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Bark Blower™

Model BB-302

Parts and Operator's Manual

Model **SB** Serial No._____

INDEX

Continued

SAFETY FIRST

With any piece of equipment, new or used, the most important part of its operation is **SAFETY!**

Finn Corporation encourages you and your employees to familiarize yourselves with your new equipment and to stress safe operation.

The first six pages of this manual are a summary of all the main safety aspects associated with this unit. Be sure to read completely before operation of machine.

This symbol is used throughout the operation and maintenance sections of this manual to call attention to safety procedures.

- Pay Attention -

DANGER: **Immediate hazards which WILL result in severe personal injury or death.**

WARNING: **Hazards or unsafe practices which COULD result in severe personal injury or death.**

CAUTION: **Hazards or unsafe practices which COULD result in minor personal injury or product or property damage.**

IMPORTANT: Indicates that equipment or property damage could result if instructions are not followed.

NOTE: Gives helpful information.

Finn Corporation

CALIFORNIA

Proposition 65 Warning

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

CALIFORNIA

Proposition 65 Warning

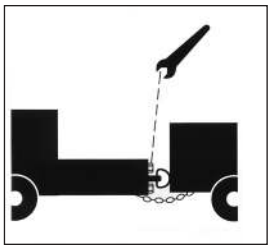
Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

BARK BLOWER SAFETY SUMMARY SECTION

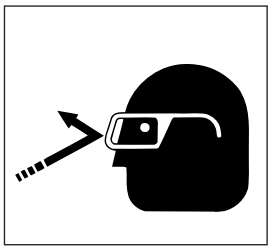
It is important that all operators of this machine are familiar with all the safety aspects mentioned below before operating the machine. Always keep a copy of this manual with the machine. It is the responsibility of the operator of the machine to fully understand this safety section. Remember that YOU are the key to safety. Good safety practices protect not only you but also the people working with and around you. Keep in mind that this safety sheet is written for this type of machine only. Practice all other usual and customary safe working precautions; and above all, remember that safety is up to you.

I. PRE-START EQUIPMENT CHECK (equipment check is to be made with the engine off):

1. Check hitch and hitch bolts, safety chains, lights, brakes and breakaway switch. Verify that the hitch ball or pintle hook is the correct size for the coupler.

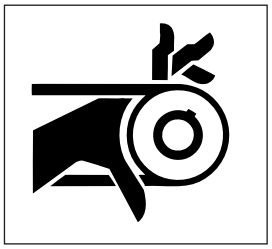


2. Verify that all guards are in place.
3. By carefully looking into the blower hopper and transition, inspect for and remove any foreign objects. Follow OSHA lockout/tagout procedure (29 CFR 1910.147)
4. Inspect all hydraulic hoses and tubes for cracks, bulges or damage. If hose is bad, replace immediately.
5. Inspect the material discharge hose and connections for cracks or damage. If damage is found, replace affected part immediately.



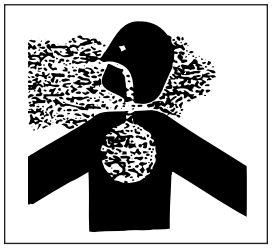
II. MACHINE OPERATION:

1. Always wear safety goggles when operating or feeding the machine. Other safety attire such as safety shoes, ear protection, gloves, hard hats, dust masks, etc., should be worn as required by warning decals on machine, operator's manuals, or job requirements. Remove rings, watches, etc. Avoid loose fitting clothing which may get caught in rotating machinery.
2. Do not override or tamper with the safety shutdown switches on the folding door or discharge. If switches fail, use OSHA lockout/tagout procedure (29 CFR 1910.147) until switches are repaired or replaced.
3. Do not operate the machine without all guards in place.



4. Never attempt to connect or disconnect the discharge hose while the engine is running.
5. Make sure that no one is working in or on the machine. Make sure the discharge area is clear of all persons, animals, etc. Signal "All Clear" before starting the engine. Keep unauthorized personnel away from the machine and discharge hose at all times.

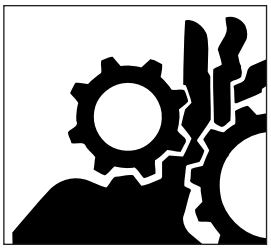
6. The driver of the towing vehicle is responsible for the safety of the operator(s) and feeder(s) of the machine. Make sure the driver is aware of and avoids all possible hazards, such as tree limbs, low power lines, etc.
7. Do not allow anyone to ride on the trailer or any other part of the blower for any reason.
8. Never operate machine in an enclosed area without venting the exhaust of both the equipment and the tow vehicle. Deadly carbon monoxide fumes can accumulate.



