



SERVIS 2160

Rev 11-16

Part No. 00765708P

PART'S MANUAL

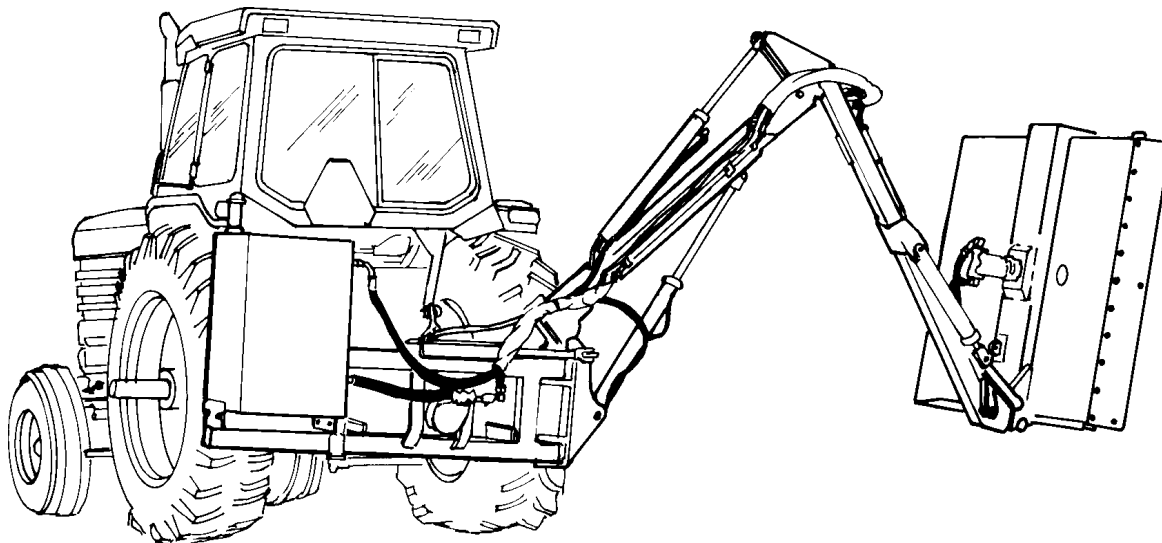


An Operator's Manual was shipped with the equipment in the Manual Canister. This Operator's Manual is an integral part of the safe operation of this machine and must be maintained with the unit at all times. **READ, UNDERSTAND, and FOLLOW** the Safety and Operation Instructions contained in this manual before operating the equipment. If the Operator's Manual is not with the equipment, contact your dealer or Servis-Rhino (800-446-5158) to obtain a Free copy before operating the equipment.

ATENCIÓN!

LEA EL INSTRUCTIVO

Si No Lee Ingles, Pida Ayuda a Alguien
Que Si Lo Lea Para Que le Traduzca las
Medidas de Seguridad.



RHINO®

1020 S. Sangamon Ave.
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800-446-5158

Email: parts@servis-rhino.com

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TO THE OWNER/OPERATOR/DEALER

All implements with moving parts are potentially hazardous. There is no substitute for a cautious, safe-minded operator who recognizes the potential hazards and follows reasonable safety practices. The manufacturer has designed this implement to be used with all its safety equipment properly attached to minimize the chance of accidents.

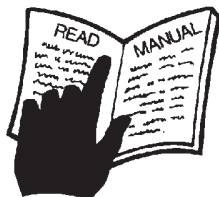
BEFORE YOU START!! Read the safety messages on the implement and shown in your manual.
Observe the rules of safety and common sense!



DANGER

FAILING TO FOLLOW SAFETY MESSAGES AND OPERATING INSTRUCTIONS CAN CAUSE SERIOUS BODILY INJURY OR EVEN DEATH TO OPERATOR AND OTHERS IN THE AREA.

1.



2. NO RIDERS, NO CHILDREN OPERATORS



3. USE SAFETY SHOES, HARD HAT, SAFETY GLASSES, SEAT BELTS, & ROPS



4. BLOCK UP SECURELY BEFORE WORKING UNDER.



1. Study and understand Operator's Manuals, Safety Signs, and Instructional Decals for tractor & flail mower to prevent misuse, abuse, & accidents. Practice before operating mower in a confined area or near passersby.

- Learn how to stop engine suddenly in an emergency. Be alert for passersby and especially children.

2. Allow no children on or near implement or tractor. Allow no riders on tractor or implement. Falling off can cause serious injury or death from being runover by tractor or mower or contact with Flail Mower Blades.

3. Operate only with tractor having Roll-Over Protective Structure (ROPS) and with seatbelt fastened securely and snugly to prevent injury and possible death from falling off or tractor overturn. Personal Protective Equipment such as Hard Hat, Safety Glasses, Safety Shoes, and Ear Plugs are recommended.

4. Block up or support raised machine and all lifted components securely before putting hands or feet under or working underneath any lifted component to prevent crushing injury or death from sudden dropping or inadvertent operation of controls. Make certain that area is clear before lowering or folding.

5. Before transporting, put Lift Lever in detent or full-lift position. Install Transport Safety Devices securely on folding implements. Slow down when turning and on hillsides.

- Install **Restrictor in folding circuit to slow down lowering and unfolding if action is faster than is desirable.

6. Make certain that SMV sign, Warning Lights, and Reflectors are clearly visible. Follow local traffic codes.

7. Never operate with Flail Mower or Folding Section raised if passersby, bystanders or traffic are in the area to reduce possibility of injury or death from objects thrown by Blades under Shields or implement structure.

8. Before dismounting, secure flail mower in transport position or lower to ground.

• Put tractor in park or set brake, disengage PTO, stop engine, remove key, and wait until noise of rotation has ceased to prevent entanglement in rotating parts which may cause injury or death.

- Never mount or dismount a moving vehicle. Crushing from runover may cause injury or death.

5. TRANSPORT SAFELY, LOCK UP.



WARRANTY INFORMATION

6. USE SMV, LIGHTS, & REFLECTORS.



7. DO NOT OPERATE WITH MOWER OR WING RAISED.



8. DO NOT MOUNT OR DISMOUNT WHILE MOVING.



002369

Read and understand the complete Warranty Statement found in this Manual. Fill out the Warranty Registration Form in full and return it within 30 Days. Make certain the Serial Number of the Machine is recorded on the Warranty Card and on the Warranty Form that you retain. The use of "will-fit" parts will void your warranty and can cause catastrophic failure with possible injury or death.

PARTS SECTION

PARTS ORDERING GUIDE

The following instructions are offered to help eliminate needless delay and error in processing purchase orders for the equipment in this section.

1. The Parts Section is prepared in logical sequence and grouping of parts that belong to the basic machine featured in this manual. Part Numbers and Descriptions are given to help locate the parts and quantities required.
2. The Purchase Order must include the name and address of the person or organization ordering the parts, who should be charged, and if possible, the serial number of the machine for which the parts are ordered.
3. The Purchase Order must clearly list the quantity of each part, the complete and correct part number (be sure to include all periods), and the basic name of the part.
4. The Manufacturer reserves the right to substitute parts where applicable.
5. Some parts are unlisted items which are special production items not normally stocked and are subject to special handling. Request a quotation for such parts before sending a Purchase Order.
6. The Manufacturer reserves the right to change prices without prior notice.

NOTE: Please refer to The Safety Section in the front of this Manual for the proper Part Number when ordering Replacement Safety Decals.



For maximum safety and to guarantee optimum product reliability, always use genuine Servis-Rhino Parts. The use of inferior replacement parts may cause premature or catastrophic failure which could result in serious injury or death. Direct any questions regarding parts to:

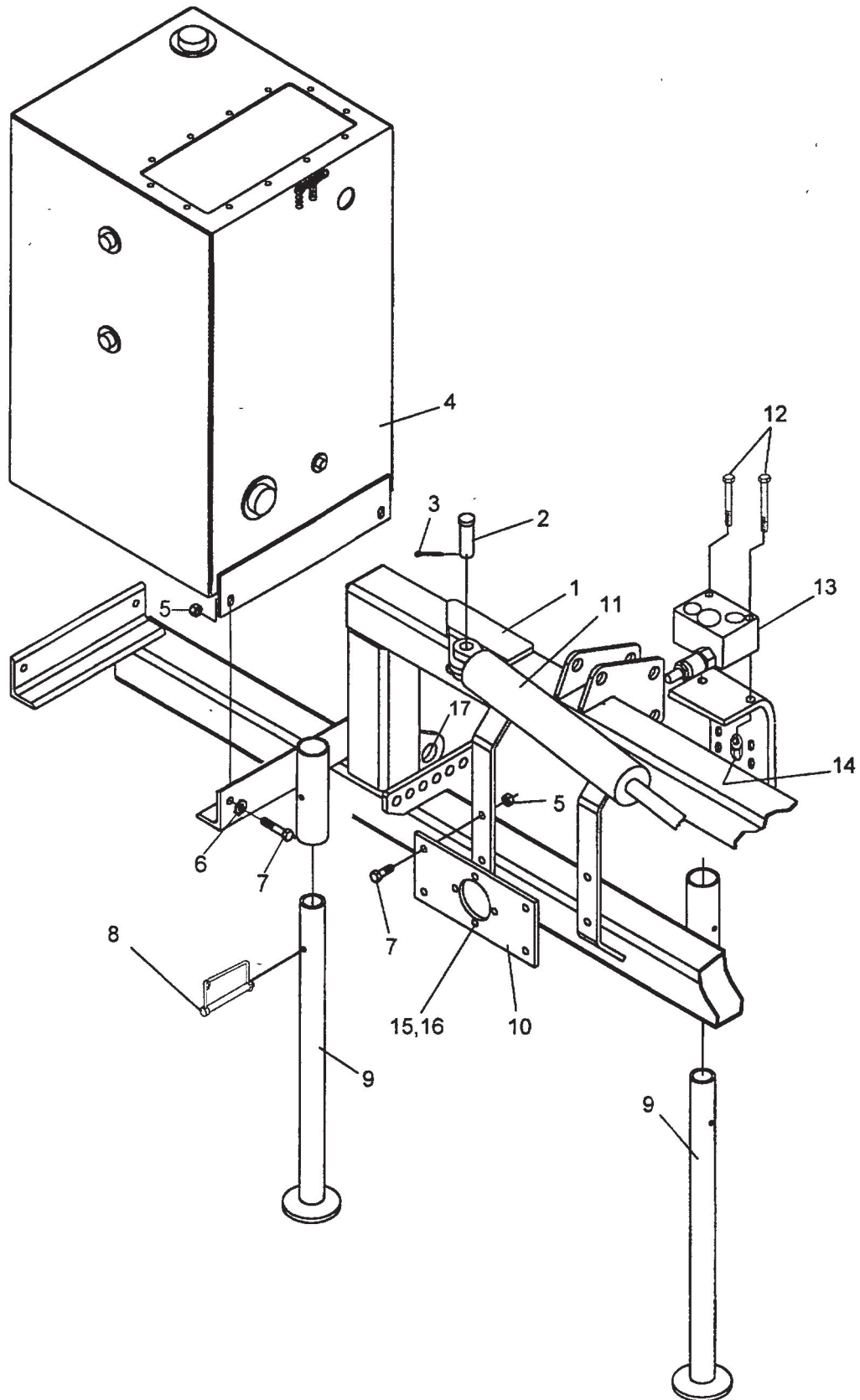


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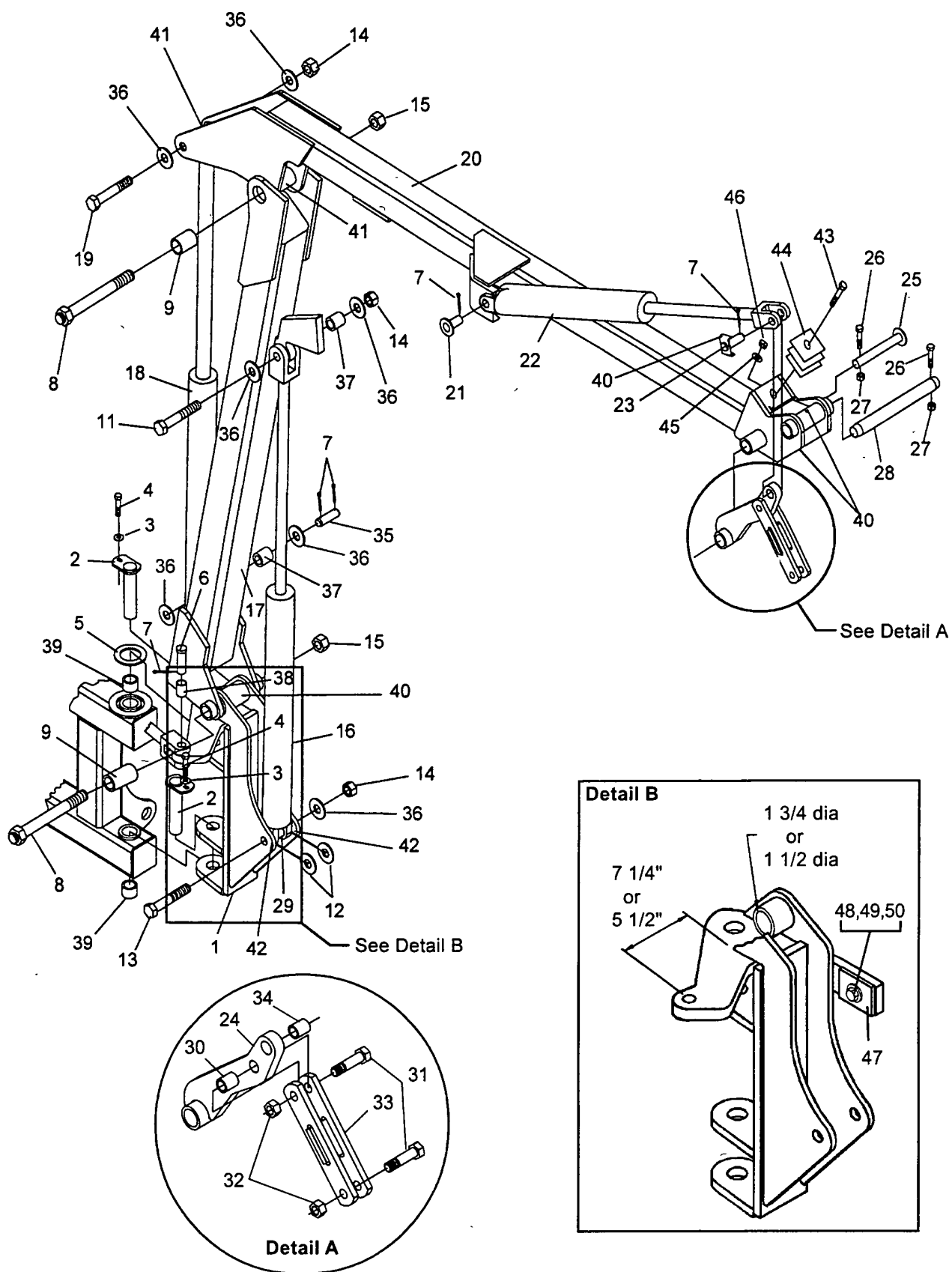
MAIN FRAME ASSEMBLY



MAIN FRAME ASSEMBLY

ITEM	PART NO.	QTY.	DESCRIPTION
1	00770570	1	WELDMENT-MAINFRAME
2	8354	2	PIN
3	00606000	2	COTTER PIN
4	00775766	1	TANK ASSEMBLY
5	00001800	4	LOCKNUT
6	00002700	4	FLATWASHER
7	00748823	4	BOLT
8	02961620	2	SAFETY CLIP PIN
9	00765522	2	STAND WELDMENT
10	00764692	1	SPEED CHANGER MOUNT PLATE
11	00770350	1	CYLINDER
12	10072000	2	BOLT
13	00770407	1	SWING VALVE
14	02959924	2	NUT
15	00762391	4	BOLT
16	00001300	4	L/WASHER
17	69141	2	CAT I & III PINS (NOT SHOWN)

