



# OPERATIONS, SERVICE AND PARTS MANUAL



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**1000 D Tilt Hopper Paver**

**Manual No. 1000802**



**B.R. Lee Industries**  
**688 North Highway 16**  
**Denver, NC 28037**

## **One Year or 1000 Hour LIMITED WARRANTY**

### **WARRANTY**

1. If a defect in material or workmanship is found and the authorized Dealer is notified during the warranty period, LeeBoy will repair or replace any part or component of the unit or part which fails to conform to the warranty during the warranty period.
2. The warranty will start on the date of the unit's warranty registration form from the initial Customer and will expire after 12 months have passed or 1000 hours on the service meter have been exceeded, whichever shall first occur.
3. Engines bearing other manufacturers' trademarks are warranted by those manufacturers and may have warranty coverage that differs from that of LeeBoy.
4. Replacement parts furnished by the LeeBoy pursuant to this warranty are covered for the remainder of the warranty period applicable to the unit or component in which such parts are installed. Replacement parts have no separate warranty coverage.
5. LeeBoy has the right to repair any component or part before replacing it with a new part.
6. All warranty work will be completed during normal working hours only.

### **LIMITATIONS**

LeeBoy has no obligation under this warranty for:

1. Any defects caused by misuse, misapplication, negligence, accident or failure to maintain or use in accordance with the most current operating instructions.
2. Unauthorized alterations.
3. Defects or failures caused by any replacement parts or attachments not manufactured by or approved by LeeBoy.
4. Failure to conduct normal maintenance and operating service, including without limitation, providing lubricants, coolant, fuel, tune-ups, inspections or adjustments.
5. Unreasonable delay, as established by LeeBoy, in making the applicable units or parts available upon notification of a service notice ordered by LeeBoy.

### **WARRANTIES OF OTHER ENGINE MANUFACTURERS**

1. LeeBoy's warranty does not apply to engines bearing other manufacturer's trademarks, whether or not such engines are installed in LeeBoy units or sold separately.
2. The warranty responsibility on all engines rests with the respective engine manufacturer. LeeBoy may have support agreements with some engine manufacturers for warranty and parts support.

### **ITEMS NOT COVERED**

LeeBoy is not responsible for the following:

1. Charges for travel time, mileage, or overtime.
2. Charges related to transporting the product to and from the place at which warranty work is performed.
3. Airfreight charges related to transporting repair parts to the place at which warranty work is performed.
4. All used units or parts of any kind.
5. Except for premature failure, tires, tubes, wiper blades, v-belts, filters, cables, bulbs, conveyor chains, polytrack pads, augers, auger wear plates, track rails, screed plates or end gates.
6. Attachments not manufactured or approved by LeeBoy.
7. Burners and boxes, cutting edges, scrapers, mats, grinder bits, and holders.
8. Miscellaneous charges.

### **OTHER WARRANTIES**

THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESSED, STATUTORY AND IMPLIED WARRANTIES APPLICABLE TO UNITS, ENGINES, OR PARTS WITHOUT LIMITATION, ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR USE OR PURPOSE. IN NO EVENT, WHETHER AS A RESULT OF BREACH OF CONTRACT OR WARRANTY, OR ALLEGED NEGLIGENCE OR LIABILITY WITHOUT FAULT, SHALL LEEBOY BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOSS OF PROFIT OR REVENUE, LOSS OF USE OF THE UNIT OR PARTS OR ANY ASSOCIATED EQUIPMENT, COST OF CAPITAL, COST OF SUBSTITUTED EQUIPMENT, FACILITIES OR SERVICES, DOWNTIME COSTS, LABOR COSTS OR CLAIMS OF CUSTOMERS, PURCHASERS OR LESSEES FOR SUCH DAMAGES.



## **User's Reference Guide**

**DELIVERY DATE** \_\_\_\_\_

**UNIT SERIAL NUMBER** \_\_\_\_\_

**ENGINE TYPE** \_\_\_\_\_

**ENGINE NUMBER** \_\_\_\_\_

**DEALER'S NAME AND ADDRESS**  
\_\_\_\_\_

**PHONE NUMBER** \_\_\_\_\_

**EQUIPMENT HOURS** \_\_\_\_\_

**SERVICE MANAGER** \_\_\_\_\_

688 North Highway 16 ~ Denver, North Carolina 28037  
www.Lee-Boy.com ~ (704) 483-9721

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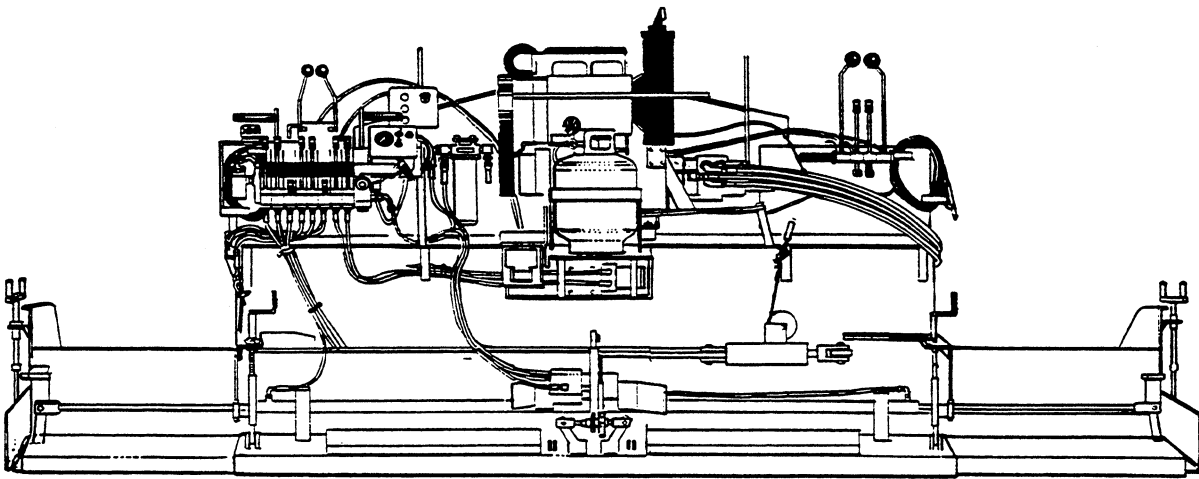
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\* MUST HAVE MODEL & SERIAL # TO PLACE PARTS ORDER

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**\* MUST HAVE MODEL & SERIAL # TO PLACE PARTS ORDER**



**REAR VIEW**

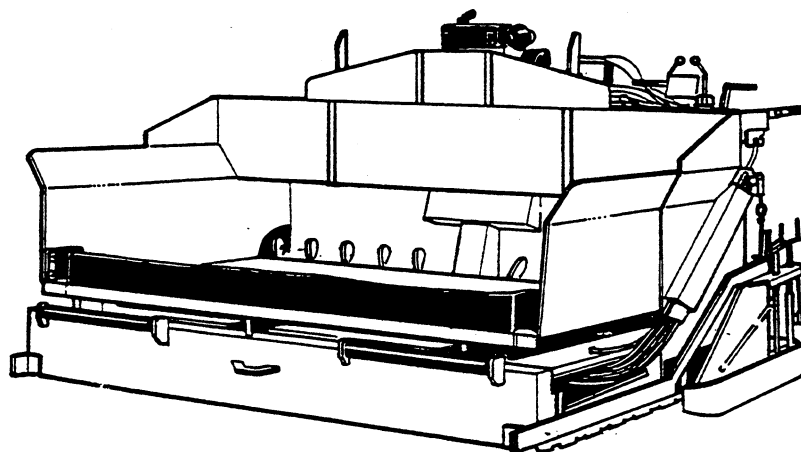
## **MANUAL INFORMATION**

### **MODEL 1000 D 8' & 9' ASPHALT PAVER OPERATORS, MAINTENANCE AND PARTS MANUAL**

This manual should be used with all related supplemental books, engine and transmission manuals, and parts books. Related Service Bulletins should be reviewed to provide information regarding some of the recent changes.

If any questions arise concerning this publication or others, contact your local Lee-Boy Distributor for the latest available information.

Contents of this manual are based on information in effect at the time of publication and are subject to change without notice.



**3/4 FRONT VIEW**

# **IMPORTANT SAFETY INSTRUCTIONS**

This manual provides important information to familiarize you with safer operating and maintenance procedures. Even though you may be familiar with similar equipment you **MUST** read and understand this manual before operating this unit.

Safety is everyone's business and is one of your primary concerns. Knowing the guidelines covered in the following paragraphs and in Section 1 will help provide for your safety, for the safety of those around you, and for the paver's proper operation.

LOOK FOR THESE SYMBOLS WHICH POINT OUT ITEMS OF EXTREME IMPORTANCE TO YOU AND YOUR CO-WORKERS SAFETY. READ AND UNDERSTAND THOROUGHLY. HEED THE WARNING AND FOLLOW THE INSTRUCTIONS.

## **! DANGER !**

**YOU MUST FOLLOW ALL DANGER SAFETY NOTES. IF YOU DO NOT FOLLOW THE INSTRUCTIONS, YOUR MISTAKE MIGHT LIKELY RESULT IN VERY SERIOUS INJURY OR DEATH.**

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## **! WARNING !**

**WARNING** safety notes must **ALSO** be followed. Your mistake might result in **SERIOUS INJURY** to yourself or others.

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## **! CAUTION !**

**CAUTION** safety notes are **ALSO** very important. They point out to you where your mistakes could cause **PHYSICAL HARM** to you or others, or damage to the machine.

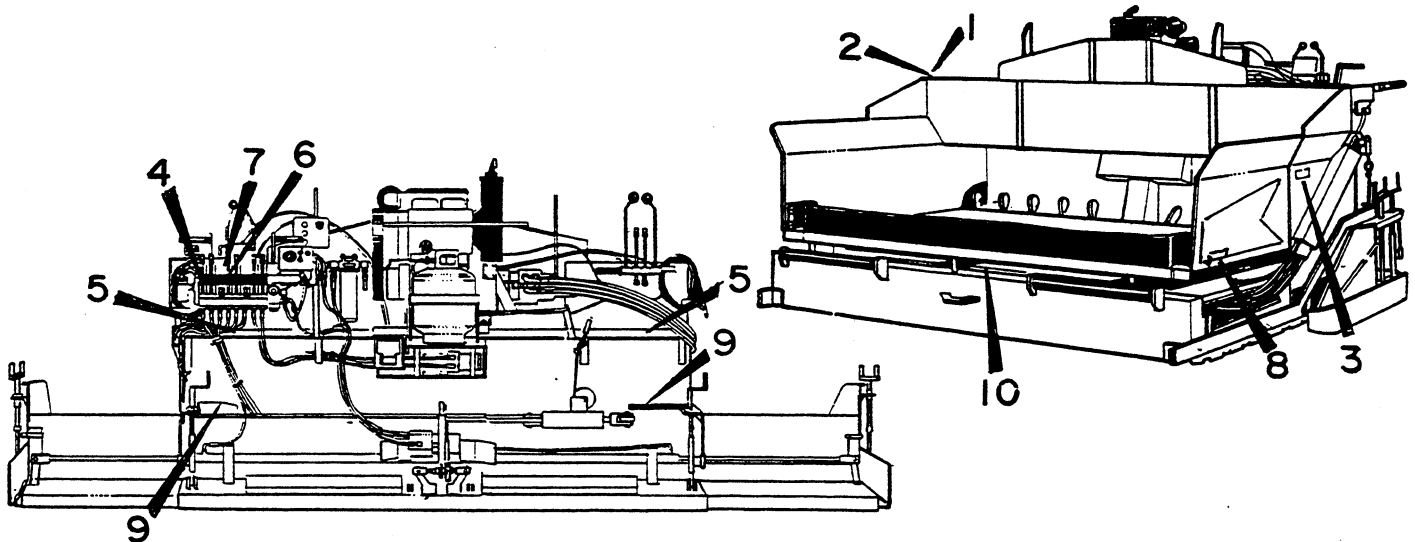
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## SAFETY PRECAUTIONS

If your paver has been repainted, it is extremely important that all the decals referring to cautions, warnings and danger be replaced in their proper locations. The illustrations on this page will aid you in determining the proper locations, however for additional help, you should refer to the part 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. If you still need more explicit instructions, contact your dealer.

**! IMPORTANT ! ! IMPORTANT !**

It is the responsibility of the owner and operator to make sure that all decals are readable and located on paver as designated by manufacturer.



**DANGER**  
DO NOT FILL  
FUEL TANK  
WHILE ENGINE  
IS RUNNING  
OR SCREEN IS  
BEING HEATED

1

**WARNING**  
**DO NOT USE**  
**ELECTRIC SPRAY SYSTEM**  
**WHEN BURNERS ARE IN USE**

2

**DANGER**  
**PINCH POINT**  
**CAUTION**  
**DO NOT SPRAY**  
**FUEL OIL ON TIRES.**

3

**WARNING**  
HYDRAULIC OIL  
**ONLY**  
KEEP CLEAN

4

**DANGER**  
Keep Hands &  
Clothing Clear of  
Augers & Conveyors

5

**DO NOT OPERATE OR TOW THIS**  
**MACHINE WITHOUT FIRST**  
**FULLY UNDERSTANDING**  
**THE CONTENTS OF THE**  
**OPERATORS MANUAL.**

6

**IMPORTANT**  
WHEN CHANGING GEARS MOVE DRIVE  
LEVERS FORWARD AND REVERSE  
GENTLY, WHILE APPLYING ABOUT 15  
LBS. PRESSURE ON SHIFTER HANDLE.  
THIS WILL ELIMINATE TRANSMISSION  
DAMAGE.

7

**DANGER**  
Always Keep Guidebar  
Latched While in Transit  
(Keep All Adjustments Tight)

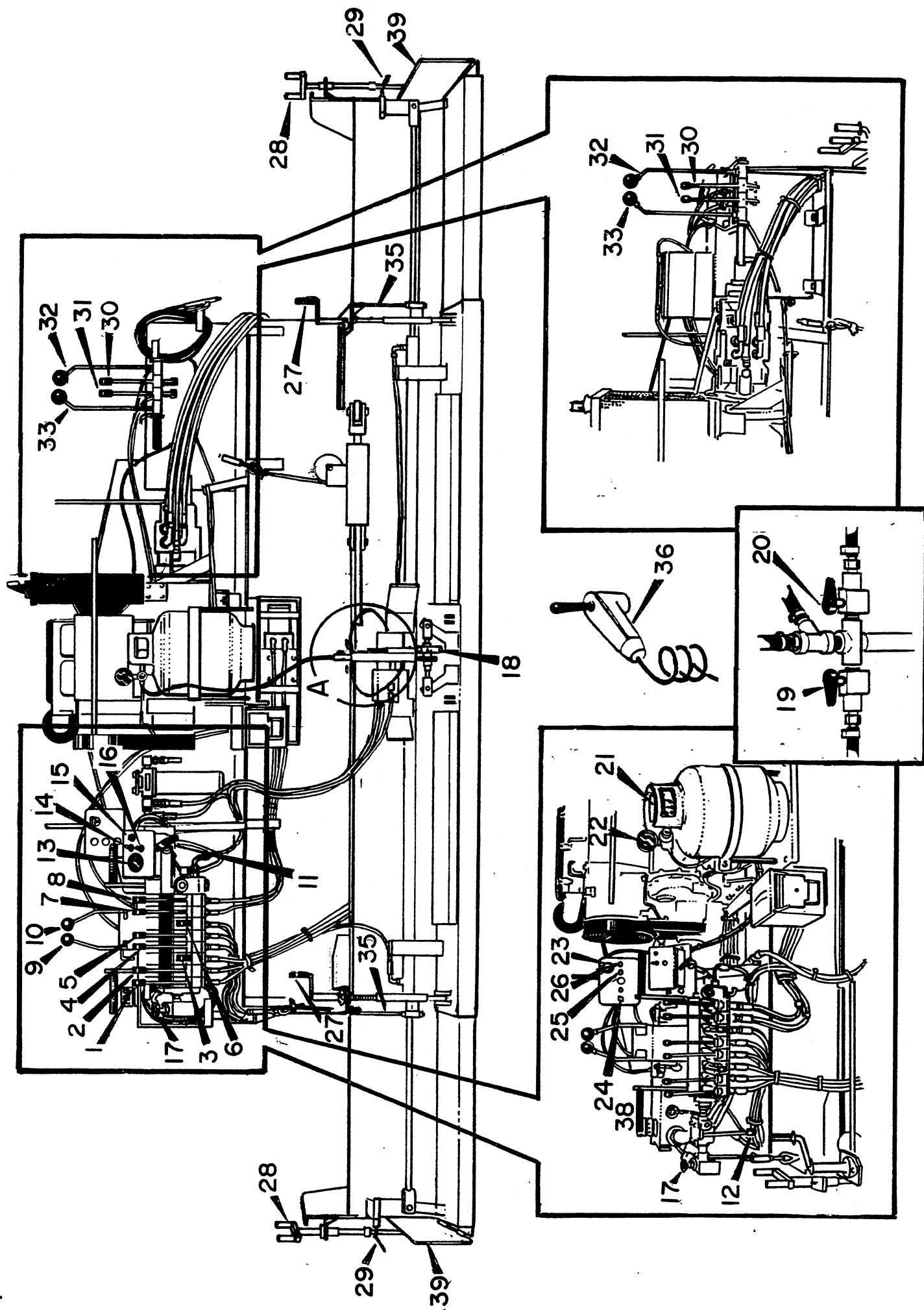
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**DANGER**  
**PINCH POINT**

9

**SAFETY**  
**LIP PROP**

10



## OPERATING CONTROLS AND DESCRIPTION

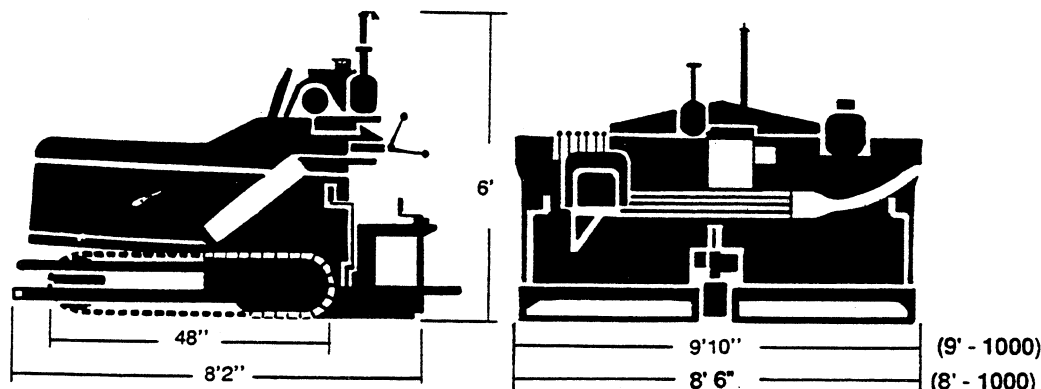
| <u>CONTROLS</u>                     |  | <u>DESCRIPTION</u>                                  | <u>CONTROLS</u>                                         | <u>DESCRIPTION</u>                                                 |
|-------------------------------------|--|-----------------------------------------------------|---------------------------------------------------------|--------------------------------------------------------------------|
| 1. Screed Extension, Left           |  | Extends and Retracts Left Screed Extend             | 23. Ignition                                            | To Start Engine                                                    |
| 2. Screed Extension, Right          |  | Extends and Retracts Right Screed Extend            | 24. Oil Warning Light                                   | Indicates Low Oil Level                                            |
| 3. Screed Lift                      |  | Raises and Lowers Screed                            | 25. Air Filter Warning Light                            | Indicates Dirty Filter                                             |
| 4. Cut Off, Left                    |  | Stops Asphalt Flow Under Left Auger                 | 26. Battery Discharge Light                             | Indicates Low or No Charge                                         |
| 5. Cut Off, Right                   |  | Stops Asphalt Flow Under Right Auger                | 27. Thickness Control Lever                             | Fine Control of Material Depth                                     |
| 6. Raise Hopper                     |  | Changes Angle of Hopper                             | 28. End Gate Control Handle                             | Sets End Gate to Desired Depth                                     |
| 7. Auger, Left                      |  | Distributes Asphalt to Left Screed Extension        | 29. Tilt Control Handle<br>(joint matching shoe)        | Changes Pitch of End Gate                                          |
| 8. Auger, Right                     |  | Distributes Asphalt to Right Screed Extension       | 30. Lever, Screed Ext. Right                            | Extends and Contracts Screed, Right                                |
| 9. Drive, Left                      |  | Forward and Rearward Drive of Left Track            | 31. Lever, Auger, Right                                 | Distributes Asphalt to Right Screed Extension                      |
| 10. Drive, Right                    |  | Forward and Rearward Drive of Right Track           | 32. Right Side Drive Control, Right                     | Forward and Rearward Drive of Right Track                          |
| 11. Throttle                        |  | Controls Engine Speed                               | 33. Right Side Drive Control, Left                      | Forward and Rearward Drive of Left Track                           |
| 12. Side Wing Hopper                |  | For dumping material onto hopper                    | 34. High/Low Speed Range<br>and Adjust Feed Chain Light | Light Is On And Does Not Flash, Paver Is In High Range             |
| 13. Hour Meter                      |  | Indicates Hours on Machine                          | 35. Screed Level Indicator                              | Indicates Position of Screed                                       |
| 14. High and Low Gear, Toggle       |  | Selects High and Low Gear (high travel, low paving) | 36. Screed Depth Remote Switch<br>Thickness             | Raises and Lowers Screed Varies Asphalt                            |
| 15. Warning Light                   |  | Low & High Gear Position                            | 37. Guide Bar (Not Shown)                               | Alignment of Paver to Paving Area                                  |
| 16. Spray Down                      |  | Used for Cleaning                                   | 38. Speed Lock Control                                  | Sets Drive Levers So Paver Maintains Even Speed and True Direction |
| 17. Vibrator                        |  | Helps Compact Asphalt                               | 39. Joint Matcher                                       | Helps Even Asphalt Joint                                           |
| 18. Crown and Valley Lever          |  | Adjust The Crown or Valley Screed                   | 40. Shifter (transmission type<br>not shown)            | Selects High and Low Gear (high travel, low paving)                |
| 19. Left Burner                     |  | Controls Flow of Propane to Left Screed Burner      |                                                         |                                                                    |
| 20. Right Burner                    |  | Controls Flow of Propane to Right Screed Burner     |                                                         |                                                                    |
| 21. Propane Tank Main Valve         |  | Opens and Closes Propane Line Pressure              |                                                         |                                                                    |
| 22. Propane Tank Pressure Regulator |  | Regulates Propane Pressure                          |                                                         |                                                                    |

## OVERVIEW

Lee-Boy pavers are designed with the paving man in mind. They are tough machines, built with fewer moving parts.

You will be pleased with the simplicity and versatility of this machine.

If you have any questions about the safe use or maintenance of this paver, ASK YOUR SUPERVISOR OR CONTACT ANY LEE-BOY DISTRIBUTOR. NEVER GUESS — ALWAYS CHECK.



### SPECIFICATIONS

**ENGINE:** Diesel 40 HP @ 3000 RPM with displacement of 104.7 cu. in.

**FUEL RESERVOIR:** 13 U.S. gallons

**EMPTY WEIGHT:** 9000 lbs.

**OVERALL LENGTH:** 8 feet 2 inches

**OVERHALL WIDTH:** 9 feet 10 inches (9' - 1000)  
8 feet 6 inches (8' - 1000)

**OVERALL HEIGHT:** 6 feet

**HOPPER:** 6 ton capacity, self-cleaning gravity feed, hydraulically raised

**\*STANDARD VARIABLE PAVING WIDTHS:** 0 to 2 feet, 4½ feet to 6½ feet, and 9 feet to 13 feet.

**\*STANDARD VARIABLE PAVING WIDTHS:** 0 to 2 feet, 4 feet to 6 feet, and 8 feet to 12 feet also 8 feet to 13 feet.

**PAVING DEPTH:** Adjustable paving depth from 0 to 6 inches.

**SCREED:** Full free floating 17 inch wide with propane heated screed equipped with (2) 54,000 BTU burners and hydraulic vibrator with frequency of 2200 VPM

**SCREED EXTENSIONS:** Two 24 inch hydraulically operated heated and vibrated extensions with left and right hand joint matcher shoes.

**SCREED CROWN INVERT:** 2 inch crown/invert adjustment

**MATERIAL FLOW GATES:** Two independent hydraulically operated flow gates under the Augers.

### SPECIFICATIONS (Cont'd.)

**PUSH ROLLERS:** Two rollers with sealed bearings

**MATERIAL AUGERS:** Two independent heavy duty hydraulically operated 9 inch dia. augers X ¾ inch thick A36 steel

**HYDRAULIC RESERVIOR:** 45 U.S. gallons

**HYDRAULIC SYSTEM:** Variable volume hydraulic pump for each drive and hydraulic pump for other hydraulic components

**TRACK DRIVE SYSTEM:** Hydrostatically powered self cleaning and self adjusting 14" wide tracks; Drive mechanism consists of dual two speed gear boxes, allowing paving in low gear up to 140 FPM and taxing in high gear of 0 to 240 FPM.

**STEERING:** Independent track lever steering from left or right side of machine

**WASHDOWN SYSTEM:** Electric pump with (2) 15 foot hoses and spray nozzles.

**OPERATOR PLATFORM:** Full machine width operator platform with left hand seat

**OPERATOR CONTROLS:** Operating control levers on both left and right side of machine

#### OPTIONS:

- \* - Right hand seat
- (12) 5 inch X 18 inch super soft solid rubber tires (All Pulling) - (9 feet to 13 feet paving width)
- \* - (10) 5 inch X 18 inch super soft solid rubber tires (All Pulling) - (8 feet to 13 feet paving width)
- Automatic Augers
- Roll up curb attachment
- Electric screw controls
- High Deck
- Automatic Igniters
- Hydraulic side wings for 8 feet
- Automatic grade and slope

## **SAFETY PRECAUTIONS AND GENERAL INFORMATION**

### **PRE-START INSPECTION**

**INSPECT** machine. Have any malfunctioning, broken or missing parts corrected or replaced before using. Hydraulic hoses should be checked daily for wear and leaks. Replace if damaged.

**CHECK** that all the instruction and safety labels are in place and readable. These are as important as any other equipment on the machine.

**READ** and **FOLLOW** all instruction decals.

**WEAR** OSHA required safety equipment when running the paver.

**FILL** the fuel tank with the engine off. Never fill near an open flame, when smoking or when screed heat is on.

**CLEAR** auger & feeders before starting engine. Make sure all covers and guards are in place.

### **OPERATING SAFETY**

**ALWAYS** make sure no person or object is in your line of travel **BEFORE** starting.

**WORK** slowly in tight areas.

**DO NOT** run engine in a closed building for long periods of time. **NEVER** spray fuel oil on or near screed while it is being heated.

**AVOID** steep hills if possible

**DO NOT** shift transmissions on steep grades.

**ALWAYS** look **BEFORE** changing your direction of travel.

**DO NOT** pave in high speed range, use it only for travel. Do not counter rotate machine in high range.

**NEVER** open a valve to burner unless a flame is present. Heat screed for no more than 5 minutes. Make sure all valves are closed after burner is turned off.

**AVOID** leaving engine running without operator present.

### **STOPPING SAFETY**

**ALWAYS** park the paver on solid, level ground, in low range. IF this is not possible, always park the paver at a right angle to the slope, lower screed when parked.

**USE** proper flags, barriers and warning devices especially when parking in areas of traffic.

### **MAINTENANCE SAFETY**

**AVOID** working on the paver with the engine running.

**NEVER** fill the fuel tank with the engine running.

**DO NOT** change the engine governor settings.

**ALWAYS** replace damaged or lost decals.

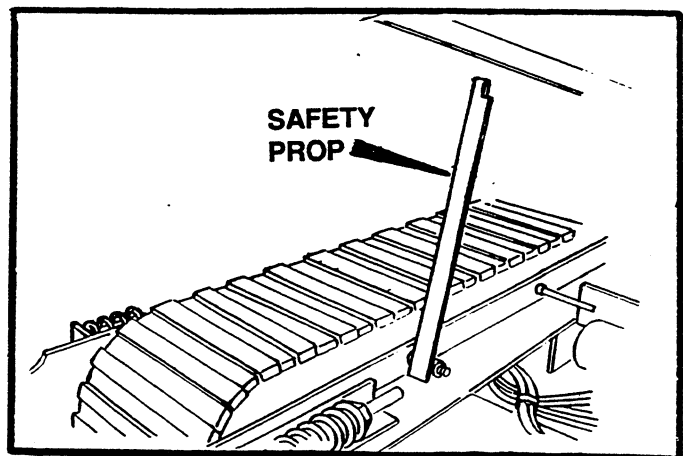
**DISCONNECT** battery cables when working on the electrical system or when welding on the unit.

IF battery needs a charge, be sure battery charger is off when making connections.

**BESURE** the correct battery polarity is observed (negative (-) to negative (-) and positive (+) to positive (+)) when connecting a battery charger or jumper cable.

**! DANGER !**

**NEVER WORK UNDER HOPPER WITHOUT PLACING SAFETY PROP IN POSITION. SEE FIGURE 1**



**FIGURE 1**

## STARTING THE ENGINE

### PRELIMINARY

Before you start the engine:

- A. Check fuel level, fuel lines, and tank for leaks.
- B. Check crankcase oil level.

### **! CAUTION !**

**FAILURE TO MAINTAIN CORRECT OIL LEVEL IS GREATEST SINGLE CAUSE OF ENGINE FAILURES.**

- C. Check hydraulic oil level. Oil level is determined by petcock on hydraulic oil tank.
- D. Make sure steering control levers are in the neutral position. To start, the safety latch lever must be in the latch position.
- E. Refer to engine operators manual for instructions when starting engine for first time. Follow engine manufacturer's recommendations for fuel and oil.

### ENGINE/START-UP

The forward/reverse levers have a safety latch lever that needs to be latched in position before it will be possible to start engine. See figure 2.

1. Open throttle full.
2. Position drive levers to neutral. Put safety latch lever in latch position.
3. Insert key and turn clockwise to start position.
4. When engine starts and is running smooth, throttle back to idle. Allow engine to warm up for several minutes before moving paver. The warm up will give the hydraulic oil time to warm, providing for more efficient operation. In cold weather let hydraulic oil warm to 50° or 60° before moving.

### NOTE

For your convenience, there is an extra key inside the switch box in case the original key is lost.

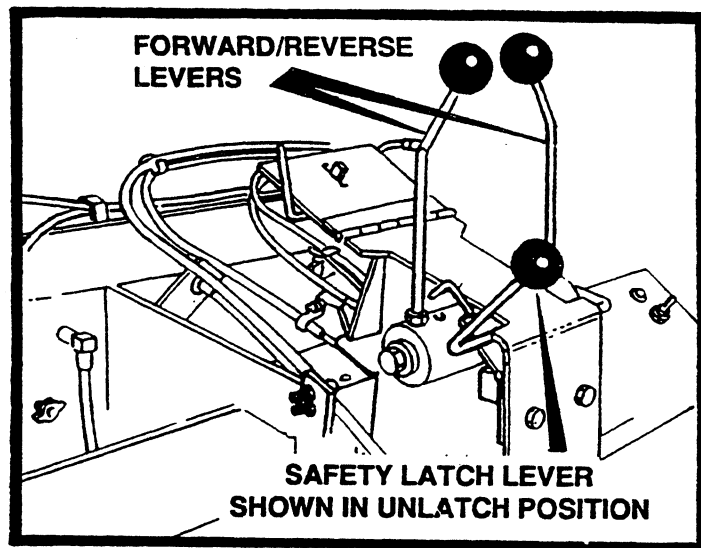


FIGURE 2

### NOTE

The use of starting additives, such as ether, is not recommended.

## STOPPING THE ENGINE

### DIESEL ENGINE

1. Throttle engine down.
2. Turn ignition key counter-clockwise (CCW) to the "off" Position and remove.
3. If for any reason the engine does not shut down when key is turned to "off", take pin out of clevis on cable throttle, at back of engine and push throttle lever control off.

### **! CAUTION !**

**DO NOT OPERATE THE STARTER LONGER THAN 30 SECONDS. IF THE ENGINE DOES NOT START, ALLOW THE STARTER TO COOL 2-3 MINUTES BEFORE TRYING AGAIN.**

## PAVER DRIVING INSTRUCTIONS

### GENERAL

The forward/reverse plus turning will require exact movement. The steering levers along with the inter-connected hydraulic components make possible the positive control necessary. The following procedures, plus illustrations in figures 4.5 and 6, will provide a working knowledge of operating the paver through forward/rearward and turning requirements.

1. After the paver has been started and the motor is warmed up, paver movements may be made.
2. To drive the paver forward, push the steering levers together from the neutral position forward, likewise to drive to the rear, pull the steering levers toward the rear from the neutral position. Refer to figures 4 & 5.

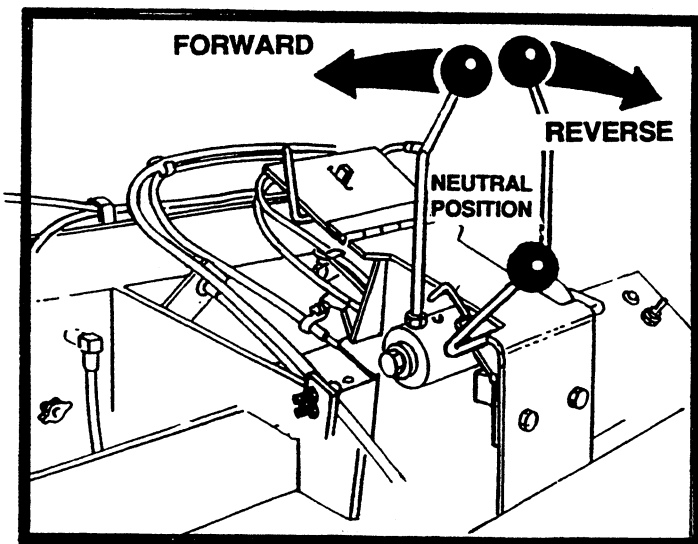


FIGURE 4

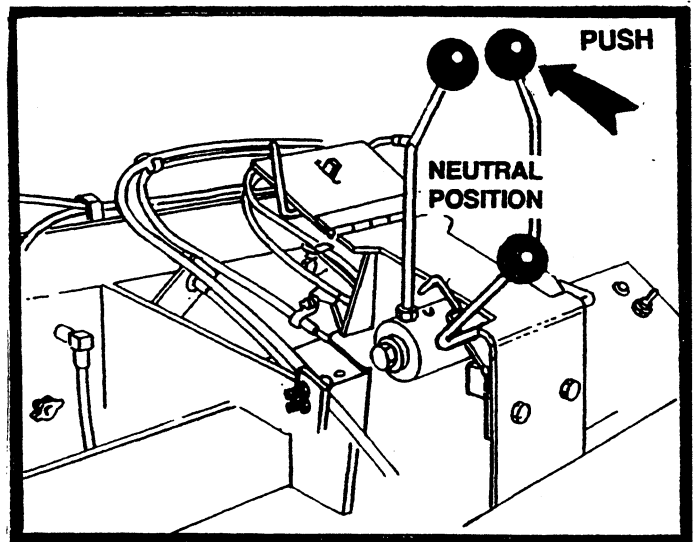


FIGURE 5

3. Depending on the direction of travel, turning the paver can be accomplished by pushing or pulling the steering lever on the inside of the turn toward the neutral position. Refer to figure 6.

