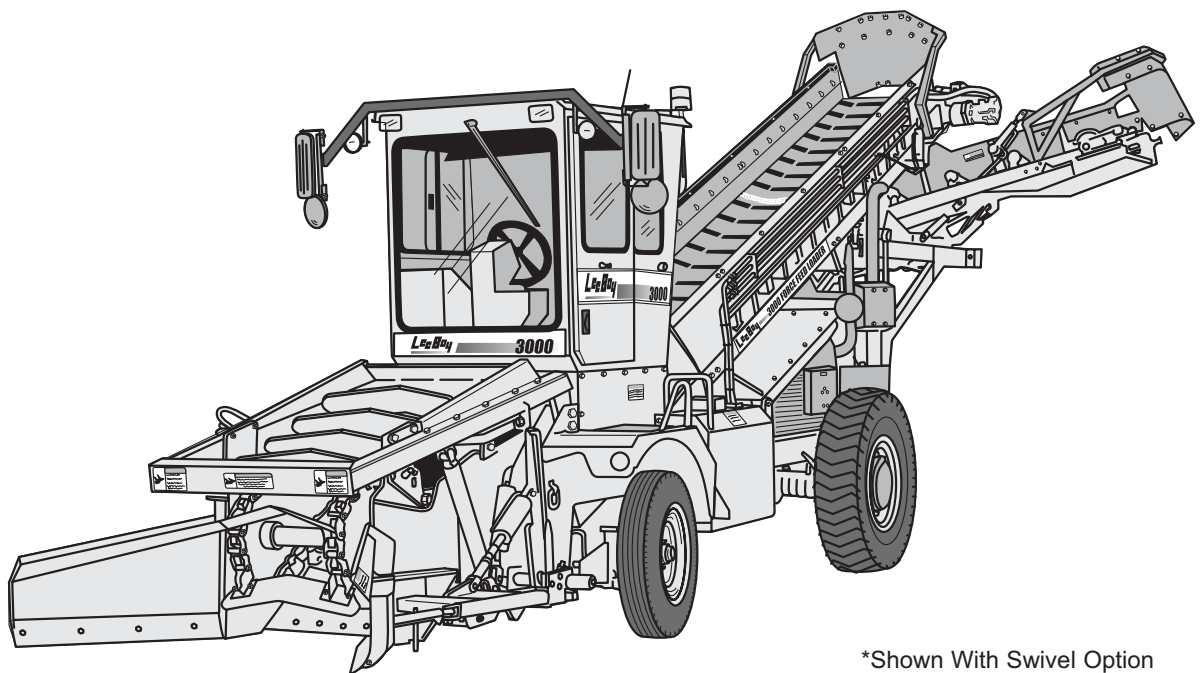




OPERATIONS, SERVICE AND PARTS MANUAL



3000 FORCE FEED LOADER

Manual No. 981622-01



LEEBOY / ROSCO LIMITED WARRANTY POLICY AND PROCEDURES

A. WARRANTY

- 1 For warranty repairs on machines with less than fifty (50) hours in service a FACTORY-TRAINED SERVICE REPRESENTATIVE will be reimbursed at a rate of \$1.50/mile (150 miles maximum) and three (3) hours (3 hours maximum) at shop rate.
2. If a defect in material or workmanship is found and the authorized Dealer is notified during the warranty period, VT LeeBoy will repair or replace any part or component of the unit or part that fails to conform to the warranty during the warranty period.
3. The warranty date will begin upon online registration of the unit by the Dealer and will expire after twelve (12) months have passed. The unit must be registered by the Dealer within ten (10) days of being sold.
4. **Manufacturers' Warranties:**

For LeeBoy Dealers: Engines are warranted by their manufacturers and may have warranty coverage that differs from that of VT LeeBoy.

For Rosco Dealers: Engines and truck chassis are warranted by their manufacturers and may have warranty coverage that differs from that of VT LeeBoy.
5. Replacement parts furnished by VT LeeBoy are covered for the remainder of the warranty period applicable to the unit or component in which such parts are installed.
6. VT LeeBoy has the right to repair any component or part before replacing it with a new one.
7. All new replacement parts purchased by a VT LeeBoy Dealer will carry a six-month warranty.

B. LIMITATIONS

- VT 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 VT 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 VT LeeBoy, in making the applicable units or parts available upon notification of a service notice ordered by same.
 6. **Warranty Responsibility:**

For LeeBoy Dealers: The warranty responsibility on all engines rests with the respective manufacturer.

For Rosco Dealers: The warranty responsibility on all engines and/or truck chassis rests with the respective manufacturer.
 7. **Warranty and Parts Support:**

For LeeBoy Dealers: VT LeeBoy may have support agreements with some engine manufacturers for warranty and parts support.

For Rosco Dealers: VT LeeBoy may have support agreements with some engine and/or truck chassis manufacturers for warranty and parts support.

LEEBOY / ROSCO LIMITED WARRANTY POLICY AND PROCEDURES

C. ITEMS NOT COVERED

VT LeeBoy is not responsible for the following:

1. Costs related to travel time, mileage or overtime other than as covered under the Warranty Section, Item 1, of this document.
2. Costs related to transporting the product to and from the place at which warranty work is performed.
3. Air freight charges related to transporting repair parts to the place at which warranty work is performed.
4. All used units or used parts of any kind.
5. Repairs due to normal wear and tear or brought about by abuse or lack of maintenance of the equipment, except for premature failures, conveyor chains, poly-track pads, track rails, and rubber track and tires.
6. Attachments not manufactured or installed by VT LeeBoy.
7. Liability for incidental or consequential damages of any type including, but not limited to, lost profits or expenses of acquiring replacement equipment.
8. Miscellaneous charges.

D. 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 VT LEEBOY BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING, WITHOUT LIMITATION, LOSS OF PROFIT OR REVENUE,

COST OF CAPITAL, COST OF SUBSTITUTED EQUIPMENT, FACILITIES OR SERVICES, DOWNTIME COSTS, LABOR COSTS OR CLAIMS OF CUSTOMERS, PURCHASERS OR LESSEES FOR SUCH DAMAGES.

E. CLAIM PROCEDURES

1. Warranty repairs over \$1,000 must be authorized by the VT LeeBoy Warranty Department in advance of any repair work. Contact Jeff White at 704.966.3364 or jwhite@leeboy.com.
2. Only claims with Warranty Registration Forms that are properly completed by the customer and on file with VT LeeBoy will be considered for reimbursement.
3. Claims for less than \$50.00 will not be accepted.
4. Claims must be submitted within thirty (30) days of the date of repair through VT LeeBoy's online warranty claim process.
5. Rates for services performed will be reimbursed at 100% of the Dealer's published hourly shop rate or as mutually agreed upon by VT LeeBoy and the Dealer. Hours reimbursed will be based upon actual hours incurred to the maximum as shown in VT LeeBoy's Summary By Repair Task. The Dealer is responsible for notifying VT LeeBoy of any rate changes in its published hourly shop rates.
6. Parts will be reimbursed at Dealer's cost.
7. The Dealer shall keep defective or damaged parts in its possession for not less than sixty (60) days. If VT LeeBoy authorizes the return of a part, it must be returned within thirty (30) days of the authorization date per VT LeeBoy's online warranty process.



USER'S REFERENCE GUIDE

DELIVERY DATE _____

UNIT SERIAL NUMBER _____

ENGINE TYPE _____

ENGINE NUMBER _____

DEALER'S NAME AND ADDRESS

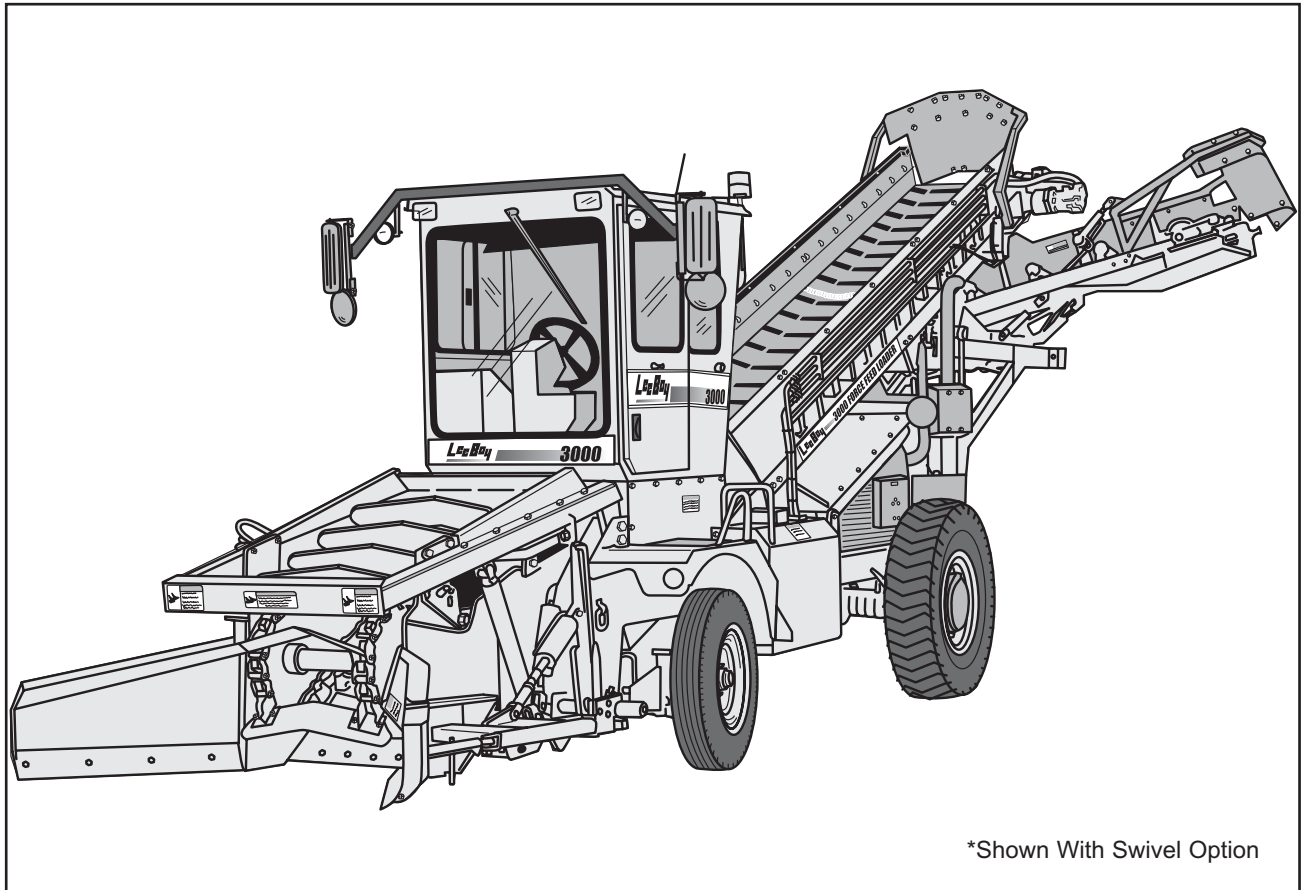
PHONE NUMBER _____

EQUIPMENT HOURS _____

SERVICE MANAGER _____

500 Lincoln County Parkway Ext. Lincolnton, North Carolina 28092 www.LeeBoy.com

MODEL 3000 CONVEYOR LOADER OPERATORS, MAINTENANCE AND PARTS MANUAL



OVERALL VIEW

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 LeeBoy 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.

IMPORTANT

SAFETY INSTRUCTIONS

This manual provides important information to familiarize you with safe 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 motor grader's proper operation.

LOOK FOR THESE SYMBOLS WHICH POINT OUT ITEMS OF EXTREME IMPORTANCE TO YOU AND YOUR COWORKERS SAFETY. READ AND UNDERSTAND THOROUGHLY. HEED THE WARNINGS 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.

WARNING

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

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.

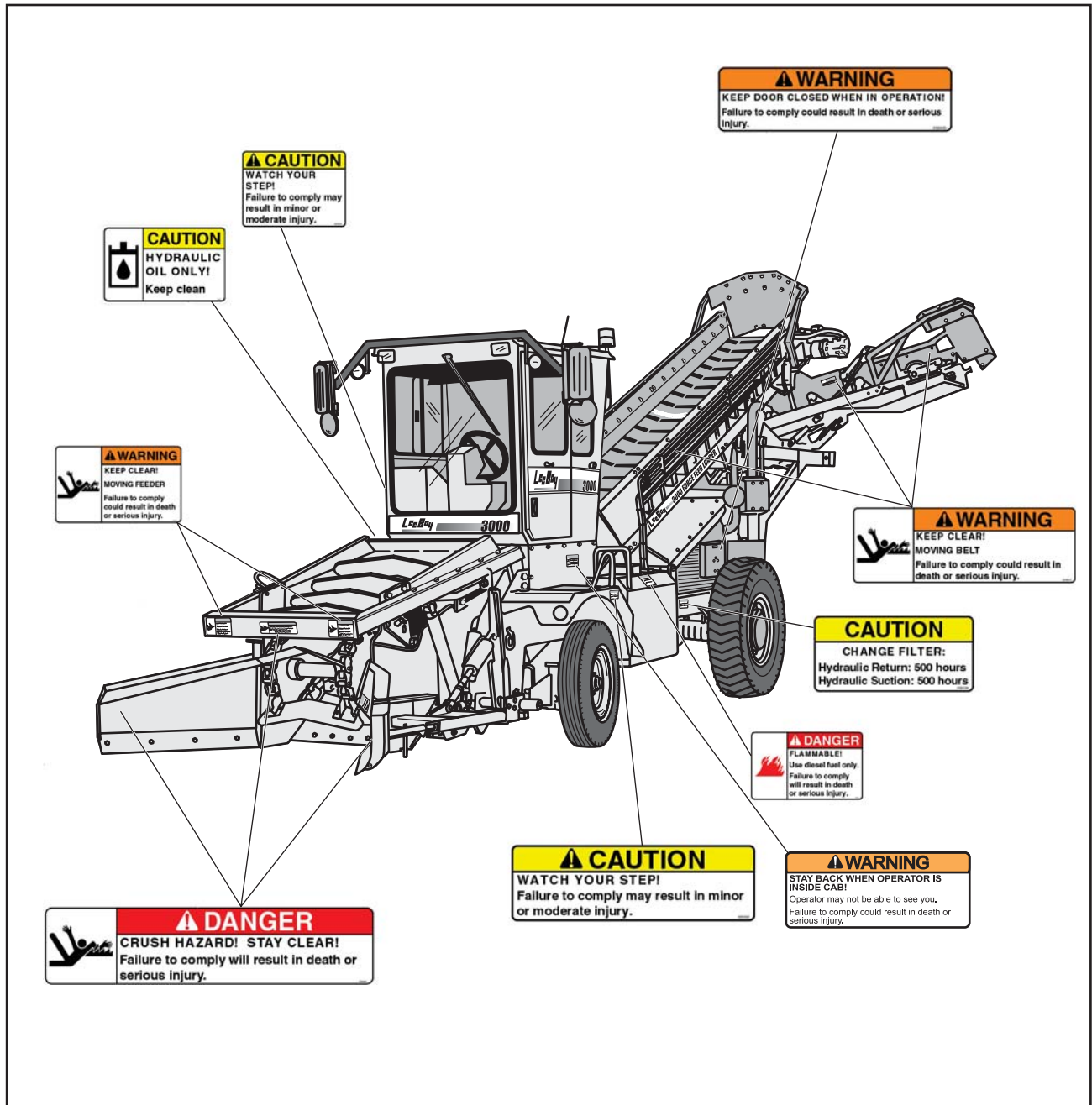
SAFETY PRECAUTIONS

If your loader 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 parts listing in the parts section of this manual and note the description column.

Under this column a description on location is provided for each decal. If you still need more explicit instructions, contact your dealer.

NOTE

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



3000 FORCE FEED LOADER DECALS AND DECAL LOCATIONS

3000 FORCE FEED LOADER



Review the following Danger, Warnings and Cautions. These will be used throughout the manual where applicable.

DANGER: Do not fill fuel tank or hydraulic tank while engine is running.



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.



WARNING: Do not weld on loader without first disconnecting battery cable.



WARNING: Decals provide valuable information and should be replaced if missing or worn.



WARNING: If hydraulic oil, or engine oil leaks are present, make necessary repair prior to putting conveyor loader into service.



WARNING: Do not use your hands or use objects in the process of finding hydraulic leaks. Hydraulic leaks can be seen visually.



WARNING: Do not leave conveyor loader running or with key available while unattended.



WARNING: Check cab to make sure no person is in it that could start the conveyor loader inadvertently or make control function changes while the conveyor loader is being repaired.



WARNING: Stand clear of conveyor loader while in operation. Be extra careful around front conveyor feeder and discharge conveyor.



WARNING: Do not use control handles as supports while entering or exiting from driver position.



WARNING: Before making any movements with conveyor loader or components, make sure all personnel are clear of area.



WARNING: Do not operate hydraulic levers or attempt to move conveyor loader unless seated in operator's position.



WARNING: Do not work on or make repairs to the conveyor loader unless thoroughly trained to do so.



WARNING: When servicing conveyor or loader make sure all untrained personnel are clear of the area.



CAUTION: Moldboard should be in full up position when operating conveyor loader to or from job site.



CAUTION: In case of hydraulic failure during operation, pressure drops below 250 PSI, brake will set, shut machine down, turn engine off.



CAUTION: The conveyor loader's hydraulic system requires clean, contaminant-free oil. Take care when working with the hydraulic system to insure its complete cleanliness (Citgo All-Temp).



CAUTION: Do not operate the starter longer than 30 seconds. If the engine does not start allow the starter to cool 2-3 minutes.



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 conveyor loader.

NEVER fill the fuel tank with the engine running.

NEVER fill fuel tank near an open flame, or when smoking

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.

AVOID steep hills if possible.

ALWAYS look BEFORE changing your direction of travel.

AVOID leaving engine running without operator present.

STOPPING SAFETY

ALWAYS park the conveyor loader on solid, level ground. If this is not possible, always park the conveyor loader at a right angle to the slope.

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

MAINTENANCE SAFETY

NEVER work on the conveyor loader 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.

BE SURE 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 CONVEYOR WITHOUT PLACING SAFETY PINS IN POSITION. SEE FIGURE 1.

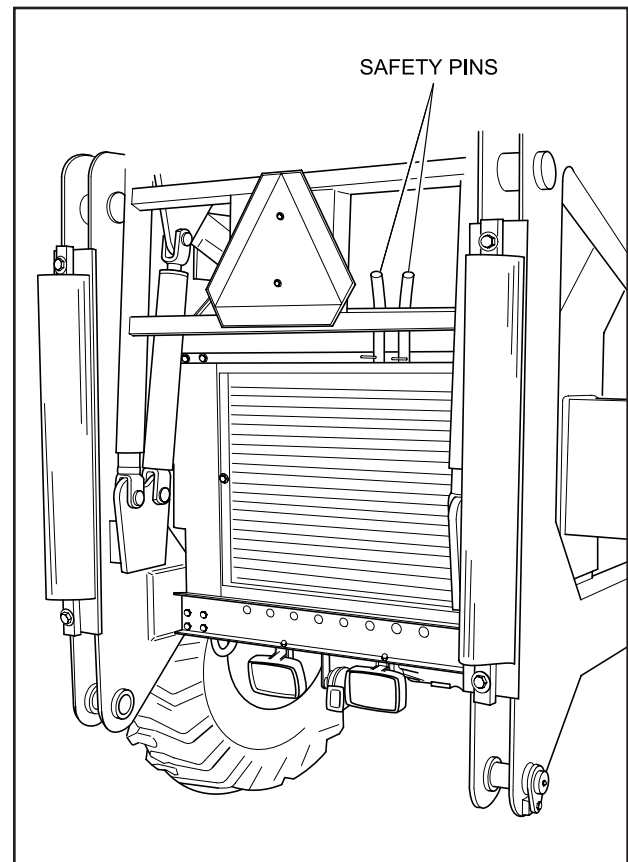


FIGURE 1. SAFETY PIN

**3000 FORCE FEED
LOADER**



NOTES



TABLE OF CONTENTS

| | Page |
|-------------------------------------------|-------------|
| GENERAL INFORMATION | 1-2 |
| SPECIFICATIONS | 1-2 |
| CONTROLS AND OPERATING INSTRUCTIONS | 1-2 |
| MAINTENANCE PROCEDURES | 1-2 |
| NAMEPLATE | 1-2 |

Section 1 INTRODUCTION



GENERAL INFORMATION

This manual contains Specification information, Controls and Operating Procedures, Maintenance and Repair Procedures and Parts Lists for the Model 3000 Force Feed Loader.

Force Feed Loader. All instructions provided in this manual and on the machine operating and warning decals must be followed to prevent damage to the equipment and/or injury to operating personnel.

SPECIFICATIONS

Refer to Section 2 - SPECIFICATIONS in this manual for all major system specifications and for typical torque value tables.

MAINTENANCE PROCEDURES

Refer to Section 4 - MAINTENANCE in this manual for all maintenance and repair procedures. Maintenance information includes preventive Maintenance, Adjustment Procedures, and Replacement Procedures.

CONTROLS AND OPERATING INSTRUCTIONS

Refer to Section 3 - OPERATION.

The operator of this equipment should READ, UNDERSTAND, and FOLLOW the operating instructions, Cautions, and Warnings provided in the front of this manual and in the OPERATION section.

CAUTION: All maintenance instructions provided in this manual should be followed to insure safety of the personnel performing the maintenance and to prevent damage to the machine.



WARNING: Do not attempt to operate the Model 3000 Force Feed Loader unless fully trained in the machine operation, only authorized personnel should operate the Model 3000



NAMEPLATE

The Nameplate (see Figure 1-1) contains the serial number and basic data used to identify the specific model on the conveyor loader.

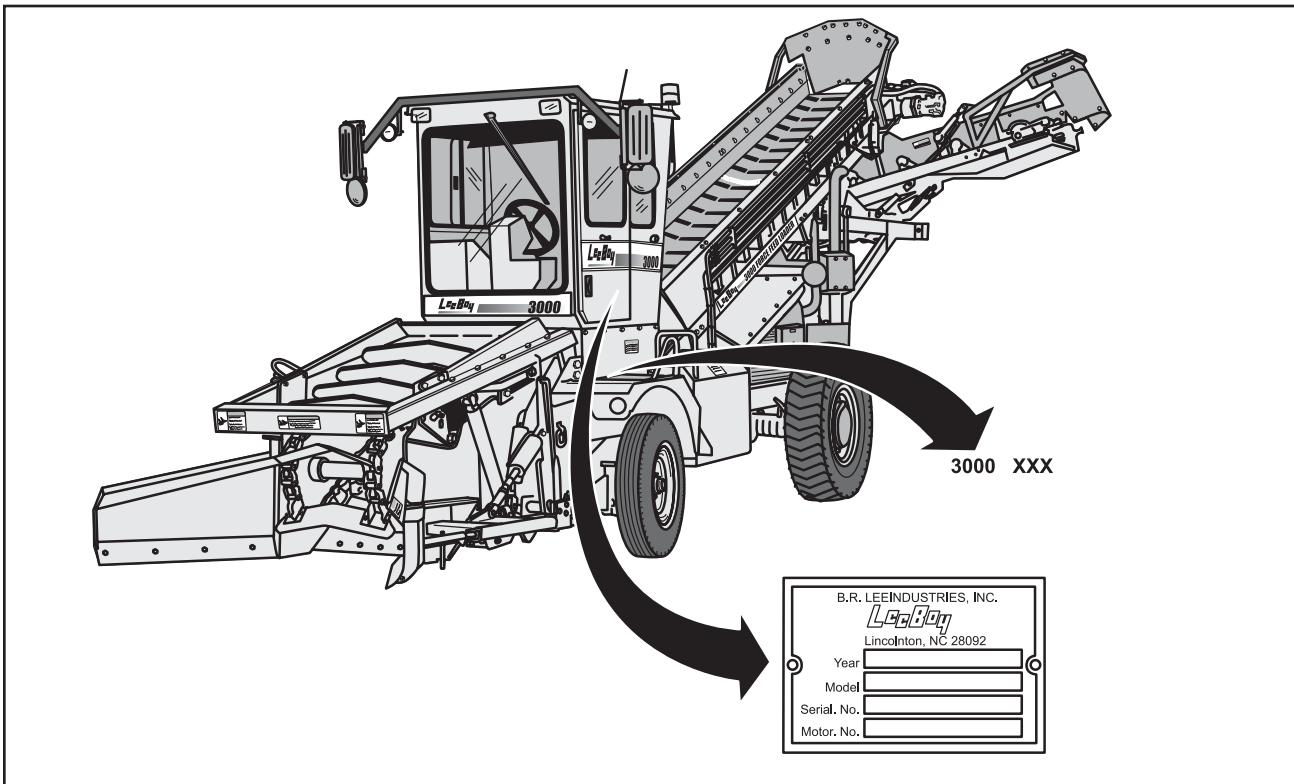


FIGURE 1-1. NAME PLATE



TABLE OF CONTENTS

| | Page |
|--------------------------------------------------------------------|-------------|
| GENERAL INFORMATION | 2-2 |
| TABLE 2-1. ENGINE SPECIFICATIONS | 2-2 |
| TABLE 2-2. ELECTRICAL SPECIFICATIONS. | 2-2 |
| TABLE 2-3. DIMENSION SPECIFICATIONS | 2-3 |
| TABLE 2-4. PERFORMANCE SPECIFICATIONS. | 2-4 |
| TABLE 2-5. MISCELLANEOUS SPECIFICATIONS. | 2-4 |
| TABLE 2-6. MACHINE SYSTEM CAPACITY SPECIFICATIONS. | 2-5 |
| TABLE 2-7. MACHINE HYDRAULIC PRESSURES. | 2-5 |
| TABLE 2-8. TYPES OF LUBRICANTS. | 2-5 |
| TABLE 2-9. TORQUE SPECIFICATIONS FOR STANDARD INCH FASTENERS. | 2-6 |
| TABLE 2-10. TORQUE SPECIFICATIONS FOR METRIC FASTENERS | 2-7 |

Section 2 SPECIFICATIONS



GENERAL INFORMATION

The specifications provided in this section are applicable to the Model 3000 Force Feed Loader. Included in this section are machine weights, dimensions, performance and torque values for both metric and standard inch fasteners.

TABLE 2-1. ENGINE SPECIFICATIONS

| ITEM | CHARACTERISTIC |
|------------------------------|---------------------------------------|
| ENGINE | |
| Model and Manufacturer | Cummins QSB4.5 |
| Type | 4 Cycle diesel |
| Number of Cylinders | Four |
| Bore & Stroke | 4.02 in. [102 mm] x 4.72 in. [120 mm] |
| Displacement | .275 cu. in. (4506 cu. cm.) |
| Engine Oil Type | 10W-40 |
| Firing Order | 1, 3, 4, 2 |
| Oil Capacity | 11.6 Quarts [10.98 liter] |
| ENGINE COOLING SYSTEM | |
| Type | Radiator |
| Capacity | 5.5 Gallons (20.8 liters) |
| ENGINE FUEL | |
| Type Used | Diesel Fuel |
| Fuel Capacity | .52 gallons [197 liters] |
| FUEL FILTER | |
| Primary | P/N 988666-04 |
| Fuel/Water Separator | P/N 988666-05 |
| Oil Filter | |
| Screw on | P/N 98666-03 |

TABLE 2-2. ELECTRICAL SPECIFICATIONS

| ITEM | CHARACTERISTIC |
|--------------------|-----------------------------------------------------------------------------------|
| BATTERY | |
| Number Per Machine | Two maintenance free |
| Ampere Hour Rating | 900 Amp |
| Voltage | 12 Volts |
| ALTERNATOR | |
| Type and Voltage | 12 Volt, negative ground |
| Output Amperage | 95 Amps |
| Fan Belt Tension | Automatic belt tension mechanism keeps serpentine belt under tension at all times |
| STARTER | |
| Manufacturer | P/N 988666-02 |
| Voltage and Type | 12 Volt, negative ground |

TABLE 2-3. DIMENSION SPECIFICATIONS [SEE FIGURE 2-1]

| ITEM | SPECIFICATION |
|-------------------------------|----------------------|
| DIMENSIONS | |
| Overall Length | 34' (1036 cm) |
| Overall Height | |
| Minimum | 10' 5.5" (320 cm) |
| Maximum | 12' 11" (393 cm) |
| Overall Width (machine) | 6' 11" (212 cm) |
| Overall Width (cab) | 4' 4.5" (130 cm) |
| Weight | 19,750 lbs (8958 kg) |

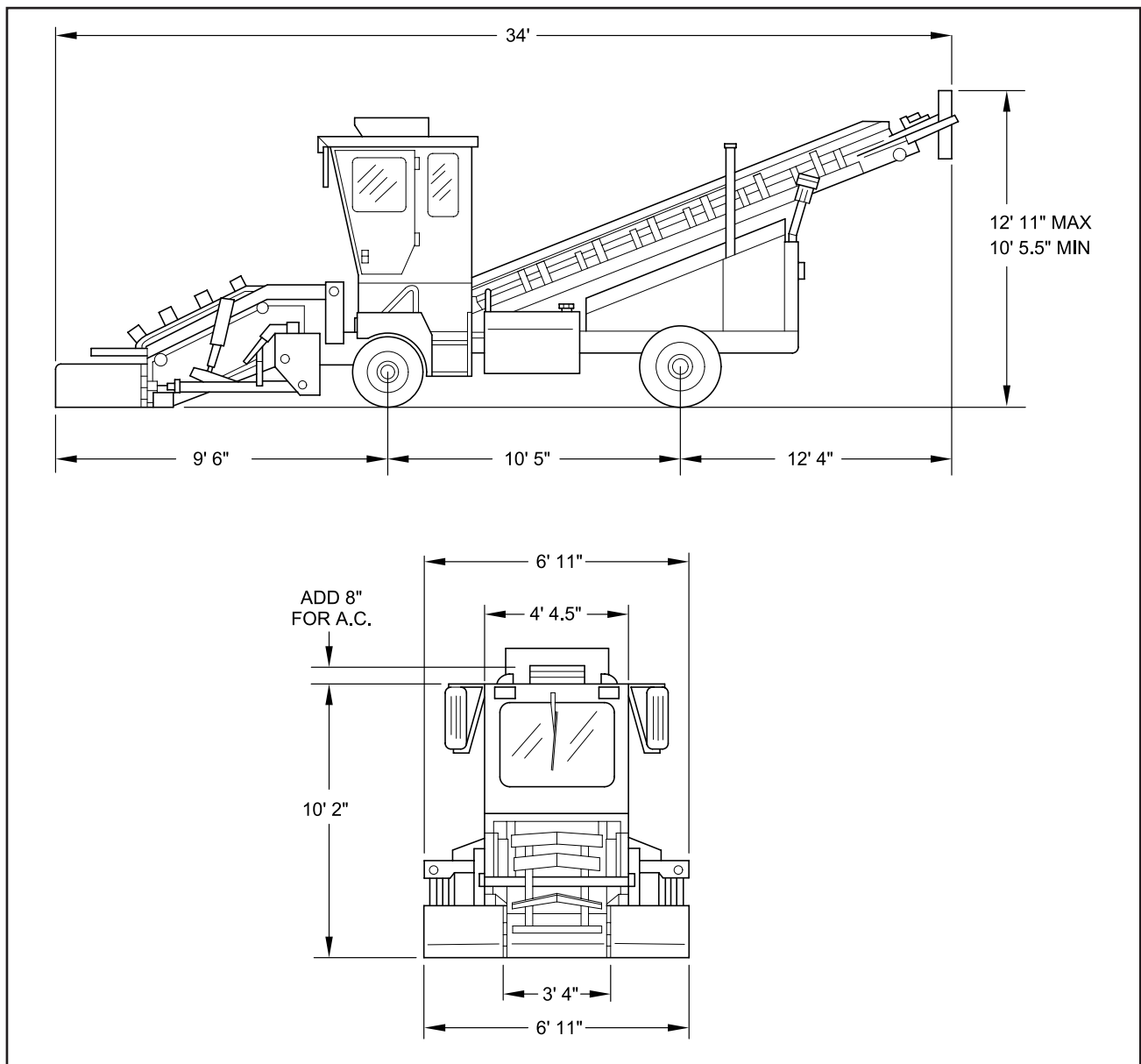


FIGURE 2-1. OUTLINE DIMENSIONAL DRAWING

Section 2 SPECIFICATIONS



TABLE 2-4. PERFORMANCE SPECIFICATIONS

| ITEM | SPECIFICATION |
|----------------------------|---------------------------|
| SPEED | |
| Travel (Highway) | .0-24 m/h (0-38.6.73 k/h) |
| Working | .0-8 m/h (0-12.9 k/h) |

TABLE 2-5. MISCELLANEOUS SPECIFICATIONS

| ITEM | SPECIFICATION |
|------------------------------|---------------------------------------------------------------------------------|
| Transmission | .Hydrostatic w/heavy duty wheel hubs |
| Brakes | |
| Service Brake | .Utilizes hydrostatic transmission (with 2-speed gear box) |
| Parking Brake | .Multiple disc on rear end |
| Steering | .Hydraulic power assisted |
| Tires | |
| Front | .8.25 x 20 - 10 ply, 90 Pounds Air |
| Rear | .14.9 x 24 - 6 ply, 45 Pounds Air |
| Feeder | |
| Raise and Lower | .Hydraulically with variable speed control |
| Tapered moldboards | .Toe and heel adjustable |
| Gathering width | .7' (213 cm) |
| Conveyor | |
| Control | .Variable speed |
| Belt width | .30" (76.2 cm) |
| Belt length | .58' 3" (17.8 m) |
| Discharge | .Hydraulically raised 10' -11' (3 - 3.4 m) |
| Cab | |
| Enclosure | .Fully enclosed with safety glass |
| Seat | .Padded with seat belt |
| Windshield wipers | .Front and rear |
| Lights | .Headlights, tail lights, turn indicators, work lights and instrument lights |

TABLE 2-6. MACHINE SYSTEM CAPACITY SPECIFICATIONS

| ITEM | SPECIFICATION |
|-------------------------------------|-------------------------------------------------------------|
| SYSTEM CAPACITIES | |
| Fuel | 52 Gallons (75.7 liters) |
| Engine Lubrication Oil | 11.6 quarts [10.98 liters] (with lubrication oil filter) |
| Cooling System | 5.5 Gallons (20.8 liters) |
| Hydraulic Oil Reservoir | 52 Gallons (75.7 liters) |
| Double Pump Drive | 4 quarts |
| 2 Speed Box | 3.7 quarts |
| Rear Axle | 12.0 quarts each side |
| Rear Axle Planet Gear Carrier | 5.0 quarts each side |
| Torque Hub Feeder Drive | 1.0 quart |
| Torque Hub Conveyor Drive | 1.0 quart |

TABLE 2-7. MACHINE HYDRAULIC PRESSURES

| ITEM | SPECIFICATION |
|--------------|--------------------|
| Brakes | 1500 PSI (117 Bar) |

TABLE 2-8. TYPES OF LUBRICANTS

| ITEM | SPECIFICATION |
|-------------------------|--------------------------------------------|
| Engine Oil | .5W-40 |
| Hydraulic Oil | Citgo All Weather/All Temp. Multiviscosity |
| Torque Hub | .85W90 |
| Grease | Shell Avania EP Grease or Equivalent |
| Chain Lub | Chain Lub |
| Double Pump Drive | .85W90 |
| Rear Axle | .85W90 |
| 2 Speed Box | .85W90 |
| Air Conditioner | 2.75 Pounds AC Ref. |
| Air Conditioner | 4 oz. AC oil |

Section 2

SPECIFICATIONS



TABLE 2-9. TORQUE SPECIFICATIONS FOR STANDARD INCH FASTENERS

WARNING: The following Table lists torque values for standard hardware and are intended as a guide for average application involving typical stresses and machined surfaces. Values are based on physical limitations of clean, plated and lubricated hardware. In all cases, when an individual torque value is specified, it should be followed instead of values given in this table.



CAUTION: Replace original equipment with hardware of equal grade.



| | | CAPSCREWS: SAE GRADE 5 | | | | CAPSCREWS: SAE GRADE 8 | | | |
|-------|--------|------------------------|-------|------------|-------|------------------------|-------|------------|-------|
| SIZE | THREAD | TORQUE FT. LBS. | | TORQUE N•m | | TORQUE FT. LBS. | | TORQUE N•m | |
| | | Dry | Lubed | Dry | Lubed | Dry | Lubed | Dry | Lubed |
| 1/4 | 20 UNC | 8 | 6 | 11 | 9 | 12 | 9 | 16 | 12 |
| | 28 UNF | 10 | 7 | 13 | 10 | 14 | 10 | 19 | 14 |
| 5/16 | 18 UNC | 17 | 13 | 24 | 18 | 25 | 18 | 33 | 25 |
| | 24 UNF | 19 | 14 | 26 | 20 | 27 | 20 | 37 | 28 |
| 3/8 | 16 UNC | 31 | 23 | 42 | 31 | 44 | 33 | 59 | 44 |
| | 24 UNF | 35 | 26 | 47 | 36 | 49 | 37 | 67 | 50 |
| 7/16 | 14 UNC | 49 | 37 | 67 | 50 | 70 | 52 | 95 | 71 |
| | 20 UNF | 55 | 41 | 75 | 56 | 78 | 58 | 105 | 79 |
| 1/2 | 13 UNC | 75 | 57 | 100 | 77 | 105 | 80 | 145 | 110 |
| | 20 UNF | 85 | 64 | 115 | 86 | 120 | 90 | 165 | 120 |
| 9/16 | 12 UNC | 110 | 82 | 145 | 110 | 155 | 115 | 210 | 155 |
| | 18 UNF | 120 | 91 | 165 | 125 | 170 | 130 | 230 | 175 |
| 5/8 | 11 UNC | 150 | 115 | 205 | 155 | 210 | 160 | 285 | 215 |
| | 18 UNF | 170 | 130 | 230 | 175 | 240 | 180 | 325 | 245 |
| 3/4 | 10 UNC | 265 | 200 | 360 | 270 | 375 | 280 | 510 | 380 |
| | 16 UNF | 295 | 225 | 405 | 300 | 420 | 315 | 570 | 425 |
| 7/8 | 9 UNC | 430 | 320 | 580 | 435 | 605 | 455 | 820 | 615 |
| | 14 UNF | 475 | 355 | 640 | 480 | 670 | 500 | 905 | 680 |
| 1 | 8 UNC | 645 | 485 | 875 | 655 | 910 | 680 | 1230 | 925 |
| | 14 NF | 720 | 540 | 980 | 735 | 1020 | 765 | 1380 | 1040 |
| 1-1/8 | 7 UNC | 795 | 595 | 1080 | 805 | 1290 | 965 | 1750 | 1310 |
| | 12 UNF | 890 | 670 | 1210 | 905 | 1440 | 1080 | 1960 | 1470 |
| 1-1/4 | 7 UNC | 1120 | 840 | 1520 | 1140 | 1820 | 1360 | 2460 | 1850 |
| | 12 UNF | 1240 | 930 | 1680 | 1260 | 2010 | 1500 | 2730 | 2050 |
| 1-3/8 | 6 UNC | 1470 | 1100 | 1990 | 1490 | 2380 | 1780 | 3230 | 2420 |
| | 12 UNF | 1670 | 1250 | 2270 | 1700 | 2710 | 2040 | 3680 | 2760 |
| 1-1/2 | 6 UNC | 1950 | 1460 | 2640 | 1980 | 3160 | 2370 | 4290 | 3210 |
| | 12 UNF | 2190 | 1650 | 2970 | 2230 | 3560 | 2670 | 4820 | 3620 |

TABLE 2-10. TORQUE SPECIFICATIONS FOR METRIC FASTENERS

WARNING: The following Table lists torque values for standard hardware and are intended as a guide for average application involving typical stresses and machined surfaces. Values are based on physical limitations of clean, plated and lubricated hardware. In all cases, when an individual torque value is specified, it should be followed instead of values given in this table.



CAUTION: Replace original equipment with hardware of equal grade.



| NOMINAL SIZE & PITCH | CLASS 8.8 [GRADE 5 EQUIVALENT] | | | | CLASS 10.9 [GRADE 8 EQUIVALENT] | | | |
|-------------------------|-----------------------------------|--------|------------|--------|------------------------------------|---------|------------|--------|
| | TORQUE FT. LBS. | | TORQUE N•m | | TORQUE FT. LBS. | | TORQUE N•m | |
| | Dry | Lubed | Dry | Lubed | Dry | Lubed | Dry | Lubed |
| M4 x 0.7 | 2.27 | 1.70 | 3.07 | 2.30 | 2.27 | 2.31 | 4.17 | 3.13 |
| M5 x 0.8 | 4.58 | 3.43 | 6.20 | 4.65 | 6.22 | 4.67 | 8.43 | 6.33 |
| M6 x 1 | 7.75 | 5.83 | 10.5 | 7.90 | 10.60 | 7.97 | 14.3 | 10.8 |
| M8 x 1.25 | 18.89 | 14.17 | 25.6 | 19.2 | 18.95 | 19.26 | 34.8 | 26.1 |
| M10 x 1.25 | 39.11 | 29.52 | 53.0 | 40.1 | 53.87 | 40.59 | 73.0 | 55.0 |
| M12 x 1.75 | 64.94 | 48.71 | 88.0 | 66.0 | 88.56 | 66.42 | 120.0 | 90.0 |
| M14 x 2 | 103.32 | 77.49 | 140.0 | 105.0 | 140.22 | 107.01 | 190.0 | 145.0 |
| M16 x 2 | 162.36 | 121.77 | 220.0 | 165.0 | 221.40 | 166.05 | 300.0 | 225.0 |
| M20 x 2.5 | 317.34 | 236.16 | 430.0 | 320.0 | 428.04 | 321.03 | 580.0 | 435.0 |
| M24 x 3 | 516.12 | 409.59 | 740.0 | 555.0 | 754.38 | 557.19 | 1010.0 | 755.0 |
| M27 x 3 | 797.04 | 597.78 | 1080.0 | 810.0 | 1084.86 | 811.80 | 1470.0 | 1100.0 |
| M30 x 3.5 | 1084.86 | 811.80 | 1470.0 | 1100.0 | 1476.00 | 1107.00 | 2000.0 | 1500.0 |

Section 2 SPECIFICATIONS



NOTES

TABLE OF CONTENTS

| | Page |
|--------------------------------------------------|------|
| GENERAL INFORMATION | 3-1 |
| OPERATING CONTROLS, INDICATORS, AND GAUGES | 3-2 |
| OPERATION | 3-9 |
| SAFETY | 3-9 |
| Operating Safety | 3-9 |
| Stopping Safety | 3-9 |
| Maintenance Safety | 3-9 |
| INTRODUCTION | 3-10 |
| INSPECTION BEFORE INITIAL START-UP | 3-10 |
| DAILY INSPECTION | 3-11 |
| OPERATING PROCEDURES | 3-12 |
| START-UP PROCEDURE | 3-12 |
| BRAKING | 3-13 |
| PARKING BRAKE | 3-13 |
| SELECTING HIGH OR LOW SPEED | 3-13 |
| FORWARD AND REVERSE | 3-13 |
| INCREASING TRAVEL SPEED | 3-14 |
| FEEDER CHAIN | 3-14 |
| DISCHARGE CONVEYOR BELT | 3-14 |
| CONVEYOR LIFTING AND LOWERING | 3-14 |
| SWIVEL CONVEYOR | 3-14 |
| STOPPING THE ENGINE | 3-14 |
| MOLDBOARD | 3-15 |
| LOADING | 3-16 |
| TRANSPORTING | 3-17 |
| TOWING THE LOADER | 3-17 |
| NOTES | 3-18 |

Section 3 OPERATION



GENERAL INFORMATION

This section provides the Operating Instructions for the Model 3000 Force Feed Loader.

It is important to READ, UNDERSTAND, and FOLLOW all "PRECAUTIONS, OPERATING INSTRUCTIONS, AND WARNINGS" written in this manual before starting or operating the machine.

DANGER: FAILURE TO OBSERVE THE "OPERATING PRECAUTIONS AND WARNING INSTRUCTIONS" PROVIDED IN THIS MANUAL CAN CAUSE SERIOUS INJURY OR DEATH. ONLY AUTHORIZED PERSONNEL, WHO ARE FULLY TRAINED IN THE MACHINE OPERATION, CAN OPERATE THE MODEL 3000 FORCE FEED LOADER.



This machine should be kept in good mechanical condition at all times.

WARNING: Do not operate a machine needing repair. Put an information tag on the instrument panel that says, "DO NOT OPERATE". Remove the key from the ignition switch. Repair all damage at once. Minor damage can result in major system failures.



OPERATING CONTROLS, INDICATORS, AND GAUGES

Operating controls for the Model 3000 Force Feed Loader are shown in Figures 3-1 through 3-5 and listed in Table 3-1.

WARNING: Do not start or operate the Model 3000 Force Feed Loader before reading, understanding and following all information given in this section and shown on the machine. The operators must read and understand the function of all controls, indicators, and gauges before starting the engine. Serious injury or death can result if these procedures are not followed.