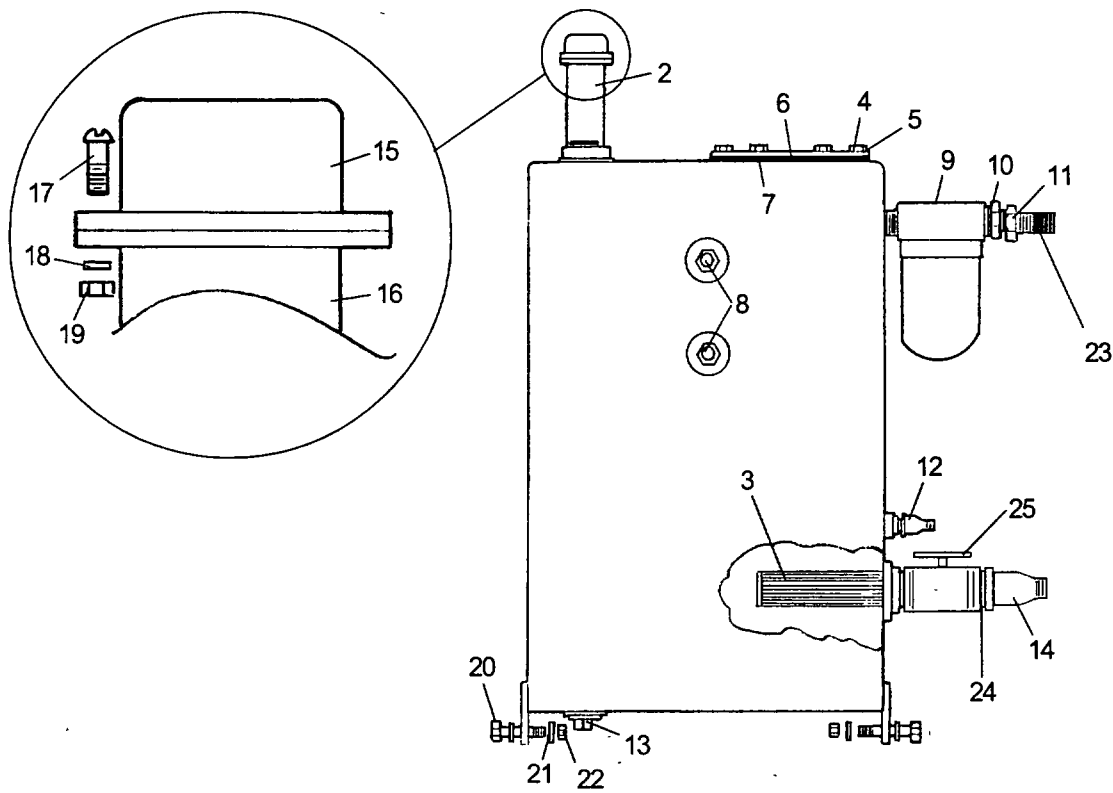
BOOM ASSEMBLY



BOOM ASSEMBLY

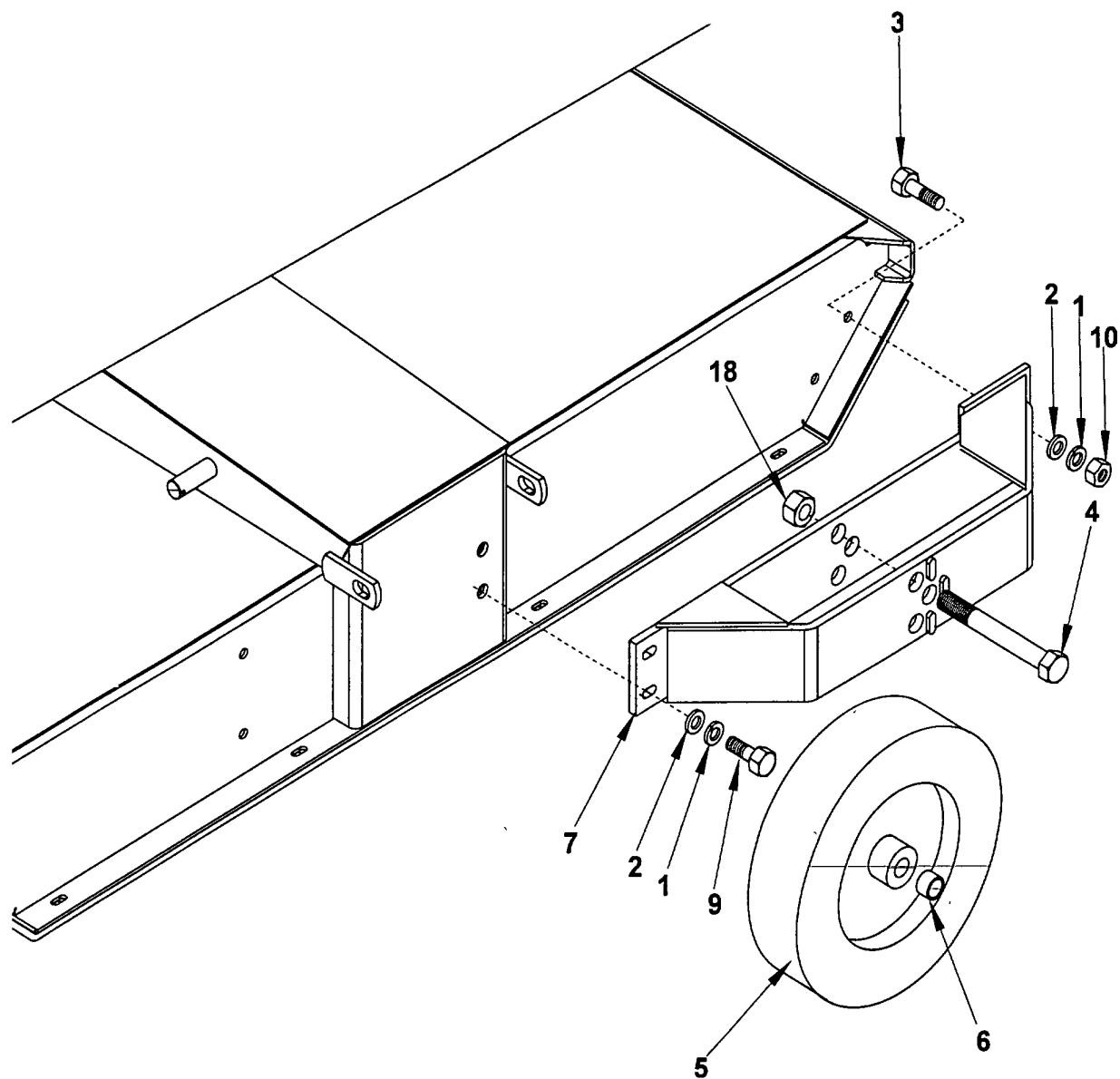
ITEM	PART NO.	QTY.	DESCRIPTION
1	00770569	1	SWING FRAME WELDMENT (1-3/4" DIA, 5-1/2")
	00764662	1	SWING FRAME WELDMENT (1-1/2" DIA, 7-1/4")
	00769605	1	SWING FRAME WELDMENT (1-1/2" DIA, 7-1/4")
2	00764695	2	SWING PIN WELDMENT
3	00012101	2	LOCKWASHER
4	00749503	2	BOLT
5	00764655	1	THRUST WASHER
6	8354	2	PIN
7	00606000	2	COTTER PIN
8	02958591	2	MAIN PIN WELDMENT
9	02958345	2	BUSHING 1-1/2" DIA
	02967170	2	BUSHING 1-3/4" DIA
11	00750479	1	BOLT
12	02822500	4	FLATWASHER
13	00750477	1	BOLT
14	02030300	2	LOCKNUT
15	02921700	2	NUT
16	002962297	1	CYLINDER (LIFT) ASSY.
17	02957752	1	LOWER ARM WELDMENT
18	02961783	1	CYLINDER (DIPPER) ASSY.
19	02956972	1	BOLT
20	00764442	1	WELDMENT-DIPPER SECTION
21	3730110	1	TOP LINK PIN
22	00764476A	1	CYLINDER (TILT)
23	02976665	1	CYLINDER PIN WELDMENT
24	00764421	1	PIVOT LINK ASSEMBLY
25	02964140	1	LIFT PIN WELDMENT
26	00013900	1	BOLT
27	00013901	1	NUT
28	02964139	1	PIN
29	00765670	1	CYLINDER CLEVIS SPACER
30	00766667	2	BEARING
31	00766666	2	BOLT
32	00037200	2	LOCKNUT
33	00764425	1	WELDMENT, CONNECTING LINK
34	02959180	1	BUSHING
35	02957535	1	PIN
36	00749946	7	WASHER
37	02957501	2	BUSHING
38	02965548	1	BEARING, TFE
39	00764656	2	BEARING
40	00752176	4	GREASE FITTING
41	00752670	2	GREASE FITTING
42	02965214	2	BEARING, TFE
43	02958114	1	BOLT
44	02962439	3	BUMPER, RUBBER
45	00011100	1	WASHER
46	00013901	1	NUT
47	02962439	1	BUMPER, RUBBER
48	02958114	1	BOLT
49	00013901	1	NUT
50	00011100	1	FLATWASHER

HYDRAULIC TANK ASSEMBLY



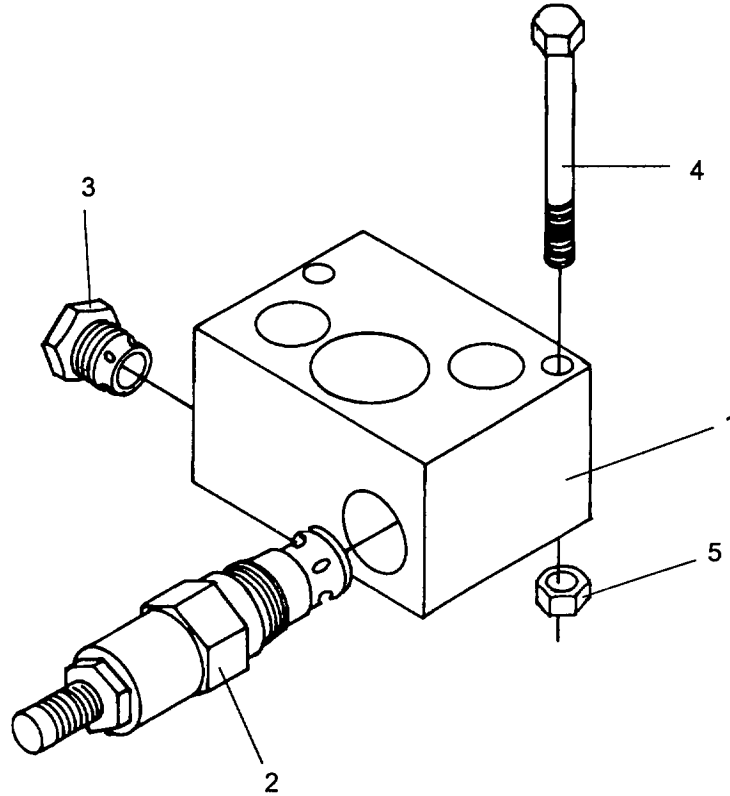
ITEM	PART NO.	QTY.	DESCRIPTION
1	00775557M	1	TANK WELDMENT
2	02209500	1	FILLER TUBE ASSEMBLY
3	02964345	1	STRAINER - SUCTION
4	00011400	12	BOLT
5	02962864	12	WASHER
6	02964410	1	COVER PLATE
7	02963663	1	GASKET
8	02049700	2	SIGHT GAUGE
9	02978014	1	FILTER ASSEMBLY
	02978015	Ref	FILTER ELEMENT
10	63067300	1	REDUCER BUSHING
11	02964518	1	STRAIGHT ADAPTER
12	02042400	1	STRAIGHT ADAPTER
13	02963659	1	PLUG
14	03200300	1	HOSE BIB
15	02209600	1	FILLER CAP
16	02957390	1	WELDMENT, FILLER CAP
17	63067100	6	SCREW
18	63121800	6	LOCKWASHER
19	63121700	6	NUT
20	00748823	4	BOLT
21	00002700	8	FLATWASHER
22	00001800	4	LOCKNUT
23	02964415	1	HOSE
24	72414000	1	ADAPTER PIPE
25	02956885	1	SHUT-OFF VALVE

SIDE WHEEL ASSEMBLY



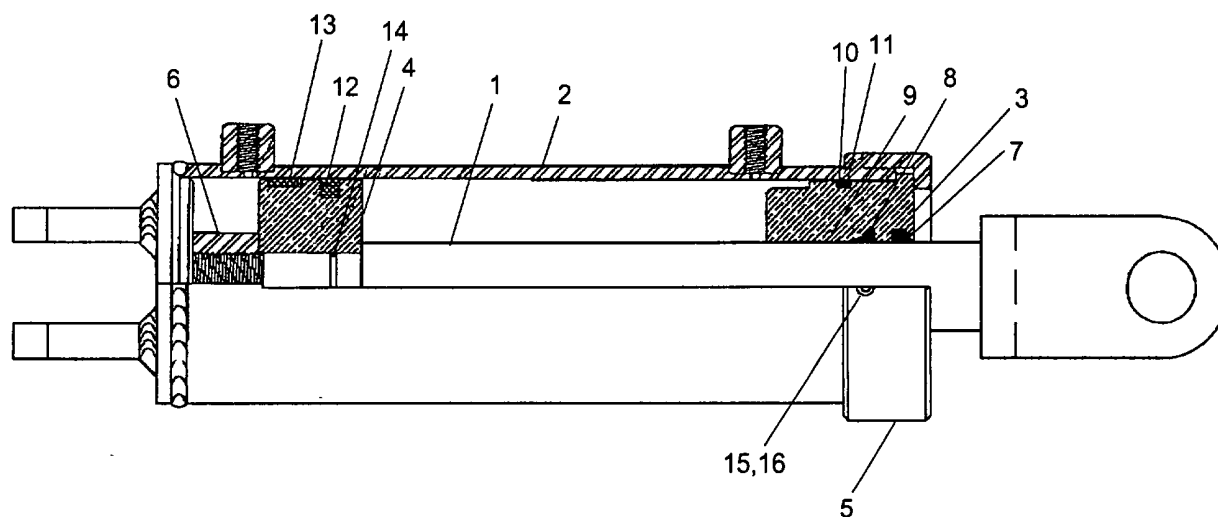
ITEM	PART NO.	QTY.	DESCRIPTION
1	00001300	4	LOCKWASHER
2	00002700	4	FLATWASHER
3	00016700	2	BOLT
4	00016700	1	BOLT
5	00130010	1	WHEEL ASSEMBY
6	00765337	1	SPACER
7	00774874	1	WHEEL BRACKET
8	02030300	1	LOCKNUT
9	02030700	2	BOLT
10	00001800	4	NUT

RELIEF VALVE, SWING



ITEM	PART NO.	QTY.	DESCRIPTION
	00770407	1	VALVE ASSY
1	00766501	1	VALVE - MANIFOLD
2	00770447	1	RELIEF VALVE
3	00766500	1	CHECK VALVE
4	10072000	1	BOLT
5	02959924	1	LOCKNUT

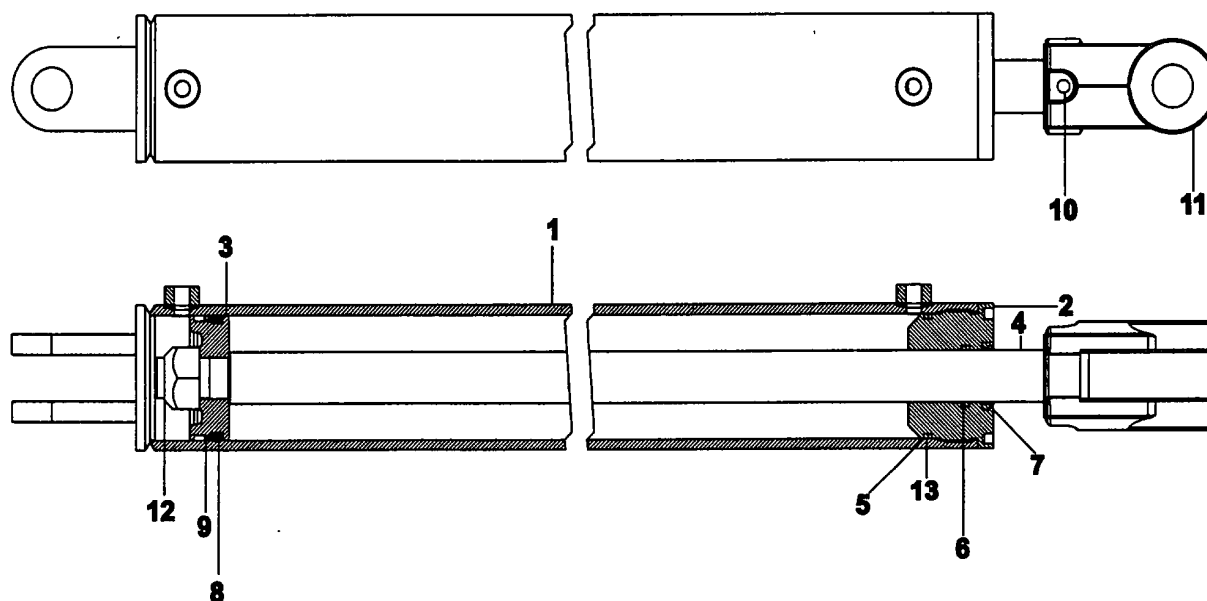
CYLINDER, TILT



ITEM	PART NO.	QTY.	DESCRIPTION
	00764476	1	CYLINDER ASSY
1	00766710	1	ROD ASSEMBLY
2	00766711	1	BARREL ASSEMBLY
3	00766712	1	CYLINDER GLAND
4	02962154	1	PISTON
5	02962158	1	COLLAR
6	00766715	1	LOCKNUT
7	-----	1	ROD WIPER
8	-----	1	ROD SEAL
9	-----	1	BUFFER SEAL
10	-----	1	GLAND SEAL
11	-----	1	BACK UP RING
12	-----	1	PISTON SEAL
13	-----	1	WEAR RING
14	-----	1	STATIC SEAL
15	00766713	1	NYLON INSERT
16	00766714	1	SET SCREW

CYLINDER, TILT

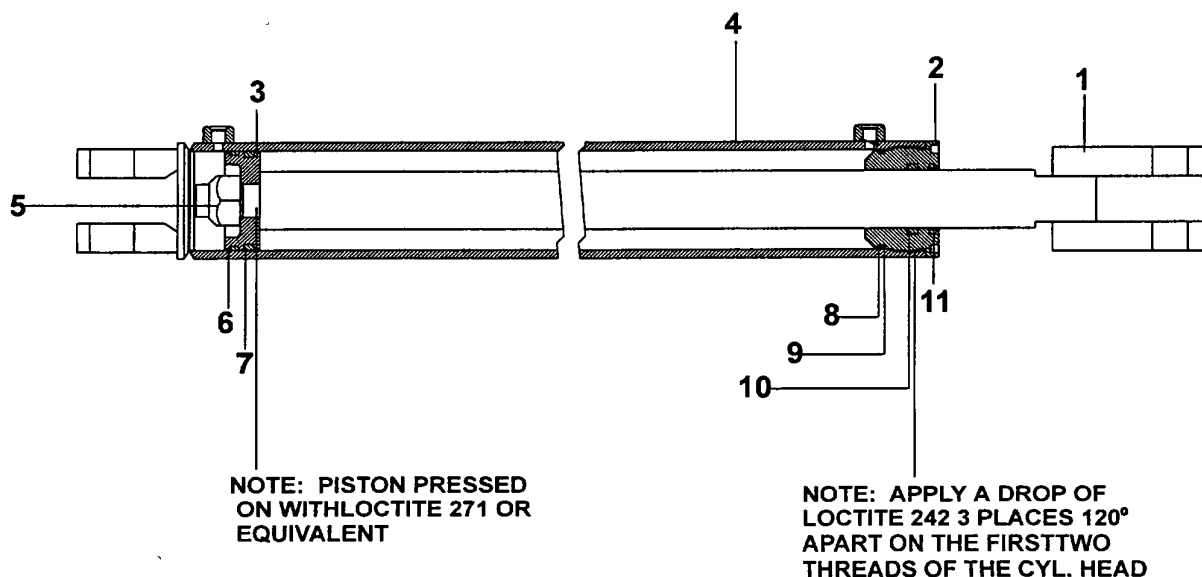
Order parts from this page if head Ref.#2 is
screwed to inside of barrel tube



ITEM	PART NO.	QTY.	DESCRIPTION
	00764476A	1	CYLINDER ASSY
1	00775884	1	TUBE WELDMENT
2	00775885	1	CYLINDER HEAD
3	002616	1	PISTON
4	00775886	1	ROD CYLINDER
5	-----	1	O-RING
6	-----	1	ROD SEAL
7	-----	1	ROD WIPER
8	-----	1	PISTON SEAL
9	-----	1	WEAR RING
10	00774740	1	SET SCREW
11	1917140	1	ROD CLEVIS
12	5JRC16140	1	LOCKNUT
13	-----	1	BUFFER SEAL

