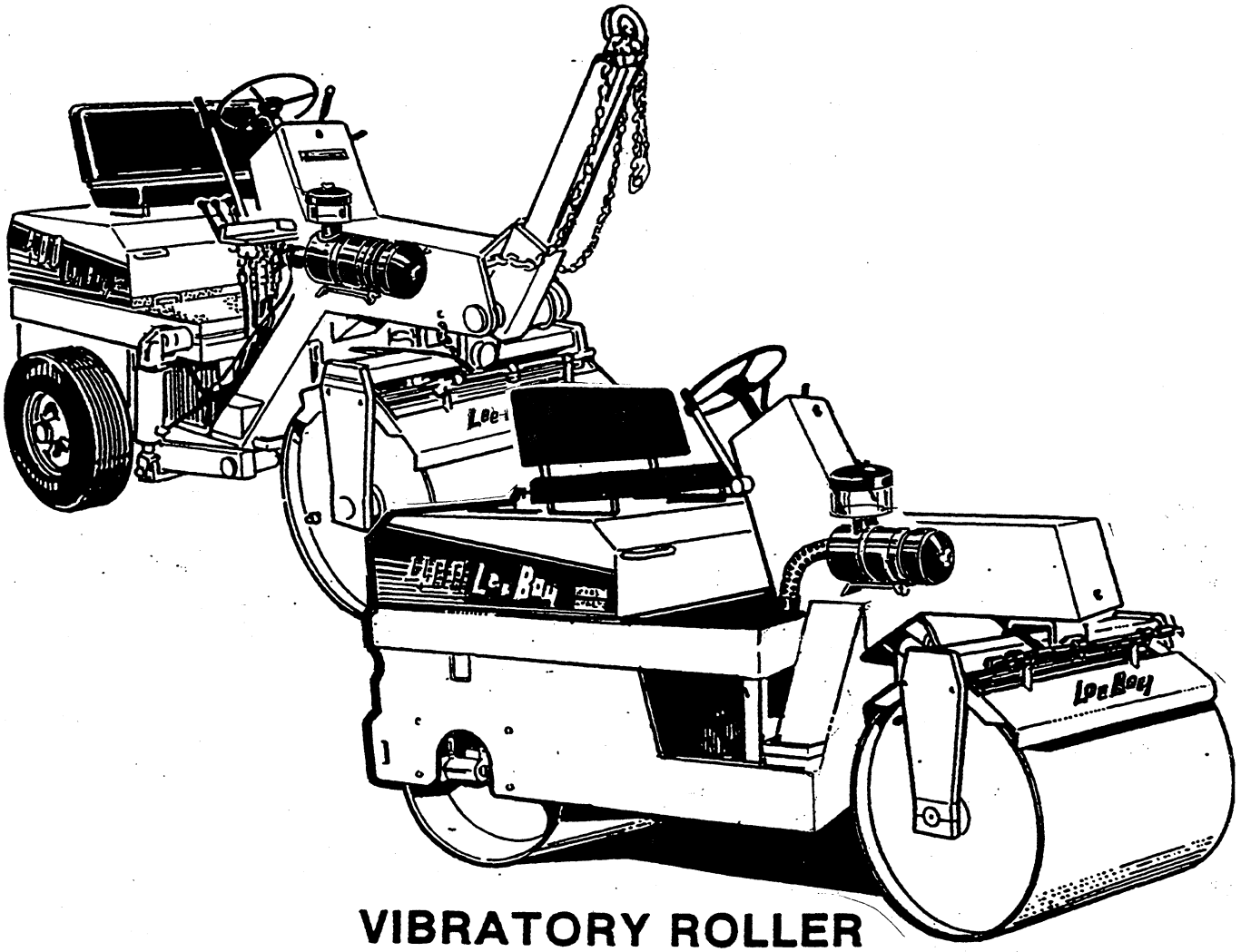
LeeBoy

OPERATORS AND PARTS MANUAL



VIBRATORY ROLLER

Model — 400

MANUAL NO. 400498

LEEBOY

688 Highway 16 North • Denver, North Carolina 28034

PHONE: A.C. 704-483-9721 • FAX # 1-704-483-5802

USER'S REFERENCE INFORMATION

DELIVER DATE _____

TYPE ENGINE _____

DEALER'S NAME & ADDRESS

_____

_____

_____

_____

EQUIPMENT SERIAL NO. _____

ENGINE NO. _____

EQUIPMENT HOURS _____

*****CALIFORNIA*****
Proposition 65 Warning
Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

SAFETY NOTICE

All danger points about the 400 and 400T Roller are explained and labeled by decals to the best of our knowledge. If anyone in the field discovers anything omitted, please notify your closest dealer or factory.

LIMITED WARRANTY

B.R. Lee & Sons, Inc. warrants to the original customer that the equipment manufactured by B.R. Lee & Sons, Inc. to whom said equipment is sold as new shall be free from defects in material and workmanship for 90 days after the date of first use or delivery whichever comes first.

This warranty is limited to the following: If any part of the equipment becomes defective during the period described and is brought to an authorized B.R. Lee & Sons, Inc. dealer, the dealer will, without charge, repair the part which has become defective or replace it without charge. B.R. Lee & Son, Inc. is not responsible for damaged or malfunction resulting from misuse, failure to follow recommended maintenance requirements, alteration, accident or fire.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES OR REPRESENTATION OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE. ACCORDINGLY, ALL IMPLIED WARRANTIES, INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. B.R. LEE & SONS, INC., SHALL NOT BE RESPONSIBLE FOR LOSS OF TIME, LOST PROFITS, LOST USE, OR ANY OTHER CONSEQUENTIAL DAMAGES OR ANY INCIDENTAL DAMAGE.

B.R. Lee & Sons, Inc. does not authorize any person to amend or extend this limited warranty on its behalf.

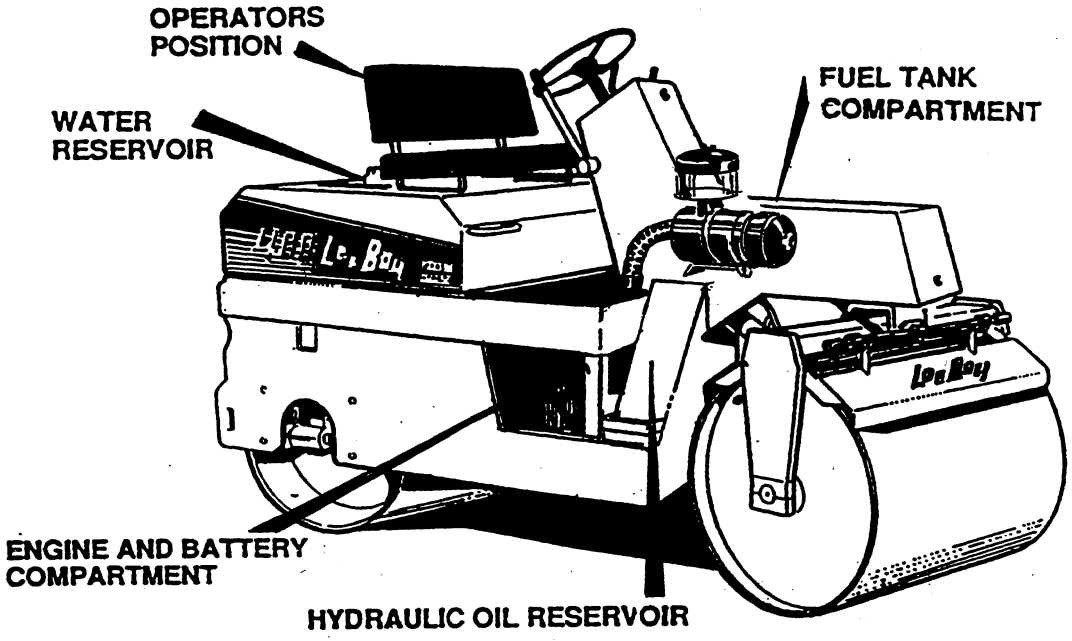
INDEX

OPERATORS SECTION **PAGE**

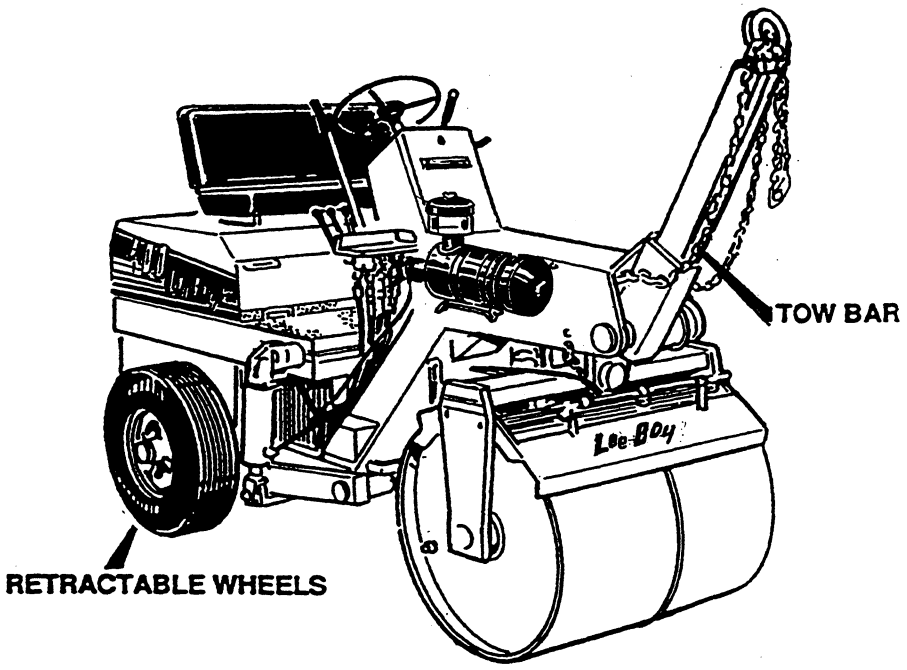
GENERAL INFORMATION

This section is provided to aid the operator in the operations of this roller in such areas as inspection, engine start-up, engine shut down, towing and transporting.

This section does not attempt to show rolling technique of rolling asphalt. The actual rolling of asphalt should only be done by a qualified asphalt roller operator who has been well trained in all types of rolling applications. The operator should also thoroughly understand the mechanical characteristic of a roller and the varying elements and terrain that it can safely operate in.



MODEL 400 ROLLER NON-TOWABLE



MODEL 400 ROLLER TOWABLE

RECEIVING

Although the roller has been checked thoroughly at the factory, road hazards or vandalism that could happen while being transported may result in damage. For this reason it is a good operation procedure to check the roller before putting it into service.

1. Check engine oil/see engine manual.
2. Check for fuel, oil, water and hydraulic leaks.
3. Check inside of water tank for contaminants or objects that could be harmful to the water system.
4. Check for damage or missing parts, if parts are missing or roller is damaged, check with dealer.

! WARNING !

THIS ROLLER SHOULD ONLY BE OPERATED BY A QUALIFIED ROLLER OPERATOR WHO IS FAMILIAR WITH ALL OF THE MECHANICAL CHARACTERISTICS OF THE ROLLER, THE VARYING ELEMENTS AND TERRAIN THAT IT CAN SAFELY OPERATE IN.

! WARNING !

DO NOT USE YOUR HANDS OR USE OBJECTS IN THE PROCESS OF FINDING HYDRAULIC LEAKS. HYDRAULIC LEAKS CAN BE SEEN.

INSPECTION

Prior to operating the roller check it out thoroughly. This should help provide for a more trouble free roller. Follow the procedures below to help in this inspection.

1. Check roller for leaks, excessive wear and loose components.
2. Check engine oil for proper level. See engine manual.
3. Check hydraulic oil, making sure oil level is visible in sight gauge on side of reservoir. If additional oil is needed fill until oil is visible in sight gauge.
4. Check battery for proper water level also make sure cables and cable terminals are free of corrsion.

! CAUTION !

DECALS PROVIDE VALUABLE INFORMATION AND SHOULD BE REPLACED IF MISSING OR WORN.

! WARNING !

DO NOT OPERATE HYDRAULIC LEVERS OR ATTEMPT TO MOVE ROLLER UNLESS SEATED IN THE OPERATOR'S POSITION.

! DANGER !

DO NOT FILL FUEL TANK WHILE ENGINE IS RUNNING.

! WARNING !

DO NOT LEAVE ROLLER RUNNING OR WITH KEYS AVAILABLE WHILE UNATTENDED.

! CAUTION !

IF HYDRAULIC OIL, FUEL OR ENGINE OIL LEAK IS PRESENT, MAKE REPAIR AS NECESSARY.

OPERATIONS

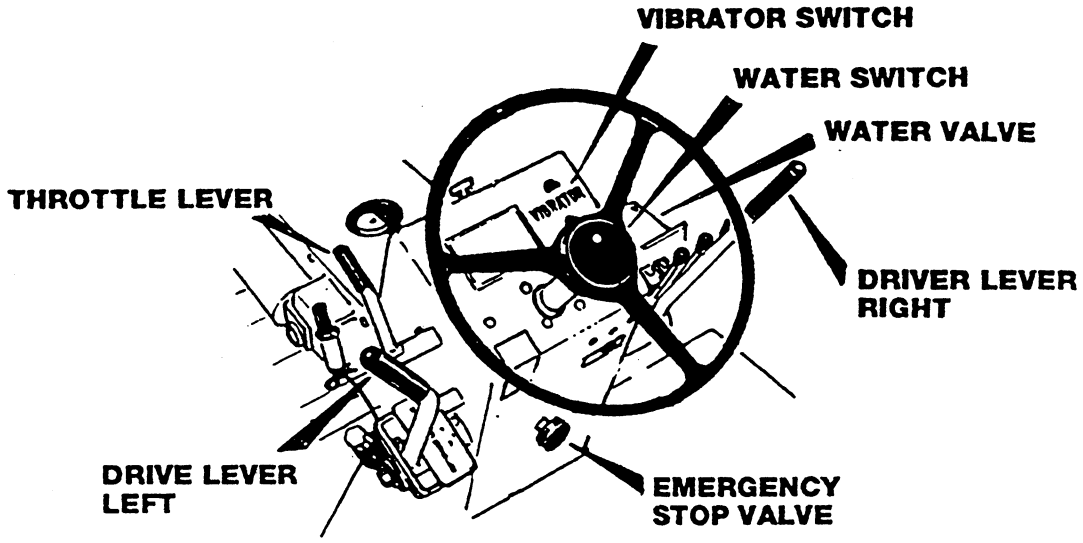


FIGURE 1

ENGINE START-UP

The following procedures are for starting the engine. Make sure you have inspected the roller thoroughly before you put it into operation.

1. Engine Start-Up:
   A. Set throttle to full open.
   B. Turn ignition on, to the start position.
   C. After start-up, reduce throttle setting and allow engine to warm up. If engine did not start, repeat A,B and C.

2. Engine Shut-Down:
   A. Reduce engine speed to slow idle.
   B. Pull Engine kill knob.
   C. Turn ignition to off.

! WARNING !

WHEN LIFTING THE WATER TANK TO GAIN ACCESS TO THE ENGINE OR FOR ANY REASON, MAKE SURE THE WATER HAS BEEN DRAINED AND AN ASSISTANT BE USED EITHER MECHANICAL OR A CAPABLE PERSON.

! WARNING !

ALL MAINTENANCE PERFORMED TO THE ROLLER SHOULD ONLY BE DONE BY A QUALIFIED MECHANIC.

! CAUTION !

RUNNING THE ENGINE AT HIGH RPM'S WILL SHORTEN ITS USEFUL LIFE.

EMERGENCY STOP VALVE

The emergency stop valve is provided to give an extra degree of safety. If a loss of hydraulic pressure occurred during rolling operation, the roller can be stopped with the emergency stop valve.

1. If the hydraulic pressure is lost during operation, push emergency stop valve to stop roller.

2. Use emergency stop valve if roller engine is running and operator is off the roller.

! CAUTION !

IF EMERGENCY STOP VALVE IS NOT PULLED ALL THE WAY OUT, THE STEERING AND VIBRATION OF THE ROLLER WILL NOT FUNCTION PROPERLY DAMAGING DRIVE SYSTEM.

FORWARD/REVERSE AND BRAKING

The roller has been designed to operate from forward to reverse with a single drive lever. There are however, two drive levers: one on either side of the steering column. These levers are inter-connected and arranged in this manner for the operator's convenience.

Braking is accomplished by bringing the forward/reverse lever to the neutral position. When the forward/reverse lever is in the neutral position, the roller is fully braked.

When operating on an incline, and roller starts to pull down, (motor under load) increase the throttle setting or push or pull drive lever toward neutral or a combination of the two.

TO OPERATE FOLLOW THE PROCEDURES BELOW

1. Start engine as instructed in start-up procedures.
2. To move forward, ease the drive lever toward the front of roller until the desired speed is reached.
3. To stop, pull the drive lever to the neutral position.
4. To move rearward, ease the drive lever toward the rear of the roller until desired speed is reached.
5. To stop, push the drive lever to the neutral position.

VIBRATORY COMPACTOR

The vibratory compactor drum provides the roller with additional compaction. The non-towable rollers weight is 5,000 lbs. static. The static weight of the towable roller is 5,500 lbs. Under compaction the static weight will increase approximately $2^1/_2$ times; non-towable 12,500 lbs., towable 13,750 lbs.

TO START VIBRATOR

1. Turn the vibrator switch to 'ON.'
2. Move the roller forward or rearward to start vibrator.
3. Turn vibrator switch to 'off' stopping vibration.
4. When the drive lever is in neutral position, vibration will automatically stop. Vibration will begin again when drive lever is engaged.

WATER SPRAY SYSTEM

The water spray is designed to provide an even spray across the face of each tire. The water powered pump assures that the even amount of water is on the drum during the rolling process.

1. The water spray valve is located on the right side of the console. See figure 1.
2. To operate turn water spray switch to "on".
3. Shut off water spray by turning water spray switch to "off".
4. Close water valve.

NOTE: To prevent freezing of water in cold climate, drain the water system. (Open Valve Below Pump).

! WARNING !