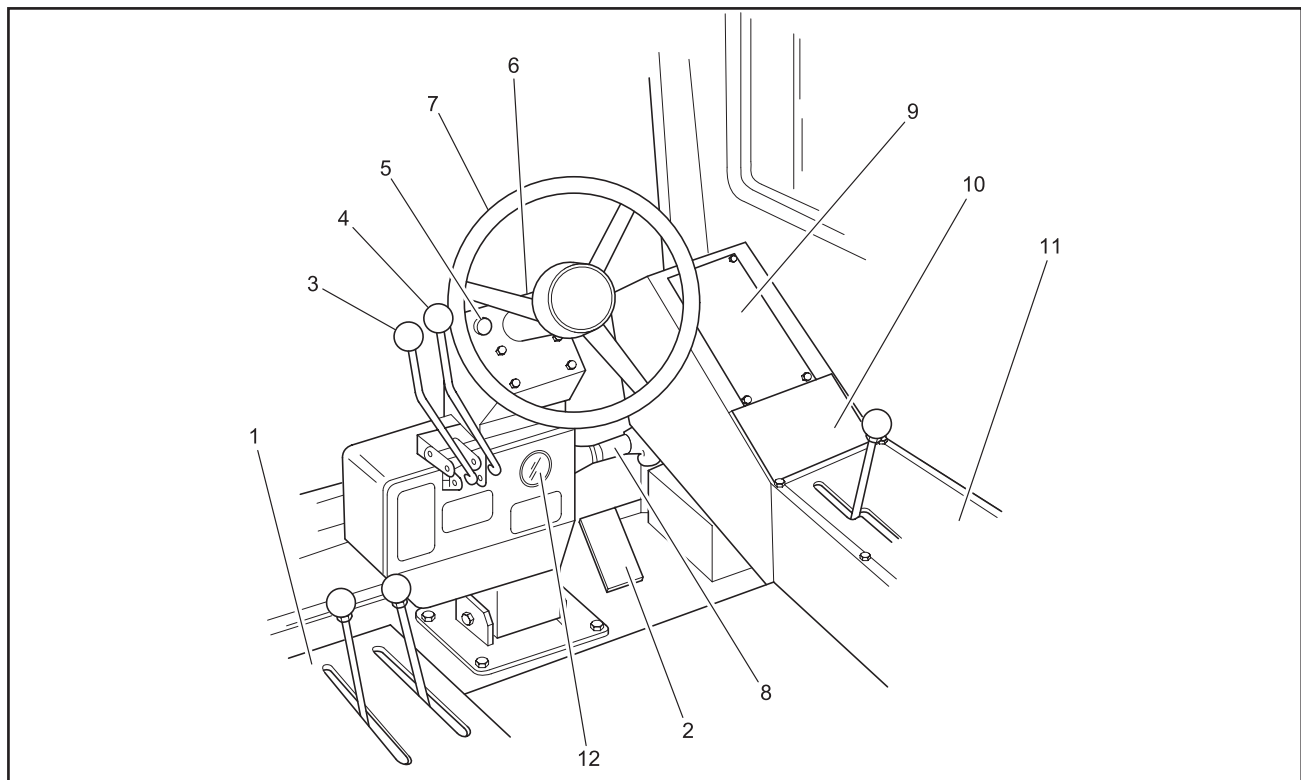


FIGURE 3-1. LOCATION OF CONTROLS

TABLE 3-1. OPERATING CONTROLS, INDICATORS, AND GAUGES

| FIG. REF | ITEM NO. | CONTROL NAME | TYPE | FUNCTION |
|----------|----------|--------------------------------------|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| 3-1 | 1 | Conveyor Control Panel | | Contains the conveyor control levers and battery disconnect switch (see Figure 3-3). |
| 3-1 | 2 | Brake Pedal | | Applies operational brakes. |
| 3-1 | 3 | Moldboard Lift Control Lever | Lever | Adjusts position of moldboard. Pulling lever back causes moldboard to lift. Pushing lever forward places moldboard in float position. |
| 3-1 | 4 | Conveyor Lift Control Lever | Lever | Adjusts position of conveyor. Pulling lever back causes conveyor to lift. Pushing lever forward places conveyor in float position. |
| 3-1 | 5 | Emergency Flasher Switch | Push-pull | Pull out to start emergency flasher. Push in to turn off emergency flasher. |
| 3-1 | 6 | Right and Left Turn Indicator Switch | Three-position lever operated switch | Turns on the left or right directional flashers. |
| 3-1 | 7 | Steering Wheel | | Steers machine. |
| 3-1 | 8 | Tilt Steering Lock Lever | Lever | Turn to lock or unlock. |
| 3-1 | 9 | Gauge Panel | | Contains various gauges (see Figure 3-2). |
| 3-1 | 10 | Switch and Indicator Panel | | Contains various switches and indicators (see Figure 3-4). |
| 3-1 | 11 | Travel Control Panel | | Contains direction control, speed control, parking brake, motor lock, ether start, and gear shift (see Figure 3-5). |
| 3-1 | 12 | Hydraulic Oil Pressure Gauge | Gauge | Monitors the hydraulic oil pressure. |

Section 3 OPERATION

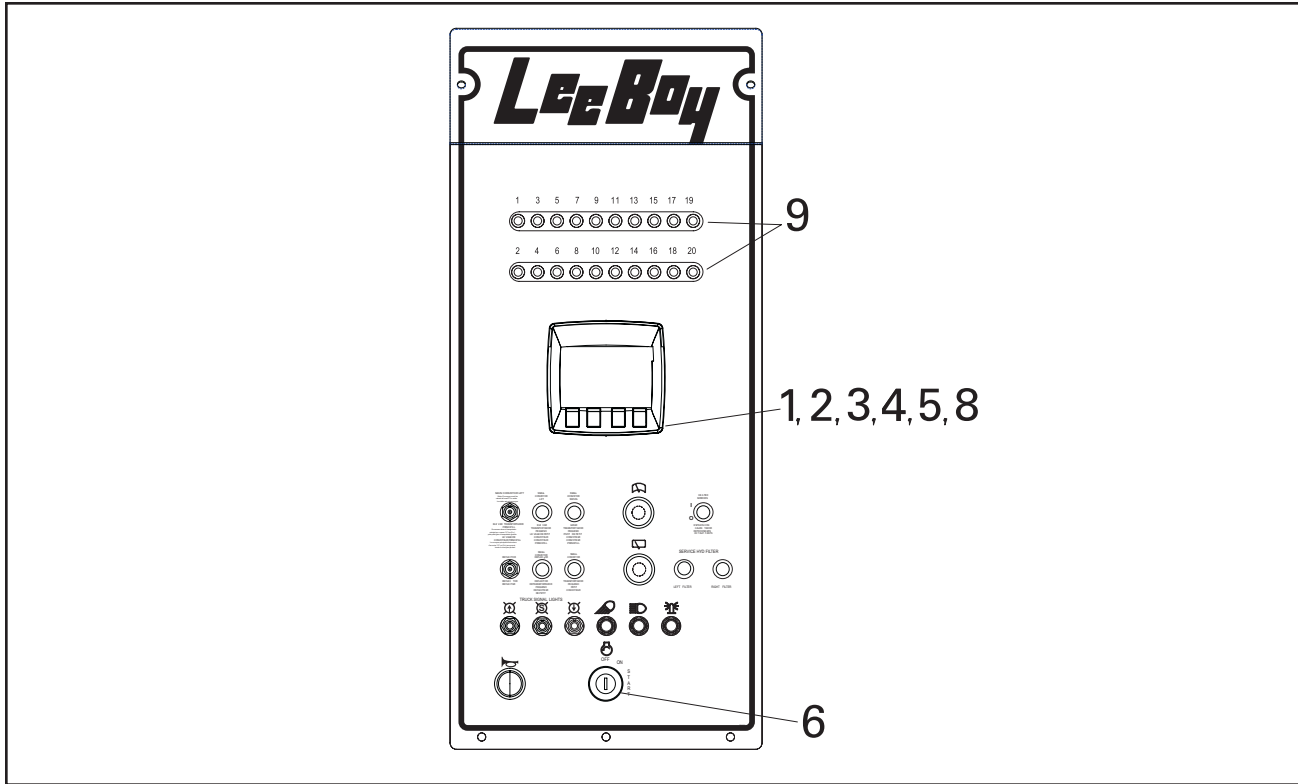


FIGURE 3-2. GAUGE PANEL

TABLE 3-2. GAUGE PANEL OPERATING CONTROLS, INDICATORS, AND GAUGES

| FIG. REF | ITEM NO. | CONTROL NAME | TYPE | FUNCTION |
|----------|----------|---------------------|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-2 | 1 | Tachometer Gauge | Display | Indicates engine RPM. |
| 3-2 | 2 | Fuel Level Gauge | Display | Indicates amount of fuel remaining in fuel tank. |
| 3-2 | 3 | Voltmeter | Display | Indicates charge level of battery. |
| 3-2 | 4 | Temperature Gauge | Display | Indicates coolant temperature. |
| 3-2 | 5 | Pressure Gauge | Display | Indicates engine oil pressure. |
| 3-2 | 6 | Ignition Key Switch | Key operated rotary switch | Starts and stops the engine. Full clockwise is Start. Automatic return to center (Run) position when key is released. Full counterclockwise position is Off. |
| 3-2 | 8 | Warning Indicator | Display | Provides a visual warning when coolant temperature is too high or if engine oil pressure falls below required limit. |
| 3-2 | 9 | Reset | Pushbuttons | Resets for dash. |

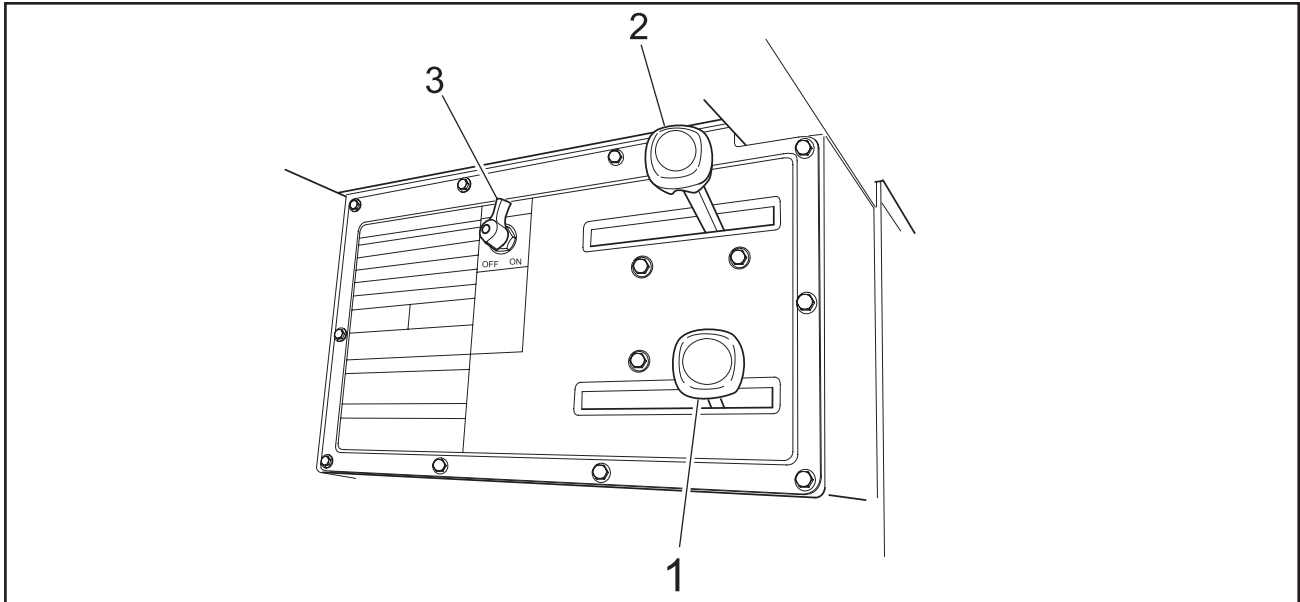


FIGURE 3-3. CONVEYOR CONTROL PANEL

TABLE 3-3. CONVEYOR CONTROL PANEL OPERATING CONTROLS, INDICATORS, AND GAUGES

| FIG. REF | ITEM NO. | CONTROL NAME | TYPE | FUNCTION |
|----------|----------|------------------------------|---------------|------------------------------------------------------------------------------------------------------------|
| 3-3 | 1 | Discharge CONVEYOR Lever | Lever | Pull backwards to set speed of belt. Push forward to reverse travel of belt. |
| 3-3 | 2 | FEEDER CHAIN Lever | Lever | Pull backwards to pick up material to put on belt. Push forward to reverse travel of chain. |
| 3-3 | 3 | Battery Disconnect Switch | Rotary switch | Disconnect the battery negative terminal from ground. Switch must be in ON position for machine operation. |

Section 3 OPERATION

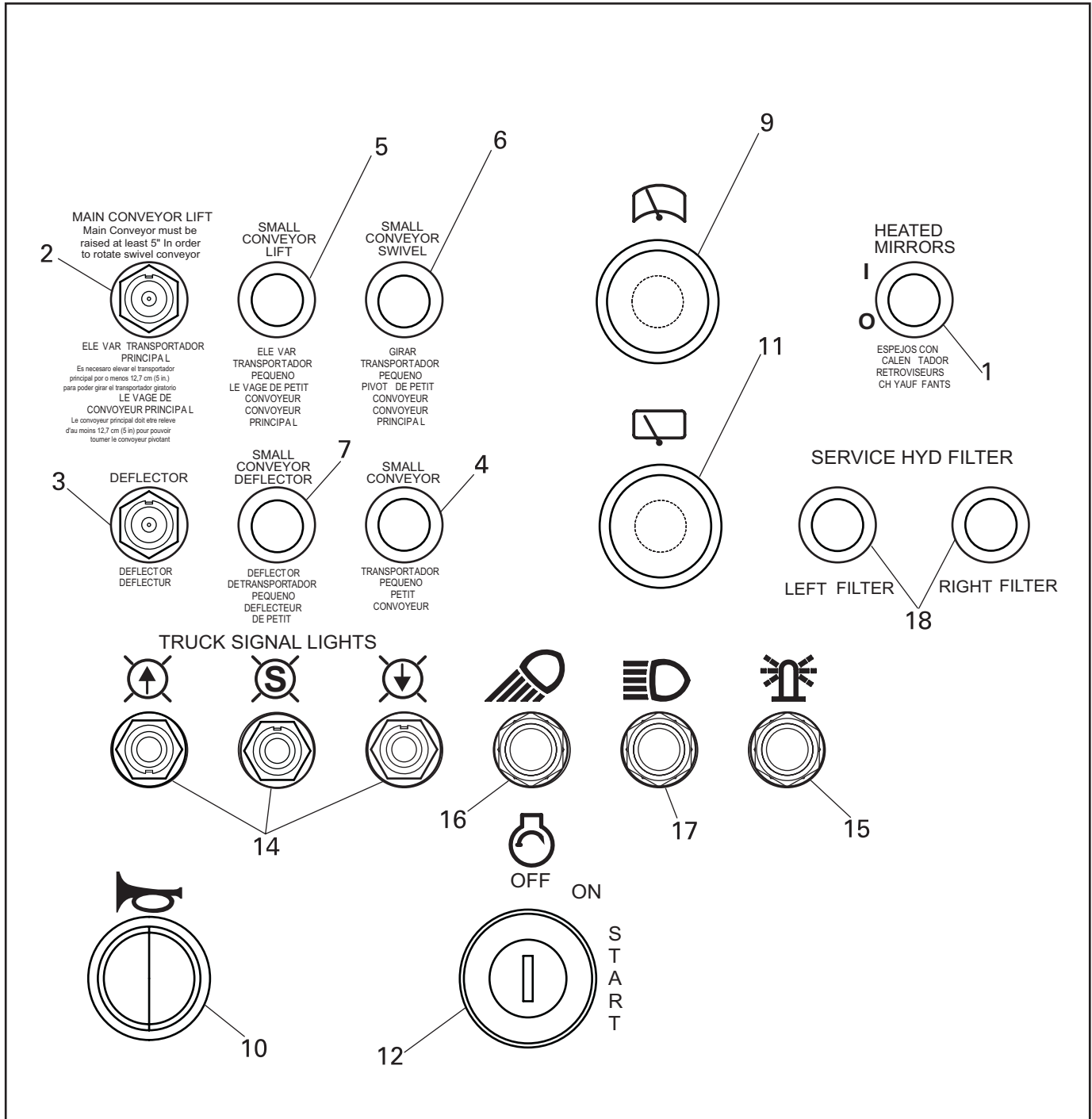


FIGURE 3-4. SWITCH AND INDICATOR PANEL

TABLE 3-4. SWITCH AND INDICATOR PANEL OPERATING CONTROLS, INDICATORS, AND GAUGES

| FIG. REF | ITEM NO. | CONTROL NAME | TYPE | FUNCTION |
|----------|----------|---------------------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-4 | *1 | HEATED MIRROR | Pushbutton | Turns on heat for mirrors. |
| 3-4 | *2 | CONVEYOR LIFT Switch | 3-position toggle switch | Up position raises conveyor. Down position lowers conveyor. NOTE: Main conveyor must be raised at least 5 inches in order to rotate swivel conveyor. |
| 3-4 | *3 | DEFLECTOR Switch | 3-position toggle switch | Controls positioning of the main deflector. |
| 3-4 | *4 | SMALL CONVEYOR Switch | Pushbutton | Turns small conveyor On or Off. |
| 3-4 | *5 | SMALL CONVEYOR LIFT Switch | Pushbutton | Lifts and lowers small conveyor. |
| 3-4 | *6 | SMALL CONVEYOR Switch | Pushbutton | Turns the swivel left or right. |
| 3-4 | *7 | SMALL CONVEYOR DEFLECTOR Switch | Pushbutton | Set the position of the small conveyor deflector. |
| 3-4 | 9 | Front WIPER/WINDSHIELD Control | Rotary switch | Rotate control clockwise to turn on wipers. Press control for washer. |
| 3-4 | 10 | Horn switch | Pushbutton switch | Press switch to sound horn. |
| 3-4 | 11 | Rear WIPER/WINDSHIELD Control | Rotary switch | Rotate control clockwise to turn on wipers. Press control for washer. |
| 3-4 | 12 | Key Switch | Ignition Switch | Starts Engine |
| 3-4 | 14 | Navigation Light Indicator | Indicator light | Illuminates when navigation lights are turned on. |
| 3-4 | 15 | Beacon Light Switch | Toggle | Turns beacon light On or Off. |
| 3-4 | 16 | Work Light Switch | Toggle | Turns work lights On or Off. |
| 3-4 | 17 | Headlight Switch | Toggle | Turn headlights On or Off. |
| 3-4 | *18 | Service Hyd. Filter | Indicator light | Illuminates when filter needs service. |

* OPTION

Section 3 OPERATION

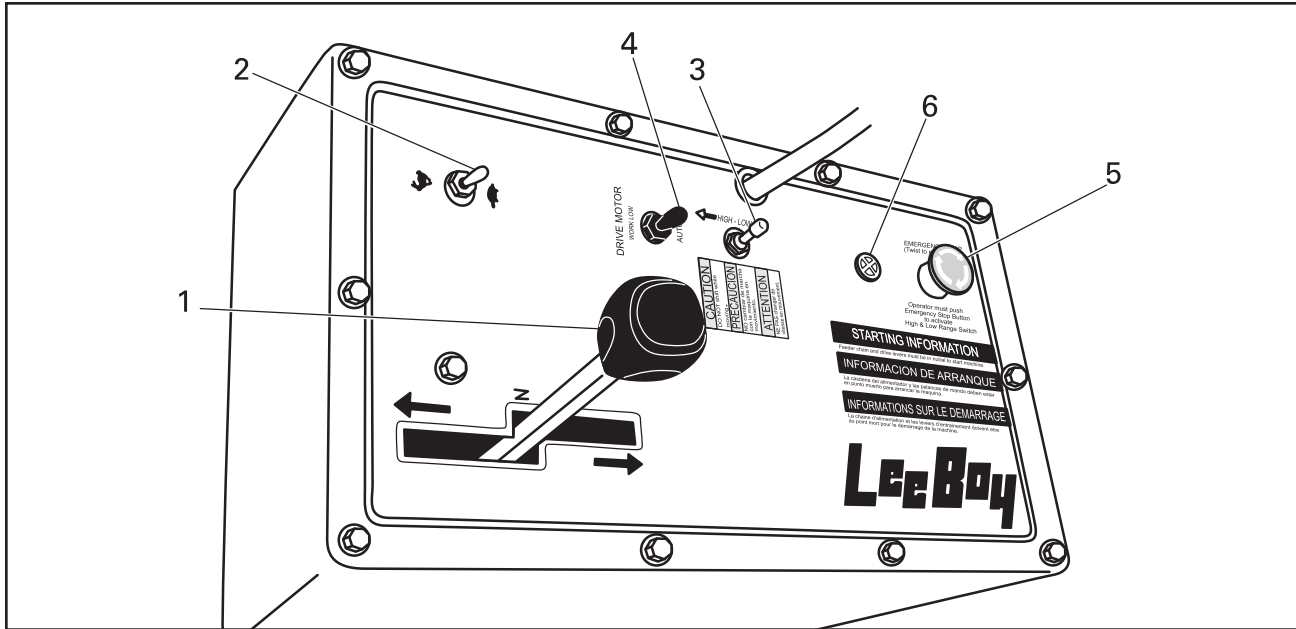


FIGURE 3-5. TRAVEL CONTROL PANEL

TABLE 3-3. TRAVEL CONTROL PANEL OPERATING CONTROLS, INDICATORS, AND GAUGES

| FIG. REF | ITEM NO. | CONTROL NAME | TYPE | FUNCTION |
|----------|----------|----------------------|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-5 | 1 | Directional Lever | Lever | Sets the direction of travel. Center position is Neutral. Move forward to travel forward. Pull backward to travel in reverse. The speed increases as the lever is moved further forward or backward. |
| 3-5 | 2 | Throttle Lever | Lever | Control engine RPM. Move backward (turtle) to reduce RPM. Pull forward (rabbit) to increase RPM. |
| 3-5 | 3 | Gear Shift Switch | 2-position toggle switch | Place in forward position for high gear. Place in back position for low gear. WARNING: Do not shift while machine is in motion. |
| 3-5 | 4 | Drive Motor | 2-Position Toggle Switch | Controls motor torque. Can be used in motion. |
| 3-5 | 5 | Parking Brake Switch | Push-pull/turn | Press down to engage parking brake. Turn and pull up to release parking brake. |
| 3-5 | *6 | Warning Buzzer | Buzzer | Provides an audible warning when coolant temperature is too high or if engine oil pressure falls below required limit. |

* OPTION

OPERATION

SAFETY

Operating Safety

Always make sure no person or object is in the line of travel before starting.

Work slowly in tight areas.

Do not run engine in a closed building for long periods of time.

Avoid steep hills if possible.

Always look before changing the direction of travel.

Avoid leaving engine running without operator present.

Keep hands, feet and clothing away from power driven parts.

Clothing worn by the operator should be relatively tight and belted. Do not wear loose jackets, shirts, sleeves or other items of clothing because of the danger of catching them in moving parts.

Before starting the engine, always check the service brakes and the parking brake to ensure proper working condition of both brakes.

Do not use the steering wheel as a handhold when getting in or out of vehicle.

Keep hands, floors and controls free from water, grease and mud to ensure non-slip control.

Never attempt to start or operate the loader except from the operator's platform.

Always keep the loader in gear when going down steep hills.

Always stand on the opposite side of the wheel away from the locking ring.

When transporting or driving on a road or highway at night or during the day, use accessory lights and devices for adequate warning to the operators of other vehicles. In this regard, check local government regulations.

Do not oil, grease or adjust any part of the loader while it is in motion.

Check for faulty wiring or loose connections.

Keep a firm grip on steering wheel at all times when speed is increased.

Do not allow anyone near the loader while the driver is in the seat with the engine running.

Reduce speed before turning or applying brakes. Drive at speeds slow enough to ensure your safety, especially over rough ground.

Do not operate the loader too fast on hillsides or curves.

Be sure the path ahead is clear to avoid collision with other machines.

Watch for overhead wires. Never touch wires with any part of loader.

Do not use loader as battering ram.

Keep the working area as level as possible.

Never allow anyone to work under a raised conveyor or other attachment.

Always lower conveyor and moldboard when machine is not in use.

Be sure that bystanders are clear of the loader before lowering or moving conveyor and other attachment.

Park loader on level ground or across the slope.

Stopping Safety

Always park the loader on solid, level ground in low range. If this is not possible, always park the loader at a right angle to the slope.

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

Maintenance Safety

Never work on the loader with the engine running.

Never refuel when the engine is running. Do not smoke while filling the fuel tank or servicing the system.

Do not change the engine governor settings.

Always replace damaged or lost decals.

Disconnect battery by using the DISCONNECT switch 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.

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

Work slowly in tight areas.

Do not run engine in a closed building for long periods of time.

Add coolant to the radiator only when the machine is stopped or idling slowly. To avoid being scalded when the pressure-type filler cap is being removed, turn the cap slightly to relieve pressure before removing the cap.

Be sure all tire rim parts are correctly assembled and interlocked, before inflating tires. Use an inflation gauge, safety cables or some other safety device during inflation.

Section 3 OPERATION



Do not leave the engine running while making adjustments or repairs unless specifically recommended.

Never allow anyone to work under a raised conveyor or other attachments.

WARNING: Never work under conveyor without placing safety pins in position (Figure 3-6). One pin must be inserted into each lift cylinder. When removing pins be sure to place the pins back in the stored position above the cylinders.



INTRODUCTION

Daily inspection and servicing at required intervals is necessary for the safe operation and maximum service life of the LeeBoy Model 3000 Force Feed Loader and its components.

WARNING: Do not smoke when performing inspections or servicing unit. Flammable liquids are present.

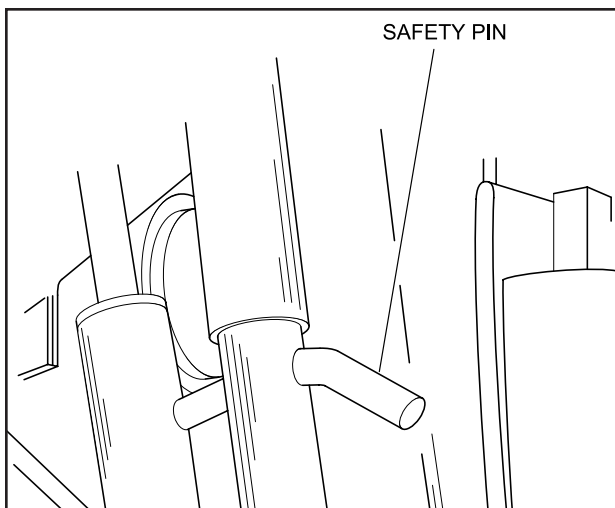


FIGURE 3-6. SAFETY PINS

INSPECTION BEFORE INITIAL START-UP

The following inspection by the operator is essential. This inspection should be performed on a daily basis. Procedures for performing the inspections are described in the MAINTENANCE Section of this manual.

Visually inspect the unit for familiarization and to check its general condition. Continue with a check of special systems and components.

OPERATOR INSPECTION LIST

| INSPECTED ITEM | PROCEDURE |
|-------------------|--------------------------------------------------------------------------------------------------------|
| Hydraulic Tank | Check the tank on the right side of cab for oil level and for any leaks. Use Citgo All-Temp. |
| Fuel Tank | Check for adequate fuel supply. Tank is located on left side of the cab. |
| Double Pump Drive | Check the oil level at the plug. Oil should flow out at proper level. (85W90) |
| Engine Crankcase | Check oil level with dipstick. |
| Radiator | Check the coolant level. |
| Battery | Make sure that all cables are tight and clean. Check for corrosion on the battery terminals. |
| Air Cleaner | Check the air filter element and hose connections. Air cleaner has both a primary and secondary filter |
| Planetary | Check oil level. (Drain and replace after the first 50 hours. |
| Tire Pressure | Check for proper inflation. (45 PSI Rear and 90 PSI Front.) |
| Drain Plugs | Make sure plugs are in and tight. |
| Engine Belt | Check for proper tension of belt. |
| Grease Fittings | Make sure the fittings are greased and in good working order. |
| Lug Nuts- | Make sure lug nuts are tight and torqued to the correct value. |
| Front Axle | Pin, and cotter key and all bolts. |

DAILY INSPECTION

Daily check the following items to maintain the life and reduce the maintenance cost of your Lee Boy 3000 Force Feed Loader.

WARNING: Do not service loader unless qualified



DAILY INSPECTION

| ITEM | PROCEDURE |
|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hydraulic Oil Level | The hydraulic oil is checked by observing the gauge attached to the side of the hydraulic tank. |
| Feeder Bushings (Require daily lubrication) | Refer to the Feeder Assembly Adjustment Procedure in the MAINTENANCE Section. |
| Fuel Supply | The fuel supply can be checked on the fuel gauge on the gauge panel. |
| Engine Oil Level | The engine oil level is measured on the right side of the engine. Open the access door to access the dipstick. Pull out the dipstick and make sure the oil is clean and falls between the two marks on the dipstick. |
| Coolant Level | Refer to the Radiator Check procedure in the MAINTENANCE Section. WARNING: Never remove radiator cap when hot. Serious burns can result from the hot liquid. |
| Air Cleaner Indicator | The air cleaner indicator is located on top of the air cleaner. When this indicator is "red", the air filters need to be replaced. Refer to the Air Filter Check procedure in the MAINTENANCE Section. The indicator can be reset by pressing the button on top of the indicator. |
| Engine Belt Tension | The engine belt must be checked for wear and proper tension. Refer to the Engine Drive Belt Removal and Installation Procedure in the MAINTENANCE Section for checking and replacing the belt. |
| Tire Pressure (45 PSI rear, 90 PSI front) | Refer to the Tire Pressure Check Procedure in the MAINTENANCE Section. |
| Conveyor Belt (For wear and proper alignment) | The conveyor belt must be centered. Check belt for proper centering. Refer to the Conveyor Belt Centering Procedure in MAINTENANCE Section for adjustment. |

Section 3 OPERATION



OPERATING PROCEDURES

START-UP PROCEDURE

NOTE: Refer to Table 3-1 for additional control information.

NOTE: The engine will not start unless the **CONVEYOR**, **FEEDER CHAIN**, and **Forward/Reverse Direction Control** levers are all in the **Neutral** position (see Figures 3-7 and 3-8).

1. Check that CONVEYOR lever and FEEDER CHAIN lever are in the Neutral (N) position.
2. Check that EMERGENCY/STOP brake switch is engaged (pushed down).
3. Check that Forward/Reverse Direction control lever is in Neutral (N) position.
4. Set Throttle lever about one-third the way toward the rabbit.
5. Set the CONVEYOR LIFT and DEFLECTOR switches to the "Center" position.

WARNING: If engine does not start, do not keep Ignition key in Start position for more than 30 seconds. Release key and wait at least 2 minutes before trying to starting again.



7. Turn the "Ignition" key switch clockwise to the start position.
8. When engine starts adjust throttle for a reading of 1500 RPM as shown on the RPM gauge. (Be careful not to over rev engine when warming up.)(Low Idle 950, High Idle 2350)

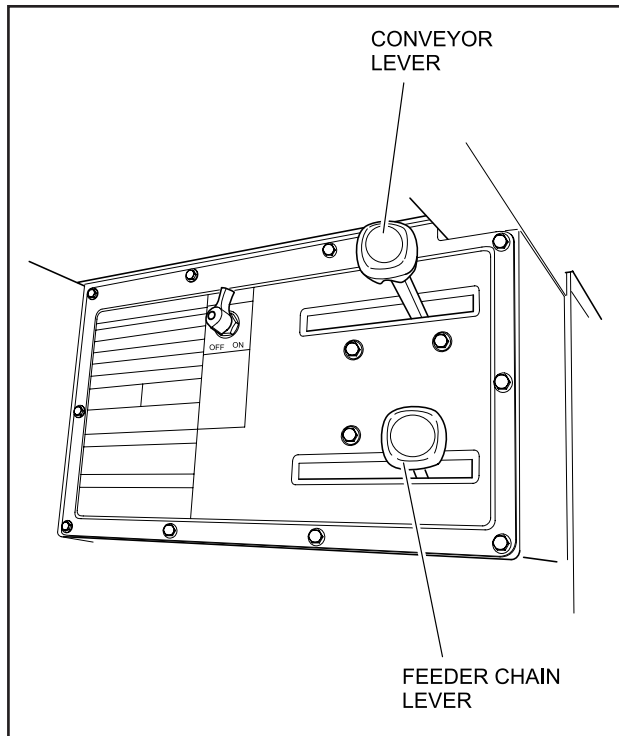


FIGURE 3-7. CONVEYOR CONTROL PANEL

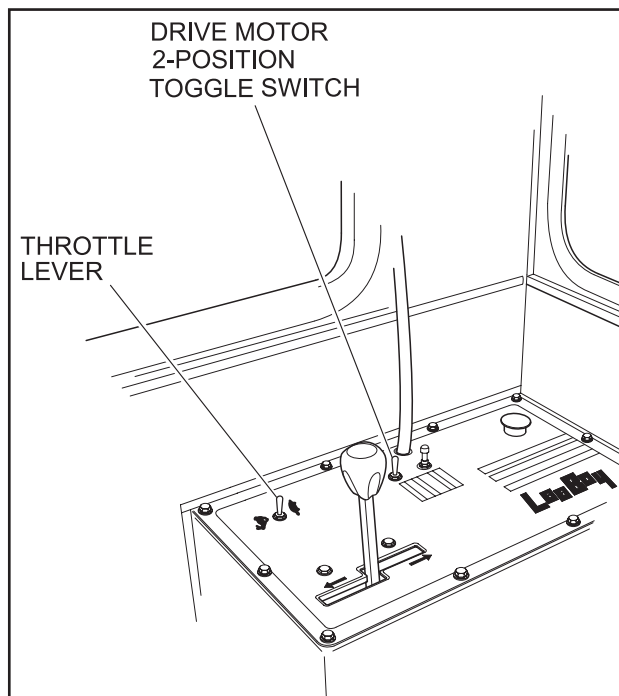


FIGURE 3-8. TRAVEL CONTROL PANEL

BRAKING

Braking is accomplished by pushing the Forward/Reverse (Directional) lever back to Neutral to slow down travel speed. Pushing the brake foot pedal down and using the disc brake pads also assist with the braking.

In emergency situations the fail-safe brake can be applied by pushing down on the EMERGENCY/STOP (parking brake) (See Figure 3-9).

PARKING BRAKE

The LeeBoy 3000 Force Feed Loader is equipped with an EMERGENCY/STOP parking brake located to the right of the operator below the High/Low Gear Shift switch. This pushbutton brake should only be used for emergency stopping or after being stopped for parking. This pushbutton, when engaged, will hold the vehicle from moving. To engage the brake, press down on the button. To release the brake, turn the button clockwise and pull the pushbutton up.

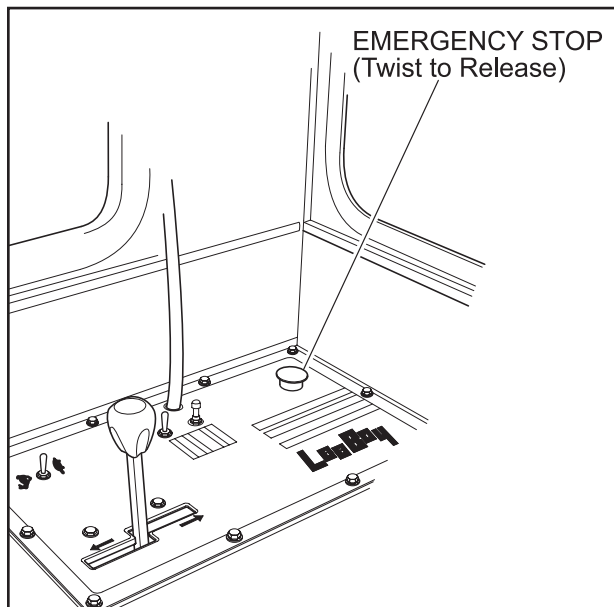


FIGURE 3-9. EMERGENCY/STOP PARKING BRAKE

SELECTING HIGH OR LOW SPEED.

WARNING: When using the High/Low toggle switch to change from low to high speed, or high to low speed, the vehicle must be stopped and the Direction Control lever set to the Neutral position.



The High/Low Gear Shift toggle switch (see Figure 3-10), is located below the Throttle on the right side of the operator. This switch selects the rear end speed. To shift the rear end speed ratio proceed as follows:

1. Check that Throttle is set to idle speed (turtle).
2. Set Forward/Reverse Direction Control Lever to the Neutral position.
3. Set the emergency stop button by pushing it down.(This supplies power to the High/Low gear shift toggle)
4. Shift the High/Low toggle to the gear desired and hold for two seconds and return to center.
5. Release the emergency stop button and jog the machine both ways making sure the gear changed.

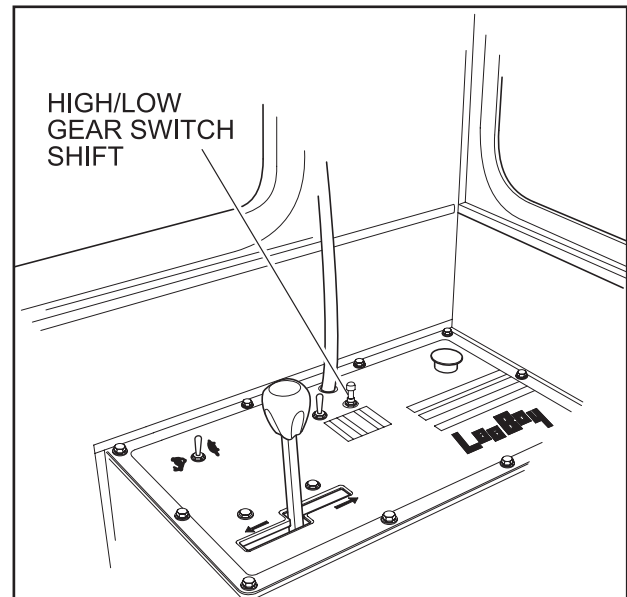


FIGURE 3-10. HIGH/LOW GEAR SHIFT TOGGLE SWITCH

FORWARD AND REVERSE

The LeeBoy 3000 Force Feed Conveyor Loader is equipped with a Forward/Reverse variable speed hydraulic motor with a two-speed rear end. The Forward/Reverse Directional Control lever (see Figure 3-8), located to the right of the operator, controls the speed of the hydraulic pump. This pump will control the speed of travel either in forward or reverse. A toggle switch located below the throttle lever selects either high or low speed in the two-speed rear end. Braking is accomplished by returning the Forward/Reverse Directional

Section 3

OPERATION



Control lever to Neutral (center position). As the lever is moved toward Neutral the speed of travel will slow allowing the operator to choose the speed desired. In case of an emergency, the foot brake maybe also be used to slow the machine.

WARNING: When using the HIGH/LOW Gear Shift toggle switch to change from low to high speed, or high to low speed, the vehicle must be stopped and the Forward/Reverse Direction Control lever set to the Neutral position.



INCREASING TRAVEL SPEED

The travel speed is determined by the setting of the Throttle lever and the position of the HIGH/LOW Gear Shift switch. The Gear Shift switch is usually set to the High-speed position for transporting the machine a long distance.

FEEDER CHAIN

The feeder chain picks up the material and dumps it on the discharge conveyor belt. The FEEDER CHAIN lever (see Figure 3-7), on the left side of operator's station determines the speed of the feeder chain. Pushing the lever back to neutral slows and stops the feeder chain. Pushing it forward runs it in reverse.

DISCHARGE CONVEYOR BELT

WARNING: Never use hands to free a clogged belt. Keep clothing and hands away from moving belt.



The Discharge CONVEYOR lever (see Figure 3-7) is the outside lever to the left of the operator. When the lever is pulled backward, the belt will move to discharge material to the swivel or truck. The belt speed is controlled by how far the lever is advanced from Neutral and the engine RPM. By moving the lever forward, the belt will run in reverse to free up a clogged belt.

CONVEYOR LIFTING AND LOWERING

WARNING: If the conveyor is being raised to perform work under the conveyor, be sure to insert the safety pins (see Figure 3-6), into the cylinders. Conveyor should be in the down position for transporting.



Lifting and lowering the discharge conveyor is done by the CONVEYOR LIFT switch on the console to the right of the operator's station. This is a three-position toggle switch with the center position Off. When the switch is set to the Up position, the conveyor is raised. When the switch is set to the Down position, the conveyor is lowered.

The conveyor must be raised to allow a truck to be positioned under the conveyor. Lower the conveyor when traveling.

SWIVEL CONVEYOR

WARNING: Main conveyor must be raised before moving swivel.



To turn the swivel conveyor on, there is a toggle switch on the console to the right of the operator's console. Raising and lowering the swivel is done by a pushbutton switch also located to the right of the operator. To move the swivel from side to side use the pushbutton switch located on the console at the operator's right.

STOPPING THE ENGINE

1. Throttle back to idle by moving the throttle lever to the minimum RPM (turtle) position.
2. Move the Forward/Reverse Directional lever to the Neutral position.
3. Stop machine motion by pressing on the Brake pedal.
4. Press down on the EMERGENCY/STOP pushbutton switch to engage the parking brake.
5. Turn Ignition key on instrument panel counter-clockwise (CCW) to the OFF position and remove key.

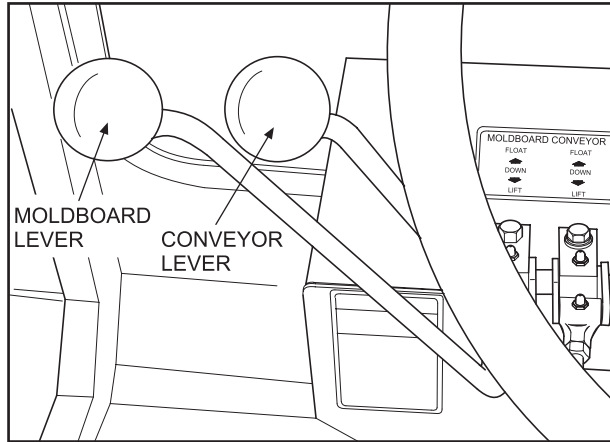


FIGURE 3-11. MOLDBOARD LEVERS

MOLDBOARDS

(MACHINE SETUP MOLDBOARD AND FEEDER)

It is important to set up the loader before operating to ensure that the loader can be operated as designed. The set up should be checked daily to ensure that there is no interference between moldboard and feeder.

1. Place machine on a flat surface.
2. Raise the rear of the main conveyor into the work position.
3. Lower the cutting edges to the ground so that all 5 cutting edges are flat on the floor. (Do not Float)
4. Adjust feeder height off the transition plate to 1 1/2" to 2" using nut 1 in figure 3-12.
 - A. Lift front of feeder with proper equipment
 - B. Loosen jam nut (1) in figure 3-12
 - C. Turn nuts (1) on both sides of machine the same amount keeping the feeder level.
 - D. Lock jam nuts.
 - E. Lower the feeder and check measurement
 - F. Repeat to get desired height between feeder blades and transition plate.

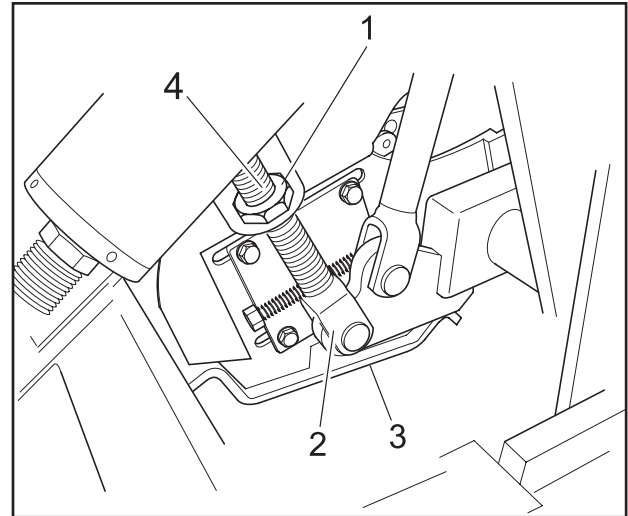


FIGURE 3-12. FEEDER ASSEMBLY ADJUSTMENT

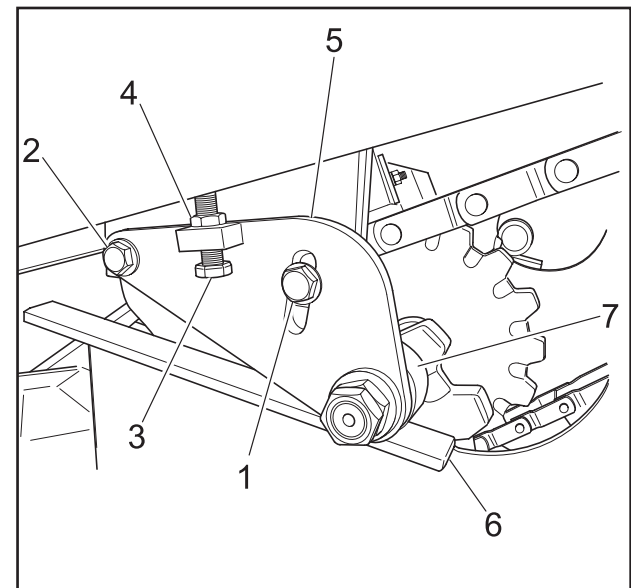


FIGURE 3-13 ROLLER ASSEMBLY ADJUSTMENT

5. Refer to Figure 3-13, and loosen bolts (1) and (2).
6. Loosen the jam nut (4).
7. Using a pry bar, raise roller end of bracket (5) so that roller (7) is about 1/2 inch clear of rail (6).
8. Tighten bolt (1) securely to attach bracket (5) in place.
9. Adjust bolt (3) to just touch frame.
10. Tighten jam nut (4) securely to fasten bolt (3) in position.
11. Tighten bolt (2) securely.
12. Align position indicators in Figure 3-14.

Section 3 OPERATION

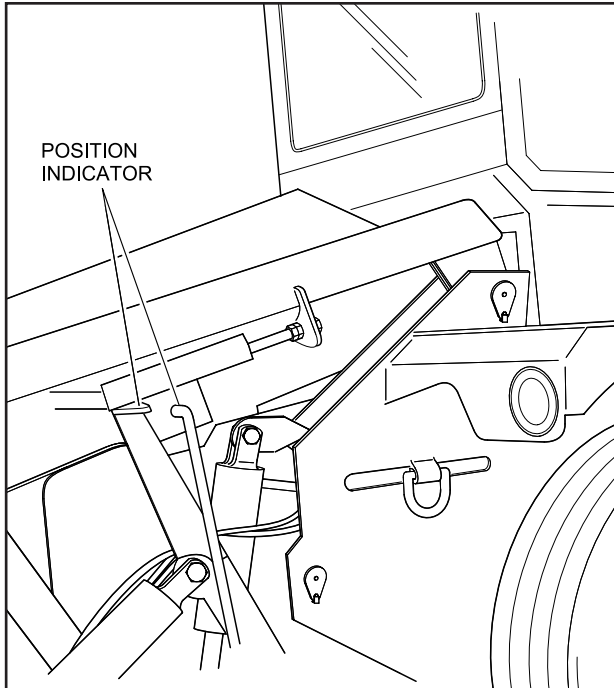


FIGURE 3-14. MOLDBOARD POSITION INDICATORS

LOADING

**Make sure machine has been set up.
See maintenance section.**

1. Place machine in line with windrow.
2. raise the rear of conveyor to work height. (For better performance of belt tracking place support pins in holes in rear stabilizer)
3. Set the deflector to the desired position.
4. Using the moldboard lever Align the pointers on the moldboard
5. Using the conveyor lever float the moldboards down until they touch the ground and take lever out of float.
6. Using the conveyor lever lift the moldboards so that they are still flat on the ground, but you have some weight on the front tires.
7. Place the moldboard lever in float at this time. (This will put the minimum amount of weight on the cutting edges for prolonged life)
8. Align truck with conveyor if desired
9. Set RPM on engine to desired speed (Full RPM for maximum production)
10. Pull the feeder chain lever to desired speed.

11. Pull discharge conveyor lever to full speed. (Unless using swivel conveyor)
12. Using the directional lever move forward into the material and find a speed not to overload the belt.
13. Using the conveyor lever, raise and lower the front of the conveyor as desired to help keep the moldboards flat on the ground while keeping the moldboard lever in float.

WARNING: Keep watch for overhead obstacles.



14. The deflector may be used to position the material where desired.
15. For quick stopping you can apply the foot brake which if pressed hard enough will destroke the pump. You can release the brake to resume speed or return the directional lever to neutral.

Option 2

Skip step #7, Using the conveyor lift lever, raise and lower moldboards as desired

TRANSPORTING

When transporting the loader on a trailer, the vehicle should be large enough to safely handle the size and weight of the loader in all driving situations.

1. Park the loader on a level surface with the EMERGENCY/STOP parking brake engaged (pressed down) and block the wheels in both directions so the loader will not roll.
2. Load the loader onto the trailer and block the wheels in both directions. Use enough chains to secure the loader to make sure that it will not move while transporting. Use the factory tie downs (See Figure 3-15).

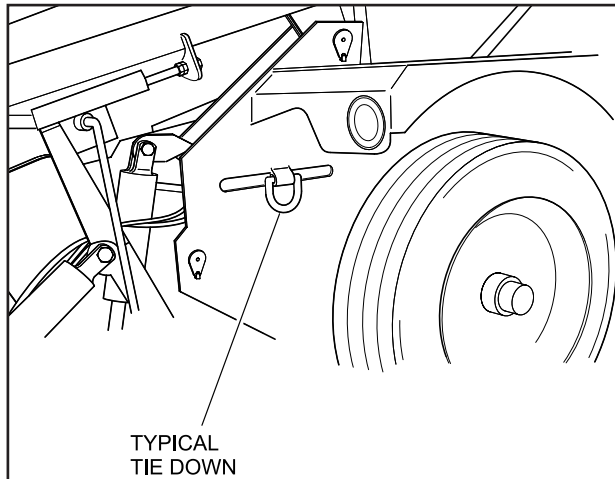


FIGURE 3-15. TYPICAL D RING FOR TIE DOWN

4. Find center position to disengage gears for towing.
5. On the sides of the rear end, locate the screw with a square head (see Figure 3-16).
6. Using a caliper, measure the exact extension of the screw and record measurement.
7. Turn the screw all the way in to release the brakes for towing the machine.

To return the machine from the towing condition to normal operation proceed as follows:

1. Push shifting bar at front of rear end all the way in.
2. Adjust square head screw to the exact position measured in step 5 above.

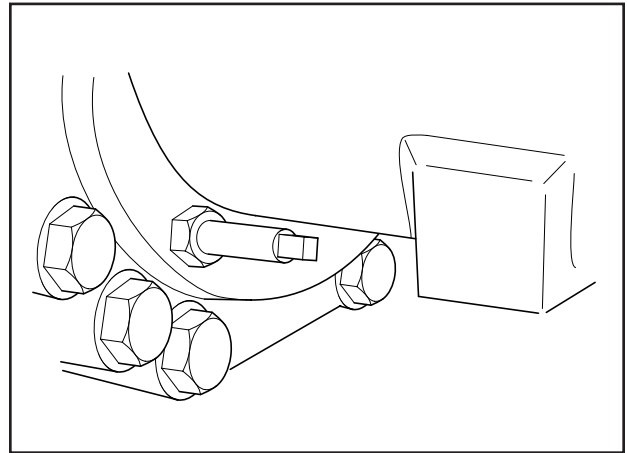


FIGURE 3-16. BRAKE RELEASE SCREW

TOWING THE LOADER

Prepare the machine for towing as follows:

WARNING: Wheels must be blocked to prevent machine from moving while preparing machine for towing.



WARNING: The following procedure can only be used for new machines.



1. Block wheels to prevent machine from moving.
2. Using a small pry bar, manually pull shifting lever at front of rear end all the way out.
3. Now push lever all the way in.

Section 3 OPERATION



NOTES

TABLE OF CONTENTS

| | Page |
|---------------------------------------------------------------------------------------------------|------|
| GENERAL INFORMATION | 4-4 |
| ROUTINE MAINTENANCE | 4-4 |
| GENERAL INFORMATION | 4-4 |
| MAINTENANCE SCHEDULE | 4-4 |
| General Information | 4-4 |
| 10 Hour or Daily Routine Maintenance | 4-4 |
| 50 Hour Routine Maintenance | 4-4 |
| 100 Hour or Monthly Routine Maintenance | 4-4 |
| 250 Hour or Quarterly Routine Maintenance | 4-4 |
| 500 Hour or Semi-Annual Routine Maintenance | 4-5 |
| 1000 Hour or Annual Routine Maintenance | 4-5 |
| MAINTENANCE CHECK PROCEDURES | 4-5 |
| ENGINE OIL | 4-5 |
| RADIATOR CHECK | 4-6 |
| HYDRAULIC OIL LEVEL | 4-6 |
| AIR FILTER CHECK | 4-6 |
| ENGINE MAINTENANCE | 4-7 |
| GENERAL INFORMATION | 4-7 |
| ENGINE LUBRICATION OIL | 4-7 |
| Checking the Engine Lubrication Oil Level | 4-7 |
| Changing the Engine Lubrication Oil | 4-8 |
| Changing The Engine Lubrication Oil Filter | 4-8 |
| FUEL SYSTEM | 4-9 |
| Fuel Tank | 4-9 |
| Engine Fuel Filters | 4-9 |
| HYDRAULIC SYSTEM | 4-10 |
| GENERAL INFORMATION | 4-10 |
| CHECKING THE HYDRAULIC OIL LEVEL AND ADDING HYDRAULIC OIL TO THE HYDRAULIC OIL RESERVOIR | 4-10 |
| Changing The Hydraulic Oil | 4-10 |
| Changing The Hydraulic Oil Strainer | 4-11 |
| TIRE PRESSURE | 4-11 |
| BATTERY SERVICING | 4-11 |
| MACHINE LUBRICATION | 4-12 |

Section 4 MAINTENANCE



TABLE OF CONTENTS (Continued)

| Page | |
|------|------------------------------------------------|
| | LUBRICATION CHART 4-13 |
| | MAINTENANCE ADJUSTMENTS 4-14 |
| | CONVEYOR BELT CENTERING 4-14 |
| | CHAINS 4-14 |
| | THROTTLE CABLE 4-15 |
| | LEVER LINKAGES 4-15 |
| | REMOVAL AND INSTALLATION 4-15 |
| | SIDE MOLDBOARD CUTTING EDGE 4-16 |
| | SIDE MOLDBOARD WEARPLATE 4-16 |
| | SCOOP CUTTING EDGE 4-16 |
| | ALL PURPOSE MOLDBOARD CUTTING EDGE 4-16 |
| | CONVEYOR PADDLE BLADE 4-16 |
| | ENGINE DRIVE BELT 4-17 |
| | Removal 4-17 |
| | Installation 4-17 |
| | CHARGE FILTER 4-17 |
| | HYDRAULIC CYLINDER REPLACEMENT 4-17 |
| | Scoop Tilt Cylinder 4-17 |
| | Removal 4-17 |
| | Installation 4-17 |
| | Moldboard Lift Cylinder 4-18 |
| | Removal 4-18 |
| | Installation 4-18 |
| | Steering Hydraulic Cylinder 4-18 |
| | Removal 4-18 |
| | Installation 4-18 |
| | Conveyor Lift Cylinder 4-18 |
| | Removal 4-19 |
| | Installation 4-19 |
| | Discharge Baffle Hydraulic Cylinder 4-19 |
| | Removal 4-19 |
| | Installation 4-19 |

TABLE OF CONTENTS (Continued)

| Page | |
|------|----------------------------------------|
| | FRONT TIRE REPLACEMENT4-19 |
| | Removal4-19 |
| | Installation4-20 |
| | REAR TIRE REPLACEMENT4-20 |
| | Removal4-20 |
| | Installation4-20 |
| | CONVEYOR HEAD PULLEY BEARING4-20 |
| | Removal4-20 |
| | Installation4-20 |
| | MUFFLER4-21 |
| | Removal4-21 |
| | Installation4-21 |
| | RADIATOR HOSES AND RADIATOR4-21 |
| | CONVEYOR BELT4-21 |
| | SCHEMATICS4-23 |
| | TROUBLESHOOTING4-30 |
| | GENERAL4-30 |

Section 4

MAINTENANCE



GENERAL INFORMATION

This section gives the necessary procedures for routine and general maintenance on the Model 3000 Force Feed Loader.

