

OPERATION AND PARTS MANUAL



MAYCO SERIES MODELS LS400/LS500 CONCRETE PUMPS (DEUTZ F4L2011, BF4L2011 DIESEL ENGINES)

Revision #6 (09/19/11)

THIS MANUAL MUST ACCOMPANY THE EQUIPMENT AT ALL TIMES.

APPENDIX — RECOMMENDED SHOTCRETE SYSTEM

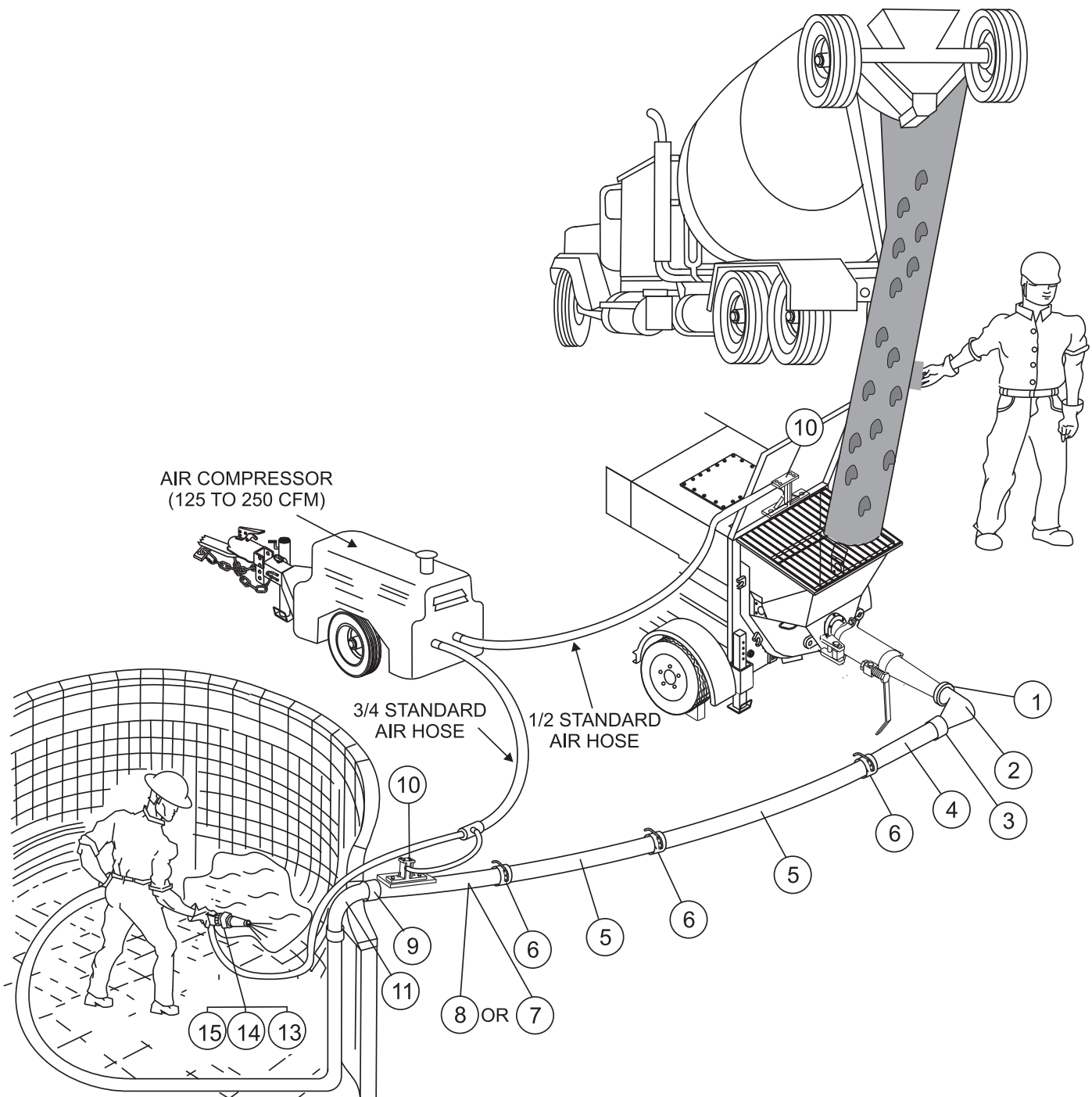


Figure 69. Recommended Shotcrete System

APPENDIX — RECOMMENDED SHOTCRETE SYSTEM

RECOMMENDED SHOTCRETE SYSTEM

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM28906	COUPLING, 5" H-D "CF"		
2	EM25837	ELBOW, 5"x4"x90°		
3	EM28905	COUPLING, 4" H-D w/GASKET & PIN		
4	EM402552	REDUCER, 4"x2.5"x53" H-D ENDS		
5	EM28061	PIPE, 2.5"x120w x 10' H-D		
6	EM289035	COUPLING, 2.5" H-D w/GASKET & PIN		
7	EM28001DD	REDUCER, 2.5"x2"x36" H-D		
8	EM23815D	REDUCER, 2.5"x2" w/AIR VIBRATOR		
9	EM28902	COUPLING, 2" H-D w/GASKET & PIN		
10	EM23101	AIR VIBRATOR ASSY.		
11	EM28131D	2"x2" ELBOW 90°		
12	EM24841	HOSE, 2"x25' H-D w/ENDS		
13	EM23808D	NOZZLE ASSEMBLY, 2" H-D		
14	EM23806	NOZZLE TIP, RUBBER 1-3/8"		
15	EM23807	NOZZLE TIP, RUBBER 1.25"		

GENERAL RECOMMENDATIONS

- If the site will permit, use steel pipe from the pump to the pool perimeter. It will reduce line pressures which is highly recommended.
- The vibrator on the reducer by the pool improves pumpability.
- Turn both air vibrators off whenever the pump is stopped to prevent separation of mix.
- The air vibrators are low consumption (4.2 scfm).
- Leave the air on at the nozzle when the pump is stopped to prevent clogging of air the hoses in the air insert.
- Use item #11 (steel elbow) at the edge of the pool to prevent collapse of the rubber hose, which can cause blockage.

APPENDIX — RECOMMENDED SHOTCRETE ACCESSORIES

RECOMMENDED SHOTCRETE ACCESSORIES

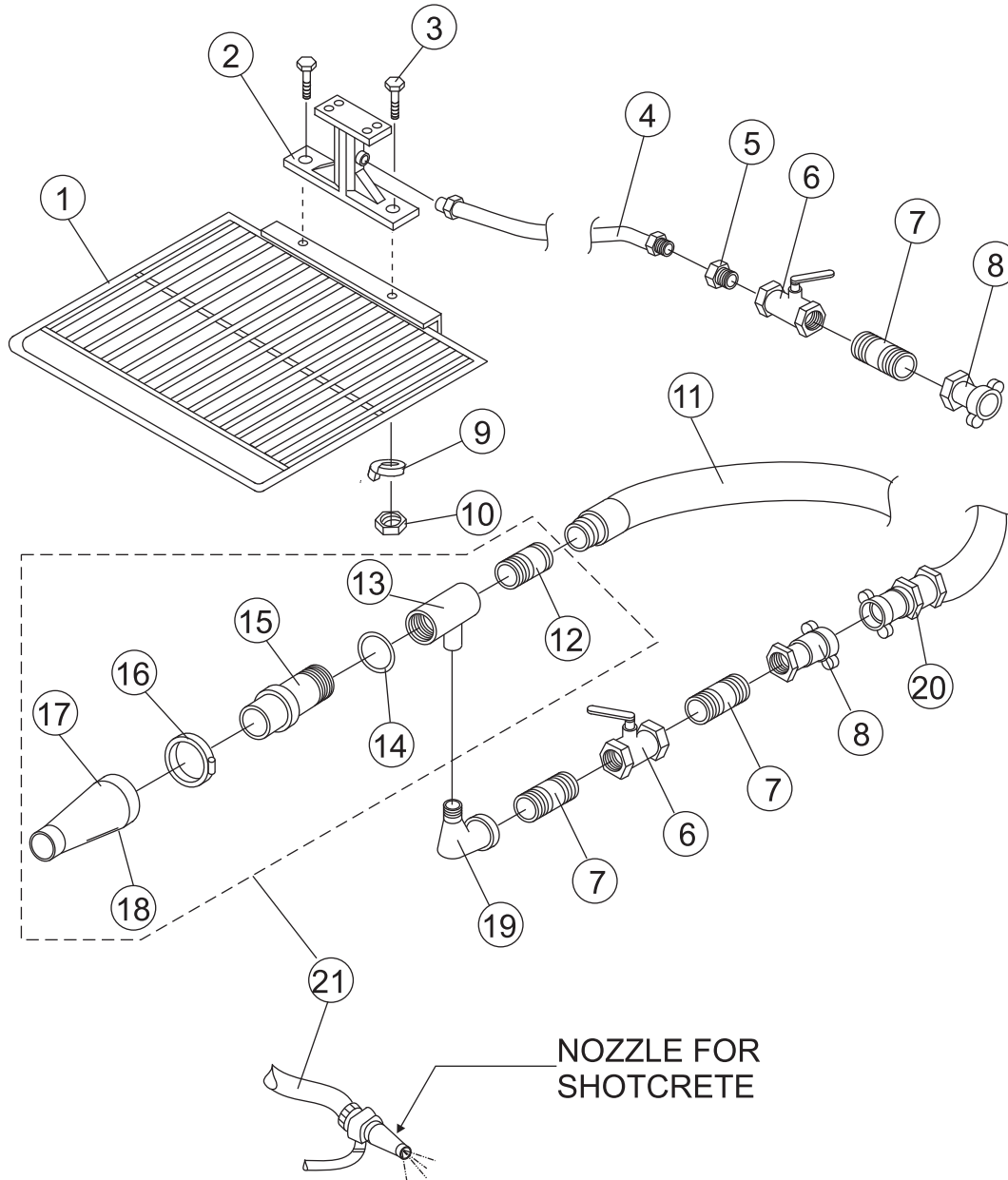


Figure 70. Shotcrete System Accessories



Use a 1-3/8" rubber nozzle tip for a wide spray pattern. Use a 1-1/4" rubber nozzle tip for a narrow spray pattern. **DO NOT INSTALL THE NOZZLE AT THE END OF THE HOSE UNTIL THE FIRST MATERIAL HAS PASSED THROUGH THE ENTIRE HOSE LENGTH.**

Disassemble and clean the nozzle assembly thoroughly after each job. Grease all threads before reassembly. **DO NOT** close the air valve when pumping is stopped as a continued air flow keeps the air passages clean.

APPENDIX — RECOMMENDED SHOTCRETE ACCESSORIES

RECOMMENDED SHOTCRETE ACCESSORIES

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM26107	HOPPER SCREEN	1	W/AIR VIBRATOR MOUNTING
2	EM23101	AIR VIBRATOR	1	
3	EM132	BOLT, 1/2-13X2	2	
4	EM23407	AIR HOSE	1	
5	EM23408	BUSHING	1	
6	EM23411	VALVE	1	
7	EM912073	NIPPLE	2	
8	EM23409	COUPLING	1	
9	EM923346	WASHER, 1/2 LOCK	2	
10	EM406	NUT, HEX 1/2-13	2	
11	EM23818	2"X25' GROOVED HOSE		
11	EM24841	2"X25' RAISED HOSE		
11	EM23845	2"X50' GROOVED HOSE		
12*	EM23802	VIC ADAPTER / EM23802D H.D	1	
13*	EM23803	GUN BODY	1	
14*	EM20816	"O" RING	1	
15*	EM23804	AIR INSERT	1	
16*	EM23805	NOZZLE CLAMP	1	
17*	EM23806	NOZZLE TIP, 1-3/8", SHORT	1	
18*	EM23807	NOZZLE TIP, 1-1/4", LONG	1	
19*	EM911076	STREET ELBOW	1	
20		AIR HOSE		NOT SUPPLIED BY MAYCO
21	EM23808	NOZZLE ASSEMBLY	1	INCLUDES ITEMS W/*

LS400/LS500 PUMP — SUGGESTED SPARE PARTS

LS400/LS500 CONCRETE PUMP 1 Unit

Qty.	P/N	Description
1	EM16462	FELT HOLDER
4	EM98050	PISTON CUP, ORANGE
4	EM16493	FELT RING
1	EM98033	OIL PLATE
2	EM14408	BRONZE RING
2	EM16145	BUSHING, SWING AXLE (BRONZE)
1	EM98021	WEAR PLATE
2	EM16816-1A	ENERGIZER RING
1	EM16816-2	INSERT RING
2	EM98065	SLEEVE SEAL
1	EM98022	WEAR RING
1	EM98065	RUBBER RING
2	EM14407	O-RING
1	34507	CAP, FUEL
2	EM20763	FILTER, FUEL (IN LINE)
1	P53712	CARTRIDGE, WATER SEPARATOR
3	01174416	FILTER, OIL (ENGINE)
3	01174696	FILTER, FUEL (ENGINE)
3	1319257	INSERT, AIR FILTER
3	1880870	AIR CARTRIDGE, SAFETY
1	EM98163	PROXIMITY SWITCH
1	EM98121	ELEMENT, RETURN OIL
		S/N 281100 AND BELOW
1	EM98275	ELEMENT, RETURN OIL,
		S/N 281101 AND ABOVE

LS400/LS500 CONCRETE PUMP 3 Units

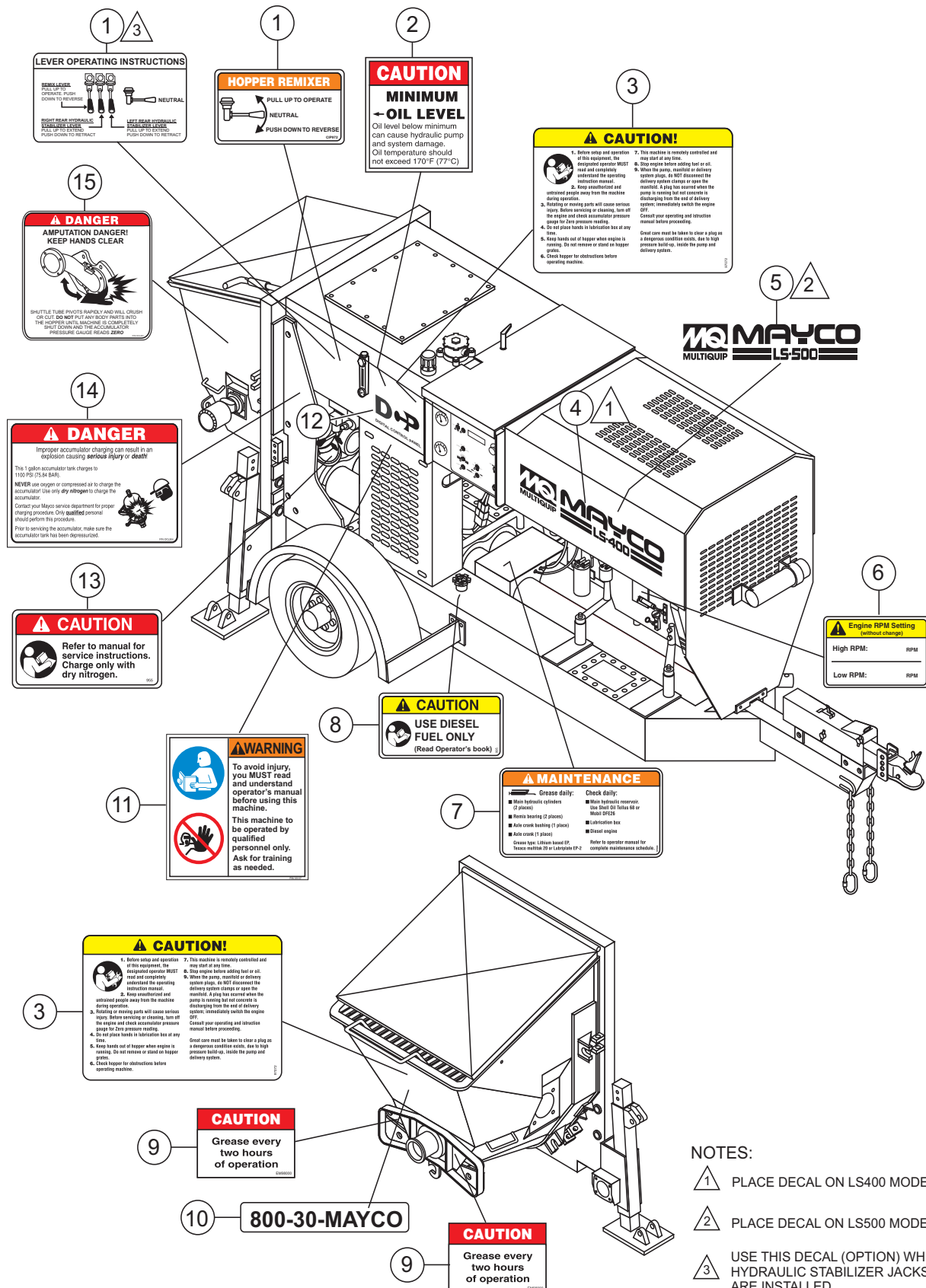
Qty.	P/N	Description
1	EM16459	PIN
2	EM25801	CONCRETE CYLINDER
4	EM16462	FELT HOLDER
6	EM98050	PISTON CUP, ORANGE
8	EM16493	FELT RING
4	EM98033	OIL PLATE
4	EM14408	BRONZE RING
4	EM16145A	BUSHING, SWING AXLE (BRONZE)
3	EM98021A	WEAR PLATE
4	EM16816-1A	ENERGIZER RING
2	EM16816-2	INSERT RING
4	EM98065	SLEEVE SEAL
6	EM98022	WEAR RING
3	EM98065	RUBBER RING
6	EM14407	O-RING
2	EM16174	O-RING
2	EM98163	SWITCH, PROXIMITY
6	510265	BOLT, HEX HEAD 3/8 NC x 3-1/4 IN. G8
1	34507	CAP, FUEL
6	EM20763	FILTER, FUEL
3	P53712	CARTRIDGE, WATER SEPARATOR
9	01174416	FILTER, OIL (ENGINE)
9	01174696	FILTER, FUEL (ENGINE)
9	1319257	INSERT, AIR FILTER
9	1180870	AIR CARTRIDGE, SAFETY
2	EM98121	ELEMENT, RETURN OIL
		S/N 281100 AND BELOW
2	EM98275	ELEMENT, RETURN OIL
		S/N 281101 AND ABOVE



Part numbers on this Suggested Spare Parts List may supersede or replace the P/N shown in the text pages of this book.

LS400/LS500 PUMP — NAMEPLATE AND DECALS

NAMEPLATE AND DECALS



NOTES:

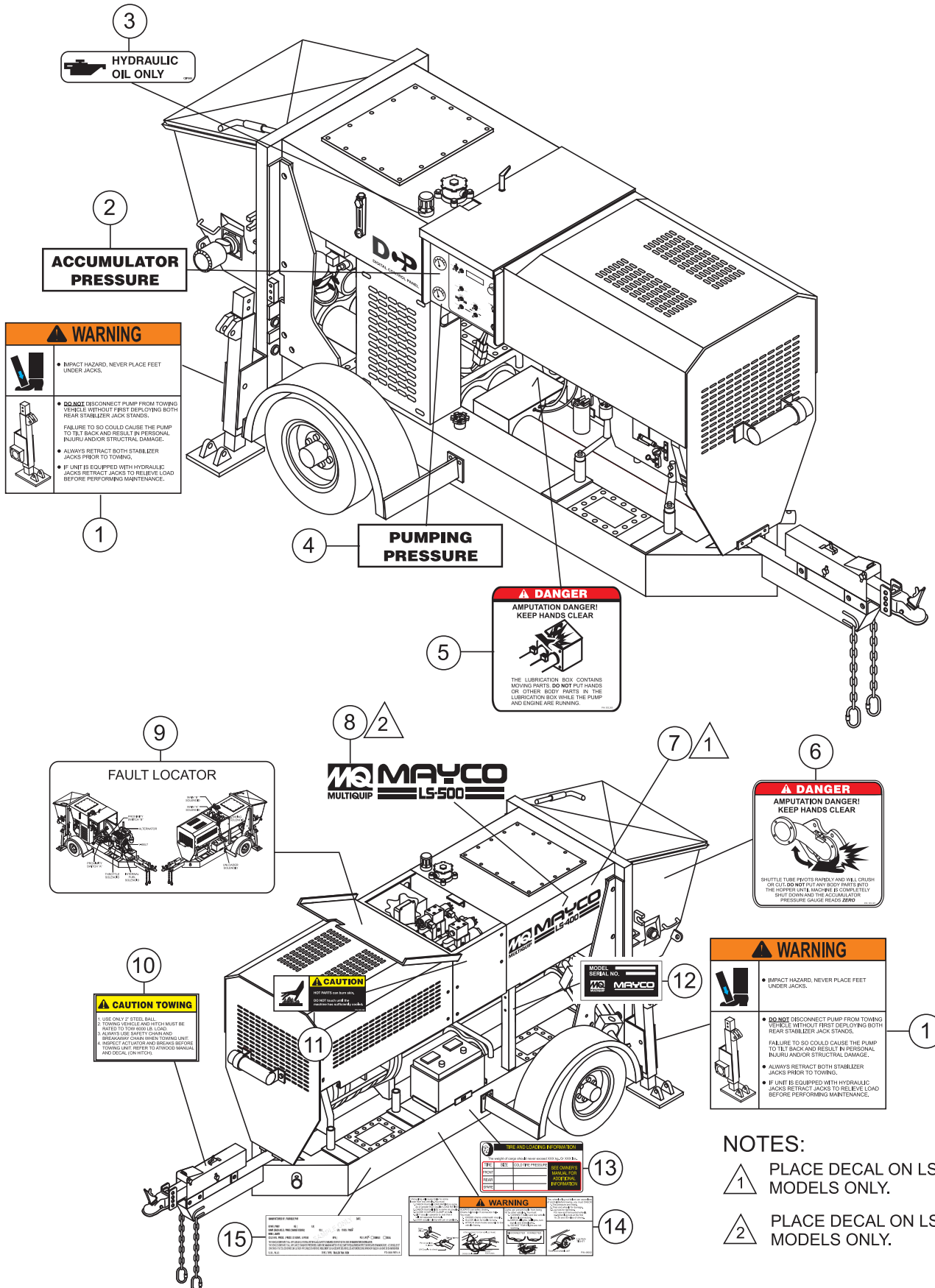
- 1 PLACE DECAL ON LS400 MODELS ONLY.
- 2 PLACE DECAL ON LS500 MODELS ONLY.
- 3 USE THIS DECAL (OPTION) WHEN HYDRAULIC STABILIZER JACKS ARE INSTALLED.