CYLINDER, LIFT

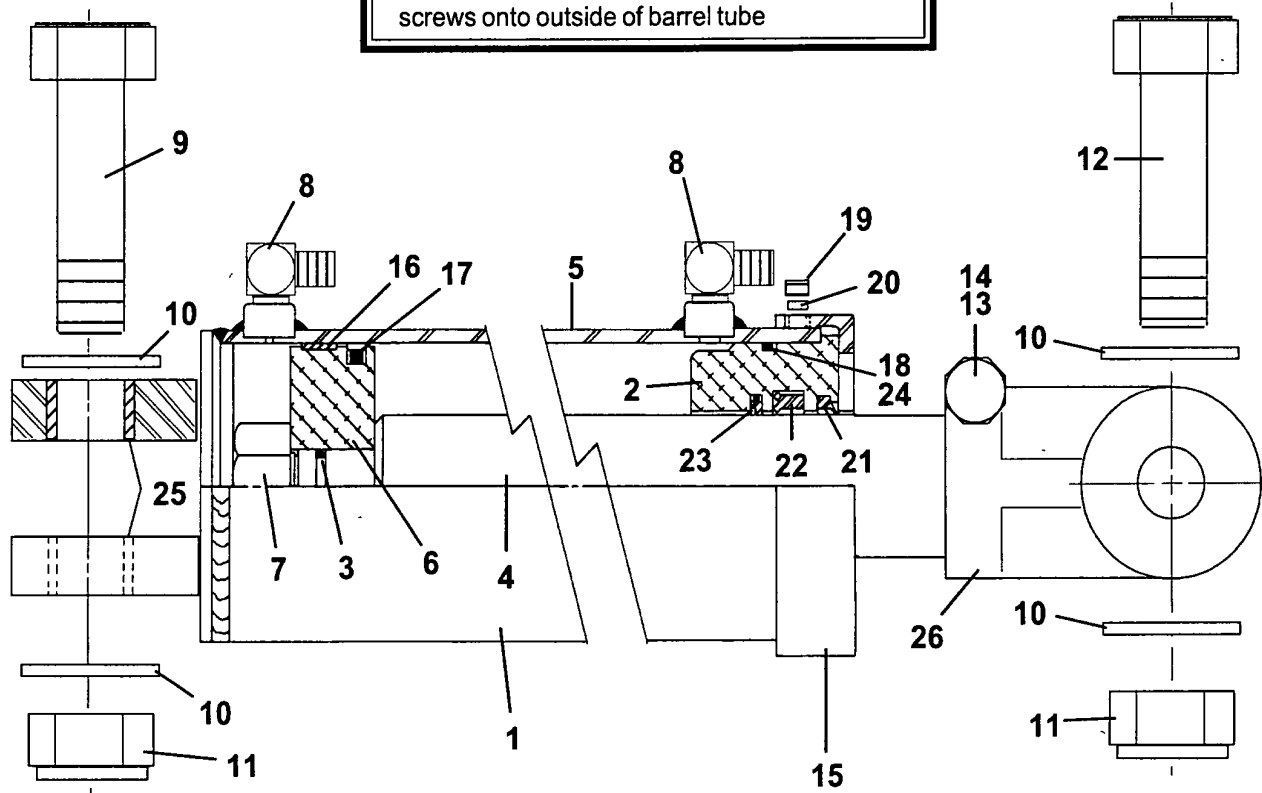
Order from this page if head Ref#2 Screws into
inside of barrel tube



ITEM	PART NO.	QTY.	DESCRIPTION
	02962651A	1	CYLINDER
1	00776304	1	ROD WLDMT
2	00776302	1	CYL HEAD
3	002616	1	PISTON
4	00776303	1	TUBE WLDMT
5	5JRC16140	1	NUT
6	-----	1	NYLON WEAR RING
7	-----	1	PISTON SEAL
8	-----	1	O-RING
9	-----	1	BACK-UP WASHER
10	-----	1	ROD SEAL
11	-----	1	ROD WIPER

CYLINDER, LIFT

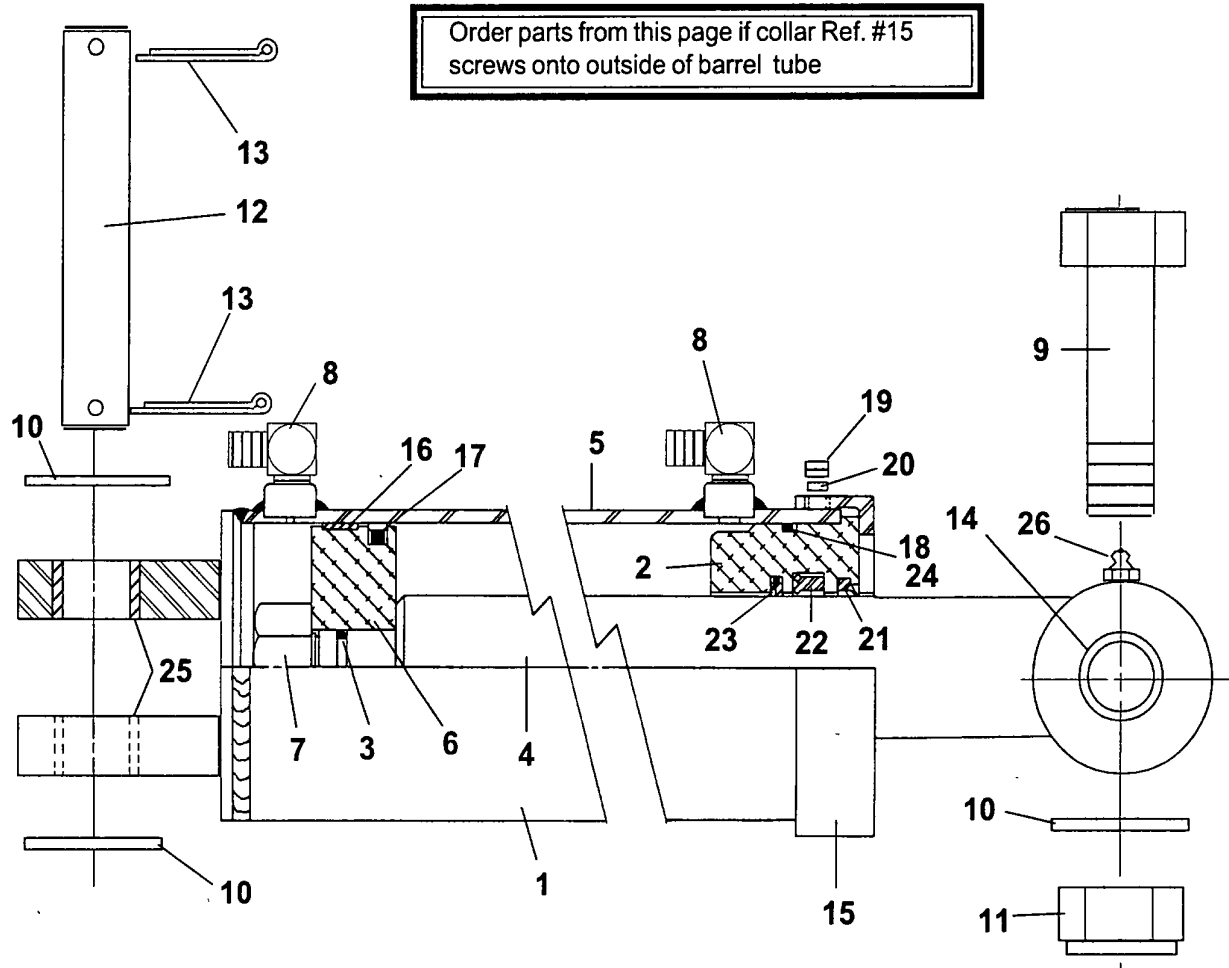
Order parts from this page if collar Ref.#15
screws onto outside of barrel tube



CYLINDER, LIFT

ITEM	PART NO.	QTY.	DESCRIPTION
	00765726	1	CYLINDER ASSY
1	02962651	1	HYDRAULIC CYLINDER
2	02962163	1	GLAND
3	-----	1	"O" RING
4	02962889	1	ROD
5	02962888	1	BARREL
6	02962160	1	PISTON
7	02252400	1	LOCKNUT
8	02960018	2	ELBOW
9	00750477	Ref.	BOLT
10	02822500	Ref.	WASHER
11	02030300	Ref.	LOCKNUT
12	00750479	Ref.	BOLT
13	02960255	Ref.	ALLEN HEAD BOLT
14	02960254	1	ROD CLEVIS - NUT
15	02962158	1	COLLAR
16	-----	1	WEAR RING
17	-----	1	PISTON SEAL
18	-----	1	"O" RING
19	02962169	1	SET SCREW
20	02962170	1	NYLON INSERT
21	-----	1	ROD WIPER
22	-----	1	ROD SEAL
23	-----	1	BUFFER SEAL
24	-----	1	BACK-UP RING
25	02965214	2	BEARING
26	02867000	1	ROD CLEVIS

CYLINDER ASSEMBLY, DIPPER

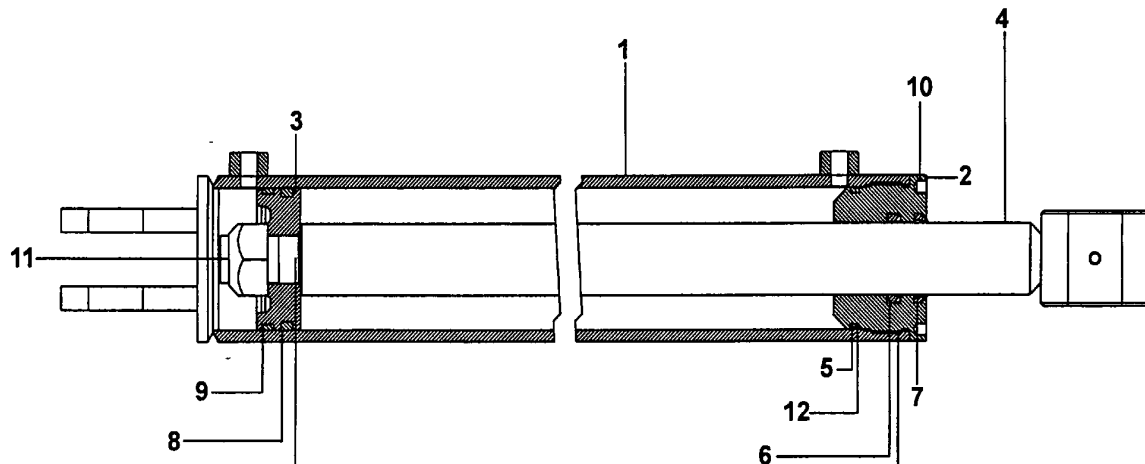


CYLINDER ASSEMBLY, DIPPER

ITEM	PART NO.	QTY.	DESCRIPTION
	02961783	1	CYLINDER ASSY
1	02961478	1	HYDRAULIC CYLINDER
2	02962157	1	GLAND
3	-----	1	"O" RING
4	02962156	1	ROD ASSEMBLY
5	02962155	1	BARREL ASSEMBLY
6	02962154	1	PISTON
7	02252400	1	LOCKNUT
8	02960018	2	ELBOW
9	02956972	Ref.	BOLT
10	00749946	Ref.	WASHER
11	02030300	Ref.	LOCKNUT
12	02957535	Ref.	PIN - LINKAGE
13	00606000	Ref.	COTTER PIN
14	02959889	1	BUSHING
15	02962158	1	COLLAR
16	-----	1	WEAR RING
17	-----	1	PISTON SEAL
18	-----	1	"O" RING
19	02962169	1	SET SCREW
20	02962170	1	NYLON INSERT
21	-----	1	ROD WIPER
22	-----	1	ROD SEAL
23	-----	1	BUFFER SEAL
24	-----	1	BACK-UP RING
25	02959925	2	BUSHING
26	00600000	1	GREASE FITTING

CYLINDER ASSEMBLY, DIPPER

Order from this page if head Ref#2 screws into inside of barrel tube

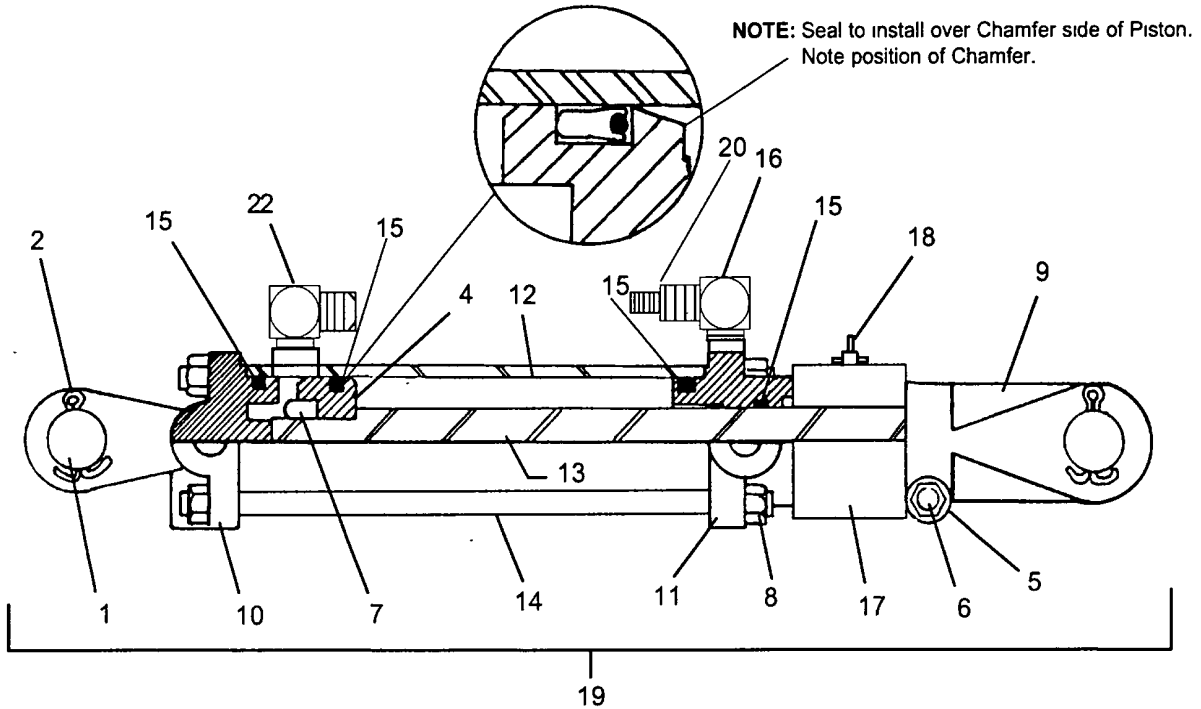


NOTE: PISTON PRESSED
ON WITH LOCTITE 271
OR EQUIVALENT

NOTE: APPLY A DROP OF
LOCTITE 242 3 PLCS.
120° APART ON THE
FIRST TWO THREADS
OF THE CYL HEAD

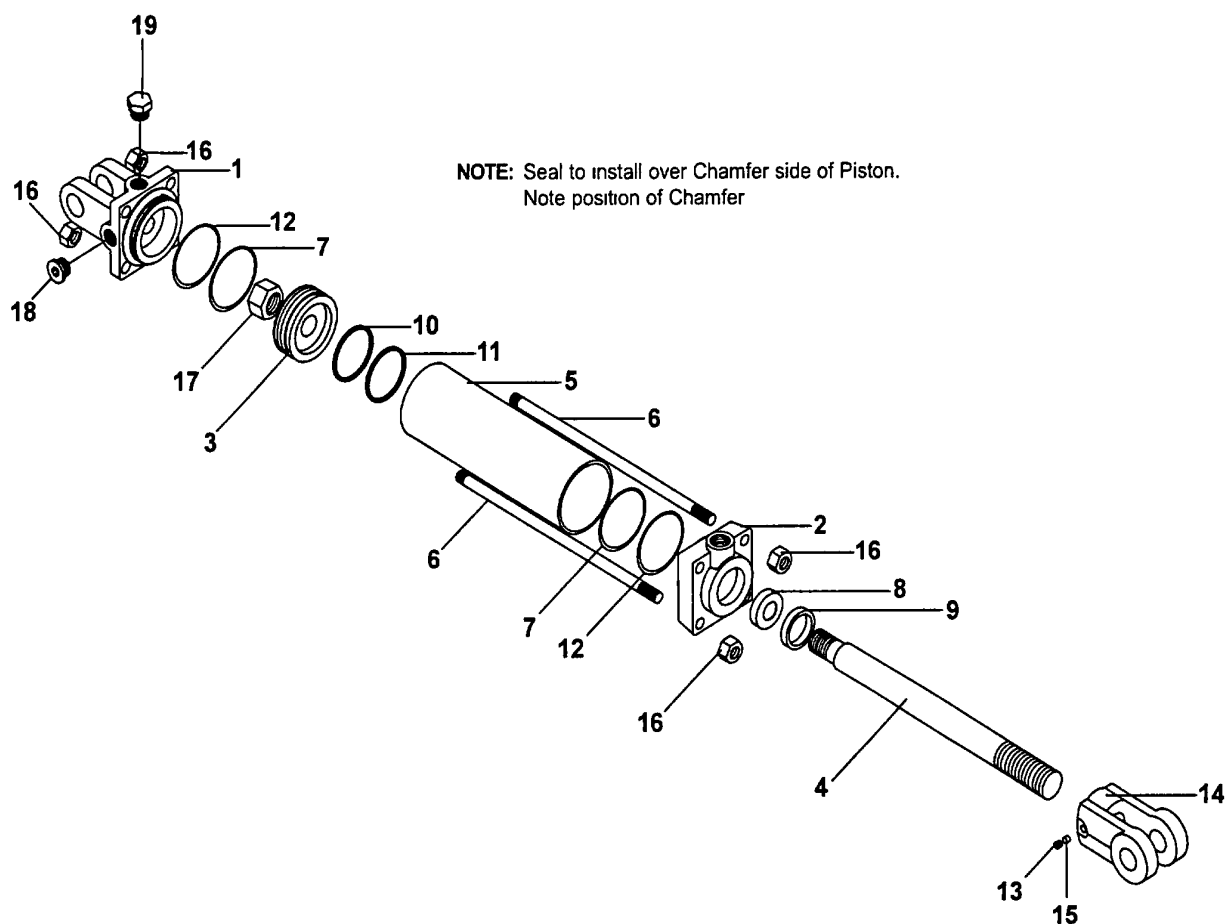
ITEM	PART NO.	QTY.	DESCRIPTION
	02961478B	1	CYLINDER
1	02975906	1	TUBE WELDMT.
2	02975450	1	CYL HEAD
3	002616	1	PISTON
4	02975907	1	ROD WELDMT.
5	-----	1	O-RING
6	-----	1	ROD SEAL
7	-----	1	ROD WIPER
8	-----	1	PISTON SEAL
9	-----	1	WEAR RING
10	02975873	1	SCKT. SET
11	5JRC16140	1	LOCKNUT
12	-----	1	BUFFER SEAL