Follow all the Maintenance Schedules and Maintenance Procedures to maintain the machine in top operating order.

ROUTINE MAINTENANCE

GENERAL INFORMATION

MAINTENANCE must be a planned program that includes periodic machine inspection and lubrication procedures.

The MAINTENANCE program must be done, based on the machine's "Operating Hours", recorded on the hourmeter, or based on the "Periodic Schedule", which is done at time intervals of weekly, monthly or yearly.

The MAINTENANCE program is divided into two subsections: The Maintenance Schedule and the Maintenance Procedures.

MAINTENANCE SCHEDULE

General Information

The Maintenance Schedule lists the recommended time intervals between machine maintenance inspections and lubrication procedures. Table 4-1 gives inspection and lubrication information for the Model 3000 Force Feed Loader.

The "Hour" and "Periodic" time periods list most service intervals. The maintenance schedule begins with ten hours, or daily, maintenance intervals and continues through the 1,000 hours, or annual, maintenance schedule intervals.

NOTE: If the machine is operated more than ten hours per day, follow the "Hour" schedule. If the machine is operated less than ten hours per day, follow the "Periodic" schedules, where they apply.

Preventive maintenance on the Model 3000 Force Feed Loader will provide years of trouble-free operation. Adjustment 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 operator's manual for engine service information.

IMPORTANT NOTICE!

The changing of oil and cleaning of the loader 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.

CAUTION: Do not substitute fasteners of any kind unless the fasteners are equal in size and grade as original equipment.



NOTE: When performing any routine maintenance such as 10, 100, 250, and 1000 hours, always include previous routine maintenance hours to the higher hourly schedule.

10 Hour or Daily Routine Maintenance

1. Check Engine Oil. Refer to Engine Check Procedures in this section.
2. Check Coolant Level. Refer to Radiator Check Procedures in this section.
3. Check Air Filter Gauge. Refer to Air Filter Check Procedures in this section.
4. Check Hydraulic Oil Level. Refer to Hydraulic Oil Check Procedures in this section.
5. Check Conveyor Belt Alignment. Refer to Conveyor Belt Check Procedures in this section.
6. Check Battery Cables for Wear. Visually check cables and cable connections to battery. Also check battery terminal for corrosion.
7. Check Drive Cables for Wear.
8. Check Hydraulic Hoses for Leaks. Visually check all hose connections.

50 Hour Routine Maintenance

1. Grease All Fittings Except Bearings. Refer to Lubrication Procedure in this section.

100 Hour or Monthly Routine Maintenance

1. Check all Battery Connections and remove any corrosion that is present.
2. Check Air Cleaner. 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 operator's manual for service information. Also,

perform any other engine preventative maintenance as described in the engine operator's manual.

3. Check all Decals and Nameplates. Replace if any are missing or damaged.
4. Check Headlamps for secure mounting and in good working order.
5. Check Filler Cap, breather caps and grease fittings. Repair or replace if necessary.
6. Check for loose, missing, damaged, or corroded parts. Repair or replace as necessary.
7. Change Engine Oil. To assure complete removal of contaminants in the oil, perform the oil change while engine is warm. 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 each oil change (15W-40 Motor Oil).
8. Perform any other engine preventative maintenance as described in the engine operator's manual.
9. Check Pump Drive Gear Oil Level. Refer to Pump Drive Check Procedures in this section.
10. Check Differential Fluid Level. Refer to Differential Fluid Check Procedures in this section.
11. Check Two-Speed Transmission Oil Level. Refer to Two-Speed Transmission Check Procedures in this section.
12. Check Planetary Hub Fluid Level. Refer to Planetary Hub Check Procedures in this section.
13. Check Tire Pressure. 90PSI front, 45 PSI rear.

250 Hour or Quarterly Routine Maintenance

1. Perform the 250-hour preventative maintenance as described in the engine operator's manual.
2. Replace Fuel Filters.
3. Replace Hydraulic Oil Filter.

500 Hour or Semi-Annual Routine Maintenance

1. Perform the 500 hour preventative maintenance as described in the engine operator's manual.

1000 Hour or Annual Routine Maintenance

1. Drain and Flush the Hydraulic Tank. A drain plug is located on the bottom of the tank for this purpose. The recommended hydraulic oil is Citgo All-Temp.
2. Perform the 1,000-hour preventative maintenance as described in the engine operator's manual.
3. Anytime the loader has been repainted or the decals have been removed, damaged or can't be read, a new set of decals should be ordered and reinstalled for safe operation.

MAINTENANCE CHECK PROCEDURES

ENGINE OIL

To check the engine oil proceed as follows:

1. Lift engine cover located on the right side rear of machine to access the oil dipstick.

NOTE: Engine oil should be warm when checked

2. To check the engine oil, pull dipstick out of the engine and check that oil level is near the full mark on the dipstick (see Figure 4-1). If oil level is low add engine oil.
3. To add oil remove the fill cap located next to the dipstick. Twist to remove cap and twist to install (use 15W40 Motor oil).

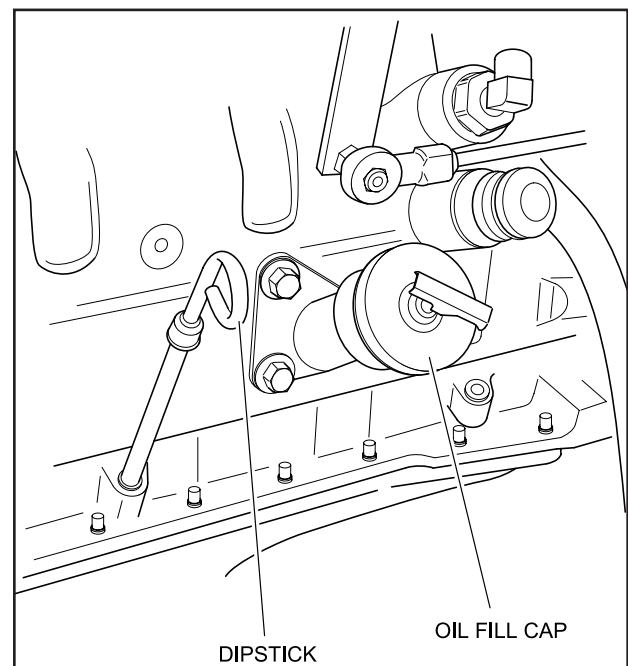


FIGURE 4-1. ENGINE OIL DIPSTICK AND FILL CAP

Section 4 MAINTENANCE



RADIATOR CHECK

The radiator fill cap is located behind a small access door marked RADIATOR. To check the radiator or add coolant proceed as follows:

1. Open the access door to access the radiator cap (see Figure 4-2).

WARNING: Do not remove the radiator cap while the engine is still hot. The radiator is under pressure and the hot water can cause serious injury to all persons around.



2. Remove the cap to check and fill radiator. Remove the cap only when the unit is cool. Coolant level should be visible when looking into radiator cap opening.
3. If coolant level is low, add coolant. Do not overfill.

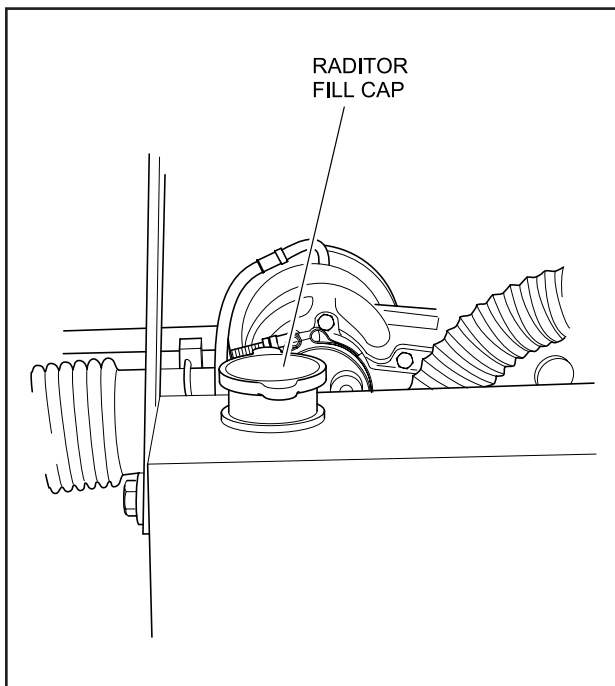


FIGURE 4-2. ENGINE RADIATOR FILL CAP

HYDRAULIC OIL LEVEL

The hydraulic oil tank level indicator is located on the hydraulic oil tank at the right of machine. Keep the proper level Citgo All-Temp fluid. Check oil level every morning with machine cold and fill as necessary. Machine holds 52 gallons (see Figure 4-3).

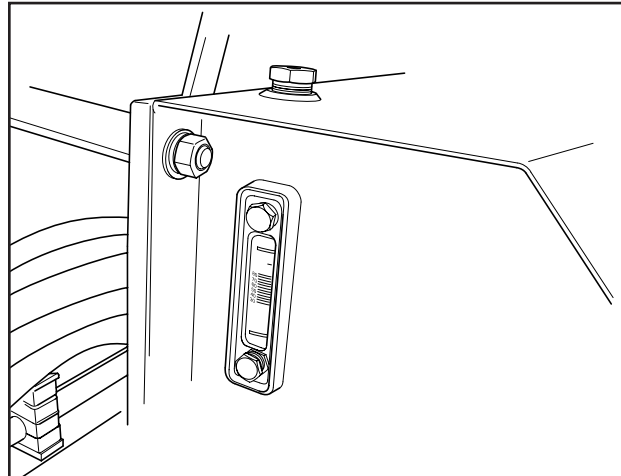


FIGURE 4-3. HYDRAULIC OIL LEVEL INDICATOR

AIR FILTER CHECK

The air filter indicator is located on the intake of the air filter (see Figure 4-4). As the air filter becomes more clogged, the air pressure increases causing the red flag in the indicator to become visible. When this occurs the air filter must be cleaned or replaced as follows:

1. Remove the wing nut (see Figure 4-4), securing the cover on the filter housing then remove the cover.
2. Remove the nut securing the outer filter and remove the outer filter.
3. Remove the nut securing the inner filter and remove the filter.
4. Replace the inner filter and secure with the nut.
5. Replace outer filter and secure with the nut.
6. Install cover and secure with the nut.
7. Reset the filter indicator by pressing down on the button on top of the indicator.

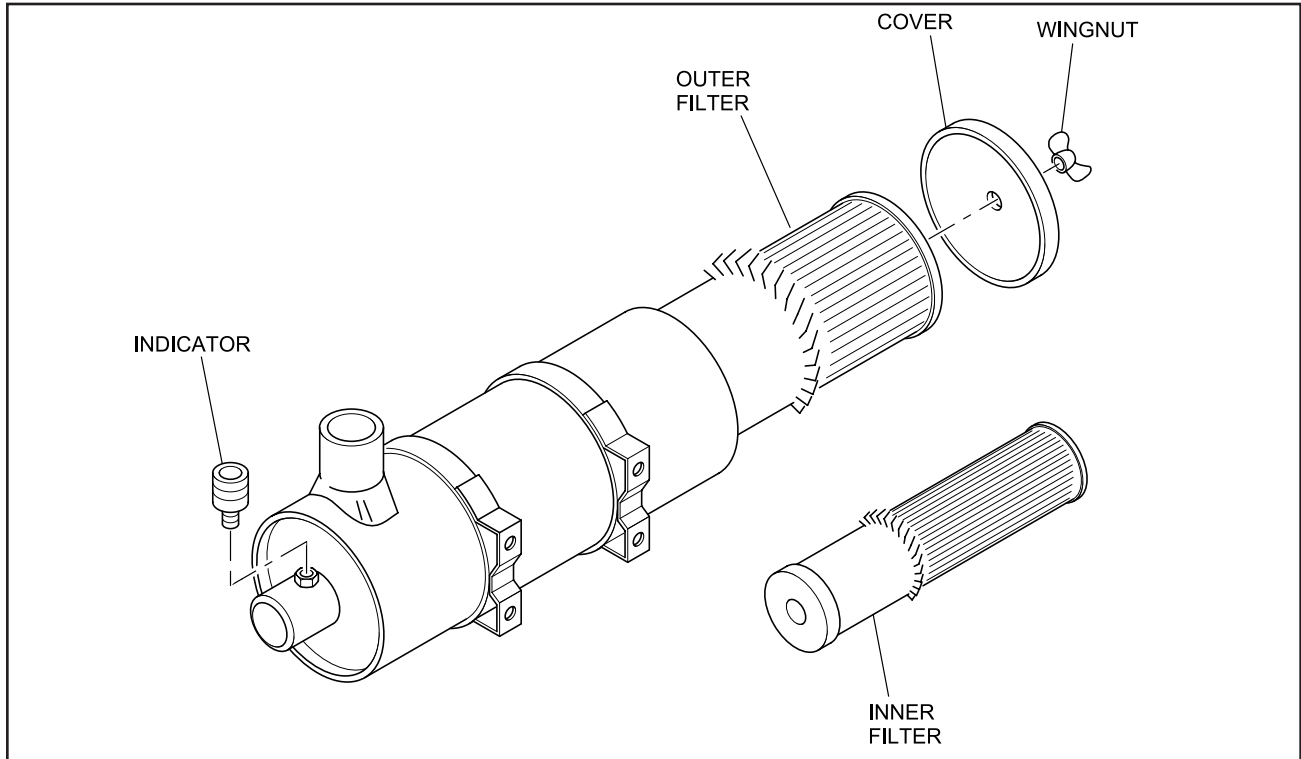


FIGURE 4-4. ENGINE AIR FILTER

ENGINE MAINTENANCE

GENERAL INFORMATION

The following engine maintenance information will cover general engine maintenance procedures most often required.

For additional, very specific, engine maintenance information, see the current "OPERATION AND MAINTENANCE MANUAL" -Cummins QSB4.5 Series engine.

ENGINE LUBRICATION OIL

Checking the Engine Lubrication Oil Level

The engine lubrication oil must be kept at a level above the "ADD" mark, but not above the "FULL" mark, on the engine lubrication oil dipstick (see Figure 4-5).

To accurately check the engine lubrication oil level, put the machine in a "level" position and stop the engine. Clean the area around the engine lubrication oil dipstick before removing the dipstick from the engine. Wait five minutes after engine shutdown, before removing the dipstick from the engine and checking the oil level.

NOTE: The above procedure will help to remove the possibility of filling the engine with too much lubrication oil, by allowing the oil to return to the oil pan.

WARNING: Stop the engine before checking the engine lubrication oil level. With the engine running, hot oil can be thrown causing serious injury.

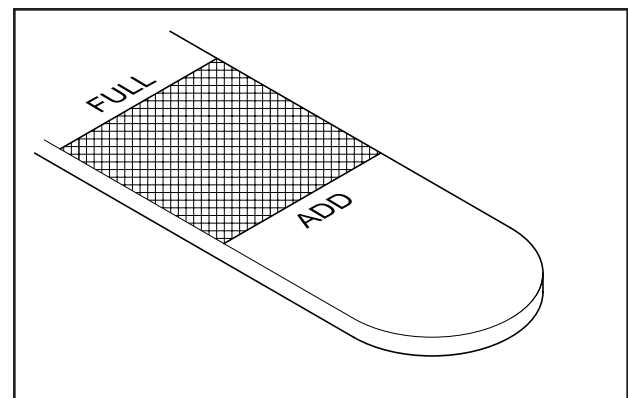


FIGURE 4-5. DIPSTICK

Section 4

MAINTENANCE



Changing the Engine Lubrication Oil

The engine lubrication oil must be changed according to the interval given in the current Cummins Diesel engine "OPERATION AND MAINTENANCE MANUAL".

NOTE: The color of the engine lubrication oil cannot be used as an indication of the need for an engine lubrication oil change. The use of an engine lubrication oil "analysis service" is the only alternate reason for not following the required engine lubrication oil change schedule.

WARNING: Do not change the engine lubrication oil when the engine and lubrication oil are hot. Change when warm only. Hot oil can cause serious injury.



CAUTION: Do not change the engine lubrication oil with the engine "running". Serious engine damage, or failure will occur. Clean the area around the engine lubrication oil dipstick and oil filler cap before removing the dipstick, or oil filler cap.



With the engine "stopped", and the engine lubrication oil "warm", proceed as follows:

1. Clean the area around the engine lubrication oil drain plug located on the engine oil pan.
2. Place a container, having a capacity of 15 quarts (20 liters), sufficient to hold the drained oil, directly under the engine lubrication oil drain plug.
3. Carefully remove the engine lubrication oil drain plug.
4. Drain all of the engine lubrication oil into the container.

NOTE: For steel pans, torque the drain plug to 59 ft-lb (80 N.m). For aluminum pans, torque the drain plug 44 ft-lb (60 N.m).

CAUTION: Do not over tighten the drain plug.



5. Clean, install and carefully tighten the lubrication oil drain plug to the correct torque.

6. Be sure that a new oil filter has been installed.

7. Fill the engine to the correct oil level, 11.6 quarts (10.98 liters), with the correct engine lubrication oil, 15W-40.

8. Install the engine lubrication oil dipstick.

CAUTION: Do not start the engine before changing the engine lubrication oil filter. Follow the procedures given in this section and in the current Cummins engine manual.



Changing The Engine Lubrication Oil Filter

The engine lubrication oil filter must be changed when the engine lubrication oil is changed.

WARNING: Do not change the engine lubrication oil when the engine and lubrication oil are hot. Change when warm only. Hot oil can cause serious injury.



CAUTION: Do not change the engine lubrication oil filter with the engine running. Serious engine damage, or failure, will occur.



With the engine "stopped" and filled with new engine lubrication oil, proceed as follows:

1. Wipe the area around the engine lubrication oil filter element and its mounting base, with a clean cloth.
2. Place a container under the filter element.
3. Use a filter removal wrench to loosen and remove the filter element by turning it in a counterclockwise direction of rotation. Drain and discard the removed filter element.

NOTE: Be sure the used rubber gasket is removed and discarded with the filter element.

4. Wipe the inside area of the lubrication oil filter head using a clean lint free cloth.
5. Put clean engine lubrication oil on the rubber gasket area of the new filter element. Fill the new filter element with correct, new, and clean oil.
6. Install the new filter element onto the filter head. Carefully tighten the filter element, by hand only.

NOTE: Tighten the filter element as directed on the filter element, by the filter manufacturer.

FUEL SYSTEM

Fuel Tank

The fuel level is indicated on the gauge panel FUEL gauge and indicates the amount of fuel in the tank. Fill the fuel tank "FULL". Also fill the tank, to "FULL", before the machine is stored for the night to reduce the accumulation of moisture in the tank, from condensation.

WARNING: The operator must be off of the machine while fuel is added. No smoking while filling the fuel tank. All fuels for internal combustion engines are flammable. Fill the fuel tank only in a designated area with good ventilation. Have a fire extinguisher available.



Never fill the tank near an open flame, or near equipment that can create sparks. Never check fuel level or check for fuel leaks with an open flame.

Engine Fuel Filters

The fuel filter element must be replaced as directed in the current Cummins engine manual. Replace the fuel filter using the following "general" procedure and very specific information given in the current engine manual.

WARNING: Diesel fuel is very flammable. Use extra caution.



Do not change the fuel filter with the machine running.

Do not change the fuel filter in an area near an open flame.

Do not smoke while changing the fuel filter.

Do not spill fuel.

1. Stop the engine.
2. Put a container under the fuel filter, before removing the filter element.
3. Wipe the area around the fuel filter element and the element mounting head, using a clean lint free cloth.
4. Use a filter removal wrench to loosen and remove the element, by turning the element in a counterclockwise direction. Drain and discard the removed element.
5. Wipe the inside area of the filter head with a clean "lint free" cloth. Fill the "new" fuel filter element completely full of the correct and clean fuel. Put clean fuel on the element rubber gasket.
6. Install the "new" fuel filter element onto the filter head. Carefully tighten the element by hand only.

CAUTION: Tighten the fuel strainer or the fuel filter element as directed on the filter element, by the filter manufacturer. Do not over tighten the fuel filter element onto the filter head.



7. Start the engine and check for any fuel leaks.

WARNING: Stop the engine immediately if any fuel leakage is noted. Do not start the engine until the leakage problem is corrected.



Section 4

MAINTENANCE



HYDRAULIC SYSTEM

GENERAL INFORMATION

The hydraulic motors and the hydraulic cylinders use the same hydraulic oil reservoir and hydraulic oil supply.

CHECKING THE HYDRAULIC OIL LEVEL AND ADDING HYDRAULIC OIL TO THE HYDRAULIC OIL RESERVOIR

Check the hydraulic reservoir oil level daily by observing the indicator glass located on the end of the hydraulic tank (see Figure 4-6). Check the oil level when the hydraulic oil is at "normal" operating temperature only.

WARNING: Do not loosen, or remove, the hydraulic oil reservoir filler cap when the hydraulic oil is hot. Always loosen the filler cap slowly to relieve any pressure in the hydraulic oil reservoir.



Only loosen the filler cap when the oil is at a warm temperature.

If the hydraulic oil level is low on the indicator, the correct filtered hydraulic oil (Citgo All-Temp) must be added to the hydraulic oil reservoir.

CAUTION: Do not over fill the hydraulic oil reservoir.



Do not use unfiltered hydraulic oil. The new hydraulic oil must be filtered before it enters the hydraulic oil reservoir. Keep the oil level of the hydraulic oil reservoir at the correct level. An air space is designed into the hydraulic oil reservoir and allows for oil expansion, at warm temperatures. The hydraulic oil reservoir will have a low pressure in it at system operating temperatures.

Changing The Hydraulic Oil

Changing the hydraulic oil removes the accumulation of dirt, water and mechanical wear particles from the hydraulic oil reservoir and system. The chemical structure of the hydraulic oil also changes after continuous use in the system and new, clean and filtered oil is a must to help insure further correct operation of the hydraulic system.

CAUTION: Hydraulic oil which has oxidized or which contains contamination, of any type, can shorten the expected service life of any, or all, of the components in the hydraulic system.



Use the following procedures to change the hydraulic oil in the hydraulic oil tank (see Figure 4-6).

1. Stop the engine. Allow the hydraulic oil to cool, until it is at a warm temperature only. Slowly loosen, and then remove, the hydraulic oil reservoir filler cap (2). Put a CLEAN, lint free cloth over the reservoir fill tube opening and secure in place with tape.

WARNING: Do not drain the hydraulic oil from the reservoir when it is hot. Hot hydraulic oil can cause serious injury. Drain at a warm temperature only.



2. Carefully remove the drain plug from the hydraulic tank. Use a drain collection device of sufficient capacity, 52 gallons (75.7 liters), to collect the hydraulic oil. Allow all of the hydraulic oil to drain from the reservoir and into the container.

CAUTION: Do not fill the hydraulic oil reservoir with new hydraulic oil until the strainer has been serviced.



3. Install the hydraulic oil reservoir drain plug (see Figure 4-6), and tighten securely.

4. Carefully remove the cloth from the hydraulic oil reservoir fill tube opening.

5. Fill the hydraulic oil reservoir with the correct, filtered hydraulic oil (Citgo All-Temp).

CAUTION: Do not overfill the hydraulic oil reservoir with oil.



6. Check the oil level in the hydraulic oil reservoir, again. Add oil if needed.

7. Install the hydraulic oil reservoir filler cap and tighten securely.

8. Start the engine using the correct procedures given in Section 3 - OPERATION of this manual. Check the hydraulic system for any leaks.

WARNING: Do not use the hands on any hydraulic hose, fitting or system component to check the system for possible leaks. Serious injury can result from an oil leak under high pressure. Oil can be injected under the skin by high pressure. Protect the eyes by wearing safety glasses.



CAUTION: Stop the engine immediately if any hydraulic leak is noted. Do not start the engine until any problem noted has been corrected.

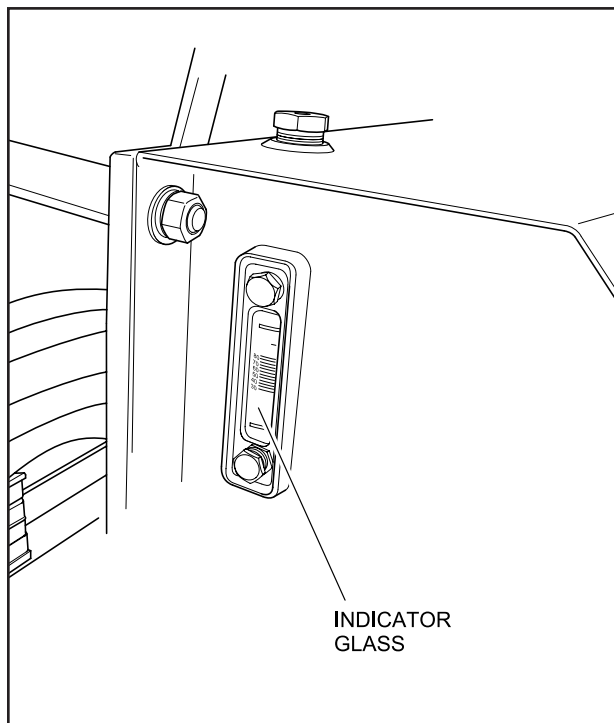


FIGURE 4-6. HYDRAULIC OIL TANK

CHANGING THE HYDRAULIC OIL STRAINER

The oil strainer is mounted in the oil filler opening under the filler cap.

WARNING: Do not remove the hydraulic oil cap from the reservoir when it is hot. Hot hydraulic oil can cause serious injury. Allow hydraulic oil to cool down to a warm temperature.



1. Remove the hydraulic oil filler cap (see Figure 4-6).

2. Remove the three screws securing the strainer, then remove the strainer and the gasket.
3. Install a new gasket, aligning the three holes in the gasket with the mounting holes on the reservoir.
4. Install the new strainer, aligning the holes in the strainer with the mounting holes of the gasket and secure the strainer with the three screws.
5. Fill the hydraulic oil reservoir with the correct, filtered hydraulic oil.

CAUTION: Do not overfill the hydraulic oil reservoir with oil.



6. Check the oil level in the hydraulic oil reservoir, again. Add oil if needed.
7. Install the hydraulic oil reservoir filler cap onto the reservoir filler neck and tighten securely.

TIRE PRESSURE

The tires should be maintained at the proper tire pressure. This should be done once a month. If a tire appears to be low when performing the daily check of the machine, measure the pressure to be sure of proper inflation. The tire pressure should be maintained at 90 PSI front and 45 PSI rear.

BATTERY SERVICING

WARNING: Batteries contain sulfuric acid and normally produce explosive gases that can cause serious injury. Therefore, do not allow flames or sparks to come near the battery. When charging or working near a battery, always shield your face and protect your eyes. In case of acid contact with skin or eyes, flush immediately with water for a minimum of 15 minutes and get prompt medical attention. If acid is swallowed, call a physician immediately.



The loader electrical system is a 12-volt negative ground system (see Figure 4-7). Keep sparks and flames away from the battery as electrolyte gas is highly flammable.

NOTE: When replacing the battery, discard the old battery properly.

Section 4 MAINTENANCE

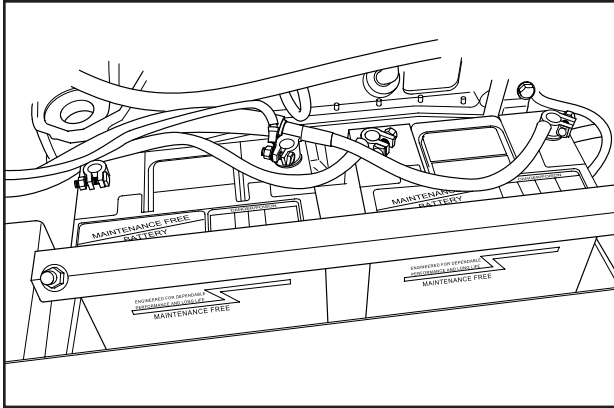


FIGURE 4-7. BATTERY

CAUTION: When servicing the electrical system or welding on the machine, always turn the Master Disconnect switch to the OFF position to disconnect the ground strap from the battery to prevent damage to the machine electrical system. The Master Disconnect switch is located on the conveyor control panel on the left of the operator.



Before connecting the battery, be sure the Disconnect switch is turned off. Be certain that the terminals and battery posts are thoroughly cleaned and that the battery cable terminals are tight. Dirty or loose connections can create high electrical resistance and permit arcing, which will quickly burn and pit terminals and posts.

NOTE: The electrical system is a negative ground system. Connect the positive (+) cable to the positive (+) post of the battery. Connect the ground cable to the negative (-) post of the battery. It is advisable to disconnect the negative (-) cable first and connect it last. Reversed polarity can damage the electrical system.

Keep the battery clean by washing it off whenever dirt buildup is excessive. If corrosion is present around terminal connections, remove them and wash with ammonia solution or a solution consisting of 1/4 lb. (0.11 kg) baking soda added to one quart of warm water. Make certain the vent caps are tight to prevent solution from entering the cells. After cleaning, pour clean water over the battery and surrounding area to wash the solution away. Check vent cap breather openings to make sure they are open.

Be sure to keep the battery fully charged during cold weather to keep it from freezing. Freezing weather has little effect on a fully charged battery.

WARNING: When using a booster battery, do not attach the negative (-) cable from the booster battery to the negative (-) post of the dead battery. A spark could occur and cause an explosion of gases normally present around the battery.



When connecting a booster battery, if necessary for cold weather starting, connect one end of the first jumper cable to the positive (+) terminal of the dead battery and the other end to the positive (+) terminal of the booster battery. Connect one end of the second jumper cable to the negative (-) terminal of the booster battery and the other end to the frame of the machine with the dead battery.

The alternator supplies electrical current for charging the battery and ample electrical power to the electronic controls. The built-in regulator in the alternator controls the voltage output. If for any reason the wires must be disconnected from the alternator, mark them so that they can be reconnected properly. Use the following precautions to prevent damage to the alternator and/or regulator:

1. An alternator is never to be polarized. Never ground any alternator terminals or circuits.
2. Always disconnect the battery before disconnecting or connecting the alternator. Never disconnect the alternator with it operating. Be certain the wiring is properly connected before connecting the battery.
3. Always connect a booster battery in the proper polarity. Negative (-) to negative (-) and positive (+) to positive (+).

MACHINE LUBRICATION

Proper lubrication is necessary to maintain the machine at top efficiency. Refer to the lubrication information in Table 4-1 Lubrication Chart. All lubrication points are shown in Figure 4-8.

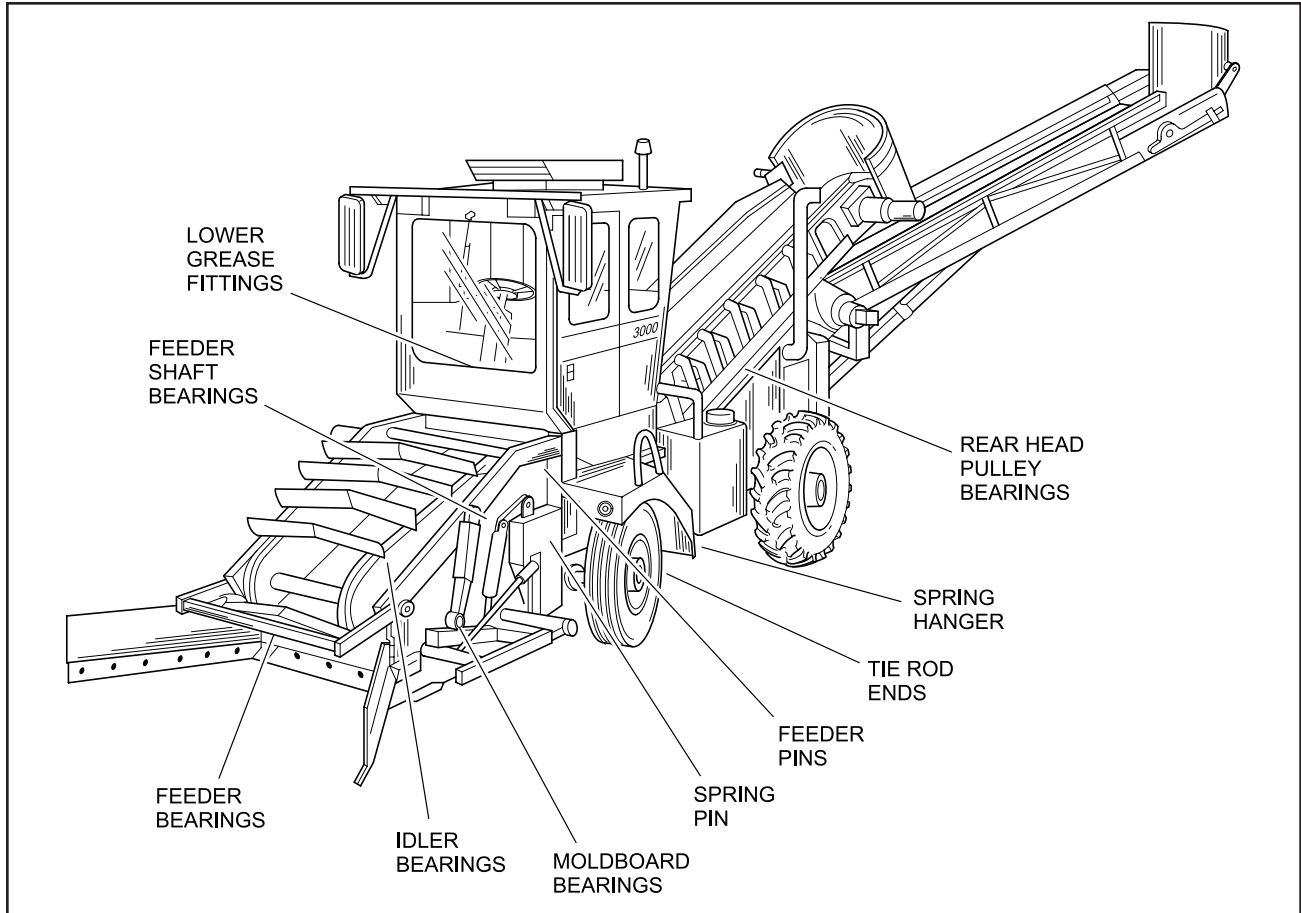


FIGURE 4-8. LUBRICATION POINTS

TABLE 4-1. LUBRICATION CHART

| ITEM | TYPE OF LUBRICANT | INTERVAL |
|---------------------------|--------------------------|-------------|
| Hydraulic System | Citgo All-Temp Oil | Check Daily |
| Engine Oil | 15W40 | Check Daily |
| Lower Grease Fittings | Shell Avania EP Grease 2 | 50 hrs |
| Feeder Shaft Bearings | Shell Avania EP Grease | 50 hrs |
| Rear End (three places) | 85W90 | 50 hrs |
| Feeder Bearings | Shell Avania EP Grease | 50 hrs |
| Idler Bearings | Shell Avania EP Grease | 50 hrs |
| Moldboard Supports | Shell Avania EP Grease | 50 hrs |
| Spring Pin | Shell Avania EP Grease | 50 hrs |
| Feeder Pins | Shell Avania EP Grease | 50 hrs |
| Tie Rod Ends | Shell Avania EP Grease | 50 hrs |
| Spring Hanger | Shell Avania EP Grease | 50 hrs |
| Rear Head Pulley Bearings | Shell Avania EP Grease | 50 hrs |

Section 4 MAINTENANCE



MAINTENANCE ADJUSTMENTS

CONVEYOR BELT CENTERING

All part item numbers in the following procedure refer to the **parts list for the HEAD PULLEY ASSEMBLY** and the associated drawing in the parts manual.

The conveyor belt must be kept centered at all times. This should be checked visually daily. If the belt appears not to be centered proceed as follow:

NOTE: This adjustment is made with the conveyor raised and the belt running. The distance must be the same on both sides of the belt.

WARNING: Be sure safety pins have been inserted to prevent conveyor from falling.



1. Measure the distance from both sides of the belt to the frame (see Figure 4-9).
2. Determine which side has the belt closest to the frame. The adjustment will be made on that side of the belt. If the closest is the drive side proceed with step 2. If the closest is the bearing side, proceed with step 8.
3. Loosen cap screw (24) on both the top and bottom of the drive assembly.
4. Loosen the jam nut (7) and adjust position of drive by adjusting screw (12).
5. Allow conveyor to run several minutes and recheck measurements.

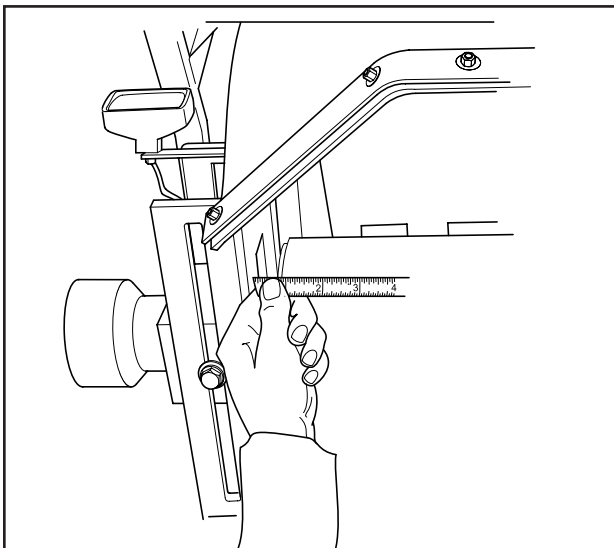


FIGURE 4-9. CENTERING MEASUREMENT

6. If belt is not centered repeat step 3 and 4. If belt appears to have moved more off center, adjust in the opposite direction.
7. If belt is now centered, tighten jam nut (7) and top and bottom cap screws (24).
8. Loosen bearing support cap screws (5) so bearing position can be changed.
9. Loosen lock nut (7) and adjust bolt (6) as necessary.
10. If belt is not centered repeat step 8 and 9. If belt appears to have moved more off center, adjust in the opposite direction.
11. If belt is now centered, tighten jam nut (7) and top and bottom cap screws (5).

CHAINS

All part item numbers in the following procedure refer to the **parts list for the CONVEYOR PADDLE ASSEMBLY** and the associated drawing in the parts manual.

The two chains for the conveyor paddle assembly must be adjusted to provide 1" of play. Perform this adjustment as follows:

1. Check the amount of play in the chains by pulling up on the center of the chain and check for approximately 1" of play. If the play is correct no adjustment is required. If the chain has too much slack proceed with step 2.
2. Loosen the nuts securing bracket and bearing.
3. Loosen the jam nut of screw .
4. On the drive side, loosen the screws securing the top and bottom of the torque hub mount .
5. Loosen the jam nut on the adjusting screw for the drive side.
6. Adjust both screws the same amount, trying to keep both shafts in line with each other and to get the 1" play required.
7. Tighten jam nuts.
8. Tighten mounting bolts.
9. Recheck the chain for approximately 1" of slack. If necessary repeat the procedure.

THROTTLE CABLE

All part item numbers in the following procedure refer to the **parts list for the ENGINE COMPONENTS** and the associated drawing in the parts manual.

The throttle cable normally will not require adjustment. If the engine RPM cannot be reduced to the idle RPM with the throttle at idle (turtle), the cable needs adjustment. The adjustment is made at the engine end of the throttle cable. Proceed as follows:

WARNING: Extreme care should be observed when performing this adjustment with the engine running.



1. Start machine and allow the machine to warm up until the engine is at normal operating temperature.
2. Set the Throttle to the idle (turtle) position and observe engine RPM on gauge. If engine idle is too high or low proceed with step 3 to adjust throttle linkage.
3. Turn engine Ignition switch to OFF to shut off the engine.
4. Open the engine access door to gain access to the throttle linkage.
5. Disconnect rod end (10) from the engine by removing the clevis pin.
6. Adjust the throttle rod end several turns.
7. Reconnect the throttle linkage to the engine
8. Restart engine and check RPM again.
9. Repeat steps 3 through 8, as necessary, to obtain the desired RPM.
10. Turn engine ignition switch to OFF to shut down the engine.
11. Tighten the jam nuts on the cable (6).
12. Reconnect the rod end to the throttle and tighten the jam nut against the rod end (10).
13. Close the engine access door.

LEVER LINKAGES

All lever linkages can be adjusted by loosening the jam nut on the rod end, then adjusting position of rod end. Be sure after making adjustments that the jam nuts are tightened against the rod ends.

REMOVAL AND INSTALLATION

SIDE MOLDBOARD CUTTING EDGE

All part item numbers in the following procedure refer to the **parts list for the MOLDBOARD II** and the associated drawing in the parts manual.

The side moldboard cutting edge needs to be replaced when worn. Replace the cutting edge as follows:

1. Raise the moldboards off the ground.

WARNING: Engine must be turned off and the wheels blocked to prevent motion when servicing the machine. Moldboard must be blocked up for safety.



WARNING: Never work under machine without blocking up moldboard.



2. Turn off engine and block the wheels to prevent movement and block up moldboard while working on the machine.
3. Clean the area around the cutting edge (5).
4. Remove the four plow bolts (12), washers (13) and nuts (14) securing the cutting edge (5) and remove the cutting edge.
5. Attach a new cutting edge (5) with the four plow bolts (12), washers (13) and nuts (14).
6. Torque nuts (14) to 210 ft-lb (285 N.m).
7. Lower moldboard and check to be sure moldboard is flat on the surface.

Section 4

MAINTENANCE



SIDE MOLDBOARD WEARPLATE

All part item numbers in the following procedure refer to the **parts list for the MOLDBOARD II** and the associated drawing in the parts manual.

The side moldboard wearplates need to be replaced when worn. Replace the wearplates as follows:

1. Raise the moldboards off the ground.

WARNING: Engine must be turned off and the wheels blocked to prevent motion when servicing the machine.



WARNING: Never work under machine without blocking up moldboard.



2. Turn off engine and block the wheels to prevent movement and block up moldboard while working on the machine.
3. Clean the area around the wearplate (4).
4. Remove the two plow bolts (12), washers (13) and nuts (14) securing the wearplate (4) and remove the wearplate.
5. Attach a new wearplate (4) with the two plow bolts (12), washers (13) and nuts (14).
6. Torque nuts (14) to 210 ft-lb (285 N.m).
7. Lower moldboard and check to be sure moldboard is flat on the surface.

SCOOP CUTTING EDGE

All part item numbers in the following procedure refer to the **parts list for the MOLDBOARD II** and the associated drawing in the parts manual.

The scoop cutting edge needs to be replaced when worn. Replace the cutting edge as follows:

1. Raise the scoop off the ground.

WARNING: Engine must be turned off and the wheels blocked to prevent motion when servicing the machine.



2. Turn off engine and block the wheels to prevent movement while working on the machine.
3. Clean the area around the cutting edge (6).
4. Remove the eight plow bolts (12), washers (13) and nuts (14) securing the cutting edge (6) and remove the cutting edge.

5. Attach a new cutting edge (6) with the eight plow bolts (12), washers (13) and nuts (14).

6. Torque nuts (14) to 210 ft-lb (285 N.m).

7. Lower scoop and check to be sure scoop is flat on the surface.

ALL PURPOSE MOLDBOARD CUTTING EDGE

WARNING: Never work under machine without blocking up moldboard.



All part item numbers in the following procedure refer to the **parts list for the MULTIPURPOSE MOLDBOARD** and the associated drawing in the parts manual.

The all purpose moldboard cutting edge needs to be replaced when worn. Replace the cutting edge as follows:

1. Raise the moldboard the ground.

WARNING: Engine must be turned off and the wheels blocked to prevent motion when servicing the machine.



2. Turn off engine and block the wheels to prevent movement while working on the machine.
3. Clean the area around the cutting edge (2).
4. Remove the eight plow bolts (3) and washers (4) securing the cutting edge (2) to the multipurpose moldboard (1) and remove the cutting edge (2).
5. Attach a new cutting edge (2) with the eight plow bolts (3) and washers (4).
6. Torque plow bolts (3) to 105 ft-lb (145 N.m).
7. Lower moldboard and check to be sure moldboard is flat on the surface.

CONVEYOR PADDLE BLADE

All part item numbers in the following procedure refer to the **parts list for the CONVEYOR PADDLE ASSEMBLY** and the associated drawing in the parts manual.

The paddle blade needs to be replaced when damaged. Replace the paddle blade as follows:

WARNING: Engine must be turned off and the wheels blocked to prevent motion when servicing the machine.



1. Turn off engine and block the wheels to prevent movement while working on the machine.
2. Clean the area around the paddle blade (6).
3. Remove the four plow bolts and nuts securing the paddle blade (6) to the chain assembly(5) and remove the paddle blade (6).
4. Attach a new paddle blade (6) with the four plow bolts and nuts.
5. Torque plow bolts to 150 ft-lb (205 N.m).

ENGINE DRIVE BELT

The engine drive belt should be replaced whenever the belt appears frayed or cracked. This belt drives the alternator as well as the cooling fan. Tension on the belt is maintained by a spring-loaded tensioner. To replace the belt proceed as follows:

Removal

WARNING: Engine must be turned off and the wheels blocked to prevent motion when servicing the machine.



1. Turn off engine and block the wheels to prevent movement while working on the machine.

NOTE: The spring-loaded belt tensioner must be pivoted away from the drive belt. Pivoting in the wrong direction can damage the tensioner.

2. Using a 3/8-inch square drive, lift the tensioner to relieve pressure on the belt and remove the belt.

Installation

1. Using a 3/8-inch square drive, lift the tensioner and hold.

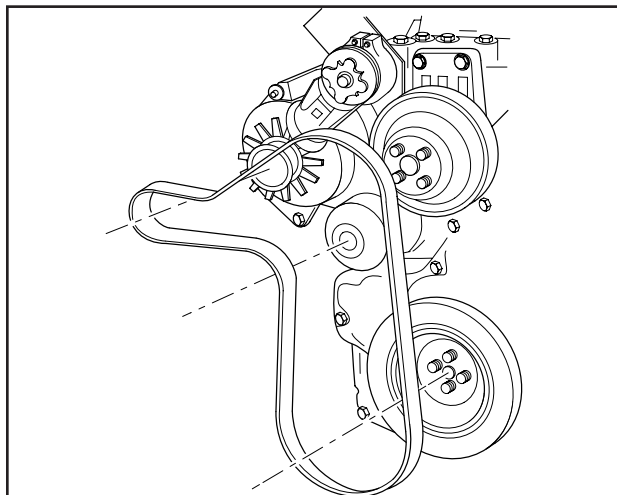


FIGURE 4-14. DRIVE BELT

2. Install the drive belt as shown in Figure 4-14.
3. Release the tensioner being sure the tensioner is properly pressing against the belt.

CHARGE FILTER

There are two charge filters, one located on each side of the machine. These filters should be changed every 1,000 hours when the hydraulic fluid is changed.

HYDRAULIC CYLINDER REPLACEMENT

Scoop Tilt Cylinder

All part item numbers in the following procedure refer to the **parts list for the MOLDBOARD II** and the associated drawing in the parts manual.

WARNING: Before breaking any circuit connection, make certain that power is off and the system pressure has been released. Lower all vertical cylinders, discharge any accumulators, and block any load whose movement could generate pressure.



Removal

NOTE: Plug and cap all lines and ports when disconnected to prevent entry of dirt into the system.

1. Place a container under the cylinder to catch any hydraulic oil when the lines are disconnected.
2. Disconnect and label the two hoses connected to cylinder fittings.
3. Remove the two clevis pins (24) and cotter pins, securing cylinder (21).
4. Remove cylinder from machine.

Installation

1. Install the two clevis pins (24) and cotter pins to secure the cylinder (21).
2. Connect the two hydraulic hoses.
3. Add hydraulic oil, if necessary.
4. Start the engine and operate the cylinder to check for leaks and for proper operation.
5. Stop the engine.

Section 4

MAINTENANCE



Moldboard Lift Cylinder

All part item numbers in the following procedure refer to the **parts list for the MOLDBOARD II** and the associated drawing in the parts manual.

WARNING: Before breaking any circuit connection, make certain that power is off and the system pressure has been released. Lower all vertical cylinders, discharge any accumulators, and block any load whose movement could generate pressure.