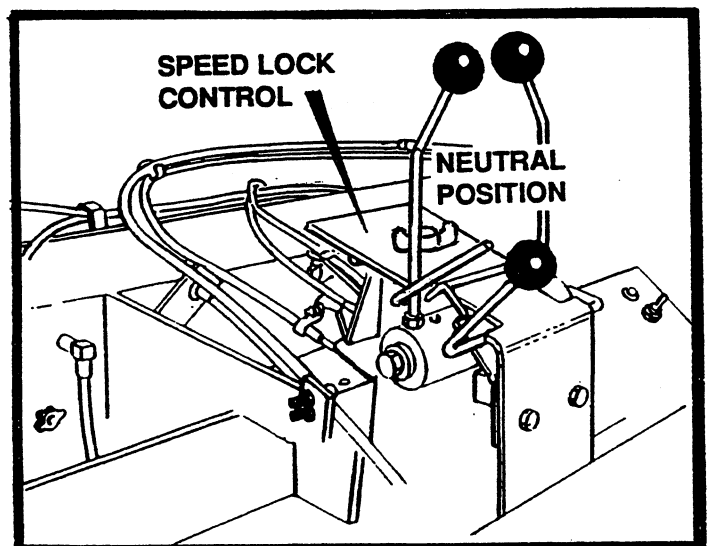


FIGURE 6

4. The traveling speed of the paver can vary greatly, depending on the steering lever position and the variable volume motor switch HI/LO position. The operator may make any combination of speed selection while moving.
5. When making forward/rearward or turns, always make these moves slowly. Move the steering levers slowly and smoothly in the direction of intended travel.
6. When stopping, move both steering levers to the neutral position. See figure 7.

7. When paving, a constant speed is necessary to lay an even asphalt mat. Use the speed lock control to hold and retain steering levers in a fixed position.
8. To make a counter rotation movement, the steering levers are moved in opposite directions. The rotating speed can vary by the combination of H/LO switch and steering lever positions.

## ! CAUTION !

**NEVER SHIFT TWO SPEED TRANSMISSION WHILE MOVING OR ON INCLINE.**

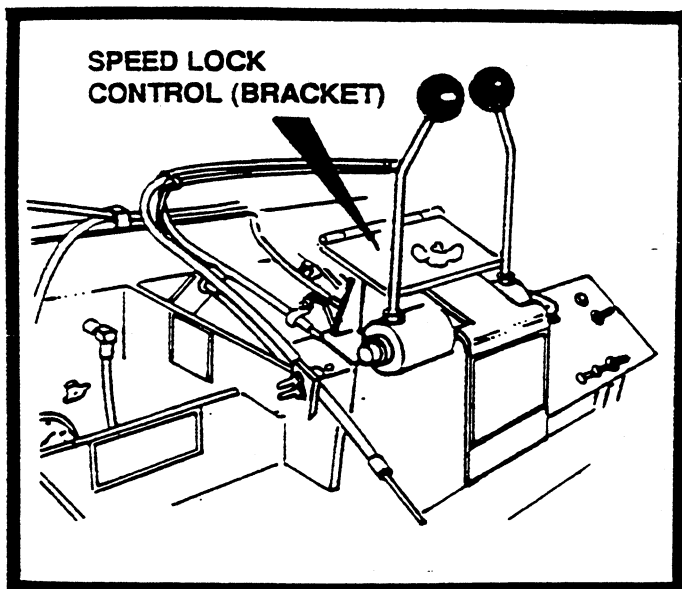


FIGURE 7

### TRUCK HITCH ATTACHMENT (OPTIONAL)

#### GENERAL

The truck hitch is an optional attachment to several "Lee-Boy" pavers. It was designed to improve the asphalt laying process. This is mainly accomplished by keeping the truck driver off his brakes, preventing excessive and uneven braking. See operating instruction below.

1. To connect truck hitch to rear of asphalt truck, extend the arm extensions of the truck hitch by pulling up on arm extension lever. See figure 8.
2. Drive paver slowly toward rear of truck until roll on hitch makes contact with rear tires of truck.

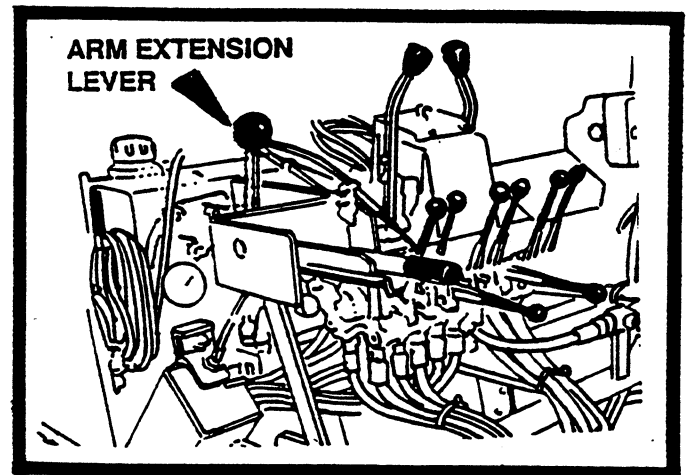


FIGURE 8

3. Retract the arm extensions until both guide rollers are fully locked into truck wheel rims.
4. May be necessary to adjust the roller guides to the inside of the wheel rims, initially. See figure 9.

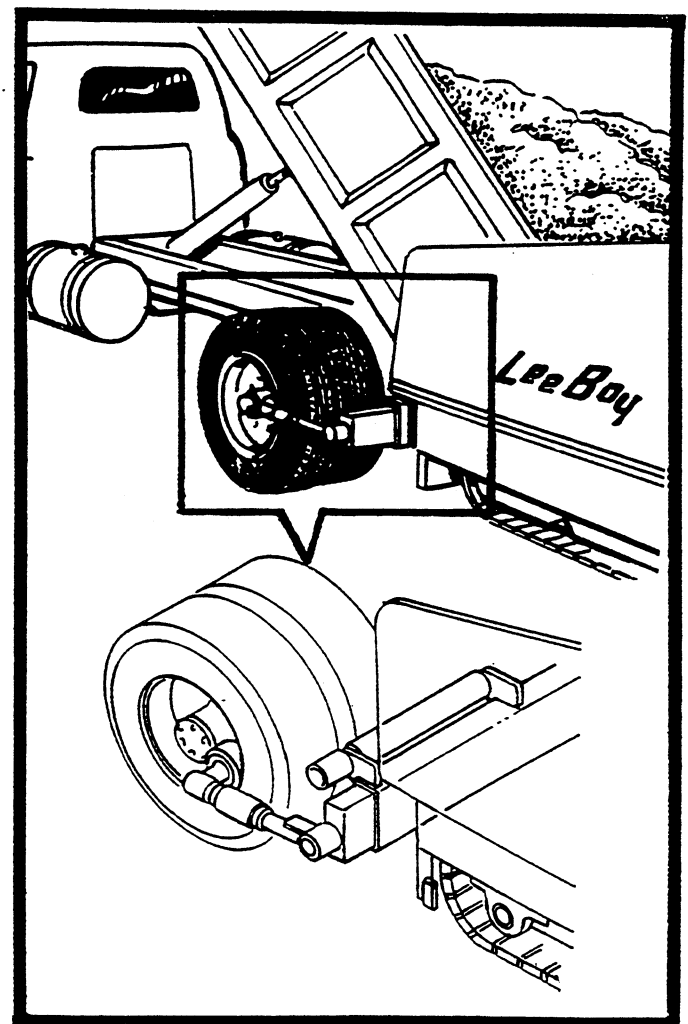


FIGURE 9

## PAVING PREPARATION INSTRUCTIONS

### LIGHTING BURNERS

#### GENERAL

The heating of the screed will require extreme care. The propane gas used to heat the screed is a volatile combustible that if treated with respect will not present a problem. Follow the procedures below and refer to the illustration as required.

1. Turn main valve on the propane tank counter-clockwise to "on" position as shown in figure 10.
2. Adjust pressure valve in or out until gauge reads between 15 pounds as shown in figure 10.

#### NOTE: AUTOMATIC IGNITORS

To light automatic burners, turn propane main valve on, push preheat button for 5 seconds, turn burner toggle on. When screed has heated, switch off. TURN PROPANE BOTTLE OFF DAILY. See figure 10.

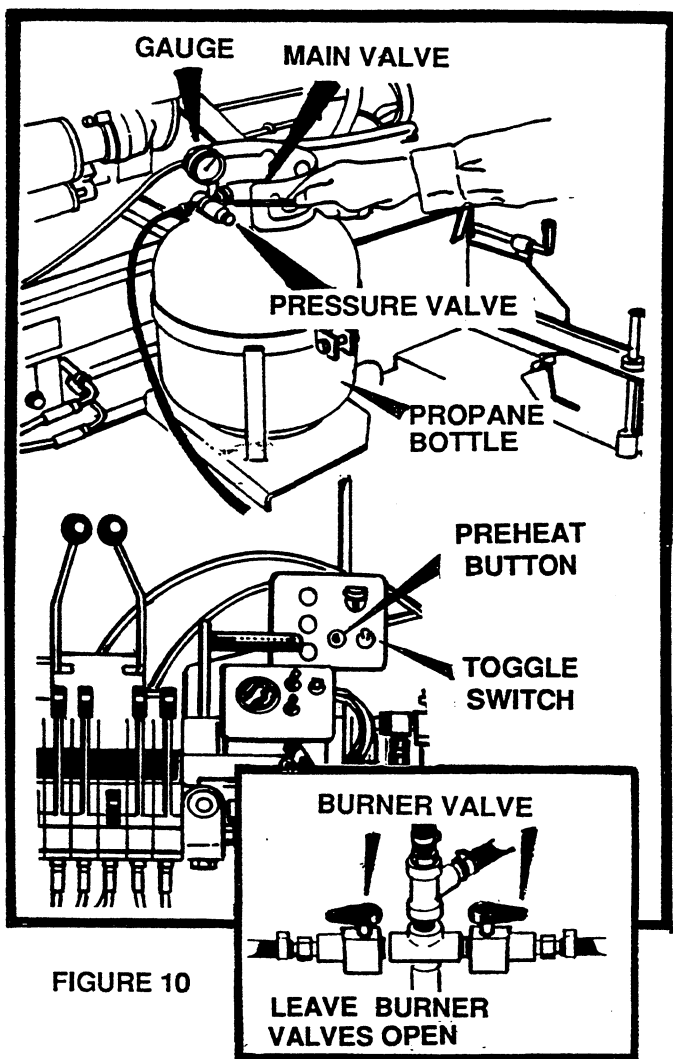


FIGURE 10

3. Light ignitor as you open the ignitor valve. See figure 11.
4. Direct ignitor flame into hole in screed cover and turn burner valve to "on" position. When the burner is lit, follow same procedure for burner on opposite side as shown in figure 12.
5. Heat screed for no more than five to ten minutes before paving.
6. When turning off the burners, make sure that all valves are closed, including the main valve on the propane tank.

### ! CAUTION !

NEVER OPEN A VALVE TO BURNER UNLESS FLAME IS PRESENT. A BUILD UP OF UNBURNED GAS COULD RESULT IN A GAS EXPLOSION!

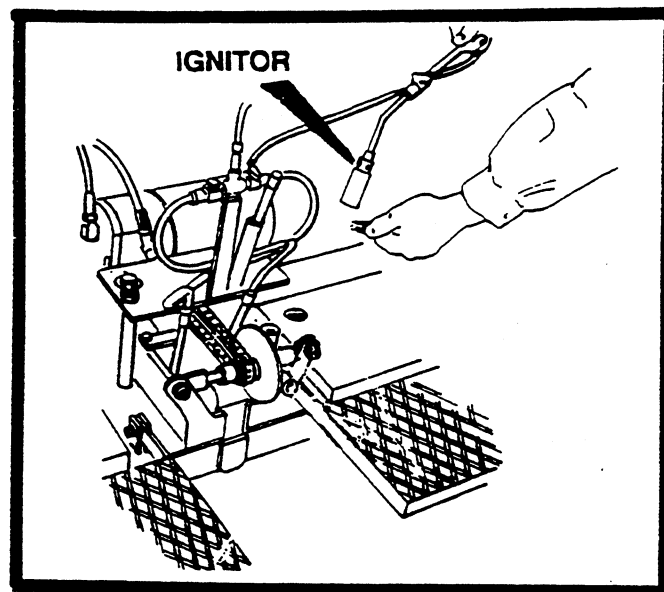


FIGURE 11

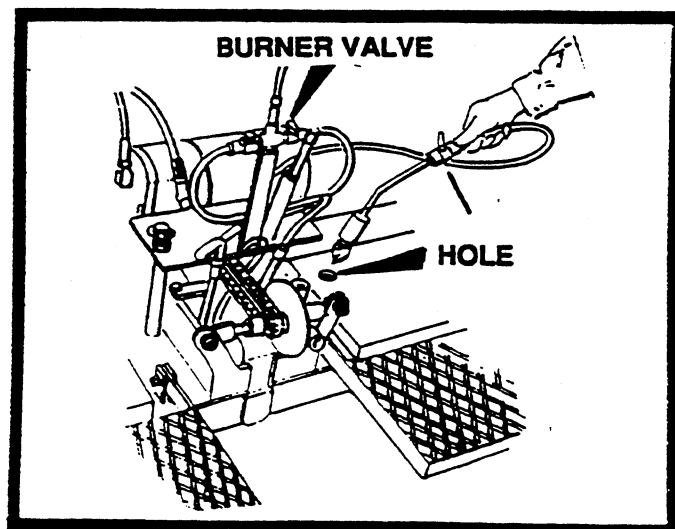


FIGURE 12

## **! CAUTION !**

TOO MUCH HEAT FOR TOO LONG CAN WARP SCREED PLATE AND CAUSE MAT TEXTURE PROBLEMS. WARP SCREED SHOULD BE REPLACED.

## **! CAUTION !**

IF FLAME COMES FROM END OF SCREED, SLOWLY TURN PETCOCK TO OFF. ALLOW FLAME TO GO OUT AND TURN PETCOCK BACK ON FULL.

### **NOTE**

Heating the screed helps prevent hot mix from sticking to the cold screed plate and produces a smooth tight mat. Heating should not only be performed at the beginning of the job, but also if the machine is idle for a long time between loads (allowing screed plate to cool).

### **NOTE**

If paving on a cool windy day, it may be necessary to maintain low heat on the screed. To accomplish this, reduce the pressure on the propane tank from 15 pounds to 2 pounds. This will provide a low even heat that will not harm the screed. Do not attempt to regulate the burner with the burner valves.

## **OPERATION OF HYDRAULIC CUTOFFS**

### **GENERAL**

The cutoffs are one of the most important functions of the paver, when used properly. Cutoffs are used primarily to control the flow of asphalt to the screed. Cutoffs can be used when making narrow passes at the beginning and ending of each pass or pull. The cutoffs have been designed to break away if accidentally hits a man hole or ridge. This feature will prevent excessive damage to cutoff. (Tack underneath will break.)

1. Moving the hydraulic handle forward will increase asphalt flow to the screed. Pulling the handle back will decrease asphalt flow.

### **NOTE**

Always work cutoff valve handle one at a time when opening or closing. If both handles are worked together, normally one will open or close before the other.

2. Always pull valve handles to close. If handle is allowed to return to center position on its own, it may pass center and cause cutoff to drift open once pressure is lost.

## **! CAUTION !**

WHEN USING AUGERS DO NOT TRY TO AUGER MATERIAL FROM ONE SIDE OF MACHINE TO THE OTHER SIDE. AUGER COVER IN CENTER BLOCKS THE FLOW. DAMAGE WILL RESULT IN BEARINGS AND COVER.

### **NOTE**

When paving basic width of machine augers are not required to run.

## **ELECTRIC SPRAYDOWN**

### **GENERAL**

The spraydown on your machine is used to spray fuel oil on any part of the machine that comes in contact with the asphalt. Build-up of this material will cause damage to components. Spray the area often, the screed extension on top and bottom, augers and hoppers.

1. Unwrap the amount of hose needed and turn spray down switch on. Pull wand handle and spray.
2. After spraying turn off spray down switch and rewrap hose.
3. **IMPORTANT:** When using spraydown consider the environment and do not allow fuel oil to run onto the ground.

### **! CAUTION !**

**IF SPRAY DOWN PUMP IS NOT TURNED OFF AFTER EACH USE, THE PUMP WILL RUN OVER BY PASS AND AFTER A PERIOD OF TIME WILL BURN UP MOTOR.**

## OPERATION OF ELECTRIC FLIGHT SCREW

### GENERAL

The electric flight screw is a added convenience to the operator. This will provide easier control of both sides of the screed.

1. Before paving, center the electric flight screw on both sides of the paver. See figure 13.
2. While paving manual flight screws are used to make major depth adjustments. Use the electric flight screws to make minor adjustments.

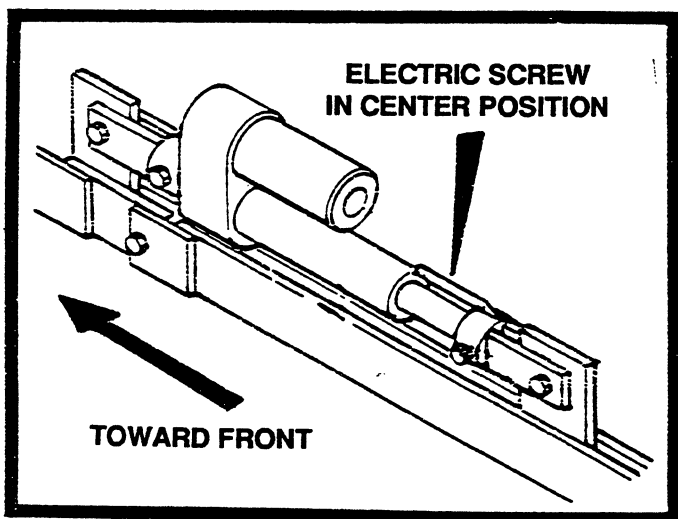


FIGURE 13

## USE OF AUGER EXTENSIONS

### GENERAL

The auger extensions should be attached to the main auger to increase the flow of asphalt. This will make it possible to lay asphalt at a higher rate. See auger extension attachment instruction below.

1. Identify the right and left auger extensions by looking for the L or R on the end of the auger extension shaft.
2. After identifying the right and left auger extension, extend the screed extension fully.
3. Shut off engine.
4. Remove bolt; nut cap on end of the main auger. Attach the correct side auger extension to the main auger with hardware just removed. Repeat this procedure for opposite side.

## LOADING AND UNLOADING

### GENERAL

Trailers used to haul the paver should have ample capacity to carry the weight of the paver. Place the trailer in a clear, level area for loading or unloading.

Work slowly and carefully to avoid accidents. Keep the area clear.

### UNLOADING

1. Remove tie down equipment.
2. Start and warm up engine.
3. Set throttle at 1/2 operating RPM. Shift transmission into low range. Set steering control levers so paver moves very slowly.
4. Make sure:
  - A. Screed position - UP
  - B. Extendable screed - IN
  - C. Gates below augers - CLOSED (Caution - Never back up with cutoff gates open.)
  - D. Speed range - LOW (Never shift Transmission on incline.)
5. Move the paver forward down the ramp as shown in figure 14.

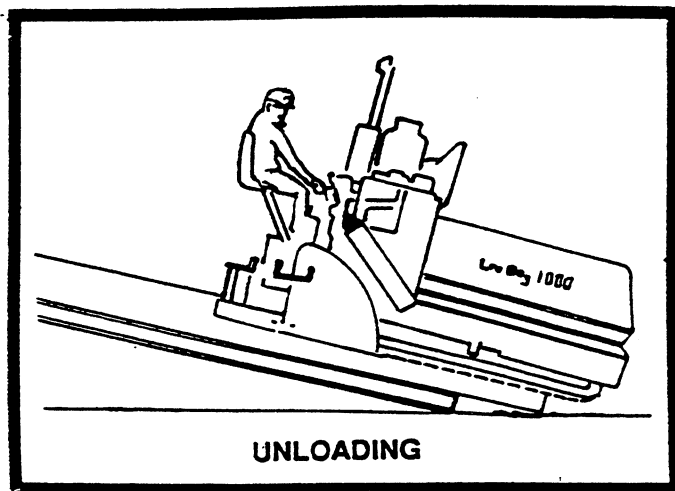


FIGURE 14

## **! DANGER !**

**MAKE SURE THE ENGINE IS RUNNING AT HIGH ENOUGH RPM'S TO PROVIDE THE HYDRAULIC PUMP WITH ENOUGH GALLONS PER MINUTE TO FUNCTION PROPERLY.**

### **NOTE**

A man should always be on the ground to assist the operator in the unloading function.

## **! CAUTION !**

**DONOT LET THE SCREED STRIKE THE RAMP WHEN MOVING OFF THE RAMP. THIS CAN BREAK THE BEARINGS ON THE THICKNESS CONTROL SCREWS OR WELDS ON THE LEVELING ARMS. A LONGER RAMP OR BLOCKS MAY BE NECESSARY TO REDUCE THE ANGLE OF UNLOADING.**

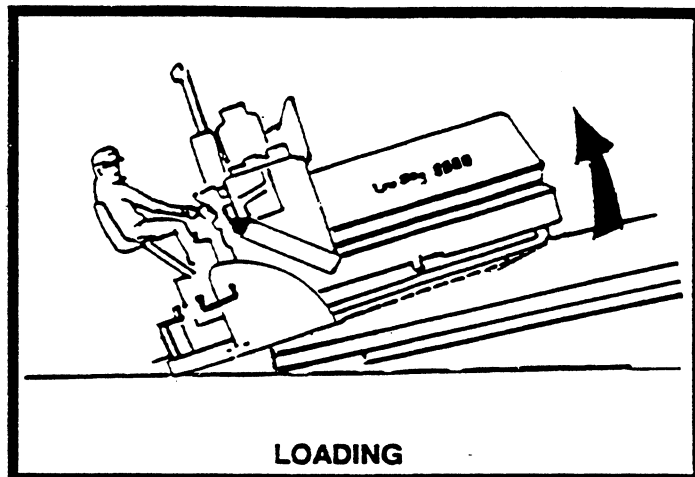
### **NOTE**

If you have a problem unloading the paver - STOP — LOOK — THINK !

### **LOADING**

1. Move paver to base of ramp. Line up tracks with the ramp. Load paver screed end first. Set throttle at 1/2 operating RPM and steering control levers so paver moves very slowly onto the ramp.
2. Make sure:
  - A. Screed position is - UP
  - B. Extendable screed - IN
  - C. Gates below auger - CLOSED
  - D. Speed range-low (Never shift transmissions on grade).
3. With the steering control levers slowly guide the paver up the ramp. If the paver is loaded hopper first, the weight of the operator on the walkway will tend to tip the paver onto the screed. See figure 15.
4. Place paver on trailer or truck at desired position.
5. Lower screed to deck.

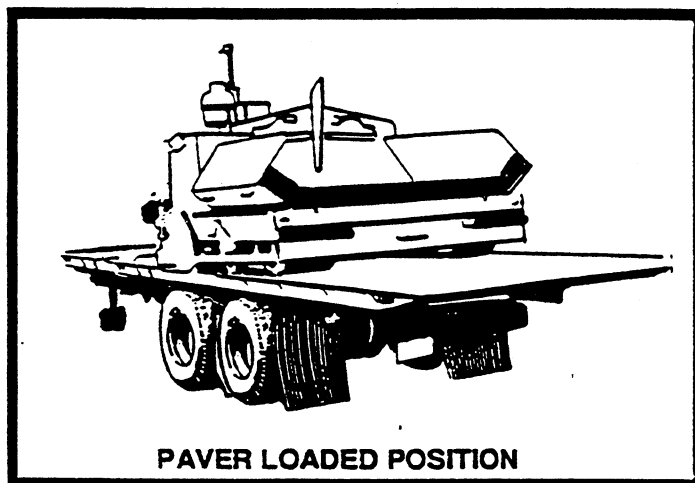
6. Shut down engine.
7. Secure paver to transport as directed by regulations.
8. Always have a helper on the ground who can assist the operator in moving the paver onto the transport.



**FIGURE 15**

### **TIE DOWN PROCEDURE**

1. Position paver on trailer centered from side to side.
2. Attach tie down chain to the hopper end of paver at the center hook provided.
3. On the rear of the paver attach a tie down chain through the crown control frame or if desired through the tie downs on each side of the paver.
4. Place chocks at wheels or tracks.
5. Make sure all chains are tight before moving.



**FIGURE 16**

## STARTING TO PAVE

### GENERAL

The paver is capable of placing bituminous base, binder and surface courses, lime or portland cement stabilized sub-base and graded aggregate materials up to a thickness of 6 inches.

Equipped with electric and manual thickness controls and a 8' to 13' or 9' to 13' wide screed, the paver can handle everything from driveways and small parking lots to large parking areas and secondary roads.

Before starting to pave, keep the following points in mind:

- A. Plan the project so that the narrowest passes are first, (the basic width of the paver) leaving the widest pass until last.
- B. Make sure to use a reference guideline. This can be a curb, gutter, adjacent mat or a string line. It is important that the first pass be straight as it will be the guideline for the following passes. Use the guidebar gauges as shown in Figure 17.
- C. Never run the paver through a pile of mix that has been dumped in front of the machine. Not only will this affect the level of the mat being laid but damage may result.

### NOTE

If paving on cool windy days, it may be necessary to maintain low heat on the screed. To accomplish this, reduce the pressure on the propane tank from 6 - 8 pounds to 2 pounds. This will provide a low even heat that will not harm the screed. Do not attempt to regulate the burner with the burner valve.

### **! WARNING !**

**NEVER SPRAY DOWN PAVER WITH FUEL OIL WHILE BURNERS ARE LIT. A FIRE COULD CAUSE SERIOUS BURNS OR DEATH!**

### NOTE:

When paving with tilt hopper paver gradually raise hopper as material is needed to screed. **DO NOT** dump hopper full and raise all the way up at one time. This will cause mat thickness to vary.

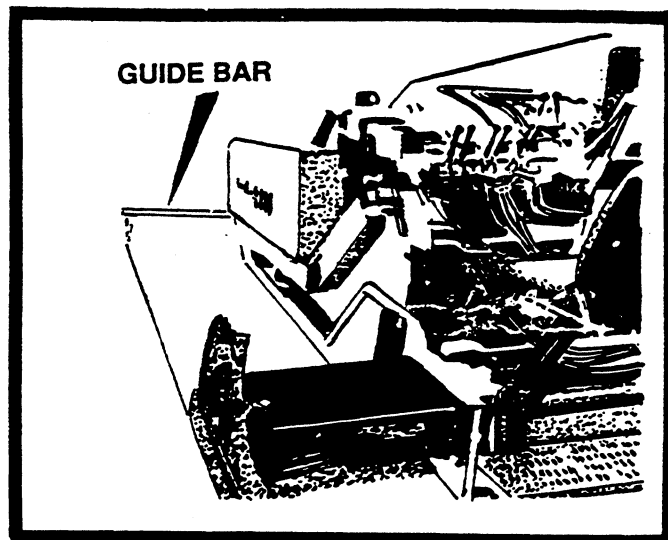


FIGURE 17

- D. It is the operators job to guide the truck up to the paver and signal driver when and how much to dump into hopper. Truck driver must maintain a light pressure on his brakes to keep truck from dumping material on the roadway in front of paver. See Figure 18.

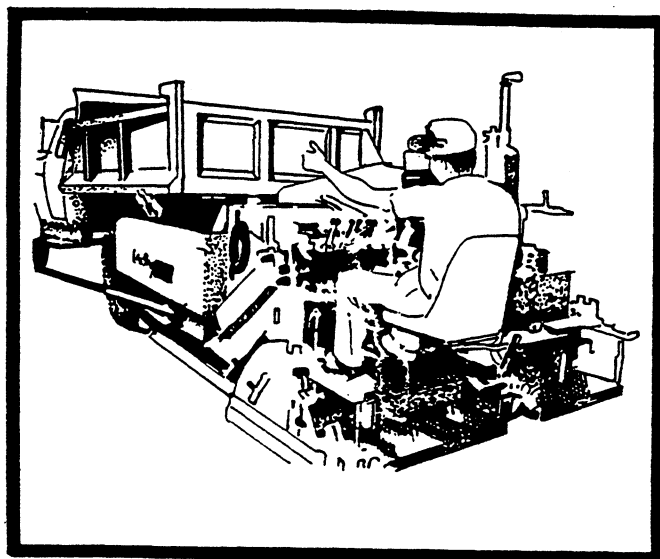


FIGURE 18

- E. Always pave in low range. See Figure 21.
- F. If paver is equipped with a truck hitch, refer to Truck Hitch Attachment instruction on page 10.

### **! DANGER !**

**BEFORE STARTING FORWARD WITH PAVER MAKE SURE NO ONE IS IN FRONT OF IT. THE LOW DECK PAVER WILL REQUIRE THE OPERATOR TO BE MORE ALERT.**

1. Raise screed and extend fully on both sides. Lubricate screed inserts with fuel oil and run the extendable screed in and out several times. Make sure end gate depth screw handles are locked after moving extensions to the desired depth. Spray the hopper and augers and auger gates of the screed plate with fuel oil as shown in Figure 19 and 20.

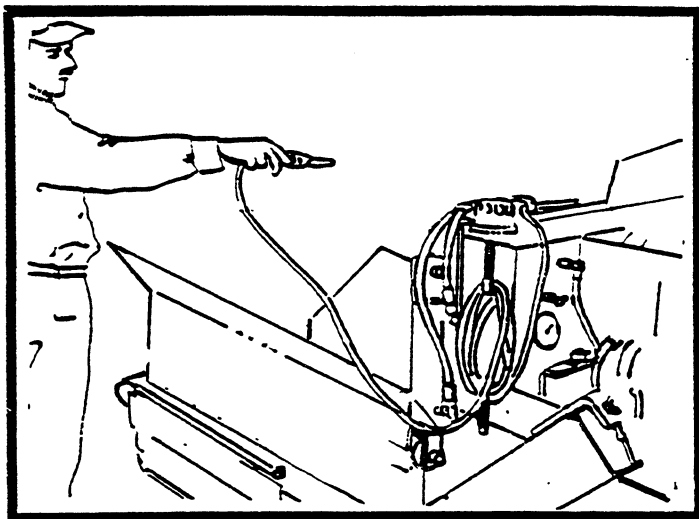


FIGURE 19

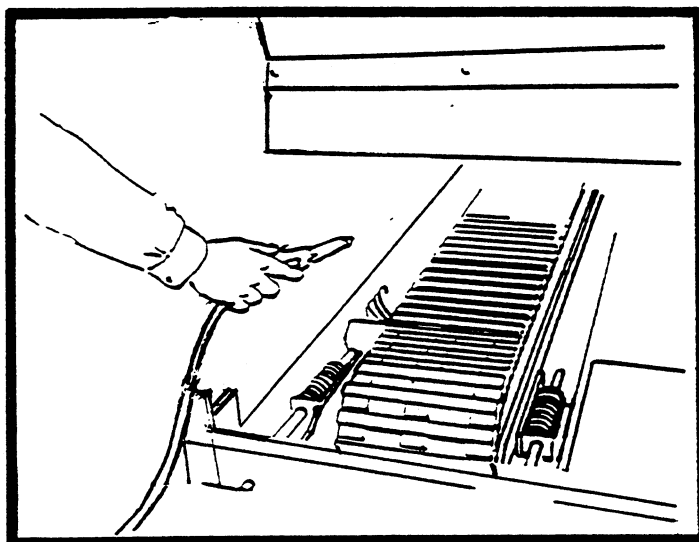


FIGURE 20

2. Figure 21 shows two methods of shifting the paver from HI to LOW gear. High and Low gear cable is used with the two speed transmission. Push down to low gear, pull up to high gear. High and Low toggle, is a toggle switch used with the Torque Hub. Pull toggle switch down to low and push up to high gear. When the paver is equipped with torque hub, a high gear indicator light will be on steady, indicating that paver is in high gear. ( 1000 D only have 1 speed.)

**NOTE:**

Always stop two speed transmission paver before shifting gears. The torque hub paver may be shifted while moving. In both cases paving should only be done in low gear.

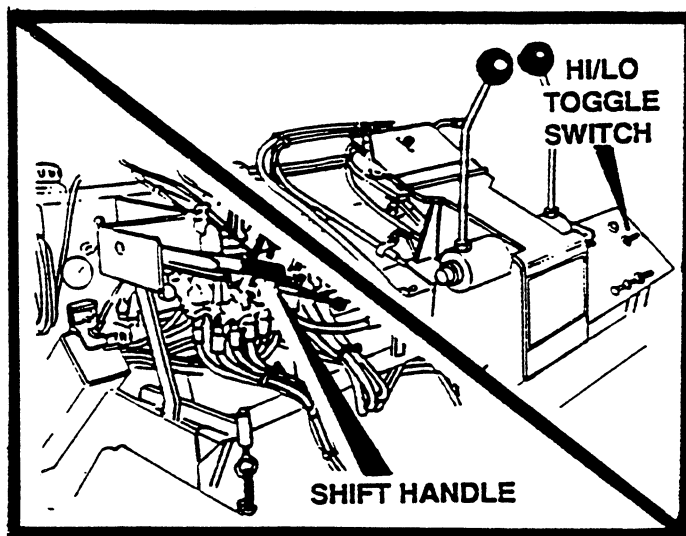


FIGURE 21

3. Light screed burners. Allow screed to heat for about 5 minutes. (After paving a short stretch, turn off screed heat; the mix will keep the screed hot.)
4. Move unit into paving position.
5. Place wood blocks under the screed as shown in Figure 22. These blocks should be slightly thicker (1/4 inch) than the finished (compacted) mat to allow for reduction in thickness after rolling.

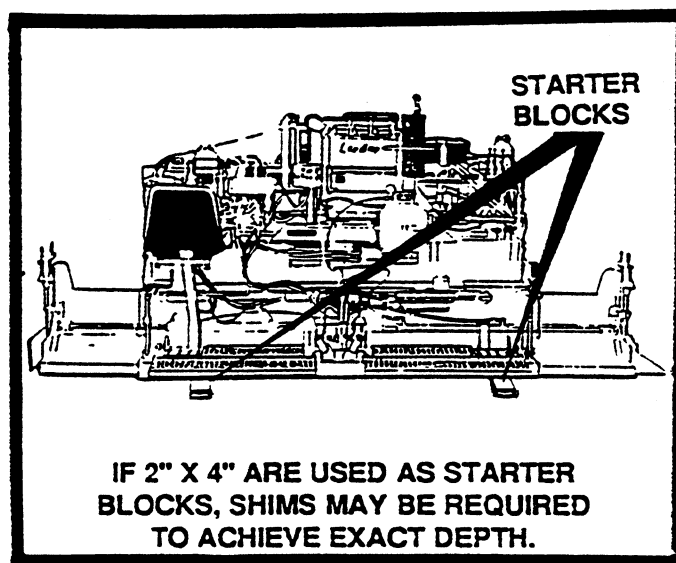


FIGURE 22

6. Adjust bottom of screed to lay flat on starting blocks. Turn flight screws one full turn toward thicker. This will lift the leading edge of the screed, preventing sag when leaving starting blocks. (End/gates can be used instead of starting blocks. Adjust end gates 1/8" to 1/4" shy of desired depth.) When paving at desired depth you should be able to feel free play in end gate. The free play indicates that the end gate is not carrying the load and that you are getting full compaction from screed.
7. Move forward and get ready to make fine adjustments with thickness control screws. (Clockwise thicker paving, counter clockwise thinner).
8. Once the machine is paving the right depth desired. The runners on each end should be about 1/4" off the base to eliminate wear on the runners.