CYLINDER ASSEMBLY, SWING



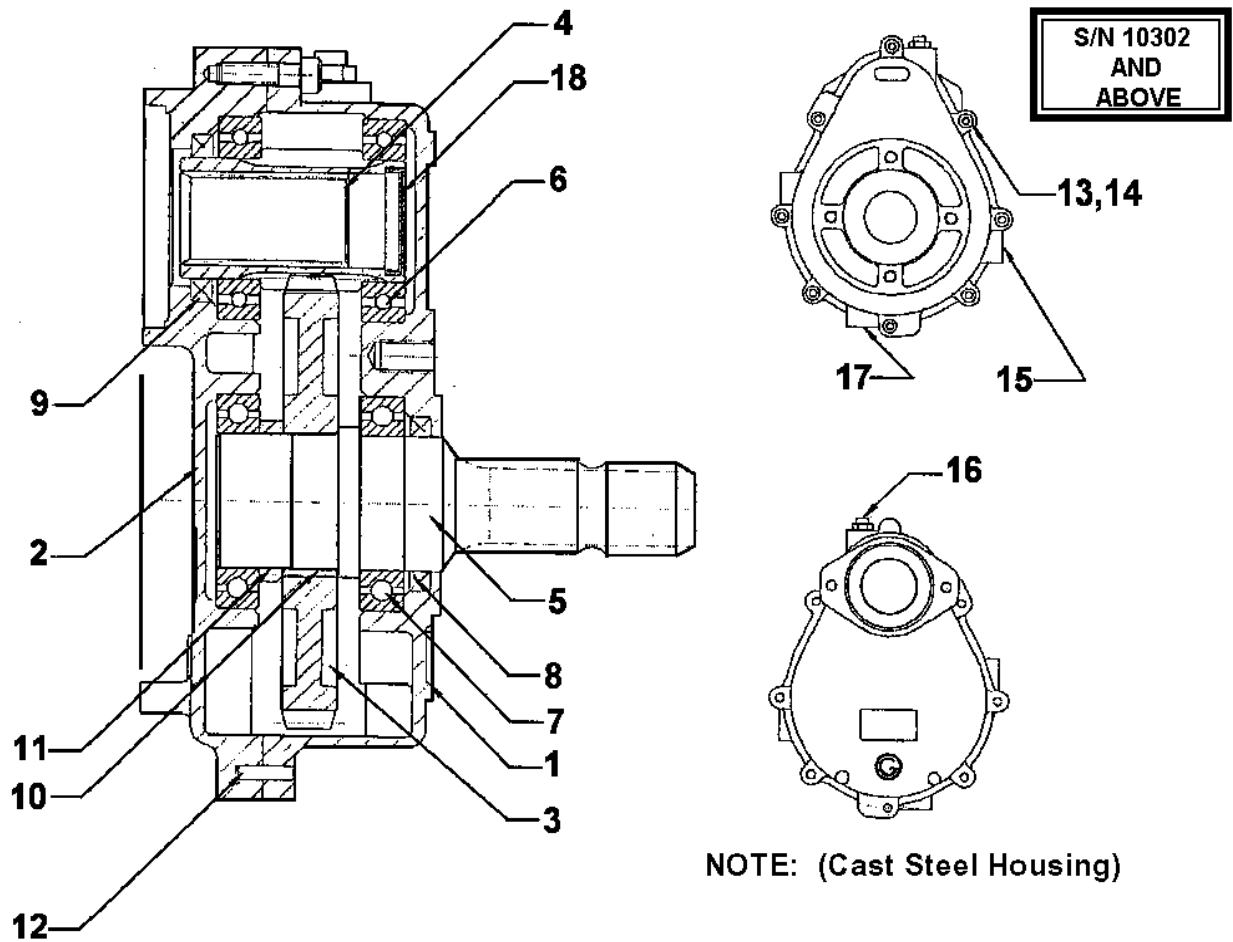
ITEM	PART NO.	QTY.	DESCRIPTION
	00770350	1	CYLINDER ASSY
1	8354	2	PIN
2	163016	2	COTTER PIN
3	00750208	1	PLUG, BREATHER (NOT SHOWN)
4	00760670	1	PISTON 2-1/2" BORE
5	4378	1	HEX NUT
6	4427	1	BOLT
7	4675	1	PISTON NUT
8	4690	8	TIE ROD NUT
9	8754	1	CLEVIS, OUTER
10	8755	1	CAP
11	8757	1	HEAD
12	8758	1	TUBE
13	8759	1	PISTON ROD
14	8761	4	TIE ROD
15	00774760	1	SEAL KIT
16	00774574	1	ELBOW W/RESTRICTOR
17	00770360	1	CYLINDER STOP
18	4720	1	GREASE ZERK
19	8728A	1	CYLINDER EXCLUDING 16,17,18
20	02042500	1	STRAIGHT ADAPTER
21	02822300	1	ELBOW

CYLINDER ASSEMBLY, SWING



ITEM	PART NO.	QTY.	DESCRIPTION
	00770350	1	COMPLETE CYLINDER ASSEMBLY
1	00774729	1	CLEVIS CAP
2	00774734	1	ROD CAP
3	00774730	1	PISTON
4	00775728	1	CYLINDER ROD
5	00774746	1	TUBE
6	00774744	1	TIE ROD
7	-----	2	END CAP O-RING
8	-----	1	ROD WIPER SEAL
9	-----	1	ROD DUST SEAL
10	-----	1	PISTON SEAL
11	-----	1	PISTON WEAR RING
12	-----	2	BACKUP WASHERS
13	3047117	1	NYLON THREAD PROTECTOR
14	3047119	1	ROD CLEVIS
15	00774740	1	SET SCREW
16	33003H5C	8	TIE ROD NUT
17	5JRC12160	1	PISTON NUT
18	1917132	1	PORT PLUG
19	2417154	1	BREATHER
20	00774760	1	SEAL KIT

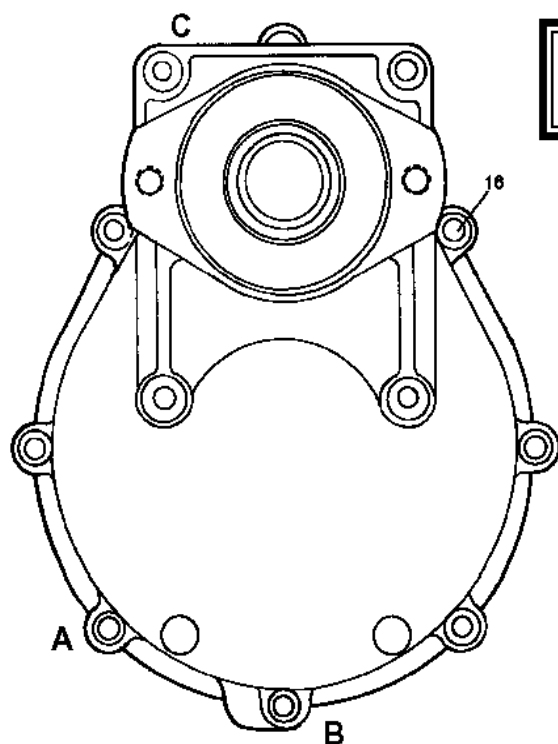
SPEED INCREASER 540 RPM P/N 02965413A Rev 07-04



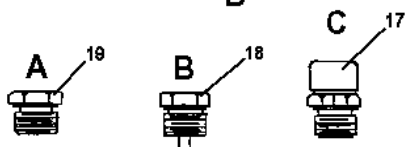
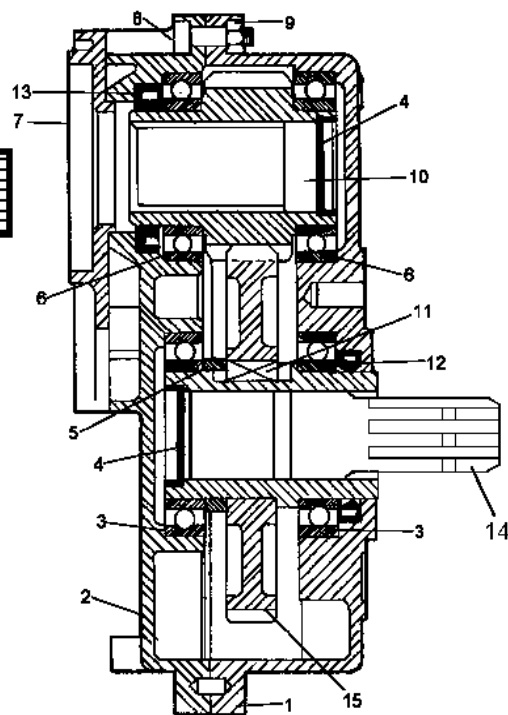
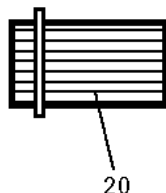
ITEM	PART NO.	QTY.	DESCRIPTION
1	00777845	1	HOUSING
2	00778274	1	CAP
3	00778794	1	GEAR -60T
4	02964724	1	PINION -16T
5	00778793	1	MUFFLER ASY-E9NN-5230-GD17M
6	02959856	2	BEARING
7	00754541	2	BRG NTN 6010 (50X80X16)
8	00778615	1	SEAL,50 X 68 X 8
9	00778616	1	SEAL,45M X 65M X 8M
10	02964725	1	PIN
11	02964719	1	SPACER
12	-----	2	DOWEL,PIN
13	02964722	8	SCREW
14	00011700	8	LOCKWASHER
15	13034	2	PIPE PLUG 1/2 SCKT HD
16	00778792	2	PLUG O RING TYPE
17	00758654	1	PLUG,1/2 PRESSURIZED VENT
18	00778791	1	PLUG , FLANGED VENT O RING TYPE (USED ONLY ON EARLY MODELS)
19	00752307	1	MAGNETIC PLUG 1/2 NPTM
20	02964718	1	SEAL PLUG

NOTE: Early units from S/N 10302 to Approx. 10372 used 1/2" Pipe Thread vents & plugs. Later units use "O" Ring Type

SPEED INCREASER REPLACEMENT PARTS 540 RPM



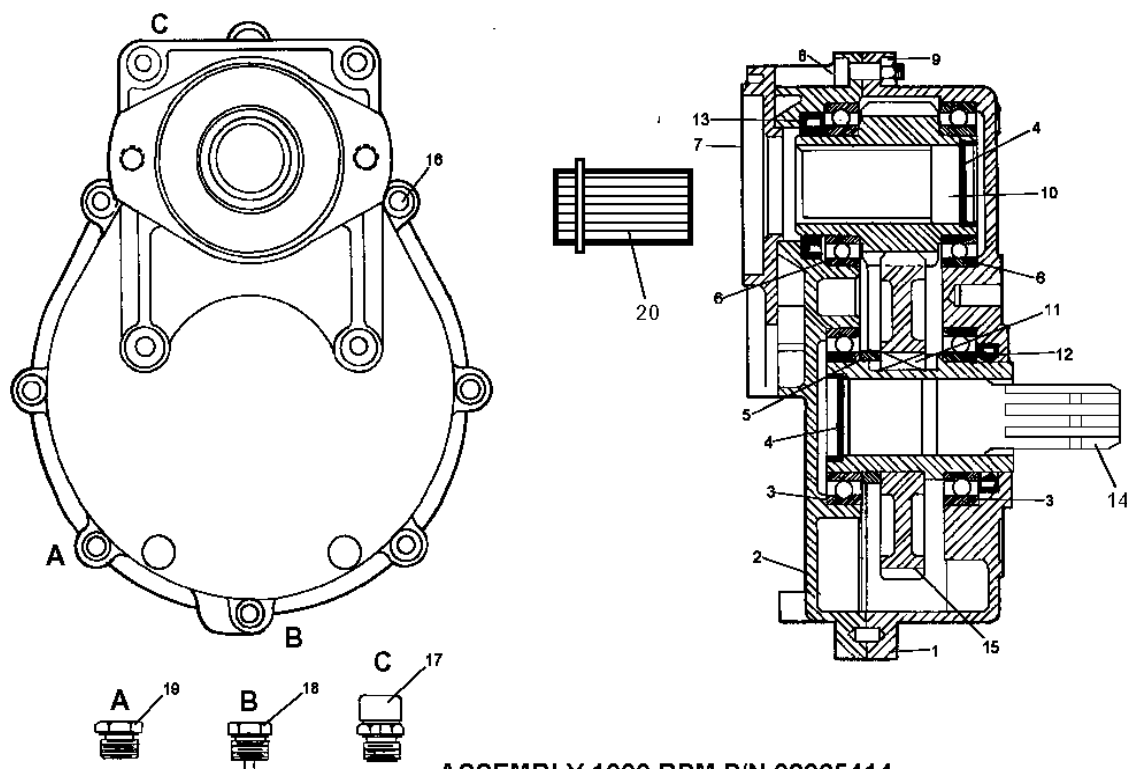
S/N # 10301
AND
BELOW



NOTE: (Aluminum Housing)

ITEM	PART NO.	QTY.	DESCRIPTION
1	02964715	1	HOUSING- INPUT
2	02964716	1	COVER
3	02964717	2	BEARING
4	02964718	2	SEAL PLUG
5	02964719	1	SPACER
6	02964720	2	BEARING
7	02964721	1	FLANGE
8	02964722	8	SCREW
9	02964723	8	NUT
10	02964724	1	PINION -16T
11	02964725	1	PIN
12	02964726	1	SEAL,50 X 68 X 8
13	02964727	1	SEAL,45M X 65M X 8M
14	02965394	1	SHAFT- 1-3/8- 6 SPLINE
15	02964729	1	GEAR -60T
16	02964730	4	SHCS METRIC 10-P1.75-20MM
17	02964731	1	PLUG,BREATHER
18	02964732	1	PLUG- MAGNETIC
19	02964733	1	PLUG
20	02964874	1	ADAPTER, SPLINED
	02965022	1	SPLINE ADAPTER
	02965023	1	SNAP RING,7/8 INT X .042 THK
	02965024	1	SNAP RING, 1.375 EXT X .057 TK

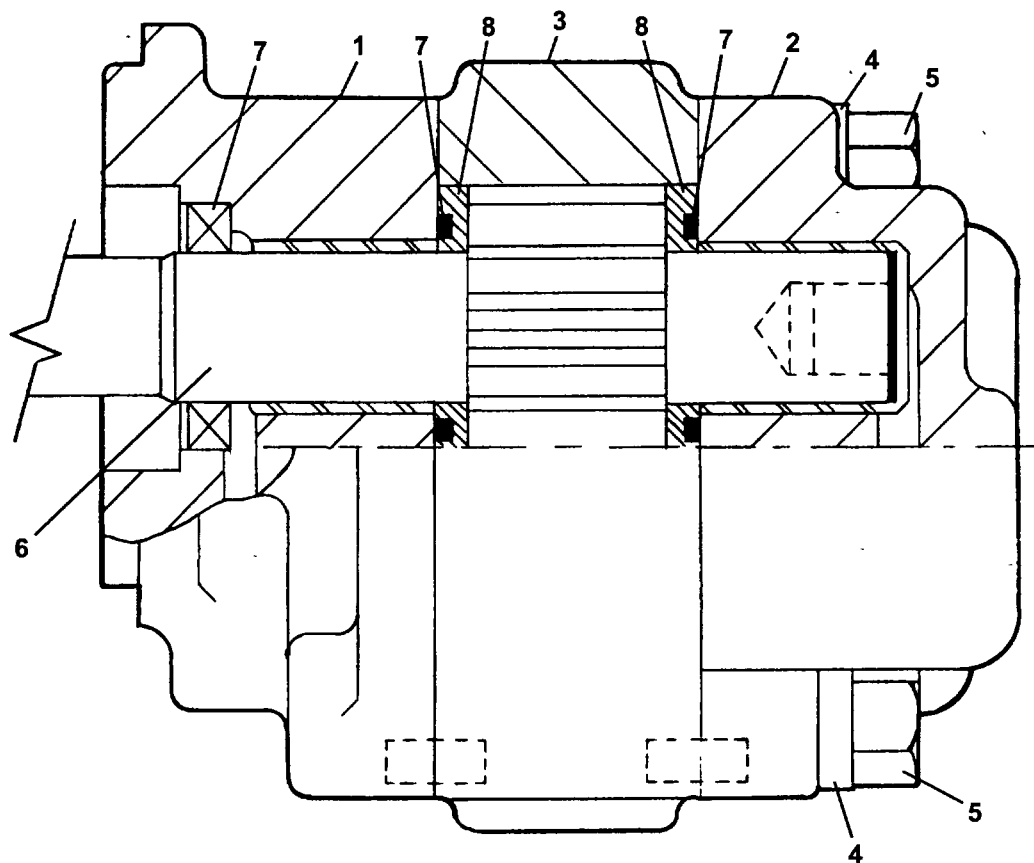
SPEED INCREASER REPLACEMENT PARTS 1000 RPM



