LeeBoy

Operations, Service, and Parts Manual

LeeBoy Model 1000G Tilt Hopper Paver

Manual No. 1012035-02

This manual applies to machines beginning with Serial Number 121508

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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.

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California Proposition 65 WARNING

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

Battery posts, terminals and other related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and other reproductive harm. Wash hands after handling.

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INTRODUCTION

Thank you for purchasing the LeeBoy Model 1000G Tilt Hopper Paver. We wish you many years of safe and efficient operation of your paver.

READ THIS MANUAL PRIOR TO OPERATING the paver. This manual is an important part of the paver and should be kept with the paver at all times in the dedicated storage container on the paver. Even though you may be familiar with similar equipment, you MUST read and understand this manual before operating this paver. Reading the manual will help you and others avoid injury and help prevent any damage to the paver. 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 paver. This manual covers the procedures for proper operation and maintenance of the paver. 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.

NOTE: This manual is accompanied by an engine instruction manual provided by the engine's manufacturer. Please follow the operation and maintenance instructions as specified in both the machine and engine manuals.

NOTES

Section 1

SAFETY

NOTES

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 1000G Tilt Hopper Paver and follow its instructions when operating the tilt hopper paver.

Safety is everyone's business and our top concern. Knowing the guidelines covered in this section will help ensure your safety, the safety of those around you, as well as proper tilt hopper paver operation.

Keep safety labels in good condition. If safety labels become missing or damaged, replace them with new matching labels. Replacement safety labels are available from your LeeBoy dealer (see **Figure 1-1, Safety Label Locations on Page 1-8**).

LOOK FOR THESE SYMBOLS THROUGHOUT THIS MANUAL. THESE ITEMS ARE EXTREMELY IMPORTANT FOR THE SAFETY OF YOU AND YOUR COWORKERS. READ AND UNDERSTAND THOROUGHLY. HEED THE WARNINGS AND FOLLOW THE INSTRUCTIONS.

⚠ 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 1000G Tilt Hopper Paver to operate improperly.**

NOTE: Indicates a procedure, practice or condition that should be followed in order for the tilt hopper paver 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 machine 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 for the location in which the tilt hopper tilt hopper paver is operated.
- Make sure you have all necessary licenses to operate the tilt hopper tilt hopper paver.

⚠ DANGER

The safety messages that follow have DANGER level hazards.

Electrocution Hazard

If your machine comes in contact with electric power lines, observe the following:

- Stay in the operators seat.
- Warn other workers to stay away and do not touch any control or any part of the machine.
- If contact can be broken, drive the machine away from the danger zone.
- If contact cannot be broken, stay in the operators seat until told that power is off.
- Failure to observe these directions could result in electrocution or death.

Suffocation Hazard

Carbon monoxide poisoning is a serious condition that occurs as a result of improper ventilation.

- Never operate the internal combustion engine on this machine in an enclosed area with poor ventilation. Ensure proper ventillation to reduce risk of carbon monoxide poisoning or death.

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.
- Always ensure that all connections are tightened to specifications after repair is made to the exhaust system.

⚠ 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 machine without the written consent of LeeBoy. Any modification can affect the safe operation of the tilt hopper tilt hopper paver and may cause personal injury or death.

Exposure Hazard

Operators of the tilt hopper tilt hopper paver must be aware of their work environment and the equipmnet needed to work safely.

- Always wear personal protective equipment, including appropriate clothing, gloves, work shoes, and protection for eyes and ears, 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 tilt hopper tilt hopper paver.
- 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 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

When operating machinery there is a risk for fire. Always have appropriate safety equipment available.

- Keep a charged fire extinguisher within reach when working in an environment where a fire may occur.
- 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 electrical fires.

Entanglement/Sever Hazard

Verify there are no people, obstacles or other equipment near the machine 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 and tie back long hair before operating or servicing the machine.

- Keep hands, other body parts, and clothing away from moving/rotating parts.
- Always stop the engine before beginning service. Before maintenance, remove negative battery cable from battery post to ensure vehicle is not operated during maintenance.
- Verify that all guards and covers are properly attached before starting the engine. Do not start the engine if any guards or covers are not properly installed on the tilt hopper tilt hopper paver.
- If you must run the engine during maintenance procedures, make sure you have a helper to keep bystanders clear of the tilt hopper tilt hopper paver and make observations of moving parts as requested by the operator.

Entanglement/Sever Hazard (Cont.)

- 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 tilt hopper paver 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 a radio or music because it will be difficult to hear the warning signals.
- Always start the engine and operate the controls while seated in the operators seat.

Alcohol and Drug Hazard

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

Piercing Hazard

High-pressure hydraulic fluid or fuel can penetrate your skin and result in serious injury. 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.

- 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 damaged parts.

Flying Object Hazard

Always wear eye protection when cleaning the LeeBoy 1000G Tilt Hopper Paver with compressed air or high-pressure water.

Dust, flying debris, compressed air, pressurized water or steam may cause eye injury.

Coolant Hazard

Coolant must be handled properly to ensure operator safety.

- Wear eye protection and rubber gloves when handling engine coolant.
- If contact with the eyes occurs, flush eyes with clean water for 15 minutes.
- If contact with skin occurs, wash immediately with soap and clean water.

Burn Hazard

Some of the machine’s 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

The work area must be well lit to ensure safe and proper operation.

- 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 machine parts.

NOTICE

The safety messages that follow have NOTICE level hazards.

Any part that 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 damage to the LeeBoy machine 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.

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.

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

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

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

SAFETY LABELS

If a LeeBoy machine has been repainted, it is extremely important that all 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 **Section 7** of this manual and note the description column.

Safety label locations and descriptions are at **Figure 4-1.** For additional instructions, contact your dealer.

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

Safety Decals Care

1. Keep safety decals and signs clean and legible at all times.
2. Become familiar with the content and the position of each safety decal. Decals include important information.
3. Replace decals and signs that are missing or become impossible to read.
4. When replacing parts that display a safety decal, ensure that the new part is fitted with a decal as well.
5. Obtain replacement safety decals or signs from your authorized LeeBoy dealer.

Decal Installation (Sticker Type)

1. Be sure that the installation area is clean and dry. Use hot, soapy water to clean the surface on which the decal will be applied.
2. Thoroughly dry the surface.
3. Decide on the exact position by taking measurements and test fitting before removing decal paper backing.
4. For decals with no top protection paper, remove the smallest split-backed paper.
5. Align decal over the specified area and carefully press exposed portion into place.
6. Slowly remove the remaining backing and carefully smooth the remaining portion of the decal into place.
7. Small air pockets can be pierced with a pin and smoothed out using a piece of the decal backing.

Decal Installation (Top Protected)

1. If the decal has a protective top paper, use hot soapy water on the surface where the decal will be applied. Leave wet.
2. After deciding on the decal location, remove protective back paper and soak decal in clean soapy water before application. This will help to alleviate air bubbles in the applied decal.
3. Smooth decal into place with a squeegee and check for air bubbles.
4. Small air pockets can be pierced with a pin and smoothed out using a piece of the decal backing.
5. When decal is completely smoothed, carefully remove top paper.

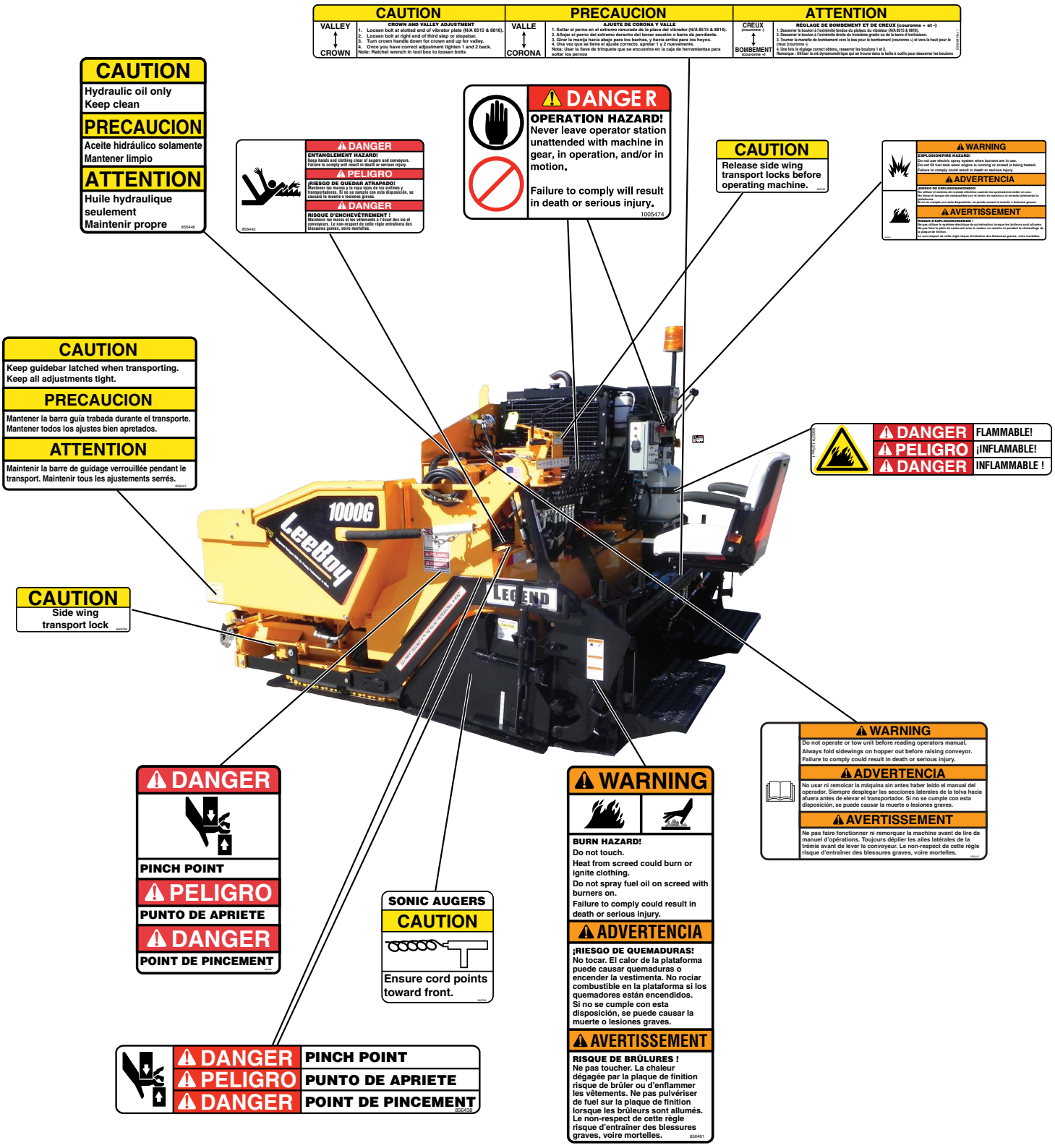


Figure 1-1. LeeBoy Model 1000G Tilt Hopper Paver Safety Labels and Safety Label Locations

SPECIFIC PRECAUTIONS

Hot Material Precautions

- Wear protective gear for face, hands, feet, and body when operating the tilt hopper paver.
- Allow machine to cool before repairing or maintaining working components.
- If hot asphalt touches skin, flush area immediately with cold water. DO NOT apply ice to the affected area. DO NOT ATTEMPT TO REMOVE ASPHALT CEMENT with products containing solvents or ammonia. Natural separation will occur in about 48 to 72 hours. Get medical attention as soon as possible.
- DO NOT remove radiator cap, drain plugs, service grease fittings, or pressure taps while engine is hot. Add coolant to the radiator and perform other services only when the engine is stopped and fully cooled.

Hydraulic Systems Precautions

- Ensure all components are in good working condition. Replace any worn, cut, abraded, flattened or crimped hoses and metal lines.
- DO NOT attempt makeshift repairs using tape, clamps or cements. The hydraulic system operates under extremely high pressure and such repairs could cause serious injury.
- Wear proper hand and eye protection when checking for a high pressure leak. Use a piece of wood or cardboard as a back stop to isolate and identify leaks.

⚠WARNING **Hydraulic oil under pressure can cause serious personal injury. Check for oil leaks with a piece of cardboard. DO NOT expose hands to possible high-pressure oil. Turn off engine before attempting to tighten oil lines and fittings.**

- Escaping pressurized hydraulic fluid has force sufficient to penetrate the skin, which could cause serious personal injury. Ensure all pressure is relieved before disconnecting line, hoses or valves.
- If injury from concentrated high pressure steam or hydraulic fluid occurs, seek medical attention immediately. Injuries resulting from hydraulic fluid penetrating the skin's surface can result in serious infections or toxic reactions.

Refueling Precautions

- Do NOT overfill the fuel tank as overflow creates a fire hazard when spilled on hot components.
- DO NOT smoke when refueling and never refuel when the engine is running. Fuel is highly flammable and should be handled with care. Death or serious injury can occur due to explosion and/or fire.
- DO NOT fill tank to capacity. Allow room for expansion to reduce the risk of fuel expanding and spilling from the tank.
- Tighten fuel cap securely. Should fuel cap be lost, replace it with an original manufacturer's approved cap. Pressurization of the tank may result from use of non-approved cap.
- Prevent fires by keeping the machine clean of accumulated debris, grease, and spilled fuel.
- Use ultra-low sulfur diesel fuel (ULSD) only.

Battery Precautions

- Keep all sparks and flames away from batteries, as gas given off by electrolytes is explosive.
- Acid propelled by an explosion can cause blindness if it comes in contact with eyes. Always wear safety glasses when working near batteries.
- If you come in contact with battery electrolyte solution, wash off immediately. Chemicals can cause burns.
- Always disconnect the battery ground cable before working on the electrical system to avoid injury from spark or short circuit. Electrical shock and burns can occur.
- To avoid electrolyte loss, DO NOT tip batteries more than 45 degrees.
- Use jumper cables ONLY as directed on **Page 5-14**. Improper use can result in battery explosion or unexpected tilt hopper paver motion.

TRACK PRECAUTIONS

Starting and Stopping Precautions

- Check all around the tilt hopper paver to make sure there are no people working on the machine or in the path of the machine before starting. DO NOT start until area is clear. Death or serious injury can occur to bystanders from being crushed under a moving machine.
- Check brakes, steering and other control devices in accordance with instructions before starting. Be sure the Steering Levers (joysticks) are both in neutral with the Neutral Lock engaged. **(See Section 3, Component Location)**
- DO NOT bypass the tilt hopper paver Neutral-Start system. If the system malfunctions, it must be repaired.

⚠WARNING **DO NOT operate the engine in an enclosed area without proper ventillation. Exhaust gasses are odorless and deadly.**

Parking Precautions

- Park tilt hopper paver on level ground whenever possible, set steering levers in neutral and lock. Apply fail-safe parking brake (if this optional component is installed). On grades, park tilt hopper paver with wheels securely blocked.
- Before leaving operator's station:
  1. Place Forward/Reverse handle in neutral and lock in place.
  2. Turn off all accessories.
  3. Throttle back to idle using the PV480 Powerview Display **(Page 4-6).**
  4. Set parking brake (if installed).
  5. Lower screed to ground.
  6. Shut off engine.
- Remove ignition key when leaving tilt hopper paver parked or unattended.

Operating Precautions

- Always comply with local regulations regarding moving equipment on public roads and highways.
- Know and use the hand signals required for a particular job. Know who has the responsibility for signaling.
- Make sure that all lights and reflectors comply with state and local regulations. Make sure that they are clean, in good working order, and can be seen clearly by all traffic.
- DO NOT stand between the equipment and the truck while the truck is being backed to the tilt hopper paver. Death or serious injury can result from being crushed between the two machines.
- DO NOT ride on attachments.
- Check all gauges and warning instruments for proper operation. If malfunctions are found, shut down the machine and report the problem for resolution. If the failure causes loss of steering control, loss of brake control, or loss of engine power, stop tilt hopper paver motion as quickly as possible. Apply parking brake (if equipped). Keep the machine securely parked until the failure is corrected or the machine can be safely towed.
- Drive the machine with care. Make sure speed is compatible with conditions. Use caution on rough ground, slopes, and while turning.
- Be alert for hazards and obstructions such as ditches, trees, cliffs, overhead power lines, and areas where there is danger of a slide.
- Be aware of and understand the job site traffic flow patterns.
- Obey flagmen, road signs, and signals.
- Watch for bystanders. Never allow anyone to be under the machine during operation. Never allow anyone to reach into the machine during use.

- Operator must know how to use signaling devices when roading with a tilt hopper paver. Operator must also understand which circumstances require use of each signal. Use tail lights, slow moving vehicle signs, and warning beacon as needed when traveling on public roads. It is recommended that you provide an escort on the road.
- DO NOT tow the tilt hopper paver, except to remove from road or to load on trailer.

Storage Precautions

- Store tilt hopper paver in an area away from human activity.
- DO NOT permit children to play on or around the stored machine. Serious injury or death can occur from improper/unauthorized use of the machine.
- Make sure the unit is stored on a surface that is firm, level, and free of debris.
- Store the machine inside a building or cover securely with a weatherproof tarpaulin.

Maintenance Precautions

- DO NOT attempt repairs unless trained to do so. Refer to manuals and experienced repair personnel for help.
- Before working on the machine, securely block the machine and any components that may fall. Block any working components to prevent unexpected movement while repairs are being made.
- Always wear safety glasses and other required safety equipment when servicing or making repairs.
- Disconnect battery before working on the electrical system.
- Avoid lubrication or mechanical adjustments while the tilt hopper paver is in motion or while engine is operating.
- If lubrication or mechanical adjustment is necessary, use extreme caution and complete the following steps:
  1. Place Forward/Reverse control in neutral.
  2. Apply neutral lock.
  3. Lower screed to ground.
  4. Shut off engine.
  5. Place equipment in a safe position.
  6. Securely block wheels and tracks.
- Never make repairs on pressurized components such as fluid lines, the gas system, or mechanical items until the pressure has been relieved. To properly relieve pressure, follow the instructions in section 4. (for propane tank) as well as section 5 (for all other systems)
- When inflating tires, use a self-attaching inflation chuck with remote shut-off.
- When servicing or replacing hardened pins, use a brass drift or other suitable material between the hammer and pin.
- Keep brake and steering systems in good operating condition.
- Safety signs that are missing, illegible or damaged must be replaced. Keep all safety signs clean.

Section 2

INFORMATION AND SPECIFICATIONS

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 grader 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.

Paver Model Number: _____

Paver Serial Number: _____

Date of Purchase: _____

NAMEPLATE

Nameplate **(Figure 2-1)** contains the specific model number and serial number used to identify the components for any parts or service information. Look in the engine owner's manual to find the specific location of the engine nameplate for your engine.

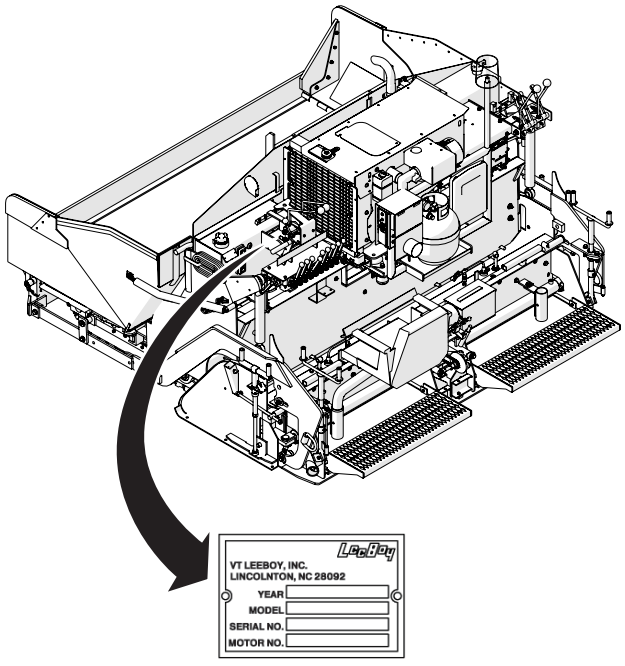


Figure 2-1. Nameplate Location

GENERAL INFORMATION

The descriptions and specifications provided in this section apply to the LeeBoy Model 1000G Tilt Hopper Paver.

This section contains a description of how the major components operate. It also includes specifications for the major system components, machine weights, dimensions, fluid specifications and torque values for tools used on this tilt hopper paver.

MACHINE DESCRIPTION

Engine

The LeeBoy Model 1000G Tilt Hopper Paver uses a Kubota D1803-CR-TE4, 48.9 HP, four-cylinder engine to drive the hydraulic function pump and steering pump. The engine is mounted near the center of the paver.

A fuel lift pump mounted to the right of the engine on the fuel tank draws diesel fuel from the fuel tank.

An air cleaner is mounted at the top rear of the engine. 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 into 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 open the rubber flaps, allowing the debris to fall out. The rubber flaps can also be squeezed to open for cleaning.

Primary and secondary fuel filters remove 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 Operator's Manual for a complete description of the engine.

Hydraulic System

The hydraulic system includes two hydraulic pumps driven by the engine: 1) Tandem Drive Pumps (on left and right drive sections), and 2) Auxiliary Pump.

The auxiliary pump is mounted on the rear of the drive pumps to the right side of the engine, and driven by the drive pump output shaft. This gear-type pump provides hydraulic flow to operate all the hydraulic cylinders used to control the paver functions. The auxiliary pump has it's own suction hose from tank.

Drive System

The paver drive system contains two torque hubs. The torque hubs provide power to propel the tracks.

Hopper

The hopper wings are hydraulically controlled that raise and lower. The hopper wings also hinge in and out to allow for more compact transportation. When fully open, the hopper can hold a payload of up to five tons. The maximum tilt is 50°.

Material in the hopper is moved toward the back of the paver to the screed by gravity.

Auger

The auger rotates clockwise to assist moving material to the screed. The auger can be manually controlled at the operator platform on the paver or by the screed operator on the screed.

The auger can also be controlled automatically when the sonic auger system is installed and active. The sonic auger sensor, mounted on the screed end gates, detect the amount of material present and control the auger to keep the material flow constant.

Screed

The Screed is the last part of the paver that contacts the paved material. Operation of the screed is usually done by the screed operator. Paving material is fed from the hopper 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 eight to 13 feet.

Screed heating is accomplished by four LPG burners.

The hydraulically-driven vibrator mounted on the main screed frame can be used to increase paving material compaction.

SPECIFICATION CHARTS

The specifications provided in this section are applicable to the LeeBoy Model 1000G Tilt Hopper Paver. Included in this section are specifications for paver weights, dimensions, performance, and torque values for both metric and standard inch fasteners.

⚠CAUTION **Replace original equipment only with LeeBoy approved components.**

Table 2-1. Screed Specifications

ITEM	SPECIFICATION
Extensions	Two 30” hydraulically operated extensions
Vibration	One hydraulic vibrator producing 3,200 vibrations per minute
Crown/Valley	Adjustable, at least 2” (51 mm) of crown and 1-1/2” 38 mm) of valley
Propane Heat	Two (2) 54,000 BTU propane burners on main screed One (1) 36,000 BTU propane burner on each extension

Table 2-2. Performance Specifications

ITEM	SPECIFICATION
Travel Speed and Pave (Standard)	0 - 220 FPM (0.067 KPM)
Paving Speed (2-Speed) (Optional)	0 - 140 FPM (0.042 KPM)
Travel Speed (2-Speed)	0-220 FPM

Table 2-3. Engine Specifications

ITEM	SPECIFICATION
Manufacturer and Model	Kubota D1803-CR-TE4
Emission Regulation	Tier 4
Type	Vertical 4-Cycle Liquid Cooled Turbocharged Diesel
Number of Cylinders	3
Bore, Stroke and Displacement	3.43” (87mm) ; 4.03” (102.4mm); 111.43 cu. in. (1.826 L)
Combustion System	Direct Injection
Power Rating HP (kW)	48.9 HP (36.5 kW)
Maximum Speed	2600 RPM
Fuel Filter Type	Kubota Diesel

Table 2-4. Hopper Specifications

ITEM	SPECIFICATION
Capacity	5 Tons (5,443 kg)
Maximum Tilt	50°
Height	22" (559 mm)

Table 2-5. Machine System Capacity Specifications

ITEM	SPECIFICATION
Engine Lubrication Oil - Pan Capacity	1.85 gal. (7.0 L)
Hydraulic Oil Reservoir	40 gal. (170.34 L)
Torque Hubs	44 oz. (0.355 L) each
Fuel	13.5 gal. (49.21 L)
Propane	One (1) 20 lb. tank
Antifreeze	Glycol based, Red, Extended Life; 2.5 gal. (9.4 L)

Table 2-6. Electrical Specifications

ITEM	SPECIFICATION
Battery	One, Maintenance Free
Battery Ampere Hour Rating	825 CCA
Battery Voltage	12 Volts
Alternator Type and Voltage	12 Volt, negative ground
Alternator Output Amperage	60 Amps
Alternator Fan Belt Tension	Manual belt tension mechanism keeps serpentine belt under tension at all times
Starter Voltage and Type	12 Volt, negative ground

Table 2-7. Hydraulic Pressures Specifications

ITEM	SPECIFICATION
Drive	3000 PSI (207 Bar)
Augers and Cylinders	2200 PSI (152 Bar)

Table 2-8. Lubricant Specifications

ITEM	SPECIFICATION
Engine Oil	15W-40
Hydraulic Oil	All Weather AW 46
Torque Hub	90 WT Gear Oil
Grease	Shell Avania EP Grease or Equivalent

DIMENSIONS

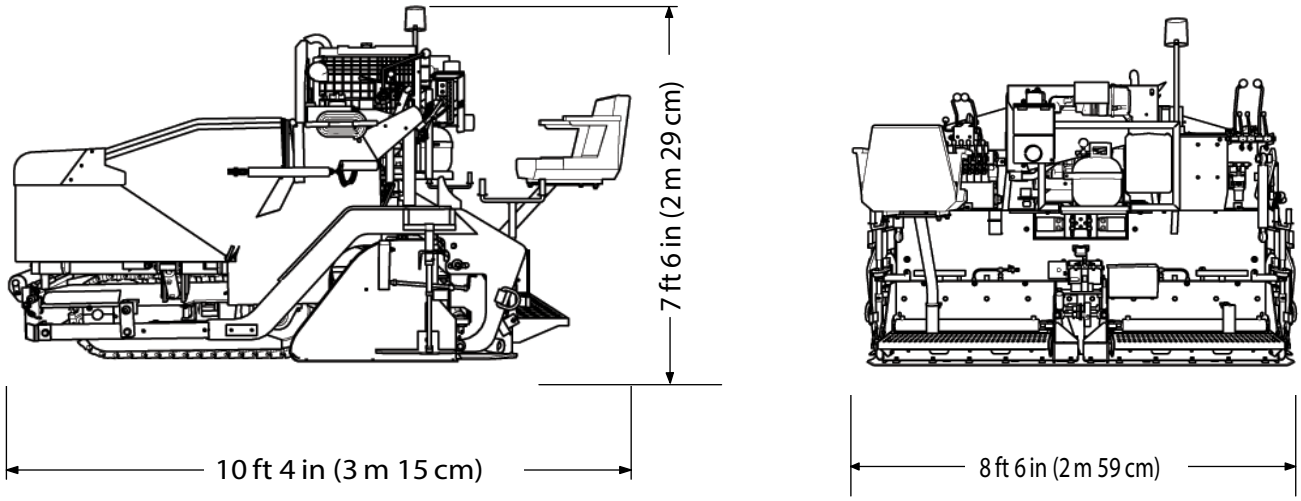


Table 2-9. 1000G Tilt Hopper Paver Dimensions

ITEM	SPECIFICATION
Overall Length	10’ 4” (3.15 m)
Overall Height	7” 6” (2.29 m)
Overall Width (Transport)	8’ 6” (2.59 m)
Overall Width (Hopper Wings Down)	9’ (2.70 m)
Paver Weight	10,000 lbs (4,536 kg)
Screed Weight	2,000 lbs. (907 kg)
Basic Paving Width	8’ (2.44 m)
Maximum Paving Width	13’ (3.96 m)
Screed Plate Material	3/8” (9.5 mm) AR400 Steel
Main Screed Wear Plate	13” (33 cm)
Extensions Width of Wear Plate	6” (15.2 cm)
Material Flow Gate Width	Two 4’ (1,219 mm) independent hydraulically-operated gates.
Material Augers Diameter	Two 9” (229 mm) diameter independent hydraulically-operated casted augers.
Push Rollers Diameter	Two 3” (76 mm) diameter rollers with sealed bearings mounted on a fixed frame.

TORQUE SPECIFICATIONS

The following tables list torque values for standard hardware. This is a guide for average application involving typical stresses and machined surfaces. Values are based upon physical limitations of clean, plated and lubricated hardware. Under more extreme conditions, individual torque value should be followed. Conversion formulas are provided below:

Conversion	Formula
ft-lb to N•m	[ft-lb]*1.3558 = [N•m)
ft-lb to in-lb	[ft-lb]*12 = [in-lb]
N•m to in-lb	[N•m]*8.8508 = [in-lb]

Standard Inch Fasteners

Table 2-10. Torque Specifications For Standard Inch Fasteners

SIZE	THREAD	CAPSCREWS: SAE GRADE 5				CAPSCREWS: SAE GRADE 8			
		TORQUE (ft lb)		TORQUE N•m		TORQUE (ft lb)		TORQUE N•m	
		Dry	Lubed	Dry	Lubed	Dry	Lubed	Dry	Lubed
1/4	20 UNC	8	6	11	8	12	9	16	12
	28 UNF	10	7	14	9	14	10	19	14
5/16	18 UNC	17	13	23	18	25	18	34	24
	24 UNF	19	15	26	20	27	20	37	27
3/8	16 UNC	31	23	42	31	44	33	60	45
	24 UNF	35	26	47	35	49	37	66	50
7/16	14 UNC	49	37	66	50	70	52	95	71
	20 UNF	55	41	75	56	78	58	106	79
1/2	13 UNC	75	57	102	77	106	80	144	108
	20 UNF	85	64	115	87	120	90	163	122
9/16	12 UNC	109	82	148	111	154	115	209	156
	18 UNF	121	91	164	123	171	128	232	174
5/8	11 UNC	150	113	203	153	212	159	287	216
	18 UNF	170	127	230	172	240	180	325	244
3/4	10 UNC	267	200	362	271	376	282	510	382
	16 UNF	297	223	403	302	420	315	569	427
7/8	9 UNC	429	322	582	437	606	455	822	617
	14 UNF	474	355	643	481	669	502	907	681
1	8 UNC	644	483	873	655	909	681	1232	923
	14 UNF	722	542	979	735	1020	765	1383	1037
1-1/4	7 UNC	1121	840	1520	1139	1817	1363	2464	1848
	12 UNF	1241	930	1683	1261	2012	1509	2728	2046
1-1/2	6 UNC	1950	1462	2644	1982	3162	2371	4287	3215
	12 UNF	2194	1645	2975	2230	3557	2668	4823	3617

Metric Fasteners

Table 2-11. Torque Specifications for Metric Fasteners

NOMINAL SIZE AND PITCH	CLASS 8.8 [GRADE 5 EQUIVALENT]				CLASS 10.9 [GRADE 8 EQUIVALENT]			
	TORQUE (ft lb)		TORQUE N•m		TORQUE (ft lb)		TORQUE N•m	
	Dry	Lubed	Dry	Lubed	Dry	Lubed	Dry	Lubed
M4 x 0.7	2	2	3	2	3	2	4	3
M5 x 0.8	5	3	7	4	7	5	9	7
M6 x 1	8	6	11	8	11	8	15	11
M8 x 1.25	19	14	26	19	27	20	37	27
M10 x 1.5	37	28	50	38	53	40	72	54
M12 x 1.75	65	49	88	66	93	70	126	95
M14 x 2	104	78	141	106	148	111	201	150
M16 x 2	161	121	218	164	230	173	312	235
M18 x 2.5	222	167	301	226	318	239	431	324
M20 x 2.5	314	236	426	320	449	337	609	457
M22 x 2.5	428	321	580	435	613	460	831	624
M24 x 3	543	407	736	552	777	582	1053	789
M27 x 3	796	597	1079	809	1139	854	1544	1158
M30 x 3.5	1079	809	1463	1097	1544	1158	2093	1570

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.
4. Hand tighten swivel nut until snug.
5. To prevent twisting the tube(s), use two wrenches. Place one wrench on the connector body and tighten the swivel nut with the second to the torque shown in the following table:

NOTE: The torque values shown are based upon lubricated connections.

Table 2-12. Torque Specifications for Steel Flare Type Tube Fittings

TUBE SIZE OUTER DIAMETER	NUT SIZE ACROSS FLATS	TORQUE VALUE	
(IN)	(IN)	(LB FT)	(N•m)
3/16	7/16	8	11
1/4	9/16	12	16
5/16	5/8	16	22
3/8	11/16	23	31
1/2	7/8	38	52
5/8	1	54	73
3/4	1 1/4	75	102
7/8	1 3/8	83	113

Determining Proper Torque

The only reliable method of creating a consistently leak-free and long-lasting connection is to ensure the coupling is brought to the proper torque. Using a torque wrench with crowfoot is the best method, but the flats method can be used if a torque wrench is not available.

The most straightforward 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) as shown below:

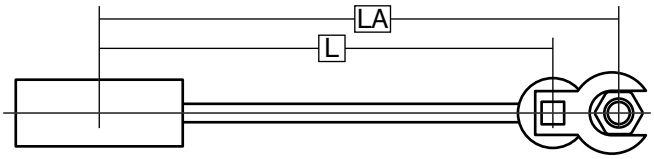


Figure 2-2. Torque Wrench - Crowfoot

NOTICE **The minimum torque values are adequate for sealing most applications. Maximum torque values should never be exceeded.**

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. The equations and illustration below describe proper measurements. (Use **LEGEND** under **Figure 2-4**)

Equations

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

$$TS = TD * L / LA$$

OR

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

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

$$TS = TD * L / LH$$

OR

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

- To estimate the crowfoot size (E)

E = Drive Size * 0.5 + Distance between Drive and Open End + Wrench Size * 0.5774

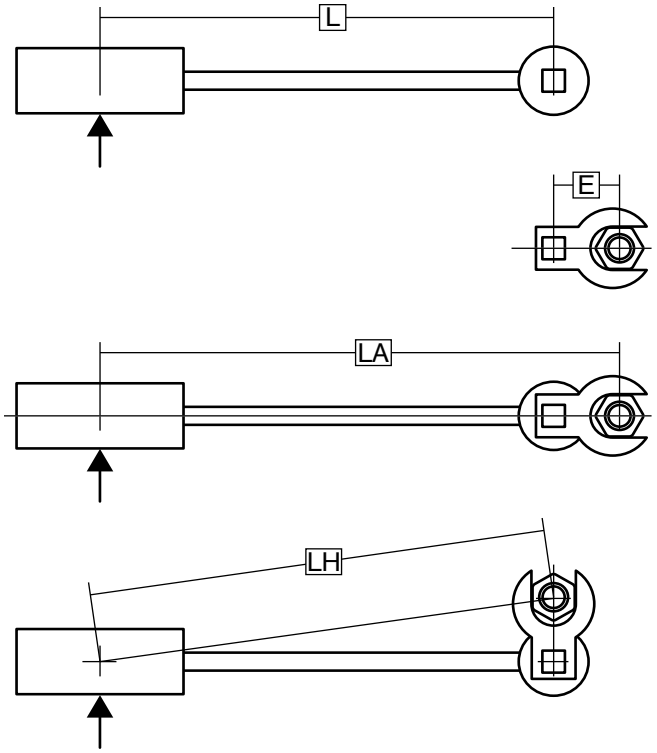


Figure 2-3. Measurements Needed

LEGEND

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

Coupling Installation

Use the following steps for 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.

2. Ensure the seal face and threads are clean and in good condition. O-Rings should be lubricated with light oil, but threads should be completely dry unless making pipe thread connections (interference seal).

NOTE: 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.

3. Tighten the connection (by hand), bringing the seal face into contact and rotating the nut until it stops.
4. Mark a line across the coupling nut and backup hex for the flats method verification of coupling torque (**12**).
5. 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.

If a torque wrench cannot fit into the coupling area or if it is unavailable, the flats method may be used to ensure that the coupling is properly tightened, as shown in **5**:

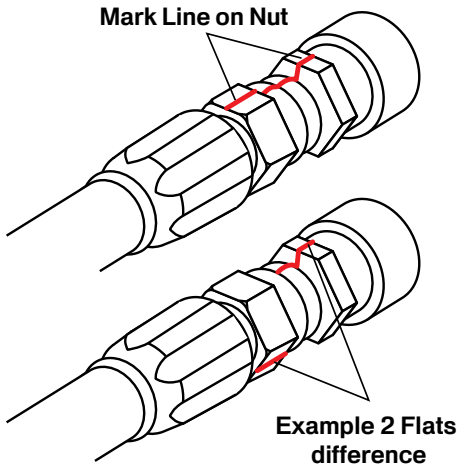


Figure 2-4. Flats Method Tightening

NOTE: The mark placed on the nut and backup hex after tightening by hand should rotate during final tightening according to the table below. (Figure 2-12) The nut and backup hex can then be marked to indicate if the coupling loosens over time.

Table 2-13. Flats Method Values for Selected Terminations

FLATS METHOD VALUES		
Termination Type	**Dash Size**	**Flats**
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

1. Seal faces must be in contact with the fitting fully tightened by hand before marking flats.
2. The flats method is most accurate for the first assembly cycle. For multiple disassembly and assembly cycles, torque values are more reliable.
3. Tightening two (2) flats or more may damage seal faces.

Table 2-14. Torque Specifications For US Style Coupling Terminations

JIC, SAE 45°, ORFS, O-RING BOSS, GATES ADAPTERLESS AND MEGASEAL										
DASH SIZE	JIC 37°, SAE 45° & Mega-Seal (Steel)		JIC 37°, SAE 45° & Mega-Seal (Brass)		Flat Face O-Ring Seal (Steel)		SAE O-Ring Boss (Steel) & Gates Adapterless ≤ 4000 PSI		SAE O-Ring Boss (Steel) & Gates Adapterless > 4000 PSI	
	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 2-15. Torque Specifications for DIN 24, DIN 60, and Inverted Cone Style Coupling Terminations

DIN 24, DIN 60, AND INVERTED CONE			
Size (mm)		Torque (lb ft)	
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 2-16. Torque Specifications for 4-Bolt Flange Connections

4-BOLT FLANGES		
Dash Size	Bolt Size (in)	Torque (lb ft)
-8	0.31	17
-12	0.38	26
-16	0.44	43
-20	0.50	65
-24	0.63	130
-32	0.75	220

1. Align faces and tighten bolts (by hand) before applying final torque in a pattern. The seal faces must be parallel with an even bolt tension to seal properly.
2. Torque values apply to bolts that are plated or coated in light engine oil.
3. Before assembly, lubricate O-Ring with light oil (SAE 10W or 20W).

Table 2-17. Torque Specifications for NPTF Dry Seal Pipe Threads

NPTF	
Dash Size	**Max Torque (ft-lb)**
-2	20
-4	25
-6	35
-8	45
-12	55
-16	65
-20	80
-24	95
-32	120

1. The torque values obtained from tightening pipe threads can vary considerably depending upon 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.
2. 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 above.
3. If thread sealant is used, maximum values shown should be decreased by 25%.

Table 2-18. Torque Specifications for BSP 30° Inverted Cone and JIS Coupling Terminations

BSP 30° INVERTED CONE AND JIS		
Dash Size	**Torque (ft-lb)**	
	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

Section 3

COMPONENT LOCATION

NOTES

OPERATION PANELS AND CONTROLS

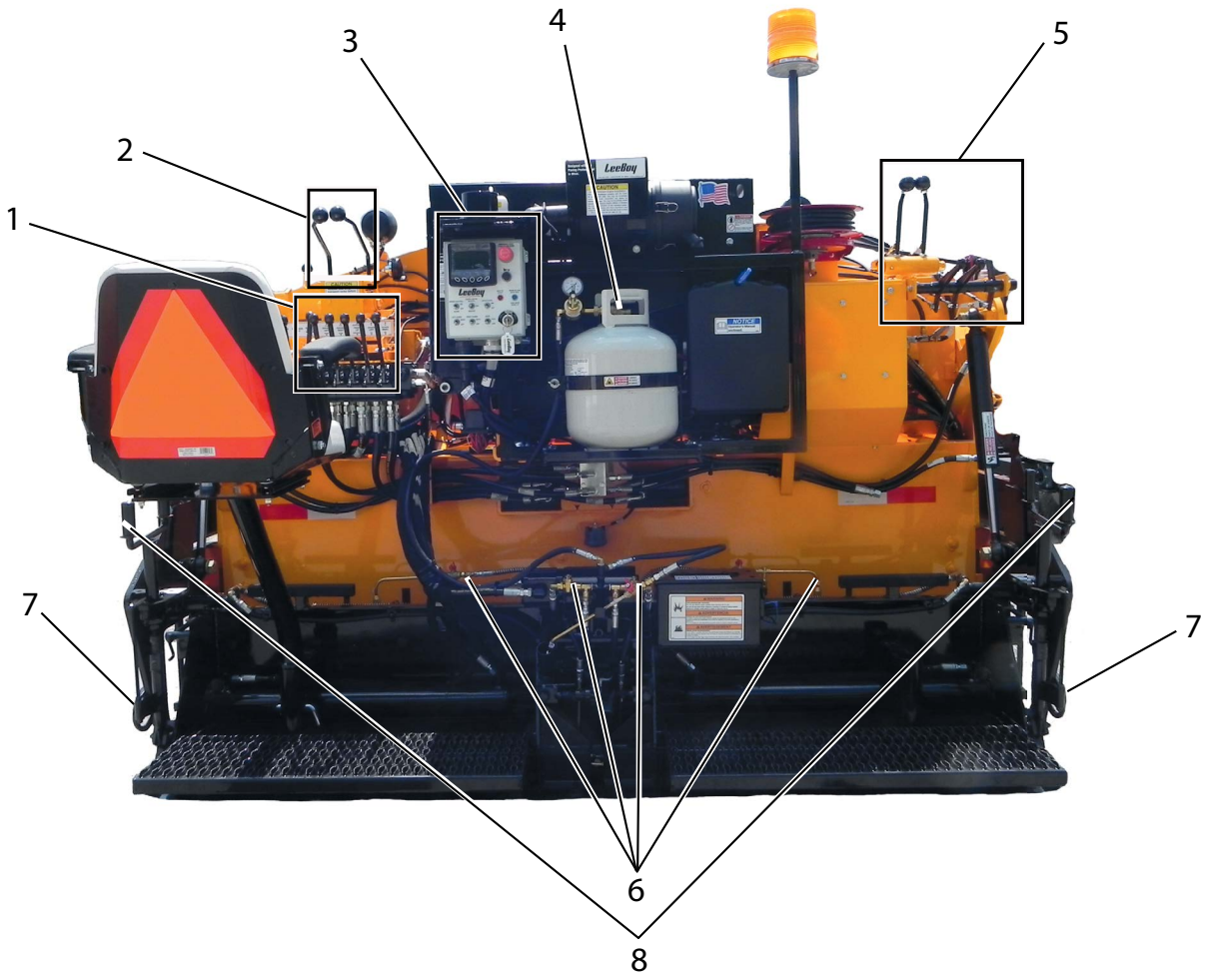


Figure 3-1. Location of Operation Panels and Controls

ITEM NO.	CONTROL NAME	FUNCTION
1	Left Operator Controls	Contains hydraulic controls to operate screed and other functions.
2	Steering	Contains controls for steering.
3	Control Panel Box	Contains switches, warning lights and ignition switch.
4	Propane Controls	Controls for propane tank.
5	Right Operator Controls	Contains controls for steering and speed control and controls for sidewings, extensions and augers.
6	Burner Controls	Contains controls for burners.
7	End Gate Control Handles	Contains controls for end gates.
8	Main Depth Adjustors	Controls screed depth.

LEFT OPERATOR CONTROLS

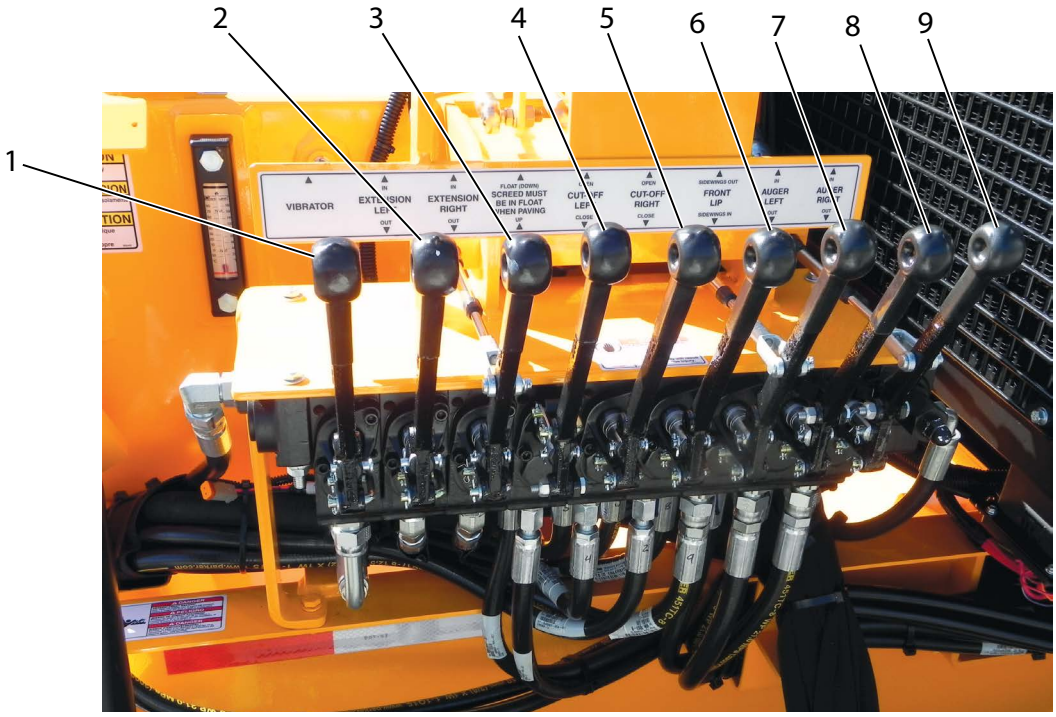


Figure 3-2. Left Operator Controls

ITEM NO.	CONTROL NAME	FUNCTION
1	Vibrator Lever	Turns screed vibration on and off.
2	Extension Left In/Out Lever	Extends and retracts left screed extension.
3	Extension Right In/Out Lever	Extends and retracts right screed extension.
4	Screed Float Down/Up Lever	Raises and lowers screed.
5	Cut-off Left Open/ Close Lever	Opens or closes the left cut-off.
6	Cut-off Right Open/ Close Lever	Opens or closes the right cut-off.
7	Front Sidewings In/Out Lever	Lever folds out the side wings to load asphalt into the paver. Push lever up to OUT position to move sidewings out. Once side wings are out, hopper will begin to tilt up. Pull lever down to IN position to move sidewings in.
8	Auger Left In/Out Lever	Distributes asphalt to left screed extension.
9	Auger Right In/Out Lever	Distributes asphalt to right screed extension.

STEERING AND SPEED CONTROLS

Figure 3-3. Steering and Speed Controls

ITEM NO.	CONTROL NAME	FUNCTION
1	Drive Left Forward/ Reverse Steering Joystick	Lever controls the speed and direction of travel forward and reverse. Pushing joystick forward moves machine forward. The farther forward, the faster the speed. Pulling joystick backward moves machine backward. The farther backward, the faster the speed. When joystick is centered, the machine is in neutral. Pushing left joystick farther forward than right joystick steers the paver to the right. The farther forward, the more the paver turns. **⚠WARNING Before moving paver, verify there are no people, obstacles or other equipment in the path of the paver.** **NOTE: Machine must be in neutral with neutral lock engaged to start machine.**
2	Drive Right Forward/ Reverse Steering Joystick	Lever controls the speed and direction of travel forward and reverse. Pushing joystick forward moves machine forward. The farther forward the faster the speed. Pulling joystick backward moves machine backward. The farther backward, the faster the speed. When joystick is centered, the machine is in neutral. Pushing right joystick farther forward than left joystick steers the paver to the left. The farther forward, the more the paver turns. **⚠WARNING Before moving paver, verify there are no people, obstacles or other equipment in the path of the paver.** **NOTE: Machine must be in neutral with neutral lock engaged to start machine.**
3	Neutral Lock with Neutral Safety Switch	Locks the left and right forward/reverse steering joysticks in neutral and applies the start/neutral switch. **NOTE: Unit will not crank unless Neutral Safety Switch is engaged.**

CONTROL PANEL BOX

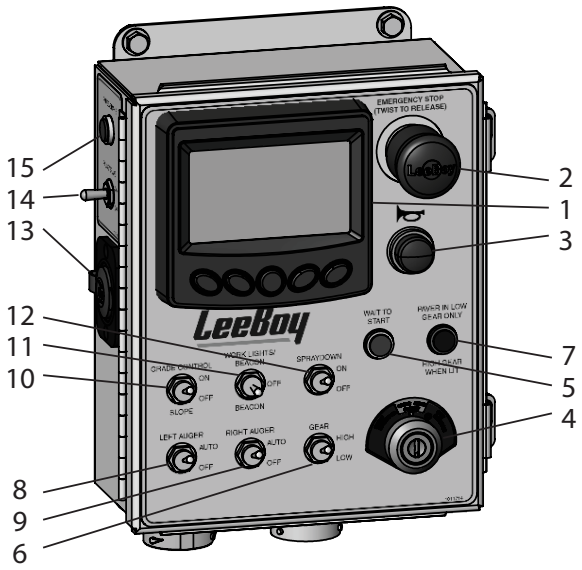


Figure 3-4. Control Panel Box

Table 3-1. Control Panel Box

ITEM NO.	CONTROL NAME	FUNCTION
1	PV480 Display	Displays digital readout of gauges, temperature, and RPM. User interactive to set functions such as RPM. For operating the PV480, see **Section 4**.
2	Emergency Stop	Press the emergency stop button to IMMEDIATELY DISABLE the paver engine and all electronic functions. Turn clockwise to release the emergency stop button. *NOTICE* **The emergency stop button will remain in a locked position until it is manually released. The unit will not restart until the emergency stop button is reset.**
3	Horn Button	Sounds horn.
4	Ignition Switch with Cold Weather Start-up	Controls starting, stopping and running of engine. Insert key and turn key clockwise to START position. Wait until the “Wait To Start” light turns off to crank ignition. Turn key counterclockwise to the OFF position to remove key. **NOTE: Engine will not start unless neutral lock is engaged.**
5	Wait to Start Light	Indicates Engine Preheat and Screen Booting.
6	High Gear/Low Gear Switch **(Option)**	Push switch UP for high gear, DOWN for low gear. **NOTE: The two-speed paver may be shifted while moving. Always pave in low gear.**
7	High Gear Light **(Option)**	Indicates paver is in high gear when lit.
8	Left Auger Auto/Off Switch **(Option)**	Distributes asphalt to left screed automatically wtih sonic augers.
9	Right Auger Auto/Off Switch **(Option)**	Distributes asphalt to right screed automatically with sonic augers.

10	Grade Control-Slope On/Off Switch **(Option)**	When switch is in GRADE position, power is ON all the time regardless of position of forward/reverse steering joystick. When switch is in SLOPE position, power is present only when forward/reverse steering joystick is in FORWARD position. With forward/reverse steering joystick in NEUTRAL, all power is turned off.
11	Work/Beacon Lights On/Off Switch	Push switch UP to activate work lights (if equipped) and beacon; DOWN to activate beacon; and CENTER to turn off lights.
12	Spray Down On/Off Switch	Turns spray down on or off.
13	12 VDC Outlet	Standard 12 VDC automotive-style power receptacle.
14	Neutral/Non-Creeping On/Off Switch	Pauses the machine. Push switch ON to pause the machine. Pull switch OFF to resume forward/reverse travel. ⚠WARNING **Never use the NEUTRAL / NON-CREEPING Switch on a hill.**
15	Warning Light	Indicates Neutral / Non-Creeping Switch is in use.

PROPANE CONTROLS

Figure 3-5. Propane Controls

ITEM NO.	CONTROL NAME	FUNCTION
1	Propane Pressure Regulator Valve	Regulates propane line pressure.
2	Propane Pressure Regulator Gauge	Indicates propane line pressure.
3	Propane Tank Open/ Close Valve	Opens and closes propane pressure.

RIGHT OPERATOR CONTROLS

The controls on the right side of the machine allow an operator to drive the paver and operate the right side hydraulic functions. The right side controls are directly tied into the left side controls via cables.

The hydraulic functions can only be operated from the right operator controls (Front Lip Sidewings In/Sidewings Out Lever, Screed Extension Right In/Out Lever, and Auger Right In/Out Lever).

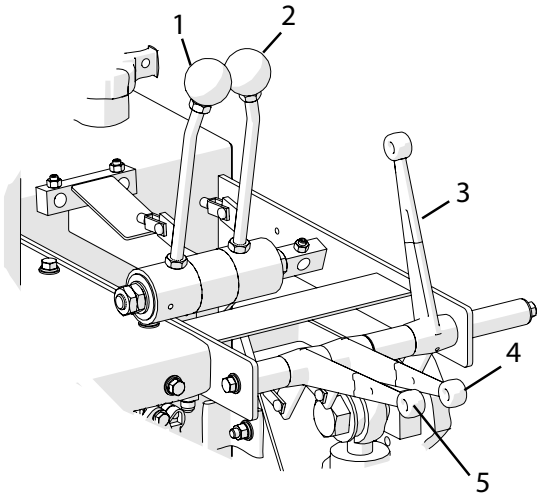


Figure 3-6. Right Operator Controls

ITEM NO.	CONTROL NAME	FUNCTION
1	Drive Left Forward/ Reverse Steering Joystick	Lever controls the speed and direction of travel forward and reverse. Pushing joystick forward moves machine forward, gaining speed as it moves forward. Pulling joystick backward moves machine backward. The farther backward, the faster the speed. When joystick is centered, the machine is in neutral. Pushing left joystick farther forward than right joystick steers the paver to the right. The farther forward, the more the paver turns. **⚠WARNING Before moving paver, verify there are no people, obstacles or other equipment in the path of the paver.** **NOTE: Machine must be in neutral with neutral lock engaged to start machine.**
2	Drive Right Forward/ Reverse Steering Joystick	Lever controls the speed and direction of travel forward and reverse. Pushing joystick forward moves machine forward, gaining speed as it moves forward. Pulling joystick backward moves machine backward. The farther backward, the faster the speed. When joystick is centered, the machine is in neutral. Pushing right joystick farther forward than left joystick steers the paver to the left. The farther forward, the more the paver turns. **⚠WARNING Before moving paver, verify there are no people, obstacles or other equipment in the path of the paver.** **NOTE: Machine must be in neutral with neutral lock engaged to start machine.**
3	Front Lip Sidewings In/ Sidewings Out Lever	Lever folds out the side wings to load asphalt into the paver. Push lever up to OUT position to move sidewings out. Once side wings are out, hopper will begin to tilt up. Pull lever down to IN position to move side wings in. **NOTE: Side wings will not fold in until hopper is in lowest position.** **⚠WARNING Before operating side wings, verify there are no people, obstacles or other equipment in the path of the paver.**
4	Screed Extension Right In/Out Lever	Extends and retracts screed extension.
5	Auger Right In/Out Lever	Distributes asphalt to right screed extension.