WHEN LEAVING THE ROLLER UNATTENDED MAKE SURE THE KEYS HAVE BEEN REMOVED AND THE ROLLER IS CHOCKED; (PREVENTING IT FROM ROLLING).

! WARNING !

ONLY THE OPERATOR SHOULD BE ON THE ROLLER AND SEATED IN THE OPERATOR'S POSITION WHILE THE ROLLER IS IN MOTION.

! WARNING !

NEVER OPERATE THE ROLLER WITH WATER TANK RAISED.

! WARNING !

WHEN WATERTANK IS RAISED, ALWAYS MAKE SURE SAFETY PROP LEVER IS FREE TO SWING. THE SAFETY LEVER PROP SHOULD BE IN THE LOCK POSITION BEFORE DOING ANY WORK ON THE ROLLER.

— CALIFORNIA — PROPOSITION 65 WARNING

DIESEL ENGINE EXHAUST AND SOME OF ITS CONSTITUENTS ARE KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECT, AND OTHER REPRODUCTIVE HARM.

TOWING AND TRANSPORTING

When equipped with tow package, the roller can be towed to and from job sites. As with most similar types of equipment being transported, certain procedures must be followed. Read carefully and follow the step by step procedures for hooking up and towing the roller. Also included are procedures for transporting roller on flat bed vehicle.

1. The vehicle towing the roller should be large enough to handle the weight of the roller in all driving situations.

2. The pintle hook on the rear of the towing vehicle should be from 26 to 32 off the ground.

3. Park towing vehicle on level surface and secure with working parking brake plus block wheel in both directions.

4. Move roller into position behind truck. Using tongue cylinder valve lever and roller driver lever engage eyelet on tongue to pintle hook on towing vehicle.

5. After engaging the pintle hook on towing vehicle, put drive lever in neutral position. Dismount roller and secure safety latch on pintle hook. Attach safety chains to structural member on rear of towing vehicle.

6. From the driver's position, use tongue cylinder valve lever and extend tongue cylinder to full extension. This will lift front drum off the surface. The front roller drums should be a minimum of 6" off the ground. Now use tow wheel cylinder valve lever and extend towing wheels to full extension. This will lift the rear drum off the surface. While the roller is in this position, dismount and engage towing wheel lock on both sides of the roller, rotate tongue support latch into position, and insert yoke lock pin on yoke. See figure 2, 3 & 4.

7. From the driver's position <u>TURN OFF ROLLER ENGINE.</u> Slowly release pressure on towing wheel extension cylinders, and lower roller until wheel locks are in the lock position. See figure 2. Now slowly release pressure on tongue extension cylinder until tongue support latch is in positive lock position. See figure 3.

8. Check safety chains, tow wheel tongue support latch and yoke lock pin, making sure these devices are in proper position before towing.

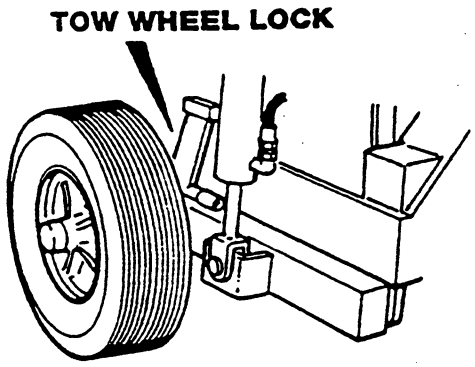


FIGURE 2

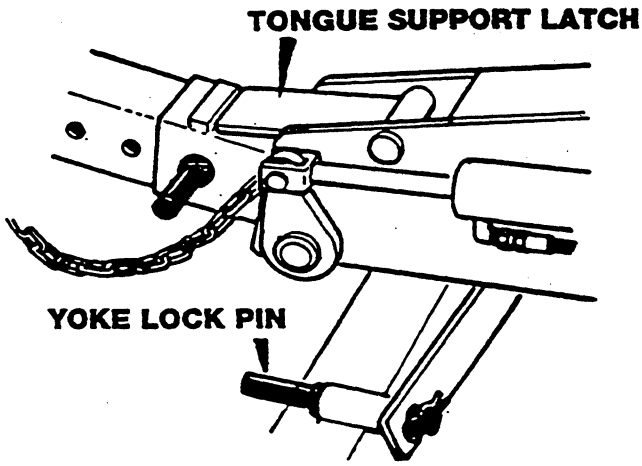


FIGURE 3

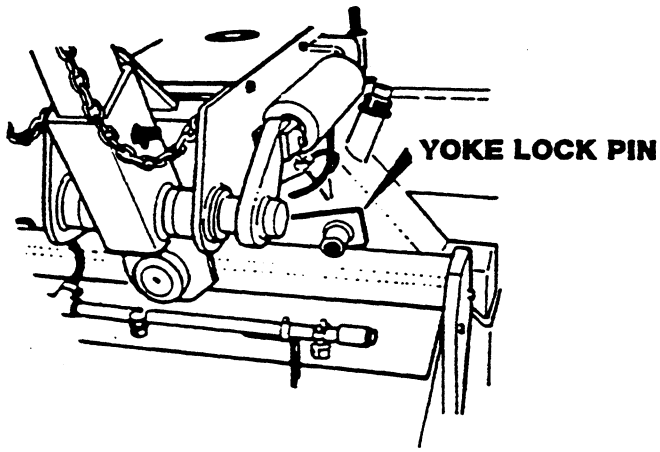


FIGURE 4

UNHOOKING ROLLER FROM TOWING VEHICLE

1. Park towing vehicle and roller on level surface. Secure towing vehicle with working hand brake and block wheels in both directions.

NOTE
When following unhooking procedures refer to figures 2; 3 & 4.

2. Sitting in the driver position, start roller up and extend the towing wheels until towing wheel locks are out of lock position.

3. Extend tongue cylinder, lift tongue until tongue support latch is clear from stop.

4. Dismount and move towing wheel lock, tongue support latch and yoke pin lock out of the way, so when roller is lowered to surface these items will not interfere. Put yoke locking pin into stow position and secure with hitch pin. Remove and stow safety chains and disengage pintle hook safety devices.

5. From the driver position, activate lever for towing wheels, and lower rear drum to the surface. Continue activating lever until towing wheels are in the full up position.

6. Using tongue extension lever, lower front drum to surface.

7. Move roller forward or backward as necessary to release pressure on eyelet in pintle hook, then raise tongue extension slightly and back up roller to disengage.

8. If removed, insert tongue extension pin back into tongue and bring the tongue to the full back position.

TRANSPORTING

When transporting the roller, use a flat bed vehicle that is large enough to handle the roller through all driving situations.

1. Park transport vehicle on level surface, secure working hand brake and block wheels in both directions.

2. Load roller onto the flat bed vehicle. Block drums to prevent roller from rolling forward or backwards.

3. Secure the roller to the flat bed vehicle with a chain having adequate strength so as not to fail during transporting. Secure roller with chain as shown in figure 5.

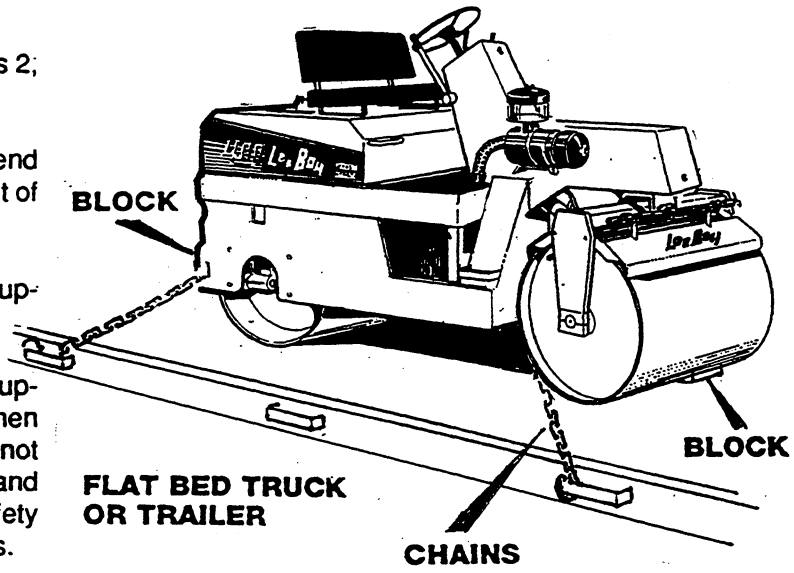


FIGURE 5

! CAUTION !

BEFORE TOWING THE ROLLER, CHECK STATE, FEDERAL AND LOCAL LAWS.

! CAUTION !

BECAUSE OF VARIOUS DESIGNS OF TRUCKS, IT IS IMPRACTICAL TO DETERMINE RAMP ANGLES THAT CAN BE DRIVEN UP OR DOWN WHILE TOWING ROLLER. IT IS FOR THIS REASON THAT EXTREME CAUTION IS TO BE USED WHEN DRIVING FROM ONE SURFACE LEVEL OR INCLINE TO ANOTHER.

! WARNING !

NEVER EXCEED 45 M.P.H. WHILE TOWING THE ROLLER. USE REDUCED OR LOWER SPEED WHEN TOWING OVER SLIPPERY OR UNEVEN SURFACE.

PREVENTATIVE MAINTENANCE

To prolong the useful life of the roller, a schedule for performing preventative maintenance has been provided below. In conjunction with this schedule an effort should be made to keep all functions of the roller working and looking as good as the day it arrived.

ENGINE

1. Change oil and replace oil filter every 125 hours, more often if roller sits for long periods of time or roller is subjected to hot or sandy conditions. (Check engine manual for proper oil and filter requirements).

2. Clean air filter every 125 hours - more often if sandy conditions exist. Replace if needed.

3. Replace fuel filter every 500 hours - more often if sandy conditions exist.

4. Check engine manual for additional preventative procedures.

NOTE:
Check battery for proper water level also make sure cables and cable terminals are free of corrosion.

HYDRAULIC SYSTEM

1. Replace hydraulic oil filter cartridge every 125 hours or when oil filter gauge indicates.

2. Change oil annually. If contaminants are present, flush the hydraulic system before refilling.

NOTE
Make necessary repairs to those items that are loose, corroded, show excessive wear or leaking.

! CAUTION !

REMOVE GROUND CABLE FROM BATTERY BEFORE DOING ANY WELDING TO ROLLER.

WATER SPRAY SYSTEM

The water spray switch is located on the console, as shown in figure 1. During operations this allows the operator to turn on and off this function as desired.

NOTE:
The following procedures should only be followed after reading and fully understanding the contents of this manual.

1. The engine should be running before energizing water system.

2. Locate water energizing switch on console and position switch to "on".

3. With roller's forward and rearward lever in neutral, check spray patterns on both front and rear drums. If spray pattern needs adjusting, turn wing knobs to loosen. and with a screwdriver direct the spray from the three nozzles so the spray will completely moisten an area across the drum. To secure, hold the screwdriver so that the spray nozzle will not turn and tighten the wing knob. See figure 6.

! CAUTION !

DURING COLD WEATHER DRAIN WATER RESERVOIR TO PREVENT FREEZING.

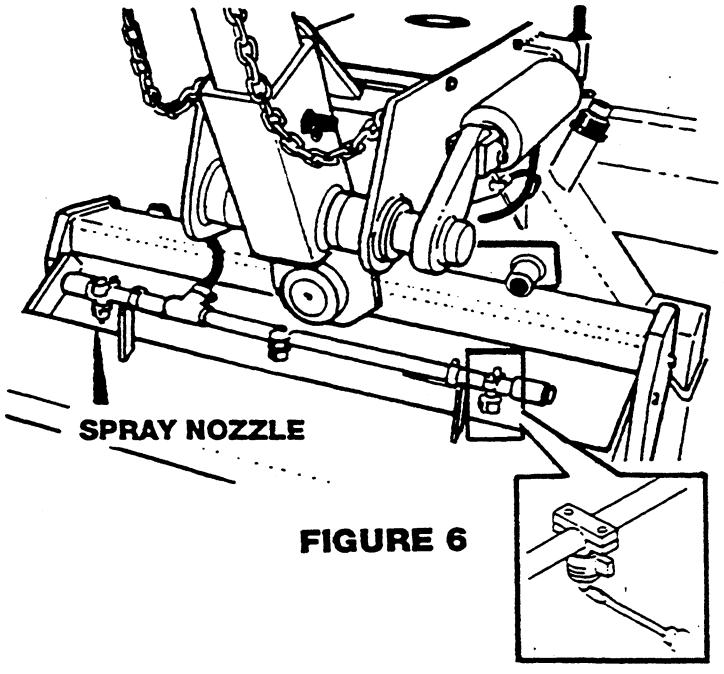


FIGURE 6

TROUBLE SHOOTING GUIDE FOR MODEL 400 ROLLER

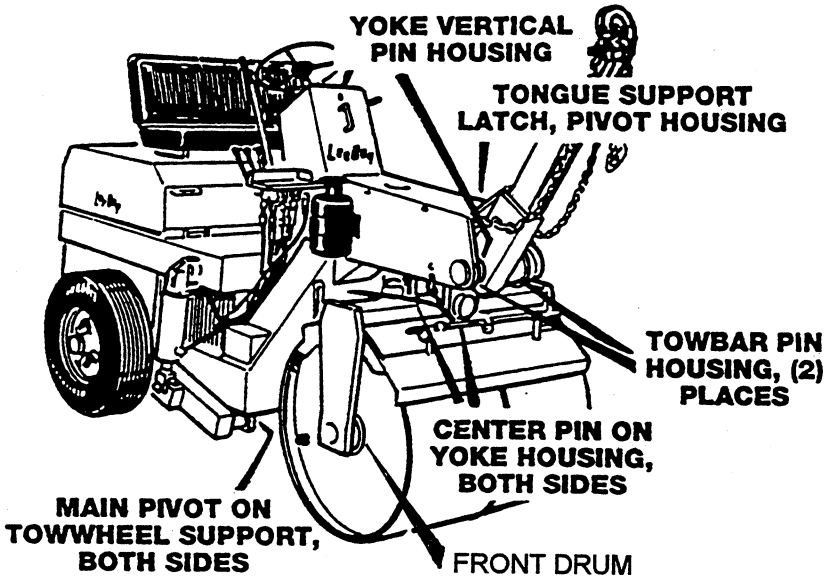
PROBLEM	SOLUTION
ENGINE WILL NOT TURN OVER:	1. Check Battery 2. Check Ignition Switch 3. Check Neutral Safety Switch 4. Check Starter Solenoid 5. Check Engine Ground
ENGINE WILL NOT START:	See Engine Manual
WATER SYSTEM WILL NOT OPERATE:	1. Check Water Level 2. Check Strainer Under Tank 3. Check Nozzle Strainer 4. Check Water Pump A. Check Pump Switch B. Check Hot Wire To Pump C. Check Ground To Pump
FORWARD/REVERSE LEVEL WILL NOT STAY IN POSITION OR IS TIGHT:	1. Grease 2. Adjust Friction Nut At Bottom Of Left Hand Lever
DIFFICULTY WITH STEERING WHILE VIBRATOR IS IN OPERATION:	See Vibratory Section
VIBRATOR WILL NOT OPERATE:	1. Check Neutral Safety Switch To Make Certain Power Is Reaching The Vibratory Valve. 2. Unfasten Pressure Line To Vibrator Motor And Attach Pressure Gauge. Start Engine. Pressure Should Go Immediately Between 1800 And 2000 PSI When Vibrator Is Engaged. This Assures That Valve Is Functioning Properly. Turn Engine Off. 3. Unbolt Hydraulic Motor From Drum. Re-fasten Pressure Line. Start Engine To See If Motor Is Operating. Turn Engine Off. 4. Check If Vibrator Shaft Turns Freely. If Shaft Does Turn Freely, Motor Is Bad. **Note:** Shaft Is Heavier On One Side Than The Other.

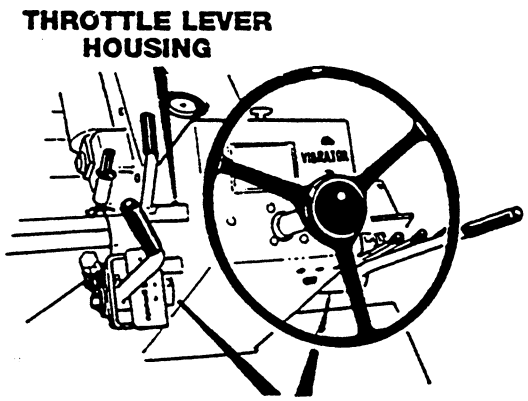
TROUBLE SHOOTING GUIDE FOR MODEL 400 ROLLER (CONT.)

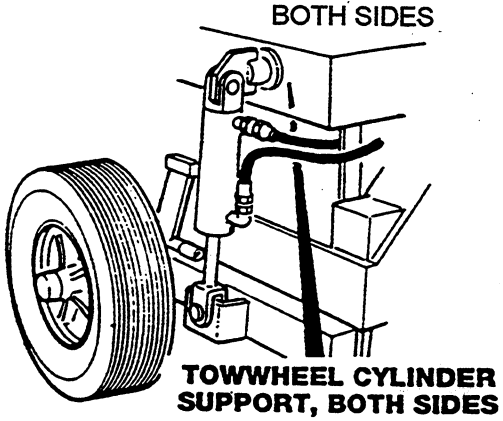
PROBLEM	SOLUTION
VIBRATOR WILL NOT OPERATE (Cont.)	5. Remove Vibratory Mechanism From Drum. Malfunction Is Bad Bearings, Broken Housing Or Broken Shaft. There Are Three Potential Areas For Failure In The Drive System.
ROLLER WILL NOT MOVE:	A. Hydraulic Pump To Check The Pump, Install Pressure Gauge In One Hose And Plug The Other Hose. Start Engine. Slowly Move Forward/Reverse Lever To Forward Or Reverse Position Until Pressure Reaches 2,500 PSI. This Assures Pump Is Functioning Properly. Turn Engine Off And Re-connect Hoses. B. Hydraulic Motor Put a tee in the hydraulic line with pressure gauge. Disconnect hydraulic motor from torque hub. Hold shaft of hydraulic motor firm preventing it from turning, check pressure gauge. If pump builds up at least 2,500 PSI, the motor is working as required. C. Torque Hub If A & B Are Functioning Properly, Replace Or Repair Torque Hub.

