



OPERATIONS, SERVICE AND PARTS MANUAL



LeeBoy Model 1200B Maintainer

Manual No.1009612

Revision A

**This manual applies
to serial number and
above: 75128**

Safety**1****Information and Specifications****2****Component Location****3****Operation****4****Maintenance****5****Schematics****6****Illustrated Parts List****7**

DISCLAIMER AND COPYRIGHT

Disclaimer:

All information, illustrations and specifications in this manual are based on the latest information available at the time of publishing. The illustrations used in this manual are intended as representative reference views only. Moreover, because of our continuous product improvement policy, we may modify information, illustrations and/or specifications to explain and/or exemplify a product, service or maintenance improvement. We reserve the right to make any change at any time without notice. VT LeeBoy, Inc., VT LeeBoy, LeeBoy, and Rosco are all the same entity and are used interchangeably.

©2012 VT LeeBoy, Inc.

LeeBoy reserves all copyright and other rights in this manual and the manual's content. No part of this manual may be reproduced or used in any way without the written permission of LeeBoy, except as necessary to operate LeeBoy equipment.





TABLE OF CONTENTS

	Page
Table Of Contentsv
Information And Specifications	2-1
Limited Warranty Policy	2-2
Warranty	2-2
Limitations	2-2
Items Not Covered	2-3
Other Limitations.	2-3
Contact Information	2-3
Record of Ownership	2-3
Nameplate	2-4
General Information	2-4
Major Components	2-4
Specification Tables	2-6
Torque Specifications	2-9
Inch Fasteners	2-9
Torque Specifications	2-10
Metric Fasteners.	2-10
Component Location	3-1
1200B Maintainer	3-2
Left Hand Control Group	3-4
Right Hand Control Group	3-6
Control Box Group	3-8
Propane and Pump Groups	3-10
Propane and Pump Groups (Continued)	3-12

Operation	4-1
General Information	4-2
Safety	4-2
Inspection	4-3
Receiving Inspection.	4-3
Inspection Before Initial Start-Up	4-5
Operator Maintenance Check	4-5
Components Check	4-5
Engine Operation	4-7
Engine Start-Up	4-7
Cold Weather Start-Up.	4-8
Engine Shut-Down.	4-8
Machine Operation.	4-8
Grinding Operation.	4-8
Tack Distributor	4-9
Screed Operation	4-11
Auxiliary Coupling	4-12
Towing Instructions	4-12
Shoulder Build-Up Attachment Operations	4-13
Procedures For Using Shoulder Build-Up	4-14
Right Hand Control Operations.	4-14
Maintenance	5-1
Lubrication Chart.	5-3
Maintenance Schedule.	5-5
100 Hour Or Monthly Routine Maintenance.	5-5
250 Hour Or Quarterly Routine Maintenance.	5-5
500 Hour Or Semi-Annual Routine Maintenance	5-5
1000 Hour Or Annual Routine Maintenance.	5-5
Grinder Bit Replacement	5-5
Removal and Replacing Conveyor Belt	5-6
Troubleshooting	5-7
Schematics	6-1
Wiring Harness (Sheet 1 of 2).	6-3
Wiring Harness (Sheet 2 of 2).	6-5
Control Panel (Sheet 1 of 3).	6-7
Control Panel (Sheet 2 of 3)	6-9

Control Panel (Sheet 3 of 3)	6-11
Hydraulic Harness	6-13
Illustrated Parts List	7-1
Quick Reference Guide	7-3
Group, L.H. Control	7-4
Control Box	7-6
Group, L.H. Control, Misc..	7-8
Group, R.H. Control.	7-10
Group, Engine, Kubota	7-12
Group, Engine, Kubota (cont.).	7-14
Hydraulic Pump And Control Linkage	7-16
Group, Engine, Hatz	7-18
Group, Engine, Hatz (cont.)	7-20
Group, Mainframe and Tank	7-22
Valve Bank	7-24
Drive Train Assembly.	7-26
Drive Unit Assembly	7-28
Hopper Assembly	7-30
Conveyor Assembly	7-32
Drawbar Assembly	7-34
Screed Assembly (6' OPT Shown)	7-36
Screed Assembly (6' OPT Shown) (Cont.).	7-38
Shoulder Attachment Assembly	7-40
Shoulder Attachment Strike-Off Assembly	7-42
Grinder Assembly	7-44
Grinder Stabilizer Wheel	7-46
Tack Piping Assembly	7-48
Propane Heater Assembly	7-50
Rear Wheel & Tires.	7-52
Alphabetical Part Index.	7-55

NOTES

INTRODUCTION

Thank you for purchasing the LeeBoy Model 1200B Maintainer. We wish you many years of safe and efficient operation of your machine.

READ THIS MANUAL PRIOR TO OPERATING the unit. This manual is an important part of the machine and should be kept in the dedicated storage container at all times. Even though you may be familiar with similar equipment, you **MUST** read and understand this manual before operating this machine. Reading the manual will help you and others avoid injury and help prevent any damage to the unit. If this manual becomes lost or damaged, contact your authorized LeeBoy Dealer immediately to order a replacement (see **Contact Information** in Section 2).

This manual is intended as a guide for the safe and efficient use of the machine. This manual covers the procedures for proper operation and maintenance of the machine. This manual contains information that was available at the time of printing and are subject to change without notice.

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 Dealer for the latest available information.

This manual provides information for use by the equipment operator under the following headings:

Section 1: Safety—

Contains general and specific safety guidelines for product, and Safety Label Locations.

Section 2: Information—

Contains Warranty, Contact Information, Product Identification Nameplate, Overview of product functions, specification tables, and product dimensions.

Section 3: Component Location—

Contains graphic and table overview combinations of major component locations and functions.

Section 4: Operation—

Contains all needed safe operation procedures and guidelines for product, including optional equipment.

Section 5: Maintenance—

Contains all needed information for safe maintenance procedures (i.e., changing filters, mechanical lubrication, adjustments, removal and installation, etc.). Specific Engine maintenance procedures referred to Engine Manufacturer manual, and troubleshooting charts for common problems and corrections.

Section 6: Schematics—

Contains electrical and hydraulic schematics for product functionality.

Section 7: Illustrated Parts List (IPL)—

Contains exploded assemblies/parts illustrations and corresponding identification tables for all serviceable components including fasteners. Also contains alphabetical parts index.

NOTES



Section 1

Safety

	Page
Safety	1-1
Safety Precautions	1-3
Safety Label Locations	1-6

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 the LeeBoy Model 1200B Maintainer and follow its instructions when operating the machine.

Safety is everyone's business and is our top concern. Knowing the guidelines covered in this section and in Section 1 will help ensure your safety, the safety of those around you and the machine's proper operation.

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

Keep safety labels in good condition. If safety labels become missing or damaged, replacement safety labels are available from your LeeBoy Dealer (see **Contact Information** in Section 2 and **Safety Label Locations** at the end of this Section.).



DANGER

Indicates a hazardous situation which, if not avoided, **will** result in death or serious injury.



WARNING

Indicates a hazardous situation which, if not avoided, **could** result in death or serious injury.



CAUTION

Indicates a hazardous situation which, if not avoided, **could** result in minor or moderate injury.

NOTICE

Indicates a situation which can cause damage to the equipment, personal property and/or the environment, or cause the LeeBoy Model 1200B Maintainer to operate improperly.

NOTE: Indicates a procedure, practice, or condition that should be followed in order for the machine or component to function in the manner intended.

SAFETY PRECAUTIONS

CAUTION

The safety messages that follow have CAUTION level hazards.

Pre-Operation Hazard



Read and understand this Operation Manual before operating or servicing the engine to ensure that safe operating practices and maintenance procedures are followed.

- Never permit anyone to service or operate the LeeBoy Model 1200B Maintainer without proper training.
- Safety signs and labels are additional reminders for safe operating and maintenance techniques.
- Contact LeeBoy or an authorized LeeBoy Dealer for additional training.
- Make sure you are aware of all laws and regulations that are in effect where the machine is operated. Make sure you have all necessary training to operate the machine.

WARNING

The safety messages that follow have WARNING level hazards.

Crush Hazard

Keep bystanders away from work area before and during operation.

Modification Hazard

Never modify the LeeBoy Model 1200B Maintainer without written consent of LeeBoy. Any modification can affect the safe operation of the machine and may cause personal injury or death.

Exposure Hazard



Always wear personal protective equipment, including appropriate clothing, gloves, work shoes, and eye and hearing protection, as required by the task at hand.

Explosion Hazard



While the engine is running or the battery is charging, hydrogen gas is being produced and can be easily ignited. Keep the area around the battery well-ventilated and keep sparks, open flame and any other form of ignition out of the area.

- Always disconnect the negative (-) battery cable before servicing the machine.
- Do not start the engine by shorting the starter circuit or any other starting method not stated in this manual. Only use the starting procedure as described in this manual to start the engine.
- Never charge a frozen battery. Always slowly warm the battery to room temperature before charging.

Fire and Explosion Hazard

- Diesel fuel is flammable and explosive under certain conditions.
- Never use a shop rag to catch the fuel.
- Wipe up all spills immediately.
- Never refuel with the engine running.
- Store any containers containing fuel in a well-ventilated area, away from any combustibles or sources of ignition.

Fire Hazard



Have appropriate safety equipment available. Have all fire extinguishers checked periodically for proper operation and/or readiness.

- Always read and follow safety-related precautions found on containers of hazardous substances like parts cleaners, primers, sealants and sealant removers.
- Undersized wiring systems can cause an electrical fire.

WARNING

The safety messages that follow have WARNING level hazards.

Exhaust Hazard



All internal combustion engines create carbon monoxide gas during operation and special precautions are required to avoid carbon monoxide poisoning:

- Never block windows, vents or other means of ventilation if the LeeBoy Model 1200B Maintainer is operating in an enclosed area.
- Always ensure that all connections are tightened to specifications after repair is made to the exhaust system.

Entanglement/Sever Hazard



Verify there are no people, obstacles or other equipment near the LeeBoy Model 1200B Maintainer before starting the engine. Sound the horn as a warning before starting the engine.



If the engine must be serviced while it is operating, remove all jewelry, tie back long hair and keep hands, other body parts and clothing away from moving/rotating parts.

- Always stop the engine before beginning service.
- Verify that all machine guards and covers are attached properly to the machine before starting the engine. Do not start the engine if any guards or covers are not properly installed on the machine.
- If you must run the engine during maintenance procedures, make sure you have a helper to keep bystanders clear of the machine and make observations of moving parts as requested by the operator.
- Always turn the start switch to the OFF position after operation is complete and remove the key from the switch. Keep the key in your possession when the machine is not operating.
- Attach a "Do Not Operate" tag near the key switch while performing maintenance on the equipment.
- Never operate the engine while wearing a headset to listen to music or radio because it will be difficult to hear the warning signals.
- Always start the engine or operate the controls while you are seated in the operators seat.

Alcohol and Drug Hazard



Never operate the engine while under the influence of alcohol or drugs, or when ill.

Piercing Hazard



Avoid skin contact with high-pressure hydraulic fluid or diesel fuel spray caused by a hydraulic or fuel system leak such as a broken hydraulic hose or fuel injection line. High-pressure hydraulic fluid or fuel can penetrate your skin and result in serious injury. If you are exposed to high-pressure hydraulic fluid or fuel spray, obtain prompt medical treatment.

- Never check for a hydraulic fluid or fuel leak with your hands. Always use a piece of wood or cardboard. Have your authorized LeeBoy Dealer or distributor repair the damage.

Flying Object Hazard



Always wear eye protection when cleaning the LeeBoy Model 1200B Maintainer with compressed air or high-pressure water. Dust, flying debris, compressed air, pressurized water or steam may injure your eyes.

Coolant Hazard



Wear eye protection and rubber gloves when handling engine coolant. If contact with the eyes or skin should occur, flush eyes and wash immediately with clean water.

Burn Hazard



Some of the machine surfaces become very hot during operation and shortly after shutdown.

- Keep hands and other body parts away from hot machine surfaces.
- Handle hot components with heat-resistant gloves.

⚠ CAUTION

The safety messages that follow have CAUTION level hazards.

Poor Lighting Hazard

Ensure that the work area is adequately illuminated.
Always install wire cages on portable safety lights.

Tool Hazard

Always use tools appropriate for the task at hand and use the correct size tool for loosening or tightening LeeBoy Model 1200B Maintainer parts.

NOTICE

The safety messages that follow have NOTICE level hazards.

Any part which is found defective as a result of inspection or any part whose measured value does not satisfy the standard or limit must be replaced.

Always tighten components to the specified torque. Loose parts can cause LeeBoy Model 1200B Maintainer damage or cause it to operate improperly.

Only use replacement parts approved by LeeBoy. Other replacement parts may affect warranty coverage.



Follow the guidelines of the EPA or other governmental agencies for the proper disposal of hazardous materials such as engine oil, diesel fuel and engine coolant. Consult the local authorities or reclamation facility.

Clean all accumulated dirt and debris away from the body of the machine and its components before you inspect the machine or perform preventive maintenance procedures or repairs. Operating a machine with accumulated dirt and debris will cause premature wear of machine components. Accumulated dirt and debris also hinders effective machine inspection.

Retrieve any tools or parts that may have dropped inside of the machine to avoid improper machine operation.

Dispose of hazardous materials in accordance with all applicable laws and regulations. Never dispose of hazardous materials by dumping them into a sewer, on the ground, or into groundwater or waterways.

If any alert indicator illuminates during machine operation, stop the engine immediately. Determine the cause and repair the problem before continuing to operate the machine.

SAFETY LABEL LOCATIONS

If your LeeBoy Model 1200B Maintainer has been repainted, it is extremely important that all the decals referring to CAUTION, WARNING, and DANGER be replaced in their proper locations. The illustrations on this page will aid you in determining the proper locations; for additional help, you should refer to the

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

A description of location is provided below for each safety label. For additional instructions, contact your dealer. (See **Contact Information** in Section 2).

NOTE: It is the responsibility of the owner and operator to make sure that all safety labels are readable and located on machine as designated by LeeBoy.

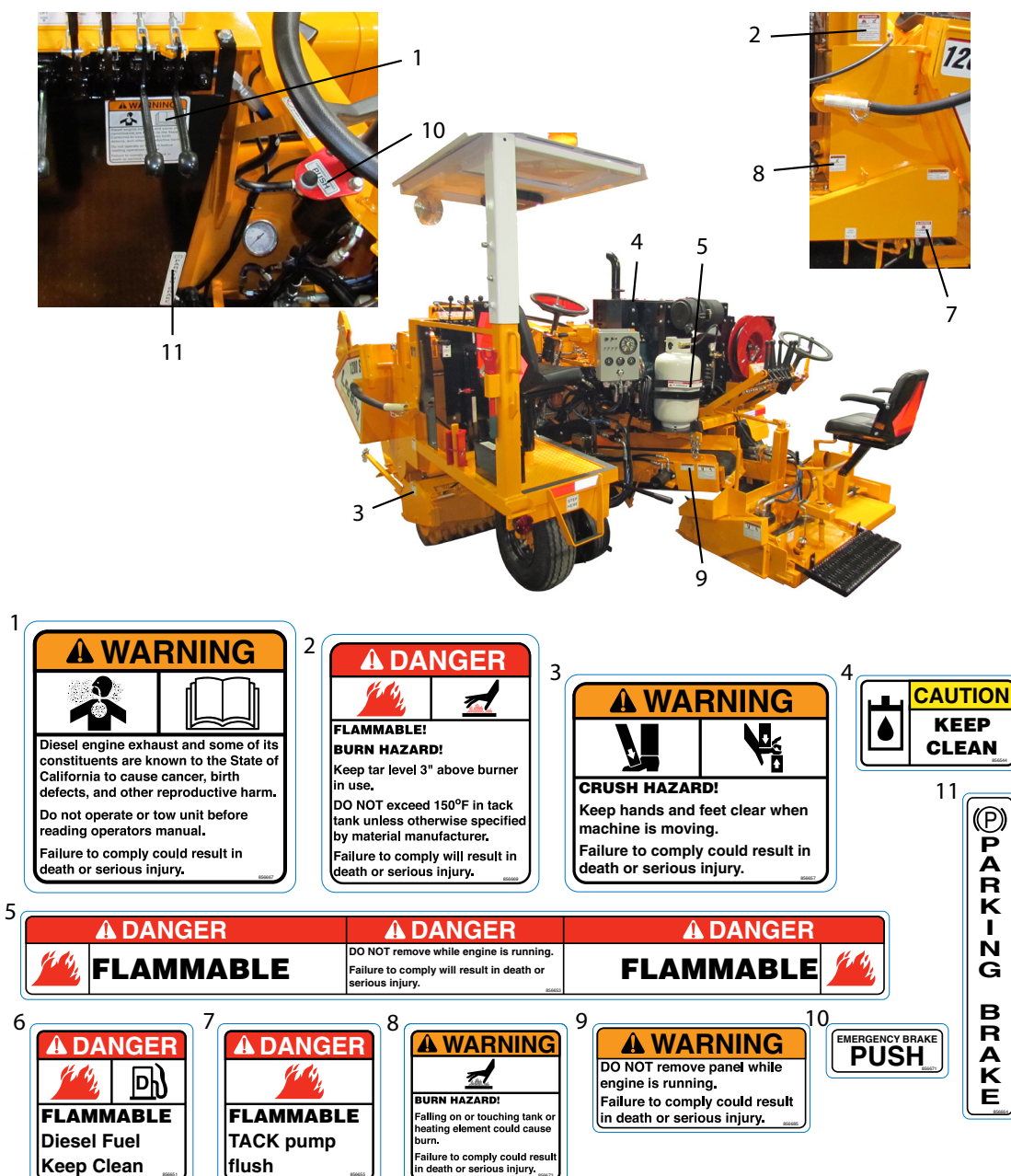


Figure 1-1. 1200B Maintainer Safety Labels and Safety Label Locations

NOTES

NOTES



Section 2

Information And Specifications

	Page
Information And Specifications	2-1
Limited Warranty Policy	2-2
Warranty	2-2
Limitations	2-2
Items Not Covered	2-3
Other Limitations.	2-3
Contact Information	2-3
Record of Ownership	2-3
Nameplate	2-4
General Information	2-4
Major Components	2-4
Specification Tables	2-6
Torque Specifications	2-9
Inch Fasteners	2-9
Torque Specifications	2-10
Metric Fasteners.	2-10

LIMITED WARRANTY POLICY

WARRANTY

1. Subject to the limitations, exclusions, and claims procedures set forth herein, LeeBoy warrants (to the first retail purchaser) that this product will be free from (substantial) defects in materials and workmanship during the warranty period.
2. If a defect in material or workmanship is found, your authorized LeeBoy Dealer is to be notified during the warranty period. LeeBoy and its authorized Dealer 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 period will begin on the initial start-up, training and delivery of the unit by the Dealer to the customer, and will expire after twelve (12) months following the delivery of the asphalt maintainer to the first retail purchaser. (See Dealer for additional warranty.)
4. Manufacturers' Warranties: Engines are warranted by their manufacturers and may have warranty coverage that differs from that of LeeBoy. LeeBoy does not warrant any engine.
5. Replacement parts furnished by LeeBoy are covered for the remainder of the warranty period applicable to the unit or component in which such parts are installed.
6. 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 LeeBoy Dealer will carry a six-month warranty.
8. This Limited Warranty is governed by the laws of the State of North Carolina.

THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESSED, STATUTORY AND IMPLIED WARRANTIES APPLICABLE TO UNITS, ENGINES, OR PARTS INCLUDING WITHOUT LIMITATION, ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR USE OR PURPOSE OR AGAINST INFRINGEMENT.

Limitations

LeeBoy has no obligation for:

1. Any defects caused by misuse, misapplication, negligence, accident or failure to maintain or use in accordance with the most current operating instructions.
2. Unauthorized alterations.
3. Defects or failures caused by any replacement parts or attachments not manufactured by or approved by LeeBoy.
4. Failure to conduct normal maintenance and operating service including, without limitation, providing lubricants, coolant, fuel, tune-ups, inspections or adjustments.
5. Unreasonable delay, as established by LeeBoy, in making the applicable units or parts available upon notification of a service notice ordered by same.
6. Warranty Responsibility: The warranty responsibility on all engines rests with the manufacturer of the engine.
7. Warranty and Parts Support: LeeBoy may have support agreements with some engine manufacturers for warranty and parts support. However, LeeBoy does not warrant the engine.
8. This Limited Warranty sets forth your sole remedy in connection with the sale or use of the LeeBoy product covered by this Limited Warranty.
9. This Limited Warranty extends only to the first retail purchaser, and is not transferable.
10. In the event any portion of this Limited Warranty shall be determined to be invalid under any applicable law, such provision shall be deemed null and void and the remainder of the Limited Warranty shall continue in full force and effect.



Items Not Covered

LeeBoy is not responsible for the following:

1. All used units or used parts of any kind.
2. Repairs due to normal wear and tear or brought about by abuse or lack of maintenance of the Machine.
3. Attachments not manufactured or installed by LeeBoy.
4. Liability for incidental or consequential damages of any type including, but not limited to, lost profits or expenses of acquiring replacement equipment.
5. Miscellaneous charges.

Other Limitations

IN NO EVENT, WHETHER AS A RESULT OF BREACH OF CONTRACT OR WARRANTY OR ALLEGED NEGLIGENCE OR LIABILITY WITHOUT FAULT, SHALL LEEBOY BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING, WITHOUT LIMITATION, LOSS OF PROFIT OR REVENUE, COST OF CAPITAL, COST OF SUBSTITUTED EQUIPMENT, FACILITIES OR SERVICES, DOWNTIME COSTS, LABOR COSTS OR CLAIMS OF CUSTOMERS, PURCHASERS OR LESSEES FOR SUCH DAMAGES. IN NO EVENT WILL WARRANTY COMPENSATION, OR OTHER DAMAGES AVAILABLE FROM LEEBOY, EXCEED THE PURCHASE PRICE OF THE PRODUCT.

CONTACT INFORMATION

For information regarding parts and repairs about your LeeBoy product, first contact the dealer you purchased your product from.

If you have a persistent problem your dealer is unable to resolve, contact LeeBoy directly.

Record dealer information in the space provided. For additional information about LeeBoy, please visit: www.leeboy.com.

Sales Representative: _____

Dealership Name: _____

Dealership Address: _____

Dealership Phone: _____

RECORD OF OWNERSHIP

Please fill out the following information and use it when you need to contact LeeBoy for service, parts or literature.

Maintainer Model Number: _____

Maintainer Serial Number: _____

Date of Purchase: _____

NAMEPLATE

The Nameplate contains the serial number and basic data used to identify the specific model on the Asphalt Maintainer. It is located on the left side of the machine above the grinder. (See Figure 3-1.)



Figure 2-1. Nameplate

GENERAL INFORMATION

The descriptions and specifications provided in this section are applicable to the LeeBoy Model 1200B Maintainer

This section contains a description of how the major components operate. It also includes specifications for the major system components. Included in this section are machine weights, dimensions, performance, and major system specifications.

Major Components

Engine

The LeeBoy Model 1200B Maintainer uses a Kubota, V3600T 4CYL 84.5HP Diesel engine to drive the hydraulic function pump and steering pump. The engine is mounted at the center right of the machine and is easily accessible from the rear or right side of the machine.

A fuel lift pump mounted on the engine draws diesel fuel from the fuel tank. The fuel tank is mounted on top of the machine on the left side.

An air cleaner is mounted at the back of the hood. The air cleaner removes fine particles such as dust, sand, chaff and lint from the air.

As air is taken into the air cleaner assembly, a cyclone type action deposits some of the fine particles in the evacuator mounted on the bottom of the air cleaner housing. The evacuator is held closed during engine operation by suction. When the engine is shut off the weight of the debris helps to open the rubber flaps allowing the debris to fall out. The rubber flaps can also be squeezed to open for cleaning.

A fuel filter removes contaminants from the diesel fuel before the fuel flows to the injection pump for injection into the engine combustion chamber.

A radiator mounted in front of the engine cools the engine. As coolant flows through the radiator, airflow from the engine-driven fan removes heat from the coolant.

Refer to the engine owner's Operation and Maintenance Manual for a complete description of the engine.

Hydraulic System

The hydraulic system includes two hydraulic pumps driven by the engine: 1) Drive Pump and 2) Grinder Pump.

Hopper

The hopper wings are hydraulically controlled to raise and lower. The hopper when fully open can hold a payload up to 2 1/2 tons.

Material in the hopper is moved toward the back of the machine to the screed by conveyor and augers. The conveyor and augers are activated at the operator platform or the screed operators platform.

The hopper can be lifted to assist the material towards the augers. The hopper lift can be controlled at the operators platform or the screed operators platform.

Augers/Conveyors

The main hopper augers rotate clockwise (CW) to assist in moving material from the hopper to the main conveyor. The auger can be manually controlled at the operator platform on the machine or by the screed operator on the screed.

The auger control is paired with the main conveyor control and cannot be run in reverse. The main conveyor transports material from the hopper to the screed.

The screed auger assists in distributing material evenly to the screed. The shoulder conveyor, if attached, transports material from the screed to the strike-off extension. Both the screed auger and shoulder conveyor are paired and can be controlled from the operators platform or the screed operator platform.

Grinder

The grinder is equipped with 51 replaceable carbide bits driven by an orbit motor. The grinder 24" wide and capable of depths of up to 3".

The grinder can tilt up to 15° off horizontal and be raised and lowered from the operators platform. Grinding control can only be preformed from the main operators platform.

Operator Platform

The operator platform allows easy and convenient control of most all functions of the maintainer and screed. The machine can be operated from either the left-hand or right-hand side depending on which side is best suited to the working conditions.

Screed

The screed is the last part of the machine that contacts the paved material. Operation of the screed is usually done by the screed operator. Paving material is fed from the hopper and conveyor to the augers to the front of the screed. The screed has hydraulically controlled extensions that move in and out to allow a wider paving base from 4 ft up to 6 ft.

Screed heating is accomplished by a propane heating burner mounted directly to the outer heat box.

Electrical System

The electrical system is powered by one 12-volt, group 74, battery mounted in the battery compartment located on the right of the machine below the engine.

The battery produces 12 volts DC and maintains 950 cold cranking amperes (CCA). An engine-mounted alternator capable of at least 60 amperes charging capacity keeps the battery charged during normal operation. The battery charge rate can be monitored using the voltmeter on the center operator dash panel.

SPECIFICATION TABLES

Included in this section are machine weights, dimensions, and performance.

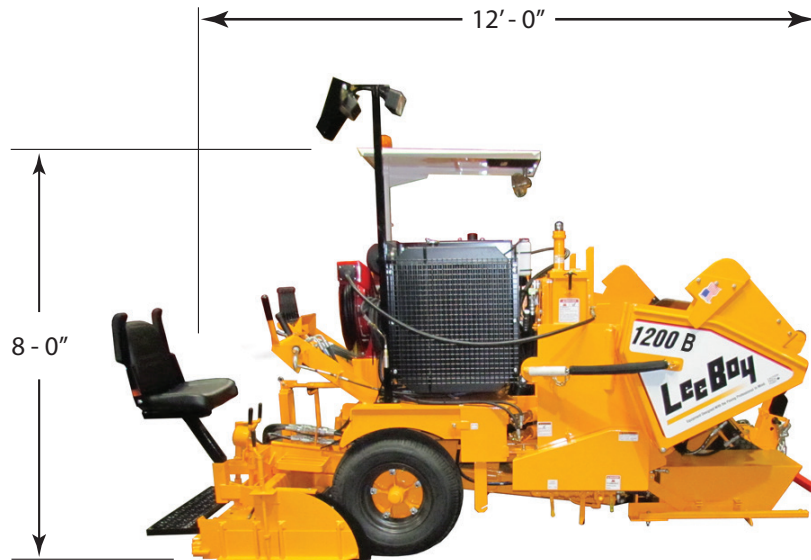
The specifications provided in this section are applicable to the Model 1200B Asphalt Maintainer.

Table 2-1. Engine Specifications

ITEM	SPECIFICATIONS
Engine	Kubota V3600T 4CYL 84.5HP Diesel
Model	V3600T
Cylinders	4
Horsepower	84.5
Displacement	3.62 Liters
Oil Capacity	14 Quarts
Oil Filter Make	Kubota
Oil Filter Part No. Primary	986537-03
Oil Type/Weight	15W40
Air Filter Make	Donaldson
Air Filter Part No. Primary	1005365-04
Air Filter Part No. Secondary	1005365-05
Fuel Type	Diesel
Fuel Tank Capacity	20 Gallons
Fuel Filter Make	Kubota
Fuel Filter Part No. Primary	982080-02
Fuel Filter Part No. Secondary	1001166-12
Coolant System	
Antifreeze Type	Glycol based, Red Extended Life
Mixture	50/50
Color	Red
Radiator	14.6 Quarts
Hydraulic System	
Pump Make	Sauer
Main Pump Part No.	320237
Piggy-back Pump Part No.	320232
Fluid/Lube Type	AW-68
Hydraulic Filter Make	Donaldson
Hydraulic Filter Part No.	290030

Table 2-2. Specifications

ITEM	SPECIFICATIONS
Length	12 Feet
Width (Hopper Wings In)	8 Feet 6 Inches
Width (Hopper Wings Out)	9 Feet 7 Inches
Height	8 Feet
Weight	10,200 Pounds
Tire Size	Front - 5.70" x 8.00" (8 ply rated) Rear - 9.00" x 14.5" (12 ply rated)
Hydraulic Reservoir	Capacity 45 Gallons
Flush Tank	Capacity 6 Gallons
Tack Tank	Capacity 100 Gallons
Electrical System	12 Volt battery, key starter electric brakes.
Hydraulic Pumps	Two variable volume piston pumps connected together (1) operated drive wheels (2) operates rotary grinder 35cc displacement - per revolution = 22 Gallon/Minute @ 2,600 RPM
Piggy - Back Pump	17cc displacement - per revolution = 10.7 Gallon/Minute @ 2,600 RPM
Front Wheel Drive	Six pneumatic tire pulling, mounted with quick lock hubs. Power steering, oscillation front end, with disc brakes.
Conveyor Belt	5/16" thick 2 ply x 16" wide oil and heat resistant.
Auxiliary Quick Coupling	Hydraulic powered.
Rotary Grinder	16" Diameter x 24" wide, with 51 carbide bites, driven by an orbit motor.
Hopper	115" wide, capacity of 2 1/2 tons.
Towing	Operator controlled front hydraulic tongue.
Road Widener	Widens road from 0" to 42"
Shoulder Build-up	Additional conveyor with strike off, builds shoulder up. Extends 28" to 42"
Right Hand Drive	Controls engine, forward/reverse, paving and shoulder build-up.
Operator's Area	Left Side: Controls all functions right side and left.



SIDE VIEW

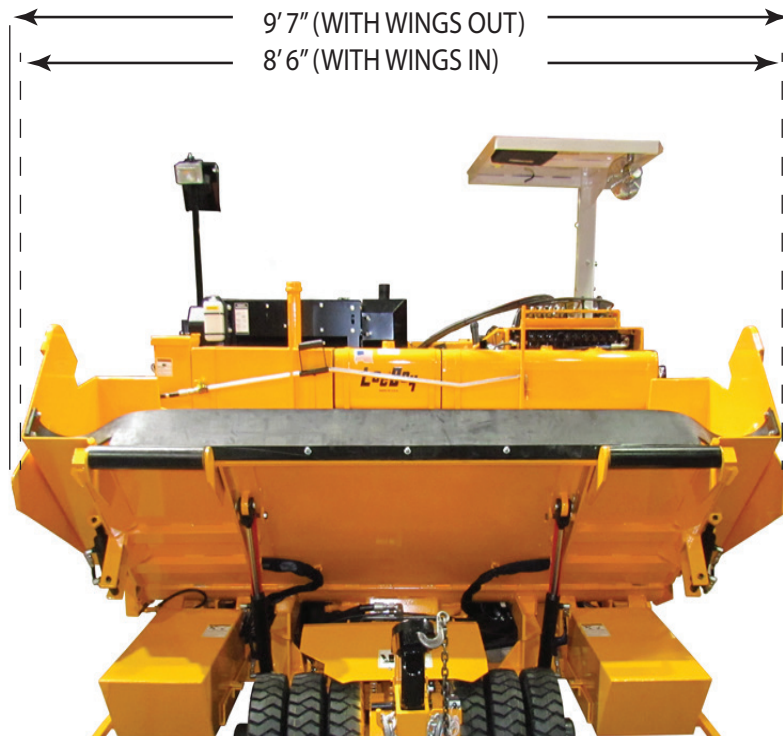


Figure 2-2. Model 1200B Maintainer Dimensions

TORQUE SPECIFICATIONS

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.

Table 2-3. Torque Specifications For Standard Inch Fasteners

		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 UNF	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

TORQUE SPECIFICATIONS

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.

Table 2-4. Torque Specifications For Metric Fasteners

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

Hydraulic Fittings

Tightening Flare Type Tube Fittings

1. Check the flare and flare seat for defects that might cause leakage.
2. Align tube with fitting before tightening.
3. Lubricate connection and hand tighten swivel nut until snug.

4. To prevent twisting the tube(s), use two wrenches. Place one wrench on the connector body and with the second, tighten the swivel nut to the torque shown in **Table 2-5**.

NOTE: The torque values shown are based on lubricated connections as in assembly.

Table 2-5. Torque Specifications For Flare Type Tube Fittings

TUBE SIZE OD	NUT SIZE (ACROSS FLATS)	TORQUE VALUE		RECOMMENDED TURNS TO TIGHTEN (AFTER FINGER TIGHTENING)	
		(N•m)	(lb-ft)	(N•m)	(lb-ft)
(in)	(in)				
3/16	7/16	8	6	1	1/6
1/4	9/16	12	9	1	1/6
5/16	5/8	16	12	1	1/6
3/8	11/16	24	15	1	1/6
1/2	7/8	46	34	1	1/6
5/8	1	62	46	1	1/6
3/4	1 1/4	102	75	3/4	1/8
7/8	1 3/8	122	90	3/4	1/8

Full Torque Nut Coupling Installation

The only completely reliable method of creating a consistent leak free, long lasting connection is to ensure that the coupling is brought to the proper torque.

The best method of ensuring a coupling is brought to the proper torque is to use a torque wrench with crowfoot. To ensure the proper torque is met, use the flats method of torque verification. Flats method may be used alone in situations where a torque wrench is inaccessible or unavailable.

There are seven steps involved in proper coupling installation:

1. Determine the correct torque value for your coupling.

NOTE: Only use the torque values specified from the manufacturer, do not use SAE torque recommendations.

The minimum torque values are adequate for sealing in most applications, and the maximum torque values should never be exceeded.

2. Calculate the correct torque wrench setting (see **Section 2** in Section 2-11).

NOTE: The most straight forward method of determining the correct torque setting is to multiply the desired torque by the length of the wrench from the center of the handle to the center of the drive (L) divided by the length of the wrench from the center of the handle to the crowfoot center (LA), (**Figure 2-3**).

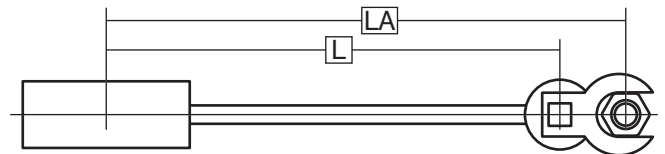


Figure 2-3. Torque Wrench - Crowfoot

NOTE: Torque Wrench Setting = Desired Torque * L / LA

3. Ensure that the seal face and threads are clean and in good condition. Do not lubricate coupling threads.

NOTE: O-Rings should be lubricated with light oil, but threads should be completely dry unless making pipe thread connections (interference seal).

Attach the male end of the hose onto the equipment first, since it may be necessary to rotate the entire hose assembly to tighten the male threads. Then route the hose into position while avoiding twisting the hose.

4. Hand tighten the connection by bringing seal face in contact and rotating the nut by hand until it stops.

NOTE: By definition hand tight is 0.3-1 ft-lb or when the seal faces are touching and with the threads engaged the hex can no longer be rotated by hand.

5. Mark a line across the coupling nut and backup hex for flats method verification of coupling torque (Figure 2-3).
6. Apply a wrench to the backup hex to prevent the coupling and hose from moving while tightening the nut with a torque wrench.

NOTICE Failure to retain the backup hex during installation will also result in additional clamp load force that could cause damage to the seal face.

NOTE: The coupling nut must be in motion for an accurate torque reading. If the nut is stopped before final torque value is achieved, it must be loosened and retightened until the torque is attained while the nut is in motion.

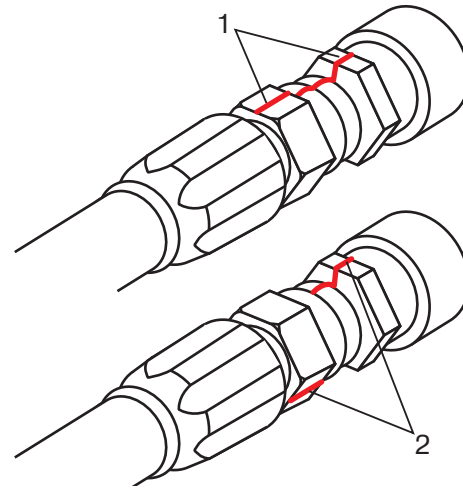


Figure 2-4. Flats Method Tightening

1 - Mark Line on Nut

2 - Example 2 Flats difference

7. If a torque wrench cannot fit into the coupling area or if it is unavailable, flats method may be used to ensure that the coupling is properly tightened, as shown in Figure 2-4.

NOTE: The mark placed on the nut and backup hex after hand tightening should have rotated 1 to 1.5 flats during final tightening. At this point in time, if desired, the nut and backup hex may be marked to indicate if the coupling loosens over time.

Table 2-6. Torque Specifications For US Style Coupling Terminations

JIC, SAE 45°, ORFS, O-RING BOSS, GATES ADAPTERLESS AND MEGASEAL										
Dash Size	JIC 37°, SAE 45° & MegaSeal (steel)		JIC 37°, SAE 45° & Mega-Seal (steel)		Flat Face O-Ring Seal (Steel)		SAE O-Ring Boss (Steel) & Gates Adapterless ≤ 4000 PSI		SAE O-Ring Boss (Steel) & Gates Adapterless > 4000 PSI	
1/16 Inch	ft-Lb		ft-Lb		ft-Lb		ft-Lb		ft-Lb	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
-3									8	10
-4	10	11	5	6	10	12	14	16	14	16
-5	13	15	7	9					18	20
-6	17	19	12	15	18	20	24	26	24	26
-8	34	38	20	24	32	40	37	44	50	60
-10	50	56	34	40	46	56	50	60	72	80
-12	70	78	53	60	65	80	75	83	125	135
-14					65	80			160	180
-16	94	104	74	82	92	105	111	125	200	220
-20	124	138	75	83	125	140	133	152	210	280
-24	156	173	79	87	150	180	156	184	270	360
-32	219	243	158	175						

Table 2-7. Torque Specifications For DIN 24, DIN 60, and Inverted Cone Style Coupling Terminations

DIN 24, DIN 60, AND INVERTED CONE			
Size		Torque	
mm		ft-Lb	
Light Series Tube OD	Heavy Series Tube OD	Min	Max
6		7	15
8		15	26
10	8	18	30
12	10	22	33
14	12	26	37
15	14	30	52
	16	30	52
18	20	44	74
22	25	59	89
28	30	74	111
	38	74	162
35		133	184
42		148	221

Table 2-8. Torque Specifications For 4-Bolt Flange Connections

4-BOLT FLANGES		
Dash Size	Bolt Size	Torque
1/16 Inch	Inch	ft-Lb
-8	0.31	17
-12	0.38	26
-16	0.44	43
-20	0.50	65
-24	0.63	130
-32	0.75	220
<ol style="list-style-type: none"> Align faces and finger tighten bolts before applying final torque in a pattern. The seal faces must be parallel with even bolt tension to seal properly. Torque values apply to bolts which are plated or coated in light engine oil. Before assembly lubricate O-Ring with light oil (SAE 10W or 20W). 		

Table 2-9. Torque Specifications For SAE Male Flareless Assembly (MFA)

SAE MALE FLARELESS ASSEMBLY (MFA)
After hand tight rotate nut one full turn (8 flats)

Table 2-10. Torque Specifications For NPTF Dry Seal Pipe Threads

NPTF	
Dash Size	Max Torque
1/16 Inch	ft-Lb
-2	20
-4	25
-6	35
-8	45
-12	55
-16	65
-20	80
-24	95
-32	120
<ol style="list-style-type: none"> The torque values obtained from tightening pipe threads can vary considerably depending on thread condition. Adequate sealing can occur at values much lower than the maximum values listed above. Only enough torque to achieve adequate sealing should be used. When using a male tapered pipe thread with a female straight or parallel pipe thread, maximum values are 50% of those listed in the table. If thread sealant is used, maximum values shown should be decreased by 25%. 	