LS400/LS500 PUMP — NAMEPLATE AND DECALS

NAMEPLATE AND DECALS

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM970	DECAL, HOPPER REX MIXER	1	
1	TBD	DECAL, LEVER OPERATING INSTRUCTIONS	1	OPTION (HYD. JACKS)
2	EM511091	DECAL, MINIMUM OIL LEVEL	1	
3	EM97072	DECAL, CAUTION - OP. INSTRUCTIONS	2	
4	517639	DECAL, MQ/MAYCO LS400 LOGO	1	USED ON LS400 MODELS
5	517641	DECAL, MQ/MAYCO LS500 LOGO	1	USED ON LS500 MODELS
6	513580	DECAL, ENGINE RPM SETTING	1	
7	EM97084	DECAL, MAINTENANCE	1	
8	EM995	DECAL, CAUTION DIESEL FUEL	1	
9	EM98000	DECAL, CAUTION - GREASE 2 HOURS	2	
10	511709	DECAL, 800-30-MAYCO	1	
11	35137	DECAL, CAUTION READ MANUAL	1	
12	517907	DIGITAL CONTROL PANEL LOGO	1	
13	EM955	DECAL, DANGER CHARGING ACCUM.	1	
14	DCL304	DECAL, DANGER IMPROPER CHARGING	1	
15	DCL301	DECAL, SHUTTLE TUBE DANGER	1	

LS400/LS500 PUMP — NAMEPLATE AND DECALS



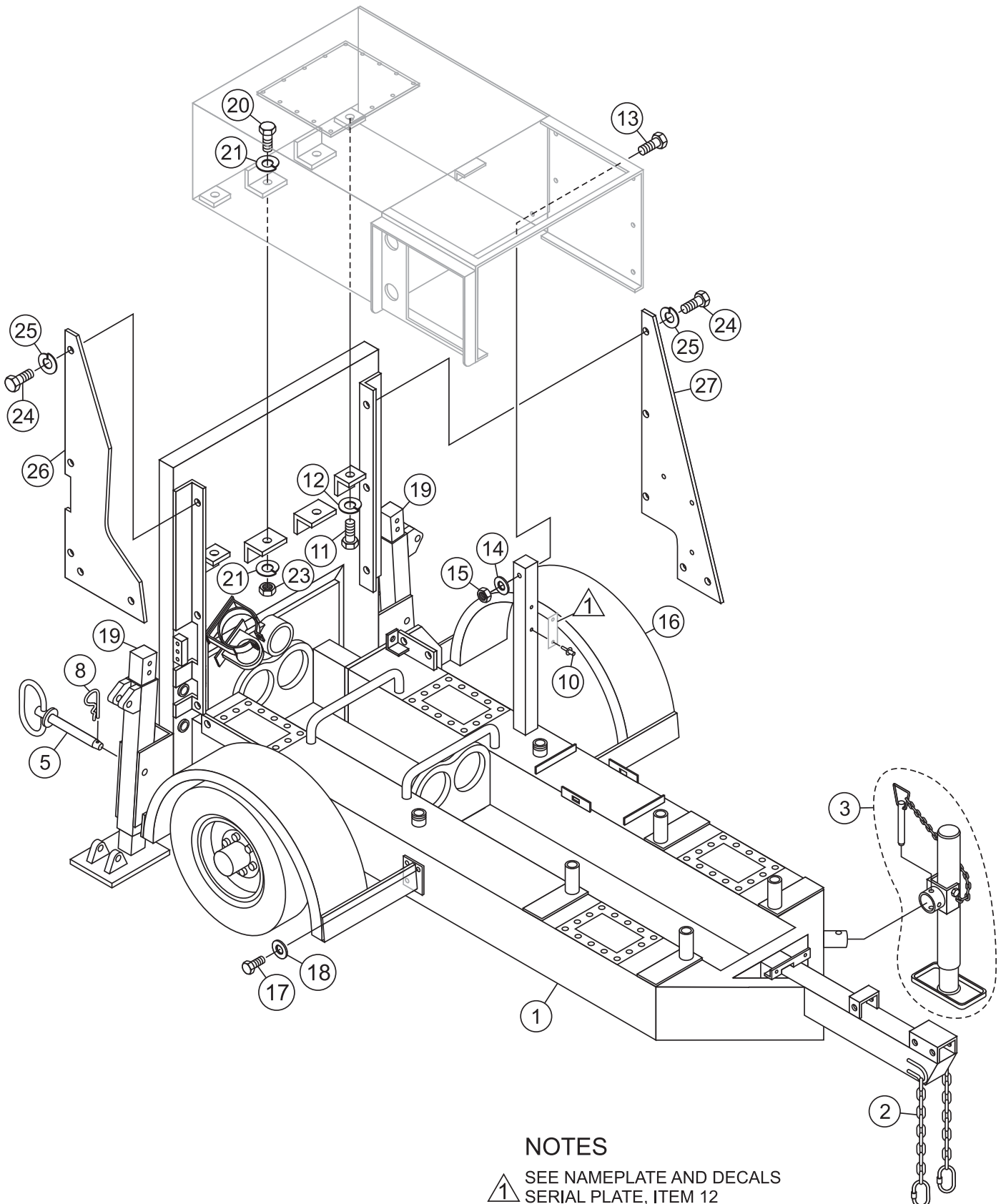
LS400/LS500 PUMP — NAMEPLATE AND DECALS

NAMEPLATE AND DECALS

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	TBD	DECAL, IMPACT HAZARD	1	
2	EM97070	DECAL, ACCUMULATOR PRESSURE	1	INCLUDED W/ITEM 4
3	EM985	DECAL, HYDRAULIC OIL ONLY	1	
4	EM97070	DECAL, PUMPING PRESSURE DECAL	1	INCLUDED W/ITEM 2
5	DCL300	DECAL, DANGER LUBRICATION BOX	1	
6	DCL301	DECAL, SHUTTLE TUBE DANGER	1	
7	517640	DECAL, MQ/MAYCO LS400 LOGO	1	USED ON LS400 MODELS
8	517642	DECAL, MQ/MAYCO LS500 LOGO	1	USED ON LS500 MODELS
9	TBD	DECAL, FAULT LOCATOR	1	
10	EM696	DECAL, CAUTION - TOWING DECAL	1	
11	DCL302	DECAL, WARNING BURN HAZARD	1	
12		SERIAL PLATE	1	CONTACT MQ PARTS DEPT.
13	TBD	DECAL, TIRE LOADING	1	
14	49002	DECAL, WARNING COUPLER	1	
15	TBD	DECAL, VIN IDENTIFICATION	1	

LS400/LS500 PUMP — FRAME ASSY.

FRAME ASSY.



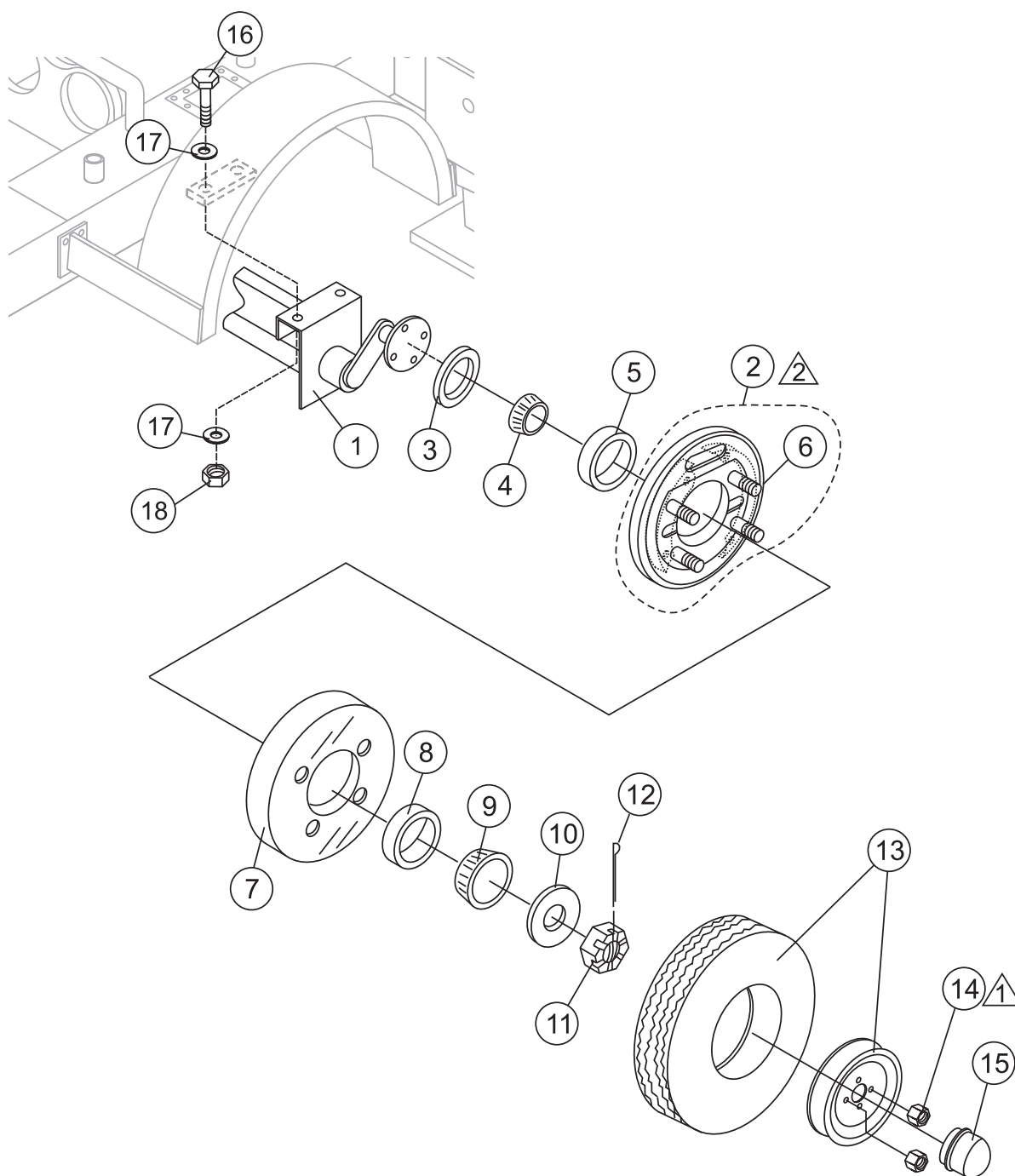
LS400/LS500 PUMP — FRAME ASSY.

FRAME ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	514355	FRAME, MAIN	1	
2	EM516581	CHAIN, TRAILER HITCH, 3/8 X 40", GRADE 40	2	
3	EM25610	JACK STAND, FRONT	1	
5	EM744	CLEVIS PIN	2	
8	EM491686	PIN	2	
10	EM491744	RIVET, POP AM-44	2	
11	509562	BOLT, 3/8" NC X 5/8" G5	2	
12	0166 A	LOCK, WASHER 3/8"	2	REPLACES 492624
13	503112	BOLT 3/8" X 2-3/4"	1	
14	3019092	WASHER 3/8"	2	REPLACES 492598
15	EM969013	NUT 3/8"	1	REPLACES 492583
16	517985	FENDOR, BOLT ON	2	
17	504456	BOLT 1/2" NC X 3/4" G5	12	
18	6109180	WASHER, LOCK 1/2 IN.	12	REPLACES 492626
19	517113	STABILIZER STAND	2	
20	492376	BOLT 3/8" NC X 1-1/4" G5	2	
21	0166 A	WASHER, LOCK 3/8"	4	REPLACES 492624
23	EM969013	NUT 3/8"	2	REPLACES 492583
24	517124	BOLT 3/4" NC X 1" G5	10	
25	EM923350	WASHER, LOCK 3/4 IN.	10	REPLACES EM492628
26	517092	SUPPORT PLATE, RIGHT	1	
27	517095	SUPPORT PLATE, LEFT	1	

LS400/LS500 PUMP — AXLE ASSY. (RIGHT/LEFT)

AXLE ASSY. (RIGHT/LEFT)



NOTES:

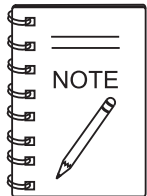
△¹ TORQUE LUG NUTS PER LUG NUT
TORQUE TABLE REFERENCED IN
THIS MANUAL.

△² RIGHT AND LEFT SIDE AXLE
ASSEMBLIES ARE IDENTICAL
WITH THE EXCEPTION OF THE
BRAKE ASSEMBLY.

LS400/LS500 PUMP — AXLE ASSY. (RIGHT/LEFT)

AXLE ASSY. (RIGHT/LEFT)

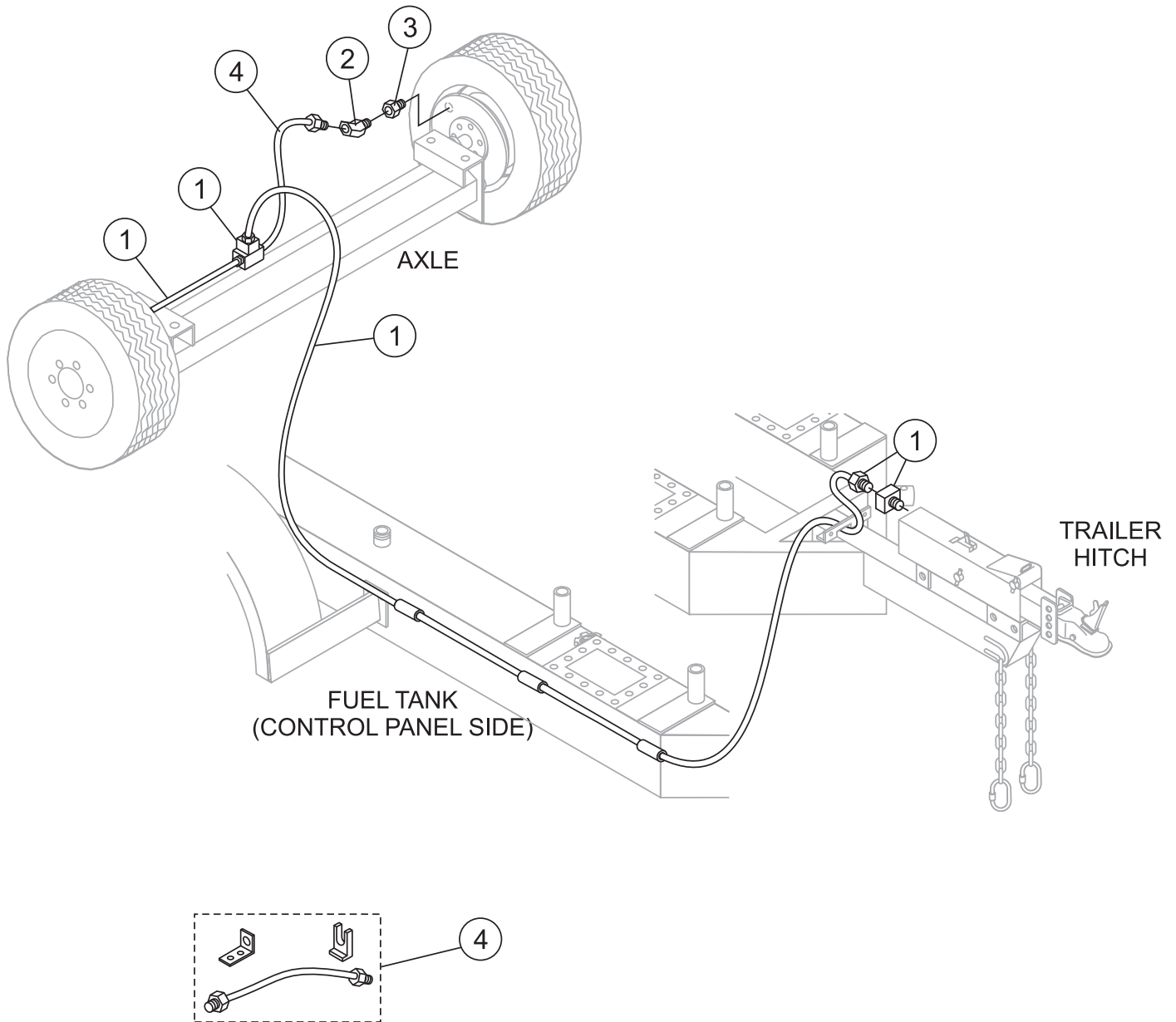
<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM98116	AXLE, TORSION BAR ASSY.	2	
2	EM092305	BRAKE ASSY COMPLETE, RIGHT	1	INCLUDES ITEMS W/#
2	EM092306	BRAKE ASSY COMPLETE, LEFT	1	INCLUDES ITEMS W/%
				SEE NOTE BELOW
3	363198	OIL SEAL	1	
4	363196	INNER BEARING CONE 2 IN.	1	
5	383911	INNER BEARING CUP 2 IN.	1	
6#%	363909	WHEEL STUD 1/2 IN. - 20 UNF PRESS IN	8	
7	363239	HUB AND DRUM ASSY.	2	
8	363916	OUTER BEARING CONE	1	
9	363420	OUTER BEARING CUP	1	
10	568326	LOAD WASHER 1 IN. T5 HP	1	
11	363257	SLOTTED NUT, 1 IN. UNF	2	
12	363258	COTTER PIN 3/16 IN. X 1-1/2	2	
13	EM514813	RIM AND TIRE	2	
14	363203	WHEEL LUG NUTS 1/2 UNF 60 CON	8	
15	363199	GREASE CAP	2	
16	EM104	BOLT, HEX HEAD 5/8 IN. NC X 2 IN. G5	4	REPLACES 503982
17	0401450160	WASHER, FLAT 5/8 IN.	8	REPLACES 492602
18	EM969023	NUT, LOCK 5/8 IN.	4	REPLACES 492586



RIGHT AND LEFT SIDE AXLE ASSEMBLIES ARE IDENTICAL WITH THE EXCEPTION OF THE BRAKE ASSEMBLY.

LS400/LS500 PUMP — BRAKE LINE ASSY.

BRAKE LINE ASSY.



