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If additional printed manuals are required for your shop/office location, order by part number through the factory's Parts Center.

If a retail customer needs replacement manual(s) for a specific unit, contact the factory's Customer Data Center at: 800-829-0051 or
customerdata@vermeermfg.com

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Vermeer®

*D80x100 Series II Navigator®
Horizontal Directional Drill*



Parts Manual

P1.06
SERIAL NO. 101 -
ORDER NO. 105400ZFP

HOW TO USE THE MANUAL

This manual contains illustrations and parts lists of components and assemblies which make up the machine. Each page consists of the name of the assembly or component, a figure number, reference numbers, part numbers, part names, and the quantities of the parts used.

Assembly or component name helps identify the illustration and parts list for each figure. This name also helps locate the general area of the machine where the assembly or component can be located.

Figure numbers are used to identify each assembly or component and to group these assemblies or components into major categories.

Reference numbers shown in a column refer to the numbered parts in the illustration. This ties the part in the illustration to the part number and description in the parts list.

An asterisk indicates information about the item has changed since the previous release of the parts manual. A note in the Remarks column often explains the change.

Part numbers are used to identify individual parts or part assemblies.

Part descriptions provide the name of the part, plus additional information such as dimensional specifications and what parts are grouped together to form part assemblies, which helps you identify the part(s).

Quantities listed for each figure are only for that assembly or component and not the total used per machine.

This parts manual is not intended to be a complete guide for machine service or repairs. Contact your Vermeer dealer for any of your service or technical requirements.

ORDERING PARTS

Parts for repair or replacement are available through our network of authorized dealers located throughout the world.

Use only authorized Vermeer parts for repair or replacement. Always give the serial number and

model number of the machine for which parts are being ordered. When ordering parts for component(s), which are not manufactured by Vermeer Manufacturing, also give the serial number of that component(s). Order all parts by part number, part name, and quantity needed.

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The parts lists, illustrations, and specifications in this manual are based on the latest information available at time of publication. Your machine may have product improvements and options not yet contained in this manual.

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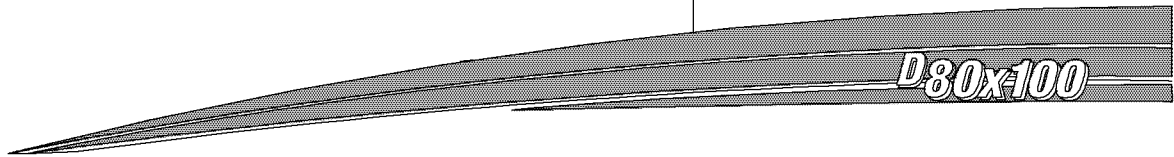
Vermeer

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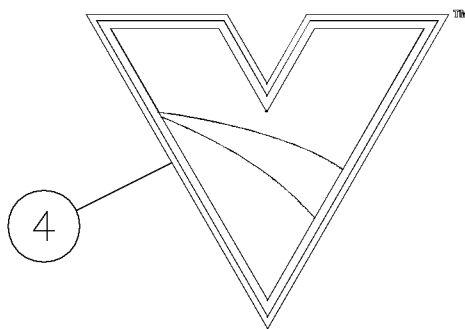
2

NAVIGATOR

3



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Decals - Domestic (S/N 151-) Fig 1-1r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	June, 2007		Changes Decal
1		2326595	DECAL VERMEER- 4 1/2 X 24	2	
2		70000614	DECAL-MODEL NAVIGATOR (BIG)	1	
3	*	7000D178	DECAL - D80X100II LEFT STRIPE	1	(S/N 151-) Show
	*	7000D179	DECAL - D80X100II RIGHT STRIPE	1	(S/N 151-)
4	*	7000D010	DECAL - COSMETIC V - 12.00"	1	(S/N 151-)

Decals - Domestic Fig 1-1

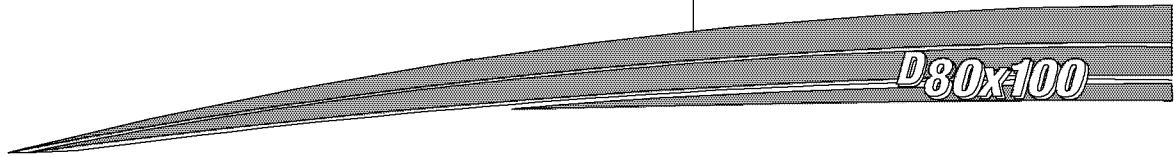
Vermeer

1

2

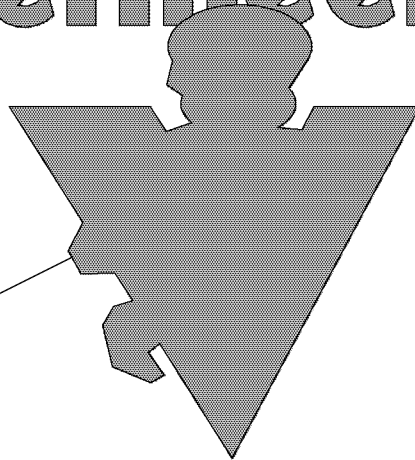
NAVIGATOR

3



Vermeer

4



Decals - Domestic Fig 1-1

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		2326595	DECAL VERMEER- 4 1/2 X 24	2	
2		70000614	DECAL-MODEL NAVIGATOR (BIG)	1	
3		7000C544	DECAL - D80X100 II LEFT STRIPE	1	Show
		7000C545	DECAL - D80X100 II RIGHT STRIPE	1	
4		70000787	DECAL 12"VERMEER LOGO	1	

Decals - Domestic Fig 1-2




FUSE "A"						FUSE "B"					
CIRCUIT	AMP	F	CIRCUIT	AMP	F	CIRCUIT	AMP	F	CIRCUIT	AMP	F
GEARBOX STOP/BUFFER	7.5	F11	CONTROLLER-POWER SUPPLY	7.5	F1	HORN CANCEL	10	F11	IGNITION SWITCH	10	F1
SEAT/STAKEDOWN	10	F12	CONTROLLER-POWER SUPPLY	7.5	F2	DEERE CONTROLLER	10	F12	DEERE CONTROLLER	15	F2
GAUGES	5	F13	CONTROLLER-POWER SUPPLY	7.5	F3	REMOTE LOCKOUT SYSTEM	10	F13	POWER POINT/CIG.LIGHTER	15	F3
LIGHTS/DISPLAY	15	F14	CONTROLLER-POWER SUPPLY	7.5	F4	FAN	15	F14	FUEL PUMP RELAY	7.5	F4
LED KEYPAD	10	F15	CONTROLLER-POWER SUPPLY	7.5	F5	HYD ENABLE	15	F15	-	-	F5
CONTROL HANDLES	10	F16	ENGINE CONTROLLER-POWER	7.5	F6	-	-	F16	-	-	F6
RACK	7.5	F17	ENGINE CONTROLLER-POWER	7.5	F7	-	-	F17	-	-	F7
GEARBOX	7.5	F18	ENGINE CONTROLLER-POWER	7.5	F8	-	-	F18	-	-	F8
-	-	F19	ENGINE CONTROLLER-POWER	7.5	F9	-	-	F19	-	-	F9
-	-	F20	ENGINE CONTROLLER-POWER	7.5	F10	-	-	F20	-	-	F10

Decals - Domestic Fig 1-2

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		2326315	DECAL-WARNING	1	
2		2326324	DECAL-WARNING/REFUEL	1	
3		2326756	DECAL-HYDRAULIC OIL	1	
4		70000044	DECAL-WARNING(AT/UND)	1	
5		70000098	DECAL-DIESEL (AT/UND)	1	
6		70000530	DECAL-DANGER	4	
7		70000563	DECAL-WARNING (UND)	2	
8		7000A392	DECAL - DANGER	4	
9		7000B811	DECAL - DANGER - REMOTE LOCK OUT	1	
10		7000B499	DECAL - ANTIFREEZE	1	
11		7000C417	DECAL - FUSE BLOCKS - D100X120 II	1	

Decals - Domestic Fig 1-3




1


2

3

▲ DANGER




Electrical shock can kills.

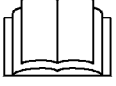


If strike occurs, don't step down.

▲ WARNING




Safety Message




Read Operator's Manual.


▲ WARNING



Safety Message




Test remote lockout.




Test strike alert.

▲ WARNING




Rollover can crush.




Fasten seat belt.

▲ WARNING




Electricity, or gas explosion can kill.




ONE-CALL
Locate Utilities.
Call 1-888-258-0808.

▲ WARNING




Safety Message




Stop engine before servicing.

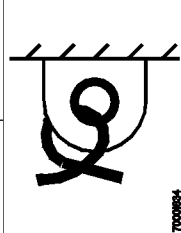
▲ WARNING



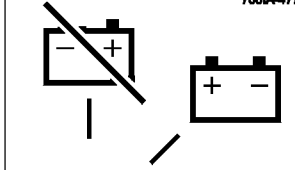
Sudden stop or movement may eject driver.



Fasten seat belt.



7001A-477




6

5

3

4

ATTENTION



Welding Alert

Electronic components will be damaged if not unplugged before welding.

Read manual for location of components and instructions to unplug before welding.

7000C446

This product may be covered by one or more of the following patents:

AU 75,6939	US 5,590,041	US 6,195,922	US 6,477,795	US 6,752,043
CA D 79,593	US 5,607,280	US 6,247,544	US 6,484,818	US 6,755,263
DE 698 11 846	US 5,611,496	US 6,289,997	US 6,491,115	US 6,766,869
DE 202 14 959.5	US 5,657,803	US 6,308,787	US 6,497,296	US 6,804,903
DE Des. 96 006 85.4	US 5,659,985	US 6,315,082	US 6,511,260	US 6,814,184
EP 772,543	US 5,687,807	US 6,332,502	US 6,516,899	US 6,833,795
EP 830,522	US 5,692,548	US 6,357,537	US 6,517,733	US 6,839,991
EP 885,343	US 5,692,549	US 6,360,830	US 6,533,046	US 6,840,471
EP 1,153,184	US 5,704,142	US 6,367,584	US 6,533,052	US 6,843,435
GB 2,053,636	US 5,720,354	US 6,374,928	US 6,554,082	US 6,845,825
HK 1015859	US 5,746,278	US 6,382,330	US 6,557,651	US 6,880,430
RU 2,158,952	US 5,768,811	US 6,389,360	US 6,577,954	US 6,886,644
US Des. 308,682	US 5,778,991	US 6,390,207	US 6,585,062	US 6,910,541
US Des. 396,837	US 5,819,859	US 6,408,952	US 6,588,615	US 6,929,075
US 4,848,423	US 5,845,689	US 6,408,954	US 6,851,755	US 6,948,265
US 5,205,181	US 5,904,210	US 6,412,715	US 6,659,202	US 6,975,942
US 5,219,380	US 5,944,121	US 6,422,495	US 6,668,946	US 6,978,955
US 5,237,888	US 5,950,942	US 6,435,286	US 6,684,538	
US 5,291,964	US 6,014,996	US 6,439,319	US 6,701,647	
US 5,509,220	US 6,050,350	US 6,446,385	US 6,719,089	
US 5,544,055	US 6,109,367	US 6,446,889	US 6,725,579	
US 5,553,407	US 6,119,376	US 6,454,025	US 6,729,050	
US 5,556,253	US 6,138,932	US 6,470,976	US 6,749,029	
US 5,574,642	US 6,154,987	US 6,474,931	US 6,751,553	
US 5,588,474	US 6,161,630	US 6,474,932	US 6,751,883	

This product may be covered by one or of the following licensed patents:

US 4,694,913	US 4,867,255	US 5,148,880
US 4,858,704	US 4,953,638	US 5,799,740

(OTHER U.S. AND FOREIGN PATENTS PENDING)

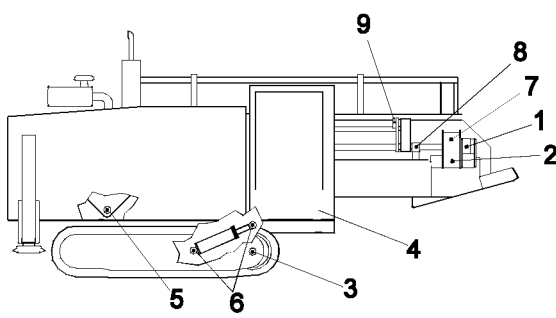
700B119 rev 1

Decals - Domestic Fig 1-3

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	February, 2007		Update Decal
1		7000C419	DECAL - WARNING - D100X120 II	1	
2		7000C437	DECAL - LG - SERIES II - D100X120 II	1	
		7000C463	DECAL - SERIES II MEDIUM	1	
3		7000C446	DECAL - NO WELD	8	
4		7000I834	DECAL - TIE DOWN POINT	5	
5		700IA477	DECAL_BATTERY SWITCH (UG)	1	
6	*	7000B119	DECAL - PATENT INDUSTRIAL	1	

Decals - Domestic (S/N 146-) Fig 1-4r02

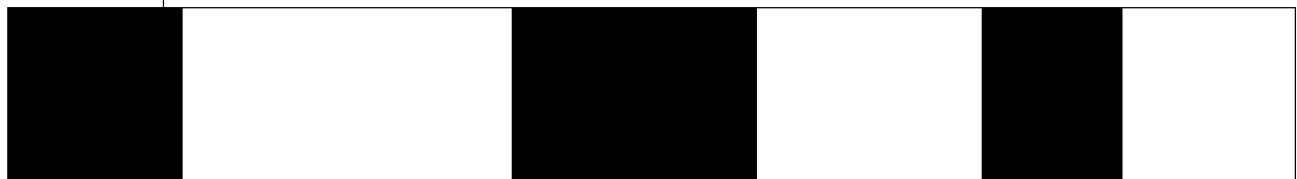
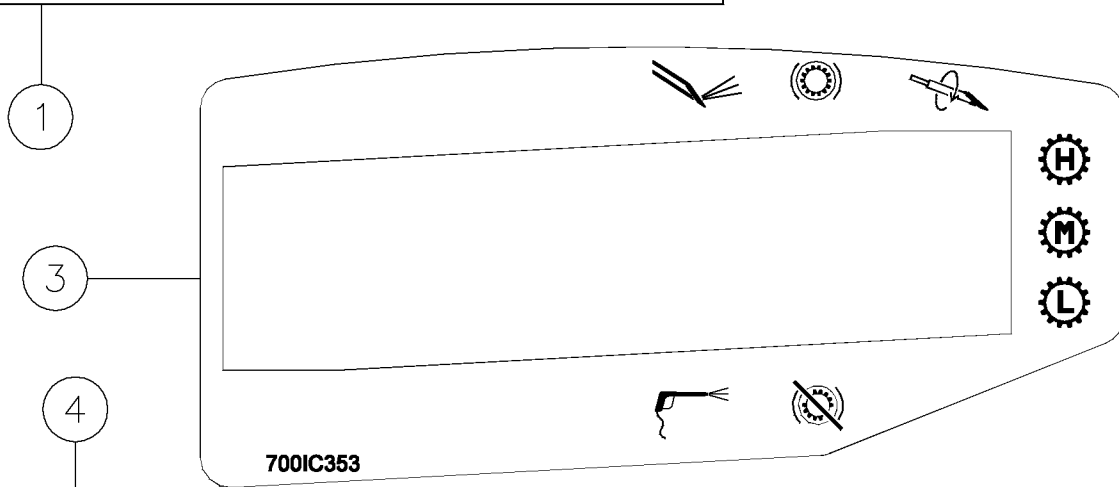
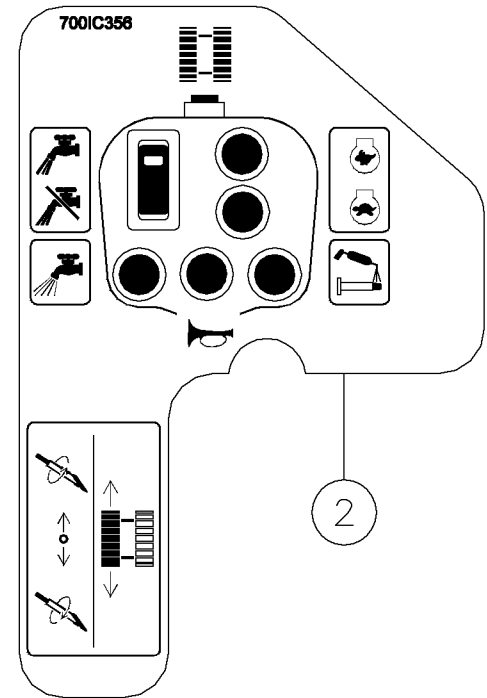
LUBRICATION CHART



REF. NO.	DESCRIPTION	NO. SHOTS	INTERVALS (HOURS)
1	ROD GUIDE ROLLERS (6)	2	10
2	WISE SLIDER PINS (2)	2	10
3	TRACK END IDLER (BOTH TRACKS)	6	10
4	CARRIAGE GUIDE ROLLERS (2)	1	50
5	RACK PIVOT (2)	1	50
6	RACK ANGLE CYL. (2)	1	50
7	WISE CYLINDER PINS (4)	1	50
8	ROD LOADER PIVOT (BOTH ENDS)	2	50
9	EXT. ARM FLIPPERS (2)	2	50

7000C458

See Operator's Manual for detailed lubrication instructions.

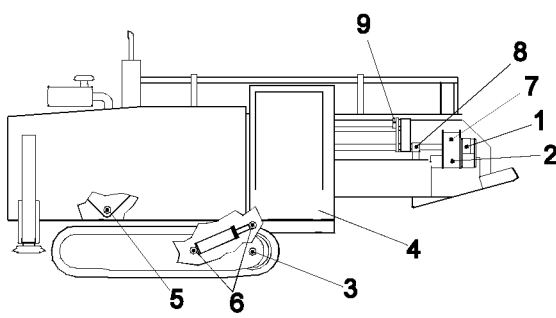


Decals - Domestic (S/N 146-) Fig 1-4r02

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	December, 2006		Change Decal
1		7000C458	DECAL - LUBRICATION CHART	1	
2		700IC356	DECAL- LEFT JOYSTICK	1	
3		700IC353	DECAL- LEFT CONTROL	1	
4	*	700ID312	DECAL-INDICATOR	1	(S/N 146-)

Decals - Domestic Fig 1-4r01

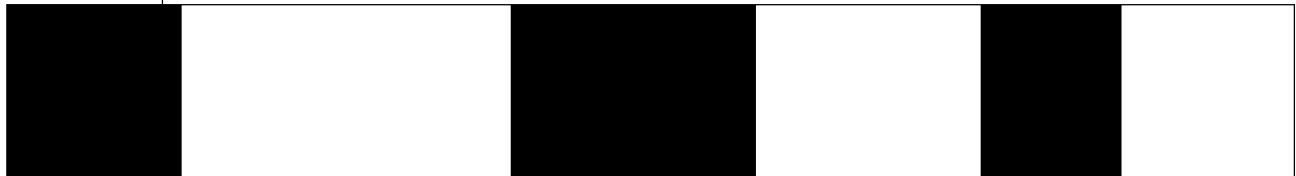
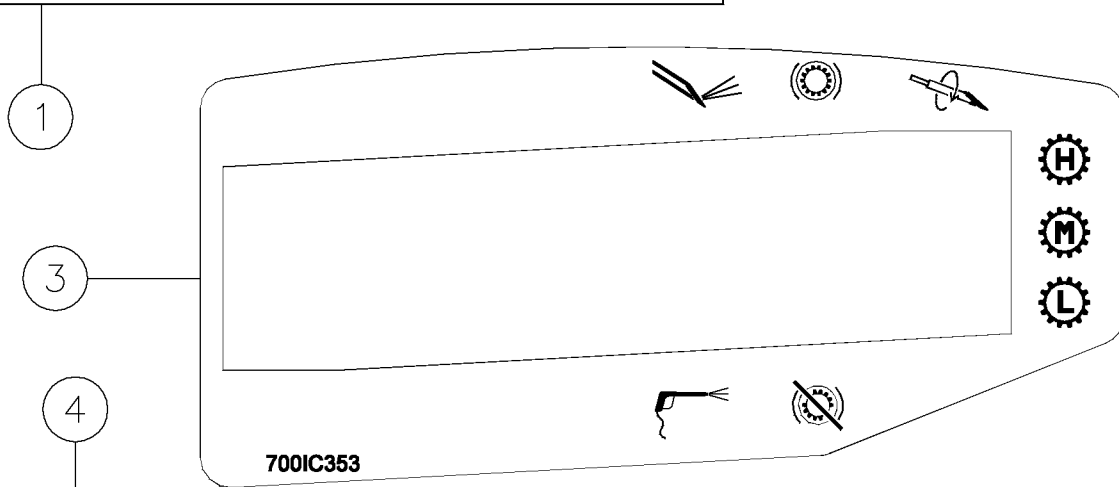
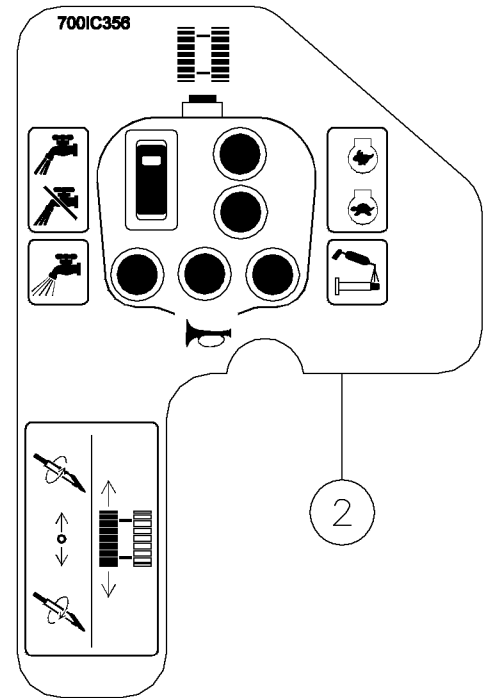
LUBRICATION CHART



REF. NO.	DESCRIPTION	NO. SHOTS	INTERVALS (HOURS)
1	ROD GUIDE ROLLERS (6)	2	10
2	WISE SLIDER PINS (2)	2	10
3	TRACK END IDLER (BOTH TRACKS)	6	10
4	CARRIAGE GUIDE ROLLERS (2)	1	50
5	RACK PIVOT (2)	1	50
6	RACK ANGLE CYL. (2)	1	50
7	WISE CYLINDER PINS (4)	1	50
8	ROD LOADER PIVOT (BOTH ENDS)	2	50
9	EXT. ARM FLIPPERS (2)	2	50

7000C458

See Operator's Manual for detailed lubrication instructions.

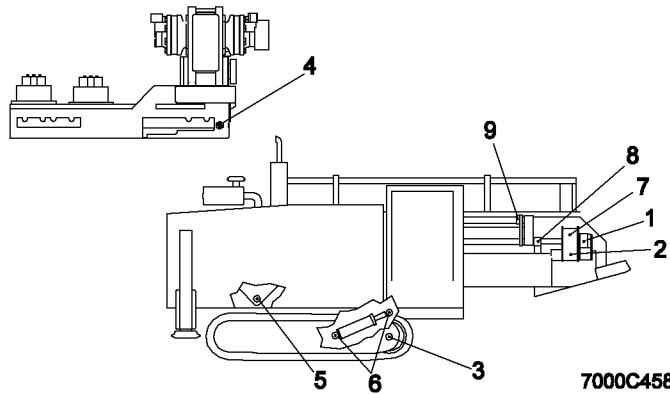


Decals - Domestic Fig 1-4r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	December, 2006		Change Decal
1		7000C458	DECAL - LUBRICATION CHART	1	
2		700IC356	DECAL- LEFT JOYSTICK	1	
3		700IC353	DECAL- LEFT CONTROL	1	
4	*	700ID312	DECAL-INDICATOR	1	(S/N 146-)

Decals - Domestic Fig 1-4

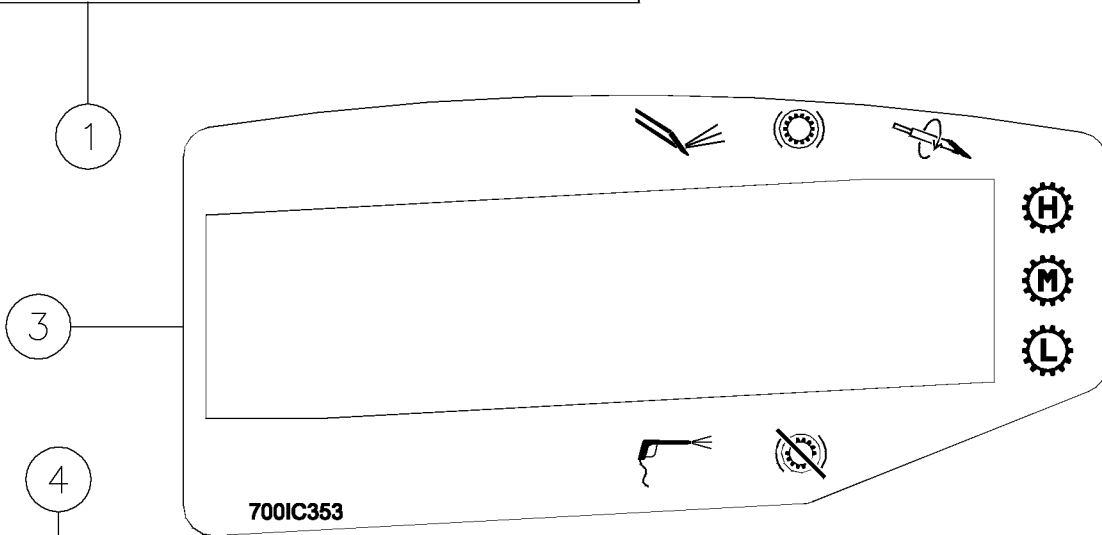
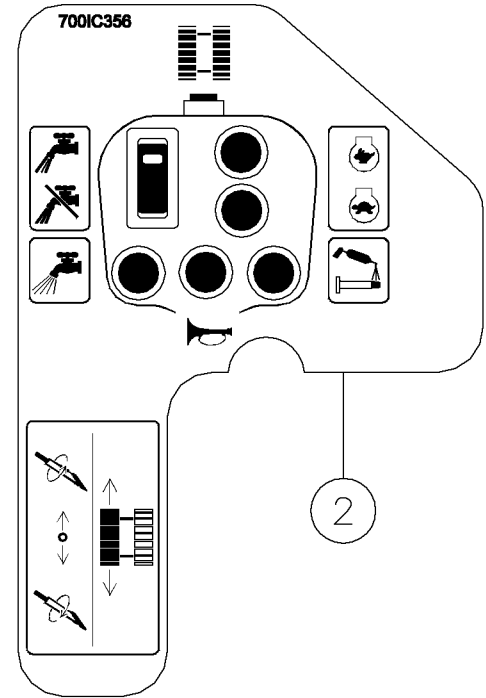
LUBRICATION CHART



REF. NO.	DESCRIPTION	NO. SHOTS	INTERVALS (HOURS)
1	ROD GUIDE ROLLERS (6)	2	10
2	VISE SLIDER PINS (2)	2	10
3	TRACK END IDLER (BOTH TRACKS)	6	10
4	CARRIAGE GUIDE ROLLERS (2)	1	50
5	RACK PIVOT (2)	1	50
6	RACK ANGLE CYL. (2)	1	50
7	VISE CYLINDER PINS (4)	1	50
8	ROD LOADER PIVOT (BOTH ENDS)	2	50
9	WXT. ARM FLIPPERS (2)	2	50

7000C458

See Operator's Manual for detailed lubrication instructions.



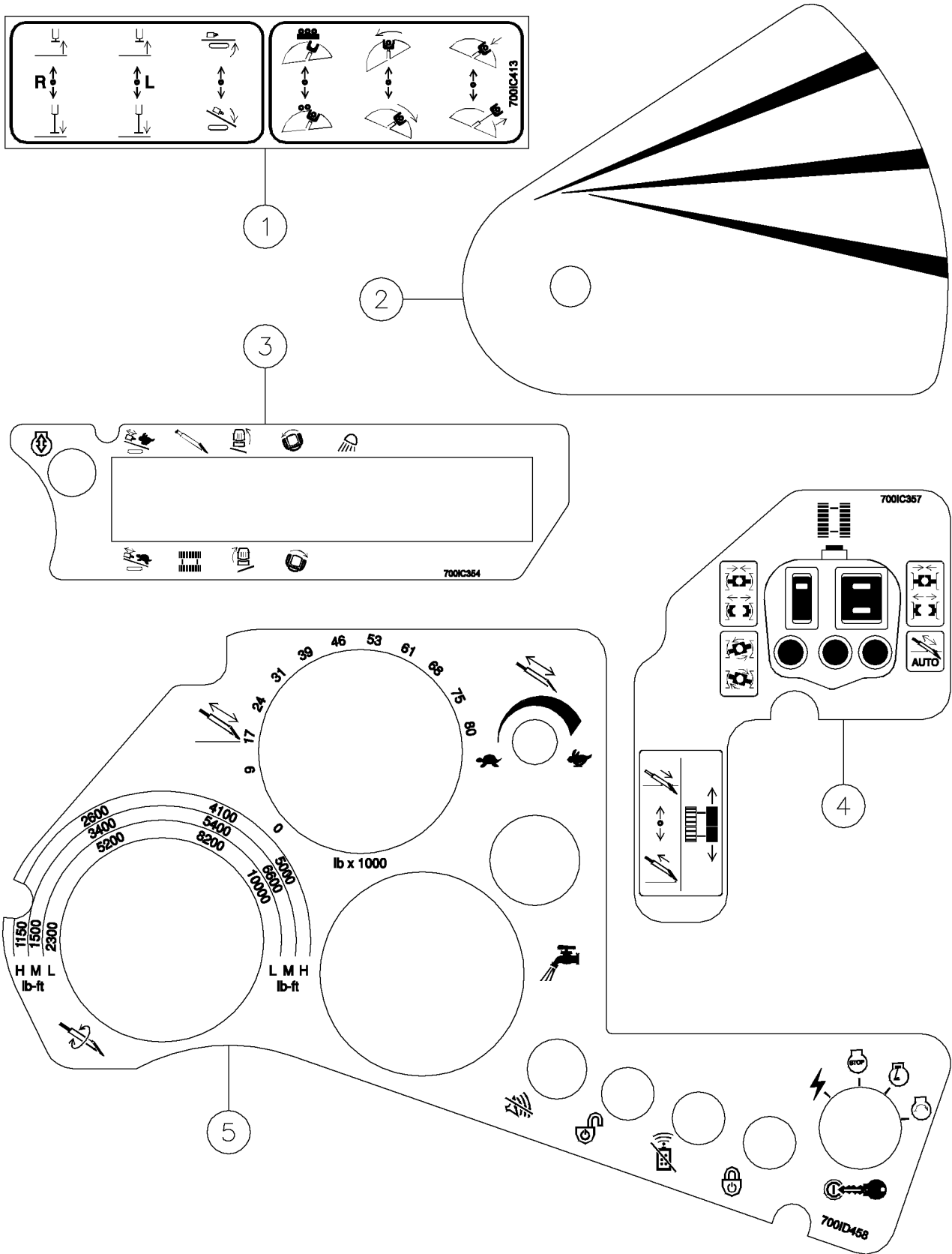
BLACK	WHITE	BLACK	WHITE
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700IA-480

Decals - Domestic Fig 1-4

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		7000C458	DECAL - LUBRICATION CHART	1	
2		700IC356	DECAL- LEFT JOYSTICK	1	
3		700IC353	DECAL- LEFT CONTROL	1	
4		700IA490	DECAL-INDICATOR 2 7/8-3 1/2ROD	1	

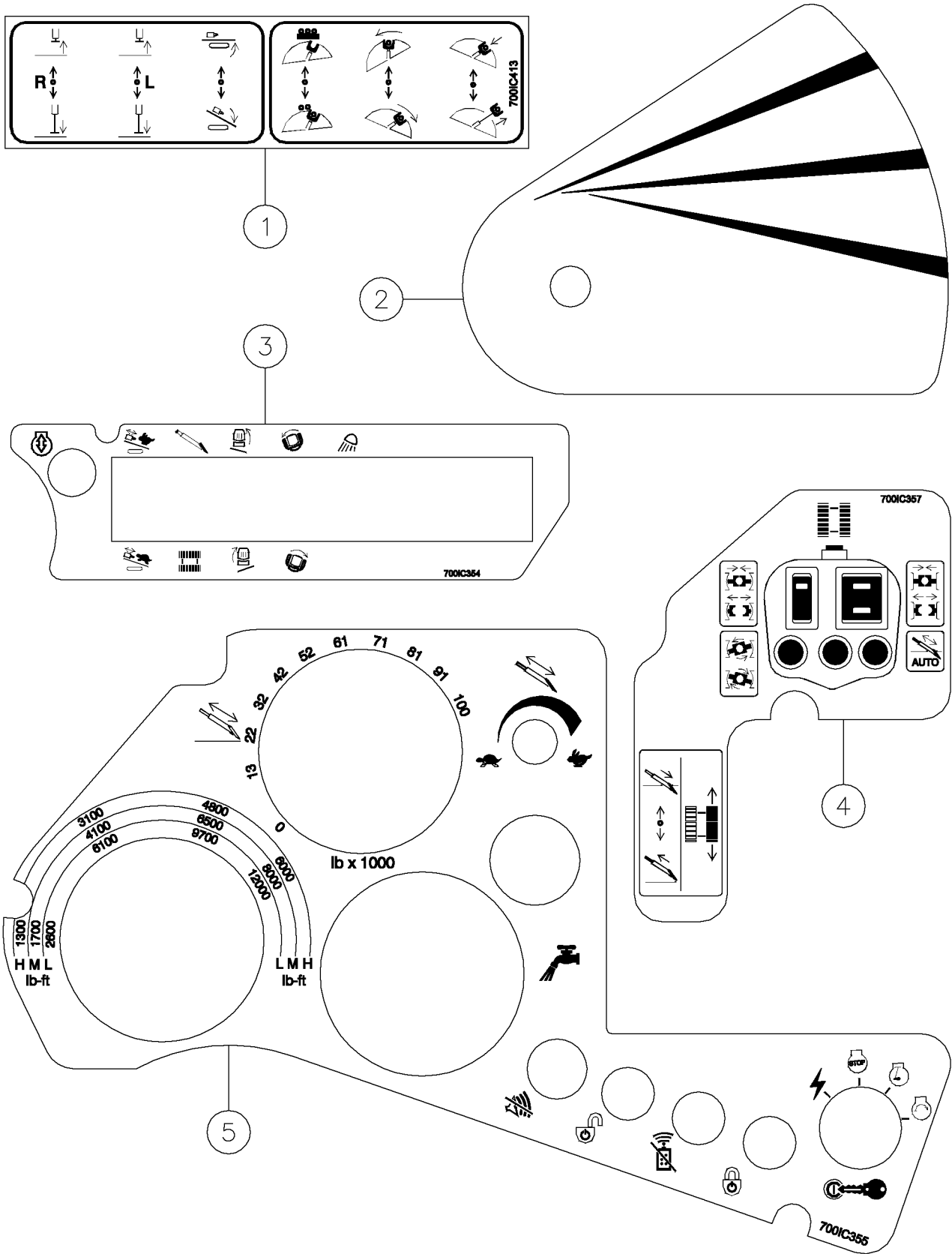
Decals - Domestic (S/N 145-) Fig 1-5r01



Decals - Domestic (S/N 145-) Fig 1-5r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2007		Change Decal Part Number
1		700IC413	DECAL-CONTROL-BANK-VALVE-D100X120 II	1	
2		700IA624	DECAL-LOADER POSITION	1	
3		700IC354	DECAL- LOWER RIGHT CONSOLE	1	
4		700IC357	DECAL- RIGHT JOYSTICK	1	
5	*	700ID458	DECAL-UPPER-RIGHT CONSOLE-D80X100II	1	(S/N 145-)

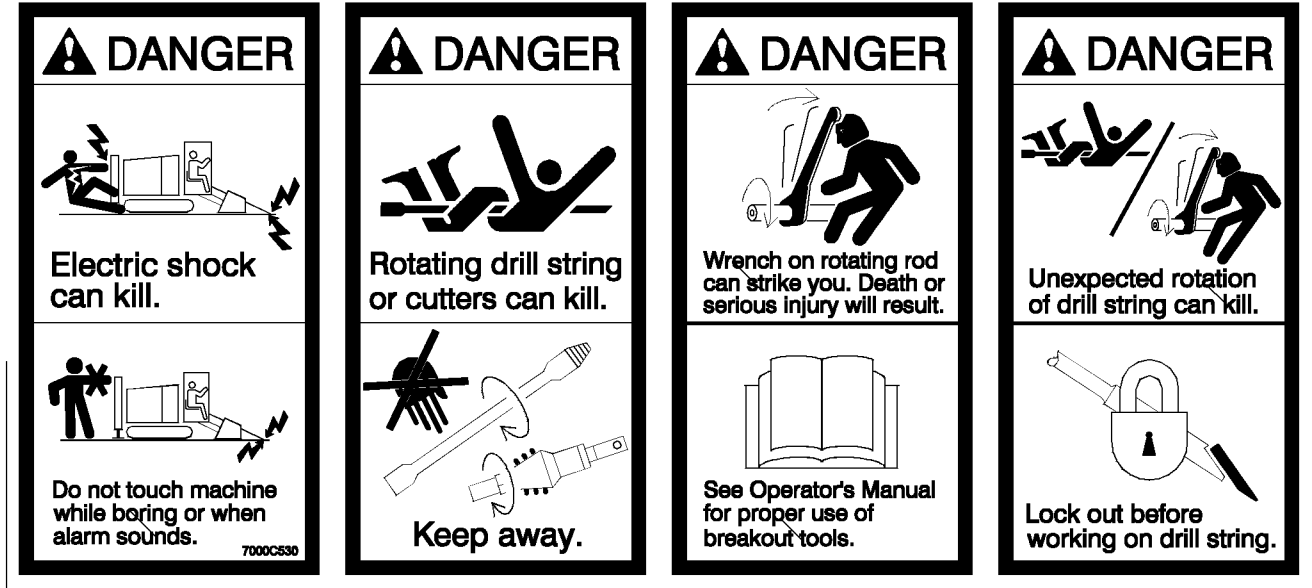
Decals - Domestic Fig 1-5



Decals - Domestic Fig 1-5

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		700IC413	DECAL - CONTROL-BANK - VALVE-D100X120 II	1	
2		700IA624	DECAL-LOADER POSITION	1	
3		700IC354	DECAL- LOWER RIGHT CONSOLE	1	
4		700IC357	DECAL- RIGHT JOYSTICK	1	
5		700IC355	DECAL- UPPER RIGHT CONSOLE	1	

Decals - Domestic Fig 1-6



1

Notice • Avis • Hinweis • Avviso • Aviso • 告示

If you purchased this product as used equipment, you can receive a FREE Operator's Manual by contacting:
 Si vous avez acheté cet équipement d'occasion, vous pouvez recevoir un manuel de l'opérateur GRATUIT en composant le :
 Wenn Sie diese Maschine gebraucht erworben haben, können Sie eine KOSTENLOSE Betriebsanleitung wie folgt anfordern:
 Se si è comprata la presente macchina usata, si può ricevere una copia del manuale dell'operatore IN OMAGGIO, contattando:
 Si este producto que ha comprado es un equipo usado, puede recibir un manual del operador GRATUITO llamando al:
 如果您所购买的是旧设备，可以通过下列地址获得一本免费的操作员手册：

○ ○ ○ ○ ○ ○ ○ ○

Vermeer Manufacturing Company
 ATTN: Customer Data Department
 1210 Vermeer Road East, PO BOX 200
 Pella, Iowa 50219 USA
 800-828-0051 or 641-628-3141
 Telephone: English speaking only
 Téléphone : en anglais uniquement
 Telefon: Nur in Englischer Sprache
 Telefono: tutte le comunicazioni saranno in inglese
 Teléfono: en Inglés solamente
 电话：只能用英语交流

○ ○ ○ ○ ○ ○ ○ ○

OR by completing and mailing the Used Equipment Registration Form enclosed in the Operator's Manual.
 OU en remplissant et en envoyant le formulaire d'enregistrement de l'équipement d'occasion inclus dans le manuel de l'opérateur.
 ODER das in der Betriebsanleitung enthaltene Formular zur Registrierung gebrauchter Ausrüstung ausfüllen und einsenden.
 OPPURE compilando e spedendo il modulo di registrazione per macchinari usati, accluso al manuale dell'operatore.
 O rellenando y enviando por correo el Impreso de registro de equipos usados incluido en el manual del operador.
 或者通过填写并邮寄操作员手册中所附的旧设备登记表获得。
 2328940

2

Decals - Domestic Fig 1-6

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	February, 2007		Update In Illustration.
1		7000C530	DECAL - DANGER 4 PANEL	1	
2	*	2326940	DECAL-NOTICE TO OWNERS	1	

Decals - Domestic Fig 1-7

Freeze-proofs entire Navigator water system

Vermeer®

NAVIGATOR FREEZE GUARD

ANTI-FREEZE AND LUBRICANT

5 U.S. GAL

Health Hazard Data:

Eyes: May cause minor eye irritation. Flush with fresh water for approximately 20 minutes. If irritation persists, call a physician.

Skin Contact: Not expected to present a significant skin hazard under anticipated conditions of normal use.

Ingestion: Not expected to present significant ingestion hazard under anticipated conditions of normal use.

Vermeer Manufacturing Company Pella IA 50219
7000876

HYDRAULIC OIL FILL
7000A814

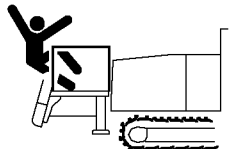
1

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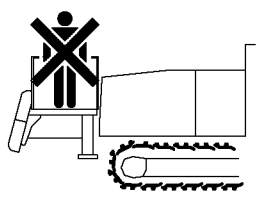
4

WARNING



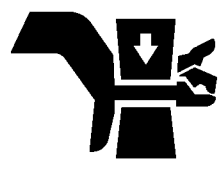
Rider Can Fall.

7000A-888

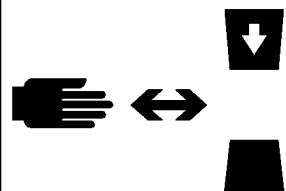


No Riders.

WARNING
7000A884



Pinch points crush.



Keep hands away.

Decals - Domestic Fig 1-7

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		70000675	DECAL-NAVIGATOR FREEZE GUARD	1	
2		7000A814	HYDRAULIC OIL FILLER	1	
3		7000A863	DECAL - WARNING	1	
4		7000A864	DECAL-WARNING DOMESTIC	2	

Decals - International (S/N 151-) Fig 1-8r01

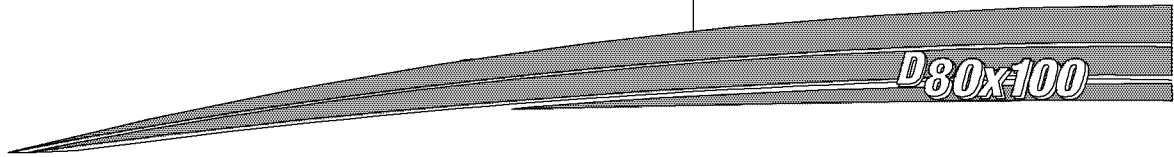
Vermeer

1

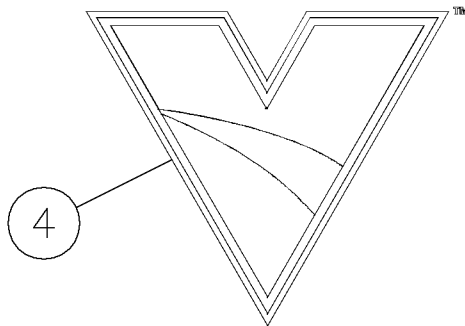
2

NAVIGATOR

3



Vermeer



Decals - International (S/N 151-) Fig 1-8r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	June, 2007		Changes Decal
1		2326595	DECAL VERMEER- 4 1/2 X 24	2	
2		70000614	DECAL-MODEL NAVIGATOR (BIG)	1	
3	*	7000D178	DECAL - D80X100II LEFT STRIPE	1	(S/N 151-) Show
	*	7000D179	DECAL - D80X100II RIGHT STRIPE	1	(S/N 151-)
4	*	7000D010	DECAL - COSMETIC V - 12.00"	1	(S/N 151-)

Decals - International Fig 1-8

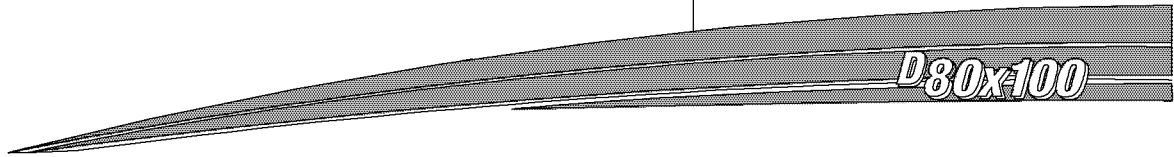
Vermeer

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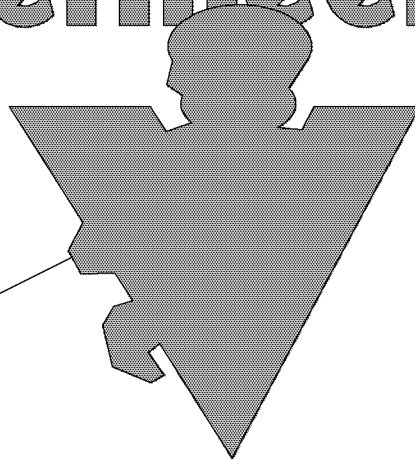
NAVIGATOR

3



Vermeer

4



Decals - International Fig 1-8

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		2326595	DECAL VERMEER- 4 1/2 X 24	2	
2		70000614	DECAL-MODEL NAVIGATOR (BIG)	1	
3		7000C544	DECAL - D80X100 II LEFT STRIPE	1	Show
		7000C545	DECAL - D80X100 II RIGHT STRIPE	1	
4		70000787	DECAL 12"VERMEER LOGO	1	

Decals - International Fig 1-9

23261315

23261324

70001-530

70001044

70001563

700A392

23261756

70001098

700IA864

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Vermeer Manufacturing Company
 ATTN: Customer Data Department
 1210 Vermeer Road East, PO BOX 200
 Pella, Iowa 50219 USA
 800-828-0051 or 641-628-3141
 Telephone: English speaking only
 Téléphone : en anglais uniquement
 Telefon: Nur in Englischer Sprache
 Telefono: tutte le comunicazioni saranno in inglese
 Teléfono: en inglés solamente
 电话： 只能用英语交流

○ ○ ○ ○ ○ ○ ○ ○

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 OU en remplissant et en envoyant le formulaire d'enregistrement de l'équipement d'occasion inclus dans le manuel de l'opérateur.
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 O rellenando y enviando por correo el Impreso de registro de equipos usados incluido en el manual del operador.
 或者通过填写并邮寄操作员手册中所附的旧设备登记表获得。

2326940

Decals - International Fig 1-9

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	February, 2007		Update In Illustration.
1		2326I315	DECAL-WARNING	1	
2		2326I324	DECAL - WARNING EXPLOSION	1	
3		7000I530	DECAL-WARNING (NAVIGATORS)	4	
4		7000I044	DECAL-WARNING	1	
5		7000I563	DECAL-WARNING (UND)	2	
6		700IA392	DECAL - DANGER D28/D50	4	
7		2326I756	DECAL-HYDRAULIC FLUID	1	
8		7000I098	DECAL-DIESEL FUEL	1	
9	*	2326940	DECAL-NOTICE TO OWNERS	1	
10		700IA864	DECAL-WARNING INTERNATIONAL	2	

Decals - International Fig 1-10

Freeze-proofs entire
Navigator water system

Vermeer®

NAVIGATOR FREEZE GUARD

ANTI-FREEZE AND LUBRICANT

5 U.S. GAL

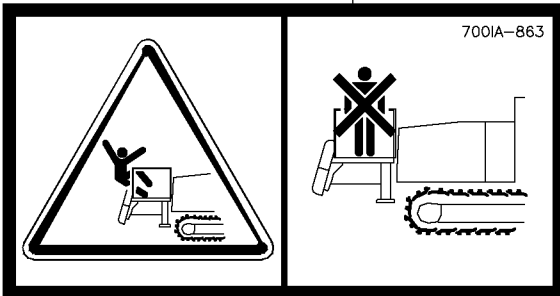
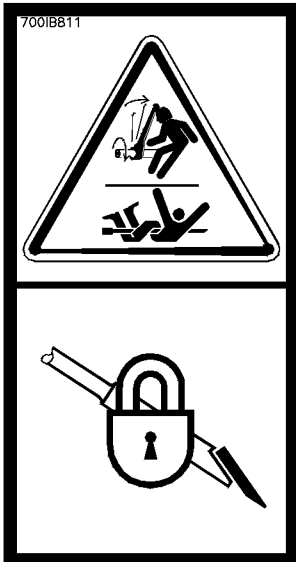
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Skin Contact: Not expected to present a significant skin hazard under anticipated conditions of normal use.

Ingestion: Not expected to present significant ingestion hazard under anticipated conditions of normal use.

Vermeer Manufacturing Company Pella IA 50219
70000675



1

2

3

5

4

7000B499

Antifreeze

This product may be covered by one or more of the following patents:

AU 75,8939	US 5,590,041	US 6,195,922	US 6,477,795	US 6,762,043
CA D 79,593	US 5,607,280	US 6,247,544	US 6,484,818	US 6,755,263
DE 690 11 846	US 5,611,496	US 6,289,997	US 6,491,115	US 6,766,869
DE 202 14 959.5	US 5,657,903	US 6,308,787	US 6,497,296	US 6,804,903
DE Des. 96 006 85.4	US 5,659,985	US 6,315,062	US 6,511,260	US 6,814,164
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EP 830,522	US 5,692,548	US 6,357,537	US 6,517,733	US 6,839,991
EP 885,343	US 5,692,549	US 6,360,830	US 6,533,046	US 6,840,471
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GB 2,053,836	US 5,720,354	US 6,374,928	US 6,554,082	US 6,845,825
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US 5,237,888	US 5,950,942	US 6,435,296	US 6,684,538	
US 5,291,964	US 6,014,996	US 6,439,319	US 6,701,647	
US 5,509,220	US 6,050,350	US 6,446,365	US 6,719,069	
US 5,544,055	US 6,109,367	US 6,448,889	US 6,725,579	
US 5,553,407	US 6,119,378	US 6,454,025	US 6,729,050	
US 5,556,253	US 6,138,932	US 6,470,976	US 6,749,029	
US 5,574,842	US 6,154,987	US 6,474,931	US 6,751,553	
US 5,588,474	US 6,161,630	US 6,474,932	US 6,751,893	

This product may be covered by one or of the following licensed patents:

US 4,694,913	US 4,967,255	US 5,148,880
US 4,858,704	US 4,953,638	US 5,799,740

(OTHER U.S. AND FOREIGN PATENTS PENDING)

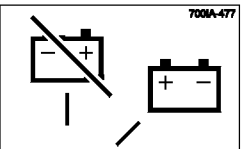
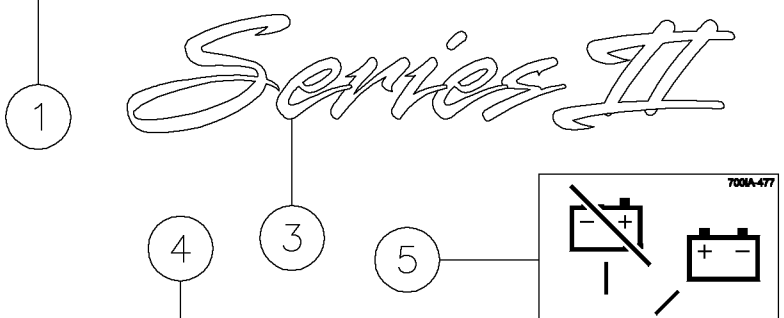
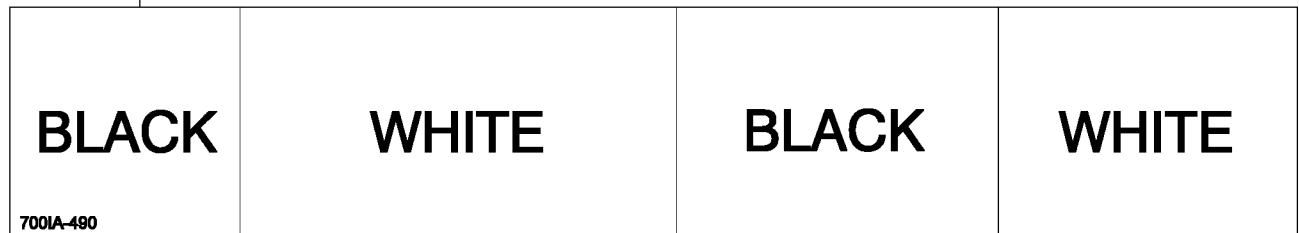
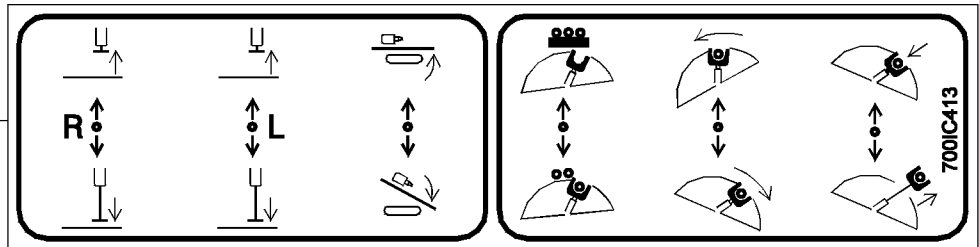
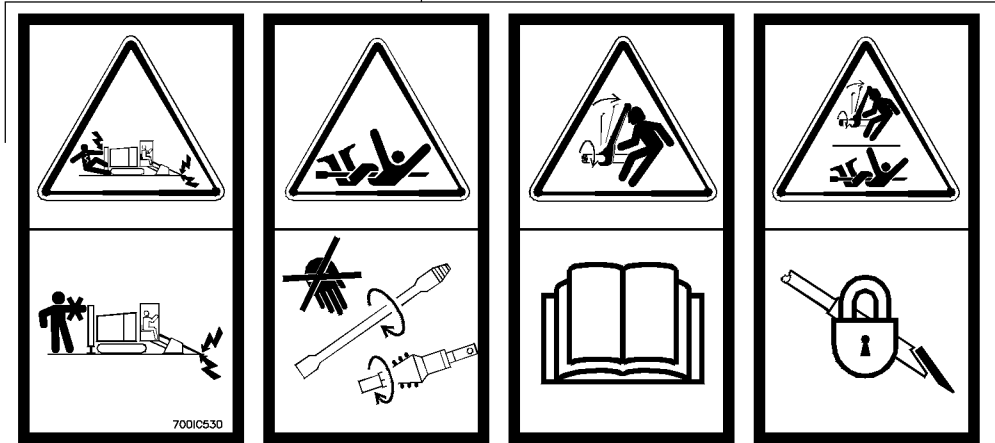
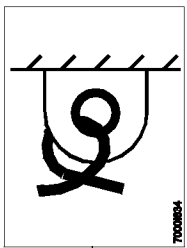
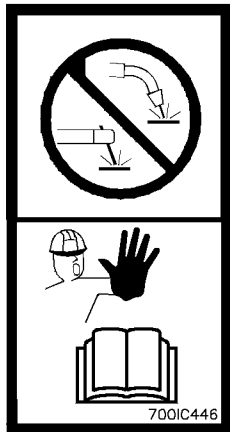
700B119 rev 1

Decals - International Fig 1-10

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	February, 2007		Update Decal
1		70000675	DECAL-NAVIGATOR FREEZE GUARD	1	
2		7000B499	DECAL - ANTIFREEZE	1	
3		700IB811	DECAL - DANGER-REMOTE LOCK OUT	1	
4		700IA863	DECAL - WARNING	1	
5	*	7000B119	DECAL - PATENT INDUSTRIAL	1	

Decals - International Fig 1-11

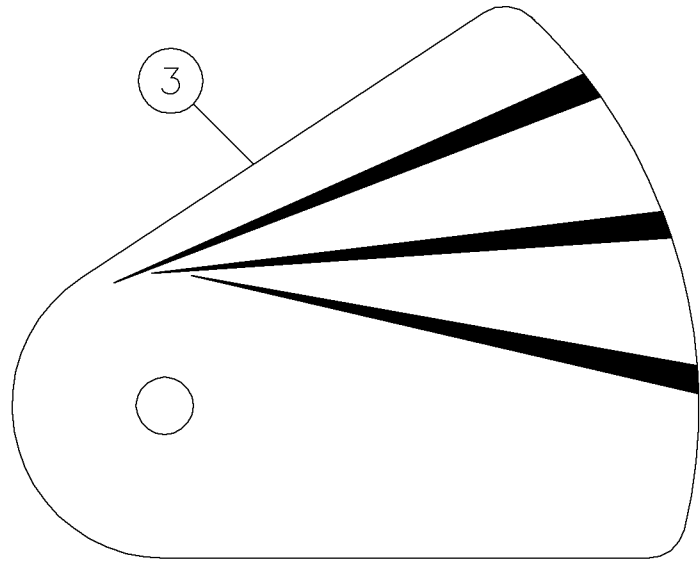
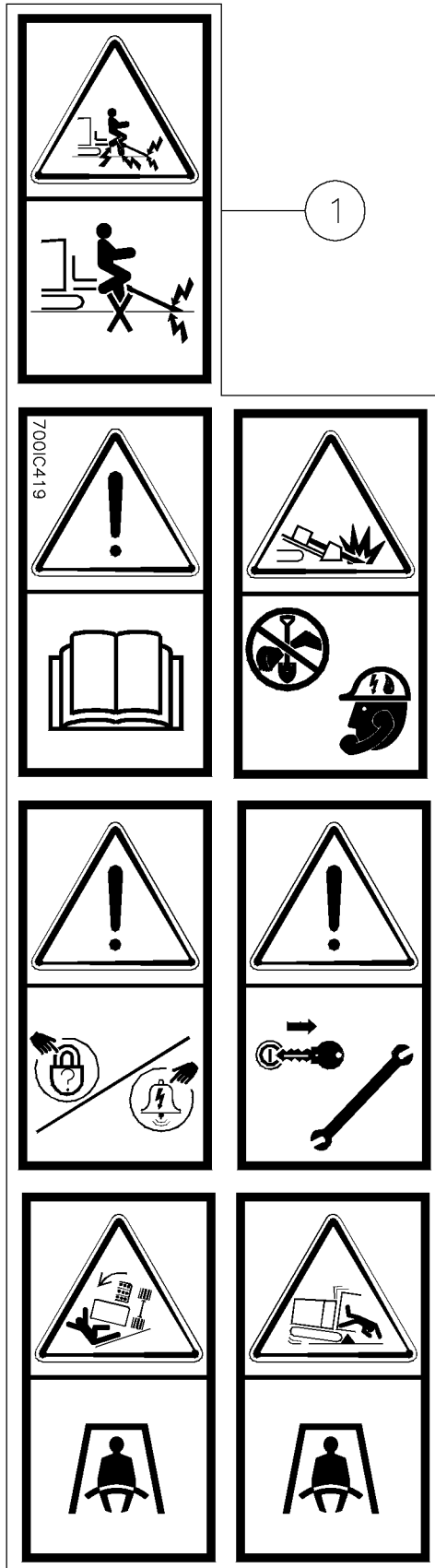
FUSE "A"						FUSE "B"					
CIRCUIT	AMP	F	CIRCUIT	AMP	F	CIRCUIT	AMP	F	CIRCUIT	AMP	F
GEARBOX STOP/BUFFER	7.5	F11	CONTROLLER-POWER SUPPLY	7.5	F1	HORN CANCEL	10	F11	IGNITION SWITCH	10	F1
SEAT/STAKEDOWN	10	F12	CONTROLLER-POWER SUPPLY	7.5	F2	DEERE CONTROLLER	10	F12	DEERE CONTROLLER	15	F2
GAUGES	5	F13	CONTROLLER-POWER SUPPLY	7.5	F3	REMOTE LOCKOUT SYSTEM	10	F13	POWER POINT/CIG/LIGHTER	15	F3
LIGHTS/DISPLAY	15	F14	CONTROLLER-POWER SUPPLY	7.5	F4	FAN	15	F14	FUEL PUMP RELAY	7.5	F4
LED KEYPAD	10	F15	CONTROLLER-POWER SUPPLY	7.5	F5	HYD ENABLE	15	F15	-	-	F5
CONTROL HANDLES	10	F16	ENGINE CONTROLLER-POWER	7.5	F6	-	-	F16	-	-	F6
RACK	7.5	F17	ENGINE CONTROLLER-POWER	7.5	F7	-	-	F17	-	-	F7
GEARBOX	7.5	F18	ENGINE CONTROLLER-POWER	7.5	F8	-	-	F18	-	-	F8
-	-	F19	ENGINE CONTROLLER-POWER	7.5	F9	-	-	F19	-	-	F9
-	-	F20	ENGINE CONTROLLER-POWER	7.5	F10	-	-	F20	-	-	F10



Decals - International Fig 1-11

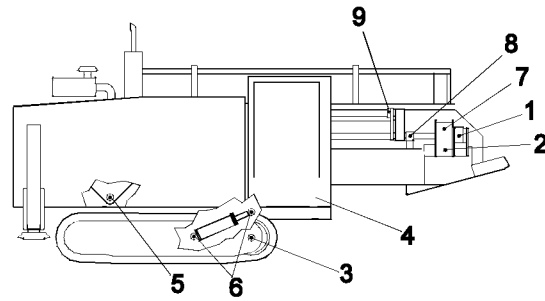
REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		7000C417	DECAL - FUSE BLOCKS - D100X120 II	1	
2		700IC446	DECAL - NO WELD	8	
3		7000C437	DECAL - LG - SERIES II - D100X120 II	1	
		7000C463	DECAL - SERIES II MEDIUM	1	
4		700IC530	DECAL - DANGER INTERNATIONAL 4 PANEL	1	
5		700IA477	DECAL_BATTERY SWITCH (UG)	1	
6		7000I834	DECAL - TIE DOWN POINT	5	
7		700IC413	DECAL - CONTROL-BANK - VALVE-D100X120 II	1	
8		700IA490	DECAL-INDICATOR 2 7/8-3 1/2ROD	1	

Decals - International Fig 1-12r01



2

LUBRICATION CHART



7000C458

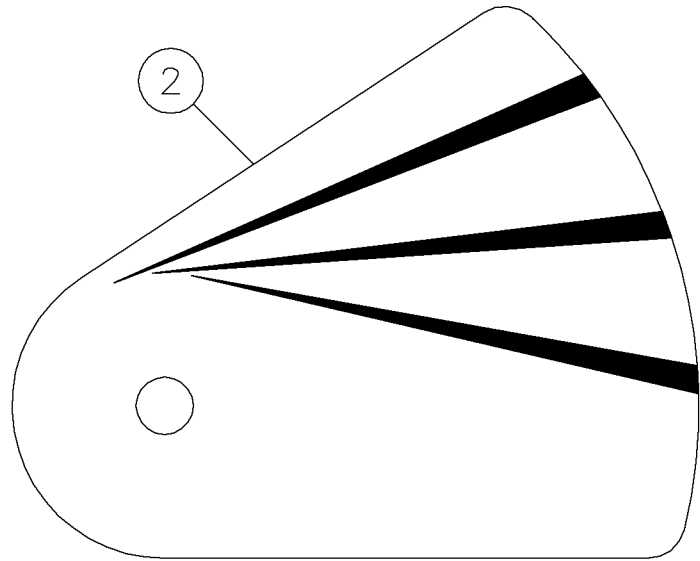
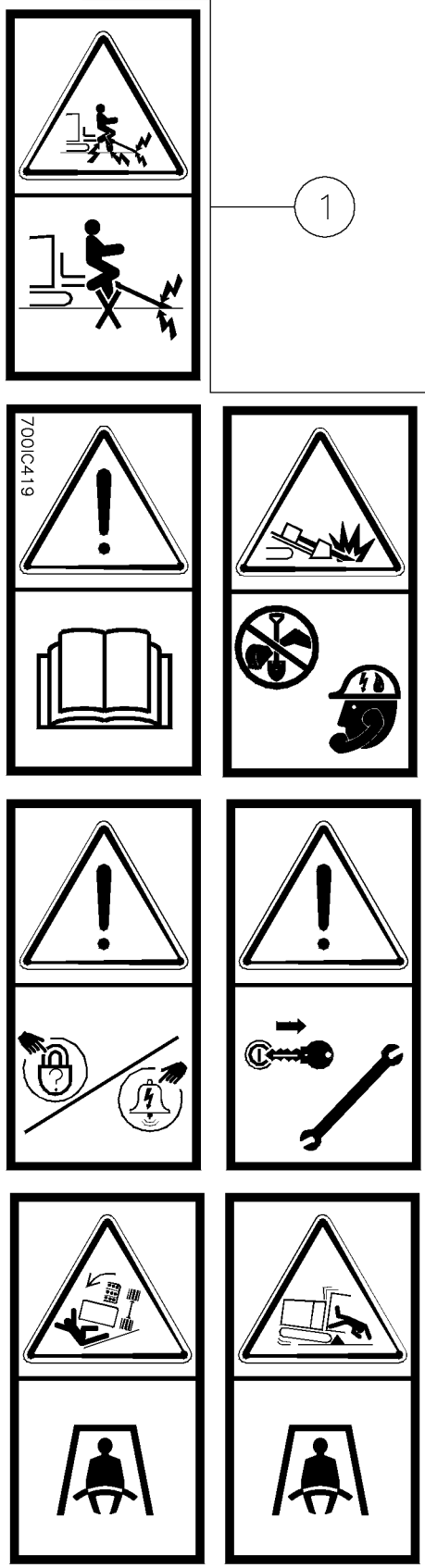
REF. NO.	DESCRIPTION	NO. SHOTS	INTERVALS (HOURS)
1	ROD GUIDE ROLLERS (6)	2	10
2	WISE SLIDER PINS (2)	2	10
3	TRACK END IDLER (BOTH TRACKS)	6	10
4	CARRIAGE GUIDE ROLLERS (2)	1	50
5	RACK PIVOT (2)	1	50
6	RACK ANGLE CYL. (2)	1	50
7	WISE CYLINDER PINS (4)	1	50
8	ROD LOADER PIVOT (BOTH ENDS)	2	50
9	EXT. ARM FLIPPERS (2)	2	50

See Operator's Manual for detailed lubrication instructions.

Decals - International Fig 1-12r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	February, 2007		Update In Illustration.
1		700IC419	DECAL- WARNING - D100X120 II	1	
2	*	7000C458	DECAL - LUBRICATION CHART	1	
3		700IA624	DECAL-LOADER POSITION	1	

Decals - International Fig 1-12

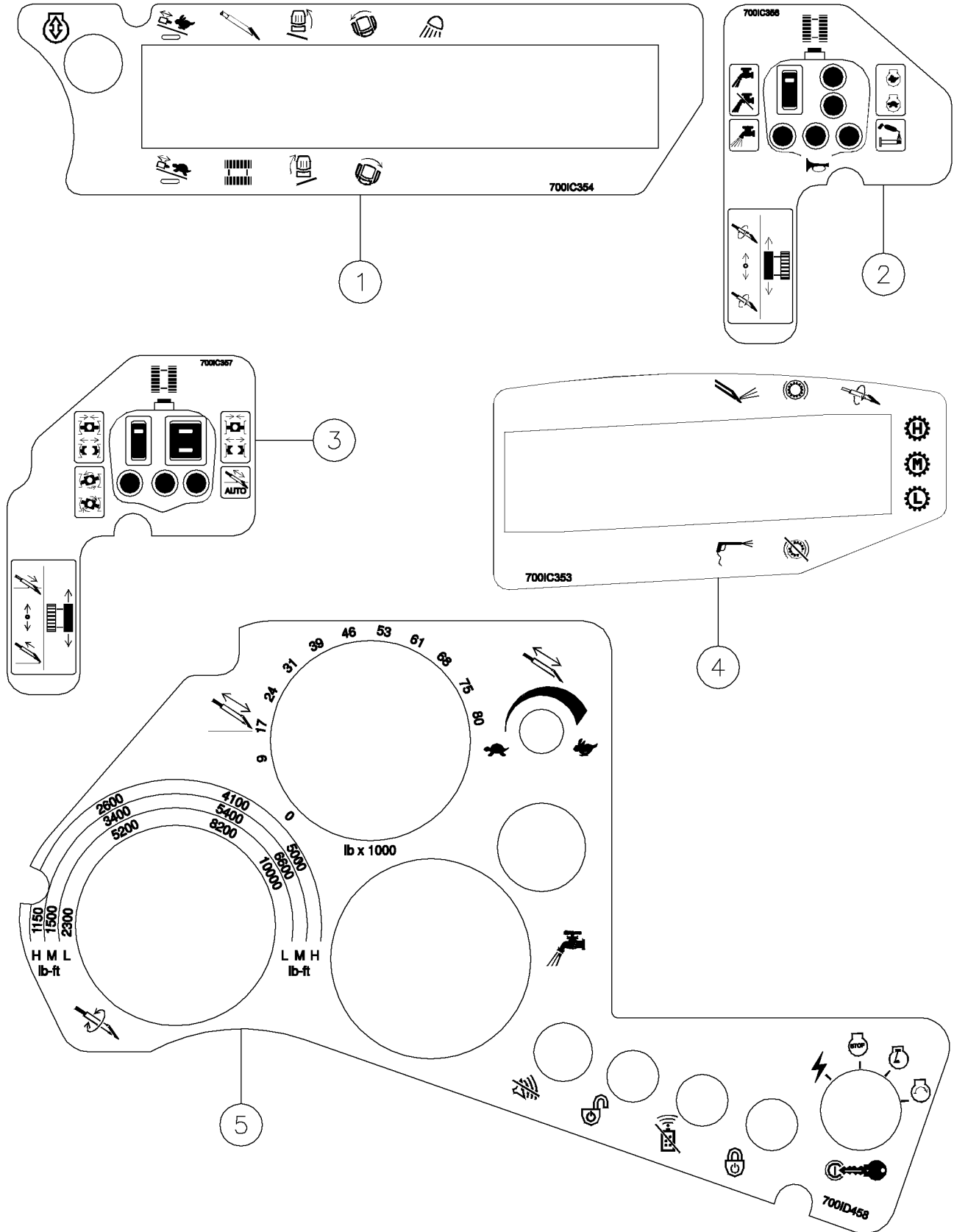


LUBRICATION CHART			
7000C458			
REF. NO.	DESCRIPTION	NO. SHOTS	INTERVALS (HOURS)
1	ROD GUIDE ROLLERS (8)	2	10
2	WISE SLIDER PINS (2)	2	10
3	TRACK END IDLER (BOTH TRACKS)	6	10
4	CARRIAGE GUIDE ROLLERS (2)	1	50
5	RACK PIVOT (2)	1	50
6	RACK ANGLE CYL. (2)	1	50
7	WISE CYLINDER PINS (4)	1	50
8	ROD LOADER PIVOT (BOTH ENDS)	2	50
9	WXT. ARM FLIPPERS (2)	2	50
See Operator's Manual for detailed lubrication instructions.			

Decals - International Fig 1-12

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		700IC419	DECAL- WARNING - D100X120 II	1	
2		7000C458	DECAL - LUBRICATION CHART	1	
3		700IA624	DECAL-LOADER POSITION	1	

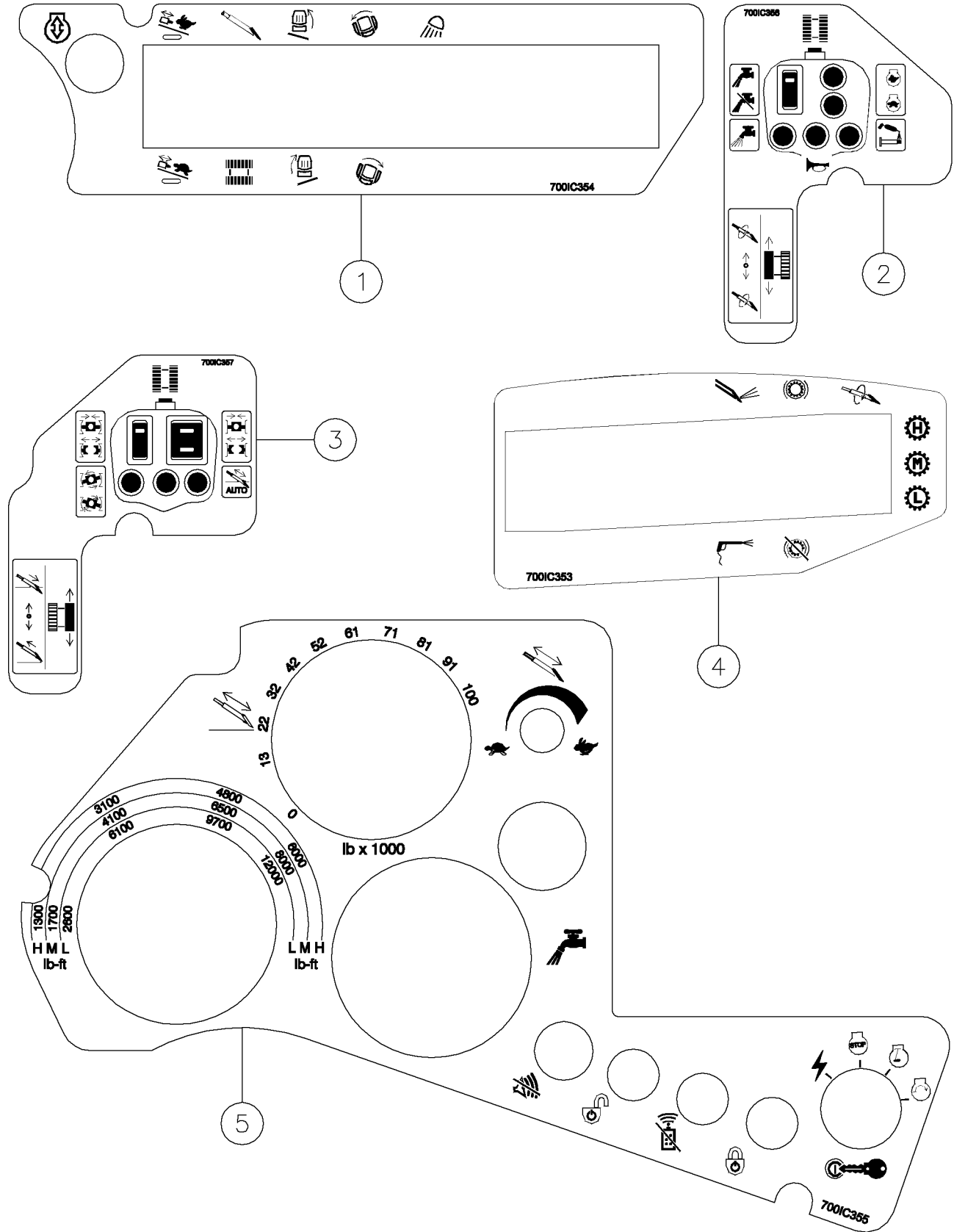
Decals - International (S/N 145-) Fig 1-13r01



Decals - International (S/N 145-) Fig 1-13r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2007		Change Decal Part Number
1		700IC354	DECAL- LOWER RIGHT CONSOLE	1	
2		700IC356	DECAL- LEFT JOYSTICK	1	
3		700IC357	DECAL- RIGHT JOYSTICK	1	
4		700IC353	DECAL- LEFT CONTROL	1	
5	*	700ID458	DECAL-UPPER-RIGHT CONSOLE-D80X100II	1	(S/N 145-)

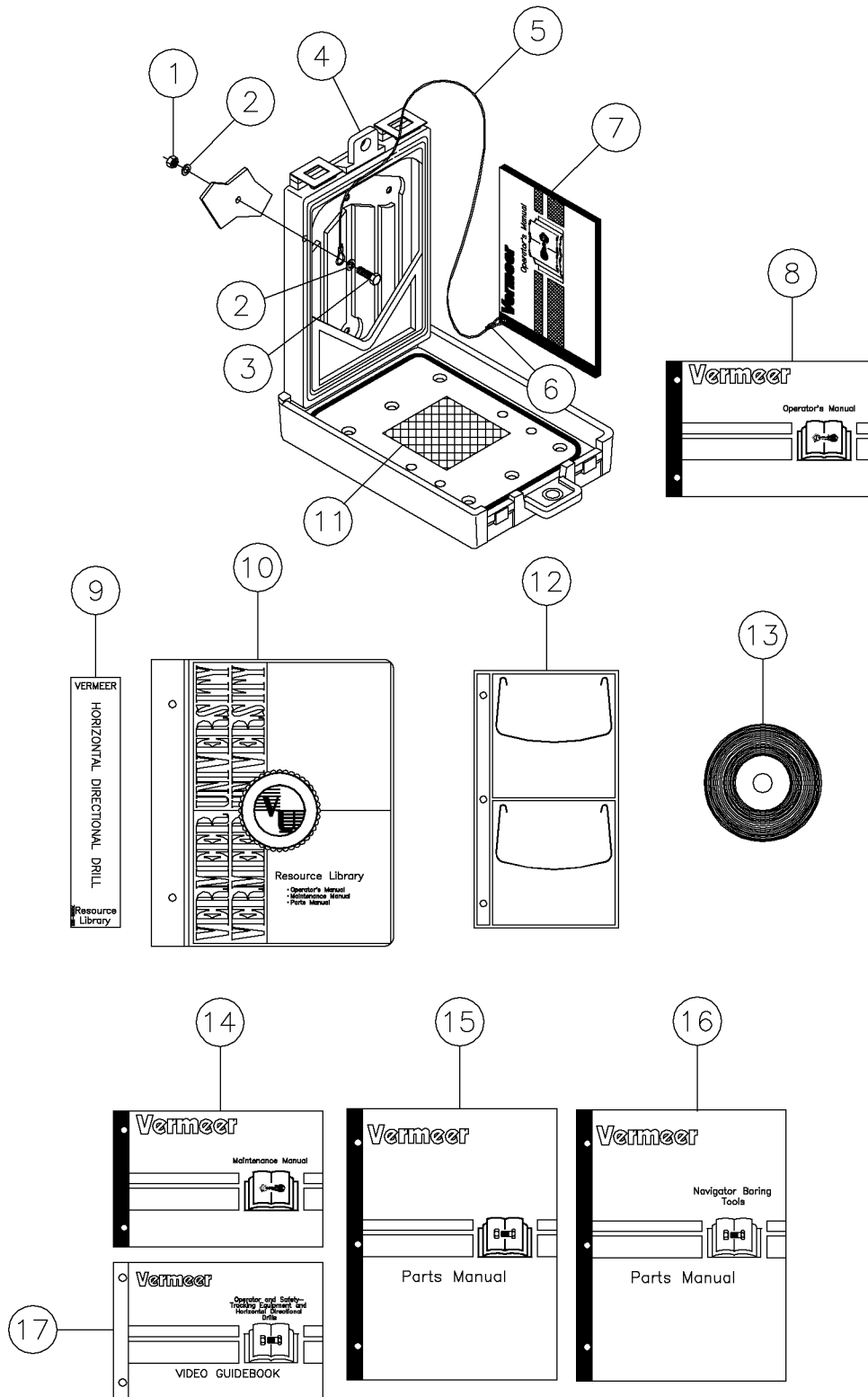
Decals - International Fig 1-13



Decals - International Fig 1-13

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		700IC354	DECAL- LOWER RIGHT CONSOLE	1	
2		700IC356	DECAL- LEFT JOYSTICK	1	
3		700IC357	DECAL- RIGHT JOYSTICK	1	
4		700IC353	DECAL- LEFT CONTROL	1	
5		700IC355	DECAL- UPPER RIGHT CONSOLE	1	

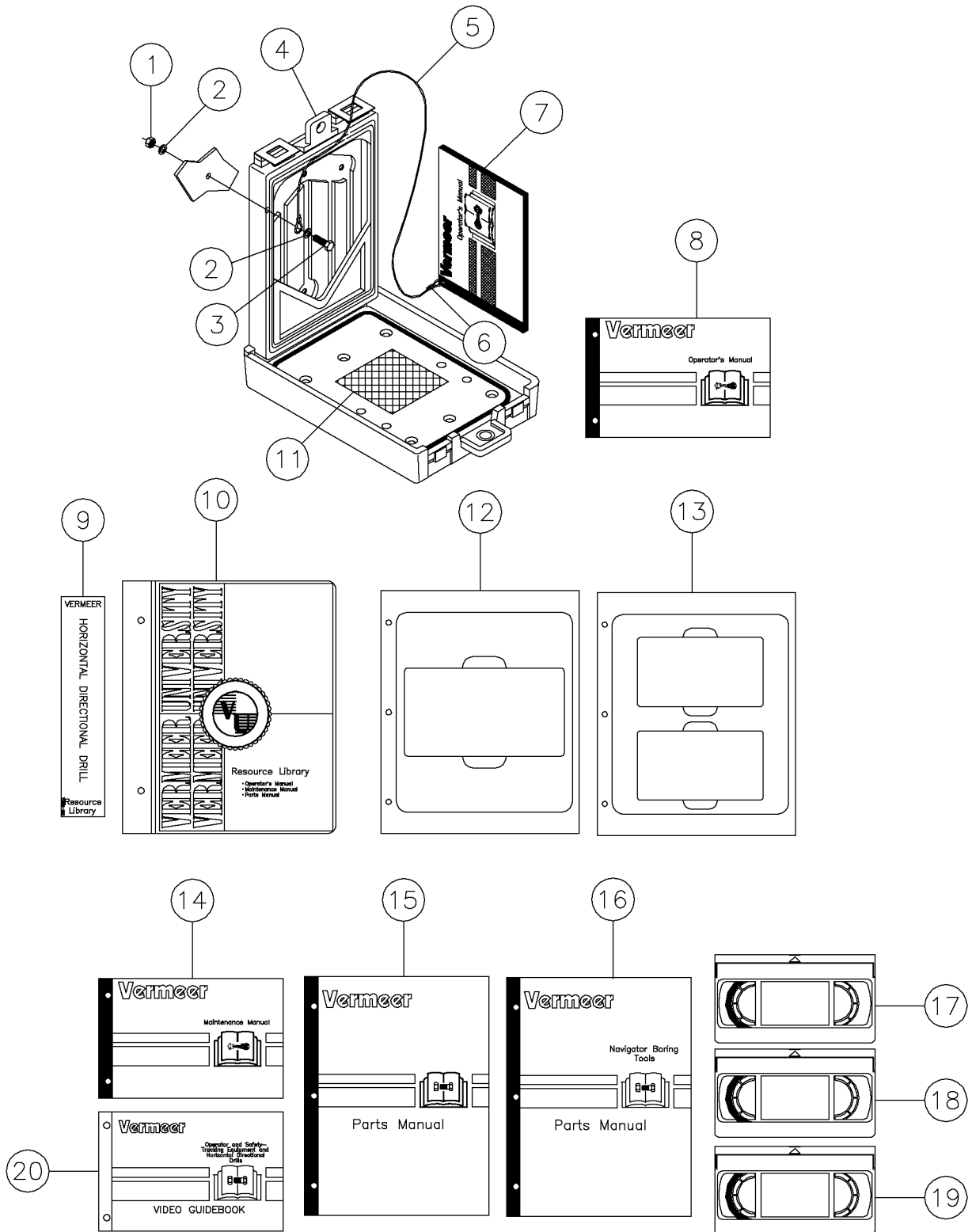
Resource Library (S/N 118-) Fig 1-14r02



Resource Library (S/N 118-) Fig 1-14r02

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2007		Update In Illustration & Parts List.
1		235732001	NUT - HEX - .25 - 20 - GR8 - YZ	3	
2		510337603	WASHER-FLATSTD-.25-.31X.75-.07-YZ	3	
3		235734001	BOLT-1/4-20X3/4 GR8 ZYC	3	
4		142410001	CASE-6"X9 XCX X1" OPERATOR MANUAL	1	
5		142954001	CABLE-.068DIA.NYLON CT.-36.00	1	
6		142423001	CRIMP-CABLE (FOR.068DIA.CABLE)	2	
7		296279146	MANUAL ASSY - CABLED D80X100/D100X120II o1.00	1	Inc. Ref. 5&6
	*	296292785	MANUAL ASSY-D80X100/D100X120II (SP) CABLED 1.01	1	Spanish - Inc. Ref. 5&6
8		105400X20	OM-D80X100/D100X120 II - EN - o1.00	1	
	*	117000Y10	OM-D80X100/D100X120II (SP) o1.01	1	Spanish
9		7000B222	DECAL -HORIZONTAL DRILL - RESOURCE LIB.	2	
10		144144001	NOTEBOOK BINDER - 2"-3 XCX	2	
11		2326940	DECAL-NOTICE TO OWNERS	1	
12	*	180010788	DVD - HOLDER	1	(S/N 118-)
13	*	296293637	HDD OPERATIONS & SAFETY DVD - NTSC VERSION	1	(S/N 118-)
14		105400X22	MM - D80X100/D100X120 II - EN - m1.00	1	
	*	117000Y12	MM-D80X100/D100X120II (SP) m1.01	1	Spanish
15		105400ZFP	PM-D80X100II - p1.00	1	
16		105400T09	PM - NAVIGATOR BORING TOOLS p4.00	1	
17	*	105400T90	HDD OPERATIONS & SAFETY VIDEO GUIDEBOOK	1	
		296260869	D80X100II OPERATIONS LIBRARIES		Inc. Ref. One Of 9, One Of 10, 11-13 And 17
		296260868	D80X100II TECHNICAL LIBRARY		Inc. Ref. One Of 10, 14 And 16

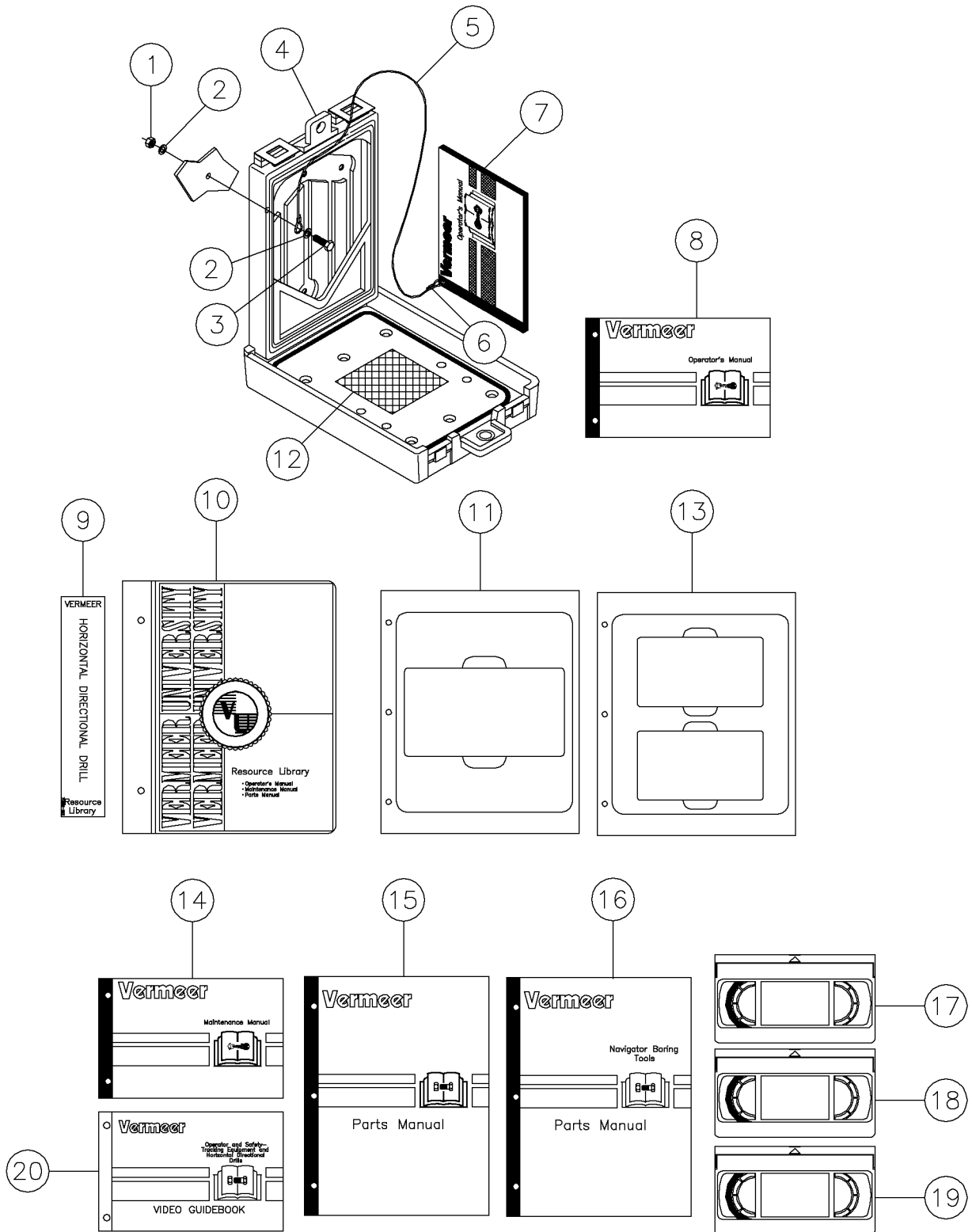
Resource Library Fig 1-14r01



Resource Library Fig 1-14r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	June, 2006		Update In Illustration.
1		235732001	NUT - HEX - .25 - 20 - GR8 - YZ	3	
2		510337603	WASHER-FLATSTD-.25-.31X.75-.07-YZ	3	
3		235734001	BOLT-1/4-20X3/4 GR8 ZINC PLTD	3	
4		142410001	CASE-6"X9 XCX X1" OPERATOR MANUAL	1	
5		142954001	CABLE-.068DIA.NYLON CT.-36.00	1	
6		142423001	CRIMP-CABLE (FOR.068DIA.CABLE)	2	
7		296279146	MANUAL ASSY-D100X120 II OM MINI CA	1	Inc. Ref. 5&6
8		105400X20	OM-D100X120 II - EN - o1.00	1	
9		7000B222	DECAL -HORIZONTAL DRILL - RESOURCE LIB.	2	
10		144144001	NOTEBOOK BINDER - 2"-3 XCX	2	
11		2326940	DECAL-NOTICE TO OWNERS	1	
12		144145001	VHS - HOLDER	1	
13		151815001	VHS HOLDER DOUBLE	1	
14		105400X22	MM - D100X120 II - EN - m1.00	1	
15		105400ZFP	PM-D100X120 II p1.00	1	
16		105400T09	PM - NAVIGATOR BORING TOOLS p4.00	1	
17		251803001		1	
18		296264887	VIDEO-OPERATIONS/SAFETY HDD&TRKNG EQUIP	1	
19		296264888		1	
20		105400T90	HDD OPERATIONS & SAFETY VIDEO GUIDEBOOK	1	
		296260869	D100X120 II OPERATIONS LIBRARY		Inc. Ref. One Of 9, One Of 10, And 11-12, And 17-20
		296260868	D100X120 II TECHNICAL LIBRARY		Inc. Ref. One Of 10, 14 And 16

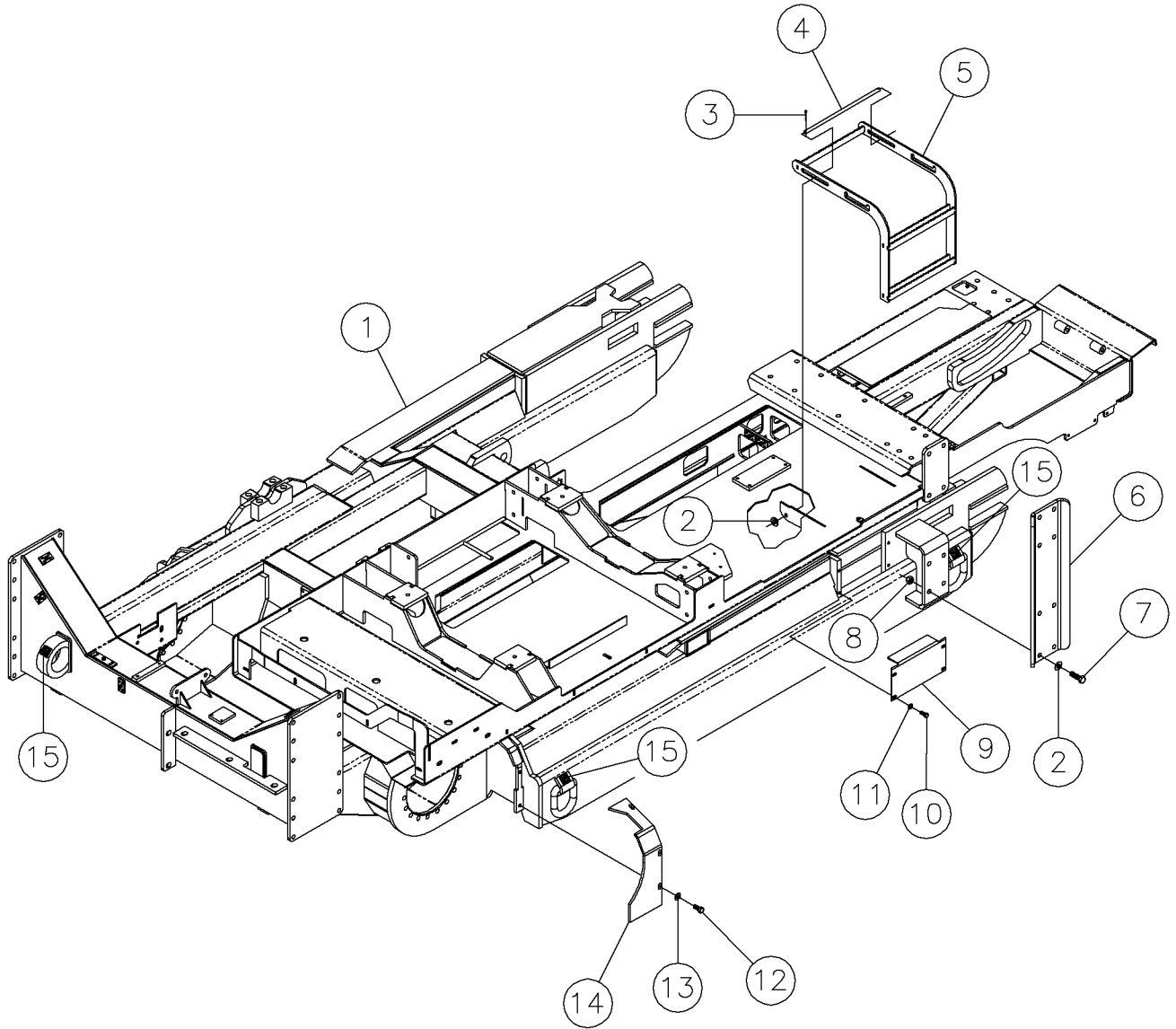
Resource Library Fig 1-14



Resource Library Fig 1-14

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		235732001	NUT - HEX - .25 - 20 - GR8 - YZ	3	
2		510337603	WASHER-FLATSTD-.25-.31X.75-.07-YZ	3	
3		235734001	BOLT-1/4-20X3/4 GR8 ZINC PLTD	3	
4		142410001	CASE-6"X9 XCX X1" OPERATOR MANUAL	1	
5		142954001	CABLE-.068DIA.NYLON CT.-36.00	1	
6		142423001	CRIMP-CABLE (FOR.068DIA.CABLE)	2	
7		296279146	MANUAL ASSY-D100X120 II OM MINI CA	1	Inc. Ref. 5&6
8		105400X20	OM-D100X120 II - EN - o1.00	1	
9		7000B222	DECAL -HORIZONTAL DRILL - RESOURCE LIB.	2	
10		144144001	NOTEBOOK BINDER - 2"-3 XCX	2	
11		2326940	DECAL-NOTICE TO OWNERS	1	
12		144145001	VHS - HOLDER	1	
13		151815001	VHS HOLDER DOUBLE	1	
14		105400X22	MM - D100X120 II - EN - m1.00	1	
15		105400ZFP	PM-D100X120 II p1.00	1	
16		105400T09	PM - NAVIGATOR BORING TOOLS p4.00	1	
17		251803001		1	
18		296264887	VIDEO-OPERATIONS/SAFETY HDD&TRKNG EQUIP	1	
19		296264888		1	
20		105400T90	HDD OPERATIONS & SAFETY VIDEO GUIDEBOOK	1	
		296260869	D100X120 II OPERATIONS LIBRARY		Inc. Ref. One Of 9, One Of 10, And 11-12, And 17-20
		296260868	D100X120 II TECHNICAL LIBRARY		Inc. Ref. One Of 10, 14 And 16

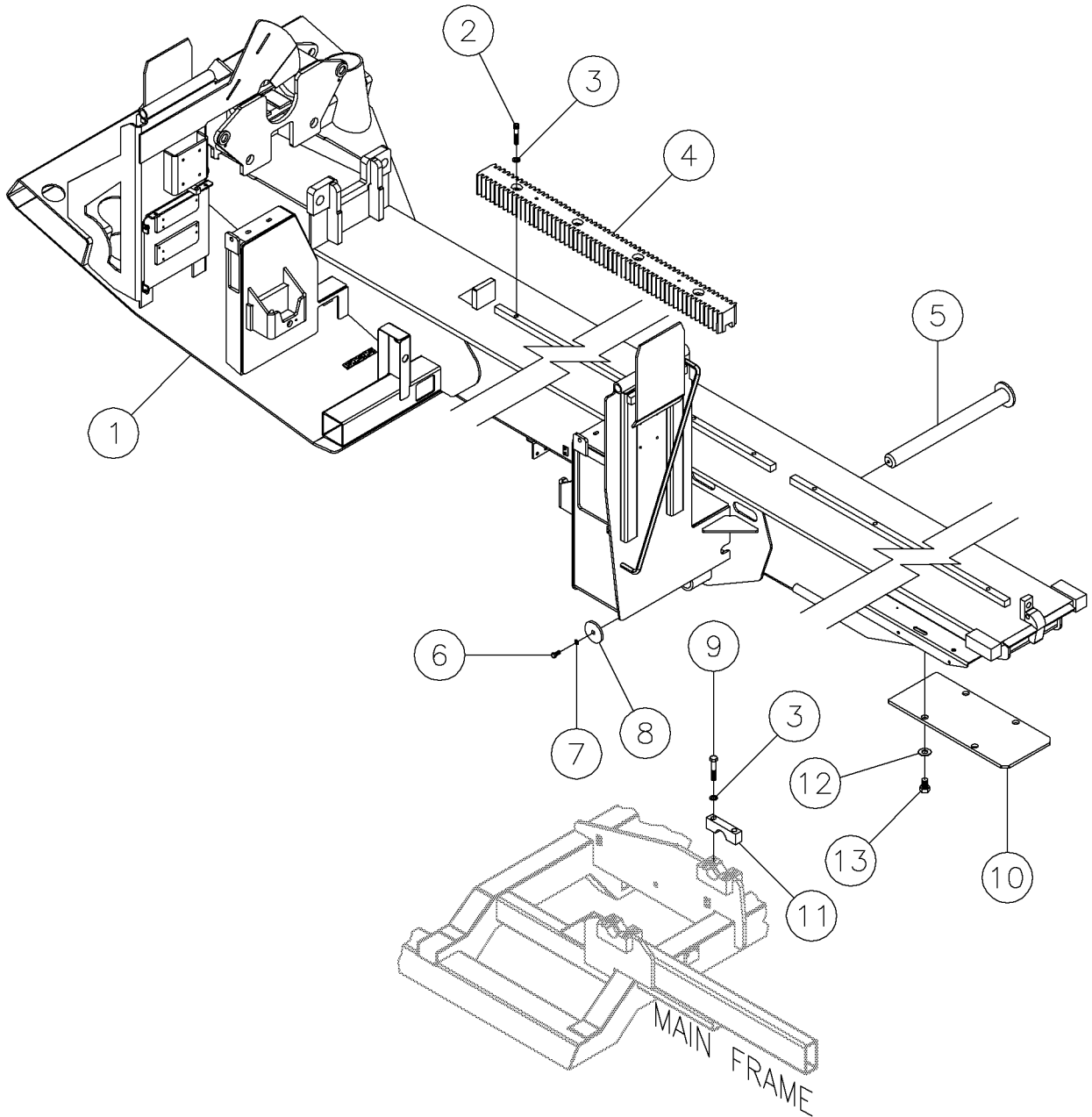
Main Frame Fig 2-1



Main Frame Fig 2-1

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296273766	MAIN FRAME WELDMENT	1	
2		235715001	WASHER-5/8 SAE HARD ZINC PLTD	12	
3		510011	COTTER PIN-1/8" X 1 1/2"	4	
4		296275835	ROD - LADDER GUIDE	2	
5		296273898	STEP FUEL FILL	1	
6		275439001	PLATE - ROPS BRACE	1	
7		145645001	BOLT - 5/8 - 11 X 2 GR.8 PLATED	8	
8		238221001	NUT - HEX -.63 - 11 - GR8 - YZ	8	
9		902157001	TRACK TIGHTNER SHIELD	2	
10		235726001	BOLT-3/8-16X3/4 GR8 HEX ZNCPLT	8	
11		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	8	
12		235737001	BOLT-1/2-13X1 1/4 GR8 ZINC PLT	6	
13		485025	WASHER-1/2 FLAT-HARDENED-YZ	6	
14		902162001	SPROCKET SHIELD	1	
		902162002	SPROCKET SHIELD	1	
15		70001834	DECAL - TIE DOWN POINT	5	

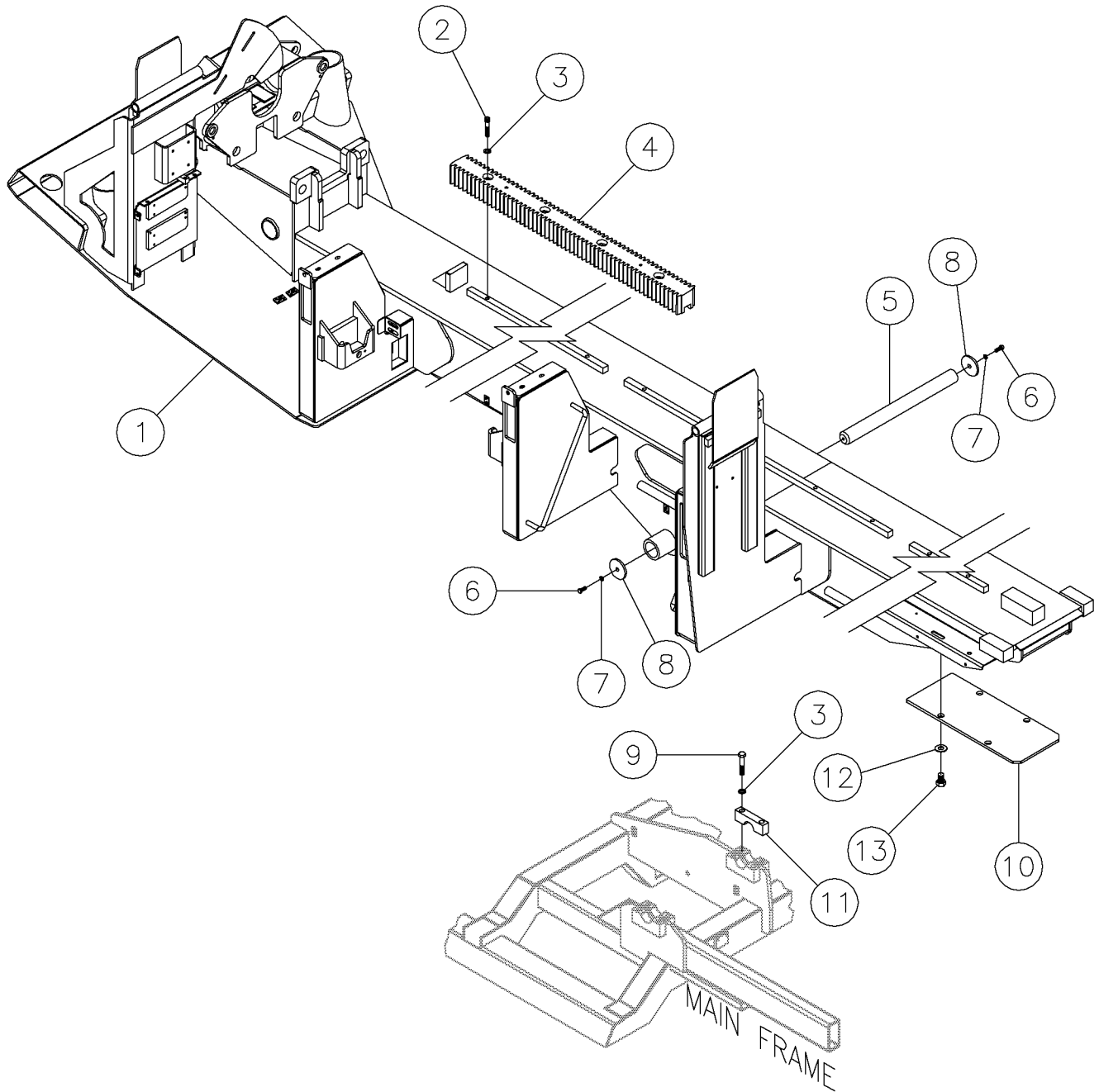
Rack Fig 2-2r01



Rack Fig 2-2r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2007		Update In Illustration.
1	*	296275620	RACK-D80X100 II	1	
2		280833001	BOLT - 3/4-10X3 1/2 SOC HEAD CS Z	20	
3		235717001	WASHER - 3/4" HARDENED FLAT YZ	20	
4		280750001	GEAR - RACK 2P 37T	5	
5		296279676	PIN - RACK PIVOT	1	
6		235737001	BOLT-1/2-13X1 1/4 GR8 ZINC PLT	1	
7		485025	WASHER-1/2 FLAT-HARDENED-YZ	1	
8		38884001	*PIVOT ROD SLUG	1	
9		124620034	BOLT-3/4-10X3 1/2 GR8 HEX ZINC	8	
10		293080001	PLATE - WEIGHT COVER	4	
11		285102001	CAP- RACK SUPPORT	4	
12		238892001	WASHER-1" HARDENED FLAT ZY	4	
13		388014	1"-8X1 1/2 GR8 HEX BOLT	4	

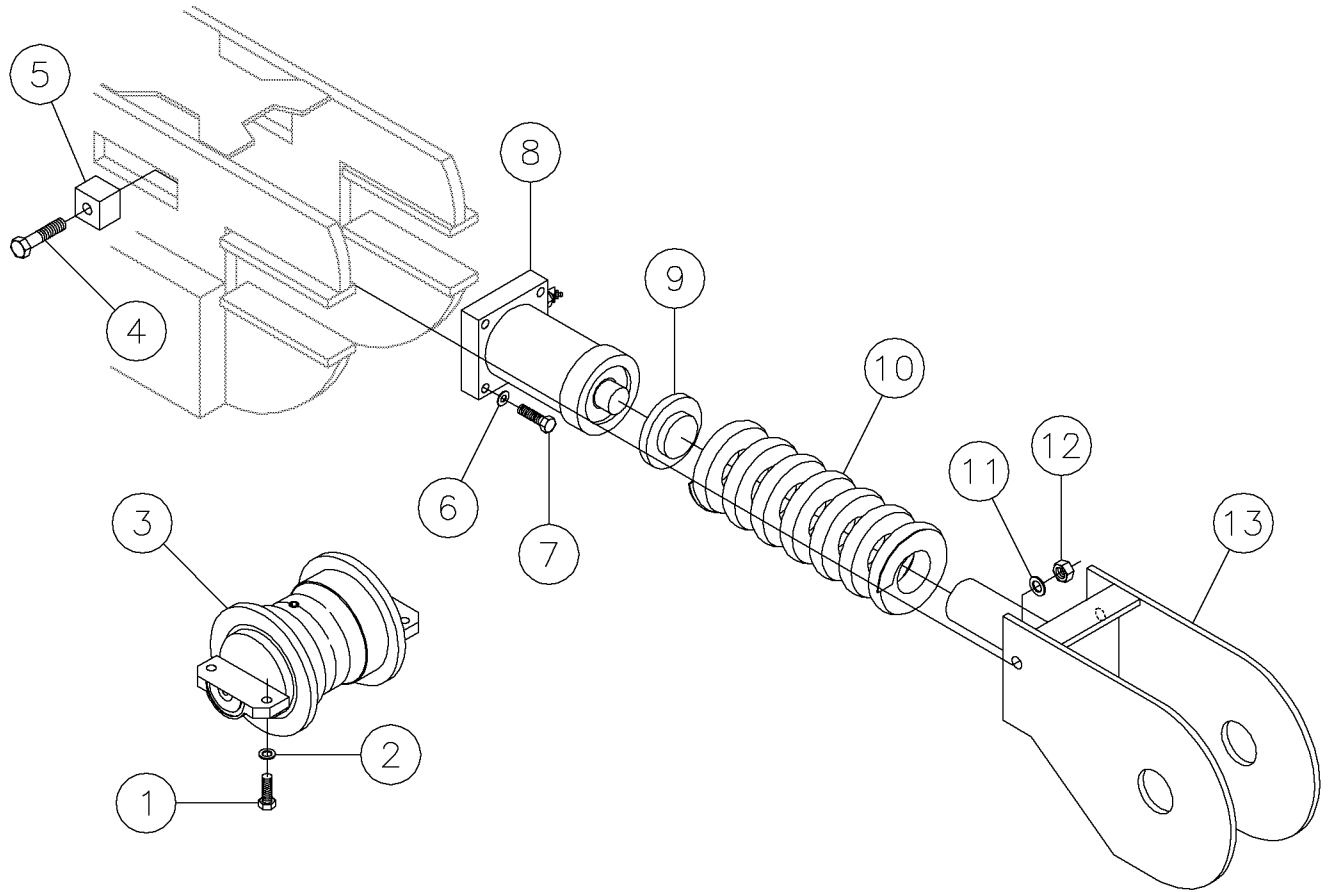
Rack Fig 2-2



Rack Fig 2-2

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296275620	RACK-D80X100 II	1	
2		280833001	BOLT - 3/4-10X3 1/2 SOC HEAD CS Z	20	
3		235717001	WASHER - 3/4" HARDENED FLAT YZ	20	
4		280750001	GEAR - RACK 2P 37T	5	
5		285105001	PIN-RACK PIVOT	1	
6		235737001	BOLT-1/2-13X1 1/4 GR8 ZINC PLT	2	
7		485025	WASHER-1/2 FLAT-HARDENED-YZ	2	
8		38884001	*PIVOT ROD SLUG	2	
9		124620034	BOLT-3/4-10X3 1/2 GR8 HEX ZINC	8	
10		293080001	PLATE - WEIGHT COVER	4	
11		285102001	CAP- RACK SUPPORT	4	
12		238892001	WASHER-1" HARDENED FLAT ZY	4	
13		388014	1"-8X1 1/2 GR8 HEX BOLT	4	

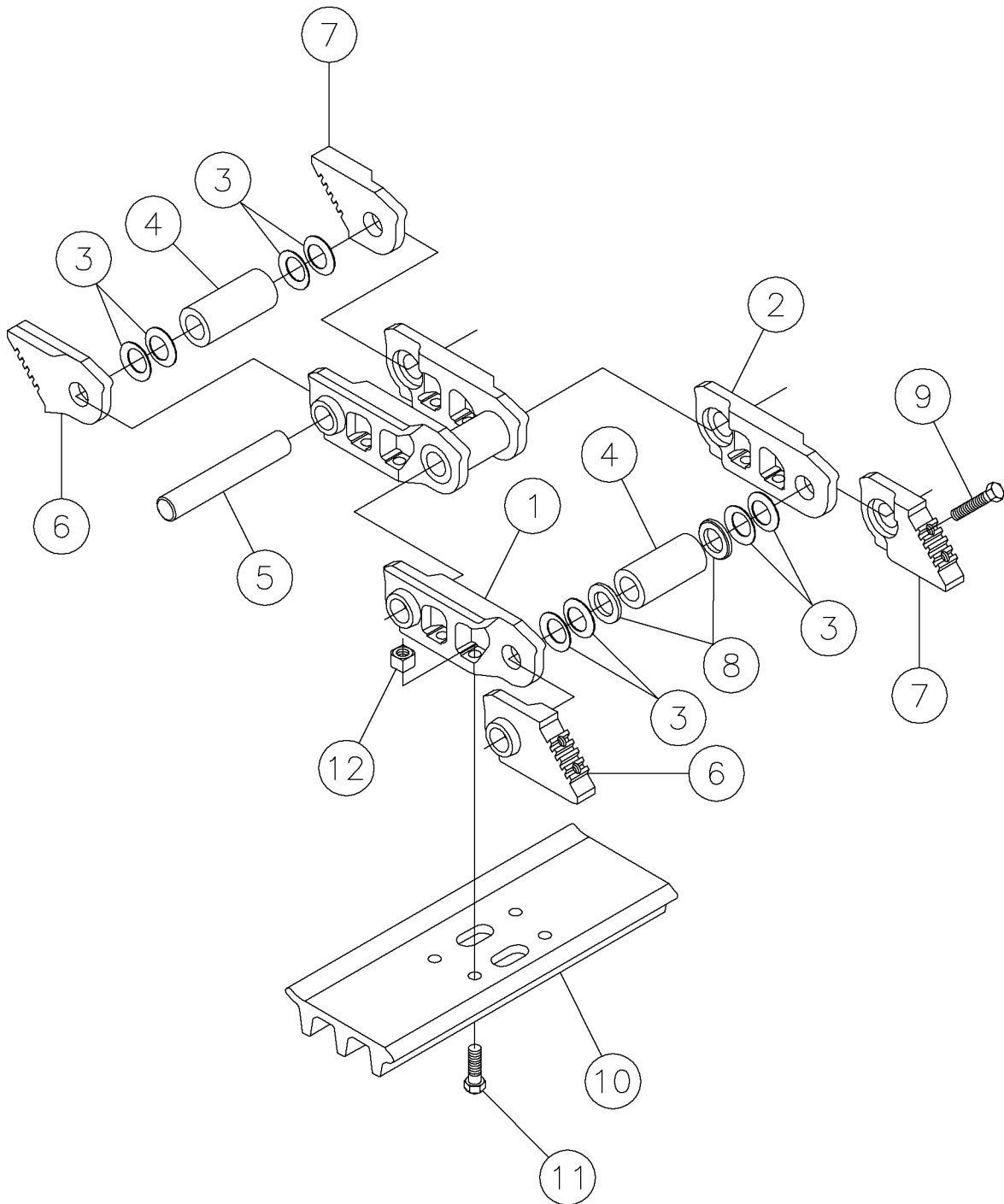
"Track Tightener, Roller & Chain " Fig 2-3



"Track Tightener, Roller & Chain " Fig 2-3

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		235737001	BOLT-1/2-13X1 1/4 GR8 ZINC PLT	64	
2		485025	WASHER-1/2 FLAT-HARDENED-YZ	64	
3		902013001	ROLLER-TRACK 3T4352	16	
4		250532001	BOLT-5/8-18 X 2 3/4 GR8 HEX Y/	4	
5		285769001	SPACER - TRACK ADJ BOLT	4	
6		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	8	
7		235720001	BOLT-3/8-16X1 3/4 6R8 ZINC PLT	8	
8		231104001	CYLINDER-3 1/2"X4 3/4"	2	Breakdown 13-4
9		69908001	PLATE-TRACK SPRING SUPPORT	2	
10		1803051	SPRING-COMP.1"WX4 1/2OD X 12"	2	
11		235715001	WASHER-5/8 SAE HARD ZINC PLTD	4	
12		250523001	BOLT-5/16-18 X 4 1/2 GR8 HEX Y	4	
13		901995001	BOX-TRACK END ROLLER	2	

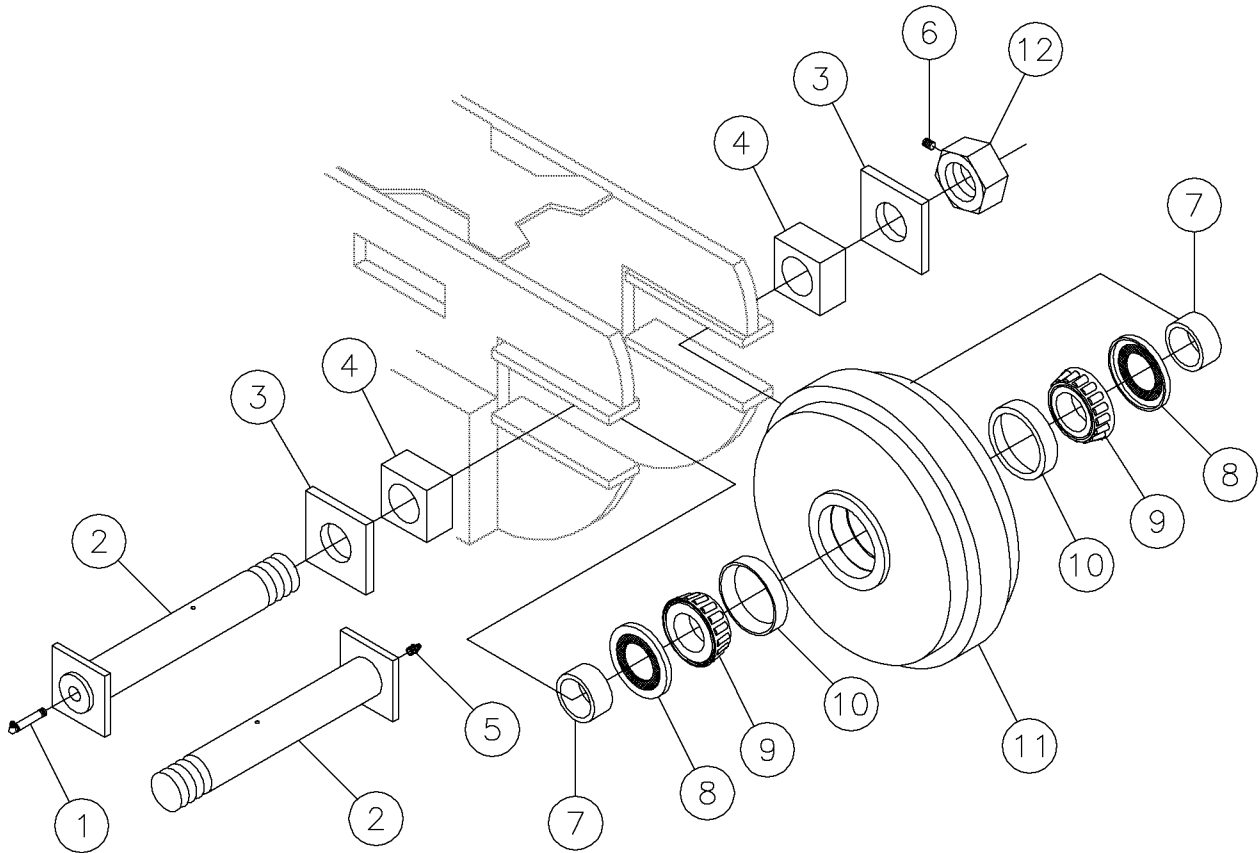
Track Chain Fig 2-4



Track Chain Fig 2-4

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		901767005	LINK-R.H.	44	
2		901767007	LINK-L.H.	44	
3		901766015	WASHER 6S3146	176	
4		901767009	BUSHING	43	
5		901767011	PIN	43	
6		296284753	LINK-SPLIT MASTER, COMPLETE, R.H.	1	
		NSS	LINK-SPLIT PIN SIDE, R. H.	1	NSS=Not Sold Separately
		NSS	LINK-SPLIT BUSHING SIDE, R. H.	1	NSS=Not Sold Separately
7		296284754	LINK-SPLIT MASTER, COMPLETE, L.H.	1	
		NSS	LINK-SPLIT, PIN SIDE, L. H.	1	NSS=Not Sold Separately
		NSS	LINK-SPLIT, BUSHING SIDE, L. H.	1	NSS=Not Sold Separately
8		901766011	SPACER 6S3145	36	
9		55945026	BOLT-9/16-18X2 3/4 GR12 .9 HEX	4	
10		296284755	GROUSER-18" TRIPLE	35	
		296284756	GROUSER-MASTER 18" TRIPLE	1	
11		12698001	BOLT-9/16-18X2 TRACK PAD	176	
12		26384001	NUT-IN 1319A 9/16-18 SQ.HD.	176	

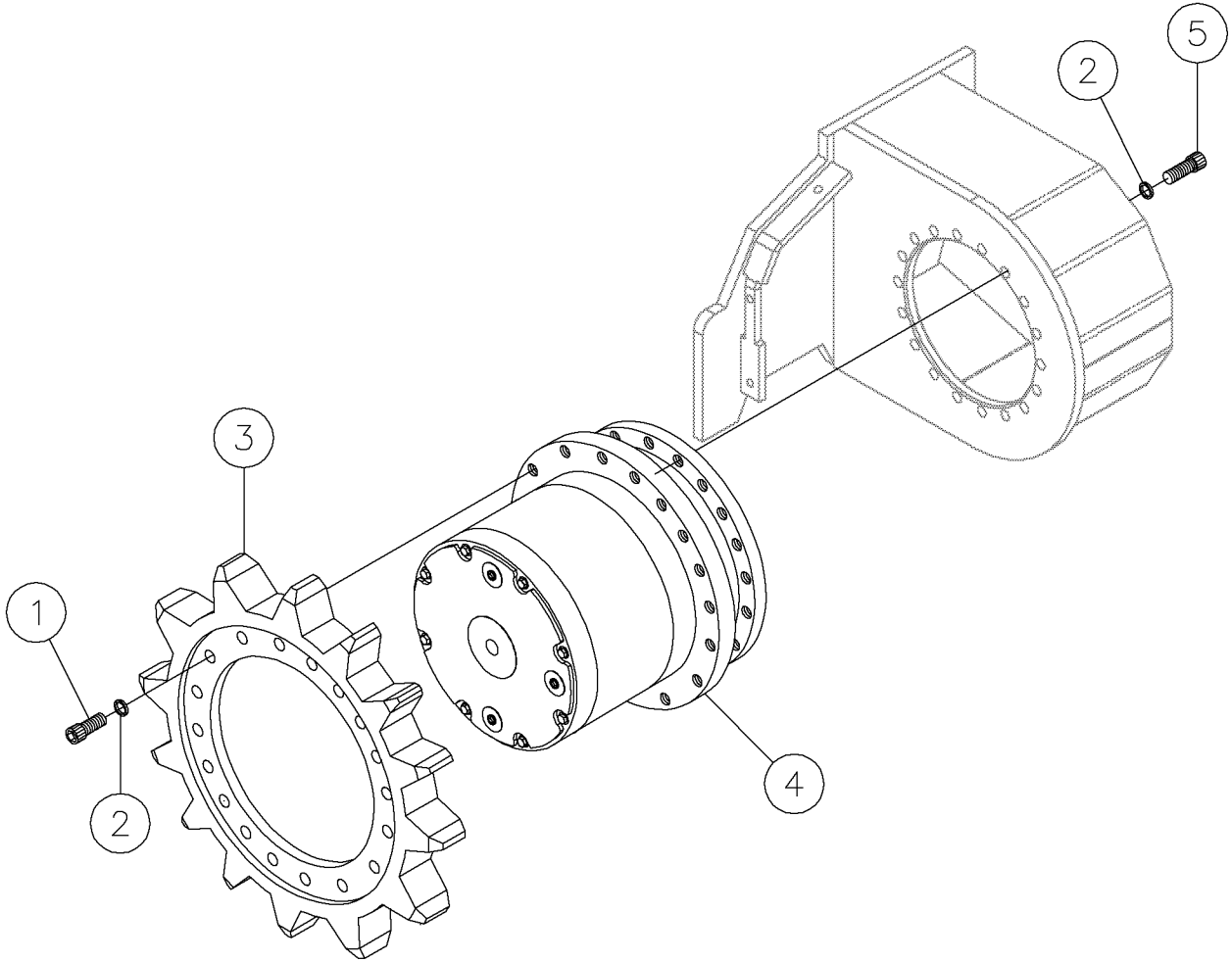
Track End Roller Fig 2-5



Track End Roller Fig 2-5

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		593001	ZERK-1/8" 90 DEG GRSE 1 13/16	1	
2		902770005	BOLT ASSY.-END IDLER ROLLER	2	
3		903257001	SPACER-IDLER ROLLER BOLT	4	
4		285770001	BLOCK - IDLER ROLLER BOLT	4	
5		586001	ZERK-1/8" ST NPT GREASE	1	
6		530001	SSS-3/8-16X1/2	2	
7		280532001	SPACER-IDLER ROLLER	4	
8		3967001	SEAL -#25091 C/R	4	
9		1716001	TIMKEN CONE-2 1/4" #387	4	
10		1715011	TIMKEN CUP 2" #3730	4	
11		217479003	ROLLER-TRACK END IDLER	2	Include 2 Of Ref. No. 10
12		6702003	NUT ASSY-END IDLER ROLLER	2	Include Ref. No. 13

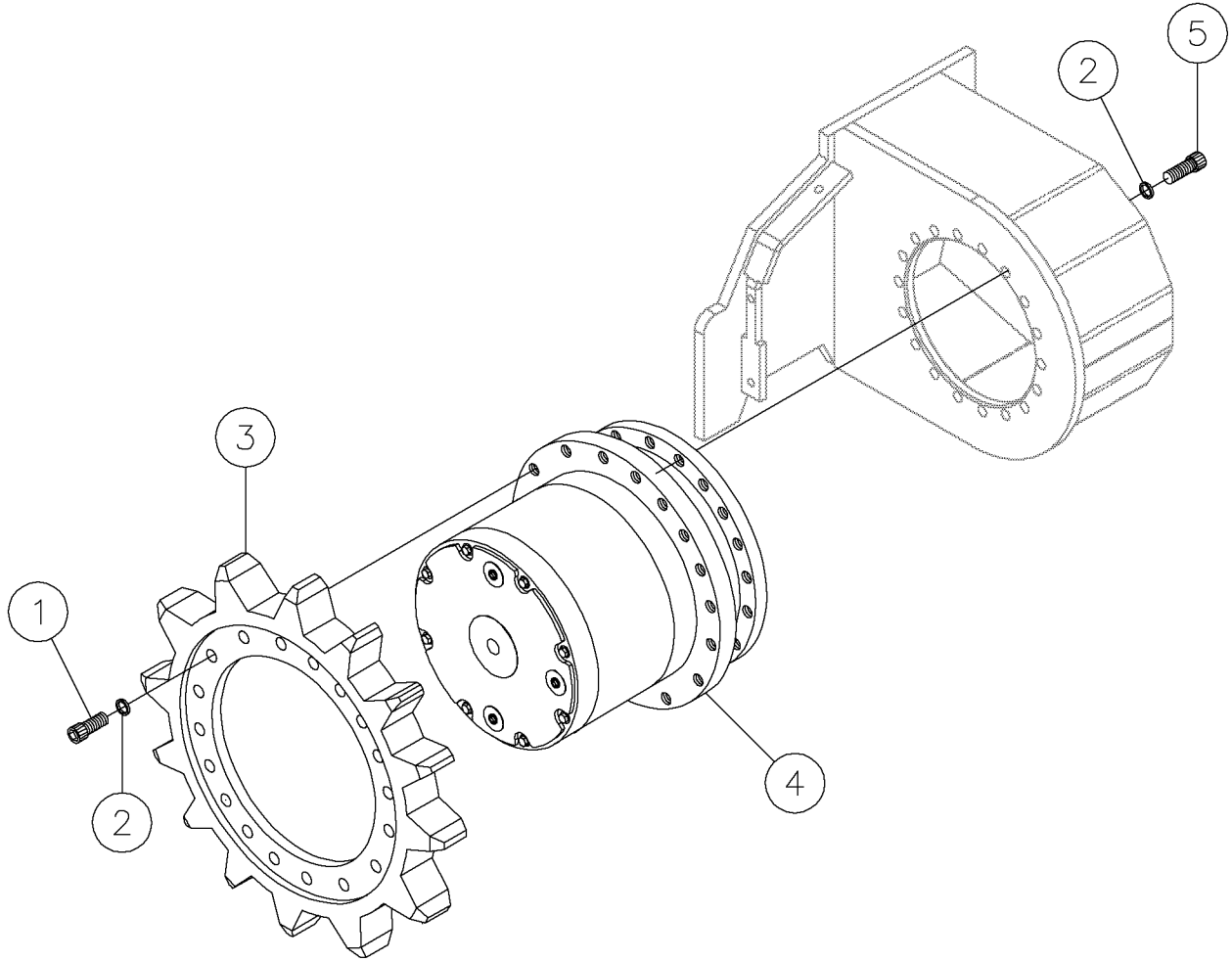
Track Planetary Fig 2-6r01



Track Planetary Fig 2-6r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	June, 2006		Update In Parts List.
1		102639001	BOLT-M16X65 DIN931 GR.12.9	32	
2		64109001	WASHER-M16 LOCK	68	
3		285757001	SPROCKET - 19T F/C72750	2	
4		619554001	PLANETARY-TORQUE HUB	2	Breakdown Fig. 13-71
5		249885001	BOLT-M16X45 12.9 SOCHD C/S ZNC	36	

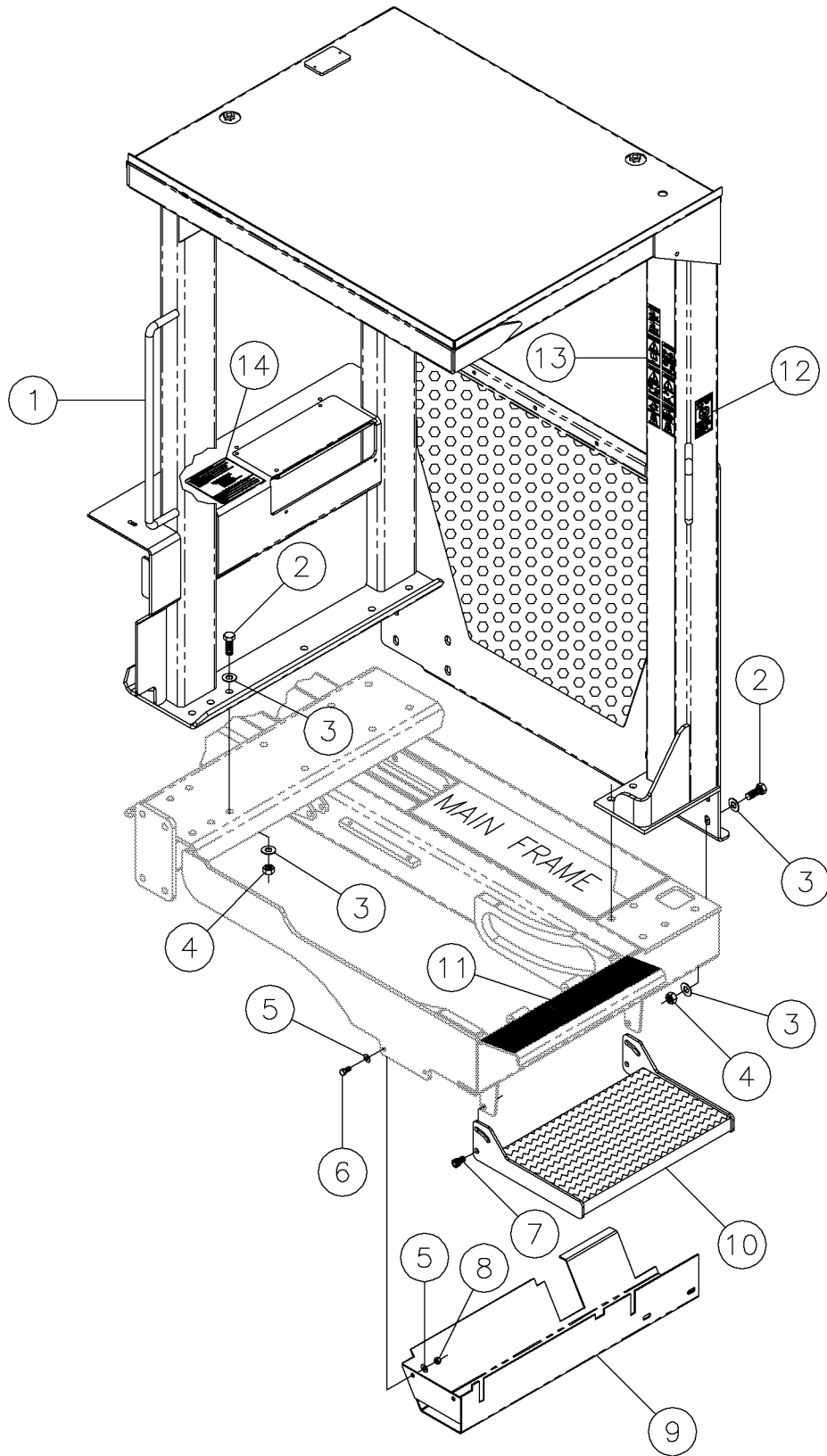
Track Planetary Fig 2-6



Track Planetary Fig 2-6

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		102639001	BOLT-M16X65 DIN931 GR.12.9	32	
2		64109001	WASHER-M16 LOCK	68	
3		285757001	SPROCKET - 19T F/C72750	2	
4		619554001	PLANETARY-TORQUE HUB	2	
5		249885001	BOLT-M16X45 12.9 SOCHD C/S ZNC	36	

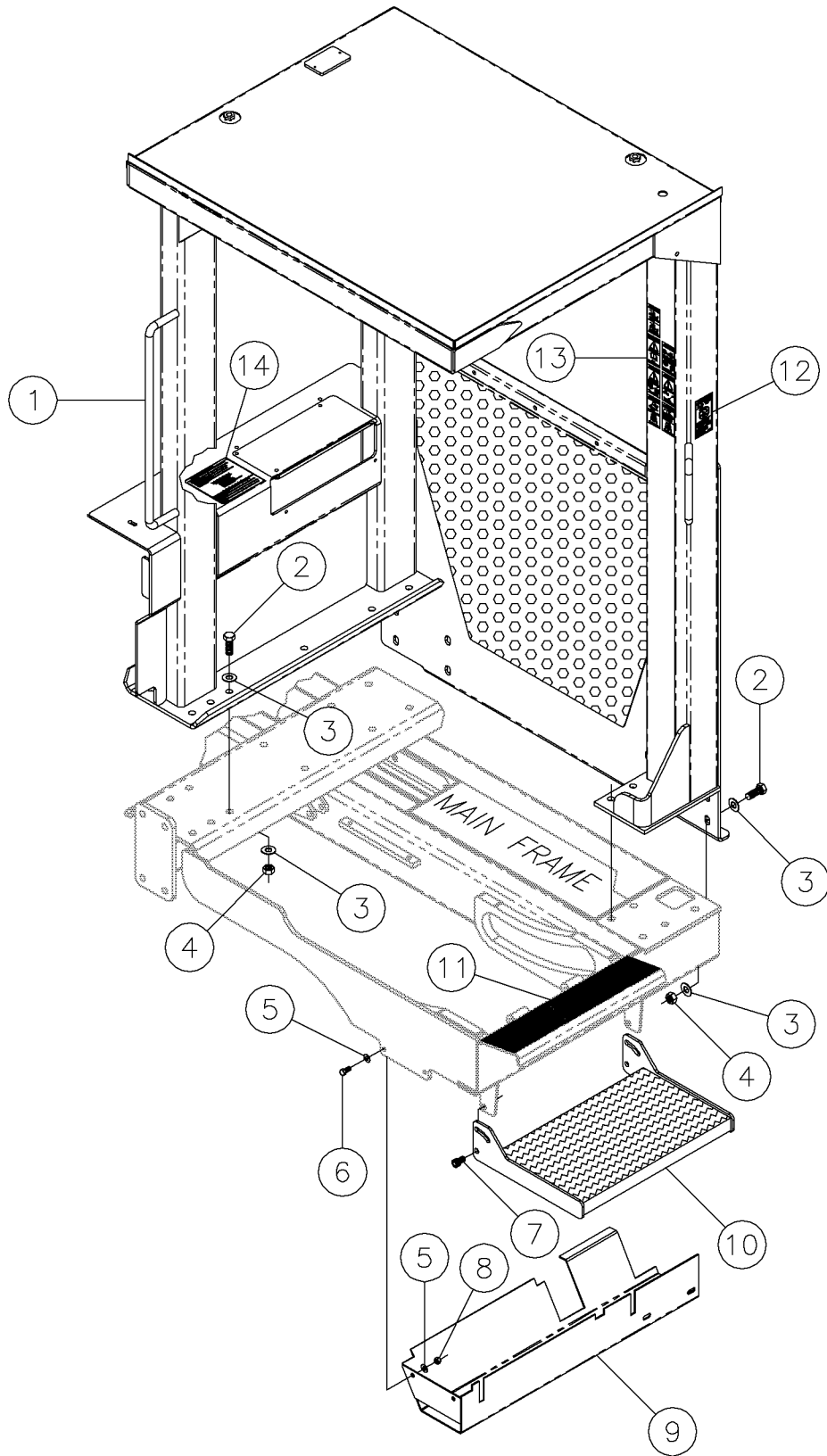
ROPS Fig 2-7r01



ROPS Fig 2-7r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	June, 2006		Update In Parts List.
1		296273773	ROPS-D100X120 II	1	
2		238220001	BOLT-5/8-11X1 3/4 Gr 8 HX YZC - Rplcd By 230728001	25	
3		235715001	WASHER-5/8 SAE HARD ZINC PLTD	50	
4		238221001	NUT - HEX -.63 - 11 - GR8 - YZ	25	
5		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	8	
6		235726001	BOLT-3/8-16X3/4 GR8 HEX ZNCPLT	4	
7		240056001	SCREW-SHSS-.50X.50-.38-16THD-CZ	4	
8		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	4	
9		296275828	TRAY - WIRE HARNESS	1	
10		296275977	STEP - OPERATOR STATION	1	
11		5776001	TAPE-SAFETY WALK 4 WIDE	A/R	Specify Length
12		7000C446	DECAL - NO WELD	1	Domestic
		700IC446	DECAL - NO WELD	1	International
13		7000C419	DECAL - WARNING - D100X120 II	1	Domestic
		700IC419	DECAL- WARNING - D100X120 II	1	International
14		2326940	DECAL-NOTICE TO OWNERS	1	

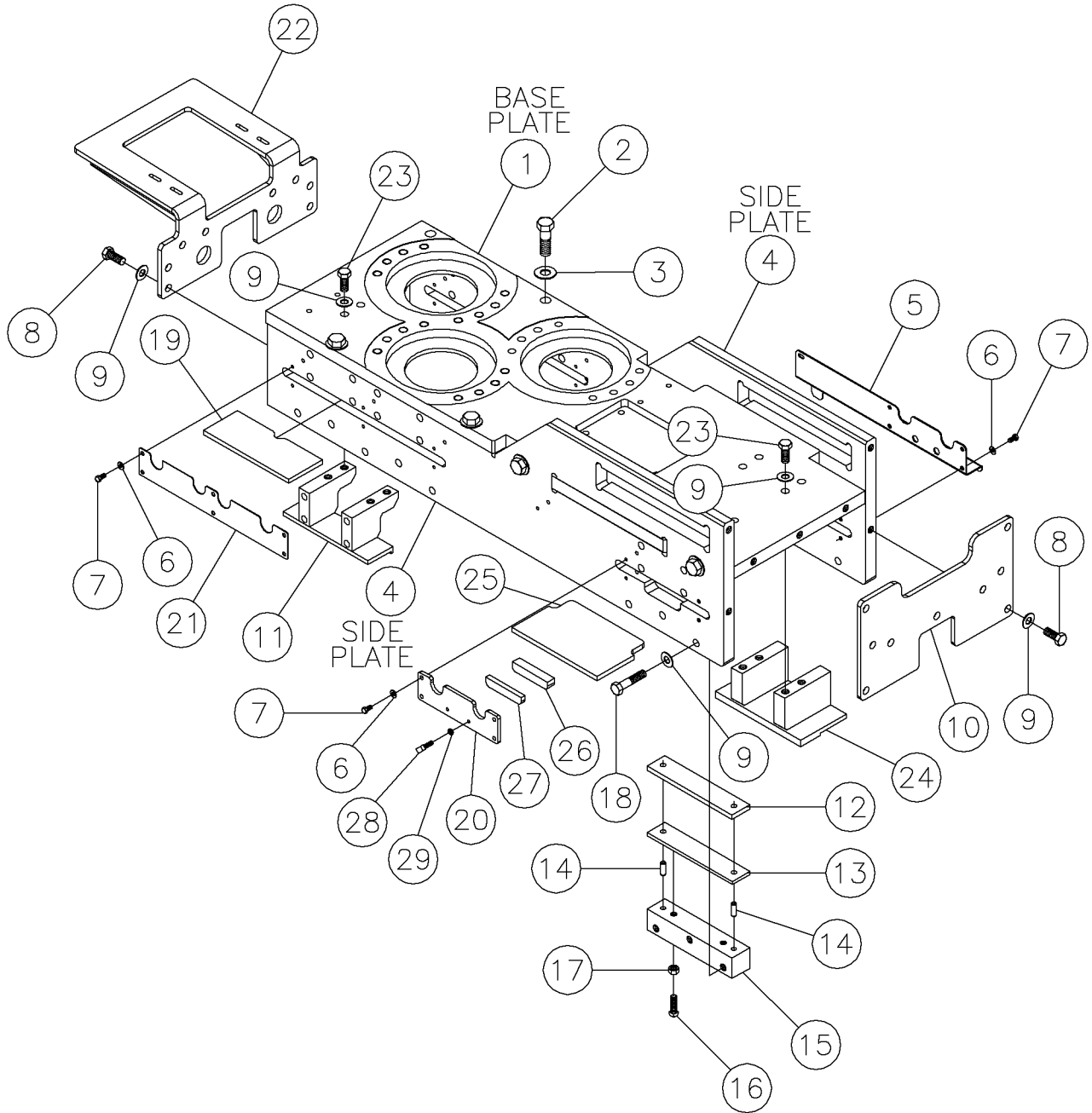
ROPS Fig 2-7



ROPS Fig 2-7

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296273773	ROPS-D100X120 II	1	
2		238220001	BOLT-5/8-11X1 3/4 Gr 8 HX YZC - Rplcd By 230728001	25	
3		235715001	WASHER-5/8 SAE HARD ZINC PLTD	50	
4		238221001	NUT - HEX -.63 - 11 - GR8 - YZ	25	
5		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	8	
6		235726001	BOLT-3/8-16X3/4 GR8 HEX ZNCPLT	4	
7		240056001	SCREW-SHSS-.50X.50-.38-16THD-CZ	4	
8		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	4	
9		296275828	TRAY - WIRE HARNESS	1	
10		296275977	STEP - OPERATOR STATION	1	
11		5776001	TAPE-SAFETY WALK 4 WIDE	A/R	Specify Length
12		7000C446	DECAL - NO WELD	1	
		700IC446	DECAL - NO WELD	1	
13		7000C419	DECAL - WARNING - D100X120 II	1	
		700IC419	DECAL- WARNING - D100X120 II	1	
14		2326940	DECAL-NOTICE TO OWNERS	1	

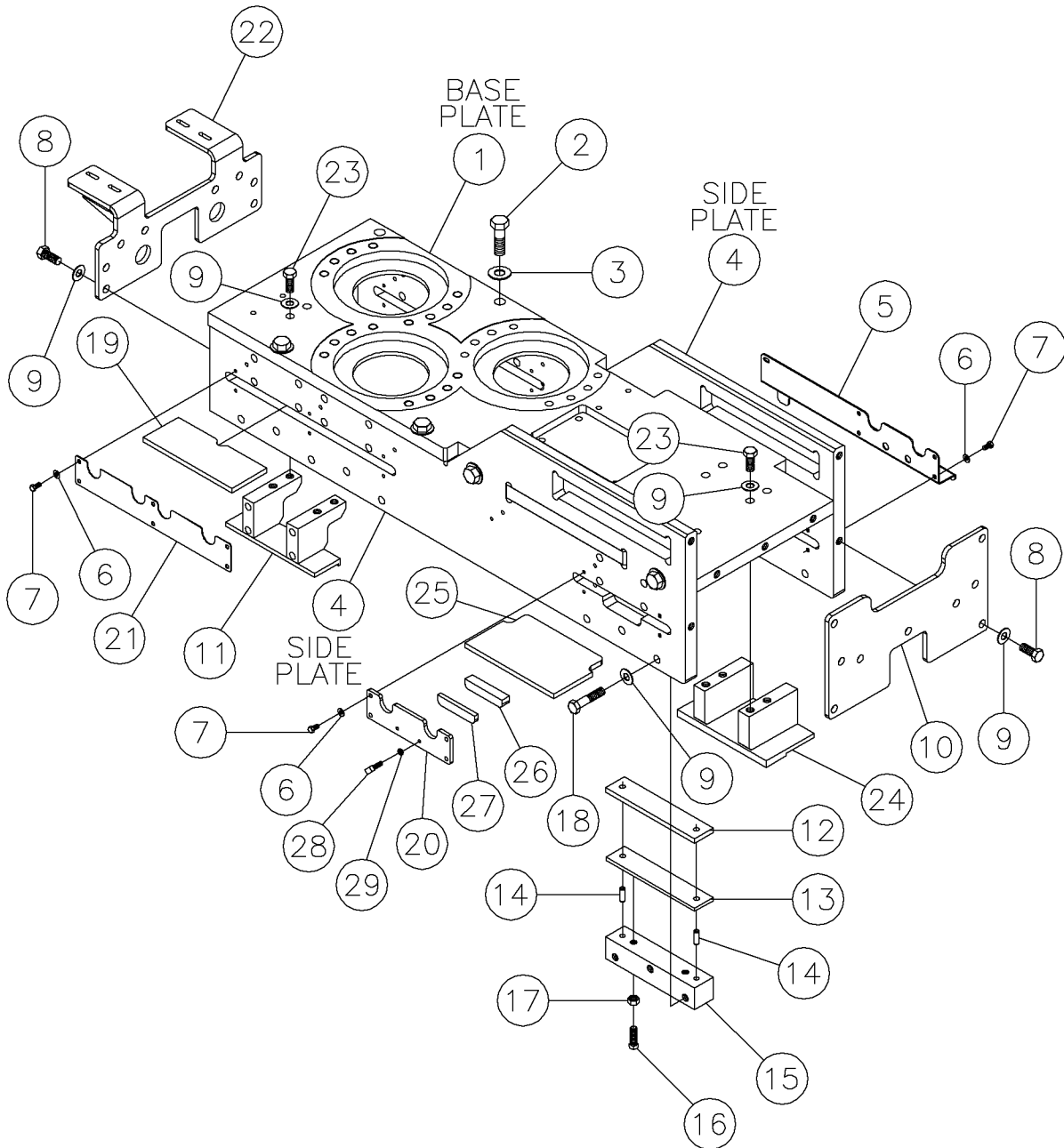
Carriage (S/N 148-) Fig 2-8r02



Carriage (S/N 148-) Fig 2-8r02

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	February, 2007		Change P/N
1		296279639	TOP-GEARBOX CARRIAGE	1	
2		238887001	BOLT-1-8 X 3 HHCS GR8 ZY	8	
3		510337619	WASHER-FLATSTD-1.00-1.06X2.50-.15-YZ	8	
4		296279637	SIDE PLATE-GEARBOX CARRIAGE	2	
5		296275861	PLATE - PROXIMITY SWITCH	1	
6		235713001	WASHER-FLATSTRL-.38-.41X.81-.06-YA-A325	21	
7		235727001	BOLT-3/8-16X1 GR8 HEX ZYC	21	
8		243921001	BOLT-3/4 - 10 X 2 1/4 GR8 ZP	15	
9		295016001	WASHER-FLAT SAE-.75-.81X1.50-14-YZ	53	
10		296273751	FRONT - PLATE CARRAIGE	1	
11		296275686	SUBWELD - SLIDE BACKER	2	
12		296273754	SLIDE-CARRIAGE BOTTOM	4	
13		296273755	BACKER BAR - BOTTOM SLIDE	4	
14		609338001	DOWEL PIN-1/2X1 1/2	8	
15		296273753	BAR - SLIDE BASE	4	
16		296279583	SCREW - SQSET - .63 - 11 X 2.50 - YZ	8	
17		250514001	NUT -5/8NC JAM Y/ZINC	8	
18		124620034	BOLT-3/4-10X3 1/2 GR8 HEX ZINC	12	
19		296275685	SLIDE - GEARBOX CARRIAGE	2	
20		296273962	COVER - GEARBOX CARRIAGE SLIDE	2	
21		296275780	COVER - GEARBOX CARRAIGE	2	
22	*	296289823	WELD - CARRIAGE BRACKET	1	(S/N 148-)
23		238880001	BOLT-3/4-10X2 1/2 HHCS GR8 ZY	26	
24		296275692	SUBWELD - SLIDE BACKER FRONT	2	
25		296275693	SLIDE - GEARBOX CARRIAGE - FRONT	2	
26		296273960	SLIDE - GEARBOX CARRIAGE SIDE	2	
27		296273961	BACKER PLATE - CARRIAGE SLIDE	2	
28		240057001	SQ HSS-3/8-16X1 1/4 ZINC PLTD	4	
29		250576001	NUT-3/8 NC HEX JAM W/Y-ZINC	4	

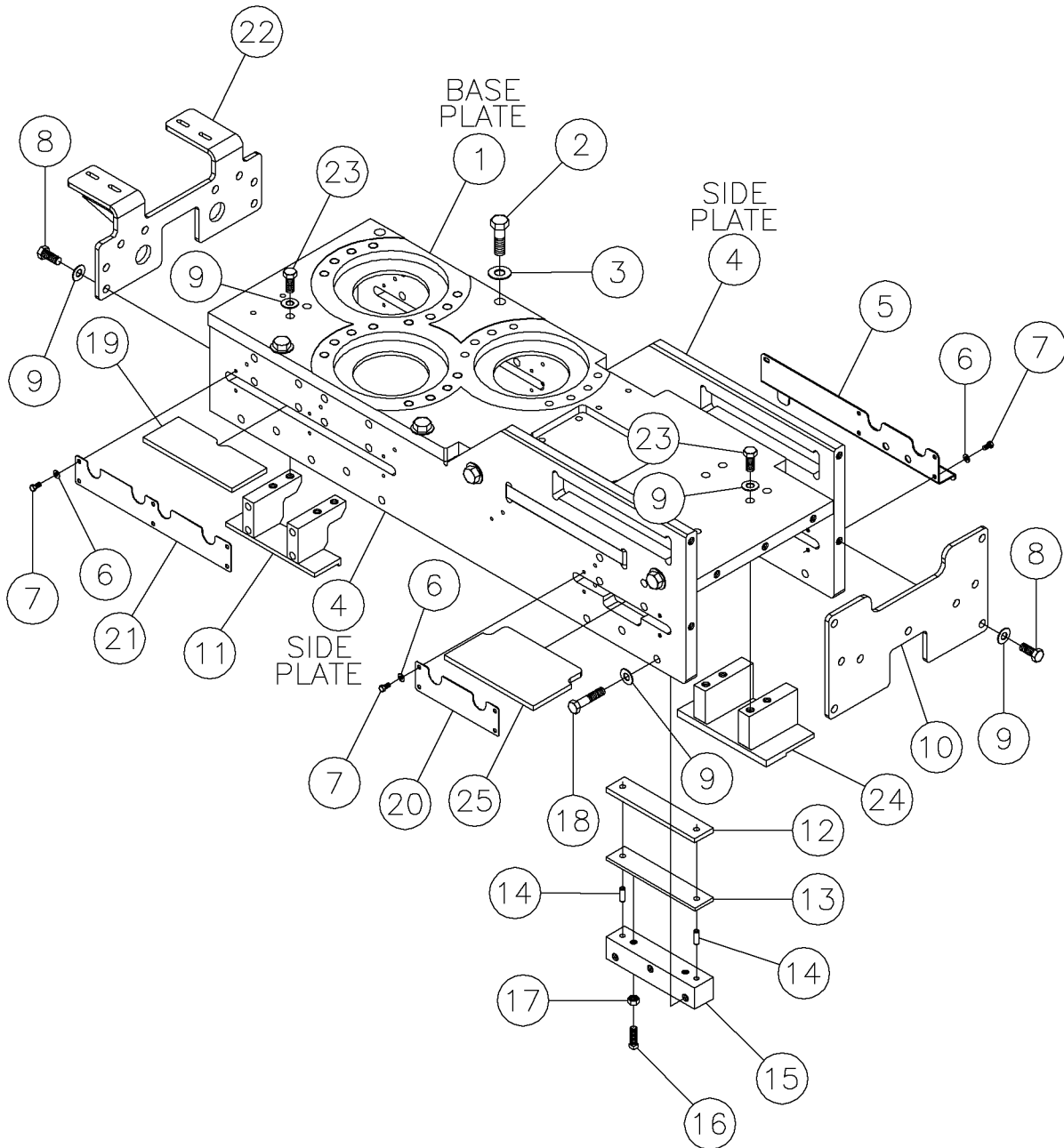
Carriage Fig 2-8r01



Carriage Fig 2-8r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2006		Update In Illustration & Parts List.
1		296279639	TOP-GEARBOX CARRIAGE	1	
2		238887001	BOLT-1-8 X 3 HHCS GR8 ZY	8	
3		510337619	WASHER-FLATSTD-1.00-1.06X2.50-.15-YZ	8	
4		296279637	SIDE PLATE-GEARBOX CARRIAGE	2	
5		296275861	PLATE - PROXIMITY SWITCH	1	
6		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	21	
7		235727001	BOLT-3/8-16X1 GR8 HEX ZYC	21	
8		243921001	BOLT-3/4 - 10 X 2 1/4 GR8 ZP	15	
9		295016001	WASHER-FLAT SAE-.75-.81X1.50-14-YZ	53	
10		296273751	FRONT - PLATE CARRAIGE	1	
11		296275686	SUBWELD - SLIDE BACKER	2	
12		296273754	SLIDE-CARRIAGE BOTTOM	4	
13		296273755	BACKER BAR - BOTTOM SLIDE	4	
14		609338001	DOWEL PIN-1/2X1 1/2	8	
15		296273753	BAR - SLIDE BASE	4	
16		296279583	SCREW - SQSET - .63 - 11 X 2.50 - YZ	8	
17		250514001	NUT -5/8NC JAM Y/ZINC	8	
18		124620034	BOLT-3/4-10X3 1/2 GR8 HEX ZINC	12	
19		296275685	SLIDE - GEARBOX CARRIAGE	2	
20		296273962	COVER - GEARBOX CARRIAGE SLIDE	2	
21		296275780	COVER - GEARBOX CARRAIGE	2	
22		296275679	WELD - CARRIAGE BRACKET	1	
23		238880001	BOLT-3/4-10X2 1/2 HHCS GR8 ZY	26	
24		296275692	SUBWELD - SLIDE BACKER FRONT	2	
25		296275693	SLIDE - GEARBOX CARRIAGE - FRONT	2	
26		296273960	SLIDE - GEARBOX CARRIAGE SIDE	2	
27		296273961	BACKER PLATE - CARRIAGE SLIDE	2	
28		240057001	SQ HSS-3/8-16X1 1/4 ZINC PLTD	4	
29		250576001	NUT-3/8 NC HEX JAM W/Y-ZINC	4	

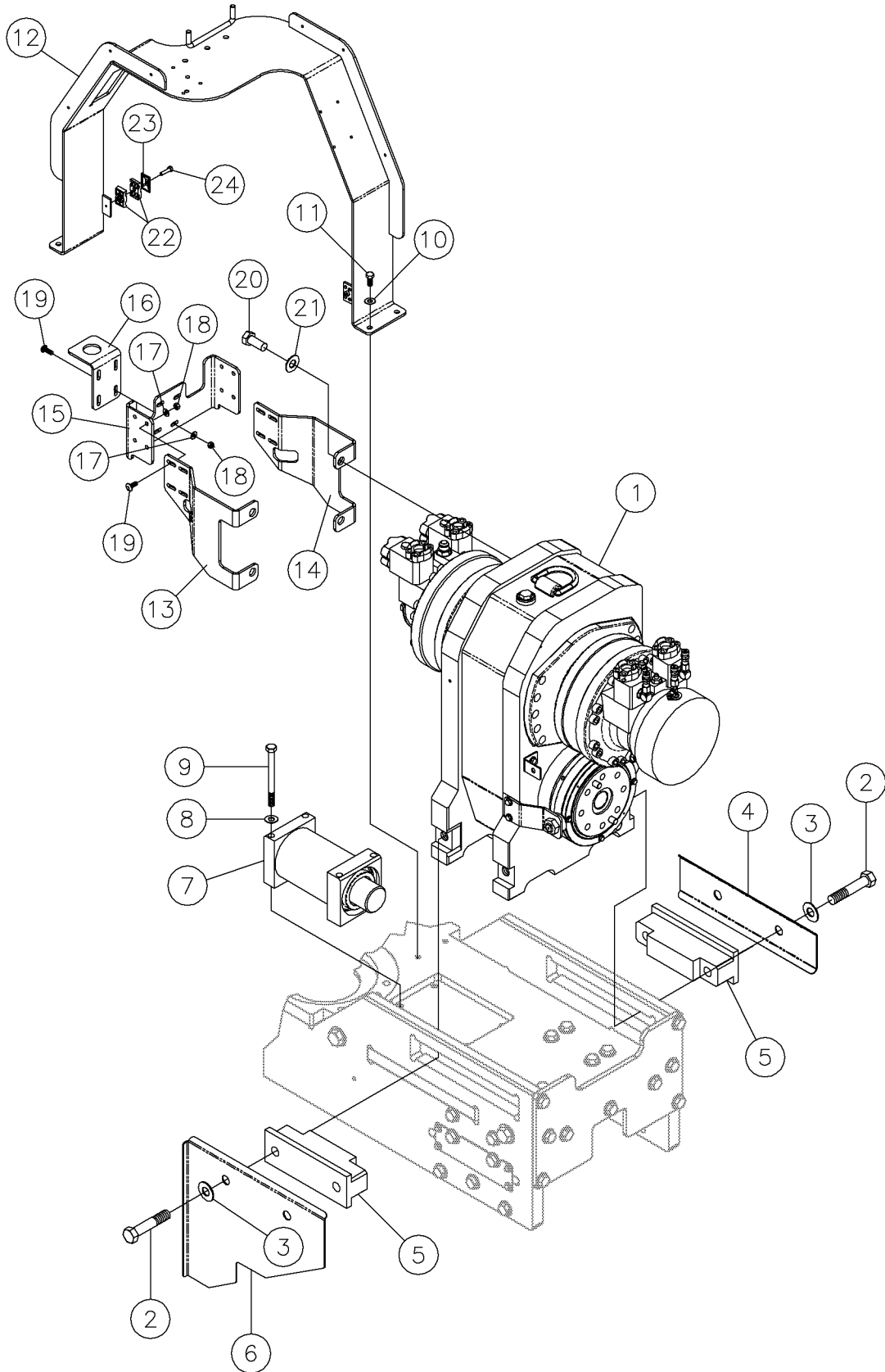
Carriage Fig 2-8



Carriage Fig 2-8

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296279639	TOP-GEARBOX CARRIAGE	1	
2		238887001	BOLT-1-8 X 3 HHCS GR8 ZY	8	
3		510337619	WASHER-FLATSTD-1.00-1.06X2.50-.15-YZ	8	
4		296279637	SIDE PLATE-GEARBOX CARRIAGE	2	
5		296275861	PLATE - PROXIMITY SWITCH	1	
6		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	21	
7		235726001	BOLT-3/8-16X3/4 GR8 HEX ZNCPLT	21	
8		243921001	BOLT-3/4 - 10 X 2 1/4 GR8 ZP	15	
9		295016001	WASHER-FLAT SAE-.75-.81X1.50-14-YZ	53	
10		296273751	FRONT - PLATE CARRAIGE	1	
11		296275686	SUBWELD - SLIDE BACKER	2	
12		296273754	SLIDE-CARRIAGE BOTTOM	4	
13		296273755	BACKER BAR - BOTTOM SLIDE	4	
14		609338001	DOWEL PIN-1/2X1 1/2	8	
15		296273753	BAR - SLIDE BASE	4	
16		296279583	SCREW - SQSET - .63 - 11 X 2.50 - YZ	8	
17		250514001	NUT -5/8NC JAM Y/ZINC	8	
18		124620034	BOLT-3/4-10X3 1/2 GR8 HEX ZINC	12	
19		296275685	SLIDE - GEARBOX CARRIAGE	2	
20		296273962	COVER - GEARBOX CARRIAGE SLIDE	1	
21		296275780	COVER - GEARBOX CARRAIGE	2	
22		296275679	WELD - CARRIAGE BRACKET	1	
23		238880001	BOLT-3/4-10X2 1/2 HHCS GR8 ZY	26	
24		296275692	SUBWELD - SLIDE BACKER FRONT	2	
25		296275693	SLIDE - GEARBOX CARRIAGE - FRONT	2	

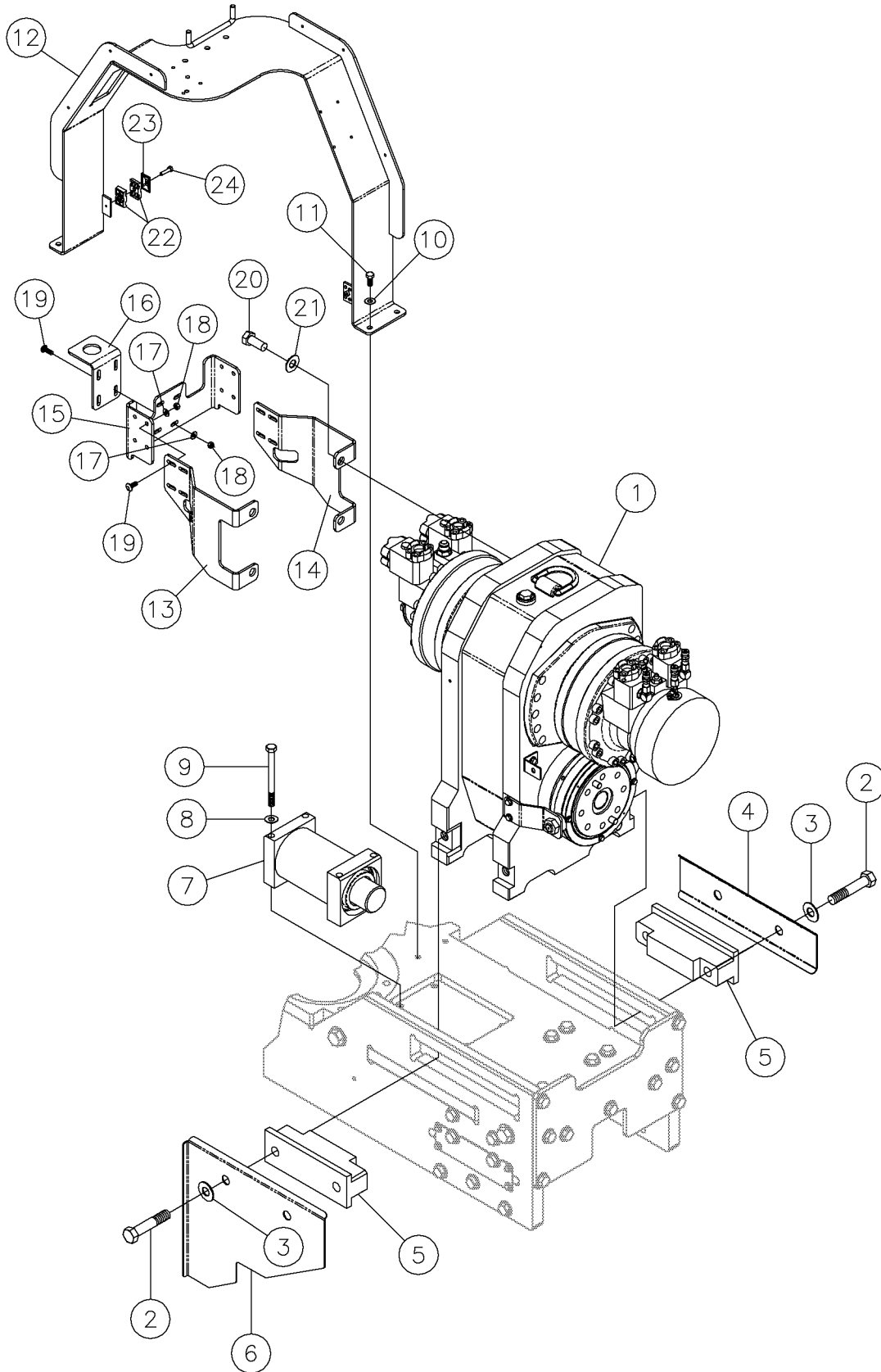
Rotation Gearbox (S/N 139-) Fig 2-9r02



Rotation Gearbox (S/N 139-) Fig 2-9r02

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	December, 2006		Change Valve Mount And Added Parts
1		296275759	GEARBOX ASSEMBLY	1	Breakdown Fig. 13-1
2		256010001	BOLT-1-8 X 5.00 HHCS GR 8 YZ	4	
3		238892001	WASHER-1" HARDENED FLAT ZY	4	
4		296273902	GUARD - GEARBOX SLIDE	1	
5		296266497	SLIDE - GEARBOX SLIDE	2	
6		296273946	GUARD - GEARBOX SLIDE (RIGHT SIDE)	1	
7		280827001	CYLINDER - 5"X 3 5/16"	1	Breakdown Fig. 13-6
8		235715001	WASHER-5/8 SAE HARD ZINC PLTD	4	
9		275360001	BOLT-5/8-18 UNF X 7 GR 8 ZINC	4	
10		485025	WASHER-1/2 FLAT-HARDENED-YZ	4	
11		235729001	SCREW-HCS-.50-13X1.00-GR8-YZ	4	
12	*	296273856	MOUNT - CARRIER VALVES	1	(S/N 130-)
13		296283716	MOUNT - WATER HOSE BULKHEAD	1	(S/N 139-)
14		296283724	MOUNT - WATER HOSE BULKHEAD	1	(S/N 139-)
15		296283717	MOUNT - WATER LINE BULKHEAD	1	(S/N 139-)
16		296283715	BULKHEAD - WATER LINE	1	(S/N 139-)
17		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	12	(S/N 139-)
18		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	12	(S/N 139-)
19		375010	BOLT-3/8"-16X1"GD#5 CARRIAGE REF T08435	12	(S/N 139-)
20		296258304	SCREW - HCS .875 - 9 X2,GR8,YZ	4	(S/N 139-)
21		288459001	WASHER - 7/8 FLAT HARD ZINC PLATED	4	(S/N 139-)
22	*	67846007	PLATE-TWIN WELD	1	Pair
23	*	67846003	PLATE-TWIN COVER	1	
24	*	351012	BOLT-5/16"-18X1 1/4"GR5 HEX REF T03059	1	

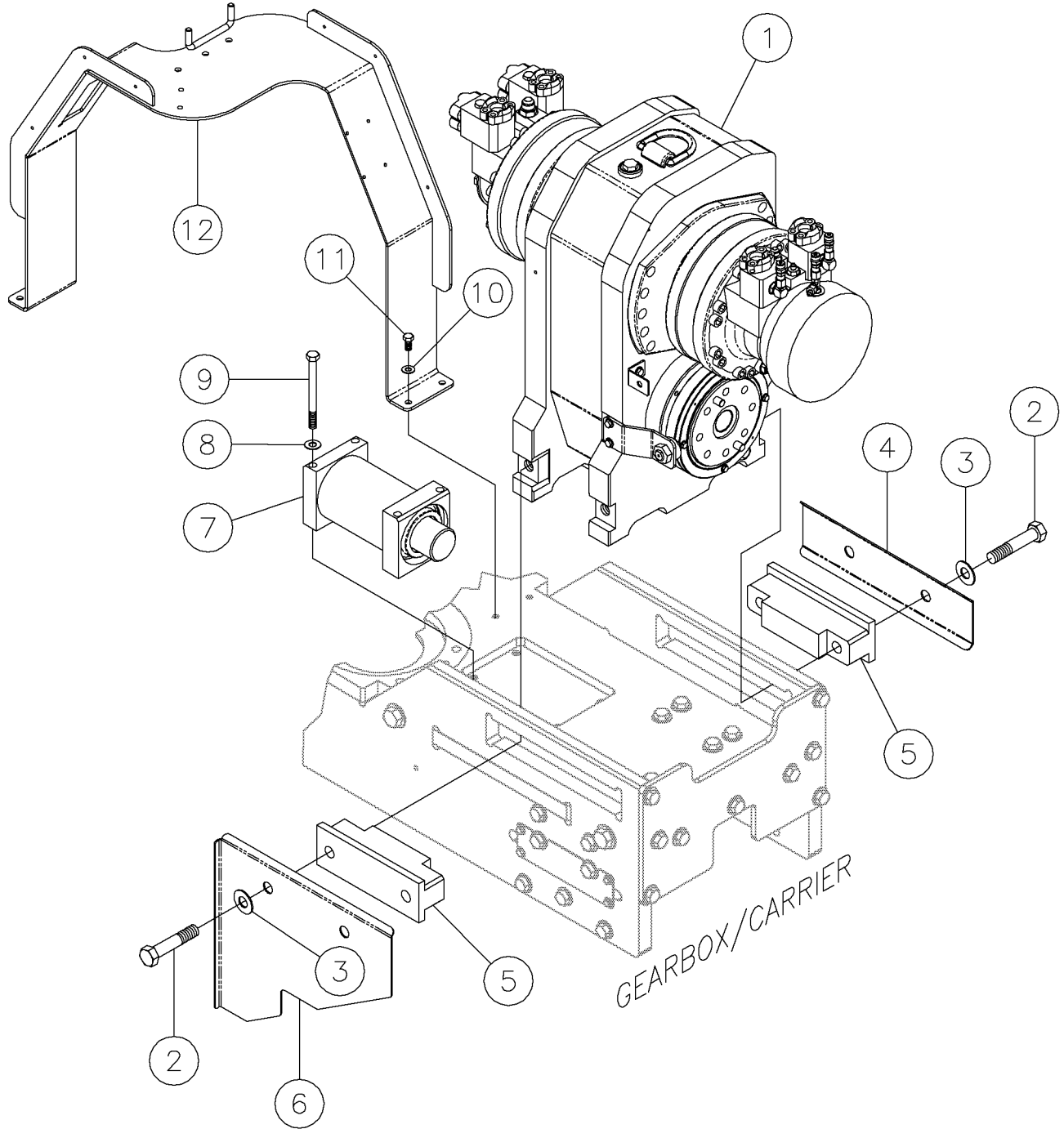
Rotation Gearbox (S/N 139-) Fig 2-9r02



Rotation Gearbox (S/N 139-) Fig 2-9r02

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	December, 2006		Change Valve Mount And Added Parts
1		296275759	GEARBOX ASSEMBLY	1	Breakdown Fig. 13-1
2		256010001	BOLT-1-8 X 5.00 HHCS GR 8 YZ	4	
3		238892001	WASHER-1" HARDENED FLAT ZY	4	
4		296273902	GUARD - GEARBOX SLIDE	1	
5		296266497	SLIDE - GEARBOX SLIDE	2	
6		296273946	GUARD - GEARBOX SLIDE (RIGHT SIDE)	1	
7		280827001	CYLINDER - 5"X 3 5/16"	1	Breakdown Fig. 13-6
8		235715001	WASHER-5/8 SAE HARD ZINC PLTD	4	
9		275360001	BOLT-5/8-18 UNF X 7 GR 8 ZINC	4	
10		485025	WASHER-1/2 FLAT-HARDENED-YZ	4	
11		235729001	SCREW-HCS-.50-13X1.00-GR8-YZ	4	
12	*	296273856	MOUNT - CARRIER VALVES	1	(S/N 130-)
13		296283716	MOUNT - WATER HOSE BULKHEAD	1	(S/N 139-)
14		296283724	MOUNT - WATER HOSE BULKHEAD	1	(S/N 139-)
15		296283717	MOUNT - WATER LINE BULKHEAD	1	(S/N 139-)
16		296283715	BULKHEAD - WATER LINE	1	(S/N 139-)
17		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	12	(S/N 139-)
18		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	12	(S/N 139-)
19		375010	BOLT-3/8"-16X1"GD#5 CARRIAGE REF T08435	12	(S/N 139-)
20		296258304	SCREW - HCS .875 - 9 X2,GR8,YZ	4	(S/N 139-)
21		288459001	WASHER - 7/8 FLAT HARD ZINC PLATED	4	(S/N 139-)
22	*	67846007	PLATE-TWIN WELD	1	Pair
23	*	67846003	PLATE-TWIN COVER	1	
24	*	351012	BOLT-5/16"-18X1 1/4"GR5 HEX REF T03059	1	

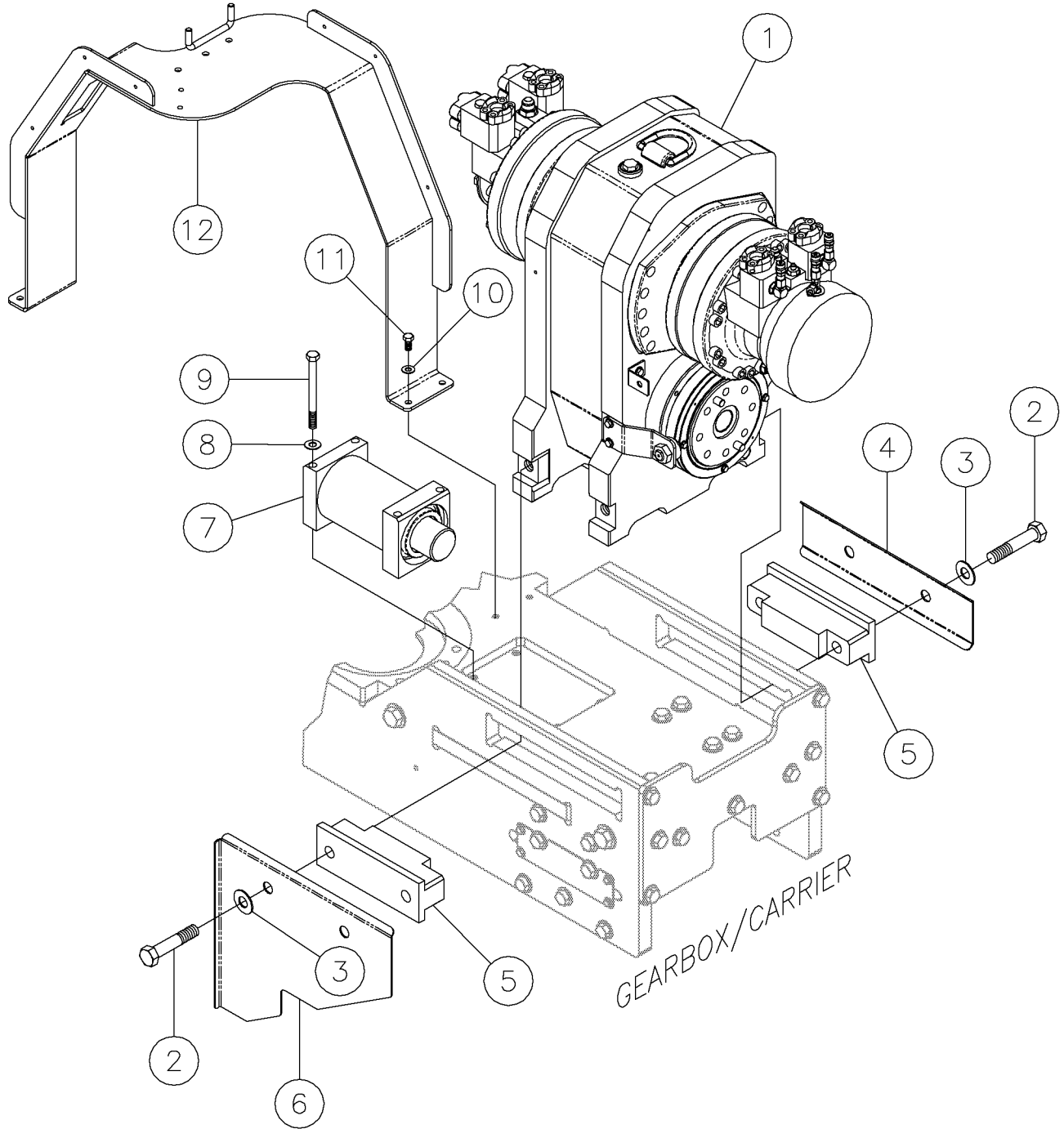
Rotation Gearbox Fig 2-9r01



Rotation Gearbox Fig 2-9r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	August, 2006		Modified Ref. 12
1		296279633	GEARBOX ASSEMBLY D80X100 II	1	Breakdown Fig. 13-1
2		256010001	BOLT-1-8 X 5.00 HHCS GR 8 YZ	4	
3		238892001	WASHER-1" HARDENED FLAT ZY	4	
4		296273902	GUARD - GEARBOX SLIDE	1	
5		296266497	SLIDE - GEARBOX SLIDE	2	
6		296273946	GUARD - GEARBOX SLIDE (RIGHT SIDE)	1	
7		280827001	CYLINDER - 5"X 3 5/16"	1	Breakdown Fig. 13-6
8		235715001	WASHER-5/8 SAE HARD ZINC PLTD	4	
9		275360001	BOLT-5/8-18 UNF X 7 GR 8 ZINC	4	
10		485025	WASHER-1/2 FLAT-HARDENED-YZ	4	
11		235729001	SCREW-HCS-.50-13X1.00-GR8-YZ	4	
12	*	296273856	MOUNT - CARRIER VALVES	1	S/N 130 & Up

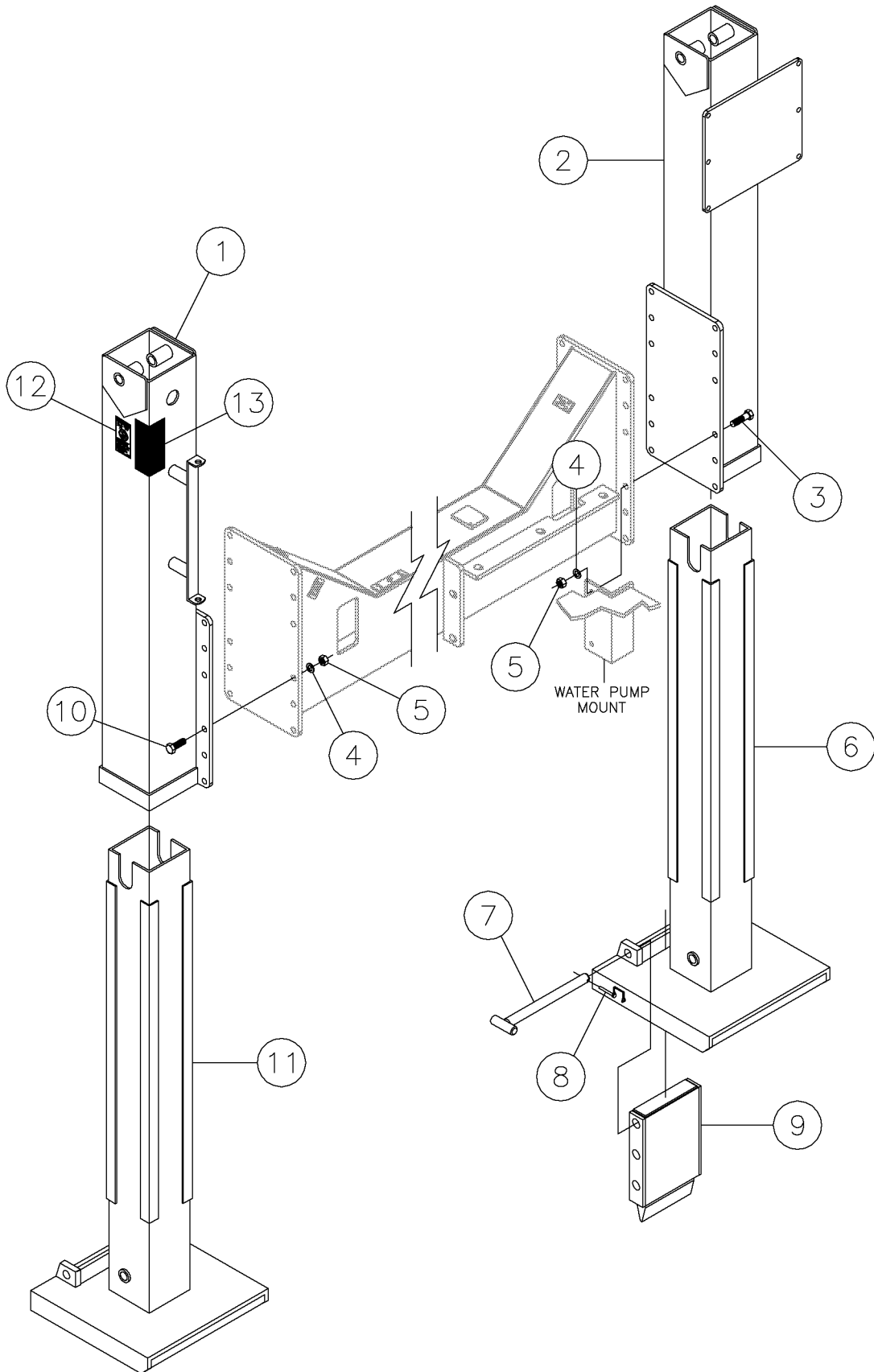
Rotation Gearbox Fig 2-9



Rotation Gearbox Fig 2-9

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296279633	GEARBOX ASSEMBLY D80X100 II	1	Breakdown Fig. 13-1
2		256010001	BOLT-1-8 X 5.00 HHCS GR 8 YZ	4	
3		238892001	WASHER-1" HARDENED FLAT ZY	4	
4		296273902	GUARD - GEARBOX SLIDE	1	
5		296266497	SLIDE - GEARBOX SLIDE	2	
6		296273946	GUARD - GEARBOX SLIDE (RIGHT SIDE)	1	
7		280827001	CYLINDER - 5"X 3 5/16"	1	Breakdown Fig. 13-6
8		235715001	WASHER-5/8 SAE HARD ZINC PLTD	4	
9		275360001	BOLT-5/8-18 UNF X 7 GR 8 ZINC	4	
10		485025	WASHER-1/2 FLAT-HARDENED-YZ	4	
11		235729001	SCREW-HCS-.50-13X1.00-GR8-YZ	4	
12		296273856	MOUNT - CARRIER VALVES	1	

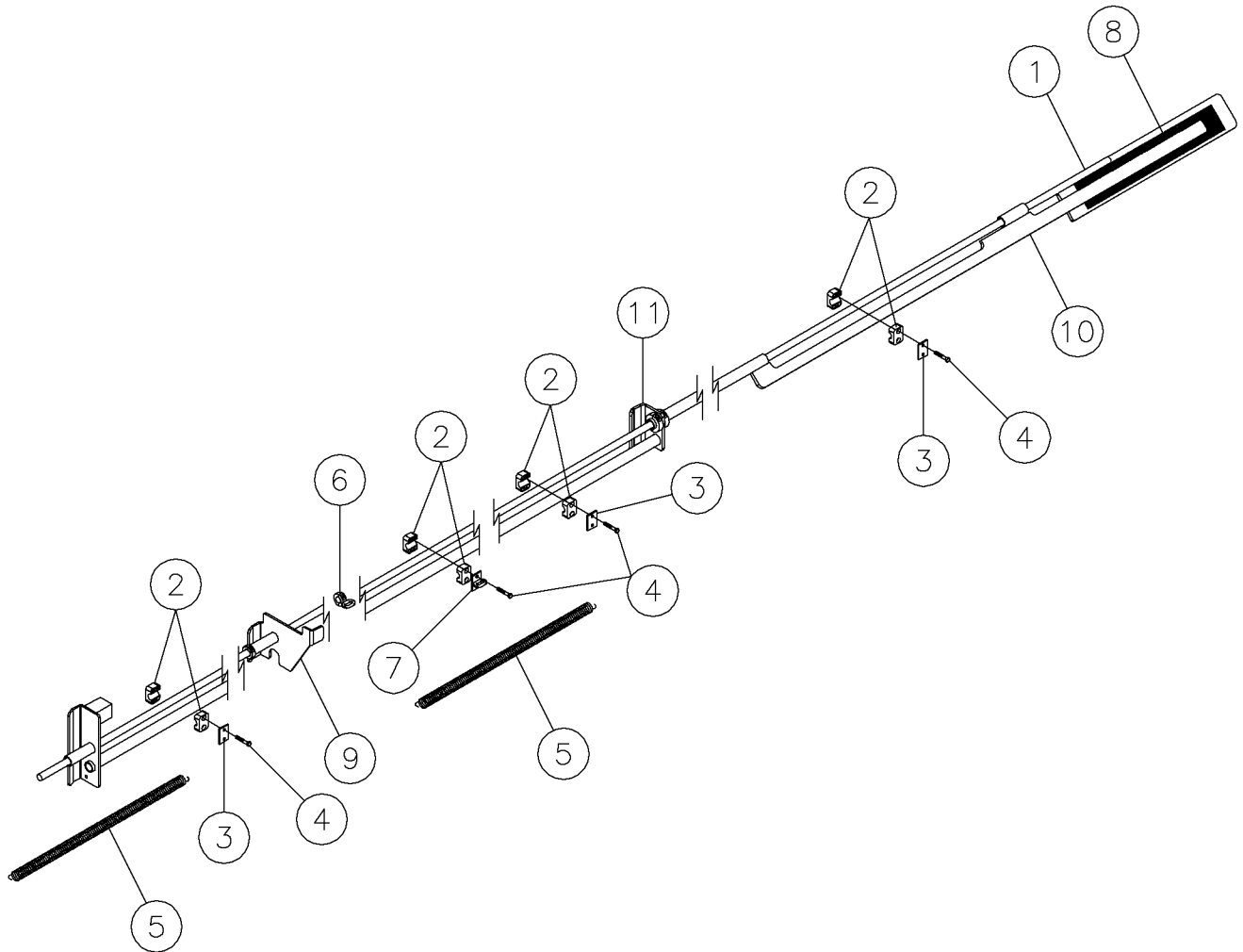
Outrigger Fig 2-10



Outrigger Fig 2-10

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		239469001	OUTRIGGER-OUTSIDE TUBE (LEFT)	1	
2		287007001	OUTRIGGER - OUTSIDE TUBE (RIGHT)	1	
3		238245001	BOLT 5/8" - 11 X 2 1/4 Gr 8 HEX	3	
4		235715001	WASHER-5/8 SAE HARD ZINC PLTD	24	
5		238221001	NUT - HEX -.63 - 11 - GR8 - YZ	24	
6		283569001	OUTRIGGER TUBE-INSIDE RIGHT	1	
7		283558001	PIN-OUTRIGGER KNIFE	2	
8		2108001	LYNCH PIN - 1/4 X 2	2	
9		283549001	KNIFE-OUTRIGGER	2	
10		145645001	BOLT - 5/8 - 11 X 2 GR.8 PLATED	21	
11		283568001	OUTRIGGER TUBE-INSIDE LEFT	1	
12		7000C446	DECAL - NO WELD	1	Domestic
		700IC446	DECAL - NO WELD	1	International
13		7000A392	DECAL - DANGER	1	Domestic
		700IA392	DECAL - DANGER D28/D50	1	International

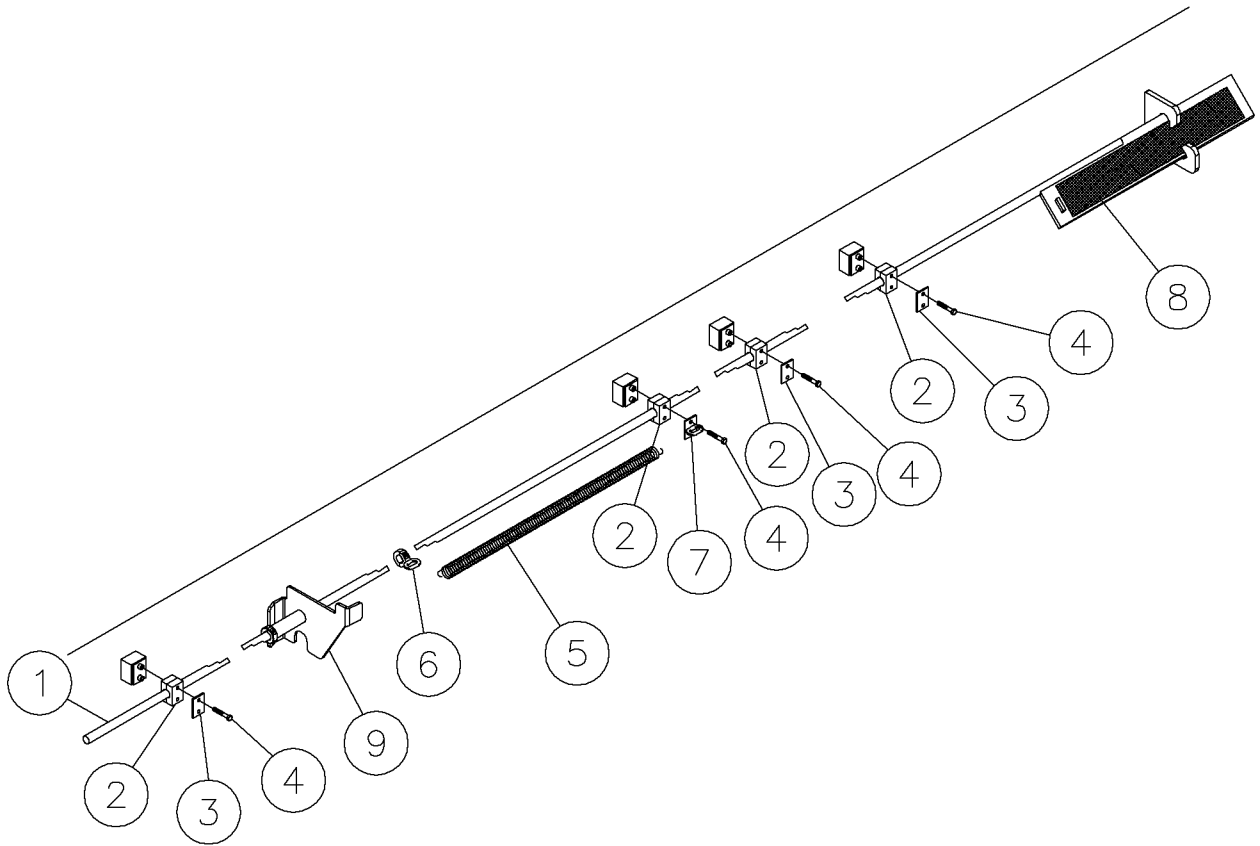
Rod Position Indicator (S/N 146-) Fig 2-11r02



Rod Position Indicator (S/N 146-) Fig 2-11r02

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	December, 2006		Add Ref. 10&11 And Change Ref. 8.
1		295509001	INDICATOR ROD-COMMON ASSEMBLY	1	
2		903135003	CLAMP HOSE HALF 20675-PP(TAKES 2 PER 1)	4	
3		903135005	PLATE-COVER COP-2	3	
4		238210001	BOLT - 1/4-20X1 1/2 GR8 HEX ZYC	8	
5	*	1789001	SPRING-1 1/8ODX15/16ID X 15 EXT REF	2	
6		295529001	MOUNT-ROD INDICATOR SPRING	1	
7		227978001	MOUNT-ROD INDICATOR SPRING	1	
8	*	700ID312	DECAL-INDICATOR 2 7/8-3 1/2ROD	1	(S/N 146-)
9		296279586	SUB-CARRIAGE BUMPER	1	
10	*	296289752	CARRIAGE - POSITION - INDICATOR	1	(S/N 146-)
11	*	296289757	CARRIAGE - POSITION - INDICATOR	1	(S/N 146-)