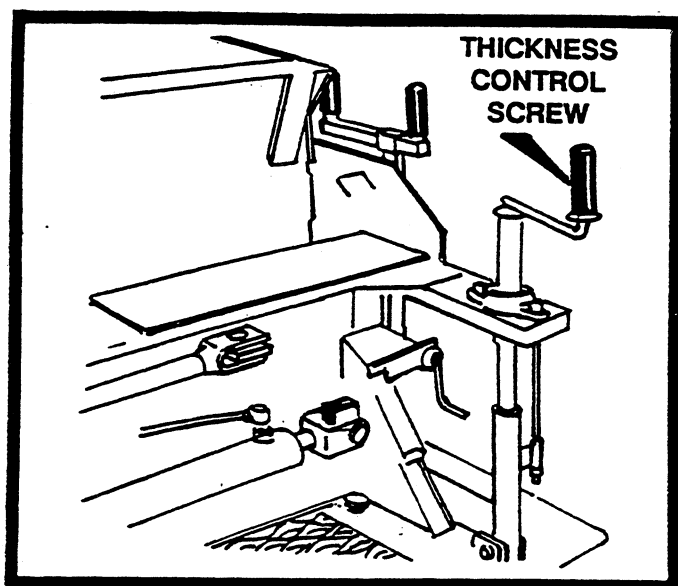


FIGURE 23

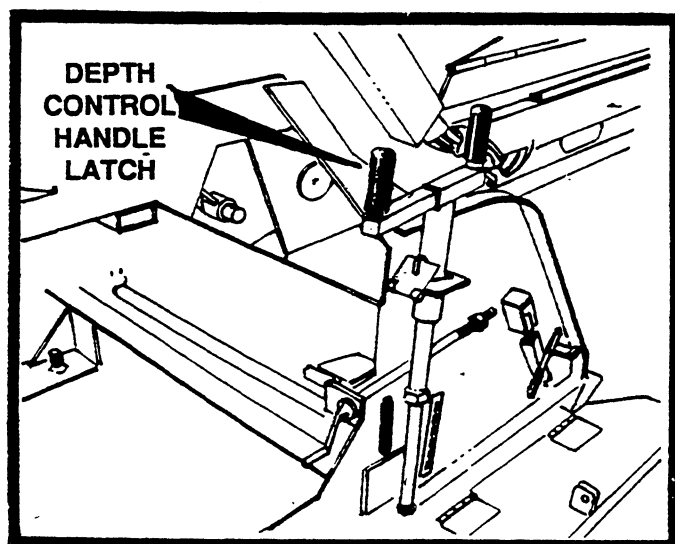


FIGURE 24

#### NOTE

Always make sure the depth control handles on the end gate are latched after each use to prevent damage when the extensions are retracted (See Figure 24).

#### ADJUSTING CROWN CONTROL

Set crown control. The screed plate is a one-piece unit which is actually bent to provide the required crown setting. See Figure 25.

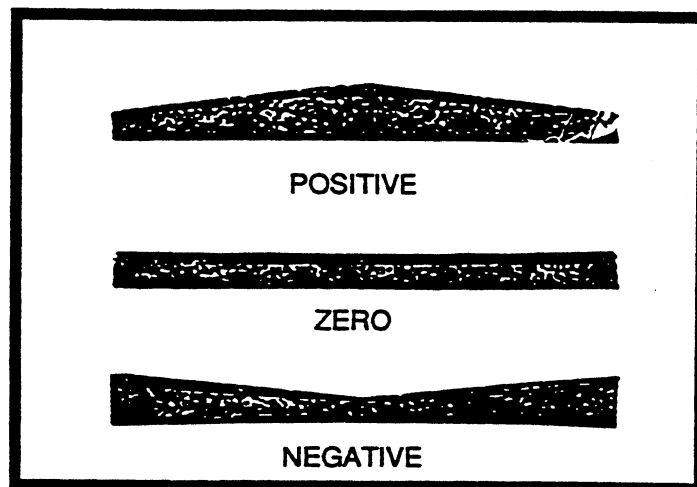


FIGURE 25

#### NOTE

Positive crown is when the middle of the mat is raised to permit water to drain to each side.

Negative crown is the lowering of the center of the screed plate. Negative crown might be used in an alley where drainage down the center of the alley is necessary.

Crown may be placed in the leading edge and/or the trailing edge of the screed plate. Crown in the leading edge aids material flow under the screed plate, only. Trailing edge crown puts a crown in the mat. As an example; trailing edge crown is 0, leading edge crown is 1/8". With this set-up there will not be any crown placed in the mat laid by the paver, however, material flow under the screed plate will be improved. Trailing edge crown is set at 0 when shipped from the factory. The chain connecting the leading and trailing edge crown control assures that the relationship of the edges remains constant as the trailing edge is changed to meet job conditions.

#### NOTE:

There is not a lot of problems that can occur to a screed other than warping or twisting. Warping can be caused by too much heat from the burners. When making adjustments to the screed flight screws, try to stay within three to four turns of each other. Otherwise, the screed will be in a bind causing screed to twist. See page 22 under screed adjustment on how to level screed.

## ADJUSTING CROWN CONTROL (Continued)

- A. Loosen nut in slot under vibration motor as shown in Figure 26.

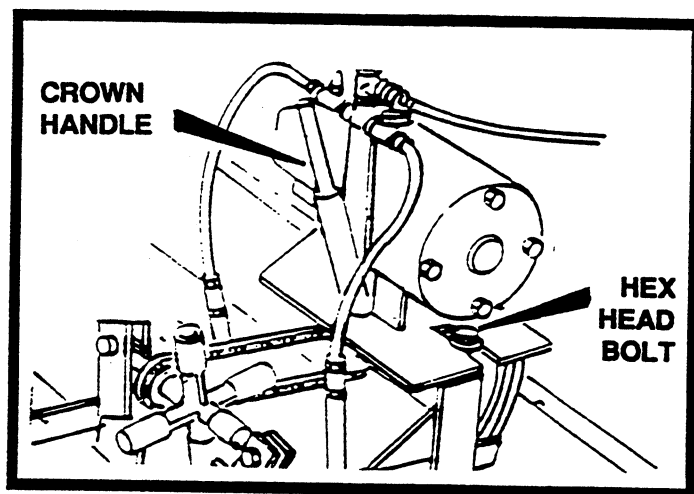


FIGURE 26

- B. Remove crown handle from holder and insert it into opening on control as shown in Figure 27.

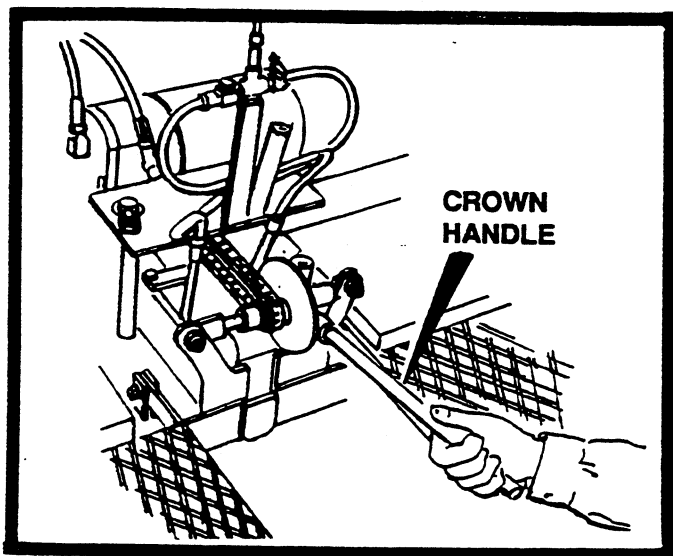


FIGURE 27

- C. Turn crown control -  
- down for positive crown  
- up for negative crown
- D. Re-tighten nut in slot under vibration motor.

### NOTE

If the job demands a specific amount of crown, it can be set by stretching a string line from one side of the screed to the other (along trailing edge). Turn crown control and measure from the center of screed plate to taut string line.

### NOTE

Regardless of the settings you have placed on the paver, the final judge of what you are doing is the mat itself. For instance, if you have set the crown on the screed, check the mat behind the paver to determine if you really are getting the crown you desire.

Begin paving the first pass following the guide line.

Reverse the paver and return to the starting point for the next pass. The depth control handle on the end gate (on the paved side) should be set so that the bottom of the end plate is about 1/4" below the screed plate if the adjacent mat has been rolled.

### NOTE

If possible, about 6 inches of the edge of the first pass should be left unrolled to allow a good joint to be made after the next pass is complete.

The second pass can be made with the truck backed up to the front rollers of the paver as shown in Figure 28. The paver will push the truck. The driver should hold the truck brakes "on" *lightly* to keep the truck from moving away from the paver.

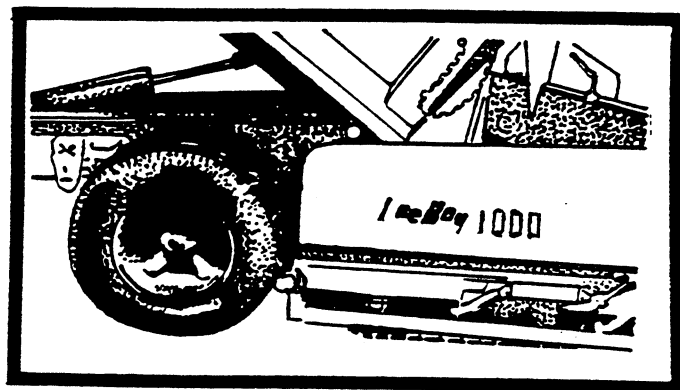


FIGURE 28

## ! CAUTION !

TRUCK DRIVER SHOULD NOT HOLD BRAKES TOO TIGHTLY OR PAVER STEERING AND THE MAT WILL BE ADVERSELY AFFECTED.

### NOTE

These paving directions are general in nature and cannot take into account unusual characteristics you will find on each job. It is, therefore, the responsibility of the supervisor in charge to determine the exact paving pattern.

## ROUTINE MAINTENANCE

### GENERAL

Preventive maintenance on the Lee-Boy paver is a simple job that will provide years of trouble-free operation. Adjustments, also, are simple; they can be performed in the field with ordinary hand tools. Engine preventative maintenance, other than oil, air and fuel filter changes, is not covered in this section. Refer to engine operators manual for engine service information.

### 10 - HOUR OR DAILY ROUTINE MAINTENANCE

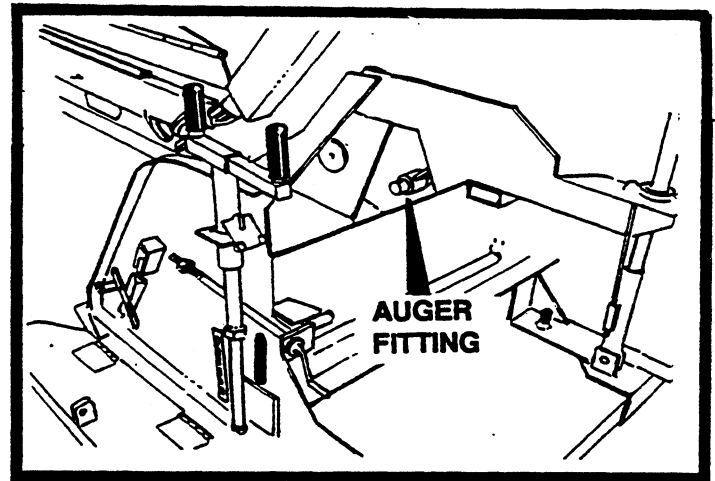
1. Cleaning the paver at the end of the working day while the machine is still hot is like putting money in the bank. A paver that is continuously left with mix stuffed in every corner is going to increase maintenance costs. Scrape off mix and spray fuel oil on the screed plate, hopper, etc., any place that has come in contact with the mix. All cleaning should be performed while the machine is hot.

## ! CAUTION !

**IF MIX IS ALLOWED TO REMAIN IN THE MACHINE OVERNIGHT, POSSIBLE DAMAGE CAN RESULT ON START-UP THE NEXT DAY. POOR "HOUSE-KEEPING" WILL INCREASE MAINTENANCE COSTS.**

2. Raise hopper (See Adjustments) and clean mix off all flat surfaces. This operation is quick and simple when the paver is still hot. **Immediately after raising hopper place the safety prop in position.**
3. Fill fuel tank for engine and spray down system to keep condensation from forming.
4. Perform engine preventative maintenance as described in your engine operators manual. Any engine preventative maintenance should always begin with an oil check. Also, check oil level in oil bath air cleaner. (If Equipped.)

5. There are three grease fittings that should be greased daily with a good grade of multipurpose grease. Two fittings are on the outside end of each auger. See figure 29.

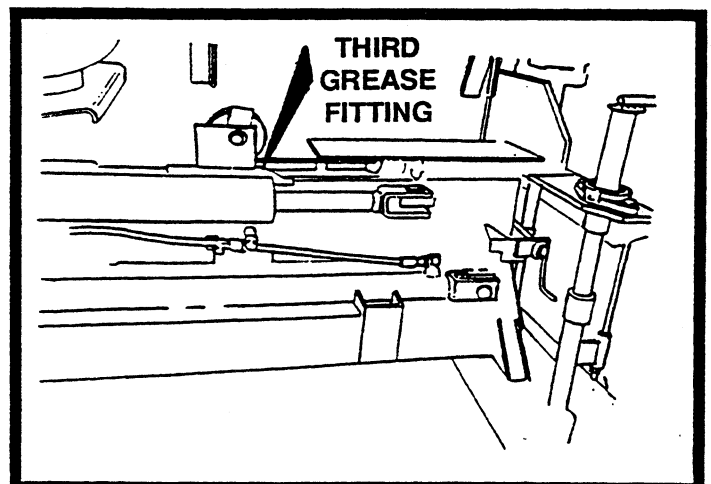


**FIGURE 29**

The center auger bearings are sealed for life.

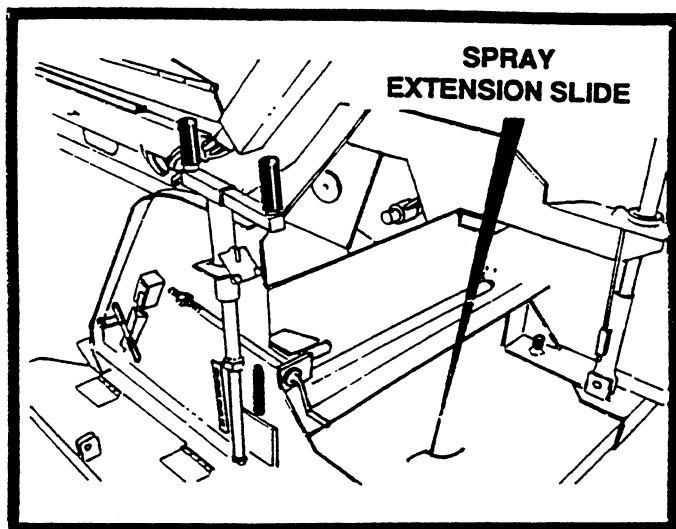
The third grease fitting is on right, screed lift slide, behind the screed hoist cylinder. See figure 30.

Grease these fittings at the end of the day while the machine is still hot. This permits the bearings to be flushed of any asphalt or fines that may have worked into them.



**FIGURE 30**

**NOTE:** At the end of the day extend screed extension all the way out and spray fuel oil on top and bottom. Work in and out a couple of times to work fuel oil to inside preventing hang up of extension the next morning.



**FIGURE 31**

6. Spray thickness control screws with fuel oil to keep them working smoothly.
7. Grease extension slide with multi-purpose grease or spray with fuel oil at points shown in Figure 31.

**50 HOURS OR MONTHLY  
ROUTINE MAINTENANCE  
Change Engine oil and Hyd. Filters.**

1. Check hydraulic oil and add if necessary.

**! CAUTION !**

**YOUR PAVER'S HYDRAULIC SYSTEM REQUIRES CLEAN, CONTAMINANT-FREE OIL. TAKE CARE WHEN WORKING WITH THE HYDRAULIC SYSTEM TO INSURE ITS COMPLETE CLEANLINESS. (15W 40 MOTOR OIL)**

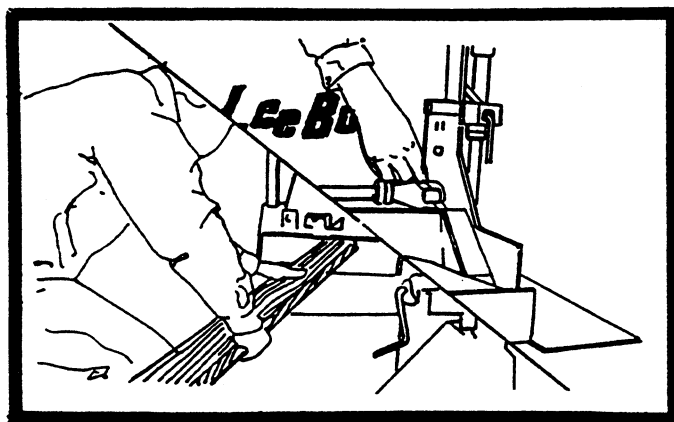
2. Check that battery electrolyte level is to the full indicator and add clean distilled water, if required. Use a battery hydrometer to measure specific gravity in each cell. A fully charged battery will read 1.265 specific gravity at 80 F. (27C.). At the same time check all battery connections and remove any corrosion that is present.

**! DANGER !**

**DO NOT SMOKE WHEN OBSERVING BATTERY ELECTROLYTE LEVEL. THE FUMES CAN EXPLODE. ELECTROLYTE IS AN ACID WHICH CAN BURN IF IT CONTACTS SKIN OR EYES. IF CONTACT IS MADE, FLUSH AREA IMMEDIATELY WITH WATER.**

3. Check air cleaner, if the engine is equipped with a dry type element. Improperly serviced air cleaners wear out engines—FAST! In just a few hours a small amount of dirt will wear out a set of piston rings! Refer to your engine's operators manual for service information. Also, perform any other engine preventative maintenance as described in the engine operators manual.
4. Clean screed insert. Remove screed insert by disconnecting extension cylinder and then pulling the screed straight out. See Figure 32. (When needed)

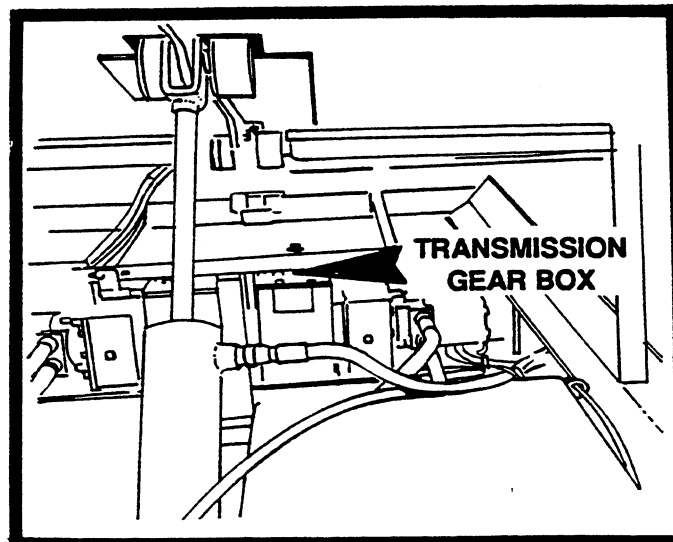
Remove asphalt that has accumulated inside screed.



**FIGURE 32**

**100 HOUR OR MONTHLY  
ROUTINE MAINTENANCE**

1. Check oil level in the two transmission gear boxes as shown in Figure 33. If oil is required use 90 wt. gear oil. There is a dipstick provided to check oil level.



**FIGURE 33**

2. Check oil level in the torque hub by removing the plug at the 3 o'clock position. If oil comes out no oil is needed, Insert plug and tighten. If oil does not come out, remove the plug at the 12 o'clock position and fill torque hub with 90 wt. gear oil until oil starts to appear at the other hole. Replace both plugs and repeat process to other torque hub. See figure 34.

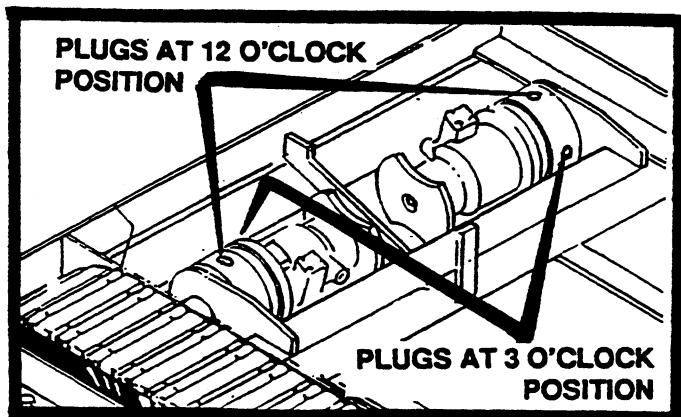


FIGURE 34

3. Replace dry type air filter, if equipped. Refer to your engine operators manual for service information.
4. Change engine oil. To assure complete removal of contaminants in the oil, perform the oil change while engine is warm. Use hose and fittings to drain oil.

After draining used oil, clean and reinstall drain plug and fill crankcase to the full mark with manufacturer's recommended oil. Change oil filter at every other oil change. (15 W 40 Motor Oil)

5. Change oil in oil bath air cleaner and rinse filter element in clean fuel to remove impurities. Also, perform any other engine preventative maintenance as described in the engine operators manual.
6. Check and adjust all chains, as required.

### 250 HOUR OR QUARTERLY ROUTINE MAINTENANCE

Perform the 250 hour preventative maintenance as described in the engine operators manual.

1. Change filter charge between valve and pump.

### 500 HOUR OR SEMI-ANNUAL ROUTINE MAINTENANCE

1. All bearings are sealed and have grease fittings. These should be greased with multi-purpose grease using a handgun. Be careful to avoid blowing the seals.
2. Perform the 500 hour preventative maintenance as described in the engine operators manual.

### 1000 HOUR OR ANNUAL ROUTINE MAINTENANCE

1. Drain and flush the hydraulic tanks. A drain plug is located on the bottom of each tank for this purpose. The recommended hydraulic oil is 15 W - 40 Motor Oil.
2. Perform the 1,000 hour preventative maintenance as described in the engine operators manual.
3. Anytime the paver has been repainted or the decals have been removed, damaged or can't be read, a new set of decals should be ordered and re-installed for safe operation.

#### NOTE

When performing any routine maintenance such as 50, 100, 250, 500 and 1000 hour, always include previous routine maintenance hours to the higher hourly schedule.

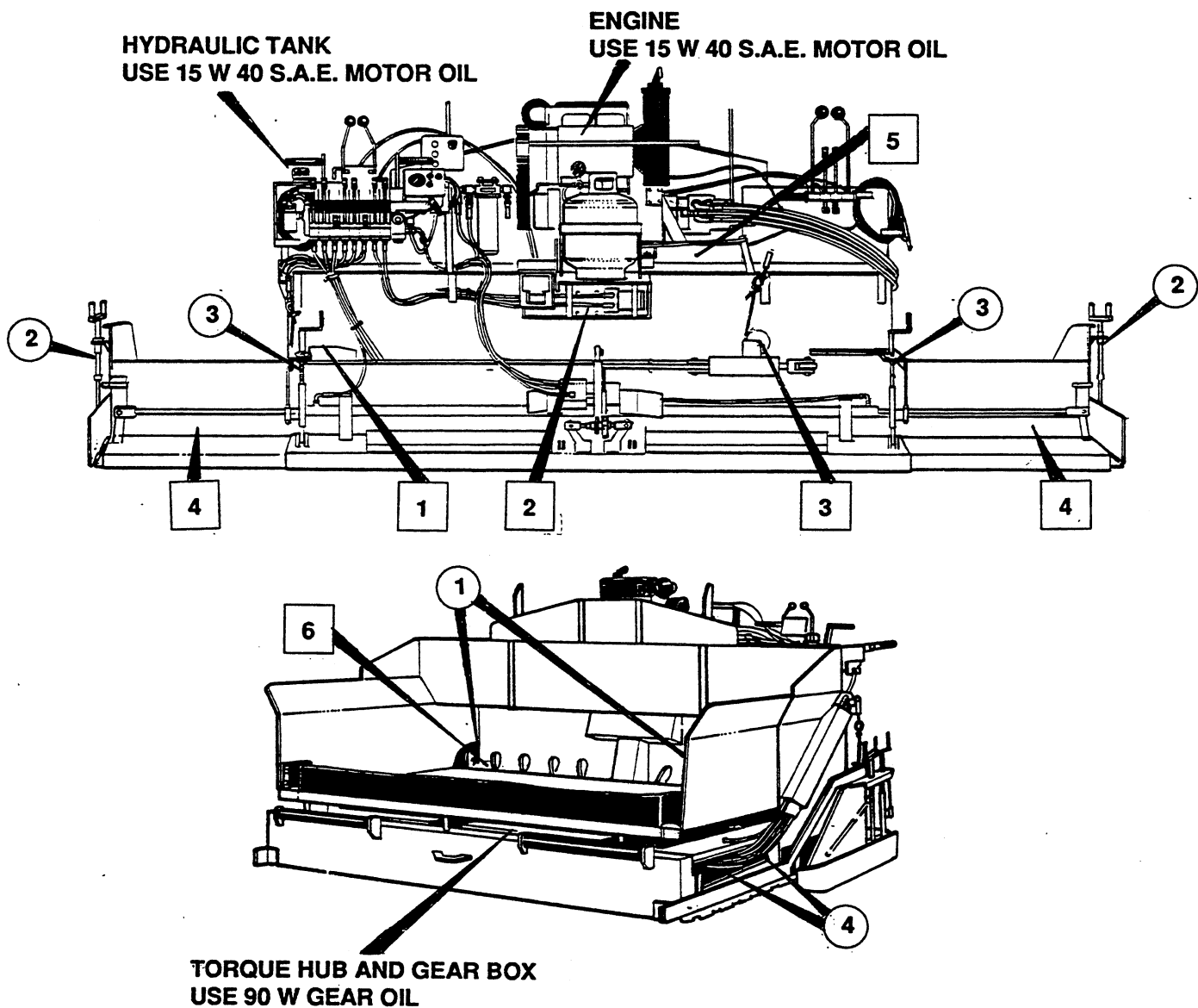
#### IMPORTANT NOTICE!!

The changing of oil and cleaning of the paver should only be done in a designated area that can contain the oil and chemicals involved in any maintenance requirement. These by products should be discarded in accordance with environmental regulations.

### SCREED ADJUSTMENT

If the screed should ever twist, set the screed down on 1-2x4 on each side. Level the screed (front and back) on 2 x 4's until the screws are free. Check the screed while it is on the 2 x 4's, if one side of the screed is up off of the 2 x 4's then lift the screed up and take the flight screw on that side and push down on that side until it is brought back level again. The twist should come out easy (you may need to repeat this process more than once), also make sure the vibrator is loose. You can leave the vibrator loose (when paving) until you need it again.

# Notes



### LUBRICATION CHART

| Item No. | Description and Location                                                | Interval |
|----------|-------------------------------------------------------------------------|----------|
| ①        | AUGER, each end of auger, (Best time at end of day)                     | Daily    |
| ②        | DEPTH SCREW, grease first in lock position, unlock turn 180° and grease | Weekly   |
| ③        | BEARING, on flight screw, both ends                                     | Weekly   |
| ④        | PILLAR BEARINGS, axle                                                   | 3 Months |
| 1        | PULLEY, screed lift, left side                                          | Daily    |
| 2        | AUGER CHAIN, middle of paver                                            | Daily    |
| 3        | PULLEY, screed lift, right side                                         | Daily    |
| 4        | SCREED EXTENSIONS, left and right (clean surface)                       | Daily    |
| 5        | CABLE END, through out paver                                            | Weekly   |
| 6        | AUGER, as shown                                                         | Daily    |

#### LEGEND

○ GREASE WITH SHELL AVANIA EP GREASE 2 OR EQUIVALENT.

□ SPRAY WITH FUEL OIL OR CHAIN LUBE

## Trouble Shooting Guide

| Problem                                       | Probable Cause                                                                                                                                                                                                                                                                         | Solution                                                                                                                                                                                       |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Auger hanging up or will not turn             | <ul style="list-style-type: none"> <li>• Chain too loose</li> <li>• Chain broke</li> <li>• Bad motor</li> <li>• Asphalt set up around auger</li> </ul>                                                                                                                                 | <ul style="list-style-type: none"> <li>• Adjust</li> <li>• Replace</li> <li>• Replace</li> <li>• Keep clean and fuel oiled</li> </ul>                                                          |
| Screed extensions hanging                     | <ul style="list-style-type: none"> <li>• Asphalt set up around extension</li> </ul>                                                                                                                                                                                                    | <ul style="list-style-type: none"> <li>• Keep cleaned and fuel oiled</li> </ul>                                                                                                                |
| Screed extensions loose (work up and down)    | <ul style="list-style-type: none"> <li>• Out of adjustment</li> </ul>                                                                                                                                                                                                                  | <ul style="list-style-type: none"> <li>• Adjust hold downs on extensions</li> </ul>                                                                                                            |
| Screed leaving streak down center of pavement | <ul style="list-style-type: none"> <li>• Screed too flat (on leading edge)</li> <li>• Screed worn out</li> </ul>                                                                                                                                                                       | <ul style="list-style-type: none"> <li>• Crown leading edge of screed</li> <li>• Replace</li> </ul>                                                                                            |
| Flight Screw Locking up                       | <ul style="list-style-type: none"> <li>• Twisting screed too far</li> </ul>                                                                                                                                                                                                            | <ul style="list-style-type: none"> <li>• Give screed time to react</li> </ul>                                                                                                                  |
| Breaking of flight screw bearings             | <ul style="list-style-type: none"> <li>• Loading and unloading</li> </ul>                                                                                                                                                                                                              | <ul style="list-style-type: none"> <li>• Check ramps for easy access</li> </ul>                                                                                                                |
| Flame coming out end of screed                | <ul style="list-style-type: none"> <li>• Raw gas from burners</li> </ul>                                                                                                                                                                                                               | <ul style="list-style-type: none"> <li>• Adjust burners in or out of hole.</li> <li>• Turn cutoff valve slowly to off, when flame goes out turn valve back on fully.</li> </ul>                |
| Hydraulic oil running out of breather cap     | <ul style="list-style-type: none"> <li>• Too full hydraulic oil</li> <li>• Air in bottom of tank</li> <li>• Oil over heated</li> </ul>                                                                                                                                                 | <ul style="list-style-type: none"> <li>• Drain 5" to 6" from top of tank</li> <li>• Bleed if you don't have vent hose</li> <li>• Slow machine down about 10% to 15%</li> </ul>                 |
| Auger handles will not stay locked in         | <ul style="list-style-type: none"> <li>• Detent worn out</li> </ul>                                                                                                                                                                                                                    | <ul style="list-style-type: none"> <li>• Replace detent</li> </ul>                                                                                                                             |
| Hydraulic pump cavitating or lost power       | <ul style="list-style-type: none"> <li>• Low hydraulic oil</li> <li>• Clogged filters</li> <li>• Suction hose loose</li> <li>• Charge pump worn</li> </ul>                                                                                                                             | <ul style="list-style-type: none"> <li>• Fill</li> <li>• Replace</li> <li>• Retighten</li> <li>• Rebuild</li> </ul>                                                                            |
| Engine will not start (Diesel)                | <ul style="list-style-type: none"> <li>• Check Safety Switches Bad</li> <li>• Wires not making good connection on solenoid</li> <li>• Plug in switch box unplugged</li> <li>• Solenoid plunger sticking</li> <li>• Fuel solenoid coil burnt up</li> <li>• Blower belt broke</li> </ul> | <ul style="list-style-type: none"> <li>• Replace</li> <li>• Make sure wires are tight</li> <li>• Plug back</li> <li>• Clean plunger</li> <li>• Replace coil</li> <li>• Replace Belt</li> </ul> |

### NOTE:

Hatz diesels are set up with a safety on starter. Normally, if the engine will not crank over it is the result of the starter relay. By pass this relay by finding terminal 50 on back of switch. Crimp new wire into this wire and run over to junction block, labeled No. 3. (Remove by pass relay.)

## Trouble Shooting Guide

| Problem                                    | Probable Cause                                                                                                                                                                                     | Solution                                                                                                                        |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Machine will not run straight              | <ul style="list-style-type: none"> <li>• Quadco out of adjustment</li> <li>• Lee-Boy Drive Control</li> </ul>                                                                                      | <ul style="list-style-type: none"> <li>• Adjust Cables</li> </ul>                                                               |
| Machine will not pull on one or both sides | <ul style="list-style-type: none"> <li>• Shifter out of adjustment</li> <li>• Keys sheared in bull gear (Transmission)</li> <li>• Transmission Gear stripped</li> <li>• Bad Drive motor</li> </ul> | <ul style="list-style-type: none"> <li>• Readjust</li> <li>• Replace keys</li> <li>• Replace Gear</li> <li>• Replace</li> </ul> |
| Tracks not running smooth                  | <ul style="list-style-type: none"> <li>• Tracks too loose</li> <li>• Front idler out of line</li> </ul>                                                                                            | <ul style="list-style-type: none"> <li>• Tighten tracks</li> <li>• Readjust track</li> </ul>                                    |
| Electric Screed don't work                 | <ul style="list-style-type: none"> <li>• Check Fuse</li> <li>• Check wiring</li> <li>• Bad actuator</li> </ul>                                                                                     | <ul style="list-style-type: none"> <li>• Replace</li> <li>• Make sure wires in tack</li> <li>• Replace</li> </ul>               |
|                                            |                                                                                                                                                                                                    |                                                                                                                                 |

### Hydraulic Pressures

Drive • 3000 PSI  
 Augers & Cyl. • 1800 PSI

## TROUBLE SHOOTING AND REPAIR GUIDE 8000 / 1000

| PROBLEM                                                             | PROBABLE CAUSE               | SOLUTION                   |
|---------------------------------------------------------------------|------------------------------|----------------------------|
| ENGINE WILL NOT START                                               | BATTERY DISCHARGED           | CHARGE BATTERY OR REPLACE  |
|                                                                     | NEUTRAL SWITCH BAD           | REPLACE                    |
|                                                                     | HATZ STARTER RELAY BAD       | REPLACE                    |
|                                                                     | STARTER OR SOLENOID BAD      | REBUILD OR REPLACE         |
| LOW BATTERY                                                         | BAD IDIOT LIGHT BULB IN DASH | REPLACE BULB               |
|                                                                     | BAD ALTERNATOR               | REPLACE OR REBUILD         |
| ENGINE CUTS OFF AND WILL NOT START. [TURNS OVER BUT WILL NOT START] | LOW FUEL                     | FILL FUEL TANK WITH DIESEL |
|                                                                     | BLOWER BELT BROKE            | REPLACE BELT               |
|                                                                     | BAD FUEL SOLENOID            | REPLACE SOLENOID           |

NOTE: IF BLOWER BELT BREAKS AND ENGINE SHUTS DOWN, TO UNLOAD MACHINE OR GET IT OUT OF THE WAY, YOU CAN HOLD BUTTON IN AT REAR OF BELT TIGHTENER TO MAKE RUN. DO NOT RUN OVER 2 TO 3 MINUTES OR ENGINE WILL OVERHEAT AND LOCK UP. [ **USE EXTREME CAUTION** ]

### HOW TO OVERRIDE HATZ FUEL SOLENOID VALVE

NOTE: HOW TO OVERRIDE THE FUEL SOLENOID. **CAUTION:** MAKE SURE THE ENGINE IS FULL OF OIL AND THE BLOWER BELT IS NOT BROKEN BEFORE DOING MANUAL OVERRIDE. **IMPORTANT NOTE:** IF THE MANUAL OVERRIDE LEVER IS USED, THE AUTOMATIC SHUTDOWN SYSTEM WILL NOT OPERATE. THE MACHINE MANUFACTURE AND THE ENGINE MANUFACTURE WILL ACCEPT NO LIABILITY FOR CONSEQUENTIAL DAMAGE, THE WARRANTY IS INVALIDATED. FOR THIS REASON, OPERATE THE ENGINE ONLY IN A GENUINE EMERGENCY AND FOR A VERY SHORT PERIOD OF TIME AFTER ENGAGING THE MANUAL OVERRIDE LEVER. TO OVERRIDE, REMOVE THE TOP COVER ON ENGINE. LOOK IN ON THE OIL FILTER SIDE OF THE ENGINE AND YOU WILL SEE THE FUEL SOLENOID AND EXTRA FUEL HOUSING ABOVE THE OIL FILTER. ON TOP OF THE HOUSING IS A SMALL LEVER, BREAK THE LEAD SEAL AND TURN THE LEVER CLOCKWISE TO LOCK IN. THE ENGINE WILL NOW RUN UNTIL YOU UNLOCK THE OVERRIDE LEVER. DO NOT RUN WITHOUT COVER ON.

|                               |                         |         |
|-------------------------------|-------------------------|---------|
| ENGINE RUNS BUT NO HYDRAULICS | PUMP DRIVE COUPLING BAD | REPLACE |
|                               | PIGGYBACK PUMP BAD      | REPLACE |

**CAUTION: DO NOT RUN HYDRAULIC OIL OVER 200 DEGREES.**

### TRACK INFORMATION

|                               |                         |                            |
|-------------------------------|-------------------------|----------------------------|
| TIRES COMING APART [CHUNKING] | RUBBER TRACK GUARDS BAD | REPLACE TO KEEP DEBRIS OUT |
|                               | TIRES SLIPPING IN TRACK | ADJUST TRACK TENSION       |

### HOW TO ADJUST TRACK TENSION

1. TURN TRACK ADJUSTING RODS CLOCKWISE AND LOAD SPRINGS SO THAT THEY MEASURE 6 1/2" TO 6 3/4" INCHES. MEASURE LENGTH OF SPRING ONLY.
2. WHEN SPRING MEASUREMENT IS CORRECT, MEASURE THE THREADED ROD STICKING THRU THE TAKEUP NUT AND MAKE SURE THAT BOTH RODS MEASURE THE SAME LENGTH. NOTE: IF THE ROD MEASUREMENT IS NOT THE SAME, FRONT IDLER WILL BE OUT OF ALIGNMENT CAUSING WEAR ON TRACK GUIDES. ONCE TRACK GUIDES WEAR OUT, THEN TRACK WILL HAVE TO BE REPLACED. TRACK TENSION SHOULD BE MEASURED WEEKLY TO MAINTAIN CORRECT TRACK TENSION OR TIRE DAMAGE MAY OCCUR. KEEP AREA WHERE SPRING MECHANISM SLIDES CLEAN AND LUBRICATED.
3. ALL 1000-D HAVE AUTOMATIC TRACK TENSION CYLINDERS TO KEEP ADJUSTED. THEY WORK OFF OF THE CHARGE PRESSURE FROM THE MAIN PUMP.