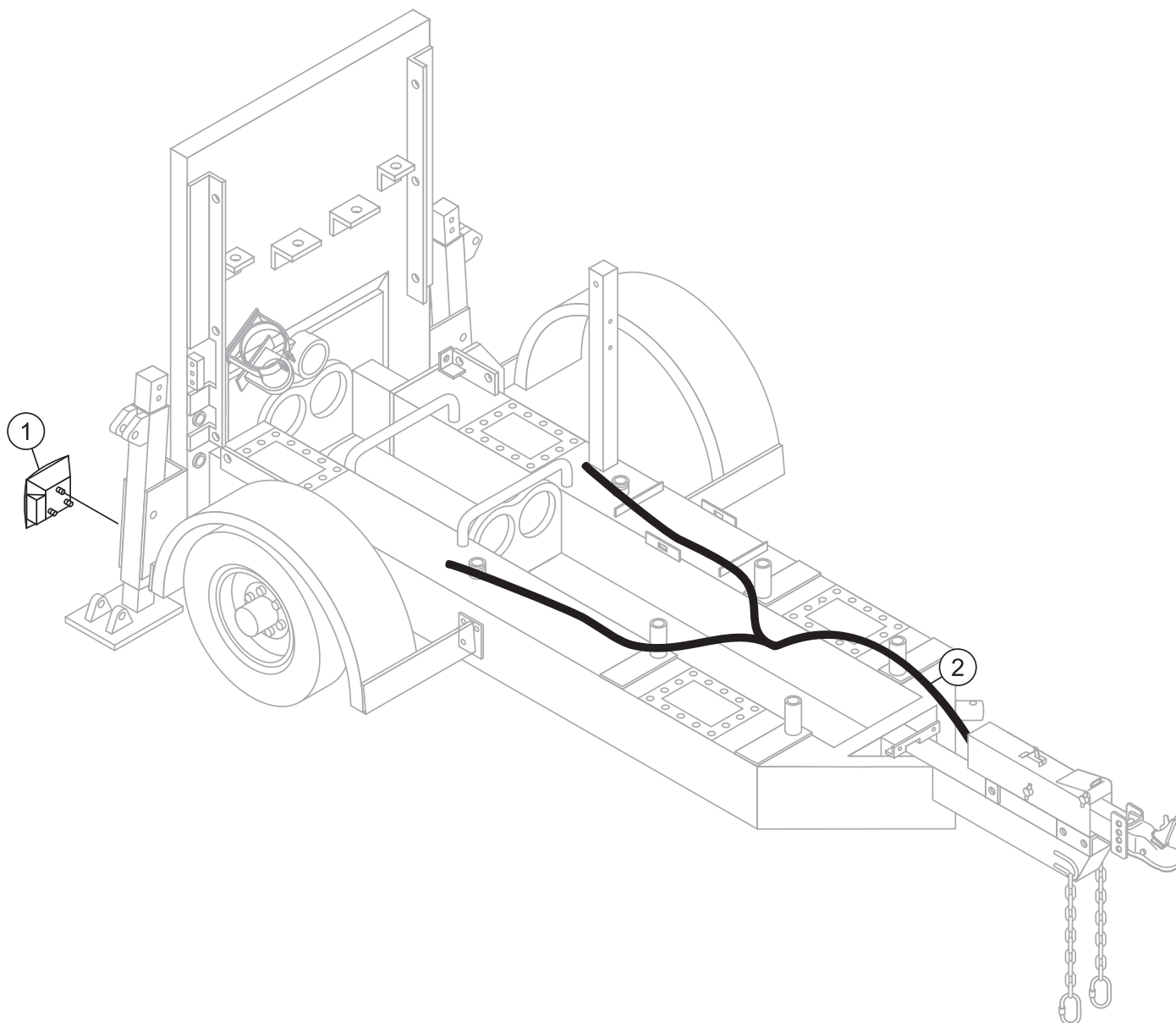
LS400/LS500 PUMP — BRAKE LINE ASSY.

BRAKE LINE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	34566	KIT, MAIN BRAKE LINE	1	
2	EM512877	ADAPTOR, STRAIGHT	2	
3	EM512876	ADAPTOR, ELBOW	2	
4	34565	KIT, WHEEL BRAKE LINE	1	

LS400/LS500 PUMP — BRAKE LIGHT ASSY.

BRAKE LIGHT ASSY.



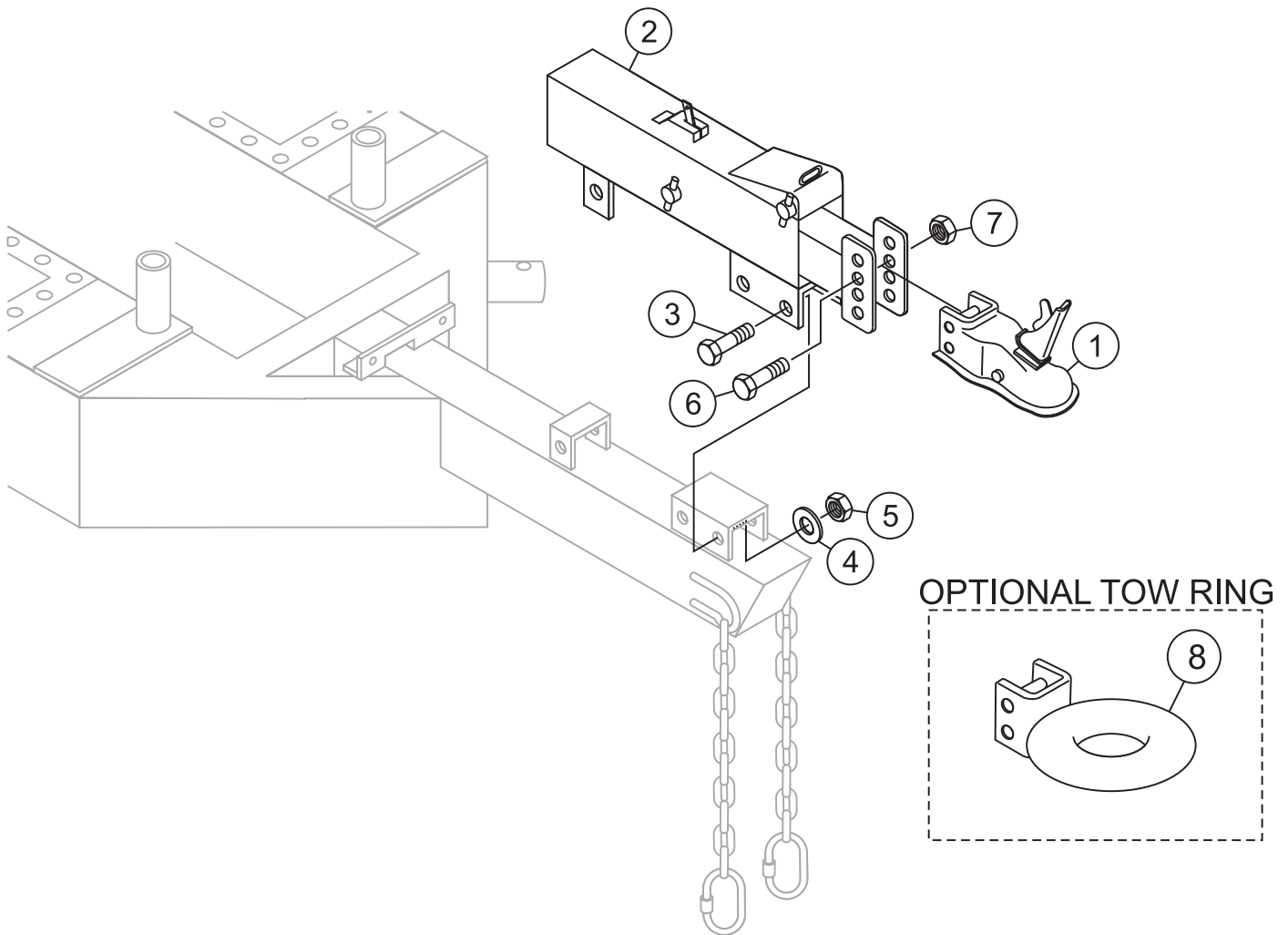
LS400/LS500 PUMP — BRAKE LIGHT ASSY.

BRAKE LIGHT ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	29242	BRAKE LIGHT ASSY.	2	
2	29207	HARNESS ASSY. W/RECEPTACLES	1	

LS400/LS500 PUMP — TRAILER HITCH ASSY.

TRAILER HITCH ASSY.

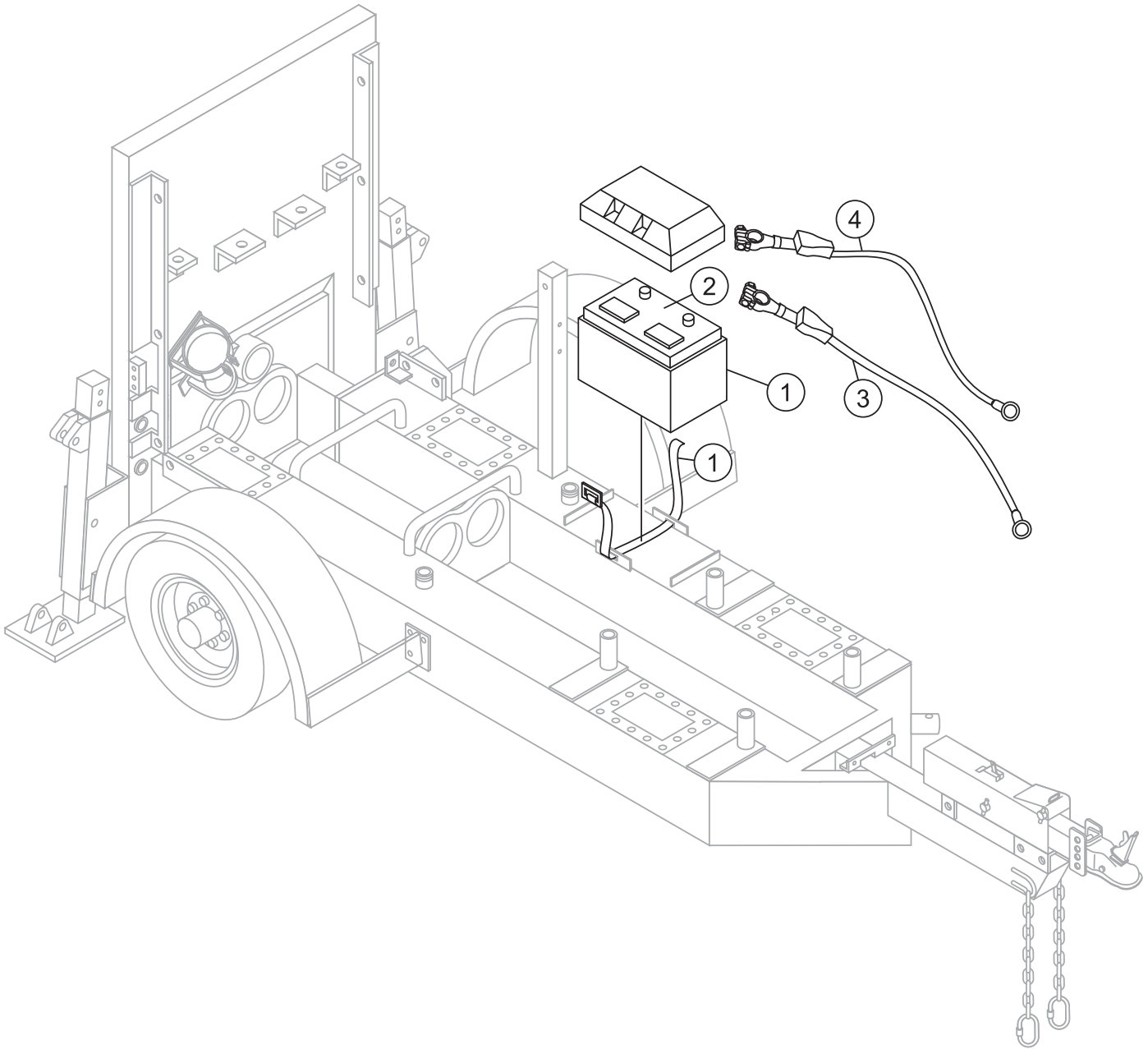


LS400/LS500 PUMP — TRAILER HITCH ASSY.

TRAILER HITCH ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM29228	COUPLING, TRAILER 2 IN.BALL, 6000 LBS	1	
2	EM19067	ACTUATOR, BRAKE	1	
3	EM503111	BOLT, HEX HEAD 1/2 NC X 4-1/2 IN.	3	
4	EM492600	WASHER, FLAT 1/2 IN.	3	
5	EM492584	NUT, LOCK 1/2 IN.	3	
6	EM507658	BOLT, HEX HEAD 5/8 NC X 4-1/2 IN. G5	2	
7	EM492586	NUT, LOCK 5/8 IN.	2	
8	16137	TOW RING, 3 IN. LUNETTE EYE	1	

LS400/LS500 PUMP — BATTERY ASSY.



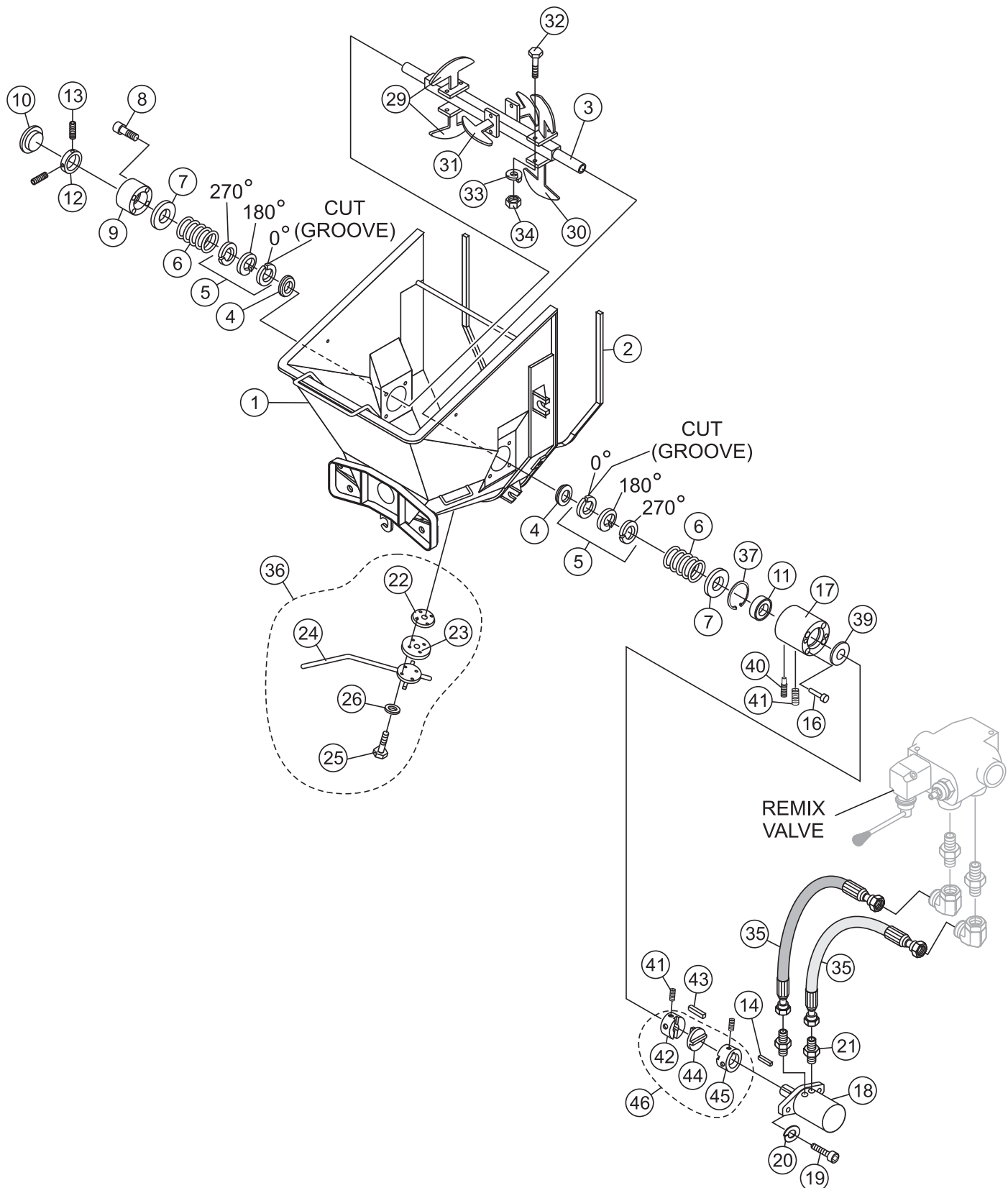
LS400/LS500 PUMP — BATTERY ASSY.

BATTERY ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM34506	BATTERY BOX W/ BELT	1	
2	EM16738	BATTERY 12V 125A	1	
3	514856	BATTERY CABLE POSITIVE	1	
4	513577	BATTERY CABLE NEGATIVE	1	

LS400/LS500 PUMP — HOPPER ASSY.

HOPPER ASSY.



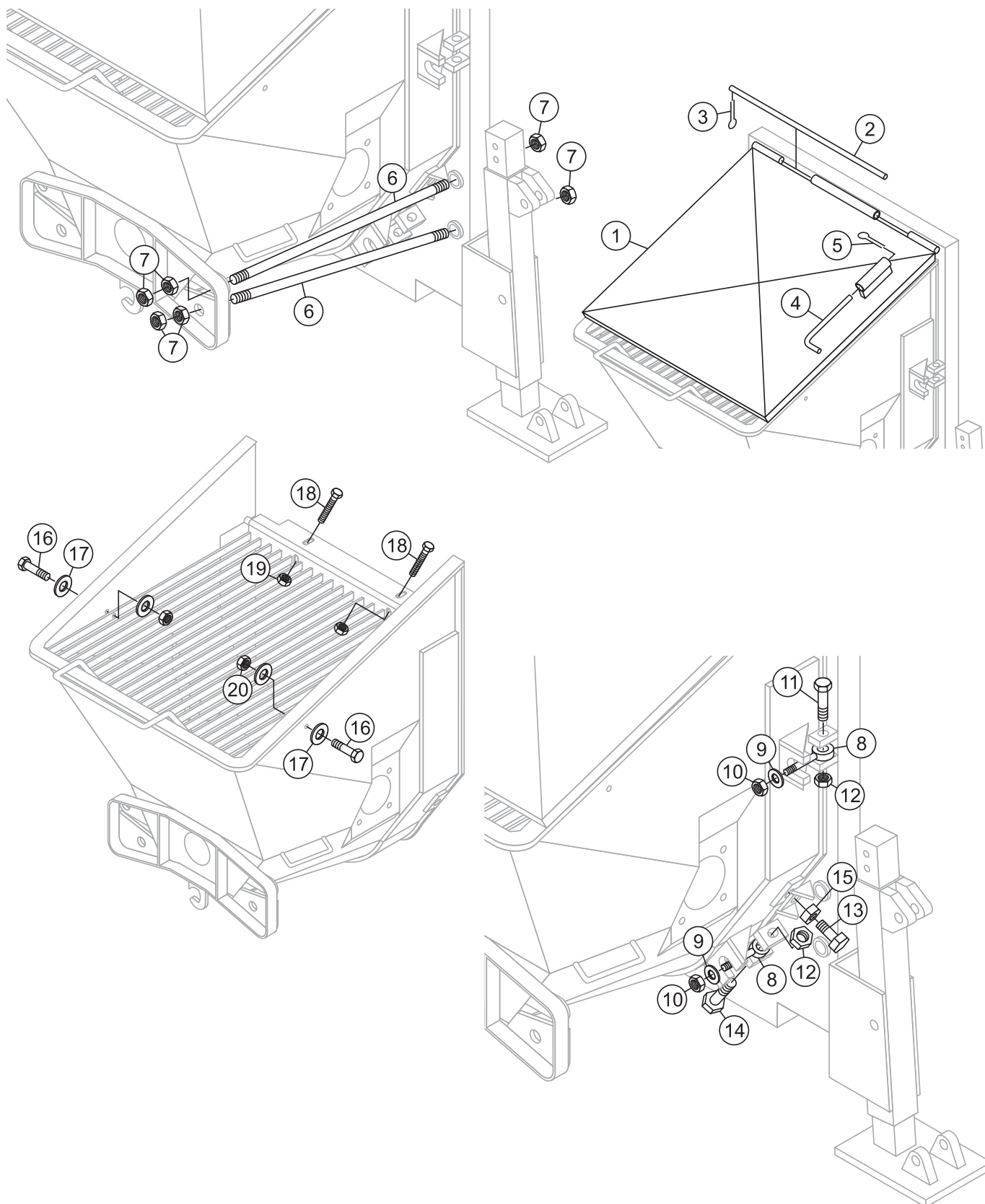
LS400/LS500 PUMP — HOPPER ASSY.

HOPPER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM515980	HOPPER ASSY	1	
2	EM16184	HOPPER SEAL	1	
3	EM516779	REMIXER SHAFT	1	
4	EM200303	FOLLOWER RING	2	
5	EM200301	GRAPHITE SEAL	6	
6	EM516820	COMPRESSION SPRING	2	
7	EM514339	HOPPER SPRING SEAT	2	
8	510717	BOLT 1/2 X 1-3/4 IN.	4	
9	EM514338	SUPPORT, LEFT	1	
10	EM514706	END CAP, SHAFT SUPPORT	1	
11	EM902153	BEARING	2	
12	EM200018	SET COLLAR	1	
13	EM703	SET SCREW	2	REPLACES 492470
14	500264	KEY 3/8 IN.	1	
16	EM511428	BOLT 1/2 X 3-1/2 IN.	4	
17	EM516780	HOUSING	1	
18	EM98108	MOTOR, REMIX	1	
19	505989	BOLT 1/2 X 1-1/4 IN.	2	
20	6109180	WASHER, LOCK 1/2 IN.	2	REPLACES 492626
21	EM25508	ADAPTER, FITTING	2	
22	EM70860-1	PISTON CUP HOLDER	1	
23	EM50417	PISTON CUP	1	
24	EM508830	HANDLE	1	
25	492378	BOLT 3/8 X 1-3/4 IN.	4	
26	0166 A	WASHER, LOCK 3/8 IN.	4	REPLACES 492624
29	EM514031	PADDLE ARM, END	2	
30	EM514032	PADDLE ARM, MOTOR END	2	
31	EM514033	PADDLE ARM, CENTER	2	
32	513454	BOLT 1/2 X 3-1/4 IN.	6	
33	6109180	WASHER, LOCK 1/2 IN.	6	REPLACES 492626
34	492589	HEX NUT 1/2 IN.	6	REPLACES 507661
35	EM25483	HOSE	2	
36	EM70860	HANDLE ASSY.	1	
37	EM515460	RETAINING RING	1	
39	516799	SPACER 6MM	1	
40	EM702	DOG POINT SET SCREW 3/8"	1	
41	EM703	SET SCREW 3/8"	3	
42%	516787	REMIX SHAFT COUPLER	1	
43	EM500264	SQUARE KEY 3/8"	1	
44%	516776	DRIVE MEMBER COUPLER	1	
45%	516775	MOTOR SHAFT COUPLER	1	
46	EM516786	COUPLER ASSY	1	INCLUDES ITEMS W/%

LS400/LS500 PUMP — HOPPER ATTACHMENT ASSY.