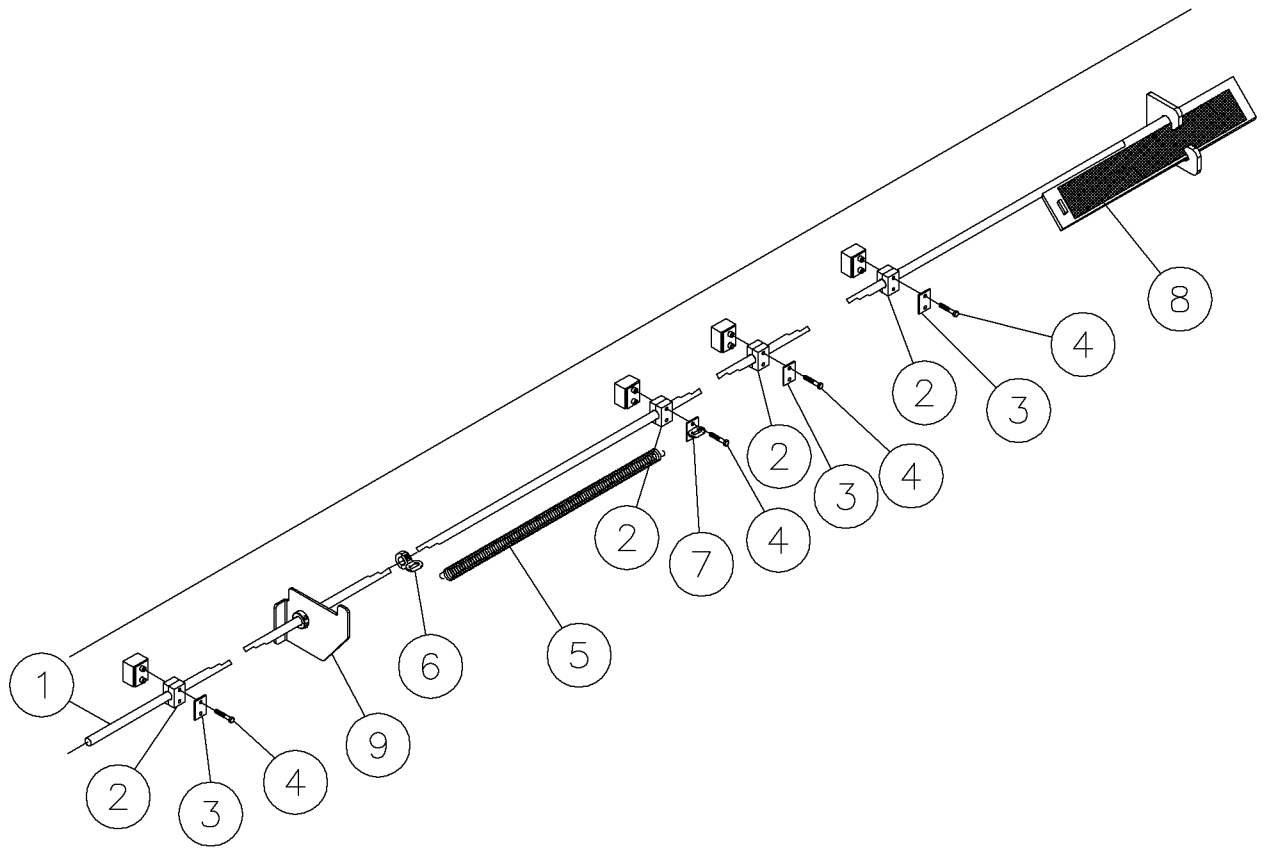
Rod Position Indicator Fig 2-11r01



Rod Position Indicator Fig 2-11r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	July, 2006		Update In Illustration.
1		295509001	INDICATOR ROD-COMMON ASSEMBLY	1	
2		903135003	CLAMP HOSE HALF 20675-PP(TAKES 2 PER 1)	4	
3		903135005	PLATE-COVER COP-2	3	
4		238210001	BOLT - 1/4-20X1 1/2 GR8 HEX ZYC	8	
5		1789001	SPRING-1 1/8ODX15/16ID X 15 EXT REF	1	
6		295529001	MOUNT-ROD INDICATOR SPRING	1	
7		227978001	MOUNT-ROD INDICATOR SPRING	1	
8		700IA490	DECAL-INDICATOR 2 7/8-3 1/2ROD	1	
9		296279586	SUB-CARRIAGE BUMPER	1	

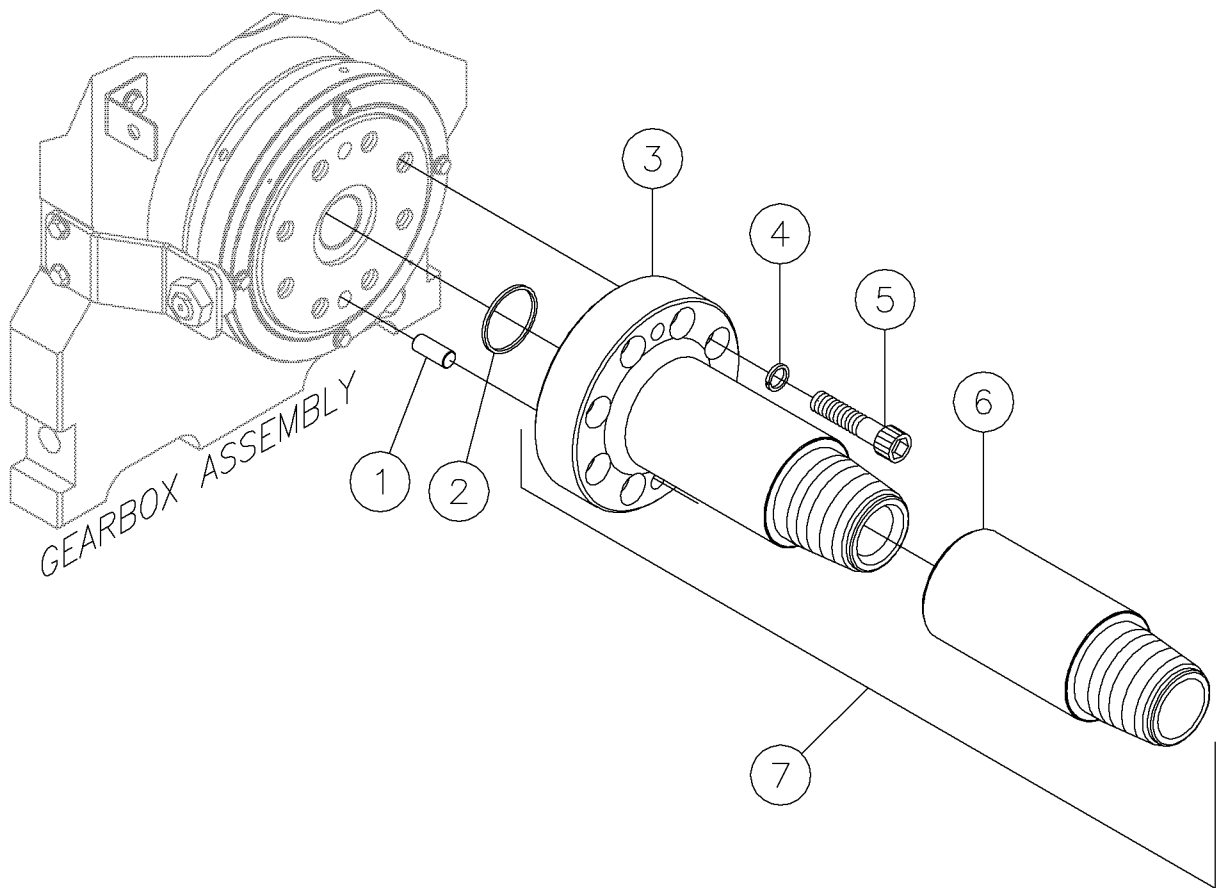
Rod Position Indicator Fig 2-11



Rod Position Indicator Fig 2-11

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		295509001	INDICATOR ROD-COMMON ASSEMBLY	1	
2		903135003	CLAMP HOSE HALF 20675-PP(TAKES 2 PER 1)	4	
3		903135005	PLATE-COVER COP-2	3	
4		238210001	BOLT - 1/4-20X1 1/2 GR8 HEX ZYC	8	
5		1789001	SPRING-1 1/8ODX15/16ID X 15 EXT REF	1	
6		295529001	MOUNT-ROD INDICATOR SPRING	1	
7		227978001	MOUNT-ROD INDICATOR SPRING	1	
8		700IA490	DECAL-INDICATOR 2 7/8-3 1/2ROD	1	
9		296279586	SUB-CARRIAGE BUMPER	1	

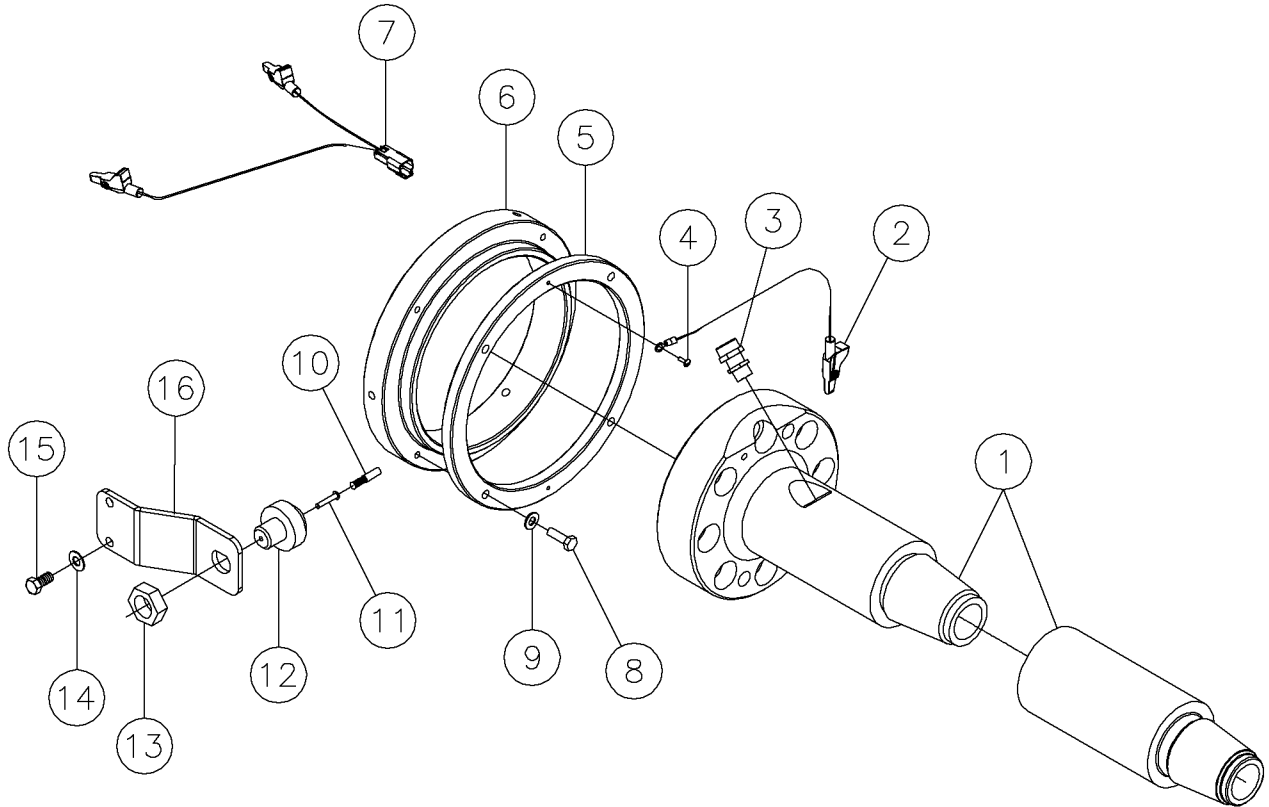
Drive Chuck Fig 2-12



Drive Chuck Fig 2-12

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		70096001	PIN-DOWEL 5/8DIA.-1 1/2	4	
2		72897001	O RING-SQ. #24 FLANGE	2	
3		284097001	SHAFT - DRIVE CHUCK 2 7/8 FST II	1	2.5" FST
		296255476	SHAFT - DRIVE CHUCK - 3 5/8	1	3.5" FST
4		480017	WASHER-3/4 S/T LOCK	16	
5		239364001	BOLT-3/4-16X3 1/4 SKTHD GR8 ZN	16	
6		284098001	SHAFT - SUB SAVER - 2 7/8 FST II	1	2.5" FST
		296255477	SHAFT-SUB SAVER - 3 5/8 (800IWSV)	1	3.5" FST
7		283544001	DRIVE CHUCK ASSY - 2 7/8" ROD	1	2.5" FST; Included Ref. No's 3 & 6
		296255475	ASSY - DRIVE CHUCK 3 5/8 O.D. (3.5 FST)	1	3.5" FST; Included Ref. No's 3 & 6

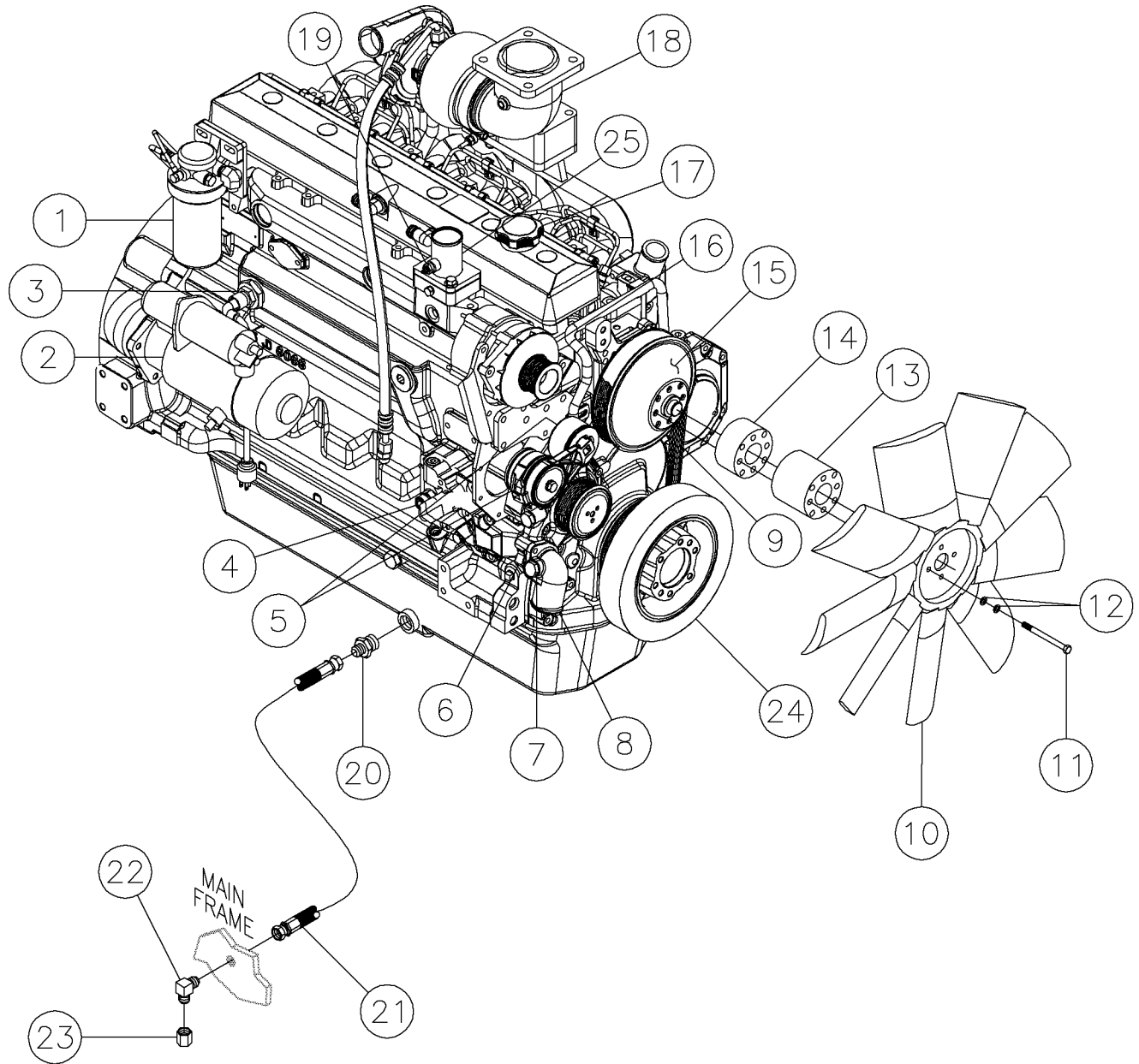
Drive Chuck/Wire Line Fig 2-13



Drive Chuck/Wire Line Fig 2-13

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	June, 2007		Re-Numbers In Illustration & Parts List.
1		296268953	ASSY-DRIVE CHUCK - 3.50 FST I-WIRE LINE	1	
2		296275696	CABLE - JUMPER - SINGLE - WIRE LINE	1	
3		296265895	FITTING - COMPRESSION 3/8 NPT	1	
4		57200001	SCREW-#8-32X1/2 RND.HD.MACH.	1	
5		296273938	RING - WIRELINE CONDUCTOR	1	
6		296273936	COLLAR - WIRELINE MOUNT	1	
7		296275695	JUMPER - WIRE LINE	1	
8		238209001	BOLT-5/16-18X1 GR8 HEX ZINC YC	4	
9		235714001	WASHER-FLATSTRL-.31-.34X.69-.06-YZ-A325	4	
10		296273939	BRUSH-CARBON COMMUTATOR W/ SHUNT	1	
11		296273942	RIVET- COPPER, 3/16 X 1 - 0.328 ROUND HD	1	
12		296273940	HOLDER - CARBON BRUSH	1	
13		437001	NUT-1 NC HEX JAM	1	
14		235713001	WASHER-FLATSTRL-.38-.41X.81-.06-YA-A325	2	
15		235726001	BOLT-3/8-16X3/4 GR8 HEX ZNCPLT	2	
16		296273941	BRACKET - CARBON BRUSH MOUNT	1	

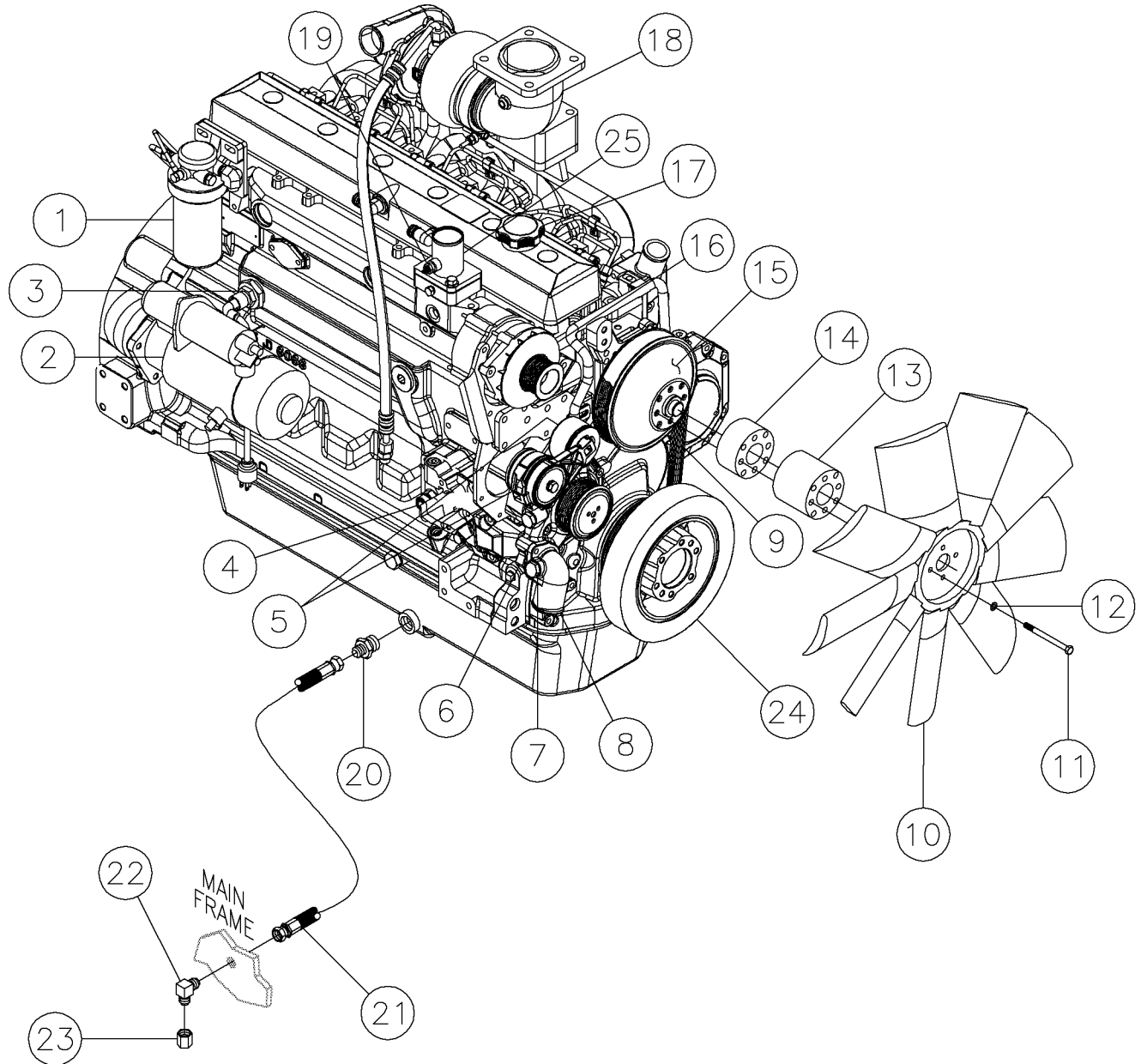
Engine Components Fig 3-1r01



Engine Components Fig 3-1r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2006		Update In Illustration & Parts List.
1		618431001	SECONDARY FUEL FILTER	1	
		296272995	SEDIMENT BOWL	1	
2		296254505	START & SOLENOID KIT	1	
		296254506	GASKET	1	
		296254563	SCREW	1	
3		296278048	COOLANT HEATER	1	
		283645001	CORD-72"-ENGINE BLOCK HEATER	1	
4		601735001	FITTING-STRAIGHT	1	
		180005696	SENSOR-OIL PRESSURE	1	
5		296251843	SHEAVE	1	
		296254517	SCREW - M10X70	1	
6		180005697	PUMP-WATER	1	
7		296251836	PLUG	1	
8		296254518	INLET - WATER PUMP	1	
		296254519	O-RING	1	
9		296284751	FAN - V BELT	1	
10		280855001	FAN - 28" SUCTION	1	
11		507092140	SCREW-HCS,M10-1.50X140,8.8,YZ,ISO4014,PT	4	
12		141350001	WASHER-M10 HARDEN PLATED FLAT	8	
13		280970001	SPACER - 3" ENGINE FAN	1	
14		280971001	SPACER - 1 3/4" ENGINE FAN	1	
15		296254520	SHEAVE - FAN	1	
16		180006301	ALTERNATOR-12V, 65 Amp	1	
17		131959031	CAP-OIL FILLER	1	
18		296254522	ELBOW - EXHAUST	1	
		296254523	ADAPTER	1	
		296254524	CLAMP	1	
19		296272991	ENGINE HEAD TEMP SENSOR	1	
20		85662001	FITTING-M22X1.5 X 10MJIC STR.	1	
21		296258361	HOSE - .63 X 33 10FS JIC ST/ST M3K	1	
22		77735001	FITTING - BH90 - 10MJ - 10MJ - LN	1	
23		78062001	FITTING - CAP - 10FJ	1	
24		296284752	PULLEY	1	
25		296278046	AIR INTAKE	1	

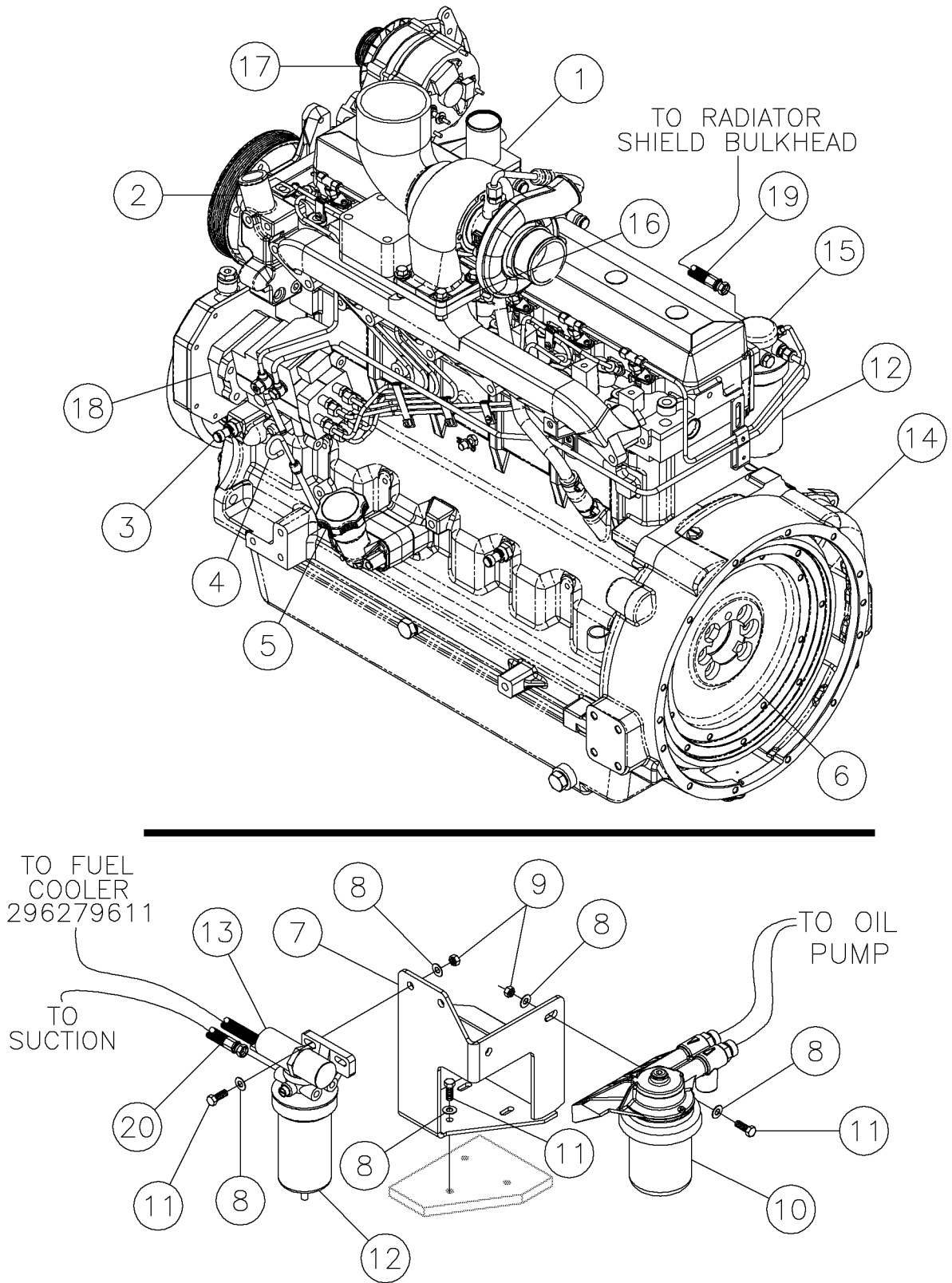
Engine Components Fig 3-1



Engine Components Fig 3-1

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		618431001	SECONDARY FUEL FILTER	1	
		296272995	SEDIMENT BOWL	1	
2		296254505	START & SOLENOID KIT	1	
		296254506	GASKET	1	
		296254563	SCREW	1	
3		296278048	COOLANT HEATER	1	
		283645001	CORD-72"-ENGINE BLOCK HEATER	1	
4		601735001	FITTING-STRAIGHT	1	
		180005696	SENSOR-OIL PRESSURE	1	
5		296251843	SHEAVE	1	
		296254517	SCREW - M10X70	1	
6		180005697	PUMP-WATER	1	
7		296251836	PLUG	1	
8		296254518	INLET - WATER PUMP	1	
		296254519	O-RING	1	
9		296284751	FAN - V BELT	1	
10		280855001	FAN - 28" SUCTION	1	
11		283644001	BOLT-M10-1.5X150 10.9 HHCS D931 Z	4	
12		141350001	WASHER-M10 HARDEN PLATED FLAT	4	
13		280970001	SPACER - 3" ENGINE FAN	1	
14		280971001	SPACER - 1 3/4" ENGINE FAN	1	
15		296254520	SHEAVE - FAN	1	
16		180006301	ALTERNATOR-12V, 65 Amp	1	
17		131959031	CAP-OIL FILLER	1	
18		296254522	ELBOW - EXHAUST	1	
		296254523	ADAPTER	1	
		296254524	CLAMP	1	
19		296272991	ENGINE HEAD TEMP SENSOR	1	
20		85662001	FITTING-M22X1.5 X 10MJIC STR.	1	
21		296258361	HOSE - .63 X 33 10FS JIC ST/ST M3K	1	
22		77735001	FITTING - BH90 - 10MJ - 10MJ - LN	1	
23		78062001	FITTING - CAP - 10FJ	1	
24		296284752	PULLEY	1	
25		296278046	AIR INTAKE	1	

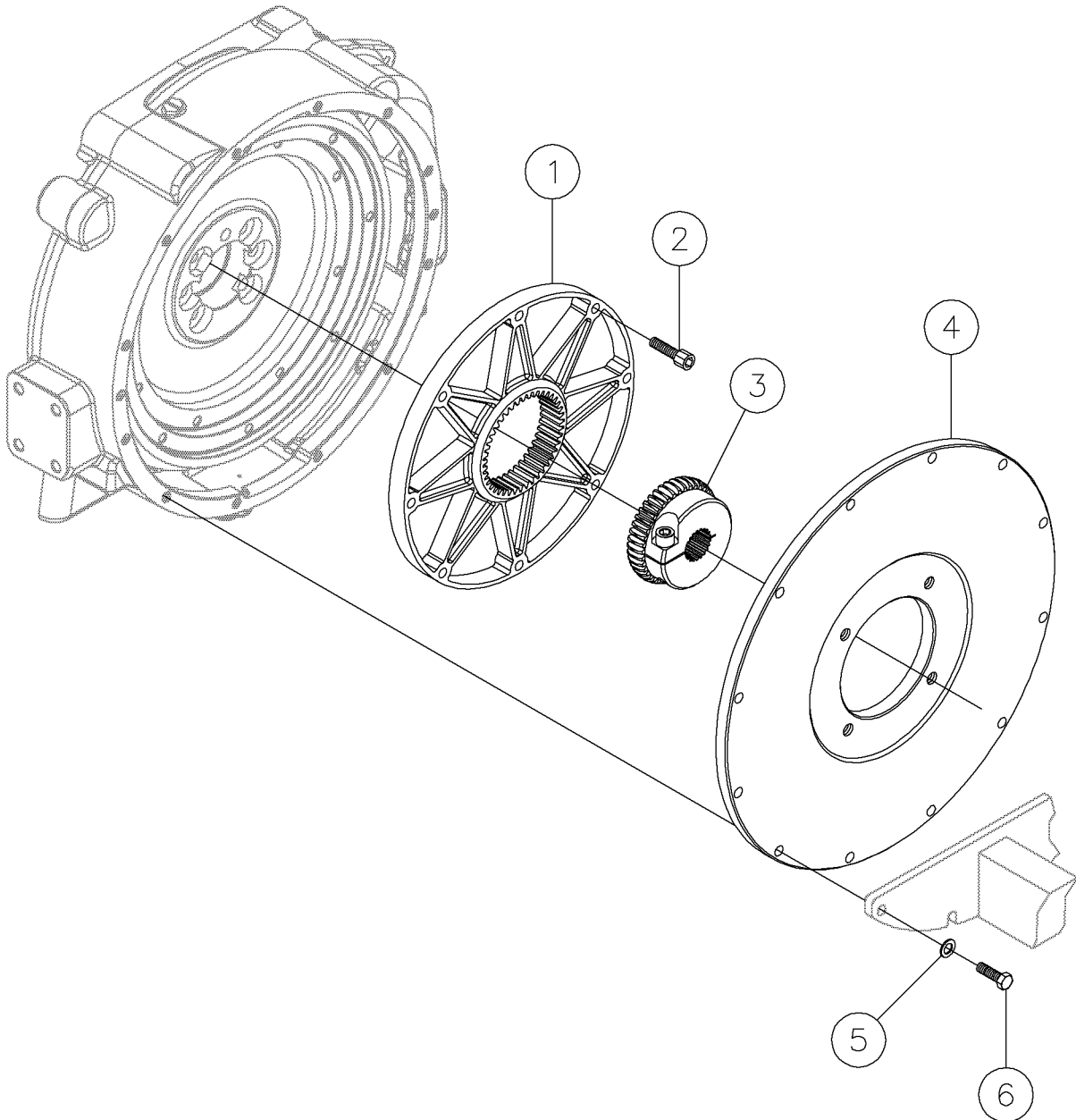
Engine Components Fig 3-2



Engine Components Fig 3-2

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296254540	AIR INTAKE	1	
		180005693	GASKET-AIR INLET	1	
		296251840	GASKET	1	
2		180005685	GASKET-THERMOSTAT	1	
		180005647	THERMOSTAT	1	
3		163622479	CRANKSHAFT SENSOR	1	
4		152009001	DIPSTICK	1	
		152008001	DIPSTICK - TUBE	1	
5		131959031	CAP-OIL FILLER	1	
6		296254538	FLYWHEEL (W/RING GEAR)	1	
		152004001	FLYWHEEL - GEAR	1	
7		296273841	BRACKET - FUEL/OIL FILTERS	1	
8		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	11	
9		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	4	
10		618429001	REMOTE OIL FILTER - 500 HR	1	
11		235727001	BOLT-3/8-16X1 GR8 HEX ZINC PLT	7	
12		618460001	RESERVOIR	1	
		296272995	SEDIMENT BOWL	1	
		618430001	PRIMARY FUEL FILTER	1	
13		296278050	FILTER HEAD	1	
		296278051	KIT-ELEC. FILTER PUMP	1	
14		296278047	HOUSING	1	
15		296278049	FINAL FUEL FILTER (KIT)	1	
16		296254515	GASKET	1	
17		180006301	ALTERNATOR-12V, 65 Amp	1	
18		296278045	FUEL PUMP	1	
19		296279608	HOSE-FUEL -.38X44-6FJS ST/6 FSJ ST	1	
20		296275697	HOSE-3/8 X 32- NO ENDS- 50#PSI-FUEL TANK	1	

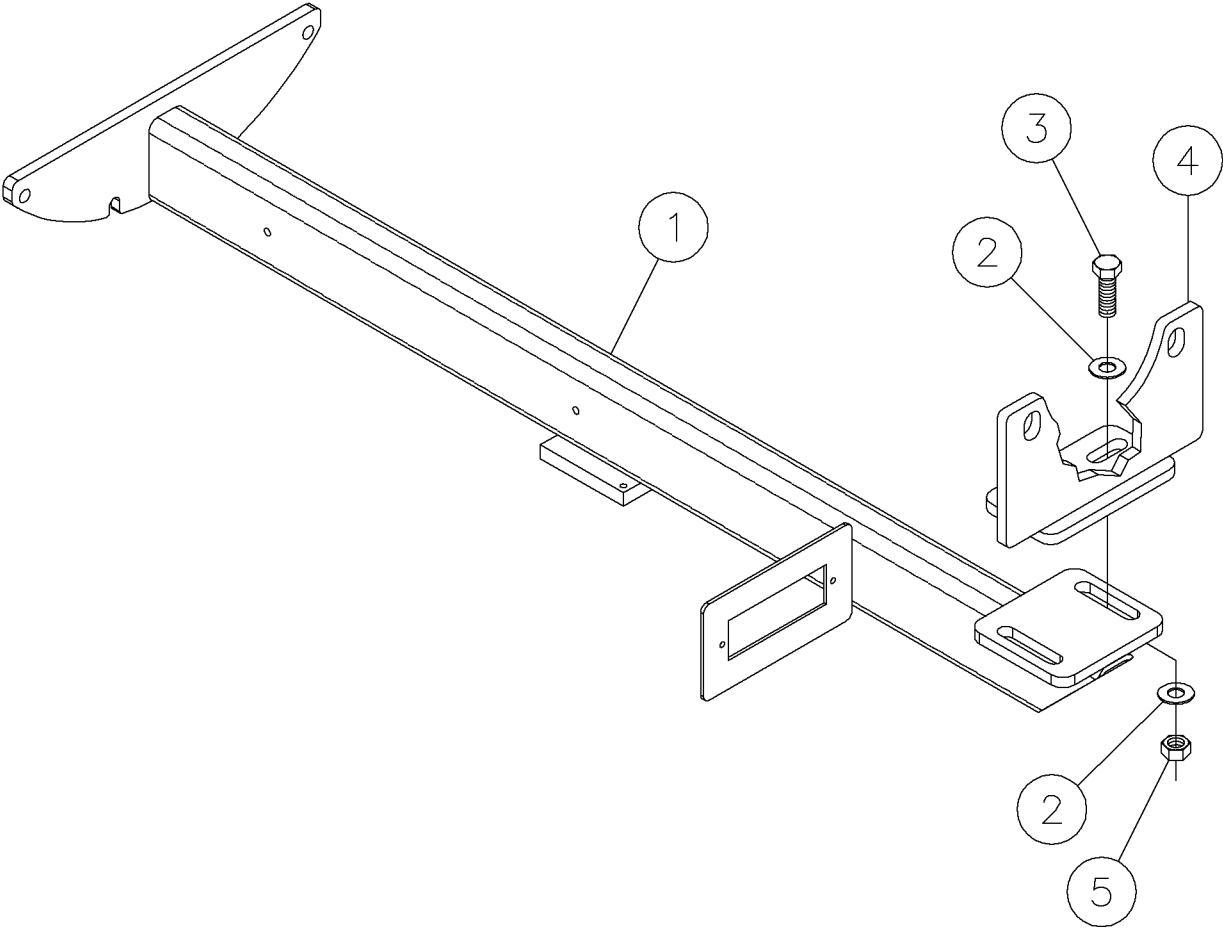
Pump Drive Fig 3-3



Pump Drive Fig 3-3

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		220075001	FLANGE-65 FLE-PA 10"FLYWHEEL	1	
2		4478014	CAPSCREW-3/8-16X1 1/2 SOCHD G8	8	
3		244703001	HUB-FLE 65T 23T-16/32 SPLINE	1	
4		220021001	PLATE-PUMP MOUNT	1	
5		141350001	WASHER-M10 HARDEN PLATED FLAT	12	
6		249891001	BOLT-M10X35 10.9 HHCS D933 ZNC	12	

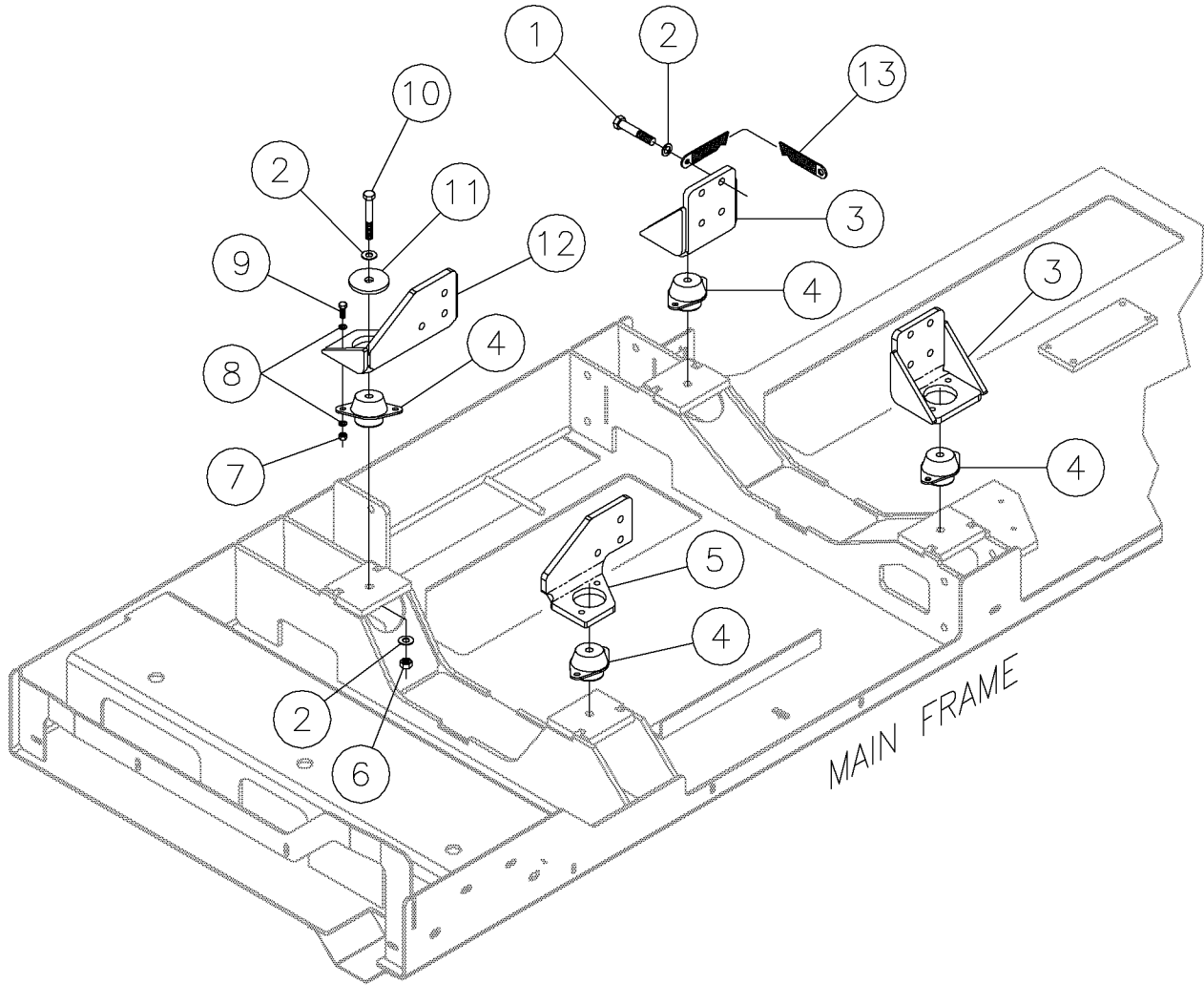
Pump Support Fig 3-4



Pump Support Fig 3-4

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296273772	TRIPLE PUMP SUPPORT	1	
2		485025	WASHER-1/2 FLAT-HARDENED-YZ	4	
3		235721001	BOLT-1/2-13X1 1/2 GR8 ZINC PLT	2	
4		275284001	BRACKET - PUMP SUPPORT	1	
5		235731001	NUT-1/2-13 GR8 ZINC PLTD	4	

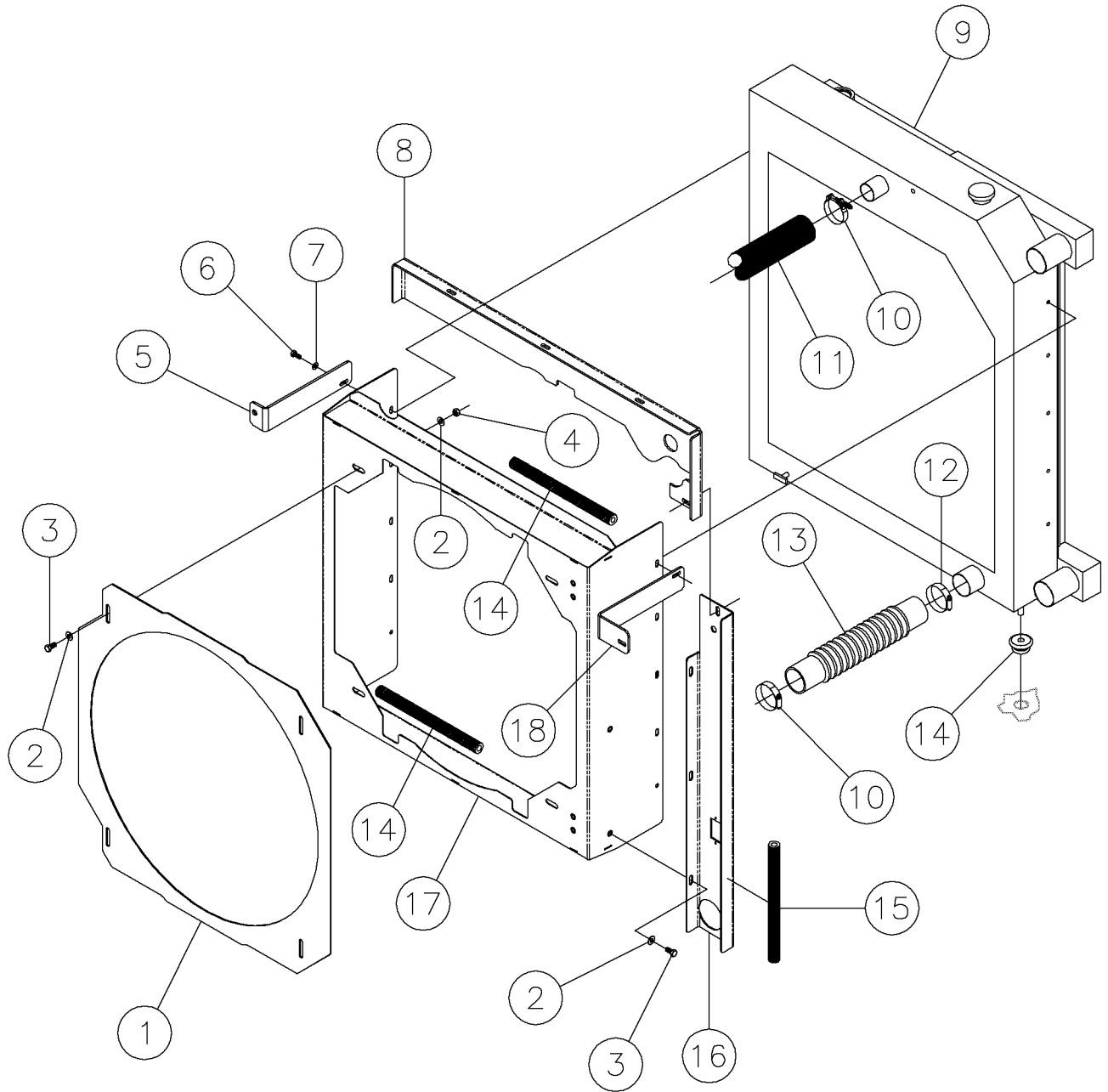
Base-Engine Bay Fig 3-5



Base-Engine Bay Fig 3-5

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		507407040	SCREW-HCS,M12-1.75X40,10.9,YZ,ISO4017,FT	14	
2		485025	WASHER-1/2 FLAT-HARDENED-YZ	22	
3		280859001	MOUNT - REAR ENGINE	2	
4		280919001	MOUNT - RUBBER 508-5NS	4	
5		296275857	MOUNT - LEFT FRONT ENGINE	1	
6		235731001	NUT-1/2-13 GR8 ZINC PLTD	4	
7		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	8	
8		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	16	
9		235736001	BOLT-3/8-16X1 1/4 ZINC PLTD	8	
10		240336001	BOLT-1/2-13X3 1/4 GR8 ZINC PLT	4	
11		76253001	SLUG-	4	
12		280880001	MOUNT - RIGHT FRONT ENGINE	1	
13		218260001	STRAP-4GA.X18"E-E BRAIDED GRND	1	

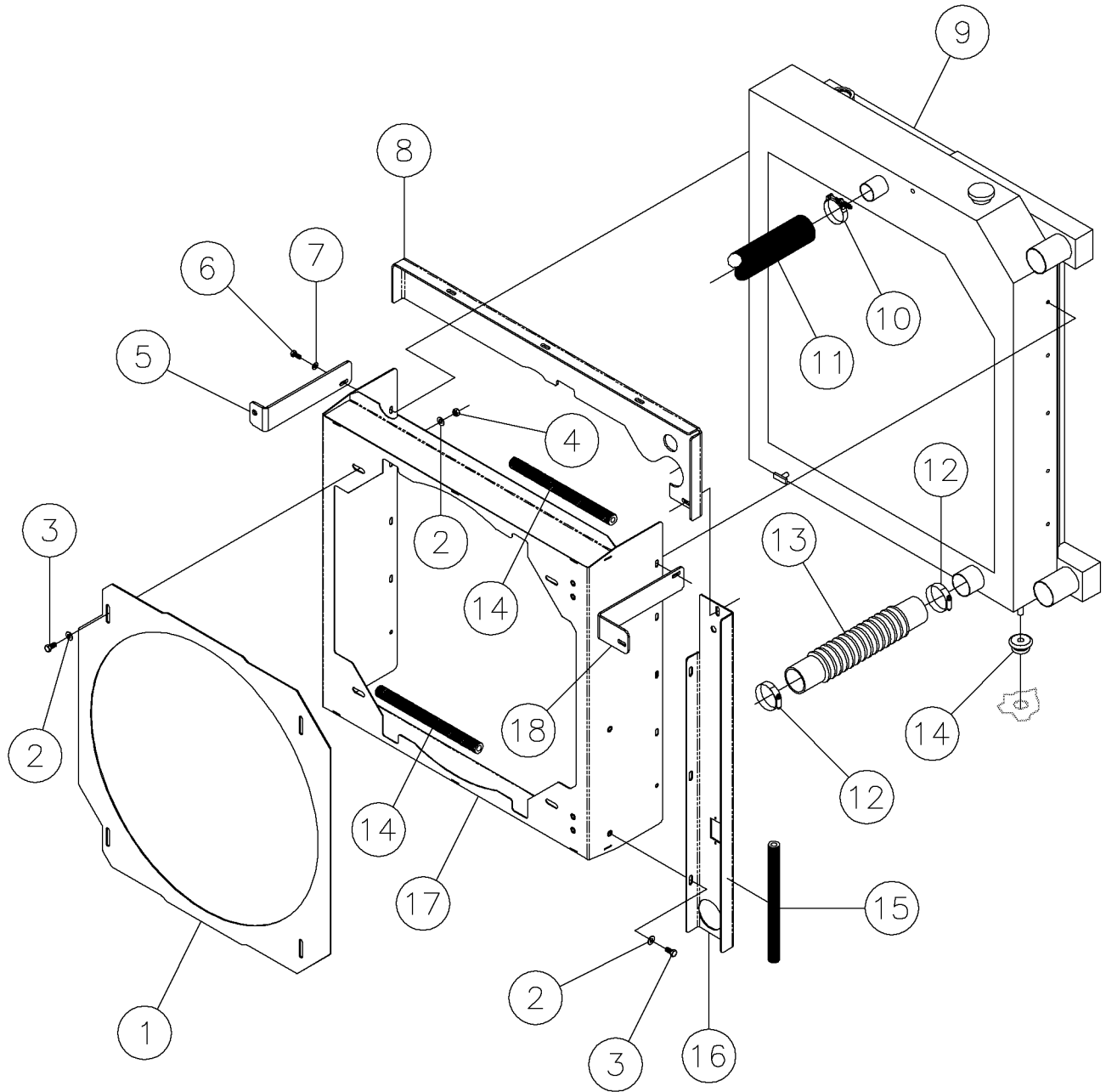
Radiator Shroud Fig 3-6r01



Radiator Shroud Fig 3-6r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	June, 2006		Update In Illustration.
1		296275677	PLATE - FAN GUARD	1	
2		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	13	
3		235726001	BOLT-3/8-16X3/4 GR8 HEX ZNCPLT	8	
4		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	5	
5		296279535	BRACKET - RADIATOR	1	
6		235742001	BOLT-5/16-18X3/4 GR8 ZINC PLTD	10	
7		235714001	WASHER - FLATSTRL - .31 - .34 X .69 - .06-YZ-A325	10	
8		296273852	RADIATOR DAM-TOP	1	
9		296275892	COOLING PACKAGE - D100X120 II	1	Breakdown Fig. 3-9
10		296279606	CLAMP - T - BOLT 1.93-2.18	2	
11		280995001	HOSE-COOLANT 1 3/4" ID X 31"	1	
12		296279664	CLAMP - T BOLT 2.50 - 2.81	1	
13		280960001	HOSE - LOWER RADIATOR	1	
14		280925001	MOUNT - RUBBER BC-1121-4	3	
15		288982001	SEAL - 1" X 1" HALF ROUND	A/R	Specify Length
16		296273853	RADIATOR - DAM - LEFT	1	
17		296273846	SHROUD-COOLING FAN	1	
18		296273850	COOLER BRACKET - LEFT	1	

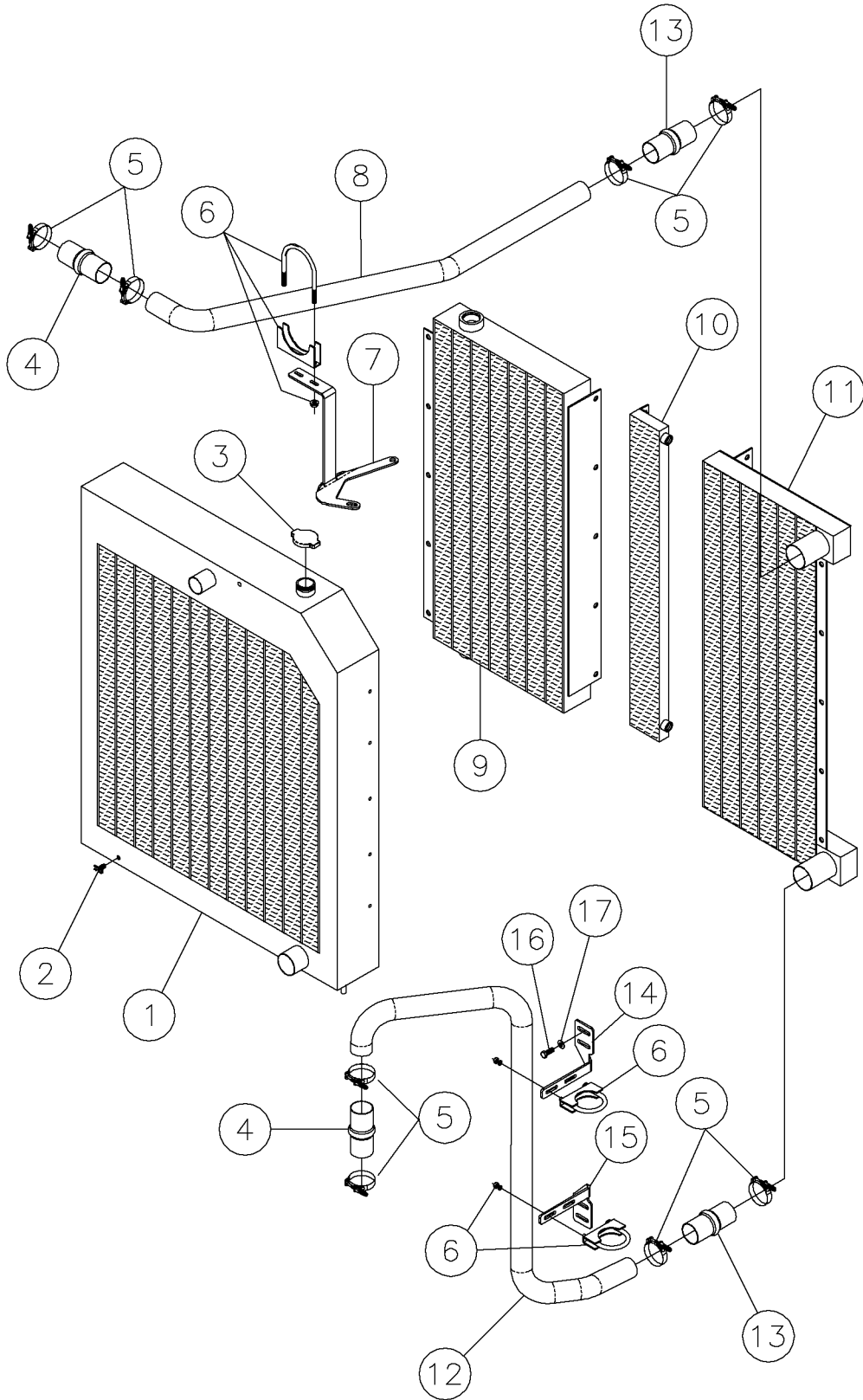
Radiator Shroud Fig 3-6



Radiator Shroud Fig 3-6

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296275677	PLATE - FAN GUARD	1	
2		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	13	
3		235726001	BOLT-3/8-16X3/4 GR8 HEX ZNCPLT	8	
4		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	5	
5		296279535	BRACKET - RADIATOR	1	
6		235742001	BOLT-5/16-18X3/4 GR8 ZINC PLTD	10	
7		235714001	WASHER - FLATSTRL - .31 - .34 X .69 - .06-YZ-A325	10	
8		296273852	RADIATOR DAM-TOP	1	
9		296275892	COOLING PACKAGE - D100X120 II	1	Breakdown Fig. 3-9
10		296279606	CLAMP - T - BOLT 1.93-2.18	1	
11		280995001	HOSE-COOLANT 1 3/4" ID X 31"	1	
12		296279664	CLAMP - T BOLT 2.50 - 2.81	2	
13		280960001	HOSE - LOWER RADIATOR	1	
14		280925001	MOUNT - RUBBER BC-1121-4	3	
15		288982001	SEAL - 1" X 1" HALF ROUND	A/R	Specify Length
16		296273853	RADIATOR - DAM - LEFT	1	
17		296273846	SHROUD-COOLING FAN	1	
18		296273850	COOLER BRACKET - LEFT	1	

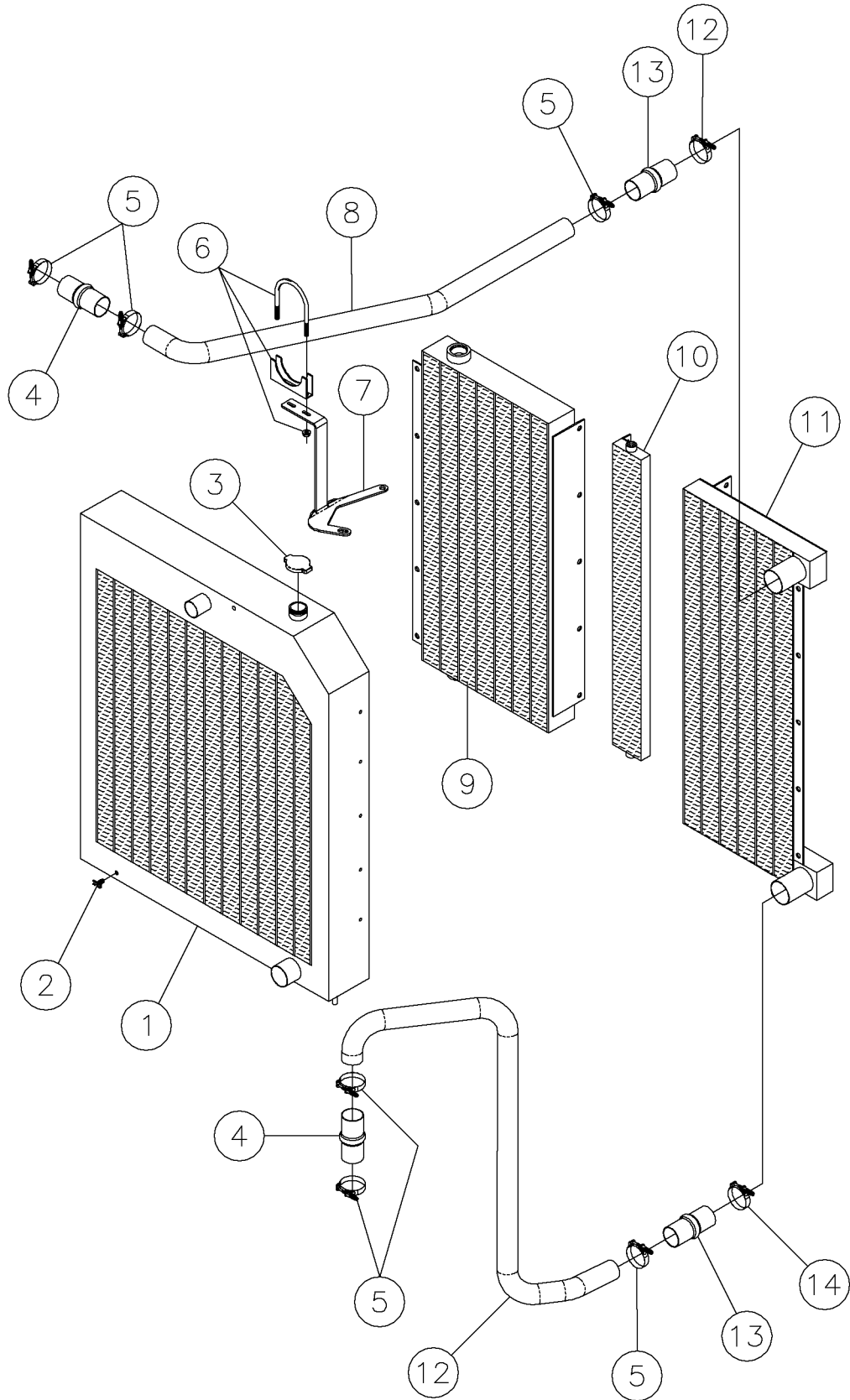
Radiator/Charge-Air Cooler Fig 3-7r01



Radiator/Charge-Air Cooler Fig 3-7r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	August, 2006		Update In Illustration & Parts List.
1		296278041	RADIATOR ASSEMBLY	1	
2		163622311	PETCOCK	1	
3		256004003	CAP-RADIATOR (10LBS.)	1	
4		280917001	CONNECTOR - CAC HUMP HOSE	2	
5		296279606	CLAMP - T - BOLT 1.93-2.18	8	
6		2609005	MUFFLER CLAMP - 2"	3	
7		283844001	BRACKET-CHARGE AIR COOLER LINE	1	
8		280916001	TUBE - CHARGE AIR HOT	1	
9		296278042	OIL COOLER	1	
10		296278043	FUEL COOLER	1	
11		296278044	CHARGE AIR COOLER	1	
12		280914001	TUBE - CHARGE AIR COLD	1	
13		617675001	HUMP HOSE- SILIC/NOMEX 2.00 X 2.50-6.00	2	
14	*	292684001	BRACKET - CHARGE AIR COOLER LINE	1	
15	*	292685001	BRACKET - CHARGE AIR COOLER LINE	1	
16	*	235727001	SCREW-HCS-.38-16X1.00-GR8-YZ	4	
17	*	235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	4	

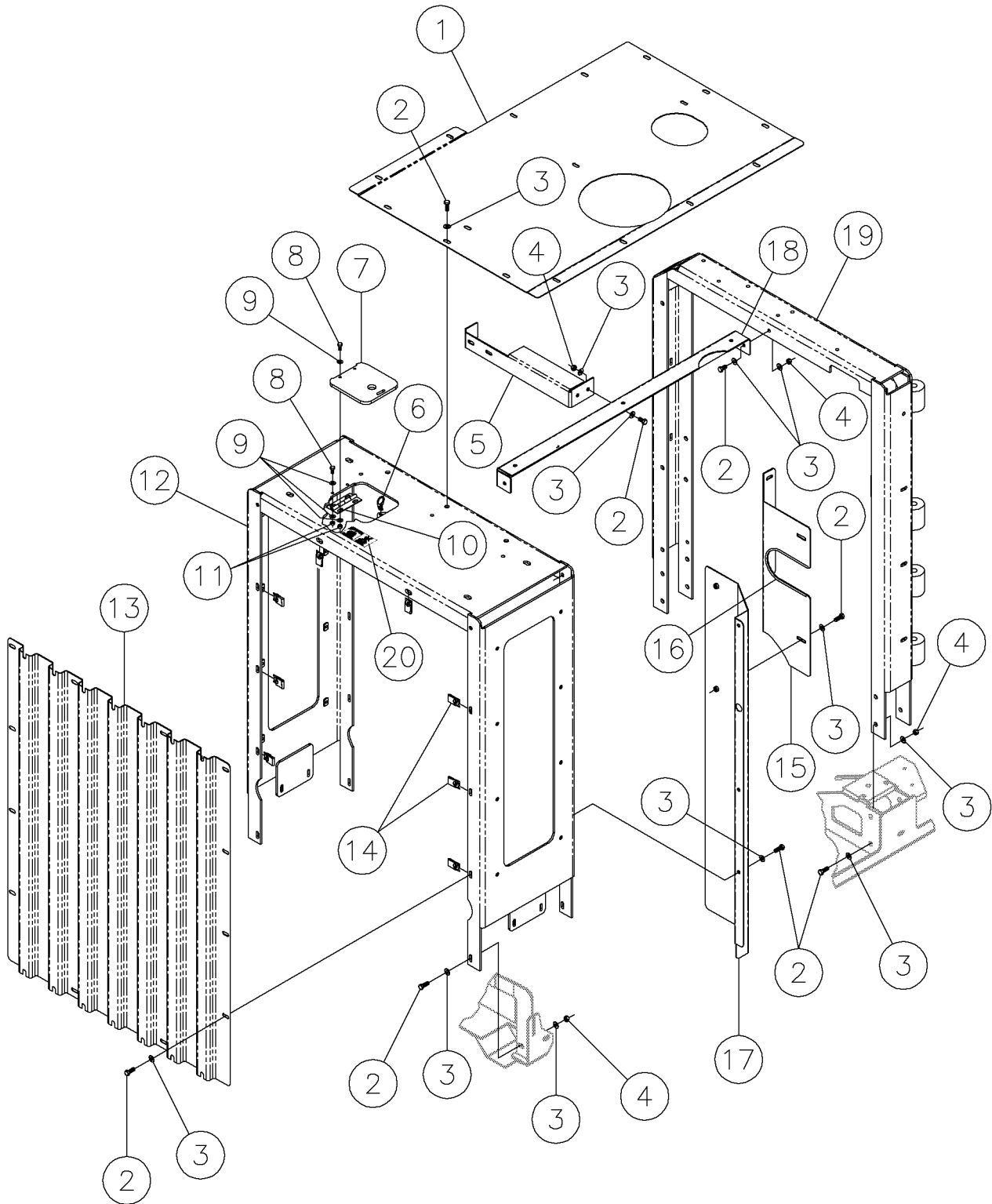
Radiator/Charge-Air Cooler Fig 3-7



Radiator/Charge-Air Cooler Fig 3-7

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296278041	RADIATOR ASSEMBLY	1	
2		163622311	PETCOCK	1	
3		256004003	CAP-RADIATOR (10LBS.)	1	
4		280917001	CONNECTOR - CAC HUMP HOSE	2	
5		225872001	CLAMP-2" T-BOLT	6	
6		2609005	MUFFLER CLAMP - 2"	1	
7		283844001	BRACKET-CHARGE AIR COOLER LINE	1	
8		280916001	TUBE - CHARGE AIR HOT	1	
9		296278042	OIL COOLER	1	
10		296278043	FUEL COOLER	1	
11		296278044	CHARGE AIR COOLER	1	
12		280914001	TUBE - CHARGE AIR COLD	1	
13		617675001	HUMP HOSE- SILIC/NOMEX 2.00 X 2.50-6.00	2	
14		296279664	CLAMP - T BOLT 2.50 - 2.81	2	

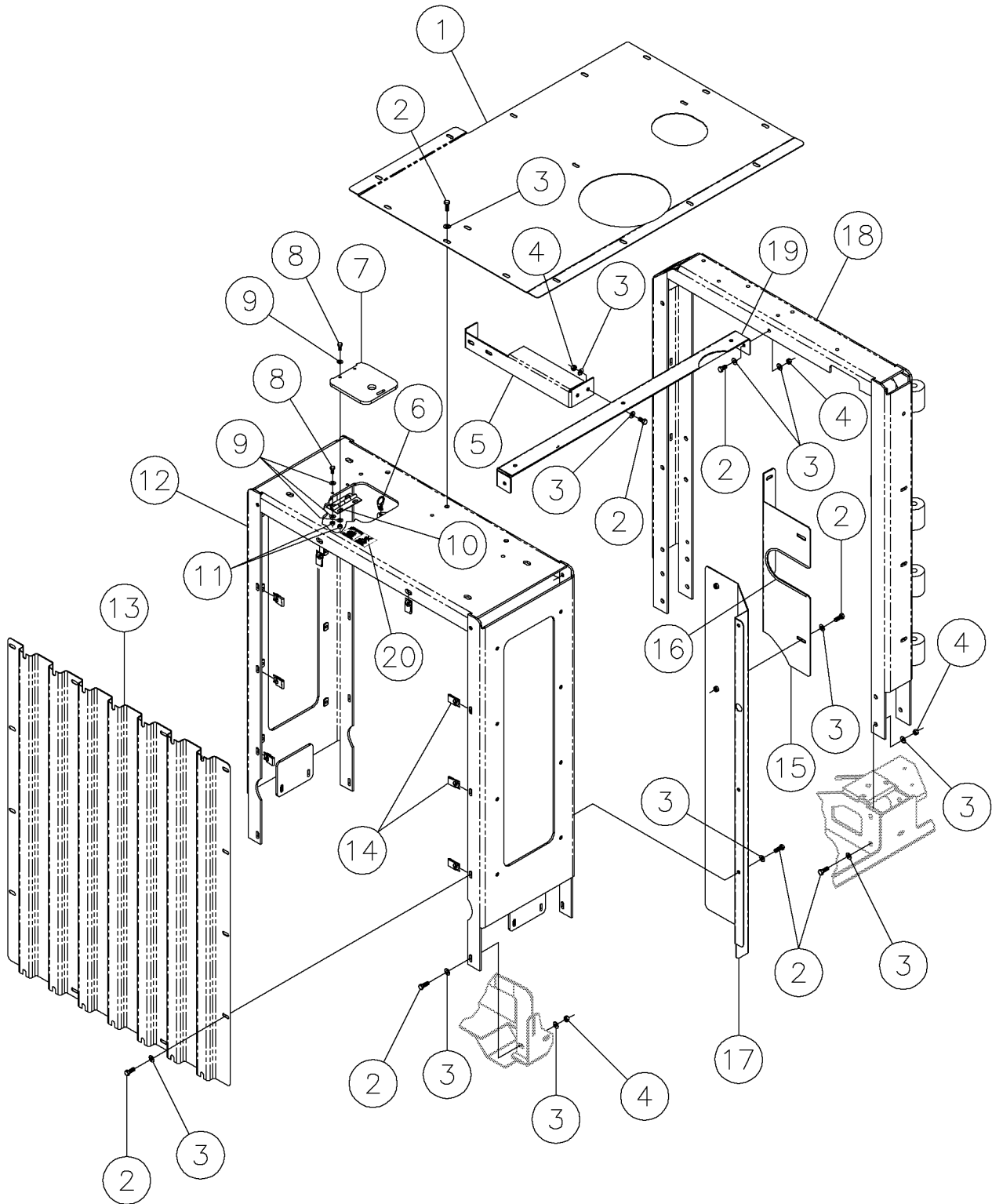
Engine Shield Fig 3-8r01



Engine Shield Fig 3-8r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	June, 2006		Update In Illustration & Parts List.
1		296273813	GRATE - TOP ENGINE BAY	1	
2		235727001	BOLT-3/8-16X1 GR8 HEX ZINC PLT	67	
3		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	52	
4		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	17	
5		296275871	PLATE - STIFFNER	1	
6		86113001	FASTENER-1/4 TURN	1	
7		296256485	COVER - RADIATOR FILL	1	
8		235742001	BOLT-5/16-18X3/4 GR8 ZINC PLTD	4	
9		235714001	WASHER - FLATSTRL - .31 - .34 X .69 - .06-YZ-A325	8	
10		293717001	HINGE - RADIATOR COVER	1	
11		235741001	NUT - HEX - .31 - 18 - GR8 -YZ	4	
12		296273828	FRAME - REAR ENGINE BAY	1	
13		296275808	GRILLE - RADIATOR	1	
14		13323001	NUT - PANEL - 3/8-16 U-CLIP	10	
15		296273935	TOP - AIR DEFLECTOR	1	
16		212522001	TRIM-1/4 EDGE	A/R	
17		296279534	AIR DEFLECTOR	1	
18		296286760	WELD - STIFFENER ENGINE BAY	1	
19		296273829	FRAME - FRONT ENGINE BAY	1	
20		2326315	DECAL-WARNING	1	Domestic
		2326I315	DECAL-WARNING	1	International

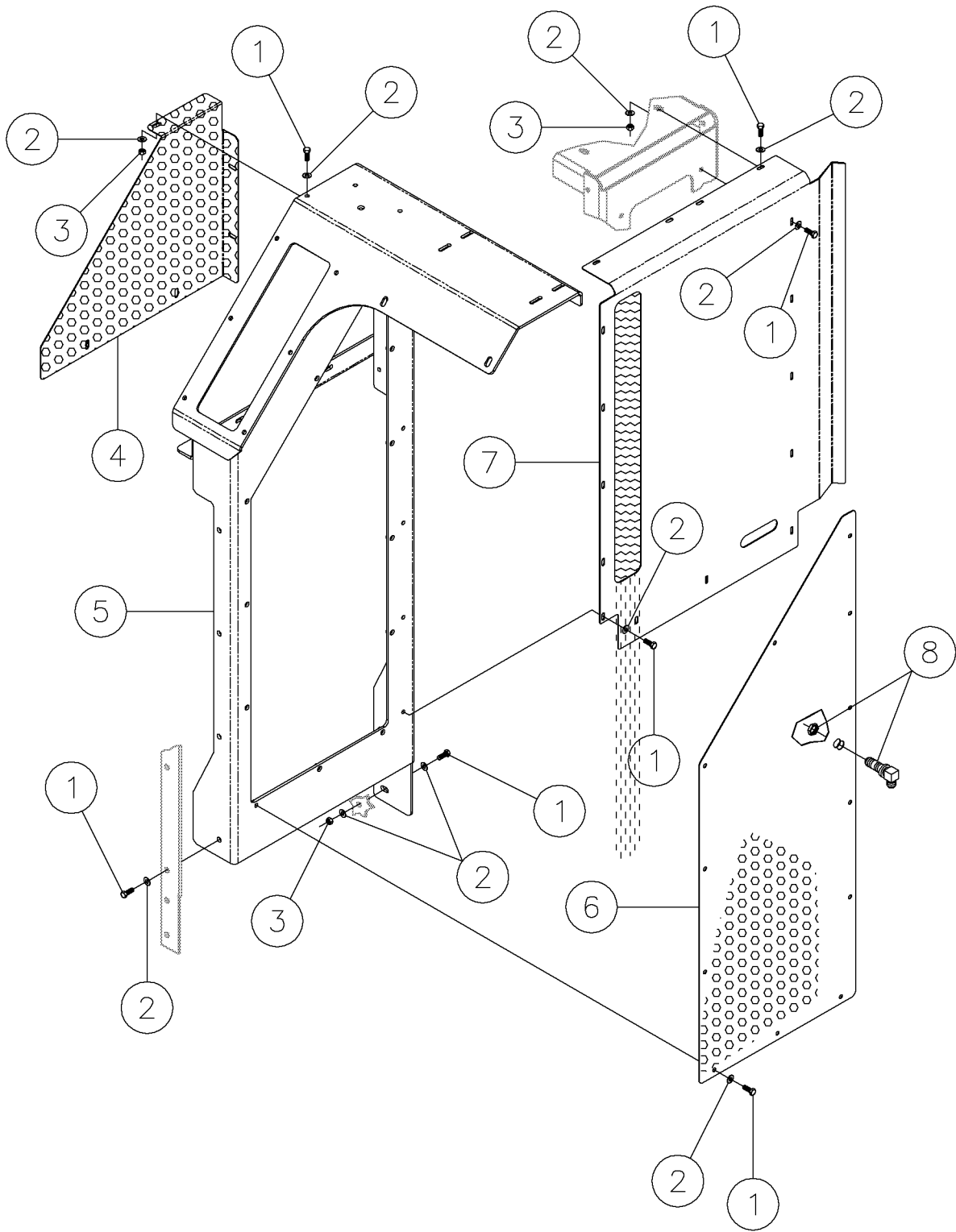
Engine Shield Fig 3-8



Engine Shield Fig 3-8

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296273813	GRATE - TOP ENGINE BAY	1	
2		235727001	BOLT-3/8-16X1 GR8 HEX ZINC PLT	67	
3		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	52	
4		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	17	
5		296275871	PLATE - STIFFNER	1	
6		86113001	FASTENER-1/4 TURN	1	
7		296256485	COVER - RADIATOR FILL	1	
8		235742001	BOLT-5/16-18X3/4 GR8 ZINC PLTD	4	
9		235714001	WASHER - FLATSTRL - .31 - .34 X .69 - .06-YZ-A325	8	
10		293717001	HINGE - RADIATOR COVER	1	
11		235741001	NUT - HEX - .31 - 18 - GR8 -YZ	4	
12		296273828	FRAME - REAR ENGINE BAY	1	
13		296275808	GRILLE - RADIATOR	1	
14		13323001	NUT - PANEL - 3/8-16 U-CLIP	10	
15		296273935	TOP - AIR DEFLECTOR	1	
16		212522001	TRIM-1/4 EDGE	A/R	
17		296279534	AIR DEFLECTOR	1	
18		296275781	PLATE - ENGINE BAY STIFFNER	1	
19		296266470	CROSSBAR-ENGINE BAY FRAME	1	
20		2326315	DECAL-WARNING	1	Domestic
		23261315	DECAL-WARNING	1	International

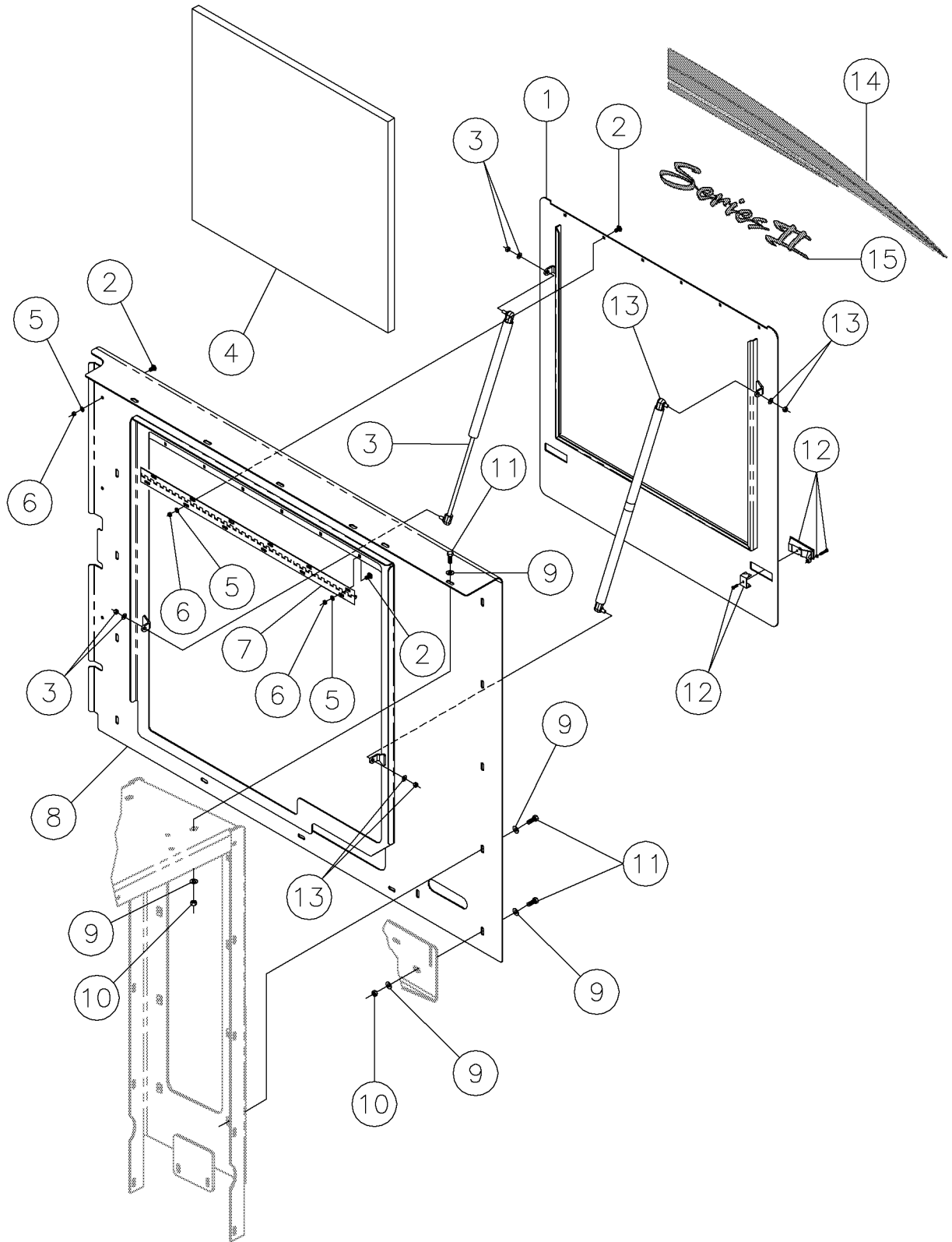
Engine Shield (Right) Fig 3-9



Engine Shield (Right) Fig 3-9

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		235727001	BOLT-3/8-16X1 GR8 HEX ZINC PLT	38	
2		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	48	
3		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	12	
4		296273816	COVER - HOSE CHANNEL	1	
5		296273814	WELDMENT - HOSE CHANNEL	1	
6		296273812	COVER - HOSE CHANNEL	1	
7		296275932	REAR - SHIELD	1	
8		77735001	FITTING - BH90 - 10MJ - 10MJ - LN	1	

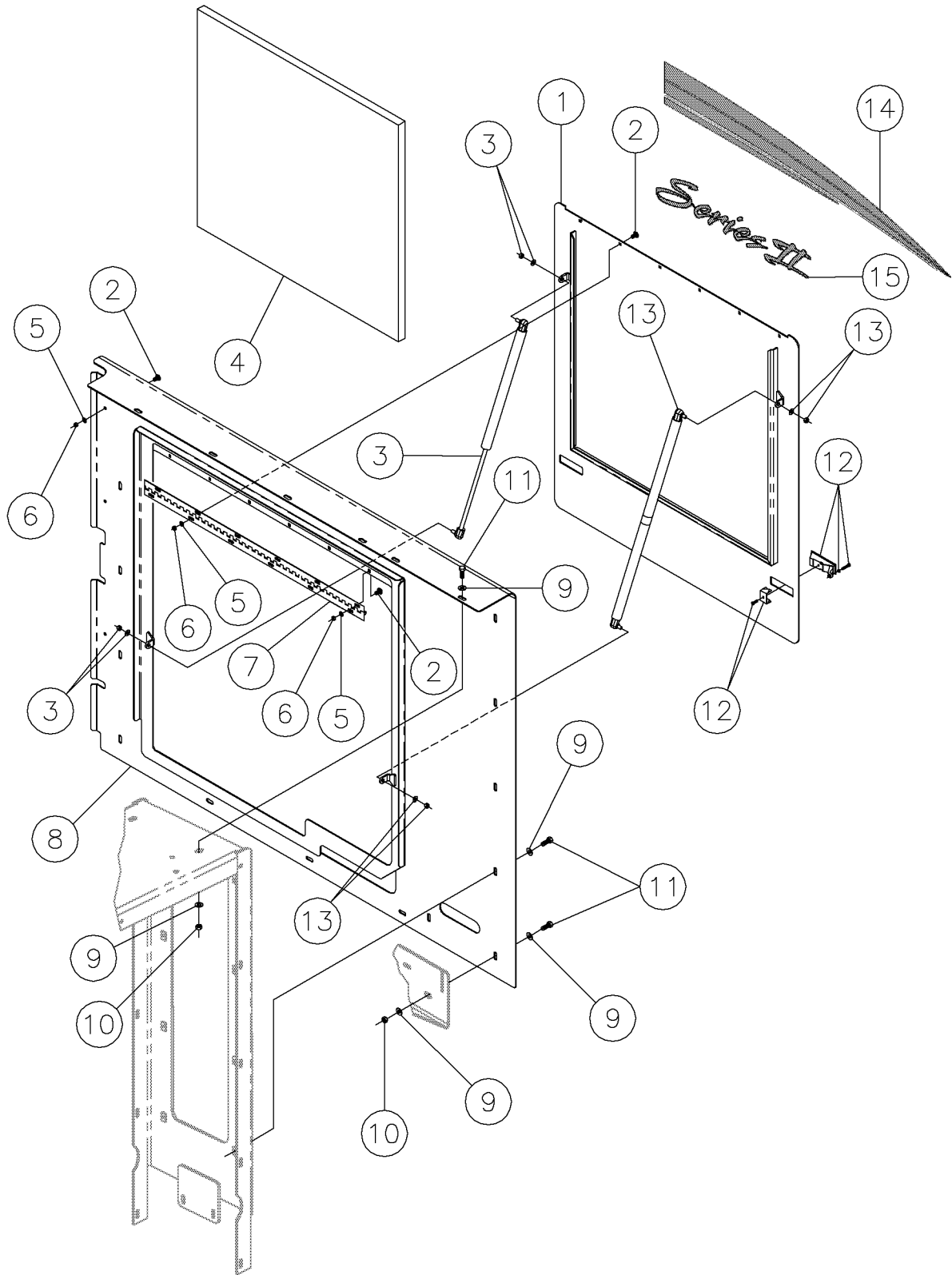
Engine Shield (Left) (S/N 151-) Fig 3-10r02



Engine Shield (Left) (S/N 151-) Fig 3-10r02

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	June, 2007		Change Decal
1		296273831	DOOR - ENGINE BAY (RIGHT)	1	
2		373005	BOLT-1/4-20X5/8 GR5 CARRIAGE	15	
3		294030001	SPRING - GAS, 26.3 EXT LENGTH	1	
4		296279662	FOAM - ENGINE BAY DOOR	1	
5		235716001	WASHER-FLATSTRL-.25-.28 X .63 - .06 - CZ	15	
6		235732001	NUT - HEX - .25 - 20 - GR8 - YZ	15	
7		280908001	HINGE - DOOR	1	
8		296273832	SHIELD-ENGINE BAY (RIGHT)	1	
9		235713001	WASHER-FLATSTRL-.38-.41X.81-.06-YA-A325	34	
10		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	16	
11		235727001	BOLT-3/8-16X1 GR8 HEX ZINC PLT	20	
12		218080001	LATCH-ADJ.LEVER W/RAISED BUTTN(INC KEYS)	2	
		97874003	KEYS	A/R	(Pair)
13		294029001	SPRING - GAS LATCHING, 26.3 EXT LENGTH	1	
14	*	7000D010	DECAL - COSMETIC V - 12.00"	1	(S/N 151-)
15		7000C437	DECAL - LG - SERIES II - D100X120 II	1	

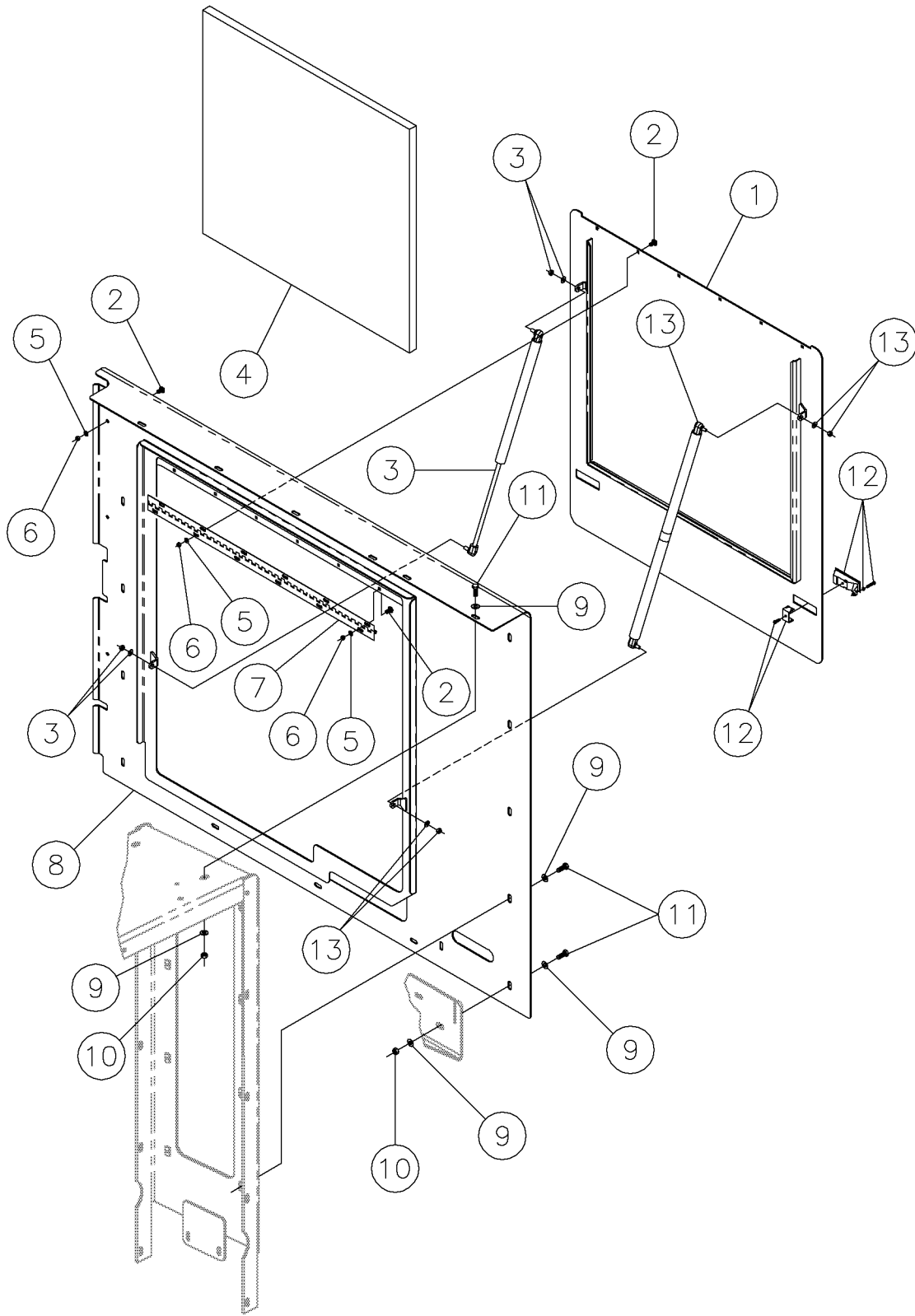
Engine Shield (Left) Fig 3-10r01



Engine Shield (Left) Fig 3-10r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	November, 2006		Added Part No. for Keys
1		296273831	DOOR - ENGINE BAY (RIGHT)	1	
2		373005	BOLT-1/4-20X5/8 GR5 CARRIAGE	15	
3		294030001	SPRING - GAS, 26.3 EXT LENGTH	1	
4		296279662	FOAM - ENGINE BAY DOOR	1	
5		235716001	WASHER-FLATSTRL-.25-.28 X .63 - .06 - CZ	15	
6		235732001	NUT - HEX - .25 - 20 - GR8 - YZ	15	
7		280908001	HINGE - DOOR	1	
8		296273832	SHIELD-ENGINE BAY (RIGHT)	1	
9		235713001	WASHER-FLATSTRL-.38-.41X.81-.06-YA-A325	34	
10		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	16	
11		235727001	BOLT-3/8-16X1 GR8 HEX ZINC PLT	20	
12		218080001	LATCH-ADJ.LEVER W/RAISED BUTTN(INC KEYS)	2	
	*	97874003	KEYS	A/R	(Pair)
13		294029001	SPRING - GAS LATCHING, 26.3 EXT LENGTH	1	
14		7000C545	DECAL - D80X100 II RIGHT STRIPE	1	
15		7000C437	DECAL - LG - SERIES II - D100X120 II	1	

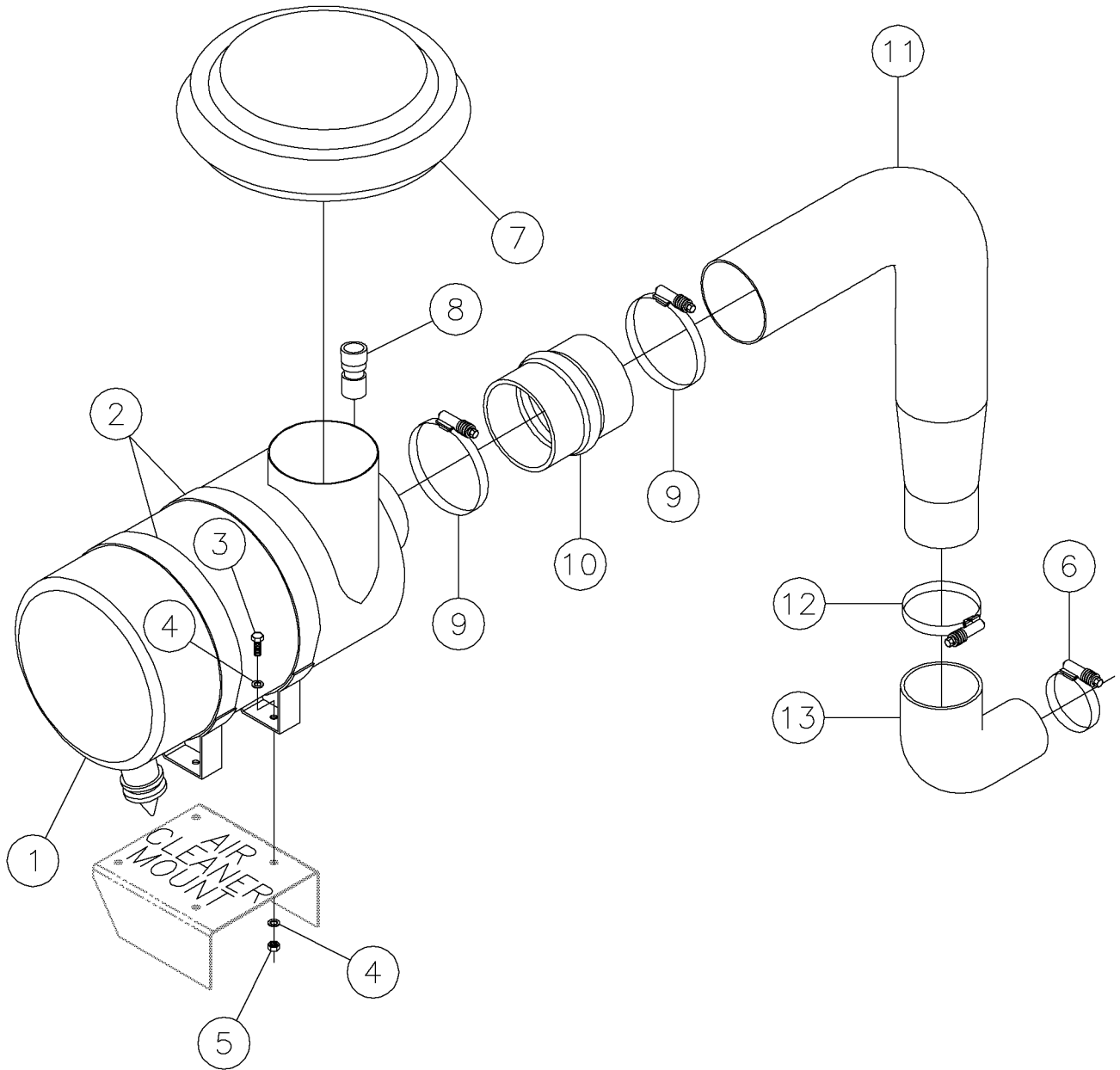
Engine Shield (Left) Fig 3-10



Engine Shield (Left) Fig 3-10

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296273831	DOOR - ENGINE BAY (RIGHT)	1	
2		373005	BOLT-1/4-20X5/8 GR5 CARRIAGE	15	
3		294030001	SPRING - GAS, 26.3 EXT LENGTH	1	
4		296279662	FOAM - ENGINE BAY DOOR	1	
5		235716001	WASHER - FLATSTRL - .25 - .28 X .63 - .06 - CZ	15	
6		235732001	NUT - HEX - .25 - 20 - GR8 - YZ	15	
7		280908001	HINGE - DOOR	1	
8		296273832	SHIELD-ENGINE BAY (RIGHT)	1	
9		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	34	
10		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	16	
11		235727001	BOLT-3/8-16X1 GR8 HEX ZINC PLT	20	
12		218080001	LATCH-ADJ.LEVER W/RAISED BUTTN(INC KEYS)	2	
13		294029001	SPRING - GAS LATCHING, 26.3 EXT LENGTH	1	

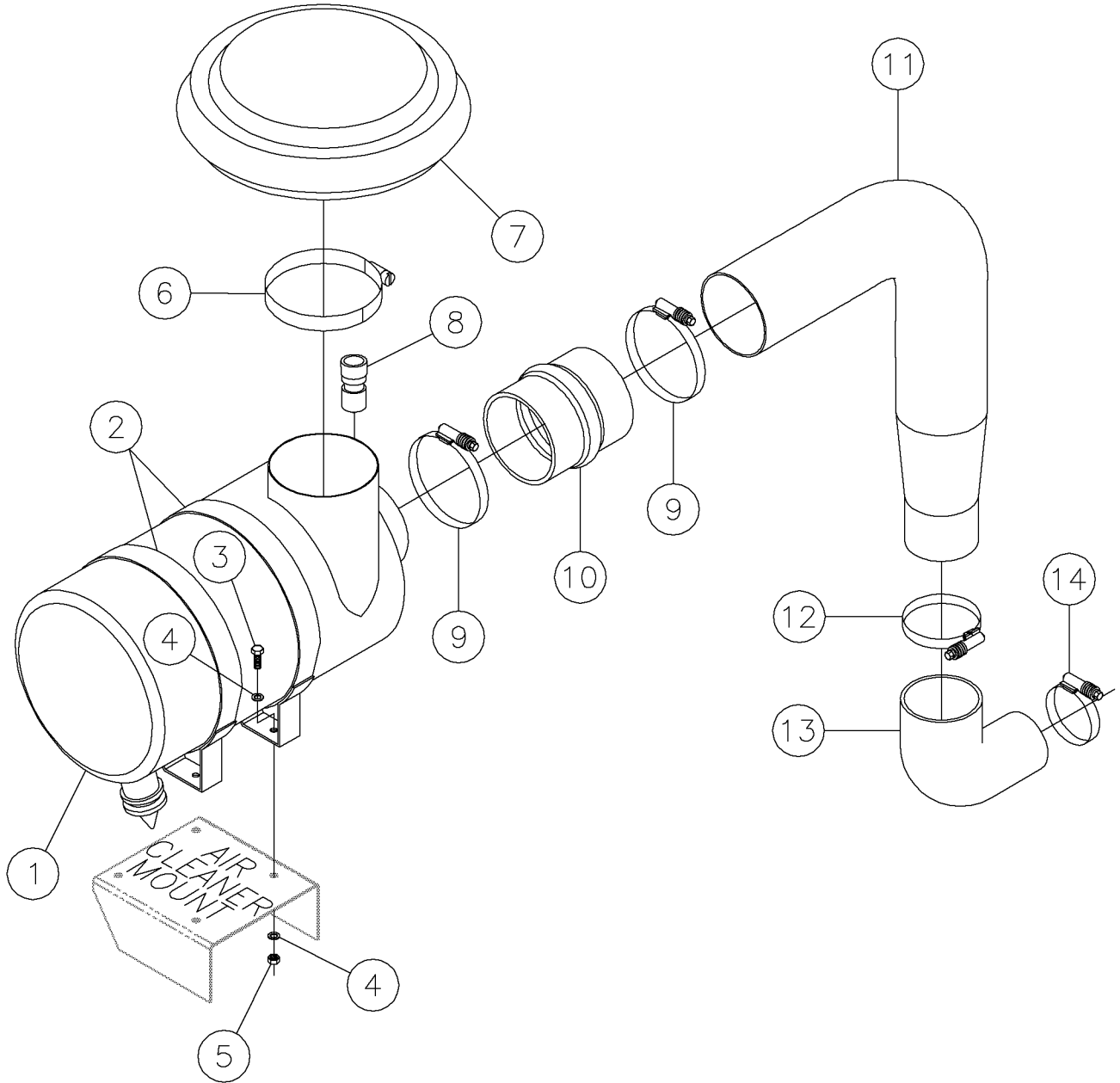
Air Cleaner Fig 3-11r01



Air Cleaner Fig 3-11r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	June, 2006		Update In Illustration & Parts List.
1		280921001	AIR CLEANER - 13" DIA. W/ SAFETY ELEMENT	1	Breakdown Fig. 13-5
2		280922001	BAND - 13" MOUNTING	2	
3		235727001	BOLT-3/8-16X1 GR8 HEX ZINC PLT	4	
4		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	8	
5		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	4	
6		280911001	CLAMP - SPRING LOADED HOSE 3.25	1	
7		140176001	CAP-AIR CLEANER	1	
8		113557001	INDICATOR-AIR FLOW - 30"	1	
9		123618001	CLAMP-SPRING LOADED HOSE 5.25	2	
10		293702001	HOSE-5" HUMP	1	
11		296273821	TUBE-AIR INLET	1	
12		91432001	CLAMP - 4 1/2" T-BOLT	1	
13		280923001	ELBOW - 4" - 3" 90 DEG. REDUCER	1	

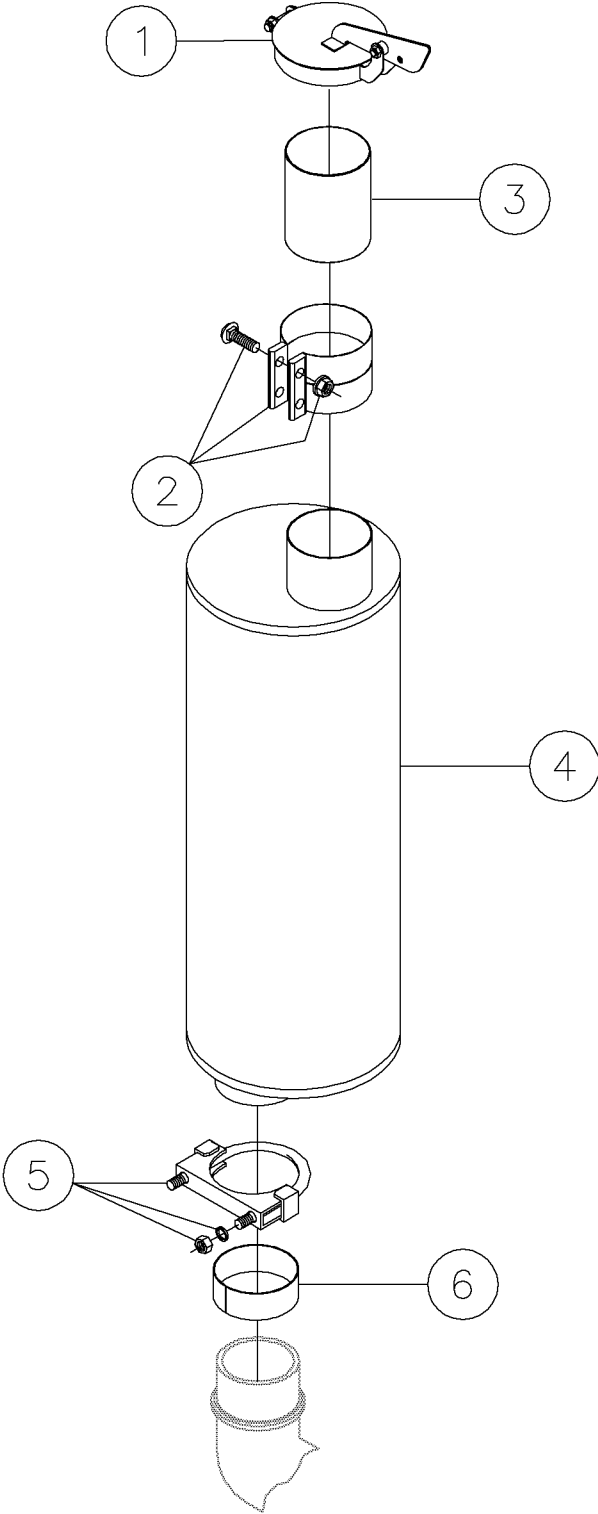
Air Cleaner Fig 3-11



Air Cleaner Fig 3-11

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		280921001	AIR CLEANER - 13" DIA. W/ SAFETY ELEMENT	1	Breakdown Fig. 13-5
2		280922001	BAND - 13" MOUNTING	2	
3		235727001	BOLT-3/8-16X1 GR8 HEX ZINC PLT	4	
4		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	8	
5		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	4	
6		603924001	CLAMP-6"DIA. BENT BOLT	1	
7		140176001	CAP-AIR CLEANER	1	
8		113557001	INDICATOR-AIR FLOW - 30"	1	
9		123618001	CLAMP-SPRING LOADED HOSE 5.25	2	
10		293702001	HOSE-5" HUMP	1	
11		296273821	TUBE-AIR INLET	1	
12		91432001	CLAMP - 4 1/2" T-BOLT	1	
13		280923001	ELBOW - 4" - 3" 90 DEG. REDUCER	1	
14		280911001	CLAMP - SPRING LOADED HOSE 3.25	1	

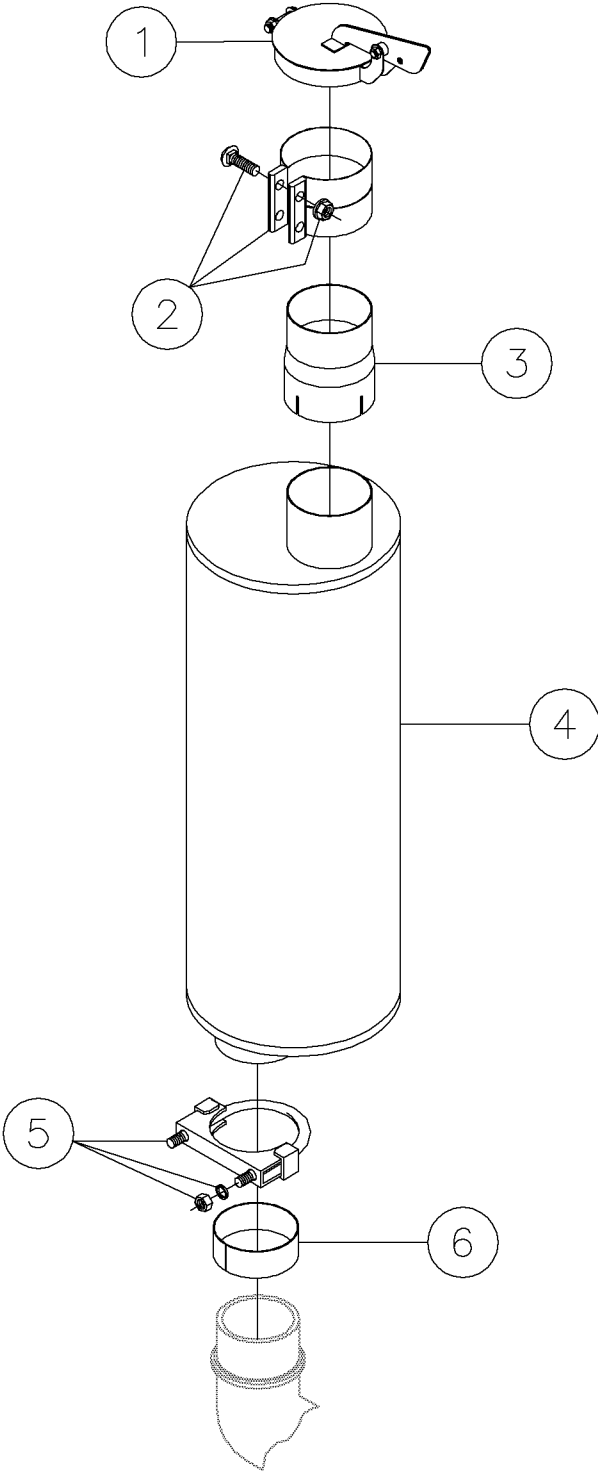
Muffler Fig 3-12r01



Muffler Fig 3-12r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	July, 2006		Update In Illustration & Parts List.
1		94238001	CAP-RAIN 4IN COUNTER BALANCE	1	
2		244951001	CLAMP-SEAL	1	
3		296286775	TUBE - EXHAUST-VERTICAL MUFFLER	1	
4		238744001	MUFFLER-VERTICAL EXHAUST	1	
5		2609017	CLAMP-MUFFLER 4"	1	
6		296279602	RING-MUFFLER	1	

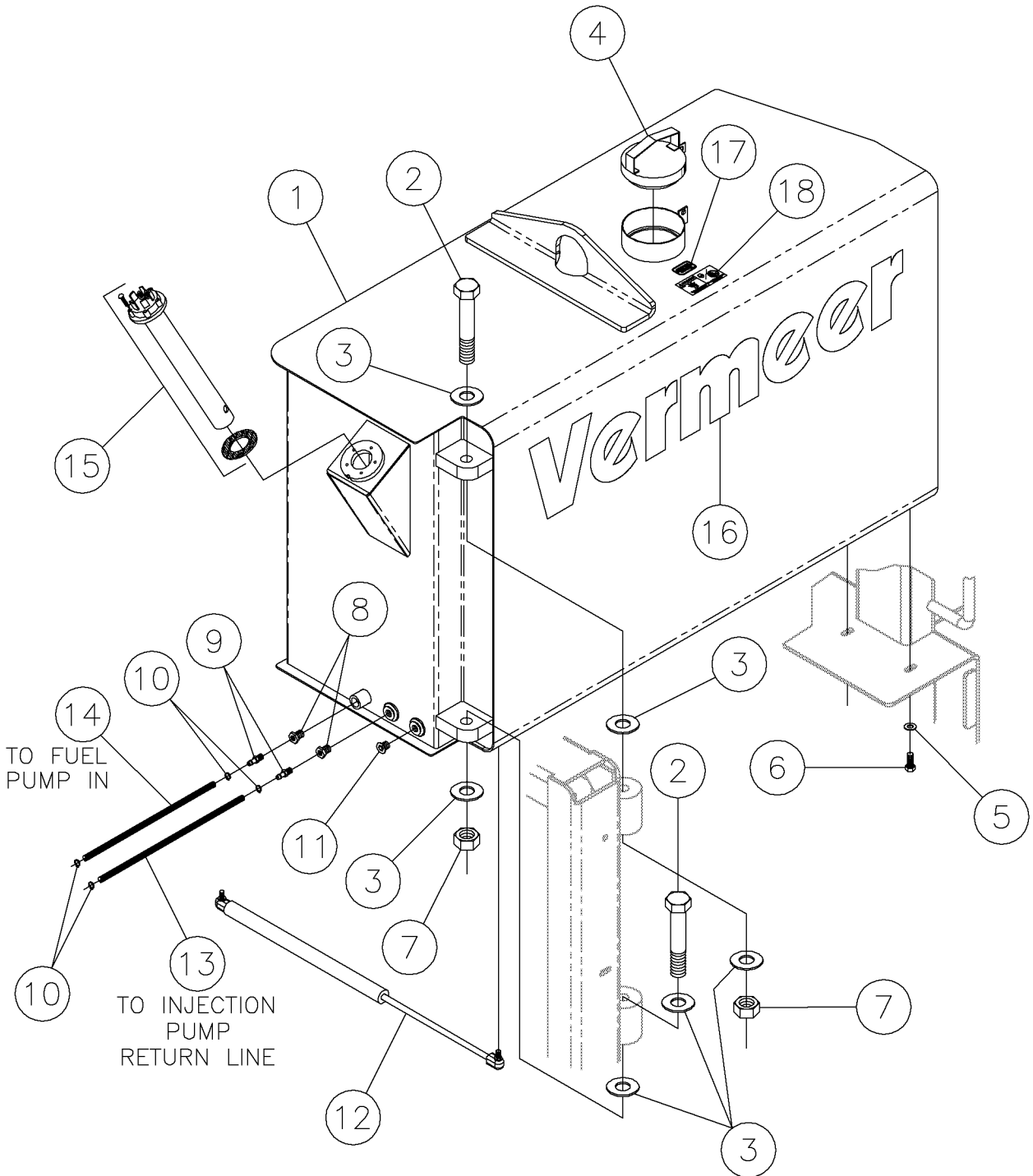
Muffler Fig 3-12



Muffler Fig 3-12

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		94238001	CAP-RAIN 4IN COUNTER BALANCE	1	
2		244951001	CLAMP-SEAL	1	
3		296275998	TUBE - EXHAUST	1	
4		238744001	MUFFLER-VERTICAL EXHAUST	1	
5		2609017	CLAMP-MUFFLER 4"	1	
6		296279602	RING-MUFFLER	1	

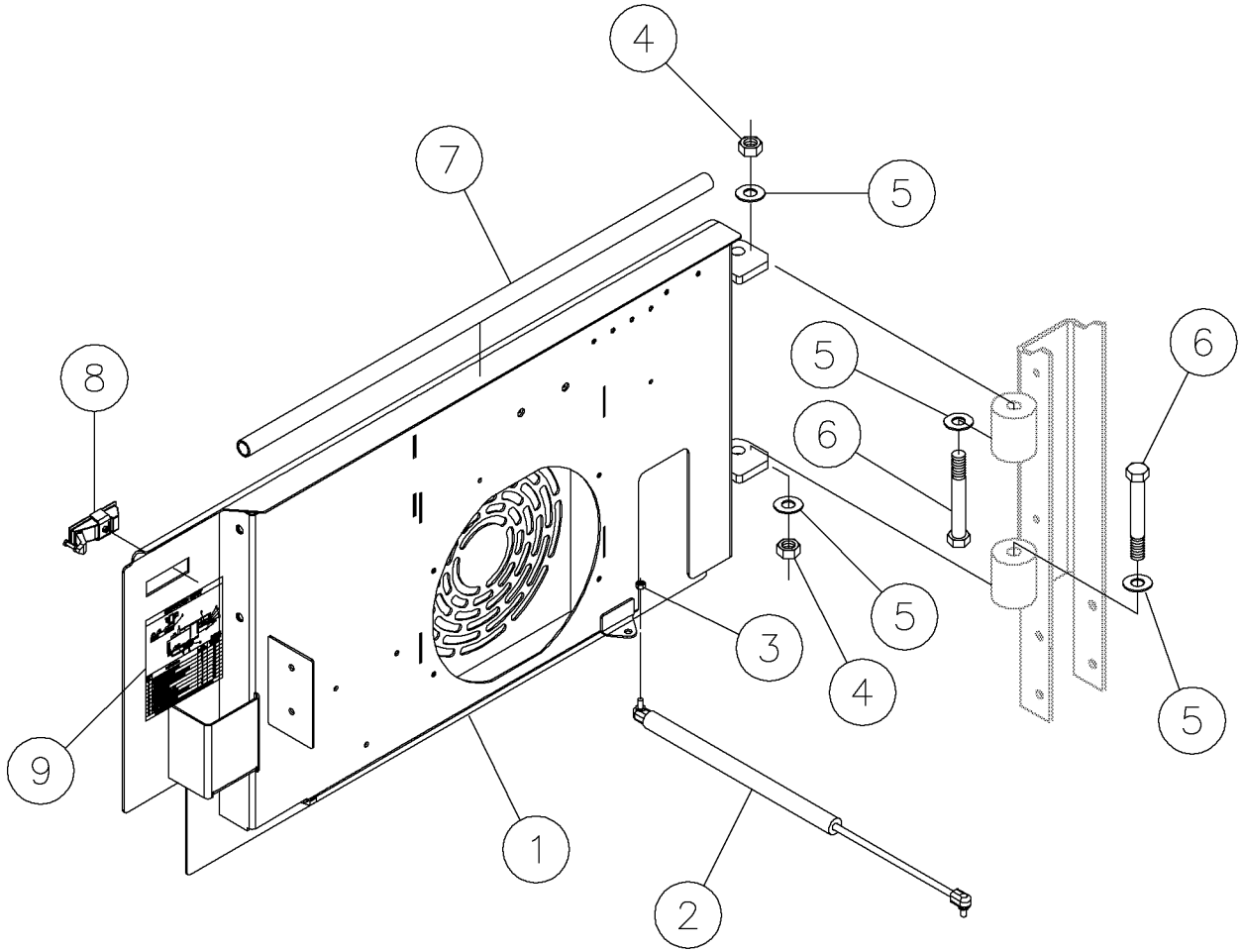
Fuel Tank Fig 3-13



Fuel Tank Fig 3-13

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296266478	FUEL TANK - D100X120 II	1	
2		388054	BOLT-1-8X5 1/2" GRADE #8 HEX	2	
3		238892001	WASHER-1" HARDENED FLAT ZY	8	
4		224985001	CAP-VENTED FUEL TANK	1	
5		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	2	
6		235727001	BOLT-3/8-16X1 GR8 HEX ZINC PLT	2	
7		238215001	NUT 1-8 GR8 ZINC YC	2	
8		730003	1/2" X 1/4" HEX BUSHING STEEL	2	
9		102118001	FITTING-1/4NPT X 3/8 HOSE BARB	2	
10		1580001	HOSE CLAMP - 3/8"	4	
11		83637001	PLUG-#8 JIC MALE	1	
12		294030001	SPRING - GAS, 26.3 EXT LENGTH	1	
13		296275698	HOSE-3/8 X 42- NO ENDS- 50#PSI-FUEL TANK	1	
14		296275697	HOSE-3/8 X 32- NO ENDS- 50#PSI-FUEL TANK	1	
15		285049001	SENDER - FUEL GAUGE	1	
		251538003	GASKET - FUEL SENDER	1	
16		2326595	DECAL VERMEER- 4 1/2 X 24	1	
17		70000098	DECAL-DIESEL (AT/UND)	1	Domestic
		7000I098	DECAL-DIESEL FUEL	1	International
18		2326324	DECAL-WARNING/REFUEL	1	Domestic
		2326I324	DECAL - WARNING EXPLOSION	1	International

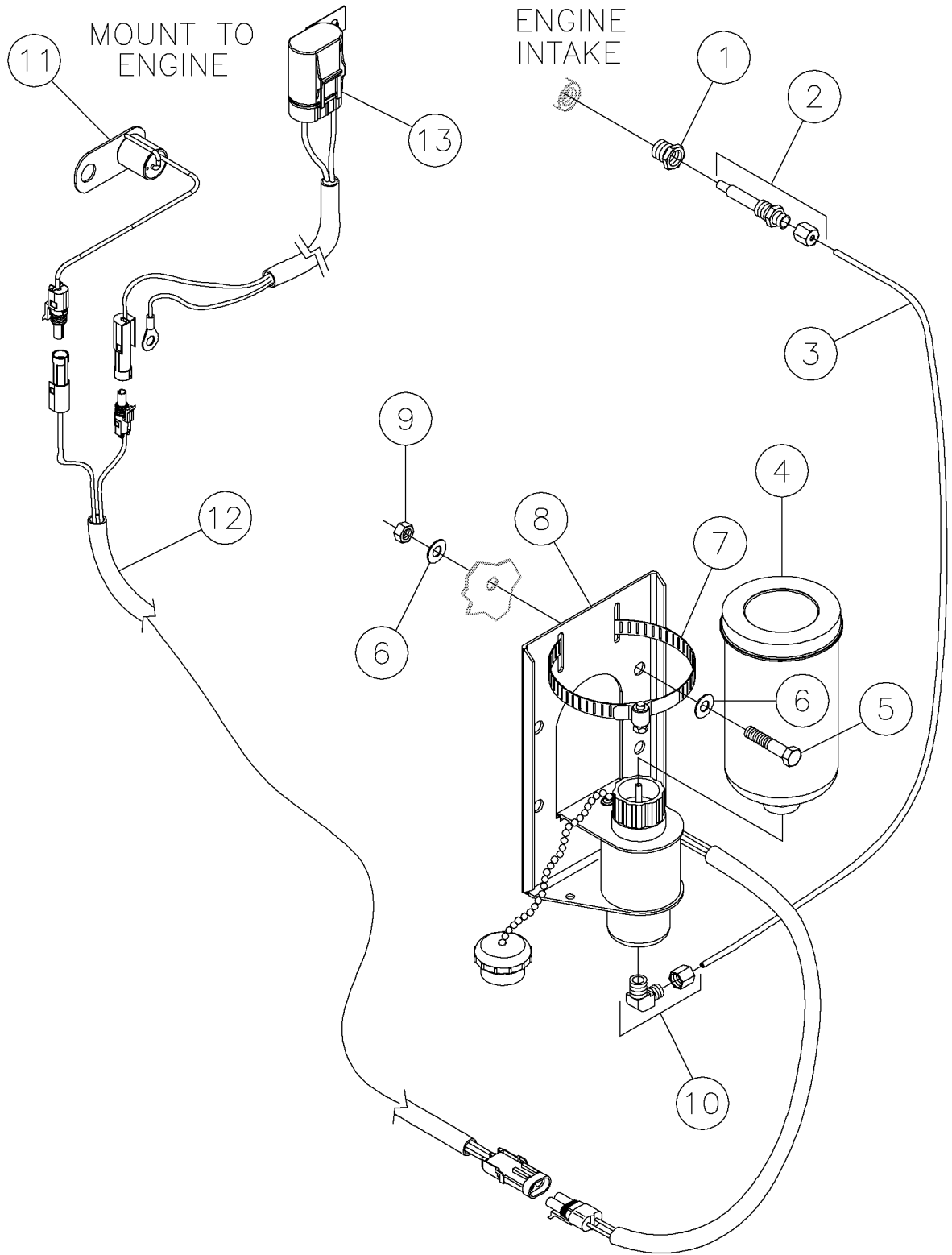
Power Distribution Door Fig 3-14



Power Distribution Door Fig 3-14

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	November, 2006		Added Part No. for Keys
1		296275799	DOOR - ELECTRICAL	1	
2		294030001	SPRING - GAS, 26.3 EXT LENGTH	1	
		510502066	10MM BALL STUD SAFETY CLIP	2	
3		235741001	NUT - HEX - .31 - 18 - GR8 -YZ	2	
4		235739001	NUT-3/4-10 GR8 ZINC PLTD	2	
5		510337617	WASHER-FLATSTD-.75-.81X2.00-.15-YZ	4	
6		242884001	BOLT-3/4-10X5 1/2 GR8 ZINC	2	
7		288982001	SEAL - 1" X 1" HALF ROUND	A/R	Specify Length
8		218080001	LATCH-ADJ.LEVER W/RAISED BUTTN(INC KEYS)	2	
	*	97874003	KEYS	A/R	(Pair)
9		7000C458	DECAL - LUBRICATION CHART	1	

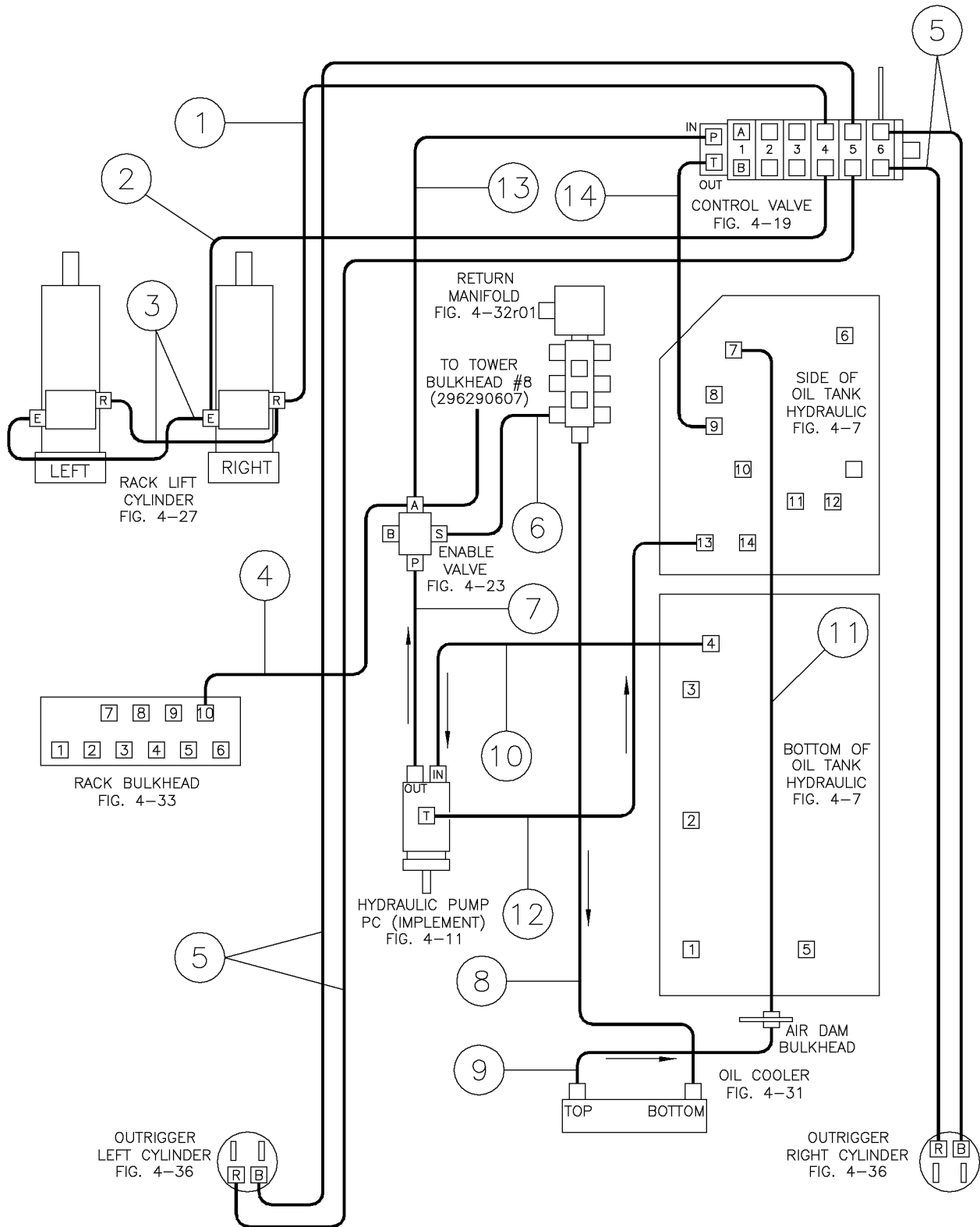
Ether Starter System Fig 3-15



Ether Starter System Fig 3-15

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296281252	ADAPTER	1	
2		296281253	NOZZLE ASSEMBLY	1	
3		202831001	TUBING-NYLON 1/8OD	A/R	Specify Length
4		296279823	CYLINDER - 8 OZ ETHER 3" DIA X 6" TALL	1	
5		279376001	BOLT-5/16-18X1 1/2 GR8 HEX ZNC PLT	4	
6		235714001	WASHER - FLATSTRL - .31 - .34 X .69 - .06-YZ-A325	8	
7		1580015	HOSE CLAMP - 3"	1	
8		296281251	ETHER 12V SOLENOID VALVE	1	
9		235741001	NUT - HEX - .31 - 18 - GR8 -YZ	4	
10		296281254	BLOCKOR FITTING ASSEMBLY	1	
11		296281255	SWITCH - ENGINE TEMP. SENSOR	1	
12		NSS	ETHER WIRING HARNESS	1	Not Sold Separately
13		NSS	FUSE BLOCK HARNESS	1	Not Sold Separately
		296277799	KIT - DEERE ETHER PARTS		Included Ref. 1-3 & 5-13
			(OPTIONAL KIT)		

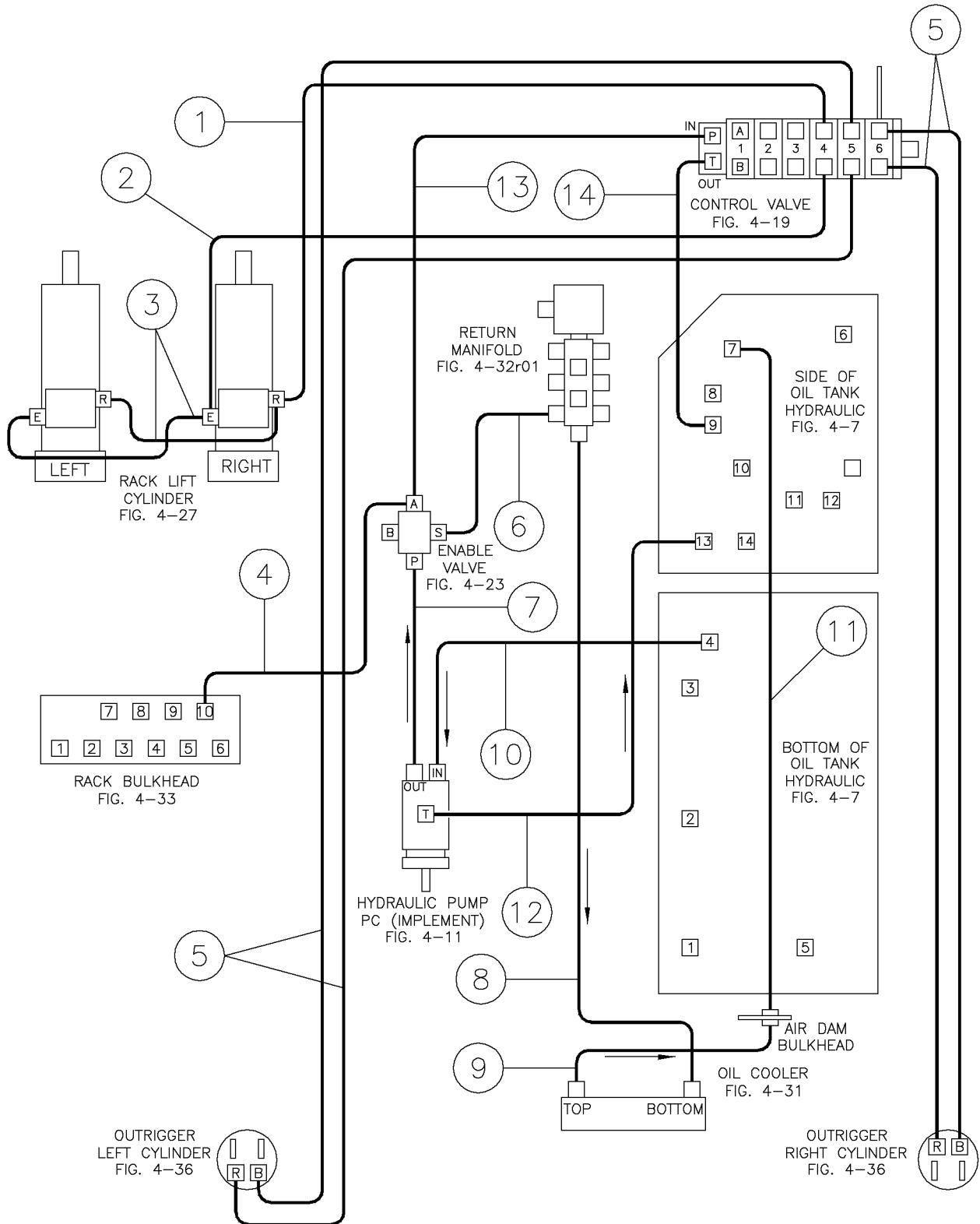
Oil Flow Diagram - Implement (S/N 146-) Fig 4-1r02



Oil Flow Diagram - Implement (S/N 146-) Fig 4-1r02

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	June, 2007		Changes Hose Length
1		57940651	HOSE-3/8X50 6FSJIC ST 3000 M3K	1	
2		296279525	HOSE-HYD.38X55 6FJS ST/6 FSJ90-3000-100R	1	
3		256697001	HOSE-HYD-.38X22-6FSJ-ST/90-M3KMTF	2	
4		296290607	HOSE-HYD-.38X56-6FS-ST/90-3000PSI-100R17-M3K	1	(S/N 130-)
5		153971001	HOSE - 1/4 X 204 4FS JIC 3000PSI	4	
6		296258368	HOSE - .50 X 32 8FS JIC ST/ST M3K	1	
7		296279539	HOSE-HYD-1.00X30 16FSJ ST/16FSJ ST-3000-	1	
8		296279523	HOSE-HYD 1.25X51 20FJS ST/20 FSJ ST-250-	1	
9		296279522	HOSE-HYD 1.25X32 20FSJ 45/10 FSJ 45-150-	1	
10		65560059	HOSE-HYD-1.25 X 32-20FSJ-ST/ST-200PSI-10	1	
11		296279524	HOSE-HYD.1.25X112 20FJS ST/20 FSJST-250-	1	
12	*	296258361	HOSE - .63 X 33 10FS JIC ST/ST M3K	1	(S/N 146-)
13		53845533	HOSE-3/4X35 12 FS JIC 3000 PSI	1	
14		296279528	HOSE-HYD.75X23 12FSJ ST/12FSJ 45-3000-10	1	

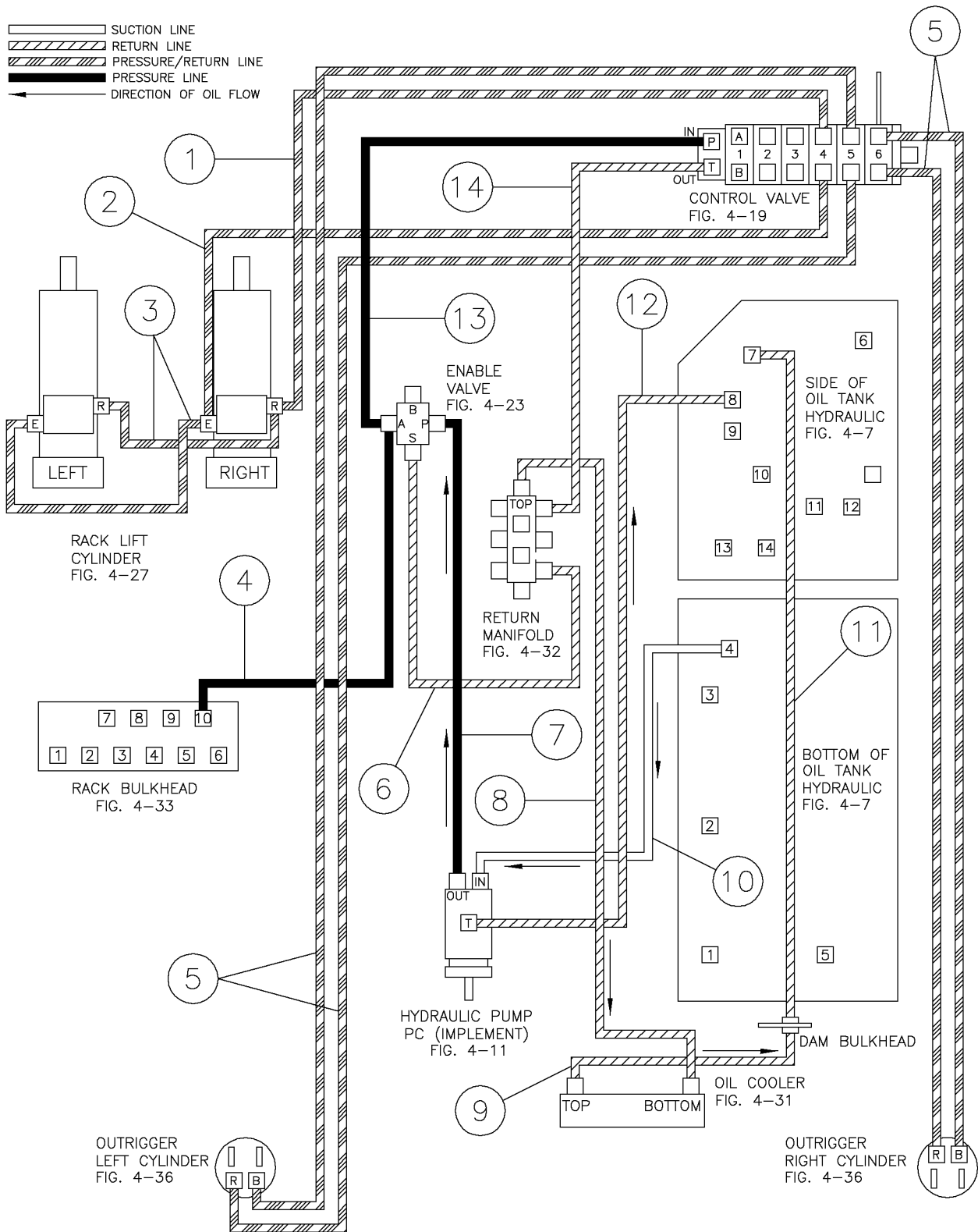
Oil Flow Diagram - Implement (S/N 130-) Fig 4-1r01



Oil Flow Diagram - Implement (S/N 130-) Fig 4-1r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2007		Update In Illustration & Parts List.
1		57940651	HOSE-3/8X50 6FSJIC ST 3000 M3K	1	
2		296279525	HOSE-HYD.38X55 6FJS ST/6 FSJ90-3000-100R	1	
3		256697001	HOSE-HYD-.38X22-6FSJ-ST/90-M3KMTF	2	
4		296290607	HOSE-HYD-.38X56-6FS-ST/90-3000PSI-100R17-M3K	1	(S/N 130-)
5		153971001	HOSE - 1/4 X 204 4FS JIC 3000PSI	4	
6		296258368	HOSE - .50 X 32 8FS JIC ST/ST M3K	1	
7		296279539	HOSE-HYD-1.00X30 16FSJ ST/16FSJ ST-3000-	1	
8		296279523	HOSE-HYD 1.25X51 20FJS ST/20 FSJ ST-250-	1	
9		296279522	HOSE-HYD 1.25X32 20FSJ 45/10 FSJ 45-150-	1	
10		65560059	HOSE-HYD-1.25 X 32-20FSJ-ST/ST-200PSI-10	1	
11		296279524	HOSE-HYD.1.25X112 20FJS ST/20 FSJST-250-	1	
12	*	255617001	HOSE-5/8 X 37 10FS ST/ST	1	
13	*	53845533	HOSE-3/4X35 12 FS JIC 3000 PSI	1	
14		296279528	HOSE-HYD.75X23 12FSJ ST/12FSJ 45-3000-10	1	

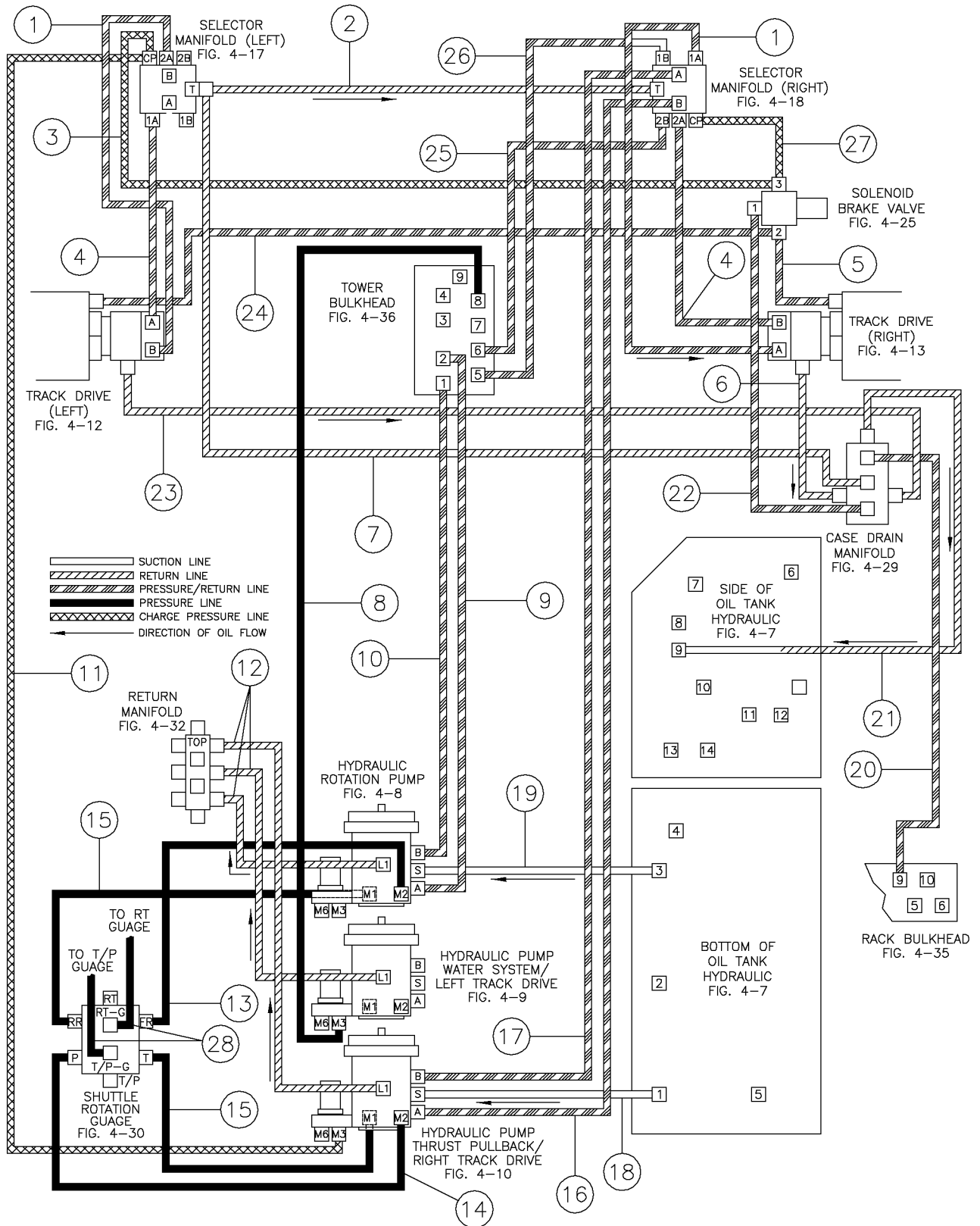
Oil Flow Diagram - Implement Fig 4-1



Oil Flow Diagram - Implement Fig 4-1

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		57940651	HOSE-3/8X50 6FSJIC ST 3000 M3K	1	
2		296279525	HOSE-HYD.38X55 6FJS ST/6 FSJ90-3000-100R	1	
3		256697001	HOSE-HYD-.38X22-6FSJ-ST/90-M3KMTF	2	
4		57940239	HOSE-3/8X64 6FS JIC 3000PSI	1	
5		153971001	HOSE - 1/4 X 204 4FS JIC 3000PSI	4	
6		296258368	HOSE - .50 X 32 8FS JIC ST/ST M3K	1	
7		296279539	HOSE-HYD-1.00X30 16FSJ ST/16FSJ ST-3000-	1	
8		296279523	HOSE-HYD 1.25X51 20FJS ST/20 FSJ ST-250-	1	
9		296279522	HOSE-HYD 1.25X32 20FSJ 45/10 FSJ 45-150-	1	
10		65560059	HOSE-HYD-1.25 X 32-20FSJ-ST/ST-200PSI-10	1	
11		296279524	HOSE-HYD.1.25X112 20FJS ST/20 FSJST-250-	1	
12		255617001	HOSE-5/8 X 37 10FS ST/ST	1	
13		53845287	HOSE-3/4X37 12FS JIC 3000 PSI	1	
14		296279528	HOSE-HYD.75X23 12FSJ ST/12FSJ 45-3000-10	1	

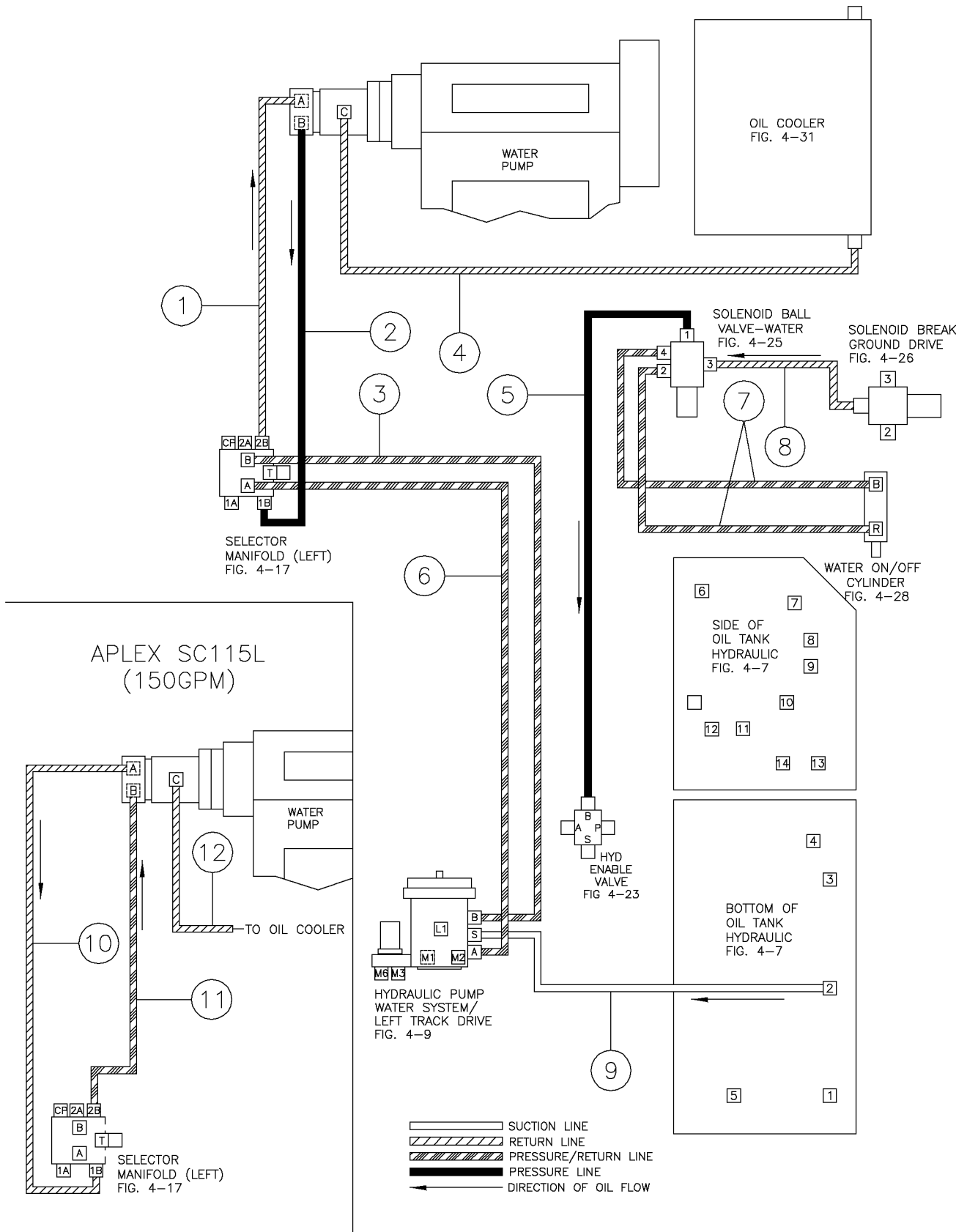
Oil Flow Diagram - Ground Drive Fig 4-2



Oil Flow Diagram - Ground Drive Fig 4-2

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296279511	HOSE-HYD 1.00X42-16FSJ ST/16FSJ ST-6000-	2	
2		53843405	HOSE-1/4X28 4FSJICST/4FSJIC90	1	
3		254747001	HOSE-1/4 X 15 4FS JIC ST/45 3000 PSI	1	
4		296279510	HOSE-HYD 1.00X39-16FSJ 90/16FSJ ST-6000-	1	
5		53843533	HOSE-1/4X44 4FS JIC ST/4FSJIC90	1	
6		296279529	HOSE-HYD.-.50X33 8FJS ST/8FSJ90-3000-10	1	
7		53843241	HOSE-1/4X34 4FS JIC 3000 PSI	1	
8		148978001	HOSE - 3/8 X 119 6FSJIC 3000#	1	
9		296276000	HOSE-HYD 1.00X65-16CD6260/16FJS ST-6000-	1	
10		296279501	HOSE-HYD-1.00X59-16CD6260/16FJS ST6000-1	1	
11		296279504	HOSE-HYD-.25X112-4FSJ-ST/45-3000PSI-100R	1	
12		53845573	HOSE-HYD-.75X33-12FSJ-ST/ST-3000PSI	3	
13		296258422	HOSE - .08 X 26 4FS JIC ST/ST MICRO	1	
14		296258417	HOSE - .08 X 31 4FS JIC ST/ST MICRO	2	
15		296258421	HOSE - .08 X 18 4FS JIC ST/ST MICRO	1	
16		296279505	HOSE-HYD-1.00X119-16CD6290L/16FJS ST-600	1	
17		296279506	HOSE-HYD-1.00X124-16CD6290L/16FJS ST-600	1	
18		296279595	HOSE-HYD-1.00X18.0-16FJS 45/16 FSJ ST-25	1	
19		296279594	HOSE-HYD-1.25X17 20FJS 45/20 FSJ ST-250-	1	
20		53845161	HOSE-3/4X86 12FS JIC(3000 PSI)	1	
21		296279526	HOSE-HYD.38X65 6FJS ST/6 FSJ90-3000-100R	1	
22		53843359	HOSE-1/4X39 4FS JIC 3000 PSI	1	
23		296256885	HOSE - .50 X 30 8FS JIC ST/90 M3K	1	
24		53843697	HOSE-1/4X54 4FS ST/90 3000PSI	1	
25		296279515	HOSE-HYD 1.00X114-16FJS ST/16FJS ST-6000	1	
26		296279514	HOSE-HYD 1.00X120-16FJS ST/16FJS ST-6000	1	
27		238710001	HOSE-1/4X32 4FSJIC ST/90 3000	1	
28		278923001	HOSE - .078X168 4FSJIC ST/ST MICRO 6900 PSI	2	

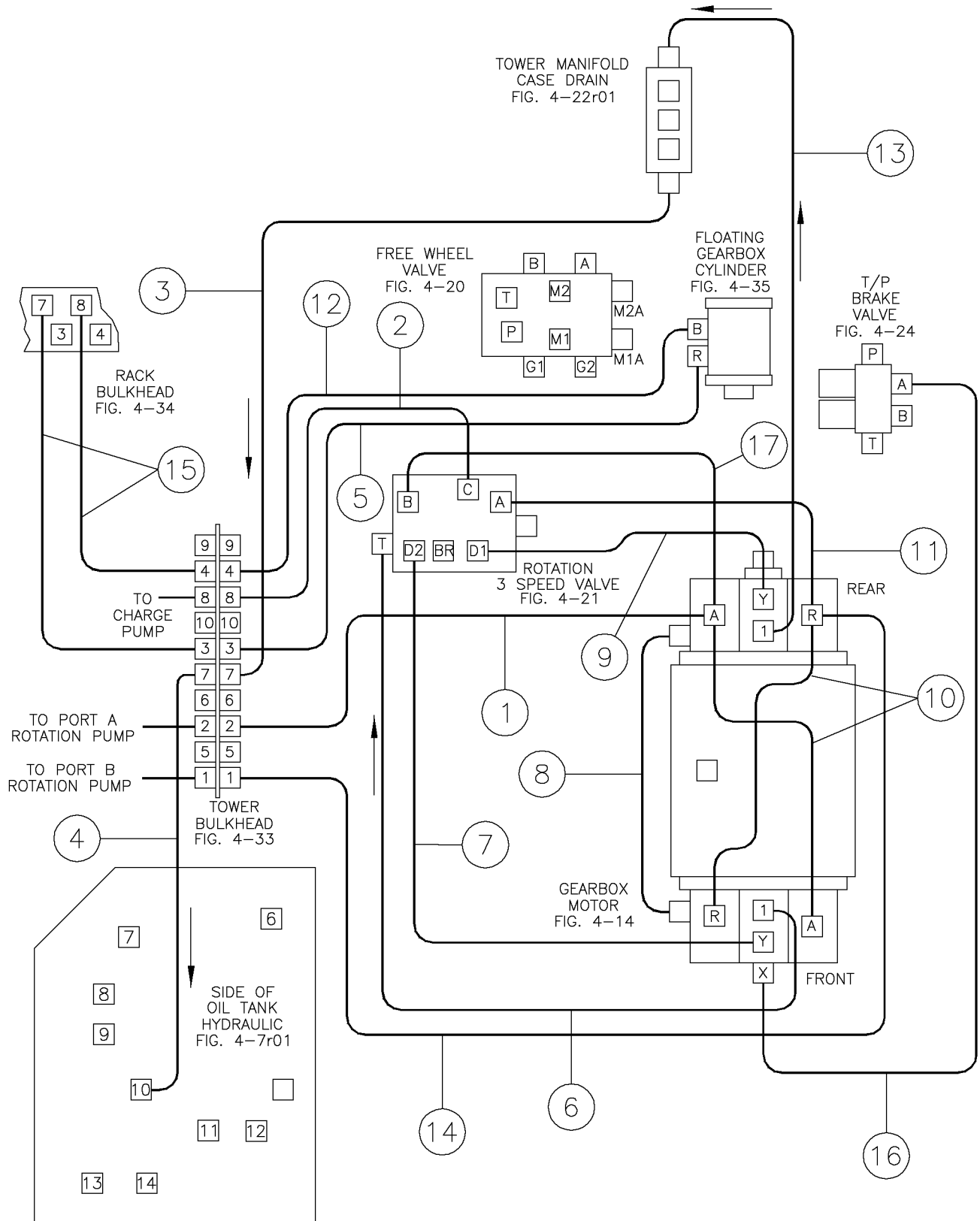
Oil Flow Diagram - Water Fig 4-3



Oil Flow Diagram - Water Fig 4-3

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	August, 2007		Update In Heading.
1		296279566	HOSE-HYD 1.00X100X-16CD62 90/16FSJ ST-60	1	
2		296279512	HOSE-HYD 1.00X114-16CD62 90/16FSJ ST6000	1	
3		296279509	HOSE-HYD 1.00X89-16CD6290/16FSJ ST-6000	1	
4		296279601	HOSE-HYD-1.00X26-16FJS 45/16 FSJ 90-300-	1	
5		275210001	HOSE-1/4X88 4FSJIC ST/45 M3K	1	
6		296279508	HOSE-HYD 1.00X84-16CD6290/16FSJ ST-6000-	1	
7		53843529	HOSE-1/4X12 4FS JIC ST/4FSJC90	2	
8		53843647	HOSE-1/4X12 4FS JIC 4FS JIC 45	1	
9		296279595	HOSE-HYD-1.00X18.0-16FJS 45/16 FSJ ST-25	1	
10		296275683	HOSE-HYD-1.0X54-16FSJ ST/16C62-60-M6K	1	
11		296275682	HOSE-HYD-1.0X47-16FSJ ST/16C62 60-M6K	1	
12		296275684	HOSE - HYD - 1.00X69-16FSBJ ST/16FSJ FSJ	1	

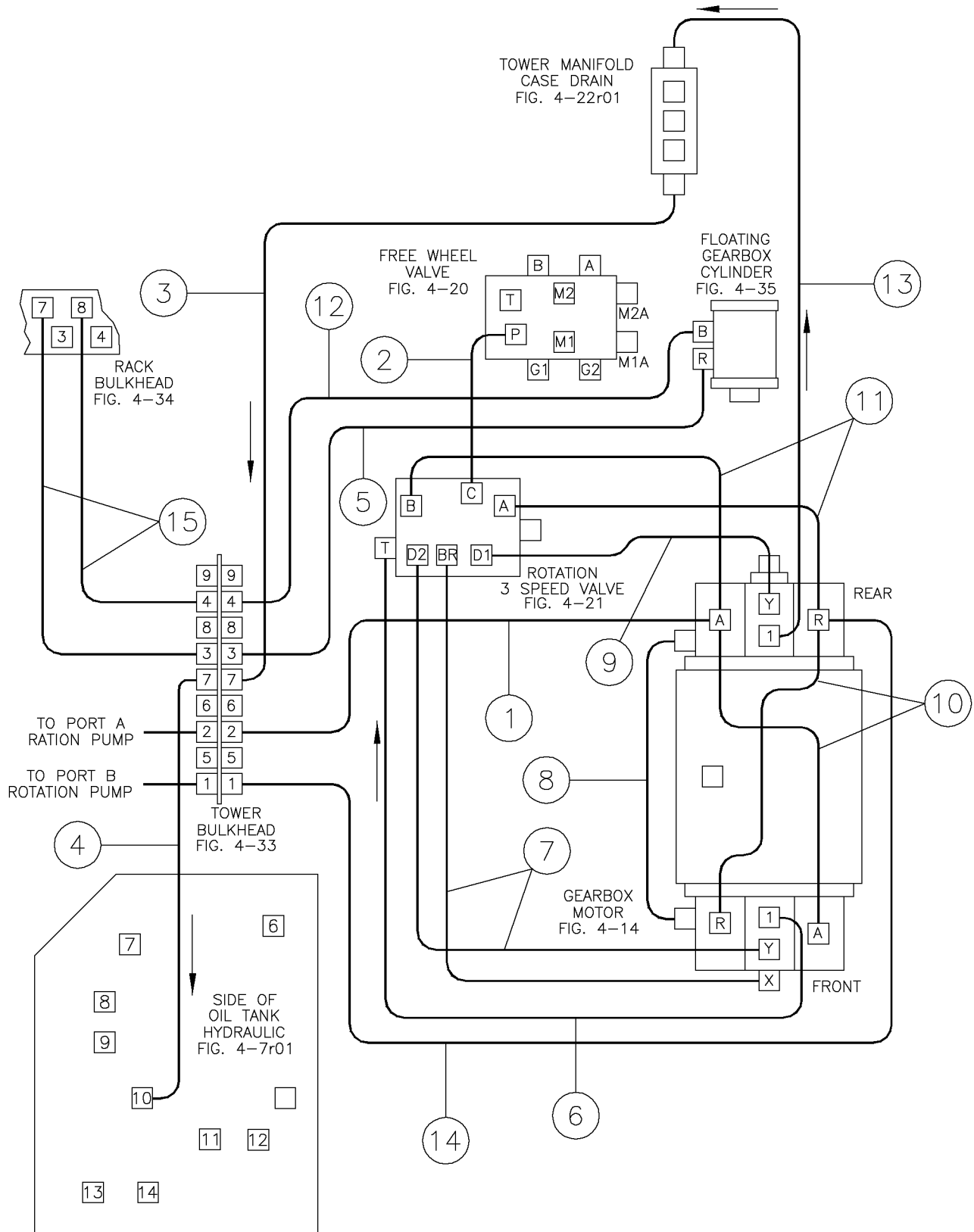
Oil Flow Diagram - Rotation (S/N 130-) Fig 4-4r02



Oil Flow Diagram - Rotation (S/N 130-) Fig 4-4r02

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	August, 2007		Update In Heading.
1		296279645	HOSE-HYD-1.00X282 16CD62 ST/16FSJ 45MEGA	1	
2		296279648	HOSE-HYD-.38X256-6FSJ 45/6FSJ 90-3000PSI	1	S/N 130-
3		296282117	HOSE-HYD 1.25X218 20FSJ ST/20FSJ 90 250	1	
4		296282104	HOSE-HYD-1.25X42 20 FJS ST/20FSJ ST 250-	1	
5		296279651	HOSE-HYD-.38X266-6FSJ ST/6FFJS 90-3000-1	1	
6		296275659	HOSE-HYD-.50X70-8FSJ ST/8FSJ 90-3000-100	1	
7		53843535	HOSE-1/4X70 4FS JIC ST/4FSJC90	1	S/N 130-
8		296279545	HOSE-HYD-.63X47-10FSJ 90/10FSJ90-3000PSI	1	
9		53843405	HOSE-1/4X28 4FSJICST/4FSJIC90	1	
10		296279544	HOSE-HYD-.75X31 12CD62 90L/12CD62 90L-60	2	
11		296290611	HOSE-HYD .38X 26 6FSORFF ST/45 6000 PSI,100R15-G6K	1	S/N 130-
12		296279650	HOSE-HYD-.38X262-6FSJ ST/6FSJ 90-3000	1	
13		296282115	HOSE-HYD 1.00X34 16FSJ90/16FSJ45 3000PS	1	
14		296279644	HOSE-HYD-1.00X284 16CD62 ST/16FSJ 45MEGA	1	
15		57940487	HOSE-3/8X126-6FS JIC 3000 PSI	2	
16		296034001	HOSE-HYD.25X56 4FSJ ST/45 3000PSI	1	S/N 130-
17		296290610	HOSE-HYD .38 X 24 6FSORFF ST/45 6000PSI,100415-G6K	1	S/N 130-

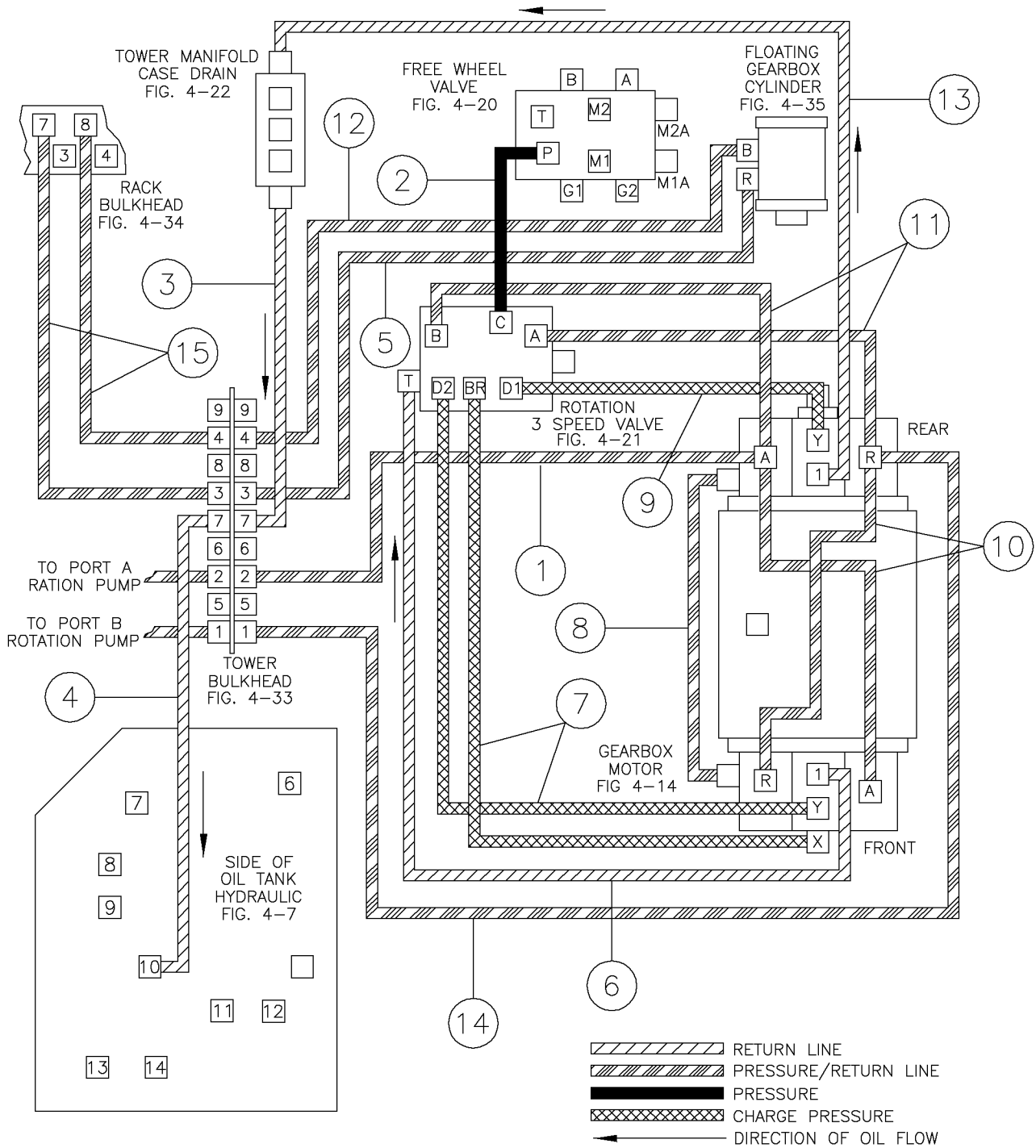
Oil Flow Diagram - Rotation (S/N 119-) Fig 4-4r01



Oil Flow Diagram - Rotation (S/N 119-) Fig 4-4r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2006		Update In Illustration & Parts List.
1		296279645	HOSE-HYD-1.00X282 16CD62 ST/16FSJ 45MEGA	1	
2		296279546	HOSE-HYD-.38X15-6FSJ ST/6FSH 45-3000PSI-	1	
3		296282117	HOSE-HYD 1.25X218 20FSJ ST/20FSJ 90 250 PSI GMV	1	
4		296282104	HOSE-HYD-1.25X42 20 FJS ST/20FSJ ST 250-GMV	1	
5		296279651	HOSE-HYD-.38X266-6FSJ ST/6FFJS 90-3000-1	1	
6		296275659	HOSE-HYD-.50X70-8FSJ ST/8FSJ 90-3000-100	1	
7		53843535	HOSE-1/4X70 4FS JIC ST/4FSJC90	2	
8		296279545	HOSE-HYD-.63X47-10FSJ 90/10FSJ90-3000PSI	1	
9		53843405	HOSE-1/4X28 4FSJICST/4FSJIC90	1	
10		296279544	HOSE-HYD-.75X31 12CD62 90L/12CD62 90L-60	2	
11		57940739	HOSE-3/8X27 6FS JIC 3000 PSI	2	
12		296279650	HOSE-HYD-.38X262-6FSJ ST/6FSJ 90-3000	1	
13		296282115	HOSE-HYD 1.00X34 16FSJ90/16FSJ45 3000PSI M3K	1	
14		296279644	HOSE-HYD-1.00X284 16CD62 ST/16FSJ 45MEGA	1	
15		57940487	HOSE-3/8X126-6FS JIC 3000 PSI	2	

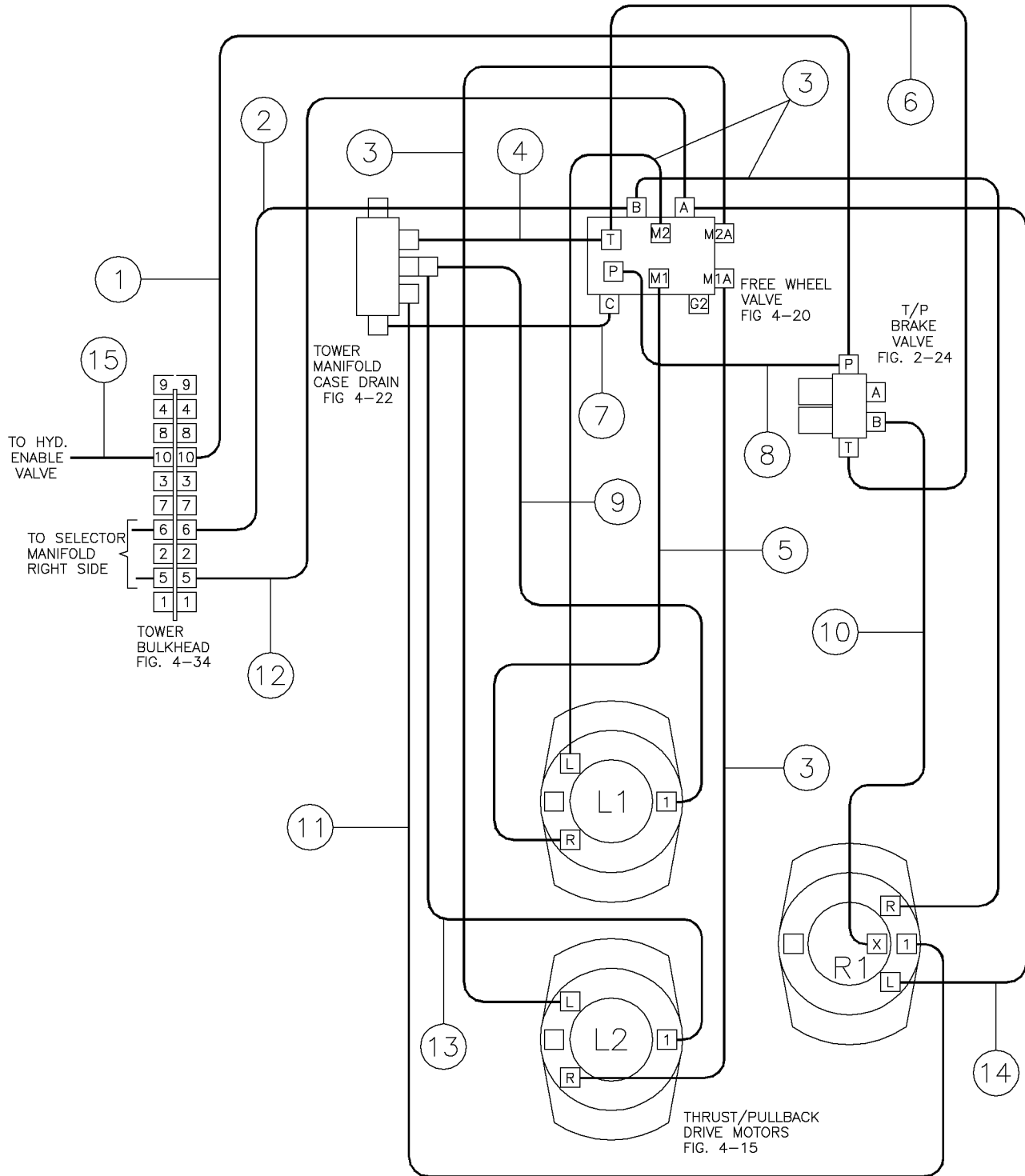
Oil Flow Diagram - Rotation Fig 4-4



Oil Flow Diagram - Rotation Fig 4-4

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296279645	HOSE-HYD-1.00X282 16CD62 ST/16FSJ 45MEGA	1	
2		296279546	HOSE-HYD-.38X15-6FSJ ST/6FSH 45-3000PSI-	1	
3		296279649	HOSE-HYD-1.00X218-16FJS ST/16 FSJ 90-300	1	
4		53846065	HOSE-1X42 16FS JIC (100R4)	1	
5		296279651	HOSE-HYD-.38X266-6FSJ ST/6FFJS 90-3000-1	1	
6		296275659	HOSE-HYD-.50X70-8FSJ ST/8FSJ 90-3000-100	1	
7		53843535	HOSE-1/4X70 4FS JIC ST/4FSJC90	2	
8		296279545	HOSE-HYD-.63X47-10FSJ 90/10FSJ90-3000PSI	1	
9		53843405	HOSE-1/4X28 4FSJICST/4FSJIC90	1	
10		296279544	HOSE-HYD-.75X31 12CD62 90L/12CD62 90L-60	2	
11		57940739	HOSE-3/8X27 6FS JIC 3000 PSI	2	
12		296279650	HOSE-HYD-.38X262-6FSJ ST/6FSJ 90-3000	1	
13		296275657	HOSE-HYD-3/4X34-12-FSJ 45/12FSJ 90 ORNT	1	
14		296279644	HOSE-HYD-1.00X284 16CD62 ST/16FSJ 45MEGA	1	
15		57940487	HOSE-3/8X126-6FS JIC 3000 PSI	2	

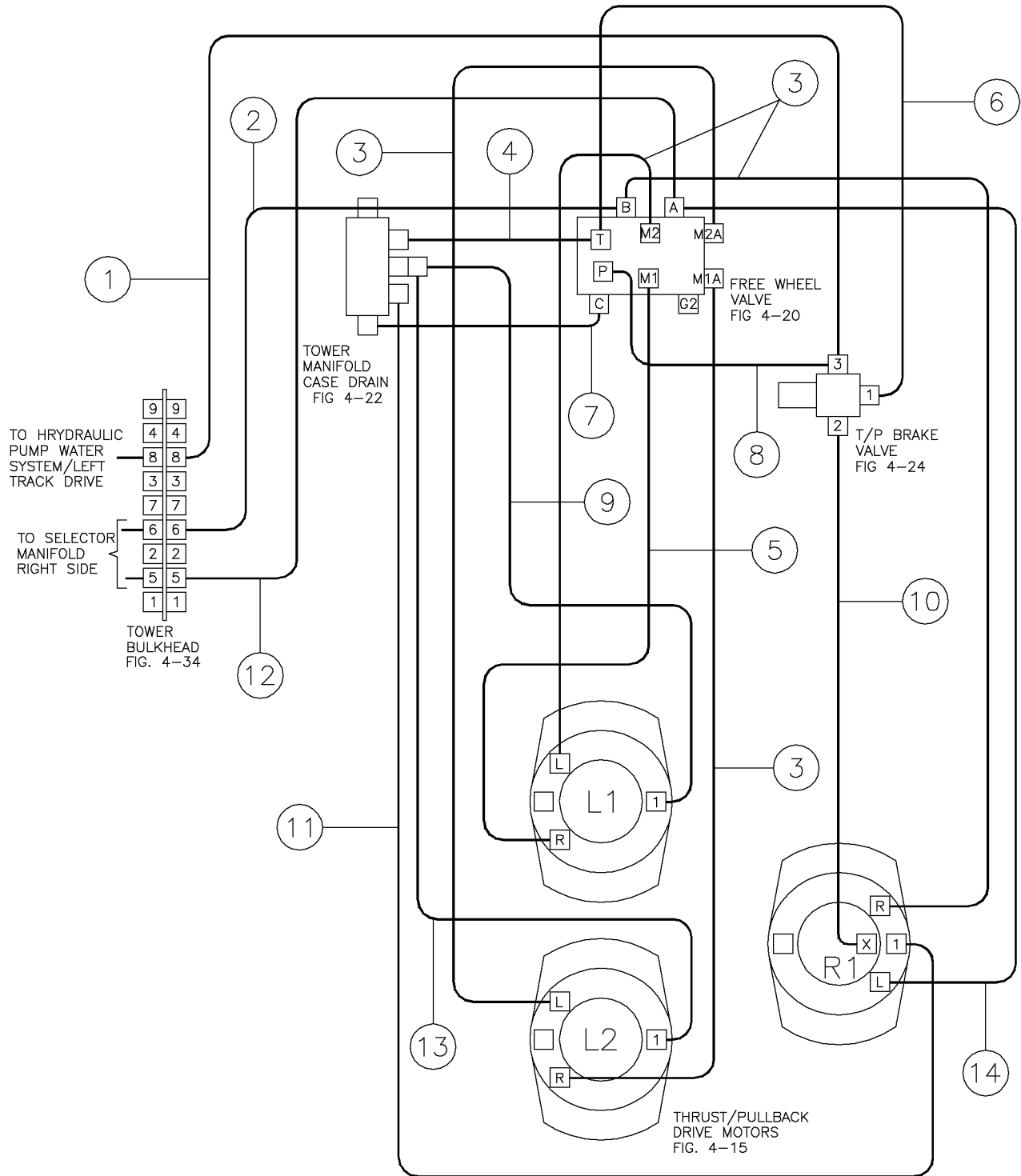
Oil Flow Diagram - Thrust/Pullback (S/N 130-) Fig 4-5r02



Oil Flow Diagram - Thrust/Pullback (S/N 130-) Fig 4-5r02

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	August, 2007		Update In Heading.
1		296290608	HOSE-HYD-.38X252-6FSJ-ST/45-3000PSI-100R17-M3K	1	S/N 130 & Up
2		296279647	HOSE-HYD-1.00X240 16FSJ 90 MEGA/16FSJ ST	1	
3		296279518	HOSE-HYD .75X22-12FSJ ST/12FSJ 45-6000-1	4	
4		57940553	HOSE-3/8X23 6FS JIC 3000 PSI	1	
5		296279519	HOSE-HYD .75X19-12FSJ ST/12FSJ ST/12FSJ	1	
6		296290605	HOSE-HYD-.38X9-6FSJ-ST/90-3000PSI-100R17-M3K	1	S/N 130-
7		278993001	HOSE - 1 X 15 16FSJIC ST/90 250PSI	1	
8		296290606	HOSE-HYD-.38X17.5-6FSJ-ST/90-3000PSI-100R17-M3K	1	S/N 130-
9		296282113	HOSE-HYD .63X16 10FSJ ST/10FSJ 45 3000PSI-M3K	1	
10		264644001	HOSE - .38 X 29 - 6FJX 90/ST 3K PSI BNS	1	
11		53842347	HOSE-HYD-.63X30-10FSJ-ST/ST-3000PSI-100R17-M3K	1	
12		296279646	HOSE-HYD-1.00X243 16FSJ 90 MEGA/16FJS ST	1	
13		296282114	HOSE-HYD-.63X24 10FSJ ST/10FSJ 45 3000PSI M3K	1	
14		296275660	HOSE-HYD-.75X15-12FSJ ST/12FSJ 45-6000-1	1	
15		296290607	HOSE-HYD-.38X56-6FS-ST/90-3000PSI-100R17-M3K	1	

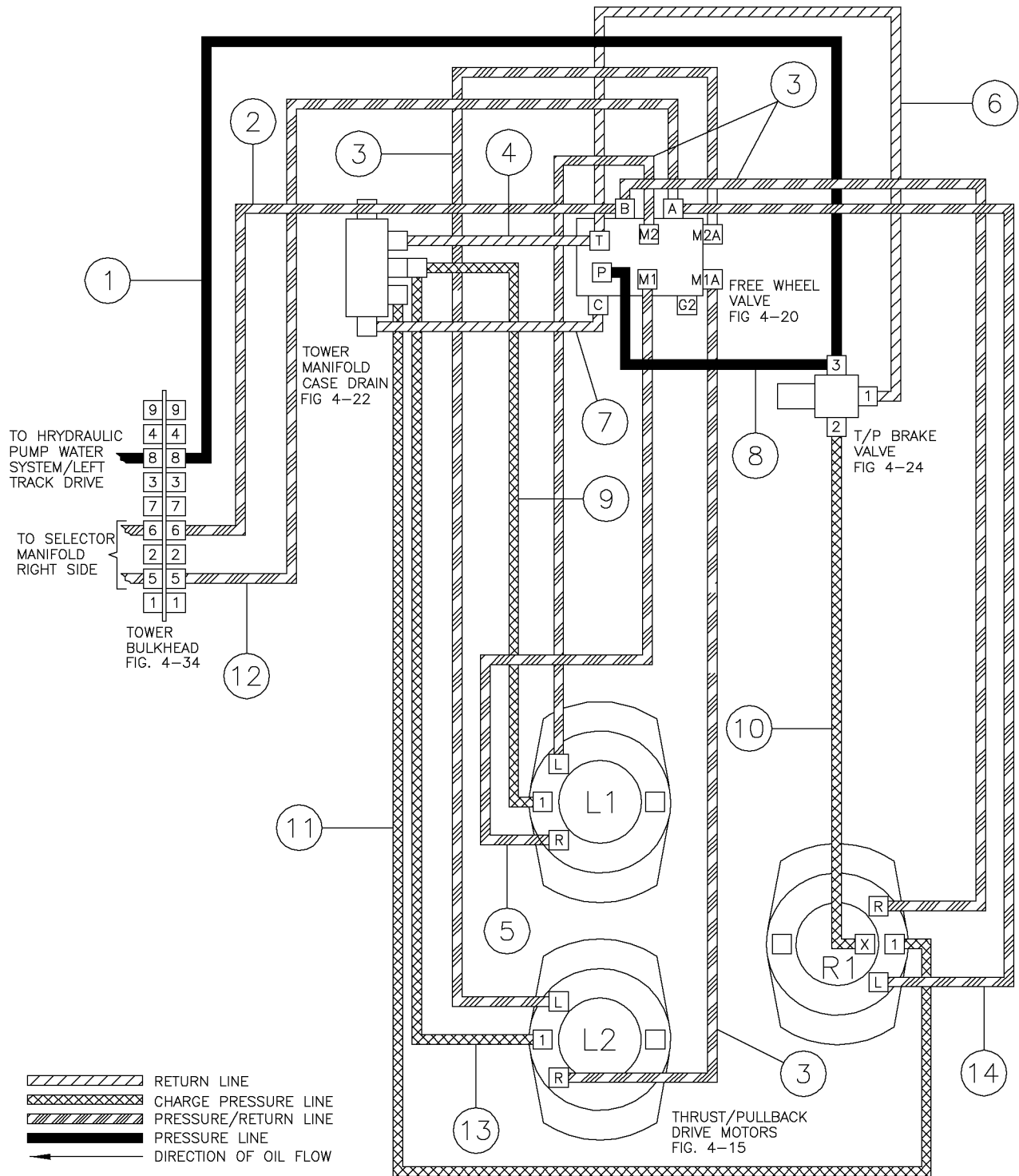
Oil Flow Diagram - Thrust/Pullback (S/N 119-) Fig 4-5r01



Oil Flow Diagram - Thrust/Pullback (S/N 119-) Fig 4-5r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2006		Update In Illustration & Parts List.
1		296279648	HOSE-HYD-.38X256-6FSJ 45/6FSJ 90-3000PSI	1	
2		296279647	HOSE-HYD-1.00X240 16FSJ 90 MEGA/16FSJ ST	1	
3		296279518	HOSE-HYD .75X22-12FSJ ST/12FSJ 45-6000-1	4	
4		57940553	HOSE-3/8X23 6FS JIC 3000 PSI	1	
5		296279519	HOSE-HYD .75X19-12FSJ ST/12FSJ ST/12FSJ	1	
6		57940303	HOSE-3/8X12 6FS JIC 3000 PSI	1	
7		278993001	HOSE - 1 X 15 16FSJIC ST/90 250PSI	1	
8		296279547	HOSE-HYD-.38X10-6FSJ ST/6FSJ 90-3000PSI	1	
9		296282113	HOSE-HYD .63X16 10FSJ ST/10FSJ 45 3000PSI-M3K	1	
10		264644001	HOSE - .38 X 29 - 6FJX 90/ST 3K PSI BNS	1	
11		53842347	HOSE-HYD-.63X30-10FSJ-ST/ST-3000PSI-100R17-M3K	1	
12		296279646	HOSE-HYD-1.00X243 16FSJ 90 MEGA/16FJS ST		
13		296282114	HOSE-HYD-.63X24 10FSJ ST/10FSJ 45 3000PSI M3K	1	
14		296275660	HOSE-HYD-.75X15-12FSJ ST/12FSJ 45-6000-1	1	

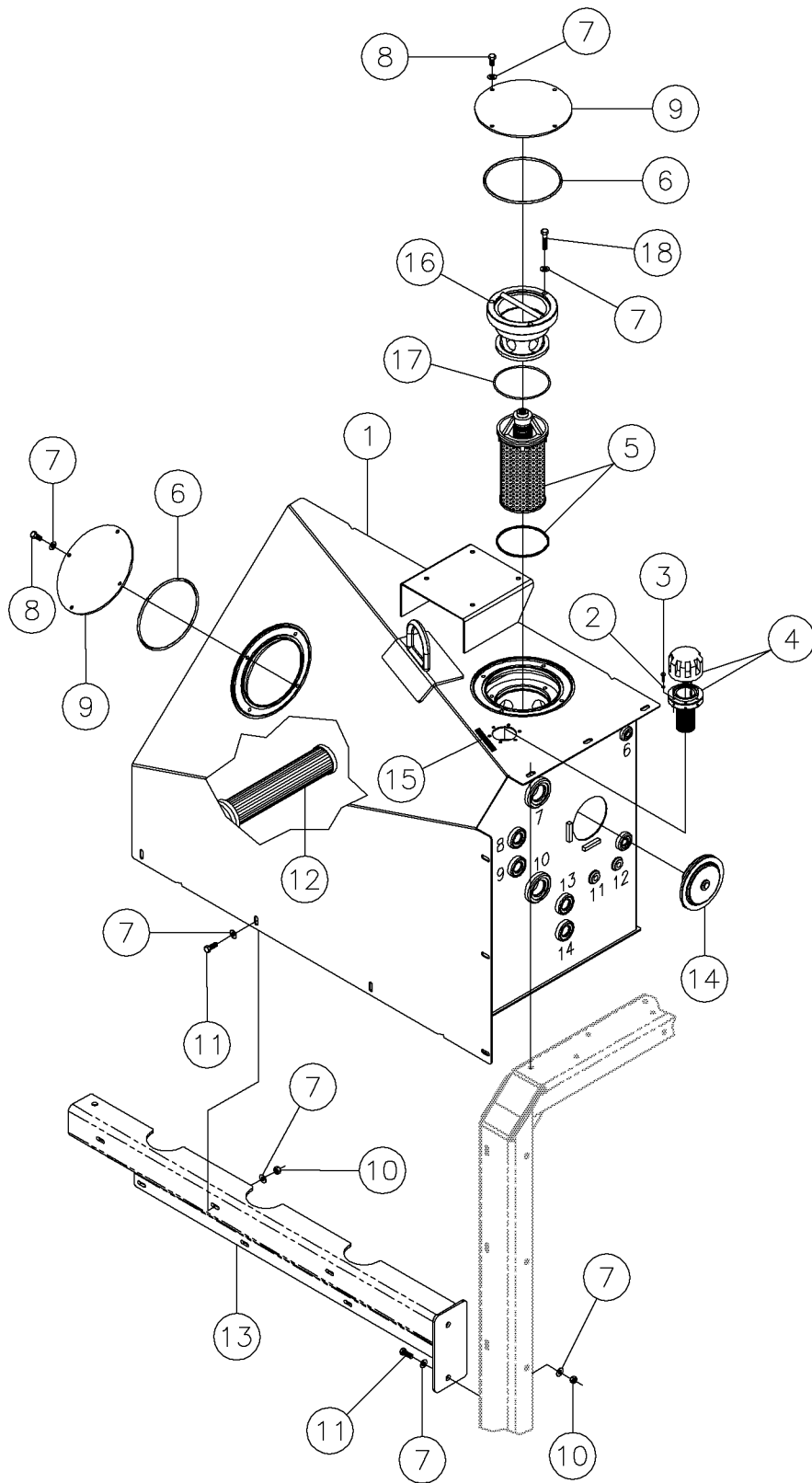
Oil Flow Diagram - Thrust/Pullback Fig 4-5



Oil Flow Diagram - Thrust/Pullback Fig 4-5

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296279648	HOSE-HYD-.38X256-6FSJ 45/6FSJ 90-3000PSI	1	
2		296279647	HOSE-HYD-1.00X240 16FSJ 90 MEGA/16FSJ ST	1	
3		296279518	HOSE-HYD .75X22-12FSJ ST/12FSJ 45-6000-1	4	
4		57940553	HOSE-3/8X23 6FS JIC 3000 PSI	1	
5		296279519	HOSE-HYD .75X19-12FSJ ST/12FSJ ST/12FSJ	1	
6		57940303	HOSE-3/8X12 6FS JIC 3000 PSI	1	
7		278993001	HOSE - 1 X 15 16FSJIC ST/90 250PSI	1	
8		296279547	HOSE-HYD-.38X10-6FSJ ST/6FSJ 90-3000PSI	1	
9		278259001	HOSE-1/2X28 8FSJIC ST/45 M2T	1	
10		264644001	HOSE - .38 X 29 - 6FJX 90/ST 3K PSI BNS	1	
11		53844157	HOSE-1/2X16 8FS JIC 3000 PSI	1	
12		296279646	HOSE-HYD-1.00X243 16FSJ 90 MEGA/16FJS ST		
13		53844027	HOSE-1/2X22 8FS JIC 100R2	1	
14		296275660	HOSE-HYD-.75X15-12FSJ ST/12FSJ 45-6000-1	1	

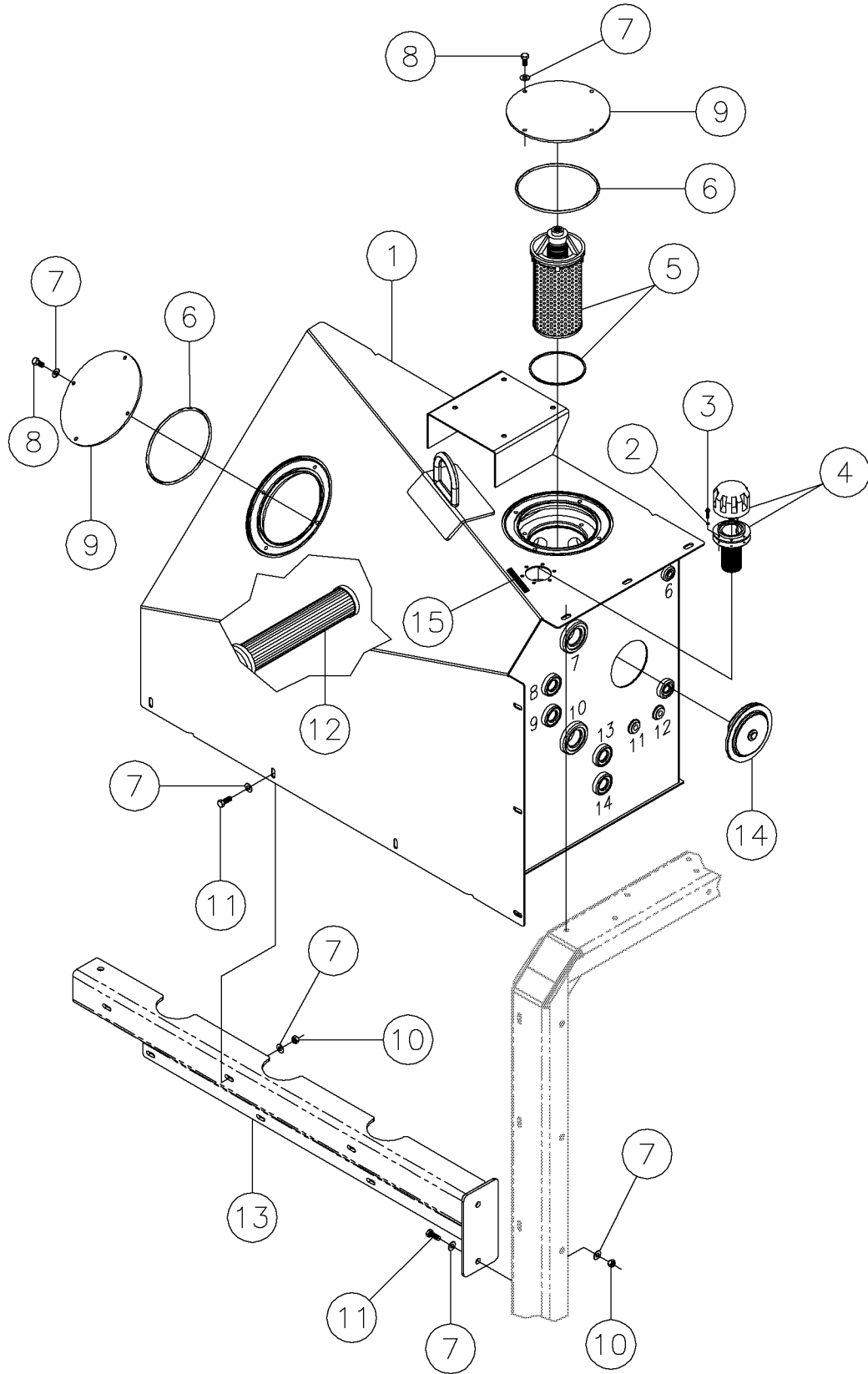
Oil Tank (S/N 129-) Fig 4-6r02



Oil Tank (S/N 129-) Fig 4-6r02

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	October, 2006		Add Filter Cap
1		296282139	OIL TANK - LARGE NAVIGATORS	1	(S/N 129-)
2		480001	WASHER-3/16 S/T LOCK	3	
3		1802006	BOLT-10-24 X 3/4 RND HD STOVE	3	
4		235808001	CAP-FILLER/BREATHER W/O RELIEF	1	
5		163632908	FILTER ELEMENT	1	
6		112794001	O-RING-6.975 ID AS365 B46	2	
7	*	235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	33	
8		235726001	BOLT-3/8-16X3/4 GR8 HEX ZNCPLT	8	
9		291381001	COVER - CLEAN-OUT	2	
10		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	11	
11		235727001	BOLT-3/8-16X1 GR8 HEX ZINC PLT	11	
12		98681001	FILTER-TANK 3 NPT OUTLET PORT	1	
13		296273818	BRACKET - OIL TANK MOUNT	1	
14		296257231	COVER - 6" RESERVOIR END	1	
15		7000A814	HYDRAULIC OIL FILLER	1	
16	*	296283620	CAP-TANK FILTER	1	
17	*	51179001	O-RING #250	1	
18	*	235720001	BOLT-3/8-16X1 3/4 6R8 ZINC PLT	3	