BURNER CONTROLS

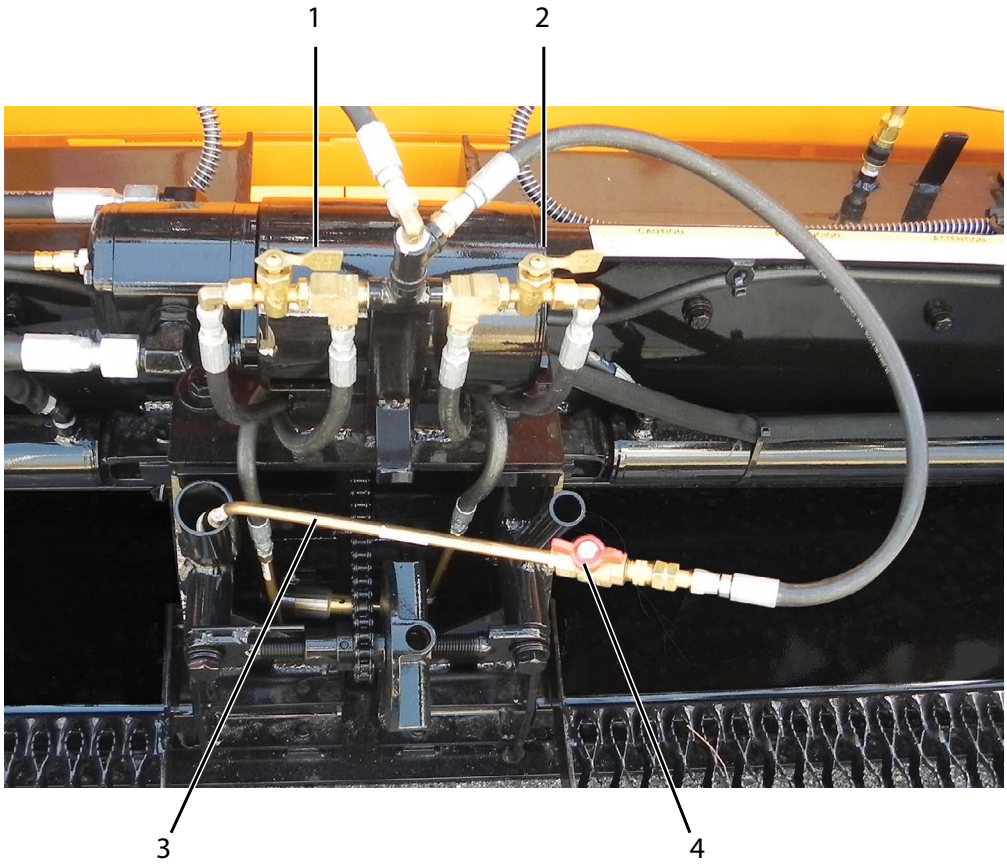


Figure 3-7. Burner Controls

ITEM NO.	CONTROL NAME	FUNCTION
1	Left Burner Valve	Controls flow of propane to left screed burner.
2	Right Burner Valve	Controls flow of propane to right screed burner.
3	Burner Ignitor	Used to light burners.
4	Burner Ignitor Valve	Controls flow of propane to ignitor.

Burner Controls (Cont.)

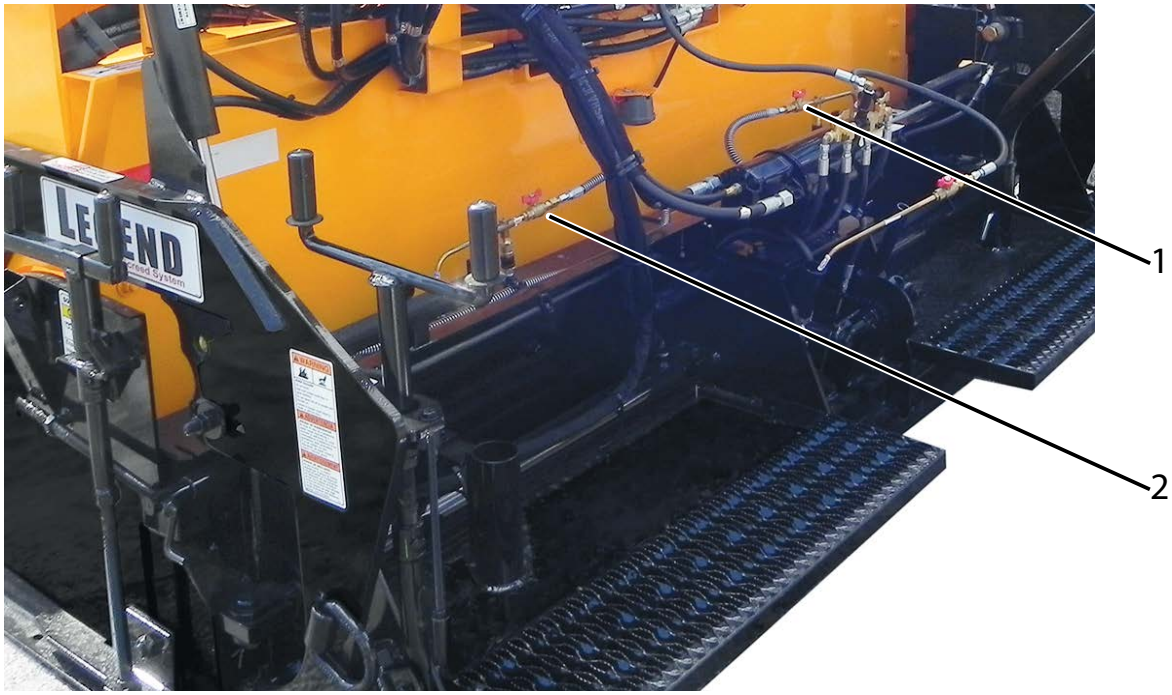


Figure 3-8. Extension Burner Controls

ITEM NO.	CONTROL NAME	FUNCTION
1	Right Extension Burner Valve	Controls flow of propane to right extension burner.
2	Left Extension Burner Valve	Controls flow of propane to left extension burner.

END GATE CONTROLS

Figure 3-9. End Gate Controls

ITEM NO.	CONTROL NAME	FUNCTION
1	End Gate Depth Screw	Sets end gate to desired depth.
2	Tilt Screw	Changes pitch of end gate.
3	Flight Screw	Controls depth of material.

OPTIONS

Electric Screw for Grade Control

This component is electric activators place on the screed arms that work in tandem with a grade sensor to automatically adjust the screed to varying grades.

Work Lights

Work lights at the front and rear work areas of the machine provide illumination when paving at night or during dark conditions.

Two-Speed Option

The two-speed option shifts the huydraulic drive motors between high and low speeds. High speed is used only for traveling. Operators should only use low speed for paving.

Spray Down Reel

The Spray Down Reel provides users with a retractable spray down hose reel to replace the right side spray down hose.

Fail-Safe Brake Kit

This brake activates when the machine run/pause switch or neutral safety switch are activated. It will also activate when the engine is turned off. This parking brake system prevents unintended movement of the machine when activated.

TOPCON IV Sonic Assembly

This sensor measures the asphalt pile height that is sent to the screed extensions from the auger. It will automatically run and shut off the augers when the desired pile height is achieved.

Section 4

OPERATION

GENERAL INFORMATION

Before operating the LeeBoy Model 1000G Tilt Hopper Paver, you must read the following safety information and review **Safety** in **Section 1.**

⚠ DANGER Operation Hazard! Never allow anyone who is not properly trained to operate this paver. Only authorized personnel who are properly trained in the operation of the paver can operate the LeeBoy Model 1000G Tilt Hopper Paver.

⚠ DANGER Operation Hazard! DO NOT operate a paver that requires repairs or scheduled maintenance. 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 and perform routine maintenance. Minor damage can result in major system failure.

⚠ DANGER Never leave machine operator station unattended with machine in gear or in motion. Operator station is defined as the platform area and vicinity of active steering and speed controls. Operator must remain at operator's station at all times when machine is in gear or in motion. Before leaving machine operator station, operator must return forward/reverse steering joysticks to neutral position. Lock with neutral lock.

SAFETY

1. Verify there are no people, obstacles or other equipment near or in the path of the LeeBoy Model 1000G Tilt Hopper Paver before starting the engine.
2. Work slowly in tight areas.
3. Avoid steep hills if possible.
4. Always look before changing the direction of travel.
5. Always park the paver on solid, level ground in low range. If this is not possible, always park the paver at a right angle to the slope. Lower screed when parked.
6. Use proper flags, barriers and warning devices, especially when parking in areas of traffic.
7. Do not run engine in a closed building for long periods of time.
8. Never open a valve to burner unless a flame is present. Heat screed for no more than 15 minutes.
9. Make sure all valves are closed before propane is turned ON.
10. Avoid leaving engine running without operator present.
11. Never work on the paver when the engine is running.
12. Never fill the fuel tank when the engine is running.
13. Always replace damaged or lost decals.
14. Disconnect battery cables when working on the electrical system or welding on the unit.
15. If battery needs a charge, be sure battery charger is off when making connections. ALso turn battery disconnect switch to the OFF position.
16. Be sure the correct battery polarity is observed [negative (-) to negative (-) and positive (+) to positive (+)], when connecting a battery charger or jumper cable.

PRE-START INSPECTION AND PREPARATION

To prevent costly down time, the LeeBoy Model 1000G Tilt Hopper Paver should be checked thoroughly before each use:

1. Inspect paver. Any malfunctioning, broken or missing parts should be repaired or replaced before using, including:
   - Hydraulic hoses/fittings
   - Pumps
   - Motors
   - Electrical wires and connections
   - Steps and supports
2. Check engine oil (refer to Engine Operator's Manual), hydraulic oil, torque hub oil and diesel fuel.
3. Check the engine neutral start switch (the engine should only start when the left and right forward/ reverse steering joysticks are in the neutral locked position).
4. Check all electrical functions before distributing asphalt.
5. Check burner ignition. **(Page 4-24)**.
6. Ensure operator's area is free of debris.
7. Ensure that all the instruction and safety labels are in place and readable. These are as important as any other equipment on the paver.
8. Read and follow all instruction and safety labels.
9. Ensure all covers and guards are in place.
10. Wear OSHA required safety equipment when running the paver.
11. Ensure paver is properly lubricated (**Pages 5-4 and 5-5**).
12. Never fill the fuel tank when the engine is running.

⚠WARNING Explosion Hazard! Never fill fuel tank near an open flame, when smoking, when the engine is running or screed heat is operating.

13. Clear auger before starting engine.
14. Spray cleaning solvent or release agent on any part of the paver that comes in contact with asphalt. **(Page 4-21)**.

STARTING THE ENGINE

Preliminary

1. Check fuel level, fuel lines and tank for leaks.
2. Check crankcase oil level.

NOTICE Failure to maintain correct engine oil level is the greatest single cause of engine failures.

3. Check hydraulic oil level. Oil level is determined by the oil level guage. **(Page 5-7)**

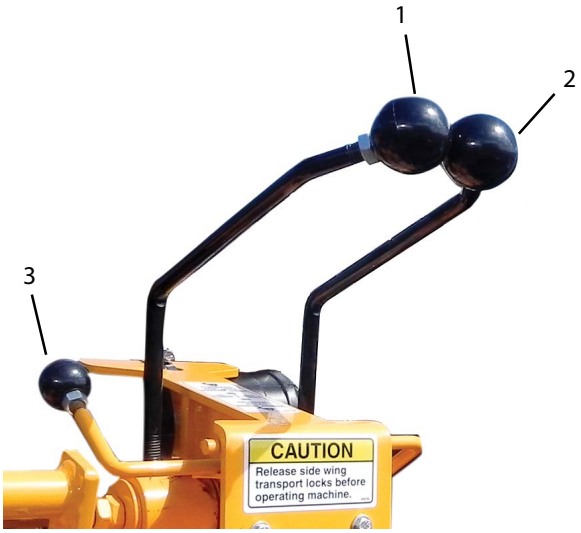


Figure 4-1. Steering Controls

1 - Drive Left Forward/Reverse Steering Joystick

2 - Drive Right Forward/Reverse Steering Joystick

3 - Neutral Lock with Neutral Safety Switch

4. Make sure forward/reverse steering joysticks **(Figure 4-1, 1, 2)** are in NEUTRAL position and Neutral Lock **(Figure 4-1, 3)** is engaged.
5. Refer to Engine Operator's Manual for instructions when starting engine for the first time. Follow engine manufacturer's recommendations for fuel and oil.

Engine Start-Up

NOTE: The Forward/Reverse steering joysticks must be in the NEUTRAL position and the Neutral Lock engaged to start the engine.

1. Position forward/reverse steering joysticks to NEUTRAL. **(Figure 4-1)**

NOTICE **Do not operate the starter longer than 10 - 15 seconds. If the engine does not start, allow the starter to cool 2 - 3 minutes before trying again.**

NOTICE **Using starting additives (i.e., ether) is not recommended.**

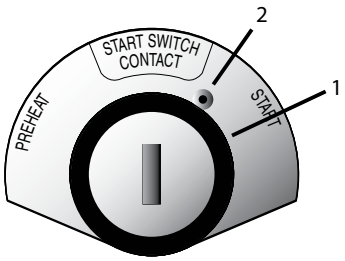


Figure 4-2. Ignition Switch

1 - Start Position

2 - Preheat Position

2. Insert key into the ignition switch on control panel and turn key clockwise to the START position. **(Figure 4-2)**
3. PV480 Powerview Display engages. **(Page 4-6)**

NOTE: Allow engine to warm up for several minutes before moving paver. This will give the hydraulic oil time to warm, providing for more efficient operation. In cold weather, allow hydraulic oil to warm to 50°F (10°C) or 60°F (16°C) before moving.

NOTE: For your convenience, there is an extra key inside the manual box.

Cold Weather Start-Up

It is important that the operator follow all proper procedures for starting the paver in cold weather.

1. Position forward/reverse steering joysticks to NEUTRAL. **(Figure 4-1)**
2. Turn key clockwise to ON position until Wait To Start light turns off to preheat engine. **(Figure 4-2)**.
3. Turn key clockwise to START position. After engine starts, throttle will be set to the default idle RPM automatically by the PV480 Powerview Display **(Page 4-6).**
4. After start-up, allow engine and hydraulic oil to warm up before activating components. This is extremely important in cold weather.

Stopping the Engine

1. Throttle back to idle by using the PV480 Powerview Display. **(Page 4-6)**
2. Turn key in ignition switch on control panel counterclockwise to the OFF position and remove key.

PV480 POWERVIEW™ DISPLAY

Gauge Screens

When turning the ignition key to the ON position, a sequence of screens will display on the controller. First you will see a notation in the upper left corner, “Booting,” followed by Murphy logo displays, and then the gauge screen is displayed. The lit status icons at the top of the screen will disappear momentarily.

Figure 4-3. **Gauge Screen**

1 - Engine Speed/RPM

2 - Engine Coolant Temperature

3 - After Treatment 1 Diesel Particulate Filter (DPF) Outlet Gas Temperature

4 - Electrical Potential Voltage

5 - Actual Engine Torque Percentage

6 - Oil Pressure - Lamp Only

7 - Fuel Level

8 - Engine Total Hours of Operation

Set Points and Throttle Speed

Use the first button to select set points (while not in the the menu). Select desired default throttle speed using buttons. **(Figure 4-3)** The default speeds are: 1000 RPM, 1400 RPM, 1600 RPM, 2200 RPM and 2600 RPM. **(Figure 4-4)**

Figure 4-4. Engine Throttle Speeds Screen

1 - 1000 RPM

2 - 1400 RPM

3 - 1600 RPM

4 - 2200 RPM

5 - 2600 RPM

Use the second button to switch between the Diesel Particulate Filter (DPF) commands and Speed/Throttle to change functions of buttons 4 and 5.

For Speed/Throttle, use buttons 4 and 5 to manually adjust the engine throttle. **(Figure 4-3)**

DPF Commands

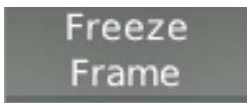
For DPF commands, use button 5 to inhibit a “Parked Regeneration” request.” **(Figure 4-3)**

⚠WARNING Parked Regeneration should be carried out as soon as possible after the command has been given. Failure to do so may result in damage to the engine.

Soft Keys (Buttons)

Your Soft Key choices **(Table 4-1)** are associated with the throttle source. (Some throttle sources may not be present on your model.)

Table 4-1. Soft Key Choices

Status Icon	Description
	Set Points — Displays the engine-requested RPM/speed quick set points.
	DPF Commands — Displays the Diesel Particulate Filter (DPF) command to access the Uninhibit Regeneration and Inhibit Regeneration.
	Request Regen — Sends message to Engine Control Unit (ECU) to start regenerating the DPF when prompted by engine ECU.
	Stop Regen — Sends message to ECU to stop regenerating the DPF (should not be used unless necessary).
	Freeze Frame — Requests the freeze frame data from the ECU when faults are present.
	Main Menu — Two full pages that list five action items to select: Gauges, Diagnostics, System Info, Lamp Info, User settings.
	Down — Navigates the curser (>) downward through a list.
	Up — Navigates the curser (>) upward through a list.
	Select — Enters the action item next to the cursor in a list. Also used with the Main Menu soft key to get back to the Main Menu from any screen.
	Deselect — Closes pop-up messages.
	Plus — Increases the engine requested speed.
	Minus — Decreases the engine requested speed.
	Speed/Throttle — Opens the speed/throttle adjustment command and enables the Plus and Minus soft keys (+/-).

Status Icons

The Status icons **(Table 4-2)** are color-coded and illuminate when communicating to the operator. Pay close attention to any Status icon and color if it appears.

Table 4-2. **Status Icons**

Status Icon	Description
	Check Engine — When this lamp is illuminated, a fault exists within the control system. The engine may continue to operate, however, it is unable to perform DPF cleaning either automatically or manually. ⚠WARNING **Take action immediately to correct the fault.**
	Parking Break Switch — The park icon displays when the parking brake is applied. **NOTE: To perform a Parked Regeneration, the "P" and "N" lamps must be illuminated.**
	Transmission Neutral — The neutral icon displays when the transmission is in neutral. **NOTE: To perform a Parked Regeneration, the "P" and "N" lamps must be illuminated.**
	Engine Exhaust High Temperature Lamp — This lamp illuminates during the regeneration cycle to warn of high exhaust temperatures. This lamp will turn off when normal operating temperatures are reached after the regeneration cycle. ⚠WARNING **Be sure engine exhaust is away from combustible materials when this is illuminated.**
	Diesel Particulate Filter Lamp — A solid lamp is the initial warning that soot levels are rising in the DPF. A flashing lamp indicates a DPF Regeneration is needed (on some systems, the lamp will become red when flashing). The lamp will turn solid again when a regeneration is initiated. Any time the lamp begins flashing, the operator should increase the loading on the engine so regeneration is possible. ⚠WARNING **If increased load does not cause an automatic regeneration to occur, the operator should immediately perform a parked, manual regeneration.**
	DPF Regeneration Set to Inhibit — The user may choose to inhibit the regeneration if conditions are too hazardous for high exhaust temperatures. When this lamp is illuminated, a regeneration cannot be performed and soot levels will continue to rise. ⚠WARNING **Unless hazardous conditions exist, the regeneration inhibit switch and this lamp should remain off.**

Glossary of Terms and Acronyms

CAN - Controller Area Network

DM1 - Diagnostic Message 1, Active Diagnostic Trouble Codes

DM2 - Diagnostic Message 2, Previously Active Diagnostic Trouble Codes

DM3 - Diagnostic Message 3, Diagnostic Data Clear/Reset for Previously Active DTCs

DM4 - Freeze Frame Parameters

DPF - Diesel Particulate Filter

DTC - Diagnostic Trouble Code

ECU - Engine Control Unit

FMI - Failure Mode Identifier

PGN - Parameter Group Number

SPN - Suspect Parameter Number

Main Menu

Press the Main Menu ( ) soft key to view the menu action items. Scroll through the Main Menu list using the UP/DOWN soft keys to maneuver the cursor (>) to the action item. **(Figure 4-5)**

3. Gauges (Main Menu Default Screen)
4. Diagnostics
5. System Info
6. Lamp Info
7. User Settings

Figure 4-5. Main Menu Screen

Gauges

The Gauge Screen is the Main Menu default screen (home). Open it from any screen by pressing the Main Menu ( ) soft key, then the Select ( ) soft key. **(Figure 4-6)**

Figure 4-6. Gauge Screen

4

Diagnostics

Scroll through the Main Menu list using the UP/DOWN soft keys and stop the cursor (>) next to the action item Diagnostics. Press the Select ( ) soft key. The screen **(Figure 4-7)** displays the following items:

8. Active Diagnostics
9. Logged Diagnostics

Figure 4-7. Diagnostics Screen

Active Diagnostics

Use the UP/DOWN soft keys and stop the cursor (>) next to the action item Active Diagnostics. Press the select ( ) soft key. The screen displays active warnings or faults from the ECU. **(Figure 4-8)**

Each diagnostic is shown with the appropriate Suspect Parameter Number (SPN) and Failure Mode Indicator (FMI), Text Description (if available), and the ID/Name of the device that transmitted the DM1 message.

Press the UP/DOWN soft keys to reach the next diagnostic in the list.

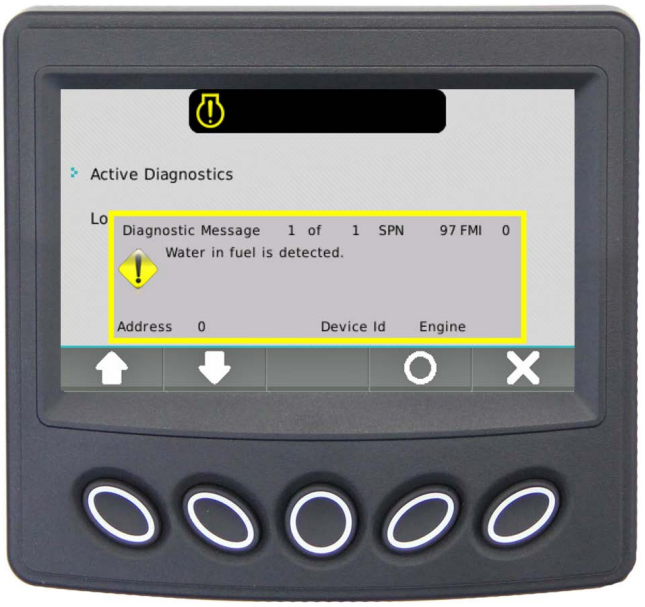


Figure 4-8. Active Diagnostics Screen

Logged Diagnostics

Use the UP/DOWN soft keys and stop the cursor (>) next to the action item Logged Diagnostics. **(Figure 4-9)**

Press the select ( ) soft key. The screen displays the controller requests DM2 (stored trouble codes, inactive), warning or faults from the ECU. Each diagnostic is shown with the appropriate information:

10. Suspect Parameter Number (SPN)
11. Failure Mode Indicator (FMI)
12. Text Description (if available)
13. ID/Name of the device that transmitted the DM1 message

NOTE: Select the Freeze Frame Button to request the freeze frame data from the ECU when faults are present.

Figure 4-9. Logged Diagnostics Screen

System Info

Scroll through the Menu list using the UP/DOWN soft keys and stop the cursor (>) next to the action item System Info. **(Figure 4-10)** Press the select ( ) soft key. The screen displays the following items:

14. Engine Model
15. Engine Serial Number
16. ECU Software ID
17. Fuel Rate
18. Time since last active Regen

Figure 4-10. System Info Screen

Press the UP/DOWN soft keys to display a screen with application and configuration information. **(Figure 4-11)**

Figure 4-11. Application and Configuration Information Screen

Lamp Info

Scroll through the Menu list using the UP/DOWN soft keys and stop the cursor (>) next to the action item Lamp Info. Press the select ( ) soft key. **(Figure 4-12)**

This screen shows the DPF Lamp symbols and provides a description with cautionary information for each symbol. **(Figures 4-12 through 4-15)** Use the UP/DOWN soft keys to scroll to each symbol.

Figure 4-12. High Exhaust Temperature Due to DPF Regeneration Symbol Screen

Figure 4-13. Needs Regenerating Screen

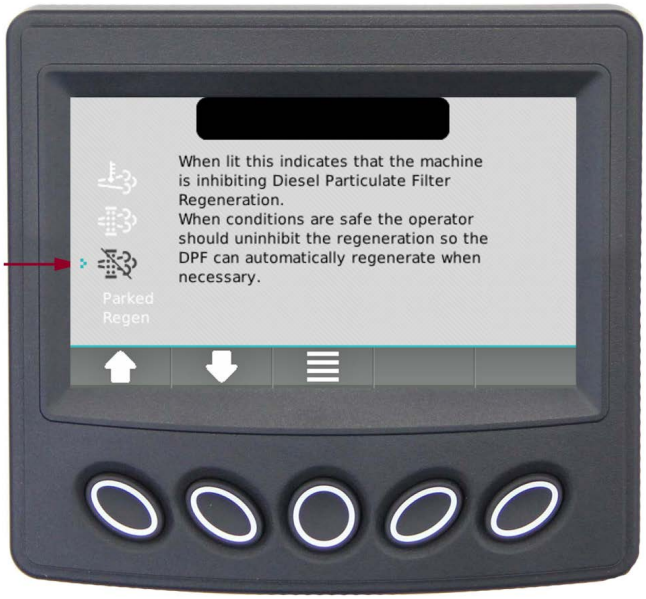


Figure 4-14. Machine Inhibiting DPF Regeneration Screen

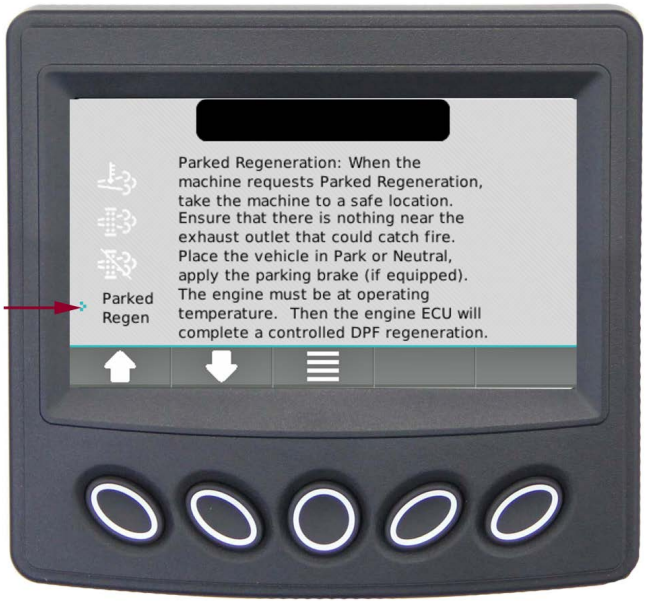


Figure 4-15. Parked Regeneration Overview Screen

User Settings

Scroll through the Menu list using the UP/DOWN soft keys and stop the cursor (>) next to the action item User Settings. Press the select ( ) soft key. The screen displays the following action items:

19. Colors
20. Brightness
21. Language
22. Units
23. Date
24. Time

Screen Color

Use the UP/DOWN soft keys and stop the cursor (>) next to the action item Colors. Set your preference for day or night vision by using the +/- soft keys. **(Figure 4-16)**

Figure 4-16. Set Night Vision Color Preferences Screen

Figure 4-17. Set Day Vision Color Preferences Screen

Screen Brightness

Use the UP/DOWN soft keys and stop the cursor (>) next to the action item Brightness. Set the brightness of the backlight by using the +/- soft keys. **(Figure 4-18)**

Figure 4-18. Set Brightness Of Backlight Screen

Language

Use the UP/DOWN soft keys and stop the cursor (>) next to the action item Language. Set your language preference using the +/- soft keys. **(Figure 4-19)**

25. English
26. French
27. German
28. Spanish
29. Italian
30. Japanese

Figure 4-19. Set Language Preferences Screen

Units

Use the UP/DOWN soft keys and stop the cursor (>) next to the action item Units. Set your unit preference using the +/- soft keys. **(Figure 4-20)**

31. USA Standard
32. Metric kPa
33. Metric Bar

Figure 4-20. Set Unit Preferences Screen

Date Setting

Use the UP/DOWN soft keys and stop the cursor (>) next to the action item Date. Press the Select ( ) soft key to initiate change to the month value. Use the (+/-) soft keys to increment or decrement the number. Use the DOWN arrow to reach the day value and year value and the +/- soft keys to make changes. **(Figure 4-21)**

Time Setting

Use the UP/DOWN soft keys and stop the cursor (>) next to the action item Time. Press the Select ( ) soft key to initiate change to the hour value. Use the (+/-) soft keys to increment or decrement the number. Use the DOWN arrow to reach the minutes value and the +/- soft keys to make changes. **(Figure 4-21)**

NOTE: A reboot is required for changes to the date setting to take effect.

Figure 4-21. Time Setting Screen

Regen (Kubota Engines Only)

Parked Ready Regen

The machine is in an operating condition so that the DPF can regenerate.

Table 4-3. Parked Ready Regen

Action	Description
Cancel Regen	Communicates with the engine that regeneration is not wanted or is unsafe to regenerate at this time.
Regen Mode Inhibit	Communicates with the engine that regeneration is not wanted or is unsafe to regenerate at this time.
Request Regen	Communicates with the engine that regeneration is safe to regenerate at this time.

Regen Caution — Example

The operator may experience a regeneration caution message pop-up on the controller screen as shown in the following examples. **Figures 4-22 through 4-27)**.

These messages require an active response by the operator, so it is important that the operator reads the entire pop-up message. The messages explain the situation and may list instructions for the operator.

Figure 4-22. Regen Caution Message Pop-Up Screen Example

Some messages require using the UP/DOWN soft keys to maneuver through the entire message **Figure 4-23)**.

Figure 4-23. Regen Caution Message Pop-Up Screen Example Requiring Use of UP/DOWN Soft Keys

Figure 4-24. Parked Regeneration Instructions Screen

If the operator does not wish to complete a parked regeneration, click on the ✕ soft key. **(Figure 4-24)** This action cancels regeneration, removes the pop-up, and takes the operator back to the Gauge Screen.

⚠CAUTION Exhaust temperatures will be extremely high. Ensure exhaust will not come into contact with combustible materials.

If the operator would like to complete a Parked Regeneration:

NOTE: The machine must be in park and neutral with a DPF level of 2 or higher to preform parked regeneration.

1. Move machine to an appropriate location.
2. Ensure the coolant temperature is in operating range (typically 155 - 160 F°) and set the engine to low idle.
3. Once these conditions are met, a blue screen message will appear. **(Figure 4-25)**.
4. Using the Up/Down Arrow, scroll down through the entire message and press the Request Regen button.

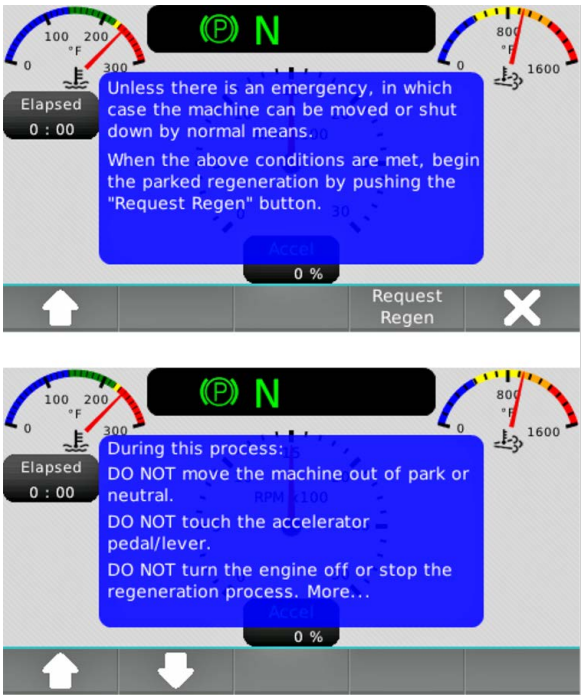


Figure 4-25. Parked Regeneration Message Screens

⚠CAUTION DO NOT attempt to operate the unit, change engine RPM or move from Park/Neutral while regeneration is occurring. This will abort the regeneration process and require you to start the process over.

5. During regeneration, the engine speed will increase and there may be a noticeable sound difference. The HEST Lamp will illuminate during the process.

Once the Parked Regeneration has started, it can be shut down by pressing the Stop Regen soft key **Figure 4-26)**. However, DO NOT shut down unless it is absolutely necessary.

Figure 4-26. Stop Regen Screen

⚠CAUTION Continue to monitor surrounding areas during the process. If unsafe conditions develop, shut the unit off immediately.

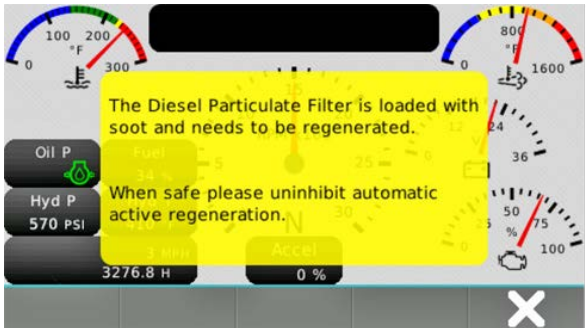
6. Parked Regeneration is complete when the controller screen shows a green pop-up message. **(Figure 4-27)** Click on the ✕ soft key to remove the pop-up message.
7. Once the Parked Regeneration process is complete, the engine will automatically return to normal idle speed and the machine can return to normal usage.

Figure 4-27. Parked Regeneration Green Popup Message Screen

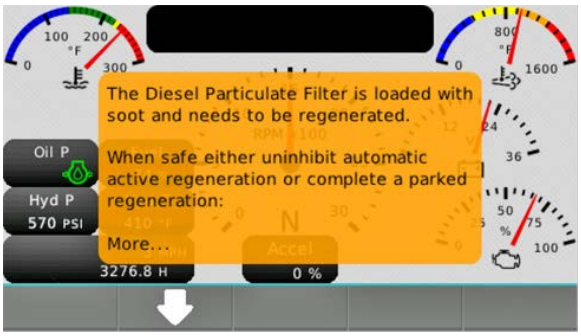
Messages, Cautions and Warnings

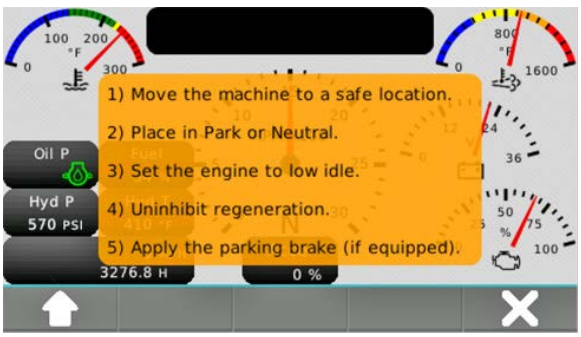
Please pay attention to all messages **(Figure 4-28)** on the controller for safet operation and to prevent engine or property damage if DPF regeneration is needed.

Regen Level 1

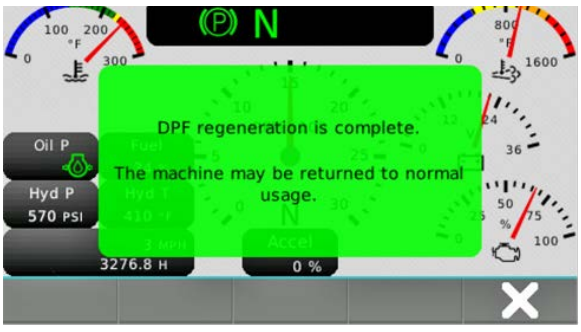


Regen Level 2

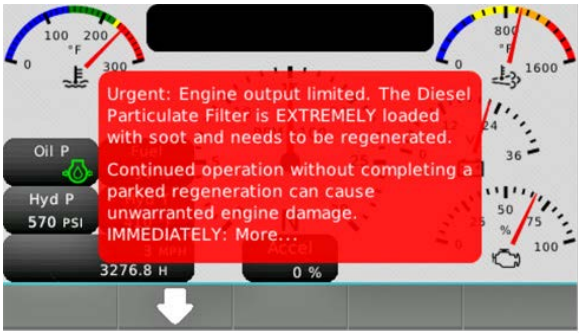


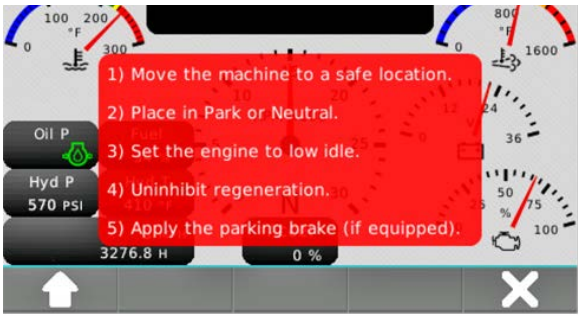


Regen Complete

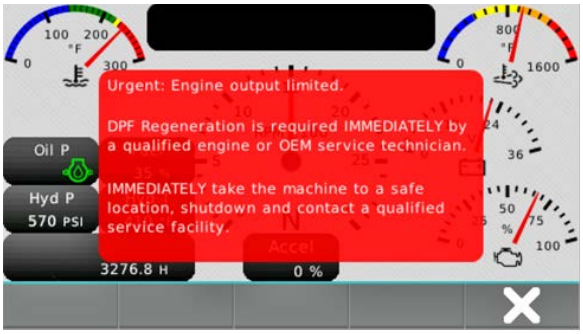


Regen Level 3





Regen Level 4



Regen Level 5

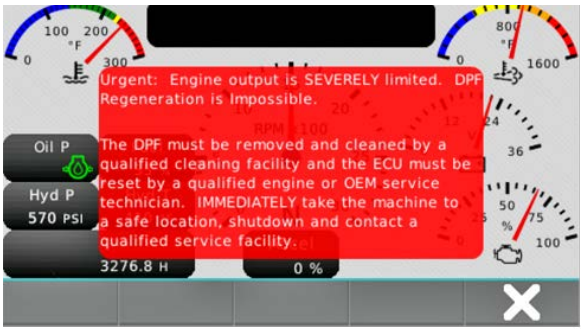


Figure 4-28. Controller Messages, Cautions and Warnings

PAVER OPERATION

1. Start the paver per instructions on **Page 4-4**.
2. Release Neutral Lock by pulling lever toward operator.
3. To drive the paver forward, slowly push both forward/reverse steering joysticks evenly from the NEUTRAL position until the paver is moving at the desired speed.
4. To drive the paver in reverse, slowly pull the drive forward/reverse steering joysticks back from the neutral position until the paver is moving in reverse at the desired speed.

⚠WARNING **Rapid counter-rotation in either direction, clockwise or counterclockwise could result in operator being thrown from machine. Counter-rotation is defined as either one forward/reverse steering joystick in extreme forward position and opposite forward/reverse steering joystick in extreme rear position while machine is in gear and moving forward or reverse. Make only SLOW adjustments to forward/reverse steering joysticks to turn machine.**

5. To turn the paver left while moving in the forward direction, either push the right-hand forward/reverse steering joystick further than the left-hand forward/reverse steering joystick or pull the left-hand forward/reverse steering joystick back. This causes the right side of the paver to move faster than the left-hand side and results in a left turn.
6. To turn the paver right while moving in the forward direction, either push the left-hand forward/reverse steering joystick further than the right-hand forward/reverse steering joystick or pull the right-hand joystick back. This causes the left side of the paver to move faster than the right-hand side and results in a right turn.
7. Advancing either forward/reverse steering joystick while pulling back on the other forward/reverse steering joystick results in a tighter turn.
8. To stop the paver, return both forward/reverse steering joysticks to the neutral position and engage neutral lock.
9. Position paver to start of mat.
10. Open cut-off gates by pushing the right and left cut-off open/close levers upward to the OPEN position. **(Page 3-4)**
11. Adjust screed as needed. **(Page 4-25)**
12. When material starts to discharge from under the screed, set the screed float down/up lever to the FLOAT position. **(Page 3-4)**

⚠CAUTION **Never fold hopper wings in fully when hopper is full of asphalt.**

13. Open the hopper sidewings by pushing the Front Sidewings In/Out lever to the OUT position. **(Page 3-4)** When first starting to pave, allow only a partial load of asphalt to enter the hopper.

NOTE: Augers are not needed when paving a basic eight-foot-wide pull.

14. Start paving. Move slowly at first so adjustments can be made to screed.

⚠CAUTION **Never back up with cut-off gates open. Cut-off gates are designed to break away from cylinders when hitting a manhole or other objects. This only occurs going forward, not in reverse.**

15. For best results, set the left and right cut-off levers **(Page 3-4)** to the CLOSE position about two to three feet (.6 to .9 m) from the end of pull. Return paver back to starting position to begin next pull. Position and set the screed end-gate on joint side back to 0 feet or flush with bottom of main screed.
16. The paver operates using one side only. Material from the opposite side cannot be augered to the working side (the auger center cover prevents this). It is possible to leave both cut-offs shut and open the end-gates on the screed. This method is generally used for patching potholes.

Hydraulic Cut-Off Gates Operation

The cut-off gates are one of the most important function of the paver, therefore, proper use is very important. Cut-offs are used primarily to control the flow of asphalt to the screed. Cut-offs can be used when making passes at the beginning and end of each pull.

⚠CAUTION **Never back up with cut-off gates open. Cut-off gates are designed to break away from cylinders when hitting a manhole or other hard object.**

1. Push the right and left cut-off Open/Close levers to the OPEN positions to increase asphalt flow to the screed. **(Page 3-4)**
2. Pull the right and left cut-off Open/Close levers to the CLOSE positions to decrease asphalt flow to the screed. **(Page 3-4)**

Spray Down

Always spray down the LeeBoy Model 1000G Tilt Hopper Paver before operation with cleaning solvent or release agent on any part of the paver that comes in contact with the asphalt. Buildup of asphalt will cause damage to components.

⚠WARNING **Fire Hazard! Never spray cleaning solvent or release agent on or near a screed heating element that is hot or near any open flame or source of ignition.**

NOTE: Only spray down the machine in an area where solvents won't run onto the ground per environmental laws and regulations.

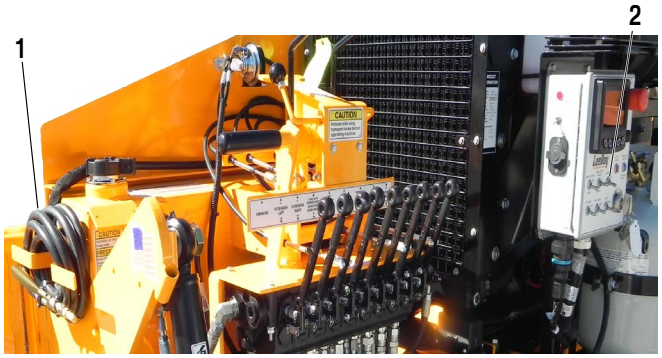


Figure 4-29. Spray Down Hose

1 - Spray Hose Wand Handle

2 - Control Panel Box

NOTE: A hose reel is available as an option.

3. Extend hose as needed and set Spray Down switch to ON (up) position. Squeeze the wand handle and spray. Release wand handle when done spraying. **(Figure 4-29)**
4. After spraying, set the Spray Down switch to the OFF (down) position and let the hose rewind on hose reel (if installed). Rewind manually if not equipped with the optional hose reel.

Burner Ignition Procedure

⚠WARNING Propane gas used to heat the screed is volatile and combustible. Use extreme care and follow the instructions.

NOTE: Heating the screed helps prevent hot mix from sticking to the cold screed plate and produces a smooth, tight mat surface. Heating should be performed at the beginning of the job and between loads if the paver is idle for a long time (allowing the screed plate to cool).

The following procedure will provide the necessary steps in manually lighting the burners. Propane is a volatile and combustible gas, therefore safety should be a major consideration.

1. Turn all burner valves at center of screed and on both right and left side extensions counterclockwise to the OPEN position. **(Figure 4-30)**

⚠WARNING Never open a valve to a burner unless flame is present. A buildup of unburned gas could result in an explosion.

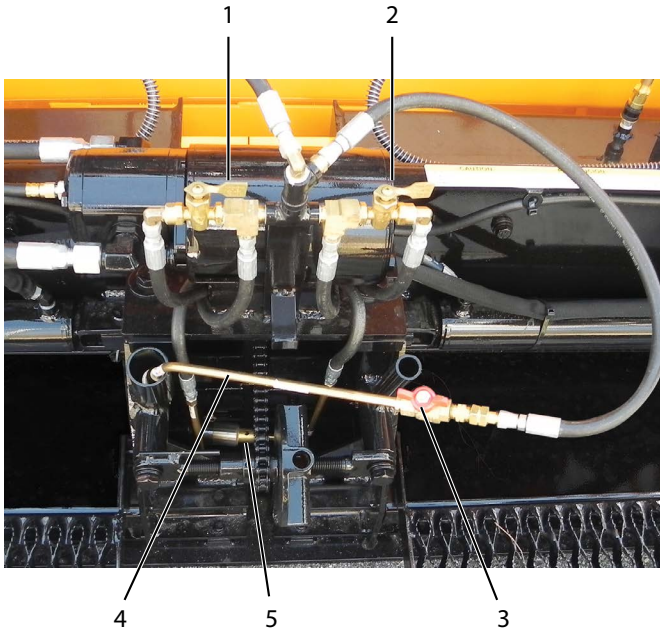


Figure 4-30. Burner Valves

1, 2 - Burner Valves

3 - Burner Ignitor Valve

4 - Burner Ignitor

5 - Burner Ignitor Hole

2. Turn propane tank Open/Close valve counterclockwise to OPEN the position and adjust propane pressure regulator valve in or out until propane pressure regulator gauge reads 15 pounds (1 bar). **(Figure 4-31)**

Figure 4-31. Propane Tank With Regulator

1 - Propane Tank Open/Close Valve

2 - Propane Pressure Regulator Gauge

3 - Propane Pressure Regulator Valve

3. Light burner ignitor as you open the ignitor valve. **(Figure 4-30)**
4. Direct ignitor flame into hole in screed cover and turn burner valve to ON position.
5. Repeat procedure in Step 4 for opposite side.

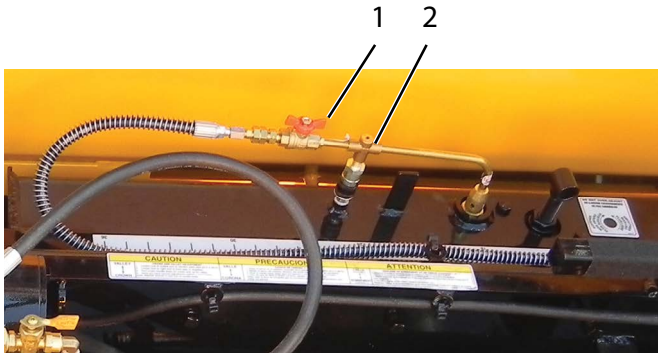


Figure 4-32. Extension Burner Valve

1 - Extension Burner Valve

2 - Coupling Connector

6. The extension burners are held in position to the screed with a quick coupling connection. Remove the extension burner from coupling connector and light. **(Figure-32)**
7. Repeat procedure in Step 6 for opposite side.
8. Turn off burner ignitor valve. **(Figure 4-30)**
9. Heat screed 15 minutes before paving.

NOTE: When heating screed, position the screed approximately two inches (5 cm) from the ground.

To Extinguish the Burners

1. After screed has heated for about 15 minutes, turn Propane Tank Open/Close Valve clockwise to the CLOSE position. **(Figure 4-31)**
2. Once flame goes out completely, turn the burners off by turning the burners valves clockwise to the CLOSE position. **(Figure 4-30)**

Two-Speed Drive (Option)

A high and low gear switch is used with the optional two-speed drive motors. **(Page 3-4)** Pull the High Gear/Low Gear Switch UP for high gear. (If equipped with this option, the High Gear light will illuminate to indicate the paver is in high gear.) Push the High Gear/ Low Gear switch DOWN for low gear.

NOTE: Always pave in low gear as the paver may be shifted while moving in high gear.

Sonic Augers Operation (Option)

The sonic augers are most often used when paving nine or 10 feet (2.7 or 3 meters). Augers are capable of running material over the top of end-gates, causing extra manual work. The sonic auger gauges the amount of material that is in the extensions.

⚠CAUTION Never run augers when paving less than nine feet (2.7 m) wide.

1. Set the LEFT AUGER and RIGHT AUGER switches on the control panel to the AUTO position. **(Page 3-4)**
2. Pull the auger levers to the OUT position to fill the end gates. The sonic will turn the augers OFF and ON, automatically. To override the automatics, the toggle switches must be set to OFF.
3. Adjust height of material at end gate with the sonic auger adjustment. **(Figure 4-33)** Turn the dial to keep the extension full. Be careful not to over run the extension with the material.

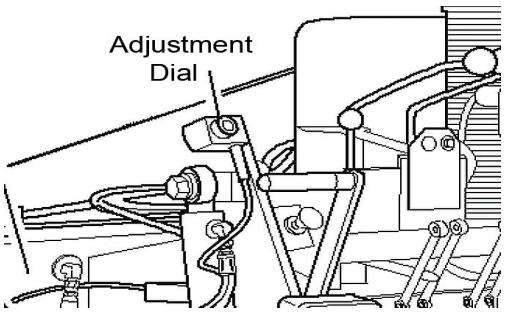


Figure 4-33. Sonic Auger Height Adjustment

4

NOTE: When running material through augers manually, try to pave so material flow to extension is adequate and maintained.

NOTICE To prevent hydraulic oil from overheating, turn augers OFF while waiting on material or manual work.

4. Anytime paver stops, set the left and right auger switches to OFF. This will keep hydraulic oil cooler.

Electric Flight Screws Operation (Option)

The electric flight screw option is an added convenience for the operator.

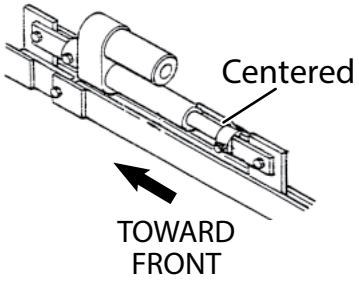


Figure 4-34. Flight Screw

5. Before paving, center the electric flight screws on each side of the paver. **(Figure 4-34)**
6. While paving, manual flight screws are used to make major depth adjustments. Use the electric flight screws to make minor adjustments.

STARTING TO PAVE

The LeeBoy Model 1000G Tilt Hopper Paver is capable of placing bituminous base, binder and surface courses, lime or Portland cement stabilized sub-base, and graded aggregate materials up to a thickness of six inches (20 cm).

The paver is equipped with optional electric and manual thickness controls and a screed that is 8 - 13 ft. (2.8 m - 4 m) wide. The paver can pave driveways and small parking lots, to large parking areas and secondary roads.

Before starting to pave, be sure to consider the following information:

1. Plan the project to pave narrow passes first, (the basic width of the paver), leaving the widest pass until last.

NOTE: When paving, gradually raise hopper as material is needed to screed. Do not dump full hopper and raise all the way up at one time. This will cause mat thickness to vary.

2. Be sure to use a reference guide such as a curb, gutter, adjacent mat or string line. It is important that the first pass be straight as it will be your guide for following passes. Use the guide bar gauge as shown in **Figure 4-35.**

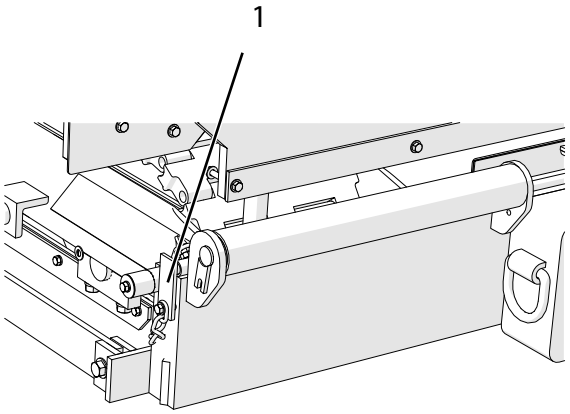


Figure 4-35. Guide Bar Gauge

1 - Guide Bar Gauge

NOTICE Never move through a pile of mix that has been dumped in front of the paver. Not only will this affect the level of the mat being laid, but can result in damage.

3. It is the operator's responsibility to guide the material truck up to the paver and signal the driver when and how much material to dump into the hopper. Truck drivers must maintain a light pressure on truck brakes to keep truck from dumping material on the roadway.
4. Always pave in low range.

⚠WARNING Before starting forward with paver, make certain no people or obstacles are in front of the paver.

⚠CAUTION Avoid low hanging limbs, power lines and other objects that can endanger crew or paver.

Setting Screed To Pave

1. Move paver to the starting position.
2. Extend the screed to the desired width.
3. To set depth, place screed on starter blocks. **(Figure 4-36)**

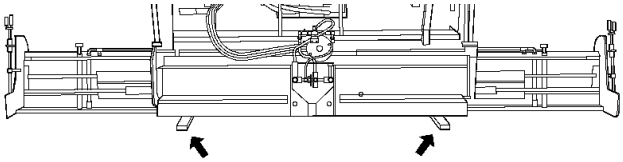


Figure 4-36. Starter Blocks

4. Level screed with flight screws until neutral position is obtained.

NOTE: Neutral position is when the pressure on the flight screw is the same when screwing either clockwise or counterclockwise.

5. Set the left or right screed float lever to the FLOAT position. This will remove the hydraulic pressure from the cylinder, allowing screed to float.
6. Turn flight screw about one complete turn clockwise.

Setting Crown or Valley

1. Loosen hex head bolt next to vibration motor. **(Figure 4-37)**

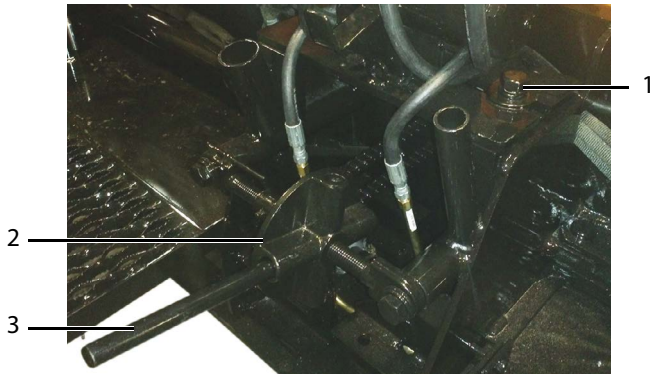


Figure 4-37. Crown Adjustment

1 - Hex Head Bolt

2 - Crown Adjuster

3 - Crown Handle

2. Remove crown handle from toolbox and insert into crown adjuster.
3. For increased positive crown, turn crown handle down.
4. For increased negative crown, turn crown handle up.
5. Retighten hex head bolt next to vibration motor.

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

NOTE: Maximum crown is two inches (5 cm).

4

6. Positive crown is achieved when the middle of the mat is raised to permit water to drain to each side. Negative crown is achieved by lowering the center of the screed plate. **(Figure 4-38)** Negative crown might be used in an alley where drainage down the center of the alley is necessary.

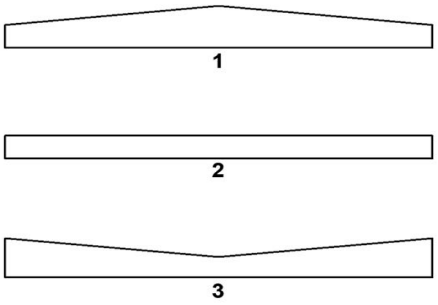


Figure 4-38. Crown Settings

1 - Positive (+)

2 - Zero (0)

3 - Negative (-)

7. Crown may be placed in the leading edge and/or the trailing edge of the screed plate. Crown in the leading edge aids material flow under the screed plate only. Trailing edge crown puts a crown in the mat. For example, if the trailing edge crown is 0 and leading edge crown is 1/8 inches, there will not be any crown placed in the mat laid by the paver; however, material flow under the screed plate will be improved.
8. Trailing edge crown is set at 0 when shipped from the factory. The chain connecting the leading and trailing edge crown control assures that the relationship of the edges remains constant as the trailing edge is changed to meet job conditions.
9. Regardless of the settings, the final judge of what you are doing is the mat itself. If you have set the crown on the screed, check the mat behind to determine if the crown is completed as desired.
10. Begin paving the first pass following the guide line.
11. Reverse the paver and return to the starting point for the next pass. The depth control handle on the end-gate (on the paved side) should be set so that the bottom of the end-plate is about 1/4-inch below the screed plate, if the adjacent mat has been rolled.