### HOW TO REPLACE TRACKS

1. LOOSEN TRACK ADJUSTERS.
2. REMOVE ANY PIN FROM TRACK BY CUTTING END OF PIN AT TOP OF FRONT IDLER. ONCE PIN HAS BEEN TRIMMED ON ENDS, ROTATE TRIMMED PIN TO BOTTOM OF FRONT IDLER AND DRIVE PIN OUT. WHEN PIN IS REMOVED, BACK MACHINE OFF OF TRACK SO THAT TRACK IS CLEAR.
3. PLACE NEW TRACK IN FRONT OF MACHINE WITH END OF TRACK WITH 3 HINGES AT FRONT IDLER.
4. DRIVE MACHINE UP ON TOP OF TRACK UNTIL TRACK IS LOCATED AT REAR OF TRACK DRIVE TIRES. TO PULL TRACK ON WE USE A ROD 4' LONG X 11/16" DIA, 2" LEG ONE END AND A HANDLE ON OTHER END. HOOK ROD INTO OUTER HINGE ON TRACK. PULL ON ROD WHILE MACHINE DRIVES FORWARD. PULL TRACK UNTIL TRACK LAYING ON GROUND IS AT FRONT OF IDLER. HOOK ROD AT FRONT OF TRACK AND BACK MACHINE UP TO WHERE TRACK WILL GO TOGETHER OVER TOP OF FRONT IDLER. PLACE PIN IN AND WELD KEEPERS ON END OF PIN. NOTE: WELDED TRACKS, MASTER PIN IS WELDED TO HINGE ON EACH SIDE.
5. TRACKS ARE READY TO ADJUST.  
TURN TRACK ADJUSTING RODS CLOCKWISE AND LOAD SPRINGS SO THAT THEY MEASURE 6 1/2" TO 6 3/4" INCHES. MEASURE LENGTH OF SPRING ONLY.  
WHEN SPRING MEASUREMENT IS CORRECT, MEASURE THE THREADED ROD STICKING THRU THE TAKEUP NUT AND MAKE SURE THAT BOTH RODS MEASURE THE SAME LENGTH. NOTE: IF THE ROD MEASUREMENT IS NOT THE SAME, FRONT IDLER WILL BE OUT OF ALIGNMENT CAUSING WEAR ON TRACK GUIDES. ONCE TRACK GUIDES WEAR OUT, THEN TRACK WILL HAVE TO BE REPLACED. TRACK TENSION SHOULD BE MEASURED WEEKLY TO MAINTAIN CORRECT TRACK TENSION OR TIRE DAMAGE MAY OCCUR. KEEP AREA WHERE SPRING MECHANISM SLIDES CLEAN AND LUBRICATED.

#### **HOW TO REPLACE DRIVE TIRES**

1. LOOSEN TRACK ADJUSTERS.
2. REMOVE ANY PIN FROM TRACK BY CUTTING END OF PIN AT TOP OF FRONT IDLER. ONCE PIN HAS BEEN TRIMMED ON ENDS, ROTATE TRIMMED PIN TO BOTTOM OF FRONT IDLER AND DRIVE PIN OUT. WHEN PIN IS REMOVED, BACK MACHINE OFF OF TRACK SO THAT TRACK IS CLEAR.
3. JACK MACHINE UP AND DROP CUTOFF CYLINDER DOWN OUT OF THE WAY SO THAT DRIVE AXLE WILL COME OUT. NOTE: RUBBER TRACK GUARD WILL NEED TO BE REMOVED TO SLIDE AXLE ASSEMBLY OUT.
4. REMOVE 2 5/8" BOLTS HOLDING PILLOW BLOCK BEARING IN PLACE.
5. PLACE FLOORJACK UNDER TIRE ASSEMBLY AND PRY OFF OF TORQUE HUB SPLINES. [ PULL OUTWARDS ]
6. ONCE AXLE ASSEMBLY IS OUT REMOVE BAD DRIVE TIRES ACCORDING.  
1000 AND OLDER 8000S WITH TAPER LOCK BUSHINGS:
  - A. REMOVE BEARING FROM END OF AXLE.
  - B. REMOVE 3 3/8" BOLTS FROM TAPER BUSHING. TAKE 2 OF THESE BOLTS AND PLACE INTO THE TWO THREADED HOLES IN BUSHING AND PUSH BUSHING APART FROM WHEEL. MAY NEED TO BEAT ON WHEEL ASSEMBLY TO HELP JAR APART. ONCE BUSHING COMES APART, PRY BUSHING OFF OF AXLE. TIRE WILL COME OFF AT THIS TIME. DO SAME PROCESS ON INNER TIRE.
  - C. CLEAN AXLE GOOD AND FIND SAW MARK ON AXLE FOR LOCATION OF INNER DRIVE TIRE. PLACE BUSHING ON THIS MARK AND TIGHTEN ASSEMBLY DOWN TIGHT. ROTATE AROUND BOLTS SO THAT THEY PULL UP EVEN. TORQUE TO 55 FOOT POUNDS.
  - D. PLACE OUTER TIRE ON AXLE WITH A 3/4" SPACER BETWEEN INNER AND OUTER TIRE. THIS WILL GIVE CLEARANCE FOR TRACK GUIDE TO RUN IN. DRIVE BUSHING IN WHEEL TIGHT AND TORQUE BOLTS.
  - E. PLACE SPACER AND BEARING BACK ON AXLE. NOTE: PUT WHEEL BEARING GREASE IN AXLE SPLINES.
7. JACK AXLE ASSEMBLY BACK UP INTO MACHINE AND SLIDE BACK ONTO SPLINES.  
PUT 2 5/8" BOLTS BACK TO HOLD PILLOW BLOCK BEARING ON. HOOK CUTOFF ASSEMBLY BACK AND INSTALL RUBBER GUARDS BACK ON.
8. PLACE TRACK IN FRONT OF MACHINE WITH END OF TRACK WITH 3 HINGES AT FRONT IDLER.

9. DRIVE MACHINE UP ON TOP OF TRACK UNTIL TRACK IS LOCATED AT REAR OF TRACK DRIVE TIRES. TO PULL TRACK ON WE USE A ROD 4' LONG X 11/16" DIA, 2" LEG ONE END AND A HANDLE ON OTHER END. HOOK ROD INTO OUTER HINGE ON TRACK. PULL ON ROD WHILE MACHINE DRIVES FORWARD. PULL TRACK UNTIL TRACK LAYING ON GROUND IS AT FRONT OF IDLER. HOOK ROD AT FRONT OF TRACK AND BACK MACHINE UP TO WHERE TRACK WILL GO TOGETHER OVER TOP OF FRONT IDLER. PLACE PIN IN AND WELD KEEPERS ON END OF PIN. NOTE: WELDED TRACKS, MASTER PIN IS WELDED TO HINGE ON EACH SIDE.
10. TRACKS ARE READY TO ADJUST.  
TURN TRACK ADJUSTING RODS CLOCKWISE AND LOAD SPRINGS SO THAT THEY MEASURE 6 1/2" TO 6 3/4" INCHES. MEASURE LENGTH OF SPRING ONLY.  
WHEN SPRING MEASUREMENT IS CORRECT, MEASURE THE THREADED ROD STICKING THRU THE TAKEUP NUT AND MAKE SURE THAT BOTH RODS MEASURE THE SAME LENGTH. NOTE: IF THE ROD MEASUREMENT IS NOT THE SAME, FRONT IDLER WILL BE OUT OF ALIGNMENT CAUSING WEAR ON TRACK GUIDES. ONCE TRACK GUIDES WEAR OUT, THEN TRACK WILL HAVE TO BE REPLACED. TRACK TENSION SHOULD BE MEASURED WEEKLY TO MAINTAIN CORRECT TRACK TENSION OR TIRE DAMAGE MAY OCCUR. KEEP AREA WHERE SPRING MECHANISM SLIDES CLEAN AND LUBRICATED.

### HOW TO REPLACE FRONT IDLER

1. LOOSEN TRACK ADJUSTERS.
2. REMOVE ANY PIN FROM TRACK BY CUTTING END OF PIN AT TOP OF FRONT IDLER. ONCE PIN HAS BEEN TRIMMED ON ENDS, ROTATE TRIMMED PIN TO BOTTOM OF FRONT IDLER AND DRIVE PIN OUT. WHEN PIN IS REMOVED, BACK MACHINE UP UNTIL TRACK CLEARS FRONT IDLER.
3. REMOVE ADJUSTING RODS AND 4 5/8" LOCK NUTS HOLDING IDLER AND SLIDE MECHANISM IN.
4. JACK FRONT OF MACHINE UP SO THAT IDLER WILL ROLL OUT. MAY NEED TO DROP TRACK GUARDS.
5. REPLACE IDLER OR IDLER BEARINGS BACK IN PLACE, AND FASTEN DOWN.
6. PLACE TRACK IN FRONT OF MACHINE WITH END OF TRACK WITH 3 HINGES AT FRONT IDLER.
7. DRIVE MACHINE UP ON TOP OF TRACK UNTIL TRACK IS LOCATED AT REAR OF TRACK DRIVE TIRES. TO PULL TRACK ON WE USE A ROD 4' LONG X 11/16" DIA, 2" LEG ONE END AND A HANDLE ON OTHER END. HOOK ROD INTO OUTER HINGE ON TRACK. PULL ON ROD WHILE MACHINE DRIVES FORWARD. PULL TRACK UNTIL TRACK LAYING ON GROUND IS AT FRONT OF IDLER. HOOK ROD AT FRONT OF TRACK AND BACK MACHINE UP TO WHERE TRACK WILL GO TOGETHER OVER TOP OF FRONT IDLER. PLACE PIN IN AND WELD KEEPERS ON END OF PIN. NOTE: WELDED TRACKS, MASTER PIN IS WELDED TO HINGE ON EACH SIDE.
8. TRACKS ARE READY TO ADJUST.  
TURN TRACK ADJUSTING RODS CLOCKWISE AND LOAD SPRINGS SO THAT THEY MEASURE 6 1/2" TO 6 3/4" INCHES. MEASURE LENGTH OF SPRING ONLY.  
WHEN SPRING MEASUREMENT IS CORRECT, MEASURE THE THREADED ROD STICKING THRU THE TAKEUP NUT AND MAKE SURE THAT BOTH RODS MEASURE THE SAME LENGTH. NOTE: IF THE ROD MEASUREMENT IS NOT THE SAME, FRONT IDLER WILL BE OUT OF ALIGNMENT CAUSING WEAR ON TRACK GUIDES. ONCE TRACK GUIDES WEAR OUT, THEN TRACK WILL HAVE TO BE REPLACED. TRACK TENSION SHOULD BE MEASURED WEEKLY TO MAINTAIN CORRECT TRACK TENSION OR TIRE DAMAGE MAY OCCUR. KEEP AREA WHERE SPRING MECHANISM SLIDES CLEAN AND LUBRICATED.

|                                                    |                              |                                |
|----------------------------------------------------|------------------------------|--------------------------------|
| <b>MACHINE WILL NOT TRAVEL STRAIGHT:</b>           | HYDRAULIC MOTOR NEEDS ADJUST | SEE MANUAL TO ADJUST           |
|                                                    | PUMP CABLES OUT OF ADJUST    | ADJUST CABLES AT PUMP          |
|                                                    | BAD CABLES                   | REPLACE CABLES                 |
|                                                    | TRAVEL PUMP WORN             | REBUILD OR REPLACE             |
| <b>MACHINE WILL NOT PULL ON ONE OR BOTH SIDES:</b> | HYDRAULIC MOTOR BAD          | REBUILD OR REPLACE             |
|                                                    | PUMP PRESSURE WEAK [3000PSI] | REBUILD PUMP                   |
|                                                    | BAD TORQUE HUB               | REBUILD OR REPLACE             |
|                                                    | AXLE SPLINES STRIPPED        | REPLACE AXLE [ GREASE SPLINES] |
|                                                    | TAPER BUSHING BOLTS SHEARED  | MAY NEED TO REPLACE BUSHING    |

**NOTE: SEE TRACK COMPONENT REPLACEMENT ON HOW TO CHANGE REAR AXLE.**

## HOW TO REMOVE TORQUE HUB

1. JACK MACHINE UP ABOUT 24" OFF OF GROUND ON JACKSTANDS.
2. RAISE CONVEYOR AND PLACE SAFETY PROP IN POSITION.
3. REMOVE 2 ALLEN BOLTS FROM DRIVE MOTOR TO TORQUE HUB AND SLIDE MOTOR OUT. DO NOT UNHOOK HOSES FROM DRIVE MOTOR. PLACE DRIVE MOTOR UP ON FRAME OUT OF THE WAY.
4. WELD A BRACE TO GO FROM REAR OF FRAME ACROSS AXLE TOP AGAINST FRAME AT ANOTHER LOCATION. PUT ABOUT A 1" WELD AT EACH LOCATION TO HOLD AXLE IN PLACE.  
**NOTE: THIS PREVENTS REMOVING TRACK AND AXLE ASSEMBLY.**
5. REMOVE 12 5/8" BOLTS FROM TORQUE HUB AND PRY OUT ON TO FLOOR JACK. [ **WHEN INSTALLING TORQUE HUB BACK IN PUT WHEEL BEARING GREASE ON AXLE SPLINES** ] WHEN JOB HAS BEEN COMPLETED CUT WELDS ON BRACE HOLDING AXLE IN AND PUT 90 WT. GEAR OIL BACK IN TORQUE HUB.

## MACHINES WITH 2 SPEED TRANSMISSION

|                                     |                            |                                                                                                                                 |
|-------------------------------------|----------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| MACHINE WANT MOVE ON ONE SIDE ONLY. | SHIFTER OUT OF ADJUSTMENT  | ADJUST BY LOOSENING BOLTS IN SHIFTER LINKAGE, AND THEN SHIFT BOTH TRANSMISSIONS TO LEFT OR RIGHT AND THEN TIGHTEN LINKAGE DOWN. |
|                                     | GEARS IN TRANSMISSION BAD  | REPLACE GEARS                                                                                                                   |
|                                     | CHAIN TRANS AND AXLE BROKE | REPLACE                                                                                                                         |

## HOW TO REMOVE AND REPLACE TRANSMISSION

1. JACK MACHINE UP ABOUT 24" OFF OF GROUND ON JACKSTANDS.
2. PUT TRANSMISSIONS IN NEUTRAL POSITION.
3. ROTATE AXLE SO THAT MASTER LINK CAN BE REMOVED IN CHAIN COUPLING. [TRANSMISSION TO AXLE]
4. REMOVE SHIFTER LINKAGE AND 3 5/8" BOLTS HOLDING BOX IN.
5. REMOVE DRIVE TRAY AND CHAINS IN EARLIER 1000'S AND 700 MACHINES TO REMOVE TRANSMISSIONS. NEWER MODEL 1000'S AND 8000'S DO NOT HAVE A MOTOR DRIVE ASSEMBLY.
6. NEW MODELS REMOVE HOSES FROM DRIVE MOTOR. MOTOR WILL COME OUT WITH TRANSMISSION.
7. PRY FRONT OF TRANSMISSION UP SO THAT YOU CAN SLIDE A 2"X6"X8' BOARD UNDER TRANSMISSION TO ACT AS A SEESAW TO SLIDE TRANSMISSION UP ON HYDRAULIC TANK.
8. REPLACE BAD GEARS AND REINSTALL TRANSMISSION BACK IN MACHINE. USE SAME METHOD ABOVE.  
**NOTE: PUT 90 WT. GEAR OIL IN TRANSMISSION WHEN FINISHED.**
9. WHEN ADJUSTING SHIFTER LOOSEN 2 BOLTS HOLDING SHIFTER LINKAGE AT SLOT. SHIFT BOTH TRANS TO LEFT OR RIGHT AND THEN TIGHTEN BOLTS DOWN AT SLOT. MAKE SURE HANDLE IS IN CORRECT POSITION BEFORE TIGHTENING SHIFTER BOLTS DOWN. HANDLE DOWN, TRANSMISSION IN LOW GEAR.  
**NOTE: DANGER NEVER SHIFT TRANSMISSION ON INCLINE.**  
**ONLY SHIFT TRANSMISSIONS WHEN LEVEL TO OPERATORS EYES.**

## HOW TO ADJUST TORQUE LIMITOR ON, 700,800,900,1000 AND 8000 MACHINES

1. PLACE A 2" X 4" BOARD IN FRONT OF MACHINE SO THAT ONE HALF OF MACHINE CAN DRIVE OVER IT.
2. IF MACHINE VEERS TO THE SIDE THAT THE 2" X 4" BOARD IS PLACED THEN ADJUSTMENT IS NEEDED.  
MAKE SURE MACHINE IS IN LOW GEAR AND MAKE SURE THAT TORQUE LIMITOR IS NOT FULL OF GREASE.
3. LOOSEN TWO SET SCREWS IN LARGE NUT ON SIDE OF TORQUE LIMITOR AND TURN CLOCKWISE. TURN NUT 1/4" TURN AT A TIME AS NEEDED UNTIL MACHINE DRIVES OVER 2" X 4" BOARD STRAIGHT.
4. ONCE TORQUE LIMITOR IS SET, LOCK TWO SET SCREWS BACK DOWN. **DO NOT SPRAY DIESEL OR GREASE TORQUE LIMITOR, THIS WILL CAUSE MACHINE TO VEER.**

## HOW TO REPLACE AUGERS AND INNER BEARINGS

1. REMOVE REAR GRATING OVER AUGER ASSEMBLY.
2. RUN SCREED EXTENSIONS ALL THE WAY OUT. THIS GIVES ROOM TO STAND IN BEHIND AUGER BACK TO REMOVE TOP PORTION OF AUGER COVER. AUGER COVER IS IN 3 PIECES WITH A SMALL TACK TO HOLD COVER TOGETHER WHILE BUILDING. REMOVE 4 NUTS HOLDING COVER ON AND PRY COVER APART. CLEAN ASPHALT BUILD UP FROM AROUND COVER, MAY NEED TO HEAT ASPHALT.  
MIDDLE AND BOTTOM PORTION OF COVER CAN BE REMOVED LAYING IN CONVEYOR UNDER ENGINE.
3. ROTATE AUGERS SO THAT MASTER LINK IS CENTERED AT FRONT. LOOSEN AUGER CHAINS BY SLIDING AUGER MOTORS DOWN FROM BACKSIDE, 2 5/8" BOLTS EACH SIDE.
4. REMOVE AUGER ENDMOUNTS SO THAT AUGERS CAN COME OUT THROUGH OPENING IN SIDES.
5. CHECK INNER AUGER BEARINGS, IF BAD REPLACE AT THIS TIME.
6. INSTALL NEW AUGERS MAKING SURE THAT WEARPLATES ARE ON CORRECT SIDE TO AUGER MATERIAL OUTWARD. LEAVE WORN AUGERS IN FLOOR TO LOOK AT WHILE INSTALLING NEW ONES.  
NOTE: VERY EASY TO INSTALL AUGERS IN BACKWARDS.  
TIGHTEN BEARING SET SCREWS DOWN TO HELP HOLD AUGER SHAFT FROM MOVING OUTWARD.
7. SLIDE AUGER COLLAR ON END OF AUGER SHAFT AND BOLT ENDMOUNT BACK ON. PUSH COLLAR ALL THE WAY IN AGAINST ENDMOUNT AND PUT ABOUT 2 SMALL WELDS TO HOLD IN PLACE. NOTE: COLLAR ONLY NEEDS A COUPLE SMALL WELDS, SO THAT WHENEVER COLLAR WEARS OUT IT CAN BE EASILY REPLACED. ALSO BRONZE BUSHING IN THE ENDMOUNTS CAN BE REPLACED IN NEW MACHINES.
8. PLACE AUGER CHAINS BACK ON AND ADJUST AUGER MOTORS UP TO TIGHTEN CHAINS. PLACE A PRY BAR UNDER MOTOR TO PRY UP, THEN SNUG BOTTOM MOTOR MOUNT BOLT. MAKE SURE MOTOR IS LEVEL THEN TIGHTEN TOP AND BOTTOM BOLTS TIGHT. DO THE SAME FOR OPPOSITE SIDE. [ LUBE CHAINS ]
9. PLACE AUGER COVER BACK IN PLACE MAKING SURE SLOT FOR AUGER SHAFT IS SEALED SHUT GOOD.
10. PLACE GRATING BACK ON OVER AUGERS. RUN AUGERS AND MAKE SURE EVERYTHING IS CORRECT.  
NOTE: AUGERS CHAINS CAN BE LUBRICATED EACH DAY BY SPRAYING FUEL OIL IN THRU SLOTS WHERE AUGER MOTORS ADJUST.

## SCREED SERVICE AND INFORMATION

|                                                        |                                                        |                                                                                        |
|--------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------------------------------------|
| SCREED LEAVING STREAK DOWN<br>CENTER OF MAT BEING LAID | SCREED NOT HEATED PROPER                               | SET PROPANE PRESSURE AT 15<br>POUNDS FOR ABOUT 15 MINUTES                              |
|                                                        | SCREED EXTENSIONS SET TO LOW<br>CARRING ALL THE WEIGHT | ALWAYS START OUT IN THE<br>MORNING WITH EXTENSIONS ALL<br>THE WAY UP, NO DOWN PRESSURE |

NOTE: DO NOT ADJUST EXTENSIONS UNTIL YOU KNOW THAT THEY ARE HOT. WHEN MAIN SCREED LAYS SMOOTH, TURN MAIN BURNERS OFF AND LEAVE EXTENSION BURNERS ON UNTIL THEY GET HEATED UP AND LAYING SMOOTH.

|                        |                             |                         |
|------------------------|-----------------------------|-------------------------|
| SCREED LEAVING RIPPLES | EXTENSIONS SET TO LOW       | READJUST EXTENSIONS S/R |
|                        | EXTENSIONS WORK UP AND DOWN | ADJUST TOP GUIDES       |
|                        | EXTENSION ROD BUSHINGS WORN | REPLACE BUSHINGS        |

### **HOW TO ADJUST TOP GUIDES ON EXTENSIONS.**

1. RUN EXTENSIONS ALL THE WAY IN.
2. REMOVE COVERS OVER EXTENSION CYLINDERS. [ NOT ON 13' HIGH DECK MACHINES ]
3. INSIDE OF CYLINDER COVER AT TOP AND IN CENTER CROWN, ARE 5 1/2" BOLTS HOLDING TOP GUIDE ON. LOOSEN GUIDE AND DRIVE GUIDE DOWN TIGHT AGAINST SLIDE BY USING A BLUNT PUNCH. STICK PUNCH THRU SLOTS IN 1/8" SHIELD COVERING TOP OF EXTENSIONS. NOTE: OLDER MODELS DID NOT HAVE SLOTS AT TOP, SO YOU WILL NEED TO DRILL HOLES TO PLACE PUNCH THRU OVER TOP OF BOLTS.
4. RUN EXTENSION OUT AND GREASE GOOD BEFORE WORKING. KEEP GREASED DAILY TO PREVENT WEAR.
5. PLACE CYLINDER COVERS BACK ON AND BE SURE THAT 1/2" BOLTS HOLDING GUIDES ARE TIGHT.

### **HOW TO CHANGE SCREED EXTENSIONS, SLIDES OR BUSHINGS**

1. REMOVE CYLINDER COVERS.
2. RUN SCREED EXTENSION ALL THE WAY OUT AND REMOVE CYLINDER PIN. [ LOWER SCREED ]
3. REMOVE 4-1/2" BOLTS IN EXTENSION RODS HOLDING EXTENSIONS ON. ONCE BOLTS REMOVED PULL EXTENSION OUT OF THE WAY.
4. PULL 1 1/2" RODS OUT OF SLIDE.
5. LOOSEN 5 BOLTS HOLDING TOP GUIDE ON. THIS WILL LET MAIN SLIDE COME OUT EASY. AT THIS TIME BUSHINGS CAN BE REPLACED OR MAIN SLIDE. NOTE: WHEN REPLACING BUSHINGS YOU WILL NEED TO HONE BUSHINGS IF 1 1/2" SHAFTS DON'T GO IN.
6. CLEAN AREA WHERE SLIDES GO, AND LUBRICATE BEFORE SLIDING SLIDE BACK IN.
7. LOOSEN GUIDE AND DRIVE GUIDE DOWN TIGHT AGAINST SLIDE BY USING A BLUNT PUNCH. STICK PUNCH THRU SLOTS IN 1/8" SHIELD COVERING TOP OF EXTENSIONS. NOTE: OLDER MODELS DID NOT HAVE SLOTS AT TOP, SO YOU WILL NEED TO DRILL HOLES TO PLACE PUNCH THRU OVER TOP OF BOLTS.
8. SLIDE 1 1/2" RODS BACK IN, AND BOLT EXTENSIONS BACK ON. MAKE SURE THAT EXTENSION IS MOUNTED FLUSH WITH BOTTOM OF SCREED PLATE.
9. HOOK CYLINDERS BACK TO EXTENSIONS AND PUT CYLINDER COVERS BACK ON.
10. RUN EXTENSION OUT AND GREASE.

### **HOW TO CHANGE SCREED WEARPLATE**

1. REMOVE CYLINDER COVERS, WALKBOARDS AND SCREED LIDS. [ SCREED EXTENSIONS IN ]
2. REMOVE 10 3/8" BOLTS HOLDING WEARPLATE TO SCREED FRAME ON EACH SIDE.
3. CLAMP CENTER PORTION OF SCREED SO THAT WHEN SCREED FRAME IS RAISED UP OFF OF WORN WEARPLATE, CLAMP WILL HOLD SCREED IN PLACE.
4. RAISE SCREED UP AND REMOVE BAD WEARPLATE.
5. CLEAN ALL MATERIAL BUILDUP FROM SCREED FRAME FOR NEW WEARPLATE TO BOLT UP TO.
6. SET NEW WEARPLATE DOWN LEVEL ON 3 BLOCKS. ONE ON EACH END AND ONE IN CENTER. MAKE SURE EXTENSIONS ARE RAISED ALL THE WAY UP TO PREVENT EXTENSIONS FROM HOLDING SCREED FRAME OFF OF WEARPLATE.
7. LOWER SCREED FRAME DOWN ON TO NEW WEARPLATE. PUT 5 BOLTS IN ON ONE SIDE AT FRONT TO HOLD WEARPLATE. [ DO NOT TIGHTEN BOLTS UNTIL ALL BOLTS ARE IN ] LOOSEN VIBRATOR ON SLOTTED SIDE AND ADJUST CROWN, THIS WILL MOVE SCREED FRAME IN AND OUT ON WEARPLATE TO LINE BOLTS UP ON OPPOSITE SIDE. ONCE FRONT BOLTS ARE IN THEN PLACE REAR BOLTS IN. WHEN ALL BOLTS HAVE BEEN STARTED, MAKE SURE THAT SCREED FRAME AND WEARPLATE IS FLAT AND THEN TORQUE BOLTS TO 55 FOOT POUNDS. START INSIDE AND MOVE OUTWARD BY ROTATING FROM LEFT TO RIGHT SIDE. THIS WILL KEEP SCREED RELAXED.
8. PLACE SCREED LIDS, WALKBOARDS AND CYLINDER COVERS BACK ON SCREED.

## HOW TO CHANGE EXTENSION WEARPLATES

1. RUN EXTENSIONS ALL THE WAY OUT.
2. REMOVE ENDGATES BY REMOVING TILT SCREW AND 7/8" NUT ON EACH SIDE. ENDGATE WILL TILT FORWARD OUT OF HOLDER AND SLIDE OFF OF 7/8" BOLT.
3. DISCONNECT EXTENSION ADJUSTER FROM WEARPLATE.
4. REMOVE FRONT EXTENSION HINGE SHIELD.
5. SLIDE HINGE PIN OUT AND WEARPLATE WILL FALL OFF.
6. HOLD NEW WEARPLATE INPLACE AND SLIDE HINGE PIN BACK IN.
7. FASTEN EXTENSION ADJUSTER BACK TO WEARPLATE.
8. PUT FRONT HINGE COVERS BACK ON.
9. PLACE ENDGATE BACK ON MACHINE.

|                                    |                               |                                                                                  |
|------------------------------------|-------------------------------|----------------------------------------------------------------------------------|
|                                    | <b>TWISTING SCREED TO FAR</b> | <b>GIVE SCREED TIME TO REACT</b>                                                 |
| <b>FLIGHT SCREW LOCKING UP</b>     |                               |                                                                                  |
|                                    | <b>TWISTING SCREED TO FAR</b> | <b>GIVE SCREED TIME TO REACT</b>                                                 |
| <b>FLIGHT SCREW BEARING DAMAGE</b> | <b>LOADING AND UNLOADING</b>  | <b>SCREED CARRING WEIGHT OF MACHINE WHEN LOADING OR UNLOADING. CORRECT RAMPS</b> |

|                                   |                           |                                |
|-----------------------------------|---------------------------|--------------------------------|
|                                   | <b>CHECK FUSE [ BAD ]</b> | <b>REPLACE</b>                 |
| <b>ELECTRIC SCREWS DON'T WORK</b> | <b>CHECK WIRING</b>       | <b>MAKE SURE WIRES IN TACK</b> |
|                                   | <b>BAD ELECTRIC SCREW</b> | <b>REPLACE ELECTRIC SCREW</b>  |
|                                   | <b>BAD TOGGLE SWITCH</b>  | <b>REPLACE TOGGLE SWITCH</b>   |

|                                     |                                    |
|-------------------------------------|------------------------------------|
| <b>HYDRAULIC PRESSURES:</b>         |                                    |
| <b>DRIVE MOTORS 3000 PSI</b>        |                                    |
| <b>CONVEYOR MOTORS 2200 PSI</b>     |                                    |
| <b>AUGER AND CYLINDERS 2000 PSI</b> | <b>CHECK PRESSURE WITH OIL HOT</b> |

|                                    |                        |
|------------------------------------|------------------------|
| <b>HATZ ENGINE OIL QUANTITIES:</b> |                        |
| <b>4L40C OR 4L41C 12 QUARTS</b>    |                        |
| <b>3L40C OR 3L41C 8 QUARTS</b>     |                        |
| <b>2L40C OR 2L41C 5 QUARTS</b>     |                        |
| <b>2M40L 5 QUARTS</b>              | <b>15W40 MOTOR OIL</b> |

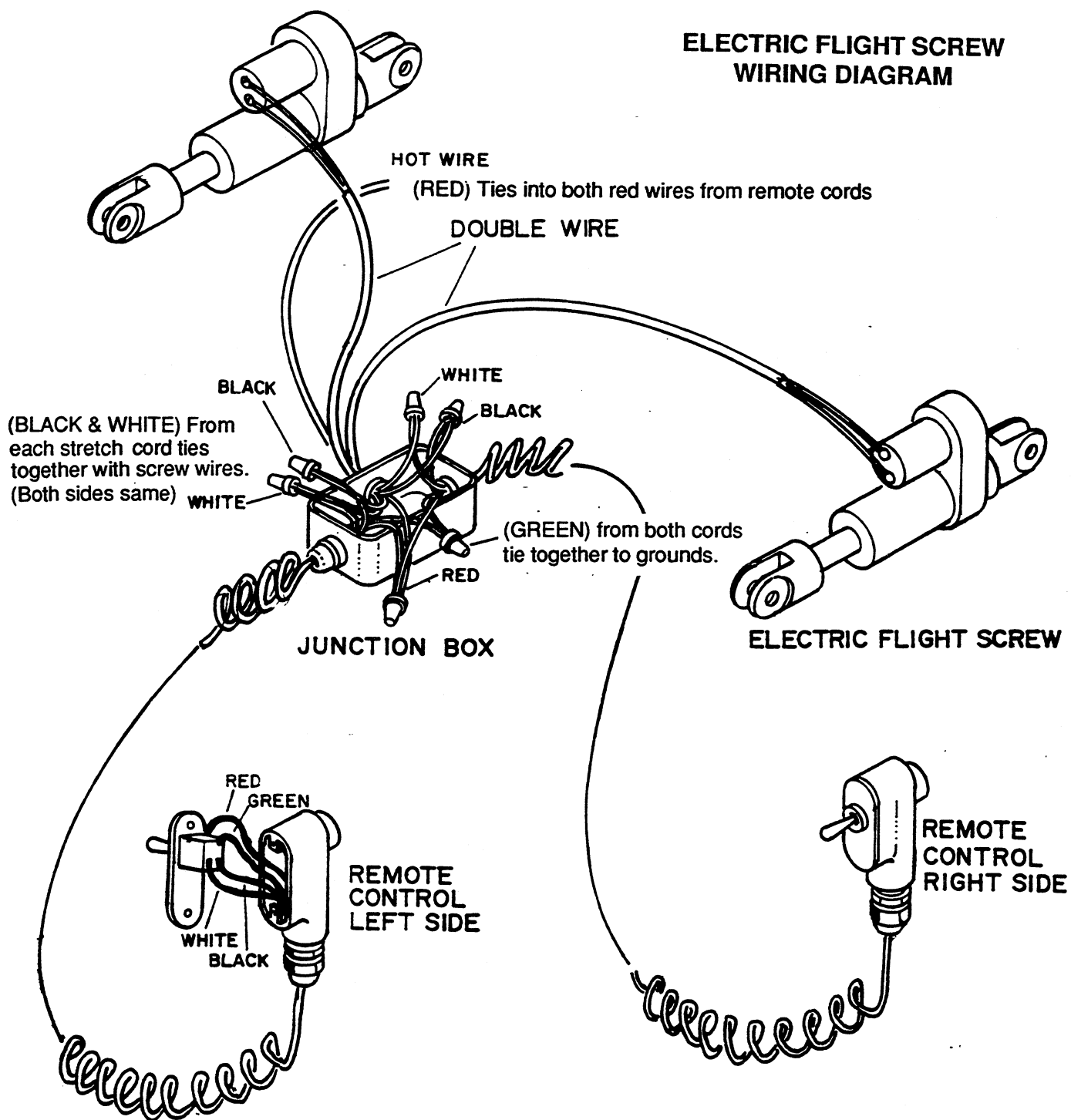
|                                   |                       |
|-----------------------------------|-----------------------|
| <b>TORQUE HUBS 32 OUNCES EACH</b> | <b>90 WT GEAR OIL</b> |
|-----------------------------------|-----------------------|