ASSEMBLY 1000 RPM P/N 02965414

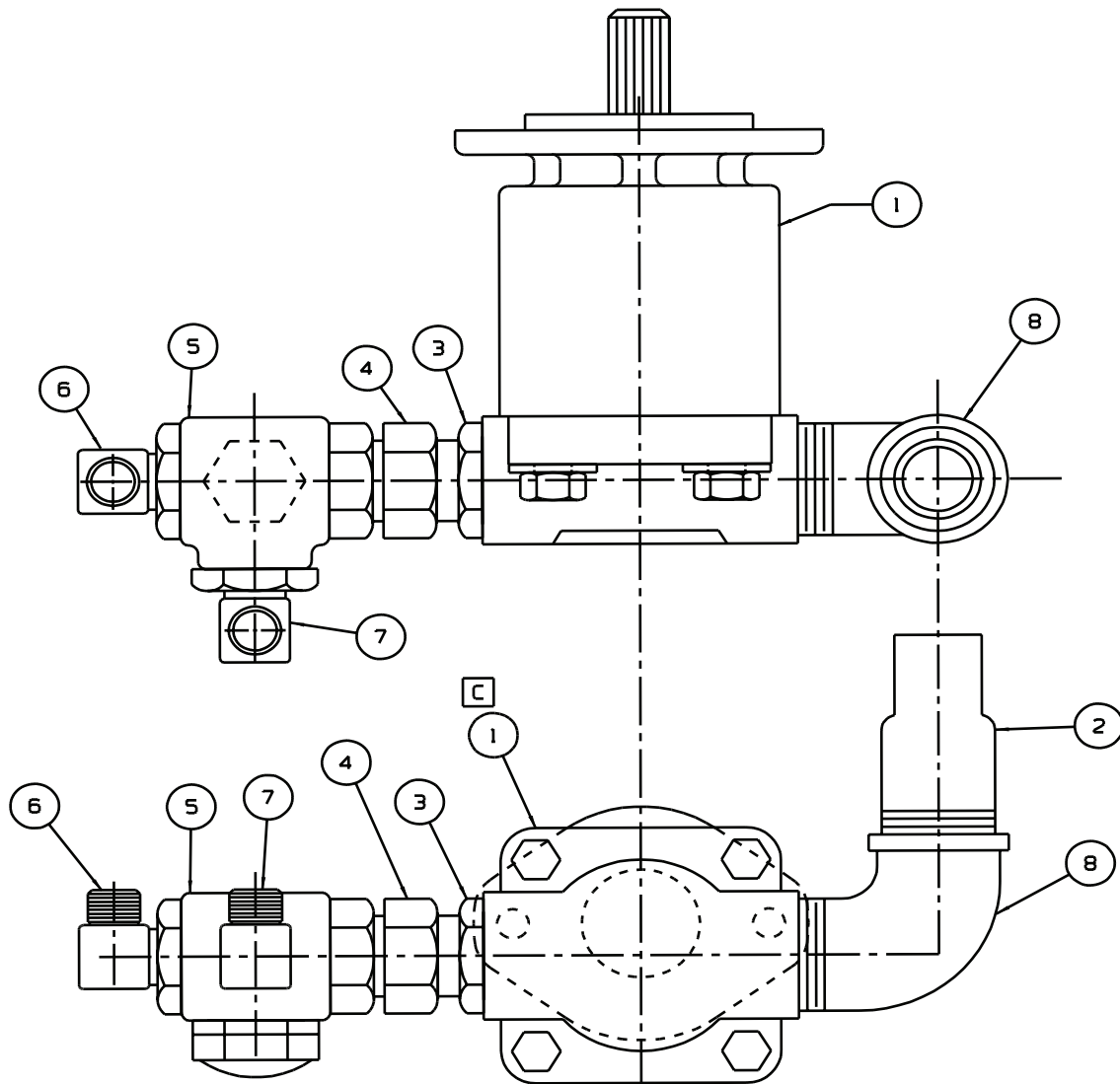
ITEM	PART NO.	QTY.	DESCRIPTION
1	02964715	1	INPUT HOUSING
2	02964716	1	COVER
3	02964717	2	BEARING
4	02964718	2	SEAL PLUG
5	02964719	1	SPACER
6	02964720	2	BEARING
7	02964721	1	FLANGE
8	02964722	8	SCREW
9	02964723	8	NUT
10	02964724	1	PINION GEAR (540 RPM)
	02964737	1	PINION GEAR (1000 RPM)
11	02964725	1	PIN
12	02964726	1	SEAL
13	02964727	1	SEAL
14	02965394	1	INPUT SHAFT (1-3/8 - 6)
15	02964729	1	GEAR (540 RPM)
	02964736	1	GEAR (1000 RPM)
16	02964730	4	SCREW
17	02964731	1	BREATHER PLUG
18	02964732	1	MAGNETIC PLUG
19	02964733	1	PLUG
20	02964874	1	ADAPTER SPLINE
	02965022	1	SPLINE ADAPTER
	02965023	1	SNAP RING INTERNAL
	02965024	1	SNAP RING EXTERNAL

HYDRAULIC PUMP REPAIR PARTS



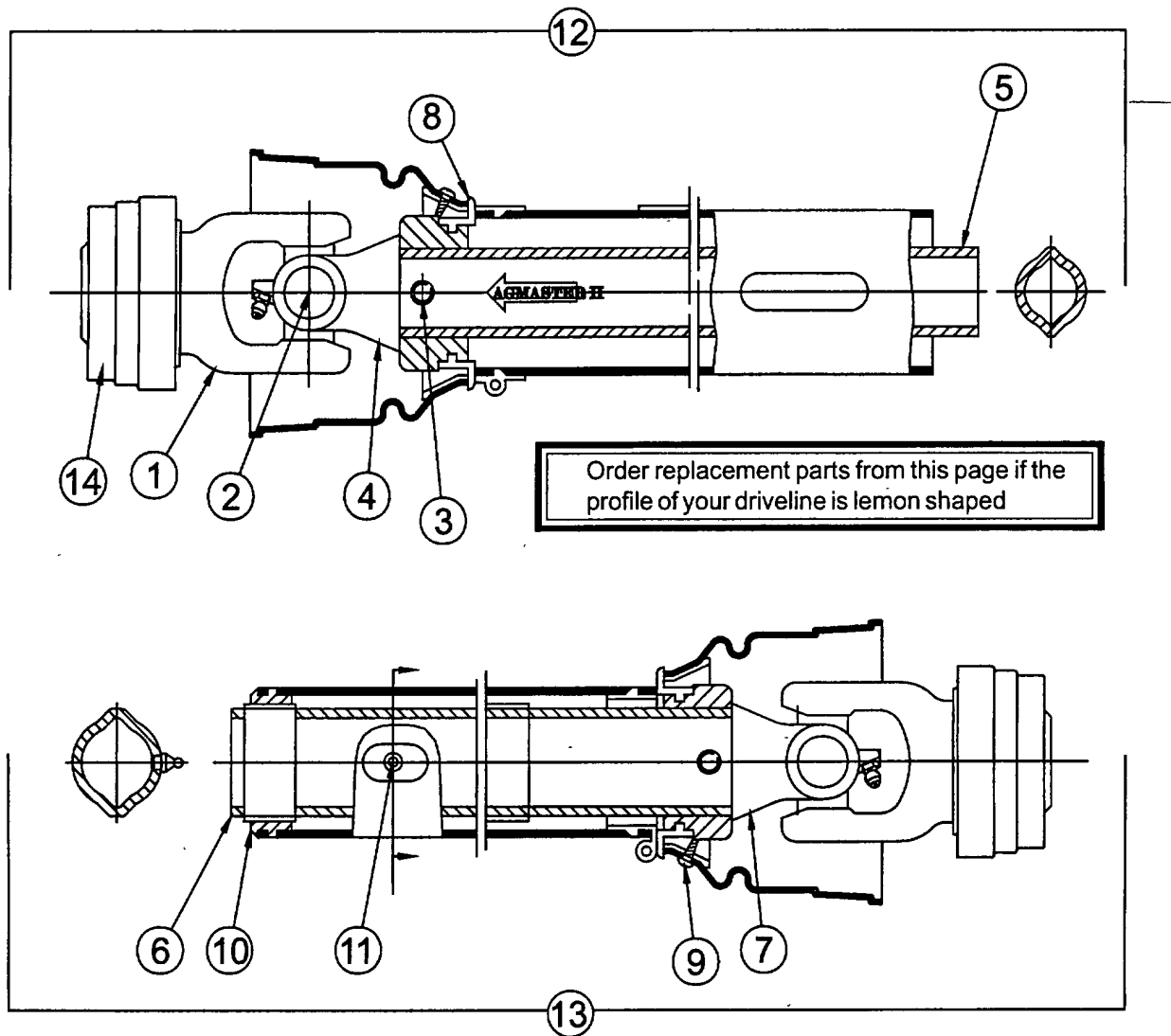
ITEM	PART NO.	QTY.	DESCRIPTION
	02964304A	1	PUMP ASSY W/ 3/8" MOUNT HOLES
	02964304	1	PUMP ASSY W/ 1/2" MOUNT HOLES
1	02964941	1	FLANGE PUMP MOUNTING
2	02964942	1	HOUSING
3	02964943	1	GEAR HOUSING
4	02964944	4	WASHER
5	02964945	4	BOLT
6	02964946	1	GEAR SET
7	02964936	1	MINOR SEAL KIT
8	02964935	1	MAJOR SEAL KIT

HYDRAULIC PUMP ASSEMBLY



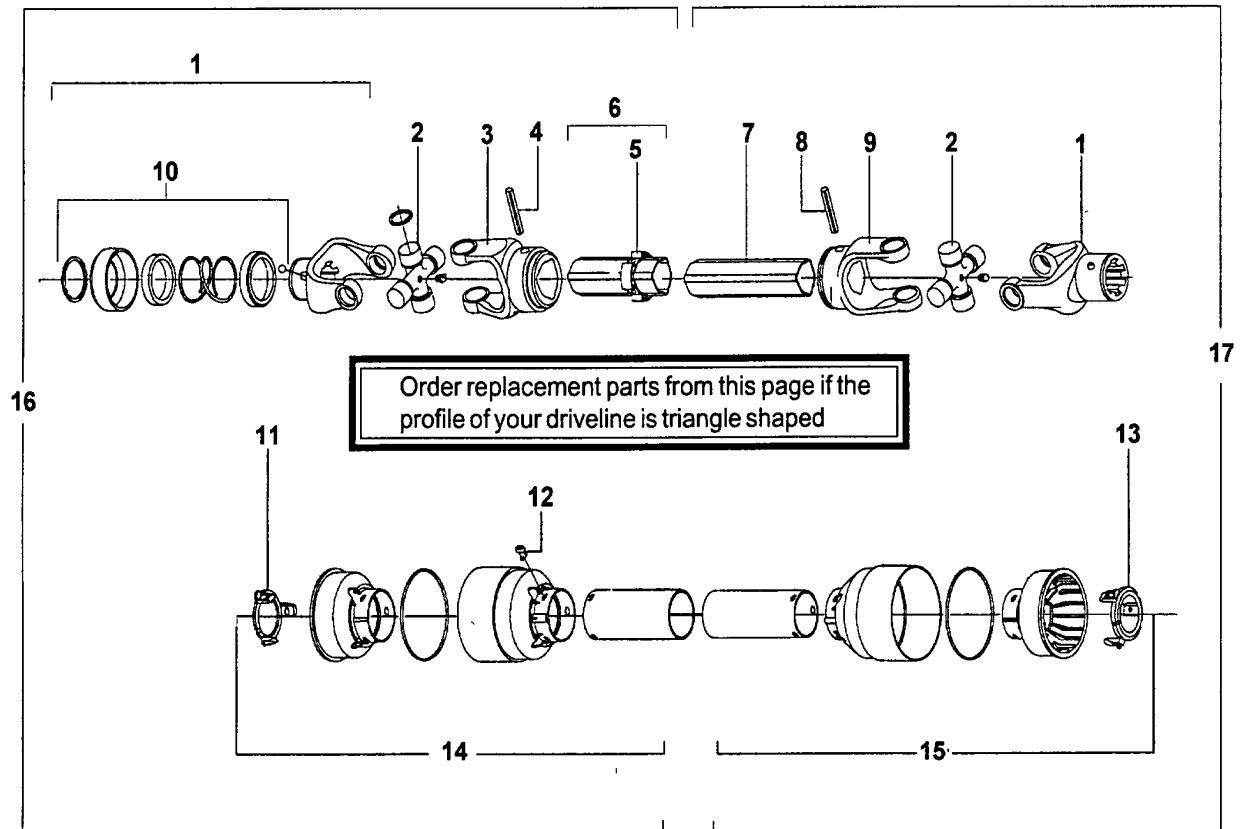
ITEM	PART NO.	QTY.	DESCRIPTION
1	02994425	1	PUMP, HYD, 300PSI
2	03200300	1	HOSE BIB - 1 1/4 PIPE
3	02964341	1	ADAPTER STGHT 12MB-12MJ
4	02964135	1	ADAPTER STGHT 12MB-12FJX
5	00765470	1	RELIEF VALVE
6	02090800	1	ADAPTER - 12MB - 12 MJ 90°
7	02161300	1	ADAPTER 10MB - 8MJ 90°
8	00751457	1	STREET ELBOW 20MP - 20MP

DRIVELINE ASSEMBLY 540 RPM



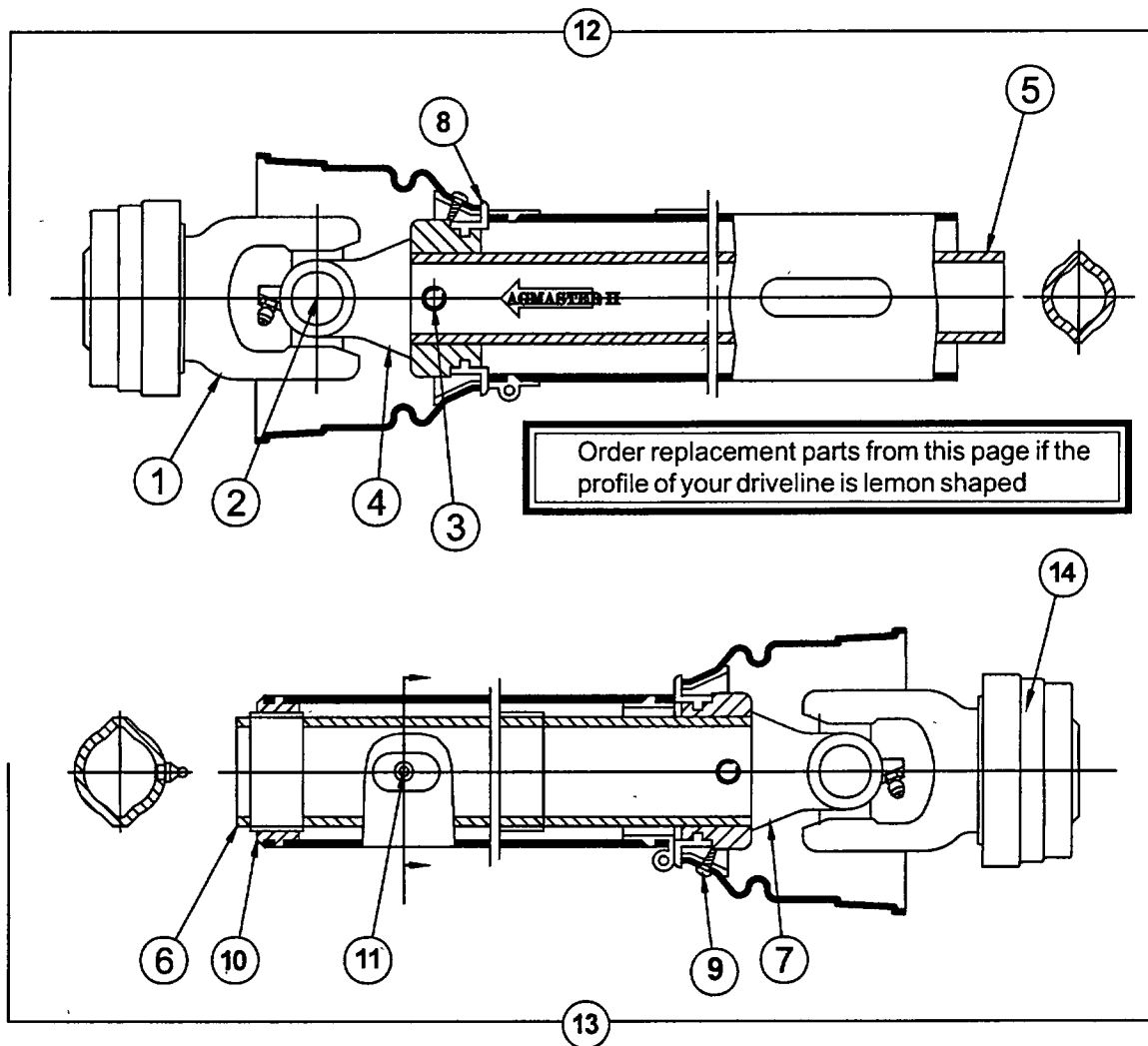
ITEM	PART NO.	QTY.	DESCRIPTION
	00775403	-	DRIVELINE ASSEMBLY
1	00775353	1	YOKE
2	W279R	2	CROSS & BEARING KIT
3	8384	2	SPRING PIN
4	00775317	1	INBOARD YOKE
5	00775408	1	INNER PROFILE
6	00775409	1	PROFILE & SLEEVE
7	00775318	1	INBOARD YOKE
8	8393	2	BEARING RING
9	4797	2	SCREW
10	8974	1	SUPPORT BEARING
11	1416601	1	GREASE FITTING
12	00775410	1	OUTER SHIELD HALF
13	00775411	1	INNER SHIELD HALF
14	00767954	1	YOKE QD KIT

DRIVELINE ASSEMBLY 540 RPM



ITEM	PART NO.	QTY.	DESCRIPTION
	02965064	-	DRIVELINE ASSEMBLY
1	00760002	1	COLLAR YOKE
2	00752896	2	CROSS JOURNAL SET
3	00754154	1	OUTER YOKE
4	00754167	1	INNER ROLL PIN
5	00772529	1	BUSH WITH GREASE NIPPLE
6	02965077	1	OUTER TUBE
7	02965076	1	INNER TUBE
8	00754167	1	OUTER ROLL PIN
9	00754153	1	INNER YOKE
10	00757144	2	COLLAR KIT
11	00754332	1	OUTER TUBE RETAINING COLLAR GUARD
12	00754330	6	BOLT
13	00754331	1	INNER TUBE RETAINING COLLAR GUARD
14	02965080	1	INNER GUARD
15	02965081	1	OUTER GUARD
16	02965868	1	HALF INNER SHAFT WITH GUARDING
17	02965079	1	HALF OUTER SHAFT WITH GUARDING