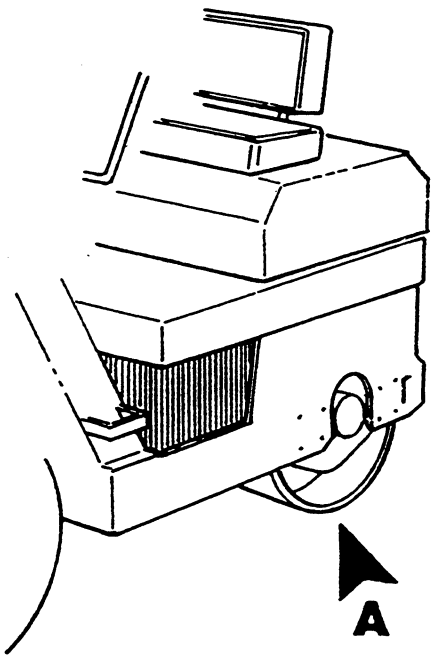
LUBRICATION CHART

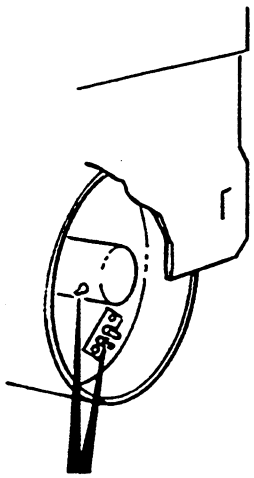
Location of grease fittings are identified in illustrations below. Lubricate these fittings every 40 hours with SHELL AVANIA EP grease 2 or equivalent.











TWO GREASE FITTING ON ROLLER DRUM AND ONE ON AXLE HUB

VIEW IN DIRECTION OF ARROW 'A'

LUBRICATION OF TORQUE HUB

Figure 1 shows the location of the Torque Hub on the Lee-Boy Model 400 and 400T Rollers.

Figure 2 shows the location of plugs "A" and "B" which can be used to fill, check or drain the oil from the hub.

The hub capacity is (1) quart of S.A.E. 90 motor oil.

It is very important that the oil level is checked every 40 - 60 hours of operation.

To check the oil level move the machine to level ground and position either plug "A" or "B" in the 10 o'clock position as shown in figure 3. To remove the plug, you must reach under the skirt of the machine. The oil level should be even with the bottom of the plug.

Tools Required:

5/16 Allen Wrench

Hand Pump (OIL) - Provides the easiest way to fill or add oil to the torque hub is to use a small 1 quart oil hand pump with a 12 inch flexible hose or a small oil can with a pump. These are both readily available at most auto parts houses.

Change the oil after first 500 hours of operation, annually thereafter.
More often if conditions are extremely harsh.

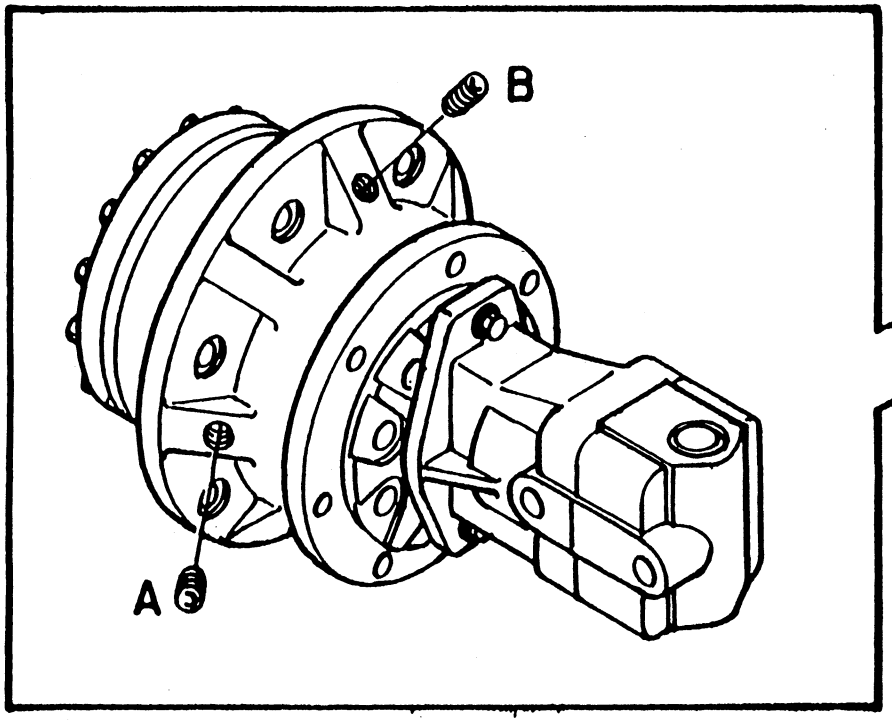


FIGURE (2)

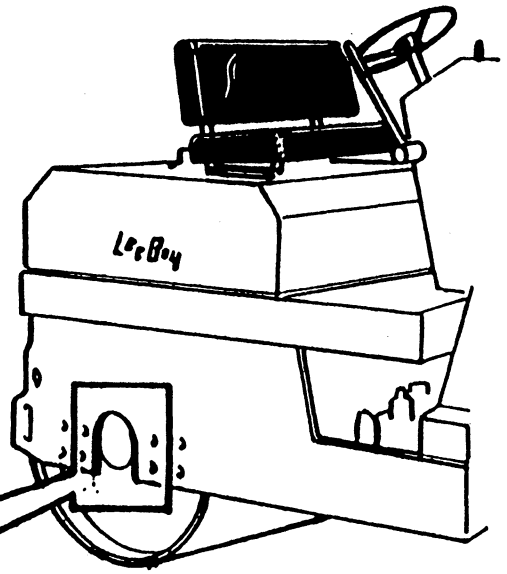


FIGURE (1)

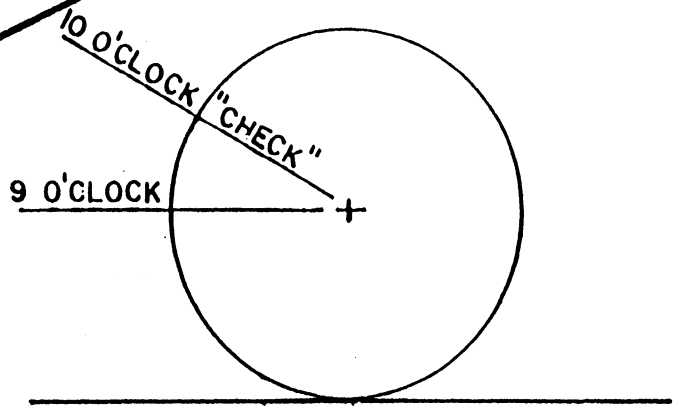
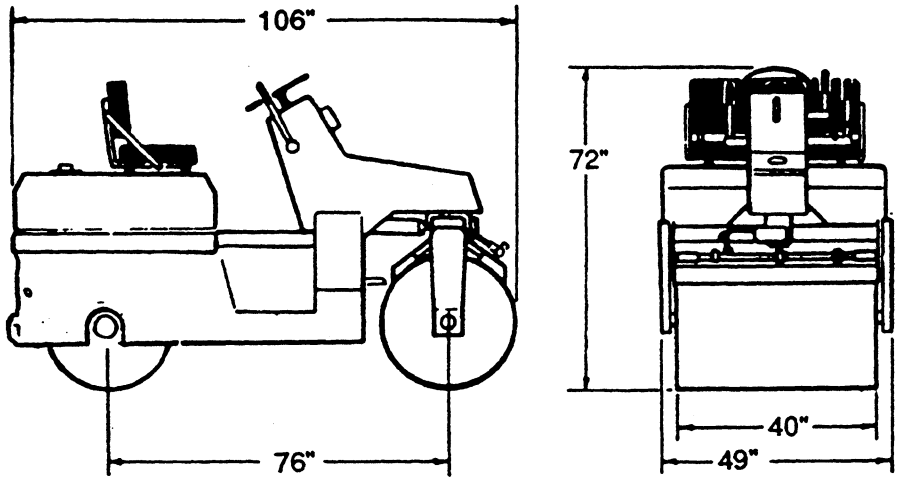


FIGURE (3)

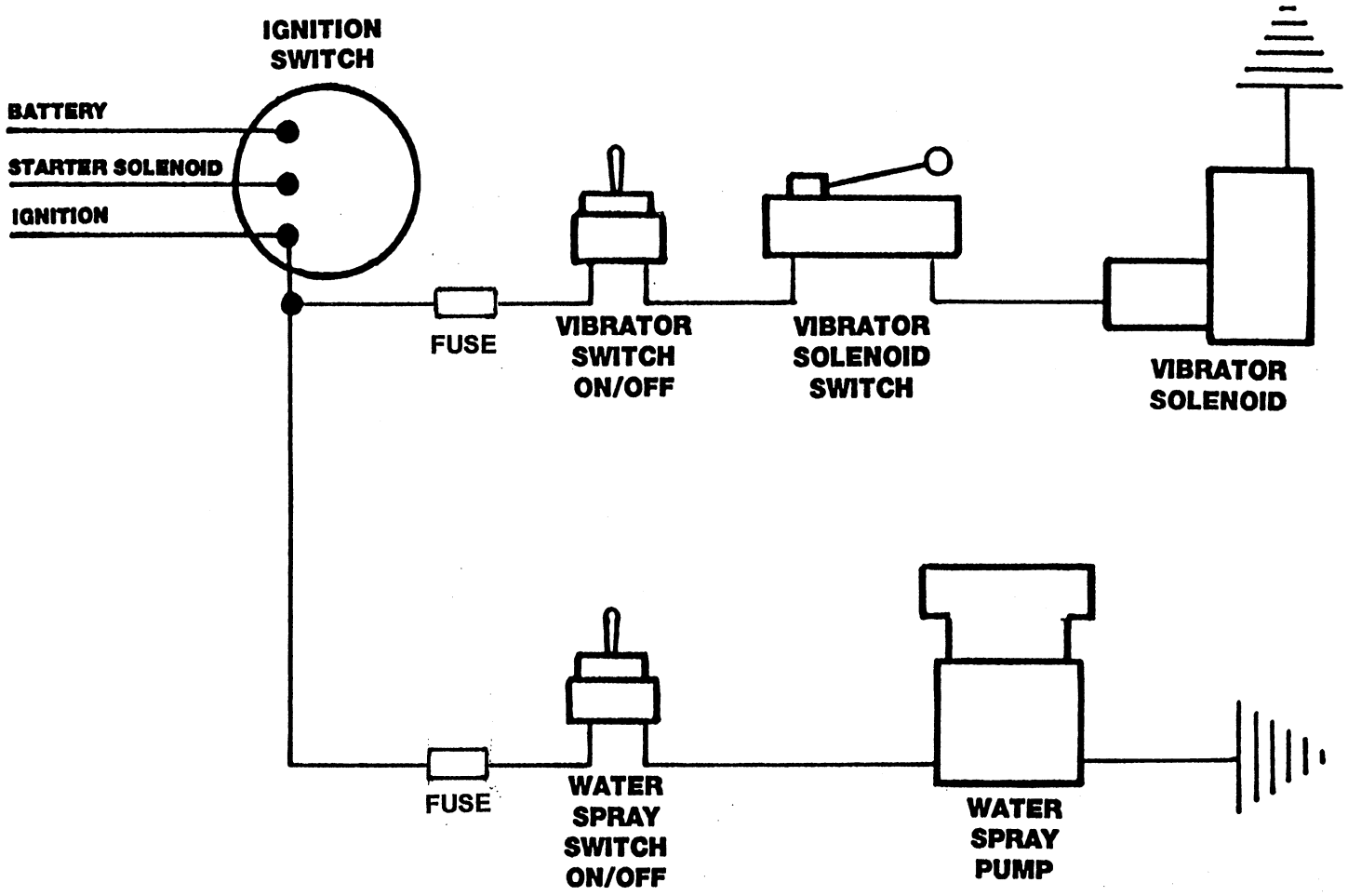
SPECIFICATIONS



VIBRATORY ROLLER
MODEL 400

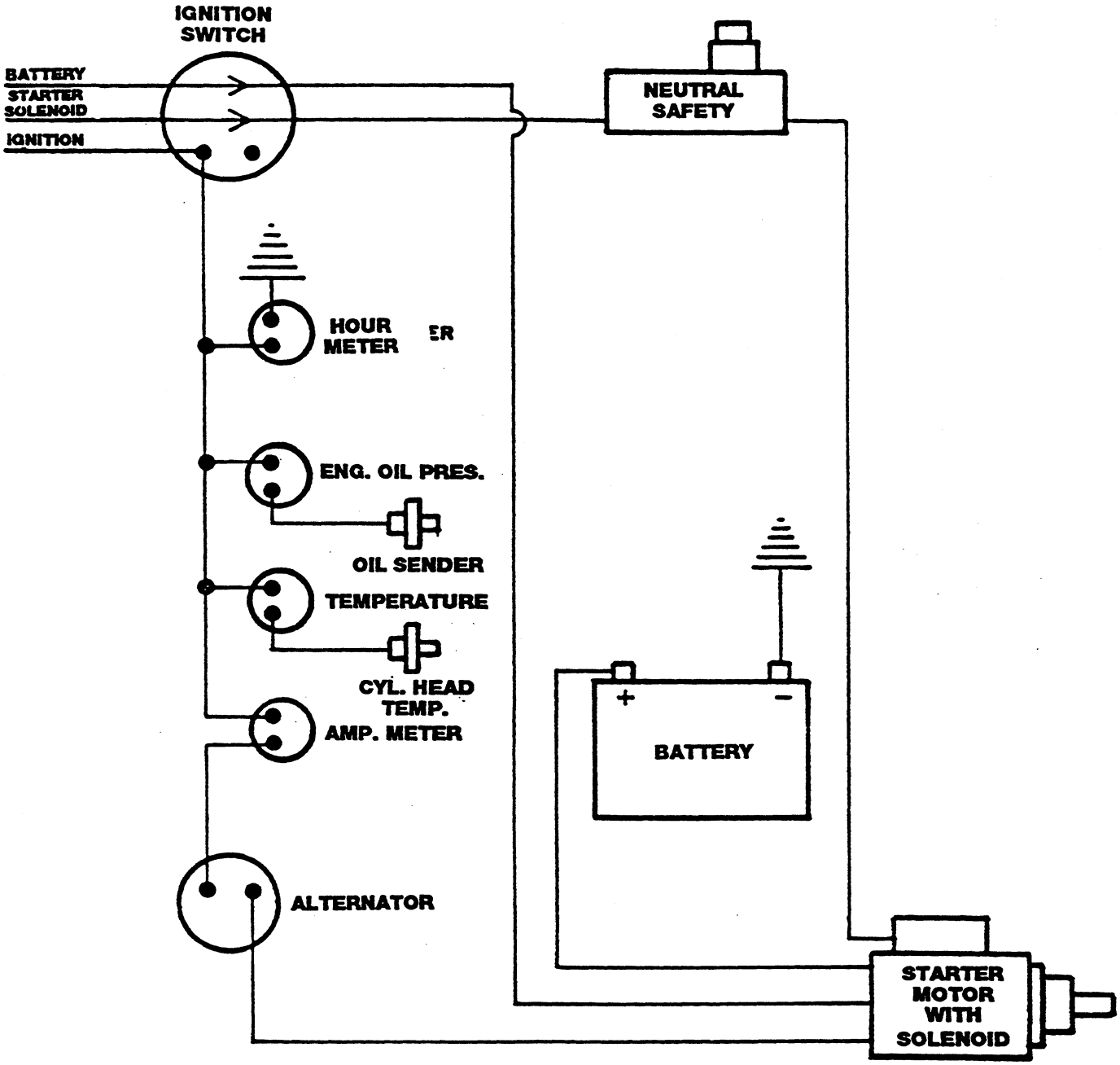
Static Weight	Empty 5,000 pounds
Engine	35 HP 3 Cylinder Diesel Engine
Transmission	Hydrostatic
Travel Speed	0 - 4.5 M.P.H.
Hydraulic Oil Capacity	29 Gallons
Water Tank Capacity	98 Gallons
Drum Split Front	Diameter 30 Inches Width 44 Inches
Rear	Diameter 30 Inches Width 40 Inches
Vibratory System	2,000 VPM
Electric System	12 Volt