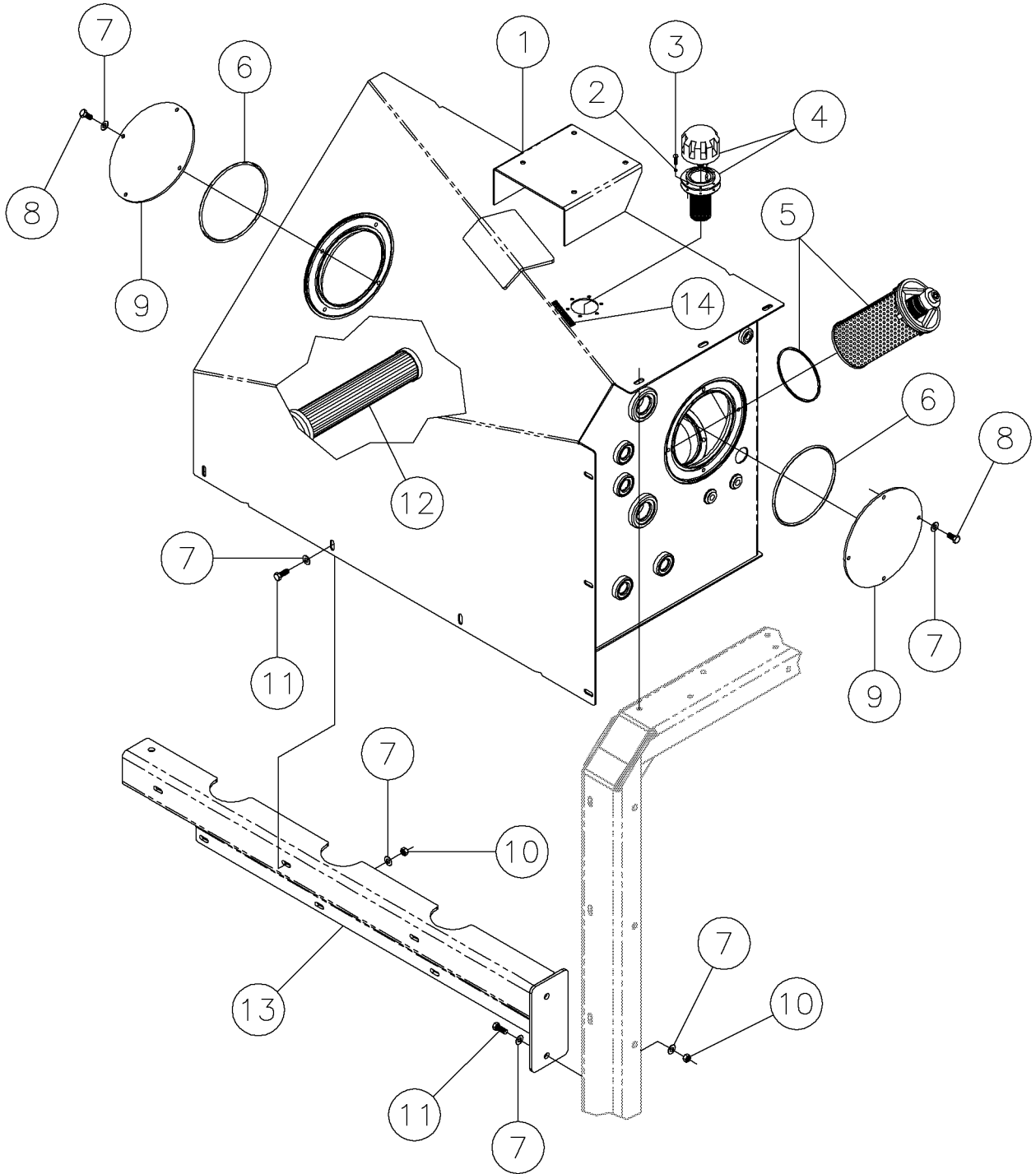
Oil Tank (S/N 119-) Fig 4-6r01



Oil Tank (S/N 119-) Fig 4-6r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2006		Update In Illustration & Parts List.
1		296283611	OIL TANK	1	
2		480001	WASHER-3/16 S/T LOCK	3	
3		1802006	BOLT-10-24 X 3/4 RND HD STOVE	3	
4		235808001	CAP-FILLER/BREATHER W/O RELIEF	1	
5		163632908	FILTER ELEMENT	1	
6		112794001	O-RING-6.975 ID AS365 B46	2	
7		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	30	
8		235726001	BOLT-3/8-16X3/4 GR8 HEX ZNCPLT	8	
9		291381001	COVER - CLEAN-OUT	2	
10		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	11	
11		235727001	BOLT-3/8-16X1 GR8 HEX ZINC PLT	11	
12		98681001	FILTER-TANK 3 NPT OUTLET PORT	1	
13		296273818	BRACKET - OIL TANK MOUNT	1	
14		296257231	COVER - 6" RESERVOIR END	1	
15		7000A814	HYDRAULIC OIL FILLER	1	

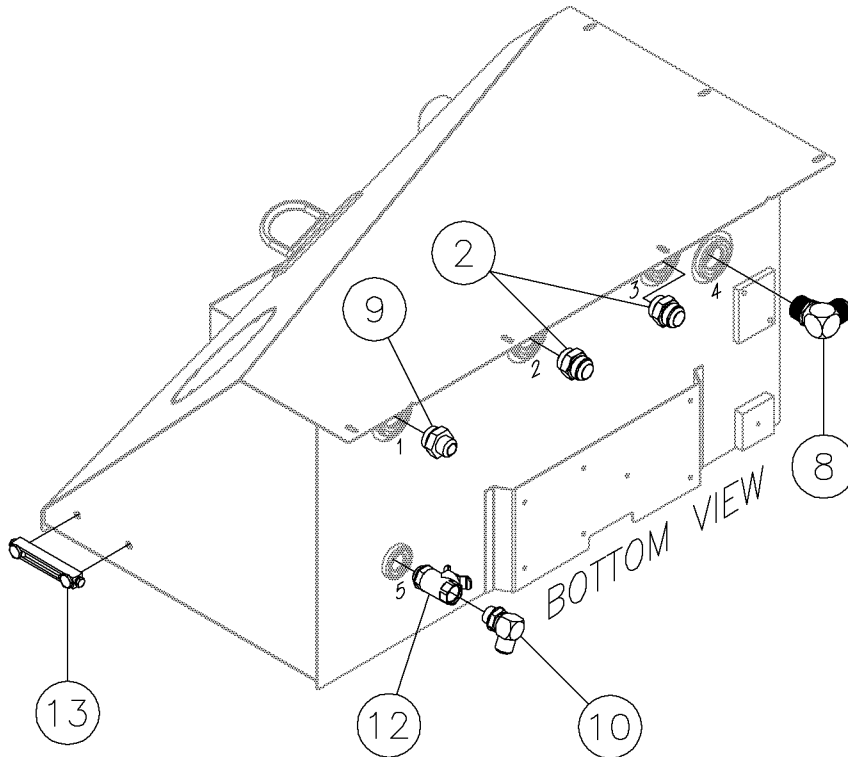
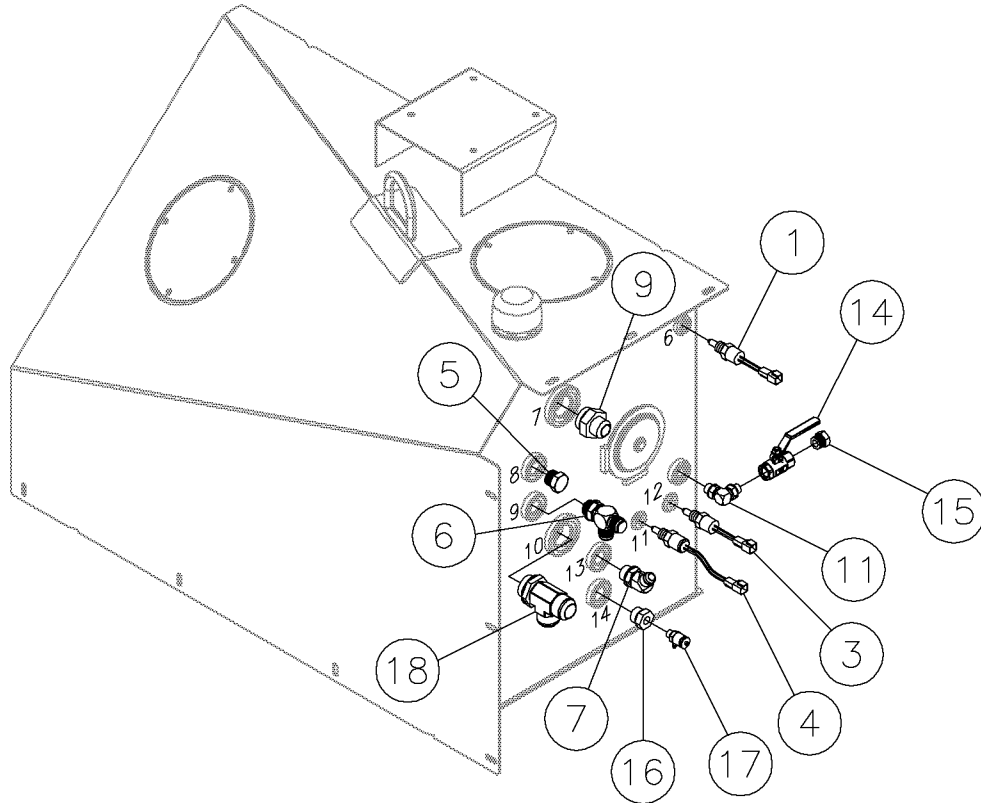
Oil Tank Fig 4-6



Oil Tank Fig 4-6

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296266476	OIL TANK	1	
2		480001	WASHER-3/16 S/T LOCK	3	
3		1802006	BOLT-10-24 X 3/4 RND HD STOVE	3	
4		235808001	CAP-FILLER/BREATHER W/O RELIEF	1	
5		296273985	ELEMENT - RETURN TANK(936973Q-5Q-PN)	1	
6		112794001	O-RING-6.975 ID AS365 B46	2	
7		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	30	
8		235726001	BOLT-3/8-16X3/4 GR8 HEX ZNCPLT	8	
9		291381001	COVER - CLEAN-OUT	2	
10		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	11	
11		235727001	BOLT-3/8-16X1 GR8 HEX ZINC PLT	11	
12		98681001	FILTER-TANK 3 NPT OUTLET PORT	1	
13		296273818	BRACKET - OIL TANK MOUNT	1	
14		7000A814	HYDRAULIC OIL FILLER	1	

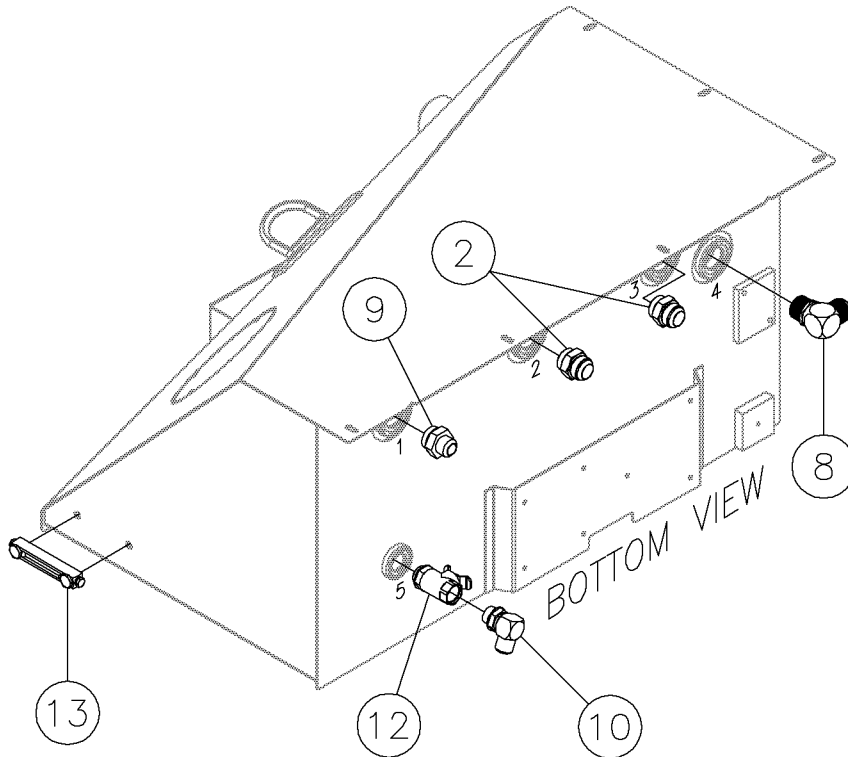
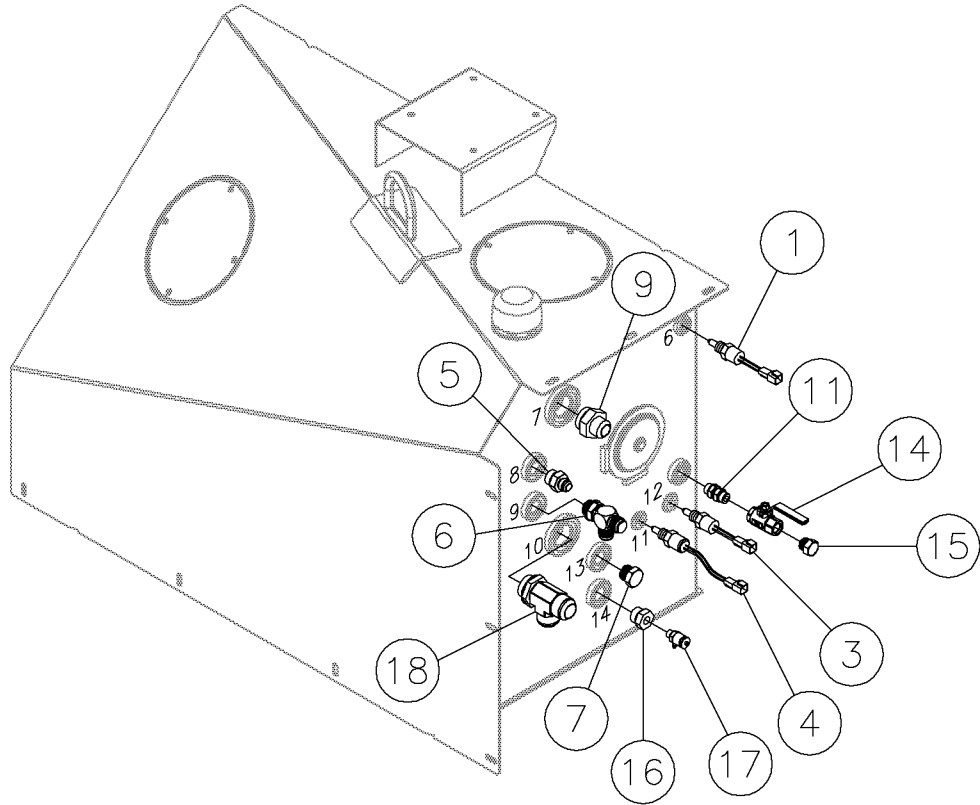
Oil Tank Hydraulic (S/N 147-) Fig 4-7r03



Oil Tank Hydraulic (S/N 147-) Fig 4-7r03

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2007		Change Part Number
1		279847001	SWITCH - 22 PSI NO	1	
2		70006001	FITTING-20M X 20 M JIC STR.	2	
3		279866001	SWITCH - FLOAT LEVEL	1	
4	*	625912001	SWITCH-200 DEG (SPST) N.O.	1	
5	*	67570001	FITTING - PLUG - 12MORB - HEX	1	(S/N 147-)
6		59420001	12 JICX12M ADJ. STR THRD RUN TEE	1	(S/N 119-)
7	*	88659001	FITTING-12M ORINGX10MJIC 45DEG	2	(S/N 147-)
8		77137001	FITTING-20MX20M JIC 90 DEG.	1	
9		85657001	FITTING-20M X 16M JIC STR.	2	
10		61703001	FITTING-90-16MJ-16MORBA	1	
11	*	254361001	8M O-RING X8M O-RING 90 DEGREE	1	(S/N 147-)
12		296273984	VALVE-BALL, #16M O-RING/#16F O-RING	1	(S/N 119-)
13		81590001	GAUGE-SIGHT	1	
14		163639202	VALVE - #8 ORB BRASS BALL	1	
15		56218001	FITTING - PLUG - 8MORB - HEX	1	
16		117452001	FITTING-STR-12MORB-6FORB	1	
17		72056001	FITTING-TEST-6MORB-16MTP	1	
18		620126001	FITTING-RTEE-20MJ-20MOR-20MJ	1	

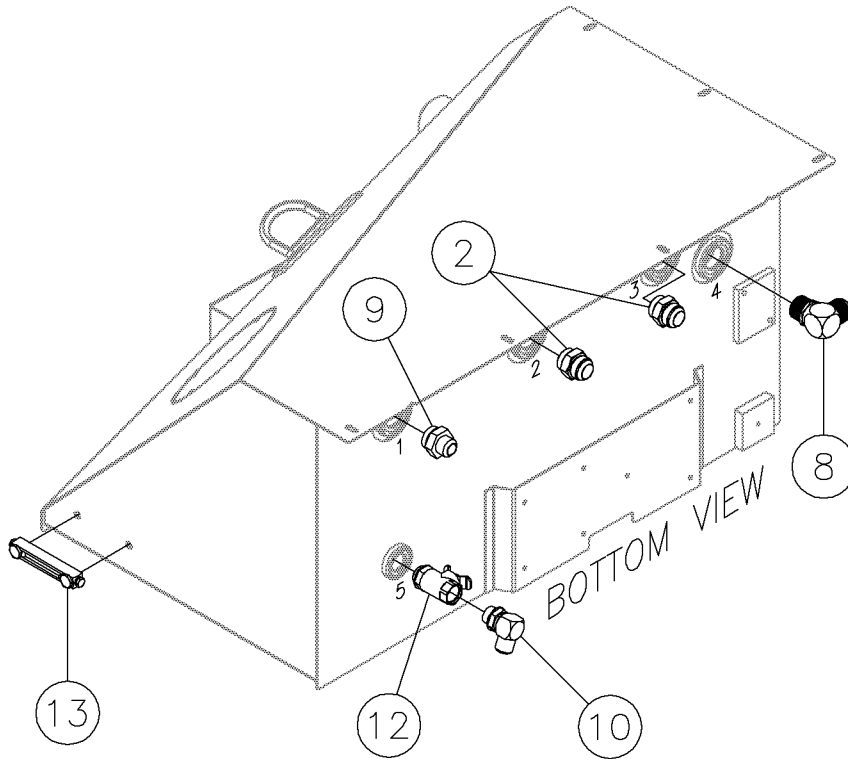
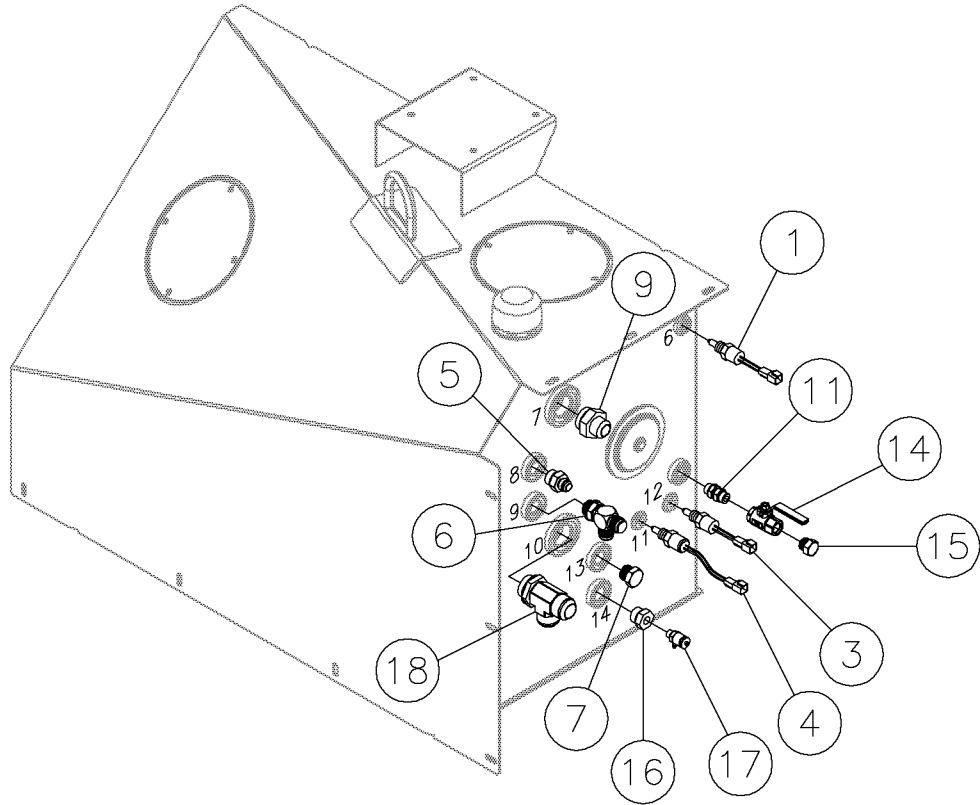
Oil Tank Hydraulic Fig 4-7r02



Oil Tank Hydraulic Fig 4-7r02

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	July, 2006		Update In Parts List.
1		279847001	SWITCH - 22 PSI NO	1	
2		70006001	FITTING-20M X 20 M JIC STR.	2	
3		279866001	SWITCH - FLOAT LEVEL	1	
4		271638001	TEMPERATURE SWITCH-HYDRAULIC OIL (200 F)	1	
5		53854001	12M O-RING-10M JIC ST.	1	
6		59420001	12 JICX12M ADJ. STR THRD RUN TEE	1	S/N 119 & Up
7		67570001	FITTING - PLUG - 12MORB - HEX	2	
8		77137001	FITTING-20MX20M JIC 90 DEG.	1	
9		85657001	FITTING-20M X 16M JIC STR.	2	
10		61703001	FITTING-90-16MJ-16MORBA	1	
11		110471001	NIPPLE-8M O-RINGX8M O-RING HEX	1	
12		296273984	VALVE-BALL, #16M O-RING/#16F O-RING	1	S/N 119 & Up
13		81590001	GAUGE-SIGHT	1	
14		163639202	VALVE - #8 ORB BRASS BALL	1	
15		56218001	FITTING - PLUG - 8MORB - HEX	1	
16		117452001	FITTING-STR-12MORB-6FORB	1	
17		72056001	FITTING-TEST-6MORB-16MTP	1	
18		620126001	FITTING-RTEE-20MJ-20MOR-20MJ	1	

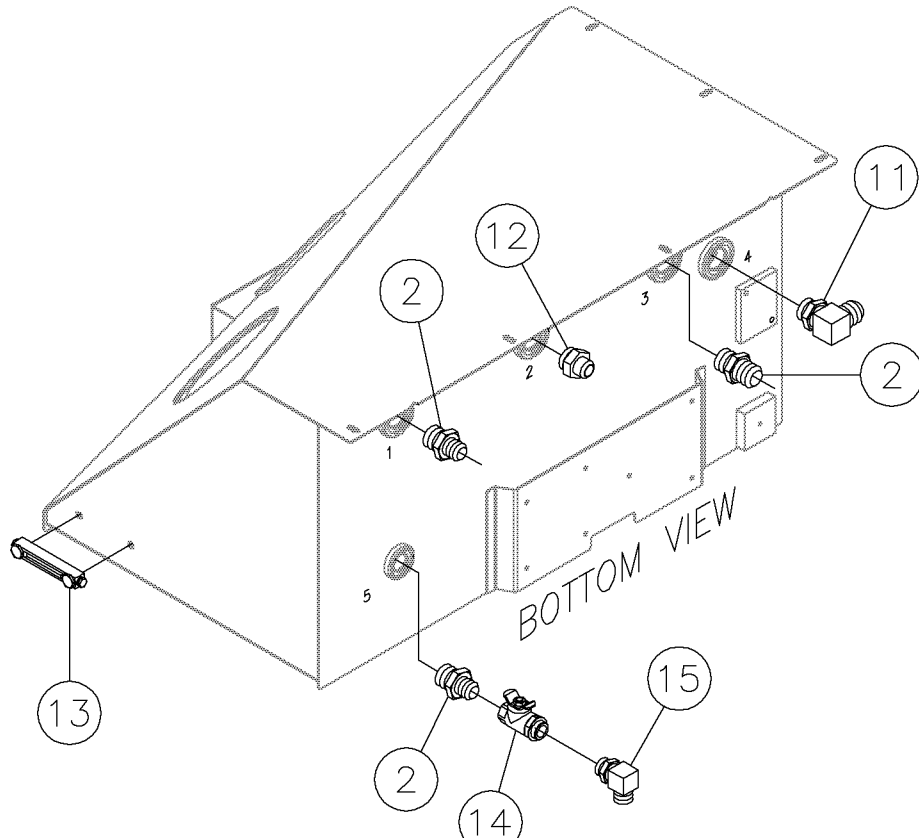
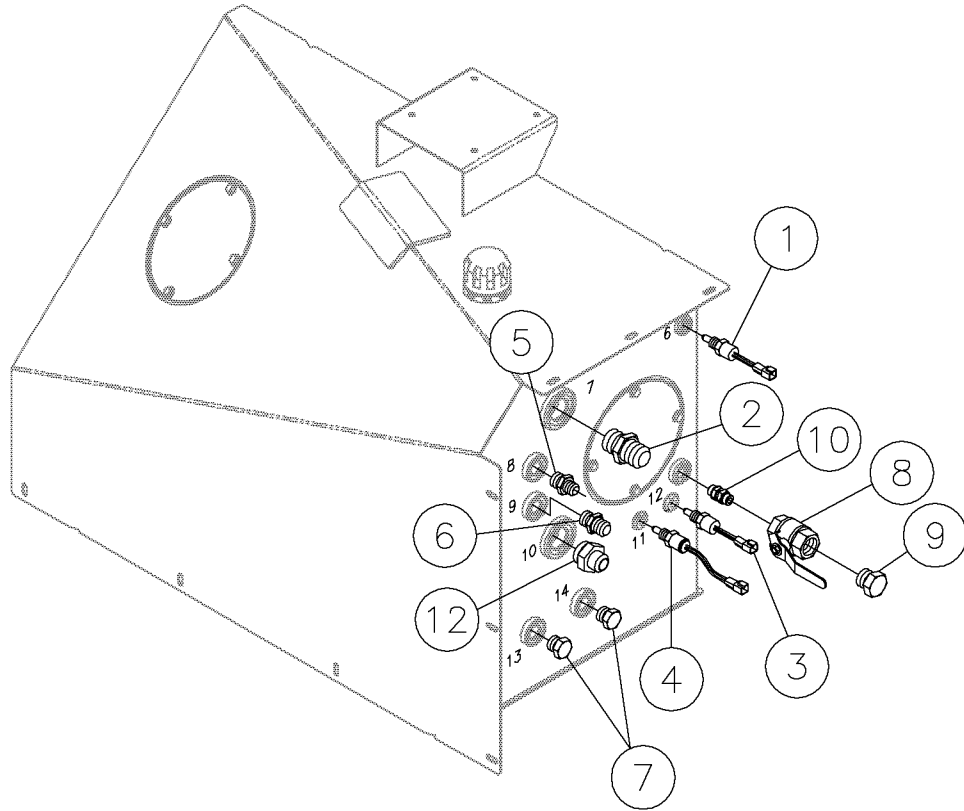
Oil Tank Hydraulic Fig 4-7r01



Oil Tank Hydraulic Fig 4-7r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2006		Update In Illustration & Parts List.
1		279847001	SWITCH - 22 PSI NO	1	
2		70006001	FITTING-20M X 20 M JIC STR.	2	
3		279866001	SWITCH - FLOAT LEVEL	1	
4		283047001	TEMPERATURE SWITCH-HYDRAULIC OIL	1	
5		53854001	12M O-RING-10M JIC ST.	1	
6		59420001	12 JICX12M ADJ. STR THRD RUN TEE	1	(SN 119 AND UP)
7		67570001	FITTING - PLUG - 12MORB - HEX	2	
8		77137001	FITTING-20MX20M JIC 90 DEG.	1	
9		85657001	FITTING-20M X 16M JIC STR.	2	
10		61703001	FITTING-90-16MJ-16MORBA	1	
11		110471001	NIPPLE-8M O-RINGX8M O-RING HEX	1	
12		296273984	VALVE-BALL, #16M O-RING/#16F O-RING	1	(SN 119 AND UP)
13		81590001	GAUGE-SIGHT	1	
14		163639202	VALVE - #8 ORB BRASS BALL	1	
15		56218001	FITTING - PLUG - 8MORB - HEX	1	
16		117452001	FITTING-STR-12MORB-6FORB	1	
17		72056001	FITTING-TEST-6MORB-16MTP	1	
18		620126001	FITTING-RTEE-20MJ-20MOR-20MJ	1	

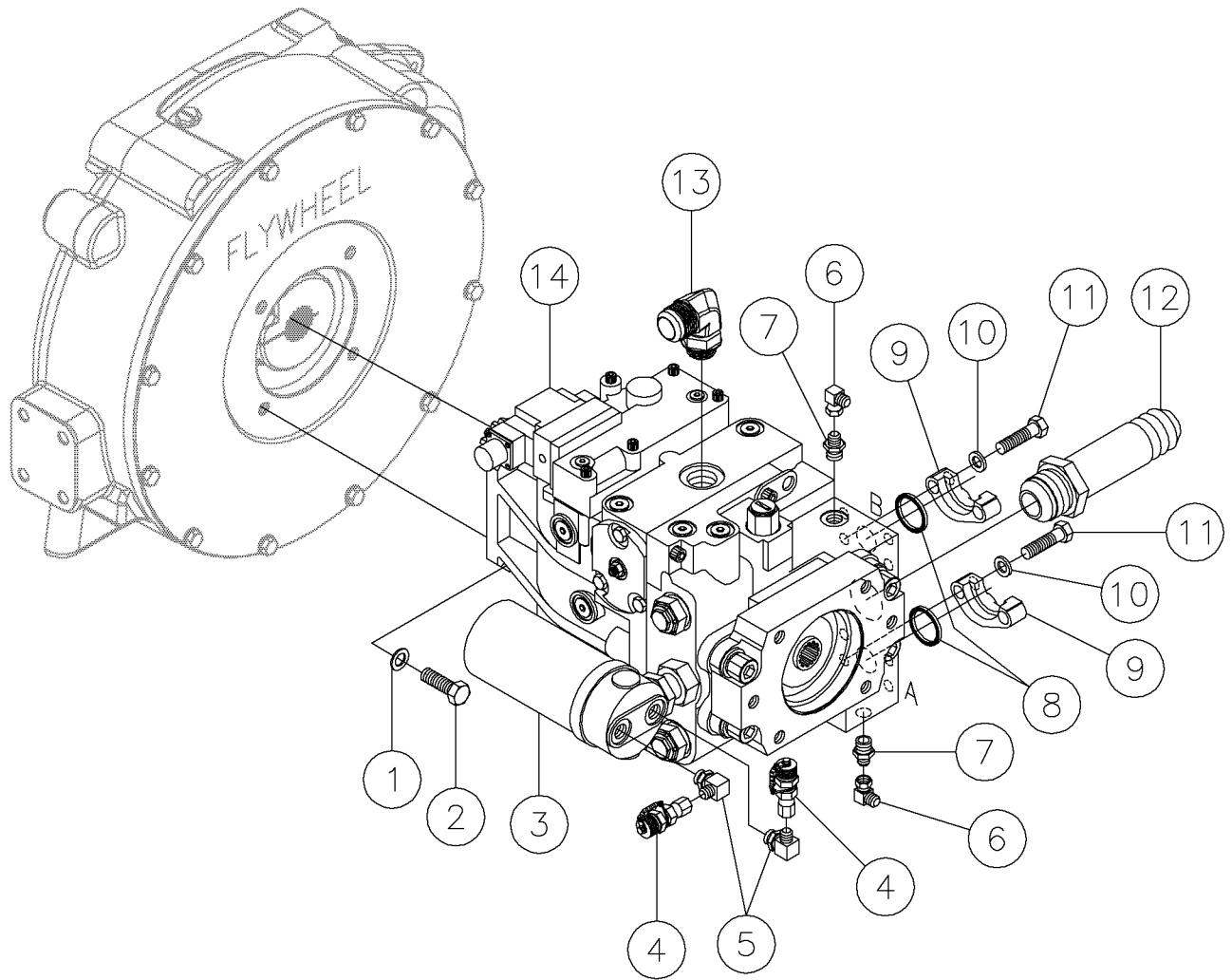
Oil Tank Hydraulic Fig 4-7



Oil Tank Hydraulic Fig 4-7

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		279847001	SWITCH - 22 PSI NO	1	
2		70006001	FITTING-20M X 20 M JIC STR.	2	
3		279866001	SWITCH - FLOAT LEVEL	1	
4		283047001	TEMPERATURE SWITCH-HYDRAULIC OIL	1	
5		53854001	12M O-RING-10M JIC ST.	1	
6		53828001	#12M O-RING-#12M JIC ST.	1	
7		67570001	FITTING - PLUG - 12MORB - HEX	2	
8		163639202	VALVE - #8 ORB BRASS BALL	1	
9		56218001	FITTING - PLUG - 8MORB - HEX	1	
10		110471001	NIPPLE-8M O-RINGX8M O-RING HEX	1	
11		77137001	FITTING-20MX20M JIC 90 DEG.	1	
12		85657001	FITTING-20M X 16M JIC STR.	3	
13		81590001	GAUGE-SIGHT	1	
14		61703001	FITTING-90-16MJ-16MORBA	1	

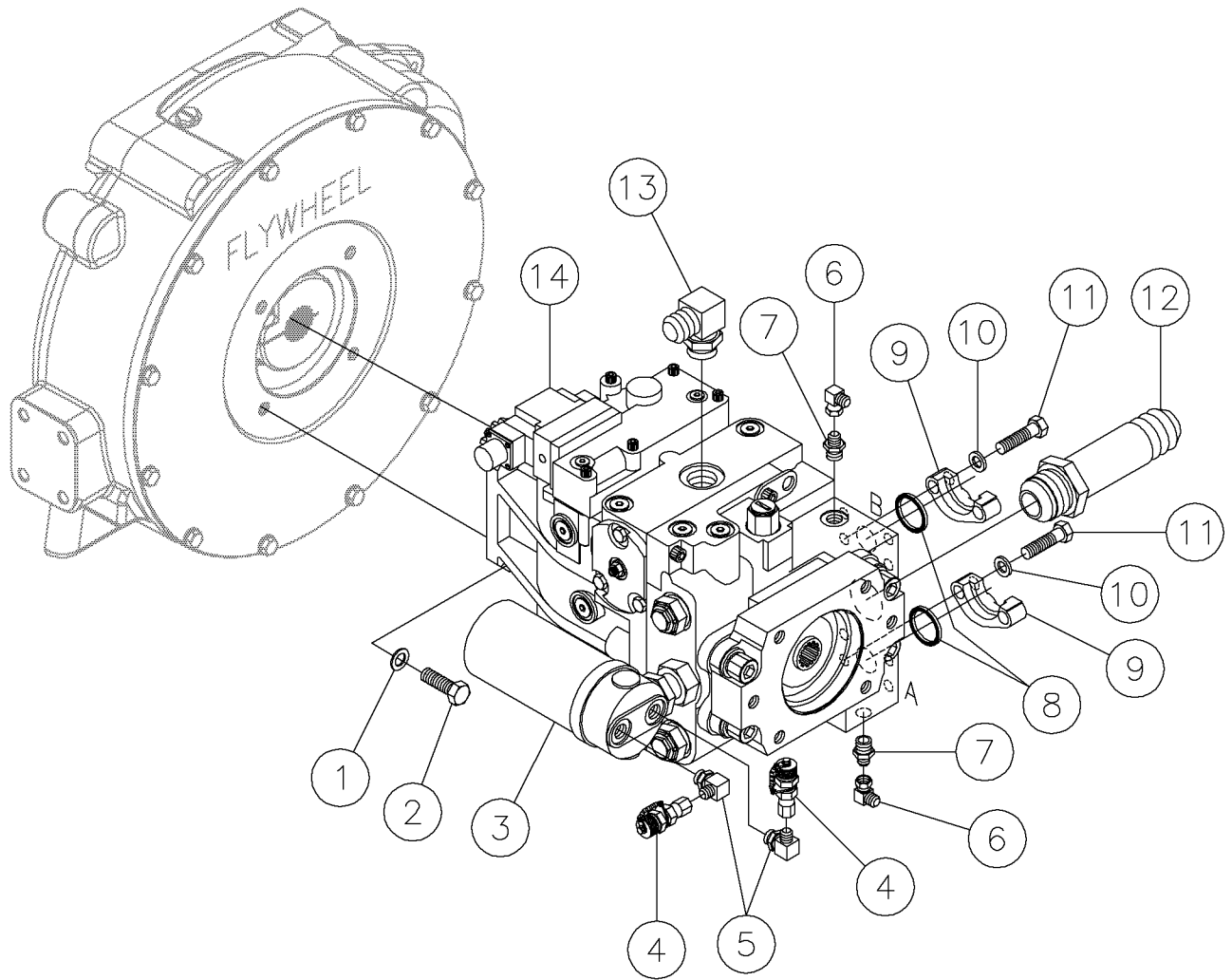
Hydraulic Pump (Rotation) Fig 4-8r01



Hydraulic Pump (Rotation) Fig 4-8r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2006		Update In Illustration & Parts List.
1		485025	WASHER-1/2 FLAT-HARDENED-YZ	4	
2		235721001	BOLT-1/2-13X1 1/2 GR8 ZINC PLT	4	
3		81902001	FILTER-OIL	1	
4		83015001	FITTING-4F JIC DIAGNOSTIC	2	
5		57950001	FITTING-90-4MJ-6MORBA	2	
6		53658001	FITTING-4M JICX4 FS JIC 90 DEG	2	
7		57968001	FITTING-STR-4MJ-6MORB	2	
8		72895001	O RING-SQ. #16 FLANGE	2	
9		67745001	FITTING - FLGH - 16CD62	4	
10		250515001	7/16 HARD WASHER SAE Y/ZINC	8	
11		250507001	BOLT 7/16-14 X 1 3/4"GR8 HEX Y	8	
12		120848001	ADAPTER-20MORINGX20MJICLONGSTS	1	
13		65571001	12M X 16M JIC 90 DEGREE	1	(SN 119 AND UP)
14		224411001	PUMP-90 SERIES 100CC 23T EDC	1	Breakdown Fig. 13-43

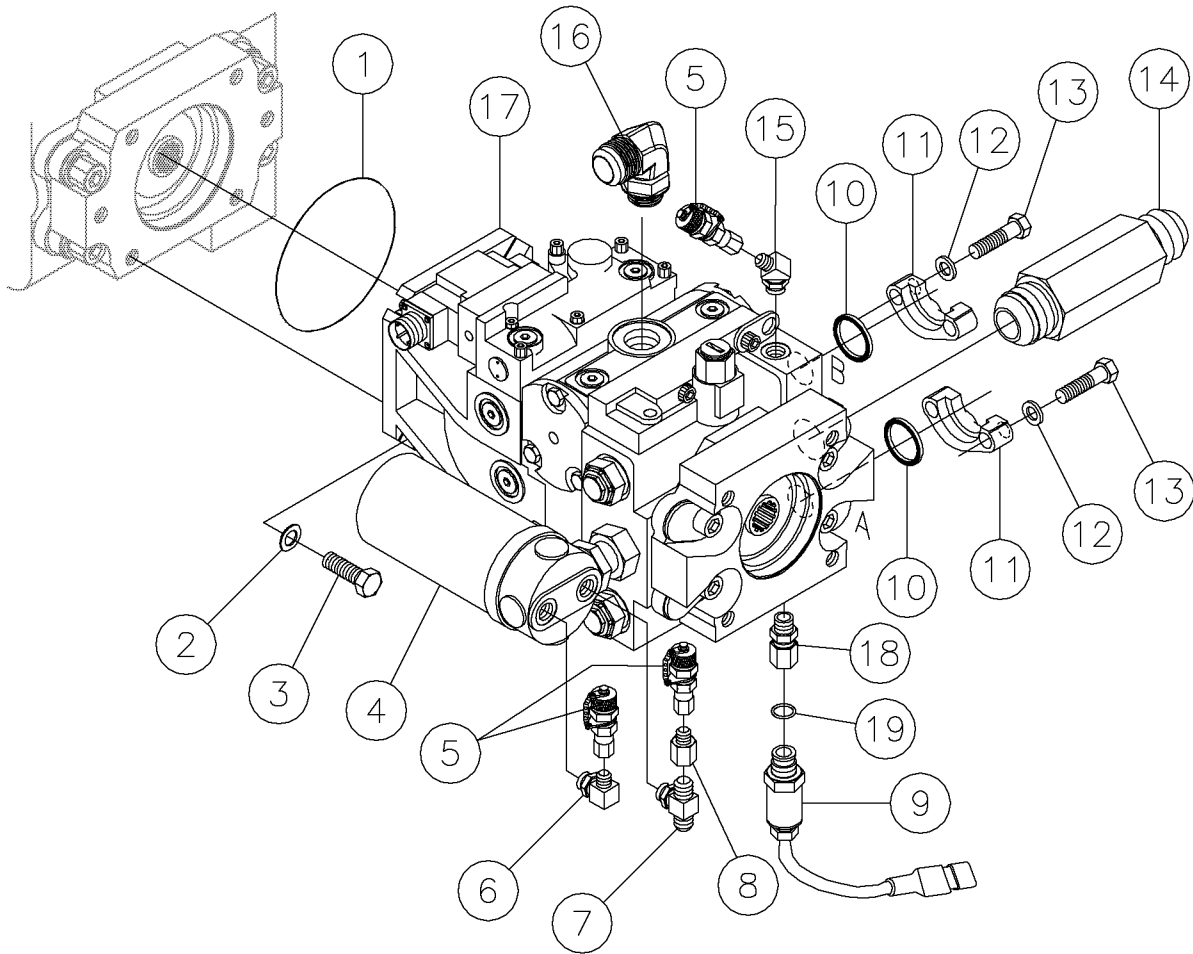
Hydraulic Pump (Rotation) Fig 4-8



Hydraulic Pump (Rotation) Fig 4-8

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		485025	WASHER-1/2 FLAT-HARDENED-YZ	4	
2		235721001	BOLT-1/2-13X1 1/2 GR8 ZINC PLT	4	
3		81902001	FILTER-OIL	1	
4		83015001	FITTING-4F JIC DIAGNOSTIC	2	
5		57950001	FITTING-90-4MJ-6MORBA	2	
6		53658001	FITTING-4M JICX4 FS JIC 90 DEG	2	
7		57968001	FITTING-STR-4MJ-6MORB	2	
8		72895001	O RING-SQ. #16 FLANGE	2	
9		67745001	FITTING - FLGH - 16CD62	4	
10		250515001	7/16 HARD WASHER SAE Y/ZINC	8	
11		250507001	BOLT 7/16-14 X 1 3/4"GR8 HEX Y	8	
12		120848001	ADAPTER-20MORINGX20MJICLONGSTS	1	
13		59410001	FITTING-90-12MJ-12MORBA	1	
14		224411001	PUMP-90 SERIES 100CC 23T EDC	1	Breakdown Fig. 13-43

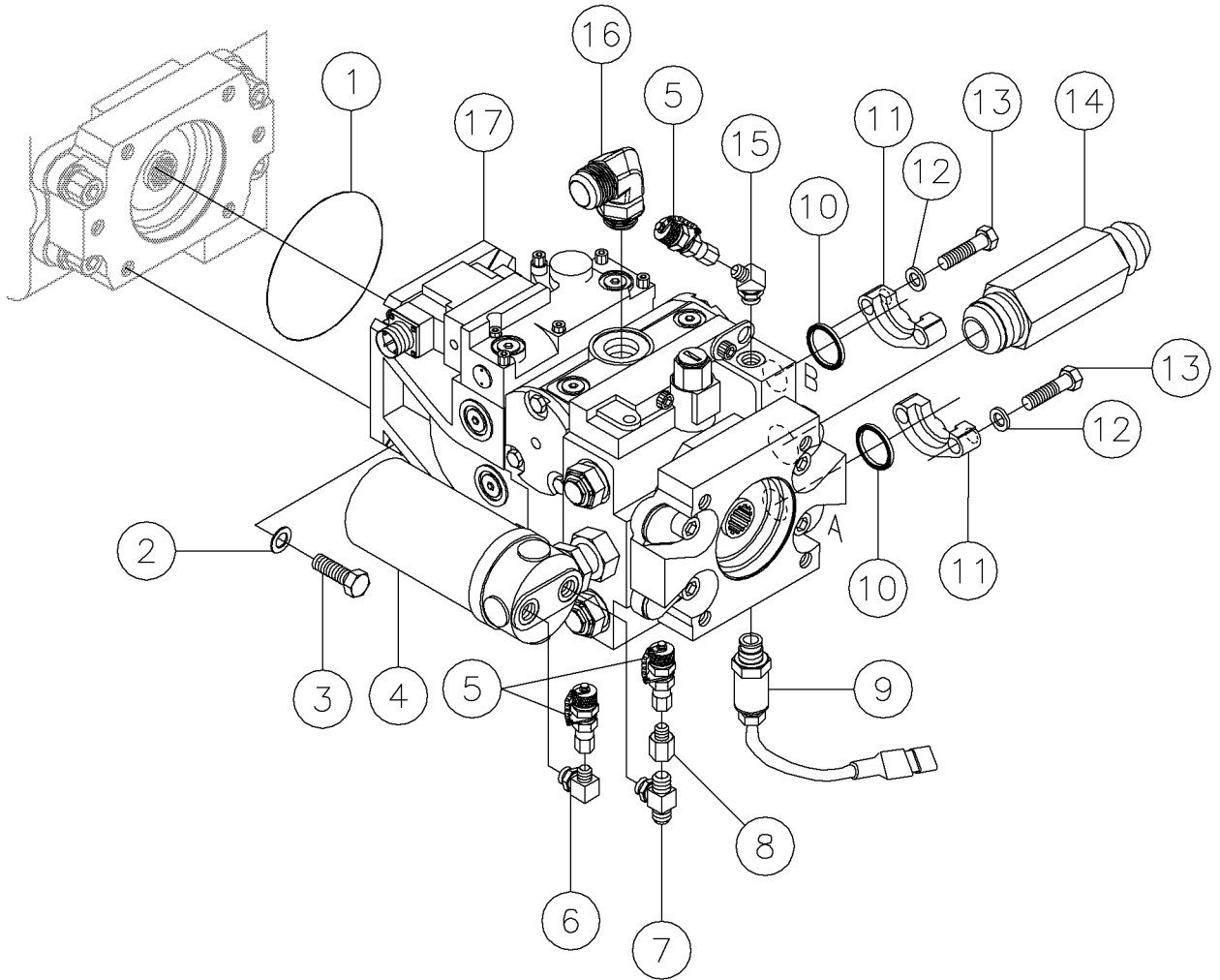
Hydraulic Pump (Water System/Left Track Drive) Fig 4-9r02



Hydraulic Pump (Water System/Left Track Drive) Fig 4-9r02

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	August, 2006		Add Ref. 18 & 19
1		85642163	O-RING	1	
2		485025	WASHER-1/2 FLAT-HARDENED-YZ	4	
3		235721001	BOLT-1/2-13X1 1/2 GR8 ZINC PLT	4	
4		81902001	FILTER-OIL	1	
5		83015001	FITTING-4F JIC DIAGNOSTIC	3	
6		57950001	FITTING-90-4MJ-6MORBA	1	
7		68787001	FITTING-6M (BCH)X6M JICX6M JIC	1	
8		59928001	6F JICX4M JIC ST REDUCER	1	
9		283059001	SENSOR - HYDRAULIC PRESSURE	1	
10		72895001	O RING-SQ. #16 FLANGE	2	
11		67745001	FITTING - FLGH - 16CD62	4	
12		250540001	REPLACED BY 250515001	8	
13		250507001	BOLT 7/16-14 X 1 3/4"GR8 HEX Y	8	
14		94161001	FITTING-16MJICX16MORING LONG	1	
15		82931001	FITTING-45-4MJX6MORBA	1	
16		65571001	12M X 16M JIC 90 DEGREE	1	S/N 119 & Up
17		244741001	PUMP-75CC 90SERIES #95Z1770	1	Breakdown Fig. 13-44
18	*	296279663	FITTING - ST - 6MOR X 6FORB	1	
19	*	59088057	O-RING AS-906-C90	1	

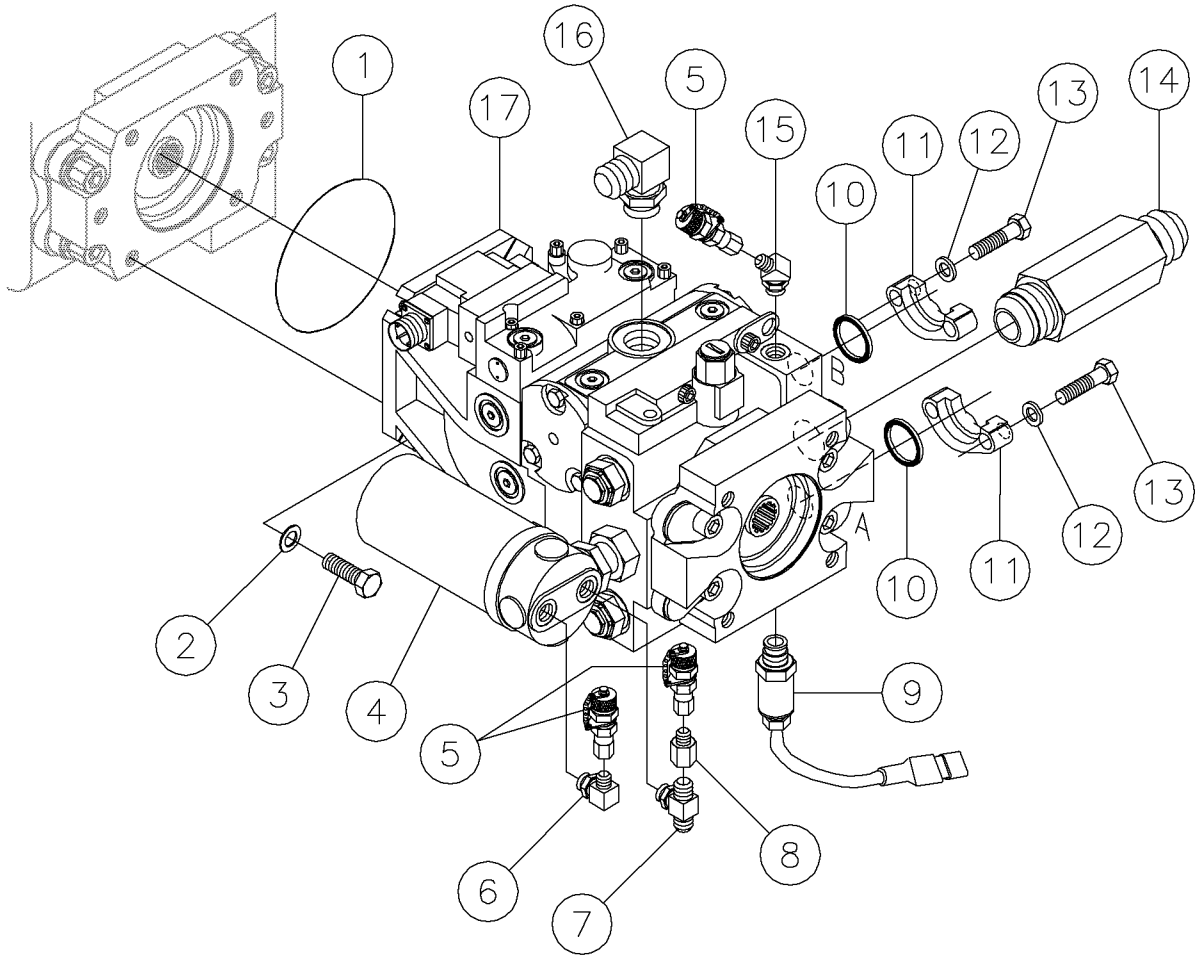
Hydraulic Pump (Water System/Left Track Drive) Fig 4-9r01



Hydraulic Pump (Water System/Left Track Drive) Fig 4-9r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2006		Update In Illustration & Parts List.
1		85642163	O-RING	1	
2		485025	WASHER-1/2 FLAT-HARDENED-YZ	4	
3		235721001	BOLT-1/2-13X1 1/2 GR8 ZINC PLT	4	
4		81902001	FILTER-OIL	1	
5		83015001	FITTING-4F JIC DIAGNOSTIC	3	
6		57950001	FITTING-90-4MJ-6MORBA	1	
7		68787001	FITTING-6M (BCH)X6M JICX6M JIC	1	
8		59928001	6F JICX4M JIC ST REDUCER	1	
9		283059001	SENSOR - HYDRAULIC PRESSURE	1	
10		72895001	O RING-SQ. #16 FLANGE	2	
11		67745001	FITTING - FLGH - 16CD62	4	
12		250540001	REPLACED BY 250515001	8	
13		250507001	BOLT 7/16-14 X 1 3/4"GR8 HEX Y	8	
14		94161001	FITTING-16MJICX16MORING LONG	1	
15		82931001	FITTING-45-4MJX6MORBA	1	
16		65571001	12M X 16M JIC 90 DEGREE	1	(SN 119 AND UP)
17		244741001	PUMP-75CC 90SERIES #95Z1770	1	Breakdown Fig. 13-44

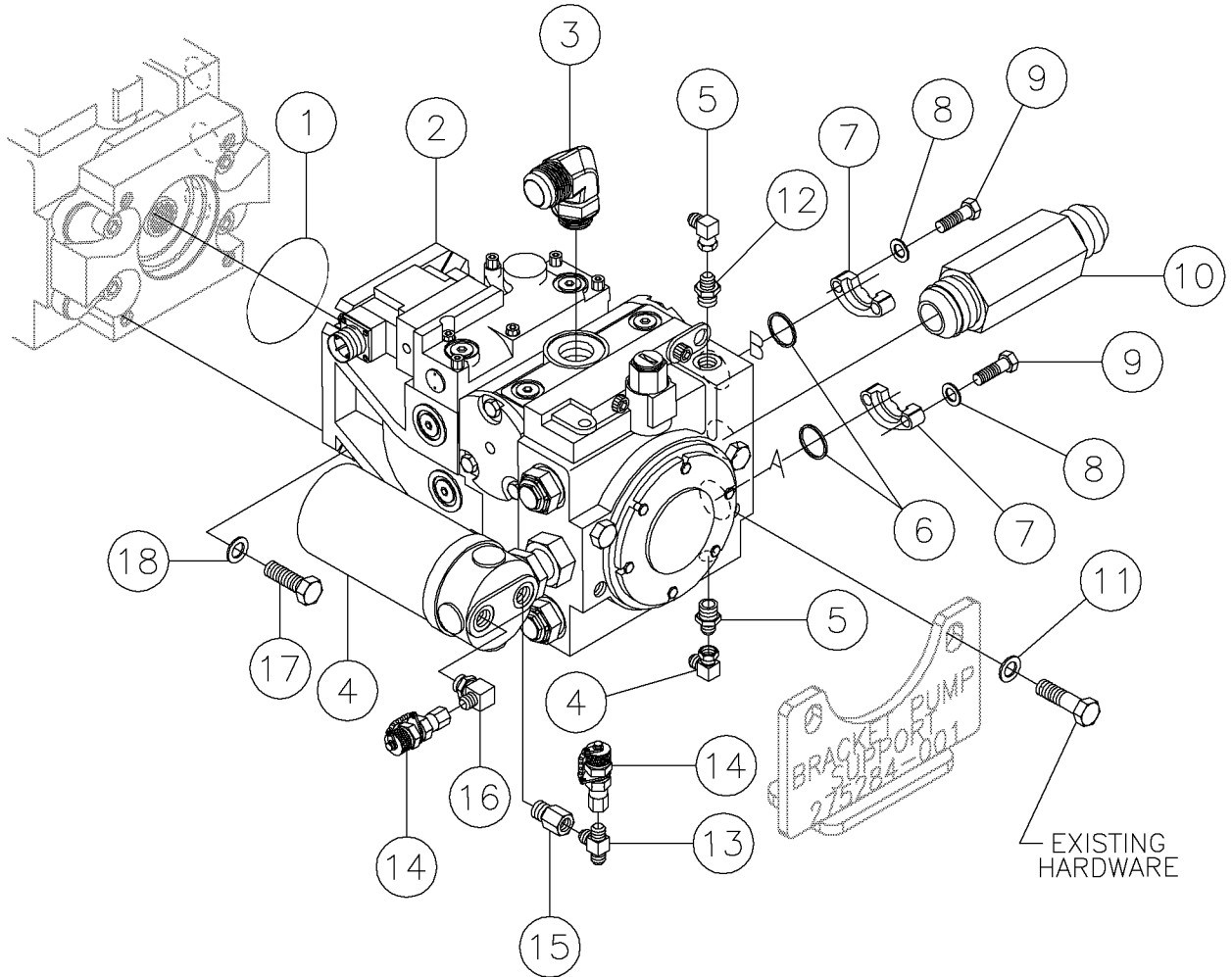
Hydraulic Pump (Water System/Left Track Drive) Fig 4-9



Hydraulic Pump (Water System/Left Track Drive) Fig 4-9

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		85642163	O-RING	1	
2		485025	WASHER-1/2 FLAT-HARDENED-YZ	4	
3		235721001	BOLT-1/2-13X1 1/2 GR8 ZINC PLT	4	
4		81902001	FILTER-OIL	1	
5		83015001	FITTING-4F JIC DIAGNOSTIC	3	
6		57950001	FITTING-90-4MJ-6MORBA	1	
7		68787001	FITTING-6M (BCH)X6M JICX6M JIC	1	
8		59928001	6F JICX4M JIC ST REDUCER	1	
9		283059001	SENSOR - HYDRAULIC PRESSURE	1	
10		72895001	O RING-SQ. #16 FLANGE	2	
11		67745001	FITTING - FLGH - 16CD62	4	
12		250540001	REPLACED BY 250515001	8	
13		250507001	BOLT 7/16-14 X 1 3/4"GR8 HEX Y	8	
14		94161001	FITTING-16MJICX16MORING LONG	1	
15		82931001	FITTING-45-4MJX6MORBA	1	
16		59410001	FITTING-90-12MJ-12MORBA	1	
17		244741001	PUMP-75CC 90SERIES #95Z1770	1	Breakdown Fig. 13-44

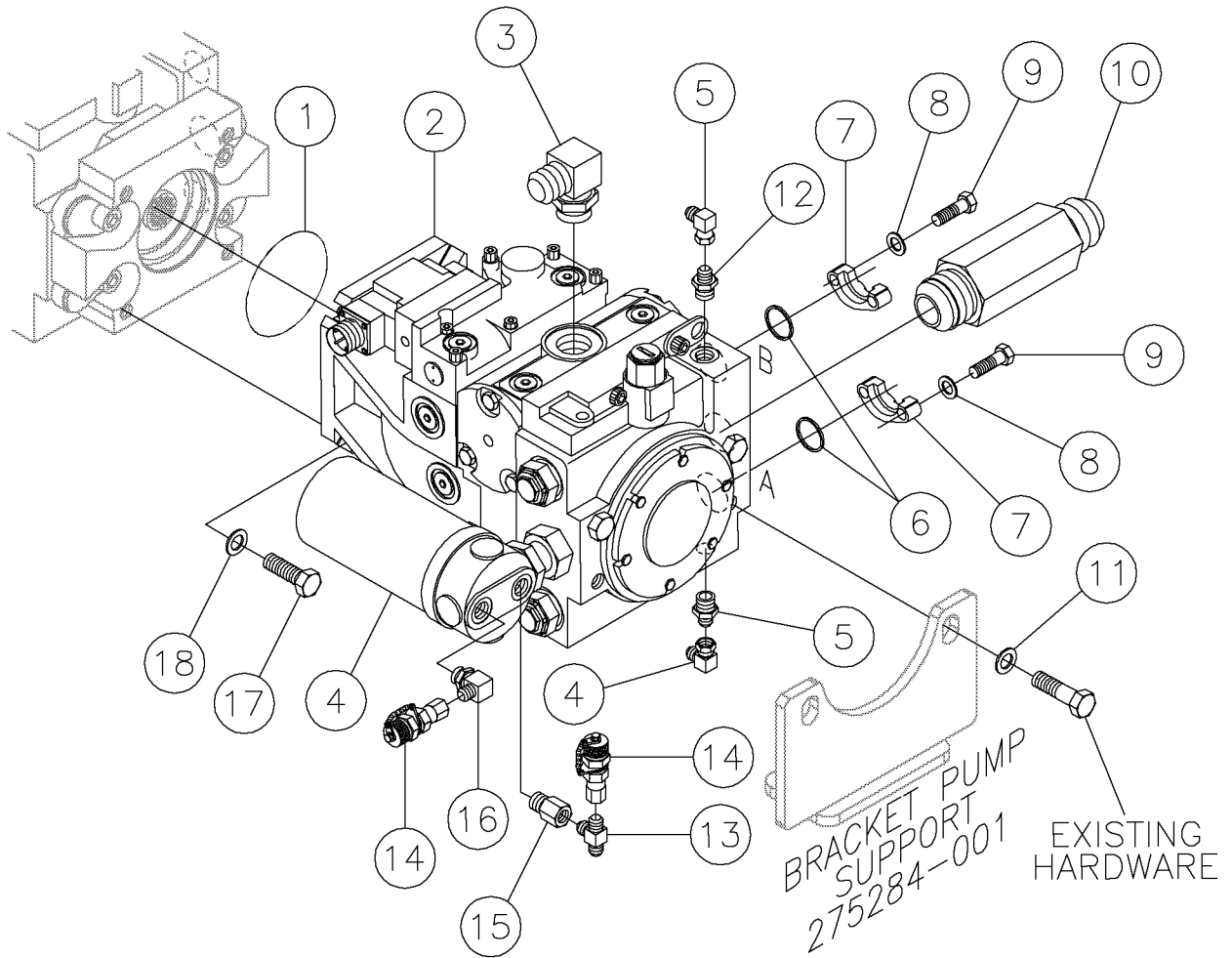
Hydraulic Pump (Thrust/Pullback/Right Track Drive) Fig 4-10r01



Hydraulic Pump (Thrust/Pullback/Right Track Drive) Fig 4-10r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2006		Update In Illustration & Parts List.
1		85642163	O-RING	1	
2		244742001	PUMP-75CC 90SERIES	1	Breakdown Fig. 13-45
3		65571001	12M X 16M JIC 90 DEGREE	1	(SN 119 AND UP)
4		81902001	FILTER-OIL	1	
5		59423001	FIT-4M JICX4M ADJ.90 DEG.ELBOW	1	
6		72895001	O RING-SQ. #16 FLANGE	2	
7		67745001	FITTING - FLGH - 16CD62	2	
8		250515001	7/16 HARD WASHER SAE Y/ZINC	4	
9		250507001	BOLT 7/16-14 X 1 3/4"GR8 HEX Y	8	
10		94161001	FITTING-16MJICX16MORING LONG	8	
11		603946001	WASHER M16	1	
12		57968001	FITTING-STR-4MJ-6MORB	2	
13		81343001	4M (BCH)X4M JICX4M JIC TEE	2	
14		83015001	FITTING-4F JIC DIAGNOSTIC	1	
15		67291001	FITTING - STR - 6MORB - 4FORB	2	
16		57950001	FITTING-90-4MJ-6MORBA	1	
17		235721001	BOLT-1/2-13X1 1/2 GR8 ZINC PLT	1	
18		235712001	WASHER-1/2 SAE HARD ZINC PLTD	4	

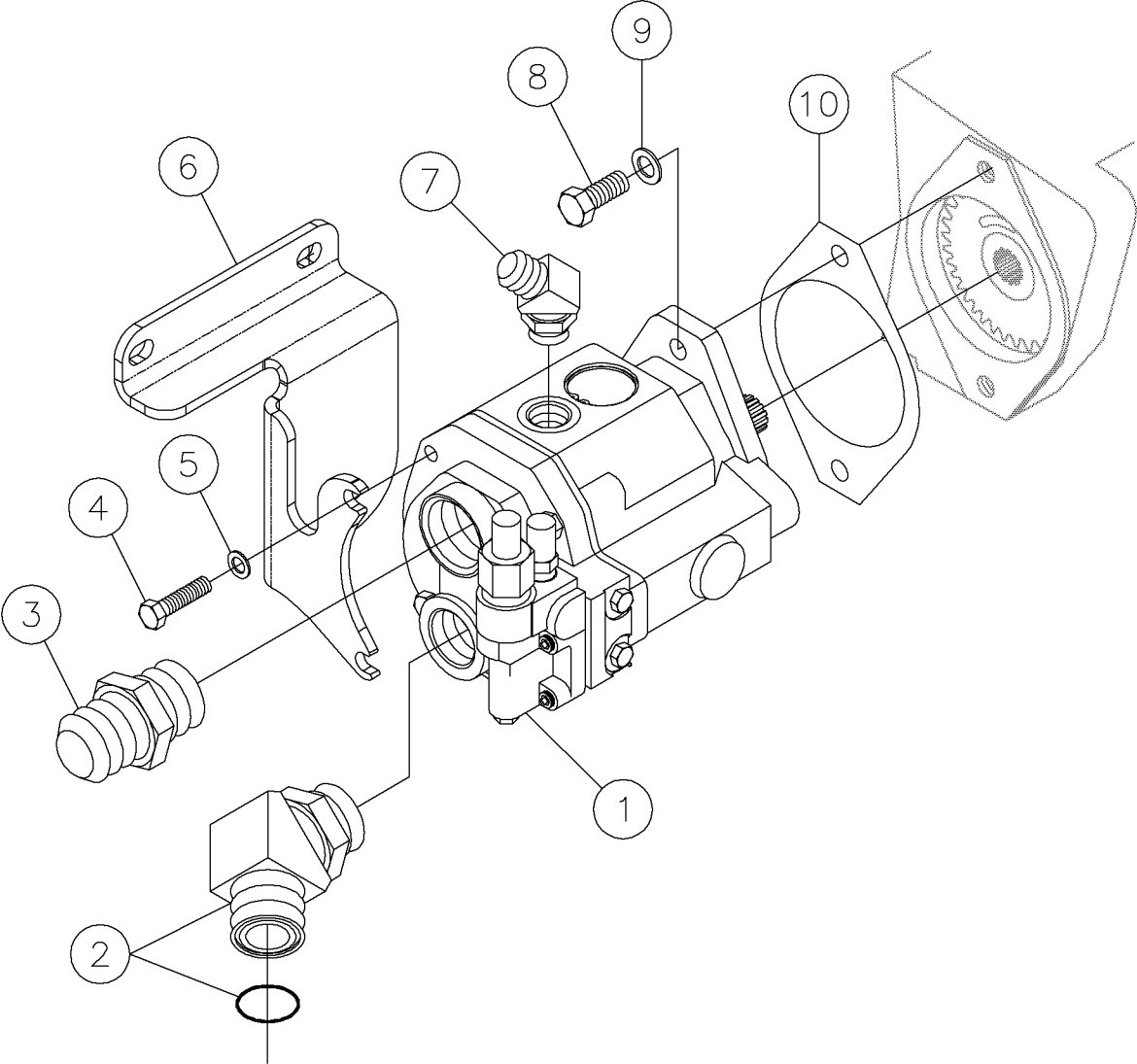
Hydraulic Pump (Thrust/Pullback/Right Track Drive) Fig 4-10



Hydraulic Pump (Thrust/Pullback/Right Track Drive) Fig 4-10

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		85642163	O-RING	1	
2		244742001	PUMP-75CC 90SERIES	1	Breakdown Fig. 13-45
3		59410001	FITTING-90-12MJ-12MORBA		
4		81902001	FILTER-OIL	1	
5		59423001	FIT-4M JICX4M ADJ.90 DEG.ELBOW	1	
6		72895001	O RING-SQ. #16 FLANGE	2	
7		67745001	FITTING - FLGH - 16CD62	2	
8		250515001	7/16 HARD WASHER SAE Y/ZINC	4	
9		250507001	BOLT 7/16-14 X 1 3/4"GR8 HEX Y	8	
10		94161001	FITTING-16MJICX16MORING LONG	8	
11		603946001	WASHER M16	1	
12		57968001	FITTING-STR-4MJ-6MORB	2	
13		81343001	4M (BCH)X4M JICX4M JIC TEE	2	
14		83015001	FITTING-4F JIC DIAGNOSTIC	1	
15		67291001	FITTING - STR - 6MORB - 4FORB	2	
16		57950001	FITTING-90-4MJ-6MORBA	1	
17		235721001	BOLT-1/2-13X1 1/2 GR8 ZINC PLT	1	
18		235712001	WASHER-1/2 SAE HARD ZINC PLTD	4	

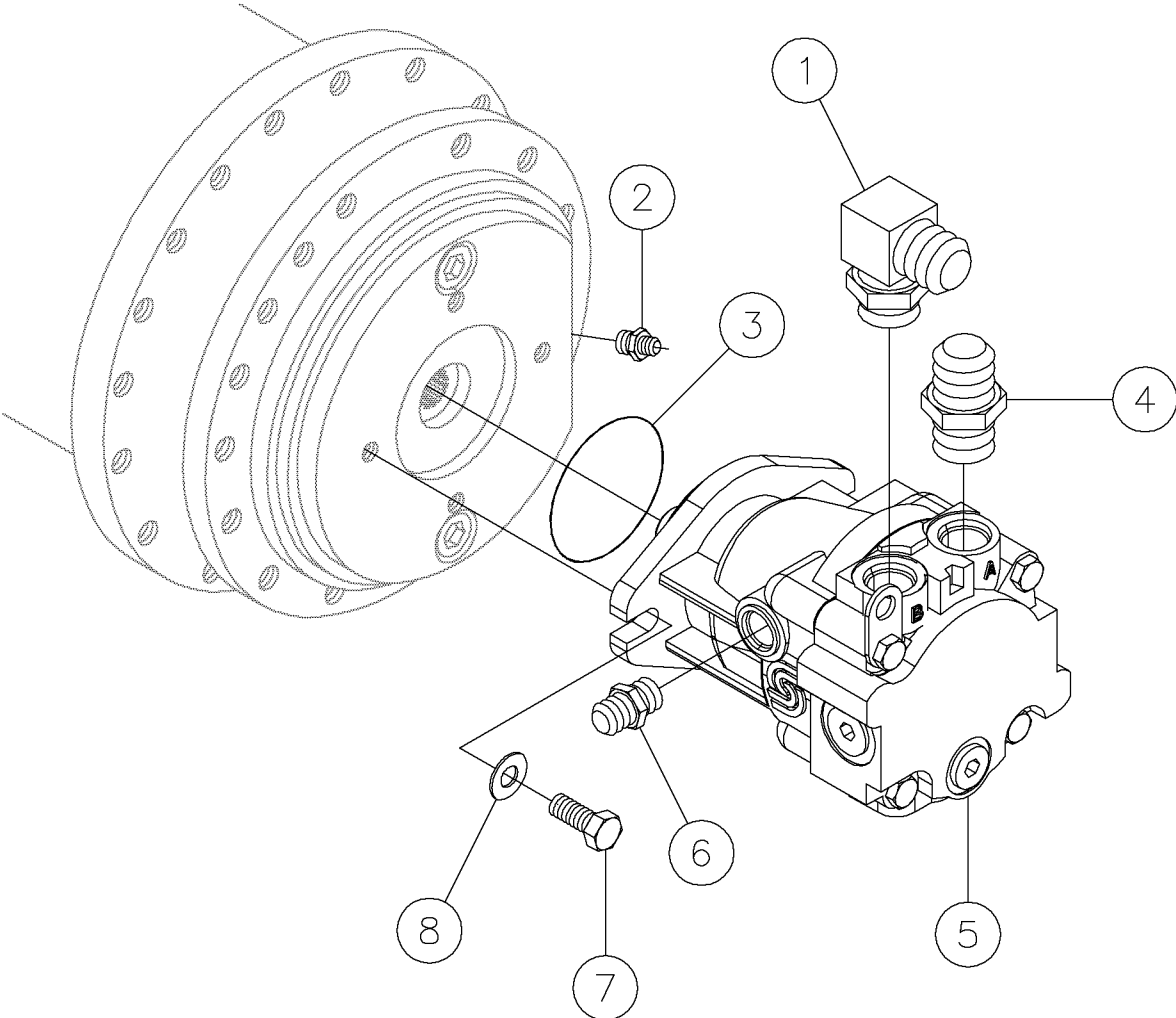
Hydraulic Pump PC (Implement) Fig 4-11



Hydraulic Pump PC (Implement) Fig 4-11

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		280850001	PUMP - 2.32 CID PD	1	
		77958097	SEAL KIT-PUMP & COMPENSATOR	1	
		296254567	COMPENSATOR ASSEMBLY	1	
2		53835001	#16M O-RING-#16M JIC 45 DEG.	1	
3		70006001	FITTING-20M X 20 M JIC STR.	1	
4		235723001	SCREW - HCS - .38 - 16 X 1.50 - GR8 - YZ	2	
5		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	2	
6		293008001	MOUNT - PUMP IMPLEMENT	1	
7		56725001	FITTING-10MX10M JIC 45 DEG.	1	
8		507407040	SCREW-HCS,M12-1.75X40,10.9,YZ,ISO4017,FT	2	
9		238249001	12MM HARD WASHER Y/ ZINC	2	
10		283642001	GASKET	1	

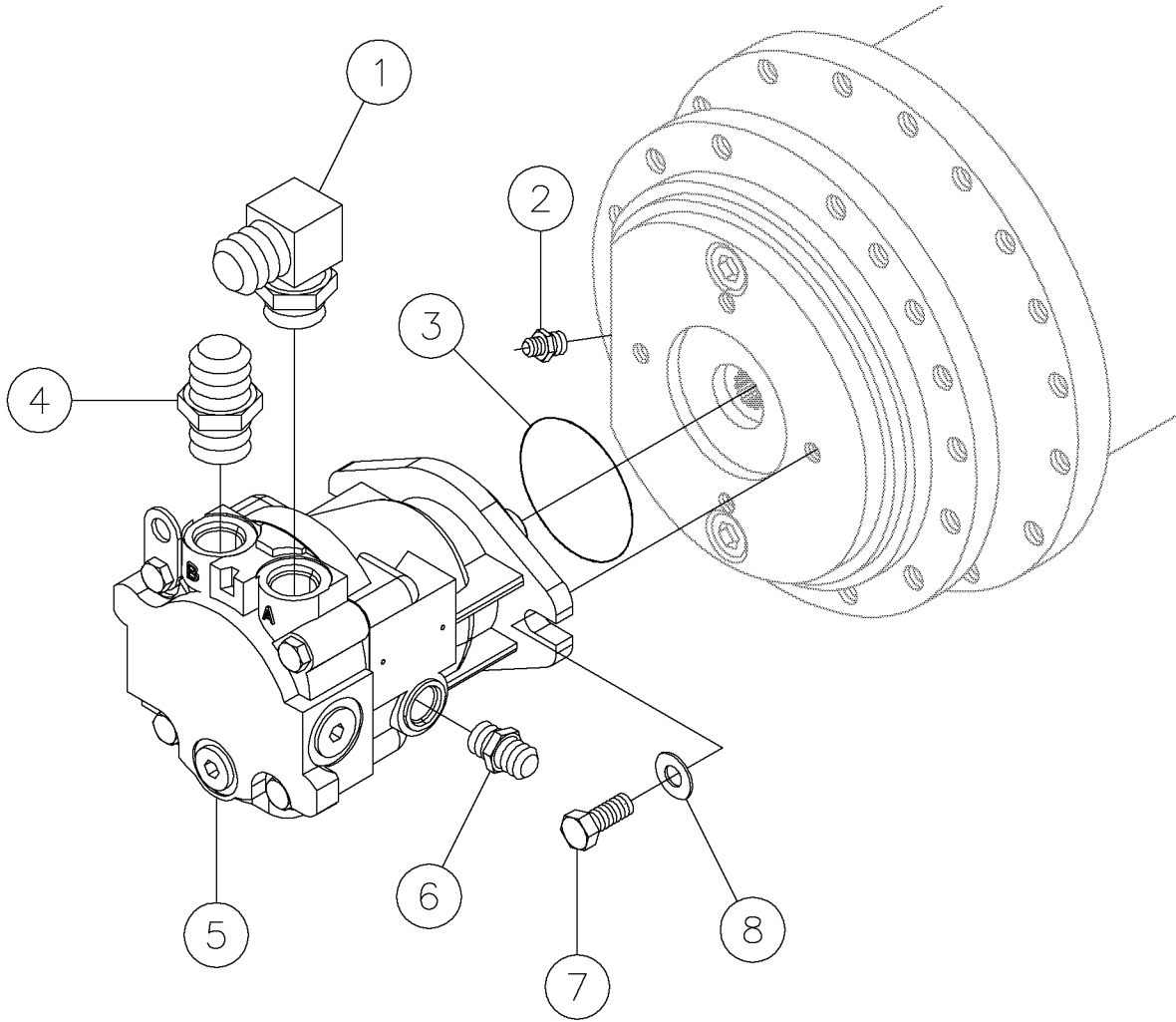
Track Drive Motor (Left) Fig 4-12



Track Drive Motor (Left) Fig 4-12

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		61703001	FITTING-90-16MJ-16MORBA	1	
2		103058001	FITTING-M12X1.5X4M JIC STR.	1	
3		903382001	O-RING AS-155	1	
4		60907001	FITTING-16M JICX16M STR ADAPT	1	
5		619555001	MOTOR-FIXED DISPLACEMENT SERIES40-M35/45	1	Breakdown Fig. 13-41
6		53824001	FITTING-#8M O-RING-#8M JIC ST.	1	
7		235737001	BOLT-1/2-13X1 1/4 GR8 ZINC PLT	2	
8		485025	WASHER-1/2 FLAT-HARDENED-YZ	2	

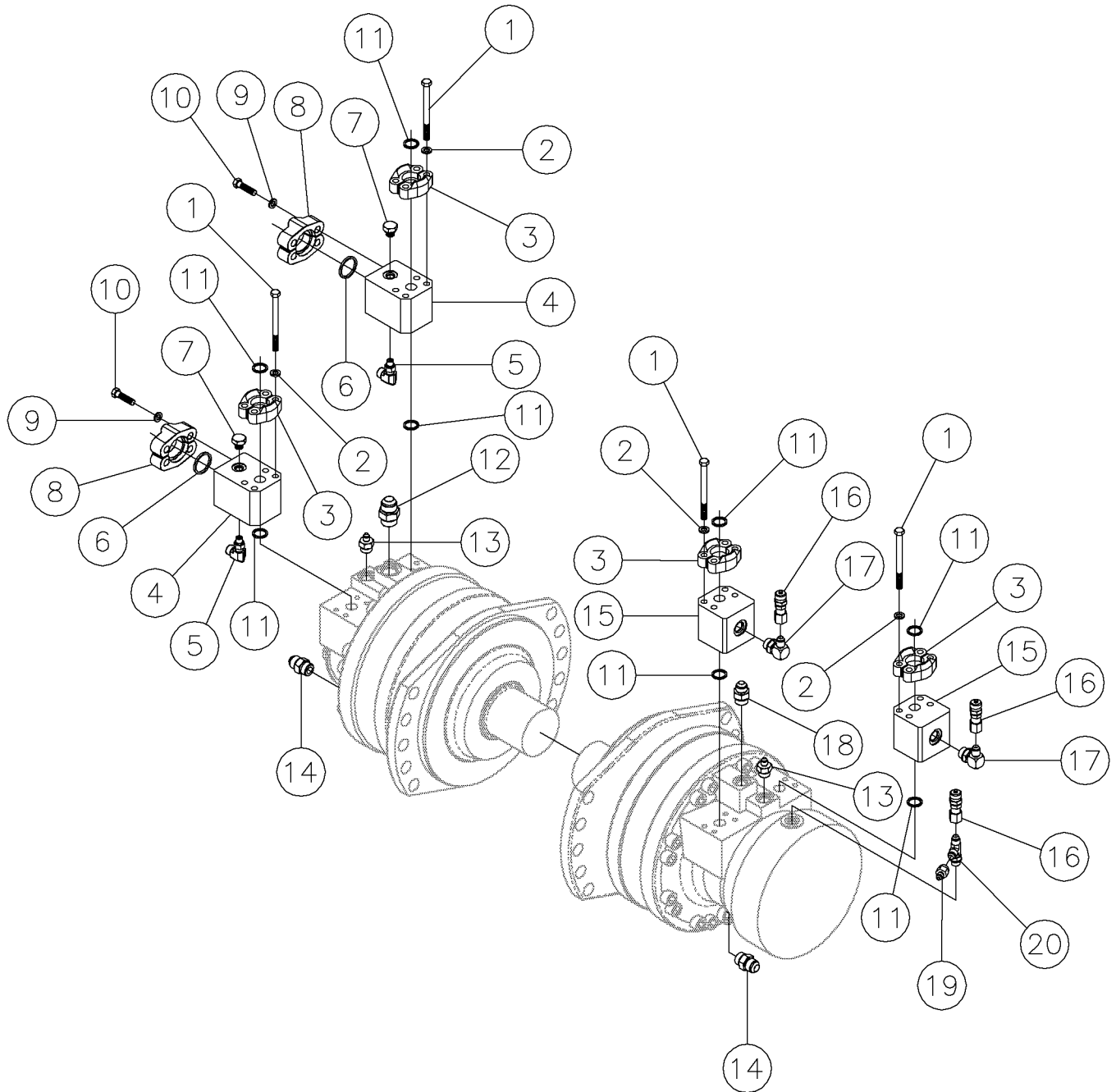
Track Drive Motor (Right) Fig 4-13



Track Drive Motor (Right) Fig 4-13

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		61703001	FITTING-90-16MJ-16MORBA	1	
2		103058001	FITTING-M12X1.5X4M JIC STR.	1	
3		903382001	O-RING AS-155	1	
4		60907001	FITTING-16M JICX16M STR ADAPT	1	
5		619555001	MOTOR-FIXED DISPLACEMENT SERIES40-M35/45	1	Breakdown Fig. 13-41
6		53824001	FITTING-#8M O-RING-#8M JIC ST.	1	
7		235737001	BOLT-1/2-13X1 1/4 GR8 ZINC PLT	2	
8		485025	WASHER-1/2 FLAT-HARDENED-YZ	2	

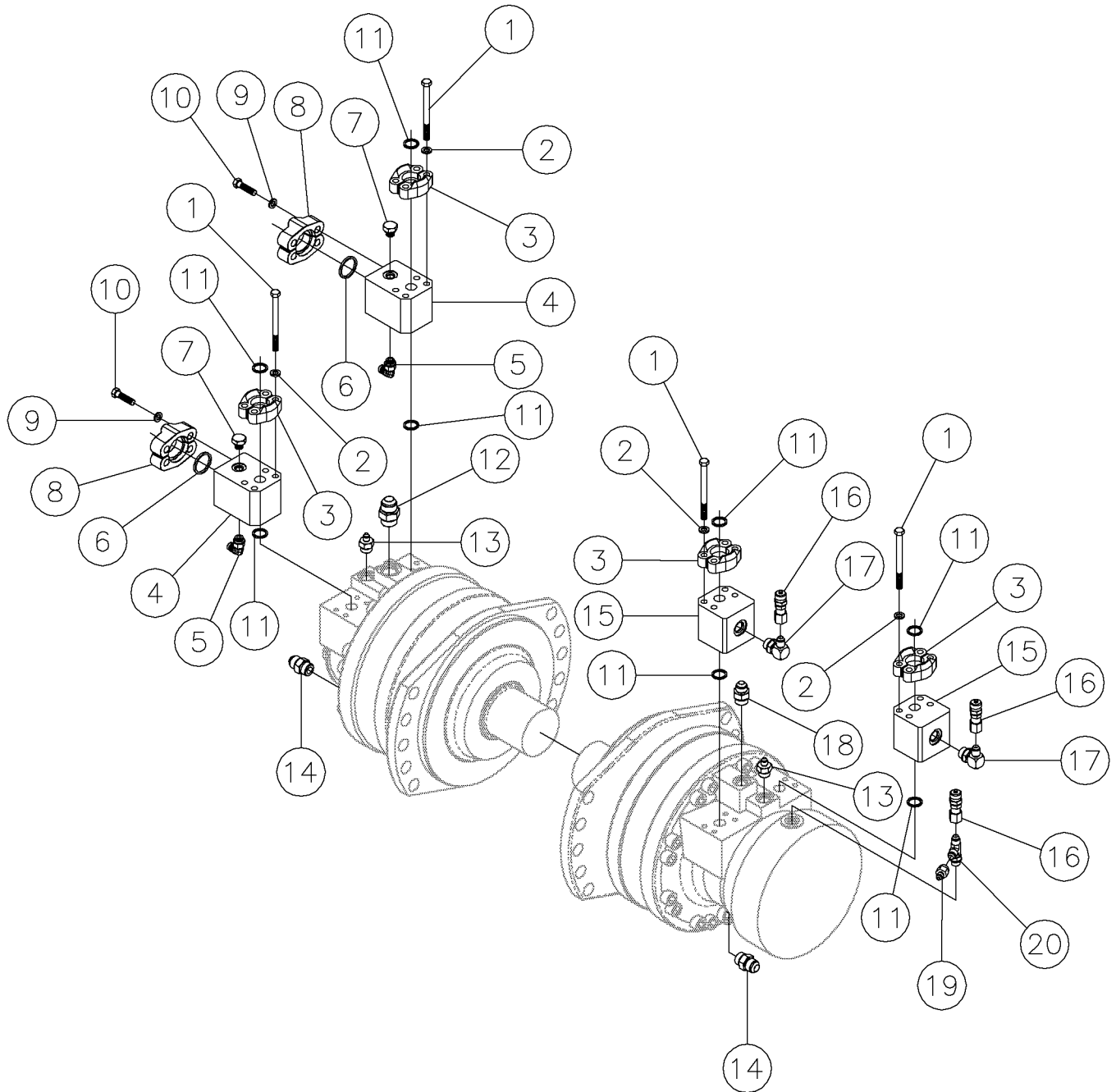
Rotation Drive Motor Hydraulic (S/N 130-) Fig 4-14r02



Rotation Drive Motor Hydraulic (S/N 130-) Fig 4-14r02

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	August, 2006		Change Fitting
1		507092110	SCREW-HCS,M10-1.50X110,8.8,YZ,ISO4014,PT	16	
2		141350001	WASHER-M10 HARDEN PLATED FLAT	16	
3		67746001	FITTING - FLGH - 12CD62	8	
4		296273901	MANIFOLD MSEII MOTOR	2	
5	*	72975001	FITTING - 90 - 6MORFF - 4MORBA	2	S/N 130 & Up
6		72895001	O RING-SQ. #16 FLANGE	2	
7		5553001	FITTING - PLUG - 6MORB - HEX	2	
8		67745001	FITTING - FLGH - 16CD62	4	
9		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	8	
10		235723001	SCREW - HCS -.38 - 16 X 1.50 - GR8 - YZ	8	
11		72894001	O RING-SQ. #12 FLANGE	8	
12		53828001	#12M O-RING-#12M JIC ST.	1	
13		53657001	FITTING-8M OR X 4M JIC ST.	2	
14		53827001	FITT.-#10M O-RING-#10M JIC ST.	2	
15		291764001	MANIFOLD - 12 CODE 62/8 O-RING	2	
16		296280278	FITTING - TEST - 6FSJ - 16MTP WITH ORING	3	
17		57954001	FITTING-8M O-RING X 6M JIC 90 DEGS	2	
18		53826001	#10M O-RING-#8M JIC ST.	1	
19		59928001	6F JICX4M JIC ST REDUCER	1	
20		68774001	FITTING-6MX6M JIC (RUN)X6M JIC	2	

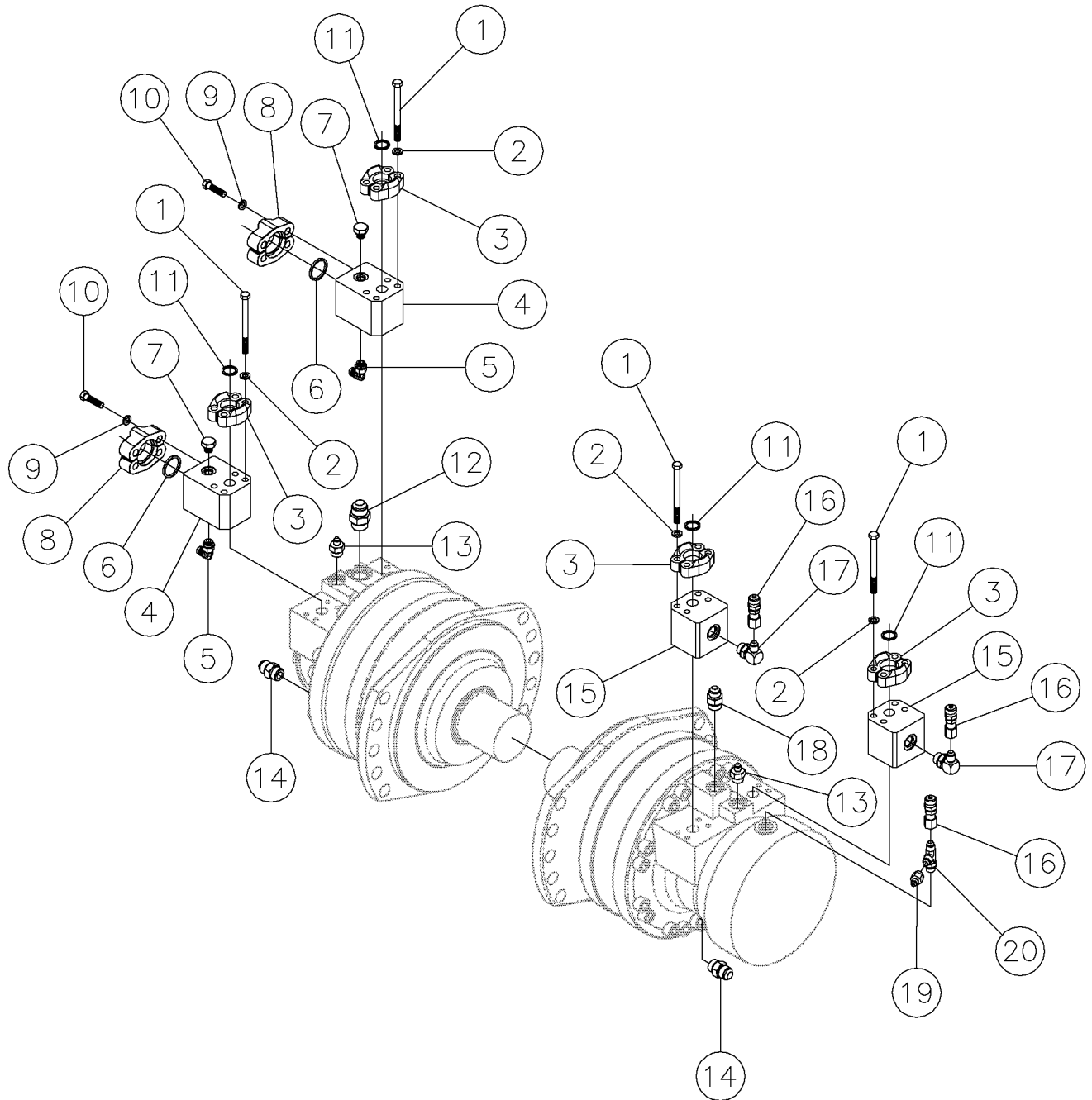
Rotation Drive Motor Hydraulic Fig 4-14r01



Rotation Drive Motor Hydraulic Fig 4-14r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2006		Update In Illustration & Parts List.
1		507092110	SCREW-HCS,M10-1.50X110,8.8,YZ,ISO4014,PT	16	
2		141350001	WASHER-M10 HARDEN PLATED FLAT	16	
3		67746001	FITTING - FLGH - 12CD62	8	
4		296273901	MANIFOLD MSEII MOTOR	2	
5		59426001	FITTING - 90-6MJ-6MORBA	2	
6		72895001	O RING-SQ. #16 FLANGE	2	
7		5553001	FITTING - PLUG - 6MORB - HEX	2	
8		67745001	FITTING - FLGH - 16CD62	4	
9		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	8	
10		235723001	SCREW - HCS - .38 - 16 X 1.50 - GR8 - YZ	8	
11		72894001	O RING-SQ. #12 FLANGE	8	
12		53828001	#12M O-RING-#12M JIC ST.	1	
13		53657001	FITTING-8M OR X 4M JIC ST.	2	
14		53827001	FITT.-#10M O-RING-#10M JIC ST.	2	
15		291764001	MANIFOLD - 12 CODE 62/8 O-RING	2	
16		296280278	FITTING - TEST - 6FSJ - 16MTP WITH ORING	3	
17		57954001	FITTING-8M O-RING X 6M JIC 90 DEGS	2	
18		53826001	#10M O-RING-#8M JIC ST.	1	
19		59928001	6F JICX4M JIC ST REDUCER	1	
20		68774001	FITTING-6MX6M JIC (RUN)X6M JIC	2	

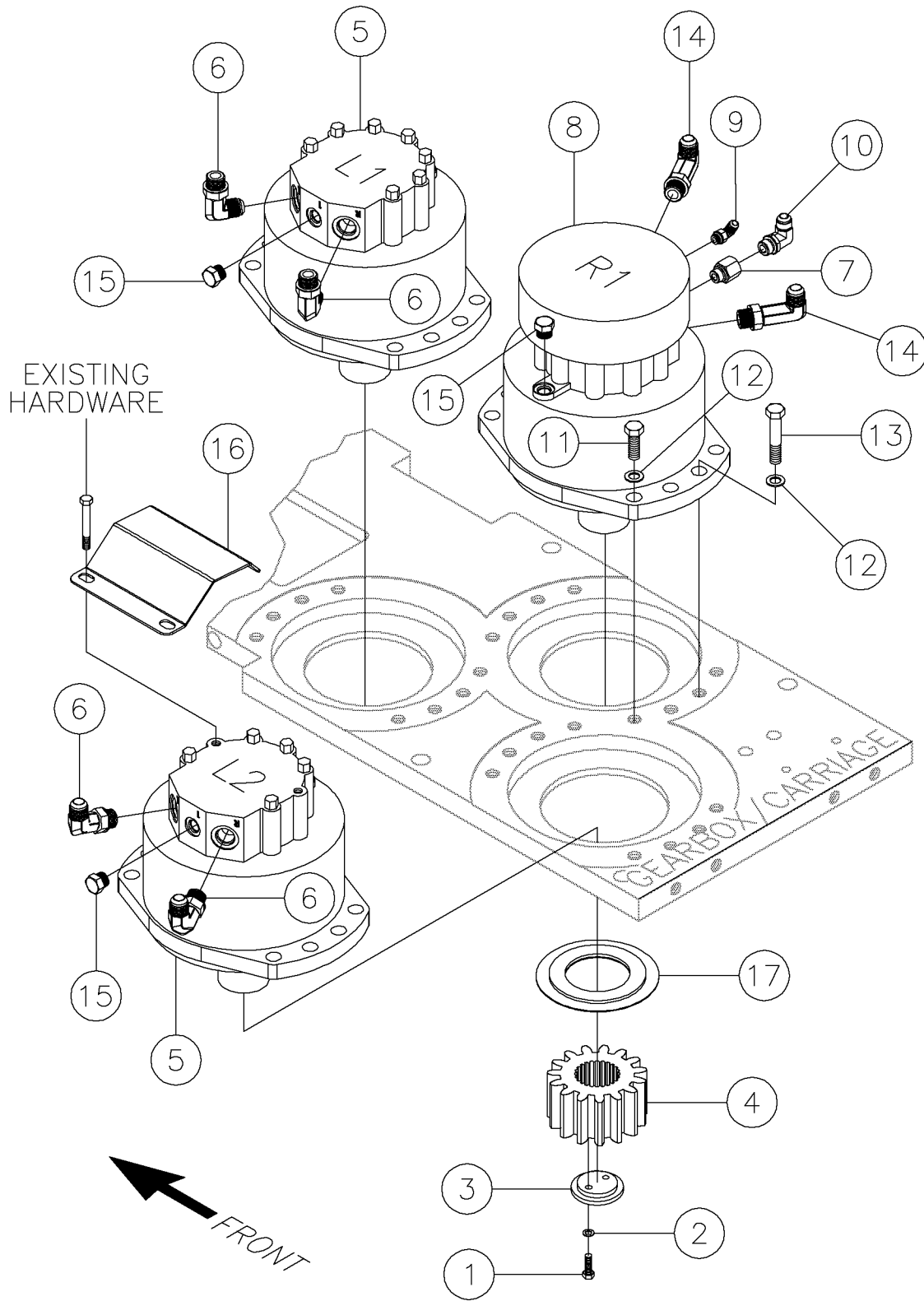
Rotation Drive Motor Hydraulic Fig 4-14



Rotation Drive Motor Hydraulic Fig 4-14

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		64111001	BOLT-M10X110 GR8.8	16	
2		141350001	WASHER-M10 HARDEN PLATED FLAT	12	
3		67746001	FITTING - FLGH - 12CD62	8	
4		296273901	MANIFOLD MSEII MOTOR	2	
5		59426001	FITTING - 90-6MJ-6MORBA	5	
6		72895001	O RING-SQ. #16 FLANGE	2	
7		5553001	FITTING - PLUG - 6MORB - HEX	2	
8		67745001	FITTING - FLGH - 16CD62	4	
9		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	8	
10		235723001	SCREW - HCS - .38 - 16 X 1.50 - GR8 - YZ	8	
11		72894001	O RING-SQ. #12 FLANGE	4	
12		53828001	#12M O-RING-#12M JIC ST.	1	
13		53657001	FITTING-8M OR X 4M JIC ST.	2	
14		53827001	FITT.-#10M O-RING-#10M JIC ST.	2	
15		291764001	MANIFOLD - 12 CODE 62/8 O-RING	2	
16		296280278	FITTING - TEST - 6FSJ - 16MTP WITH ORING	3	
17		57954001	FITTING-8M O-RING X 6M JIC 90 DEGS	2	
18		53826001	#10M O-RING-#8M JIC ST.	1	
19		59928001	6F JICX4M JIC ST REDUCER	1	
20		68774001	FITTING-6MX6M JIC (RUN)X6M JIC	2	

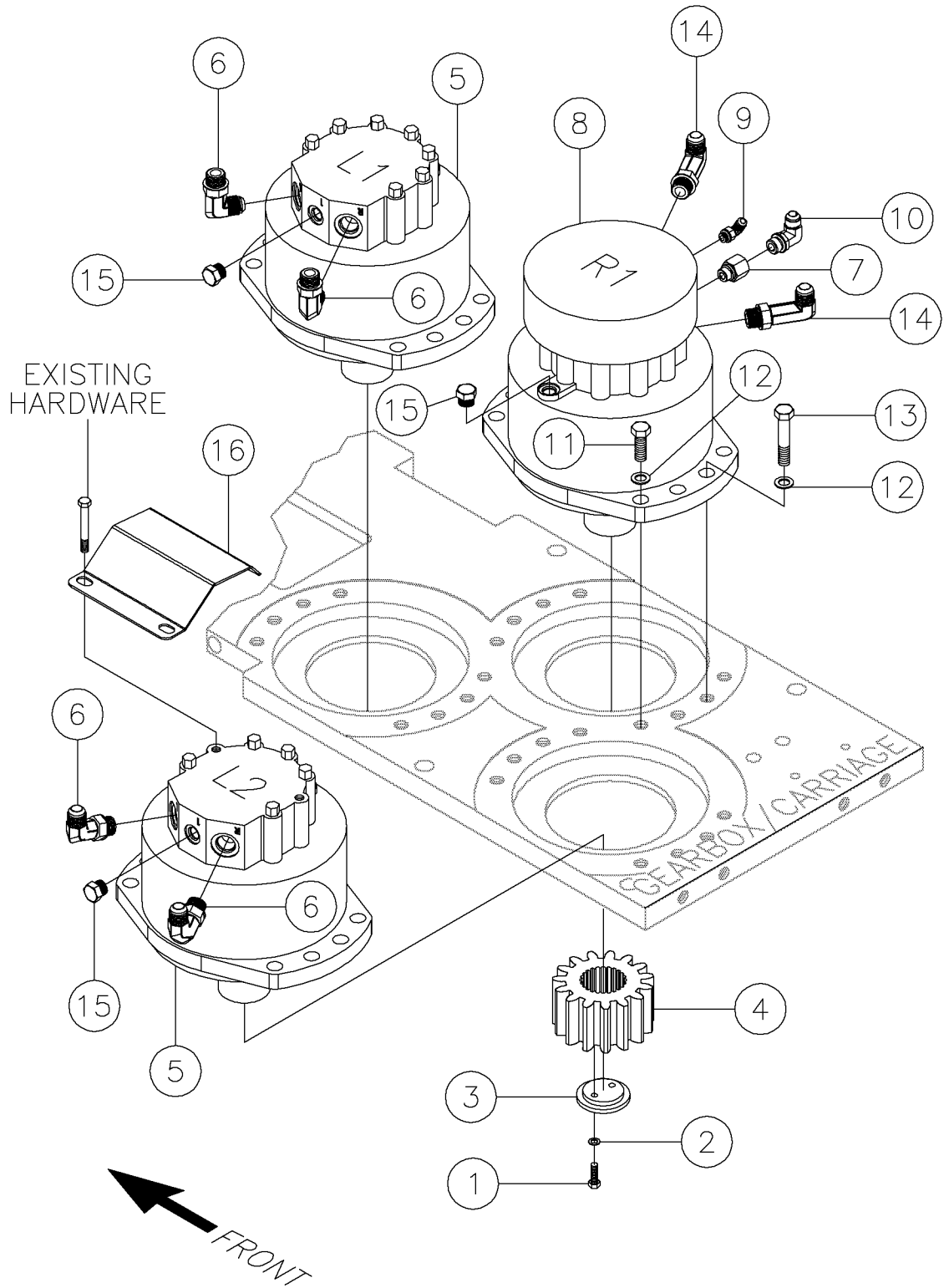
Thrust/Pullback Drive Motor (S/N 146-) Fig 4-15r02



Thrust/Pullback Drive Motor (S/N 146-) Fig 4-15r02

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2007		Add Part Number
1		508476045	SCREW-HCS,M10-1.50X45,10.9,YZ,4014,PT	8	
2		233497001	WASHER-10.7X21X2.5MM HARD FLT	8	
3		280779001	CAP - PINION	4	
4		280751001	GEAR - 12 TOOTH 2P	4	
5		296273807	MOTOR-MSE11-2-11A-A11-2A10-5000	2	Breakdown Fig. 13-46
6		278867001	FITTING-12M X 12M JIC LONG 90	4	
7		81696001	FITTING-8MX10F STR	1	(SN 119 AND UP)
8		296273808	MOTOR-MSE11-2-14A-F12-2A10-2500	1	Breakdown Fig. 13-47
9		59426001	FITTING - 90-6MJ-6MORBA	1	
10		53829001	#10M O-RING-#10M JIC 90 DEG.	1	(SN 119 AND UP)
11		243921001	SCREW-HCS-.75-10X2.25-GR8-YZ	18	
12		235717001	WASHER - 3/4" HARDENED FLAT YZ	22	
13		250604001	BOLT-3/4-10X3 1/4 GR8 HX Y/ZNC	6	
14		296275889	FITTING-90-12MF-12MORB-LL	2	
15		56218001	FITTING - PLUG - 8MORB - HEX	3	
16		296275658	PLATE - HOSE - GUIDE -L2-T/P MOTOR	1	
17	*	296289806	WASHER - FOAM	3	(S/N 146-)

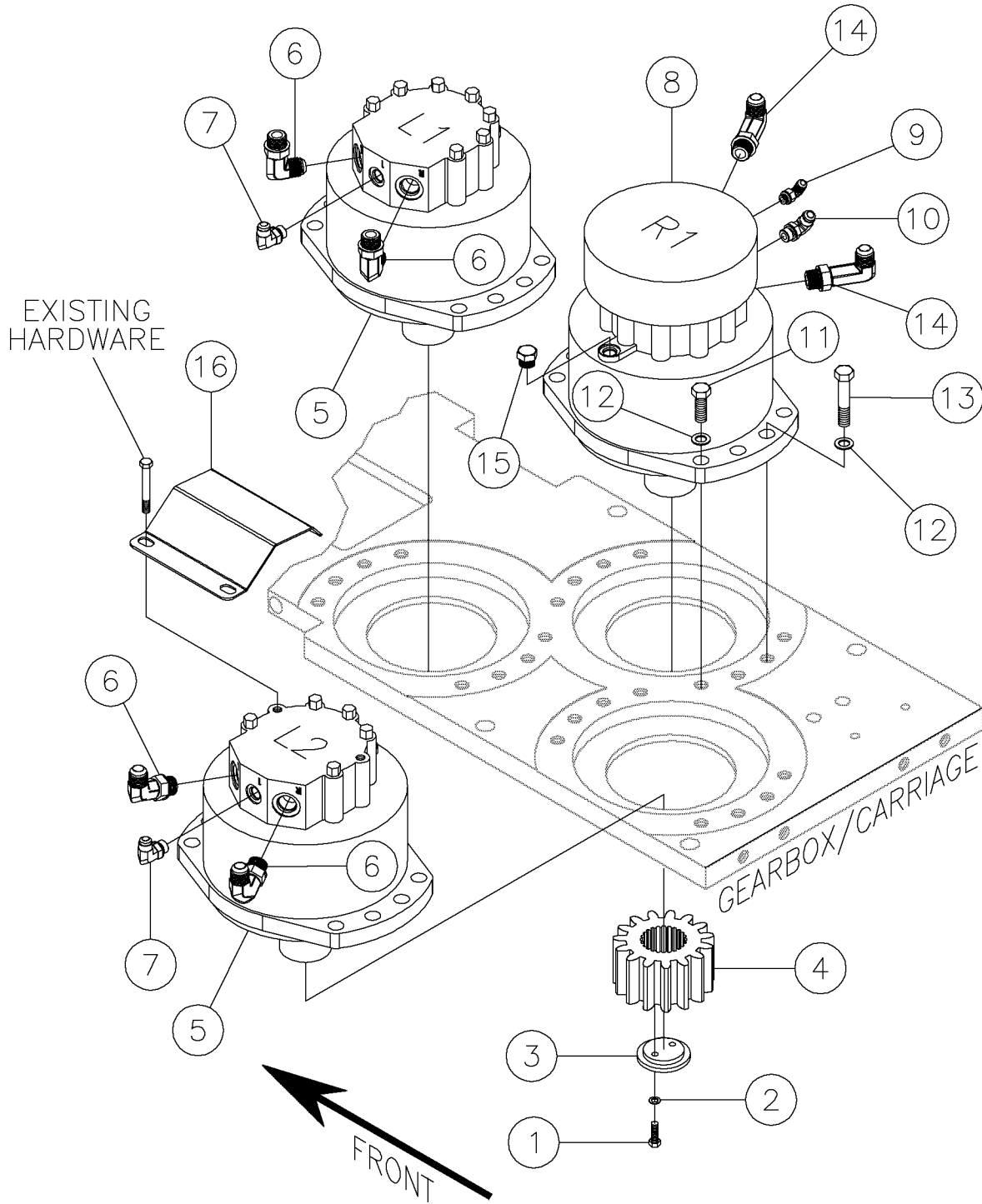
Thrust/Pullback Drive Motor Fig 4-15r01



Thrust/Pullback Drive Motor Fig 4-15r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2006		Update In Illustration & Parts List.
1		508476045	SCREW-HCS,M10-1.50X45,10.9,YZ,4014,PT	8	
2		233497001	WASHER-10.7X21X2.5MM HARD FLT	8	
3		280779001	CAP - PINION	4	
4		280751001	GEAR - 12 TOOTH 2P	4	
5		296273807	MOTOR-MSE11-2-11A-A11-2A10-5000	2	Breakdown Fig. 13-46
6		278867001	FITTING-12M X 12M JIC LONG 90	4	
7		81696001	FITTING-8MX10F STR	1	(SN 119 AND UP)
8		296273808	MOTOR-MSE11-2-14A-F12-2A10-2500	1	Breakdown Fig. 13-47
9		59426001	FITTING - 90-6MJ-6MORBA	1	
10		53829001	#10M O-RING-#10M JIC 90 DEG.	1	(SN 119 AND UP)
11		243921001	BOLT-3/4 - 10 X 2 1/4 GR8 ZP	18	
12		235717001	WASHER - 3/4" HARDENED FLAT YZ	22	
13		250604001	BOLT-3/4-10X3 1/4 GR8 HX Y/ZNC	6	
14		296275889	FITTING-90-12MF-12MORB-LL	2	
15		56218001	FITTING - PLUG - 8MORB - HEX	3	
16		296275658	PLATE - HOSE - GUIDE -L2-T/P MOTOR	1	

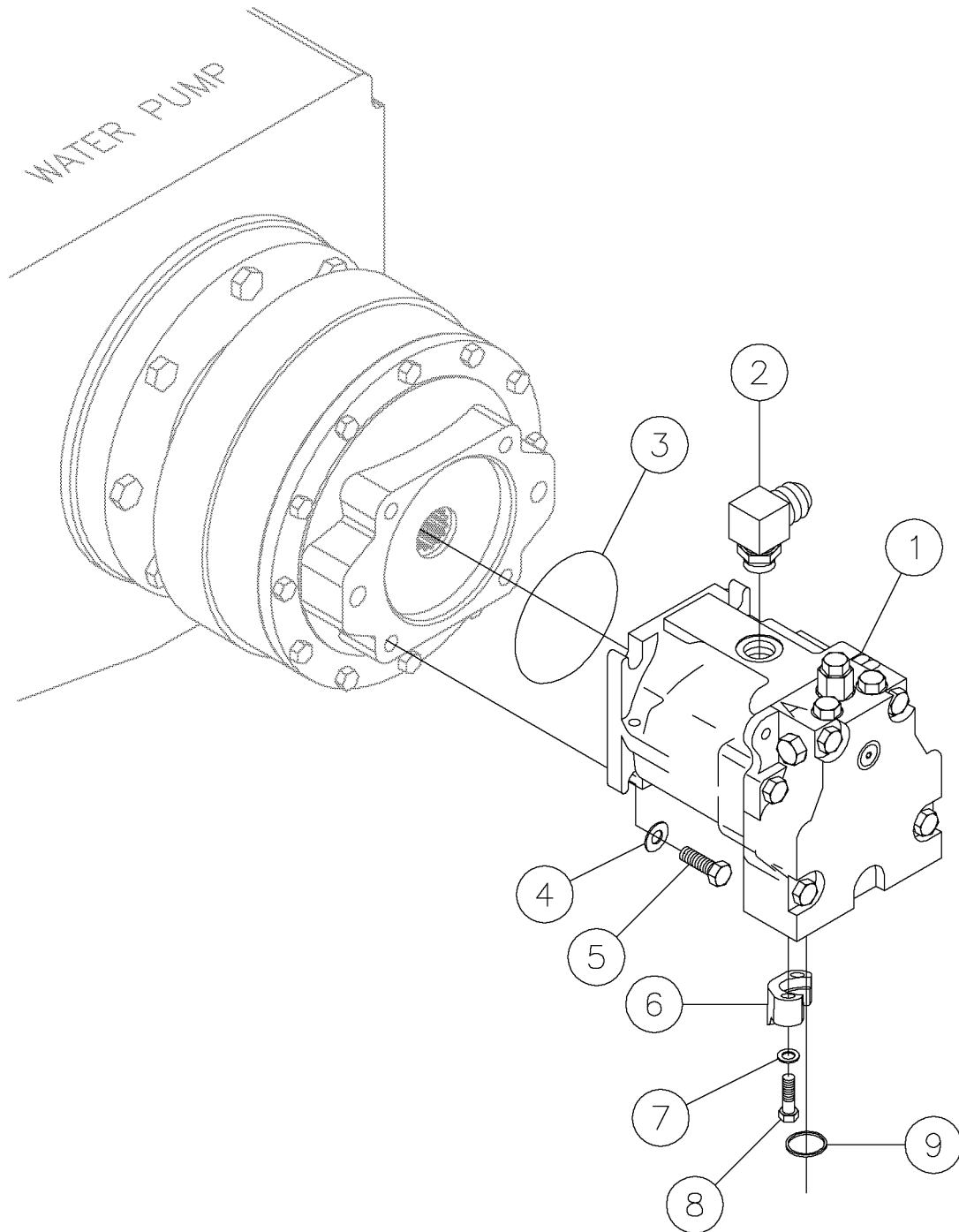
Thrust/Pullback Drive Motor Fig 4-15



Thrust/Pullback Drive Motor Fig 4-15

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		508476045	SCREW-HCS,M10-1.50X45,10.9,YZ,4014,PT	8	
2		233497001	WASHER-10.7X21X2.5MM HARD FLT	8	
3		280779001	CAP - PINION	4	
4		280751001	GEAR - 12 TOOTH 2P	4	
5		296273807	MOTOR-MSE11-2-11A-A11-2A10-5000	2	Breakdown Fig. 13-46
6		278867001	FITTING-12M X 12M JIC LONG 90	4	
7		53837001	FITTING - 8M O-RING X 8M JIC 90 DEGREE	3	
8		296273808	MOTOR-MSE11-2-14A-F12-2A10-2500	1	Breakdown Fig. 13-47
9		59426001	FITTING - 90-6MJ-6MORBA	1	
10		53837001	FITTING - 8M O-RING X 8M JIC 90 DEGREE	1	
11		243921001	BOLT-3/4 - 10 X 2 1/4 GR8 ZP	18	
12		235717001	WASHER - 3/4" HARDENED FLAT YZ	22	
13		250604001	BOLT-3/4-10X3 1/4 GR8 HX Y/ZNC	6	
14		296275889	FITTING-90-12MF-12MORB-LL	2	
15		56218001	FITTING - PLUG - 8MORB - HEX	1	
16		296275658	PLATE - HOSE - GUIDE -L2-T/P MOTOR	1	

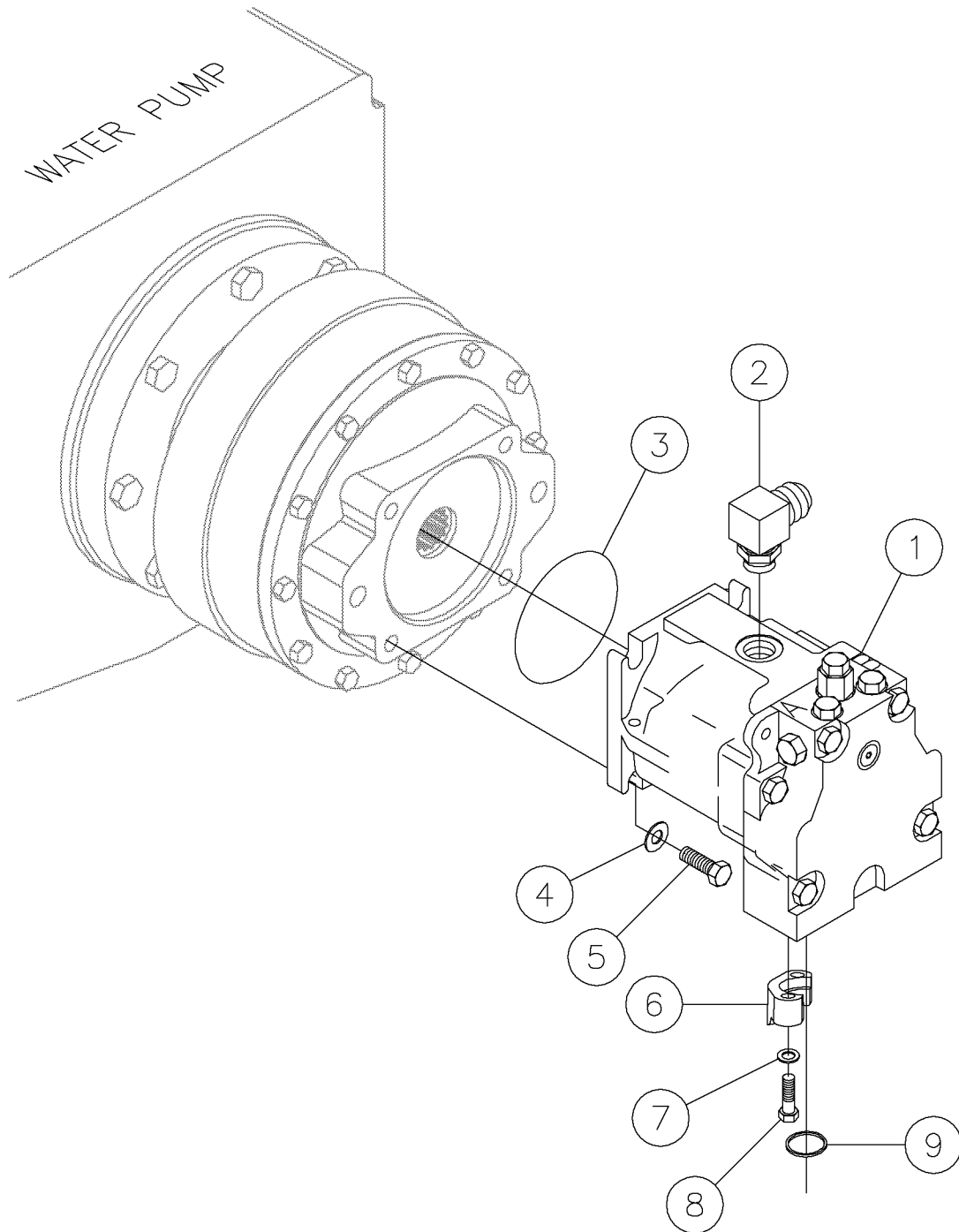
Water Pump Drive Motor Fig 4-16r01



Water Pump Drive Motor Fig 4-16r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	June, 2006		Update In Parts List.
1		296273947	MOTOR-HYD 90 SERIES 75CC(W/SPEED SENSOR)	1	Breakdown Fig. 13-14, Apex/Kerr 200 GPM
		296273957	MOTOR-HYD 90 SERIES 55CC(W/SPEED SENSOR)	1	Breakdown Fig. 13-70, Apex/Kerr 150 GPM
2		296275687	FITTING - 16J X 10MOR-90	1	
3		234319001	O-RING #159N70	1	
4		485025	WASHER-1/2 FLAT-HARDENED-YZ	4	
5		235721001	BOLT-1/2-13X1 1/2 GR8 ZINC PLT	4	
6		67745001	FITTING - FLGH - 16CD62	4	
7		250515001	7/16 HARD WASHER SAE Y/ZINC	8	
8		250507001	BOLT 7/16-14 X 1 3/4"GR8 HEX Y	8	
9		72895001	O RING-SQ. #16 FLANGE	2	

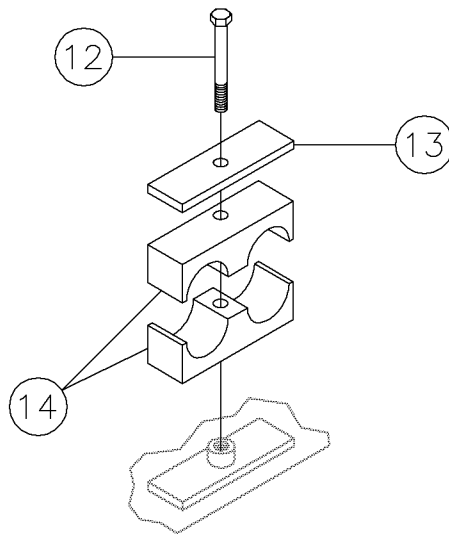
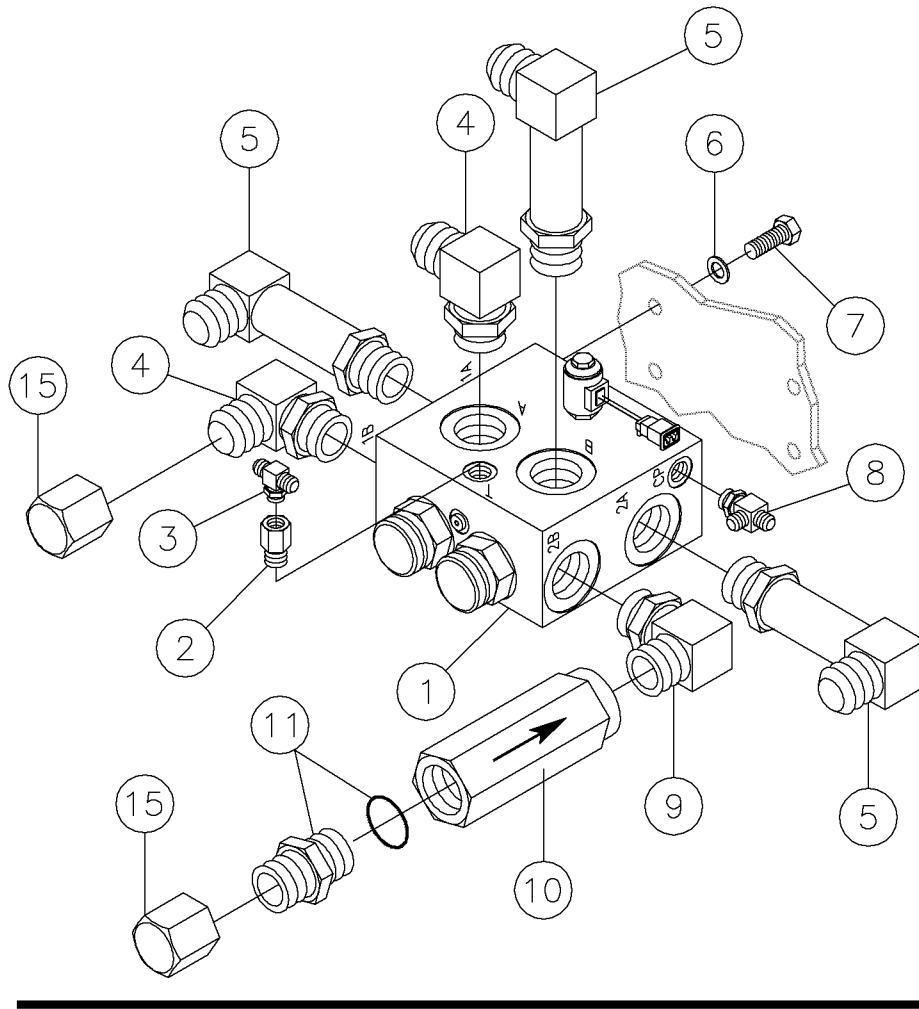
Water Pump Drive Motor Fig 4-16



Water Pump Drive Motor Fig 4-16

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296273947	MOTOR-HYD 90 SERIES 75CC(W/SPEED SENSOR)	1	Breakdown Fig. 13-14, Apex/Kerr 200 GPM
		296273957	MOTOR-HYD 90 SERIES 55CC(W/SPEED SENSOR)	1	Breakdown Fig. 13-70, Apex/Kerr 150 GPM
2		65571001	12M X 16M JIC 90 DEGREE	1	
3		234319001	O-RING #159N70	1	
4		485025	WASHER-1/2 FLAT-HARDENED-YZ	4	
5		235721001	BOLT-1/2-13X1 1/2 GR8 ZINC PLT	4	
6		67745001	FITTING - FLGH - 16CD62	4	
7		250515001	7/16 HARD WASHER SAE Y/ZINC	8	
8		250507001	BOLT 7/16-14 X 1 3/4"GR8 HEX Y	8	
9		72895001	O RING-SQ. #16 FLANGE	2	

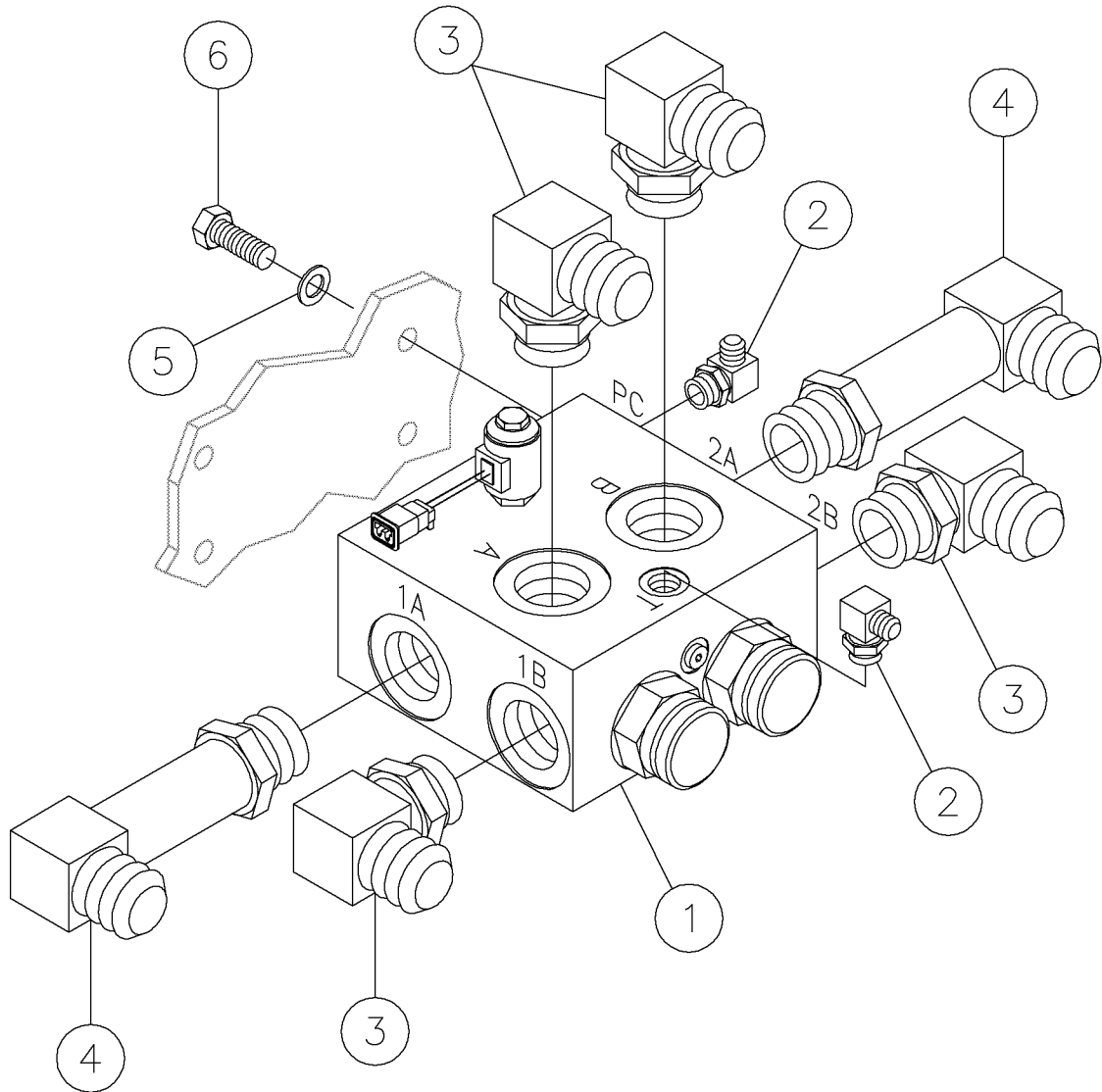
Selector Manifold (Left Track/Water) Fig 4-17



Selector Manifold (Left Track/Water) Fig 4-17

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		280825001	VALVE - DRILL TRANSPORT	1	
2		67291001	FITTING - STR - 6MORB - 4FORB	1	
3		81343001	4M (BCH)X4M JICX4M JIC TEE	1	
4		61703001	FITTING-90-16MJ-16MORBA	2	
5		103741001	ELBOW-16MORX16MJIC EXTRALONG90	3	
6		250515001	7/16 HARD WASHER SAE Y/ZINC	4	
7		250507001	BOLT 7/16-14 X 1 3/4"GR8 HEX Y	4	
8		82930001	FIT-6MX4M JICX4M JIC (RUN) TEE	1	
9		163621449	FITTING - 90 - 16MORBA - 16MORBA	1	
10		283651001	VALVE - CHECK - 5000PSI, 50 GPM	1	
11		60907001	FITTING-16M JICX16M STR ADAPT	1	
12		250502001	BOLT 5/16-18 X 2 3/4"GR8 HEX Y	1	
13		296254845	COVER PLATE - HOSE CLAMP	1	
14		296254844	CLAMP - 1" HOSE	1	
15		77141001	FITTING-CAP NUT 16F JIC	2	

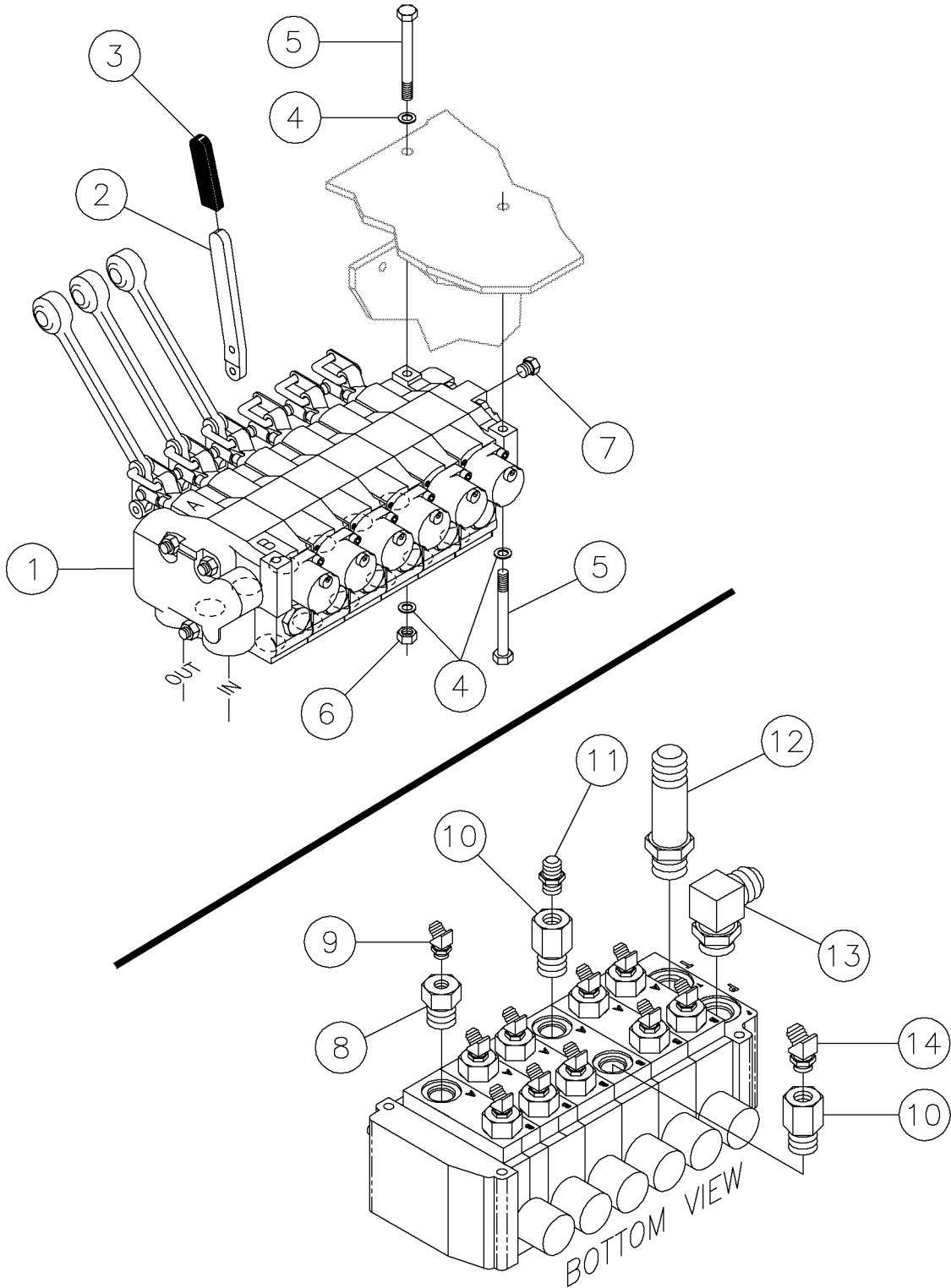
Selector Manifold (Right Track/Thrust Pullback) Fig 4-18



Selector Manifold (Right Track/Thrust Pullback) Fig 4-18

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		280825001	VALVE - DRILL TRANSPORT	1	Breakdown Fig. 13-13
2		57950001	FITTING-90-4MJ-6MORBA	2	
3		61703001	FITTING-90-16MJ-16MORBA	4	
4		103741001	ELBOW-16MORX16MJIC EXTRALONG90	2	
5		250515001	7/16 HARD WASHER SAE Y/ZINC	4	
6		250507001	BOLT 7/16-14 X 1 3/4"GR8 HEX Y	4	

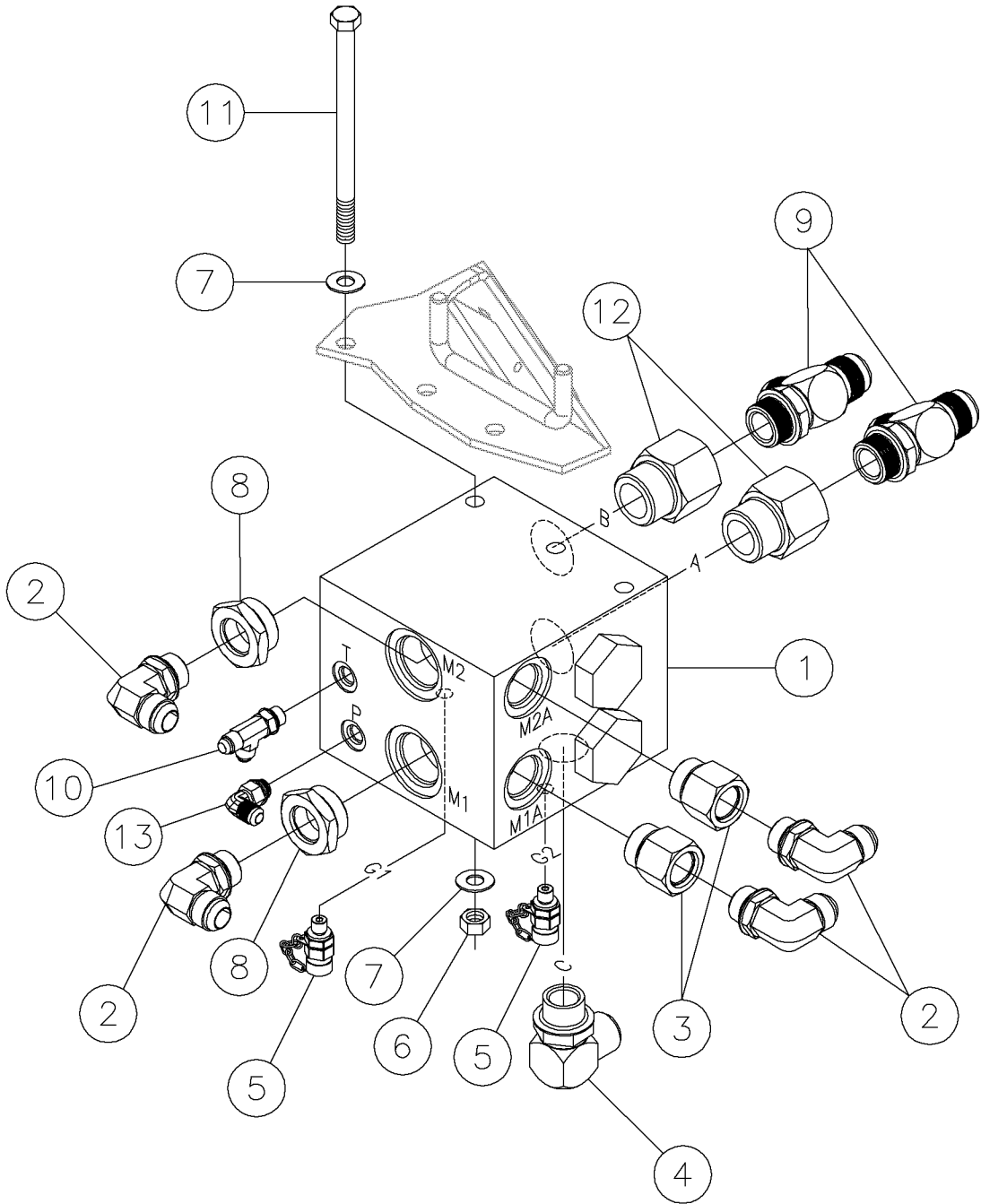
Control Valve - 6 Spool Implement Fig 4-19



Control Valve - 6 Spool Implement Fig 4-19

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		291766001	VALVE - 6 SECT CLOSED CENTER W/ L.S.	1	Breakdown Fig. 13-7
2		234364001	PLATE-VALVE HANDLE	3	
3		201482001	HANDLE-BLACK PLASTIC 2 1/2"	3	
4		235714001	WASHER - FLATSTRL - .31 - .34 X .69 - .06-YZ-A325	4	
5		248013001	BOLT-5/16-18X3 1/2 GD8 ZINC PL	3	
6		235741001	NUT - HEX - .31 - 18 - GR8 -YZ	1	
7		67263001	FITTING - PLUG - 4MORB - HEX	1	
8		108484001	FITTING - STR - 10MORB - 4FORB	10	
9		58295001	FITTING-4M OR X 4M JIC 45 DEG.	10	
10		57967001	FITTING - STR - 10MORB - 6FORB	2	
11		65565001	FITTING - 6M O-RING X 6M JIC ST.	1	
12		65563001	FITTING - 6M O-RING X 6M JIC 45 DEGREE	1	
13		59410001	FITTING-90-12MJ-12MORBA	1	
14		59434001	12M JICX12M LONG ST THRD ADPT	1	

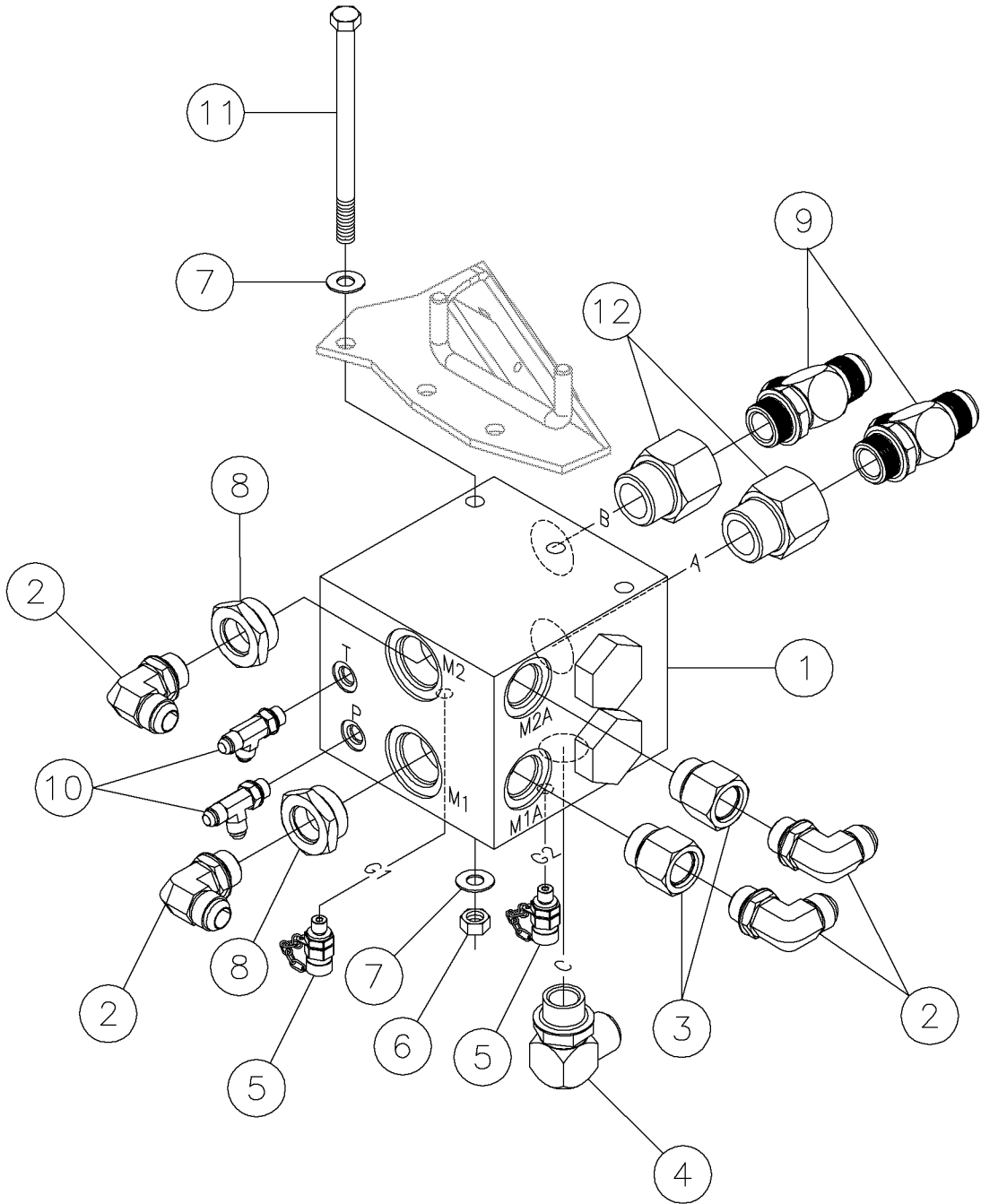
Free-Wheel Valve (S/N 137-) Fig 4-20r01



Free-Wheel Valve (S/N 137-) Fig 4-20r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	December, 2006		Change Fitting
1		296273840	VALVE- "FREE WHEEL", 2-SPD	1	Breakdown Fig. 13-16
2		59410001	FITTING-90-12MJ-12MORBA	4	
3		71252001	FITTING - STR - 16MORB - 12FORB	2	
4		61703001	FITTING-90-16MJ-16MORBA	1	
5		75493001	FITTING - TEST - 4MORB - 16MTP	2	
6		235731001	NUT-1/2-13 GR8 ZINC PLTD	3	
7		510337611	WASHER-FLATSTD-.50-.56X1.38-.11-YZ	6	
8		86669001	FITTING-20M ORINGX12F ORING ST	2	
9		94565001	TEE-16MJICX16MOR RUNX16MJIC	2	
10		68774001	FITTING-6MX6M JIC (RUN)X6M JIC	1	(S/N 130-)
11		249812001	BOLT-1/2-13X7 1/2 HHCS GR8 ZNC	3	
12		79498001	FITTING - STR - 20MORB - 16FORB	2	
13	*	122606001	FITTING-6MX6M JIC90 DEG/ RSTS	1	(S/N 137-)

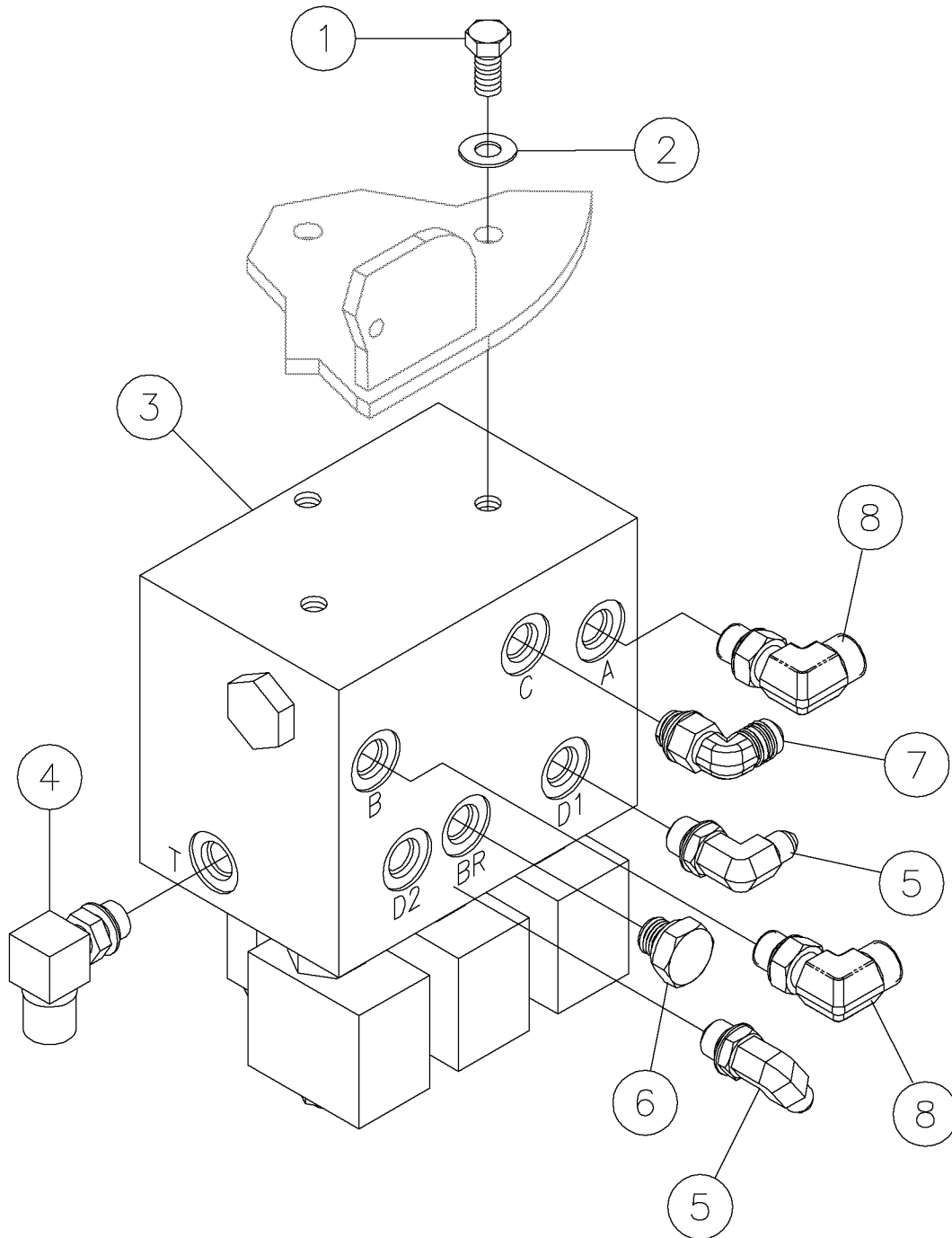
Free-Wheel Valve Fig 4-20



Free-Wheel Valve Fig 4-20

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296273840	VALVE- "FREE WHEEL", 2-SPD	1	Breakdown Fig. 13-16
2		59410001	FITTING-90-12MJ-12MORBA	4	
3		71252001	FITTING - STR - 16MORB - 12FORB	2	
4		61703001	FITTING-90-16MJ-16MORBA	1	
5		75493001	FITTING - TEST - 4MORB - 16MTP	2	
6		235731001	NUT-1/2-13 GR8 ZINC PLTD	3	
7		510337611	WASHER - FLATSTD - .50-.56X1.38-.11-YZ	6	
8		86669001	FITTING-20M ORINGX12F ORING ST	2	
9		94565001	TEE-16MJICX16MOR RUNX16MJIC	2	
10		68774001	FITTING-6MX6M JIC (RUN)X6M JIC	2	
11		249812001	BOLT-1/2-13X7 1/2 HHCS GR8 ZNC	3	
12		79498001	FITTING - STR - 20MORB - 16FORB	2	

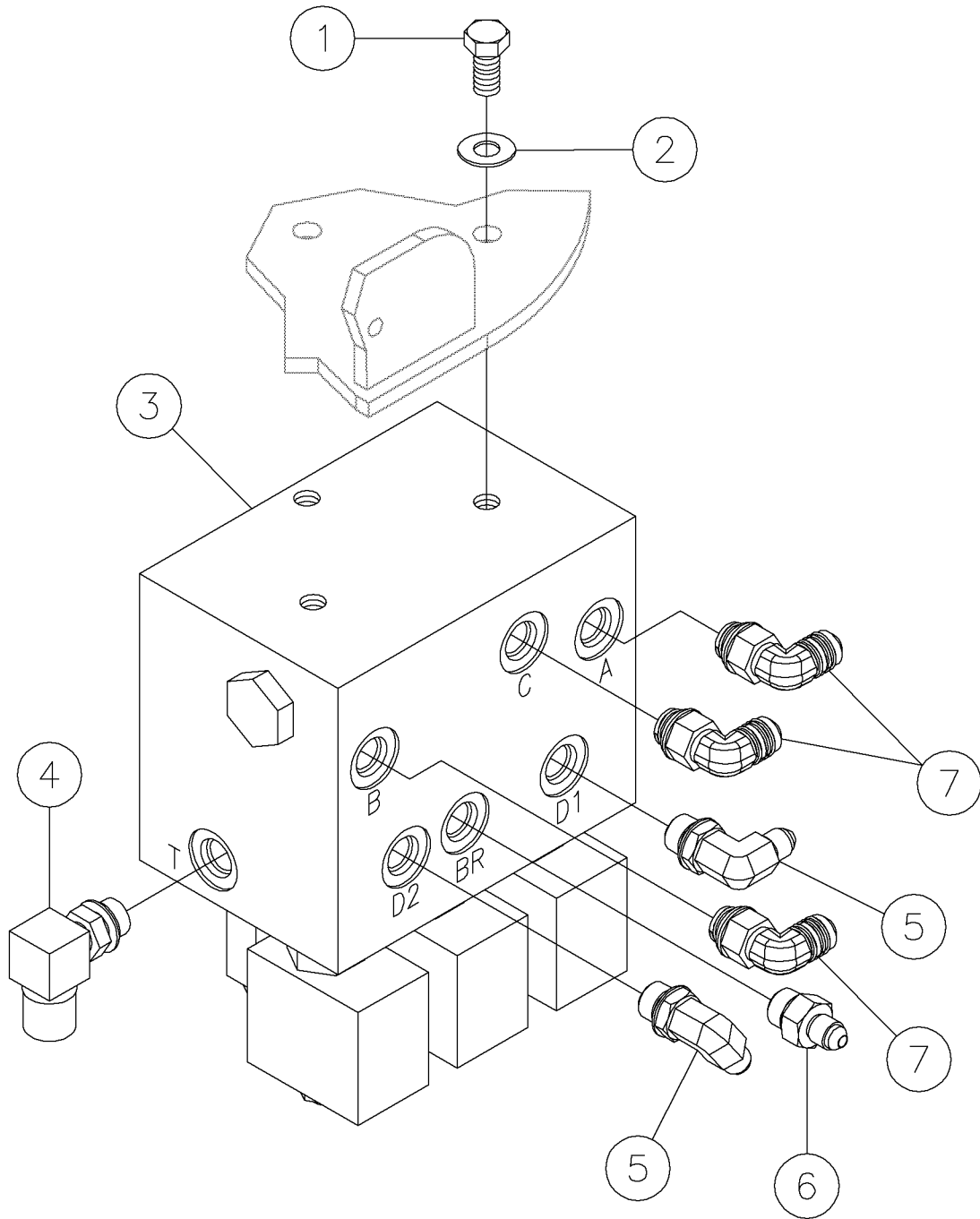
Rotation Valve (S/N 130-) Fig 4-21r01



Rotation Valve (S/N 130-) Fig 4-21r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	August, 2006		Fitting Changes
1		235726001	BOLT-3/8-16X3/4 GR8 HEX ZNCPLT	3	
2		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	3	
3		296273855	VALVE - 3SPD ROTATION	1	Breakdown Fig. 13-15
4		77811001	FITTING - 6M O-RING X 8M JIC 90 DEG	1	
5		57950001	FITTING-90-4MJ-6MORBA	2	
6	*	5553001	FITTING - PLUG - 6MORB - HEX	1	S/N 130 & Up
7	*	59426001	FITTING - 90-6MJ-6MORBA	1	S/N 130 & Up
8	*	72444001	FITTING - 90 - 6MORFF - 6MORBA	2	S/N 130 & Up

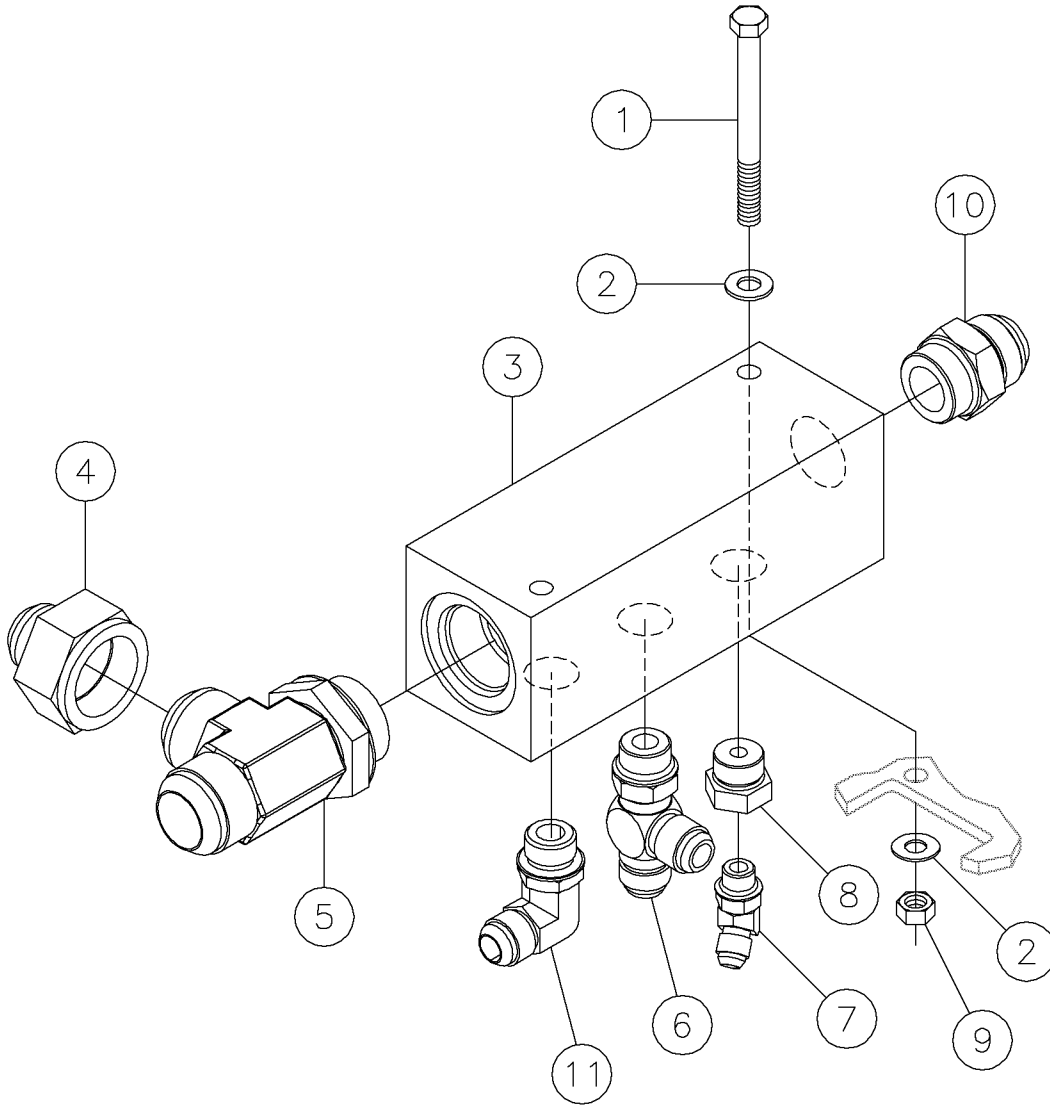
Rotation Valve Fig 4-21



Rotation Valve Fig 4-21

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		235726001	BOLT-3/8-16X3/4 GR8 HEX ZNCPLT	3	
2		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	3	
3		296273855	VALVE - 3SPD ROTATION	1	Breakdown Fig. 13-15
4		77811001	FITTING - 6M O-RING X 8M JIC 90 DEG	1	
5		57950001	FITTING-90-4MJ-6MORBA	2	
6		57968001	FITTING-STR-4MJ-6MORB	1	
7		59426001	FITTING - 90-6MJ-6MORBA	3	

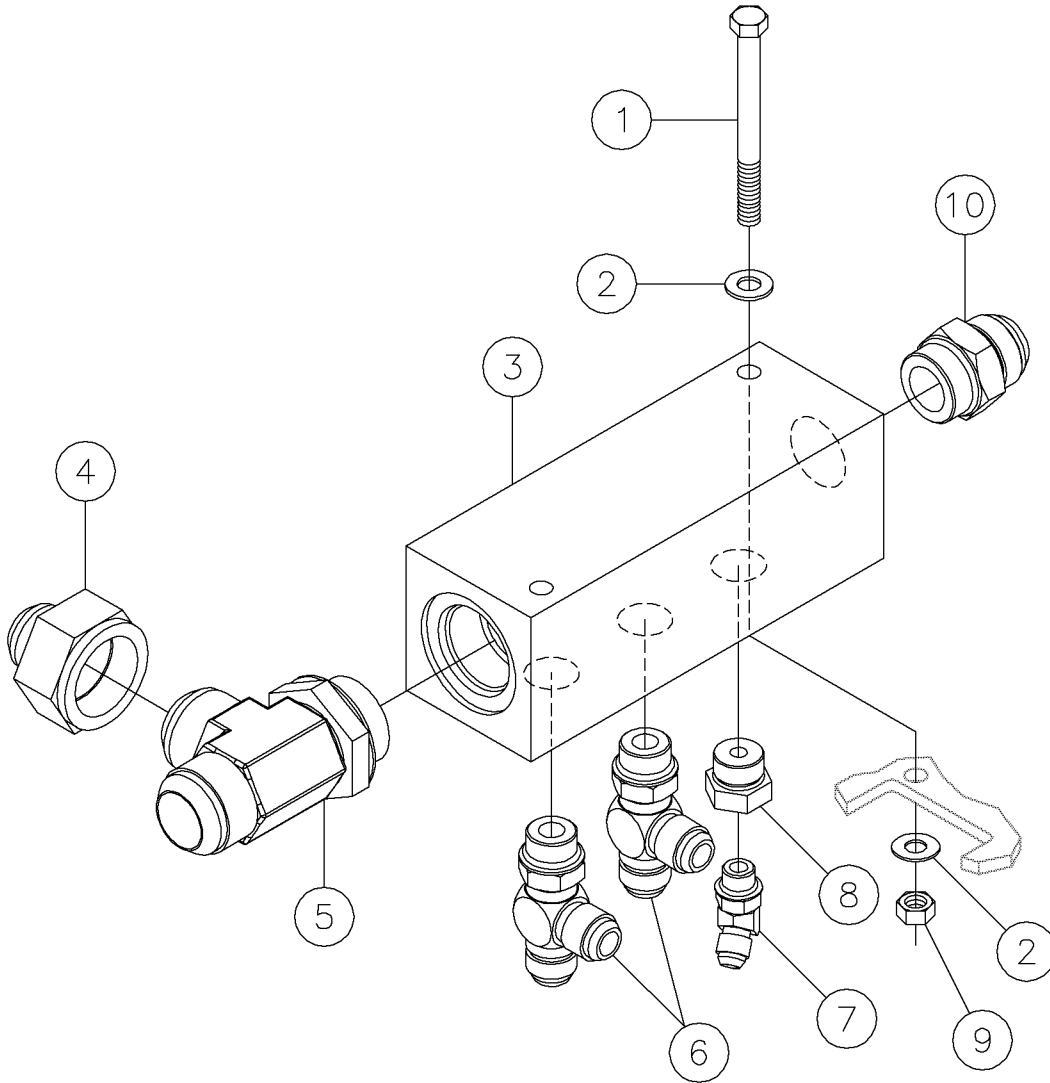
Manifold Case Drain (Tower) (S/N 119-) Fig 4-22r02



Manifold Case Drain (Tower) (S/N 119-) Fig 4-22r02

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	August, 2006		Update In Illustration & Parts List.
1		250541001	BOLT-3/8-16 X 4" GR8 HEX Y/ZI	2	
2		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	4	
3		296283607	MANIFOLD-CASE DRAIN	1	
4		103738001	FITTING-20FS X 16M JIC STR.	1	
5		620126001	FITTING-RTEE-20MJ-20MOR-20MJ	1	
6	*	100873001	FITTING-10MX10MJIC RUN TEE	1	
7		65563001	FITTING - 6M O-RING X 6M JIC 45 DEGREE	1	
8		57967001	FITTING - STR - 10MORB - 6FORB	1	
9		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	2	
10		60907001	FITTING-16M JICX16M STR ADAPT	1	
11	*	53829001	#10M O-RING-#10M JIC 90 DEG.	1	

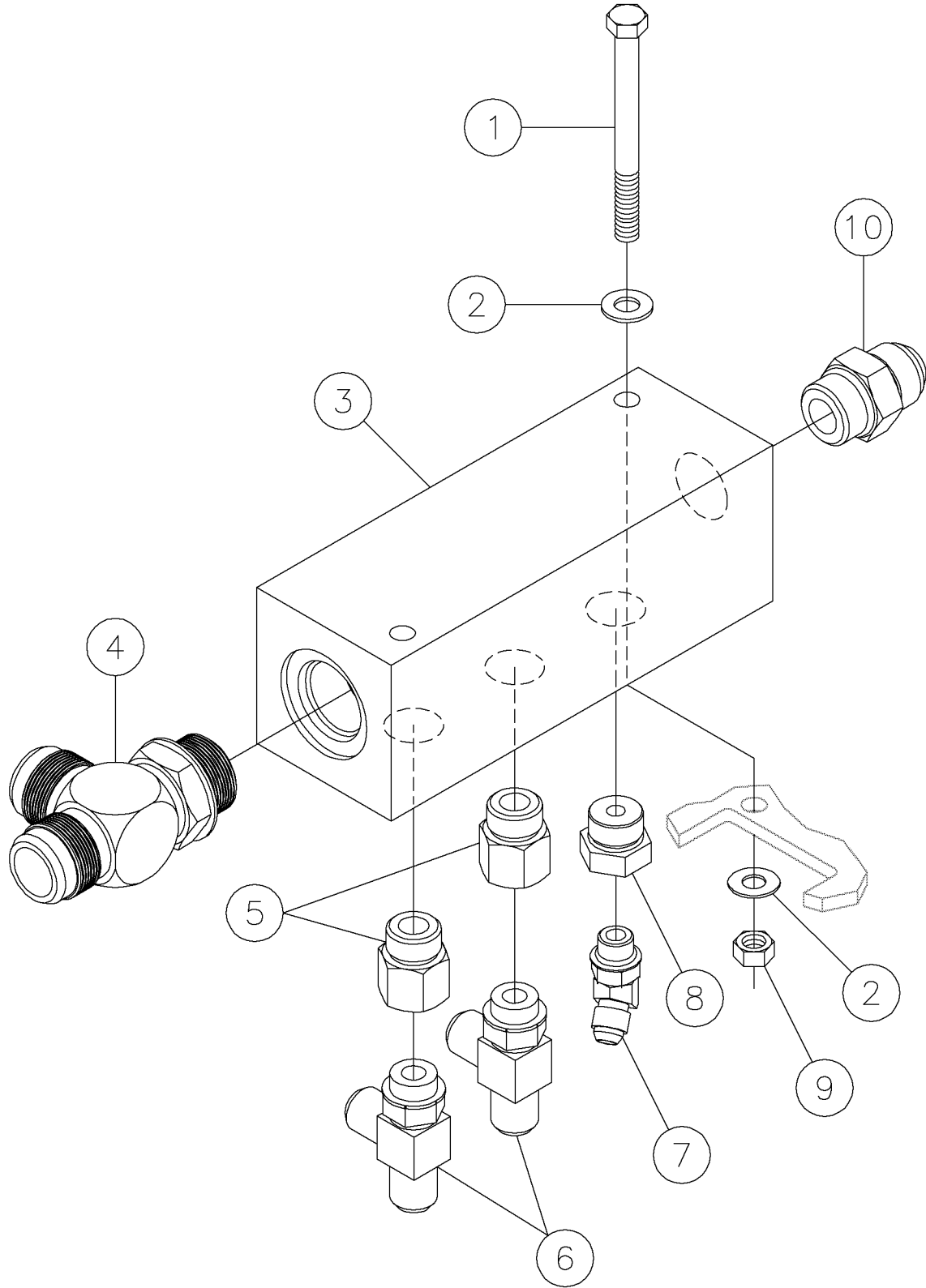
Manifold Case Drain (Tower) (S/N 119-) Fig 4-22r01



Manifold Case Drain (Tower) (S/N 119-) Fig 4-22r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2006		Update In Illustration & Parts List.
1		250541001	BOLT-3/8-16 X 4" GR8 HEX Y/ZI	2	
2		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	4	
3		296283607	MANIFOLD-CASE DRAIN	1	
4		103738001	FITTING-20FS X 16M JIC STR.	1	
5		620126001	FITTING-RTEE-20MJ-20MOR-20MJ	1	
6		100873001	FITTING-10MX10MJIC RUN TEE	2	
7		65563001	FITTING - 6M O-RING X 6M JIC 45 DEGREE	1	
8		57967001	FITTING - STR - 10MORB - 6FORB	1	
9		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	2	
10		60907001	FITTING-16M JICX16M STR ADAPT	1	

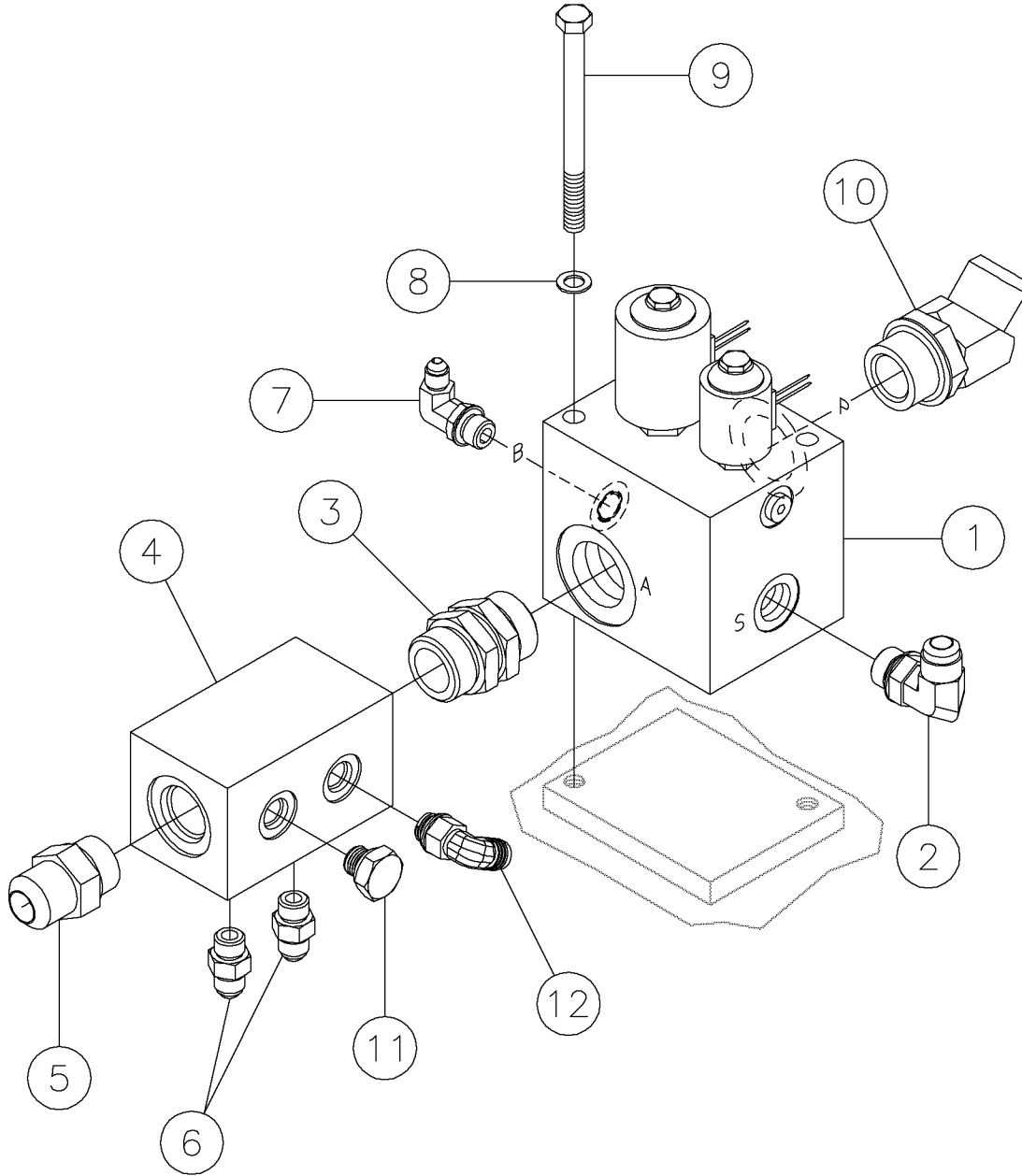
Manifold Case Drain (Tower) Fig 4-22



Manifold Case Drain (Tower) Fig 4-22

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		250541001	BOLT-3/8-16 X 4" GR8 HEX Y/ZI	2	
2		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	4	
3		292899001	MANIFOLD - CASE DRAIN	1	
4		94565001	TEE-16MJICX16MOR RUNX16MJIC	1	
5		60930001	10MX8F ST.SOLID REDUCER	2	
6		81705001	FITTING-8MX8M JIC(RUN)X8M JIC	2	
7		65563001	FITTING - 6M O-RING X 6M JIC 45 DEGREE	1	
8		57967001	FITTING - STR - 10MORB - 6FORB	1	
9		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	2	
10		53828001	#12M O-RING-#12M JIC ST.	1	

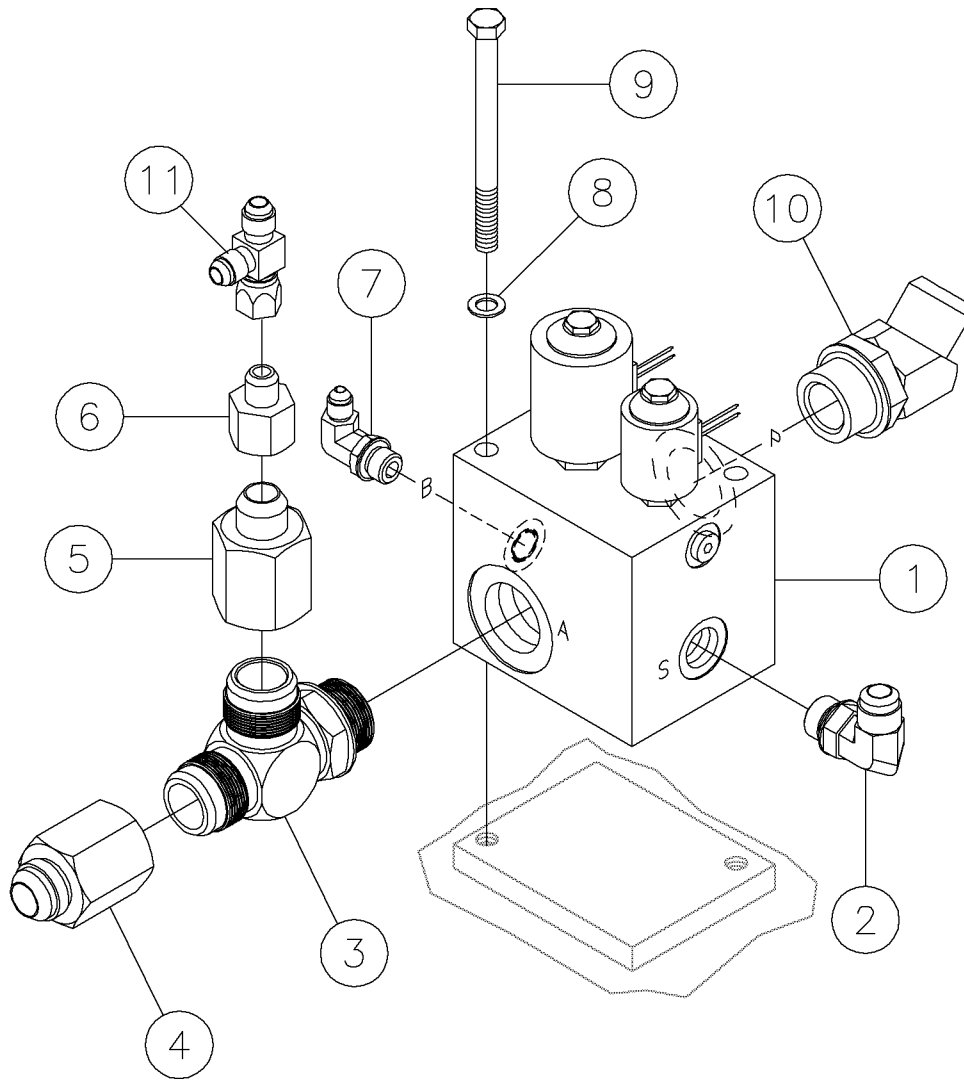
Hydraulic Enable Valve (S/N -) Fig 4-23r02



Hydraulic Enable Valve (S/N -) Fig 4-23r02

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	February, 2007		Update In Illustration & Parts List.
1		291758001	VALVE - HYD. ENABLE	1	Breakdown Fig. 13-17
2		53837001	FITTING - 8M O-RING X 8M JIC 90 DEGREE	1	
3	*	89226001	HEX NIPPLE-16MX16M ADJ ORING	1	(S/N
4	*	296289820	MANIFOLD - 6 PORT	1	(S/N
5	*	59416001	12M JICX12M STR THRD ADAPTER	1	(S/N
6	*	65565001	FITTING - 6M O-RING X 6M JIC ST.	2	(S/N
7		57950001	FITTING-90-4MJ-6MORBA	1	
8		235713001	WASHER-FLATSTRL-.38-.41X.81-.06-YA-A325	2	
9		238246001	BOLT 3/8"-16 X 4 1/2" GR8 HEX	2	
10		53835001	#16M O-RING-#16M JIC 45 DEG.	1	
11	*	5553001	FITTING - PLUG - 6MORB - HEX	1	(S/N
12	*	59426001	FITTING - 90-6MJ-6MORBA	1	(S/N

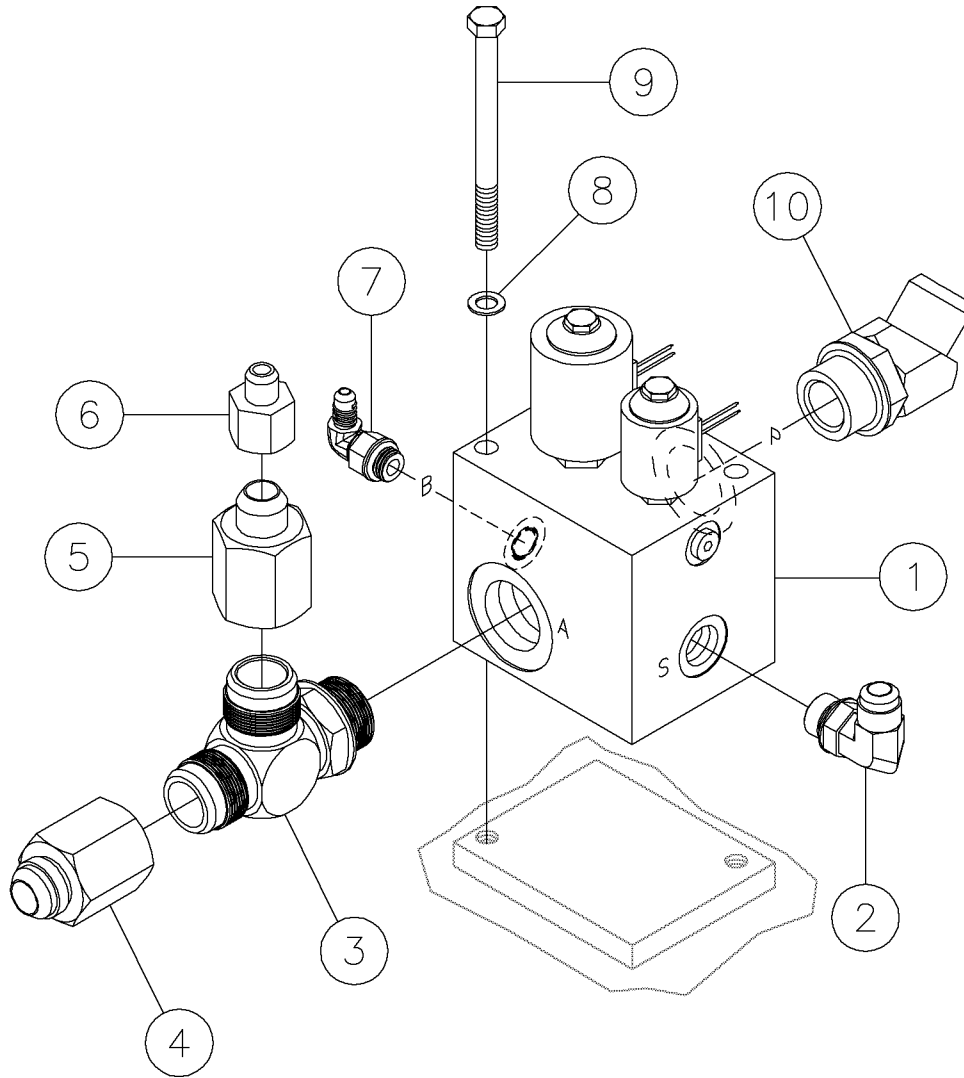
Hydraulic Enable Valve (S/N 130-) Fig 4-23r01



Hydraulic Enable Valve (S/N 130-) Fig 4-23r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	August, 2006		Add Fitting
1		291758001	VALVE - HYD. ENABLE	1	Breakdown Fig. 13-17
2		53837001	FITTING - 8M O-RING X 8M JIC 90 DEGREE	1	
3		94565001	TEE-16MJICX16MOR RUNX16MJIC	1	
4		70028001	FITTING-STR-12MJ-16FJ	1	
5		85663001	FITTING-16FJICX10MJIC SOLID ST	1	
6		71253001	FITTING-6M JICX10F JIC REDUCER	1	
7		57950001	FITTING-90-4MJ-6MORBA	1	
8		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	2	
9		238246001	BOLT 3/8"-16 X 4 1/2" GR8 HEX	2	
10		53835001	#16M O-RING-#16M JIC 45 DEG.	1	
11	*	59427001	TEE-6MJ-6FSJ-6MJ	1	S/N 130 & Up

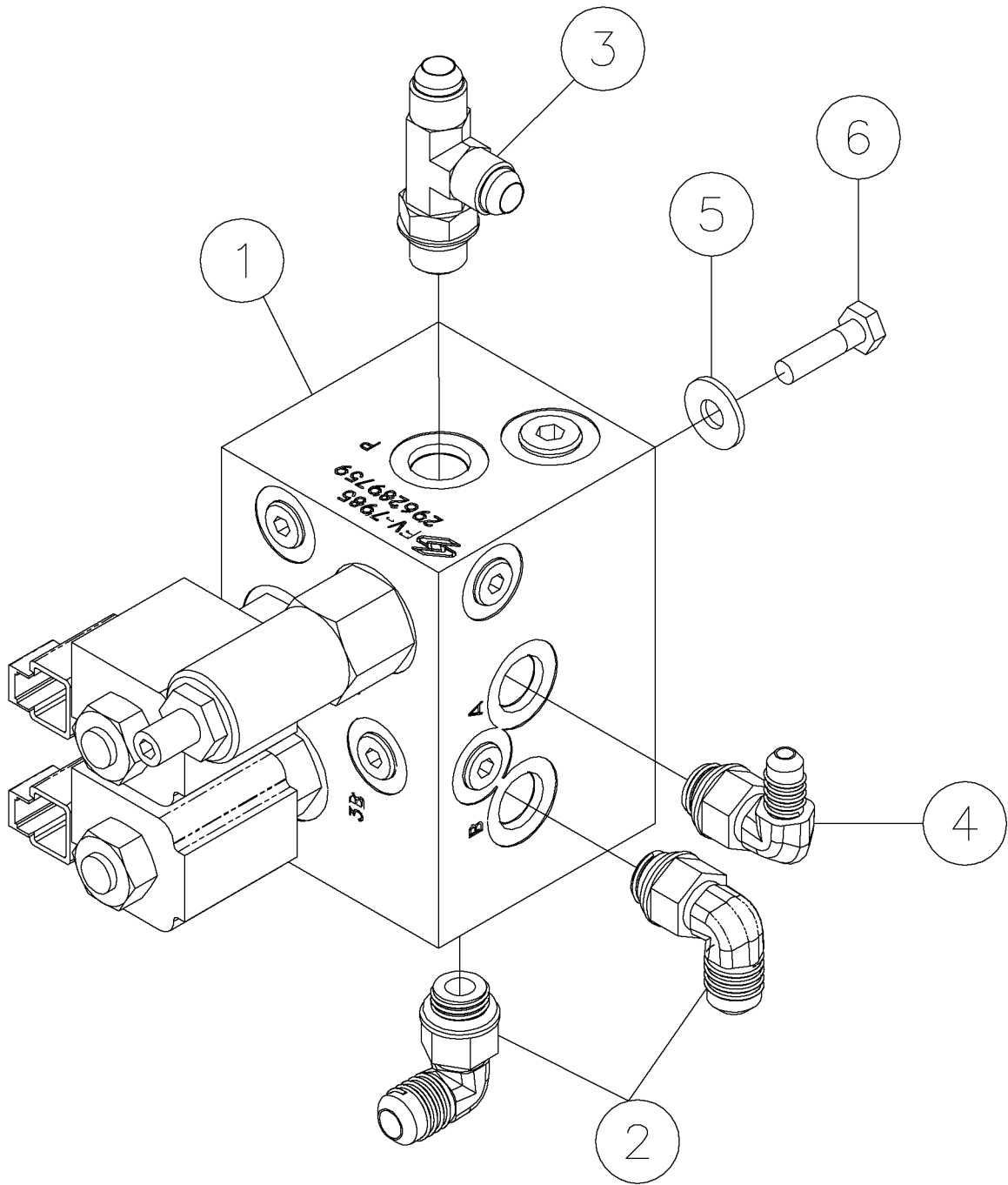
Hydraulic Enable Valve Fig 4-23



Hydraulic Enable Valve Fig 4-23

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		291758001	VALVE - HYD. ENABLE	1	Breakdown Fig. 13-17
2		53837001	FITTING - 8M O-RING X 8M JIC 90 DEGREE	1	
3		94565001	TEE-16MJICX16MOR RUNX16MJIC	1	
4		70028001	FITTING-STR-12MJ-16FJ	1	
5		85663001	FITTING-16FJICX10MJIC SOLID ST	1	
6		71253001	FITTING-6M JICX10F JIC REDUCER	1	
7		600118001	FITTING-6MORINGX4MJIC90PARKER	1	
8		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	2	
9		238246001	BOLT 3/8"-16 X 4 1/2" GR8 HEX	2	
10		53835001	#16M O-RING-#16M JIC 45 DEG.	1	

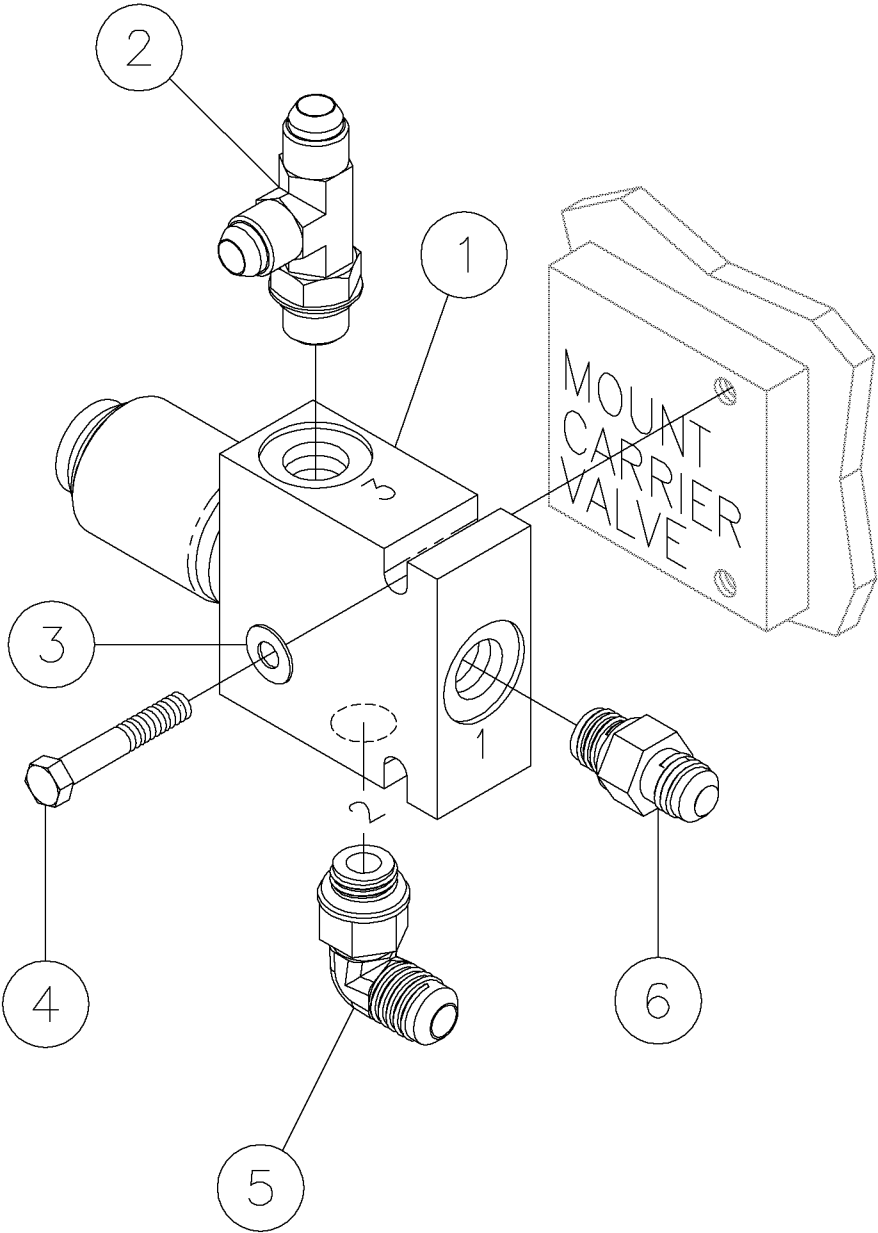
T/P Brake Valve (S/N 130-) Fig 4-24r01



T/P Brake Valve (S/N 130-) Fig 4-24r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	December, 2006		Change Fitting
1		296289759	VALVE-THRUST/PULLBACK/ROTATION BRAKES	1	(S/N 133 & Up) Breakdown Fig. 13-57
2	*	59426001	FITTING - 90-6MJ-6MORBA	2	Was 1
3		68774001	FITTING-6MX6M JIC (RUN)X6M JIC	1	
4		600118001	FITTING-6MORINGX4MJIC90PARKER	1	
5		510337603	WASHER-FLATSTD-.25-.31X.75-.07-YZ	4	
6		235735001	BOLT-1/4-20X1 GR8 HEX ZYC	4	

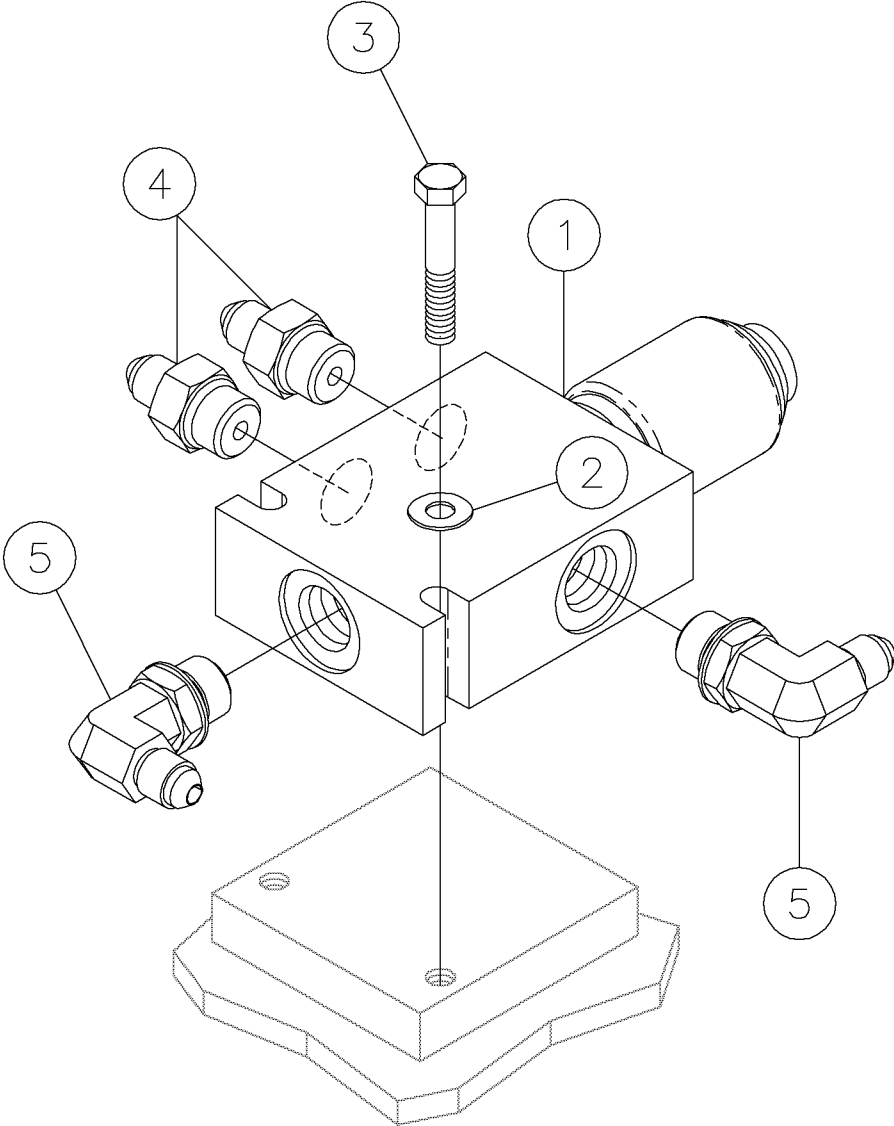
T/P Brake Valve Fig 4-24



T/P Brake Valve Fig 4-24

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		291768001	VALVE - 2 POS. 3 WAY W/ DEUTSCH	1	Breakdown Fig. 13-18
2		68774001	FITTING-6MX6M JIC (RUN)X6M JIC	1	
3		235716001	WASHER - FLATSTRL - .25 -.28 X .63 - .06 - CZ	2	
4		238210001	BOLT - 1/4-20X1 1/2 GR8 HEX ZYC	2	
5		59426001	FITTING - 90-6MJ-6MORBA	1	
6		65565001	FITTING - 6M O-RING X 6M JIC ST.	1	