HOPPER ATTACHMENT ASSY.



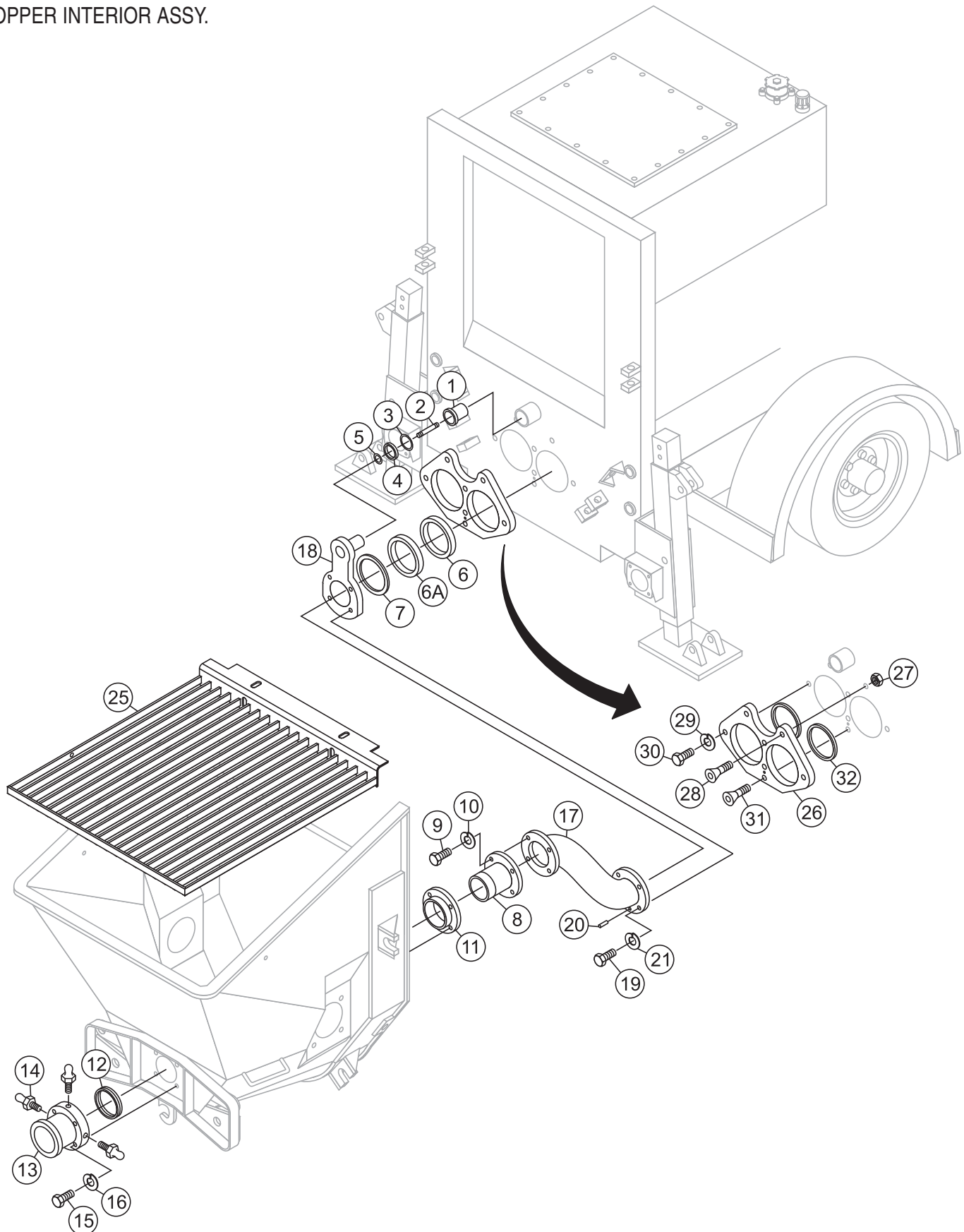
LS400/LS500 PUMP — HOPPER ATTACHMENT ASSY.

HOPPER ATTACHMENT ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM514204	SPLASH PLATE	1	
2	EM514620	HINGE PIN	1	
3	EM491686	COTTER PIN 1/8 X 1-1/2 IN.	1	
4	EM70134-2	PIN, SPLASH PLATE	1	
5	EM505723	COTTER PIN 5/32 X 1-1/2 IN.	1	
6	EM16166	TIE ROD	4	
7	505728	NUT, HEX 1 IN. NC	12	
8	EM14165	EYE BOLT 3/4 IN.	4	
9	EM619	O-RING 3/4 IN.	4	
10	EM968446	NUT, HEX 3/4 IN.	4	
11	505121	BOLT 3/4 IN. X 3 IN.	4	
12	EM968446	HEX NUT 3/4 IN.	4	
13	505123	HEX BOLT 1/2 X 2-1/2 IN.	2	
14	492491	HEX BOLT 1/2 X 1-1/2 IN.	1	
15	6109160	HEX NUT 1/2 IN.	3	 REPLACES 492556
16	492379	SCREW CAP 3/8"	2	
17	3019092	WASHER FLAT 3/8"	4	
18	515395	BOLT 7/16 NC X 4" G5	2	
19	492584	NUT LOCK 1/2"	2	
20	EM969013	NUT NYLOC	2	

LS400/LS500 PUMP — HOPPER INTERIOR ASSY.

HOPPER INTERIOR ASSY.



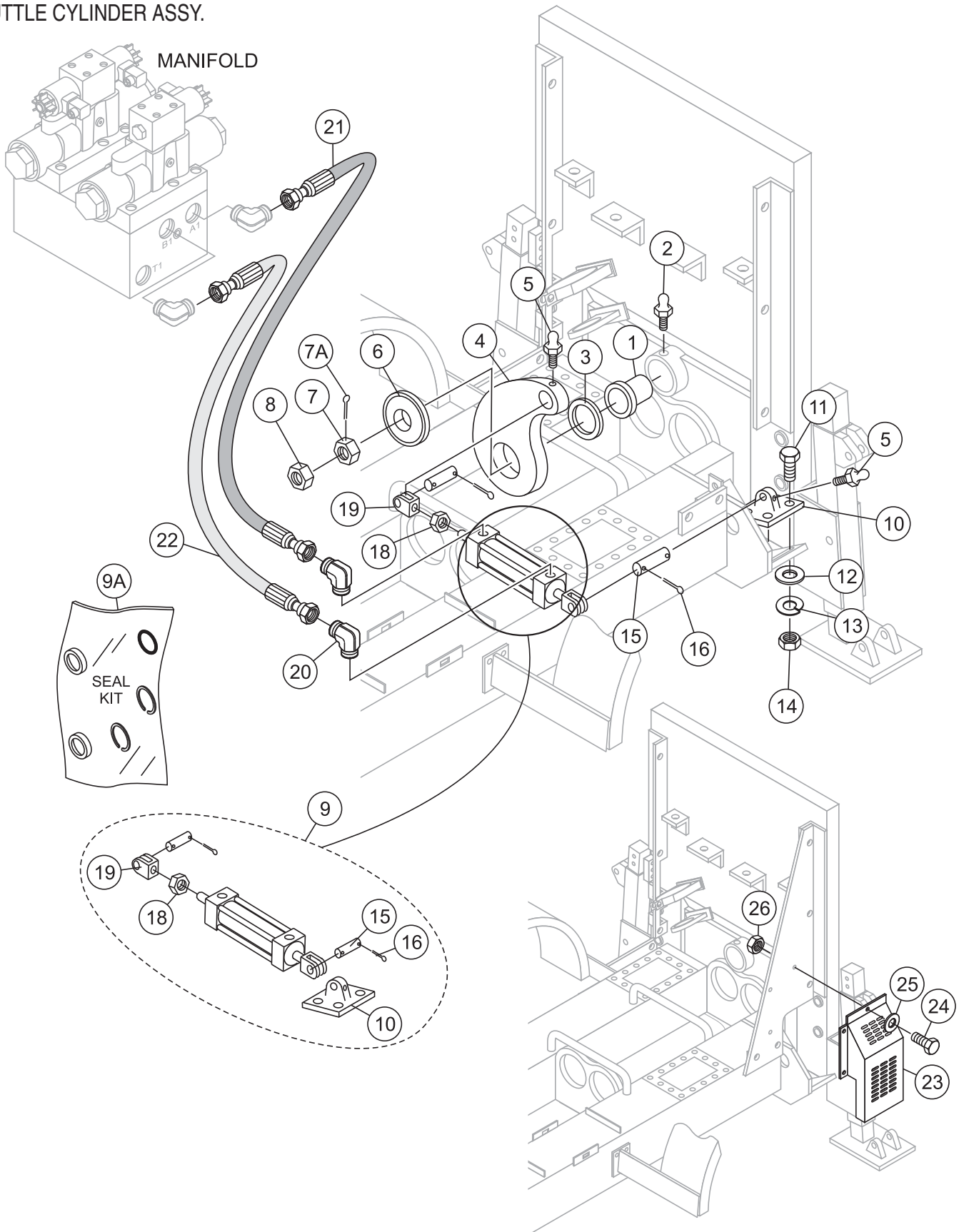
LS400/LS500 PUMP — HOPPER INTERIOR ASSY.

HOPPER INTERIOR ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM16145A	SWING AXLE BUSHING	2	
2	EM284	STUD 1 IN. - 14 UNF	1	
3	EM16175	O-RING	1	
4	EM16170	RING SEAL, SHUTTLE AXLE	1	
5	EM16176	O-RING	1	
6	EM98022	WEAR RING HF	1	
6A	EM16816-1A	RING, ENERGIZER RUBBER	1	
7	EM16816-2	RING, INSERT STEEL	1	
8	EM16804	SLEEVE 5 IN.	1	JUNE 2008 AND BELOW
8	EM16804A	SLEEVE 5 IN.	1	JULY 2008 AND ABOVE
9	EM104	BOLT 5/8 X 2 IN.	4	REPLACES 503982
10	EM923348	WASHER, LOCK 5/8 IN.	4	
11	EM25803	DISCHARGE PLATE BEARING	1	
12	EM98065	SEAL, RUBBER	1	
13	EM512212	DISCHARGE NIPPLE	1	
14	491701	GREASE FITTING	3	
15	EM210	BOLT 5/8 X 2 IN.	6	
17	EM16811	SHUTTLE CYLINDER	1	
18	EM25843	NUN PLATE	1	
19	EM104	BOLT, HEX HEAD 5/8 X 2 IN.	4	REPLACES 503982
20	491719	PIN	1	
21	EM923348	WASHER, LOCK 5/8 IN.	4	
25	EM514357	HOPPER SCREEN	1	
26	EM98021	PLATE, WEAR HF	1	
27	EM969023	NUT, HEX 5/8 IN. NC INS.	2	REPLACES 492586
28	EM265	BOLT, COUNTER SUNK 5/8-11 x 3 IN.	2	
29	EM923350	WASHER, LOCK 3/4 IN.	2	REPLACES EM492628
30	EM151	BOLT, HEX HEAD 3/4-10 X 2 IN.	2	
31	EM264	BOLT, COUNTER SUNK 1/2-13 x 3 IN.	2	
32	EM517700	O-RING	2	

LS400/LS500 PUMP — SHUTTLE CYLINDER ASSY.

SHUTTLE CYLINDER ASSY.



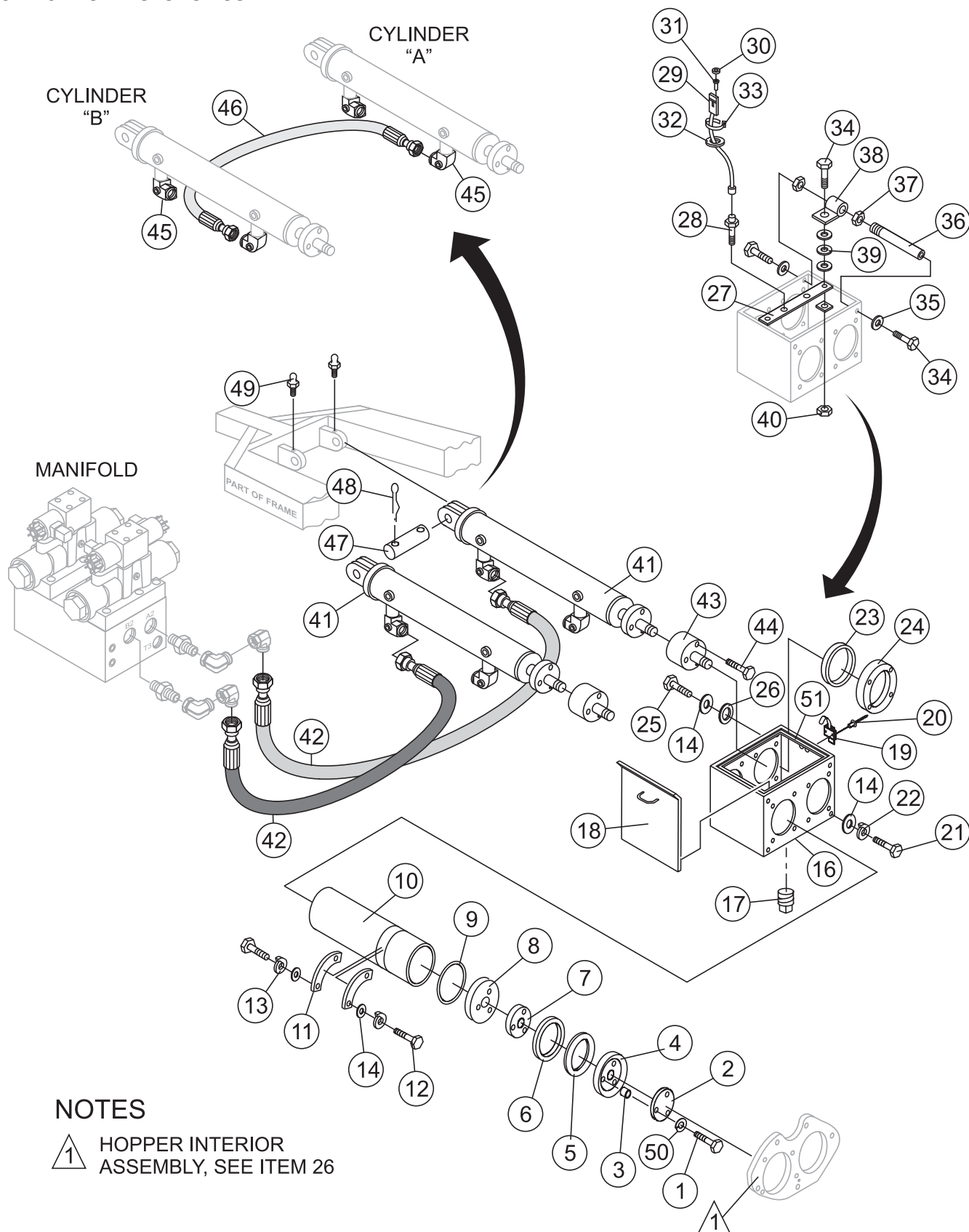
LS400/LS500 PUMP — SHUTTLE CYLINDER ASSY.

SHUTTLE CYLINDER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM16145	SWING AXLE BUSHING	2	
2	EM510684	GREASE FITTING	1	
3	EM16169	THRUST WASHER	1	
4	EM25236	SHUTTLE CRANK, SPLINED SHAFT	1	
5	EM505490	GREASE FITTING	2	
6	EM16814	TENSIONER	1	
7	EM424	HEX NUT 1 IN. 14NF	1	
7A	EM924006	COTTER PIN 5/32 X 2 IN.	1	
8	EM417	NUT 1 IN. 14NF	1	
9	EM98106	SHUTTLE CYLINDER ASSY.	1	INCLUDES ITEMS W/*
9A	EM98106SK	SEAL KIT, SHUTTLE CYLINDER	1	
10*	EM254549	BRACKET, PIVOT	1	
11	492397	BOLT 1/2 X 2-1/2 IN.	4	
12	EM621	WASHER 1/2 IN.	4	
13	6109180	WASHER, LOCK 1/2 IN.	4	REPLACES 492626
14	492584	NUT 1/2 IN.	4	
15*	0820270000	CLEVIS PIN 3/4 IN.	2	
16*	0820270000	COTTER PIN	2	
18*	515249	JAM NUT	1	
19*	0509440000	FEMALE CLEVIS	2	
20	3322	FITTING, ELBOW	2	
21	EM514590	HOSE	1	
22	EM514591	HOSE	1	
23	517742	COVER, SHUTTLE CYLINDER	1	
24	0202	BOLT	3	REPLACES 492364
25	EM923023	WASHER, FLAT	3	REPLACES 492597
26	2105164	NUT, HEX	3	REPLACES 492582

LS400/LS500 PUMP — LUBRICATION PISTONS ASSY.

LUBRICATION PISTONS ASSY.



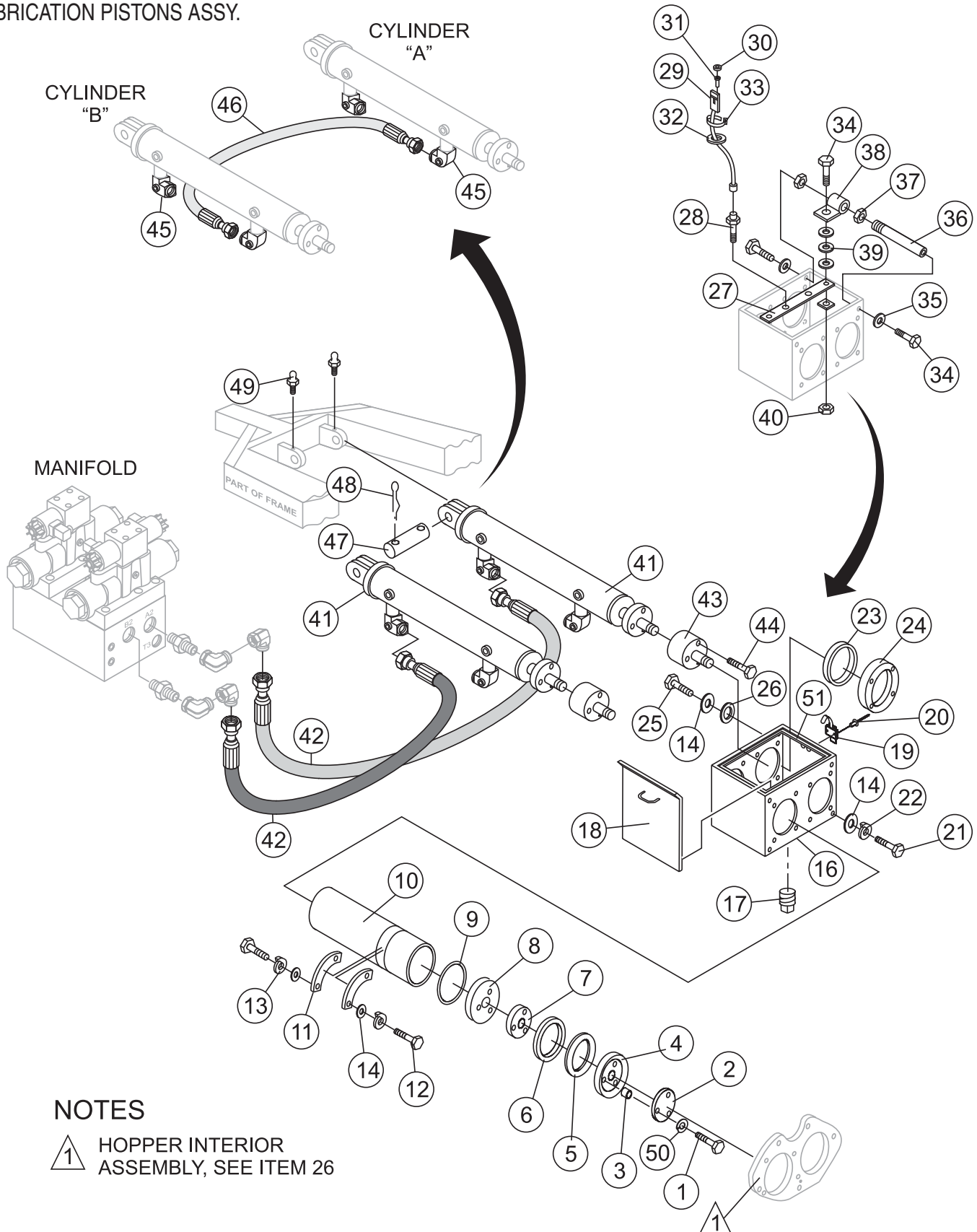
LS400/LS500 PUMP — LUBRICATION PISTONS ASSY.