9. Never operate this or any other machinery when fatigued, tired, under the influence of alcohol, illegal drugs or medication. You must be in good physical condition and mentally alert to operate this machine.
10. Never modify the machine. Never remove any part of the machine (except for service and then reinstall before operating).
11. During application, high pressure can be exerted at the end of the hose. Always establish and maintain good footing and hold the hose firmly. Extra personnel may be required to help direct and hold the hose, especially when working on slopes. The proper technique for hose holding personnel is to firmly grasp the hose under both arms. Never hold the hose so it goes between the legs.

12. The blower discharges material at pressures and velocities that can cause severe bodily injury. Do not aim discharge at people, animals, etc. Only aim the discharge at the intended discharge area. Unless properly protected, do not place hand into the discharge stream.

13. Do not open any doors or access panels while machine is in operation. Severe injury may result from rotating parts.



14. Do not attempt to pull anything out of the blower hopper when machine is in operation. Shut down the engine, using OSHA lockout/tagout procedure (29 CFR 1910.147) before removing any foreign objects. Signal "All Clear" before restarting the machine.

15. When leaving the blower unattended for any reason, be sure to:

    A. Shut off conveyor drive.

    B. Shut off vehicle engine and blower engine.

    C. Place transmission of the vehicle in "neutral" or "park".

    D. Set parking brake firmly.

    E. Lock ignition and take keys with you.

    F. Lock vehicle cab.

    G. If on a steep grade, block the wheels.

    These actions are recommended to avoid unauthorized use, runaway, vandalism, theft and unexpected operation when the equipment is restarted.

16. Do not read, eat or otherwise lose or lessen your attention in any manner while operating the blower. Operating is a full time job.

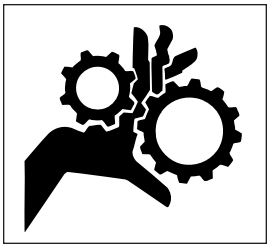
17. Be careful in getting on and off the blower, especially in wet, icy, snowy or muddy conditions. Clean mud, snow or ice from steps, fenders and footwear.

18. All personnel operating and/or around the machine must be aware that the blower can be controlled via remote control. For safety reasons and to prevent accidental starting, always keep the power switch on the remote receiver in the "OFF" position when the remote control is not being used.

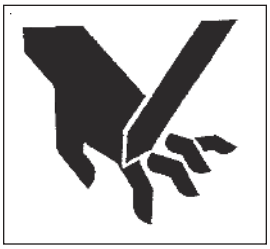
20. Turn slowly and travel on rough surfaces and side slopes carefully, especially with a loaded blower body.

III. MAINTENANCE:

1. Before servicing the machine, turn off engine and allow all moving parts to stop. Disconnect the battery cables to prevent accidental starting of the machine. Tag the engine operating area to show that the machine is being serviced. Use lockout/tagout procedure (29 CFR 1910.147).



2. Take extreme care when adjusting or replacing knives. Knife edge is very sharp and can cause severe bodily injury.



3. Radiator maintenance. Liquid cooling systems build up pressure as the engine gets hot. Before removing the radiator cap, stop the engine and let the system cool. Remove the radiator cap only after the coolant is cool.

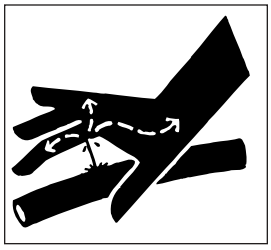
4. Battery maintenance. Lead-acid batteries contain sulfuric acid which may damage eyes or skin on contact. Always wear a face shield to avoid acid in the eyes. If acid contacts eyes, flush immediately with clean water and get medical attention. Wear rubber gloves and protective clothing to keep acid off skin. Lead-acid batteries produce flammable and explosive gasses. Keep arcs, sparks, flames, and lighted tobacco away.

5. Filling of fuel. Never fill the fuel tank with the engine running, or while smoking or when near an open flame. Never smoke while handling fuel or working on the fuel system. The fumes in an empty container are explosive. Never cut or weld on fuel lines, tanks, or containers. Move at least 10 feet (3 meters) away from fueling point before starting engine. Wipe off any spilled fuel and let dry before starting engine.

    NOTE: Be careful not to allow fuel, lubricant, hydraulic fluid, or cooling fluids to penetrate into the ground or be discharged into the water system. Collect all used fluids and dispose of them properly.

6. It is recommended that only authorized genuine FINN replacement parts be used on this machine.

7. Do not use ether cold start fluid if engine is equipped with glow plug type preheater or other intake manifold type preheater. It could cause an explosion or fire and severe injury or death.

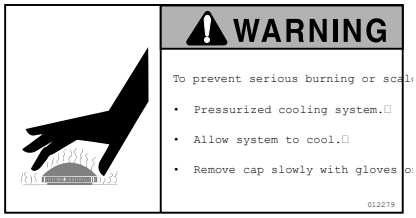


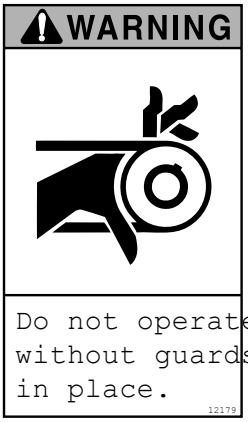
8. Diesel fuel or hydraulic fluid under pressure can penetrate the skin or eyes and cause injury, blindness or death. To check for such leaks, use a piece of cardboard or wood instead of your hand. Pressure may build up in the hydraulic system so use caution when removing the cap.