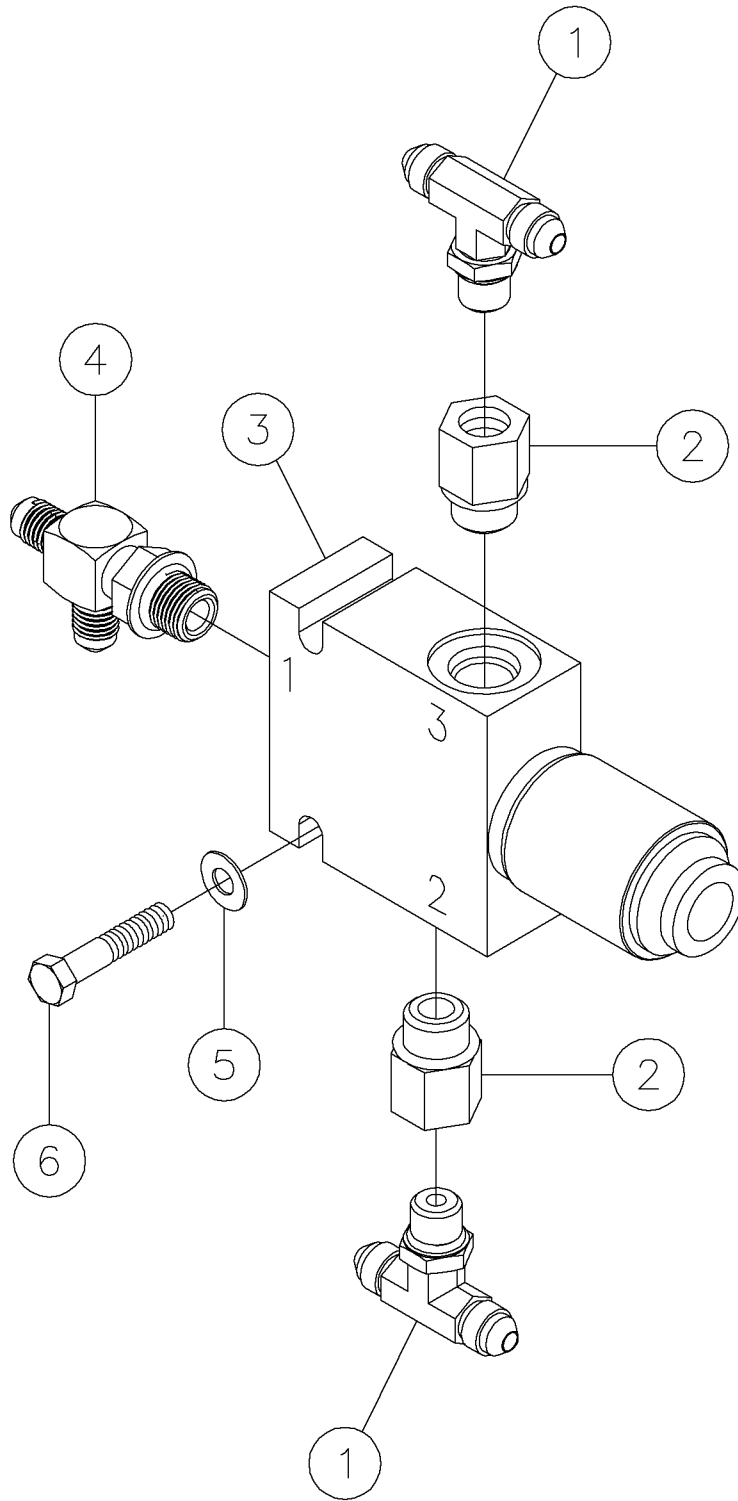
Solenoid Valve-Water Fig 4-25



Solenoid Valve-Water Fig 4-25

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		282525001	VALVE - 2P4W HF990725	1	Breakdown Fig. 13-19
2		510337603	WASHER-FLATSTD-.25-.31X.75-.07-YZ	2	
3		238210001	BOLT - 1/4-20X1 1/2 GR8 HEX ZYC	2	
4		57968001	FITTING-STR-4MJ-6MORB	2	
5		57950001	FITTING-90-4MJ-6MORBA	2	

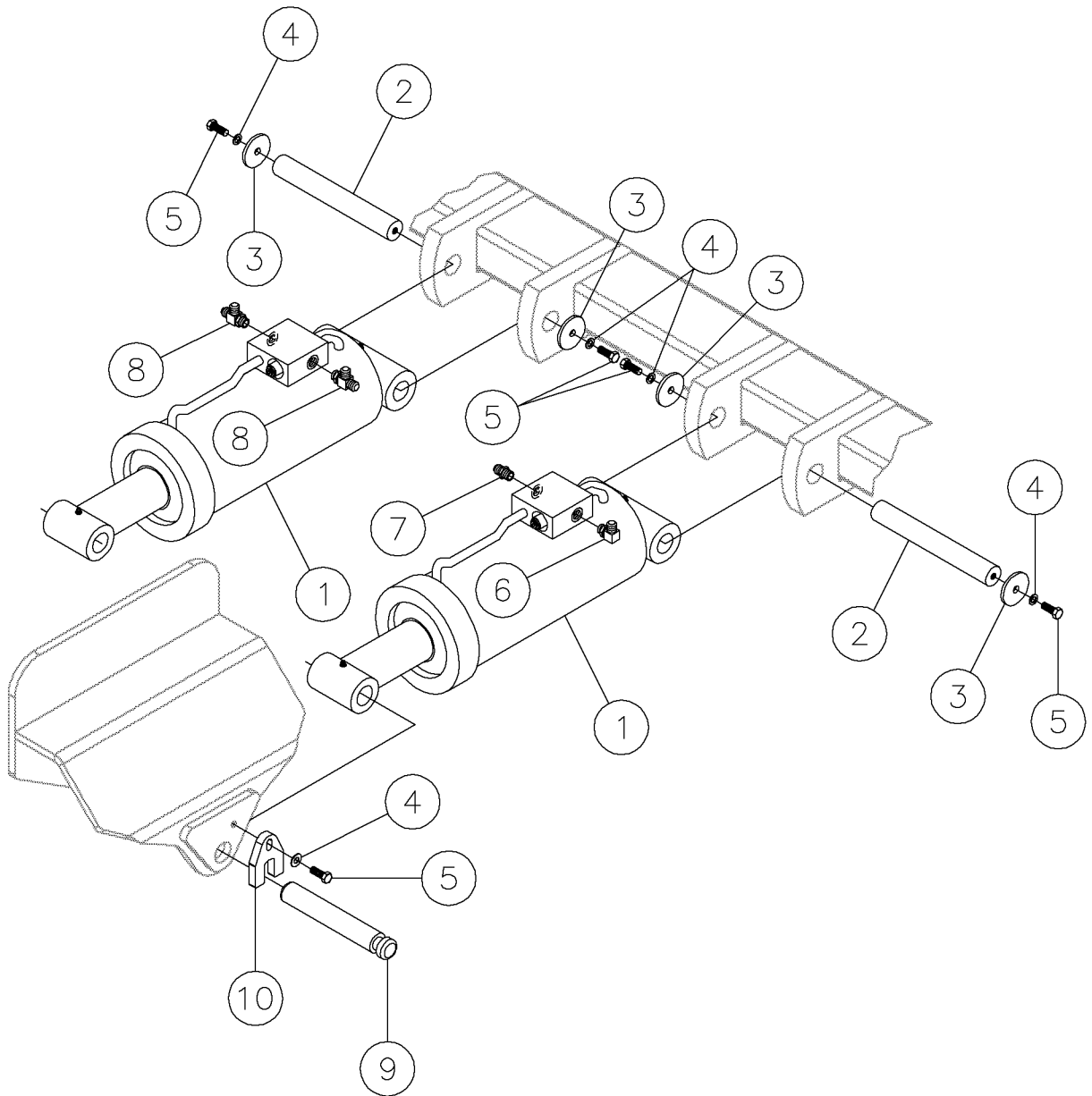
Solenoid Ground Drive Valve Fig 4-26



Solenoid Ground Drive Valve Fig 4-26

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		81343001	4M (BCH)X4M JICX4M JIC TEE	2	
2		67291001	FITTING - STR - 6MORB - 4FORB	2	
3		291768001	VALVE - 2 POS. 3 WAY W/ DEUTSCH	1	Breakdown Fig. 13-18
4		82930001	FIT-6MX4M JICX4M JIC (RUN) TEE	1	
5		235716001	WASHER - FLATSTRL - .25 -.28 X .63 - .06 - CZ	2	
6		238210001	BOLT - 1/4-20X1 1/2 GR8 HEX ZYC	2	

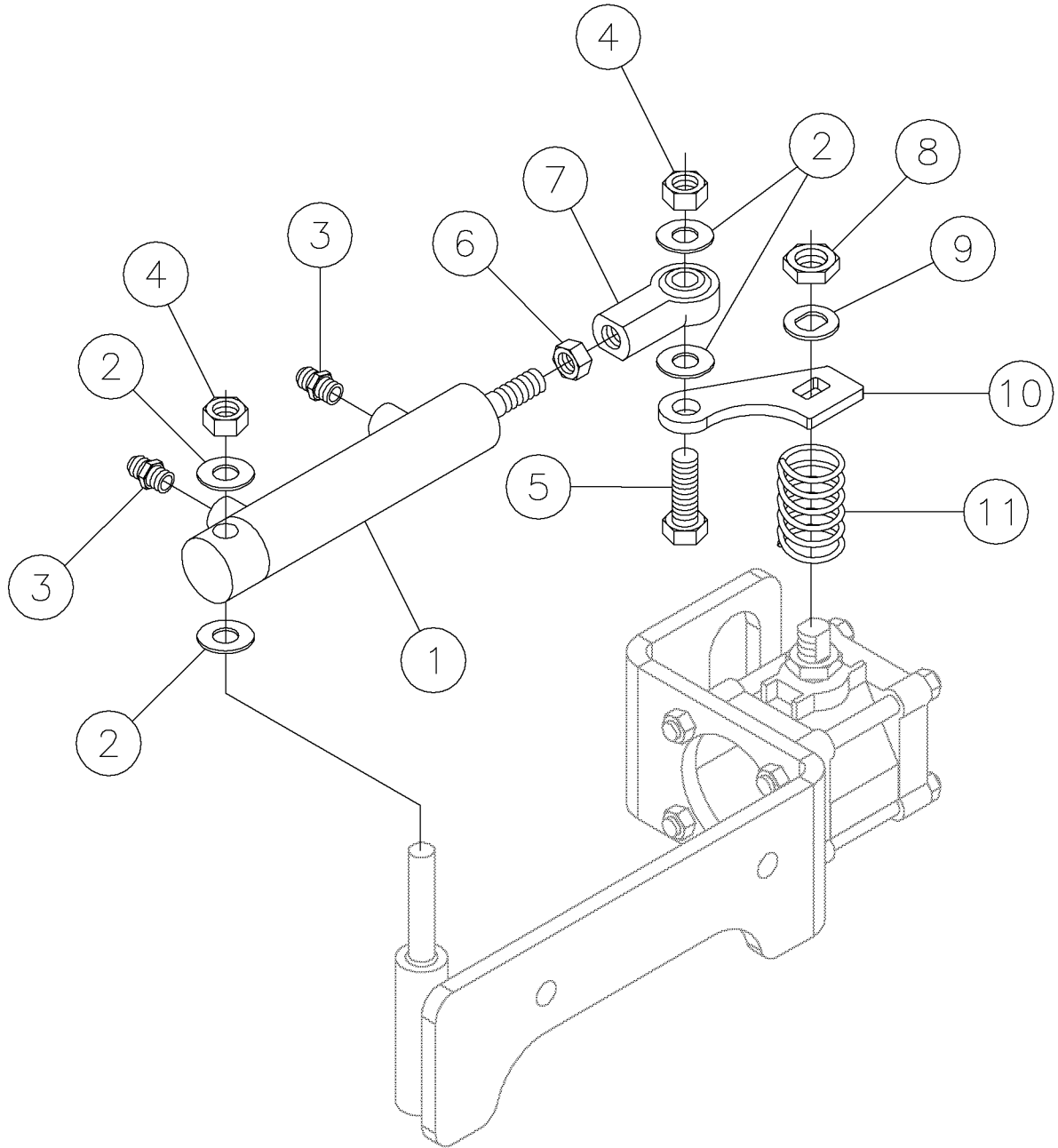
Rack Lift Cylinder Fig 4-27



Rack Lift Cylinder Fig 4-27

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	December, 2006		Deleted From Manual Ref. #11
1		280797001	CYLINDER - 5.0 X 12 X 2 1/2 ROD	2	Breakdown Fig. 13-21
2		275343001	PIN - RACK CYLINDER BASE	2	
3		18150001	SLUG-2 DIA.-1/4"	4	
4		235713001	WASHER-FLATSTRL-.38-.41X.81-.06-YA-A325	6	
5		235727001	BOLT-3/8-16X1 GR8 HEX ZINC PLT	6	
6		65565001	FITTING - 6M O-RING X 6M JIC ST.	1	
7		59426001	FITTING - 90-6MJ-6MORBA	1	
8		68774001	FITTING-6MX6M JIC (RUN)X6M JIC	2	
9		292728001	PIN - RACK ANGLE	2	
10		292729001	SHIM - RACK ANGLE PIN	2	

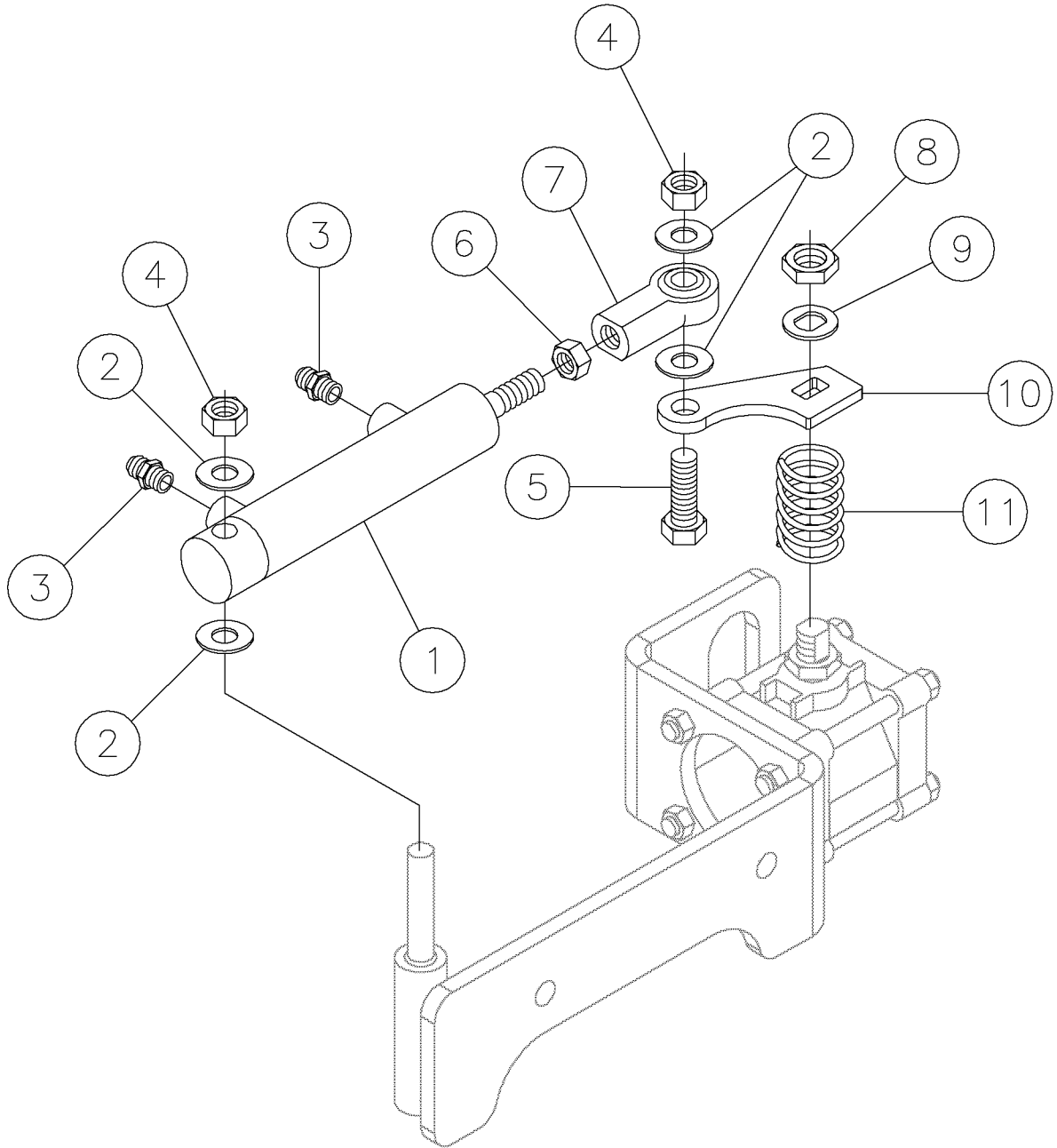
Water Pump On/Off Cylinder (S/N 149-) Fig 4-28r01



Water Pump On/Off Cylinder (S/N 149-) Fig 4-28r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	February, 2007		Change Cylinder
1	*	296285658	CYLINDER - 1 X 3-1/2	1	Breakdown Fig. 13-22 (S/N 149-)
2		485025	WASHER-1/2 FLAT-HARDENED-YZ	4	
3		60908001	FITTING-4MX4M JIC STR ADAPTER	2	
4		250512001	NUT- 1/2 NC Gr8 TOP LOCK Y/ ZINC	2	
5		240334001	BOLT-1/2-13X1 3/4 GR8 ZINC PLT	1	
6		3888001	NUT-1/2 N.F. HEX JAM	1	
7		224291001	BALL JOINT-1/2-20 FEMALE THDS.	1	
8		250514001	NUT -5/8NC JAM Y/ZINC	1	
9		287053005	SPRING - STEM	1	
10		279983001	LEVER - BALL VALVE	1	
11		287053003	SPRING - GROUNDING	1	

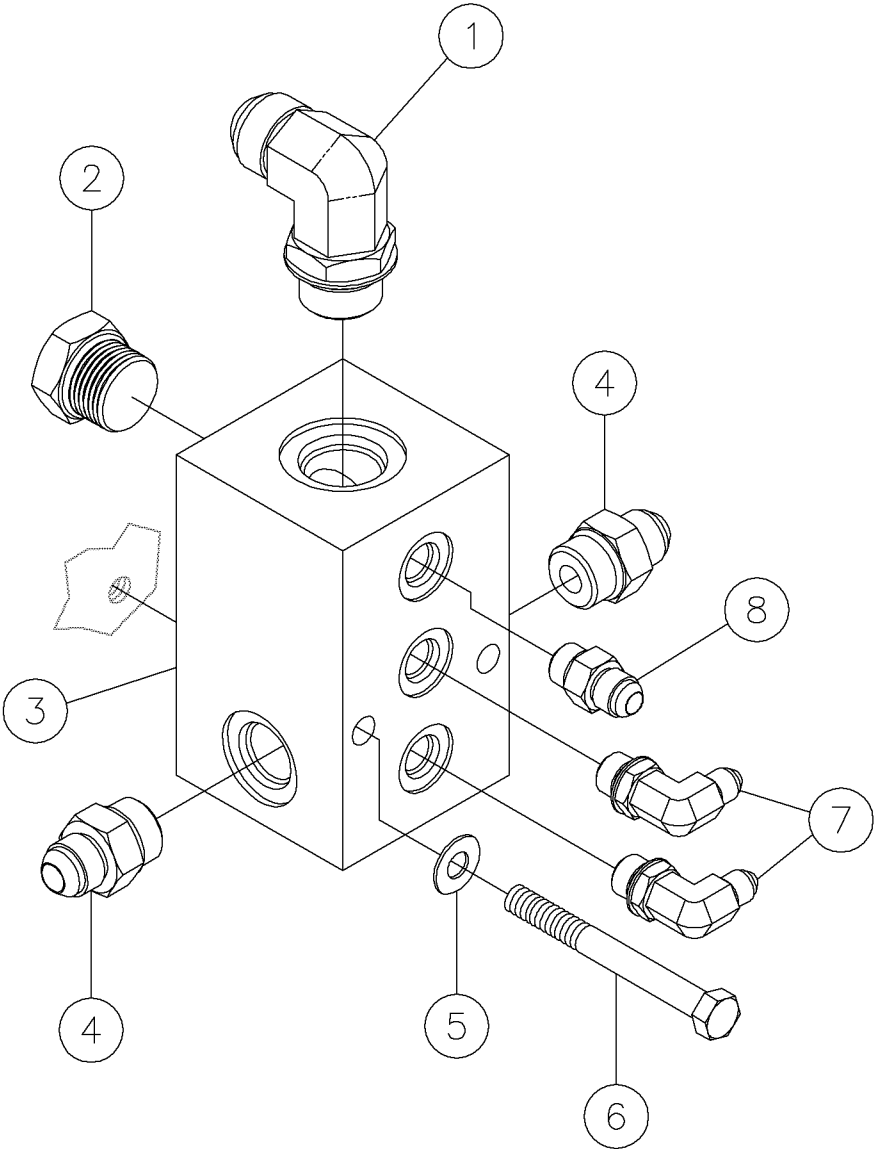
Water Pump On/Off Cylinder Fig 4-28



Water Pump On/Off Cylinder Fig 4-28

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		287591001	CYLINDER - 1 X 3-1/2	1	Breakdown Fig. 13-22
2		485025	WASHER-1/2 FLAT-HARDENED-YZ	4	
3		60908001	FITTING-4MX4M JIC STR ADAPTER	2	
4		250512001	NUT- 1/2 NC Gr8 TOP LOCK Y/ ZINC	2	
5		240334001	BOLT-1/2-13X1 3/4 GR8 ZINC PLT	1	
6		3888001	NUT-1/2 N.F. HEX JAM	1	
7		224291001	BALL JOINT-1/2-20 FEMALE THDS.	1	
8		250514001	NUT -5/8NC JAM Y/ZINC	1	
9		287053005	SPRING - STEM	1	
10		279983001	LEVER - BALL VALVE	1	
11		287053003	SPRING - GROUNDING	1	

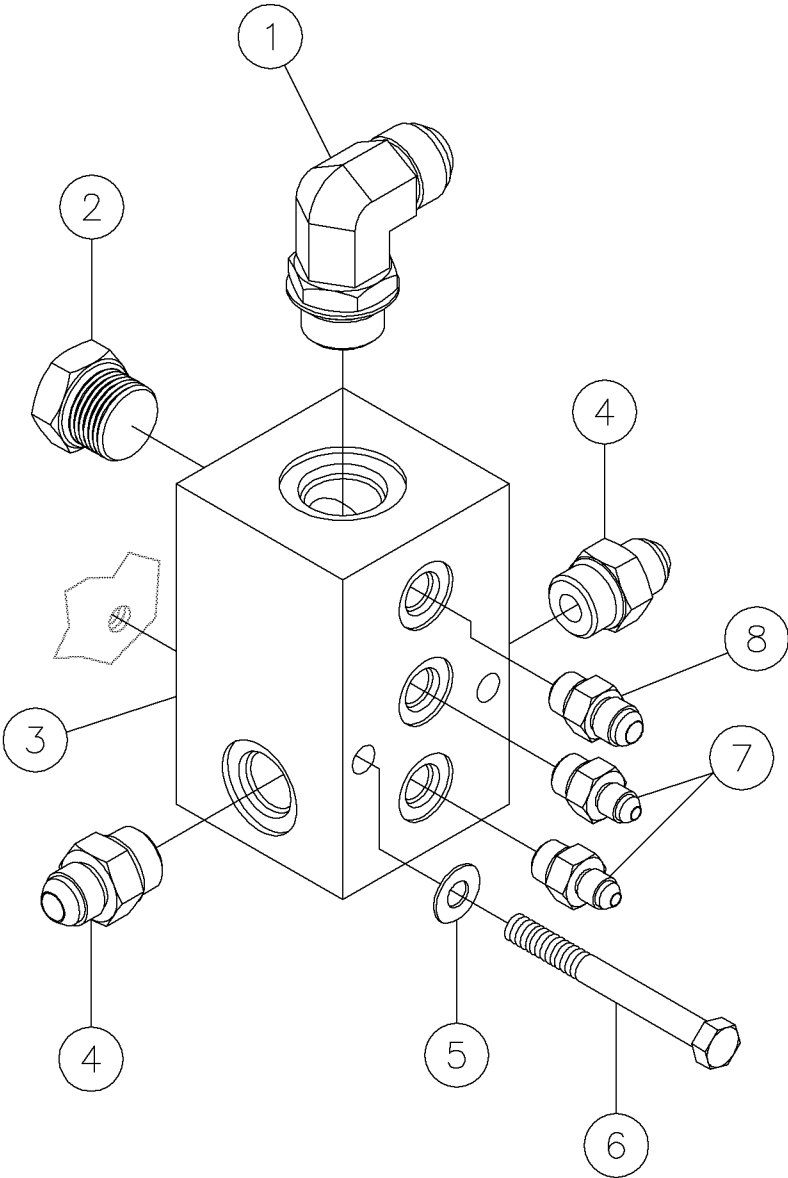
Manifold Case Drain (Ground Drive) Fig 4-29r01



Manifold Case Drain (Ground Drive) Fig 4-29r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	June, 2006		Update In Illustration & Parts List.
1		59410001	FITTING-90-12MJ-12MORBA	1	
2		67570001	FITTING - PLUG - 12MORB - HEX	1	
3		296273900	MANIFOLD - CASE DRAIN	1	
4		53826001	#10M O-RING-#8M JIC ST.	2	
5		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	2	
6		16114034	BOLT-3/8-16X3 1/2 HEX HD. GR8	2	
7		57950001	FITTING-90-4MJ-6MORBA	2	
8		65565001	FITTING - 6M O-RING X 6M JIC ST.	1	

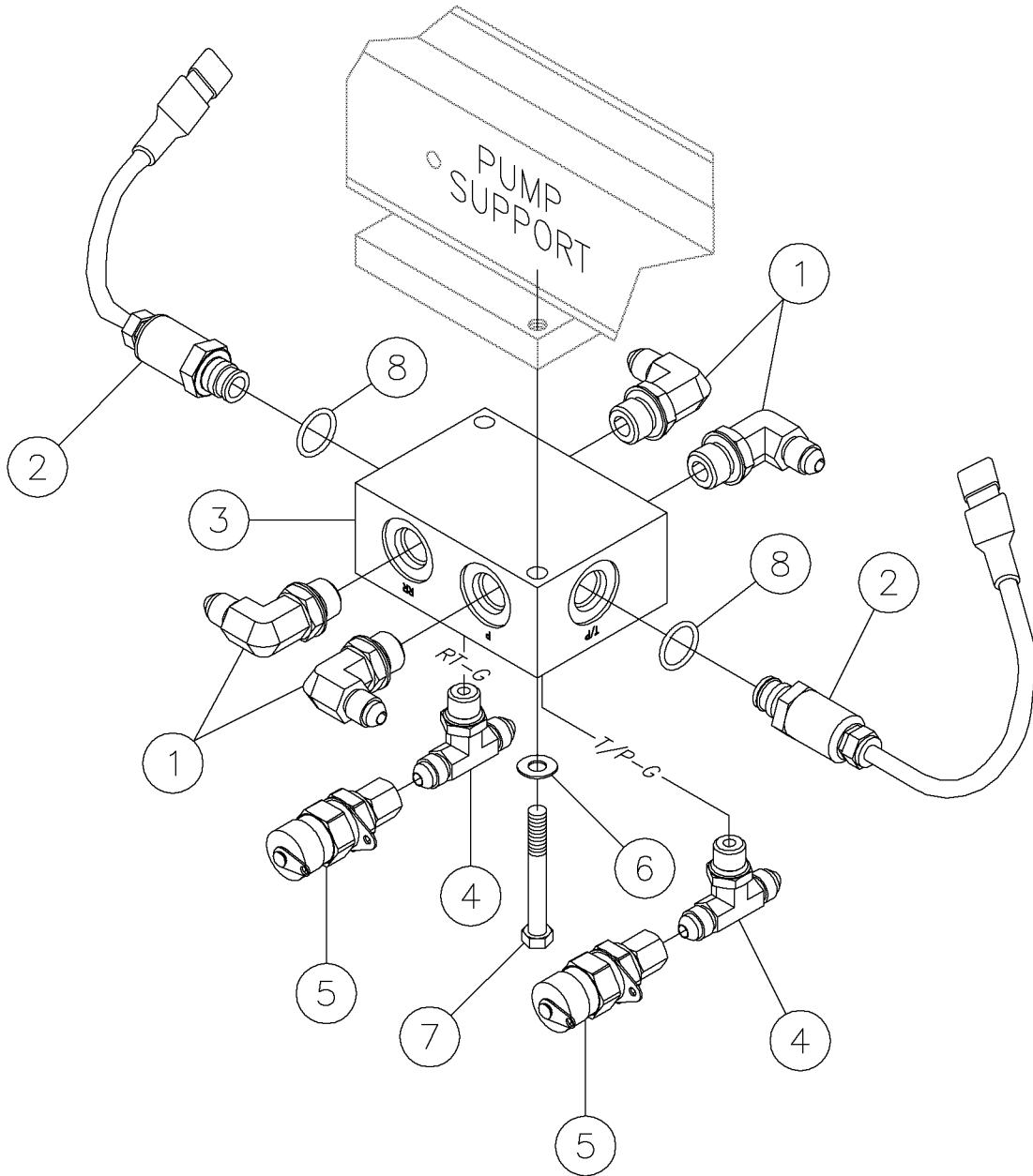
Manifold Case Drain (Ground Drive) Fig 4-29



Manifold Case Drain (Ground Drive) Fig 4-29

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		59410001	FITTING-90-12MJ-12MORBA	1	
2		67570001	FITTING - PLUG - 12MORB - HEX	1	
3		296273900	MANIFOLD - CASE DRAIN	1	
4		53826001	#10M O-RING-#8M JIC ST.	2	
5		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	2	
6		16114034	BOLT-3/8-16X3 1/2 HEX HD. GR8	2	
7		600118001	FITTING-6MORINGX4MJIC90PARKER	2	
8		65565001	FITTING - 6M O-RING X 6M JIC ST.	1	

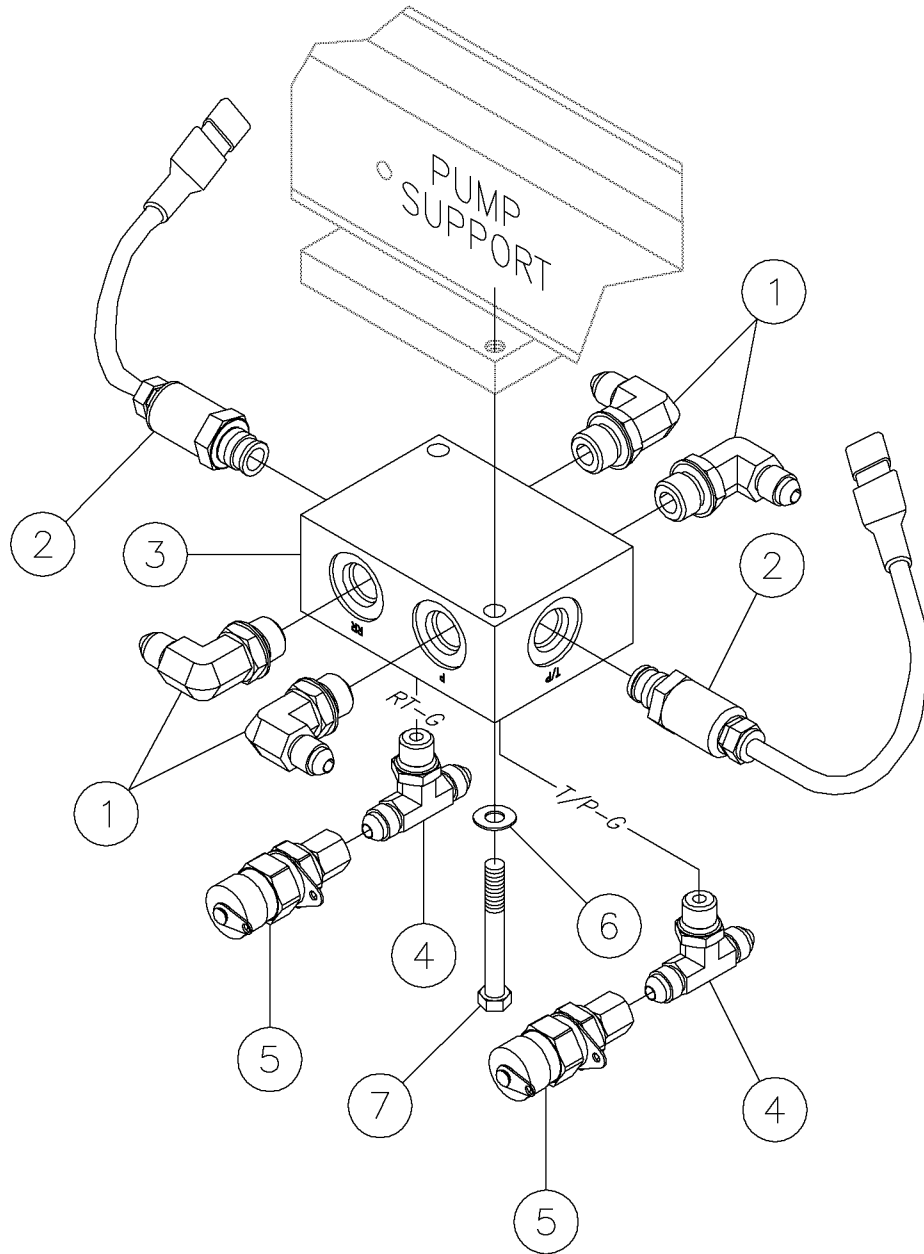
Shuttle Rotation Gauge Fig 4-30r01



Shuttle Rotation Gauge Fig 4-30r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	August, 2006		Add O-Rings
1		57950001	FITTING-90-4MJ-6MORBA	4	
2		283059001	SENSOR - HYDRAULIC PRESSURE	2	
3		296267955	VALVE - DUAL SHUTTLE (1 GPM, 6000PSI)	2	
4		81343001	4M (BCH)X4M JICX4M JIC TEE	2	
5		83015001	FITTING-4F JIC DIAGNOSTIC	2	
6		510337603	WASHER-FLATSTD-.25-.31X.75-.07-YZ	2	
7		248197001	BOLT-1/4-20X2 GR.8 ZINC PLTD	2	
8	*	59088057	O-RING AS-906-C90	2	

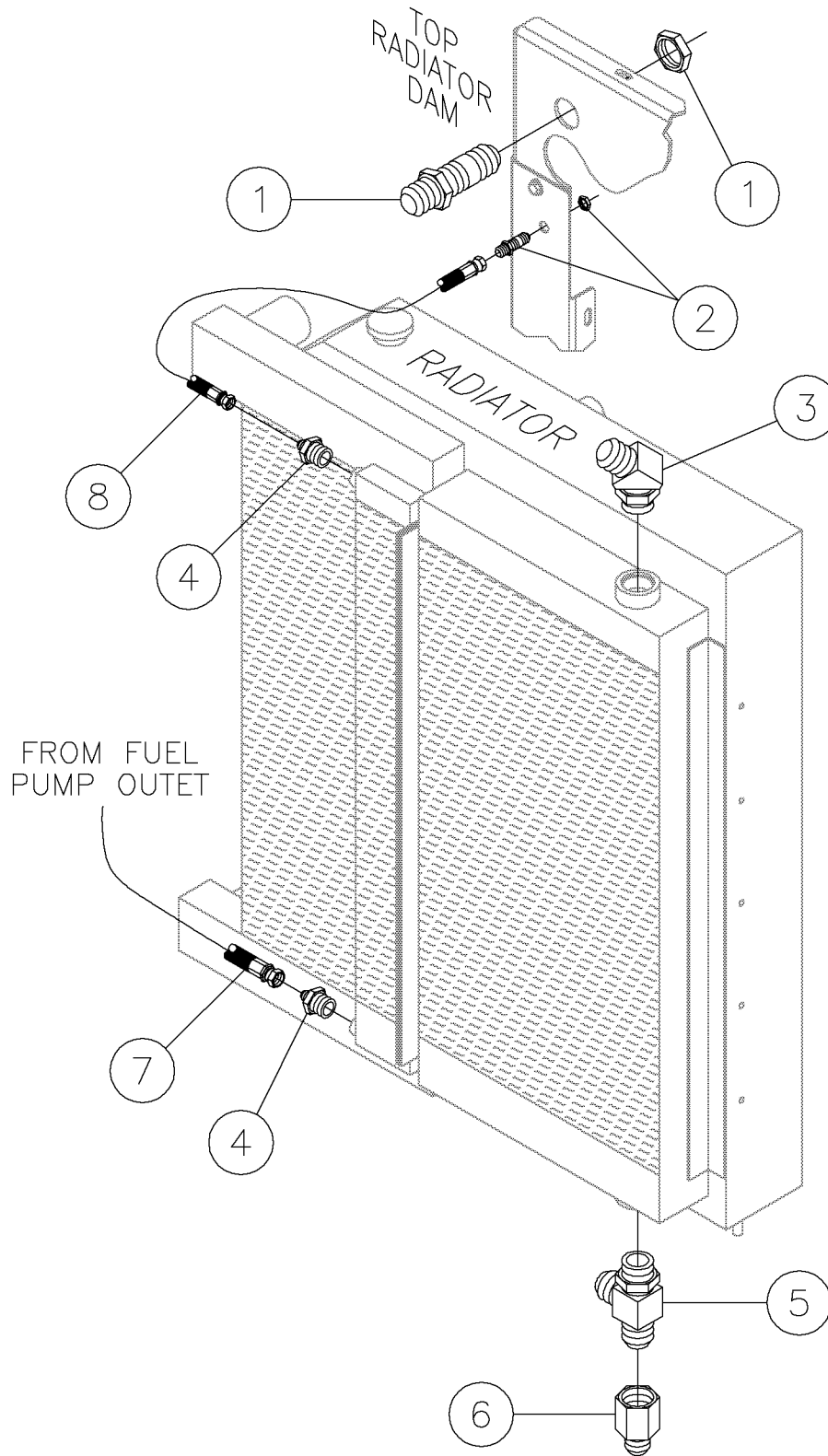
Shuttle Rotation Gauge Fig 4-30



Shuttle Rotation Gauge Fig 4-30

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		57950001	FITTING-90-4MJ-6MORBA	4	
2		283059001	SENSOR - HYDRAULIC PRESSURE	2	
3		296267955	VALVE - DUAL SHUTTLE (1 GPM, 6000PSI)	2	
4		81343001	4M (BCH)X4M JICX4M JIC TEE	2	
5		83015001	FITTING-4F JIC DIAGNOSTIC	2	
6		510337603	WASHER-FLATSTD-.25-.31X.75-.07-YZ	1	
7		248197001	BOLT-1/4-20X2 GR.8 ZINC PLTD		

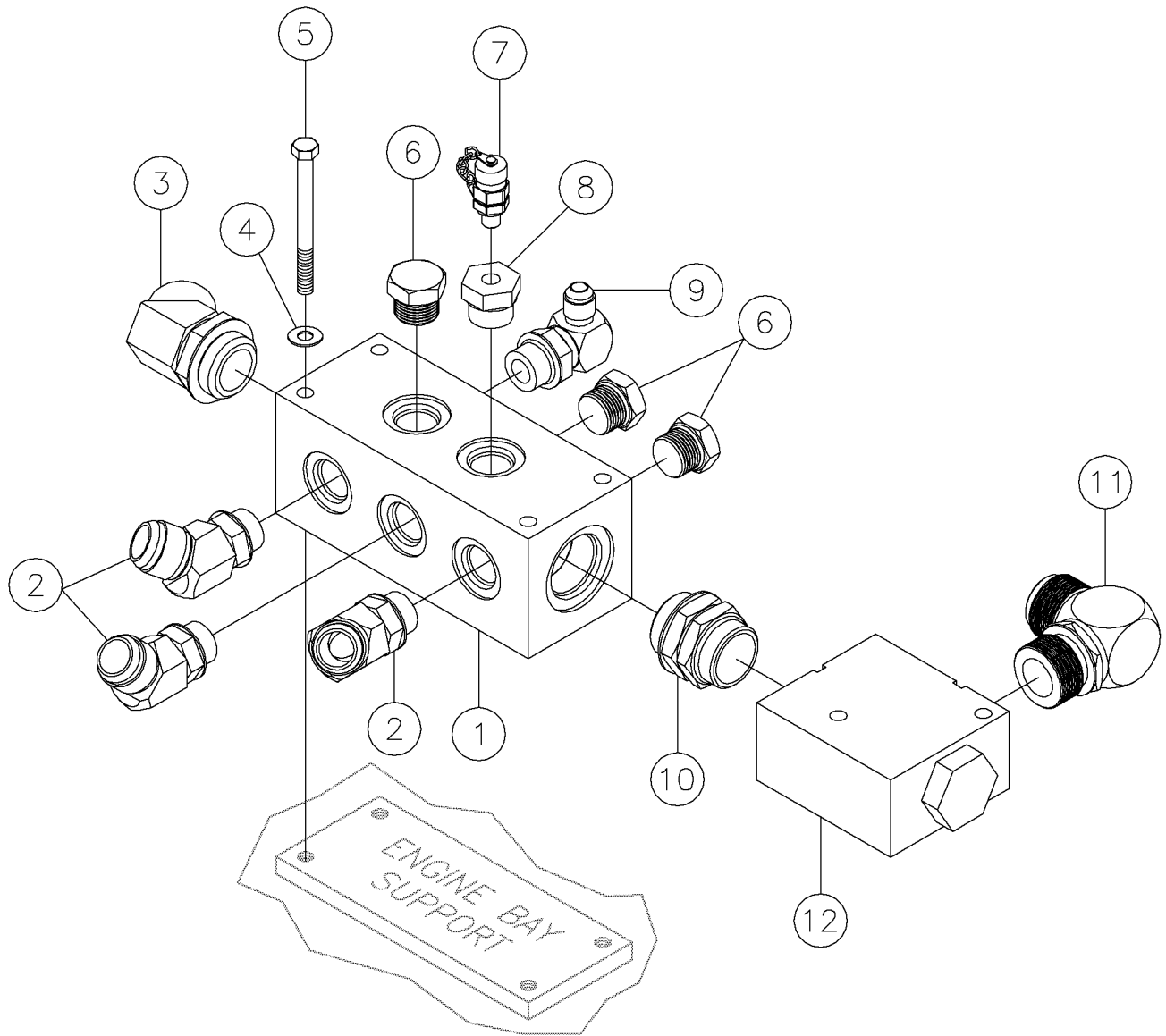
Oil Cooler Fig 4-31



Oil Cooler Fig 4-31

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		100875001	FITTING-20M JIC BULKHEAD STR.	1	
2		79475001	FITTING-6M BULKHEAD JIC ST.	1	
3		81703001	FITTING-20M ORBA X 20M JIC 45 DEG.EL.	1	
4		69933001	FITTING-1/2MX 6M JIC STR.	2	
5		620126001	FITTING-RTEE-20MJ-20MOR-20MJ	1	
6		103738001	FITTING-20FS X 16M JIC STR.	1	
7		296279611	HOSE - FUEL - .38X100-6F JS ST/6 FSJ ST	1	
8		296279607	HOSE - FUEL - .38X19-6FJS ST/6 FSJ ST	1	

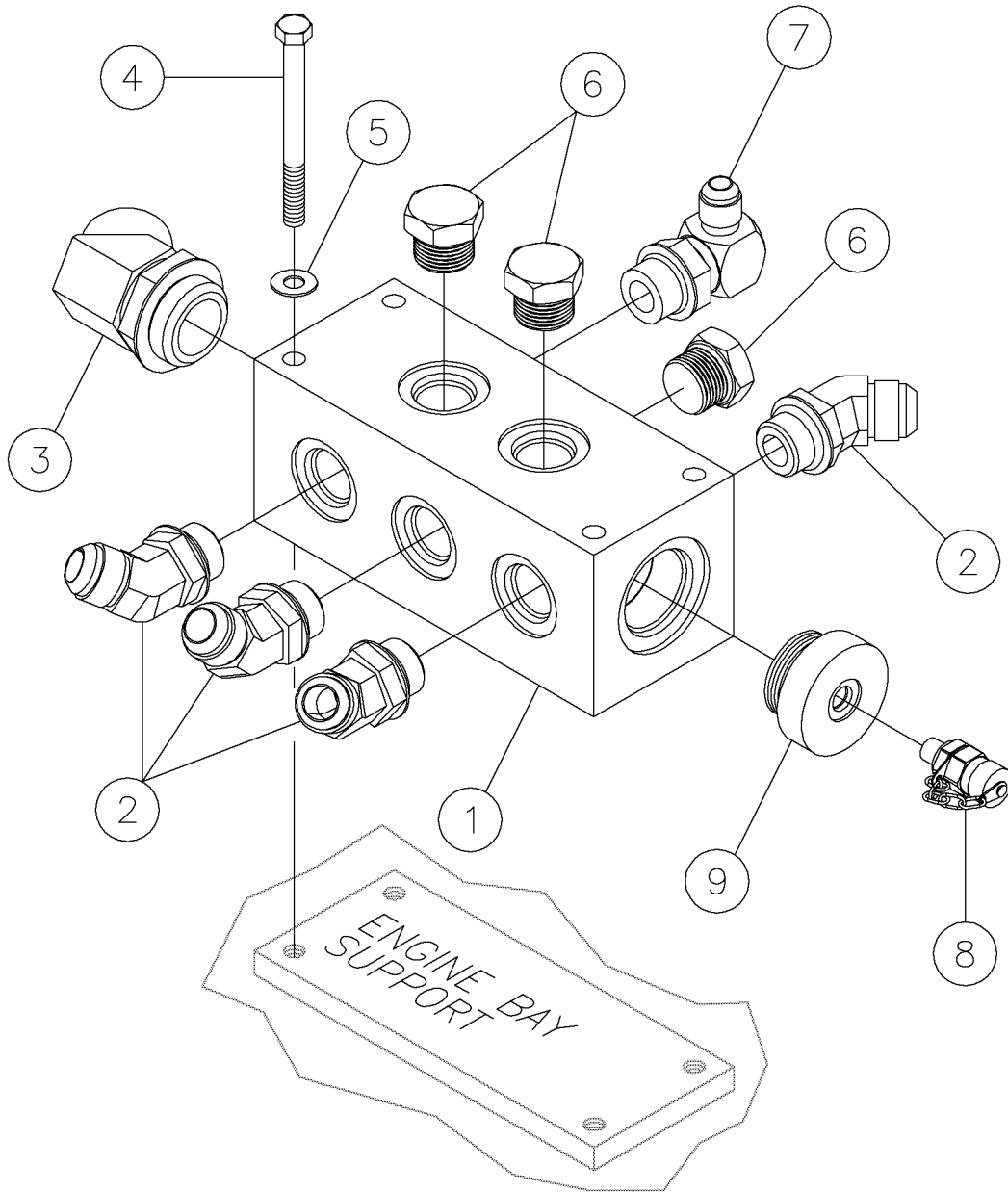
Return Manifold (S/N 119-) Fig 4-32r01



Return Manifold (S/N 119-) Fig 4-32r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2006		Update In Illustration & Parts List.
1		283674001	MANIFOLD - HYD. RETURN	1	
2		65568001	FITTING-45-16MJ-12MORBA	3	
3		81703001	FITTING-20M ORBA X 20M JIC 45 DEG.EL.	1	
4		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	4	
5		250541001	BOLT-3/8-16 X 4" GR8 HEX Y/ZI	4	
6		67570001	FITTING - PLUG - 12MORB - HEX	3	
7		75493001	FITTING - TEST - 4MORB - 16MTP	1	
8		120890001	FITTING-STR-12MORB-4FORB	1	
9		57949001	FITTING-12MX8M JIC 90 DEG. EL.	1	
10		608012001	FITTING-20M ORINGX20M OR	1	
11		77137001	FITTING-20MX20M JIC 90 DEG.	1	
12		607743001	VALVE-THERMAL BYPASS	1	

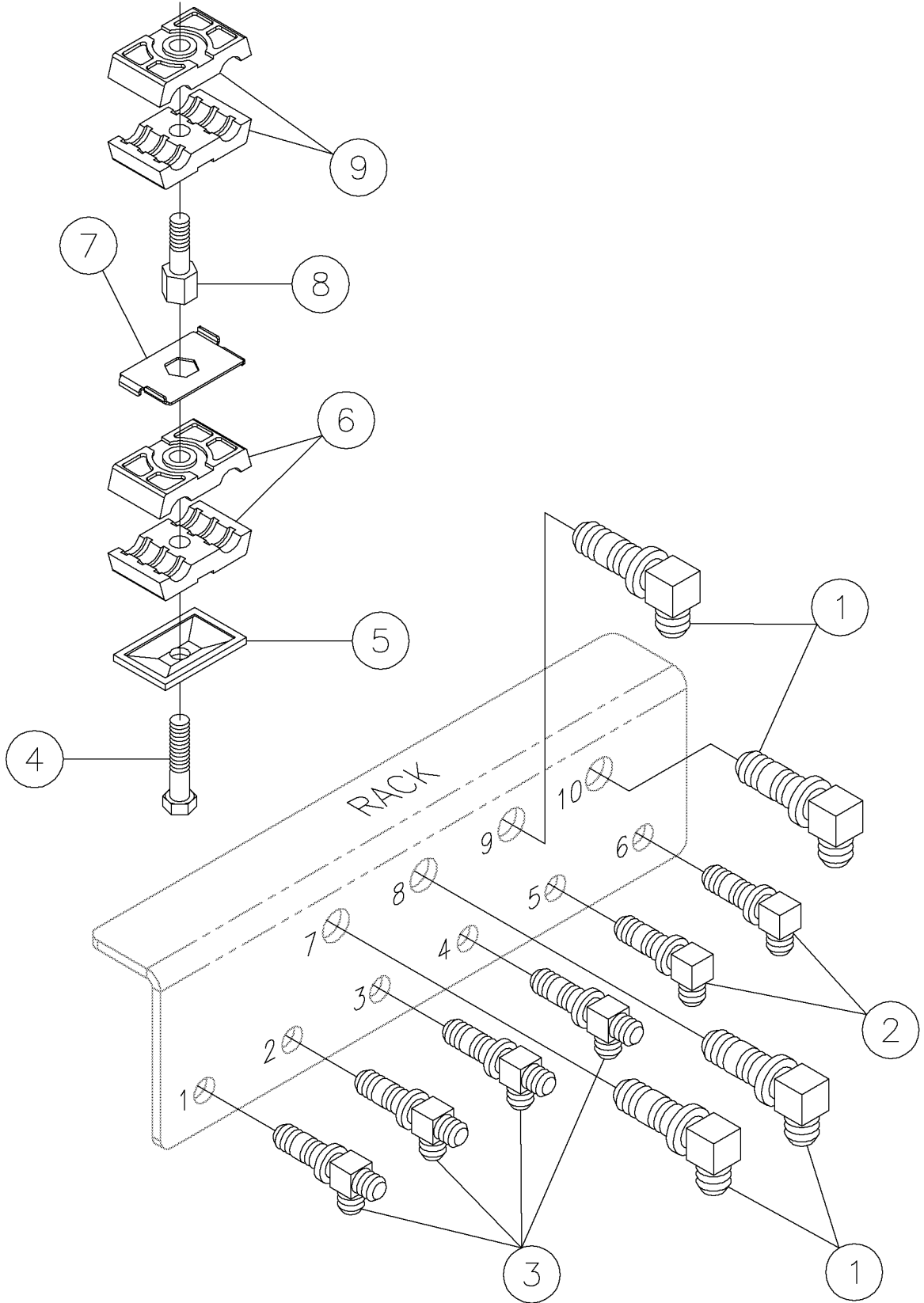
Return Manifold Fig 4-32



Return Manifold Fig 4-32

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		283674001	MANIFOLD - HYD. RETURN	1	
2		60718001	FITTING-45-12MJ-12MORBA	4	
3		81703001	FITTING-20M ORBA X 20M JIC 45 DEG.EL.	1	
4		250541001	BOLT-3/8-16 X 4" GR8 HEX Y/ZI	4	
5		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	4	
6		67570001	FITTING - PLUG - 12MORB - HEX	3	
7		57949001	FITTING-12MX8M JIC 90 DEG. EL.	1	
8		75493001	FITTING - TEST - 4MORB - 16MTP	1	
9		251503001	PLUG-20 ORB MODIFIED	1	

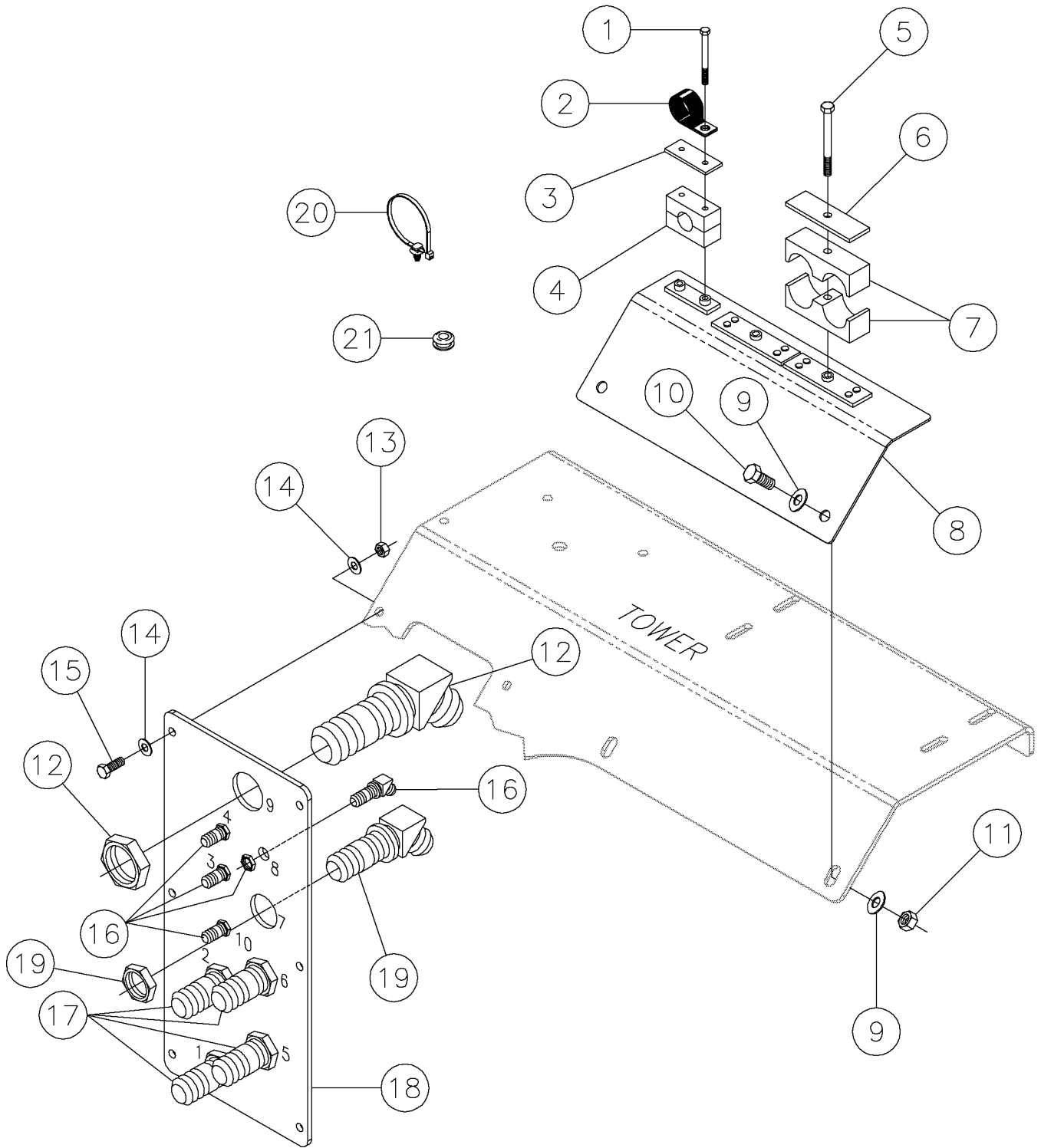
Bulkhead (Rack) Fig 4-33



Bulkhead (Rack) Fig 4-33

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		60727001	FITTING-6MJICX90BULKHEAD ELBOW	4	
2		61497001	FITTING-4M JIC BULKHEAD 90DEG.	2	
3		88545001	FITTING-4M JIC BLKHD RUN TEE	4	
4		279376001	BOLT - 5/16-18X1 1/2 GR8 HEX ZNC PLT	22	
5		67846003	PLATE-TWIN COVER	22	
6		67846005	CLAMP-PAIR-1/2" PIPE/1/4" HYD. HOSE	12	
7		231758001	WASHER-SAFETY(1/2" HEX ID)	6	
8		231757001	BOLT-CLAMP STACKING 5/16THREAD	6	
9		900035005	CLAMP-3/8"DOUBLE HOSE(COMPLETE)	8	

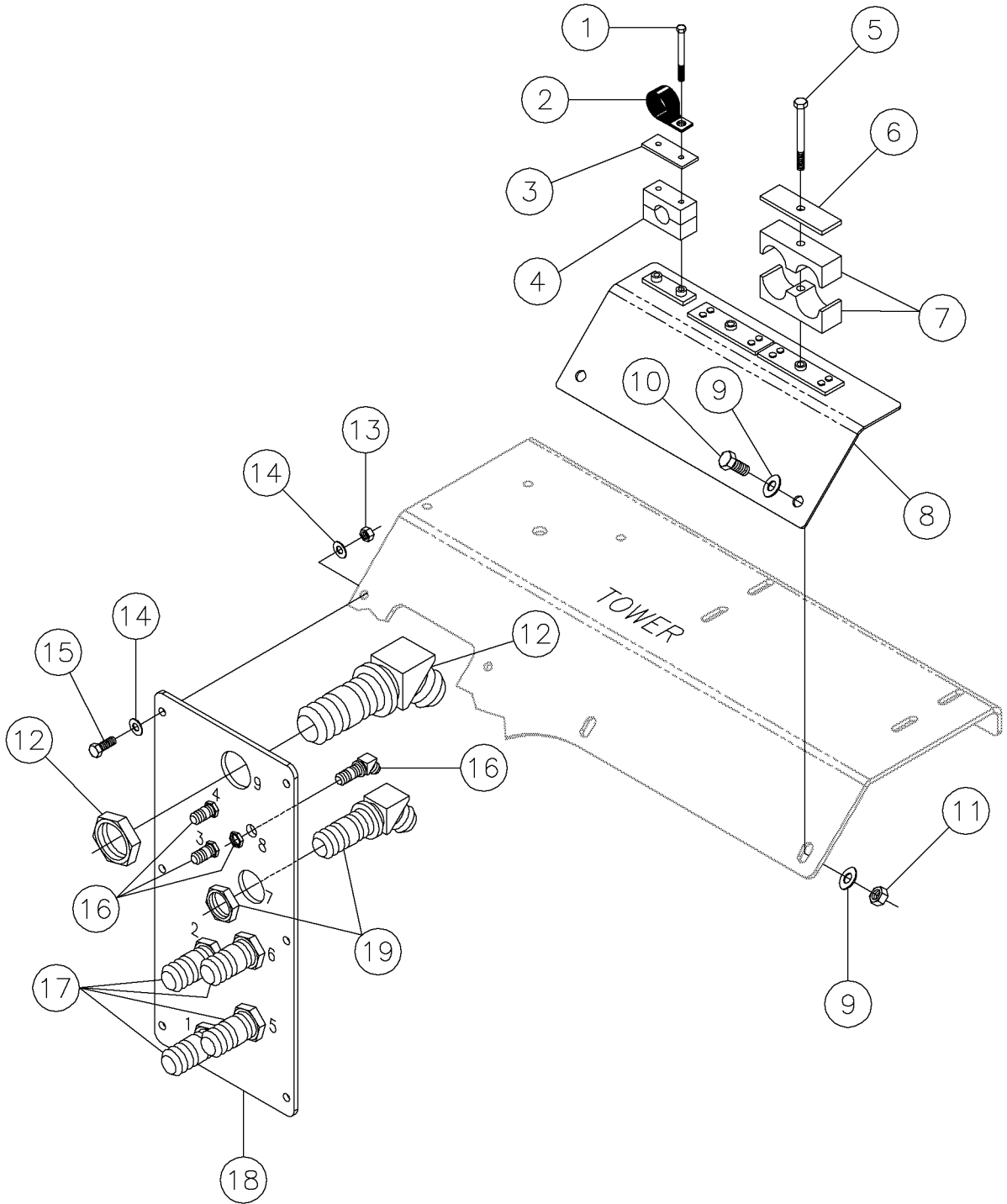
Bulkhead (Tower) (S/N 130-) Fig 4-34r02



Bulkhead (Tower) (S/N 130-) Fig 4-34r02

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	August, 2006		Change Bulkhead, Add Fitting
1		124631026	BOLT-1/4-20X2 3/4 GR8 HEX ZYC	2	
2		204721001	HOSE CLAMP-CCV2913 1 3/4"	1	
3		278066005	PLATE - COVER	1	
4		296282122	CLAMP-1.76 PAIR	1	
5		250502001	BOLT 5/16-18 X 2 3/4"GR8 HEX Y	2	
6		296254845	COVER PLATE - HOSE CLAMP	2	
7		296254844	CLAMP - 1" HOSE	2	
8		278066007	PLATE - WELD	1	
9		485011	WASHER-1/2 FLAT	4	
10		235737001	BOLT-1/2-13X1 1/4 GR8 ZINC PLT	2	
11		235731001	NUT-1/2-13 GR8 ZINC PLTD	2	
12		296279582	FITTING - BH45-24MJ-24MJ	1	
13		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	6	
14		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	12	
15		235727001	BOLT-3/8-16X1 GR8 HEX ZINC PLT	6	
16	*	60728001	FITTING - 6MJIC X 45 BULK ELBOW	4	S/N 130 & Up
17		108905001	FITTING-16MJICX16MJIC45 BULKHD	4	
18	*	296282102	BULKHEAD - HOSE TOWER	1	S/N 130 & Up
19		296282120	FITTING-BH45-20MJ 20MJ-LN	1	
20		296276007	FIR TREE MOUNT	3	
21		1865005	GROMMET - 2560 BLACK	1	

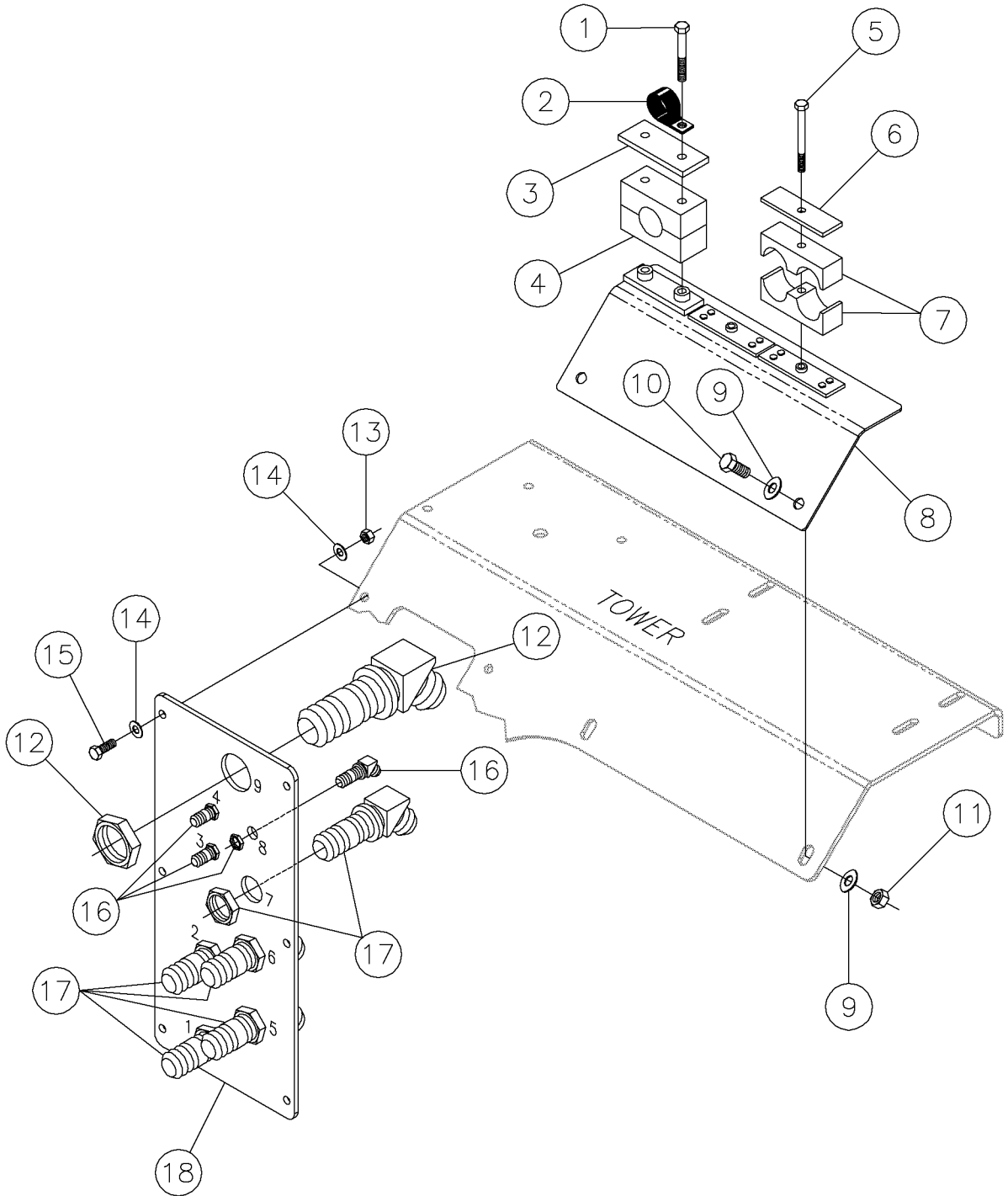
Bulkhead (Tower) Fig 4-34r01



Bulkhead (Tower) Fig 4-34r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2006		Update In Illustration & Parts List.
1		124631026	BOLT-1/4-20X2 3/4 GR8 HEX ZYC	2	
2		204721001	HOSE CLAMP-CCV2913 1 3/4"	1	
3		278066005	PLATE - COVER	1	
4		296282122	CLAMP-1.76 PAIR	1	
5		250502001	BOLT 5/16-18 X 2 3/4"GR8 HEX Y	2	
6		296254845	COVER PLATE - HOSE CLAMP	2	
7		296254844	CLAMP - 1" HOSE	2	
8		278066007	PLATE - WELD	1	
9		485011	WASHER-1/2 FLAT	4	
10		235737001	BOLT-1/2-13X1 1/4 GR8 ZINC PLT	2	
11		235731001	NUT-1/2-13 GR8 ZINC PLTD	2	
12		296279582	FITTING - BH45-24MJ-24MJ	1	
13		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	6	
14		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	12	
15		235727001	BOLT-3/8-16X1 GR8 HEX ZINC PLT	6	
16		60728001	FITTING - 6MJIC X 45 BULK ELBOW	3	
17		108905001	FITTING-16MJICX16MJIC45 BULKHD	4	
18		296282102	BULKHEAD - HOSE TOWER	1	
19		296282120	FITTING-BH45-20MJ 20MJ-LN	1	

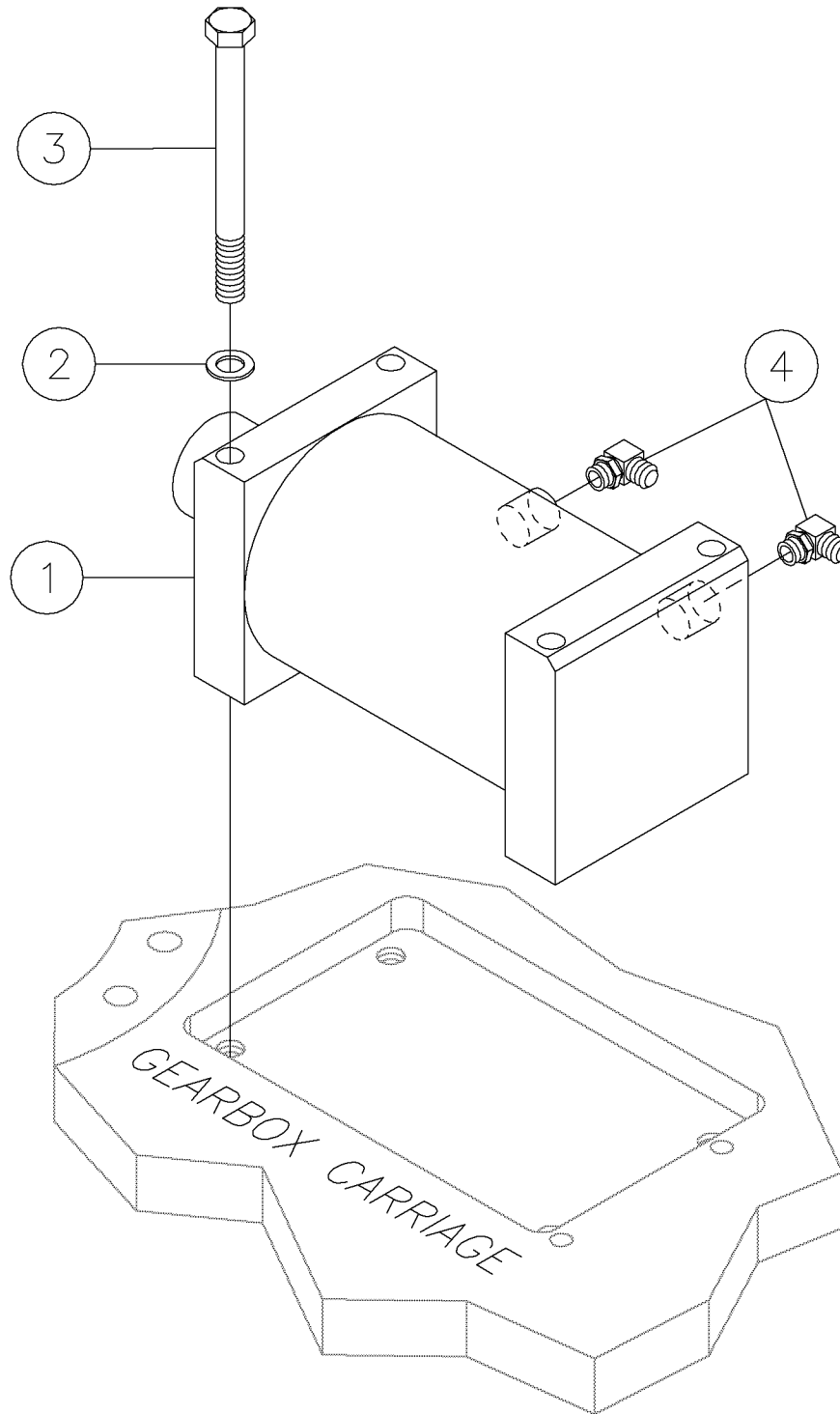
Bulkhead (Tower) Fig 4-34



Bulkhead (Tower) Fig 4-34

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		250640001	BOLT-3/8-16 X2 3/4 GR 8 Y/ZINC	2	
2		204721001	HOSE CLAMP-CCV2913 1 3/4"	1	
3		71220007	PLATE-HOSE CLAMP TOP	1	
4		71220005	CLAMP-PLASTIC INSIDE (PAIR)	1	
5		250502001	BOLT 5/16-18 X 2 3/4"GR8 HEX Y	2	
6		296254845	COVER PLATE - HOSE CLAMP	2	
7		296254844	CLAMP - 1" HOSE	2	
8		296275842	PLATE- HOSE CLAMP SUB	1	
9		485011	WASHER-1/2 FLAT	4	
10		235737001	BOLT-1/2-13X1 1/4 GR8 ZINC PLT	2	
11		235731001	NUT-1/2-13 GR8 ZINC PLTD	2	
12		296279582	FITTING - BH45-24MJ-24MJ	1	
13		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	6	
14		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	12	
15		235727001	BOLT-3/8-16X1 GR8 HEX ZINC PLT	6	
16		60728001	FITTING - 6MJIC X 45 BULK ELBOW	3	
17		108905001	FITTING-16MJICX16MJIC45 BULKHD	5	
18		296273768	BULKHEAD - HOSE TOWER	1	

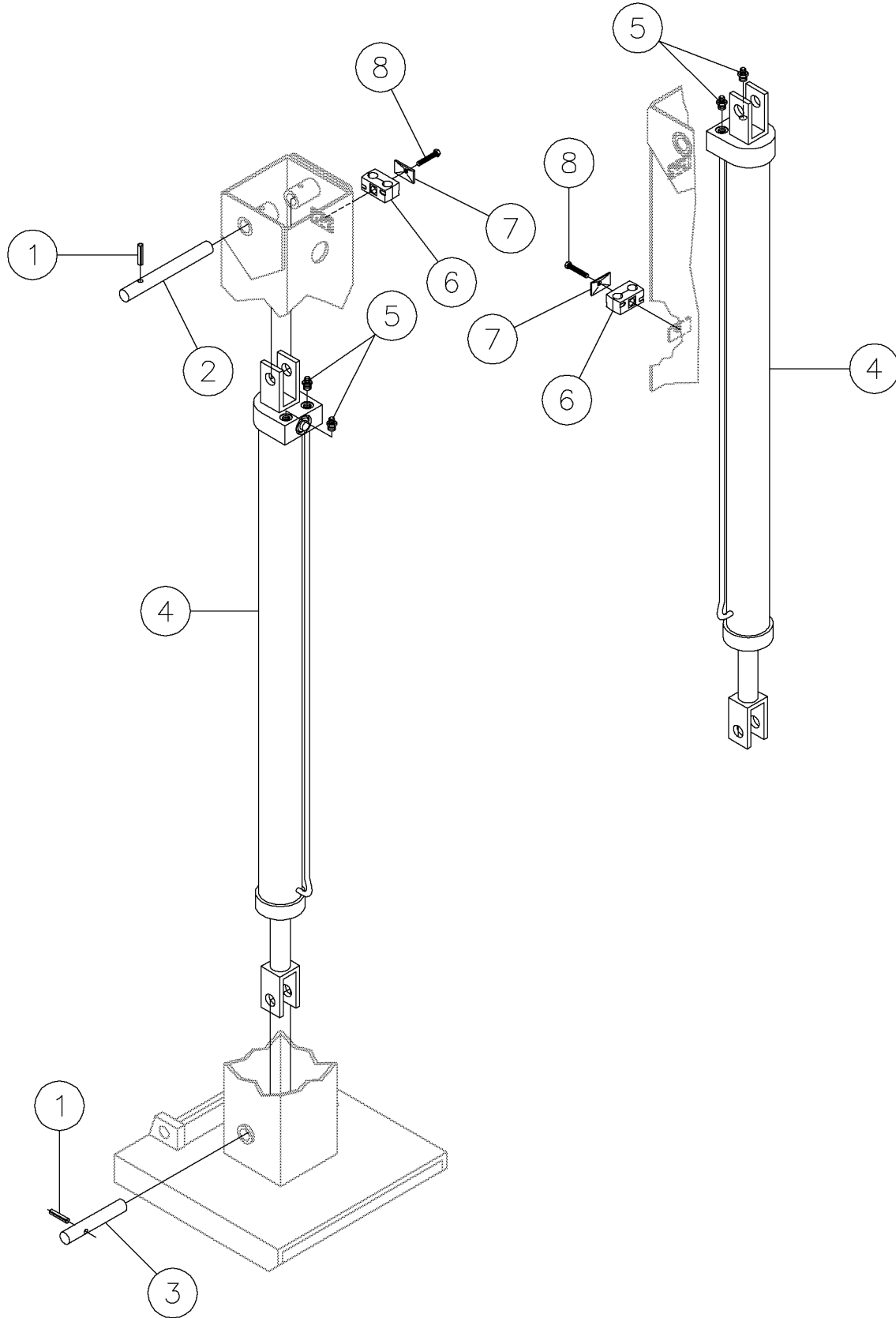
Floating Gearbox Cylinder Fig 4-35



Floating Gearbox Cylinder Fig 4-35

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		280827001	CYLINDER - 5"X 3 5/16"	1	Breakdown Fig 13-6
2		235715001	WASHER-5/8 SAE HARD ZINC PLTD	4	
3		275360001	BOLT-5/8-18 UNF X 7 GR 8 ZINC	4	
4		59426001	FITTING - 90-6MJ-6MORBA	2	

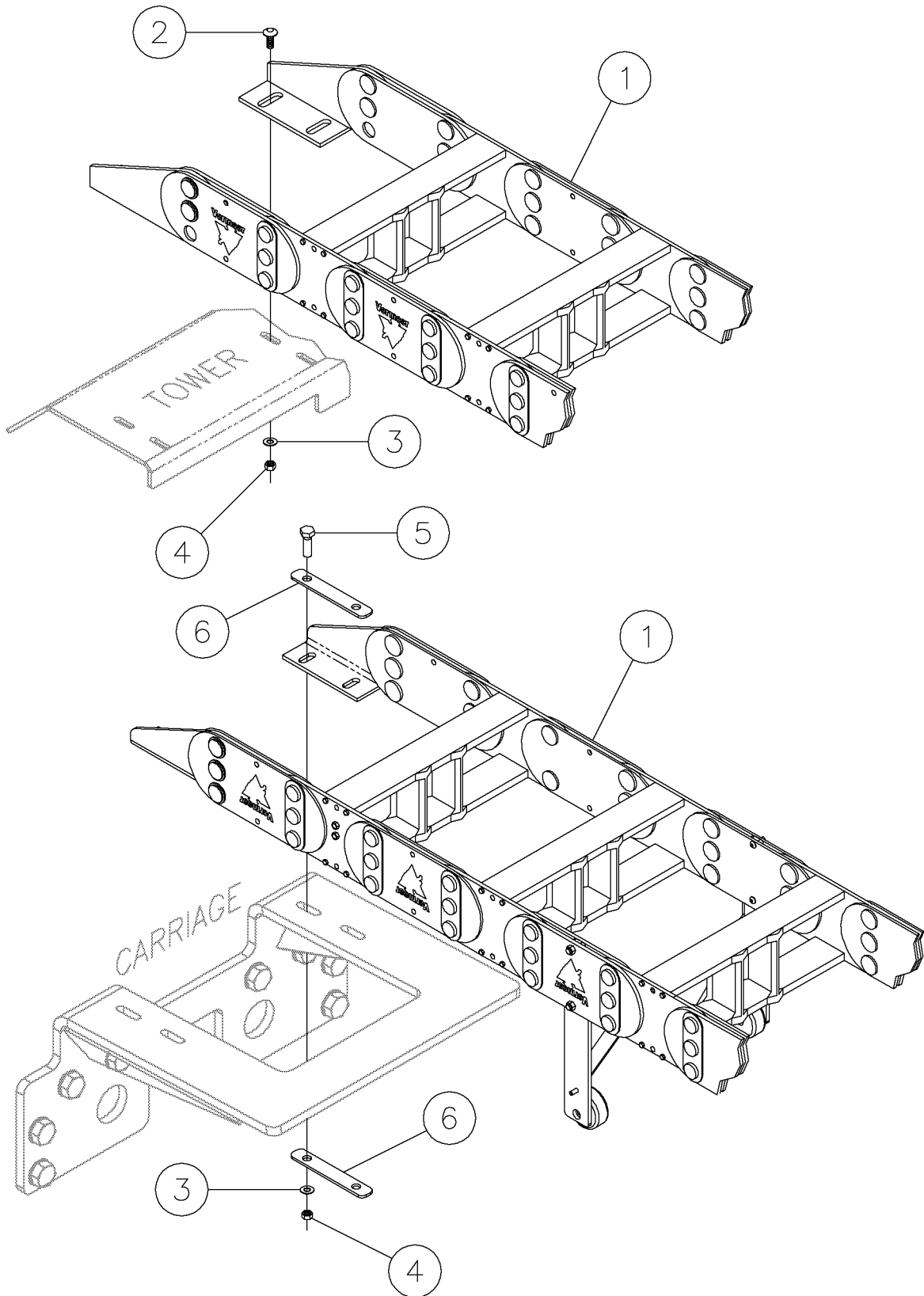
Outrigger Cylinder Fig 4-36



Outrigger Cylinder Fig 4-36

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		1788033	PIN-EXP.3/8X2 1/4	4	
2		216682001	PIN-OUTRIGGER CYLINDER	2	
3		216681001	PIN-OUTRIGGER CYLINDER	2	
4		224278001	CYL 3"X40 XCX W/ CB VALVE	2	Breakdown Fig. 13-20
5		57968001	FITTING-STR-4MJ-6MORB	4	
6		900035005	CLAMP-3/8"DOUBLE HOSE	3	
7		67846003	PLATE-TWIN COVER	3	
8		248031001	BOLT-5/16-18X1 1/4 GR8 ZINC PL	3	

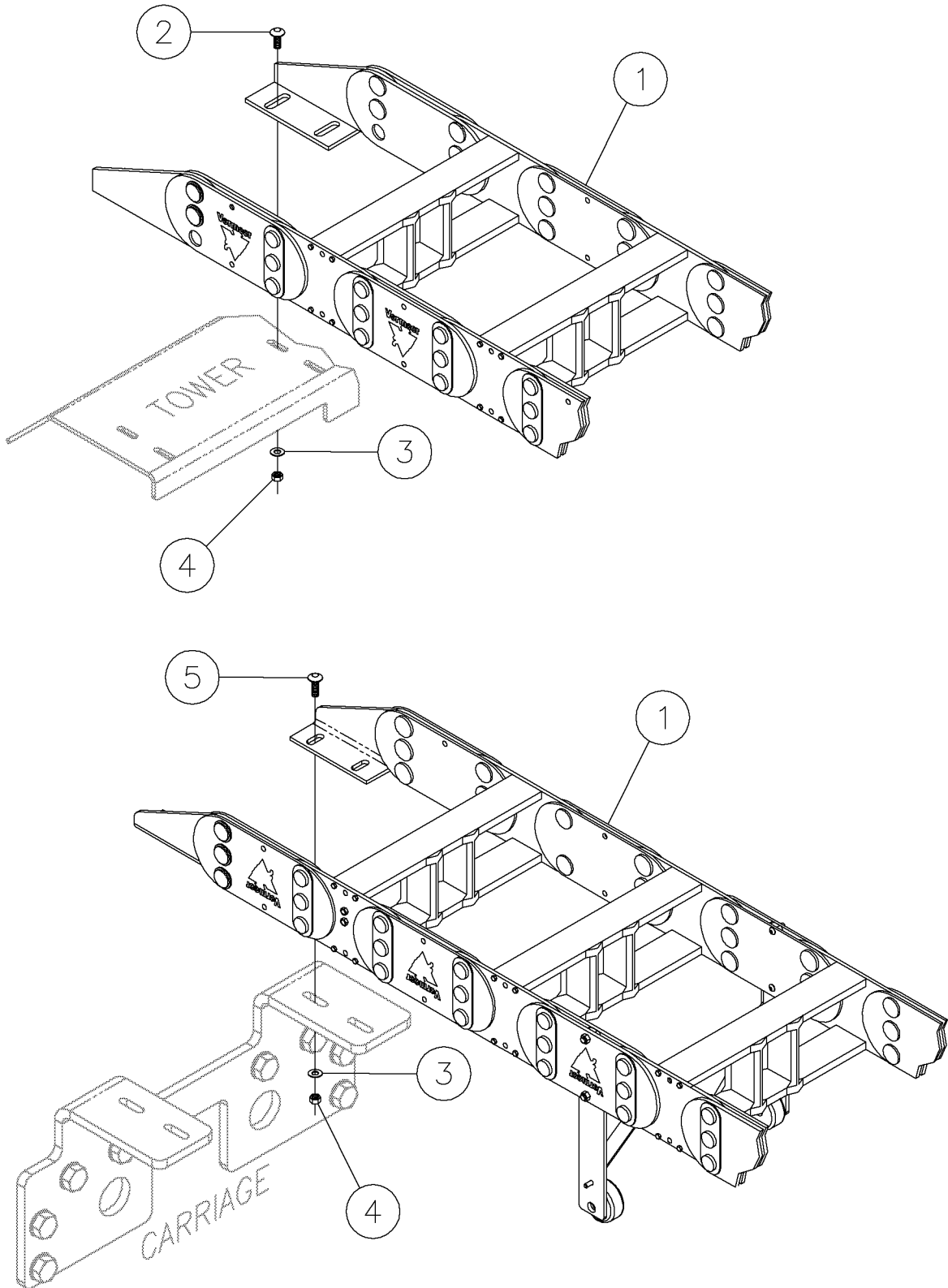
Hose Carrier (S/N 148-) Fig 4-37r01



Hose Carrier (S/N 148-) Fig 4-37r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	February, 2007		Change/Add Part Number
1		296273955	HOSE CARRIER-PT45E-A2-15.00-12(D80X100II)	1	Breakdown Fig. 13-23
2		375010	BOLT-3/8"-16X1"GD#5 CARRIAGE	4	
3		235713001	WASHER-FLATSTRL-.38-.41X.81-.06-YA-A325	8	
4		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	8	
5	*	235721001	BOLT-1/2-13X1 1/2 GR8 ZINC PLT	4	(S/N 148-)
6	*	296289825	BACKER PLATE - HOSE CARRIER MOUNT	4	(S/N 148-)

Hose Carrier Fig 4-37

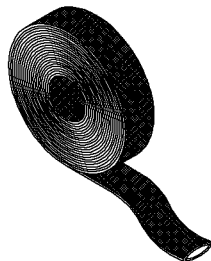


Hose Carrier Fig 4-37

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296273955	HOSE CARRIER-PT45E-A2-15.00-12(D80X100II)	1	Breakdown Fig. 13-23
2		375010	BOLT-3/8"-16X1"GD#5 CARRIAGE	4	
3		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	8	
4		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	8	
5		375012	3/8-16X1 1/4"GD#5CARRIAGE BOLT	4	

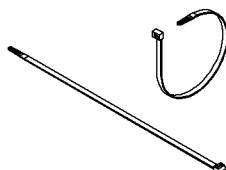
Miscellaneous Supplies Fig 4-38r01

CORDURA SLEEVES

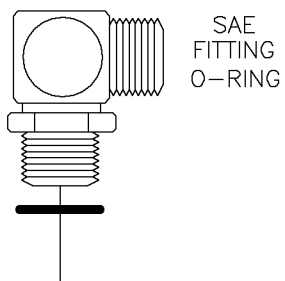


NOTE: SPECIFY LENGTH WHEN ORDERING

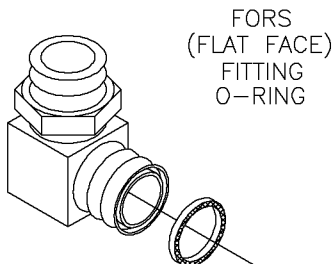
TIE STRAPS



O-RINGS



SAE
FITTING
O-RING



FORS
(FLAT FACE)
FITTING
O-RING

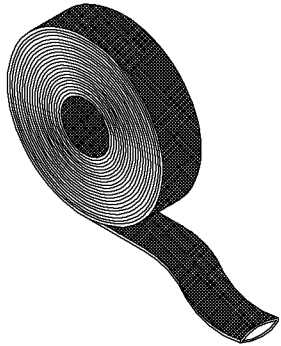
NOTE: O-RINGS LISTED ARE 90 DUROMETER

Miscellaneous Supplies Fig 4-38r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
			CORDURA SLEEVES		
		83726001	INSIDE DIAMETER .71		
		66094001	INSIDE DIAMETER 1.22		
		67264001	INSIDE DIAMETER 1.42		
		69129001	INSIDE DIAMETER 1.59		
		53840001	INSIDE DIAMETER 1.81		
		53841001	INSIDE DIAMETER 2.37		
		235824001	INSIDE DIAMETER 2.66		
			NOTE: SPECIFY LENGTH WHEN ORDERING		
			TIE STRAPS		
		78657001	4 IN. LENGTH		
		59634001	8 IN. LENGTH		
		58151001	15 IN. LENGTH		
			O-RINGS		
			SAE FITTING REPLACEMENT O-RING		
		78185027	4M SAE FITTING SIZE		
		53649081	5M SAE FITTING SIZE		
		59088057	6M SAE FITTING SIZE		
		59088053	8M SAE FITTING SIZE		
		792029	10M SAE FITTING SIZE		
		3152013	12M SAE FITTING SIZE		
		3155015	14M SAE FITTING SIZE		
		81580001	16M SAE FITTING SIZE		
		93316001	20M SAE FITTING SIZE		
			O-RINGS		
			FORS FITTING REPLACEMENT O-RING		
		93843001	ORING-AS-011-C90 FOR#4ORS FIT		
		93844001	ORING-AS-012-C90 FOR #6ORS FIT		
		93845001	ORING-AS-014-C90 FOR#8ORS FIT.		
		93846001	O-RING-AS-016-C90 FOR#10ORS FIT		
		93847001	O-RING-AS-018-C90 FOR#12ORS FIT		
		93848001	ORING-AS-021-C90 FOR#16ORS FIT		
		93849001	O-RING-AS-025-C90 FOR#20ORS FIT		
		93850001	O-RING-AS-029-C90 FOR#24ORS FIT		
			NOTE: O-RINGS LISTED ARE 90 DUROMETER		

Miscellaneous Supplies Fig 4-38

CORDURA SLEEVES



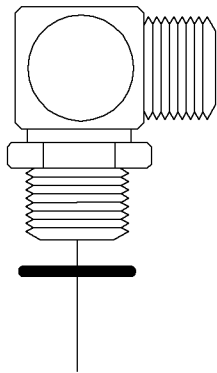
INSIDE DIAMETER	PART NUMBER
.71	83726001
1.22	66094001
1.42	67264001
1.59	69129001
1.81	53840001
2.37	53841001

NOTE: SPECIFY LENGTH WHEN ORDERING

TIE STRAPS

LENGTH	PART NUMBER
4 IN.	78657001
8 IN.	59634001
15 IN.	58151001

O-RINGS

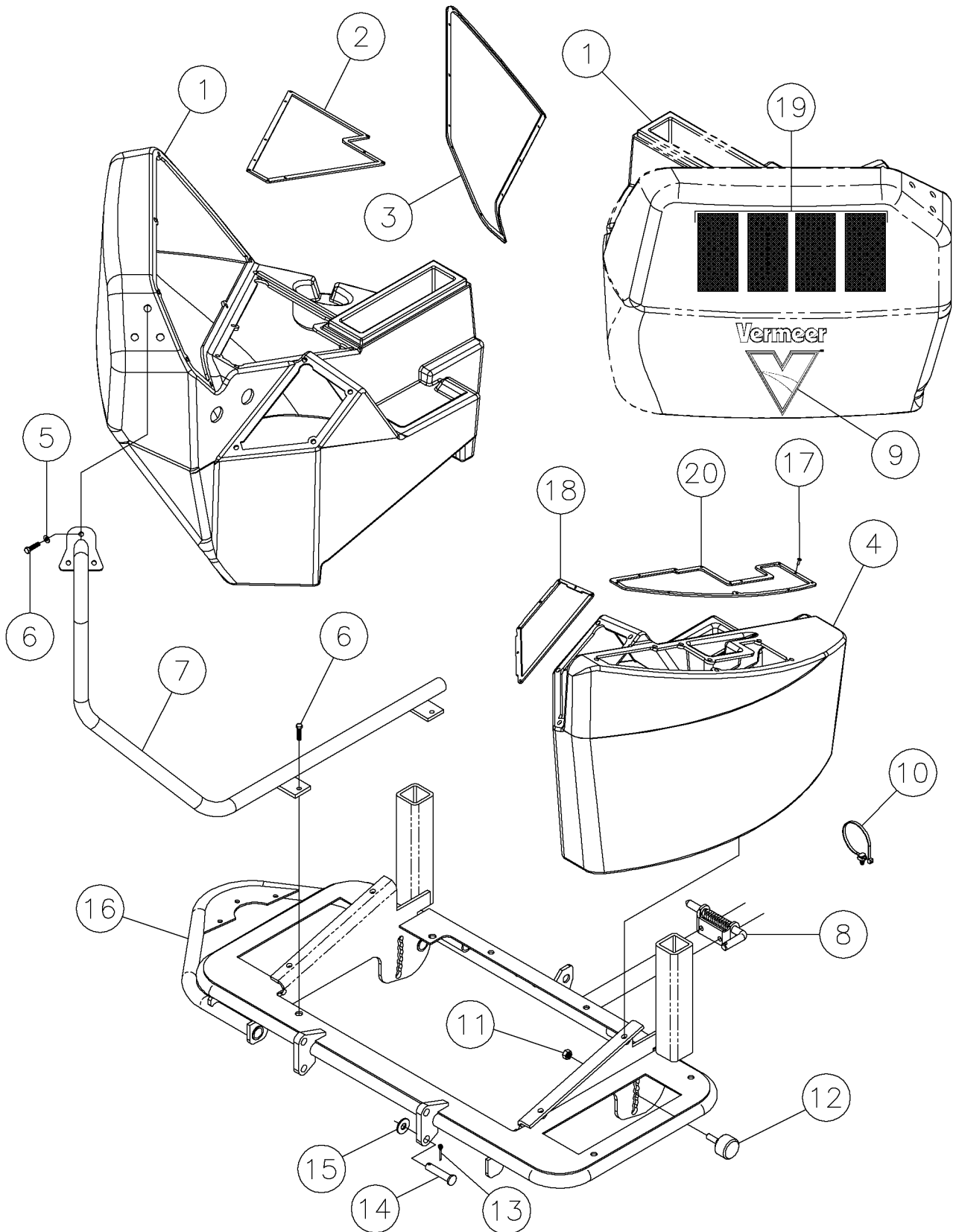


SAE FITTING SIZE	REPLACEMENT O-RING PART NO.
4M	78185027
5M	53649081
6M	59088057
8M	59088053
10M	792029
12M	78518037
14M	64082019
16M	81580001
20M	93316001

Miscellaneous Supplies Fig 4-38

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
			Miscellaneous Supplies		

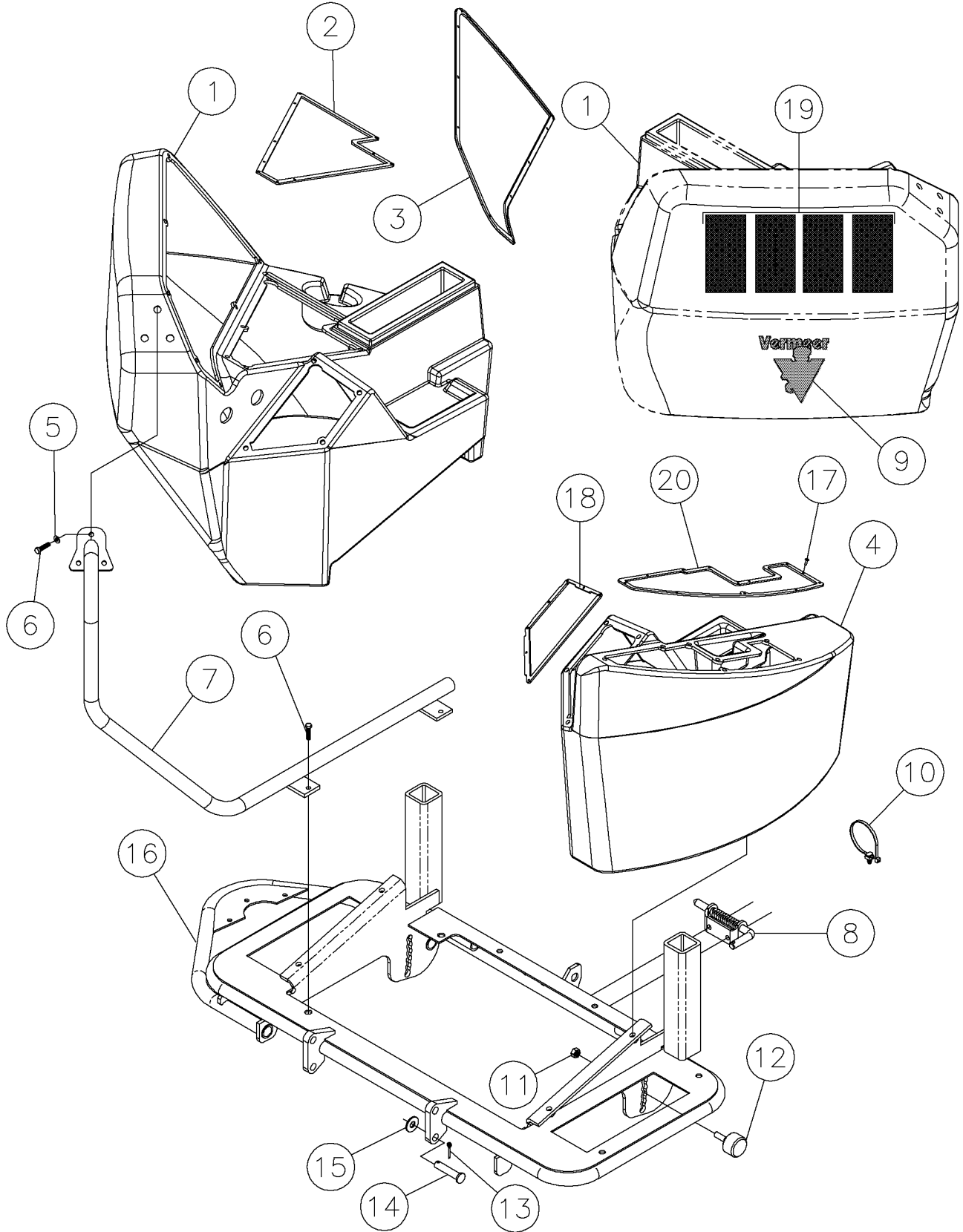
Control Console/Console Mount (S/N 151-) Fig 5-1r02



Control Console/Console Mount (S/N 151-) Fig 5-1r02

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	June, 2007		Change Decals
1		296274251	CONSOLE - OPERATOR RH	1	
2		296274188	BACKING - PLATE RIGHT HAND LOWER	1	
3		296274187	PLATE - BACKING GAUGE RIGHT UPPER	1	
4		296274252	CONSOLE - OPERATOR LH	1	
5		485003	WASHER-1/4 FLAT REF TR00295	3	
6		350010	1/4-20 X 1" GRADE #5 HEX BOLT	5	
7		296274172	WELD - HAND RAIL	1	
8		296274337	SPRING LATCH 720-S-L-ZINC	1	
9	*	7000D010	DECAL - COSMETIC V - 12.00"	1	(S/N 151-)
10		296276007	FIR TREE MOUNT	2	
11		416001	NUT-3/8 NC SLTL REF T13409	2	
12		296274127	HANDLE - SEAT ADJUSTMENT	2	
13		510009	COTTER PIN-1/8" X 1" REF TR00317	2	
14		289662001	PIN - CLEVIS 1/2" X 2 1/4"	2	
15		485011	WASHER-1/2 FLAT REF T06152	2	
16		296275580	WELD - SEAT FRAME D100X120 II	1	
17		547001	POP RIVET-SS44D	2	
18		296274182	BACKING - PLATE - JOYSTICK	2	
19	*	7000C530	DECAL - DANGER 4 PANEL	1	Domestic
	*	7001C530	DECAL - DANGER INTERNATIONAL 4 PANEL	1	International
20		296274190	PLATE - BACKING LEFT HAND	1	

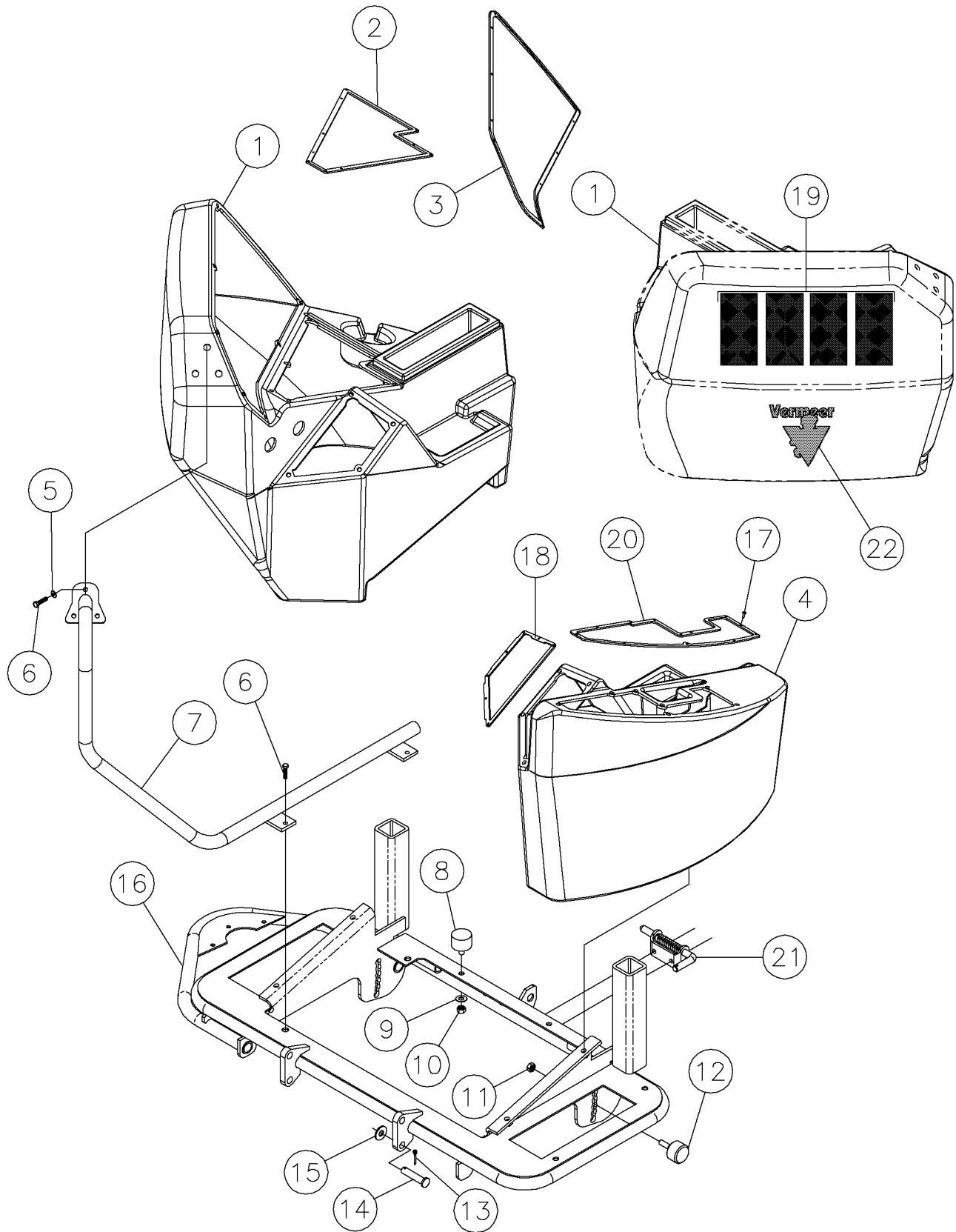
Control Console/Console Mount Fig 5-1r01



Control Console/Console Mount Fig 5-1r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	August, 2006		Update In Illustration & Parts List.
1		296274251	CONSOLE - OPERATOR RH	1	
2		296274188	BACKING - PLATE RIGHT HAND LOWER	1	
3		296274187	PLATE - BACKING GAUGE RIGHT UPPER	1	
4		296274252	CONSOLE - OPERATOR LH	1	
5		485003	WASHER-1/4 FLAT REF TR00295	3	
6		350010	1/4-20 X 1" GRADE #5 HEX BOLT REF TR00570	5	
7		296274172	WELD - HAND RAIL	1	
8		296274337	SPRING LATCH 720-S-L-ZINC	1	
9		70000787	DECAL 12"VERMEER LOGO	1	
10		296276007	FIR TREE MOUNT	2	
11		416001	NUT-3/8 NC SLTL REF T13409	2	
12		296274127	HANDLE - SEAT ADJUSTMENT	2	
13		510009	COTTER PIN-1/8" X 1" REF TR00317	2	
14		289662001	PIN - CLEVIS 1/2" X 2 1/4"	2	
15		485011	WASHER-1/2 FLAT REF T06152	2	
16		296275580	WELD - SEAT FRAME D100X120 II	1	
17		547001	POP RIVET-SS44D	2	
18		296274182	BACKING - PLATE - JOYSTICK	2	
19		7000A393	DECAL - DANGER	1	
20		296274190	PLATE - BACKING LEFT HAND	1	

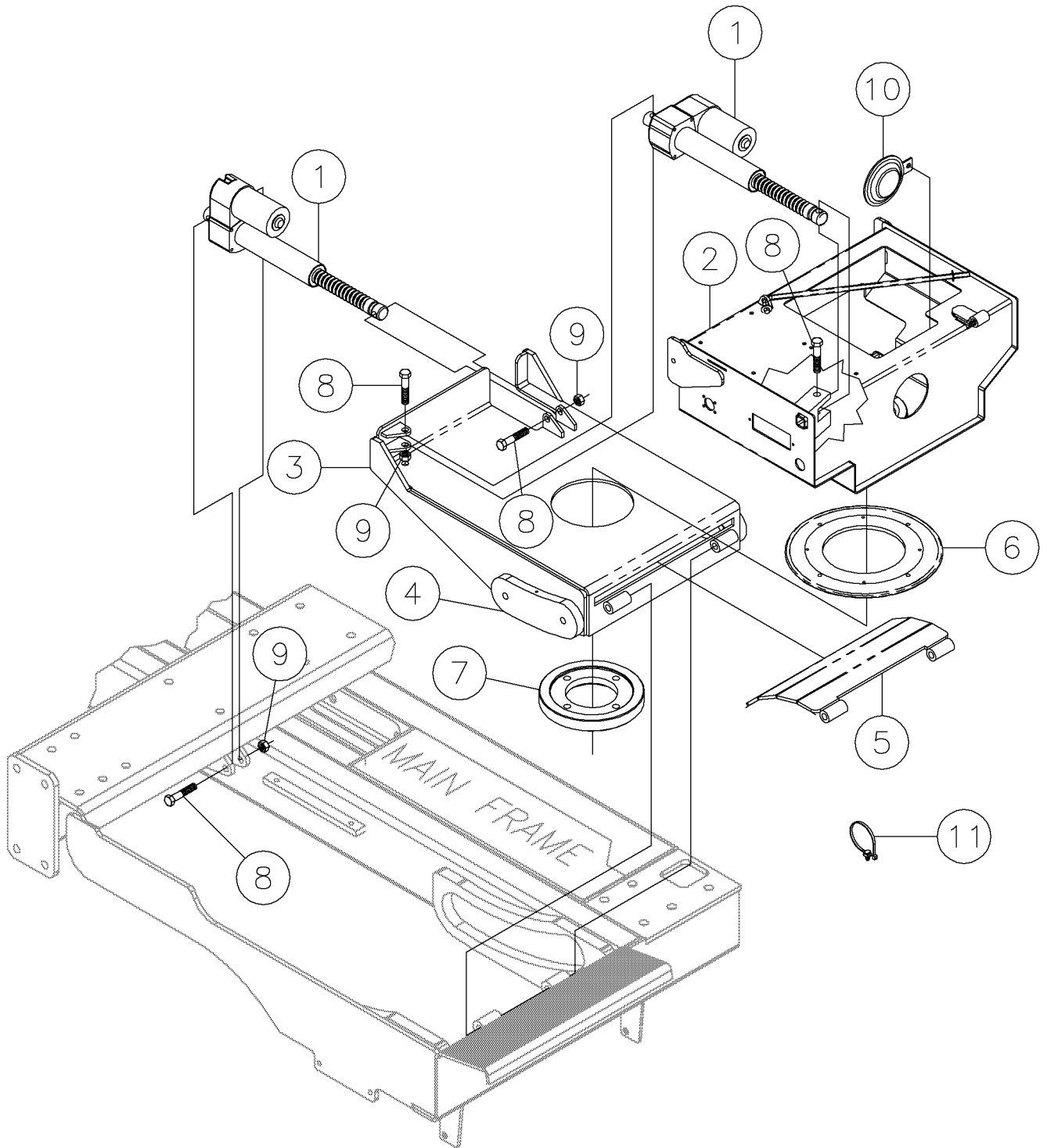
Control Console/Console Mount Fig 5-1



Control Console/Console Mount Fig 5-1

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296274251	CONSOLE - OPERATOR RH	1	
2		296274188	BACKING - PLATE RIGHT HAND LOWER	1	
3		296274187	PLATE - BACKING GAUGE RIGHT UPPER	1	
4		296274252	CONSOLE - OPERATOR LH	1	
5		485003	WASHER-1/4 FLAT REF TR00295	3	
6		350010	1/4-20 X 1" GRADE #5 HEX BOLT REF TR00570	5	
7		296274172	WELD - HAND RAIL	1	
8		122474001	MOUNT-SANDWICH SINGLE STUD	2	
9		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	2	
10		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	2	
11		416001	NUT-3/8 NC SLTL REF T13409	2	
12		296274127	HANDLE - SEAT ADJUSTMENT	2	
13		510009	COTTER PIN-1/8" X 1" REF TR00317	2	
14		289662001	PIN - CLEVIS 1/2" X 2 1/4"	2	
15		485011	WASHER-1/2 FLAT REF T06152	2	
16		296275580	WELD - SEAT FRAME D100X120 II	1	
17		547001	POP RIVET-SS44D	2	
18		296274182	BACKING - PLATE - JOYSTICK	2	
19		7000A393	DECAL - DANGER	1	
20		296274190	PLATE - BACKING LEFT HAND	1	
21		296274337	SPRING LATCH 720-S-L-ZINC	1	
22		70000787	DECAL 12"VERMEER LOGO	1	

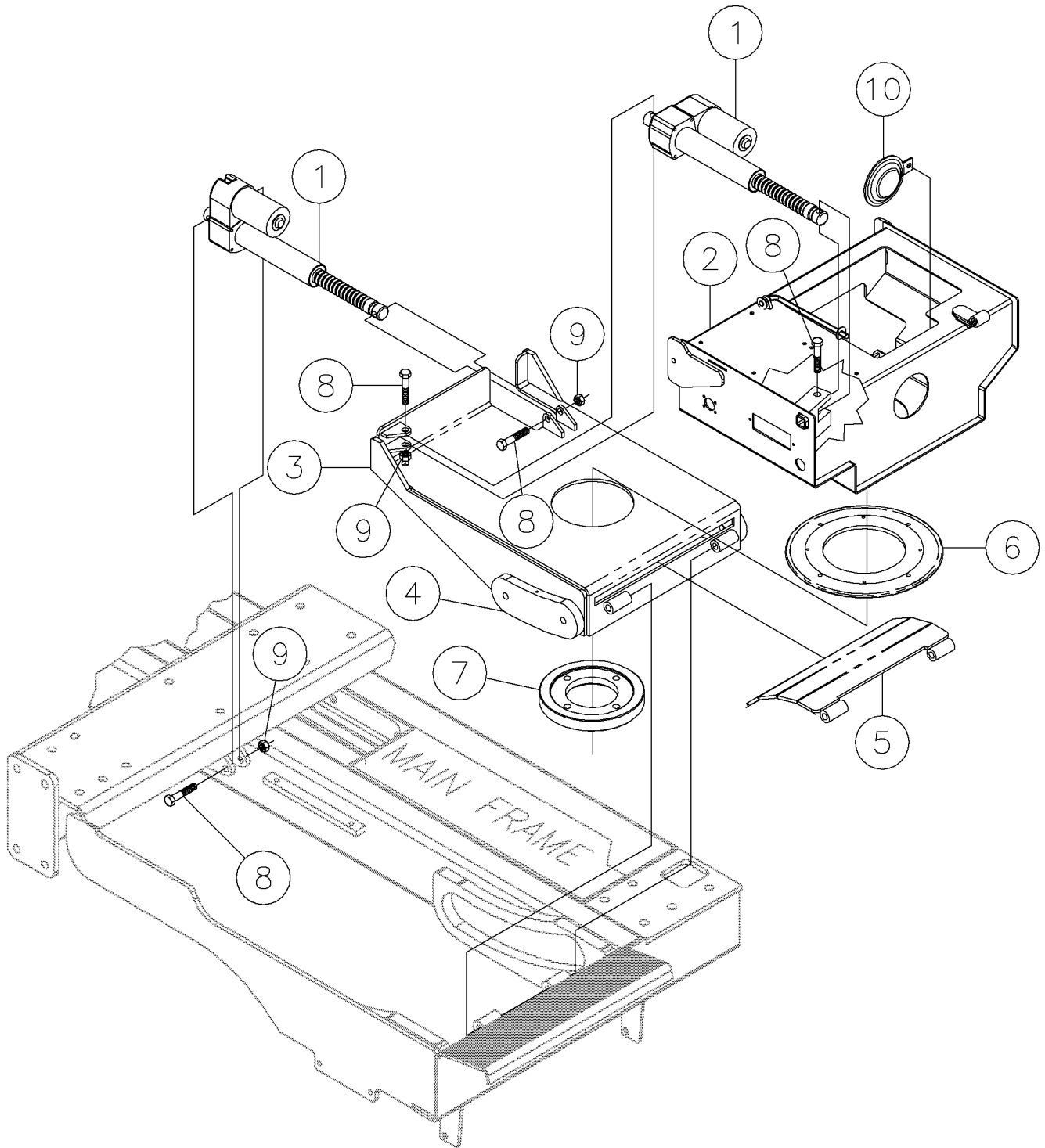
Actuator/Pedestal Fig 5-2r01



Actuator/Pedestal Fig 5-2r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	June, 2006		Update In Illustration & Parts List.
1		52864001	ACTUATOR-D12-10A5-06	2	
2		296275806	SUB - BASE LARGE NAVIGATOR	1	
3		296273859	PIVOT - OPERATOR'S PLATFORM	1	
4		296273860	SLIDE - PLATE - SEAT PIVOT	2	
5		296273880	COVER - PLATFORM GAP	1	
6		296256466	BEARING-LAZY SUSAN #12C	1	
7		296273874	RING - SEAT PIVOT RETAINER	1	
8		250573001	BOLT-1/2-13 X 2 1/2 GR8 HX Y/Z	4	
9		250512001	NUT- 1/2 NC Gr8 TOP LOCK Y/ ZINC	3	
10		26464001	HORN-12 VOLT DISC LOW NOTE	1	
11		296276007	FIR TREE MOUNT	1	

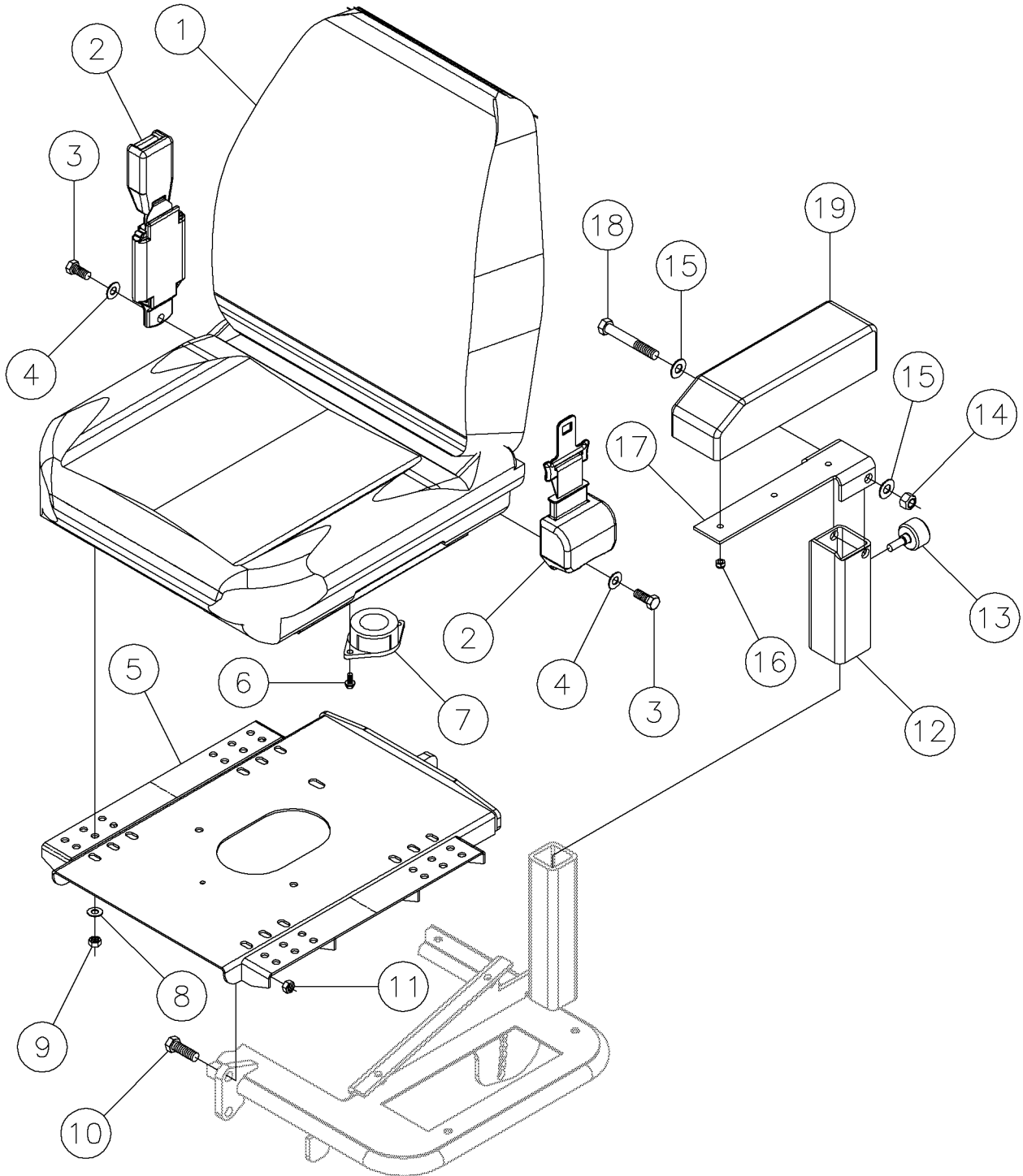
Actuator/Pedestal Fig 5-2



Actuator/Pedestal Fig 5-2

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		52864001	ACTUATOR-D12-10A5-06	2	
2		296275806	SUB - BASE LARGE NAVIGATOR	1	
3		296273859	PIVOT - OPERATOR'S PLATFORM	1	
4		296273860	SLIDE - PLATE - SEAT PIVOT	2	
5		296273880	COVER - PLATFORM GAP	1	
6		296256466	BEARING-LAZY SUSAN #12C	1	
7		296273874	RING - SEAT PIVOT RETAINER	1	
8		250573001	BOLT-1/2-13 X 2 1/2 GR8 HX Y/Z	4	
9		250512001	NUT- 1/2 NC Gr8 TOP LOCK Y/ ZINC	3	
10		26464001	HORN-12 VOLT DISC LOW NOTE	1	

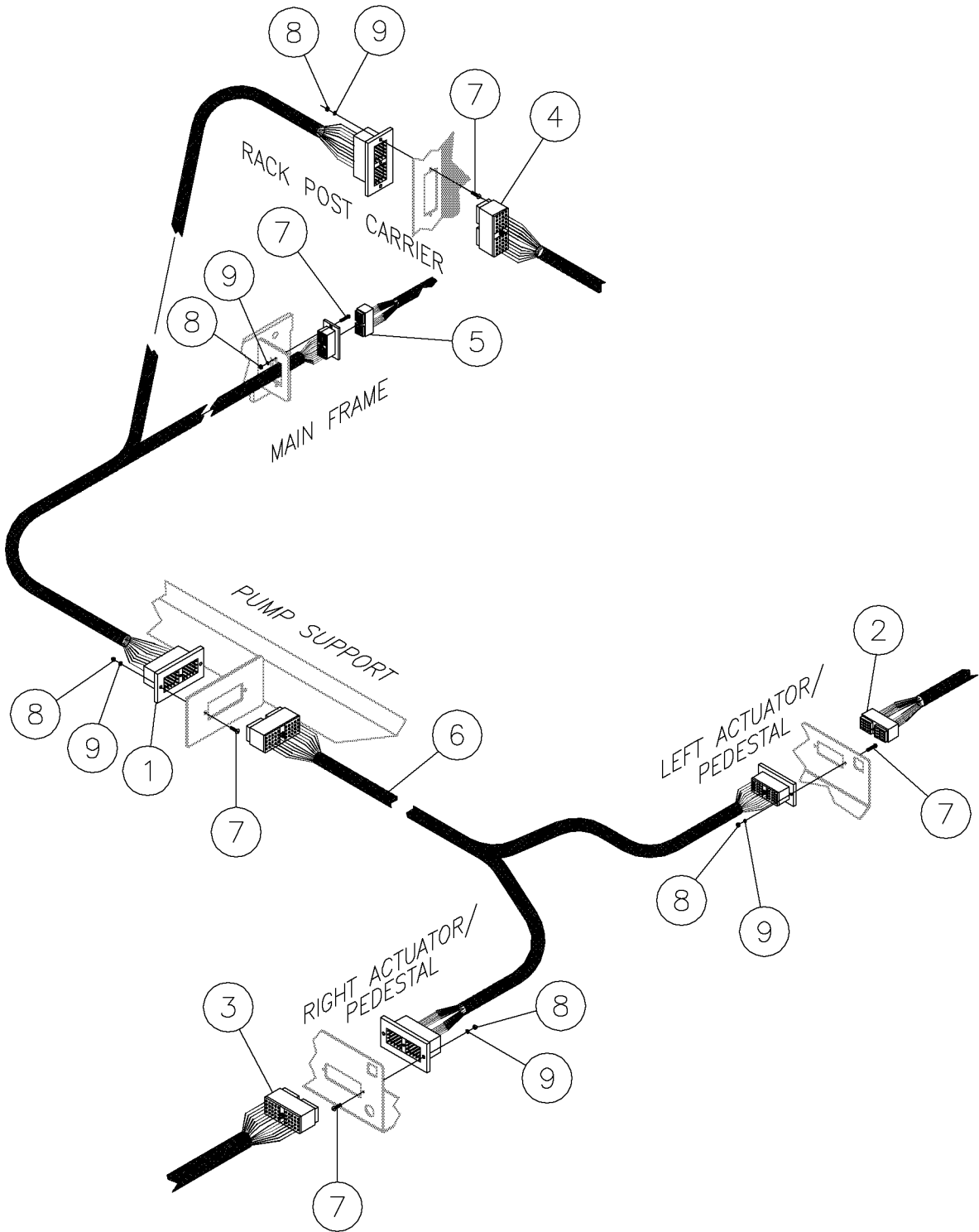
Seat Fig 5-3



Seat Fig 5-3

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296274294	SEAT - MILSCO XL100 GRAY	1	
2		203254001	2"SEAT BELT F08015	1	
3		382010	BOLT-7/16-20X1 GR.8 HEX HEAD	2	
4		250515001	7/16 HARD WASHER SAE Y/ZINC	2	
5		296275577	WELD - SEAT PLATE-HINGE - D100X120 II	1	
6		240419001	BOLT-1/4-20X3/4 BUTTON HEAD	2	
7		279361003	SWITCH - SAFETY (SEALED)	1	
8		17393001	WASHER-8M LOCK	4	
9		574001	NUT-HEX M8-1.25 CL8 YZ D934	4	
10		235721001	BOLT-1/2-13X1 1/2 GR8 ZINC PLT	2	
11		250512001	NUT- 1/2 NC Gr8 TOP LOCK Y/ ZINC	2	
12		296274121	ARM - REST SUPPORT UPPER	2	
13		296274127	HANDLE - SEAT ADJUSTMENT	2	
14		75382001	NUT-1/2-UNC GRADE 8 SLTL	2	
15		485025	WASHER-1/2 FLAT-HARDENED-YZ	4	
16		103201001	NUT-1/4-20NC NYLON INSERT LOCK	6	
17		296275122	KEY - RETAINER TORSION BAR	2	
18		238241001	BOLT 1/2"-13X 3 1/2" GR8 HEX	2	
19		296274120	ARM REST - VINYL	2	

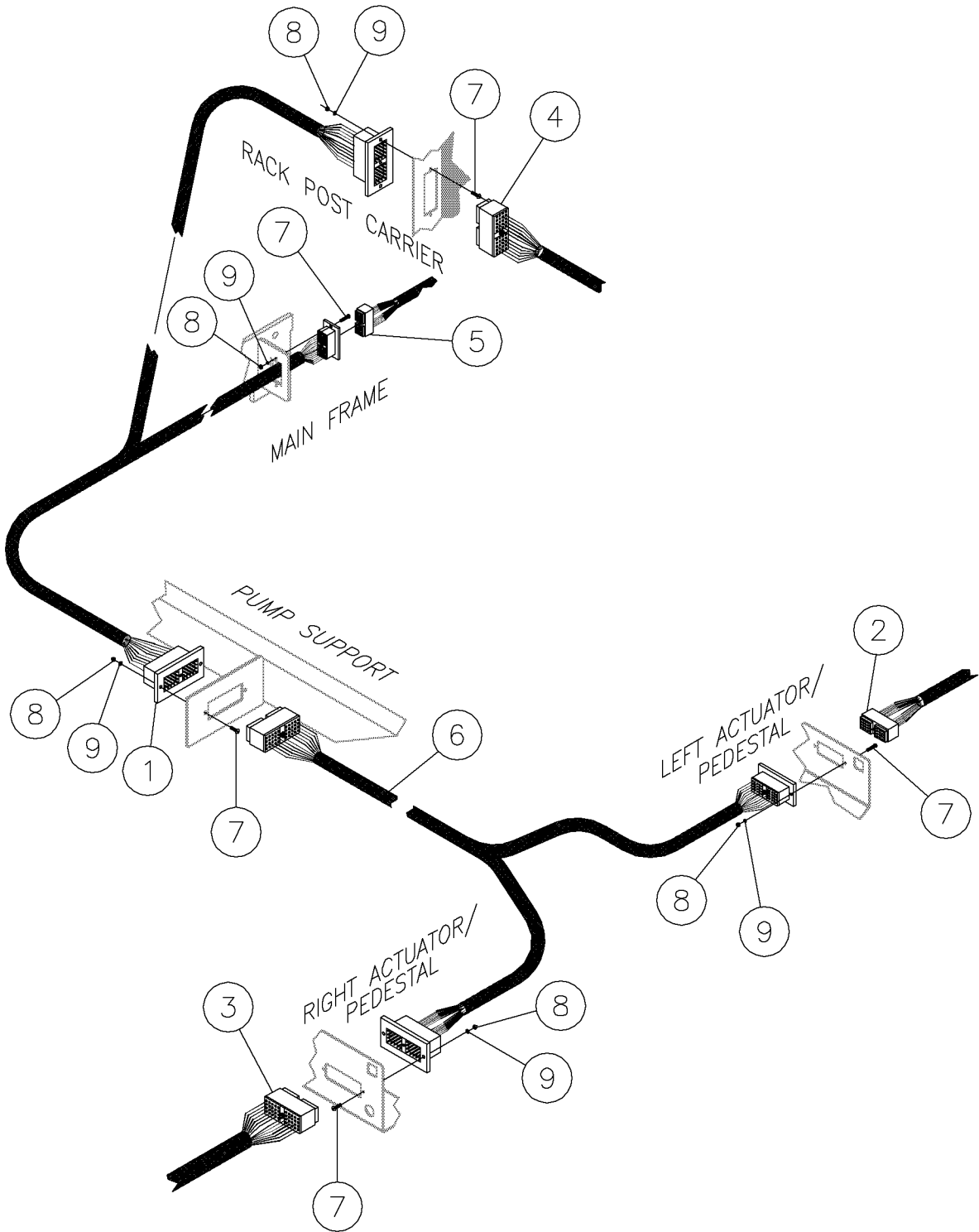
Console, Main, Rack, Engine Harness Fig 5-4r01



Console, Main, Rack, Engine Harness Fig 5-4r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	December, 2006		Repalce Connector On Harness For New Valve
1		296276006	HARNESS - MAIN - D100X120 - TIER II	1	
2		296276014	HARNESS-LEFT CONSOLE-D100X120-TEIR II	1	
3		296276013	HARNESS - RIGHT CONSOLE	1	
4	*	296276032	HARNESS-HOSE CARRIER-D100X120-TEIR II	1	S/N 142-
5		296276034	HARNESS - RACK 15 FT	1	
6		296276010	HARNESS - CONSOLE	1	
7		10530006	SCREW-#8-32X3/4 SLOT RD.HD.	10	
8		399001	NUT-8-32 HEX	10	
9		480001	WASHER-3/16 S/T LOCK REF T10253	10	

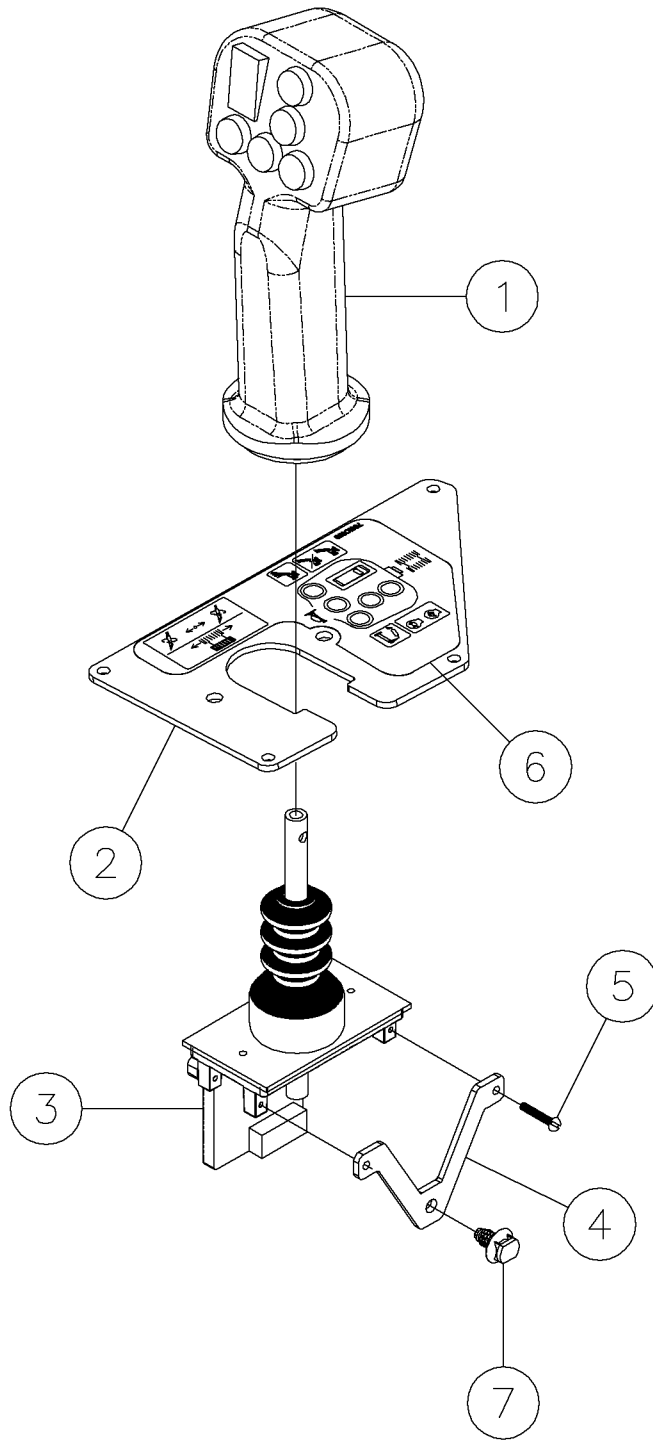
Console, Main, Rack, Engine Harness Fig 5-4



Console, Main, Rack, Engine Harness Fig 5-4

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296276006	HARNESS - MAIN - D100X120 - TIER II	1	
2		296276014	HARNESS-LEFT CONSOLE-D100X120-TEIR II	1	
3		296276013	HARNESS - RIGHT CONSOLE	1	
4		296276032	HARNESS - HOSE CARRIER 15 FT RACK	1	
5		296276034	HARNESS - RACK 15 FT	1	
6		296276010	HARNESS - CONSOLE	1	
7		10530006	SCREW-#8-32X3/4 SLOT RD.HD.	10	
8		399001	NUT-8-32 HEX	10	
9		480001	WASHER-3/16 S/T LOCK REF T10253	10	

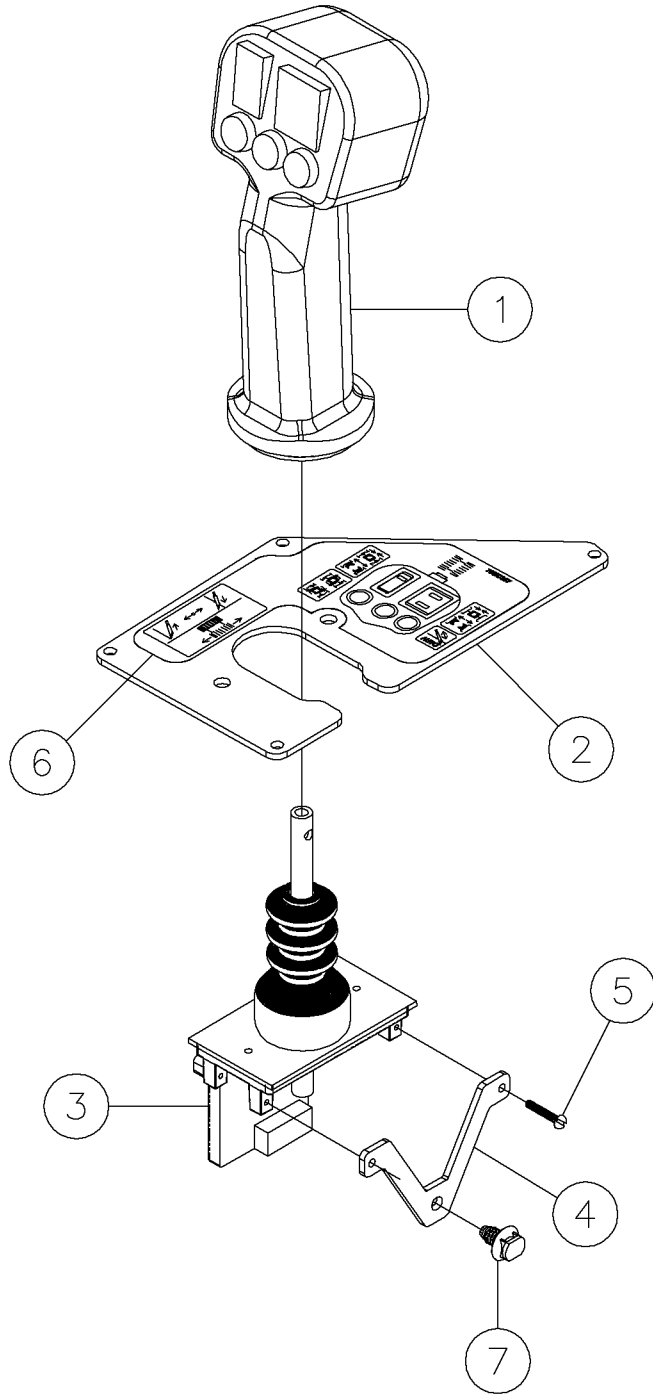
Left Joystick Fig 5-5



Left Joystick Fig 5-5

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296273907	HANDLE GRIP ASSEMBLY - LEFT JOYSTICK	1	Breakdown Fig. 13-24
2		296275951	PANEL -JOYSTICK OPERATOR STATION	1	
3		296273906	JOYSTICK- FRICTION HELD, HALL EFFECT	1	
4		296275859	GUIDE - CONTROLLER WIRES	1	
5		289110001	SCREW - 6 - 32 X 3/4 MACHINE	2	
6		700IC356	DECAL- LEFT JOYSTICK	1	
7		296276007	FIR TREE MOUNT	1	

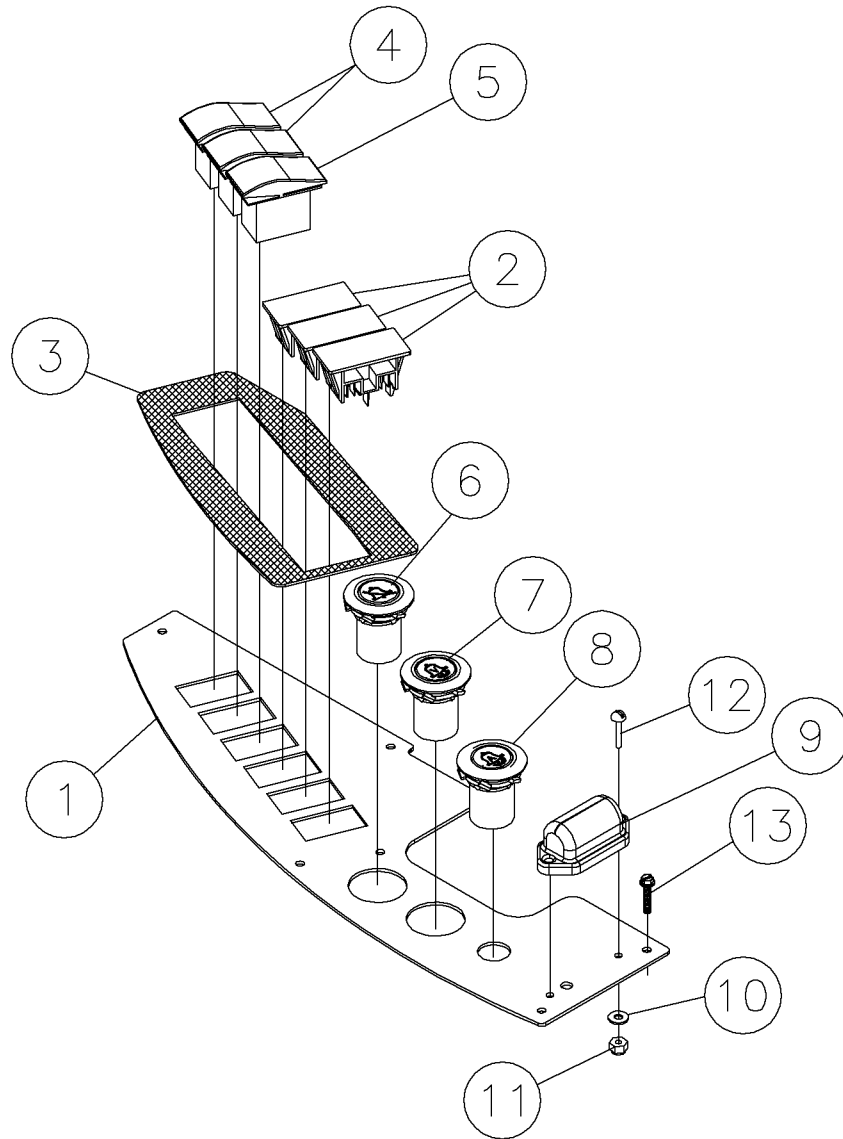
Right Joystick Fig 5-6



Right Joystick Fig 5-6

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296273908	HANDLE GRIP ASSEMBLY - RIGHT JOYSTICK	1	Breakdown Fig. 13-25
2		296275853	PANEL - JOYSTICK OPERATOR STATION	1	
3		296273906	JOYSTICK- FRICTION HELD, HALL EFFECT	1	
4		296275859	GUIDE - CONTROLLER WIRES	1	
5		289110001	SCREW - 6 - 32 X 3/4 MACHINE	2	
6		700IC357	DECAL- RIGHT JOYSTICK	1	
		296276007	FIR TREE MOUNT	1	

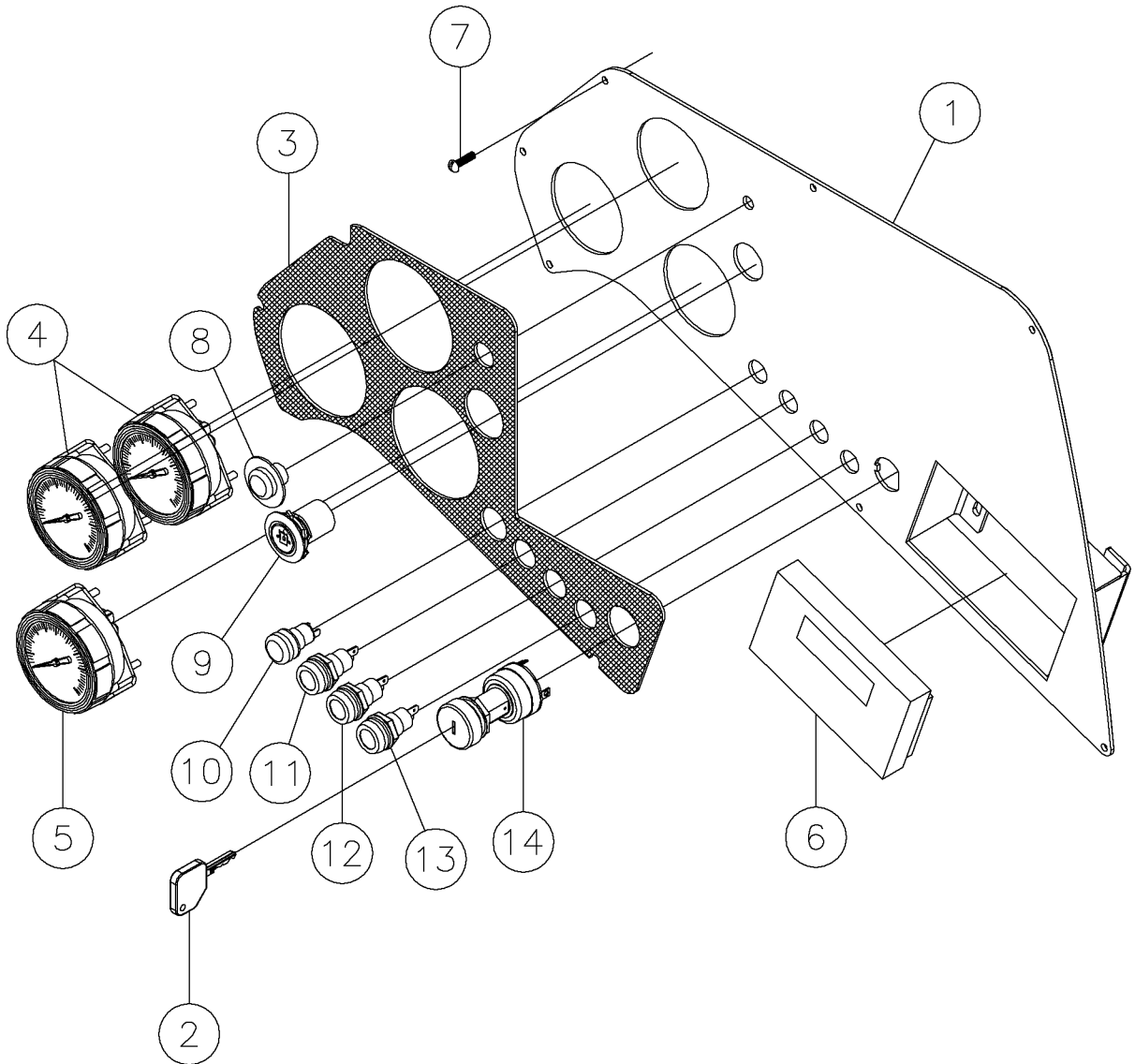
Left Operator Electrical Panel Fig 5-7



Left Operator Electrical Panel Fig 5-7

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296275673	PLATE - LEFT CONSOLE	1	
2		156720001	PLUG - ROCKER SWITCH	3	
3		700IC353	DECAL- LEFT CONTROL	1	
4		257205001	SWITCH-SP 2 POSITION	2	
5		296274146	SWITCH - SP 3 POSITION	1	
6		277697001	SWITCH - PUSH BUTTON ZAP ALERT CURRENT TEST	1	
7		277695001	SWITCH - PUSH BUTTON ZAP ALERT RESET	1	
8		277696001	SWITCH - PUSH BUTTON ZAP ALERT VOLTAGE TEST	1	
9		296256067	LIGHT - CONSOLE, M434	1	
10		224769001	WASHER-#8 FLAT	2	
11		69759001	LOCK NUT-#8-32 NYLON INSERT PL	2	
12		289110001	SCREW - 6-32 X 3/4 MACHINE	2	
13		510357010	SCREW-MCH-10-24X.75-GR2-YZ-HWH- SLOTTED	2	

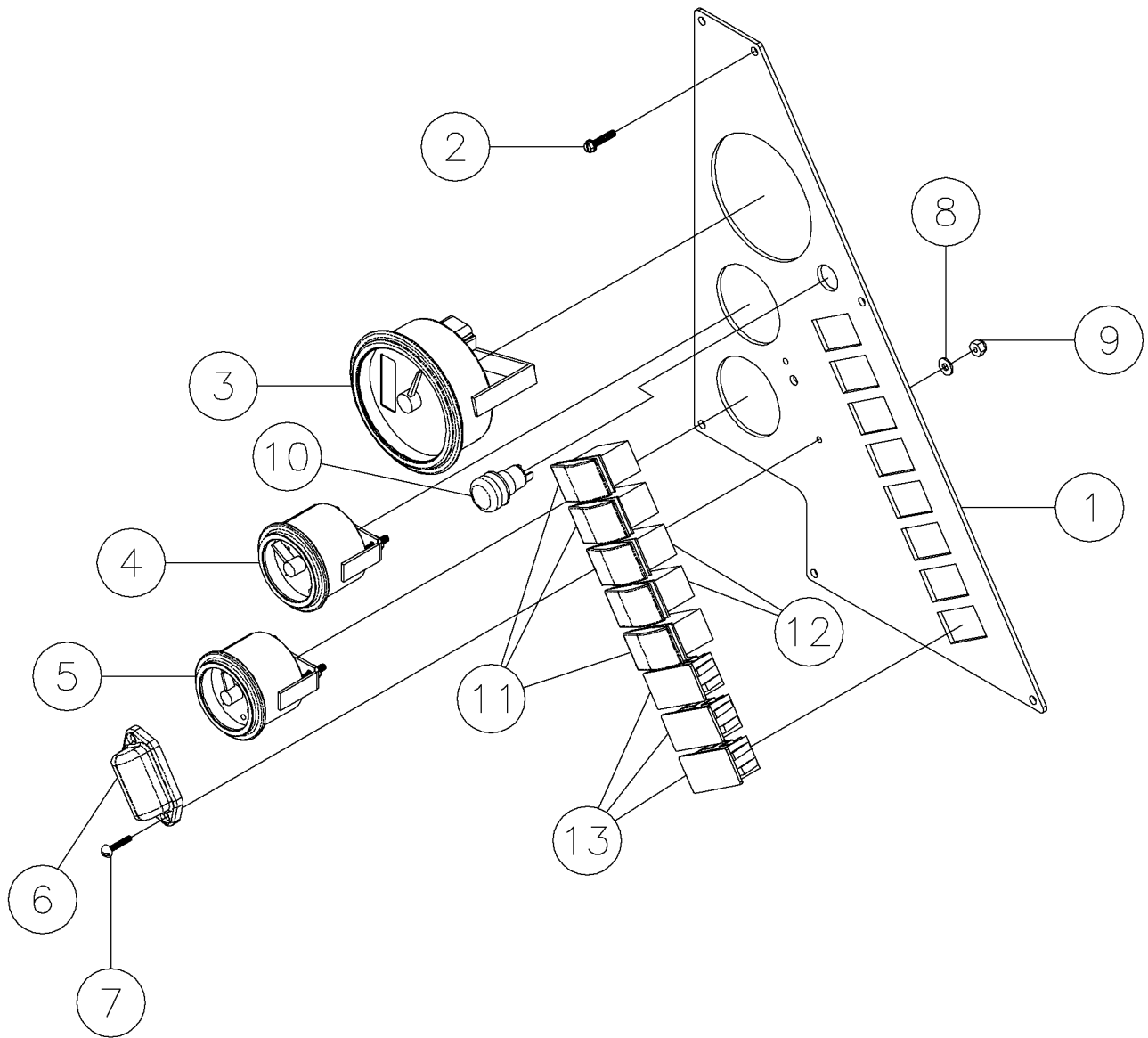
Right Upper Electrical Panel Fig 5-8



Right Upper Electrical Panel Fig 5-8

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296275558	WELD-RH PANEL-CONSOLE	1	
2		285597002	KEYS - IGNITION SWITCH (MATCHED PAIR)	1	
3		700IC355	DECAL- UPPER RIGHT CONSOLE	1	
4		289651001	GAUGE-7500 PSI - SPAN - JIC - LIGHT	2	
5		289650001	GAUGE-2000 PSI - SPAN - JIC - LIGHT	1	
6		296272343	DISPLAY - LARGE HDD	1	
7		510357010	SCREW-MCH-10-24X.75-GR2-YZ-HWH-SLOTTED	7	
8		78114001	CONTROL KNOB #409D2K1	1	
9		277699001	SWITCH - PUSH BUTTON HYDRAULIC ENABLE	1	
10		260766001	SWITCH-MOM BUTTON NO	1	
11		296275582	LIGHT - REMOTE LOCKOUT-RED	1	
12		296275583	LIGHT - REMOTE LOCKOUT - AMBER	1	
13		296275581	LIGHT - REMOTE LOCKOUT-GREEN	1	
14		285597001	SWITCH - IGNITION	1	

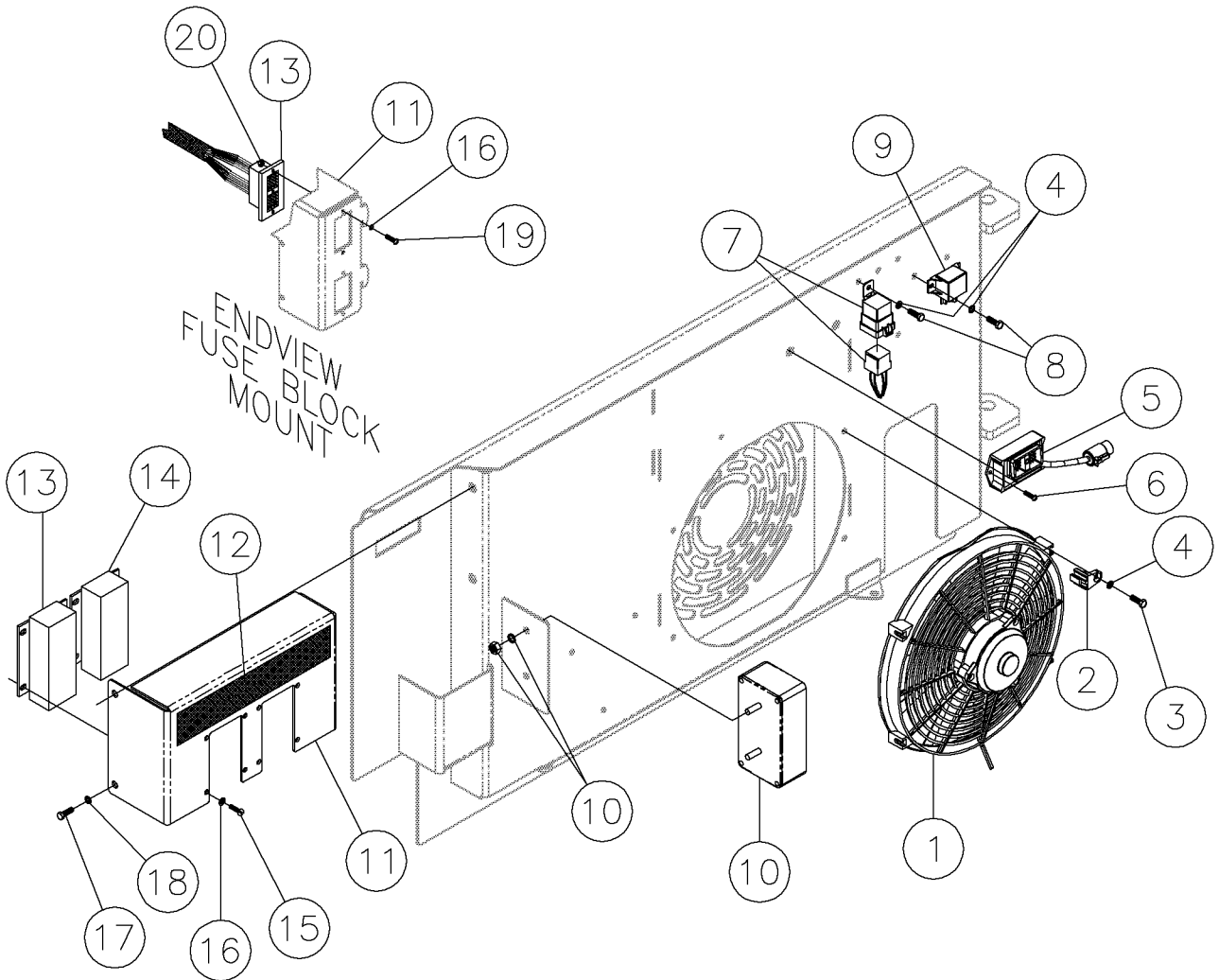
Right Lower Electrical Panel Fig 5-9



Right Lower Electrical Panel Fig 5-9

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296275564	PLATE - GUAGE	1	
2		510357010	SCREW-MCH-10-24X.75-GR2-YZ-HWH-SLOTTED	6	
3		163627173	TACHOMETER CANBUS	1	
4		296274330	GAUGE - FUEL	1	
5		296274329	GAUGE-TEMP DATCON 12V W/ DEUTSCH CONNECTR	1	
6		296256067	LIGHT - CONSOLE, M434	1	
7		289110001	SCREW - 6 - 32 X 3/4 MACHINE	2	
8		224769001	WASHER-#8 FLAT	2	
9		69759001	LOCK NUT-#8-32 NYLON INSERT PL	2	
10		260766001	SWITCH-MOM BUTTON NO	1	
11		257205001	SWITCH-SP 2 POSITION	3	
12		257543001	SWITCH-DPDT 3 POSITION MOM	2	
13		156720001	PLUG - ROCKER SWITCH	3	

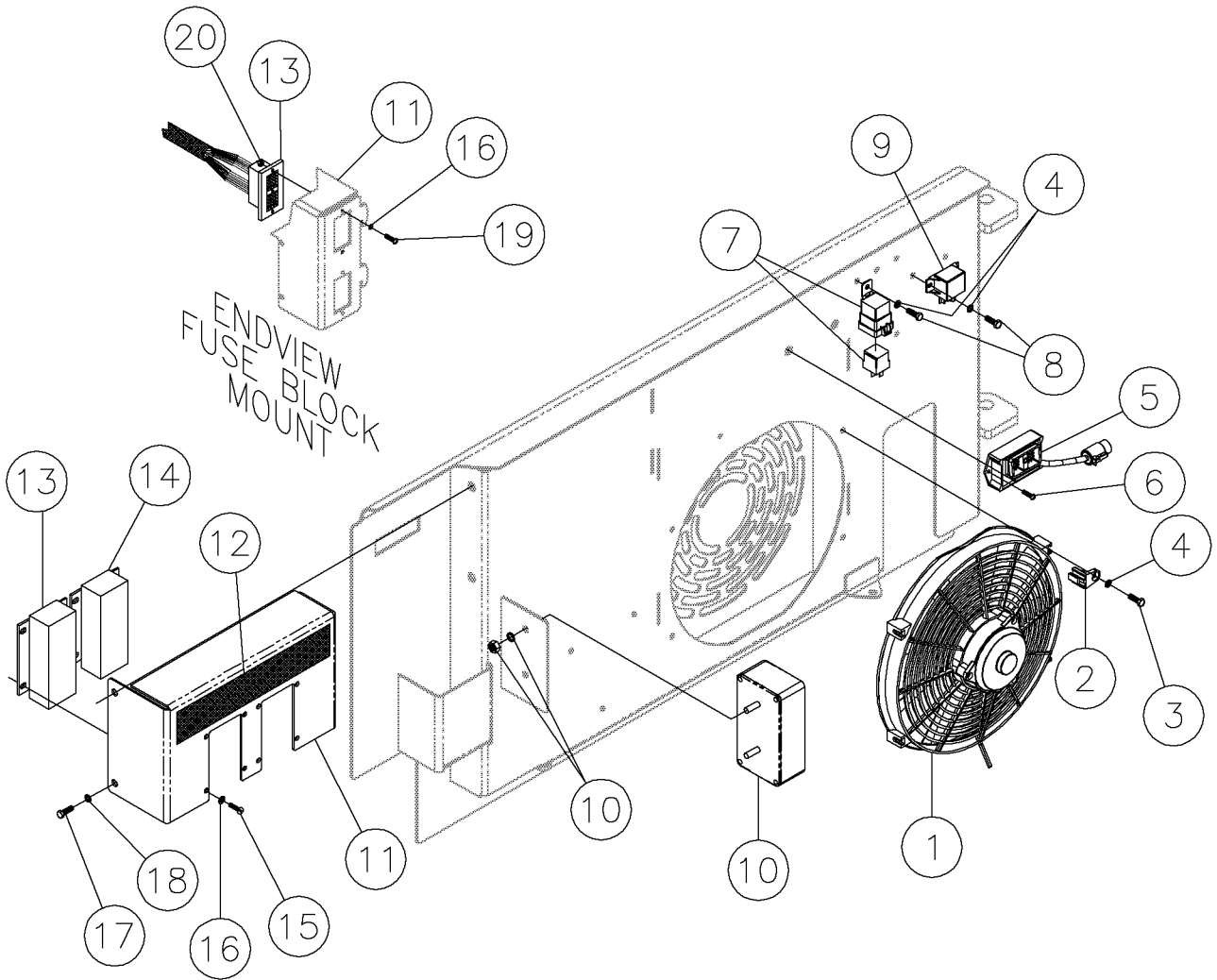
Engine Electrical Panel Fig 5-10r01



Engine Electrical Panel Fig 5-10r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	June, 2006		Update In Parts List.
1		241895001	FAN-12" SEALED ELECTRIC	1	
2		207852001	MOUNT KIT-FAN FLUSH(SET OF 4)	1	
3		235734001	BOLT-1/4-20X3/4 GR8 ZINC PLTD	4	
4		510337603	WASHER-FLATSTD-.25-.31X.75-.07-YZ	4	
5		251681001	RELAY - SEALED 40 AMP	1	
6		233502001	SCREW- #10-24X5/8 PHILLIPS PAN	2	
7		700000162	RELAY - SPDT - WEATHERPROOF/ BRACKET	4	S/N 125 & Up - applies to quantity change from 3 to 4
8		238210001	BOLT - 1/4-20X1 1/2 GR8 HEX ZYC	5	
9		86217001	RELAY-BOSCH SPST 75 AMP SEALED	1	
10		281523001	ZAP ALERT - CURRENT SENSOR	1	
11		296275983	PLATE - FUSE BLOCK MOUNT	1	
12		7000C417	DECAL - FUSE BLOCKS - D100X120 II	1	
13		296276015	HARNESS - FUSE BLOCK	1	
14		296276024	HARNESS - FUSE BLOCK 2	1	
15		1802004	BOLT-3/16"NF X 1/2" STOVE REF T16183	8	
16		485003	WASHER-1/4 FLAT	8	
17		235726001	BOLT-3/8-16X3/4 GR8 HEX ZNCPLT	2	
18		510337607	WASHER-FLATSTD-.38-.44X1.00-.08-YZ	2	
19		504543001	10-32X3/4 RH M/S ZP	4	
20		26692001	NUT-10-32 NF HEX	4	

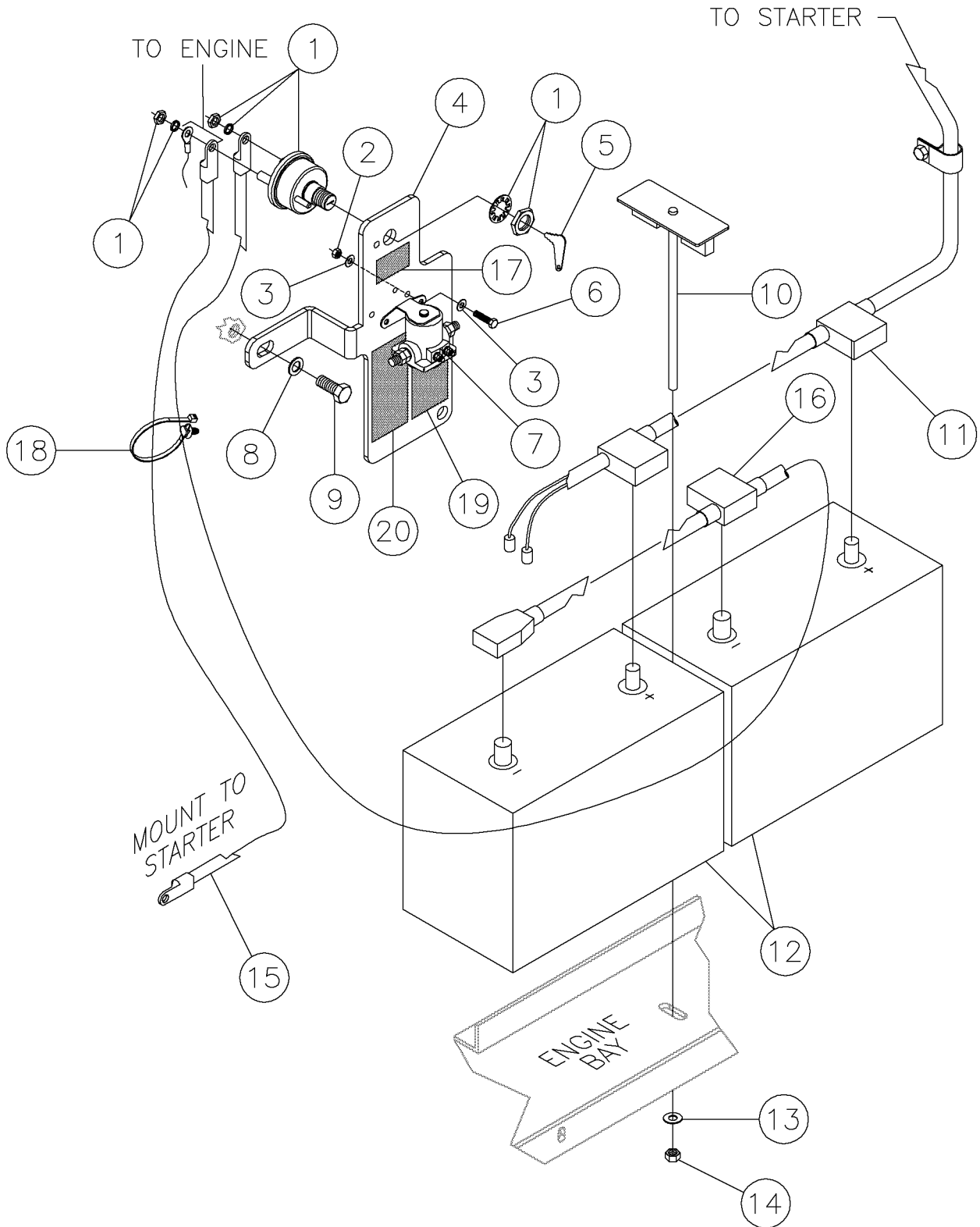
Engine Electrical Panel Fig 5-10



Engine Electrical Panel Fig 5-10

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		241895001	FAN-12" SEALED ELECTRIC	1	
2		207852001	MOUNT KIT-FAN FLUSH(SET OF 4)	1	
3		235734001	BOLT-1/4-20X3/4 GR8 ZINC PLTD	4	
4		510337603	WASHER-FLATSTD-.25-.31X.75-.07-YZ	4	
5		251681001	RELAY - SEALED 40 AMP	1	
6		233502001	SCREW- #10-24X5/8 PHILLIPS PAN	2	
7		700000162	RELAY - SPDT - WEATHERPROOF/ BRACKET	3	
8		238210001	BOLT - 1/4-20X1 1/2 GR8 HEX ZYC	5	
9		86217001	RELAY-BOSCH SPST 75 AMP SEALED	1	
10		281523001	ZAP ALERT - CURRENT SENSOR	1	
11		296275983	PLATE - FUSE BLOCK MOUNT	1	
12		7000C417	DECAL - FUSE BLOCKS - D100X120 II	1	
13		296276015	HARNESS - FUSE BLOCK	1	
14		296276024	HARNESS - FUSE BLOCK 2	1	
15		1802004	BOLT-3/16"NF X 1/2" STOVE REF T16183	8	
16		485003	WASHER-1/4 FLAT	8	
17		235726001	BOLT-3/8-16X3/4 GR8 HEX ZNCPLT	2	
18		510337607	WASHER-FLATSTD-.38-.44X1.00-.08-YZ	2	
19		504543001	10-32X3/4 RH M/S ZP	4	
20		26692001	NUT-10-32 NF HEX	4	

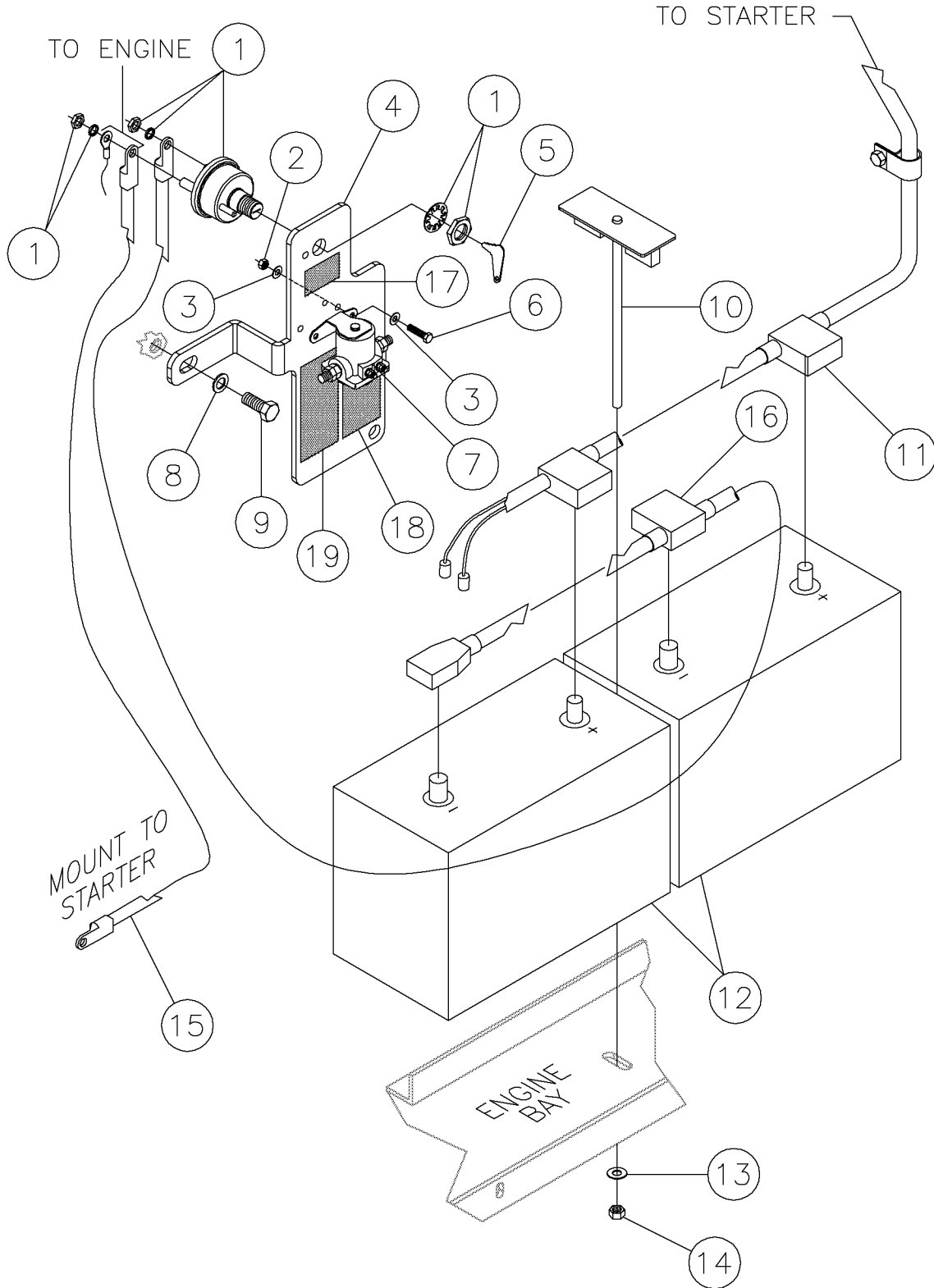
Battery Fig 5-11r01



Battery Fig 5-11r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	June, 2006		Update In Illustration & Parts List.
1		904365001	DISCONNECT SWITCH	1	
2		235741001	NUT - HEX - .31 - 18 - GR8 -YZ	2	
3		510337605	WASHER-FLATSTD-.31-.38X.88-.08-YZ	4	
4		296275996	PLATE - BATTERY DISCONNECT	1	
5		87356003	KEY	1	
6		235742001	BOLT-5/16-18X3/4 GR8 ZINC PLTD	2	
7		81947001	RELAY - STARTER D20F-11450-AA	1	
8		510337615	WASHER-FLATSTD-.63-.69X1.75-.14-YZ	2	
9		244211001	BOLT-5/8-11X1 GR8 HEX ZINC PLTD	2	
10		296275850	SUB BATTERY PLATE	1	
11		296276016	CABLE - POS BATTERY	1	
12		91547001	BATT. GROUP 31 950CCA	2	
13		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	1	
14		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	1	
15		296276027	CABLE - NEG BATTERY	1	
16		296276030	CABLE-NEGATIVE BATTERY	1	
17		700IA477	DECAL_BATTERY SWITCH (UG)	1	
18		296276007	FIR TREE MOUNT		
19		7000C446	DECAL - NO WELD	1	Domestic
		700IC446	DECAL - NO WELD	1	Internantional
20		70000044	DECAL-WARNING(AT/UND)	1	Domestic
		7000I044	DECAL-WARNING	1	Internantional

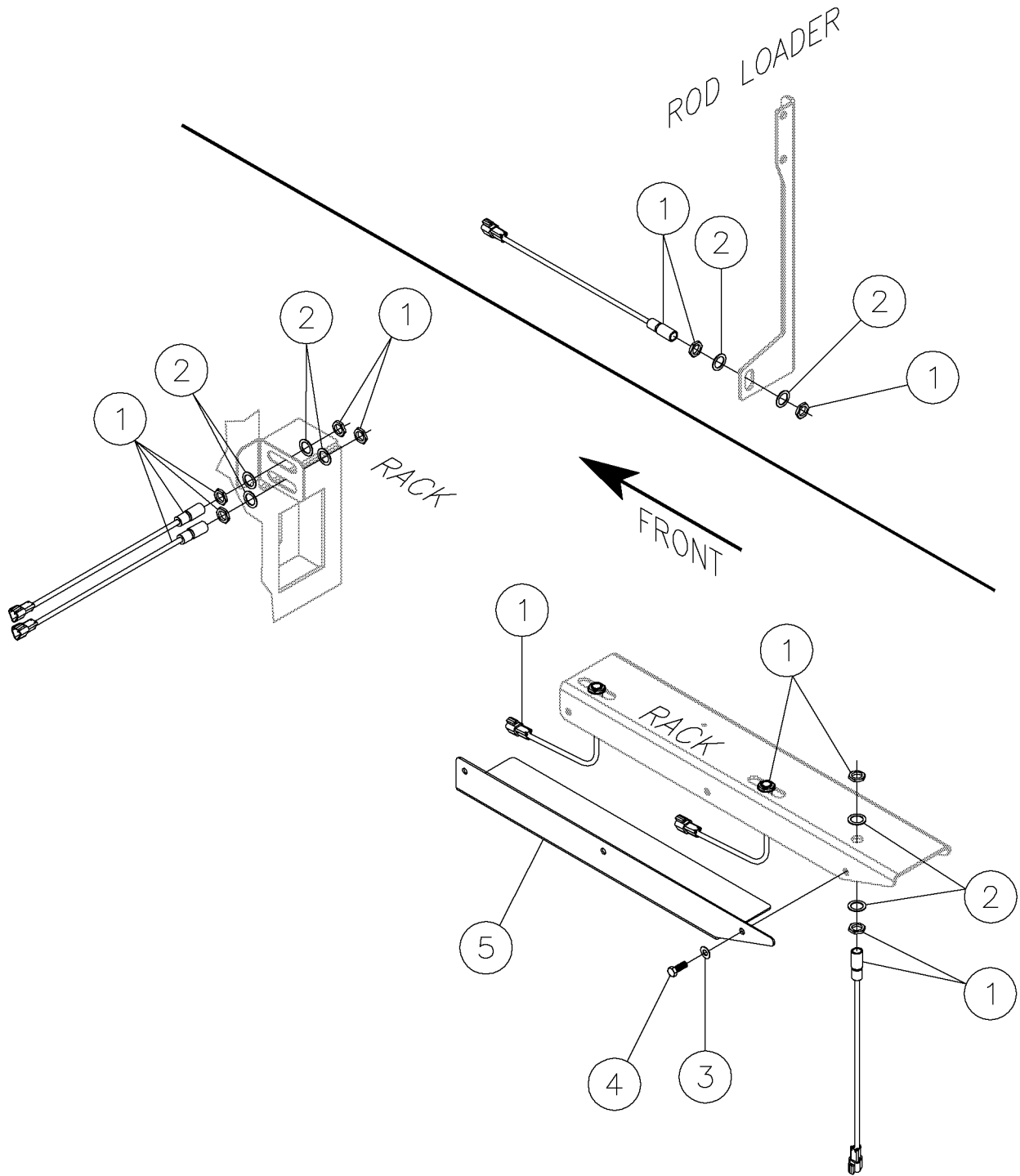
Battery Fig 5-11



Battery Fig 5-11

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		904365001	DISCONNECT SWITCH	1	
2		235741001	NUT - HEX - .31 - 18 - GR8 - YZ	2	
3		510337605	WASHER-FLATSTD-.31-.38X.88-.08-YZ	4	
4		296275996	PLATE - BATTERY DISCONNECT	1	
5		87356003	KEY	1	
6		235742001	BOLT-5/16-18X3/4 GR8 ZINC PLTD	2	
7		81947001	RELAY - STARTER D20F-11450-AA	1	
8		510337615	WASHER-FLATSTD-.63-.69X1.75-.14-YZ	2	
9		244211001	BOLT-5/8-11X1 GR8 HEX ZINC PLTD	2	
10		296275850	SUB BATTERY PLATE	1	
11		296276016	CABLE - POS BATTERY	1	
12		91547001	BATT. GROUP 31 950CCA	2	
13		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	1	
14		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	1	
15		296276027	CABLE - NEG BATTERY	1	
16		296276030	CABLE-NEGATIVE BATTERY	1	
17		700IA477	DECAL_BATTERY SWITCH (UG)	1	
18		7000C446	DECAL - NO WELD	1	Domestic
		700IC446	DECAL - NO WELD	1	Internantional
19		70000044	DECAL-WARNING(AT/UND)	1	Domestic
		7000I044	DECAL-WARNING	1	Internantional

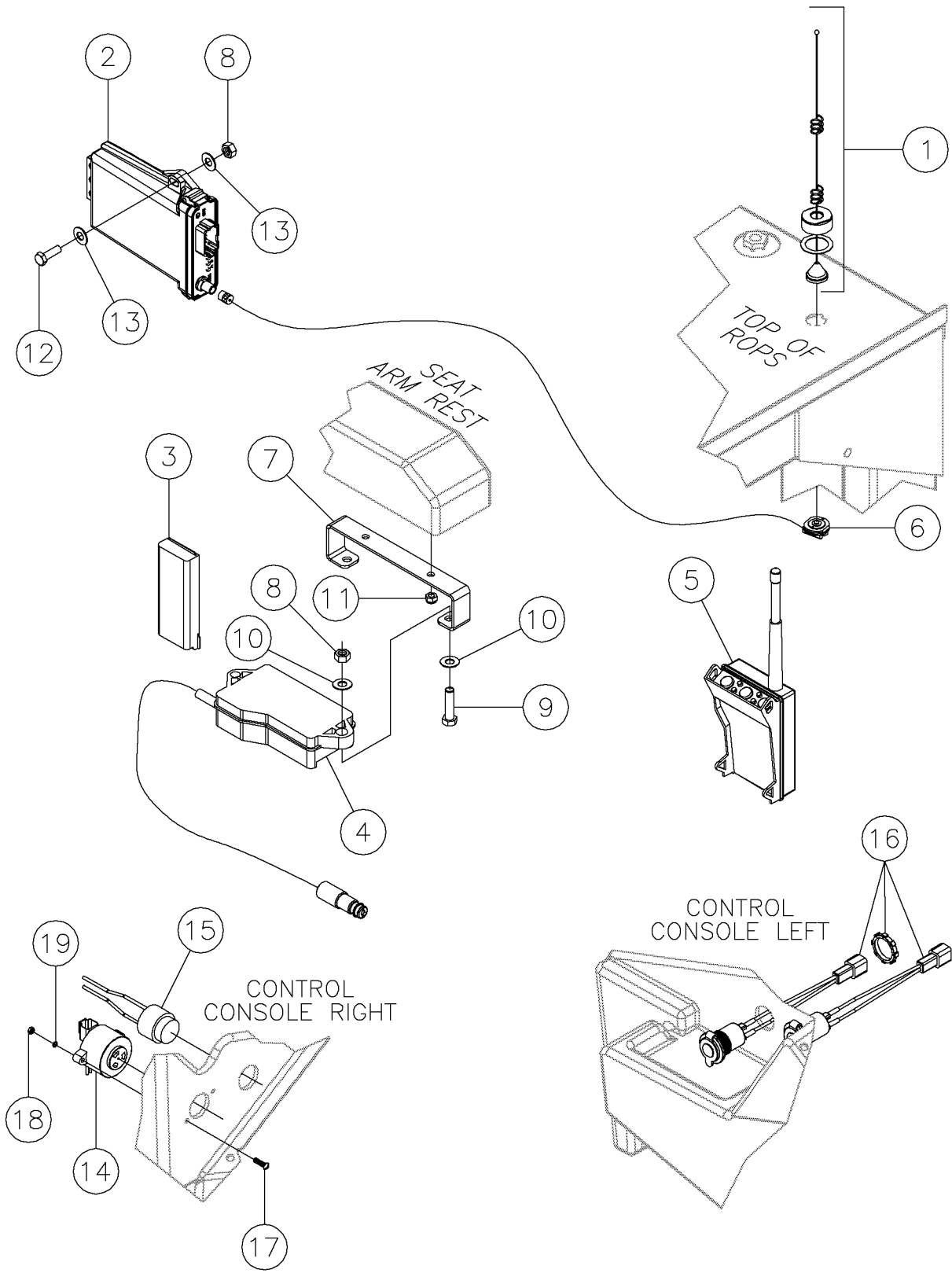
Rack Switch Proximity Fig 5-12



Rack Switch Proximity Fig 5-12

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296272091	SWITCH - PROXIMITY 18MM NO	6	
2		483051	WASHER-1.125ODX.765IDX18GA.	12	
3		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	3	
4		235726001	BOLT-3/8-16X3/4 GR8 HEX ZNCPLT	3	
5		296273952	COVER - RACK PPU BANK	1	

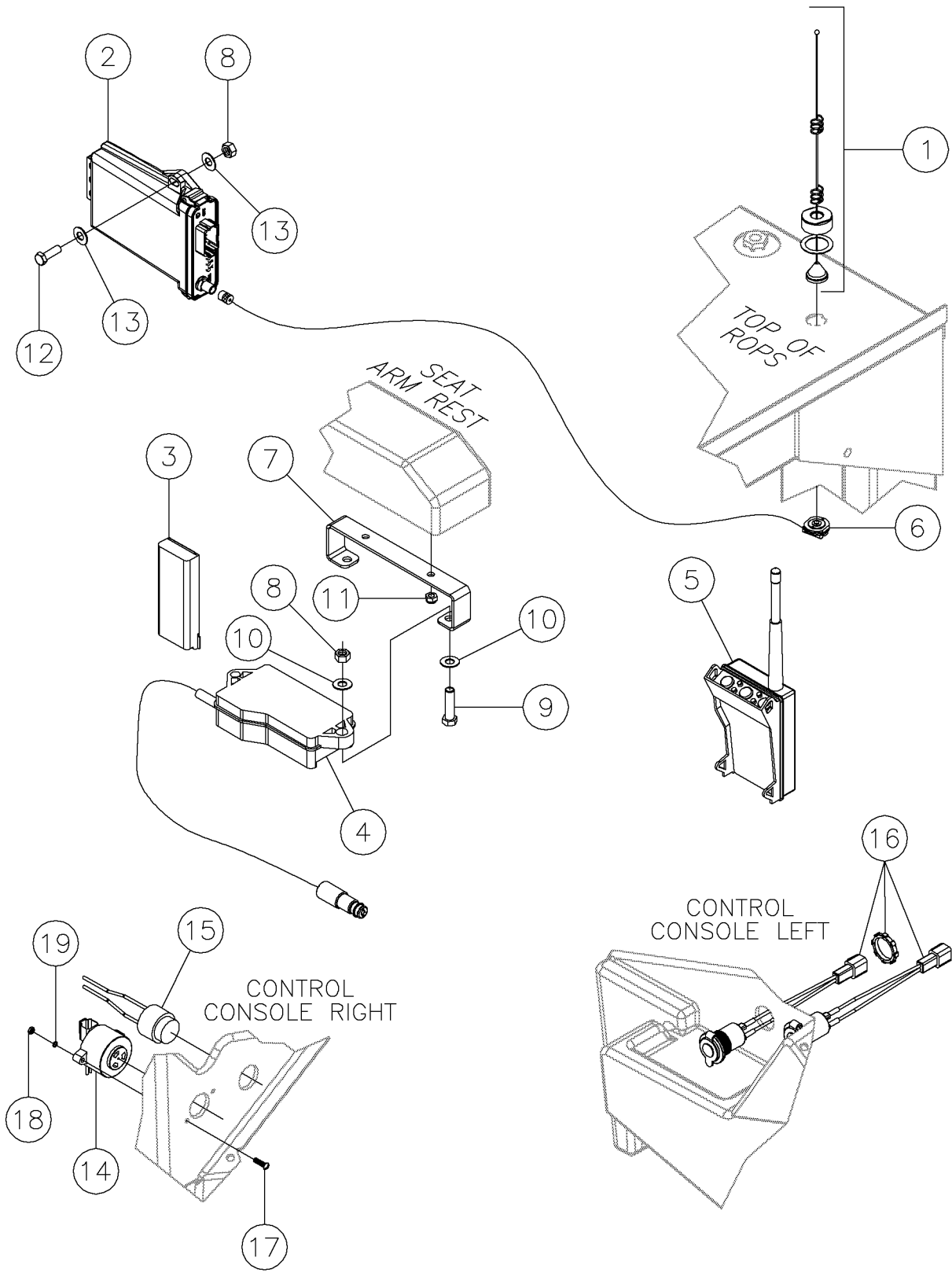
Remote Lockout Electrical (S/N 145-) Fig 5-13r02



Remote Lockout Electrical (S/N 145-) Fig 5-13r02

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2007		Change P/N
1		296272364	ANTENNA -915 MHZ, 3 dBI, 1/4 WAVE	1	
2		296272506	B309LK2, CAN DOM	1	
3		296272400	BATTERY - 1000MA NBB	1	
4		296272392	CHARGER, 12-VOLT NBB	1	
5		296272303	ASM - R309LK FOR HDD	1	
6		296272366	MOUTN - ANTENNA MOTOROLA TYPE RG-58	1	
7		296275585	BRACKET - REMOTE LOCKOUT	1	
8		235741001	NUT - HEX - .31 - 18 - GR8 -YZ	5	
9		279376001	BOLT - 5/16-18X1 1/2 GR8 HEX ZNC PLT	2	
10		485005	WASHER-5/16 FLAT REF T04106	4	
11		103201001	NUT-1/4-20NC NYLON INSERT LOCK	2	
12		238209001	BOLT-5/16-18X1 GR8 HEX ZINC YC	3	
13		235714001	WASHER-FLATSTRL-.31-.34X.69-.06-YZ-A325	6	
14	*	296292078	HORN - ZAP ALERT DEUTSCH 2 PIN	1	(S/N 145-)
15		286920001	REMOTE LOCKOUT BUZZER	1	
16		154677001	OUTLET - 12 VOLT	2	
17		905001001	BOLT-8-32 X 2 STOVE	2	
18		399001	NUT-8-32 HEX	2	
19		480001	WASHER-3/16 S/T LOCK	2	

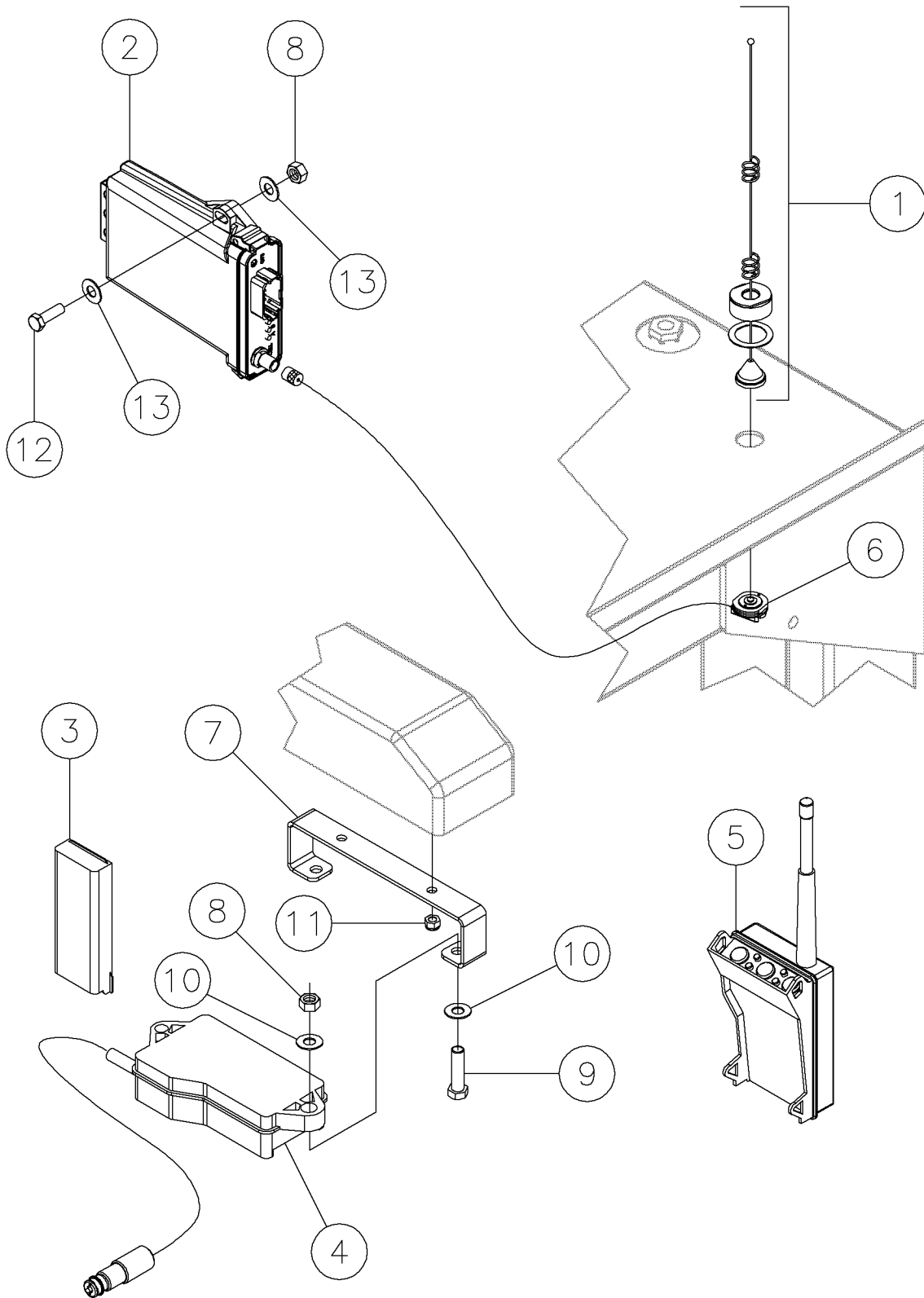
Remote Lockout Electrical Fig 5-13r01



Remote Lockout Electrical Fig 5-13r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2006		Update In Illustration & Parts List.
1		296272364	ANTENNA -915 MHZ, 3 dBI, 1/4 WAVE	1	
2		296272506	B309LK2, CAN DOM	1	
3		296272400	BATTERY - 1000MA NBB	1	
4		296272392	CHARGER, 12-VOLT NBB	1	
5		296272303	ASM - R309LK FOR HDD	1	
6		296272366	MOUTN - ANTENNA MOTOROLA TYPE RG-58	1	
7		296275585	BRACKET - REMOTE LOCKOUT	1	
8		235741001	NUT - HEX - .31 - 18 - GR8 -YZ	5	
9		279376001	BOLT - 5/16-18X1 1/2 GR8 HEX ZNC PLT	2	
10		485005	WASHER-5/16 FLAT REF T04106	4	
11		103201001	NUT-1/4-20NC NYLON INSERT LOCK	2	
12		238209001	BOLT-5/16-18X1 GR8 HEX ZINC YC	3	
13		235714001	WASHER - FLATSTRL - .31 - .34 X .69 - .06-YZ-A325	6	
14		285617001	HORN - ZAP ALERT 2 PIN DEUTSCH	1	
15		286920001	REMOTE LOCKOUT BUZZER	1	
16		154677001	OUTLET - 12 VOLT	2	
17		905001001	BOLT-8-32 X 2 STOVE	2	
18		399001	NUT-8-32 HEX	2	
19		480001	WASHER-3/16 S/T LOCK	2	

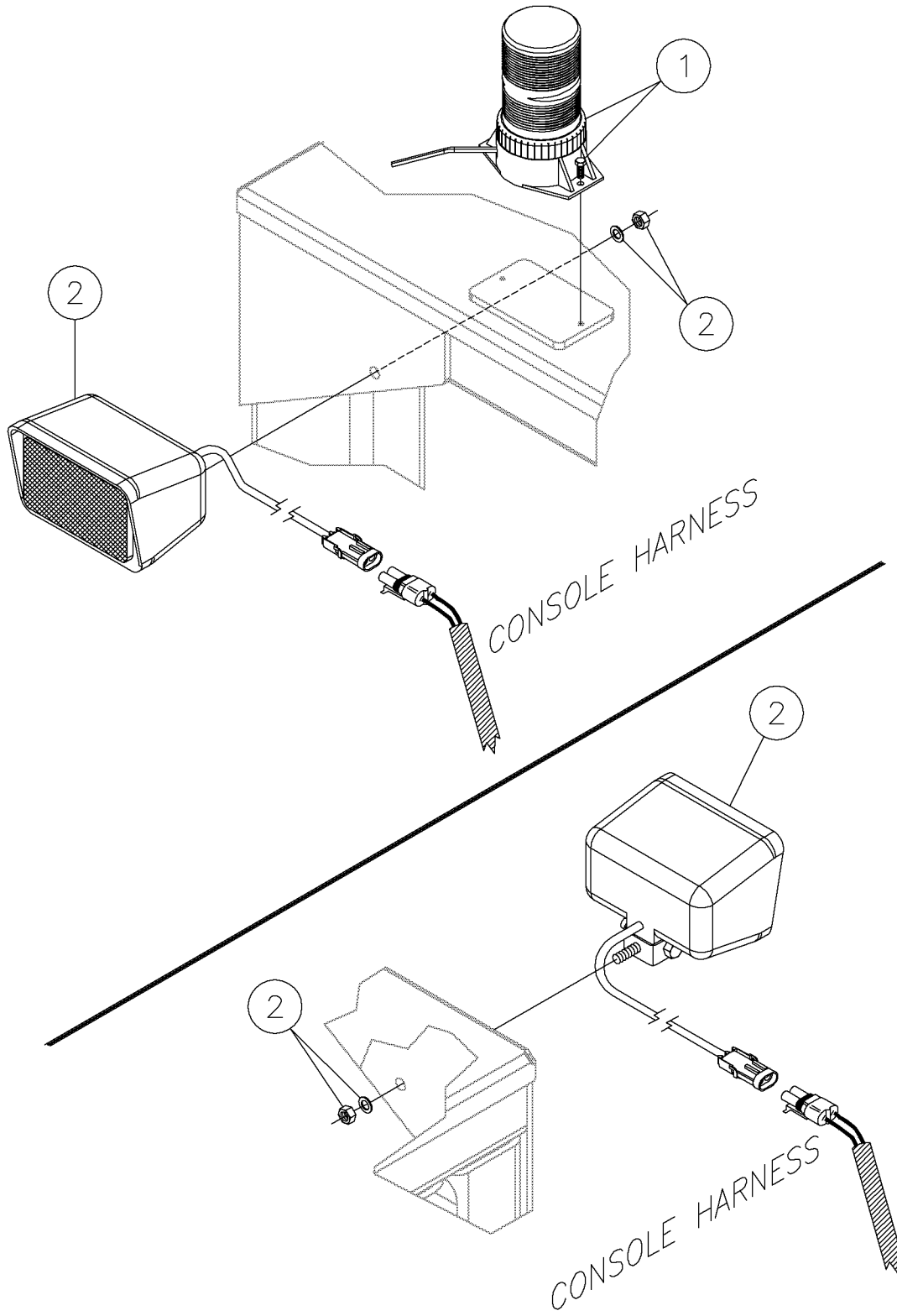
Remote Lockout Electrical Fig 5-13



Remote Lockout Electrical Fig 5-13

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296272364	ANTENNA -915 MHZ, 3 dBI, 1/4 WAVE	1	
2		296272506	B309LK2, CAN DOM	1	
3		296272400	BATTERY - 1000MA NBB	1	
4		296272392	CHARGER, 12-VOLT NBB	1	
5		296272303	ASM - R309LK FOR HDD	1	
6		296272366	MOUTN - ANTENNA MOTOROLA TYPE RG-58	1	
7		296275585	BRACKET - REMOTE LOCKOUT	1	
8		235741001	NUT - HEX - .31 - 18 - GR8 -YZ	5	
9		279376001	BOLT - 5/16-18X1 1/2 GR8 HEX ZNC PLT	2	
10		485005	WASHER-5/16 FLAT REF T04106	4	
11		103201001	NUT-1/4-20NC NYLON INSERT LOCK	2	
12		238209001	BOLT-5/16-18X1 GR8 HEX ZINC YC	3	
13		235714001	WASHER - FLATSTRL - .31 - .34 X .69 - .06-YZ-A325	6	