Table 2-11. Torque Specifications For BSP 30° Inverted Cone and JIS Coupling Terminations

BSP 30° INVERTED CONE AND JIS		
Dash Size	Torque	
mm	ft-Lb	
1/16 Inch	Min	Max
-2	7	9
-4	11	18
-6	19	28
-8	30	36
-10	37	44
-12	50	60
-16	79	95
-20	127	152
-24	167	190
-32	262	314

Table 2-12. Flats Method Values For Selected Terminations

FLATS METHOD VALUES		
Termination Type	Dash Size	Flats
	1/16 Inch	
JIC	4	1.5 - 1.75
JIC	6	1.0 - 1.5
JIC	8	1.5 - 1.75
JIC	10	1.0 - 1.5
JIC	12	1.0 - 1.5
JIC	16	.75 - 1.0
JIC	20	.75 - 1.0
JIC	24	.75 - 1.0
JIC	32	.75 - 1.0
JIS	4	.5 - 1.5
<ol style="list-style-type: none"> Seal faces must be in contact and the fitting fully hand tightened before marking flats. Flats method is most accurate for the first assembly cycle, for multiple disassembly/assembly cycles torque values are more reliable. Tightening 2 flats or more is analogous to sever over torque and may damage seal faces. 		

Determining Torque Setting

There are several methods of determining the correct setting on the torque wrench when using a crowfoot. All of the methods involve making the setting proportional to the effective change in length of the wrench multiplied by the desired final torque.

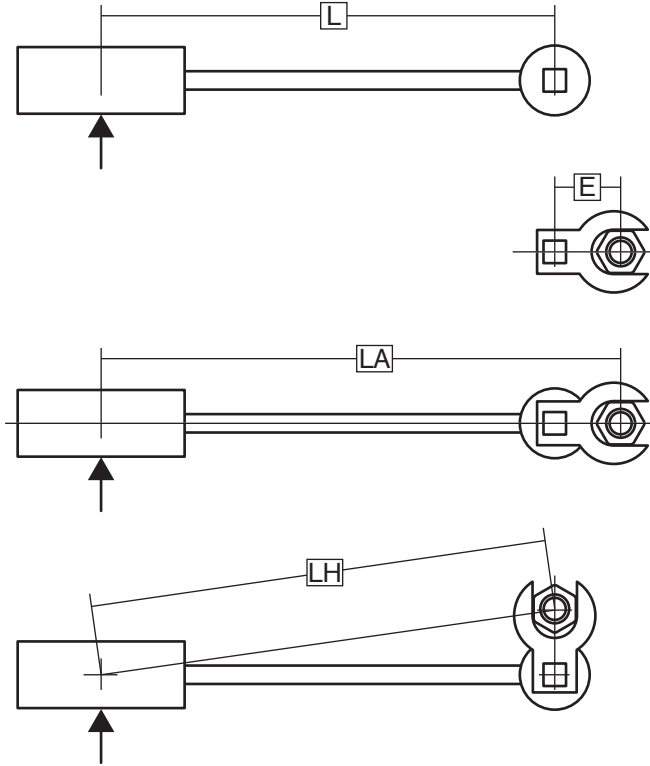


Figure 2-5. Measurements Needed

L = Distance from center of torque wrench handle to the center of socket drive

E = Distance from center of socket drive to the center of crowfoot

LA = Distance from center of torque wrench handle to the center of crowfoot

LH = Distance from center of torque wrench handle to the center of crowfoot, when mounted at 90°

TD = Desired torque at the fitting

TS = Torque setting indicated on wrench

Equations

Equation 1

Torque setting if the crowfoot is placed in line with respect to the wrench:

$$TS = TD * L / LA$$

or

$$TS = TD * L / (L+E)$$

Equation 2

Torque setting if the crowfoot is placed at 90° with respect to the wrench

$$TS = TD * L / LH$$

or

$$TS = TD * L / \sqrt{L^2 + E^2}$$

Equation 3

To estimate the crowfoot size (E)

$$E = \text{Drive Size} * 0.5 + \text{Distance between Drive \& Open End} + \text{Wrench Size} * 0.5774$$

NOTES



Section 3

Component Location

	Page
Component Location	3-1
1200B Maintainer	3-2
Left Hand Control Group	3-4
Right Hand Control Group	3-6
Control Box Group	3-8
Propane and Pump Groups	3-10
Propane and Pump Groups (Continued)	3-12

1200B MAINTAINER

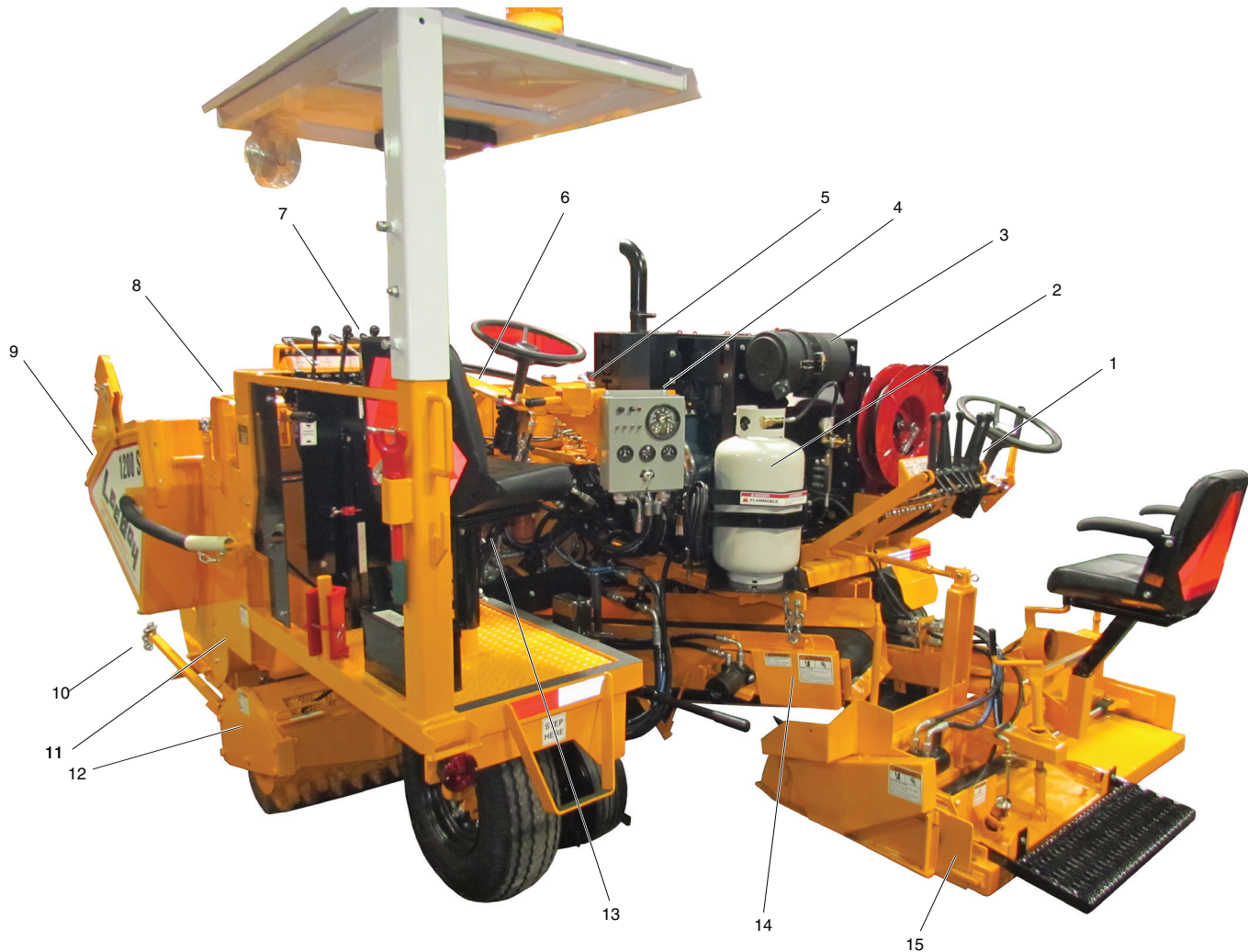


Figure 3-1. 1200B Maintainer

- | | |
|---|---------------------------|
| 1 - Right Hand Control Group | 9 - Hopper |
| 2 - Propane Tank | 10 - Guide Bar |
| 3 - Engine | 11 - Tack Tank |
| 4 - Operating Control Box Group | 12 - Grinder |
| 5 - Hydraulic Tank (Right Front Tank) | 13 - Parking Brake |
| 6 - Flush Tank (Middle Front Tank) | 14 - Conveyor |
| 7 - Left Hand Control Group | 15 - Screed |
| 8 - Diesel Fuel Tank (Left Front Tank) | |

Table 3-1. 1200B Maintainer

ITEM NO.	ITEM	DESCRIPTION
1	Right Hand Control Group	Group includes sidewing in/out lever, hopper lip lift lever, screed, up/down lever, screed/shoulder extension in/out lever, screed auger/shoulder conveyor lever, main conveyor lever, electronic brake button, steering wheel, forward/reverse lever, left end gate handle, flight screw handle, auxiliary couplings, screed angle handle, right end gate handle. Refer to Figure 3-3 and Table 3-3 .
2	Propane Tank	30 pound capacity propane tank used to run two tack burners and screed burner and burner nozzle ignitor.
3	Engine	Kubota, V3600T 4CYL 84.5HP diesel engine drives the hydraulic function pump and steering pump. Mounted at center right of machine and easily accessible from rear or right side of machine.
4	Operating Control Box Group	Group includes horn button, throttle switch, check engine light, work light switch, fan switch, beacon light switch, spray down switch, tachometer gauge, fuel level gauge, hour gauge, charge indicator gauge and ignition switch. Refer to Figure 3-4 and Table 3-4 .
5	Hydraulic Tank (Right Front Tank)	45 Gallon capacity tank.
6	Flush Tank (Middle Front Tank)	6 Gallon capacity tank.
7	Left Hand Control Group	Group includes sidewing in/out lever, tack pump lever, tongue lever, grinder tilt lever, lip lever, grinder lift lever, screed lever, screed extension in/out lever, screed auger/shoulder conveyor lever, conveyor lever, grinder speed lever, grinder depth level gauge, park brake lever, tack temp gauge, electric brake button, and forward/reverse lever and steering wheel. Refer to Figure 3-2 and Table 3-2 .
8	Diesel Fuel Tank (Left Front Tank)	20 Gallon capacity tank.
9	Hopper	Hopper wings hydraulically controlled to raise and lower. When fully open, can hold payload up to 2 1/2 tons. Material in hopper is moved toward back of Maintainer to screed by conveyor and augers. Can be lifted to assist material towards augers. Controlled at operators platform or screed operators platform.
10	Guide Bar	Used to maintain long, straight cuts.
11	Tack Tank	100 Gallon capacity tack dispersion tank, heated by two burners.
12	Grinder	Lowered and raised hydraulically. Can cut a 24 inch wide strip 0 to 3 inches deep. With 51 replaceable carbide bits, it can cut angles 0° to 15°. Leveling wheel used to maintain consistent depth.
13	Parking Brake	Used when leaving the Maintainer unattended. Brake provides back pressure on Maintainer to prevent it from lunging forward during grinding operations.
14	Conveyor	Activated at operator platform or screed operators platform. Can be lifted to assist material towards augers. Controlled at operators platform or screed operators platform.
15	Screed	Propane heated, telescopes from 38 inches to 62 inches. Can lay asphalt up to 100 feet per minute. An optional road widening pan will provide a 0 inch to 24 inch road widening capability.

Left Hand Control Group

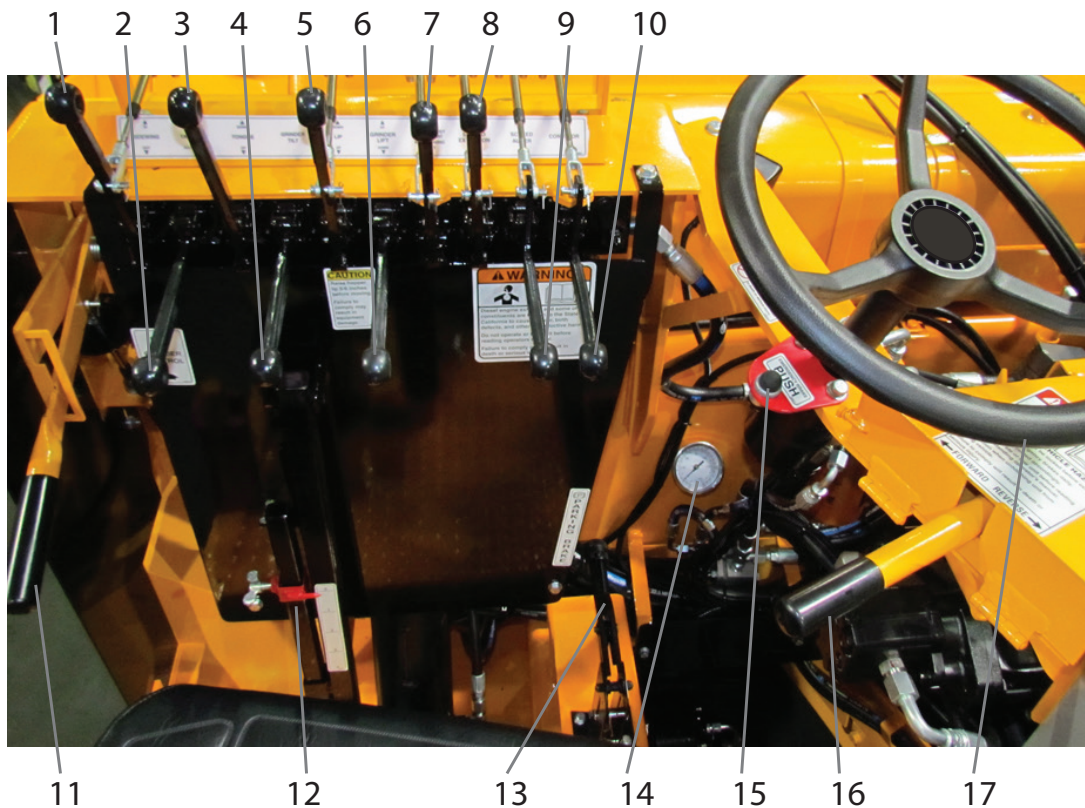


Figure 3-2. Left Hand Control Group

- | | |
|--|--|
| 1 - Sidewing In/Out Lever | 9 - Screed Auger/Shoulder Conveyor Lever |
| 2 - Tack Pump Lever | 10 - Conveyor Lever |
| 3 - Tongue Lever | 11 - Grinder Speed Lever |
| 4 - Grinder Tilt Lever | 12 - Grinder Depth Level Gauge |
| 5 - Hopper Lip Lever | 13 - Park Brake Lever |
| 6 - Grinder Lift Lever | 14 - Tack Temperature Gauge |
| 7 - Screed Lever | 15 - Electric Brake Button |
| 8 - Screed Shoulder Extension In/Out Lever | 16 - Forward/Reverse Lever |
| | 17 - Steering Wheel |

Table 3-2. Left Hand Control Group

ITEM NO.	CONTROL NAME	DESCRIPTION
1	Sidewing In/Out Lever	Fold and unfold hopper sidewings.
2	Tack Pump Lever	Controls tack pump forward and reverse.
3	Tongue Lever	Raise and lower hitch tongue.
4	Grinder Tilt Lever	Controls grinder angle from 0° to ±15°.
5	Hopper Lip Lever	Raise and lower hopper lip.
6	Grinder Lift Lever	Raise and lower grinder.
7	Screed Lever	Raise and float screed or shoulder extension. Pull and hold lever part way down to raise drawbar. Push lever all the way down, locking in place, to float drawbar. NOTE: Must be in float when paving.
8	Screed/Shoulder Extension In/Out Lever	Extends and retracts screed or strike-off extensions.
9	Screed Auger/Shoulder Conveyor Lever	Controls the screed auger or shoulder conveyor. NOTE: Screed auger and shoulder conveyor can only move in one direction, forward.
10	Conveyor Lever	Controls on/off and speed of main conveyor.
11	Grinder Speed Lever	Raise lever to activate grinder.
12	Grinder Depth Level Gauge	Grinder depth indicator.
13	Park Brake Lever	Pull lever to activate parking brake.
14	Tack Temperature Gauge	Indicates tack tank temperature.
15	Electric Brake Button	Applies rear electric brakes, only when depressed.
16	Forward/Reverse Lever	Controls forward and reverse movement and speed of travel.
17	Steering Wheel	Controls left and right movement of machine.

Right Hand Control Group



Figure 3-3. Right Hand Control Group

- | | |
|--|----------------------------|
| 1 - Sidewing In/Out Lever | 8 - Steering Wheel |
| 2 - Hopper Lip Lift Lever | 9 - Forward/Reverse Lever |
| 3 - Screed Up/Down Lever | 10 - Left End Gate Handle |
| 4 - Screed/Shoulder Extension In/Out Lever | 11 - Flight Screw Handle |
| 5 - Screed Auger/Shoulder Conveyor Lever | 12 - Auxiliary Couplings |
| 6 - Main Conveyor Lever | 13 - Screed Angle Handle |
| 7 - Electronic Brake Button | 14 - Right End Gate Handle |

Table 3-3. Right Hand Control Group

ITEM NO.	CONTROL NAME	DESCRIPTION
1	Sidewing In/Out Lever	Fold and unfold hopper sidewings.
2	Hopper Lip Lift Lever	Raise and lower hopper lip.
3	Screed Up/Down Lever	Raise and float screed or shoulder extension. Pull and hold lever half way down to raise drawbar. Pull lever all the way down, locking in place, to float drawbar. NOTE: Must be in float when paving.
4	Screed/Shoulder Extension In/Out Lever	Extends and retracts screed or strike-off extensions.
5	Screed Auger/Shoulder Conveyor Lever	Controls the screed auger or shoulder conveyor. NOTE: Screed auger and shoulder conveyor can only move in one direction, forward.
6	Main Conveyor Lever	Controls on /off and speed of main conveyor.
7	Electronic Brake Button	Applies rear electric brakes, only when depressed.
8	Steering Wheel	Control left and right movement of machine.
9	Forward/Reverse Lever	Controls forward and reverse movement and speed of travel.
10	Left End Gate Handle	Sets left end gate to desired level.
11	Flight Screw Handle	Controls mat thickness.
12	Auxiliary Couplings	Hook-up for shoulder equipment.
13	Screed Angle Handle	Sets angle of screed.
14	Right End Gate Handle	Sets right end gate to desired level.

Control Box Group

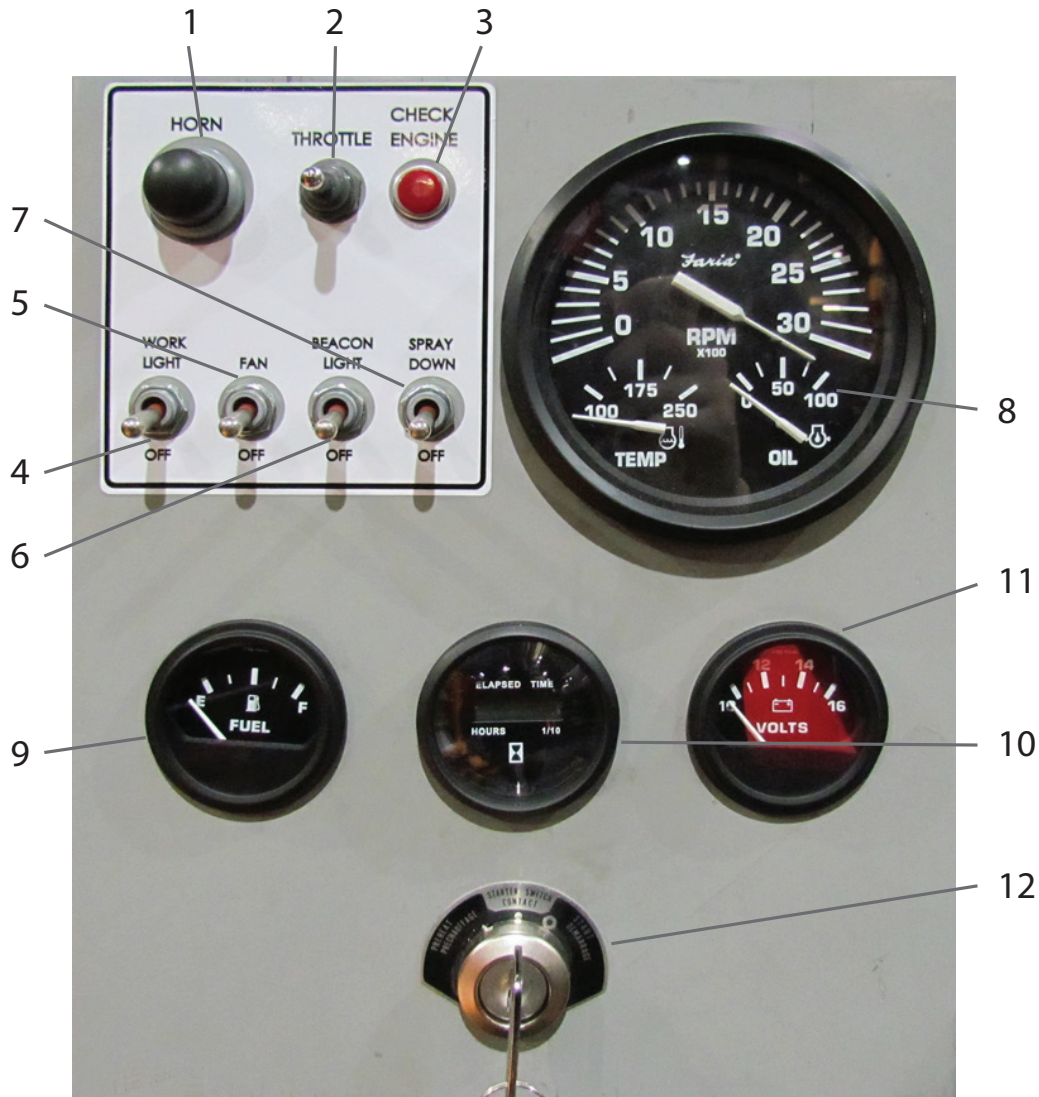


Figure 3-4. Control Box Group

- | | |
|-------------------------|-----------------------------|
| 1 - Horn Button | 7 - Spray Down Switch |
| 2 - Throttle Switch | 8 - Tachometer Gauge |
| 3 - Check Engine Light | 9 - Fuel Level Gauge |
| 4 - Work Light Switch | 10 - Hour Gauge |
| 5 - Fan Switch | 11 - Charge Indicator Gauge |
| 6 - Beacon Light Switch | 12 - Ignition Switch |

Table 3-4. Control Box Group

ITEM NO.	CONTROL NAME	DESCRIPTION
1	Horn Button	Activated machines horn when depressed.
2	Throttle Switch	Controls engine throttle level.
3	Check Engine Light	Indicates probable engine trouble or needed maintenance.
4	Work Light Switch	Turns on and off the work lights.
5	Fan Switch	Turns on and off the fan.
6	Beacon Light Switch	Turns on and off the roof beacon.
7	Spray Down Switch	Turns on and off the Spray down pump.
8	Tachometer Gauge	Indicates machine RPM, temperature, and oil level.
9	Fuel Level Gauge	Indicates fuel level.
10	Hour Gauge	Indicates machine run time.
11	Charge Indicator Gauge	Indicates charge on battery.
12	Ignition Switch	Turn to start or stop the Maintainer engine.

Propane and Pump Groups

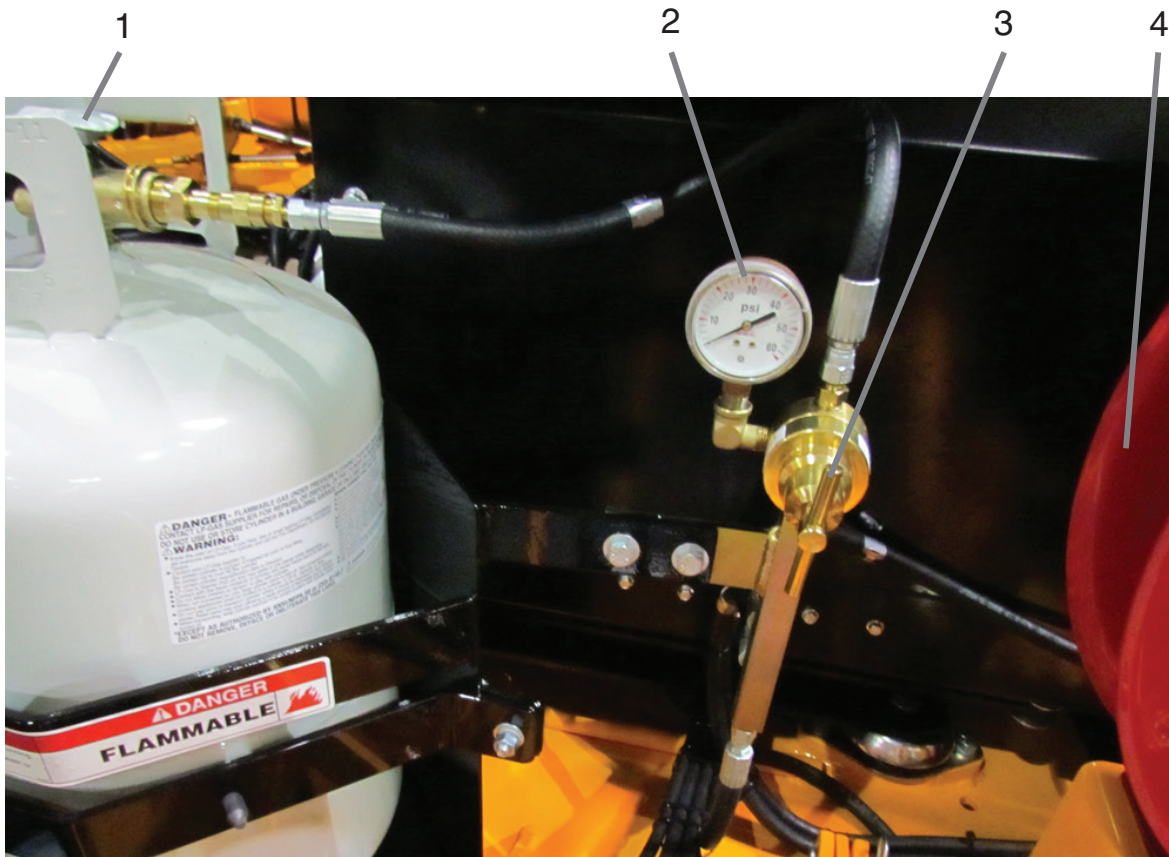


Figure 3-5. Propane and Pump Groups

1 - Propane Tank Main Valve

2 - Propane Pressure Regulator Gauge

3 - Propane Tank Pressure Regulator Valve

4 - Tack Hose Reel

Table 3-5. Propane and Pump Groups

ITEM NO.	CONTROL NAME	DESCRIPTION
1	Propane Tank Main Valve	Open and close propane pressure.
2	Propane Pressure Regulator Gauge	Indicated propane line pressure.
3	Propane Tank Pressure Regulator Valve	Regulates propane line pressure.
4	Tack Hose Reel	Unreels tank hose.

Propane and Pump Groups (Continued)



Figure 3-6. Propane and Pump Groups

- 1 - Burner Valve
- 2 - Tack Exit Valve
- 3 - Tack Flush On/Off Valve

Table 3-6. Propane and Pump Groups (Continued)

ITEM NO.	CONTROL NAME	DESCRIPTION
1	Burner Valve	Turns burner on/off.
2	Tack Exit Valve	Opens tack to pump.
3	Tack Flush On/Off Valve	Opens flush to pump.

NOTES



Section 4

Operation

	Page
Operation	4-1
General Information	4-2
Safety	4-2
Inspection	4-3
Receiving Inspection.	4-3
Inspection Before Initial Start-Up	4-5
Operator Maintenance Check	4-5
Components Check	4-5
Engine Operation	4-7
Engine Start-Up	4-7
Cold Weather Start-Up.	4-8
Engine Shut-Down.	4-8
Machine Operation.	4-8
Grinding Operation.	4-8
Tack Distributor	4-9
Screed Operation	4-11
Auxiliary Coupling	4-12
Towing Instructions	4-12
Shoulder Build-Up Attachment Operations	4-13
Procedures For Using Shoulder Build-Up	4-14
Right Hand Control Operations.	4-14

GENERAL INFORMATION

Safety

Before operating the LeeBoy Model 1200B Maintainer, you must read the following safety information and review *Safety* in Section 1.

⚠ DANGER Failure to observe the Precautions, Operating Instructions and Warnings provided in this manual can cause serious injury or death. Never allow anyone who is not properly trained to operate this machine. Only authorized personnel, who are fully trained in the machine operation, can operate the Model 1200B Maintainer.

This machine should be kept in good mechanical, electrical, and hydraulic condition at all times.

⚠ DANGER 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.

⚠ DANGER Operation Hazard! Never leave machine operator station unattended with machine in gear and/or in motion. Operator station is defined as the platform area within arms reach of active control steering box. Operator must remain in operator's station at all times when machine is in gear and/or in motion. Before leaving machine operator station, operator must return forward/reverse lever to neutral position and apply parking brake.

⚠ WARNING Do not start or operate the Model 1200B Maintainer 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.

⚠ WARNING Fire Hazard! Never spray cleaning solvent or release agent on or near a screed heating element that is hot or being heated or on or near any open flame or source of ignition. Cleaning solvent and release agent could ignite causing serious personal injury.

NOTE: When using spray down, consider the environment and do not allow cleaning solvent to run onto the ground.

⚠ CAUTION Verify there are no people, obstacles or other equipment near the LeeBoy Model 1200B Maintainer before starting the engine.

NOTICE The safety messages that follow have NOTICE level hazards.

- Work slowly in tight areas.
- Avoid steep hills if possible.
- Always look before changing the direction of travel.
- Do not run engine in a closed building for long periods of time.
- Always park the machine on solid, level ground in low range. If this is not possible, always park the machine at a right angle to the slope. Lower screed when parked.
- Use proper flags, barriers and warning devices, especially when parking in areas of traffic.
- Never perform maintenance work on the machine 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
- Keep hands, floors and controls free from water, grease and mud to ensure non-slip control.
- Never attempt to start or operate the Maintainer except from the operator's platform.

NOTICE Leeboy recommends two machine operators for any paving operation.

- When transporting or driving on a road or highway 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 Maintainer while it is in motion.
- Check for faulty wiring or loose connections.
- Keep a firm grip on steering wheel at all times when machine is in motion.

- Do not allow anyone near the Maintainer while the driver(s) is in the seat with the engine running.
- Reduce speed before turning. Drive at speeds slow enough to ensure your safety, especially over rough terrain.
- Be sure the path ahead is clear to avoid collision with other machines.
- Watch for overhead wires. Never touch wires with any part of the Maintainer.
- Always lower or secure shoulder, grinder, and hopper when machine is not in use.
- Do not operate machine without the red front foot guard. Guard must be in place prior to operation.
- Keep all objects, feet, and clothing away from grinder rotary drum.
- Be sure any obstructions are removed prior to grinder operation.
- Always keep clear of grinder operation when in operation. It is recommended to stay a minimum of 15 feet from rear of grinder to avoid flying debris.
- Do not light the tack tank burners if tack level is less than 3 inches above burners.
- Never heat tack above 200°F.
- LeeBoy recommends multiple small paths over one deep pass for grinding operations. The max recommended depth for the Maintainer grinder is 1.5 inches per pass. The max grinder depth per pass is 3 inches.

INSPECTION

Daily inspection and servicing at required intervals is necessary for the safe operation and maximum service life of the LeeBoy Model 1200B Maintainer and its components.

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

Receiving Inspection

When the Maintainer arrives at a new site, the Maintainer should be inspected for road hazards or vandalism that could occur during transportation and could have damaged the machine. Perform the following inspections and correct any faulty condition using the procedures in the Section of this manual.

1. Check for any missing or damaged parts.
2. Check engine oil level.
3. Check hydraulic fluid level.
4. Check coolant in radiator.
5. Check fuel level.
6. Check tires for cuts.
7. Check augers.
8. Check conveyor belt.
9. Check propane tank level.
10. Have a qualified operator test all functions.
11. Check neutral safety switches on drive box and grinder speed lever.
12. Check pins for grinder stabilization wheel.

Table 6-1. Inspection Items

INSPECTION ITEMS	PROCEDURE
Loose or Missing Hardware	Check all visually accessible areas for loose or missing hardware. Any loose hardware should be torqued to the correct value.
Check Neutral Safety Switches	Check both neutral safety switches on forward/reverse box and grinder speed lever.
Check for Worn or Damaged Parts	Check all accessible parts for wear or damage. Replace any parts as necessary.
Check for Leaks	Check all hydraulic lines, fuel lines, and tanks for leaks.
Check Engine Oil Level	Check that engine oil is between the marks on the dipstick.
Check Hydraulic Fluid Level	Check that the hydraulic oil is no lower than 3/4 full on the sight glass.
Check Coolant in Radiator	<p>⚠ WARNING Never remove radiator cap when hot. Serious burns can result from hot liquid.</p> <p>Allow coolant to cool down before checking level.</p>
Check Fuel Level	Check fuel gauge for sufficient fuel 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.
Check Lugs on All Wheels	Check for loose appearing lugs. If any lug is suspect, tighten.
Check Tire Pressure	Check for correct tire pressure in all eight tires.
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.
Check Steering Joint and Welds	Check for any cracks.
Check all Lights for Proper Operation	Test the signal, brake, flasher, work, strobe and driving lights for any malfunction or defects.
Check Parking Brake and Service Brake	Check that both brakes are working properly.
Check Augers	Check that augers are clean from asphalt.
Check conveyor Belt	Check the tension of the conveyor belt(s).
Check Propane Tank	Check that the propane tank is properly connected and filled.
Test All Functions	Have a qualified operator test all functions before allowing Maintainer to be placed in operation. If any function is not performing, take machine out of service until it has been corrected.

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 Maintenance Check

1. Check Oil
2. Battery
3. Hydraulic Fluid Level / Contamination
4. Air Filter
5. Fuel Supply
6. Chain, loose
7. Check Lubrication Requirements
8. Propane Level
9. Neutral Safety Switches on Drive Box and Grinder Speed Lever

Components Check

Screed

1. Extend Screed.
2. Check for wear, damage, and/or broken parts.
3. Free all screw handles.
4. See **Figure 4-1** and clear fire port and exhaust.
5. Float valve handle should be in down position

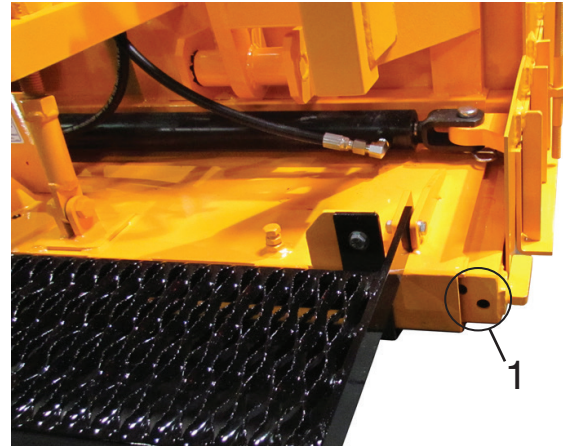


Figure 4-1. Screed Exhaust

1 - Screed Exhaust

CAUTION Always lift screed at least 3" off surface and have screed fully extended before heating.

WARNING Always remove burner from screed burner keeper before lighting, see Figure 4-2.

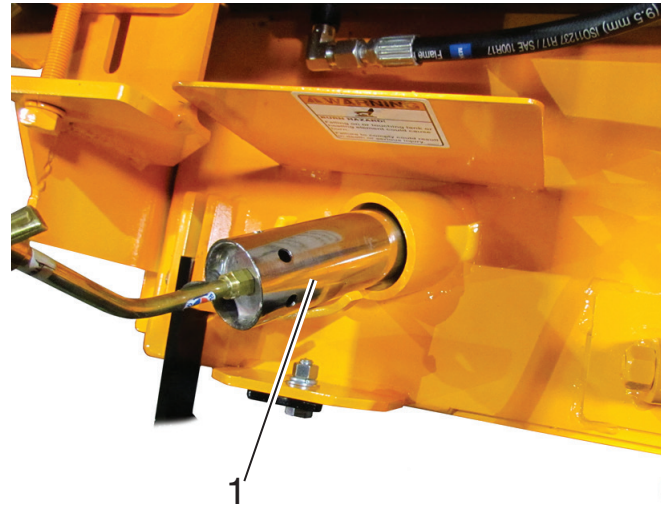


Figure 4-2. Screed Burner

1 - Screed Burner

Grinder

1. Check for excessive wear, damaged, and/or broken parts.
2. Tighten all loose nuts and/or bolts.
3. Clear any obstructions from grinder. Cycle grinder up and down 2 or 3 times.
4. Check and make sure grinder, when activated, moves freely through its functions.
5. Replace carbide bits that are missing or badly worn. See Section of this manual.

NOTE: The carbide bit should be replaced when badly worn. Make sure the replacement is made before the carbide bit housing comes in contact with the surface. Use a hammer and the tool provided to remove the bits. See **Figure 4-3**.

Tack Distributor System

1. Heat liquid asphalt -- BEFORE LIGHTING BURNER, READ AND UNDERSTAND LIGHTING BURNER PROCEDURE AS DESCRIBED ON PAGES 4-9 AND 4-10.
2. On the control group, push the tack valve lever forward.
3. Open tack exit valve. See **Figure 4-3**.
4. Open valve on wand and check for spray.
5. If tack does not spray, you may have to clean the wand tip end or flush the tack spray system. Refer to Maintenance Section.

NOTE: Pump and wand must both be off prior to removing wand tip.

6. After step (6), flush tack system as described on Page 4-9 and 4-10.

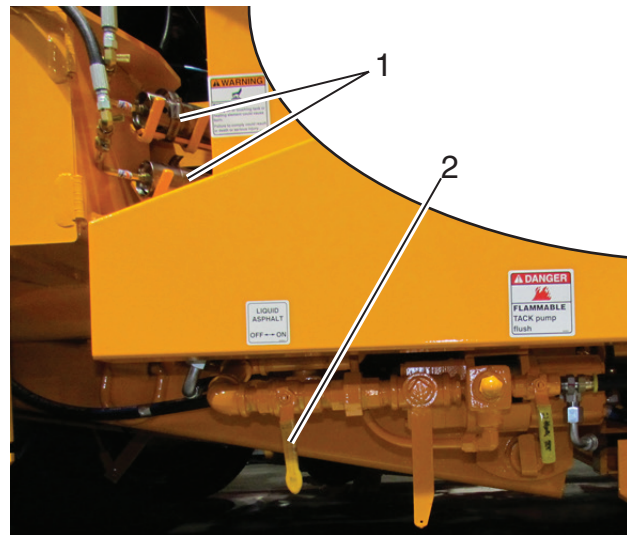


Figure 4-3. Tack Exit Valve

1 - Burners

2 - Exit Valve

Towing Lever

1. Adjust tongue to the truck pintle hook.
2. Activate tongue valve lever, making sure tongue moves freely up and down.
3. Make sure safety chains and cylinder locks are in place.
4. With engine off, place the towing lever in the up position to allow the weight of the machine to rest on the cylinder rod lock.

NOTE: Make sure tongue cylinder rod lock fits with tongue extended.

5. Make sure main tongue pin is in place. See **Figure 4-4**.

WARNING Never get between the towing truck and Maintainer while either machine is running or does not have the parking break engaged.

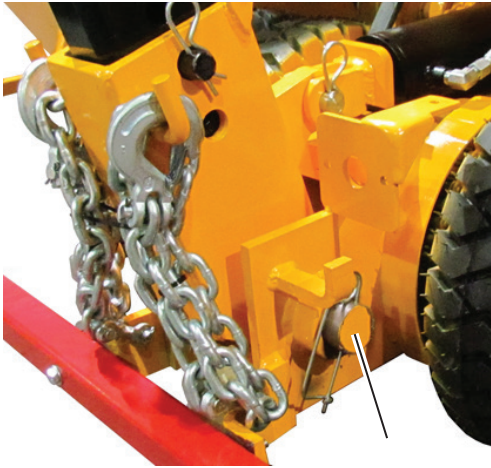


Figure 4-4. Towing

1 - Pin, Main Tongue

Auxiliary Coupling

1. Make sure dust covers are in place.

Asphalt Conveying System

(To include hopper, auger, and conveyor)

1. Check hopper, auger, and conveyor for debris.
2. Check conveyor belt for tightness. If adjustment is needed, refer to **Figure 5-3. Conveyor Belt Assembly** in **Section 5** for procedures.
3. Check for excessive worn, damaged, and/or broken parts.
4. Check chain for damaged and/or broken parts.
5. Activate hopper valve, cycling hopper at least two times.

ENGINE OPERATION

The LeeBoy Model 1200B Maintainer is designed to perform several road repair functions: grinding out surface problems, laying new asphalt, widening roads, shoulder build-up, and tack distribution. These various functions make the Maintainer a unique road repair machine. It will require an operator to be well trained in all aspects of utilizing this equipment.

In conjunction with the many functions, safety in the operation of this machine will require an additional alertness. It will be the operator's major concern to safeguard those individuals working alongside the Maintainer as it performs the desired work.