Setting Screed End Gates

1. On the first pass, turn the end gate depth screw to lower the end-gate until it is about .25 inches (6.35 mm) below the screed. **(Figure 4-39)**

NOTE: Most operators run end gates within .25 inches (6.35 mm) of flush.

2. Turn the flight screw on the end gate so the front of the end gate tilts down slightly when the screed is lifted. This allows the end gate to set itself to grade.

NOTE: When paving, never let the end gate carry the weight of the screed. This will cause screed compaction to vary.

3. If the end-gate starts to dig in at the front during operation, adjust the tilt screw so the end gate tilts back.
4. When making a joint, the end-gate must be set to where it fits flush with bottom of screed.

NOTE: Keep runners clean. When making a joint, spray clean solvent on runners.

Figure 4-39. End-Gates

1 - End-Gate Depth Screw

2 - Tilt Screw

3 - Flight Screw

4 - Runner

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

5. On the first pass, leave about six to eight inches (15 - 20 cm) of unrolled asphalt where the joint is being made.
6. If the joint looks too high or too low, adjust the flight screw **(Figure 4-3939, 3)** on the screed one turn at a time, and allow four to five feet (1.2 - 1.4 m) of travel to correct itself.

NOTE: Too much adjustment up or down may cause rising and falling effect in the paved material.

7. If making a cold joint, set end-gate down about 1/4 inches (6.35 mm). This result in a nice, even edge.

Setting Screed Extensions - Mat Texture

NOTE: This is used when paving more than eight feet (2.4 m).

The screed extensions should be heated with initial heating cycle before making adjustments. Use the wrench provided to make adjustments. If correct adjustment is made, the pressure on the rear edge of extended screed is the same as on the rear edge of the main screed. The result of making this adjustment will be a smooth mat the length of the screed.

⚠WARNING **Fire Hazard! Never spray cleaning solvent or release agent on or near a screed that is hot or being heated or on or near any open flame or ignition source. 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.

1. Heat the screed extension before making adjustment to extended width.
2. Adjust tilt on the rear edge of the extension by turning the Angle of Attack (AOA) adjuster (**Figure 4-4040**) counterclockwise. This is done to give the same amount of compaction and slickness on the extension and main screed.

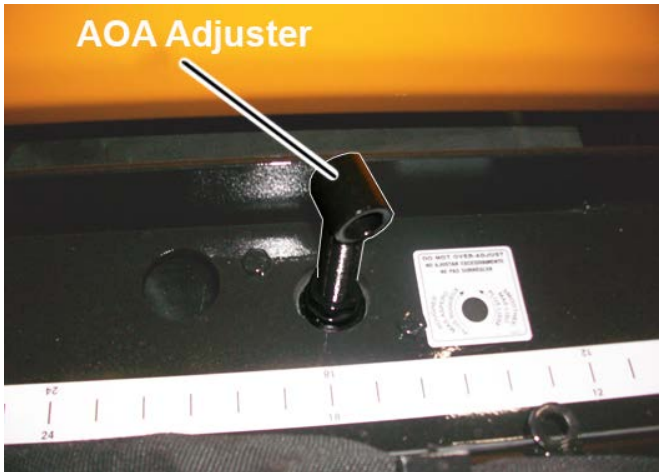


Figure 4-40. Angle of Attack (AOA) Adjuster

3. If drag occurs in center of the screed, then too much pressure is on the screed extension and the extension is carrying all the weight. Correct this by turning the adjustment clockwise until both the screed and the screed extension produce the same mat texture.

NOTE: Turning the AOA adjuster clockwise will decrease the pressure on the back of the screed. Turning the adjuster counterclockwise will increase the pressure on the back of the screed.

NOTE: Increasing the pressure on the back of the extension will give you a smoother, slicker finish. Decreasing the pressure will give you a coarser finish. Putting too much pressure on the back of the extension will take the weight off of the screed wearplate and cause poor material compacting, resulting in a poor finish in the middle of the main screed.

UNLOADING AND LOADING

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

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

Unloading

1. Remove tie-down equipment.
2. Start and warm-up engine.
3. Set throttle at 1/2 operating RPM. Set steering control lever so paver moves very slowly.
4. Be sure these components are set properly:
   - Neutral/Non-Creeping Switch - OFF
   - Side Wing Transport Locks - RELEASED
   - Screed Position - UP
   - Extendible Screed - IN
   - Gates Below Augers - CLOSED
5. Move paver forward down the ramp as shown **(Figure 4-41)**.

NOTICE **Never back up with cut-off gates open.**

NOTE: Always post an assistant to "ground guide" the operator during the unloading procedure.

⚠WARNING Make sure engine is operating at a high enough RPM so that the hydraulic pump is providing sufficient flow to operate all functions properly.

⚠CAUTION Do not let the screed strike the ramp when moving on or off the ramp. This can break the bearings on the thickness control screws or welds on the leveling arms. A longer ramp or blocks may be necessary to reduce the loading angle.

6. Move paver forward down the ramp as shown **(Figure 4-41)**.

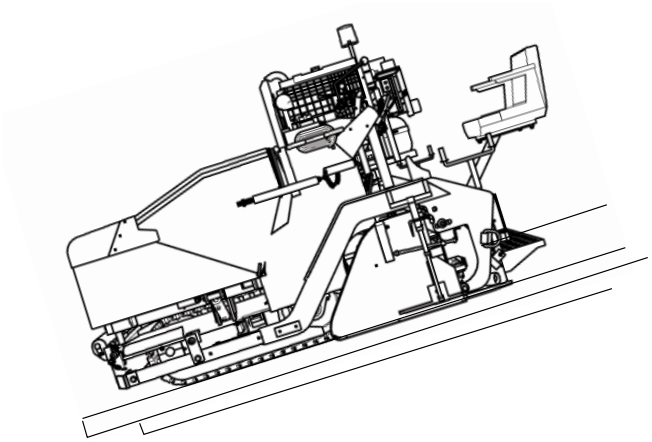


Figure 4-41. Correct Loading/Unloading Position

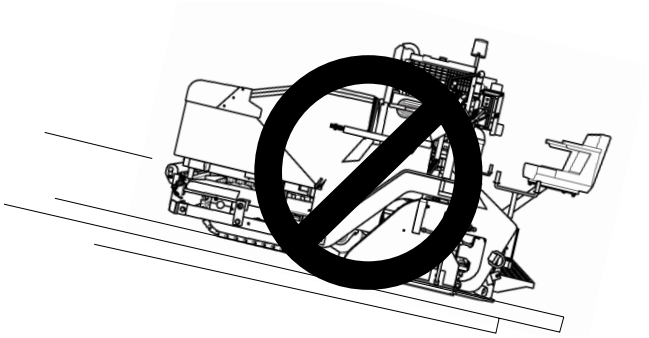


Figure 4-42. Incorrect Loading/Unloading Position

Loading

⚠CAUTION **Paver must be loaded with the screed end first to prevent damage. If the paver is loaded hopper end first, the weight will tend to tip the paver onto the screed (Figure 4-42).**

NOTE: Always post an assistant to "ground guide" the operator when moving the paver onto the transport.

1. Move paver to base of ramp. Line up tracks with the ramp.
2. Be sure these components are set properly:
3. Neutral/Non-Creeping Switch - OFF
4. Side Wing Transport Locks - RELEASED
5. Screed Position - UP
6. Extendible Screed - IN
7. Gates Below Augers - CLOSED

NOTICE **Never back up with cut-off gates open.**

8. Load paver with the screed end first. Set throttle at 1/2 operating RPM and steering control lever so paver moves very slowly onto the ramp.
9. With the steering control levers, slowly guide the paver up the ramp.
10. Place paver in center of trailer or desired position.
11. Lower screed to deck.
12. Shut down engine.
13. Secure paver to transport as directed by DOT and other applicable regulations.

Tie-Down Procedure

1. Attach tie down chains to the hopper and screed arms at the D-rings **(Figure 4-4343, 1)**.
2. Engage side wing transport locks **(Figure 4-4343, 2)**.
3. Make sure all chains are tight before moving.

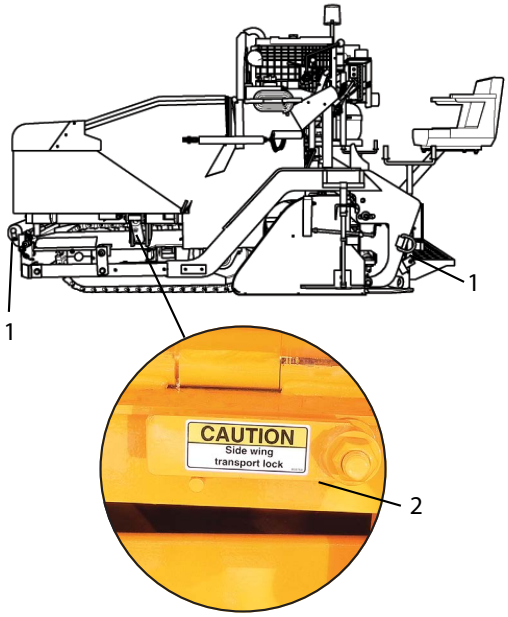


Figure 4-43. Tie Down Points and Transport Lock

1 - Tie Down D-Rings

2 - Side Wing Transport Lock

4

SETUP OF TOPCON IV SONIC GRADE SENSORS (OPTION)

1. Loosen the “Z”-Arm bolt (**Figure 4-44, 1)**, and swing it beyond the end gate **(Figure 4-44, 2)**.

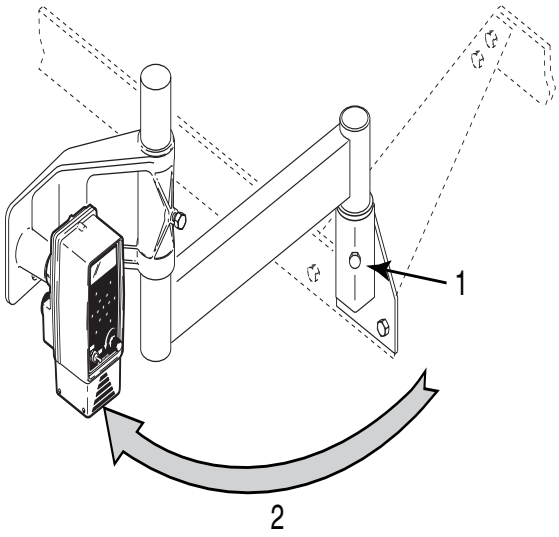


Figure 4-44. Z-Arm

2. Position the tracker 14 inches (35.5 cm) to 30 inches (76.2 cm) above the reference to be used.
3. Turn the Grade Adjustment Knob (**Figure 4-45, 3)**, on the sonic tracker counterclockwise until an “On Grade” symbol appears **(Figure 4-45, 3).**

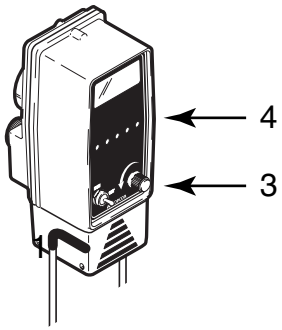


Figure 4-45. Grade Adjustment

Section 5

MAINTENANCE

GENERAL INFORMATION

This section gives the necessary procedures for routine and general maintenance on the Model 1000G Paver. Follow all Maintenance Schedules and Maintenance Procedures to maintain the machine in top operating condition.

Maintenance must be a planned program that includes periodic machine inspection and lubrication procedures. The first and most important requirement for satisfactory paver performance is a clean machine. Many failures in the field are due to equipment that has become so covered with excess gravel and dirt that even ordinary adjustments and lubrication are neglected.

The operator should inspect the machine daily. The operator is responsible for seeing that worn or damaged parts are replaced or repaired to prevent damage to other areas of the machine. Daily inspections should include checking for loose bolts, fluid leaks, worn or damaged hoses, and debris or dirt accumulations to prevent potential service or safety problems.

The maintenance program must be done based on the machine "Operating Hours" recorded on the hour meter or based on the "Periodic Schedule," which is typically done at the following time intervals:

- Daily, Weekly, Monthly, Quarterly, Semi-Annually and Yearly

Table 5-1. Periodic Maintenance Schedule

SYSTEM	ITEM	Every 10 Hours	Every 50 Hours	Every 100 Hours	Every 250 Hours	Every 500 Hours	Every 1000 Hours
Paver	Lubricate paver	X					
Hydraulic	Check oil level	X					
	Torque hub oil level			X			
	Replace oil charge filter cartridge				X		
	Replace oil						X
	Replace oil suction filter						X
	Replace strainer filter						X
	Replace drive torque hub oil					X	
Engine	Inspect belts, replace A/R				X		
	Inspect air intake hoses and clamps				X		
	Inspect alternator and connections						X
	Replace engine oil and oil filter cartridge				X		
	Check oil level - change at initial 50 hours	X					
Electrical	Check all wiring connections		X				
	Service battery				X		
Engine Air Cleaner	Check/clean air cleaner element				X		
	Replace air cleaner element				X		
	Check air cleaner indicator	X					
Fuel	Replace fuel filter cartridge				X		
	Inspect Fuel System Hoses and Clamps		X				
Cooling	Coolant Level, check and change A/R	X					
	Inspect Coolant Hoses and Clamps				X		
Mechanical	Adjust auger chains			X			
	Screed extension top guide adjustment			X			

LUBRICATION POINTS

Proper lubrication is necessary to maintain the machine at top efficiency. Refer to the Lubrication Specifications in **Table 5-2**. All lubrication points are shown in **Figures 5-1 and 5-2.**

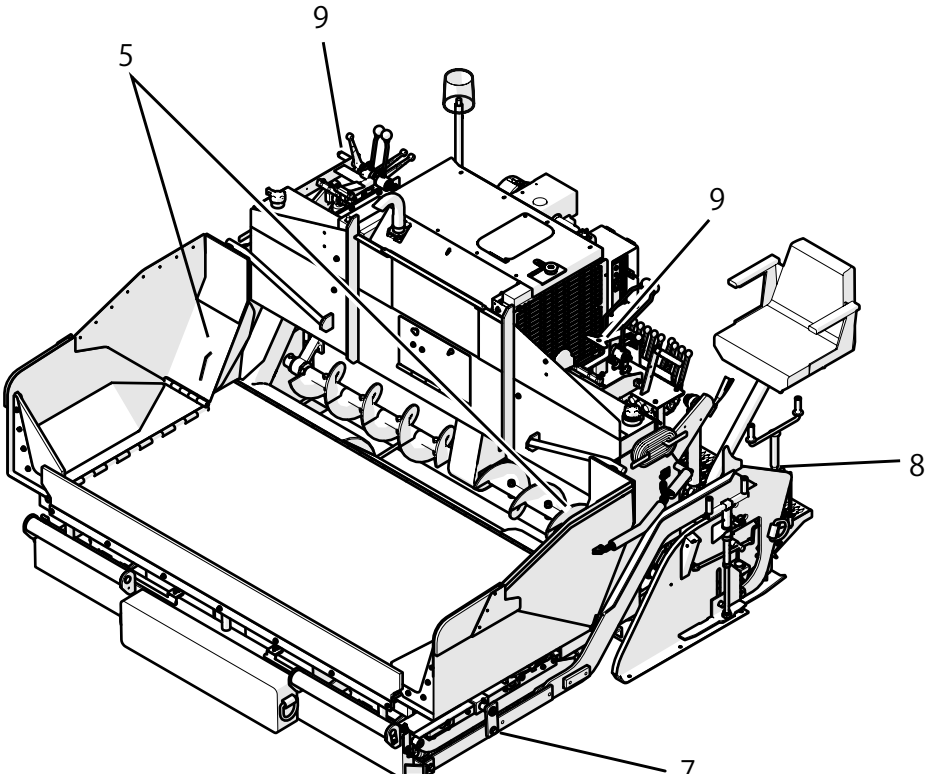


Figure 5-1. Lubrication Points (Front)

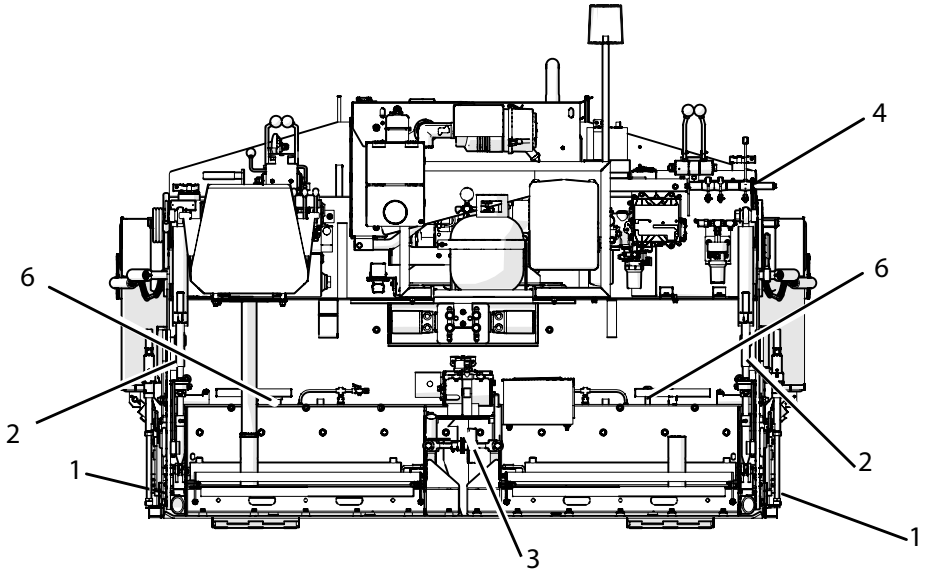


Figure 5-2. Lubrication Points (Rear)

Table 5-2. Lubrication Specifications

ITEM NO.	LUBRICANT TYPE	DESCRIPTION AND LOCATION	INTERVAL
Legend	A	Grease With Shell Avania EP Grease 2 Or Equivalent	
	B	Spray With An Approved Release Agent	
1	A	Depth Screw (grease first in lock position, unlock and turn 180° and grease)	Weekly
2	A	Flange Bearing and Fitting, on flight screw plus flange bearing, on T-handle of extension, (both sides)	Weekly
3	B	Auger Chain, middle of paver	Weekly
4	B	Cable End, throughout paver	Weekly
5	A	Auger, grease fitting on end mount (end of day)	Daily
6	B	Screed Extensions, left and right (clean surface)	Daily
7	A	Pillow block bearing, on rear axle	3 Months
8	A	Main Flight Screws Ball Socket and Nut	Weekly
9	A	Drive Lever, on pivot housing	Weekly
10	A	Extension Slides	Daily
11	B	Spray any part of paver that contacts asphalt	Daily
12	B	Paver, clean all surfaces	Daily

NOTE: Item Nos. 10, 11, and 12 are not shown in Figures 5-1 and 5-2.

MAINTENANCE SCHEDULE

Before performing any maintenance procedures on the LeeBoy Model 1000G Tilt Hopper Paver, read the following safety information and review **Safety** in **Section 1.**

⚠WARNING **Tool Hazard! ALWAYS use tools appropriate for the task at hand and use the correct sized tool for loosening or tightening screed parts.**

⚠WARNING **Burn Hazard! ALWAYS handle hot components with heat-resistant gloves.**

This section gives the necessary procedures for routine and general maintenance on the LeeBoy Model 1000G Tilt Hopper Paver. Follow all maintenance schedules and procedures to maintain the machine in top operating order. The Maintenance Schedule on **Page 5-3 (Table 5-1)** lists the recommended time intervals between LeeBoy Model 1000G Tilt Hopper Paver maintenance inspections and lubrication procedures (refer to **Lubrication Specifications** on **Page 5-5, Table 5-2**).

The "Hour" and "Periodic" time periods list most service intervals. The maintenance schedule begins with 10-hour, or daily, maintenance intervals and continues through the 1000-hour, or annual, maintenance schedule intervals.

Preventive maintenance on the paver will provide years of trouble-free operation. Adjustments can be performed in the field with ordinary tools. Engine preventive maintenance, other than oil, air and fuel filter changes, is not covered in this section. Refer to the Engine Operator's Manual for engine service information.

Anytime the paver has been repainted or the decals have been removed, damaged or worn/illegible, a new set of decals should be ordered and re-installed for safe operation (see **Safety Label Installation in Section 1**).

NOTICE **Changing oil and cleaning the LeeBoy Model 1000G Tilt Hopper Paver should only be done in a designated area where the the oil and chemicals can be contained. These by-products should be discarded in accordance with environmental regulations.**

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

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

NOTE: **If the paver is operated more than 10 hours per day, follow the "Hour" schedule. If the paver is operated less than 10 hours per day, follow the "Periodic" schedules.**

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

NOTICE **If mix is allowed to remain on the screed overnight, possible damage can result upon start-up the next day.**

Preparing Paver for Maintenance

When performing maintenance, perform the following steps before leaving the operator's position, unless the maintenance procedure instructs otherwise.

1. Park the paver on a flat even surface.
2. Lower all attachments to ground level.
3. Place drive levers in NEUTRAL.
4. Apply Neutral Lock.
5. Run engine at 1/2 speed (RPM) without load for 3 to 5 minutes.
6. Reduce engine speed (RPM) to slow idle.
7. Place ignition switch in the OFF position.

⚠WARNING **If maintenance must be performed with engine running, do not leave paver unattended.**

10-Hour or Daily Routine Maintenance

1. Scrape off mix and spray cleaning solvent or release agent on the hopper, extensions and any area that has come into contact with the mix. All cleaning should be performed while the paver is hot.

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

NOTICE **If mix is allowed to remain on the screed overnight, possible damage can result upon start-up the next day. Poor housekeeping will increase maintenance costs.**

2. Remove any debris from screed and check for leaks.

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

3. Tighten fittings as necessary. Replace hoses and fittings as needed.

⚠WARNING Crush Hazard! Never work under the hopper without making sure it is supported by safety prop and all unauthorized personnel are clear of the area.

4. Raise hopper and clean mix off all flat surfaces. This operation is quick and simple when the paver is still hot. Immediately after raising hopper, place the safety prop **(Figure 5-3)** in proper position.

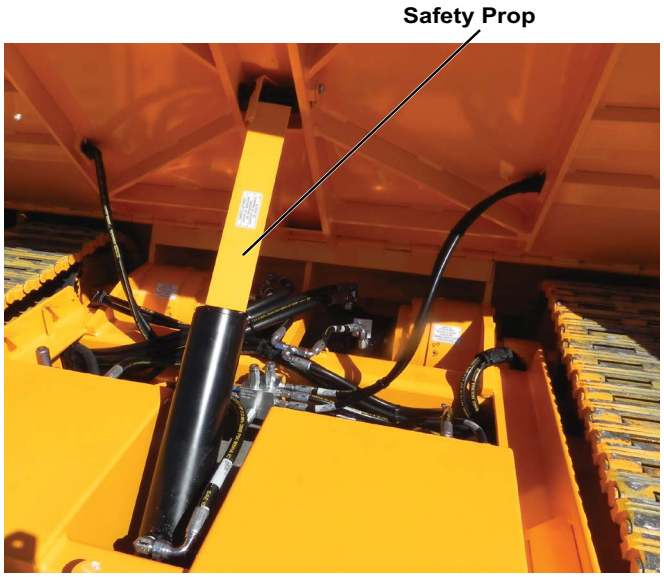


Figure 5-3. Safety Prop

5. Keep the fuel tank full to prevent condensation from forming. Fill at end of day.
6. Perform engine preventive maintenance as described in your engine operator's manual. Any engine preventive maintenance should always begin with an oil check.
7. Lubricate paver according to the **Lubrication Specifications on Page 5-5.**
8. Check for damaged or loose element wires and harness connections. Repair or replace as required.
9. Check for damaged, loose, or missing decals. Replace decals as required (see **Safety Label Installation in Section 1).**

50-Hour (Initial) or Weekly Routine Maintenance

NOTICE **The LeeBoy Model 1000G Tilt Hopper Paver hydraulic system requires clean, contaminant-free oil (see Lubricant Specifications on Page 5-5). Be careful working with the hydraulic system to ensure it is completely clean.**

1. Check hydraulic oil (see **Checking Hydraulic Oil Level** on **Page 5-17).** Add more if necessary.

⚠WARNING **Fire and Explosion Hazard! Do not smoke when observing battery electrolyte level as the fumes can explode.**

⚠WARNING **Burn Hazard! Electrolyte is an acid that can burn skin or eyes. If contact is made, flush area immediately with water and obtain prompt medical attention.**

2. Check all battery connections and remove any corrosion that is present. (Check cables daily.)
3. Check air cleaner if the engine is equipped with a dry type element. Improperly serviced air cleaners wear out engines--FAST! Even a small amount of dirt will wear out a set of piston rings in only a few hours. Refer to your Engine Operator's Manual for service information.

⚠WARNING **If maintenance must be performed with engine running, do not leave paver unattended.**

4. Perform engine preventive maintenance as described in your Engine Operator's Manual. Any engine preventive maintenance should always begin with an oil check.
5. Check auger chains, lubricate and adjust.
6. For both sides of the screed, lubricate all grease fittings on the flight screw, the fitting on the depth screw, and the fittings on the flange bearings located on top of the extension screed **(Figure 5-1)**. Grease nuts on extension screws.

100-Hour or Monthly Routine Maintenance

1. Check oil level in drive torque hubs. The torque hub is positioned so the center plug **(Figure 5-4, 1)** is at the 12 o'clock position. Remove the plug either at the 3 or 9 o'clock position **(Figure 5-3, 2)**. If oil comes out, no oil is needed. Insert plug and tighten. If oil does not come out, remove the plug at the 12 o'clock position and fill torque hub with 90 wt. gear oil until oil starts to appear at the other hole. Replace both plugs and repeat process on other torque hub.

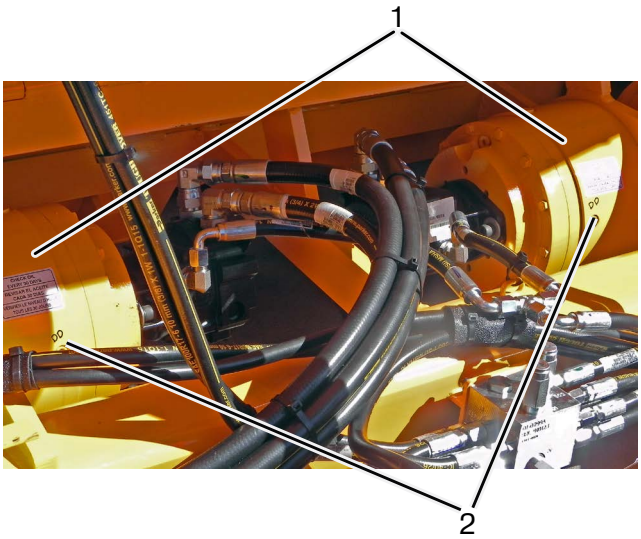


Figure 5-4. Torque Hub Plug Orientation

1 - 12 O'clock Position

2 - 3 or 9 O'clock Position

2. Change engine oil with 15W-40 oil. To assure complete removal of contaminants in the oil, perform the oil change while engine is warm.
3. 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.
4. Change oil in air cleaner and rinse filter element in clean fuel to remove impurities.
5. Replace the air filter. Refer to your Engine Operator's Manual for service information.
6. Perform any other engine preventive maintenance as described in the Engine Operator's Manual.
7. Check and adjust all chains as needed.

250-Hour or Quarterly Routine Maintenance

1. Perform the 250-hour preventive maintenance as described in the Engine Operator's Manual.
2. Change charge filter located behind the main pump.
3. Check air cleaner.

NOTICE **Improperly serviced air cleaners quickly wear out engine and piston rings.**

500-Hour or Semi-Annual Routine Maintenance

1. All bearings are sealed and have grease fittings. These should be greased with multipurpose grease using a grease gun. Be careful to avoid blowing the seals.
2. Perform the 500-hour preventive maintenance as described in the Engine Operator's Manual.
3. Replace air filter. Refer to the Engine Operator's Manual for service information.
4. Change engine oil and filters.
5. After draining used oil, clean and reinstall drain plug and fill crankcase to the full mark with manufacturer's recommended oil.
6. Change oil in drive torque hubs with 90 wt. gear oil.

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. Fill with AW-46 oil (see **Changing Hydraulic Oil** on **Page 5-17**).
2. Perform the 1000-hour preventive maintenance as described in the Engine Operator's Manual.
3. Change oil in drive torque hubs with 90 wt. gear oil. **(Page 5-5)**

MAINTENANCE ADJUSTMENTS

Replacing Tracks

1. Loosen track cylinder by unscrewing manifold relief.
2. Remove any pin from track by cutting end of pin at top of front idler.
3. Once pin has been trimmed on the end, drive pin out.
4. When pin is removed, back machine off track until the track is clear.
5. Place new track in front of machine, positioning the end of track with three (3) hinges at front idler.
6. Drive machine up on top of track until track is located at rear of track drive tires.
7. To pull track on, use a rod 4' x 11/16" with a two-inch (5 cm) leg on one end and a handle on the opposite end. Hook rod into outer hinge on track. Pull on rod while machine drives forward.
8. Pull track until track on the ground is at front of idler.
9. Hook rod at front of track. Back machine up to where track will connect over top of front idler.
10. Insert pin and weld keepers at end of pin.
11. Screw manifold relief back into place.

Replacing Drive Tires

1. Loosen track cylinder by unscrewing manifold relief.
2. Remove any pin from track by cutting the end at top of front idler.
3. Once pin has been trimmed on the end, drive pin out.
4. When pin is removed, back machine off the track so the track is clear.

⚠WARNING Crush Hazard! Machine may fall off jack and cause personal injury. Always use safety blocking and jack when working under paver. Clear the area of untrained personnel.

5. Jack machine up approximately two feet (61 cm) and drop cut-off cylinder out of the way so the drive axle extends.

NOTE: Rubber track guard will need to be removed to slide out axle assembly.

6. Remove the two 5/8" bolts holding pillow block bearing in place.
7. Place floor jack under tire assembly and pull outwards to pry from the torque hub splines.
8. Once axle assembly is out, remove bad drive tires.
   - Remove bearing from end of axle.
   - Remove the three 3/8" bolts from taper bushing.
   - Take two of these bolts and place into the two threaded holes in bushing and push bushing apart from wheel.
   - Once bushing comes apart, pry bushing off of axle. Tire will come off at this time. Use the same process on inner tire.
   - Clean axle. Locate saw mark on axle for location of inner drive tire.
   - Place bushing on this mark and tighten assembly.
   - Rotate around bolts until they are even.
   - Torque to 55 ft. lbs.
   - Place outer tire on axle with a 3/4" spacer between inner and outer tire. This will give clearance for track guide to run into place.
   - Drive bushing into wheel tight and torque bolts.
   - Place spacer and bearing back onto axle.

NOTE: Inject wheel bearing grease into axle splines.

9. Jack axle assembly back into machine and slide back onto splines. Put two 5/8" bolts back to hold pillow block bearing on. Hook cut-off assembly back and reinstall rubber guards.
10. Place track in front of machine, positioning the end of track with three hinges at front idler.
11. Drive machine up on top of track until track is located at rear of track drive tires.
12. To pull track on, use a rod 4' x 11/16" with a 2 in. (5 cm) leg on one end and a handle on the opposite end. Hook rod into outer hinge on track. Pull on rod while machine drives forward.
13. Pull track until track laying on ground is at front of idler.
14. Hook rod at front of track. Back up machine to where track will connect over top of front idler.
15. Insert pin. Weld keepers on end of pin.

NOTE: Welded tracks and master pin is welded to hinge on each side.

16. Hook up hoses to track tension manifold.

Replacing Front Idler

1. Loosen track cylinder,
2. Remove any pin from track by cutting end of pin at top of front idler. Once pin has been trimmed on ends, rotate trimmed pin to bottom of front idler and drive out pin.
3. When pin is removed, back machine up until track clears front idler.
4. Jack front of machine up so that idler will roll out.
5. Replace idler or idler bearings back in place and fasten down.
6. Place track in front of machine, positioning the end of track with three hinges at front idler.
7. Drive machine onto top of track until track is located at rear of track drive tires.
8. To pull track on, use a rod 4' x 11/16" with a two-inch (5 cm) leg on one end and a handle on the opposite end.

9. Hook rod into outer hinge on track. Pull onto rod while machine drives forward.
10. Pull track until track on the ground is at front of idler.
11. Hook rod at front of track. Back machine up to where track will connect over top of front idler.
12. Place pin in and weld keepers on end of pin.

NOTE: Welded tracks and master pin are welded to hinge on each side.

13. Hook hoses up to track tension manifold.

Replacing Screed Extensions, Slides or Bushings

1. Run screed extension all the way out and remove cylinder pin (lower screed).
2. Remove 4-1/2" bolts in extension rods, holding extensions on.
3. Once bolts are removed, pull extension out of the way.
4. Pull 1 1/2" rods out of slide.
5. Loosen the five bolts holding the top guide. This will allow main slide to come out easily.
6. Clean area where slides go and lubricate before sliding slide back in.
7. Loosen guide, then drive guide down tight against slide using a blunt punch.
8. Slide 1-1/2" rods back in and bolt extensions back on. Make sure extension is mounted flush with bottom of screed plate.
9. Hook cylinders back to extensions and put cylinder covers back on.
10. Run extension out fully and grease.

Extension Top Guide Adjustment

1. Close the left and right extensions to their fully retracted positions.
2. Loosen guide by loosening the five 1/2" bolts located over top of extension cylinders. Use set screws above guide to adjust down to proper clearance. If you tighten it down to much, it won't slide.
3. Run the extensions out fully and grease the slide track rails.

NOTE: The slide tracks should be greased daily to help prevent excessive wear.

Replacing Screed Extension Wear Plates

1. Run extension out fully.
2. Remove end gate by disconnecting tilt screw. Loosen the 7/8" jam nut.
3. Remove nut. End gate will drop forward out of slot and slide off stud.
4. Remove shoulder bolts out of lower adjustment screws on top of wear plate **(Figure 5-5)**.
5. Lower screed to ground and pull out front pivot pin.
6. Lift screed. Wear plate should be disconnected.

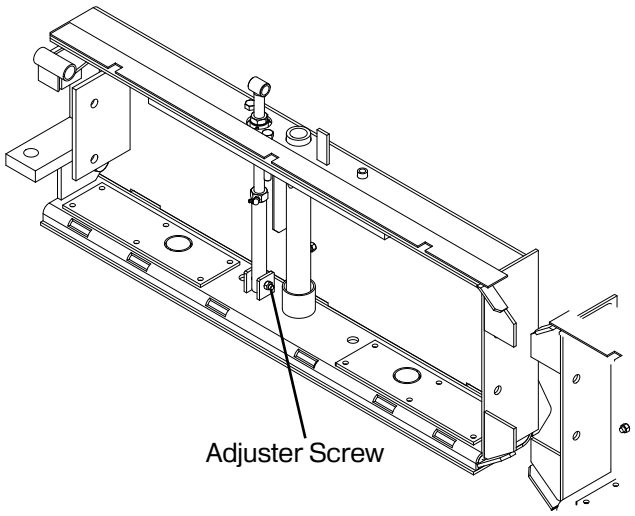


Figure 5-5. **Wear Plate Shoulder Bolts**

7. Clean all areas where new wear plate will be attached.

8. Place new wear plate in position with floor jack or by lowering screed to floor. Slide pivot pin into place.
9. Attach adjustment screws to new wear plate.
10. Place end gate back on.
11. Adjust 7/8" nut until end gate moves up and down freely and lock.
12. Connect tilt screw.

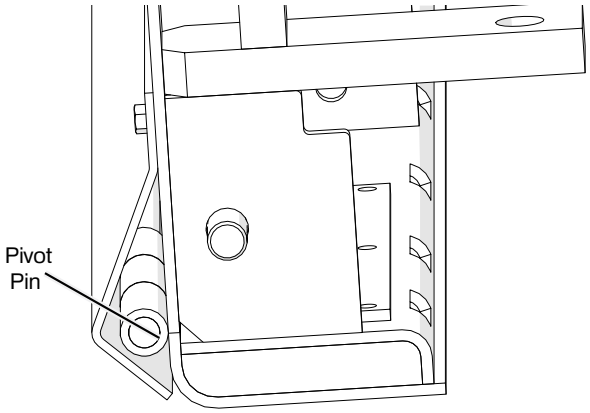


Figure 5-6. Pivot Pin

Replacing Screed Main Wear Plates

1. Remove walk boards.
2. Remove screed lids.

NOTE: Once walk boards are removed, lids will slide out.

3. Remove the 24 bolts **(Figure 5-7)** holding wear plate to screed frame.

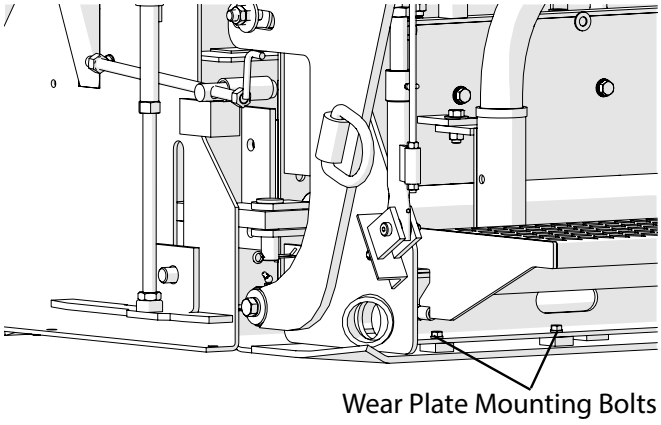


***Figure 5-7.* Wear Plate Mounting Bolts**

4. Before raising screed off wear plate. Clamp center of crown gussets so screed frame stays flat.
5. Raise screed off wear plate.
6. Clean screed frame.
7. Set screed frame down onto new wear plate, allowing cylinders to carry most of the weight. This will allow wear plate to be moved into alignment with bolts.
8. Place six bolts in front left side first, then right side.

NOTE: You may need to clamp, pry or rotate crown in and out so the six bolts on the right side line up.

9. Bolt rear of wear plate to frame assembly.
10. Once bolts are started, lift screed and set on three 2" x 4" boards to hold flat. Place one board at each end and one in the center.
11. Level the screed with the flight screws until neutral position is felt.

NOTE: Neutral position is when the pressure on the flight screw is the same when screwing either clockwise or counterclockwise.

12. Position screed all the way down. Torque bolts from the center outward - two on the left side, then two on the right side to 50 ft. lbs. (67 N•m).
13. Install screed lids and walk boards.

Automatic Track Adjustment

NOTE: Failure to maintain adequate throttle setting may cause improper adjustment to track.

⚠CAUTION When backing a loaded paver, maintain at least a 3/4 throttle setting. Failure to do so may cause improper track tension, resulting in poor performance and damage.

Hydraulic adjustment cylinders are automatic and provide even tension on track, which prevents excessive wear to paver undercarriage.

Auger Drive Chain Adjustment

1. The auger chains should be snug, but not loose. To tighten chains, loosen bolts in slots provided.
2. Adjust bracket.
3. Tighten adjustment bolts (see **Torque Specifications** in **Section 2**).

Torque Hub Lubrication

NOTE: See 100-Hour or Monthly Routine Maintenance on Page 5-8.

1. The torque hub is positioned so the center plug is at the 12 o'clock position. Remove the plug either at the three or nine o'clock position. If oil comes out, no oil is needed. Insert plug and tighten.
2. If oil does not come out, remove the plug at the 12 o'clock position and fill torque hub with specified gear oil (see **Lubricant Specifications on Page 5-5**) until oil starts to appear at the other hole.
3. Replace both plugs and repeat process on other torque hub.

Track Tension Pressure Check

NOTE: Relief pressure is set at 900 PSI at track tension manifold.

NOTE: Relief pressure should go to 900 PSI. If pressure is not correct, adjust relief IN for more pressure. Maximum is 1500 PSI.

Track Tension Release

1. Locate manifold under hopper to release track tension.

⚠CAUTION Do not tamper with adjustment part of relief cartridge.

2. Back relief cartridge out of the aluminum block until tracks are loose.
3. Make sure cartridge is tightened before moving paver.

Battery Servicing

⚠WARNING **Burn Hazard! Batteries contain sulfuric acid.**

- **NEVER allow battery fluid to come in contact with clothing, skin or eyes.**
- **ALWAYS wear safety goggles and protective clothing when servicing the battery.**
- **If battery fluid contacts eyes or skin, immediately flush the affected areas with water and obtain prompt medical treatment.**

The paver electrical system is a 12-volt negative ground system. The battery is located on the right side of the engine.

⚠WARNING **Fire Hazard! Keep sparks and flames away from the batteries as electrolyte gas is highly flammable.**

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

Before connecting the battery, turn off the master switch located behind the Manual Box. Be sure the terminals and battery posts are thoroughly cleaned and that battery cable terminals are tight. Dirty or loose connections can create high electrical resistance and permit arcing.

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

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

⚠WARNING **Fire and Explosion Hazard! Be sure the battery charger is in the OFF position before connecting it to the battery.**

Keep the battery fully charged during cold weather and when machine has been idle for extended periods. When connecting a booster battery, connect one end of the first jumper cable to the positive (+) terminal of the dead battery, and the other end to the positive (+) terminal of the booster battery. Connect one end of the second jumper cable to the negative (-) terminal of the booster battery and the other end to the frame of the paver with the dead battery.

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

1. Never polarize the alternator. Never ground any alternator terminals or circuits.

⚠WARNING **Fire and Explosion Hazard! Always observe battery polarity when connecting a battery charger or jumper cables to the battery: Negative (-) to negative (-); positive (+) to positive (+). Failure to follow this procedure can produce sparks.**

2. Always disconnect the battery before disconnecting or connecting the alternator. Never disconnect the alternator with it is operating. Ensure wiring is properly connected before connecting the battery.

ENGINE MAINTENANCE

The following engine maintenance information covers general maintenance procedures that are most often required. For specific engine maintenance information, see the Engine Operator's Manual.

Engine Lubrication Oil

The engine lubrication oil must be kept at a level above the ADD mark, but not above the FULL mark, on the engine lubrication oil dipstick.

To accurately check the engine lubrication oil level:

1. Park the LeeBoy Model 1000G Tilt Hopper Paver in a level position. Stop the engine.
2. Clean around the engine lubrication oil dipstick before removing it from the engine.

⚠WARNING Stop the engine before checking the engine lubrication oil level as hot oil can be thrown, causing serious injury.

3. Wait five minutes after engine shutdown before removing the dipstick from the engine and checking the oil level.

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

Changing Engine Lubrication Oil

The engine oil must be changed according to the intervals given in the Engine Operator's Manual.

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

⚠WARNING Do not change the engine lubrication oil when the engine and lubrication oil are hot. Hot oil can cause serious injury.

NOTICE Do not change the engine lubrication oil while the engine is running as serious damage or engine failure can occur.

While the engine is warm, proceed as follows:

1. Clean the area around the engine lubrication oil drain.
2. Place a container that has sufficient capacity to hold the drained oil directly under the engine lubrication oil drain plug.
3. Carefully remove the engine lubrication oil drain plug.
4. Clean, install and carefully tighten the lubrication oil drain plug.

NOTICE Do not overtighten the drain plug.

5. Fill the engine with 15 quarts (14.2 liters) of oil. **(Lubricant Specifications on Page 5-5)**
6. Reinsert the engine lubrication oil dipstick.

NOTICE Do not start the engine before changing the engine lubrication oil filter. Follow the procedures listed here and in the Engine Operator's Manual.

Changing Engine Lubrication Oil Filter

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

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

NOTICE Do not change the engine lubrication oil filter with the engine running. Serious engine damage or failure can occur.

After the engine lubrication oil has been changed, proceed as follows:

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

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

NOTE: Comply with environmental laws by properly discarding used oil.

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

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

FUEL SYSTEM

The fuel level is indicated on the FUEL gauge located on the dashboard, and indicates the amount of fuel in the tank.

NOTE: Fill the tank to FULL before the paver is stored overnight to reduce moisture accumulation in the tank from condensation.

⚠WARNING The operator should NEVER be on the paver while fuel is being added. NO SMOKING while filling the fuel tank as all fuels for internal combustion engines are flammable. Fill the fuel tank only in a designated area where there is good ventilation and a fire extinguisher available.

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

Fuel Filters

The fuel filter elements must be replaced as directed in the Engine Operator's Manual.

⚠WARNING Diesel fuel is very flammable. Use extra caution and DO NOT spill fuel. DO NOT change the fuel filter while the paver running. DO NOT change the fuel filter in an area near an open flame. DO NOT smoke while changing the fuel filter.

Replace the fuel filters using the following general procedure:

1. Stop the engine.
2. Put a container under fuel filters before removing the filter elements.

NOTE: Consider the environment when discarding used filters and comply with environmental lawful practices.

3. Wipe the area around the fuel filter elements and element mounting heads using a clean, lint-free cloth.
4. Use a filter removal wrench to loosen and remove fuel filter elements by turning in a clockwise (CW) direction. Drain and discard the removed elements.
5. Wipe the inside area of the filter heads with a clean, lint-free cloth. Fill the new fuel filter elements completely with clean fuel.
6. Put clean fuel onto the element rubber gaskets.
7. Install the new fuel filter elements onto the filter heads. Carefully tighten the elements (by hand only).

NOTICE **Tighten the fuel strainers or the fuel filter elements as directed on the filter element by the filter manufacturer. Do not overtighten the fuel filter elements onto the filter heads.**

8. Start the engine and check for ANY fuel leaks.

⚠WARNING STOP the engine immediately if any fuel leakage is noted. DO NOT start the engine until the leakage problem is corrected.

⚠DANGER NEVER loosen a fuel injector line as contents are under high pressure. DO NOT try to bleed air by loosening injector lines.

Engine Air Filter

The engine inlet air filter assembly uses a replaceable filter element.

NOTICE **The air filter element should be replaced every 100 hours of normal paver operation or monthly. Replace the air filter element more often for a paver that is operated under more severe conditions. NEVER operate the engine without an air cleaner element installed.**

NOTICE **DO NOT service the air cleaner element while the engine is running.**

Use the following procedures to service the air cleaner element:

1. Remove the back cover on air breather housing.
2. Remove the air filter outer element.
3. Remove the air filter inner element.
4. Clean the inside of the air cleaner housing with a clean, lint-free cloth.
5. Discard filters properly.

NOTICE **Severe engine damage can occur if engine is operated without air filter properly installed.**

6. Carefully install the new air filter elements into the housing.
7. Install the rear covers.
8. Start the engine.

HYDRAULIC SYSTEM

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

Checking Hydraulic Oil Level

1. Make sure all cylinders are retracted, so that oil flows to tank, ensuring an accurate reading.
2. Wait 10 minutes after engine has been shut down before checking hydraulic oil.

NOTICE **Oil level is determined by sight gauge (Figure 5-8). Hydraulic oil level should be added if the oil level falls below the fill line. Never fill above the black fill line.**

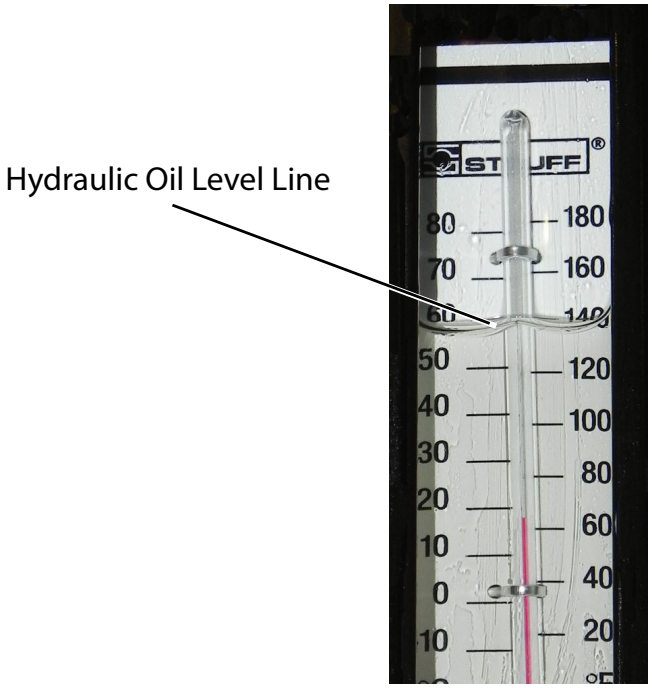


Figure 5-8. Hydraulic Gauge

3. If level is low, remove hydraulic oil filler cap **(Figure 5-9)** to add hydraulic oil to the tank.
4. Fill tank to the black fill line on sight gauge.
5. DO NOT OVERFILL THE TANK. Leave approximately one inch (25 mm) of space for hot oil to expand.
6. Screw the hydraulic oil filler cap back onto the hydraulic tank.
7. Remove any spilled oil with a clean cloth.

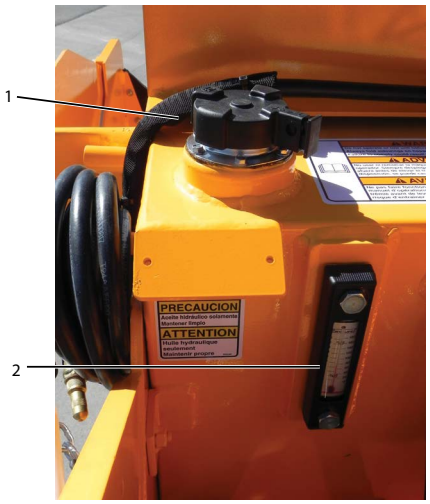


Figure 5-9. Hydraulic Oil Filler Cap and Sight Gauge

1 - Hydraulic Oil Filler Cap

2 - Hydraulic Oil Sight Gauge

Adding Hydraulic Oil To Hydraulic Oil Reservoir

⚠WARNING **DO NOT remove the hydraulic filler cap from the reservoir when it is HOT. Hot hydraulic oil can cause serious injury. Allow hydraulic oil to cool down to a warm temperature.**

1. Unscrew hydraulic oil filler cap **(Figure 5-9, 1)**.

NOTICE **Do not overfill the hydraulic oil reservoir.**

2. Remove the hydraulic oil level plug **(Figure 5-9, 2)** located below the hydraulic oil filler cap.
3. Add new hydraulic oil **(see Lubricant Oil Specifications on Page 5-5)** until oil appears at the hydraulic oil level plug hole.
4. Insert the hydraulic oil level plug **(Figure 5-7, 2)** and tighten securely.
5. Install the hydraulic oil filler cap **(Figure 5-7, 1)** onto the reservoir filler neck and tighten securely.

NOTE: Keep the oil level of the hydraulic oil reservoir at the correct level.

NOTE: An air space is designed into the hydraulic oil reservoir and allows for oil expansion, at warm temperatures. The hydraulic oil reservoir will have a low pressure in it at system operating temperatures.

Changing Hydraulic Oil

Changing the hydraulic oil removes the accumulation of dirt, water and mechanical wear particles from the hydraulic oil reservoir and system. The chemical structure of hydraulic oil changes after continuous use, therefore, new oil is important to ensure correct operation of the hydraulic system.

NOTICE **Hydraulic oil that has oxidized or becomes contaminated can shorten the expected service life of the components in the hydraulic system.**

Use the following procedures to change the hydraulic oil:

1. Stop the engine. Allow the hydraulic oil to cool until it is at a warm temperature. Slowly loosen and remove the hydraulic oil reservoir filler cap **(Figure 5-9, 1)**. Put a clean, lint-free cloth over the reservoir fill tube opening and secure in place with tape.

⚠WARNING **DO NOT drain the hydraulic oil from the reservoir when it is HOT. Hot hydraulic oil can cause serious injury. Drain at a warm temperature only.**

NOTE: The hydraulic system holds approximately 45 gallons.

2. Carefully remove the plugs from the hydraulic tanks. Use a drain collection container of sufficient capacity to collect the hydraulic oil underneath. Allow all of the hydraulic oil to drain from the reservoirs and into the container.

NOTICE **Do not fill the hydraulic oil reservoir with new hydraulic oil until the strainer has been serviced.**

3. Install the hydraulic oil reservoir drain plug and tighten securely.
4. Carefully remove the cloth from the hydraulic oil reservoir fill tube opening.

5. To be sure the bottom oil tank is properly filled, proceed as follows:
   - Remove the strainer on the top tank.
   - Fill the top hydraulic oil tank until full.
   - Crank engine and let pump transfer oil from top tank to bottom tank.
   - Monitor oil level in top tank. When oil level is below one-half full, shut off engine and refill top tank.
   - Repeat this process until proper level is obtained.

NOTICE **Do not overfill the hydraulic oil reservoir with oil.**

NOTICE **Never let tank run dry. Pump damage will occur.**

6. Check the oil level in the hydraulic oil reservoir, again (see **Checking Hydraulic Oil Level on Page 5-17)**. Add oil if needed.
7. Install the hydraulic oil filler cap **(Figure 5-9, 1)** onto the reservoir filler neck and tighten securely.
8. Start the engine.
9. Check the hydraulic system for any leaks.

⚠WARNING **DO NOT touch hydraulic hoses, fittings or system components when checking for possible leaks. Serious injury can result from an oil leak under high pressure. Oil can be injected under the skin by high pressure. Protect your eyes by wearing safety glasses.**

⚠CAUTION **Stop the engine immediately if any hydraulic leak is noted. DO NOT start the engine until any problem has been corrected.**

Changing Hydraulic Oil Strainer

The oil strainer is mounted in the oil filler opening under the filler cap **(Figure 5-7, 1)**.

⚠WARNING **Do not remove the hydraulic filler cap from the reservoir when it is "HOT". Hot hydraulic oil can cause serious injury. Allow hydraulic oil to cool down to a warm temperature.**

1. Remove the hydraulic oil filler cap. **(Figure 5-7, 1)**
2. Remove the six screws securing the strainer, then remove the strainer and the gasket.
3. Install a new gasket, aligning the three holes in the gasket with the mounting holes on the reservoir.
4. Install the new strainer, aligning the holes in the strainer with the mounting holes of the gasket and secure the strainer with the six screws.
5. Fill the hydraulic oil reservoir with the correct, filtered hydraulic oil **(see Lubricant Specifications on Page 5-5)** until oil appears at the hydraulic oil level plug hole (refer to **Figure 5-7, 2**).

NOTICE **Do not overfill the hydraulic oil reservoir with oil.**

6. Check the oil level in the hydraulic oil reservoir, again. Add oil if needed.
7. Install the hydraulic oil filler cap **(Figure 5-7, 1)** onto the reservoir filler neck and tighten securely.
8. Let machine down and install the previously removed pin into the tract. Weld the end of the pin.
9. Tighten the relief cartridge in the track tension manifold.

REPLACEMENT PROCEDURES

If you have difficulty performing these procedures, contact your LeeBoy authorized dealer.

Hopper Lift Cylinder

⚠WARNING **Crush Hazard! NEVER work under hopper without making sure it is supported by safety prop and that all unauthorized personnel are clear of the area.**

1. Raise hopper and insert safety prop **(Figure 5-8, 1)**.
2. Locate the track tension manifold. Turn the relief cartridge out of the aluminum block about three turns or until pressure releases.
3. The 1000G Tilt Hopper Paver does not have a master link on the track. Using a torch, cut off the end of a link at top of the front idler and take the tracks apart.
4. Once the tracks are apart, jack up the front of the machine until track falls in front of weight block.
5. Back up the machine until the track lays flat on the ground.
6. Jack machine up on the front weight block.
7. Pull out the hitch pin.
8. Slide the idler forward and out of the track assembly.
9. Unhook the hose to the cylinder and remove the cylinder.
10. Either repair or replace the cylinder.
11. Install the cylinder into the machine.
12. Attach the hose to the cylinder.
13. Install the idler back into the machine by sliding it into the track assembly and pushing it back until the holes line up between the idler and the frame.
14. Install the hitch pin.
15. Let jack down and install the previously removed pin into the track. Weld the end of the pin.
16. Tighten the relief cartridge in the track tension manifold.