LUBRICATION PISTONS ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM510265	BOLT, HEX HEAD 3/8 NC X 3-1/2 IN., BLACK OXIDE G8	6	
2	EM16464	FACE PLATE	2	
3	EM16465	PISTON CUP SPACER	6	
4	EM98050	CUP, PISTON- ORANGE	2	
5	EM14408	RING, BRONZE	2	
6	EM16493	RING, FELT	2	
7	EM16462	FELT HOLDER	2	
8	EM16461	OILER PLATE	2	
9	EM14407	O- RING, OILER PLATE	2	
10	EM25801	CYLINDER, CONCRETE	2	
11	EM25110	RETAINER, CYLINDER	4	
12	EM963610	BOLT, 3/8 NC X 1.3/4 IN. G5	8	REPLACES 492375
13	0166 A	WASHER LOCK 3/8 IN.	8	REPLACES 492624
14	3019092	WASHER, FLAT 3/8 IN.	22	REPLACES 492598
16	EM514197	LUBRICATION BOX	1	
17	EM507895	PLUG	1	
18	EM515796	COVER, LUBRICATION BOX	1	
19	EM514610	LATCH, COVER	1	
20	491754	RIVET, AM-66	2	
21	492378	BOLT, 3/8 NC X 1.3/4 IN. G5	6	
22	0166 A	WASHER, LOCK 3/8"	6	REPLACES 492624
23	EM274351	SEAL LUBE BOX	2	
24	EM50425	FLANGE, RING	2	
25	492451	BOLT 3/8 - 24 X 1 IN. HEX HEAD	8	
26	EM50443	SEAL, OIL BOX	8	
27	514208	BAR, PROXIMITY SWITCH SUPPORT	1	
28	EM98163	SWITCH, PROXIMITY W/CABLE	2	
29	EM98135	CABLE HOUSING, FEMALE	2	
30	EM98134	SEAL, CONNECTOR HOUSING	6	
31	EM98138	TERMINAL PIN, FEMALE	6	
32	514611	GROMMET	2	
33	504505	WRAP TIE	8	

LS400/LS500 PUMP — LUBRICATION PISTONS ASSY.

LUBRICATION PISTONS ASSY.



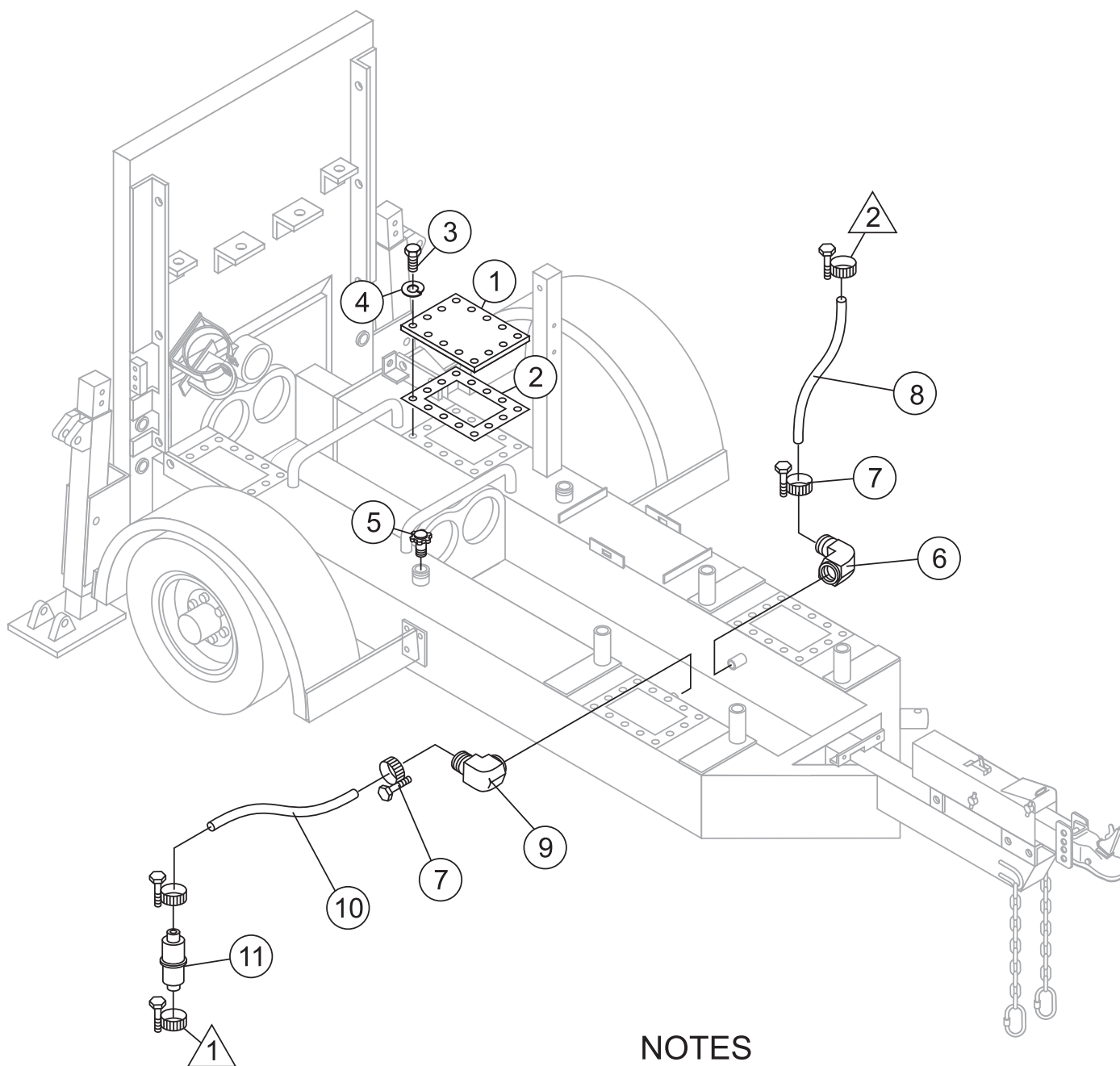
LS400/LS500 PUMP — LUBRICATION PISTONS ASSY.

LUBRICATION PISTONS ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
34	492366	BOLT, HEX HEAD 5/16 NC X 1 IN. G5	6	
35	EM492623	WASHER, LOCK 5/16 IN.	4	
36	EM514216	ADJUSTMENT ROD, PROXIMITY SWITCH	2	
37	EM492556	NUT, HEX 1/2 IN.	4	
38	EM514207	BRACKET, ADJUSTMENT ROD	2	
39	EM492597	WASHER, FLAT 5/16 IN.	6	
40	EM492582	NUT, HEX HEAD 5/16 IN	2	
41	EM98211	CYLINDER, MAIN	2	
42	EM514920	HOSE, MAIN HYD. CYLINDER	2	
43	EM514202	EXTENSION, SPACER	2	
44	EM185	BOLT, SOCKET HEAD 3/8 NC X 3 IN., BLACK OXIDE G8	6	
45	EM25497	FITTING, 90°	4	
46	EM25474	HOSE, HYDRAULIC SLAVE	1	
47	EM16459	PIN, WRIST	2	
48	EM505723	PIN, COTTER	4	
49	EM491701	FITTING, GREASE	2	
50	EM517126	LOCK WASHER	6	
51	EM513352	SEAL, SQUARE	1	

LS400/LS500 PUMP — FUEL TANK ASSY.

FUEL TANK ASSY.



NOTES

1 CONNECT TO FILTER INLET HOSE
WATER SEPARATOR ASSY., NOTE 1

2 CONNECT TO FILTER OUTLET HOSE
WATER SEPARATOR ASSY., NOTE 2

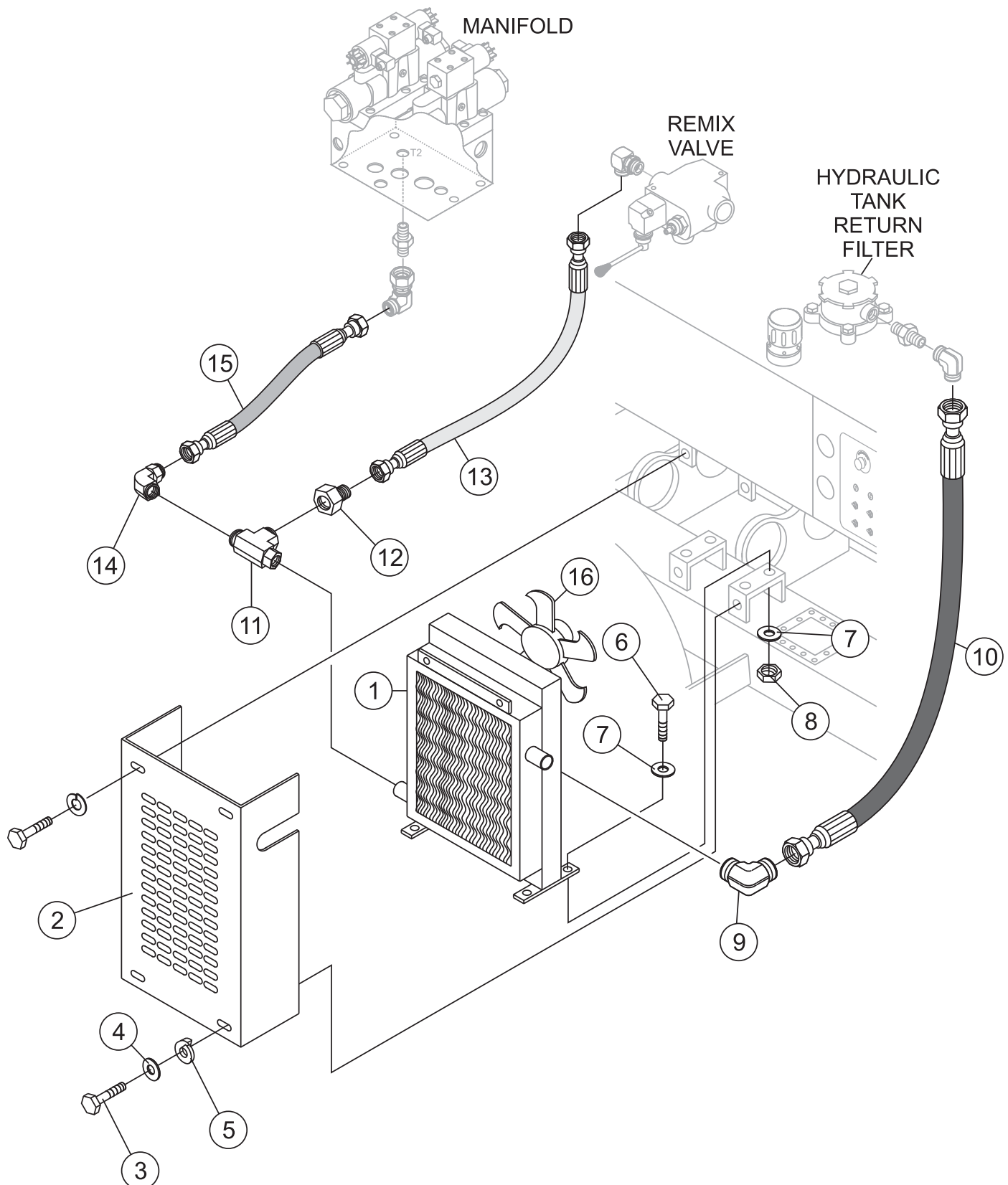
LS400/LS500 PUMP — FUEL TANK ASSY.

FUEL TANK ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM514084	COVER, DIESEL TANK	4	
2	514080	GASKET	4	
3	492362	BOLT 5/16 X 5/8 IN.	56	
4	EM923343	WASHER, LOCK 5/16 IN.	56	 REPLACES 492623
5	34507	CAP, FUEL W\GAUGE	1	
6	EM514559	ADAPTOR	1	
7	506208	CLAMP	5	
8	EM514536	HOSE, FUEL RETURN 5/16 IN.	A/R	
9	EM20426	ADAPTER	1	
10	EM514536	HOSE, FUEL FILTER 5/16 IN.	A/R	
11	EM20763	FILTER, FUEL	2	

LS400/LS500 PUMP — HEAT EXCHANGER ASSY.

HEAT EXCHANGER ASSY.



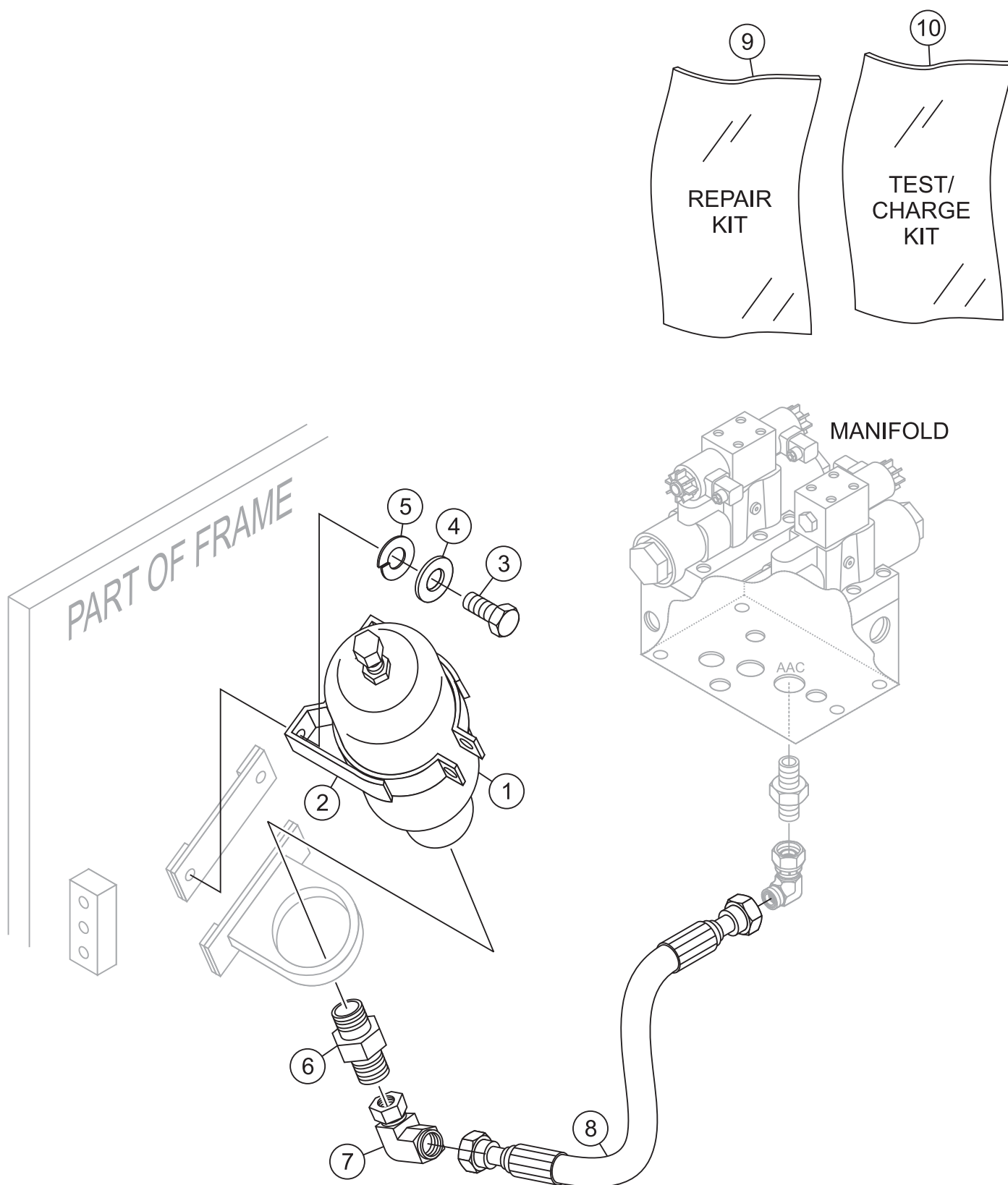
LS400/LS500 PUMP — HEAT EXCHANGER ASSY.

HEAT EXCHANGER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM98118	HEAT EXCHANGER	1	
2	EM514175	COVER, HEAT EXCHANGER	1	
3	EM963610	BOLT 3/8 IN. X 1 IN.	4	REPLACES 492375
4	3019092	O-RING 3/8 IN.	4	REPLACES 492598
5	0166 A	WASHER, LOCK 3/8 IN.	4	REPLACES 492624
6	0202	BOLT 5/16 X 1 IN.	4	REPLACES 492364
7	EM923023	WASHER, FLAT 5/16 IN.	8	REPLACES 492597
8	2105164	NUT 5/16 IN.	4	REPLACES 492582
9	EM25497	ADAPTER	1	
10	EM514607	HOSE 4000 PSI	1	
11	EM25566	ADAPTER	1	
12	EM509345	ADAPTER	1	
13	EM514606	HOSE 2000 PSI	1	
14	EM509401	ADAPTER	1	
15	EM514604	HOSE, 2000 PSI	1	
16	EM98264	MOTOR AND FAN ASSY	1	

LS400/LS500 PUMP — ACCUMULATOR ASSY.

ACCUMULATOR ASSY.



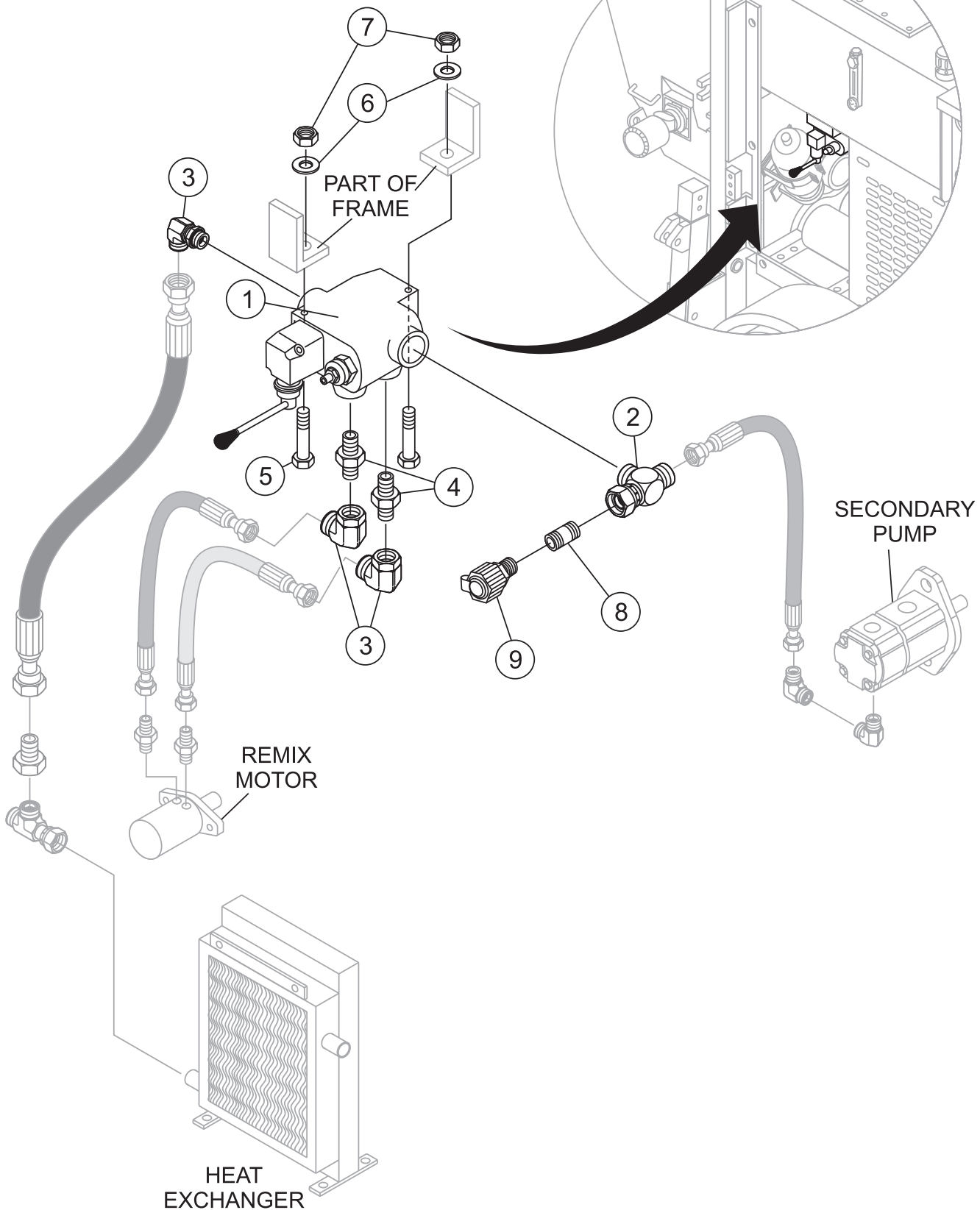
LS400/LS500 PUMP — ACCUMULATOR ASSY.