Removal

NOTE: Plug and cap all lines and ports when disconnected to prevent entry of dirt into the system.

1. Place a container under the cylinder to catch any hydraulic oil when the lines are disconnected.
2. Disconnect and label the two hoses connected to cylinder fittings.
3. Remove the two clevis pins and cotter pins, securing cylinder (23).
4. Remove cylinder from machine.

Installation

1. Install the two clevis pins and cotter pins to secure the cylinder (23).
2. Connect the two hydraulic hoses.
3. Add hydraulic oil, if necessary.
4. Start the engine and operate the cylinder to check for leaks and for proper operation.
5. Stop the engine.

Steering Hydraulic Cylinder

All part item numbers in the following procedure refer to the **parts list for the FRONT AXLE ASSEMBLY** and the associated drawing in the parts manual.

WARNING: Before breaking any circuit connection, make certain that power is off and the system pressure has been released. Lower all vertical cylinders, discharge any accumulators, and block any load whose movement could generate pressure.



Removal

NOTE: Plug and cap all lines and ports when disconnected to prevent entry of dirt into the system.

1. Place a container under the cylinder (5) to catch any hydraulic oil when the lines are disconnected.
2. Disconnect and label the two hoses connected to cylinder fittings.
3. Remove the two nuts and washers securing the two tie rod ends (8) to the front axle and the spindle.
4. Remove cylinder from machine.
5. Remove tie rod ends (8) from cylinder (5).

Installation

1. Install tie rod ends (8) and jam nuts to cylinder (5).
2. Attach the two tie rod ends (8) to the front axle and the spindle by adjusting tie rod ends and securing tie rod end positions with the jam nuts.
3. Connect the two hydraulic hoses.
4. Add hydraulic oil, if necessary.
5. Start the engine and operate the cylinder to check for leaks and for proper operation.
6. Stop the engine.

Conveyor Lift Cylinder

All part item numbers in the following procedure refer to the **parts list for the CONVEYOR ASSEMBLY** and the associated drawing in the parts manual.

WARNING: Before breaking any circuit connection, make certain that power is off and the system pressure has been released. Lower all vertical cylinders, discharge any accumulators, and block any load whose movement could generate pressure.



Removal

NOTE: Plug and cap all lines and ports when disconnected to prevent entry of dirt into the system.

1. Place a container under the cylinders (5) to catch any hydraulic oil when the lines are disconnected.
2. Disconnect and label the two hoses connected to cylinder fittings.
3. Remove the two clevis pins (14) and clip pins (15) attaching the cylinder (5) to the frame and the conveyor.
4. Remove cylinder from machine.

Installation

1. Install the two clevis pins (14) and clip pins (15) to secure the cylinder.
2. Connect the two hydraulic hoses.
3. Add hydraulic oil, if necessary.
4. Start the engine and operate the cylinder to check for leaks and for proper operation.
5. Stop the engine.

Discharge Baffle Hydraulic Cylinder

All part item numbers in the following procedure refer to the **parts list for the HEAD PULLEY ASSEMBLY** and the associated drawing in the parts manual.

WARNING: Before breaking any circuit connection, make certain that power is off and the system pressure has been released. Lower all vertical cylinders, discharge any accumulators, and block any load whose movement could generate pressure.



Removal

NOTE: Plug and cap all lines and ports when disconnected to prevent entry of dirt into the system.

1. Place a container under the cylinders (1) to catch any hydraulic oil when the lines are disconnected.
2. Disconnect and label the two hoses connected to cylinder fittings.
3. Remove the clevis pins (2) and clip pin

attaching the cylinder base.

4. Remove the clevis pins (3) and clip pin attaching the cylinder rod.
5. Remove cylinder from machine.

Installation

1. Install the clevis pins (2) and clip pin attaching the cylinder base.
2. Install the clevis pins (3) and clip pin attaching the cylinder rod.
3. Connect the two hydraulic hoses.
4. Add hydraulic oil, if necessary.
5. Start the engine and operate the cylinder to check for leaks and for proper operation.
6. Stop the engine.

FRONT TIRE REPLACEMENT

All part item numbers in the following procedure refer to the **parts list for the FRONT AXLE ASSEMBLY** and the associated drawing in the parts manual.

WARNING: The rim and tire assemblies for the front wheels are very heavy and must be supported when lug nuts are removed.



Removal

WARNING: Engine must be turned off and the wheels blocked to prevent motion when servicing the machine.



1. Turn off engine and block the wheels to prevent movement while working on the machine.
2. Release any air that remains in the tire.
3. Use a jack or hoist to lift the side of the machine so that the wheel assembly (31) to be removed just clears the floor.
4. Place supports under the machine to keep tire clear of the floor.
5. Attach a sling or other support to the tire.
6. Remove the eight lug nuts from the wheel and carefully remove the wheel from the machine.
7. Using standard tire removal tools, remove the tire from the wheel.

Section 4

MAINTENANCE



Installation

1. Install a new tire on the wheel.
2. Inflate the tire to 90 PSI.
3. Using a sling or other support for the wheel assembly (31), align the mounting holes with the studs on the hub (23).
4. Install the eight lug nuts on the studs to hand tightness.
5. Torque the lug nuts in a diagonal pattern to 300 ft-lb (407 N.m).
6. Lower the tire to the ground.
7. Remove jack or supports from machine.

REAR TIRE REPLACEMENT

All part item numbers in the following procedure refer to the **parts list for the REAR END ASSEMBLY** and the associated drawing in the parts manual.

WARNING: The rim and tire assemblies for the rear wheels are very heavy and must be supported when lug nuts are removed.



Removal

WARNING: Engine must be turned off and the wheels blocked to prevent motion when servicing the machine.



1. Turn off engine and block the wheels to prevent movement while working on the machine.
2. Release any air that remains in the tire.
3. Use a jack or hoist to lift the side of the machine so that the wheel assembly (16 and 17) to be removed just clears the floor.
4. Place supports under the machine to keep tire clear of the floor.
5. Attach a sling or other support to the tire.
6. Remove the twelve lug nuts from the wheel and carefully remove the wheel from the machine.
7. Using standard tire removal tools, remove the tire from the wheel.

Installation

1. Install a new tire (17) on the wheel (16).
2. Inflate the tire to 45 PSI.

3. Using a sling or other support for the wheel assembly (16 and 17), align the mounting holes with the hub studs on the rear axle (1).
4. Install the twelve lug nuts on the studs to hand tightness.
5. Torque the lug nuts in a diagonal pattern to 500 ft-lb (678 N.m).
6. Lower the tire to the ground.
7. Remove jack or supports from machine.

CONVEYOR HEAD PULLEY BEARING

All part item numbers in the following procedure refer to the **parts list for the HEAD PULLEY ASSEMBLY** and the associated drawing in the parts manual.

WARNING: This procedure should only be performed with the equipment not operating.



Removal

1. Check that machine is turned off and key is removed from the ignition.
2. Remove the two caps screws (5) and the associated hardware.
3. Slide the bearing (4) off the shaft (15) and remove bearing from machine.

Installation

1. Clean mounting surface.
2. Slide new bearing (4) onto shaft (15).
3. Install front cap screw (5) through bearing mount and hole in frame.
4. Attach nut and washers to cap screw (5) but do not tighten at this time.
5. Install rear cap screw through a washer, then through adjusting bolt (6) and the mounting hole in the frame.
6. Attach nut and washers to cap screw (5).
7. Torque both nuts to 375 ft-lb (508 N.m).
8. Lubricate bearing.

MUFFLER

All part item numbers in the following procedure refer to the **parts list for the MUFFLER ASSEMBLY** and the associated drawing in the parts manual.

WARNING: This procedure should only be performed with the equipment not operating and cooled down. When the machine has been running the muffler will be very hot.



The muffler is mounted to a plate with clamps (9) and has a heat shield (5) on the outside. To replace the muffler proceed as follows:

Removal

1. Be sure engine is off and has had sufficient time for the muffler assembly to cool down.
2. Loosen clamp (1) and disconnect exhaust flex pipe (2).
3. Loosen clamp (6) and remove exhaust stack (7) with rain cap (8).
4. Remove cap screws (14), washer (10), spacer tube (4), washer (10) and nut (13).
5. Slide muffler (3) out of plate with clamps (9).

Installation

1. Slide muffler (3) into plate with clamps (9).
2. Position muffler so that outlet is at right pointing up and input is at left pointing down.
3. Slide elbow with flex tube (2) on muffler inlet and secure with clamp (1).
4. Attach muffler (3) and heat shield (5) using cap screws (14) and washers (10) on outside of heatshield and spacers (4) between heat shield and clamp (9).
5. Secure muffler in clamp using washers (10) and nuts (13).
6. Torque nuts (13) to 31 ft-lb (42 N•m).
7. Attach exhaust stack pipe (7) to muffler with clamp (6).
8. Install rain cap (8) on top of exhaust stack pipe (7).

RADIATOR HOSES AND RADIATOR

All part item numbers in the following procedure refer to the **parts list for the GRILLE AND RADIATOR ASSEMBLY** and the associated drawing in the parts manual.

WARNING: This procedure should only be performed with the equipment not operating.



1. Turn off ignition, remove key, and allow the engine to cool down before proceeding.

WARNING: Do not remove the radiator cap while the engine is still hot. The radiator is under pressure and the hot water can cause serious injury to all persons around.



2. After machine has cooled down, remove the radiator cap (5).
3. Drain radiator into a suitable container large enough to hold the radiator contents, 5.5 Gal (20.8 Liters).
4. To remove upper hose (4), loosen the two hose clamps and disconnect the hose. If clamps are not damaged, retain for installation.
5. To remove lower hose (3), loosen the two hose clamps (10) and disconnect the hose. If clamps are not damaged, retain for installation.
6. Remove radiator cap (5).
7. Remove overflow hose (6) by removing clamp (11).
8. Remove the hardware attaching the radiator (13) to grille and radiator support (9).
9. Remove radiator.

CONVEYOR BELT

All part item numbers in the following procedure refer to the **parts list for the TAIL PULLEY GROUP** and the associated drawing in the parts manual.

CAUTION: The conveyor belt weights approximately 400 lbs. Belt replacement will require more than one person.



When installing a new belt, the old belt should be used to pull the new belt onto the machine. For belt replacement proceed as follow:

1. Run the existing belt (1) so that the belt joint is on the top surface near the head pulley group.
2. Remove belt lacing pin (2) to disengage the belt ends.
3. Attach one end of the new belt to the top of the old belt and attach the belts together with the lacing pin (2).

Section 4

MAINTENANCE



4. Slowly run the belt (1) so that the new belt is pulled around the pulleys back to the tail pulley group. At the same time pull the old belt away.
5. Stop the machine when the end of the new belt is on top of the tail pulley group.
6. Remove lacing pin (2) and move old belt clear of the area.
7. Secure the two ends of the new belt together with lacing pin (2).
8. Check that new belt is properly adjusted and stays centered. If belt requires adjustment, refer to the adjustment procedure in this section.

ELECTRICAL AND HYDRAULIC SCHEMATICS

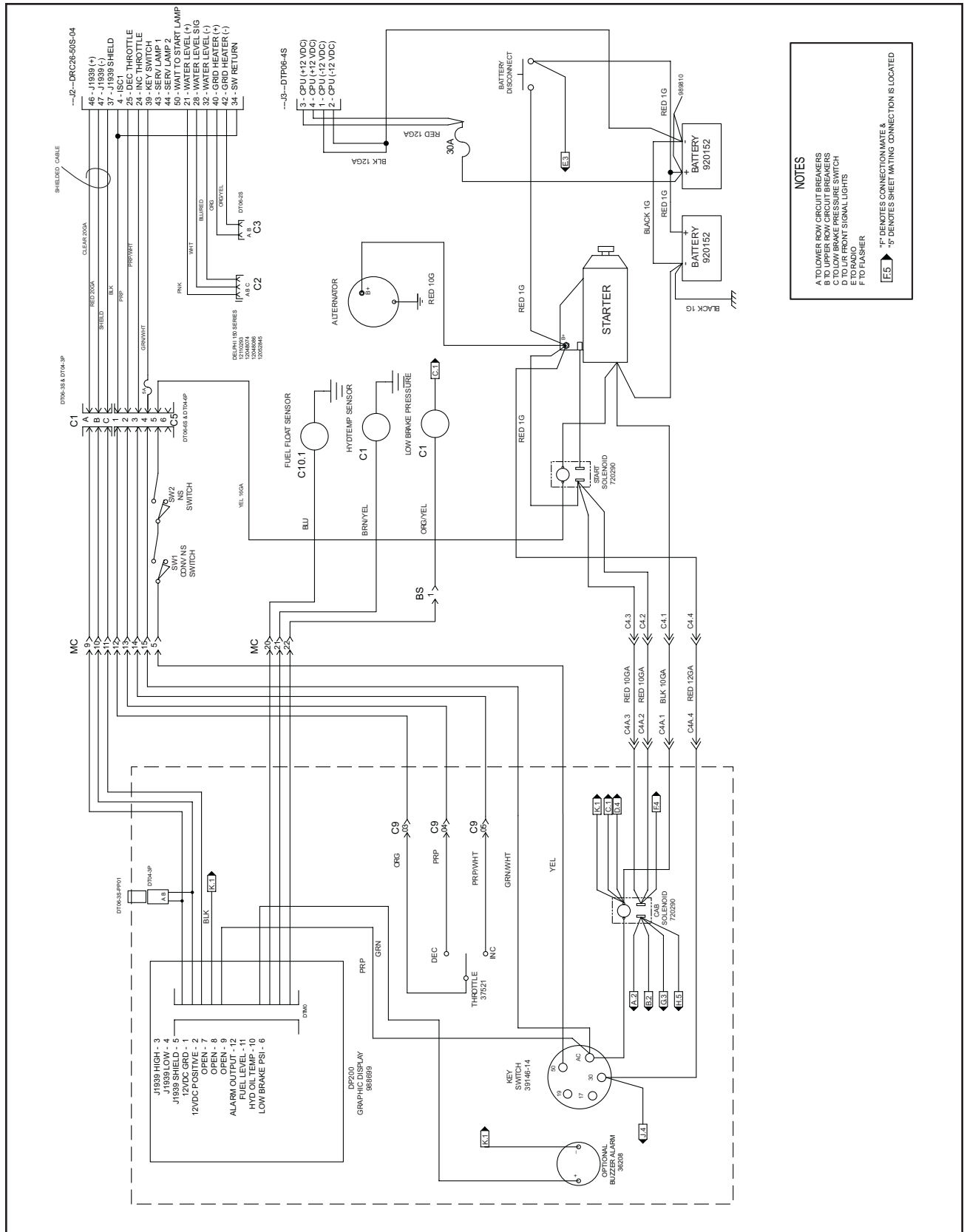


FIGURE 4-15. ELECTRIC TIER 3 (1 OF 5)

Section 4 MAINTENANCE

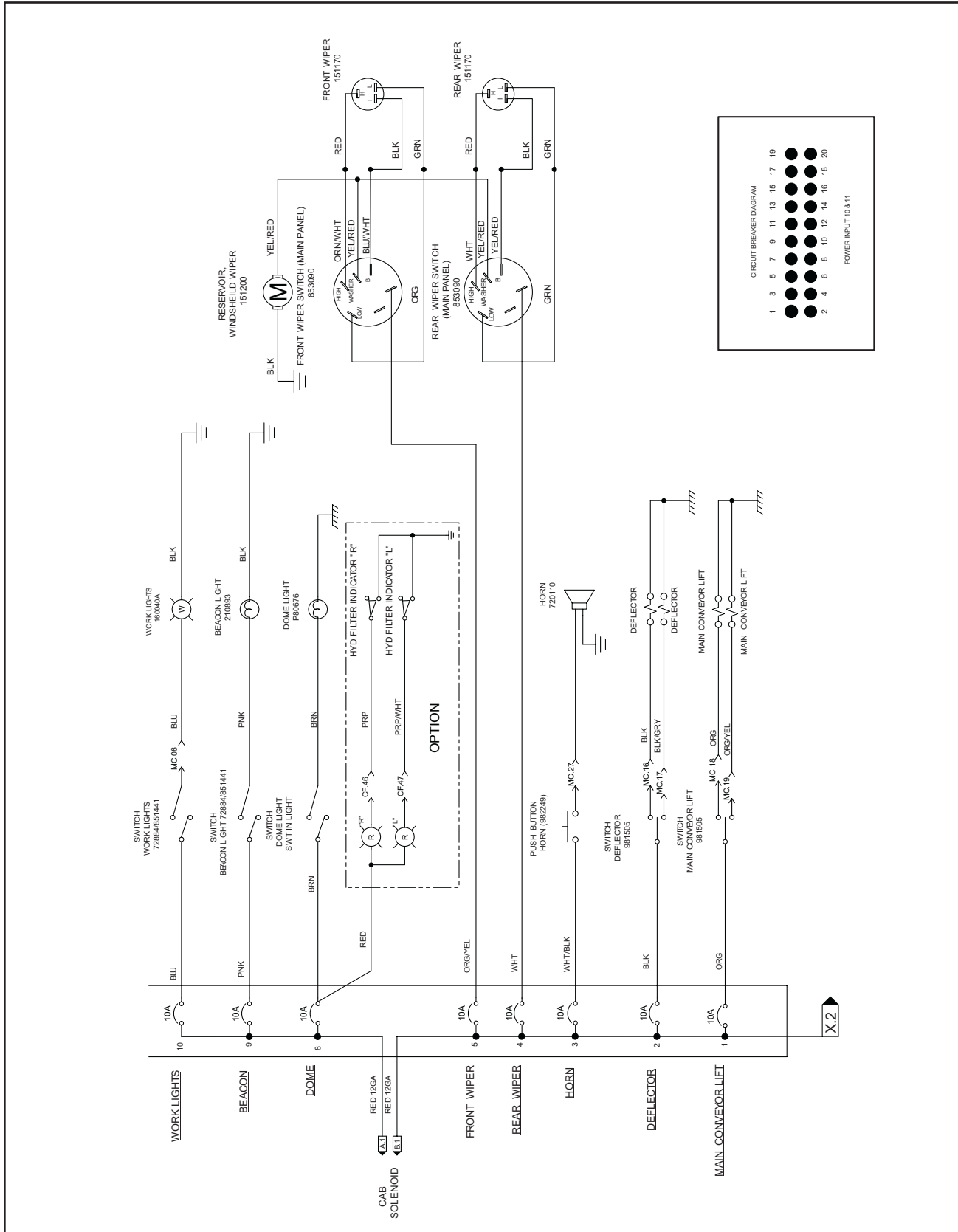


FIGURE 4-16. FUSE, CAB PANEL (2 OF 5)

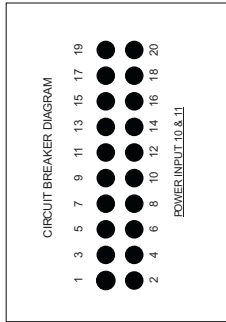
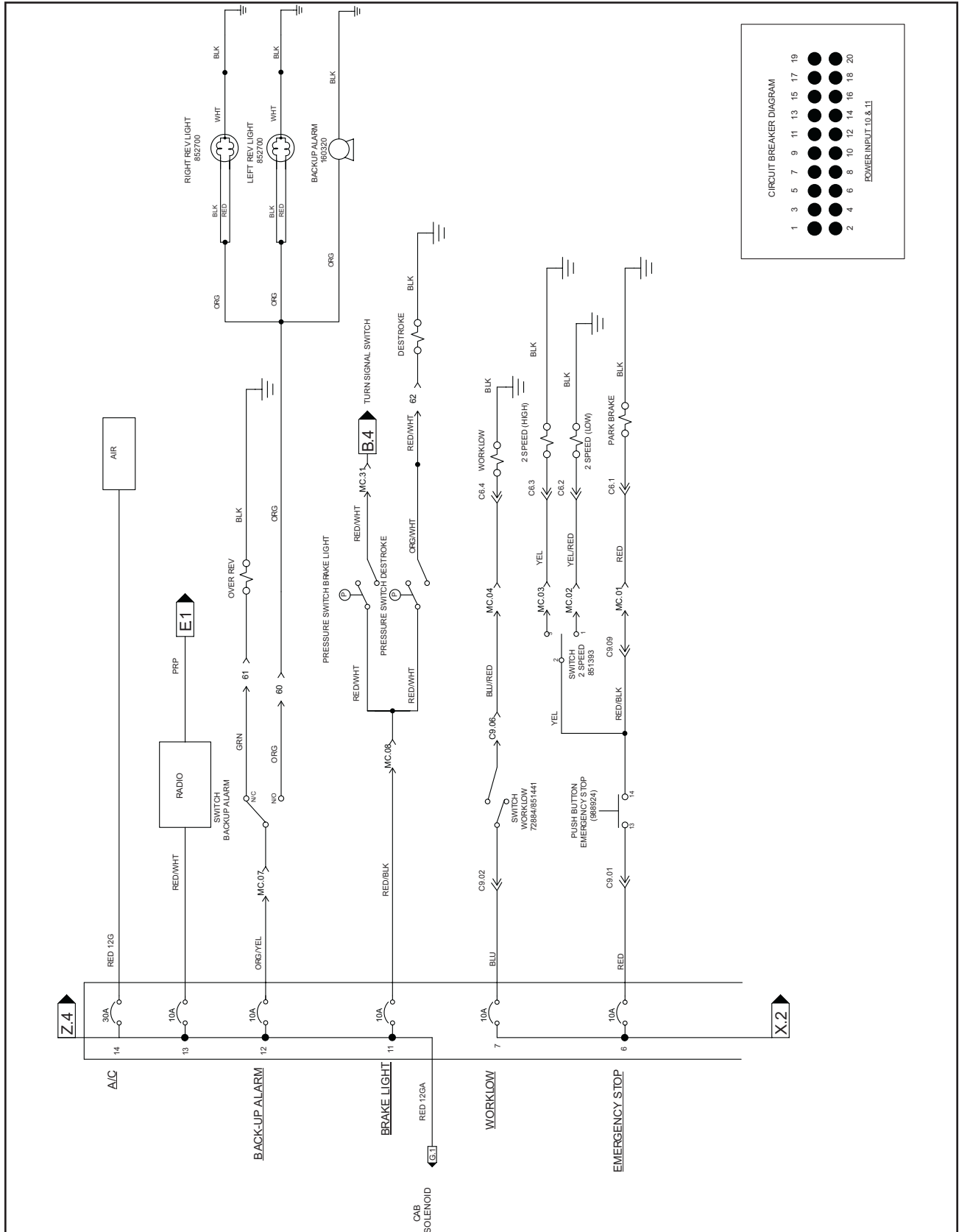


FIGURE 4-17. FUSE, CAB PANEL (3 OF 5)

Section 4 MAINTENANCE

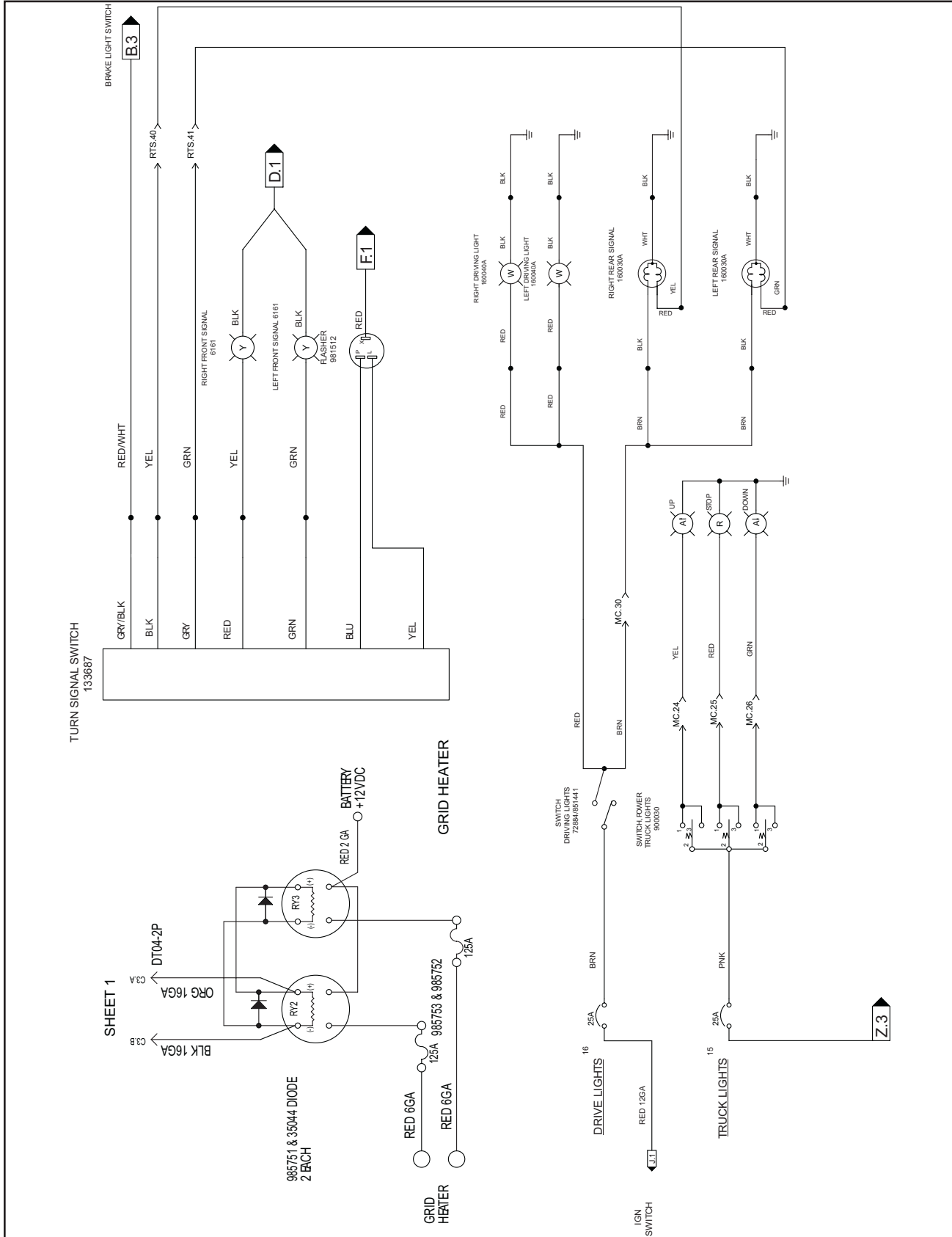


FIGURE 4-18. LIGHTS & SIGNAL (4 OF 5)

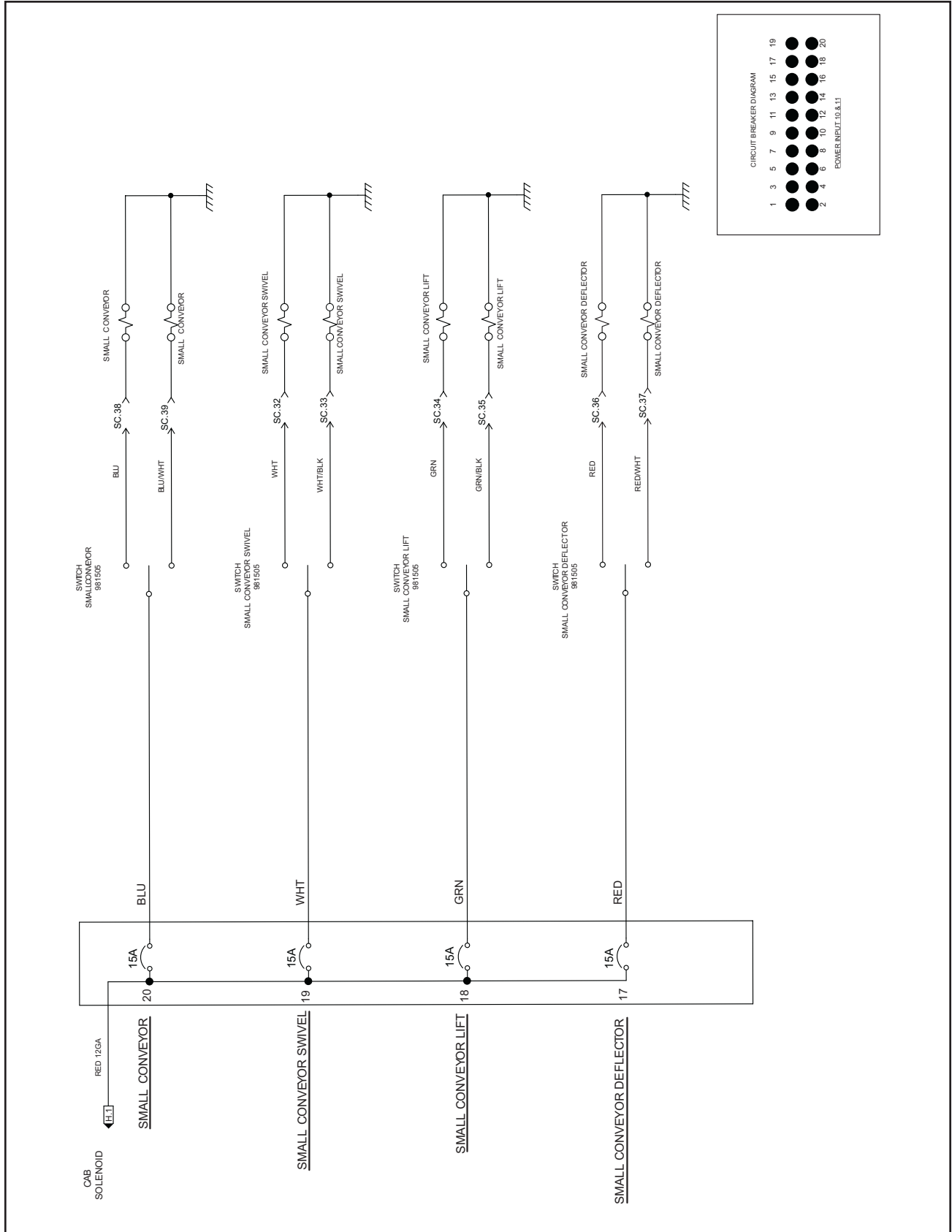


FIGURE 4-19. SWIVEL OPTION (5 OF 5)

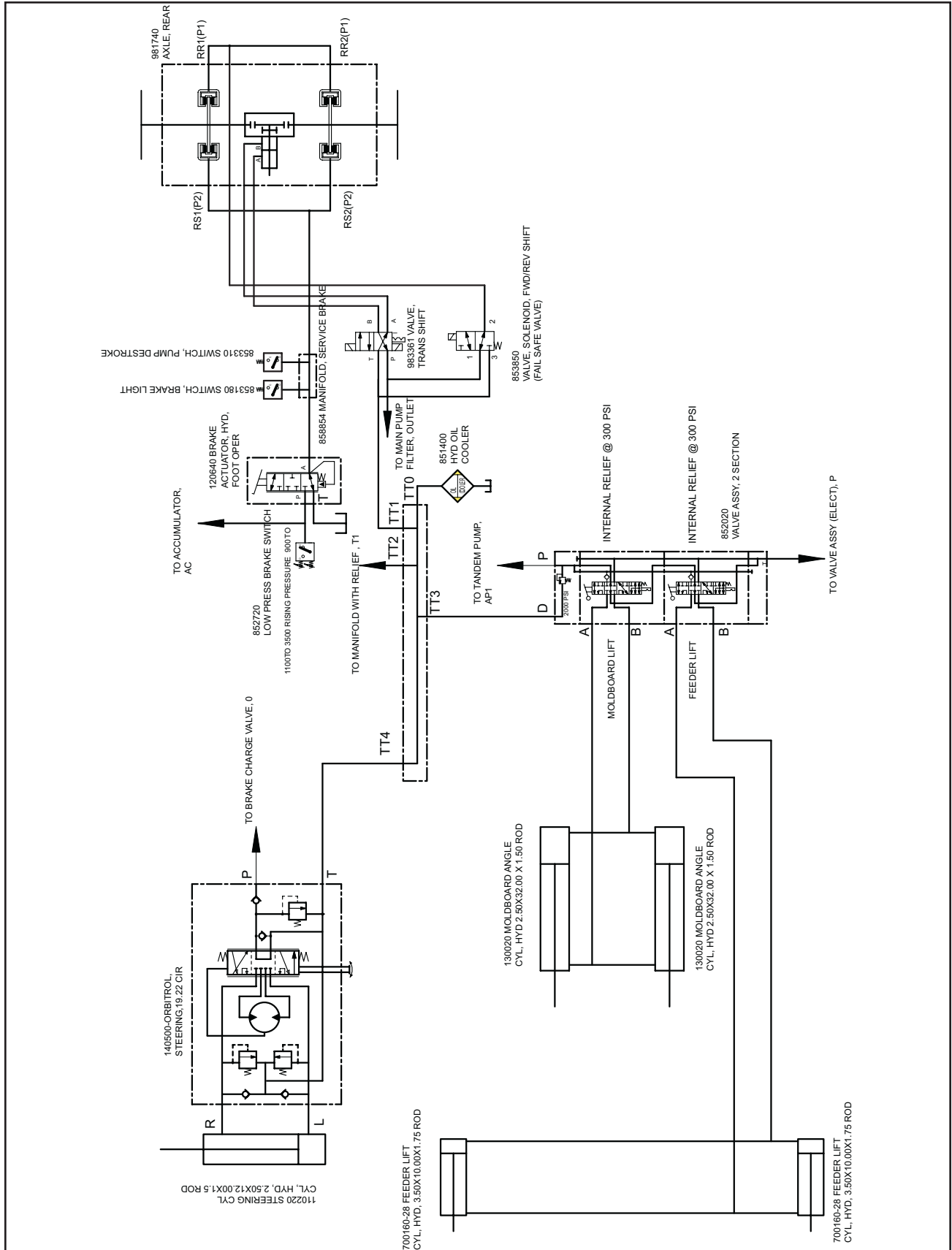


FIGURE 4-21. HYDRAULIC HOSE (2 OF 3)

Section 4 MAINTENANCE

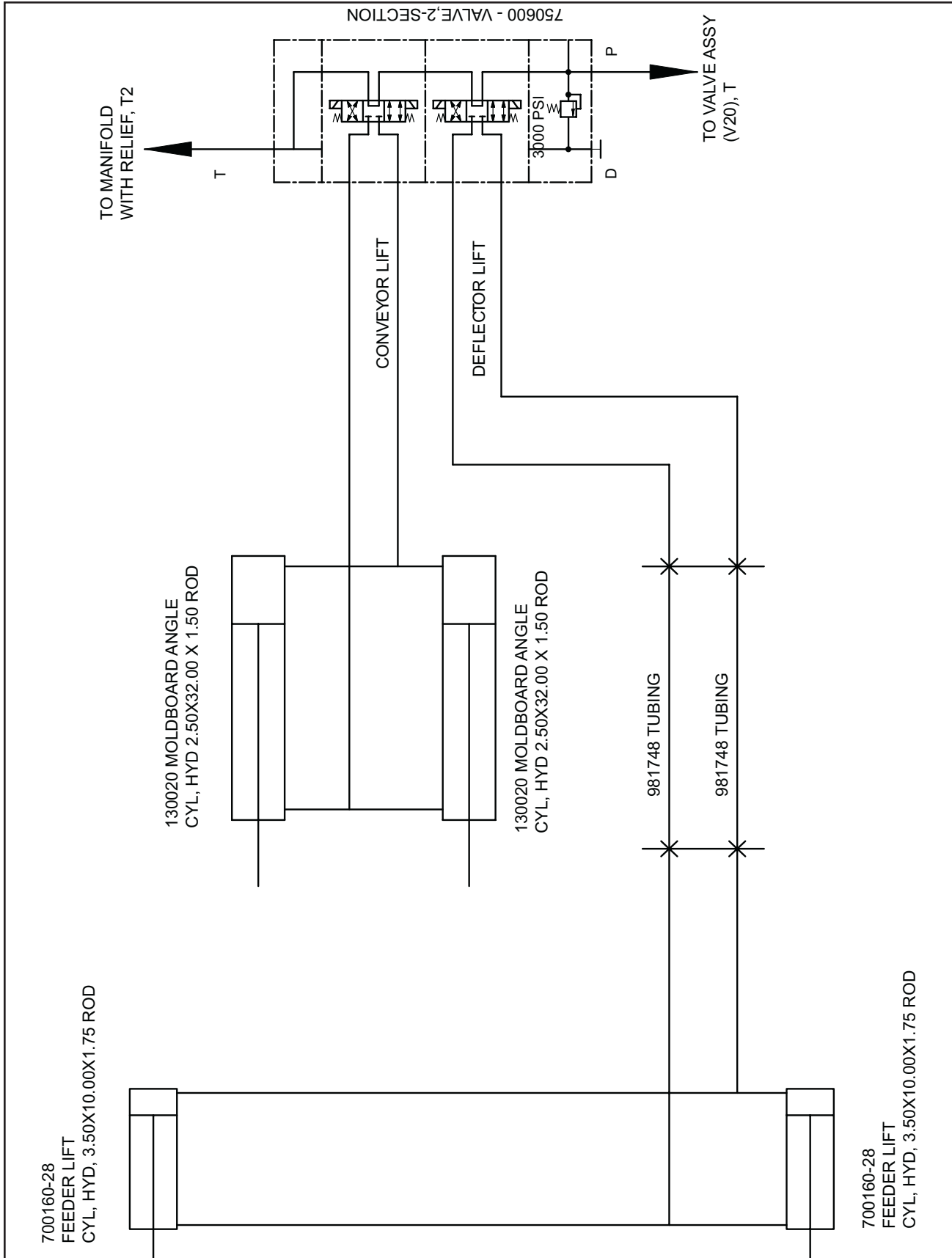


FIGURE 4-22. HYDRAULIC HOSE (3 OF 3)

Section 4 MAINTENANCE

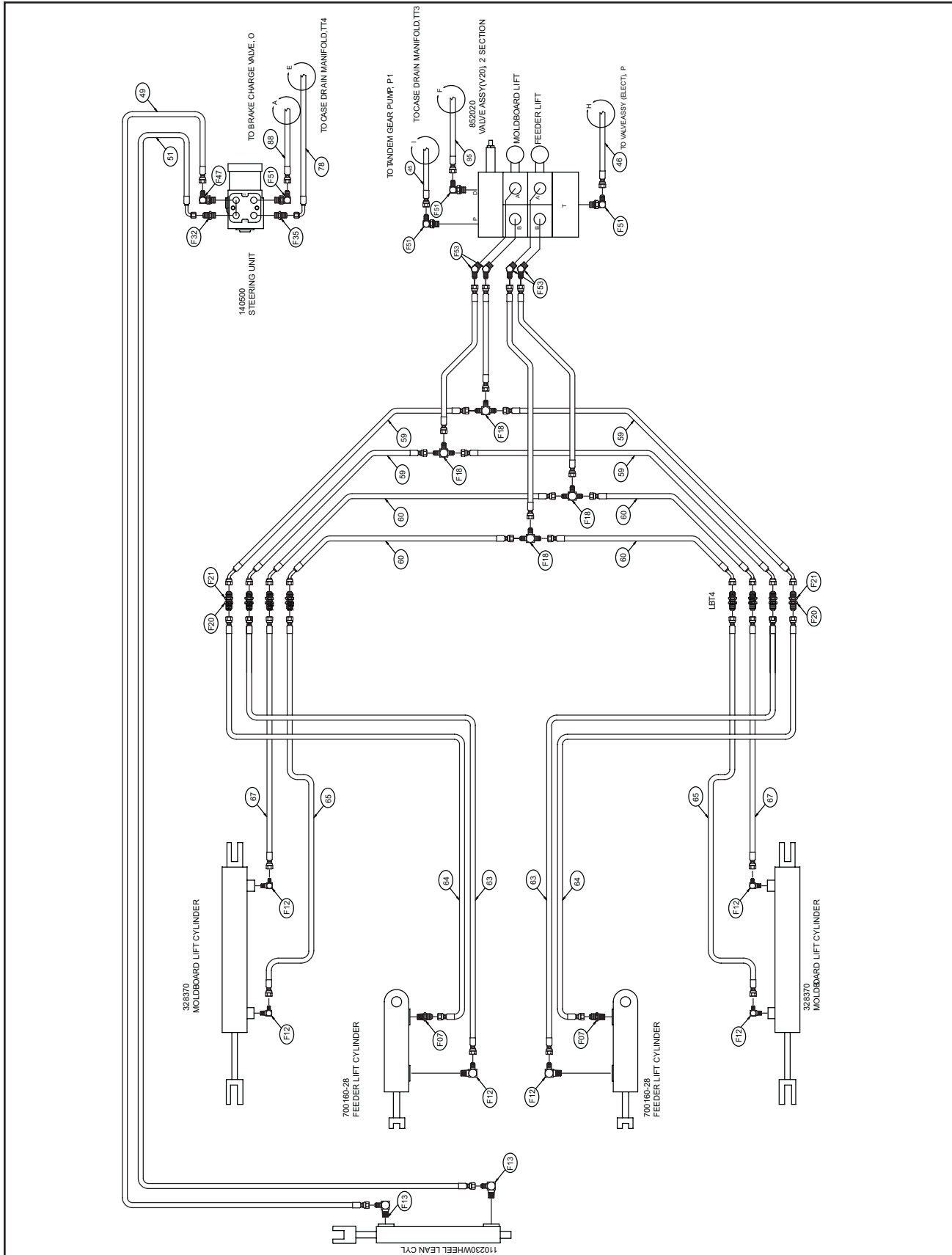


FIGURE 4-24. HYDRAULIC HOSE (2 OF 3)

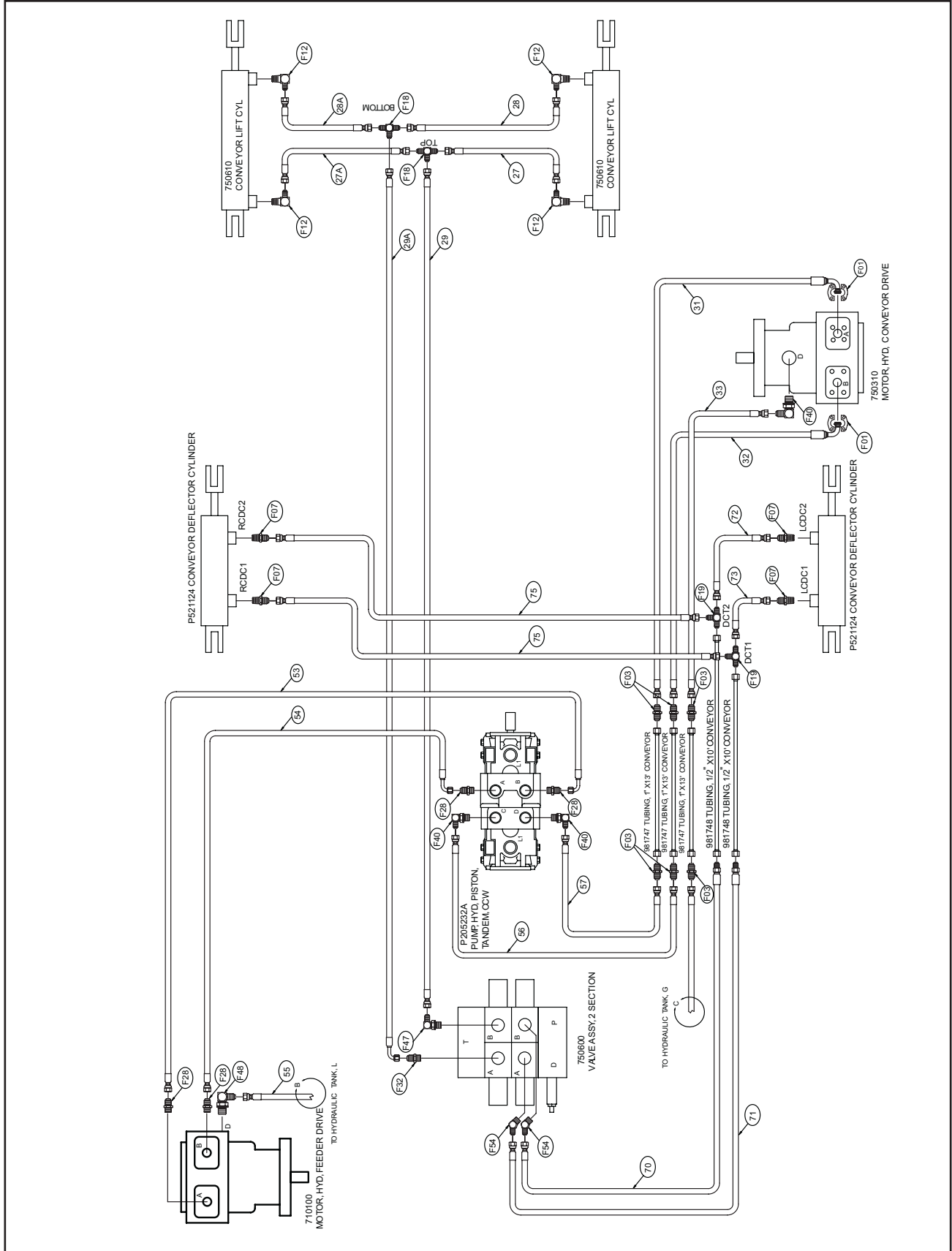


FIGURE 4-25. HYDRAULIC HOSE (3 OF 3)

Section 4 MAINTENANCE



TROUBLESHOOTING

GENERAL

The Troubleshooting Chart is based on identifying a symptom, identifying the probable causes, and identifying the remedy for the indicated symptom.

The causes listed are the most probable. If these causes do not locate the problem a more detailed analysis is required.