If you have any questions about the safe use of the Maintainer or its general maintenance, **ASK YOUR SUPERVISOR OR CONTACT ANY LEEBOY DISTRIBUTOR. NEVER GUESS - ALWAYS CHECK.**

Engine Start-Up

It is required that the operator read and understand the pertinent information in the engine manual. The following procedures will help prevent undo harm to the Maintainer. See **Figure 4-5**.

⚠ WARNING Do not fill fuel tank while smoking, running the engine, or propane burner is lit.

1. Before start-up, a pre-start check should be preformed.
 - A. Check conveyor system, hopper, auger and conveyor for debris.
 - B. Check oil and fuel levels.
 - C. Check hydraulic fluid level.
 - D. Check tack tank fluid level.
 - E. Check flush tank fluid level.
2. Position the forward/reverse lever into neutral. Place locking flap up against forward/reverse lever housing.
3. Make sure grinder lever is in neutral position.
4. Turn key to start.
5. After start-up, allow engine and hydraulic oil to warm before activating components and before moving the Maintainer.

Cold Weather Start-Up

It is important that the operator follow all proper procedures especially concerning safe operation of starting the Maintainer in cold weather. Refer to **Engine Start-Up** and read through to procedure 3. Now refer to procedure 1, below.

1. Turn key left to PREHEAT position for approximately 30 seconds to 2 minutes to preheat engine.
2. Turn key right to START position. After engine starts, throttle back - make sure the engine does not over rev. (RPM's too high may possibly do engine damage.)
3. After start-up, allow engine and hydraulic oil to warm up before activating components. This is extremely important in cold weather.

Engine Shut-Down

1. Lower and stow all components.
2. Engage park brake.
3. Turn key off.

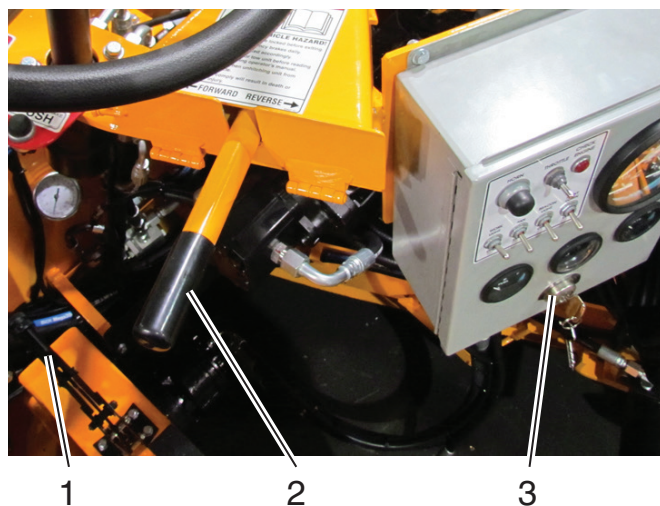


Figure 4-5. Left Controls

- 1 - Park Brake
- 2 - Drive Lever
- 3 - Ignition Switch

⚠ DANGER Always turn engine off before performing any maintenance.

⚠ DANGER Always scotch/chock Maintainer when parked on incline.

MACHINE OPERATION

Forward and reverse movements are controlled by either pushing or pulling the drive lever away from neutral. Stopping is accomplished by returning the drive lever to the neutral position.

1. Before moving the Maintainer, raise and stow all movable components.
2. Move drive lever in the direction of intended travel.
3. Increase throttle setting as needed when traveling or maneuvering.
4. Steer in desired direction.
5. Stop by returning drive lever to the neutral position.
6. Emergency stops can be made by engaging emergency switch on control panel. The most likely reason for applying the emergency brake is if hydraulic failure has occurred - permitting Maintainer to roll free.
7. There is also a parking brake. The brake is used when leaving the Maintainer unattended. The brake provides back pressure on the Maintainer to prevent it from lunging forward during grinding operations.

GRINDING OPERATION

The grinder is lowered and raised hydraulically, and can cut a 24 inch wide strip 0 to 3 inches deep. Having 51 replaceable carbide bits, it can cut angles 0° to 15°. A leveling wheel is used to maintain a consistent depth.

1. Align the Maintainer to the repair site in as straight a line as possible. This should eliminate excessive alignment changes. It requires about 10 feet to correct the grinding path.
2. Place leveling wheel into operation. See **Figure 4-7**.
 - A. Lower grinder by pressing down on grinder control valve lever (**Figure 3-2,6**), until Maintainer rear wheel is lifted off the ground.
 - B. Remove hitch pin and locking pin. Allow stabilization wheel to make contact with road surface.
 - C. Replace locking pin and hitch pin in hole closest to leveling wheel support bracket.

- D. Pull up on the grinder valve handle, returning grinder to the up position, the leveling wheel will now support the Maintainer at this position.

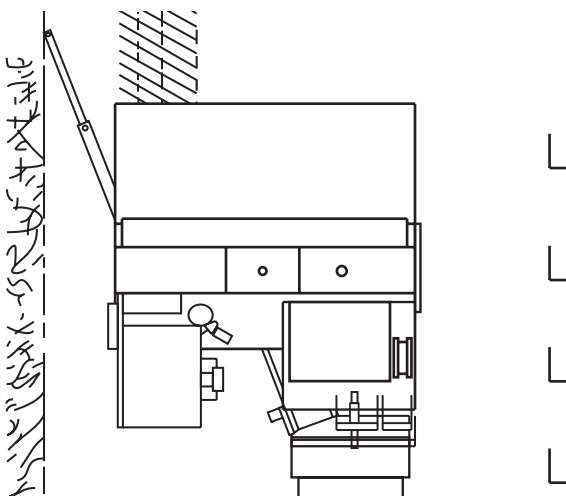


Figure 4-6. Grinding Operation



Figure 4-7. Grinding Stabilization Wheel

3. Lower the grinder to the asphalt using the Grinder Tilt (**Figure 5-2,4**). Activate valve handle until grinder bits are parallel to the asphalt surface. Run machine at low RPM and lower the grinder to the asphalt. At this point, the grinder bits should strike and scratch the asphalt uniformly across the length of the grinder. If necessary, make final adjustments to the angle with the Grinder Tilt (**Figure 5-2,4**) before boring in.
4. Set depth gauge to "0".
5. Increase the grinder RPM's to full. Lower the grinder slowly, controlling the downward pressure on the grinder so it won't bog down. Grind to desired depth.

NOTE: If a deep grinding path of more than 2 inches is required, making multiple shallow passes will be faster and easier than one deep pass. Do not grind more than 2" depth of material at a time - grinder performance will decrease and equipment damage may occur. Max grinding depth is approximately 3".

6. Push the drive lever, adjusting forward pressure so that the grinder will cut at its best rate and not put a heavy load on the Maintainer engine and grinder
7. Use the guide bar to maintain long, straight cuts. (**Figure 4-6**).
8. **ANGLE CUT;** the angle of the grinder is set with the angle control valve handle. Set the desired angle before making cut and follow same procedures when making level cuts

TACK DISTRIBUTOR

The tack distributor has a 100 gallon capacity. Utilizing a 26 foot hose with wand nozzle, a hydraulically powered pump provides the pressure to distribute a fine, even spray.

⚠ WARNING Never light tack burner with anything but the lighter provided with the Maintainer.

⚠ CAUTION Never use a fiber based tack. It can damage the pump and clog the spray tip.

1. Check all valves and make sure they are off.
2. Open the main valve on the propane tank. Set the pressure regulator valve so pressure gauge reads between 5 to 8 pounds. See **Figure 4-8**.
3. Remove the lighter from its holder. See **Figure 4-9**.
4. Light the lighter. Hold the lighter to the bottom tack burner. Open valve on this burner. When burner is lit, light upper burner.

⚠ WARNING Always maintain tack level at least 3 inches above burner. A lower level will cause excessive heat and possible damage.

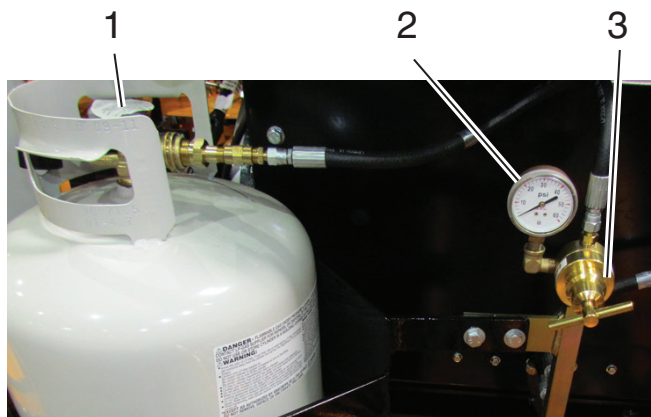


Figure 4-8. Propane Tank

- 1 - Propane Tank Valve**
- 2 - Pressure Gauge**
- 3 - Pressure Regulator Valve**

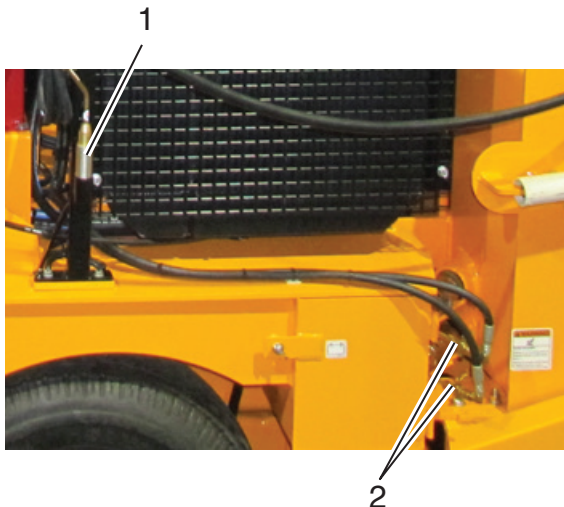


Figure 4-9. Propane Burners

- 1 - Burner Ignitor Hose**
 - 2 - Burners**
5. Return lighter to holder. Heat the tack to manufacturer recommended temperature. **DO NOT EXCEED 200 DEGREES FAHRENHEIT.**
 6. After the tack is heated to recommended temperature, turn tank valve to off position to let gas escape, then turn burner valve to off position. The tack is now ready to spray. (Control the tack temperature with burner valve; turn "off" and "on", relighting when necessary.)

NOTE: Make sure wand is off before starting pump with tack pump lever.

7. Lift the tack pump lever at left hand control group.
8. Open the exit valve handle. See **Figure 4-10.**
9. Spray tack using wand.

⚠ WARNING Never open flush valve with wand off. This will dump flush material into tack tank.

10. TO FLUSH turn exit valve handle to off. Hold open, flush valve handle while also holding wand spray handle open. Continue this until flush appears. Close valves and stow wand back in the stow position. See **Figure 4-11.**

IMPORTANT! After flushing make sure flush valve returns to the off position. Also, when flushing system, follow state and federal laws in dispensing of excess flush and tack.

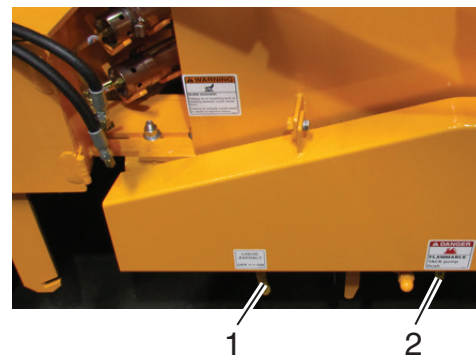


Figure 4-10. Tack Valves

- 1 - Exit Valve**
- 2 - Flush Valve**

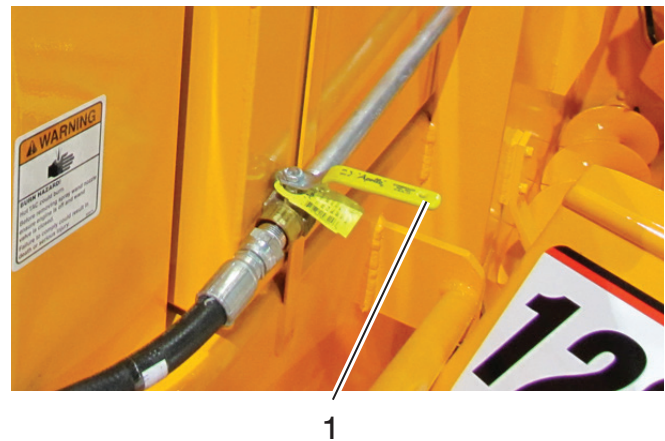


Figure 4-11. Spray Wand

- 1 - Spray Handle**

SCREED OPERATION

The propane heated, floating screed telescopes from 38 inches to 62 inches. The screed can lay asphalt up to 100 feet per minute. An optional road widening pan will provide a 0 inch to 24 inch road widening capability.

1. Spray cleaning solution on areas of screed, screed auger and conveyor that are most likely to come in contact with asphalt.
2. Raise the screed two inches off surface. Extend screed extension all the way out to heat better. Check all gas valves and make sure they are off.
3. Open the main valve on the propane tank. Open and set regulator valve so pressure reads 5 to 8 pounds.

WARNING Never light screed burner with anything but the lighter provided with the Maintainer.

4. Pull burner from screed, point away from screed and Maintainer. Use ignitor hose and burner valve to light the burner. Insert burner back into holder. Check exhaust port in extension of screed. If heat is not exiting, clear a blockage in the screed. See **Figure 4-12** and **Figure 4-1**.

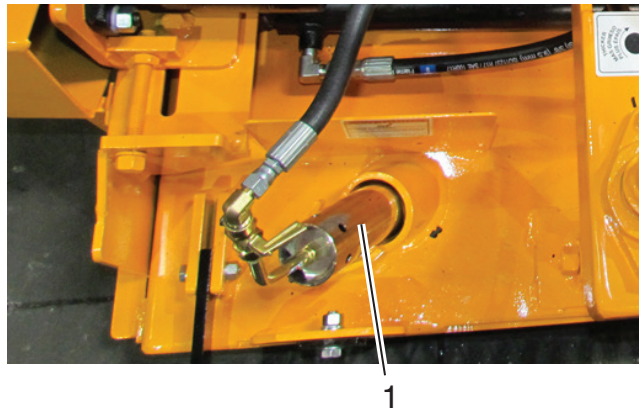


Figure 4-12. Screed Burner

1 - Burner

5. Align the screed to the paving site, extend the screed to the width desired and set guide if needed.

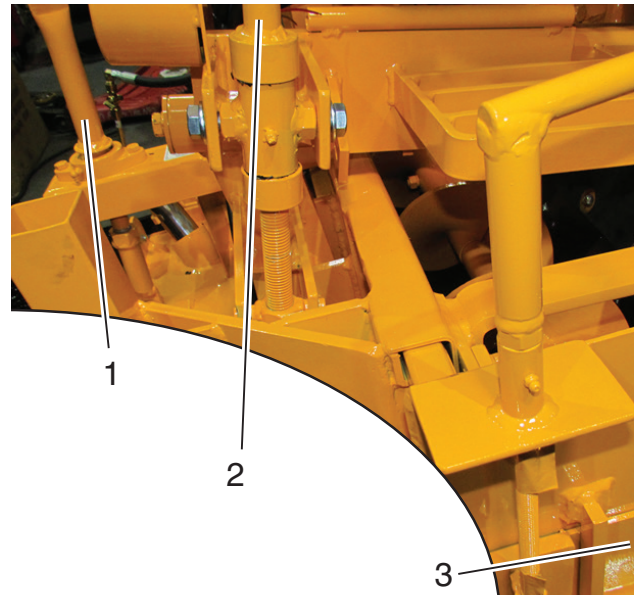


Figure 4-13. Screed Adjustment

1 - Flight Screw

2 - Screed Angle Lever

3 - End Gate

6. Lower the screed to surface with float valve. Use angle control handle and set screed angle. Make sure screed float control valve remains in float while screed is paving allowing the screed to float over the surface. See **Figure 4-13**.
7. Set end gates within 1/4 to 1/2 inches of desired depth. Start moving and turn flight screw thicker or thinner until end gates lift off ground. This is known as flying the screed and will result in less end gate wear while compacting the asphalt more.

The road widener is a shield that attaches to the bottom of the screed and will prevent asphalt from passing underneath that portion of the screed. The asphalt will pass under the extended portion of the screed only. See **Figure 4-14**.

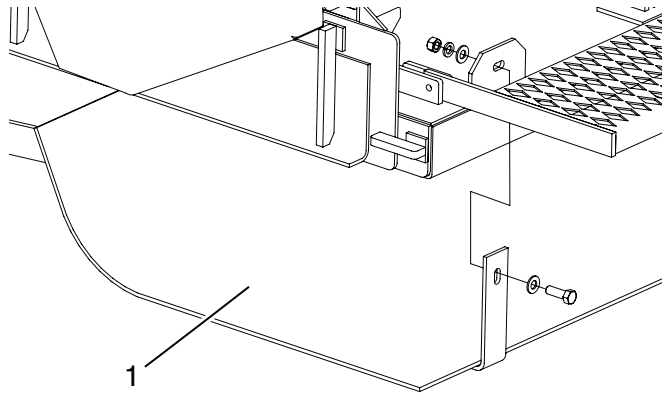


Figure 4-14. Screenshot Road Widener

1 - Road Widener

AUXILIARY COUPLING

When a job may require a special power tool such as a chain saw or jack hammer, these tools can be attached to the hydraulic lines as shown in **Figure 4-15**. Just uncouple the two top lines and couple in your special tool. (Make sure the coupling device is kept clean as possible.)

1. With engine off, work screed auger control handle up and down to release any pressure in the system.
2. Uncouple screed auger hoses.
3. Couple attachment hoses.

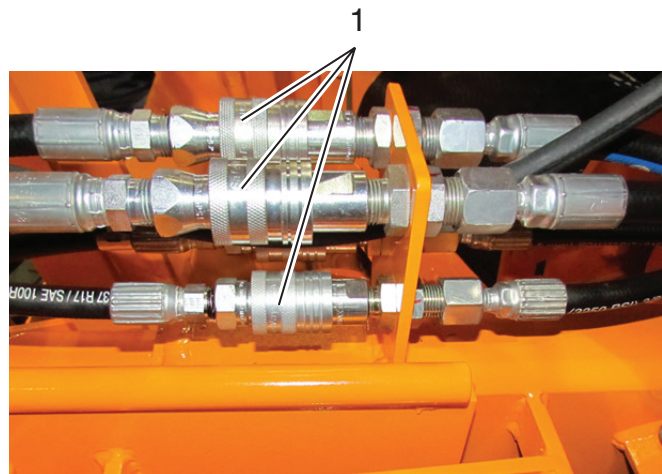


Figure 4-15. Shoulder Quick Connect

1 - Quick Connect

TOWING INSTRUCTIONS

The towing tongue of the Maintainer is hydraulically adjusted to fit most towing trucks. The Maintainer may be towed safely up to 45 mph. See procedure below for trailer connection procedure.

WARNING Never exceed 45 mph while towing the Maintainer. Use lower speed when towing over slippery or uneven surfaces.

DANGER Before towing the Maintainer, check local, state, and federal laws.

WARNING Never get between the towing truck and Maintainer while either machine is running or does not have the parking brake engaged.

1. Position Maintainer behind truck.
2. Raise grinder, screed, and retract screed extension. Secure screed with the two safety chains and place variable volume drive lever in neutral. See **Figure 4-16**.

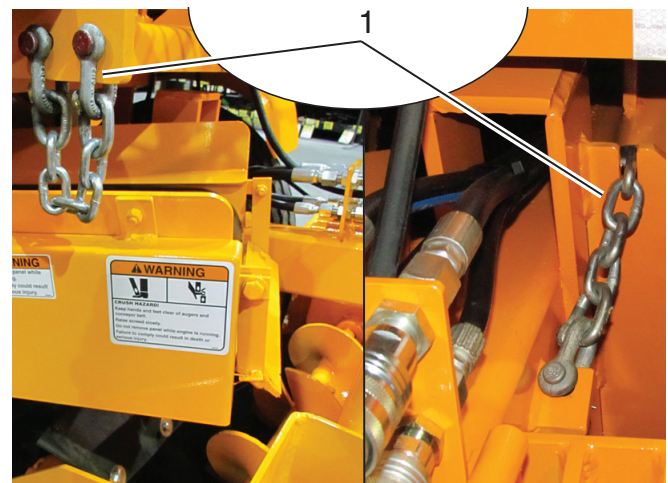


Figure 4-16. Shoulder Safety Chain

1 - Safety Chain

3. Remove tongue extension from stow position and place it into main housing of tongue.
4. Adjust tongue to fit hook on truck then raise the front wheels a minimum of 5 inches off the surface.
5. Place cylinder rod lock onto cylinder rod. Secure with pin and hitch pin. See **Figure 4-17**.
6. Secure Maintainer to truck with safety chains.
7. With engine off, lower tongue until the Maintainer weight rests on the safety pin.

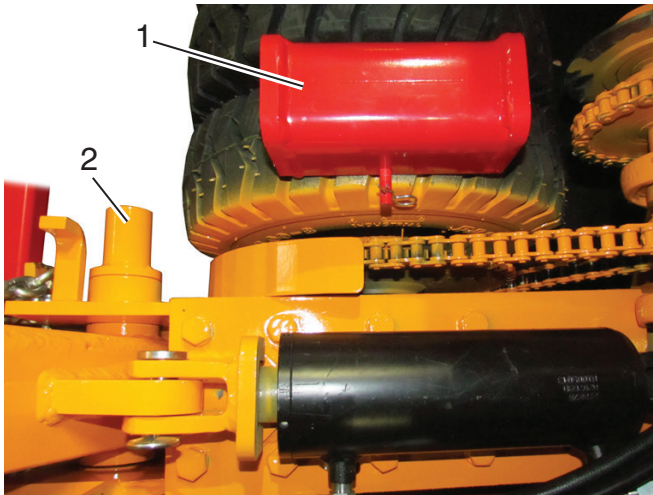


Figure 4-17. Front Pintle Cylinder Lock

- 1 - Tongue Safety Lock and Pin
- 2 - Pin, Main Tongue

SHOULDER BUILD-UP ATTACHMENT OPERATIONS

The shoulder build-up is designed in two major components: conveyor extension and strike off. It is used to widen roads, build-up shoulders, and back fill utility cuts. Attaching the shoulder build-up will first require the removal of the screed. Follow the procedures below to complete this assembly.

1. Lower screed to the surface
2. Disconnect the four quick coupling hydraulic hoses on the screed and draw bar. See **Figure 4-15**.

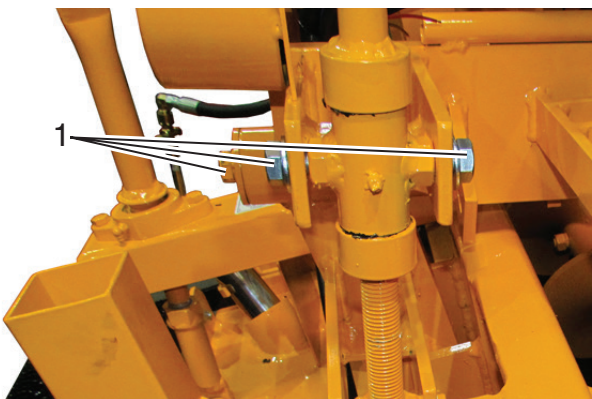


Figure 4-18. Screed Adjust Screw

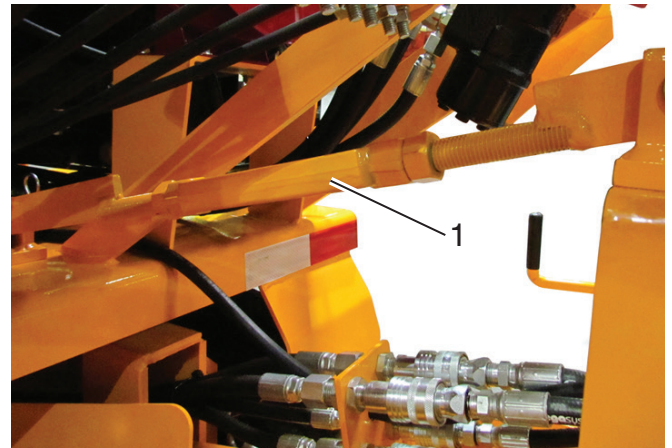


Figure 4-19. Shoulder Stabilizer Bar

- 1 - Stabilizer Bar

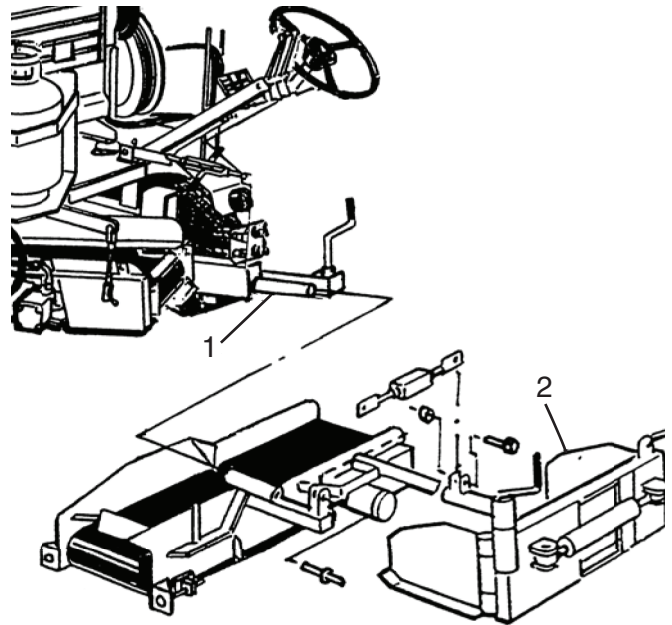


Figure 4-20. Shoulder Conveyor Attachment

- 1 - Draw Bar
- 2 - Strike Off

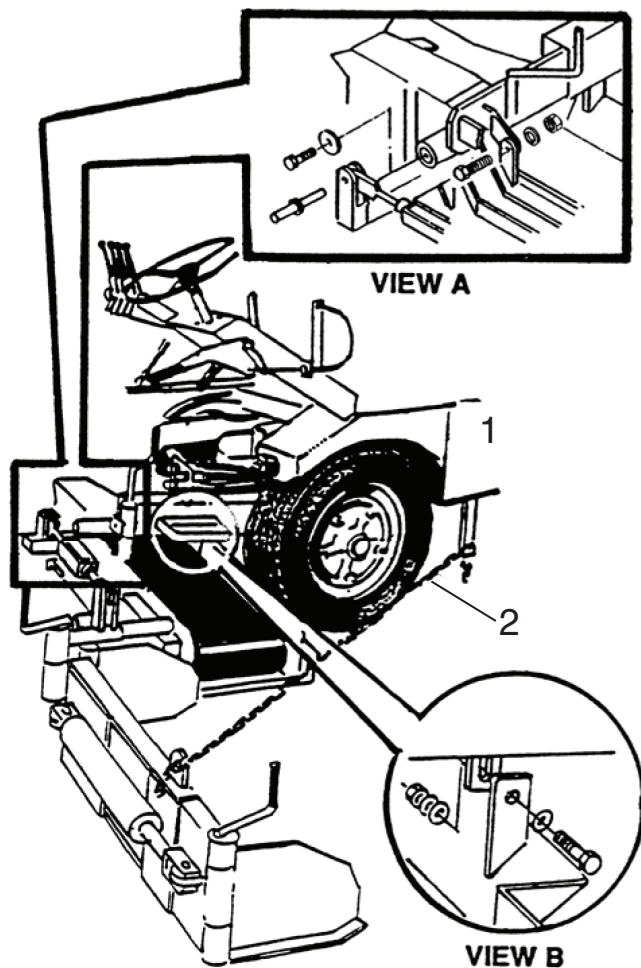


Figure 4-21. Shoulder Strike-off Attachment

1 - Battery Box

2 - Chain

Procedures For Using Shoulder Build-Up

1. Find working angle of strike off assembly and attach the chain to the bracket under battery box. See **Figure 4-21**.
2. Extend strike off with the screed extension valve to desired width, from 28 to 40 inches.
3. Raise or lower strike off with screed valve lever to obtain desired material thickness.
4. Start the material flow using the conveyor valve lever and screed auger valve lever. See **Figure 4-22**.
5. To maintain a straight line while dispensing road build up material, use the guide bar.



Figure 4-22. Screed Controls

1 - Screed Auger Lever

RIGHT HAND CONTROL OPERATIONS

The right hand control is used to operate the Maintainer when making shoulder build-up or laying mat with screed. With the operator attention diverted to right hand procedures only it is extremely necessary to have an observer to left side of the Maintainer to check for unsafe conditions ahead.

1. Start engine from primary operator position.
2. Lower neutral position safety door after start-up. See **Figure 4-23**.
3. The various valve levers are well marked and the direction of lever movement is indicated.

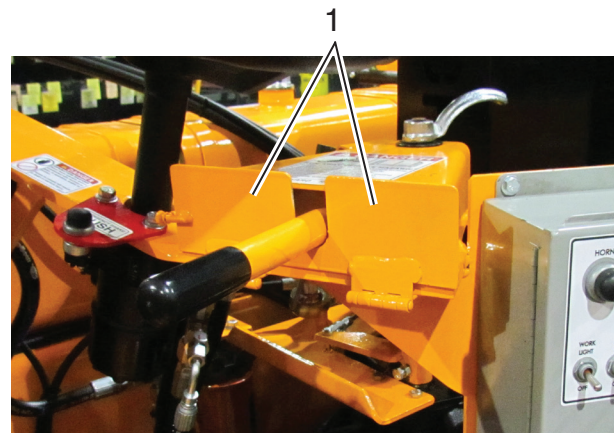


Figure 4-23. Drive Box

1 - Neutral Position Safety Door

NOTES

NOTES



Section 5

Maintenance

	Page
Maintenance	5-1
Lubrication Chart.	5-3
Maintenance Schedule.	5-5
100 Hour Or Monthly Routine Maintenance.	5-5
250 Hour Or Quarterly Routine Maintenance.	5-5
500 Hour Or Semi-Annual Routine Maintenance	5-5
1000 Hour Or Annual Routine Maintenance.	5-5
Grinder Bit Replacement	5-5
Removal and Replacing Conveyor Belt	5-6
Troubleshooting	5-7

Table 5-1. Maintenance Schedule

SYSTEM	ITEM	10 Hours Daily	50 Hour Weekly	100 Hour Monthly	250 Hour Quarterly	500 Hour Semi-Annually	1000 Hours Annually
Maintainer	Lubricate Maintainer		X				X
	Check decals						X
	Check propane level	X					
Hydraulic	Replace oil suction filter						X
	Replace strainer filter						X
	Inspect belts, replace A/R	X					
	Inspect air intake hoses and clamps	X					
	Check hydraulic fluid level	X					
	Filter between valve and pump				X		
	Drain/flush hydraulic tanks						X
Electrical	Check all wiring connections	X					
	Service battery		X				
Engine Oil and Filter	Replace engine oil and oil filter cartridge			X			
	Check oil level - change at initial 50 hours	X					
Engine Air Cleaner	Check/clean air cleaner element	X					
	Replace air cleaner element			X			
	Check air cleaner indicator	X					
	Replace fuel filter				X		
	Inspect Fuel System Hoses and Clamps	X					
Cooling	Clean engine cooling system						X
	Coolant Level, check and change A/R	X					
	Inspect Coolant Hoses and Clamps	X					
	Clean radiator			X			
Mechanical	Inspect conveyor drive chains	X					
	Inspect front drive chains	X					
	Inspect auger chains	X					
	Check neutral safety switches	X					
Emergency brake	Test both emergency brake buttons.	X					
Propane	Inspect propane lines.	X					

LUBRICATION CHART

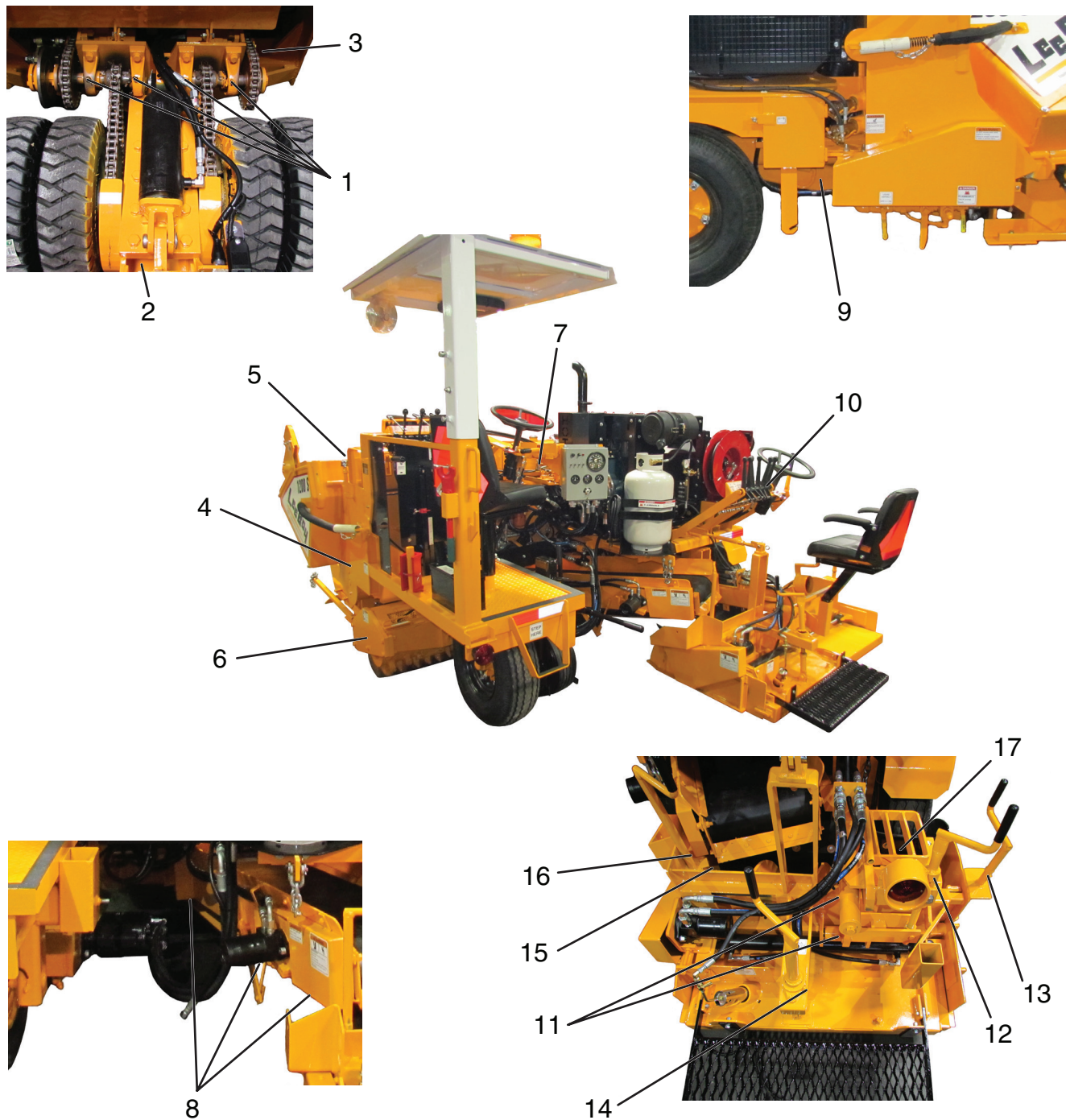


Figure 5-1. Lubrication Chart

Table 5-2. Lubrication Points Schedule

ITEM NO	TYPE	DESCRIPTION AND LOCATION
Legend	A	Sealed bearing grease fitting. Lubricate annually with SHELL AVANIA EP grease 2 or equivalent.
	B	Standard grease fitting. Lubricate every 40 hours with SHELL AVANIA EP grease 2 or equivalent.
1	A	Four sealed bearing grease fittings located on the front dual chain axis bearings
2	B	One normal grease fitting located on front trolley assembly
3	B	Two normal grease fittings located on front pivot housing. Turn front wheels fully to the left to allow easier access to these grease fittings
4	A	Two sealed bearing grease fittings located on axis bearing on each side of hopper auger
5	B	One normal grease fitting located at middle support bracket on hopper auger
6	B	Three normal grease fittings located on grinder pivot housing
7	A	Two sealed bearing and 1 X normal grease fittings located on forward/reverse control box
8	A	Six sealed bearing grease fittings located at bottom of axle bearings on each side of each conveyor pulley
9	B	One normal grease fitting located at front end of shoulder draw bar under right side of machine
10	B	Six normal grease fittings on right hand control levers
11	B	Two normal grease fittings located on screed swivel mount
12	B	One normal grease fitting located on screed swivel mount
13	B	One normal grease fitting located on screed right end gate screw
14	A	One normal grease fitting located on screed flight screw
15	A	One sealed bearing grease fitting located on axle bearing at left side of screed auger
16	B	One normal grease fitting located on screed left end gate screw
17	B	One normal grease fitting located on right screed auger support bracket
-	A	Four sealed bearing grease fittings located on shoulder conveyor
-	B	Six normal grease fittings located on shoulder strike-off attachment

MAINTENANCE SCHEDULE

100 Hour Or Monthly Routine Maintenance

1. Replace dry type air filter, if equipped. Refer to your engine operators manual for service information.
2. 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 every other oil change. (15W-40 Motor Oil)

250 Hour Or Quarterly Routine Maintenance

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

1. Change filter charge between valve and pump.

500 Hour Or Semi-Annual Routine Maintenance

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

1000 Hour Or Annual Routine Maintenance

1. Drain and flush the hydraulic tanks. A drain plug is located on the bottom of each tank for this purpose. The recommended hydraulic oil is 210°F SAE 10W-AW32.
2. Perform the 1000 hour preventative maintenance As described in the engine operators manual.
3. Anytime the Maintainer has been repainted or the decals have been removed, damaged or can't be read, a new set of decals should be ordered and re-installed for safe operation.

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

NOTICE

The changing of oil and cleaning of the Maintainer 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.

GRINDER BIT REPLACEMENT

The carbide bits should be replaced when badly worn. Make sure the replacement is made before the carbide bit housing comes in contact with the surface. Use a hammer and the tool provided to remove the bits. See (Figure 5-2).

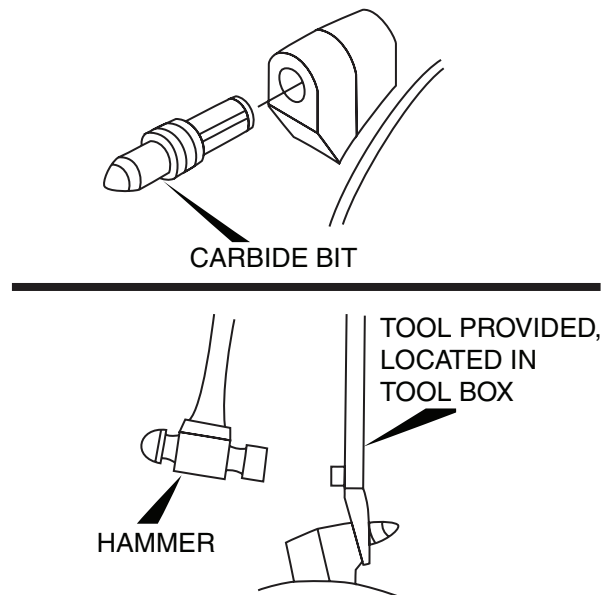


Figure 5-2. Grinder Bit Removal

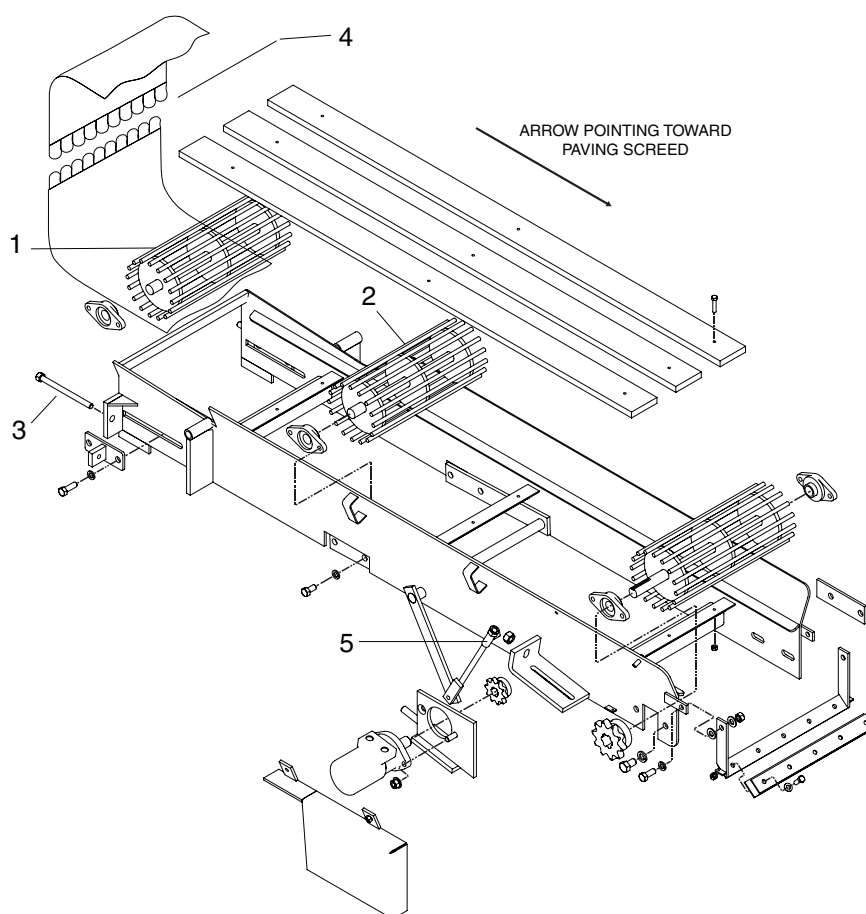


Figure 5-3. Conveyor Belt Assembly

REMOVAL AND REPLACING CONVEYOR BELT

The changing of the conveyor belt is a quick process that can easily be preformed. Follow the procedures below to assist in this process.