Torque Hub Replacement

⚠WARNING **Crush Hazard! NEVER work under hopper without making sure it is supported by safety prop and that all unauthorized personnel are clear of the area.**

1. Raise hopper and insert safety prop **(Figure 5-8, 1)**.
2. Jack paver up approximately 24 inches (61 cm) off the ground and place on sturdy jack stands.
3. Remove the two socket head cap screws and lock washers attaching the hydraulic drive motor to the torque hub drive.

NOTE: Do not disconnect hoses from the hydraulic drive motor. Hoses are long enough to slide motor out and place out of way.

NOTE: Mark location of torque hub to frame before removing to assure that drive motor is reinstalled in same position.

4. Remove tracks and rear axle assembly.

NOTE: This prevents removing track and axle assembly.

⚠CAUTION **Falling Object Hazard! Before completely removing all bolts from torque hub, place jack or other method underneath to safely lower torque hub to ground.**

5. Remove the 12 5/8-inch bolts holding torque hub to track undercarriage and pry out onto floor jack.

NOTE: Before reinstalling torque hub, put wheel bearing grease on axle splines.

6. Install torque hub in proper position for drive motor to line up.
7. Place thread-locking adhesive on torque hub bolts and torque all bolts to specification.
8. Check O-ring on drive motor. Rreplace if worn. Bolt drive motor to torque hub with thread-locking adhesive.
9. Fill torque hub (see **100 Hour or Monthly Routine Maintenance on Page 5-8**) with specified oil (see **Lubricant Specifications on Page 5-5)**.
10. Lower paver to ground.

NOTICE **Make sure hose connections are clean before removing and installing.**

11. Lower hopper.

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

12. Start the engine.
13. Check the hydraulic system for any leaks.

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

Auger And Inner Bearing Replacement

1. Run screed extension out completely.

NOTE: Auger cover is in one piece with a small tack to hold cover together while building.

2. Remove the four nuts holding the cover and pry cover apart.
3. Clean asphalt buildup from around cover.

NOTE: Heating asphalt may be required.

4. Lay across hopper floor to gain access to the auger cover under the engine and remove.
5. Rotate augers so that master link is centered at front.
6. Loosen the two bolts securing mounting brackets, then loosen auger chains by sliding auger motors down from backside.
7. Remove auger endmounts so that augers can be removed through opening in sides.
8. Remove augers and lay augers on the ground in the same position as removed. This will help insure proper installation of the new augers.
9. Check inner auger bearing and replace at this time if faulty.

NOTE: When installing new augers, be sure to realign in the same position. (It is very easy to install augers backwards.)

10. Install new augers after assuring alighnment is correct to auger material outward.
11. Tighten bearing set screw to prevent auger shaft from moving outward.
12. Slide auger collar onto end of auger shaft and bolt endmount. Torque mounting screws to 78 ft. lbs. (106 N•m).
13. Push collar completely in against the endmount and tighten.
14. Place auger chains back on and adjust auger motors up to tighten chains. Use a pry bar under motor to pry up, then tighten chain abd bottom motor mount bolts (making sure chains have approximately 1/4 inches of slack).
15. Make sure motor is level, then tighten top and bottom bolts to a torque of 150 ft. lbs. (155 N•m). Do the same for the other side.
16. Lubricate chains.
17. Replace auger cover ensuring that slot for auger shaft is sealed shut.
18. Operate augers and make sure everything is correct.

NOTE: Auger chains can be lubricated each day by spraying oil on chain lube through the slots where auger motor is adjusted.

Tandem Serve Pump Replacement

1. Remove covers, battery and hose reel to access pumps.
1. Label and disconnect the hoses to the tandem propulsion hydraulic pump, plugging the hoses and capping the fittings on the hydraulic pump.
2. Label and disconnect the hoses to the tandem auxiliary hydraulic pump, plugging the hoses and capping the fitting on the hydraulic pump.

NOTE: If the auxiliary pump is in good condition, leave hoses attached and slide out of the main pump.

⚠CAUTION **The pump assembly is very heavy and must be properly supported with a sling before loosening mounting bolts.**

3. Place a sling around the pump assembly to provide support.
4. Remove the two bolts attaching pump assembly to the pump plate cover.
5. Slide the pump assembly out of the splined coupling.
6. Using the sling, lift pump assembly with auxiliary pump assembly out of paver, and place on a flat surface.
7. Remove the two bolts attaching the tandem auxiliary hydraulic pump to the tandem propulsion hydraulic pump.
8. Remove the O-ring from between the pumps.
9. Place a small amount of hydraulic oil on the O-ring and install O-ring between the pumps.
10. **Carefully support auxiliary pump and align the mounting holes (on auxiliary pump) with the mounting on pump.**
11. Attach pumps with the two mounting bolts.
12. Torque the bolts to 89 ft. lbs. (121 N•m).

⚠CAUTION **Pump assembly is very heavy and must be properly supported with a sling before loosening mounting bolts.**

13. Support the complete pump assembly with a sling and lift assembly into paver.
14. Carefully slide pump assembly into the splined coupling. Align mounting holes with the pump plate cover mounting holes (grease splines before installing).
15. Attach pumps with the two mounting bolts.
16. Torque the bolts to 89 ft. lbs. (121 N•m).
17. Remove plugs and caps, and connect hydraulic hoses to pumps.
18. Check hydraulic oil level in tank. Add hydraulic oil if necessary.
19. Install the spray hose assembly on the top right side cover.
20. Start the paver.
21. Check to be sure there are no hydraulic oil leaks.

Single-Speed Hydraulic Motor Replacement

⚠CAUTION **The hydraulic motor is very heavy and must be properly supported with a sling before attempting replacement.**

1. Turn the paver off.
2. Check to be sure there is no hydraulic pressure.
3. Label and disconnect the hoses to the hydraulic motor.
4. Plug the hoses and cap the fitting on the hydraulic motor.
5. Support hydraulic motor, then remove the four screws and lock washers attaching the hydraulic motor to the torque hub.
6. Carefully remove the motor from the torque hub.
7. Remove the gasket.
8. Drain the hydraulic oil from the hydraulic motor. Discard or repair the hydraulic motor as appropriate.
9. Install new gasket on torque hub.
10. Attach hydraulic motor to torque hub using four capscrews and lock washers.
11. Torque capscrews to 120 ft. lbs. (163 N•m).
12. Remove plugs from hydraulic hoses and connect the hydraulic hoses in accordance with the labels.
13. Operate paver and check for leaks.

NOTE: **When installing motor dry, crank and let run for approximately 10 minutes to work air out of system before engaging to move.**

TROUBLESHOOTING CHARTS

The troubleshooting charts below identify the most common symptoms of failure. Use these charts to help identify the failed component and possible remedies. If the problem persists, see your authorized LeeBoy Dealer (see *Contact Information* in Section 3).

Table 5-3. Paver Troubleshooting

SYMPTOM	CAUSE	REMEDY
Engine does not start.	Defective battery or low battery charge.	Replace or charge battery as applicable.
	Forward/reverse steering joystick not centered (neutral).	Center steering control and activate.
	Insufficient fuel supply.	Fill fuel tank.
	Plug in switch box unplugged.	Plug back in.
	Starter or solenoid faulty.	Replace or rebuild.
	Neutral switch defective.	Replace.
Engine stops or turns over but will not start.	Low fuel.	Add fuel to fuel tank.
Low battery.	Faulty alternator.	Replace or rebuild.
	Cables damaged.	Check cables.
Machine will not move.	Travel pump defective.	Replace pump or rebuild.
	Front idler out of line.	Readjust track.
	Track tension pressure.	Check pressure. NOTE: Relief pessure should be set to 00 psi.
Machine will not pull on one or both sides.	Faulty hydraulic motor.	Replace.
	Pump pressure too low.	Pump pressure should be 3000 psi.
	Faulty torque hub.	Rebuild or replace.
	Pump drive coupling faulty.	Replace.
	Defective pump.	Replace.

SYMPTOM	CAUSE	REMEDY
Hydraulic oil running out of breather cap.	Hydraulic oil tank overfilled.	Drain 5 to 6 in (12.7 to 15 cm) from top of tank.
	Air in bottom of tank.	Bleed if you don't have vent hose.
	Oil over heated.	Slow paver down about 10% to 15%.
Hydraulic pump cavitating or lost power.	Low level in hydraulic tank.	Fill.
	Clogged filters.	Replace.
	Suction hose loose.	Tighten.
	Charge pump worn.	Replace.
Auger hanging up or will not turn.	Chain too loose.	Adjust.
	Chain broke.	Replace.
	Faulty motor.	Replace.
	Asphalt set up around auger.	Keep clean and oiled.
Screed extensions binding.	Asphalt set up around extension.	Keep clean and oiled.
Screed extension loose (work up and down).	Out of adjustment.	Adjust hold downs on extensions.
Screed leaving streak down center of pavement.	No lead crown in screed.	Crown leading edge of screed.
	Screed worn out.	Replace.
	Extensions set too low.	Adjust extension. Always start all the way up, no down pressure.
	Screed not heated properly.	Set propane pressure at 15 PSI for about 5 to 8 minutes.
Screed leaving ripples.	Extension set too low.	Readjust extensions.
	Extensions work up and down.	Adjust top guide.
Flight screw locking up.	Twisting screed too far.	Give screed time to react.
	Screw seized.	Replace screw.
Flight screw bearing damage.	Twisting screed too far.	Give screed time to react.
	Loading and unloading.	Check ramps for easy access.

NOTES

Section 6

SCHEMATICS

NOTES

SCHEMATIC, MAIN, ELECTRICAL (TIER 4) , 1 OF 2

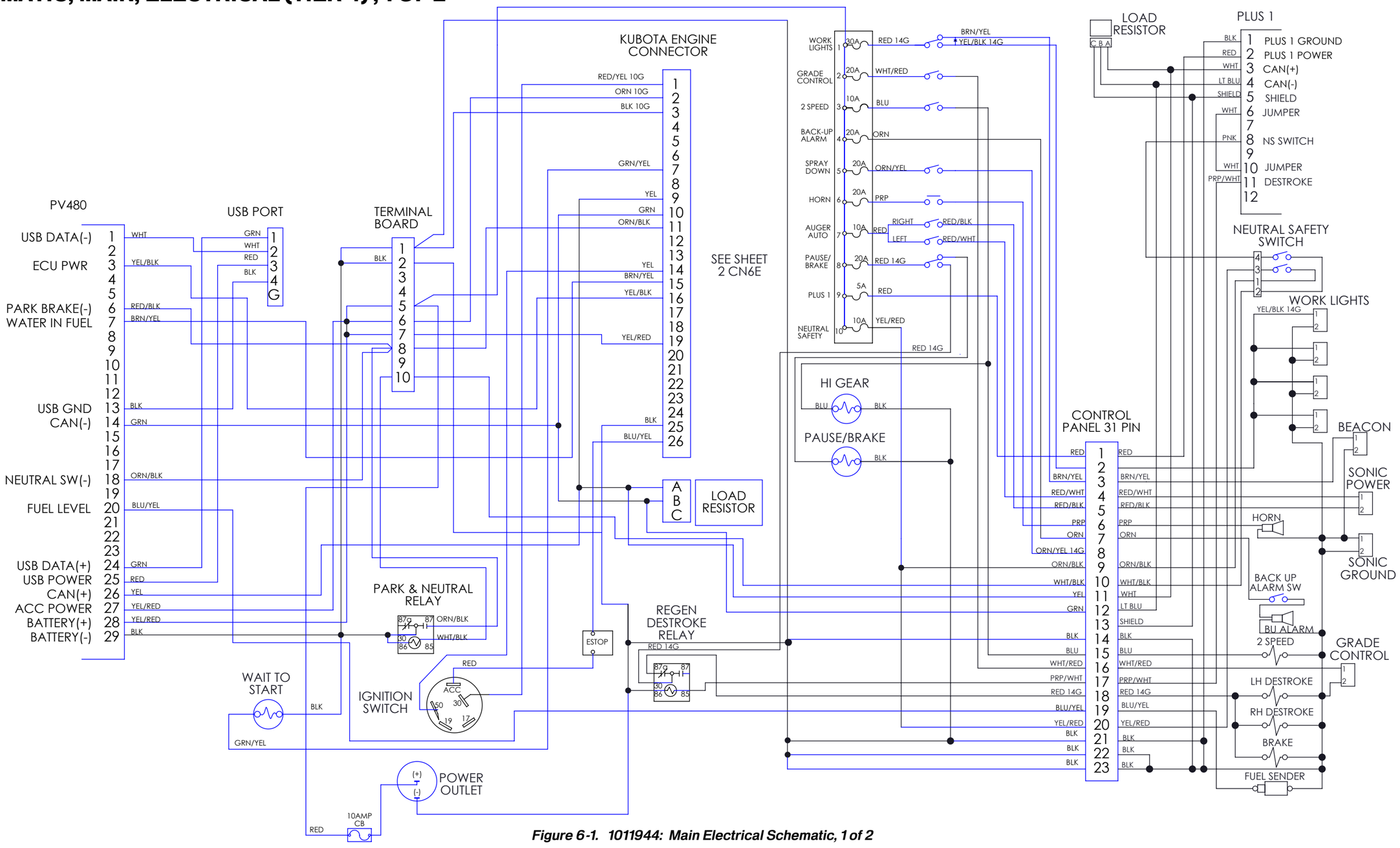


Figure 6-1. 1011944: Main Electrical Schematic, 1 of 2

NOTES

SCHEMATIC, MAIN, ELECTRICAL (TIER 4) , 2 OF 2

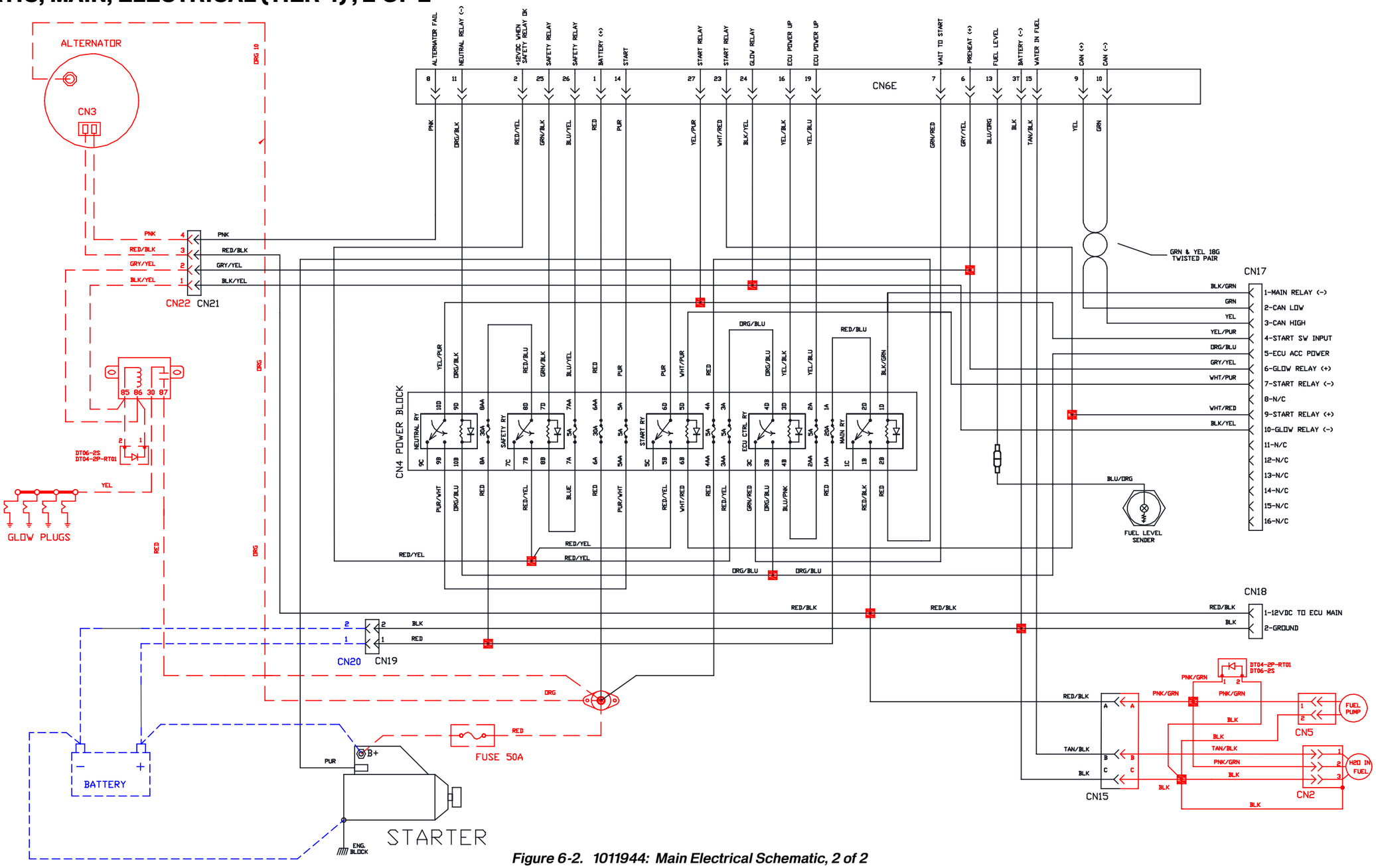


Figure 6-2. 1011944: Main Electrical Schematic, 2 of 2

NOTES

HARNESS, NEUTRAL SAFETY (TIER 4)

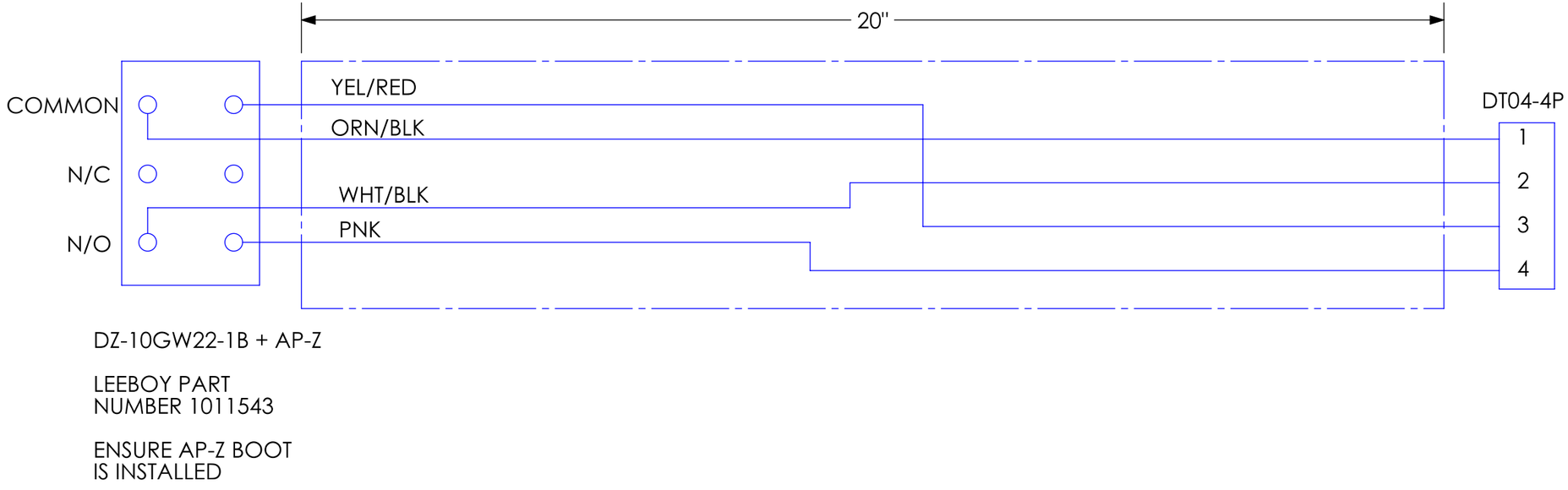
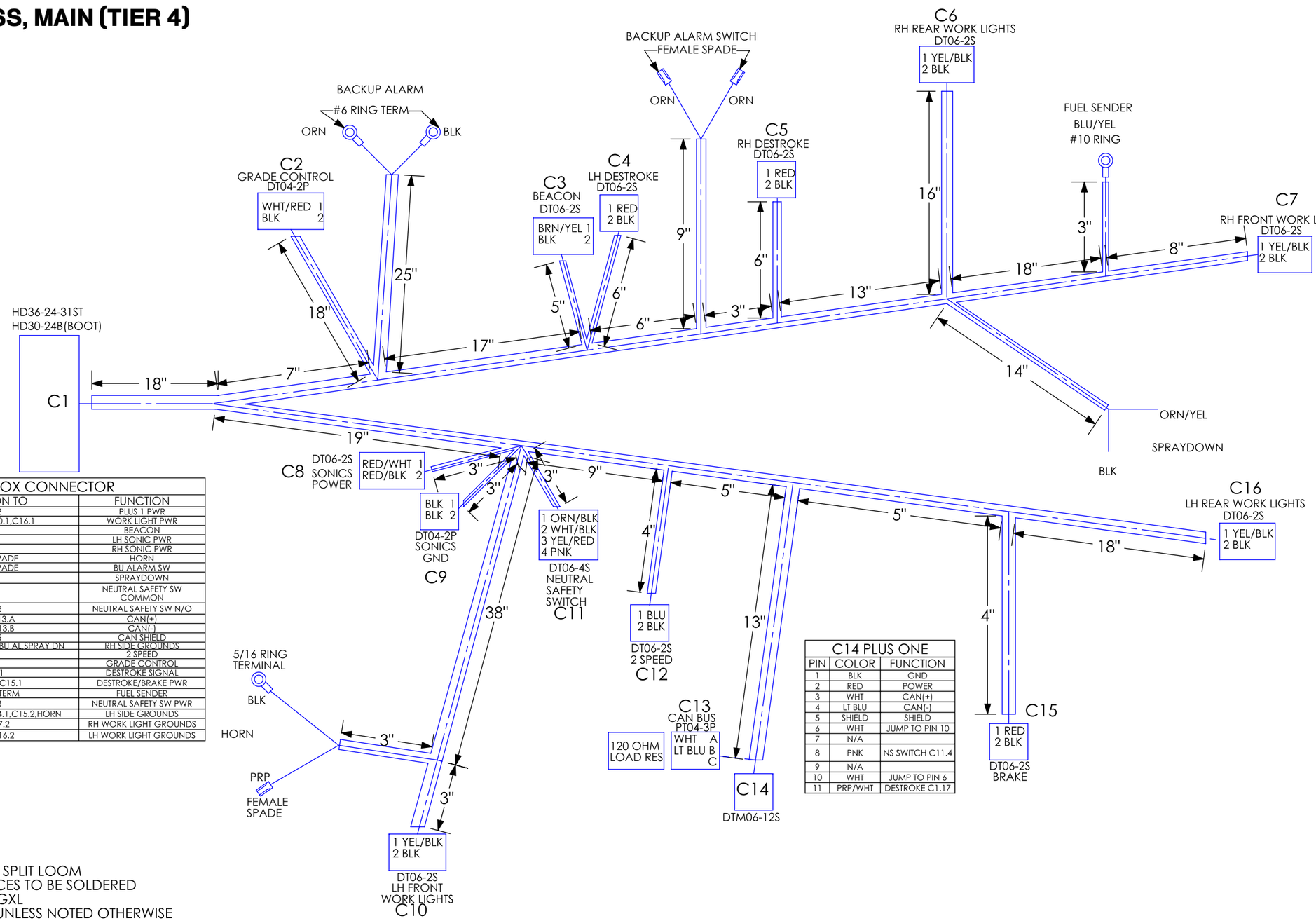


Figure 6-3. 1011853: Neutral Safety Harness

NOTES

ELECTRICAL, HARNESS, MAIN (TIER 4)



C1 CONTROL BOX CONNECTOR			
PIN	COLOR	LOCATION TO	FUNCTION
1	RED	C14.2	PLUS 1 PWR
2	YEL/BLK 14G	C6.1,C7.1,C10.1,C16.1	WORK LIGHT PWR
3	BRN/YEL	C3.1	BEACON
4	RED/WHT	C8.1	LH SONIC PWR
5	RED/BLK	C8.2	RH SONIC PWR
6	PRP	FEMALE SPADE	HORN
7	ORN	FEMALE SPADE	BU ALARM SW
8	ORN/YEL 14G		SPRAYDOWN
9	ORN/BLK	C11.1	NEUTRAL SAFETY SW COMMON
10	WHT/BLK	C11.2	NEUTRAL SAFETY SW N/O
11	WHT	C14.3,C13.A	CAN(+)
12	LT BLU	C14.4,C13.B	CAN(-)
13	SHEILD	C14.5	CAN SHIELD
14	BLK 14G	C2.2,C3.2,C4.2,C5.2,BU AL,SPRAY DN	RH SIDE GROUNDS
15	BLU	C12.1	2 SPEED
16	WHT/RED	C2.1	GRADE CONTROL
17	PRP/WHT	C14.11	DESTROKE SIGNAL
18	RED 14G	C4.1,C5.1,C15.1	DESTROKE/BRAKE PWR
19	BLU/YEL	#10 RING TERM	FUEL SENDER
20	YEL/RED	C11.3	NEUTRAL SAFETY SW PWR
21	BLK 14G	C9.1,C9.2,C12.2,C14.1,C15.2,HORN	LH SIDE GROUNDS
22	BLK 14G	C6.2,C7.2	RH WORK LIGHT GROUNDS
23	BLK 14G	C10.2,C16.2	LH WORK LIGHT GROUNDS

C14 PLUS ONE		
PIN	COLOR	FUNCTION
1	BLK	GND
2	RED	POWER
3	WHT	CAN(+)
4	LT BLU	CAN(-)
5	SHIELD	SHIELD
6	WHT	JUMP TO PIN 10
7	N/A	
8	PNK	NS SWITCH C11.4
9	N/A	
10	WHT	JUMP TO PIN 6
11	PRP/WHT	DESTROKE C1.17

NOTES:
1. USE CONVOLUTED SPLIT LOOM
2. ALL INTERNAL SPLICES TO BE SOLDERED
3. WIRE TYPE TXL OR GXL
4. ALL WIRE 16AWG UNLESS NOTED OTHERWISE

Figure 6-4. 1011852: Main Tier 4 Harness

NOTES

ELECTRICAL, HARNESS, CONTROL BOX (1 OF 2)

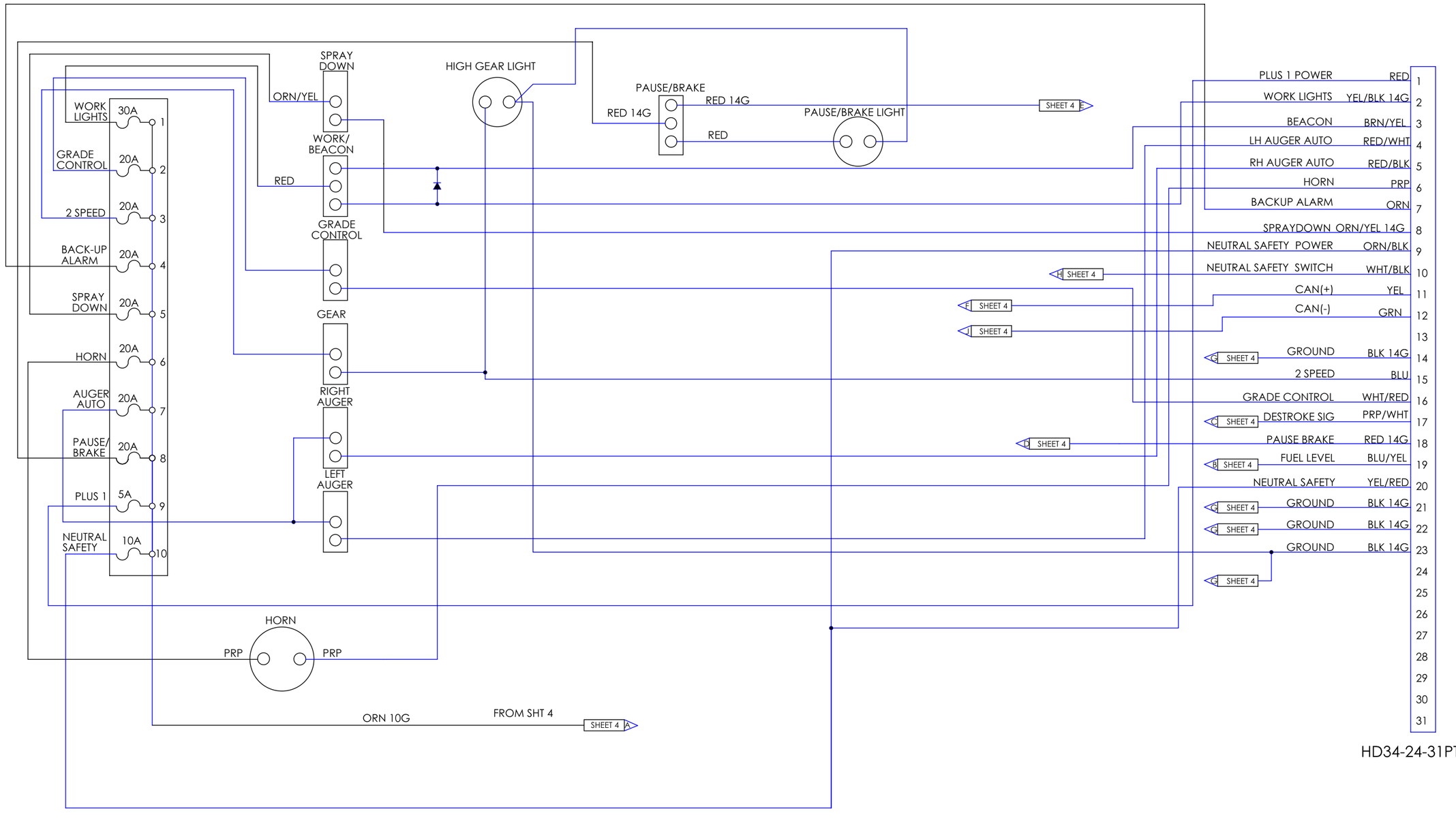


Figure 6-5. 1011465: Control Box Harness (1 of 2)

NOTES

ELECTRICAL, SCHEMATIC, CONTROL BOX (2 OF 2)

PIN	COLOR	FUNCTION
1	WHT	USB DATA(-)
3	YEL/BLK	ECU PWR
6	RED/BLK	PARK BRAKE(-)
7	BRN/YEL	WATER IN FUEL
13	BLK	USB GROUND
14	GRN	CAN(-)
18	ORN/BLK	NEUTRAL SWITCH(-)
20	BLU/YEL	FUEL LEVEL
24	GRN	USB DATA(+)
25	RED	USB POWER
26	YEL	CAN(+)
27	YEL/RED	AC POWER KEYSWITCH
28	YEL/RED	BATTERY(+)
29	BLK	BATTERY(-)

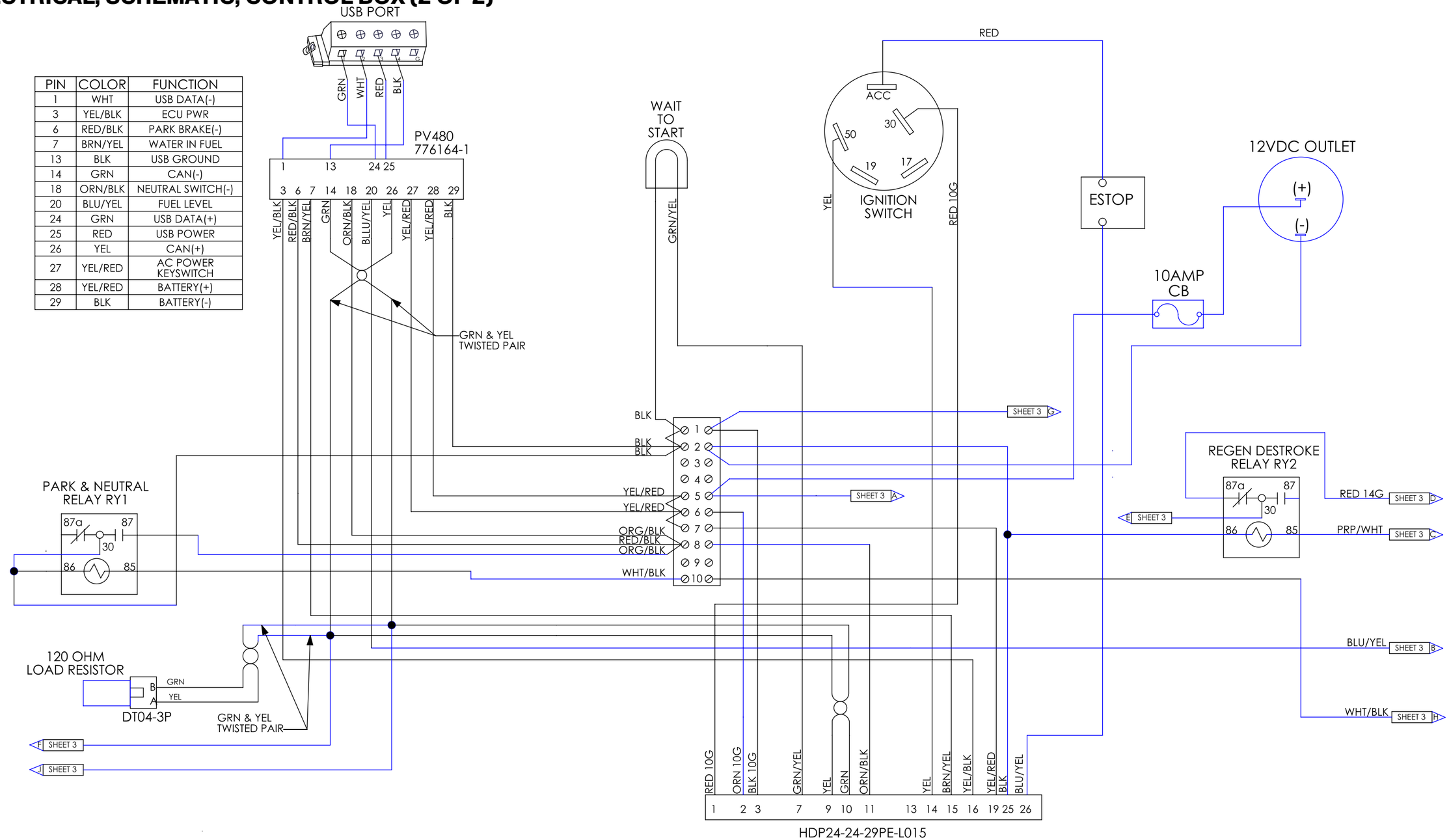


Figure 6-6. . 1011465: Control Box Harness (2 of 2)

NOTES

HYDRAULIC, SCHEMATIC, MAIN (1 OF 2)

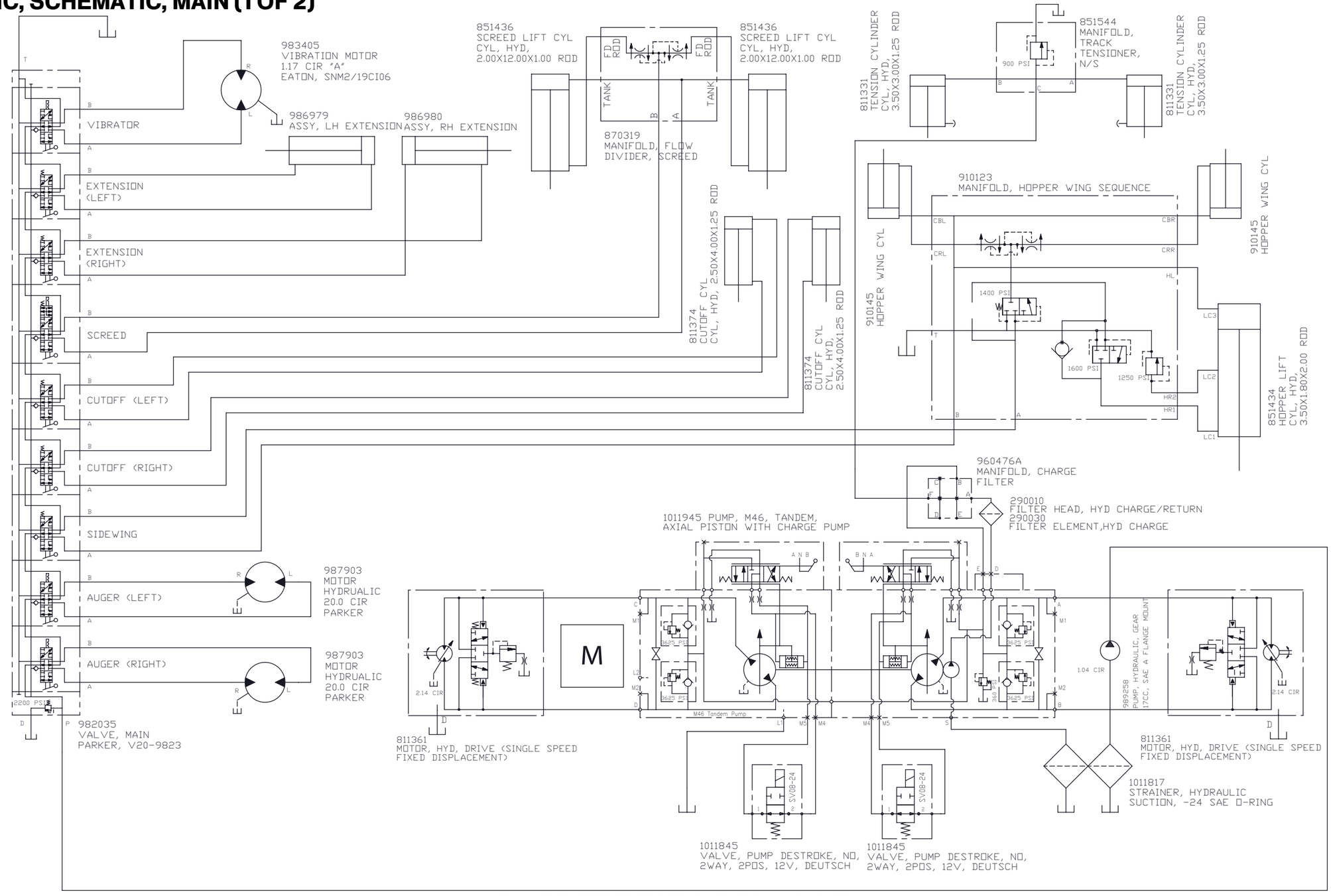


Figure 6-7. 1011995: Main Hydraulic Schematic, 1 of 2

NOTES

HYDRAULIC, SCHEMATIC, MAIN (2 OF 2)

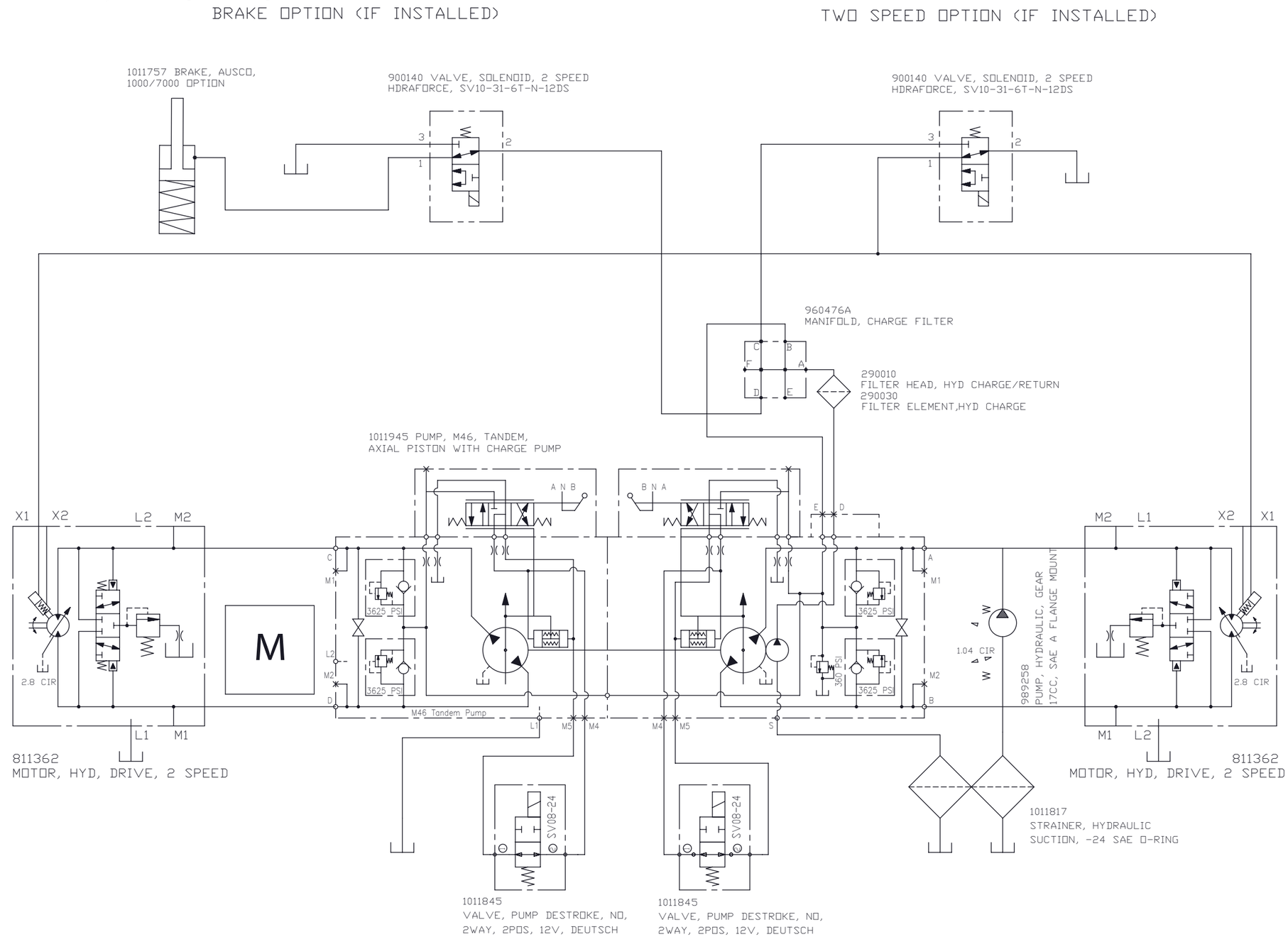


Figure 6-8. . 1011995: Main Hydraulic Schematic (2 of 2)

NOTES

Section 7

ILLUSTRATED PARTS LIST

QUICK REFERENCE GUIDE

Part Number	Description
1011049-15	Fuel Filter
290010	Head, Charge Filter
290030	Filter Element, Hyd Charge
960476A	Manifold, Charge Filter
982080-01	Engine, Oil Filter, Kubota, Tier 4
38385-01	Filter, Air, Primary, Kub
38385-02	Filter, Air, Secondary, Kub
1011049-26	Filter, Fuel/Water Separator, Kubota, Tier 4
1011795	Group, Decal, 1000G
859799	Decal, Caution,Sonic Augers, Lh
859801	Decal, Caution, Sonic Augers
1011852	Harness, Main, Tier4
1011853	Harness, Neutral Safety, Tier 4
1010680	Harness, Power, Ultrasonic
851622A	Flashing (Hard), 1000C-8
811366	O-Ring, Hyd Motor To Torque Hub
1011817	Strainer, Hydraulic Suction, -24 Sae O-Ring
920061-1	Chain, 12 Link
1011958	Hose Kit, Main, 1000G
9981000S	Hose Kit, 1000C 8', Screed
1008058	Kit, Hose Drive Motors 1000
9981000CG	Hose, 1000D Chain Guard
1012070	Hose Kit, Brake Option, 1000G
9981000AA	Hose Kit, 1000 8', Auto Auger
1003677	Hose, Spraydown, 18'

TRACK DRIVE ASSEMBLY

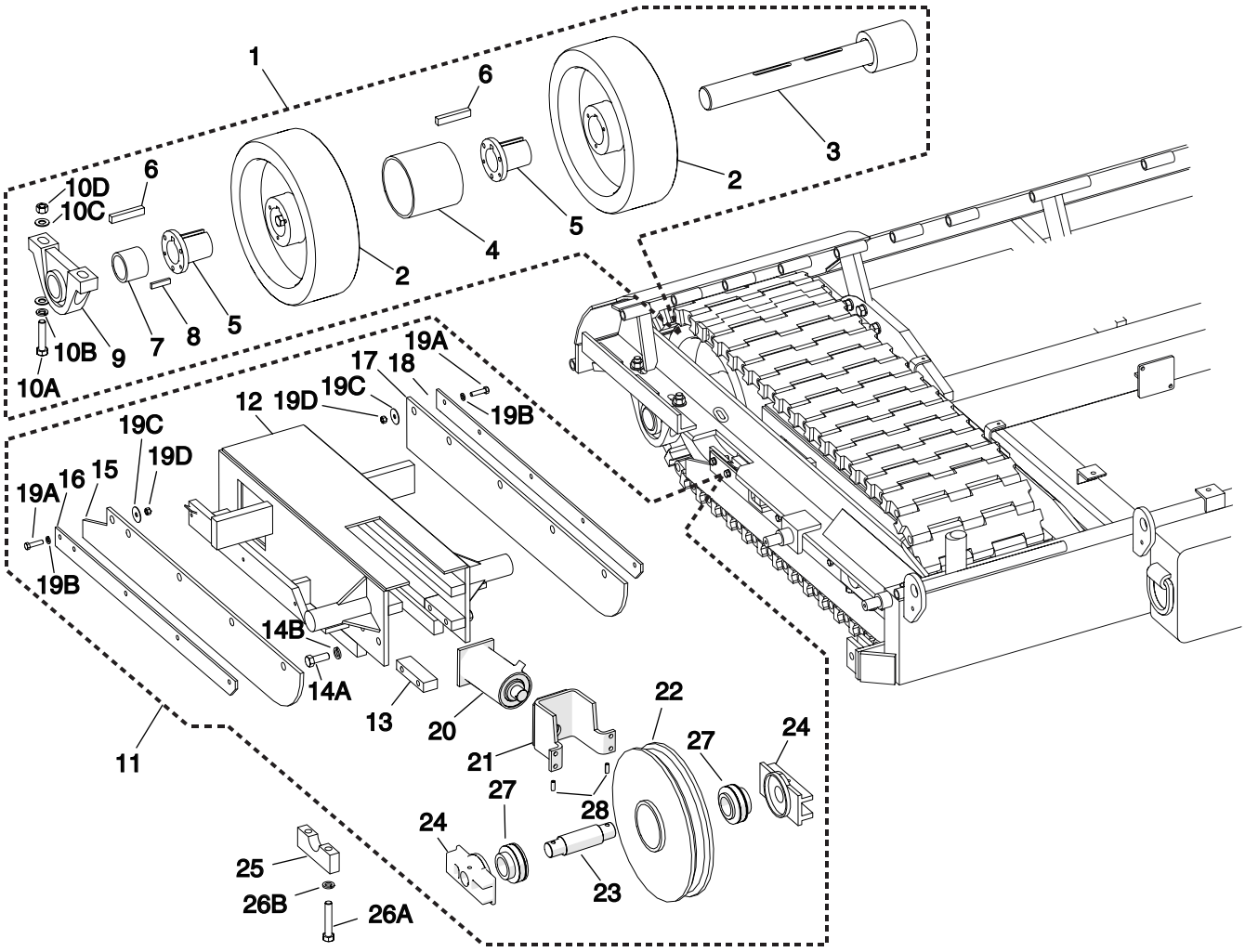


Figure 7-1.

Track Drive Assembly Parts List

Item No.	Part Number	Qty.	Description	Remarks
Ref	983674	Ref.	Group, Drive	
1	981076	2	Assembly, Rear Torque Hub Tire	Items 2 - 10D
2	810129	4	Molded Wheel & Tire (5 X 16)	
3	811150SRV	1	Axle, 1000 /, Final Drive W/Torque Hub	
4	852831	2	Pipe, 6.00 X 5.25, Sch 40	
5	810160	4	Bushing, Taper Lock, 2.250	Comes w/Keystock
6	810160-1	4	Keystock, 0.5 X 0.7 X 3.5	
7	852833	2	Pipe, 2.50 X 2.25, Sch 40	
8	852185	2	Bar, .250 X .50 X 2.00	1/4 X 1/2 Fb X 2
9	810140	2	Bearing, Pillow Block, 2.250	
10A	100-10-11-48-5	4	Cshh, 0.625-11 X 3 X 1.5 - Gr5	
10B	302-10	4	Washer, Lock, 0.625	
10C	300-10	8	Washer, Flat, 0.625	
10D	200-10-11	4	Nut, Hex, 0.625-11	
11	981077R	1	Rh Undercarriage Assy, 1000	Items 12 - 24
Ref	981077L	1	Lh Undercarriage Assy, 1000	Items 12 - 24
12	856812	2	Frame, 1000 Undercarriage	Includes 13, 14B
13	856798	2	Brace, Tapped, Undercarriage Frame	
14A	101-10-11-28-5	4	Cshh, 0.625-11 X 1.75 X 1.5 - Gr5	
14B	302-10	4	Washer, Lock, 0.625	
15	810021	2	Rubber, Track Guard, Inner	
16	852598	2	Clamp, Track Guard, Inner	
17	810020	2	Rubber, Track Guard, Outer	
18	810031	2	Clamp, Track Guard, Outer	
19A	100-6-16-24-5F	10	Cshh, 0.375-16 X 1.5 X 1.5 - N	
19B	302-6	10	Washer, Lock, 0.375	
19C	981511	10	Washer, Fender,.375	
19D	200-6-16-8	10	Nut, Hex, 3/8-16, Gr8	
20	811331	2	Cyl, Hyd, 3.50 X 3.00 X 1.25 Rod	
21	811333	2	Yoke,Track Idler, Front	
22	856832	2	Weldment, Idler Wheel	
23	811336	2	Shaft,Track Idler, 7000	
24	853191	4	Slide, Undercarriage Idler	
25	852827	4	Clamp Half, W/Drilled Holes	
26A	100-10-11-56-5	8	Cshh, 0.625-11 X 3.5 X 1.5 - Gr5	
26B	302-10	8	Washer, Lock, 0.625	
27	420090	4	Bearing, Er32	
28	400-M10-26	4	Roll Pin, Metric, M10 X 26	
Ref	853518	4	Bar,.500X1.00x2.50	(not shown)

TRACK DRIVE ASSEMBLY (CONT.)

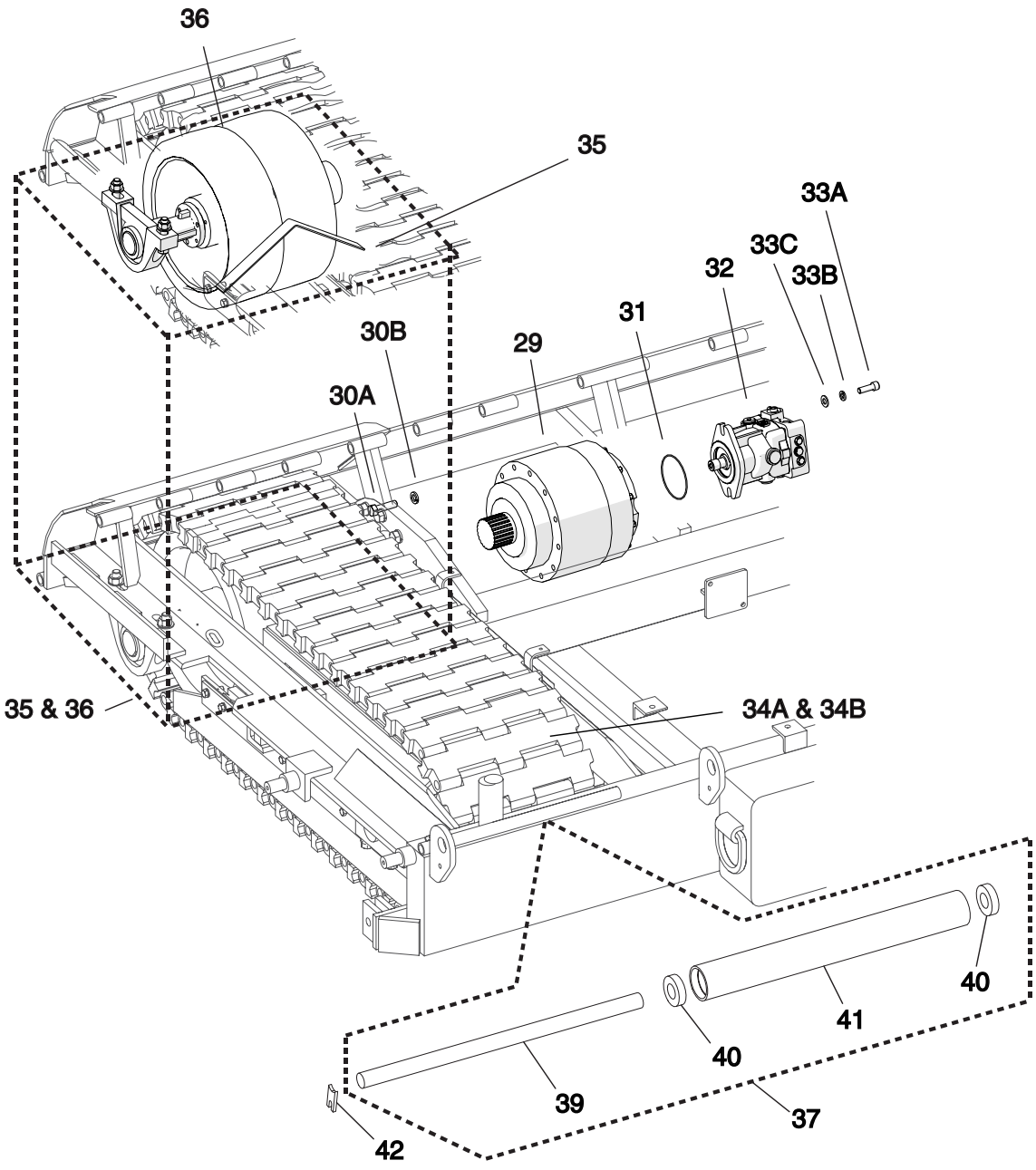


Figure 7-2.

Track Drive Assembly Parts List (Cont.)