TROUBLESHOOTING CHART

| SYMPTOM | CAUSE | REMEDY |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Engine won't turn over | Battery low Ignition switch defective Controls not in Neutral Engine ground corroded | Check batteries Check ignition switch Check safety neutral switches Check engine ground wire See engine manual |
| Engine won't start- "Engine turns over" | Low fuel level Contaminated fuel Fuel flow cutoff | Check fuel in tank Drain fuel tank and refill Check fuel cutoff Check power to fuel cutoff See engine manual |
| Loader won't move | Hydraulic fluid level low Drive cable not properly attached Parking brake not released Drive motor defective Hydraulic pump pressure too low Pump destroke valve defective | Check hydraulic oil level Check to see if drive cables are attached properly Release parking brake Check drive motor Check hydraulic pump pressure Check pump destroke valve |
| Hydraulic control valve doesn't function | Hydraulic oil level too low Relief valve stuck Suction filter clogged | Check hydraulic oil level Check relief valve to see if stuck open Check hydraulic suction filter |

TROUBLESHOOTING CHART (CONTINUED)

| SYMPTOM | CAUSE | REMEDY |
|-------------------------|------------------------------------------------|-----------------------------------------------------|
| No parking brakes | Parking brake switch defective | Check parking brake switch |
| | Parking brake in wrong position | Check parking brake switch for proper position |
| | Brake circuit not complete | Check wire connections |
| | Solenoid valve defective | Check solenoid valve |
| | Improper pad adjustment | Check pad adjustment (0.012) with engine running |
| Feeder won't turn | Control cable defective or improperly adjusted | Check control cable to make sure ends are connected |
| | Hydraulic fluid level low | Check hydraulic fluid level |
| | Hydraulic filter clogged | Check hydraulic fluid filter |
| | Obstruction blocking chains | Visually inspect blades and chains for obstructions |
| | Hydraulic Pressure Low At Motor | Check pressure at motor |
| Conveyor belt won't run | Control cable defective or improperly adjusted | Check control cable to make sure ends are connected |
| | Hydraulic fluid level low | Check hydraulic fluid level |
| | Hydraulic filter clogged | Check hydraulic fluid filter |
| No foot pedal brakes | Insufficient pressure in brake system | Check pressure at caliper (1700 PSI) |
| | Pressure switch defective | Check charge valve |

Section 4 MAINTENANCE



NOTES



Section 5 ILLUSTRATED PARTS LIST

| TABLE OF CONTENTS | PAGE |
|-------------------------------------------|---------|
| FIG. 1 MOLDBOARD II | .IPL-2 |
| FIG. 2 MULTIPURPOSE MOLD BOARD | .IPL-4 |
| FIG. 3 CONVEYOR PADDLE ASSEMBLY | .IPL-6 |
| FIG. 4 FRONT AXLE ASSEMBLY | .IPL-8 |
| FIG. 5 MAIN FRAME | .IPL-10 |
| FIG. 6 TAIL PULLEY GROUP | .IPL-12 |
| FIG. 7 CONVEYOR ASSEMBLY | .IPL-14 |
| FIG. 8 HEAD PULLEY ASSEMBLY | .IPL-16 |
| FIG. 9 CAB ASSEMBLY | .IPL-18 |
| FIG. 10 CAB DOOR | .IPL-20 |
| FIG. 11 STEERING WHEEL AND CAB COMPONENTS | .IPL-22 |
| FIG. 12A CONTROLS | .IPL-24 |
| FIG. 12B CONTROLS | .IPL-26 |
| FIG. 13 ENGINE AND PUMPS | .IPL-28 |
| FIG. 14 ENGINE COMPONENTS | .IPL-30 |
| FIG. 15 HOOD AND ENGINE ACCESS PANELS | .IPL-32 |
| FIG. 16 MUFFLER ASSEMBLY | .IPL-34 |
| FIG. 17 AIR CLEANER ASSEMBLY | .IPL-36 |
| FIG. 18 GRILLE AND RADIATOR ASSEMBLY | .IPL-38 |
| FIG. 19 REAR END ASSEMBLY | .IPL-40 |
| FIG. 20 GEAR BOX | .IPL-42 |
| FIG. 21 HUB REDUCTION | .IPL-46 |
| FIG. 22 SWIVEL MOUNT ASSEMBLY | .IPL-48 |
| FIG. 23 REAR SWIVEL ASSEMBLY | .IPL-50 |
| FIG. 24 DEFLECTOR ASSEMBLY | .IPL-52 |
| INDEX OF PARTS BY NAME | .IPL-54 |

Section 5 ILLUSTRATED PARTS LIST

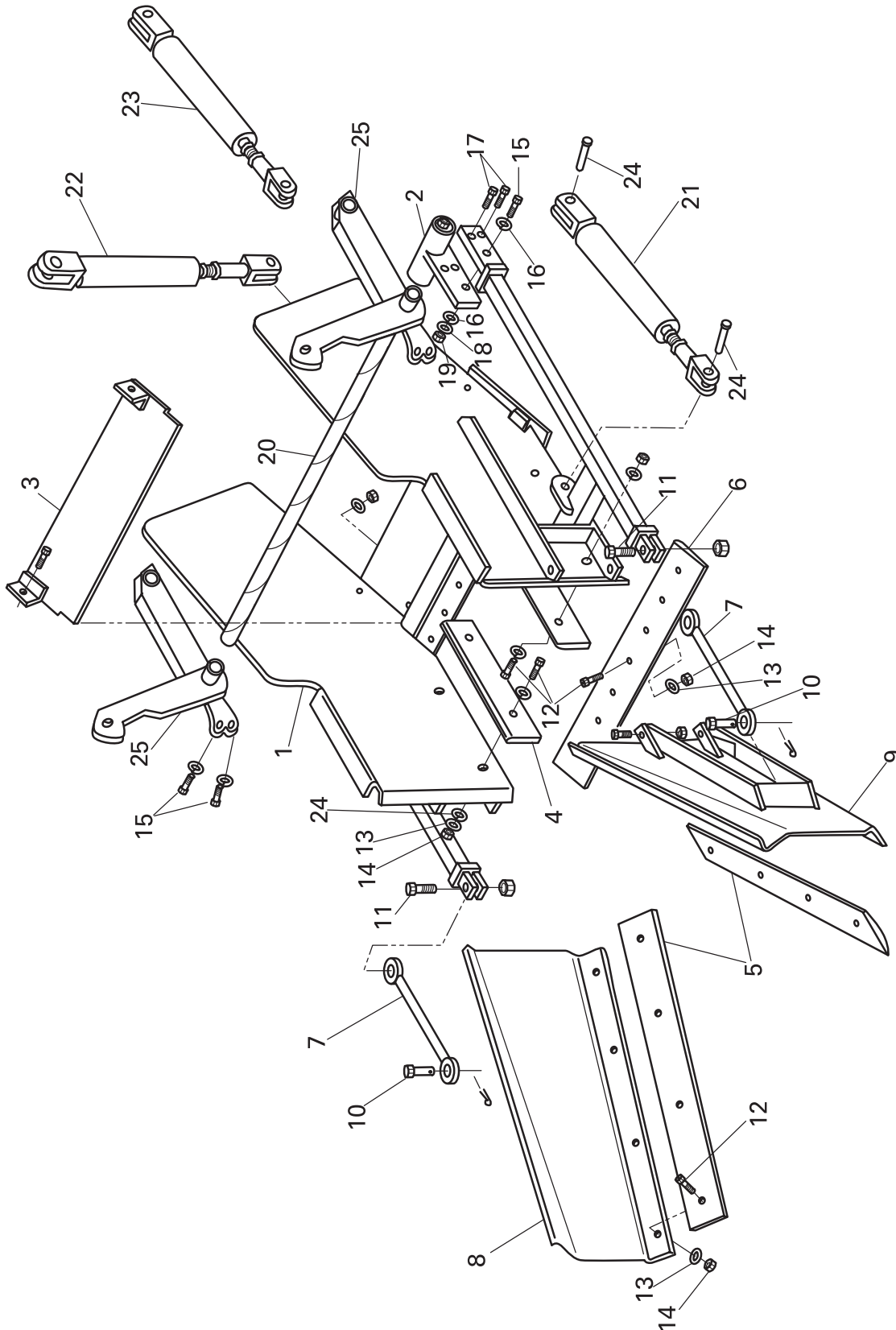


FIGURE 1. MOLD BOARD II



Section 5 ILLUSTRATED PARTS LIST

FIGURE 1. MOLD BOARD II

| FIG ITEM | PART NUMBER | NOMENCLATURE 123456 | UNITS PER ASSY |
|-------------|----------------|-------------------------------------------------|----------------------|
| 1 | 750505 | MOLDBOARD ASSEMBLY | 1 |
| 2 | 700131 | PIVOT, MOLDBOARD | 2 |
| 3 | 750506 | PLATE, TRANSITION (USED ON OLDER MACHINES) | 1 |
| *4 | 750507 | WEAR PLATE, 3000 FEEDER LOWER FRAME SQUARE HOLE | 2 |
| *5 | 750508 | CUTTING EDGE, 2800 / 3000 SIDE MOLDBOARD | 2 |
| *6 | 750509 | CUTTING EDGE, SCOOP (2800) | 1 |
| *7 | 750510 | STABILIZER BAR | 2 |
| 8 | 750511 | WING, 3000 RH MOLDBOARD | 1 |
| 9 | 750512 | WING, 3000 LH MOLDBOARD | 1 |
| 10 | 855192 | SCOOP HOLDER ROD PIN | A/R |
| 11 | 102-917-1A | CAP SCREW, 1"-8 X 4 HEX | A/R |
| 12 | 130220 | PLOW BOLT, 5/8"-11 x 2 | A/R |
| 13 | 118-7 | WASHER, 5/8" LOCK | A/R |
| 14 | 116-7 | NUT, 5/8"-11 HEX | A/R |
| 15 | 102-713-1A | CAP SCREW, 3/4"-10 X 3 HEX | A/R |
| 16 | 119-8 | WASHER, 3/4" SAE FLAT | A/R |
| 17 | 102-715-1A | CAP SCREW, 3/4"-10 X 3-1/2 HEX | A/R |
| 18 | 118-8 | WASHER, 3/4" LOCK | A/R |
| 19 | 116-8 | NUT, 3/4"-10 HEX | A/R |
| 20 | 854958 | SHAFT, MOLDBOARD ATTACHMENT | 1 |
| 21 | 328370 | CYL.HYD. MOLDBOARD LIFT | 2 |
| 22 | 750635 | FEEDER SUPPORT ASSEMBLY | 2 |
| 23 | 700160-28 | CYLINDER, HYD. 3.5OX10.00 1.75 ROD | 2 |
| 24 | 210060 | PIN, CLEVIS 1.00X2.625 W1.5HD | 4 |
| 25A | 981438L | CONVEYOR LIFT PIVOT & FEEDER LIFT STABILIZER | |
| 25B | 981438R | CONVEYOR LIFT PIVOT & FEEDER LIFT STABILIZER | |
| | | | |
| *4 | 988744 | CUTTING EDGE, 6X13 KENNAMETAL | 2 |
| *5 | 988746 | CUTTING EDGE, 6X44 KENNAMETAL | 2 |
| *6 | 988745 | CUTTING EDGE, 6X42 KENNAMETAL | 1 |
| *7 | P526113 | LINK, TOP (ADJ) | 2 |

*OPTIONAL



Section 5 ILLUSTRATED PARTS LIST

FIGURE 2. MULTIPURPOSE MOLD BOARD

| FIG ITEM | PART NUMBER | NOMENCLATURE 123456 | UNITS PER ASSY |
|-------------|----------------|------------------------------------------|----------------------|
| 1 | 986374 | MOLDBOARD, ALL PURPOSE. LOADER | 1 |
| 2 | P523295 | CUTTING EDGE, ALL PURPOSE MOLDBOARD | 1 |
| 3 | 109-408-3 | PLOWBOLT, 1/2"-13 UNC x 2" | 8 |
| 4 | 118-5 | WASHER, 1/2" LOCK | |
| 5 | 116-5 | NUT, 1/2" X 13 HEX | |
| 6 | 102-406-1A | CAP SCREW, 1/2"-13 X 1-1/4 HEX | 4 |
| 7 | 116-5 | NUT, 1/2"-13 HEX | 4 |
| 8 | M522850 | RUBBER SEAL, THROAT CENTER | A/R |
| **9 | 750622-1 | ADJ. SWV. CONV., HEADPULLEY 12.75LG | |
| 10 | 110-312-2 | CAP SCREW, 3/8"-16 X 1" FLAT SOCKET HEAD | 4 |
| 11 | 118-3 | WASHER, 3/8" LOCK | 4 |
| 12 | 116-3 | NUT, 3/8"-16 HEX | 4 |
| 13 | 102-609-1A | CAP SCREW, 5/8"-11 X 2 HEX | 4 |
| 14 | 118-7 | WASHER, 5/8" LOCK | 4 |
| 15 | 116-7 | NUT, 5/8"-11 HEX | 4 |
| 16 | S46515 | SHIM | A/R |
| 17 | S46515 | SHIM | A/R |
| 18 | 982753 | WING, SNOW AUGER R.H. SIDE | 1 |
| 18A | 982758 | WING, SNOW AUGER L.H. SIDE | 1 |
| 19 | 100-406-1A | CAP SCREW, 1/2" -13 X 1 1/4" | 8 |
| 20 | W522854 | AUGER (SNOW) R/H | 1 |
| 21 | W522855 | AUGER (SNOW) L/H | 1 |
| 22 | 102-931-1A | CAP SCREW, 1"-13 x 8"L | 2 |
| 23 | 118-10 | WASHER, 1" LOCK | 2 |
| 24 | 116-10 | NUT, 1"-8 HEX | 2 |
| **25 | 115-12-1 | NUT, 1 1/4" -13 HEX JAM | 2 |
| **26 | 854953 | PADDLE ROLLER SPACER/3000 | 2 |
| **27 | 811316 | CAM FOLLOWER, 3-1/4" | 2 |
| 28 | 855066 | SPROCKET, SNOW AUGER 3000 LOADER | 2 |
| 29 | 710221A | SHAFT, 3000 FEEDER LOWER SNOW AUGER | 1 |
| 29A | 980932 | SHAFT 3000 FEEDER LOWER | 1 |
| 30 | 750553 | PADDLE SHAFT ARM, R/F SIDE | 1 |
| 31 | 750551 | PADDLE SHAFT ARM, L/F SIDE | 1 |
| 32 | M19805 | BUSHING, LOWER FEEDER SHAFT | 2 |
| 33 | 854942 | KEY STOCK, PADDLE | 2 |
| 34 | 985683 | MULTIPURPOSE FEEDER ADJUSTER | |
| | 1000925 | SNOW AUGER SKID SHOE (NOT SHOWN) | |

** INCLUDED IN 985683

Section 5 ILLUSTRATED PARTS LIST

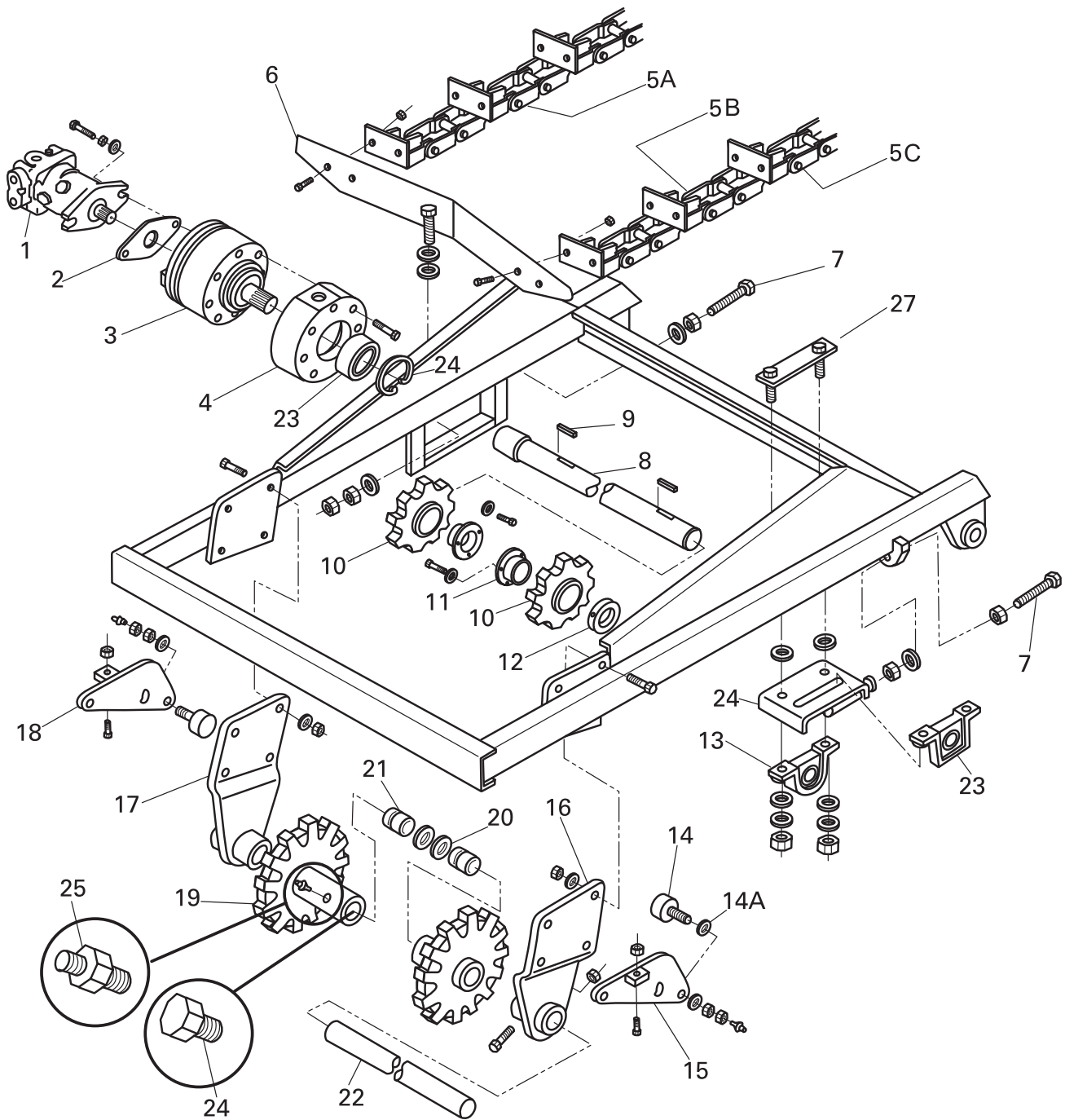


FIGURE 3. CONVEYOR PADDLE ASSEMBLY

FIGURE 3. CONVEYOR PADDLE ASSEMBLY

| FIG ITEM | PART NUMBER | NOMENCLATURE 123456 | UNITS PER ASSY |
|-------------|----------------|------------------------------------------------------------|----------------------|
| 1 | 710100 | HYD. MOTOR, FEEDER DRIVE | 1 |
| 2 | 700480 | GASKET, S.A.E. "B" 2 BOLT | 1 |
| 3 | 710090-28 | TORQUE HUB, FEEDER DRIVE | 1 |
| 4 | 854932 | MOUNT, TORQUE HUB | 1 |
| 5 | A710230 | CHAIN ASSY., FEEDER | A/R |
| 5A | 710230L | CHAIN ASSY., FEEDER L.H.(PADDLE) | A/R |
| 5B | 710230R | CHAIN ASSY., FEEDER R.H. (PADDLE) | A/R |
| 5C | 710230-1 | LINK & PIN ASSY., FEEDER CHAIN (2800/3000) | A/R |
| 6 | 710240 | BLADE PADDLE, 2800 / 3000 FEEDER | A/R |
| 7 | 750549 | ROD, PADDLE CHAIN ADJUSTER | 1 |
| 8 | 710171A | SHAFT, 3000 FEEDER UPPER DRIVE | 1 |
| 9 | 710171-2 | KEYWAY, PADDLE CONVEYOR | 1 |
| 10 | 710182 | SPROCKET, 3000 FEEDER CHAIN UPPER (9 TOOTH) PADDLE DRIVE 2 | 2 |
| 11 | 710150-28 | TAPER LOCK BUSHING, 2 1/2" | 2 |
| 12 | 120120 | LOCKING COLLAR, 2-1/2" I.D. | 2 |
| 13 | 710160-28R | BEARING, CONVEYOR HEAD PULLEY R.H. (2800) | 1 |
| 14 | 811316 | CAM FOLLOWER, 3-1/4" | 2 |
| 14A | 854953 | SPACER | |
| 15 | 750550 | BRACKET, L/F SIDE | 1 |
| 16 | 750551 | BRACKET, L/F SIDE | 1 |
| 17 | 750553 | BRACKET, R/F SIDE | 1 |
| 18 | 855066 | SPROCKET, SNOW AUGER 3000 | 1 |
| 19 | 710213A | SPROCKET, 3000 FEEDER CHAIN LOWER (PADDLE) | 2 |
| 20 | 210240 | SEAL | 2 |
| 21 | 710183 | BUSHING, LOWER FEEDER SHAFT (BRONZE) | 2 |
| 22 | 980932 | SHAFT, 3000 FEEDER LOWER | 1 |
| 23 | 854955 | PADDLE SHAFT STOP | |
| 24 | | GREASE RELIEF | |
| 25 | 140610 | GREASE FITTING, 1/4" X 28 SCREW IN | |
| 27 | 854946A | PADDLE BEARING PLATE | |

Section 5 ILLUSTRATED PARTS LIST

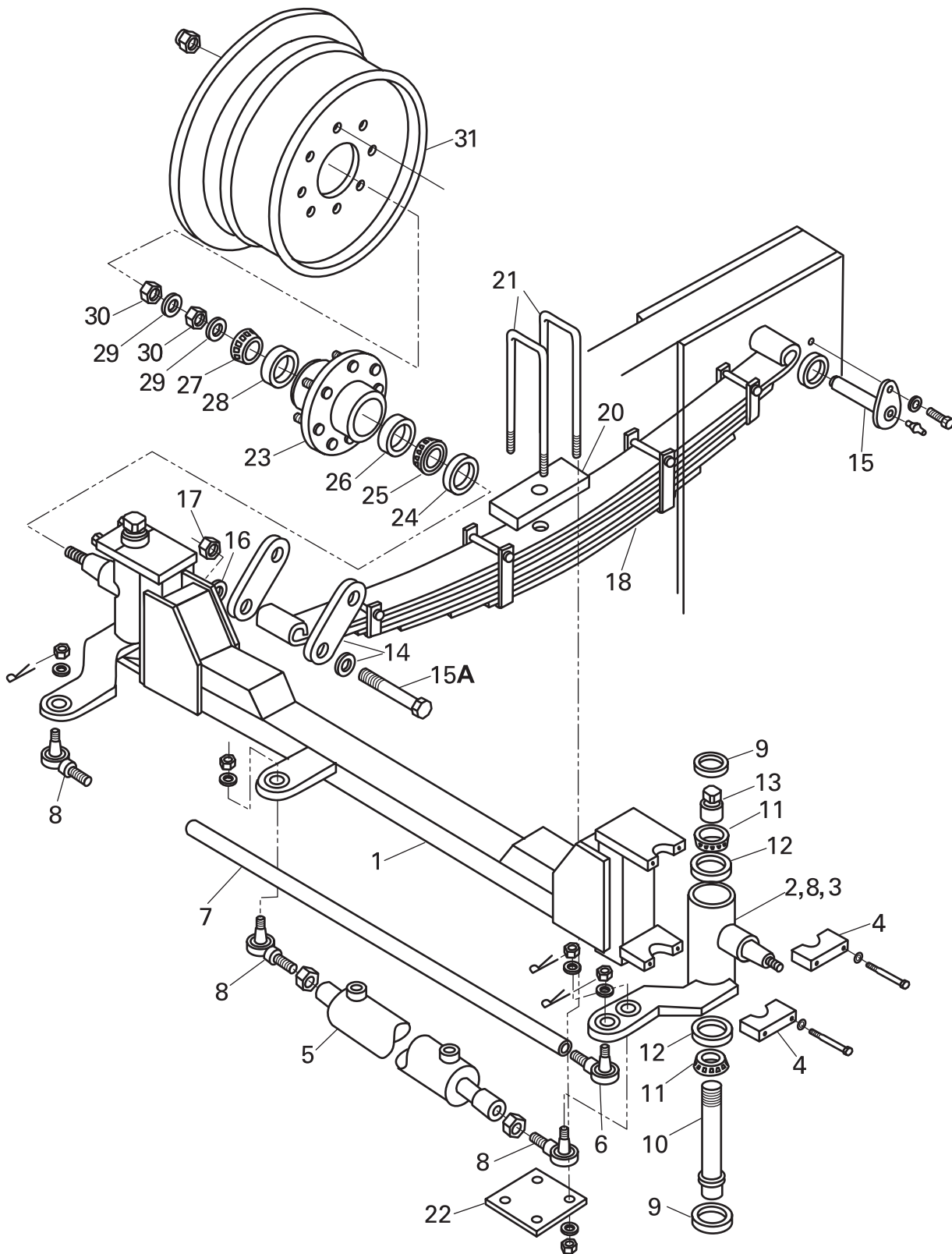


FIGURE 4. FRONT AXLE ASSEMBLY

FIGURE 4. FRONT AXLE ASSEMBLY

| FIG ITEM | PART NUMBER | NOMENCLATURE 123456 | UNITS PER ASSY |
|-------------|----------------|------------------------------------------------|----------------------|
| 1 | 730013 | FRONT AXLE,(SPLINES NOT INCLUDED) | 1 |
| 2 | 854855 | RIGHT FRONT AXLE, HUB, SUB-ASSEMBLY | 1 |
| 3 | 854854 | LEFT FRONT AXLE, HUB, SUB-ASSEMBLY | 1 |
| 4 | 852827 | CLAMP HALF, W/DRILL HOLES | 4 |
| 5 | 110220 | HYD. CYL., 685 STEERING | 1 |
| 6 | 110200 | TIE ROD END, L.H. | 1 |
| 7 | 730071 | TIE ROD, 2800/3000 STEERING | 1 |
| 8 | 110210 | TIE ROD END, R.H. | 1 |
| 9 | 210240 | SEAL | 4 |
| 10 | 110061 | KING PIN, 685/2800/300 FRONT END SPINDLE | 2 |
| 11 | 210180 | BEARING CONE | 4 |
| 12 | 210190 | BEARING CUP | 4 |
| 13 | 110101 | NUT, 635 ARTICULATION SHAFT | 2 |
| 14 | 855082 | SPRING HOLDER | 4 |
| 15 | 855083 | SPRING ROD | 2 |
| 15A | 730060 | CAP SCREW, 1" x 4 1/2"bolt with grease fitting | |
| 17 | 80377 | NUT, FLEXLOC. 1.00-14 FULL LT | 4 |
| 18 | 730090 | LEAF SPRING (ASSY.), 3000 LOADER FRONT END | 2 |
| 20 | 855194 | FRONT END, U-BOLT MOUNTING | 2 |
| 21 | 730120 | "U" BOLT, LEAF SPRING (2800/3000 LOADER) | 2 |
| 22 | 855105 | FRONT END MOUNTING PLATE | 4 |
| 23 | 988911 | HUB ASSEMBLY, WHEEL, W2.00 STUDS | 2 |
| 24 | 36830 | SEAL, 3.628ODX 2.250IDX .468 | 2 |
| 25 | 110260 | BEARING CONE, 685 FRONT WHEEL HUB (INNER) | 2 |
| 26 | 110250 | BEARING CUP, 685 FRONT WHEEL HUB (INNER) | 2 |
| 27 | 610210 | BEARING, CONE | 2 |
| 28 | 610200 | BEARING CUP | 2 |
| 29 | 110320 | LOCKWASHER, FRONT SPINDLE | 2 |
| 30 | 730210 | NUT, | 2 |
| 31 | 730220A | WHEEL, 3000 FRONT (1 PC. DROP CENTER) | 2 |
| | 981738 | ASSY. 3000 WHEEL FRONT (NOT SHOWN) | A/R |
| | 852800 | TIRE, FRONT 3000 (NOT SHOWN) | A/R |

Section 5 ILLUSTRATED PARTS LIST

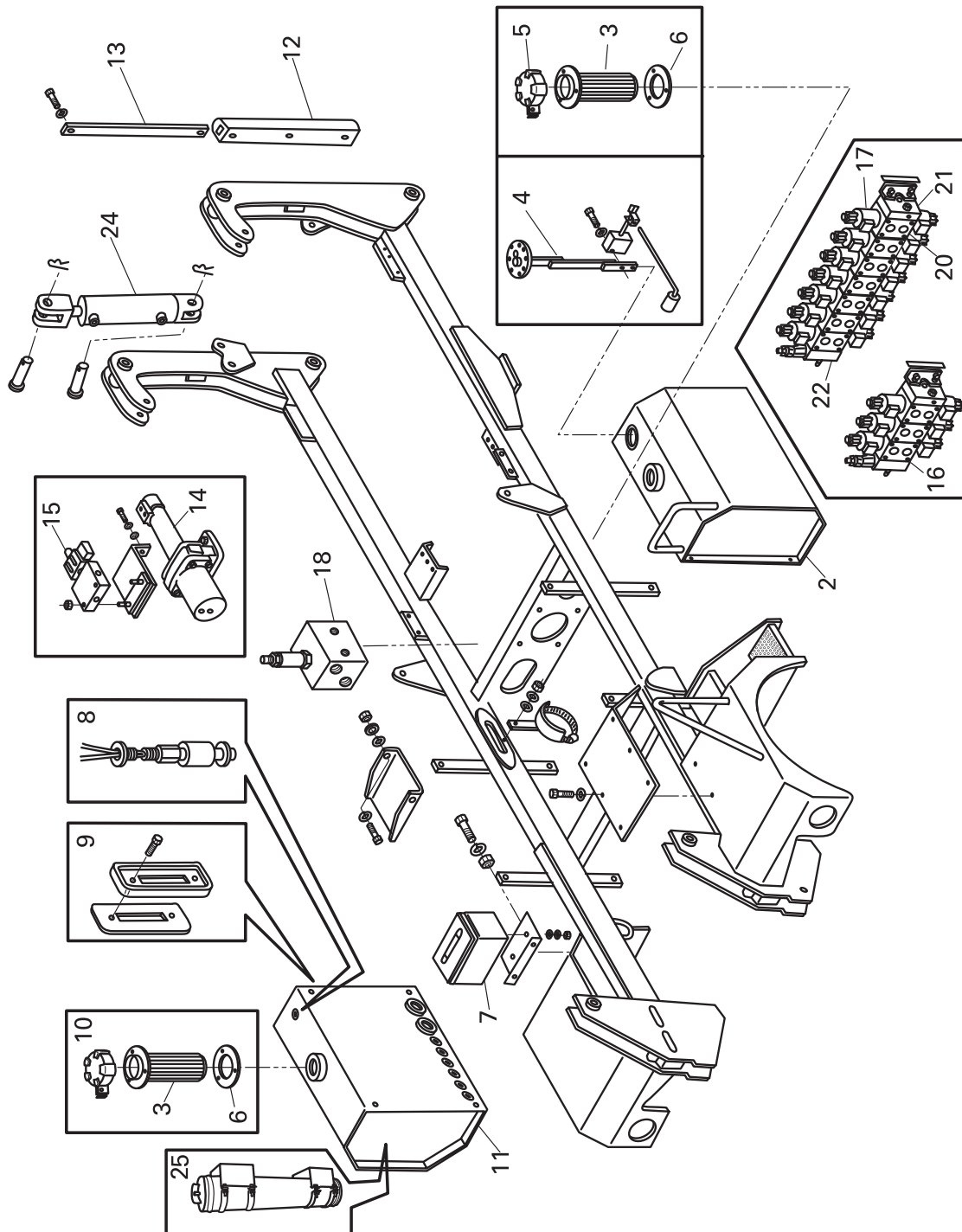


FIGURE 5. MAIN FRAME

FIGURE 5. MAIN FRAME

| FIG ITEM | PART NUMBER | NOMENCLATURE 123456 | UNITS PER ASSY |
|-------------|----------------|-------------------------------------------------------|----------------------|
| 1 | 988765 | MAIN FRAME | 1 |
| 2 | 750595 | TANK, 3000 FUEL | 1 |
| 3 | 140030FN | FILLER NECK, HYD. OIL / FUEL CAP | 1 |
| 4 | 140040 | SENDING UNIT, FUEL LEVEL | 1 |
| 5 | 140030FL | FUEL TANK CAP, LOCKABLE | 1 |
| 6 | 140030GK | STRAINER & GASKET KIT, HYD./ FUEL FILLER | 1 |
| 7 | 851169 | TOOL BOX | 1 |
| *8 | 981357 | SWITCH, LOW HYD. OIL LEVEL | 1 |
| 9 | 500070 | GAUGE, HYD. OIL LEVEL & TEMP. | 1 |
| 10 | 140030HL | CAP, HYD. OIL TANK (LOCKABLE) | 1 |
| 11 | 750597 | TANK, 3000 HYD. OIL | 1 |
| 12 | 720200-01 | BUMPER, "D" RUBBER (2800 / 3000) | 2 |
| 13 | 750656 | MOUNT FOR BUMPER 'D'RUBBER | 2 |
| 14 | 853850 | VALVE, SOLENOID, FORWARD/REVERSE SHIFT FAILSAFE VALVE | 1 |
| 15 | 160380 | VALVE, SOLENOID PUMP DESTROKE-685 | 1 |
| 16 | 750600 | VALVE SEC. ASSY 2-SECTION | 1 |
| *17 | 750601 | VALVE ASSY., 5 SECTION (3000) | 1 |
| 18 | 750602 | MANIFOLD W / RELIEF, 3000 BRAKE & DRAIN | 1 |
| 20 | 750600-1 | CARTRIDGE, RELIEF VALVE (3000 P..S.I.) | 1 |
| 21 | 750600-2 | VALVE SECTION | A/R |
| 22 | 750600-3 | INLET COVER W/RELIEF, 3000 ELECTRONIC VALVE | 1 |
| 23 | 750600-4 | OUTLET COVER | 1 |
| 24 | 750610 | CONVEYOR LIFT CYLINDER | 2 |
| 25 | 855064 | ACCUMULATOR | 1 |
| | 852720 | SWITCH, BRAKE LOW PRESS (NOT SHOWN) | |
| | 853180 | SWITCH, BRAKE LIGHT 3000 (NOT SHOWN) | |
| 26 | 35368 | SENDER, TEMPERATURE GAUGE | 1 |

* OPTIONAL, SWIVEL CONVEYOR

Section 5 ILLUSTRATED PARTS LIST

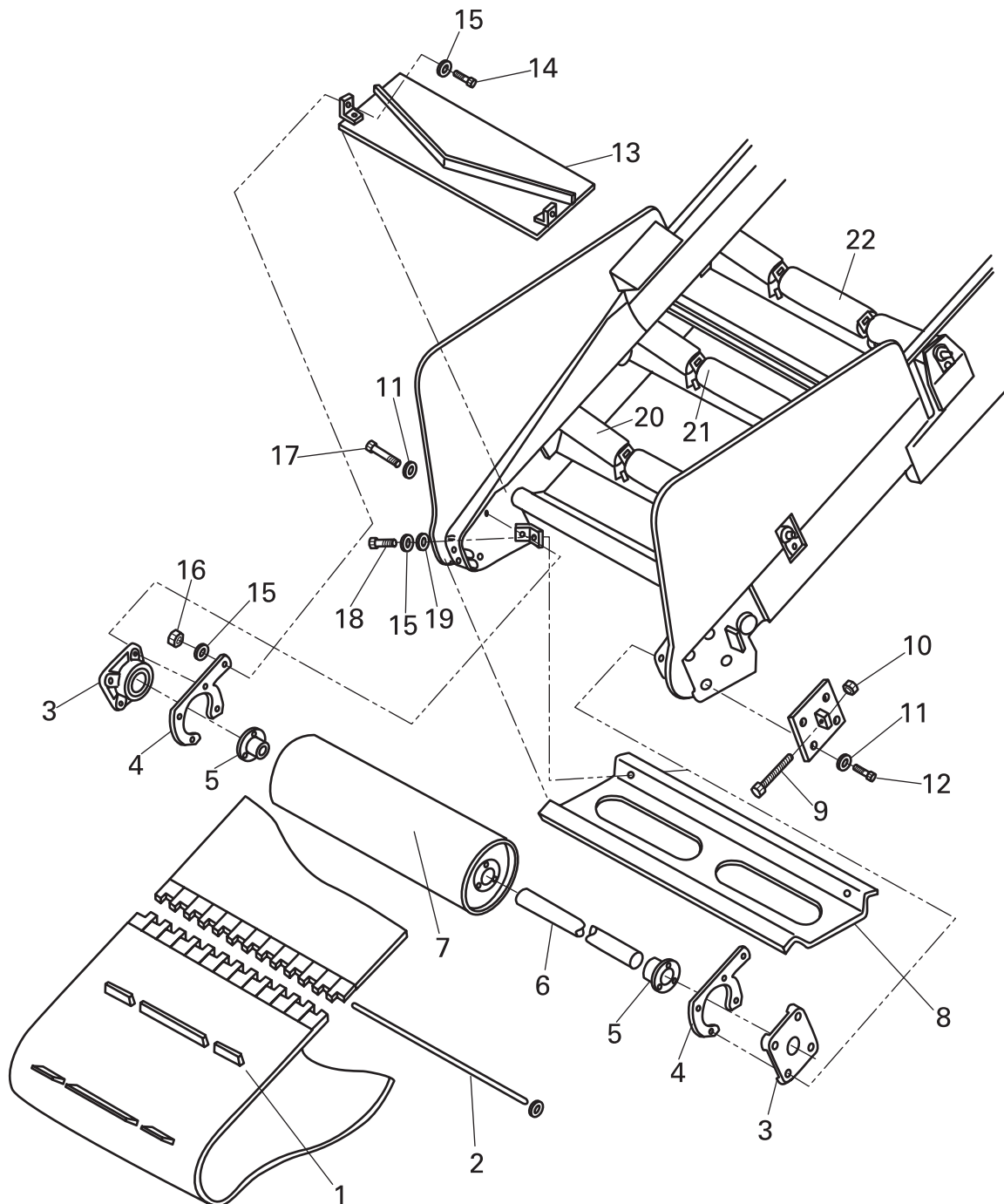


FIGURE 6. TAIL PULLEY GROUP

FIGURE 6. TAIL PULLEY GROUP

| FIG ITEM | PART NUMBER | NOMENCLATURE 123456 | UNITS PER ASSY |
|-------------|----------------|-------------------------------------------------------------------------|----------------------|
| 1 | P202014 | CONVEYOR BELT W / CLEATS, 28' FRAME | 1 |
| 2 | 750080 | PIN, CONVEYOR BELT LACING (30") W/O METAL TIPS, FOR 3000 LOADER ONLY | A/R |
| 3 | 750040 | BEARING, 2800 / 3000 CONVEYOR TAIL PULLEY | 2 |
| 4 | 750052 | BRACKET, TAIL PULLEY BEARING ADJUSTMENT | 2 |
| 5 | 750050 | BUSHING, 2800 / 3000 CONVEYOR TAIL PULLEY | 2 |
| 6 | 750032 | SHAFT, 3000 MAIN CONVEYOR TAIL PULLEY | 1 |
| 7 | 750060 | TAIL PULLEY (SWIVEL), 2800 / 3000 MAIN CONVEYOR 10.50 X 32" | 1 |
| 8 | 750061 | BURN OUT GUARD, 3000 TAIL PULLEY | 1 |
| 9 | W520862 | BOLT, CONVEYOR ADJUSTING | 2 |
| 10 | 116-8 | NUT, 3/4"-10 HEX | 2 |
| 11 | 118-7 | WASHER, 5/8" LOCK | 8 |
| 12 | 102-611-1A | CAP SCREW, 5/8"-11 X 2-1/2 HEX | 4 |
| 13 | 750062 | SCRAPER, 3000 TAIL PULLEY | 1 |
| 14 | 102-207-1A | CAP SCREW, 3/8"-16 X 1-1/2 HEX | 2 |
| 15 | 119-3 | WASHER, 3/8" SAE FLAT | 4 |
| 16 | 143-3 | LOCK NUT, 3/8"-16 HEX | 2 |
| 17 | 102-609-1A | CAP SCREW, 5/8"-11 X 2 HEX | 4 |
| 18 | 102-206-1A | CAP SCREW, 3/8"-16 X 1-1/4 HEX | 4 |
| 19 | 118-3 | WASHER, 3/8" LOCK | 4 |
| 20 | 750131 | ROLLER ASSY(15 DEGREE), CONVEYOR TROUGHING | 1 |
| 21 | 750130 | ROLLER ASSY (30 DEGREE), CONVEYOR TROUGHING | 2 |
| 22 | 986341 | ROLLER ASSY.(25 DEGREE), CONVEYOR TROUGHING | 9 |
| * | 988471 | OPTIONAL BELT FOR PEN.DOT (NOT SHOWN) | |

NOTE: OLDER LOADERS FIRST ROLLER #750132 ROLLER ASSY 10 DEGREE

Section 5 ILLUSTRATED PARTS LIST

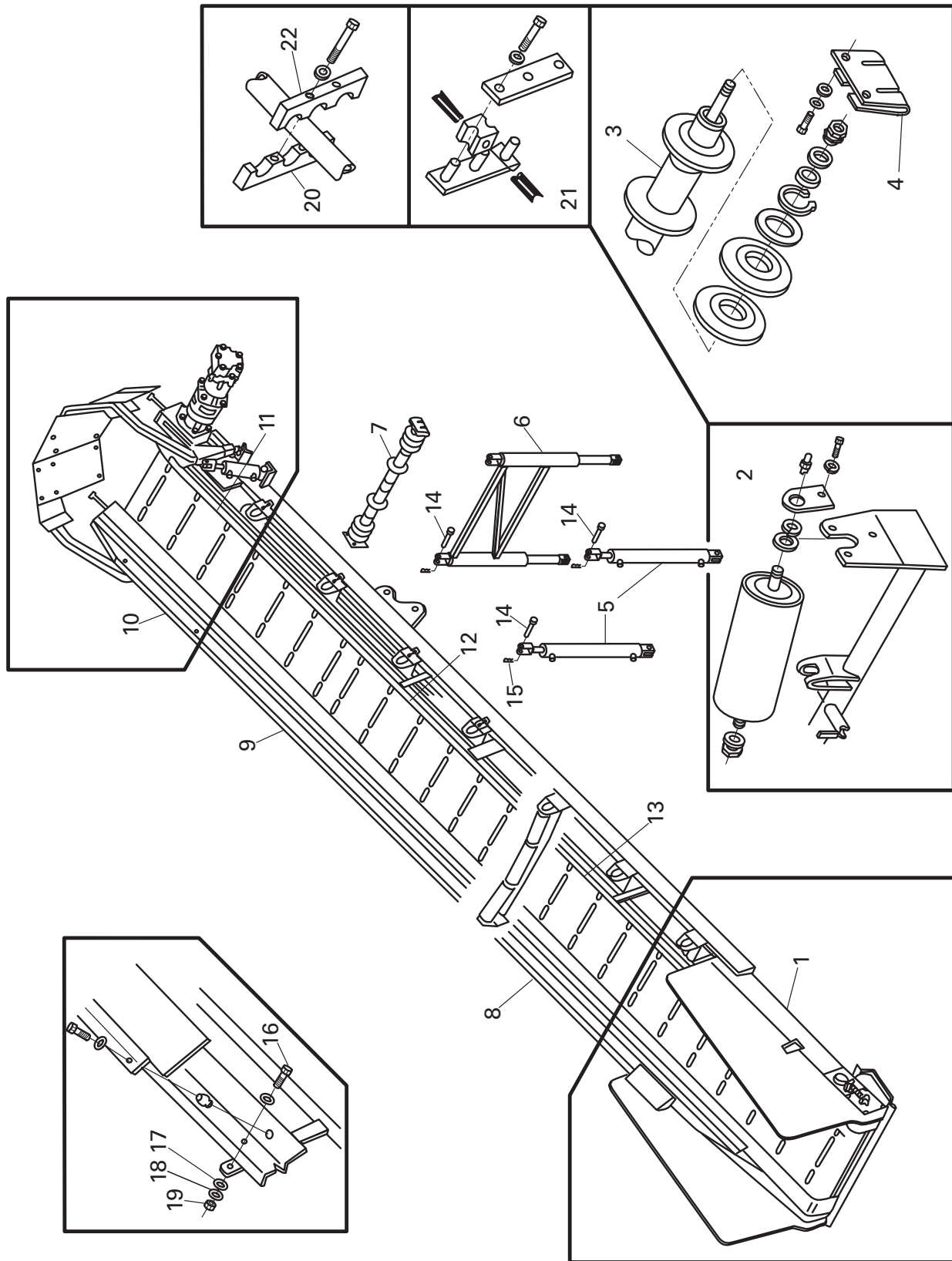


FIGURE 7. CONVEYOR ASSEMBLY

FIGURE 7. CONVEYOR ASSEMBLY

| FIG ITEM | PART NUMBER | NOMENCLATURE 123456 | UNITS PER ASSY |
|-------------|----------------|-----------------------------------------|----------------------|
| 1 | 981386 | COMPLETE ASSEMBLY | 1 |
| 2 | 750140 | ROLLER, 2800 / 3000 TROUGHING IDLER | A/R |
| 3 | 750090 | ROLLER ASSY., CONVEYOR RETURN IDLER | A/R |
| 4 | 854741 | J. BRACKET MAIN CONVEYOR | 2 |
| 5 | 750610 | CONVEYOR LIFT CYLINDER | 2 |
| 6 | 981438 | CONVEYOR STABILIZER | 1 |
| 7 | 750090 | ROLLER ASSY., CONVEYOR RETURN IDLER | 3 |
| 8 | 854795 | SIDE PLATE, FRONT RIGHT | 1 |
| 9 | 854799 | SIDE PLATE, CENTER RIGHT | 1 |
| 10 | 854797 | SIDE PLATE, BACK RIGHT SIDE | 1 |
| 11 | 854801 | SIDE PLATE, BACK LEFT SIDE | 1 |
| 12 | 854798 | SIDE PLATE, CENTER LEFT SIDE | 1 |
| 13 | 854796 | SIDE PLATE, FRONT LEFT SIDE | 1 |
| 14 | 1000284 | CYL. CLEVIS 1.00X 2.75 | 4 |
| 15 | 870307 | CLIP, HYD CYL. PIN * | 4 |
| 16 | 102-405-1A | CAP SCREW, 1/2"-13 X 1 HEX | A/R |
| 17 | | WASHER, FLAT 1/2" | A/R |
| 18 | | WASHER, LOCK 1/2" | A/R |
| 19 | 116-5 | NUT, 1/2" | A/R |
| 20 | 854748-A | CLAMP/3 HOLE. TOP HALF | 2 |
| 21 | 854748 | CLAMP, HOSE 3 HOLE COMPLETE SET | 2 |
| 22 | 854748-B | CLAMP/3 HOLE. BOTTOM HALF | 2 |
| | 750241A | FLASHING, 25X6.0 X 34. MAIN (NOT SHOWN) | A/R |

Section 5 ILLUSTRATED PARTS LIST

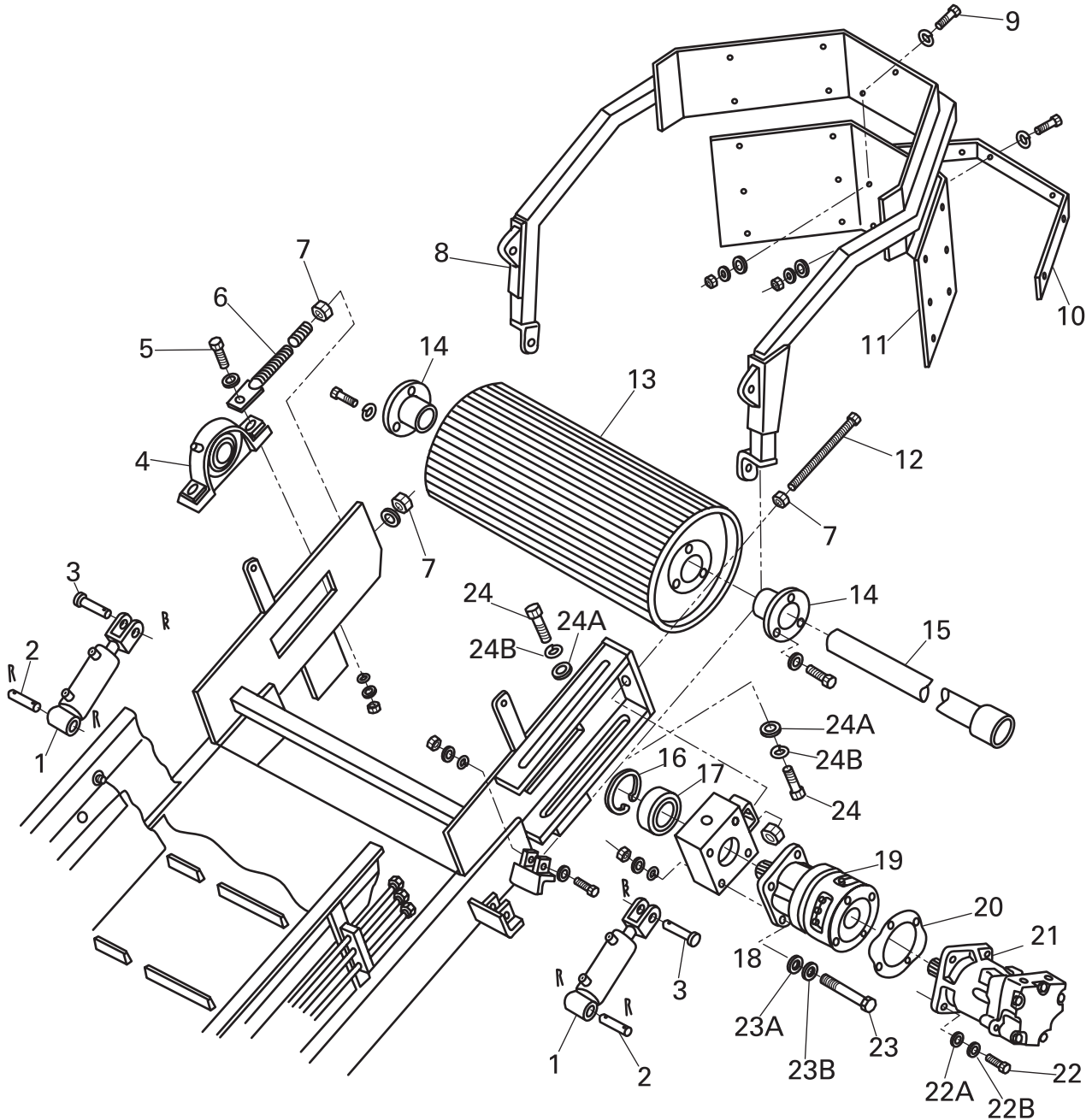


FIGURE 8. HEAD PULLEY ASSEMBLY

FIGURE 8. HEAD PULLEY ASSEMBLY

| FIG ITEM | PART NUMBER | NOMENCLATURE 123456 | UNITS PER ASSY |
|-------------|----------------|-------------------------------------------|----------------------|
| 1 | P521124 | HYD.CYL.,DISCHARGE BAFFLE | 2 |
| 2 | 856997 | BAR, ROUND W/2 HOLES | 2 |
| 3 | 210060 | PIN, CLEVIS | 2 |
| 4 | 710160-28R | BEARING, CONVEYOR HEAD PULLEY R.H. (2800) | 1 |
| 5 | 102-716-1A | CAP SCREW, 3/4"-10 X 3-3/4" HEX HEAD | 2 |
| 6 | 750321 | ADJ. BOLT, MAIN CONVEYOR BELT R.H. | 2 |
| 7 | 116-8 | NUT, 3/4"-10 HEX | 4 |
| 8 | 750653 | FRAME, DISCHARGE BAFFLE | 1 |
| 9 | P521452 | ELEVATOR BOLT, 1/4"-20 X 1" | 12 |
| 10 | S521763 | STRIP, FLASHING RETAINER | 1 |
| 11 | M521454 | RUBBER SKIRT, DISCHARGE BAFFLE | 1 |
| 12 | 854744 | ADJ. ROD, TAIL PULLEY | 1 |
| 13 | 750260 | PULLEY, HEAD DRUM W/LAG | 1 |
| 14 | 750051 | BUSHING, 2800 / 3000 CONVEYOR HEAD PULLEY | 2 |
| 15 | 750271 | SHAFT, 2800 / 3000 CONVEYOR HEAD PULLEY | 1 |
| 16 | 750323 | SNAP RING, CONVEYOR L.H. BEARING RETAINER | 1 |
| 17 | 520100 | BEARING, 400 STUB AXLE (3") | 1 |
| 18 | 854788 | MOTOR MOUNT | 1 |
| 19 | 750300 | TORQUE HUB, 2800 / 3000 CONVEYOR DRIVE | 1 |
| 20 | P77494 | GASKET, S.A.E. "C" 4 HOLE | 1 |
| 21 | 750310 | HYD. MOTOR, MAIN CONVEYOR DRIVE | 1 |
| 22 | 102-411-1A | CAP SCREW, 1/2"-13 X 2-1/2" HEX HEAD | 4 |
| 22A | 119-5 | WASHER, 1/2" S.A.E. FLAT | 4 |
| 22B | 118-5 | WASHER, 1/2" LOCK | 4 |
| 23 | 102-609-1A | CAP SCREW, 5/8"-11 X 2" HEX HEAD | 4 |
| 23A | 119-7 | WASHER, 5/8" S.A.E. FLAT | 4 |
| 23B | 118-7 | WASHER, 5/8" LOCK | 4 |
| 24 | 102-909-1A | CAP SCREW, 1"-8 X 2" HEX HEAD | 2 |
| 24A | 119-10 | WASHER, 1" S.A.E. FLAT | 2 |
| 24B | 118-10 | WASHER, 1" LOCK | 2 |