ELECTRICAL CIRCUIT DIAGRAM
WATER PUMP & VIBRATOR SOLENOID

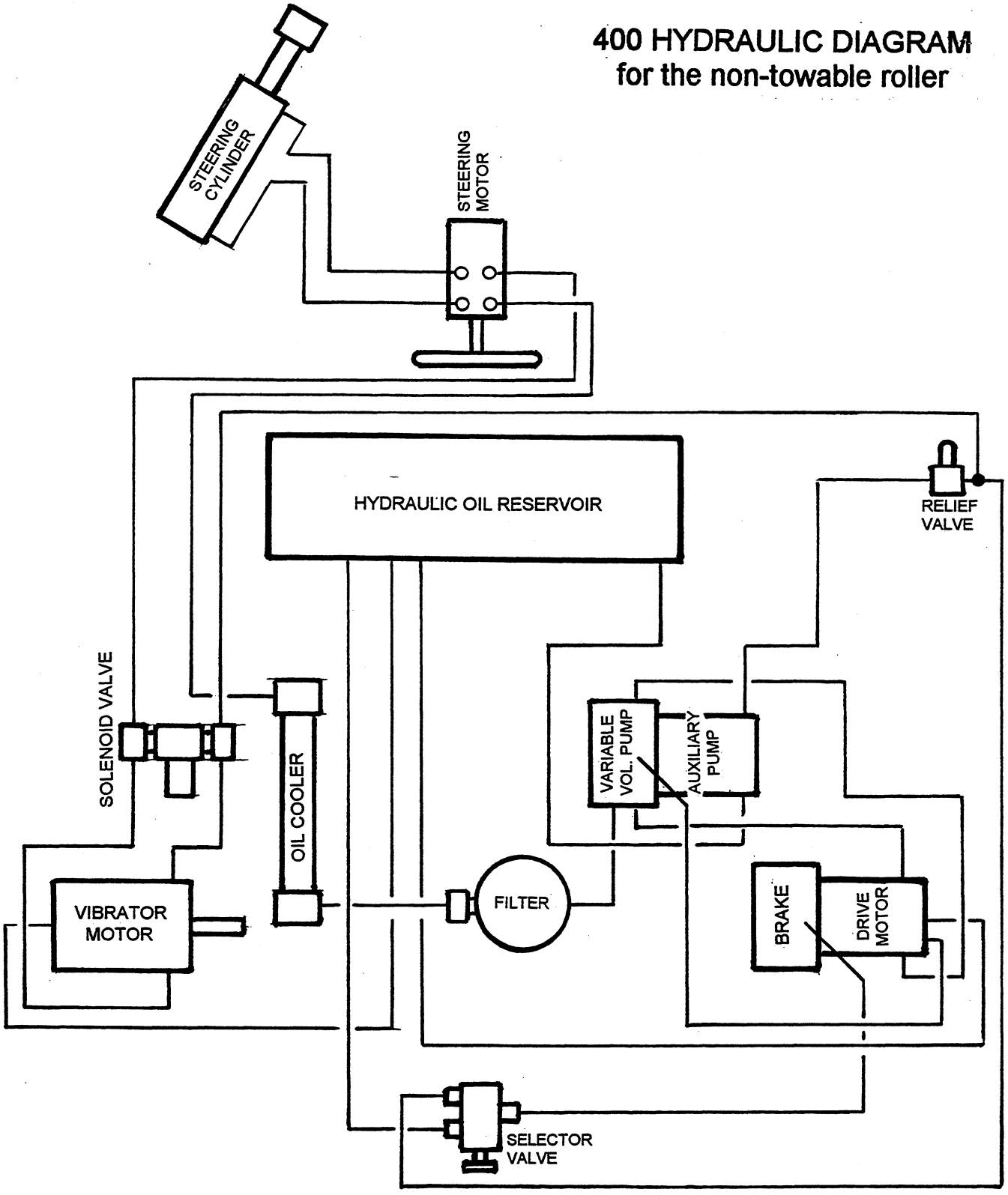


ELECTRICAL CIRCUIT DIAGRAM

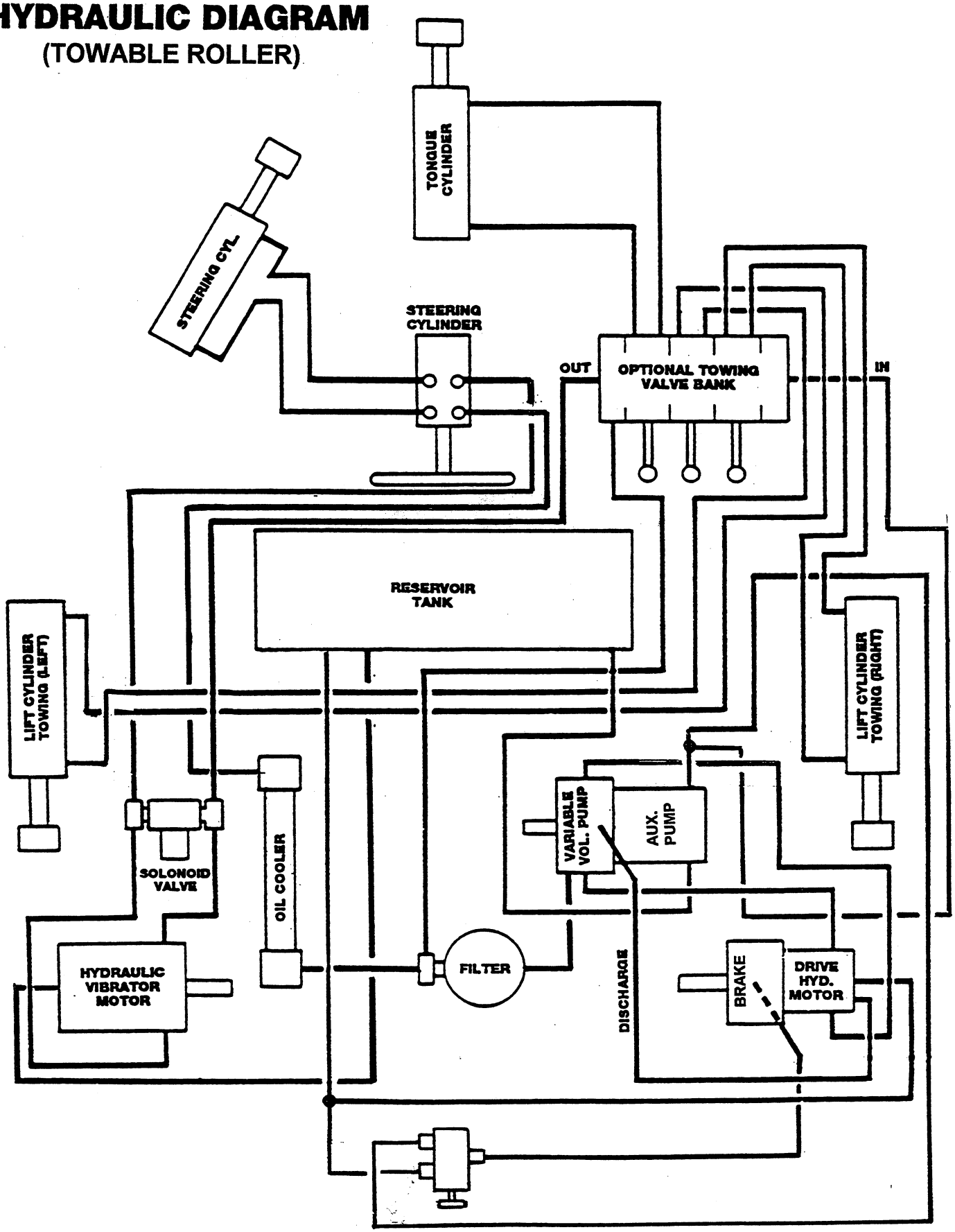
STARTING, CHARGING & WARNING LIGHTS



400 HYDRAULIC DIAGRAM
for the non-towable roller



HYDRAULIC DIAGRAM
(TOWABLE ROLLER)



LIST OF ILLUSTRATIONS
400 VIBRATORY ROLLER

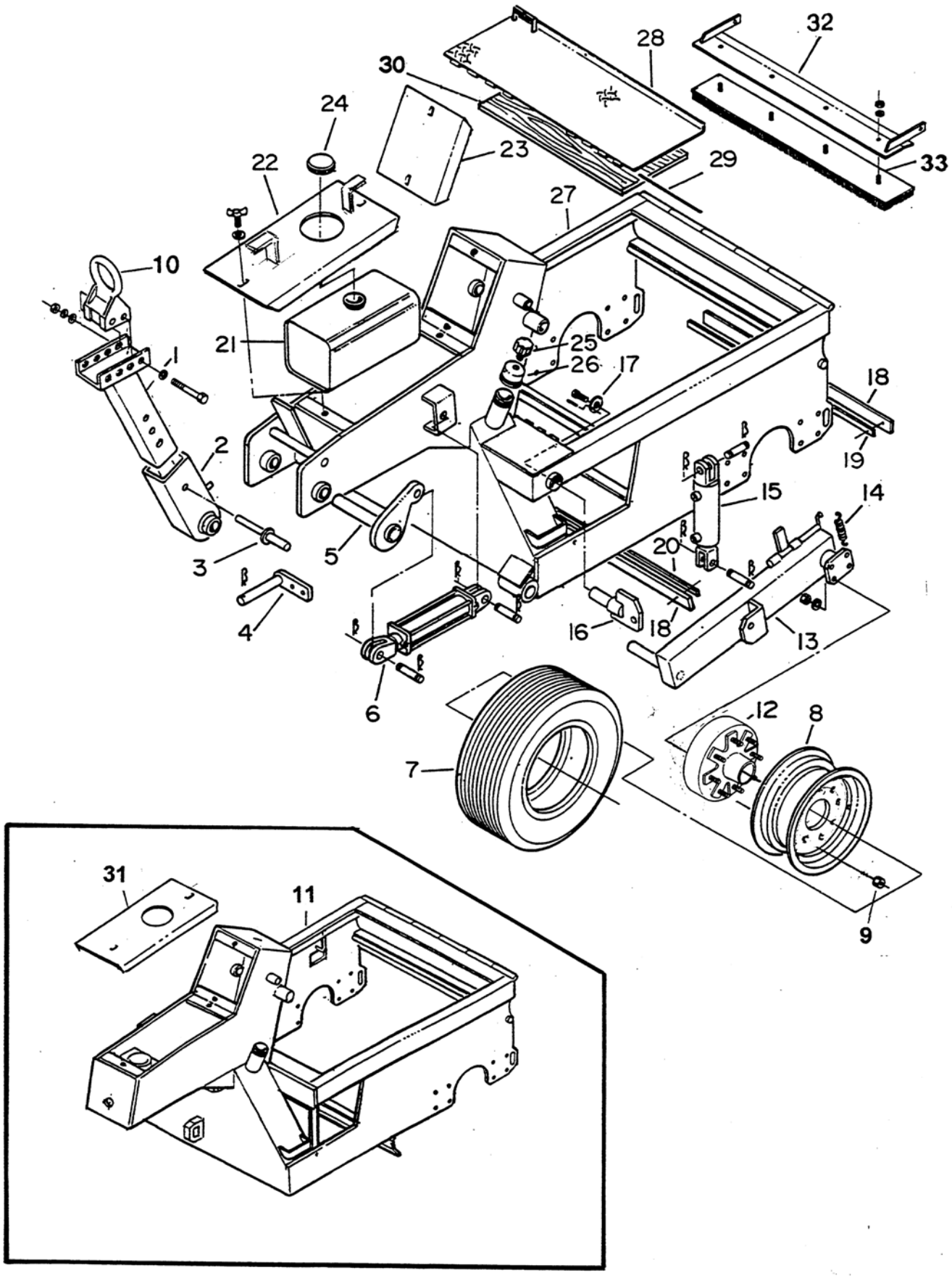
ORDERS

Orders should specify correct part numbers, a full description, quantity required, machine and engine model and serial numbers, method of shipping and shipping address.

RIGHT HAND AND LEFT HAND SIDES

the terms right hand and left hand (abbreviated to R.H. and L.H.) As used in this manual indicate the right and left sides of the machine as viewed from the operator's platform change.

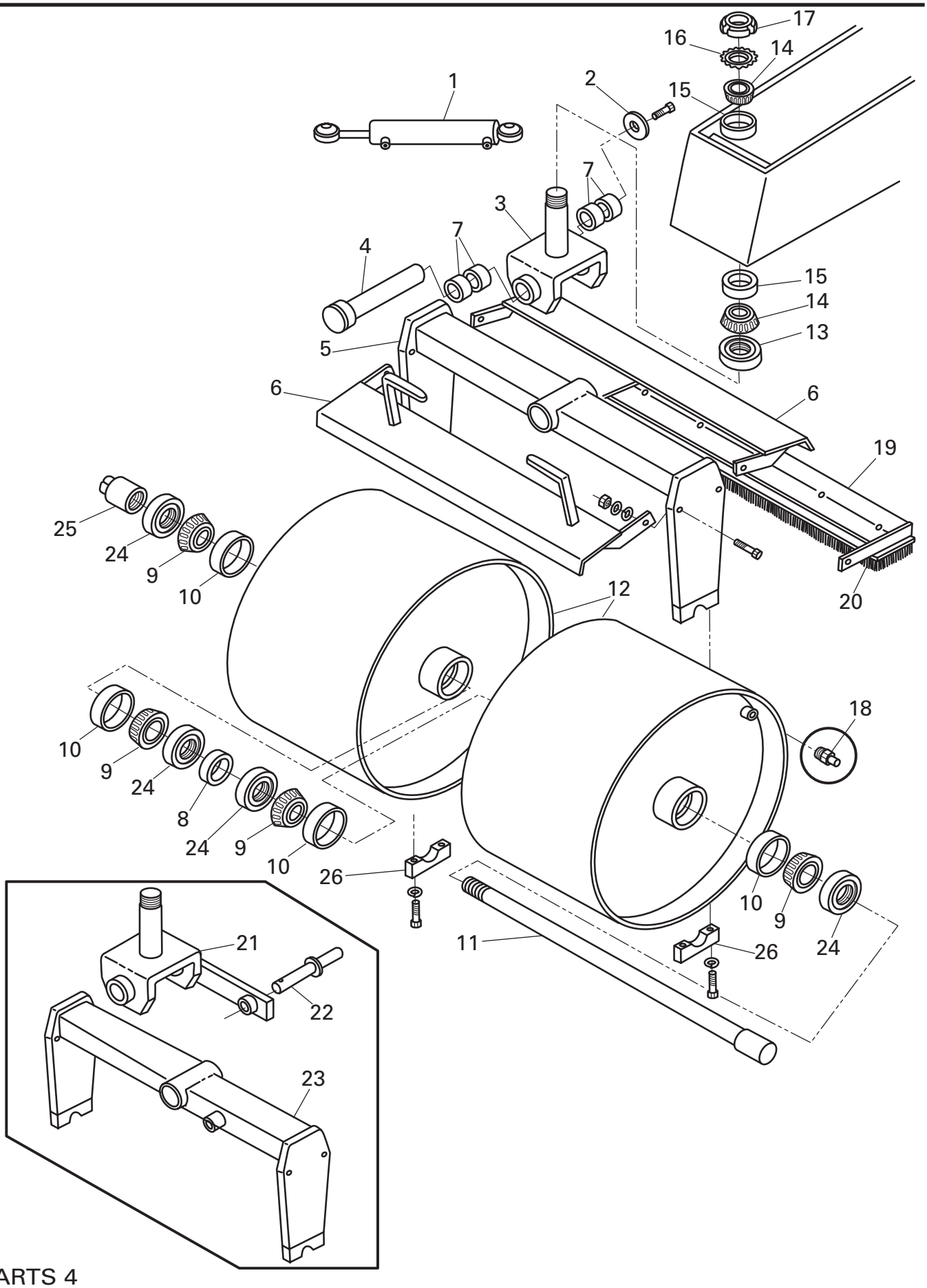
TOW PACKAGE AND MAIN FRAME



TOW PACKAGE AND MAIN FRAME

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	510014	TONGUE, EXTENSION	1
2	510023	RECEIVER, TONGUE	1
3	510031	PIN, TONGUE POSITIONER	1
4	510041	PIN, TOWING SAFETY	1
5	510052	ARM, TONGUE ACTUATOR	1
6	510060	CYLINDER, HYDRAULIC TONGUE (REPAIR SEAL KIT #510060-1)	1
7	340010	TIRE	1
8	340200	RIM	1
9	340020	LUG, RIM	1
10	510200	EYELET, PINTLE	1
11	410044	MAIN FRAME, NON-TOWABLE	1
12	340060	HUB (SPECIFY LEFT OR RIGHT)	1
13	510134	RIGGER (SPECIFY LEFT OR RIGHT)	1
14	510140	SPRING, SAFETY LOCK	1
15	510150	CYLINDER, HYDRAULIC (REPAIR SEAL KIT #510150-1)	1
16	510160-1	EYELET, CYLINDER	1
17	510170	WASHER, BACKUP	1
18	430050	MAT, SCRAPER BAR	1
19	430122	CLAMP, REAR MAT	1
20	430062	CLAMP, FRONT MAT	1
21	410030	TANK, FUEL	1
22	410031	PANEL, ACCESS TOWABLE	1
23	410041	PANEL, TOP ACCESS	1
24	330010	CAP, FUEL TANK	1
25	620050	CAP, BREATHER	1
26	410080	CAP, HYDRAULIC TANK	1
27	410044-T	MAIN FRAME, TOWABLE	1
28	410091	FLOOR PANEL, ENGINE ACCESS	1
29	410100	HINGE ASSY., FLOOR PANEL	1
30	410111	WOOD INSULATOR, FLOOR PANEL	1
31	410122	PANAL, FUEL TANK ACCESS	1
32	410132	BRACKET, REAR COCO MAT	1
33	430160-44	COCO MAT, REAR 44”	1