1. Rotate the belt until the belt lacing is to the bottom of the conveyor.
2. Loosen bolts on front idler.
3. Refer to item 3, and screw front idler adjustment screw in, until front idler (**Item 1**) can slide completely back.
4. Adjust center roller (**Item 2**) so it is in the full "up" position. This will provide room for the new belt.
5. Remove the lacing pin (**Item 4**) from the belt and remove belt from conveyor.
6. Clean the conveyor frame and all attaching parts thoroughly with fuel oil.
7. Wash debris and residue off with water spray.
8. Slip the new belt around the rear roller and extend the upper part of the belt over the front roller. The arrow on the belt should point toward the screed.
9. Pull both ends of the belt together under the conveyor and attach with new lacing pin.
10. Adjust front roller adjustment screws (**Item 3**) until conveyor belt is tight and rolls freely without rubbing either side of conveyor frame while running.
11. Additional adjustments will be necessary to keep proper tension on belt. This is done by screwing down on the center adjustment screw (**Item 5**).

NOTE: After each days use, lightly spray the edge of conveyor frame with fuel oil and check conveyor belt tension.

NOTE: When replacing belt, thick rubber goes on the outside .

TROUBLESHOOTING

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.

Table 5-3. Troubleshooting Chart

SYMPTOM	CAUSE	REMEDY
Engine will not run start	Out of fuel	Refuel
	Clogged filter	Change
Engine will not turn over	Neutral safety lock on drive handle in down position or grinder not in neutral	Close
	Safety switch went bad	Replace
	Loose battery cables	Clean and tighten
	Bad battery	Replace
	Starter went bad	Replace
Machine will not move	Out of oil	Refill
	Chain broke	Replace
	Pump wore out	Replace
Machine will not steer	If pressure gauge reads 2000 or more, a restriction is in the system.	Clear the restriction
	Out of hydraulic oil	Refill
Auger will not turn	Broken chain	Replace
	Debris caught in auger	Clean out
Screed extension hanging up, will not extend	Asphalt inside the box	Clean out
	Quick disconnect- unhooked	Reconnect
Hydraulic oil coming out of the tank	Too full	Drain
	Pump sucking air	Check suction hose
Grinder will not turn	No oil pressure	Check pump
	Cable not working	Replace
Conveyor will not feed	Belt too loose	Tighten belt
	Oil inside belt	Clean the belt
Tack will not spray	Pump turning in wrong direction	Reverse handle or hoses
	Bad coupling	Replace
	Bad key	Replace
	Suction line clogged	Heat or clean
	Tip clogged	Clean out
	Pump worn out	Replace or rebuild
	Relief on pressure line stuck open	Clean

NOTES



Section 6

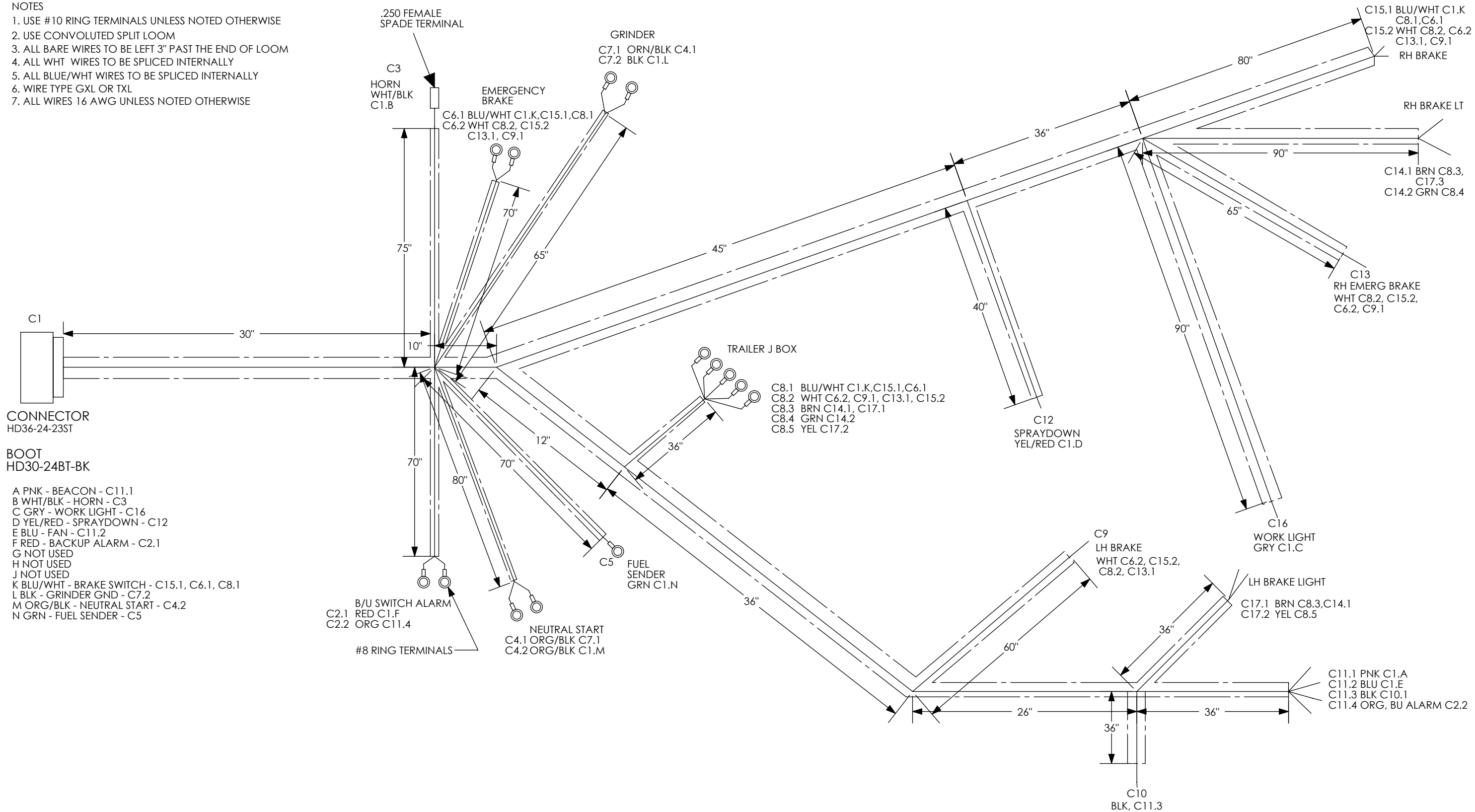
Schematics

	Page
Schematics	6-1
Wiring Harness (Sheet 1 of 2)	6-3
Wiring Harness (Sheet 2 of 2)	6-5
Control Panel (Sheet 1 of 3)	6-7
Control Panel (Sheet 2 of 3)	6-9
Control Panel (Sheet 3 of 3)	6-11
Hydraulic Harness	6-13

NOTES

WIRING HARNESS (SHEET 1 OF 2)

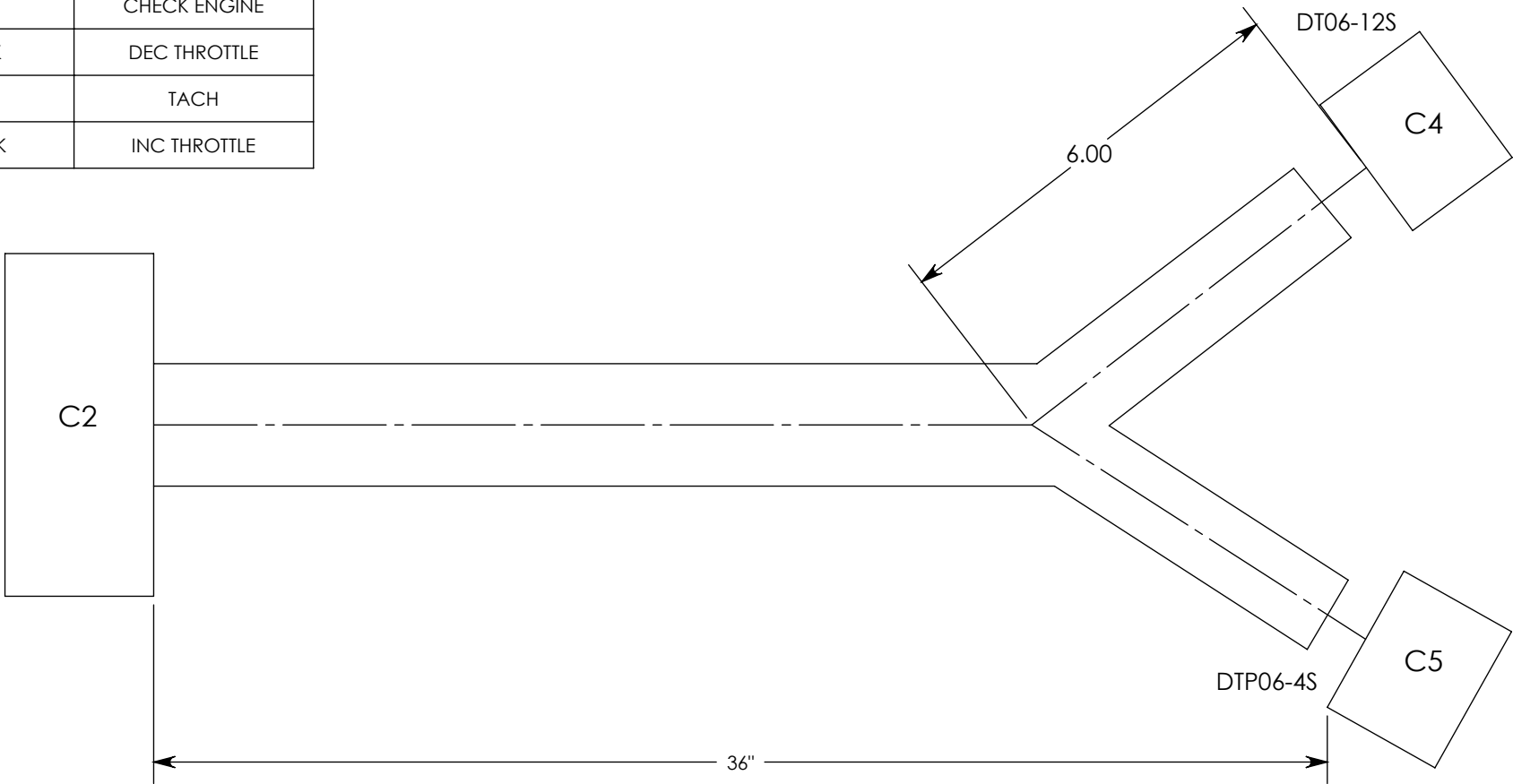
- NOTES
1. USE #10 RING TERMINALS UNLESS NOTED OTHERWISE
 2. USE CONVOLUTED SPLIT LOOM
 3. ALL BARE WIRES TO BE LEFT 3" PAST THE END OF LOOM
 4. ALL WHT WIRES TO BE SPLICED INTERNALLY
 5. ALL BLUE/WHT WIRES TO BE SPLICED INTERNALLY
 6. WIRE TYPE GXL OR TXL
 7. ALL WIRES 16 AWG UNLESS NOTED OTHERWISE



WIRING HARNESS (SHEET 2 OF 2)

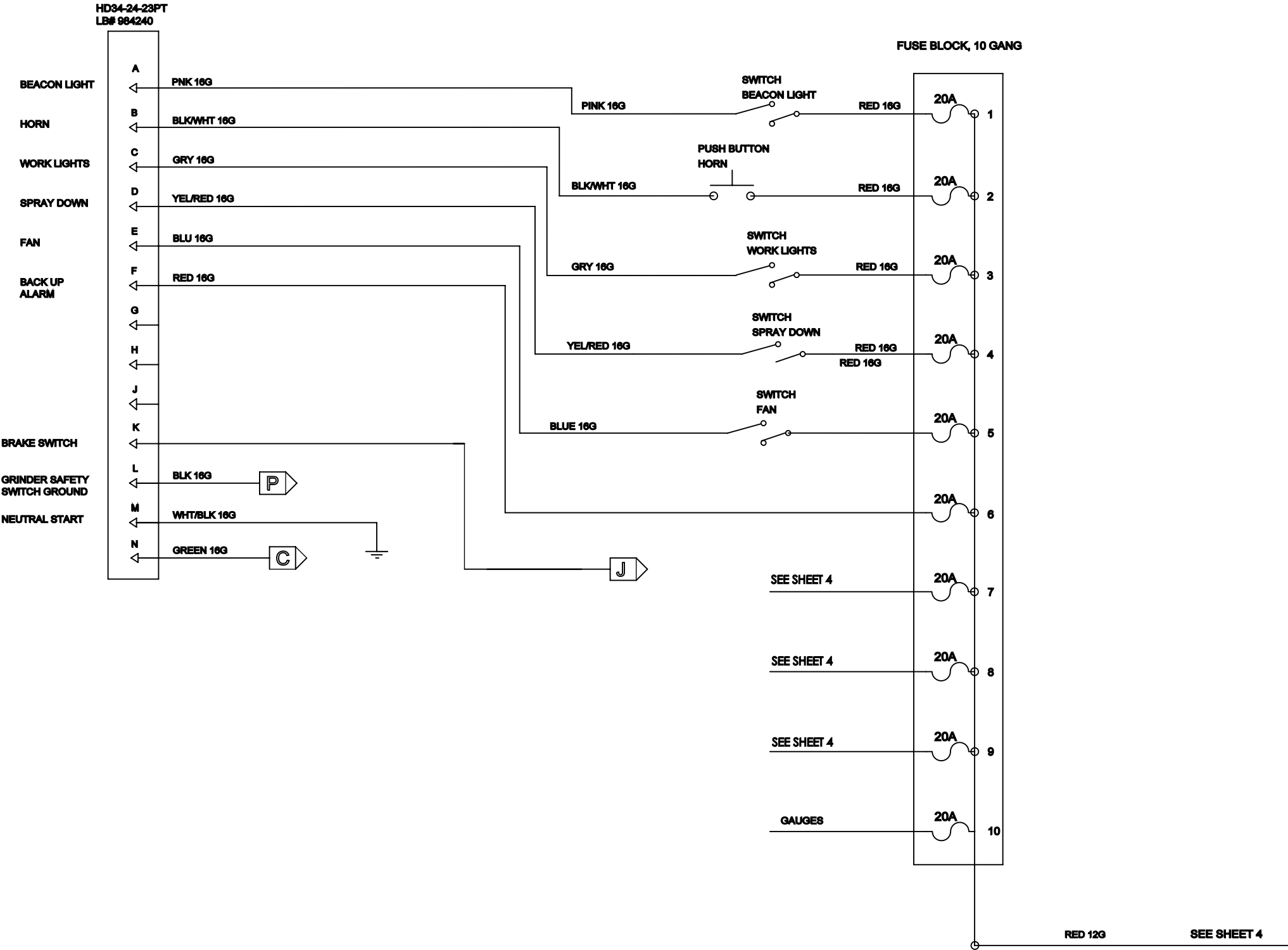
CONNECTION 2 MALE DEUTSCH 21 PIN P/N HD36-24-21SN CONNECTOR BOOT P/N HD30-24BT-BK		
PIN #	WIRE COLOR	FUNCTION
C2.A	RED	IGNITION
C2.B	RED	MAIN POWER 12G
C2.C	ORG/BLK	NEUTRAL SAFETY
C2.D	BLK	GROUND 12G
C2.F	YEL	STARTER
C2.H	ORN	GLOW PLUGS
C2.J	BLU	TEMP
C2.K	BRN	OIL PRESSURE
C2.L	WHT	CHECK ENGINE
C2.M	YEL/BLK	DEC THROTTLE
C2.N	TAN	TACH
C2.P	WHT/BLK	INC THROTTLE

C4 ENGINE CONNECTION		
PIN #	WIRE COLOR	FUNCTION
C4.2	ORG/BLK	NEUTRAL SAFETY
C4.3	RED	IGNITION
C4.4	YEL	STARTER
C4.5	ORG	GLOW PLUGS
C4.6	BRN	OIL PRESS
C4.7	BLU	TEMP
C4.8	WHT	CHECK ENGINE
C4.9	TAN	TACH
C4.10	YEL/BLK	DEC THROTTLE
C4.12	WHT/BLK	INC THROTTLE

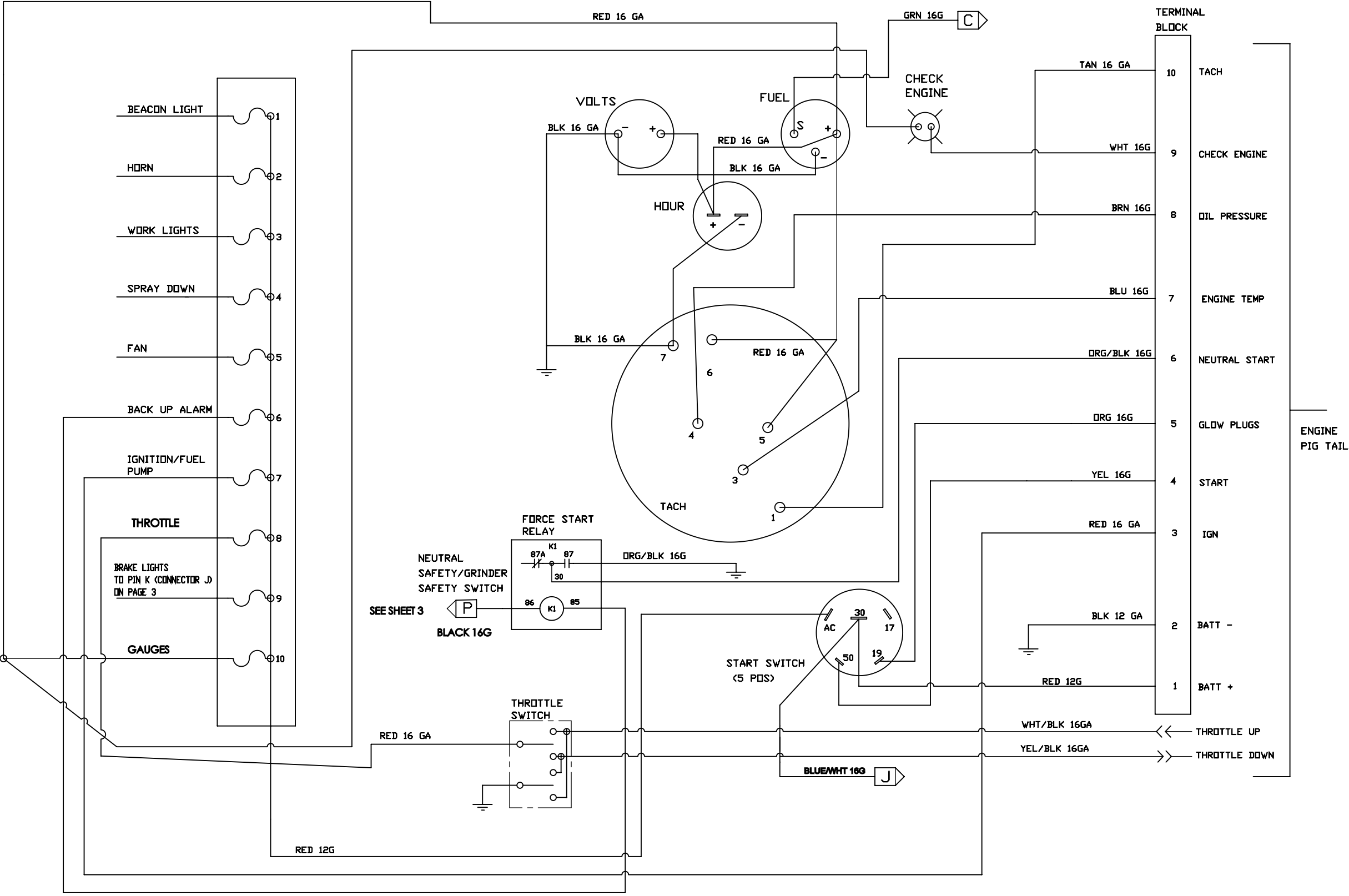


C5 ENGINE CONNECTION		
PIN#	WIRE COLOR	FUNCTION
C5.1	RED	POWER 12G
C5.2	BLK	GROUND 12G

CONTROL PANEL (SHEET 1 OF 3)

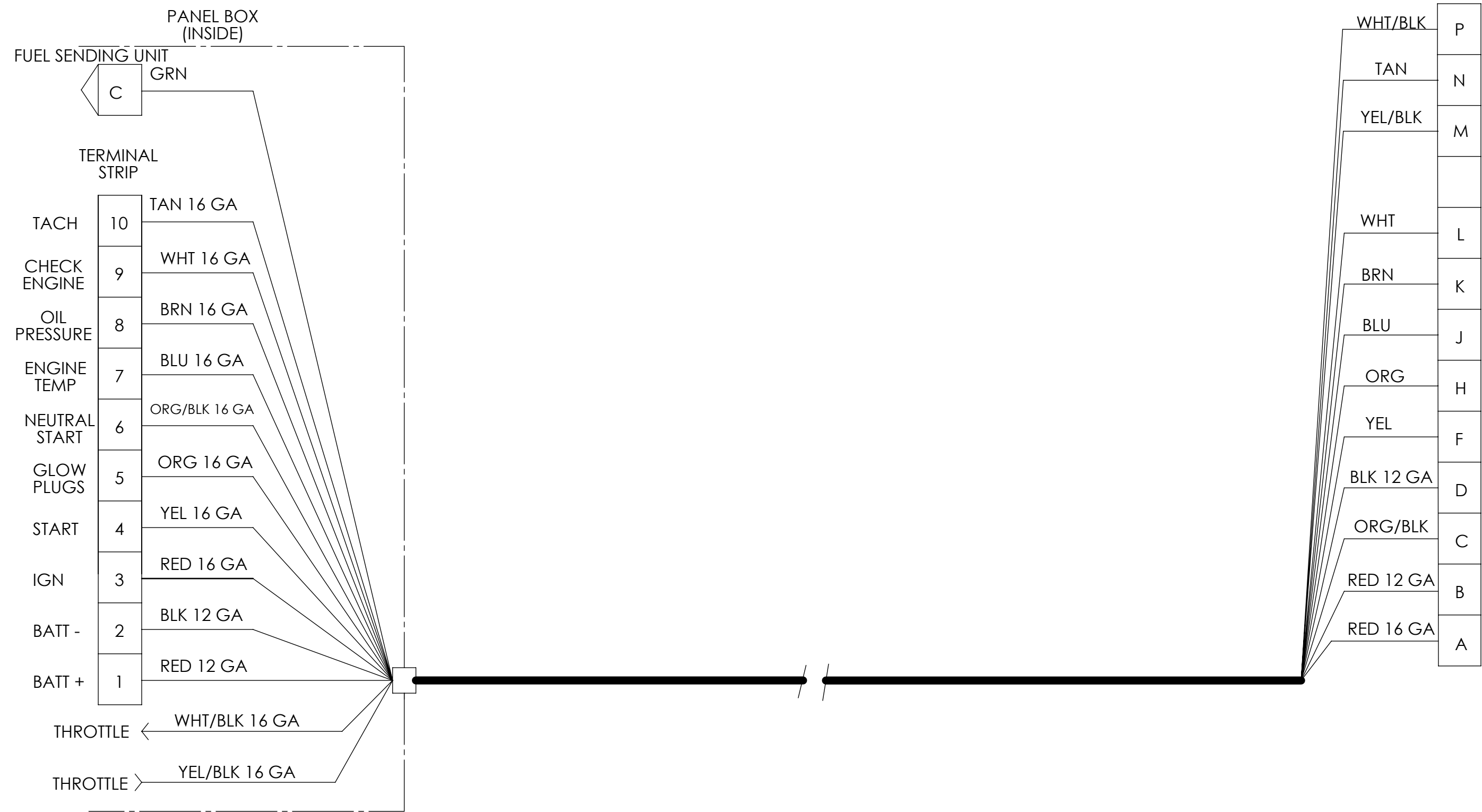


CONTROL PANEL (SHEET 2 OF 3)

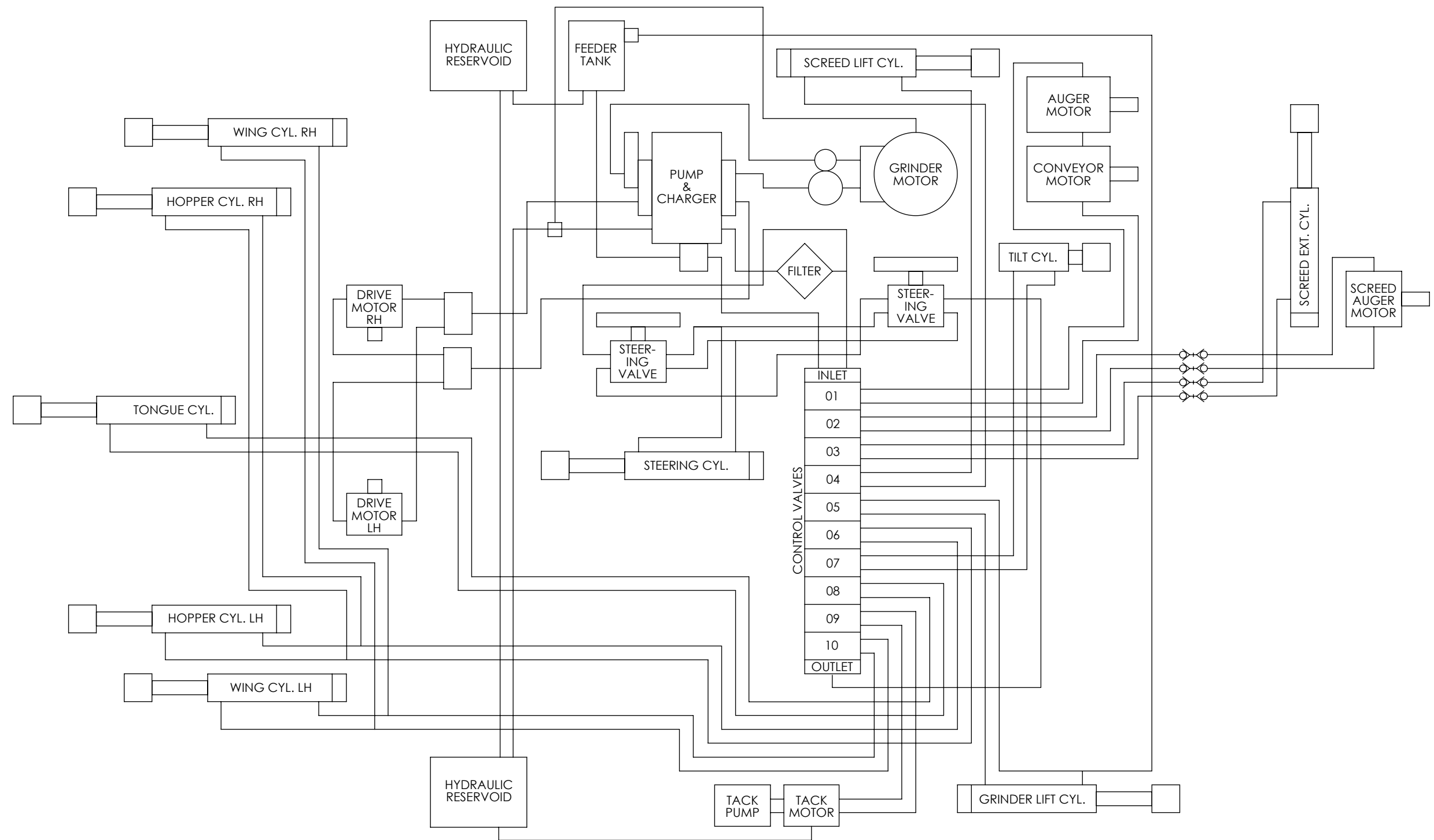


CONTROL PANEL (SHEET 3 OF 3)

HD34-24-21PN



HYDRAULIC HARNESS



NOTES



Section 7

Illustrated Parts List

	Page
Illustrated Parts List	7-1
Quick Reference Guide	7-3
Group, L.H. Control.	7-4
Control Box	7-6
Group, L.H. Control, Misc..	7-8
Group, R.H. Control.	7-10
Group, Engine, Kubota	7-12
Group, Engine, Kubota (cont.).	7-14
Hydraulic Pump And Control Linkage	7-16
Group, Engine, Hatz	7-18
Group, Engine, Hatz (cont.)	7-20
Group, Mainframe and Tank	7-22
Valve Bank	7-24
Drive Train Assembly.	7-26
Drive Unit Assembly	7-28
Hopper Assembly	7-30
Conveyor Assembly	7-32
Drawbar Assembly	7-34
Screed Assembly (6' OPT Shown)	7-36
Screed Assembly (6' OPT Shown) (Cont.).	7-38
Shoulder Attachment Assembly	7-40
Shoulder Attachment Strike-Off Assembly	7-42
Grinder Assembly	7-44



Grinder Stabilizer Wheel7-46
Tack Piping Assembly7-48
Propane Heater Assembly7-50
Rear Wheel & Tires.7-52
Alphabetical Part Index.7-55

QUICK REFERENCE GUIDE

Part Number	Description
986537-03	OIL FILTER, MAINTAINER
1005365-04	AIR CLEANER, ELEMENT, MAINTAINER
1005365-05	AIR CLEANER, ELEMENT, SECONDARY, MAINTAINER
982080-02	FILTER ELEMENT, FUEL
1001166-12	PRE-FILTER, FUEL, KUB, T3, V3600TB
290030	FILTER ELEMENT, HYD CHARGE
984549	DECAL KIT, DECORATIVE, 1200S
856687	DECAL KIT, SAFETY/OPS, 1200S
988634	DECAL, MANUAL BOXES
1005474	DECAL, NO UNATTENDED
984630	DECAL, SMV
1006351	HARNESS, 1200S MAINTAINER, MAIN
1006352	HARNESS, 1200S MAINTAINER, ENGINE

Illustrated Parts List



GROUP, L.H. CONTROL

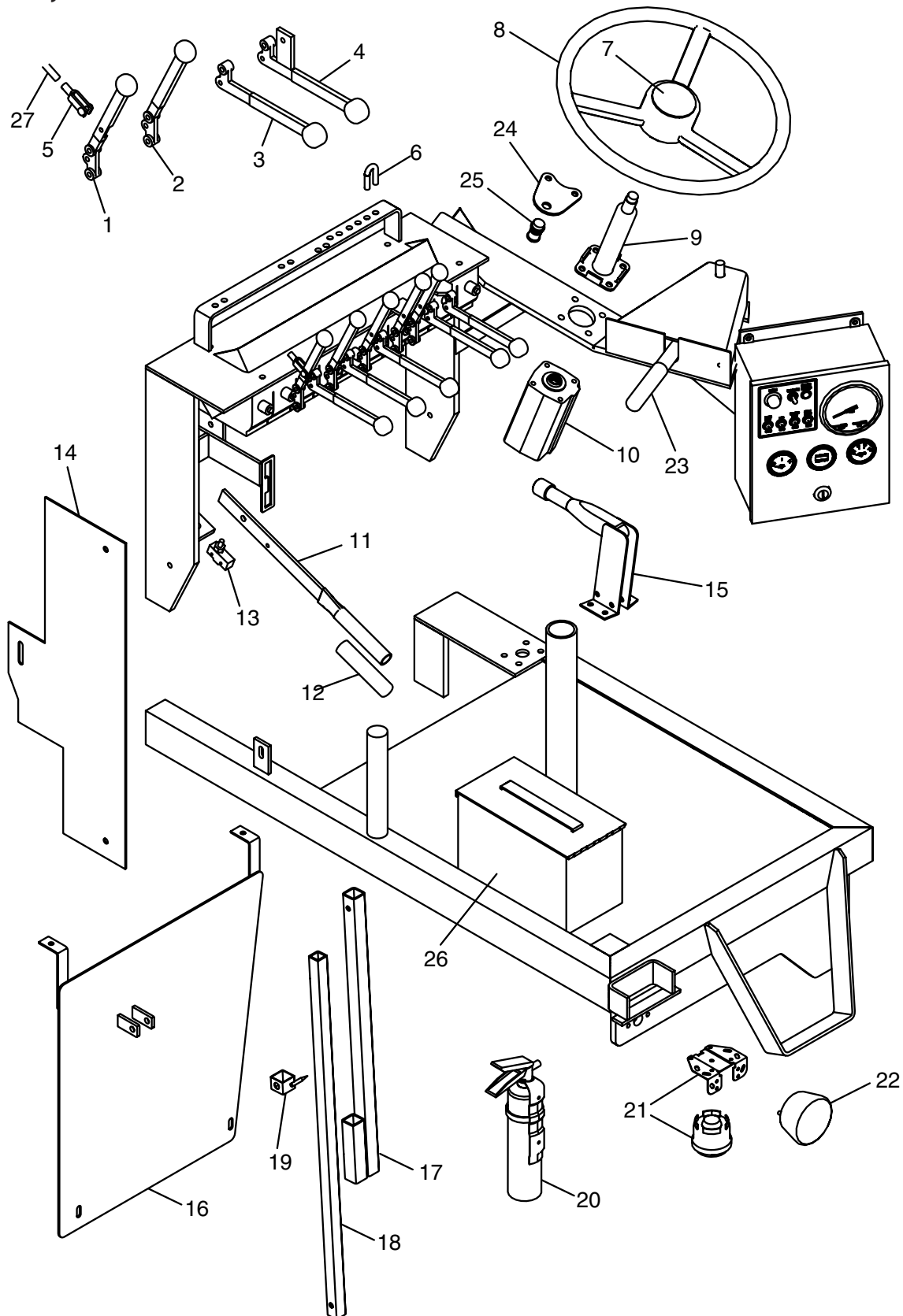


Figure 7-1

Group, L.H. Control Parts List

Item No.	Part Number	Qty.	Description	Remarks
1	350090	4	HANDLE (MODIFIED), V-20 VALVE CONTROL (1200)	
2	910060	1	HANDLE, VERTICAL,V-20 VALVE	
3	910070	3	HANDLE, HORIZONTAL (V-20 VALVE)	
4	1009531	2	HANDLE, HOROZONTAL, WITH BAR, (V-20 VALVE)	
5	350050	6	CLEVIS,.250-28	
6	350060	6	U-BOLT,.375-16 U-BOLT,3/8	
7	300010	1	CAP,STEERING WHEEL	
	300020	1	NUT, HEX, .813-20	
8	300030	1	STEERING WHEEL,17.00,36 SPLINE	
9	300040	1	STEERING COLUMN,6.00 400/685/1200	
10	36127	1	MOTOR,HYD,POWER STEERING W/O RELIEF, 19.22 CIR	
11	1009382	1	GRINDER CONTROL HANDLE	
12	490010	1	HAND GRIP, DRIVE LEVER *	
13	490040	1	SWITCH,NEUTRAL SAFETY MICROSWITCH	
14	980588	1	PLATE,SIDE COVER	
15	140060	1	LEVER ASSY, PARKING BRAKE	
-	350070	1	CABLE, PARK BRAKE, 1200S	
16	1009385SRV	1	ASSEMBLY, DEPTH GAUGE MOUNT	
	1009389SRV	1	ASSEMBLY, DEPTH GAUGE MOUNT, EXTENDED	
17	1009387SRV	1	WELDMENT, DEPTH GAUGE TUBE	
18	858443	1	TUBE,SQ,GRINDER DEPTH GAUGE	
19	1009386SRV	1	DEPTH GAUGE INDICATOR	
-	920070		THUMB SCREW, .375-16 X 1.00	
20	360050	1	FIRE EXTINGUISHER, 2-1/2 LBS W/BACKET	
21	160320	1	ALARM,BACK UP. 107DB PAVERS/GRADERS	
22	330050	1	BRAKE LIGHT	
23	870276	1	HAND GRIP, FLIGHT/DEPTH SCREW	
24	980862	1	PLATE, EMERGENCY STOP SWITCH	
25	982249	1	SWITCH,PUSH BUTTON	
26	851169SRV	1	TOOL BOX PAVERS,LOADERS,MAINTAINERS	
27	350010	6	CABLE, PUSH/PULL, 90" X 3" STROKE	

CONTROL BOX

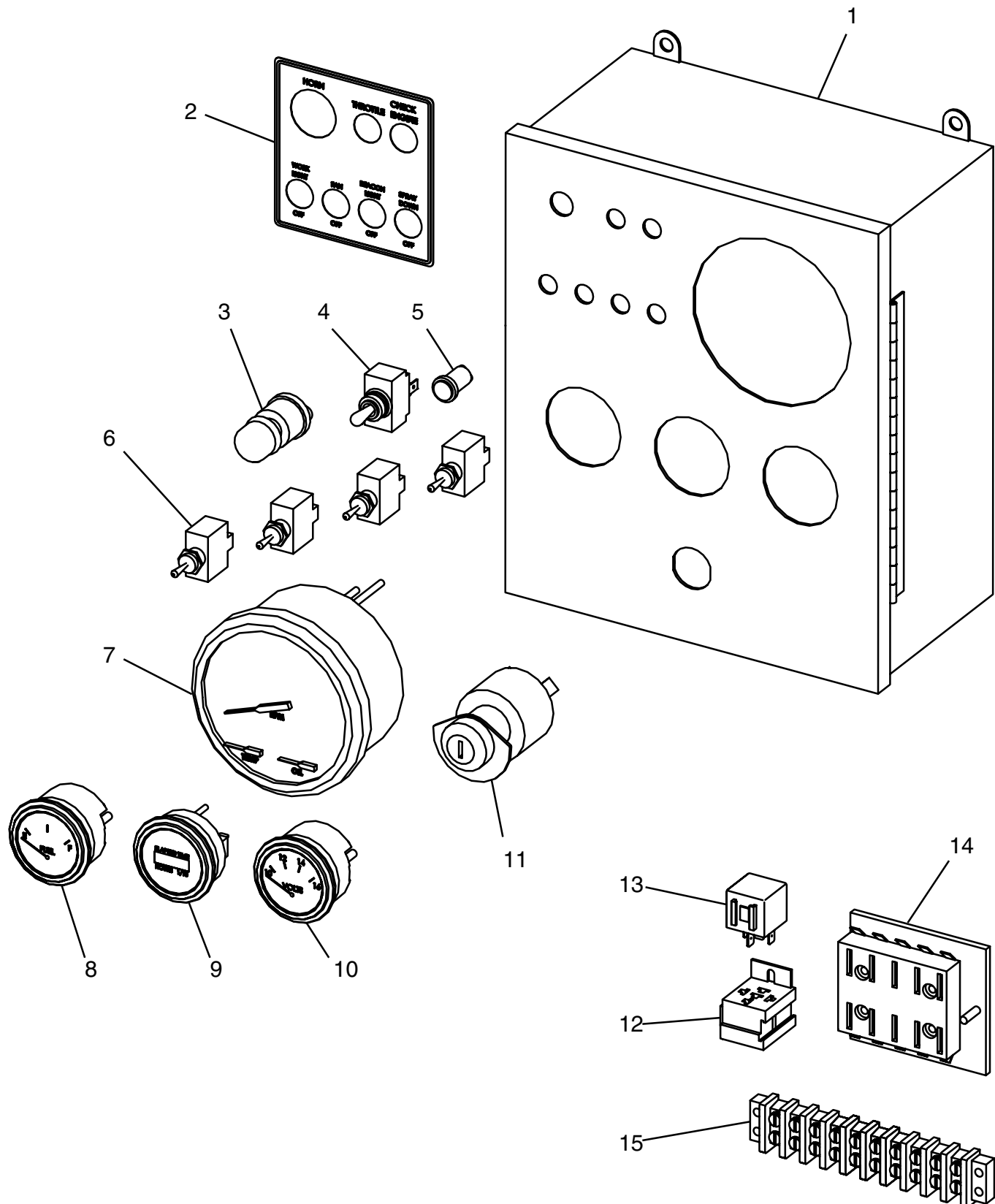


Figure 7-2

Control Box Parts List

Item No.	Part Number	Qty.	Description	Remarks
	1006218	1	PANEL,CONTROL MAINTAINER KUBOTA	
1	1002086	1	ENCLOSURE,ELEC,10X12X5	
2	1006223	1	DECAL,CONTROL PANEL,MAINTAINER,KUBOTA	
3	982249	1	SWITCH,PUSH BUTTON	
4	900080	1	SWITCH,TOGGLE,3POS,REV,DPDT MO	
5	31983	1	LIGHT,RED,DASH,.50 HOLE RED DASH LIGHT	
6	851391	4	SWITCH,TOGGLE,SPST,2-POS 2 SPEED HIGH/LOW	
7	1002032	1	GAUGE,TACH,3 IN 1,OIL/WATER 5" BLACK BEZEL	
8	1002033	1	GAUGE,FUEL LEVEL,FARIA 2" BLACK BEZEL	
9	1002035	1	GAUGE,HOURLMETER,FARIA 2" BLACK BEZEL	
10	1002034	1	GAUGE,VOLTMETER,FARIA 2" BLACK BEZEL	
11	39146-14	1	SWITCH,IGNITION,W/HEAT ST KUBOTA	
-	982008-04	A/R	KEY, IGNITION	
12	36086	1	BRACKET,RELAY MOUNT RELAY MOUNT BRKT	
13	36085	1	RELAY,12VDC,SPDT,40 AMP,5 PIN	
14	36694	1	FUSE BLOCK,10 GANG,ATC	
15	987982	1	TERMINAL BLOCK,10 GANG	

GROUP, L.H. CONTROL, MISC.