ACCUMULATOR ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM97015	ACCUMULATOR 1 GAL.	1	
2	EM97016	BRACKET, ACCUMULATOR	1	
3	EM9603055	BOLT, HHCS 3/8 IN. DIA.	2	
4	3019092	WASHER, FLAT 3/8 IN.	2	
5	0166A	WASHER, LOCK 3/8 IN. DIA.	2	
6	EM509425	FITTING, STRAIGHT	1	
7	EM509353	FITTING, 90° ELBOW	1	
8	EM514603	HOSE, ACCUMULATOR	1	
9	EM98009	ACCUMULATOR REPAIR KIT	1	
10	EM98052	ACCUMULATOR TEST/CHARGE KIT	1	

LS400/LS500 PUMP — REMIXER CONTROL ASSY.

REMIKX CONTROL ASSY.



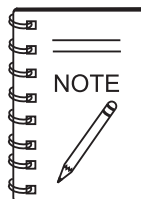
LS400/LS500 PUMP — REMIXER CONTROL ASSY.

REMUXER CONTROL ASSY.

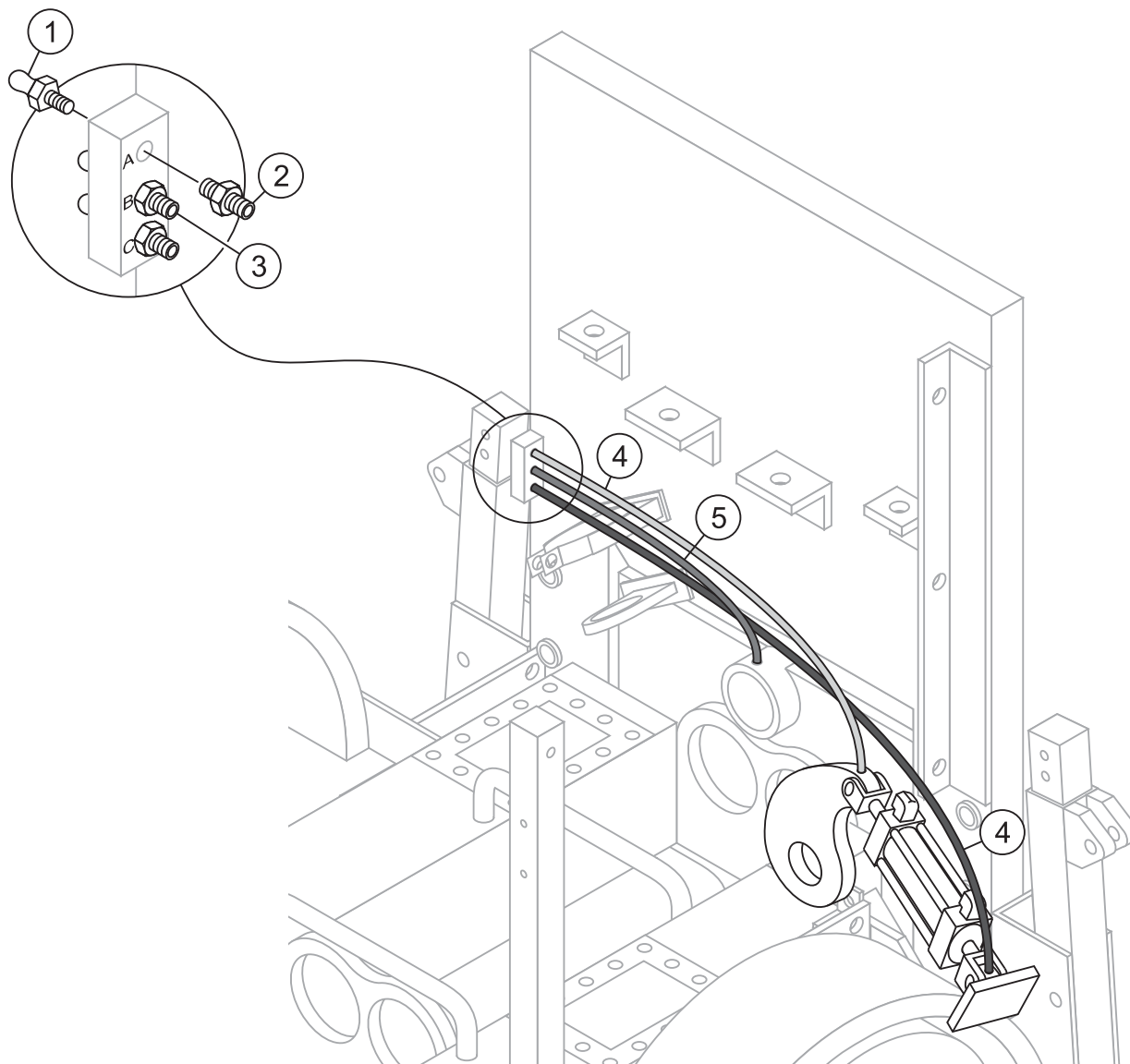
<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM25495	VALVE REMIXER W/ LEVER	1	
2	515384	ADAPTER FITTING, T	1	
3	506195	ADAPTER FITTING, 90° ELBOW	1	
4	EM25509	ADAPTER FITTING, STRAIGHT	2	
5	EM218	BOLT 5/16 X 2-1/2 IN.	2	
6	EM923343	WASHER, LOCK 5/16 IN.	2	REPLACES 492623
7	2105164	NUT, HEX 5/16 IN.	2	REPLACES 492553
8	EM98015	COUPLING	1	
9	EM98014	TEST PORT	1	

LS400/LS500 PUMP — LUBRICATION PANEL

GREASE POINTS



Grease daily, two or three times of #2 multipurpose automotive grease. Over greasing any bearing will not damage the machine. **ALWAYS** grease **before and after** pump operation.



<u>POSITION</u>	<u>LOCATION</u>	<u>LENGTH OF LINES</u>
A	CLEVIS GREASE POINT	34 in. (1.1 m)
B	SWING AXLE BUSHING GREASE POINT	26 in. (.85 m)
C	PIVOT BRACKET GREASE POINT	41 in. (1.5 m)

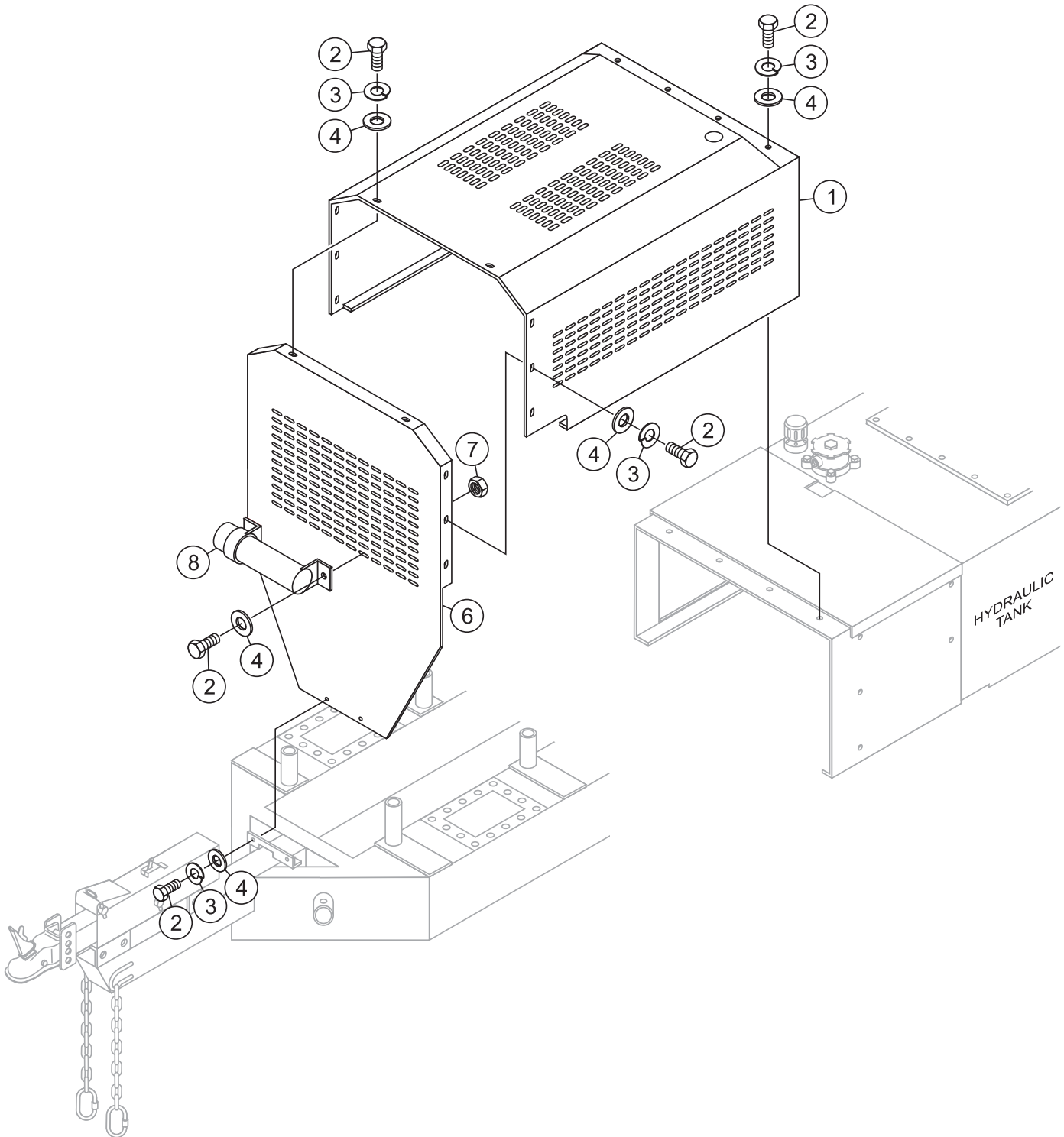
LS400/LS500 PUMP — LUBRICATION PANEL

LUBRICATION PANEL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM491701	GREASE FITTING	3	
2	EM508812	CONNECTOR	2	
3	EM510684	CONNECTOR	3	
4	EM505516	HOSE, PLASTIC	A/R	
5	EM510487	HOSE, STEEL	1	

LS400/LS500 PUMP — ENGINE COVER ASSY.

ENGINE COVER ASSY.



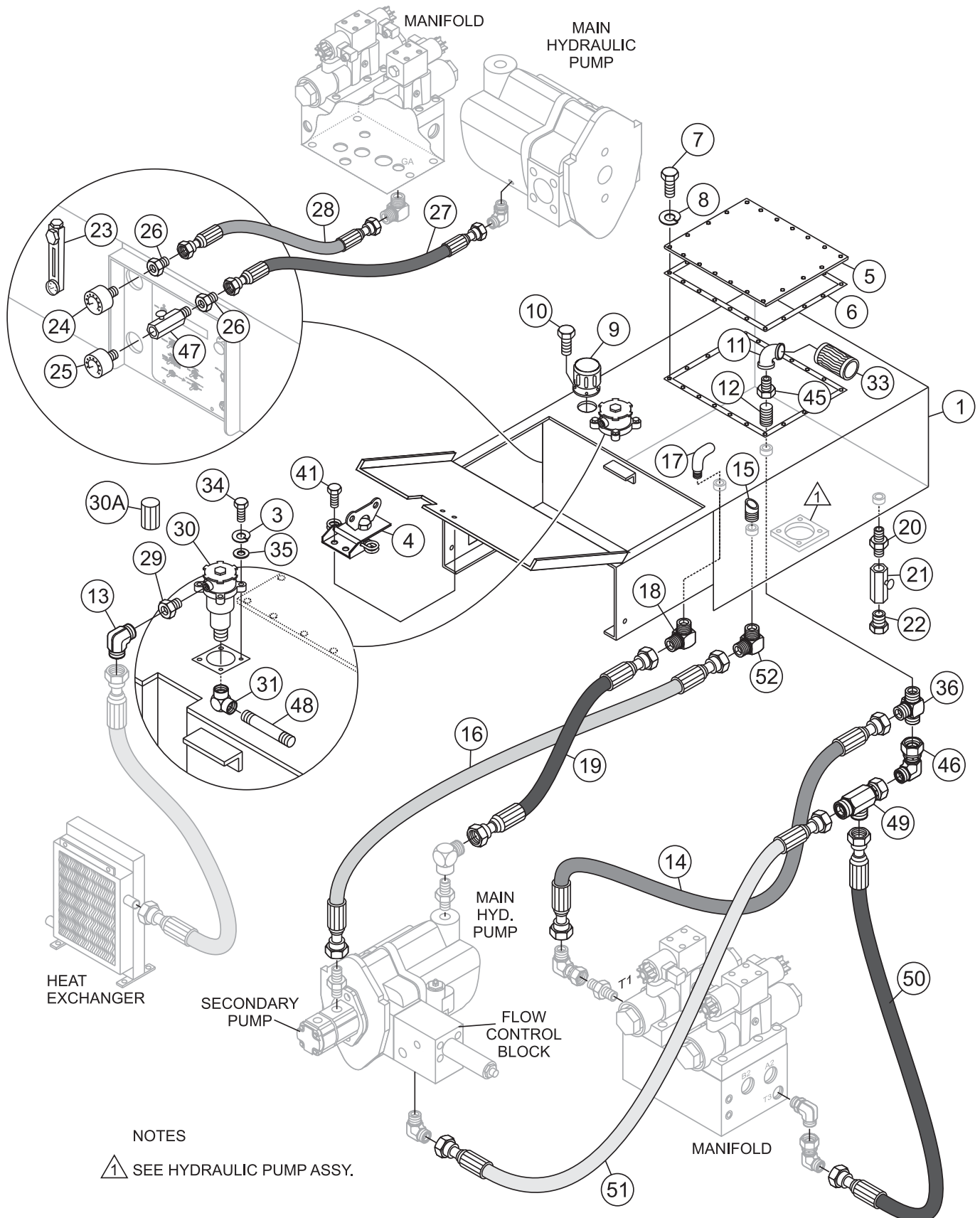
LS400/LS500 PUMP — ENGINE COVER ASSY.

ENGINE COVER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM517737	COVER, TOP	1	
2	492356	BOLT 1/4" NC X 3/4" G5	16	
3	EM923057	LOCK WASHER 1/4 IN.	14	REPLACES 492596
4	2101402	WASHER 1/4 IN.	16	REPLACES 492622
6	EM517730	COVER, FRONT ENGINE	1	
7	492541	NUT 5/16" NC G2	2	
8	TK6737260	DOCUMENT CYLINDER	1	

LS400/LS500 PUMP — HYDRAULIC TANK ASSY.

HYDRAULIC TANK ASSY.



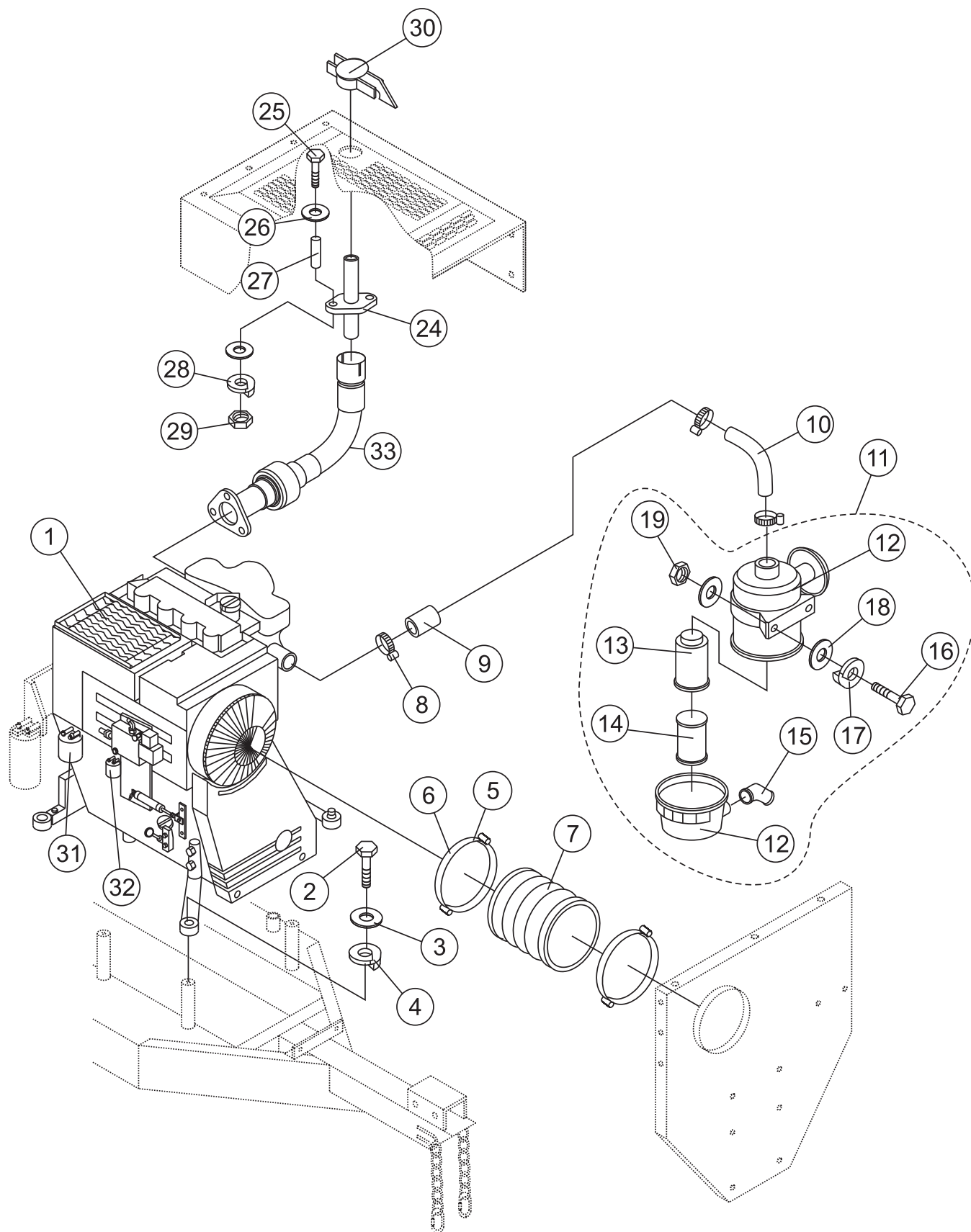
LS400/LS500 PUMP — HYDRAULIC TANK ASSY.

HYDRAULIC TANK ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	514040	HYDRAULIC TANK, LS-S	1	
3	0166 A	LOCK, WASHER 3/8 IN.	4	REPLACES 492624
4	EM517295	HANDLE	1	
5	EM251191	TANK COVER PLATE	1	
6	EM25184	RESERVOIR GASKET	1	
7	492362	BOLT 5/16 X 5/8 IN.	20	
8	EM923343	WASHER, LOCK 5/16 IN.	20	REPLACES 492623
9	EM98263	CAP ASSEMBLY	1	
10	492267	BOLT 3/16 X 5/8 IN.	6	
11	16433	TUBE	1	
12	EM491189	FITTING	1	
13	EM18436	90° MALE ADAPTER 2103-16-16	1	
14	EM514605	HOSE	1	
15	EM514622	FITTING 1 IN.	1	
16	EM514597	HOSE	1	
17	EM491164	ELBOW, 3/4 IN.	1	
18	509784	ADAPTER	1	
19	517002	HOSE	1	
20	EM509369	STRAIGHT MALE ADAPTOR , 0101-08-08	1	
21	491237	VALVE 1/2 IN.	1	
22	506094	CAP 1/2 IN.	1	
23	EM98188	GAUGE, LEVEL & TEMP.	1	REPLACES EM16478
24	EM97066	GAUGE 3000PSI, ACCUMULATOR	1	
25	EM97067	GAUGE 5000 PSI, MAIN	1	
26	EM25523	ADAPTER	2	
27	EM509517	HOSE, 4000 PSI MAIN GAUGE	1	
28	EM514602	HOSE, 4000 PSI ACCUMULATOR GAUGE	1	
29	EM16517	STRAIGHT MALE ADAPTER 0102-24-16	1	
30	EM98112A	RETURN FILTER ASSY.	1	S/N 281101 AND BELOW
30A	EM98275	ELEMENT, RETURN FILTER	1	S/N 281102 AND ABOVE
31	516814	90° FITTING	1	
33	EM16513	DIFFUSER	1	
34	492376	BOLT 3/8 X 1-1/4 IN.	4	
35	492598	WASHER, FLAT 3/8 IN.	4	
36	509343	TEE FITTING	1	
41	TBD	BOLT	2	
45	516813	BUSHING	1	
46	409401	ADAPTOR 3903-16-16	1	
47	EM16414	VALVE NEEDLE	1	
48	16516	PIPE 1-1/2"	1	S/N 281101 AND BELOW
49	509344	ADAPTOR 063T-16-16	1	
50	514604	HOSE	1	
51	514604	HOSE	1	

LS400/LS500 PUMP — ENGINE ASSY.