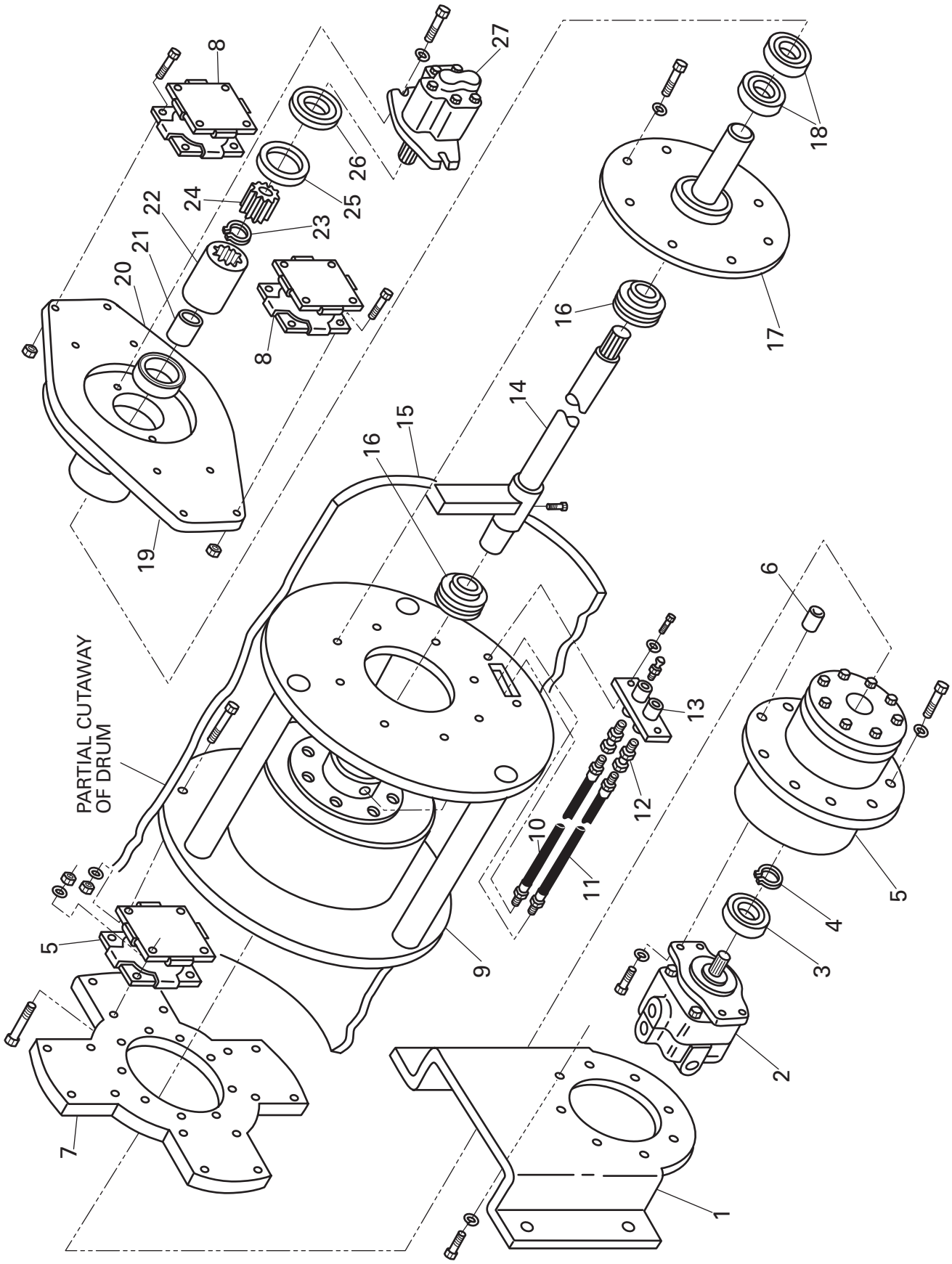
FRONT ROLLER ASSEMBLY



FRONT ROLLER ASSEMBLY

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	210460	CYLINDER, HYDRAULIC STEERING (Repair seal kit #210460-1)	1
2	420022	WASHER, BACKUP	1
3	420032	YOKE, STEERING	1
4	420042	PIN, STEERING YOKE	1
5	420043	CROSS MEMBER, FRONT END	1
6	420063	WIPER BLADE, FRONT ROLLER	2
7	210010	BUSHING, FRONT CROSS MEMBER	2
8	420082	SPACER, FRONT AXLE	2
9	210180	CONE, FRONT AXLE	4
10	210190	CUP, FRONT AXLE	4
11	420202	AXLE, FRONT	1
12	420124	DRUM, ROLLER FRONT	2
13	210240	SEAL, STEERING YOKE	1
14	210180	BEARING, STEERING YOKE	2
15	210190	RACE, STEERING YOKE	2
16	210170	LOCKWASHER, STEERING YOKE	1
17	210160	LOCKNUT, STEERING YOKE	1
18	420180	PLUG, ROLLER DRUM	2
19	420190	BRACKET, FRONT COCO MAT	1
20	430160-40	COCO MAT, FRONT 40”	1
21	420032T	YOKE, STEERING, TOWABLE	1
22	510041	PIN, STABILIZER	1
23	420210	TUBE, PIN LOCKING	1
24	210240	SEAL, FRONT AXLE	4
25	420211	NUT, FRONT AXLE	1
26	420102	SUPPORT BLOCK, FRONT AXLE	2

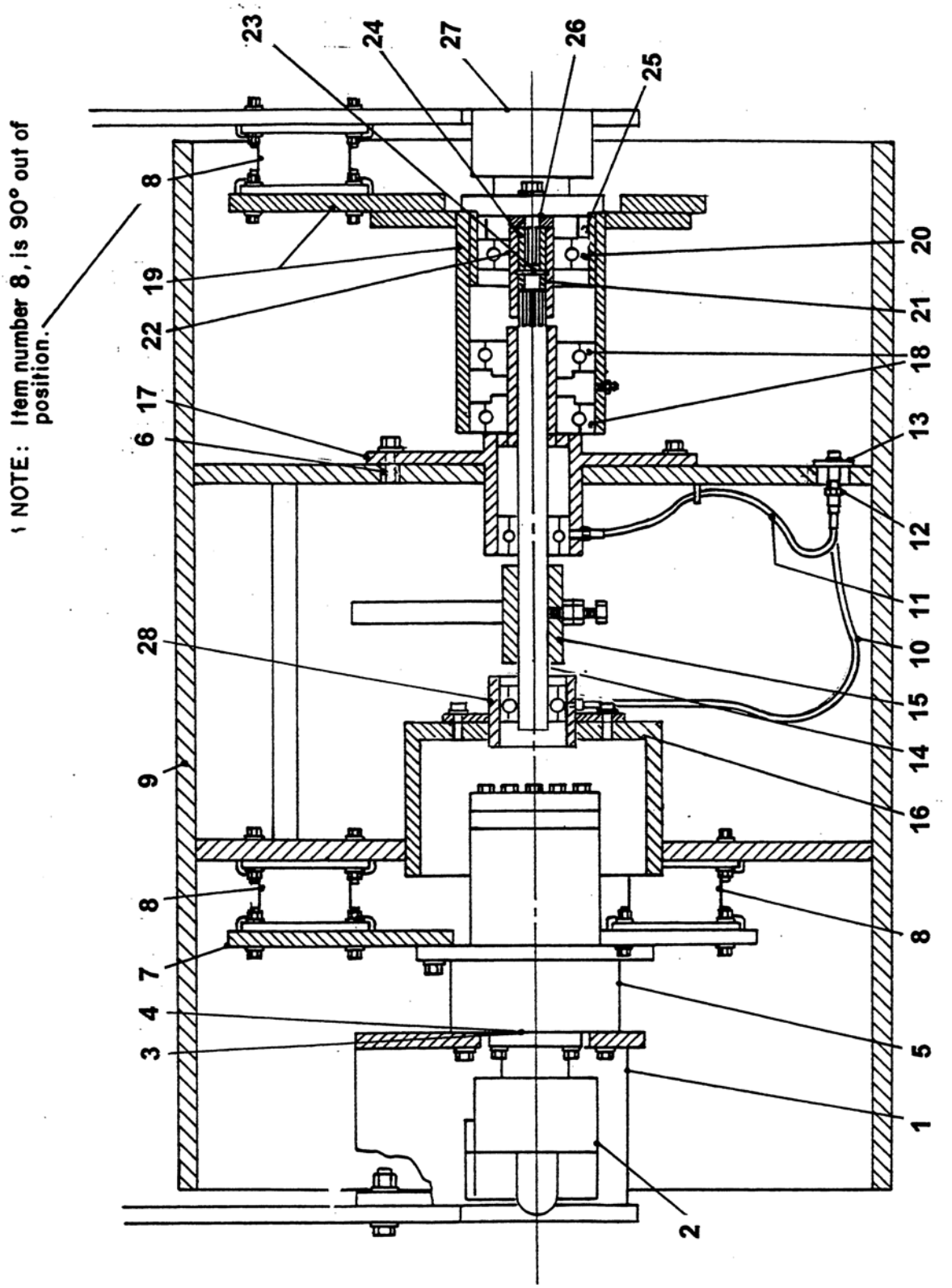
VIBRATORY DRUM ASSEMBLY



VIBRATORY DRUM ASSEMBLY

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	520191	SUPPORT, TORQUE HUB OUTER	1
2	520010	MOTOR, HYDRAULIC DRIVE	1
3	471965	SEAL, HYDRAULIC MOTOR	1
4	855600	RING, SNAP	1
5	520040	HUB, TORQUE	1
6	520270	BUSHING, TORQUE HUB	1
7	520202	SUPPORT, TORQUE HUB INNER	1
8	520020	PAD, MOUNTING	1
9	520074	HOUSING, DRIVE	1
10	520210	HOSE, LING GREASE	1
11	520220	HOSE, SHORT GREASE	1
12	520230	COUPLING, GREASE	1
13	520241	PLATE, MOUNTING GREASE	1
14	520081	SHAFT, VIBRATOR	1
15	520251	WEIGHT, ECCENTRIC	1
16	520060	BEARING, VIBRATOR SHAFT	1
17	520092	AXLE, STUB	1
18	520100	BEARING, AXLE	1
19	520132	HOUSING, AXLE	1
20	520120	BEARING, COUPLING SUPPORT	1
21	520141	SPACER	1
22	520150	COUPLING, OUTER SPLINE	1
23	520160	RING, SNAP	1
24	520170	COUPLING, INNER SPLINE	1
25	520261	SPACER	1
26	446102	SEAL, VIBRATOR MOTOR	1
27	520180	MOTOR, HYDRAULIC	1

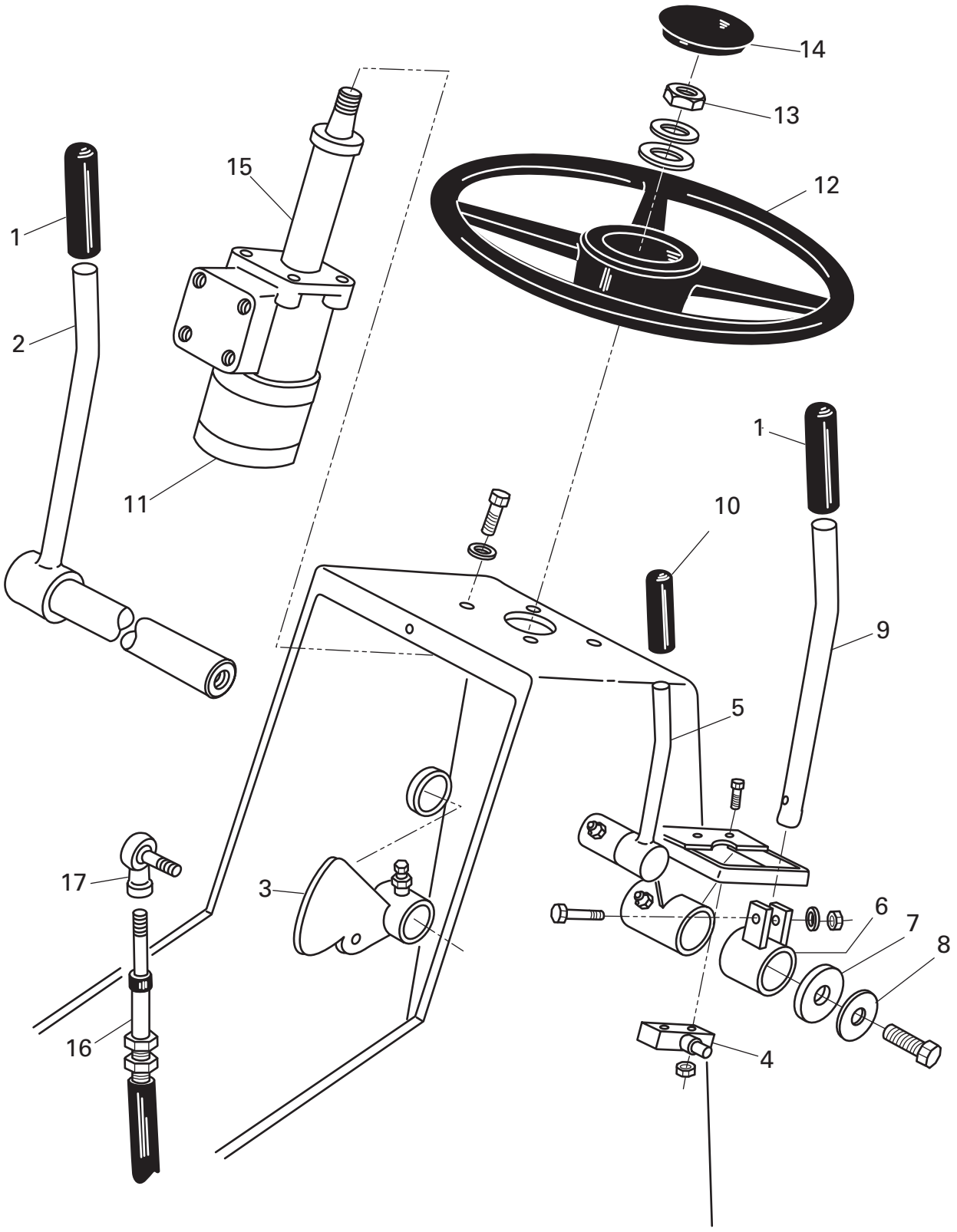
VIBRATORY DRUM ASSEMBLY CUT AWAY



VIBRATORY DRUM ASSEMBLY CUT AWAY

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	520191	SUPPORT, TORQUE HUB OUTER	1
2	520010	MOTOR, HYDRAULIC DRIVE	1
3	471965	SEAL, HYDRAULIC MOTOR	1
4	855600	RING, SNAP	1
5	520040	HUB, TORQUE	1
6	520270	BUSHING, TORQUE HUB	1
7	520202	SUPPORT, TORQUE HUB INNER	1
8	520020	PAD, MOUNTING	1
9	520074	HOUSING, DRIVE	1
10	520210	HOSE, LONG GREASE	1
11	520220	HOSE, SHORT GREASE	1
12	520230	COUPLING, GREASE	1
13	520241	PLATE, MOUNTING GREASE	1
14	520081	SHAFT, VIBRATOR	1
15	520251	WEIGHT, ECCENTRIC	1
16	520060	BEARING, VIBRATOR SHAFT	1
17	520092	AXLE, STUB	1
18	520100	BEARING, AXEL	1
19	520132	HOUSING, AXEL	1
20	520120	BEARING, COUPLING SUPPORT	1
21	520141	SPACER	1
22	520150	COUPLING, OUTTER SPLINE	1
23	520160	RING, SNAP	1
24	520170	COUPLING, INNER SPLINE	1
25	520261	SPACER	1
26	446102	SEAL, VIBRATOR MOTOR	1
27	520180	MOTOR , HYDRAULIC	1

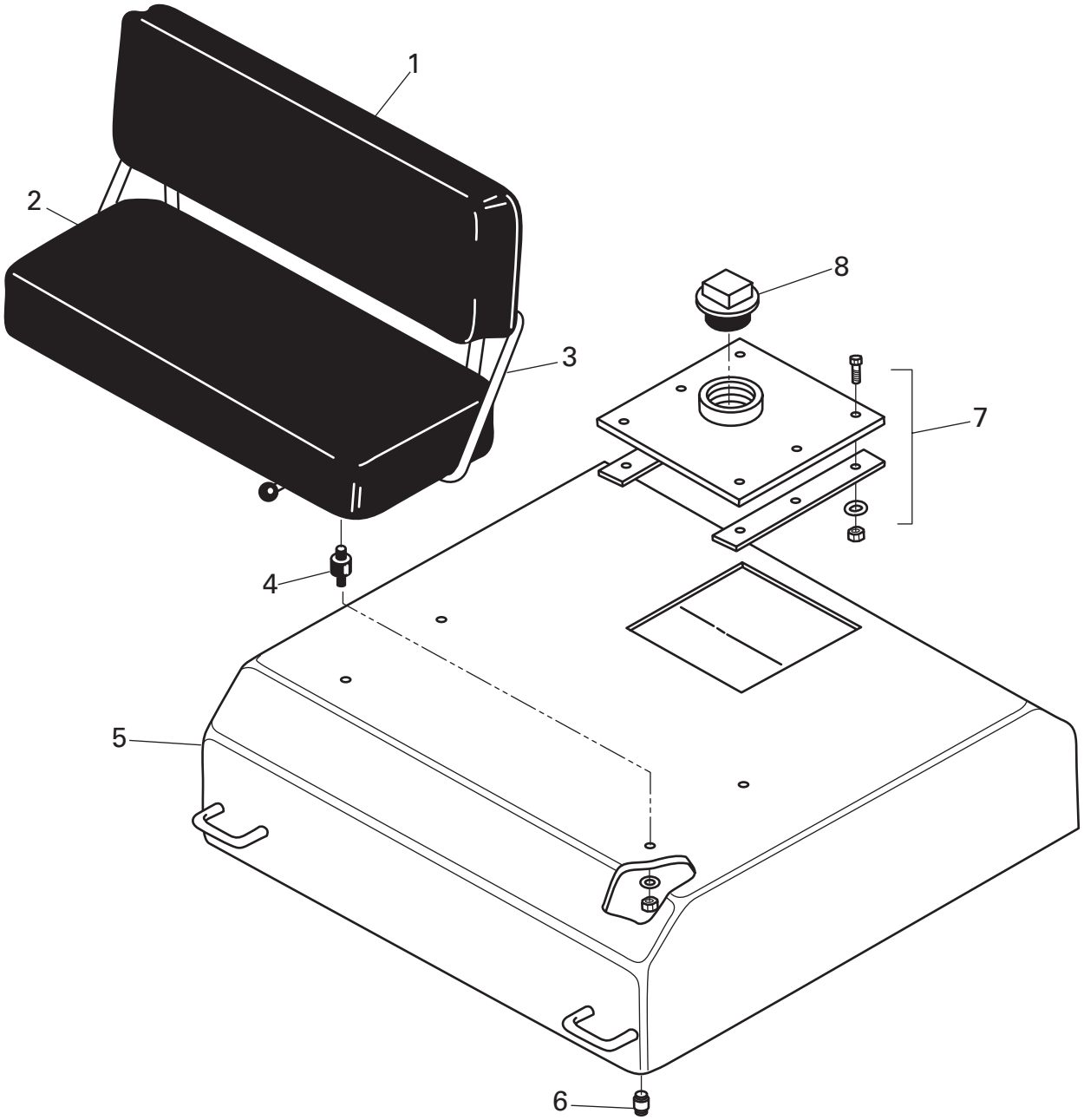
STEERING AND DRIVE CONTROL ASSEMBLY



STEERING AND DRIVE CONTROL ASSEMBLY

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	490010	COVER, DRIVE HANDLE	2
2	490022	DRIVE LEVER, R.H.	1
3	490031	LEVER, PUMP	1
4	490040	SWITCH, NEUTRAL SAFETY	1
5	490052	LEVER, THROTTLE	1
6	490062	BUSHING, L.H. DRIVE LEVER	1
7	490071	SPACER	1
8	490080	WASHER, SPRING	1
9	490092	DRIVE LEVER, L.H.	1
10	490100	COVER, THROTTLE LEVER	1
11	300050	HYDRAULIC MOTOR, POWER STEERING	1
12	300030	STEERING WHEEL	1
13	300020	NUT, STEERING WHEEL	1
14	300010	COVER, STEERING WHEEL	1
15	300040	STEERING COLUMN	1
16	500770	CABLE, FORWARD & REVERSE	1
17	140280	BALL JOINT, ROD END	1