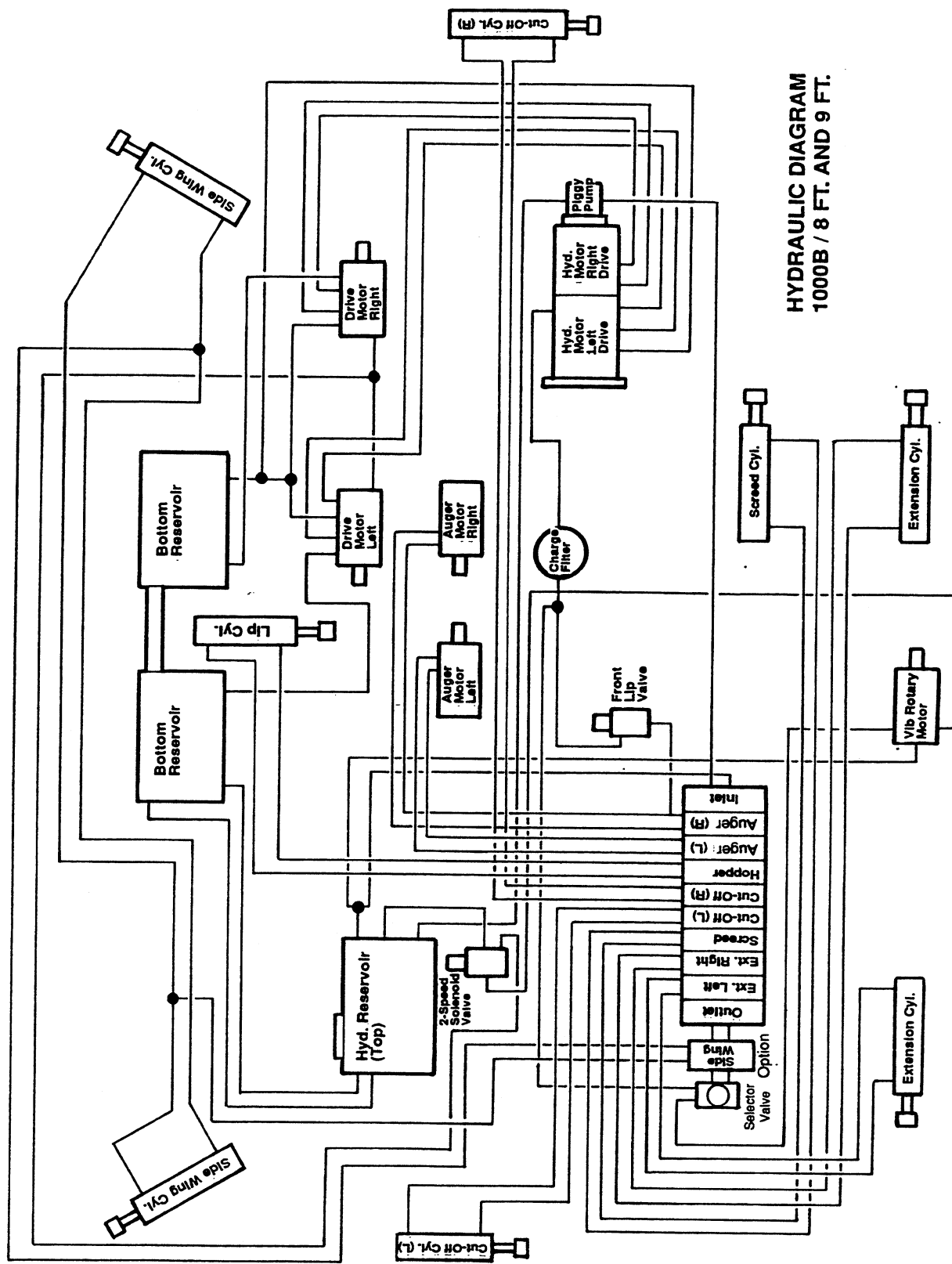
|                                       |                         |
|---------------------------------------|-------------------------|
| <b>MACHINE HYDRAULIC OIL 40 GALS.</b> | <b>15W 40 MOTOR OIL</b> |
|---------------------------------------|-------------------------|

|                           |
|---------------------------|
| <b>FUEL TANK 20 GALS.</b> |
|---------------------------|

# ELECTRIC FLIGHT SCREW

## ELECTRIC FLIGHT SCREW WIRING DIAGRAM





HYDRAULIC DIAGRAM  
1000B / 8 FT. AND 9 FT.



## PARTS MANUAL



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**1000 D Tilt Hopper Paver**

**Manual No. 1000802**



## **PARTS INFORMATION**

In order to expedite locating and shipping of parts you may need, please refer to the following information:

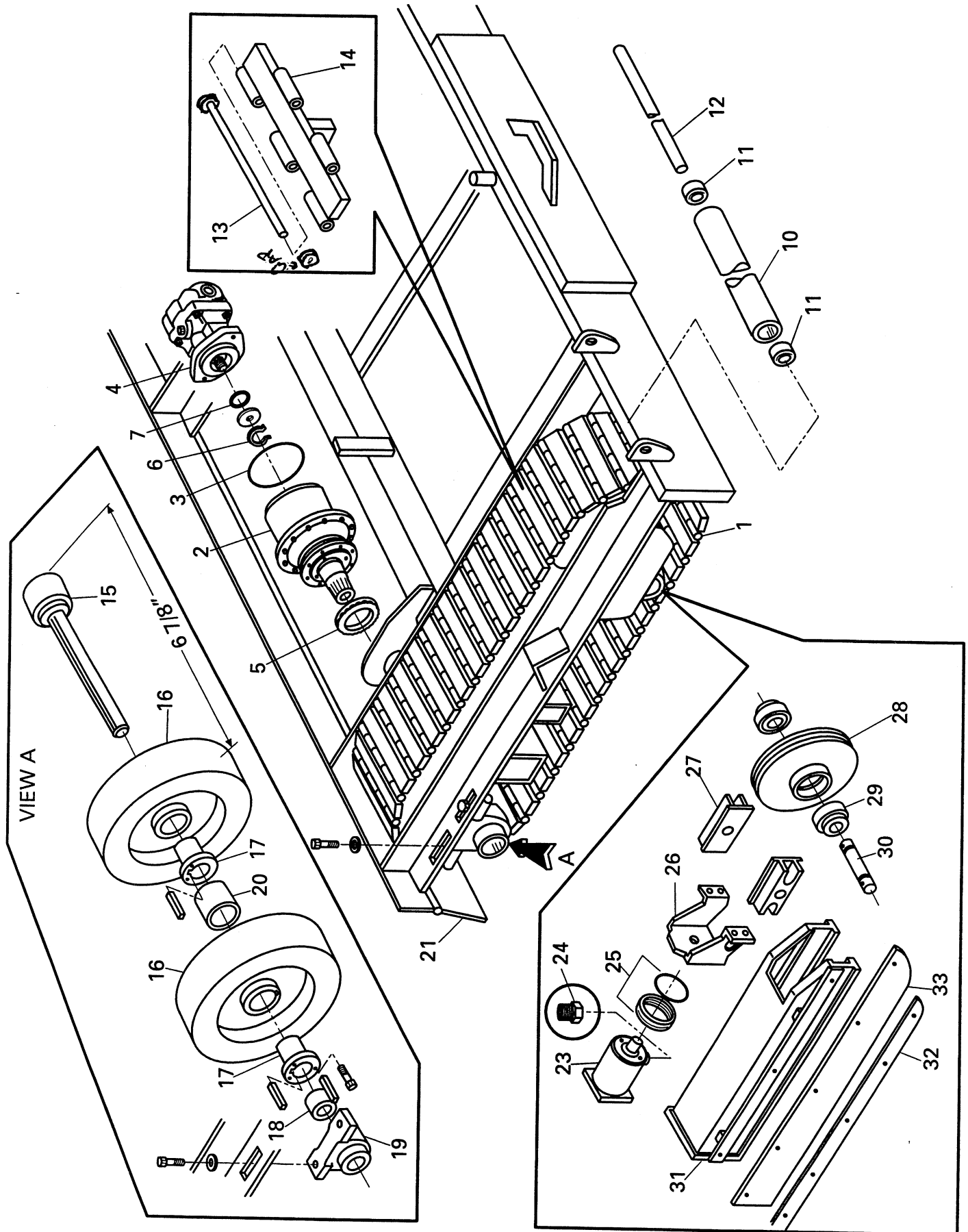
1. All parts must be ordered by a LeeBoy dealer.
2. The model and serial number of the unit should be given when ordering parts.
3. Parts should be ordered by part number and description.

688 North Highway 16 ~ Denver, North Carolina 28037  
www.lee-boy.com ~ (704) 483-9721

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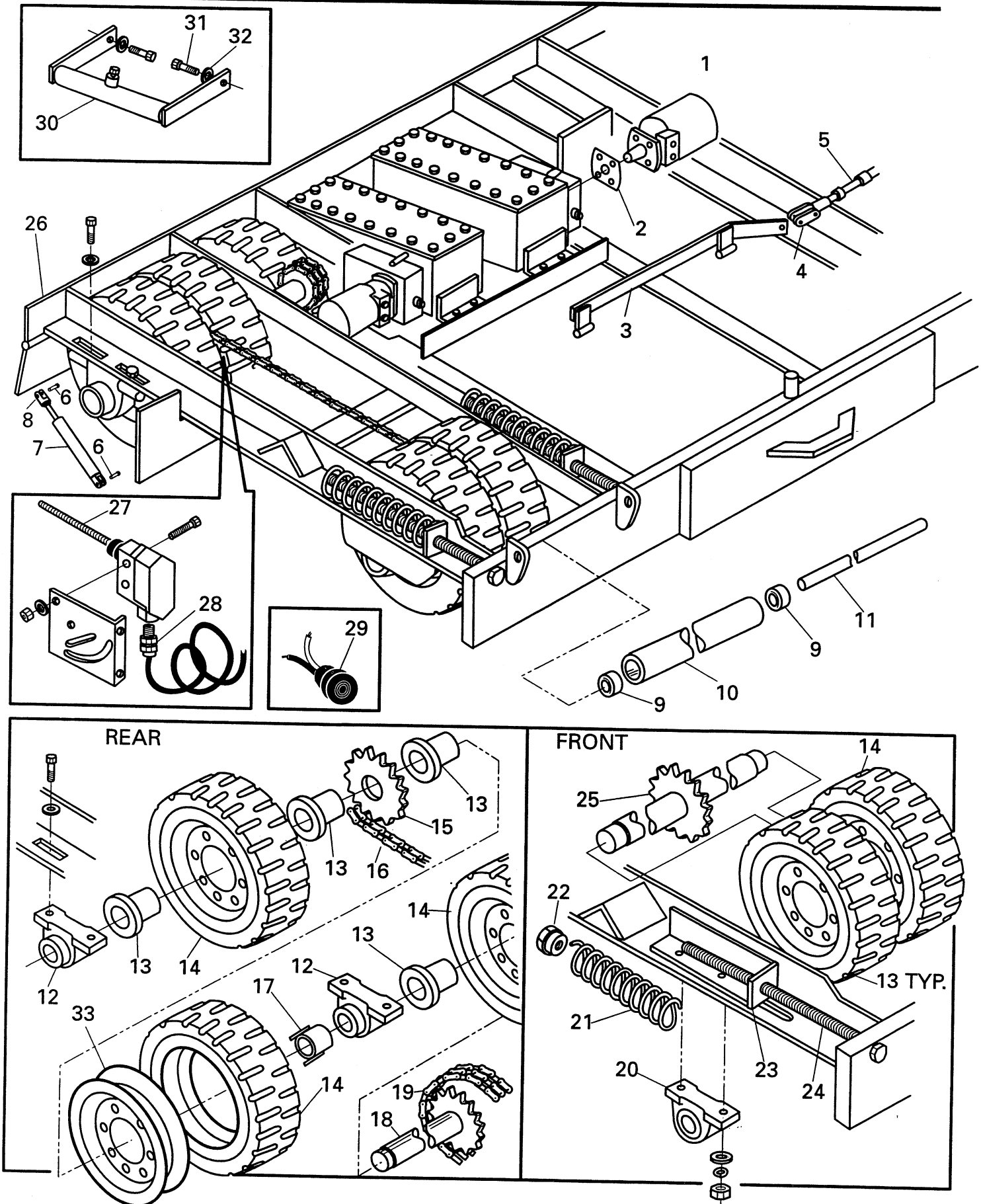


# TRACK DRIVE ASSEMBLY



| ITEM NO. | PART NO.  | DESCRIPTION                              | QTY. |
|----------|-----------|------------------------------------------|------|
| 1        | 810015    | TRACK SET, 700-1000 (47 LINKS)           | 1    |
| 2        | 811360    | TORQUE HUB                               | 2    |
| 3        | 811366    | O-RING, TORQUE HUB COVER                 | 2    |
| 4        | 811361    | MOTOR, HYD.(EATON 1000 D only)           | 2    |
| 4A       | 811362    | MOTOR, HYD. (SUNSTRAND) 1000C - 2- speed | 2    |
| 5        | 811365    | SEAL, TORQUE HUB DRIVE SHAFT             | 2    |
| 6        |           | SNAPRING                                 | A/R  |
| 6A       | 851489A-1 | SNAPRING (EATON)                         |      |
| 7        | 851489A   | SEAL, MOTOR (EATON)                      | A/R  |
| 8        |           |                                          |      |
| 9        |           |                                          |      |
| 10       | 810102    | ROLLER BUMPER                            | 2    |
| 11       | 810110    | BEARING, ROLLER                          |      |
| 12       | 810122    | SHAFT, FRONT ROLLER                      | 2    |
| 13       | 810291C   | PIN, MASTER (TRACK)                      | A/R  |
| 14       | 810281C   | SECTION, CASTED TRACK                    | A/R  |
| 15       | 811150    | AXLE, REAR DRIVE                         | 2    |
| 16       | 810129    | TIRE, 5"x16" (MOLDED)                    | 2    |
| 17       | 810160    | TAPERLOCK BUSHING, 2 1/4"                | 4    |
| 18       | 810151    | SPACER, 5 1/4"x6"                        | 2    |
| 19       | 810140    | BEARING, 2 1/4" PILLOW BLOCK             | 2    |
| 20       | 852831    | SPACER.                                  | 2    |
| 21       | 810276    | CUTOFF, COMPLETE 8'                      | 1    |
| 22       | 810301    | CUTOFF COMPLETE 9'                       | 1    |
| 23       | 811331    | HYD. CYL., TRACK TENSIONER               | 2    |
| 24       | 851644    | BREATHER, CYLINDER                       | 2    |
| 25       | 851485    | SEALKIT, TRACK TENSION CYLINDER          | A/R  |
| 26       | 811333    | YOKE, TRACK IDLER                        | 2    |
| 27       | 811334    | BLOCK, TRACK IDLER                       | 4    |
| 28       | 811337    | WHEEL                                    | 2    |
| 29       | 420090    | BEARING, AXLE                            | 4    |
| 30       | 811336    | SHAFT, TRACK IDLER                       | 2    |
| 31       | 811338    | FRAME ASSEMBLY, LEFT SIDE                | 1    |
| 31A      | 811338    | FRAME ASSEMBLY, RIGHT SIDE               | 1    |
| 32       | 810031    | CLAMP, RUBBER                            | 2    |
| 33       | 810020    | RUBBER, TRACK OUTER                      | 2    |
| 33A      | 810021    | 1000 INNER TRACK GUARD                   |      |

## RUBBER TIRE DRIVE ASSEMBLY

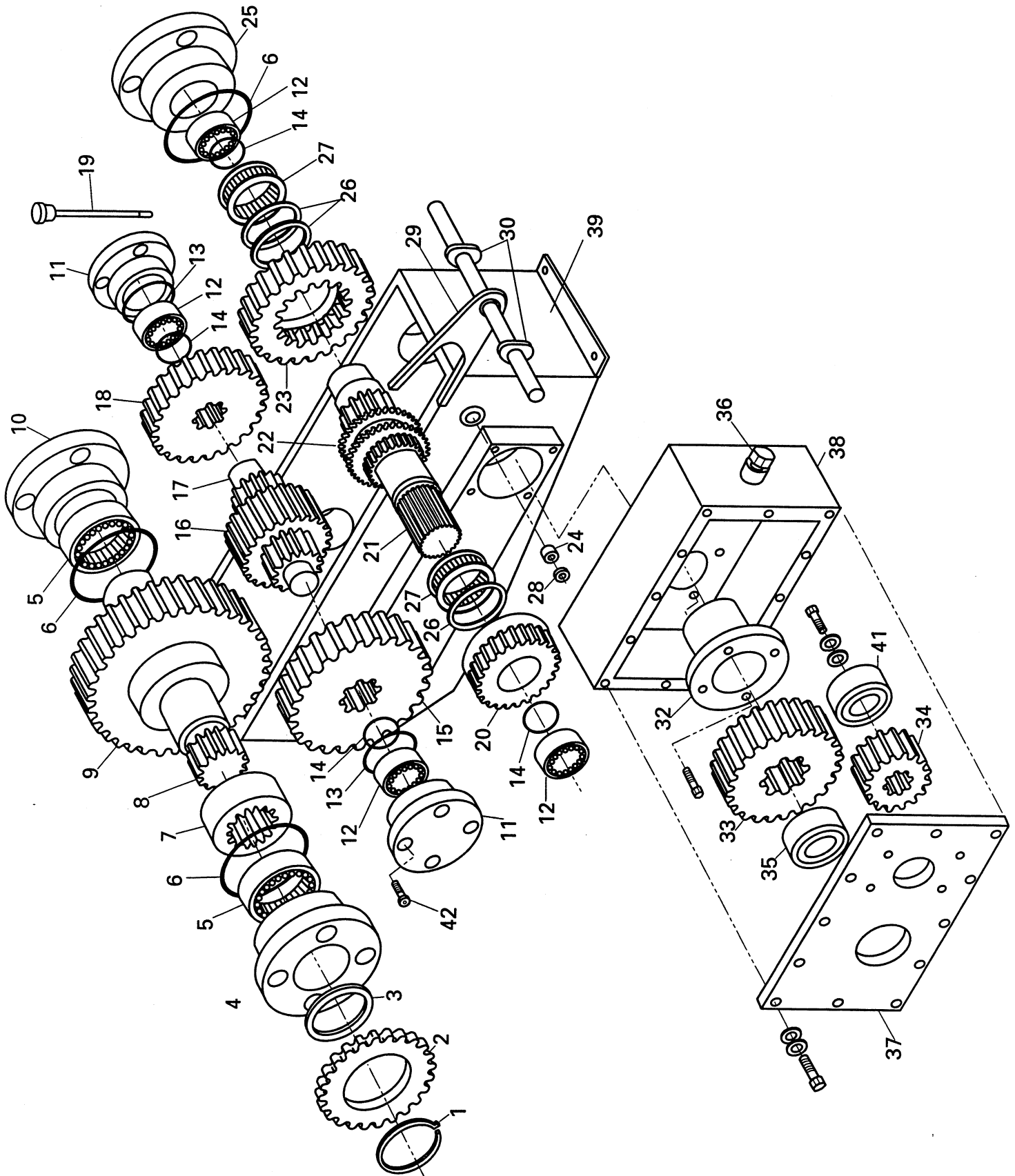


# RUBBER TIRE DRIVE ASSEMBLY



| ITEM NO. | PART NO.   | DESCRIPTION                                  | QTY. |
|----------|------------|----------------------------------------------|------|
| 1        | 810240     | MOTOR, FOR. & REV.                           | 2    |
| 2        | 810250     | GASKET, DRIVE MOTOR                          | 2    |
| 3        | 810042     | HARNESS, SHIFT                               | 1    |
| 4        | 810050     | CLEVIS, SHIFT CABLE                          | 1    |
| 5        | 810060     | CABLE, SHIFTER                               | 1    |
| 6        | 210060     | PINS, CYLINDER 210060                        | 2    |
| 7        | 811374     | HYD. CYL., CUTOFF                            | 2    |
| 7A       | 870312     | UNIVERSAL SEAL KIT 2 1/2" CYL.               |      |
| 8        | 811373     | YOKE, CYLINDER                               | 2    |
| 9        | 810110     | BEARING, PUSH ROLLER (1 1/4")                | 4    |
| 10       | 810102     | PUSH ROLLER, TRUCK WHEEL                     | 2    |
| 11       | 810122     | SHAFT, PUSH ROLLER                           | 2    |
| 12       | 810140     | BEARING, 2 1/4" PILLOW BLOCK                 | 4    |
| 13       | 810160     | TAPER LOCK BUSHING, 2 1/4"                   | 6    |
| 14       | 900111     | TIRE, LUG (NO RIM), 5 X 8 X 18               | 10   |
| 15       | 820150     | SPROCKET, REAR AXLE (RUBBER TIRE DRIVE)      | 2    |
| 16       | 900116     | TRANSFER CHAIN, FRONT TO REAR (700R / 1000R) | 2    |
| 17       | 810151     | SPACER                                       | 2    |
| 18       | 900114     | REAR AXLE (2 1/4                             | 2    |
| 19       | 810180     | CHAIN, SPROCKET COUPLING (TRANS. OUTPUT)     | 2    |
| 20       | 810190     | BEARING, 2" PILLOW BLOCK                     | 4    |
| 21       | 810200     | SPRING, ADJUSTMENT                           | 4    |
| 22       | 810210     | NUT, BACKUP                                  | 4    |
| 23       | 810221     | L.H. SLIDE ADJUSTER                          | 1    |
| 23A      | 810222     | R.H. SLIDE ADJUSTER                          | 1    |
| 24       | 810233     | BOLT, ADJUSTMENT (18")                       | 4    |
| 25       | 900207     | AXLE, FRONT (2"x21 1/2" )                    | 2    |
| 26       | 810300     | CUTOFF, COMPLETE (9') (7 1/4"x108")          | 1    |
| 27       | 851508     | SWITCH, BRAKE LIGHT                          | 1    |
| 28       | 851611     | CORD, BRAKE LIGHT                            | 1    |
| 29       | 330050     | LIGHT, BRAKE WARNING                         | 1    |
| 30       | 851610     | BAR, TIRE BRAKE                              | 1    |
| 31       | 102-611-1A | CAP SCREW, 5/8"x 2 1/2" (8'-1000)            | 2    |
| 32       | 118-7      | WASHER, 5/8"                                 |      |
| 33       | 900110     | RIM                                          |      |

## TRANSMISSION ASSEMBLY, HEAVY (RIGHT HAND SHOWN)

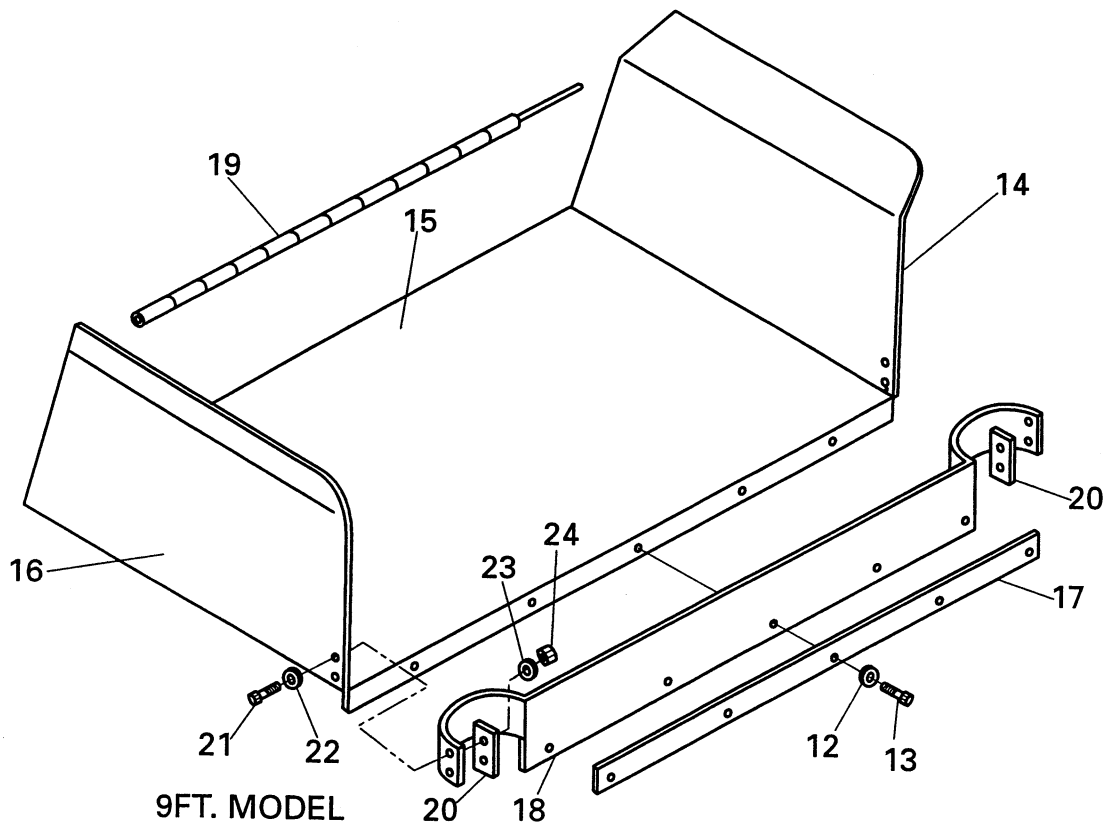
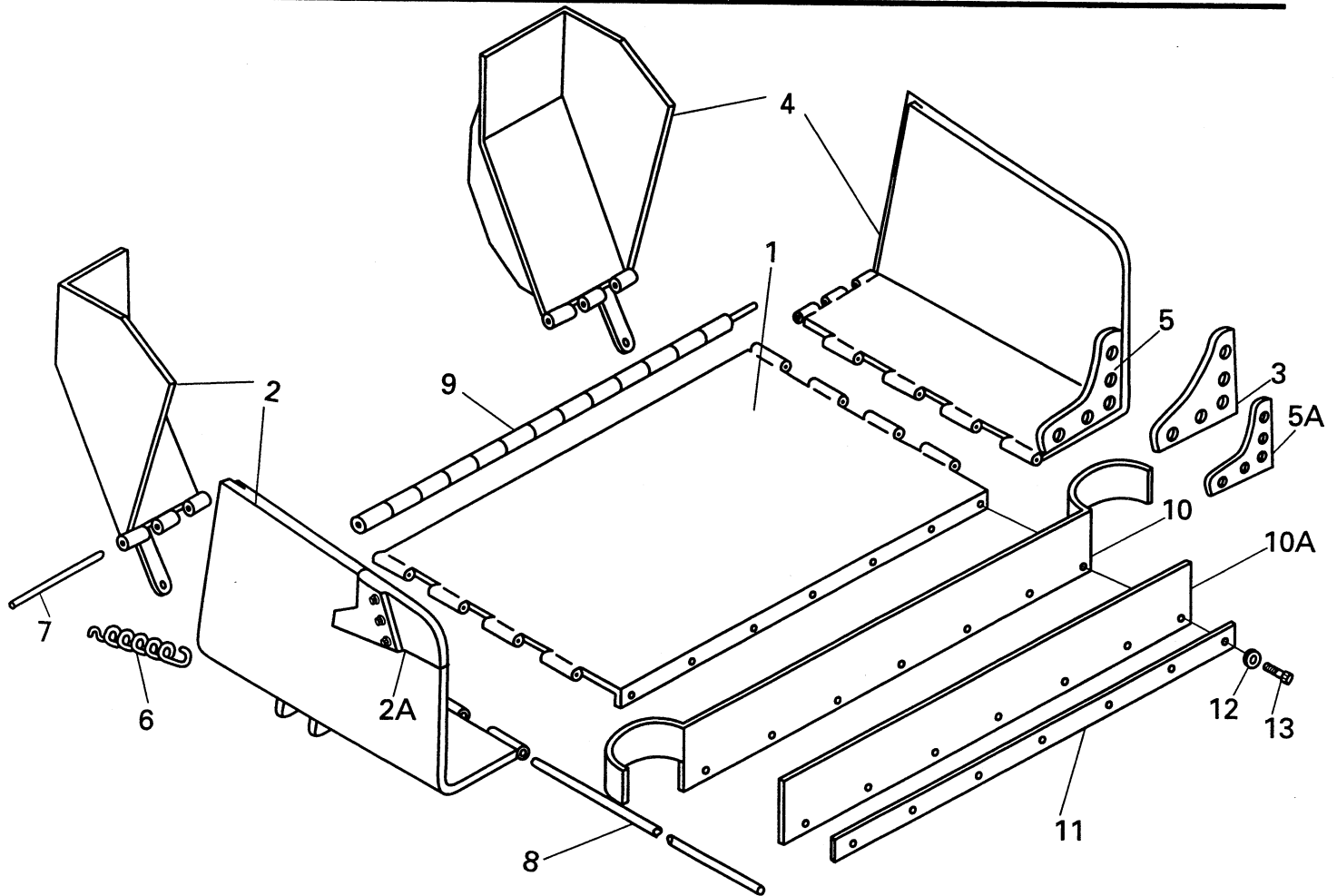


# TRANSMISSION ASSEMBLY, HEAVY (RIGHT HAND SHOWN)



| ITEM NO. | PART NO. | DESCRIPTION                                          | QTY. |
|----------|----------|------------------------------------------------------|------|
|          | 830004   | R.H. TRANSMISSION                                    |      |
|          | 830005   | L.H. TRANSMISSION                                    |      |
| 1        | 830010   | SNAP RING                                            | 1    |
| 2        | 830020   | SPROCKET, OUTPUT (80S22)                             | 1    |
| 3        | 830030   | SEAL, REAR                                           | 1    |
| 4        | 830041   | CAP, REAR SEAL                                       | 1    |
| 5        | 830050   | BEARING, REAR                                        | 2    |
| 6        | 830060   | O-RING, FRONT AND REAR                               | 3    |
| 7        | 831424   | SPACER, BULL GEAR                                    | 2    |
| 8        | 831082   | SHAFT, REAR                                          | 1    |
| *9       | 831092   | GEAR, BULL (SOLD IN MATCHED SETS) (USE PART# 831455) | 1    |
| 10       | 830101   | CAP. PLAIN                                           | 1    |
| 11       | 830111   | CAP, PLAIN CENTER                                    | 2    |
| 12       | 830120   | BEARING, FRONT AND CENTER                            | 4    |
| 13       | 830130   | O-RING, CENTER CAP                                   | 2    |
| 14       | 830140   | SPACER                                               | A/R  |
| *15      | 831151   | GEAR, LOW(CENTER SHAFT) (SOLD IN MATCH SETS#831450)  | 1    |
| *16      | 831161   | GEAR, INTERMEDIATE (SOLD IN SETS) #831455            | 1    |
| 17       | 830171   | CENTER SHAFT, TRANSMISSION                           | 1    |
| *18      | 831181   | GEAR, HIGH(CENTER SHAFT) (SOLD IN SETS# 831460)      | 1    |
| 19       | 830191   | STICK, DIP                                           | 1    |
| *20      | 831201   | GEAR, LOW (FRONT SHAFT) (SOLD IN SETS # 831450)      | 1    |
| 21       | 831211   | FRONT SHAFT, TRANS. (NEW STYLE)                      | 1    |
| 22       | 830221   | GEAR, CLUTCH                                         | 1    |
| *23      | 831231   | GEAR, (FRONT SHAFT) (SOLD IN SETS # 831460)          | 1    |
| 24       | 830240   | BUSHING, SHIFTER SHAFT                               | 1    |
| 25       | 830251   | BEARING CAP, FRONT SHAFT (CLOSED)                    | 1    |
| 26       | 830260   | SHIM, BEARING (LOW / HIGH GEAR FRONT SHAFT)          | 3    |
| 27       | 830270   | BEARING, TRANS. HI / LO GEAR INPUT SHAFT             | 2    |
| 28       | 830280   | SEAL, SHIFTER                                        | 2    |
| 29       | 830291   | FORK, SHIFTER                                        | 1    |
| 30       | 830300   | COLLAR, SHIFTER FORK                                 | 2    |
| 31       | 830311   | SHAFT, SHIFTER                                       | 1    |
| 32       | 830321   | CAP, FRONT (BORED)                                   | 1    |
| *33      | 831331   | GEAR, INPUT (SOLD IN SETS # 831465)                  | 1    |
| *34      | 831341   | GEAR, DRIVER (SOLD IN SETS #831465)                  | 1    |
| 35       | 831410   | BEARING, INPUT                                       | 1    |
| 36       | 830360   | PLUG                                                 | 1    |
| 37       | 831371   | PLATE, SIDE                                          | 1    |
| 38       | 830382   | HOUSING, SIDE BOX                                    | 1    |
| 39       | 830393   | HOUSING, MAIN GEAR BOX                               | 1    |
| 40       | 830402   | PLATE, TOP COVER (N/S)                               | 1    |
| 41       | 831420   | BEARING, (FOR DRIVER GEAR)                           | 1    |
| 42       | 831421   | ALLEN BOLTS                                          | A/R  |
|          | *831450  | LOW GEAR, (FOR CENTER SHAFT) & LOW GEAR ITEM #15&#20 |      |
|          | *831455  | BULL & INTERMEDIATE GEAR SET ITEM # 9&#16            |      |
|          | *831460  | HIGH GEAR, (FOR CENTER SHAFT ITEM # 18& #23          |      |
|          | *831465  | INPUT & DRIVER GEAR ITEM # 33& #34                   |      |