Section 5 ILLUSTRATED PARTS LIST

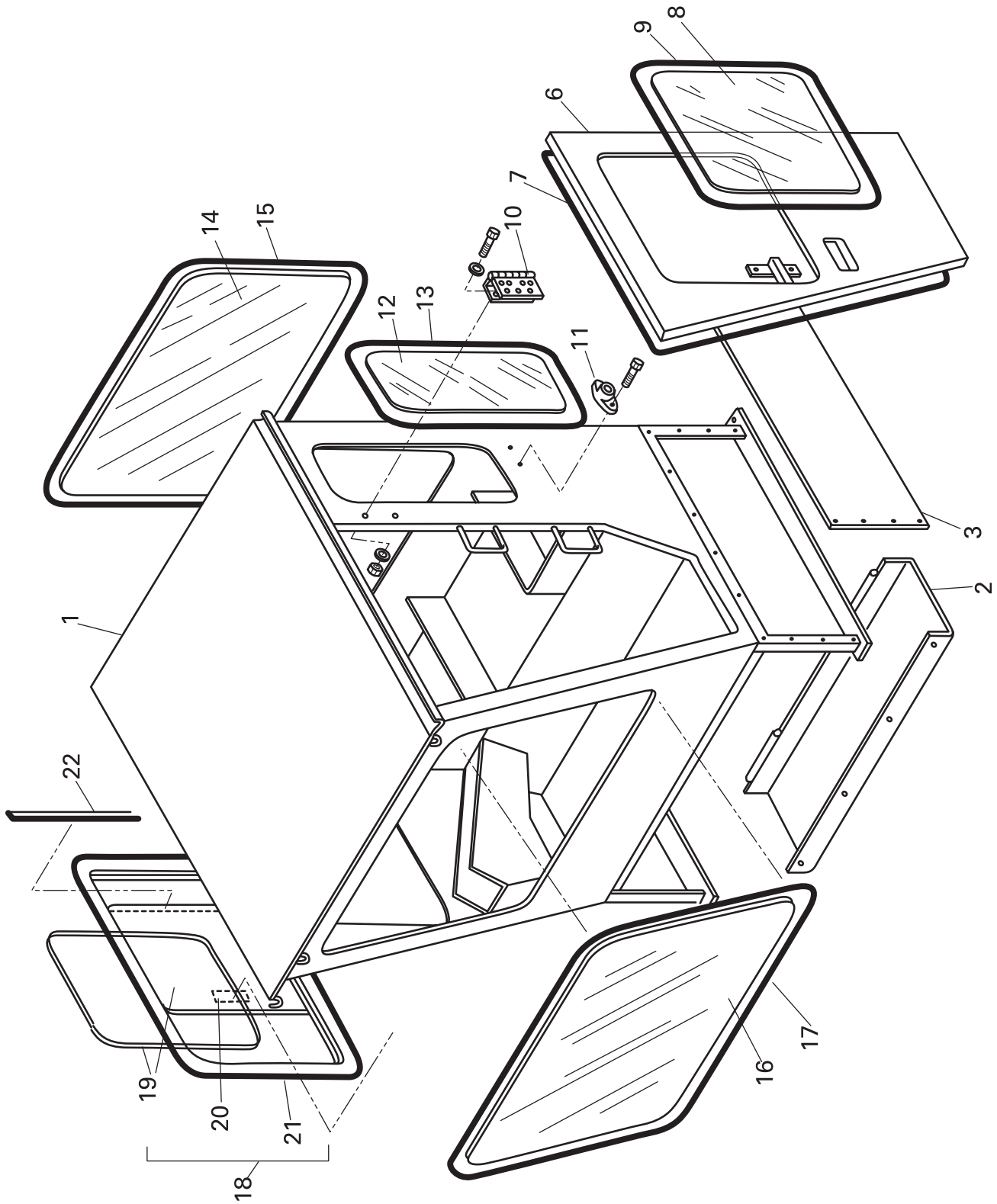


FIGURE 9. CAB ASSEMBLY

FIGURE 9. CAB ASSEMBLY

| FIG ITEM | PART NUMBER | NOMENCLATURE 123456 | UNITS PER ASSY |
|-------------|----------------|-------------------------------|----------------------|
| 1 | 760010A | CAB, WELDMENT | 1 |
| 2 | 760021 | COVER, HOSES | 1 |
| 3 | 760031 | PANEL, SIDE | 2 |
| 6 | 760062 | DOOR | 1 |
| 7 | 760070 | SEAL, DOOR | 1 |
| 8 | 760080 | WINDOW, DOOR | 1 |
| 9 | 760090 | SEAL, WINDOW | 1 |
| 10 | 760101 | HINGE, 3000 LOADER CAB | 2 |
| 11 | P527323 | SOCKET, DOOR STOP | 1 |
| 12 | 760120 | WINDOW, RIGHT SIDE | 1 |
| 13 | 760090 | SEAL, REAR SIDE WINDOW | 1 |
| 14 | 760130 | WINDOW, REAR | 1 |
| 15 | 760090 | SEAL, REAR WINDOW | 1 |
| 16 | 760140 | WINDOW, FRONT WINDOW | 1 |
| 17 | 760090 | SEAL, FRONT WINDOW | 1 |
| 18 | 760150 | WINDOW ASSEMBLY | A/R |
| 19 | 760160 | WINDOW, RIGHT SIDE | 1 |
| 20 | 760090 | SEAL, SIDE WINDOW | A/R |
| 21 | 760170 | FRAME, WINDOW | 1 |
| 22 | 760180 | SEAL, WINDOW SLIDE | 1 |

Section 5 ILLUSTRATED PARTS LIST

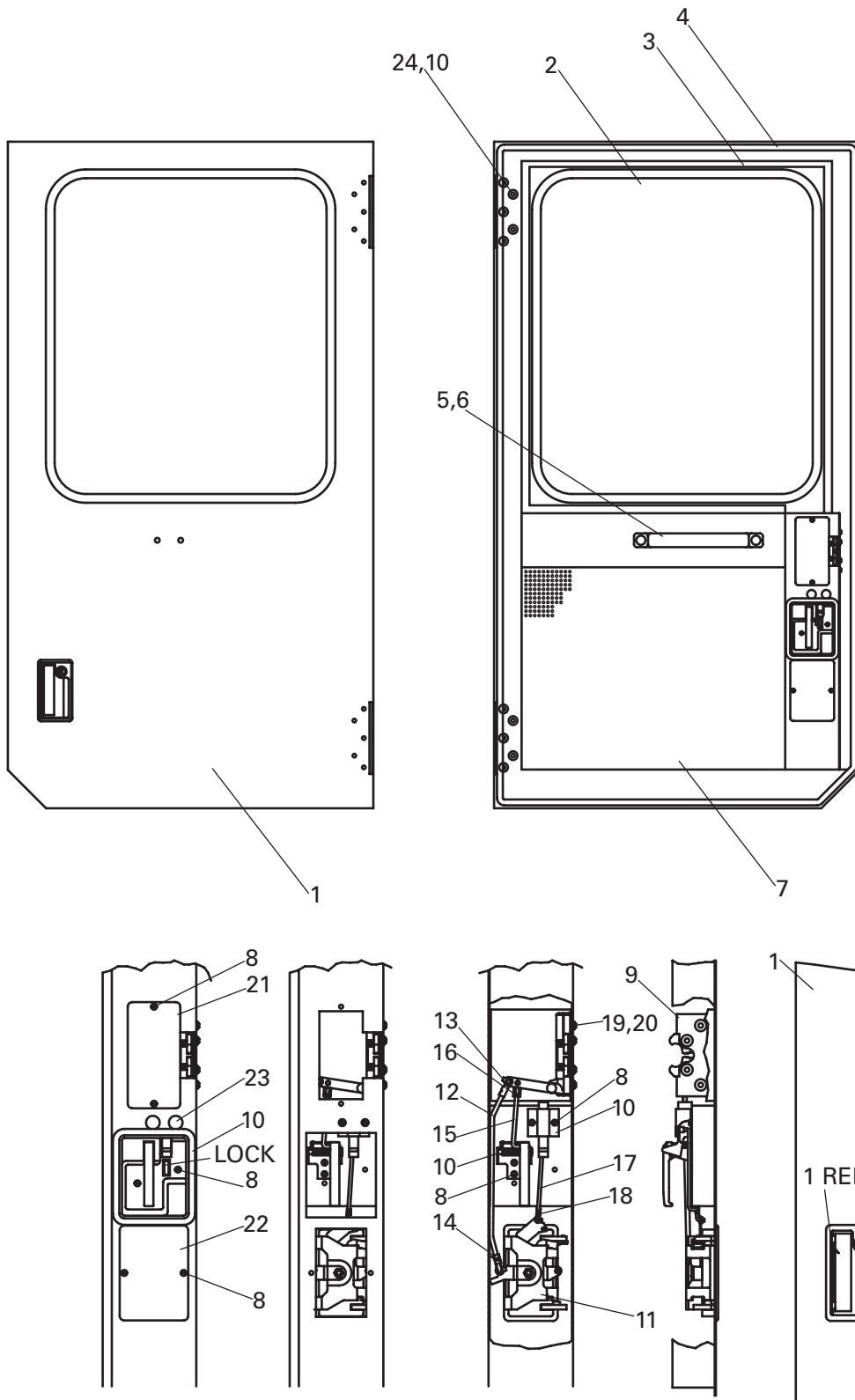


FIGURE 10. CAB DOOR



Section 5 ILLUSTRATED PARTS LIST

FIGURE 10. CAB DOOR

| FIG ITEM | PART NUMBER | NOMENCLATURE 123456 | UNITS PER ASSY |
|---------------------|------------------------|--------------------------------------|-------------------------------|
| 1 | 760062 | DOOR WELDMENT | 1 |
| 2 | 760080 | GLASS - DOOR | 1 |
| 3 | 760090 | WINDSHIELD SEAL | 9FT. |
| 4 | 760070 | EDGE TRIM | 15 FT |
| 5 | 982060 | INTERIOR HANDLE | 1 |
| 6 | A510-B | 1/4 -20 PHPHIL X 5/8" | 2 |
| 7 | 982061 | FOAM - DOOR | 1 |
| 8 | | 8-32 PHMS x 1/2 | 10 |
| 9 | 982062 | LATCH - SMC MODIFIED - RH | 1 |
| 10 | 982063 | INT. HANDLE & BEZEL- RH | 1 |
| 11 | 982064 | O.S. PADDLE HANDLE - RH | 1 |
| 12 | 982065 | Latch Rod, LH | 1 |
| 13 | 982066 | 7/32 ROD CLIP - RH | 1 |
| 14 | 982067 | 7/32 ROD CLIP - LH | 1 |
| 15 | 982068 | RH I/S TRIP ROD | 1 |
| 16 | 982069 | 3/16 ROD CLIP - PLSTC - CNTR | 1 |
| 17 | 982070 | LOCK TRIP ROD - 5/32 DIA. - CNTR | 1 |
| 18 | 982071 | 5/32 ROD CLIP - RH | 1 |
| 19 | | 1/4-20 BHSCS X 5/8 | 4 |
| 20 | | 1/4 INT TOOTH LK WSHR | 4 |
| 21 | 982072 | COVER | 1 |
| 22 | 982073 | COVER | 1 |
| 23 | 982075 | 3/8 DIA. HOLE PLUG - PLSTC | 2 |
| 24 | 982076 | PLUG, 3/4, BUTTON, NYLON, BLACK | 10 |

Section 5 ILLUSTRATED PARTS LIST

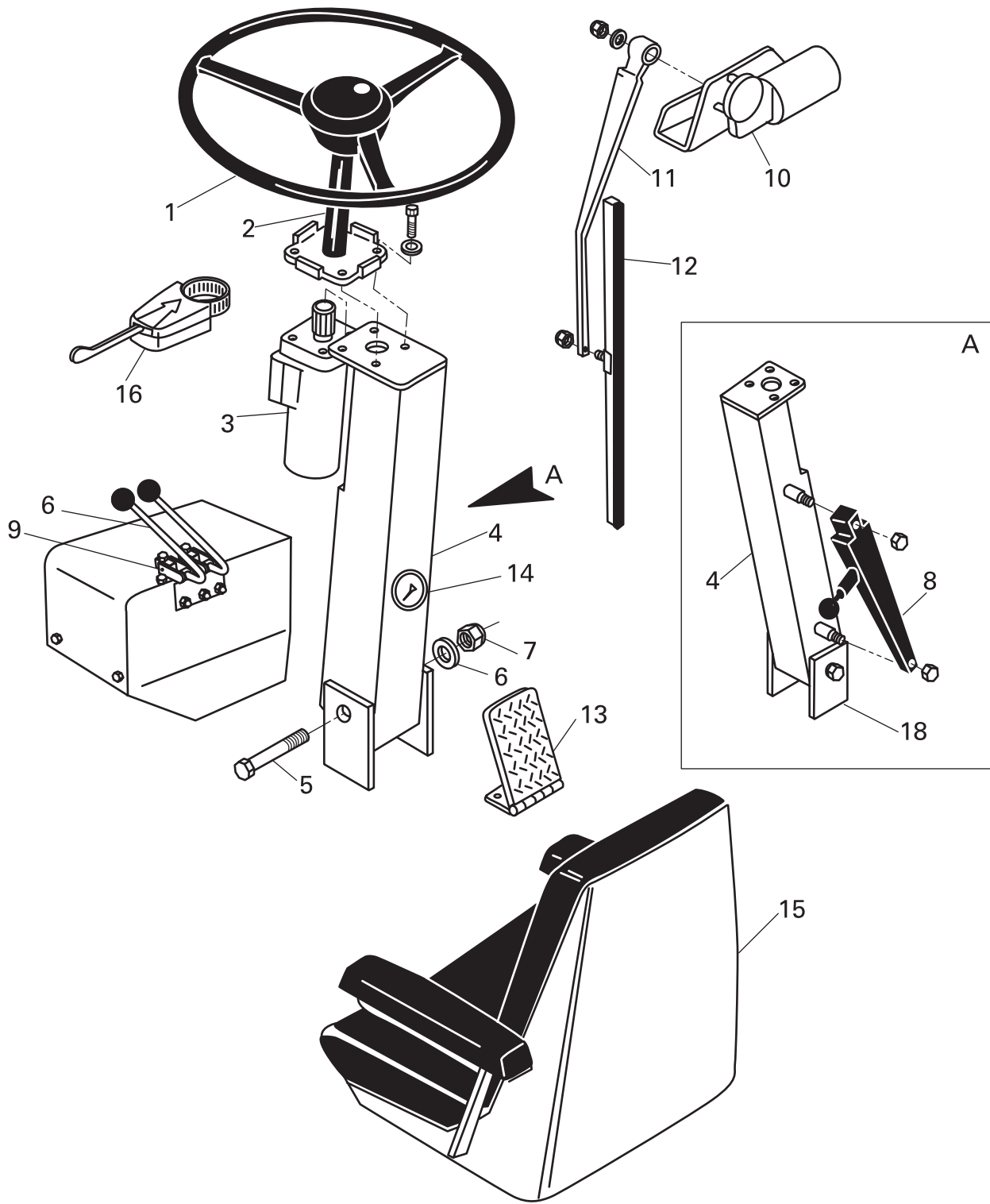


FIGURE 11. STEERING WHEEL AND CAB COMPONENTS

FIGURE 11. STEERING WHEEL AND CAB COMPONENTS

| FIG ITEM | PART NUMBER | NOMENCLATURE 123456 | UNITS PER ASSY |
|-------------|----------------|---------------------------------------|----------------------|
| 1 | 300030 | STEERING WHEEL, 400, 635, 685 & 1200 | 1 |
| 2 | 300040 | STEERING COLUMN, 6" (400, 685 & 1200) | 1 |
| 3 | 140500 | STEERING UNIT, HYD 19.22 CIR W/RELIEF | 1 |
| 4 | 760492 | SUPPORT, STEERING COLUMN | 1 |
| 5 | 760500 | BOLT, PIVOT STEERING COLUMN | 1 |
| 6 | 760510 | WASHER, FLAT | 1 |
| 7 | 760520 | NUT, LOCK HEX | 1 |
| 8 | 855258 | TILT STEERING BAR | 1 |
| 9 | 852020 | VALVE, TWO STATION GRESSEN VALVE | 1 |
| 10 | 151170 | MOTOR, WIPER | 1 |
| 11 | 151180 | ARM, WIPER | 1 |
| 12 | 151190 | BLADE, WIPER | 1 |
| 13 | 853350 | VALVE, BREAK, W/PEDAL 1000PSI | 1 |
| 14 | 38393 | GAUGE, PRESSURE | |
| 15 | 360010B | SEAT ASSY W / ARMREST, BLACK | 1 |
| 16 | 33687 | TURN SIGNAL. W/HAZARD, 7 WIRE | 1 |

Section 5 ILLUSTRATED PARTS LIST

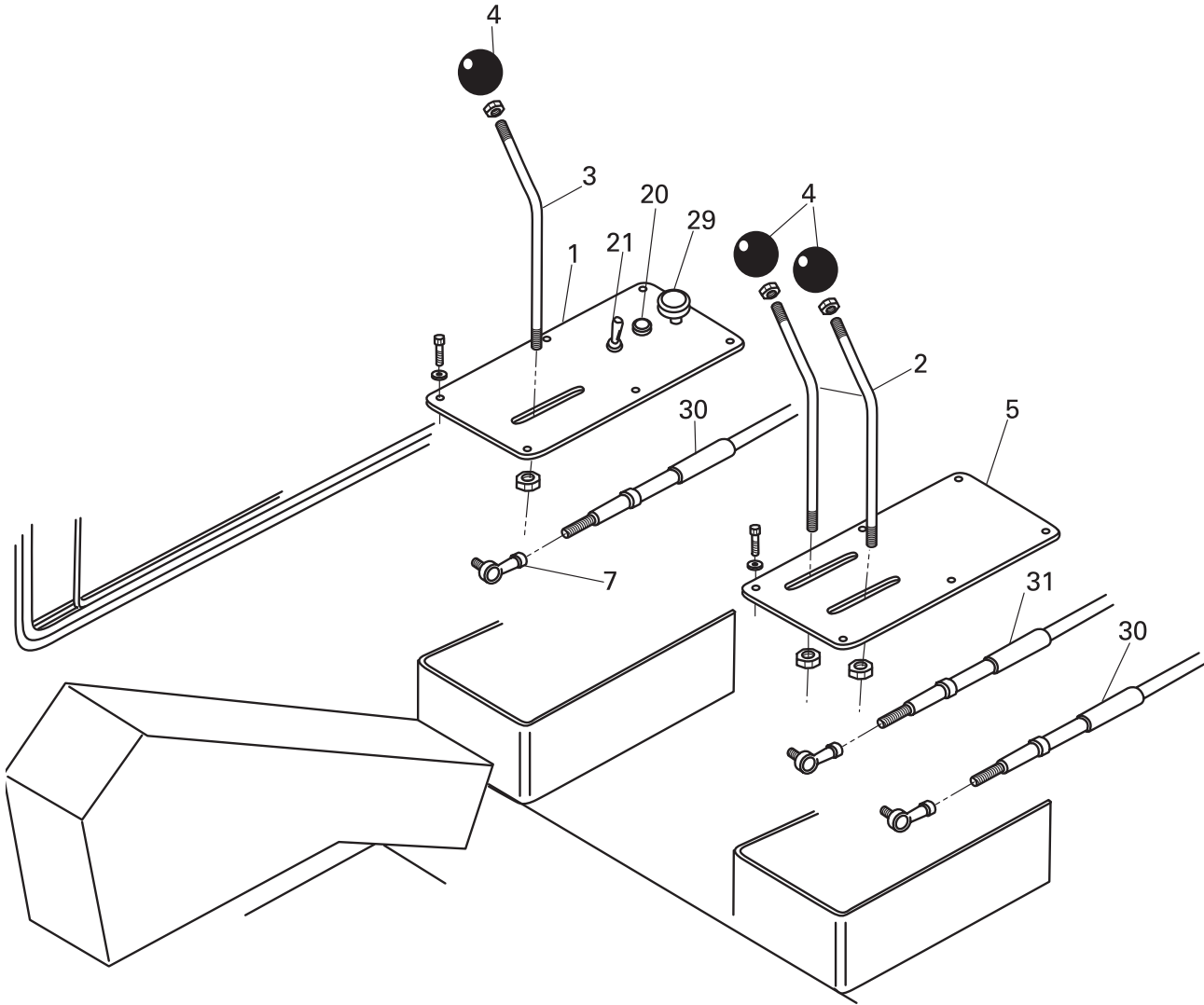


FIGURE 12A. CONTROLS



Section 5 ILLUSTRATED PARTS LIST

FIGURE 12A. CONTROLS

| FIG ITEM | PART NUMBER | NOMENCLATURE 123456 | UNITS PER ASSY |
|---------------------|------------------------|-----------------------------------------------------|-------------------------------|
| 1 | 988874 | PANEL, LEVER GUIDE RIGHT SIDE (INCLUDED IN 1000737) | 1 |
| 2 | 980990 | LH CONTROL | 1 |
| 3 | 1000892 | RH CONTROL | 1 |
| 4 | 920180 | KNOB, LEVER | 3 |
| 5 | 988873 | PANEL, LEVER GUIDE LH (INCLUDED W/1000736) | 1 |
| 7 | 920090 | SPHERICAL ROD END, 3/8" X 1/4" W / STUD | 3 |
| 20 | 36208 | WARNING BUZZER | |
| 21 | 851393 | TOGGLE SWITCH, 3 POSITION AUTOMATIC CENTER | A/R |
| 29 | 988924 | BRAKE BUTTON | 1 |
| 30 | 920130 | CABLE, PUSH/PULL 123 X 3 STROKE | 2 |
| 31 | 920140 | CABLE, PUSH/PULL 116 X 3 STROKE | 1 |

Section 5 ILLUSTRATED PARTS LIST

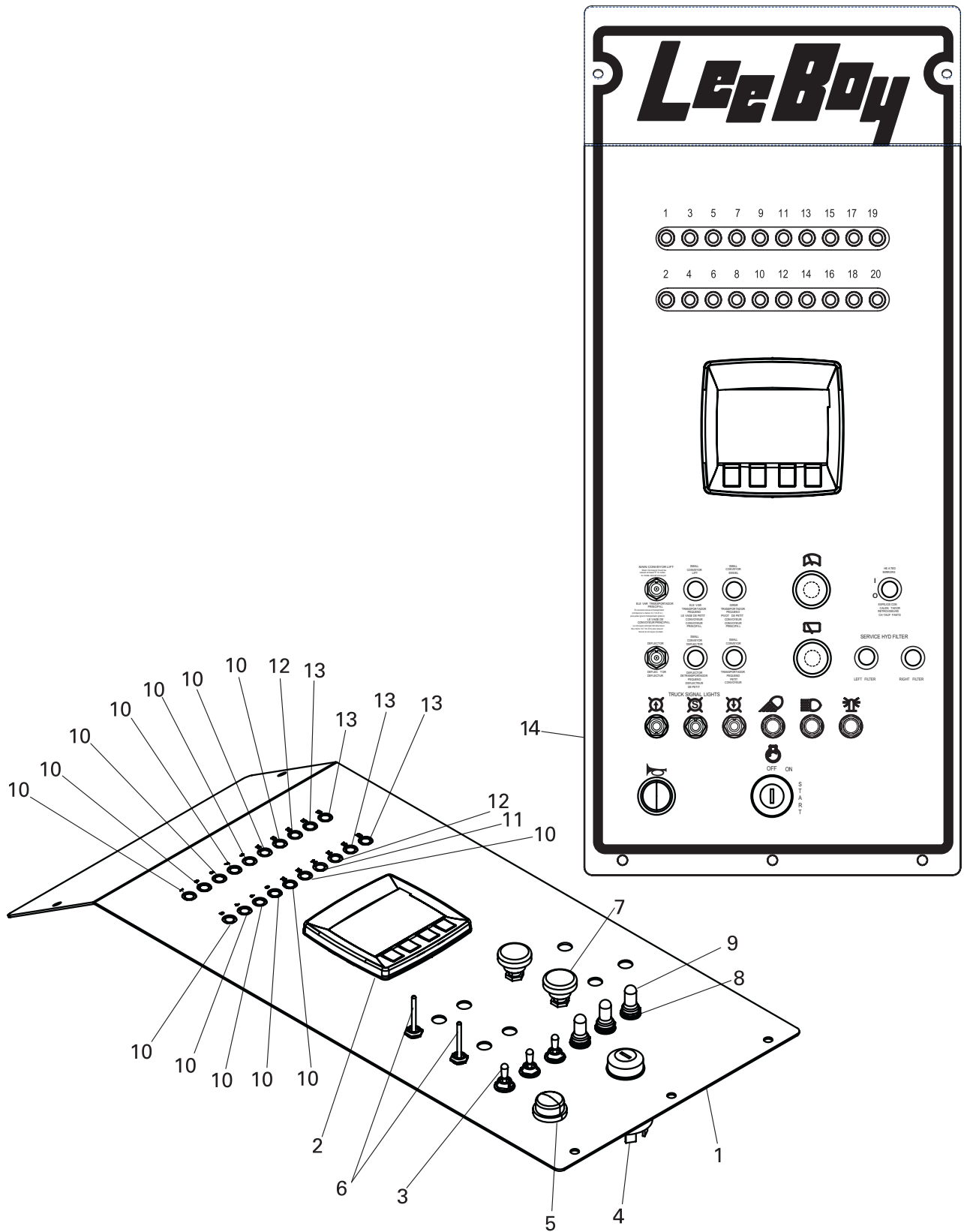


FIGURE 12B. CONTROLS



Section 5 ILLUSTRATED PARTS LIST

FIGURE 12B. CONTROLS

| FIG ITEM | PART NUMBER | NOMENCLATURE 123456 | UNITS PER ASSY |
|---------------------|------------------------|--------------------------------------|-------------------------------|
| 1 | 988873 | PI, INSTRUMENT PANEL, LOADER | 1 |
| 2 | 988699 | DISPLAY, GRAPHIC, B&W, DP200 | 1 |
| 3 | 900030 | SWITCH, TOGGLE, SPDT, 3-POS, MOM | 3 |
| 4 | 39146-14 | SWITCH, IGN, W/HEAT ST | 1 |
| 5 | 982249 | SWITCH, PUSH BUTTON, MOM | 1 |
| 6 | 981505 | SWITCH, TOGGLE, 3-POS, SPDT, MOM | 2 |
| 7 | 853090 | SWITCH, WIPER/WASHER | 2 |
| 8 | 851391 | SWITCH, TOGGLE, SPDT, 2-POS | 3 |
| 9 | 851441 | WEATHER BOOT, TOGGLE SWITCH | 3 |
| 10 | 34964 | CIRCUIT BREAKER, 10A | 13 |
| 11 | 989261 | CIRCUIT BREAKER, 30A | 1 |
| 12 | 35701 | CIRCUIT BREAKER, 25A | 2 |
| 13 | 989260 | CIRCUIT BREAKER, 15A | 4 |
| 14 | 989954 | DECAL, PANEL, LOADER | 1 |
| | 981916 | CONN, 31-PIN, RECPT, HD34-24-31 | 1 |
| | 983198 | CONN, 02-PIN, SOC, DT04-2P | 1 |
| | 983209 | CONN, WEDGE, RECP, 2P, DEUTSCH | 1 |
| | 982456 | TERM, PIN, DEUTSCH, 14-16AWG | 11 |
| | 983207 | CONN, 12-PIN, SOC, DT04-12P | 1 |
| | 983217 | CONN, WEDGE, RECP, 12P, DEUTSCH | 1 |
| | 73192-02 | PLUG, CAVITY, DEUTSCH CONN | 3 |

Section 5 ILLUSTRATED PARTS LIST

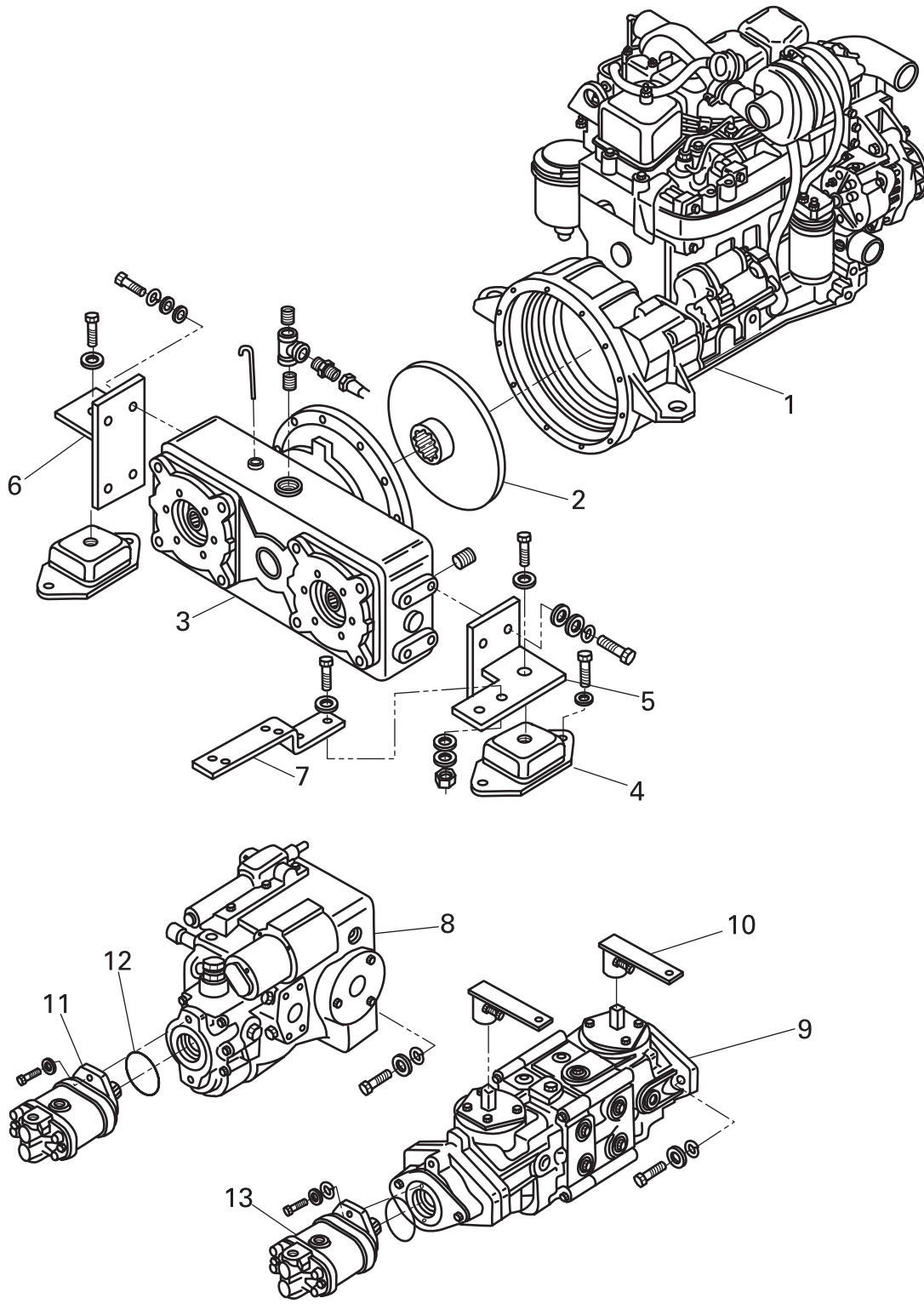


FIGURE 13. TIER III ENGINE AND PUMPS

FIGURE 13. TIER III ENGINE AND PUMPS

| FIG ITEM | PART NUMBER | NOMENCLATURE 123456 | UNITS PER ASSY |
|-------------|----------------|--------------------------------------------|----------------------|
| 1 | 988666 | ENGINE, CUMMINS 130HP, TIER 3 | 1 |
| 2 | P86879B | COUPLING, FLYWHEEL PUMP DRIVE | 1 |
| 3 | P76869A | DOUBLE PUMP DRIVE | 1 |
| 4 | 320140 | MOUNTING PAD, ENGINE | 2 |
| 5 | 981778 | BRACKET, L/H | 1 |
| 6 | 750581 | BRACKET, R/H | 1 |
| 7 | 750582 | BRACKET, PUMP CABLE HOLDER | 1 |
| 8 | 1000568 | PUMP, HYD. 4.57 CIR MAN. B PAD LH | 1 |
| *9 | P205232A | HYD. PUMP, V.V. FEEDER & CONVEYOR | 1 |
| 10 | 750585 | ARM, DRIVE | 1 |
| 11 | 162802 | HYD. PUMP, AUX. & POWER STEERING | 1 |
| 12 | P77675 | GASKET, SAE "A" 2" BOLT | 2 |
| 13 | 162803 | HYD. PUMP, SINGLE 3000 W/SWIVEL ATTACHMENT | 1 |
| | 852580 | PUMP, HYD, GEAR, TANDEM (NOT SHOWN) | 1 |
| | 34464 | ELEMENT, FILTER, HYD. (NOT SHOWN) | 2 |

Section 5 ILLUSTRATED PARTS LIST

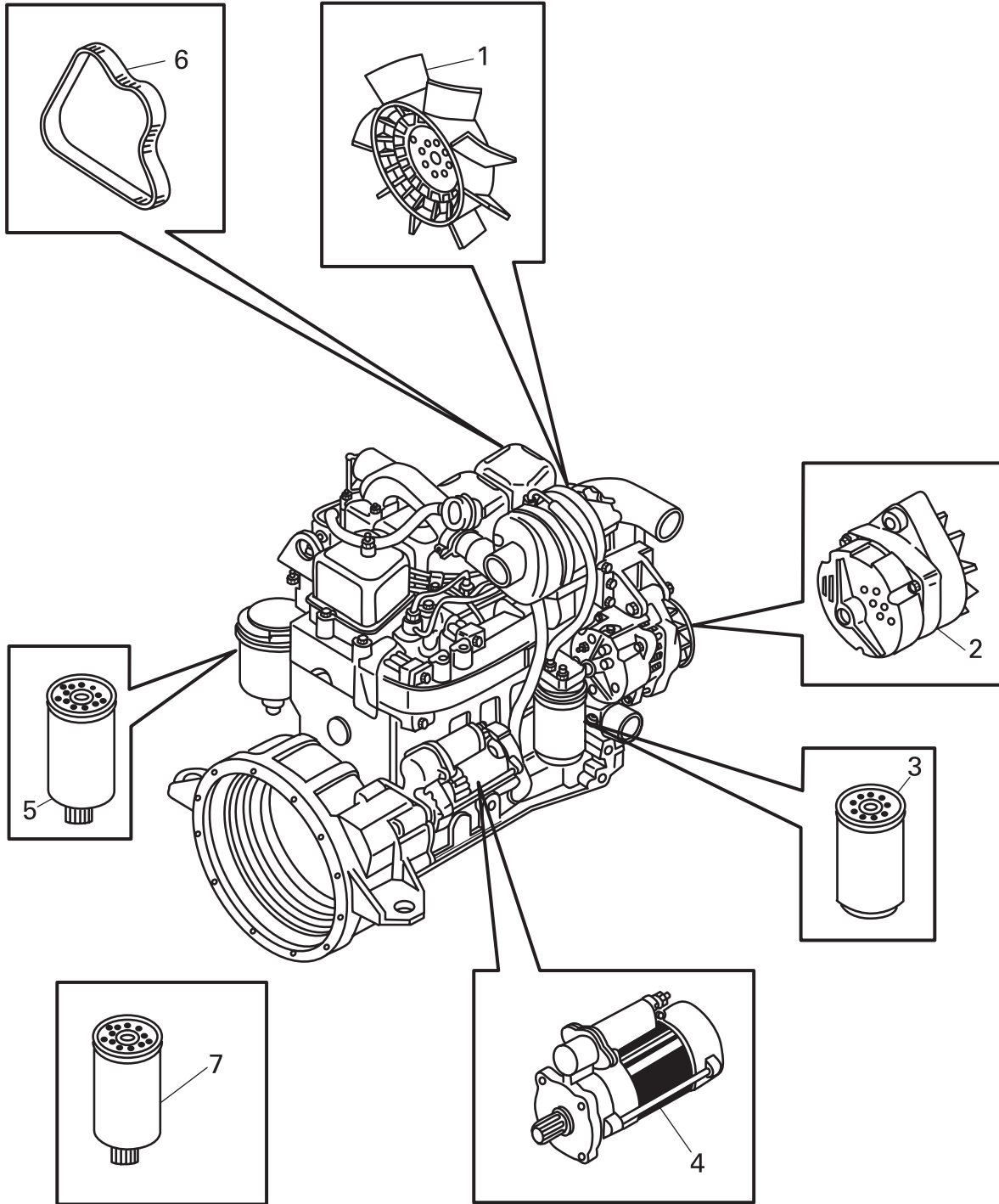


FIGURE 14. TIER III ENGINE COMPONENTS



Section 5 ILLUSTRATED PARTS LIST

FIGURE 14. TIER III ENGINE COMPONENTS

| FIG ITEM | PART NUMBER | NOMENCLATURE 123456 | UNITS PER ASSY |
|---------------------|------------------------|--------------------------------------|-------------------------------|
| 1 | 988934 | FAN, MULTI WING. 22" DIA | 1 |
| 2 | 988666-01 | ALTERNATOR. DELCO-REMY 12V 95AMP | 1 |
| 3 | 988666-03 | ELEMENT, OIL FILTER, 4.5 QSB | 1 |
| 4 | 988666-02 | STARTER, DENSO. R2.7 | 1 |
| 5 | 988666-04 | ELEMENT, FUEL FILTER, 4.5 QSB | 1 |
| 6 | 988666-07 | BELT, ALTERNATOR, CUMMINS 4.5L | 1 |
| 7 | 988666-05 | ELEMENT, FUEL/WATER SEPARATOR | 1 |

Section 5 ILLUSTRATED PARTS LIST

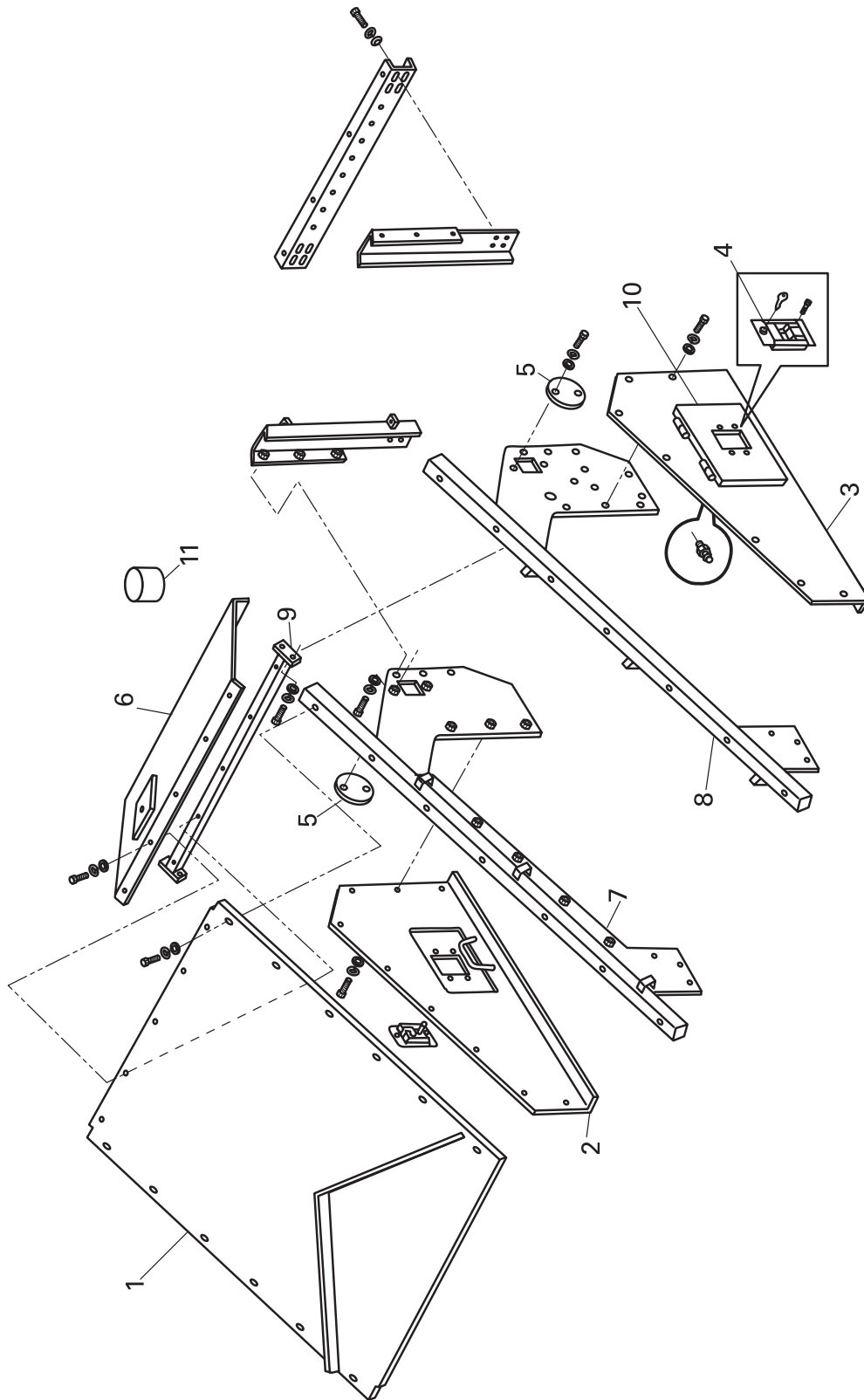


FIGURE 15. HOOD AND ENGINE ACCESS PANELS



Section 5 ILLUSTRATED PARTS LIST

FIGURE 15. HOOD AND ENGINE ACCESS PANELS

| FIG ITEM | PART NUMBER | NOMENCLATURE 123456 | UNITS PER ASSY |
|---------------------|------------------------|--------------------------------------|-------------------------------|
| 1 | 1000072 | W/M. ENGINE COVER LOADER | 1 |
| 2 | 988757 | W/M. ENGINE SIDE COVER RH | 1 |
| 3 | 988767 | W/M. ENGINE SIDE COVER LH | 1 |
| 4 | 160450 | LATCH, ENGINE ACCESS PANEL | 2 |
| 5 | 855132 | COVER | 1 |
| 6 | 988753 | GROUP, ENGINE HOOD LOADER | 1 |
| 7 | 1000556 | PLATE, FRAME SIDE RIGHT 3000 | 1 |
| 8 | 1000557 | PLATE, FRAME SIDE LEFT 3000 | 1 |
| 9 | 171231 | BRACE | 2 |
| 10 | 986742 | W/M. ENGINE DOOR RH | 2 |
| 11 | 852520 | BACK UP ALARM (3000) | 1 |
| | 853600 | GAS SHOCK, ENGINE BACK DOOR | 2 |

Section 5 ILLUSTRATED PARTS LIST

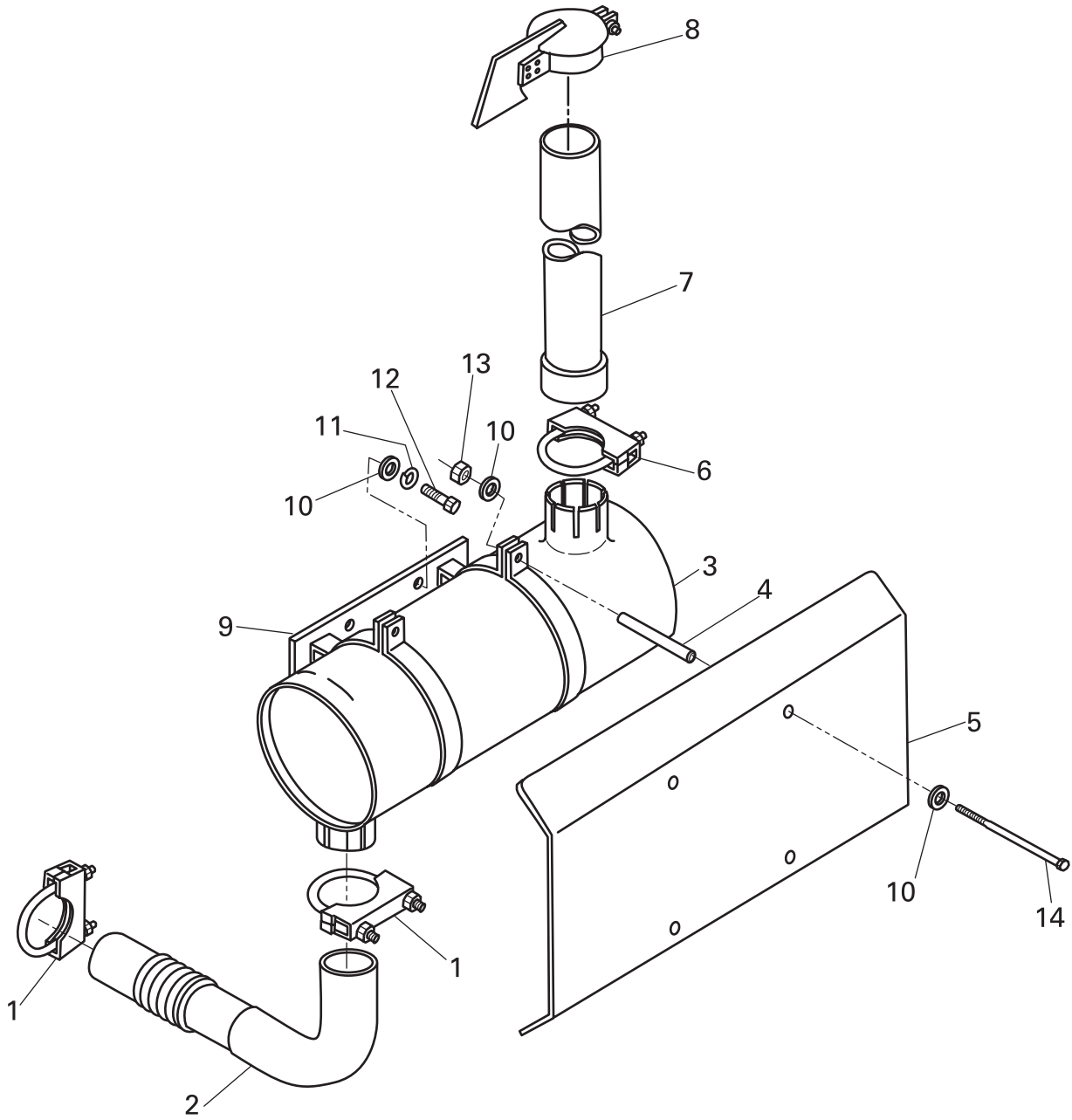


FIGURE 16. MUFFLER ASSEMBLY



Section 5 ILLUSTRATED PARTS LIST

FIGURE 16. MUFFLER ASSEMBLY

| FIG ITEM | PART NUMBER | NOMENCLATURE 123456 | UNITS PER ASSY |
|---------------------|------------------------|---------------------------------------|-------------------------------|
| 1 | 161250 | CLAMP, 3" MUFFLER | 2 |
| 2 | 750042 | ELBOW W / FLEX PIPE, 3000 EXHAUST | 1 |
| 3 | 750043 | MUFFLER, 3000 EXHAUST | 1 |
| 4 | 856999 | SPACER TUBE, 3000 EXHAUST HEAT SHIELD | 4 |
| 5 | 750045 | PLATE, 3000 MUFFLER HEAT SHIELD | 1 |
| 6 | 750046 | CLAMP, 3-1/4" MUFFLER | 1 |
| 7 | 750047 | PIPE, 3000 EXHAUST STACK | 1 |
| *8 | 750041 | RAIN CAP, 3" EXHAUST PIPE | 1 |
| 9 | 750048 | PLATE W / CLAMPS, 3000 MUFFLER MOUNT | 1 |
| 10 | 119-3 | WASHER, 3/8" SAE FLAT | 3 |
| 11 | 118-3 | WASHER, 3/8" LOCK | 2 |
| 12 | 102-205-1A | CAP SCREW, 3/8"-16 X 1 HEX | 4 |
| 13 | 116-3 | NUT, 3/8"-16 HEX | 4 |
| 14 | 102-225-1A | CAP SCREW, 3/8"-16 x 6" HEX HEAD | 4 |
| | | | |
| *8 | 160010 | PIPE, EXHAUST ELBOW (NOT SHOWN) | 1 |