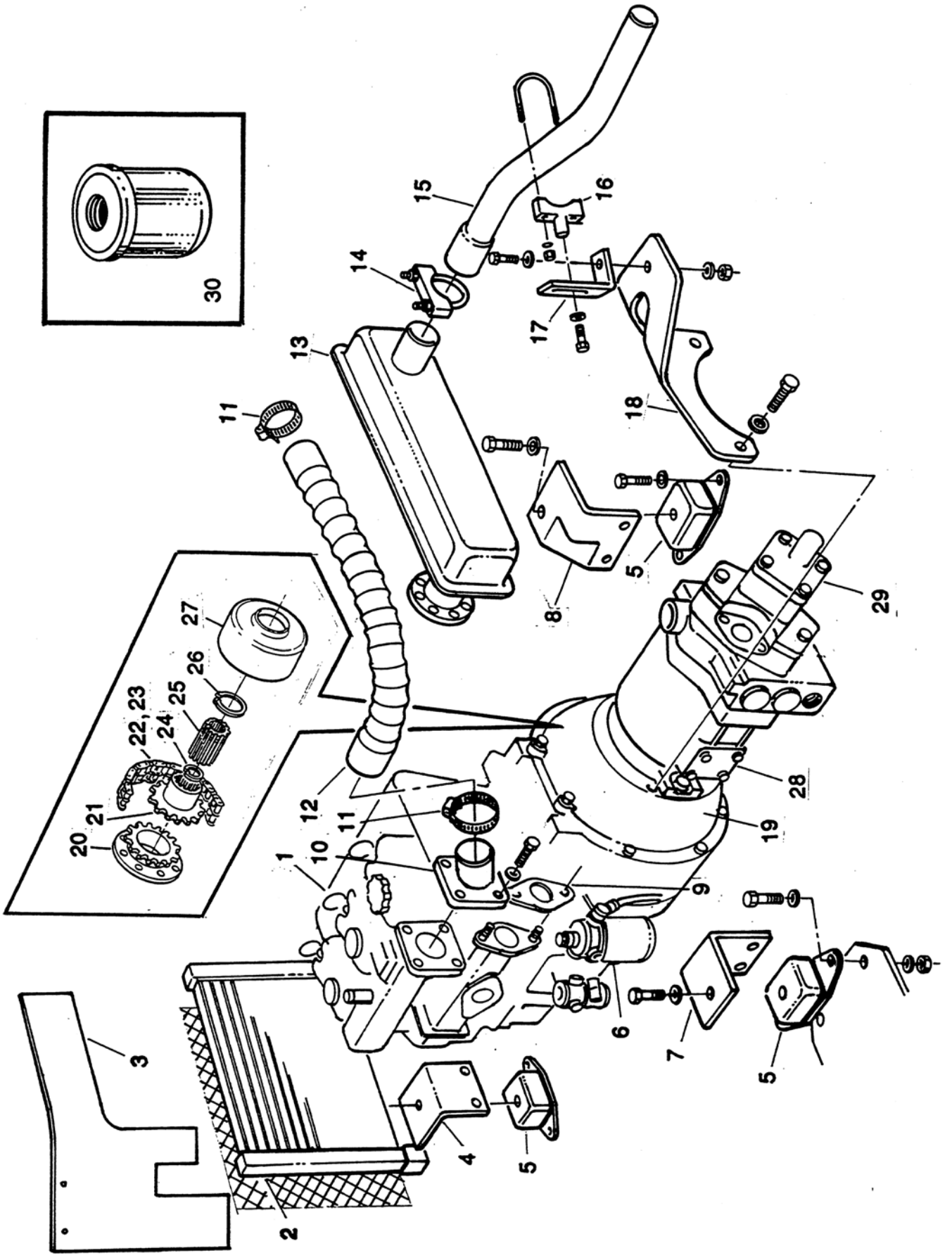
WATER TANK AND SEAT ASSEMBLY



WATER TANK AND SEAT ASSEMBLY

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	440010	SEAT, BACK REST	1
2	440020	SEAT, LOWER CUSHION	1
3	440030	FRAME, SEAT	1
4	440040	SHOCK MOUNT, SEAT	4
5	440054	TANK, WATER	1
6	420180	PLUG, DRAIN	1
7	440072	PANEL, FILL & ACCESS	1
8	440080	FILL PLUG	1

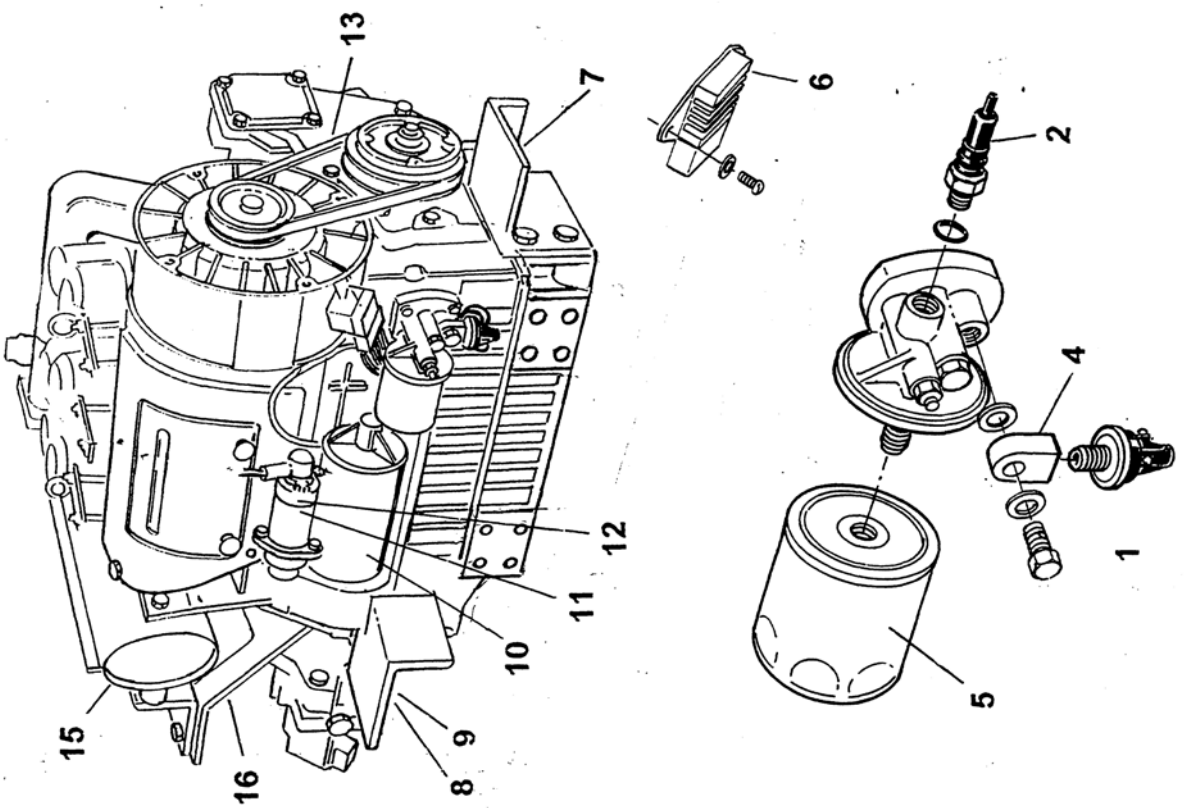
ENGINE, HYDRAULIC OIL COOLER AND COMPONENTS

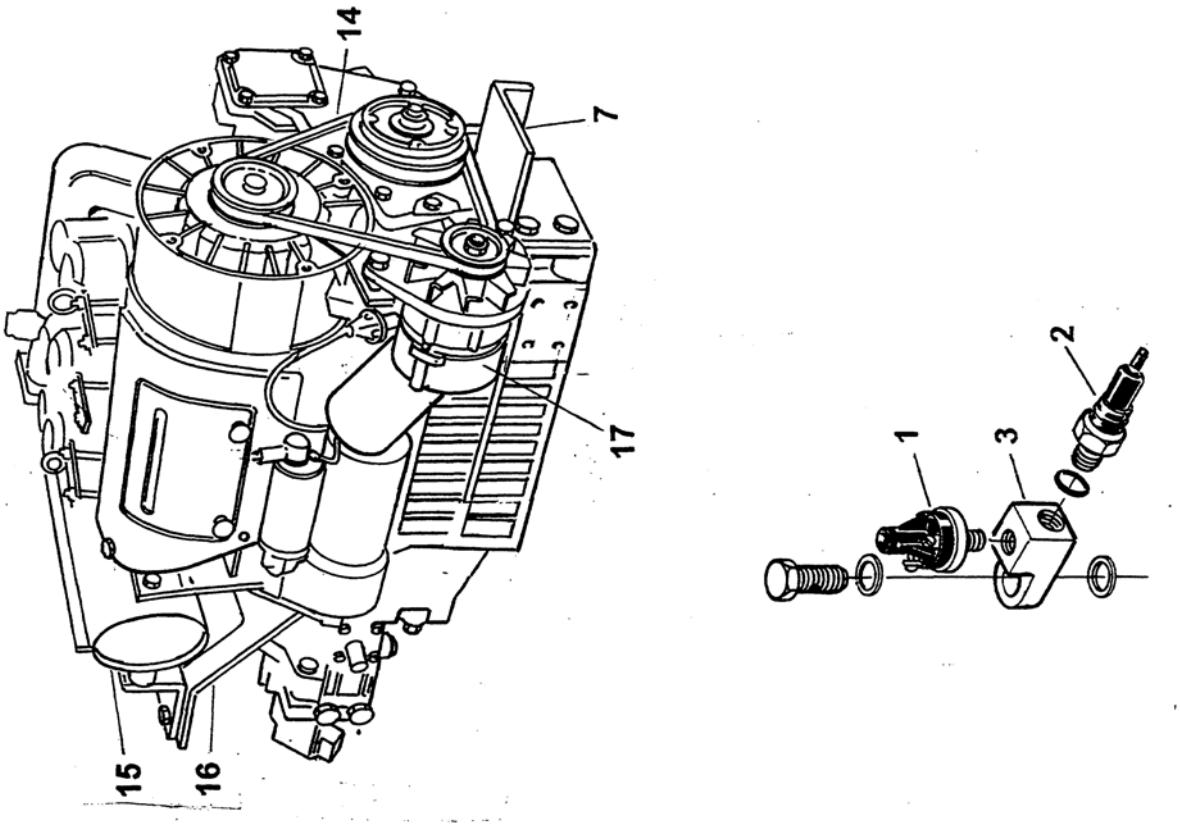


ENGINE, HYDRAULIC OIL COOLER AND COMPONENTS

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	530010-3	ENGINE, LOMBARDINI 3 CYL.	1
2	700090	COOLER, OIL	2
3	530110	DEFELECTOR, AIR	1
4	530121	BRACKET, FRONT ENGINE	1
5	530090	MOUNT, ENGINE INSULATOR	3
6	700370	FUEL FILTER	1
7	530101-3 L.H.	BRACKET, LEFT REAR ENGINE	1
8	530101-3 R.H.	BRACKET, RIGHT REAR ENGINE	1
9	530130	GASKET, EXHAUST	1
10	530141	NECK, AIR INTAKE	1
11	700500	CLAMP, HOSE	2
12	530150	HOSE, AIR INTAKE	1
13	530160	MUFFLER, EXHAUST	1
14	530170	CLAMP, EXHAUST PIPE	1
15	530180	PIPE, EXHAUST	1
16	530170	ADAPTER, 'U' BOLT ALIGNMENT	1
17	530191	BRACKET, 'U' BOLT ALIGNMENT	1
18	530202	SUPPORT, EXHAUST SYSTEM	1
19	700460	HOUSING, ENGINE, COUPLING	1
20	700390	COUPLING, SPROCKET MOUNT	1
21	700400	COUPLING, SPROCKET SPLINE	1
22	700410	CHAIN, COUPLING	1
23	700410-1	LINK, MASTER	1
24	700420	RING, SNAP	1
25	700430	COUPLING, EXTERNAL / INTERNAL	1
26	700440	RING, SNAP	1
27	700450	BOOT, RUBBER PROTECTOR	1
28	530040	PUMP, HYDRAULIC	1
29	530050	PUMP, AUXILIARY AND CHARGE	1
30	500160-2	OIL FILTER, ENGINE	1

ENGINE COMPONENTS

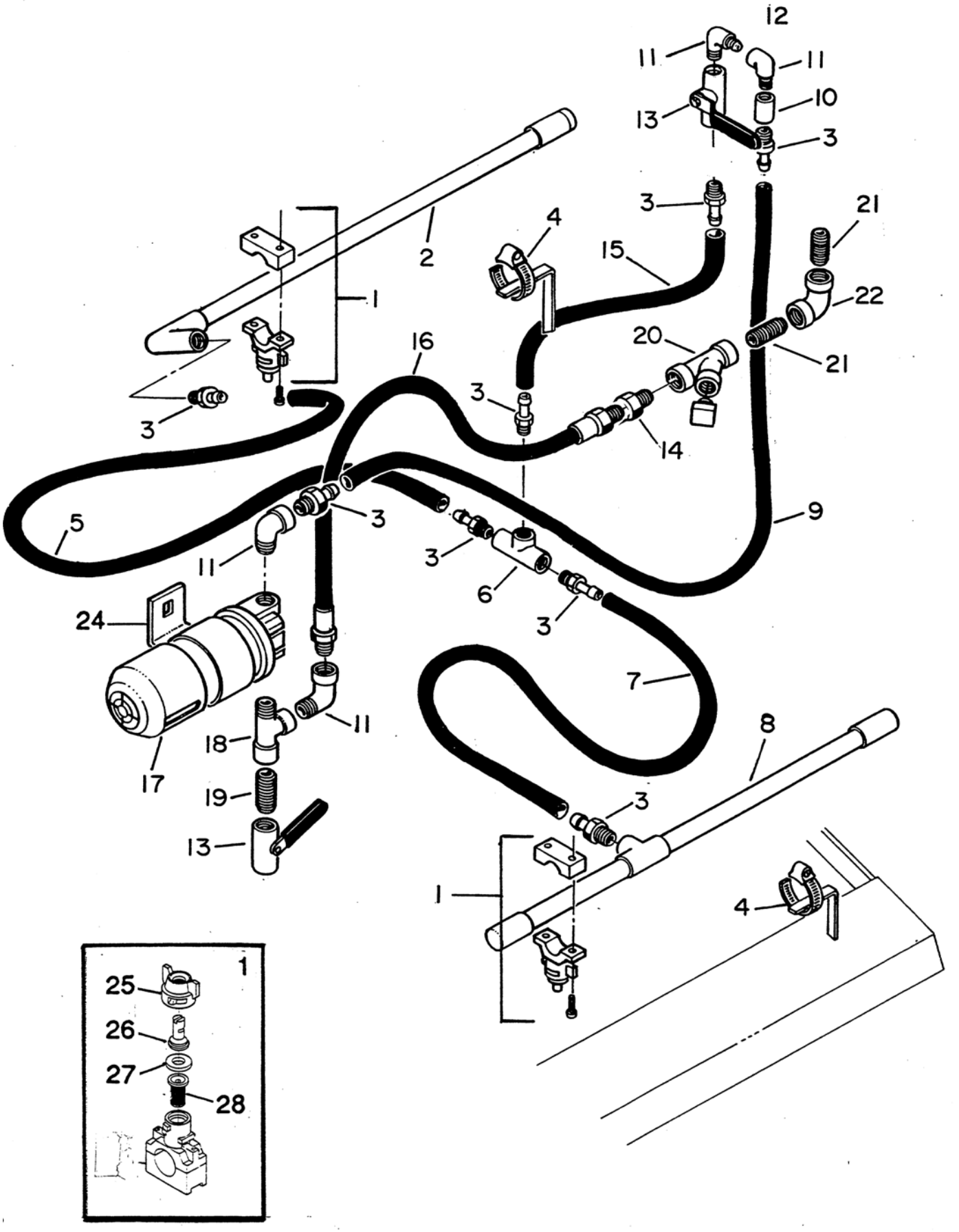




ENGINE COMPONENTS

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	000Z1Q	SWITCH, OIL PRESS (HOBBS)	1
2	530210	SWITCH, OIL PRESS	1
3	000P1 Q	ADAPTER, HOBBS SWITCH (EXTERNAL ALTERNATOR)	1
4	000P1 E	ADAPTER, HOBBS SWITCH (INTERNAL ALTERNATOR)	1
5	700370	OIL FILTER	1
6	530220	VOLTAGE REGULATOR	1
7	530121	FRONT MOUNT, ENGINE	1
8	530101-3L	SIDE MOUNT, ENGINE (SPECIFY R.H. OR L.H.)	1
9	530101-3R	SIDE MOUNT, ENGINE (SPECIFY R.H. OR L.H.)	1
10	530230	STARTER MOTOR (SPECIFY BOSCH OR DELCO)	1
11	530240	SOLENOID, STARTER (SPECIFY BOSCH OR DELCO)	1
12	530250	BENDIX DRIVE, (SPECIFY BOSCH OR DELCO)	1
13	530260	ALTERNATOR/FAN BELT (INTERNAL ALTERNATOR)	1
14	530270	ALTERNATOR/FAN BELT (EXTERNAL ALTERNATOR)	1
15	530160	MUFFLER	1
16	530202	SUPPORT, MUFFLER	1
17	530280	ALTERNATOR (EXTERNAL ONLY)	1