## HOPPER AND HOPPER SIDEWINGS



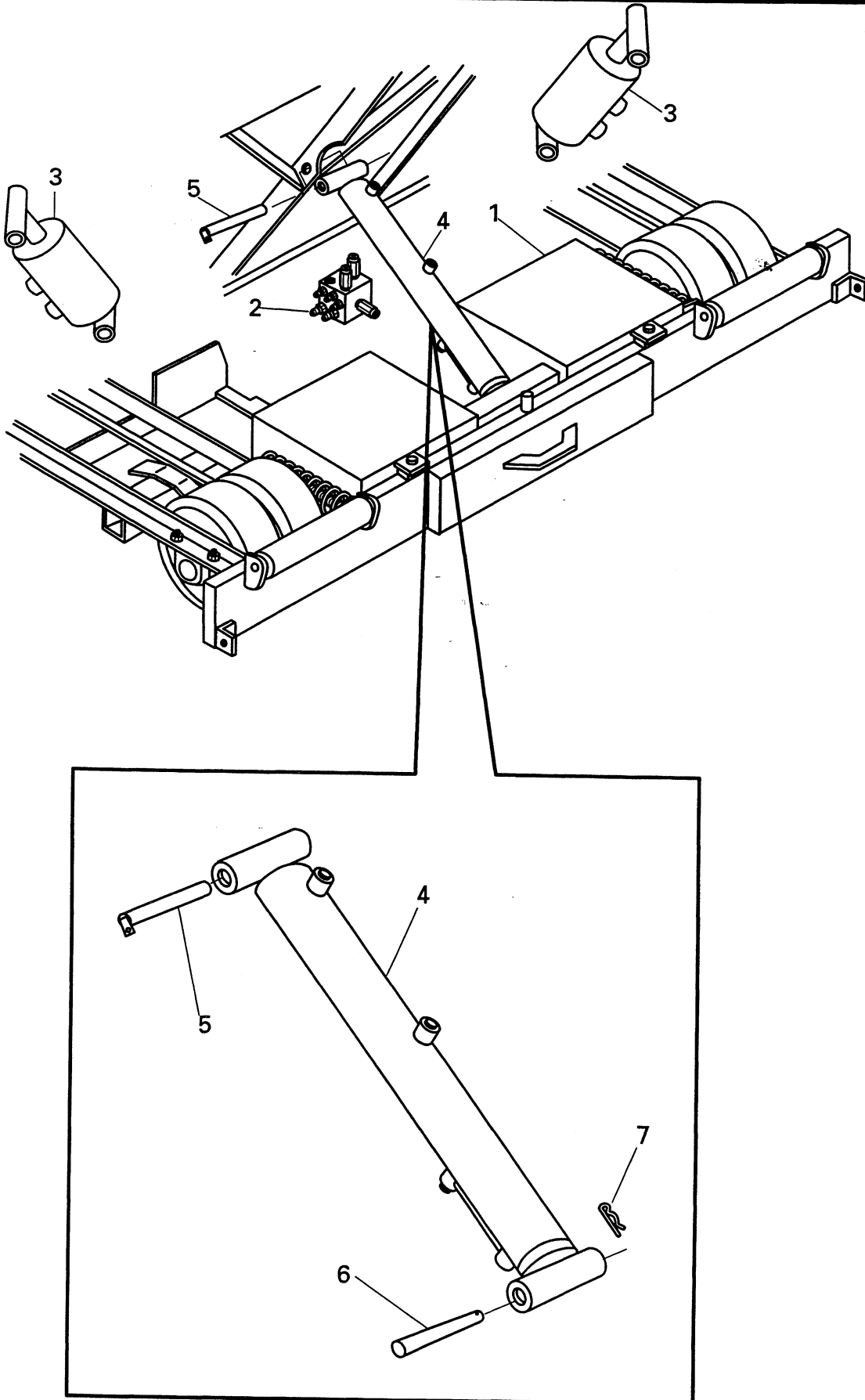
9FT. MODEL

# HOPPER AND HOPPER SIDEWINGS



| ITEM NO. | PART NO.   | DESCRIPTION                                         | QTY. |
|----------|------------|-----------------------------------------------------|------|
| 1        | 851612     | HOPPER FLOOR DOUBLE RAILS [8']                      | 1    |
| 2        | 851615     | 8'SIDEWING RIGHT [HIGHER LIFT]                      | 1    |
| 3        | 851622A-1  | FLASHING, HOPPERWING CORNER                         | 2    |
| 4        | 851614     | PANEL, 8' L.H.HOPPER WING (HIGH LIFT)               | 1    |
| 5        | 851646     | WELD PLATE, HOPPER WING CORNER RUBBER               | 2    |
| 5A       | 851646-1   | CLAMP PLATE, HOPPER WING CORNER RUBBER              | 2    |
| 6        | 930029     | SPRING, SIDE WING (TILT HOPPER)                     | 2    |
| 7        | 930031     | PIN, SIDEWING EXTENSION                             | 2    |
| 8        | 930032     | PIN, SIDEWING                                       | 2    |
| 9        | 930022     | HINGE, HOPPER (8')                                  | 1    |
| 10       | 851622     | HOPPER FLASHING, 1000C 8 ft (SER. # 2500 UP)        | 1    |
| 10A      | 851622A    | FLASHING, HARD RUBBER                               | 1    |
| 11       | 851623     | CLAMP, HOPPER FLASHING                              | 1    |
| 12       | 118-3      | WASHER, 3/8"                                        | 7    |
| 13       | 102-213-1A | CAP SCREW, 3/8"- 16X3"                              | 7    |
| 14       | 930013     | SIDEWING, LEFT (9')                                 | 1    |
| 15       | 930008     | FLOOR, HOPPER (9')                                  | 1    |
| 16       | 930012     | SIDEWING, RIGHT (9')                                | 1    |
| 17       | 851625     | BRACKET, SHIELD (9') S.N. 2500 Above                | 1    |
| 18       | 851624     | HOPPER FLASHING, 9 ft. (700 & 1000 Above 2500 S.N.) | 1    |
| 19       | 930023     | HINGE, HOPPER (9')                                  | 1    |
| 20       | 930009     | BRACKET, END SHIELD (9')                            | 2    |
| 21       | 102-207-1A | CAP SCREW, 3/8"x1 1/2"                              | 4    |
| 22       | 118-3      | WASHER, 3/8"                                        | 4    |
| 23       | 119-3      | WASHER, LOCK 3/8"                                   | 4    |
| 24       | 116-3      | NUT, 3/8"                                           | 4    |

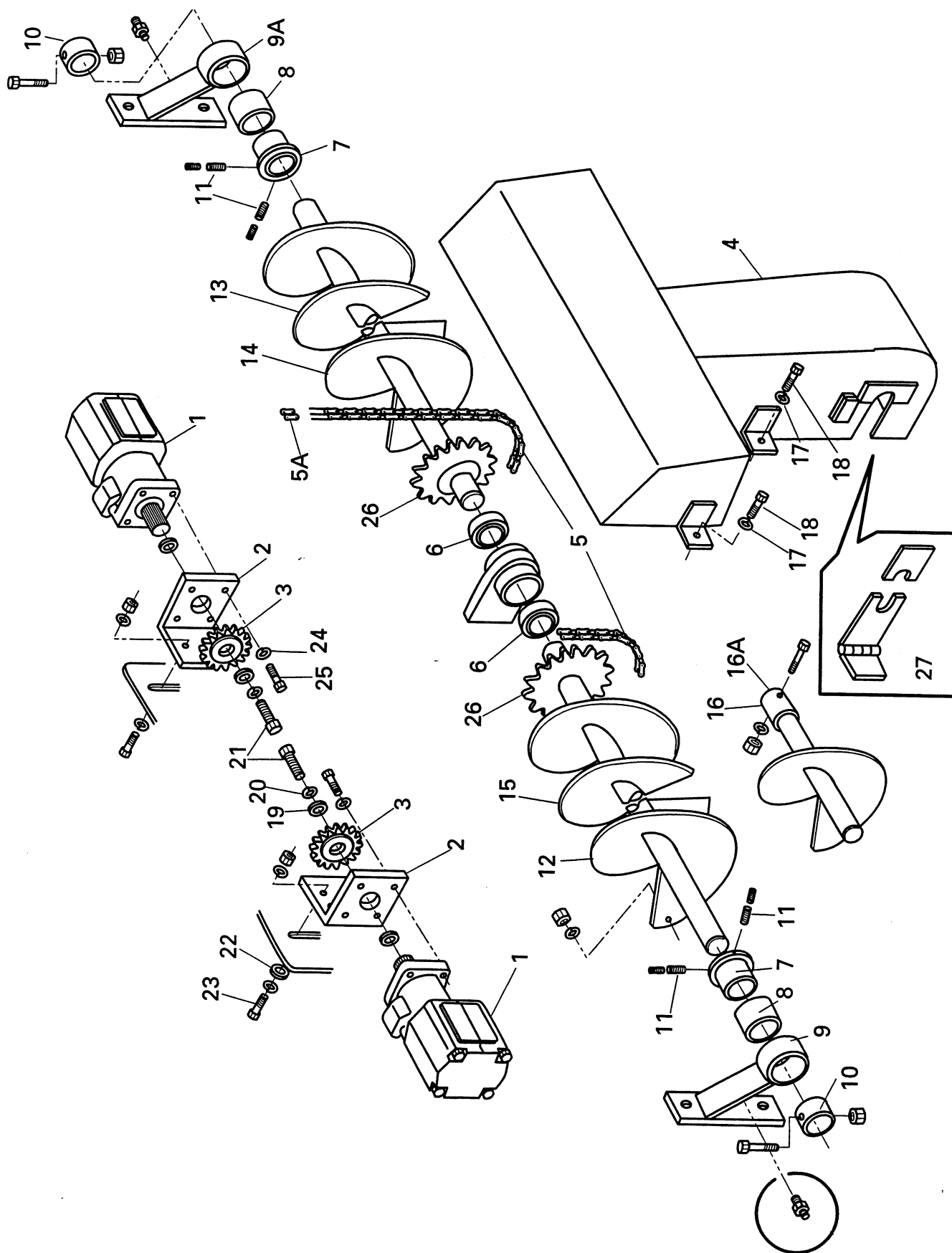
## HYDRAULIC RESERVOIR AND HOPPER LIFT CYLINDER



# HYDRAULIC RESERVOIR AND HOPPER LIFT CYLINDER



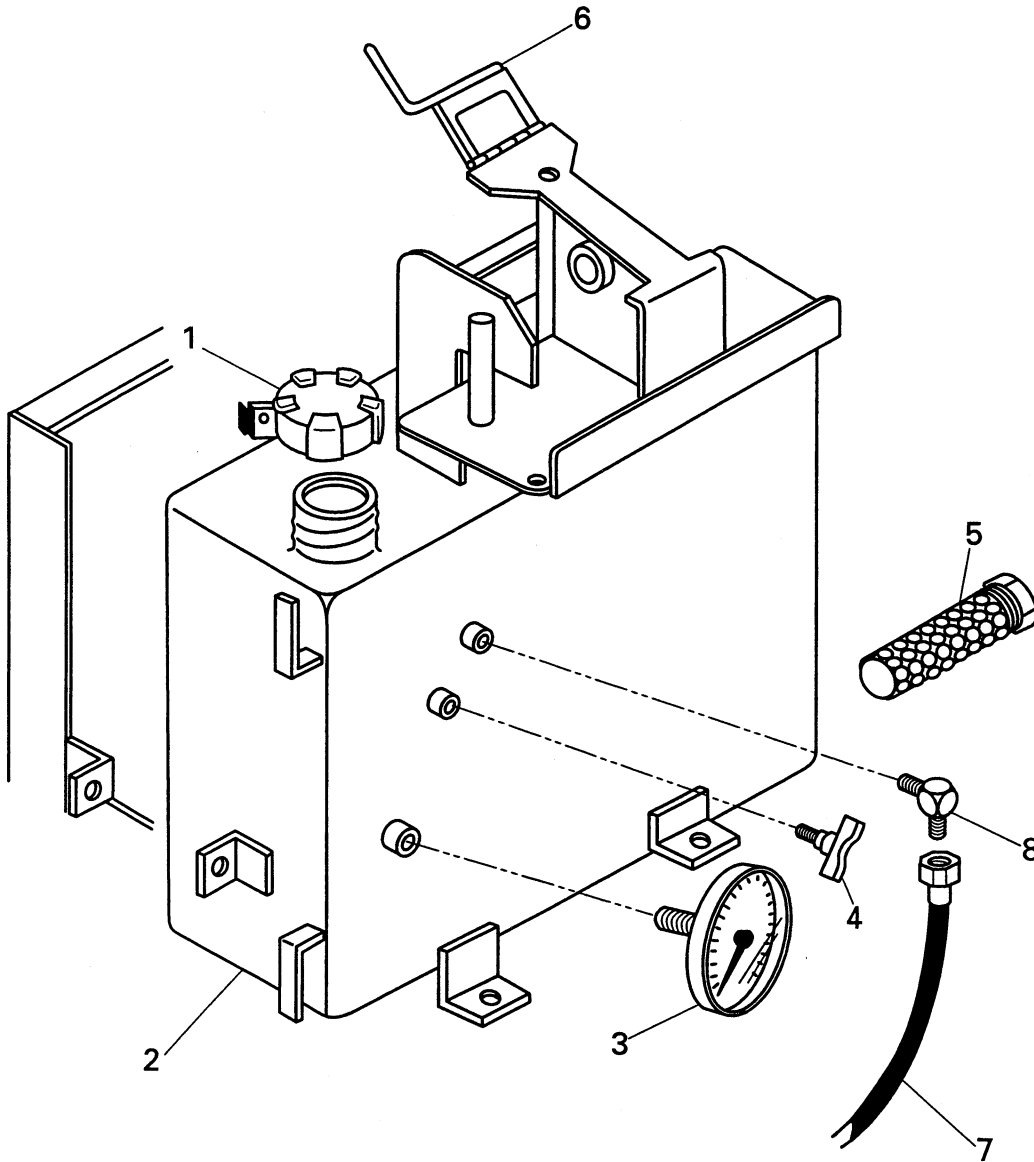
| ITEM NO. | PART NO. | DESCRIPTION                        | QTY. |
|----------|----------|------------------------------------|------|
| 1        | 930034   | TANK, HYD. RESRVOIR                | 1    |
| 2        | 910123   | MANIFOLD, HOPPER AND WINGS         | 1    |
|          |          | RELIEF, HOPPER (1500 PSI.)         | 1    |
|          |          | RELIEF, WINGS (1700 PSI.)          | 1    |
| 3        | 910145   | HYD. CYLINDERS WINGS               | 2    |
| 3A       | 851485   | SEAL KIT, HYD. CYLINDER            |      |
| 4        | 930036   | HYD.CYLINDER HOPPER                | 1    |
| 4A       | 851485   | SEAL KIT, HYD. CYLINDER            |      |
| 5        | 851619   | PIN, 1000C HOPPER LIFT CYL. TOP    | 1    |
| 6        | 851618   | PIN, 1000C HOPPER LIFT CYL. BOTTOM | 1    |
| 7        | 870307   | CLIP, HYD CYL. PIN                 | 1    |



# AUGER ASSEMBLY



| ITEM NO. | PART NO.   | DESCRIPTION                                | QTY. |
|----------|------------|--------------------------------------------|------|
| *1       | 860010     | HYD. MOTOR, AUGER (ALL) / CONVEYOR (8000B) | 2    |
| 2        | 860021     | MOUNTING BRACKET, AUGER MOTOR              | 2    |
| 3        | 240350     | SPROCKET, SCREED AUGER MOTOR               | 2    |
| 4        | 900616     | COVER, AUGER CHAIN DRIVE (700 & 1000)      | 1    |
| 5        | 860090     | CHAIN, PAVER AUGER DRIVE                   | 2    |
| 5A       | 860049     | MASTER LINK, (60H CHAIN)                   | 2    |
| 6        | 850130     | BEARING, AUGER / AXLE / IDLER              | 2    |
| 7        | 851645     | 1.5X2 COLLAR                               | 1    |
| 8        | 810070     | BUSHING                                    | 2    |
| 9        | 860051HDR  | END MOUNT,R.H. AUGER                       | 1    |
| 9A       | 860051HDL  | END MOUNT,L.H. AUGER                       | 1    |
| 10       | 851647     | END CAP, AUGER                             | 2    |
| 11       | 851645-1   | SET SCREWS                                 | 4    |
| 12       | 860100     | FLIGHT, AUGER (R/H WELDS ON)               | A/R  |
| 13       | 860110     | FLIGHT, AUGER (L/H WELDS ON)               | A/R  |
| 14       | 900607L    | L.H. AUGER ASSY. 9ft. MACH.                | A/R  |
| 14A      | 900619     | L.H. AUGER ASSY. 8ft. MACH.                | A/R  |
| 15       | 900607R    | R.H. AUGER ASSY. 9' MACHINE                | 1    |
| 15A      | 900620     | R.H. AUGER ASSY. 8' MACHINE                |      |
| 16       | 860136     | AUGER EXTENSION R.H. SIDE                  | 1    |
| 16A      | 860135     | AUGER EXTENSION L.H. SIDE                  | 1    |
| 17       | 118-4      | WASHER, LOCK (7/16 - 20 x 1/2)             | 2    |
| 18       | 860048     | BOLTS, (7/16)                              | 2    |
| 19       | 860036     | WASHER, FENDER (1/4)                       | 1    |
| 20       | 118-1      | WASHER, LOCK (1/4)                         | 1    |
| 21       | 102-3-1A   | CAP SCREW, (1/4 - 20 x 3/4)                | 1    |
| 22       | 118-7      | WASHER, FLAT (5/8)                         | 4    |
| 23       | 102-607-1A | CAP SCREW, (5/8 - 11 x 1 1/2 )             | 4    |
| 24       | 118-3      | WASHER, LOCK (3/8)                         | 4    |
| 25       | 102-206-1A | CAP SCREW, (3/8 - 16 x 1 1/4)              | 4    |
| 26       | 860035     | SPROCKET, AUGER SHAFT (WELD ON)            | 2    |
| 27       | 860043-1   | KIT, AUGER COVER CLOSING                   | A/R  |
|          | *860016    | SEAL KIT, AUGER MOTOR (EATON)              | A/R  |
|          | *860012    | SEAL KIT, AUGER MOTOR (ROSS)               | A/R  |

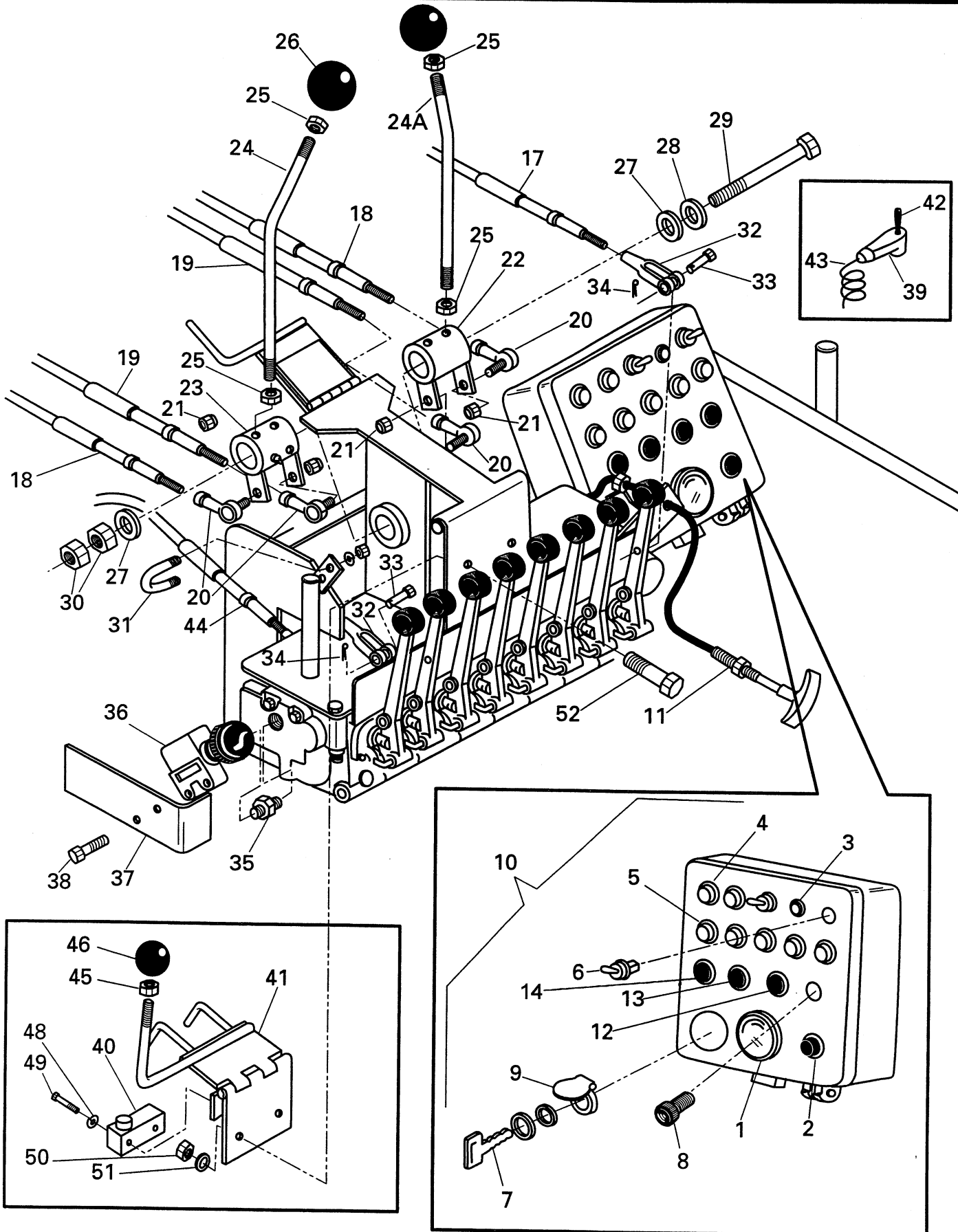


# HYDRAULIC COMPONENTS & ACCESSORIES (L/H SIDE)



| ITEM NO. | PART NO. | DESCRIPTION                            | QTY. |
|----------|----------|----------------------------------------|------|
| 1        | 140030HL | HYD. TANK CAP, LOCKABLE                | 1    |
| 2        | 840014   | TOP TANK, HYD. OIL                     | 1    |
| 3        | 330040   | GAUGE, TACK TEMP./ HYD.OIL TEMP        | 1    |
| 4        | 910150   | PETCOCK                                | 1    |
| 5        | 910020   | SUCTION STRAINER, HYD. OIL TANK        | 1    |
| 6        | 910124   | SPEED STOP, FWD. & REV. LEVERS (1000B) | 1    |
| 7        | 910128   | HOSE, VENT                             | 1    |
| 8        | 910129   | ELBOW, (90 DEGREE)                     | 1    |

## VALVE CONTROL STATIONS LEFT SIDE AND COMPONENTS

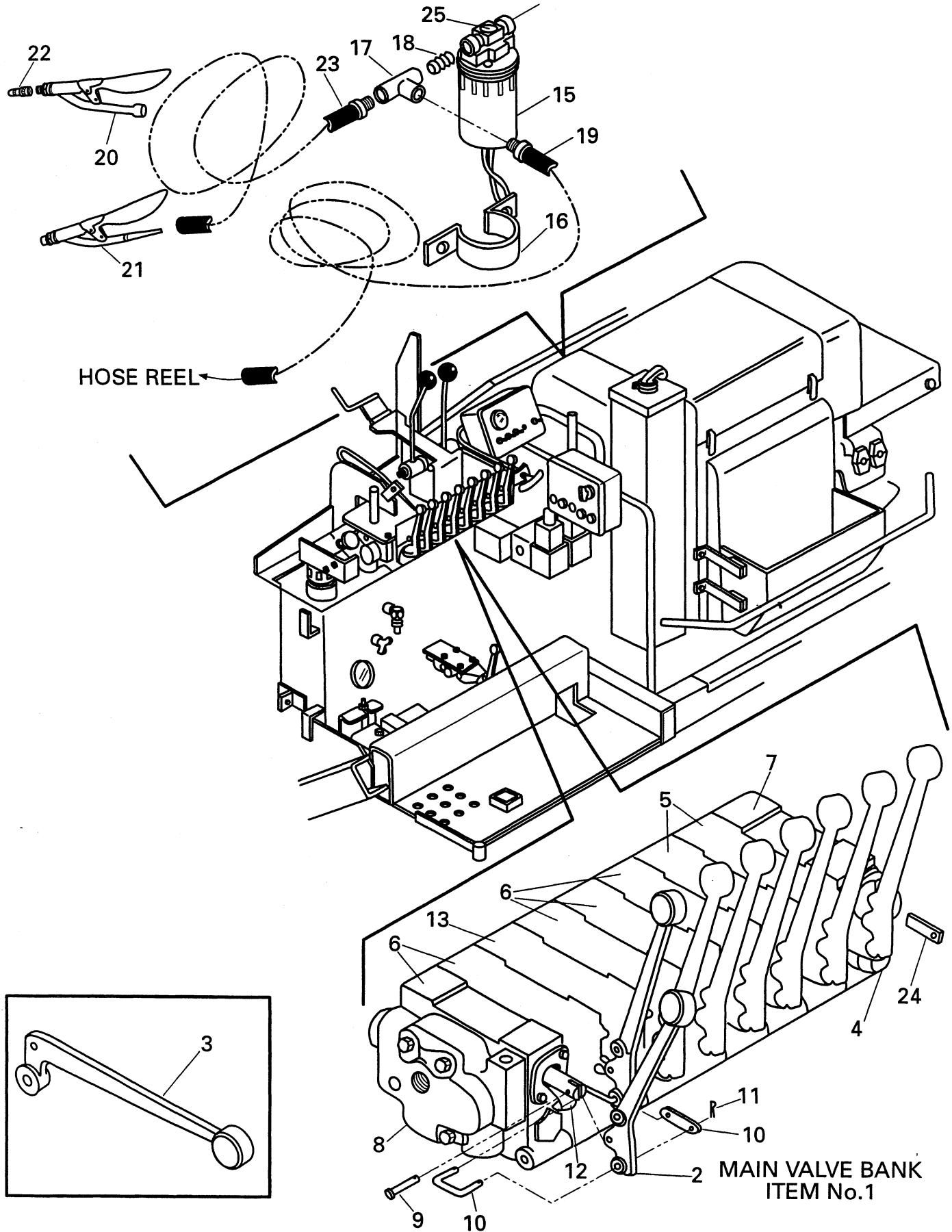


# VALVE CONTROL STATIONS LEFT SIDE AND COMPONENTS



| ITEM NO. | PART NO.   | DESCRIPTION                                     | QTY. |
|----------|------------|-------------------------------------------------|------|
| 1        | 900130     | HOUR METER                                      | 1    |
| 2        | 900122     | HORN                                            | 1    |
| 3        | 900120     | RED LIGHT , PAUSE LIGHT                         | 1    |
| 4        | 320382     | PLUGS, HATZ INSTRUMENT PANEL                    | A/R  |
| 5        | 320382     | PLUGS, HATZ INSTRUMENT PANEL                    | A/R  |
| 6        | 500040     | TOGGLE SWITCH, ON / OFF                         | 1    |
| 7        | 320380     | IGNITION KEY, HATZ DIESEL                       | A/R  |
| 8        | 320386     | INDICATOR LIGHT, BATTERY CHARGE                 | 1    |
| 9        | 320370     | COVER, IGNITION SWITCH (HATZ)                   | 1    |
| 10       | 852191     | DASH                                            |      |
| 11       | 920160     | CABLE, THROTTLE (1000B-8' W / HATZ)             | 1    |
| 11A      | 920161     | CABLE, THROTTLE (1000B-9' W / HATZ)             | 1    |
| 12       | 320384     | INDICATOR LIGHT, ENGINE OIL PRESSURE            | 1    |
| 13       | 320360     | LIGHT BULB, INDICATOR LAMP                      | A/R  |
| 14       | 320385     | INDICATOR LIGHT, AIR FILTER RESTRICTION         | 1    |
| 15       | 320340     | BLOCK, TERMINAL STRIP (NOT SHOWN)               | 1    |
| 16       | 320390     | SWITCH KEY (HATZ)                               | 1    |
| 17       | 920140     | CABLE, R.H. DRIVE, AUGER & PUMP (116" X 3")     | 1    |
| 17A      | 920120     | CABLE, AUGER (8' MACHINE 104"X3')               | 1    |
| 18       | 920140     | CABLE, R.H. DRIVE / CONTROL (116"x3") (9')      | 1    |
| 18A      | 920120     | CABLE, R.H. DRIVE, AUGER & PUMP (104" X 3")(8') | 1    |
| 19       | 920124     | CABLE, FWD. & REV. PUMP (104"x3")(8' & 9')      | 2    |
| 20       | 920090     | SPHERICAL ROD END, W/ STUD                      | 4    |
| 21       | 920092     | NUT, 3/8"-24 HEX                                | 4    |
| 22       | 920094     | R.H. PIVOT, FOR.& REV. LEVER (LEFT SIDE)        | 1    |
| 23       | 920094 TOM | L.H. PIVOT, FOR.& REV.LEVER (LEFT SIDE)         | 1    |
| 24       | 920097L    | HANDLE, DRIVE                                   | 1    |
| 24A      | 920097R    | HANDLE, DRIVE                                   | 1    |
| 25       | 116-5-1    | NUTS, JAM 1/2"                                  | 2    |
| 26       | 920225     | KNOB, ROUND BALL (1 7/8"x 1/2"-13 THREADS)      | 4    |
| 27       | 119-7      | WASHER, FLAT, 5/8"                              | 2    |
| 28       | 490080     | WASHER, BEVEL                                   | 2    |
| 29       | 920229     | CAPSCREW, 5/8"-11x7 1/2"                        | 1    |
| 30       | 116-7-1    | NUT, 5/8"-11 HEX JAM                            | 2    |
| 31       | 350060     | U-BOLTS, 3/8"                                   | 6    |
| 32       | 350050     | CLEVIS, YOKE                                    | 2    |
| 33       | 350080     | PIN, CLEVIS                                     | 2    |
| 34       | 850100     | PIN, COTTER                                     | 2    |
| 35       | 920233     | ADAPTER, 1/2"M.P.T.x #8 MALE SAE.               | 1    |
| 36       | 910080     | VALVE, VIBRATOR                                 | 1    |
| 37       | 920234     | SHIELD                                          | 1    |
| 38       | 102-1091A  | CAPSCREW, 5/16"-18x201/4"                       | 2    |
| 39       | 920238     | CONTROL, REMOTE (ELECTRIC FLIGHT SCREW)         | 1    |
| 40       | 900020     | SWITCH, NEUTRAL SAFETY                          | 1    |
| 41       | 900029     | BRACKET, SAFETY SWITCH                          | 1    |
| 42       | 900080     | SWITCH, REMOTE (ONLY)                           | 1    |
| 43       | 900082     | CORD, REMOTE                                    | 1    |
| 44       | 920136     | CABLE, DRIVE/ EXTENSION                         | 2    |
| 45       | 116-3-1    | NUT, 3/8"-16 HEX JAM                            | 1    |
| 46       | 851156     | KNOB.                                           | 1    |
| 47       | 320330     | SOCKET, RELAY NS.                               | 1    |
| 48       | 118-C      | WASHER, #6 LOCK                                 | 2    |
| 49       | 110-125-4  | SCREW, # 6-32 x1" PHILLIPS HEAD                 | 2    |
| 50       | 116-1      | NUT, 1/4"-20 HEX                                | 2    |
| 51       | 118-1      | WASHER, LOCK, 5/16"                             | 2    |
| 52       | 102-3-1A   | CAPSCREW, 1/4"-20 x 3/4"                        | 2    |