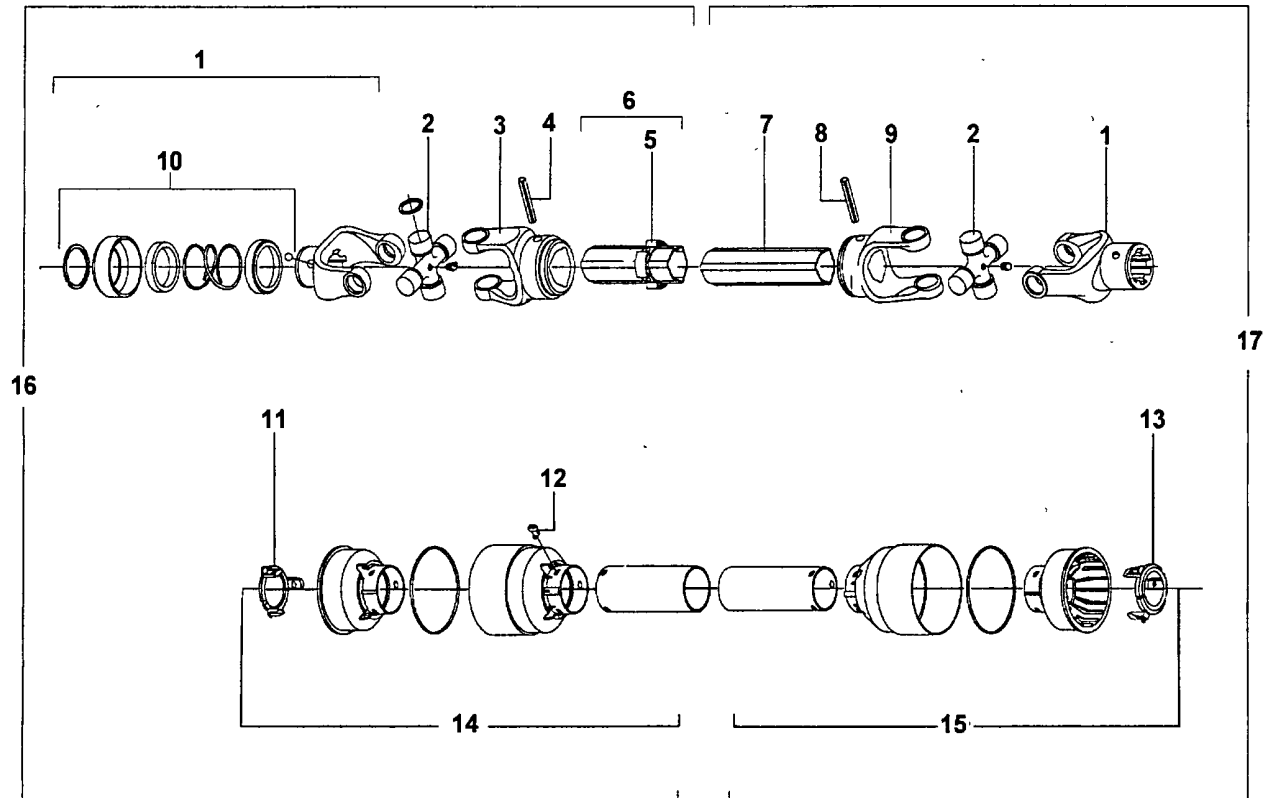
DRIVELINE ASSEMBLY 1000 RPM



ITEM	PART NO.	QTY.	DESCRIPTION
	00775404	-	DRIVELINE ASSEMBLY
1	00761762	1	YOKE
2	W279R	2	CROSS & BEARING KIT
3	8384	2	SPRING PIN
4	00775317	1	INBOARD YOKE
5	00775408	1	INNER PROFILE
6	00775409	1	PROFILE & SLEEVE
7	00775318	1	INBOARD YOKE
8	8393	2	BEARING RING
9	4797	2	SCREW
10	8974	1	SUPPORT BEARING
11	1416601	1	GREASE FITTING
12	00775410	1	OUTER SHIELD HALF
13	00775411	1	INNER SHIELD HALF
14	00767954	1	YOKE QD KIT

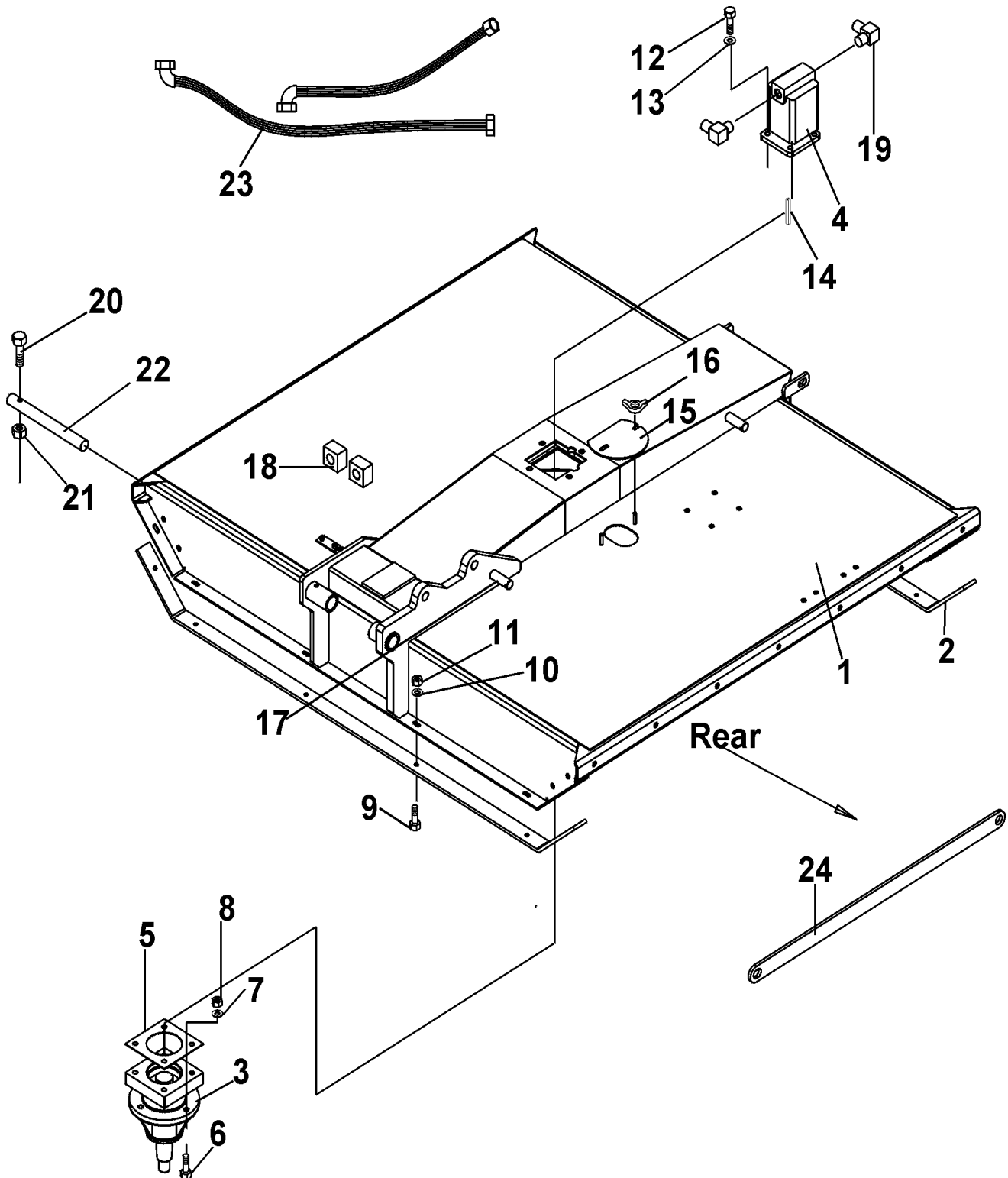
DRIVELINE ASSEMBLY 1000 RPM

Order replacement parts from this page if the profile of your driveline is triangle shaped



ITEM	PART NO.	QTY.	DESCRIPTION
	02965412	-	DRIVELINE ASSEMBLY
1	00760002	1	COLLAR YOKE
2	00752896	2	CROSS JOURNAL SET
3	00754154	1	OUTER YOKE
4	00754167	1	INNER ROLL PIN
5	00772529	1	BUSH WITH GREASE NIPPLE
6	02965077	1	OUTER TUBE
7	02965076	1	INNER TUBE
8	00754167	1	OUTER ROLL PIN
9	00754153	1	INNER YOKE
10	00757144	2	COLLAR KIT
11	00754332	1	OUTER TUBE RETAINING COLLAR GUARD
12	00754330	6	BOLT
13	00754331	1	INNER TUBE RETAINING COLLAR GUARD
14	02965080	1	INNER GUARD
15	02965081	1	OUTER GUARD
16	02965868	1	HALF INNER SHAFT WITH GUARDING
17	02965079	1	HALF OUTER SHAFT WITH GUARDING

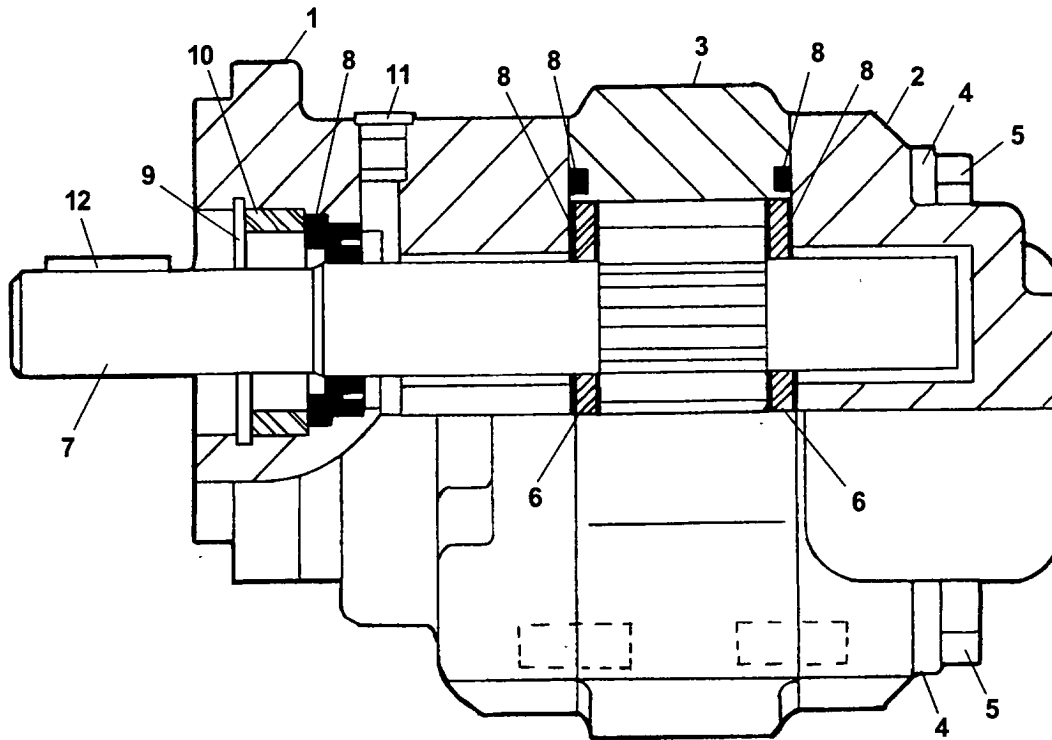
MOWER HEAD ASSEMBLY



MOWER HEAD ASSEMBLY

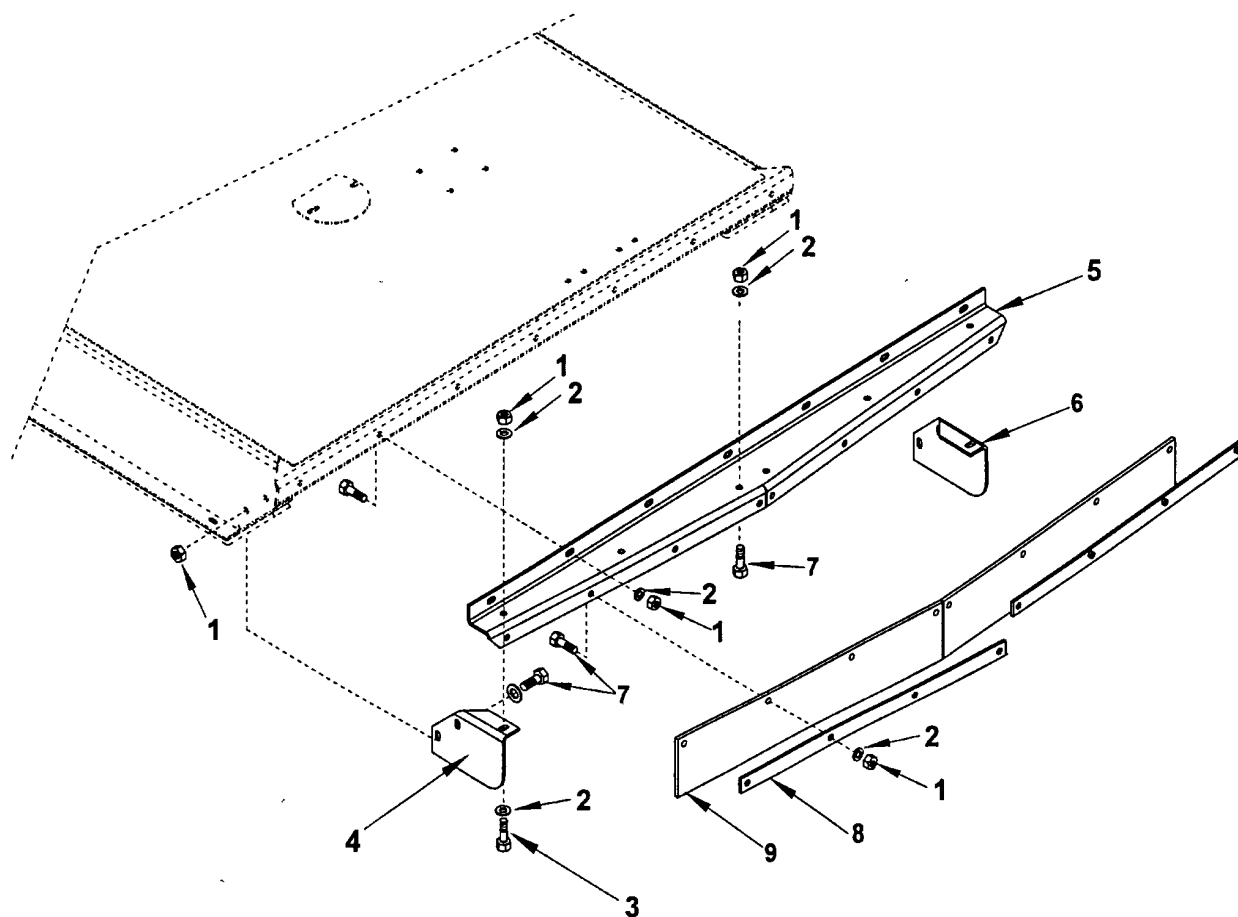
ITEM	PART NO.	QTY.	DESCRIPTION
1	00775559M	1	WDMT,DECK
2	00775568	2	FLAT SKID SHOE
3	00763572	1	ASY,SPINDLE
4	02964349	1	BUSHING,CONNEX 3/4 X 1 X .94LG
5	00763460	1	GASKET
6	00755082	4	HEXB 5/8 NC 2-1/2PL8
7	00756077	8	WASHER,5/8 HARDENED
8	02956948	4	LOCKNUT 5/8 NC PLC
9	2A361612	12	BOLT
10	00011100	12	FLATWASHER
11	00015800	12	TOP LOCKNUT
12	02892000	4	BOLT-1/2 NC 1-1/2 LG GR8
13	00019600	4	LOCKWASHER
14	02964956	1	KEY- .25 X .25 X 1.25 LONG
15	5710121	1	COVER PLATE
16	5F5180	2	NUT 5/16 NC WING
17	37107B13	2	CLIP-X HAIR PIN
18	02960871	2	CLAMP-STEEL TUBING 1-1/4 STD
19	02090800	2	ADAPTER, HYD, ELBOW
20	00013900	1	BOLT
21	00015800	1	LOCKNUT
22	02964139	1	PIN,1-1/2 X 14 (PLATED)
23	00775957	2	HOSE #12 - 12FJX - 12FJX 90
24	00775966	1	TRANSPORT BAR

HYDRAULIC MOTOR REPAIR PARTS



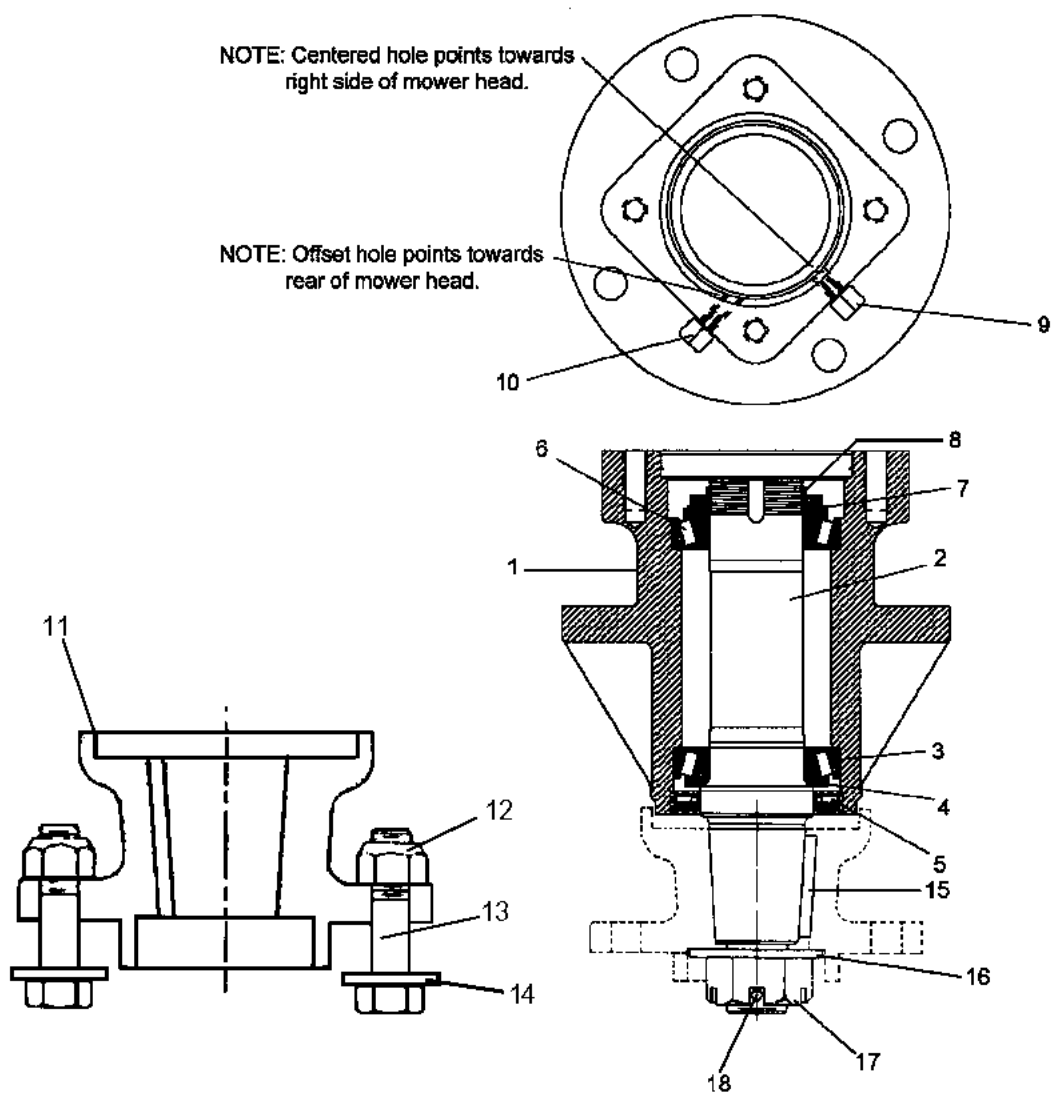
ITEM	PART NO.	QTY.	DESCRIPTION
	02964305	1	MOTOR ASSY
1	02964933	1	MOTOR MOUNTING FLANGE
2	02964934	1	HOUSING
3	02962205	1	GEAR HOUSING
4	02961917	4	WASHER
5	02962208	4	BOLT
6	02964939	1	MAJOR SEAL KIT
7	02964937	1	GEAR SHAFT SET
8	02964938	1	MINOR SEAL KIT
9	02962210	1	SNAP RING
10	02964940	1	SPACER
11	02961940	1	PLUG
12	02964956	1	KEY