*OPTION

Section 5 ILLUSTRATED PARTS LIST

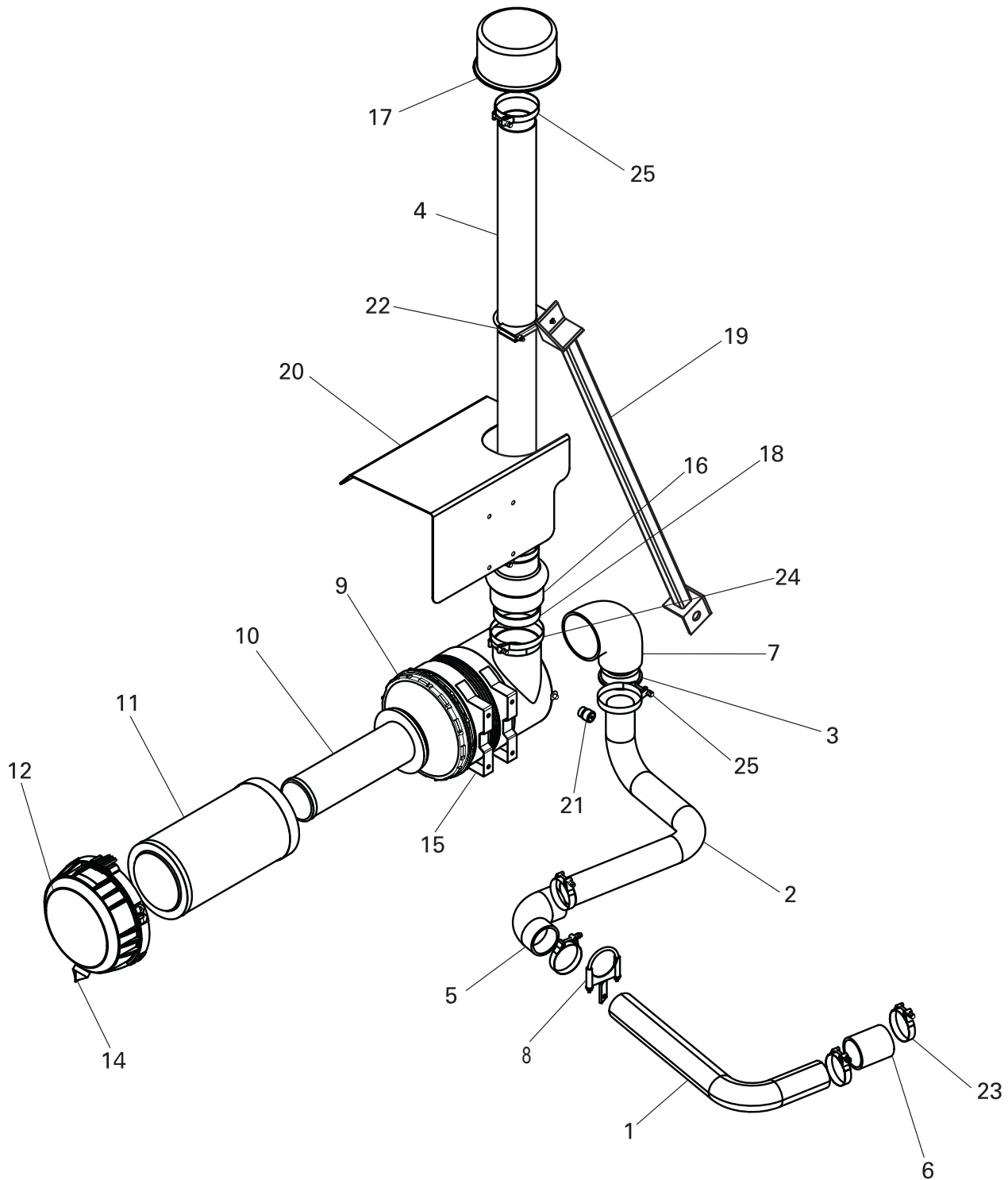


FIGURE 17. AIR CLEANER ASSEMBLY

FIGURE 17. AIR CLEANER ASSEMBLY

| FIG ITEM | PART NUMBER | NOMENCLATURE 123456 | UNITS PER ASSY |
|-------------|----------------|-----------------------------------|----------------------|
| 1 | 1000500 | TUBE, BENT AIR INTAKE, 3.00 OD | 1 |
| 2 | 1000501 | TUBE, BENT AIR INTAKE, 3.00 OD | 1 |
| 3 | 1000575 | REDUCER, RUBBER, 3.00 ID/4.00 OD | 1 |
| 4 | 1000723 | PIPE, AIR INTAKE, 4.00X54.00 | 1 |
| 5 | 34031 | ELBOW, RUBBER, 90, 3.00 ID | 1 |
| 6 | 987281 | TUBE, HIGH TEMP, 3" ID X 4"L, STR | 1 |
| 7 | 72172 | ELBOW, RUBBER, 90, 5.00X 4.00 ID | 1 |
| 8 | 1000923 | W/M, C LAMP, PIPE SUPPORT | 1 |
| 9 | 988962 | AIR CLEANER | 1 |
| 10 | 9888962-02 | ELEMENT, SECONDARY | 1 |
| 11 | 9888962-01 | ELEMENT, PRIMARY | 1 |
| 12 | 9888962-04 | COVER | 1 |
| 14 | 9888962-03 | DUST INJECTOR | 1 |
| 15 | 989242 | BAND, MOUNTING | 2 |
| 16 | 953521244 | HUMP HOSE, REDUCER, 5.00-4.00 ID | 1 |
| 17 | 852060 | FILTER, AIR PRE-CLEANER | 1 |
| 18 | 1000862 | TUBE, SLEEVE, LOADER AIR CLEANER | 1 |
| 19 | 1000721 | W/M, AIR INTAKE STABILIZER, 3000 | 1 |
| 20 | 1000707 | PL, COVER, AIR CLEANER, 3000 | 1 |
| 21 | 171220 | INDICATOR, AIR FILTER | 1 |
| 22 | 34040 | CLAMP, MUFFLER, 4.00 ID | 1 |
| 23 | 171090 | CLAMP, T-BOLT, 5.00 ID | 4 |
| 24 | 72174 | CLAMP, T-BOLT, 5.00 ID | 2 |
| 25 | 953521243 | CLAMP, T-BOLT, 4.00 ID | 3 |

Section 5 ILLUSTRATED PARTS LIST

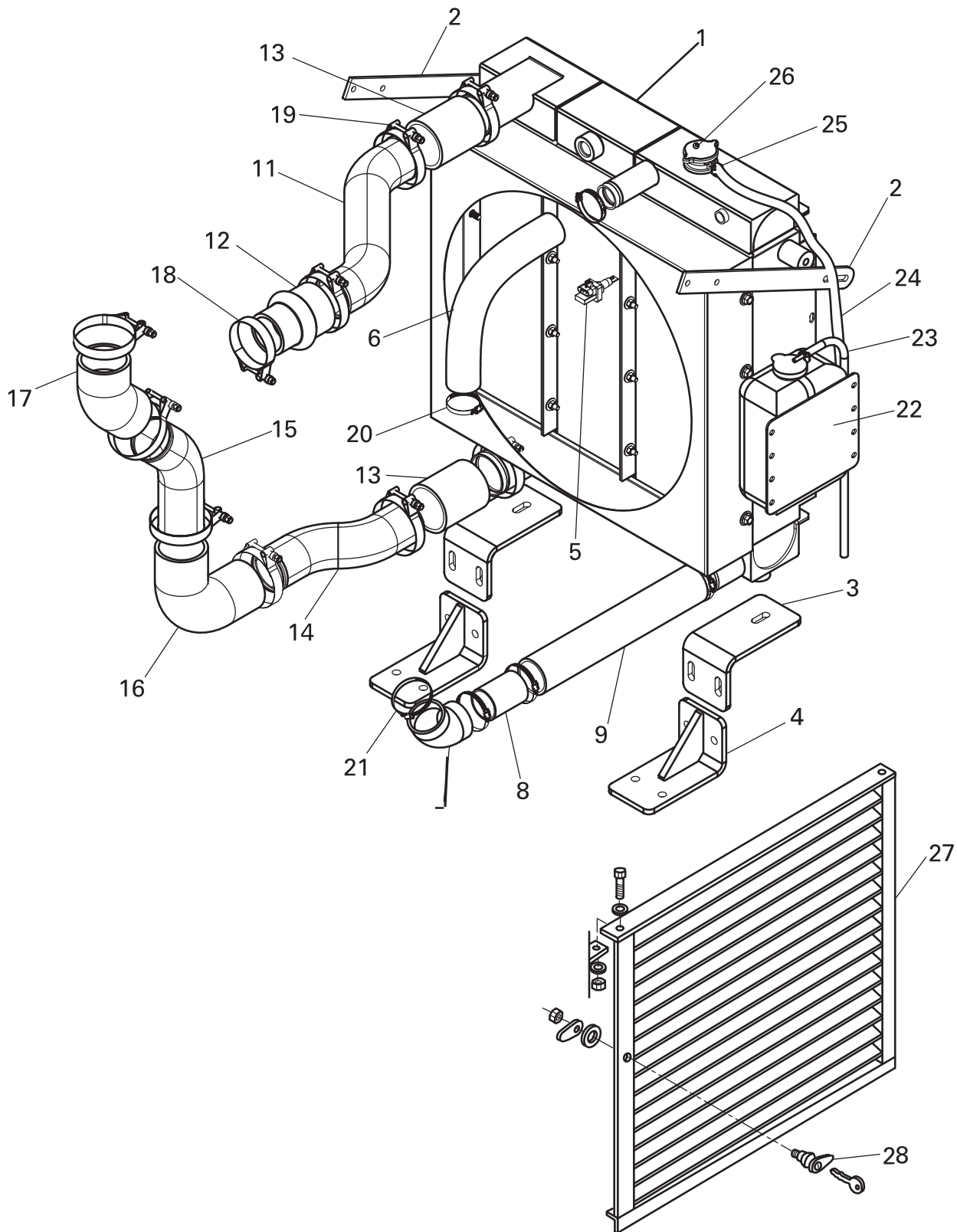


FIGURE 18. GRILLE AND RADIATOR ASSEMBLY

FIGURE 18. GRILLE AND RADIATOR ASSEMBLY

| FIG ITEM | PART NUMBER | NOMENCLATURE 123456 | UNITS PER ASSY |
|-------------|----------------|-------------------------------------|----------------------|
| 1 | 988646 | RAD/CAC/OIL COOLER | 1 |
| 2 | 988748 | LINK, TOP RAD GUSSET | 2 |
| 3 | 988759 | W/M, FRT RAD MOUNT | 2 |
| 4 | 988762 | W/M, REAR RAD MOUNT | 2 |
| 5 | 988986 | SENSOR, COOLANT LEVEL | 1 |
| 6 | 170100A | HOSE, RADIATOR, LOWER | 1 |
| 7 | 984262 | ELBOW, RUBBER, 60, 2.25 ID | 1 |
| 8 | 42541 | TUBE, RND, 2.25OD X 2.00ID X3.00 LG | 1 |
| 9 | 170071A | HOSE, RADIATOR, UPPER 685B/3000 | 1 |
| 10 | 1000517 | GRP, CAC, 3000, TIER3 | 1 |
| 11 | 1000504 | TUBE, BENT, CHARGE AIR, 3.00 OD | 1 |
| 12 | 982780 | REDUCER | 1 |
| 13 | 987281 | TUBE, HIGH TEMP, 3"ID X 4"L, STR | 2 |
| 14 | 1000502 | TUBE, BENT, CHARGE AIR, 3.00 OD | 1 |
| 15 | 1000503 | TUBE, BENT, CHARGE AIR, 3.00 OD | 1 |
| 16 | 987282 | 90 DEGREE ELBOWS | 1 |
| 17 | 982779 | 90 DEGREE ELBOWS | 1 |
| 18 | 171090 | CLAMP, T-BOLT, 3.00 ID | 1 |
| 19 | 171190 | CLAMP, T-BOLT, 3.50 NOMINAL | 9 |
| 20 | 230040 | NUMBER 28, HOSE CLAMP | 2 |
| 21 | 500230 | NUMBER 36, HOSE CLAMP | 4 |
| 22 | 983273 | TANK, RADIATOR OVERFLOW | 1 |
| 23 | 32882-01 | HOSE, 04, PUSH-ON, 3.0 FT LG | 1 |
| 24 | 71812-01 | HOSE, 05. PUSH-ON, 3.0 FT LG | 1 |
| 25 | 33277 | NUMBER 4, HOSE CLAMP | 3 |
| 26 | 988646-01 | CAP, RADIATOR | 1 |
| 27 | 750554 | GRILL | 1 |
| 28 | 160460 | LATCH, RADIATOR ACCESS PANEL | 1 |

Section 5 ILLUSTRATED PARTS LIST

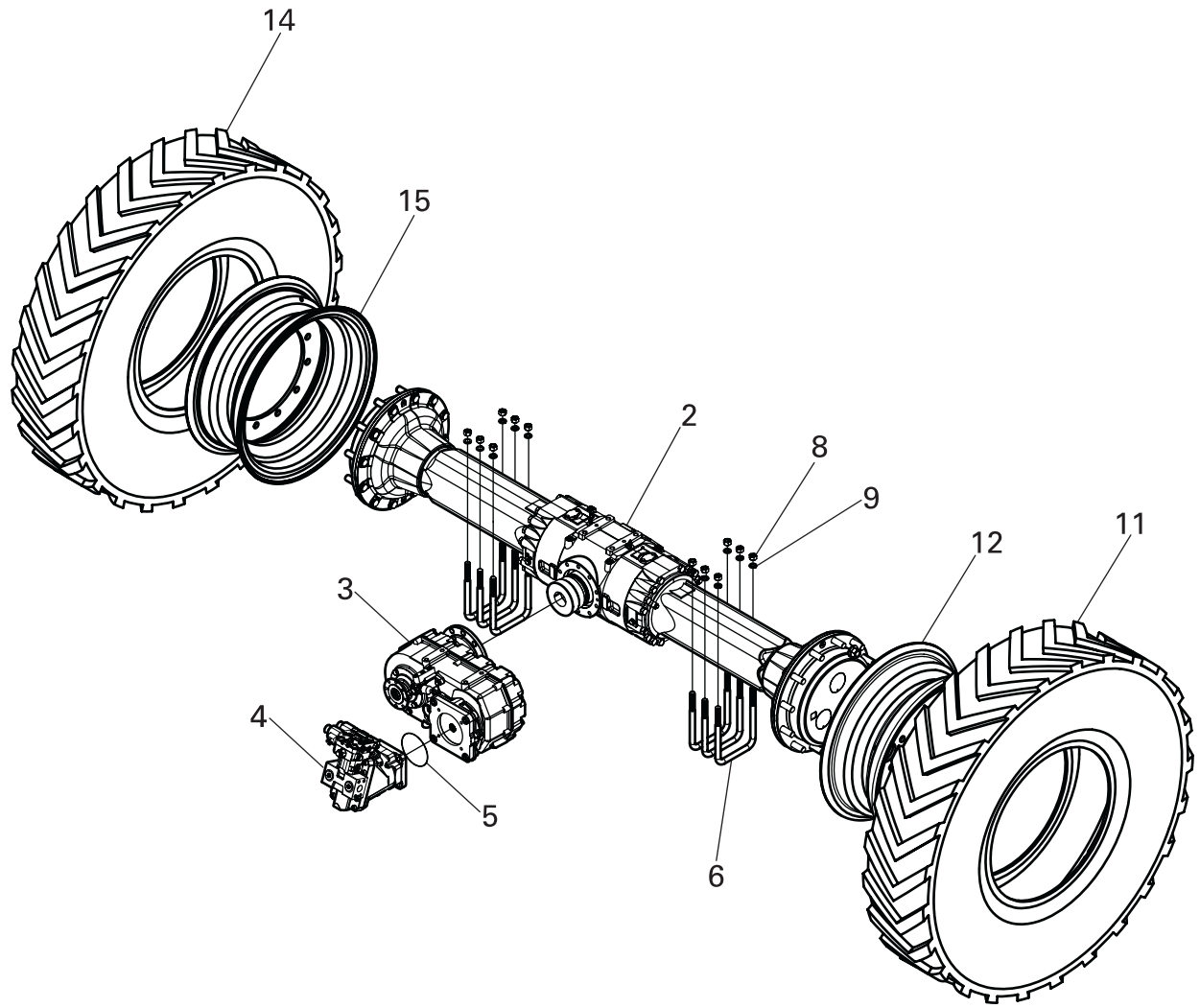


FIGURE 19. REAR END ASSEMBLY



Section 5 ILLUSTRATED PARTS LIST

FIGURE 19. REAR END ASSEMBLY

| FIG ITEM | PART NUMBER | NOMENCLATURE 123456 | UNITS PER ASSY |
|---------------------|------------------------|--------------------------------------|-------------------------------|
| 1 | 981740 | AXLE, REAR DRIVE, LOADER | 1 |
| 2 | 981740-89 | AXLE & REDUCTION HUB | 1 |
| 3 | 981740-90 | AXLE, TRANSFER CASE | 1 |
| 4 | 1000569 | MOTOR, HYD, 4.82 CIR, 51 SERIES | 1 |
| 5 | 981740-88 | SEAT, O-RING, 5.00 ID X .063 | 1 |
| 6 | 853360 | U-BOLD, 7" C/L X 9" LONG | 6 |
| 8 | 80375 | NUT, FLEXLOC, .750-16, FULL, LT | 12 |
| 9 | 80375 | WASHER, LOCK 3/4 | 12 |
| 10 | A750568L | ASSY, 3000, WHEEL, REAR, LH | 1 |
| 11 | 750568 | TIRE, GRADER, 14:00-24 TG | 1 |
| 12 | 750565 | RIM, 14:00 | 1 |
| 13 | A750568R | ASSY, 3000, WHEEL, REAR, RH | 1 |
| 14 | 750568 | TIRE, GRADER, 14:00-24 TG | 1 |
| 15 | 750565 | RIM, 14:00 | 1 |

Section 5 ILLUSTRATED PARTS LIST

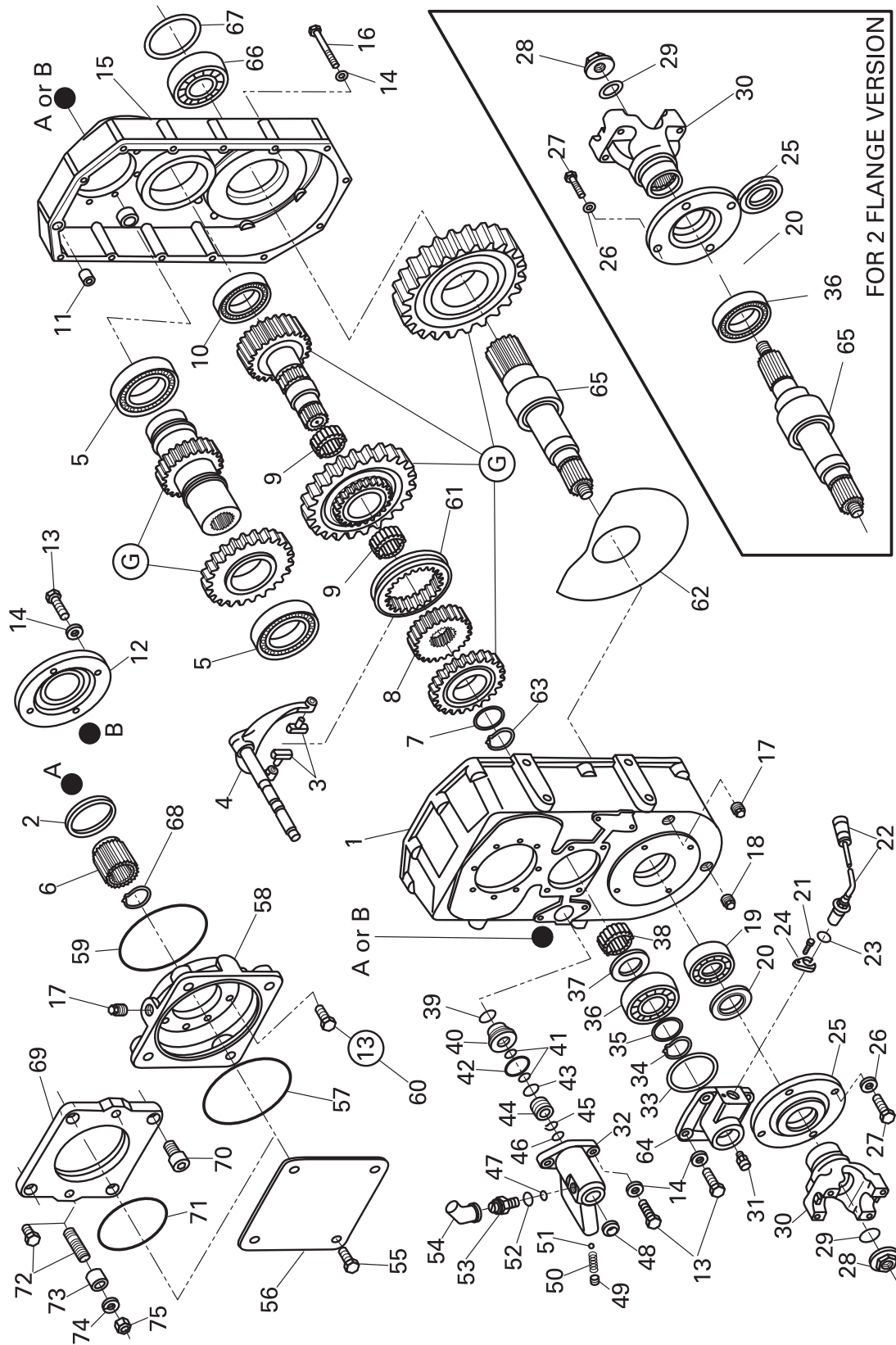


FIGURE 20. GEAR BOX



Section 5 ILLUSTRATED PARTS LIST

FIGURE 20. GEAR BOX

| FIG ITEM | PART NUMBER | NOMENCLATURE 123456 | UNITS PER ASSY |
|---------------------|------------------------|--------------------------------------|-------------------------------|
| 1 | 981740-13 | HOUSING | 1 |
| 2 | 981740-192 | SEAL | 1 |
| 3 | 981740-15 | SLIDING PIN | 2 |
| 4 | 981740-12 | BAR | 1 |
| 5 | 981740-16 | BALL BEARING | 2 |
| 6 | 981740-17 | REDUCTION BUSHING | 1 |
| 7 | 981740-18 | FRICTION WASHER | 1 |
| 8 | 981740-19 | GUIDE - TUBE | 1 |
| 9 | 981740-20 | NEEDLE BEARING | 2 |
| 10 | 981740-21 | BEARING | 1 |
| 11 | 981740-22 | REDUCTION BUSHING | 2 |
| 12 | 981740-23 | COVER | 1 |
| 13 | 981740-24 | HEXAGON BOLT | 4 |
| 14 | 981740-25 | SPRING WASHER | 18 |
| 15 | 981740-26 | COVER | 1 |
| 16 | 981740-27 | HEXAGON BOLT | 14 |
| 17 | 981740-28 | PLUG | 1 |
| 18 | 981740-29 | MAGNET PLUG | 1 |
| 19 | 981740-30 | BALL BEARING | 1 |
| 20 | 981740-31 | SEAL | 1 |
| 25 | 981740-32 | COVER | 1 |
| 26 | 981740-33 | SPRING WASHER | 4 |
| 27 | 981740-34 | HEXAGON BOLT | 4 |
| 28 | 981740-35 | NUT | 1 |
| 29 | 981740-36 | JOINT OR O-RING | 1 |
| 30 | 981740-37 | FLANGE | 1 |
| 31 | 981740-38 | VENT | 1 |
| 32 | 981740-39 | CYLINDER | 1 |
| 33 | 981740-40 | SHIM | 1 |
| 33A | 981740-41 | SHIM | 1 |
| 34 | 981740-42 | CIRCLIP | 1 |
| 35 | 981740-43 | SHIM | 1 |
| 36 | 981740-44 | ROLLER BEARING | 1 |
| 37 | 981740-45 | FRICTION WASHER | 1 |
| 38 | 981740-46 | NEEDLE BEARING | 1 |
| 39 | 981740-47 | O-RING | 1 |
| 40 | 981740-48 | REDUCTION BUSHING | 1 |

Section 5
ILLUSTRATED PARTS LIST



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Section 5 ILLUSTRATED PARTS LIST

FIGURE 20. GEAR BOX CONT...

| FIG ITEM | PART NUMBER | NOMENCLATURE 123456 | UNITS PER ASSY |
|---------------------|------------------------|--------------------------------------|-------------------------------|
| 41 | 981740-49 | O-RING | 2 |
| 42 | 981740-50 | O-RING | 1 |
| 43 | 981740-51 | O-RING | 1 |
| 44 | 981740-52 | PISTON | 1 |
| 45 | 981740-53 | CIRCLIP | 1 |
| 46 | 981740-54 | O-RING | 1 |
| 47 | 981740-55 | O-RING | 1 |
| 48 | 981740-56 | SEAL | 1 |
| 49 | 981740-57 | GRUB BOLT | 1 |
| 50 | 981740-58 | SPRING | 1 |
| 51 | 981740-59 | DETEND BALL | 1 |
| 52 | 981740-60 | SEAL WASHER | 1 |
| 53 | 981740-61 | SECURITY SWITCH | 1 |
| 54 | 981740-62 | BOOT | 1 |
| 57 | 981740-63 | O-RING | 1 |
| 58 | 981740-64 | COVER | 1 |
| 59 | 981740-65 | O-RING | 1 |
| 60 | 981740-24 | HEXAGON BOLT | 8 |
| 61 | 981740-06 | CHANGE SELECTOR | 1 |
| 62 | 981740-67 | COVERPLATE | 1 |
| 63 | 981740-68 | CLIRCLIP | 1 |
| 64 | 981740-69 | COVER | 1 |
| 65 | 981740-70 | OUTPUT SHAFT | 1 |
| 68 | 981740-71 | CIRCLIP | 1 |
| 69 | 981740-72 | FLANGE | 1 |
| 70 | 981740-73 | CYLINDER BOLT | 4 |
| 71 | 981740-14 | O-RING | 1 |
| 72 | 981740-75 | STUD | 2 |
| 73 | 981740-76 | SPACER | 2 |
| 74 | 981740-77 | SPRING WASHER | 2 |
| 75 | 981740-78 | NUT | 2 |

Section 5 ILLUSTRATED PARTS LIST

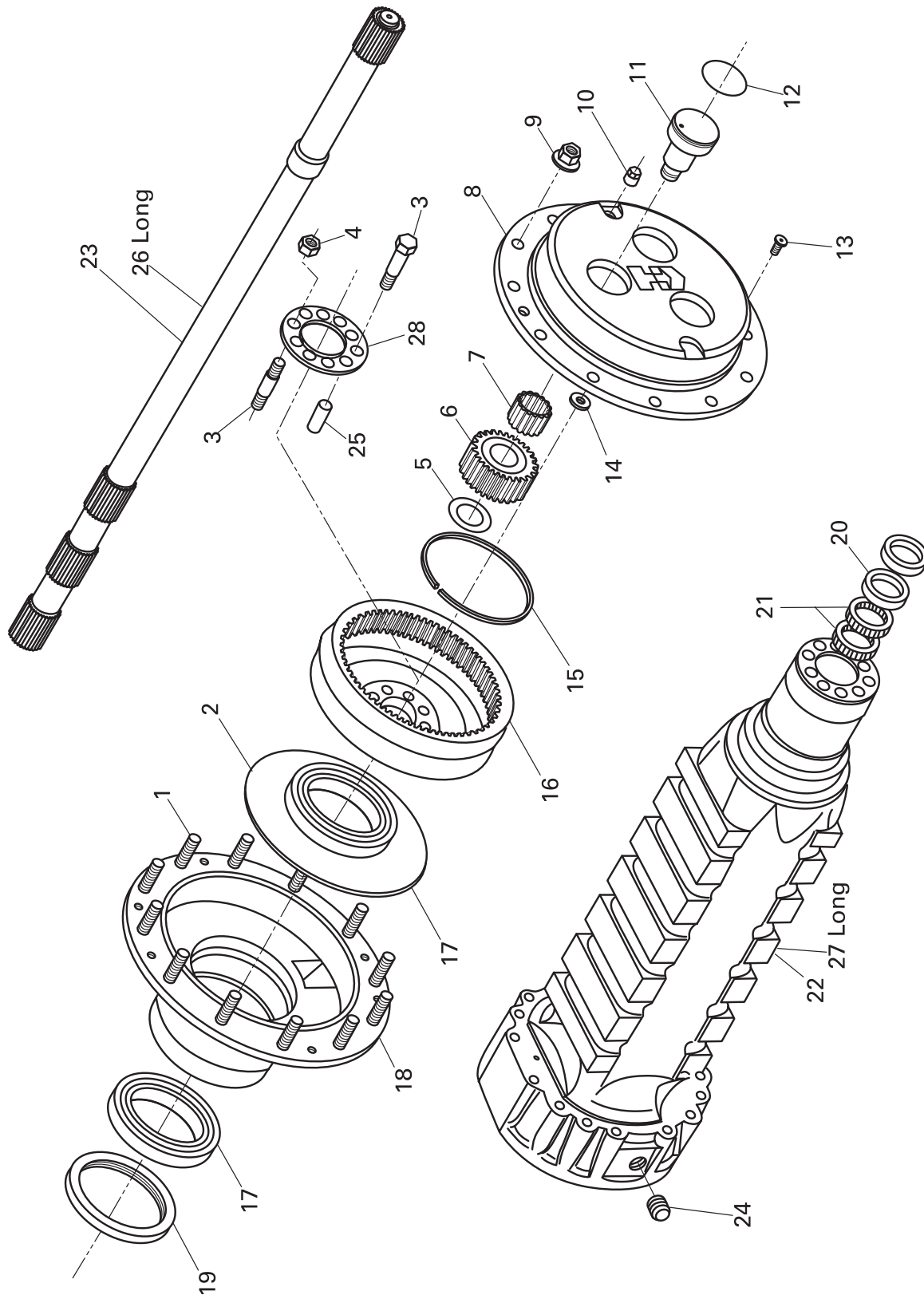


FIGURE 21. HUB REDUCTION

FIGURE 21. HUB REDUCTION

| FIG ITEM | PART NUMBER | NOMENCLATURE 123456 | UNITS PER ASSY |
|-------------|----------------|-------------------------------|----------------------|
| 1 | 981740-137 | WHEEL STUD | 24 |
| 2 | 981740-138 | O-RING | 2 |
| 3 | 981740-139 | BOLT | 20 |
| 4 | | OPTIONAL | |
| 5 | 981740-140 | FRICTION WASHER | 6 |
| 6 | 981740-141 | PLANET GEAR | 6 |
| 7 | 981740-142 | NEEDLE BEARING | 6 |
| 8 | 981740-143 | PLANET GEAR CARRIER | 2 |
| 9 | 981740-144 | NUT | 24 |
| 10 | 981740-29 | MAGNET PLUG | 2 |
| 11 | 981740-145 | PIN | 6 |
| 12 | 981740-146 | O-RING | 6 |
| 13 | 981740-147 | COUNTERSUNK BOLT | 4 |
| 14 | 981740-148 | FRICTION WASHER | 2 |
| 15 | 981740-149 | CIRCLIP | 2 |
| 16 | 981740-150 | RING GEAR | 2 |
| 17 | 981740-151 | TAPER ROLLER BEARING | 4 |
| 18 | 981740-152 | WHEEL HUB | 2 |
| 19 | 981740-85 | SEAL | 2 |
| 20 | 981740-153 | CENTERING RING | 2 |
| 21 | 981740-154 | SEAL | 2 |
| 22 | 981740-155 | AXLE CASE | 2 |
| 23 | 981740-156 | HALF SHAFT | 2 |
| 25 | 981740-157 | REDUCTION BUSHING | 20 |
| 26 | | OPTIONAL | |
| 27 | | OPTIONAL | |
| 28 | 981740-158 | LOCKING PLATE | 2 |

Section 5 ILLUSTRATED PARTS LIST

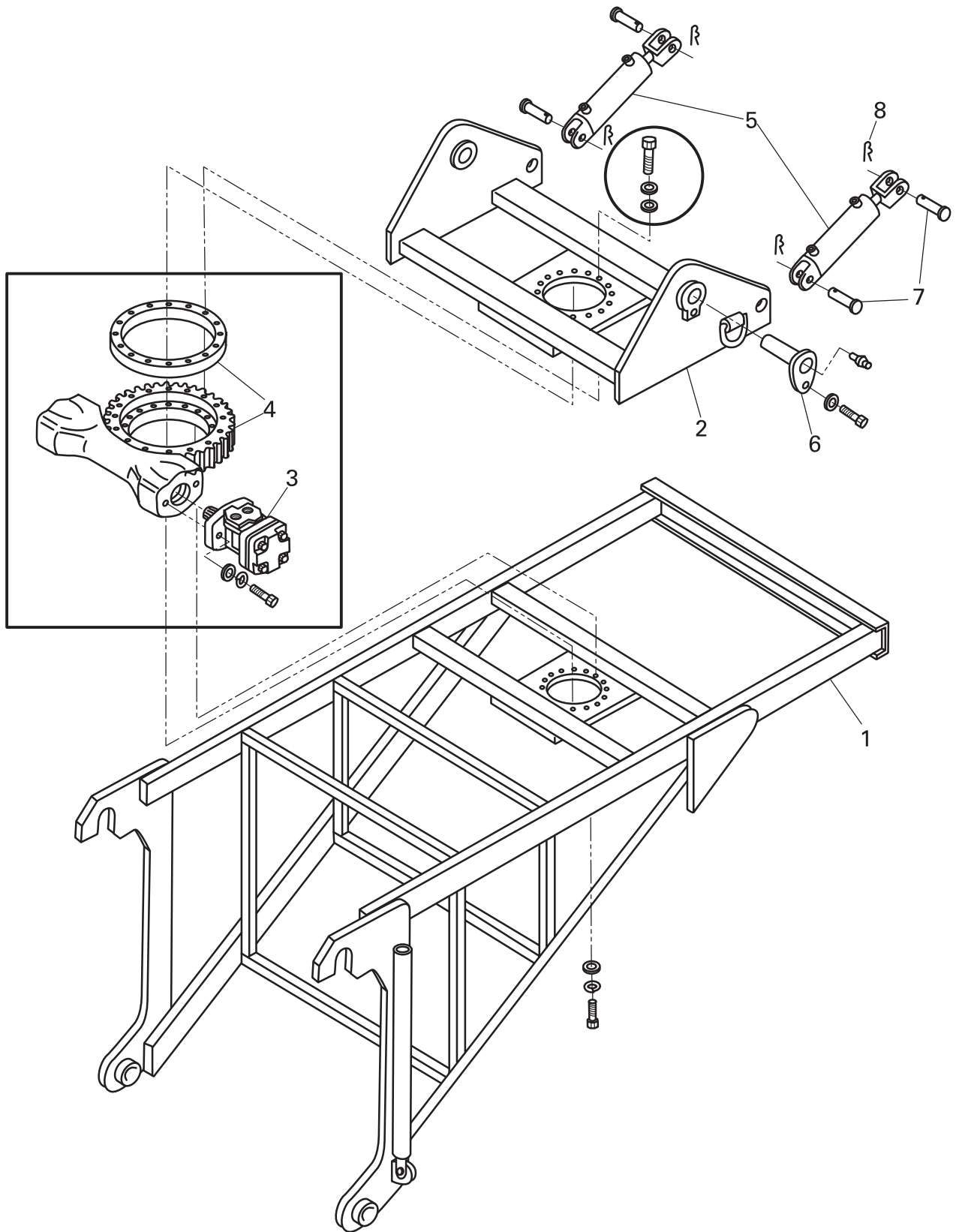


FIGURE 22. SWIVEL MOUNT ASSEMBLY



Section 5 ILLUSTRATED PARTS LIST

FIGURE 22. SWIVEL MOUNT ASSEMBLY

| FIG ITEM | PART NUMBER | NOMENCLATURE 123456 | UNITS PER ASSY |
|---------------------|------------------------|--------------------------------------|-------------------------------|
| 1 | 750604 | SWIVEL MOUNT, MAIN FRAME | |
| 2 | 750606 | SWIVEL YOKE | |
| 3 | 750607 | MOTOR, SWIVEL TURN | 1 |
| 4 | 750608 | SWIVEL GEAR ASSEMBLY | 1 |
| 5 | 811374 | CYLINDER | 2 |
| 6 | 750652 | PIN | 2 |
| 7 | 240030 | PIN | |
| 8 | 870307 | CLIP, HYD. CYLINDER PIN | 4 |

Section 5 ILLUSTRATED PARTS LIST

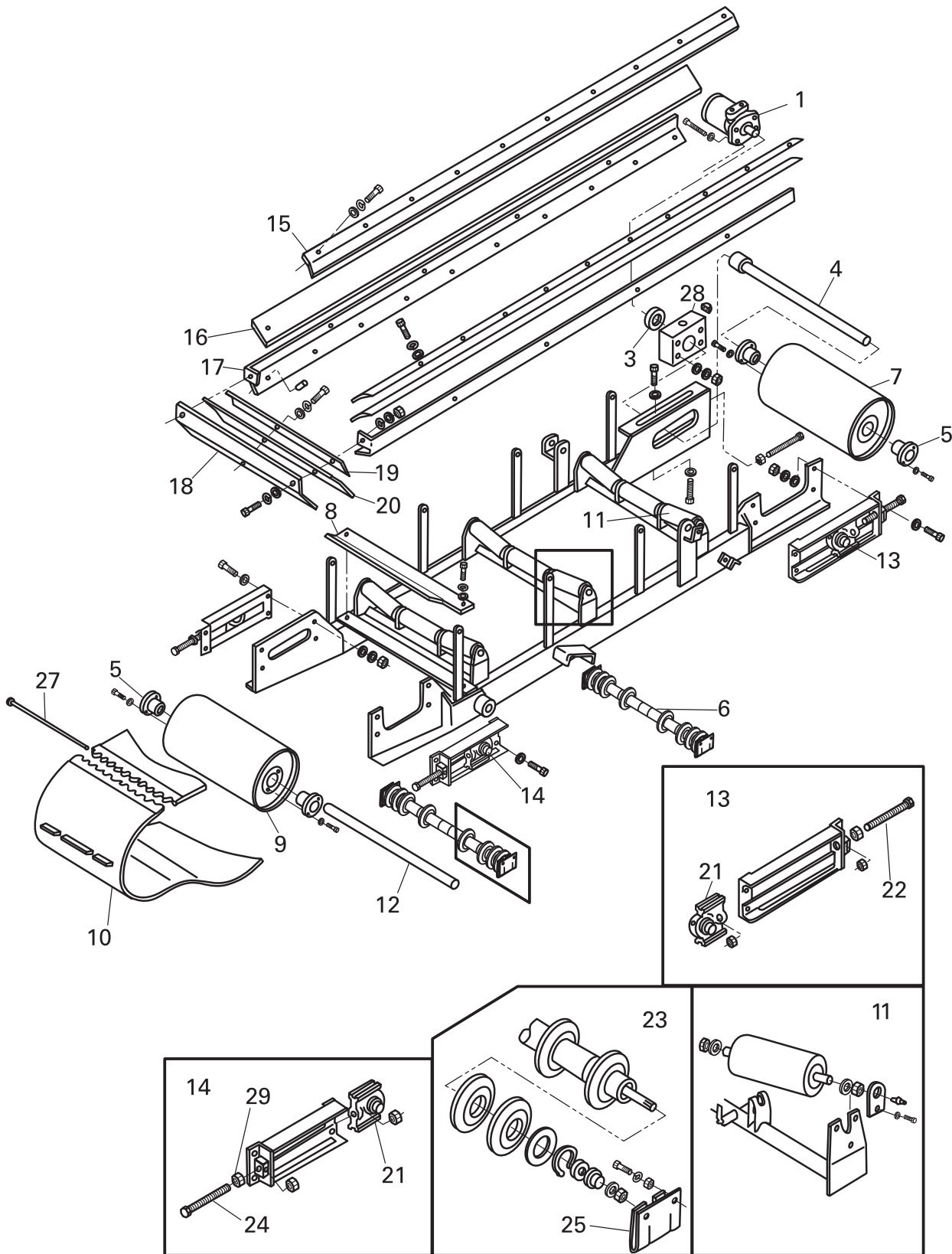


FIGURE 23. REAR SWIVEL ASSEMBLY

FIGURE 23. REAR SWIVEL ASSEMBLY

| FIG ITEM | PART NUMBER | NOMENCLATURE 123456 | UNITS PER ASSY |
|-------------|----------------|----------------------------------------------|----------------------|
| 1 | 750607 | HYD. MOTOR, CONVEYOR SWV | 1 |
| 3 | 520120 | BEARING, INSERT | 1 |
| 4 | 750612 | SHAFT, SWIVEL CONVEYOR DRIVE | 1 |
| 5 | 750615 | BUSHING, SWIVEL CONVEYOR PULLEY | 1 |
| 6 | 750090 | ROLLER ASSY., CONVEYOR RETURN IDLER | A/R |
| 7 | 750616 | HEAD PULLEY, SWIVEL, CONV,W/LAG 10.50 X 32" | 1 |
| 8 | 1000768 | W/M. TAIL PULLEY SCRAPER, 3000 SWV | 1 |
| 9 | 984940 | ASSM, PULLEY, TAIL DRUM, LOADER SWV | 1 |
| 10 | 750072A | CONVEYOR BELT, SWIVEL W/CLEATS | 1 |
| 11 | 750133 | ROLLER ASSY.(8 degree), CONVEYOR TROUGHING | 3 |
| 12 | 750620 | SHAFT, 3000 TAIL PULLEY | 1 |
| 13 | 750621 | BRACKET, SWIVEL CONVEYOR BELT REAR ADJ. 6"L | 2 |
| 14 | 750622 | BRACKET, SWIVEL CONVEYOR BELT FRONT ADJ. 4"L | 2 |
| 15 | 750623 | BRACKET, SIDE FLASHING | 2 |
| 16 | 750624 | FLASHING SET, SWIVEL CONVEYOR SIDE | 2 |
| 17A | 853292 | PLATE, RH CONVEYOR SIDE SKIRT | 2 |
| 17B | 853293 | PLATE, LH CONVEYOR SIDE SKIRT | 2 |
| 18 | 853342 | ASSM., RUBBER CATCH BRACKET | 2 |
| 19 | 853379 | CLAMP, SKIRT | 2 |
| 20 | 750628 | FLASHING, FRONT | 1 |
| 21 | 750627 | BEARING, SWIVEL CONVEYOR PULLEY | 3 |
| 22 | 750622-2 | ADJ. SWIVEL CONVEYOR TAIL PULLEY 6.75LG | 2 |
| 23 | 750090 | ROLLER ASSY., CONVEYOR RETURN IDLER | A/R |
| 24 | 750622-1 | ADJ. SWIVEL CONVEYOR TAIL PULLEY 12.75LG | 2 |
| 25 | 854741 | J. BRACKET MAIN CONVEYOR | 2 |
| 27 | 750080 | PIN, CONVEYOR BELT LACING (30") | 1 |
| 28 | 853339 | ASSM. ROLLER ADJ. LARGE DRUM | 1 |
| 29 | 80359 | NUT, FLEXLOC | A/R |

Section 5 ILLUSTRATED PARTS LIST

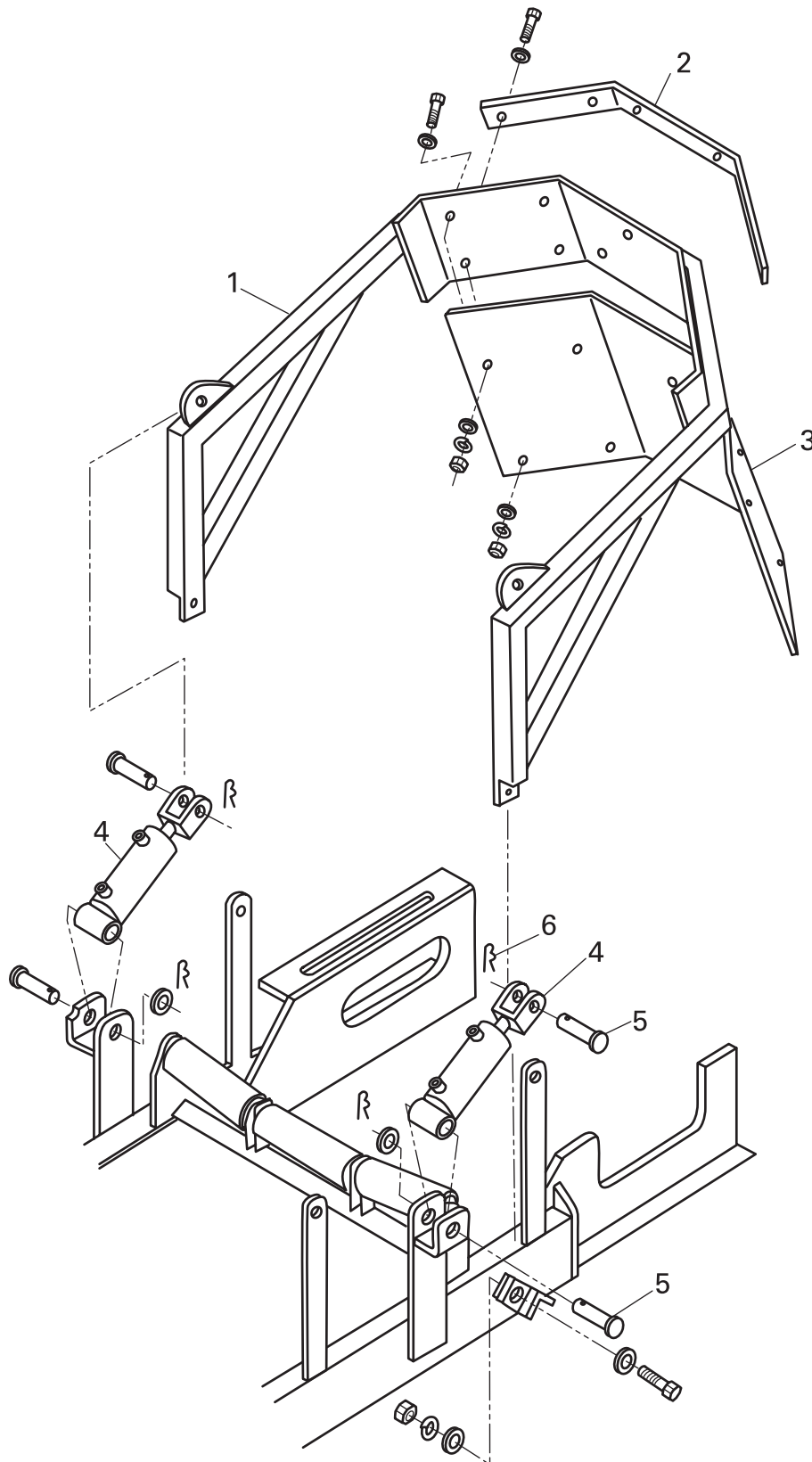


FIGURE 24. DEFLECTOR ASSEMBLY



Section 5 ILLUSTRATED PARTS LIST

FIGURE 24. DEFLECTOR ASSEMBLY

| FIG ITEM | PART NUMBER | NOMENCLATURE 123456 | UNITS PER ASSY |
|---------------------|------------------------|---------------------------------------------------|-------------------------------|
| 1 | 853248 | ASSM., BASKET SWIVEL CONVEYOR | 1 |
| 2 | S521763 | STRIP, FLASHING RETAINER | 1 |
| 3 | M521454 | RUBBER SKIRT, DISCHARGE BAFFLE | 1 |
| 4 | P521124 | HYD. DEFLECTOR CYL., 7-12 / 3000 DISCHARGE BAFFLE | 2 |
| 5 | 210060 | PIN, CLEVIS | 4 |
| 6 | 870307 | CLIP, HYD CYL. PIN | 4 |

Section 5 ILLUSTRATED PARTS LIST



INDEX BY PART NAME

| ITEM NO. | PART NUMBER | NOMENCLATURE 123456 | PAGE |
|----------|-------------|-------------------------------------------|--------|
| 6 | A510-B | 1/4 -20 PHPHIL X 5/8" | IPL-21 |
| 20 | | 1/4 INT TOOTH LK WSHR | IPL-21 |
| 19 | | 1/4-20 BHSCS X 5/8 | IPL-21 |
| 16 | 982069 | 3/16 ROD CLIP - PLSTC - CNTR | IPL-21 |
| 23 | 982075 | 3/8 DIA. HOLE PLUG - PLSTC | IPL-21 |
| 18 | 982071 | 5/32 ROD CLIP - RH | IPL-21 |
| 14 | 982067 | 7/32 ROD CLIP - LH | IPL-21 |
| 13 | 982066 | 7/32 ROD CLIP - RH | IPL-21 |
| 8 | | 8-32 PHMS X 1/2 | IPL-21 |
| 17 | 982779 | 90 DEGREE ELBOWS | IPL-39 |
| 16 | 987282 | 90 DEGREE ELBOWS | IPL-39 |
| 25 | 855064 | ACCUMULATOR | IPL-11 |
| 6 | 750321 | ADJ. BOLT, MAIN CONVEYOR BELT R.H. | IPL-17 |
| 12 | 854744 | ADJ. ROD, TAIL PULLEY | IPL-17 |
| 24 | 750622-1 | ADJ. SWIVEL CONVEYOR TAIL PULLEY 12.75LG | IPL-51 |
| 22 | 750622-2 | ADJ. SWIVEL CONVEYOR TAIL PULLEY 6.75LG | IPL-51 |
| **9 | 750622-1 | ADJ. SWV. CONV., HEADPULLEY 12.75LG | IPL-05 |
| 9 | 988962 | AIR CLEANER | IPL-37 |
| 2 | 988666-01 | ALTERNATOR. DELCO-REMY 12V 95AMP | IPL-31 |
| 10 | 750585 | ARM, DRIVE | IPL-29 |
| 11 | 151180 | ARM, WIPER | IPL-23 |
| 9 | 984940 | ASSM, PULLEY, TAIL DRUM, LOADER SWV | IPL-51 |
| 28 | 853339 | ASSM. ROLLER ADJ. LARGE DRUM | IPL-51 |
| 1 | 853248 | ASSM., BASKET SWIVEL CONVEYOR | IPL-53 |
| 18 | 853342 | ASSM., RUBBER CATCH BRACKET | IPL-51 |
| 13 | A750568R | ASSY, 3000, WHEEL, REAR, RH | IPL-41 |
| 10 | A750568L | ASSY, 3000, WHEEL,REAR, LH | IPL-41 |
| | 981738 | ASSY. 3000 WHEEL FRONT (NOT SHOWN) | IPL-09 |
| 21 | W522855 | AUGER (SNOW) L/H | IPL-05 |
| 20 | W522854 | AUGER (SNOW) R/H | IPL-05 |
| 2 | 981740-89 | AXLE & REDUCTION HUB | IPL-41 |
| 22 | 981740-155 | AXLE CASE | IPL-47 |
| 1 | 981740 | AXLE, REAR DRIVE, LOADER | IPL-41 |
| 3 | 981740-90 | AXLE, TRANSFER CASE | IPL-41 |
| 11 | 852520 | BACK UP ALARM (3000) | IPL-33 |
| 5 | 981740-16 | BALL BEARING | IPL-43 |
| 19 | 981740-30 | BALL BEARING | IPL-43 |
| 15 | 989242 | BAND, MOUNTING | IPL-37 |
| 4 | 981740-12 | BAR | IPL-43 |
| 2 | 856997 | BAR, ROUND W/2 HOLES | IPL-17 |
| 10 | 981740-21 | BEARING | IPL-43 |
| 11 | 210180 | BEARING CONE | IPL-09 |
| 25 | 110260 | BEARING CONE, 685 FRONT WHEEL HUB (INNER) | IPL-09 |
| 12 | 210190 | BEARING CUP | IPL-09 |
| 28 | 610200 | BEARING CUP | IPL-09 |
| 26 | 110250 | BEARING CUP, 685 FRONT WHEEL HUB (INNER) | IPL-09 |
| 3 | 750040 | BEARING, 2800 / 3000 CONVEYOR TAIL PULLEY | IPL-13 |
| 17 | 520100 | BEARING, 400 STUB AXLE (3") | IPL-17 |
| 27 | 610210 | BEARING, CONE | IPL-09 |
| 13 | 710160-28R | BEARING, CONVEYOR HEAD PULLEY R.H. (2800) | IPL-07 |
| 4 | 710160-28R | BEARING, CONVEYOR HEAD PULLEY R.H. (2800) | IPL-17 |
| 3 | 520120 | BEARING, INSERT | IPL-51 |
| 21 | 750627 | BEARING, SWIVEL CONVEYOR PULLEY | IPL-51 |
| 6 | 988666-07 | BELT, ALTERNATOR, CUMMINS 4.5L | IPL-31 |