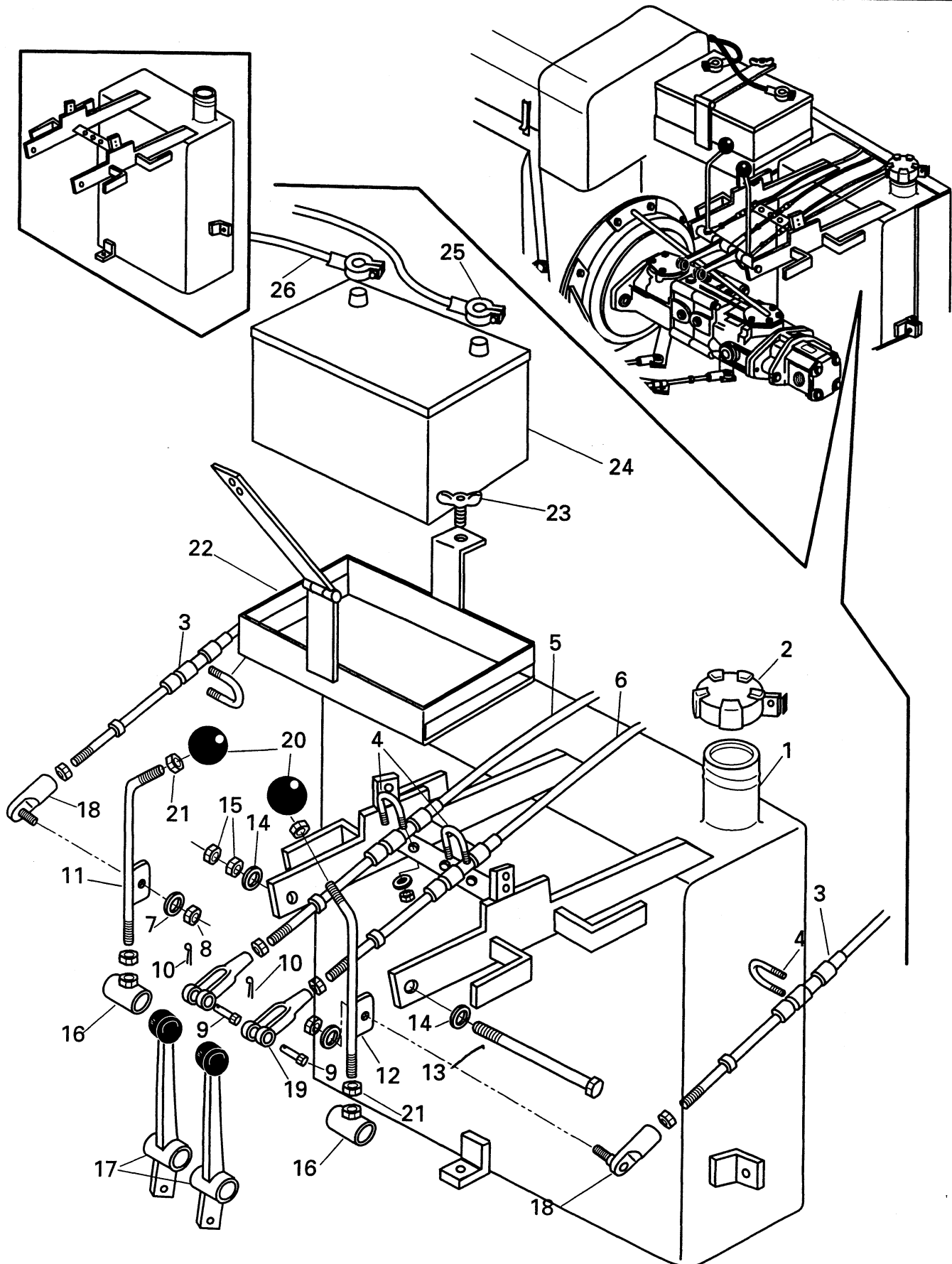
## MAIN VALVE & SPRAY DOWN



# MAIN VALVE & SPRAY DOWN

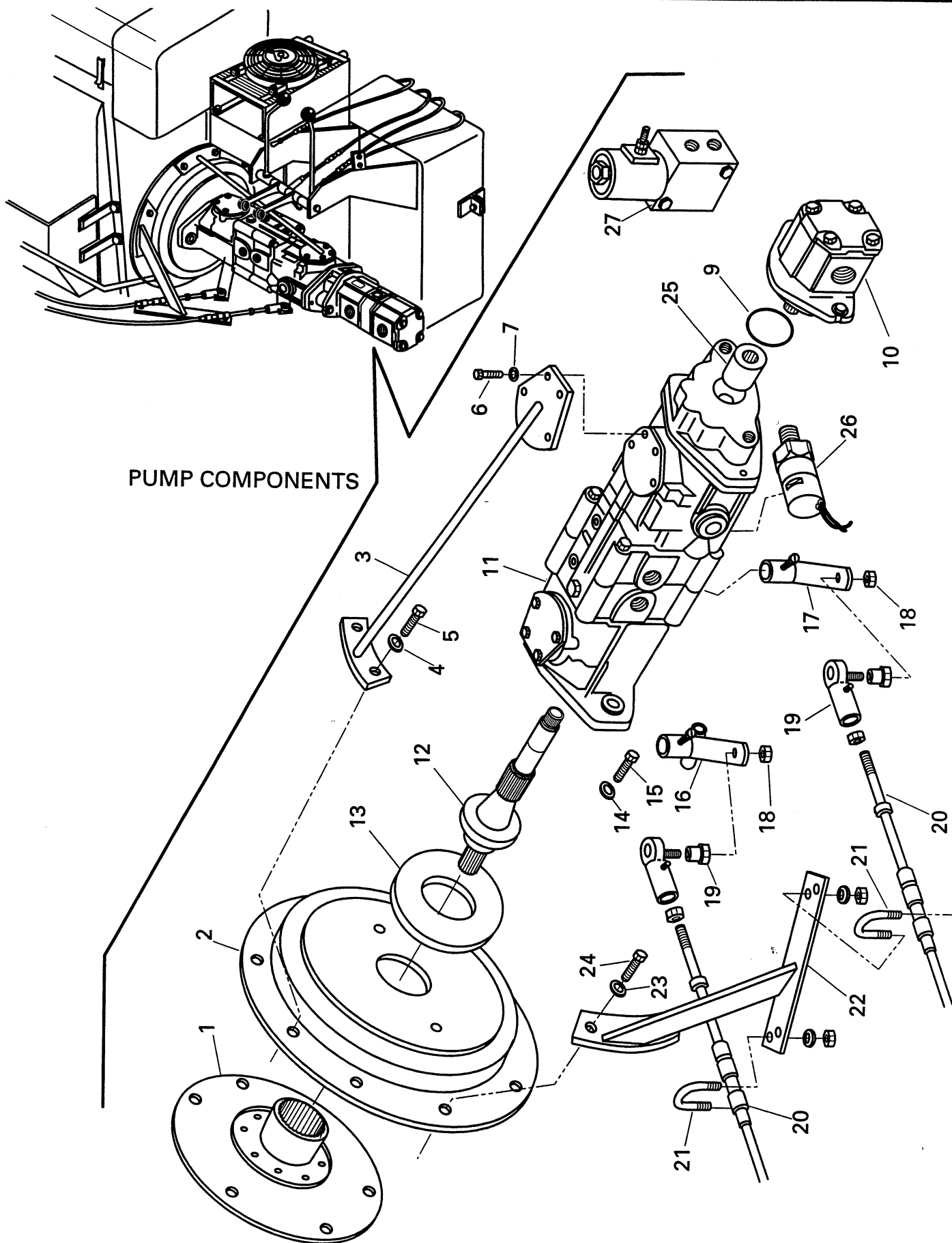


| ITEM NO. | PART NO.  | DESCRIPTION                                      | QTY. |
|----------|-----------|--------------------------------------------------|------|
| 1        | 910050    | VALVE, MAIN                                      | 1    |
| 2        | 910060    | HANDLE, VERTICAL                                 | 8    |
| 3        | 910070    | HANDLE, HORIZONTAL                               | 1    |
| 4        | 901009    | VALVE, RELIEF                                    | 1    |
| 5        | 910052    | SECTION, VALVE (AUGERS) (DETENTED)               | 2    |
| 6        | 910054    | SECTION, VALVE (CYLINDERS) (SPRING RETURN)       | 6    |
| 7        | 910055    | INLET COVER, V-20 (W/RELIEF)                     | 1    |
| 8        | 910056    | OUTLET COVER, V-20 (W / PB SLEEVE)               | 1    |
| 9        | 350080    | PIN, CLEVIS (1/4")                               | 8    |
| 10       | 901010    | LINK ASSY., VALVE LEVER                          | 8    |
| 11       | 960019    | COTTER PIN                                       | 8    |
| 12       | 910058    | BRACKET, VALVE LEVER                             | 8    |
| 13       | 910054FLS | FLOAT, ASSEMBLY SCREED                           | 1    |
| 14       |           |                                                  |      |
| 15       | 900010    | PUMP, SPRAYDOWN (FLOJET) 12 volt or 24 volt pump | 1    |
| 16       | 480260    | BRACKET, WATER / FUEL PUMP MOUNT                 | 1    |
| 17       | 920222    | TEE, 3/8                                         | 1    |
| 18       | 920223    | NIPPLE, 3/8                                      | 1    |
| 19       |           | HOSE                                             | 1    |
| 20       | 920220A   | HANDLE ONLY, FUEL WASH-DOWN (THREADED)           | 2    |
| 21       | 920220    | HANDLE & NOZZLE, FUEL WASH-DOWN                  | 2    |
| 22       | 901210A   | NOZZLE, FUEL WASH-DOWN HANDLE                    | A/R  |
| 23       |           | HOSE, TO SPRAYDOWN HANDLE                        | 2    |
| 24       | 850101    | TAB, AUGER LOCKOUT                               | 2    |
| 25       | 851448    | PRESSURE SWITCH, (FLOWJET PUMP)                  | A/R  |
|          |           | SEAL KITS FOR VALVES                             |      |
|          | 910059    | SEAL KIT, VALVE SPOOL                            |      |
|          | 910062    | SEAL KIT, VALVE SECTION                          |      |
|          | 910065    | KIT, SEAL (RELIEF VALVE)                         |      |



**R/H DRIVE ASSEMBLY**

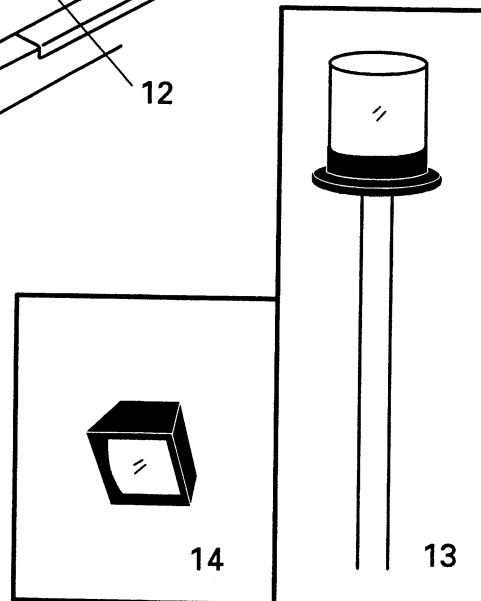
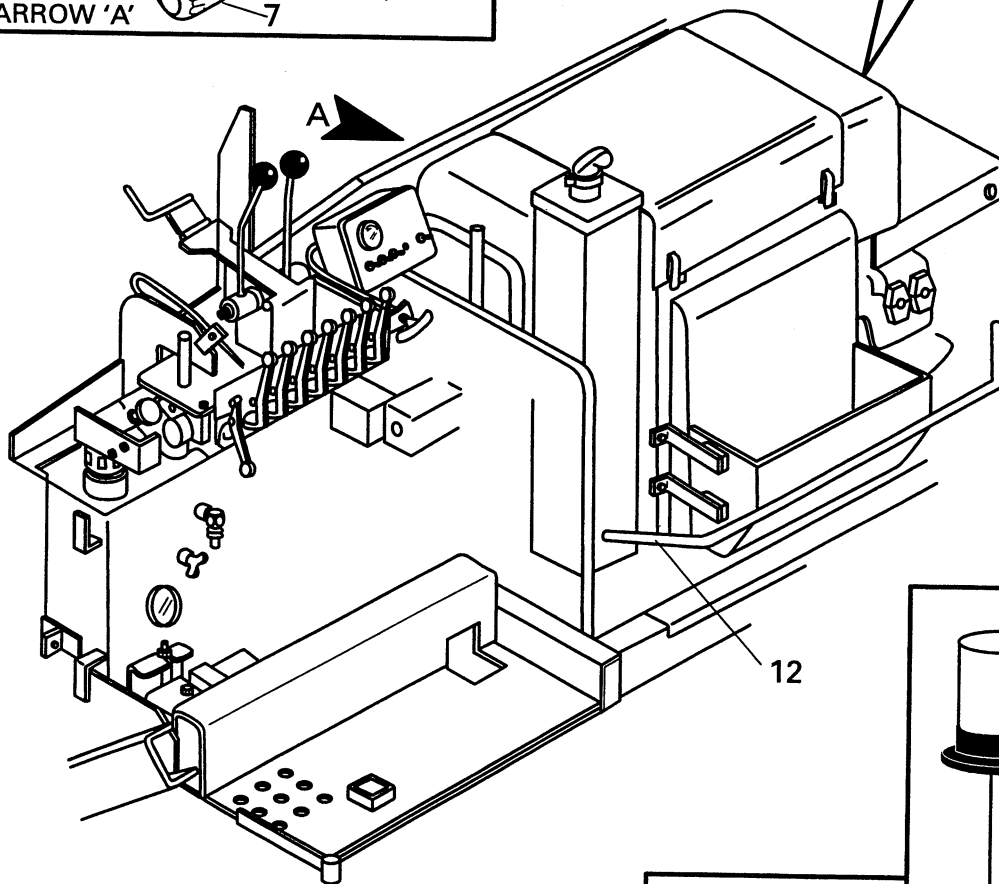
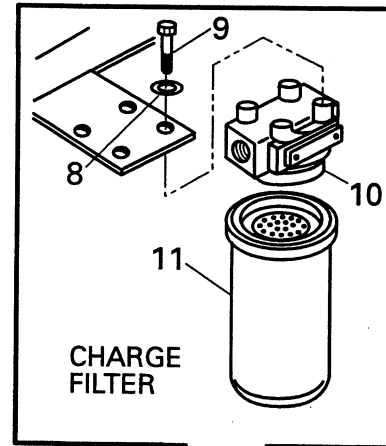
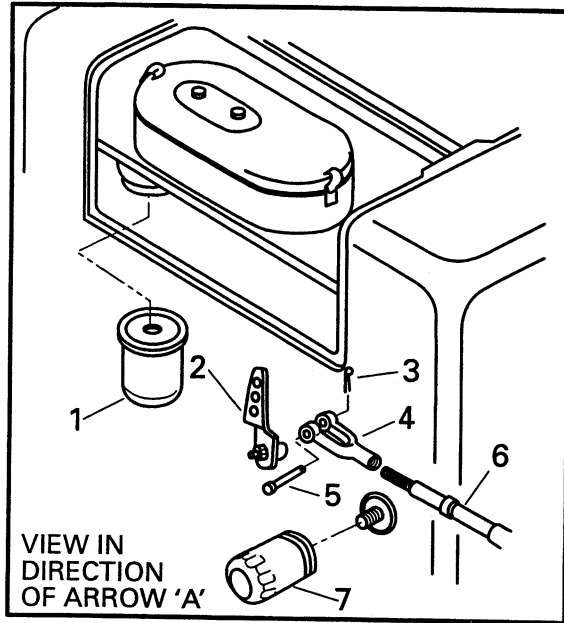
| <b>ITEM NO.</b> | <b>PART NO.</b> | <b>DESCRIPTION</b>                            | <b>QTY.</b> |
|-----------------|-----------------|-----------------------------------------------|-------------|
| 1               | 910009          | FUEL TANK ASSY., 13 GAL. (1000B / 8000B)      | 1           |
| 2               | 910010          | FUEL CAP & GAUGE, 16" / 13 GAL. TANK          | 1           |
| 2A              | 140030FL        | FUEL CAP, LOCKABLE                            | A/R         |
| 3               | 920140          | CABLE, R.H. DRIVE / CONTROL (116" X 3" STROKE | 1           |
| 4               | 350060          | U-BOLTS, 3/8                                  | 3           |
| 5               | 920140          | CABLE, R/H AUGER (116"x3") (9' MACHINE)       | 1           |
| 5A              | 920120          | CABLE, R/H AUGER (101"x3") (8' MACHINE)       | 1           |
| 6               | 920140          | CABLE, R/H AUGER (116"x3") (9' MACHINE)       | 1           |
| 6A              | 920120          | CABLE, R/H AUGER(101"x3") (8' MACHINE)        | 1           |
| 7               | 118-3           | WASHER, LOCK 3/8"                             | 2           |
| 8               | 920092          | NUT, 3/8"                                     | 2           |
| 9               | 350080          | PIN, 1/4"                                     | 2           |
| 10              | 960019          | PIN, COTTER                                   | 2           |
| 11              | 920228          | HANDLE, (L/H)                                 | 1           |
| 12              | 920230          | HANDLE, (R/H)                                 | 1           |
| 13              | 920145          | ROD FOR RIGHT HAND 5/8                        | 1           |
| 14              | 119-7           | WASHER, LOCK 5/8"                             | 2           |
| 15              | 116-7-1         | NUT. 5/8' JAM                                 | 2           |
| 16              | 350054          | PIVOT, HANDLE                                 | 2           |
| 17              | 920210          | HANDLES, R/H AUGER & EXTENSIONS (CASTED)      | 2           |
| 18              | 920090          | RODEND, SPHERICAL WITH STUD, 3/8" FINE THREAD | 2           |
| 19              | 350050          | CLEVIS, YOKE (1/4")                           | 2           |
| 20              | 920225          | KNOBS, ROUND                                  | 2           |
| 21              | 116-5           | NUTS, 1/2"                                    | 2           |
| 22              | 920149          | BOX, BATTERY                                  | 1           |
| 23              | 920070          | WING BOLT, 3/8"                               | 1           |
| 24              | 920155          | BATTERY                                       | 1           |
| 25              | 800076          | CABLE, (-) (BATTERY)                          | 1           |
| 26              | 800072          | BATTERY CABLE, POS. (+) 1000B 9' W / HATZ     | 1           |



# PUMP COMPONENTS



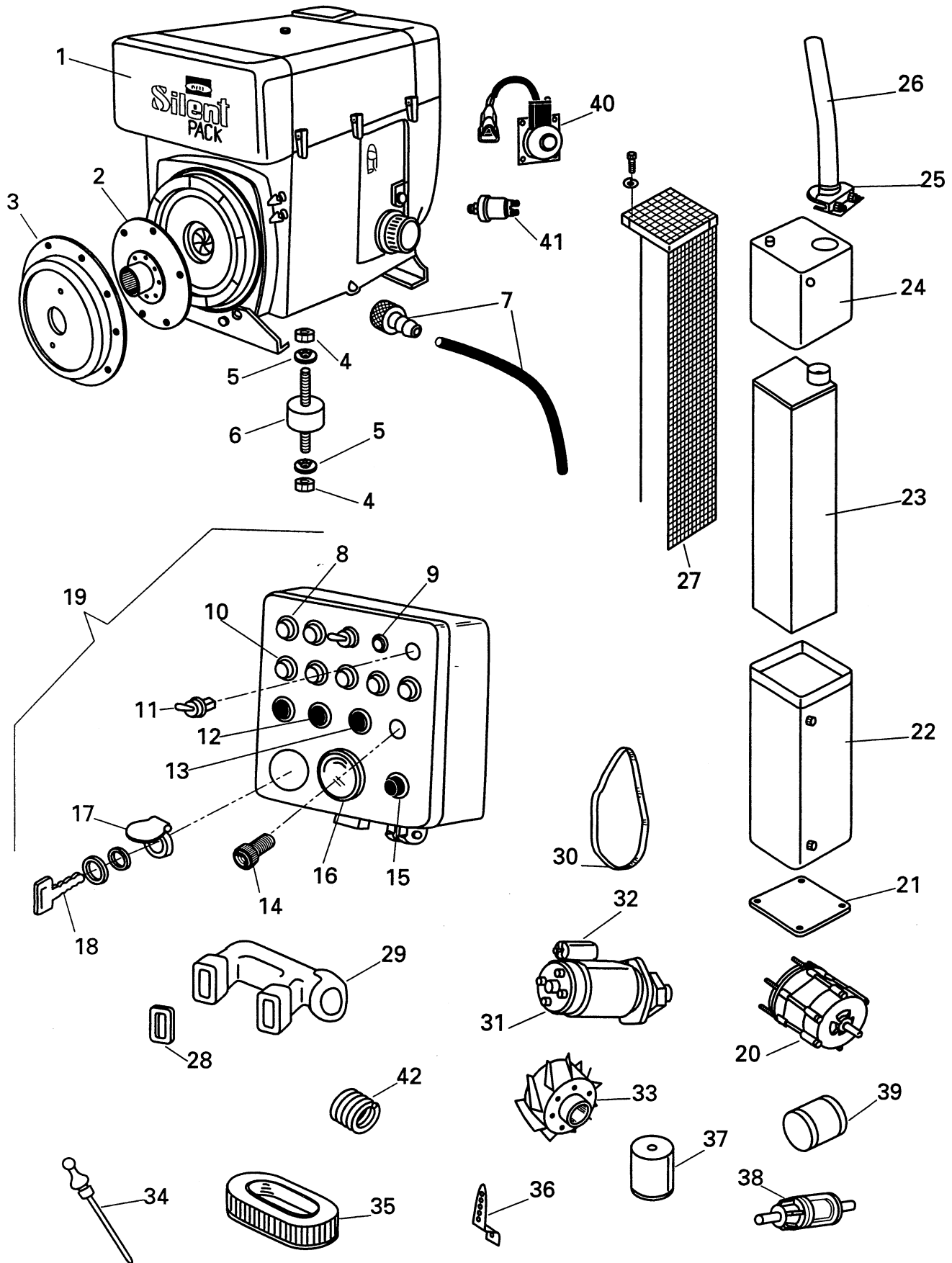
| ITEM NO. | PART NO. | DESCRIPTION                                             | QTY. |
|----------|----------|---------------------------------------------------------|------|
| 1        | 851479   | PUMP DRIVE PLATE, FLYWHEEL                              | 1    |
| 2        | 320200   | COVER, PUMP PLATE                                       | 1    |
| 3        | 320224   | BRACE, PUMP SUNSTRAND                                   | 1    |
| 4        | 320142   | WASHER, LOCK                                            | 1    |
| 5        | 320227   | CAPSCREW                                                | 2    |
| 6        | 320228   | CAPSCREW                                                | 2    |
| 7        | 320229   | WASHER, LOCK                                            | 2    |
| 8        |          |                                                         | 1    |
| 9        | 320235   | O-RING, (PIGGYBACK TO MAIN PUMP)                        | 1    |
| 10       | 320232   | PUMP, AUGER & CYLINDERS (SINGLE PIGGYBACK)              | 1    |
| 11       | 320237   | PUMP, L.&R. DRIVE SUNSTRAND                             | 1    |
| 12       | 851489A  | SHAFT, NEW STYLE (NOTE: SEAL SIZE 1 5/8"OUTSIDE )       | 1    |
| 12A      | 851495   | SHAFT, OLD STYLE ( NOTE: SEAL SIZE 2 7/8" OUTSIDE)      |      |
| 13       | 851489   | SEAL, FRONT SUN STRAND ( NOTE: 1 5/8"OUTSIDE)           | 1    |
| 13A      | 851489A  | SEAL, OLD STYLE FRONT SUN STRAND (NOTE: 2 7/8" OUTSIDE) |      |
| 14       | 320242   | WASHER                                                  | 2    |
| 15       | 320243   | CAPSCREW                                                | 2    |
| 16       | 320245   | ARM, LEFT DRIVE                                         | 1    |
| 17       | 900025   | ARM , RIGHT DRIVE                                       | 1    |
| 18       | 143-3    | NUT                                                     | 2    |
| 19       | 920090   | SPHERICAL ROD END, W/STUD                               | 2    |
| 20       | 920120   | CABLE, R.H. DRIVE, AUGERS & PUMP (104"x3")              | 2    |
| 21       | 350060   | U-BOLT, 3/8"                                            | 1    |
| 22       | 920125   | BRACKET, PUMP CABLES                                    | 1    |
| 23       | 320142   | WASHER, LOCK                                            | 2    |
| 24       | 320227   | CAPSCREW                                                | 2    |
| 25       | 851160-2 | DRIVE CPLG, TANDEM PUMP                                 | 1    |
| 26       | 851504   | BACKUP ALARM, PRESSURE SWITCH                           | 1    |
| 27       | 320244   | SOLENOID, NEUTRAL PAUSE                                 | 1    |
| 28       | 320244K  | SOLENOID, NEUTRAL PAUSE (KIT)                           | A/R  |



# **FILTER LOCATION & ACCESSORIES, WORK & BEACON LIGHTS (HATZ)**



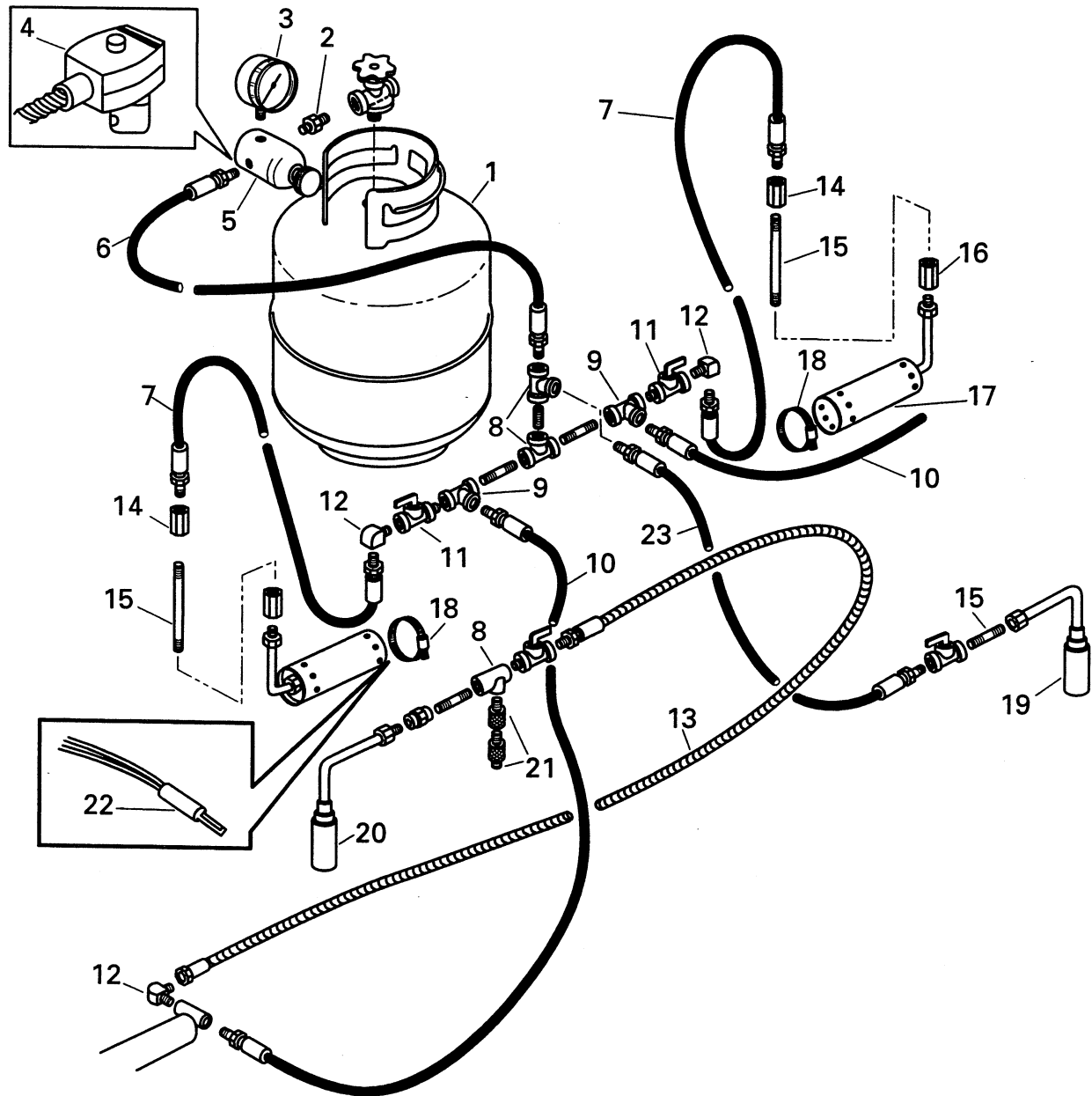
| <b>ITEM NO.</b> | <b>PART NO.</b> | <b>DESCRIPTION</b>                             | <b>QTY.</b> |
|-----------------|-----------------|------------------------------------------------|-------------|
| 1               | 310080          | ELEMENT, FUEL FILTER (HATZ DIESEL)             | 1           |
| 2               | 320120          | ARM, ADJUSTMENT                                | 1           |
| 3               | 910057          | PIN, COTTER                                    | 1           |
| 4               | 350050          | CLEVIS, YOKE (1/4")                            | 1           |
| 5               | 350080          | PIN, CLEVIS (1/4")                             | 1           |
| 6               | 920160          | CABLE, THROTTLE (36"x3")( 8' MACHINES)         | 1           |
| 6A              | 920161          | CABLE, THROTTLE (9'MACHINE ) CABLE IS 42' LONG | 1           |
| 7               | 310070          | FILTER, OIL (HATZ)                             | 1           |
| 8               | 118-3           | WASHER, 3/8"                                   | 4           |
| 9               | 102-205-1A      | CAP SCREW, 3/8"x1"                             | 4           |
| 10              | 290010          | HEAD, CHARGE / RETURN FILTER                   | 1           |
| 11              | 290030          | ELEMENT, CHARGE / RETURN FILTER                | 1           |
| 12              | 320112          | SHIELD, HEAT                                   | 1           |
| 13              | OP37            | STROBE LIGHT KIT                               |             |
| 14              | OP9             | WORKLIGHT KIT                                  |             |



# ENGINE COMPONENTS (HATZ)



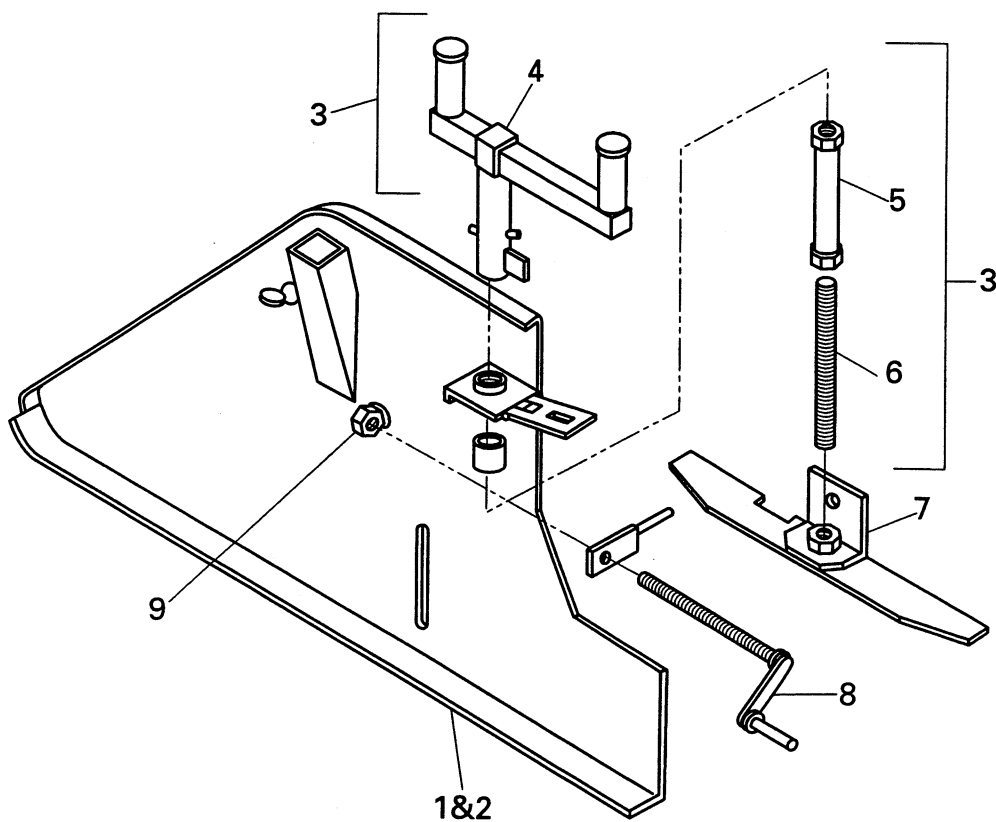
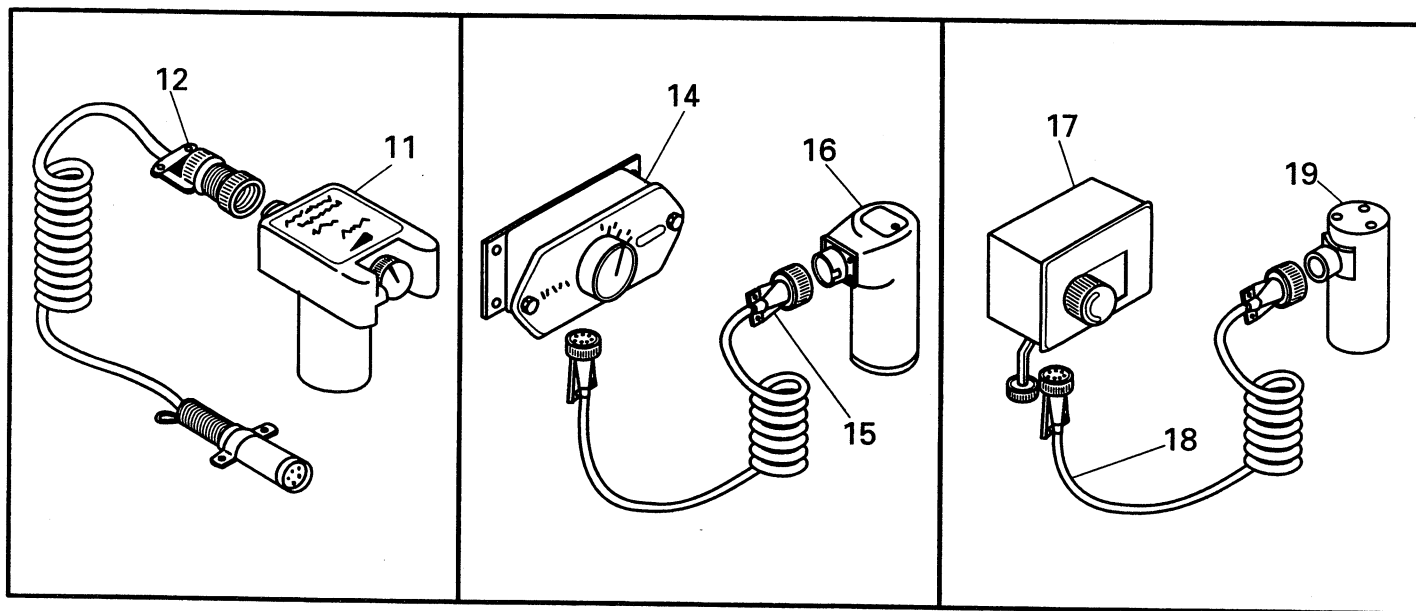
| ITEM NO. | PART NO.     | DESCRIPTION                                | QTY. |
|----------|--------------|--------------------------------------------|------|
| 1        | 320004       | 2 CYL.DIESEL ENG. HATZ 2L41C (SILENT- PAK) | 1    |
| 2        | 851479       | PUMP DRIVE PLATE, FLYWHEEL                 | 1    |
| 3        | 320200       | COVER, PUMP PLATE                          | 1    |
| 4        | 320144       | NUT,10mm.                                  | 1    |
| 5        | 320142       | WASHER, 10mm.                              | 4    |
| 6        | 320140       | MOUNTPAD, ENGINE HATZ                      | 4    |
| 7        | 851497       | HOSE & DRAIN FITTING, ENGINE OIL DRAIN     | 1    |
| 8        | 320382       | PLUGS, HATZ INSTRUMENT PANEL               | A/R  |
| 9        | 900120       | RED LIGHT, PAUSE LIGHT                     | 1    |
| 10       | 320382       | PLUGS, HATZ INSTRUMENT PANEL               | A/R  |
| 11       | 500040       | TOGGLE SWITCH, ON / OFF                    | 1    |
| 12       | 320360       | INDICATOR LAMP, AIR FILTER                 | A/R  |
| 13       | 320384       | INDICATOR LAMP, OIL PRESSURE               | 1    |
| 14       | 320386       | INDICATOR LAMP, BATTERY CHARGE             | 1    |
| 15       | 900122       | HORN                                       | 1    |
| 16       | 900130       | HOUR METER                                 | 1    |
| 17       | 320381       | COVER, IGNITION SWITCH (HATZ)              | 1    |
| 18       | 320380       | IGNITION KEY, HATZ DIESEL                  | 1    |
| 18A      | 320390       | SWITCH, HATZ DIESEL                        |      |
| 19       | 852191       | DASH                                       | 1    |
| 20       | 320300       | ALTERNATOR, 12 VOLT                        | 1    |
| 21       | HATO3878000  | PLATE, MUFFLER BOTTOM                      | 1    |
| 22       | HATOO871801  | COVER, MUFFLER BOTTOM                      | 1    |
| 23       | 320422       | MUFFLER, HATZ SILENT PACK                  | 1    |
| 24       | HATO1083000  | COVER, MUFFLER TOP                         | 1    |
| 25       | 320030       | CLAMP, 2" EXH. PIPE                        | 1    |
| 26       | 851164       | PIPE, EXT. MUFFLER                         | 1    |
| 27       | 320510       | HEAT SHIELD, MUFFLER                       | 1    |
| 28       | 320260       | GASKET, MUFFLER TO MANIFOLD                | 3    |
| 29       | 320250-2     | EXH. MANIFOLD TO CYL. HEAD                 | 1    |
| 30       | 320090-2L    | BELT, ALTERNATOR / BLOWER                  | 1    |
| 31       | 320270       | STARTER MOTOR                              | 1    |
| 32       | 320280       | SOLENOID, STARTER                          | 1    |
| 33       | 320290       | BLOWER FAN                                 | 1    |
| 34       | 320110       | DIPSTICK, ENGINE OIL LEVEL                 | 1    |
| 35       | 310060       | ELEMENT, AIR FILTER                        | 2    |
| 36       | 320120       | LEVER, ENGINE THROTTLE                     | 1    |
| 37       | 310080       | ELEMENT, FUEL FILTER                       | 1    |
| 38       | 310090       | IN-LINE FUEL FILTER                        | 1    |
| 39       | 310070       | ELEMENT, OIL FILTER                        | 1    |
| 40       | 851567       | SOLENOID, FUEL SHUT-OFF                    | 1    |
| 41       | 320387       | SENDING UNIT, OIL PRESSURE                 | 1    |
| 42       | HATO01603700 | GASKET, MUFFLER TO MANIFOLD                | 1    |