Item No.	Part Number	Qty.	Description	Remarks
29	811360	2	Torque Hub, Final Drive, 1000	
30A	100-10-11-36-5	24	CSHH, 0.625-11 X 2.25 X 1.5 - GR5	
30B	302-10	36	Washer, Lock, 0.625	
31	811366	2	O-Ring, Hyd Motor To Torque Hub	
32	811361	2	Motor, Hyd., Drive, 1000 Drive	
33A	100-8-13-24-F	8	CSHH, 1/2-13 x 1.5, FT	
33B	302-8	8	Washer, Lock, 0.5	
33C	300-8	8	Washer, Flat, 0.5	
Ref	810015	2	Track, One Side, 1000	
34A	810291CSRV	42	Link Pink Assy.	
34B	810281C	42	Track Section	
35	852828	2	Mount, Tire Wipe	
36	981076	2	Subassembly, Rear Torque Hub	
37	981152	2	Push Roller, Tilt Hopper	Items 39-41
39	810122	2	Shaft, Push Bar Roller	
40	810110	4	Bearing, Push Roller, 1.250	
41	856923	2	Pipe, Push Bar Roller, 24.00 Lg.	
42	852826	2	Lock Tab, Push Roller Shaft	
Ref	982093SRV	A/R	Opt., Electric Flight Screws	

HOPPER AND HOPPER SIDE WINGS COMPONENTS

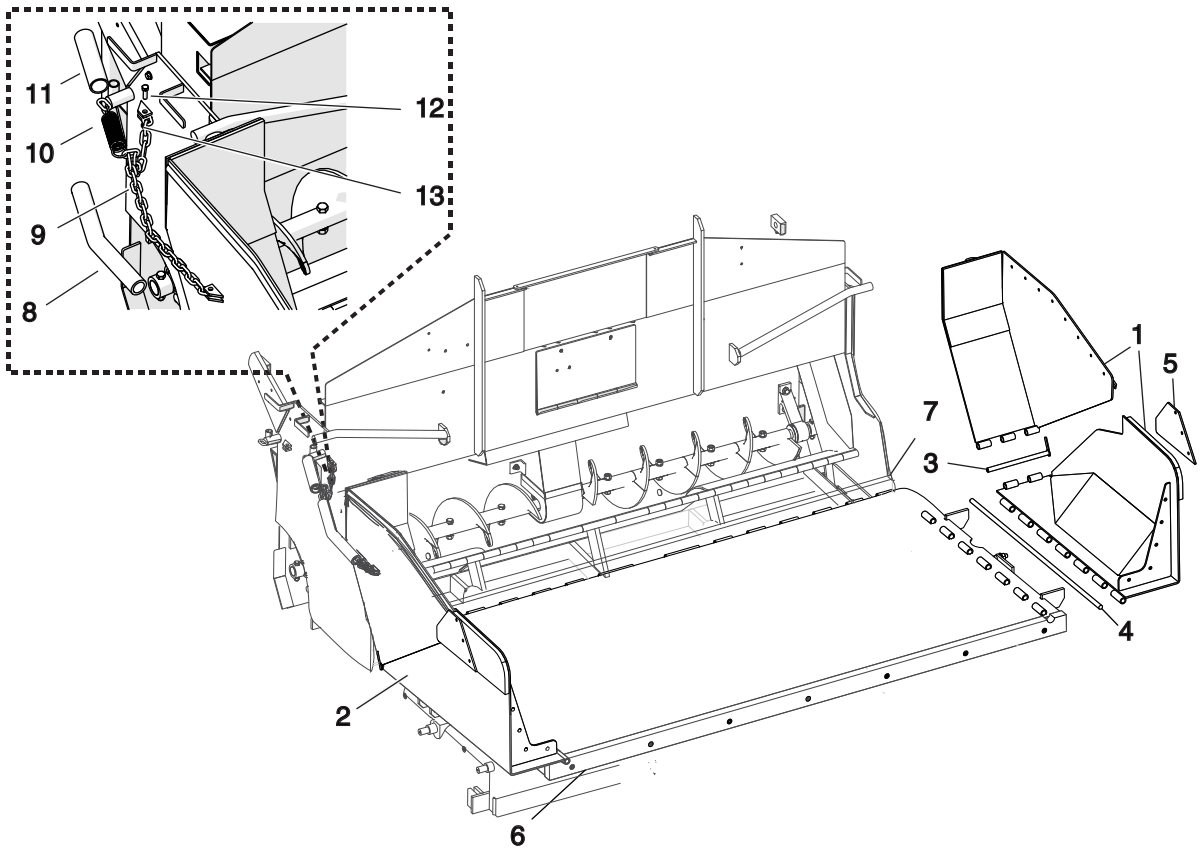


Figure 7-3.

Hopper and Hopper Side Wings Components Parts List

Item No.	Part Number	Qty.	Description	Remarks
Ref	983677	Ref.	Group, Hopper	
Ref	1000519	Ref.	Assembly, Sidewings And Floor, 1000	Includes 1 - 4, 6
1	851614SRV	1	Sidewing, Lh, (8' 1000) New Style	Includes 3 - 4
2	851615SRV	1	Sidewing, Rh, (8' 1000) New Style	Includes 3 - 4
3	930031SRV	1	Pin, Sidewing Extension	
4	852692	1	Pin, Hopper Wing Hinge, 11/16" - 48" Crs	
5	852645SRV	2	Guide, Side Wing Slide	
6	851612SRV	1	Floor, 1000 8' Hopper	
7	852617	1	Rnd., .688 X 94.00	
8	9981000CG	2	Hose, 1000D Chain Guard	
9	852619	1	Chain, Proof Coil, 0.250X27 Link	
10	930029	2	Spring, Extension	
11	852428	2	Pipe, Chain Guard, Pvc	
12	100-6-16-20-5	4	Cshh, 3/8-16 X 1.25, Gr5	
13	204-6-16-5	4	Nut, Lock, Stover, 3/8-16, Gr5	

HOPPER DETAIL

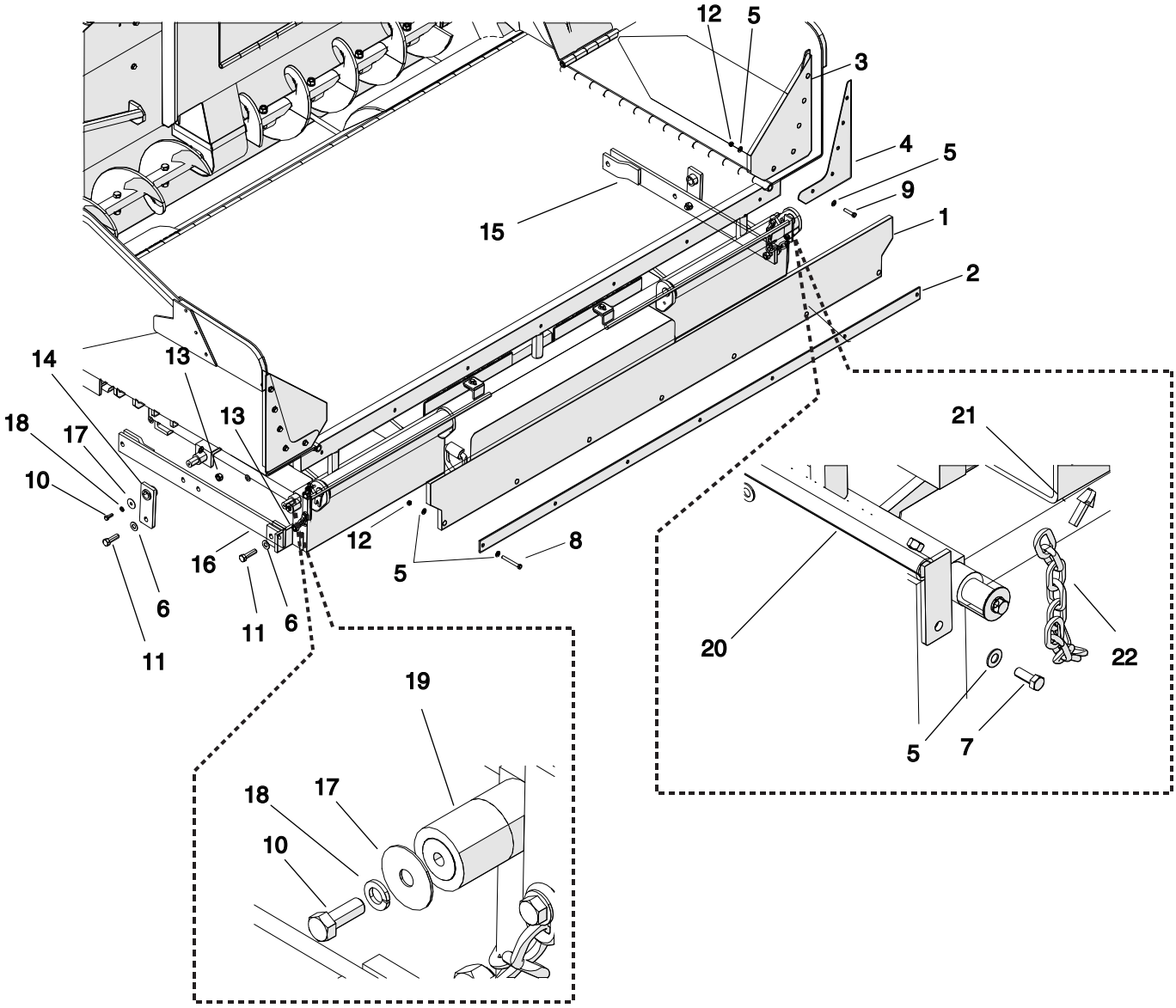


Figure 7-4.

Hopper Detail Parts List

Item No.	Part Number	Qty.	Description	Remarks
1	851622A	1	Flashing (Hard), 1000C-8, Hopper Front	
2	851623	1	Bar, Front Rubber	
3	851622A-1	2	Rubber, Hopper Corner	
4	851646-1	2	Clamp Plate, 1000D Hopper Wing	
5	300-6	36	Washer, Flat, Sae, 3/8	
6	300-10	4	Washer, Flat, Sae, 5/8	
7	100-6-16-16-5F	4	Cshh,3/8-16 X 1,Gr5,Ft	
8	100-6-16-52-5	7	Cshh,3/8-16 X 3.25,Gr5	
9	100-6-16-28-5	10	Cshh,3/8-16 X 1.75,Gr5	
10	100-6-16-28-5	2	Cshh,5/8-11 X 2,Gr5	
11	100-10-11-36-5	4	Cshh,5/8-11 X 2.25,Gr5	
12	204-6-16-5	17	Nut,Lock,Stover,3/8-16,Gr5	
13	204-10-11-5	4	Nut,Lock,Stover,5/8-11,Gr5	
14	987278	2	Assembly, Screed Arm Hanger	
15	987286	1	Weldment, Screed Arm, Left	
16	987288	1	Weldment, Screed Arm, Right	
17	308-6-24	4	Washer, Flat, Fender, 3/8 X 1.5	
18	302-6	2	Washer, Lock, 3/8	
19	854047	2	Bushing,Flight Screw,Lower	
20	920061	2	Rod,Guide Bar	
21	920070	4	Screw,Wing,.375-16X1.00	
22	920061-1	1	Chain, 12 Link	

ENGINE HATCHES

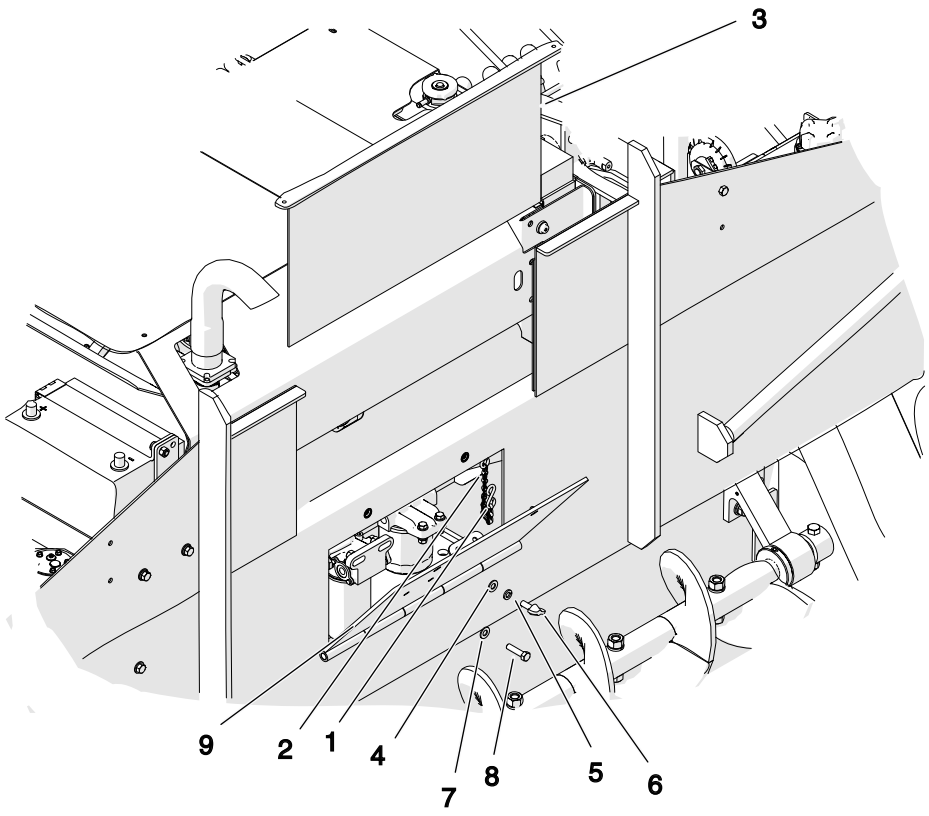


Figure 7-5.

Engine Hatches Parts List

Item No	Part Number	Qty	Description	Remarks
1	20938635	2	S-Hook	
2	1011831	1	Chain, Top Back Lower Panel, #50 Sash Chain, 6” Lg	
3	1011827	1	Weldment, Top Back Access Panel	
4	300-6	2	Washer, Flat, Sae, 3/8	
5	302-6	2	Washer, Lock, 3/8	
6	920070	2	Thumb Screw,.375-16X1.00	
7	300-6	2	Washer, Flat, Sae, 3/8	
8	100-6-16-20-5	2	Cshh,3/8-16 X 1.25,Gr5	
9	1011833	1	Welment, Top Back Lower Panel	

HYDRAULIC RESERVOIR AND HOPPER LIFT CYLINDER

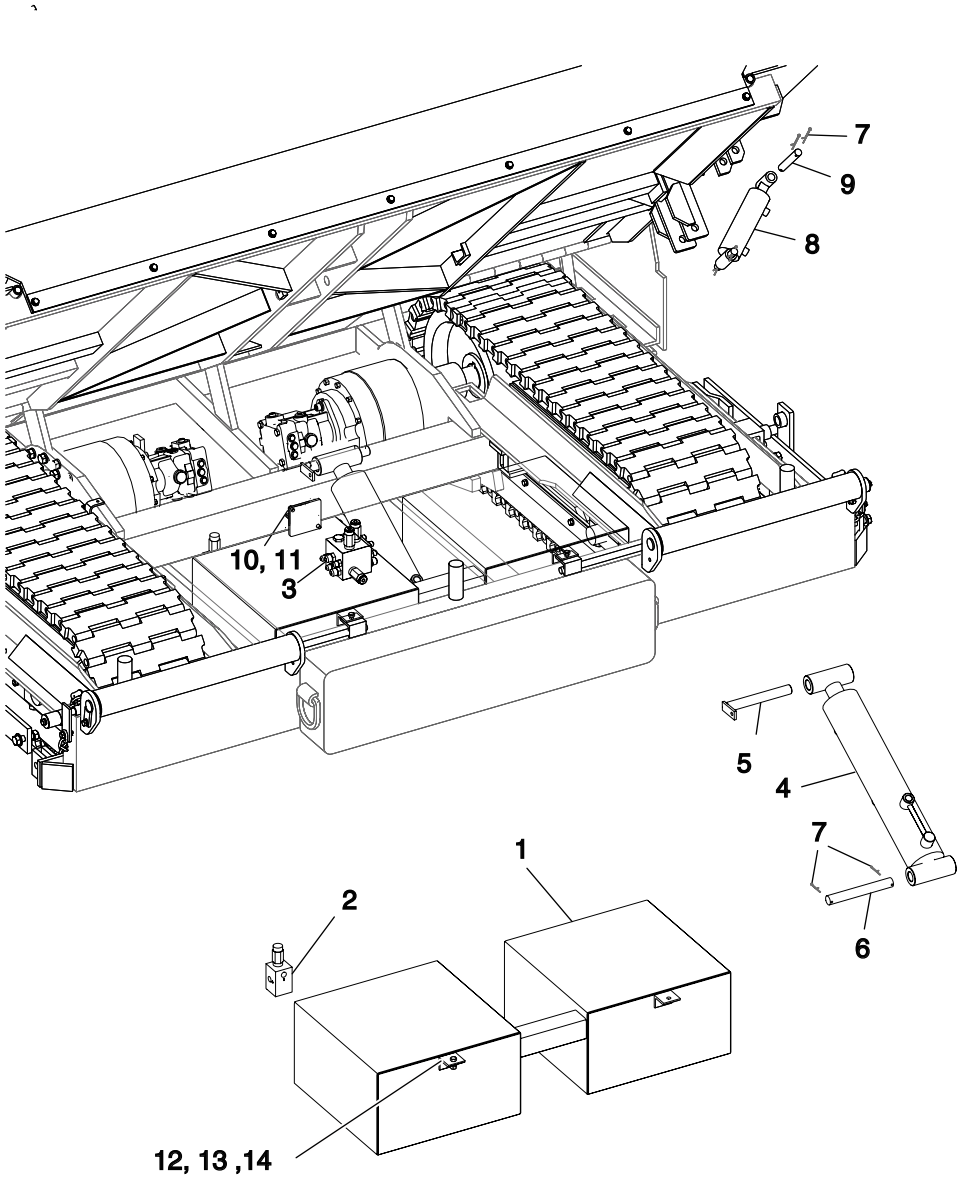


Figure 7-6.

Hydraulic Reservoir and Hopper Lift Cylinder Parts List

Item No.	Part Number	Qty.	Description	Remarks
1	1012015	1	Weldment, Bottom Hydraulic Tank	
2	851544	1	Manifold, Track Tensioner, N/S	
3	910123	1	Manifold, Hopper Wing Sequence	
4	851434	1	Cyl., Hyd., 3.50 X 18.00 X 2.00 Rod	
5	851619SRV	1	Pin, 1000 Hopper Lift Cyl. Top	
6	851618	1	Pin, 1000 Hopper Lift Cyl.	
7	405-3-24	10	Pin, Cotter, 0.188X2.00	
8	910145	2	Cyl., Hyd., Hopper Wing	
Ref	910145-01	A/R	Seal Kit	
9	910146	4	Pin, Cylinder	
10	302-5	2	Washer, Lock, 5/16	
11	100-5-18-12-5F	2	Cshh,5/16-18 X 0.75,Gr5,Ft	
12	200-6-16-5	13	Nut,Hex,3/8-16,Gr5	
13	302-6	13	Washer, Lock, 3/8	
14	100-6-16-20-5	13	Cshh,3/8-16 X 1.25,Gr5	

HOPPER WING SEQUENCE MANIFOLD

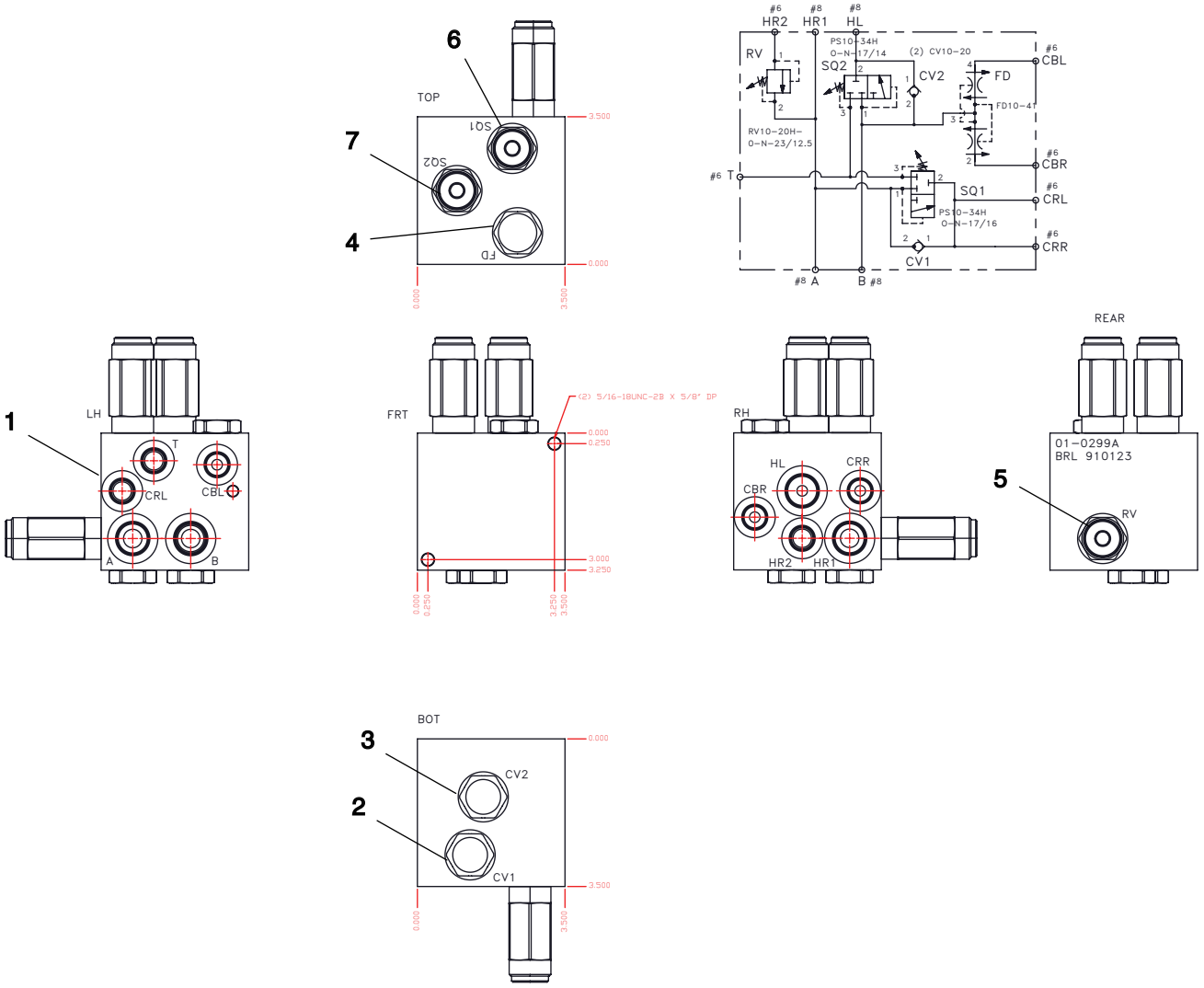


Figure 7-7.

Hopper Wing Sequence Manifold Parts List

Item No.	Part Number	Qty.	Description	Remarks
1	910123	1	M&W Manifold, 01-0299A	
2	910123-05	1	H-F Check Valve, Cv10-20-0-N-5	
3	910123-06	1	H-F Check Valve, Cv10-20-0-N-5	
4	910123-02	1	H-F Flow Divider, Fd50-45-0-N-33	
5	910123-01	1	H-F Relief Valve, Rv10-20H-0-N-23/12.5	
6	910123-04	1	H-F Sequence Valve, Ps10-34H-0-N-17/16	
7	910123-03	1	H-F Sequence Valve, Ps10-34H-0-N-17/14	

AUGER ASSEMBLY

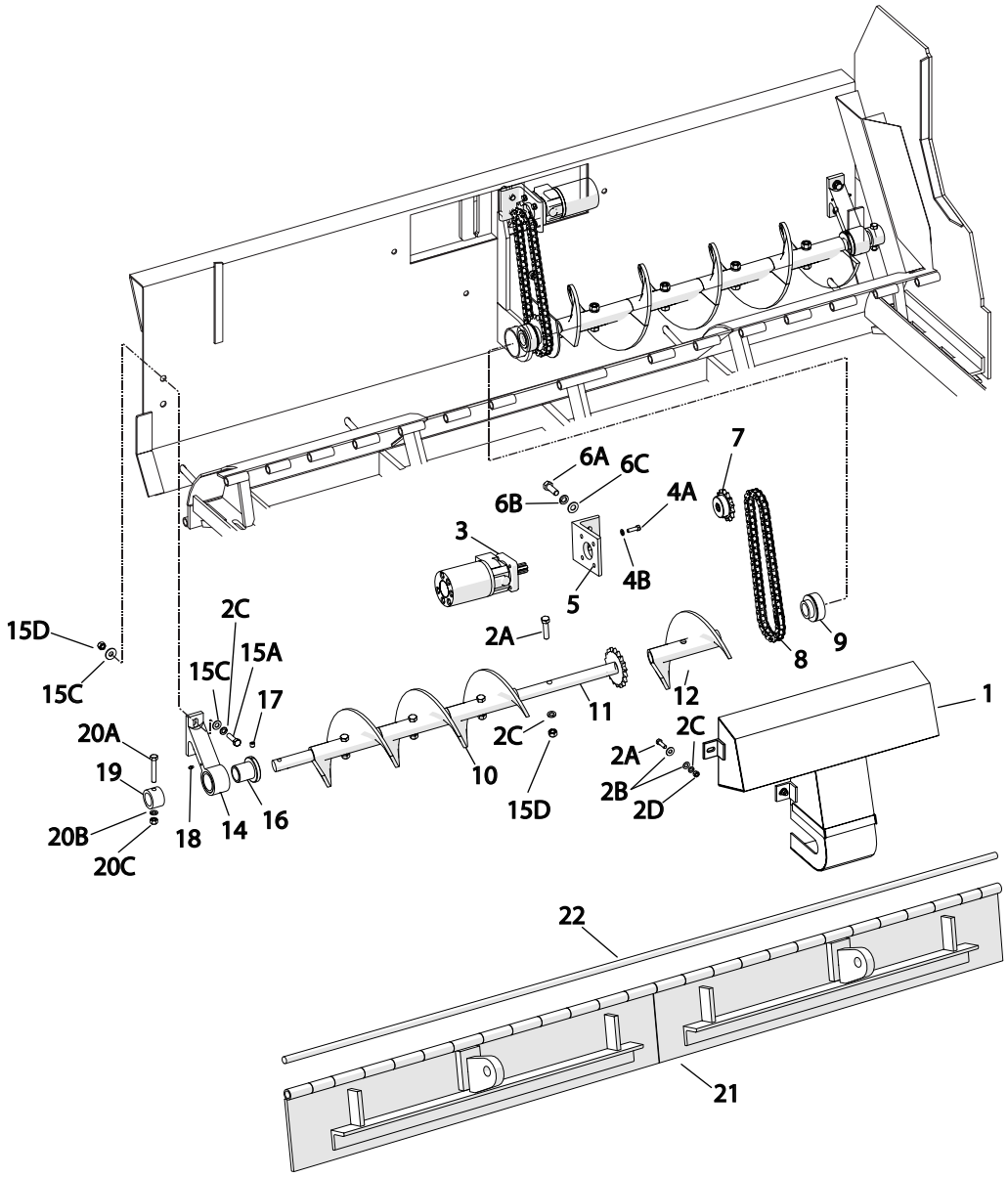


Figure 7-8.

Auger Assembly Parts List

Item No	Part Number	Qty	Description	Remarks
Ref.	984910	Ref.	Group, Auger	
1	900616	1	Cover, Auger Chain Drive	
Ref	860043-1SRV	1	Auger Closing Kit	
2A	100-6-16-20-5	12	Cshh, 3/8-16 X 1.25, Gr5	
2B	300-6	8	Washer, Flat, 0.375	
2C	302-6	16	Washer, Lock, 0.375	
2D	200-6-16-5	4	Nut, Hex, 3/8-16, Gr5	
3	987903	2	Motor, Hyd., 20.0 Cir. Parker	
4A	100-8-13-48-5	8	Cshh,1/2-13 X 3,Gr5	
4B	300-8	8	Washer, Flat, Sae, 3/8	
5	860021	2	Mount, Auger Motor	
6A	100-10-11-28-5	4	Cshh,5/8-11 X 1.75,Gr5	
6B	302-10	4	Washer, Lock, 1/2	
6C	300-10	4	Washer, Flat, Sae, 1/2	
7	240350	2	Sprocket, 60B12 X 1.00-6 Spline	
8	860090	2	Chain, Roller, 60H X 52 Pitch	
Ref	860049	1	Link,Master,#60H Chain	
9	850130	2	Bearing, Insert, 1.50	
10	853770	1	Auger Assembly, Casted (8' 1000 Rh)	Include 11, 12,
Ref	853760	1	Auger Assembly, Casted (8' 1000 Lh)	
11	980691	1	Shaft, Auger	
Ref	860100C	4	Auger Section Rh Casted	
12	860110C	4	Auger Section Lh Casted	
14	1011441	2	Auger Mount, Rh	Include 16 - 18
15A	100-8-13-28-5	4	Cshh, 0.5-13 X 1.75 X 1.25 - Gr5	
15C	301-8	8	Washer, Flat, Uss, 1/2	
15D	200-8-13-5	12	Nut, Hex, 1/2-13, Gr5	
16	851645	1	Collar, Auger Shaft End	Include 17
17	851645-1	1	Sssh, 0.5-20 X 0.5 - Hx - N	(also 102-8-20-8)
18	Ref.	1	Grease Fitting	
19	851647	2	End Cap,Auger Shaft	
20A	100-8-13-48-5	2	Cshh, 0.5-13 X 3 X 1.25 - Gr5	
20B	301-8	2	Washer, Flat, Uss, 0.5	
20C	302-8	2	Washer, Lock, 0.5	
21	810304SRV	1	Assembly, Cutoff, 1000 8' Rt.	Include 22
22	852617	1	Rnd., 0.688 X 94.00	

HYDRAULIC COMPONENTS AND ACCESSORIES LH SIDE

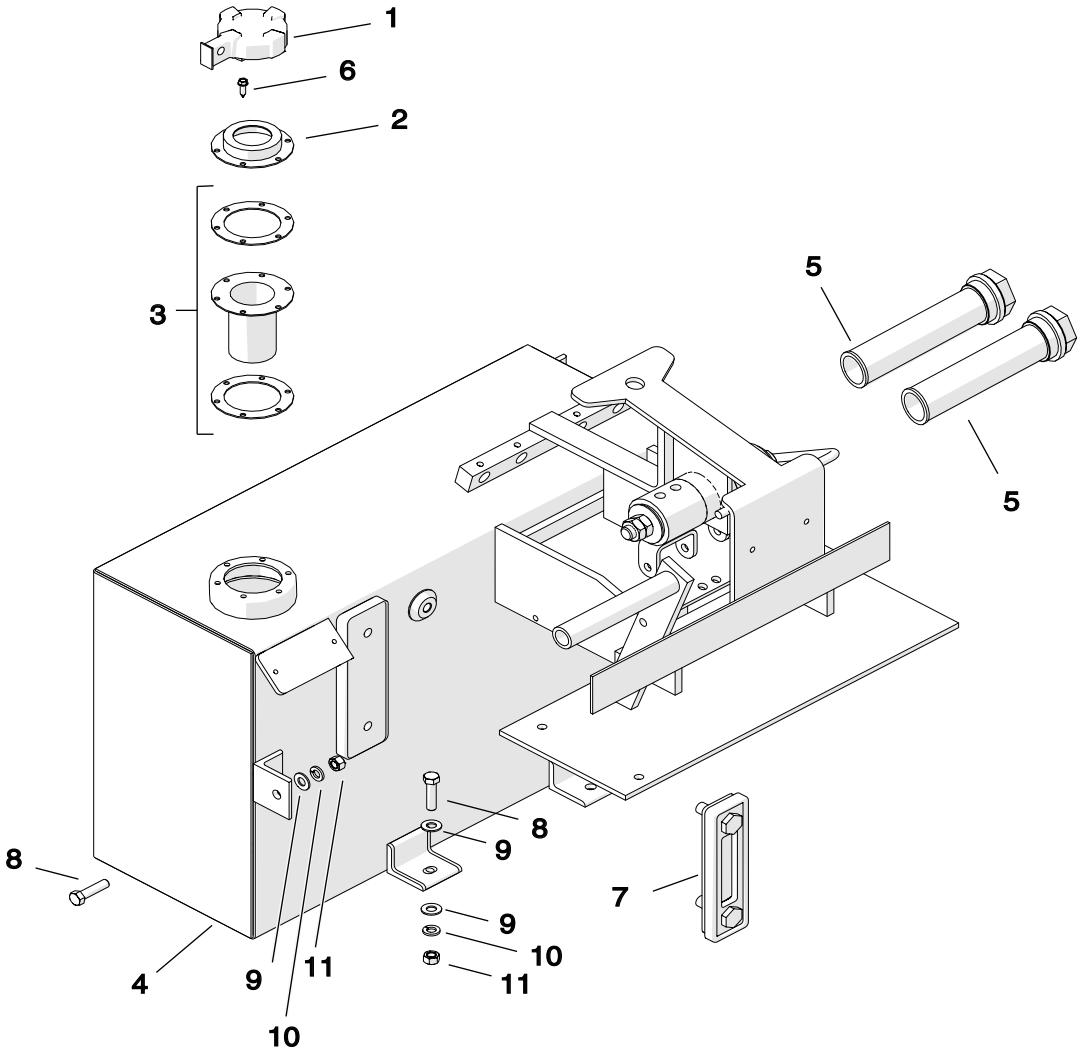


Figure 7-9.

Hydraulic Components and Accessories LH Side Parts List

Item No	Part Number	Qty	Description	Remarks
1	140030HL	1	Cap, Hyd Oil Tank (Lockable)	
2	140030FN	1	Filler Neck, Hyd Oil/Fuel Cap	
3	140030GK	1	Strainer & Gasket Kit	
4	1011752	1	Tank W/M, Hyd, Top, 1000	
5	1011817	2	Strainer, Hydraulic Suction, -24 Sae O-Ring	
6	116-#12-12	11	Scr, Slfdrl, Hwh, #12 X 0.75	
7	500070	1	Gauge,Sight Level/Temp,Hyd Oil	
8	100-6-16-20-5	13	Cshh,3/8-16 X 1.25,Gr5	
9	300-6	18	Washer, Flat, Sae, 3/8	
10	302-6	13	Washer, Lock, 3/8	
11	200-6-16-5	13	Nut,Hex,3/8-16,Gr5	
Ref	1011958	1	Hose Kit, Main, 1000G	
Ref	1007675	1	Plug,.1.00 Npt,Sq Hd,Magnetic	

CONTROL GROUP

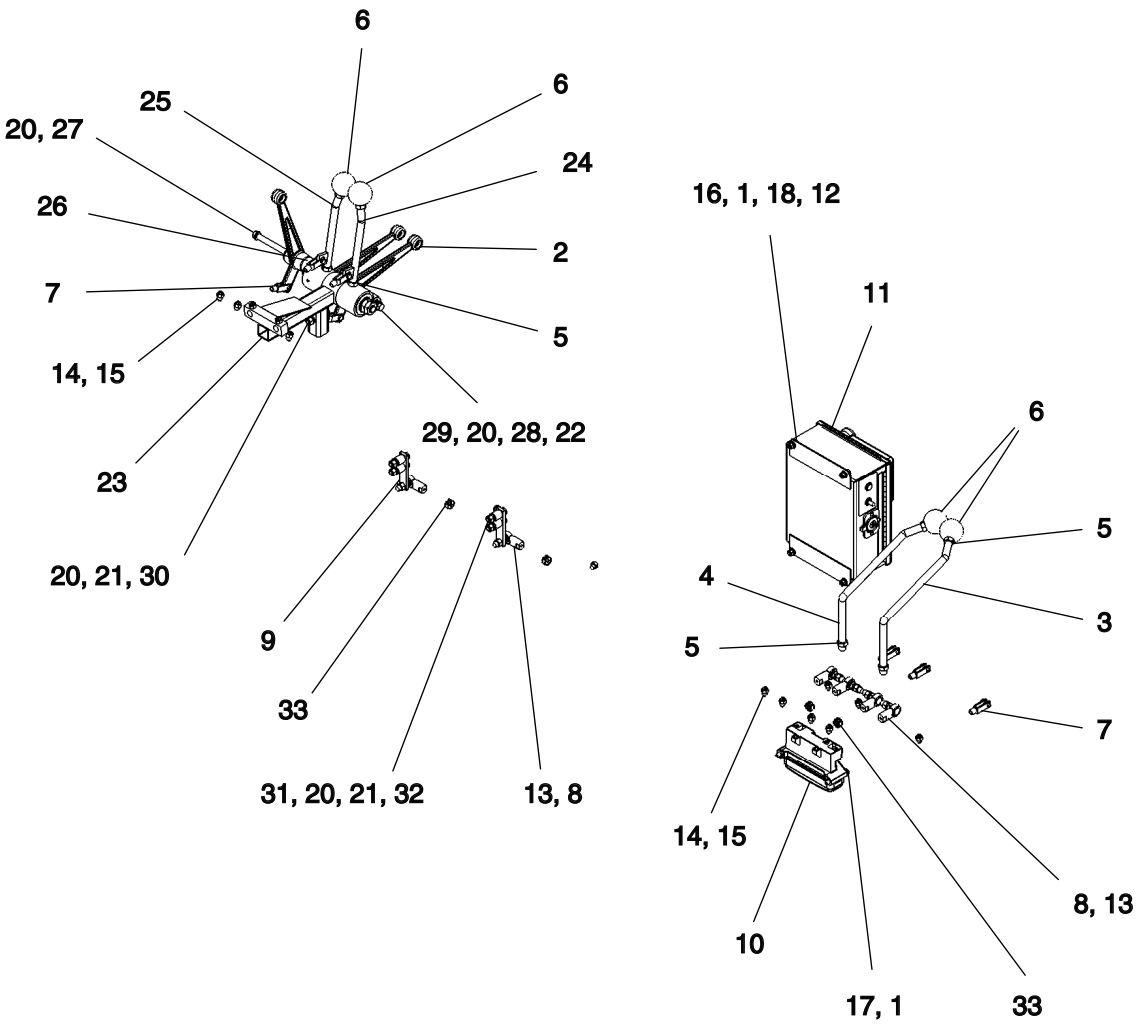


Figure 7-10.

Control Group Parts List

Item No	Part Number	Qty	Description	Remarks
1	300-4	10	Washer, Flat, Sae, 1/4	
2	920210	3	Cast Handle, Right Hand Control	
3	920097L	1	Lever,Fwd/Rev,Left Side Lh	
4	920097R	1	Lever,Fwd/Rev,Left Side Rh	
5	202-8-13-5	8	Nut,Hex,Jam,1/2-13,Gr5	
6	920225	4	Knob,Round Ball,1-7/8”X1/2-13	
7	350050	8	Clevis,.250”-28”	
8	920090	6	Ball Joint,.250,Fm,W/.375 Stud	
9	1011970	2	Bar, Extension, M46 Pump Lever	
10	1011410	1	Controller, Plus 1, 12 Pin, Parked Regen	
11	1011465	1	Control Box, 1000, Tier 4	
12	200-4-20-5	4	Nut,Hex,1/4-20,Gr5	
13	200-6-24-5	8	Nut,Hex,3/8-24,Gr5	
14	200-5-18-5	16	Nut,Hex,5/16-18,Gr5	
15	126-5-18-12	16	Set S, Hskt, Oval, 5/16-18 X 0.75	
16	100-4-20-12-5F	4	Cshh,1/4-20 X 0.75,Gr5,Ft	
17	100-4-20-36-5	2	Cshh,1/4-20 X 2.25,Gr5	
18	302-4	4	Washer, Lock, 1/4	
19	1011852	1	Harness, Main, Tier4	
20	302-6	7	Washer, Lock, 3/8	
21	200-6-16-5	3	Nut,Hex,3/8-16,Gr5	
22	1012776	1	Rod, Rh Control Handel Pivot, 1000G	
23	1012938	1	Assembly, Rh Drive, Drive Controls	
24	1012902	1	Weldment, Lever, Right Side, Lh	
25	1012901	1	Weldment, Lever, Right Side, Rh	
26	1012847	2	Tube, Spacer, Rh Drive	
27	100-6-24-68-5	1	Cshh,3/8-24 X 4.25,Gr5	
28	300-6	1	Washer, Flat, Sae, 3/8	
29	100-6-24-16-5F	1	Cshh,3/8-24 X 1,Gr5,Ft	
30	100-6-16-32-5	1	Cshh,3/8-16 X 2,Gr5	
31	1012935	4	Tube, Spacer, Control Arm Extension	
32	100-6-16-26-5	4	Cshh,3/8-16 X 1.625,Gr5	
33	1012971	4	Shaft Collar, 0.25”, Clamp On	

VALVE CONTROL STATIONS LH SIDE AND COMPONENTS

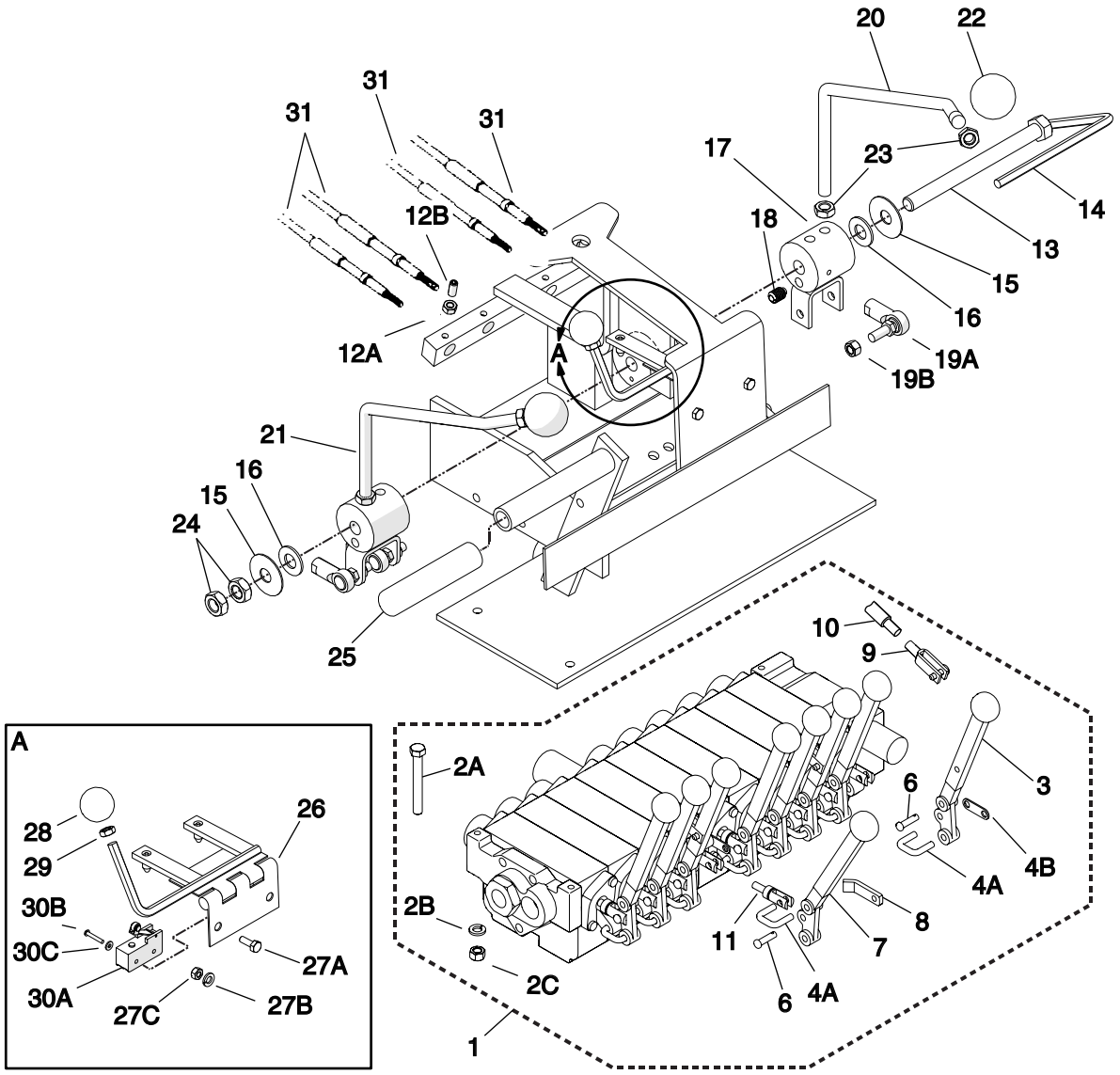


Figure 7-11.

Valve Control Stations LH Side and Components Parts List

Item No	Part Number	Qty	Description	Remarks
1	982035	1	Valve, Main, 1000	
2A	100-6-16-48-5	3	Cshh, 3/8-16 X 3, Gr5	
2B	302-8	3	Washer, Lock, 1/2	
2C	200-6-16-5	3	Nut, Hex, 3/8-16, Gr5	
3	910060B	3	Vertical W/ Weldment Handle	
4A	901010	9	Link Assy, Valve Lever	Includes item 6
4B	901010-A	9	Link Plate	
6	350080	9	Pin, Clevis, 0.250 X 0.875	
7	910060	6	Handle, Vertical, V-20 Valve	
8	852648	1	Tab, Auto Auger/Screed Valve	
9	350050	1	Clevis, 0.250-28	
10	920120	3	Cable, Push/Pull, 104” X 3” Stroke	
11	141060	9	Clevis, Valve Spool End (V20)	
12A	200-5-18-5	14	Nut, Hex, 5/16-18, Gr5	
12B	126-5-18-12	14	Set S, Hskt, Oval, 3/8-16 X 0.75	
13	100-10-11-120-5	1	Cshh, 5/8-11 X 7.5, Gr5	
14	852536	1	Rod, Drive Lever Stop	
15	490080	2	Washer, Belleville 5/8”	
16	301-10	2	Washer, Flat, Uss, 5/8	
17	1011875	1	Hub Assembly, Fwd./Rev. Pivot	Includes Item 18
18	920095	2	Ball Plunger, 1/2”-13	
19A	920090	6	Ball Joint, 0.250, Fm, W/0.375 Stud	
19B	200-6-24-5	6	Nut, Hex, 3/8-24, Gr5	
20	920097R	1	Lever, Fwd./Rev., Left Side Rh	
21	920097L	1	Lever, Fwd./Rev., Left Side Lh	(Lever only)
22	920225	2	Knob, Round Ball, 1-7/8” X 1/2-13	
23	202-8-13-5	4	Nut, Hex, Jam, 1/2-13, Gr5	
24	202-10-11-5	2	Nut, Hex, Jam, 5/8-11, Gr5	
25	490010	1	Hand Grip, Drive Lever	
26	1011924	1	Bracket, Neutral Safety Switch	
27A	100-4-20-12-5F	8	Cshh, 1/4-20 X 0.75, Gr5, Ft	
27B	300-4	8	Washer, Flat, Sae, 1/4	
27C	200-4-20-5	8	Nut, Hex, 1/4-20, Gr5	
28	851156	1	Knob, Round Ball, 1.375 X 0.375-16	
29	202-6-16-5	1	Nut, Hex, Jam, 3/8-16, Gr5	
30A	1011853	1	Switch, Neutral Safety (N/S)	
30B	110-#6-32-14F	2	Rhms, Slotted, #6-32 X 0.875, Ft	

VALVE CONTROL STATIONS LH SIDE AND COMPONENTS (CONT.)

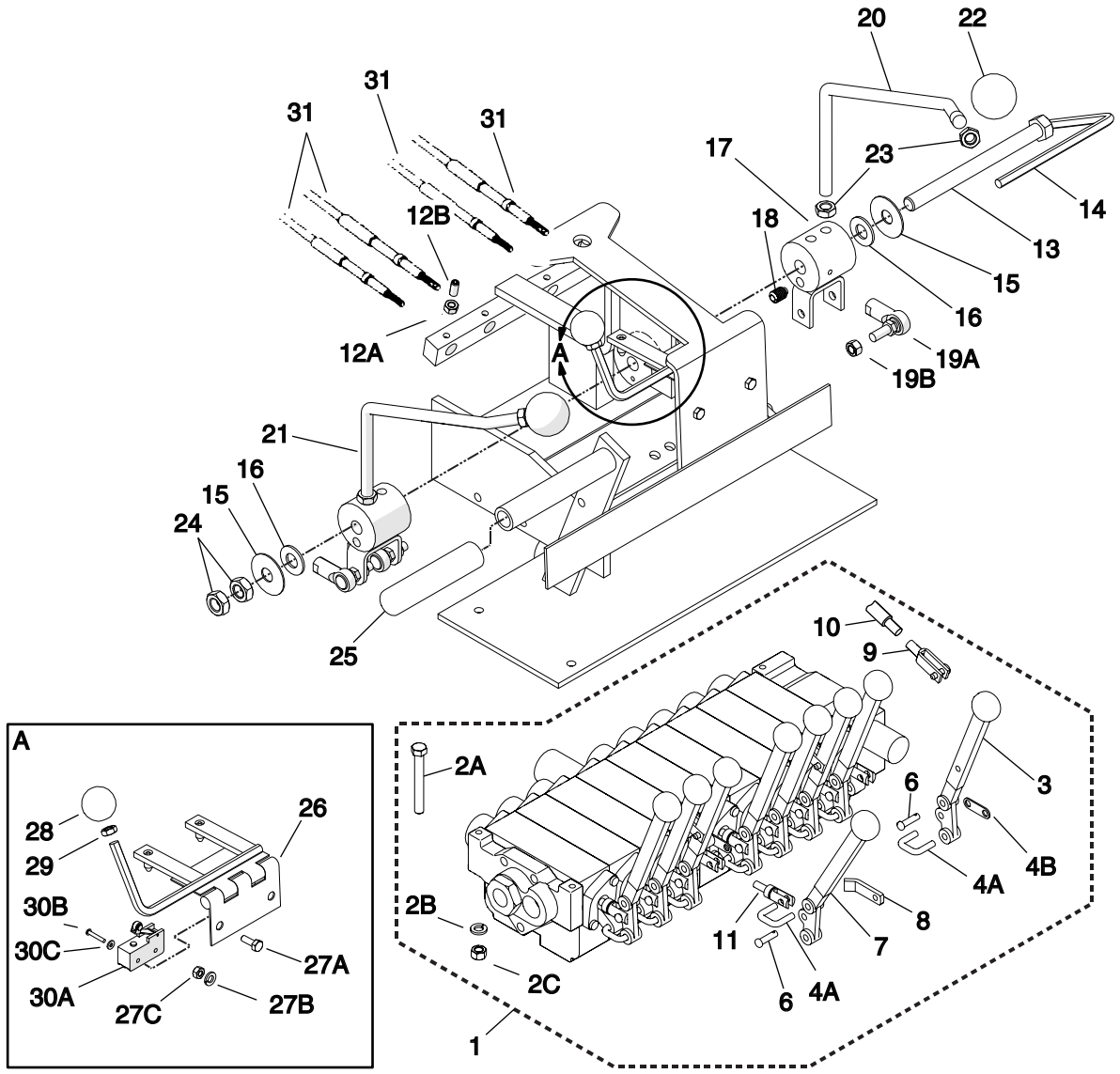


Figure 7-11.

Valve Control Stations LH Side and Components Parts List (Cont.)

Item No	Part Number	Qty	Description	Remarks
30C	300-#6	2	Washer, Flat, Sae, #6	
Ref	1011852	1	Harness,Main,Tier4	
31	920124	4	Cable,Push/Pull,88”X3” Stroke	

MAIN VALVE MANIFOLD DETAIL

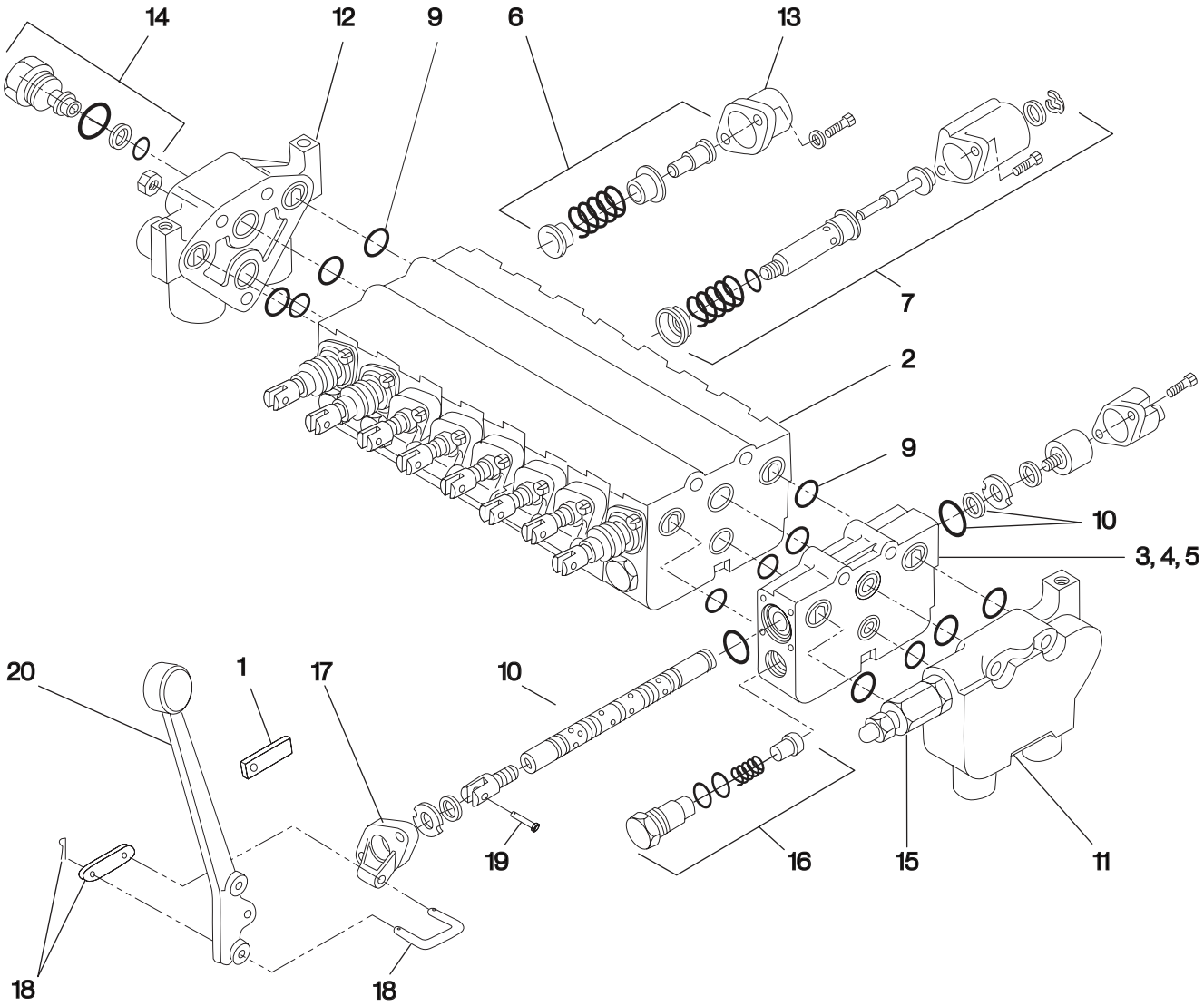


Figure 7-12.