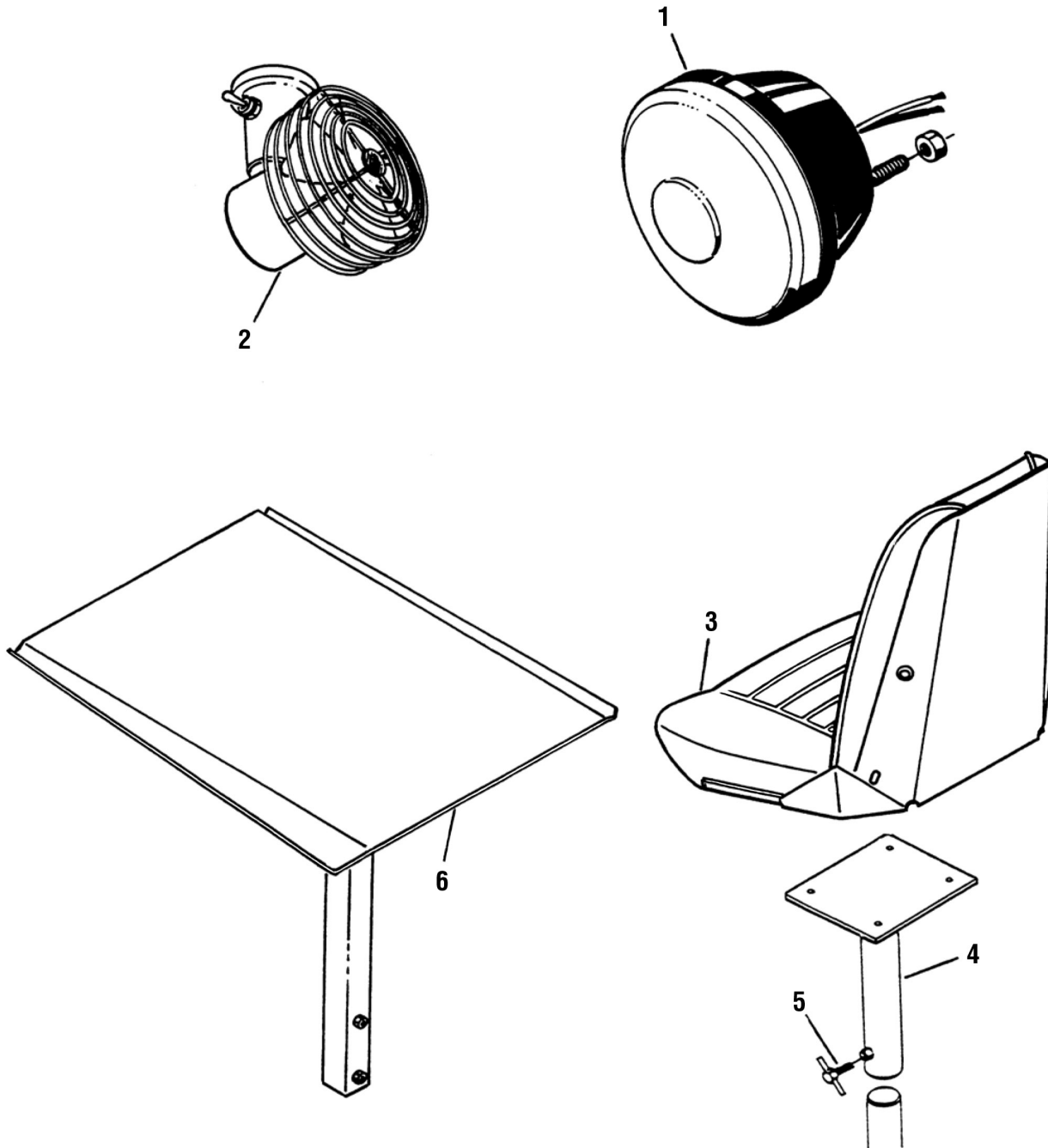


Figure 7-3



Illustrated Parts List

Group, L.H. Control, Misc. Parts List

Item No.	Part Number	Qty.	Description	Remarks
1	330050	2	BRAKE LIGHT	
2	1000-12	1	CAB FAN, 12 VOLT	
3	360010B	1	SEAT ASSY,BLACK,W/ARMREST	
	360010	A/R	SEAT ASSY, WHITE, W/ARMREST	
4	360022SRV	1	PEDESTAL, 1200 LH SEAT SUPPORT	
5	360031	1	BOLT, SEAT PEDESTAL ADJ	
6	360042	1	CANOPY, 1200S	

Illustrated Parts List



GROUP, R.H. CONTROL

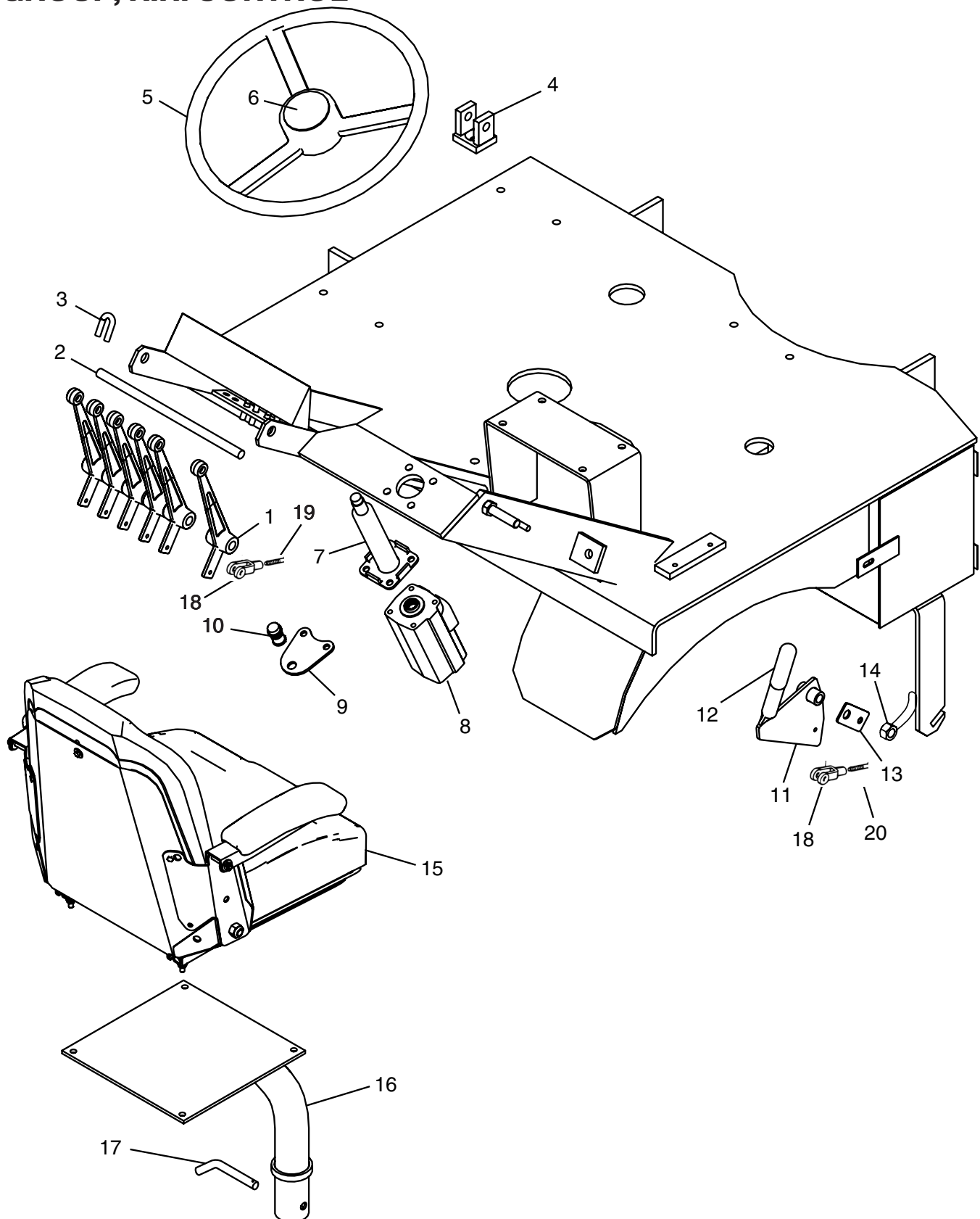


Figure 7-4

Group, Group, R.H. Control Parts List

Item No.	Part Number	Qty.	Description	Remarks
1	920210	6	CASTED HANDLE,RH CONTROL CAST TAB	
2	985582	1	THD'D ROD,.625-11X14.00	
3	350060	6	U-BOLT,.375-16 U-BOLT,3/8	
4	240081SRV	1	YOKE,SCREED STABILIZER,1200	
5	300030	1	STEERING WHEEL,17.00,36 SPLINE	
6	300010	1	CAP,STEERING WHEEL	
	300020	1	NUT, HEX, .813-20	
7	300040	1	STEERING COLUMN,6.00 400/685/1200	
8	36127	1	MOTOR,HYD,POWER STEERING	
9	980862	1	PLATE, EMERGENCY STOP SWITCH	
10	982249	1	SWITCH,PUSH BUTTON	
11	370080SRV	1	LEVER,PUMP,FWD/REV,1200,RH	
12	490010	1	HAND GRIP, DRIVE LEVER *	
13	858474	1	BAR,RH FWD/REV PIVOT	
14	300060	1	HANDLE NUT,.625-11	
15	360010B	1	SEAT ASSY,BLACK,W/ARMREST	
16	988640SRV	1	ASSY,NEW STYLE SEAT POST,SHORT	
17	72836	1	PIN,.50X3.00,W/HAIRPIN COTTER	
18	350050	10	YOKE, CABLE END	
19	350010	2	CABLE,PUSH/PULL,90"X3" STROKE	
20	350020	3	CABLE, RIGHT HAND CONTROL	

Illustrated Parts List



GROUP, ENGINE, KUBOTA

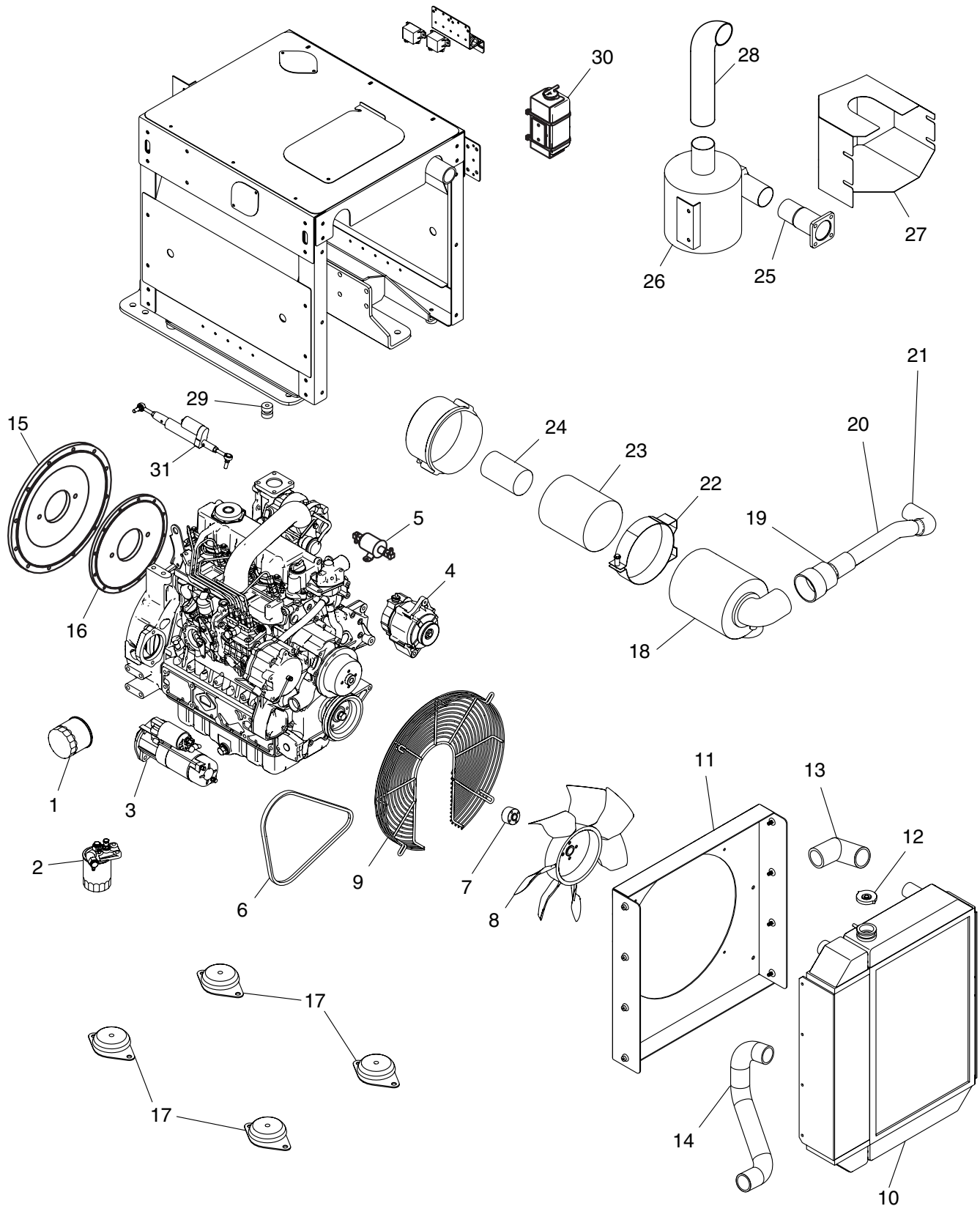


Figure 7-5

Group, Engine, Kubota Parts List

Item No.	Part Number	Qty.	Description	Remarks
-	1005365	Ref.	ASSY, ENGINE, KUBOTA, MAINTAINER	
1	986537-03	1	FILTER OIL KUBOTA	
2	982080-02	1	FILTER ELEMENT, FUEL	
-	1001166-12	1	FILTER, FUEL, IN LINE	
3	1001166-03	1	STARTER, KUB, TIER3, V3600TB	
4	1001166-04	1	ALTERNATOR, KUB, TIER3, V3600TB	
-	1002184-28	1	SENDER, TEMP, 100-250 F, 06 MP	
-	986537-49	1	SWITCH, TEMP KUBOTA	
-	1005365-10	1	SENDER, OIL PRESSURE, MAINTAINER	
-	982008-09	1	SENDING UNIT, ENG OIL PRESS	
-	986537-05	1	SOLENOID FUEL SHUT OFF	
5	986537-39	1	PUMP, FUEL, 12VDC, KUBOTA	
6	1001166-05	1	BELT, ENGINE, KUB, TIER3, V3600TB	
7	1002184-07	1	SPACER,ENGINE FAN,CHALVKUB	
8	1005365-20	1	FAN, COOLING, MAINTAINER	
9	1005365-23	1	GUARD, FAN, MAINTAINER	
10	1005365-12	1	RADIATOR, MAINTAINER	
11	1005365-22	1	GUARD, RADIATOR, MAINTAINER	
12	986537-11	1	CAP,RADIATOR KUBOTA	
13	986537-21	1	HOSE,RADIATOR,UPPER	
14	1005365-27	1	HOSE, RADIATOR, LOWER	
15	1001166-11	1	PLATE, PUMP, MNT, KUB, TIER3	
	Ref.	12	M10 X 1.25 X 30MM	
16	1009533	1	PLATE, FLYWHEEL, KUBOTA V3300/3307	
	Ref.	8	M10 X 1.25 X 16MM	
	1009532	A/R	BOLT KIT, PUMP MOUNT + FLYWHEEL, KUB, TIR3	
17	986537-14	4	ISOLATOR	
	Ref.	4	M16 X 2.0 X 40MM	
18	1003139-03	1	AIR CLEANER ASSY	
19	1005365-28	1	INTAKE, RUBBER REDUCER, KUBOTA	
20	1005365-30	1	PIPE, EXHAUST, KUBOTA	
21	986537-27	1	AIR BREATHER HOSE 180 X + 1.7	
22	38386	1	MOUNTING BAND,8.13 ID	
23	1005365-04	1	AIR CLEANER, ELEMENT, MAINTAINER	
24	1005365-05	1	AIR CLEANER, ELEMENT, SECONDARY	

Illustrated Parts List



GROUP, ENGINE, KUBOTA (CONT.)

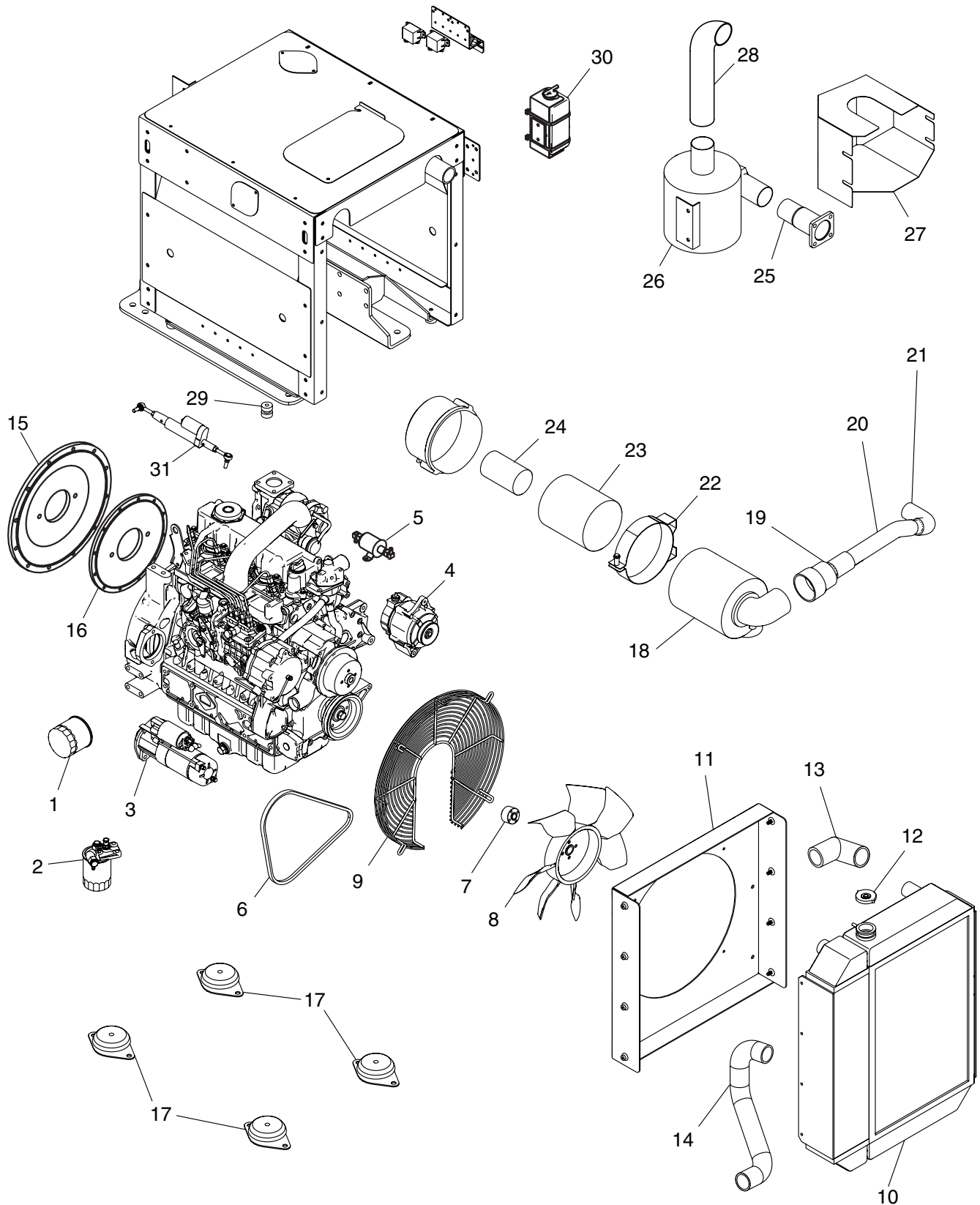


Figure 7-5

Group, Engine, Kubota (cont.) Parts List

Item No.	Part Number	Qty.	Description	Remarks
25	1005365-30		PIPE, EXHAUST, KUBOTA	
26	1005365-16	1	MUFFLER, MAINTAINER	
27	1005365-25	1	MUFFLER, HEAT SHIELD, MAINTAINER	
28	1005365-31	1	MUFFLER, TAIL PIPE, KUBOTA	
29	1001166-57	4	ISOLATOR, RAD UPPER MNT	
30	1005365-06	1	TANK, COOLANT RESERVE, MAINTAINER	
31	987985	1	ACTUATOR, EMULSION THROTTLE	
-	987685	1	SUBFRAME, BRACING CENTER	
-	1001166-67	1	HARNESS, ENGINE, KUBOTA	

HYDRAULIC PUMP AND CONTROL LINKAGE

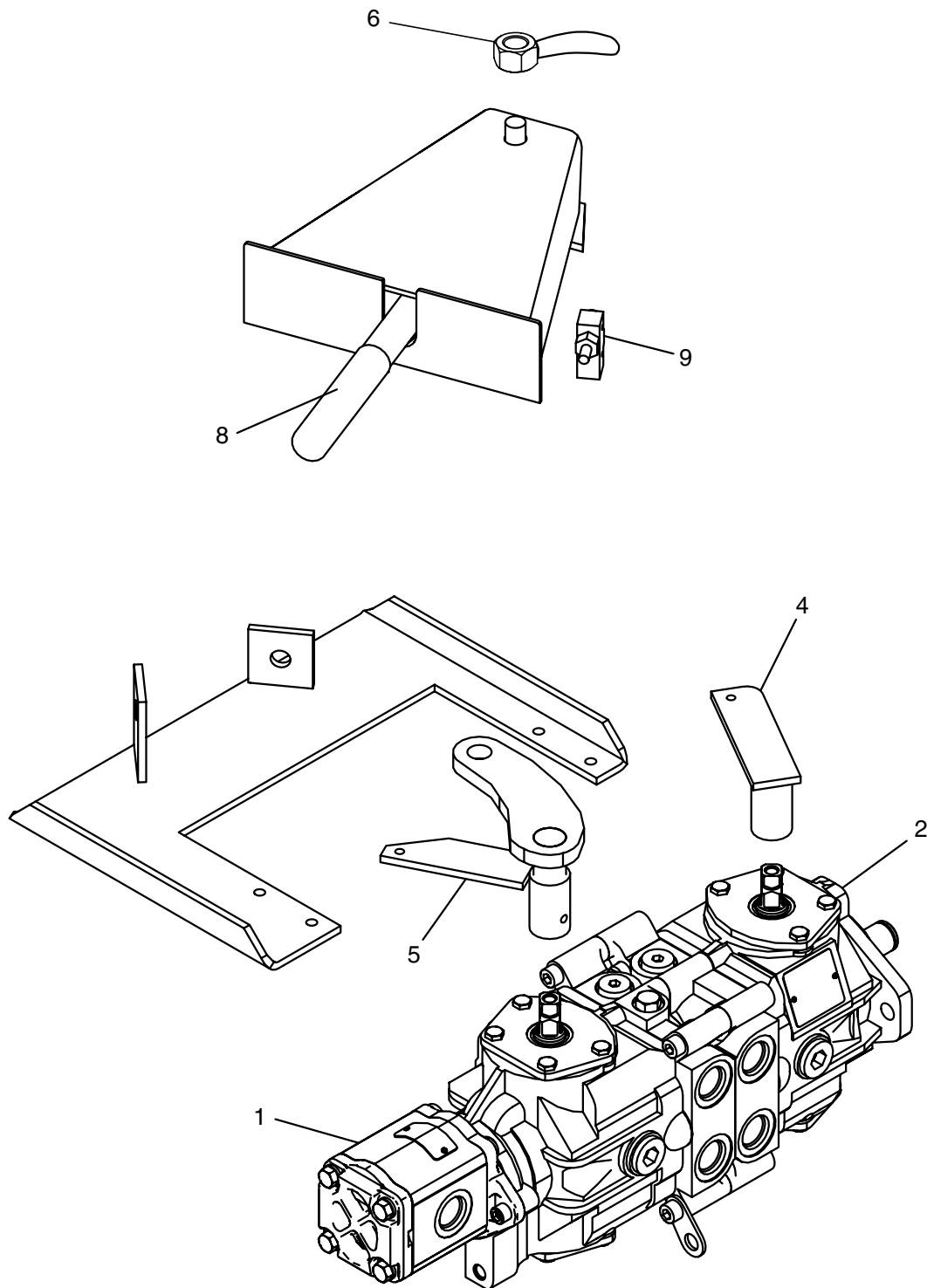


Figure 7-6

Hydraulic Pump And Control Linkage Parts List

Item No.	Part Number	Qty.	Description	Remarks
1	320232	1	PUMP, HYD, GEAR, .85 CIR	
2	320237	1	PUMP, HYD, PISTON, TANDEM, V V	
4	220610	1	ARM, GRINDER PUMP CONTROL	
5	350121SRV	1	ASSY, FWD&REV CONTROL ARM LWR	
6	300060	1	HANDLE NUT, .625-11	
-	350140	1	SPRING, SHIFTER GATE	
8	870276	1	HAND GRIP, FLIGHT/DEPTH SCREW	
9	490040	1	SWITCH, NEUTRAL SAFETY	

Illustrated Parts List



GROUP, ENGINE, HATZ

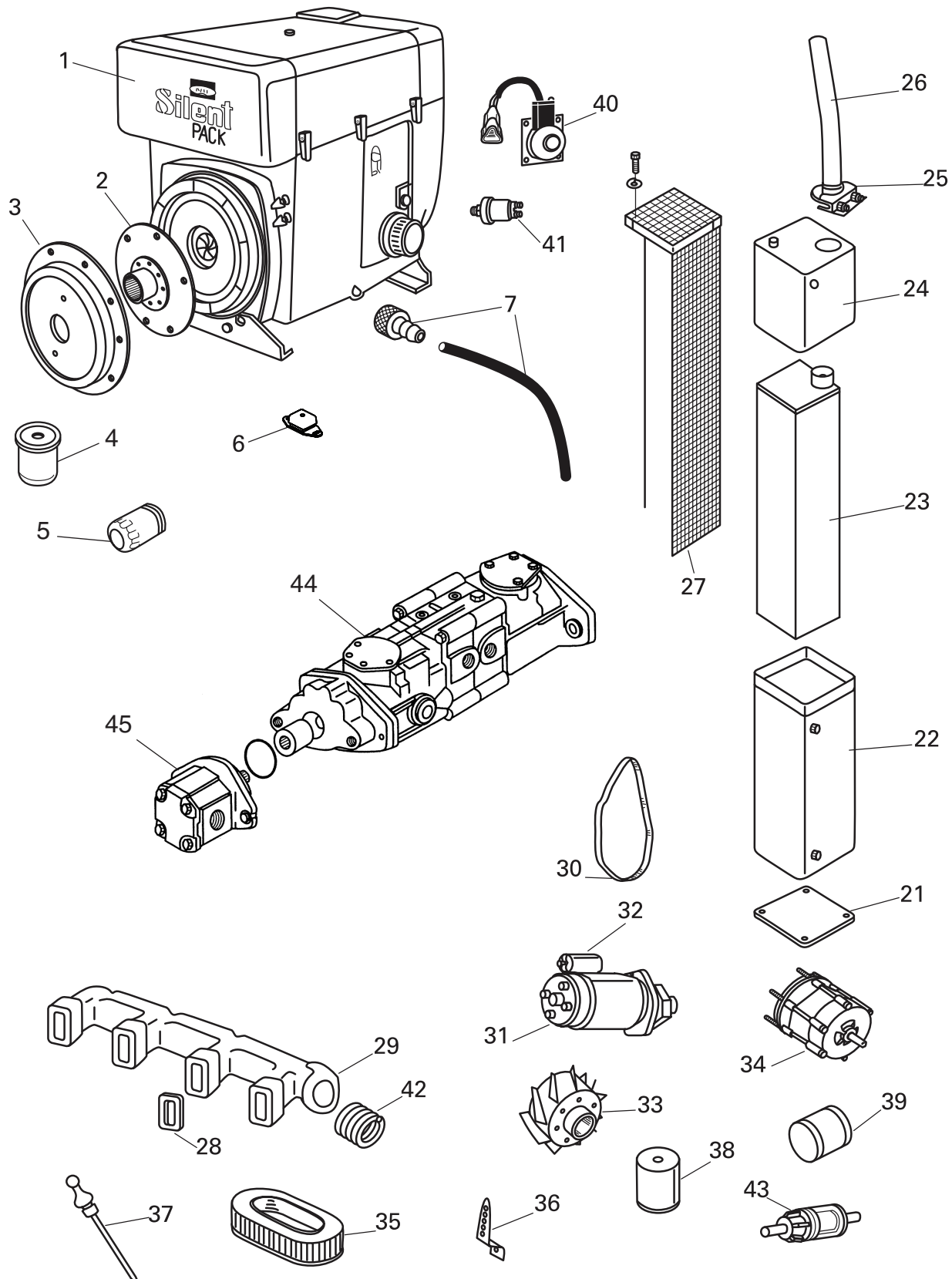


Figure 7-7

Group, Engine, Hatz Parts List

Item No.	Part Number	Qty.	Description	Remarks
1	320001	1	ENGINE,HATZ,4L41C TEIR 3	
2	320170	2	PLATE,FLYWHEEL PUMP DRIVE	
3	320200	1	ADAPTER,PUMP TO ENG	
4	988670-01	1	ELEMENT, FUEL FILTER (HATZ DIESEL)	
5	310070	1	OIL FILTER, HATZ	
6	320140-1	4	MOUNTING PAD, HATZ DIESEL ENG	
7	851497	1	HOSE W/FITTING,OIL DRAIN,HATZ	
-	320330	1	MOUNT, STARTER RELAY	
-	320320	1	RELAY,STARTER,HATZ	
-	320340	1	TERMINAL BLOCK,IGNITION PANEL	
-	320383	NS	INDICATOR LAMP, ENGINE TEMP	
-	320385	NS	INDICATOR LAMP, AIR FILTER	
-	320384	NS	INDICATOR LIGHT, ENG.OIL PRESS.	
-	320386	NS	INDICATOR LIGHT, BATTERY CHARGE	
-	984962	1	GAUGE,HOUR METER,4 WIRE	
-	140380	1	GAUGE,FUEL LEVEL	
-	320380	1	KEY,IGNITION,HATZ,DIESEL	
-	320370	1	COVER, IGNITION SWITCH (HATZ)	
-	320390	1	SWITCH,IGNITION,HATZ	
-	1000770	1	BOX,CONTROL 1200	
21	HATO3878000	1	PLATE, MUFFLER BOTTOM	
22	HAT00871801	1	COVER, MUFFLER BOTTOM	
23	320422	1	MUFFLER, HATZ SILENT PACK	
24	HATO1083000	1	COVER, MUFFLER TOP	
25	320030	1	CLAMP, 2 EXH. PIPE "	
26	851164	1	PIPE EXT. MUFFLER	
27	320510	1	HEAT SHIELD, MUFFLER	
28	320260	3	GASKET,EXH MANIFOLD/HEAD	
29	320250-4	1	MANIFOLD,EXH,HATZ 4 CYL	
30	320090	1	BELT,ALTERNATOR/BLOWER,HATZ	
31	320270	1	MOTOR,STARTER,HATZ	
32	320280	1	SOLENOID,STARTER,HATZ	
33	320290	1	BLOWER/FAN 4-CYL HATZ	
34	985010	1	ALTERNATOR,60AMP,HATZ	
35	310060	2	FILTER ELEMENT,AIR	
36	320120	1	LEVER,THROTTLE,HATZ	
	350010	1	CABLE, PUSH/PULL, 90" X 3" STROKE	
37	320110	1	DIP STICK, HATZ ENGINE OIL	
38	310080	1	FILTER ELEMENT,FUEL	

Illustrated Parts List



GROUP, ENGINE, HATZ (CONT.)

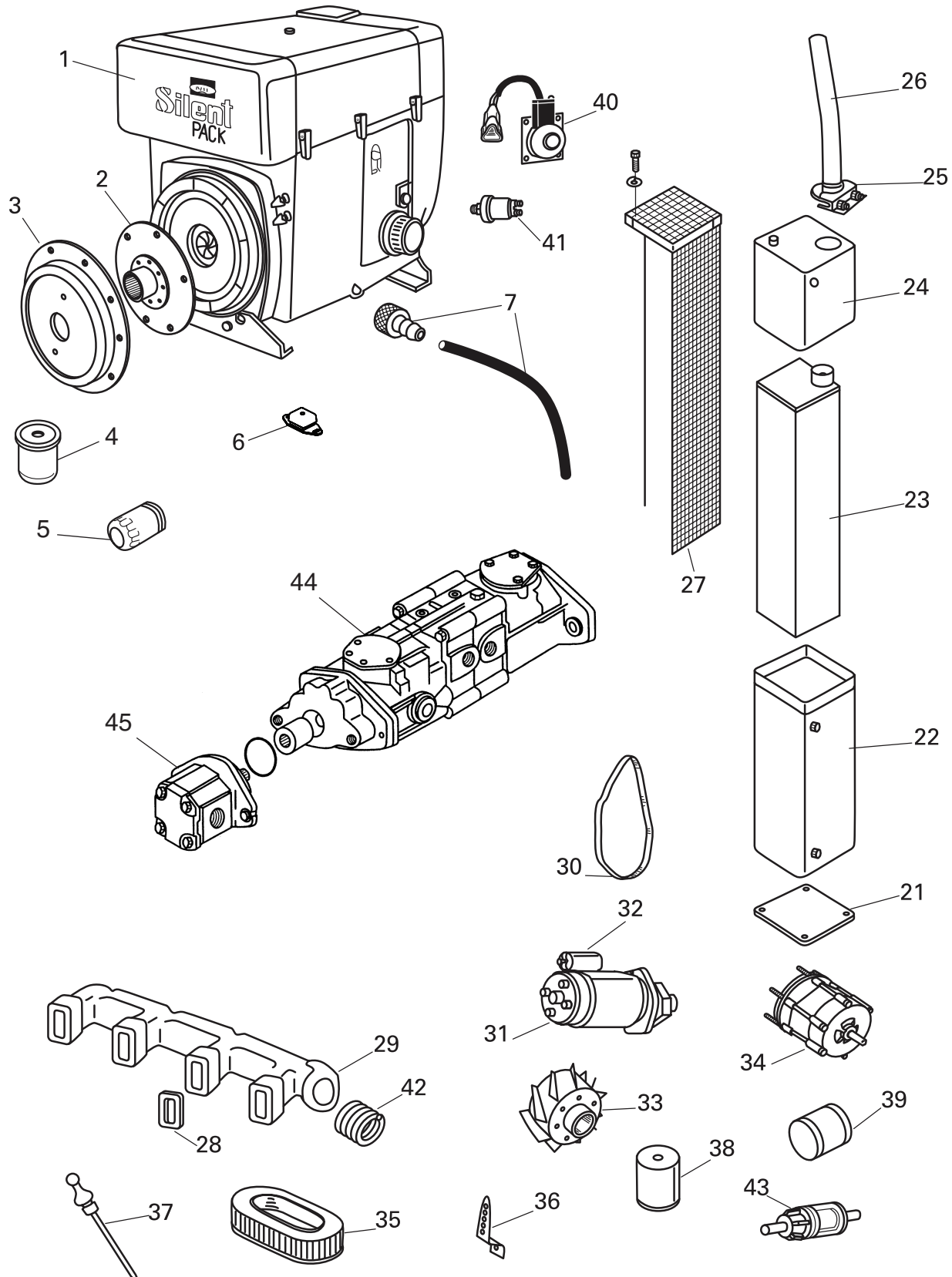


Figure 7-7

Group, Engine, Hatz (cont.) Parts List

Item No.	Part Number	Qty.	Description	Remarks
39	310070	1	FILTER ELEMENT,OIL	
40	851567	1	VALVE,SOLENOID,FUEL SHUT-OFF	
41	853490	1	SWITCH,OIL PRESS	
42	HATO01603700	1	GASKET, MUFFLER TO MANIFOLD	
43	310090	1	FILTER,FUEL,IN LINE	
44	320237	1	PUMP,HYD,PISTON,TANDEM,V V	
45	320232	1	PUMP,HYD,GEAR,,85 CIR	
-	988670-02	1	HATZ ENGINE CONTROLER	
-	320360	A/R	BULB, INDICATOR LIGHTS	

Illustrated Parts List



GROUP, MAINFRAME AND TANK

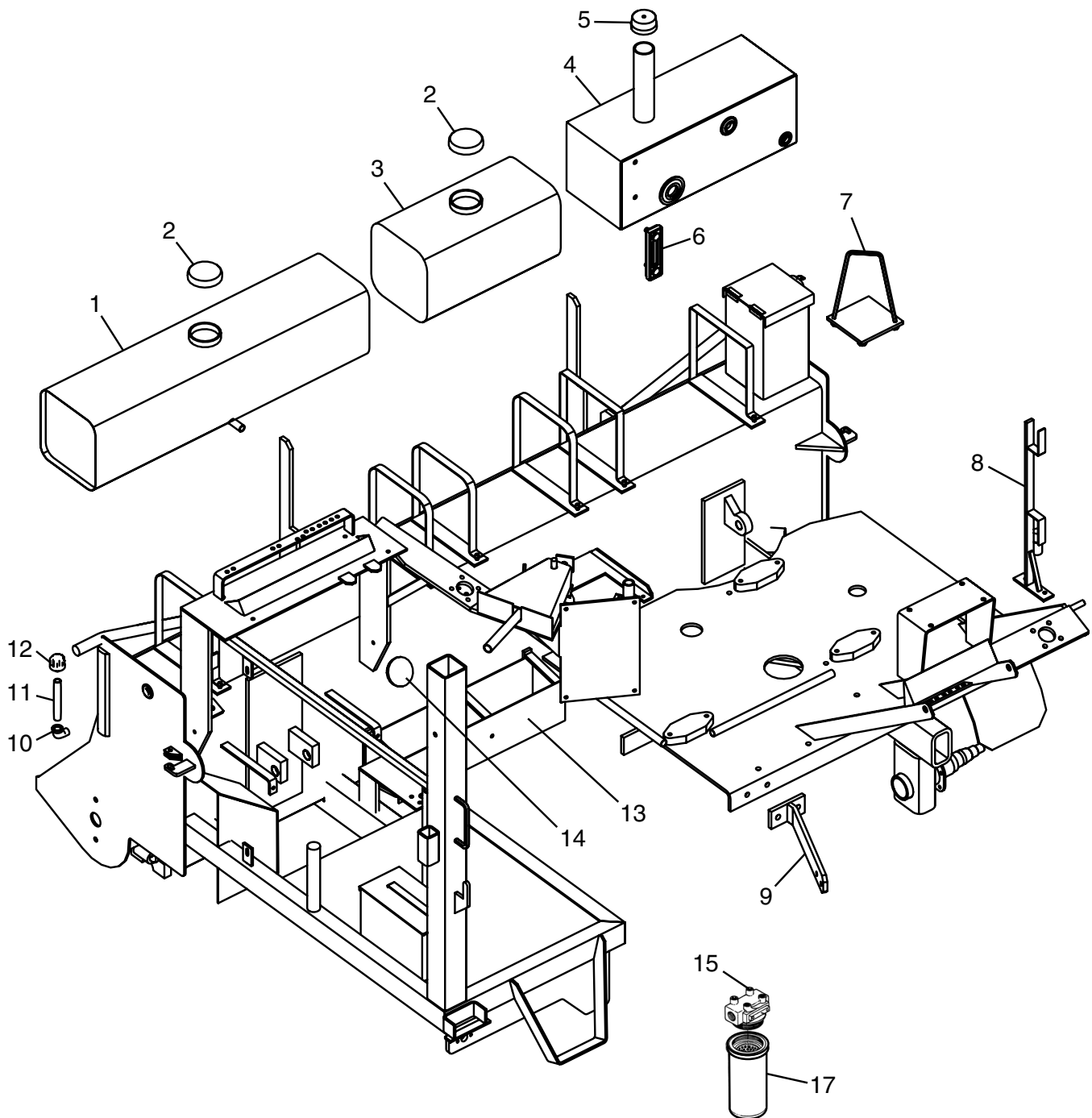


Figure 7-8

Group, Group, Mainframe and Tank Parts List

Item No.	Part Number	Qty.	Description	Remarks
1	DH-1016SRV	1	TANK W/M, FUEL, 1200B	
2	330020	2	CAP,FUEL TANK	
3	800006	1	TANK W/M, FUEL	
4	330070	1	TANK W/M,HYD,TOP,1200	
5	410080	1	CAP,HYD TANK	
-	260160	2	TANK, HYD, LOWER, 1200	
6	500070	1	GAUGE,SIGHT LEVEL/TEMP,HYD OIL	
7	120011	1	SHIELD, SPLASH	
8	1009391	1	WELDMENT, STAND, HOSE WRAP	
	1009406	1	WELDMENT, STAND, WORK LIGHTS	
9	1009392	1	WELDMENT, SCREED TOWING SUPPORT, 6'	
-	1009393	Ref.	WELDMENT, SCREED TOWING SUPPORT, 4'	
10	99526	1	ELBOW,PIPE,90,500 STREET,MI	
11	280090	1	PIPE,NIPPLE,500X5.50	
-	280320	1	RED BUSHING, 1/2 MPT X 1/4 FPT	
12	620050	1	BREATHER CAP, 1/4"	
13	985056	1	COVER,HOSE,TANK MOUNT,MAINT.	
14	330040	1	GAUGE,TACK TEMP/HYD OIL TEMP	
15	290010	1	FILTER HEAD	
17	290030	1	FILTER ELEMENT	
-	1200SN	1	CABLE,BATTERY,NEG,63",EYE/POST	
-	1200SP	1	CABLE,BATTERY,POS,63",EYE/EYE	