Worklight /Light Switch Fig 5-14

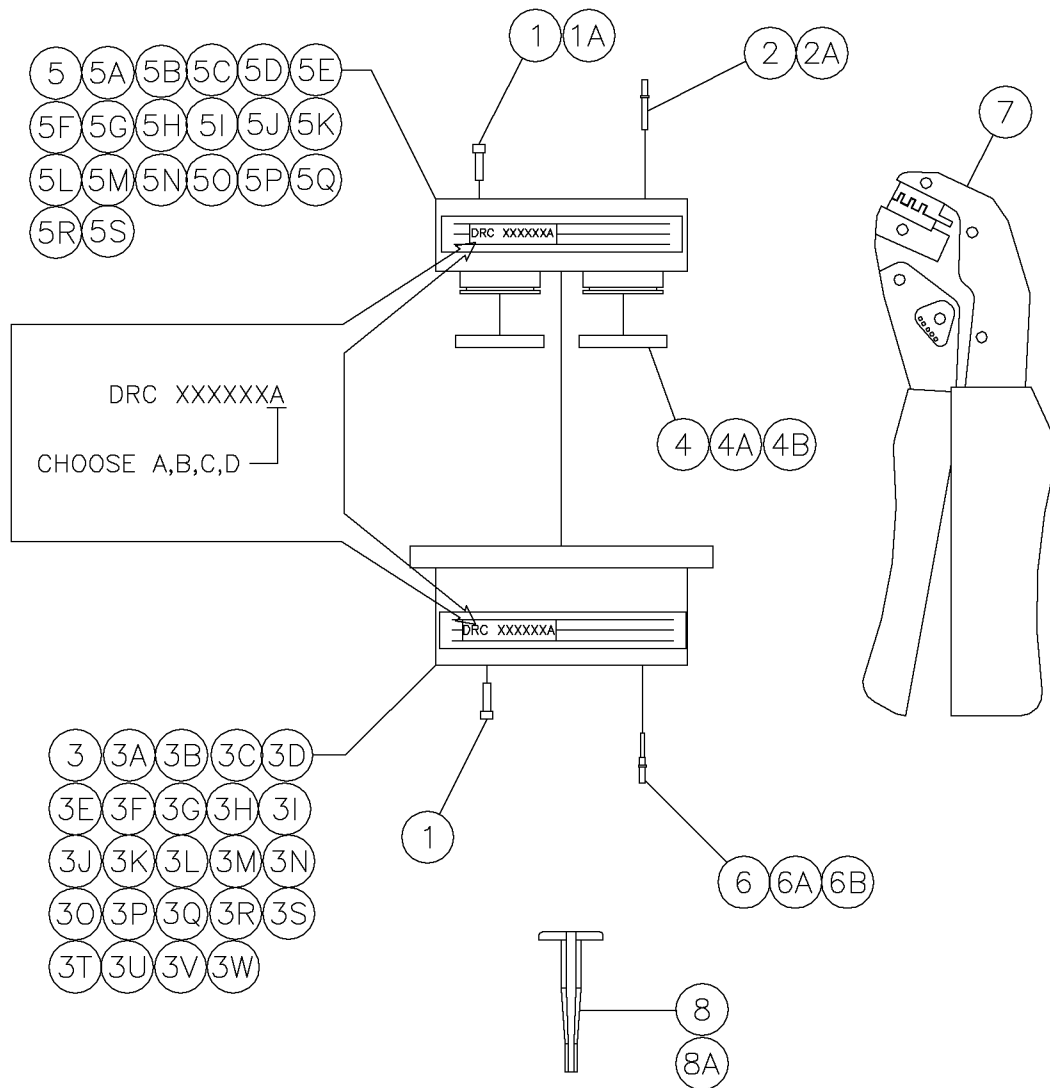


Worklight /Light Switch Fig 5-14

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		404090001	MINI YELLOW STROBE	1	Supplied Hardwares Included
2		245006001	ASSEMBLY-3X5 FLOOD LIGHT	1	Supplied Hardwares Included

DRC Series Connectors Fig 5-15

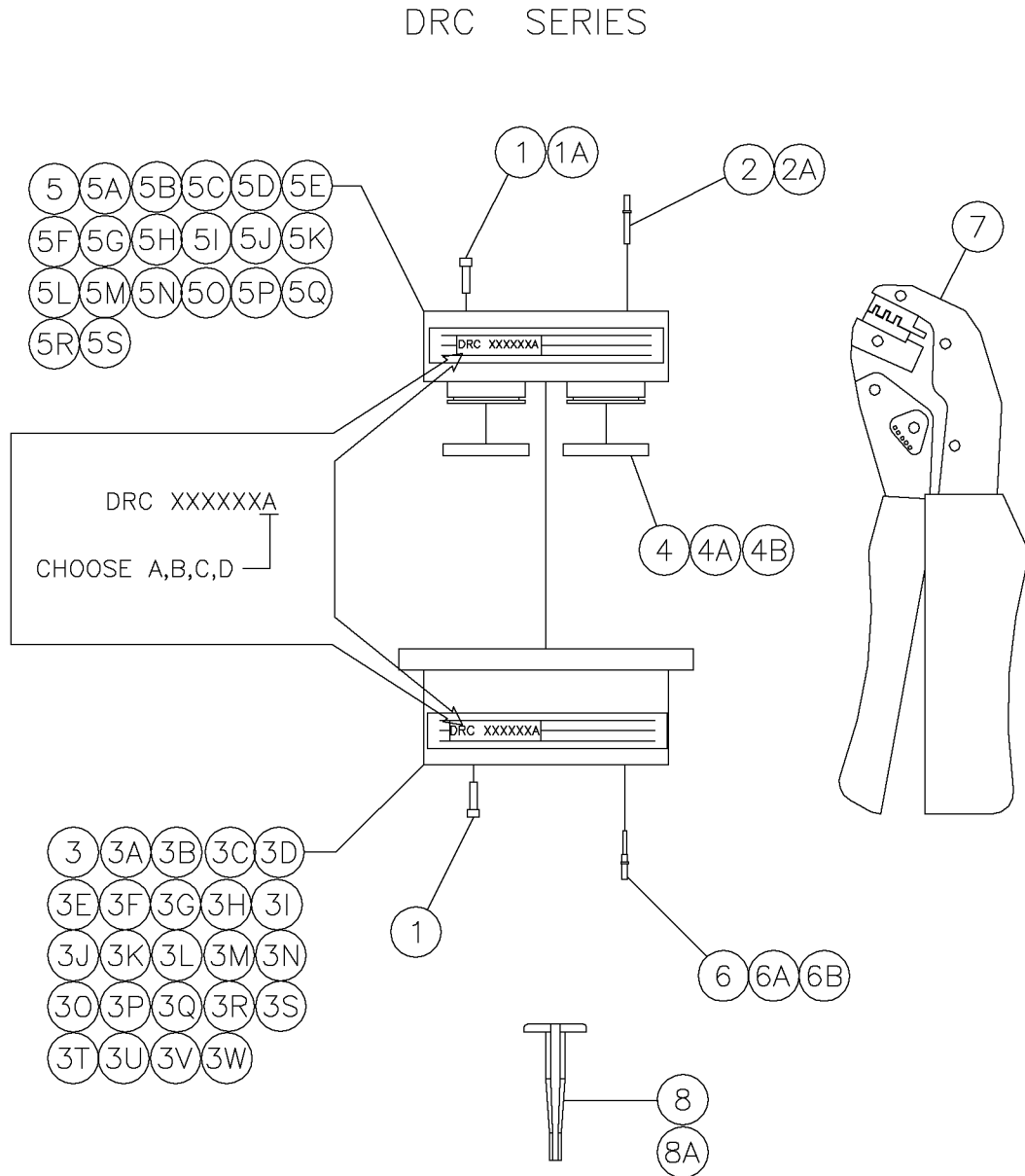
DRC SERIES



DRC Series Connectors Fig 5-15

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		276906001	PLUG - SEALING (20)		
1A		94201001	PLUG - SEALING (12-16)		
2		91354001	SOCKET - 16/18 GA.		
2A		276916001	SOCKET - 20 GA.		
2B		276894001	RECEPTACLE - 24 PIN INLINE (A)		
3		276894001	RECEPTACLE - 24 PIN INLINE (A)		
3A		276907001	RECEPTACLE - 24 PIN INLINE (B)		
3B		276917001	RECEPTACLE - 24 PIN INLINE (C)		
3C		276918001	RECEPTACLE - 24 PIN INLINE (D)		
3D		276895001	RECEPTACLE - 24 IN FLNG MNT (A)		
3E		276908001	RECEPTACLE - 24 PIN FLNG MNT (B)		
3F		276919001	RECEPTACLE - 24 PIN FLNG MNT (C)		
3G		276920001	RECEPTACLE - 24 PIN FLNG MNT (D)		
3H		276896001	RECEPTACLE - 40 PIN INLINE (A)		
3I		276909001	RECEPTACLE - 40 PIN INLINE (B)		
3J		276921001	RECEPTACLE - 40 PIN INLINE (C)		
3K		276922001	RECEPTACLE - 40 PIN INLINE (D)		
3L		276897001	RECEPTACLE - 40 PIN FLNG MNT (A)		
3M		276910001	RECEPTACLE - 40 PIN FLNG MNT (B)		
3N		276923001	RECEPTACLE - 40 PIN FLNG MNT (C)		
3O		276924001	RECEPTACLE - 40 PIN FLNG MNT (D)		
3P		276898001	RECEPTACLE - 70 PIN INLINE (A)		
3R		276925001	RECEPTACLE - 70 PIN INLINE (C)		
3S		276926001	RECEPTACLE - 70 PIN INLINE (D)		
3T		276899001	RECEPTACLE - 70 PIN FLNG MNT (A)		
3U		276912001	RECEPTACLE - 70 PIN FLNG MNT (B)		
3V		276927001	RECEPTACLE - 70 PIN FLNG MNT (C)		
3W		276928001	RECEPTACLE - 70 PIN FLNG MNT (D)		
4		276900001	GASKET - 24 PIN INTERFACE		
4A		276901001	GASKET - 40 PIN INTERFACE		
4B		276902001	GASKET - 70 PIN INTERFACE		
			Continued On Next Pages		

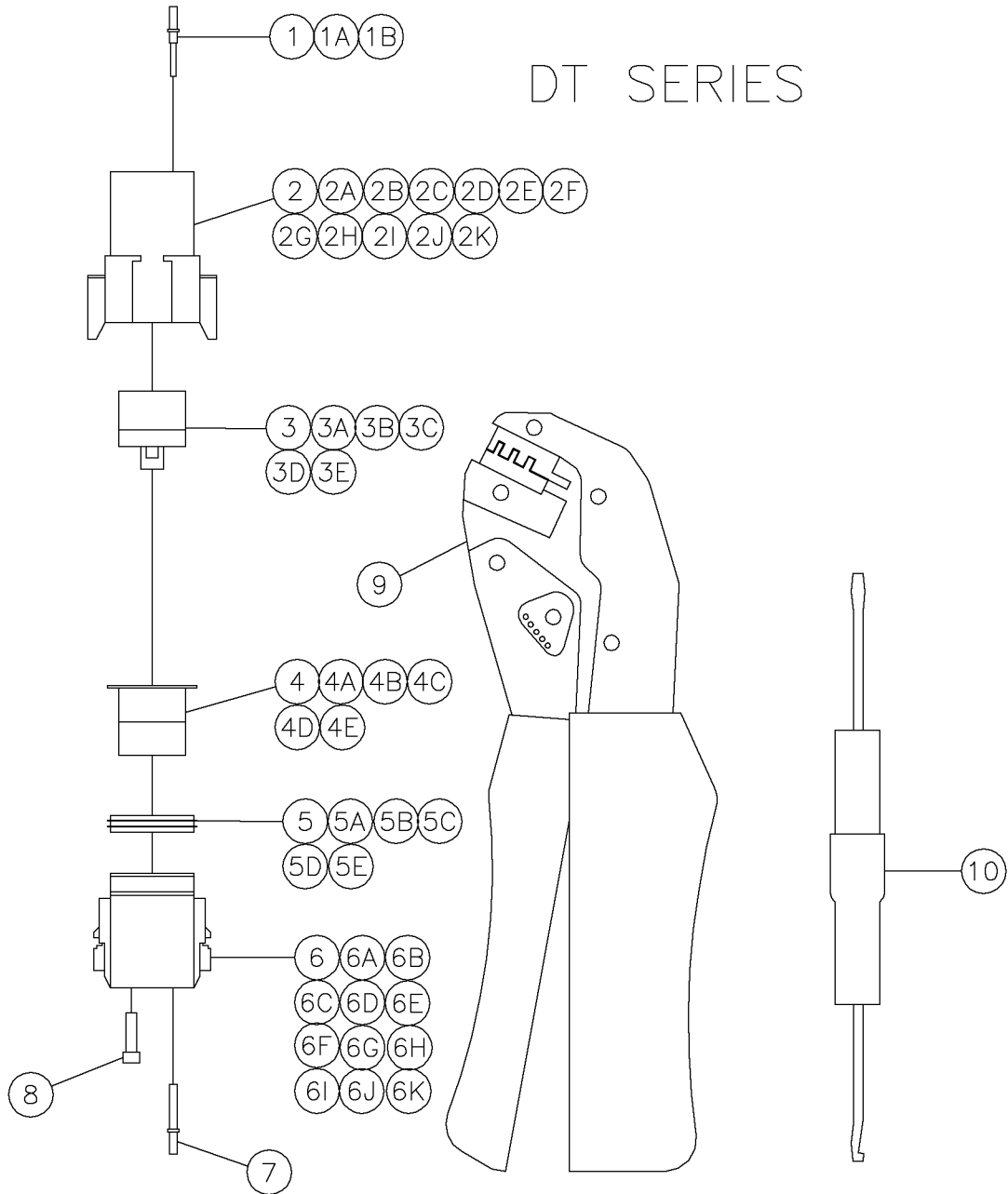
DRC Series Connectors (Continued) Fig 5-15



DRC Series Connectors (Continued) Fig 5-15

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
5		276931001	PLUG - 24 PIN (SIZE 20 CONTACTS) (A)		
5A		276932001	PLUG - 24 PIN (SIZE 20 CONTACTS)		
5B		276933001	PLUG - 24 PIN (SIZE 20 CONTACTS) (C)		
5C		276934001	PLUG - 24 PIN (SIZE 20 CONTACTS) (D)		
5D		276939001	PLUG - 40 PIN (SIZE 20 CONTACTS) (A)		
5E		276940001	PLUG - 40 PIN (SIZE 20 CONTACTS) (B)		
5F		276941001	PLUG - 40 PIN (SIZE 20 CONTACTS) (C)		
5G		276942001	PLUG - 40 PIN (SIZE 20 CONTACTS) (D)		
5H		276903001	PLUG - 24 PIN (A)		
5I		276913001	PLUG - 24 PIN (B)		
5J		276929001	PLUG - 24 PIN (C)		
5K		276930001	PLUG - 24 PIN (D)		
5L		276904001	PLUG - 40 PIN (A)		
5M		276914001	PLUG - 40 PIN (B)		
5N		276935001	PLUG - 40 PIN (C)		
5O		276936001	PLUG - 40 PIN (D)		
5P		276905001	PLUG - 70 PIN (A)		
5Q		276915001	PLUG - 70 PIN (B)		
5R		276937001	PLUG - 70 PIN (C)		
5S		276938001	PLUG - 70 PIN (D)		
6		276866001	PIN - 14/16 GA.		
6A		87696001	PIN-16/18 GA.		
6B		276951001	PIN - (20 GA.)		
7		286553001	TOOL - DEUTSCH CRIMPING (FIELD)		
8		276892001	TOOL - 16/18 GA. EXTRACTOR (BLUE)		
8A		276893001	TOOL - 20/24 GA. EXTRACTOR (RED)		

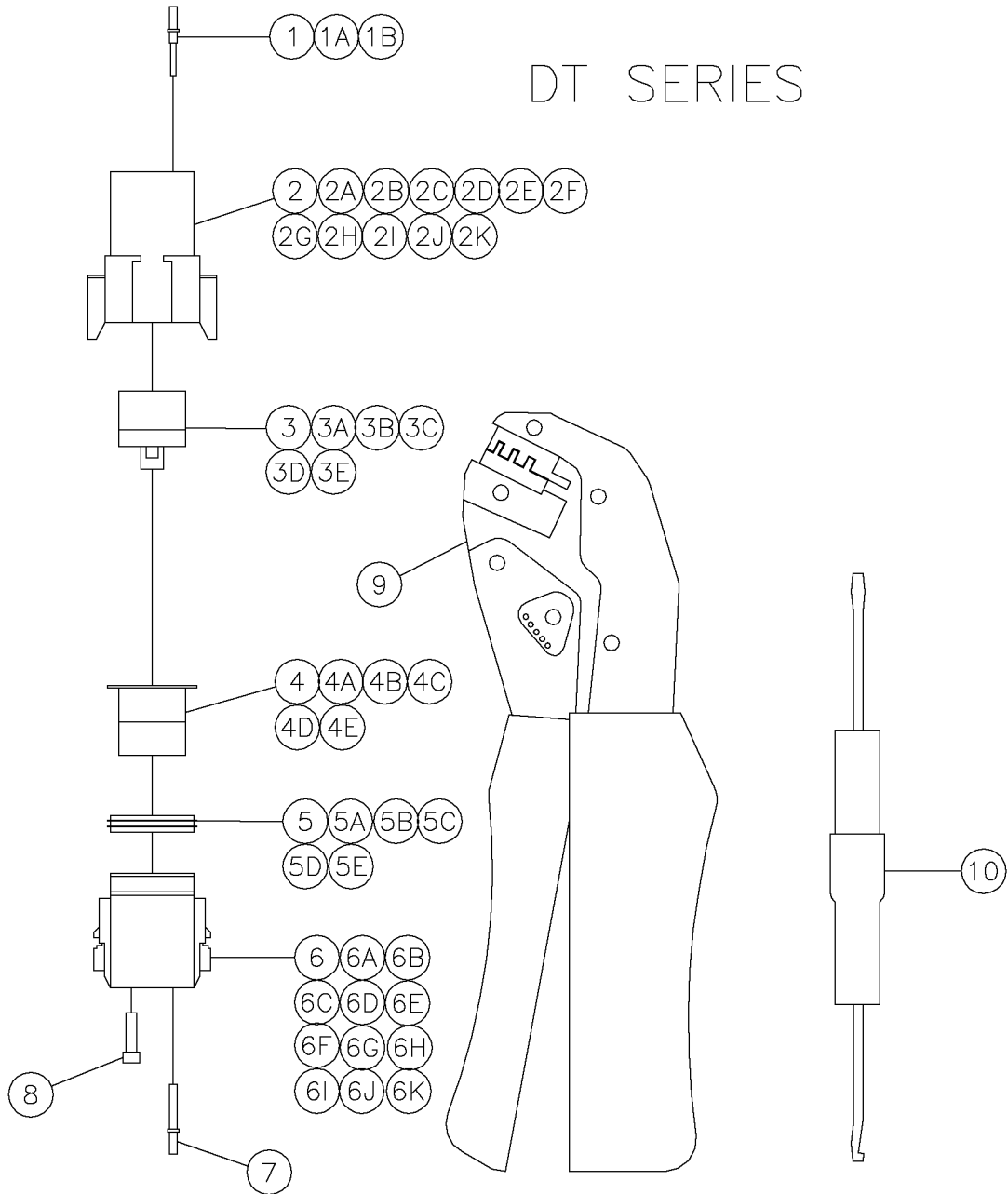
DT Series Connectors Fig 5-16r01



DT Series Connectors Fig 5-16r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	June, 2007		Change Part Number
1		276866001	PIN - 14/16 GA.		
1A		87696001	PIN-16/18 GA.		
1B		276951001	PIN - (20 GA.)		
2		276867001	RECEPTACLE - 2 PIN		
2A		276868001	RECEPTACLE - 3 PIN		
2B		276869001	RECEPTACLE - 4 PIN		
2C		276890001	RECEPTACLE - 6 PIN		
2D		276943001	RECEPTACLE - 8 PIN (A)		
2E		276944001	RECEPTACLE - 8 PIN (B)		
2F		276945001	RECEPTACLE - 8 PIN (C)		
2G		276946001	RECEPTACLE - 8 PIN (D)		
2H		276947001	RECEPTACLE - 12 PIN (A)		
2I		276948001	RECEPTACLE - 12 PIN (B)		
2J		276949001	RECEPTACLE - 12 PIN (C)		
2K		276950001	RECEPTACLE - 12 PIN (D)		
3		276870001	WEDGE - 2 PIN RECEPTACLE		
3A		276871001	WEDGE - 3 PIN RECEPTACLE		
3B		276872001	WEDGE - 4 PIN RECEPTACLE		
3C		276873001	WEDGE - 6 PIN RECEPTACLE		
3D		94200001	WEDGE - 8 PIN RECEPTACLE		
3E		103213001	WEDGE - 12 PIN RECEPTACLE		
4		276874001	WEDGE - 2 PIN PLUG		
4A		276875001	WEDGE - 3 PIN PLUG		
4B		276876001	WEDGE - 4 PIN PLUG		
4C		276877001	WEDGE - 6 PIN PLUG		
4D		98106001	WEDGE - 8 PIN PLUG		
4E		103214001	WEDGE - 12 PIN PLUG		
5		276878001	GASKET - INTERFACE 2 PIN		
5A		276879001	GASKET - INTERFACE 3 PIN		
5B		276880001	GASKET - INTERFACE 4 PIN		
5C		276881001	GASKET - INTERFACE 6 PIN		
5D		276882001	GASKET - INTERFACE 8 PIN		
5E		276883001	GASKET - INTERFACE 12 PIN		
6	*	276884001	PLUG - 2 PIN		
6A		276885001	PLUG - 3 PIN		
6B		276886001	PLUG - 4 PIN		
6C		276887001	PLUG - 6 PIN		
6D		98107001	PLUG - 8 PIN (A)		
6E		276985001	PLUG - 8 PIN (B)		
6F		276986001	PLUG - 8 PIN (C)		
6G		276987001	PLUG - 8 PIN (D)		
6H		103211001	PLUG - 12 PIN (A)		
6I		276988001	PLUG - 12 PIN (B)		
6J		276989001	PLUG - 12 PIN (C)		
6K		276990001	PLUG - 12 PIN (D)		
7		91354001	SOCKET - 16/18 GA.		
8		94201001	PLUG - SEALING (12-16)		
9		286553001	TOOL - DEUTSCH CRIMPING (FIELD)		
10		286553003	TOOL - DEUTSCH (FIELD)		

DT Series Connectors (Continued) Fig 5-16

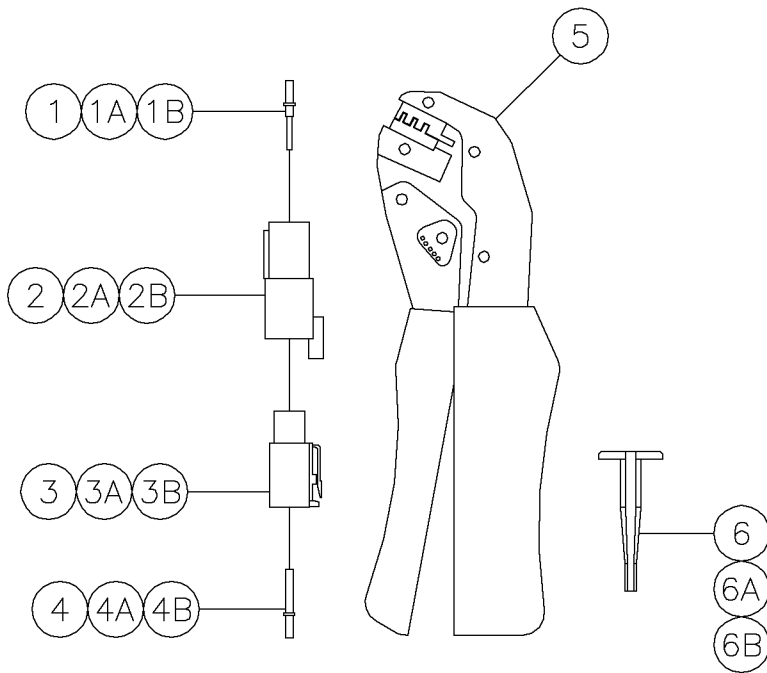


DT Series Connectors (Continued) Fig 5-16

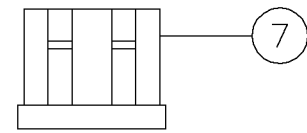
REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		276866001	PIN - 14/16 GA.		
1A		87696001	PIN-16/18 GA.		
1B		276951001	PIN - (20 GA.)		
2		276867001	RECEPTACLE - 2 PIN		
2A		276868001	RECEPTACLE - 3 PIN		
2B		276869001	RECEPTACLE - 4 PIN		
2C		276890001	RECEPTACLE - 6 PIN		
2D		276943001	RECEPTACLE - 8 PIN (A)		
2E		276944001	RECEPTACLE - 8 PIN (B)		
2F		276945001	RECEPTACLE - 8 PIN (C)		
2G		276946001	RECEPTACLE - 8 PIN (D)		
2H		276947001	RECEPTACLE - 12 PIN (A)		
2I		276948001	RECEPTACLE - 12 PIN (B)		
2J		276949001	RECEPTACLE - 12 PIN (C)		
2K		276950001	RECEPTACLE - 12 PIN (D)		
3		276870001	WEDGE - 2 PIN RECEPTACLE		
3A		276871001	WEDGE - 3 PIN RECEPTACLE		
3B		276872001	WEDGE - 4 PIN RECEPTACLE		
3C		276873001	WEDGE - 6 PIN RECEPTACLE		
3D		94200001	WEDGE - 8 PIN RECEPTACLE		
3E		103213001	WEDGE - 12 PIN RECEPTACLE		
4		276874001	WEDGE - 2 PIN PLUG		
4A		276875001	WEDGE - 3 PIN PLUG		
4B		276876001	WEDGE - 4 PIN PLUG		
4C		276877001	WEDGE - 6 PIN PLUG		
4D		98106001	WEDGE - 8 PIN PLUG		
4E		103214001	WEDGE - 12 PIN PLUG		
5		276878001	GASKET - INTERFACE 2 PIN		
5A		276879001	GASKET - INTERFACE 3 PIN		
5B		276880001	GASKET - INTERFACE 4 PIN		
5C		276881001	GASKET - INTERFACE 6 PIN		
5D		276882001	GASKET - INTERFACE 8 PIN		
5E		276883001	GASKET - INTERFACE 12 PIN		
6		279884001	PUMP STACK ASSEMBLY D44X60		
6A		276885001	PLUG - 3 PIN		
6B		276886001	PLUG - 4 PIN		
6C		276887001	PLUG - 6 PIN		
6D		98107001	PLUG - 8 PIN (A)		
6E		276985001	PLUG - 8 PIN (B)		
6F		276986001	PLUG - 8 PIN (C)		
6G		276987001	PLUG - 8 PIN (D)		
6H		103211001	PLUG - 12 PIN (A)		
6I		276988001	PLUG - 12 PIN (B)		
6J		276989001	PLUG - 12 PIN (C)		
6K		276990001	PLUG - 12 PIN (D)		
7		91354001	SOCKET - 16/18 GA.		
8		94201001	PLUG - SEALING (12-16)		
9		286553001	TOOL - DEUTSCH CRIMPING (FIELD)		
10		286553003	TOOL - DEUTSCH (FIELD)		

DTHD Series/HDFB Modules Fig 5-17

DTHD SERIES



HDFB MODULES

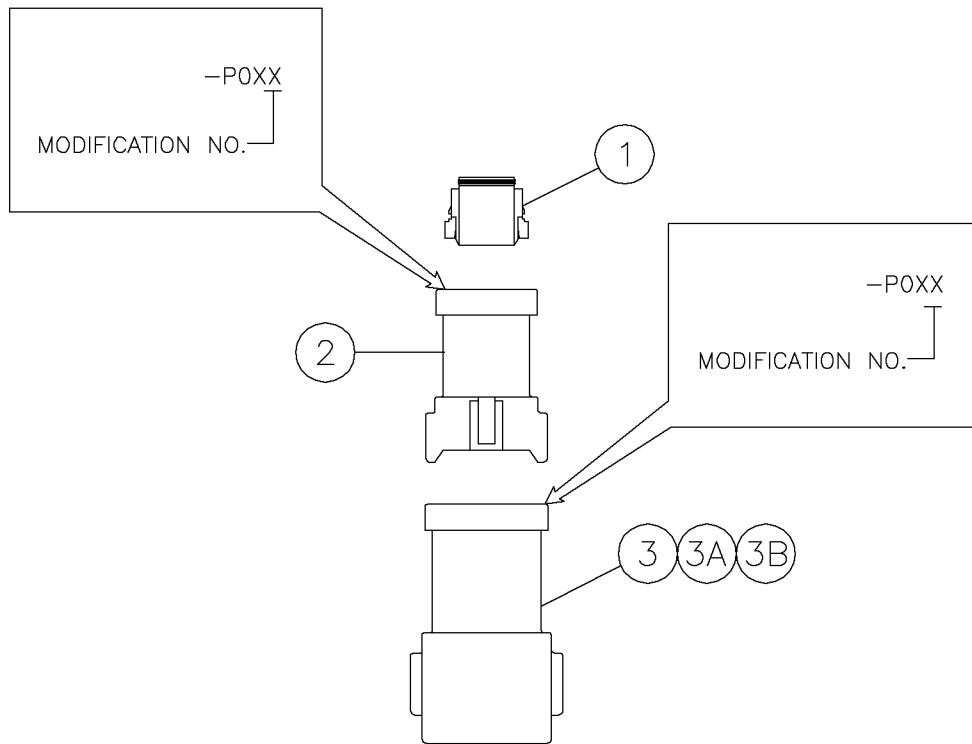


DTHD Series/HDFB Modules Fig 5-17

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		231988001	PIN-12 GA		
1A		276953001	PIN - 8/10 GA.		
1B		276954001	PIN - 6 GA.		
2		279423001	RECEPTACLE - SIZE 4 CONTACT		
2A		279424001	RECEPTACLE - SIZE 8 CONTACT		
2B		279425001	RECEPTACLE - SIZE 12 CONTACT		
3		279426001	PLUG - SIZE 4 CONTACT		
3A		279427001	PLUG - SIZE 8 CONTACT		
3B		279428001	PLUG - SIZE 12 CONTACT		
4		276982001	SOCKET - 12/14 GA. DEUTSCH		
4A		276984001	SOCKET - 8/12 GA.		
4B		276952001	SOCKET - 6 GA.		
5		603961001	PLIERS-DEUTSCH CRIMPING		
6		276981001	PLUG - 19 PIN (SHELL SIZE 24)		
6A		276889001	TOOL - 8/10 GA. EXTRACTOR (GREEN)		
6B		276888001	TOOL - 6 GA. EXTRACTOR (WHITE)		
7		279430001	MODULE - FEEDBACK (10 PIN)		
			Not All Items Listed Are Used On This Machine		

DT Series Diode/Buss Blocks Fig 5-18

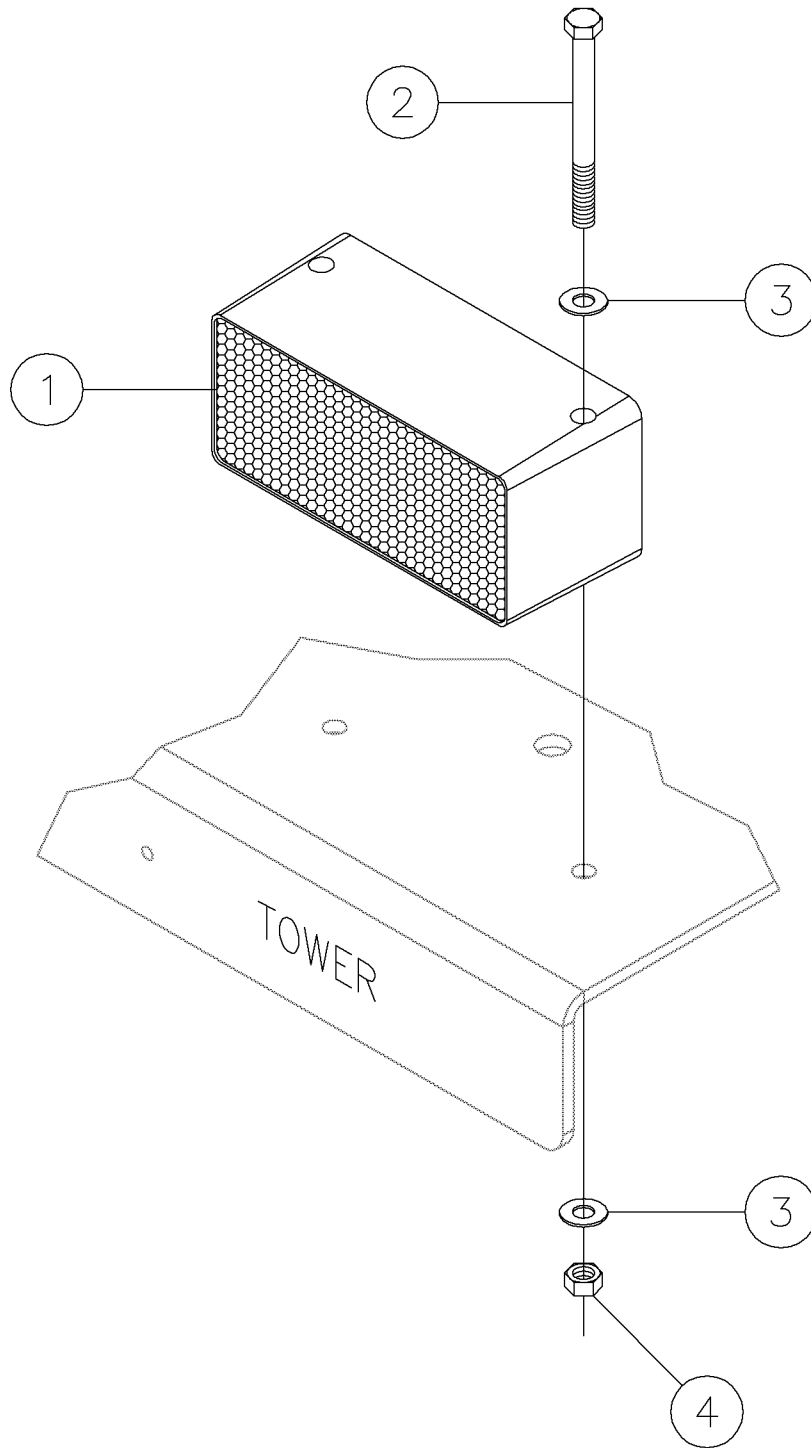
DT SERIES DIODE/BUSS BLOCKS



DT Series Diode/Buss Blocks Fig 5-18

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		282531001	MODULE - DEUTSCH DT06-6S 3AMP DIODE	1	
2		700000096	BUSS - 1 - 8PIN - B	1	
3		700000102	BUSS - 1 - 12PIN - B - NICKEL	1	
3A		700000104	BUSS - 2 - 12PIN - B - 6/6	1	
3B		700000106	BUSS - 4 - 12PIN - B - 3/3/3/3	1	

Back-Up Alarm Fig 5-19

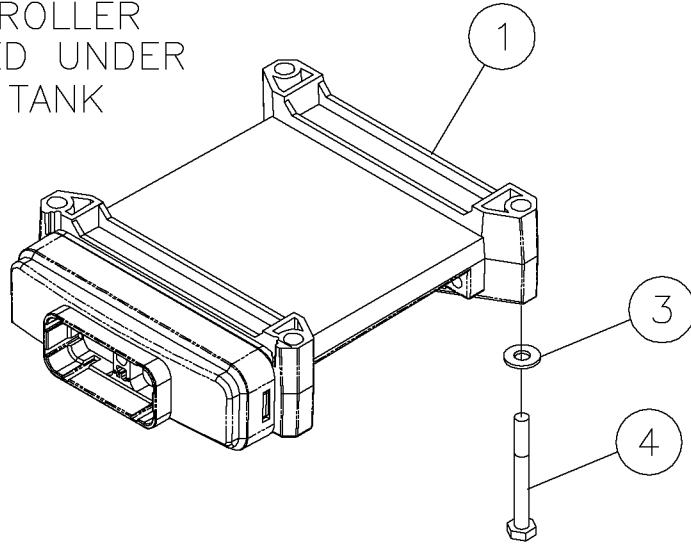


Back-Up Alarm Fig 5-19

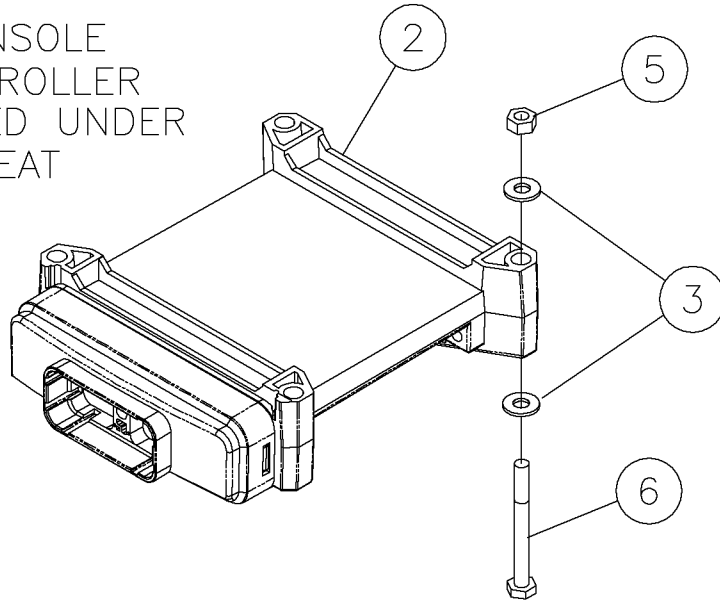
REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2006		Addition To Manual
1		614929001	ALARM - BACKUP	1	
2		250541001	BOLT-3/8-16 X 4" GR8 HEX Y/ZI	2	
3		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	4	
4		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	2	

Controllers Fig 5-20

ENGINE BAY
CONTROLLER
MOUNTED UNDER
OIL TANK



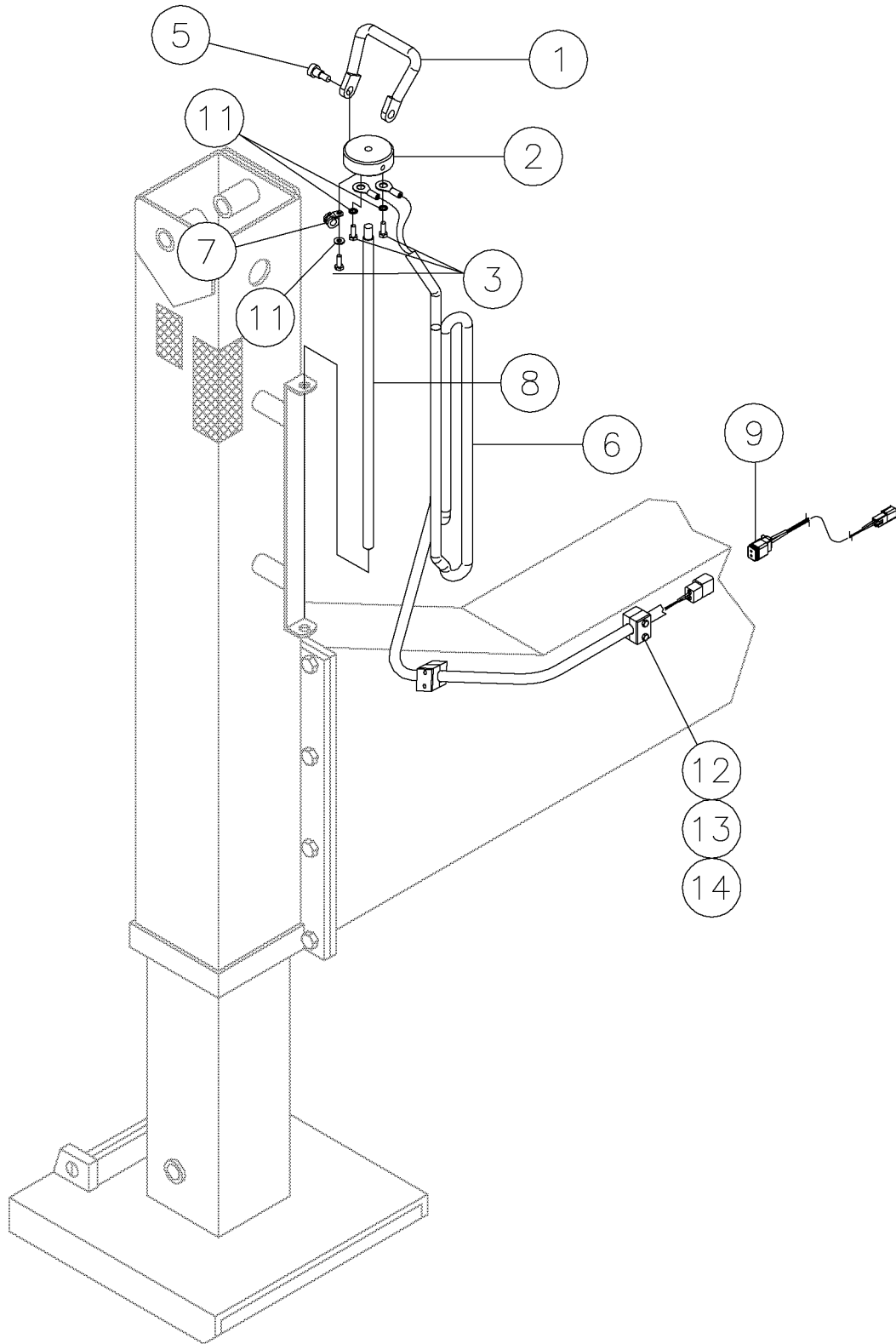
CONSOLE
CONTROLLER
MOUNTED UNDER
SEAT



Controllers Fig 5-20

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	August, 2006		Addition To Manual
1		296275629	ENG CONTROLLER PROGRAMMED D80X100II	1	
		296273863	CONTROLLER-M050-100 (UNPROGRAMMED)		
2		296275633	CONSOLE CONTROLLER PROG. D80X100II	1	
		296273863	CONTROLLER-M050-100 (UNPROGRAMMED)		
3		235716001	WASHER - FLATSTRL - .25 - .28 X .63 - .06 - CZ	12	
4		250644001	BOLT-1/4-20 X2 1/4 GR 8 Y/ZINC	4	
5		235732001	NUT - HEX - .25 - 20 - GR8 - YZ	4	
6		244102001	BOLT-14-200X2 1/2 GR8 ZNC	4	

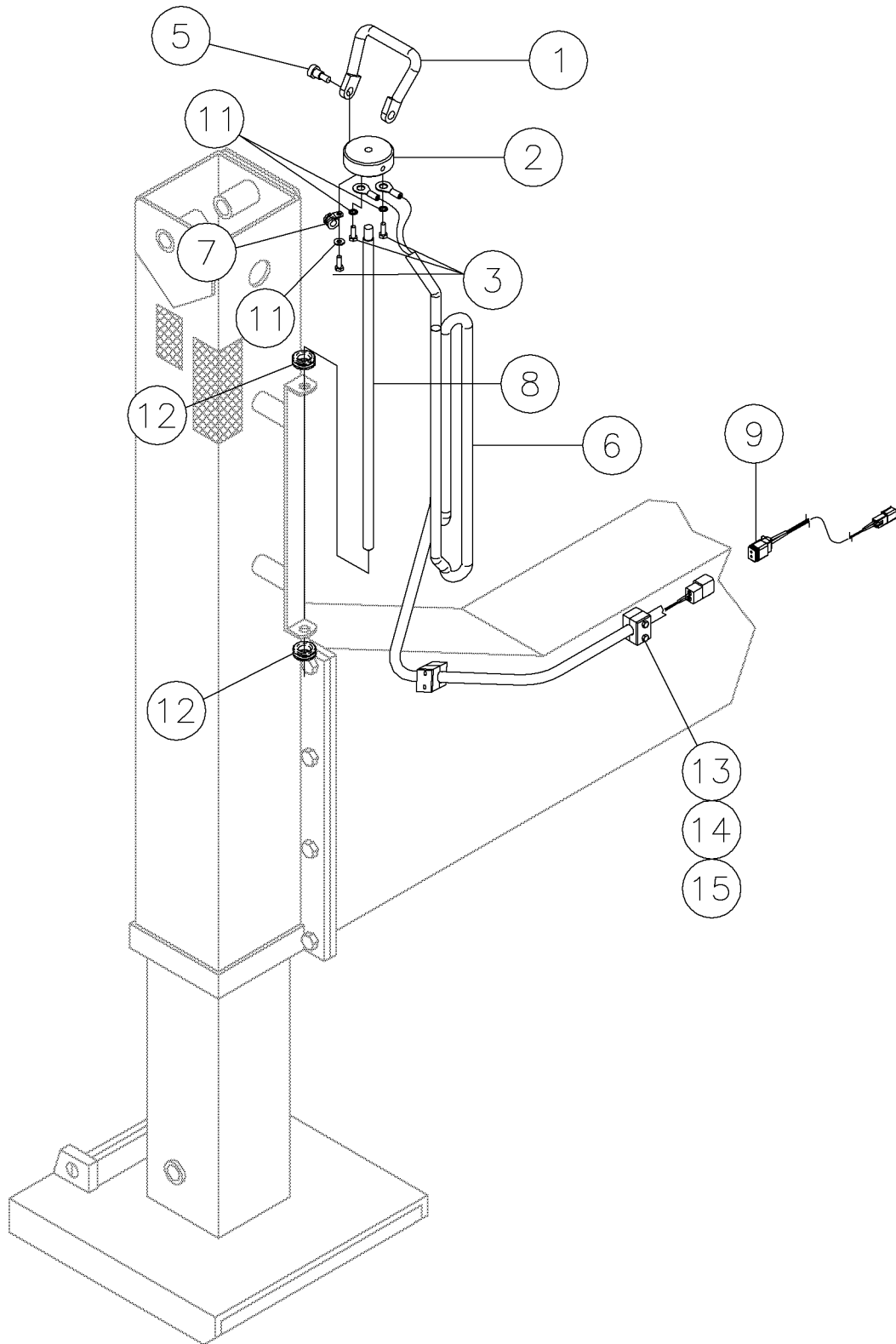
Voltage Stake Fig 6-1r01



Voltage Stake Fig 6-1r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	June, 2006		Update In Illustration & Parts List.
1		234164001	HANDLE-VOLTAGE STAKE	1	
2		296275107	HEAD - VOLTAGE STAKE	1	
3		235734001	BOLT-1/4-20X3/4 GR8 ZINC PLTD	3	
4		235735001	BOLT-1/4-20X1 GR8 HEX ZNC PLTD	1	
5		240056001	SCREW-SHSS-.50X.50-.38-16THD-CZ	2	
6		296275117	HARNESS-VOLTAGE STAKE	1	
7		296275118	CLAMP - #8	2	
8		296275119	STAKE-VOLTAGE	1	
9		296275120	HARNESS-ADAPTOR VOLTAGE STAKE	1	
10		481013	WASHER-1/4 EST. STAR	2	
11		510337603	WASHER-FLATSTD-.25-.31X.75-.07-YZ	3	
12		248031001	BOLT-5/16-18X1 1/4 GR8 ZYC	2	
13		900035005	CLAMP-3/8"DOUBLE HOSE(COMplete)	2	
14		67846003	PLATE-TWIN COVER	2	

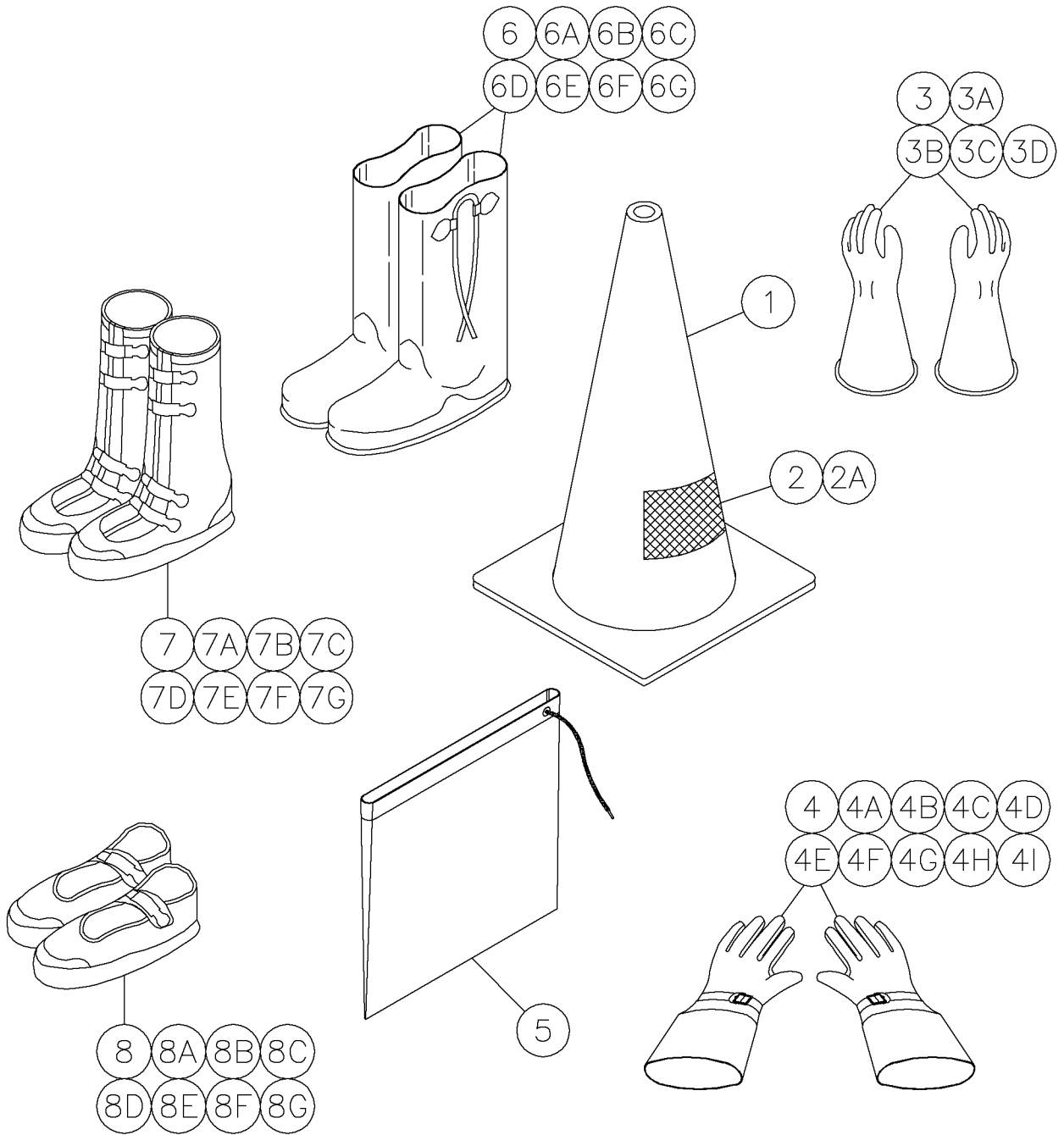
Voltage Stake Fig 6-1



Voltage Stake Fig 6-1

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		234164001	HANDLE-VOLTAGE STAKE	1	
2		296275107	HEAD - VOLTAGE STAKE	1	
3		235734001	BOLT-1/4-20X3/4 GR8 ZINC PLTD	3	
4		235735001	BOLT-1/4-20X1 GR8 HEX ZNC PLTD	1	
5		240056001	SCREW-SHSS-.50X.50-.38-16THD-CZ	2	
6		296275117	HARNESS-VOLTAGE STAKE	1	
7		296275118	CLAMP - #8	2	
8		296275119	STAKE-VOLTAGE	1	
9		296275120	HARNESS-ADAPTOR VOLTAGE STAKE	1	
10		481013	WASHER-1/4 EST. STAR	2	
11		510337603	WASHER-FLATSTD-.25-.31X.75-.07-YZ	3	
12		1865043	GROMMET-.75IDX1.38OD-.19GROOVE	2	
13		900035005	CLAMP-3/8"DOUBLE HOSE(COMplete)	2	
14		67846003	PLATE-TWIN COVER	2	
15		248031001	BOLT-5/16-18X1 1/4 GR8 ZINC PL	2	

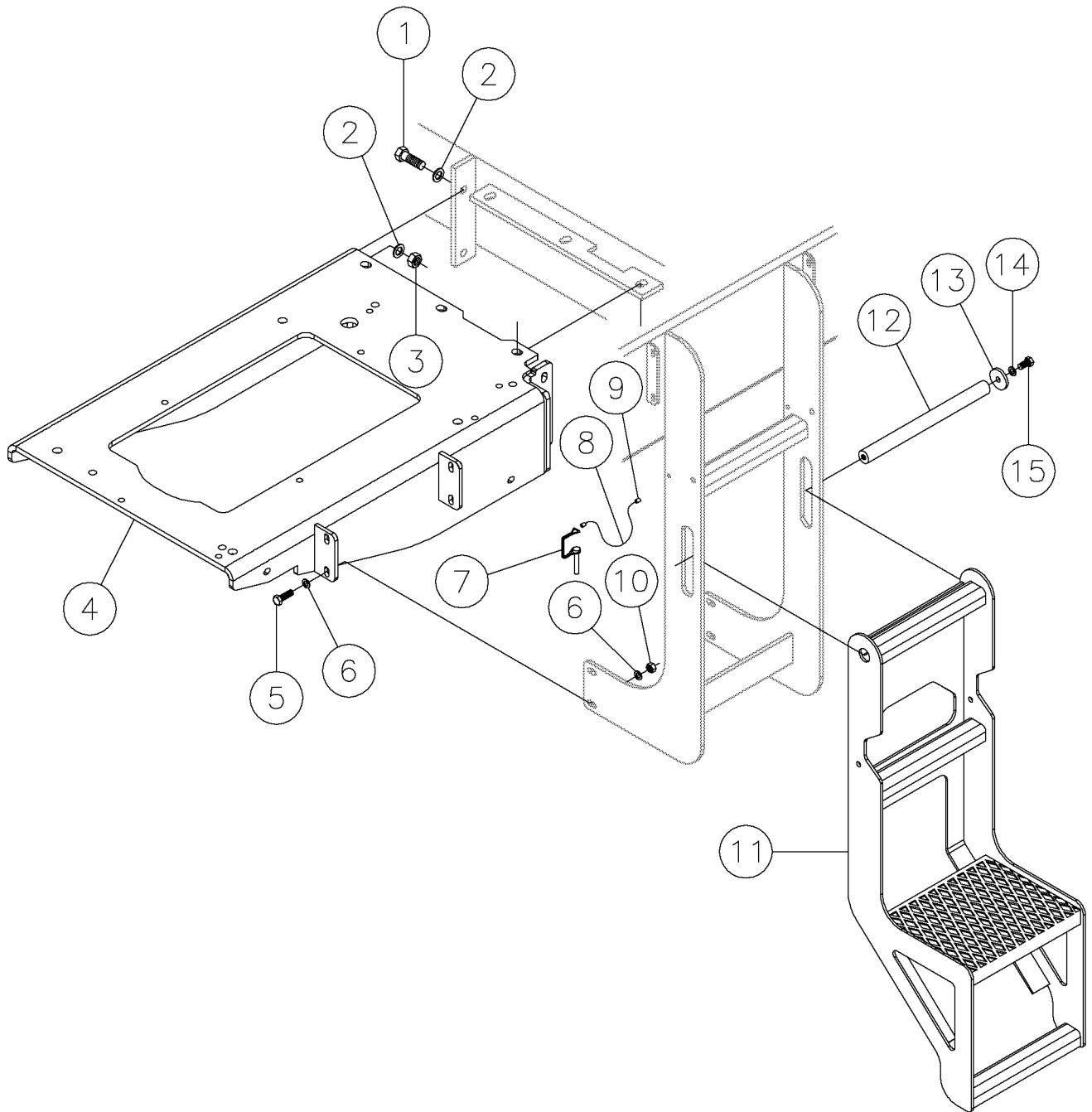
Safety Features-Gloves, Boots, Cones Fig 6-2



Safety Features-Gloves, Boots, Cones Fig 6-2

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Note:	All Gloves & boots Are Ordered As Pair		
1		904541001	CONES-ORANGE PVC	4	
2		70000530	DECAL-DANGER	4	
2A		7000I530	DECAL-WARNING (NAVIGATORS)	4	
3		210782001	GLOVES-SIZE 9 RUBBER INSULATE	1	
3A		210782005	GLOVES-SIZE 9 1/2 RUBBER INSUL (PAIR)	1	
3B		210782003	GLOVES-SIZE 10 RUBBER INS (PAIR)	1	
3C		210782007	GLOVE-SIZE 11 RUBBER INSULATED	1	
3D		210782009	GLOVE-SIZE 12 RUBBER INSULATED	1	
4		210783001	GLOVES-SIZE 9 LEATHER PROTECT (PAIR)	1	
4A		210783005	GLOVES SIZE 9 1/2 LEATHER PROT (PAIR)	1	
4B		210783003	GLOVES-SIZE 10 LEATHER PROTECT (PAIR)	1	
4C		210783007	GLOVE-SIZE 11 LEATHER PROTECT	1	
4D		210783009	GLOVE-SIZE 12 LEATHER PROTECT	1	
4E		210781001	GLOVE KIT-SIZE 9	1	Inc 1 Ea: Ref No 3 & 4, (persize) & 5
4F		224979001	GLOVE KIT-SIZE 9 1/2	1	Inc 1 Ea: Ref No 3 & 4, (persize) & 5
4G		210785001	GLOVE KIT-SIZE 10 (PAIR)	1	Inc 1 Ea: Ref No 3 & 4, (persize) & 5
4H		224990001	GLOVE KIT-SIZE 11	1	Inc 1 Ea: Ref No 3 & 4, (persize) & 5
4I		224991001	GLOVE KIT-SIZE 12	1	Inc 1 Ea: Ref No 3 & 4, (persize) & 5
5		210784001	BAG-GLOVE	1	
6		210780009	BOOTS-SIZE 9 OVER-THE-SHOE	1	
6A		210780001	BOOTS-SIZE 10 OVER-THE-SHOE	1	
6B		210780003	BOOTS-SIZE 11 OVER-THE-SHOE	1	
6C		210780005	BOOTS-SIZE 12 OVER-THE-SHOE	1	
6D		210780007	BOOTS-SIZE 13 OVER-THE-SHOE	1	
6E		210780011	BOOTS-SIZE 14 OVER-THE-SHOE	1	
6F		210780013	BOOTS-SIZE 15 OVER-THE-SHOE	1	
6G		210780015	BOOTS-SIZE 16 OVER-THE-SHOE	1	
7		279118001	BOOT - 4 BUCKLE SIZE 9	1	
7A		279118002	BOOT-4 BUCKLE SIZE 10	1	
7B		279118003	BOOT 4 BUCKLE SIZE 11	1	
7C		279118004	BOOT - 4 BUCKLE SIZE 12	1	
7D		279118005	BOOT - 4 BUCKLE SIZE 13	1	
7E		279118006	BOOT - 4 BUCKLE SIZE 14	1	
7F		279118007	BOOT - 4 BUCKLE SIZE 15	1	
7G		279118008	BOOT - 4 BUCKLE SIZE 16	1	
8		279119001	BOOT - ANKLE RUBBER SIZE9	1	
8A		279119002	BOOT - ANKLE RUBBER SIZE 10	1	
8B		279119003	BOOT - ANKLE RUBBER SIZE 11	1	
8C		279119004	BOOT - ANKLE RUBBER SIZE 12	1	
8D		279119005	BOOT - ANKLE RUBBER SIZE 13	1	
8E		279119006	BOOT - ANKLE RUBBER SIZE 14	1	
8F		279119007	BOOT - ANKLE RUBBER SIZE 15	1	
8G		279119008	BOOT - ANKLE RUBBER SIZE 16	1	

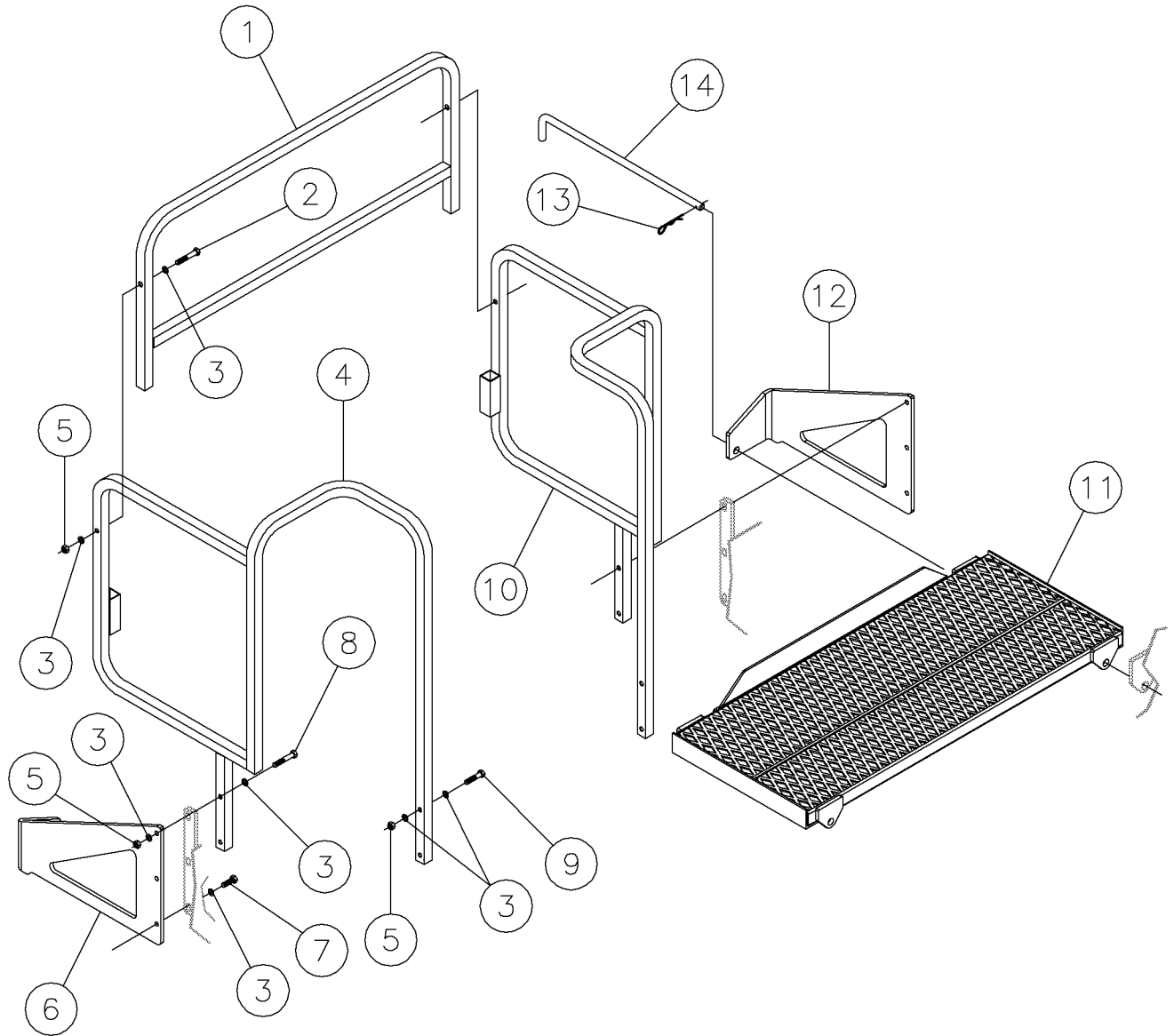
Platform Fig 7-1



Platform Fig 7-1

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	December, 2006		Update In Illustration.
1		243921001	BOLT-3/4 - 10 X 2 1/4 GR8 ZP	5	
2		235717001	WASHER - 3/4" HARDENED FLAT YZ	10	
3		235739001	NUT-3/4-10 GR8 ZINC PLTD	5	
4		296275981	WELD-PLATFORM WATER PUMP	1	
5		235721001	BOLT-1/2-13X1 1/2 GR8 ZINC PLT	4	
6		485025	WASHER-1/2 FLAT-HARDENED-YZ	8	
7		2109003	PIN LOCKING - 3/8 X 2 1/4	2	
8		1830059	NYLON COATED CABLE-3/32-10.00	2	
9		1838001	CONNECTOR-WIRE (ETC)	4	
10		235731001	NUT-1/2-13 GR8 ZINC PLTD	4	
11	*	287038001	LADDER - TANK	1	
12		277816001	BAR -STEP PIVOT	1	
13		18150001	SLUG-2 DIA.-1/4"	2	
14		235713001	WASHER-FLATSTRL-.38-.41X.81-.06-YA-A325	2	
15		235727001	BOLT-3/8-16X1 GR8 HEX ZINC PLT	2	

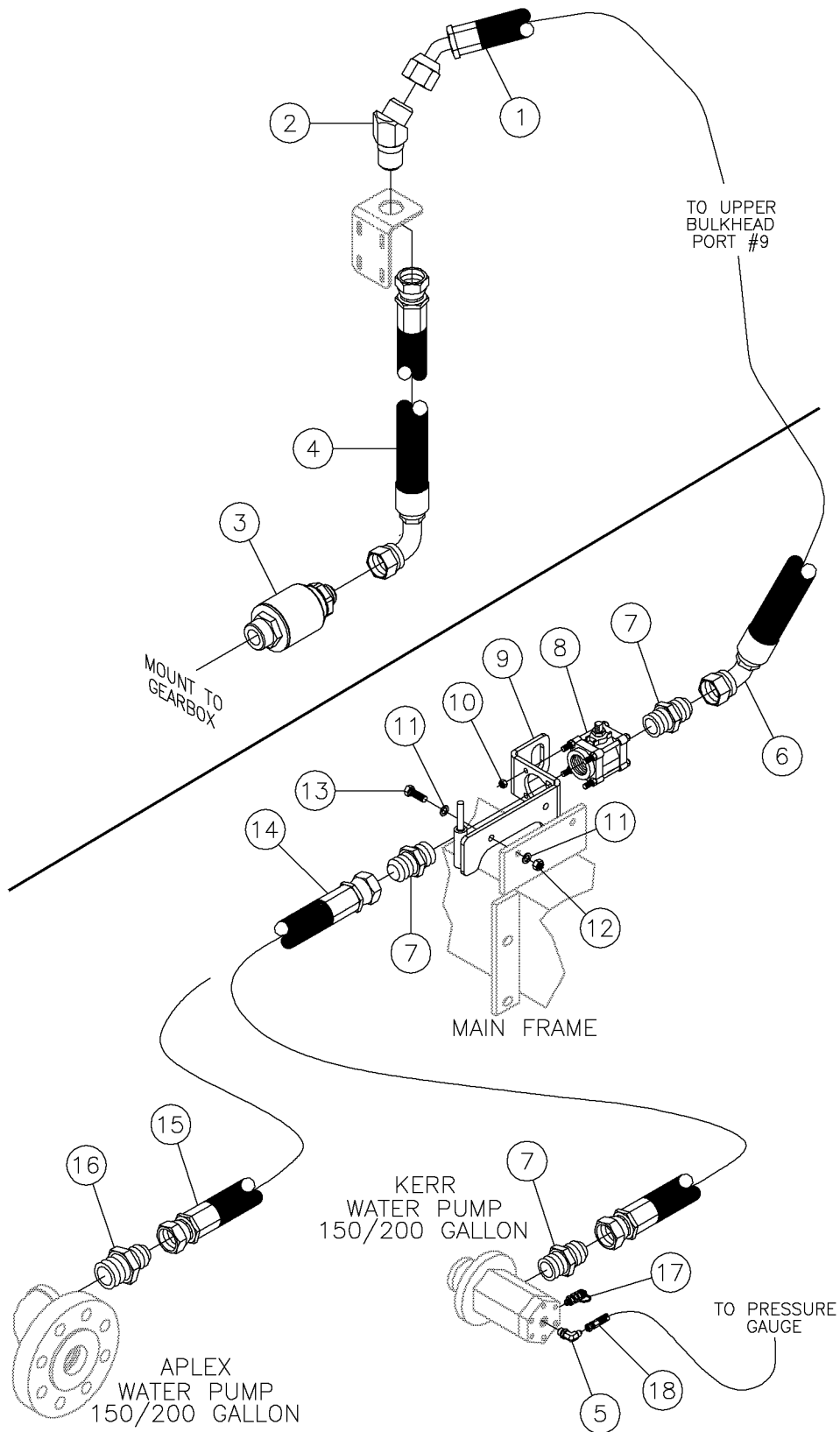
Hand Rail Platform Fig 7-2



Hand Rail Platform Fig 7-2

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		283958001	HANDRAIL - FRONT PLATFORM	1	
2		250529001	BOLT 3/8-16X2 1/2"GR.8 HEX	2	
3		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	24	
4		294102001	HANDRAIL - LEFT	1	
5		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	12	
6		283951001	PLATE - PLATFORM SUPPORT (REAR)	1	
7		235736001	BOLT-3/8-16X1 1/4 ZINC PLTD	2	
8		250504001	BOLT 3/8-16 X 2 1/4"GR8 HEX Y	4	
9		235720001	BOLT-3/8-16X1 3/4 6R8 ZINC PLT	4	
10		294101001	HANDRAIL - RIGHT	1	
11		294108001	PLATFORM - ACCESS	1	
12		283950001	PLATE - PLATFORM SUPPORT (FRONT)	1	
13		1794003	HAIR PIN COTTER - .148 WIRE	2	
14		283972001	PIN - PLATFORM PIVOT	2	

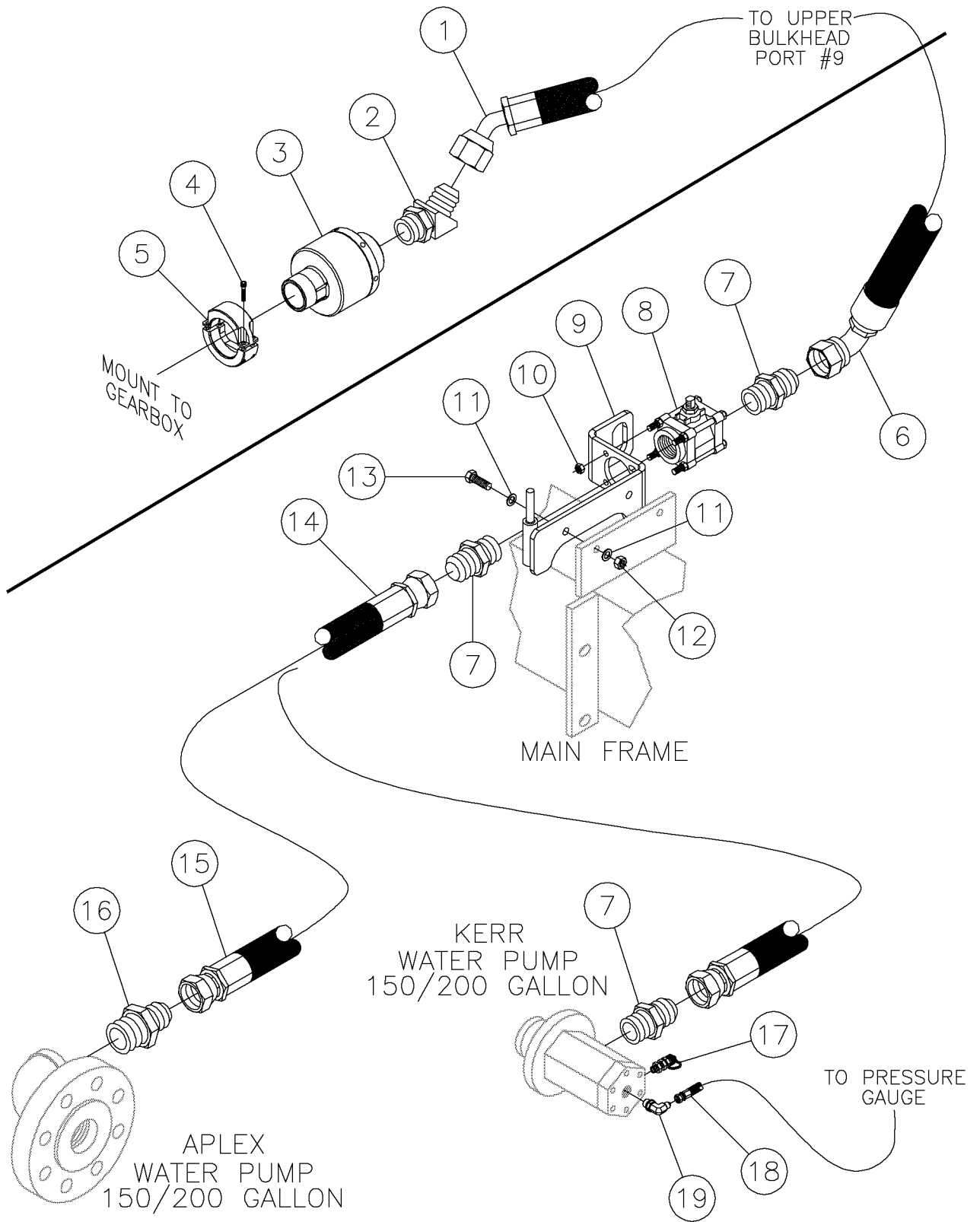
Water Line (S/N 139-) Fig 7-3r02



Water Line (S/N 139-) Fig 7-3r02

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	June, 2007		Change Part Number
1		296279652	HOSE-HYD-1.50X298-24FSJ ST/24FSJ 45-2500	1	
2		296279582	FITTING - BH45-24MJ-24MJ	1	(S/N 139-)
3		296273990	SWIVEL - WATER, SS24MP200XMJ24-NI-U	1	(S/N 139-)
	*	296289775	SEAL KIT - WATER SWIVEL (SS-24-KIT-U-1)	1	(S/N 139-)
4		296289772	HOSE	1	(S/N 139-)
5		57950001	FITTING-90-4MJ-6MORBA	1	
6		296279558	HOSE-HYD-1.50X106-24FSJ ST/24FSJ 45-2500	1	
7	*	279993001	FITTING - BHSTR - 24MJ - 24FNPT	3	
8		287053001	VALVE - 1-1/2" BALL (2200 PSI)	1	Breakdown Fig. 13-26
9		279984001	SUPPORT - BALL VALVE	1	
10		287053019	NUT - BODY	4	
11		485025	WASHER-1/2 FLAT-HARDENED-YZ	4	
12		250512001	NUT- 1/2 NC Gr8 TOP LOCK Y/ ZINC	2	
13		235721001	BOLT-1/2-13X1 1/2 GR8 ZINC PLT	2	
14		296279562	HOSE-HYD.1.50X82-24FSJ ST/24FSJ ST-2500-	1	
15		296279561	HOSE-HYD-1.50X56-24FSJ ST/24FSJ ST-2500-	1	
16	*	278061001	FITTING-24 MJIC X2 MNPT CONNCT	1	
17		72056001	FITTING-TEST-6MORB-16MTP	1	
18		296279563	HOSE-HYD-.08X302-4FSJ-ST/4FSJ ST-6900PSI	1	

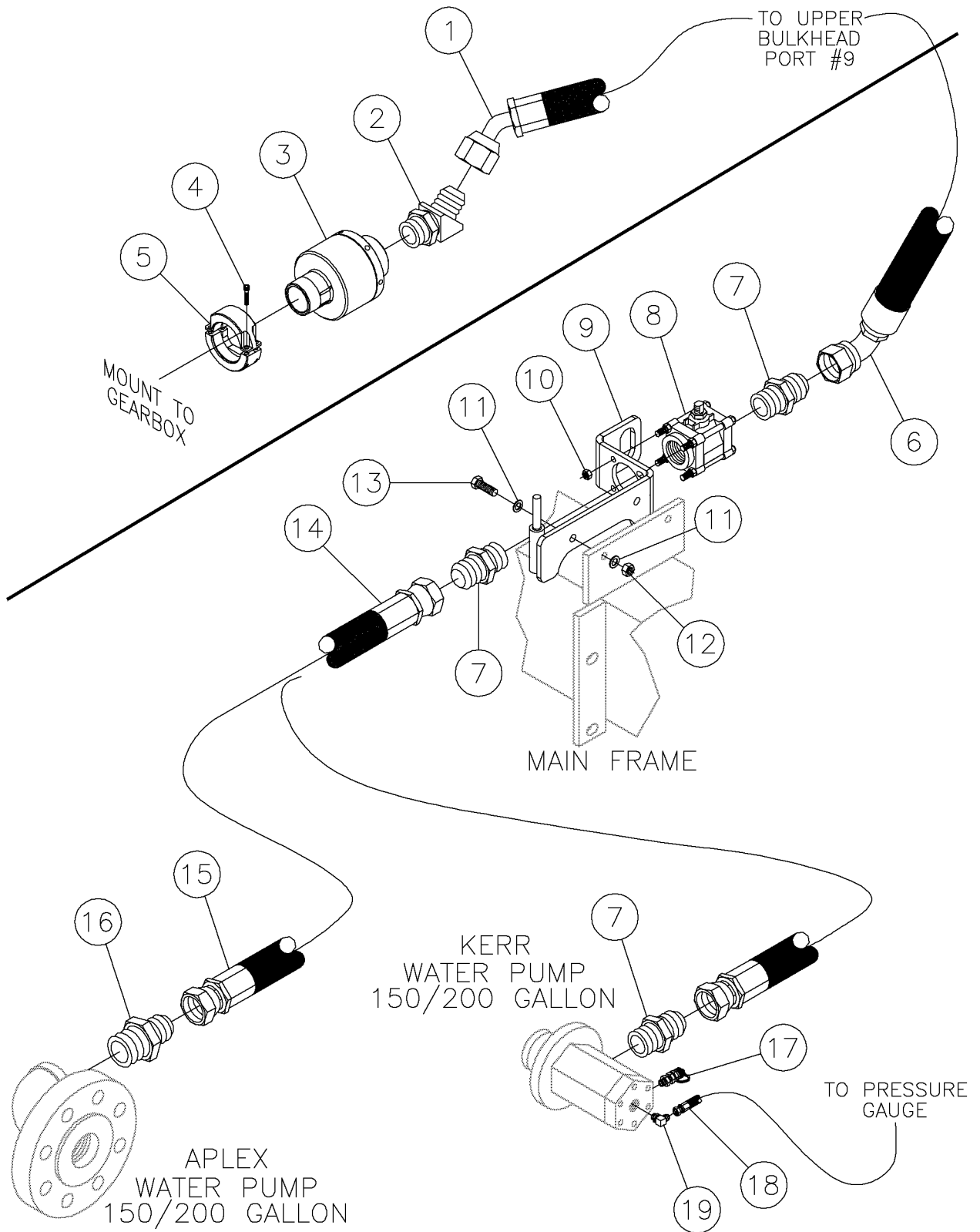
Water Line Fig 7-3r01



Water Line Fig 7-3r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	June, 2006		Update In Illustration & Parts List.
1		296279652	HOSE-HYD-1.50X298-24FSJ ST/24FSJ 45-2500	1	
2		130640001	FITTING-24MJICX24M ORING 45DEG	1	
3		280789001	WATER SWIVEL - 2" NPT 200 GPM	1	
		296251025	SEAL KIT - WATER SWIVEL	1	
4		5544012	BOLT-1/4-20X1 1/4 SOCKET HEAD	4	
5		293169001	LOCK - WATER SWIVEL	1	
6		296279558	HOSE-HYD-1.50X106-24FSJ ST/24FSJ 45-2500	1	
7		94569001	FITTING - STR - 24MJ - 24MNPT	3	
8		287053001	VALVE - 1-1/2" BALL (2200 PSI)	1	Breakdown Fig. 13-26
9		279984001	SUPPORT - BALL VALVE	1	
10		287053019	NUT - BODY	4	
11		485025	WASHER-1/2 FLAT-HARDENED-YZ	4	
12		250512001	NUT- 1/2 NC Gr8 TOP LOCK Y/ ZINC	2	
13		235721001	BOLT-1/2-13X1 1/2 GR8 ZINC PLT	2	
14		296279562	HOSE-HYD.1.50X82-24FSJ ST/24FSJ ST-2500-	1	
15		296279561	HOSE-HYD-1.50X56-24FSJ ST/24FSJ ST-2500-	1	
16		278063001	FITTING-2"X90 DEG BLK STRT EL	1	
17		72056001	FITTING-TEST-6MORB-16MTP	1	
18		296279563	HOSE-HYD-.08X302-4FSJ-ST/4FSJ ST-6900PSI	1	
19		57950001	FITTING-90-4MJ-6MORBA	1	

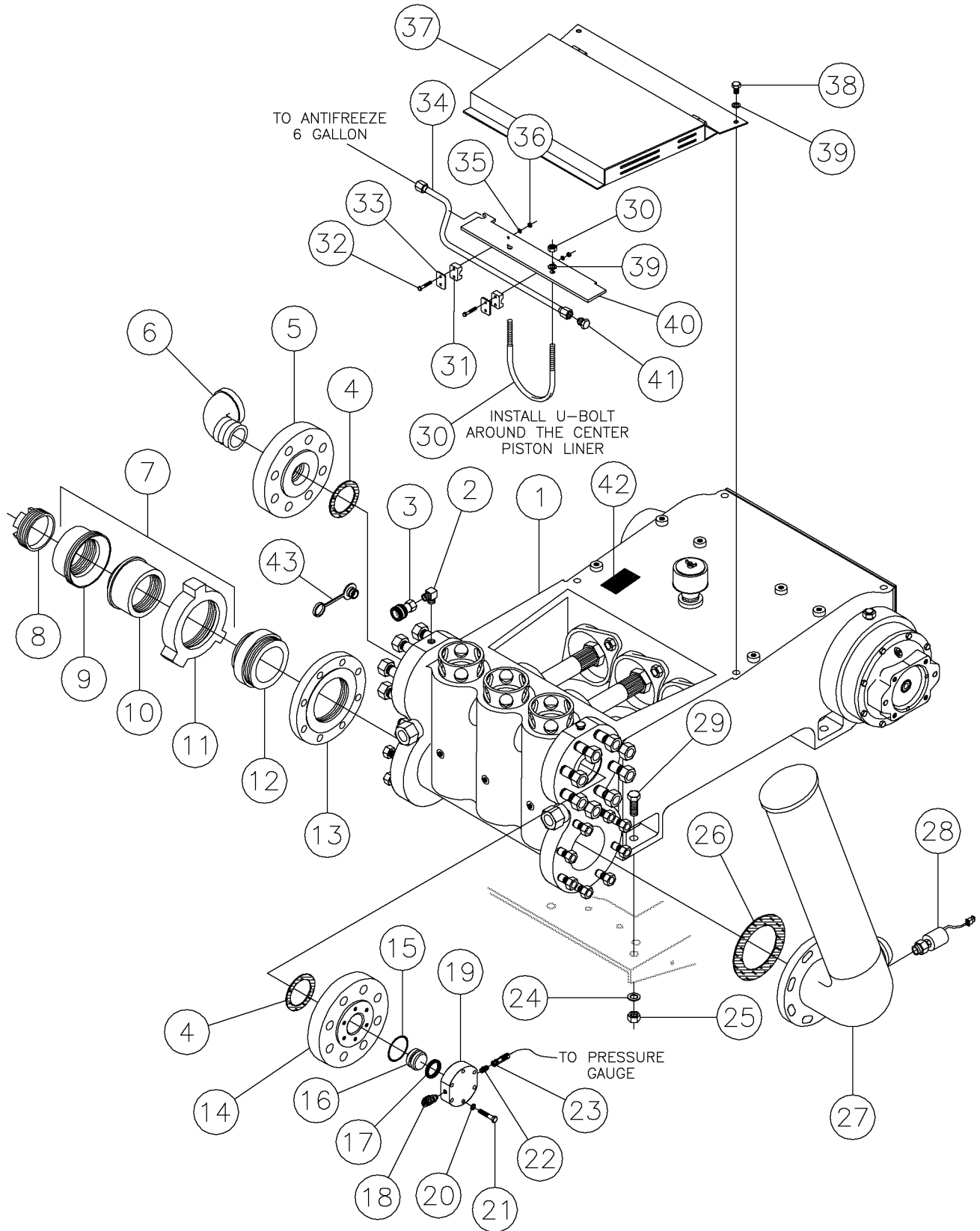
Water Line Fig 7-3



Water Line Fig 7-3

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296279652	HOSE-HYD-1.50X298-24FSJ ST/24FSJ 45-2500	1	
2		130640001	FITTING-24MJICX24M ORING 45DEG	1	
3		280789001	WATER SWIVEL - 2" NPT 200 GPM	1	
		296251025	SEAL KIT - WATER SWIVEL	1	
4		5544012	BOLT-1/4-20X1 1/4 SOCKET HEAD	4	
5		293169001	LOCK - WATER SWIVEL	1	
6		296279558	HOSE-HYD-1.50X106-24FSJ ST/24FSJ 45-2500	1	
7		94569001	FITTING - STR - 24MJ - 24MNPT	3	
8		287053001	VALVE - 1-1/2" BALL (2200 PSI)	1	Breakdown Fig. 13-26
9		279984001	SUPPORT - BALL VALVE	1	
10		287053019	NUT - BODY	4	
11		485025	WASHER-1/2 FLAT-HARDENED-YZ	4	
12		250512001	NUT- 1/2 NC Gr8 TOP LOCK Y/ ZINC	2	
13		235721001	BOLT-1/2-13X1 1/2 GR8 ZINC PLT	2	
14		296279562	HOSE-HYD.1.50X82-24FSJ ST/24FSJ ST-2500-	1	
15		296279561	HOSE-HYD-1.50X56-24FSJ ST/24FSJ ST-2500-	1	
16		278063001	FITTING-2"X90 DEG BLK STRT EL	1	
17		72056001	FITTING-TEST-6MORB-16MTP	1	
18		296279563	HOSE-HYD-.08X302-4FSJ-ST/4FSJ ST-6900PSI	1	
19		600118001	FITTING-6MORINGX4MJIC90PARKER	1	

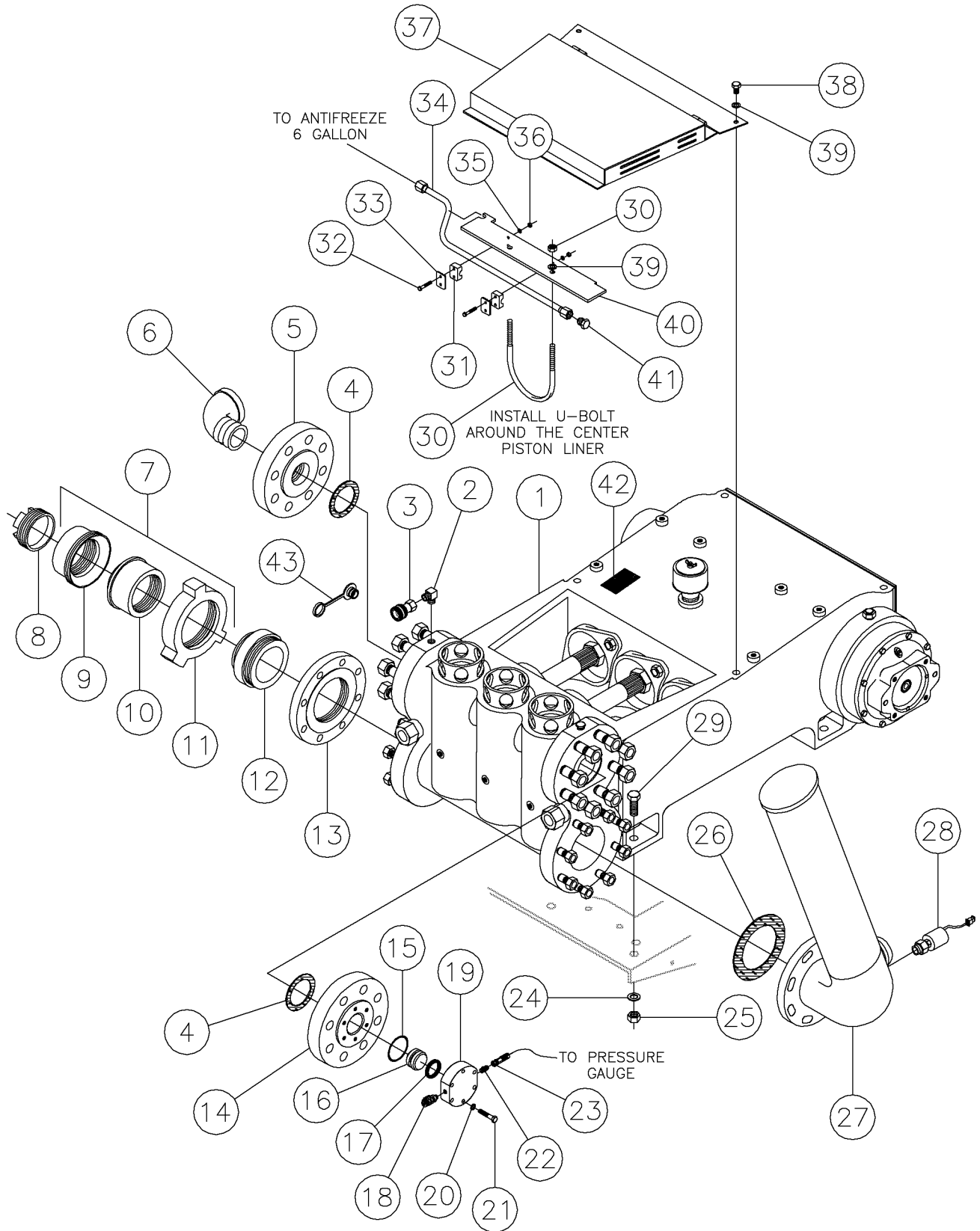
Water Pump - Apex 200 GPM (SC170) (S/N 141-) Fig 7-4r02



Water Pump - Apex 200 GPM (SC170) (S/N 141-) Fig 7-4r02

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	December, 2006		Update In Parts List.
1		277780001	PUMP- SC170 4"-07 GR TRIPLEX	1	Inc. Ref. 4&26; Breakdown Fig. 13-48 Thru 13-54
2		904831001	FITTING 1/2MNPT X 1/2MNPT 90	1	
3		227235001	COUPLER-1/2"NPT QUICK(FEMALE)	1	
4		277780002	GASKET - DISCHARGE (4.125 OD)	2	
5		278062001	FITTING-SC170 OUTLET (DRL FLD)	1	
6		244191001	ELBOW - 2" 90 DEG BLK STREET	1	
7		287056001	UNION - 4" HAMMER (1000PSI)	1	Included Ref. No's 9-11
8		287057001	PLUG - 4" NPT	1	
9		287056005	SUB - 4" FEMALE HAMMER UNION (1000PSI)	1	
10		287056003	SUB - 4" MALE HAMMER UNION (1000PSI)	1	
11		287056007	NUT - 4" HAMMER UNION WING (1000PSI)	1	
12		287034001	FITTING - 5" MPT X 4" MPT REDUCER	1	
13		287035001	FLANGE - SUCTION STABILIZER	1	
14		277821001	FITTING - SC170 OUTLET	1	
15		227589001	O-RING #AS-231	1	
16		239252001	PISTON-SC65 OUTLET FITTING	1	
17		51181001	O-RING #326	1	
18		75493001	FITTING - TEST - 4MORB - 16MTP	1	
19		277824001	COVER-SC170 OUTLET FITTING	1	
20		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	6	
21		240454001	BOLT-3/8-16X2 GR#8 ZINC PLTD	6	
22		60908001	FITTING-4MX4M JIC STR ADAPTER	1	
23		296279563	HOSE-HYD-.08X302-4FSJ-ST/4FSJ ST-6900PSI	1	
24		235717001	WASHER - 3/4" HARDENED FLAT YZ	4	
25		235739001	NUT-3/4-10 GR8 ZINC PLTD	4	
26		277780003	GASKET - SUCTION (7.75 OD)	2	
27	*	287052001	TUBE - SUCTION STABILIZER (SC170)	1	S/N 141
28	*	287554001	SWITCH - 10 PSI NO/NC	1	S/N 141
29		235746001	BOLT-3/4-10X2 GR8 HEX ZNC PLTD	4	
30		285069001	U-BOLT - 1/2" X 5" ZINC PLTD	1	
31		903135003	CLAMP HOSE HALF 20675-PP(TAKES 2 PER 1)	2	
32		238210001	BOLT - 1/4-20X1 1/2 GR8 HEX ZYC	4	
33		903135005	PLATE-COVER COP-2	2	
34		285068001	TUBE - PISTON WASH	1	
35		235716001	WASHER - FLATSTRL - .25 -.28 X .63 - .06 - CZ	4	
36		248198001	NUT-1/4 - 20 GR8 TOP LOCK ZINC	4	
37		285058001	COVER, PISTON WASH	1	
38		235728001	BOLT-1/2-13X3/4 GR8 ZINC PLTD	2	
39		485025	WASHER-1/2 FLAT-HARDENED-YZ	4	
40		285096001	PLATE, PISTON WASH	1	
41		83637001	PLUG-#8 JIC MALE	1	
42		7000B304	DECAL - WARNING	1	Domestic
		7001B304	DECAL - WARNING	1	International
43		234679001	CAP-DUST	1	

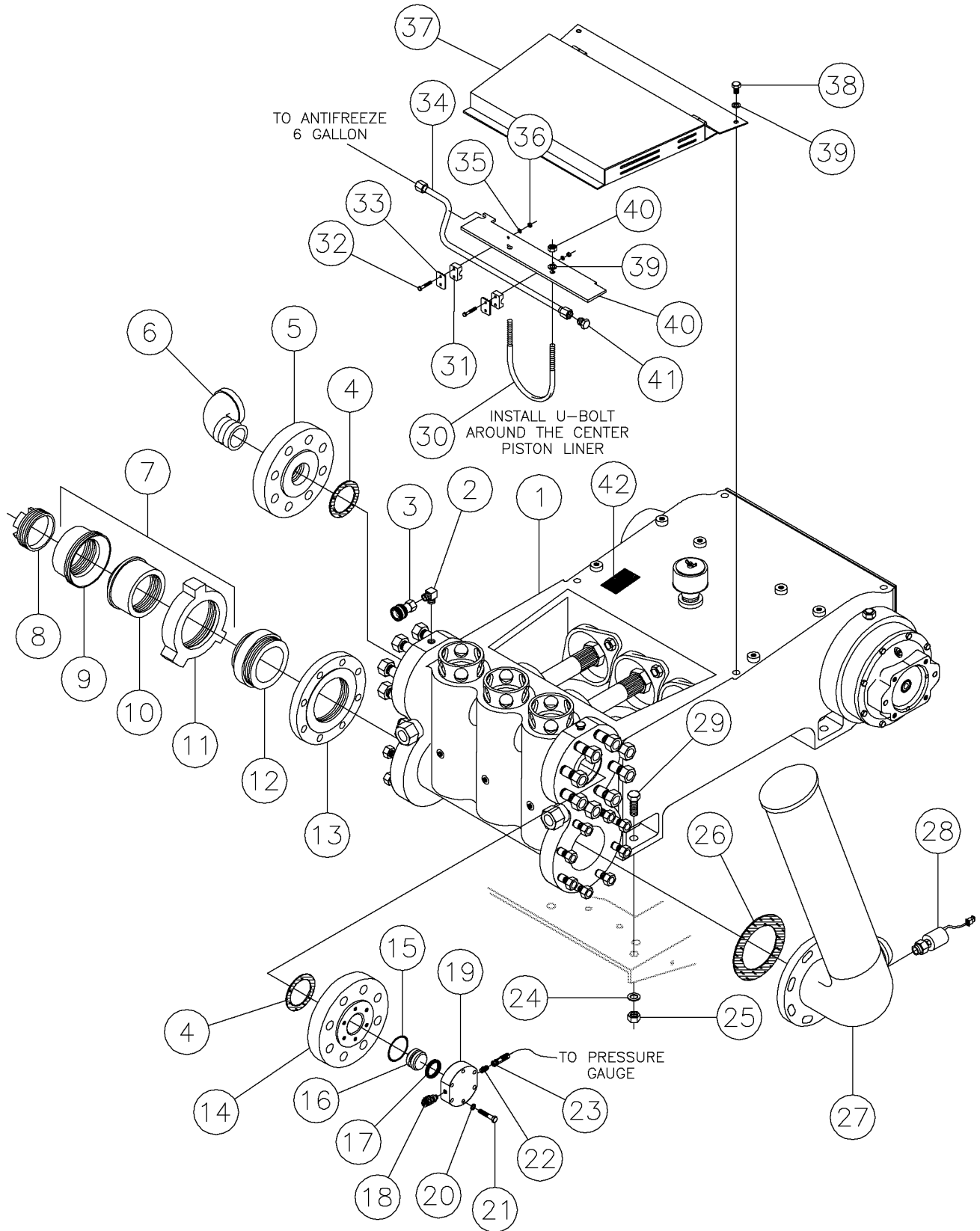
Water Pump - Apex 200 GPM (SC170) Fig 7-4r01



Water Pump - Apex 200 GPM (SC170) Fig 7-4r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	September, 2006		Corrected Illustration
1		277780001	PUMP- SC170 4"-07 GR TRIPLEX	1	Inc. Ref. 4&26; Breakdown Fig. 13-48 Thru 13-54
2		904831001	FITTING 1/2MNPT X 1/2MNPT 90	1	
3		227235001	COUPLER-1/2"NPT QUICK(FEMALE)	1	
4		277780002	GASKET - DISCHARGE (4.125 OD)	2	
5		278062001	FITTING-SC170 OUTLET (DRL FLD)	1	
6		244191001	ELBOW - 2" 90 DEG BLK STREET	1	
7		287056001	UNION - 4" HAMMER (1000PSI)	1	Included Ref. No's 9-11
8		287057001	PLUG - 4" NPT	1	
9		287056005	SUB - 4" FEMALE HAMMER UNION (1000PSI)	1	
10		287056003	SUB - 4" MALE HAMMER UNION (1000PSI)	1	
11		287056007	NUT - 4" HAMMER UNION WING (1000PSI)	1	
12		287034001	FITTING - 5" MPT X 4" MPT REDUCER	1	
13		287035001	FLANGE - SUCTION STABILIZER	1	
14		277821001	FITTING - SC170 OUTLET	1	
15		227589001	O-RING #AS-231	1	
16		239252001	PISTON-SC65 OUTLET FITTING	1	
17		51181001	O-RING #326	1	
18		75493001	FITTING - TEST - 4MORB - 16MTP	1	
19		277824001	COVER-SC170 OUTLET FITTING	1	
20		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	6	
21		240454001	BOLT-3/8-16X2 GR#8 ZINC PLTD	6	
22		60908001	FITTING-4MX4M JIC STR ADAPTER	1	
23		296279563	HOSE-HYD-.08X302-4FSJ-ST/4FSJ ST-6900PSI	1	
24		235717001	WASHER - 3/4" HARDENED FLAT YZ	4	
25		235739001	NUT-3/4-10 GR8 ZINC PLTD	4	
26		277780003	GASKET - SUCTION (7.75 OD)	2	
27		296275987	TUBE-SUCTION STABILIZER	1	
28		283060001	SENSOR-MUD PRESSURE	1	
29		235746001	BOLT-3/4-10X2 GR8 HEX ZNC PLTD	4	
30		285069001	U-BOLT - 1/2" X 5" ZINC PLTD	1	
31		903135003	CLAMP HOSE HALF 20675-PP(TAKES 2 PER 1)	2	
32		238210001	BOLT - 1/4-20X1 1/2 GR8 HEX ZYC	4	
33		903135005	PLATE-COVER COP-2	2	
34		285068001	TUBE - PISTON WASH	1	
35		235716001	WASHER - FLATSTRL - .25 -.28 X .63 - .06 - CZ	4	
36		248198001	NUT-1/4 - 20 GR8 TOP LOCK ZINC	4	
37		285058001	COVER, PISTON WASH	1	
38		235728001	BOLT-1/2-13X3/4 GR8 ZINC PLTD	2	
39		485025	WASHER-1/2 FLAT-HARDENED-YZ	4	
40		285096001	PLATE, PISTON WASH	1	
41		83637001	PLUG-#8 JIC MALE	1	
42		7000B304	DECAL - WARNING	1	Domestic
		700IB304	DECAL - WARNING	1	International
43		234679001	CAP-DUST	1	

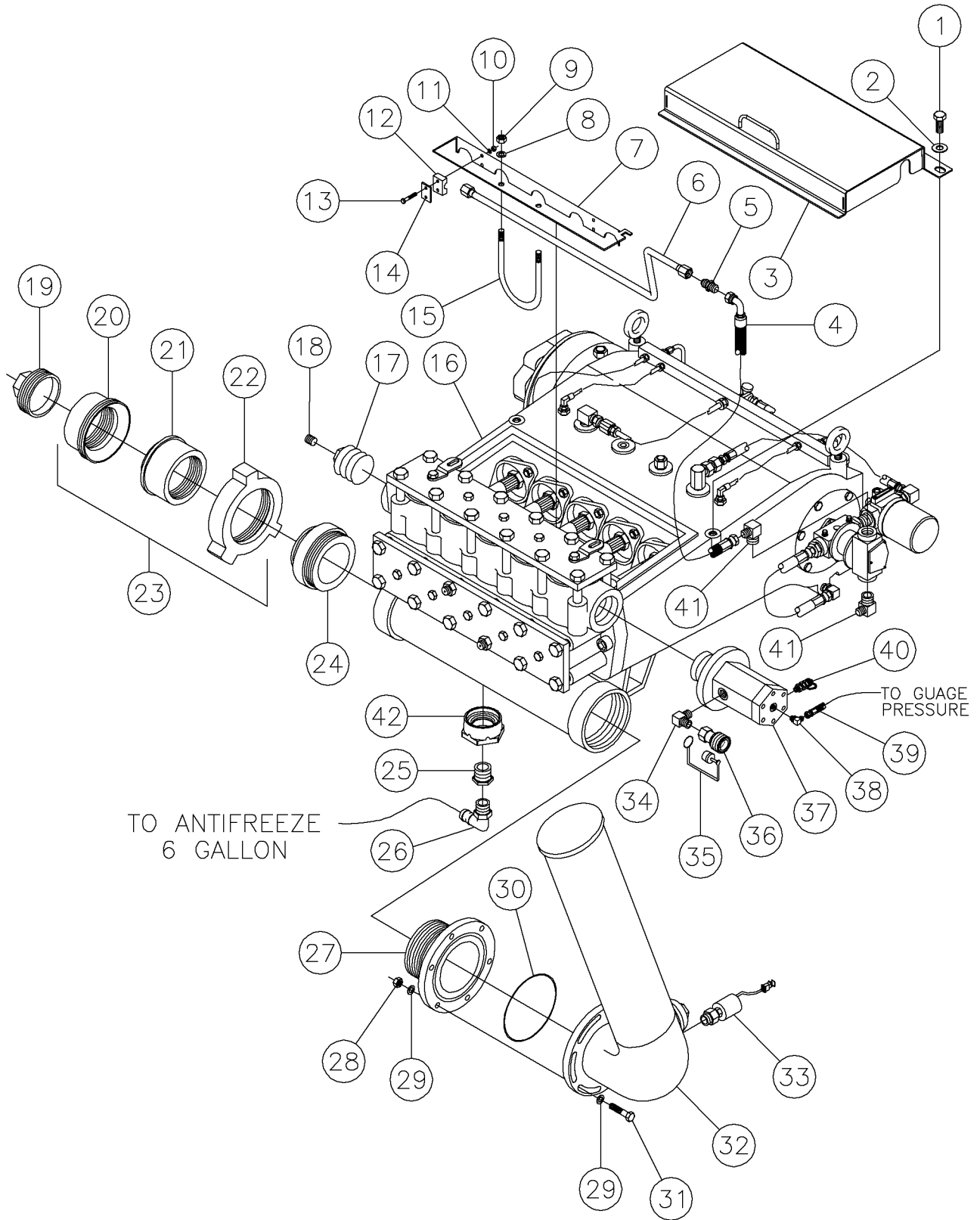
Water Pump - Aplex 200 GPM (SC170) Fig 7-4



Water Pump - Aplex 200 GPM (SC170) Fig 7-4

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		277780001	PUMP- SC170 4"-07 GR TRIPLEX	1	Inc. Ref. 4&26; Breakdown Fig. 13-48 Thru 13-54
2		904831001	FITTING 1/2MNPT X 1/2MNPT 90	1	
3		227235001	COUPLER-1/2"NPT QUICK(FEMALE)	1	
4		277780002	GASKET - DISCHARGE (4.125 OD)	2	
5		278062001	FITTING-SC170 OUTLET (DRL FLD)	1	
6		244191001	ELBOW - 2" 90 DEG BLK STREET	1	
7		287056001	UNION - 4" HAMMER (1000PSI)	1	Included Ref. No's 9-11
8		287057001	PLUG - 4" NPT	1	
9		287056005	SUB - 4" FEMALE HAMMER UNION (1000PSI)	1	
10		287056003	SUB - 4" MALE HAMMER UNION (1000PSI)	1	
11		287056007	NUT - 4" HAMMER UNION WING (1000PSI)	1	
12		287034001	FITTING - 5" MPT X 4" MPT REDUCER	1	
13		287035001	FLANGE - SUCTION STABILIZER	1	
14		277821001	FITTING - SC170 OUTLET	1	
15		227589001	O-RING #AS-231	1	
16		239252001	PISTON-SC65 OUTLET FITTING	1	
17		51181001	O-RING #326	1	
18		75493001	FITTING - TEST - 4MORB - 16MTP	1	
19		277824001	COVER-SC170 OUTLET FITTING	1	
20		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	6	
21		240454001	BOLT-3/8-16X2 GR#8 ZINC PLTD	6	
22		60908001	FITTING-4MX4M JIC STR ADAPTER	1	
23		296279563	HOSE-HYD-.08X302-4FSJ-ST/4FSJ ST-6900PSI	1	
24		235717001	WASHER - 3/4" HARDENED FLAT YZ	4	
25		235739001	NUT-3/4-10 GR8 ZINC PLTD	4	
26		277780003	GASKET - SUCTION (7.75 OD)	2	
27		296275987	TUBE-SUCTION STABILIZER	1	
28		283060001	SENSOR-MUD PRESSURE	1	
29		235746001	BOLT-3/4-10X2 GR8 HEX ZNC PLTD	4	
30		285069001	U-BOLT - 1/2" X 5" ZINC PLTD	1	
31		903135003	CLAMP HOSE HALF 20675-PP(TAKES 2 PER 1)	2	
32		238210001	BOLT - 1/4-20X1 1/2 GR8 HEX ZYC	4	
33		903135005	PLATE-COVER COP-2	2	
34		285068001	TUBE - PISTON WASH	1	
35		235716001	WASHER - FLATSTRL - .25 - .28 X .63 - .06 - CZ	4	
36		248198001	NUT-1/4 - 20 GR8 TOP LOCK ZINC	4	
37		285058001	COVER, PISTON WASH	1	
38		235728001	BOLT-1/2-13X3/4 GR8 ZINC PLTD	2	
39		485025	WASHER-1/2 FLAT-HARDENED-YZ	4	
40		235731001	NUT-1/2-13 GR8 ZINC PLTD	2	
41		83637001	PLUG-#8 JIC MALE	1	
42		7000B304	DECAL - WARNING	1	Domestic
		700IB304	DECAL - WARNING	1	International

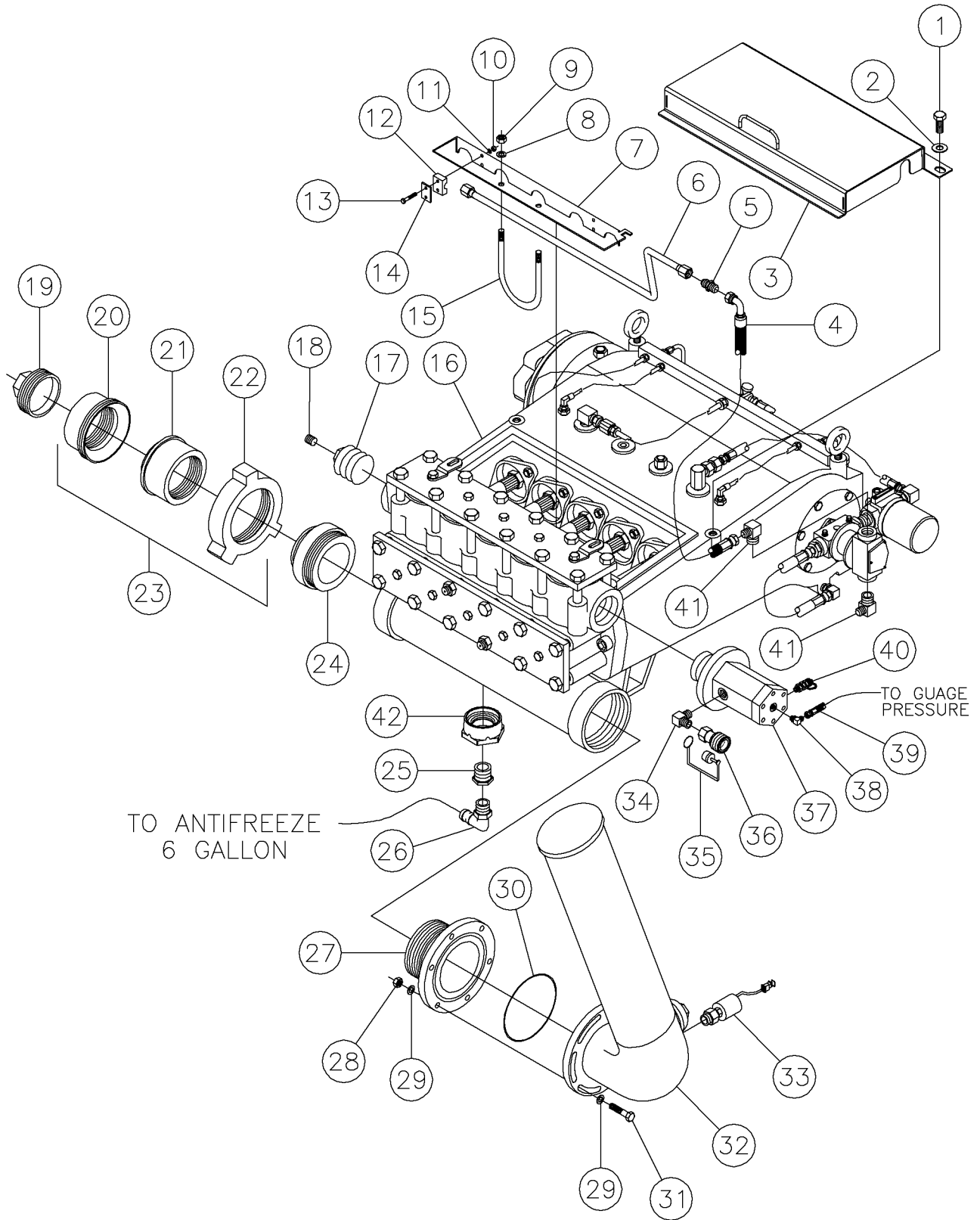
Water Pump - Aplex 150 GPM (SC115) (S/N 141-) Fig 7-5r02



Water Pump - Aplex 150 GPM (SC115) (S/N 141-) Fig 7-5r02

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	December, 2006		Update In Parts List.
1		235730001	BOLT-5/8-11X1 1/4 GR8 ZINC PLT	2	
2		235715001	WASHER-5/8 SAE HARD ZINC PLTD	2	
3		294131001	COVER - APLEX PISTON WASH	1	
4		296254863	HOSE - HYD - 0.50 - 16 - 8FJX - 8FJX90S - 100R17	1	
5		67215001	8M JICX8M JIC STR.	1	
6		285913001	TUBE - SC115L PISTON WASH	1	
7		285874001	PLATE - PISTON WASH HOLDER	1	
8		235713001	WASHER-FLATSTRL-.38-.41X.81-.06-YA	2	
9		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	2	
10		248198001	NUT-1/4 - 20 GR8 TOP LOCK ZINC	4	
11		235716001	WASHER-FLATSTRL-.25-28X.63-.06-CZ	4	
12		903135003	CLAMP HOSE HALF 20675-PP(TAKES 2 PER 1)	2	
13		238210001	BOLT - 1/4-20X1 1/2 GR8 HEX ZYC	4	
14		903135005	PLATE-COVER COP-2	2	
15		285807001	U-BOLT-3/8-16 UNC X 6.00	1	
16		285217001	PUMP - APLEX SX115L RH DRIVE 6.0:1 RATIO	1	Breakdown Fig. 13-55 Thru 13-61
17		244516001	FITTING-40MNPT/8FNPT HEX REDCR	1	
18		735003	1/2 COUNTERSUNK PIPE PLUG	1	
19		287057001	PLUG - 4" NPT	1	
20		287056003	SUB - 4" MALE HAMMER UNION (1000PSI)	1	
21		287056005	SUB - 4" FEMALE HAMMER UNION (1000PSI)	1	
22		287056007	NUT - 4" HAMMER UNION WING (1000PSI)	1	
23		287056001	UNION - 4" HAMMER (1000PSI)	1	Included Ref. No's 20-22
24		287034001	FITTING - 5" MPT X 4" MPT REDUCER	1	
25		231150001	BUSHING-2"X1 XCX REDUCER (POLY)	1	
26		905430001	FITTING-1NPTX1 BARB-90 NYLON	1	
27		275312001	FLANGE-WATER PUMP INLET	1	
28		75382001	NUT-1/2-UNC GRADE 8 SLTL	6	
29		485025	WASHER-1/2 FLAT-HARDENED-YZ	12	
30		275321001	O-RING - SS #165	1	
31		240335001	BOLT-1/2-13X2 1/4 GR8 ZINC PLT	6	
32	*	294125001	TUBE-SUCTION STABILIZER(SC115I RH)	1	S/N 141-
33	*	287554001	SWITCH - 10 PSI NO/NC	1	S/N 141-
34		904831001	FITTING 1/2MNPT X 1/2MNPT 90	1	
35		234679001	CAP-DUST	1	
36		227235001	COUPLER-1/2"NPT QUICK(FEMALE)	1	
37		294123001	ASSEMBLY - SC115L RH FLANGE OUTLET	1	Breakdown Fig. 13-62
38		5790001	SHIELD-CHAIN	1	
39		294040001	HOSE-HYD-1.50-80-24FJX-24FJX-100R12	1	
40		72056001	FITTING-TEST-6MORB-16MTP	1	
41		62633001	3/4MX8 JIC M(90)	2	
42		215428001	BUSHING-3X2 REDUCER (POLY)	1	

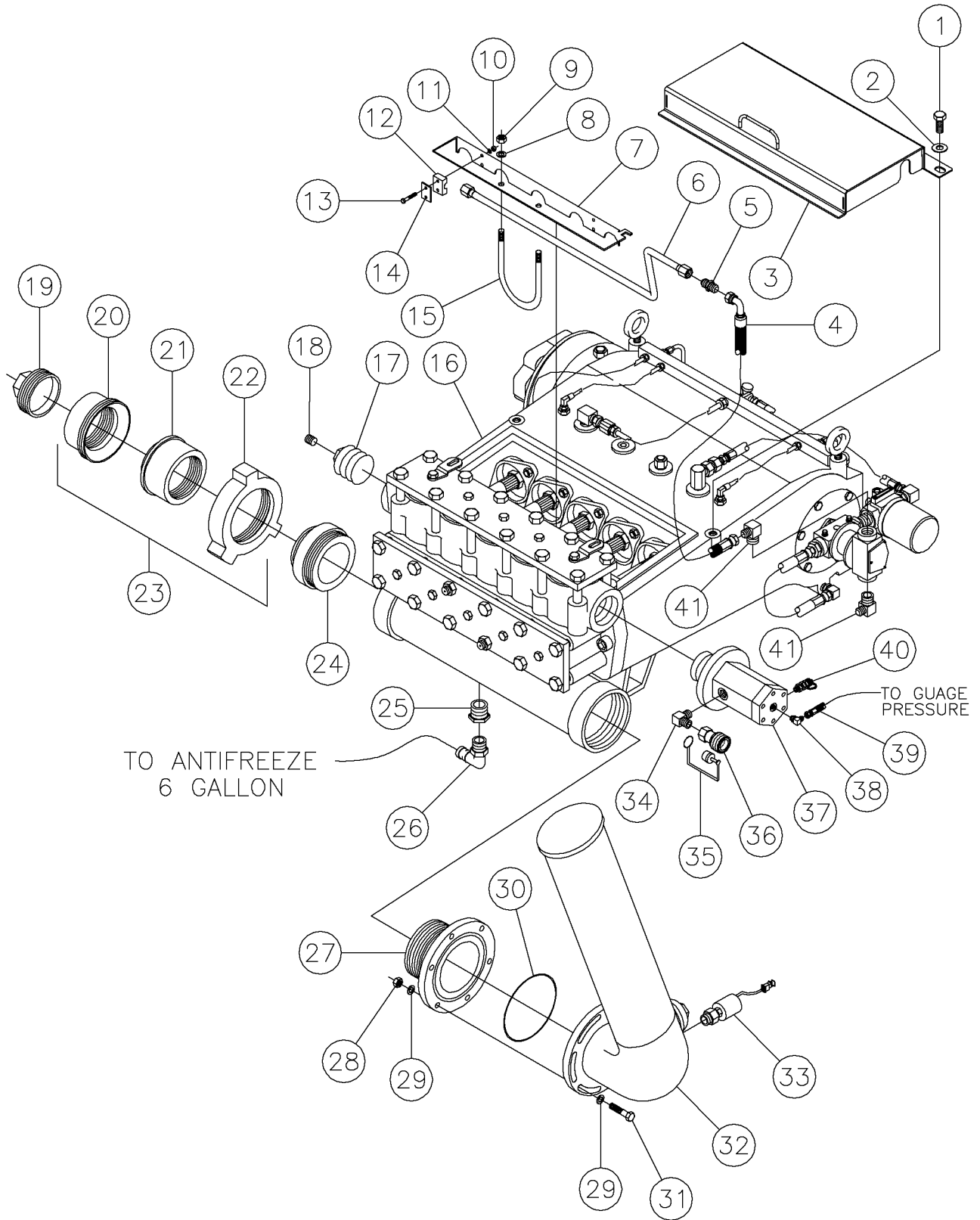
Water Pump - Apex 150 GPM (SC115) Fig 7-5r01



Water Pump - Aplex 150 GPM (SC115) Fig 7-5r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	August, 2006		Update In Illustration & Parts List.
1		235730001	BOLT-5/8-11X1 1/4 GR8 ZINC PLT	2	
2		235715001	WASHER-5/8 SAE HARD ZINC PLTD	2	
3		294131001	COVER - APLEX PISTON WASH	1	
4		296254863	HOSE - HYD - 0.50 - 16 - 8FJX - 8FJX90S - 100R17	1	
5		67215001	8M JICX8M JIC STR.	1	
6		285913001	TUBE - SC115L PISTON WASH	1	
7		285874001	PLATE - PISTON WASH HOLDER	1	
8		235713001	WASHER-FLATSTRL-.38-.41X.81-.06-YA	2	
9		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	2	
10		248198001	NUT-1/4 - 20 GR8 TOP LOCK ZINC	4	
11		235716001	WASHER - FLATSTRL - .25 -.28 X .63 - .06	4	
12		903135003	CLAMP HOSE HALF 20675-PP(TAKES 2 PER 1)	2	
13		238210001	BOLT - 1/4-20X1 1/2 GR8 HEX ZYC	4	
14		903135005	PLATE-COVER COP-2	2	
15		285807001	U-BOLT-3/8-16 UNC X 6.00	1	
16		285217001	PUMP - APLEX SX115L RH DRIVE 6.0:1 RATIO	1	Breakdown Fig. 13-55 Thru 13-61
17		244516001	FITTING-40MNPT/8FNPT HEX REDCR	1	
18		735003	1/2 COUNTERSUNK PIPE PLUG	1	
19		287057001	PLUG - 4" NPT	1	
20		287056003	SUB - 4" MALE HAMMER UNION (1000PSI)	1	
21		287056005	SUB - 4" FEMALE HAMMER UNION (1000PSI)	1	
22		287056007	NUT - 4" HAMMER UNION WING (1000PSI)	1	
23		287056001	UNION - 4" HAMMER (1000PSI)	1	Included Ref. No's 20-22
24		287034001	FITTING - 5" MPT X 4" MPT REDUCER	1	
25		231150001	BUSHING-2"X1 XCX REDUCER (POLY)	1	
26		905430001	FITTING-1NPTX1 BARB-90 NYLON	1	
27		275312001	FLANGE-WATER PUMP INLET	1	
28		75382001	NUT-1/2-UNC GRADE 8 SLTL	6	
29		485025	WASHER-1/2 FLAT-HARDENED-YZ	12	
30		275321001	O-RING - SS #165	1	
31		240335001	BOLT-1/2-13X2 1/4 GR8 ZINC PLT	6	
32		296275988	TUBE - SUCTION STABILIZER SC 115	1	
33		283060001	SENSOR-MUD PRESSURE	1	
34		904831001	FITTING 1/2MNPT X 1/2MNPT 90	1	
35		234679001	CAP-DUST	1	
36		227235001	COUPLER-1/2"NPT QUICK(FEMALE)	1	
37		294123001	ASSEMBLY - SC115L RH FLANGE OUTLET	1	Breakdown Fig. 13-62
38		5790001	SHIELD-CHAIN	1	
39		294040001	HOSE - HYD - 1.50-80-24FJX-24FJX-100R12	1	
40		72056001	FITTING-TEST-6MORB-16MTP	1	
41		62633001	3/4MX8 JIC M(90)	2	
42	*	215428001	BUSHING-3X2 REDUCER (POLY)	1	

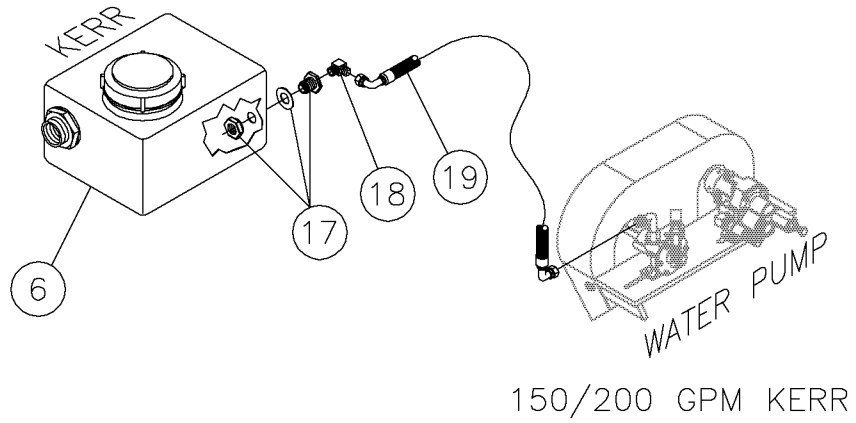
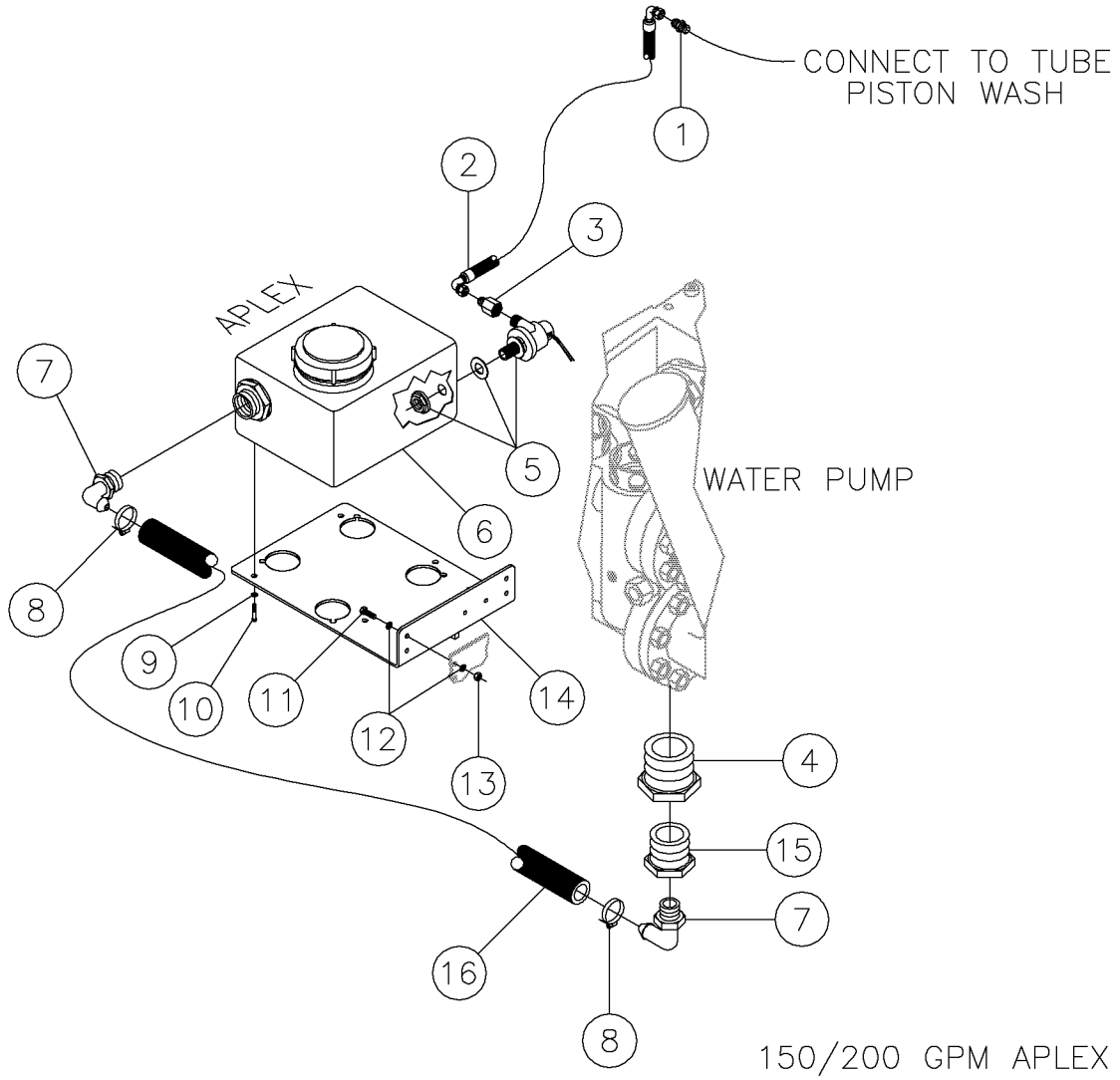
Water Pump - Apex 150 GPM (SC115) Fig 7-5



Water Pump - Aplex 150 GPM (SC115) Fig 7-5

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		235730001	BOLT-5/8-11X1 1/4 GR8 ZINC PLT	2	
2		235715001	WASHER-5/8 SAE HARD ZINC PLTD	2	
3		294131001	COVER - APLEX PISTON WASH	1	
4		296254863	HOSE - HYD - 0.50 - 16 - 8FJX - 8FJX90S - 100R17	1	
5		67215001	8M JICX8M JIC STR.	1	
6		285913001	TUBE - SC115L PISTON WASH	1	
7		285874001	PLATE - PISTON WASH HOLDER	1	
8		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	2	
9		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	2	
10		248198001	NUT-1/4 - 20 GR8 TOP LOCK ZINC	4	
11		235716001	WASHER - FLATSTRL - .25 -.28 X .63 - .06 - CZ	4	
12		903135003	CLAMP HOSE HALF 20675-PP(TAKES 2 PER 1)	2	
13		238210001	BOLT - 1/4-20X1 1/2 GR8 HEX ZYC	4	
14		903135005	PLATE-COVER COP-2	2	
15		285807001	U-BOLT-3/8-16 UNC X 6.00	1	
16		285217001	PUMP - APLEX SX115L RH DRIVE 6.0:1 RATIO	1	Breakdown Fig. 13-55 Thru 13-61
17		244516001	FITTING-40MNPT/8FNPT HEX REDCR	1	
18		735003	1/2 COUNTERSUNK PIPE PLUG	1	
19		287057001	PLUG - 4" NPT	1	
20		287056003	SUB - 4" MALE HAMMER UNION (1000PSI)	1	
21		287056005	SUB - 4" FEMALE HAMMER UNION (1000PSI)	1	
22		287056007	NUT - 4" HAMMER UNION WING (1000PSI)	1	
23		287056001	UNION - 4" HAMMER (1000PSI)	1	Included Ref. No's 20-22
24		287034001	FITTING - 5" MPT X 4" MPT REDUCER	1	
25		231150001	BUSHING-2"X1 XCX REDUCER (POLY)	1	
26		905430001	FITTING-1NPTX1 BARB-90 NYLON	1	
27		275312001	FLANGE-WATER PUMP INLET	1	
28		75382001	NUT-1/2-UNC GRADE 8 SLTL	6	
29		485025	WASHER-1/2 FLAT-HARDENED-YZ	12	
30		275321001	O-RING - SS #165	1	
31		240335001	BOLT-1/2-13X2 1/4 GR8 ZINC PLT	6	
32		296275988	TUBE - SUCTION STABILIZER SC 115	1	
33		283060001	SENSOR-MUD PRESSURE	1	
34		904831001	FITTING 1/2MNPT X 1/2MNPT 90	1	
35		234679001	CAP-DUST	1	
36		227235001	COUPLER-1/2"NPT QUICK(FEMALE)	1	
37		294123001	ASSEMBLY - SC115L RH FLANGE OUTLET	1	Breakdown Fig. 13-62
38		5790001	SHIELD-CHAIN	1	
39		294040001	HOSE - HYD - 1.50-80-24FJX-24FJX-100R12	1	
40		72056001	FITTING-TEST-6MORB-16MTP	1	
41		62633001	3/4MX8 JIC M(90)	2	

Piston Wash Fig 7-6r01



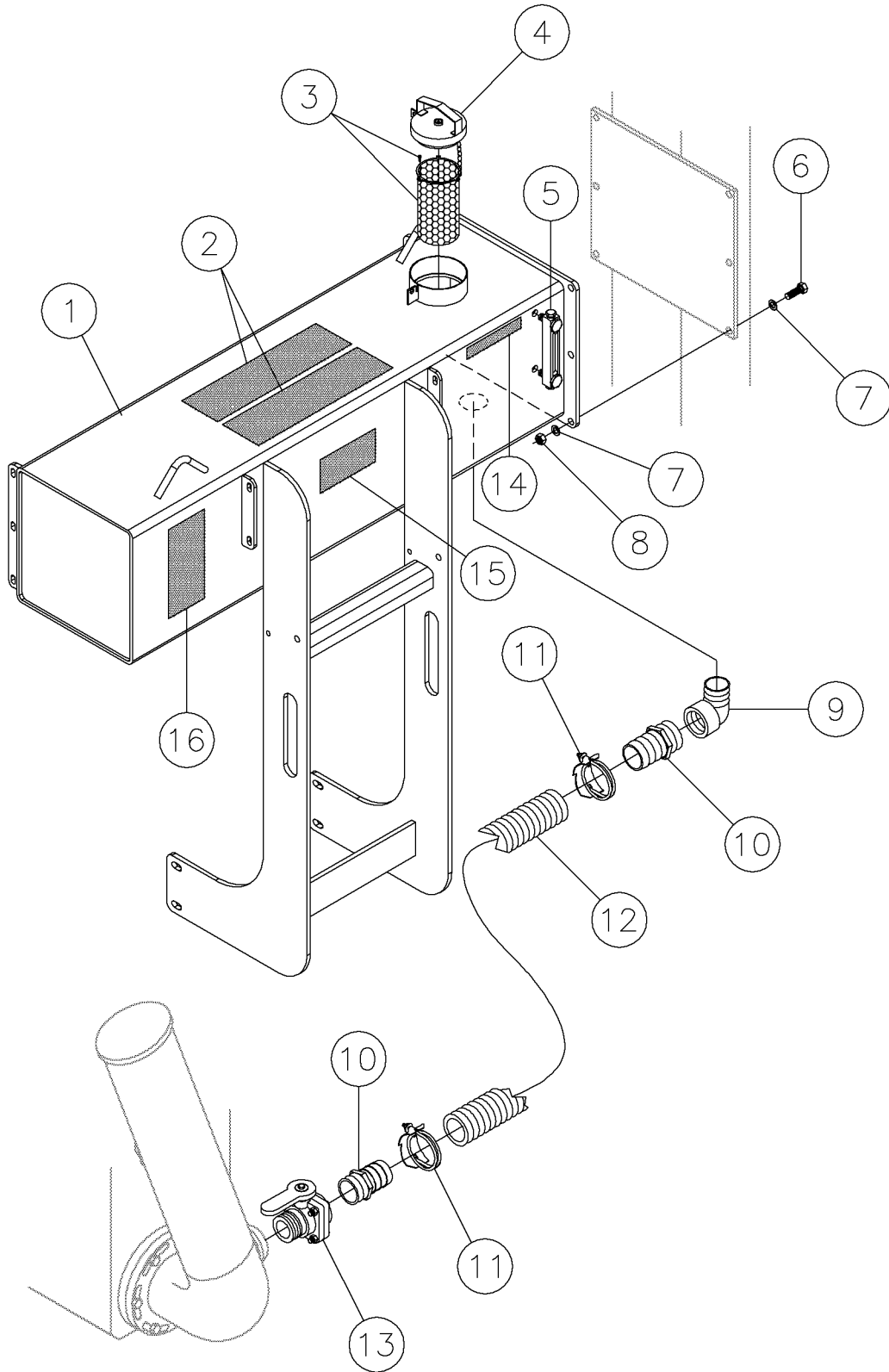
Piston Wash Fig 7-6r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	August, 2006		Update In Illustration & Parts List.
1		37251001	3B124 POWER BAND-	1	
2		53844327	HOSE-HYD-.50X32-8FSJ-ST/90-3000PSI-100R1	1	
3		296275718	FITTING - 8MJ-12FP-ST	1	
4	*	215460001	BUSHING-3X2 NPT REDUCER(NYLON)	1	
5		296279590	PUMP - PISTON WASH	1	
6		285850001	TANK - 6 GALLON POLY	1	
7	*	905430001	FITTING-1NPTX1 BARB-90 NYLON	2	
8		1580007	HOSE CLAMP - 1 1/2"	2	
9		235716001	WASHER - FLATSTRL - .25 -.28 X .63 - .06 - CZ	4	
10		235734001	BOLT-1/4-20X3/4 GR8 ZINC PLTD	4	
11		235736001	BOLT-3/8-16X1 1/4 ZINC PLTD	4	
12		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	4	
13		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	4	
14		285804001	PLATE- TANK MOUNT	1	
15	*	231150001	BUSHING-2"X1 XCX REDUCER (POLY)	1	
16		285924001	HOSE - 1 1/2 X 37 SUCTION	1	
17		904062005	3/4" BUNG	2	
18		62633001	3/4MX8 JIC M(90)	1	
19		68208047	HOSE-1/2X52 8FSJIC/8FSJIC90	1	

Piston Wash Fig 7-6

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		37251001	3B124 POWER BAND-	1	
2		53844327	HOSE-HYD-.50X32-8FSJ-ST/90-3000PSI-100R1	1	
3		296275718	FITTING - 8MJ-12FP-ST	1	
4		285070001	FITTING - 2" POLY BULKHEAD	1	
5		296279590	PUMP - PISTON WASH	1	
6		285850001	TANK - 6 GALLON POLY	1	
7		223756001	HOSE BARB-1 1/2 X 1 1/2 90M	2	
8		1580007	HOSE CLAMP - 1 1/2"	2	
9		235716001	WASHER - FLATSTRL - .25 -.28 X .63 - .06 - CZ	4	
10		235734001	BOLT-1/4-20X3/4 GR8 ZINC PLTD	4	
11		235736001	BOLT-3/8-16X1 1/4 ZINC PLTD	4	
12		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	4	
13		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	4	
14		285804001	PLATE- TANK MOUNT	1	
15		285070001	FITTING - 2" POLY BULKHEAD	1	
16		285924001	HOSE - 1 1/2 X 37 SUCTION	1	
17		904062005	3/4" BUNG	2	
18		62633001	3/4MX8 JIC M(90)	1	
19		68208047	HOSE-1/2X52 8FSJIC/8FSJIC90	1	

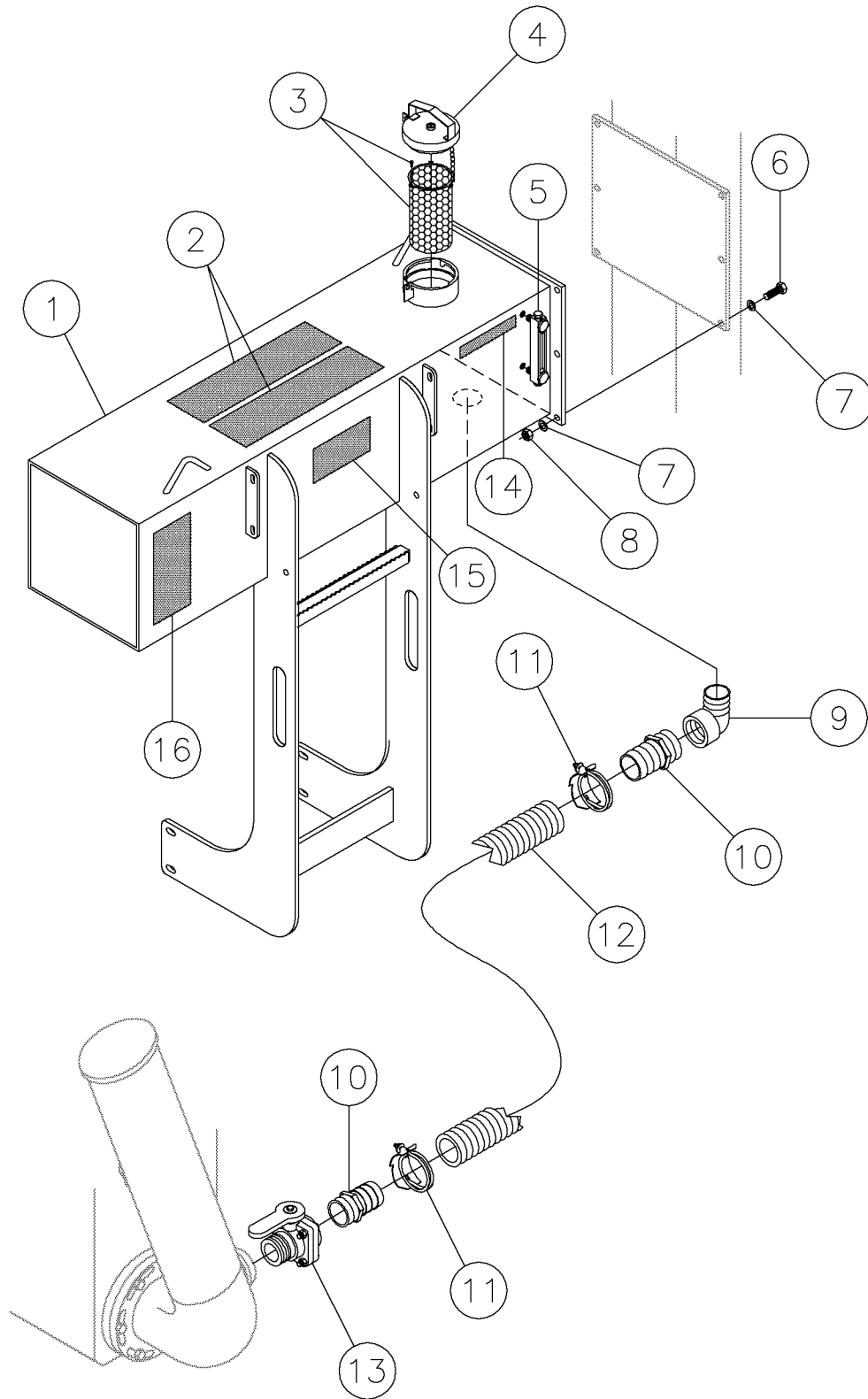
Antifreeze Tank Fig 7-7r01



Antifreeze Tank Fig 7-7r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	December, 2006		Update In Illustration.
1	*	287003001	TANK - WP ANTI-FREEZE	1	
2		5776001	TAPE-SAFETY WALK 4 WIDE	A/R	Specify Length
3		99998001	STRAINER-6" .030 STEEL	1	
4		224985001	CAP-VENTED FUEL TANK	1	
5		81590001	GAUGE-SIGHT	1	
6		235721001	BOLT-1/2-13X1 1/2 GR8 ZINC PLT	6	
7		485025	WASHER-1/2 FLAT-HARDENED-YZ	12	
8		75382001	NUT-1/2-UNC GRADE 8 SLTL	6	
9		214088001	ELBOW-90 DEG 2" POLY STREET	1	
10		215426001	HOSE BARB-2X2 MPT (POLY)	2	
11		238064001	CLAMP-2" POWERLOCK HOSE	2	
12		278116001	HOSE - 2" HD SUCTION 45"	1	
13		236045001	VALVE-2"FPTX2"MPT POLY BALL	1	Breakdown Fig. 13-34
14		7000B499	DECAL - ANTIFREEZE	1	
15		7000A863	DECAL - WARNING	1	Domestic
		700IA863	DECAL - WARNING	1	International
16		7000A392	DECAL - DANGER	1	Domestic
		700IA392	DECAL - DANGER D28/D50	1	International

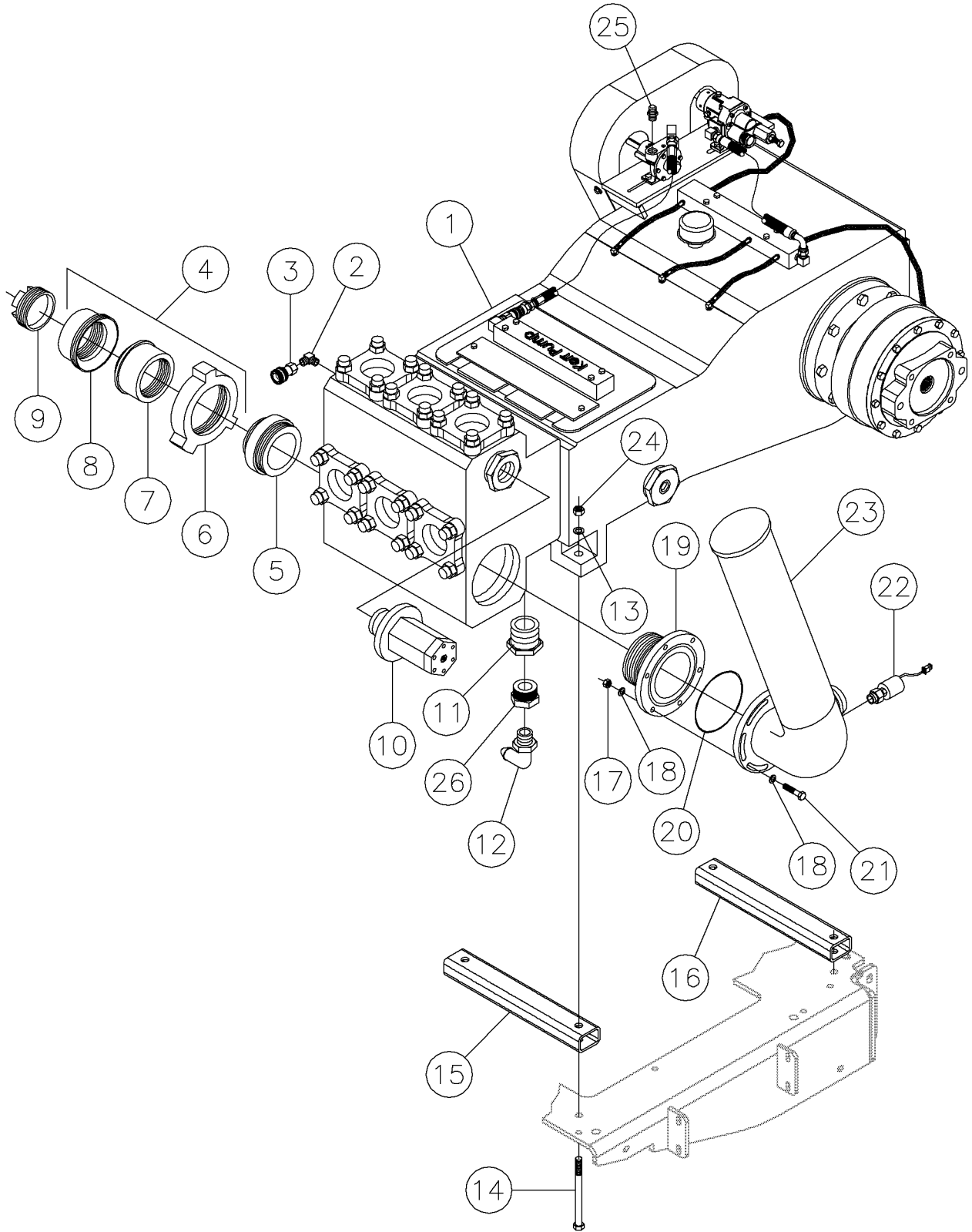
Antifreeze Tank Fig 7-7



Antifreeze Tank Fig 7-7

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		287003001	TANK - WP ANTI-FREEZE	1	
2		5776001	TAPE-SAFETY WALK 4 WIDE	A/R	Specify Length
3		99998001	STRAINER-6" .030 STEEL	1	
4		224958001	ARM-SHIFTER PIVOT	1	
5		81590001	GAUGE-SIGHT	1	
6		235721001	BOLT-1/2-13X1 1/2 GR8 ZINC PLT	6	
7		485025	WASHER-1/2 FLAT-HARDENED-YZ	12	
8		75382001	NUT-1/2-UNC GRADE 8 SLTL	6	
9		214088001	ELBOW-90 DEG 2" POLY STREET	1	
10		215426001	HOSE BARB-2X2 MPT (POLY)	2	
11		238064001	CLAMP-2" POWERLOCK HOSE	2	
12		278116001	HOSE - 2" HD SUCTION 45"	1	
13		236045001	VALVE-2"FPTX2"MPT POLY BALL	1	Breakdown Fig. 13-34
14		7000B499	DECAL - ANTIFREEZE	1	
15		7000A863	DECAL - WARNING	1	Domestic
		700IA863	DECAL - WARNING	1	International
16		7000A392	DECAL - DANGER	1	Domestic
		700IA392	DECAL - DANGER D28/D50	1	International

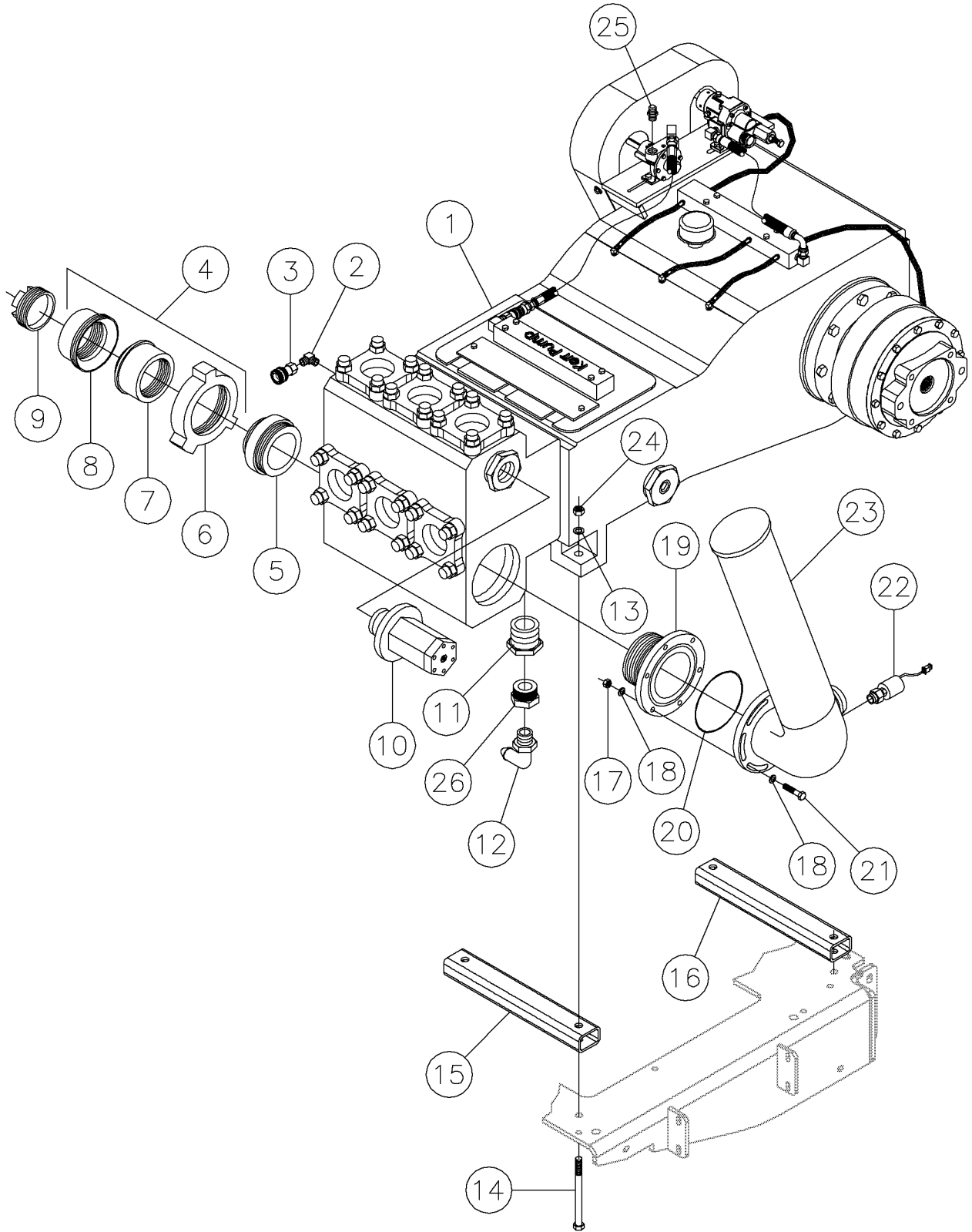
Water Pump - Kerr 200 GPM (KA5500PT) (S/N 141-) Fig 7-8r02



Water Pump - Kerr 200 GPM (KA5500PT) (S/N 141-) Fig 7-8r02

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	December, 2006		Changes Part Number
1		287030001	PUMP - KERR KA-5500PT MUD	1	Breakdown Fig. 13-27 Thru 13-32
2		904831001	FITTING 1/2MNPT X 1/2MNPT 90	1	
3		227235001	COUPLER-1/2"NPT QUICK(FEMALE)	1	
4		287056001	UNION - 4" HAMMER (1000PSI)	1	Inc. Ref. No's 6-8
5		287034001	FITTING - 5" MPT X 4" MPT REDUCER	1	
6		287056007	NUT - 4" HAMMER UNION WING (1000PSI)	1	
7		287056003	SUB - 4" MALE HAMMER UNION (1000PSI)	1	
8		287056005	SUB - 4" FEMALE HAMMER UNION (1000PSI)	1	
9		287057001	PLUG - 4" NPT	1	
10		294129001	ASSEMBLY - KT3350 FLANGE OUTLET	1	Breakdown Fig. 13-33
11		287030064	BUSHING - 3" X 2" HEX	1	
12		905430001	FITTING-1NPTX1 BARB-90 NYLON	1	
13		235715001	WASHER-5/8 SAE HARD ZINC PLTD	4	
14		287009001	BOLT - 5/8-11 X 4-1/2 GRD HEX YZN PLTD	4	
15		287031001	TUBE - FLUID END PUMP SUPPORT	1	
16		287041001	TUBE - DRIVE END PUMP SUPPORT	1	
17		75382001	NUT-1/2-UNC GRADE 8 SLTL	6	
18		485025	WASHER-1/2 FLAT-HARDENED-YZ	12	
19		275312001	FLANGE-WATER PUMP INLET	1	
20		275321001	O-RING - SS #165	1	
21		235721001	BOLT-1/2-13X1 1/2 GR8 ZINC PLT	6	
22	*	287554001	SWITCH - 10 PSI NO/NC	1	S/N 141-
23	*	287046001	TUBE-SUCTION STABILIZER	1	S/N 141-
24		238221001	NUT - HEX -.63 - 11 - GR8 - YZ	4	
25		60922001	1/2MX8M JIC ST.ADAPTER	1	
26		231150001	BUSHING-2"X1 XCX REDUCER (POLY)	1	

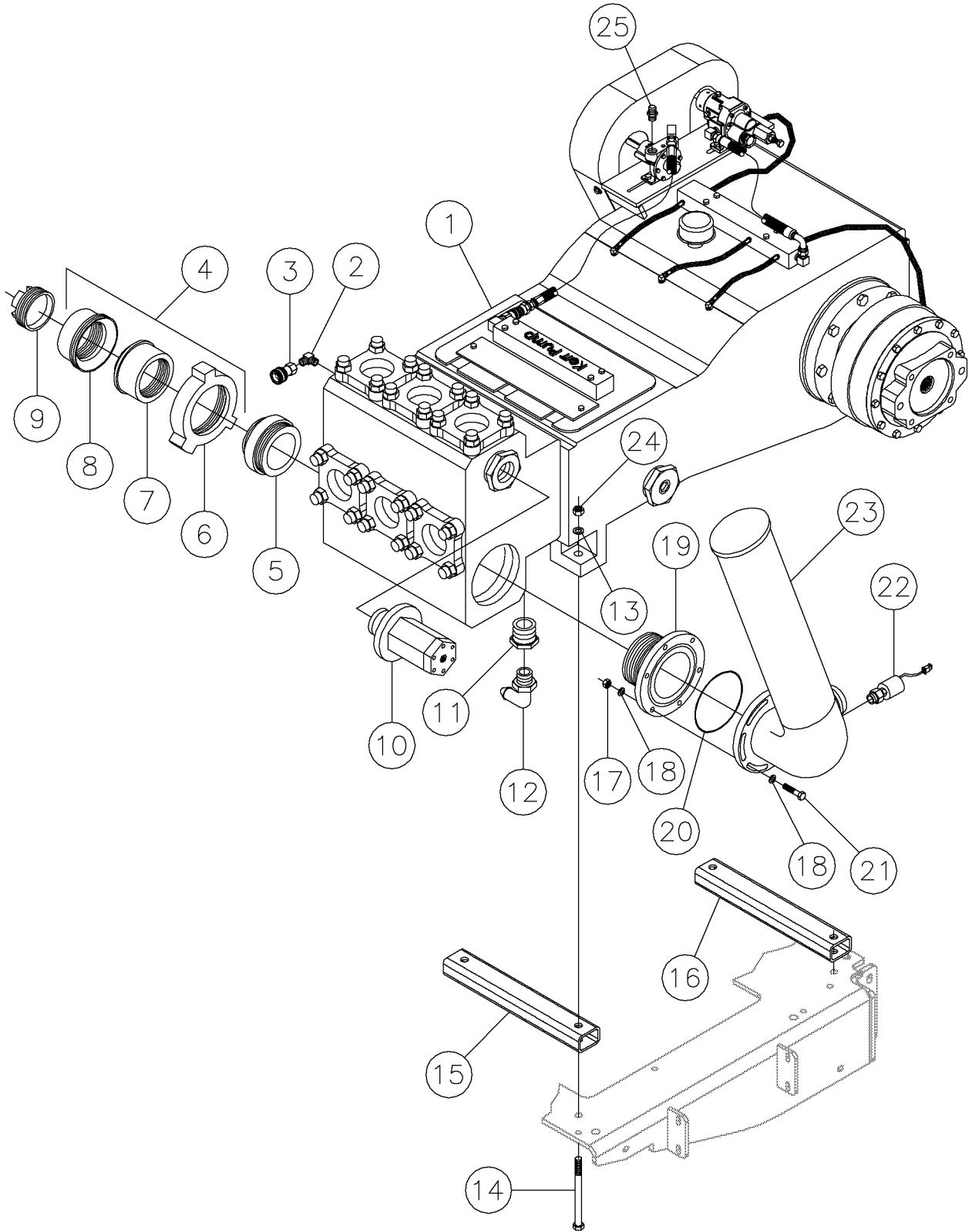
Water Pump - Kerr 200 GPM (KA5500PT) Fig 7-8r01



Water Pump - Kerr 200 GPM (KA5500PT) Fig 7-8r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	August, 2006		
1		287030001	PUMP - KERR KA-5500PT MUD	1	Breakdown Fig. 13-27 Thru 13-32
2		904831001	FITTING 1/2MNPT X 1/2MNPT 90	1	
3		227235001	COUPLER-1/2"NPT QUICK(FEMALE)	1	
4		287056001	UNION - 4" HAMMER (1000PSI)	1	Inc. Ref. No's 6-8
5		287034001	FITTING - 5" MPT X 4" MPT REDUCER	1	
6		287056007	NUT - 4" HAMMER UNION WING (1000PSI)	1	
7		287056003	SUB - 4" MALE HAMMER UNION (1000PSI)	1	
8		287056005	SUB - 4" FEMALE HAMMER UNION (1000PSI)	1	
9		287057001	PLUG - 4" NPT	1	
10		294129001	ASSEMBLY - KT3350 FLANGE OUTLET	1	Breakdown Fig. 13-33
11	*	287030064	BUSHING - 3" X 2" HEX	1	
12	*	905430001	FITTING-1NPTX1 BARB-90 NYLON	1	
13		235715001	WASHER-5/8 SAE HARD ZINC PLTD	4	
14		287009001	BOLT - 5/8-11 X 4-1/2 GRD HEX YZN PLTD	4	
15		287031001	TUBE - FLUID END PUMP SUPPORT	1	
16		287041001	TUBE - DRIVE END PUMP SUPPORT	1	
17		75382001	NUT-1/2-UNC GRADE 8 SLTL	6	
18		485025	WASHER-1/2 FLAT-HARDENED-YZ	12	
19		275312001	FLANGE-WATER PUMP INLET	1	
20		275321001	O-RING - SS #165	1	
21		235721001	BOLT-1/2-13X1 1/2 GR8 ZINC PLT	6	
22		283060001	SENSOR-MUD PRESSURE	1	
23		296275972	TUBE-STABILIZER KIT	1	
24		238221001	NUT - HEX -.63 - 11 - GR8 - YZ	4	
25		60922001	1/2MX8M JIC ST.ADAPTER	1	
26	*	231150001	BUSHING-2"X1 XCX REDUCER (POLY)	1	

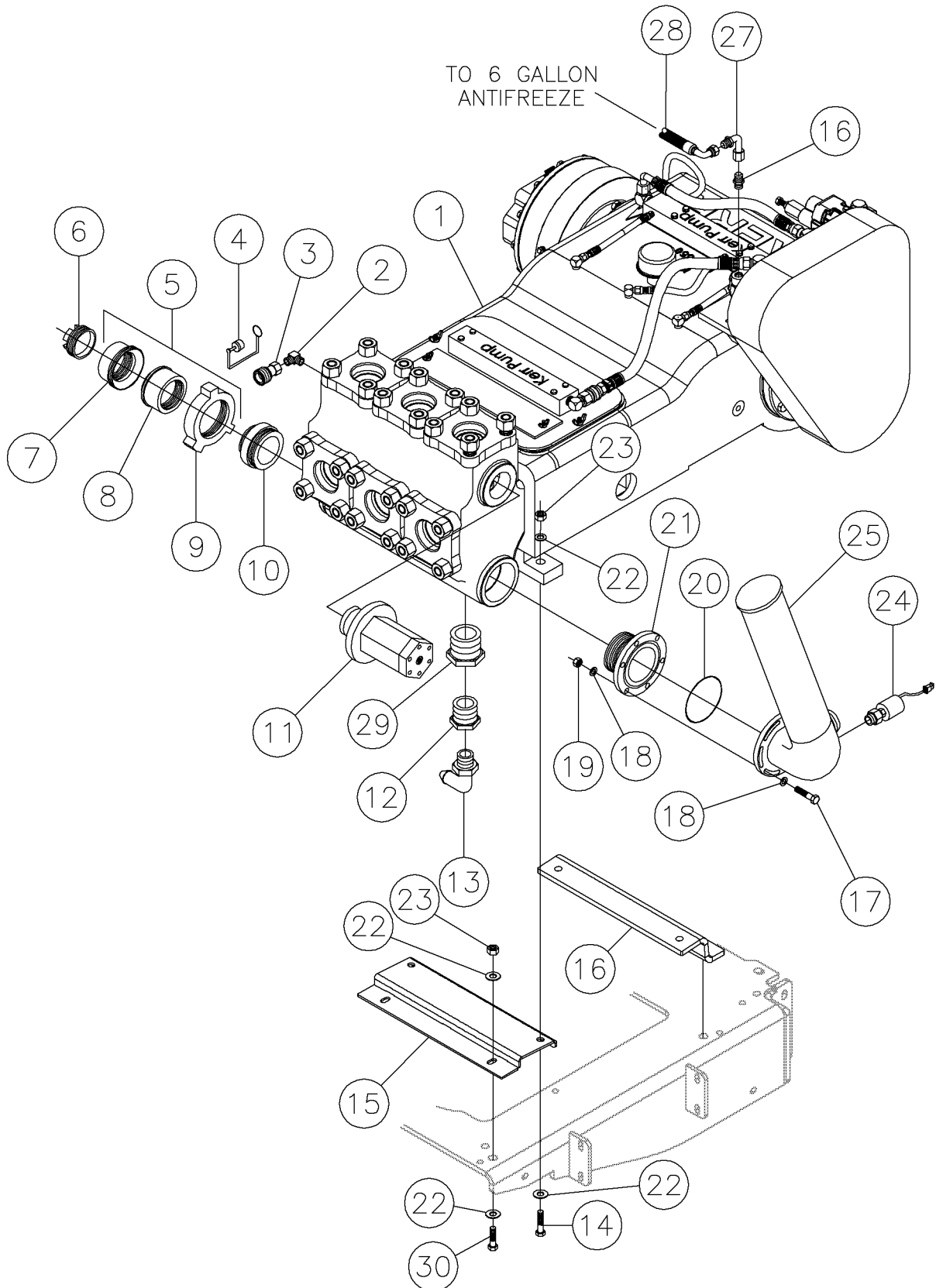
Water Pump - Kerr 200 GPM (KA5500PT) Fig 7-8



Water Pump - Kerr 200 GPM (KA5500PT) Fig 7-8

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		287030001	PUMP - KERR KA-5500PT MUD	1	Breakdown Fig. 13-27 Thru 13-32
2		904831001	FITTING - 1/2MNPT X 1/2MNPT 90	1	
3		227235001	COUPLER-1/2"NPT QUICK(FEMALE)	1	
4		287056001	UNION - 4" HAMMER (1000PSI)	1	Inc. Ref. No's 6-8
5		287034001	FITTING - 5" MPT X 4" MPT REDUCER	1	
6		287056007	NUT - 4" HAMMER UNION WING (1000PSI)	1	
7		287056003	SUB - 4" MALE HAMMER UNION (1000PSI)	1	
8		287056005	SUB - 4" FEMALE HAMMER UNION (1000PSI)	1	
9		287057001	PLUG - 4" NPT	1	
10		294129001	ASSEMBLY - KT3350 FLANGE OUTLET	1	Breakdown Fig. 13-33
11		285923001	BUSHING - 3" X 1 1/2" REDUCER (POLY)	1	
12		223756001	HOSE BARB-1 1/2 X 1 1/2 90M	1	
13		235715001	WASHER-5/8 SAE HARD ZINC PLTD	4	
14		287009001	BOLT - 5/8-11 X 4-1/2 GRD HEX YZN PLTD	4	
15		287031001	TUBE - FLUID END PUMP SUPPORT	1	
16		287041001	TUBE - DRIVE END PUMP SUPPORT	1	
17		75382001	NUT-1/2-UNC GRADE 8 SLTL	6	
18		485025	WASHER-1/2 FLAT-HARDENED-YZ	12	
19		275312001	FLANGE-WATER PUMP INLET	1	
20		275321001	O-RING - SS #165	1	
21		235721001	BOLT-1/2-13X1 1/2 GR8 ZINC PLT	6	
22		283060001	SENSOR-MUD PRESSURE	1	
23		296275972	TUBE-STABILIZER KIT	1	
24		238221001	NUT - HEX -.63 - 11 - GR8 - YZ	4	
25		60922001	1/2MX8M JIC ST.ADAPTER	1	

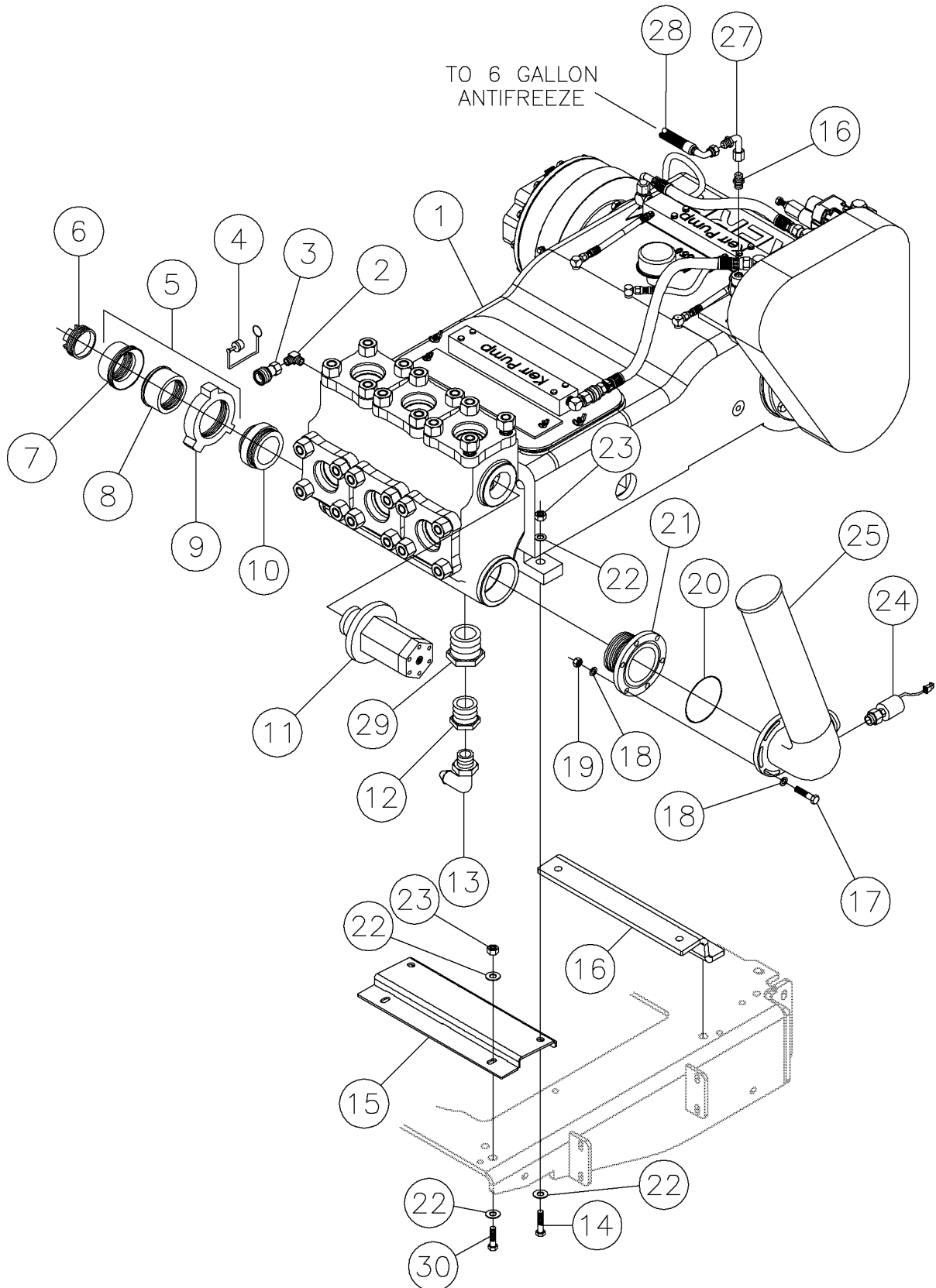
Water Pump - Kerr 150 GPM (KT3350PT-RH) (S/N 141-) Fig 7-9r02



Water Pump - Kerr 150 GPM (KT3350PT-RH) (S/N 141-) Fig 7-9r02

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	December, 2006		Changes Part Number
1		285141001	PUMP-KERR KT-3350PT-3500,RH DRV,AUBURN GEAR 6.0:1	1	Breakdown Fig. 13-63 thru 13-68
2		904831001	FITTING 1/2MNPT X 1/2MNPT 90	1	
3		227235001	COUPLER-1/2"NPT QUICK(FEMALE)	1	
4		223756001	HOSE BARB-1 1/2 X 1 1/2 90M	1	
5		287056001	UNION - 4" HAMMER (1000PSI)	1	Included Ref. No's 7-9
6		287057001	PLUG - 4" NPT	1	
7		287056005	SUB - 4" FEMALE HAMMER UNION (1000PSI)	1	
8		287056003	SUB - 4" MALE HAMMER UNION (1000PSI)	1	
9		287056007	NUT - 4" HAMMER UNION WING (1000PSI)	1	
10		287050001	FITTING - 4" MPT X 3" MPT REDUCER	1	
11		294129001	ASSEMBLY - KT3350 FLANGE OUTLET	1	Breakdown Fig. 13-69
12		231150001	BUSHING-2"X1 XCX REDUCER (POLY)	1	
13		905430001	FITTING-1NPTX1 BARB-90 NYLON	1	
14		238245001	BOLT 5/8" - 11 X 2 1/4 Gr 8 HEX	4	
15		294168001	MOUNT - FRONT PUMP KERR 3350	1	
16		285181001	MOUNT-PUMP REAR KERR 3350	1	
17		240335001	BOLT-1/2-13X2 1/4 GR8 ZINC PLT	6	
18		485025	WASHER-1/2 FLAT-HARDENED-YZ	12	
19		75382001	NUT-1/2-UNC GRADE 8 SLTL	6	
20		228181001	O-RING -#243 7OD BUNA-N	1	
21		287010001	FLANGE - WATER PUMP 3" INLET	1	
22		235715001	WASHER-5/8 SAE HARD ZINC PLTD	12	
23		238221001	NUT - HEX -.63 - 11 - GR8 - YZ	8	
24	*	283060001	SENSOR-MUD PRESSURE	1	S/N 141-
25		287033001	TUBE - SUCTION STABILIZER (KT 3350)	1	
26		60922001	1/2MX8M JIC ST.ADAPTER	1	
27		53660001	#8M JIC-#8FS JIC 90 DEG.TUBE	1	
28		296254858	HOSE - 1/2 X 66 8FSJIC/8FSJIC90	1	
29		287030064	BUSHING - 3" X 2" HEX	1	
30		145645001	BOLT - 5/8 - 11 X 2 GR.8 ZYC	4	

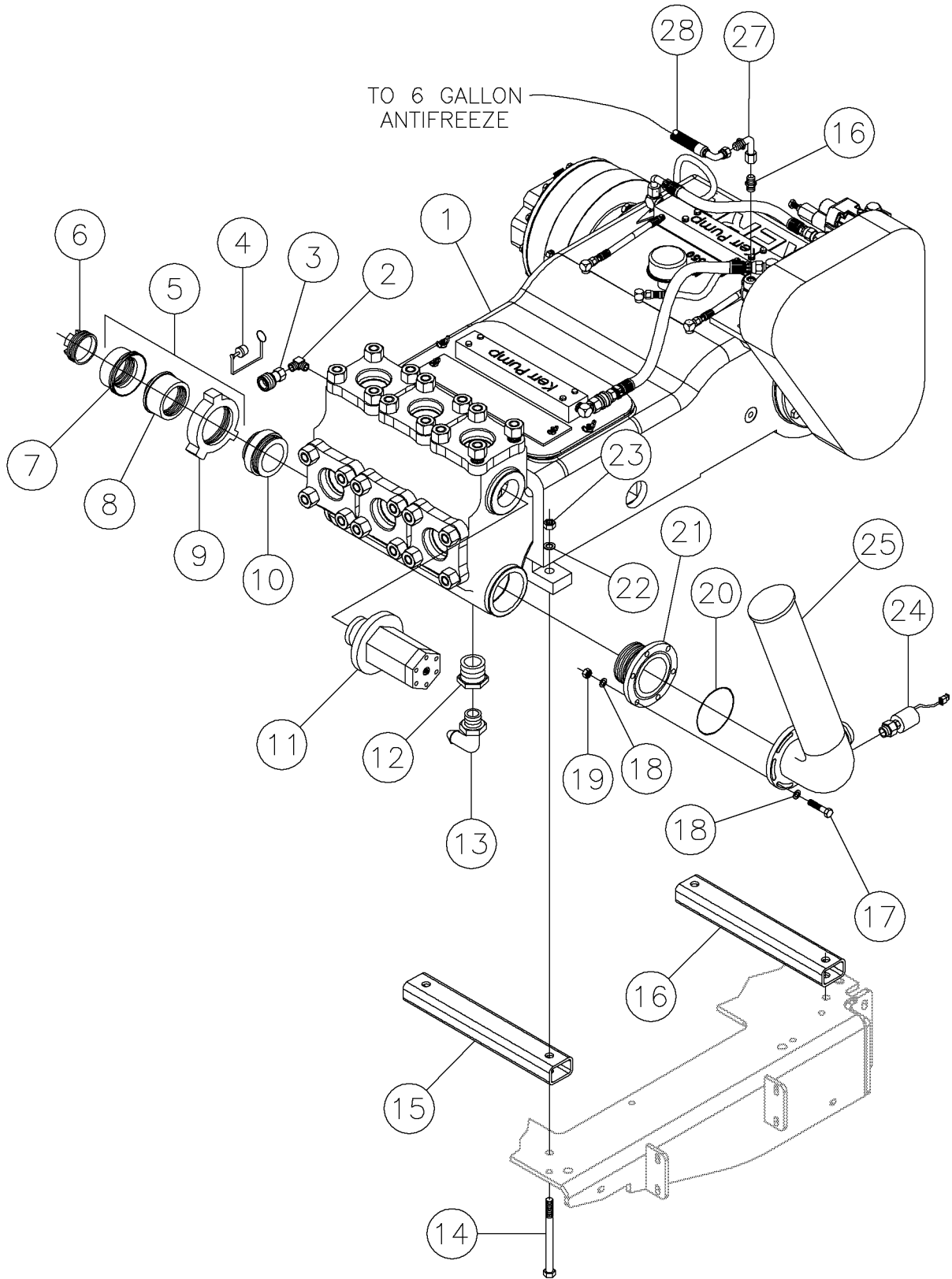
Water Pump - Kerr 150 GPM (KT3350PT-RH) Fig 7-9r01



Water Pump - Kerr 150 GPM (KT3350PT-RH) Fig 7-9r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	October, 2006		Corrected Illustration
1		285141001	PUMP-KERR KT-3350PT-3500,RH DRV,AUBURN GEAR 6.0:1	1	Breakdown Fig. 13-63 thru 13-68
2		904831001	FITTING 1/2MNPT X 1/2MNPT 90	1	
3		227235001	COUPLER-1/2"NPT QUICK(FEMALE)	1	
4		223756001	HOSE BARB-1 1/2 X 1 1/2 90M	1	
5		287056001	UNION - 4" HAMMER (1000PSI)	1	Included Ref. No's 7-9
6		287057001	PLUG - 4" NPT	1	
7		287056005	SUB - 4" FEMALE HAMMER UNION (1000PSI)	1	
8		287056003	SUB - 4" MALE HAMMER UNION (1000PSI)	1	
9		287056007	NUT - 4" HAMMER UNION WING (1000PSI)	1	
10		287050001	FITTING - 4" MPT X 3" MPT REDUCER	1	
11		294129001	ASSEMBLY - KT3350 FLANGE OUTLET	1	Breakdown Fig. 13-69
12		231150001	BUSHING-2"X1 XCX REDUCER (POLY)	1	
13		905430001	FITTING-1NPTX1 BARB-90 NYLON	1	
14		238245001	BOLT 5/8" - 11 X 2 1/4 Gr 8 HEX	4	
15		294168001	MOUNT - FRONT PUMP KERR 3350	1	
16		285181001	MOUNT-PUMP REAR KERR 3350	1	
17		240335001	BOLT-1/2-13X2 1/4 GR8 ZINC PLT	6	
18		485025	WASHER-1/2 FLAT-HARDENED-YZ	12	
19		75382001	NUT-1/2-UNC GRADE 8 SLTL	6	
20		228181001	O-RING -#243 7OD BUNA-N	1	
21		287010001	FLANGE - WATER PUMP 3" INLET	1	
22		235715001	WASHER-5/8 SAE HARD ZINC PLTD	12	
23		238221001	NUT - HEX -.63 - 11 - GR8 - YZ	8	
24		283060001	SENSOR-MUD PRESSURE	1	
25		287033001	TUBE - SUCTION STABILIZER (KT 3350)	1	
26		60922001	1/2MX8M JIC ST.ADAPTER	1	
27		53660001	#8M JIC-#8FS JIC 90 DEG.TUBE	1	
28		296254858	HOSE - 1/2 X 66 8FSJIC/8FSJIC90	1	
29		287030064	BUSHING - 3" X 2" HEX	1	
30		145645001	BOLT - 5/8 - 11 X 2 GR.8 ZYC	4	

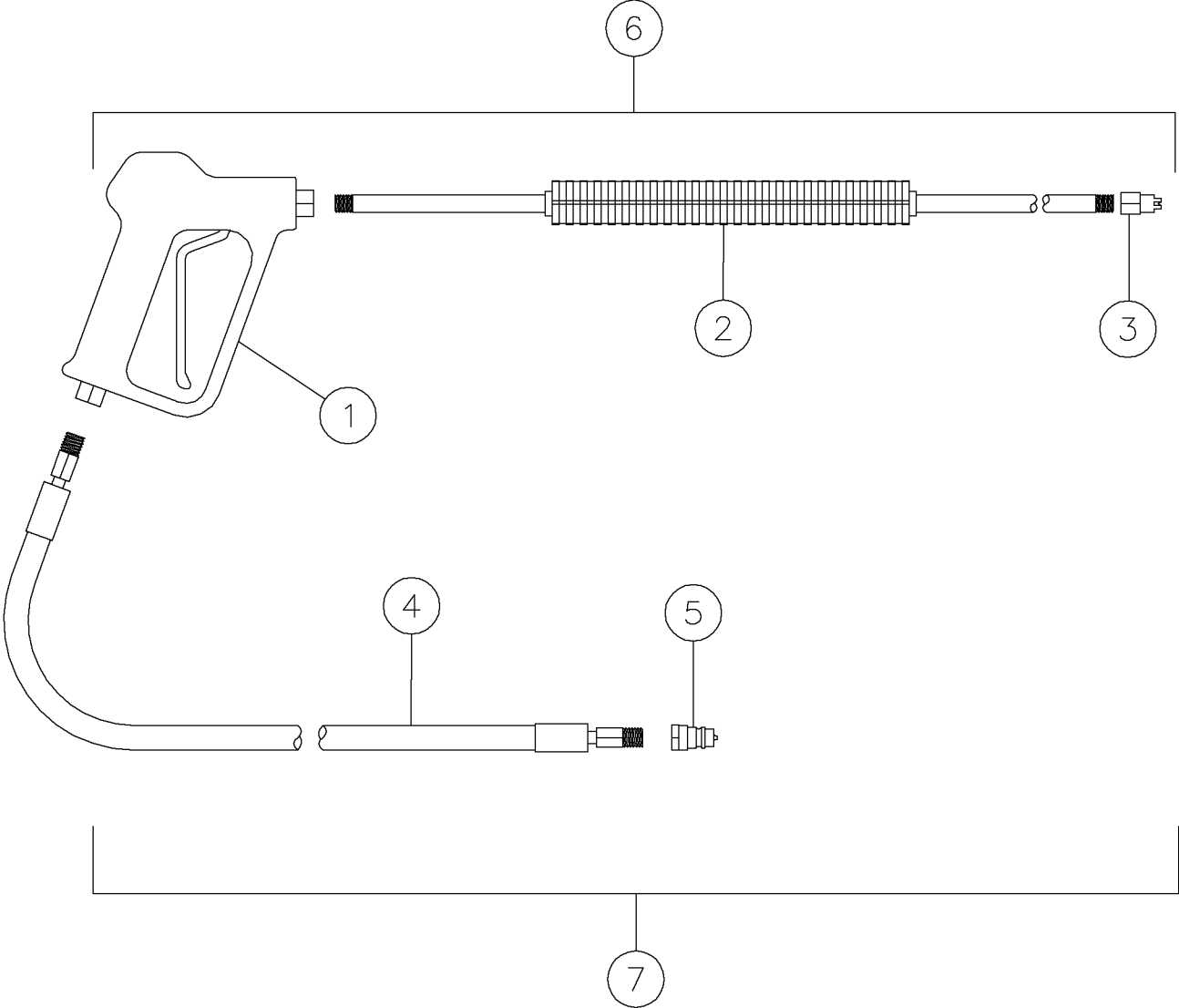
Water Pump - Kerr 150 GPM (KT3350PT-RH) Fig 7-9



Water Pump - Kerr 150 GPM (KT3350PT-RH) Fig 7-9

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		285141001	PUMP-KERR KT-3350PT-3500,RH DRV,AUBURN GEAR 6.0:1	1	Breakdown Fig. 13-63 thru 13-68
2		904831001	FITTING 1/2MNPT X 1/2MNPT 90	1	
3		227235001	COUPLER-1/2"NPT QUICK(FEMALE)	1	
4		285181001	MOUNT-PUMP REAR KERR 3350	1	
5		287056001	UNION - 4" HAMMER (1000PSI)	1	Included Ref. No's 7-9
6		287057001	PLUG - 4" NPT	1	
7		287056005	SUB - 4" FEMALE HAMMER UNION (1000PSI)	1	
8		287056003	SUB - 4" MALE HAMMER UNION (1000PSI)	1	
9		287056007	NUT - 4" HAMMER UNION WING (1000PSI)	1	
10		287050001	FITTING - 4" MPT X 3" MPT REDUCER	1	
11		294129001	ASSEMBLY - KT3350 FLANGE OUTLET	1	Breakdown Fig. 13-69
12		231150001	BUSHING-2"X1 XCX REDUCER (POLY)	1	
13		905430001	FITTING-1NPTX1 BARB-90 NYLON	1	
14		287009001	BOLT - 5/8-11 X 4-1/2 GRD HEX YZN PLTD	4	
15		287031001	TUBE - FLUID END PUMP SUPPORT	1	
16		287041001	TUBE - DRIVE END PUMP SUPPORT	1	
17		240335001	BOLT-1/2-13X2 1/4 GR8 ZINC PLT	6	
18		485025	WASHER-1/2 FLAT-HARDENED-YZ	12	
19		75382001	NUT-1/2-UNC GRADE 8 SLTL	6	
20		228181001	O-RING -#243 7OD BUNA-N	1	
21		287010001	FLANGE - WATER PUMP 3" INLET	1	
22		235715001	WASHER-5/8 SAE HARD ZINC PLTD	4	
23		238221001	NUT - HEX -.63 - 11 - GR8 - YZ	4	
24		283060001	SENSOR-MUD PRESSURE	1	
25		287033001	TUBE - SUCTION STABILIZER (KT 3350)	1	
26		60922001	1/2MX8M JIC ST.ADAPTER	1	
27		53660001	#8M JIC-#8FS JIC 90 DEG.TUBE	1	
28		296254858	HOSE - 1/2 X 66 8FSJIC/8FSJIC90	1	

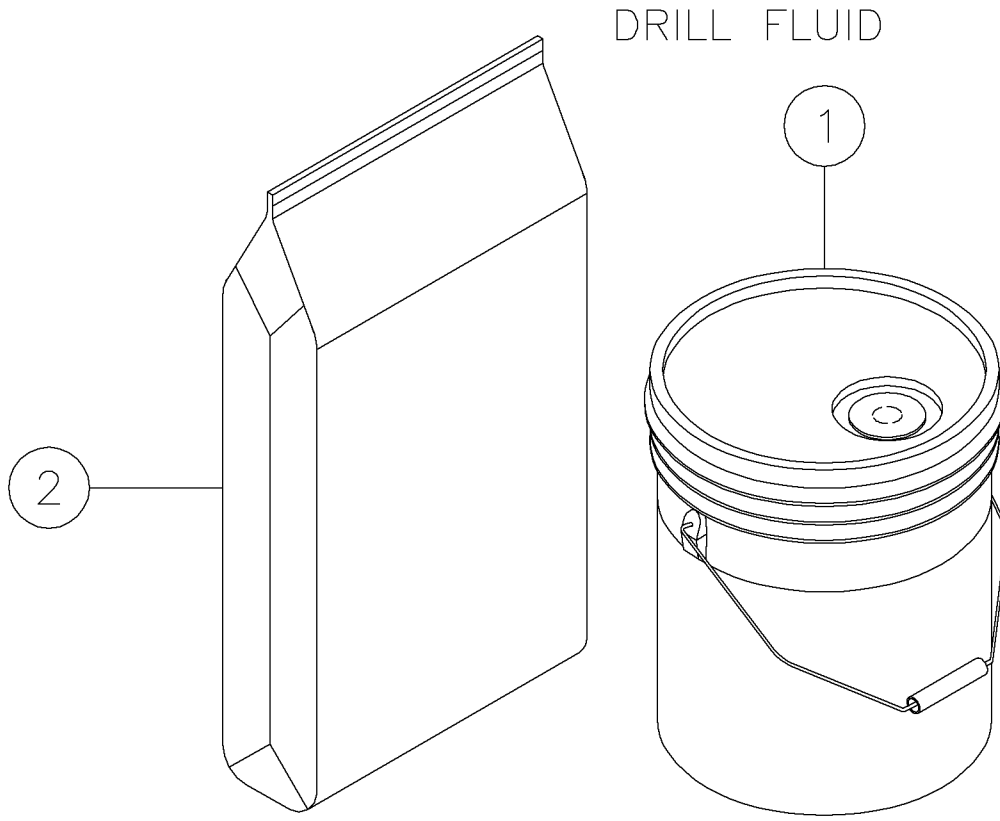
Wand Fig 7-10



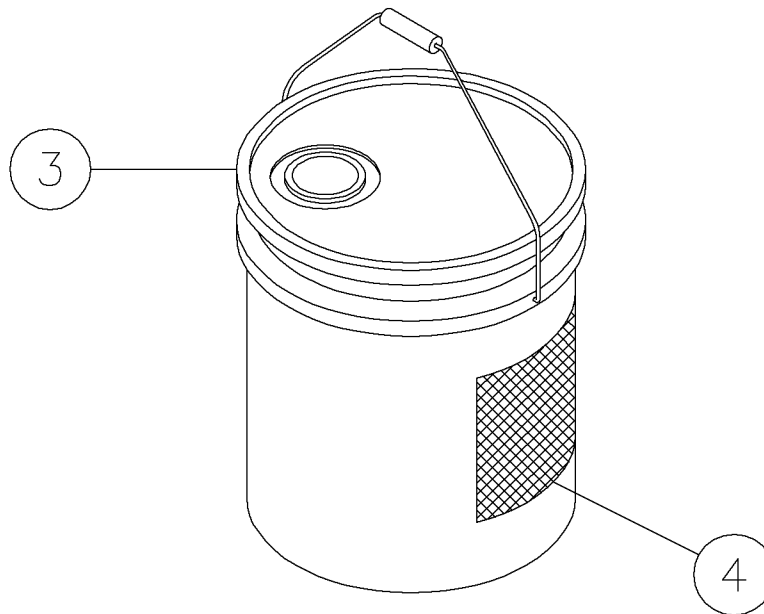
Wand Fig 7-10

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		904578001	GUN HANDLE	4	
2		904577001	MOLDED LANCE	8	
3		904576001	SPRAY NOZZLE	4	
4		282761001	HOSE-3/8X500 3/8MSNPT/1/2MNPT 100R2	1	
5		227236001	COUPLER-1/2" NPT QUICK(MALE)	1	
6		285927001	GUN ASSY	1	
7		240264001	WAND ASSY	1	Included All Items In This Figure

Drill Fluid/Freeze Guard Fig 7-11



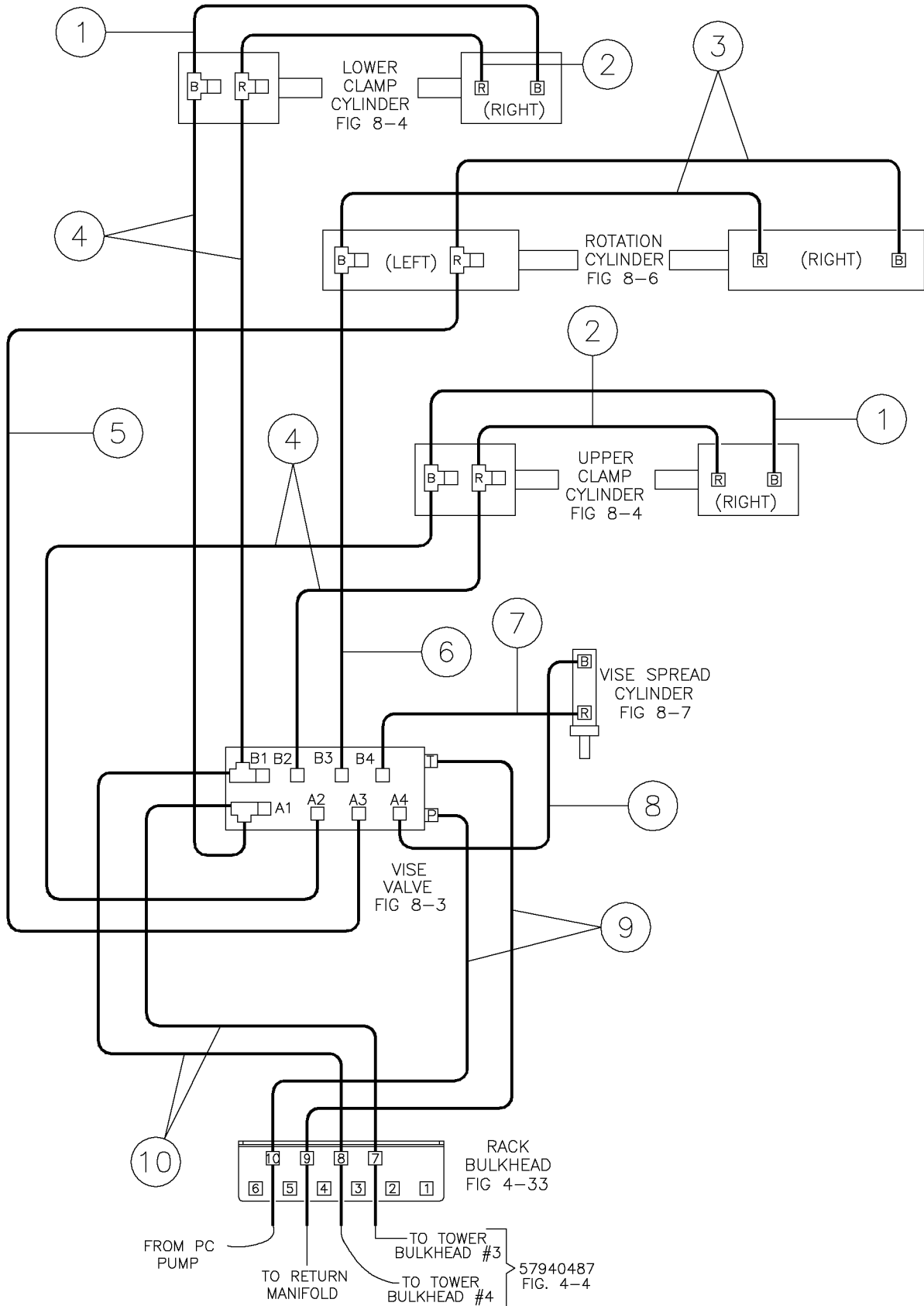
FREEZE GUARD



Drill Fluid/Freeze Guard Fig 7-11

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		905216001	ASP700 (POLYMER) 5 GAL PAIL	1	
		123595001	EZ-MUD - 5 GALLON	1	
2		123596001	BORE-GEL (50 LB BAG)	1	
		904882001	50LBS BAG QUICK GELL BENTONITE	1	
3		210779001	NAVIGATOR FREEZE GUARD	1	5 Gallon
		210779005	NAVIGATOR FREEZE GUARD	1	55 Gallon
4		70000675	DECAL-NAVIGATOR FREEZE GUARD	1	5 Gallon
		7000A027	DECAL-NAVIGATOR FREEZE GUARD	1	55 Gallon