LS-40TD/LS-50TD ENGINE ASSY.



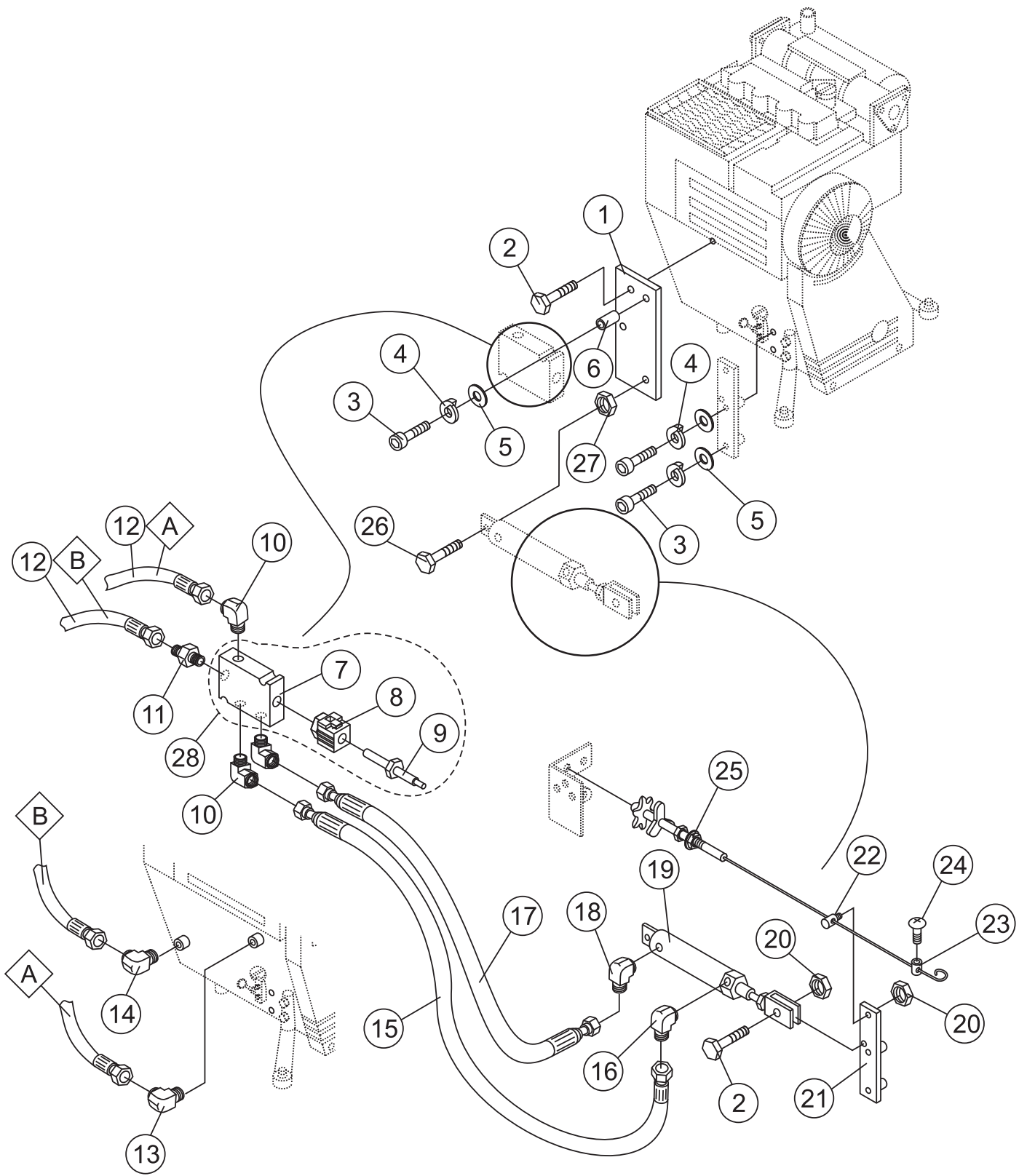
LS400/LS500 PUMP — ENGINE ASSY.

ENGINE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM98189	ENGINE, DEUTZ TURBO 76 HP BF4L2011	1	
2	492401	BOLT 1/2 IN. X 4 FT.	4	
3	6109170	WASHER, FLAT 1/2 IN.	4	REPLACES 492600
4	6109180	WASHER, LOCK 1/2 IN.	4	REPLACES 492626
5	EM511021	AIR DUCTING CLAMP	2	
6	EM510725	AIR DUCTING CLAMP	2	
7	EM511019	AIR DUCTING DUCTING	1	
8	TBD	CLAMP	3	
9	EM510888	CONNECTOR, AIR FILTER	1	
10	22001301	HOSE, ELBOW 90°	1	
11	22002183	AIR CLEANER ASSY.	1	INCLUDES ITEMS W/*
12*	01881280	HOOD, AIR CLEANER	1	
13*	01319257	INSERT, AIR FILTER	1	
14*	01880870	CARTRIDGE, SAFETY AIR	1	
15*	01881413	DUST EJECTOR	1	
16*	EM492366	BOLT 5/16 X 1-1/2 IN.	2	
17*	EM492623	WASHER, LOCK 5/16 IN.	2	
18*	EM492597	WASHER, FLAT 5/16 IN.	4	
19*	EM492553	NUT, HEX 5/16 IN. G5	2	
24	EM514633	REDUCTION TUBE, EXHAUST	1	
25	492371	BOLT 5/16 NC X 3 IN. G5	2	
26	EM923023	WASHER, FLAT 5/16 IN.	4	REPLACES 492597
27	EM514714	SPACER, EXHAUST	2	
28	EM923343	WASHER, LOCK 5/16 IN.	2	REPLACES 492623
29	2105164	HEX NUT 5/16 IN. G5	2	REPLACES 492553
30	EM510897	CAP, EXHAUST 2-1/2 IN.	1	
31	01174416	FILTER, OIL (ENGINE)	1	
32	01174696	FILTER, FUEL (ENGINE)	1	
33	EM516434	PIPE EXHAUST ASSY.	1	

LS400/LS500 PUMP — THROTTLE ASSY.

THROTTLE ASSY.



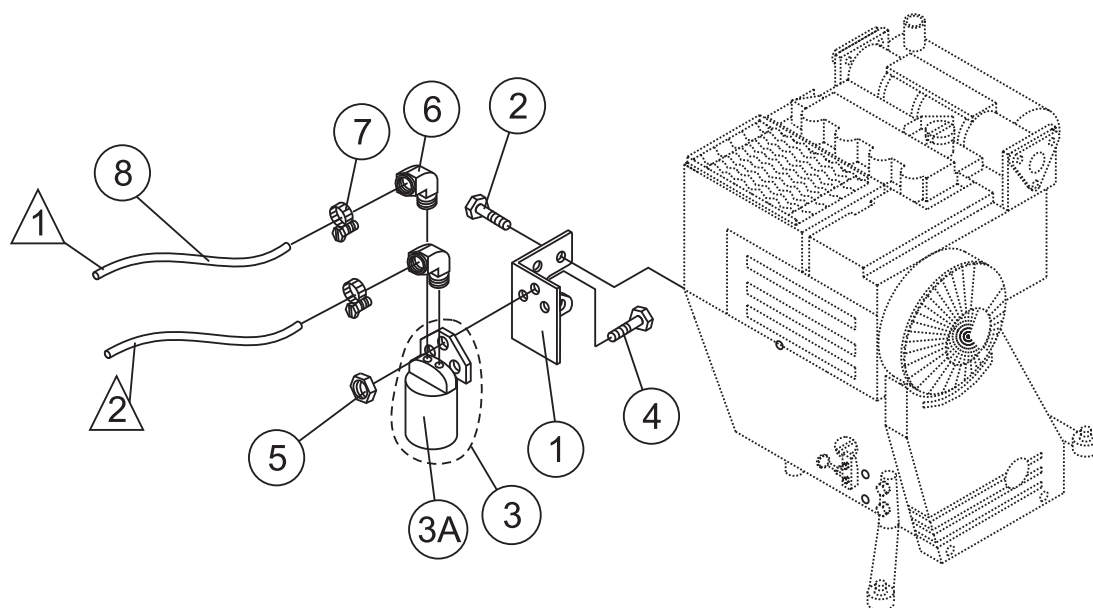
LS400/LS500 PUMP — THROTTLE ASSY.

THROTTLE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	510792	SUPPORT	1	
2	492356	BOLT 1/4" X 3/4 IN.	3	
3	EM167	BOLT 1/4" X 1-3/4 IN.	4	
4	EM923057	LOCK WASHER 1/4 IN.	4	REPLACES 492596
5	2101402	WASHER 1/4 IN.	4	REPLACES 492622
6	EM16465	PISTON SPACER	2	
7*	EM98233	BLOCK	1	
8*	EM98228	COIL, 12V	1	
9*	EM98232	VALVE	1	
10	EM25429	ELBOW ADAPTER 90° MALE	3	
11	EM25511	STRAIGHT ADAPTER	1	
12	EM25576	HOSE 20 IN.	2	
13	EM50449	ELBOW ADAPTER 90° MALE	1	
14	EM25504	ELBOW ADAPTER 90° MALE	1	
15	EM50463	HOSE 17-1/2 IN.	1	
16	EM50449	ELBOW ADAPTER 90° MALE	1	
17	EM50462	HOSE 10 IN.	1	
18	EM50449	ELBOW ADAPTER 90° MALE	1	
19	EMCC700	HYDRAULIC CYLINDER	1	
20	492581	NUT, HEX 1/4 IN.	2	
21	515812	THROTTLE CONTROL PLATE	1	
22	513213	THROTTLE CABLE GUIDE	1	
23	EM501102	SLEEVE, THROTTLE	1	
24	EM491089	BOLT 8 X 1/4 IN.	1	
25	510229	CABLE, THROTTLE	1	
26	492366	BOLT 5/16 X 1-1/2 IN.	1	
27	2105164	HEX NUT 5/16 IN.	1	REPLACES 492553
28	EM98168	THROTTLE BLOCK ASSY.	1	INCLUDES ITEMS W/*

LS400/LS500 PUMP — WATER SEPARATOR ASSY.

WATER SEPARATOR ASSY.



NOTES

-  CONNECT TO FUEL FILTER
FUEL TANK ASSY., ITEM 11
-  CONNECT TO FUEL RETURN HOSE
FUEL TANK ASSY., ITEM 8

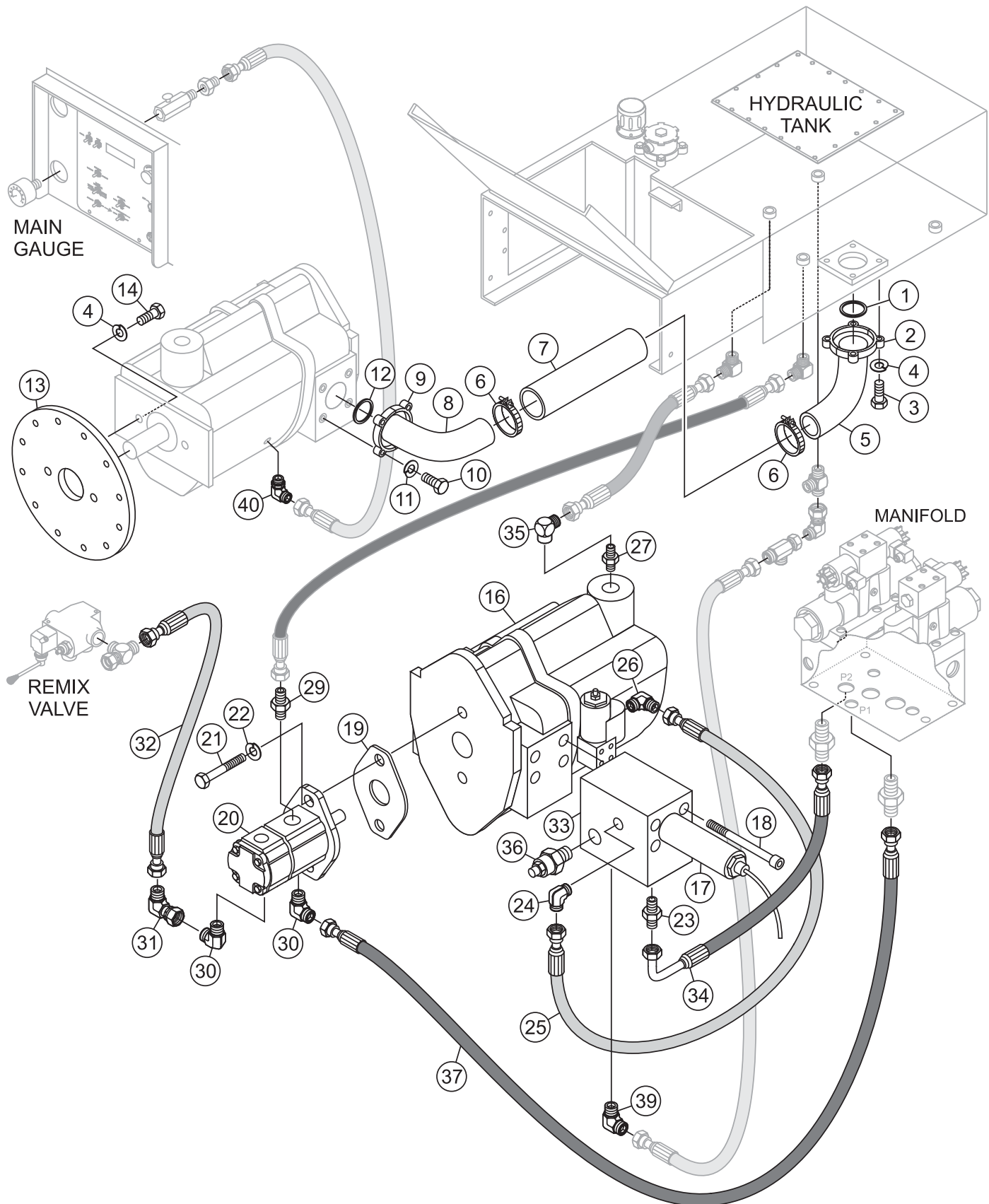
LS400/LS500 PUMP — WATER SEPARATOR ASSY.

WATER SEPARATOR ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	514340	BRACKET, WATER SEPARATOR	1	
2	TBD	BOLT	2	
3	EM16747	WATER SEPARATOR ASSEMBLY	1	
3A	P53712	CARTRIDGE, WATER SEPARATOR	1	
4	492364	BOLT 5/16 X 1 IN.	3	
5	2105164	HEX NUT 5/16 IN.	3	REPLACES 492582
6	EM514559	ELBOW ADAPTER 90° MALE	2	
7	EM506208	CLAMP, HOSE	2	
8	EM514536	HOSE 5/16 IN.	TBD	

LS400/LS500 PUMP — HYD. PUMP ASSY.

HYDRAULIC PUMP ASSY.



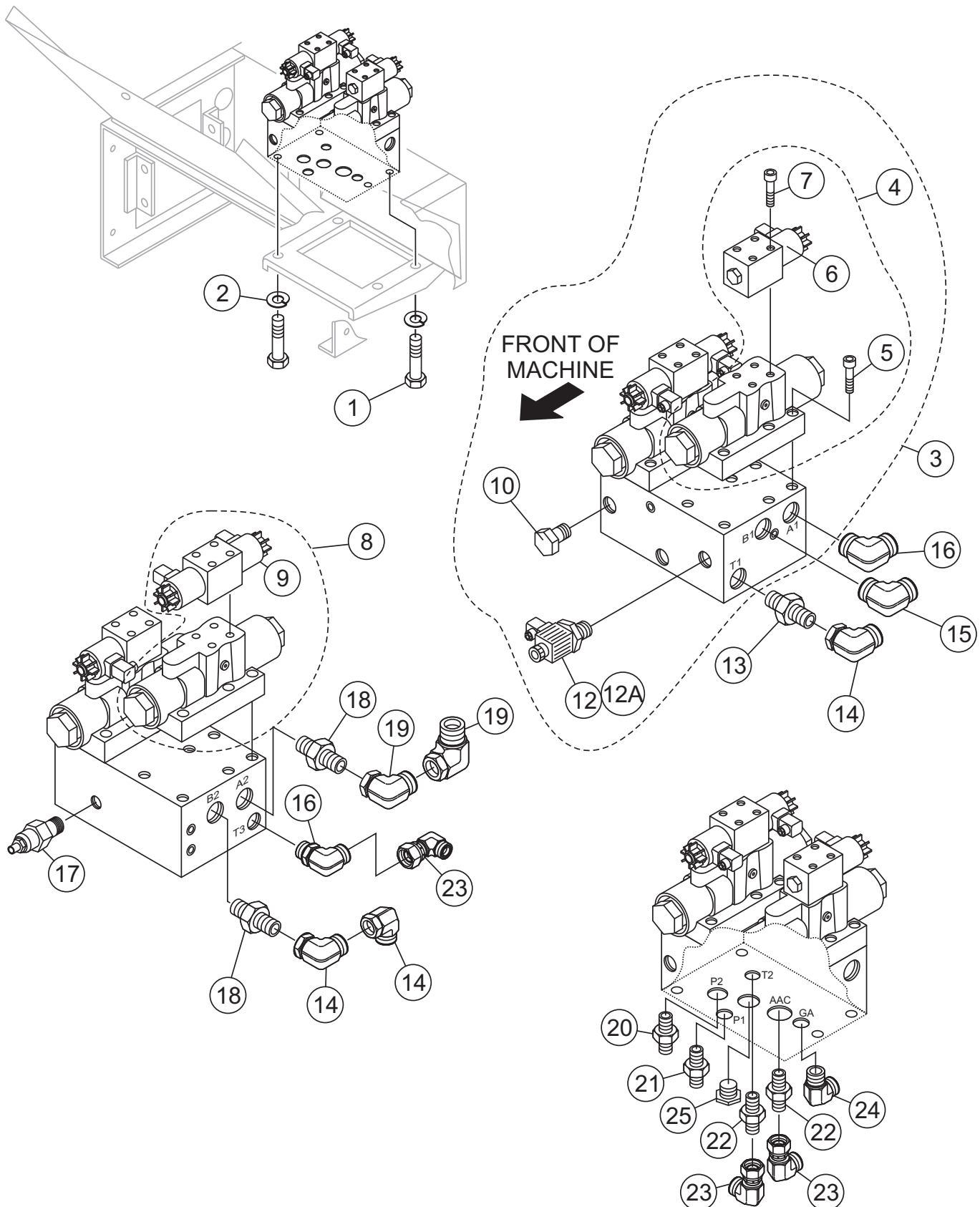
LS400/LS500 PUMP — HYD. PUMP ASSY.

HYDRAULIC PUMP ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1*	TBD	O-RING	1	
2	EM514719	FLANGE, SUCTION PIPE	2	INCLUDES ITEMS W/*
3	EM492444	BOLT 1/2 X 1-1/4 IN.	4	
4	6109180	WASHER, LOCK 1/2 IN.	6	REPLACES 492626
5	EM514718	SUCTION PIPE ADAPTER, 40 SPECIAL	1	
6	EM515207	CLAMP 2 IN.	2	
7	EM514623	HOSE, SUCTION 2 IN.	1	
8	EM514627	ADAPTER, SUCTION PIPE 32	1	
9	EM514628	FLANGE, SUCTION PIPE	1	INCLUDES ITEMS W/%
10	EM510902	BOLT 1/2 X 1-1/2 IN.	4	
11	6109180	WASHER, LOCK 1/2 IN.	4	REPLACES 492626
12%		O-RING	1	
13	EM98128	COUPLER, ENGINE ASSY.	1	
14	EM510902	BOLT 1/2 X 1-1/2 IN.	2	
16	EM517674	PUMP, MAIN 60CC, PARKER P1-60 SERIES	1	USED ON LS400 ONLY
16	EM98256	PUMP, MAIN 75CC, PARKER P1-75 SERIES	1	USED ON LS500 ONLY
17	EM98273	FLOW CONTROL VALVE	1	
18	EM506953	BOLT 7/16 X 3 IN.	4	
19	EM16190	GASKET	1	
20	EM98107	PUMP, SECONDARY	1	
21	EM963610	BOLT 3/8 X 1 IN.	2	REPLACES 492375
22	0166 A	WASHER, LOCK 3/8 IN.	2	REPLACES 492624
23	EM25498	STRAIGHT ADAPTER	1	
24	EM25429	ELBOW ADAPTER	1	
25	EM514599	HOSE, 4000 PSI SENSOR	1	USED ON LS400 ONLY
25	EM516875	HOSE, 4000 PSI SENSOR	1	USED ON LS500 ONLY
26	EM25429	ELBOW ADAPTER	1	
27	EM491372	STRAIGHT ADAPTER	1	
29	EM25498	STRAIGHT ADAPTER	1	
30	EM16524	ELBOW ADAPTER 90° MALE	2	
31	506200	ELBOW ADAPTER	1	
32	EM514601	HOSE 2000 PSI, REMIX VALVE	1	
33	EM517649	MOTORIZED FLOW CONTROL MANIFOLD ASSY.	1	
34	EM517038	HOSE, MAIN MANIFOLD	1	
35	EM509353	ELBOW	1	
36\$	TBD	VALVE, MAIN RELIEF	1	
37	EM514608	HOSE	1	
39	EM25459	ELBOW	1	
40	EM25429	ELBOW ADAPTER	1	

LS400/LS500 PUMP — MANIFOLD ASSY.