VALVE BANK

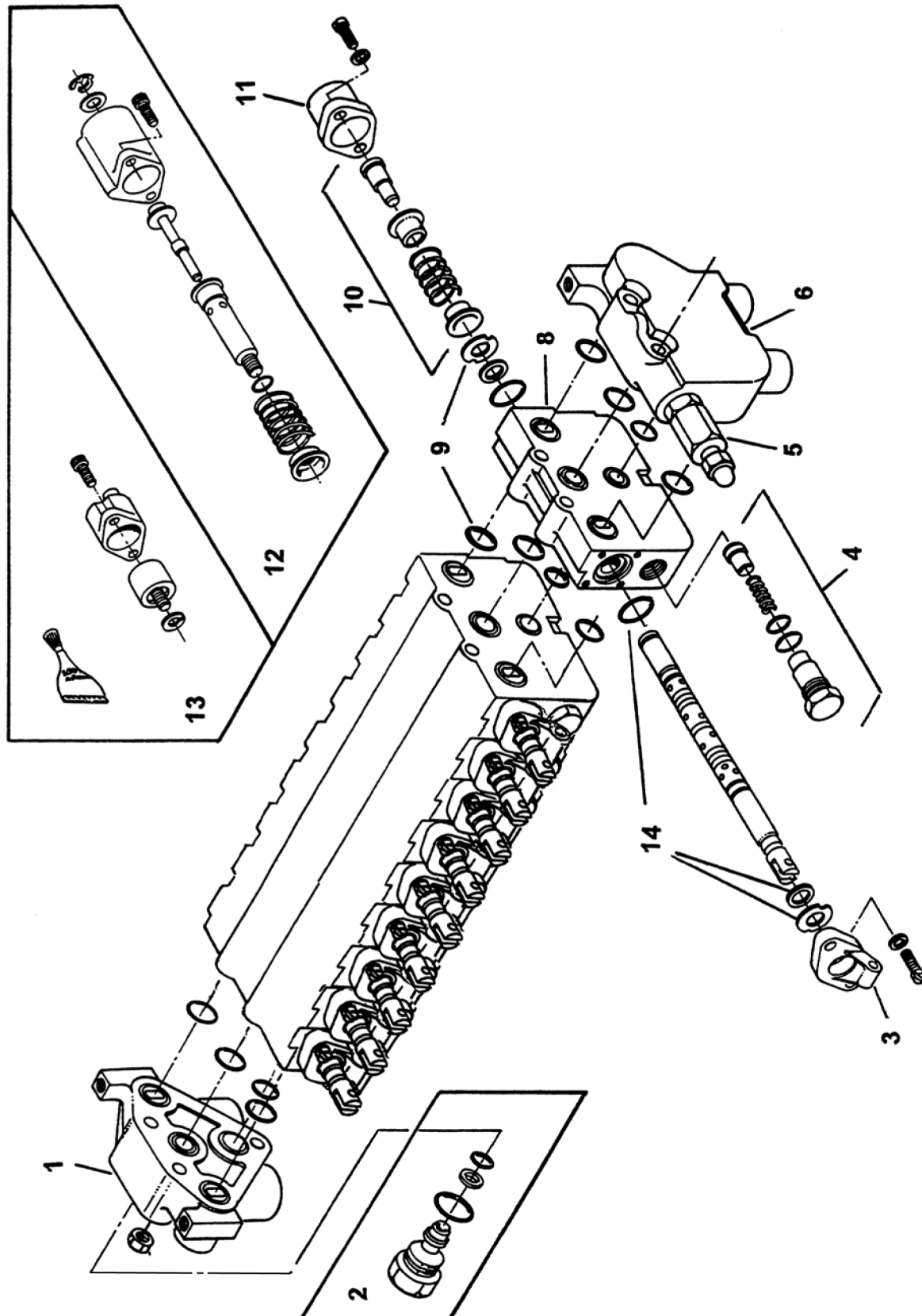


Figure 7-9

Valve Bank Parts List

Item No.	Part Number	Qty.	Description	Remarks
	852610	Ref.	VALVE ASSY, 10 SECTION	
1	910056	1	COVER, OUTLET	
2	901002	1	VALVE, POWER BEYOND	
3	910058	1	BRACKET, VALVE LEVER	
4	141020	1	VALVE, ANTI-CAVITATION	
5	901009	1	RELIEF VALVE	
6	910055	1	COVER, INLET	
8	910054	1	VALVE SECTION	
9	910062	1	SEAL KIT, VALVE SECTION	
10	901014	1	SPRING RETURN KIT	
11	141040	1	END CAP, VALVE SPOOL	
12	141050	1	FLOAT ASSY.	
13	901007	1	DETENT KIT	
14	910059	1	SEAL KIT, VALVE SPOOL	
-	500080	1	VALVE, RELIEF, 2000 PSI	

DRIVE TRAIN ASSEMBLY

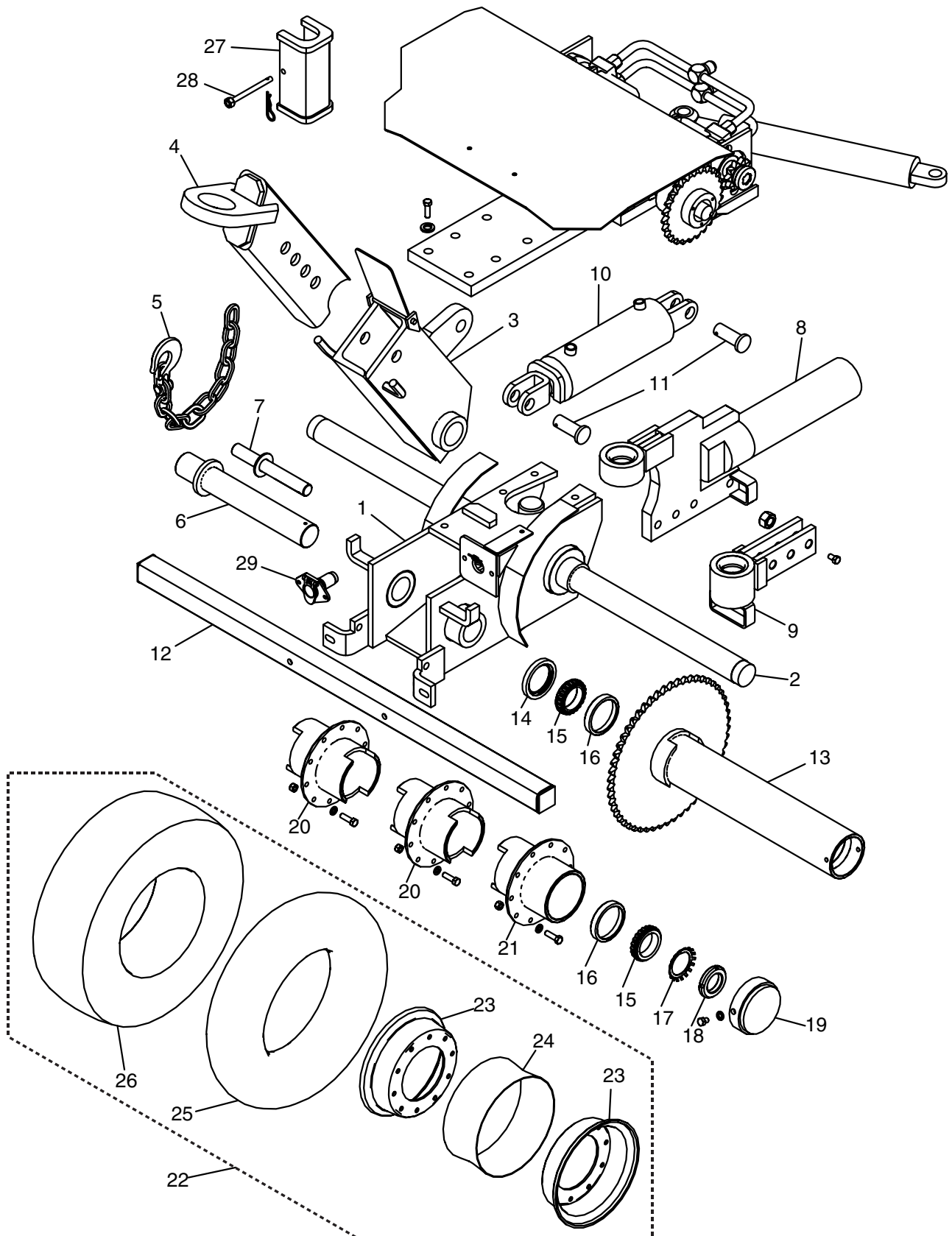


Figure 7-10

Drive Train Assembly Parts List

Item No.	Part Number	Qty.	Description	Remarks
1	210474SRV	1	TROLLEY ASSY, 1200 FRT WHEEL	
2	210252	1	AXLE,1200,FRONT WHEEL	
3	210491SRV	1	BOX, TOWING TONGUE	
4	210093SRV	1	EXTENSION, TOWING TONGUE	
5	983605	2	CHAIN W/CLEVIS,.375X38 LINKS	
6	210282SRV	1	PIN, TONGUE BOX	
7	210082SRV	1	PIN, TONGUE POSITIONER	
8	210273SRV	1	DRAWBAR, FRONT END	
9	210262SRV	1	SUPPORT, DRAWBAR LOWER BUSHING	
-	210010	1	BUSHING,2.00 IDX2.50 ODX1.75LG	
-	210020	2	THRUST WASHER	
-	210030	1	THRUST BEARING	
-	210040	2	BUSHING,2.5ODX2.0IDX1.5LG	
10	210070SRV	1	CYL,HYD,3.50X7.00X1.50 ROD	
-	210070-1	A/R	SEAL KIT	
11	210060	1	PIN,CLEVIS,1.00X2.625 W/1.5HD	
12	210481	1	FOOT GUARD, FRONT WHEEL	
-	210200	2	TIRE & WHEEL ASSY,1200 FRONT	All 13 through 23
13	210223	2	HUB & SPROCKET,FRONT AXLE,1200	
14	210240	2	SEAL	
15	210180	4	BEARING CONE	
16	210190	4	BEARING CUP	
17	210170	2	WASHER,LOCK	
18	210160	2	NUT,LOCK	
19	210152	2	HUB CAP, FRONT AXLE	
-	1009077	4	ASSEMBLY, TIRE AND HUB, INNER	Include 20, 23
20	210212	4	WHEEL FLANGE, 1200 FRONT	
	Ref.	60	CSHH, 3/8-16 X 1.25 GR5, FT	Bolt for front wheel
	Ref.	60	NUT, HEX, 3/8-16, GR5	
-	1009078	2	ASSEMBLY, TIRE AND HUB, OUTER	Include 22, 23
21	210202	2	WHEEL FLANGE,OUTER	
22	210100	6	TIRE & WHEEL ASSY, FRONT WHEEL	
23	210130	12	RIM ASSY,2 PIECE,1200	
24	210140	6	LINER, RIM	
25	210120	6	INNER TUBE, FRONT TIRE	
26	210100	6	TIRE, 5" X 8" (1200 FR WHEEL)	
27	210071	1	LOCK, TONGUE SAFETY (1200S)	
28	858015SRV	1	PIN,TONGUE SAFETY CHANNEL	
29	755-5048	1	SOCKET, 6 WAY TRAILER PLUG	
-	852550	1	BREAKAWAY SWITCH NYLON	

DRIVE UNIT ASSEMBLY

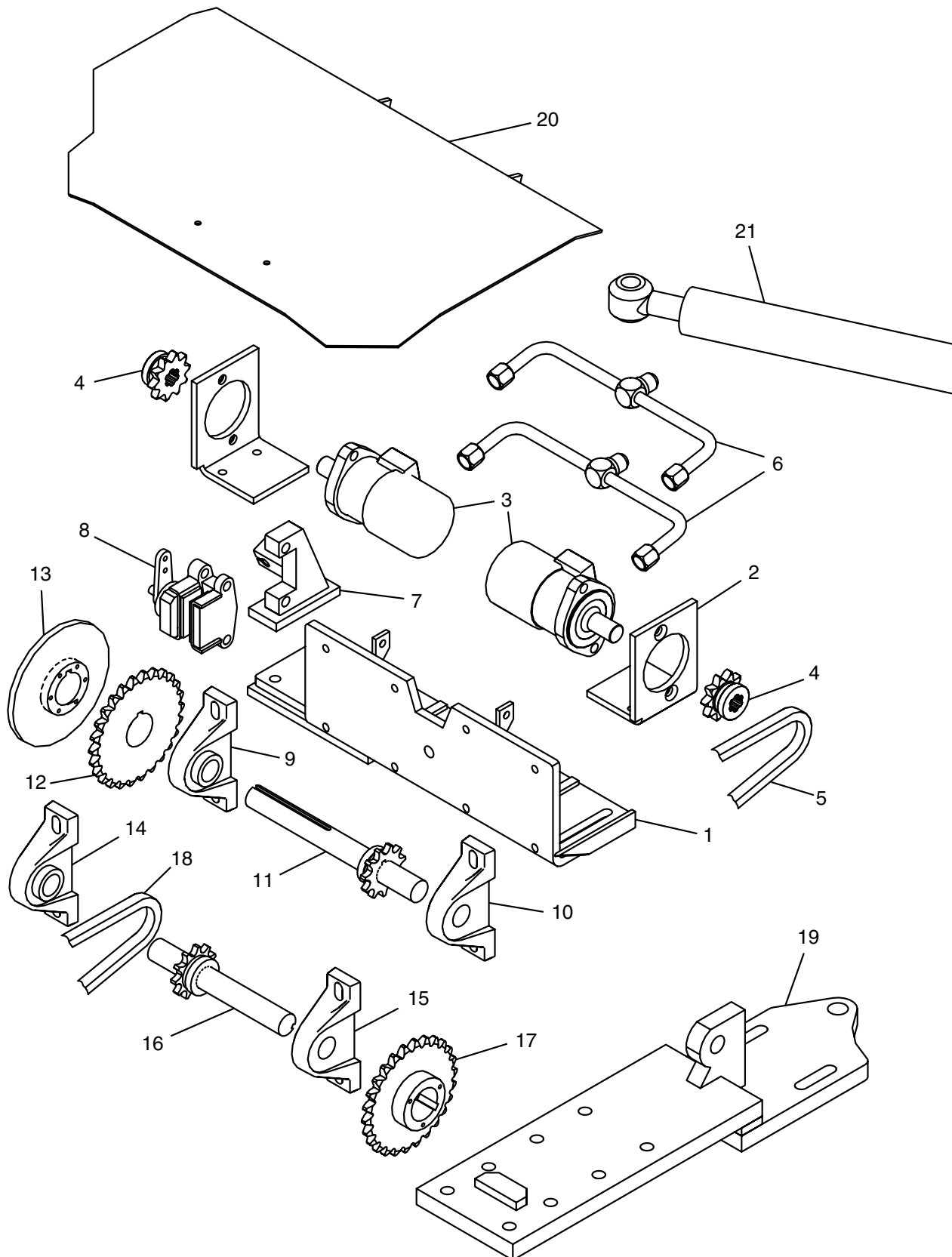


Figure 7-11

Drive Unit Assembly Parts List

Item No.	Part Number	Qty.	Description	Remarks
1	210522	1	MOUNTING PLATE, DRIVE	
2	210322	1	MOUNT, 1200 RH DRIVE MOTOR	
-	210332	1	MOUNT, 1200 LH DRIVE MOTOR	
3	210340	2	MOTOR, HYD, DRIVE, 1200	
-	860012	A/R	SEAL KIT, MOTOR	
-	Ref.	4	CSFHS, 1/2-13 X 1.75, FT	Motor Bolt
-	Ref.	4	NUT, HEX, 1/2-13, GR5	
-	Ref.	4	WASHER, LOCK, 1/2	
4	210350SRV	2	SPROCKET, 60B10X1.00-6 SPLINE	
-	Ref.	2	CSHH, 1/4-20 X 1, GR5	Sprocket Bolt
-	Ref.	2	WASHER, LOCK, 1/4	
5	210360	2	CHAIN, ROLLER, 60X32 PITCH	
6	210420-14	2	TUBE ASSY, FRONT WHEEL DRIVE	
7	1009409	1	WELDMENT, PARK BRAKE CALIPER MOUNT	
8	312110	1	BRAKE CALIPER, PARKING BRAKE	
9	210410	1	BEARING, CPLG SHAFT, RH OUTER	
10	210410-RI	1	BEARING, CPLG SHAFT, RH INNER	
11	210521SRV	1	JACKSHAFT, 1200S DRIVE, RH	
12	210400	1	SPROCKET, 60P26	
13	210490SRV	1	DISC, BRAKE ROTOR	
-	210511SRV	1	KEYSTOCK, SQ, .250X4.00	
14	210410-LI	1	BEARING, CPLG SHAFT, LH INNER	
15	210410-LO	1	BEARING, CPLG SHAFT, LH OUTER	
16	210432SRV	1	JACKSHAFT, 1200 DRIVE, LH	
17	210400	1	SPROCKET, 60P26	
18	210230	2	CHAIN, ROLLER, 60HX70 PITCH	
19	210453SRV	1	TOP SECTION, TROLLEY	
20	210313SRV	1	COVER, FRONT WHEEL DRIVE UNIT	
21	210460	1	CYL, HYD, 2.50X12.00X1.00 ROD	
-	210460-1	A/R	SEAL KIT	

Illustrated Parts List



HOPPER ASSEMBLY

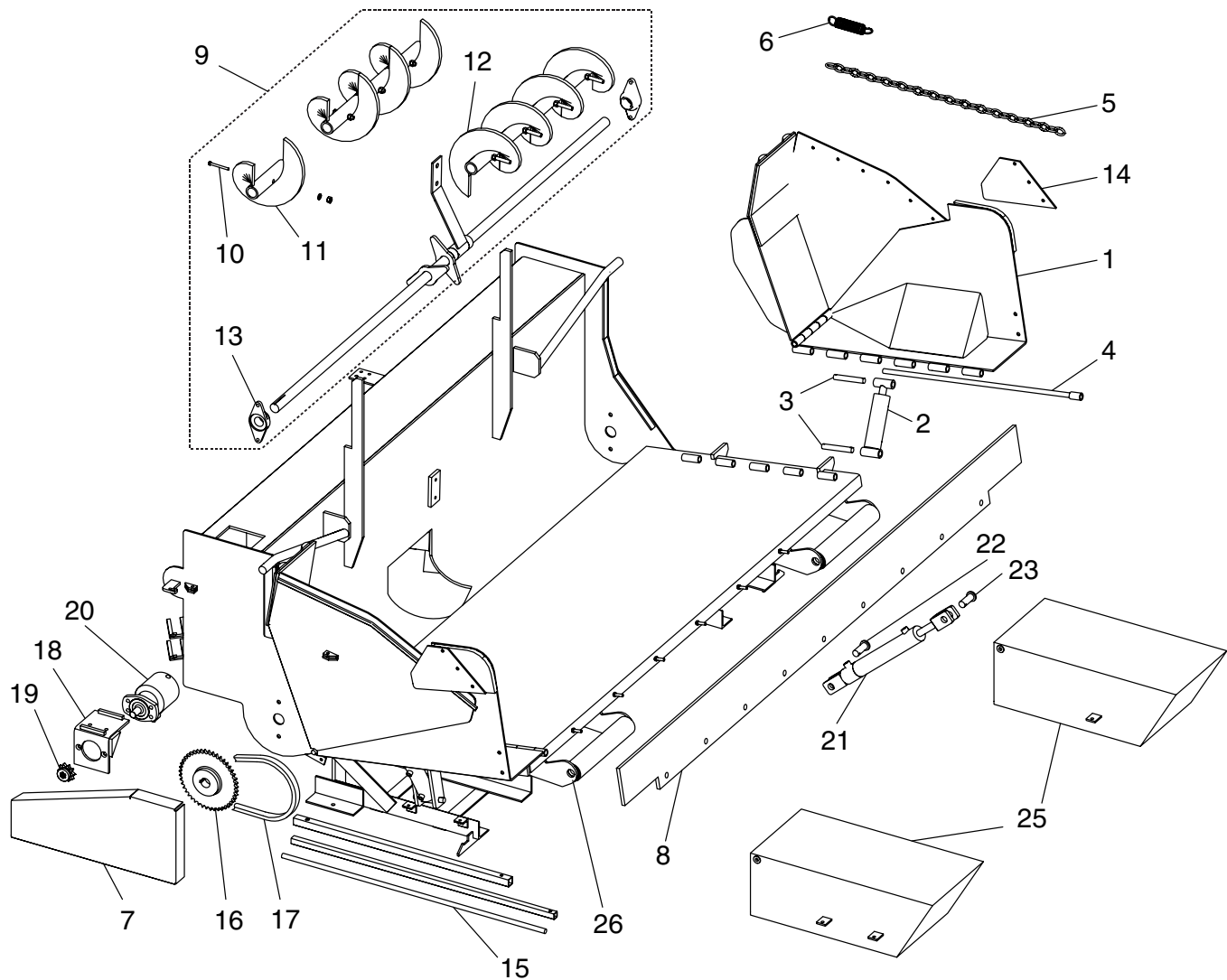


Figure 7-12

Hopper Assembly Parts List

Item No.	Part Number	Qty.	Description	Remarks
1	1009396	1	WELDMENT, HOPPER WING, LH, 1200B	
	1009397	1	WELDMENT, HOPPER WING, RH, 1200B	
2	910145	2	CYL, HYD, HOPPER WING, 1000B	
3	910146	4	PIN, CYLINDER	
4	1009398	2	HINGE PIN, HOPPER WING	
5	858336	2	CHAIN, PROOF COIL, .250X30 LINK	
6	930029	2	SPRING, COMP,	
-	852428	2	PIPE, CHAIN GUARD, PVC	
7	858558	1	COVER, MAIN AUGER CHAIN	
8	851622	1	FLASHING, HOPPER 1000C	
-	851623SRV	1	CLAMP, HOPPER FLASHING	
-	858083	2	PLATE, HOPPER FLASHING MNTG	
9	260014	1	AUGER ASSY, 1200 MAIN	
10	Ref.	8	CSHH, 5/8-11 X 2 3/4, GR2	
	Ref.	8	WASHER, LOCK, 5/8	
	Ref.	8	NUT, HEX, 5/8-11	
11	860100C	4	AUGER SECTION RH CASTED 1000	
12	860110C	4	AUGER SECTION LH CASTED YELLOW	
13	240290	2	BEARING, FLANGE, 2-BOLT, 1.50	
14	852645SRV	2	GUIDE, SIDE WING SLIDE	
15	985021SRV	A/R	ASSY, GUIDE BAR, 1200B	
16	260090	1	SPROCKET, 60B45X1.50 BORE	
17	210360	1	CHAIN, ROLLER, 60X32 PITCH	
18	260122	1	MOUNT, 1200 MAIN AUGER MOTOR	
19	210350SRV	1	SPROCKET, 60B10X1.00-6 SPLINE	
20	260130	1	MOTOR, HYD, 22.0 CIR	
-	860014	A/R	SEAL KIT, HYD MOTOR, PARKER	
21	260060	2	CYL, HYD, 2.00X12.00X1.00 ROD	
-	260060-1	A/R	SEAL KIT	
22	260071	2	PIN, HYDRAULIC CYLINDER, LOWER	
23	210060	2	PIN, HYDRAULIC CYLINDER, UPPER	
25	260160	1	TANK, HYD, LOWER, 1200/1200S	
26	858387	2	PUSH ROLLER ASSY	
	855002	4	WASHER, FLAT, 1.250X2.063X.130	

CONVEYOR ASSEMBLY

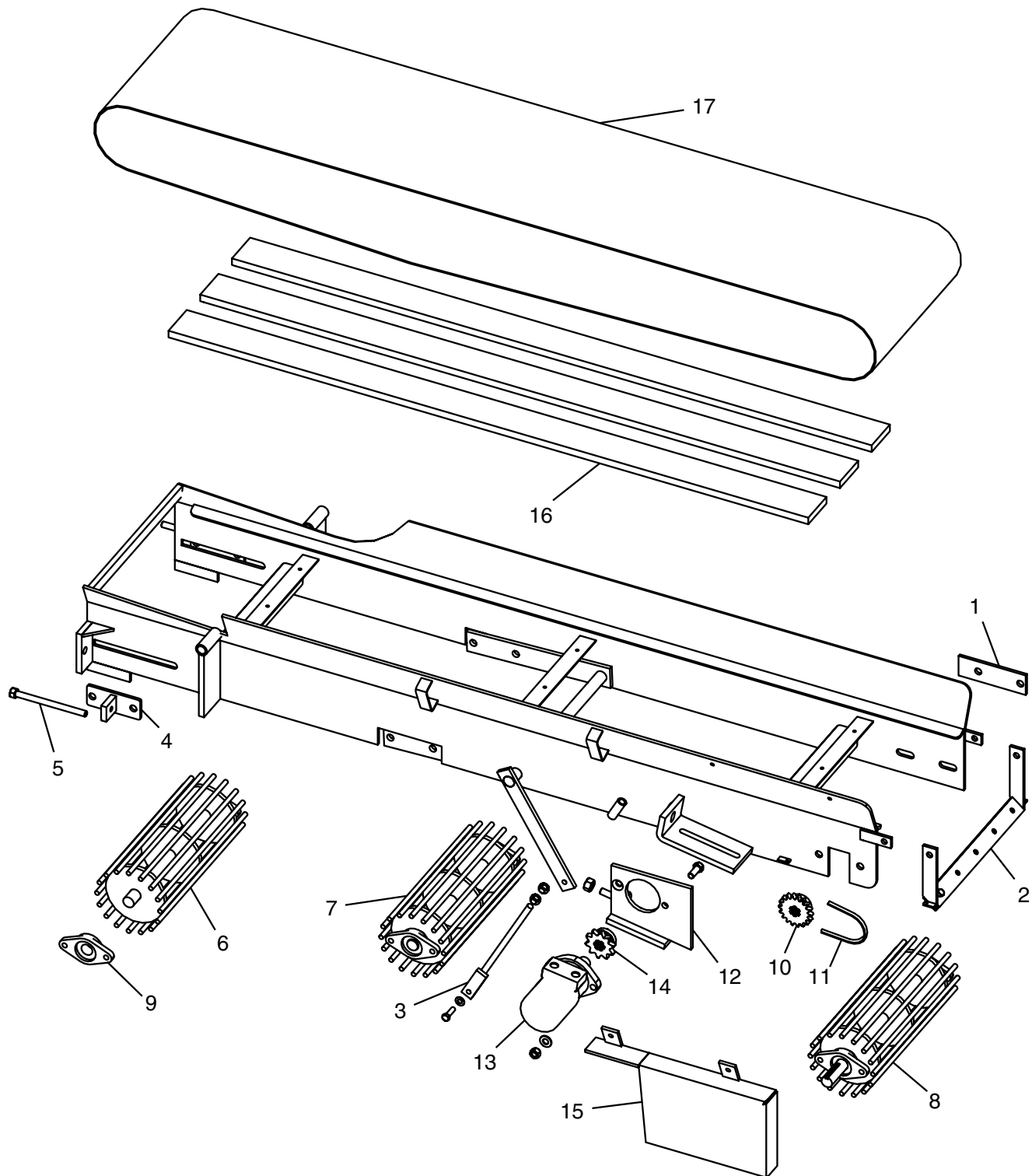


Figure 7-13

Conveyor Assembly Parts List

Item No.	Part Number	Qty.	Description	Remarks
1	857874	1	BAR,CONVEYOR HEAD PULLEY ADJ	
2	270091	1	BRACKET, MAIN CONVEYOR BELT	
	250101SRV	1	CLAMP,MAIN CONVEYOR BELT WIPER	
	250110	1	WIPER, MAIN CONVEYOR BELT	
-	250170	2	SPRING,EXT, 1200 CONVEYOR BELT WIPER	
4	250181SRV	2	BRACKET, TAIL PULLEY ADJUSTING	
5	250161SRV	2	ADJ SCREW, CONVEYOR TAIL	
6	250122SRV	1	TAIL PULLEY,MAIN CONVEYOR	
7	250132SRV	1	IDLER PULLEY,MAIN CONVEYOR	
8	250142SRV	1	HEAD PULLEY,MAIN CONVEYOR	
9	250150	6	BEARING,FLANGE,2-BOLT,1.00	
10	250190	1	SPROCKET,MAIN CONVEYOR DRIVE	
-	857827	1	KEYSTOCK, SQ., .25 X 1.75	
11	250040	1	CHAIN,ROLLER,60X42 PITCH	
12	250072	1	MOTOR MOUNT,CONVEYOR DRIVE	
13	250060	1	MOTOR,HYD,20.0 CIR	
-	860012	A/R	SEAL KIT,HYD MOTOR,PARKER	
-	Ref.	1	CSFHS, 1/2-13 X 1.75, FT	
-	Ref.	1	CSHH, 1/2-13 X 1.75, GR5	
-	Ref.	2	WASHER, LOCK, 1/2	
-	Ref.	2	NUT, HEX, 1/2-13, GR5	
14	210350SRV	1	SPROCKET,60B10X1.00-6 SPLINE	
15	250082SRV	1	CHAIN GUARD, MAIN CONVEYOR	
16	250030	3	WOOD SLAT, MAIN CONVEYOR BED	
17	250010	1	CONVEYOR BELT, 1200 MAIN	
-	250020	1	LACING PIN, MAIN CONVEYOR BELT	

DRAWBAR ASSEMBLY

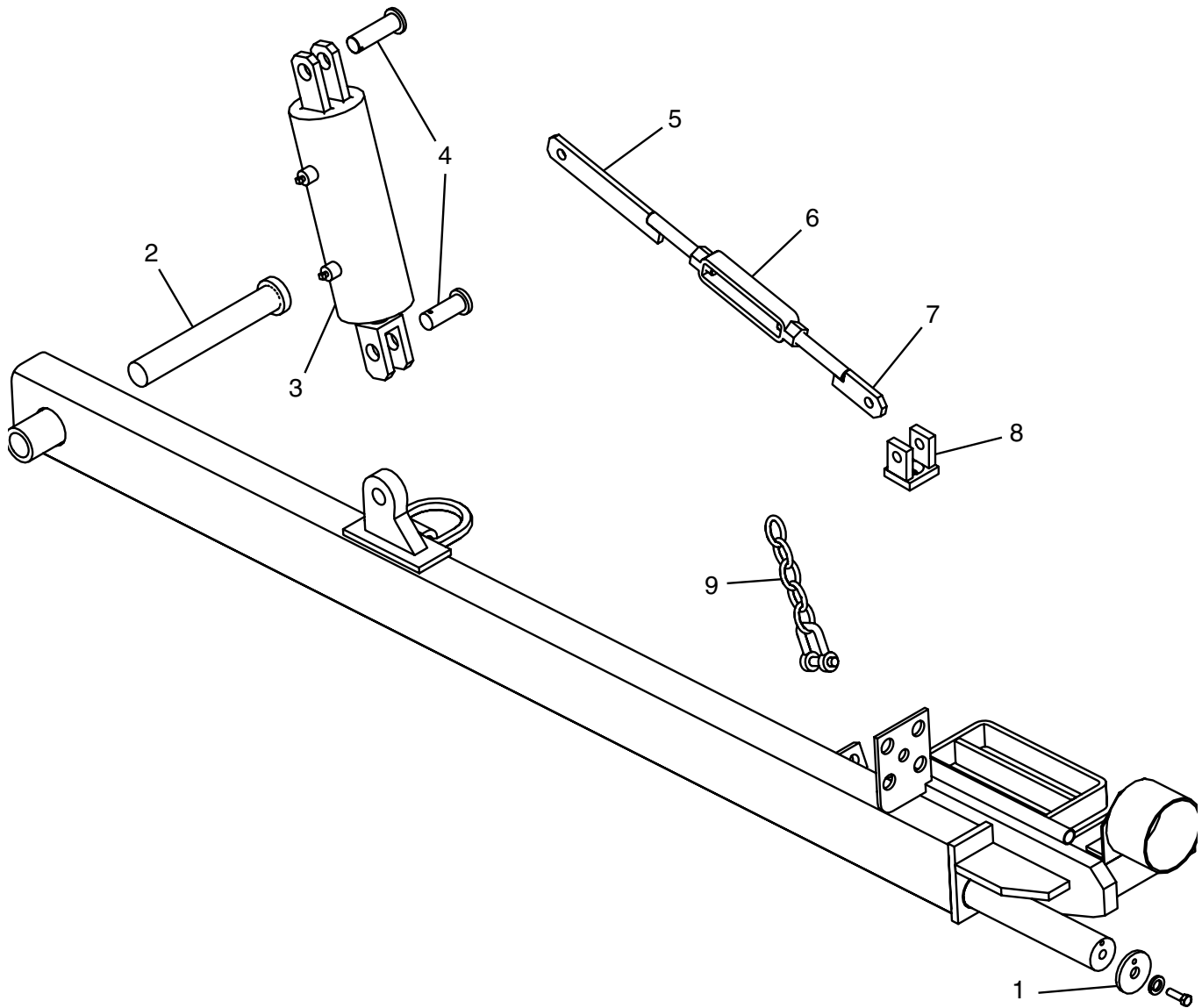


Figure 7-14

Drawbar Assembly Parts List

Item No.	Part Number	Qty.	Description	Remarks
-	240024SRV	A/R	DRAWBAR, SCREED	
1	240391	1	WASHER,SCREED SWIVEL MOUNT	
-	Ref.	1	CSHH, 5/8-11 X 1.25, GR5	
-	Ref.	1	WASHER, LOCK, 5/8	
-	Ref.	1	ROLLPIN, 1/4 X 1	
2	240011SRV	1	PIN, DRAWBAR	
3	240040	1	CYL,HYD,4.00X7.00X1.250 ROD	
	240040-1	A/R	SEAL KIT,HYD CYL,4.00X1.25	
4	240030	2	PIN,CLEVIS,1.00X3.25 W/1.5HD	
5	240051SRV	1	LONG EXTENSION, SCREED	
6	851478	1	TURNBUCKLE BODY, 3/4-10	
7	240071SRV	1	SHORT EXTENSION, SCREED	
8	240081SRV	1	YOKE, SCREED STABILIZER, 1200	
9	858388	1	CHAIN ASSY,SCREED DRAWBAR TOW	

SCREED ASSEMBLY (6' OPT SHOWN)

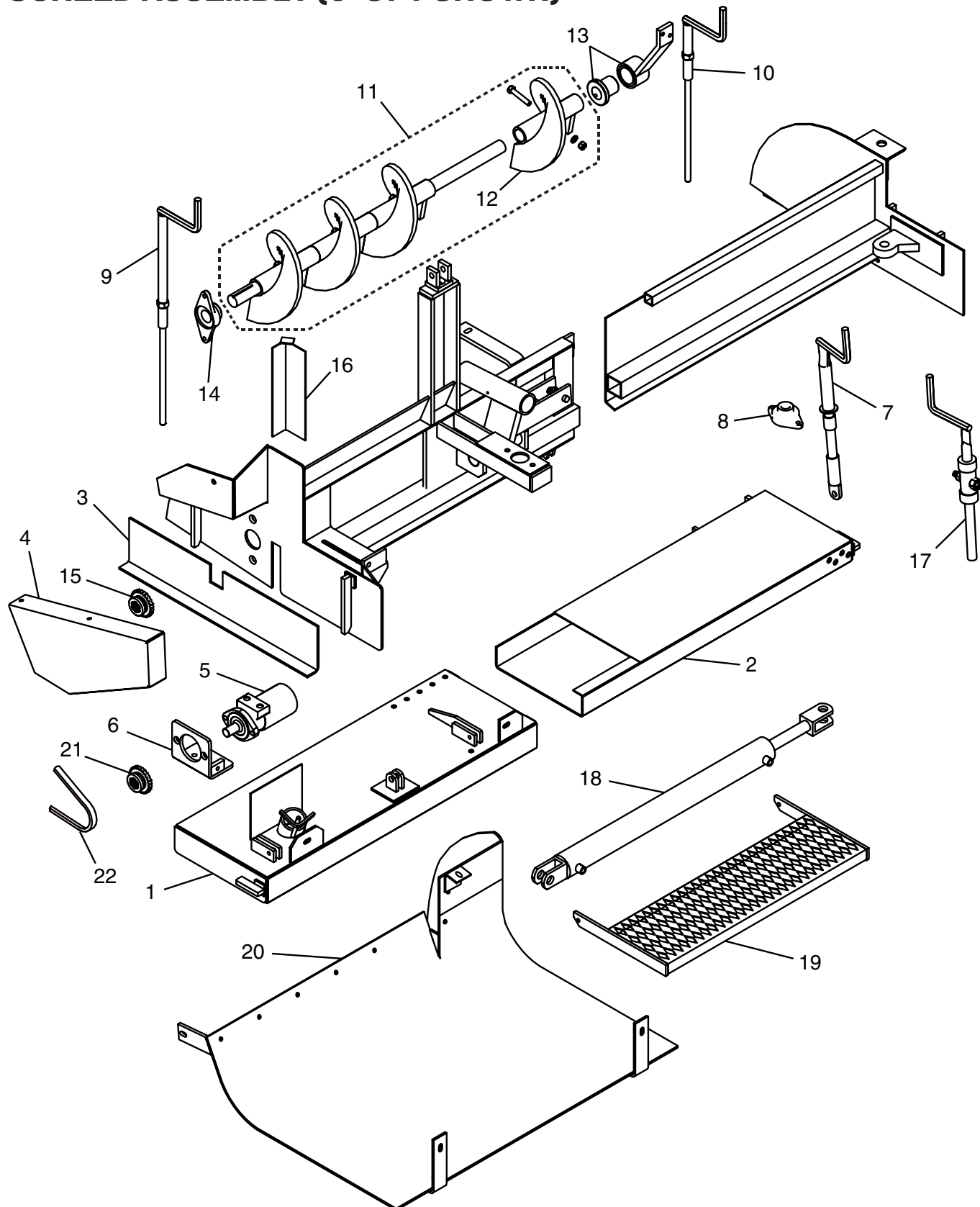


Figure 7-15

Screed Assembly (6' OPT Shown) Parts List

Item No.	Part Number	Qty.	Description	Remarks
-	240000ASRV	Ref.	SCREED ASSY 1200B OPTION	
-	240000SRV	Ref.	SCREED ASSY 1200B STANDARD	
1	240174ASRV	1	SCREED BOX (42"), 1200 OPT	
	240174SRV	Ref.	SCREED BOX 1200 STD OUTER	
2	240164ASRV	1	INSERT BOX, 1200 OPT 42"	
	240164SRV	Ref.	INSERT BOX, 1200 STD 36"	
3	240332SRV	1	DEPTH SHOE, 1200 SCREED LH	
-	240132SRV	1	DEPTH SHOE, 1200 SCREED, RH	
4	250082SRV	1	CHAIN GUARD,MAIN CONVEYOR	
5	240250	1	MOTOR,HYD,12.0 CIR	
-	Ref.	2	CSFHS, 1/2-13 X 1.75, FT	
-	Ref.	2	WASHER, LOCK, 1/2	
-	Ref.	2	NUT, HEX, 1/2-13, GR5	
6	857741	1	MOUNT, SCREED AUGER MOTOR	
7	240212SRV	1	FLIGHT SCREW, 1200 SCREED	
8	240200	1	BEARING,FLIGHT SCREW	
9	240272SRV	1	DEPTH SCREW,LH SHOE	
10	240122SRV	1	DEPTH SCREW,RH SHOE	
	240120	A/R	HAND GRIP, DEPTH SCREW	
11	240284B	1	OPT,AUGER ASSY,4'-6' SCREED	
	240284	Ref.	AUGER ASSY, 1200 STD SCREED	
12	860100C	4	AUGER SECTION RH CASTED 1000	
-	Ref.	4	CSHH, 5/8-11 X 2 3/4, GR2	Auger Bolt
-	Ref.	4	NUT, HEX, 5/8-11	
13	240221SRV	1	BRACKET, SCREED AUGER SUPPORT	
	851645	A/R	COLLAR,AUGER SHAFT END	
14	240290	1	BEARING,FLANGE,2-BOLT,1.50	
15	240310	1	SPROCKET,60B24X1.50 BORE	
16	240361SRV	1	GUARD, LH DEPTH SHOE ADJ SCREW	
17	240092SRV	1	SCREED ANGLE ADJ. SCREW	
	490100	A/R	HAND GRIP, THROTTLE LEVER	
18	900705	1	CYL,HYD,2.00X24.00X1.00 ROD	
	240150-1	A/R	SEAL KIT	
19	240183SRV	1	WALK BOARD, SCREED	

SCREED ASSEMBLY (6' OPT SHOWN) (CONT.)