DEFLECTOR ASSEMBLY



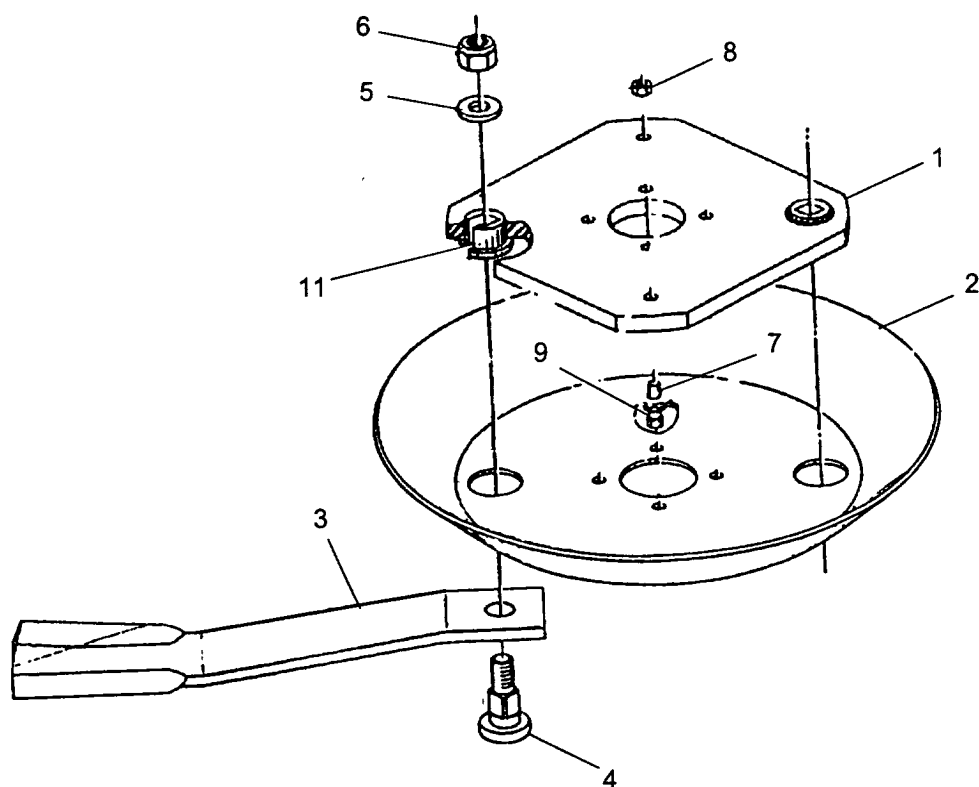
ITEM	PART NO.	QTY.	DESCRIPTION
1	00001800	25	LOCKNUT
2	00002700	10	FLATWASHER
3	00748823	2	BOLT
4	00775554	1	RIGHT SIDE SHIELD
5	00775556	1	MOUNTING PLATE
6	00775782	1	LEFT SIDE SHIELD
7	02030700	23	BOLT
8	00775783	2	STRAP
9	00775784	2	PANEL

SPINDLE ASSEMBLY



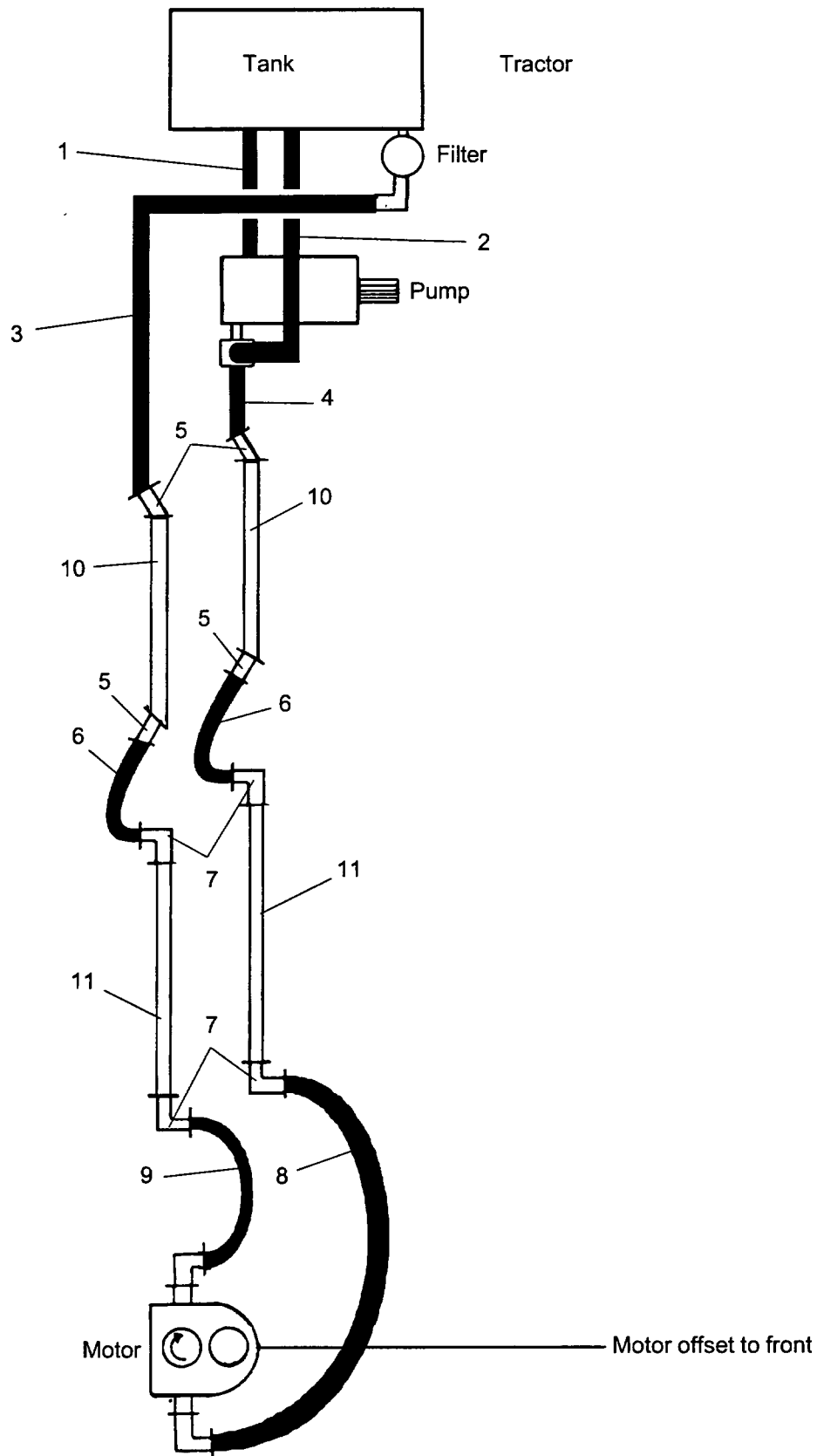
ITEM	PART NO.	QTY.	DESCRIPTION
	00763572	1	SPINDLE ASSY
1	00763571	1	SPINDLE HOUSING
2	00763570	1	SPINDLE
3	00748537	1	BEARING CUP
4	581038	1	BEARING CONE
5	5810310	1	OIL SEAL
6	00755628	1	BEARING
7	02964269	1	LOCKWASHER
8	02962030	1	LOCKNUT
9	02959018	1	RELIEF FITTING
10	00565000	1	CHECK PLUG
11	581036	1	HUB
12	00749127	4	BOLT
13	00749136	4	NUT
14	00756077	4	WASHER
15	581037	1	KEY
16	15C2000	1	WASHER
17	5D20120	1	SLOTTED NUT
18	00606000	1	COTTER PIN

BLADE ASSEMBLY



ITEM	PART NO.	QTY.	DESCRIPTION
1	582011	1	BLADE CARRIER PLATE
2	582012	1	BLADE CARRIER PAN
3	00776437	1	BLADE SET, CONTAINS 2 BLADES (UPDRAFT)
4	571044	2	SHOULDER BOLT (L.H. THREADS)
5	571045	2	WASHER
6	5GL16140	2	LOCKNUT
7	7AH5101816	2	BOLT
8	00749136	2	LOCKNUT
9	00756077	2	WASHER
11	571042B	2REF	BROACHED BUSHING

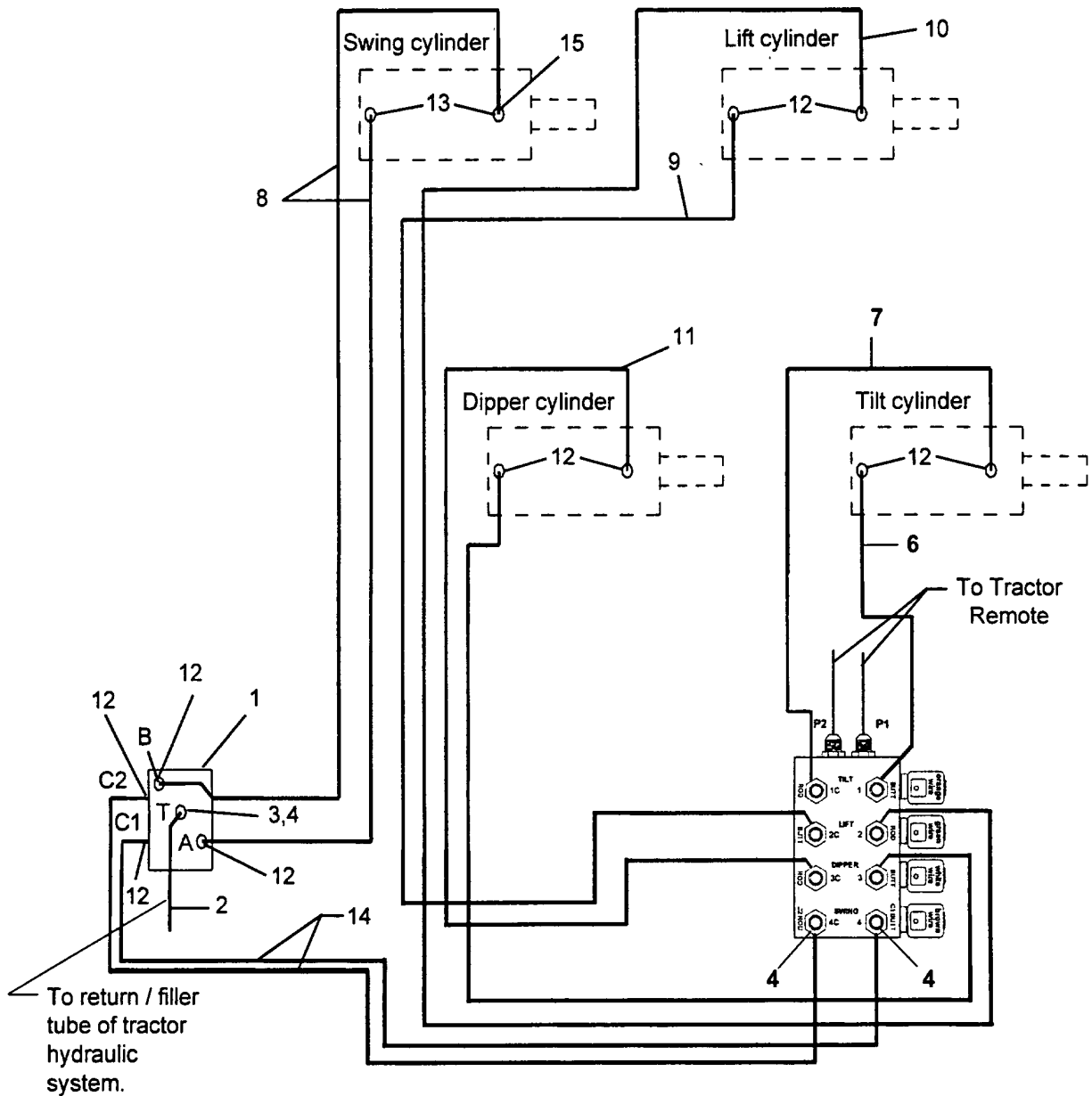
HYDRAULIC SYSTEM



HYDRAULIC SYSTEM

ITEM	PART NO.	QTY.	DESCRIPTION
1	00764809	1	HOSE - 19-3/4" (SUCTION)
2	00764808	1	HOSE - 31"
3	00764800	1	HOSE - 86" (RETURN)
4	00764799	1	HOSE - 45"
5	02959154	4	ADAPTER (45 DEGREE)
6	00764807	2	HOSE - 55"
7	02956851	4	ADAPTER (90 DEGREE)
8	00764806	1	HOSE - 71" (PRESSURE)
9	00764805	2	HOSE - 66" (RETURN)
10	02959590	2	HYDRAULIC TUBE, LIFT BOOM
11	00764759	2	HYDRAULIC TUBE, DIPPER BOOM

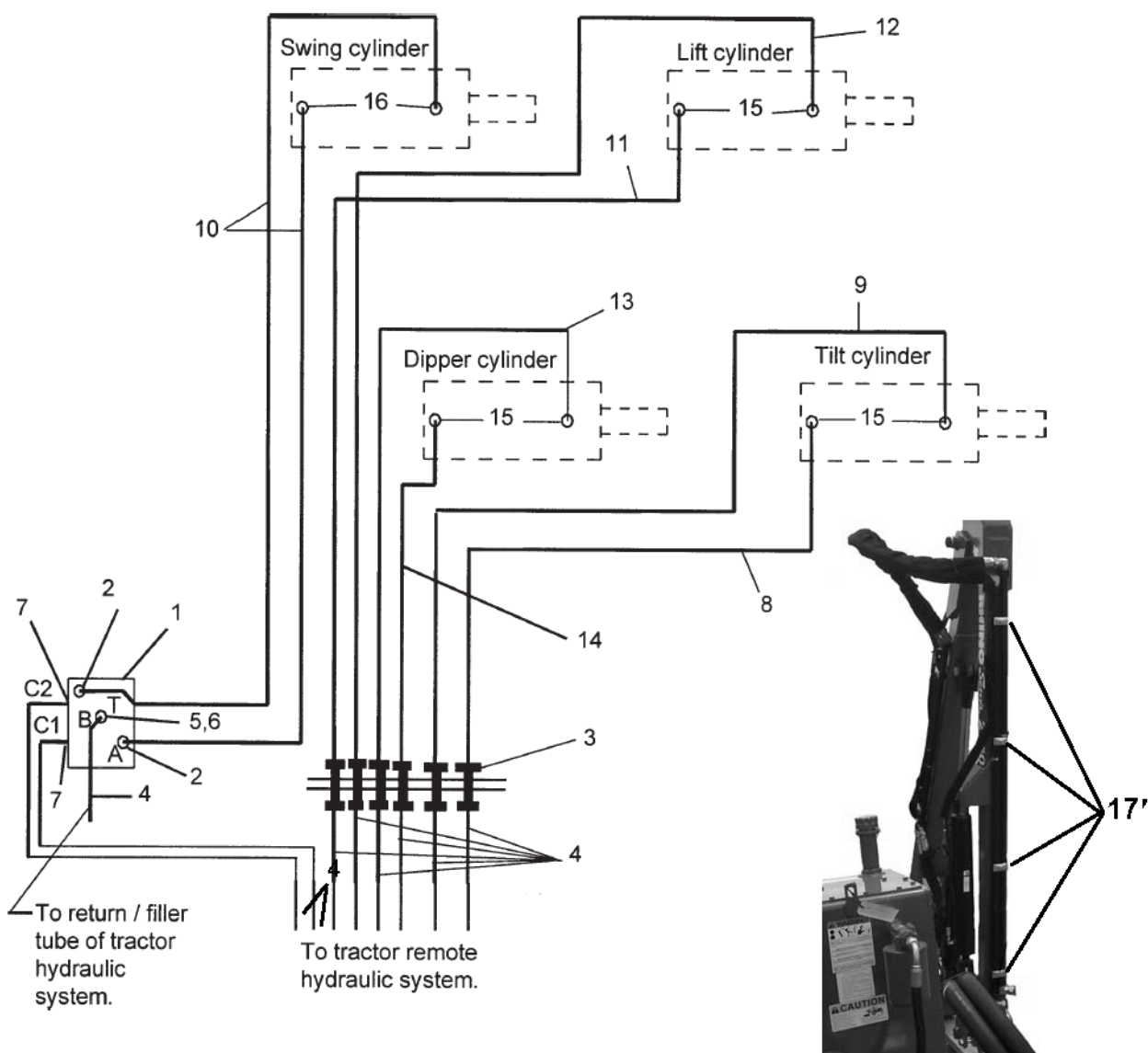
HOSE DIAGRAM - ELECTRO HYDRAULIC



HOSE DIAGRAM - ELECTRO HYDRAULIC

ITEM	PART NO.	QTY.	DESCRIPTION
1	00770407	1	VALVE-SWING BREAK-AWAY
2	02839000	1	HOSE - 64"
3	02822300	1	ADAPTER - STRAIGHT
4	02962022	3	ELBOW - 90 DEGREE
6	02215700	1	HOSE - 190 DEGREE
7	02218000	1	HOSE - 214-1/2"
8	02961321	2	HOSE - 32"
9	001772	1	HOSE - 79"
10	00765738	1	HOSE - 100"
11	00765737	1	HOSE - 91"
12	02960018	10	ELBOW - 90 DEGREE
13	02822100	2	ELBOW
14	02965475	2	HOSE 18"
15	7329	1	ADAPTER W/ RESTRICTOR