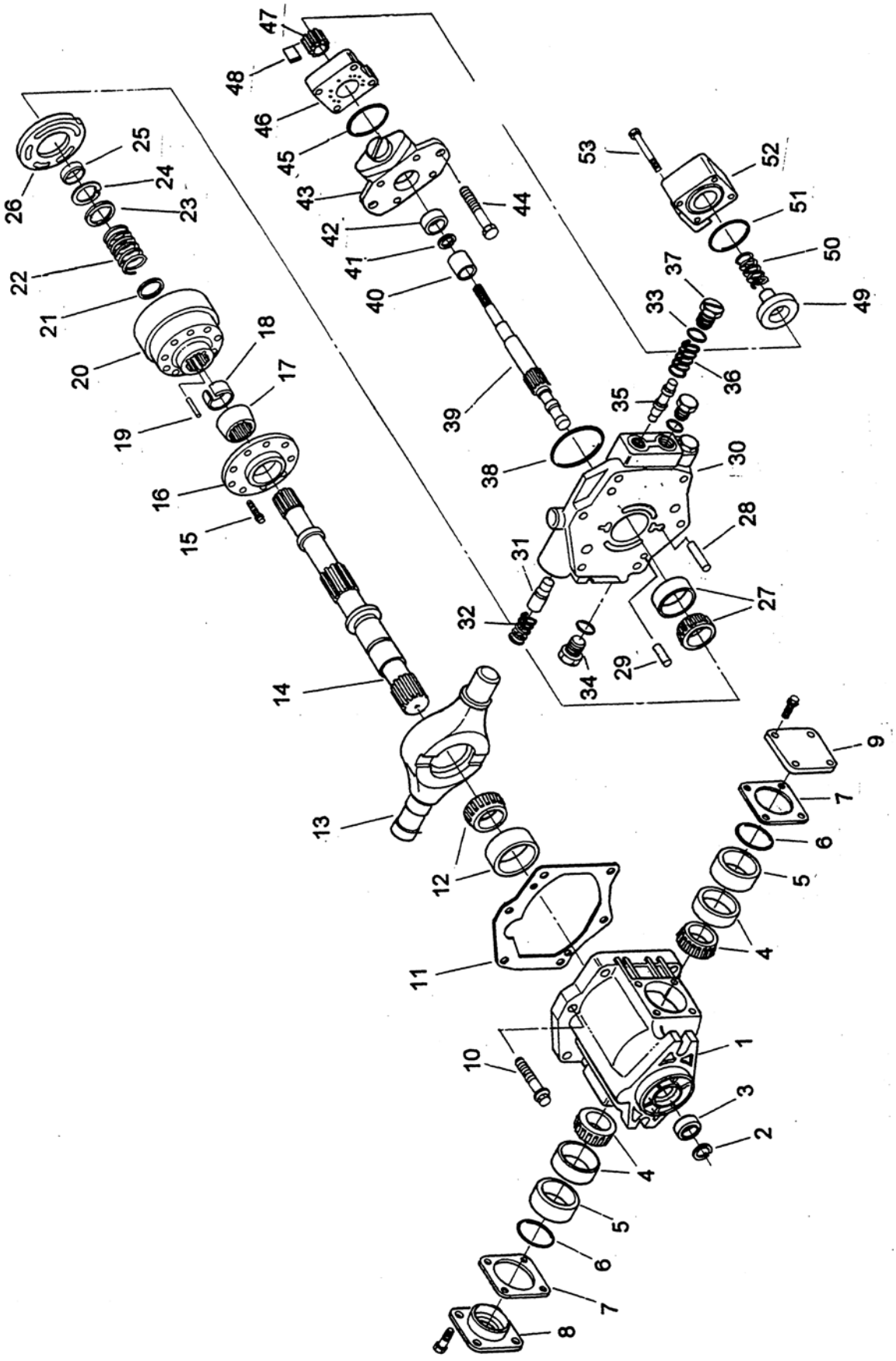
WATER SYSTEM ASSEMBLY



WATER SYSTEM ASSEMBLY

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	480010	NOZZLE, WATER SPRAY	6
2	480022	BAR, REAR SPRAY	1
3	480030	HOSE, ADAPTOR	2
4	480200	CLAMP	4
5	480040-1	HOSE, REAR WATER	1
6	480140	TEE	1
7	480150	HOSE	1
8	480100	BAR, FRONT SPRAY	1
9	480210	HOSE	1
10	480220	COUPLE	1
11	480230	ELBOW, 900 STREET	1
12		ELBOW, 900 NIPPLE	1
13	480160	VALVE	2
14		REDUCER	1
15	480240	HOSE	1
16	480250	HOSE	1
17	480110-1	PUMP, WATER	1
18	480170	TEE	1
19	480120	PIPE, NIPPLE	1
20	480080	Y-STRAINER	1
21	480070	PIPE, NIPPLE	1
22	480060	PIPE, ELBOW	1
23	480050	PIPE, NIPPLE	1
24	480260	BRACKET, WATER PUMP	1
25	480010-3	CAP, WATER SPRAY NOZZLE	1
26	480010-1	TIPS	1
27	480010-4	WASHER, FLAT	1
28	480010-2	STRAINER	1

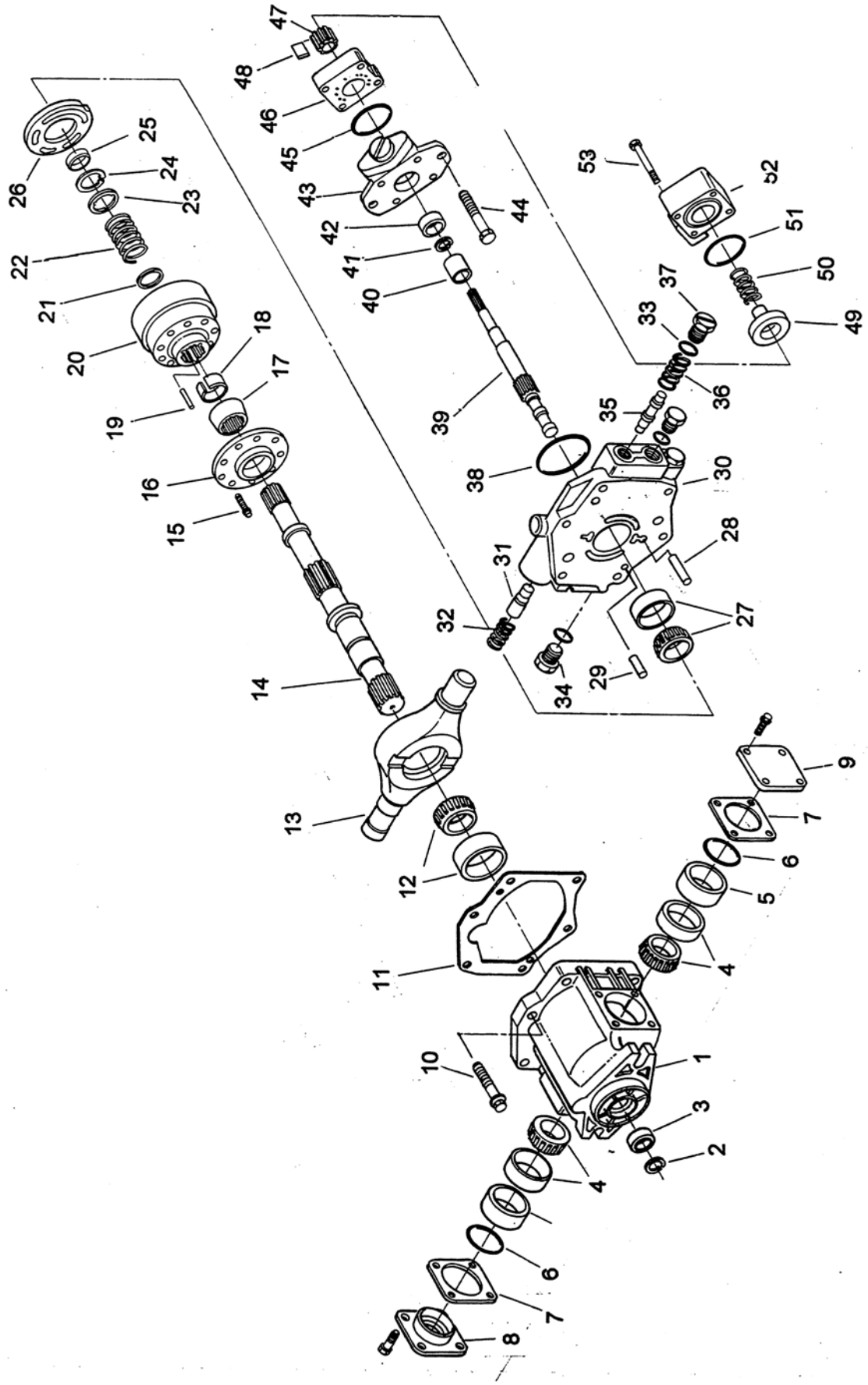
SINGLE TRANSMISSION PUMP WITH SINGLE VALVE PUMP



SINGLE TRANSMISSION PUMP WITH SINGLE VALVE PUMP

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	422309	HOUSING	1
2	855600	RING, SNAP	1
3	471965	SEAL, SHAFT	1
4	417381	BEARING AND RACE ASSY.	1
5	410053	SPACER, PINTLE BEARING	1
6	174140	'O' RING	1
7	923938	SHIM	1
8	416638	SEAL, PINTLE SHAFT	1
9	416637	COVER, PINTLE	1
10	427171	BOLT	1
11	423617	GASKET	1
12	419627	BEARING AND RACE ASSY.	1
13	416636	YOKE (SHOWN IN RIGHT HAND POSITION)	1
14	423420	SHAFT	1
15	923939	PISTON, SHOE	1
16	402650	PLATE, SHOE	1
17	402580	WASHER, SPHERICAL	1
18	410050	PIN, RETAINER	1
19	248810	PIN	3
20	426836	BLOCK, CYLINDER	1
21	404932	WASHER, SPRING	1
22	424526	SPRING, GREEN CODED	1
23	423368	WASHER, SPRING	1
24	999070	RING, RETAINER	1
25	942041	SPACER, BEARING (CHAMFER TOWARD SHOULDER OF SHAFT)	1
26	424481	PLATE, WAFER	1
27	473914	BEARING AND RACE ASSY.	1
28	248910	PIN	1
29	429325	PIN	1
30	423343	BLOCK, VALVE	1
31	416645	POPPET	1

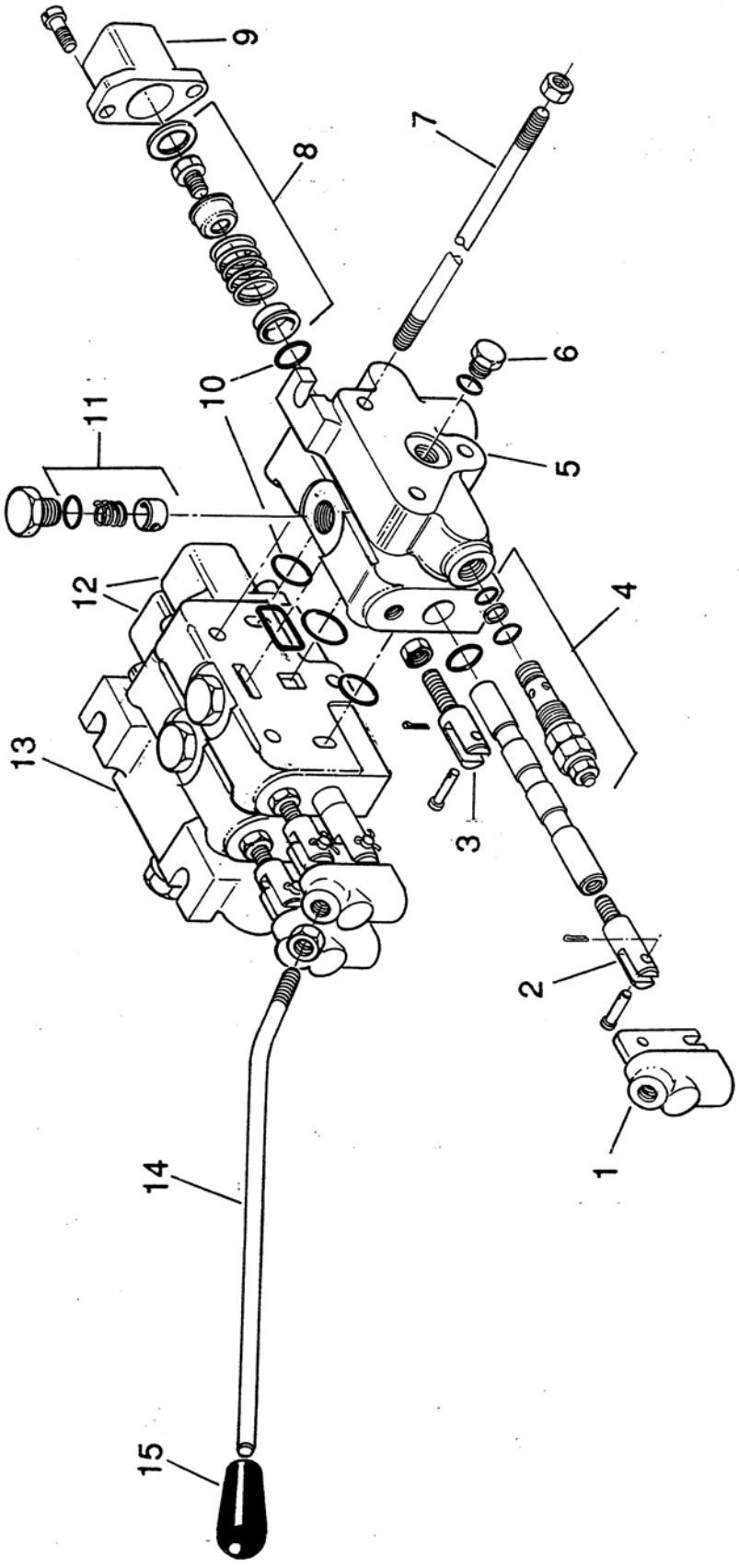
SINGLE TRANSMISSION PUMP WITH SINGLE VALVE PUMP (continued)



SINGLE TRANSMISSION PUMP WITH SINGLE VALVE PUMP (continued)

ITEM NO.	PART NO.	DESCRIPTION	QTY.
32	424525	SPRING, RED CODED	1
33	154131	'O' RING	1
34	317697	PLUG, TORQUE (128-148 FT. LB.)	1
35	942430	REPLENISHING CHECK	1
36	416960	SPRING	1
37	317697	PLUG, TORQUE (TO 128-148 FT. LB.)	1
38	353786	'O' RING	1
39	423577	SHAFT (THREAD SHAFT UNTIL BOTTOMED. BACK OFF 1/4 TURN, THEN INSTALL COUPLING AND RETAINER RING.)	1
40	416661	COUPLING	1
41	123785	RING, SNAP	1
42	263585	SEAL, SHAFT (FACE SPRING OUTWARD)	1
43	317668	BODY	1
44	170177	BOLT, HEX (TORQUE TO 23-26 FT. LB.)	1
45	199823	'O' RING	1
46	317677	RING CAPACITY	1
47	351247	ROTOR	1
48	923500	VANE, ROTOR	1
49 -	374343	PLATE, PRESSURE	1
50	345262	SPRING	1
51	199822	'O' RING	1
52	372865	COVER	1
53	432511	BOLT, STANDARD COVER	1