MANIFOLD ASSY.



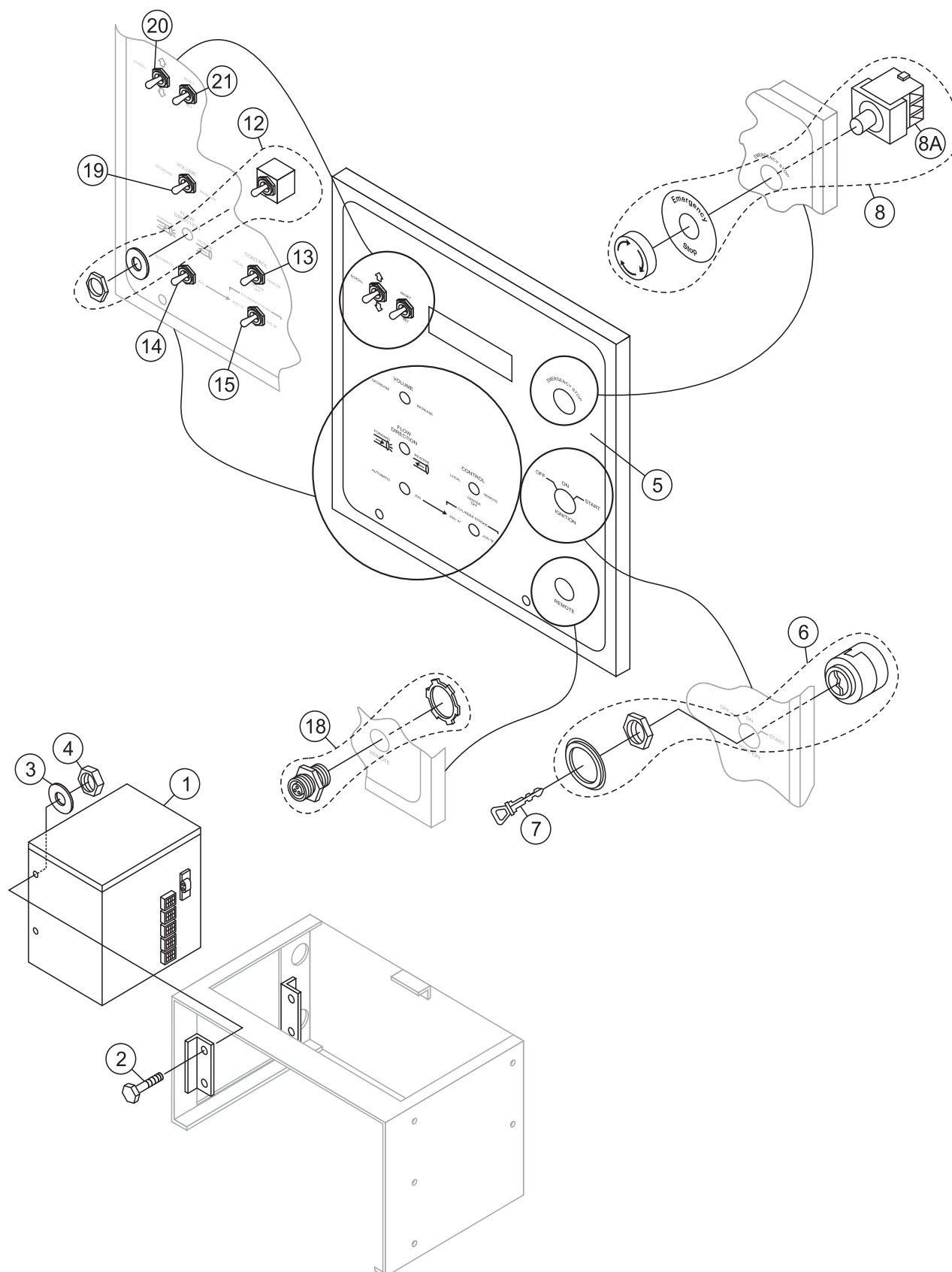
LS400/LS500 PUMP — MANIFOLD ASSY.

MANIFOLD ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM963102	BOLT 1/2 X 1-1/4 IN.	4	REPLACES 492393
2	6109180	WASHER, LOCK 1/2 IN.	4	REPLACES 492626
3	EM98261	MANIFOLD ASSY COMPLETE	1	REPLACES EM98109
				INCLUDES ITEMS W/ %
4%	EM98220	CYCLING VALVE, SWING W/PILOTS	1	INCLUDES ITEMS W/ #
5#	EMBK227	BOLT, SHCS 1/2" x 2-1/4"	12	
6#	EM98223	PILOT VALVE, SHUTTLE	1	
7#	EMBK2097	BOLT, SHCS 1/2" X 1-1/4"	8	
8	EM98221	CYCLING VALVE, MAIN	1	INCLUDES ITEM W/ &
9&	EM98222	PILOT VALVE, MAIN CYLINDER	1	
10%	EM98227	CHECK VALVE	1	
12%	EM98228	COIL, 12VDC ACCUMULATOR	1	
12A%	EM98229	ACCUMULATOR UNLOADER CARTRIDGE ASSY	1	
13	EM25498	ADAPTER	1	
14	EM509401	ADAPTER	3	
15	EM514488	ADAPTER	1	
16	EM25459	ADAPTER	2	
17	EM98226	UNLOADING RELIEF VALVE, SHUTTLE	1	
18	EM514231	ADAPTER	2	
19	EM514489	ADAPTER	2	
20	EM491372	ADAPTER	1	
21	506193	ADAPTER	1	
22	EM25462	ADAPTER	2	
23	EM509353	ADAPTER	3	
24	EM25429	ADAPTER	1	
25	TBD	CHECK VALVE	1	

LS400/LS500 PUMP — CONTROL BOX ASSY.

CONTROL BOX ASSY.



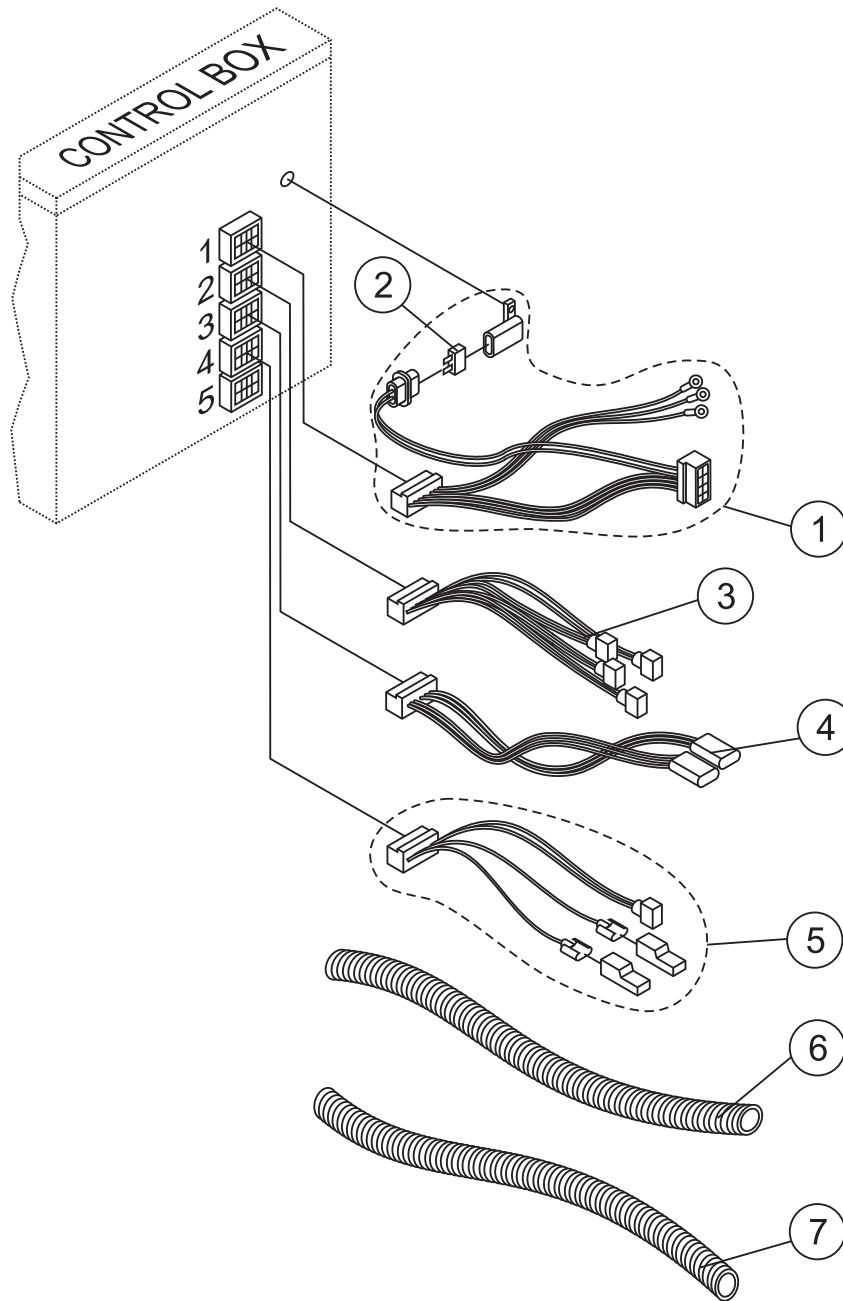
LS400/LS500 PUMP — CONTROL BOX ASSY.

CONTROL BOX ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1		CONTROL BOX ASSY	1	CONTACT FACTORY
2	0202	BOLT 5/16 X 1 IN.	4	REPLACES 492364
3	EM923023	WASHER, FLAT 5/16 IN.	4	REPLACES 492597
4	2105164	NUT 5/16 IN.	4	REPLACES 492582
5	TBD	OVERLAY, CONTROL PANEL	1	
6	EM98206	IGNITION SWITCH ASSY.	1	
7	EM98206K	KEY, IGNITION	1	
8	EM517177	EMERGENCY STOP SWITCH ASSY.	1	
8A	EM517186	CONTACT BLOCKS, EMERGENCY SWITCH	3	
12	EM98120	FLOW DIRECTION SWITCH ASSY.	1	
13	EM98119	MAIN CONTROL SWITCH ASSY.	1	
14	EM98121	AUTO/JOG SWITCH ASSY.	1	
15	EM98122	JOG A/B SWITCH ASSY.	1	
18	EM97068	RECEPTACLE, REMOTE	1	
19	TBD	VOLUME SWITCH ASSY.	1	
20	TBD	SCROLL SWITCH ASSY.	1	
21	TBD	RESET SWITCH ASSY.	1	

LS400/LS500 PUMP — CONTROL BOX HARNESSSES ASSY.

CONTROL BOX HARNESSSES ASSY.



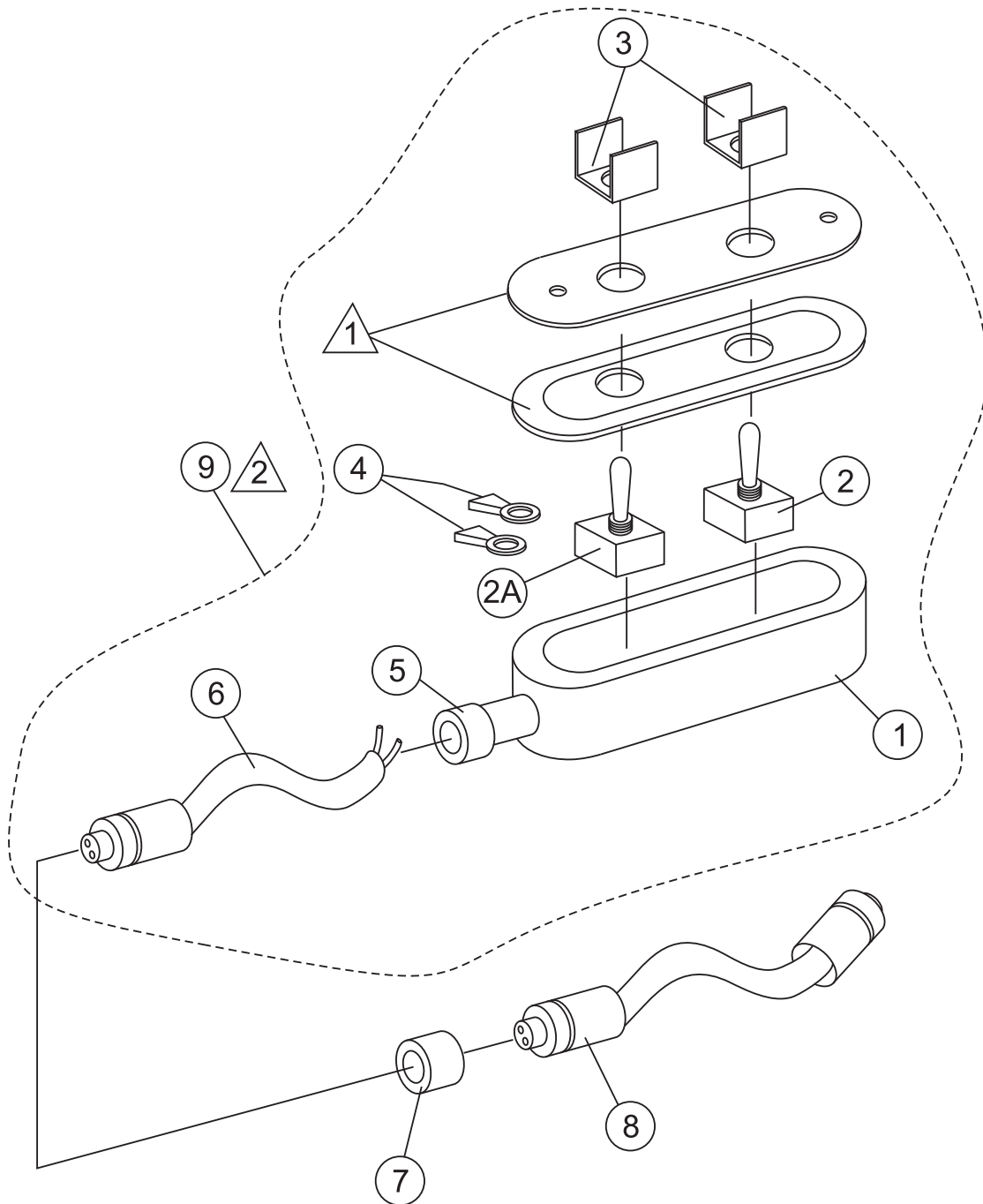
LS400/LS500 PUMP — CONTROL BOX HARNESSSES ASSY.

CONTROL BOX HARNESSSES ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM514635	WIRE HARNESS 1	1	
2	344102000	FUSE, 30 AMP	1	
3	EM514636	WIRE HARNESS 2	1	
4	EM514637	WIRE HARNESS 3	1	
5	EM514638	WIRE HARNESS 4	1	
6	509588	POLY FLEX TUBE 1/2 IN. BLACK	AR	
7	16716	CONDUCTIVE DIVIDER 3/8 IN.	AR	

LS400/LS500 PUMP — REMOTE CONTROL CABLE ASSY.

REMOTE CONTROL CABLE ASSY.



NOTES:

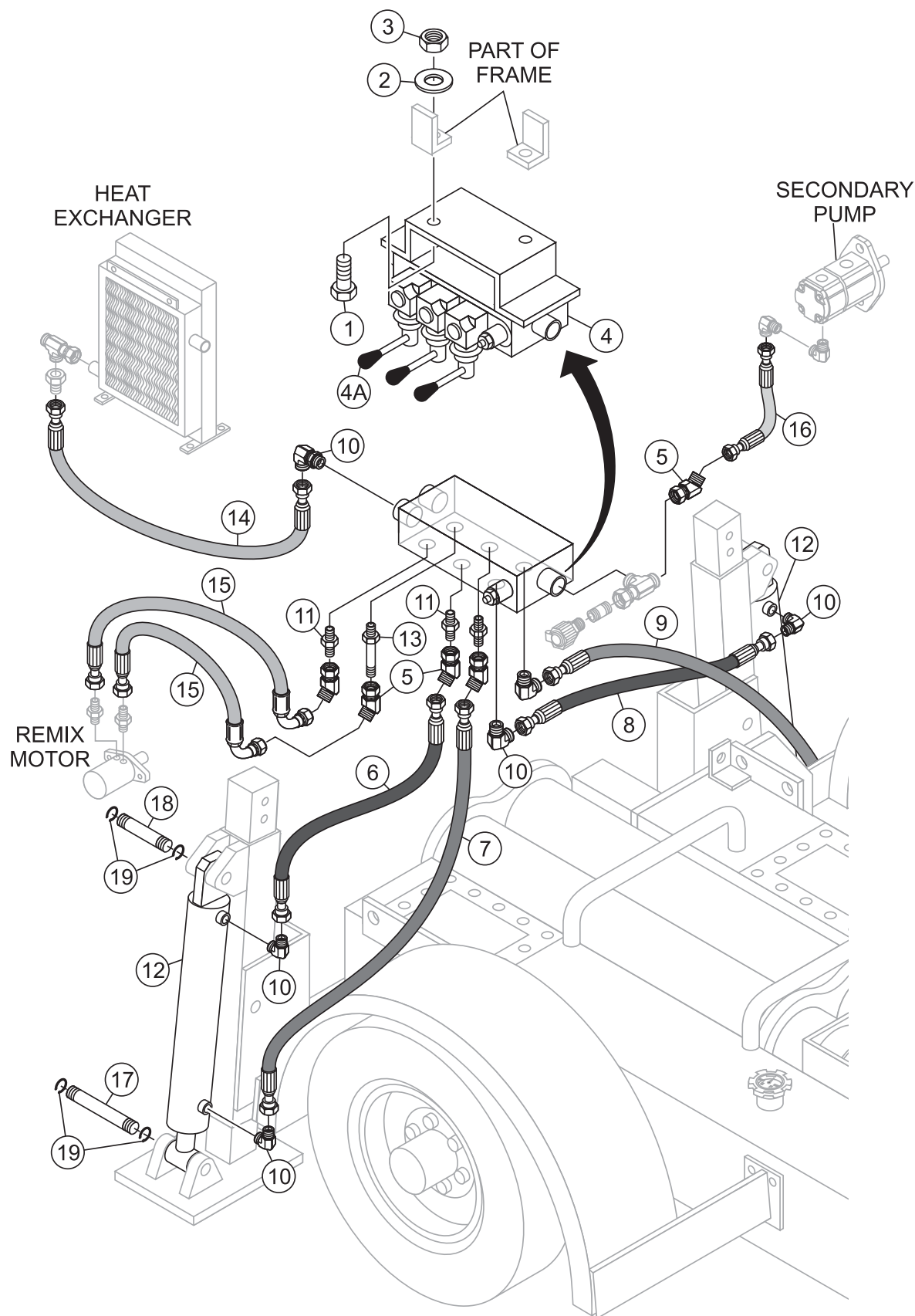
- △ 1 INCLUDED WITH ITEM 1.
- △ 2 COMPLETE CORD ASSY. INCLUDES ITEMS WITHIN DASHED LINE.

LS400/LS500 PUMP — REMOTE CONTROL CABLE ASSY.

REMOTE CONTROL CABLE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1*	EM16753	JUNCTION BOX	1	
2*	EM16754	SWITCH	1	
2A	EM97075	SWITCH	1	
3*	EM491897	CONNECTOR, RING 3/16 IN.	4	
4*	EM16756	GUARD SWITCH - ALUMINUM	2	
5*	EM26791	SEAL, GRIP CORD	1	
6*	EM26790	CORD, MX P/E 25 FT.	1	
7	EM26793	ADAPTER, CORD GRIP 1/2 IN.	1	
8	EM97065	ADAPTER, CORD 100 FT.	1	
9	EM97099	COMPLETE CORD ASSY 25 FT	1	INCLUDES ITEMS W/*

LS400/LS500 PUMP — HYDRAULIC STABILIZER ASSY. (OPTIONAL)



LS400/LS500 PUMP — HYDRAULIC STABILIZER ASSY. (OPTIONAL)

OPTIONAL HYDRAULIC STABILIZER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	TBD	BOLT	2	
2	TBD	WASHER	2	
3	TBD	NUT	2	
4	EM98046	VALVE REMIXER W/ 3 LEVERS	1	
4A	EM98047	HANDLE, DIRECTIONAL VALVE	3	
5	506200	FITTING 45°	5	
6	517101	HOSE	1	
7	517102	HOSE	1	
8	517103	HOSE	1	
9	517104	HOSE	1	
10	512655	FITTING 90°	7	
11	25509	FITTING STRAIGHT	3	
12	EM516382	HYDRAULIC STABILIZER	2	
13	517107	FITTING STRAIGHT	1	
14	517105	HOSE	1	
15	517100	HOSE	2	
16	517106	HOSE	1	
17	517153	BOLT	2	
18	517154	BOLT	2	
19	490957	SNAP RING	8	