# PROPANE HEATER ASSEMBLY & AUTOMATIC IGNITORS



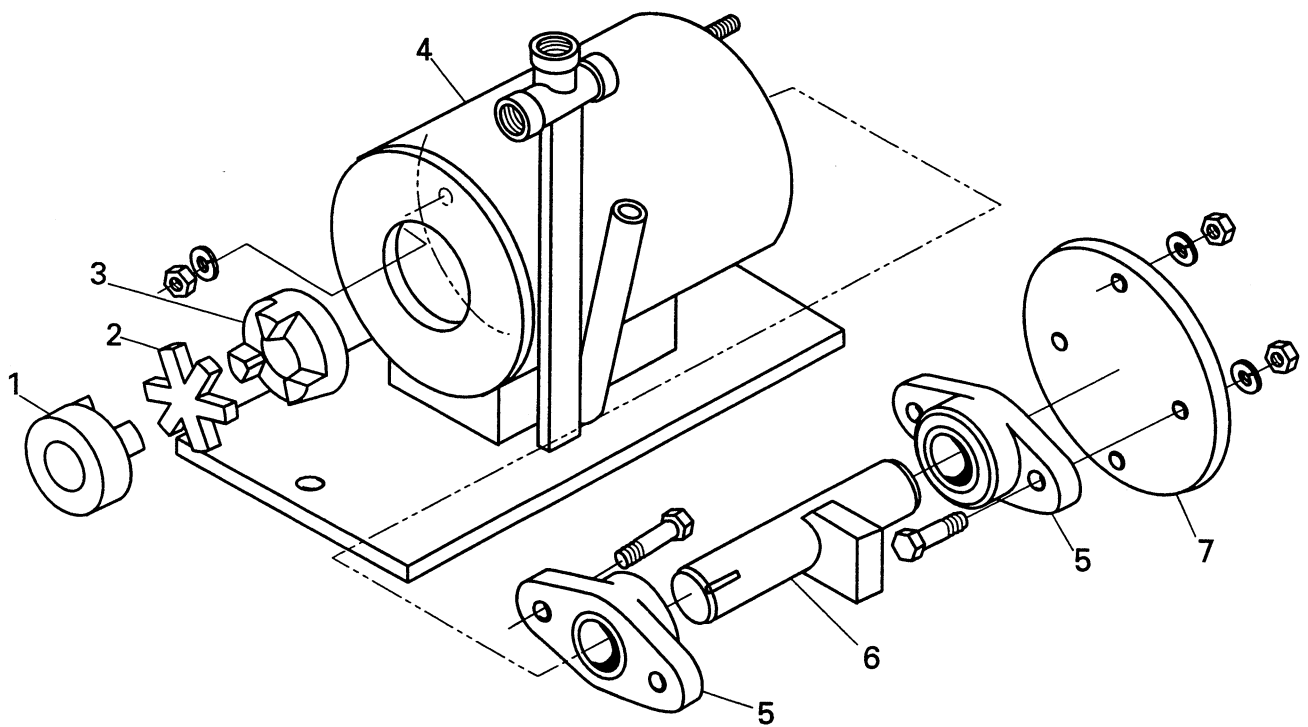
| ITEM NO. | PART NO. | DESCRIPTION                               | QTY. |
|----------|----------|-------------------------------------------|------|
| 1        | 230010   | L.P.G. TANK, 20 LBS.                      | 1    |
| 2        | 230030   | ADAPTER,P.O.L.                            | 1    |
| 3        | 230110   | GAUGE, L.P.G. PRESS.                      | 1    |
| 4        | 230300   | SOLENOID VALVE, 12 VOLT L.P.G.            | OPT. |
| 5        | 230100   | REGULATOR W / GAUGE, L.P.G.               | 1    |
| 6        | 230032   | HOSE, L.P.G. REGULATOR TO TEE (7000/8000) | 1    |
| 7        | 230034   | HOSE, SCREED BURNER                       | 2    |
| 8        | 230080   | TEE, 1/4" PIPE                            | 2    |
| 9        | 230081   | TEE, 1/4" STREET                          | 2    |
| 10       | 230038   | HOSE, L.P.G. TEE TO SCREED EXTENSION      | 2    |
| 11       | 230070   | VALVE, SELECTOR (CUTOFF)                  | 5    |
| 12       | 230069   | ADAPTER, HOSE TO PIPE( 90 DEGREES )       | 3    |
| 13       | 851225   | HOSE, SCREED EXTENSION BURNER             | 2    |
| 14       | 230170   | COUPLING, 1/4" PIPE                       | 3    |
| 15       | 230999   | PIPE NIPPLE, 1/4" X 6"                    | 3    |
| 16       | 230170   | COUPLING, 1/4" PIPE                       | 3    |
| 17       | 910025   | BURNER, SCREED EXTENSION                  | 2    |
| 18       | 230240   | HOSE CLAMP, 2 1/8" (SIZE 28)              | 2    |
| 19       | 230200   | BURNER NOZZLE, IGNITOR                    | 1    |
| 20       | 230082   | BURNER NOZZLE, SCREED EXTENSION (1200)    | 2    |
| 21       | 230084   | QUICK DISCONNECT CPLG.                    | 2    |
| 22       | 230024   | IGNITOR,CERAMIC HOT SURFACE               | 2    |
| 23       | 230036   | HOSE, IGNITOR BURNER                      | 1    |



# JOINTER ASSEMBLY



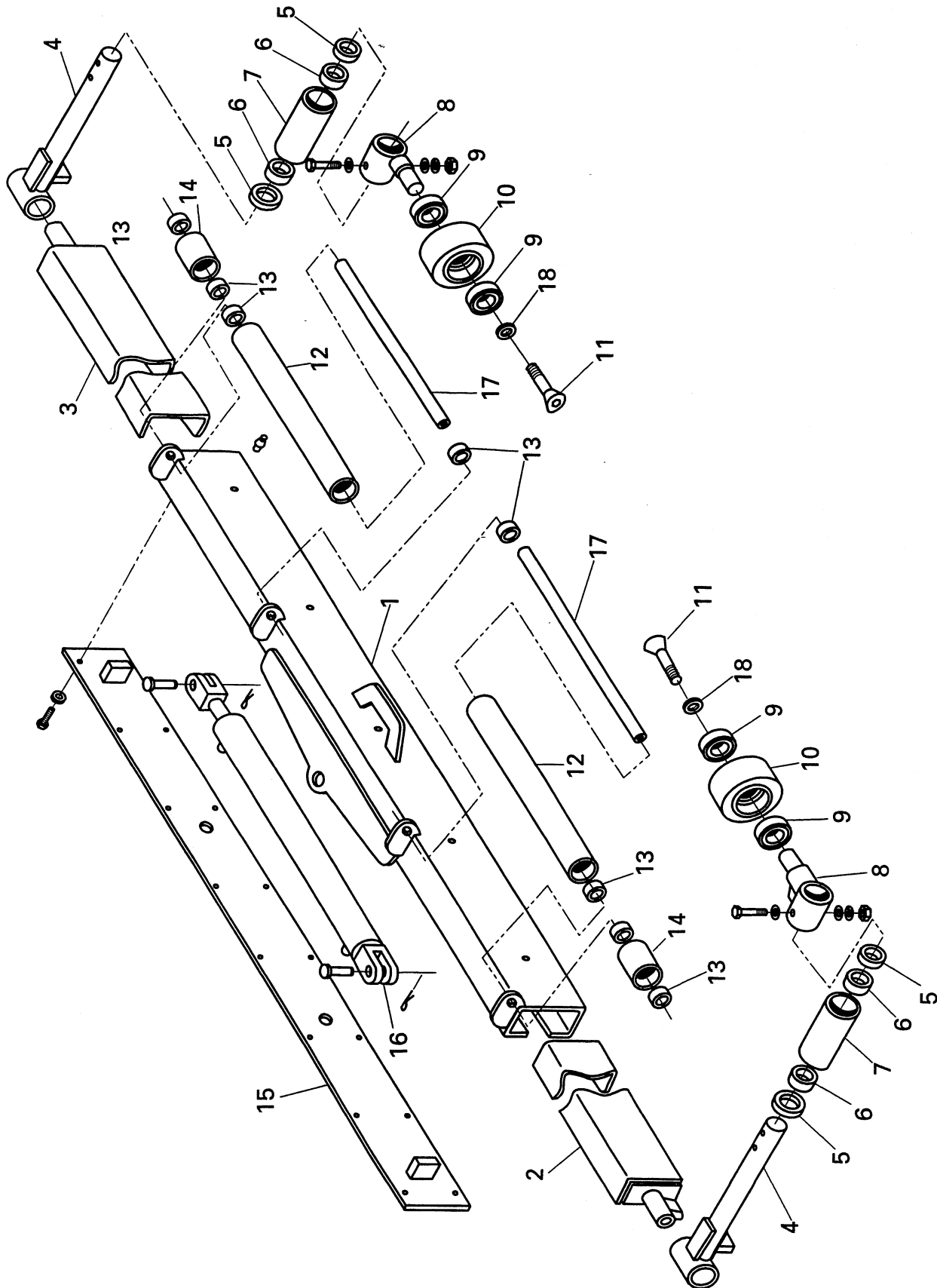
| ITEM NO. | PART NO.     | DESCRIPTION                                          | QTY. |
|----------|--------------|------------------------------------------------------|------|
| 1        | 851682       | JOINTER, ASSEMBLY [SHORT]                            | 1    |
| 2        | 851683       | JOINTER, ASSEMBLY [SHORT] R/H                        | 1    |
| 3        | 890092       | DEPTH SCREW ASSY., SCREED                            | 2    |
| 4        | 890092       | HANDLE, DEPTH SCREW SLIDE TYPE                       | 2    |
| 5        |              | COMES AS # 3                                         |      |
| 6        |              | COMES AS # 3                                         |      |
| 7        | 890132 R & L | BRACKET, DEPTH SCREW CONTROL                         | 2    |
| 8        | 890081       | TILT SCREW, JOINTER ASSY.                            | 2    |
| 9        | 890070       | NUT , (WELDMAN)                                      | 2    |
| 10       | 851595       | SONAMAT WIRING HARNESS (NOT SHOWN)                   | 2    |
| 11       | 851592       | SONIC SENSOR, AUTO-AUGER (O/S RAMSEY)(NOT AVAILABLE) | A/R  |
| 12       | 851593       | CABLE, AUTO. AUGER SENSOR (O/S RAMSEY)               | A/R  |
| 13       | 851594       | KIT, SONIC AUGER                                     | 1    |
| 14       | 851690       | CONTROL, AUTO AUGER SENSOR (N/S RAMSEY)              | A/R  |
| 15       | 851691       | CABLE, AUTO. AUGER SENSOR (N/S RAMSEY)               | A/R  |
| 16       | 851692       | SONIC SENSOR, AUTO AUGER (N/S RAMSEY)                | A/R  |
| 17       | 851693       | CONTROL, AUTO AUGER SENSOR (MOBA)                    | A/R  |
| 18       | 851694       | CABLE, AUTO. AUGER SENSOR (MOBA)                     | A/R  |
| 19       | 851695       | SONIC SENSOR, AUTO AUGER (N/S MOBA)                  | A/R  |



# VIBRATOR ASSEMBLY



| ITEM NO. | PART NO. | DESCRIPTION                              | QTY. |
|----------|----------|------------------------------------------|------|
| 1        | 280030   | COUPLING HALF, TACK PUMP MOTOR           | 1    |
| 2        | 280040   | INSERT, 3-JAW COUPLING                   | 1    |
| 3        | 880030   | COUPLING HALF, 1" (VIBRATOR SHAFT)       | 1    |
| 4        | 880042   | HOUSING, VIBRATOR ECCENTRIC              | 1    |
| 5        | 250150   | BEARING, CONVEYOR PULLEY/ VIBRATOR SHAFT | 2    |
| 6        | 880062   | SHAFT, VIBRATOR ECCENTRIC                | 1    |
| 7        | 880071   | PLATE, VIBRATOR HOUSING                  | 1    |

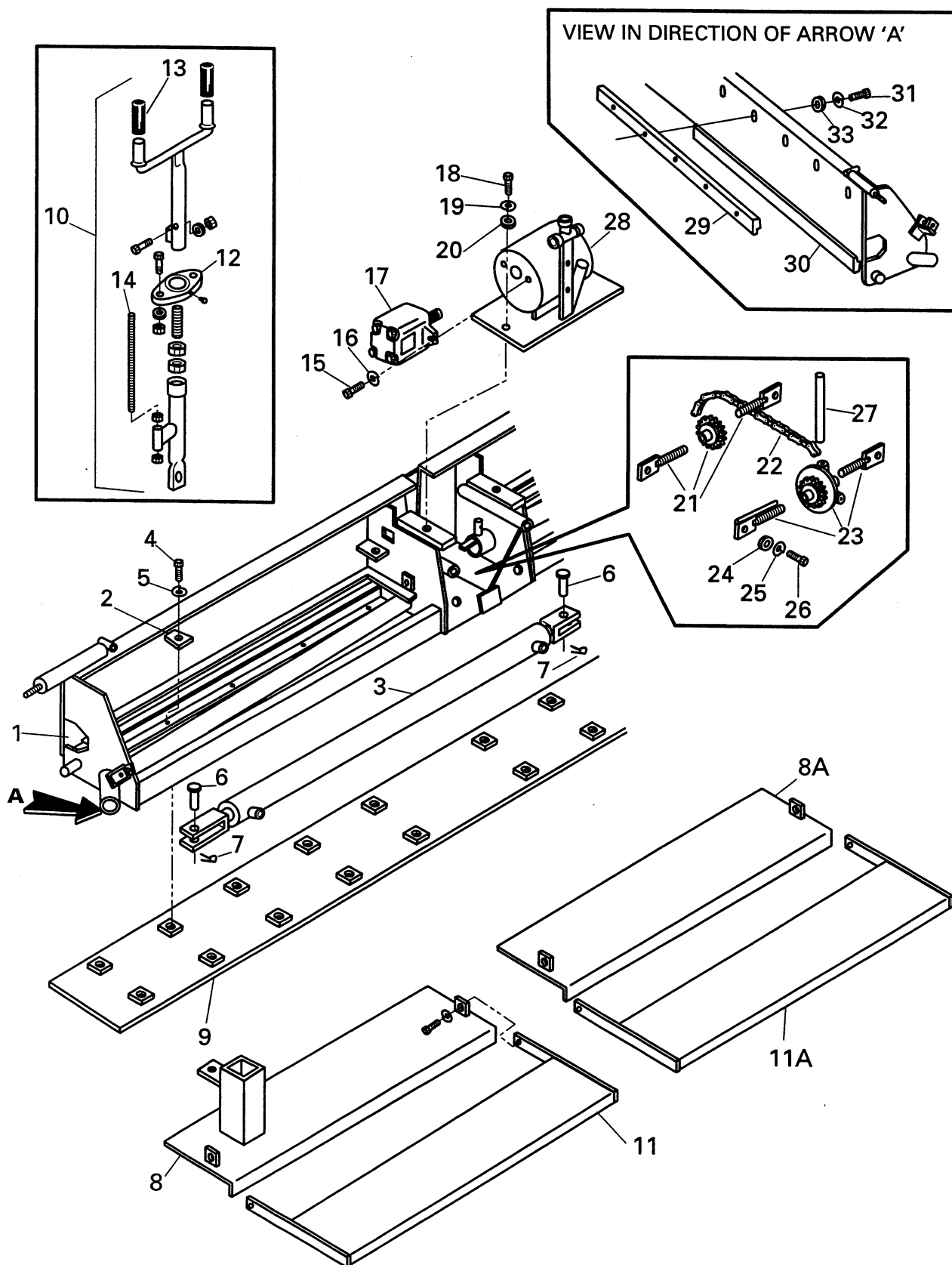


# TRUCK HITCH ASSEMBLY



| ITEM NO. | PART NO. | DESCRIPTION                            | QTY. |
|----------|----------|----------------------------------------|------|
|          | 930010   | TRUCK HITCH ASSEMBLY                   |      |
| 1        | 930015   | SUPPORT,PIVOTBAR                       | 1    |
| 2        | 930020   | ARM EXTENSION, R/H                     | 1    |
| 3        | 930025   | ARM EXTENSION, L/H                     | 1    |
| 4        | 930030   | GUIDE, WHEEL PIVOT ARM                 | 2    |
| 5        | 620400   | COLLAR, LOCK                           | 4    |
| 6        | 810070   | BUSHING, TRACK IDLER / TRUCK HITCH     | 4    |
| 7        | 930040   | ROLLER                                 | 2    |
| 8        | 930045   | AXLE, GUIDE WHEEL                      | 2    |
| 9        | 930050   | BEARING, TRUCK HITCH ROLLER            | 4    |
| 10       | 930055   | GUIDE WHEEL, TRUCK HITCH               | 2    |
| 11       | 851111   | CAPSCREW, 1/2" 13 x 2 FLAT HEAD SOCKET | 2    |
| 12       | 810102   | PUSH ROLLER, TRUCK WHEEL               | 2    |
| 13       | 810110   | BEARING, PUSH ROLLER (1 1/4")          | 8    |
| 14       | 930060   | ROLLER EXTENSION, BUMPER               | 2    |
| 15       | 930065   | COVER, BACK PANEL                      | 1    |
| 16       | 930070   | CYLINDER, ARM EXTENSION                | 1    |
| 17       | 930075   | SHAFT, BUMPER ROLLER                   | 2    |
| 18       | 851112   | WASHER, COUNTER SUNK                   | 2    |

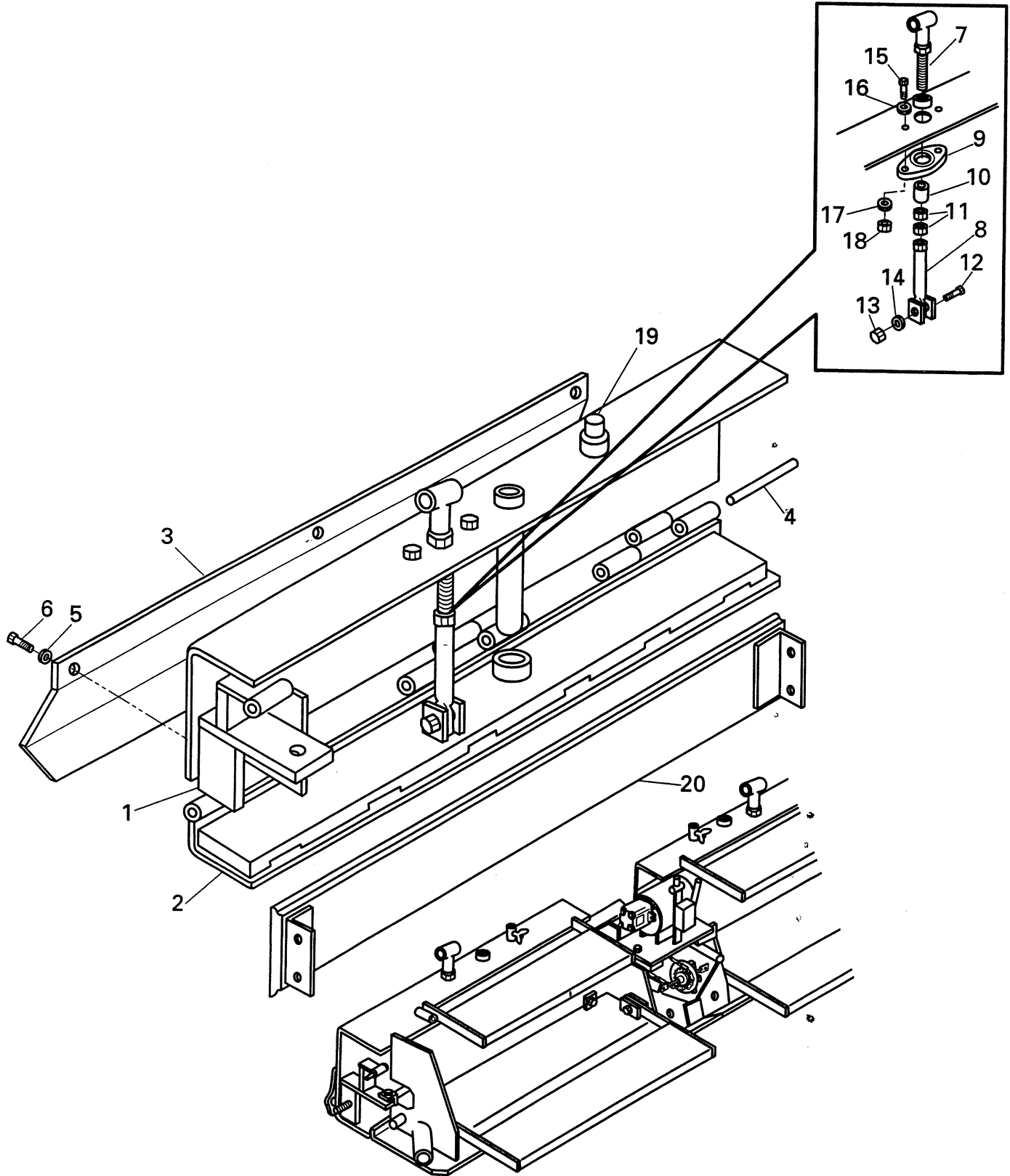
## EXTENDIBLE SCREED ASSEMBLY (REAR SECTION)



# EXTENDIBLE SCREED ASSEMBLY (REAR SECTION)

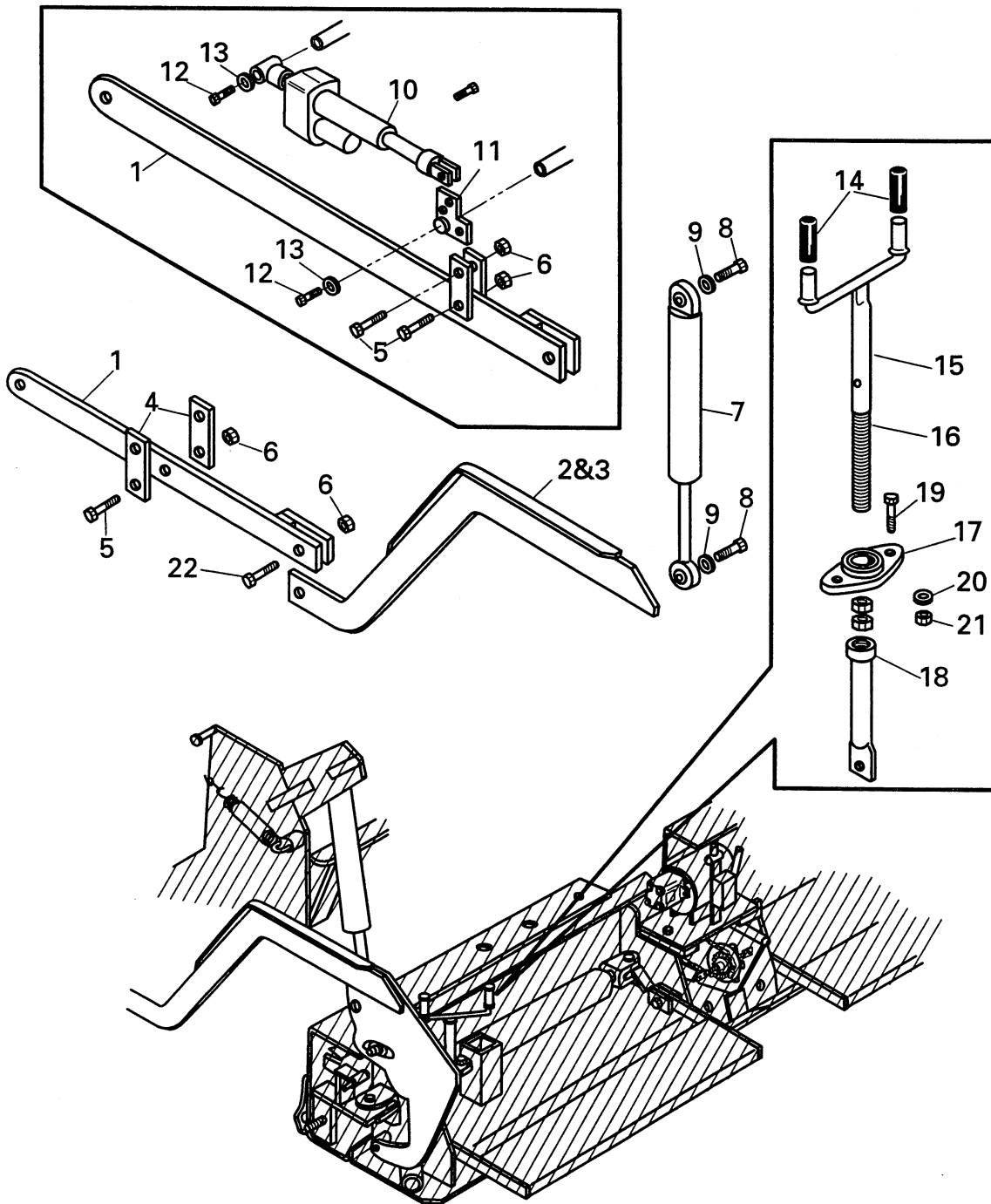


| ITEM NO. | PART NO.   | DESCRIPTION                        | QTY. |
|----------|------------|------------------------------------|------|
|          | 851596     | SCREED ASSEMBLY, COMPLETE (BB)     | 1    |
| 1        | 851597     | SCREED, BASE BB                    | 1    |
| 2        | 121-3      | WASHER, WEDGE                      | 20   |
| 3        | 870140     | HYD. CYLINDER, SCREED EXTENSION    | 2    |
| 3A       | 870312     | SEAL KIT, CYLINDER                 |      |
| 4        | 851134     | CAP SCREW, 3/8"X3/4"               | 20   |
| 5        | 118-3      | WASHER, 3/8"                       | 20   |
| 6        | 240030     | PIN, CYLINDER                      | 2    |
| 7        | 870307     | PIN, COTTER                        | 2    |
| 8        | 851599L    | LID, SCREED LEFT SIDE              | 1    |
| 8A       | 851599R    | LID, SCREED RIGHT SIDE             | 1    |
| 9        | 851598     | WEARPLATE , MAIN SCREED            | 1    |
| 10       | 870042A    | FLIGHT SCREW                       | 2    |
| 11       | 851554L    | WALK BOARD (LEFT SIDE)             | 1    |
| 11A      | 851554R    | WALK BOARD (RIGHT SIDE)            | 2    |
| 12       | 870030     | BEARING, FLANGE                    | 2    |
| 13       | 870276     | GRIP, HANDLE                       | A/R  |
| 14       | 851372     | ROD GAUGE                          | 2    |
| 15       | 860048     | CAP SCREW, 7/16"x2" HEX HEAD       | 4    |
| 16       | 118-4      | WASHER, FLAT 7/16"                 | 4    |
| 17       | 870220     | MOTOR, HYDRAULIC SCREED VIBRATOR   | 1    |
| 18       | 102-606-1A | CAP SCREW 5/8"X1 1/4"              | 2    |
| 19       | 118-7      | WASHER, LOCK 5/8"                  | 2    |
| 20       | 119-7      | WASHER, FLAT 5/8"                  | 1    |
| 21       | 870172     | TURNBUCKLE, CROWN & VALLEY (FRONT) | 1    |
| 22       | 870190     | CHAIN, CROWN & VALLEY              | 1    |
| 23       | 870182     | TURNBUCKLE, CROWN & VALLEY (REAR)  | 1    |
| 24       | 119-7      | WASHER, FLAT 5/8"                  | 2    |
| 25       | 118-7      | WASHER, LOCK 5/8"                  | 2    |
| 26       | 119-7      | WASHER, FLAT 5/8"                  | 2    |
| 27       | 851195     | HANDLE, CRANK                      | 1    |
| 28       | 870232     | VIBRATOR, SCREED Assy.             | 1    |
| 29       | 851298     | GUIDE, EXTENSION TOP               | 1    |
| 30       | 851299     | GUIDE, EXTENSION BOTTOM (WELDMENT) | 1    |
| 31       | 102-406-1A | CAP SCREW, 1/2"x2"                 | 5    |
| 32       | 118-5      | WASHER, LOCK 5/8"                  | 5    |
| 33       | 119-7      | WASHER, FLAT 5/8"                  |      |



**BB EXTENSION - SCREED ASSEMBLY**

| <b>ITEM NO.</b> | <b>PART NO.</b> | <b>DESCRIPTION</b>                      | <b>QTY.</b> |
|-----------------|-----------------|-----------------------------------------|-------------|
| 1               | 851600          | EXTENSION, "BB" SCREED L.H.             | 1           |
| 1               | 851601          | EXTENSION, "BB" SCREED R.H.             | 1           |
| 2               | 851602          | SCREED, LOWER EXT. (SPECIFY LH. OR RH.) | 1           |
| 3               | 851180          | GUARD, EXT. ( SPECIFY LH. OR RH.)       | 1           |
| 4               | 851196          | PIN                                     | 1           |
| 5               | 118-3           | WASHER, LOCK 3/8"                       | 3           |
| 6               | 102-205-1A      | CAP SCREW, 3/8"x1"                      | 3           |
| 7               | 851603          | PIPE NUT, "BB" SCREED EXTENSION SCREW   | 1           |
| 8               | 851603          | PIPE NUT, "BB" SCREED EXTENSION SCREW   | 1           |
| 9               | 870030          | BEARING, SCREED FLIGHT SCREW            | 1           |
| 10              | 851604          | BUSHING FLANGE BEARING 1X3/4            | 1           |
| *11             | 116-8           | NUTS, JAM 3/4"                          | 2           |
| 12              | 870279          | BOLTS, SHOULDER                         | 2           |
| 13              | 143-3           | NUT, 3/8 LOCK                           | 1           |
| 14              | 118-3           | WASHER, LOCK 3/8"                       | 2           |
| 15              | 102-309-1A      | CAP SCREW, 7/16"x2"                     | 2           |
| 16              | 119-4           | WASHER, FLAT 7/16"                      | 2           |
| 17              | 118-4           | WASHER, LOCK 7/16"                      | 2           |
| 18              | 116-5           | NUT, 7/16"                              | 2           |
| 19              | 851183          | COUPLING                                | 1           |
| 20              | 851552          | SLIDE, EXTENSION                        | 1           |



**BB SCREED ARM ASSEMBLY****LeeBoy**

| <b>ITEM NO.</b> | <b>PART NO.</b> | <b>DESCRIPTION</b>                    | <b>QTY.</b> |
|-----------------|-----------------|---------------------------------------|-------------|
| 1               | 851605          | ARM, SCREED EXTENSION                 | 2           |
| 2               | 851607          | ARM, SCREED REAR (LEFT SIDE)          | 1           |
| 3               | 851606          | ARM, SCREED REAR (RIGHT SIDE)         | 1           |
| 4               | 851210          | EARS, PIVOT                           | 2           |
| 5               | 102-611-1A      | CAP SCREW, 5/8"x 2 1/2"               | 2           |
| 6               | 116-7           | NUT, LOCK 5/8"                        | 2           |
| 7               | 851436          | CYLINDER, LIFT (2x12)                 | 2           |
| 7A              | 851484          | SEAL KIT, 2" CYLINDER                 |             |
| 8               | 100-913-1A      | CAP SCREW, 1"x 3"                     | 1           |
| 9               | 118-10          | WASHER, LOCK 1"                       | 1           |
| 10              | 870302          | SCREW, ELECTRIC                       | 1           |
| 11              | 851209          | MOUNT, PIVOT                          | 1           |
| 12              | 851134          | BOLT, 3/8"x -16x 3/4"                 | 2           |
| 13              | 119-3           | WASHER, FENDER 3/8"                   | 2           |
| 14              | 870276          | HAND GRIP, FLIGHT SCREW / DEPTH SCREW | A/R         |
| 15              | 870042A         | FLIGHT SCREW ASSY. SCREED             | 2           |
| 16              | 870042A         | SCREW, ADJUSTER                       | 2           |
| 17              | 870030          | BEARING, SCREED FLIGHT SCREW          | 2           |
| 18              | 870042A         | FLIGHT SCREW ASSY. SCREED             | 2           |
| 19              | 860048          | CAP SCREW, 7/16"x 2"                  | 2           |
| 20              | 119-4           | WASHER, FLAT 7/16"                    | 2           |
| 21              | 116-5           | NUT, 1/2"                             | 2           |
| 22              | 102-611-1A      | CAP SCREW, 1"x 2 1/2"                 | 1           |

# SAFETY DECALS



| ITEM NO. | PART NO.  | DESCRIPTION                                                                                        | QTY. |
|----------|-----------|----------------------------------------------------------------------------------------------------|------|
|          | 941000-0  | Decal Kit, (Complete) (Consists of small decals and big orange stripes)                            | 1    |
|          | 941000-00 | Decal Set, (Consists of small decals; Does Not Include big orange stripes)                         | 1    |
| 1        | 940001-1  | Located on upper R/H of Hopper closest to fuel filler neck                                         | 1    |
| 2        | 940001-2  | Located 2" down from top edge of fuel tank                                                         | 1    |
| 3        | 940001-3  | Located 1/2" down and 1/4" in from Rigger edge of Hopper both sides                                | 2    |
| 4        | 940001-4  | Located on Hydraulic Reservoir 1/2" down from edge and centered to fill neck                       |      |
| 5        | 940001-8  | Located on wide Flange as shown                                                                    |      |
| 6        | 940001-7  | Located ahead of main valve bank controls on Forward/Reverse Support                               |      |
| 7        | 940001-12 | Located just above decal item 6                                                                    |      |
| 8        | 940001-9  | Located as shown both sides                                                                        |      |
| 9        | 940001-6  | Located just above Screed both sides                                                               |      |
| 10       | 941003-2  | Located 1 1/4" up from bottom edge of siding and 1 1/2" in from front edge (Specify right or left) | 1    |
| 11       | 941000-20 | Located as shown                                                                                   | 2    |
| 12       | 940003-1  | Located on side of fuel tank                                                                       | 1    |
| 13       | 941000-21 | Located on Throttle Support Bracket                                                                | 1    |
| 14       | 940002-1  | Located on center of Exhaust Heat Shield and centered as shown in front view                       |      |
| 15       | 940003-3  | Located on and centered on hose cover both sides                                                   | 2    |
| 16       | 940002-4  | Located on flat surface just ahead of Flight Screw                                                 |      |
| 17       | 940002-5  | Located on both sides under decal item 3 and on Exhaust Heat Shield                                | 3    |
| 18       | 940002-7  | Located on Exhaust Heat Shield on 2-Speed Gearbox or Torque Hub                                    | 1    |
| 19       | 940004-1  | Located on both cut off ends                                                                       | 2    |
| 20       | 940004-18 | Located on Face Plate ahead of Control Levers                                                      |      |
| 21       | 940004-3  | Located on the Drive Controls with the "N" by the Notch, showing position of neutral               |      |
| 22       | 940004-5  | Located on face plate ahead of right hand drive control                                            |      |
| 23       | 940002-3  | Located to top front center of tool box lid                                                        |      |
| 24       | 940002-6  | Located on Flange Support of Vibrator Valve                                                        |      |
| 25       | 940002-9  | Located on both sidings and above main valve decal                                                 |      |
| 26       | 940002-10 | Located as shown                                                                                   |      |
| 27       | 940002-11 | Located as shown                                                                                   |      |
| 28       | 940002-12 | Located as shown                                                                                   |      |
| 29       | 940002-13 | Located as shown                                                                                   |      |
| 30       | 940002-14 | Located as shown                                                                                   |      |

# UMBRELLA

## ASSEMBLY INSTRUCTIONS

1. Install Umbrella Mounting bracket (See bracket mounting instructions furnished with each bracket).
  2. Insert ball stud on (#3) curved shaft into (#1) umbrella support shaft, align holes, and drive (#2) 3/16" x 1" spiral spring pins into position. Install (#5) locking handle.
  3. Place (#7) canvas cover over (#8) umbrella frame assembly and hook corners to bows — tie each bow securely with tie straps.
  4. Insert (#8) umbrella frame assembly with canvas in place into tube on (#3) curved shaft and insert (#6) bolt. Tighten snugly with nut (#4).
  5. Install complete umbrella into clamp on umbrella mounting bracket.
- Each bow may be raised individually until locked into open position. Each bow has two positions in which it can be locked open. This is to allow for arc stretch in canvas.
- \* Part No. varies with color.





## Other Members of the LeeBoy Family of Products...

635 Motor  
Grader

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8500 Elite III  
Asphalt Paver

---



8000  
Asphalt Paver

---



420  
Pneumatic Roller

---



LeeBoy 5000 Path  
Master Paver

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