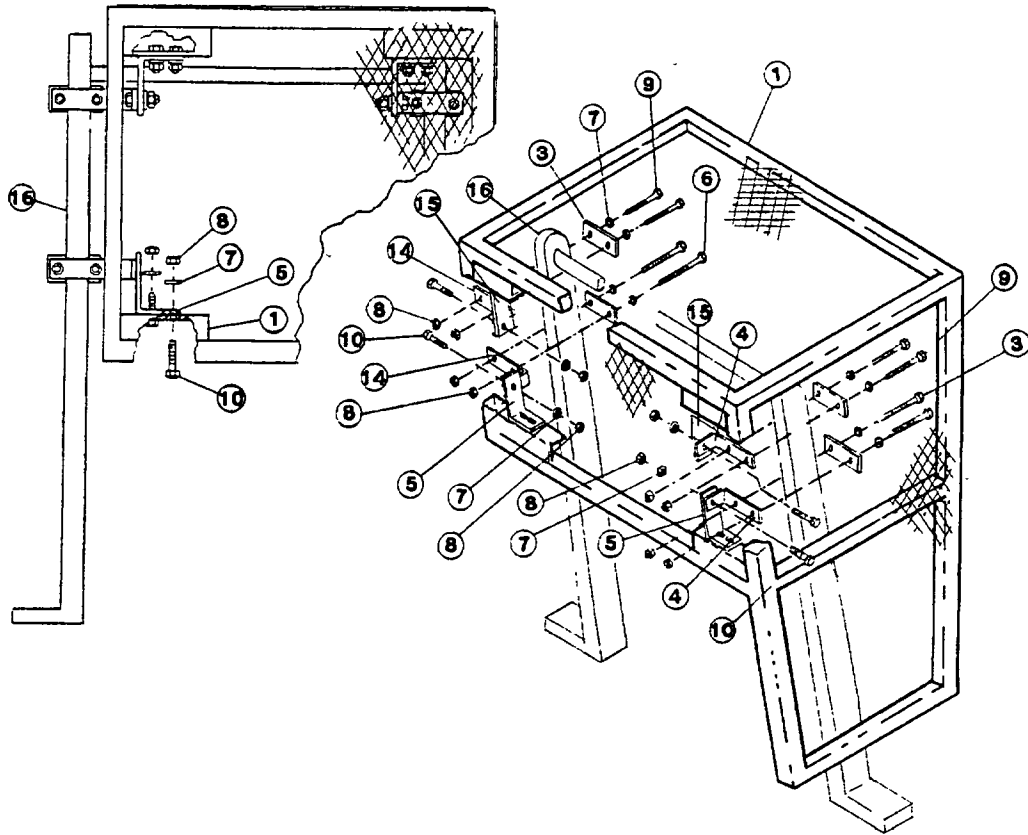
HOSE DIAGRAM - DIRECT CONNECT



ITEM	PART NO.	QTY.	DESCRIPTION
1	00770407	1	VALVE-SWING BREAK-AWAY
2	02960018	2	ELBOW-90 DEGREE
3	02965448	6	BULKHEAD FITTING
4	02839000	9	HOSE - 64"
5	02822300	1	ADAPTER - STRAIGHT
6	02962022	1	ELBOW - 90 DEGREE
7	02962181	2	ADAPTER - STRAIGHT
8	02215700	1	HOSE - 190 DEGREE
9	02218000	1	HOSE - 214-1/2"
10	02961321	2	HOSE - 32"
11	001772	1	HOSE - 79"
12	00765738	1	HOSE - 100"
13	00765737	1	HOSE - 91"
14	02839000	1	HOSE - 64"
15	02960018	8	ELBOW - 90 DEGREE
16	02822100	2	ELBOW
17	02959283	6	TUBE CLAMP,TWIN SERIES

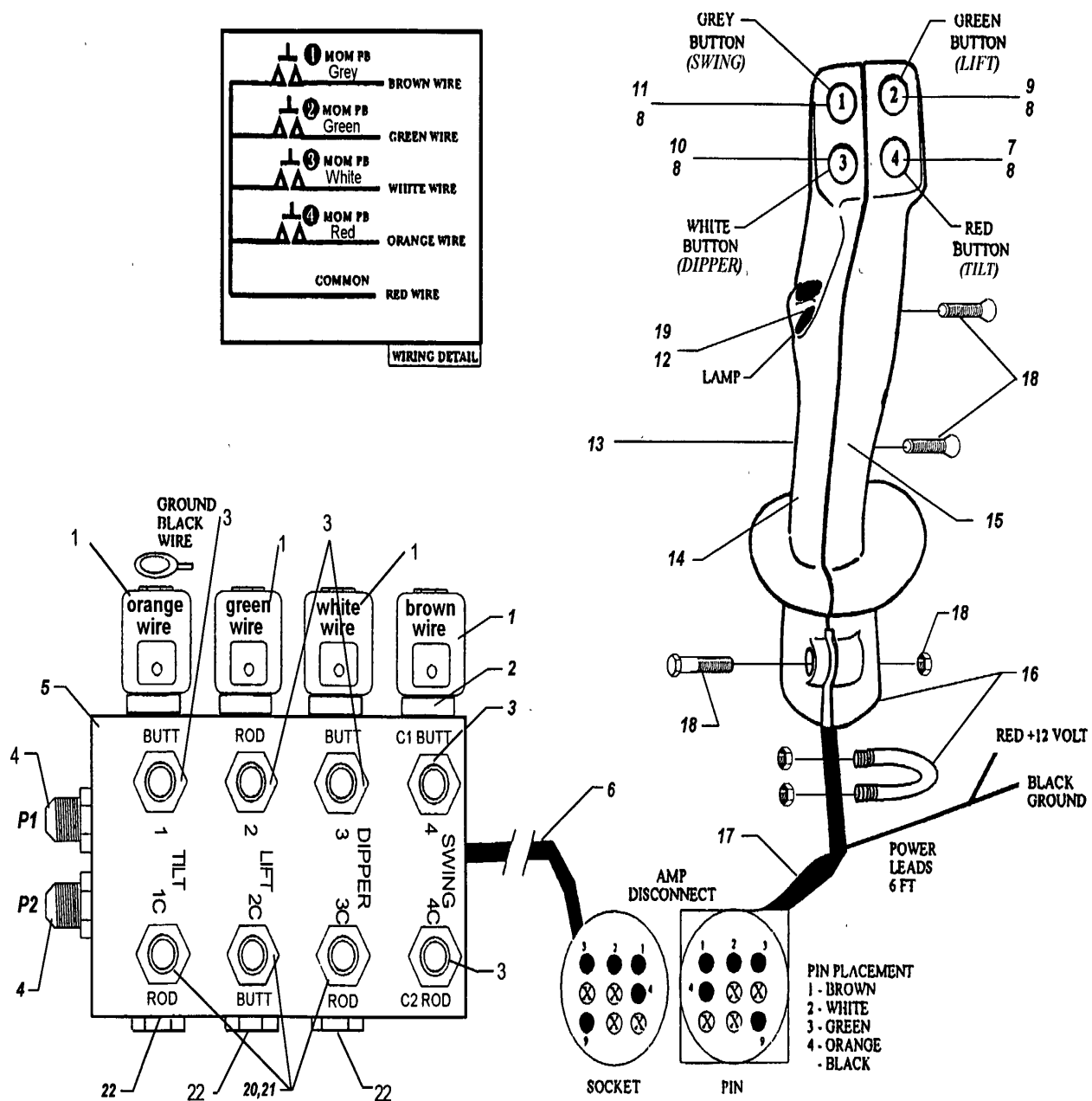
Servis 2160 (July 03) S/N 10302- Current Rev 07-04

CAGE ASSEMBLY



ITEM	PART NO.	QTY.	DESCRIPTION
1	02958047	1	CAGE WELDMENT
3	02959608	4	CLAMP BAR
4	02959610	2	ATTACHMENT BAR
5	02959611	2	MOUNT BRACKET
6	00751582	4	BOLT
7	00002700	20	FLATWASHER
8	00001800	20	LOCKNUT
9	02958035	4	BOLT
10	02886900	12	BOLT
14	02959989	2	LONG MOUNT BRACKET
15	02959990	2	TOP LONG MOUNT BRACKET
16	-----	Ref	ROLL BAR

CONTROL VALVE, ELECTRO-HYDRAULIC

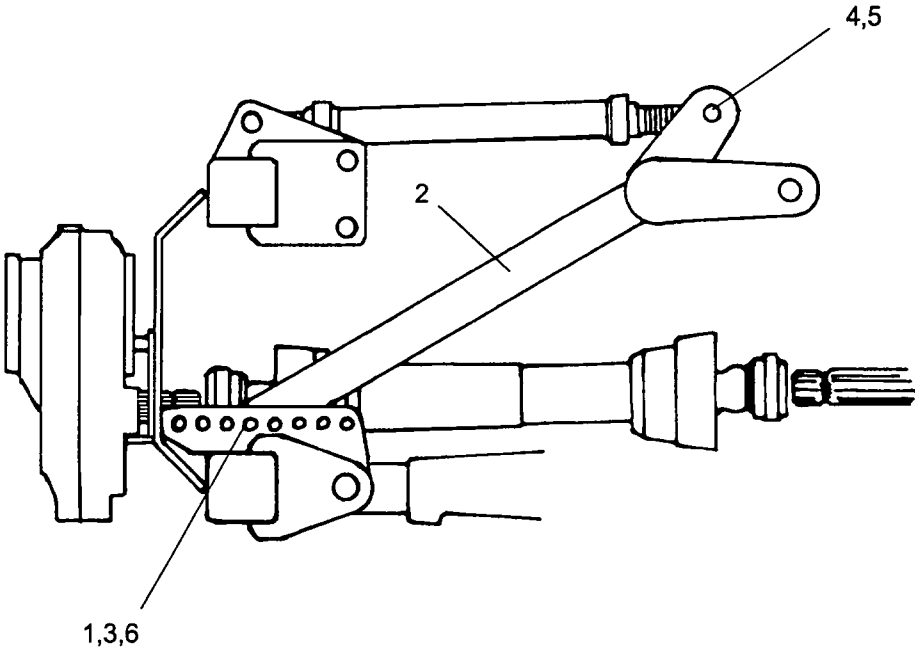


CONTROL VALVE, ELECTRO-HYDRAULIC

ITEM	PART NO.	QTY.	DESCRIPTION
	00771641	1	CONTROL VALVE ASSY
1	00771989	4	ELECTRIC SOLENOID COIL
2	00771990	4	ELECTRIC SOLENOID CARTRIDGE
3	02822300	5	STRAIGHT ADAPTOR
4	00696800	2	STRAIGHT ADAPTOR
5	00771991	1	VALVE BLOCK
6	00771992	1	WIRING HARNESS VALVE END
7	00770353	1	BOOT, RED
8	00770351	1	SWITCH, PUSH BUTTON MOMENTARY
9	00770354	1	BOOT, GREEN
10	00770352	1	BOOT, WHITE
11	00770355	1	BOOT, GREY
12	00770356	1	LAMP 12V RED
13	00770348	1	HANDLE AND HARNESS COMPLETE (INCLUDES NO. 7-18)
14	00770432	1	HANDLE LEFT PIECE
15	00770431	1	HANDLE RIGHT PIECE
16	00770359	1	HANDLE BRACKET INCLUDES U-BOLTS AND NUTS
17	00770430	1	WIRING HARNESS HANDLE END
18	00770434	1	HARDWARE BAG (INCLUDES SCREWS, NUTS AND HANDLE SCREW)
19	00770357	1	CAP, GROMMET
20	00771993	3	STRAIGHT ADAPTER W/ FLOW RESTRICTOR
21	02967151	3	STRAIGHT ADAPTER
22	00771994	3	PO CHECK CARTRIDGE

HYDRAULIC RELIEF ARM KIT - OPTIONAL

(Required for use with Non-Quick Hitch Tractors)



ITEM	PART NO.	QTY.	DESCRIPTION
	00765478		HITCH KIT ASSY - CATEGORY 2 & 3
1	00037200	2	TOPLOCK NUT
2	00765759	1	HYDRAULIC LIFT SUPPORT
3	02931300	2	HEX HEAD CAP SCREW
4	2196	1	CLIP
5	373011M	1	PIN - TOP LINK
6	69113	6	BUSHING

SERVIS-RHINO

LIMITED WARRANTY

1. LIMITED WARRANTIES

- 1.01. Servis-Rhino warrants for one year from the purchase date to the original non-commercial, governmental, or municipal purchaser ("Purchaser") and warrants for six months to the original commercial or industrial purchaser ("Purchaser") that the goods purchased are free from defects in material or workmanship.
- 1.02. Manufacturer will replace for the Purchaser any part or parts found, upon examination at one of its factories, to be defective under normal use and service due to defects in material or workmanship.
- 1.03. This limited warranty does not apply to any part of the goods which has been subjected to improper or abnormal use, negligence, alteration, modification, or accident, damaged due to lack of maintenance or use of wrong fuel, oil, or lubricants, or which has served its normal life. This limited warranty does not apply to any part of any internal combustion engine, or expendable items such as blades, shields, guards, or pneumatic tires except as specifically found in your Operator's Manual.
- 1.04. Except as provided herein, no employee, agent, Dealer, or other person is authorized to give any warranties of any nature on behalf of Manufacturer.

2. REMEDIES AND PROCEDURES.

- 2.01. This limited warranty is not effective unless the Purchaser returns the Registration and Warranty Form to Manufacturer within 30 days of purchase.
- 2.02. Purchaser claims must be made in writing to the Authorized Dealer ("Dealer") from whom Purchaser purchased the goods or an approved Authorized Dealer ("Dealer") within 30 days after Purchaser learns of the facts on which the claim is based.
- 2.03. Purchaser is responsible for returning the goods in question to the Dealer.
- 2.04. If after examining the goods and/or parts in question, Manufacturer finds them to be defective under normal use and service due to defects in material or workmanship, Manufacturer will:
 - (a) Repair or replace the defective goods or part(s) or
 - (b) Reimburse Purchaser for the cost of the part(s) and reasonable labor charges (as determined by Manufacturer) if Purchaser paid for the repair and/or replacement prior to the final determination of applicability of the warranty by Manufacturer.The choice of remedy shall belong to Manufacturer.
- 2.05. Purchaser is responsible for any labor charges exceeding a reasonable amount as determined by Manufacturer and for returning the goods to the Dealer, whether or not the claim is approved. Purchaser is responsible for the transportation cost for the goods or part(s) from the Dealer to the designated factory.

3. LIMITATION OF LIABILITY.

- 3.01. MANUFACTURER DISCLAIMS ANY EXPRESS (EXCEPT AS SET FORTH HEREIN) AND IMPLIED WARRANTIES WITH RESPECT TO THE GOODS INCLUDING, BUT NOT LIMITED TO, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.
- 3.02. MANUFACTURER MAKES NO WARRANTY AS TO THE DESIGN, CAPABILITY, CAPACITY, OR SUITABILITY FOR USE OF THE GOODS.
- 3.03. EXCEPT AS PROVIDED HEREIN, MANUFACTURER SHALL HAVE NO LIABILITY OR RESPONSIBILITY TO PURCHASER OR ANY OTHER PERSON OR ENTITY WITH RESPECT TO ANY LIABILITY, LOSS, OR DAMAGE CAUSED OR ALLEGED TO BE CAUSED DIRECTLY OR INDIRECTLY BY THE GOODS INCLUDING, BUT NOT LIMITED TO, ANY INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES RESULTING FROM THE USE OR OPERATION OF THE GOODS OR ANY BREACH OF THIS WARRANTY. NOTWITHSTANDING THE ABOVE LIMITATIONS AND WARRANTIES, MANUFACTURER'S LIABILITY HEREUNDER FOR DAMAGES INCURRED BY PURCHASER OR OTHERS SHALL NOT EXCEED THE PRICE OF THE GOODS.
- 3.04. NO ACTION ARISING OUT OF ANY CLAIMED BREACH OF THIS WARRANTY OR TRANSACTIONS UNDER THIS WARRANTY MAY BE BROUGHT MORE THAN TWO (2) YEARS AFTER THE CAUSE OF ACTION HAS OCCURRED.

4. MISCELLANEOUS.

- 4.01. Proper Venue for any lawsuits arising from or related to this limited warranty shall be only in Guadalupe County, Texas.
- 4.02. Manufacturer may waive compliance with any of the terms of this limited warranty, but no waiver of any terms shall be deemed to be a waiver of any other term.
- 4.03. If any provision of this limited warranty shall violate any applicable law and is held to be unenforceable, then the invalidity of such provision shall not invalidate any other provisions herein.
- 4.04. Applicable law may provide rights and benefits to purchaser in addition to those provided herein.

KEEP FOR YOUR RECORDS

ATTENTION: Purchaser should fill in the blanks below for his reference when buying repair parts and/or for proper machine identification when applying for warranty.

Servis-Rhino Implement Model _____ Serial Number _____

Date Purchased _____ Dealer _____

ATTENTION:
READ YOUR OPERATOR'S MANUAL

RHINO®
1020 S. Sangamon Ave.
Gibson City, IL 60936
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TO THE OWNER/OPERATOR/DEALER

To keep your implement running efficiently and safely, read your manual thoroughly and follow these directions and the Safety Messages in this Manual. The Table of Contents clearly identifies each section where you can easily find the information you need.

The OCCUPATIONAL SAFETY AND HEALTH ACT (1928.51 Subpart C) makes these minimum safety requirements of tractor operators:

REQUIRED OF THE OWNER:

1. Provide a Roll-Over-Protective Structure that meets the requirements of this Standard; and
2. Provide Seatbelts that meet the requirements of this paragraph of this Standard and SAE J4C; and
3. Ensure that each employee uses such Seatbelt while the tractor is moving; and
4. Ensure that each employee tightens the Seatbelt sufficiently to confine the employee to the protected area provided by the ROPS.

REQUIRED OF THE OPERATOR

1. Securely fasten seatbelt if the tractor has a ROPS.
2. Where possible, avoid operating the tractor near ditches, embankments, and holes.
3. Reduce speed when turning, crossing slopes, and on rough, slick, or muddy surfaces.
4. Stay off slopes too steep for safe operation.
5. Watch where you are going - especially at row ends, on roads, and around trees.
6. Do not permit others to ride.
7. Operate the tractor smoothly - no jerky turns, starts, or stops.
8. Hitch only to the drawbar and hitch points recommended by the tractor manufacturer.
9. When the tractor is stopped, set brakes securely and use park lock, if available.



Keep children away from danger all day, every day...



Equip tractors with rollover protection (ROPS) and keep all machinery guards in place...



Please work, drive, play and live each day with care and concern for your safety and that of your family and fellow citizens.