Main Valve Manifold Detail Parts List

Item No	Part Number	Qty	Description	Remarks
1	852648	9	Tab, Auger Valve Reverse Lockout	
2	851161	1	Valve Assy, 9 Section, W/Float	
3	910054	6	Valve Section, Spring Return	
4	910052	2	Valve Section, Detented	
5	910054FLS	1	Valve Section, Float	
6	901014	6	Spring Center Kit	
7	141050	1	Float Positioner Kit	
9	910062	10	Seal Kit, Valve Section	
10	910059	9	Seal Kit, Valve Spool	
Ref	910065	A/R	Seal Kit, Relief Valve	Not Shown
11	910055	1	Cover, Valve Inlet	
12	910056	1	Cover, Valve Outlet	
13	141040	9	Cap, Valve Spool Cover	
14	901002	1	Power Beyond Sleeve	
15	901009	1	Valve, Main Relief	
16	141020	9	Valve & Plug, Anticavitation	
17	910058	1	Bracket, Valve Lever Mount	
18	901010	9	Link Assy, Valve Lever	
19	350080	9	Pin, Clevis	
20	910060	9	Handle, Vertical	

HYDRAULIC GROUP DETAIL

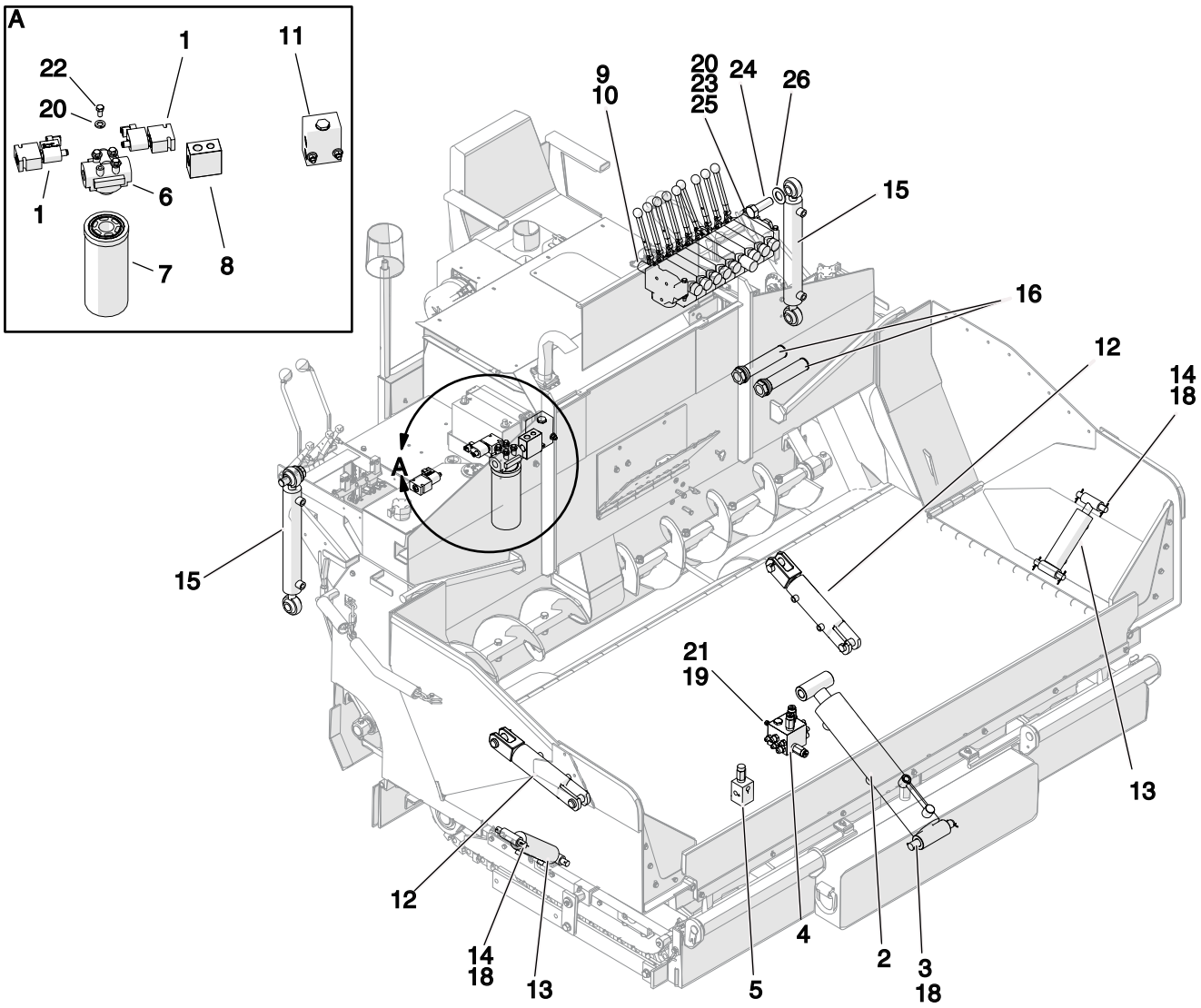


Figure 7-13.

Hydraulic Group Detail Parts List

Item No	Part Number	Qty	Description	Remarks
1	1011845	2	Valve, Pump Destroke, No, 2Way, 2Pos, 12V, Deutsch	
2	851434	1	Cylinder, Hydraulic, Hopper Lift	
3	851618	1	Pin, Hopper Lift Cylinder, 1000	
4	910123	1	Manifold-Hopper Wing Sequence	
5	851544	1	Manifold,Track Tensioner	
6	290010	1	Head, Charge Filter	
7	290030	1	Filter Element,Hyd Charge	
8	960476A	1	Manifold,Charge Filter	
9	982035	1	Valve, Main	
10	852648	1	Tab, Auto Auger/Screed Valve	
11	870319	1	Manifold,Flow Divider,Screed	
12	811374	2	Cylinder, Hydraulic, 2.50X4.00	
13	910145	2	Cylinder, Hopper Wing	
14	910146	4	Pin, Side Wing Cyl.	
15	851436SRV	2	Cyl,Hyd 2.00X12.00,2500psi	
16	1011817	2	Strainer, Hydraulic Suction, -24 Sae O-Ring	
Ref.	1011958	1	Hose Kit, Main, 1000G	
18	405-3-24	10	Cotter Pin,.188X1.50	
19	302-5	2	Washer, Lock, 5/16	
20	302-8	9	Washer, Lock, 1/2	
21	100-5-18-12-5F	2	Cshh,5/16-18 X 0.75,Gr5,Ft	
22	100-6-16-12-5F	4	Cshh,3/8-16 X 0.75,Gr5,Ft	
23	100-6-16-48-5	5	Cshh,3/8-16 X 3,Gr5	
24	100-16-14-48-8	2	Cshh,1-14 X 3,Gr8	
25	200-6-16-5	5	Nut,Hex,3/8-16,Gr5	
26	300-18	2	Washer, Flat, Sae, 1-1/8	
Ref.	1008058	1	Kit, Hose Drive Motors 1000	

FUEL TANK ASSEMBLY

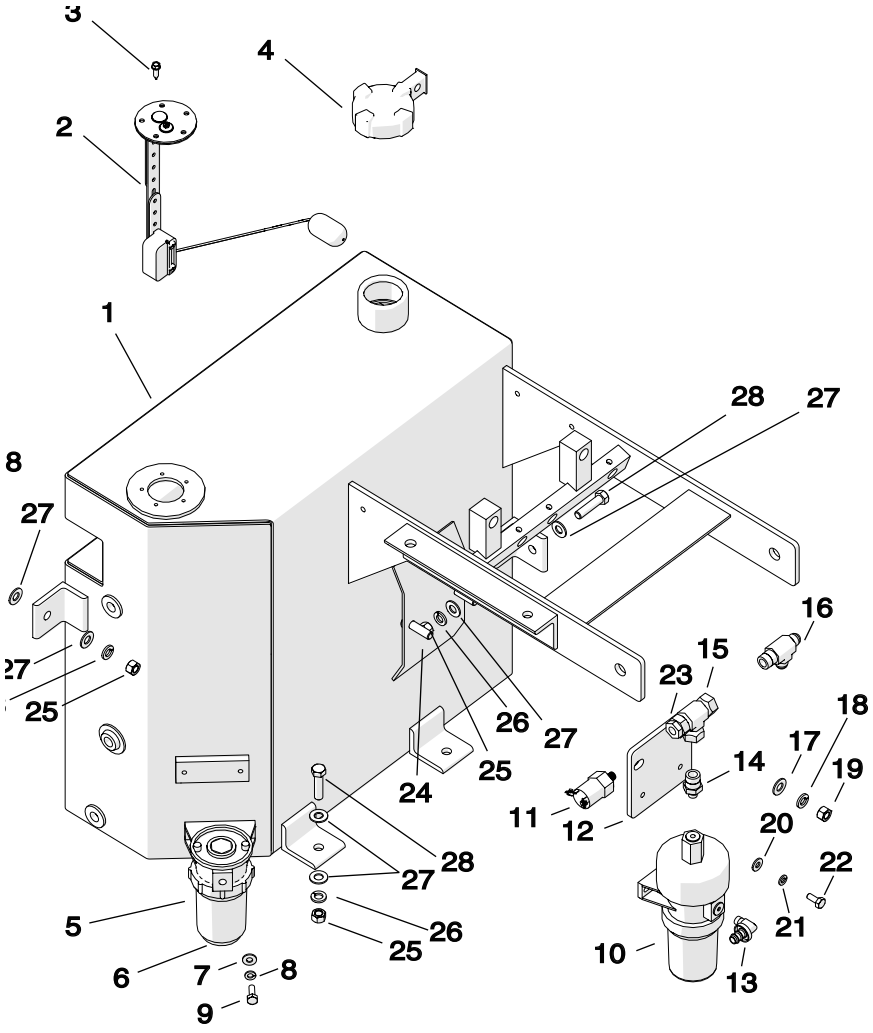


Figure 7-14.

Fuel Tank Assembly Parts List

Item No	Part Number	Qty	Description	Remarks
1	1011753	1	Weldment, Rh Tank Assembly, 1000G	
2	140040	1	Sending Unit,Fuel Level	
3	116-#12-12	11	Scr, Slfdrl, Hwh, #12 X 0.75	
4	140030FL	1	Cap,Fuel Tank,Lockable	
5	1011799-71	1	Pump, Fuel, Housing	
6	1011799-70	1	Filter, Fuel	
7	300-5	2	Washer, Flat, Sae, 5/16	
8	302-5	2	Washer, Lock, 5/16	
9	100-M14-2-30-8.8F	2	Cshh,M14x2 X 30,C8.8,Ft	
10	1011738	1	Pump, Spray Down Facet	
11	1011844	1	Switch,Pressure, 10 Psi Rise	
12	1011781	1	Mount,Spraydown Pump,Facet	
13	2120-6-2-B	1	Fitting, Elbow, Brass, 90 Deg, -6 Pl / -2 Nptf	
14	6/2/5404	1	Mp-Mp Hex Nipple, -6 Nptf / -2 Nptf	
15	1603-6-6-6	1	Adapter, Union, Triple Swivel, -6 Npsm/-6 Npsm/-6 Npsm	
16	2605-6-6-6	1	Adapter, Male, Run Tee, -6 Jic/-6 Nptf/-6 Jic	
17	300-4	2	Washer, Flat, Sae, 1/4	
18	302-4	2	Washer, Lock, 1/4	
19	200-4-20-5	2	Nut, Hex, 1/4-20, Gr5	
20	300-10	2	Washer, Flat, Sae, 5/8	
21	302-10	2	Washer, Lock, 5/8	
22	100-10-11-32-5	2	Cshh,5/8-11 X 2,Gr5	
23	6/2/5406	1	Adapter, Reducer, Pipe, -6 / -2	
24	100-4-20-10-5F	2	Cshh,1/4-20 X 0.625,Gr5,Ft	
25	200-6-16-5	4	Nut,Hex,3/8-16,Gr5	
26	302-6	8	Washer, Lock, 3/8	
27	300-6	4	Washer, Flat, Sae, 3/8	
28	100-6-16-20-5	4	Cshh, 3/8-16 X 1.25, Gr5	

RH CONTROL ASSEMBLY

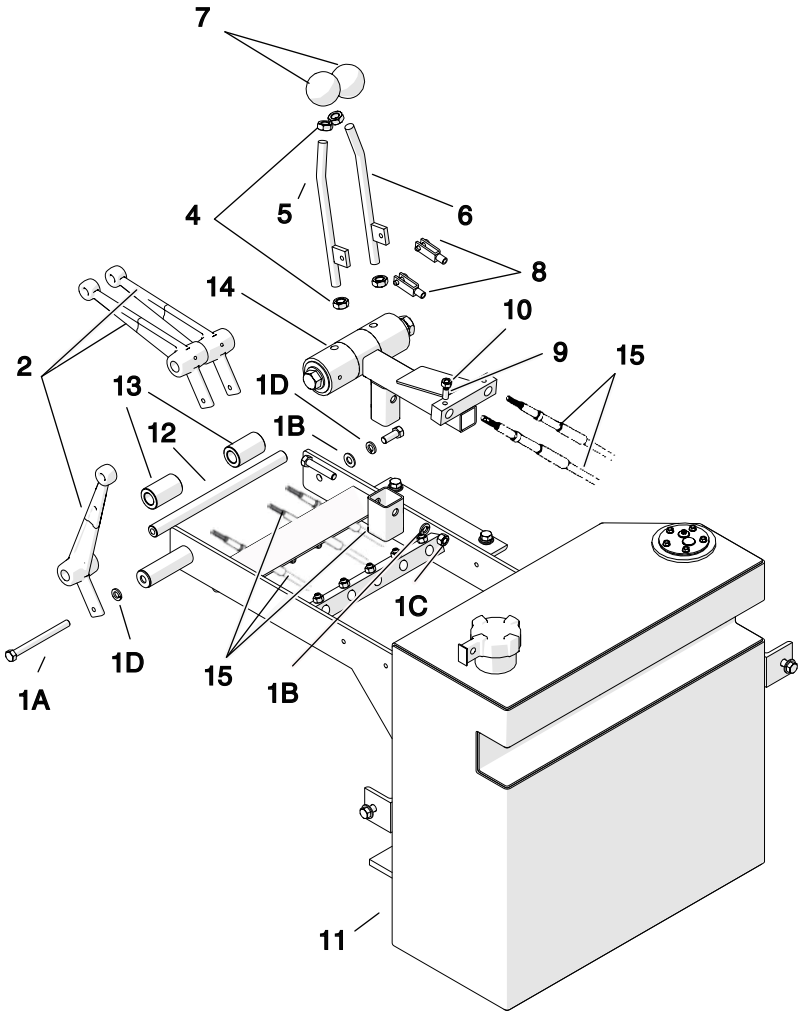


Figure 7-15.

RH Control Assembly Parts List

Item No	Part Number	Qty	Description	Remarks
1A	987041	1	Assembly, Rod	
1B	300-10	3	Washer, Flat, Sae, 5/8	
1C	204-10-11-5	1	Nut,Lock,Stover,5/8-11,Gr5	
1D	302-10	2	Washer, Lock, 5/8	
2	920210	3	Casted Handle,Rh Control	
4	202-8-13-5	4	Nut,Hex,Jam,1/2-13,Gr5	
5	1012901	1	Lever, Right Side Rh Fwd	
6	1012902	1	Lever, Right Side Lh Fwd	
7	920225	2	Knob, Round Ball, 1-7/8" X 1/2-13	
8	350050	5	Clevis, .250-28	
9	126-5-18-12	5	Set S, Hskt, Oval, 5/16-18 X 0.75	
10	200-5-18-5	5	Nut,Hex,5/16-18,Gr5	
11	1011790	1	Group, Tanks, 1000G	
12	1012776	1	Rod, Rh Control Handle Pivot, 100G	
13	1012847	2	Tube, Spacer, Rh Drive	
14	1012938	1	Assembly, Rh Drive, Drive Controls	
15	920120	5	Auger/Pump/Rh Drive Cable	

SEAT ASSEMBLY

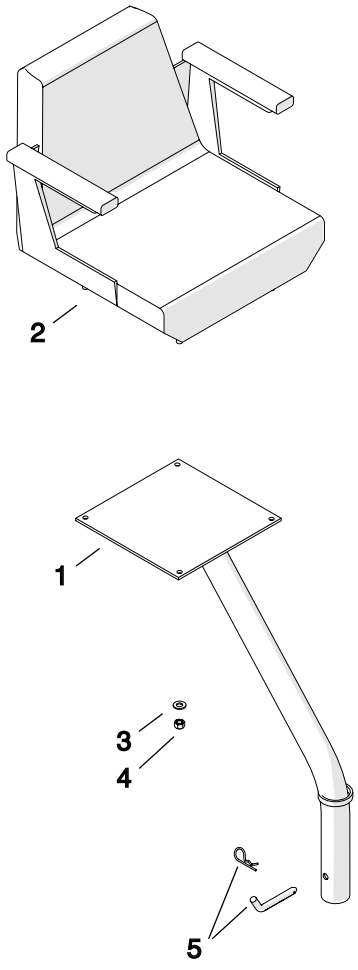


Figure 7-16.

Seat Assembly Parts List

Item No	Part Number	Qty	Description	Remarks
1	988998	1	Assy,New Style Seat Post,Long	
2	360010	1	Seat Assembly, White, With Armrest	
3	300-8	4	Washer, Flat, Sae, 1/2	
4	200-8-13-5	4	Nut,Hex,1/2-13,Gr5	
5	72836	1	Pin,.50X3.00,W/Hairpin Cotter	

MISC. DETAIL

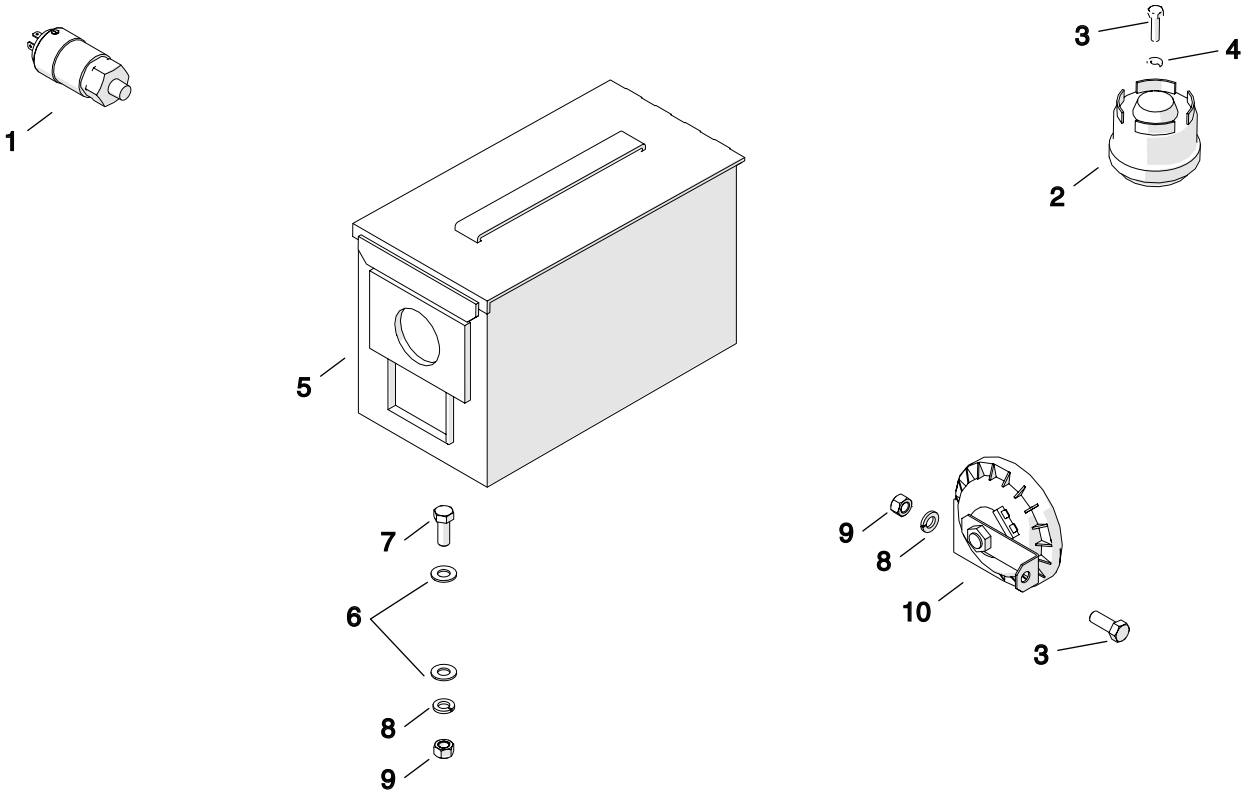


Figure 7-17.

Misc. Detail Parts List

Item No	Part Number	Qty	Description	Remarks
1	851504	1	Switch,Press,Back-Up Alarm	
2	160320	1	Alarm,Back Up. 107Db	
3	100-4-20-16-5F	2	Cshh,1/4-20 X 1,Gr5,Ft	
4	302-4		Washer, Lock, 1/4	
5	1006950	1	Toolbox,W/Holes	
6	300-6	4	Washer, Flat, Sae, 3/8	
7	100-6-16-16-5F	2	Cshh,3/8-16 X 1,Gr5,Ft	
8	302-6	3	Washer, Lock, 3/8	
9	200-6-16-5	3	Nut,Hex,3/8-16,Gr5	
10	20190773	1	Horn Low Pitch	

PROPANE HEATER ASSEMBLY AND AUTOMATIC IGNITORS

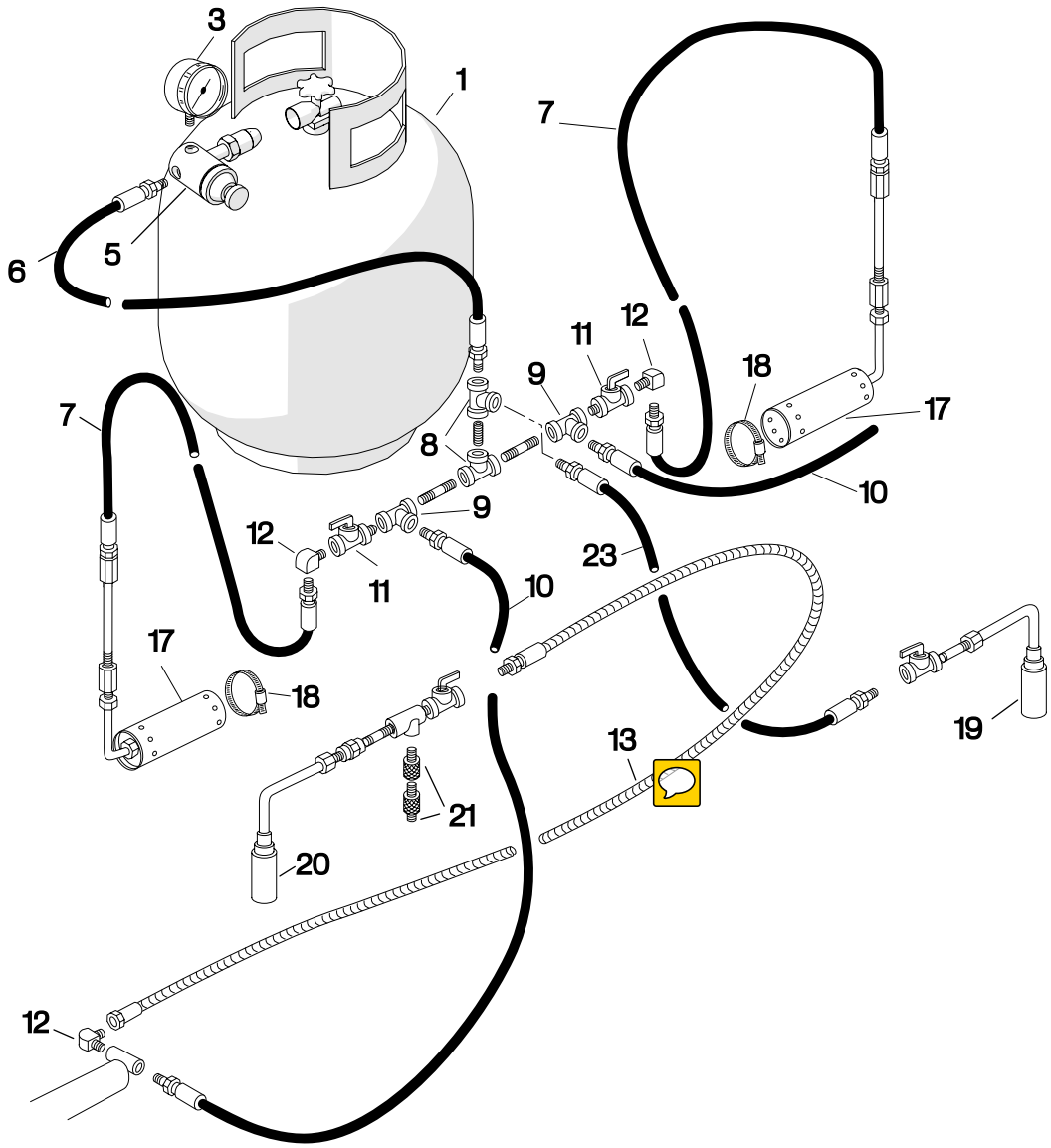


Figure 7-18.

Propane Heater Assembly and Automatic Ignitors Parts List

Item No	Part Number	Qty	Description	Remarks
1	230010	1	L.p.g. Tank, 20 Lbs	
3	230110	1	Gauge, L.p.g. Pressure	
5	982515	1	Regulator W/Gauge, L.p.g.	
6	230032	1	Hose, L.p.g. Regulator To Tee	
7	230034	2	Hose, Ignitor Burner	
9	230081	2	Tee, .250 Street	
10	230038	2	Hose, Screed Extension Burner	
11	1008544	5	Valve, Selector (Cutoff)	
12	230069	3	Adapter, Hose To Pipe (90 Deg)	
13	851225	2	Hose, Screed Extension Burner	
17	982504	2	Burner, Screed Extension	
18	230240	2	Hose Clamp, 2.125 (Size 28)	
19	1008652SRV	A/R	Burner Nozzle, Ignitor	
20	1008654SRV	2	Burner Nozzle, Screed Extension	
21	230084	2	Quick Disconnect Coupling	
23	230034	1	Hose, Ignitor Burner	
Ref	9981000S	1	Hose Kit,1000C 8',Screed	

PROPANE HEATER AND REAR CLUSTER

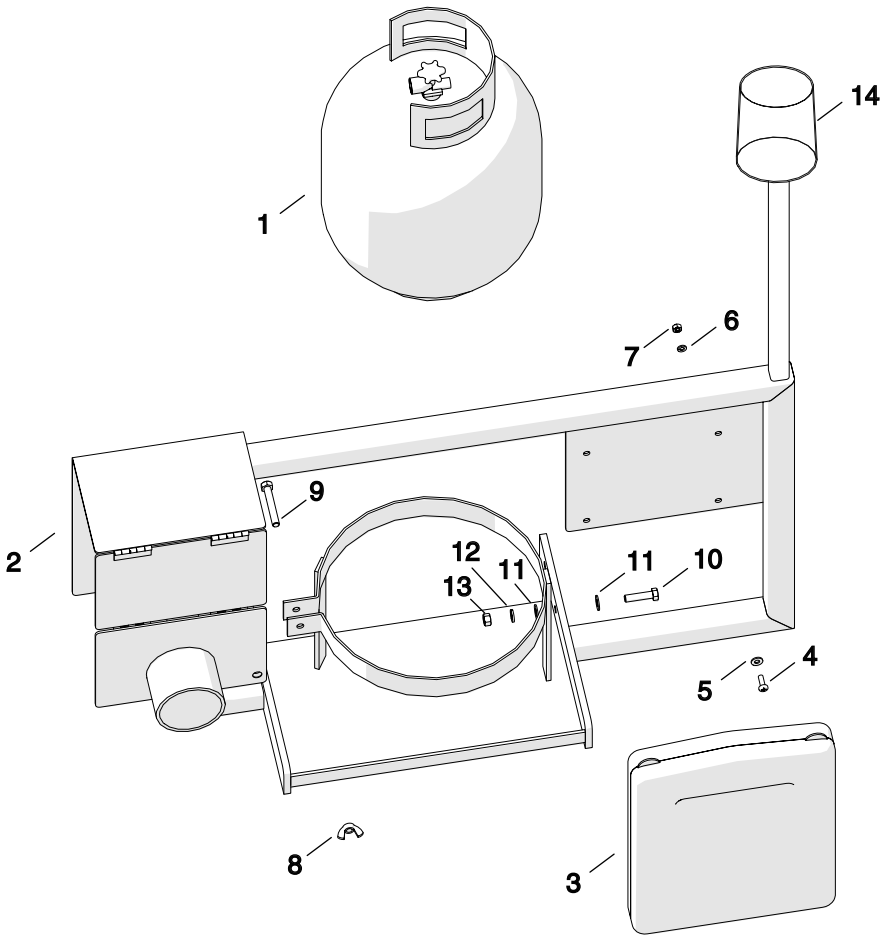


Figure 7-19.

Propane Heater and Rear Cluster Parts List

Item No	Part Number	Qty	Description	Remarks
1	230010	1	Tank,Lpg,20Lb	
2	1011801	1	Weldment, Rear Cluster Frame	
3	985234	1	Manual-Pak Case ,8.5X11x1.13	
4	122-4-20-12F	4	Phms, Cross, 1/4-20 X 0.5, Ft	
5	300-4	4	Washer, Flat, Sae, 1/4	
6	302-4	4	Washer, Lock, 1/4	
7	200-4-20-5	4	Nut, Hex, 1/4-20, Gr5	
8	31877	1	Nut,Wing,.375-16	
9	100-6-16-40-5	1	Cshh,3/8-16 X 2.5,Gr5	
10	100-6-16-24-5	4	Cshh,3/8-16 X 1.5,Gr5	
11	300-6	8	Washer, Flat, Sae, 3/8	
12	302-6	4	Washer, Lock, 3/8	
13	200-6-16-5	4	Nut,Hex,3/8-16,Gr5	
14	211748-02	1	Strobe Light, Amber	

BATTERY AND COVER PLATE

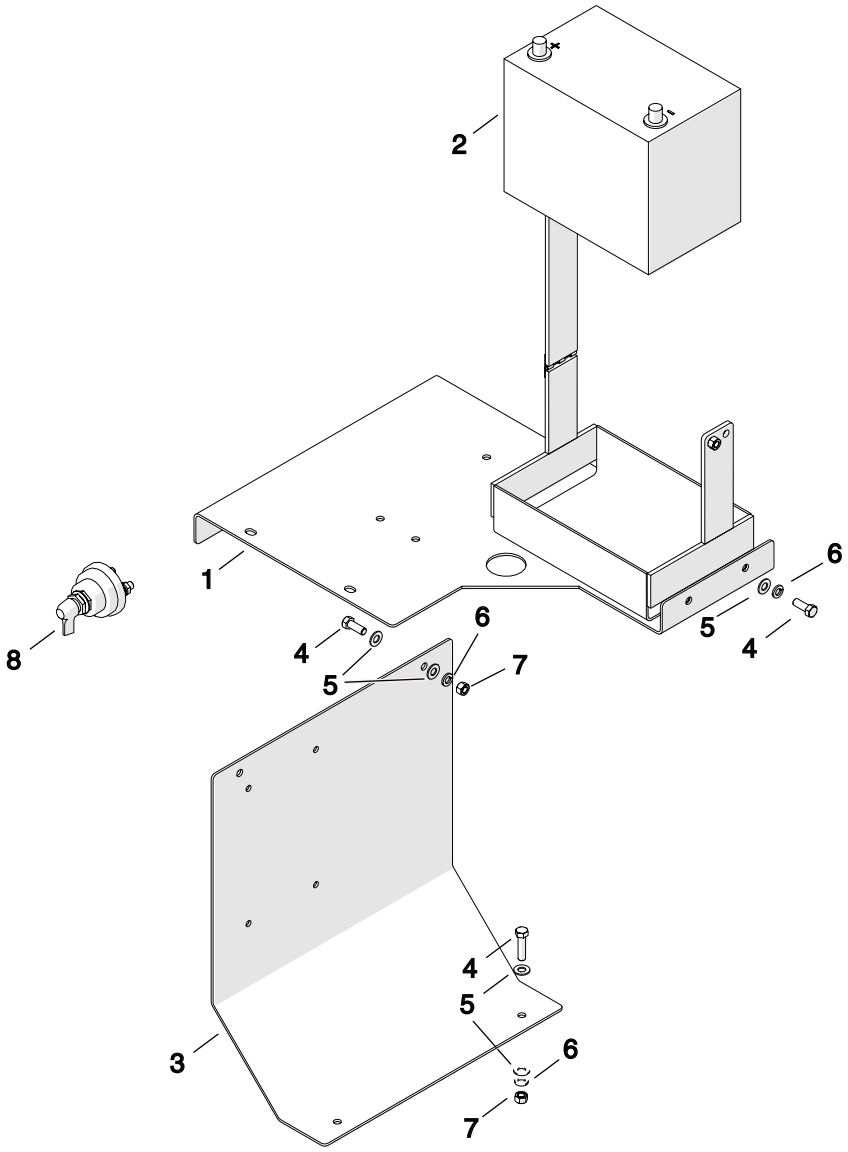


Figure 7-20.

Battery and Cover Plate Parts List

Item No	Part Number	Qty	Description	Remarks
1	1011856	1	Weldment, Battery Box & Cover Plate	
2	Ref	1	Battery, 12V, 825	(purchase in store)
3	1011861	1	Plate, Rear Cover	
4	100-6-16-16-5F	8	Cshh,3/8-16 X 1,Gr5,Ft	
5	300-6	12	Washer, Flat, Sae, 3/8	
6	302-6	8	Washer, Lock, 3/8	
7	200-6-16-5	4	Nut,Hex,3/8-16,Gr5	
8	1009253-34	1	Battery Disconnect Switch	

VIBRATOR ASSEMBLY (1012224)

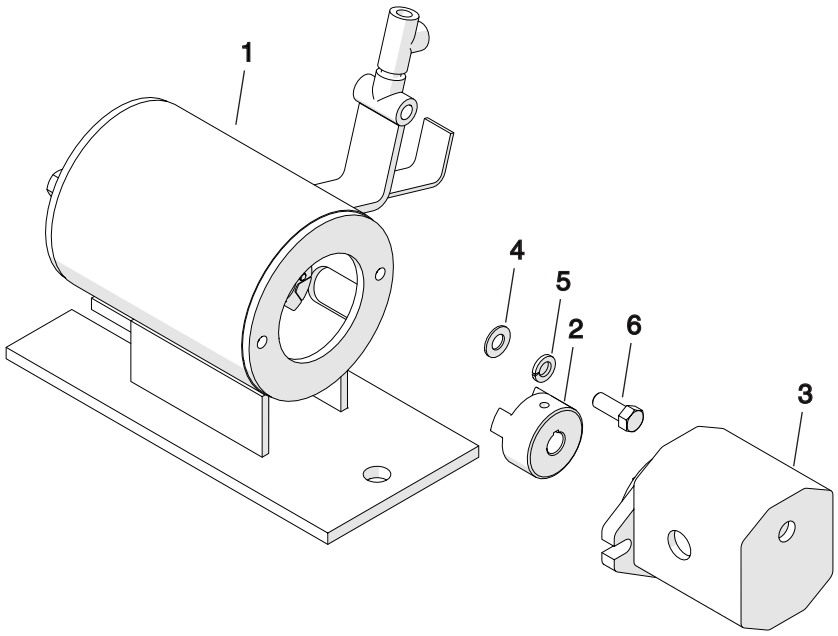


Figure 7-21.

Vibrator Assembly (1012224) Parts List

Item No	Part Number	Qty	Description	Remarks
1	1012066	1	Weldment, Screed Vibrator	
2	280030	1	Coupling Half W/0.625 Bore	
3	983405	1	Motor,Hyd,Gear,1.17 Cir,"A"	
4	300-7	2	Washer, Flat, Sae, 7/16	
5	302-7	2	Washer, Lock, 7/16	
6	100-7-14-18-5F	2	Cshh,7/16-14 X 1.125,Gr5,Ft	

ENGINE GROUP

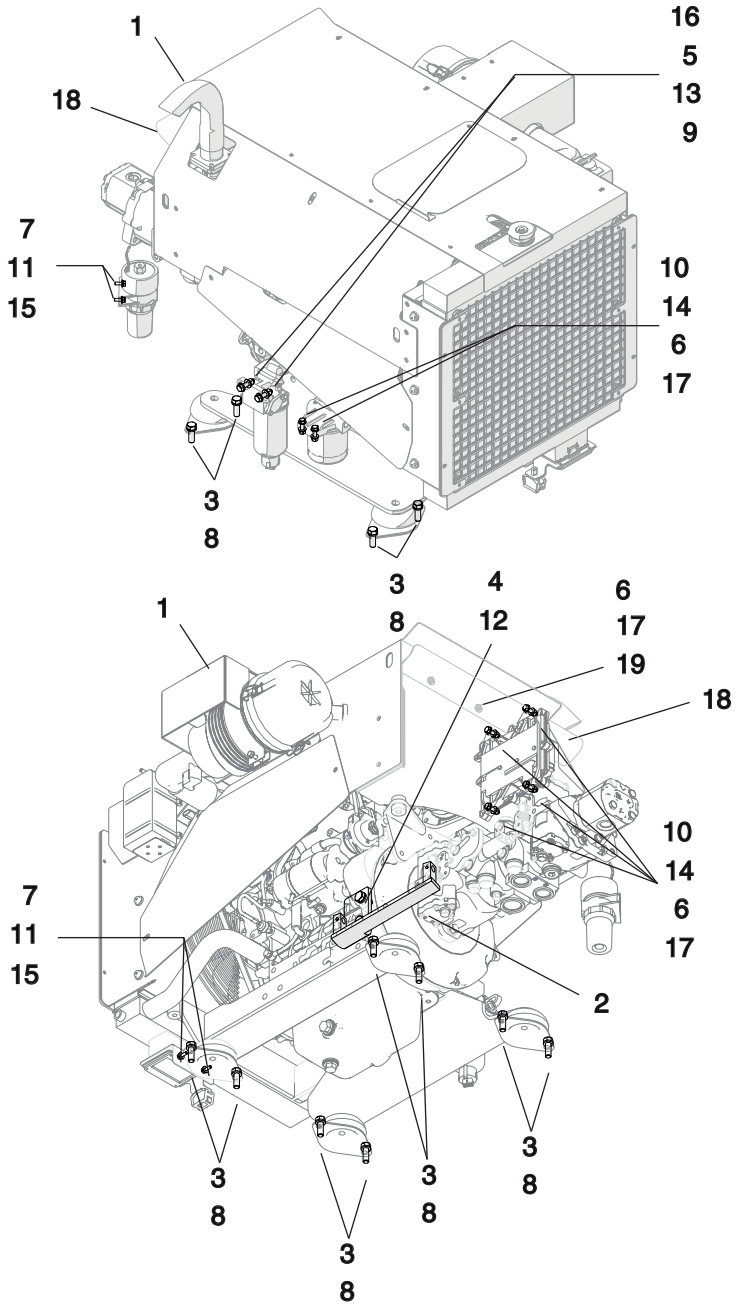


Figure 7-22.

Engine Group Parts List

Item No	Part Number	Qty	Description	Remarks
1	1011800	1	Assembly, Engine With Pumps, 1000G T4f	
2	1011926	1	Weldment, Pump Cable Bracket	
3	302-8	8	Washer, Lock, 1/2	
4	302-9	2	Washer, Lock, 9/16	
5	302-6	2	Washer, Lock, 3/8	
6	302-5	9	Washer, Lock, 5/16	
7	302-4	4	Washer, Lock, 1/4	
8	100-8-13-24-5	8	Cshh,1/2-13 X 1.5,Gr5	
9	100-6-16-24-5	2	Cshh,3/8-16 X 1.5,Gr5	
10	100-5-18-20-5	6	Cshh,5/16-18 X 1.25,Gr5	
11	100-4-20-12-5F	4	Cshh,1/4-20 X 0.75,Gr5,Ft	
12	100-M14-2-30-8.8F	2	Cshh,M14x2 X 30,C8.8,Ft	
13	300-6	4	Washer, Flat, Sae, 3/8	
14	300-5	12	Washer, Flat, Sae, 5/16	
15	300-4	4	Washer, Flat, Sae, 1/4	
16	200-6-16-5	2	Nut,Hex,3/8-16,Gr5	
17	200-5-18-5	9	Nut,Hex,5/16-18,Gr5	
18	1012995	1	Sheet, Deflector, Engine Shroud	
19	100-5-24-12-5F	3	Cshh, 5/16-24 X 0.75, Gr5, Ft	

ENGINE WITH PUMPS

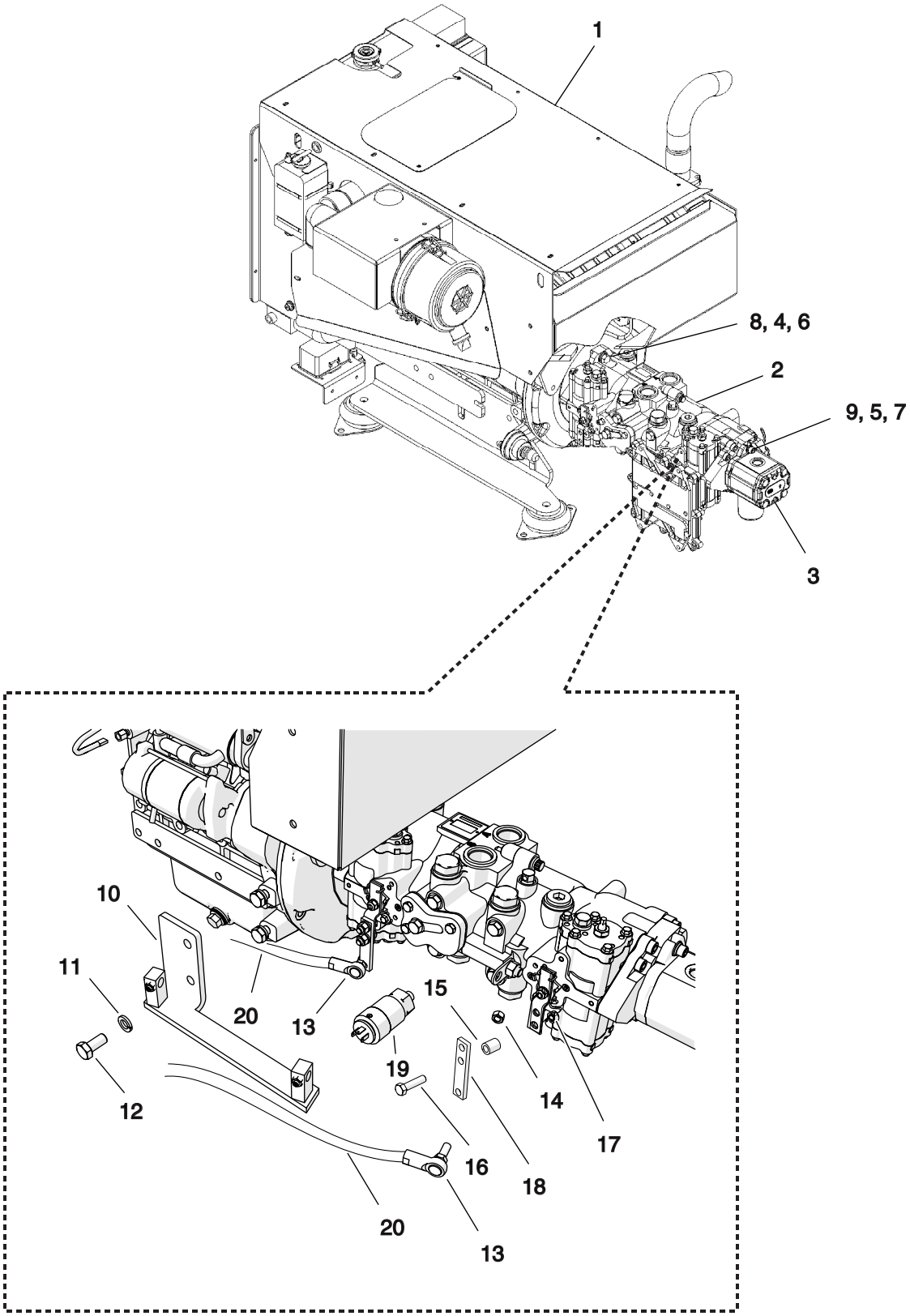


Figure 7-23.

Engine with Pumps Parts List

Item No	Part Number	Qty	Description	Remarks
1	1011799	1	Engine, Kubota T4f, 1000G	
2	1011945	1	Pump,M46, Tandem, Axial Piston With Charge Pump	
3	989258	1	Pump, Hydraulic, Gear, 17Cc, Sae A Flange Mount	
4	300-8	2	Washer, Flat, Sae, 1/2	
5	300-6	2	Washer, Flat, Sae, 3/8	
6	302-8	2	Washer, Lock, 1/2	
7	302-6	2	Washer, Lock, 3/8	
8	100-8-13-24-5	2	Cshh,1/2-13 X 1.5,Gr5	
9	102-6-16-20-F	2	Cssh,3/8-16X1.25,Ft	
10	1011926	1	Weldment, Pump Cable Bracket	
11	302-9	2	Washer, Lock, 9/16	
12	100-M14-2-30-8.8F	2	Cshh,M14x2 X 30,C8.8,Ft	
13	920090	2	Ball Joint,.250,Fm,W/.375 Stud	
14	200-6-24-5	2	Nut,Hex,3/8-24,Gr5	
15	1012935	4	Tube, Spacer, Control Arm	
16	100-6-16-24-5	4	Cshh,3/8-16 X 1.5,Gr5	
17	205-6-16-5	4	Nut, Lock, Nylon, 3/8-16, Gr5	
18	1011970	2	Bar, Extension, M46 Pump Lever	
19	851504	1	Switch,Press,Back-Up Alarm	
20	920124	2	Cable,Push/Pull,88”X3” Stroke	(Item 31 in Fig. 7-11)

AXIAL PISTON TANDEM PUMP (M46)

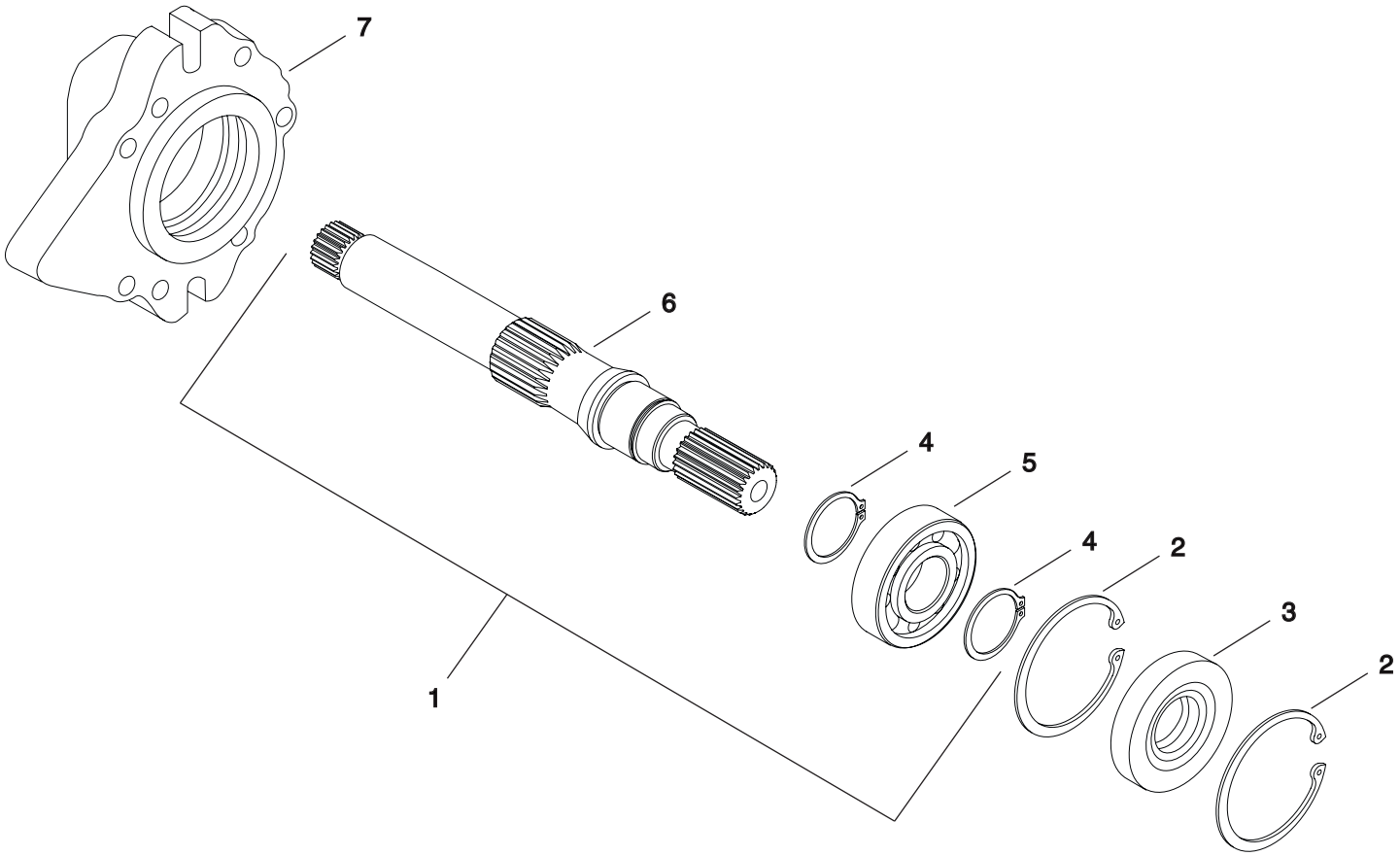


Figure 7-24.

Axial Piston Tandem Pump (M46) Parts List

Item No.	Part Number	Qty.	Description	Remarks
1	1011945-03	1	Assembly, Input Shaft	
2	59861872	2	Ring	
3	59941203	1	Seal	
4	59785519	2	Ring	
5	1011945-02	1	Bearing, Input Shaft, M46 Tandem	
6	1011945-01	1	Shaft, 15 Tooth, M46 Tandem	
7	1011945	1	Pump,M46, Tandem, Axial Piston With Charge Pump	

ENGINE ASSEMBLY (1011799)

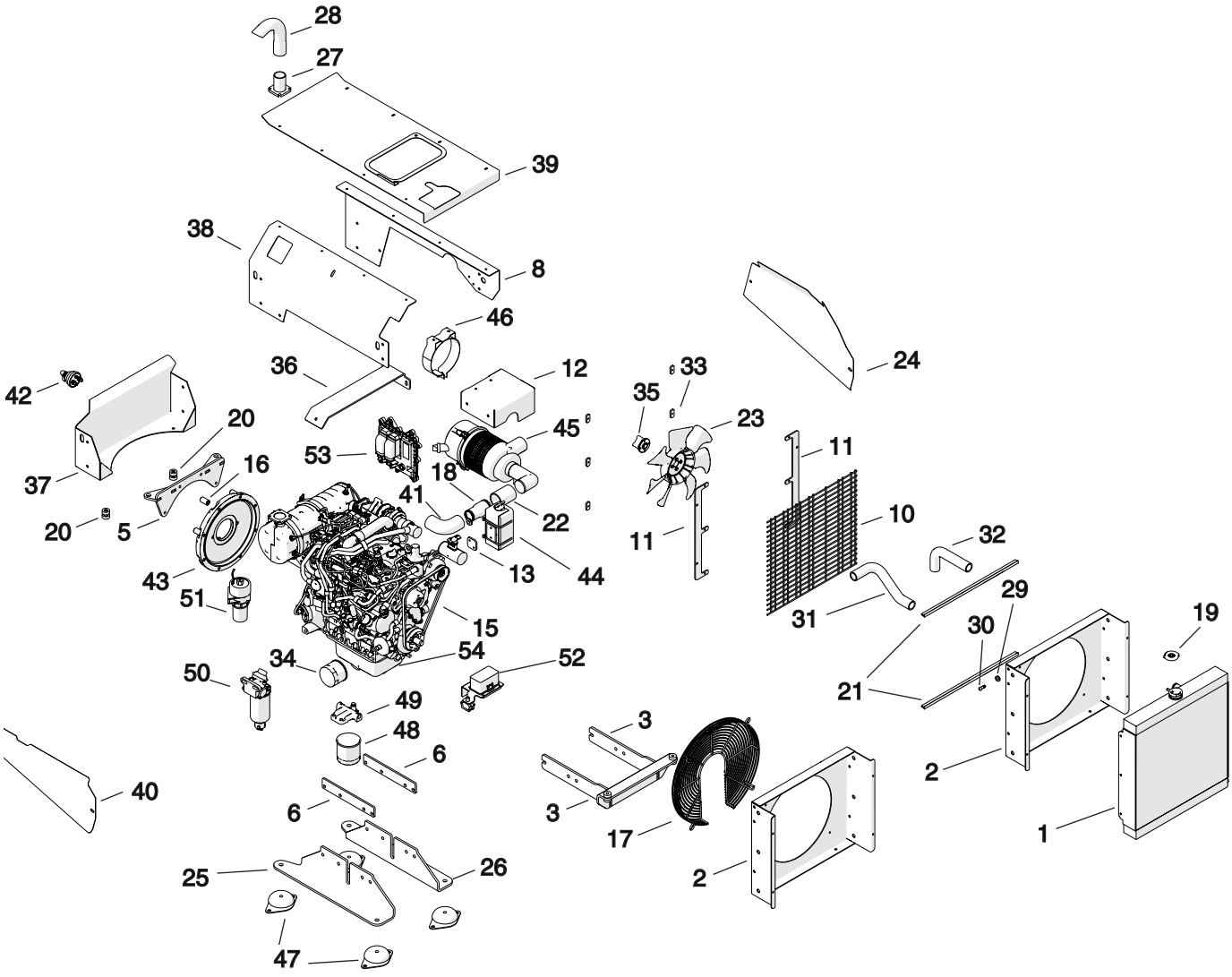


Figure 7-25.

Engine Assembly (1011799) Parts List

Item No	Part Number	Qty	Description	Remarks
1	1011799-01	1	Radiator, 1000G, Tier 4	
2	1011799-02	2	Radiator, Shroud, 1000G, Tier 4	
3	1011799-03	1	Radiator, Mount, 1000G, Tier 4	
Ref	TEC16	2	Isolator, Mount	
5	1011799-05	1	Engine, Shroud, Rear Mount, 1000G, Tier 4	
6	1011799-06	2	Engine, Mount, Spacer, 1000G, Tier 4	
8	1011799-08	1	Engine, Shroud Panel, Left, Upper, 1000G, Tier 4	
10	1011799-10	1	Radiator, Guard, 1000G, Tier 4	
11	1011799-11	2	Radiator, Guard Mount, 1000G, Tier 4	
12	1011799-12	1	Engine, Air Intake Box, 1000G, Tier 4	
13	1011799-13	1	Spacer, Recovery Tank, Kubota, Tier 4	
15	1011799-15	1	Engine, , 1000G, Tier 4	
16	1011799-16	4	Spacer, Rear Shroud Mount, 1000G, Tier 4	
17	1011799-17	1	Radiator, Inside Fan Guard, 1000G, Tier 4	
18	1011799-20	1	Filter, Air, Connector, Reducer	
19	1011799-22	1	Cap, Radiator, Kubota, Tier 4	
20	1011799-23	2	Engine, Isolator, Small	
21	1011799-30	4	Radiator, Shroud, Trim Seal, 1000G, Tier 4	
22	1011799-32	1	Filter, Air, Connector	
23	1011799-33	1	Engine, Fan, Kubota, Tier 4	
24	1011799-34	1	Engine, Shroud Panel, Left, Lower	
25	1011799-35	1	Engine, Mount, Right, 1000G, Tier 4	
26	1011799-36	1	Engine, Mount, Left, 1000G, Tier 4	
27	1011799-37	1	Engine, Exhaust, Adapter, 1000G, Tier 4	
28	1011799-38	1	Engine, Exhaust, Tailpipe, 1000G, Tier 4	
29	1011799-39	6	Radiator, Isolator	
30	1011799-40	6	Cssh, 3/8-16 X 5/8 Shoulder	
31	1011799-43	1	Hose, Radiator, Upper, 1000G, Tier 4	
32	1011799-44	1	Hose, Radiator, Lower, 1000G, Tier 4	
33	1011799-47	6	Radiator, Guard Nut Plate, 1000G, Tier 4	
34	1011799-53	1	Engine, Oil Filter, Kubota, Tier 4	
35	1011799-60	1	Engine, Fan Spacer, Kubota, Tier 4	
36	1011799-61	1	Engine, Shroud Brace, 1000G, Tier 4	
37	1011799-62	1	Engine, Shroud Panel, Rear, 1000G, Tier 4	
38	1011799-63	1	Engine, Shroud Panel, Right,Upper, 1000G, Tier 4	
39	1011799-64	1	Engine, Shroud Panel, Top, 1000G, Tier 4	
40	1011799-65	1	Engine, Shroud Panel, Right, Lower, 1000G, Tier 4	
41	1011799-66	1	Filter, Air, Connector, 90°	

ENGINE ASSEMBLY (1011799) - CONT.