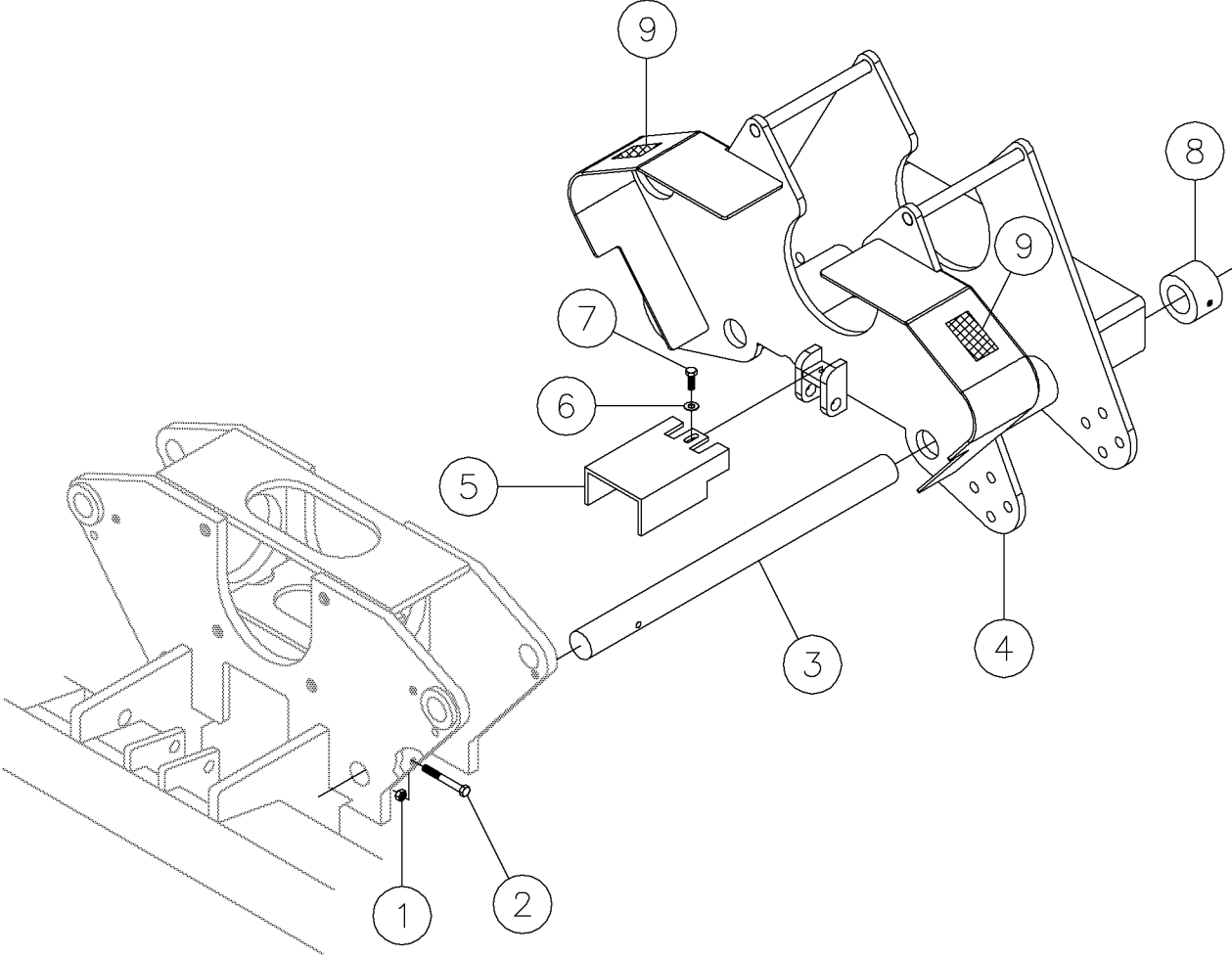
Oil Flow Diagram - Pipe Vise Fig 8-1



Oil Flow Diagram - Pipe Vise Fig 8-1

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2007		Change Part Number
1		57940553	HOSE-3/8X23 6FS JIC 3000 PSI	2	
2		57940565	HOSE-3/8X16 6FS JIC 3000 PSI	2	
3		296279565	HOSE-HYD-.38X48-6FSJ ST/6FSJ 90-3000PSI-	2	
4		57940741	HOSE-3/8X35 6FS JIC 3000 PSI	4	
5		296256871	HOSE - .375 X 26 6FS JIC ST/90 M3K	1	
6		57940783	HOSE-3/8X28 6FS JIC 3000 PSI	1	
7	*	296286805	HOSE-HYD-.25X36.0-4FSJ ST/ST-3000PSI-M3K	1	
8		53843559	HOSE-1/4X32 4FS JIC 3000 PSI	1	
9		296279683	HOSE-HYD-.38X158-6FSJ ST/6FSJ 45-3000-10	2	
10		296279684	HOSE-HYD-.38X158-6FSJ ST/6FSJ 90-3000-10	2	

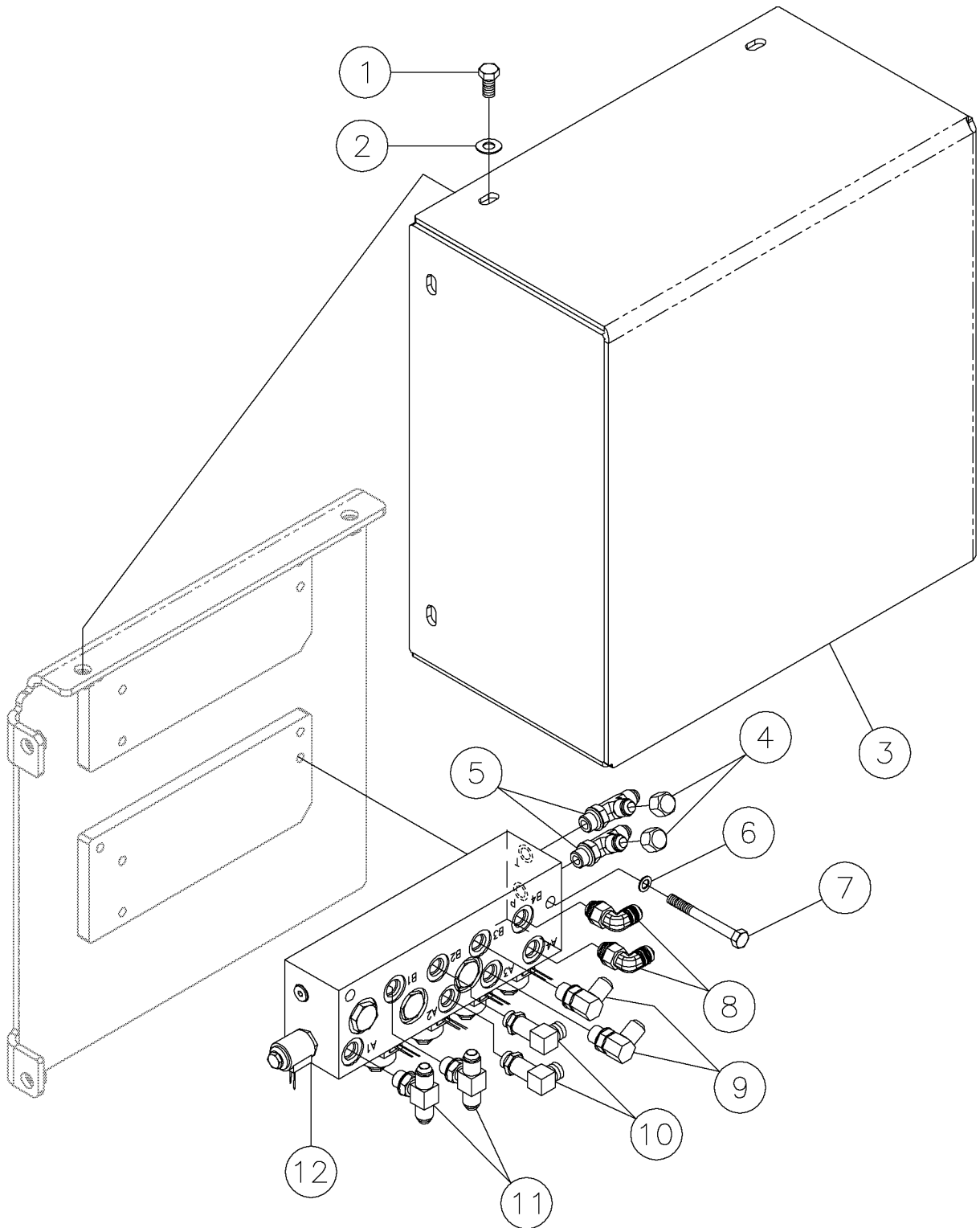
Carriage - Rear Vise Fig 8-2



Carriage - Rear Vise Fig 8-2

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		240333001	NUT-5/16-18 GR8 TL ZINC PLTD	2	
2		238212001	BOLT - 5/16-18 X 3 HEX GRADE 8	2	
3		234299001	PIN-VISE SLIDE	2	
4		280842001	CARRIAGE - REAR VISE	1	
5		234412001	SHIELD-CYLINDER	1	
6		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	1	
7		235727001	BOLT-3/8-16X1 GR8 HEX ZINC PLT	1	
8		239462001	SPACER-VISE SLIDE	2	
9		7000A864	DECAL-WARNING DOMESTIC	2	Domestic
		700IA864	DECAL-WARNING INTERNATIONAL	2	International

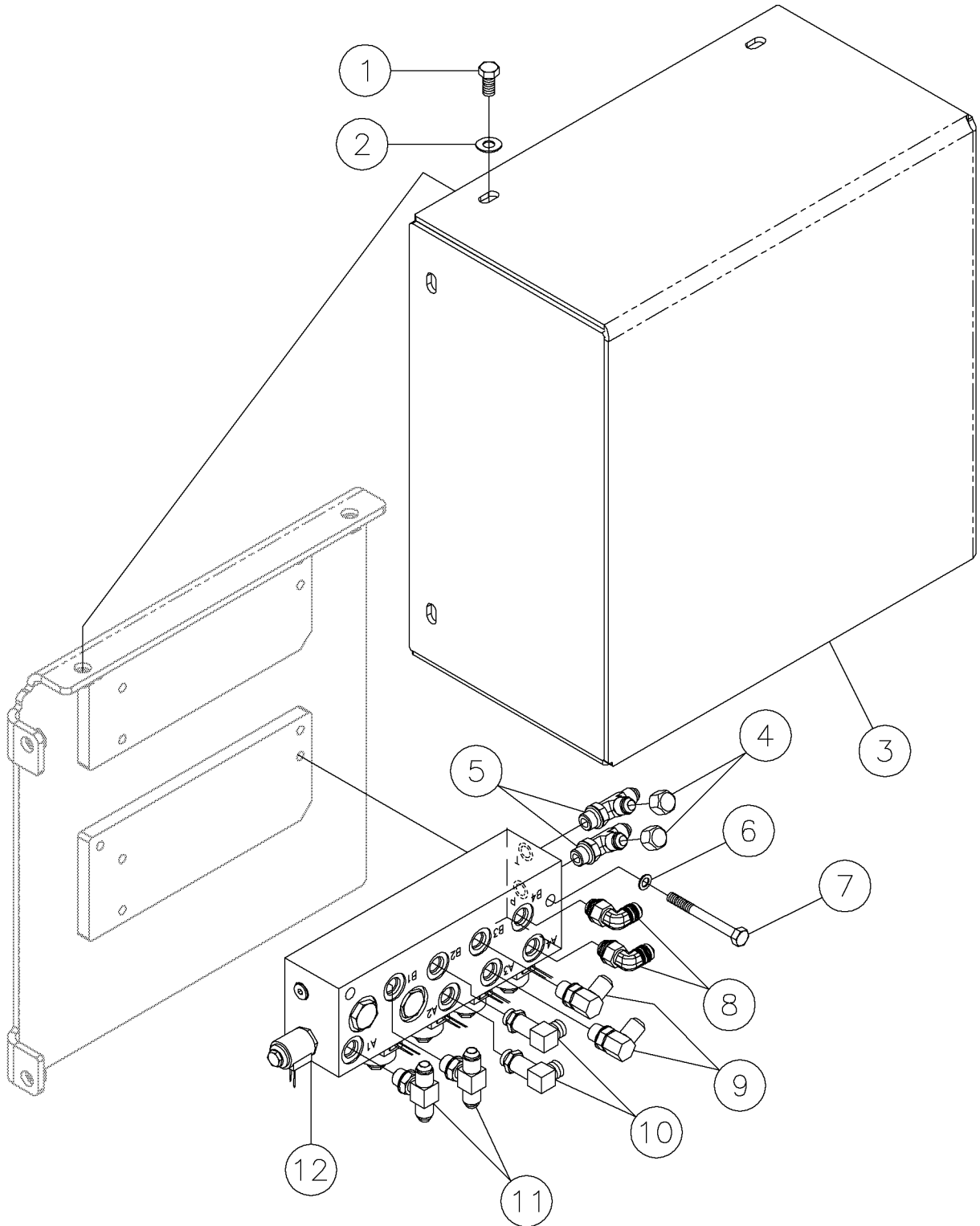
Vise Valve Hydraulic (S/N 146-) Fig 8-3r01



Vise Valve Hydraulic (S/N 146-) Fig 8-3r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2007		Change Valve
1		235726001	BOLT-3/8-16X3/4 GR8 HEX ZNCPLT	4	
2		235713001	WASHER-FLATSTRL-.38-.41X.81-.06-YA-A325	4	
3		283889001	SHIELD - VALVE	1	
4		59403001	CAP NUT - 6 JIC	2	
5		68774001	FITTING-6MX6M JIC (RUN)X6M JIC	2	
6		235714001	WASHER-FLATSTRL-.31-.34X.69-.06-YZ-A325	2	
7		238212001	BOLT - 5/16-18 X 3 HEX GRADE 8	2	
8		59426001	FITTING - 90-6MJ-6MORBA	2	
9		122606001	FITTING-6MX6M JIC90 DEG/ RSTS	2	
10		65570001	6M X 6M JIC 90 DEGREE LONG	2	
11		68787001	FITTING-6M (BCH)X6M JICX6M JIC	2	
12	*	296289762	VALVE - VISE 4 BANK/W DUAL CHECKS	1	Breakdown Fig. 13-35 (S/N 146-)

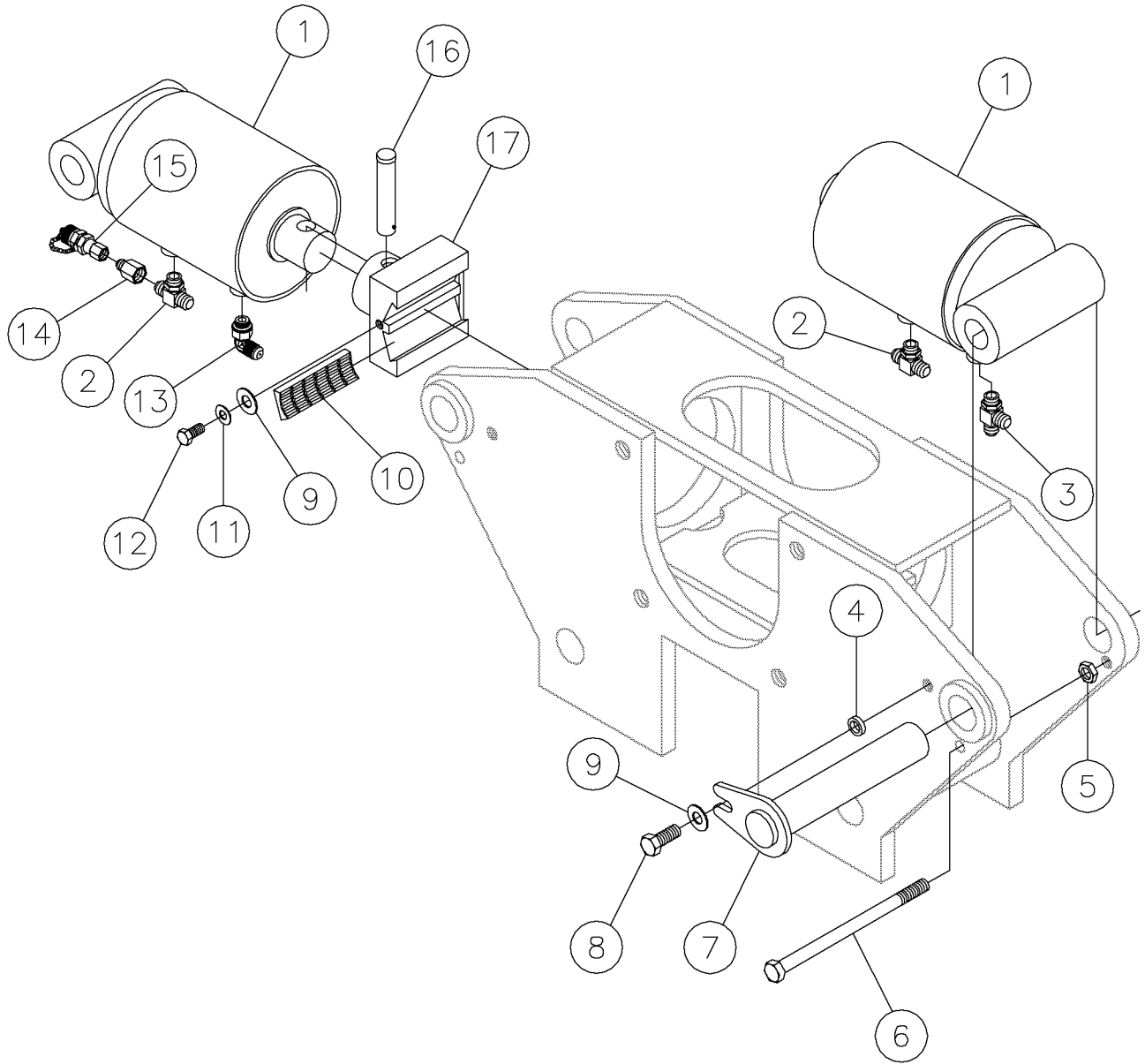
Vise Valve Hydraulic Fig 8-3



Vise Valve Hydraulic Fig 8-3

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		235726001	BOLT-3/8-16X3/4 GR8 HEX ZNCPLT	4	
2		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	4	
3		283889001	SHIELD - VALVE	1	
4		59403001	CAP NUT - 6 JIC	2	
5		68774001	FITTING-6MX6M JIC (RUN)X6M JIC	2	
6		235714001	WASHER - FLATSTRL - .31 - .34 X .69 - .06-YZ-A325	2	
7		238212001	BOLT - 5/16-18 X 3 HEX GRADE 8	2	
8		59426001	FITTING - 90-6MJ-6MORBA	2	
9		122606001	FITTING-6MX6M JIC90 DEG/ RSTS	2	
10		65570001	6M X 6M JIC 90 DEGREE LONG	2	
11		68787001	FITTING-6M (BCH)X6M JICX6M JIC	2	
12		279850001	VALVE - VISE 4 BANK	1	Breakdown Fig. 13-35

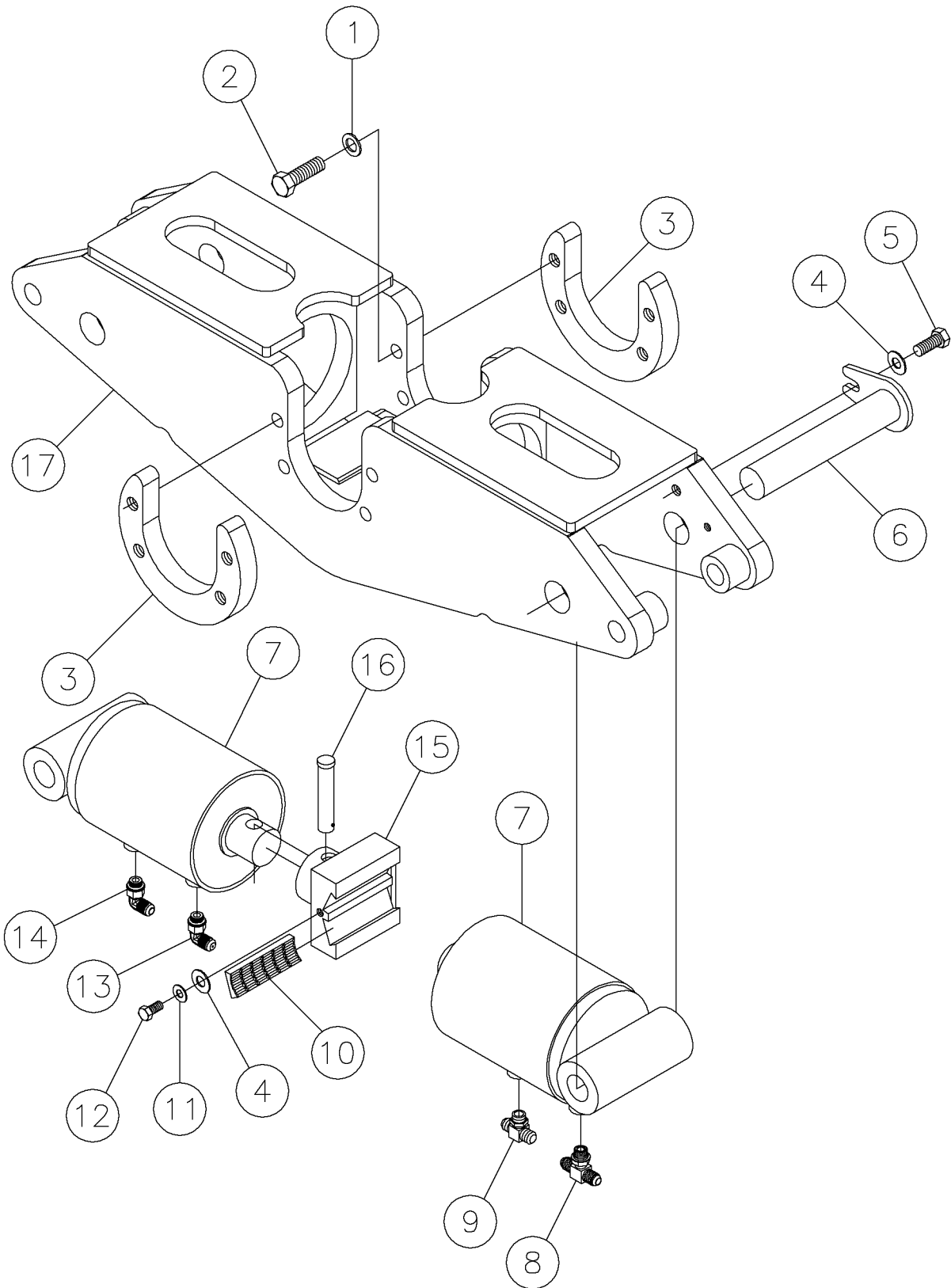
Vise Cylinder (Lower) Fig 8-4



Vise Cylinder (Lower) Fig 8-4

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		283581001	CYLINDER - HYDRAULIC 5" BORE X 2.25" ROD X 2" ST	2	Breakdown Fig. 13-42
2		68774001	FITTING-6MX6M JIC (RUN)X6M JIC	2	
3		122605001	FITTING-6M JIC BCH TEE W/ RSTS	1	
4		280535001	TUBE - SPACER	2	
5		75383001	NUT-1/2-UNC GR.8 JAM HEX	2	
6		249812001	BOLT-1/2-13X7 1/2 HHCS GR8 ZNC	2	
7		234402001	PIN-VISE CYLINDER	2	
8		235721001	BOLT-1/2-13X1 1/2 GR8 ZINC PLT	2	
9		485025	WASHER-1/2 FLAT-HARDENED-YZ	4	
10		278121001	GRIP -VISE (3 5/8 UPSET)	4	
11		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	2	
12		235726001	BOLT-3/8-16X3/4 GR8 HEX ZNCPLT	2	
13		122606001	FITTING-6MX6M JIC90 DEG W/ RSTS	1	
14		59928001	6F JICX4M JIC ST REDUCER	1	
15		83015001	FITTING-4F JIC DIAGNOSTIC	1	
16		275478001	PIN-1/2X3 1/4 BALL LOCK CLEVIS	2	
17		278228001	HOLDER - 2 1/4 RAM GRIP (4 1/8 UPSET)	2	

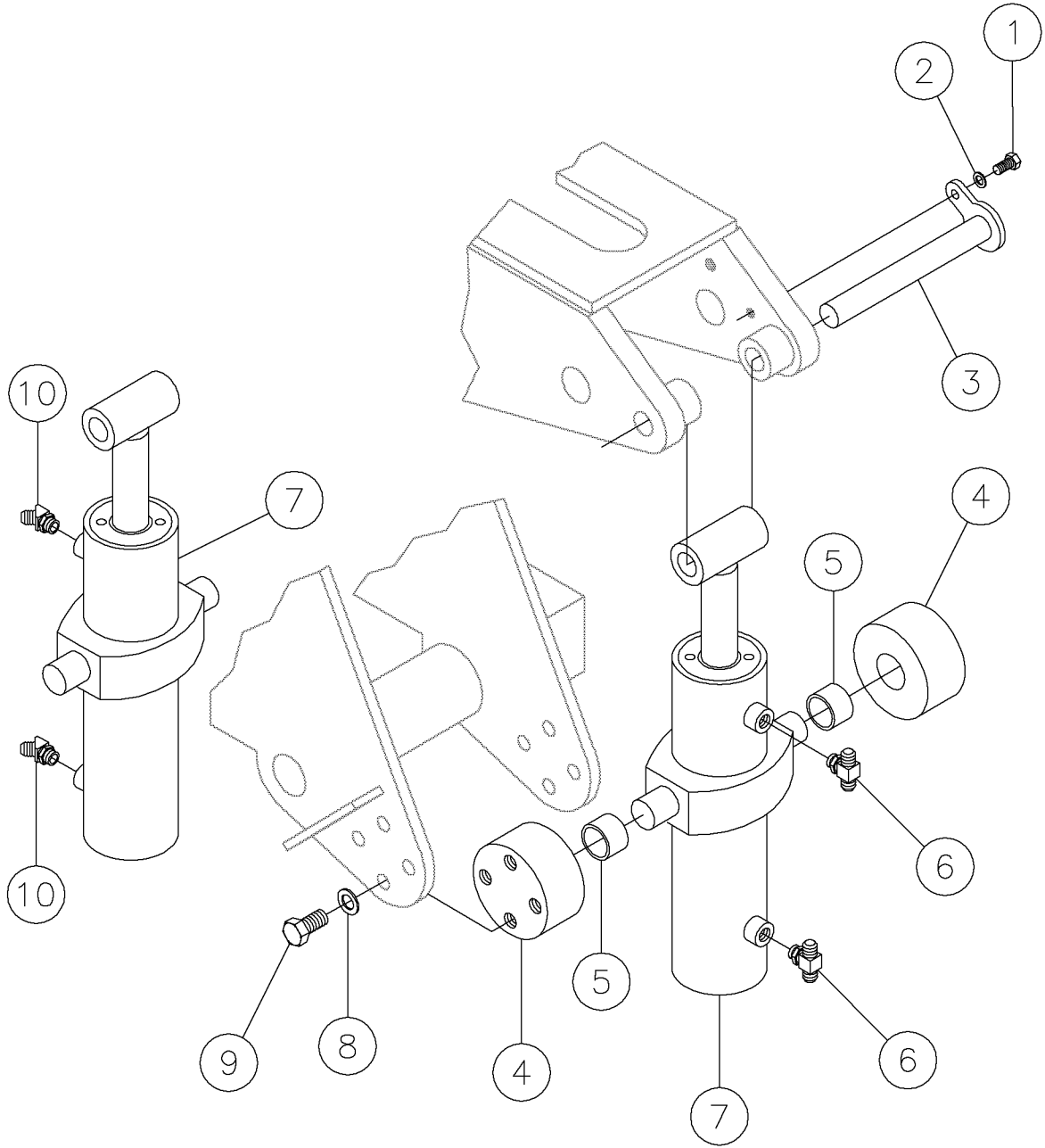
Vise Cylinder (Upper) Fig 8-5



Vise Cylinder (Upper) Fig 8-5

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		235715001	WASHER-5/8 SAE HARD ZINC PLTD	8	
2		238245001	BOLT 5/8" - 11 X 2 1/4 Gr 8 HEX	8	
3		296275642	PLATE - VISE INSERT	2	
4		485025	WASHER-1/2 FLAT-HARDENED-YZ	4	
5		235721001	BOLT-1/2-13X1 1/2 GR8 ZINC PLT	2	
6		234407001	PIN-VISE CYLINDER	2	
7		283581001	CYLINDER - HYDRAULIC 5" BORE X 2.25" ROD X 2" ST	2	Breakdown Fig. 13-42
8		68787001	FITTING-6M (BCH)X6M JICX6M JIC	1	
9		122605001	FITTING-6M JIC BCH TEE W/ RSTS	1	
10		278121001	GRIP -VISE (3 5/8 UPSET)	4	
11		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	2	
12		235726001	BOLT-3/8-16X3/4 GR8 HEX ZNCPLT	2	
13		122606001	FITTING-6MX6M JIC90 DEG W/ RSTS	1	
14		59426001	FITTING - 90-6MJ-6MORBA	1	
15		278228001	HOLDER - 2 1/4 RAM GRIP (4 1/8 UPSET)	2	
16		275478001	PIN-1/2X3 1/4 BALL LOCK CLEVIS	2	
17		296279680	CRADLE - VISE	1	

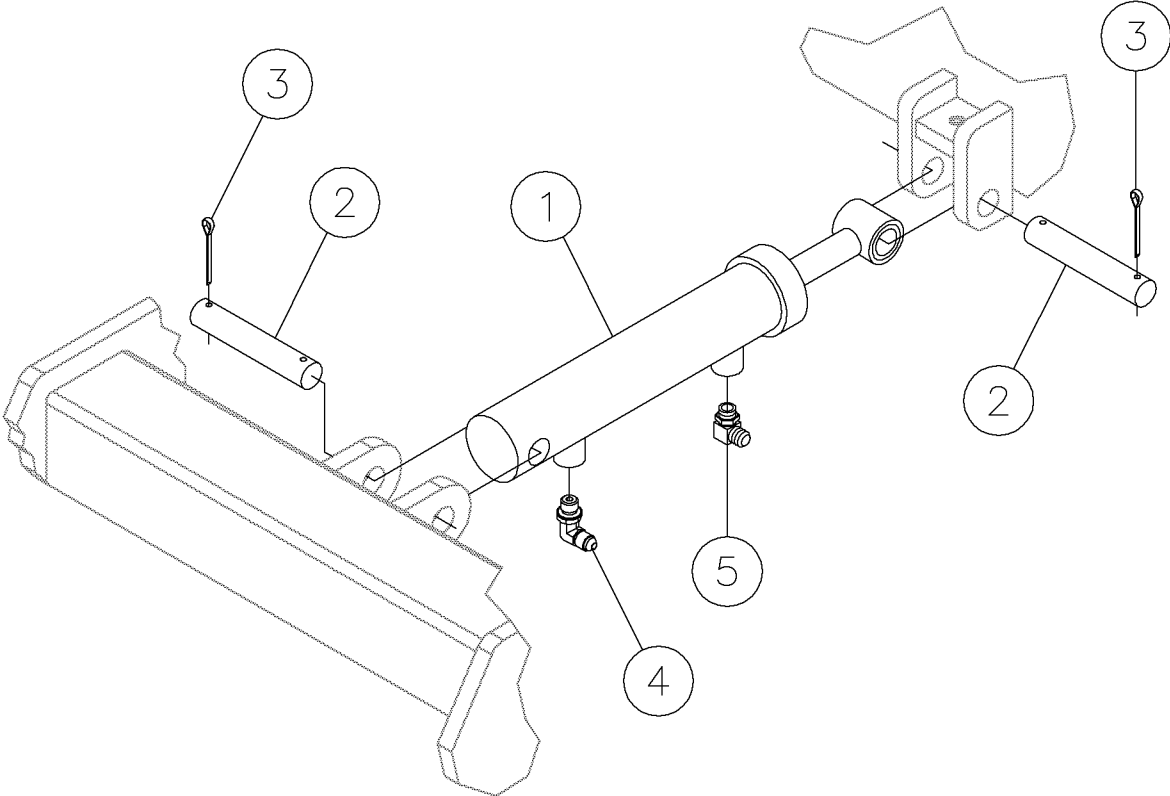
Rotation Carriage Cylinder Fig 8-6



Rotation Carriage Cylinder Fig 8-6

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		235727001	BOLT-3/8-16X1 GR8 HEX ZINC PLT	2	
2		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	2	
3		230761001	ROTATION PIN	2	
4		222433001	MOUNT- TRUNION	4	
5		70070003	BEARING-COMPOSITE 1 LONG	4	
6		68787001	FITTING-6M (BCH)X6M JICX6M JIC	2	
7		239275001	CYLINDER-2 1/2 X 5 TRN MNT	2	Breakdown Fig. 13-36
8		235715001	WASHER-5/8 SAE HARD ZINC PLTD	16	
9		235730001	BOLT-5/8-11X1 1/4 GR8 ZINC PLT	16	
10		65563001	FITTING - 6M O-RING X 6M JIC 45 DEGREE	2	

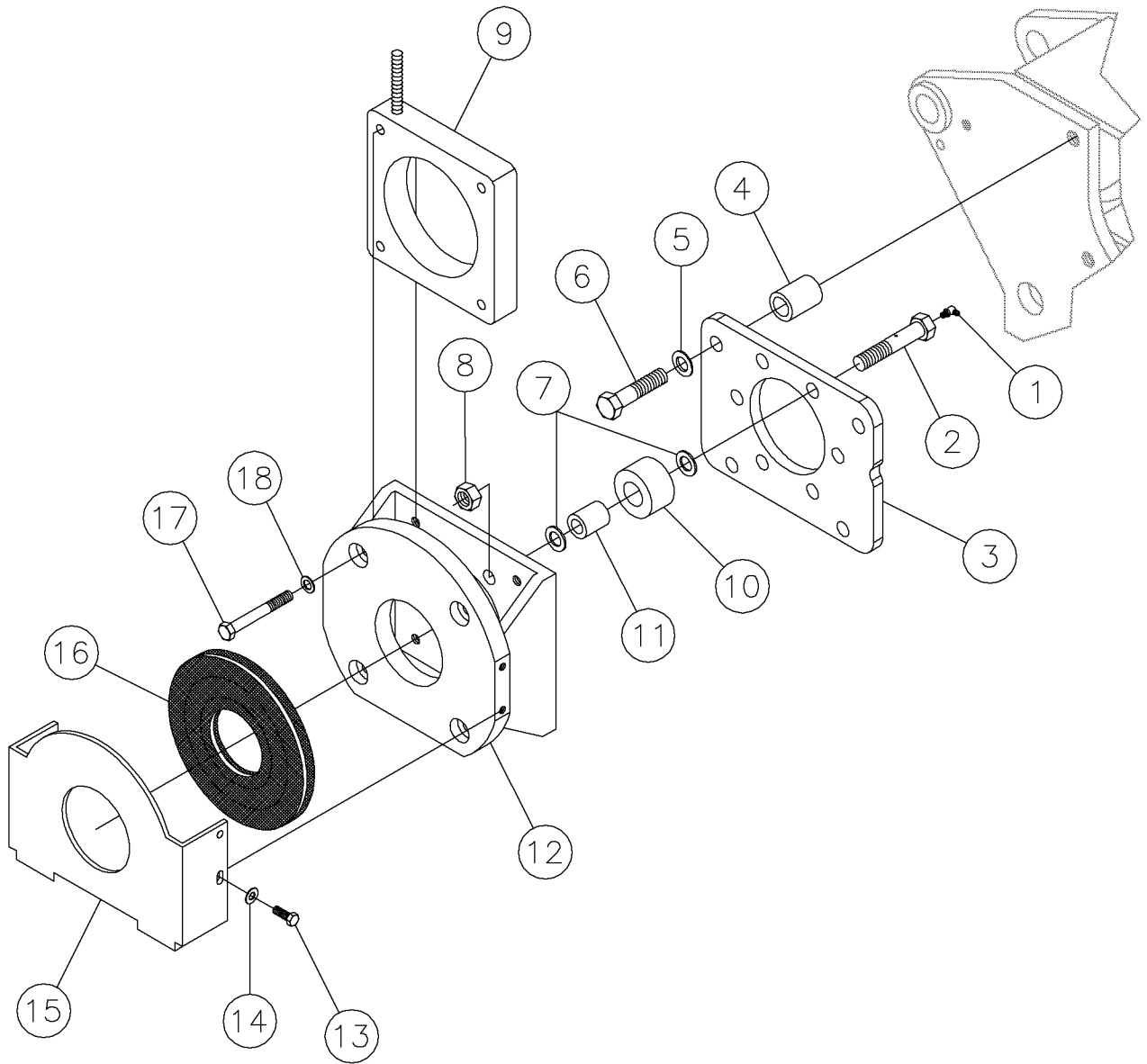
Vise Spread Cylinder Fig 8-7



Vise Spread Cylinder Fig 8-7

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		223998001	CYLINDER- 1 1/2 X 6	1	Breakdown Fig. 13-37
2		239313001	PIN-CYLINDER	2	
3		510017	COTTER PIN-5/32" X 1 1/2"	4	
4		68821001	FITTING-4MX4M JIC 90 W/RESTRIC	1	
5		59423001	FIT-4M JICX4M ADJ.90 DEG.ELBOW	1	

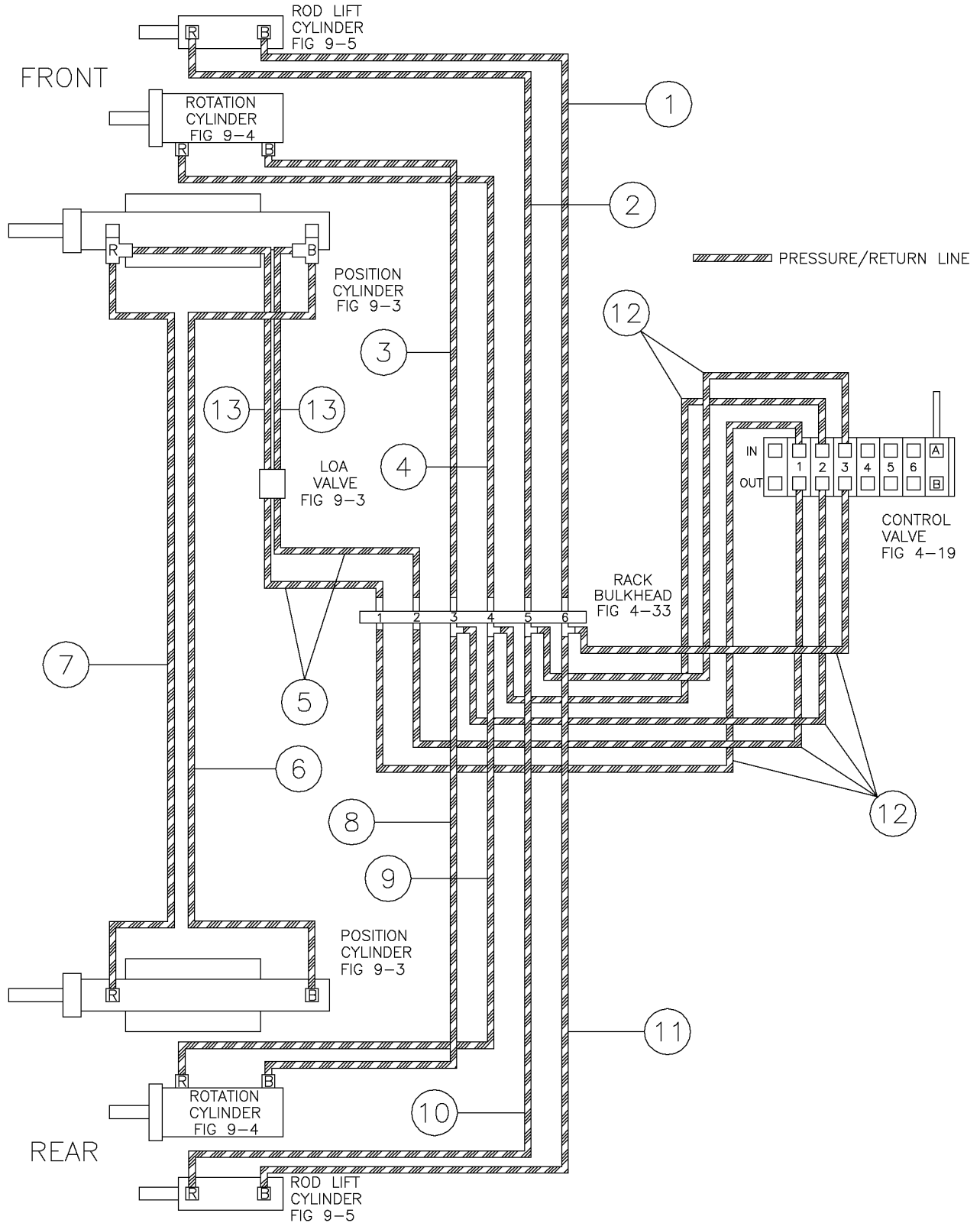
Zap Alert Fig 8-8



Zap Alert Fig 8-8

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		597001	ZERK-1/4" NF 90 DEG GREASE	6	
2		234426003	BOLT ASSEMBLY-ROLLER MOUNT	6	Included Ref. No. 1
3		296273986	MOUNT - WIPER HOLDER	1	
4		280536001	TUBE - LINKAGE-SHAFT CLAMP	4	
5		235717001	WASHER - 3/4" HARDENED FLAT YZ	4	
6		124620034	BOLT-3/4-10X3 1/2 GR8 HEX ZINC	4	
7		485017	WASHER-3/4 FLAT	12	
8		397001	NUT-3/4-10 GR 8 SLTL	6	
9		296276042	COIL CURRENT SENSOR	1	
10		244679001	ROLLER-GUIDE	6	
11		244678001	BUSHING GUIDE ROLLER	6	
12		280837001	HOLDER - ROD WIPER	1	
13		235727001	BOLT-3/8-16X1 GR8 HEX ZINC PLT	4	
14		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	4	
15		280841001	STOP - WIPER	1	
16		235925001	WIPER-2 7/8 OD ROD	1	
		235926001	WIPER-3 1/2 OD ROD	1	
17		238244001	BOLT 1/2"-13 X 4"GR8 HEX Y/ZIN	4	
18		485025	WASHER-1/2 FLAT-HARDENED-YZ	4	

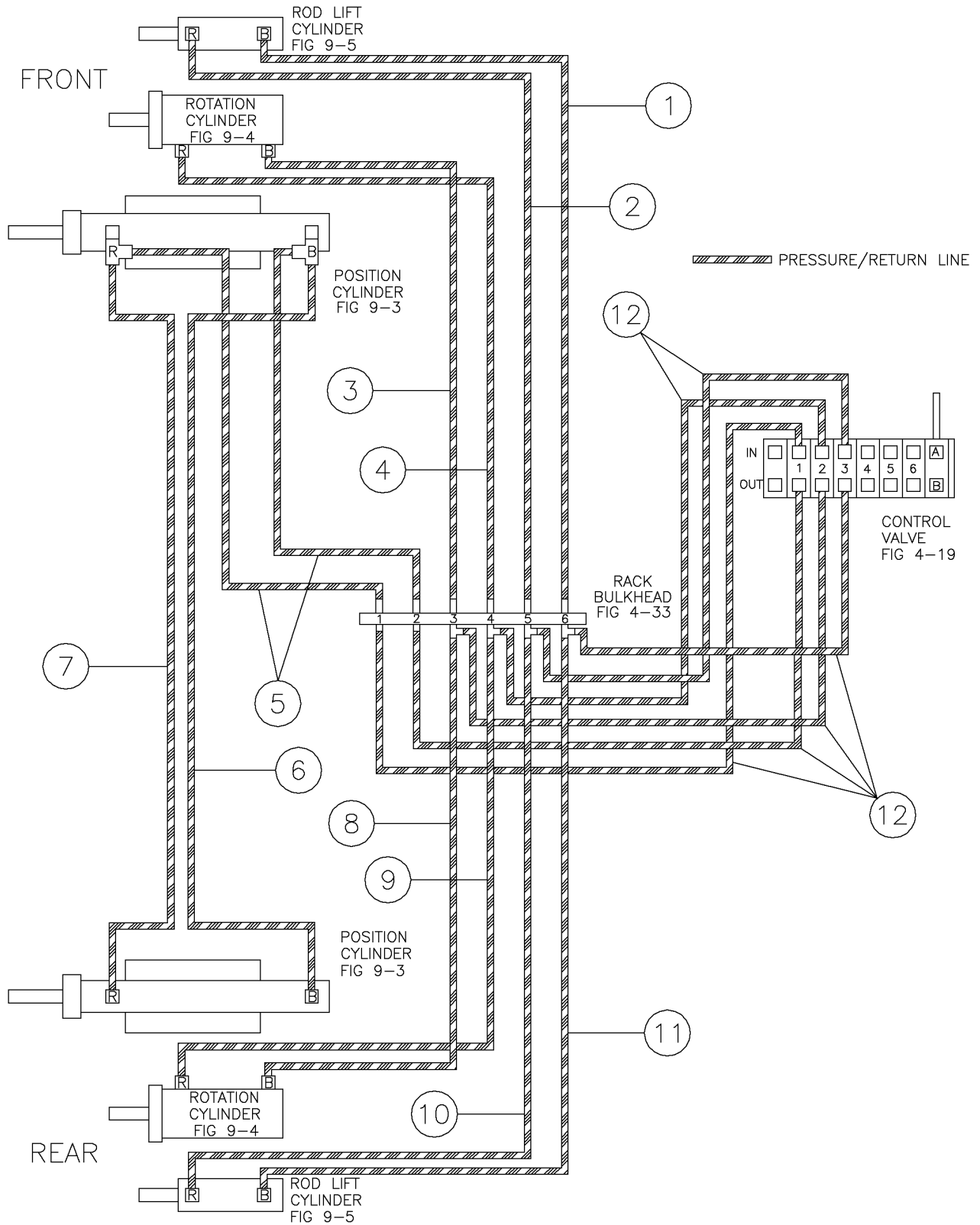
Oil Flow Diagram - Rod Loader Fig 9-1r01



Oil Flow Diagram - Rod Loader Fig 9-1r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	August, 2006		Added LOA Valve to Rack
1		53843002	HOSE - 1/4 X 163 - 4FS JIC 3000 PSI	1	
2		296279685	HOSE-HYD-.25X168-4FSJ ST/4FSJ ST-3000-10	1	
3		296279687	HOSE-HYD-.25X131-4FSJ ST/4FSJ ST-3000-10	1	
4		296279686	HOSE-HYD-.25X138-4FSJ ST/4FSJ ST-3000-10	1	
5	*	53843191	HOSE-1/4X12 4FS JIC 3000 PSI	2	
6		53843729	HOSE-1/4X150 4FSJICST/90D 3000	1	
7		53843717	HOSE-1/4X136 4FS JIC ST 5000#	1	
8		296275643	HOSE-HYD-.25X63-4FSJ ST/4FSJ 45-3000-100	1	
9		296275647	HOSE-HYD-.25 X 70 - 4FSJ ST/4FSJ 45-3000	1	
10		296275646	HOSE-HYD-.25X104-4FSJ ST/4FSJ 45-3000-10	1	
11		296275645	HOSE-HYD-.25X101-4FSJ ST/4FSJ 45-3000-10	1	
12		239134001	HOSE - 1/4X86 4FS JIC 3000 PSI	6	
13	*	296258371	HOSE - .25 X 144 4FS JIC ST/ST M3K	2	

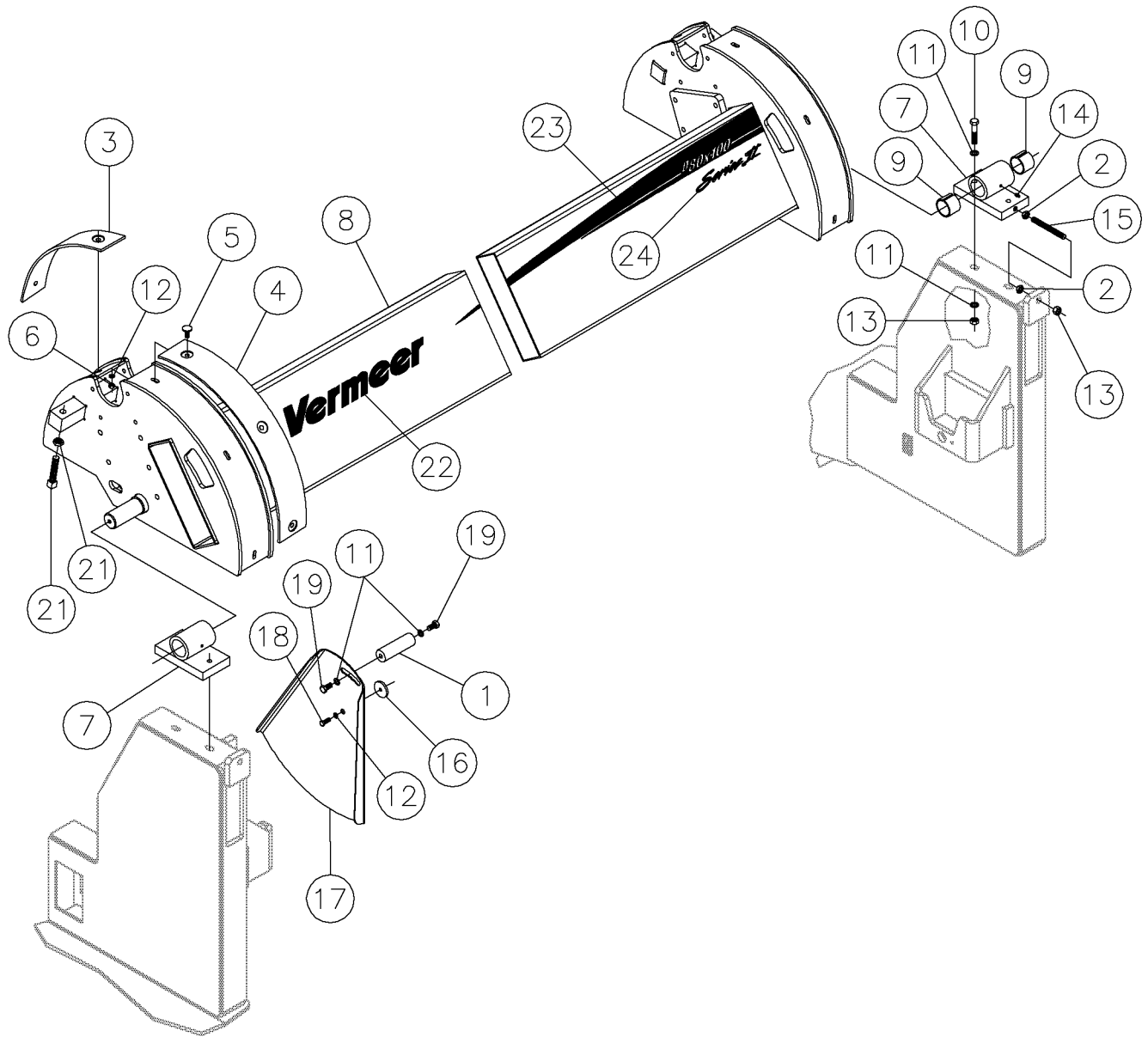
Oil Flow Diagram - Rod Loader Fig 9-1



Oil Flow Diagram - Rod Loader Fig 9-1

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		53843002	HOSE - 1/4 X 163 - 4FS JIC 3000 PSI	1	
2		296279685	HOSE-HYD-.25X168-4FSJ ST/4FSJ ST-3000-10	1	
3		296279687	HOSE-HYD-.25X131-4FSJ ST/4FSJ ST-3000-10	1	
4		296279686	HOSE-HYD-.25X138-4FSJ ST/4FSJ ST-3000-10	1	
5		296275644	HOSE-HYD-.25X159-4FSJ ST/4FSJ 45-3000-10	2	
6		53843729	HOSE-1/4X150 4FSJICST/90D 3000	1	
7		53843717	HOSE-1/4X136 4FS JIC ST 5000#	1	
8		296275643	HOSE-HYD-.25X63-4FSJ ST/4FSJ 45-3000-100	1	
9		296275647	HOSE-HYD-.25 X 70 - 4FSJ ST/4FSJ 45-3000	1	
10		296275646	HOSE-HYD-.25X104-4FSJ ST/4FSJ 45-3000-10	1	
11		296275645	HOSE-HYD-.25X101-4FSJ ST/4FSJ 45-3000-10	1	
12		239134001	HOSE - 1/4X86 4FS JIC 3000 PSI	6	

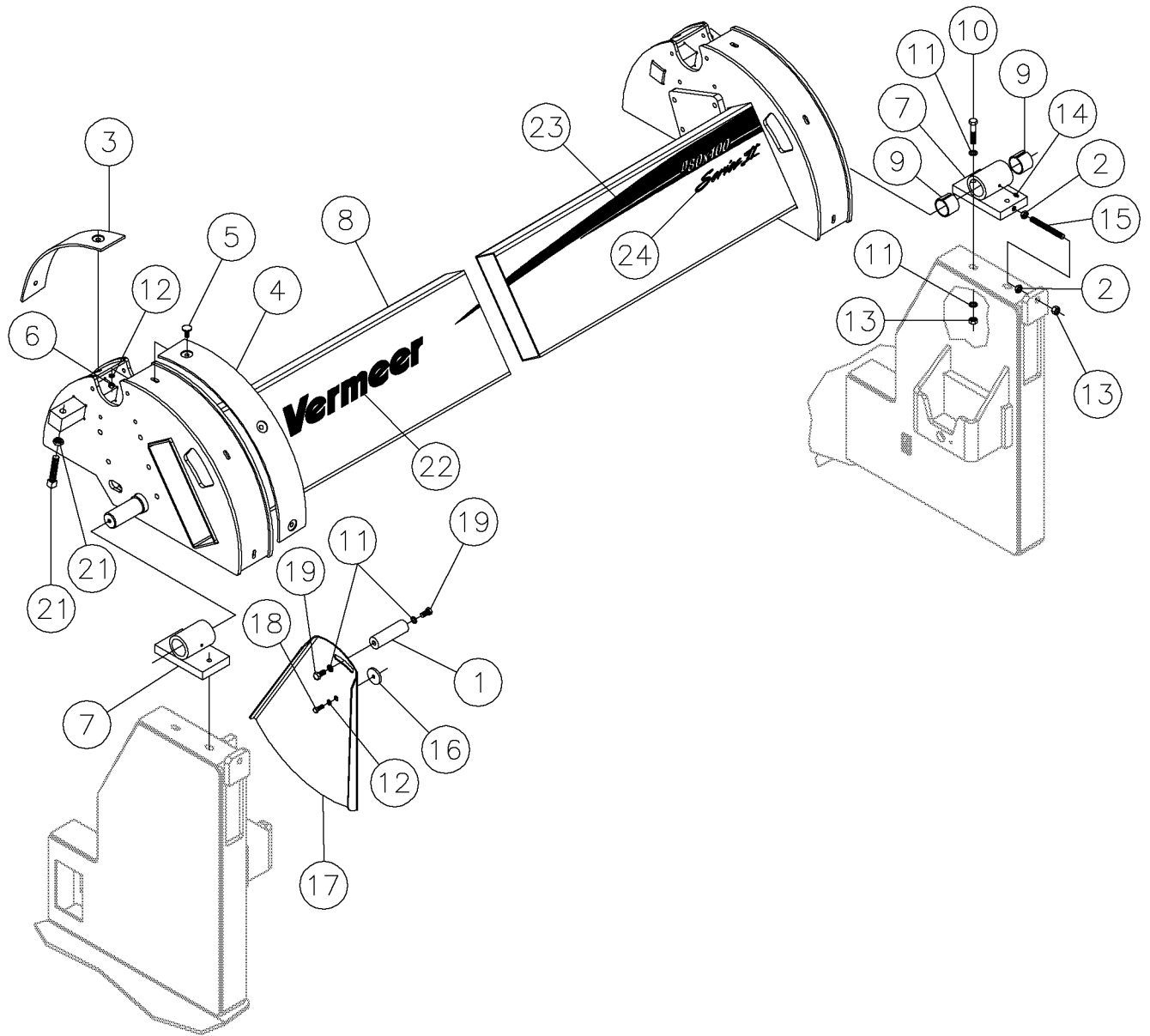
Rod Loader Frame (S/N 151-) Fig 9-2r01



Rod Loader Frame (S/N 151-) Fig 9-2r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	June, 2007		Change Part Number
1		234252001	SPACER-LOADER INDICATOR	1	
2		75383001	NUT-1/2-UNC GR.8 JAM HEX	4	
3	*	296305252	WEAR BAR - SMALL - ROD LOADER	2	
4	*	296305251	WEAR BAR-LARGE - ROD LOADER	2	
5		601699012	3/8-16X1 1/4 ELEVATOR BOLT ZNC	12	
6		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	12	
7		251327001	PIVOT - LOADER	2	
8		227899001	LOADER-ROD	1	
9		1835033	BSHG.-STL-.2 X 1 3/4 X 1 1/2	4	
10		250573001	BOLT-1/2-13 X 2 1/2 GR8 HX Y/Z	4	
11		485025	WASHER-1/2 FLAT-HARDENED-YZ	10	
12		235713001	WASHER-FLATSTRL-.38-.41X.81-.06-YA-A325	12	
13		235731001	NUT-1/2-13 GR8 ZINC PLTD	6	
14		598001	FITTING-1/4" NF ST GREASE ZERK	2	
15		251329001	ROD - THREADED	2	
16		18150001	SLUG-2 DIA.-1/4" REF T13457	1	
17		296254794	INDICATOR - ROD LOADER	1	
18		235727001	BOLT-3/8-16X1 GR8 HEX ZINC PLT	2	
19		235729001	SCREW-HCS-.50-13X1.00-GR8-YZ	2	
20		250514001	NUT -5/8NC JAM Y/ZINC	2	
21		601697030	SQ HSS-5/8-11X3 ZINC PLT	2	
22		2326595	DECAL VERMEER- 4 1/2 X 24	1	
23	*	7000D178	DECAL - D80X100II LEFT STRIPE	1	(S/N 151-)
24		7000C463	DECAL - SERIES II MEDIUM	1	

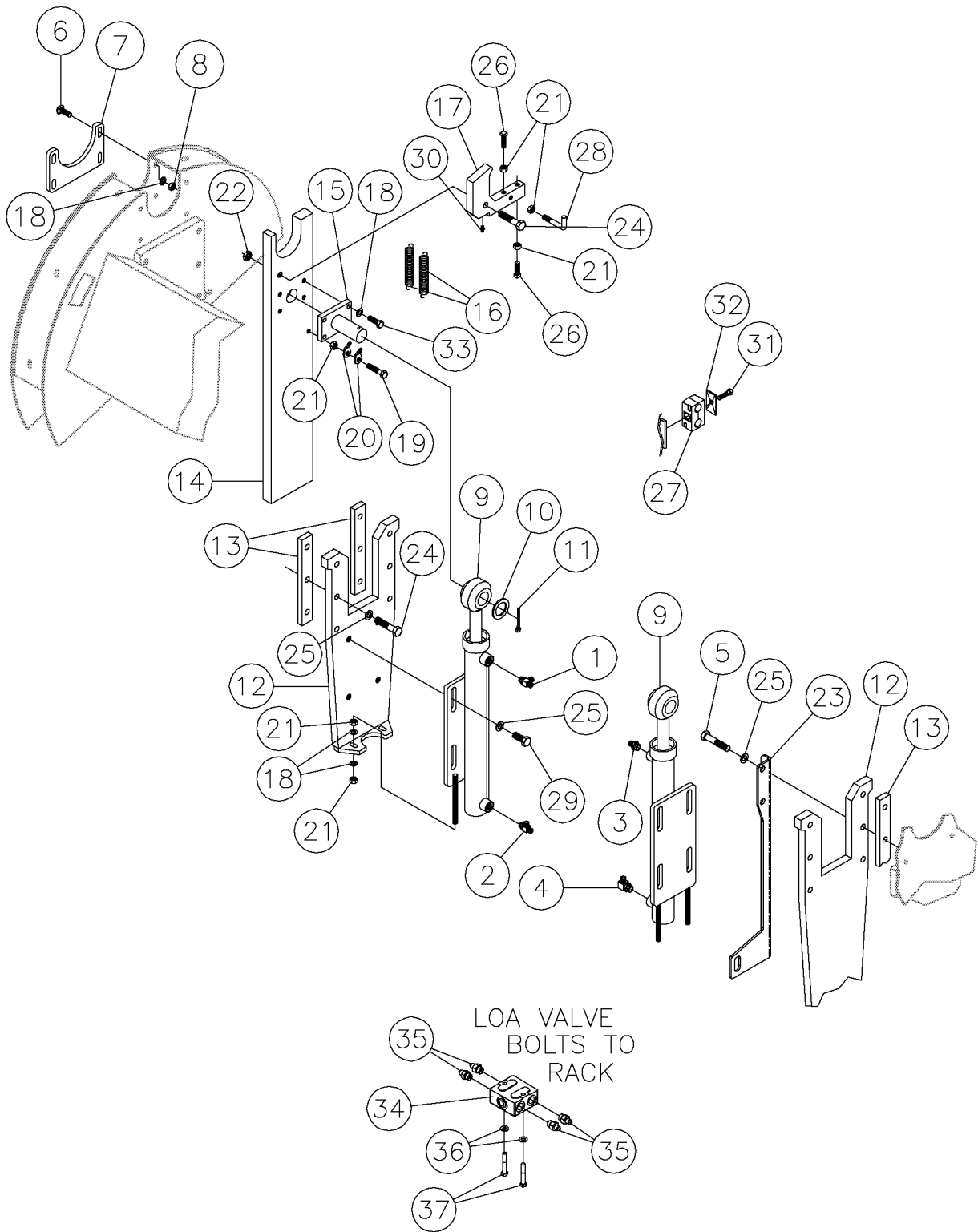
Rod Loader Frame Fig 9-2



Rod Loader Frame Fig 9-2

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	December, 2006		Updated Ref. 8 Illustration
1		234252001	SPACER-LOADER INDICATOR	1	
2		75383001	NUT-1/2-UNC GR.8 JAM HEX	4	
3		227901001	WEAR BAR - ROD LOADER	2	
4		227900001	WEAR BAR-ROD LOADER	2	
5		601699012	3/8-16X1 1/4 ELEVATOR BOLT ZNC	12	
6		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	12	
7		251327001	PIVOT - LOADER	2	
8	*	227899001	LOADER-ROD	1	
9		1835033	BSHG.-STL-.2 X 1 3/4 X 1 1/2 REF T10835	4	
10		250573001	BOLT-1/2-13 X 2 1/2 GR8 HX Y/Z	4	
11		485025	WASHER-1/2 FLAT-HARDENED-YZ	10	
12		235713001	WASHER-FLATSTRL-.38-.41X.81-.06-YA-A325	12	
13		235731001	NUT-1/2-13 GR8 ZINC PLTD	6	
14		598001	FITTING-1/4" NF ST GREASE ZERK	2	
15		251329001	ROD - THREADED	2	
16		18150001	SLUG-2 DIA.-1/4" REF T13457	1	
17		296254794	INDICATOR - ROD LOADER	1	
18		235727001	BOLT-3/8-16X1 GR8 HEX ZINC PLT	2	
19		235729001	SCREW-HCS-.50-13X1.00-GR8-YZ	2	
20		250514001	NUT -5/8NC JAM Y/ZINC	2	
21		601697030	SQ HSS-5/8-11X3 ZINC PLT	2	
22		2326595	DECAL VERMEER- 4 1/2 X 24	1	
23		7000C544	DECAL - D80X100 II LEFT STRIPE	1	
24		7000C463	DECAL - SERIES II MEDIUM	1	

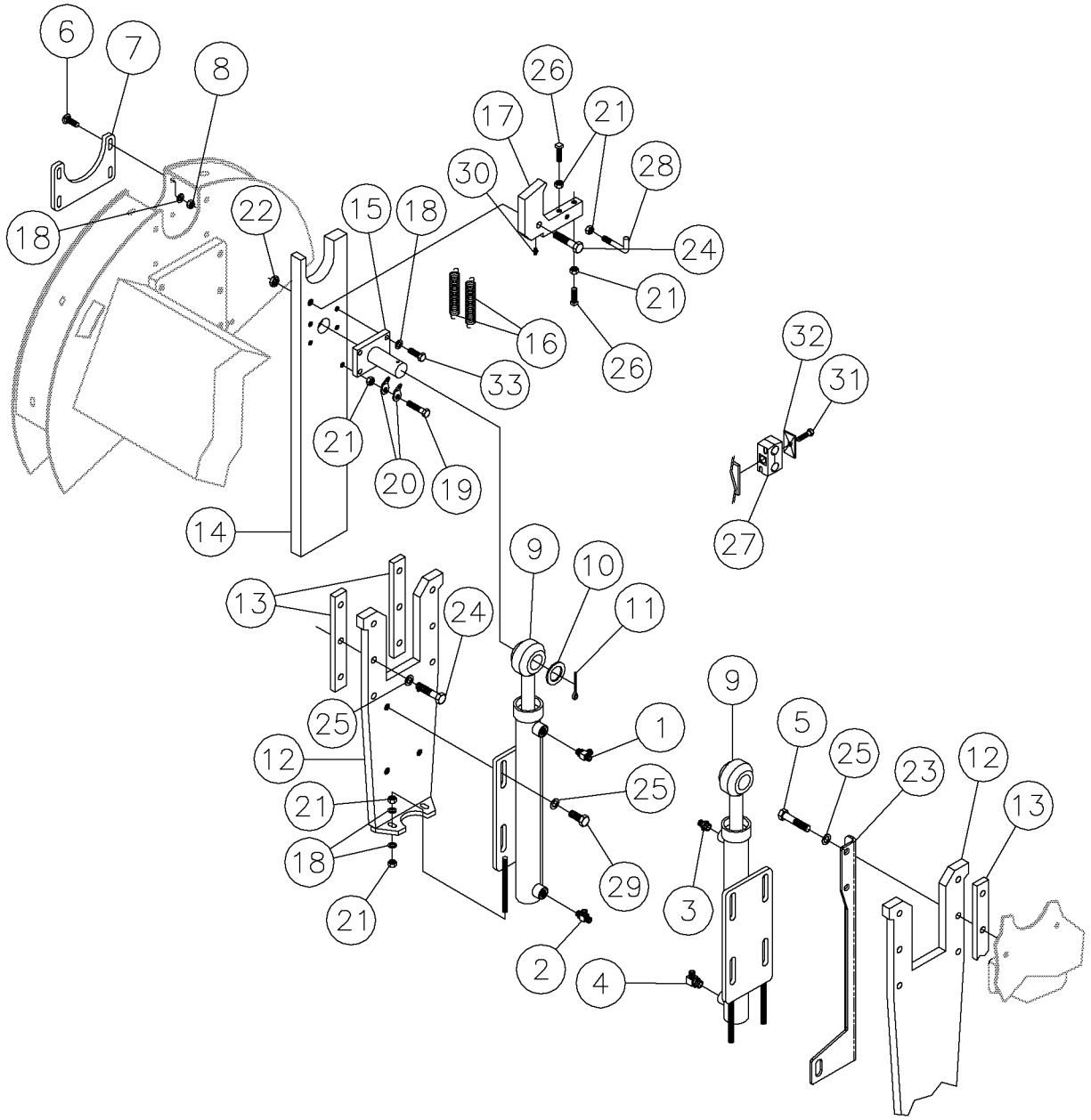
Rod Position Cylinder Fig 9-3r01



Rod Position Cylinder Fig 9-3r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	August, 2006		Add LOA Valve to Rack
1		82930001	FIT-6MX4M JICX4M JIC (RUN) TEE	1	
2		131007001	FIT-4MJICX6MORX4MJIC TEE R.062	1	
3		57968001	FITTING-STR-4MJ-6MORB	1	
4		57950001	FITTING-90-4MJ-6MORBA	1	
5		250573001	BOLT-1/2-13 X 2 1/2 GR8 HX Y/Z	2	
6		375012	3/8-16X1 1/4"GD#5CARRIAGE BOLT REF T15211	8	
7		224335001	PLATE-LOADER INSERT	2	
8		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	8	
9		227815001	CYLINDER 1 1/2 X 14 1/2	2	Breakdown Fig 13-57
10		483007	WASHER-1 7/8X1 1/4X14 GA M.B. REF T04275	2	
11		510025	COTTER PIN-3/16" X 2" REF T10997	2	
12		227863001	MOUNT-POSITION CYLINDER	2	
13		224361001	SPACER-ROD ARM	4	
14		224326001	ARM-2 7/8" ROD	2	Option: 2.875 FIRESTICK II
		216635001	ARM-3 1/2" ROD	2	Option: 3.5 FIRESTICK I
15		227752001	MOUNT-LOADER CYLINDER	2	
16		1789013	SPRING -EXT. #76 4" OA	4	
17		224333001	PLATE-2 7/8" ROD FLIPPER	2	Option: 2.875 FIRESTICK II
		293067001	PLATE-ROD FLIPPER 2 SPRING	2	Option: 3.5 FIRESTICK I
18		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	16	
19		250504001	BOLT 3/8-16 X 2 1/4"GR8 HEX Y	2	
20		239421001	PLATE-SPRING HOOK	4	
21		250576001	NUT-3/8 NC HEX JAM W/Y-ZINC	14	
22		75383001	NUT-1/2-UNC GR.8 JAM HEX	2	
23		296275970	PLATE - SWITCH MOUNTING	1	
24		240335001	BOLT-1/2-13X2 1/4 GR8 ZINC PLT	8	
25		485025	WASHER-1/2 FLAT-HARDENED-YZ	16	
26		249877001	SQ HSS - 3/8-16 X 2	4	
27		67846005	CLAMP-PAIR-1/2" PIPE/1/4" HYD. HOSE	5	
28		293068001	HOOK-FLIPPER 2 SPRING	2	
29		235737001	BOLT-1/2-13X1 1/4 GR8 ZINC PLT	8	
30		598001	FITTING-1/4" NF ST GREASE ZERK	2	
31		248031001	BOLT-5/16-18X1 1/4 GR8 ZINC PL	5	
32		67846003	PLATE-TWIN COVER	5	
33		235727001	BOLT-3/8-16X1 GR8 HEX ZINC PLT	8	
34	*	86668001	VALVE-LOA-6-D	1	Breakdown Fig. 13-72
35	*	57968001	FITTING-STR-4MJ-6MORB	4	
36	*	235714001	WASHER - FLATSTRL - .31 - .34 X .69 - .06-YZ-A325	2	
37	*	248030001	BOLT-5/16-18X1 3/4 GR8 ZYC	2	

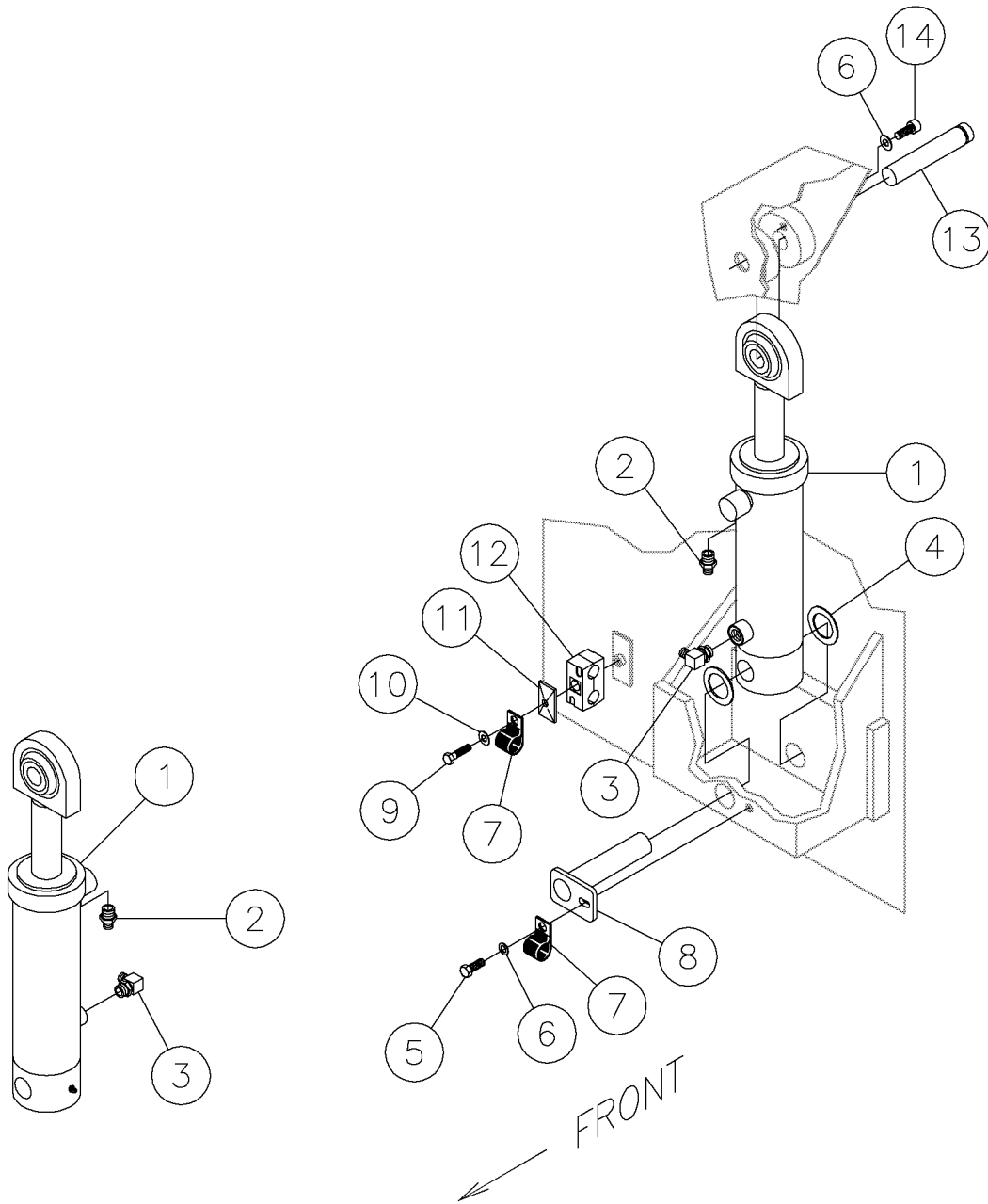
Rod Position Cylinder Fig 9-3



Rod Position Cylinder Fig 9-3

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		82930001	FIT-6MX4M JICX4M JIC (RUN) TEE	1	
2		131007001	FIT-4MJICX6MORX4MJIC TEE R.062	1	
3		57968001	FITTING-STR-4MJ-6MORB	1	
4		57950001	FITTING-90-4MJ-6MORBA	1	
5		250573001	BOLT-1/2-13 X 2 1/2 GR8 HX Y/Z	2	
6		375012	3/8-16X1 1/4"GD#5CARRIAGE BOLT REF T15211	8	
7		224335001	PLATE-LOADER INSERT	2	
8		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	8	
9		227815001	CYLINDER 1 1/2 X 14 1/2	2	Breakdown Fig 13-57
10		483007	WASHER-1 7/8X1 1/4X14 GA M.B. REF T04275	2	
11		510025	COTTER PIN-3/16" X 2" REF T10997	2	
12		227863001	MOUNT-POSITION CYLINDER	2	
13		224361001	SPACER-ROD ARM	4	
14		224326001	ARM-2 7/8" ROD	2	Option: 2.875 FIRESTICK II
		216635001	ARM-3 1/2" ROD	2	Option: 3.5 FIRESTICK I
15		227752001	MOUNT-LOADER CYLINDER	2	
16		1789013	SPRING -EXT. #76 4" OA	4	
17		224333001	PLATE-2 7/8" ROD FLIPPER	2	Option: 2.875 FIRESTICK II
		293067001	PLATE-ROD FLIPPER 2 SPRING	2	Option: 3.5 FIRESTICK I
18		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	16	
19		250504001	BOLT 3/8-16 X 2 1/4"GR8 HEX Y	2	
20		239421001	PLATE-SPRING HOOK	4	
21		250576001	NUT-3/8 NC HEX JAM W/Y-ZINC	14	
22		75383001	NUT-1/2-UNC GR.8 JAM HEX	2	
23		296275970	PLATE - SWITCH MOUNTING	1	
24		240335001	BOLT-1/2-13X2 1/4 GR8 ZINC PLT	8	
25		485025	WASHER-1/2 FLAT-HARDENED-YZ	16	
26		249877001	SQ HSS - 3/8-16 X 2	4	
27		67846005	CLAMP-PAIR-1/2" PIPE/1/4" HYD. HOSE	5	
28		293068001	HOOK-FLIPPER 2 SPRING	2	
29		235737001	BOLT-1/2-13X1 1/4 GR8 ZINC PLT	8	
30		598001	FITTING-1/4" NF ST GREASE ZERK	2	
31		248031001	BOLT-5/16-18X1 1/4 GR8 ZINC PL	5	
32		67846003	PLATE-TWIN COVER	5	
33		235727001	BOLT-3/8-16X1 GR8 HEX ZINC PLT	8	

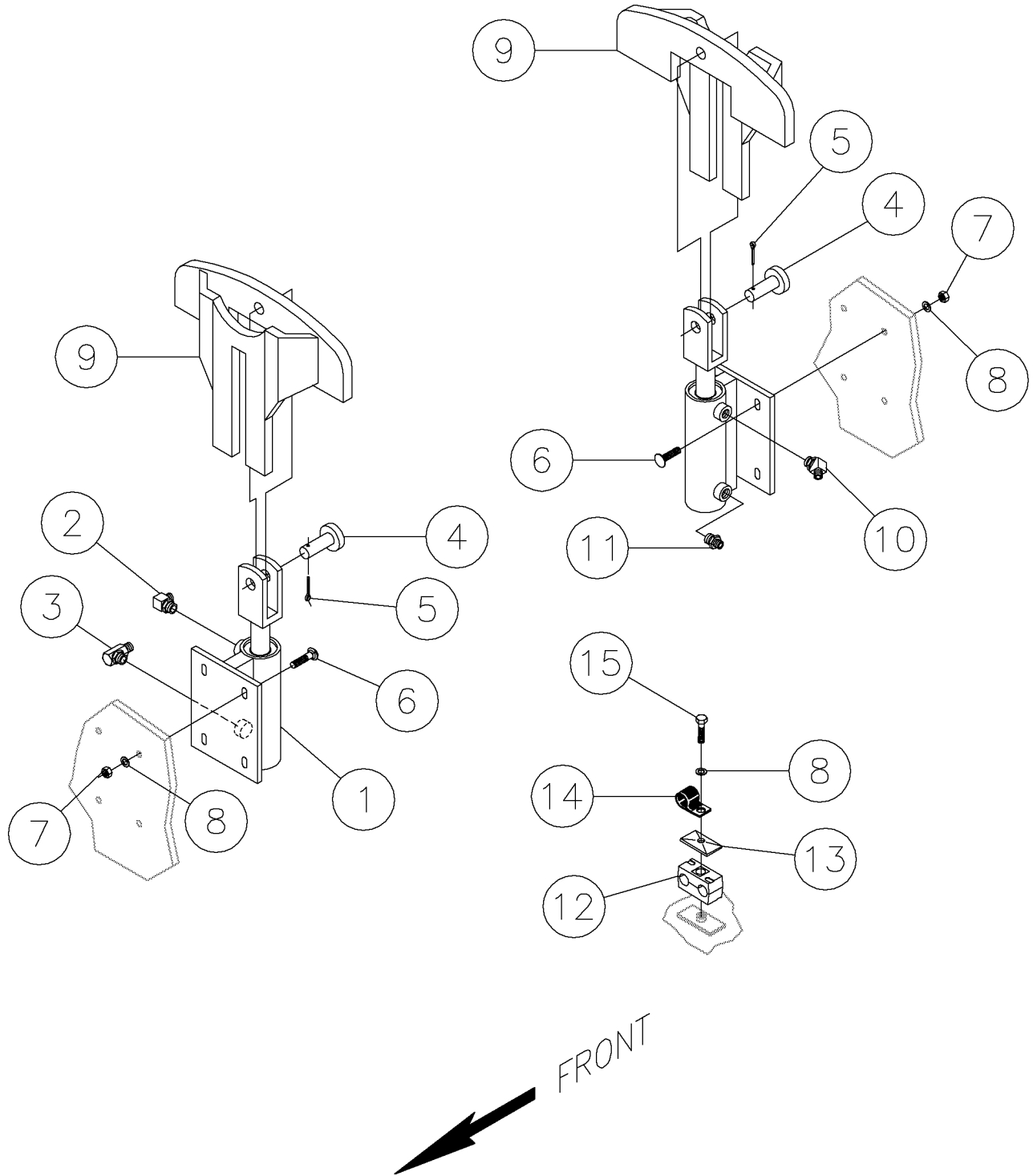
Rod Loader-Rod Rotation Cylinder Fig 9-4



Rod Loader-Rod Rotation Cylinder Fig 9-4

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		227814001	CYLINDER-3 X 7 1/2	2	Breakdown Fig 13-39
2		57968001	FITTING-STR-4MJ-6MORB	2	
3		57950001	FITTING-90-4MJ-6MORBA	2	
4		124648001	WASHER-1.875X1.25ID 14GA ZINC	4	
5		235727001	BOLT-3/8-16X1 GR8 HEX ZINC PLT	2	
6		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	4	
7		2595007	HOSE CLAMP - TS7J 3/4" REF T15457	2	
8		227880001	PIN-ROTATION CYLINDER	2	
9		248031001	BOLT-5/16-18X1 1/4 GR8 ZINC PL	6	
10		235714001	WASHER - FLATSTRL - .31 - .34 X .69 - .06-YZ-A325	1	
11		67846003	PLATE-TWIN COVER	6	
12		67846005	CLAMP-PAIR-1/2" PIPE/1/4" HYD. HOSE	6	
13		227902001	PIN-ROTATE CYLINDER A100-66943	2	
14		601696010	SOCKET HD CAP SCREW 3/8-16X1 Z	2	

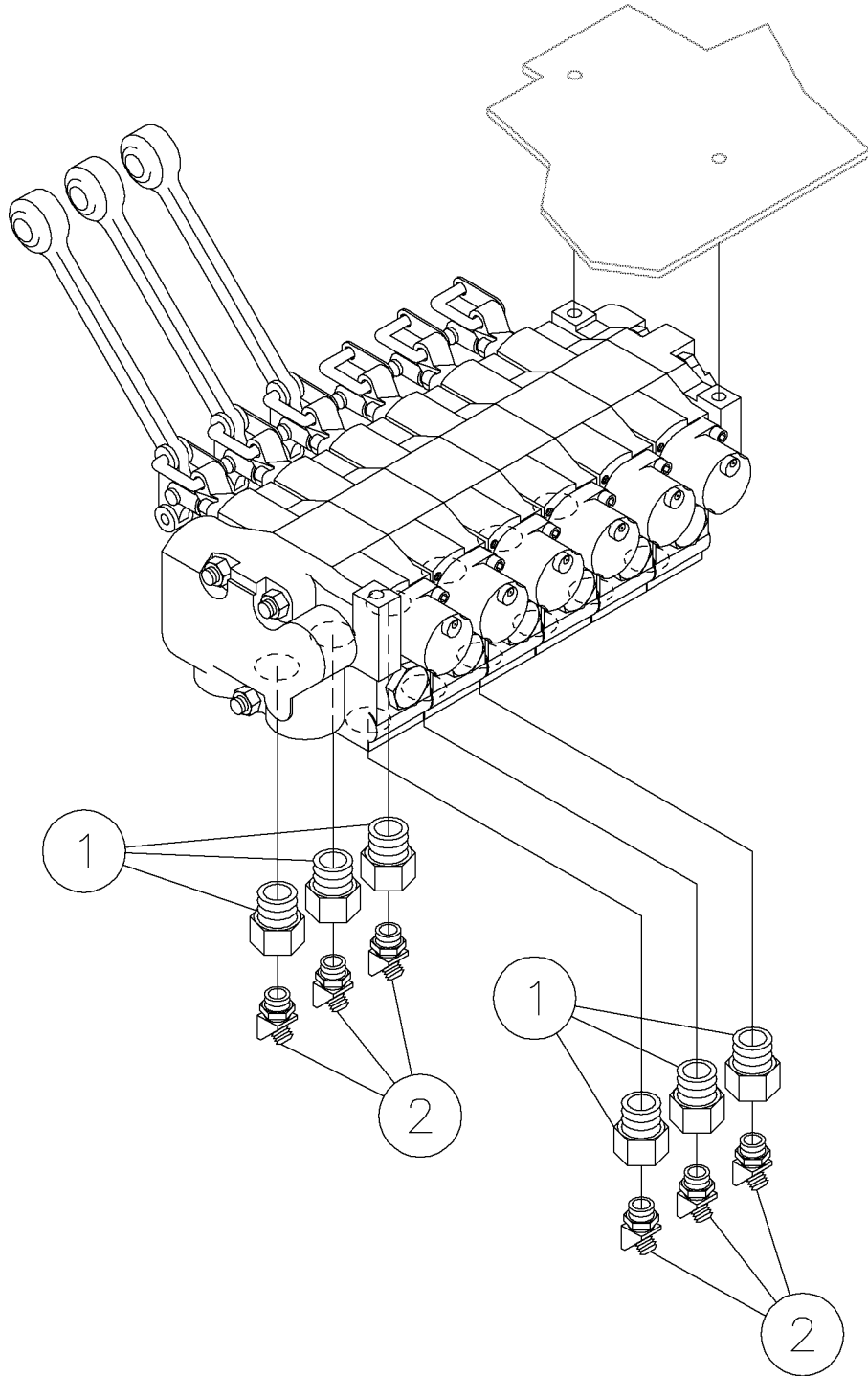
Rod Loader-Rod Pusher Cylinder Fig 9-5



Rod Loader-Rod Pusher Cylinder Fig 9-5

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		224394001	CYLINDER-2X5	2	Breakdown Fig 13-40
2		57950001	FITTING-90-4MJ-6MORBA	1	
3		131008001	FITTING-4MJICX6MORING 90D.062R	1	
4		222815001	PIN-STEER CYLINDER	2	
5		510047	PIN - 3/16 X 1 1/4 COTTER REF T16726	2	
6		375012	3/8-16X1 1/4"GD#5CARRIAGE BOLT REF T15211	8	
7		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	8	
8		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	8	
9		239442001	LIFTER-ROD	2	
10		82931001	FITTING-45-4MJX6MORBA	1	
11		57968001	FITTING-STR-4MJ-6MORB	1	
12		67846005	CLAMP-PAIR-1/2" PIPE/1/4" HYD. HOSE	5	
13		67846003	PLATE-TWIN COVER	5	
14		2595007	HOSE CLAMP - TS7J 3/4" REF T15457	1	
15		248031001	BOLT-5/16-18X1 1/4 GR8 ZINC PL	5	

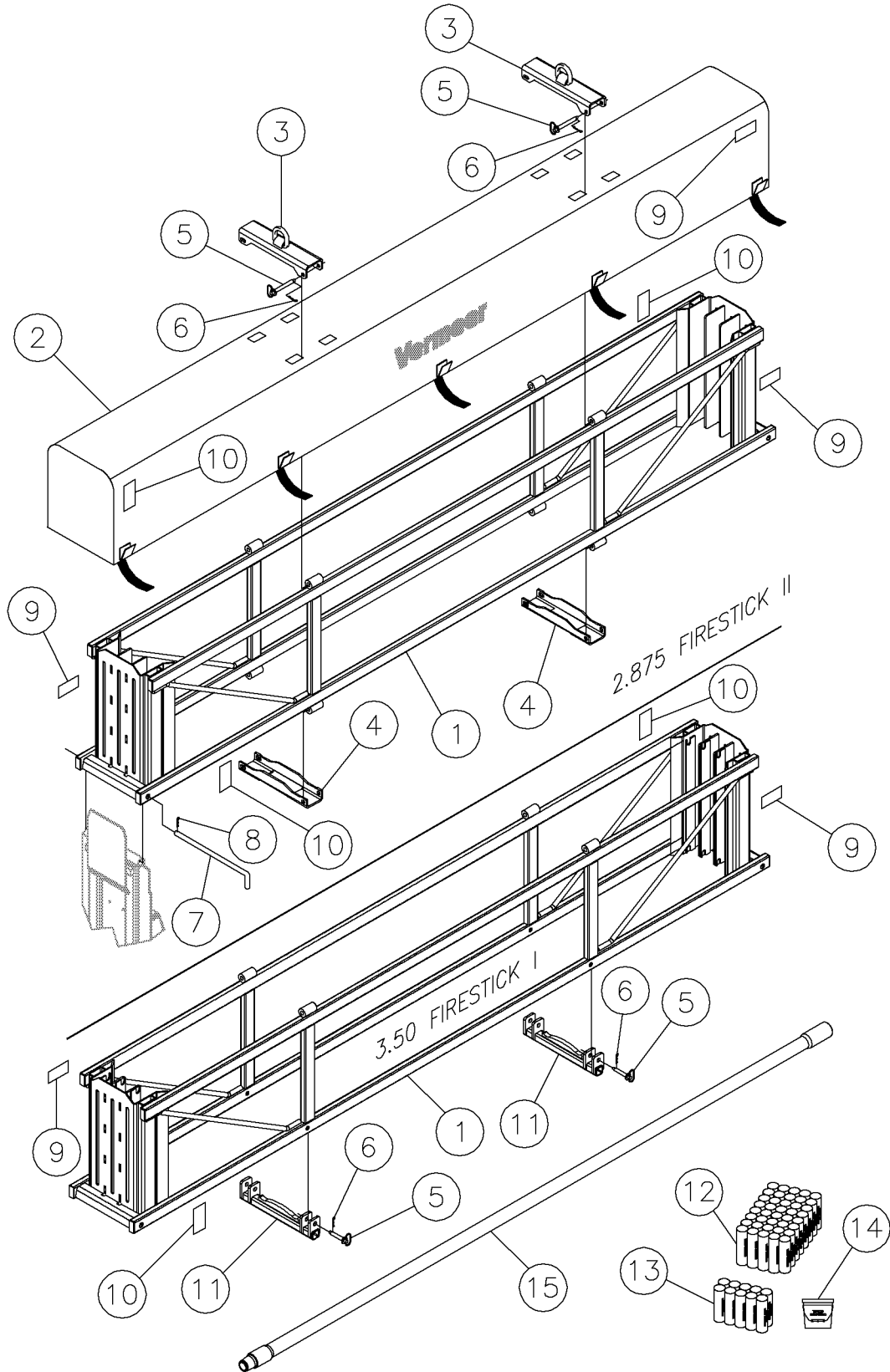
Rod Loader Plumbing Fig 9-6



Rod Loader Plumbing Fig 9-6

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		108484001	FITTING - STR - 10MORB - 4FORB	6	
2		58295001	FITTING-4M OR X 4M JIC 45 DEG.	6	

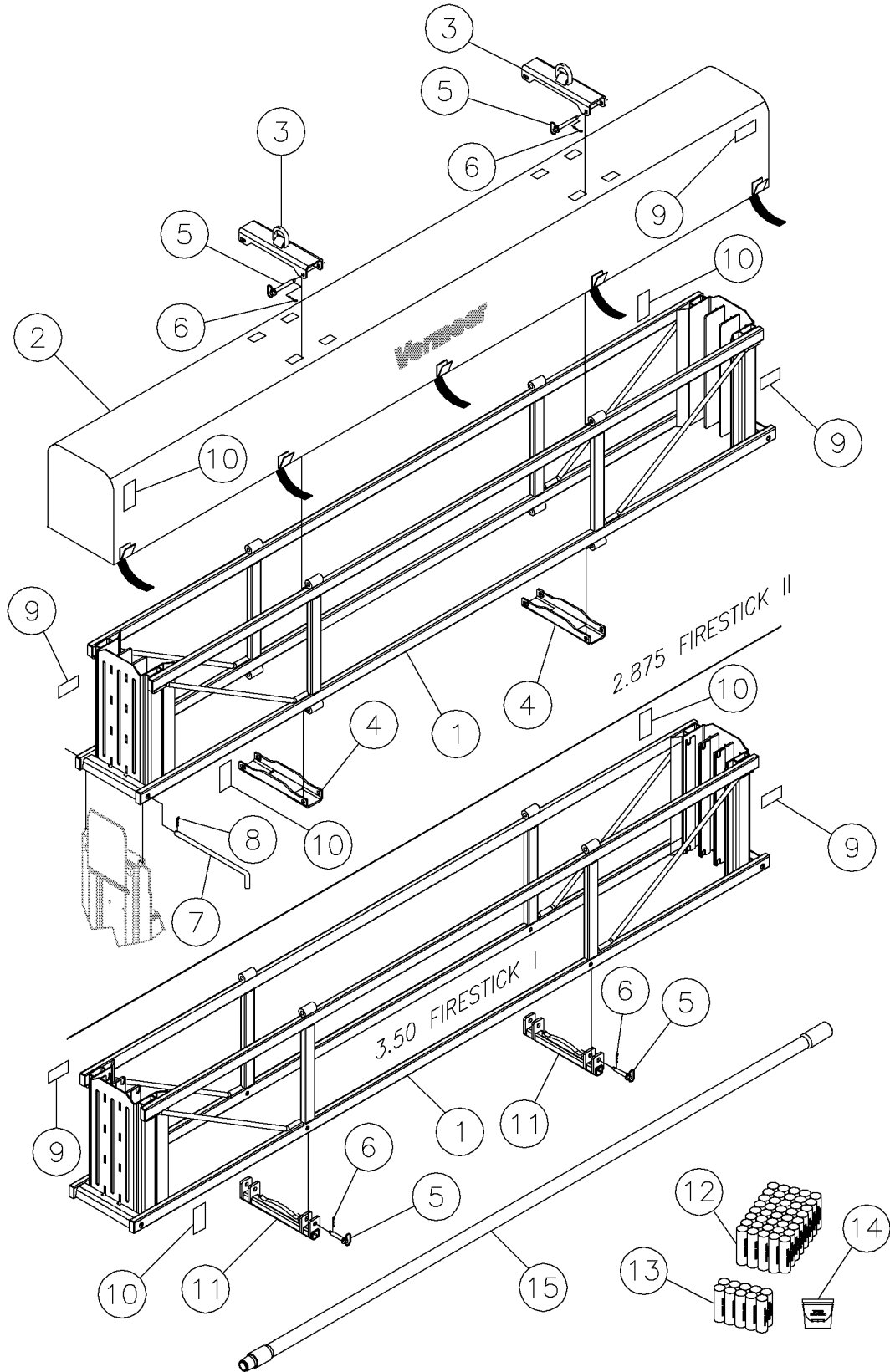
Rod Box (300 ft) Fig 9-7r01



Rod Box (300 ft) Fig 9-7r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	June, 2006		Update In Parts List.
1		285175001	BOX - ROD 2- 7/8 FSII, 24ROD	1	
		294136001	BOX - ROD 3 1/2 FS I TALL	1	
2		287691001	COVER - 15' X 2 7/8" FSII TALL ROD BOX	1	
3		285048001	TOP-ROD BOX	2	
4		285046001	PLATE-BOTTOM ROD BOX	2	
5		2107007	PIN-HITCH 3/4 X 6	8	
6		1794003	HAIR PIN COTTER - .148 WIRE	8	
7		285170001	PIN - ROD BOX	2	
8		20667001	HAIR PIN COTTER - .177 WIRE	2	
9		70000563	DECAL-WARNING (UND)	2	Domestic
		7000I563	DECAL-WARNING (UND)	2	International
10		7000A392	DECAL - DANGER	2	Domestic
		700IA392	DECAL - DANGER D28/D50	2	International
11		293040001	BAR - ROD BOX LIFT BOTTOM	2	
12		275928982	THRD CMPND - CASE OF 4 / 10 PACKS	A/R	
13		275927982	THRD CMPND - PLUSCO 135 - 10 PACK	A/R	
14		275927982	THRD CMPND - PLUSCO 135 - 10 PACK	A/R	
15		276307001	DRILL STEM - 2 7/8 FST II V3 15' ROD	24	
		222454001	DRILL ROD - 3.50" (8.9 CM) O.D. X 15'	24	

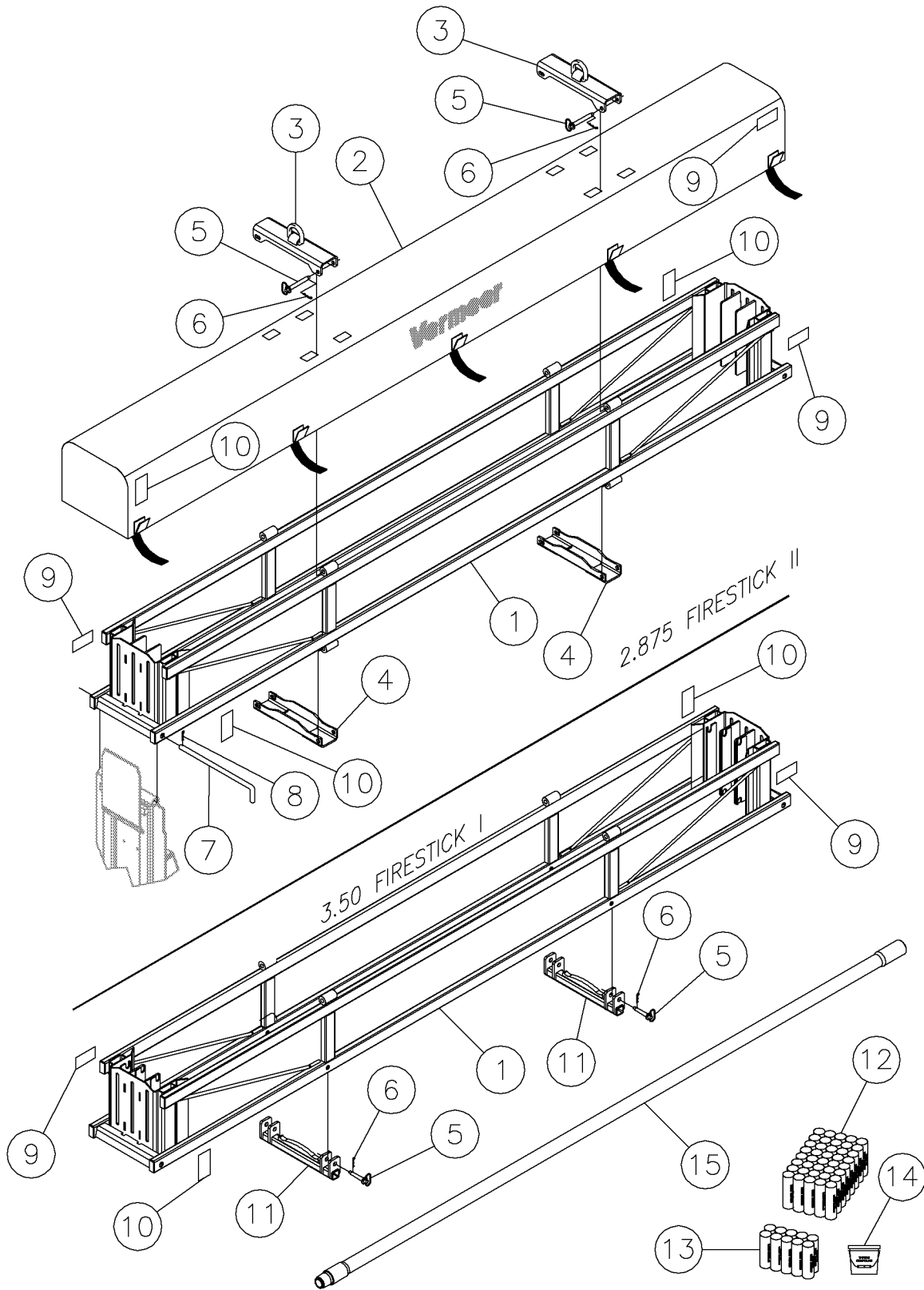
Rod Box (300 ft) Fig 9-7



Rod Box (300 ft) Fig 9-7

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		285175001	BOX - ROD 2- 7/8 FSII, 24ROD	1	
		294136001	BOX - ROD 3 1/2 FS I TALL	1	
2		287691001	COVER - 15' X 2 7/8" FSII TALL ROD BOX	1	
3		285048001	TOP-ROD BOX	2	
4		285046001	PLATE-BOTTOM ROD BOX	2	
5		2107007	PIN-HITCH 3/4 X 6	8	
6		1794003	HAIR PIN COTTER - .148 WIRE	8	
7		285170001	PIN - ROD BOX	2	
8		20667001	HAIR PIN COTTER - .177 WIRE	2	
9		70000563	DECAL-WARNING (UND)	2	
		7000I563	DECAL-WARNING (UND)	2	
10		7000A392	DECAL - DANGER	2	
		700IA392	DECAL - DANGER D28/D50	2	
11		293040001	BAR - ROD BOX LIFT BOTTOM	2	
12		275928982	THRD CMPND - CASE OF 4 / 10 PACKS	A/R	
13		275927982	THRD CMPND - PLUSCO 135 - 10 PACK	A/R	
14		275927982	THRD CMPND - PLUSCO 135 - 10 PACK	A/R	
15		276307001	DRILL STEM - 2 7/8 FST II V3 15' ROD	24	
		222454001	DRILL ROD - 3.50" (8.9 CM) O.D. X 15'	24	

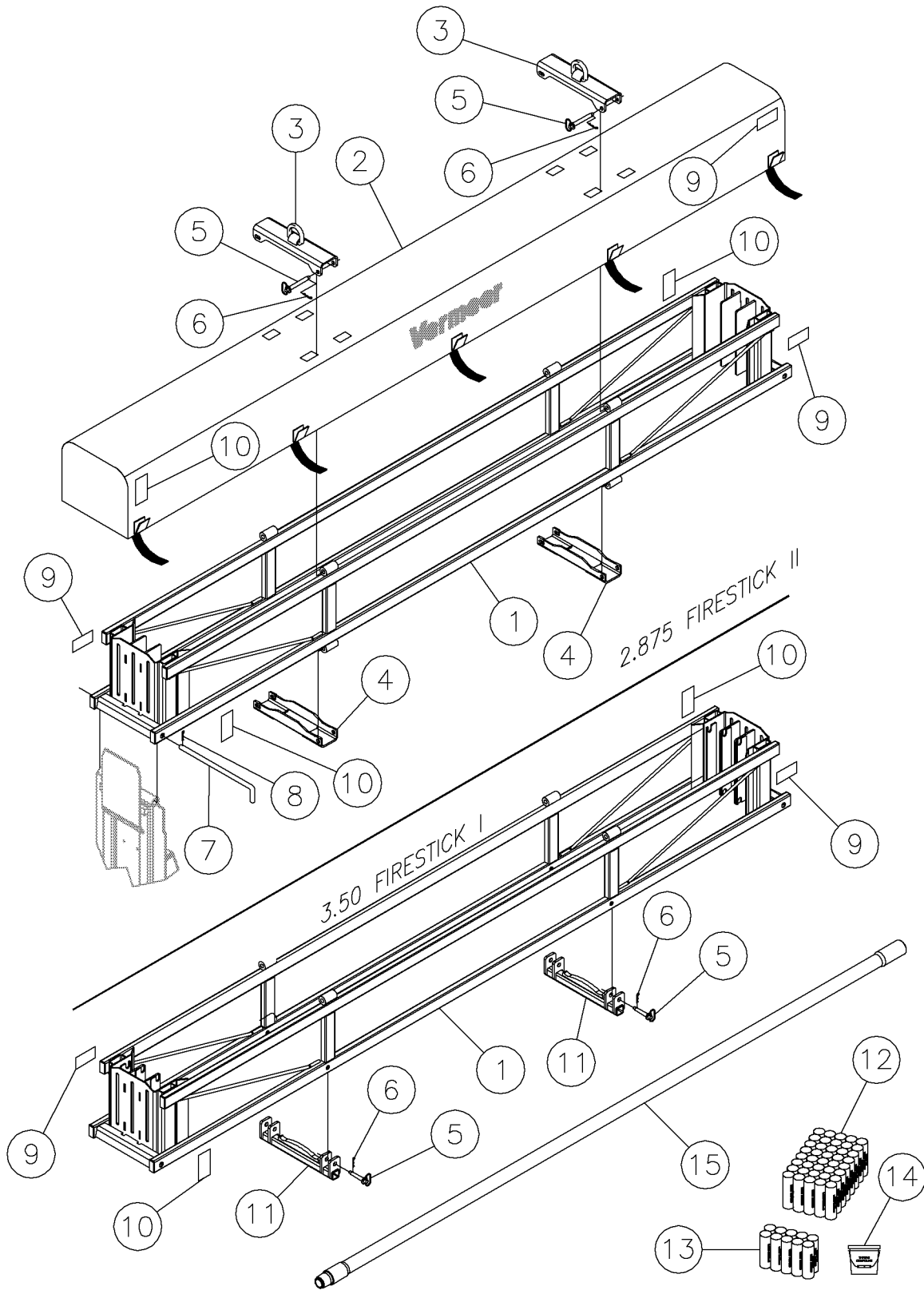
Rod Box (Short) Fig 9-8r01



Rod Box (Short) Fig 9-8r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	June, 2006		Update In Parts List.
1		293017001	BOX - ROD 2-7/8 FSII, 12 ROD	1	
		294143001	BOX - ROD 3 1/2 FS I SHORT	1	
2		287692001	COVER - 15' X 2 7/8" FSII	1	
3		285048001	TOP-ROD BOX	2	
4		285046001	PLATE-BOTTOM ROD BOX	2	
5		2107007	PIN-HITCH 3/4 X 6	8	
6		1794003	HAIR PIN COTTER - .148 WIRE REF TR00152	8	
7		285170001	PIN - ROD BOX	2	
8		20667001	HAIR PIN COTTER - .177 WIRE	2	
9		70000563	DECAL-WARNING (UND)	2	Domestic
		7000I563	DECAL-WARNING (UND)	2	International
10		7000A392	DECAL - DANGER	2	Domestic
		700IA392	DECAL - DANGER D28/D50	2	International
11		293040001	BAR - ROD BOX LIFT BOTTOM	2	
12		275928982	THRD CMPND - CASE OF 4 / 10 PACKS	A/R	
13		275927982	THRD CMPND - PLUSCO 135 - 10 PACK	A/R	
14		275927982	THRD CMPND - PLUSCO 135 - 10 PACK	A/R	
15		276307001	DRILL STEM - 2 7/8 FST II V3 15' ROD	12	
		222454001	DRILL ROD - 3.50" (8.9 CM) O.D. X 15'	12	

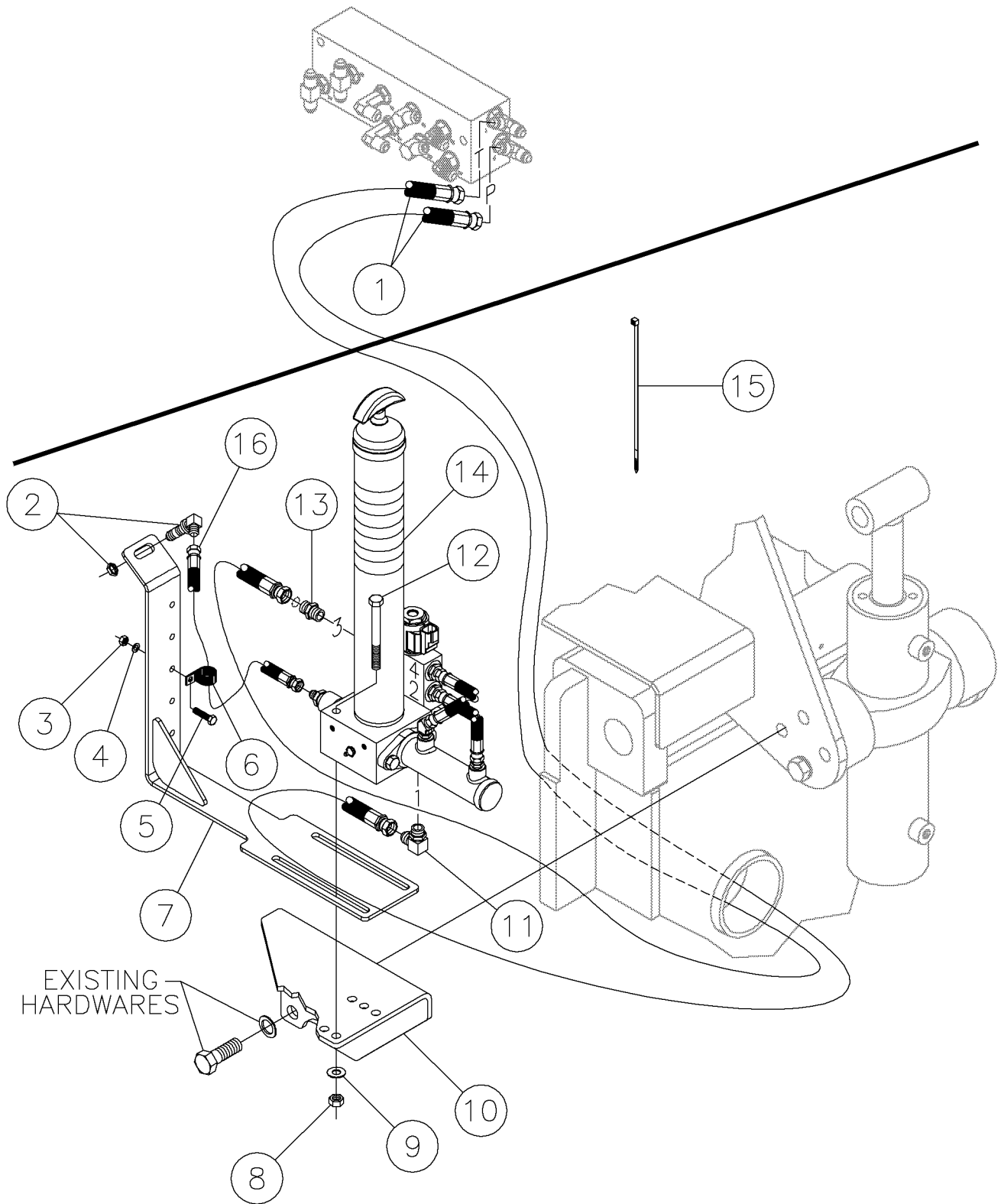
Rod Box (Short) Fig 9-8



Rod Box (Short) Fig 9-8

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		293017001	BOX - ROD 2-7/8 FSII, 12 ROD	1	
		294143001	BOX - ROD 3 1/2 FS I SHORT	1	
2		287692001	COVER - 15' X 2 7/8" FSII	1	
3		285048001	TOP-ROD BOX	2	
4		285046001	PLATE-BOTTOM ROD BOX	2	
5		2107007	PIN-HITCH 3/4 X 6	8	
6		1794003	HAIR PIN COTTER - .148 WIRE REF TR00152	8	
7		285170001	PIN - ROD BOX	2	
8		20667001	HAIR PIN COTTER - .177 WIRE	2	
9		70000563	DECAL-WARNING (UND)	2	
		7000I563	DECAL-WARNING (UND)	2	
10		7000A392	DECAL - DANGER	2	
		700IA392	DECAL - DANGER D28/D50	2	
11		293040001	BAR - ROD BOX LIFT BOTTOM	2	
12		275928982	THRD CMPND - CASE OF 4 / 10 PACKS	A/R	
13		275927982	THRD CMPND - PLUSCO 135 - 10 PACK	A/R	
14		275927982	THRD CMPND - PLUSCO 135 - 10 PACK	A/R	
15		276307001	DRILL STEM - 2 7/8 FST II V3 15' ROD	12	
		222454001	DRILL ROD - 3.50" (8.9 CM) O.D. X 15'	12	

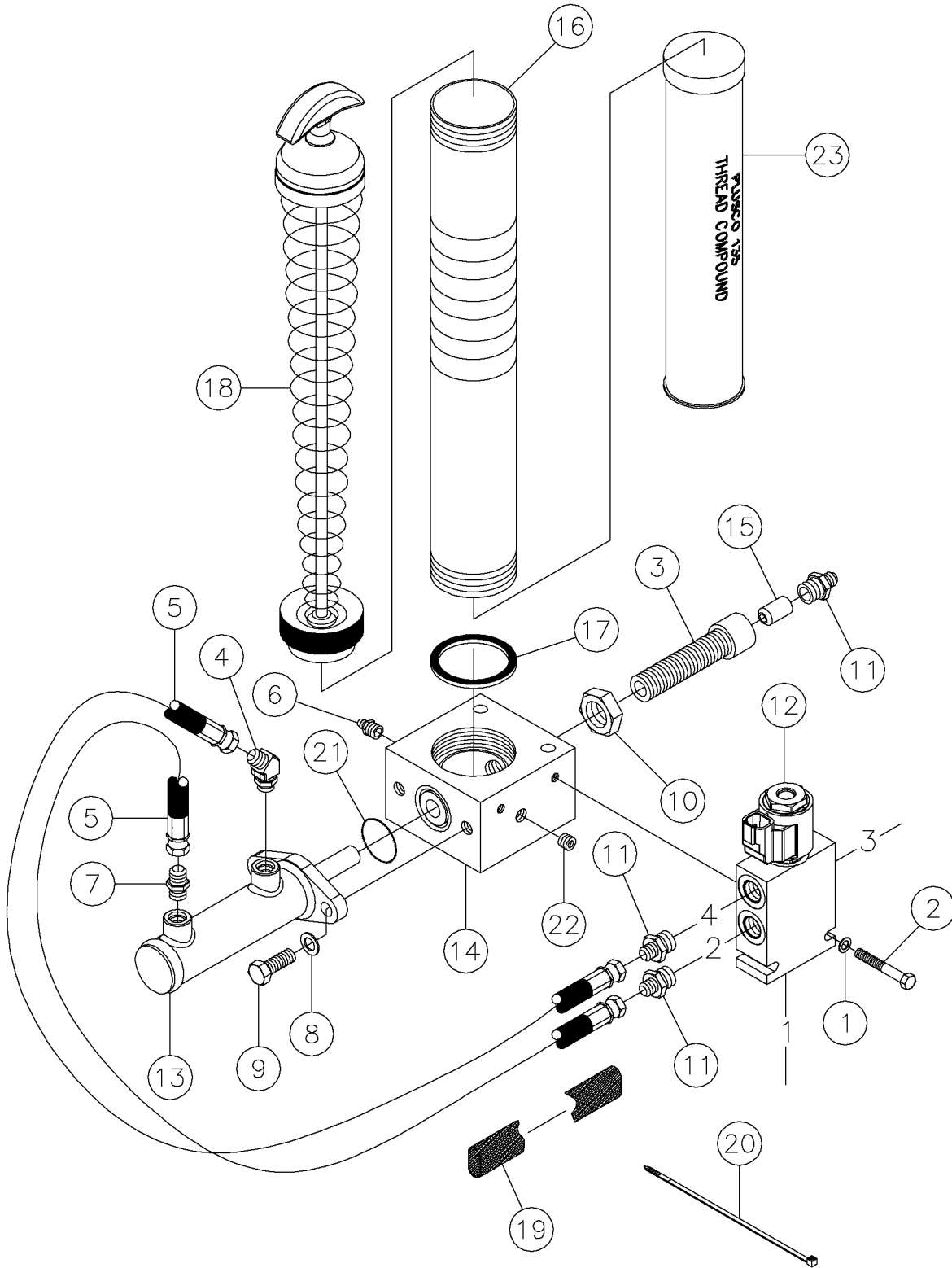
Auto Greaser Fig 10-1



Auto Greaser Fig 10-1

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		57940585	HOSE-HYD-.38X65-6FSJ-ST/ST-3000PSI	2	
2		61497001	FITTING-4M JIC BULKHEAD 90DEG.	1	
3		235732001	NUT - HEX - .25 - 20 - GR8 - YZ	1	
4		510337603	WASHER-FLATSTD-.25-.31X.75-.07-YZ	1	
5		235735001	BOLT-1/4-20X1 GR8 HEX ZNC PLTD	1	
6		2595007	HOSE CLAMP - TS7J 3/4"	1	
7		296269005	GREASER MOUNT	1	
8		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	2	
9		510337607	WASHER-FLATSTD-.38-.44X1.00-.08-YZ	2	
10		291985001	PLATE-GREASER MOUNT	1	
11		60906001	4MX6M JIC 90 DEG ELBOW	1	
12		16114034	BOLT-3/8-16X3 1/2 HEX HD. GR8	2	
13		65565001	FITTING - 6M O-RING X 6M JIC ST.	11	
14		296279612	GREASE PUMP AY - VAR DISP	1	Breakdown Fig. 10-2
15		59634001	SINGLE NYTIE - 8"	8	
16		53843601	HOSE-1/4X17 4FS JIC 3000 PSI	1	

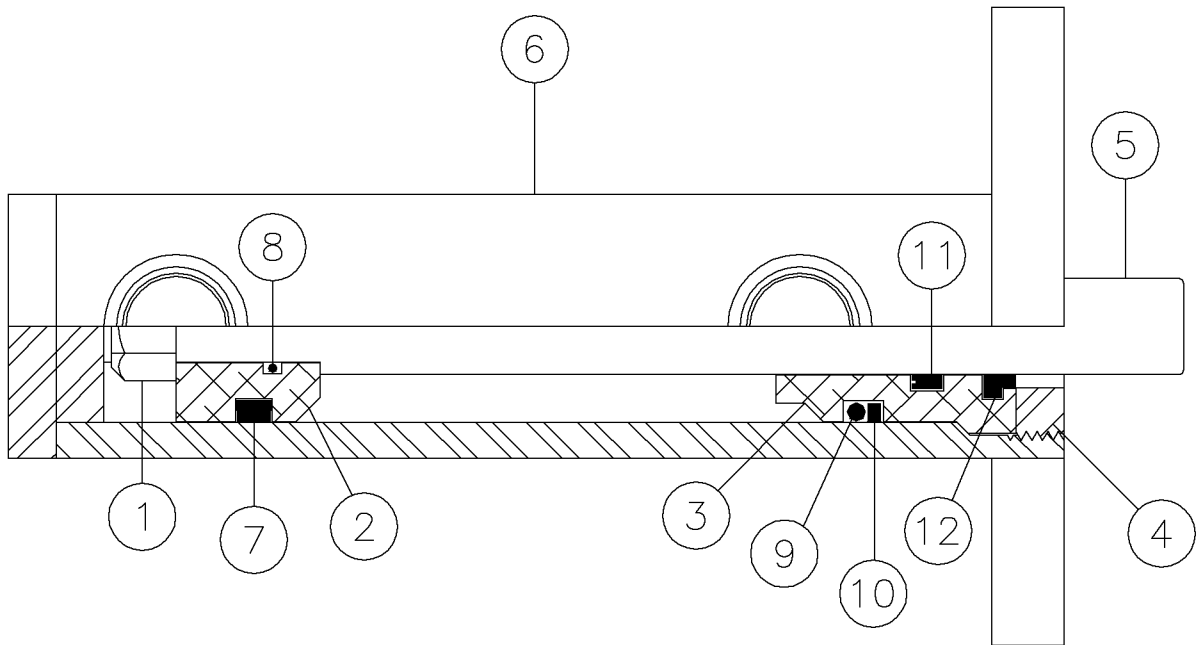
Auto Greaser Components Fig 10-2



Auto Greaser Components Fig 10-2

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		510337603	WASHER-FLATSTD-.25-.31X.75-.07-YZ	2	
2		248107001	BOLT-1/4-20X1 3/4 GR 8 ZINC PL	2	
3		294896001	SLEEVE - GREASE PUMP	1	
4		58295001	FITTING-4M OR X 4M JIC 45 DEG.	1	
5		53843601	HOSE-1/4X17 4FS JIC 3000 PSI	2	
6		586001	ZERK-1/8" ST NPT GREASE	1	
7		60908001	FITTING-4MX4M JIC STR ADAPTER	1	
8		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	2	
9		235727001	BOLT-3/8-16X1 GR8 HEX ZINC PLT	2	
10		456001	NUT-3/4 N.F. HEX JAM	1	
11		57968001	FITTING-STR-4MJ-6MORB	3	
12		294901001	VALVE - GREASER	1	Breakdown Fig. 10-4
13		294899001	CYLINDER - HYD 1 X 2-3/8	1	Breakdown Fig. 10-3
14		294895001	HOUSING - GREASE PUMP	1	
15		294905001	VALVE - INSERT CHECK, 1/2"	1	
16		294910001	TUBE - GREASE	1	
17		294902001	GASKET - GREASE TUBE	1	
18		294903001	FOLLOWER - GREASE TUBE AY	1	
19		235824001	CORDURA SLEEVE-NHS-090	A/R	
20		59634001	SINGLE NYTIE - 8"	4	
21		296262010	O-RING - 213 .139 X .921 ID	1	
22		296258613	FITTING -1/8 NPT HEX SOCKET - .25L	1	
23		296262012	THRD CMPND-PLUSCO 135-SINGLE CARTRIDGE	1	
		275927982	THRD CMPND - PLUSCO 135 - 10 PACK	A/R	
		275928982	THRD CMPND - CASE OF 4 / 10 PACKS	A/R	
		296279612	GREASE PUMP AY - VAR DISP		Included All Items In This Figure

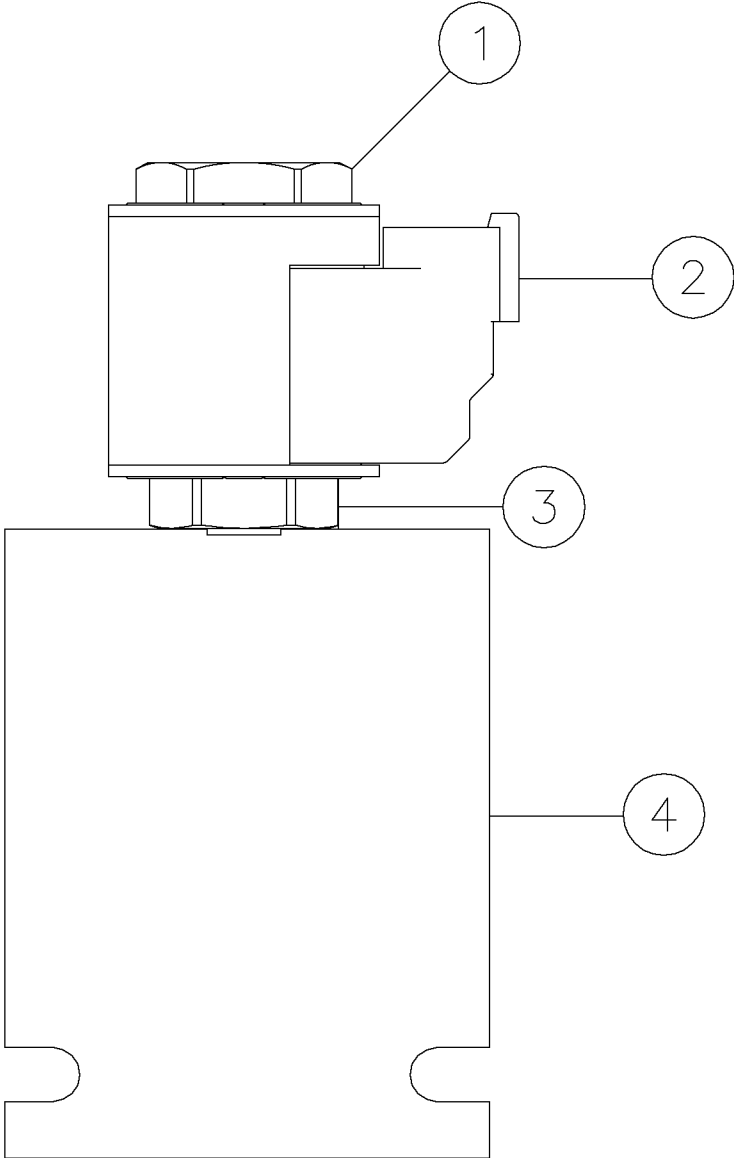
Auto Greaser Cylinder Components Fig 10-3



Auto Greaser Cylinder Components Fig 10-3

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		236113003	NUT	1	
2		296251772	PISTON	1	
3		234359007	HEAD	1	
4		234359013	COLLAR	1	
5		296265525	ROD-CYLINDER	1	
6		296265524	BODY-CYLINDER	1	
7		NSS	PSP - SEAL	1	NSS = Not Sold Separately
8		NSS	O - RING	1	NSS = Not Sold Separately
9		NSS	O - RING	1	NSS = Not Sold Separately
10		NSS	BACKUP	1	NSS = Not Sold Separately
11		NSS	ROD SEAL	1	NSS = Not Sold Separately
12		NSS	DUST SEAL	1	NSS = Not Sold Separately
		294899001	CYLINDER - HYD 1 X 2-3/8	1	Included All Items In This Figure
		296251775	SEAL KIT	1	

Auto Greaser Valve Components Fig 10-4



Auto Greaser Valve Components Fig 10-4

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296265526	NUT-COIL	1	
2		296265527	COIL	1	
3		244725009	CARTRIDGE - SOLENOID	1	
		244725011	SEAL KIT	1	
4		NSS	BLOCK	1	NSS = Not Sold Separately
		294901001	VALVE - GREASER	1	Included All Items In This Figure

Bucket Auto Greaser Mount Fig 10-5

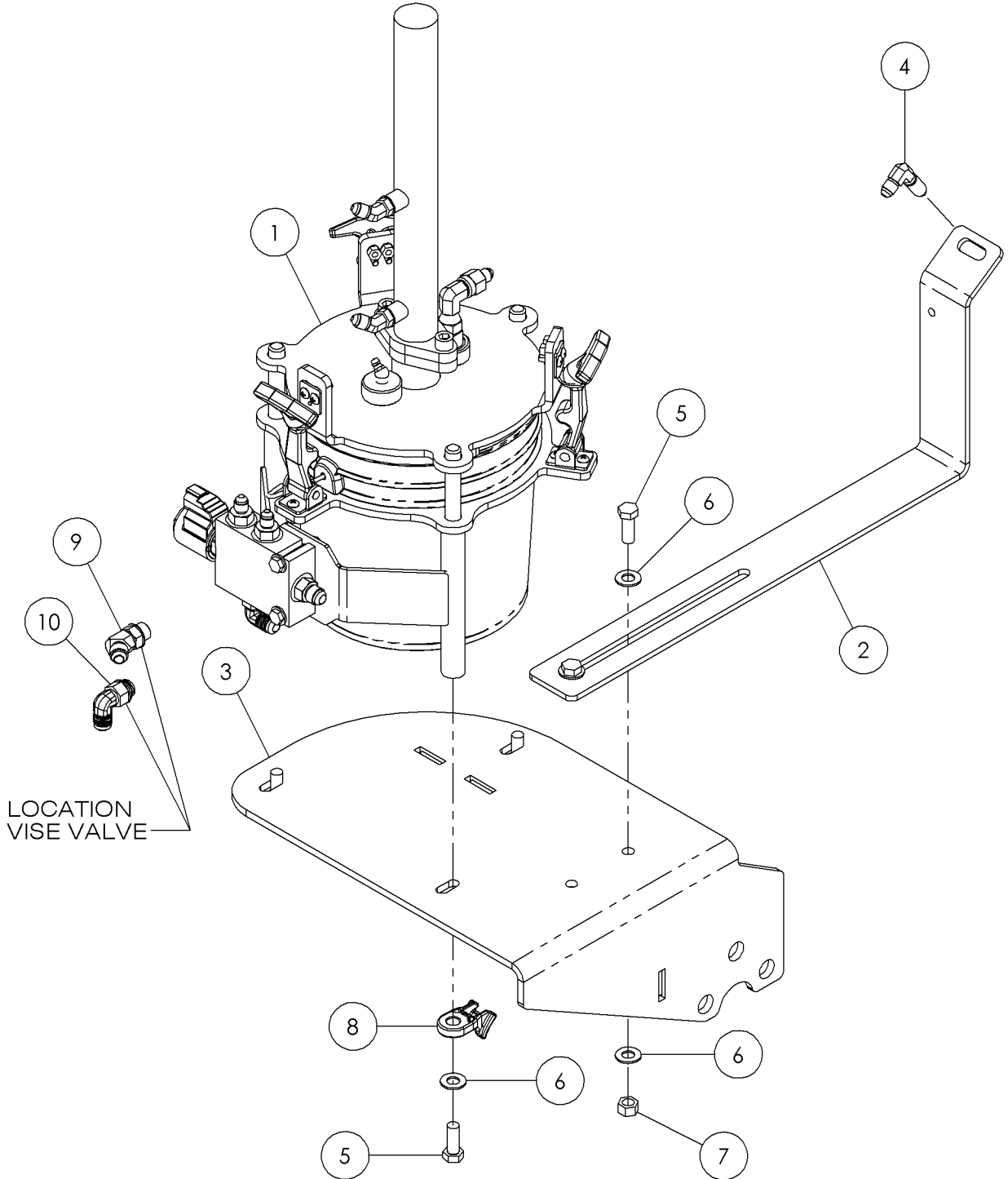


Illustration No. 296289050

Bucket Auto Greaser Mount Fig 10-5

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2007		Update/Add Fitting On Drawing
1	*	296287962	ASSEMBLY - AUTO GREASER (1 GAL.	1	Breakdown Fig. 10-6
2		296289046	PLATE - GREASER NOZZLE SUPPORT	1	
3		296289047	GREASER MOUNT	1	
4		61497001	FITTING-4M JIC BULKHEAD 90DEG.	1	
5		235727001	SCREW-HCS-.38-16X1.00-GR8-YZ	5	
6		235713001	WASHER-FLATSTRL-.38-.41X.81-.06-YA-A325	7	
7		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	2	
8		296276018	MOUNT HELLER MANN TITON	1	
9	*	65563001	FITTING - 6M O-RING X 6M JIC 45 DEGREE	1	
10	*	59426001	FITTING - 90-6MJ-6MORBA	1	

Bucket Auto Greaser (1 Gallon) Fig 10-6

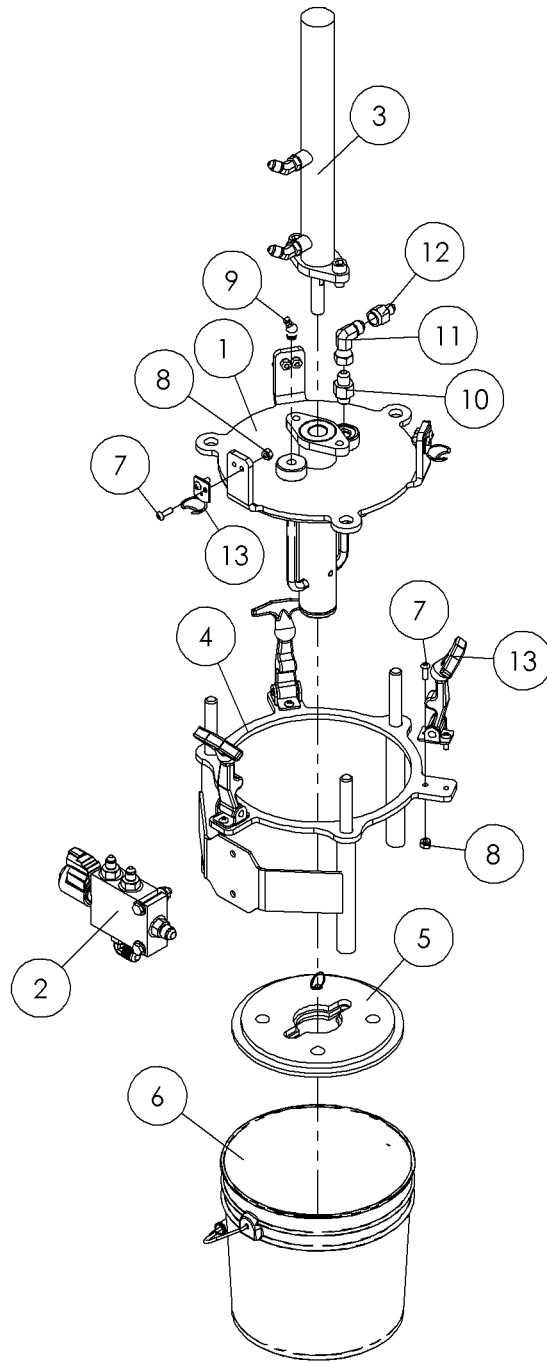


Illustration No. 296287962

Bucket Auto Greaser (1 Gallon) Fig 10-6

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2007		Change Fitting
1		296287952	WELDMENT - GREASE BUCKET TOP	1	
2		296287941	ASSEMBLY - AUTO GREASER VALVE	1	Breakdown Fig. 10-7
3		296287960	CYLINDER - AUTO GREASER	1	Breakdown Fig. 10-8
4		296289052	WELD - BUCKET SUPPORT	1	
5		296287954	ASSEMBLY - GREASER FOLLOWER (1 GAL.	1	Breakdown Fig. 10-10
6		235983001	LUBRICANT - THREAD 1 GALLON	1	
7		233502001	SCREW- #10-24X5/8 PHILLIPS PAN	12	
8		99042001	NUT - NYLOCK - 10 - 24 - GR2 - CZ	12	
9		588001	ZERK-1/8" NPT 45 DEG GREASE	1	
10		296280727	FITTING-CHECK VALVE-6MORX6MJIC-40PSI	1	
11		60851001	FITTING-6M JICX6FS JIC 90ELBOW	1	
12	*	59928001	6F JICX4M JIC ST REDUCER	1	
13		109591001	LATCH-4" RUBBER T HANDLE	3	

Bucket Auto Greaser Valve Fig 10-7

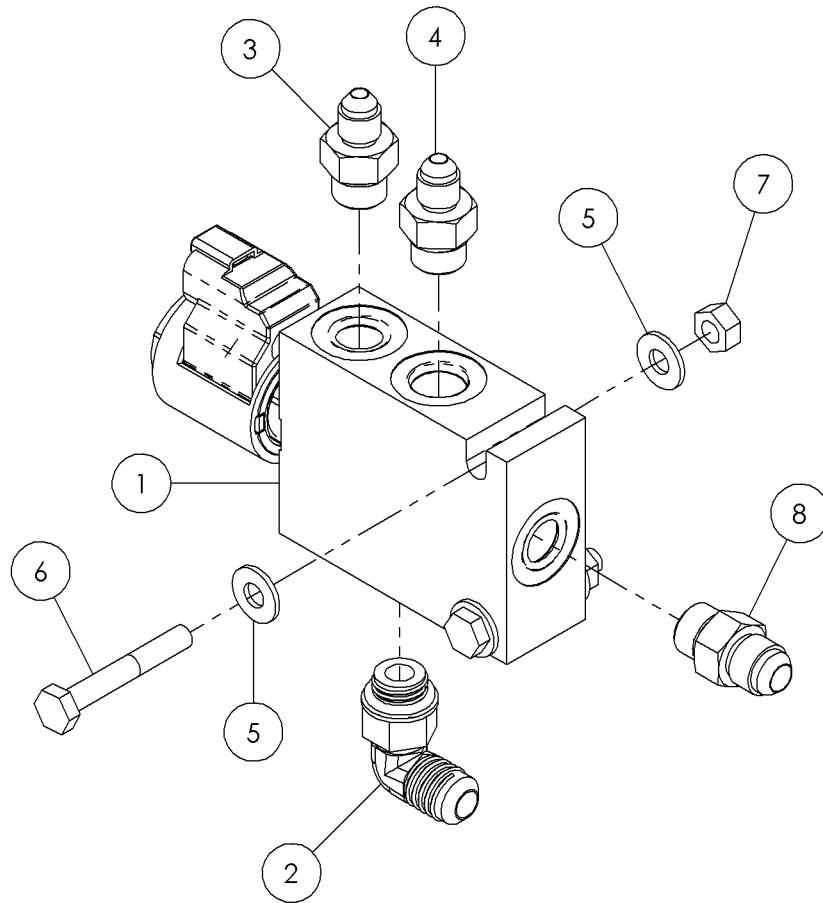


Illustration No. 296287941

Bucket Auto Greaser Valve Fig 10-7

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	February, 2007		Update In Illustration & Parts List.
1		294901001	VALVE-GREASER	1	Breakdown Fig. 10-4
2		59426001	FITTING - 90-6MJ-6MORBA	2	
3		57968001	FITTING-STR-4MJ-6MORB	2	
4	*	131009001	FITTING-4MJICX6MORING ST.062R	1	
5	*	235716001	WASHER-FLATSTRL-.25-.28X.63-.06-CZ	4	
6	*	248107001	BOLT-1/4-20X1 3/4 GR 8 ZINC PL	2	
7	*	235732001	NUT - HEX - .25 - 20 - GR8 - YZ	2	
8	*	65565001	FITTING - 6M O-RING X 6M JIC ST.	1	

Bucket Auto Greaser Cylinder Fig 10-8

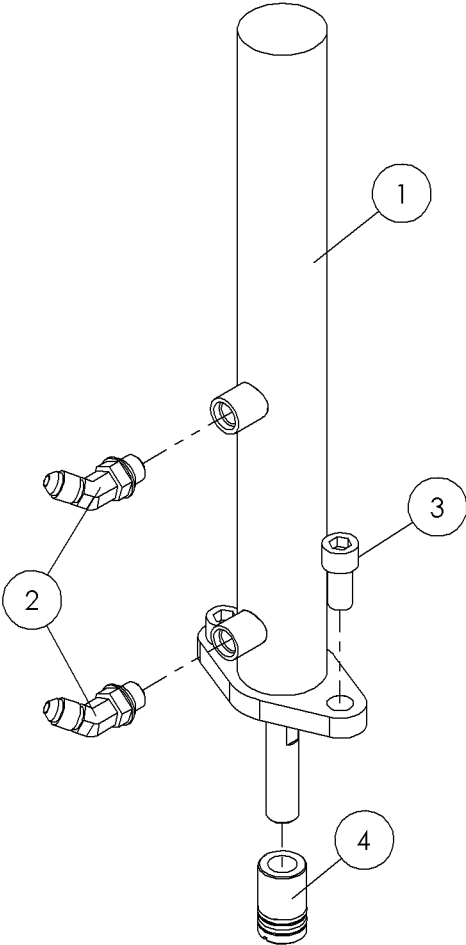
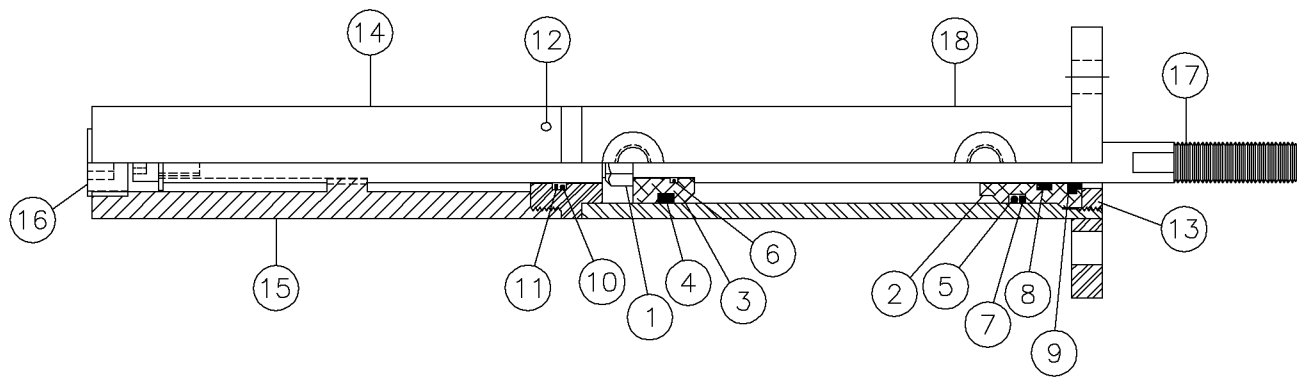


Illustration No. 296287960

Bucket Auto Greaser Cylinder Fig 10-8

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2007		Change Fittings
1		296280672	CYL-1.00 BORE X 3.50 STROKE X 0.50 ROD	1	Breakdown Fig. 10-9
2	*	58295001	FITTING-4M OR X 4M JIC 45 DEG.	2	
3		512006	3/8-16X3/4" SOCKET HEAD BOLT	2	
4		296287964	ASSEMBLY - GLAND O-RING	1	

Bucket Auto Greaser Cylinder Components Fig 10-9



Bucket Auto Greaser Cylinder Components Fig 10-9

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	October, 2006		Addition To Manual
1			NUT	1	
2			HEAD	1	
3			PISTON	1	
4			PSP-SEAL	1	
5			O-RING	1	
6			O-RING	1	
7			BACKUP	1	
8			ROD SEAL	1	
9			DUST SEAL	1	
10			O-RING	1	
11			BACKUP	1	
12			ROLL PIN	1	
13			COLLAR	1	
14			1/4-28 NYLOCK SET SCREW	1	
15			STOKE ADJUSTER	1	
16			1/2 NPT STEEL PLUG	1	
17		296285224	SHAFT	1	
18			BARREL		
		296280672	CYLINDER-1" X 3 1/2"		Includes All Items In Figure
		296285225	REPAIR KIT		Includes Ref. 4-11

Bucket Auto Greaser Follower (1 Gallon) Fig 10-10

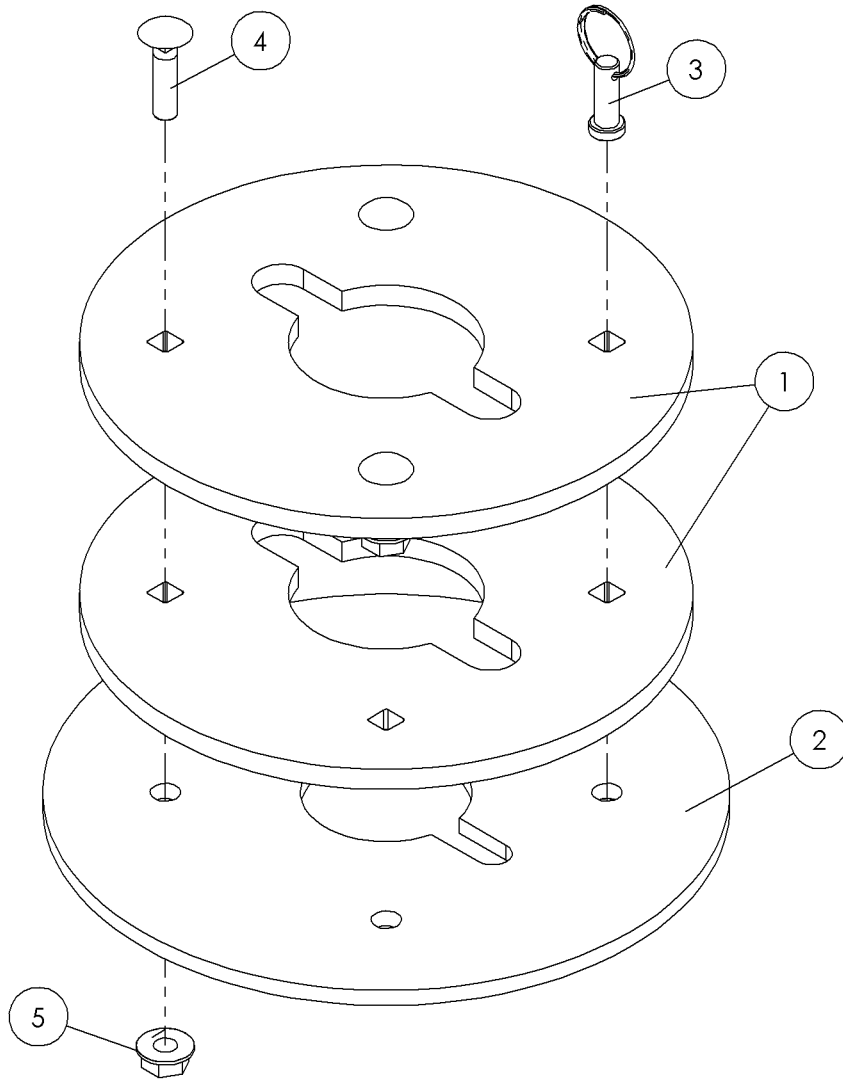


Illustration No. 296287954

Bucket Auto Greaser Follower (1 Gallon) Fig 10-10

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	November, 2006		Addition To Manual
1		296287951	PLATE-GREASE FOLLOWER	2	
2		296287955	SHEET-RUBBER	1	
3		296280696	PIN-CLEVIS-.25X.5 U.L. WITH RING	1	
4		373010	BOLT-CARG-.25-20X1.00-GR5-CZ	3	
5		1809005	NUT-SMFLGTL-.25-20-G-CZ	3	

Oil Flow Diagram - Bucket Auto Greaser Fig 10-11

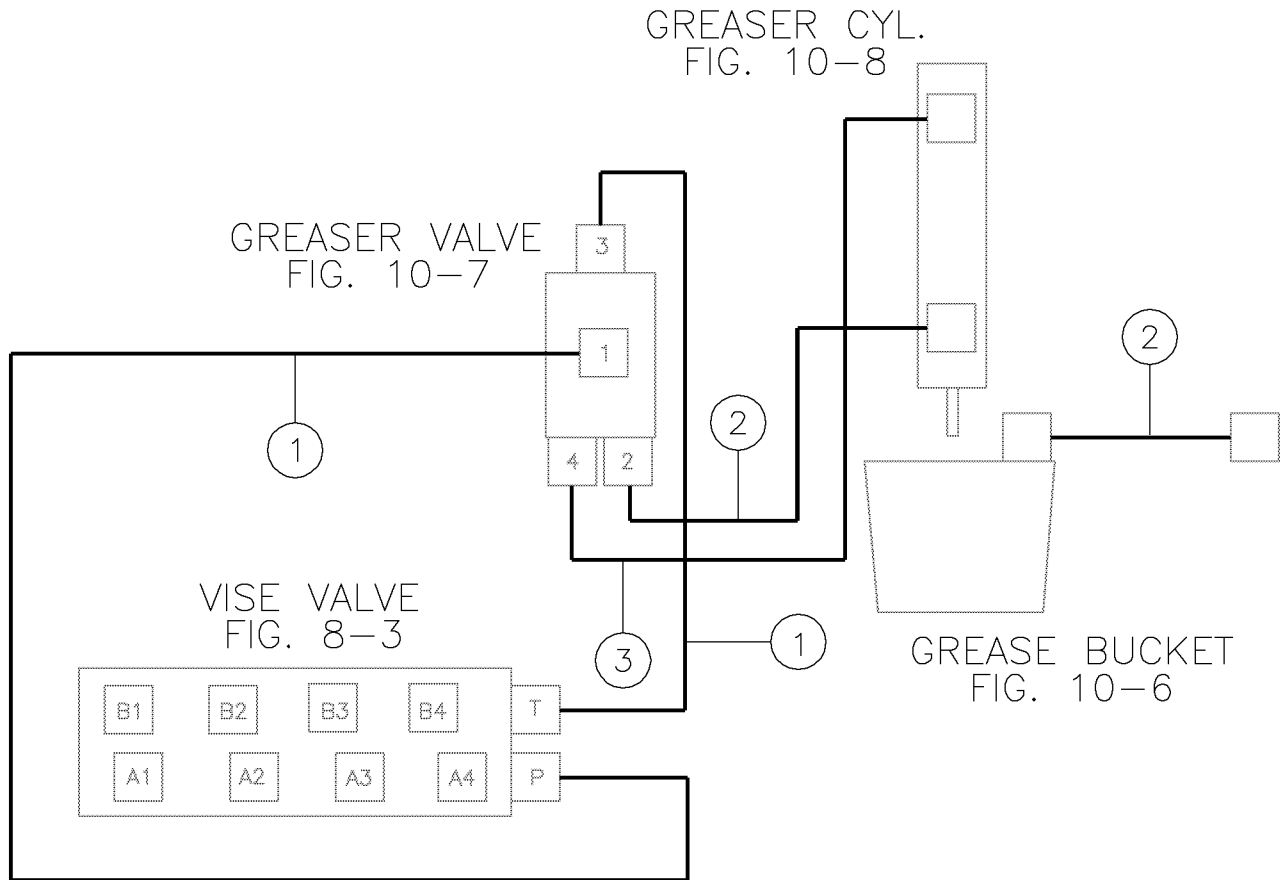
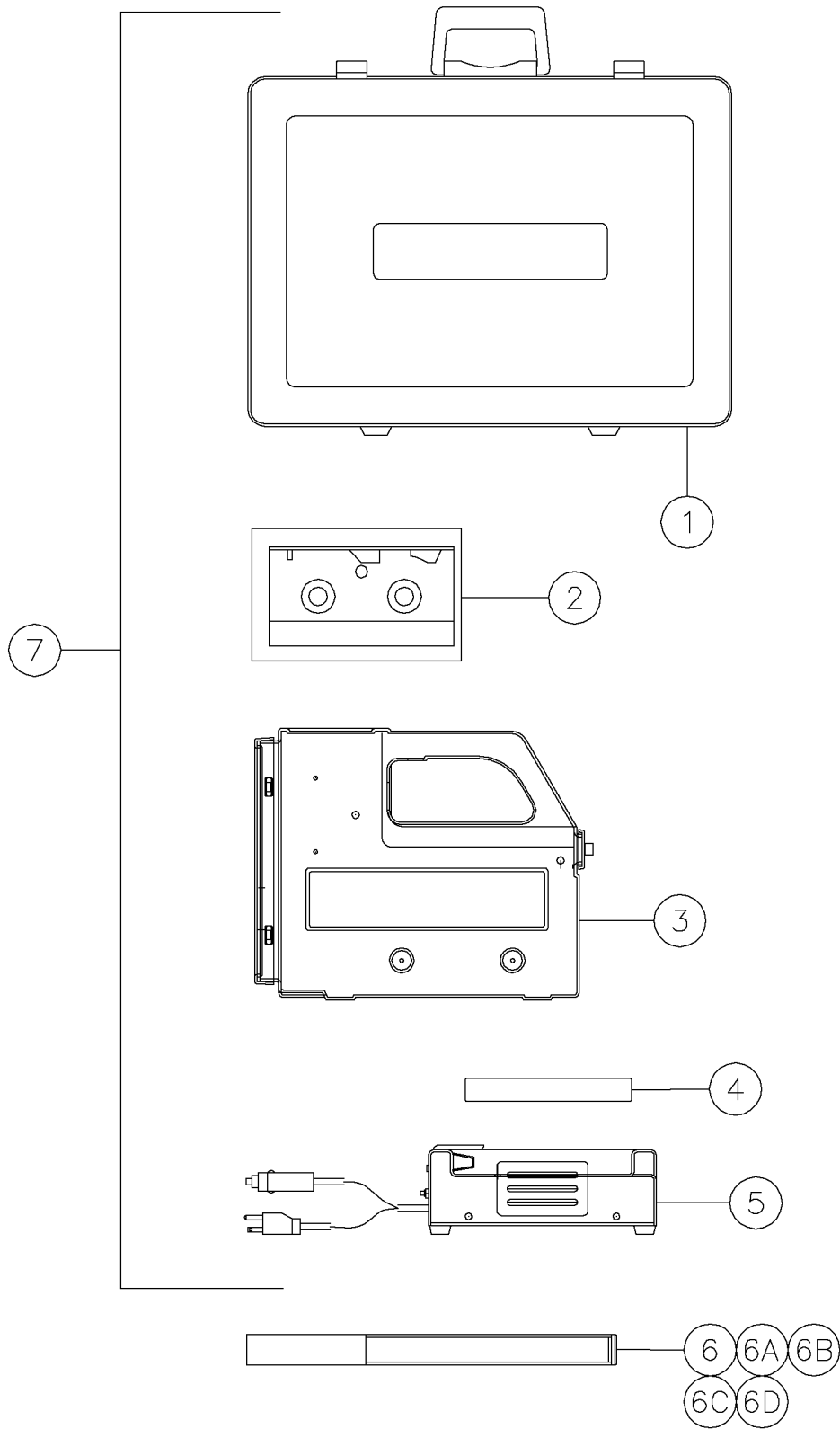


Illustration No. 296289056AC

Oil Flow Diagram - Bucket Auto Greaser Fig 10-11

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2007		Change Hoses
1		57940319	HOSE-3/8X67 6FS JIC ST 3000	2	
2	*	53843183	HOSE-1/4X18 4FS JIC 3000 PSI	2	
3	*	53843547	HOSE-1/4X21 4FS JIC 3000 PSI	1	

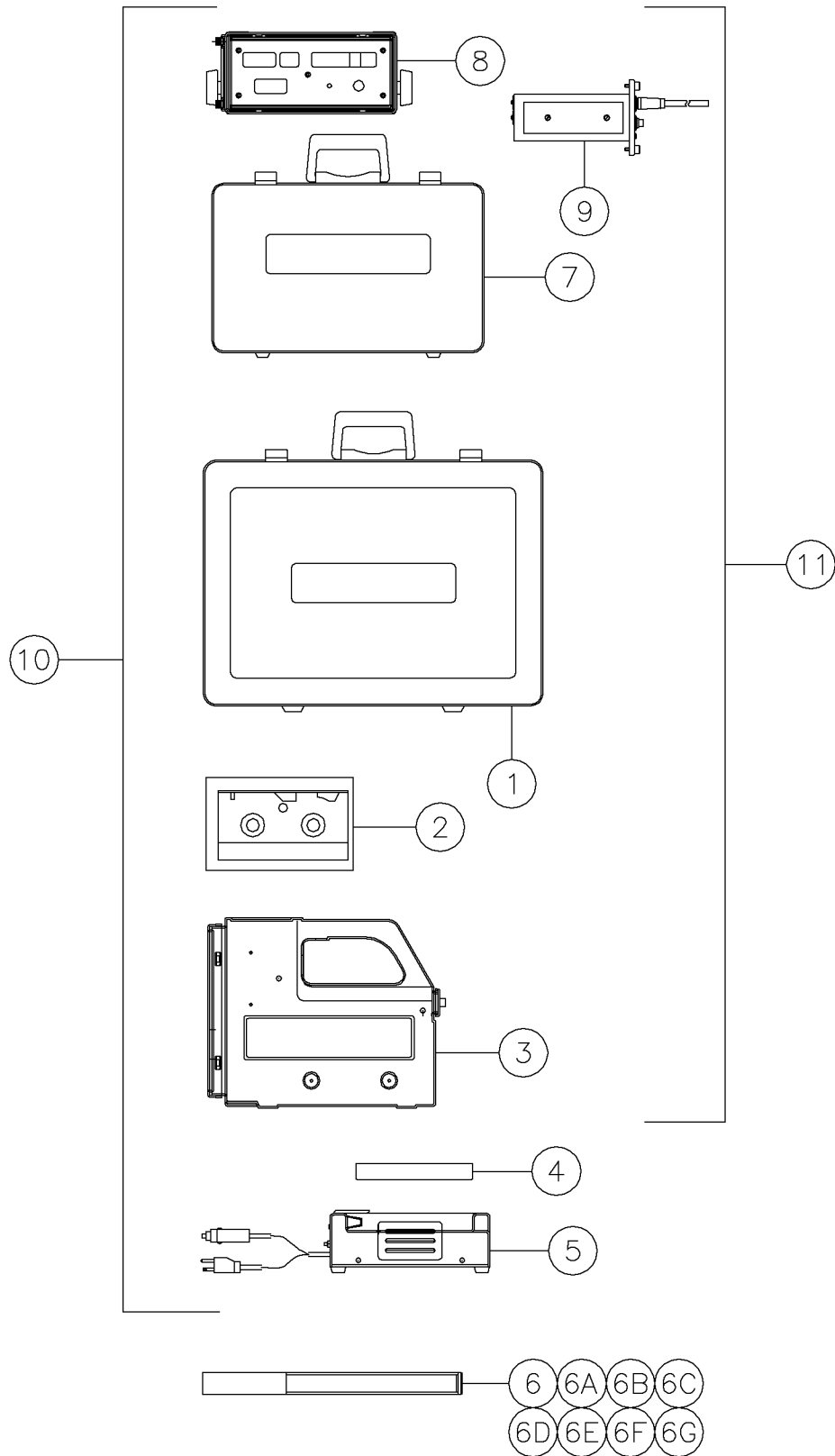
Locator Package-Mark III -Digitrak-Domestic & International Fig 11-1



Locator Package-Mark III -Digitrak-Domestic & International Fig 11-1

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		213389011	CARRYING CASE	1	
2		231990001	DIGITRAK OP. MAN. TRAIN VIDEO	1	
3		231991001	MARK III STANDARD RECEIVER (NON-REMOTE CAPABLE)	1	
4		213389009	BATTERY PACK	2	
5		213389007	BATTERY CHARGER 115/230V	1	
6		221806001	15' SHORT RANGE TRANSMITTER (BLUE)	1	
6A		213389005	40' STANDARD RANGE SONDE (YELLOW) (LOC111)	1	
6B		221643001	70' LONG RANGE SONDE (RED)(LOC112)	1	
6C		226196001	70'LONG RANGE SONDE W/ EXT.BATT.(RED) (LOC113)	1	
6D		213086001	O-RING #122	3	
7		231212001	MARK III STANDARD SYSTEM (LOC005)	1	(INC REF 1-5)

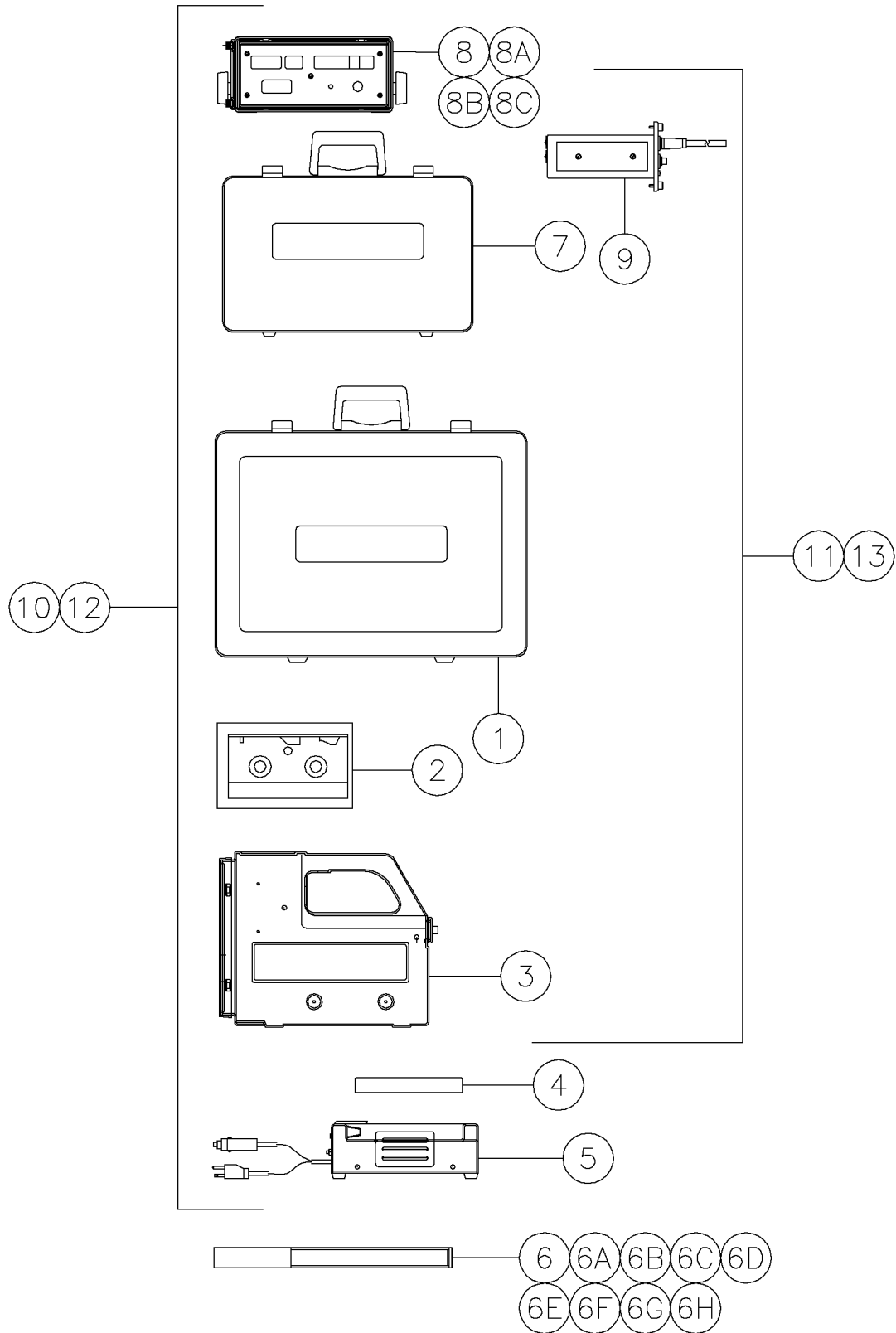
Locator Package-Mark III -Digitrak (W/Remote Display-Domestic) Fig 11-2



Locator Package-Mark III -Digitrak (W/Remote Display-Domestic) Fig 11-2

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		213389011	CARRYING CASE	1	
2		231990001	DIGITRAK OP. MAN. TRAIN VIDEO	1	
3		231991001	MARK III STANDARD RECEIVER (NON-REMOTE CAPABLE)	1	
4		213389009	BATTERY PACK	1	
5		213389007	BATTERY CHARGER 115/230V	2	
6		221806001	15' SHORT RANGE TRANSMITTER (BLUE)	1	
6A		213389005	40' STANDARD RANGE SONDE (YELLOW) (LOC111)	1	
6B		221643001	70' LONG RANGE SONDE (RED)(LOC112)	1	
6C		226196001	70'LONG RANGE SONDE W/ EXT.BATT.(RED) (LOC113)	1	
6D		226197001	70'LONG RANGE SONDE W/0.1% PITCH(MAGENTA)(LOC114)	1	
6E		226198001	70' LR SONDE W/0.1PITCH-EXT. BATT. (MGT) (LOC115)	1	
6F		226199001	100' CABLE SONDE (GREEN)(LOC120)	1	
6G		226200001	100' CABLE SONDE W/ 0.1% PITCH (MAGENTA)(LOC121)	1	
6H		213086001	O-RING #122	3	
7		221658001	REMOTE CARRYING CASE	1	
8		231993001	DIGITRAK REMOTE DISPLAY	1	
8A		231994001	US REMOTE DISPLY FOR CABLE TRANSMITTER	1	
9		226195001	CABLE SONDE POWER SUPPLY	1	
10		231218001	MARK III SYSTEM W/REMOTE DISPLAY (LOC025)	1	Included Ref. No's 1-5, 7 & 8
11		231221001	MARK III SYSTEM W/CABLE TRANSMITTER	1	Included Ref. No's 1-3, 7 & 9

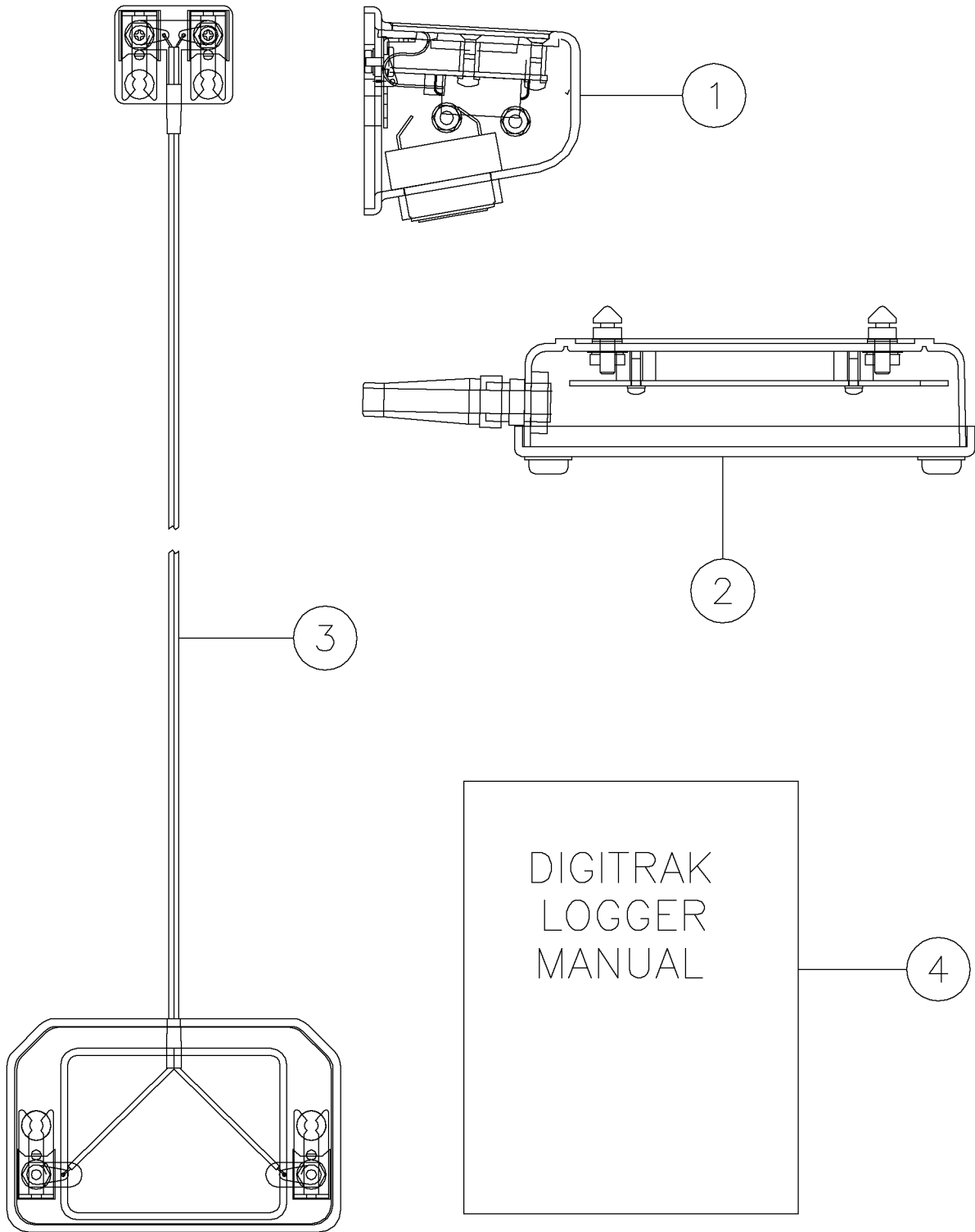
Locator Package-Mark III -Digitrak (W/Remote Display-International) Fig 11-3



Locator Package-Mark III -Digitrak (W/Remote Display-International) Fig 11-3

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		213389011	CARRYING CASE	1	
2		231990001	DIGITRAK OP. MAN. TRAIN VIDEO	1	
3		231995001	RECEIVER W/REMOTE FUNCTION AU	1	
4		213389009	BATTERY PACK	1	
5		213389007	BATTERY CHARGER 115/230V	2	
6		221806001	15' SHORT RANGE TRANSMITTER (BLUE)	1	
6A		213389005	40' STANDARD RANGE SONDE (YELLOW) (LOC111)	1	
6B		221643001	70' LONG RANGE SONDE (RED)(LOC112)	1	
6C		226196001	70'LONG RANGE SONDE W/ EXT.BATT.(RED) (LOC113)	1	
6D		226197001	70'LONG RANGE SONDE W/0.1% PITCH(MAGENTA)(LOC114)	1	
6E		226198001	70' LR SONDE W/0.1PITCH-EXT. BATT. (MGT) (LOC115)	1	
6F		226199001	100' CABLE SONDE (GREEN)(LOC120)		
6G		226200001	100' CABLE SONDE W/ 0.1% PITCH (MAGENTA)(LOC121)		
6H		213086001	O-RING #122	3	
7		221658001	REMOTE CARRYING CASE	1	
8		231997001	REMOTE DISPLAY AU	1	
8A		231998001	REMOTE DISPLY FOR CBLE SOND AU	1	
8B		231999001	REMOTE DISPLAY UK	1	
8C		226192001	REMOTE DISPLAY FOR CABLE SOND UK	1	
9		226195001	CABLE SONDE POWER SUPPLY	1	
10		231219001	MARK III SYSTEM W/REMOTE DISPLAY (AU) (LOC027)	1	
11		231222001	MARKIII SYSTEM W/CABLE TRANSMITTER REMOTE DISPLAY	1	
12		231220001	MARK III SYSTEM W/REMOTE DISPLAY (UK) (LOC029)	1	Included Ref. No's 1-5, 7 & 8
13		231223001	MARK III SYSTEM W/CABLE TRANSMITTER REMOTE DISPLAY	1	Included Ref. No's 1-3, 7 & 9

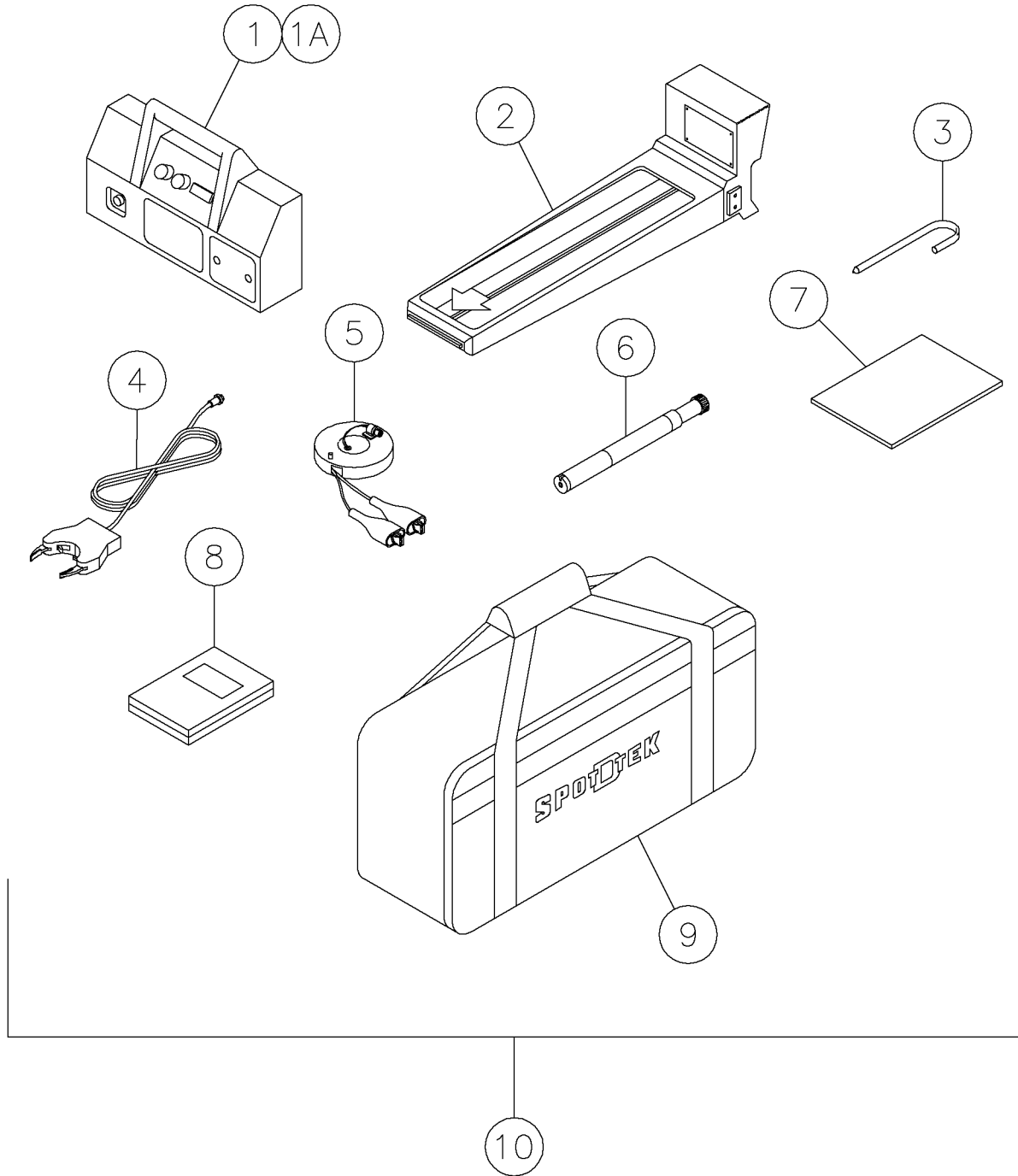
Data Logger, Mark III - Digitrak Fig 11-4



Data Logger, Mark III - Digitrak Fig 11-4

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		231224001	DATALOG MODULE	1	
2		231228001	DATALOG/PC INTERFACE	1	(INC REF 3 & 4)
3		238751001	DATA LOG REAL TIME CABLE	1	
4		238572001	COOLER-HYD. OIL (6630018)	1	

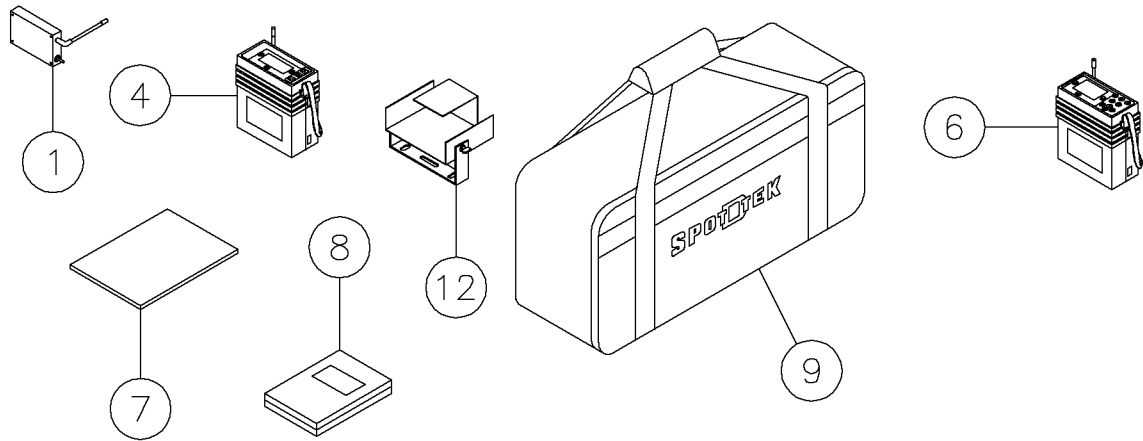
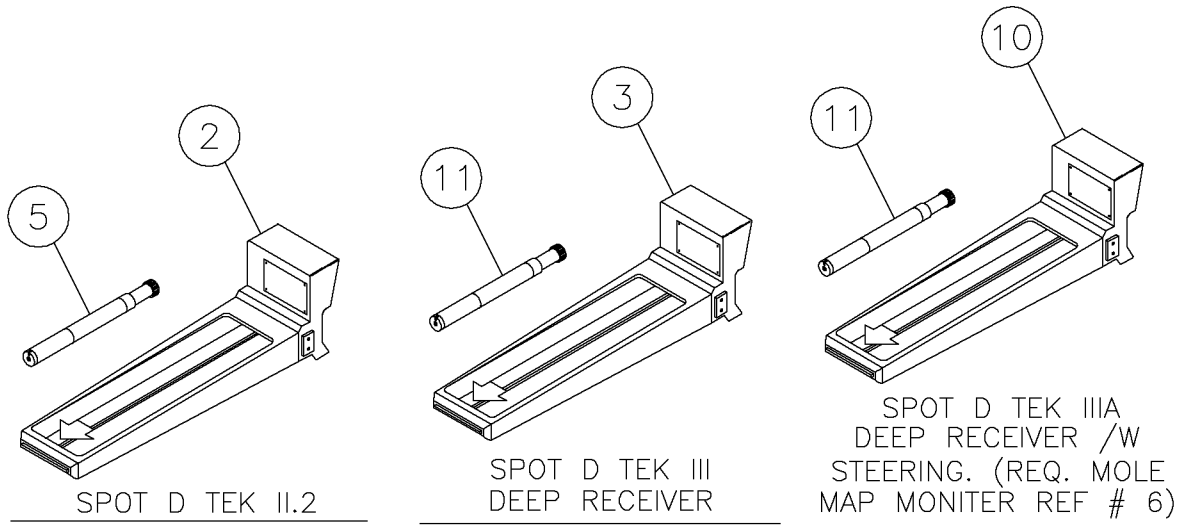
Locator Package, Spot-D-Tek II.2 Utility Fig 12-1



Locator Package, Spot-D-Tek II.2 Utility Fig 12-1

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		213900003	TRTRANSMITTER FOR SPOT D TEK II	1	
1A		213900019	SUNCSCREEN FOR TRANSMITTER	1	
2		215671001	ROLLER-LARGE	1	
3		213900013	GROUND STAKE - SPOT D TEK II	1	
4		213900007	EXTERNAL COIL - SPOT D TEK II	1	
5		213900015	DIRECT CONNECTION CABLE	1	
6		215942001	DIR.PROBE II.2 (LOC100)	1	
7		215938003	OPERATIONAL MANUAL	1	
8		213900021	VIDEO TAPE	1	
9		213900009	CASE FOR SPOT D TEK II	1	
10		215938001	SPOTDTEK II.2 UTILITY LOC. PKG (LOC093)	1	Included Ref. No's 1-9
		213900023	SUNCSCREEN-RECEIVER II.2 MONIT	1	Accessories
		213900025	RAINCOVER-RECEIVER	1	Accessories

Locator Package-Spot-D-Tek II.2, III & IIIA Fig 12-2

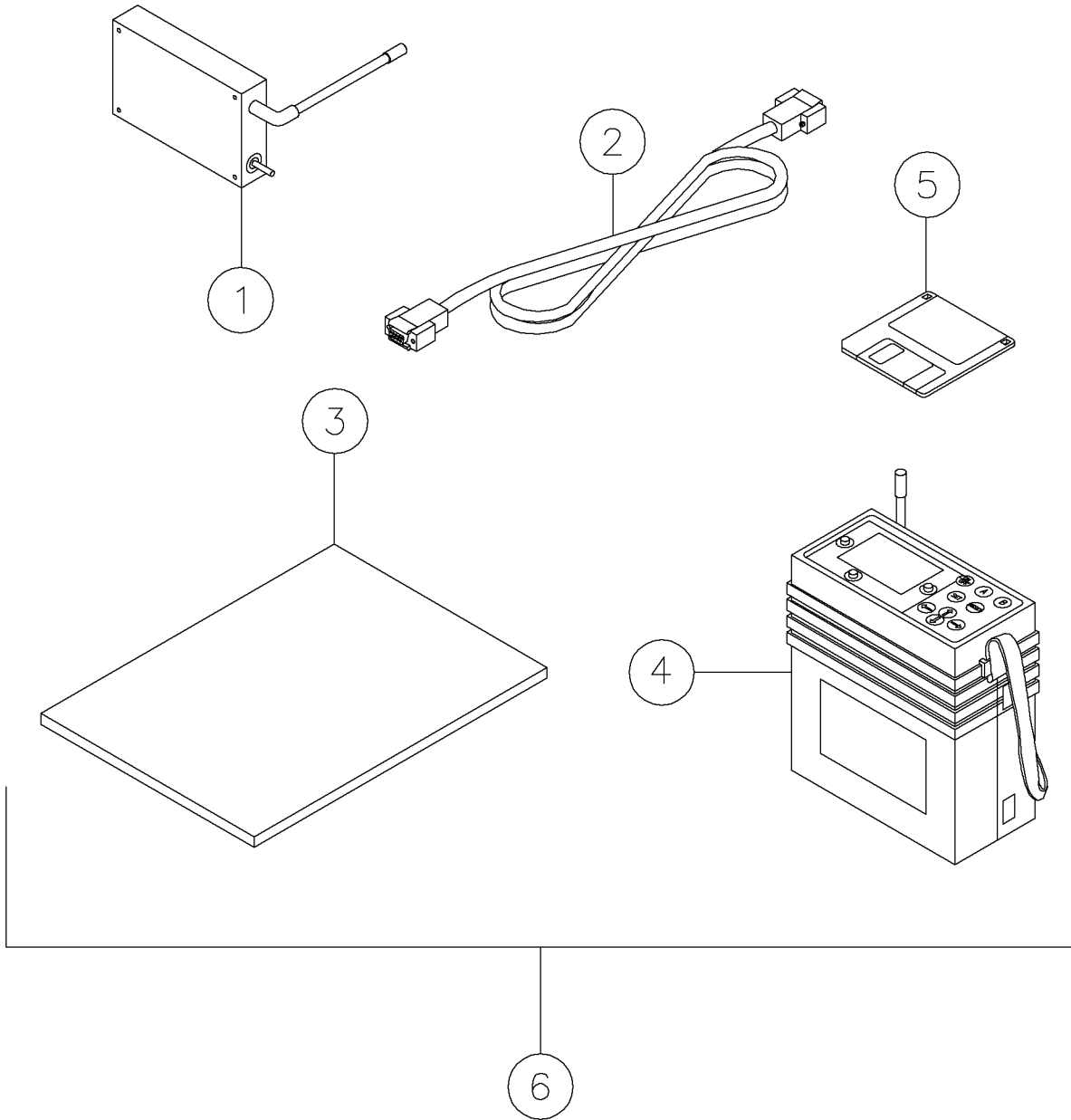


- ⑬ INC. REF. 1 & 4
- ⑭ INC. REF. 2, 5 & 7-9
- ⑮ INC. REF. 3 & 7-9
- ⑯ INC. REF. 7-9 & 10

Locator Package-Spot-D-Tek II.2, III & IIIA Fig 12-2

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		213902005	WIRELESS TRANSMITTER	1	
2		215941001	RECEIVER II.2	1	
3		231197003	RECEIVER-III	1	
4		215943001	WIRELESS MONTIOR II.2	1	
5		215942001	DIR.PROBE II.2 (LOC100)	1	
6		231109001	MOLE MAP WIRELESS REMOTE MONITOR (LOC096)	1	
7		215938003	OPERATIONAL MANUAL	1	
8		215940003	VIDEO TAPE-INSTRUCTIONAL	1	Locating With Probes
9		213900009	CASE FOR SPOT D TEK II	1	
10		231111003	RECEIVER-IIIA	1	
11		231110001	SPOT-D-TEK DEEP SONDE (LOC097)	1	
12		244935001	HOLDER ASSY. - REMOTE MONITOR	1	
13		215940001	SPOTDTEK II.2 REMOTE MON. PKG. (LOC095)	1	Included Ref. No's 1 & 4
14		215939001	SPOTDTEK II.2 DIRECT.BORE PKG. (LOC091)	1	Included Ref. No's 2, 5 & 7-9
15		231197001	SPOT-D-TEK III DEEP RECEIVER (LOC098)	1	Included Ref. No's 3 & 7-9
16		231111001	SPOT-D-TEK IIIA DEEP REC W/REM (LOC094)	1	Included Ref. No's 7-9 & 10

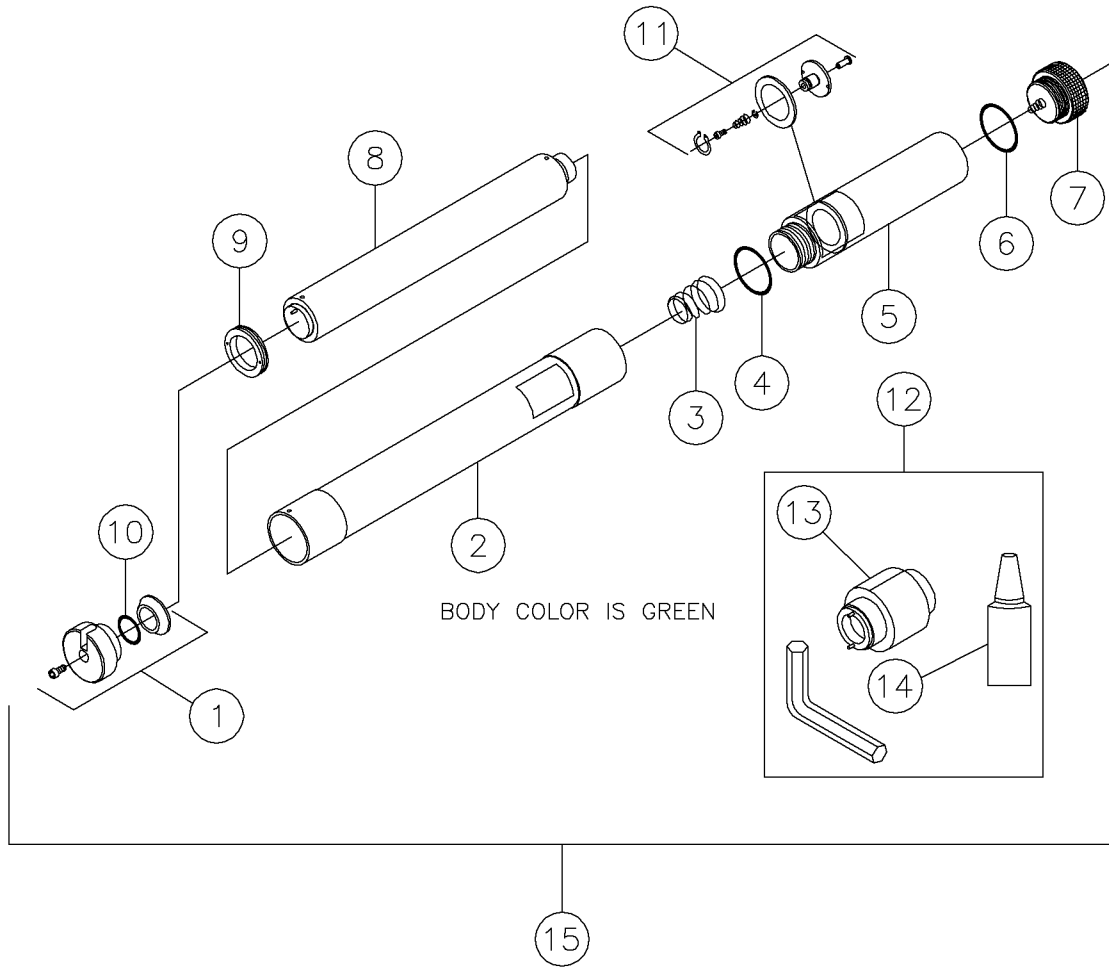
Locator Package-Spot-D-Tek Mole Mapping System Fig 12-3



Locator Package-Spot-D-Tek Mole Mapping System Fig 12-3

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		213902005	WIRELESS TRANSMITTER	1	
2		231109005	COMPUTER CORD	1	
3		231109007	OPERATIONAL MANUAL	1	
4		231109001	MOLE MAP WIRELESS REMOTE MONITOR (LOC096)	1	
5		231109003	MAPPING SOFTWARE REPLACE DISK	1	
6		231113001	MOLE MAPPING SYSTEM COMPLETE (LOC099)	1	Included Ref. No's 1-5

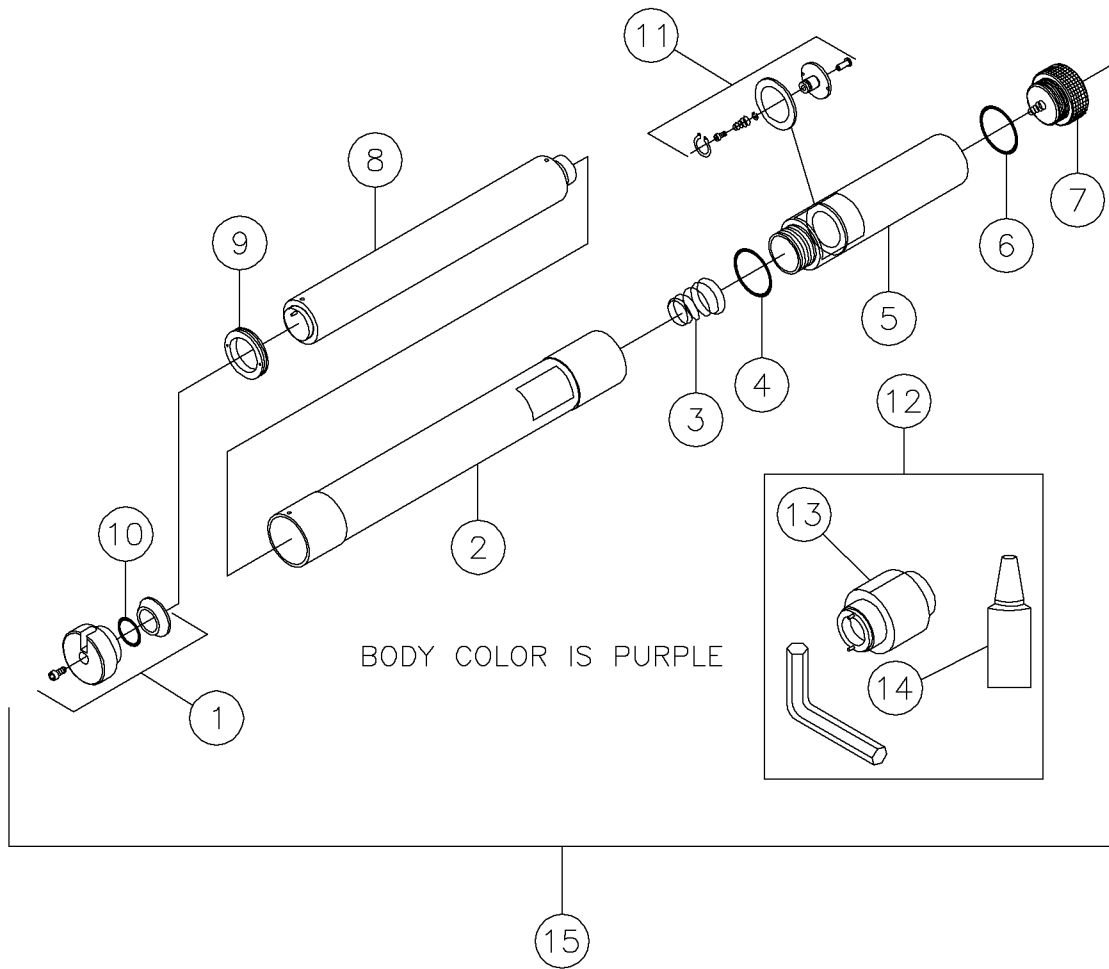
Spot-D-Tek II.2 Directional Probe (Repairable) Components Fig 12-4



Spot-D-Tek II.2 Directional Probe (Repairable) Components Fig 12-4

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		215942003	SLOTTED HEAD ASSEMBLY	1	
2		215942005	FIBER PROBE BODY 11.2	1	
3		215942007	SPRING - SUSPENSION	1	
4		215942009	O-RING	1	
5		215942011	BATTERY COMPARTMENT ASSEMBLY	1	
6		215942013	O-RING	1	
7		215942015	BATTERY CAP ASSEMBLY	1	
8		215942017	SOLID STATE ELEC. CAPSULE 11.2	1	
9		215942019	ROUND SET NUT	1	
10		215942021	O-RING	1	
11		215942023	BATTERY CONTACT ASSEMBLY	1	
12		215942025	MAINTENANCE TOOL KIT	1	
13		215942027	TOOL-CAPSULE LINE-UP	1	
14		215942029	SEALANT-SILICONE	1	
15		215942001	DIR.PROBE II.2 (LOC100)	1	Included All Items In This Figure

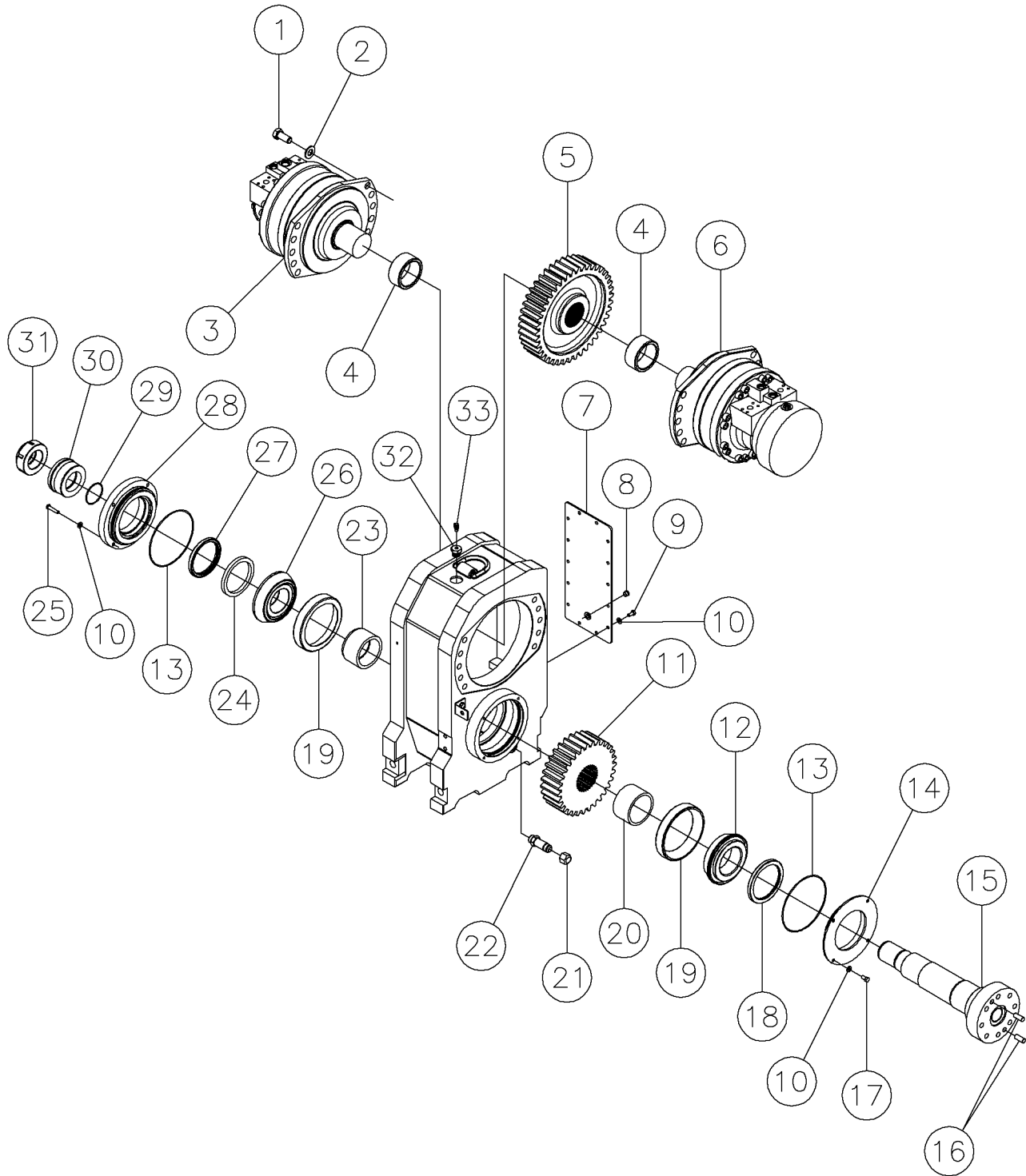
Spot-D-Tek II.2 Deep Sonde (Repairable) Components Fig 12-5



Spot-D-Tek II.2 Deep Sonde (Repairable) Components Fig 12-5

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		215942003	SLOTTED HEAD ASSEMBLY	1	
2		231110003	FIBER PROBE BODY 11.2 (DEEP)	1	
3		215942007	SPRING - SUSPENSION	1	
4		215942009	O-RING	1	
5		215942011	BATTERY COMPARTMENT ASSEMBLY	1	
6		215942013	O-RING	1	
7		215942015	BATTERY CAP ASSEMBLY	1	
8		231110005	SOLID STATE ELECT CAPSULE 11.2	1	
9		215942019	ROUND SET NUT	1	
10		215942021	O-RING	1	
11		215942023	BATTERY CONTACT ASSEMBLY	1	
12		215942025	MAINTENANCE TOOL KIT	1	
13		215942027	TOOL-CAPSULE LINE-UP	1	
14		215942029	SEALANT-SILICONE	1	
15		231110001	SPOT-D-TEK DEEP SONDE (LOC097)	1	Included All Items In This Figure

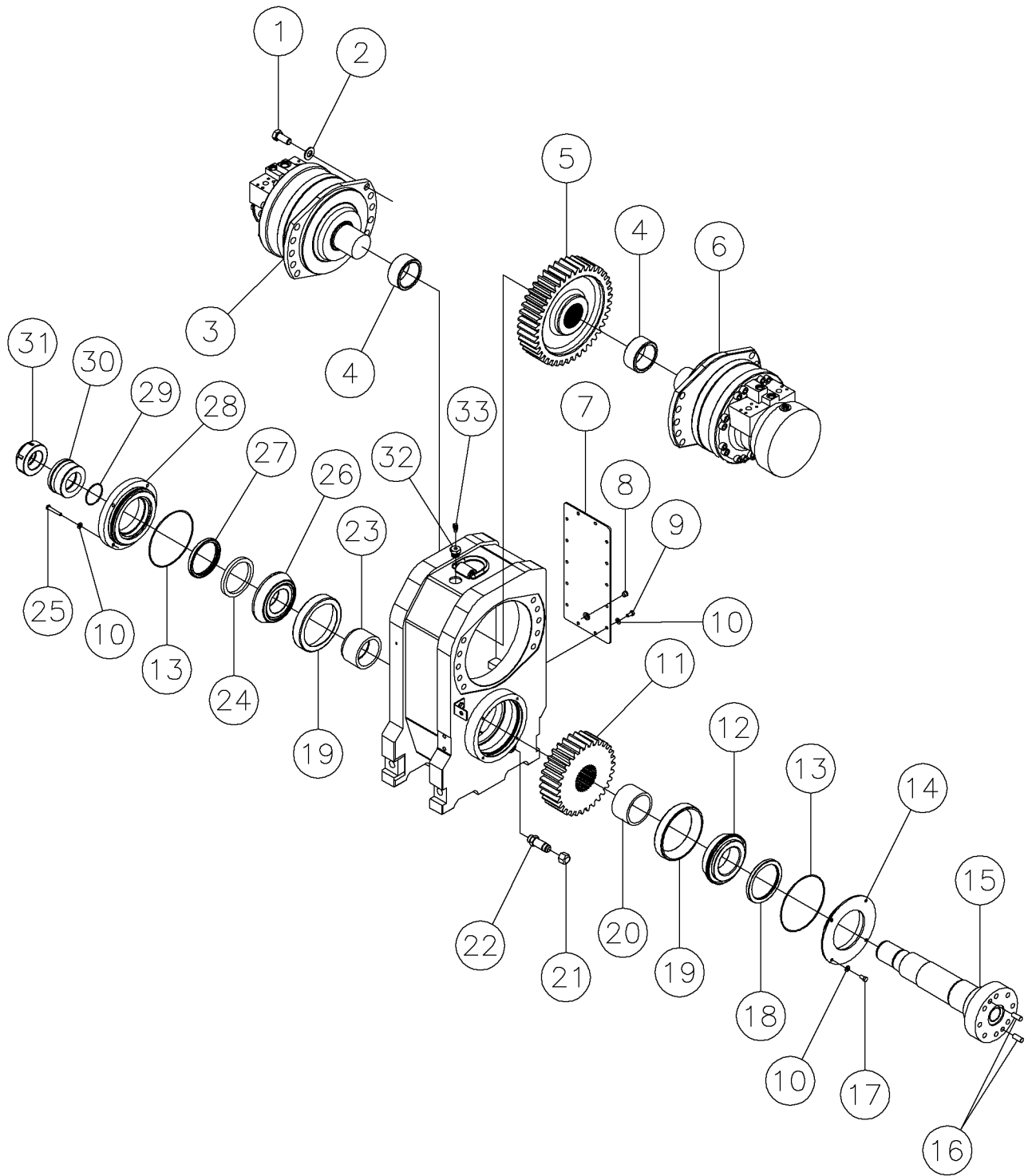
Gearbox Fig 13-1r01



Gearbox Fig 13-1r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	October, 2006		Corrected Part Number
1		296258304	SCREW - HCS .875 - 9 X2,GR8,YZ	20	
2	*	288459001	WASHER - 7/8 FLAT HARD ZINC PLATED	20	
3		296273805	MOTOR-MS18-2-D27-A18-2A10-2500	1	Breakdown Fig. 13-3
4		296273839	SPACER-UPPER GEAR	2	
5		296273929	GEAR - INPUT 45T 3P	1	
6		296273806	MOTOR-MS18-2-G27-F12-2A10-2500	1	Breakdown Fig. 13-2
7		296275826	COVER - GEARBOX D100X120 II	1	
8		86678001	PLUG-6M ORING HOLLOW HEX	1	
9		235726001	BOLT-3/8-16X3/4 GR8 HEX ZNCPLT	14	
10		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	22	
11		285162001	GEAR - 28 TOOTH	1	
12		280759001	CONE - BEARING 4.000 ID	1	
13		280763001	O-RING #266	2	
14		280760001	COLLAR - FRONT HEADSHAFT SEAL	1	
15		280754001	HEAD SHAFT - D80X120 GEARBOX 2.125 X 30 CHAMFER	1	
16		70096001	PIN-DOWEL 5/8DIA.-1 1/2	2	
17		235726001	BOLT-3/8-16X3/4 GR8 HEX ZNCPLT	4	
18		296273837	SEAL-5.00ID X 6.250D X .50 (CR#49966)	1	
19		280757001	CUP - BEARING 7.874 OD	2	
20		296275650	SPACER - HEADSHAFT FRONT	1	
21		56219001	FITTING - CAP - 12FJ	1	
22		59434001	12M JICX12M LONG ST THRD ADPT	1	
23		296275817	SPACER - HEADSHAFT REAR	1	
24		280980001	SEAL - 4.625ID X 5.625OD - .500 HP	1	
25		235720001	BOLT-3/8-16X1 3/4 6R8 ZINC PLT	4	
26		280758001	CONE - BEARING 3.500 ID	1	
27		296273838	SEAL-4.625ID X 5.625 OD X .50 (CR#46144)	1	
28		296275786	COLLAR - HEADSHAFT SEAL REAR	1	
29		280783001	O-RING #233	1	
30		280762001	COLLAR - PULSE RING	1	
31		280782001	LOCKNUT - M70X1.5 SPEITH	1	
32		296275997	FITTING - AIR VENT	1	
33		599001	BREATHER VENT-1/8 NPT 131000	1	

Gearbox Fig 13-1

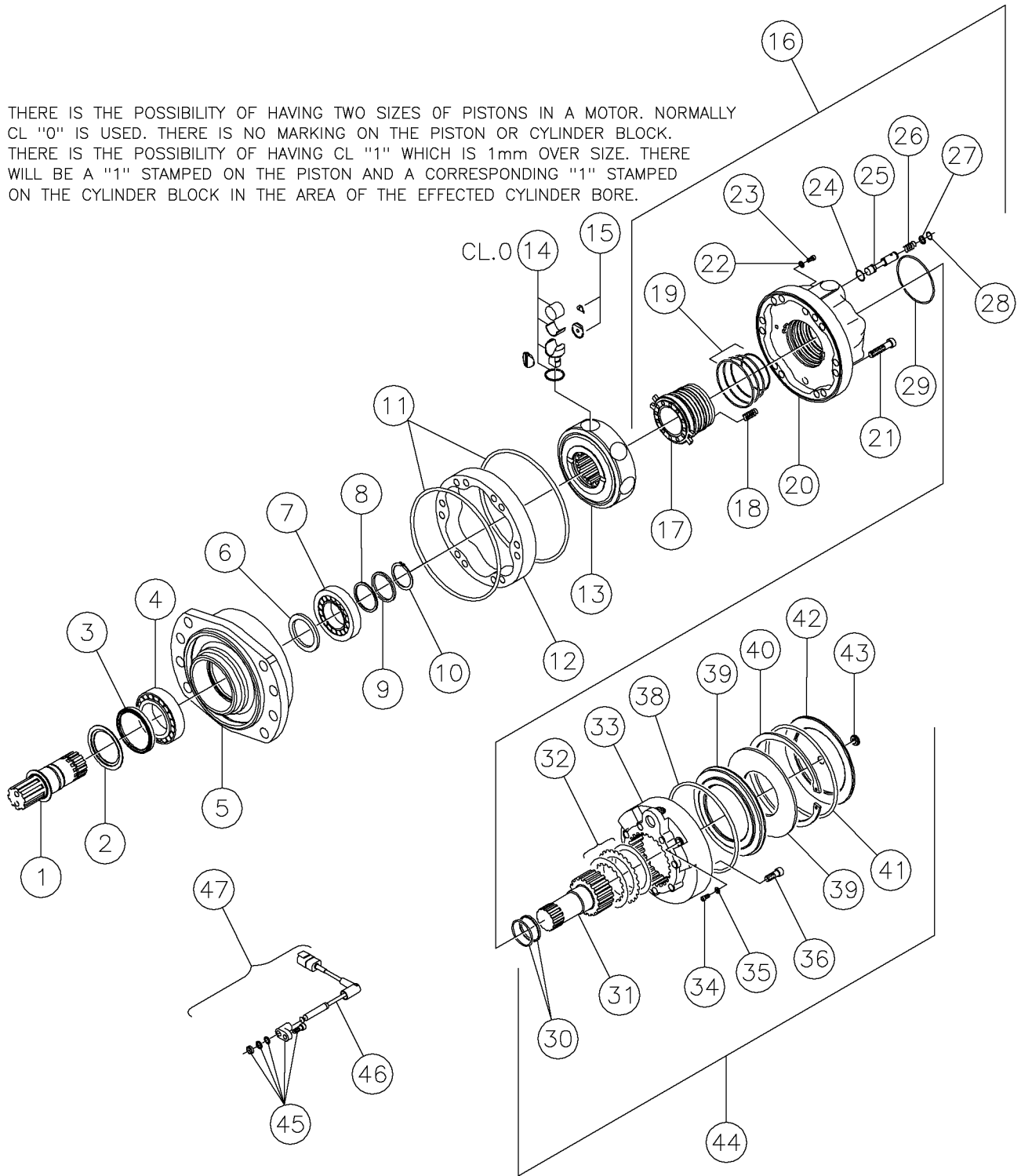


Gearbox Fig 13-1

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296258304	SCREW - HCS .875 - 9 X2,GR8,YZ	20	
2		288489001	BAR - BULKHEAD	20	
3		296273805	MOTOR-MS18-2-D27-A18-2A10-2500	1	Breakdown Fig. 13-3
4		296273839	SPACER-UPPER GEAR	2	
5		296273929	GEAR - INPUT 45T 3P	1	
6		296273806	MOTOR-MS18-2-G27-F12-2A10-2500	1	Breakdown Fig. 13-2
7		296275826	COVER - GEARBOX D100X120 II	1	
8		86678001	PLUG-6M ORING HOLLOW HEX	1	
9		235726001	BOLT-3/8-16X3/4 GR8 HEX ZNCPLT	14	
10		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	22	
11		285162001	GEAR - 28 TOOTH	1	
12		280759001	CONE - BEARING 4.000 ID	1	
13		280763001	O-RING #266	2	
14		280760001	COLLAR - FRONT HEADSHAFT SEAL	1	
15		280754001	HEAD SHAFT - D80X120 GEARBOX 2.125 X 30 CHAMFER	1	
16		296275997	FITTING - AIR VENT	2	
17		235726001	BOLT-3/8-16X3/4 GR8 HEX ZNCPLT	4	
18		296273837	SEAL-5.00ID X 6.250D X .50 (CR#49966)	1	
19		280757001	CUP - BEARING 7.874 OD	2	
20		296275650	SPACER - HEADSHAFT FRONT	1	
21		56219001	FITTING - CAP - 12FJ	1	
22		59434001	12M JICX12M LONG ST THRD ADPT	1	
23		296275817	SPACER - HEADSHAFT REAR	1	
24		280980001	SEAL - 4.625ID X 5.625OD - .500 HP	1	
25		250504001	BOLT 3/8-16 X 2 1/4"GR8 HEX Y	4	
26		280758001	CONE - BEARING 3.500 ID	1	
27		296273838	SEAL-4.625ID X 5.625 OD X .50 (CR#46144)	1	
28		296275786	COLLAR - HEADSHAFT SEAL REAR	1	
29		280783001	O-RING #233	1	
30		280762001	COLLAR - PULSE RING	1	
31		280782001	LOCKNUT - M70X1.5 SPEITH	1	
32		296275997	FITTING - AIR VENT	1	
33		599001	BREATHER VENT-1/8 NPT 131000	1	

Hydraulic Motor Fig 13-2r01

THERE IS THE POSSIBILITY OF HAVING TWO SIZES OF PISTONS IN A MOTOR. NORMALLY CL "0" IS USED. THERE IS NO MARKING ON THE PISTON OR CYLINDER BLOCK. THERE IS THE POSSIBILITY OF HAVING CL "1" WHICH IS 1mm OVER SIZE. THERE WILL BE A "1" STAMPED ON THE PISTON AND A CORRESPONDING "1" STAMPED ON THE CYLINDER BLOCK IN THE AREA OF THE EFFECTED CYLINDER BORE.