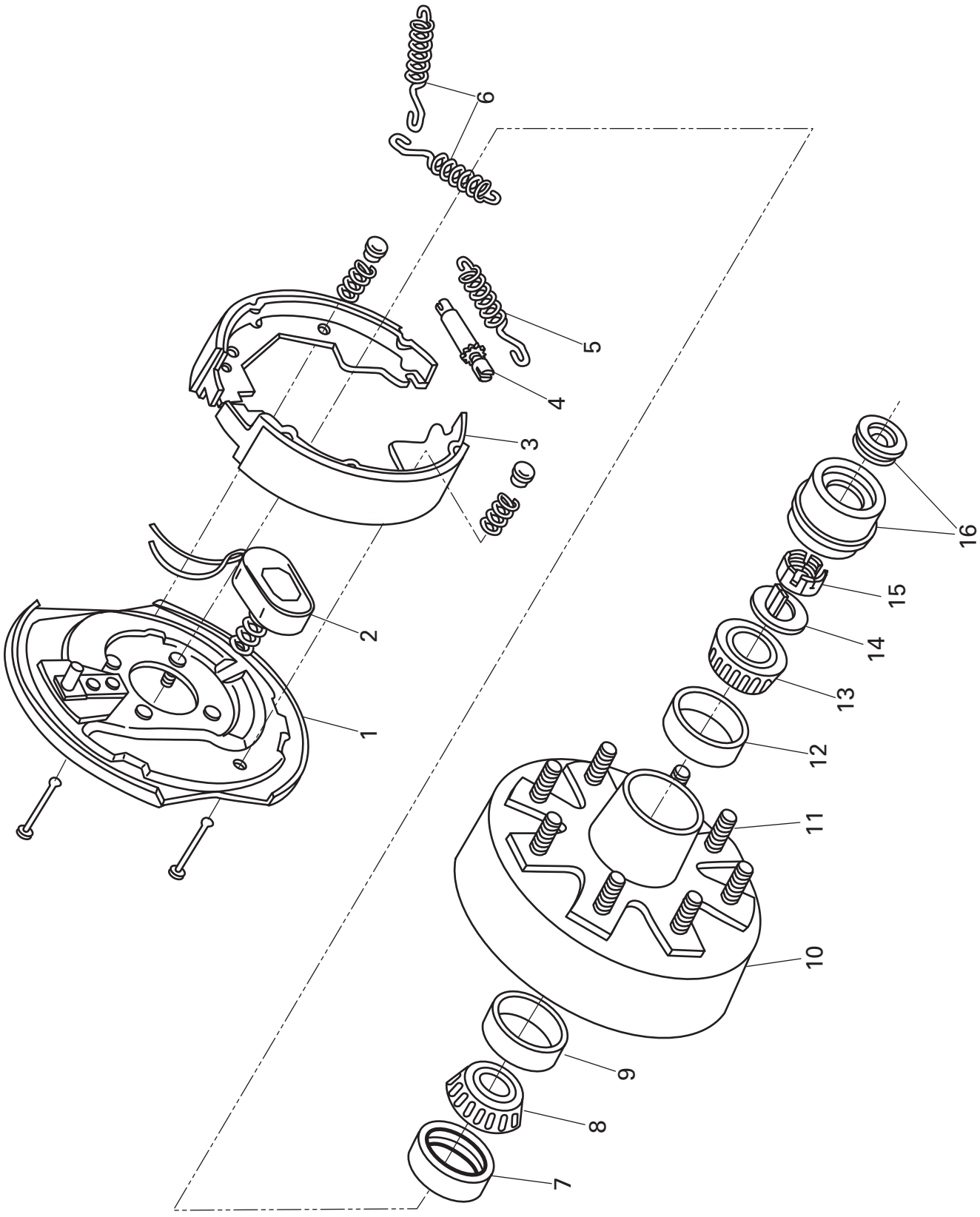
VALVE BANK ASSEMBLY



VALVE BANK ASSEMBLY

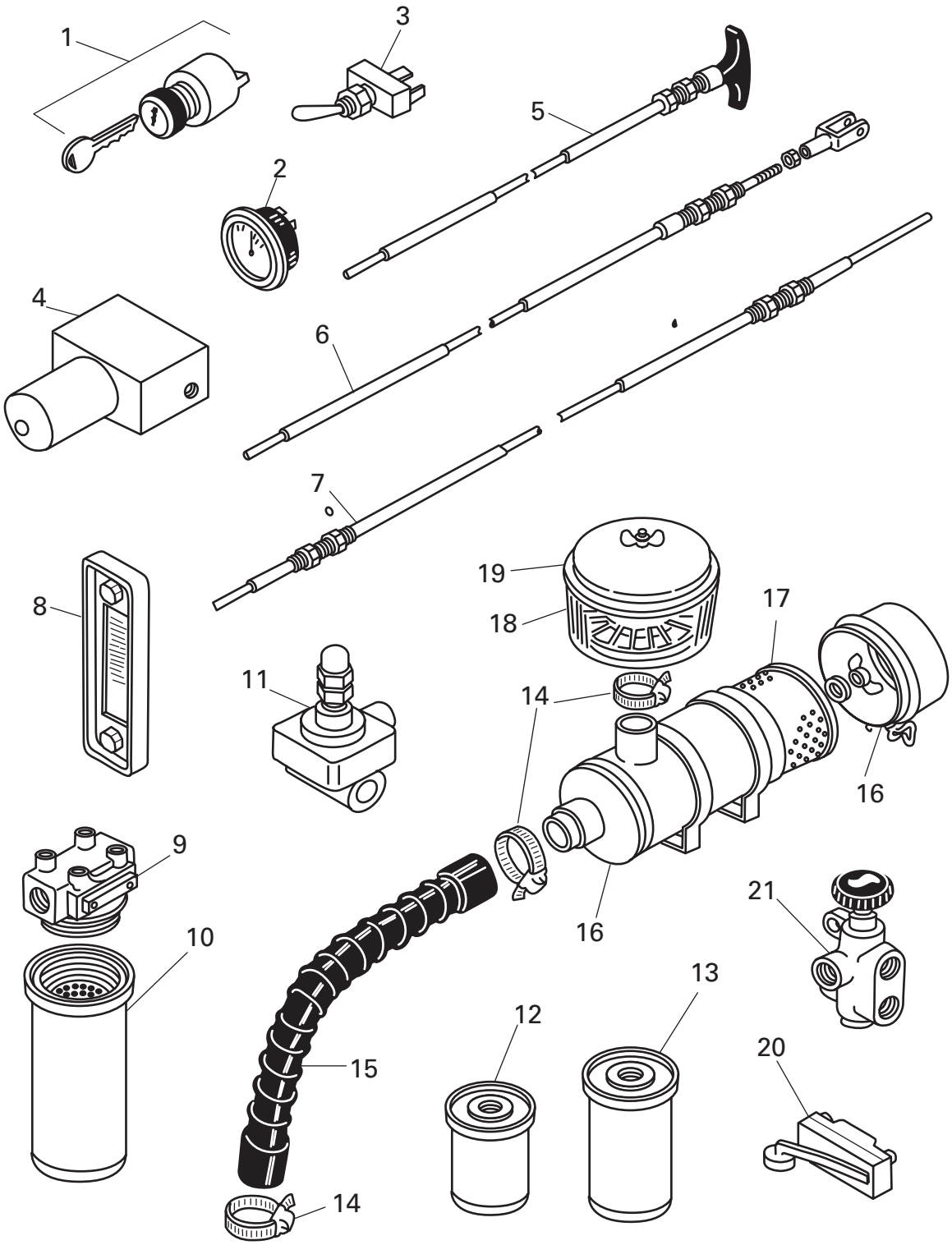
ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	670230	MOUNT, VALVE LEVER	1
2	255250	CLEVIS, VALVE SPOOL	1
3	670220	CLEVIS, VALVE LEVER	1
4	510180	RELIEF VALVE	1
5	510190	END COVER, R.H.	1
6	510200	PLUG	1
7	510210	STUD KIT, 3 SECTION VALVE ASSY.	1
8	510220	SPRING RETURN KIT	1
9	510230	COVER, VALVE SPOOL	1
10	510240	'O' RING KIT, VALVE SECTION & SPOOL	1
11	510250	LOAD CHECK KIT	1
12	510260	VALVE SECTION	1
13	510270	END COVER, L. H.	1
14	670240	LEVER, VALVE	1

WHEEL HUB AND BRAKE ASSEMBLY



WHEEL HUB AND BRAKE ASSEMBLY

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	340060	BACKING PLATE, BRAKE (SPECIFY R.H. OR L.H.)	1
2	340100	MAGNET, BRAKE ACTUATING	1
3	340070	BRAKE SHOE KIT	1
4	340110	ADJUSTER, BRAKE	1
5	340120	SPRING, ADJUSTER	1
6	340130	SPRING, RETRACTOR	1
7	340140	SEAL	1
8	110290	BEARING, CONE	1
9	110280	BEARING, CUP	1
10	340150	BRAKE DRUM	1
11	340160	STUD	1
12	340170	BEARING, CUP	1
13	340180	BEARING, CONE	1
14	340190	WASHER	1
15	610260	NUT	1
16	620200	CAP, DUST	1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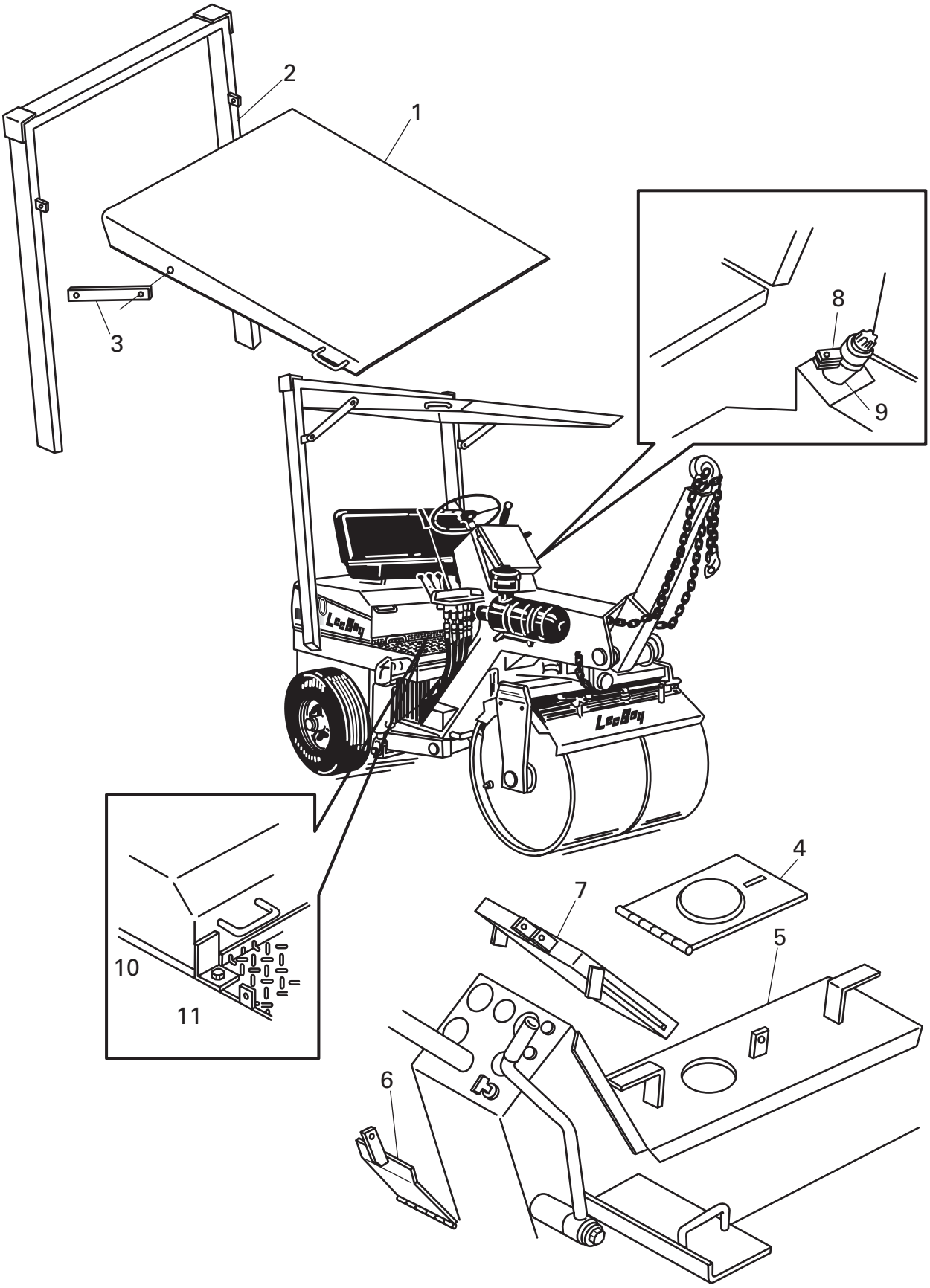
GAUGE, CABLES, FILTER, AIR CLEANER & VALVES

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	500010	KEY, IGNITION SWITCH	1
2	500030	GAUGE, HOUR METER	1
3	500040	SWITCH, TOGGLE	2
4	500090	VALVE, SOLENOID	1
5	350040	CABLE, ENGINE SHUT-OFF	1
6	500050B	CABLE, THROTTLE	1
7	500770	CABLE, FORWARD & REVERSE	1
8	500070	GAUGE, HYDRAULIC OIL LEVEL & TEMP.	1
9	290010	HEAD, CHARGE FILTER	1
10	290030	ELEMENT, CHARGE FILTER FROM #400-104	1
11	500080	VALVE, RELIEF, 2000 P.S.I.	1
12	500150-2	FILTER, FUEL (DIESEL)	1
13	500160-2	FILTER, OIL (DIESEL)	1
14	700500	CLAMP, HOSE	2
15	530210	HOSE, AIR	1
16	500260	AIR CLEANER ASSEMBLY	1
17	500520	ELEMENT, AIR CLEANER	1
18	310020	BOWL, DUST PRE-CLEANER	1
19	310010	COVER, DUST BOWL	
20	500140	SWITCH, VIBRATOR ACTUATOR	1
21	910080	VALVE, EMERGENCY STOP	1

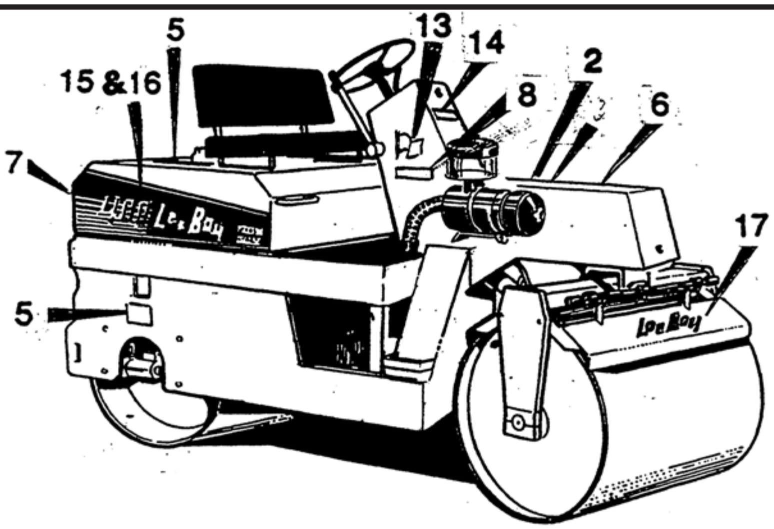
ROPS BAR, CANOPY AND VANDALISM KIT

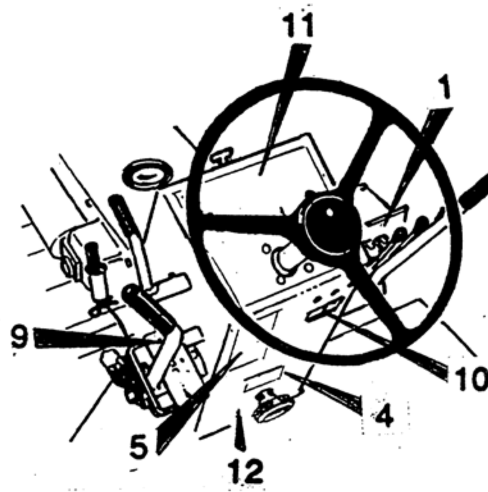


ROPS BAR, CANOPY AND VANDALISM KIT

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	410144	CANOPY	1
2	410154	BAR, ROLL (CANOPY SUPPORT)	1
3	410161	BRACE, ROLL BAR TO CANOPY	2
		VANDALISM PARTS	
4	410171	DOOR, FUEL ACCESS	1
5	410182	BRACKET, ACCESS DOOR LOCK	1
6	410191	SHIELD, WARNING LIGHT	1
7	410201	PANEL, INSTRUMENT pSECURITY	1
8	410211	LATCH, FUEL CAP	1
9	410221	LATCH, FUEL NECK	1
10	410231	LATCH, ENGINE ACCESS WATER TANK	1
11	410241	LATCH, ENGINE ACCESS FLOOR PANEL	1

DECALS





! IMPORTANT ! ! IMPORTANT !

It is the responsibility of the owner to maintain a complete set of decals and make sure they are in the proper place.

If the maintainer has been repainted, it is extremely important that all the decals referring to cautions, warnings and dangers be replaced in their proper locations. The illustration on this page will aid you in determining the proper locations. For additional help refer to the parts listing in the parts section of this manual and note the description column. Under this column a description on location is provided for each decal. Contact your dealer if you need additional, more explicit instructions.

1 LOWER TONGUE RAISE | RAISE LEFT WHEEL LOWER | RAISE RIGHT WHEEL LOWER

2 ⚠ WARNING HYDRAULIC OIL ONLY KEEP CLEAN 940001-4

3 FLAMMABLE 540030

4 PULL EMERGENCY BRAKE

5 IMPORTANT
EVERY 30 DAYS
1. Check oil in torque hub. "See manual"
2. Grease vibrator bearings. "See manual"
3. Check hydraulic charge filter. If gauge shows red while engine is running, change filter.

6 DIESEL FUEL TANK KEEP CLEAN 540050

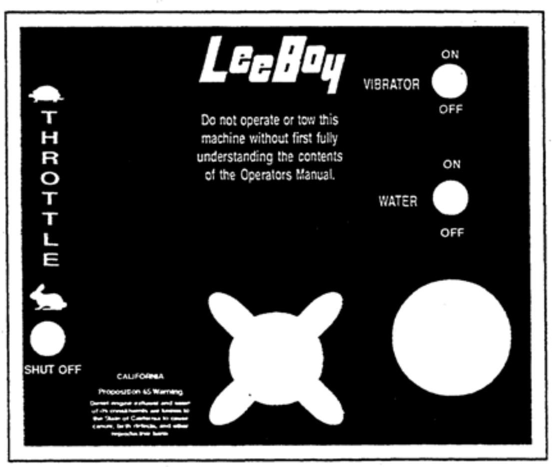
7

8 WATER

9 FORWARD REVERSE

10 GENERATOR | OIL PRESSURE

11



12 LeeBoy

13

14 LEE-BOY MFG. CO. DENVER, NORTH CAROLINA 940002-1

15 & 16

17 LeeBoy MADE IN U.S.A.

DECALS

ITEM NO.	PART NO.	DESCRIPTION	QTY.
	540097	DECAL KIT (KIT INCLUDES ITEMS 1-17)	1
1	540160	LOCATED ABOVE VALVE BANK ON TOWABLE ROLLER	1
2	940001	LOCATED ON HYDRAULIC TANKS ABOVE FILLER NECK, OPPOSITE SIDE	1
3	540020	LOCATED ON TOP AND CENTER OF ACCESS COVER	1
4	9854	LOCATED ON COLSOLE ABOVE BRAKE KNOB	1
5	540060	LOCATED ABOVE REAR AXLE OPENING	1
6	540050	LOCATED ON TOP AND CENTER OF ACCESS HOLE	1
7	9788	LOCATED AT REAR, ON BOTH ENDS OF FRAME BELOW TANK	1
8	540100	LOCATED AT REAR AND CENTERED TO FILLER NECK	
		ALSO ABOVE SHUT OFF VALVE	1
9	540080	LOCATED ON PLATE ADJACENT TO FORWARD/REVERSE LEVER	1
10	540130	LOCATED BELOW LIGHT DISPLAY ON CONSOLE	1
11	10631	LOCATED ON TOP OF CONSOLE	1
12	940040	LOCATED ON CONSOLE FACE	1
13	940002	LOCATED ON BOTH SIDES OF CONSOLE	1
14		LOCATED ON CONSOLE UPPER PANEL AND CENTERED	1
15	10628-1	LOCATED ON WATER TANK RIGHT SIDE	1
16	10628-2	LOCATED ON WATER TANK LEFT SIDE	1
17	540060	LOCATED ON FRONT CENTER OF SCRAPPER AND	
		REAR CENTER OF WATER TANK	1