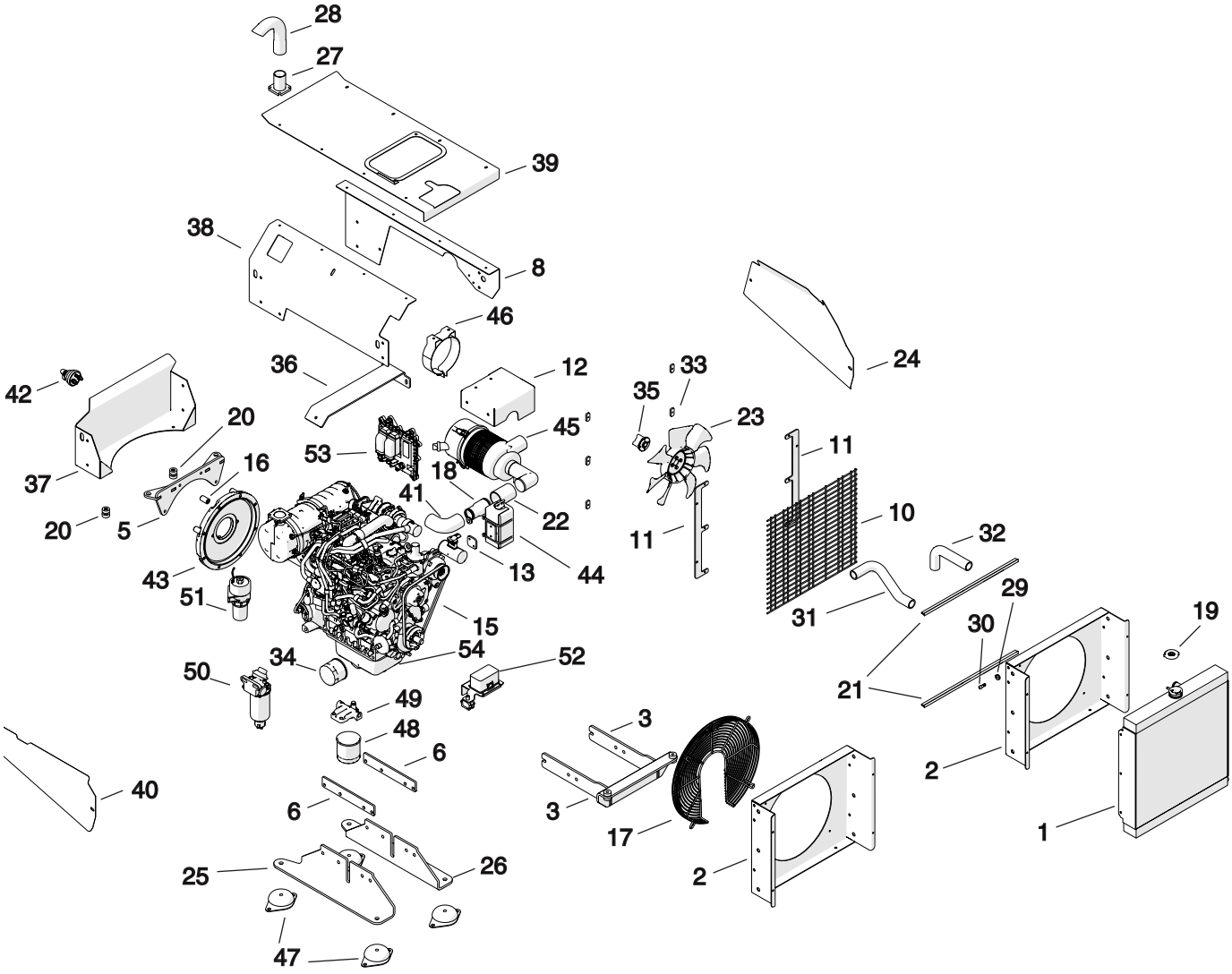


Figure 7-25.

Engine Assembly Parts List (Cont.)

Item No	Part Number	Qty	Description	Remarks
42	1009253-34	1	Battery Disconnect Switch	
43	1011799-27	1	Drive Plate, Pump Adapter	
44	1011799-18	1	Radiator, Recover Tank Kit, 1000G	
45	1011049-18	1	Filter, Air, Case	
Ref	38385-01	1	Filter, Air, Primary, Kub	
Ref	38385-02	1	Filter, Air, Secondary, Kub	
46	1011049-19	1	Filter, Air, Case, Band	
47	986537-14	4	Isolator	
Ref	1011799-69	1	Filter, Fuel, 80 Micron	
48	1011799-70	1	Filter, Fuel	
49	1011799-71	1	Filter, Fuel, Housing	
50	1011799-72	1	Filter, Fuel/Water Searator, Kubota, Tier 4	
51	1011799-28	1	Pump, Fuel, Kubota, Tier 4	
52	1011799-67	1	Engine, Fuse Block, Tier 4	
53	1011799-68	1	Ecu, V24t4, Kubota, Tier 4	
54	1011799-04	1	Engine, Oil Pan, 1000G, Tier 4	

SCREED ASSEMBLY

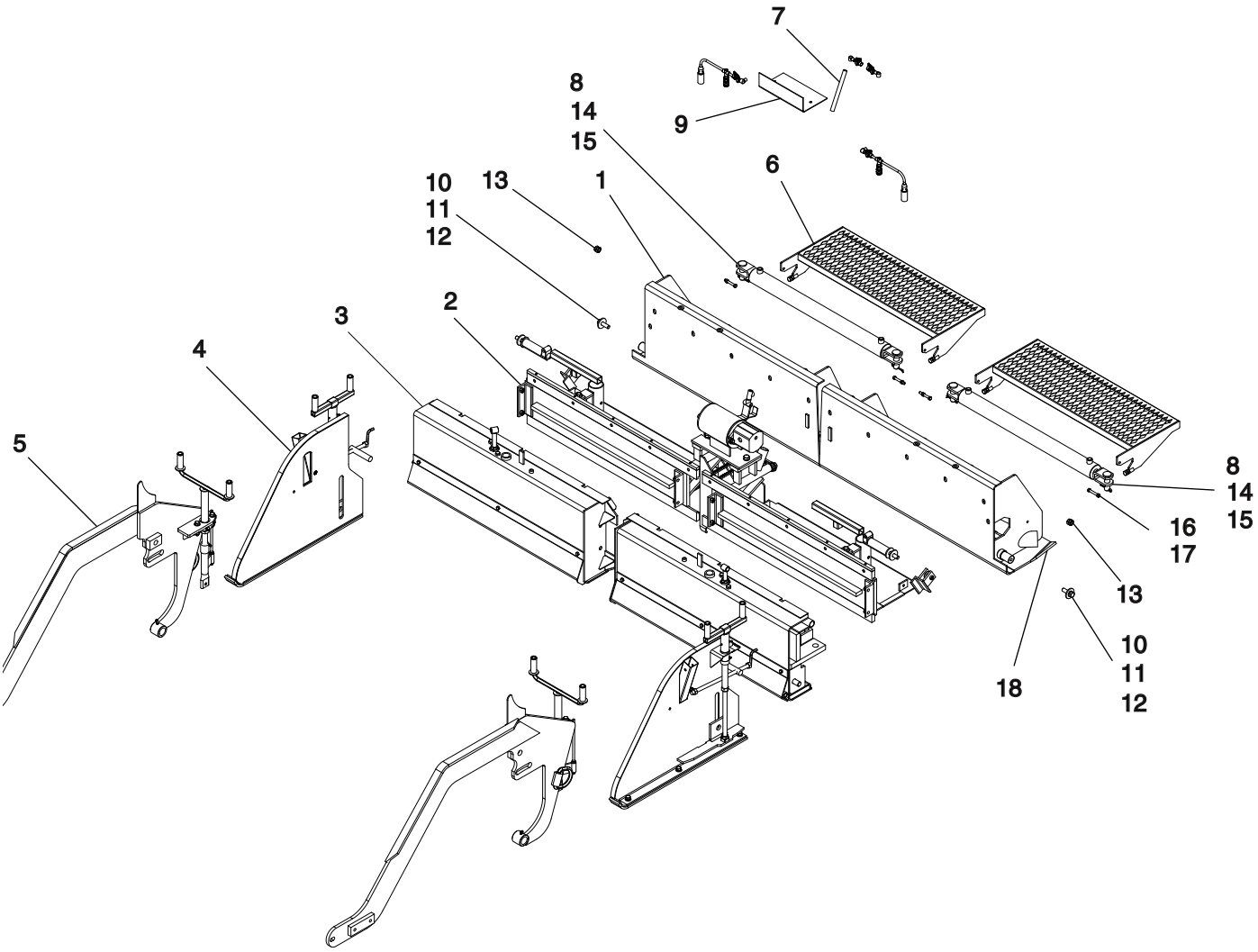


Figure 7-26.

Screed Assembly Parts List

Item No	Part Number	Qty	Description	Remarks
1	1005391	1	Group,Screed Frame	
2	1008370	1	Group, Screed Base	
3	989191	1	Group, Screed Inserts	
4	988742	1	Group,Jointer,8500	
5	989237	1	Group, Screed Arms, 1000	
6	1011907	1	Group, Walkboard, 1000/7000	
7	985061	1	Group,Detail,Screed,1000	
8	870140	2	Cyl,Hyd,2.50X30.00x1.25 Rod	
9	1012069	1	Plate, Toolbox Mount	(Welded)
10	302-10	2	Washer, Lock, 5/8	
11	100-10-11-32-8	2	Cshh,5/8-11 X 2,Gr8	
12	855507	2	Pivot Guide Spacer	
13	202-10-11-5	4	Nut,Hex,Jam,5/8-11,Gr5	
14	240030	4	Pin,Clevis,1.00X3.25 W/1.5Hd	
15	80338	4	Cotter Pin,.188X2.00	
16	100-6-16-40-5	4	Cshh,3/8-16 X 2.5,Gr5	
17	200-6-16-5	4	Nut,Hex,3/8-16,Gr5	
18	1006289	1	Weldment,1000/7000 Wear Plate	

BASE (SCREED) ASSEMBLY

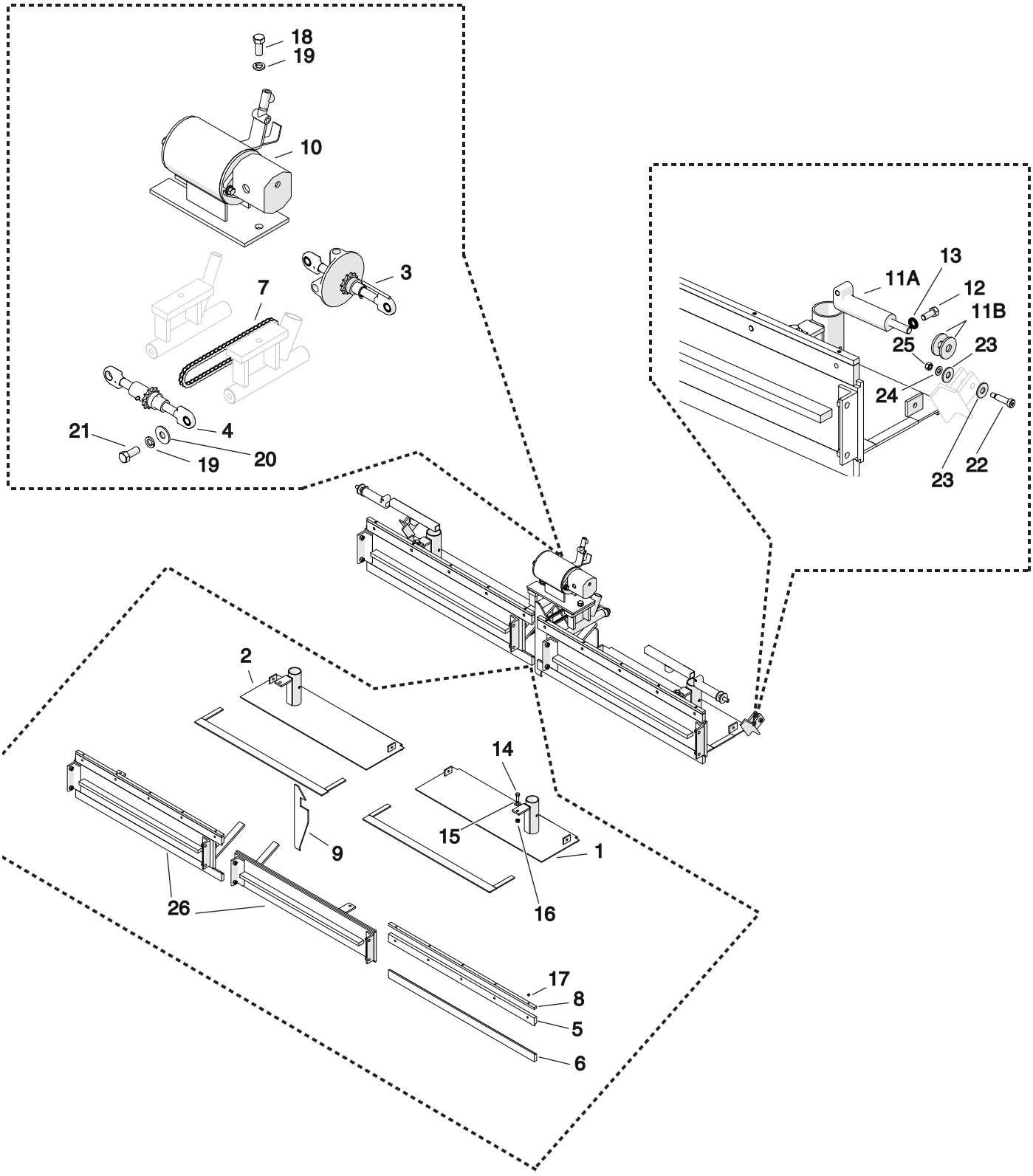


Figure 7-27.

Base (Screed) Assembly Parts List

Item No	Part Number	Qty	Description	Remarks
1	1009192	1	Weldment, Burner Box Lid, Lh	
2	1009193	1	Weldment, Burner Box Lid, Rh	
3	870182	1	Crown & Valley Assy, Rear	
4	870172	1	Crown & Valley Adjustment Assy, Front	
5	855784	2	Extension Slide Rails Top	
6	855783	2	Extension Slide Rail Bottom	
7	870190	1	Chain,Roller,40X52 Pitch | Crown & Valley	
8	988556	2	Bar,Screed Slide Jack Screw	
9	853394	1	Front Screed Sheild	
10	1012224	1	Assembly, Screed Vibrator	
11A	987379	2	Guide,Assembly,End Gate Mount	
11B	855507	4	Pivot Guide Spacer	
12	100-8-13-20-5F	10	Cshh,1/2-13 X 1.25,Gr5,Ft	
13	986810	10	Nord Washer	
14	100-8-13-24-5	2	Cshh,1/2-13 X 1.5,Gr5	
15	300-10	2	Washer, Flat, Sae, 5/8	
16	200-8-13-5	2	Nut,Hex,1/2-13,Gr5	
17	113-6-16-6	10	Set S,Hskt,Cup,3/8-16X0.375	
18	100-10-11-28-5	2	Cshh,5/8-11 X 1.75,Gr5	
19	302-10	6	Washer, Lock, 5/8	
20	301-10	4	Washer, Flat, Uss, 5/8	
21	100-10-11-24-5F	4	Cshh,5/8-11 X 1.5,Gr5,Ft	
22	118-8-24-3/8x16	2	Shldr Bolt, Ø1/2 X 1.5L, 3/8X16	
23	301-8	4	Washer, Flat, Uss, 1/2	
24	300-6	2	Washer, Flat, Sae, 3/8	
25	200-6-16-5	2	Nut,Hex,3/8-16,Gr5	
26	851552SRV	1	Assy, Bb/Dd Screed Slide Ext.	
Ref	851195SRV	1	Handle, Crown And Valley	
Ref	1012071	1	Hose Kit, Screed, 1000G	

SCREED INSERTS

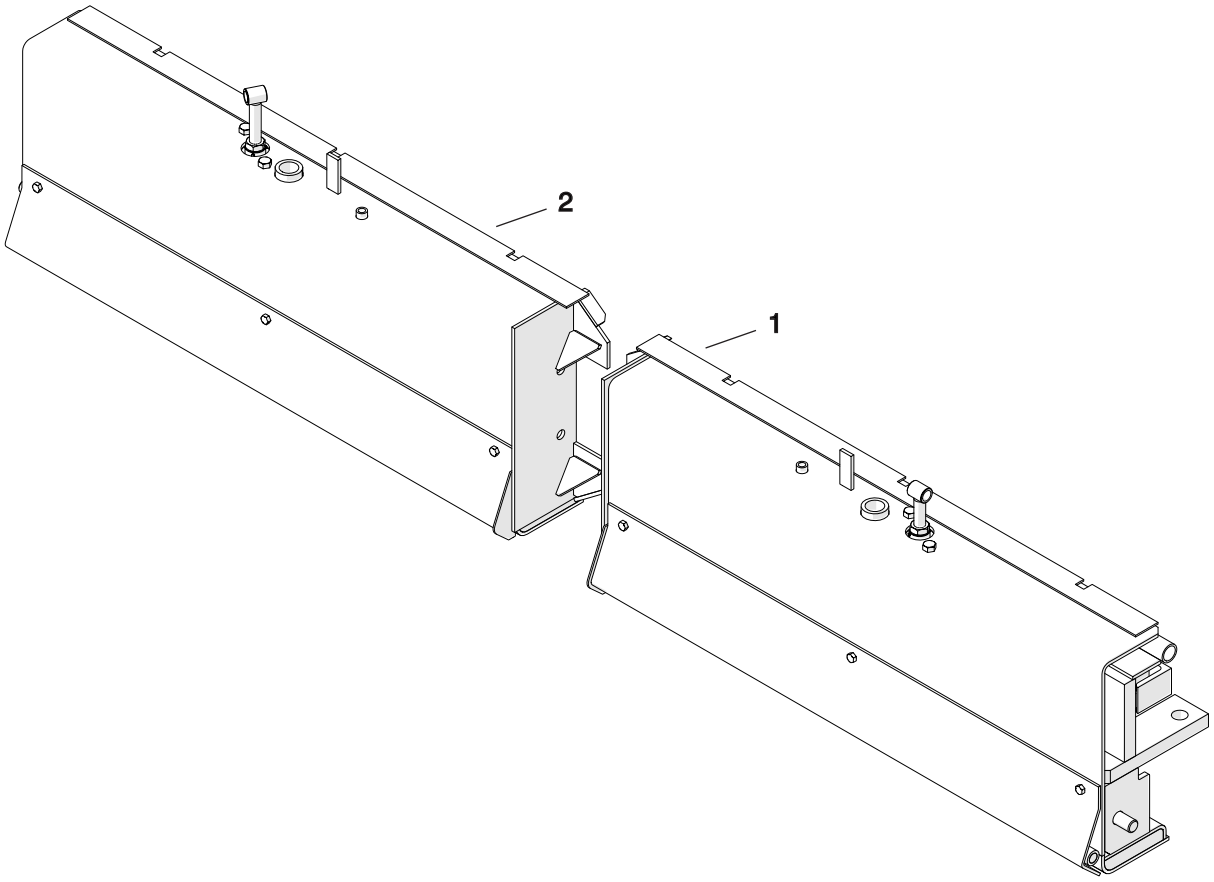


Figure 7-28.

Screed Inserts Parts List

Item No	Part Number	Qty	Description	Remarks
1	851600SRV	1	Assembly, Lh Extension	
2	851601SRV	1	Assembly, Rh Extension	

LH EXTENSION ASSEMBLY

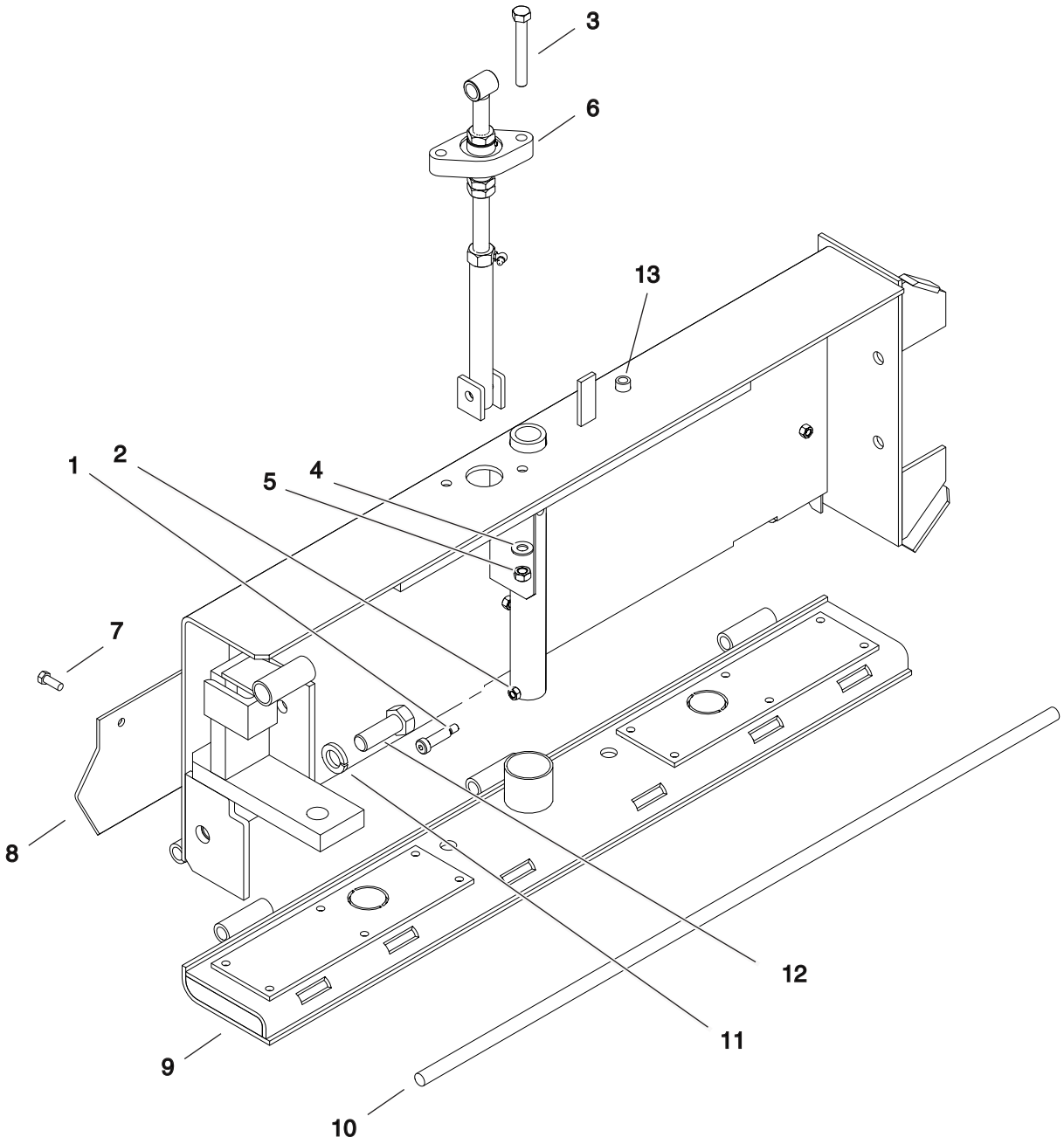


Figure 7-29.

LH Extension Assembly Parts List

Item No	Part Number	Qty	Description	Remarks
1	118-8-24-3/8x16	1	Shldr Bolt, Ø1/2 X 1.5L, 3/8X16	
2	204-6-16-5	1	Nut,Lock,Stover,3/8-16,Gr5	
3	100-8-13-60-5	2	Cshh,1/2-13 X 3.75,Gr5	
4	300-8	2	Washer, Flat, Sae, 1/2	
5	204-8-13-5	2	Nut,Lock,Stover,1/2-13,Gr5	
6	854446	1	Screw Assy,Screed Extension	Welds to 9
7	80221	3	Cshh,.375-16X1.00,Gr5	
Ref	200-6-16-5	3	Nut,Hex,3/8-16,Gr5	Not shown
8	855433	1	Shield, 8500 Screed Extension	
9	851602SRV	1	Wear Plate,Screed Ext, Bb,	
10	854447SRV	1	Rnd,.688X43.50 Crs	
11	302-15	1	Washer, Lock, 15/16	
12	100-14-9-40-5	1	Cshh,7/8-9 X 2.5,Gr5	
Ref	854575	1	Gusset, Cover, Extension Hinge	Not shown
13	870030	1	Bearing,Screed Flight Screw	

RH EXTENSION ASSEMBLY

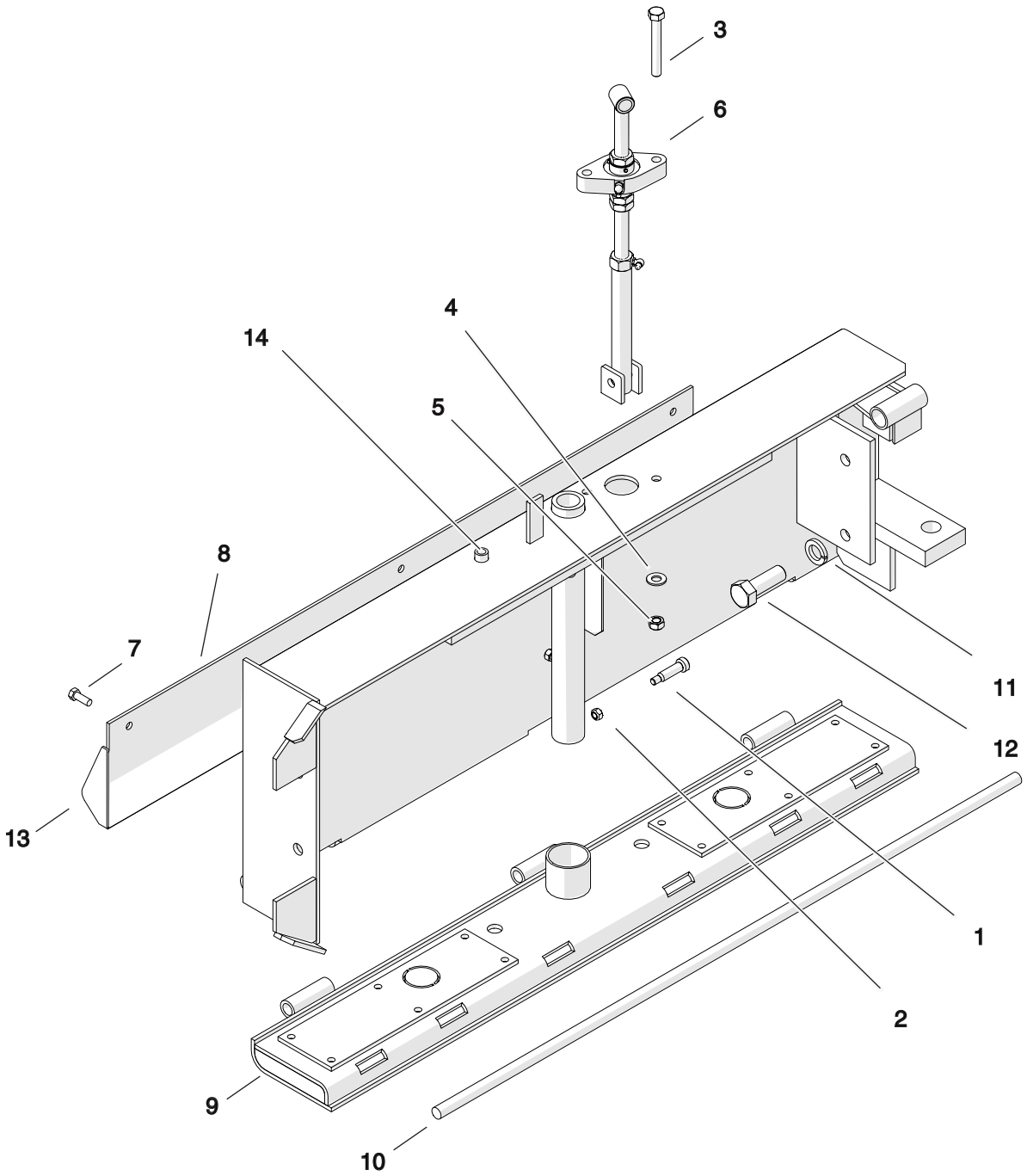


Figure 7-30.

RH Extension Assembly Parts List

Item No	Part Number	Qty	Description	Remarks
1	118-8-24-3/8x16	1	Shldr Bolt, Ø1/2 X 1.5L, 3/8X16	
2	204-6-16-5	1	Nut,Lock,Stover,3/8-16,Gr5	
3	100-8-13-60-5	2	Cshh,1/2-13 X 3.75,Gr5	
4	300-8	2	Washer, Flat, Sae, 1/2	
5	204-8-13-5	2	Nut,Lock,Stover,1/2-13,Gr5	
6	854446	1	Screw Assy,Screed Extension	Welds to 9
7	80221	3	Cshh,.375-16X1.00,Gr5	
Ref	200-6-16-5	3	Nut,Hex,3/8-16,Gr5	Not shown
8	855433	1	Shield, 8500 Screed Extension	
9	851602SRV	1	Wear Plate,Screed Ext, Bb,	
10	854447SRV	1	Rnd,.688X43.50 Crs	
11	302-15	1	Washer, Lock, 15/16	
12	100-14-9-40-5	1	Cshh,7/8-9 X 2.5,Gr5	
13	854575	1	Gusset, Cover, Extension Hinge	
14	870030	1	Bearing,Screed Flight Screw	

SCREED JOINTERS

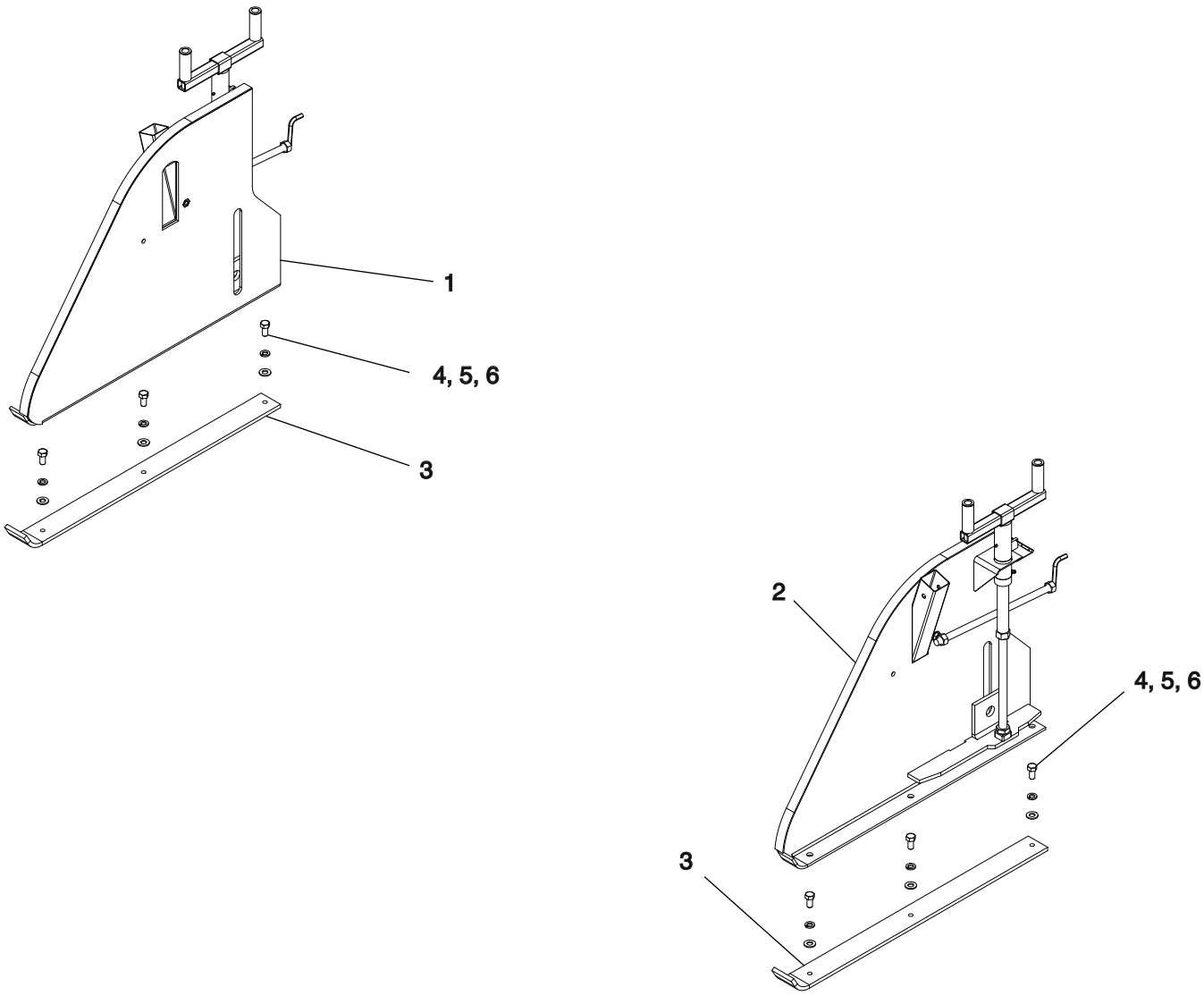


Figure 7-31.

Screed Jointers Parts List

Item No	Part Number	Qty	Description	Remarks
1	851683	1	Assembly, Rh End Gate	
2	851682	1	Assembly, Lh End Gate Sonic	
3	982963	2	Bar, End Gate Skid	
4	100-8-13-16-5F	6	Cshh,1/2-13 X 1,Gr5,Ft	
5	302-8	6	Washer, Lock, 1/2	
6	300-8	6	Washer, Flat, Sae, 1/2	

RH END GATE ASSEMBLY (851683)

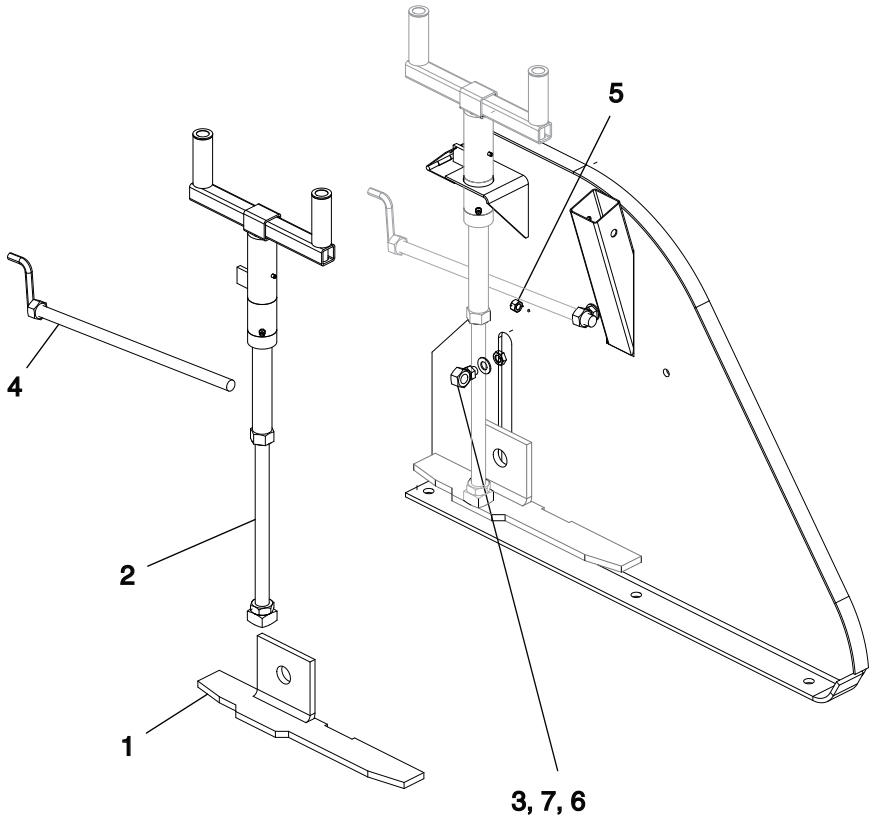


Figure 7-32.

RH End Gate Assembly Parts List

Item No	Part Number	Qty	Description	Remarks
1	855262R	1	Brkt, Rh Depth Screw Bottom Mount	
2	890092	1	Assembly, Depth Screw End Gate	
3	890070	1	Assy., Adjusting Swivel Nut	
4	890081	1	Assy., Handle Adjustement	
5	200-6-16-8	1	Nut,Hex,3/8-16,Gr8	
6	200-7-14-5	1	Nut,Hex,7/16-14,Gr5	
7	300-7	1	Washer, Flat, Sae, 7/16	
Ref	987396	1	Nut,Nylon Lock,7/8-9 Unc-2B	
Ref	920070	1	Thumb Screw,.375-16X1.00	

LH END GATE ASSEMBLY (851682)

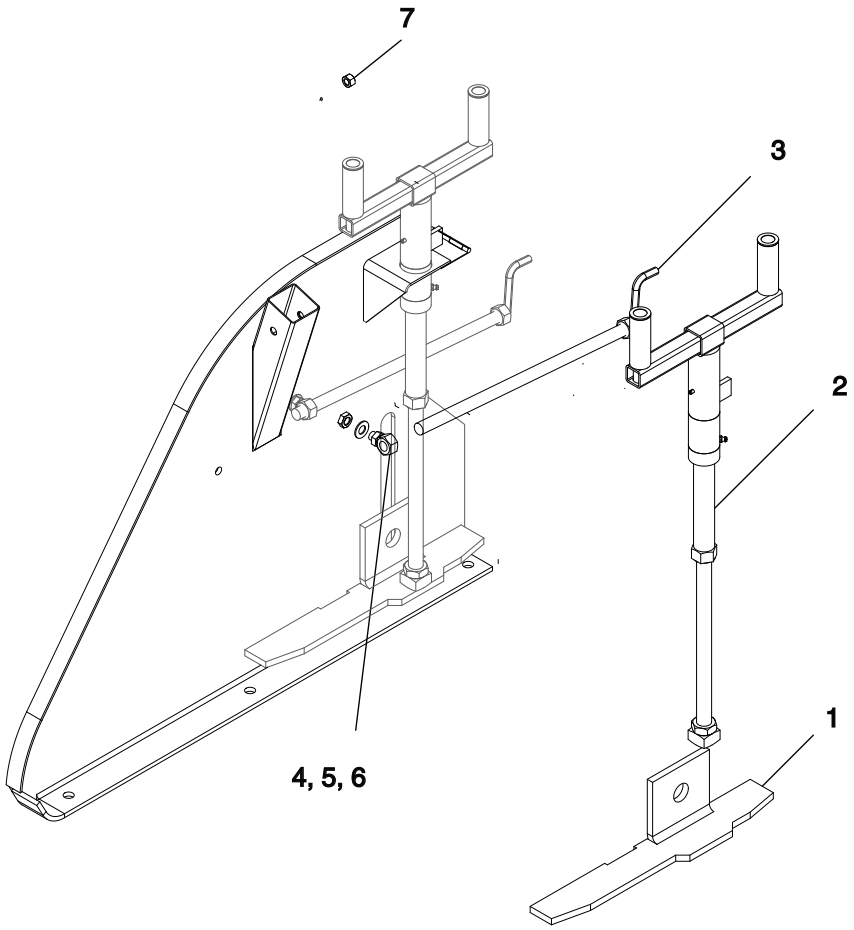


Figure 7-33.

LH End Gate Assembly Parts List

Item No	Part Number	Qty	Description	Remarks
1	855262L	1	Brkt, Lh Depth Screw Bottom Mount	
2	890092	1	Assembly, Depth Screw End Gate	
3	890081	1	Assy., Handle Adjustement	
4	890070	1	Assy., Adjusting Swivel Nut	
5	300-7	1	Washer, Flat, Sae, 7/16	
6	200-7-14-5	1	Nut,Hex,7/16-14,Gr5	
7	200-6-16-8	1	Nut,Hex,3/8-16,Gr8	
Ref	987396	1	Screed End Gate Mount Nut	
Ref	920070	1	Thumb Screw,.375-16X1.00	

SCREED ARMS WITH DEPTH SCREW END GATE

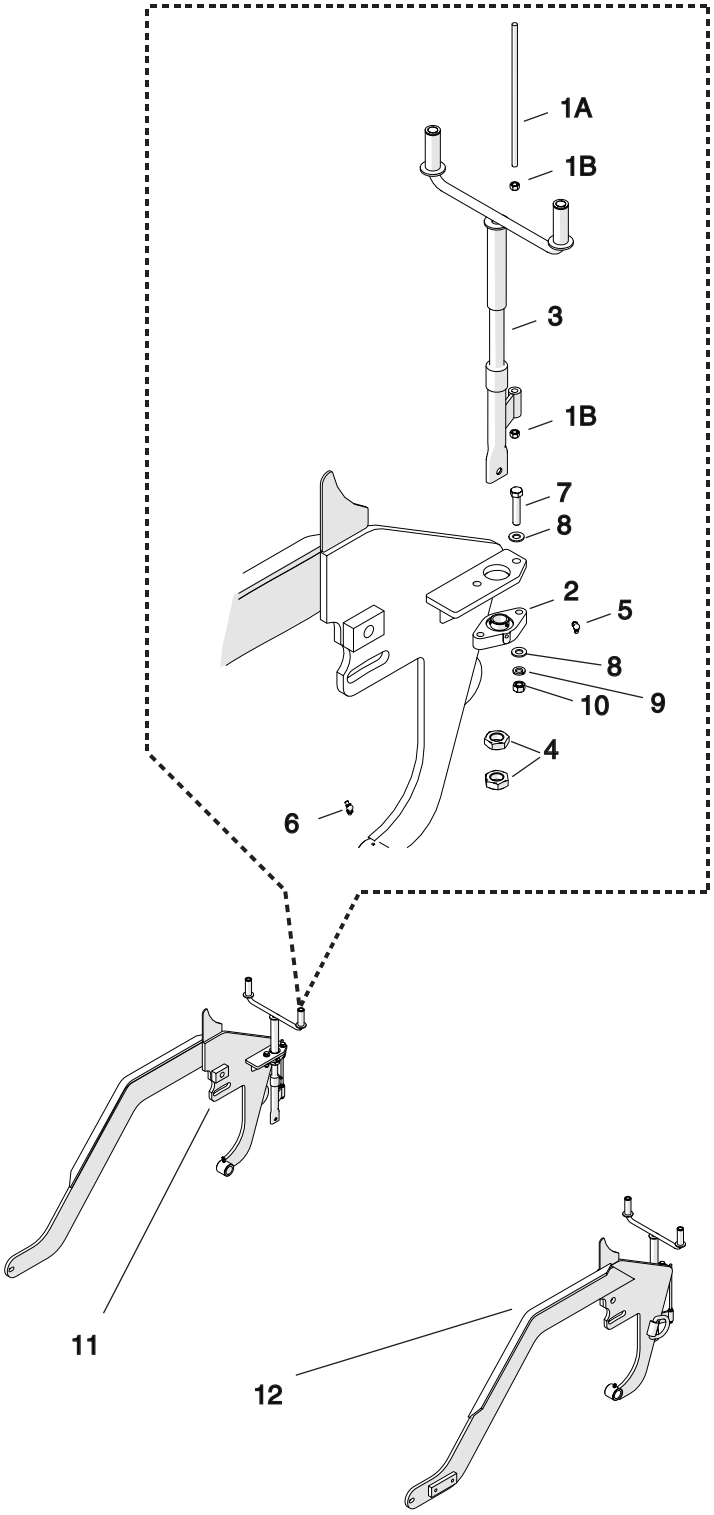


Figure 7-34.

Screed Arms with Depth Screw End Gate Parts List

Item No	Part Number	Qty	Description	Remarks
1A	851372SRV	2	Rod,Flight Screw Level Gauge	
1B	200-6-24-8	4	Nut, Hex, 3/8-24, Gr8	
2	870030	2	Bearing Mount	
3	870042ASRV	2	Assembly, Flight Screw	
4	80081	4	Nut,Hex,Jam,1-8 Unc	
5	140620	2	Fitting, Grease, 90 1/4-28	
6	140615	2	Fitting, Grease, 45 1/4-28	
7	100-8-13-40-5	4	Cshh,1/2-13 X 2.5,Gr5	
8	300-8	8	Washer, Flat, Sae, 1/2	
9	302-8	4	Washer, Lock, 1/2	
10	200-8-13-5	4	Nut,Hex,1/2-13,Gr5	
11	986979	1	Assembly, Lh Extension	
12	986980	1	Assembly, Rh Extension	

SCREED WALKBOARD

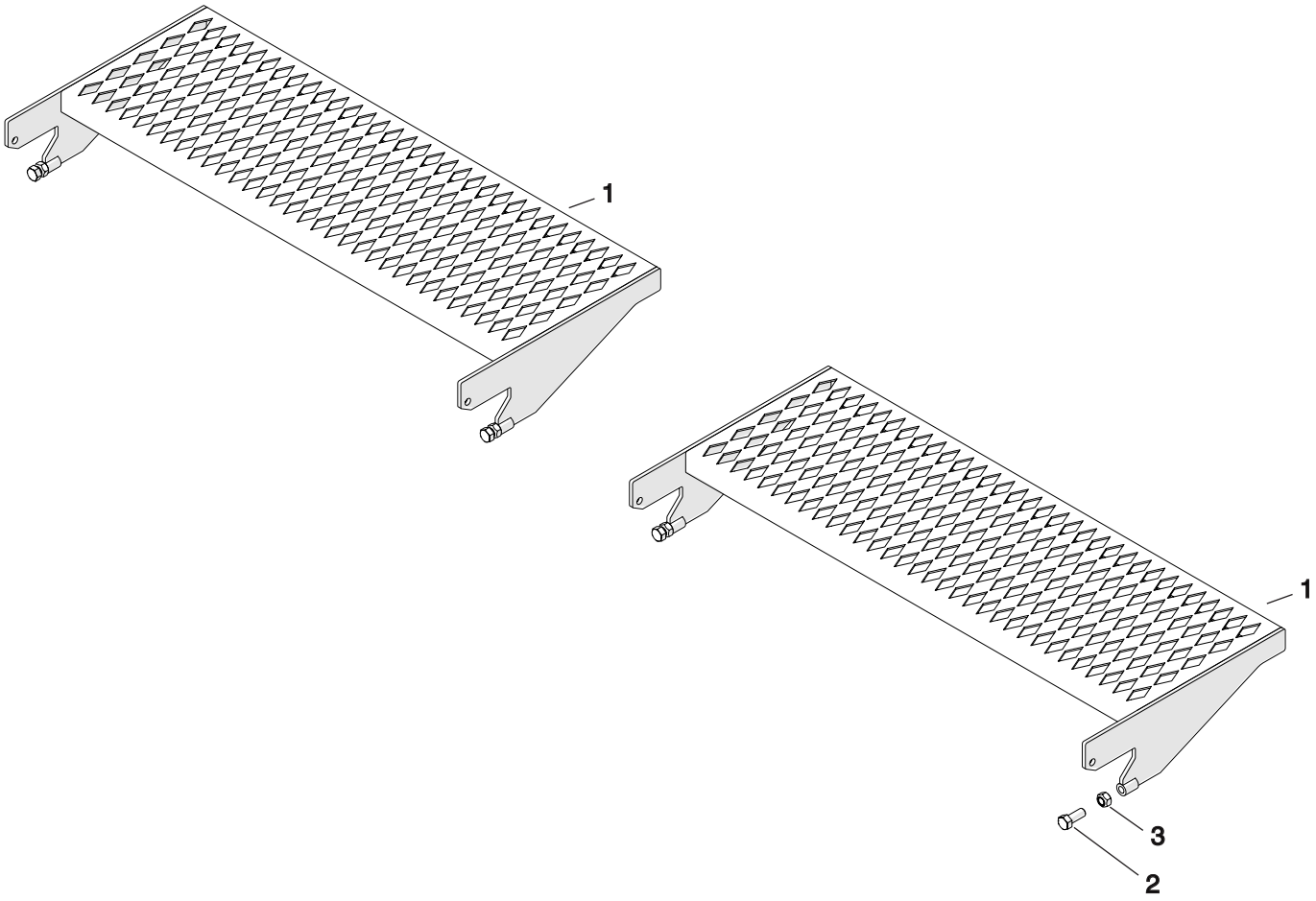


Figure 7-35.

Screed Walkboard Parts List

Item No	Part Number	Qty	Description	Remarks
1	1011904	2	Weldment, Walkboard, 1000G	
2	100-8-13-20-5F	4	Cshh,1/2-13 X 1.25,Gr5,Ft	
3	204-8-13-5	4	Nut,Lock,Stover,1/2-13,Gr5	

CONTROL BOX ASSEMBLY

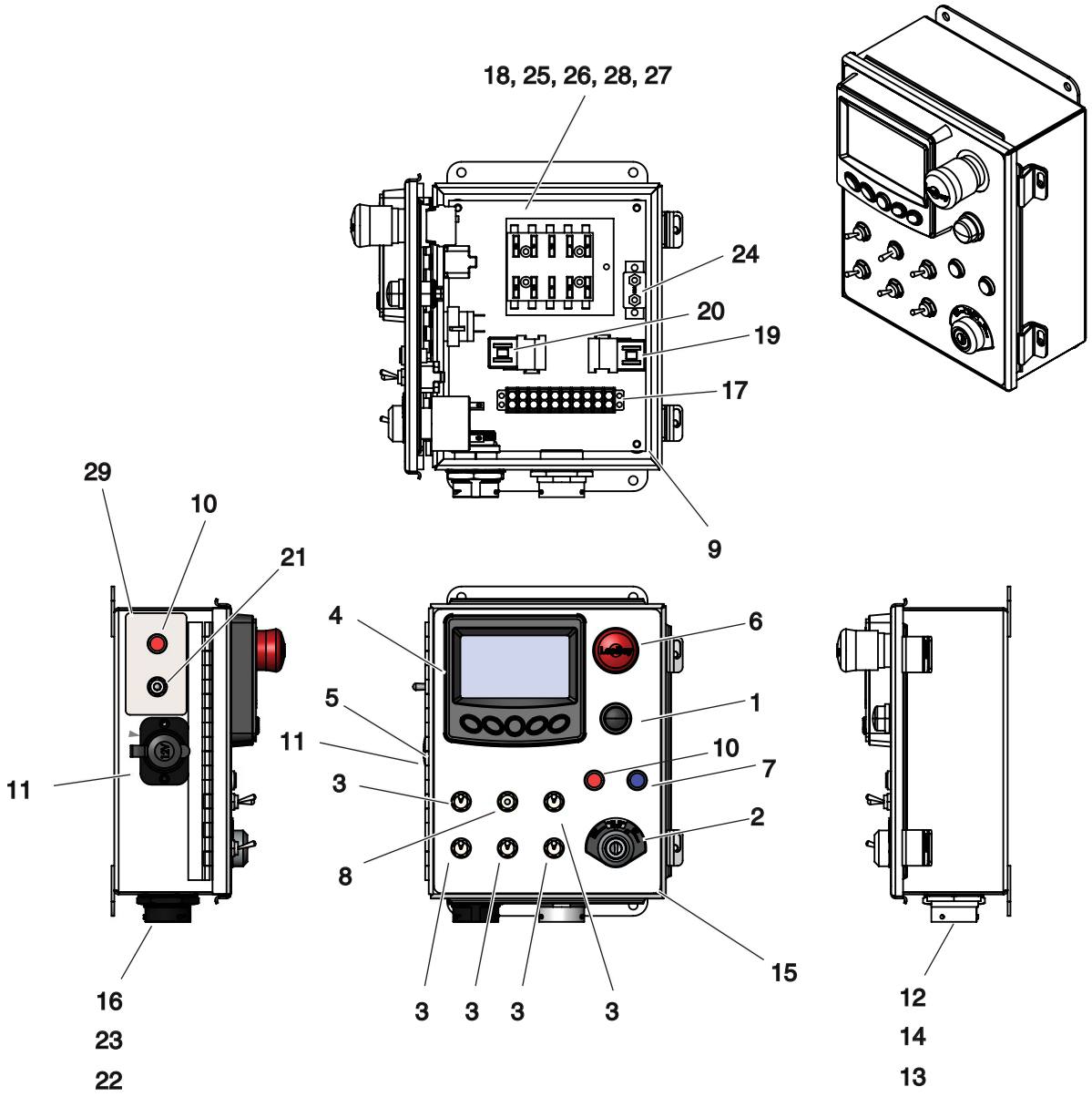


Figure 7-36.

Control Box Assembly Parts List

Item No	Part Number	Qty	Description	Remarks
1	982249	1	Switch,Push Button	
2	39146-14	1	Switch,Ign,W/Heat St	
3	851391	5	Switch,Toggle,Spst,2-Pos	
4	1011915	1	Display, Pv480, Kubota 1000G T4f	
5	100804	1	Hoffman Enclosure. 10X8x4. | Continuous Hinge Type 4.Size A	
6	1010672	1	Switch,Emer Stop, 1-Nc	
7	31986	1	Light,Blue,Dash,.50 Hole	
8	851090613	1	Switch,Toggle,Spdt,3-Pos	
9	100804-13	1	Panel, 10X8x4 Enclosure	
10	31983	2	Light,Red,Dash,.50 Hole	
11	1011147	1	Lighter, Cigarette	
12	981916	1	Conn,31-Pin,Recpt,Hd34-24-31, Deutsch	
13	981916-01	1	Conn,Nut,24 Shell	
14	981916-02	1	Conn,Lock Washer,24 Shell	
15	1011714	1	Decal, Operator, Control Panel	
16	1011851	1	Connector, 29 Pin, Deutsch Hdp24-24-29Pe-L015	
17	1009993	1	Terminal Strip,10 Pole	
18	36694	1	Fuse Block,10 Gang,Atc	
19	36086	2	Bracket,Relay Mount	
20	36085	2	Relay,12Vdc,Spdt,40 Amp,5 Pin	
21	851090624	1	Switch,Toggle,Spdt,2-Pos	
22	1011855	1	Connector, Washer, Deutsch Hdp20 Series	
23	1011854	1	Connector, Nut, Deutsch Hdp20 Series	
24	986546	1	Circuit Breaker,10A	
25	36342	5	Fuse,20 Amp,Atc	
26	36340	3	Fuse,10 Amp,Atc	
27	36218	1	Fuse,30 Amp,Atc	
28	36746	1	Fuse,5 Amp,Atc	
29	1011714-01	1	Decal, Oper, Control Panel, Side	

ELECTRIC SCREW FOR GRADE CONTROL (OPTION)

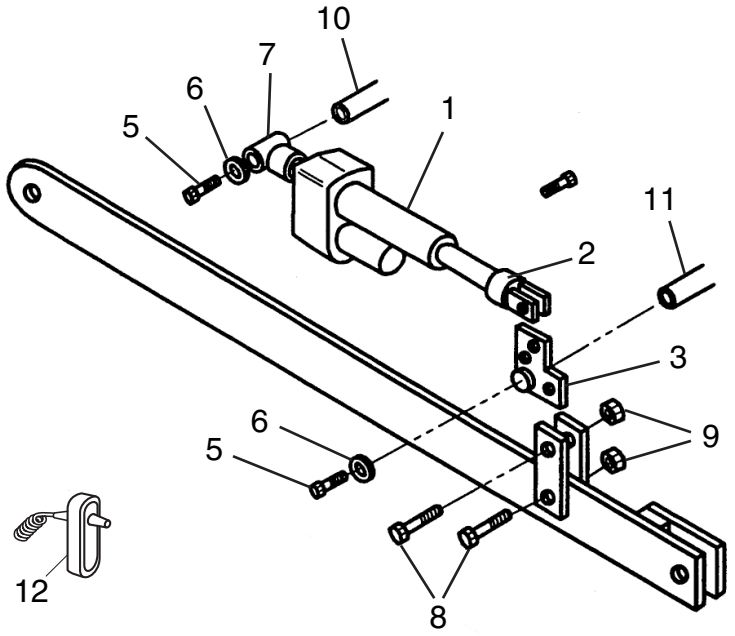


Figure 7-37.