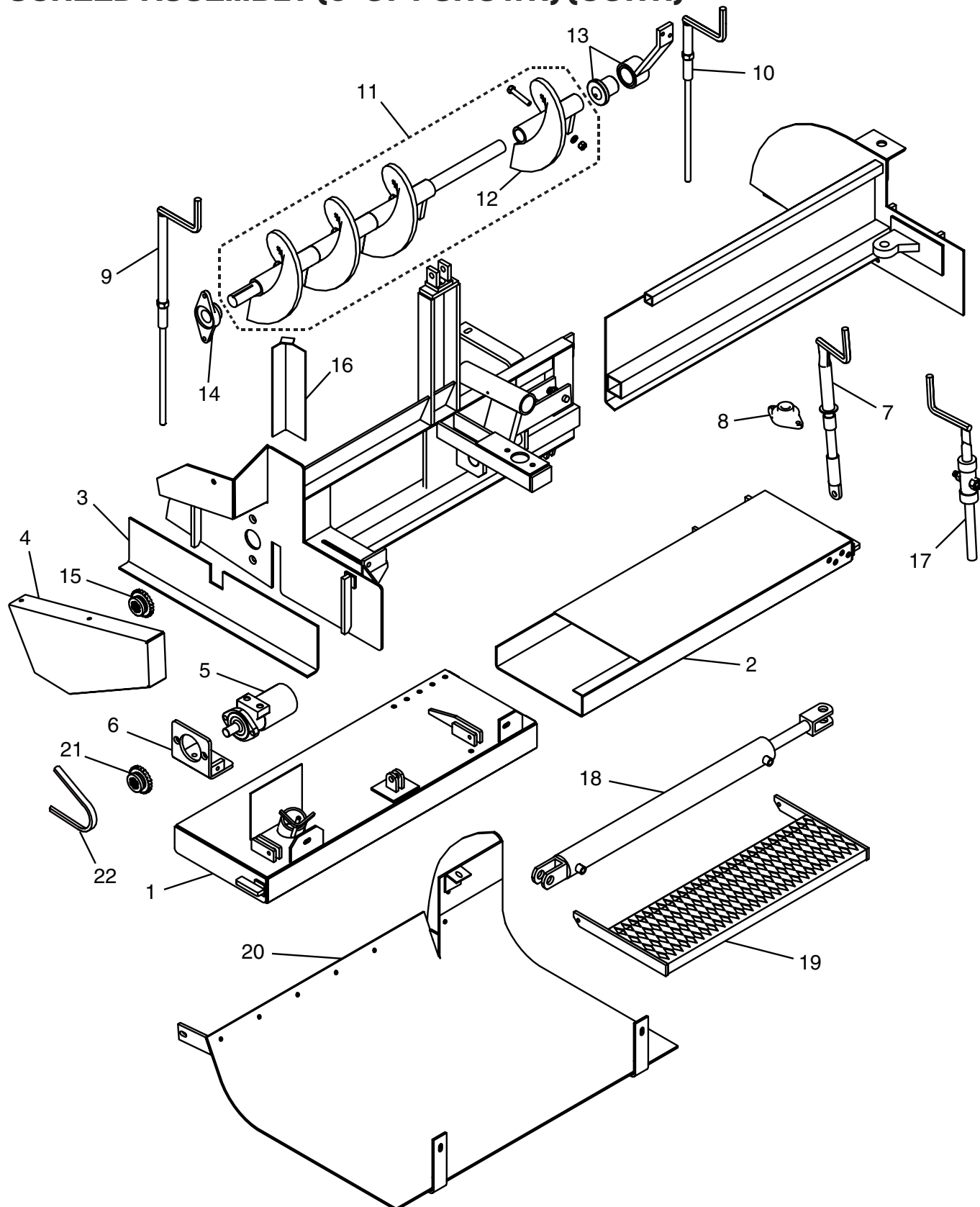


Figure 7-15

Screed Assembly (6' OPT Shown) (Cont.) Parts List

Item No.	Part Number	Qty.	Description	Remarks
20	240374ASRV	1	ROAD WIDENING PAN, 6FT SCREED	
	1000283	A/R	RUBBER,6FT SCREED OPTION,1200	
	240374SRV	Ref.	ROAD WIDENING PAN, ST	
	240380	A/R	FLASHING, ROAD WIDENING PAN	
21	240350	1	SPROCKET,60B12X1.00-6 SPLINE	
22	240300	1	CHAIN,ROLLER,60X52 PITCH	
-	9912006S	A/R	HOSE KIT,1200S W/6' SCREED OPT	
-	1000283	A/R	RUBBER,6FT SCREED OPTION,1200	

SHOULDER ATTACHMENT ASSEMBLY

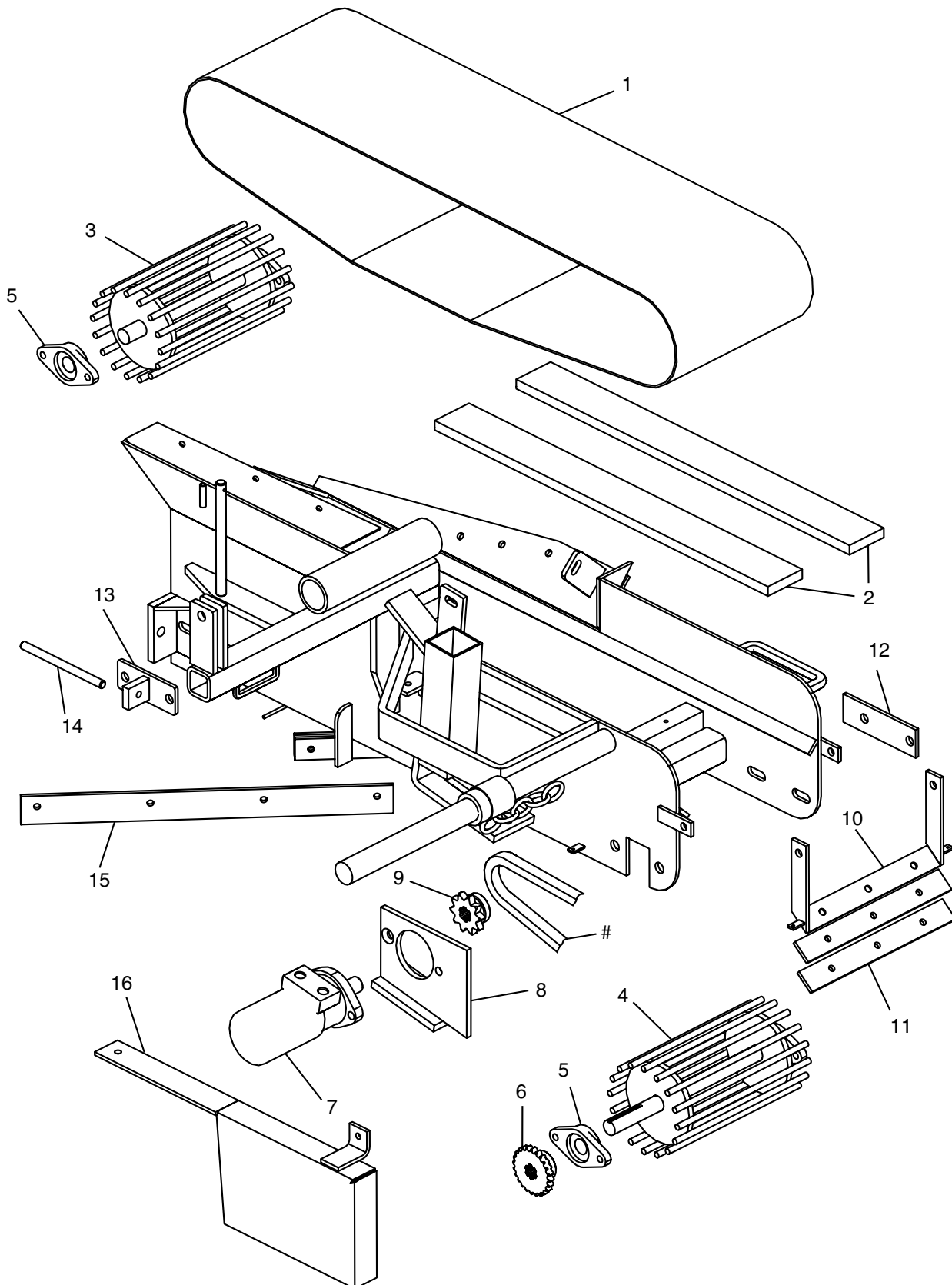


Figure 7-16

Shoulder Attachment Assembly Parts List

Item No.	Part Number	Qty.	Description	Remarks
-	981435SRV	Ref.	ASSY, SHOULDER ATTACHMENT	
-	270254		FRAME ASSY, SHOULDER CONVEYOR	
	270291	A/R	PIN, LH WING	
	270220	A/R	MATERIAL GUIDE, SHOULDER CONVEYOR	
	270231	1	CLAMP,MATERIAL GUIDE (3 HOLE)	
	270241	1	CLAMP,MATERIAL GUIDE (2 HOLE)	
1	270010	1	CONVEYOR BELT, 1200 SHOULDER	
	270020SRV	1	LACING PIN, 12 CONVEYOR BELT	
2	270030	2	WOOD SLAT,SHOULDER CONVR BED	29"
3	270042SRV	1	TAIL PULLEY, SHOULDER CONVEYOR	
4	270061SRV	1	HEAD PULLEY,SHOULDER CONVEYOR	
5	250150	4	BEARING,FLANGE,2-BOLT,1.00	
6	270110	1	SPROCKET,60B24X1.00 BORE	
	270120	1	CHAIN,ROLLER,60X46 PITCH	
7	240250	1	MOTOR,HYD,12.0 CIR	
-	860012	A/R	SEAL KIT,HYD MOTOR,PARKER	
-	Ref.	1	CSFHS, 1/2-13 X 1.75, GR5	
-	Ref.	1	CSHH, 1/2-13 X 1.75, GR5	
-	Ref.	2	WASHER, LOCK, 1/2	
-	Ref.	2	NUT, HEX, 1/2-13	
8	250072	1	MOTOR MOUNT,CONVEYOR DRIVE	
9	240350	1	SPROCKET,60B12X1.00-6 SPLINE	
10	270081SRV	1	BRACKET, SHOULDER CONVEYOR	
11	857865	1	BAR,SHOULDER CONVEYOR WIPE	
	270100	A/R	WIPER, SHOULDER CONVEYOR BELT	
	250170	2	SPRING,EXT, 1200 CONVEYOR BELT WIPER	
12	857874	1	BAR,CONVEYOR HEAD PULLEY ADJ	
13	250181SRV	2	BRACKET, TAIL PULLEY ADJUSTING	
14	250161SRV	2	THD'D ROD,.500-13X7.00	
15	270180	1	BOTTOM SCRAPER, 1200 SHOULDER	
	270172	1	CLAMP,SHOULDER CONVEYOR	
16	270162	1	CHAIN GUARD,SHOULDER CONVEYOR	
-	99SK	A/R	HOSE KIT, 1200, SHLDR CONVEYOR	

SHOULDER ATTACHMENT STRIKE-OFF ASSEMBLY

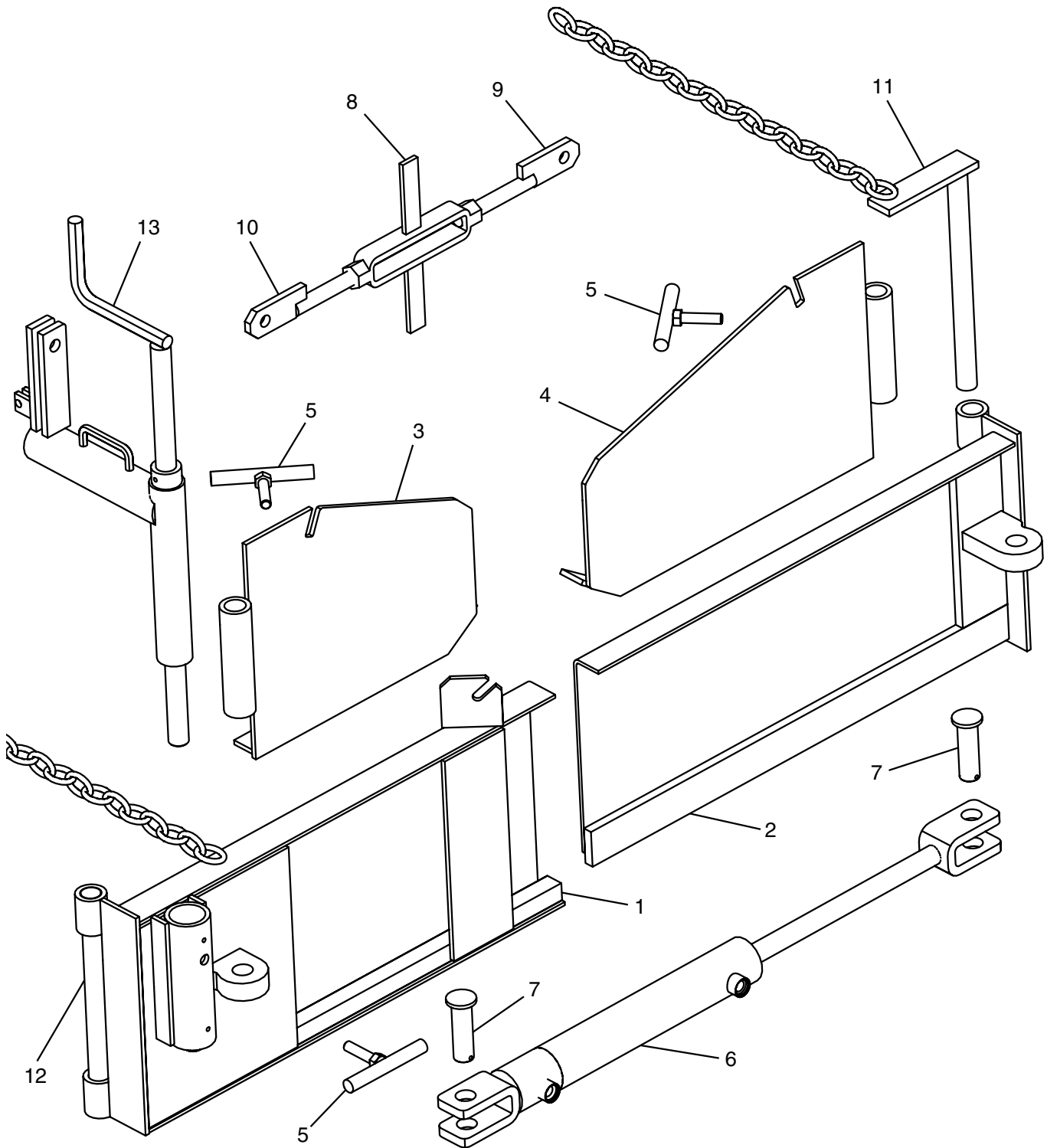


Figure 7-17

Shoulder Attachment Strike-Off Assembly Parts List

Item No.	Part Number	Qty.	Description	Remarks
-	1008765SRV	Ref.	ASSEMBLY, SHOULDER STRIKE OFF	
1	270324SRV	1	FRAME ASSY, SHOULDER	
2	270354SRV	1	EXTENSION, FRAME ASSY	
3	270303SRV	1	WING, SHOULDER STRIKE-OFF, LH	
4	270373SRV	1	WING, SHOULDER STRIKE-OFF, RH	
5	270311SRV	3	TEE HANDLE, SHOULDER	
6	260060	1	CYL, HYD, 2.00X12.00X1.00 ROD	
	260060-1	A/R	SEAL KIT	
7	240030	2	PIN, CLEVIS, 1.00X3.25 W/1.5HD	
8	240060SRV	1	TURNBUCKLE, SCREED STABILIZER	
9	270284SRV	1	DEPTH SCREW, SHOULDER	
10	270262SRV	1	TURNBUCKLE EXTENSION, SHOULDER	
11	270361SRV	1	PIN, RH WING (SHOULDER STRIKE-OFF)	
12	270291SRV	1	PIN, LH WING (SHOULDER STRIKE-OFF)	
13	270354-1SRV	1	ASSY, SHOULDER ADJUSTMENT	

Illustrated Parts List



GRINDER ASSEMBLY

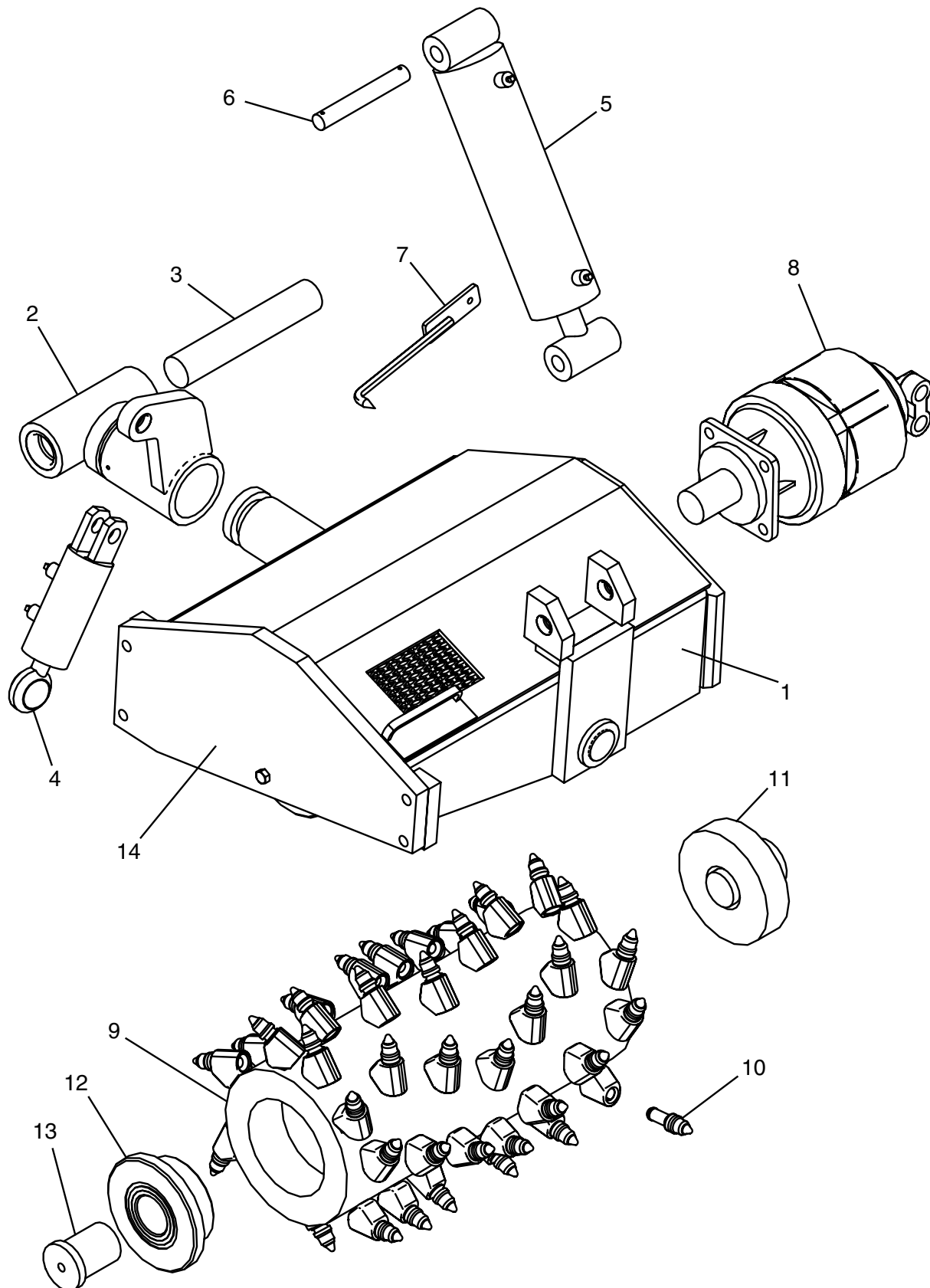


Figure 7-18

Grinder Assembly Parts List

Item No.	Part Number	Qty.	Description	Remarks
-	984437	Ref.	GROUP, GRINDER,1200S	
1	220413	1	HOUSING, GRINDER	
2	220522SRV	1	SWIVEL MOUNT, GRINDER TILT,	
3	857943	1	SHAFT,GRINDER PIVOT MOUNT	
4	220510	1	CYL,HYD,2.50X2.50X1.00 ROD	
	210460-1	A/R	SEAL KIT,HYD CYL,2.50X1.00	
5	220460	1	CYL,HYD,4.00X12.00X2.00 ROD	
	220460-1	A/R	SEAL KIT,HYD CYL,4.00X2.00	
6	858476	2	PIN,1.000,GRINDER LIFT CYL	
7	220471SRV	1	INDICATOR ARM, GRINDER TILT	
8	220450SRV	1	MOTOR,HYD,GRINDER,1200S	
	220450-1	A/R	SEAL,GRINDER MOTOR SHAFT,1200S	
-	Ref.	4	CSHH, 5/8-11 x 1 3/4, GR5	Motor Bolt
-	Ref.	4	WASHER, LOCK, 5/8	
9	220493	1	DRUM,GRINDER,W/BIT BLOCKS	
10	220380	52	CARBIDE BIT,ASPHALT GRINDING	
11	220501	1	DRIVE HUB, 16" GRINDER DRUM	
12	220480	1	BEARING,PILOTED FLANGE,2.50	
13	857929	1	SHAFT,GRINDER BEARING	
14	857924	A/R	PLATE, GRINDER LH SIDE	
-	220400	1	TOOL, BIT REMOVEAL	

GRINDER STABILIZER WHEEL

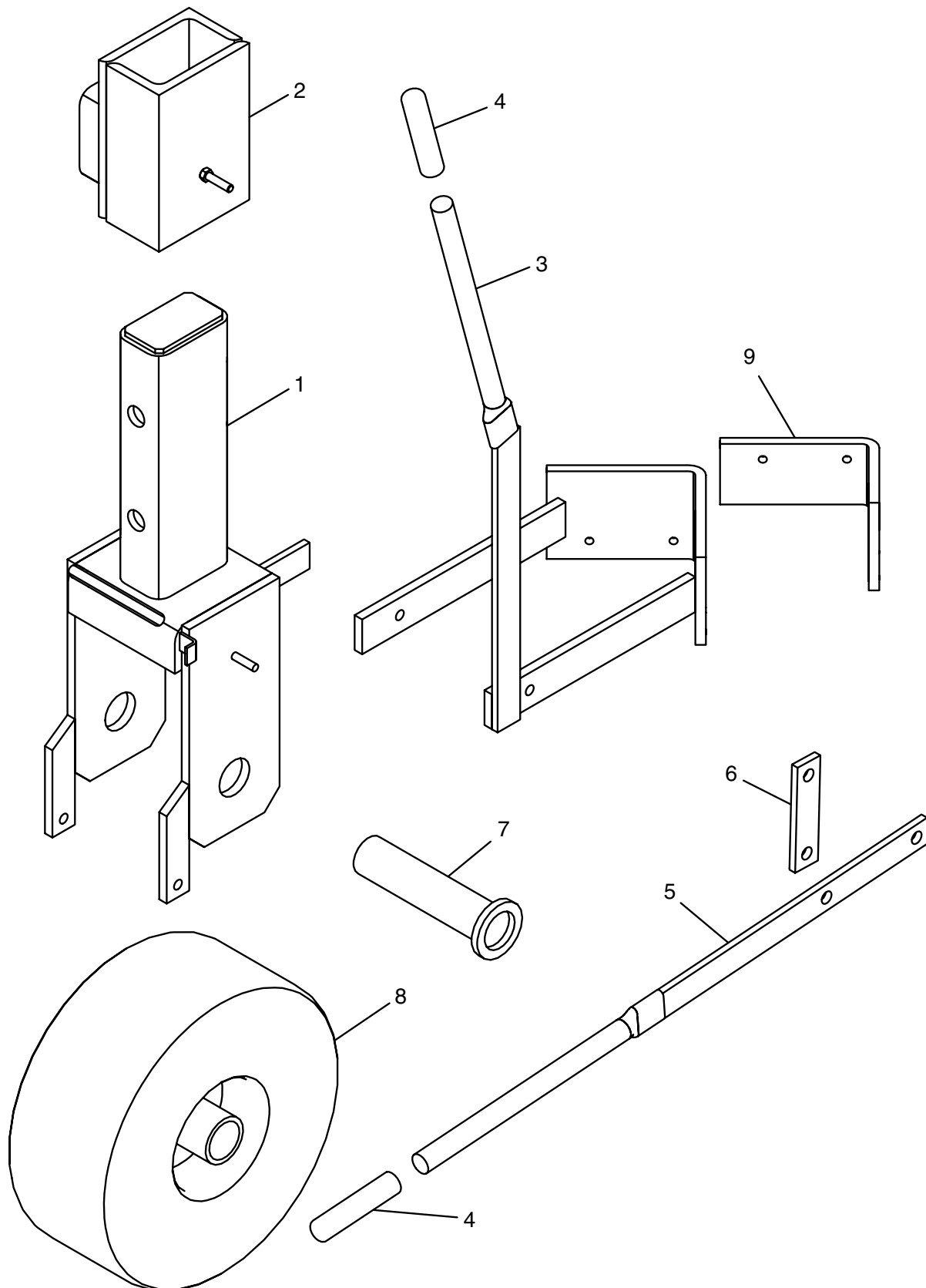


Figure 7-19

Grinder Stabilizer Wheel Parts List

Item No.	Part Number	Qty.	Description	Remarks
1	370121SRV	1	YOKE,GRINDER SUPPORT WHEEL	
2	-	Ref	FRAME WELDMENT	Not Serviceable
	370491	1	PIN, POSITION LOCK	
3	370171SRV	1	ARM, DIRT DEFLECTOR	
	370181	A/R	BLADE, DIRT DEFLECTOR ARM	
4	490010	2	HAND GRIP, DRIVE LEVER	
5	370151SRV	1	LEVER,GRINDER WHEEL RAISE	
6	858437	1	BAR,STABILIZER WHEEL LIFT LEVR	
7	370137SRV	1	AXLE, 1200 GRINDER SUPPORT	
-	Ref.	1	CSHH, 5/8-11 x 1.75, GR5	
-	Ref.	1	WASHER, LOCK, 5/8	
-	Ref.	1	ROLLPIN, 1/4 x 1	
8	370120	1	TIRE & WHEEL ASSY, 1200	
	900304	1	TIRE, 9TH WHEEL	
	210130	2	RIM ASSY,2 PIECE,1200	
	370200	1	FLANGE, WHEEL REINFORCEMENT	
	370141	1	HOUSING, AXLE BEARING	
	420090	2	BEARING,INSERT,2.00	
9	370181	1	BLADE, DIRT DEFLECTOR ARM	

Illustrated Parts List



TACK PIPING ASSEMBLY

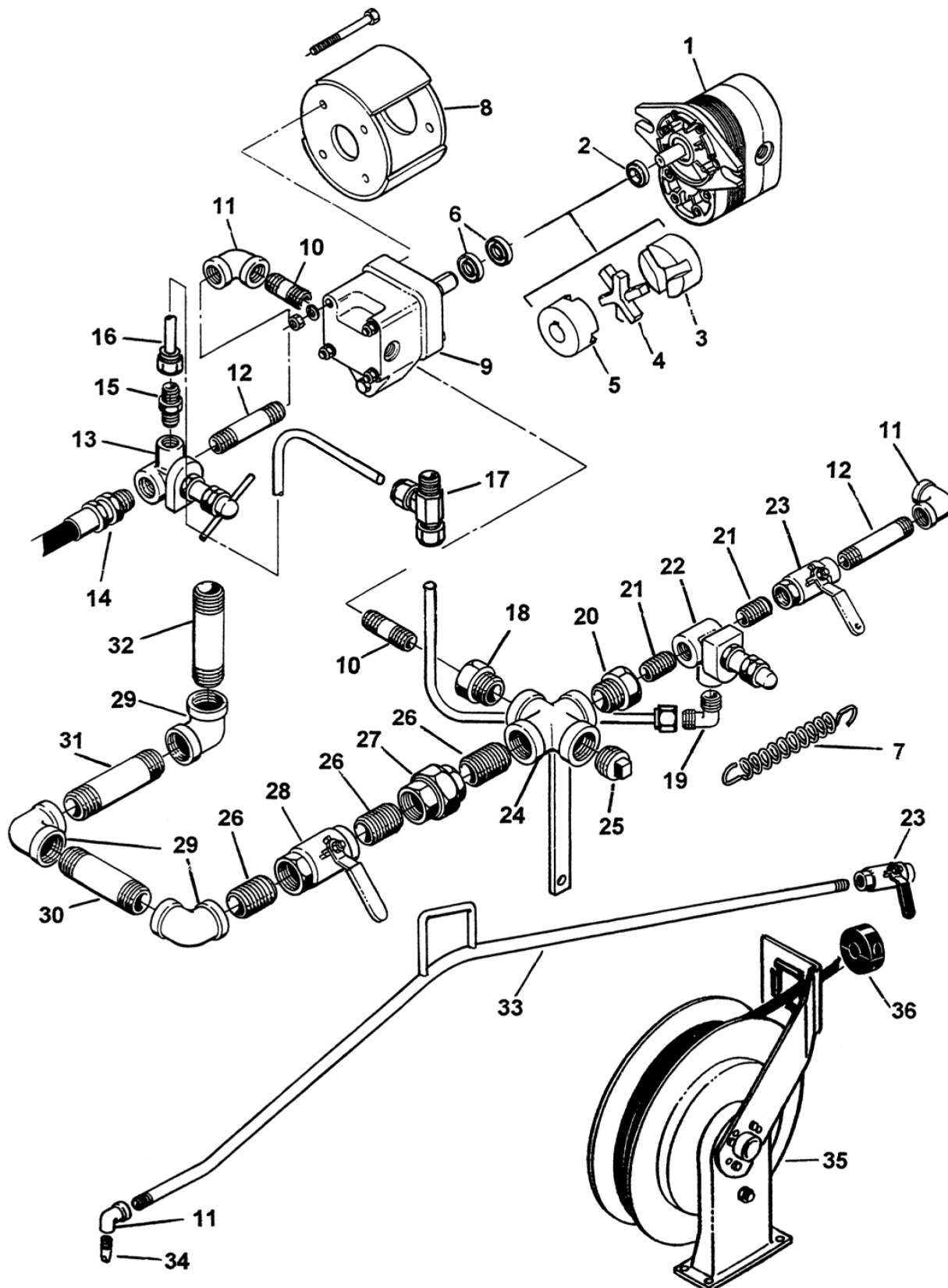


Figure 7-20

Tack Piping Assembly Parts List

Item No.	Part Number	Qty.	Description	Remarks
1	280010		MOTOR, TACK PUMP DRIVE	
3	280030	1	COUPLING, MOTOR	
4	280040	1	RUBBER, INSERT	
5	280050	1	COUPLING, PUMP	
6	280020-1	1	SEAL KIT, TACK PUMP	
7	250170	1	SPRING, RETURN	
8	280062	1	MOUNTING HOUSING	
9	280020	1	PUMP, TACK	
10	280070	3	NIPPLE, PIPE	
11	99512	3	ELBOW, PIPE	
12	280090	2	NIPPLE, 'PIPE	
13	280100	1	RELIEF VALVE, 250 P.S.I.	
14	280110	1	HOSE, TACK	
15	280150A	3	ADAPTER, PIPE TO TUBE	
16	280121	1	TUBE ASSEMBLY, SHORT	
17	280140A	1	TEE, PIPE TO TUBE	
18	280131	1	TUBE ASSEMBLY, LONG	
19	280260A	1	90° ELBOW, PIPE TO TUBE	
20	280240	2	ADAPTER, PIPE	
21	280270	2	NIPPLE, PIPE	
22.	280280	1	VALVE, RELIEF 100 PSI	
23	280290	2	BALL VALVE, 1/2 "	
24	280230	1	CROSS, 4 WAY PIPE	
25	280250	1	PUGE, PIPE	
26	280200	3	NIPPLE, PIPE	
27	280220	1	UNION, PIPE	
28	280210	1	BALL VALVE, 1 "	
29	280170	3	ELBOW, PIPE	
30	280190	1	NIPPLE, PIPE	
31	280180	1	NIPPLE, PIPE	
32	280160	1	NIPPLE, PIPE	
33	280302	1	WAND, TACK SPRAY	
34	280310	1	NOZZLE, TACK SPRAY	
35	150020	1	REWIND HOSE WHEEL	
36	2-HR1004-3	1	BUMPER STOP	

PROPANE HEATER ASSEMBLY

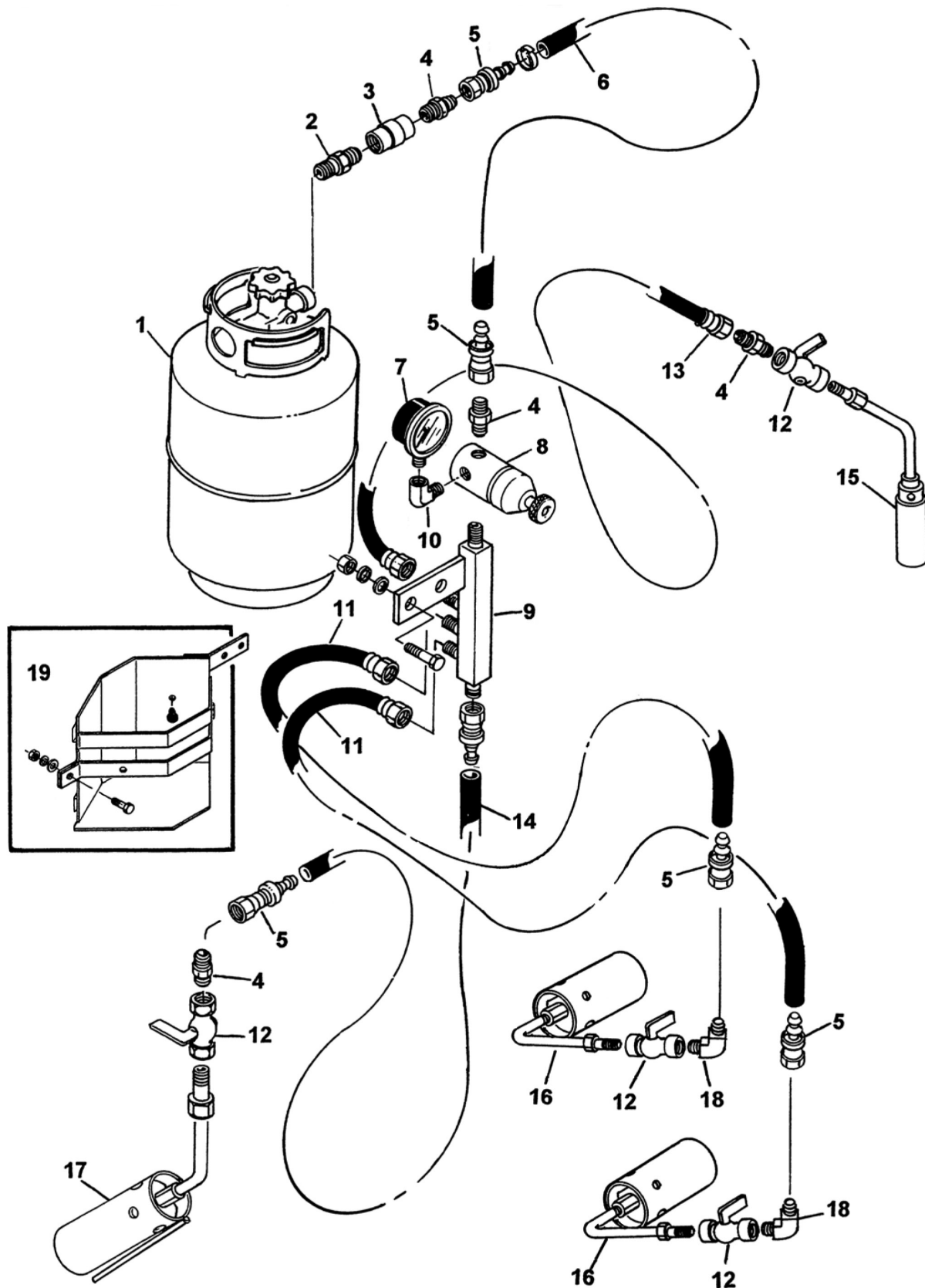


Figure 7-21

Propane Heater Assembly Parts List

Item No.	Part Number	Qty.	Description	Remarks
1	230010-30	1	TANK, 30 LBS. I.P.G.	
2	230030	1	ADAPTER, P.O.L.	
3	230040	1	COUPLING, 1/4 PIPE "	
4	2404-4-2	1	JIC/NPTF CONNECTOR	
5	230260	1	ADAPTER, HOSE TO FLARE	
6	230270	1	HOSE, TANK TO REGULATOR	
7	230110	1	GAUGE, L.P.G. PRESS	
8	982515	1	REGULATOR, I.P.G. PRESS	
9	230131	1	MANIFOLD, I.P.G.	
10	230270	1	STREET ELBOW, 1/4 PIPE "	
11	230210	1	HOSE, TACK TANK BURNER	
12	1008635	1	VALVE , PETCOCK, #2NPTF #2FMNT LPG	
13	230220	1	HOSE, STARTER BURNER	
14	230230	1	HOSE, SCREED BURNER	
15	1008652	1	BURNER, WANO ASSY, ST3WV	
16	1008655	2	BURNER, WANO ASSY, ST6WV	Include 12,18
17	982580SRV	1	BURNER, NOZZLE	
18	230280	1	ELBOW, 1/4 M.P.T. X 114" FLARE "	
19	230291	1	BRACKET, L.P.G. TANK	