Section 5 ILLUSTRATED PARTS LIST

INDEX BY PART NAME

| ITEM NO. | PART NUMBER | NOMENCLATURE 123456 | PAGE |
|----------|-------------|-------------------------------------------------|--------|
| 6 | 710240 | BLADE PADDLE, 2800 / 3000 FEEDER | IPL-07 |
| 12 | 151190 | BLADE, WIPER | IPL-23 |
| 3 | 981740-139 | BOLT | IPL-47 |
| 9 | W520862 | BOLT, CONVEYOR ADJUSTING | IPL-13 |
| 5 | 760500 | BOLT, PIVOT STEERING COLUMN | IPL-23 |
| 54 | 981740-62 | BOOT | IPL-45 |
| 9 | 171231 | BRACE | IPL-33 |
| 15 | 750550 | BRACKET, L/F SIDE | IPL-07 |
| 16 | 750551 | BRACKET, L/F SIDE | IPL-07 |
| 5 | 981778 | BRACKET, L/H | IPL-29 |
| 7 | 750582 | BRACKET, PUMP CABLE HOLDER | IPL-29 |
| 17 | 750553 | BRACKET, R/F SIDE | IPL-07 |
| 6 | 750581 | BRACKET, R/H | IPL-29 |
| 15 | 750623 | BRACKET, SIDE FLASHING | IPL-51 |
| 14 | 750622 | BRACKET, SWIVEL CONVEYOR BELT FRONT ADJ. 4"L | IPL-51 |
| 13 | 750621 | BRACKET, SWIVEL CONVEYOR BELT REAR ADJ. 6"L | IPL-51 |
| 4 | 750052 | BRACKET, TAIL PULLEY BEARING ADJUSTMENT | IPL-13 |
| 29 | 988924 | BRAKE BUTTON | IPL-25 |
| 12 | 720200-01 | BUMPER, "D" RUBBER (2800 / 3000) | IPL-11 |
| 8 | 750061 | BURN OUT GUARD, 3000 TAIL PULLEY | IPL-13 |
| 14 | 750051 | BUSHING, 2800 / 3000 CONVEYOR HEAD PULLEY | IPL-17 |
| 5 | 750050 | BUSHING, 2800 / 3000 CONVEYOR TAIL PULLEY | IPL-13 |
| 32 | M19805 | BUSHING, LOWER FEEDER SHAFT | IPL-05 |
| 21 | 710183 | BUSHING, LOWER FEEDER SHAFT (BRONZE) | IPL-07 |
| 5 | 750615 | BUSHING, SWIVEL CONVEYOR PULLEY | IPL-51 |
| 1 | 760010A | CAB, WELDMENT | IPL-19 |
| 31 | 920140 | CABLE, PUSH/PULL 116 X 3 STROKE | IPL-25 |
| 30 | 920130 | CABLE, PUSH/PULL 123 X 3 STROKE | IPL-25 |
| **27 | 811316 | CAM FOLLOWER, 3-1/4" | IPL-05 |
| 14 | 811316 | CAM FOLLOWER, 3-1/4" | IPL-07 |
| 24 | 102-909-1A | CAP SCREW, 1"-8 X 2" HEX HEAD | IPL-17 |
| 11 | 102-917-1A | CAP SCREW, 1"-8 X 4 HEX | IPL-03 |
| 16 | 102-405-1A | CAP SCREW, 1/2"-13 X 1 HEX | IPL-15 |
| 6 | 102-406-1A | CAP SCREW, 1/2"-13 X 1-1/4 HEX | IPL-05 |
| 22 | 102-411-1A | CAP SCREW, 1/2"-13 X 2-1/2" HEX HEAD | IPL-17 |
| 19 | 100-406-1A | CAP SCREW, 1/2" -13 X 1 1/4" | IPL-05 |
| 15A | 730060 | CAP SCREW, 1" X 4 1/2" BOLT WITH GREASE FITTING | IPL-09 |
| 22 | 102-931-1A | CAP SCREW, 1"-13 X 8"L | IPL-05 |
| 15 | 102-713-1A | CAP SCREW, 3/4"-10 X 3 HEX | IPL-03 |
| 17 | 102-715-1A | CAP SCREW, 3/4"-10 X 3-1/2 HEX | IPL-03 |
| 5 | 102-716-1A | CAP SCREW, 3/4"-10 X 3-3/4" HEX HEAD | IPL-17 |
| 12 | 102-205-1A | CAP SCREW, 3/8"-16 X 1 HEX | IPL-35 |
| 10 | 110-312-2 | CAP SCREW, 3/8"-16 X 1" FLAT SOCKET HEAD | IPL-05 |
| 14 | 102-207-1A | CAP SCREW, 3/8"-16 X 1-1/2 HEX | IPL-13 |
| 18 | 102-206-1A | CAP SCREW, 3/8"-16 X 1-1/4 HEX | IPL-13 |
| 14 | 102-225-1A | CAP SCREW, 3/8"-16 X 6" HEX HEAD | IPL-35 |
| 13 | 102-609-1A | CAP SCREW, 5/8"-11 X 2 HEX | IPL-05 |
| 17 | 102-609-1A | CAP SCREW, 5/8"-11 X 2 HEX | IPL-13 |
| 23 | 102-609-1A | CAP SCREW, 5/8"-11 X 2" HEX HEAD | IPL-17 |
| 12 | 102-611-1A | CAP SCREW, 5/8"-11 X 2-1/2 HEX | IPL-13 |
| 10 | 140030HL | CAP, HYD. OIL TANK (LOCKABLE) | IPL-11 |
| 26 | 988646-01 | CAP, RADIATOR | IPL-39 |
| 20 | 750600-1 | CARTRIDGE, RELIEF VALVE (3000 P..S.I.) | IPL-11 |
| 20 | 981740-153 | CENTERING RING | IPL-47 |

Section 5 ILLUSTRATED PARTS LIST



INDEX BY PART NAME

| ITEM NO. | PART NUMBER | NOMENCLATURE 123456 | PAGE |
|----------|-------------|----------------------------------------------|--------|
| 5 | A710230 | CHAIN ASSY., FEEDER | IPL-07 |
| 5A | 710230L | CHAIN ASSY., FEEDER L.H.(PADDLE) | IPL-07 |
| 5B | 710230R | CHAIN ASSY., FEEDER R.H. (PADDLE) | IPL-07 |
| 61 | 981740-06 | CHANGE SELECTOR | IPL-45 |
| 15 | 981740-149 | CIRCLIP | IPL-47 |
| 34 | 981740-42 | CIRCLIP | IPL-43 |
| 45 | 981740-53 | CIRCLIP | IPL-45 |
| 68 | 981740-71 | CIRCLIP | IPL-45 |
| 10 | 34964 | CIRCUIT BREAKER, 10A | IPL-27 |
| 13 | 989260 | CIRCUIT BREAKER, 15A | IPL-27 |
| 12 | 35701 | CIRCUIT BREAKER, 25A | IPL-27 |
| 11 | 989261 | CIRCUIT BREAKER, 30A | IPL-27 |
| 4 | 852827 | CLAMP HALF, W/DRILL HOLES | IPL-09 |
| 1 | 161250 | CLAMP, 3" MUFFLER | IPL-35 |
| 6 | 750046 | CLAMP, 3-1/4" MUFFLER | IPL-35 |
| 21 | 854748 | CLAMP, HOSE 3 HOLE COMPLETE SET | IPL-15 |
| 22 | 34040 | CLAMP, MUFFLER, 4.00 ID | IPL-37 |
| 19 | 853379 | CLAMP, SKIRT | IPL-51 |
| 18 | 171090 | CLAMP, T-BOLT, 3.00 ID | IPL-39 |
| 19 | 171190 | CLAMP, T-BOLT, 3.50 NOMINAL | IPL-39 |
| 25 | 953521243 | CLAMP, T-BOLT, 4.00 ID | IPL-37 |
| 24 | 72174 | CLAMP, T-BOLT, 5.00 ID | IPL-37 |
| 23 | 171090 | CLAMP, T-BOLT, 5.00 ID | IPL-37 |
| 22 | 854748-B | CLAMP/3 HOLE. BOTTOM HALF | IPL-15 |
| 20 | 854748-A | CLAMP/3 HOLE. TOP HALF | IPL-15 |
| 6 | 870307 | CLIP, HYD CYL. PIN | IPL-53 |
| 15 | 870307 | CLIP, HYD CYL. PIN * | IPL-15 |
| 8 | 870307 | CLIP, HYD. CYLINDER PIN | IPL-49 |
| 63 | 981740-68 | CLIRCLIP | IPL-45 |
| 1 | 981386 | COMPLETE ASSEMBLY | IPL-15 |
| | 983198 | CONN, 02-PIN, SOC, DT04-2P | IPL-27 |
| | 983207 | CONN, 12-PIN, SOC, DT04-12P | IPL-27 |
| | 981916 | CONN, 31-PIN, RECPT, HD34-24-31 | IPL-27 |
| | 983217 | CONN, WEDGE, RECP, 12P, DEUTSCH | IPL-27 |
| | 983209 | CONN, WEDGE, RECP, 2P, DEUTSCH | IPL-27 |
| 1 | P202014 | CONVEYOR BELT W / CLEATS, 28' FRAME | IPL-13 |
| 10 | 750072A | CONVEYOR BELT, SWIVEL W/CLEATS | IPL-51 |
| 24 | 750610 | CONVEYOR LIFT CYLINDER | IPL-11 |
| 5 | 750610 | CONVEYOR LIFT CYLINDER | IPL-15 |
| 25A | 981438L | CONVEYOR LIFT PIVOT & FEEDER LIFT STABILIZER | IPL-03 |
| 25B | 981438R | CONVEYOR LIFT PIVOT & FEEDER LIFT STABILIZER | IPL-03 |
| 6 | 981438 | CONVEYOR STABILIZER | IPL-15 |
| 13 | 981740-147 | COUNTERSUNK BOLT | IPL-47 |
| 2 | P86879B | COUPLING, FLYWHEEL PUMP DRIVE | IPL-29 |
| 5 | 855132 | COVER | IPL-33 |
| 21 | 982072 | COVER | IPL-21 |
| 22 | 982073 | COVER | IPL-21 |
| 12 | 981740-23 | COVER | IPL-43 |
| 15 | 981740-26 | COVER | IPL-43 |
| 25 | 981740-32 | COVER | IPL-43 |
| 58 | 981740-64 | COVER | IPL-45 |
| 64 | 981740-69 | COVER | IPL-45 |
| 12 | 9888962-04 | COVER | IPL-37 |
| 2 | 760021 | COVER, HOSES | IPL-19 |



Section 5 ILLUSTRATED PARTS LIST

INDEX BY PART NAME

| ITEM NO. | PART NUMBER | NOMENCLATURE 123456 | PAGE |
|----------|-------------|------------------------------------------|--------|
| 62 | 981740-67 | COVERPLATE | IPL-45 |
| *5 | 750508 | CUTTING EDGE, 2800 / 3000 SIDE MOLDBOARD | IPL-03 |
| *4 | 988744 | CUTTING EDGE, 6X13 KENNAMETAL | IPL-03 |
| *6 | 988745 | CUTTING EDGE, 6X42 KENNAMETAL | IPL-03 |
| *5 | 988746 | CUTTING EDGE, 6X44 KENNAMETAL | IPL-03 |
| 2 | P523295 | CUTTING EDGE, ALL PURPOSE MOLDBOARD | IPL-05 |
| *6 | 750509 | CUTTING EDGE, SCOOP (2800) | IPL-03 |
| 14 | 1000284 | CYL. CLEVIS 1.00X 2.75 | IPL-15 |
| 21 | 328370 | CYL.HYD. MOLDBOARD LIFT | IPL-03 |
| 5 | 811374 | CYLINDER | IPL-49 |
| 32 | 981740-39 | CYLINDER | IPL-43 |
| 70 | 981740-73 | CYLINDER BOLT | IPL-45 |
| 23 | 700160-28 | CYLINDER, HYD. 3.5OX10.00 1.75 ROD | IPL-03 |
| 14 | 989954 | DECAL, PANEL, LOADER | IPL-27 |
| 51 | 981740-59 | DETEND BALL | IPL-45 |
| 2 | 988699 | DISPLAY, GRAPHIC, B&W, DP200 | IPL-27 |
| 6 | 760062 | DOOR | IPL-19 |
| 1 | 760062 | DOOR WELDMENT | IPL-21 |
| 3 | P76869A | DOUBLE PUMP DRIVE | IPL-29 |
| 14 | 9888962-03 | DUST INJECTOR | IPL-37 |
| 4 | 760070 | EDGE TRIM | IPL-21 |
| 2 | 750042 | ELBOW W / FLEX PIPE, 3000 EXHAUST | IPL-35 |
| 7 | 984262 | ELBOW, RUBBER, 60, 2.25 ID | IPL-39 |
| 5 | 34031 | ELBOW, RUBBER, 90, 3.00 ID | IPL-37 |
| 7 | 72172 | ELBOW, RUBBER, 90, 5.00X 4.00 ID | IPL-37 |
| | 34464 | ELEMENT, FILTER, HYD. (NOT SHOWN) | IPL-29 |
| 5 | 988666-04 | ELEMENT, FUEL FILTER, 4.5 QSB | IPL-31 |
| 7 | 988666-05 | ELEMENT, FUEL/WATER SEPARATOR | IPL-31 |
| 3 | 988666-03 | ELEMENT, OIL FILTER, 4.5 QSB | IPL-31 |
| 11 | 9888962-01 | ELEMENT, PRIMARY | IPL-37 |
| 10 | 9888962-02 | ELEMENT, SECONDARY | IPL-37 |
| 9 | P521452 | ELEVATOR BOLT, 1/4"-20 X 1" | IPL-17 |
| 1 | 988666 | ENGINE, CUMMINS 130HP, TIER 3 | IPL-29 |
| 1 | 988934 | FAN, MULTI WING. 22" DIA | IPL-31 |
| 22 | 750635 | FEEDER SUPPORT ASSEMBLY | IPL-03 |
| 3 | 140030FN | FILLER NECK, HYD. OIL / FUEL CAP | IPL-11 |
| 17 | 852060 | FILTER, AIR PRE-CLEANER | IPL-37 |
| 30 | 981740-37 | FLANGE | IPL-43 |
| 69 | 981740-72 | FLANGE | IPL-45 |
| 16 | 750624 | FLASHING SET, SWIVEL CONVEYOR SIDE | IPL-51 |
| | 750241A | FLASHING, 25X6.0 X 34. MAIN (NOT SHOWN) | IPL-15 |
| 20 | 750628 | FLASHING, FRONT | IPL-51 |
| 7 | 982061 | FOAM - DOOR | IPL-21 |
| 8 | 750653 | FRAME, DISCHARGE BAFFLE | IPL-17 |
| 21 | 760170 | FRAME, WINDOW | IPL-19 |
| 5 | 981740-140 | FRICTION WASHER | IPL-47 |
| 14 | 981740-148 | FRICTION WASHER | IPL-47 |
| 7 | 981740-18 | FRICTION WASHER | IPL-43 |
| 37 | 981740-45 | FRICTION WASHER | IPL-43 |
| 1 | 730013 | FRONT AXLE,(SPLINES NOT INCLUDED) | IPL-09 |
| 22 | 855105 | FRONT END MOUNTING PLATE | IPL-09 |
| 20 | 855194 | FRONT END, U-BOLT MOUNTING | IPL-09 |
| 5 | 140030FL | FUEL TANK CAP, LOCKABLE | IPL-11 |
| | 853600 | GAS SHOCK, ENGINE BACK DOOR | IPL-33 |

Section 5

ILLUSTRATED PARTS LIST



INDEX BY PART NAME

| ITEM NO. | PART NUMBER | NOMENCLATURE 123456 | PAGE |
|----------|-------------|---------------------------------------------------|--------|
| 2 | 700480 | GASKET, S.A.E. "B" 2 BOLT | IPL-07 |
| 20 | P77494 | GASKET, S.A.E. "C" 4 HOLE | IPL-17 |
| 12 | P77675 | GASKET, SAE "A" 2" BOLT | IPL-29 |
| 9 | 500070 | GAUGE, HYD. OIL LEVEL & TEMP. | IPL-11 |
| 14 | 38393 | GAUGE, PRESSURE | IPL-23 |
| 2 | 760080 | GLASS - DOOR | IPL-21 |
| 25 | 140610 | GREASE FITTING, 1/4" X 28 SCREW IN | IPL-07 |
| 24 | | GREASE RELIEF | IPL-07 |
| 27 | 750554 | GRILL | IPL-39 |
| 6 | 988753 | GROUP, ENGINE HOOD LOADER | IPL-33 |
| 10 | 1000517 | GRP, CAC, 3000, TIER3 | IPL-39 |
| 49 | 981740-57 | GRUB BOLT | IPL-45 |
| 8 | 981740-19 | GUIDE - TUBE | IPL-43 |
| 23 | 981740-156 | HALF SHAFT | IPL-47 |
| 7 | 750616 | HEAD PULLEY, SWIVEL, CONV,W/LAG 10.50 X 32" | IPL-51 |
| 13 | 981740-24 | HEXAGON BOLT | IPL-43 |
| 60 | 981740-24 | HEXAGON BOLT | IPL-45 |
| 16 | 981740-27 | HEXAGON BOLT | IPL-43 |
| 27 | 981740-34 | HEXAGON BOLT | IPL-43 |
| 10 | 760101 | HINGE, 3000 LOADER CAB | IPL-19 |
| 23 | 32882-01 | HOSE, 04, PUSH-ON, 3.0 FT LG | IPL-39 |
| 24 | 71812-01 | HOSE, 05. PUSH-ON, 3.0 FT LG | IPL-39 |
| 6 | 170100A | HOSE, RADIATOR, LOWER | IPL-39 |
| 9 | 170071A | HOSE, RADIATOR, UPPER 685B/3000 | IPL-39 |
| 1 | 981740-13 | HOUSING | IPL-43 |
| 23 | 988911 | HUB ASSEMBLY, WHEEL, W2.00 STUDS | IPL-09 |
| 16 | 953521244 | HUMP HOSE, REDUCER, 5.00-4.00 ID | IPL-37 |
| 5 | 110220 | HYD. CYL., 685 STEERING | IPL-09 |
| 4 | P521124 | HYD. DEFLECTOR CYL., 7-12 / 3000 DISCHARGE BAFFLE | IPL-53 |
| 1 | 750607 | HYD. MOTOR, CONVEYOR SWV | IPL-51 |
| 1 | 710100 | HYD. MOTOR, FEEDER DRIVE | IPL-07 |
| 21 | 750310 | HYD. MOTOR, MAIN CONVEYOR DRIVE | IPL-17 |
| *9 | P205232A | HYD. PUMP,V.V.FEEDER & CONVEYOR | IPL-29 |
| 1 | P521124 | HYD.CYL.,DISCHARGE BAFFLE | IPL-17 |
| 11 | 162802 | HYD.PUMP, AUX.& POWER STEERING | IPL-29 |
| 13 | 162803 | HYD.PUMP, SINGLE 3000 W/SWIVEL ATTACHMENT | IPL-29 |
| 21 | 171220 | INDICATOR, AIR FILTER | IPL-37 |
| 22 | 750600-3 | INLET COVER W/RELIEF, 3000 ELECTRONIC VALVE | IPL-11 |
| 10 | 982063 | INT. HANDLE & BEZEL- RH | IPL-21 |
| 5 | 982060 | INTERIOR HANDLE | IPL-21 |
| 4 | 854741 | J. BRACKET MAIN CONVEYOR | IPL-15 |
| 25 | 854741 | J. BRACKET MAIN CONVEYOR | IPL-51 |
| 29 | 981740-36 | JOINT OR O-RING | IPL-43 |
| 33 | 854942 | KEY STOCK, PADDLE | IPL-05 |
| 9 | 710171-2 | KEYWAY, PADDLE CONVEYOR | IPL-07 |
| 10 | 110061 | KING PIN, 685/2800/300 FRONT END SPINDLE | IPL-09 |
| 4 | 920180 | KNOB, LEVER | IPL-25 |
| 9 | 982062 | LATCH - SMC MODIFIED - RH | IPL-21 |
| 12 | 982065 | LATCH ROD, LH | IPL-21 |
| 4 | 160450 | LATCH, ENGINE ACCESS PANEL | IPL-33 |
| 28 | 160460 | LATCH, RADIATOR ACCESS PANEL | IPL-39 |
| 18 | 730090 | LEAF SPRING (ASSY.), 3000 LOADER FRONT END | IPL-09 |
| 3 | 854854 | LEFT FRONT AXLE, HUB, SUB-ASSEMBLY | IPL-09 |
| 2 | 980990 | LH CONTROL | IPL-25 |



Section 5 ILLUSTRATED PARTS LIST

INDEX BY PART NAME

| ITEM NO. | PART NUMBER | NOMENCLATURE 123456 | PAGE |
|----------|-------------|--------------------------------------------|--------|
| 5C | 710230-1 | LINK & PIN ASSY., FEEDER CHAIN (2800/3000) | IPL-07 |
| 2 | 988748 | LINK, TOP RAD GUSSET | IPL-39 |
| *7 | P526113 | LINK, TOP (ADJ) | IPL-03 |
| 16 | 143-3 | LOCK NUT, 3/8"-16 HEX | IPL-13 |
| 17 | 982070 | LOCK TRIP ROD - 5/32 DIA. - CNTR | IPL-21 |
| 12 | 120120 | LOCKING COLLAR, 2-1/2" I.D. | IPL-07 |
| 28 | 981740-158 | LOCKING PLATE | IPL-47 |
| 29 | 110320 | LOCKWASHER, FRONT SPINDLE | IPL-09 |
| 18 | 981740-29 | MAGNET PLUG | IPL-43 |
| 10 | 981740-29 | MAGNET PLUG | IPL-47 |
| 1 | 988765 | MAIN FRAME | IPL-11 |
| 18 | 750602 | MANIFOLD W / RELIEF, 3000 BRAKE & DRAIN | IPL-11 |
| 1 | 750505 | MOLDBOARD ASSEMBLY | IPL-03 |
| 1 | 986374 | MOLDBOARD, ALL PURPOSE. LOADER | IPL-05 |
| 18 | 854788 | MOTOR MOUNT | IPL-17 |
| 4 | 1000569 | MOTOR, HYD, 4.82 CIR, 51 SERIES | IPL-41 |
| 3 | 750607 | MOTOR, SWIVEL TURN | IPL-49 |
| 10 | 151170 | MOTOR, WIPER | IPL-23 |
| 13 | 750656 | MOUNT FOR BUMPER 'D'RUBBER | IPL-11 |
| 4 | 854932 | MOUNT, TORQUE HUB | IPL-07 |
| 4 | 320140 | MOUNTING PAD, ENGINE | IPL-29 |
| 3 | 750043 | MUFFLER, 3000 EXHAUST | IPL-35 |
| 34 | 985683 | MULTIPURPOSE FEEDER ADJUSTER | IPL-05 |
| 7 | 981740-142 | NEEDLE BEARING | IPL-47 |
| 9 | 981740-20 | NEEDLE BEARING | IPL-43 |
| 38 | 981740-46 | NEEDLE BEARING | IPL-43 |
| 20 | 230040 | NUMBER 28, HOSE CLAMP | IPL-39 |
| 21 | 500230 | NUMBER 36, HOSE CLAMP | IPL-39 |
| 25 | 33277 | NUMBER 4, HOSE CLAMP | IPL-39 |
| 9 | 981740-144 | NUT | IPL-47 |
| 28 | 981740-35 | NUT | IPL-43 |
| 75 | 981740-78 | NUT | IPL-45 |
| 30 | 730210 | NUT, | IPL-09 |
| **25 | 115-12-1 | NUT, 1 1/4" -13 HEX JAM | IPL-05 |
| 24 | 116-10 | NUT, 1"-8 HEX | IPL-05 |
| 19 | 116-5 | NUT, 1/2" | IPL-15 |
| 7 | 116-5 | NUT, 1/2"-13 HEX | IPL-05 |
| 5 | 116-5 | NUT, 1/2" X 13 HEX | IPL-05 |
| 19 | 116-8 | NUT, 3/4"-10 HEX | IPL-03 |
| 10 | 116-8 | NUT, 3/4"-10 HEX | IPL-13 |
| 7 | 116-8 | NUT, 3/4"-10 HEX | IPL-17 |
| 12 | 116-3 | NUT, 3/8"-16 HEX | IPL-05 |
| 13 | 116-3 | NUT, 3/8"-16 HEX | IPL-35 |
| 14 | 116-7 | NUT, 5/8"-11 HEX | IPL-03 |
| 15 | 116-7 | NUT, 5/8"-11 HEX | IPL-05 |
| 13 | 110101 | NUT, 635 ARTICULATION SHAFT | IPL-09 |
| 29 | 80359 | NUT, FLEXLOC | IPL-51 |
| 8 | 80375 | NUT, FLEXLOC, .750-16, FULL, LT | IPL-41 |
| 17 | 80377 | NUT, FLEXLOC, 1.00-14 FULL LT | IPL-09 |
| 7 | 760520 | NUT, LOCK HEX | IPL-23 |
| 11 | 982064 | O.S. PADDLE HANDLE - RH | IPL-21 |
| * | 988471 | OPTIONAL BELT FOR PEN.DOT (NOT SHOWN) | IPL-13 |
| 2 | 981740-138 | O-RING | IPL-47 |
| 71 | 981740-14 | O-RING | IPL-45 |

Section 5 ILLUSTRATED PARTS LIST



INDEX BY PART NAME

| ITEM NO. | PART NUMBER | NOMENCLATURE 123456 | PAGE |
|----------|-------------|-----------------------------------------------------|--------|
| 12 | 981740-146 | O-RING | IPL-47 |
| 39 | 981740-47 | O-RING | IPL-43 |
| 41 | 981740-49 | O-RING | IPL-45 |
| 42 | 981740-50 | O-RING | IPL-45 |
| 43 | 981740-51 | O-RING | IPL-45 |
| 46 | 981740-54 | O-RING | IPL-45 |
| 47 | 981740-55 | O-RING | IPL-45 |
| 57 | 981740-63 | O-RING | IPL-45 |
| 59 | 981740-65 | O-RING | IPL-45 |
| 23 | 750600-4 | OUTLET COVER | IPL-11 |
| 65 | 981740-70 | OUTPUT SHAFT | IPL-45 |
| 27 | 854946A | PADDLE BEARING PLATE | IPL-07 |
| **26 | 854953 | PADDLE ROLLER SPACER/3000 | IPL-05 |
| 31 | 750551 | PADDLE SHAFT ARM, L/F SIDE | IPL-05 |
| 30 | 750553 | PADDLE SHAFT ARM, R/F SIDE | IPL-05 |
| 23 | 854955 | PADDLE SHAFT STOP | IPL-07 |
| 5 | 988873 | PANEL, LEVER GUIDE LH (INCLUDED W/1000736) | IPL-25 |
| 1 | 988874 | PANEL, LEVER GUIDE RIGHT SIDE (INCLUDED IN 1000737) | IPL-25 |
| 3 | 760031 | PANEL, SIDE | IPL-19 |
| 6 | 750652 | PIN | IPL-49 |
| 11 | 981740-145 | PIN | IPL-47 |
| 7 | 240030 | PIN | IPL-49 |
| 3 | 210060 | PIN, CLEVIS | IPL-17 |
| 5 | 210060 | PIN, CLEVIS | IPL-53 |
| 24 | 210060 | PIN, CLEVIS 1.00X2.625 W1.5HD | IPL-03 |
| 2 | 750080 | PIN, CONVEYOR BELT LACING (30") | IPL-13 |
| 27 | 750080 | PIN, CONVEYOR BELT LACING (30") | IPL-51 |
| 7 | 750047 | PIPE, 3000 EXHAUST STACK | IPL-35 |
| 4 | 1000723 | PIPE, AIR INTAKE, 4.00X54.00 | IPL-37 |
| *8 | 160010 | PIPE, EXHAUST ELBOW (NOT SHOWN) | IPL-35 |
| 44 | 981740-52 | PISTON | IPL-45 |
| 2 | 700131 | PIVOT, MOLDBOARD | IPL-03 |
| 20 | 1000707 | PL, COVER, AIR CLEANER, 3000 | IPL-37 |
| 1 | 988873 | PL, INSTRUMENT PANEL, LOADER | IPL-27 |
| 6 | 981740-141 | PLANET GEAR | IPL-47 |
| 8 | 981740-143 | PLANET GEAR CARRIER | IPL-47 |
| 9 | 750048 | PLATE W / CLAMPS, 3000 MUFFLER MOUNT | IPL-35 |
| 5 | 750045 | PLATE, 3000 MUFFLER HEAT SHIELD | IPL-35 |
| 8 | 1000557 | PLATE, FRAME SIDE LEFT 3000 | IPL-33 |
| 7 | 1000556 | PLATE, FRAME SIDE RIGHT 3000 | IPL-33 |
| 17B | 853293 | PLATE, LH CONVEYOR SIDE SKIRT | IPL-51 |
| 17A | 853292 | PLATE, RH CONVEYOR SIDE SKIRT | IPL-51 |
| 3 | 750506 | PLATE, TRANSITION (USED ON OLDER MACHINES) | IPL-03 |
| 12 | 130220 | PLOW BOLT, 5/8"-11 X 2 | IPL-03 |
| 3 | 109-408-3 | PLOWBOLT, 1/2"-13 UNC X 2" | IPL-05 |
| 17 | 981740-28 | PLUG | IPL-43 |
| 24 | 982076 | PLUG, 3/4, BUTTON, NYLON, BLACK | IPL-21 |
| | 73192-02 | PLUG, CAVITY, DEUTSCH CONN | IPL-27 |
| 13 | 750260 | PULLEY, HEAD DRUM W/LAG | IPL-17 |
| | 852580 | PUMP, HYD, GEAR, TANDEM (NOT SHOWN) | IPL-29 |
| 8 | 1000568 | PUMP, HYD. 4.57 CIR MAN. B PAD LH | IPL-29 |
| 1 | 988646 | RAD/CAC/OIL COOLER | IPL-39 |
| *8 | 750041 | RAIN CAP, 3" EXHAUST PIPE | IPL-35 |
| 12 | 982780 | REDUCER | IPL-39 |



Section 5 ILLUSTRATED PARTS LIST

INDEX BY PART NAME

| ITEM NO. | PART NUMBER | NOMENCLATURE 123456 | PAGE |
|----------|-------------|---------------------------------------------|--------|
| 3 | 1000575 | REDUCER, RUBBER, 3.00 ID/4.00 OD | IPL-37 |
| 25 | 981740-157 | REDUCTION BUSHING | IPL-47 |
| 6 | 981740-17 | REDUCTION BUSHING | IPL-43 |
| 11 | 981740-22 | REDUCTION BUSHING | IPL-43 |
| 40 | 981740-48 | REDUCTION BUSHING | IPL-43 |
| 3 | 1000892 | RH CONTROL | IPL-25 |
| 15 | 982068 | RH I/S TRIP ROD | IPL-21 |
| 2 | 854855 | RIGHT FRONT AXLE, HUB, SUB-ASSEMBLY | IPL-09 |
| 12 | 750565 | RIM, 14:00 | IPL-41 |
| 15 | 750565 | RIM, 14:00 | IPL-41 |
| 16 | 981740-150 | RING GEAR | IPL-47 |
| 7 | 750549 | ROD, PADDLE CHAIN ADJUSTER | IPL-07 |
| 21 | 750130 | ROLLER ASSY (30 DEGREE), CONVEYOR TROUGHING | IPL-13 |
| 20 | 750131 | ROLLER ASSY(15 DEGREE), CONVEYOR TROUGHING | IPL-13 |
| 22 | 986341 | ROLLER ASSY.(25 DEGREE), CONVEYOR TROUGHING | IPL-13 |
| 11 | 750133 | ROLLER ASSY.(8 DEGREE), CONVEYOR TROUGHING | IPL-51 |
| 3 | 750090 | ROLLER ASSY., CONVEYOR RETURN IDLER | IPL-15 |
| 7 | 750090 | ROLLER ASSY., CONVEYOR RETURN IDLER | IPL-15 |
| 6 | 750090 | ROLLER ASSY., CONVEYOR RETURN IDLER | IPL-51 |
| 23 | 750090 | ROLLER ASSY., CONVEYOR RETURN IDLER | IPL-51 |
| 36 | 981740-44 | ROLLER BEARING | IPL-43 |
| 2 | 750140 | ROLLER, 2800 / 3000 TROUGHING IDLER | IPL-15 |
| 8 | M522850 | RUBBER SEAL, THROAT CENTER | IPL-05 |
| 11 | M521454 | RUBBER SKIRT, DISCHARGE BAFFLE | IPL-17 |
| 3 | M521454 | RUBBER SKIRT, DISCHARGE BAFFLE | IPL-53 |
| 10 | 855192 | SCOOP HOLDER ROD PIN | IPL-03 |
| 13 | 750062 | SCRAPER, 3000 TAIL PULLEY | IPL-13 |
| 20 | 210240 | SEAL | IPL-07 |
| 9 | 210240 | SEAL | IPL-09 |
| 21 | 981740-154 | SEAL | IPL-47 |
| 2 | 981740-192 | SEAL | IPL-43 |
| 20 | 981740-31 | SEAL | IPL-43 |
| 48 | 981740-56 | SEAL | IPL-45 |
| 19 | 981740-85 | SEAL | IPL-47 |
| 52 | 981740-60 | SEAL WASHER | IPL-45 |
| 24 | 36830 | SEAL, 3.628ODX 2.250IDX .468 | IPL-09 |
| 7 | 760070 | SEAL, DOOR | IPL-19 |
| 17 | 760090 | SEAL, FRONT WINDOW | IPL-19 |
| 13 | 760090 | SEAL, REAR SIDE WINDOW | IPL-19 |
| 15 | 760090 | SEAL, REAR WINDOW | IPL-19 |
| 20 | 760090 | SEAL, SIDE WINDOW | IPL-19 |
| 9 | 760090 | SEAL, WINDOW | IPL-19 |
| 22 | 760180 | SEAL, WINDOW SLIDE | IPL-19 |
| 15 | 360010B | SEAT ASSY W / ARMREST, BLACK | IPL-23 |
| 5 | 981740-88 | SEAT, O-RING, 5.00 ID X .063 | IPL-41 |
| 53 | 981740-61 | SECURITY SWITCH | IPL-45 |
| 26 | 35368 | SENDER, TEMPERATURE GAUGE | IPL-11 |
| 4 | 140040 | SENDING UNIT, FUEL LEVEL | IPL-11 |
| 5 | 988986 | SENSOR, COOLANT LEVEL | IPL-39 |
| 29A | 980932 | SHAFT 3000 FEEDER LOWER | IPL-05 |
| 15 | 750271 | SHAFT, 2800 / 3000 CONVEYOR HEAD PULLEY | IPL-17 |
| 22 | 980932 | SHAFT, 3000 FEEDER LOWER | IPL-07 |
| 29 | 710221A | SHAFT, 3000 FEEDER LOWER SNOW AUGER | IPL-05 |
| 8 | 710171A | SHAFT, 3000 FEEDER UPPER DRIVE | IPL-07 |

Section 5 ILLUSTRATED PARTS LIST



INDEX BY PART NAME

| ITEM NO. | PART NUMBER | NOMENCLATURE 123456 | PAGE |
|----------|-------------|----------------------------------------------------------|--------|
| 6 | 750032 | SHAFT, 3000 MAIN CONVEYOR TAIL PULLEY | IPL-13 |
| 12 | 750620 | SHAFT, 3000 TAIL PULLEY | IPL-51 |
| 20 | 854958 | SHAFT, MOLDBOARD ATTACHMENT | IPL-03 |
| 4 | 750612 | SHAFT, SWIVEL CONVEYOR DRIVE | IPL-51 |
| 33 | 981740-40 | SHIM | IPL-43 |
| 33A | 981740-41 | SHIM | IPL-43 |
| 35 | 981740-43 | SHIM | IPL-43 |
| 16 | S46515 | SHIM | IPL-05 |
| 17 | S46515 | SHIM | IPL-05 |
| 11 | 854801 | SIDE PLATE, BACK LEFT SIDE | IPL-15 |
| 10 | 854797 | SIDE PLATE, BACK RIGHT SIDE | IPL-15 |
| 12 | 854798 | SIDE PLATE, CENTER LEFT SIDE | IPL-15 |
| 9 | 854799 | SIDE PLATE, CENTER RIGHT | IPL-15 |
| 13 | 854796 | SIDE PLATE, FRONT LEFT SIDE | IPL-15 |
| 8 | 854795 | SIDE PLATE, FRONT RIGHT | IPL-15 |
| 3 | 981740-15 | SLIDING PIN | IPL-43 |
| 16 | 750323 | SNAP RING, CONVEYOR L.H. BEARING RETAINER | IPL-17 |
| | 1000925 | SNOW AUGER SKID SHOE (NOT SHOWN) | IPL-05 |
| 11 | P527323 | SOCKET, DOOR STOP | IPL-19 |
| 14A | 854953 | SPACER | IPL-07 |
| 73 | 981740-76 | SPACER | IPL-45 |
| 4 | 856999 | SPACER TUBE, 3000 EXHAUST HEAT SHIELD | IPL-35 |
| 7 | 920090 | SPHERICAL ROD END, 3/8" X 1/4" W / STUD | IPL-25 |
| 50 | 981740-58 | SPRING | IPL-45 |
| 14 | 855082 | SPRING HOLDER | IPL-09 |
| 15 | 855083 | SPRING ROD | IPL-09 |
| 14 | 981740-25 | SPRING WASHER | IPL-43 |
| 26 | 981740-33 | SPRING WASHER | IPL-43 |
| 74 | 981740-77 | SPRING WASHER | IPL-45 |
| 19 | 710213A | SPROCKET, 3000 FEEDER CHAIN LOWER (PADDLE) | IPL-07 |
| 10 | 710182 | SPROCKET, 3000 FEEDER CHAIN UPPER (9 TOOTH) PADDLE DRIVE | IPL-07 |
| 18 | 855066 | SPROCKET, SNOW AUGER 3000 | IPL-07 |
| 28 | 855066 | SPROCKET, SNOW AUGER 3000 LOADER | IPL-05 |
| *7 | 750510 | STABILIZER BAR | IPL-03 |
| 4 | 988666-02 | STARTER, DENSO. R2.7 | IPL-31 |
| 2 | 300040 | STEERING COLUMN, 6" (400, 685 & 1200) | IPL-23 |
| 3 | 140500 | STEERING UNIT, HYD 19.22 CIR W/RELIEF | IPL-23 |
| 1 | 300030 | STEERING WHEEL, 400, 635, 685 & 1200 | IPL-23 |
| 6 | 140030GK | STRAINER & GASKET KIT, HYD./ FUEL FILLER | IPL-11 |
| 10 | S521763 | STRIP, FLASHING RETAINER | IPL-17 |
| 2 | S521763 | STRIP, FLASHING RETAINER | IPL-53 |
| 72 | 981740-75 | STUD | IPL-45 |
| 4 | 760492 | SUPPORT, STEERING COLUMN | IPL-23 |
| | 853180 | SWITCH, BRAKE LIGHT 3000 (NOT SHOWN) | IPL-11 |
| | 852720 | SWITCH, BRAKE LOW PRESS (NOT SHOWN) | IPL-11 |
| 4 | 39146-14 | SWITCH, IGN, W/HEAT ST | IPL-27 |
| 8 | 981357 | SWITCH, LOW HYD. OIL LEVEL | IPL-11 |
| 5 | 982249 | SWITCH, PUSH BUTTON, MOM | IPL-27 |
| 6 | 981505 | SWITCH, TOGGLE, 3-POS, SPDT, MOM | IPL-27 |
| 8 | 851391 | SWITCH, TOGGLE, SPDT, 2-POS | IPL-27 |
| 3 | 900030 | SWITCH, TOGGLE, SPDT, 3-POS, MOM | IPL-27 |
| 7 | 853090 | SWITCH, WIPER/WASHER | IPL-27 |
| 4 | 750608 | SWIVEL GEAR ASSEMBLY | IPL-49 |
| 1 | 750604 | SWIVEL MOUNT, MAIN FRAME | IPL-49 |



Section 5 ILLUSTRATED PARTS LIST

INDEX BY PART NAME

| ITEM NO. | PART NUMBER | NOMENCLATURE 123456 | PAGE |
|----------|-------------|-------------------------------------------------------------|--------|
| 2 | 750606 | SWIVEL YOKE | IPL-49 |
| 7 | 750600 | TAIL PULLEY (SWIVEL), 2800 / 3000 MAIN CONVEYOR 10.50 X 32" | IPL-13 |
| 2 | 750595 | TANK, 3000 FUEL | IPL-11 |
| 11 | 750597 | TANK, 3000 HYD. OIL | IPL-11 |
| 22 | 983273 | TANK, RADIATOR OVERFLOW | IPL-39 |
| 11 | 710150-28 | TAPER LOCK BUSHING, 2 1/2" | IPL-07 |
| 17 | 981740-151 | TAPER ROLLER BEARING | IPL-47 |
| | 982456 | TERM, PIN, DEUTSCH, 14-16AWG | IPL-27 |
| 6 | 110200 | TIE ROD END, L.H. | IPL-09 |
| 8 | 110210 | TIE ROD END, R.H. | IPL-09 |
| 7 | 730071 | TIE ROD, 2800/3000 STEERING | IPL-09 |
| 8 | 855258 | TILT STEERING BAR | IPL-23 |
| | 852800 | TIRE, FRONT 3000 (NOT SHOWN) | IPL-09 |
| 11 | 750568 | TIRE, GRADER, 14:00-24 TG | IPL-41 |
| 14 | 750568 | TIRE, GRADER, 14:00-24 TG | IPL-41 |
| 21 | 851393 | TOGGLE SWITCH, 3 POSITION AUTOMATIC CENTER | IPL-25 |
| 7 | 851169 | TOOL BOX | IPL-11 |
| 19 | 750300 | TORQUE HUB, 2800 / 3000 CONVEYOR DRIVE | IPL-17 |
| 3 | 710090-28 | TORQUE HUB, FEEDER DRIVE | IPL-07 |
| 1 | 1000500 | TUBE, BENT AIR INTAKE, 3.00 OD | IPL-37 |
| 2 | 1000501 | TUBE, BENT AIR INTAKE, 3.00 OD | IPL-37 |
| 14 | 1000502 | TUBE, BENT, CHARGE AIR, 3.00 OD | IPL-39 |
| 15 | 1000503 | TUBE, BENT, CHARGE AIR, 3.00 OD | IPL-39 |
| 11 | 1000504 | TUBE, BENT, CHARGE AIR, 3.00 OD | IPL-39 |
| 6 | 987281 | TUBE, HIGH TEMP, 3" ID X 4"L, STR | IPL-37 |
| 13 | 987281 | TUBE, HIGH TEMP, 3" ID X 4"L, STR | IPL-39 |
| 8 | 42541 | TUBE, RND, 2.25OD X 2.00ID X3.00 LG | IPL-39 |
| 18 | 1000862 | TUBE, SLEEVE, LOADER AIR CLEANER | IPL-37 |
| 16 | 33687 | TURN SIGNAL. W/HAZARD, 7 WIRE | IPL-23 |
| 21 | 730120 | U BOLT, LEAF SPRING (2800/3000 LOADER) | IPL-09 |
| 6 | 853360 | U-BOLD, 7" C/L X 9" LONG | IPL-41 |
| *17 | 750601 | VALVE ASSY., 5 SECTION (3000) | IPL-11 |
| 16 | 750600 | VALVE SEC. ASSY 2-SECTION | IPL-11 |
| 21 | 750600-2 | VALVE SECTION | IPL-11 |
| 13 | 853350 | VALVE, BREAK, W/PEDAL 1000PSI | IPL-23 |
| 15 | 160380 | VALVE, SOLENOID PUMP DESTROKE-685 | IPL-11 |
| 14 | 853850 | VALVE, SOLENOID, FORWARD/REVERSE SHIFT FAILSAFE VALVE | IPL-11 |
| 9 | 852020 | VALVE, TWO STATION GRESSEN VALVE | IPL-23 |
| 31 | 981740-38 | VENT | IPL-43 |
| 19 | 1000721 | W/M, AIR INTAKE STABILIZER, 3000 | IPL-37 |
| 8 | 1000923 | W/M, C LAMP, PIPE SUPPORT | IPL-37 |
| 3 | 988759 | W/M, FRT RAD MOUNT | IPL-39 |
| 4 | 988762 | W/M, REAR RAD MOUNT | IPL-39 |
| 10 | 986742 | W/M. ENGINE DOOR RH | IPL-33 |
| 1 | 1000072 | W/M. ENGINE COVER LOADER | IPL-33 |
| 3 | 988767 | W/M. ENGINE SIDE COVER LH | IPL-33 |
| 2 | 988757 | W/M. ENGINE SIDE COVER RH | IPL-33 |
| 8 | 1000768 | W/M. TAIL PULLEY SCRAPER, 3000 SWV | IPL-51 |
| 20 | 36208 | WARNING BUZZER | IPL-25 |
| 23 | 118-10 | WASHER, 1" LOCK | IPL-05 |
| 24B | 118-10 | WASHER, 1" LOCK | IPL-17 |
| 24A | 119-10 | WASHER, 1" S.A.E. FLAT | IPL-17 |
| 22B | 118-5 | WASHER, 1/2" LOCK | IPL-17 |
| 22A | 119-5 | WASHER, 1/2" S.A.E. FLAT | IPL-17 |

Section 5

ILLUSTRATED PARTS LIST



INDEX BY PART NAME

| ITEM NO. | PART NUMBER | NOMENCLATURE 123456 | PAGE |
|----------|-------------|-------------------------------------------------|--------|
| 4 | 118-5 | WASHER, 1/2" LOCK | IPL-05 |
| 18 | 118-8 | WASHER, 3/4" LOCK | IPL-03 |
| 16 | 119-8 | WASHER, 3/4" SAE FLAT | IPL-03 |
| 11 | 118-3 | WASHER, 3/8" LOCK | IPL-05 |
| 19 | 118-3 | WASHER, 3/8" LOCK | IPL-13 |
| 11 | 118-3 | WASHER, 3/8" LOCK | IPL-35 |
| 15 | 119-3 | WASHER, 3/8" SAE FLAT | IPL-13 |
| 10 | 119-3 | WASHER, 3/8" SAE FLAT | IPL-35 |
| 13 | 118-7 | WASHER, 5/8" LOCK | IPL-03 |
| 14 | 118-7 | WASHER, 5/8" LOCK | IPL-05 |
| 11 | 118-7 | WASHER, 5/8" LOCK | IPL-13 |
| 23B | 118-7 | WASHER, 5/8" LOCK | IPL-17 |
| 23A | 119-7 | WASHER, 5/8" S.A.E. FLAT | IPL-17 |
| 6 | 760510 | WASHER, FLAT | IPL-23 |
| 17 | | WASHER, FLAT 1/2" | IPL-15 |
| 18 | | WASHER, LOCK 1/2" | IPL-15 |
| 9 | 80375 | WASHER, LOCK 3/4 | IPL-41 |
| *4 | 750507 | WEAR PLATE, 3000 FEEDER LOWER FRAME SQUARE HOLE | IPL-03 |
| 9 | 851441 | WEATHER BOOT, TOGGLE SWITCH | IPL-27 |
| 18 | 981740-152 | WHEEL HUB | IPL-47 |
| 1 | 981740-137 | WHEEL STUD | IPL-47 |
| 31 | 730220A | WHEEL, 3000 FRONT (1 PC. DROP CENTER) | IPL-09 |
| 18 | 760150 | WINDOW ASSEMBLY | IPL-19 |
| 8 | 760080 | WINDOW, DOOR | IPL-19 |
| 16 | 760140 | WINDOW, FRONT WINDOW | IPL-19 |
| 14 | 760130 | WINDOW, REAR | IPL-19 |
| 12 | 760120 | WINDOW, RIGHT SIDE | IPL-19 |
| 19 | 760160 | WINDOW, RIGHT SIDE | IPL-19 |
| 3 | 760090 | WINDSHIELD SEAL | IPL-21 |
| 9 | 750512 | WING, 3000 LH MOLDBOARD | IPL-03 |
| 8 | 750511 | WING, 3000 RH MOLDBOARD | IPL-03 |
| 18A | 982758 | WING, SNOW AUGER L.H. SIDE | IPL-05 |
| 18 | 982753 | WING, SNOW AUGER R.H. SIDE | IPL-05 |