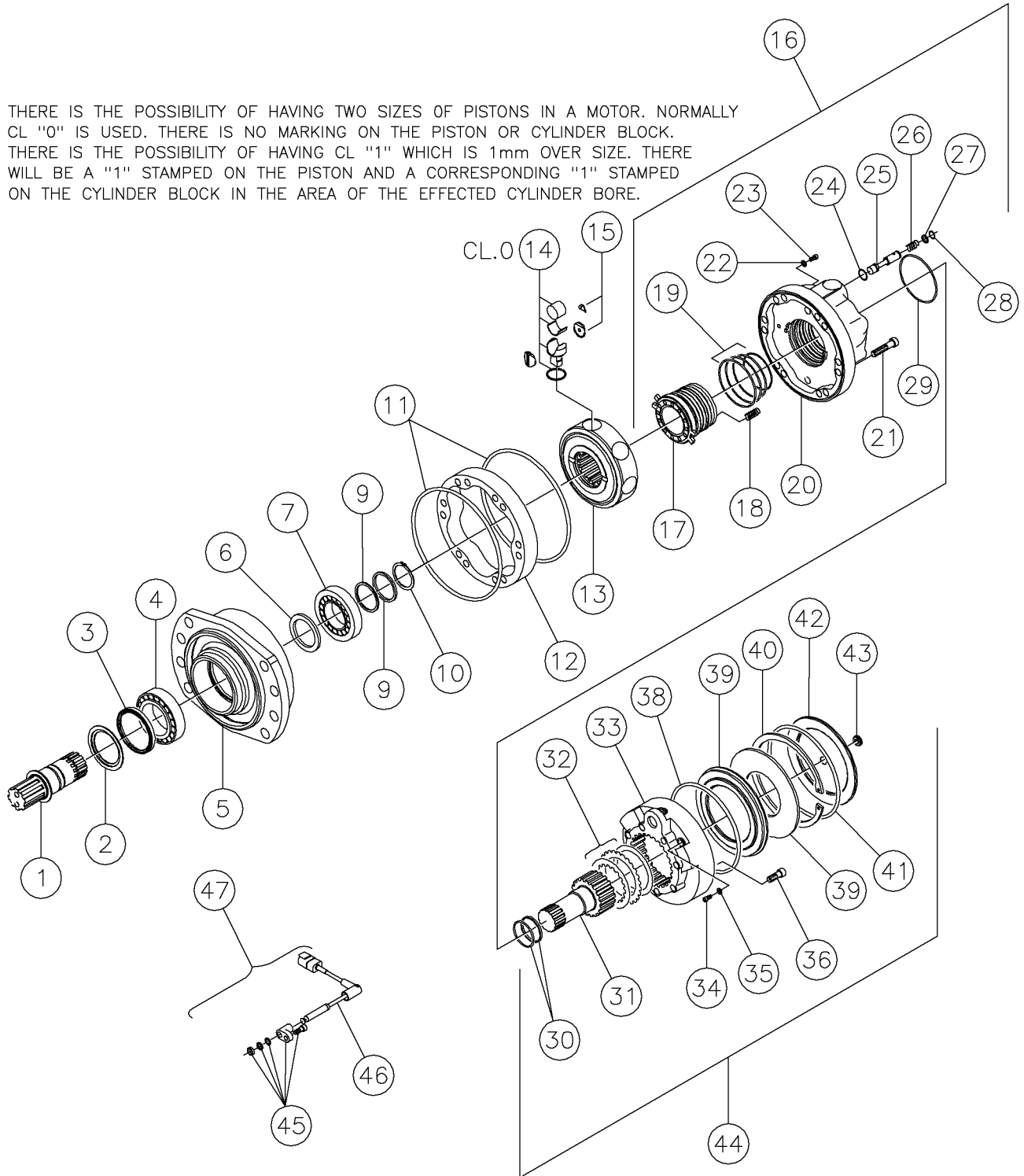


Hydraulic Motor Fig 13-2r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2006		Update In Illustration & Parts List.
1		296251958	SHAFT	1	
2		254642039	DEFLECTOR	1	
3		99098031	SEAL	1	
4		99098027	OUTER BEARING	1	
5		296251956	BEARING SUPPORT ASSY	1	
		296251957	BEARING SUPPORT	1	
6		99098025	SEAL	1	
7		254642029	BEARING	1	
8		84550069	SHIM SET	1	
9		254642025	RING	1	
10		254642023	SNAP RING	1	
11		296278090	O-RING	2	
12		216674003	CAM ASSEMBLY	1	
13		296278089	CYLINDER BLOCK	1	
14		254642007	REPAIR KIT	1	
15		254642005	PISTON	1	
16		296278091	VALVING COVER	1	
17		296278093	VALVING/DISTRIBUTOR	1	
18		84550029	SPRING	12	
19		254642017	SEALS	1	
20		296278092	VALVING COVER	1	
21		254642013	SCREW-BOLT	16	
22		608383001	WASHER	1	
23		140255041	SCREW - BOLT	1	
24		216675005	O-RING	1	
25		216675007	VALVE SPOOL	1	
26		216675009	SPRING	1	
27		216675011	WASHER	1	
28		296278094	SNAP RING	1	
29		608385001	O-RING	1	
30		296251965	SEAL KIT	1	
31		296278097	SHAFT	1	
32		280985007	BRAKE DISC KIT	1	
33		296278096	BRAKE BODY	1	
34		140255041	SCREW - BOLT	2	
35		608383001	WASHER	2	
36		280985011	SCREW	10	
37		296275604	O-RING-5.70X199.30	1	
38		296251962	BRAKE PISTON	1	
39		296271036	BELVILLE WASHER	1	
40		608492001	SNAP RING	1	
41		608499001	O-RING	1	
42		296251967	PROJECTOR	1	
43		608498001	PLUG	1	
44		296278095	DISC BRAKE	1	Included Ref. No/s 30-43
45		296278088	REPAIR KIT	1	
46		296278087	SPEED SENSOR KIT	1	
47		296278088	REPAIR KIT	1	Included Ref. No's 45 & 46
		296273806	MOTOR-MS18-2-G27-F12-2A10-2500		Included All Items In This Figure
		254642043	SEAL KIT		
		99098003	SEAL KIT		In. Ref. No's 2, 3, 6, 9, 11, 19, 22, 29, 30, 35 & 38

Hydraulic Motor Fig 13-2

THERE IS THE POSSIBILITY OF HAVING TWO SIZES OF PISTONS IN A MOTOR. NORMALLY CL "0" IS USED. THERE IS NO MARKING ON THE PISTON OR CYLINDER BLOCK. THERE IS THE POSSIBILITY OF HAVING CL "1" WHICH IS 1mm OVER SIZE. THERE WILL BE A "1" STAMPED ON THE PISTON AND A CORRESPONDING "1" STAMPED ON THE CYLINDER BLOCK IN THE AREA OF THE EFFECTED CYLINDER BORE.

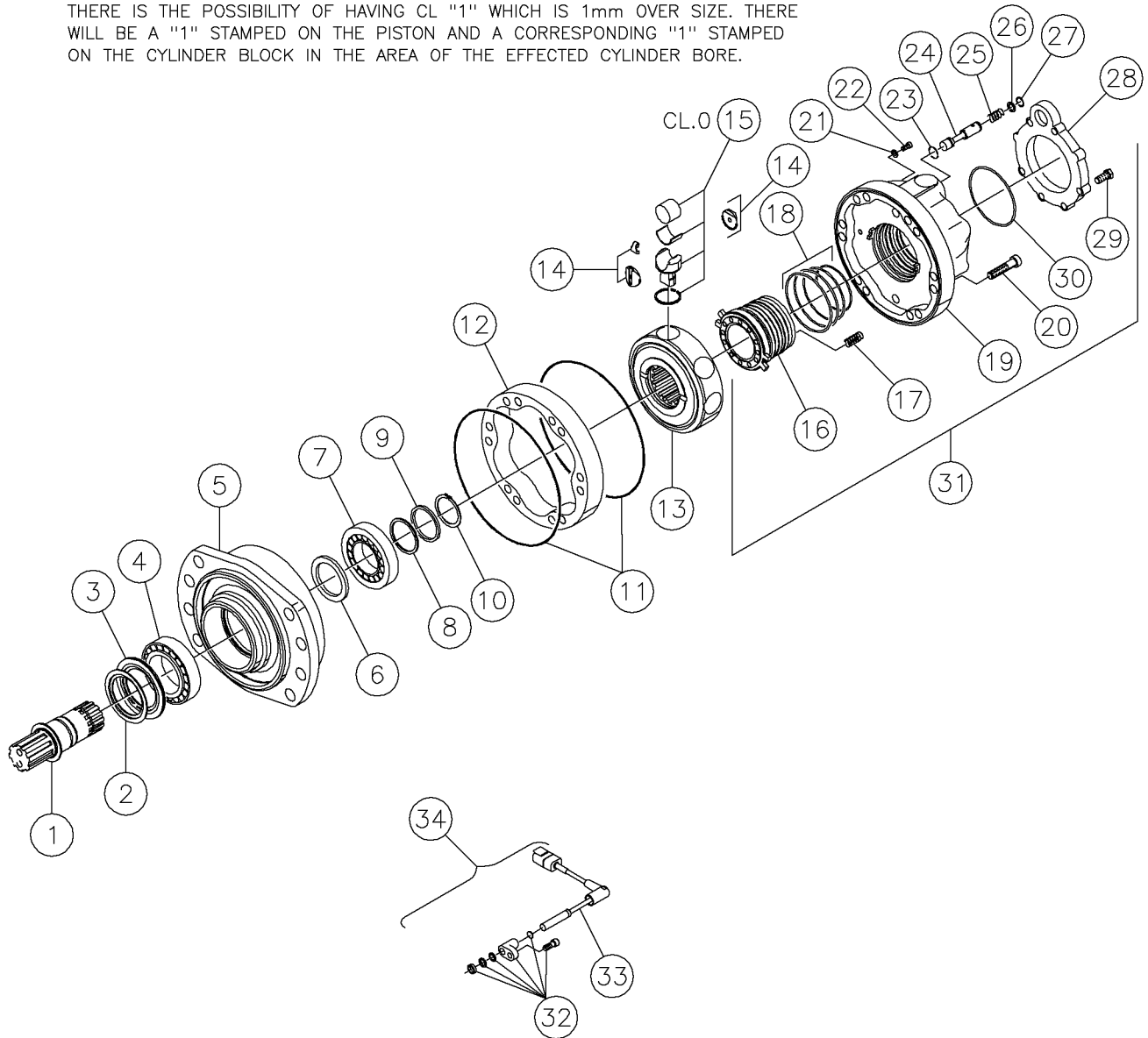


Hydraulic Motor Fig 13-2

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296251958	SHAFT	1	
2		254642039	DEFLECTOR	1	
3		99098031	SEAL	1	
4		99098027	OUTER BEARING	1	
5		296251956	BEARING SUPPORT ASSY	1	
		296251957	BEARING SUPPORT	1	
6		99098025	SEAL	1	
7		254642029	BEARING	1	
8		84550069	SHIM SET	1	
9		254642025	RING	1	
10		254642023	SNAP RING	1	
11		296278090	O-RING	2	
12		216674003	CAM ASSEMBLY	1	
13		296278089	CYLINDER BLOCK	1	
14		254642007	REPAIR KIT	1	
15		254642005	PISTON	1	
16		296278091	VALVING COVER	1	
17		296278093	VALVING/DISTRIBUTOR	1	
18		84550029	SPRING	12	
19		254642017	SEALS	1	
20		296278092	VALVING COVER	1	
21		254642013	SCREW-BOLT	16	
22		608383001	WASHER	1	
23		140255041	SCREW - BOLT	1	
24		216675005	O-RING	1	
25		216675007	VALVE SPOOL	1	
26		216675009	SPRING	1	
27		216675011	WASHER	1	
28		296278094	SNAP RING	1	
29		608385001	O-RING	1	
30		296251965	SEAL KIT	1	
31		296278097	SHAFT	1	
32		280985007	BRAKE DISC KIT	1	
33		296278096	BRAKE BODY	1	
34		140255041	SCREW - BOLT	2	
35		608383001	WASHER	2	
36		280985011	SCREW	10	
37		296275604	O-RING-5.70X199.30	1	
38		296251962	BRAKE PISTON	1	
39		296271036	BELVILLE WASHER	1	
40		608492001	SNAP RING	1	
41		608499001	O-RING	1	
42		296251967	PROJECTOR	1	
43		608498001	PLUG	1	
44		296278095	DISC BRAKE	1	Included Ref. No/s 30-43
45		296278088	REPAIR KIT	1	
46		296278087	SPEED SENSOR KIT	1	
47		296278088	REPAIR KIT	1	Included Ref. No's 45 & 46
		296273806	MOTOR-MS18-2-G27-F12-2A10-2500		Included All Items In This Figure
		254642043	SEAL KIT		
		99098003	SEAL KIT		

Hydraulic Motor Fig 13-3r01

THERE IS THE POSSIBILITY OF HAVING TWO SIZES OF PISTONS IN A MOTOR. NORMALLY CL "0" IS USED. THERE IS NO MARKING ON THE PISTON OR CYLINDER BLOCK. THERE IS THE POSSIBILITY OF HAVING CL "1" WHICH IS 1mm OVER SIZE. THERE WILL BE A "1" STAMPED ON THE PISTON AND A CORRESPONDING "1" STAMPED ON THE CYLINDER BLOCK IN THE AREA OF THE EFFECTED CYLINDER BORE.

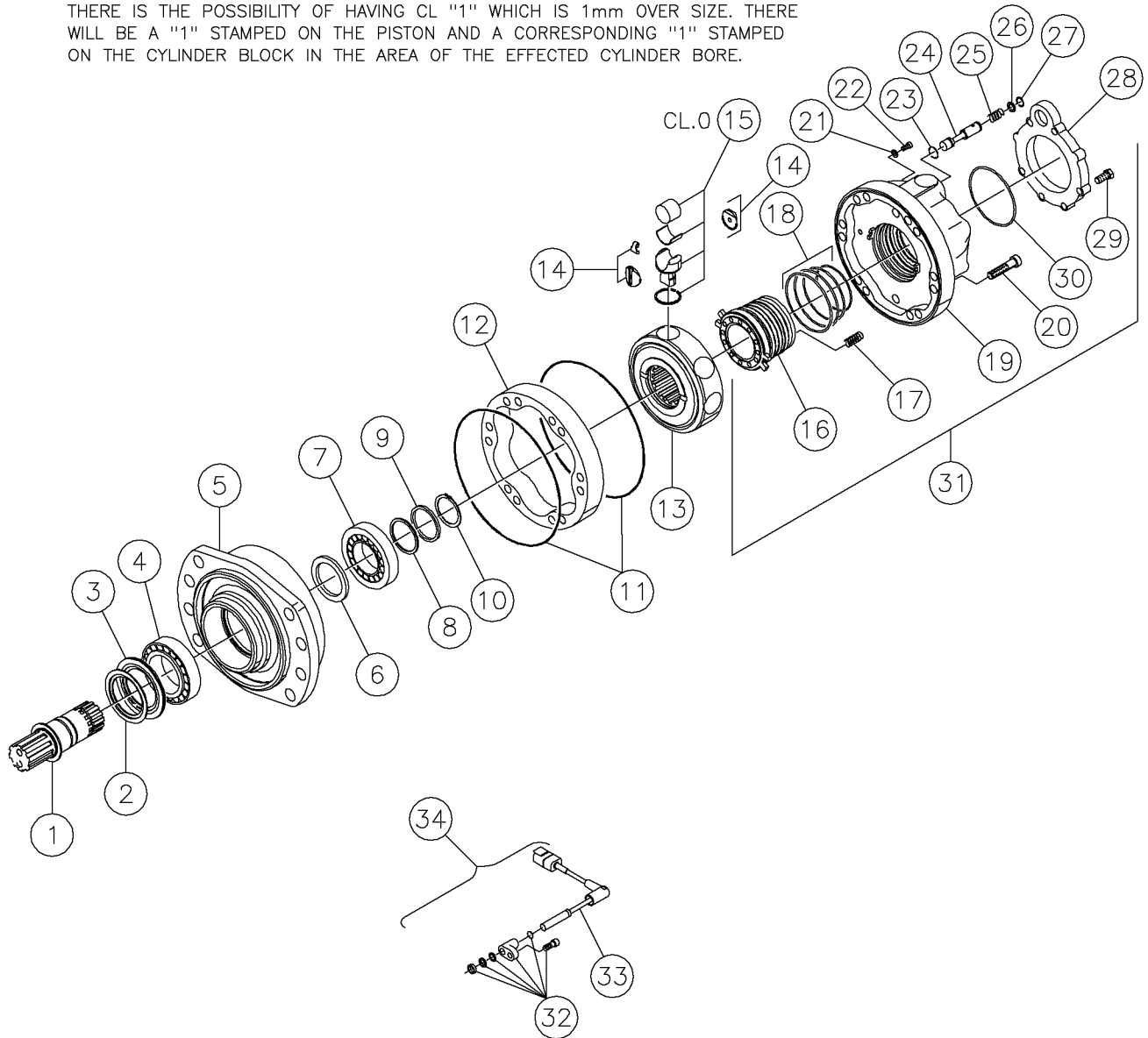


Hydraulic Motor Fig 13-3r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	September, 2006		Corrected Illustration
1		296251958	SHAFT	1	
2		254642039	DEFLECTOR	1	
3		99098031	SEAL	1	
4		99098027	OUTER BEARING	1	
5		296251956	BEARING SUPPORT ASSY	1	
		296251957	BEARING SUPPORT	1	
6		99098025	SEAL	1	
7		254642029	BEARING	1	
8		84550069	SHIM SET	1	
9		254642025	RING	1	
10		254642023	SNAP RING	1	
11		296278090	O-RING	2	
12		216674003	CAM ASSEMBLY	1	
13		296278089	CYLINDER BLOCK	1	
14		254642007	REPAIR KIT	1	
15		254642005	PISTON	1	
16		296278093	VALVING/DISTRIBUTOR	1	
17		84550029	SPRING	12	
18		254642017	SEALS	1	
19		296278092	VALVING COVER	1	
20		254642013	SCREW-BOLT	16	
21		608383001	WASHER	1	
22		140255041	SCREW - BOLT	1	
23		216675005	O-RING	1	
24		216675007	VALVE SPOOL	1	
25		216675009	SPRING	1	
26		216675011	WASHER	1	
27		296278094	SNAP RING	1	
28		85635027	PLATE-REAR COVER	1	
29		85635029	BOLT-M16X35	4	
30		608385001	O-RING	1	
31		296278091	VALVING COVER	1	Included Ref. No's 16-30
32		296278087	SPEED SENSOR KIT	1	
33		296278088	REPAIR KIT	1	
34		296278086	SPEED SENSOR KIT	1	Included Ref. No's 32 and 33
		296273805	MOTOR-MS18-2-D27-A18-2A10-2500		Included All Items In This Figure
		99098003	SEAL KIT		Inc. Ref. 2, 3, 6, 9, 11, 18, 21&30
		254642043	SEAL KIT		

Hydraulic Motor Fig 13-3

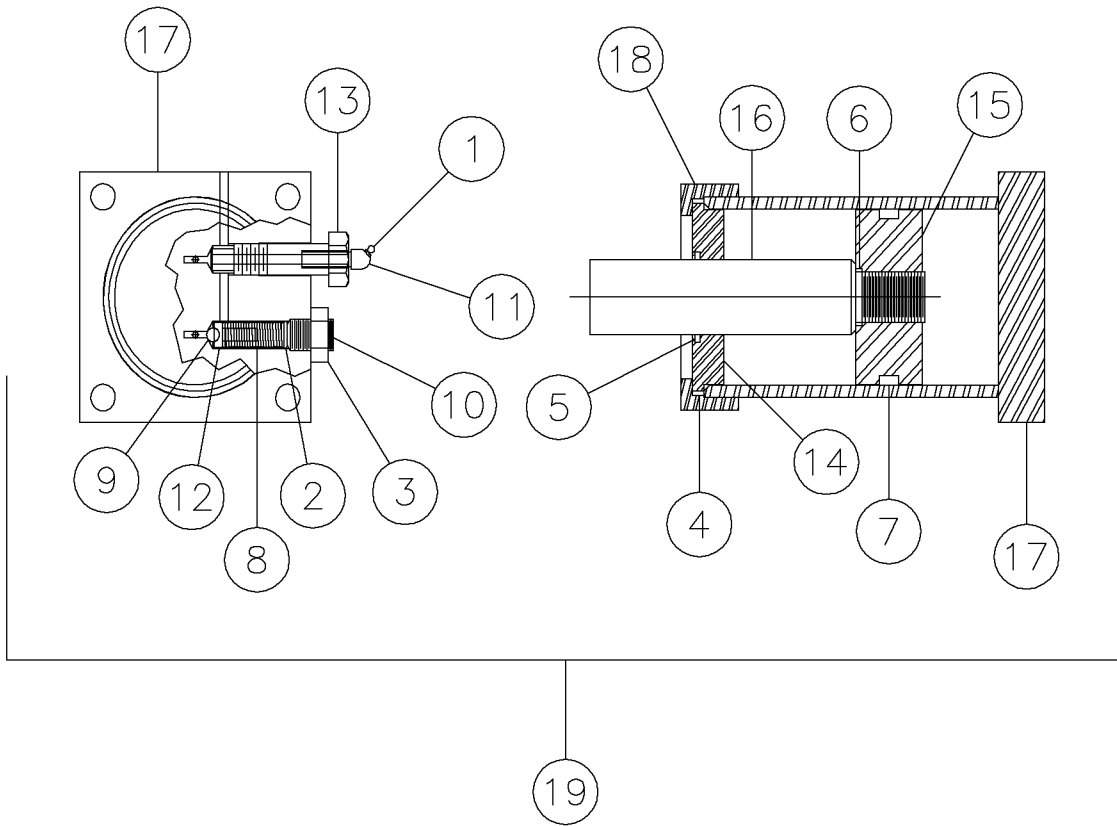
THERE IS THE POSSIBILITY OF HAVING TWO SIZES OF PISTONS IN A MOTOR. NORMALLY CL "0" IS USED. THERE IS NO MARKING ON THE PISTON OR CYLINDER BLOCK. THERE IS THE POSSIBILITY OF HAVING CL "1" WHICH IS 1mm OVER SIZE. THERE WILL BE A "1" STAMPED ON THE PISTON AND A CORRESPONDING "1" STAMPED ON THE CYLINDER BLOCK IN THE AREA OF THE EFFECTED CYLINDER BORE.



Hydraulic Motor Fig 13-3

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296251958	SHAFT	1	
2		254642039	DEFLECTOR	1	
3		99098031	SEAL	1	
4		99098027	OUTER BEARING	1	
5		296251956	BEARING SUPPORT ASSY	1	
		296251957	BEARING SUPPORT	1	
6		99098025	SEAL	1	
7		254642029	BEARING	1	
8		84550069	SHIM SET	1	
9		254642025	RING	1	
10		254642023	SNAP RING	1	
11		296278090	O-RING	2	
12		216674003	CAM ASSEMBLY	1	
13		296278089	CYLINDER BLOCK	1	
14		254642007	REPAIR KIT	1	
15		254642005	PISTON	1	
16		296278093	VALVING/DISTRIBUTOR	1	
17		84550029	SPRING	12	
18		254642017	SEALS	1	
19		296278092	VALVING COVER	1	
20		254642013	SCREW-BOLT	16	
21		608383001	WASHER	1	
22		140255041	SCREW - BOLT	1	
23		216675005	O-RING	1	
24		216675007	VALVE SPOOL	1	
25		216675009	SPRING	1	
26		216675011	WASHER	1	
27		296278094	SNAP RING	1	
28		85635027	PLATE-REAR COVER	1	
29		85635029	BOLT-M16X35	4	
30		608385001	O-RING	1	
31		296278091	VALVING COVER	1	Included Ref. No's 16-30
32		296278087	SPEED SENSOR KIT	1	
33		296278088	REPAIR KIT	1	
34		296278086	SPEED SENSOR KIT	1	Included Ref. No's 32 and 33
		296273805	MOTOR-MS18-2-D27-A18-2A10-2500		Included All Items In This Figure
		254642043	SEAL KIT		
		99098003	SEAL KIT		

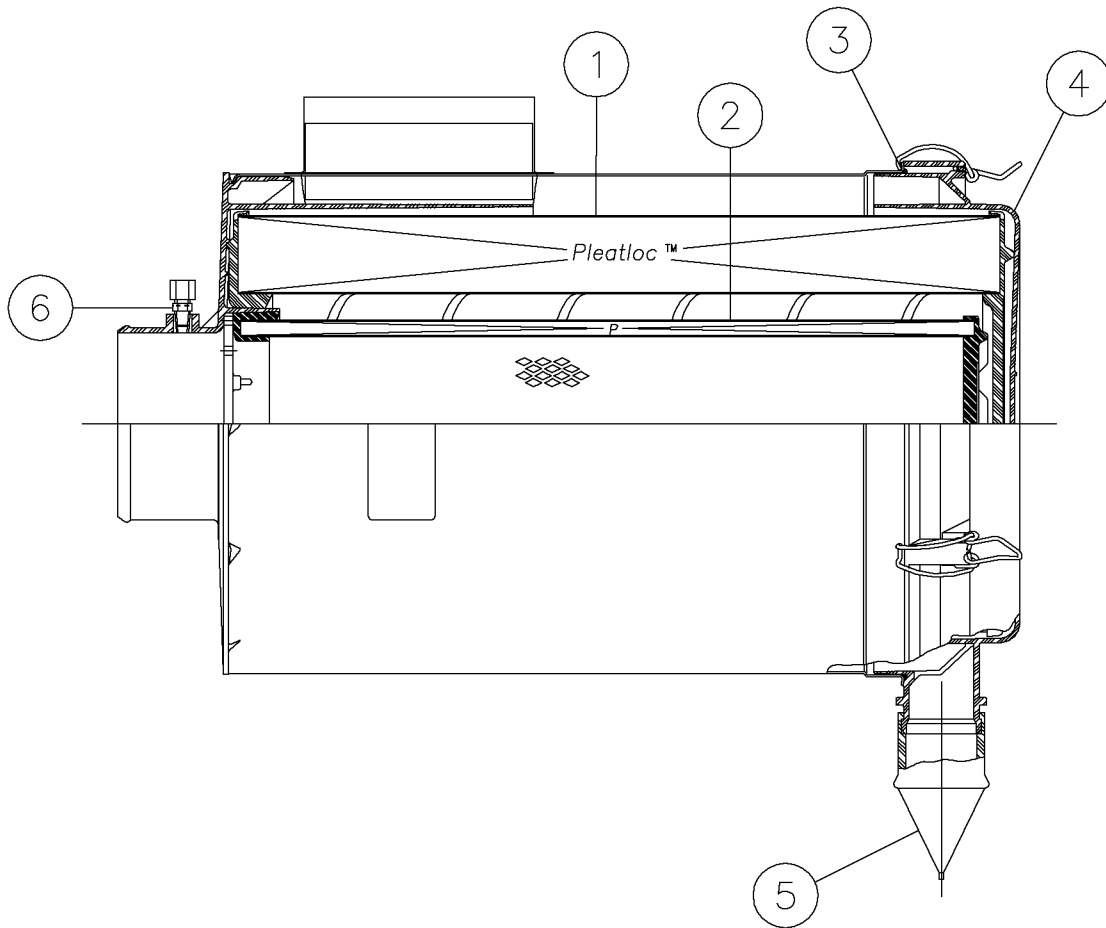
Hydraulic Track Tightener Cylinder Fig 13-4



Hydraulic Track Tightener Cylinder Fig 13-4

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		88978001	ZERK-1/8 NPT STR. LEAK PROOF	1	
2		15694001	WASHER-#6M FLAT	1	
3		429001	NUT-5/8 NC HEX JAM	1	
4		4350001	O-RING 042 NAT.	1	
5		57300001	WIPER-#50-17	1	
6		3211043	O-RING 119 BRAND DC7508	1	
7		58138001	UNI-RING	1	
8		3115027	SPRING ENERGY A-4057	1	
9		3113009	BALL-STEEL 5/16 DIA. ENGY 80029	1	
10		15164001	SSS-5/8-11X1 DOGPOINT/LOCKPATC	1	
11		88979001	STREET ELBOW-1/8 NPT	1	
12		68581001	SUPPORT-BALL BEARING	1	
13		68580003	BOLT ASSY-GREASE	1	
14		68579001	GLAND-	1	
15		68578001	PISTON-	1	
16		68577001	ROD-	1	
17		68574001	BODY-	1	
18		68573001	CAP-	1	
19		231104001	CYLINDER-3 1/2"X4 3/4"	1	Included All Items In This Figure
		68582001	REPAIR KIT-	1	Included Ref. No's 4-7

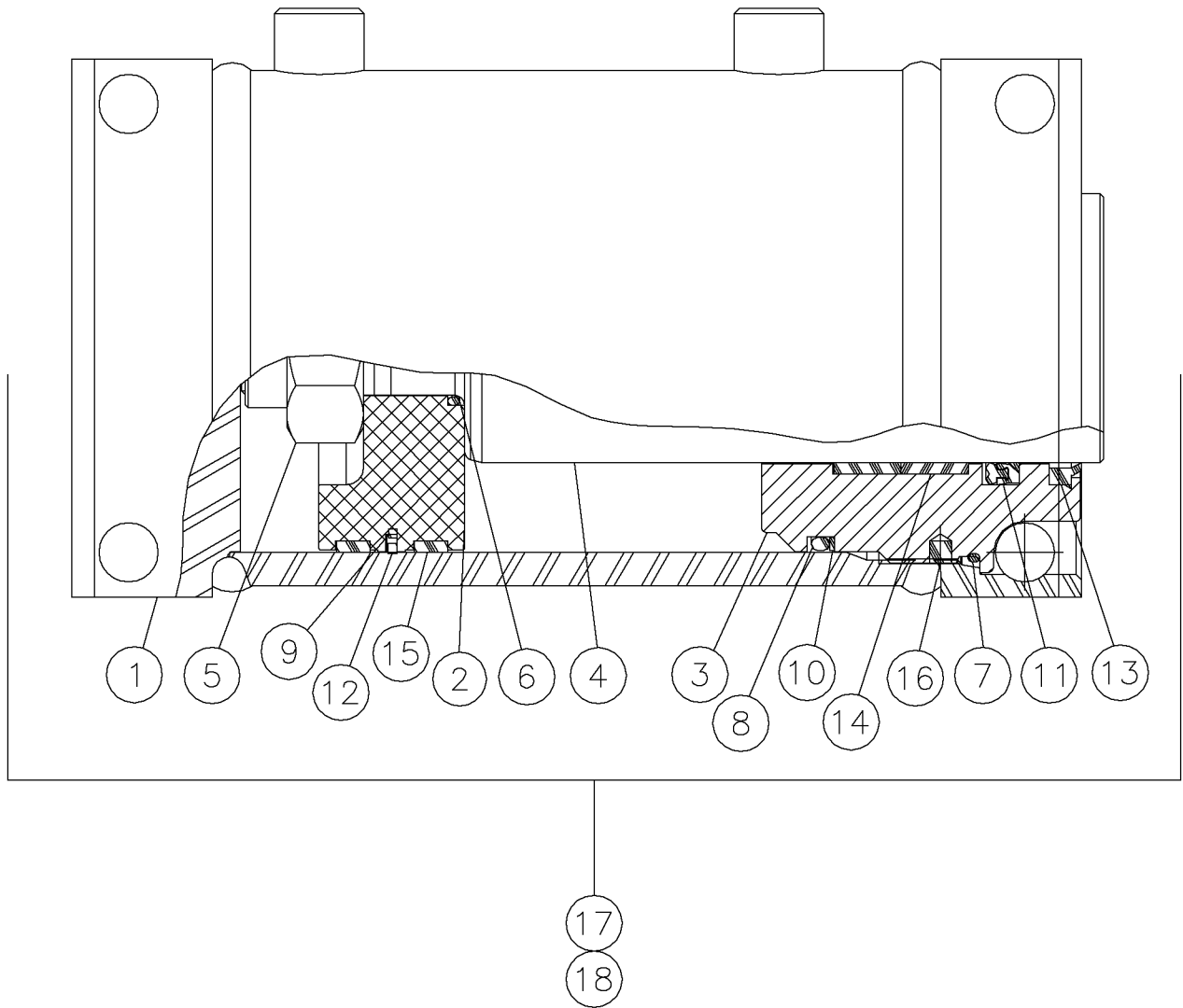
Air Cleaner Fig 13-5



Air Cleaner Fig 13-5

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296251026	ELEMENT-PRIMARY	1	
2		296251027	ELEMENT - SAFETY	1	
3		296251028	GASKET	1	
4		296251029	COVER ASSEMBLY	1	
5		296251030	VACUATOR VALVE	1	
6		66811001	1/8NPTX1/8NPT SAFETY FITTING	1	

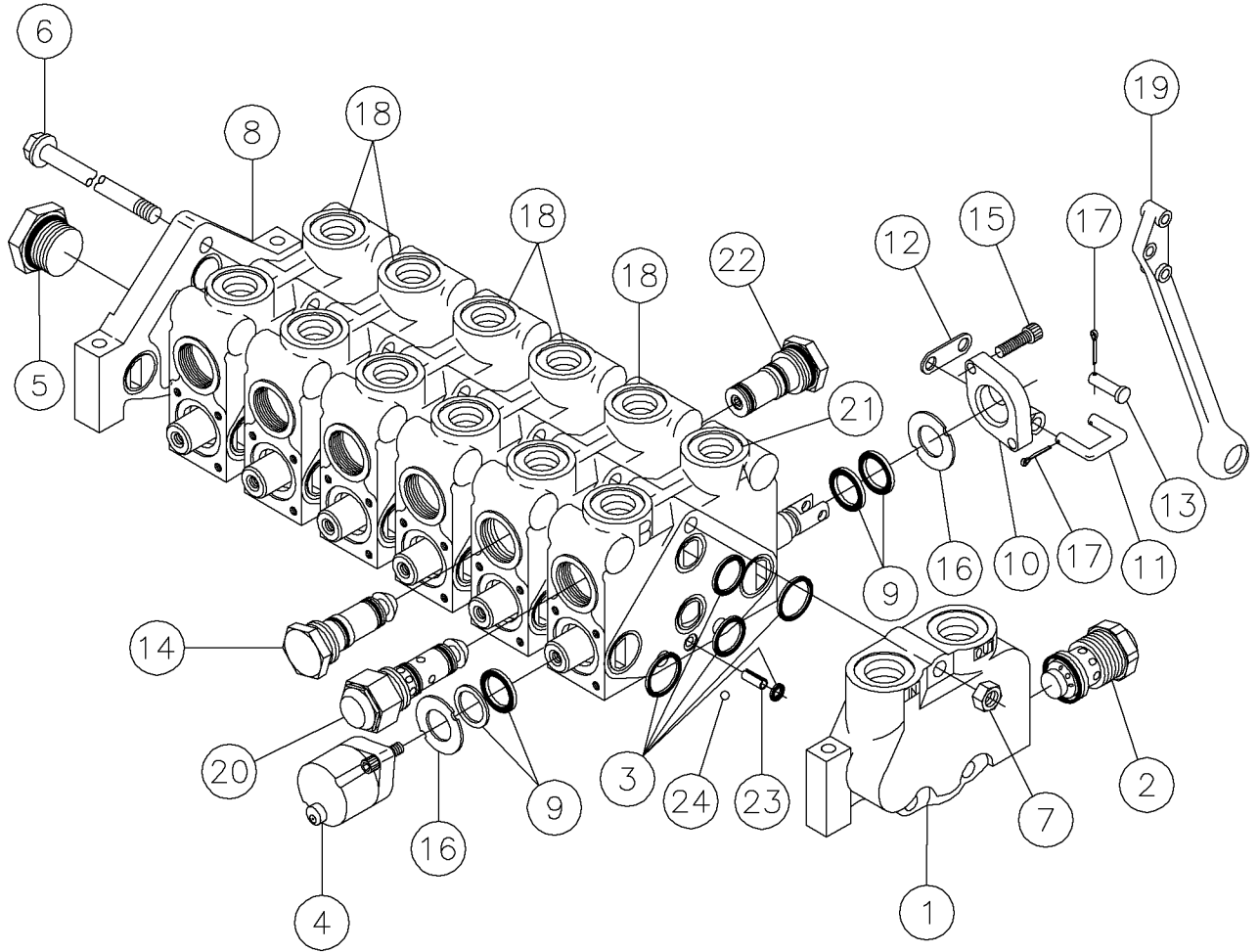
Hydraulic Floating Gearbox Cylinder Fig 13-6



Hydraulic Floating Gearbox Cylinder Fig 13-6

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296251179	TUBE WELDMENT	1	
2		605973001	PISTON	1	
3		296251180	HEAD GLAND	1	
4		244722007	CYLINDER ROD	1	
5		85777031	NUT-1 1/2" 12 LOCK	1	
6		296251181	O-RING	1	
7		608418001	O-RING	1	
8		605982001	O-RING	1	
9		605983001	SQUARE RING	1	
10		605984001	BACKUP RING	1	
11		296251182	SEAL - DEEP Z W/ROD BACKUP	1	
12		605986001	SQUARE SECTION TEE PISTON SEAL	1	
13		104012017	ROD WIPER	1	
14		224478017	WEAR BAND	2	
15		605988001	WEARBAND	2	
16		104012005	LOCKING INSERT	2	
17		296251183	SEAL KIT	1	Inc Ref No's 6-16
18		280827001	CYLINDER - 5"X 3 5/16"	1	Include All Items in This Figure

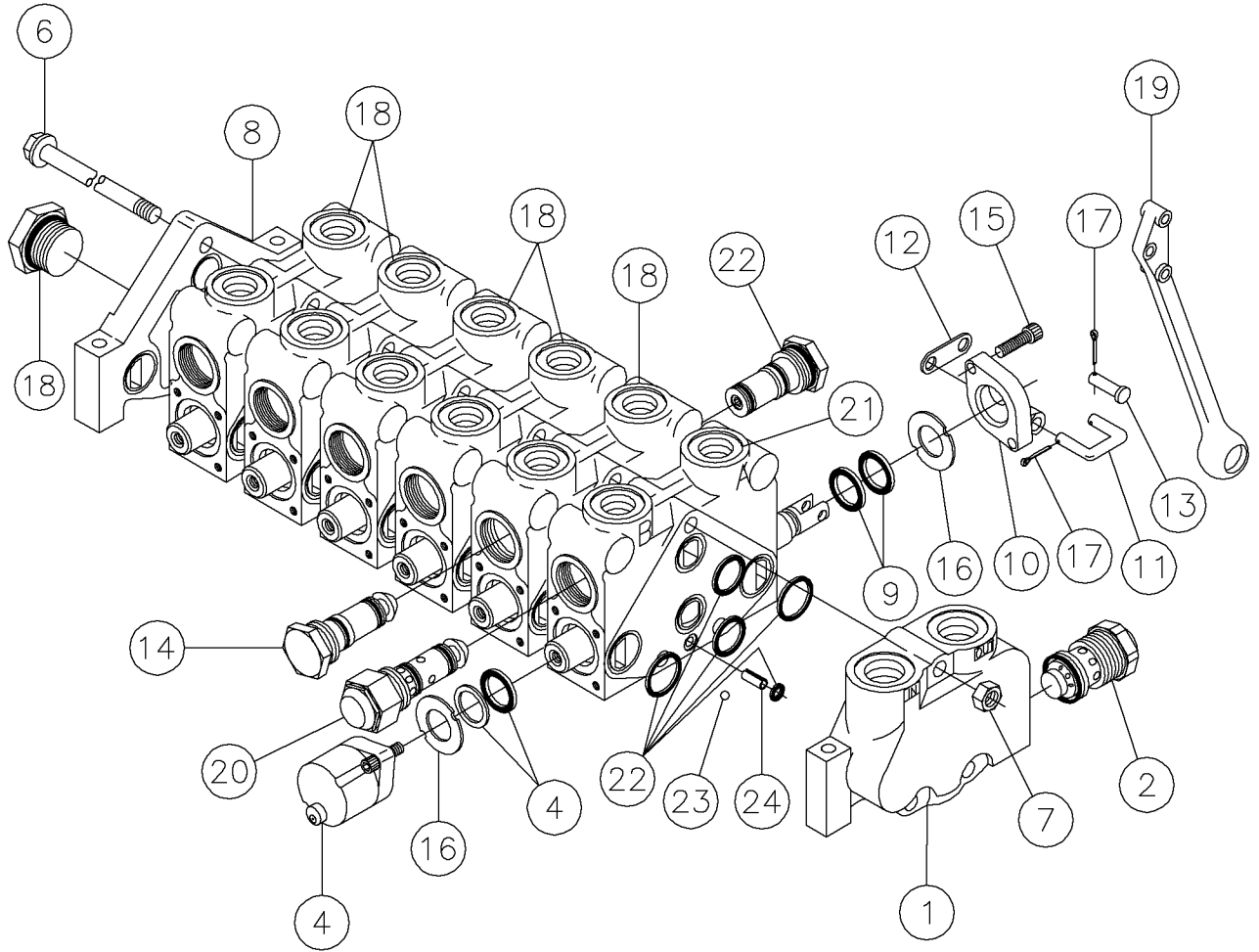
Control Valve Fig 13-7r01



Control Valve Fig 13-7r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2006		Update In Illustration & Parts List.
1		228113003	LEFT COVER PLATE COMPLETE	1	Inc. Ref. No. 2
2		228113005	WH MAIN RELIEF (3500 PSI)	1	Breakdown Fig 13-8
3		87390001	REPAIR KIT-LOAD SENSING SECT.	7	
4		6149005	POSITIONER-STD. GRESEN K-6125	6	Breakdown Fig 13-9
5		98108011	PLUG-1 15/16-12 UNF SOCKHD	1	
		3152013	SEAL-O-RING GRESEN 2708-001	1	
6		10866003	STUD KIT-6 SECTION GRSN K-6109	1	
7		446001	NUT-3/8 NF HEX	3	
8		86686009	COVER-RIGHT(FAR LOAD SENSING)	1	Inc One Of Ref No's 3 & 5
9		3147077	REPAIR KIT GRESEN K-6035	6	
10		3147029	BRACKET GRESEN 1801-001	6	
11		4333003	LINK-	6	
12		4333005	PLATE-LINK	6	
13		2110003	PIN - CLEVIS 1/4 X 7/8 - 47/64 UL ZINC	6	
14		3147035	PLUG-LOAD CHECK STEEL K-6030	5	Breakdown Fig 13-10
15		79704001	SCREW-1/4-20X7/8 SOC HD SELFLK	12	
16		3147081	RETAIN-PLT WASH GRSN 6752-001	12	
17		510035	PIN-3/32 X 1/2 COTTER	18	
18		244519003	BODY ASSY-CENTER SECTION	5	Inc One Of Ref No's 3, 4, 9-13, 14 & 22, Two Of Ref No's 15 & 16 & Three Of Ref No's 17
19		280625001	HANDLE-W/ ZINC PLATE & BLACK PLASTIC COAT	3	
20		89275007	RC PORT RELIEF	1	Breakdown Fig 13-11
21		244519005	BODY ASSY-CENTER SECTION	1	Inc One Of Ref No's 3, 4, 9-13, 20&22, Two Of Ref No's 15 & 16 & Three Of Ref No's 17
22		238196001	CARTRIDGE-ANTI-DRIFT	6	Breakdown Fig 13-12
23		87398001	BALL	1	
24		87397001	PIN-SPRING	1	
		291766001	VALVE - 6 SECT CLOSED CENTER W/ L.S.		Include's All Items In Figure

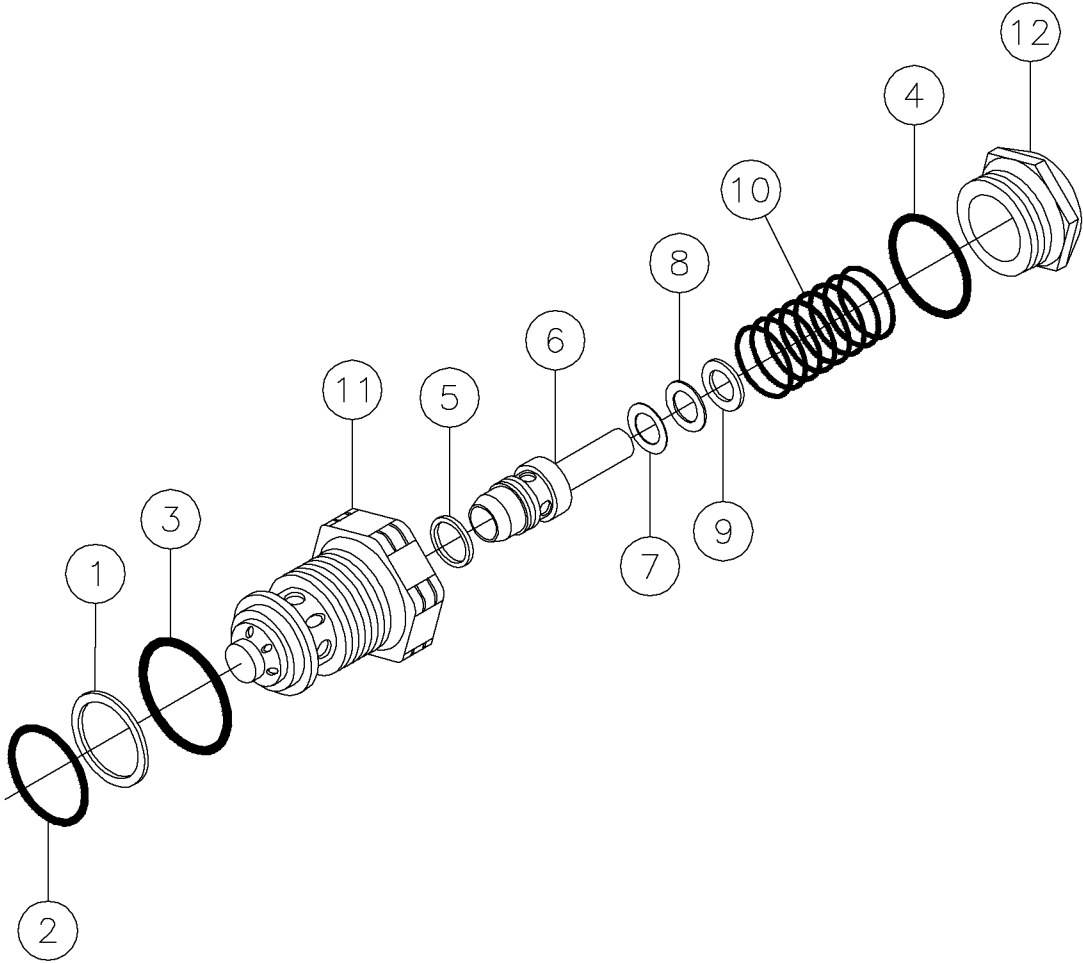
Control Valve Fig 13-7



Control Valve Fig 13-7

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		228113003	LEFT COVER PLATE COMPLETE	1	Inc. Ref. No. 2
2		228113005	WH MAIN RELIEF (3500 PSI)	1	Breakdown Fig 13-8
3		87390001	REPAIR KIT-LOAD SENSING SECT.	7	
4		6149005	POSITIONER-STD. GRESEN K-6125	6	Breakdown Fig 13-9
5		98108011	PLUG-1 15/16-12 UNF SOCKHD	1	
		3152013	SEAL-O-RING GRESEN 2708-001	1	
6		10866003	STUD KIT-6 SECTION GRSN K-6109	1	
7		446001	NUT-3/8 NF HEX	3	
8		86686009	COVER-RIGHT(FAR LOAD SENSING)	1	Inc One Of Ref No's 3 & 5
9		3147077	REPAIR KIT GRESEN K-6035	6	
10		3147029	BRACKET GRESEN 1801-001	6	
11		4333003	LINK-	6	
12		4333005	PLATE-LINK	6	
13		2110003	PIN - CLEVIS 1/4 X 7/8 - 47/64 UL ZINC	6	
14		3147035	PLUG-LOAD CHECK STEEL K-6030	5	Breakdown Fig 13-10
15		79704001	SCREW-1/4-20X7/8 SOC HD SELFLK	12	
16		3147081	RETAIN-PLT WASH GRSN 6752-001	12	
17		510035	PIN-3/32 X 1/2 COTTER	18	
18		244519003	BODY ASSY-CENTER SECTION	5	Inc One Of Ref No's 3, 4, 9-13, 14 & 22, Two Of Ref No's 15 & 16 & Three Of Ref No's 17
19		280625001	HANDLE-W/ ZINC PLATE & BLACK PLASTIC COAT	3	
20		89275007	RC PORT RELIEF	1	Breakdown Fig 13-11
21		244519005	BODY ASSY-CENTER SECTION	1	Inc One Of Ref No's 3, 4, 9-13, 20&22, Two Of Ref No's 15 & 16 & Three Of Ref No's 17
22		238196001	CARTRIDGE-ANTI-DRIFT	6	Breakdown Fig 13-12
23		87397001	PIN-SPRING	1	
24		87398001	BALL	1	
		291766001	VALVE - 6 SECT CLOSED CENTER W/ L.S.		Include's All Items In Figure

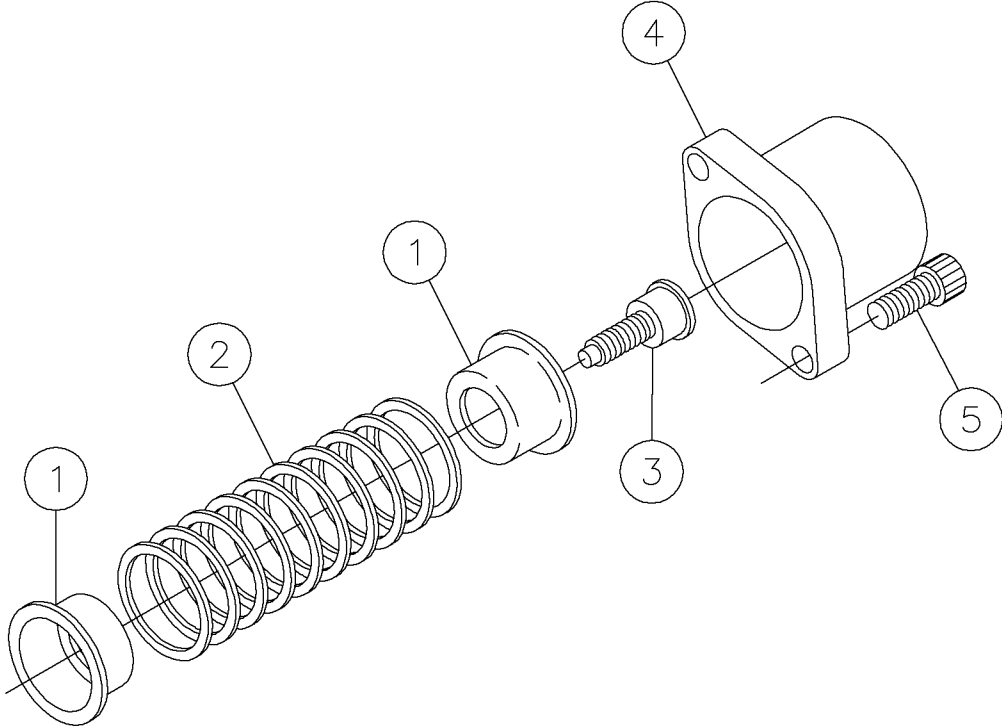
WH Main Relief Fig 13-8



WH Main Relief Fig 13-8

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		NSS	RING - BACKUP	1	NSS=(Not Sold Separately)
2		NSS	SEAL - O - RING	1	NSS=(Not Sold Separately)
3		NSS	SEAL - O - RING	1	NSS=(Not Sold Separately)
4		NSS	BODY-WH RELIEF	1	NSS=(Not Sold Separately)
5		NSS	RING - PISTION	1	NSS=(Not Sold Separately)
6		NSS	POPPET	1	NSS=(Not Sold Separately)
7		208019	SHIM - .010 #0462-001	A/R	
8		208017	SHIM - .020 #0459-001	A/R	
9		208015	SHIM - .040 #0458-001	A/R	
10		228113007	SPRING (3000-3500 PSI)	1	
11		15844009	BODY-WH RELIEF 6533-001	1	
12		3147027	CAP GRESEN 1880-001	1	
		15844007	REPAIR KIT-K19003		Included Ref. No's 1, 3 & 11
		3147011	SERVICE KIT GRESEN K-19002		Included Ref. No's 5 & 6
		228113005	WH MAIN RELIEF (3500 PSI)		Included All Items In This Figure

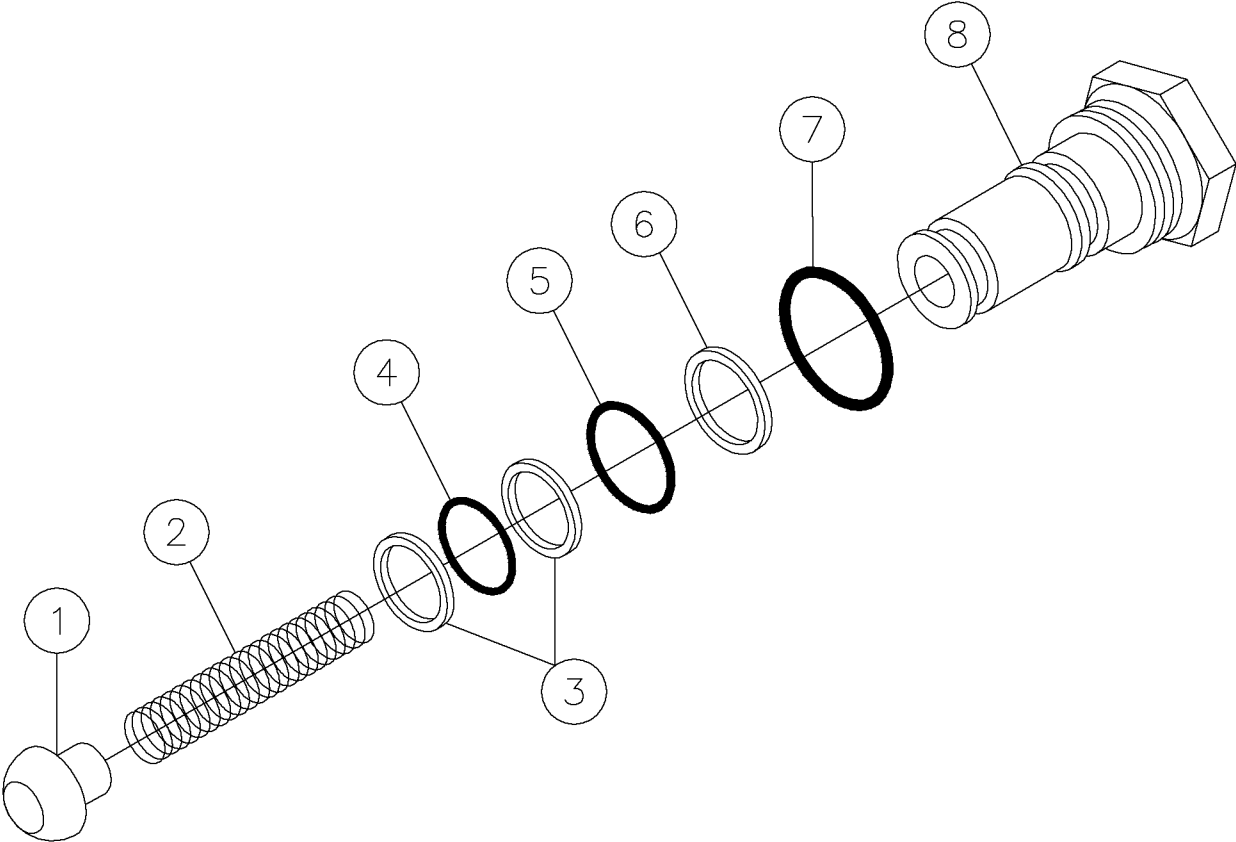
Standard Spool Positioner Fig 13-9



Standard Spool Positioner Fig 13-9

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		3149005	COLLAR-SPRING GRESEN 1809-001	2	
2		6149057	SPRING-RETURN 7433-001	1	
3		3149013	COLLAR-SPOOL	1	
4		6149043	BONNET	1	
5		79704001	SCREW-1/4-20X7/8 SOC HD SELFLK	2	
		6149005	POSITIONER-STD. GRESEN K-6125		Included All Items In This Figure

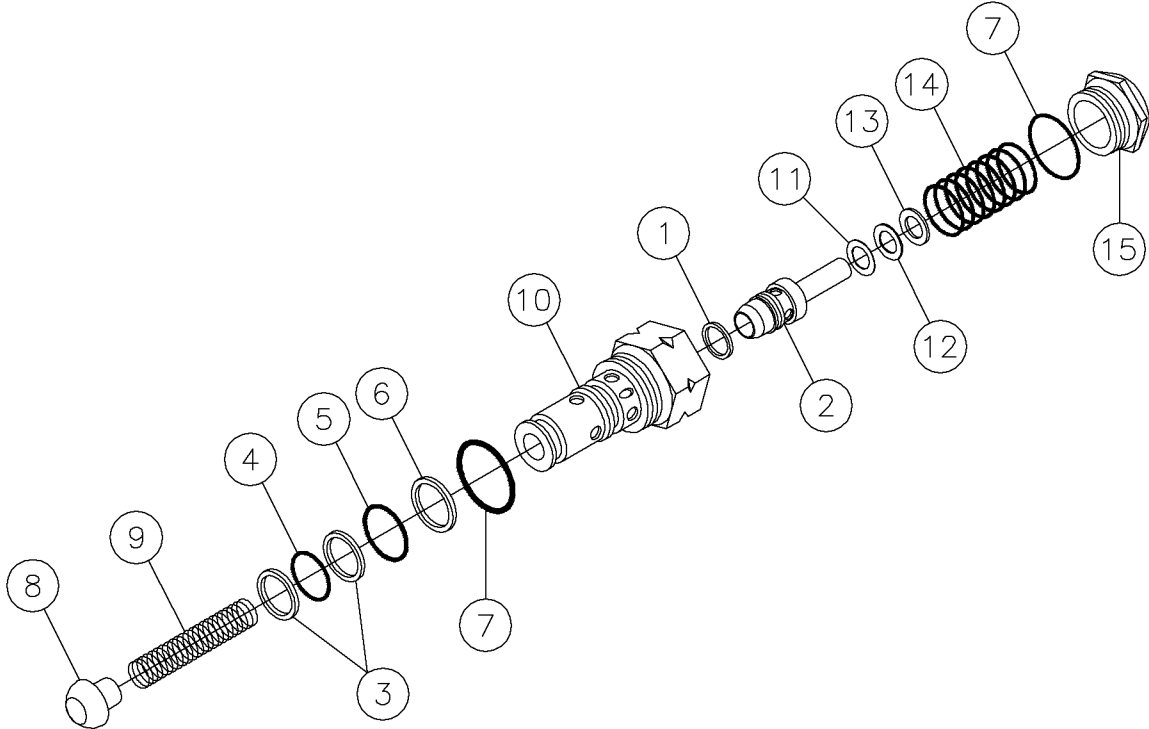
Load Check Plug Fig 13-10



Load Check Plug Fig 13-10

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		3128009	POPPET-CHECK GRESEN 2781-001	1	
		3149005	COLLAR-SPRING GRESEN 1809-001	2	
2		3147041	SPRING-CHECK GRESEN 1868-001	1	
		6149057	SPRING-RETURN 7433-001	1	
3		3149013	COLLAR-SPOOL	1	
		NSS	WASHER - BACKUP (INNER)	2	NSS=(Not Sold Separately)
4		NSS	O - RING	1	NSS=(Not Sold Separately)
		6149043	BONNET	1	
5		79704001	SCREW-1/4-20X7/8 SOC HD SELFLK	2	
		NSS	O - RING	1	NSS=(Not Sold Separately)
6		NSS	WASHER - BACKUP (INNER)	1	NSS=(Not Sold Separately)
7		NSS	PLUG-LIFT CHECK	1	NSS=(Not Sold Separately)
8		3147043	PLUG-LIFT CHECK GRSN 3411-001	1	
		3147037	REPAIR KIT GRESEN K-6032		Included Ref. No's 3-7
		3147035	PLUG-LOAD CHECK STEEL K-6030		Included Ref. No's 1-8

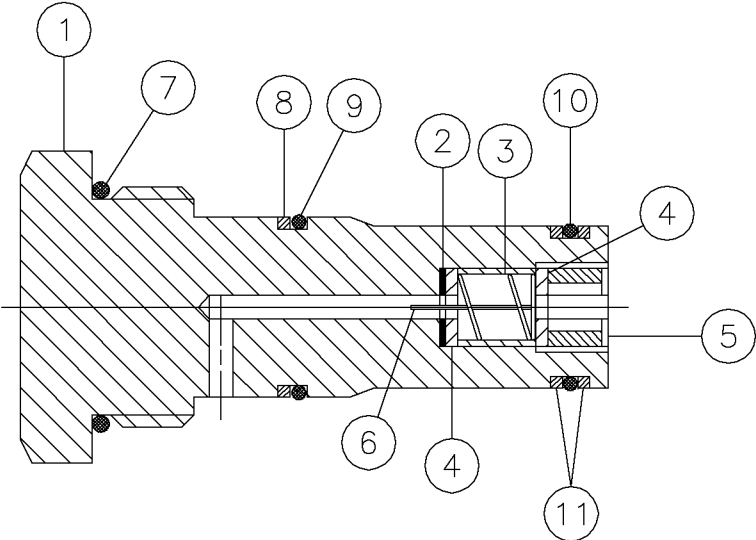
RC Port Relief Fig 13-11



RC Port Relief Fig 13-11

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		NSS	RING - PISTON	1	NSS = (Not Sold Separately)
2		NSS	POPPET-CHECK	1	NSS = (Not Sold Separately)
3		NSS	WASHER - BACKUP	2	NSS = (Not Sold Separately)
4		NSS	O - RING	1	NSS = (Not Sold Separately)
5		NSS	O - RING	1	NSS = (Not Sold Separately)
6		NSS	WASHER - BACKUP	1	NSS = (Not Sold Separately)
7		NSS	O - RING	2	NSS = (Not Sold Separately)
8		3128009	POPPET-CHECK GRESEN 2781-001	1	
9		3147041	SPRING-CHECK GRESEN 1868-001	1	
10		3159007	BODY-RELIEF GRESEN 1884-001	1	
11		208019	SHIM - .010 #0462-001	A/R	
12		208017	SHIM - .020 #0459-001	A/R	
13		208015	SHIM - .040 #0458-001	A/R	
14		3147023	SPRING-YELLOW GRESEN 1451-001	1	
		86323005	SPRING-SS 2000-3000 PSI	1	
15		3147027	CAP GRESEN 1880-001	1	
		3147011	SERVICE KIT GRESEN K-19002		Included Ref. No's 9 & 10
		3159005	REPAIR KIT GRESEN K-6005		Included Ref. No's 3-7
		89275007	RC PORT RELIEF		Included All Items In This Figure

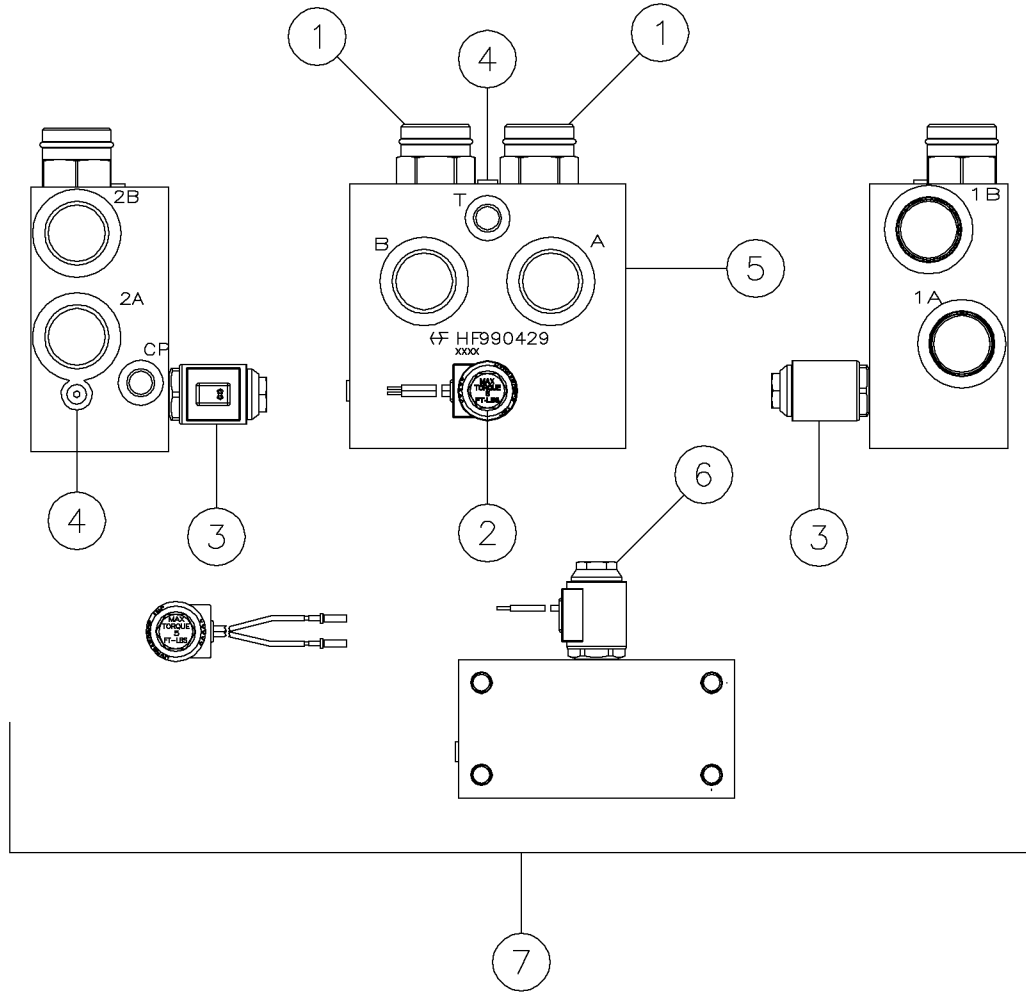
Anti-Drift Cartridge Fig 13-12



Anti-Drift Cartridge Fig 13-12

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		238196003	PLUG-BLEED OFF	1	
2		238196005	WASHER-BLEED OFF	1	
3		238196007	SPACER	1	
4		238196009	WASHER-BACK UP	1	
5		238196011	SCREW-LOCKING	1	
6		238196013	SPRING	1	
7		NSS	SEAL - O - RING	1	NSS = (Not Sold Separately)
8		NSS	RING - BACKUP	1	NSS = (Not Sold Separately)
9		NSS	SEAL - O - RING	1	NSS = (Not Sold Separately)
10		NSS	SEAL - O - RING	1	NSS = (Not Sold Separately)
11		NSS	RING - BACKUP - CUT	1	NSS = (Not Sold Separately)
		3147037	REPAIR KIT GRESEN K-6032		Included Ref. No's 2-4, 9&10
		238196001	CARTRIDGE-ANTI-DRIFT		Included All Items In This Figure

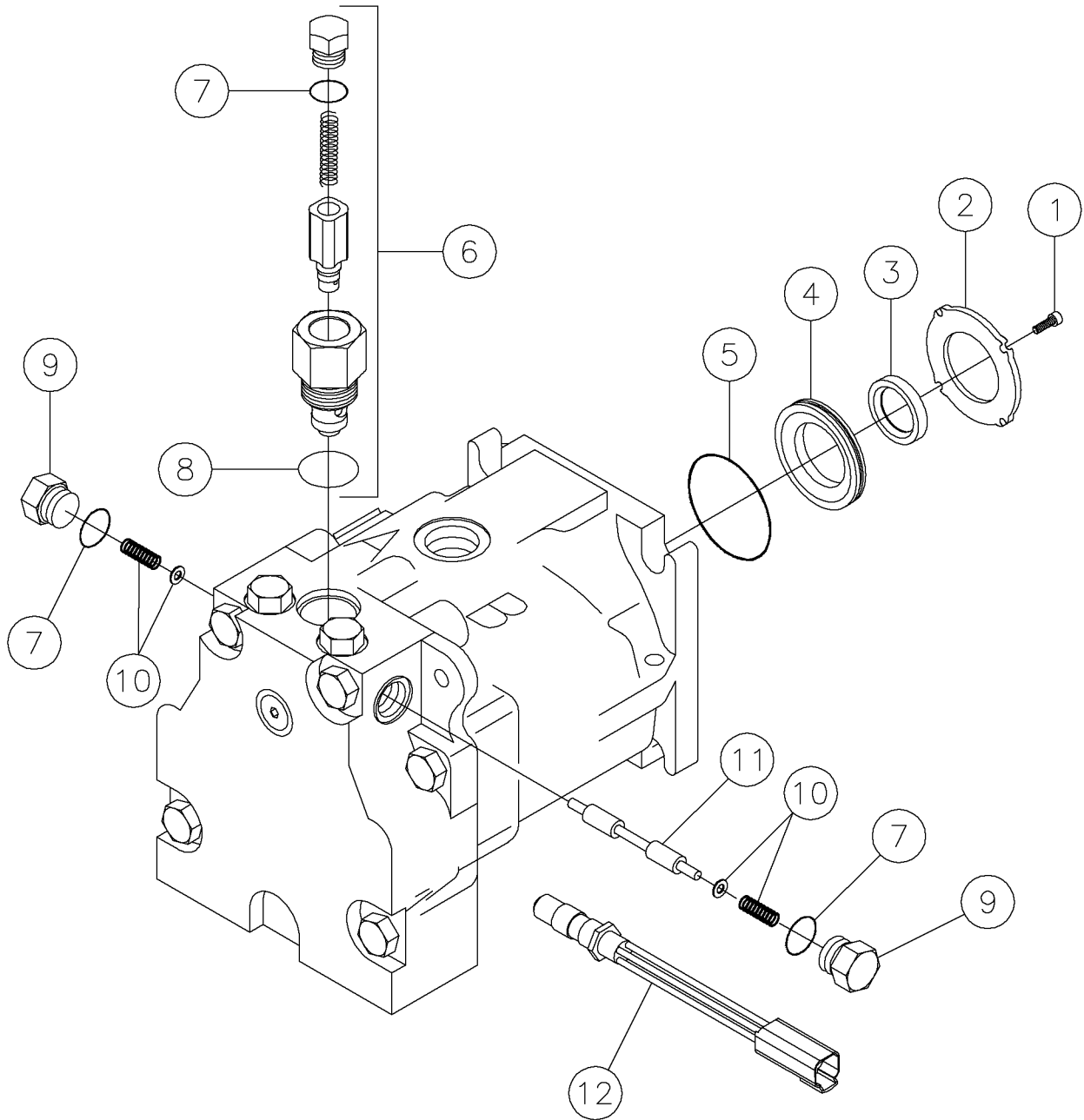
Valve-Drill Transport Fig 13-13



Valve-Drill Transport Fig 13-13

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296251267	VALVE-PILOTED 3 WAY EXT-VENT	2	
		224790005	SEAL KIT-DIVERTER VALVE	1	
2		251117007	CARTRIDGE - SOLENOID	1	
		110467003	SEAL KIT	1	
3		251117009	COIL - #8	1	
4		240324015	PLUG-SAE	2	
5		NSS	BLOCK - BODY	1	NSS = Not Sold Separately
6		296251284	NUT - RAIN PROOF COIL	1	
7		280825001	VALVE - DRILL TRANSPORT	1	Included All Items In This Figure

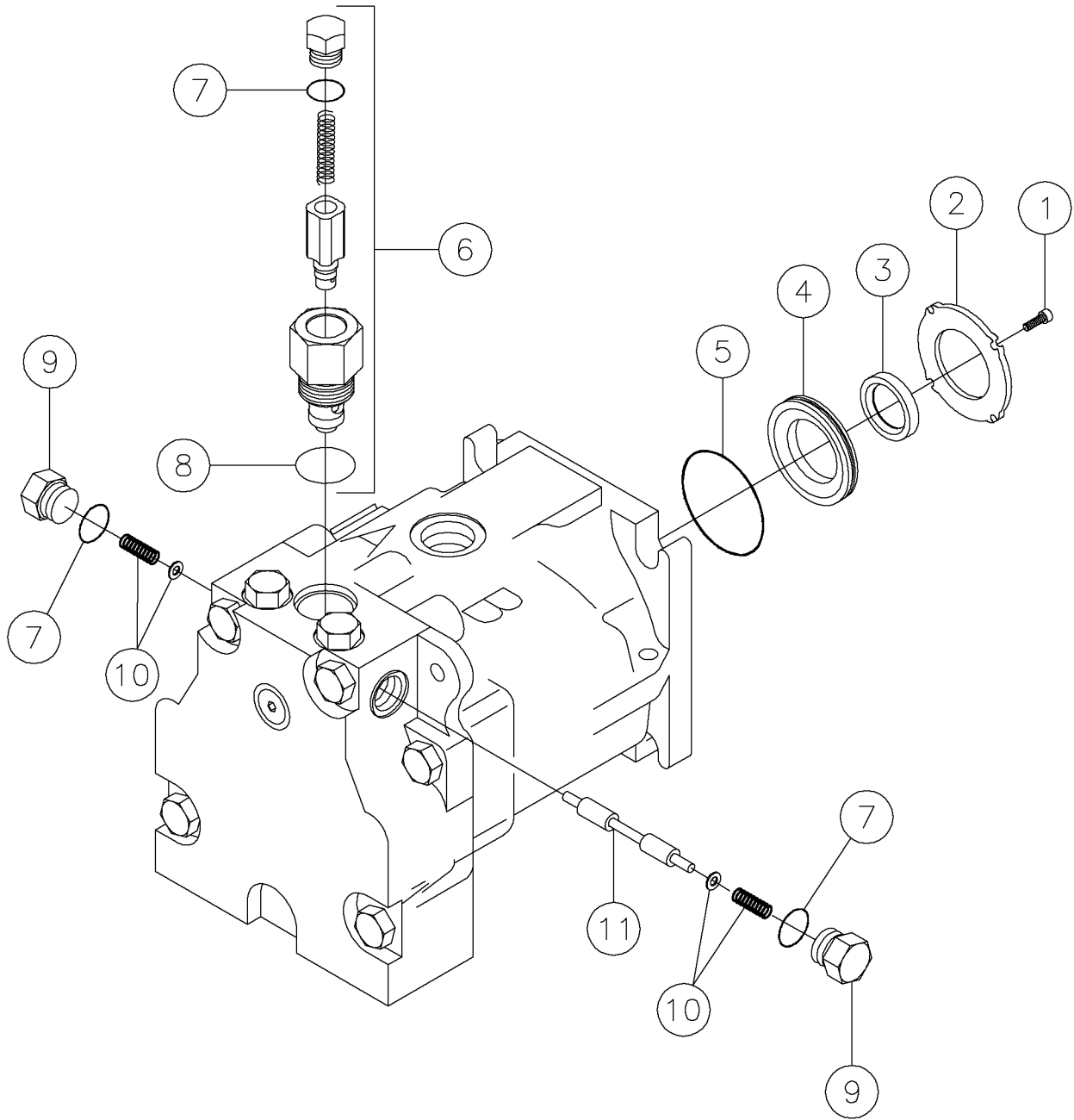
Motor-Water Pump (90 Series 75CC) Fig 13-14r01



Motor-Water Pump (90 Series 75CC) Fig 13-14r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2006		Update In Illustration & Parts List.
1		131494021	SOCKET HEAD SCREW	3	
2		131494019	RETAINER PLATE	1	
3		114282005	LIP SEAL	1	
4		114282003	SEAL CARRIER	1	
5		114282007	O-RING	3	
6		296278108	CHARGE RELIEF VALVE CARTRIDGE KIT	1	
7		296278109	O-RING	1	
8		113080023	O-RING	1	
9		296278110	SPECIAL PLUG	2	
10		296278111	SPRING GUIDE ASSEMBLY	2	
11		196278112	SHUTTLE SPOOL	1	
12		604451001	MAGNETIC PICKUP	1	
		296273947	MOTOR-HYD 90 SERIES 75CC(W/SPEED SENSOR)		Included All Items In This Figure
		296278075	SEAL KIT		

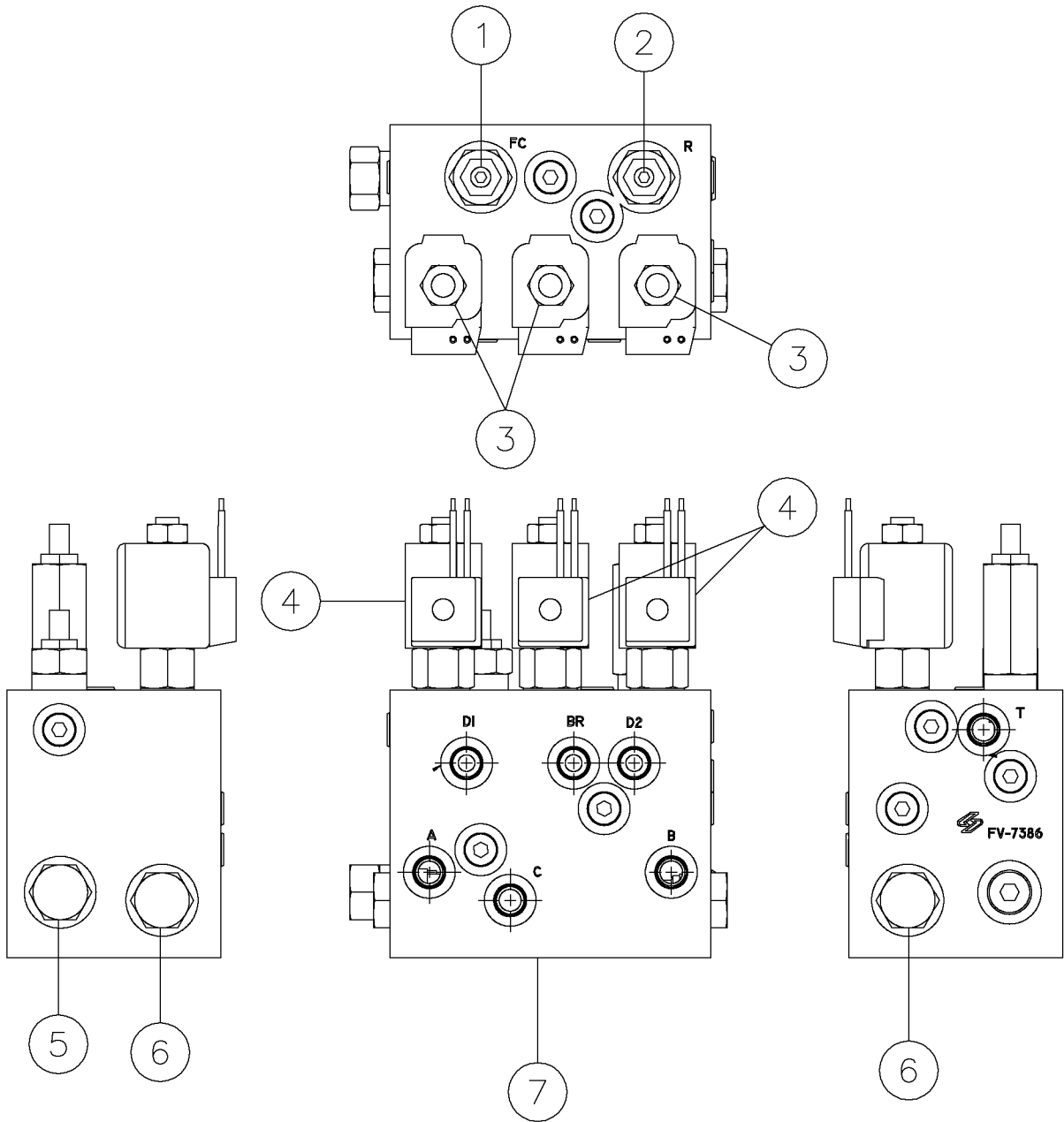
Motor-Water Pump (90 Series 75CC) Fig 13-14



Motor-Water Pump (90 Series 75CC) Fig 13-14

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		131494021	SOCKET HEAD SCREW	3	
2		131494019	RETAINER PLATE	1	
3		114282005	LIP SEAL	1	
4		114282003	SEAL CARRIER	1	
5		114282007	O-RING	3	
6		296278108	CHARGE RELIEF VALVE CARTRIDGE KIT	1	
7		296278109	O-RING	1	
8		113080023	O-RING	1	
9		296278110	SPECIAL PLUG	2	
10		296278111	SPRING GUIDE ASSEMBLY	2	
11		196278112	SHUTTLE SPOOL	1	
		296273947	MOTOR-HYD 90 SERIES 75CC(W/SPEED SENSOR)		

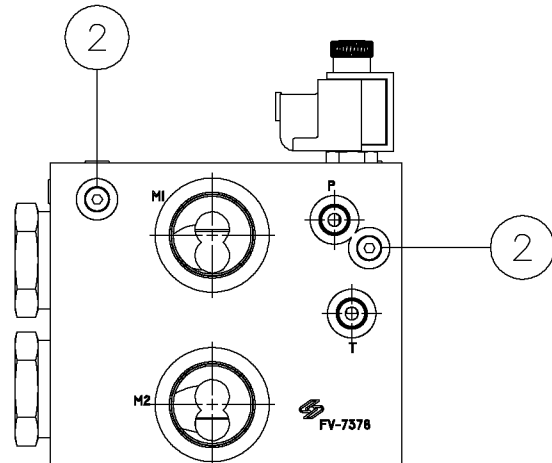
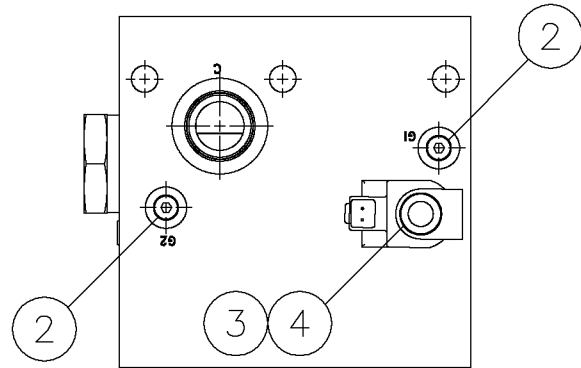
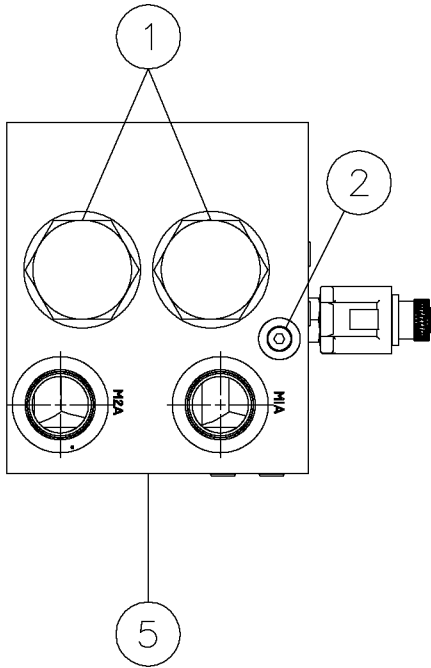
Valve-3 Speed Rotation Fig 13-15



Valve-3 Speed Rotation Fig 13-15

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296278059	FLOW REGULATOR VALVE	1	
2		277838011	RELIEF VALVE	1	
3		296278057	VALVE-2 POS-3WAY SOLENOID	3	
4		220187005	COIL	3	
5		296263269	SHUTTLE VALVE	1	
		255076015	SEAL KIT	1	
		277838005	REPAIR KIT - SHUTTLE VALVE	1	
6		296278058	CHECK VALVE	2	
		255075041	SEAL KIT	2	
7		NSS	BLOCK - BODY	1	NSS = Not Sold Separately
		296273855	VALVE - 3SPD ROTATION		Included All Items In This Figure
		277838013	REPAIR KIT - RELIEF VALVE		Ref. 1-3

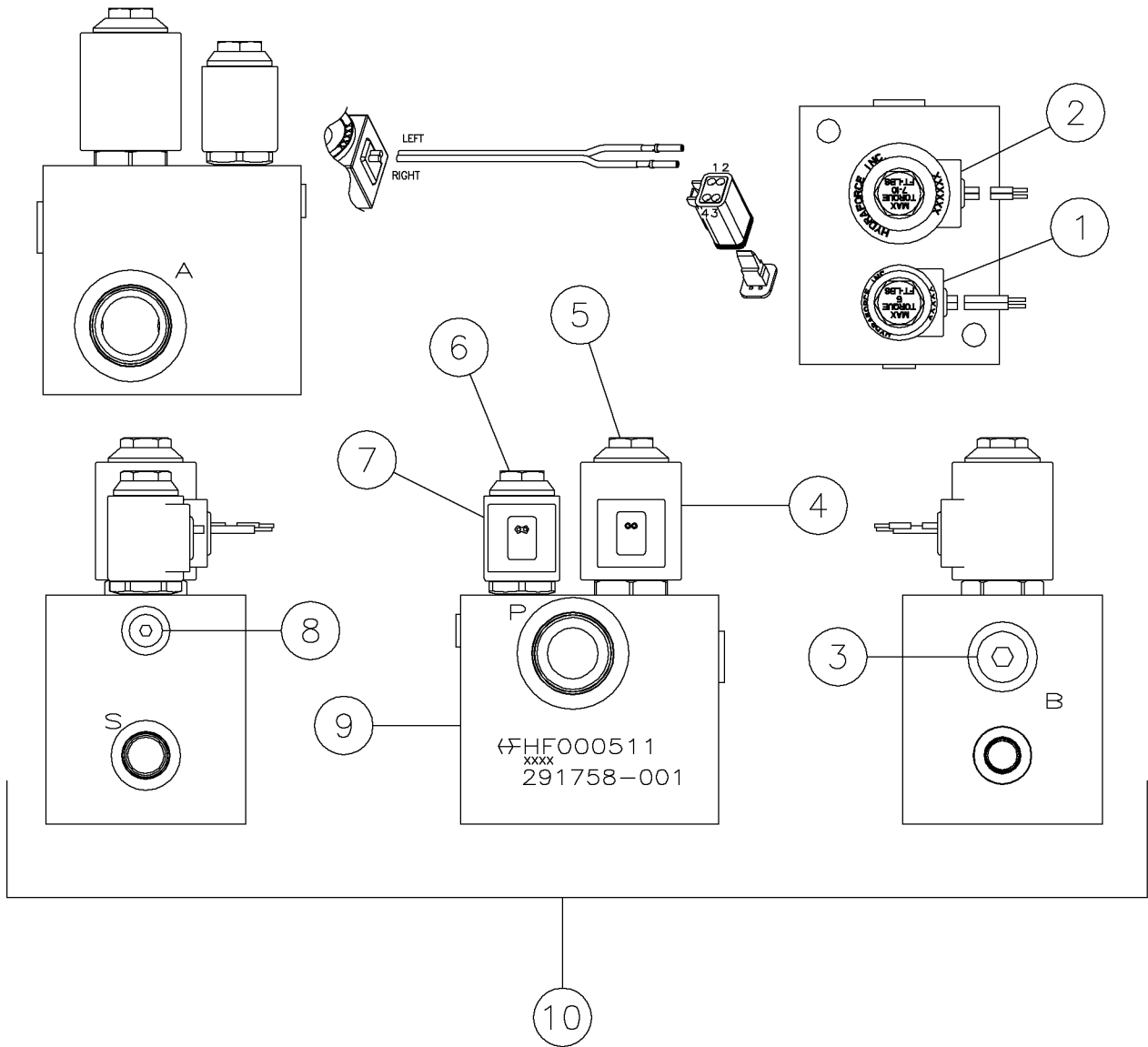
Valve-2 Speed/Free Wheel Fig 13-16



Valve-2 Speed/Free Wheel Fig 13-16

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		224292009	DIVERTER VALVE	2	
		224292013	SEAL KIT	5	
2		296278016	PLUG - #4 EPCO	1	
3		296278060	SOLENOID VALVE	1	
		255075019	SEAL KIT	1	
		255077007	SEAL KIT	1	
4		296278061	STERLING 12 VOLT COIL	1	
5		NSS	BLOCK - BODY	1	NSS = Not Sold Separately
		296273840	VALVE- "FREE WHEEL", 2-SPD		Included All Items In This Figure

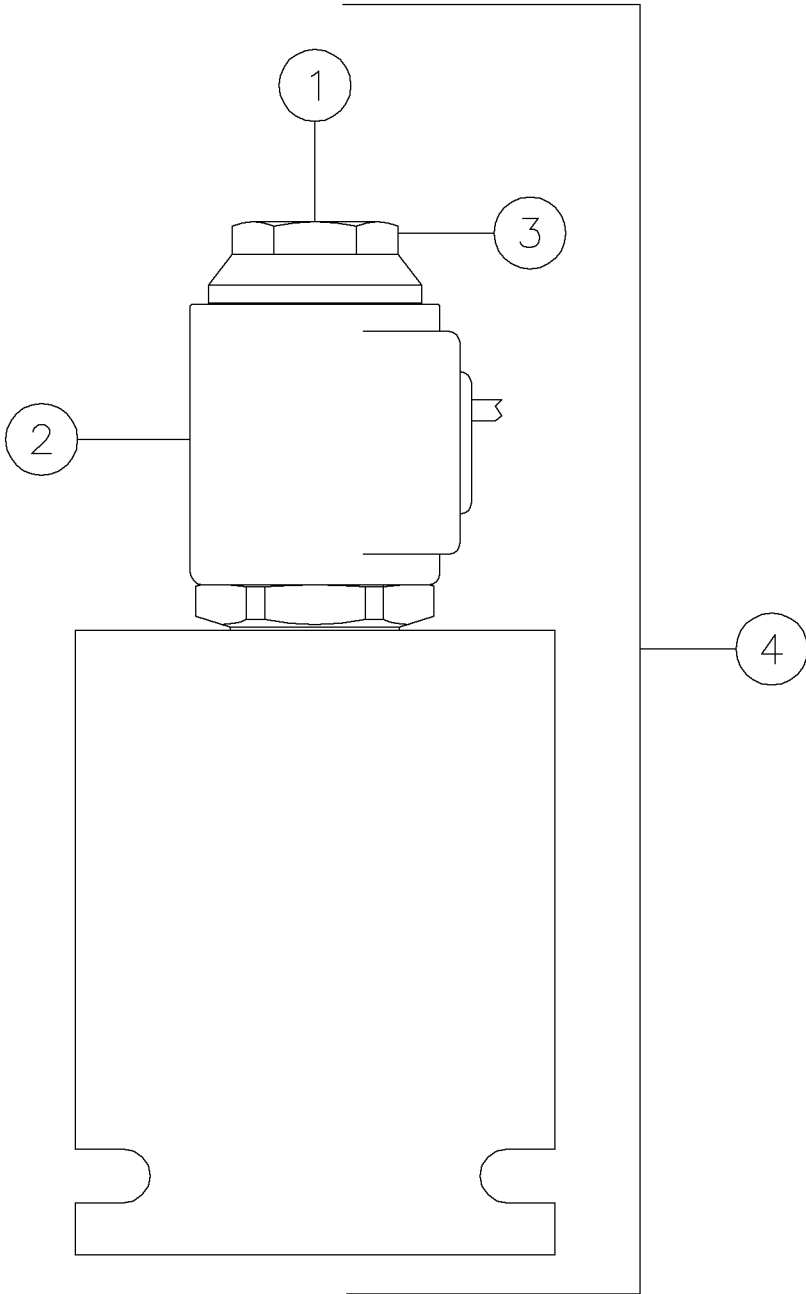
Valve-Hydraulic Enable Fig 13-17



Valve-Hydraulic Enable Fig 13-17

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		279356012	POPPET - 2-WAY NORMALLY CLOSE	1	
		228128009	SEAL KIT	1	
2		296251268	POPPET-N/C	1	
		240324003	SEAL KIT	1	
3		236494005	PLUG-SAE	1	
4		251112005	COIL - 10 DL 12V/SPL	1	
5		282515007	NUT	1	
6		296251284	NUT - RAIN PROOF COIL	1	
7		251117009	COIL - #8	1	
8		240324011	PLUG-SAE	1	
9		NSS	BLOCK - BODY	1	Not Sold Separately
10		291758001	VALVE - HYD. ENABLE	1	Included All Items In This Figure

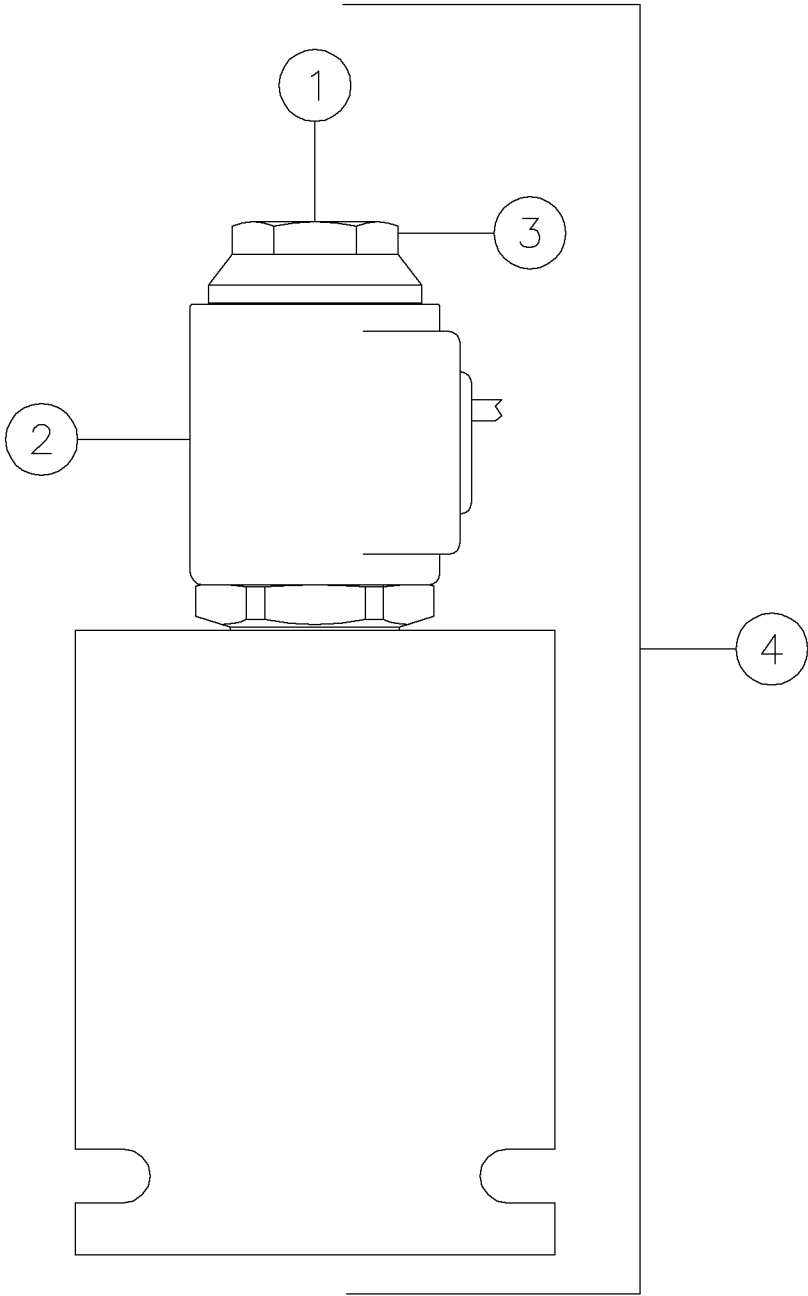
Valve-2 Pos. 3 Way W/Deutsch Fig 13-18



Valve-2 Pos. 3 Way W/Deutsch Fig 13-18

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		278845003	CARTRIDGE - SOLENOID	1	
		110467003	SEAL KIT	1	
2		251117009	COIL - #8	1	
3		280624001	NUT - RAIN PROOF COIL	1	
		240324003	SEAL KIT	1	
4		291768001	VALVE - 2 POS. 3 WAY W/ DEUTSCH	1	

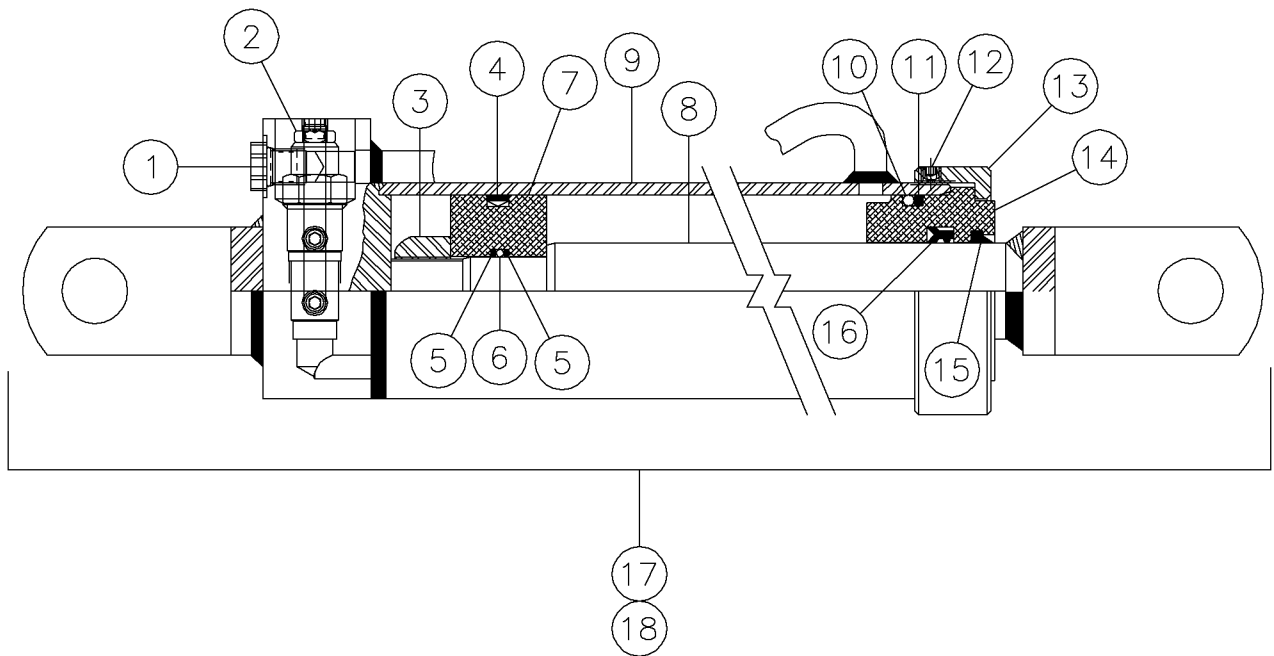
Valve Components 2 Pos. 4 Way Fig 13-19



Valve Components 2 Pos. 4 Way Fig 13-19

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		282525002	SPOOL - 4 WAY, 2 POS.	1	
		246435009	SEAL KIT	1	
2		251117009	COIL - #8	1	
3		280624001	NUT - RAIN PROOF COIL	1	
4		282525001	VALVE - 2P4W HF990725	1	

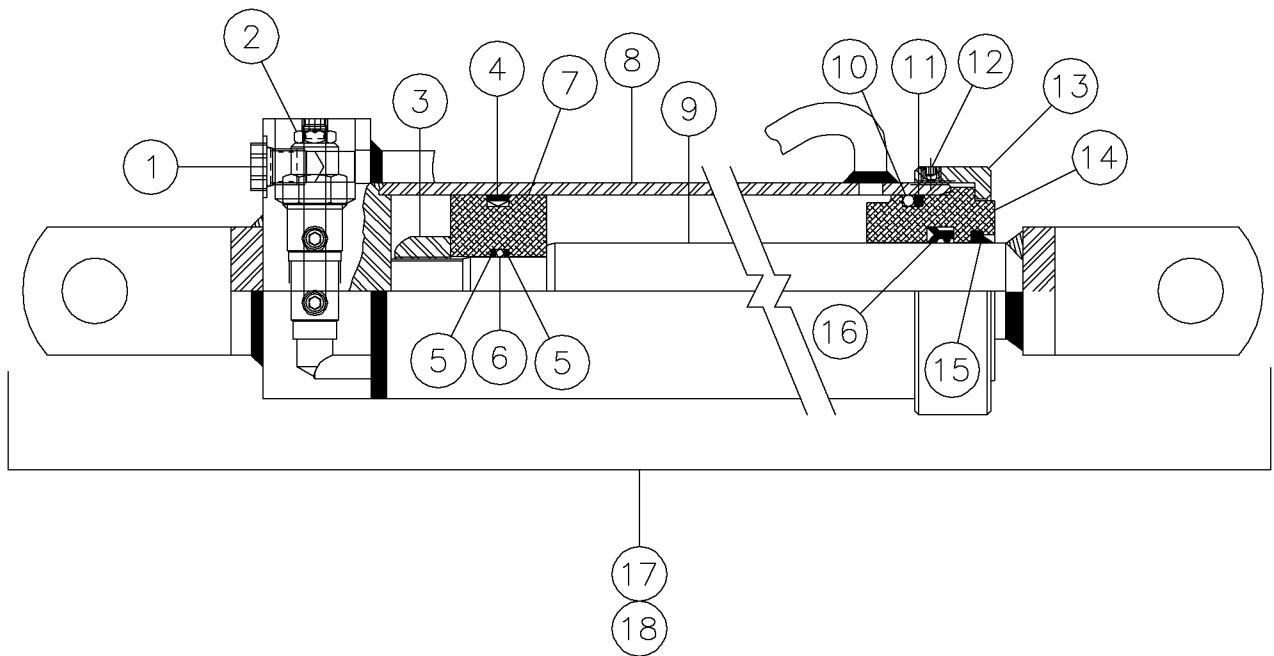
Hydraulic Outrigger Cylinder Fig 13-20r01



Hydraulic Outrigger Cylinder Fig 13-20r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2006		Update In Illustration.
1		223998003	O-RING	2	
2		202529001	VALVE CARTRIDGE-COUNTERBALANCE	1	
		58035007	REPAIR KIT	1	
3		218496007	LOCK NUT	1	
4		200780001	UNI-RING 12G-300220-312	1	
5		208331001	RING-BACK UP	2	
6		208332001	O-RING	1	
7		209060001	PISTON	1	
8		224278005	ROD ASSEMBLY	1	
9		224278003	BARREL ASSEMBLY	1	
10		218021011	O-RING	1	
11		209057001	WASHER-BACK UP	1	
12		219125011	NT SH SET SCREW	1	
13		218496013	THREADED CAP	1	
14		207403005	CAP HEAD-THREAD	1	
15		200808001	WIPER 52-1500	1	
16		209058001	U CUP-DOUBLE LIP	1	
17		224278001	CYL 3"X40 XCX W/ CB VALVE	1	
18		207403009	SEAL KIT	1	

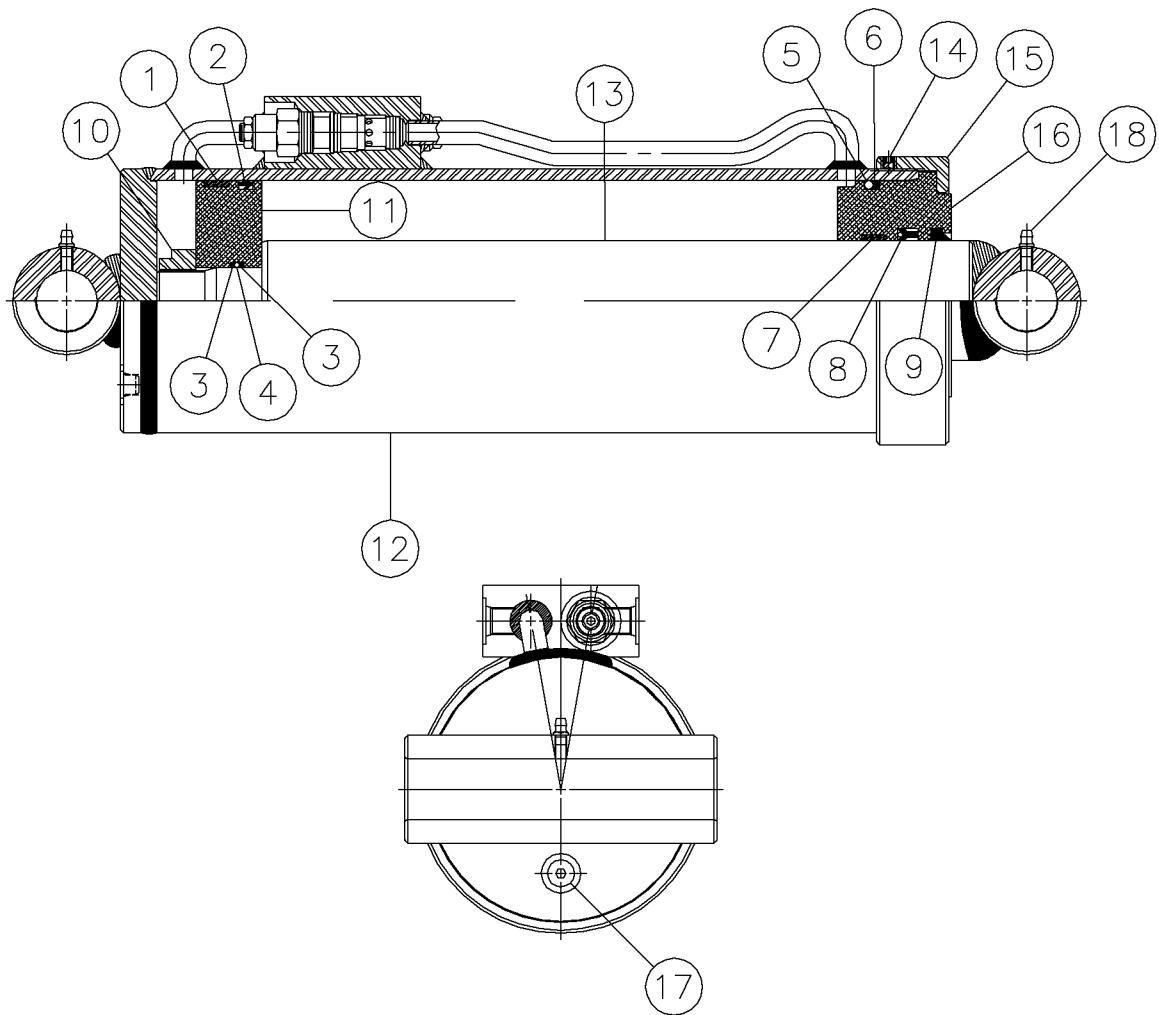
Hydraulic Outrigger Cylinder Fig 13-20



Hydraulic Outrigger Cylinder Fig 13-20

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		223998003	O-RING	2	
2		202529001	VALVE CARTRIDGE-COUNTERBALANCE	1	
		58035007	REPAIR KIT	1	
3		218496007	LOCK NUT	1	
4		200780001	UNI-RING 12G-300220-312	1	
5		208331001	RING-BACK UP	2	
6		208332001	O-RING	1	
7		209060001	PISTON	1	
8		224278005	ROD ASSEMBLY	1	
9		224278003	BARREL ASSEMBLY	1	
10		218021011	O-RING	1	
11		209057001	WASHER-BACK UP	1	
12		219125011	NT SH SET SCREW	1	
13		218496013	THREADED CAP	1	
14		207403005	CAP HEAD-THREAD	1	
15		200808001	WIPER 52-1500	1	
16		209058001	U CUP-DOUBLE LIP	1	
17		224278001	CYL 3"X40 XCX W/ CB VALVE	1	
18		207403009	SEAL KIT	1	

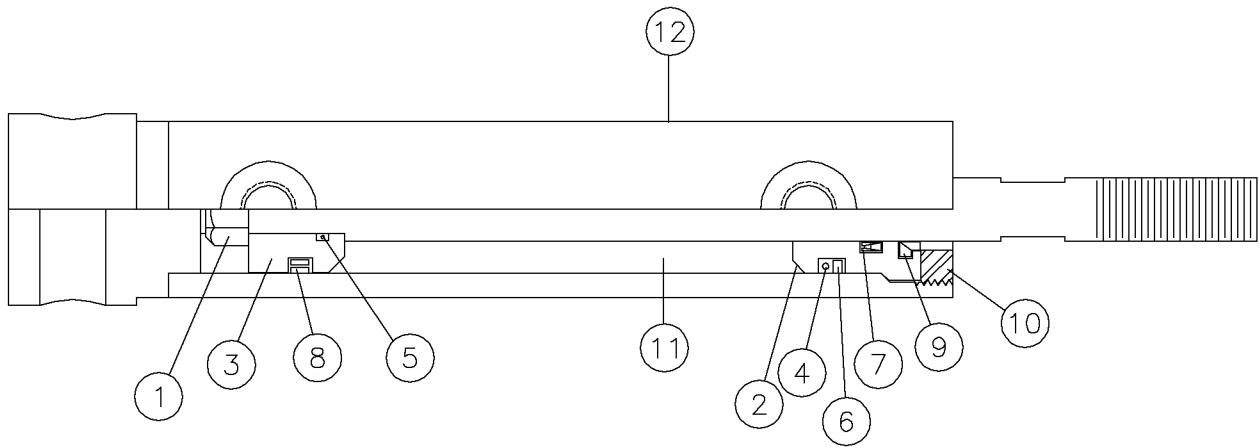
Hydraulic Rack Lift Cylinder Fig 13-21



Hydraulic Rack Lift Cylinder Fig 13-21

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		NSS	WEAR RING	1	NSS=(Not Sold Separately)
2		NSS	PSP SEAL	1	NSS=(Not Sold Separately)
3		NSS	BACK - UP - RING	2	NSS=(Not Sold Separately)
4		NSS	O - RING	1	NSS=(Not Sold Separately)
5		NSS	O - RING	1	NSS=(Not Sold Separately)
6		NSS	BACK - UP - RING	1	NSS=(Not Sold Separately)
7		NSS	WEAR RING	1	NSS=(Not Sold Separately)
8		NSS	LOADED U-CUP	1	NSS=(Not Sold Separately)
9		NSS	ROD WIPER	1	NSS=(Not Sold Separately)
10		296251001	LOCK NUT	1	
11		296251002	PISTON	1	
12		296251003	BARREL ASSEMBLY	1	
13		296251004	ROD ASSEMBLY	1	
14		223998013	SET SCREW	1	
15		202538001	CAP-5X7 1/2 CYL THREADED	1	
16		296251005	THREAD CAP HEAD	1	
17		296251007	VALVE	1	
18		598001	FITTING-1/4" NF ST GREASE ZERK	2	
		280797001	CYLINDER - 5.0 X 12 X 2 1/2 ROD		Included All Items In This Figure
		296251006	SEAL KIT		Included Ref. No's 1-9

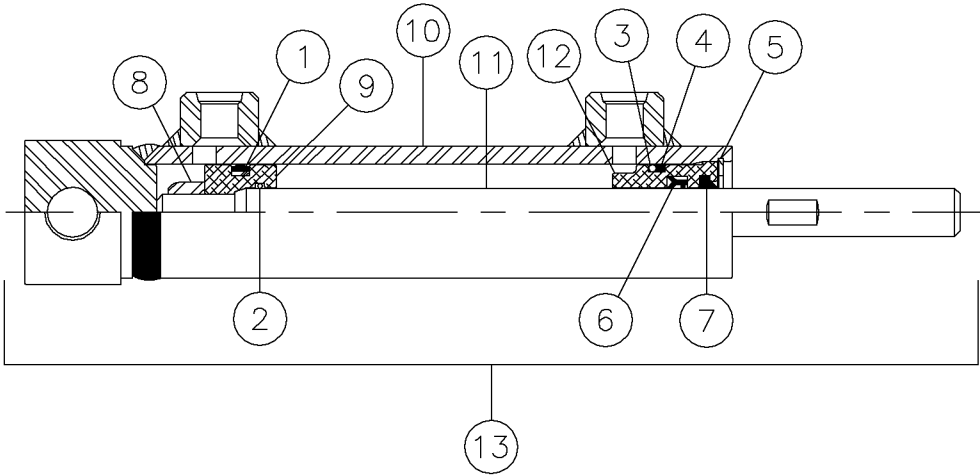
Hydraulic Water Pump On/Off Cylinder (S/N 149-) Fig 13-22r01



Hydraulic Water Pump On/Off Cylinder (S/N 149-) Fig 13-22r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	February, 2007		Change Cylinder
1			NUT	1	
2			HEAD	1	
3			PISTON	1	
4		NSS	O-RING	1	
5		NSS	O-RING	1	
6		NSS	BACKUPS	3	
7		NSS	BS SEAL	1	
8		NSS	PSP SEAL	1	
9		NSS	DUST SEAL	1	
10		NSS	COLLAR	1	
11		296285210	SHAFT	1	
12			BARREL WITH CLEVIS AND PORTS	1	
	*	296285658	CYLINDER 1 X 3 1/2		Inc. All Items In Figure (S/N149-)
		296285211	SEAL KIT		Inc Items 4 thru 9
		NSS	NOT SOLD SEPARATELY		

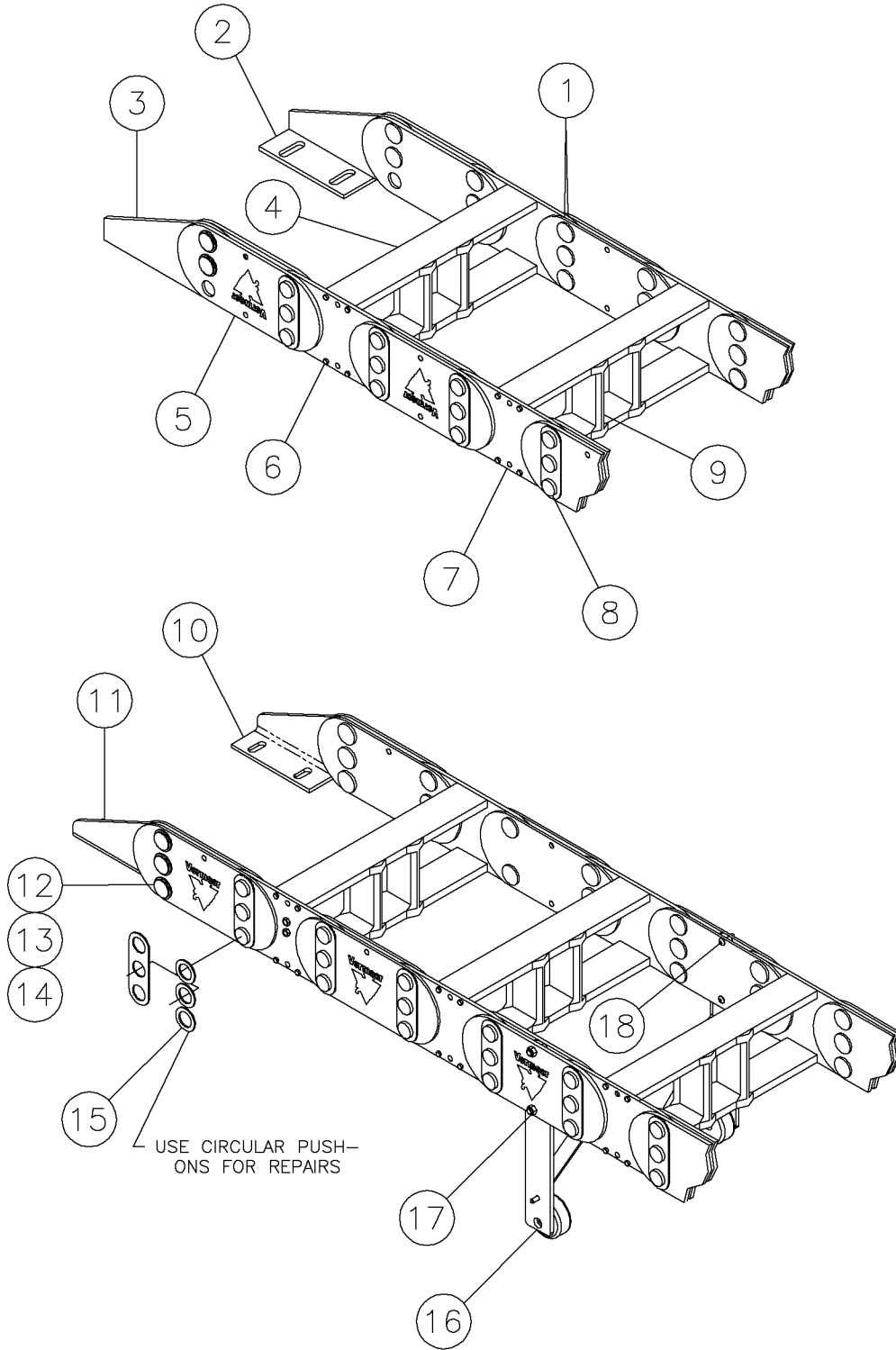
Hydraulic Water Pump On/Off Cylinder Fig 13-22



Hydraulic Water Pump On/Off Cylinder Fig 13-22

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		NSS	PSP SEAL	1	
2		NSS	O - RING	1	
3		NSS	O - RING	1	
4		NSS	BACKUP RING	1	
5		NSS	INTERNAL SNAP RING	1	
6		NSS	DOUBLE LIP U-CUP	1	
7		NSS	ROD WIPER	1	
8		296254582	LOCKNUT	1	
9		296254583	PISTON	1	
10		296254584	BARREL ASSEMBLY	1	
11		296254585	ROD ASSEMBLY	1	
12		296254586	SNAP RING HEAD	1	
13		287591001	CYLINDER - 1 X 3-1/2	1	Included All Items In This Figure
		296254587	SEAL KIT	1	Included Ref. No's 1-7

Hose Carrier Fig 13-23



Hose Carrier Fig 13-23

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		234256011	PT45E ANTI-FRICTION DISC	144	
2		234256005	PT45E MOUNTING BRACKET ASSY(R)	1	
3		234256003	PT45E MOUNTING BRACKET ASSY (L)	1	
4		296278053	PT45E ALUM. CHANNEL CAR'R 14.00" LG	33	
5		234256007	PT45E OUTER LINK W/VERMEERLOGO	72	
6		215252017	SCREW-WHIZ LOCK	130	
7		296278052	PT45E INNER LINK 15.00 RADIUS	68	
8		234256017	PT45E HINGE PIN-PUSH ON FASTNR	204	
9		296251020	PT45E AC SEPERATOR	16	
10		296278054	PT45E MOUNTING BRACKET RH FIXED END	1	
11		296278055	PT453 MOUNTING BRACKET LH FIXED END	1	
12		225192011	WASHER - BRACKET SHIM	6	
13		225192013	RING - BRACKET RETAINING	6	
14		225192009	PIN - BRACKET HINGE	6	
15		296251021	PT45E ONE-PIECE PUSH ON	68	
16		296278056	PT45E VERMEER WHEEL BRACKET ASSY	6	
17		296251009	NUT - .25-20 ZINC ESAN	24	
18		296251010	SCREW - BHSCS .25-20 X .875	24	

Rotation Control Grip (Left) Fig 13-24

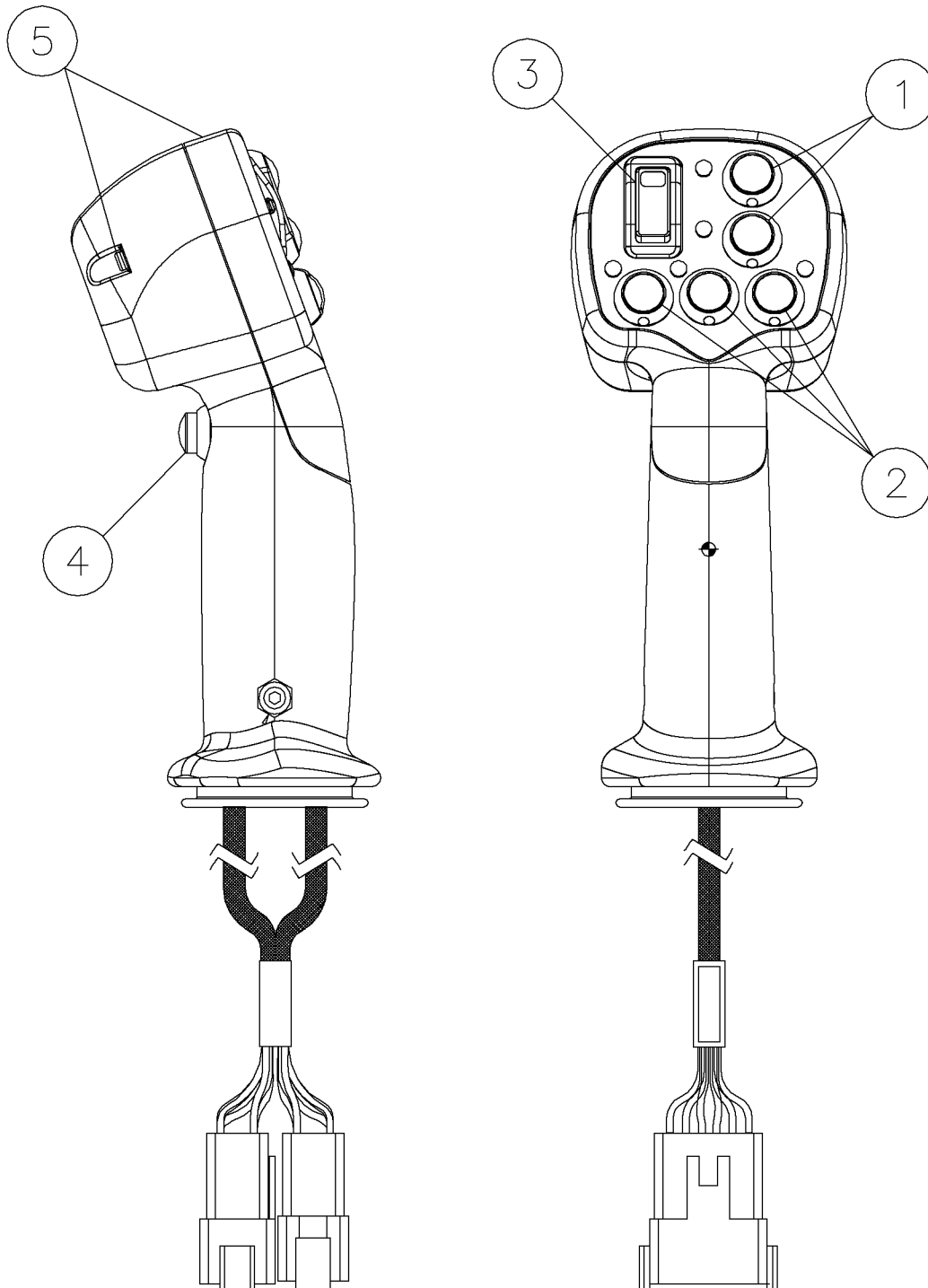


Illustration No. 296273907AC

Rotation Control Grip (Left) Fig 13-24

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	June, 2007		Added Part Number
1		296271136	SWITCH	2	
	*	296271135	BOOT -RUBBER	2	
2		296271137	SWITCH	3	
	*	296271135	BOOT -RUBBER	3	
3		296271141	ROCKER SWITCH	1	
4		296271138	SWITCH	1	
5	*	296278211	FACE PLATE LEFT COVER	1	
	*	296278212	SCREW	2	
		296273907	HANDLE GRIP ASSEMBLY - LEFT JOYSTICK		Includes All Items In Figure

Thrust Control Grip (Right) Fig 13-25

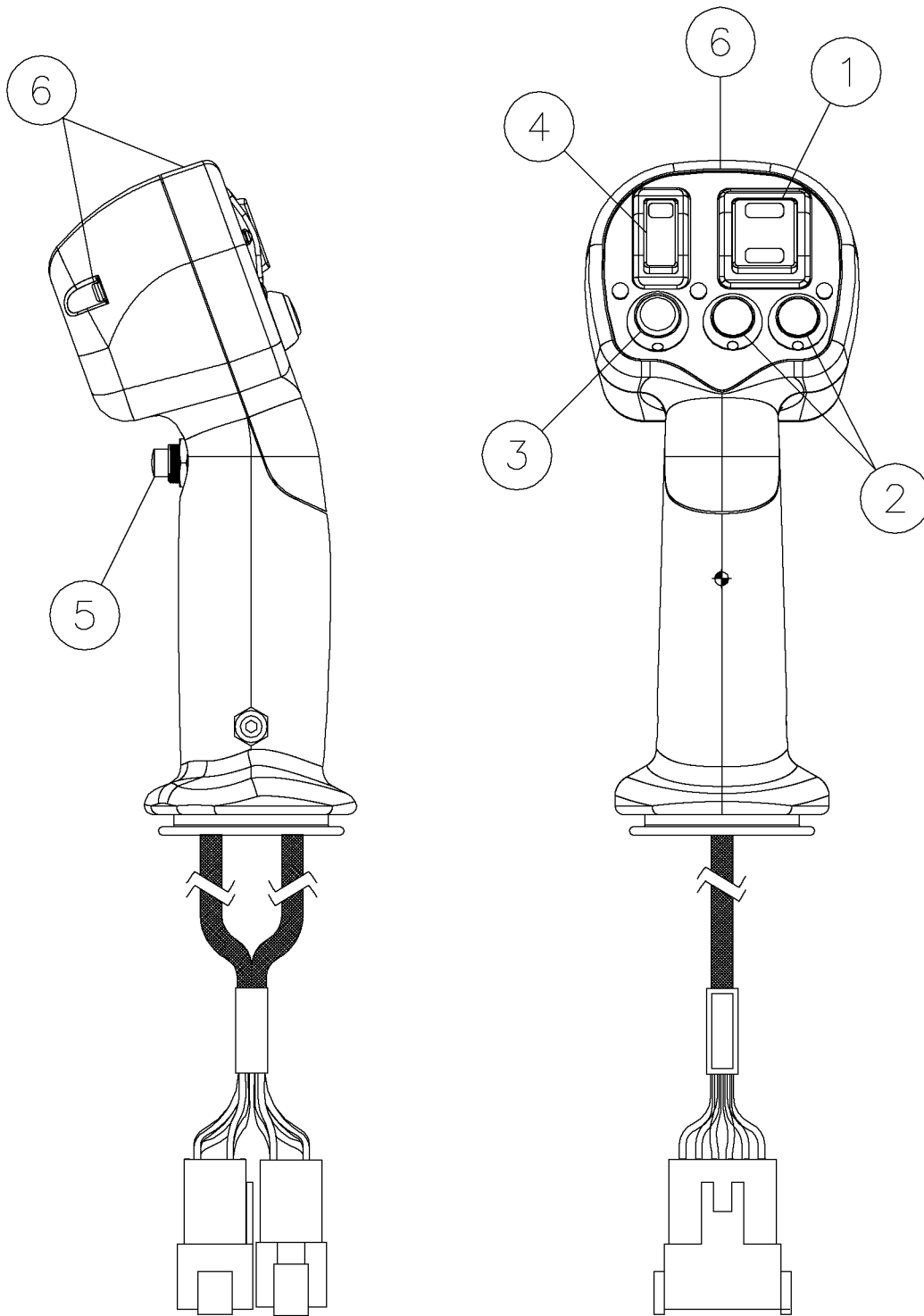
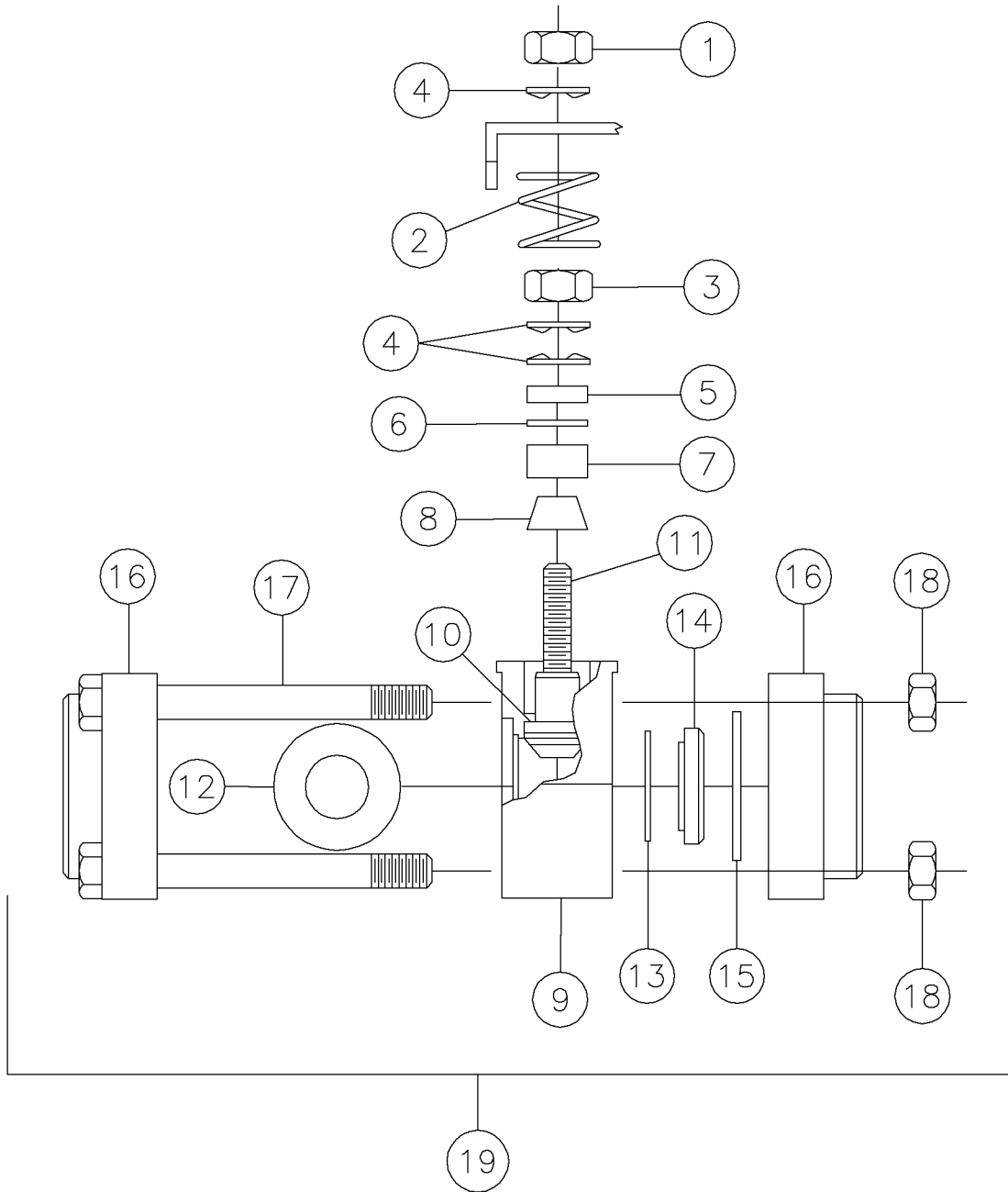


Illustration No. 296273908AC

Thrust Control Grip (Right) Fig 13-25

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	June, 2007		Added Part Number
1		296271142	ROCKER SWITCH	1	
2		296271137	SWITCH	2	
	*	296271135	BOOT -RUBBER	2	
3		296271139	SWITCH	1	
	*	296271135	BOOT -RUBBER	1	
4		296271141	ROCKER SWITCH	1	
5	*	296271140	SWITCH	1	
6	*	296285231	FACE PLATE- CONTROL	1	
	*	296278212	SCREW	2	
		296273908	HANDLE GRIP ASSEMBLY - RIGHT JOYSTICK		Includes All Items In Figure

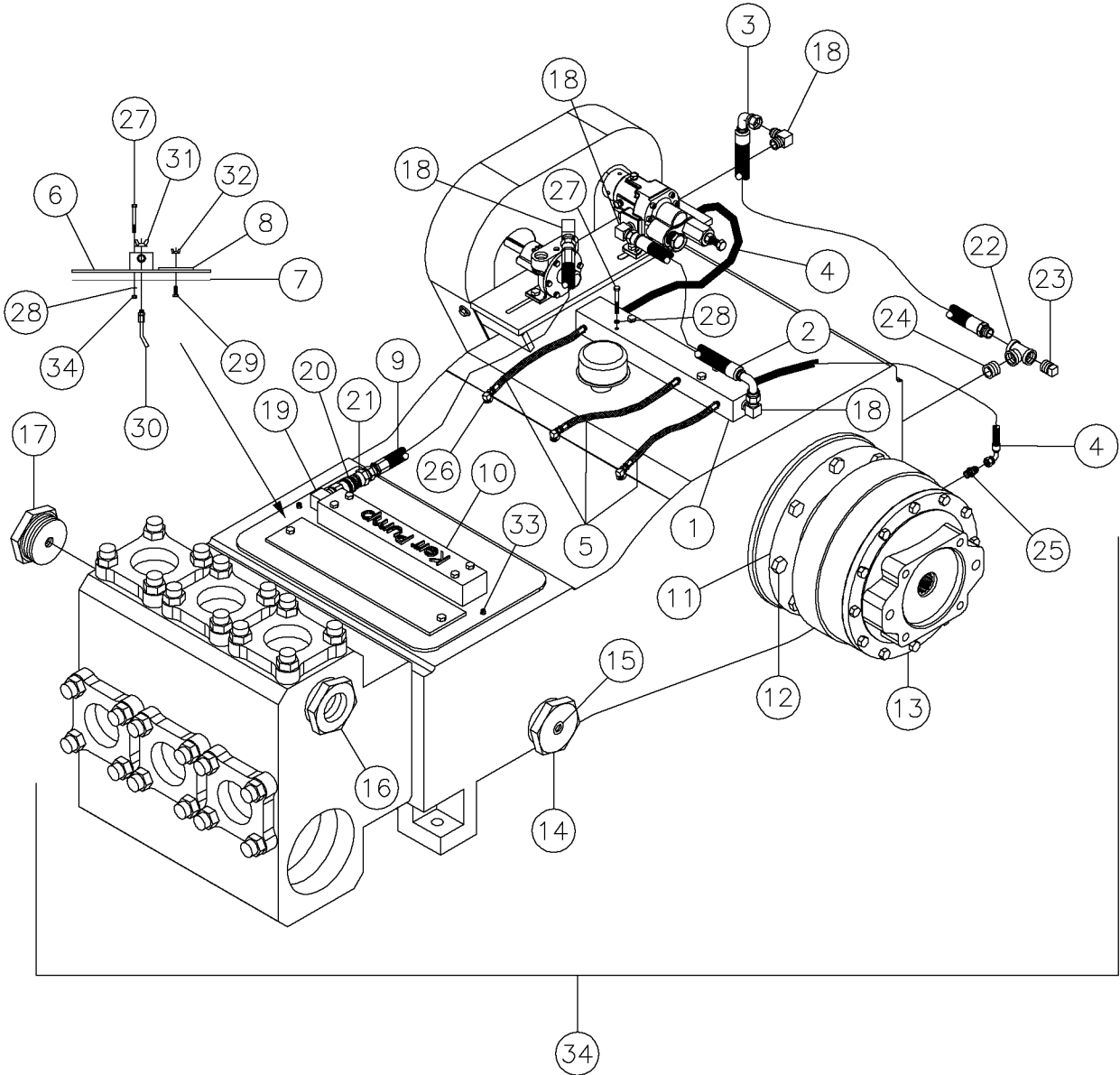
Water Shut-Off Valve Components Fig 13-26



Water Shut-Off Valve Components Fig 13-26

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		287053002	NUT - STEM	1	
2		287053003	SPRING - GROUNDING	1	
3		287053004	NUT - STEM	1	
4		287053005	SPRING - STEM	3	
5		287053006	GLAND	1	
6		287053007	SUPPORT - PACKING	1	
7		287053008	PACKING - TOP	1	
8		287053009	PACKING - BOTTOM	1	
9		287053010	BODY - CYLINDER	1	
10		287053011	BEARING - STEM	2	
11		287053012	STEM	1	
12		287053013	BALL	1	
13		287053014	RING - SUPPORT	2	
14		287053015	SEAT/SEAT SPRING	2	
15		287053016	O-RING	2	
16		287053017	FLANGE	2	
17		287053018	CAP - SCREW	4	
18		287053019	NUT - BODY	8	
19		287053001	VALVE - 1-1/2" BALL (2200 PSI)	1	Included Ref. No's 1-18
		287053020	KIT - MAINTENANCE	1	Included Ref. No's 4-8,10&14-15

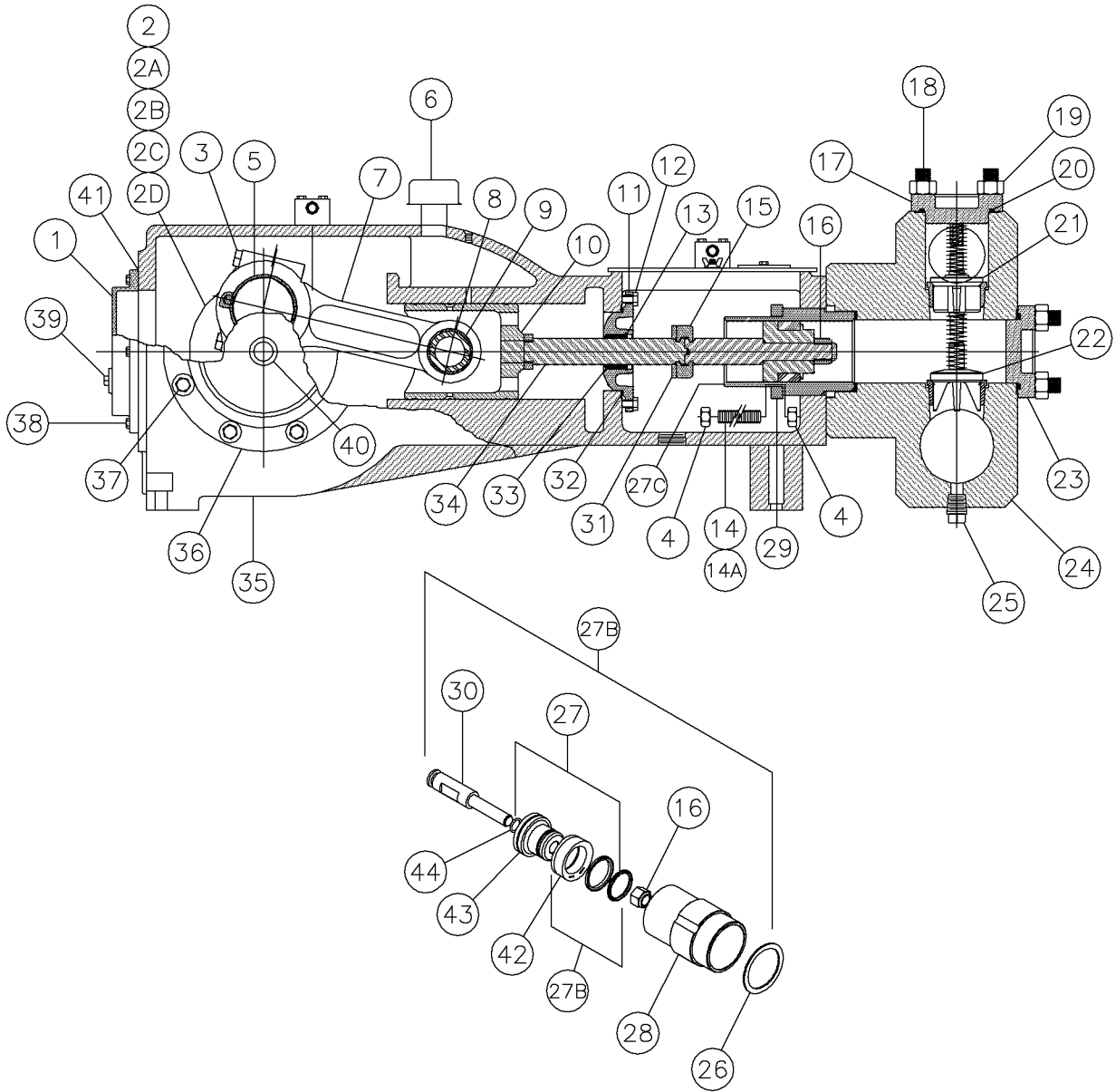
Water Pump - Kerr 200 GPM (KA5500PT) - Outer Fig 13-27



Water Pump - Kerr 200 GPM (KA5500PT) - Outer Fig 13-27

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		287030054	MANIFOLD - OIL	1	
		287030055	GASKET - OIL MANIFOLD	1	
2		287030056	HOSE - 8FS JIC/8FS JIC 90	1	
3		287030057	HOSE - 8FS JIC/ 1/2 M STR	1	
4		287030058	HOSE - 4FS JIC 90/ 1/8 M STR	2	
5		287030059	HOSE - 4FS JIC 90/ 1/8 M STR	3	
6		287030060	COVER - PISTON CHAMBER	1	
7		287030061	GASKET - PISTON CHAMBER COVER	1	
8		287030062	COVER - GLASS INSPECTION	1	
9		287030063	HOSE - 8FS JIC ST / 1/2 M ST	1	
10		287030005	MANIFOLD - WATER	1	
11		287030075	HOUSING - BRG. HYD. DRIVE #8	1	
12		235721001	BOLT-1/2-13X1 1/2 GR8 ZINC PLT	8	
13		277780050	GEARBOX - #8 KIT 7.07 RATIO AUBURN	1	Breakdown Fig. 13-30
14		225838001	BUSHING-2X3/4 NPT REDUCER POLY	2	
15		735001	3/4" COUNTERSUNK PIPE PLUG	2	
16		287030064	BUSHING - 3" X 2" HEX	1	
17		287030065	BUSHING - 3" X 1/2" HEX	1	
18		53832001	1/2M PIPE-#8M JIC 90 DEG.	4	
19		904831001	FITTING 1/2MNPT X 1/2MNPT 90	1	
20		287030069	COUPLING - 3/8" QUICK	1	
21		287030076	QUICK CONNECT - 3/8"	1	
22		725003	1/2" PIPE TEE BLACK	1	
23		732007	1/2" PIPE PLUG BLACK STEEL	1	
24		707003	1/2" NPT HEX NIPPLE	1	
25		97491001	FITTING-1/8M X 4M JIC STR.CONN	2	
26		287030070	FITTING - INJECTOR	3	
27		250531001	BOLT-1/4-20 X 2 GR8 HEX Y/ZINC	8	
28		480003	WASHER-1/4 S/T LOCK	8	
29		235734001	BOLT-1/4-20X3/4 GR8 ZINC PLTD	2	
30		287030066	FITTING - WATER JET	3	
31		287030067	WING NUT - 5/16 - 18 UNC	2	
32		287030068	WING NUT - 1/4 - 20 UNC	2	
33		524005	SSS 5/16-18X1	2	
34		287030074	GASKET KIT - DA-5500PT GRBUILD	1	

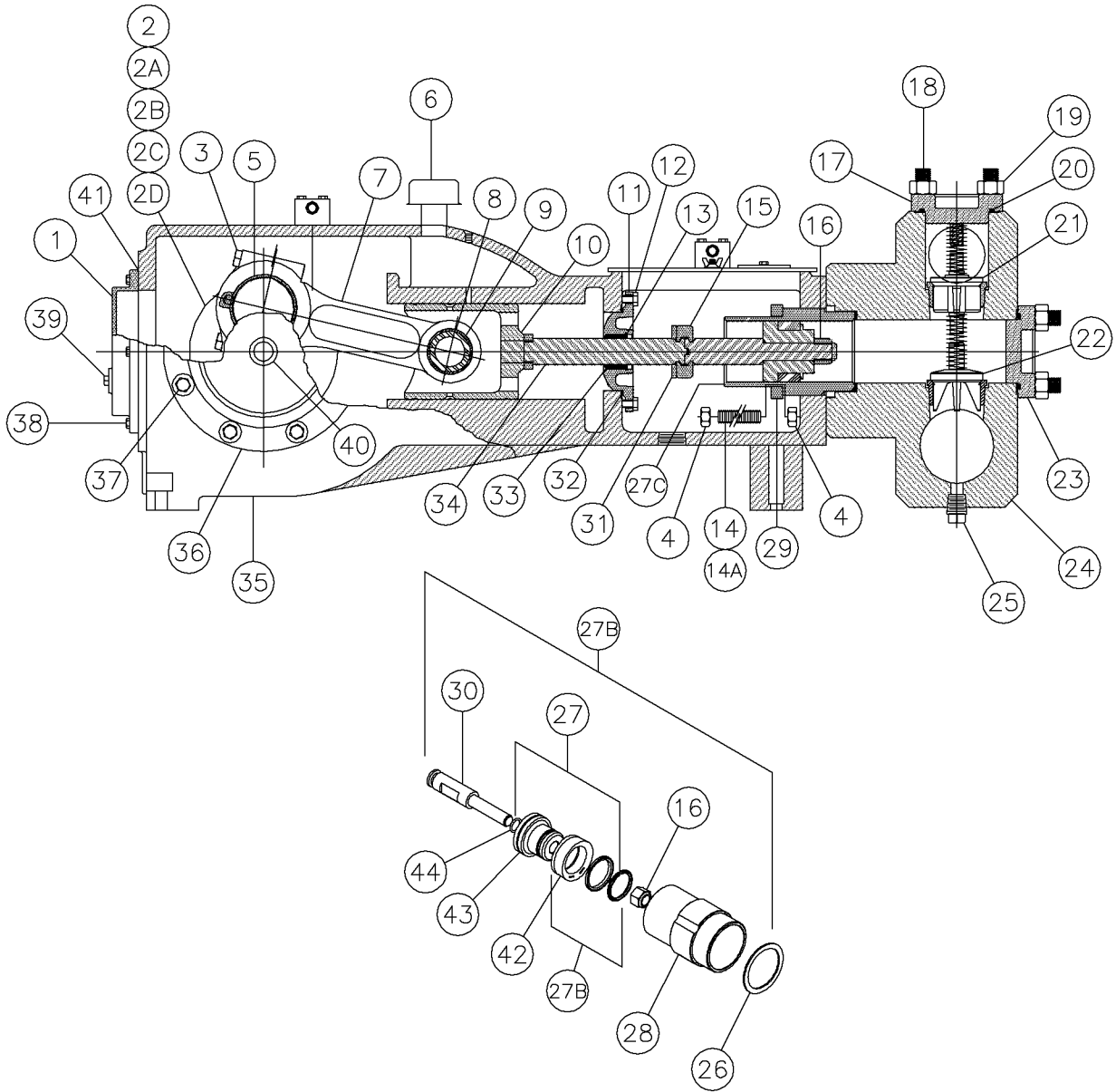
Water Pump - Kerr 200 GPM (KA5500PT) - Power/Fluid Ends Fig 13-28



Water Pump - Kerr 200 GPM (KA5500PT) - Power/Fluid Ends Fig 13-28

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		287030002	PAN COVER	1	
2		287030003	CRANKSHAFT - 21 T SPLINE	1	
2A		287030038	BEARING - MAIN	2	
2B		287030051	SEAL - OIL	1	
2C		287030039	GASKET	1	
2D		287030052	SHIM KIT	1	Various Thicknesses
3		287030004	BOLT	3	
4		287030079	NUT - 5/8-11 SS	24	
5		287030006	BUSHING - CONN ROD (STD)	3	
6		287030007	CAP - OIL FILL/BREATHER	1	
7		287030008	ROD - CONNECTING (INSERTED)	3	
8		287030009	PIN - WRIST	3	
9		287030010	BUSHING - WRIST PIN	3	
10		287030011	CROSS HEAD	3	
11		287030012	PONY ROD GLAND ONLY	3	
12		287030013	BOLT - 7/16-14 X 1-1/4 SS	6	
13		287030014	SNAP RING	3	
14		287030077	STUD - FLUID END/LINER	10	
14A		287030078	STUD - FLUID END/LINER (LINE UP)	2	
15		287030016	CLAMP	3	
16		287030017	LOCK NUT	3	
17		287030018	CAP - TOP COVER	3	
18		287030019	STUD	24	
19		287030020	NUT	24	
20		287030021	O-RING	6	
21		287030022	VALVE - DISCHARGE (COMPLETE)	3	
22		287030023	VALVE - SUCTION (COMPLETE)	3	
23		287030024	COVER - END CAP	3	
24		287030025	VESSEL - FLUID END	1	
25		287030026	PLUG - BRASS DRAIN	1	
26		287030027	GASKET - LINER	3	
27		287030028	PISTON - 3-1/2"	3	
27A		287030098	PISTON CUP KIT	3	
27B		296251940	LINER ASSY - 3 1/2" CERAMIC (1)	3	
27C		296251936	LINER ASSY - 3 1/2 CERAMIC (SET OF 3)	1	
28		287030029	LINER - 3-1/2" CERAMIC	3	
			Figure Continued On The Following Page		

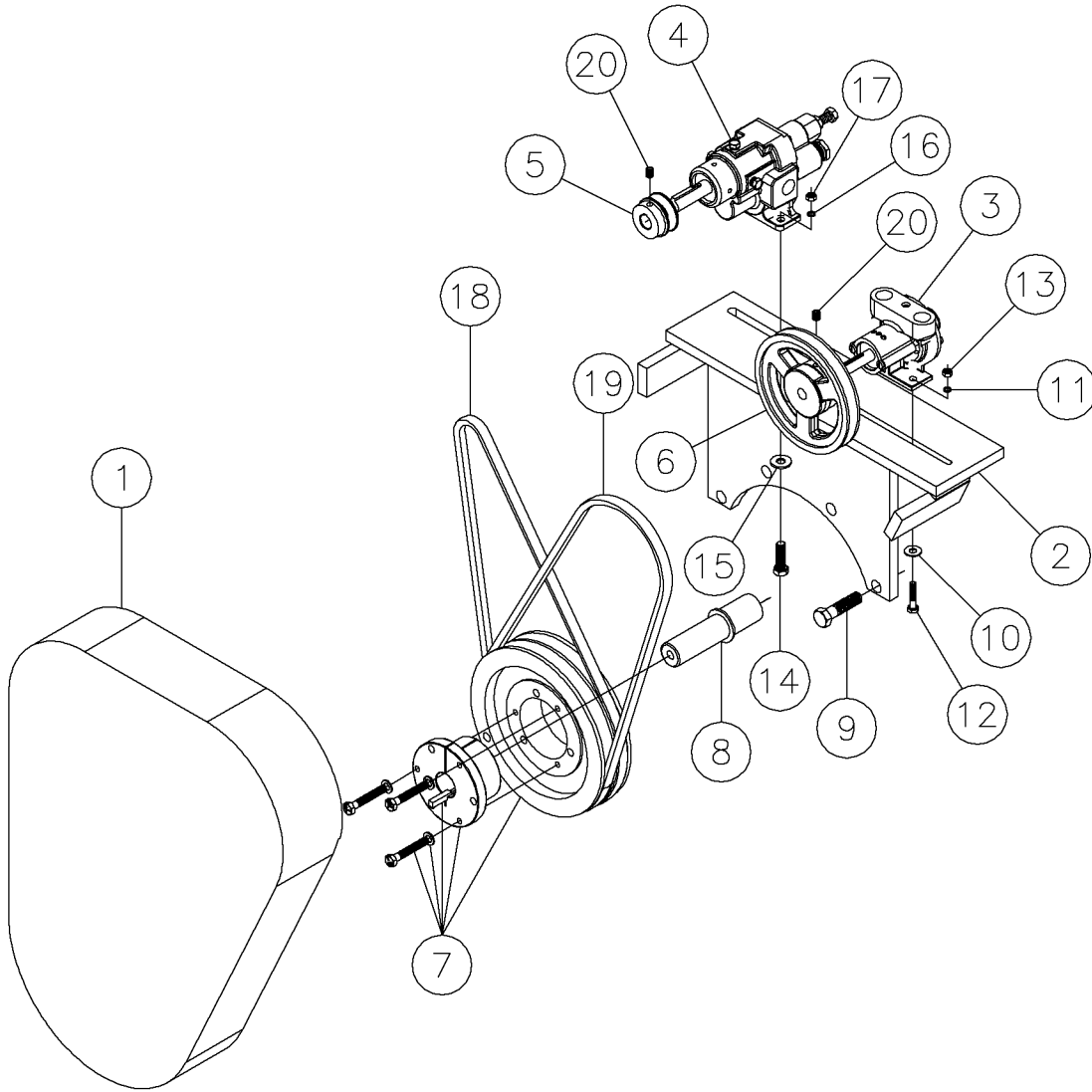
Water Pump - Kerr 200 GPM (KA5500PT) - Power/Fluid Ends (Cont.) Fig 13-28



Water Pump - Kerr 200 GPM (KA5500PT) - Power/Fluid Ends (Cont.) Fig 13-28

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
29		287030030	RETAINER - LINER	3	
30		287030031	ROD - PISTON EXTENSION	3	
31		287030032	SPLASH GUARD - PONY ROD	3	
32		287030033	GASKET - PONY ROD GLAND	3	
33		287030034	SEAL SET (INCL. FOUR SEALS)	3	
34		287030035	ROD - PONY PISTON	3	
35		287030036	CASE - PUMP	1	
36		287030037	HOUSING - BEARING	1	
37		235721001	BOLT-1/2-13X1 1/2 GR8 ZINC PLT	8	
38		238209001	BOLT-5/16-18X1 GR8 HEX ZINC YC	19	
39		287030040	PLUG - BRASS OIL LEVER	1	
40		287030053	SEAL - OIL	1	
41		287030015	GASKET - PAN COVER	1	
42		296251932	CUP - PISTON (SET OF 3)	1	
43		287078021	PISTON - BODY ONLY	3	
44		296251941	O - RING	3	

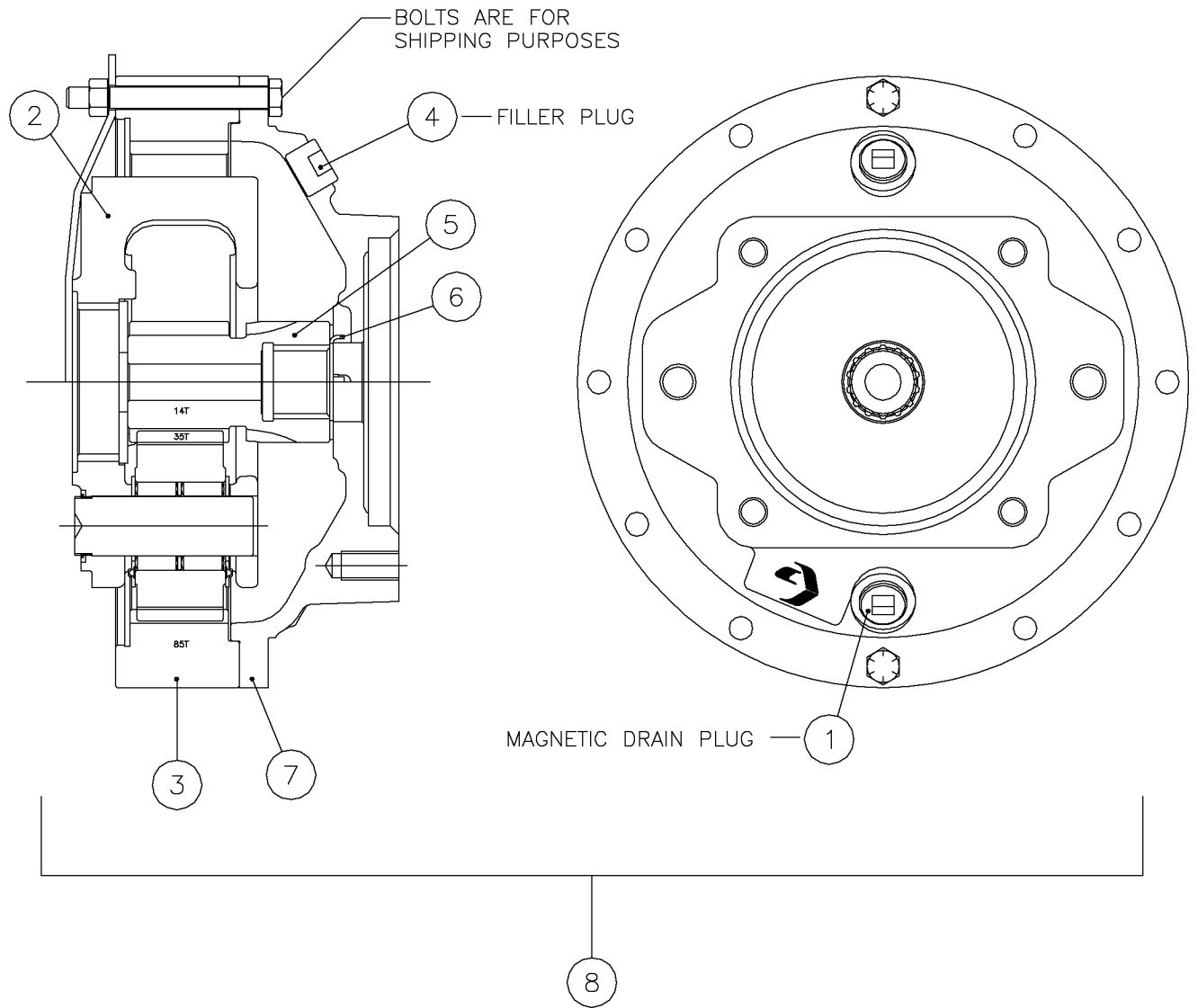
Water Pump - Kerr 200 GPM (KA5500PT) - Piston Wash Pump Drive Fig 13-29



Water Pump - Kerr 200 GPM (KA5500PT) - Piston Wash Pump Drive Fig 13-29

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		287030041	BELT GUARD - PUMP DRIVE	1	
2		287030042	BRACKET - OIL/WATER PUMP	1	
3		287030043	PUMP - BRONZE WATER	1	
		287030048	REPAIR KIT (INCL. IMPELLER)	1	
4		287030044	PUMP - HYD. CAST IRON	1	
			REPAIR KIT	1	
5		287030045	SHEAVE - OIL PUMP	1	
6		287030046	SHEAVE - WATER PUMP	1	
7		287030047	SHEAVE - CRANKSHAFT	1	
8		NSS	SHAFT-AUXILIARY (COMES W/ CRANKSHAFT)	1	NSS = (Not Sold Separately)
9		235718001	BOLT-1/2-13X2 GR8 HEX ZINC PLT	4	
10		250008001	BOLT 1/4-20 X 1 1/4 ZINC PL	2	
11		480003	WASHER-1/4 S/T LOCK	2	
12		485003	WASHER-1/4 FLAT	2	
13		235732001	NUT - HEX - .25 - 20 - GR8 - YZ	2	
14		235736001	BOLT-3/8-16X1 1/4 ZINC PLTD	2	
15		485007	WASHER-FLATSTD-.38-.44X1.00-.08-CZ	2	
16		480007	WASHER-3/8 S/T LOCK	2	
17		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	2	
18		287030049	BELT - HYD. PUMP	1	
19		287030050	BELT - WATER PUMP	1	
20		528001	SS-3/8-16X3/8 BRASS TIP	2	

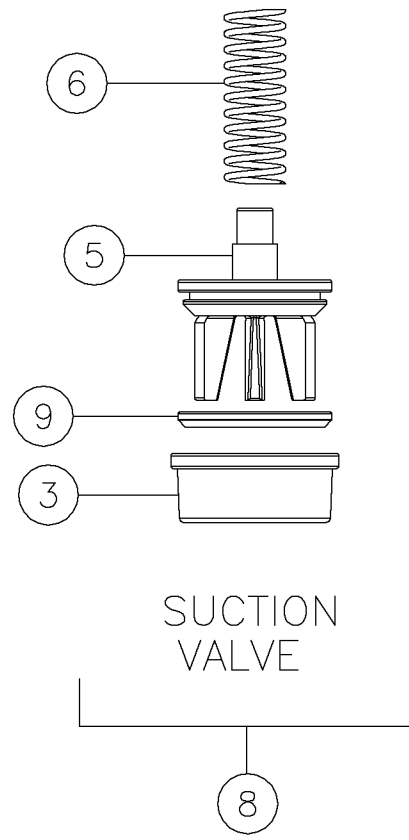
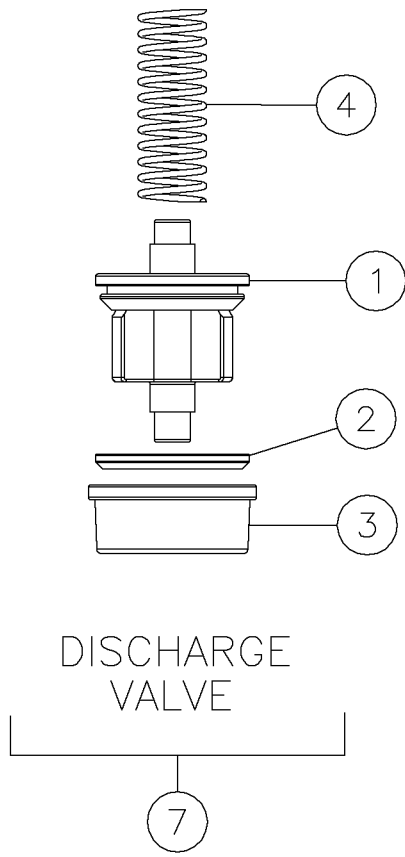
Water Pump - Kerr 200 GPM (KA5500PT) - Gearbox Fig 13-30



Water Pump - Kerr 200 GPM (KA5500PT) - Gearbox Fig 13-30

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		221652035	MAGNETIC PLUG	1	
2		277780052	SEC. CARRIER ASSEMBLY	1	
3		277780053	GEAR - RING	1	
4		221652039	PIPE PLUG	1	
5		277780054	GEAR - SUN	1	
6		131488021	THRUST WASHER	1	
7		277781033	COVER	1	
8		277780050	GEARBOX - #8 KIT 7.07 RATIO BURN	1	Included All Items In This Figure

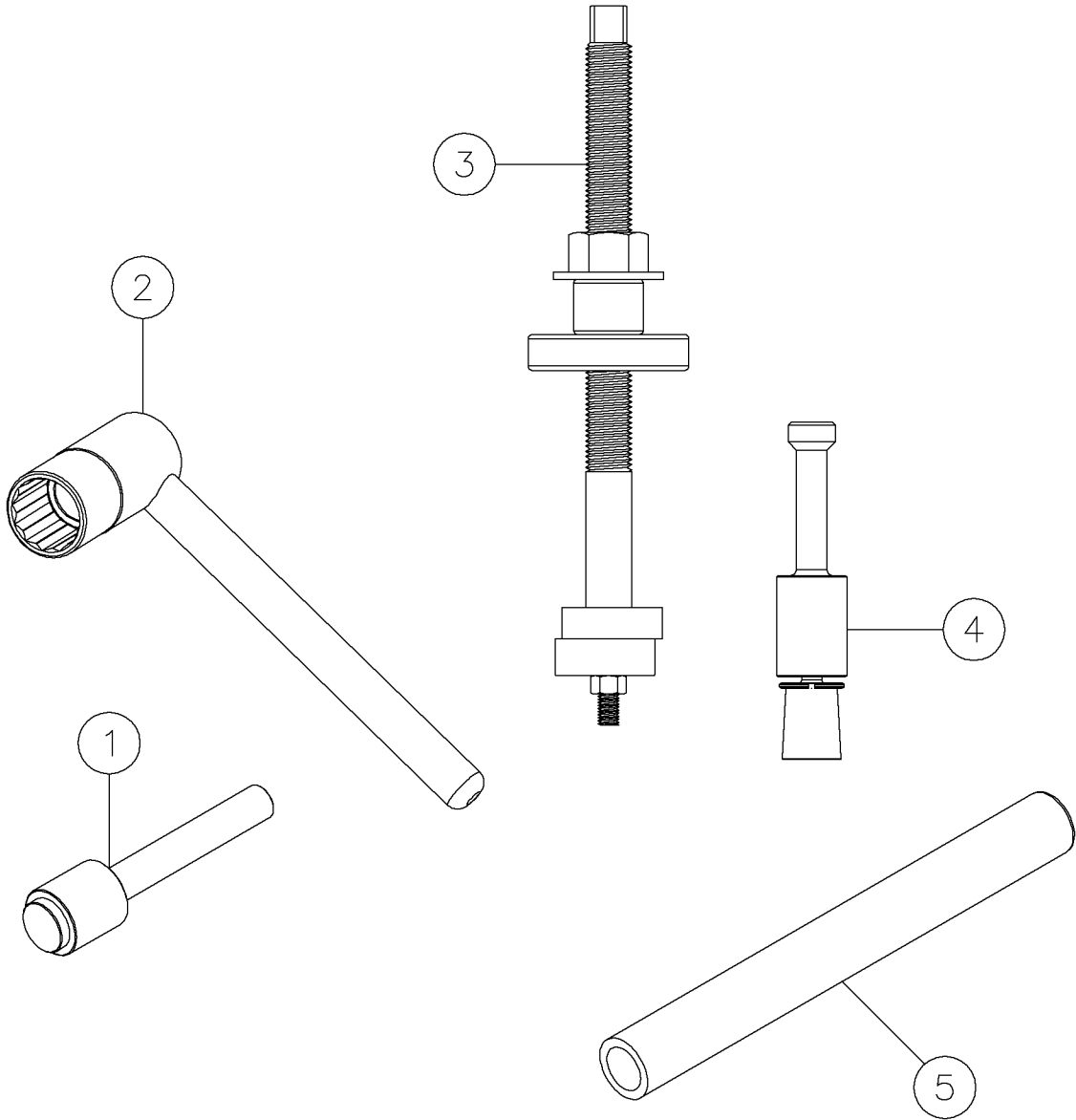
Water Pump - Kerr 200 GPM (KA5500PT) - Suction/Discharge Valve Fig 13-31



Water Pump - Kerr 200 GPM (KA5500PT) - Suction/Discharge Valve Fig 13-31

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		287030080	DISCHARGE VALVE W / INSERT	3	
2		287078027	VALVE INSERT - RED	3	
3		287078028	VALVE SEAT	6	
4		287030081	VALVE SPRING (DISCHARGE) LONG	3	
5		287030082	SUCTION VALVE W/INSERT	3	
6		287030083	VALVE SPRING (SUCTION) SHORT	3	
7		287030022	VALVE - DISCHARGE (COMPLETE)	3	Included Ref. No's 1-4
		296251937	VALVE - DISCHARGE (SET OF 3)	1	
8		287030023	VALVE - SUCTION (COMPLETE)	3	Included Ref. No's 3, 5, 6 & 9
		296251938	VALVE - SUCTION (SET OF 3)	1	
9		296251942	VALVE - INSERT - BLUE	3	

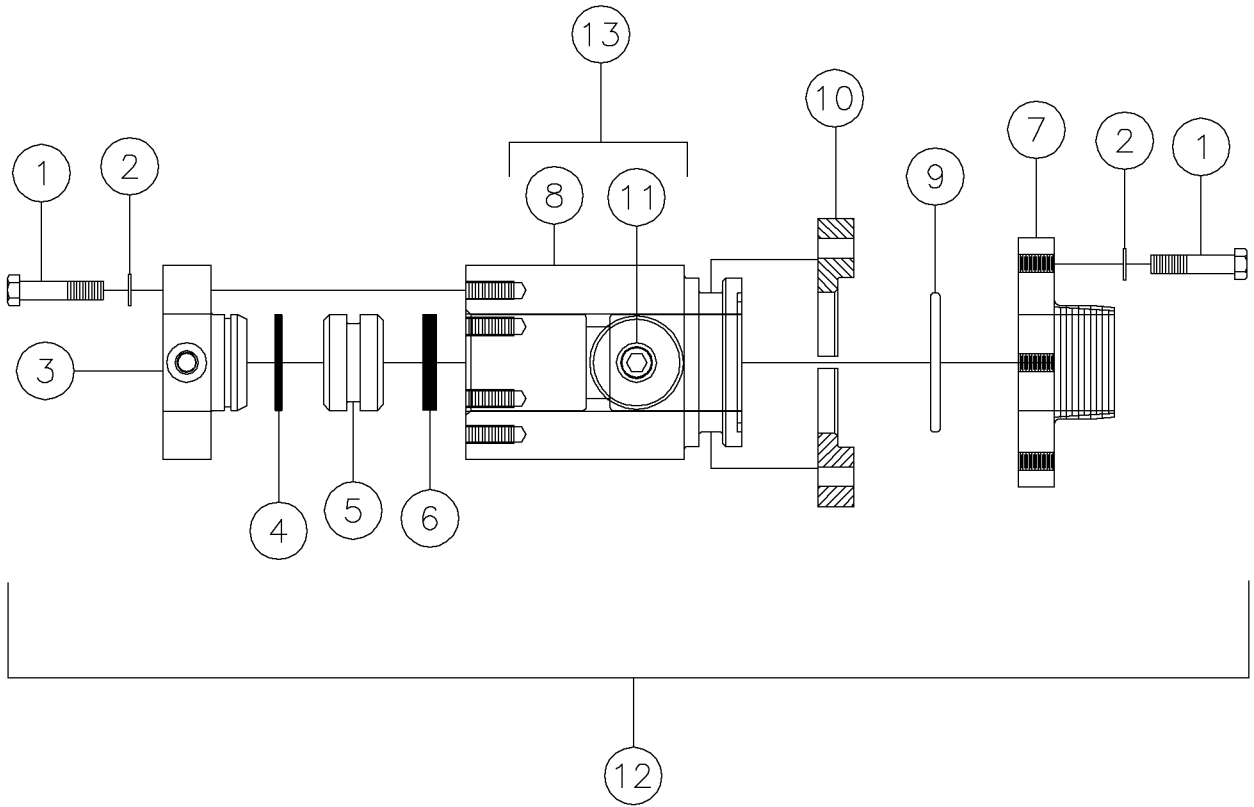
Water Pump - Kerr 200 GPM (KA5500PT) - Special Tools Fig 13-32



Water Pump - Kerr 200 GPM (KA5500PT) - Special Tools Fig 13-32

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		287030071	INSTALLATION TOOL - PONY ROD SEAL	1	
2		287030072	INSTALLATION WRENCH - PONY ROD	1	
3		287030073	VALVE PULLER - WING TYPE	1	
4		296251270	PISTON SNAP RING INSTALLATION TOOL	1	
5		296251278	TOOL-VALVE SEAT SEATING	1	

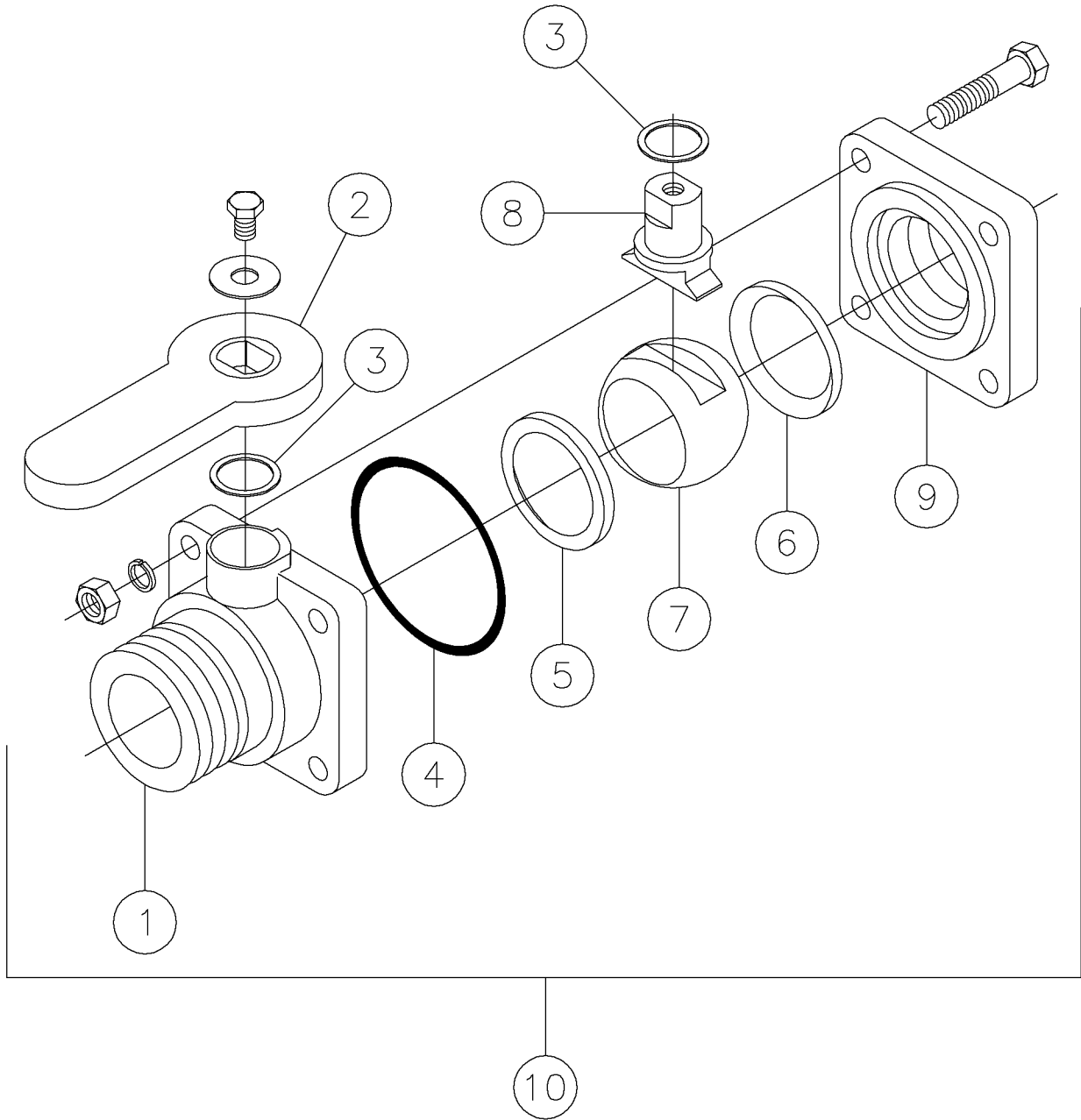
Water Pump - Kerr 200 GPM (KA5500PT) - Outlet Fig 13-33