Illustrated Parts List



REAR WHEEL & TIRES

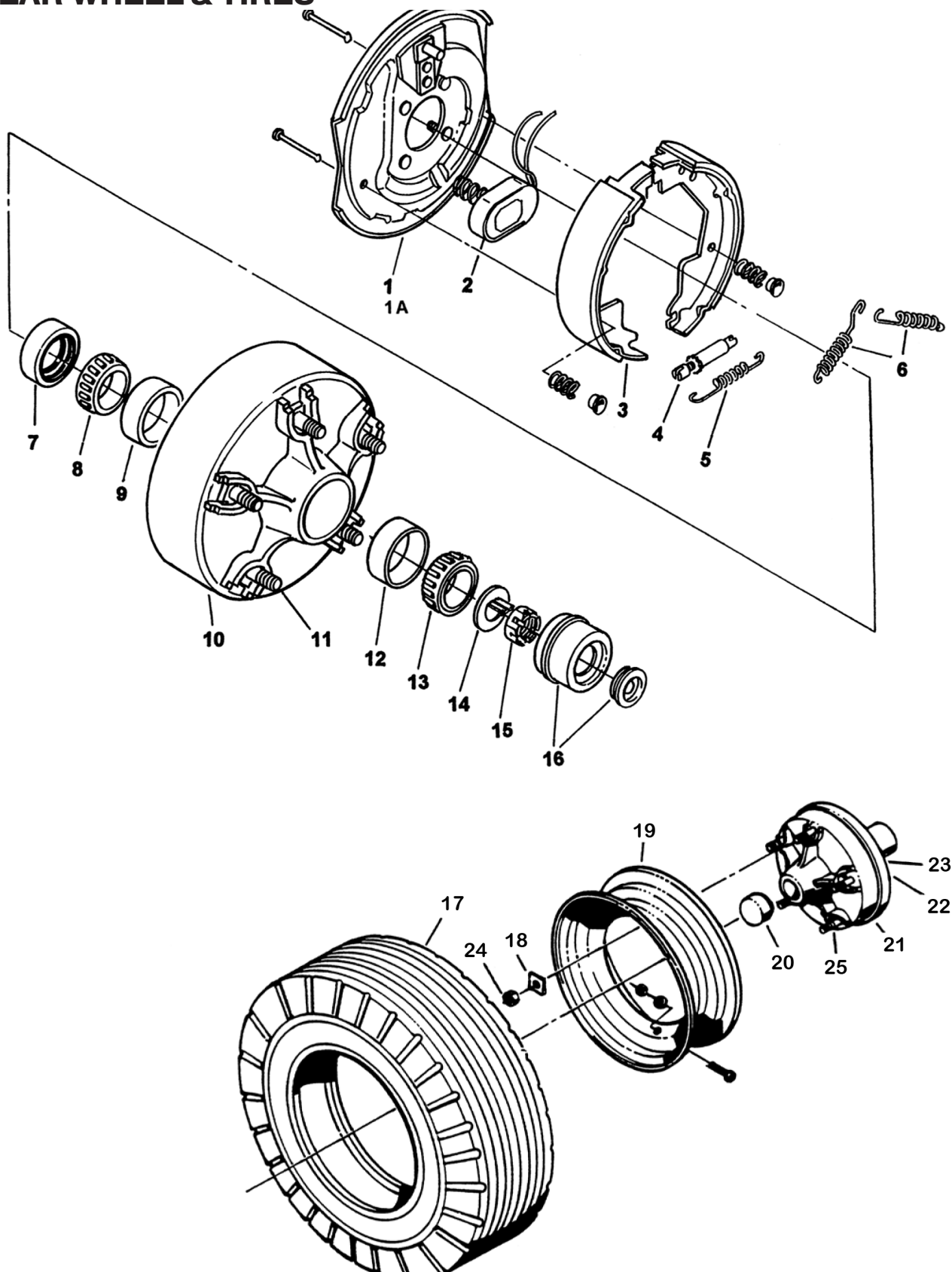


Figure 7-22

Rear Wheel & Tires Parts List

Item No.	Part Number	Qty.	Description	Remarks
1	340060L	1	BACKING PLATE, BRAKE (L.H.)	
1A	340060R	1	BACKING PLATE, BRAKE (R.H.)	
2	340100	1	MAGNET, BRAKE ACTUATING	
3	340070	1	BRAKE SHOE KIT	
4	340110	1	ADJUSTER, BRAKE	
5	340120	1	SPRING, ADJUSTER	
6	340130	1	SPRING, RETRACTOR	
7	33187	1	SEAL	
8	110290	1	BEARING, CONE	
9	110280	1	BEARING, CUP	
10	340050	1	BRAKE DRUM	
11	340160	1	STUD	
12	340170	1	BEARING, CUP	
13	340180	1	BEARING, CONE	
14	610250	1	WASHER	
15	610260	1	NUT	
16	620200	1	CAP, DUST	
17	340010	1	TIRE & WHEEL ASSY.	
18	340020	5	LUG, RIM LOCKING	
19	340030	1	RIM	
20	340040	1	CAP, DUST	
21	340050	1	DRUM, BRAKE	
22	340060L	1	BRAKE ASSY, 12VDC, 2X12, LH	
	340060R	1	BRAKE ASSY, 12VDC, 2X12, RH	
23	340070	2	BRAKE SHOE (NOT SHOWN)	
24	340080	5	LUG NUT	
25	340090	5	STUD	

NOTES

ALPHABETICAL PART INDEX

Alphabetical Part Index



IPL PART LIST

Description	Part Number	Figure Number	Item Number
90° ELBOW, PIPE TO TUBE	280260A	7-20	19
ACTUATOR, EMULSION THROTTLE	987985	7-5	31
ADAPTER, HOSE TO FLARE	230260	7-21	5
ADAPTER, P.O.L.	230030	7-21	2
ADAPTER, PIPE	280240	7-20	20
ADAPTER, PIPE TO TUBE	280150A	7-20	15
ADAPTER, PUMP TO ENG	320200	7-7	3
ADJ SCREW, CONVEYOR TAIL	250161SRV	7-13	5
ADJUSTER, BRAKE	340110	7-22	4
AIR BREATHER HOSE 180 X + 1.7	986537-27	7-5	21
AIR CLEANER ASSY	1003139-03	7-5	18
AIR CLEANER, ELEMENT, MAINTAINER	1005365-04	7-5	23
AIR CLEANER, ELEMENT, SECONDARY	1005365-05	7-5	24
ALARM, BACK UP. 107DB PAVERS/GRADERS	160320	7-1	21
ALTERNATOR, KUB, TIER3, V3600TB	1001166-04	7-5	4
ALTERNATOR, 60AMP, HATZ	985010	7-7	34
ARM, DIRT DEFLECTOR	370171SRV	7-19	3
ARM, GRINDER PUMP CONTROL	220610	7-6	4
ASSEMBLY, DEPTH GAUGE MOUNT	1009385SRV	7-1	16
ASSEMBLY, DEPTH GAUGE MOUNT, EXTENDED	1009389SRV	7-1	
ASSEMBLY, SHOULDER STRIKE OFF	1008765SRV	7-17	-
ASSEMBLY, TIRE AND HUB, INNER	1009077	7-10	-
ASSEMBLY, TIRE AND HUB, OUTER	1009078	7-10	-
ASSY, ENGINE, KUBOTA, MAINTAINER	1005365	7-5	-
ASSY, FWD&REV CONTROL ARM LWR	350121SRV	7-6	5
ASSY, GUIDE BAR, 1200B	985021SRV	7-12	15
ASSY, SHOULDER ADJUSTMENT	270354-1SRV	7-17	13
ASSY, SHOULDER ATTACHMENT	981435SRV	7-16	-
ASSY, NEW STYLE SEAT POST, SHORT	988640SRV	7-4	16
AUGER ASSY, 1200 MAIN	260014	7-12	9
AUGER ASSY, 1200 STD SCREED	240284	7-15	
AUGER SECTION LH CASTED YELLOW	860110C	7-12	12
AUGER SECTION RH CASTED 1000	860100C	7-12	11
AUGER SECTION RH CASTED 1000	860100C	7-15	12
AXLE, 1200 GRINDER SUPPORT	370137SRV	7-19	7
AXLE, 1200, FRONT WHEEL	210252	7-10	2
BACKING PLATE, BRAKE (L.H.)	340060L	7-22	1
BACKING PLATE, BRAKE (R.H.)	340060R	7-22	1A
BALL VALVE, 1"	280210	7-20	28
BALL VALVE, 1/2"	280290	7-20	23

IPL PART LIST

Description	Part Number	Figure Number	Item Number
BAR,CONVEYOR HEAD PULLEY ADJ	857874	7-13	1
BAR,CONVEYOR HEAD PULLEY ADJ	857874	7-16	12
BAR,RH FWD/REV PIVOT	858474	7-4	13
BAR,SHOULDER CONVEYOR WIPE	857865	7-16	11
BAR,STABILIZER WHEEL LIFT LEVR	858437	7-19	6
BEARING CONE	210180	7-10	15
BEARING CUP	210190	7-10	16
BEARING, CONE	110290	7-22	8
BEARING, CONE	340180	7-22	13
BEARING, CUP	110280	7-22	9
BEARING, CUP	340170	7-22	12
BEARING,CPLG SHAFT,LH INNER	210410-LI	7-11	14
BEARING,CPLG SHAFT,LH OUTER	210410-LO	7-11	15
BEARING,CPLG SHAFT,RH INNER	210410-RI	7-11	10
BEARING,CPLG SHAFT,RH OUTER	210410	7-11	9
BEARING,FLANGE,2-BOLT,1.00	250150	7-13	9
BEARING,FLANGE,2-BOLT,1.00	250150	7-16	5
BEARING,FLANGE,2-BOLT,1.50	240290	7-12	13
BEARING,FLANGE,2-BOLT,1.50	240290	7-15	14
BEARING,FLIGHT SCREW	240200	7-15	8
BEARING,INSERT,2.00	420090	7-19	
BEARING,PILOTED FLANGE,2.50	220480	7-18	12
BELT, ENGINE, KUB, TIER3, V3600TB	1001166-05	7-5	6
BELT,ALTERNATOR/BLOWER,HATZ	320090	7-7	30
BLADE, DIRT DEFLECTOR ARM	370181	7-19	
BLADE, DIRT DEFLECTOR ARM	370181	7-19	9
BLOWER/FAN 4-CYL HATZ	320290	7-7	33
BOLT KIT, PUMP MOUNT + FLYWHEEL, KUB, TIR3	1009532	7-5	
BOLT, SEAT PEDESTAL ADJ	360031	7-3	5
BOTTOM SCRAPER, 1200 SHOULDER	270180	7-16	15
BOX, TOWING TONGUE	210491SRV	7-10	3
BOX,CONTROL 1200	1000770	7-7	-
BRACKET, L.P.G. TANK	230291	7-21	19
BRACKET, MAIN CONVEYOR BELT	270091	7-13	2
BRACKET, SCREED AUGER SUPPORT	240221SRV	7-15	13
BRACKET, SHOULDER CONVEYOR	270081SRV	7-16	10
BRACKET, TAIL PULLEY ADJUSTING	250181SRV	7-13	4
BRACKET, TAIL PULLEY ADJUSTING	250181SRV	7-16	13
BRACKET, VALVE LEVER	910058	7-9	3
BRACKET,RELAY MOUNT RELAY MOUNT BRKT	36086	7-2	12

Alphabetical Part Index



Description	Part Number	Figure Number	Item Number
BRAKE ASSY,12VDC,2X12,LH	340060L	7-22	22
BRAKE ASSY,12VDC,2X12,RH	340060R	7-22	
BRAKE CALIPER,PARKING BRAKE	312110	7-11	8
BRAKE DRUM	340050	7-22	10
BRAKE LIGHT	330050	7-1	22
BRAKE LIGHT	330050	7-3	1
BRAKE SHOE (NOT SHOWN)	340070	7-22	23
BRAKE SHOE KIT	340070	7-22	3
BREAKAWAY SWITCH NYLON	852550	7-10	-
BREATHER CAP, 1/4"	620050	7-8	12
BULB, INDICATOR LIGHTS	320360	7-7	-
BUMPER STOP	2-HR1004-3	7-20	36
BURNER, NOZZLE	982580SRV	7-21	17
BURNER, WANO ASSY, ST3WV	1008652	7-21	15
BURNER, WANO ASSY, ST6WV	1008655	7-21	16
BUSHING,2.00 IDX2.50 ODX1.75LG	210010	7-10	-
BUSHING,2.50DX2.0IDX1.5LG	210040	7-10	-
CAB FAN, 12 VOLT	1000-12	7-3	2
CABLE, PARK BRAKE, 1200S	350070	7-1	-
CABLE, PUSH/PULL, 90" X 3" STROKE	350010	7-7	
CABLE, PUSH/PULL, 90" X 3" STROKE	350010	7-1	27
CABLE, RIGHT HAND CONTROL	350020	7-4	20
CABLE,BATTERY,NEG,63",EYE/POST	1200SN	7-8	-
CABLE,BATTERY,POS,63",EYE/EYE	1200SP	7-8	-
CABLE,PUSH/PULL,90"X3" STROKE	350010	7-4	19
CANOPY, 1200S	360042	7-3	6
CAP, DUST	620200	7-22	16
CAP, DUST	340040	7-22	20
CAP,FUEL TANK	330020	7-8	2
CAP,HYD TANK	410080	7-8	5
CAP,RADIATOR KUBOTA	986537-11	7-5	12
CAP,STEERING WHEEL	300010	7-1	7
CAP,STEERING WHEEL	300010	7-4	6
CARBIDE BIT,ASPHALT GRINDING	220380	7-18	10
CASTED HANDLE,RH CONTROL CAST TAB	920210	7-4	1
CHAIN ASSY,SCREED DRAWBAR TOW	858388	7-14	9
CHAIN GUARD, MAIN CONVEYOR	250082SRV	7-13	15
CHAIN GUARD,SHOULDER CONVEYOR	270162	7-16	16
CHAIN W/CLEVIS,.375X38 LINKS	983605	7-10	5
CHAIN,PROOF COIL,.250X30 LINK	858336	7-12	5

Description	Part Number	Figure Number	Item Number
CHAIN,ROLLER,60HX70 PITCH	210230	7-11	18
CHAIN,ROLLER,60X32 PITCH	210360	7-12	17
CHAIN,ROLLER,60X32 PITCH	210360	7-11	5
CHAIN,ROLLER,60X42 PITCH	250040	7-13	11
CHAIN,ROLLER,60X46 PITCH	270120	7-16	
CHAIN,ROLLER,60X52 PITCH	240300	7-15	22
CLAMP, 2 EXH. PIPE "	320030	7-7	25
CLAMP,HOPPER FLASHING	851623SRV	7-12	-
CLAMP,MAIN CONVEYOR BELT WIPER	250101SRV	7-13	
CLAMP,MATERIAL GUIDE (2 HOLE)	270241	7-16	
CLAMP,MATERIAL GUIDE (3 HOLE)	270231	7-16	
CLAMP,SHOULDER CONVEYOR	270172	7-16	
CLEVIS,.250-28	350050	7-1	5
COLLAR,AUGER SHAFT END	851645	7-15	
CONVEYOR BELT, 1200 MAIN	250010	7-13	17
CONVEYOR BELT, 1200 SHOULDER	270010	7-16	1
COUPLING, 1/4 PIPE "	230040	7-21	3
COUPLING, MOTOR	280030	7-20	3
COUPLING, PUMP	280050	7-20	5
COVER, FRONT WHEEL DRIVE UNIT	210313SRV	7-11	20
COVER, IGNITION SWITCH (HATZ)	320370	7-7	-
COVER, INLET	910055	7-9	6
COVER, MUFFLER BOTTOM	HATOO871801	7-7	22
COVER, MUFFLER TOP	HATO1083000	7-7	24
COVER, OUTLET	910056	7-9	1
COVER,HOSE,TANK MOUNT,MAINT.	985056	7-8	13
COVER,MAIN AUGER CHAIN	858558	7-12	7
CROSS, 4 WAY PIPE	280230	7-20	24
CYL,HYD,2.00X12.00X1.00 ROD	260060	7-12	21
CYL,HYD,2.00X12.00X1.00 ROD	260060	7-17	6
CYL,HYD,2.00X24.00X1.00 ROD	900705	7-15	18
CYL,HYD,2.50X12.00X1.00 ROD	210460	7-11	21
CYL,HYD,2.50X2.50X1.00 ROD	220510	7-18	4
CYL,HYD,3.50X7.00X1.50 ROD	210070SRV	7-10	10
CYL,HYD,4.00X12.00X2.00 ROD	220460	7-18	5
CYL,HYD,4.00X7.00X1.250 ROD	240040	7-14	3
CYL,HYD,HOPPER WING,1000B	910145	7-12	2
DECAL,CONTROL PANEL,MAINTAINER,KUBOTA	1006223	7-2	2
DEPTH GAUGE INDICATOR	1009386SRV	7-1	19
DEPTH SCREW, SHOULDER	270284SRV	7-17	9

Alphabetical Part Index



Description	Part Number	Figure Number	Item Number
DEPTH SCREW,LH SHOE	240272SRV	7-15	9
DEPTH SCREW,RH SHOE	240122SRV	7-15	10
DEPTH SHOE, 1200 SCREED LH	240332SRV	7-15	3
DEPTH SHOE, 1200 SCREED, RH	240132SRV	7-15	-
DETENT KIT	901007	7-9	13
DIP STICK, HATZ ENGINE OIL	320110	7-7	37
DISC, BRAKE ROTOR	210490SRV	7-11	13
DRAWBAR, FRONT END	210273SRV	7-10	8
DRAWBAR, SCREED	240024SRV	7-14	-
DRIVE HUB, 16" GRINDER DRUM	220501	7-18	11
DRUM, BRAKE	340050	7-22	21
DRUM,GRINDER,W/BIT BLOCKS	220493	7-18	9
ELBOW, 1/4 M.P.T. X 114" FLARE "	230280	7-21	18
ELBOW, PIPE	99512	7-20	11
ELBOW, PIPE	280170	7-20	29
ELBOW,PIPE,90,.500 STREET,MI	99526	7-8	10
ELEMENT, FUEL FILTER (HATZ DIESEL)	988670-01	7-7	4
ENCLOSURE,ELEC,10X12X5	1002086	7-2	1
END CAP, VALVE SPOOL	141040	7-9	11
ENGINE,HATZ,4L41C TEIR 3	320001	7-7	1
EXTENSION, FRAME ASSY	270354SRV	7-17	2
EXTENSION, TOWING TONGUE	210093SRV	7-10	4
FAN, COOLING, MAINTAINER	1005365-20	7-5	8
FILTER ELEMENT	290030	7-8	17
FILTER ELEMENT, FUEL	982080-02	7-5	2
FILTER ELEMENT,AIR	310060	7-7	35
FILTER ELEMENT,FUEL	310080	7-7	38
FILTER ELEMENT,OIL	310070	7-7	39
FILTER HEAD	290010	7-8	15
FILTER OIL KUBOTA	986537-03	7-5	1
FILTER, FUEL, IN LINE	1001166-12	7-5	-
FILTER,FUEL,IN LINE	310090	7-7	43
FIRE EXTINGUISHER, 2-1/2 LBS W/BACKET	360050	7-1	20
FLANGE, WHEEL REINFORCEMENT	370200	7-19	
FLASHING, HOPPER 1000C	851622	7-12	8
FLASHING, ROAD WIDENING PAN	240380	7-15	
FLIGHT SCREW, 1200 SCREED	240212SRV	7-15	7
FLOAT ASSY.	141050	7-9	12
FOOT GUARD, FRONT WHEEL	210481	7-10	12
FRAME ASSY, SHOULDER	270324SRV	7-17	1

Description	Part Number	Figure Number	Item Number
FRAME ASSY, SHOULDER CONVEYOR	270254	7-16	-
FRAME WELDMENT	-	7-19	2
FUSE BLOCK,10 GANG,ATC	36694	7-2	14
GASKET, MUFFLER TO MANIFOLD	HATO01603700	7-7	42
GASKET,EXH MANIFOLD/HEAD	320260	7-7	28
GAUGE, LP.G. PRESS	230110	7-21	7
GAUGE,FUEL LEVEL	140380	7-7	-
GAUGE,FUEL LEVEL,FARIA 2" BLACK BEZEL	1002033	7-2	8
GAUGE,HOUR METER,4 WIRE	984962	7-7	-
GAUGE,HOURMETER,FARIA 2" BLACK BEZEL	1002035	7-2	9
GAUGE,SIGHT LEVEL/TEMP,HYD OIL	500070	7-8	6
GAUGE,TACH,3 IN 1,OIL/WATER 5" BLACK BEZEL	1002032	7-2	7
GAUGE,TACK TEMP/HYD OIL TEMP	330040	7-8	14
GAUGE,VOLTMETER,FARIA 2" BLACK BEZEL	1002034	7-2	10
GRINDER CONTROL HANDLE	1009382	7-1	11
GROUP, GRINDER,1200S	984437	7-18	-
GUARD, FAN, MAINTAINER	1005365-23	7-5	9
GUARD, LH DEPTH SHOE ADJ SCREW	240361SRV	7-15	16
GUARD, RADIATOR, MAINTAINER	1005365-22	7-5	11
GUIDE, SIDE WING SLIDE	852645SRV	7-12	14
HAND GRIP, DEPTH SCREW	240120	7-15	
HAND GRIP, DRIVE LEVER	490010	7-19	4
HAND GRIP, DRIVE LEVER *	490010	7-1	12
HAND GRIP, DRIVE LEVER *	490010	7-4	12
HAND GRIP, FLIGHT/DEPTH SCREW	870276	7-1	23
HAND GRIP, FLIGHT/DEPTH SCREW	870276	7-6	8
HAND GRIP, THROTTLE LEVER	490100	7-15	
HANDLE (MODIFIED), V-20 VALVE CONTROL (1200)	350090	7-1	1
HANDLE NUT, .625-11	300060	7-4	14
HANDLE NUT, .625-11	300060	7-6	6
HANDLE, HORIZONTAL (V-20 VALVE)	910070	7-1	3
HANDLE, HORIZONTAL, WITH BAR, (V-20 VALVE)	1009531	7-1	4
HANDLE, VERTICAL, V-20 VALVE	910060	7-1	2
HARNESS, ENGINE, KUBOTA	1001166-67	7-5	-
HATZ ENGINE CONTROLER	988670-02	7-7	-
HEAD PULLEY,MAIN CONVEYOR	250142SRV	7-13	8
HEAD PULLEY,SHOULDER CONVEYOR	270061SRV	7-16	4
HEAT SHIELD, MUFFLER	320510	7-7	27
HINGE PIN, HOPPER WING	1009398	7-12	4
HOSE KIT, 1200, SHLDR CONVEYOR	99SK	7-16	-

Alphabetical Part Index



Description	Part Number	Figure Number	Item Number
HOSE KIT,1200S W/6' SCREED OPT	9912006S	7-15	-
HOSE W/FITTING,OIL DRAIN,HATZ	851497	7-7	7
HOSE, RADIATOR, LOWER	1005365-27	7-5	14
HOSE, SCREED BURNER	230230	7-21	14
HOSE, STARTER BURNER	230220	7-21	13
HOSE, TACK	280110	7-20	14
HOSE, TACK TANK BURNER	230210	7-21	11
HOSE, TANK TO REGULATOR	230270	7-21	6
HOSE,RADIATOR,UPPER	986537-21	7-5	13
HOUSING, AXLE BEARING	370141	7-19	
HOUSING, GRINDER	220413	7-18	1
HUB & SPROCKET,FRONT AXLE,1200	210223	7-10	13
HUB CAP, FRONT AXLE	210152	7-10	19
IDLER PULLEY,MAIN CONVEYOR	250132SRV	7-13	7
INDICATOR ARM, GRINDER TILT	220471SRV	7-18	7
INDICATOR LAMP, AIR FILTER	320385	7-7	-
INDICATOR LAMP, ENGINE TEMP	320383	7-7	-
INDICATOR LIGHT, BATTERY CHARGE	320386	7-7	-
INDICATOR LIGHT, ENG.OIL PRESS.	320384	7-7	-
INNER TUBE, FRONT TIRE	210120	7-10	25
INSERT BOX, 1200 OPT 42"	240164ASRV	7-15	2
INSERT BOX, 1200 STD 36"	240164SRV	7-15	
INTAKE, RUBBER REDUCER, KUBOTA	1005365-28	7-5	19
ISOLATOR	986537-14	7-5	17
ISOLATOR, RAD UPPER MNT	1001166-57	7-5	29
JACKSHAFT,1200 DRIVE,LH	210432SRV	7-11	16
JACKSHAFT,1200S DRIVE,RH	210521SRV	7-11	11
JIC/NPTF CONNECTOR	4/2/2404	7-21	4
KEY, IGNITION	982008-04	7-2	-
KEY,IGNITION,HATZ,DIESEL	320380	7-7	-
KEYSTOCK,SQ,,250X1.75	857827	7-13	-
KEYSTOCK,SQ,,250X4.00	210511SRV	7-11	-
LACING PIN, 12 CONVEYOR BELT	270020SRV	7-16	
LACING PIN, MAIN CONVEYOR BELT	250020	7-13	-
LEVER ASSY, PARKING BRAKE	140060	7-1	15
LEVER,GRINDER WHEEL RAISE	370151SRV	7-19	5
LEVER,PUMP,FWD/REV,1200,RH	370080SRV	7-4	11
LEVER,THROTTLE,HATZ	320120	7-7	36
LIGHT,RED,DASH,.50 HOLE RED DASH LIGHT	31983	7-2	5
LINER, RIM	210140	7-10	24

Description	Part Number	Figure Number	Item Number
LOCK, TONGUE SAFETY (1200S)	210071	7-10	27
LONG EXTENSION, SCREED	240051SRV	7-14	5
LUG NUT	340080	7-22	24
LUG, RIM LOCKING	340020	7-22	18
MAGNET, BRAKE ACTUATING	340100	7-22	2
MANIFOLD, I.P.G.	230131	7-21	9
MANIFOLD,EXH,HATZ 4 CYL	320250-4	7-7	29
MATERIAL GUIDE, SHOULDER CONVEYOR	270220	7-16	
MOTOR MOUNT,CONVEYOR DRIVE	250072	7-13	12
MOTOR MOUNT,CONVEYOR DRIVE	250072	7-16	8
MOTOR, TACK PUMP DRIVE	280010	7-20	1
MOTOR,HYD,12.0 CIR	240250	7-15	5
MOTOR,HYD,12.0 CIR	240250	7-16	7
MOTOR,HYD,20.0 CIR	250060	7-13	13
MOTOR,HYD,22.0 CIR	260130	7-12	20
MOTOR,HYD,DRIVE,1200	210340	7-11	3
MOTOR,HYD,GRINDER,1200S	220450SRV	7-18	8
MOTOR,HYD,POWER STEERING	36127	7-4	8
MOTOR,HYD,POWER STEERING	36127	7-1	10
MOTOR,STARTER,HATZ	320270	7-7	31
MOUNT, 1200 LH DRIVE MOTOR	210332	7-11	-
MOUNT, 1200 MAIN AUGER MOTOR	260122	7-12	18
MOUNT, 1200 RH DRIVE MOTOR	210322	7-11	2
MOUNT, SCREED AUGER MOTOR	857741	7-15	6
MOUNT, STARTER RELAY	320330	7-7	-
MOUNTING BAND,8.13 ID	38386	7-5	22
MOUNTING HOUSING	280062	7-20	8
MOUNTING PAD, HATZ DIESEL ENG	320140-1	7-7	6
MOUNTING PLATE, DRIVE	210522	7-11	1
MUFFLER, HATZ SILENT PACK	320422	7-7	23
MUFFLER, HEAT SHIELD, MAINTAINER	1005365-25	7-5	27
MUFFLER, MAINTAINER	1005365-16	7-5	26
MUFFLER, TAIL PIPE, KUBOTA	1005365-31	7-5	28
NIPPLE, PIPE	280070	7-20	10
NIPPLE, PIPE	280270	7-20	21
NIPPLE, PIPE	280200	7-20	26
NIPPLE, PIPE	280190	7-20	30
NIPPLE, PIPE	280180	7-20	31
NIPPLE, PIPE	280160	7-20	32
NIPPLE, 'PIPE	280090	7-20	12

Alphabetical Part Index



Description	Part Number	Figure Number	Item Number
NOZZLE, TACK SPRAY	280310	7-20	34
NUT	610260	7-22	15
NUT, HEX, .813-20	300020	7-1	
NUT, HEX, .813-20	300020	7-4	
NUT, LOCK	210160	7-10	18
OIL FILTER, HATZ	310070	7-7	5
OPT, AUGER ASSY, 4'-6' SCREED	240284B	7-15	11
PANEL, CONTROL MAINTAINER KUBOTA	1006218	7-2	
PEDESTAL, 1200 LH SEAT SUPPORT	360022SRV	7-3	4
PIN, DRAWBAR	240011SRV	7-14	2
PIN, HYDRAULIC CYLINDER, LOWER	260071	7-12	22
PIN, HYDRAULIC CYLINDER, UPPER	210060	7-12	23
PIN, LH WING	270291	7-16	
PIN, LH WING (SHOULDER STRIKE-OFF)	270291SRV	7-17	12
PIN, POSITION LOCK	370491	7-19	
PIN, RH WING (SHOULDER STRIKE-OFF)	270361SRV	7-17	11
PIN, TONGUE BOX	210282SRV	7-10	6
PIN, TONGUE POSITIONER	210082SRV	7-10	7
PIN, .50X3.00, W/HAIRPIN COTTER	72836	7-4	17
PIN, 1.000, GRINDER LIFT CYL	858476	7-18	6
PIN, CLEVIS, 1.00X2.625 W/1.5HD	210060	7-10	11
PIN, CLEVIS, 1.00X3.25 W/1.5HD	240030	7-14	4
PIN, CLEVIS, 1.00X3.25 W/1.5HD	240030	7-17	7
PIN, CYLINDER	910146	7-12	3
PIN, TONGUE SAFETY CHANNEL	858015SRV	7-10	28
PIPE EXT. MUFFLER	851164	7-7	26
PIPE, CHAIN GUARD, PVC	852428	7-12	-
PIPE, EXHAUST, KUBOTA	1005365-30	7-5	20
PIPE, EXHAUST, KUBOTA	1005365-30	7-5	25
PIPE, NIPPLE, .500X5.50	280090	7-8	11
PLATE, CHAIN GUARD	857797	7-15	4
PLATE, EMERGENCY STOP SWITCH	980862	7-1	24
PLATE, EMERGENCY STOP SWITCH	980862	7-4	9
PLATE, FLYWHEEL, KUBOTA V3300/3307	1009533	7-5	16
PLATE, GRINDER LH SIDE	857924	7-18	14
PLATE, HOPPER FLASHING MNTG	858083	7-12	-
PLATE, MUFFLER BOTTOM	HATO3878000	7-7	21
PLATE, PUMP, MNT, KUB, TIER3	1001166-11	7-5	15
PLATE, FLYWHEEL PUMP DRIVE	320170	7-7	2
PLATE, SIDE COVER	980588	7-1	14

Description	Part Number	Figure Number	Item Number
PUGE, PIPE	280250	7-20	25
PUMP, FUEL, 12VDC, KUBOTA	986537-39	7-5	5
PUMP, TACK	280020	7-20	9
PUMP, HYD, GEAR, .85 CIR	320232	7-6	1
PUMP, HYD, GEAR, .85 CIR	320232	7-7	45
PUMP, HYD, PISTON, TANDEM, V V	320237	7-6	2
PUMP, HYD, PISTON, TANDEM, V V	320237	7-7	44
RADIATOR, MAINTAINER	1005365-12	7-5	10
RED BUSHING, 1/2 MPT X 1/4 FPT	280320	7-8	-
REGULATOR, I.P.G. PRESS	982515	7-21	8
RELAY, 12VDC, SPDT, 40 AMP, 5 PIN	36085	7-2	13
RELAY, STARTER, HATZ	320320	7-7	-
RELIEF VALVE	901009	7-9	5
RELIEF VALVE, 250 P.S.I.	280100	7-20	13
REWIND HOSE WHEEL	150020	7-20	35
RIM	340030	7-22	19
RIM ASSY, 2 PIECE, 1200	210130	7-10	23
RIM ASSY, 2 PIECE, 1200	210130	7-19	-
ROAD WIDENING PAN, 6FT SCREED	240374ASRV	7-15	20
ROAD WIDENING PAN, ST	240374SRV	7-15	-
ROLLPIN, 1/4 X 1	Ref.	7-14	-
ROLLPIN, 1/4 x 1	Ref.	7-19	-
RUBBER, INSERT	280040	7-20	4
RUBBER, 6FT SCREED OPTION, 1200	1000283	7-15	-
RUBBER, 6FT SCREED OPTION, 1200	1000283	7-15	-
SCREED ANGLE ADJ. SCREW	240092SRV	7-15	17
SCREED ASSY 1200B OPTION	240000ASRV	7-15	-
SCREED ASSY 1200B STANDARD	240000SRV	7-15	-
SCREED BOX (42"), 1200 OPT	240174ASRV	7-15	1
SCREED BOX 1200 STD OUTER	240174SRV	7-15	-
SEAL	210240	7-10	14
SEAL	33187	7-22	7
SEAL KIT	210070-1	7-10	-
SEAL KIT	210460-1	7-11	-
SEAL KIT	260060-1	7-12	-
SEAL KIT	240150-1	7-15	-
SEAL KIT	260060-1	7-17	-
SEAL KIT, MOTOR	860012	7-11	-
SEAL KIT, TACK PUMP	280020-1	7-20	6
SEAL KIT, VALVE SECTION	910062	7-9	9

Alphabetical Part Index



Description	Part Number	Figure Number	Item Number
SEAL KIT, VALVE SPOOL	910059	7-9	14
SEAL KIT,HYD CYL,2.50X1.00	210460-1	7-18	
SEAL KIT,HYD CYL,4.00X1.25	240040-1	7-14	
SEAL KIT,HYD CYL,4.00X2.00	220460-1	7-18	
SEAL KIT,HYD MOTOR,PARKER	860014	7-12	-
SEAL KIT,HYD MOTOR,PARKER	860012	7-13	-
SEAL KIT,HYD MOTOR,PARKER	860012	7-16	-
SEAL,GRINDER MOTOR SHAFT,1200S	220450-1	7-18	
SEAT ASSY, WHITE, W/ARMREST	360010	7-3	
SEAT ASSY,BLACK,W/ARMREST	360010B	7-3	3
SEAT ASSY,BLACK,W/ARMREST	360010B	7-4	15
SENDER, OIL PRESSURE, MAINTAINER	1005365-10	7-5	-
SENDER, TEMP, 100-250 F, 06 MP	1002184-28	7-5	-
SENDING UNIT, ENG OIL PRESS	982008-09	7-5	-
SHAFT,GRINDER BEARING	857929	7-18	13
SHAFT,GRINDER PIVOT MOUNT	857943	7-18	3
SHIELD, SPLASH	120011	7-8	7
SHORT EXTENSION, SCREED	240071SRV	7-14	7
SOCKET, 6 WAY TRAILER PLUG	755-5048	7-10	29
SOLENOID FUEL SHUT OFF	986537-05	7-5	-
SOLENOID,STARTER,HATZ	320280	7-7	32
SPACER,ENGINE FAN,CHALVKUB	1002184-07	7-5	7
SPRING RETURN KIT	901014	7-9	10
SPRING, ADJUSTER	340120	7-22	5
SPRING, RETRACTOR	340130	7-22	6
SPRING, RETURN	250170	7-20	7
SPRING, SHIFTER GATE	350140	7-6	-
SPRING,COMP,	930029	7-12	6
SPRING,EXT, 1200 CONVEYOR BELT WIPER	250170	7-13	-
SPRING,EXT, 1200 CONVEYOR BELT WIPER	250170	7-16	
SPROCKET,60B10X1.00-6 SPLINE	210350SRV	7-11	4
SPROCKET,60B10X1.00-6 SPLINE	210350SRV	7-13	14
SPROCKET,60B10X1.00-6SPLINE	210350SRV	7-12	19
SPROCKET,60B12X1.00-6 SPLINE	240350	7-16	9
SPROCKET,60B12X1.00-6 SPLINE	240350	7-15	21
SPROCKET,60B24X1.00 BORE	270110	7-16	6
SPROCKET,60B24X1.50 BORE	240310	7-15	15
SPROCKET,60B45X1.50 BORE	260090	7-12	16
SPROCKET,60P26	210400	7-11	12
SPROCKET,60P26	210400	7-11	17

Description	Part Number	Figure Number	Item Number
SPROCKET,MAIN CONVEYOR DRIVE	250190	7-13	10
STARTER, KUB, TIER3, V3600TB	1001166-03	7-5	3
STEERING COLUMN,6.00 400/685/1200	300040	7-1	9
STEERING COLUMN,6.00 400/685/1200	300040	7-4	7
STEERING WHEEL,17.00,36 SPLINE	300030	7-1	8
STEERING WHEEL,17.00,36 SPLINE	300030	7-4	5
STREET ELBOW, 1/4 PIPE "	230270	7-21	10
STUD	340160	7-22	11
STUD	340090	7-22	25
SUBFRAME, BRACING CENTER	987685	7-5	-
SUPPORT, DRAWBAR LOWER BUSHING	210262SRV	7-10	9
SWITCH, TEMP KUBOTA	986537-49	7-5	-
SWITCH,IGNITION,HATZ	320390	7-7	-
SWITCH,IGNITION,W/HEAT ST KUBOTA	39146-14	7-2	11
SWITCH,NEUTRAL SAFETY	490040	7-6	9
SWITCH,NEUTRAL SAFETY MICROSWITCH	490040	7-1	13
SWITCH,OIL PRESS	853490	7-7	41
SWITCH,PUSH BUTTON	982249	7-1	25
SWITCH,PUSH BUTTON	982249	7-2	3
SWITCH,PUSH BUTTON	982249	7-4	10
SWITCH,TOGGLE,3POS,REV,DPDT MO	900080	7-2	4
SWITCH,TOGGLE,SPST,2-POS 2 SPEED HIGH/LOW	851391	7-2	6
SWIVEL MOUNT, GRINDER TILT,	220522SRV	7-18	2
TAIL PULLEY, SHOULDER CONVEYOR	270042SRV	7-16	3
TAIL PULLEY,MAIN CONVEYOR	250122SRV	7-13	6
TANK W/M, FUEL	800006	7-8	3
TANK W/M, FUEL, 1200B	DH-1016SRV	7-8	1
TANK W/M,HYD,TOP,1200	330070	7-8	4
TANK, 30 LBS. I.P.G.	230010-30	7-21	1
TANK, COOLANT RESERVE, MAINTAINER	1005365-06	7-5	30
TANK, HYD, LOWER, 1200	260160	7-8	-
TANK,HYD,LOWER,1200/1200S	260160	7-12	25
TEE HANDLE, SHOULDER	270311SRV	7-17	5
TEE, PIPE TO TUBE	280140A	7-20	17
TERMINAL BLOCK,10 GANG	987982	7-2	15
TERMINAL BLOCK,IGNITION PANEL	320340	7-7	-
THD'D ROD,.500-13X7.00	250161SRV	7-16	14
THD'D ROD,.625-11X14.00	985582	7-4	2
THRUST BEARING	210030	7-10	-
THRUST WASHER	210020	7-10	-

Alphabetical Part Index



Description	Part Number	Figure Number	Item Number
THUMB SCREW, .375-16 X 1.00	920070	7-1	-
TIRE & WHEEL ASSY, 1200	370120	7-19	8
TIRE & WHEEL ASSY, FRONT WHEEL	210100	7-10	22
TIRE & WHEEL ASSY, 1200 FRONT	210200	7-10	-
TIRE & WHEEL ASSY.	340010	7-22	17
TIRE, 5" X 8" (1200 FR WHEEL)	210100	7-10	26
TIRE, 9TH WHEEL	900304	7-19	
TOOL BOX PAVERS, LOADERS, MAINTAINERS	851169SRV	7-1	26
TOOL, BIT REMOVEAL	220400	7-18	-
TOP SECTION, TROLLEY	210453SRV	7-11	19
TROLLEY ASSY, 1200 FRT WHEEL	210474SRV	7-10	1
TUBE ASSEMBLY, LONG	280131	7-20	18
TUBE ASSEMBLY, SHORT	280121	7-20	16
TUBE ASSY, FRONT WHEEL DRIVE	210420-14	7-11	6
TUBE, SQ, GRINDER DEPTH GAUGE	858443	7-1	18
TURNBUCKLE BODY, 3/4-10	851478	7-14	6
TURNBUCKLE EXTENSION, SHOULDER	270262SRV	7-17	10
TURNBUCKLE, SCREED STABILIZER	240060SRV	7-17	8
U-BOLT, .375-16 U-BOLT, 3/8	350060	7-1	6
U-BOLT, .375-16 U-BOLT, 3/8	350060	7-4	3
UNION, PIPE	280220	7-20	27
VALVE, PETCOCK, #2NPTF #2FMNT LPG	1008635	7-21	12
VALVE ASSY, 10 SECTION	852610	7-9	
VALVE SECTION	910054	7-9	8
VALVE, ANTI-CAVITATION	141020	7-9	4
VALVE, POWER BEYOND	901002	7-9	2
VALVE, RELIEF 100 PSI	280280	7-20	22
VALVE, RELIEF, 2000 PSI	500080	7-9	-
VALVE, SOLENOID, FUEL SHUT-OFF	851567	7-7	40
WALK BOARD, SCREED	240183SRV	7-15	19
WAND, TACK SPRAY	280302	7-20	33
WASHER	610250	7-22	14
WASHER, LOCK	210170	7-10	17
WASHER, SCREED SWIVEL MOUNT	240391	7-14	1
WELDMENT, DEPTH GAUGE TUBE	1009387SRV	7-1	17
WELDMENT, HOPPER WING, LH, 1200B	1009396	7-12	1
WELDMENT, HOPPER WING, RH, 1200B	1009397	7-12	
WELDMENT, PARK BRAKE CALIPER MOUNT	1009409	7-11	7
WELDMENT, SCREED TOWING SUPPORT, 4'	1009393	7-8	-
WELDMENT, SCREED TOWING SUPPORT, 6'	1009392	7-8	9

Description	Part Number	Figure Number	Item Number
WELDMENT, STAND, HOSE WRAP	1009391	7-8	8
WELDMENT, STAND, WORK LIGHTS	1009406	7-8	
WHEEL FLANGE, 1200 FRONT	210212	7-10	20
WHEEL FLANGE, OUTER	210202	7-10	21
WING, SHOULDER STRIKE-OFF, LH	270303SRV	7-17	3
WING, SHOULDER STRIKE-OFF, RH	270373SRV	7-17	4
WIPER, MAIN CONVEYOR BELT	250110	7-13	
WIPER, SHOULDER CONVEYOR BELT	270100	7-16	
WOOD SLAT, MAIN CONVEYOR BED	250030	7-13	16
WOOD SLAT, SHOULDER CONVR BED	270030	7-16	2
YOKE, CABLE END	350050	7-4	18
YOKE, SCREED STABILIZER, 1200	240081SRV	7-14	8
YOKE, GRINDER SUPPORT WHEEL	370121SRV	7-19	1
YOKE, SCREED STABILIZER, 1200	240081SRV	7-4	4



VT LeeBoy

A company of VT Systems

500 Lincoln County Parkway Ext.

Lincolnton, North Carolina 28092

Phone: (704) 966-3300 - Fax Sales: (704) 483-5802

www.leeboy.com

Printed in the U.S.A.