Electric Screw for Grade Control (Option) Parts List

Item No	Part Number	Qty	Description	Remarks
Ref	982093SRV	Ref.	Opt, Electric Flight Screws	Includes all
1	870302	2	Actuator, Linear, 4.00, 12V	
Ref	983510	2	Bushing, .625	
2	851211	2	Clevis, Electric Screw Rod End	
3	853858	2	Assy, Screed Rocker Arm	
5	100-6-16-16-5	4	Cshh, .375-16 X 1.00, Gr5	
6	302-6	4	Washer, Lock, .375	
7	851212	2	Clevis, Electric Screw Base End	
8	100-7-14-32-5	6	Cshh, .437-14 X 2.00, Gr5	
9	204-7-14	6	Nut, Lock, .437-14	
Ref	981511	8	Washer, Fender, .375	
10	852222	2	Mount, Electric Screw	
11	852221	2	Mount, Electric Screw	
Ref	855502	2	Bar, .250 X 2.00 X 2.00	1/4 X 2 Fb X 2
Ref	855422	2	Pipe, .750 X 6.00, Sch 40	
Ref	852512	1	Mount, Electric Screw Switch	
Ref	35174	4	Wire, 14Ga, Purple	
Ref	852234	2	Brkt, Sidewing Slide	
Ref	500040	1	Switch, Toggle, Spst, 2-Pos	
Ref	852516	1	Bar, Electric Screw Box	
Ref	851442	1	Seal, Switch, Nut, .469-32	
12	852900	1	Assy, Remotes, Electric Screws	

WORK LIGHTS (OPTION)

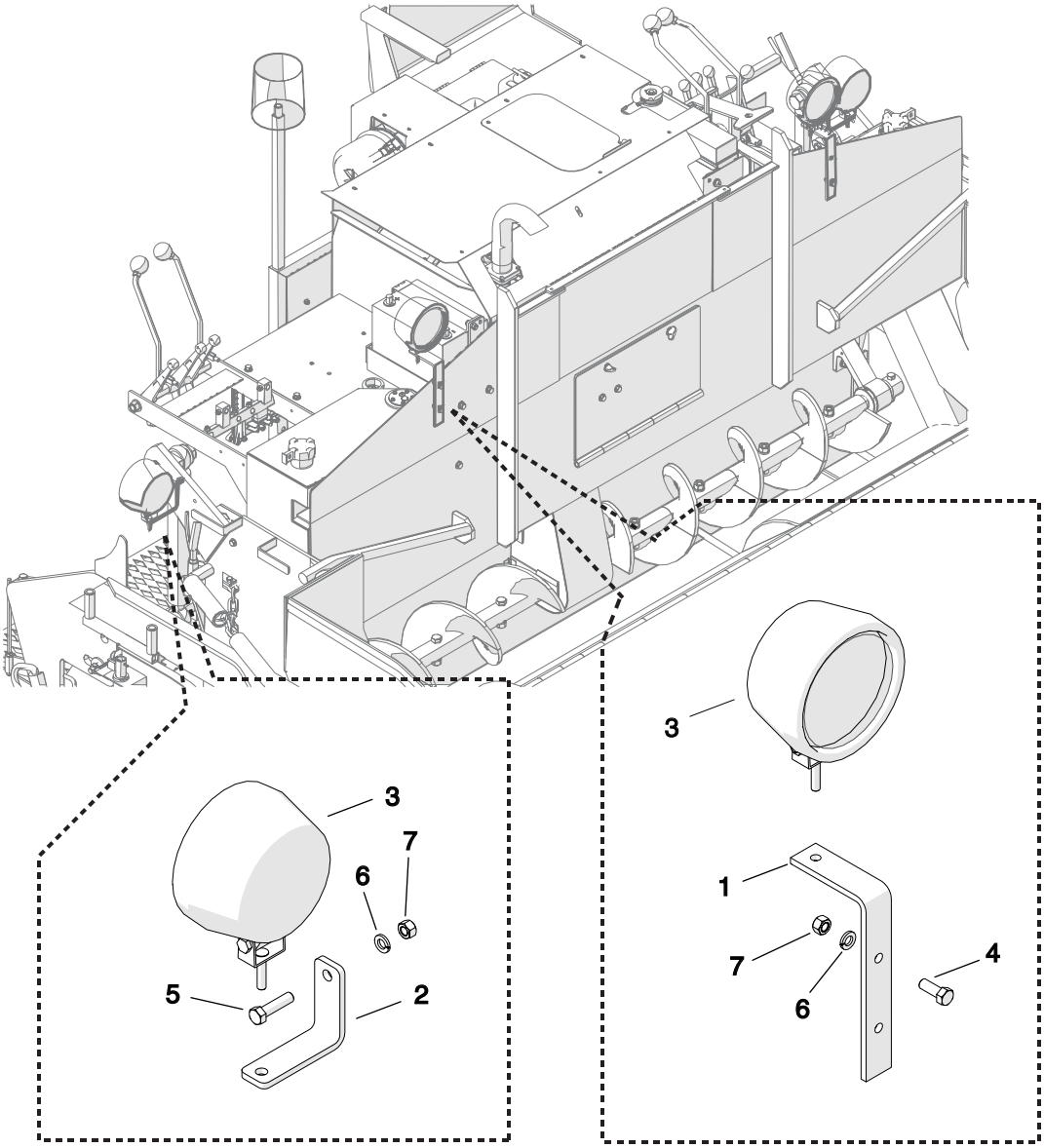


Figure 7-38.

Work Lights (Option) Parts List

Item No	Part Number	Qty	Description	Remarks
1	984618	2	Bracket, Work Light	
2	1011898	2	Bar, Rear Work Light	
3	1003862	4	Light, 4.5”, Tractor	
4	100-6-16-16-5F	3	Cshh,3/8-16 X 1,Gr5,Ft	
5	100-6-16-24-5	2	Cshh,3/8-16 X 1.5,Gr5	
6	302-6	5	Washer, Lock, 3/8	
7	200-6-16-5	5	Nut,Hex,3/8-16,Gr5	

2-SPEED (OPTION)

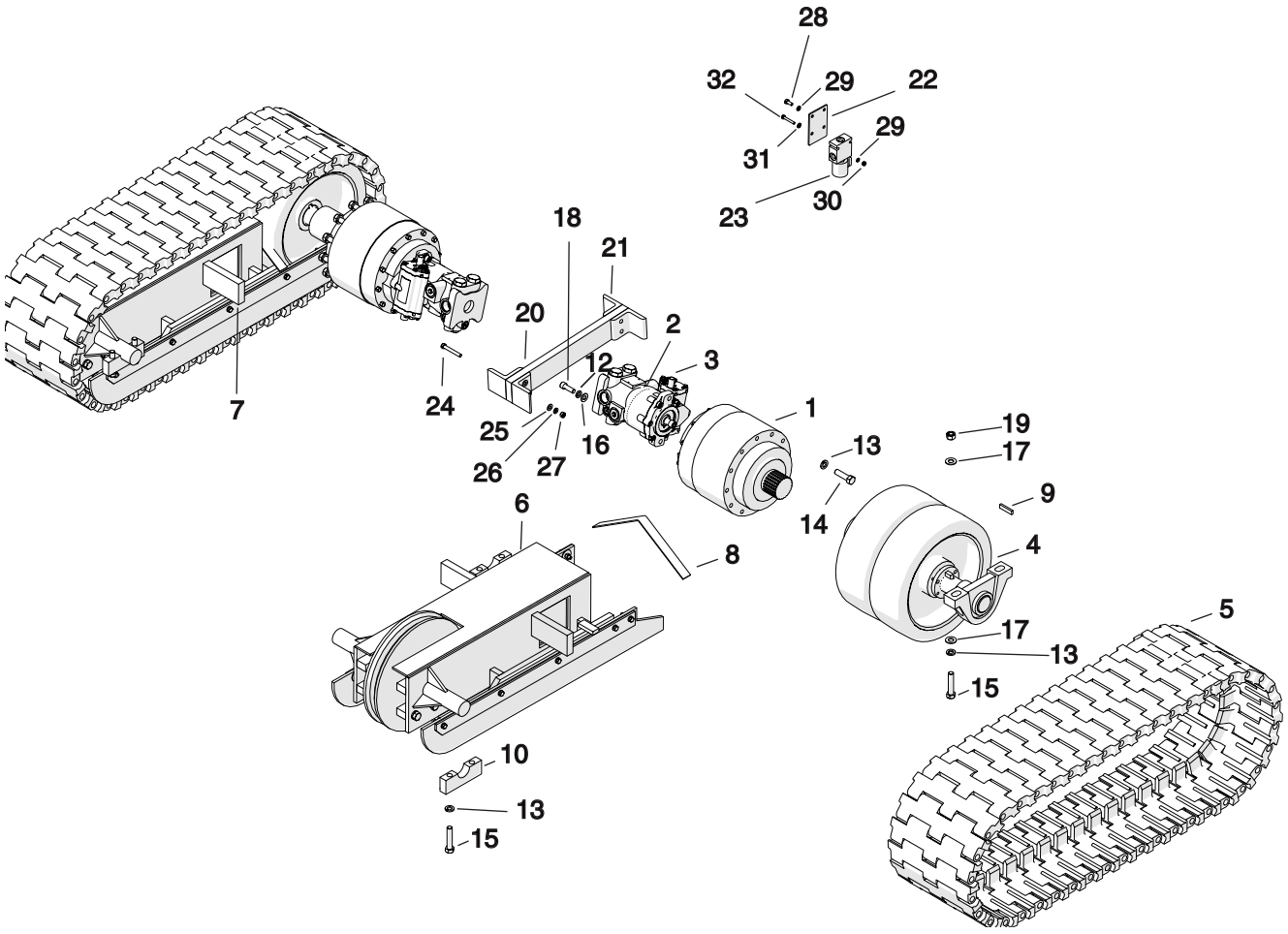


Figure 7-39.

2-Speed (Option) Parts List

Item No	Part Number	Qty	Description	Remarks
1	811360	2	Torque Hub, Final Drive	
2	811366	2	O-Ring,Hydraulic Motor To Torque Hub	
3	811362	2	Motor,Hydraulic,Drive,2 Speed	
4	981076	2	Assembly, Rear Torque Hub Tire	
5	810015	2	Track,One Side,700/1000 | 46 Pads/Trck	
6	981077L	1	Lh Undercarriage Assembly, 1000	
7	981077R	1	Rh Undercarriage Assembly, 1000	
8	852828	2	Mount, Tire Wipe	
9	852185	2	Spacer, 2", Front Rubber Tire	
10	852827	4	Trunion, 21/32" Drill, 2" Od Shaft	
12	302-8	4	Washer, Lock, 1/2	
13	302-10	36	Washer, Lock, 5/8	
14	100-10-11-36-5	24	Cshh,5/8-11 X 2.25,Gr5	
15	100-10-11-48-5	12	Cshh,5/8-11 X 3,Gr5	
16	300-8	4	Washer, Flat, Sae, 1/2	
17	300-10	8	Washer, Flat, Sae, 5/8	
18	102-8-13-24-F	4	Cssh,1/2-13X1.5,Ft	
19	200-10-11-5	4	Nut,Hex,5/8-11,Gr5	
20	988532	1	Brace,Frame W/Brake	
21	988533	4	Angle 3.00X3.00x.75X3.00	
22	1011897	1	Plate, Valve Mount	
23	900140	1	Valve,Solenoid,2 Speed	
24	100-6-16-44-5	4	Cshh,3/8-16 X 2.75,Gr5	
25	300-6	4	Washer, Flat, Sae, 3/8	
26	302-6	4	Washer, Lock, 3/8	
27	200-6-16-5	4	Nut,Hex,3/8-16,Gr5	
28	100-4-20-28-5	2	Cshh,1/4-20 X 1.75,Gr5	
29	302-4	2	Washer, Lock, 1/4	
30	200-4-20-5	2	Nut,Hex,1/4-20,Gr5	
31	302-5	2	Washer, Lock, 5/16	
32	100-5-18-12-5F	2	Cshh,5/16-18 X 0.75,Gr5,Ft	

SPRAY DOWN HOSE (STANDARD & OPTIONAL)

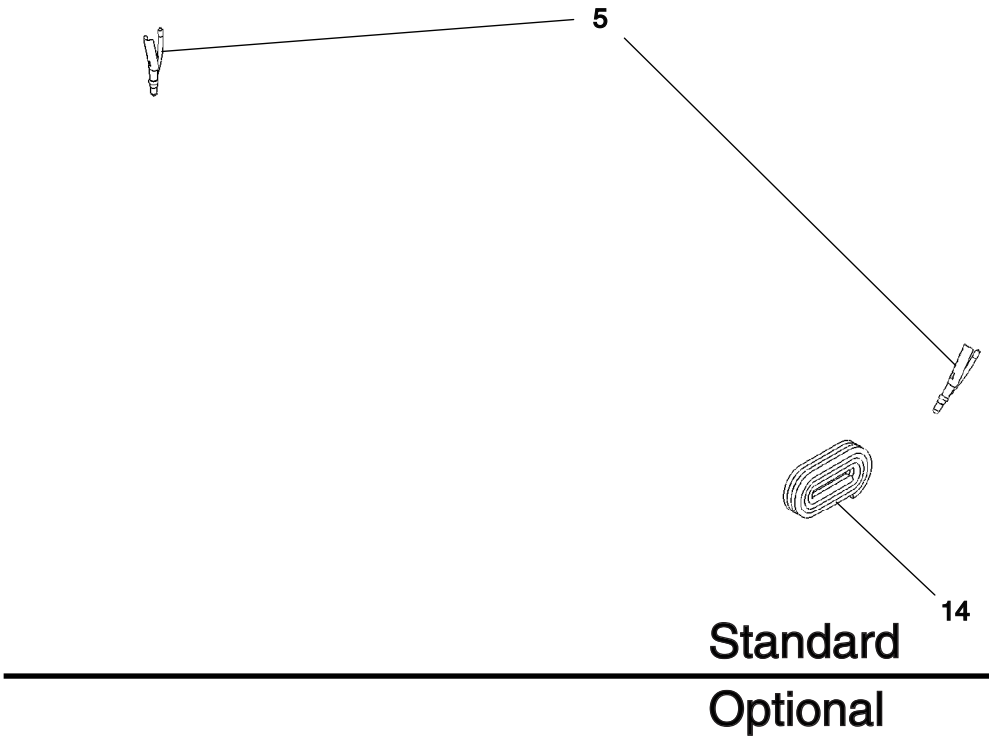


Figure 7-40.

Spray Down Hose (Standard and Optional) Parts List

Item No	Part Number	Qty	Description	Remarks
1	1011862	1	Plate, Hose Reel Mounting	
2	920200	1	Reel, W/Hose, Spray Down	.312 Hose
3	2501-6-6	1	Adapter, Elbow, 90 Deg, -6 Jic / -6 Nptf	
4	5LOC-6RFJX	1	Fitt, Str 05Hb-06Fjx	
5	920220	2	Handle & Nozzle, Fuel	Standard
6	300-5	8	Washer, Flat, Sae, 5/16	
7	300-6	8	Washer, Flat, Sae, 3/8	
8	100-5-18-16-5	4	Cshh, 5/16-18 X 1, Gr5	
9	100-6-16-16-5F	4	Cshh, 3/8-16 X 1, Gr5, Ft	
10	302-5	4	Washer, Lock, 5/16	
11	302-6	4	Washer, Lock, 3/8	
12	200-5-18-5	4	Nut, Hex, 5/16-18, Gr5	
13	200-6-16-5	4	Nut, Hex, 3/8-16, Gr5	
14	1003677	1	Hose,Spraydown,18’	Standard

FAIL-SAFE BRAKE KIT (OPTION)

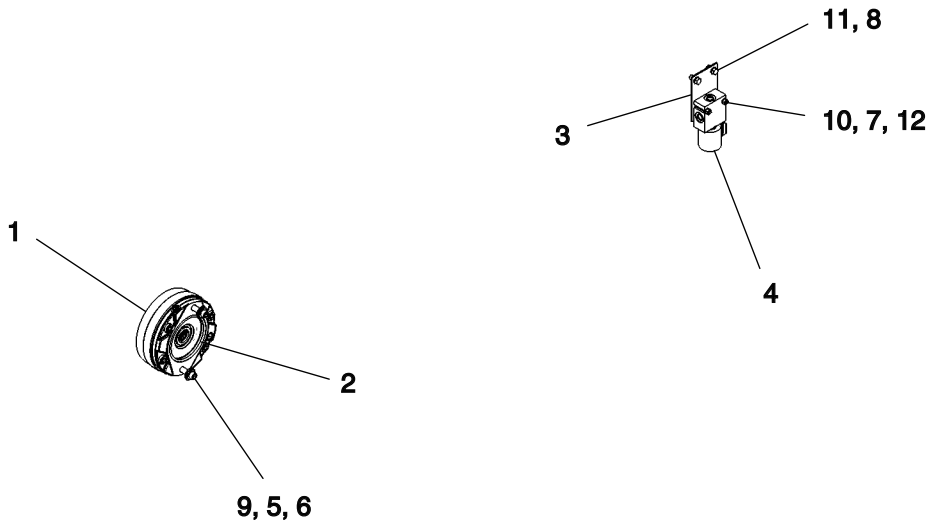


Figure 7-41.

Fail-Safe Brake Kit (Option) Parts List

Item No	Part Number	Qty	Description	Remarks
1	1011757	1	Brake, Ausco, 1000/7000 Option	
2	811366	1	O-Ring,Hydraulic Motor To Torque Hub	
3	1011897	1	Plate, Valve Mount	
4	900140	1	Valve,Solenoid,2 Speed	
5	300-8	2	Washer, Flat, Sae, 1/2	
6	302-8	2	Washer, Lock, 1/2	
7	302-4	2	Washer, Lock, 1/4	
8	302-5	2	Washer, Lock, 5/16	
9	102-6-16-20-F	2	Cssh,3/8-16X1.25,Ft	
10	100-4-20-28-5	2	Cshh,1/4-20 X 1.75,Gr5	
11	100-5-18-12-5F	2	Cshh,5/16-18 X 0.75,Gr5,Ft	
12	200-4-20-5	2	Nut,Hex,1/4-20,Gr5	
13	1012070	1	Hose Kit, Brake Option, 1000G	

TOPCON / SONIC ASSEMBLY (OPTION)

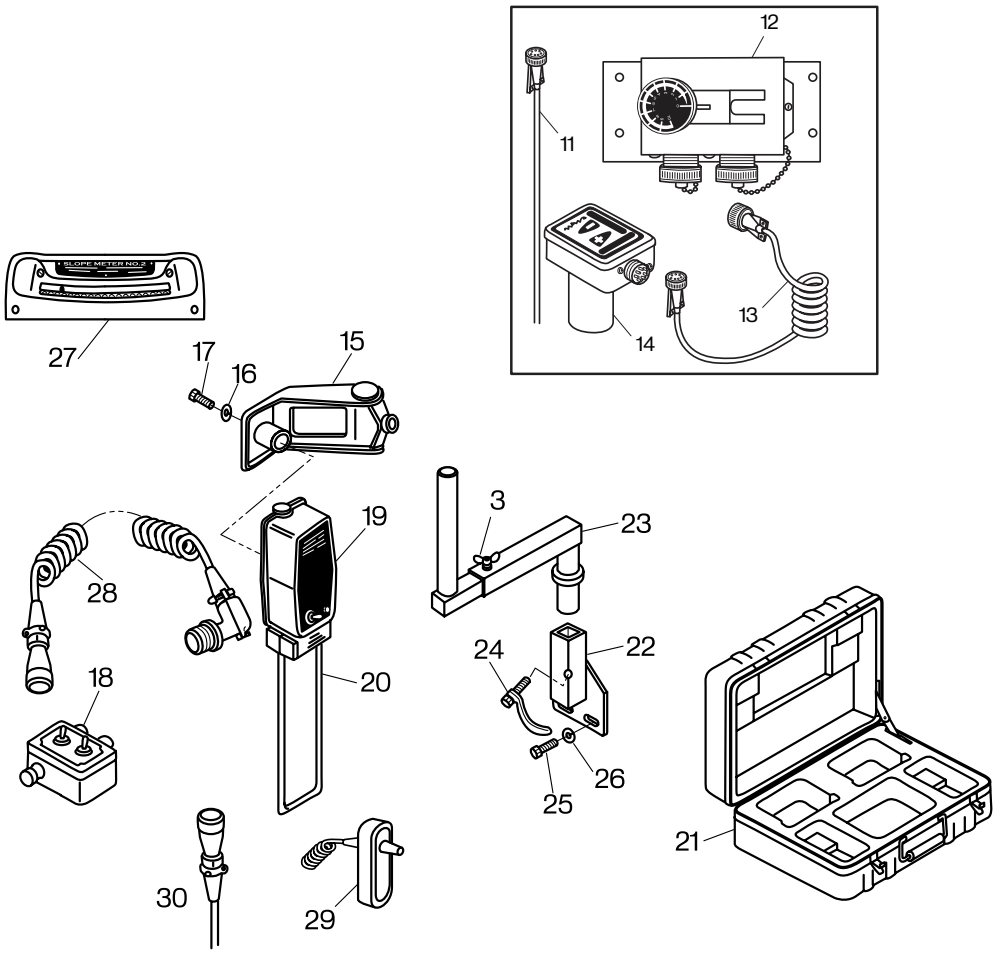


Figure 7-42.

Topcon / Sonic Assembly (Option) Parts List

Item No	Part Number	Qty	Description	Remarks
Ref	988279	Ref.	Sonic Auger, Option	Includes next 4 items
Ref	987026	1	Auger Manifold Bracket	
Ref	9981000AA	1	Hose Kit, 1000 8', Auto Auger	
Ref	940520	1	Manifold, Auto Augers	
Ref	851696	1	Opt, Sonic Auger Kit	Includes item 1-4
1	982796	1	Cable, Power, Ultrasonic	
2	982795	1	Remote Pod, Ultra Sonic	
3	983050	1	Coil Cord, 6S/6S 1.5 To 7.5 Ft	
4	982794	1	Sensor, Ultra Sonic	
5	851578	1	Bracket, Sonic Tracker	
6	300-12	1	Washer, Flat, .625	
7	100-12-11-64-5	1	Cshh, .625-11 X 4.00 Gr5	
8	985866	1	Am Module And Cable Assy, W/Base Plate	
Ref	985866-01	1	Am Module Only	
Ref	984596	1	Assy, Cord Remote (Topcon)	
9	851579	1	Sonic Tracker	
10	851581	1	Wire Bail, Temperature	
11	851265	1	Case For Sonic Tracker	
12	851575SRV	2	Pivot Mount, Topcon/Spectra Physics	
13	9090-1125SRV	1	Bracket, Z Arm, Topcon	
14	300060	1	Handle, Bolt, .625-11	
15	100-12-11-4-5	1	Cshh, .625-11 X .250 Gr5	
16	300-8	1	Washer, Flat, .625	
17	851421	A/R	Slope Meter	
18	851574	A/R	Coiled Cord, Topcon Tracker/Slope	
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Ref	851585SRV	1	Assy, 30 Ft. To 40 Ft. Kit	
19	986609	2	Coiled Cord, Remote Topcon	
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Fuse,30 Amp,Atc	36218	Figure 7-36	27
Fuse,5 Amp,Atc	36746	Figure 7-36	28
Gauge, L.p.g. Pressure	230110	Figure 7-18	3
Gauge,Sight Level/Temp,Hyd Oil	500070	Figure 7-9	7
Grease Fitting	Ref.	Figure 7-8	18
Group, Auger	984910	Figure 7-8	Ref.
Group, Drive	983674	Figure 7-1	Ref
Group, Hopper	983677	Figure 7-3	Ref
Group, Screed Arms, 1000	989237	Figure 7-26	5
Group, Screed Base	1008370	Figure 7-26	2
Group, Screed Inserts	989191	Figure 7-26	3
Group, Tanks, 1000G	1011790	Figure 7-15	11
Group, Walkboard, 1000/7000	1011907	Figure 7-26	6
Group,Detail,Screed,1000	985061	Figure 7-26	7
Group,Jointer,8500	988742	Figure 7-26	4
Group,Screed Frame	1005391	Figure 7-26	1
Guide, Side Wing Slide	852645SRV	Figure 7-3	5
Guide,Assembly,End Gate Mount	987379	Figure 7-27	11A
Gusset, Cover, Extension Hinge	854575	Figure 7-29	Ref
Gusset, Cover, Extension Hinge	854575	Figure 7-30	13
Hand Grip, Drive Lever	490010	Figure 7-11	25
Handle & Nozzle, Fuel	920220	Figure 7-40	5
Handle, Bolt, .625-11	300060	Figure 7-42	14
Handle, Crown And Valley	851195SRV	Figure 7-27	Ref
Handle, Vertical	910060	Figure 7-12	20
Handle, Vertical, V-20 Valve	910060	Figure 7-11	7
Harness, Main, Tier4	1011852	Figure 7-10	19
Harness,Main,Tier4	1011852	Figure 7-11	Ref
Head, Charge Filter	290010	Figure 7-13	6
H-F Check Valve, Cv10-20-0-N-5	910123-05	Figure 7-7	2

Description	Part Number	Figure #	Item #
H-F Check Valve, Cv10-20-0-N-5	910123-06	Figure 7-7	3
H-F Flow Divider, Fd50-45-0-N-33	910123-02	Figure 7-7	4
H-F Relief Valve, Rv10-20H-0-N-23/12.5	910123-01	Figure 7-7	5
H-F Sequence Valve, Ps10-34H-0-N-17/14	910123-03	Figure 7-7	7
H-F Sequence Valve, Ps10-34H-0-N-17/16	910123-04	Figure 7-7	6
Hoffman Enclosure. 10X8x4. | Continuous	100804	Figure 7-36	5
Horn Low Pitch	20190773	Figure 7-17	10
Hose Clamp, 2.125 (Size 28)	230240	Figure 7-18	18
Hose Kit, 1000 8', Auto Auger	9981000AA	Figure 7-42	Ref
Hose Kit, Brake Option, 1000G	1012070	Figure 7-41	13
Hose Kit, Main, 1000G	1011958	Figure 7-9	Ref
Hose Kit, Main, 1000G	1011958	Figure 7-13	Ref.
Hose Kit, Screed, 1000G	1012071	Figure 7-27	Ref
Hose Kit,1000C 8',Screed	9981000S	Figure 7-18	Ref
Hose, 1000D Chain Guard	9981000CG	Figure 7-3	8
Hose, Ignitor Burner	230034	Figure 7-18	7
Hose, Ignitor Burner	230034	Figure 7-18	23
Hose, L.p.g. Regulator To Tee	230032	Figure 7-18	6
Hose, Radiator, Lower, 1000G, Tier 4	1011799-44	Figure 7-25	32
Hose, Radiator, Upper, 1000G, Tier 4	1011799-43	Figure 7-25	31
Hose, Screed Extension Burner	230038	Figure 7-18	10
Hose, Screed Extension Burner	851225	Figure 7-18	13
Hose,Spraydown,18'	1003677	Figure 7-40	14
Hub Assembly, Fwd./Rev. Pivot	1011875	Figure 7-11	17
Isolator	986537-14	Figure 7-25	47
Isolator, Mount	TEC16	Figure 7-25	Ref
Keystock, 0.5 X 0.7 X 3.5	810160-1	Figure 7-1	6
Kit, Am Module With Remote	987053SRV	Figure 7-42	Ref
Kit, Hose Drive Motors 1000	1008058	Figure 7-13	Ref.
Knob, Round Ball, 1.375 X 0.375-16	851156	Figure 7-11	28
Knob, Round Ball, 1-7/8" X 1/2-13	920225	Figure 7-11	22
Knob, Round Ball, 1-7/8" X 1/2-13	920225	Figure 7-15	7
Knob,Round Ball,1-7/8"X1/2-13	920225	Figure 7-10	6
L.p.g. Tank, 20 Lbs	230010	Figure 7-18	1
Lever, Fwd./Rev., Left Side Lh	920097L	Figure 7-11	21
Lever, Fwd./Rev., Left Side Rh	920097R	Figure 7-11	20

Description	Part Number	Figure #	Item #
Lever, Right Side Lh Fwd	1012902	Figure 7-15	6
Lever, Right Side Rh Fwd	1012901	Figure 7-15	5
Lever,Fwd/Rev,Left Side Lh	920097L	Figure 7-10	3
Lever,Fwd/Rev,Left Side Rh	920097R	Figure 7-10	4
Lh Undercarriage Assembly, 1000	981077L	Figure 7-39	6
Lh Undercarriage Assy, 1000	981077L	Figure 7-1	Ref
Light, 4.5", Tractor	1003862	Figure 7-38	3
Light,Blue,Dash,.50 Hole	31986	Figure 7-36	7
Light,Red,Dash,.50 Hole	31983	Figure 7-36	10
Lighter, Cigarette	1011147	Figure 7-36	11
Link Assy, Valve Lever	901010	Figure 7-11	4A
Link Assy, Valve Lever	901010	Figure 7-12	18
Link Pink Assy.	810291CSRV	Figure 7-2	34A
Link Plate	901010-A	Figure 7-11	4B
Link,Master,#60H Chain	860049	Figure 7-8	Ref
Lock Tab, Push Roller Shaft	852826	Figure 7-2	42
M&W Manifold, 01-0299A	910123	Figure 7-7	1
Manifold, Auto Augers	940520	Figure 7-42	Ref
Manifold, Hopper Wing Sequence	910123	Figure 7-6	3
Manifold, Track Tensioner, N/S	851544	Figure 7-6	2
Manifold,Charge Filter	960476A	Figure 7-13	8
Manifold,Flow Divider,Screed	870319	Figure 7-13	11
Manifold,Track Tensioner	851544	Figure 7-13	5
Manifold-Hopper Wing Sequence	910123	Figure 7-13	4
Manual-Pak Case ,8.5X11x1.13	985234	Figure 7-19	3
Molded Wheel & Tire (5 X 16)	810129	Figure 7-1	2
Motor, Hyd., 20.0 Cir. Parker	987903	Figure 7-8	3
Motor, Hyd., Drive, 1000 Drive	811361	Figure 7-2	32
Motor,Hyd,Gear,1.17 Cir,"A"	983405	Figure 7-21	3
Motor,Hydraulic,Drive,2 Speed	811362	Figure 7-39	3
Mount, Auger Motor	860021	Figure 7-8	5
Mount, Electric Screw	852222	Figure 7-37	10
Mount, Electric Screw	852221	Figure 7-37	11
Mount, Electric Screw Switch	852512	Figure 7-37	Ref
Mount, Tire Wipe	852828	Figure 7-2	35
Mount, Tire Wipe	852828	Figure 7-39	8

Description	Part Number	Figure #	Item #
Mount,Spraydown Pump,Facet	1011781	Figure 7-14	12
Mp-Mp Hex Nipple, -6 Nptf / -2 Nptf	1279964	Figure 7-14	14
Nord Washer	986810	Figure 7-27	13
Nut, Hex, 0.625-11	200-10-11	Figure 7-1	10D
Nut, Hex, 1/2-13, Gr5	200-8-13-5	Figure 7-8	15D
Nut, Hex, 1/4-20, Gr5	200-4-20-5	Figure 7-11	27C
Nut, Hex, 1/4-20, Gr5	200-4-20-5	Figure 7-14	19
Nut, Hex, 1/4-20, Gr5	200-4-20-5	Figure 7-19	7
Nut, Hex, 3/8-16, Gr5	200-6-16-5	Figure 7-8	2D
Nut, Hex, 3/8-16, Gr5	200-6-16-5	Figure 7-11	2C
Nut, Hex, 3/8-16, Gr5	200-6-16-5	Figure 7-40	13
Nut, Hex, 3/8-16, Gr8	200-6-16-8	Figure 7-1	19D
Nut, Hex, 3/8-24, Gr5	200-6-24-5	Figure 7-11	19B
Nut, Hex, 3/8-24, Gr8	200-6-24-8	Figure 7-34	1B
Nut, Hex, 5/16-18, Gr5	200-5-18-5	Figure 7-11	12A
Nut, Hex, 5/16-18, Gr5	200-5-18-5	Figure 7-40	12
Nut, Hex, Jam, 1/2-13, Gr5	202-8-13-5	Figure 7-11	23
Nut, Hex, Jam, 3/8-16, Gr5	202-6-16-5	Figure 7-11	29
Nut, Hex, Jam, 5/8-11, Gr5	202-10-11-5	Figure 7-11	24
Nut, Lock, .437-14	204-7-14	Figure 7-37	9
Nut, Lock, Nylon, 3/8-16, Gr5	205-6-16-5	Figure 7-23	17
Nut, Lock, Stover, 3/8-16, Gr5	204-6-16-5	Figure 7-3	13
Nut,Hex,1/2-13,Gr5	200-8-13-5	Figure 7-16	4
Nut,Hex,1/2-13,Gr5	200-8-13-5	Figure 7-27	16
Nut,Hex,1/2-13,Gr5	200-8-13-5	Figure 7-34	10
Nut,Hex,1/4-20,Gr5	200-4-20-5	Figure 7-10	12
Nut,Hex,1/4-20,Gr5	200-4-20-5	Figure 7-39	30
Nut,Hex,1/4-20,Gr5	200-4-20-5	Figure 7-41	12
Nut,Hex,3/8-16,Gr5	200-6-16-5	Figure 7-6	12
Nut,Hex,3/8-16,Gr5	200-6-16-5	Figure 7-9	11
Nut,Hex,3/8-16,Gr5	200-6-16-5	Figure 7-10	21
Nut,Hex,3/8-16,Gr5	200-6-16-5	Figure 7-13	25
Nut,Hex,3/8-16,Gr5	200-6-16-5	Figure 7-14	25
Nut,Hex,3/8-16,Gr5	200-6-16-5	Figure 7-17	9
Nut,Hex,3/8-16,Gr5	200-6-16-5	Figure 7-19	13
Nut,Hex,3/8-16,Gr5	200-6-16-5	Figure 7-20	7

Description	Part Number	Figure #	Item #
Nut,Hex,3/8-16,Gr5	200-6-16-5	Figure 7-22	16
Nut,Hex,3/8-16,Gr5	200-6-16-5	Figure 7-26	17
Nut,Hex,3/8-16,Gr5	200-6-16-5	Figure 7-27	25
Nut,Hex,3/8-16,Gr5	200-6-16-5	Figure 7-29	Ref
Nut,Hex,3/8-16,Gr5	200-6-16-5	Figure 7-30	Ref
Nut,Hex,3/8-16,Gr5	200-6-16-5	Figure 7-38	7
Nut,Hex,3/8-16,Gr5	200-6-16-5	Figure 7-39	27
Nut,Hex,3/8-16,Gr8	200-6-16-8	Figure 7-32	5
Nut,Hex,3/8-16,Gr8	200-6-16-8	Figure 7-33	7
Nut,Hex,3/8-24,Gr5	200-6-24-5	Figure 7-10	13
Nut,Hex,3/8-24,Gr5	200-6-24-5	Figure 7-23	14
Nut,Hex,5/16-18,Gr5	200-5-18-5	Figure 7-10	14
Nut,Hex,5/16-18,Gr5	200-5-18-5	Figure 7-15	10
Nut,Hex,5/16-18,Gr5	200-5-18-5	Figure 7-22	17
Nut,Hex,5/8-11,Gr5	200-10-11-5	Figure 7-39	19
Nut,Hex,7/16-14,Gr5	200-7-14-5	Figure 7-32	6
Nut,Hex,7/16-14,Gr5	200-7-14-5	Figure 7-33	6
Nut,Hex,Jam,1/2-13,Gr5	202-8-13-5	Figure 7-10	5
Nut,Hex,Jam,1/2-13,Gr5	202-8-13-5	Figure 7-15	4
Nut,Hex,Jam,1-8 Unc	80081	Figure 7-34	4
Nut,Hex,Jam,5/8-11,Gr5	202-10-11-5	Figure 7-26	13
Nut,Lock,Stover,1/2-13,Gr5	204-8-13-5	Figure 7-29	5
Nut,Lock,Stover,1/2-13,Gr5	204-8-13-5	Figure 7-30	5
Nut,Lock,Stover,1/2-13,Gr5	204-8-13-5	Figure 7-35	3
Nut,Lock,Stover,3/8-16,Gr5	204-6-16-5	Figure 7-4	12
Nut,Lock,Stover,3/8-16,Gr5	204-6-16-5	Figure 7-29	2
Nut,Lock,Stover,3/8-16,Gr5	204-6-16-5	Figure 7-30	2
Nut,Lock,Stover,5/8-11,Gr5	204-10-11-5	Figure 7-4	13
Nut,Lock,Stover,5/8-11,Gr5	204-10-11-5	Figure 7-15	1C
Nut,Nylon Lock,7/8-9 Unc-2B	987396	Figure 7-32	Ref
Nut,Wing,.375-16	31877	Figure 7-19	8
Opt, Electric Flight Screws	982093SRV	Figure 7-37	Ref
Opt, Sonic Auger Kit	851696	Figure 7-42	Ref
Opt., Electric Flight Screws	982093SRV	Figure 7-2	Ref
O-Ring, Hyd Motor To Torque Hub	811366	Figure 7-2	31
O-Ring,Hydraulic Motor To Torque Hub	811366	Figure 7-39	2

Description	Part Number	Figure #	Item #
O-Ring,Hydraulic Motor To Torque Hub	811366	Figure 7-41	2
Panel, 10X8x4 Enclosure	100804-13	Figure 7-36	9
Phms, Cross, 1/4-20 X 0.5, Ft	122-4-20-12F	Figure 7-19	4
Pin, 1000 Hopper Lift Cyl.	851618	Figure 7-6	6
Pin, 1000 Hopper Lift Cyl. Top	851619SRV	Figure 7-6	5
Pin, Clevis	350080	Figure 7-12	19
Pin, Clevis, 0.250 X 0.875	350080	Figure 7-11	6
Pin, Cotter, 0.188X2.00	405-3-24	Figure 7-6	7
Pin, Cylinder	910146	Figure 7-6	9
Pin, Hopper Lift Cylinder, 1000	851618	Figure 7-13	3
Pin, Hopper Wing Hinge, 11/16" - 48" Crs	852692	Figure 7-3	4
Pin, Side Wing Cyl.	910146	Figure 7-13	14
Pin, Sidewing Extension	930031SRV	Figure 7-3	3
Pin,.50X3.00,W/Hairpin Cotter	72836	Figure 7-16	5
Pin,Clevis,1.00X3.25 W/1.5Hd	240030	Figure 7-26	14
Pipe, .750 X 6.00, Sch 40	855422	Figure 7-37	Ref
Pipe, 2.50 X 2.25, Sch 40	852833	Figure 7-1	7
Pipe, 6.00 X 5.25, Sch 40	852831	Figure 7-1	4
Pipe, Chain Guard, Pvc	852428	Figure 7-3	11
Pipe, Push Bar Roller, 24.00 Lg.	856923	Figure 7-2	41
Pivot Guide Spacer	855507	Figure 7-26	12
Pivot Guide Spacer	855507	Figure 7-27	11B
Pivot Mount, Topcon/Spectra Physics	851575SRV	Figure 7-42	12
Plate, Hose Reel Mounting	1011862	Figure 7-40	1
Plate, Rear Cover	1011861	Figure 7-20	3
Plate, Toolbox Mount	1012069	Figure 7-26	9
Plate, Valve Mount	1011897	Figure 7-39	22
Plate, Valve Mount	1011897	Figure 7-41	3
Plug,.1.00 Npt,Sq Hd,Magnetic	1007675	Figure 7-9	Ref
Power Beyond Sleeve	901002	Figure 7-12	14
Pump, Fuel, Housing	1011799-71	Figure 7-14	5
Pump, Fuel, Kubota, Tier 4	1011799-28	Figure 7-25	51
Pump, Hydraulic, Gear, 17Cc, Sae A Flange Mount	989258	Figure 7-23	3
Pump, Spray Down Facet	1011738	Figure 7-14	10
Pump,M46, Tandem, Axial Piston With Charge Pump	1011945	Figure 7-24	7
Pump,M46, Tandem, Axial Piston With Charge Pump	1011945	Figure 7-23	2

Description	Part Number	Figure #	Item #
Push Roller, Tilt Hopper	981152	Figure 7-2	37
Quick Disconnect Coupling	230084	Figure 7-18	21
Radiator, 1000G, Tier 4	1011799-01	Figure 7-25	1
Radiator, Guard Mount, 1000G, Tier 4	1011799-11	Figure 7-25	11
Radiator, Guard Nut Plate, 1000G, Tier 4	1011799-47	Figure 7-25	33
Radiator, Guard, 1000G, Tier 4	1011799-10	Figure 7-25	10
Radiator, Inside Fan Guard, 1000G, Tier 4	1011799-17	Figure 7-25	17
Radiator, Isolator	1011799-39	Figure 7-25	29
Radiator, Mount, 1000G, Tier 4	1011799-03	Figure 7-25	3
Radiator, Recover Tank Kit, 1000G	1011799-18	Figure 7-25	44
Radiator, Shroud, 1000G, Tier 4	1011799-02	Figure 7-25	2
Radiator, Shroud, Trim Seal, 1000G, Tier 4	1011799-30	Figure 7-25	21
Reel, W/Hose, Spray Down	920200	Figure 7-40	2
Regulator W/Gauge, L.p.g.	982515	Figure 7-18	5
Relay,12Vdc,Spdt,40 Amp,5 Pin	36085	Figure 7-36	20
Remote Pod, Ultra Sonic	982795	Figure 7-42	2
Rh Undercarriage Assembly, 1000	981077R	Figure 7-39	7
Rh Undercarriage Assy, 1000	981077R	Figure 7-1	11
Rhms, Slotted, #6-32 X 0.875, Ft	110-#6-32-14F	Figure 7-11	30B
Ring	59861872	Figure 7-24	2
Ring	59785519	Figure 7-24	4
Rnd,.688X43.50 Crs	854447SRV	Figure 7-29	10
Rnd,.688X43.50 Crs	854447SRV	Figure 7-30	10
Rnd., .688 X 94.00	852617	Figure 7-3	7
Rnd., 0.688 X 94.00	852617	Figure 7-8	22
Rod, Drive Lever Stop	852536	Figure 7-11	14
Rod, Rh Control Handel Pivot, 1000G	1012776	Figure 7-10	22
Rod, Rh Control Handle Pivot, 100G	1012776	Figure 7-15	12
Rod,Flight Screw Level Gauge	851372SRV	Figure 7-34	1A
Rod,Guide Bar	920061	Figure 7-4	20
Roll Pin, Metric, M10 X 26	400-M10-26	Figure 7-1	28
Rubber, Hopper Corner	851622A-1	Figure 7-4	3
Rubber, Track Guard, Inner	810021	Figure 7-1	15
Rubber, Track Guard, Outer	810020	Figure 7-1	17
Scr, Slfdrl, Hwh, #12 X 0.75	116-#12-12	Figure 7-9	6
Scr, Slfdrl, Hwh, #12 X 0.75	116-#12-12	Figure 7-14	3

Description	Part Number	Figure #	Item #
Screed End Gate Mount Nut	987396	Figure 7-33	Ref
Screw Assy,Screed Extension	854446	Figure 7-29	6
Screw Assy,Screed Extension	854446	Figure 7-30	6
Screw,Wing,.375-16X1.00	920070	Figure 7-4	21
Seal	59941203	Figure 7-24	3
Seal Kit	910145-01	Figure 7-6	Ref
Seal Kit, Relief Valve	910065	Figure 7-12	Ref
Seal Kit, Valve Section	910062	Figure 7-12	9
Seal Kit, Valve Spool	910059	Figure 7-12	10
Seal, Switch, Nut, .469-32	851442	Figure 7-37	Ref
Seat Assembly, White, With Armrest	360010	Figure 7-16	2
Sending Unit,Fuel Level	140040	Figure 7-14	2
Sensor, Ultra Sonic	982794	Figure 7-42	4
Set S, Hskt, Oval, 3/8-16 X 0.75	126-5-18-12	Figure 7-11	12B
Set S, Hskt, Oval, 5/16-18 X 0.75	126-5-18-12	Figure 7-10	15
Set S, Hskt, Oval, 5/16-18 X 0.75	126-5-18-12	Figure 7-15	9
Set S,Hskt,Cup,3/8-16X0.375	113-6-16-6	Figure 7-27	17
Shaft Collar, 0.25”, Clamp On	1012971	Figure 7-10	33
Shaft, 15 Tooth, M46 Tandem	1011945-01	Figure 7-24	6
Shaft, Auger	980691	Figure 7-8	11
Shaft, Push Bar Roller	810122	Figure 7-2	39
Shaft,Track Idler, 7000	811336	Figure 7-1	23
Sheet, Deflector, Engine Shroud	1012995	Figure 7-22	18
Shield, 8500 Screed Extension	855433	Figure 7-29	8
Shield, 8500 Screed Extension	855433	Figure 7-30	8
Shldr Bolt, Ø1/2 X 1.5L, 3/8X16	118-8-24-3/8x16	Figure 7-27	22
Shldr Bolt, Ø1/2 X 1.5L, 3/8X16	118-8-24-3/8x16	Figure 7-29	1
Shldr Bolt, Ø1/2 X 1.5L, 3/8X16	118-8-24-3/8x16	Figure 7-30	1
S-Hook	20938635	Figure 7-5	1
Sidewing, Lh, (8’ 1000) New Style	851614SRV	Figure 7-3	1
Sidewing, Rh, (8’ 1000) New Style	851615SRV	Figure 7-3	2
Slide, Undercarriage Idler	853191	Figure 7-1	24
Slope Meter	851421	Figure 7-42	17
Sonic Auger, Option	988279	Figure 7-42	Ref
Sonic Tracker	851579	Figure 7-42	9
Spacer, 2”, Front Rubber Tire	852185	Figure 7-39	9

Description	Part Number	Figure #	Item #
Spacer, Rear Shroud Mount, 1000G, Tier 4	1011799-16	Figure 7-25	16
Spacer, Recovery Tank, Kubota, Tier 4	1011799-13	Figure 7-25	13
Spring Center Kit	901014	Figure 7-12	6
Spring, Extension	930029	Figure 7-3	10
Sprocket, 60B12 X 1.00-6 Spline	240350	Figure 7-8	7
Sssh, 0.5-20 X 0.5 - Hx - N	851645-1	Figure 7-8	17
Strainer & Gasket Kit	140030GK	Figure 7-9	3
Strainer, Hydraulic Suction, -24 Sae O-Ring	1011817	Figure 7-9	5
Strainer, Hydraulic Suction, -24 Sae O-Ring	1011817	Figure 7-13	16
Strobe Light, Amber	211748-02	Figure 7-19	14
Subassembly, Rear Torque Hub	981076	Figure 7-2	36
Switch, Neutral Safety (N/S)	1011853	Figure 7-11	30A
Switch, Toggle, Spst, 2-Pos	500040	Figure 7-37	Ref
Switch,Emer Stop, 1-Nc	1010672	Figure 7-36	6
Switch,Ign,W/Heat St	39146-14	Figure 7-36	2
Switch,Press,Back-Up Alarm	851504	Figure 7-17	1
Switch,Press,Back-Up Alarm	851504	Figure 7-23	19
Switch,Pressure, 10 Psi Rise	1011844	Figure 7-14	11
Switch,Push Button	982249	Figure 7-36	1
Switch,Toggle,Spdt,2-Pos	851090624	Figure 7-36	21
Switch,Toggle,Spdt,3-Pos	851090613	Figure 7-36	8
Switch,Toggle,Spst,2-Pos	851391	Figure 7-36	3
Tab, Auger Valve Reverse Lockout	852648	Figure 7-12	1
Tab, Auto Auger/Screed Valve	852648	Figure 7-11	8
Tab, Auto Auger/Screed Valve	852648	Figure 7-13	10
Tank W/M, Hyd, Top, 1000	1011752	Figure 7-9	4
Tank,Lpg,20Lb	230010	Figure 7-19	1
Tee, .250 Street	230081	Figure 7-18	9
Terminal Strip,10 Pole	1009993	Figure 7-36	17
Thumb Screw,.375-16X1.00	920070	Figure 7-5	6
Thumb Screw,.375-16X1.00	920070	Figure 7-32	Ref
Thumb Screw,.375-16X1.00	920070	Figure 7-33	Ref
Toolbox,W/Holes	1006950	Figure 7-17	5
Torque Hub, Final Drive	811360	Figure 7-39	1
Torque Hub, Final Drive, 1000	811360	Figure 7-2	29
Track Section	810281C	Figure 7-2	34B

Description	Part Number	Figure #	Item #
Track, One Side, 1000	810015	Figure 7-2	Ref
Track,One Side,700/1000 | 46 Pads/Trck	810015	Figure 7-39	5
Trunion, 21/32" Drill, 2" Od Shaft	852827	Figure 7-39	10
Tube, Spacer, Control Arm	1012935	Figure 7-23	15
Tube, Spacer, Control Arm Extension	1012935	Figure 7-10	31
Tube, Spacer, Rh Drive	1012847	Figure 7-10	26
Tube, Spacer, Rh Drive	1012847	Figure 7-15	13
Valve & Plug, Anticavitation	141020	Figure 7-12	16
Valve Assy, 9 Section, W/Float	851161	Figure 7-12	2
Valve Section, Detented	910052	Figure 7-12	4
Valve Section, Float	910054FLS	Figure 7-12	5
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Valve, Main, 1000	982035	Figure 7-11	1
Valve, Pump Destroke, No, 2Way, 2Pos, 12V, Deutsch	1011845	Figure 7-13	1
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Valve,Solenoid,2 Speed	900140	Figure 7-41	4
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Washer, Flat, .625	300-8	Figure 7-42	16
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Washer, Flat, Sae, 1/2	300-8	Figure 7-16	3
Washer, Flat, Sae, 1/2	300-8	Figure 7-23	4
Washer, Flat, Sae, 1/2	300-8	Figure 7-29	4
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Washer, Flat, Sae, 1/2	300-8	Figure 7-31	6

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Washer, Flat, Sae, 1/2	300-8	Figure 7-39	16
Washer, Flat, Sae, 1/2	300-8	Figure 7-41	5
Washer, Flat, Sae, 1/4	300-4	Figure 7-10	1
Washer, Flat, Sae, 1/4	300-4	Figure 7-11	27B
Washer, Flat, Sae, 1/4	300-4	Figure 7-14	17
Washer, Flat, Sae, 1/4	300-4	Figure 7-19	5
Washer, Flat, Sae, 1/4	300-4	Figure 7-22	15
Washer, Flat, Sae, 1-1/8	300-18	Figure 7-13	26
Washer, Flat, Sae, 3/8	300-6	Figure 7-4	5
Washer, Flat, Sae, 3/8	300-6	Figure 7-5	4
Washer, Flat, Sae, 3/8	300-6	Figure 7-5	7
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Washer, Flat, Sae, 3/8	300-6	Figure 7-17	6
Washer, Flat, Sae, 3/8	300-6	Figure 7-19	11
Washer, Flat, Sae, 3/8	300-6	Figure 7-20	5
Washer, Flat, Sae, 3/8	300-6	Figure 7-22	13
Washer, Flat, Sae, 3/8	300-6	Figure 7-23	5
Washer, Flat, Sae, 3/8	300-6	Figure 7-27	24
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Washer, Flat, Sae, 5/8	300-10	Figure 7-4	6
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Washer, Flat, Uss, 1/2	301-8	Figure 7-27	23
Washer, Flat, Uss, 5/8	301-10	Figure 7-11	16
Washer, Flat, Uss, 5/8	301-10	Figure 7-27	20
Washer, Lock, .375	302-6	Figure 7-37	6
Washer, Lock, 0.375	302-6	Figure 7-1	19B
Washer, Lock, 0.375	302-6	Figure 7-8	2C
Washer, Lock, 0.5	302-8	Figure 7-2	33B
Washer, Lock, 0.5	302-8	Figure 7-8	20C
Washer, Lock, 0.625	302-10	Figure 7-1	10B
Washer, Lock, 0.625	302-10	Figure 7-1	14B
Washer, Lock, 0.625	302-10	Figure 7-1	26B
Washer, Lock, 0.625	302-10	Figure 7-2	30B
Washer, Lock, 1/2	302-10	Figure 7-8	6B
Washer, Lock, 1/2	302-8	Figure 7-11	2B
Washer, Lock, 1/2	302-8	Figure 7-13	20
Washer, Lock, 1/2	302-8	Figure 7-22	3
Washer, Lock, 1/2	302-8	Figure 7-23	6
Washer, Lock, 1/2	302-8	Figure 7-31	5
Washer, Lock, 1/2	302-8	Figure 7-34	9
Washer, Lock, 1/2	302-8	Figure 7-39	12
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Washer, Lock, 3/8	302-6	Figure 7-4	18
Washer, Lock, 3/8	302-6	Figure 7-5	5
Washer, Lock, 3/8	302-6	Figure 7-6	13
Washer, Lock, 3/8	302-6	Figure 7-9	10
Washer, Lock, 3/8	302-6	Figure 7-10	20

Description	Part Number	Figure #	Item #
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Washer, Lock, 3/8	302-6	Figure 7-17	8
Washer, Lock, 3/8	302-6	Figure 7-19	12
Washer, Lock, 3/8	302-6	Figure 7-20	6
Washer, Lock, 3/8	302-6	Figure 7-22	5
Washer, Lock, 3/8	302-6	Figure 7-23	7
Washer, Lock, 3/8	302-6	Figure 7-38	6
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Washer, Lock, 3/8	302-6	Figure 7-40	11
Washer, Lock, 5/16	302-5	Figure 7-6	10
Washer, Lock, 5/16	302-5	Figure 7-13	19
Washer, Lock, 5/16	302-5	Figure 7-14	8
Washer, Lock, 5/16	302-5	Figure 7-22	6
Washer, Lock, 5/16	302-5	Figure 7-39	31
Washer, Lock, 5/16	302-5	Figure 7-40	10
Washer, Lock, 5/16	302-5	Figure 7-41	8
Washer, Lock, 5/8	302-10	Figure 7-14	21
Washer, Lock, 5/8	302-10	Figure 7-15	1D
Washer, Lock, 5/8	302-10	Figure 7-26	10
Washer, Lock, 5/8	302-10	Figure 7-27	19
Washer, Lock, 5/8	302-10	Figure 7-39	13
Washer, Lock, 7/16	302-7	Figure 7-21	5
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Wear Plate,Screed Ext, Bb,	851602SRV	Figure 7-29	9
Weldment, Battery Box & Cover Plate	1011856	Figure 7-20	1
Weldment, Bottom Hydraulic Tank	1012015	Figure 7-6	1
Weldment, Burner Box Lid, Lh	1009192	Figure 7-27	1
Weldment, Burner Box Lid, Rh	1009193	Figure 7-27	2
Weldment, Idler Wheel	856832	Figure 7-1	22
Weldment, Lever, Right Side, Lh	1012902	Figure 7-10	24
Weldment, Lever, Right Side, Rh	1012901	Figure 7-10	25
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Weldment, Pump Cable Bracket	1011926	Figure 7-23	10
Weldment, Rear Cluster Frame	1011801	Figure 7-19	2

Description	Part Number	Figure #	Item #
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Weldment, Screed Vibrator	1012066	Figure 7-21	1
Weldment, Top Back Access Panel	1011827	Figure 7-5	3
Weldment, Walkboard, 1000G	1011904	Figure 7-35	1
Weldment,1000/7000 Wear Plate	1006289	Figure 7-26	18
Welment, Top Back Lower Panel	1011833	Figure 7-5	9
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Wire, 14Ga, Purple	35174	Figure 7-37	Ref
Yoke,Track Idler, Front	811333	Figure 7-1	21

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