Water Pump - Kerr 200 GPM (KA5500PT) - Outlet Fig 13-33

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		235720001	BOLT-3/8-16X1 3/4 6R8 ZINC PLT	12	
2		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	12	
3		283637001	ENDCAP-SC115L OUTLET FITTING	1	
4		51163001	O-RING #133	1	
5		239252001	PISTON-SC65 OUTLET FITTING	1	
6		51181001	O-RING #326	1	
7		287001001	FLANGE - KT 3350 PT OUTLET	1	
8		294122001	FITTING - APLEX SC115L RH OUTLET	1	
9		227589001	O-RING #AS-231	1	
10		277843001	FLANGE - SPLIT, SC115L OUTLET	1	
11		735003	1/2 COUNTERSUNK PIPE PLUG	1	
12		294129001	ASSEMBLY - KT3350 FLANGE OUTLET	1	Included All Items In This Figure
13		294130001	ASSEMBLY - PLUG & FITTING	1	Included Ref. No's 8 & 11

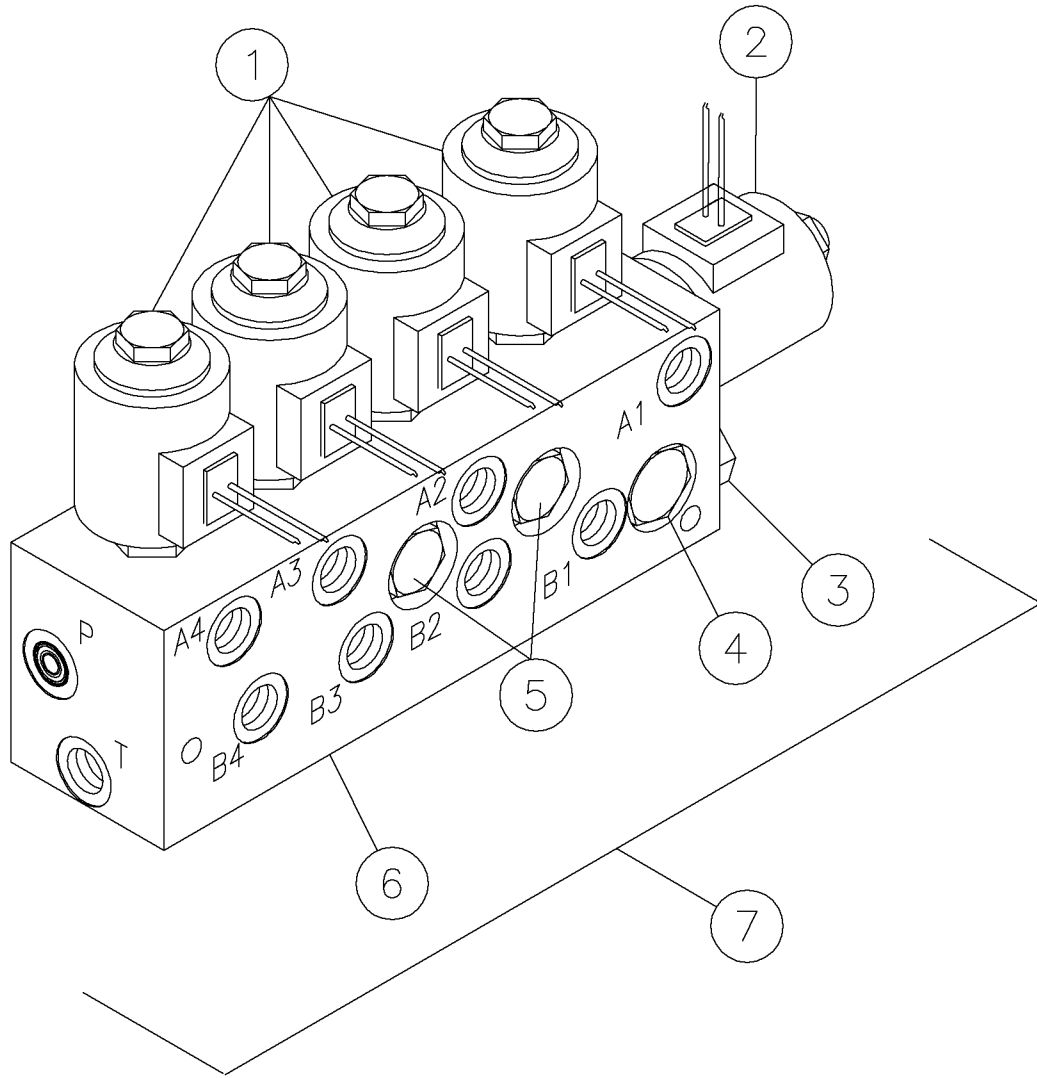
Ball Valve Fig 13-34



Ball Valve Fig 13-34

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		236045003	BODY-2" MNPT	1	
2		236045005	HANDLE-SHORT	1	
3		224942011	THRUST WASHER	1	
4		236045007	GASKET-BODY	1	
5		236045009	SEAT	1	
6		236045011	SEAT	1	
7		236045013	BALL	1	
8		236045015	STEM	1	
9		224942013	END PLATE	1	
10		236045001	VALVE-2"FPT X 2"MPT POLY BALL	1	Included All Items In This Figure

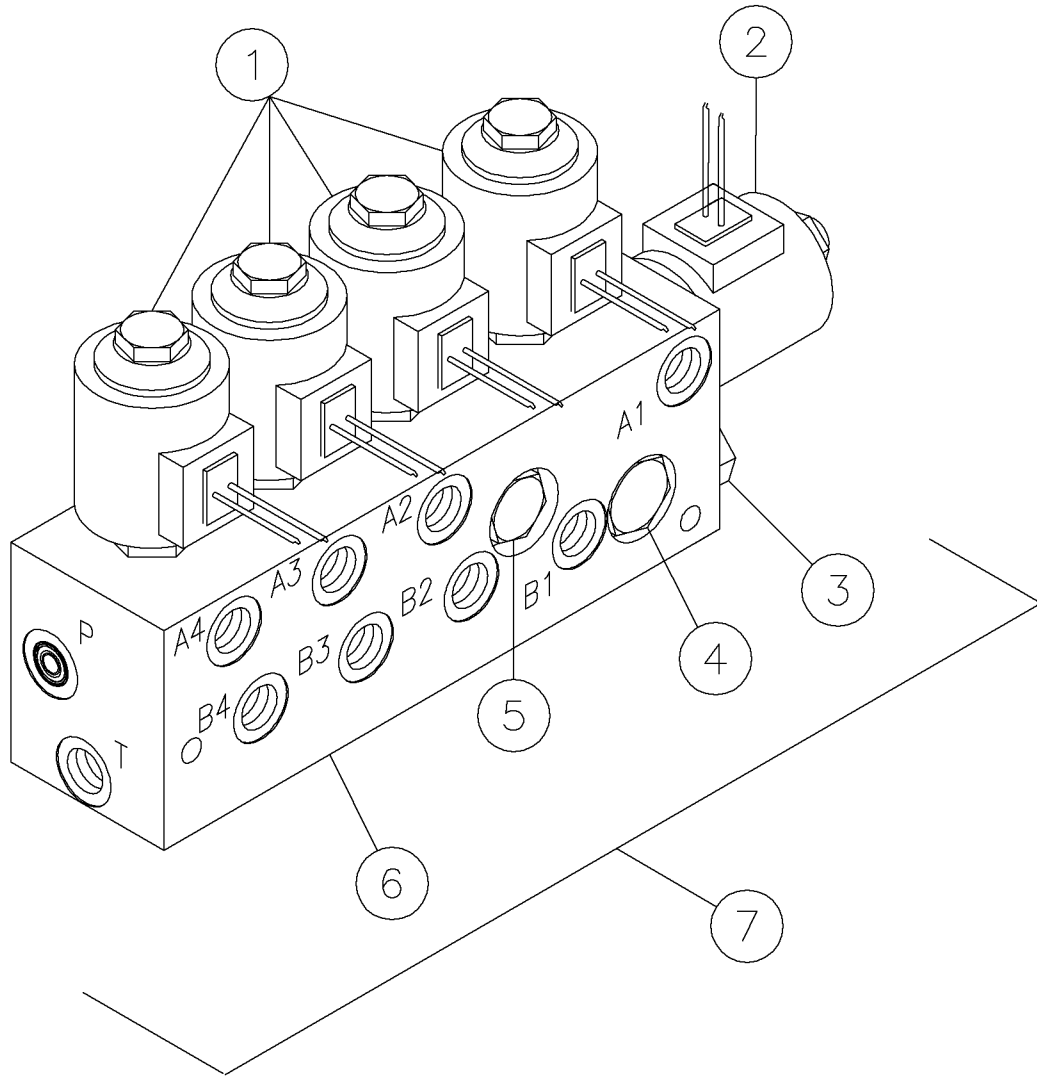
Vise Valve (S/N 146-) Fig 13-35r01



Vise Valve (S/N 146-) Fig 13-35r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2007		Change Valve
1		296251070	VALVE - SOLENOID 4-WAY	4	
		206271007	REPAIR KIT	4	
		251112005	COIL - 10 DL 12V/SPL	4	
		280624001	NUT - RAIN PROOF COIL	4	
2		251113005	CARTRIDGE - SOLENOID	1	
		212821009	SEAL KIT	1	
		251117009	COIL - #8	1	
		296251284	NUT - RAIN PROOF COIL	1	
3		240324015	PLUG-SAE	1	
4		507798005	VALVE-PILOT OPERATED CHECK	1	
		296251288	SEAL KIT	1	
5		228128017	CHECK VALVE	1	
		228128009	SEAL KIT	1	
6		NSS	BLOCL - BODY	1	NSS = Not Sold Separately
7	*	296289762	VALVE - VISE 4 BANK/W DUAL CHECKS	1	Included All Items In This Figure (S/N 146-)

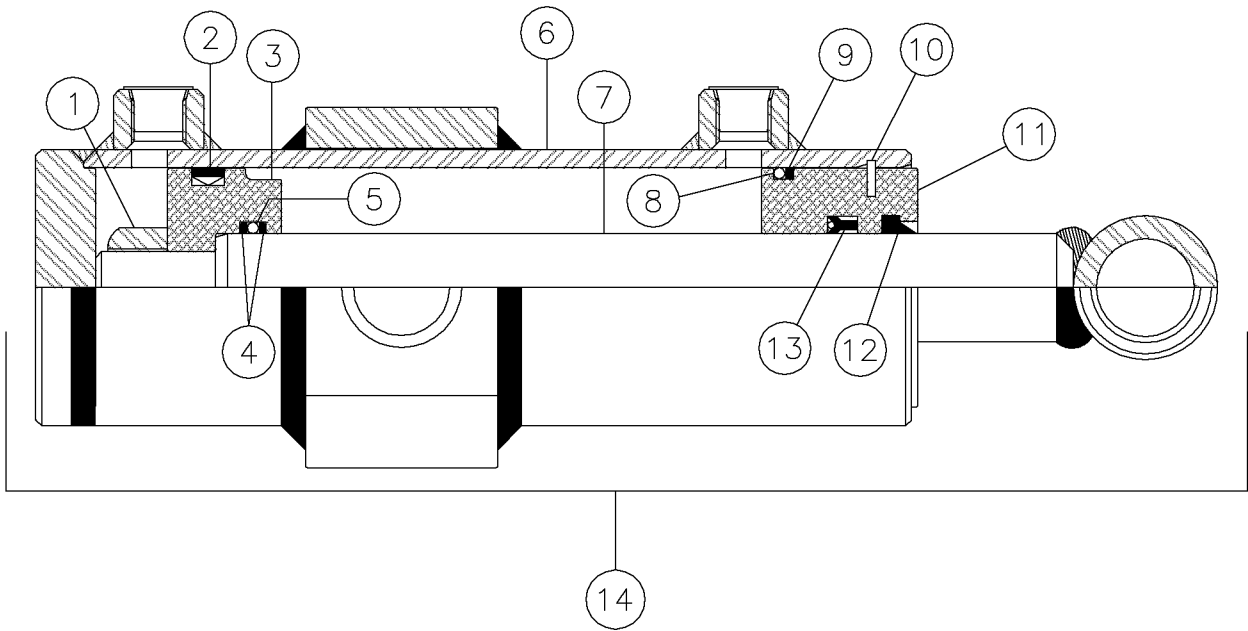
Vise Valve Fig 13-35



Vise Valve Fig 13-35

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296251070	VALVE - SOLENOID 4-WAY	4	
		206271007	REPAIR KIT	4	
		251112005	COIL - 10 DL 12V/SPL	4	
		280624001	NUT - RAIN PROOF COIL	4	
2		251113005	CARTRIDGE - SOLENOID	1	
		212821009	SEAL KIT	1	
		251117009	COIL - #8	1	
		296251284	NUT - RAIN PROOF COIL	1	
3		240324015	PLUG-SAE	1	
4		507798005	VALVE-PILOT OPERATED CHECK	1	
		296251288	SEAL KIT	1	
5		228128017	CHECK VALVE	1	
		228128009	SEAL KIT	1	
6		NSS	BLOCL - BODY	1	NSS = Not Sold Separately
7		279850001	VALVE - VISE 4 BANK	1	Included All Items In This Figure

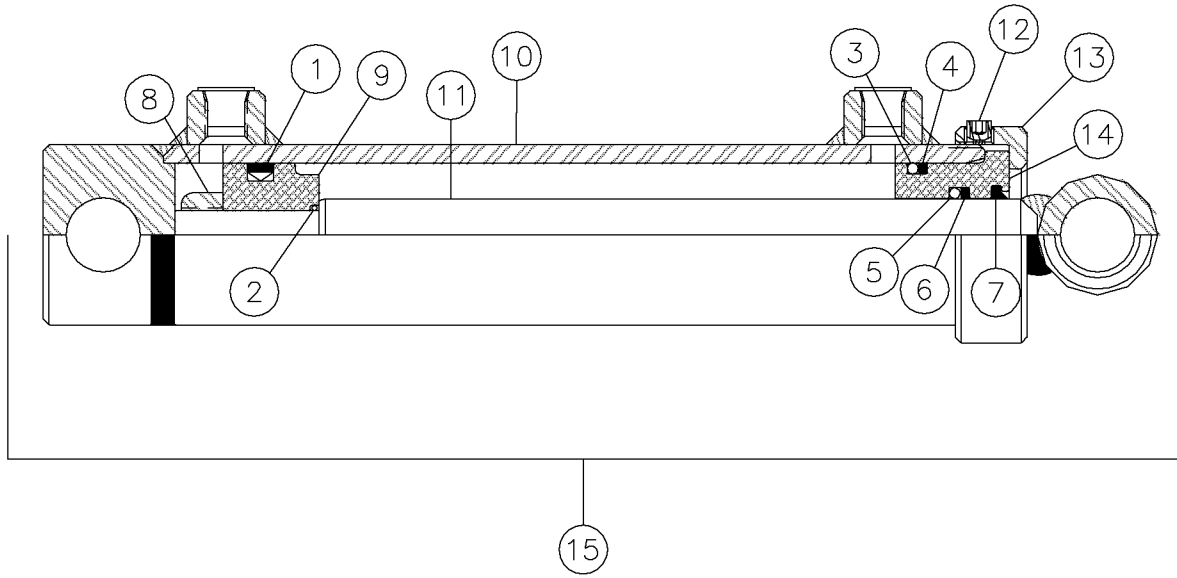
Hydraulic Rotation Carriage Cylinder Fig 13-36



Hydraulic Rotation Carriage Cylinder Fig 13-36

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		95631011	LOCK NUT	1	
2		200769001	UNI-RING 12G-216204-312	1	
3		104628009	PISTON	1	
4		222440007	BACK-UP RING	2	
5		221256013	O-RING	1	
6		222440003	BARREL ASSY	1	
7		239275003	ROD ASSEMBLY	1	
8		221766017	O-RING	1	
9		200841001	BACKUP WASHER #228	1	
10		222440009	INTERNAL SNAP RING	1	
11		200777001	GLAND	1	
12		221256015	ROD WIPER	1	
13		205002001	1 1/8"LOADED U-CUP	1	
14		239275001	CYLINDER-2 1/2 X 5 TRN MNT	1	Included Ref. No's 1-13
		222440011	SEAL KIT	1	

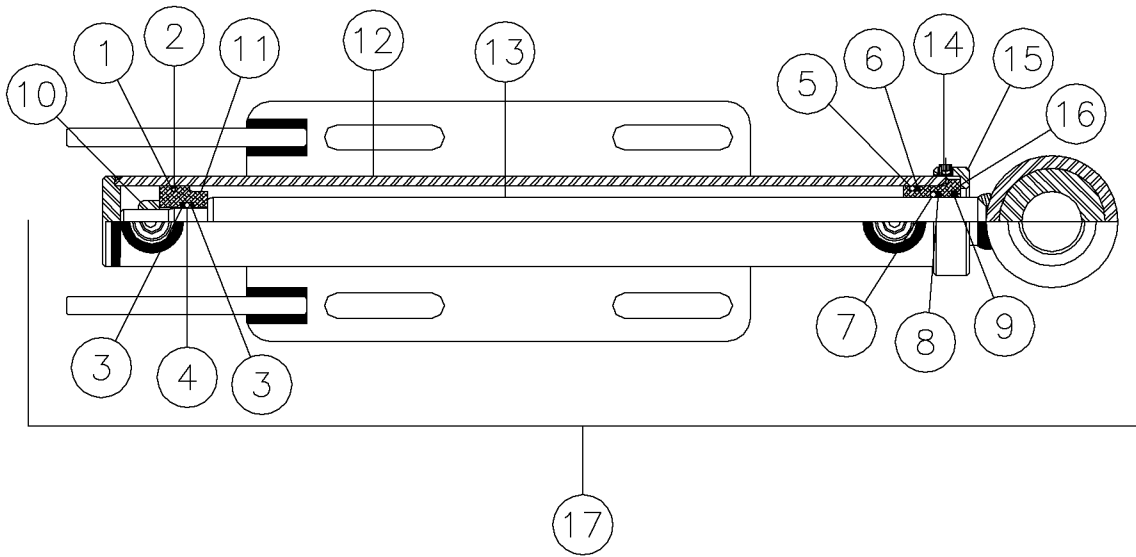
Hydraulic Vise Shift Cylinder Fig 13-37



Hydraulic Vise Shift Cylinder Fig 13-37

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		202721001	UNI-RING	1	
2		223998003	O-RING	1	
3		202727001	O-RING	1	
4		202726001	WASHER-BACK-UP	1	
5		223998005	O-RING	1	
6		223998007	BACK-UP RING	1	
7		202724001	WIPER-ROD	1	
8		202722001	LOCKNUT	1	
9		202720001	PISTON	1	
10		223998009	BARREL ASSEMBLY	1	
11		223998011	ROD ASSEMBLY	1	
12		223998013	SET SCREW	1	
13		223998015	THREAD CAP	1	
14		223998017	THREAD CAP HEAD	1	
15		223998001	CYLINDER- 1 1/2 X 6	1	Included Ref. No's 1-14
		223998019	SEAL KIT	1	Included Ref. No's 1-7

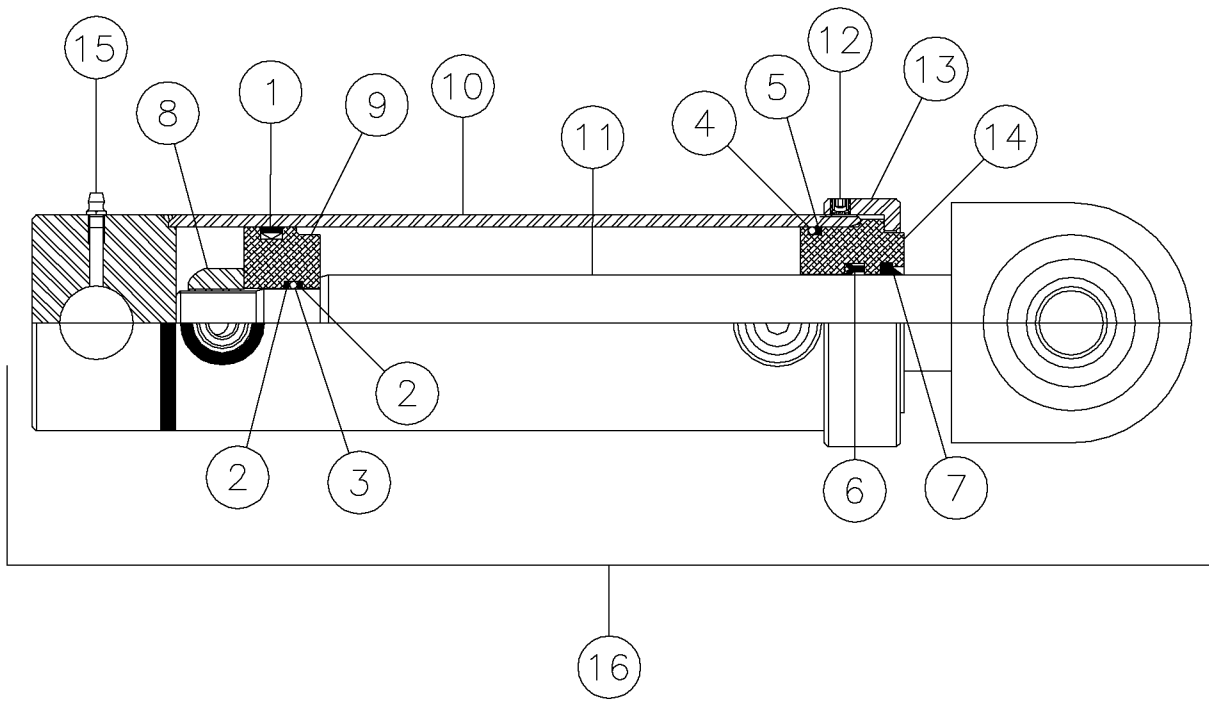
Hydraulic Rod Position Cylinder Fig 13-38



Hydraulic Rod Position Cylinder Fig 13-38

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		227815007	TEFLON PISTON RING	1	
2		227815009	O-RING	1	
3		227815011	BACK-UP RING	2	
4		227815013	O-RING	1	
5		202727001	O-RING	1	
6		119510005	BACK-UP RING	1	
7		2081780001	TUBE - HAND RAIL	1	
8		208177001	WASHER - BACKUP	1	
9		227815021	ROD WIPER	1	
10		202722001	LOCKNUT	1	
11		227815015	PISTON	1	
12		227815003	BARREL ASSY	1	
13		227815005	ROD ASSY	1	
14		219125011	NT SH SET SCREW	1	
15		215170019	CAP-THREADED	1	
16		215170017	ROD ASSEMBLY	1	
17		227815001	CYLINDER 1 1/2 X 14 1/2	1	Included Ref No's 1-16
		227815019	SEAL KIT-1 1/2X14 1/2 CYLINDER	1	Included Ref No's 1-9

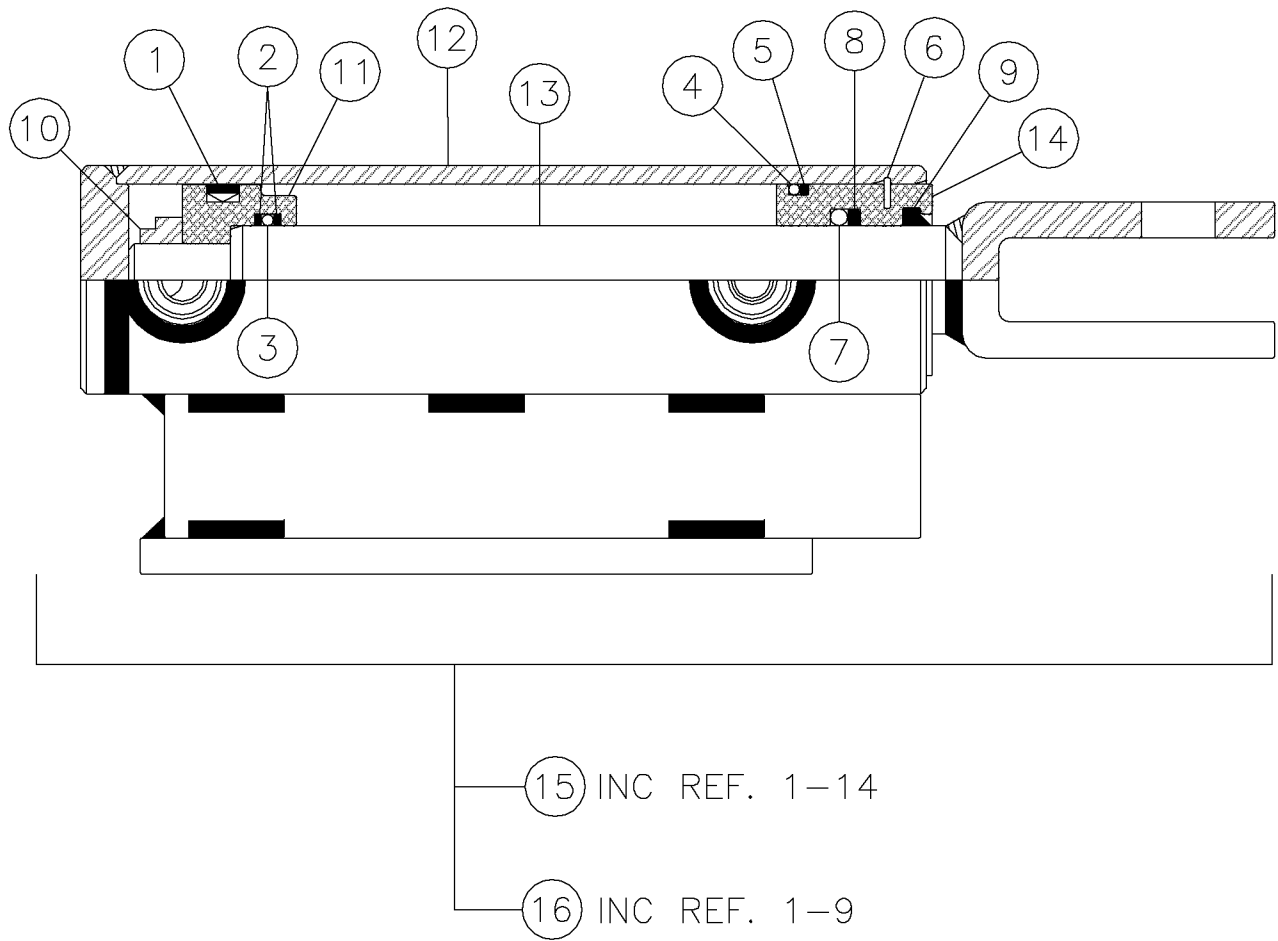
Hydraulic Rod Loader Rotation Cylinder Fig 13-39



Hydraulic Rod Loader Rotation Cylinder Fig 13-39

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		200780001	UNI-RING 12G-300220-312	1	
2		208331001	RING-BACK UP	2	
3		208332001	O-RING	1	
4		200809001	O-RING #232	1	
5		200778001	WASHER-BACKUP #232	1	
6		204315001	1 1/2" LOADED U-CUP	1	
7		200808001	WIPER 52-1500	1	
8		218496007	LOCK NUT	1	
9		227814007	PISTON	1	
10		227814003	PISTON	1	
11		227814005	ROD ASSY	1	
12		219125011	NT SH SET SCREW	1	
13		218496013	THREADED CAP	1	
14		89315007	GLAND-CYLINDER	1	
15		598001	FITTING-1/4" NF ST GREASE ZERK	1	
16		227814001	CYLINDER-3 X 7 1/2	1	Included Ref No's 1-15
		227814009	SEAL KIT-3" CYLINDER	1	included Ref No's 1-7

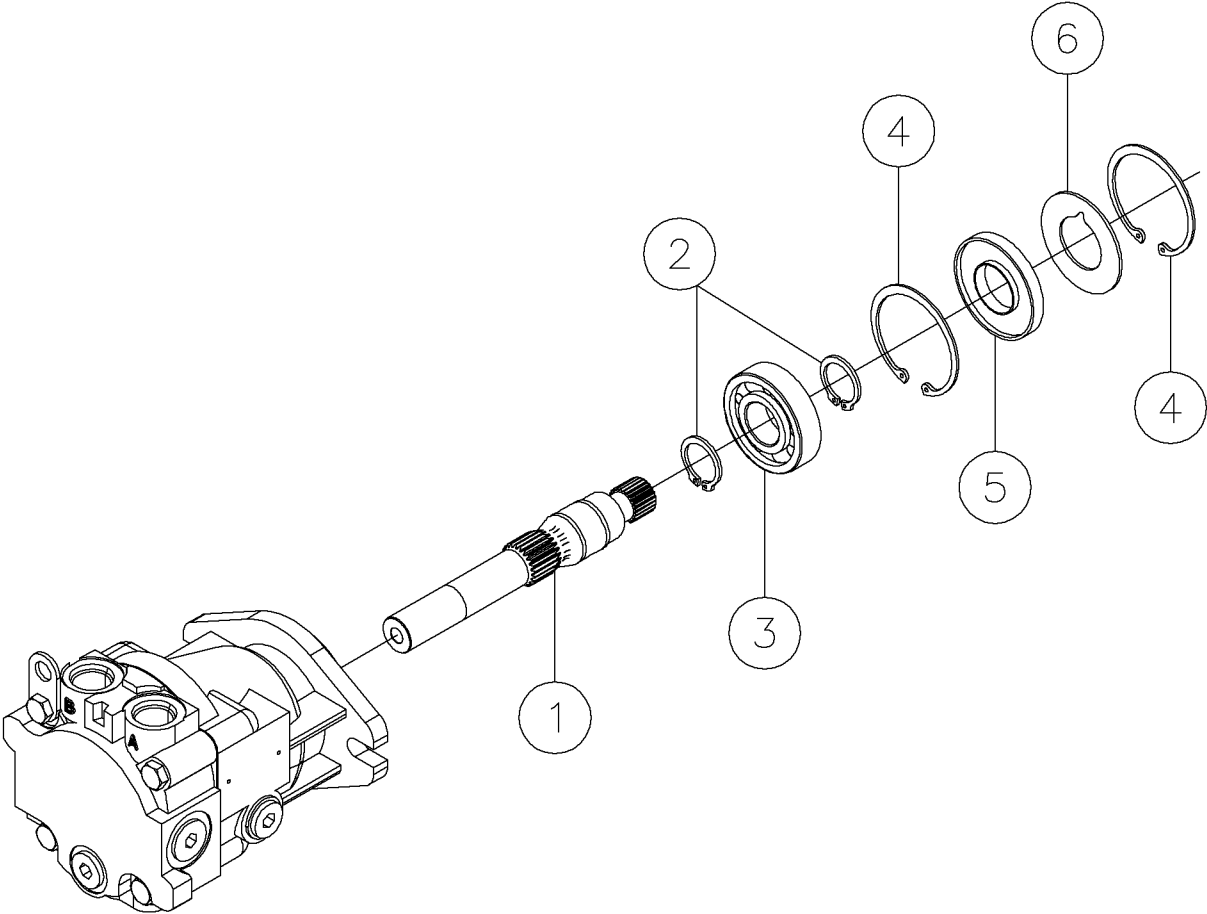
Hydraulic Rod Loader Pusher Cylinder Fig 13-40



Hydraulic Rod Loader Pusher Cylinder Fig 13-40

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		200833001	UNIRING 12G-200120-312	1	
2		222440007	BACK-UP RING	2	
3		221256013	O-RING	1	
4		51172001	O-RING #224	1	
5		200834001	BACKUP WASHER #224	1	
6		224394007	SNAP RING	1	
7		200771001	O-RING #320	1	
8		224394009	BACK-UP RING	1	
9		221256015	ROD WIPER	1	
10		224394011	THIN LOCKNUT	1	
11		218008009	PISTON	1	
12		224394003	BARREL ASSY	1	
13		224394005	ROD ASSY	1	
14		200831001	GLAND	1	
15		224394001	CYLINDER-2X5	1	Included Ref. No's 1-14
16		224394013	SEAL KIT-2 X 5 CYLINDER	1	Included Ref. No's 1-9

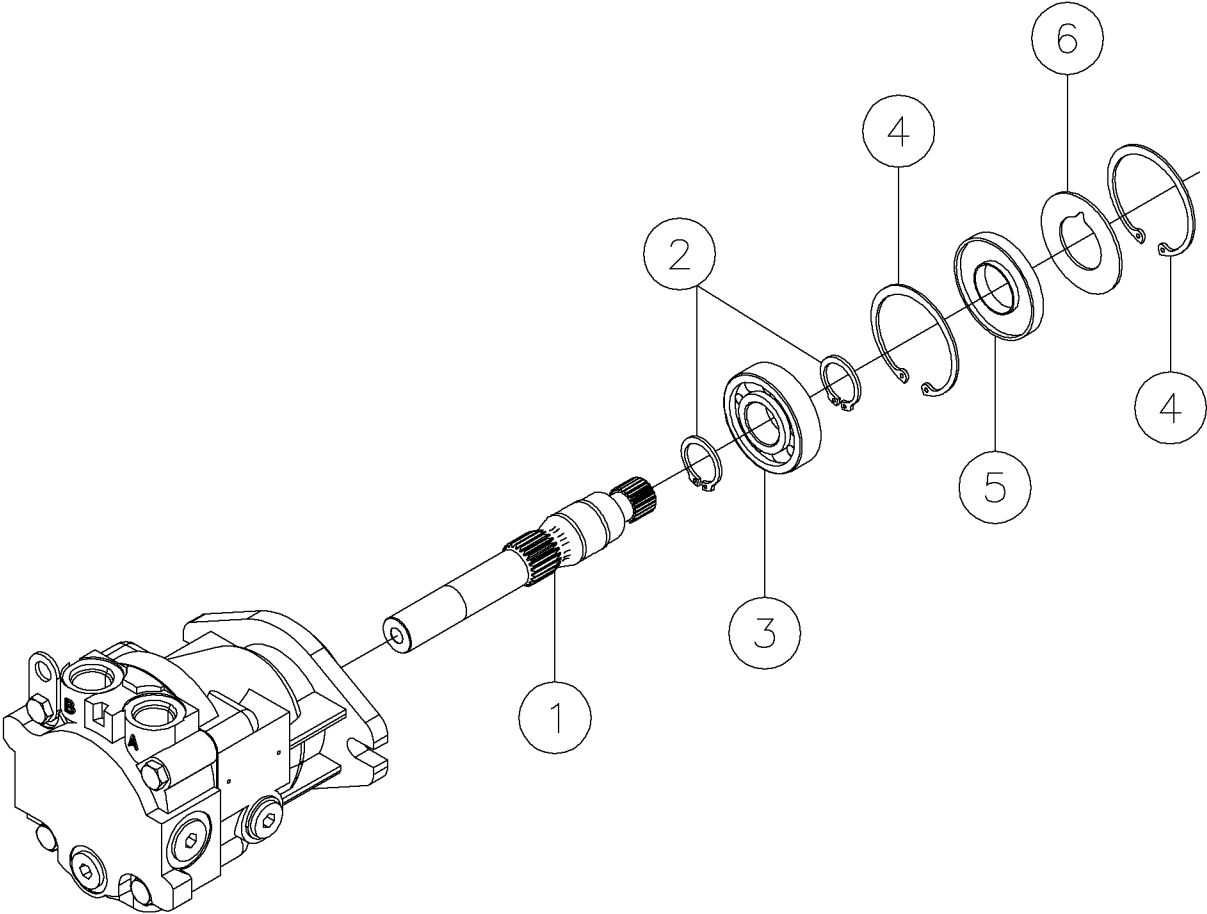
Motor-Axial Piston Plug-In 45cc Fig 13-41r01



Motor-Axial Piston Plug-In 45cc Fig 13-41r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	June, 2006		Update In Parts List.
1		296278068	SHAFT - MOTOR FIXED 15T	1	
2		68859057	RING-RETAINING	2	
3		68859053	BEARING-BALL	1	
4		68859055	RING-RETAINING	2	
5		68859099	SEAL LIP	1	
6		296278070	WASHER - SEAL SUPPORT	1	
		619555001	MOTOR-FIXED DISPLACEMENT SERIES40-M35/45		Includes All Items In Figure
		296278075	SEAL KIT		

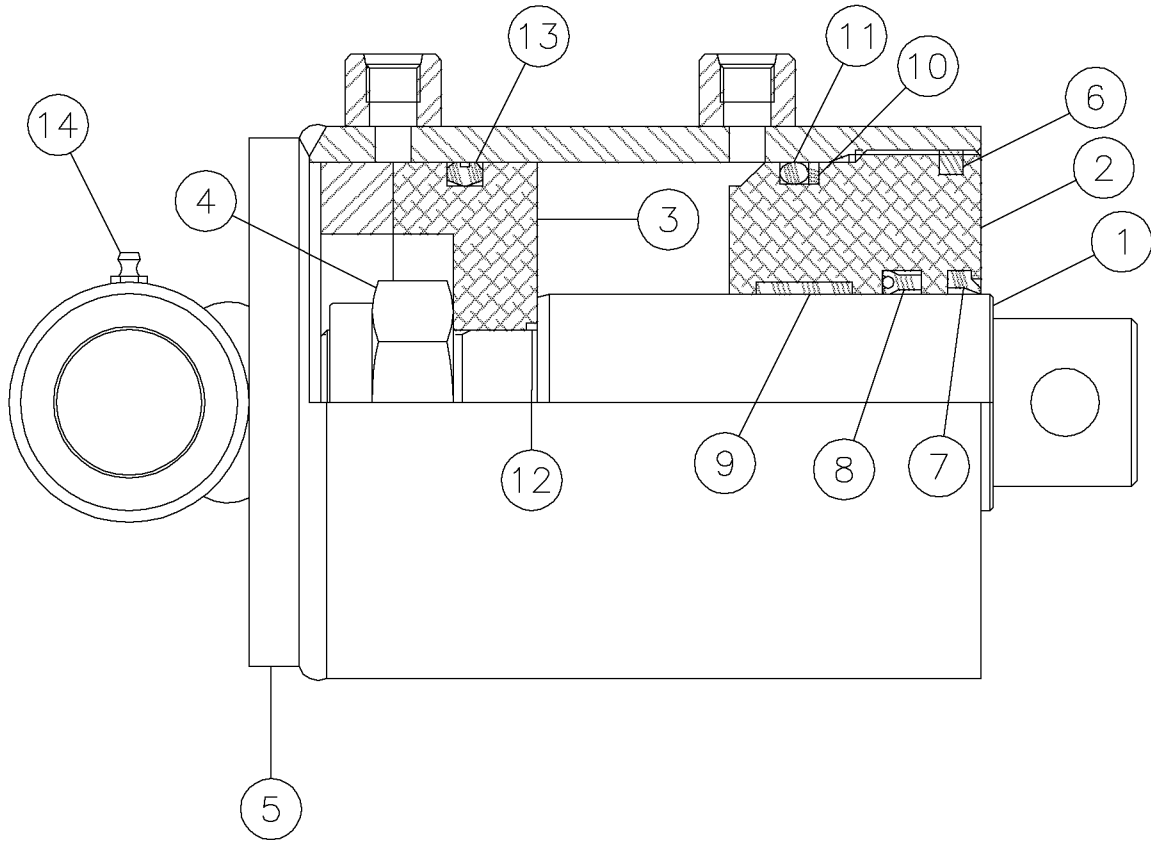
Motor-Axial Piston Plug-In 45cc Fig 13-41



Motor-Axial Piston Plug-In 45cc Fig 13-41

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296278068	SHAFT - MOTOR FIXED 15T	1	
2		68859057	RING-RETAINING	2	
3		68859053	BEARING-BALL	1	
4		68859055	RING-RETAINING	2	
5		68859099	SEAL LIP	1	
6		296278070	WASHER - SEAL SUPPORT	1	
		619555001	MOTOR-FIXED DISPLACEMENT SERIES40-M35/45		Included All Items In This Figure

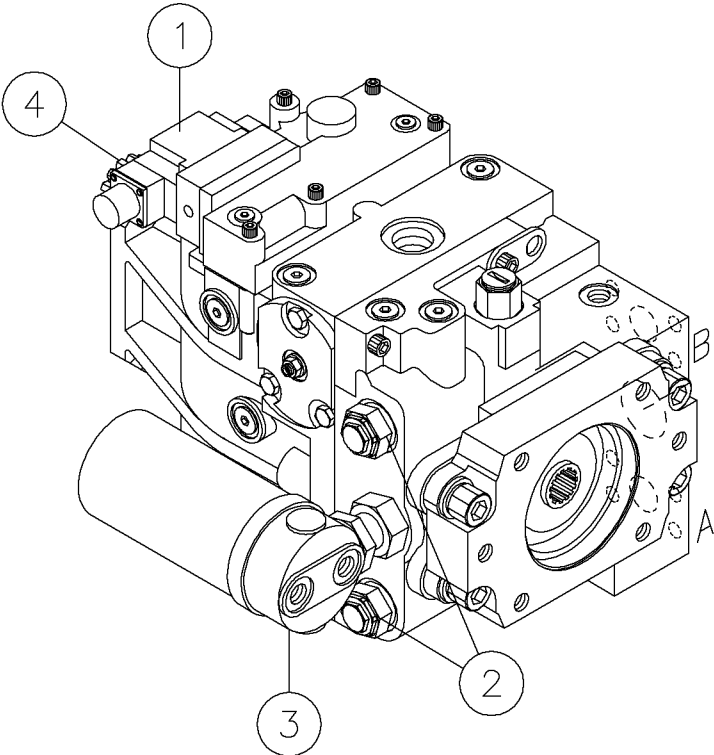
Hydraulic Vise Cylinder Fig 13-42



Hydraulic Vise Cylinder Fig 13-42

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		275458005	CYLINDER ROD	1	
2		221731007	HEAD GLAND	1	
3		221731009	PISTON	1	
4		85777031	NUT-1 1/2" 12 LOCK	1	
5		283581002	TUBE - WELDMENT	1	
6		104012005	LOCKING INSERT	2	
7		215799015	ROD WIPER	1	
8		215799013	POLYPAK	1	
9		221731011	WEAR BAND	1	
10		89540011	WASHER-BACKUP	1	
11		85777019	O-RING	1	
12		221731013	O-RING	1	
13		85777025	UNI-RING USE 77507001	1	
14		224445007	GREASE FITTING	1	
		234292005	SEAL KIT		Included Ref. No's 6-13
		283581001	CYLINDER - HYDRAULIC 5" BORE X 2.25" ROD X 2" ST		Included All Items In This Figure

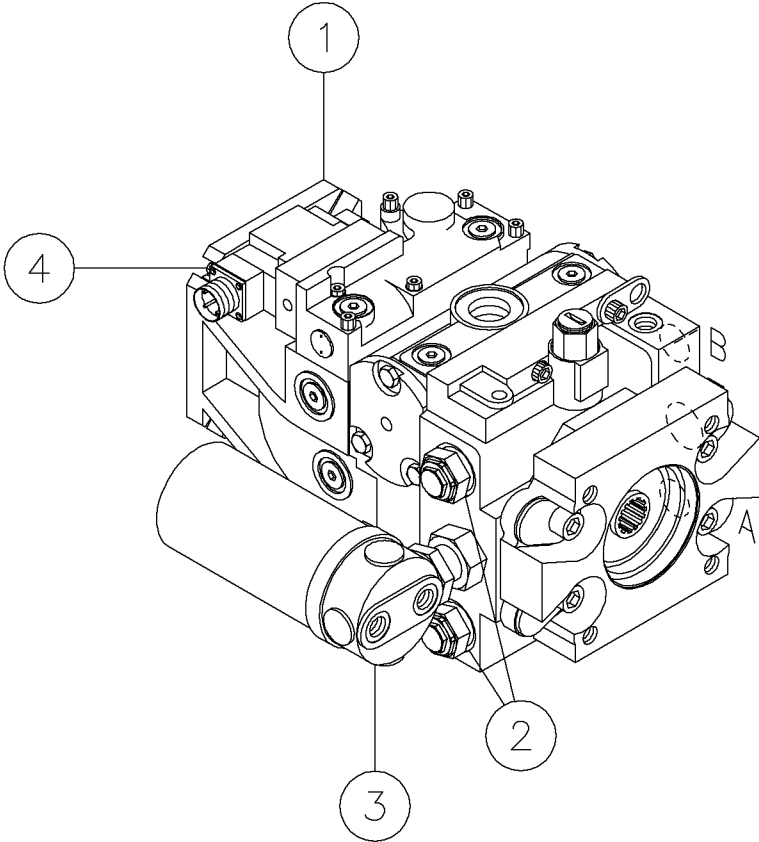
Hydraulic Rotation Pump Fig 13-43



Hydraulic Rotation Pump Fig 13-43

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		224411003	EDC KIT W/MS CONNECTOR	1	
		224411005	GASKET-CONTROL	1	
2		85642007	VALVE-MULTI-FUNCTION	2	
		85642009	O-RING	1	
		85642011	O-RING	1	
3		85642051	FILTRATION-INTEGRAL SHT FILTER	1	
		81902001	FILTER-OIL	1	
4		98688009	LIP SEAL	1	
		98688011	SEAL-CARRIER	1	
		98688013	O-RING	1	
		224411001	PUMP-90 SERIES 100CC 23T EDC		COMPLETE

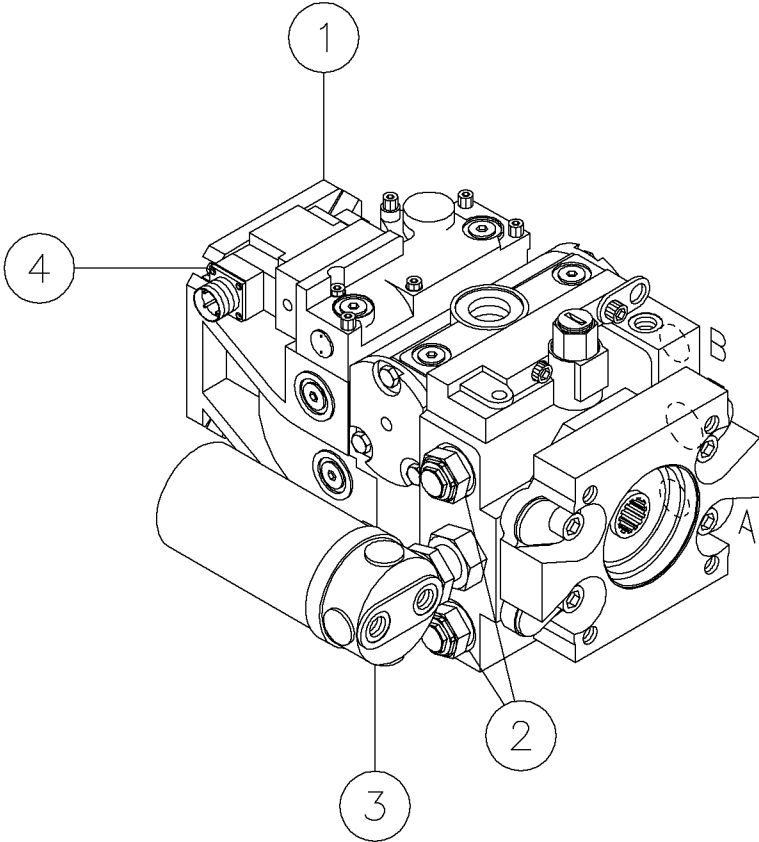
Hydraulic Left Track Drive Pump Fig 13-44



Hydraulic Left Track Drive Pump Fig 13-44

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		224295003	EDC KIT W/MS CONNECTOR	1	Incl. Gasket & Hardware
		98688017	GASKET-CONTROL	1	
		224295005	PRESSURE CONTROL PILOT VALVE	1	
2		85642007	VALVE-MULTI-FUNCTION	2	
		85642009	O-RING	1	Outer, per Valve
		85642011	O-RING	1	Inner, Per Valve
3		91019003	FILTRATION MANIFOLD KIT	1	
		81902001	FILTER-OIL	1	
4		114282005	LIP SEAL	1	
		223803005	CARRIER SEAL	1	
		114282007	O-RING	1	
		244741001	PUMP-75CC 90SERIES #95Z1770		Complete

Hydraulic Right Track Drive Pump Fig 13-45

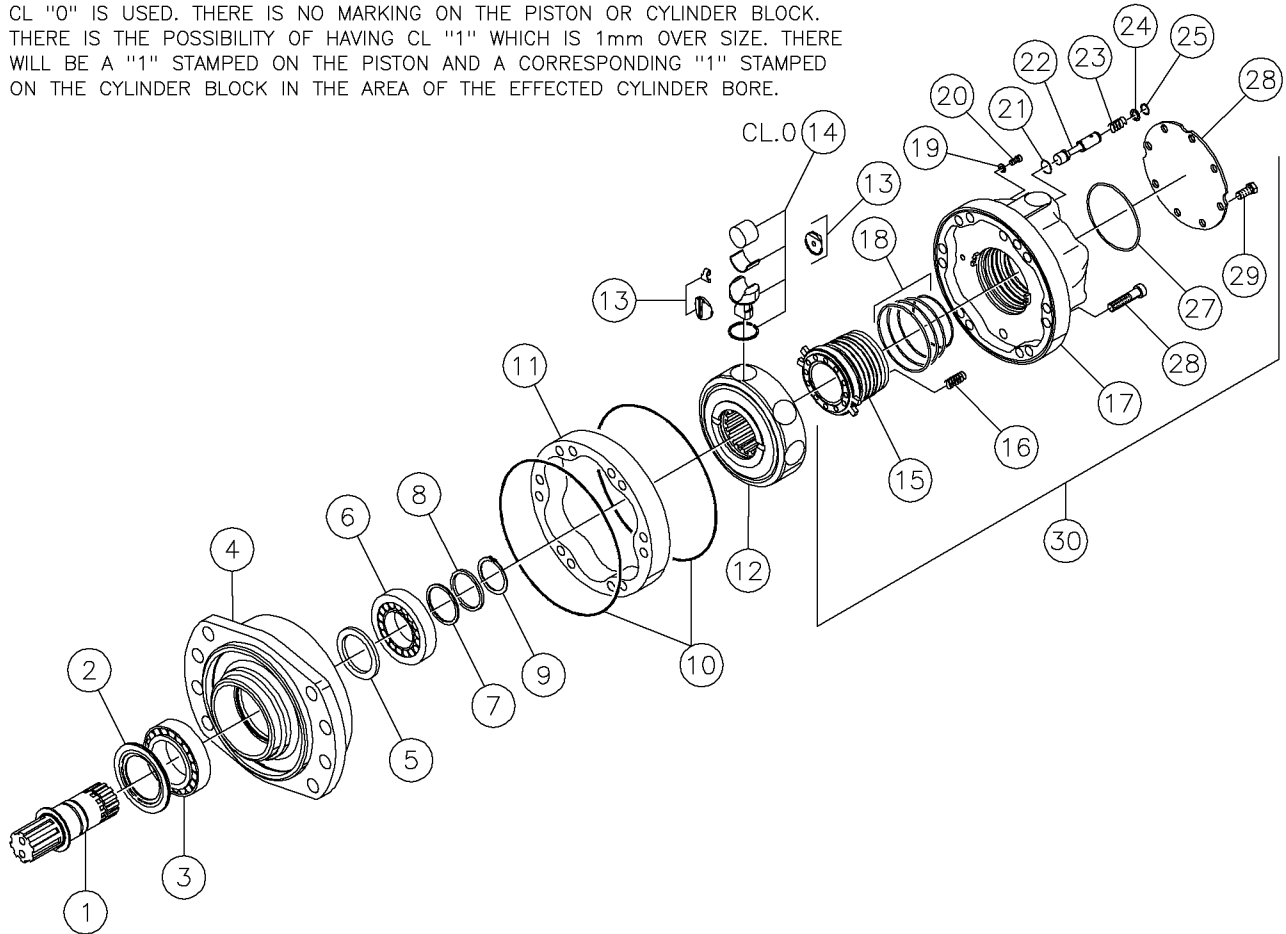


Hydraulic Right Track Drive Pump Fig 13-45

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		224295003	EDC KIT W/MS CONNECTOR	1	
		98688017	GASKET-CONTROL	1	
		224295005	PRESSURE CONTROL PILOT VALVE	1	
2		85642007	VALVE-MULTI-FUNCTION	2	
		85642009	O-RING	1	
		85642011	O-RING	1	
3		91019003	FILTRATION MANIFOLD KIT	1	
		81902001	FILTER-OIL	1	
4		114282005	LIP SEAL	1	
		223803005	CARRIER SEAL	1	
		114282007	O-RING	1	
		244742001	PUMP-75CC 90SERIES #95Z1771		Complete

Hydraulic T/P Motor Fig 13-46r01

THERE IS THE POSSIBILITY OF HAVING TWO SIZES OF PISTONS IN A MOTOR. NORMALLY CL "0" IS USED. THERE IS NO MARKING ON THE PISTON OR CYLINDER BLOCK. THERE IS THE POSSIBILITY OF HAVING CL "1" WHICH IS 1mm OVER SIZE. THERE WILL BE A "1" STAMPED ON THE PISTON AND A CORRESPONDING "1" STAMPED ON THE CYLINDER BLOCK IN THE AREA OF THE EFFECTED CYLINDER BORE.

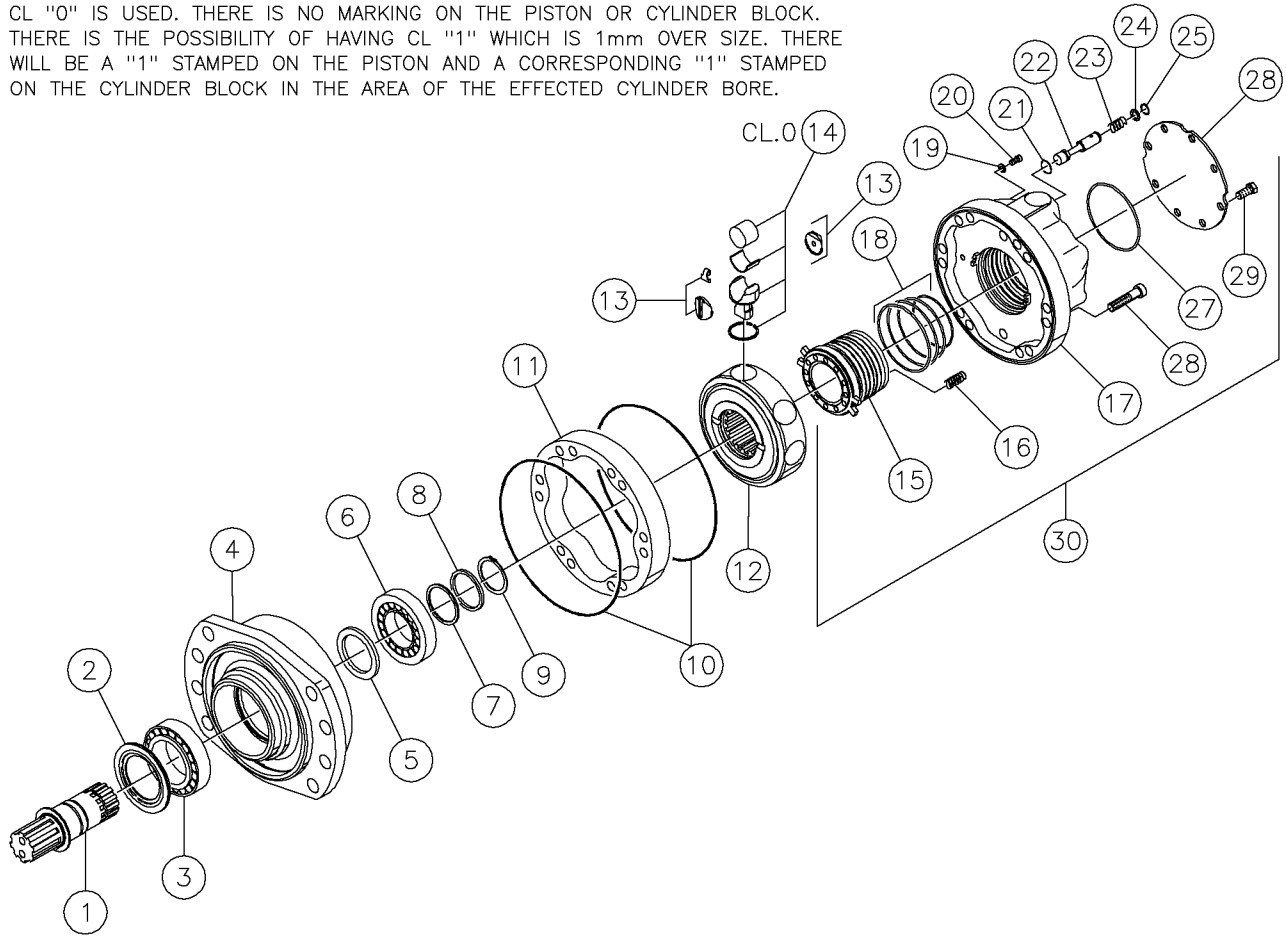


Hydraulic T/P Motor Fig 13-46r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	June, 2007		Change Part Number
1		276258009	SHAFT	1	
2		256555005	ENVIRONMENT SEAL	1	
3		256555007	BEARING	1	
4		276258011	BEARING SUPPORT ASSEMBLY	1	
		276258005	BEARING SUPPORT	1	
5		256555011	RUBBER SEAL RING	1	
6		256555013	BEARING	1	
7		256555015	SET OF SPUDS	1	
8		256555017	RING	1	
9		208165001	SNAP RING	1	
10		256555021	O-RING	2	
11		296278023	CAM RING	1	
12		224897003	CYLINDER BLOCK	1	
13		224897017	REPAIR KIT-PISTON	1	
14		224897005	PISTON CL "O"	A/R	
15		296278025	VALVING	1	
16		84550029	SPRING	8	
17		235790005	VALVING COVER	1	
18		256555027	SEAL KIT	1	
19		608383001	WASHER	2	
20		140255041	SCREW - BOLT	2	
21		235790011	O-RING	1	
22		235790013	VALVE SPOOL	1	
23		235790015	SPRING	1	
24		235790017	WASHER	1	
25		235790019	SNAP RING	1	
26		235790007	SCREW	16	
27		608385001	O-RING	1	
28	*	254642021	BACK PLATE	1	Show
	*	296278104	BACK PLATE	1	Thicker Plate
29		235790023	BOLT	6	
30		296278024	VALVING COVER ASSEMBLY	1	Included Ref. No's 15-29
		296273807	MOTOR-MSE11-2-11A-A11-2A10-5000		Included All Items In This Figure
		256555029	SEAL KIT		Inc. Ref. No's 2, 5, 8, 10, 18, 19, & 27

Hydraulic T/P Motor Fig 13-46

THERE IS THE POSSIBILITY OF HAVING TWO SIZES OF PISTONS IN A MOTOR. NORMALLY CL "0" IS USED. THERE IS NO MARKING ON THE PISTON OR CYLINDER BLOCK. THERE IS THE POSSIBILITY OF HAVING CL "1" WHICH IS 1mm OVER SIZE. THERE WILL BE A "1" STAMPED ON THE PISTON AND A CORRESPONDING "1" STAMPED ON THE CYLINDER BLOCK IN THE AREA OF THE EFFECTED CYLINDER BORE.

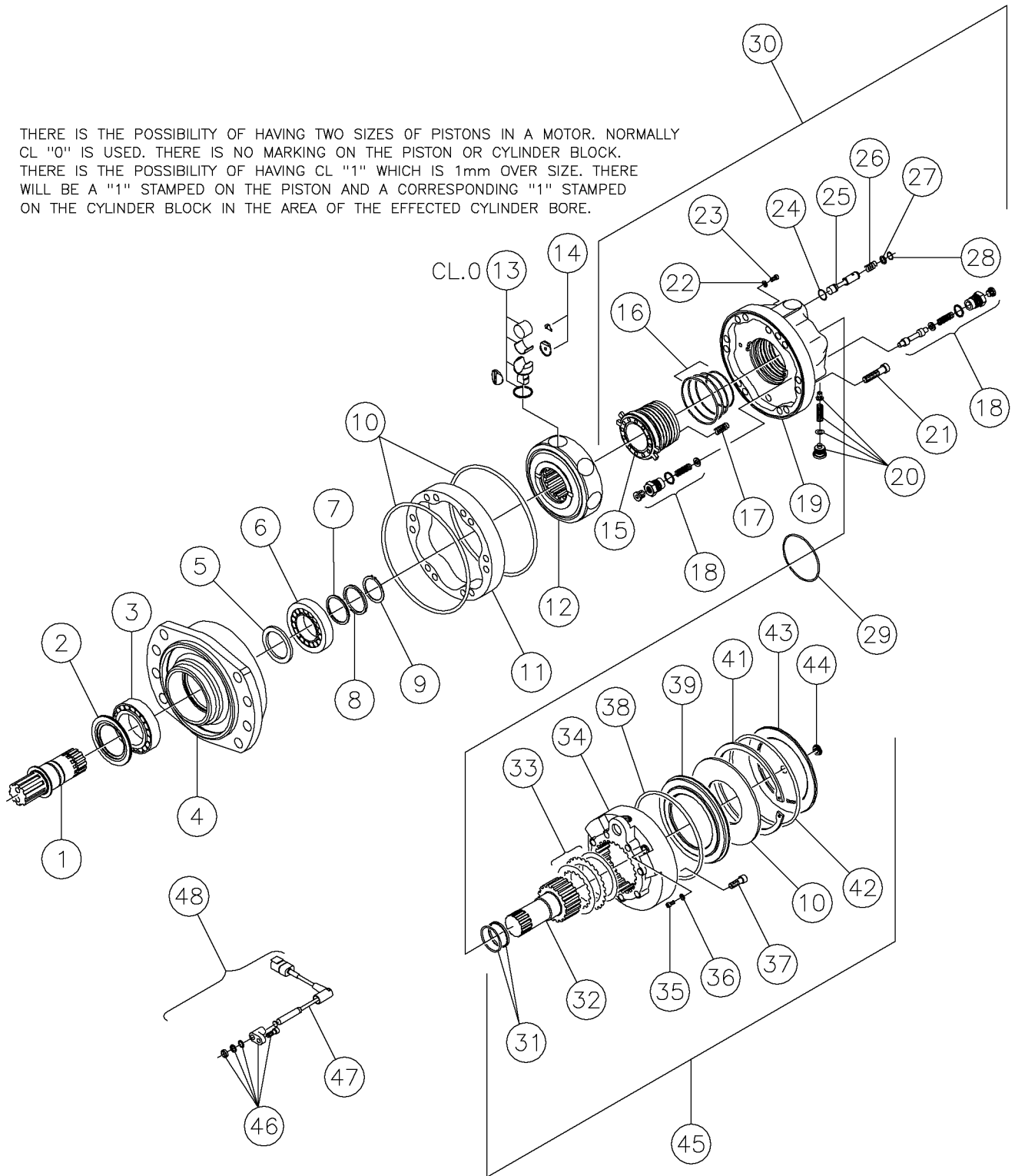


Hydraulic T/P Motor Fig 13-46

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		276258009	SHAFT	1	
2		256555005	ENVIRONMENT SEAL	1	
3		256555007	BEARING	1	
4		276258011	BEARING SUPPORT ASSEMBLY	1	
		276258005	BEARING SUPPORT	1	
5		256555011	RUBBER SEAL RING	1	
6		256555013	BEARING	1	
7		256555015	SET OF SPUDS	1	
8		256555017	RING	1	
9		208165001	SNAP RING	1	
10		256555021	O-RING	2	
11		296278023	CAM RING	1	
12		224897003	CYLINDER BLOCK	1	
13		224897017	REPAIR KIT-PISTON	1	
14		224897005	PISTON CL "O"	A/R	
15		296278025	VALVING	1	
16		84550029	SPRING	8	
17		235790005	VALVING COVER	1	
18		256555027	SEAL KIT	1	
19		608383001	WASHER	2	
20		140255041	SCREW - BOLT	2	
21		235790011	O-RING	1	
22		235790013	VALVE SPOOL	1	
23		235790015	SPRING	1	
24		235790017	WASHER	1	
25		235790019	SNAP RING	1	
26		235790007	SCREW	16	
27		608385001	O-RING	1	
28		235790021	BACK PLATE	1	
29		235790023	BOLT	6	
30		296278024	VALVING COVER ASSEMBLY	1	Included Ref. No's 15-29
		296273807	MOTOR-MSE11-2-11A-A11-2A10-5000		Included All Items In This Figure
		296272979	SEAL KIT		
		256555029	SEAL KIT		

Hydraulic T/P Brake Motor Fig 13-47r01

THERE IS THE POSSIBILITY OF HAVING TWO SIZES OF PISTONS IN A MOTOR. NORMALLY CL "0" IS USED. THERE IS NO MARKING ON THE PISTON OR CYLINDER BLOCK. THERE IS THE POSSIBILITY OF HAVING CL "1" WHICH IS 1mm OVER SIZE. THERE WILL BE A "1" STAMPED ON THE PISTON AND A CORRESPONDING "1" STAMPED ON THE CYLINDER BLOCK IN THE AREA OF THE EFFECTED CYLINDER BORE.

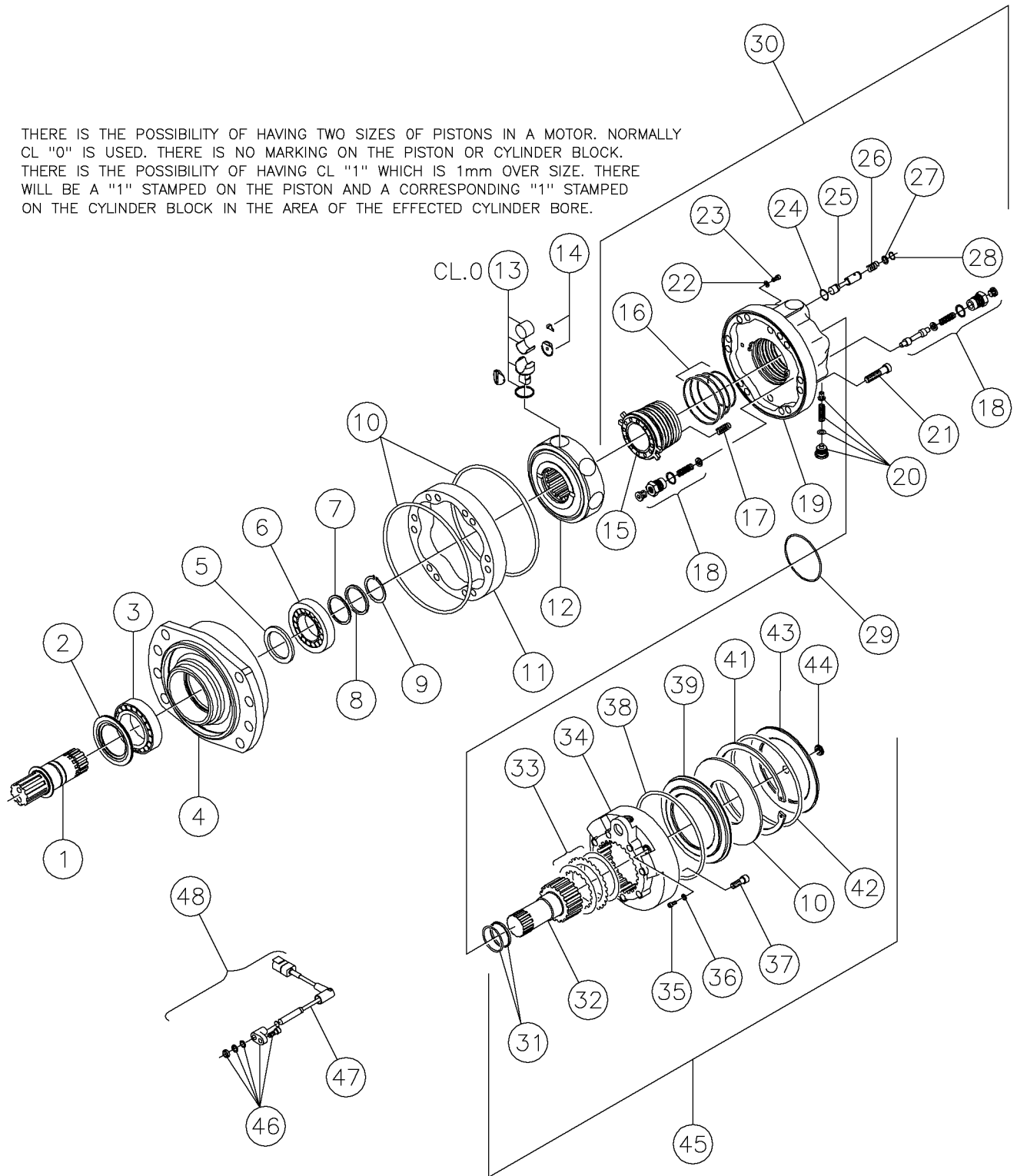


Hydraulic T/P Brake Motor Fig 13-47r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2006		Update In Parts List.
1		280793003	SHAFT	1	
2		608397001	ENVIRONMENT SEAL	1	
3		83651039	BEARING	1	
4		280793005	BEARING SUPPORT	1	
5		256556007	RUBBER SEAL RING	1	
6		83651041	BEARING	1	
7		83651043	SHIM SET	1	
8		83651045	WASHER	1	
9		608396001	SNAP RING	1	
10		296278080	O-RING	2	
11		280793007	CAM RING	1	
12		296278078	CYLINDER BLOCK	1	
13		296275596	PISTON CI.O	A/R	
14		296278079	REPAIR KIT	1	
15		296278083	VALVING/DISTRIBUTOR	1	
16		608387001	SEAL KIT	1	
17		84550029	SPRING	9	
18		256811005	VALVE SPOOL	1	
19		296278082	VALVING COVER	1	
20		256811007	VALVE	1	
21		83651023	SCREW-M16X90	12	
22		608383001	WASHER	2	
23		140255041	SCREW - BOLT	2	
24		235790011	O-RING	1	
25		235790013	VALVE SPOOL	1	
26		235790015	SPRING	1	
27		235790017	WASHER	1	
28		235790019	SNAP RING	1	
29		608385001	O-RING	1	
30		296278081	COMPLETE VALVING COV	1	Included Ref. No's 15-29
31		608494001	SEAL	1	
32		280985005	SHAFT	1	
33		280985007	BRAKE DISC KIT	1	
34		296278085	BRAKE BODY	1	
35		140255041	SCREW - BOLT	2	
36		608383001	WASHER	2	
37		280985011	SCREW	6	
38		296275604	O-RING-5.70X199.30	1	
39		296251962	BRAKE PISTON	1	
40		296271036	BELVILLE WASHER	1	
41		608492001	SNAP RING	1	
42		608499001	O-RING	1	
43		296251967	PROJECTOR	1	
44		608498001	PLUG	1	
45		296278084	DISC BRAKE	1	Included Ref. No's 31-44
46		296278086	SPEED SENSOR KIT	1	Included Ref. No's 47 & 48
47		296278087	SPEED SENSOR KIT	1	
48		296278088	REPAIR KIT	1	
		296273808	MOTOR-MSE11-2-14A-F12-2A10-2500		Included All Items In This Figure
		208350001	SEAL KIT		Inc. Ref. 2, 5, 8, 10,16, 22, 29, 31, 38 & 42

Hydraulic T/P Brake Motor Fig 13-47

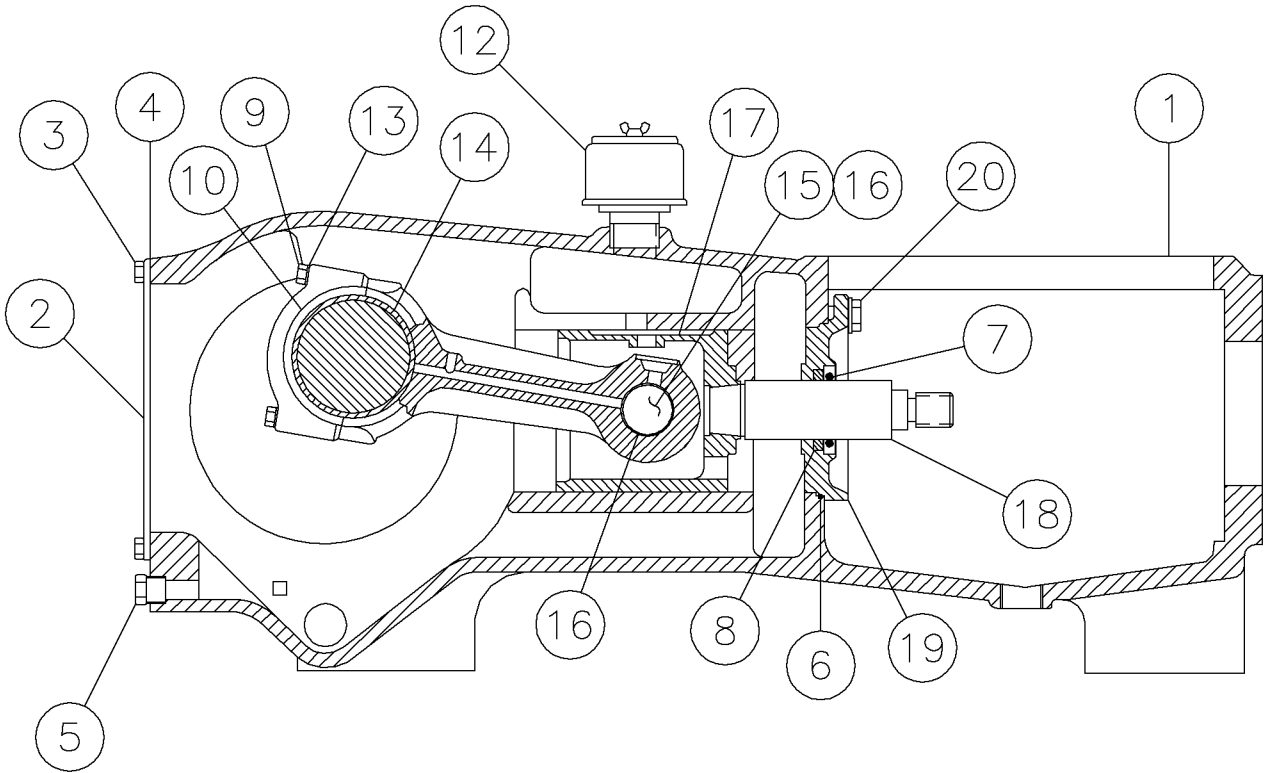
THERE IS THE POSSIBILITY OF HAVING TWO SIZES OF PISTONS IN A MOTOR. NORMALLY CL "0" IS USED. THERE IS NO MARKING ON THE PISTON OR CYLINDER BLOCK. THERE IS THE POSSIBILITY OF HAVING CL "1" WHICH IS 1mm OVER SIZE. THERE WILL BE A "1" STAMPED ON THE PISTON AND A CORRESPONDING "1" STAMPED ON THE CYLINDER BLOCK IN THE AREA OF THE EFFECTED CYLINDER BORE.



Hydraulic T/P Brake Motor Fig 13-47

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		280793003	SHAFT	1	
2		608397001	ENVIRONMENT SEAL	1	
3		83651039	BEARING	1	
4		280793005	BEARING SUPPORT	1	
5		256556007	RUBBER SEAL RING	1	
6		83651041	BEARING	1	
7		83651043	SHIM SET	1	
8		83651045	WASHER	1	
9		608396001	SNAP RING	1	
10		296278080	O-RING	2	
11		280793007	CAM RING	1	
12		296278078	CYLINDER BLOCK	1	
13		296275596	PISTON CI.O	A/R	
14		296278079	REPAIR KIT	1	
15		296278083	VALVING/DISTRIBUTOR	1	
16		608387001	SEAL KIT	1	
17		84550029	SPRING	9	
18		256811005	VALVE SPOOL	1	
19		296278082	VALVING COVER	1	
20		256811007	VALVE	1	
21		83651023	SCREW-M16X90	12	
22		608383001	WASHER	2	
23		140255041	SCREW - BOLT	2	
24		235790011	O-RING	1	
25		235790013	VALVE SPOOL	1	
26		235790015	SPRING	1	
27		235790017	WASHER	1	
28		235790019	SNAP RING	1	
29		608385001	O-RING	1	
30		296278081	COMPLETE VALVING COV	1	Included Ref. No's 15-29
31		608494001	SEAL	1	
32		280985005	SHAFT	1	
33		280985007	BRAKE DISC KIT	1	
34		296278085	BRAKE BODY	1	
35		140255041	SCREW - BOLT	2	
36		608383001	WASHER	2	
37		280985011	SCREW	6	
38		296275604	O-RING-5.70X199.30	1	
39		296251962	BRAKE PISTON	1	
40		296271036	BELVILLE WASHER	1	
41		608492001	SNAP RING	1	
42		608499001	O-RING	1	
43		296251967	PROJECTOR	1	
44		608498001	PLUG	1	
45		296278084	DISC BRAKE	1	Included Ref. No's 31-44
46		296278086	SPEED SENSOR KIT	1	Included Ref. No's 47 & 48
47		296278087	SPEED SENSOR KIT	1	
48		296278088	REPAIR KIT	1	
		296273808	MOTOR-MSE11-2-14A-F12-2A10-2500		Included All Items In This Figure
		280985003	SEAL KIT		
		256811009	SEAL KIT		

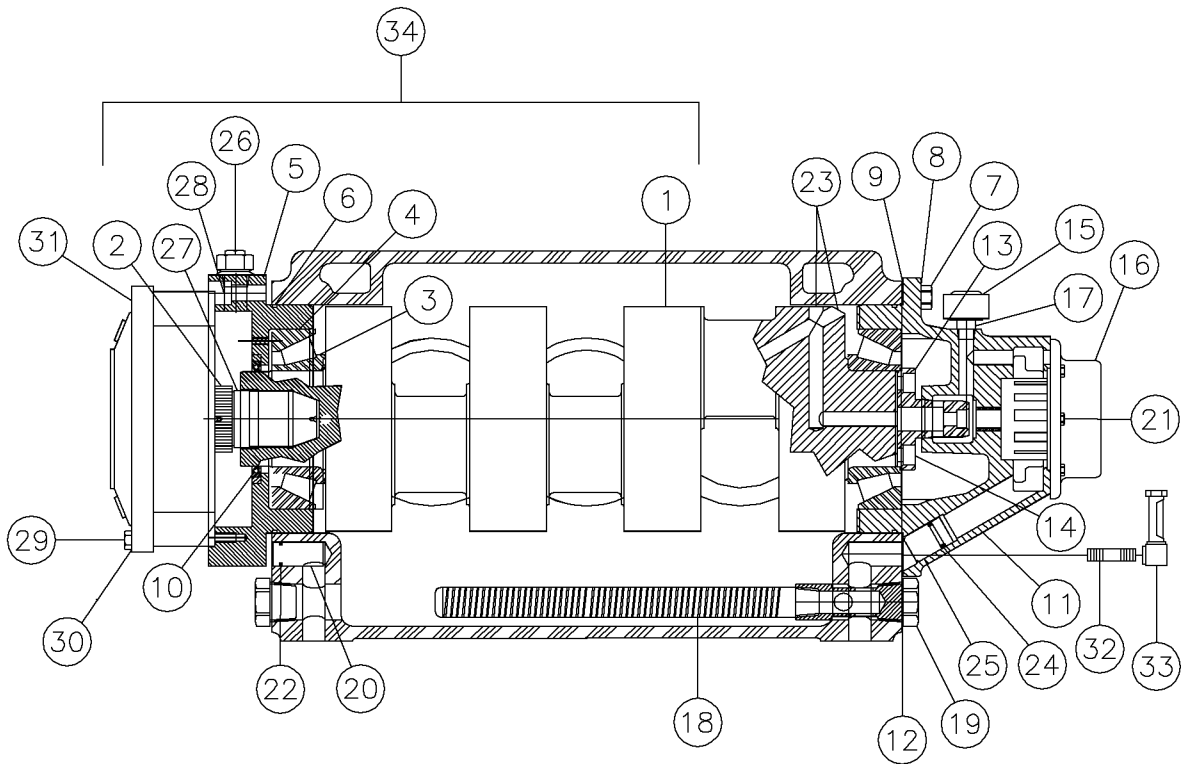
Water Pump - Apex 200 GPM (SC170) - Power Frame Fig 13-48



Water Pump - Apex 200 GPM (SC170) - Power Frame Fig 13-48

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		277780004	FRAME - POWER	1	
2		277780005	COVER - CRANKCASE	1	
3		277780006	HEX HD CAP SCREW 3/8-16X3/4	14	
4		277780007	GASKET - CRANKCASE COVER	1	
5		277780008	PLUG - 1/2" HEX HD	1	
6		277780009	SEAL - NITRILE RUBBER	3	
7		277780010	SEAL - OIL	3	
8		277780011	POLYPACK RING-2" ID X 2 3/4" OD	3	
9		277780012	BOLT - CONNECTING ROD	6	
10		277780013	CONNECTING ROD ASSEMBLY	3	Included Ref. No's 9-11 & 13
11		277780014	BUSHING - WRIST PIN	3	
12		277780015	BREATHER - CRANKCASE	1	
13		277780016	WASHER - 1/2" MEDIUM SPRING LOCK	6	
14		277780017	BEARING HALF-CRANK PIN (W/OIL GROOVE)	6	
15		277780018	PIN - WRIST	3	
16		277780019	SET SCREW - 3/8 NC X 3/4 NY LOCK SAC HD	3	Not Shown
17		277780020	CROSSHEAD	3	
18		277780021	ROD - EXTENSION	3	
19		277780022	WIPER BOX	1	
20		277780023	HEX HD CAP SCREW -5/8 X 1 1/2	5	

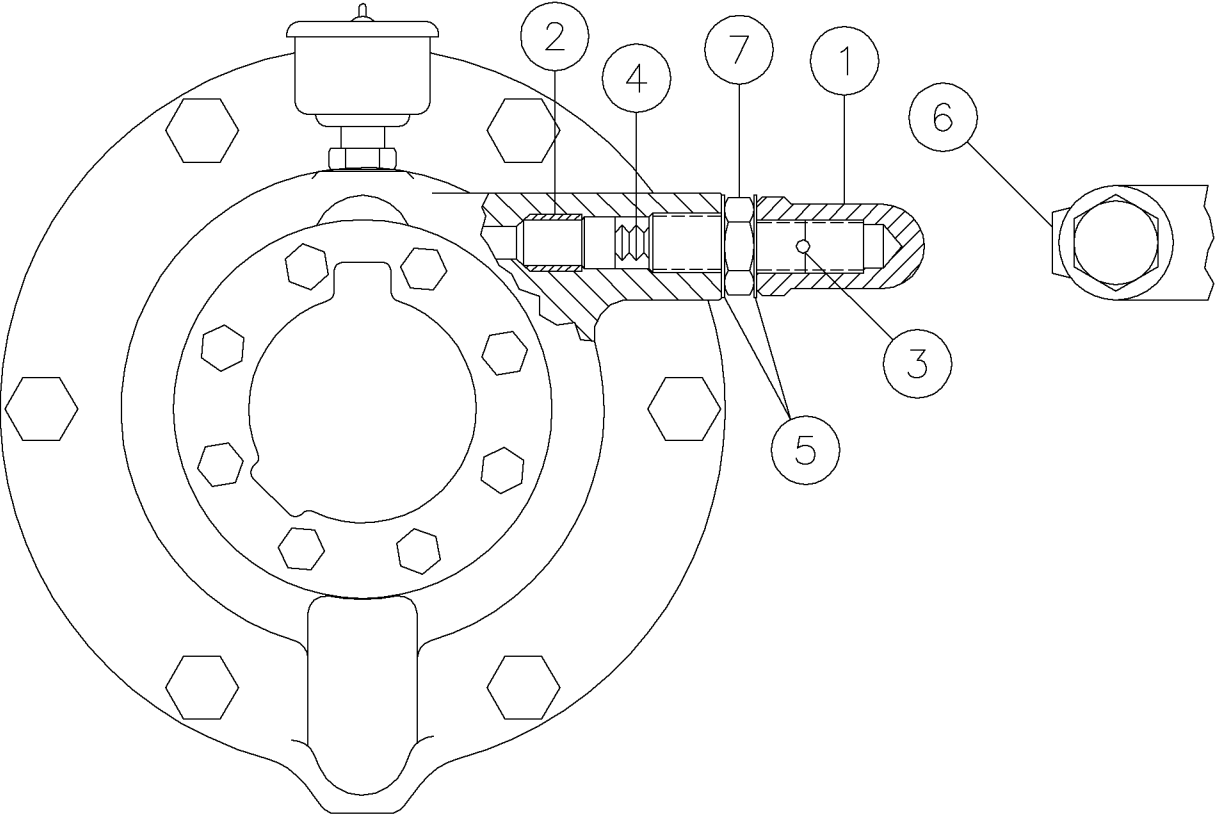
Water Pump - Apex 200 GPM (SC170) - Crankshaft Fig 13-49



Water Pump - Apex 200 GPM (SC170) - Crankshaft Fig 13-49

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		277780024	CRANK SHAFT	1	
2		277780025	ADAPTOR - SPLINED	1	
3		277780026	CONE - BEARING	2	
4		277780027	CUP - BEARING	2	
5		277780028	BEARING CARRIER / GEAR ADAPTOR	1	
6		277780029	O-RING - NITRILE RUBBER	2	
7		277780030	HEX HD CAP SCREW - 5/8 NCX 1 3/4	6	
8		277780031	WASHER - 5/8 MEDIUM SPRING LOCK	6	
9		277780032	SHIM SET	1	
10		277780033	SEAL - OIL (DRIVE SIDE)	1	
11		277780043	CARRIER - BEARING	1	
12		277780034	GASKET	1	
13		277780035	RETAINER - BEARING	1	
14		277780036	SCREW - 1/2 X 1 SOC HD CAP NYLOK	4	
15		277780037	SWITCH -MURPHY	1	
16		277780038	LUBE OUL PUMP	1	
17		277780039	BUSHING - 3/8 X 1/8 HEX	1	
18		277780040	FILTER - OIL 1 X 15	1	
19		277780041	PLUG - 1 1/4 OIL FILTER	1	
20		277780042	PLUG -DRIVE	1	
21		277780044	HEX HD CAP SCREW - 5/16 NC X 5/8	8	
22		277780045	O-RING - NITRILE RUBBER	1	
23		3213017	PLUG-RELIEF 3/8" GRESEN 73-001	2	
24		277780046	O-RING - NITRILE RUBBER	1	
25		277780047	CHECK VALVE - BRASS	1	
26		220741019	BREATHER-CRANKCASE 3/4M NPT	1	
27		244643013	RING-SNAP	1	
28		277780048	SCREW - 5/8 X 2 1/2 SOC HD CAP	6	
29		277780049	SCREW - 3/8 X 3 1/4 HEX HD CAP	12	
30		244643017	WASHER-STAT O SEAL-3/8	12	
31		277780050	GEARBOX - #8 KIT 7.07 RATIO AUBURN	1	Breakdown Fig. 13-30
32		277780051	NIPPLE - 1/4 X 2 STD WT.	1	
33		220741127	OIL LEVEL SIGHT GAUGE	1	
34		296253159	SC - 170 LH - CRANKSHAFT KIT W/ BEARINGS	1	Included Ref. No's 1-4 & Ref. 27

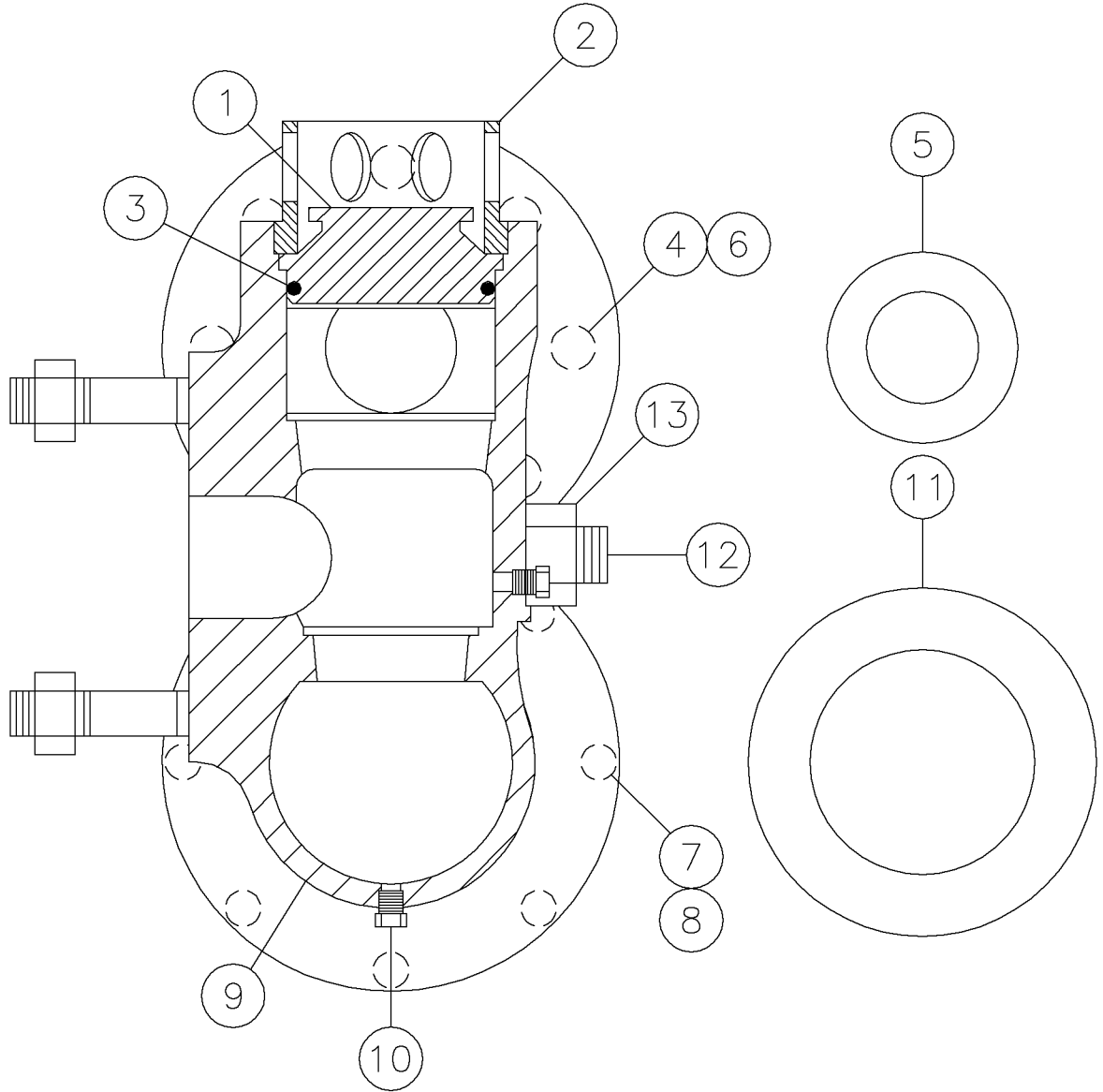
Water Pump - Apex 200 GPM (SC170) - Lube Fig 13-50



Water Pump - Aplex 200 GPM (SC170) - Lube Fig 13-50

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		277780055	CAP - RELIEF VALVE	1	
2		277780056	PISTON - RELIEF VALVE	1	
3		277780057	ADJUSTING SCREW - RELIEF VALVE	1	
4		277780058	SPRING - RELIEF VALVE	1	
5		277780059	WASHER	1	
6		115222001	FITTING-1/8 NPT HEX SOCKET	1	
7		277780060	NUT - 7/8 - 14 JAM	1	

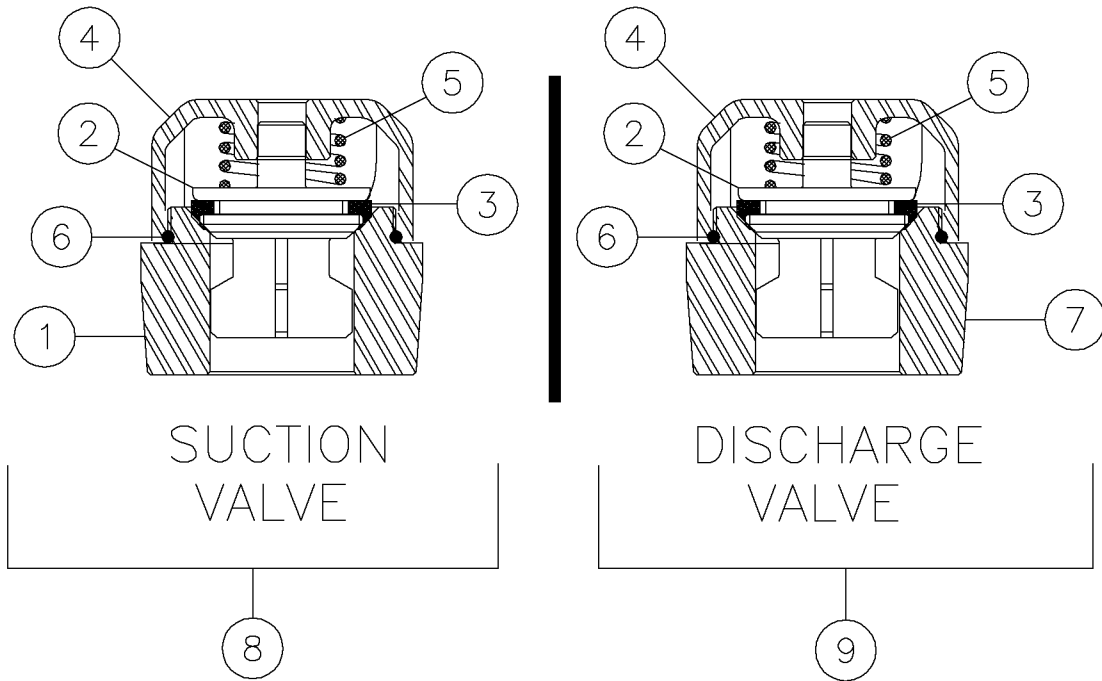
Water Pump - Apex 200 GPM (SC170) - Fluid End Fig 13-51



Water Pump - Aplex 200 GPM (SC170) - Fluid End Fig 13-51

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		277780061	COVER - VALVE	3	
2		277780062	SCREW - VALVE COVER	3	
3		277780063	O-RING	3	
4		277780064	NUT - 1-8 HVY HEX	16	
5		277780002	GASKET - DISCHARGE (4.125 OD)	2	
6		277780065	STUD - 1 X 4 1/8	16	
7		277781039	NUT - 3/4 HEAVY HEX	16	
8		277780067	STUD - 3/4 X 3	16	
9		277780068	LIQUID END	1	
10		277780069	PLUG - 1/4 HEX SS	4	
11		277780003	GASKET - SUCTION (7.75 OD)	2	
12		277780070	STUD - POWER FRAME TO LIQUID END	2	
13		277780071	NUT - 1 1/4 - 7 HVY HEX	2	

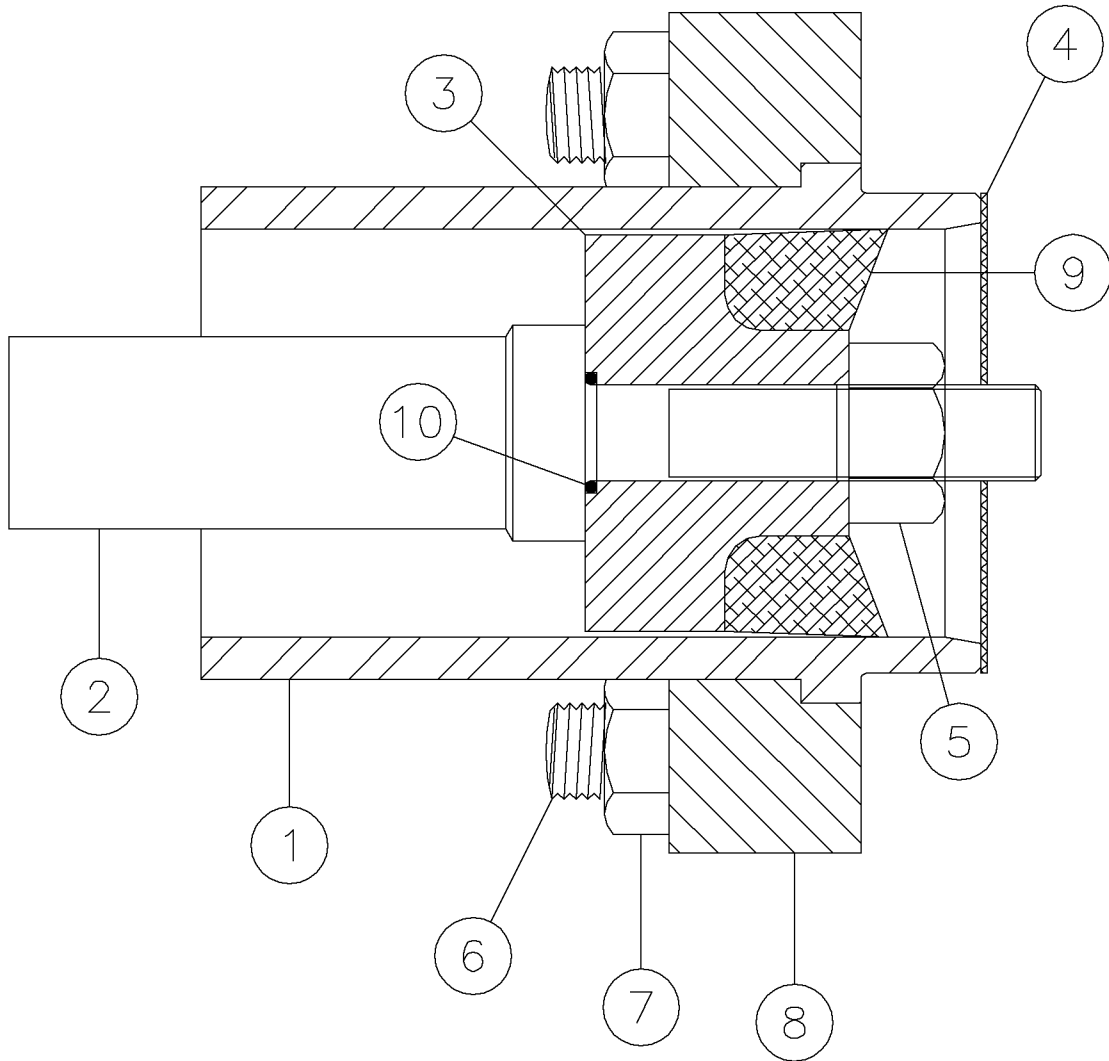
Water Pump - Apex 200 GPM (SC170) - Suction/Discharge Valve Fig 13-52



Water Pump - Apex 200 GPM (SC170) - Suction/Discharge Valve Fig 13-52

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		277780072	VALVE SEAT - SUCTION	3	
2		277780073	VALVE BODY	6	
3		277780074	POLYURETHANE INSERT	6	
4		277780075	GUIDE CAGE	6	
5		277780076	VALVE SPRING	6	
6		277780077	O-RING - NITRILE RUBBER	6	
7		277780078	VALVE SEAT - DISCHARGE	3	
8		277780079	VALVE ASSEMBLY - SUCTION	3	Included Ref. No's 1-6
9		277780080	VALVE ASSEMBLY - DISCHARGE	3	Included Ref. No's 2-7

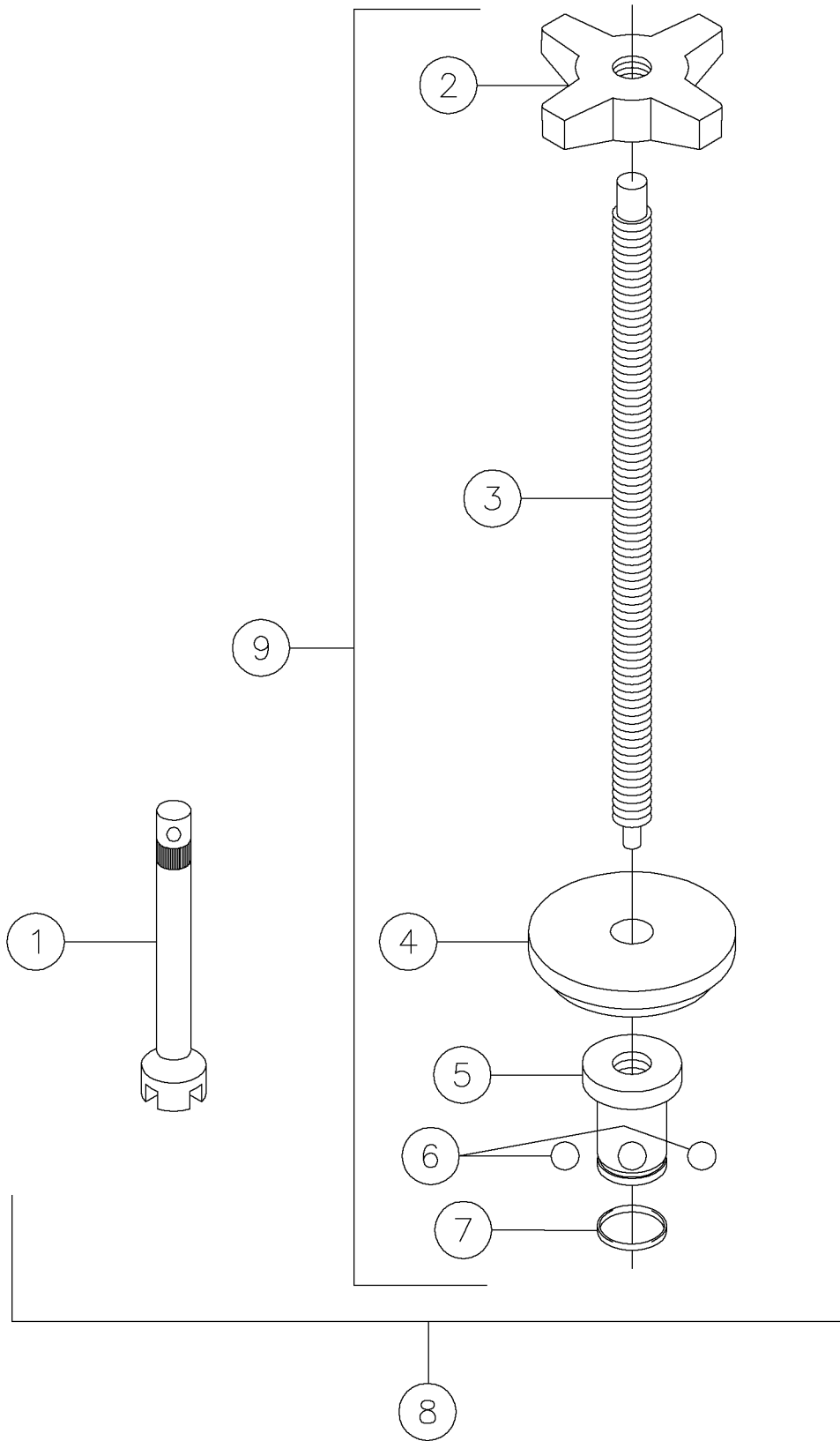
Water Pump - Apex 200 GPM (SC170) - Piston-4" Fig 13-53



Water Pump - Apex 200 GPM (SC170) - Piston-4" Fig 13-53

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		277780081	LINER - 4" CHROME OXIDE PISTON	3	
2		277780082	ROD - PISTON	3	
3		277780083	PISTON ASSY (BLACK)	3	
4		277780084	GASKET LINER	3	
5		277780085	NUT - SL PISTON ROD	3	
6		277780086	STUD	16	
7		277780087	NUT - 1" NC	16	
8		277780088	LINER - PISTON FLANGE	4	
9		NSS	PISTON RUBBER	3	
10		NSS	O - RING	3	

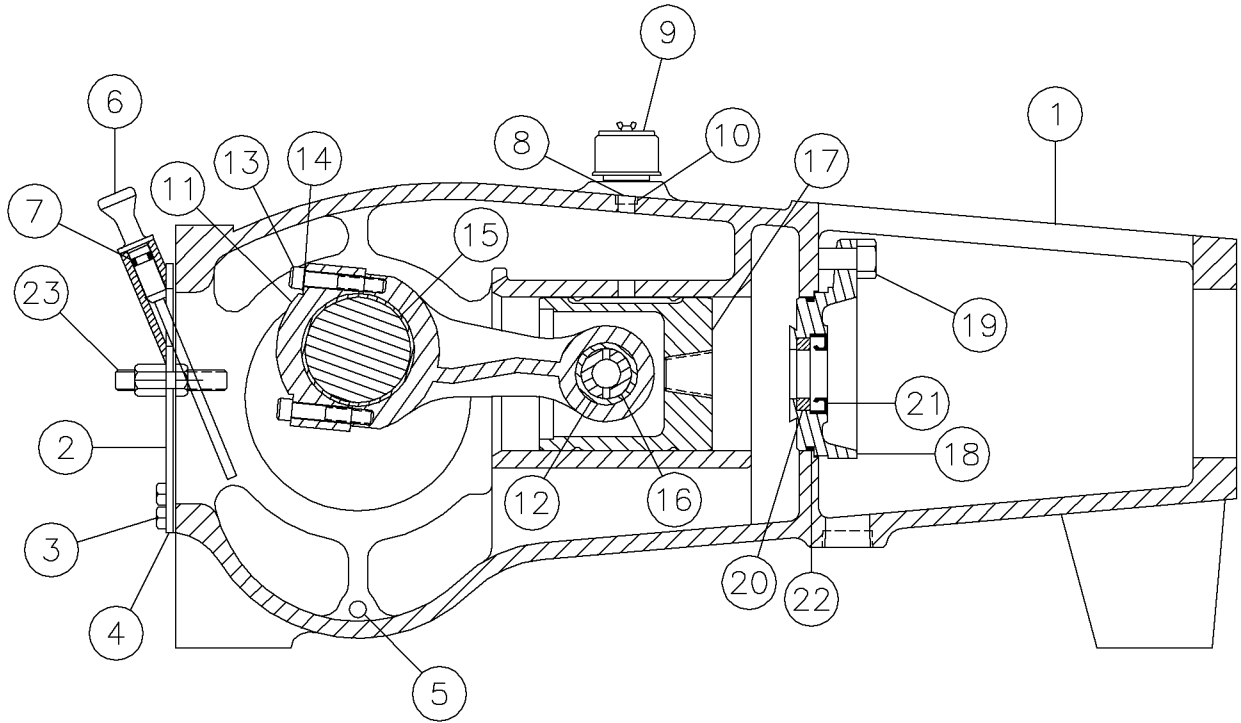
Water Pump - Apex 200 GPM (SC170) - Special Tools Fig 13-54



Water Pump - Aplex 200 GPM (SC170) - Special Tools Fig 13-54

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296251254	CAGE WRENCH	1	
2		277780101	WING NUT	1	
3		277780095	VALVE STEM	1	
4		277780097	BRIDGE	1	
5		277780093	PULLER HEAD	1	
6		277780099	BALL - 1"	2	
7		277780091	O-RING	1	
8		277780089	VALVE PULLER ASSEMBLY	1	Included Ref. No's 1-7
9		296251276	SC170 VALVE SEAT PULLER TOOL	1	Included Ref. No's 2-7

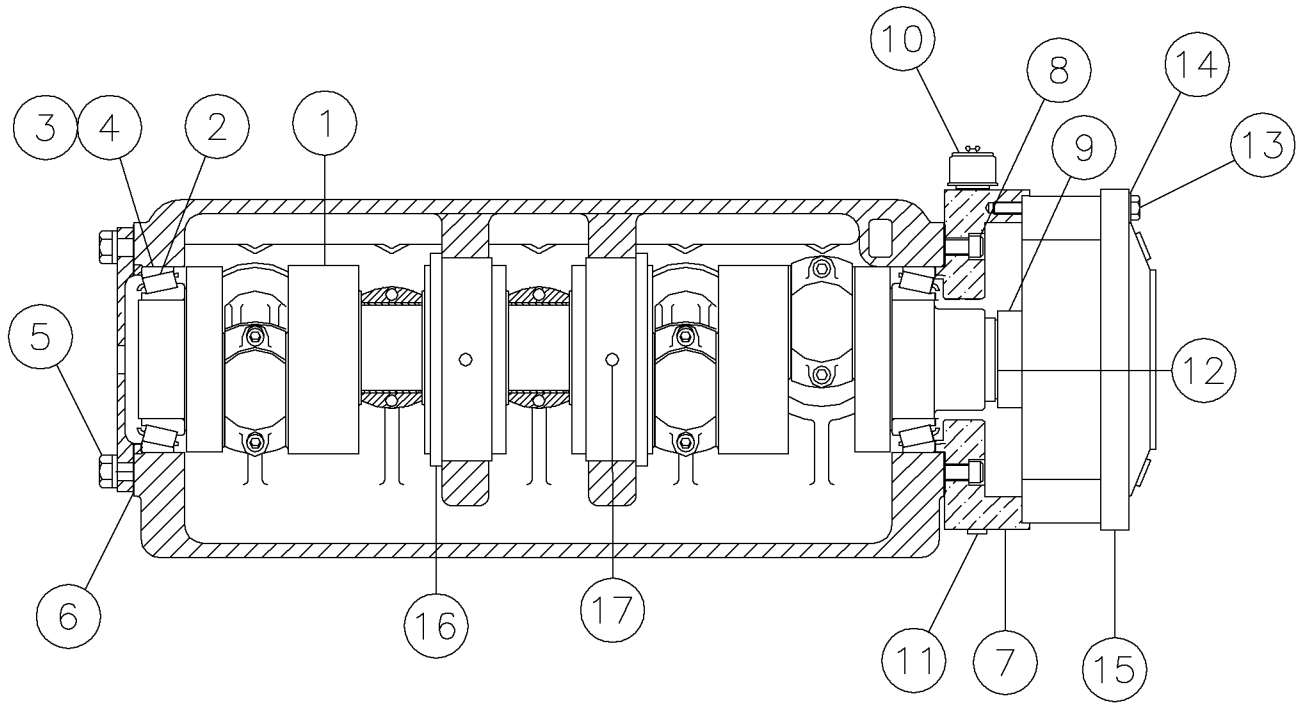
Water Pump - Apex 150 GPM (SC115L) - Power Frame Fig 13-55



Water Pump - Apex 150 GPM (SC115L) - Power Frame Fig 13-55

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		239383005	POWER FRAME (FOR DIPSTICK)	1	
2		296251305	COVER - CRANKCASE	1	
3		220741009	3/8-16X5/8 HHCS	12	
4		239383011	GASKET-CRANKCASE COVER	1	
5		239383013	PLUG-1/2 NPT SQ HEAD	1	
6		224408081	OIL LEVEL DIPSTICK	1	
7		220741023	O-RING 2-023	1	
8		239383009	PLUG-1/4 NPT SOCKET HEAD PLUG	3	
9		277781019	FILTER - BREATHER	1	
10		220741017	1/2" NPT PLUG-SOCKET HEAD	2	
11		277781005	CONNECTION ROD ASSEMBLY	5	
12		224408087	WRIST PIN BUSHING	1	
13		4478024	3/8-16X2 1/2 SOCK HD.	2	
14		480007	WASHER-3/8 S/T LOCK	2	
15		296251306	CRANKPIN - BEARING PAIR	5	
16		224408091	WRIST PIN	5	
17		224408093	CROSSHEAD	5	
18		224408095	WIPER BOX	5	
19		224408097	HEX HEAD CAP SCREW 1/2 X 1 1/2	10	
20		224408099	POLYPAK RING	5	
21		224408101	OIL SEAL-WIPER BOX	5	
22		224408103	O-RING-WIPER BOX	5	
23		296251307	FITTING - BULKHEAD	2	

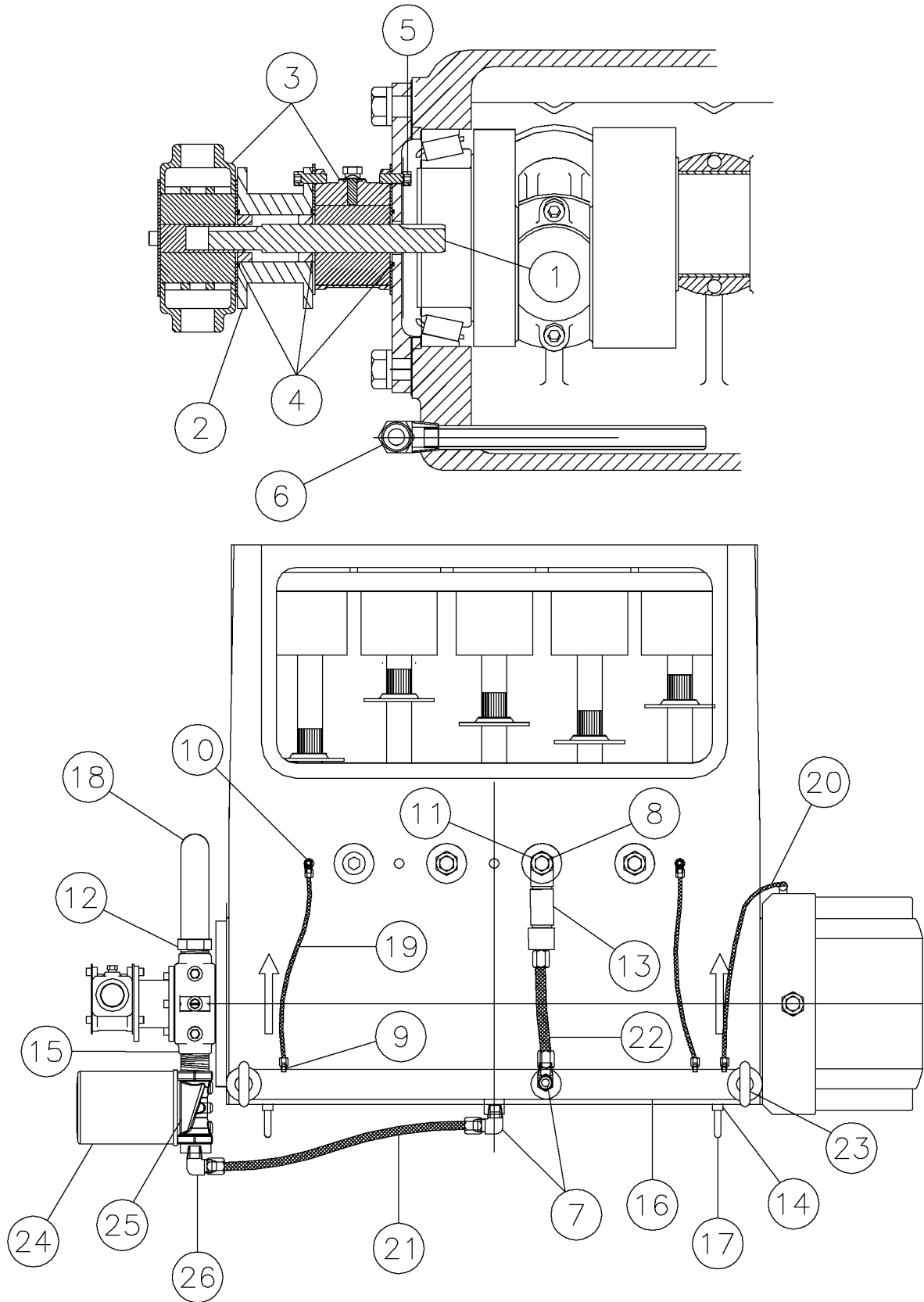
Water Pump - Apex 150 GPM (SC115L) - Crankshaft Fig 13-56



Water Pump - Aplex 150 GPM (SC115L) - Crankshaft Fig 13-56

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296251308	CRANKSHAFT	1	
2		277781009	BEARING - CONE	2	
3		234309007	BEARING CUP	2	
4		296251309	RETAINER - BLIND BEARING	1	
5		224408097	HEX HEAD CAP SCREW 1/2 X 1 1/2	6	
6		277781013	SHIM SET	1	
7		277781015	BEARING RETAINER - GEARBOX ADAPTOR	1	
8		244643009	SCREW-1/2-13 X 1 3/4 SOCK HD C	6	
9		277781017	SHAFT - PLANETARY OUTPUT	1	
10		277781019	FILTER - BREATHER	1	
11		234309019	1/4 NPT PIPE PLUG	2	
12		244643013	RING-SNAP	1	
13		277780049	SCREW - 3/8 X 3 1/4 HEX HD CAP	12	
14		244643017	WASHER-STAT O SEAL-3/8	12	
15		296251342	GEARBOX - #8 6.0: RATION AUBURN	1	Breakdown Fig. 13-30
16		239383017	BEARING-CENTER	2	
17		239383089	SET SCREW-3/8 NC X1 1/2 SOC HD	2	

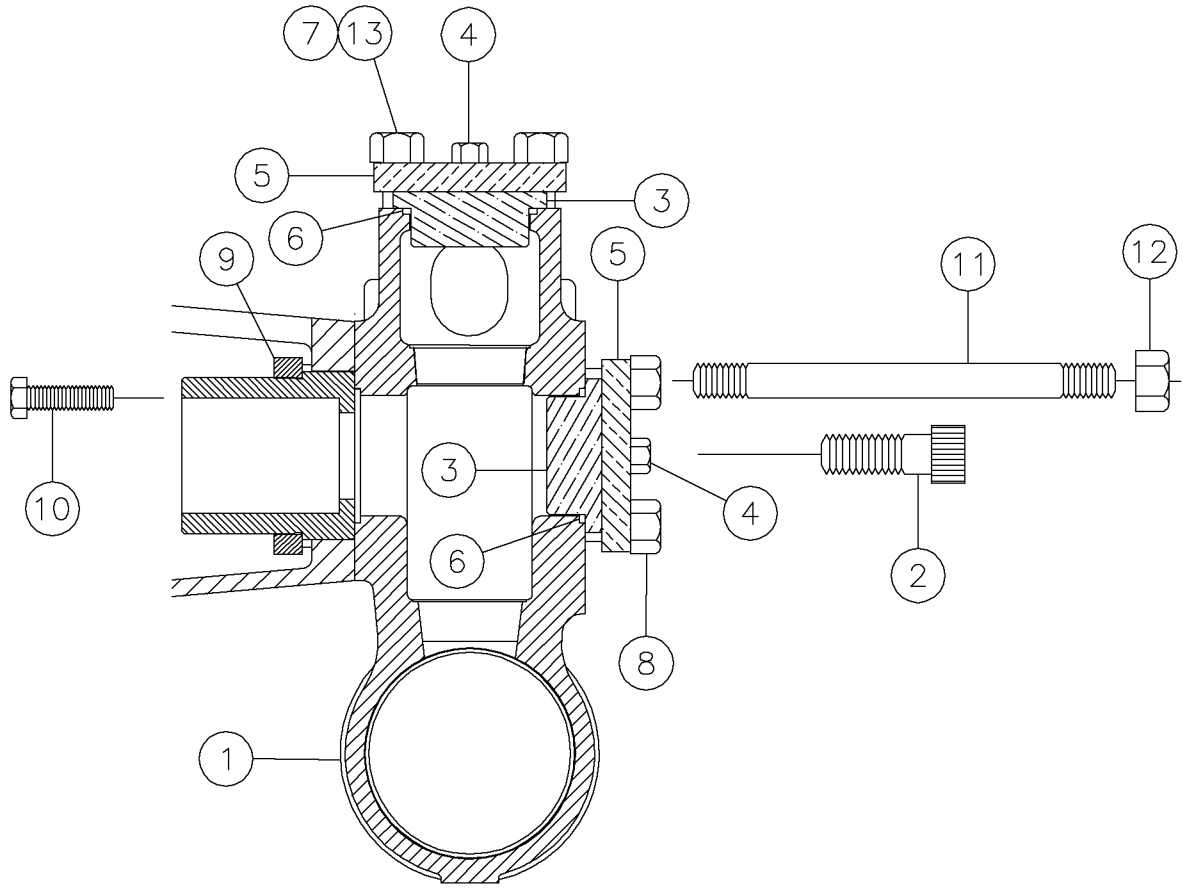
Water Pump - Apex 150 GPM (SC115L) - Dual pump Fig 13-57



Water Pump - Apex 150 GPM (SC115L) - Dual pump Fig 13-57

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296251310	PUMP SHAFT	1	
2		296251311	PUMP SPACER	1	
3		296251312	PUMP - FLEXIBLE IMPELLOR	2	
4		224408121	O-RING (POLY) SIZE 028	3	
5		296251313	SCREW - 1/4" NC SOCKET HEAD CAP X 3/5"SS	9	
6		296251314	INLET ADAPTER	1	
7		296251315	FITTING - 1/2" MP X 8MJ90	2	
8		296251316	FITTING - ELBOW STREET 1/2" NPT	1	
9		296251317	FITTING - 1/8" MP X - 4MJ	3	
10		296251318	FITTING - 1/4" MP X - 4MJ90	3	
11		296251319	BUSHING - 3/4" NPT X 1/2" NPT	1	
12		296251320	BUSHING - 1" NPT X 3/4" NPT	1	
13		296251321	CHECK VALVE	1	
14		296251322	FITTING - 1/4" TUBE X 18" NPT	2	
15		296251323	REDUCER - 1" MNPT X 3.4" MNPT	1	
16		296251324	OIL MANIFOLD	1	
17		296251325	TUBING - 1/4" S.S.	2	
18		296251327	HOSE - 3/4"	1	
19		296251328	HOSE - 1/4" S.S. BRAIDED 10"	2	
20		296251329	HOSE - 1/4" S.S. BRAIDED 15"	1	
21		296251330	HOSE - 1/2" S.S. BRAIDED 15"	1	
22		296251331	HOSE - 1/2" S.S. BRAIDED 9"	1	
23		296251332	EYE BOLT - 5/8" NC FORGED	2	
24		296251333	OIL FILTER	1	
25		296251334	OIL FILTER HEAD	1	
26		62633001	3/4MX8 JIC M(90)	1	

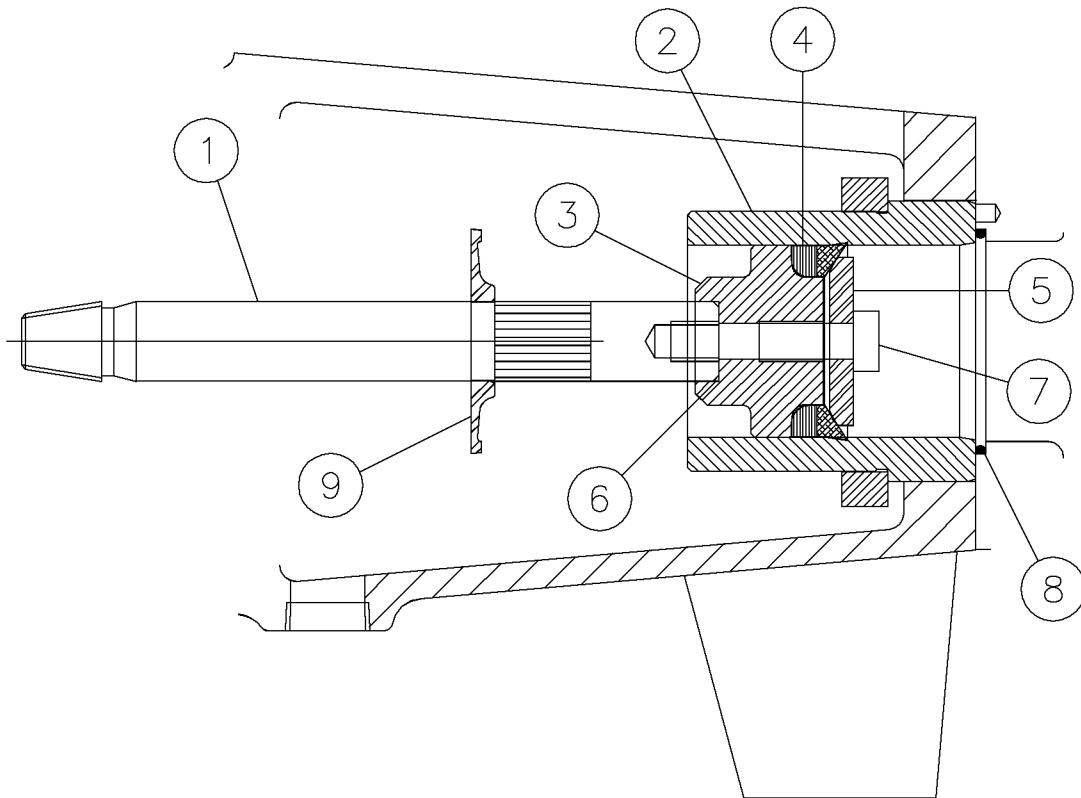
Water Pump - Apex 150 GPM (SC115L) - Fluid End Fig 13-58



Water Pump - Apex 150 GPM (SC115L) - Fluid End Fig 13-58

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		244643019	FLUID END-DUCTILE IRON	1	
2		224408107	SOCKET HD CAPSCREW 7/8X2 3/4	2	
3		244643021	VALVE COVER & CYL. HEAD PLUG	10	
4		239383023	CAP SCREW-1/2 NC-1 1/4 HEX HD	10	
5		239383019	VALVE COVER RETAINER PLATE	2	
6		296251335	O-RING - FLUID SEAL	10	
7		244643023	SCREW-3/4-10 X 2 1/2 HEX HD C	4	
8		244643025	SCREW-3/4-10 X 9 1/2 HEX HD C	10	
9		239383075	RETAINER PLATE	1	
10		277781035	HEX HD CAP SCREW - 5/8 X 2 1/4	2	
11		296251336	STUD - POWER FRAME TO FLUID END	2	
12		277781039	NUT - 3/4 HEAVY HEX	4	
13		277781041	HEX HD CAP SCREW - 3/4 X 4	8	

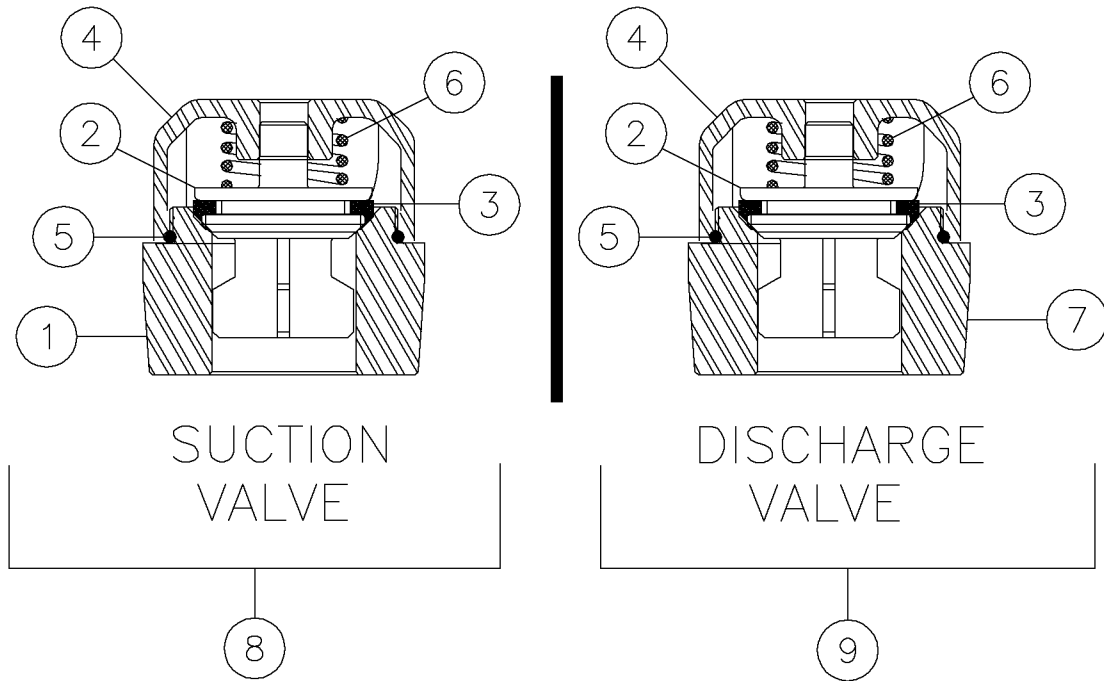
Water Pump - Apex 150 GPM (SC115L) - Piston-3" Fig 13-59



Water Pump - Apex 150 GPM (SC115L) - Piston-3" Fig 13-59

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		279254001	PISTON - ROD	1	
2		296251337	PISTON LINER 3"	1	
3		296251338	PISTON HUB	1	
4		296251339	PISTON CUP - BLACK RUBBER	1	
5		296251340	PISTON KEEPER	1	
6		220741075	O-RING-POLYURETHANE (SIZE 024)	1	
7		279264001	PISTON - FASTENER END	1	
8		296251341	FLUID SEAL	1	
9		277781061	BAFFLE PLATE	1	

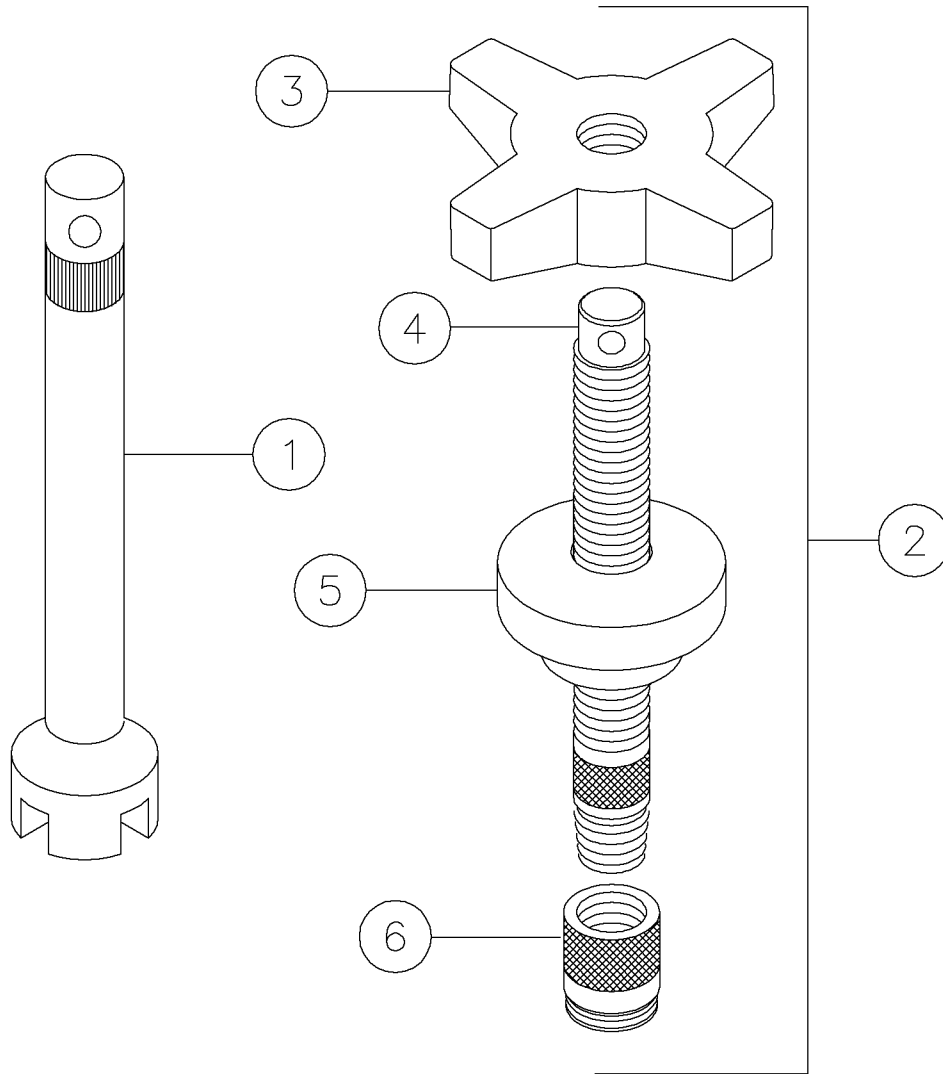
Water Pump - Apex 150 GPM (SC115L) - Suction/Discharge Valve Fig 13-60



Water Pump - Aplex 150 GPM (SC115L) - Suction/Discharge Valve Fig 13-60

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		277781043	VALVE SEAT - SUCTION	5	
2		277781045	VALVE BODY	10	
3		277781047	POLYURETHANE THRUST	10	
4		277781049	GUIDE CAGE	10	
5		239383033	O-RING NITRILE RUBBER-2-035	10	
6		277781053	VALVE SPRING	10	
7		277781055	VALVE SEAT - DISCHARGE	5	
8		277781057	VALVE ASSEMBLY - SUCTION	5	Included Ref. No's 1-6
9		277781059	VALVE ASSEMBLY - DISCHARGE	5	Included Ref. No's 2-7

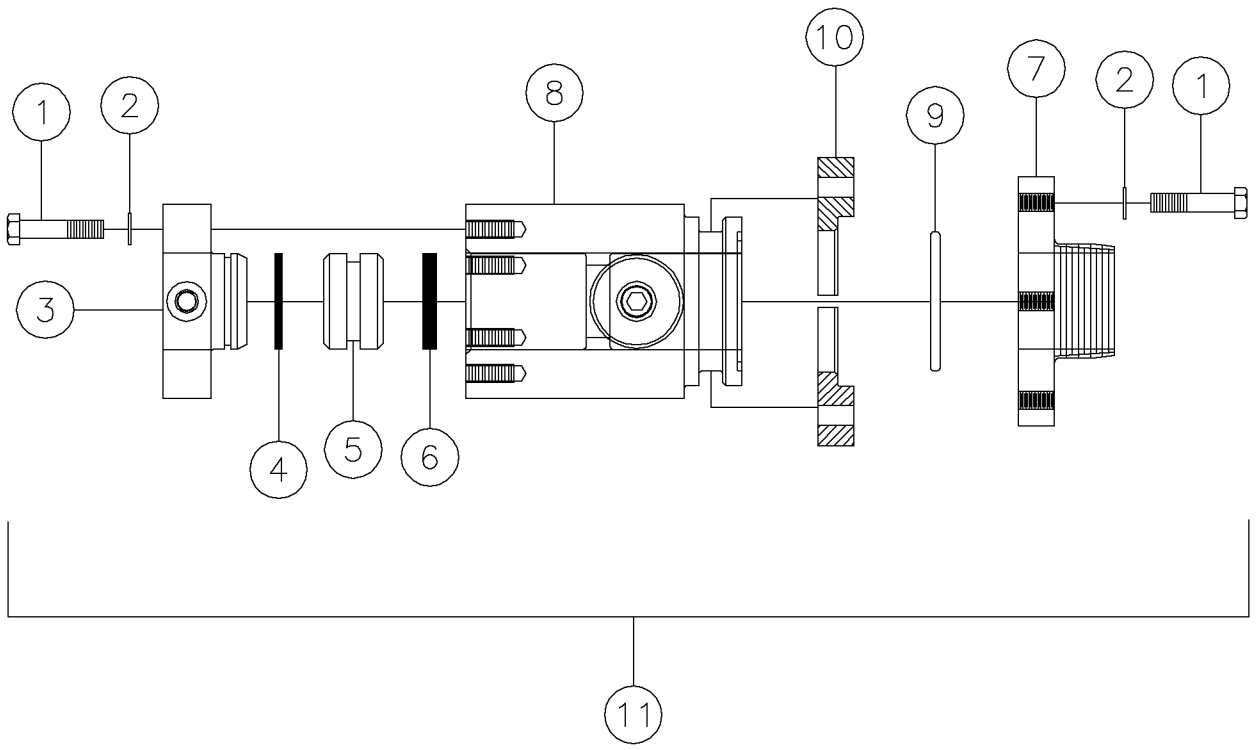
Water Pump - Apex 150 GPM (SC115L) - Special Tools Fig 13-61



Water Pump - Apex 150 GPM (SC115L) - Special Tools Fig 13-61

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296251253	CAGE WRENCH	1	
2		296251275	SC115L VALVE SEAT PULLER TOOL	1	Included Ref. No's 3-6
3		224893001	WING NUT	1	
4		296251252	STEM PULLER	1	
5		224891001	BRIDGE	1	
6		296251251	PULLER HEAD	1	

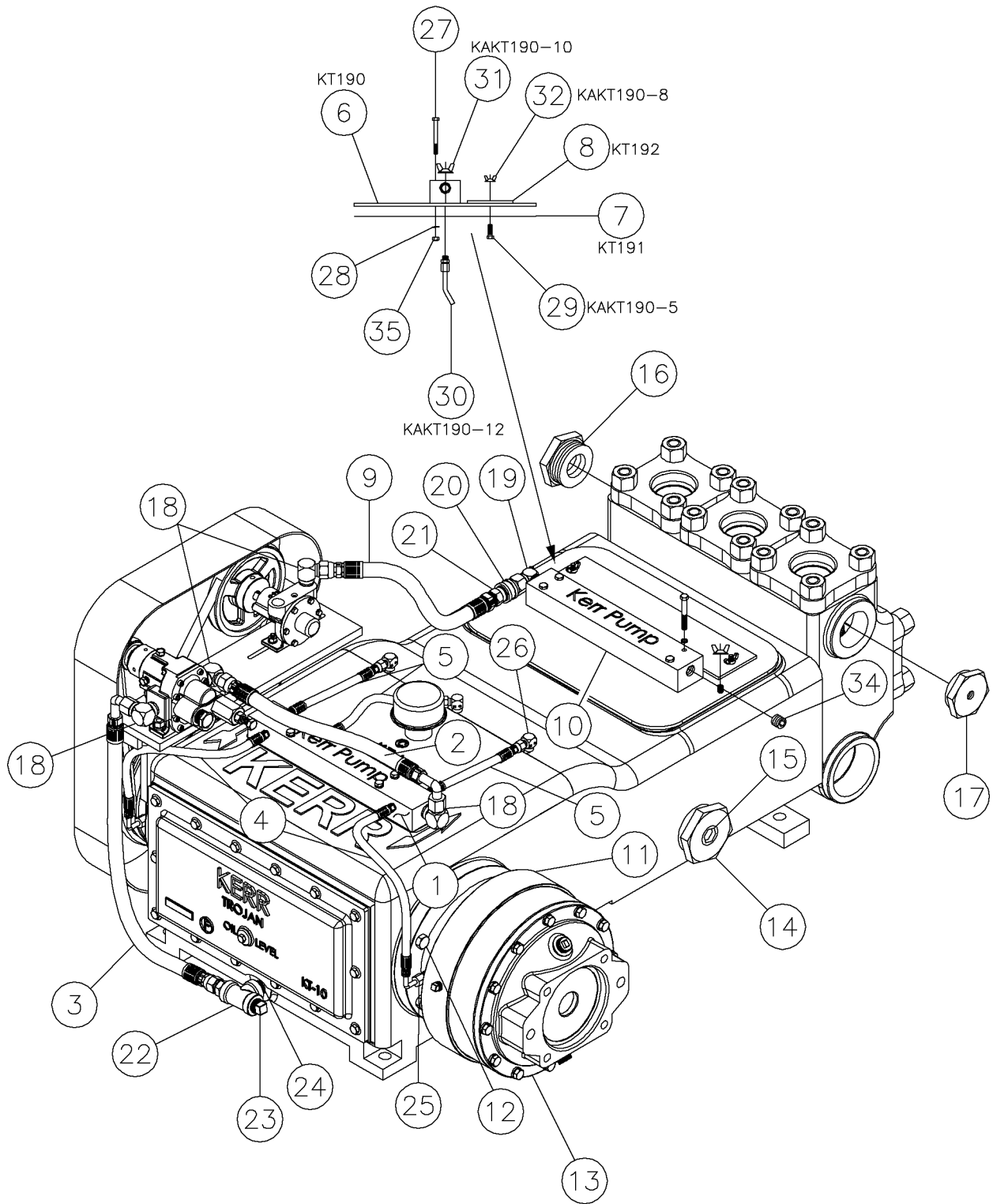
Water Pump - Apex 150 GPM (SC115L) - Outlet Fig 13-62



Water Pump - Aplex 150 GPM (SC115L) - Outlet Fig 13-62

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		235720001	BOLT-3/8-16X1 3/4 6R8 ZINC PLT	12	
2		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	12	
3		283637001	ENDCAP-SC115L OUTLET FITTING	1	
4		51163001	O-RING #133	1	
5		239252001	PISTON-SC65 OUTLET FITTING	1	
6		51181001	O-RING #326	1	
7		277841001	FLANGE-SC115L OUTLET	1	
8		294122001	FITTING - APLEX SC115L RH OUTLET	1	
9		227589001	O-RING #AS-231	1	
10		277843001	FLANGE - SPLIT, SC115L OUTLET	1	
11		294123001	ASSEMBLY - SC115L RH FLANGE OUTLET	1	Included All Items In This Figure

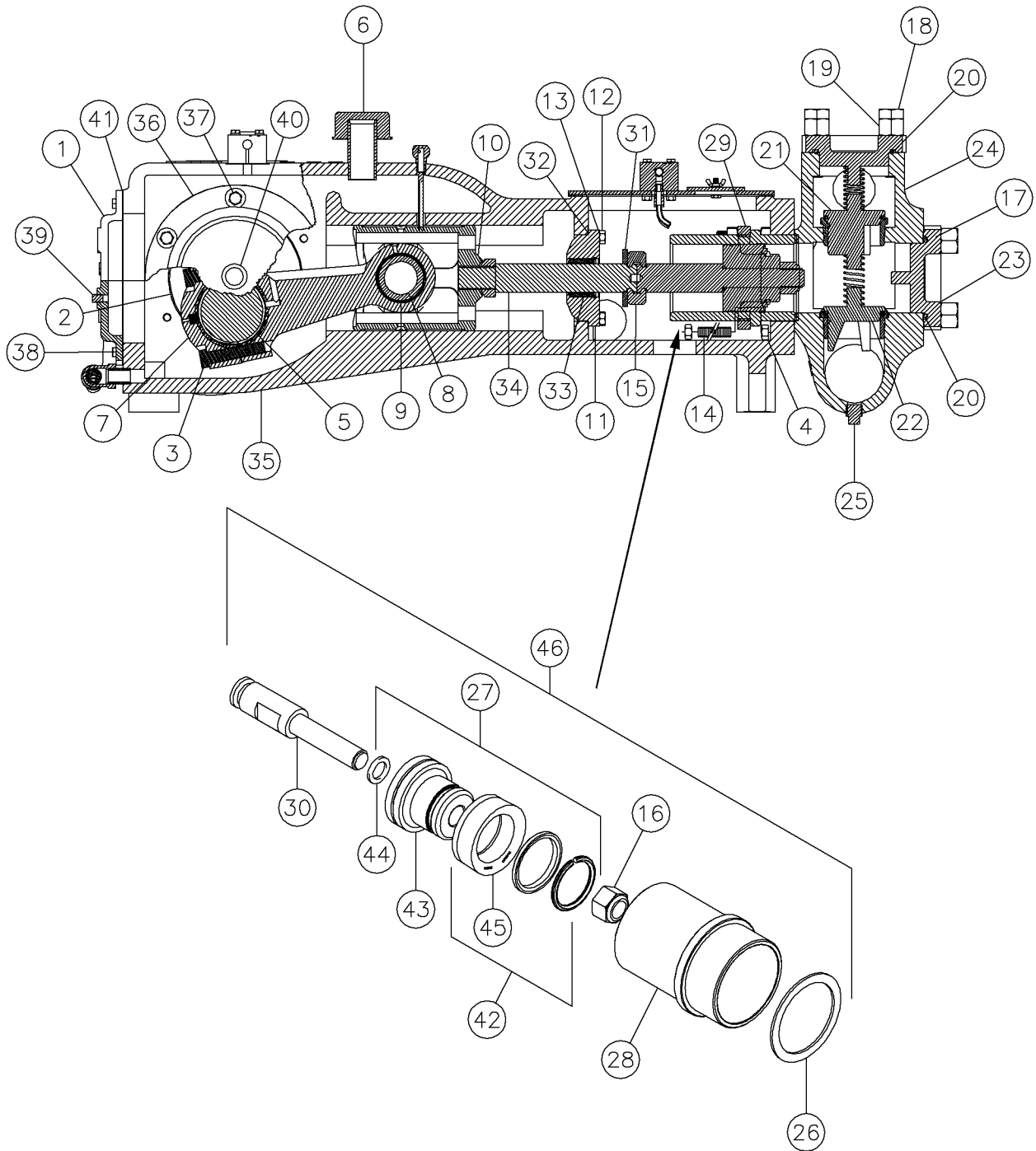
Water Pump - Kerr 150 GPM (KT3350PT-RH) - Outer Fig 13-63



Water Pump - Kerr 150 GPM (KT3350PT-RH) - Outer Fig 13-63

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		287030054	MANIFOLD - OIL	1	
		287030055	GASKET - OIL MANIFOLD	1	
2		287030056	HOSE - 8FS JIC/8FS JIC 90	1	
3		287030057	HOSE - 8FS JIC/ 1/2 M STR	1	
4		287030058	HOSE - 4FS JIC 90/ 1/8 M STR	2	
5		287030059	HOSE - 4FS JIC 90/ 1/8 M STR	3	
6		287078002	COVER - PISTON CHAMBER	1	
7		287078003	GASKET - PISTON CHAMBER COVER	1	
8		287078004	COVER - CHAMBER INSPECTION GLASS	1	
9		287030063	HOSE - 8FS JIC ST / 1/2 M ST	1	
10		287030005	MANIFOLD - WATER	1	
11		287030075	HOUSING - BRG. HYD. DRIVE #8	1	
12		235721001	BOLT-1/2-13X1 1/2 GR8 ZINC PLT	8	
13		296251342	GEARBOX - #8 6.0: RATION AUBURN	1	Breakdown Fig. 13-68
14		225838001	BUSHING-2X3/4 NPT REDUCER POLY	2	
15		735001	3/4" COUNTERSUNK PIPE PLUG	2	
16		287030064	BUSHING - 3" X 2" HEX	1	
17		287030065	BUSHING - 3" X 1/2" HEX	1	
18		53832001	1/2M PIPE-#8M JIC 90 DEG.	4	
19		904831001	FITTING 1/2MNPT X 1/2MNPT 90	1	
20		287030069	COUPLING - 3/8" QUICK	1	
21		287030076	QUICK CONNECT - 3/8"	1	
22		725003	1/2" PIPE TEE BLACK	1	
23		732007	1/2" PIPE PLUG BLACK STEEL	1	
24		707003	1/2" NPT HEX NIPPLE	1	
25		97491001	FITTING-1/8M X 4M JIC STR.CONN	2	
26		287030070	FITTING - INJECTOR	3	
27		250531001	BOLT-1/4-20 X 2 GR8 HEX Y/ZINC	8	
28		480003	WASHER-1/4 S/T LOCK	8	
29		235734001	BOLT-1/4-20X3/4 GR8 ZINC PLTD	2	
30		287030066	FITTING - WATER JET	3	
31		287030067	WING NUT - 5/16 - 18 UNC	2	
32		287030068	WING NUT - 1/4 - 20 UNC	2	
33		524005	SSS 5/16-18X1	2	
34		287503001	PLUG - 3/8" PIPE HOLLOW HEX	1	
35		235732001	NUT - HEX - .25 - 20 - GR8 - YZ	8	

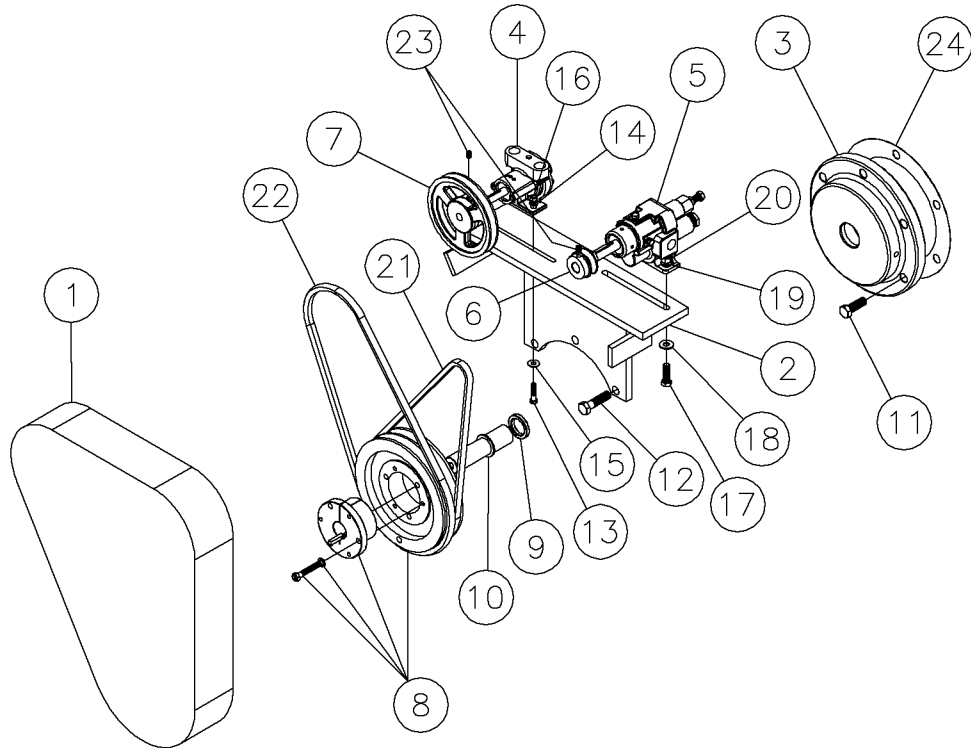
Water Pump - Kerr 150 GPM (KT3350PT-RH) - Power/Fluid Ends Fig 13-64



Water Pump - Kerr 150 GPM (KT3350PT-RH) - Power/Fluid Ends Fig 13-64

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		287078005	COVER - PAN	1	
2		287078006	CRANKSHAFT - SPLINED HYD 21" TOOTH	1	
3		287030004	BOLT	6	
4		287030079	NUT - 5/8-11 SS	24	
5		287078007	BUSHING - CONN. ROD (STD)	3	
6		287030007	CAP - OIL FILL/BREATHER	1	
7		287078008	ROD - CONNECTING (INSERTED)	3	
8		287030009	PIN - WRIST	3	
9		287030010	BUSHING - WRIST PIN	3	
10		287030011	CROSS HEAD	3	
11		287030012	PONY ROD GLAND ONLY	3	
12		287030013	BOLT - 7/16-14 X 1-1/4 SS	12	
13		287030014	SNAP RING	2	
14		287078009	STUD - RETAINER LINER	3	
		287078010	STUD - RETAINER LINER RETAINMENT	3	
15		287030016	CLAMP	3	
16		287030017	LOCK NUT	24	
17		287030018	CAP - TOP COVER	24	
18		287030019	STUD	6	
19		287030020	NUT	3	
20		287030021	O-RING	3	
21		287078011	VALVE - DISCHARGE (COMPLETE)	3	
22		287078012	VALVE - SUCTION (COMPLETE)	1	
23		287030024	COVER - END CAP	1	
24		287078013	FLUID VESSEL - END ONLY	3	
25		287030026	PLUG - BRASS DRAIN	3	
26		287030027	GASKET - LINER	3	
27		287030028	PISTON - 3-1/2"	3	
28		287078014	LINER - 3 1/2 CERAMIC	3	
29		287030030	RETAINER - LINER	3	
30		287078015	ROD - PISTON EXTENSION	3	
31		287030032	SPLASH GUARD - PONY ROD	3	
32		287030033	GASKET - PONY ROD GLAND	3	
33		287030034	SEAL SET (INCL. FOUR SEALS)	3	
34		287078016	ROD - PONY PISTON (PUMP)	3	
35		287078017	CASE - PUMP	1	
36		287078018	HOUSING - BEARING EXT. SHAFT SIDE	1	
37		235721001	BOLT-1/2-13X1 1/2 GR8 ZINC PLT	8	
38		238209001	BOLT-5/16-18X1 GR8 HEX ZINC YC	19	
39		287030040	PLUG - BRASS OIL LEVER	1	
40		287030053	SEAL - OIL	1	
41		287078019	GASKET - PAN COVER	1	
42		287030098	PISTON CUP KIT	3	
43		287078021	PISTON - BODY ONLY	3	
44		296251941	O - RING	3	
45		296251932	CUP - PISTON (SET OF 3)	1	
46		296251939	LINER ASSY - 3 1/2" CERAMIC (1)	3	
		296251933	LINER ASSY - 3 1/2 CERAMIC (SET OF 3)	1	

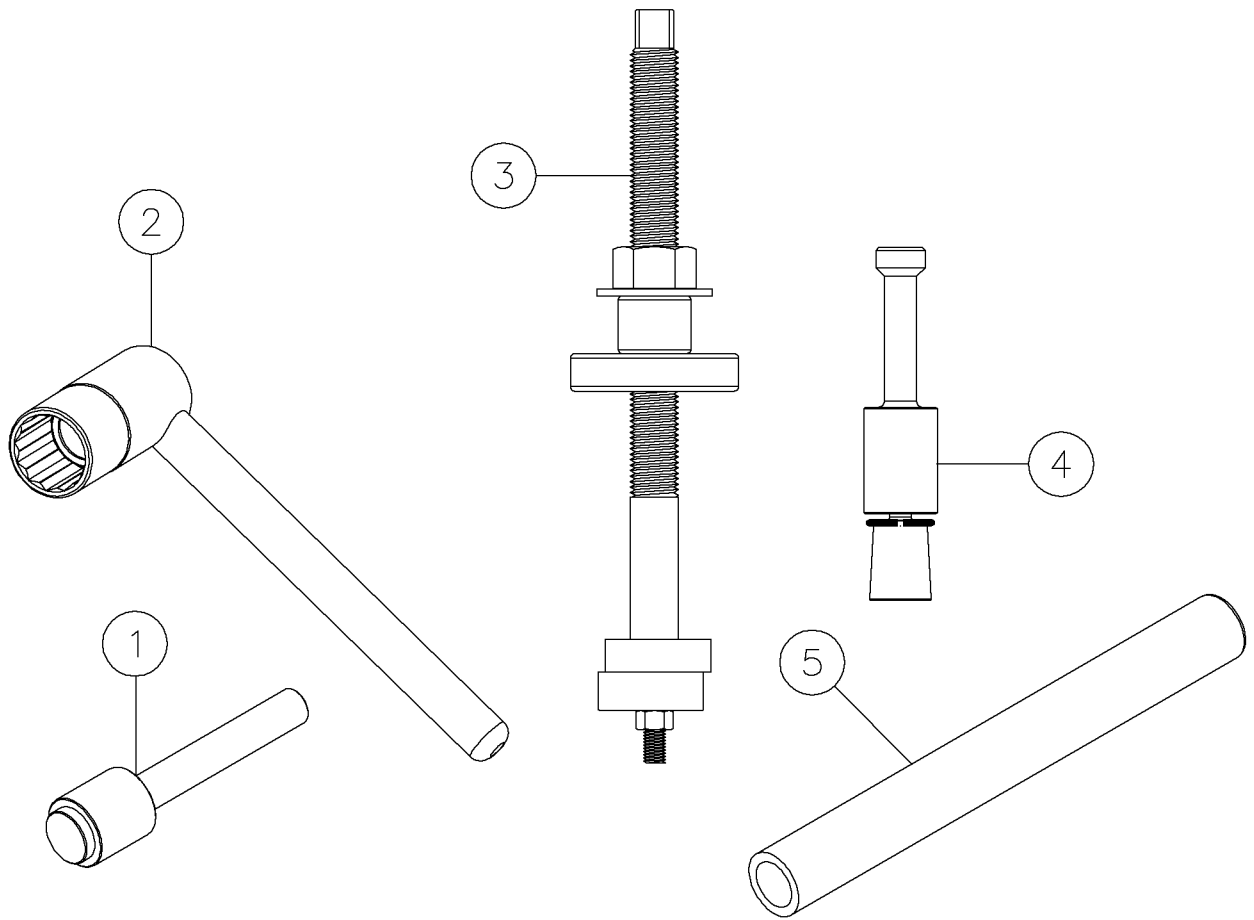
Water Pump - Kerr 150 GPM (KT3350PT-RH) - Piston Wash Pump Drive Fig 13-65



Water Pump - Kerr 150 GPM (KT3350PT-RH) - Piston Wash Pump Drive Fig 13-65

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		296251302	GUARD - PUMP DRIVE BELT	1	
2		296251303	BRACKET - OIL & WATER PUMP	1	
3		287078018	HOUSING - BEARING EXT. SHAFT SIDE	1	
4		287030043	PUMP - BRONZE WATER	1	
5		287030042	BRACKET - OIL/WATER PUMP	1	
6		287030045	SHEAVE - OIL PUMP	1	
7		287030046	SHEAVE - WATER PUMP	1	
8		287030047	SHEAVE - CRANKSHAFT	1	
9		287030053	SEAL - OIL	1	
10		NSS	AUXILIARY SHAFT	1	Comes With Crankshaft
11		235721001	BOLT-1/2-13X1 1/2 GR8 ZINC PLT	3	
12		235718001	BOLT-1/2-13X2 GR8 HEX ZINC PLT	3	
13		250008001	BOLT 1/4-20 X 1 1/4 ZINC PL	2	
14		480003	WASHER-1/4 S/T LOCK	2	
15		485003	WASHER-1/4 FLAT	2	
16		235732001	NUT - HEX - .25 - 20 - GR8 - YZ	2	
17		235736001	BOLT-3/8-16X1 1/4 ZINC PLTD	2	
18		485007	WASHER-FLATSTD-.38-.44X1.00-.08-CZ	2	
19		480007	WASHER-3/8 S/T LOCK	2	
20		235725001	NUT - HEX - .38 - 16 - GR8 - YZ	2	
21		287078024	BELT - OIL PUMP	1	
22		287078025	BELT - WATER PUMP	1	
23		528001	SS-3/8-16X3/8 BRASS TIP	2	
24		296251304	GASKET - BEARING HOUSING	1	

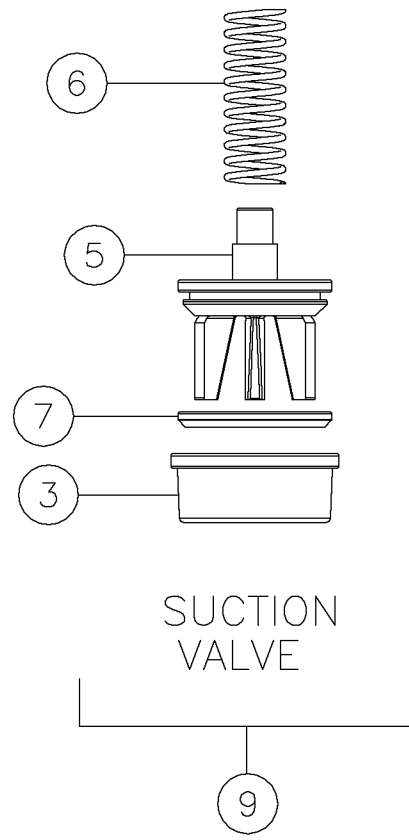
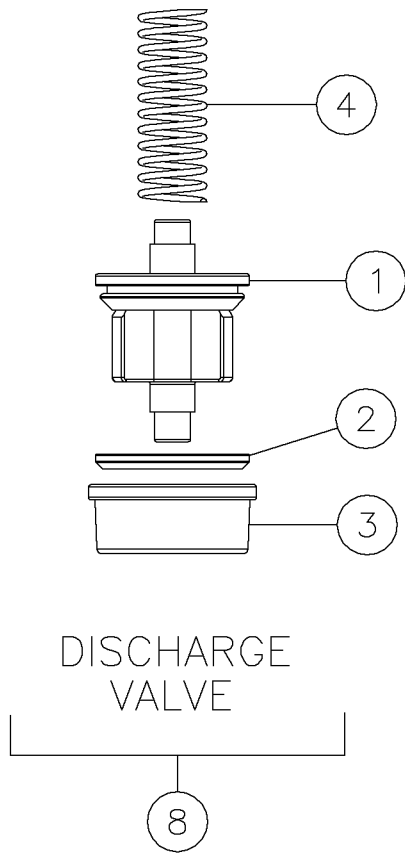
Water Pump - Kerr 150 GPM (KT3350PT-RH) - Special Tools Fig 13-66



Water Pump - Kerr 150 GPM (KT3350PT-RH) - Special Tools Fig 13-66

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		287030071	INSTALLATION TOOL - PONY ROD SEAL	1	
2		287030072	INSTALLATION WRENCH - PONY ROD	1	
3		287030073	VALVE PULLER - WING TYPE	1	
4		296251270	PISTON SNAP RING INSTALLATION TOOL	1	
5		296251278	TOOL-VALVE SEAT SEATING	1	

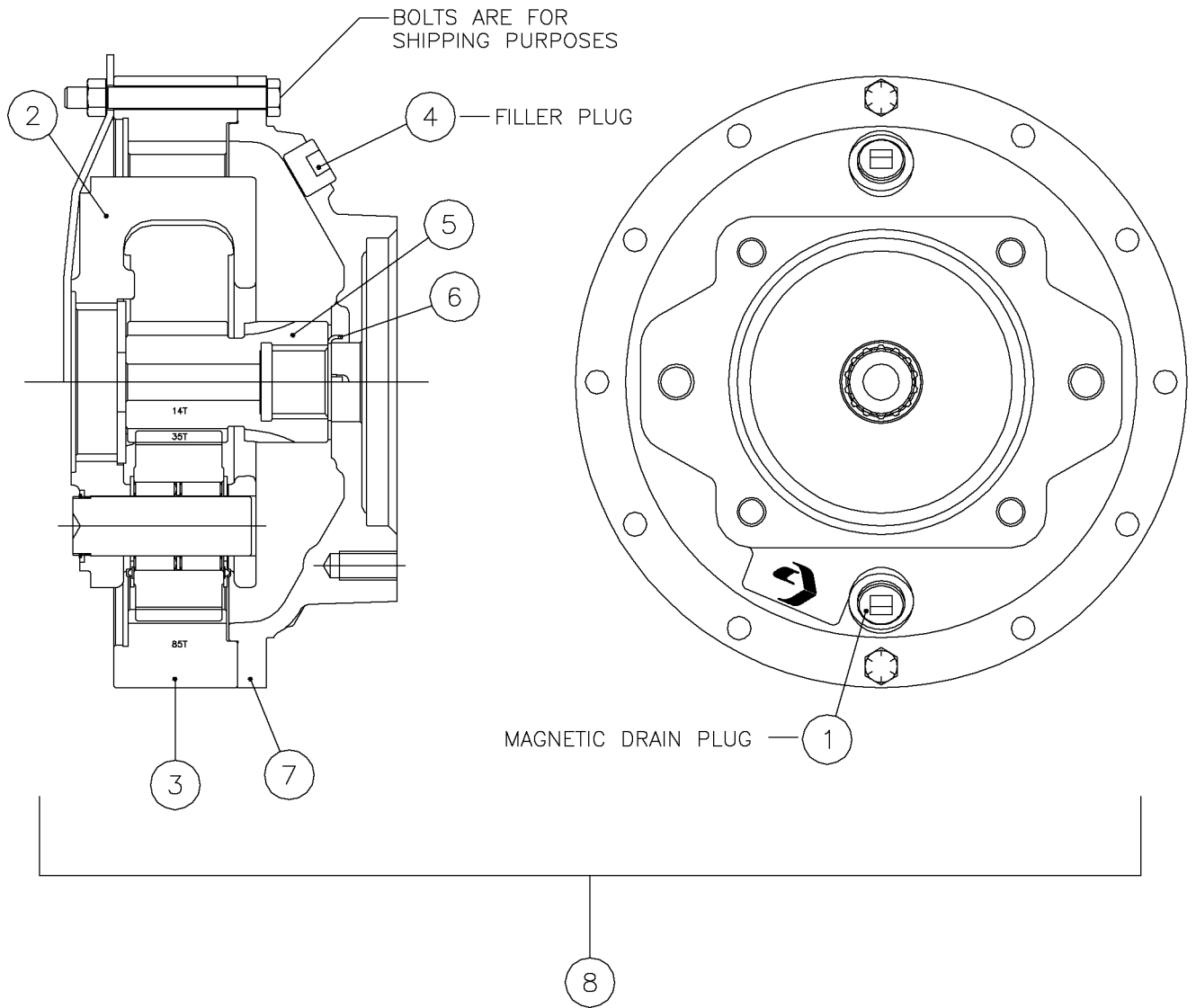
Water Pump - Kerr 150 GPM (KT3350PT-RH) - Suction/Discharge Valve Fig 13-67



Water Pump - Kerr 150 GPM (KT3350PT-RH) - Suction/Discharge Valve Fig 13-67

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		287078026	DISCHARGE VALVE W/ INSERT	3	
2		287078027	VALVE INSERT - RED	3	
3		287078028	VALVE SEAT	6	
4		287078029	VALVE SPRING (DISCHARGE) LONG	3	
5		287078030	SUCTION VALVE W/ INSERT	3	
6		287078031	VALVE SPRING (SUCTION) SHORT	3	
7		296251942	VALVE - INSERT - BLUE	3	
8		287078011	VALVE - DISCHARGE (COMPLETE)	3	Included Ref. No's 1-4
		296251934	VALVE - DISCHARGE (SET OF 3)	1	
9		287078012	VALVE - SUCTION (COMPLETE)	3	Included Ref. No's 3-7
		296251935	VALVE - SUCTION (SET OF 3)	1	

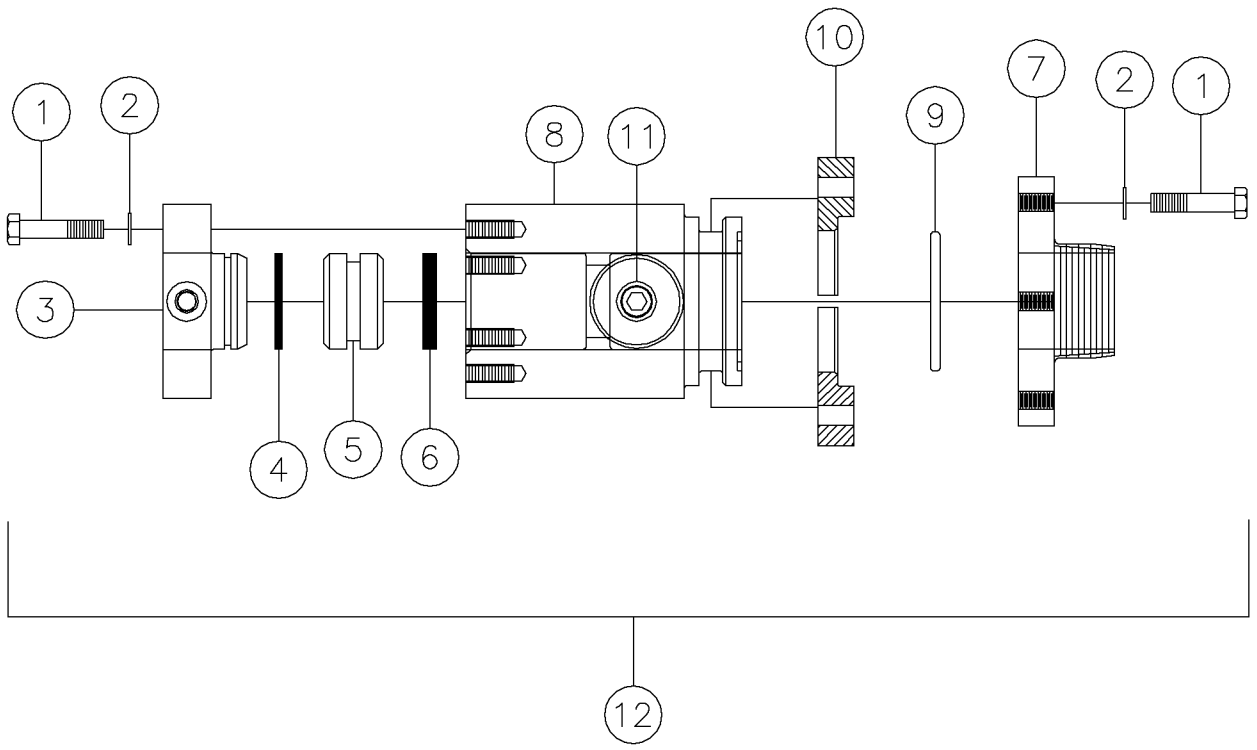
Water Pump - Kerr 150 GPM (KT3350PT-RH) - Gearbox Fig 13-68



Water Pump - Kerr 150 GPM (KT3350PT-RH) - Gearbox Fig 13-68

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		221652035	MAGNETIC PLUG	1	
2		296251343	SEC. CARRIER ASSEMBLY	1	
3		277780053	GEAR - RING	1	
4		221652039	PIPE PLUG	1	
5		296251344	GEAR - SUM	1	
6		131488021	THRUST WASHER	1	
7		277781033	COVER	1	
8		296251342	GEARBOX - #8 6.0: RATION AUBURN	1	Included All Items In This Figure

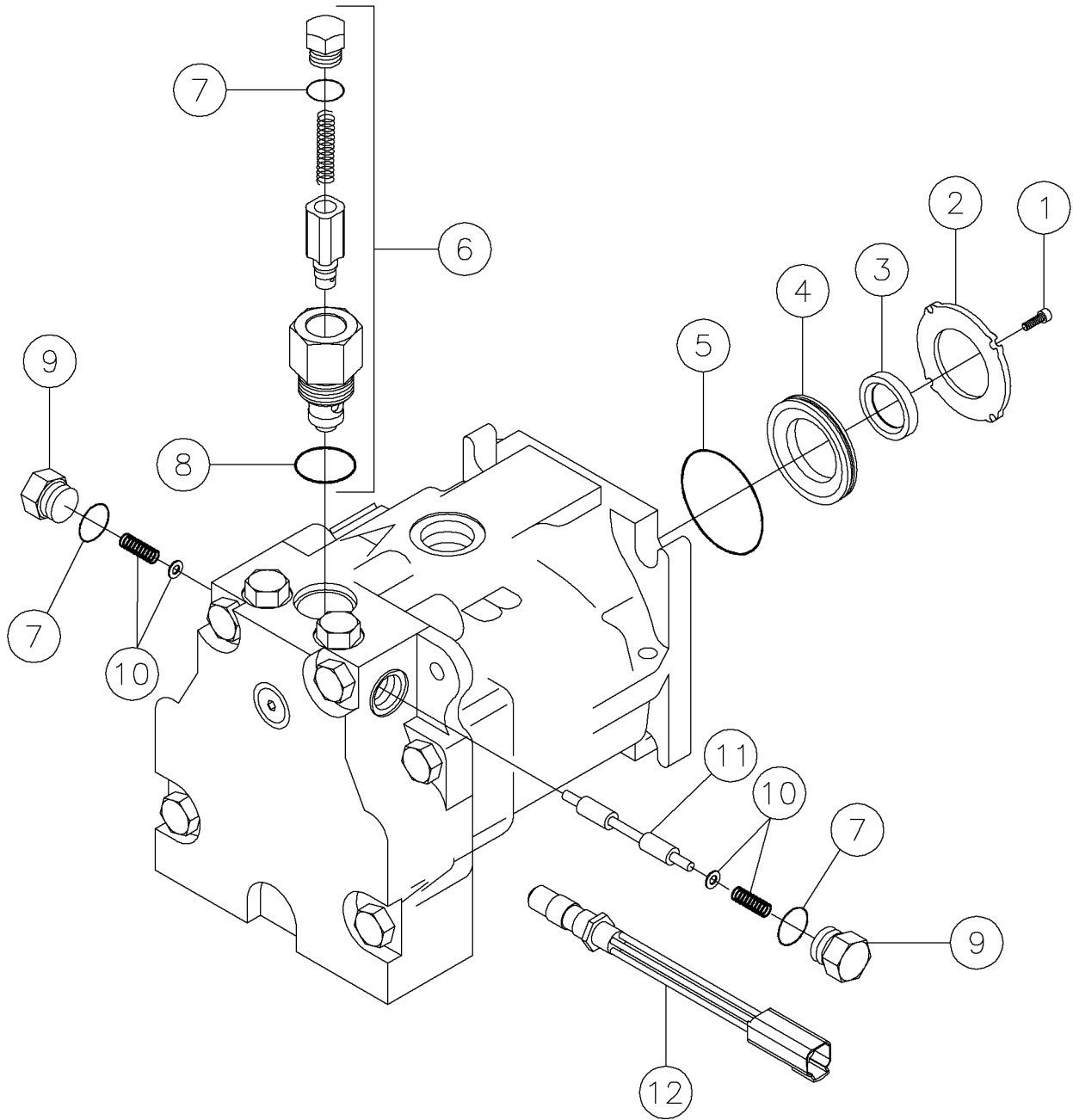
Water Pump - Kerr 150 GPM (KT3350PT-RH) - Outlet Fig 13-69



Water Pump - Kerr 150 GPM (KT3350PT-RH) - Outlet Fig 13-69

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
1		235720001	BOLT-3/8-16X1 3/4 6R8 ZINC PLT	12	
2		235713001	WASHER - FLATSTRL - .38 - .41 X .81 - .06-YA-A325	12	
3		283637001	ENDCAP-SC115L OUTLET FITTING	1	
4		51163001	O-RING #133	1	
5		239252001	PISTON-SC65 OUTLET FITTING	1	
6		51181001	O-RING #326	1	
7		287001001	FLANGE - KT 3350 PT OUTLET	1	
8		294122001	FITTING - APLEX SC115L RH OUTLET	1	
9		227589001	O-RING #AS-231	1	
10		277843001	FLANGE - SPLIT, SC115L OUTLET	1	
11		735003	1/2 COUNTERSUNK PIPE PLUG	1	
12		294129001	ASSEMBLY - KT3350 FLANGE OUTLET	1	Included All Items In This Figure

Motor-Water Pump (90 Series 55CC) Fig 13-70r01



Motor-Water Pump (90 Series 55CC) Fig 13-70r01

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	January, 2006		Update In Illustration & Parts List.
1		131494021	SOCKET HEAD SCREW	3	
2		268972001	RETAINER PLATE	1	
3		85642081	SEAL LIP	1	
4		114282003	SEAL CARRIER	1	
5		85642083	O-RING	3	
6		296284760	CHARGE RELIEF VALVE KIT	1	
7		296278109	O-RING	1	
8		113080023	O-RING	1	
9		296278110	SPECIAL PLUG	2	
10		296278111	SPRING GUIDE ASSEMBLY	2	
11		131494011	SHUTTLE VALVE SPOOL	1	
12		604451001	MAGNETIC PICKUP	1	
		296273957	MOTOR-HYD 90 SERIES 55CC(W/SPEED SENSOR)		Included All Items In This Figure
		254674003	OVERHAUL GASKET/SEAL KIT		

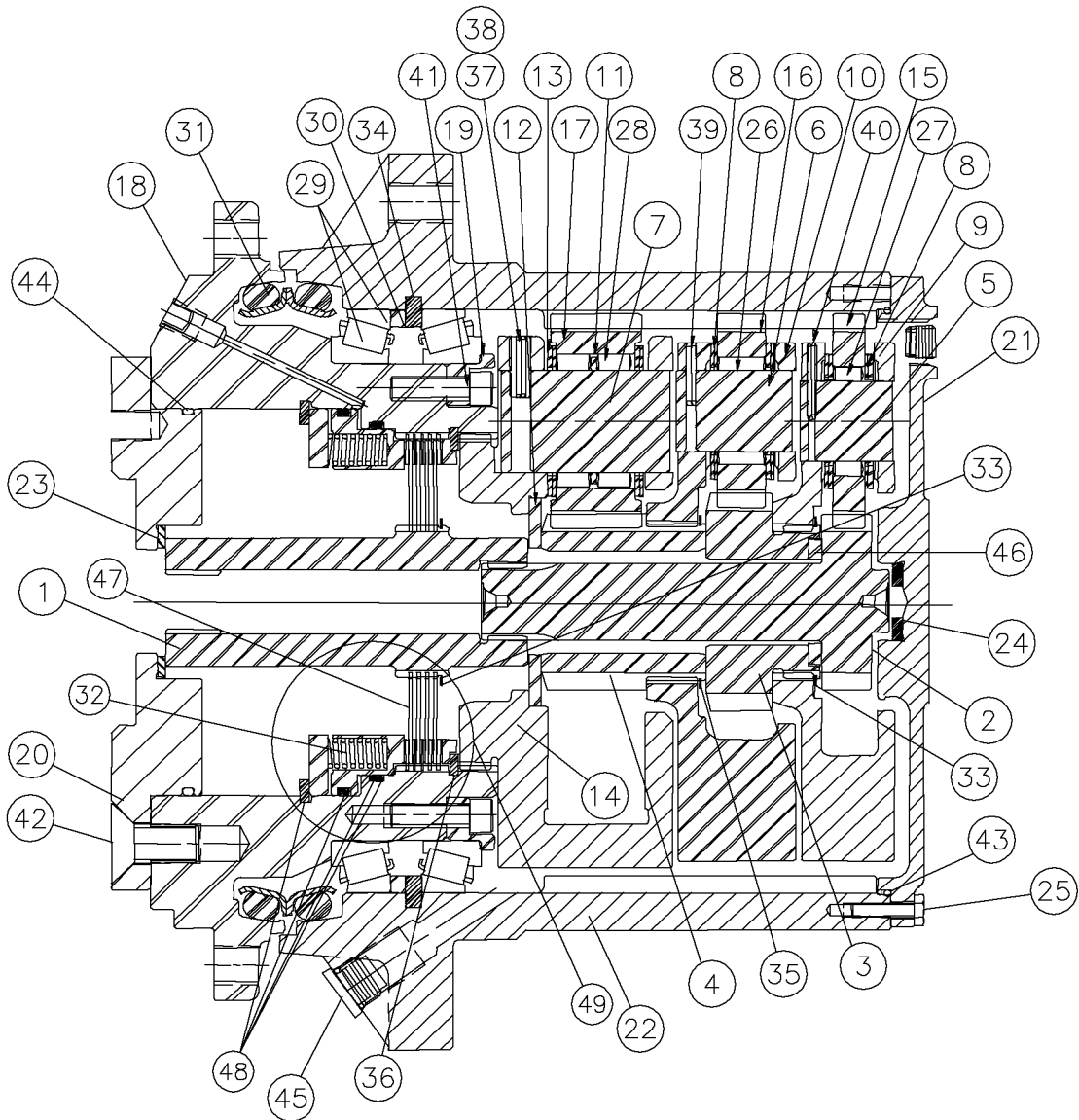
Motor-Water Pump (90 Series 55CC) Fig 13-70

NOT AVAILABLE AT
THIS TIME

Motor-Water Pump (90 Series 55CC) Fig 13-70

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS

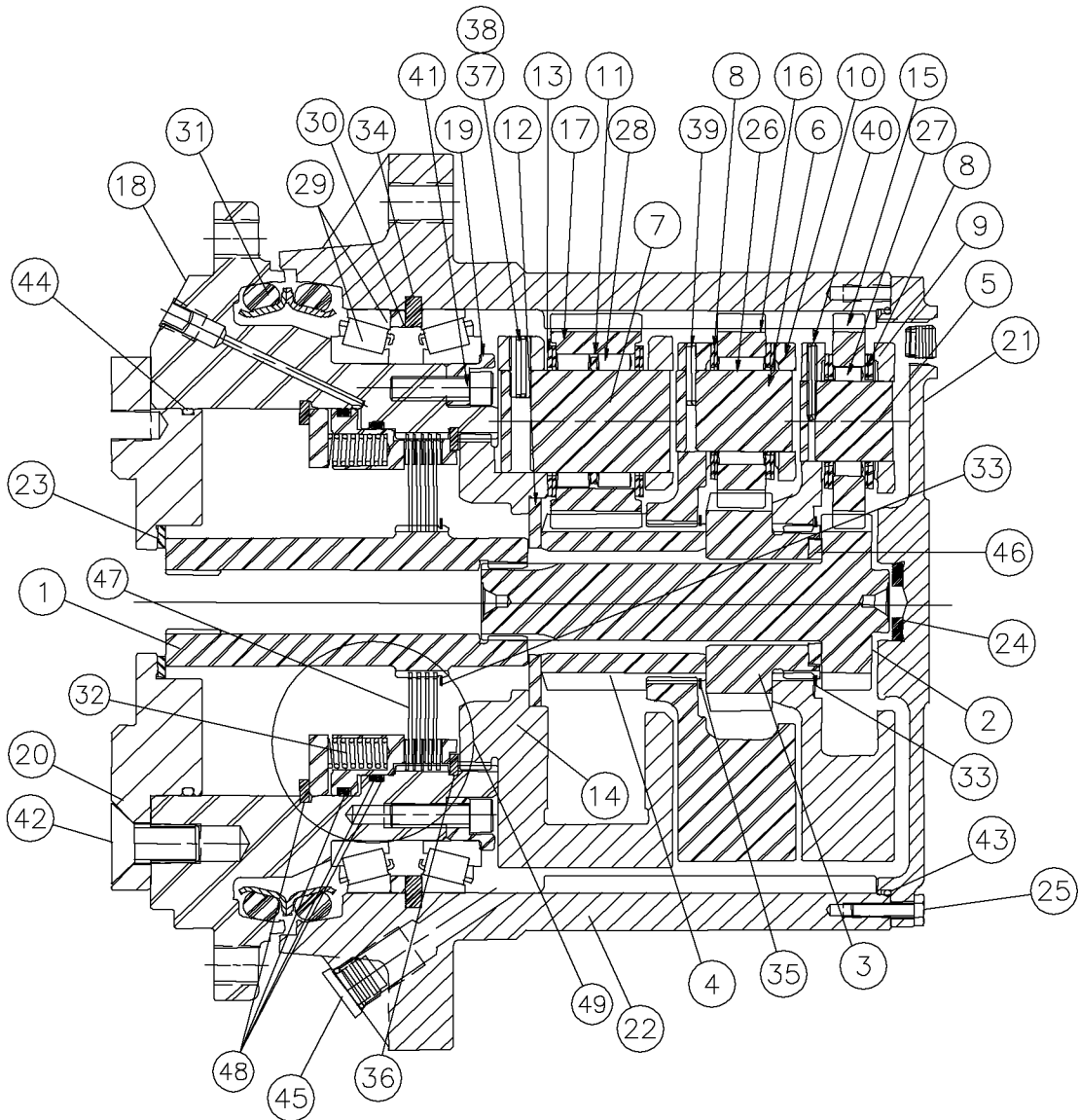
Planetary-Torque Hub Fig 13-71



Planetary-Torque Hub Fig 13-71

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	June, 2006		Addition To Manual
1		296276804	COUPLING	1	
2		296276805	GEAR - SUN	1	
3		296276806	GEAR-SUN	1	
4		296276807	GEAR-SUN	1	
5		296276808	SHAFT-PLANET	3	
6		296276809	SHAFT-PLANET	3	
7		296276810	SHAFT-PLANET	4	
8		296276811	WASHER-THRUST	24	
9		296276812	CARRIER	1	
10		296276813	CARRIER	1	
11		296276814	SPACER	4	
12		296276815	SPACER-THRUST	1	
13		296276816	WASHER-1.67, .060	13	
14		296276817	CARRIER	1	
15		296276818	GEAR-PLANET	3	
16		296276819	GEAR-PLANET	3	
17		296276820	GEAR-PLANET	4	
18		296276821	SPINDLE	1	
19		296276822	BEARING PLATE	1	
20		296254602	ADAPTER - MOUNTING	1	
21		296276823	PLATE-COVER	1	
22		296276824	HOUSING	1	
23		296276844	WASHER-THRUST 1.757, .1245	1	
24		214045063	WASHER-THRUST	1	
25		235735001	BOLT-1/4-20X1 GR8 HEX ZYC	8	
			Continued on the Following Page		

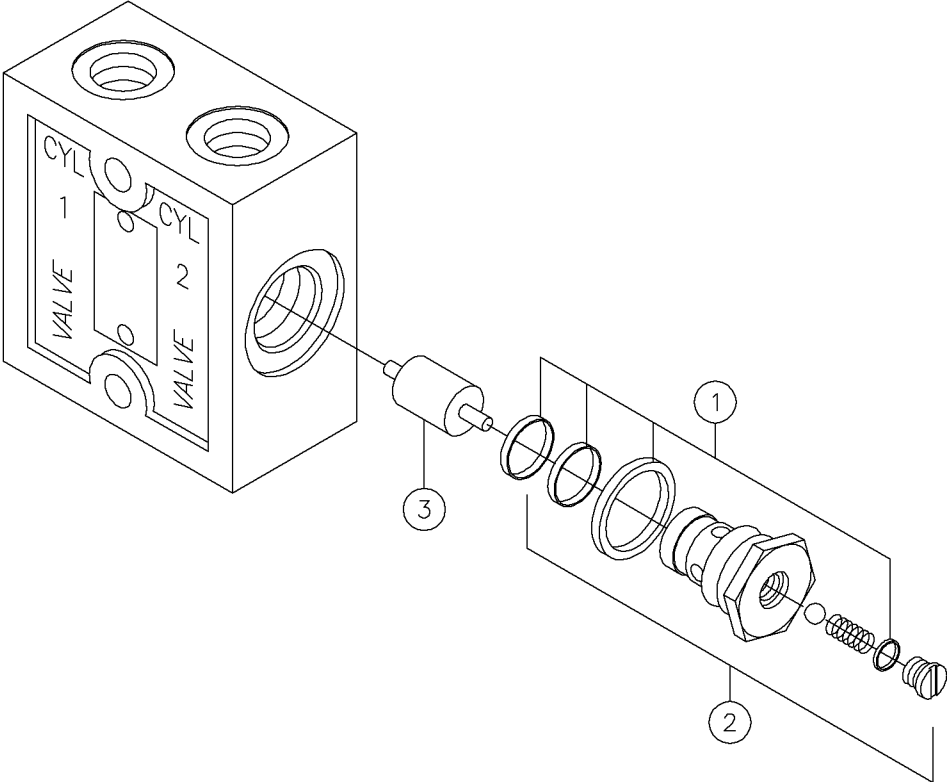
Planetary-Torque Hub (Continued) Fig 13-71



Planetary-Torque Hub (Continued) Fig 13-71

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
26		296276825	BEARING-NEEDLE	66	
27		296276826	BEARING-NEDLE	66	
28		296276827	BEARING-NEEDLE	192	
29		296276828	BEARING-TAPERED ASSY	2	
30		296276829	SPACER-CUP	1	
31		214045013	SEAL-FACE	1	
32		296276830	BRAKE-INPUT	1	
33		214045057	RETAINING RING-EXTERNAL	2	
34		296276831	RETAINING RING-INTERNAL	1	
35		296276832	RETAINING RING-EXTERNAL	1	
36		296276833	RETAINING RING-INT	1	
37		406801001	PIN-ROLL	4	
38		296276834	PIN-SPRING .312, 1.125	4	
39		296276835	PIN-ROLL .164, 1.00	3	
40		296276836	PIN-SPRING.125, 1.250	3	
41		296276837	BOLT-SKT-UNC(.365-16,1.23)	10	
42		296254603	BOLT - METRIC - FLT HD (M16-2X35MM)	2	
43		296276838	O-RING	1	
44		296254604	O-RING	1	
45		296276839	PIPE PLUG-MAG	5	
46		296276840	WASHER-THRUST 1.375, .1865	1	
47		296276841	FRICTION DISC KIT	1	
48		296276842	REPAIR KIT-O-RING	1	
49		296276843	SPRING REPAIR KIT	1	

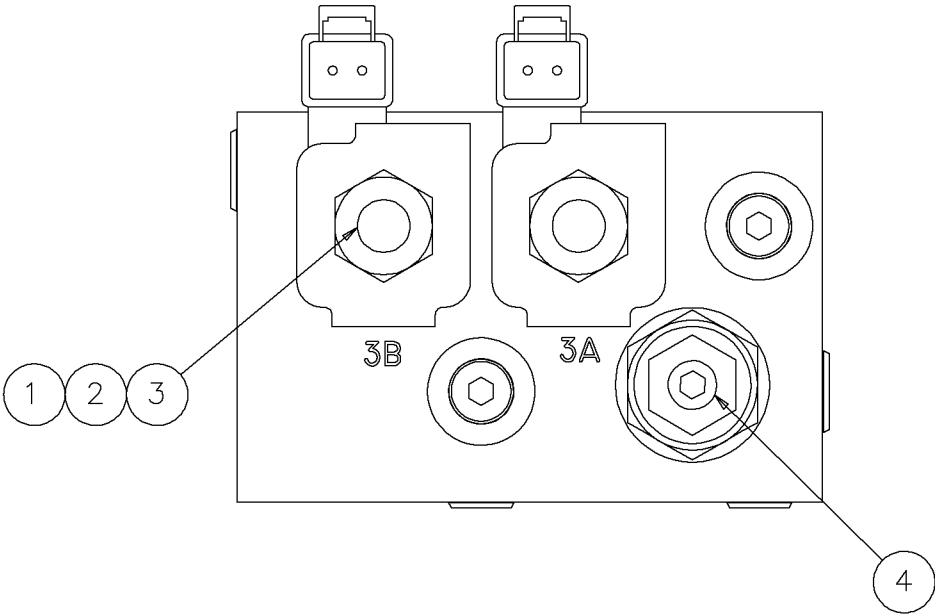
Valve - LOA Fig 13-72



Valve - LOA Fig 13-72

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	August, 2006		Addition To Manual
1		3216003	REPAIR KIT GRESEN K-26004		Inc Two Of Ref 2
2		3216005	REBUILDING KIT-D GRSN K-26002		Inc Two Of Ref 2 & One Of 3
3		NSS	PISTON-D	1	
		86668001	VALVE-LOA-6-D		Inc All Items In Figure
			NSS-NOT SOLD SEPARATELY		

Valve - T/P Rotation Brakes (S/N 130-) Fig 13-73



Valve - T/P Rotation Brakes (S/N 130-) Fig 13-73

REF. NO.	*	PART NO.	DESCRIPTION	QTY.	REMARKS
		Revision Date	August, 2006		Addition To Manual
1		263333003	REMOVABLE ORIFICE	2	
2		296278061	STERLING 12 VOLT COIL	2	
3		224476005	CARTRIDGE-VALVE	2	
		207418009	SEAL KIT		
4		296276845	RELIEF VALVE	1	
		296276846	SEAL KIT		
		296289759	VALVE-THRUST/PULLBACK/ROTATION BRAKES		Includes All Items In Figure

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Revision History

Revision	Date	Page(s)	Description
P1.00	November, 2005	All	1st Edition
P1.01	January, 2006	Revised: TOC, 1-4, 1-12, 2-8, 3-1, 4-4, 4-5, 4-6, 4-7, 4-8, 4-9, 4-10, 4-14, 4-15, 4-22, 4-32, 4-34, 5-13, 5-15, 5-16, 13-1, 13-2, 13-3, 13-7, 13-14, 13-20, 13-46, 13-47, 13-70. New: 5-19,	1st Edition, 1st Revision
P1.02	August, 2006	Revised: TOC, 1-14, 2-2, 2-6, 2-7, 2-9, 2-11, 3-6, 3-7, 3-8, 3-10, 3-11, 3-12, 4-1, 4-4, 4-5, 4-6, 4-7, 4-9, 4-14, 4-16, 4-20, 4-21, 4-22, 4-23, 4-24, 4-29, 4-30, 4-34, 4-38, 5-1, 5-2, 5-10, 5-11, 6-1, 7-3, 7-4, 7-5, 7-6, 7-7, 7-8, 7-9, 9-1, 9-3, 9-7, 9-8, 13-41. New: 5-20, 13-71, 13-72, 13-73	1st Edition, 2nd Revision
P1.03	November, 2006	Revised: TOC, 1-4, 1-12, 2-9, 4-6, 5-4, 7-3, 7-4, 7-9, 13-1, 13-3, New: 10-5, 10-6, 10-7, 10-8, 10-9, 10-10, 10-11	1st Edition, 3rd Revision
P1.04	February, 2007	Revised: TOC, 1-3, 1-4, 1-5, 1-6, 1-9, 1-10, 1-12, 1-13, 1-14, 2-2, 2-8, 2-9, 2-11, 3-10, 3-14, 4-1, 4-7, 4-15, 4-20, 4-23, 4-24, 4-27, 4-28, 4-37, 5-4, 5-13, 7-1, 7-4, 7-5, 7-7, 7-8, 7-9, 8-1, 8-3, 9-2, 10-5, 10-6, 10-7, 10-8, 10-11, 13-22 and 13-35. New: 2-13	1st Edition, 4th Revision
P1.05	June, 2007	Revised: TOC, 1-1, 1-8, 2-13, 3-10, 4-1, 4-5, 5-1, 5-16, 7-3, 9-2, 13-24, 13-25 and 13-46	1st Edition, 5th Revision
P1.06	August, 2007	Revised: TOC, 4-3, 4-4 and 4-5	1st Edition, 5th Revision