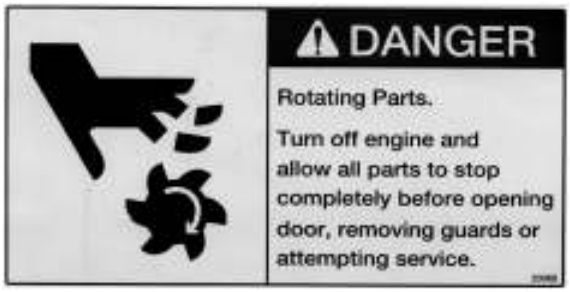
9. Some parts and assemblies are quite heavy. Before attempting to unfasten any heavy part or assembly, arrange to support it by means of a hoist, by blocking or by use of an adequate arrangement to prevent it from falling, tipping, swinging or moving in any manner which may damage it or injure someone.

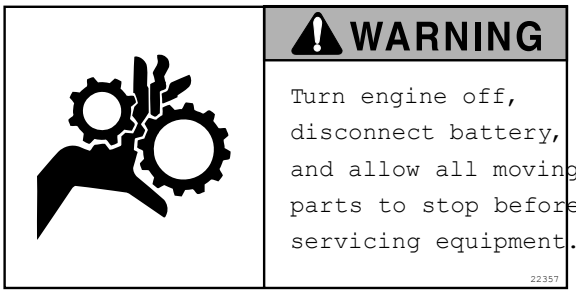
10. If repairs require use of a torch or electric welder, be sure that all flammable and combustible materials are removed. Fuel or oil reservoirs must be emptied, steam cleaned and filled with clean water before any cutting or welding on them is attempted. Do NOT weld or cut on any tank containing oil, gasoline or their fumes or other flammable material, or any container whose contents or previous contents are unknown.

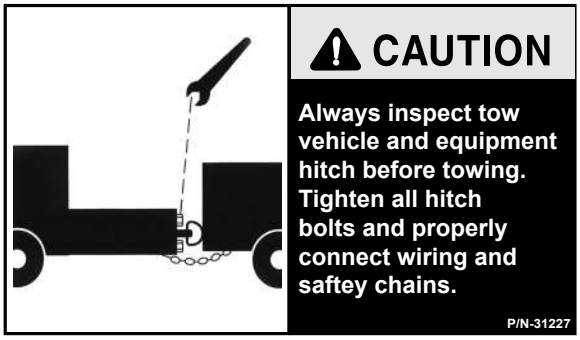
CURRENT SET OF SAFETY DECALS

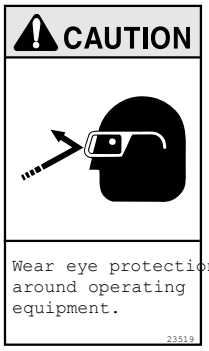


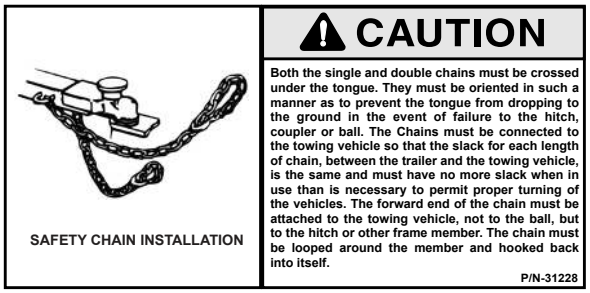


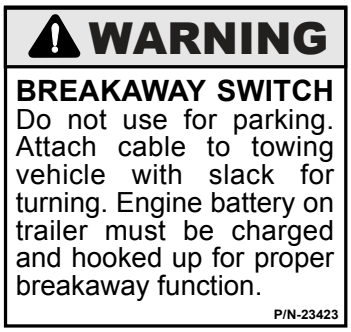


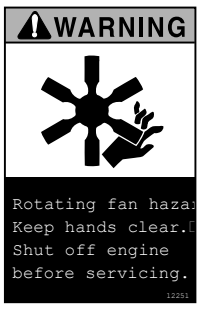












OPERATION AND MAINTENANCE OF THE FINN BARK BLOWER

THE FINN BARK BLOWER AND ITS FUNCTION:

The FINN Bark Blower is an apparatus for conveying and discharging bulk materials, such as bark mulch, at a fast and uniform rate utilizing a minimum amount of manpower. The product to be used is generally composted and processed and used as a soil amendment, a ground cover for erosion and weed control, or for decorative purposes on landscaping (bark mulch).

This manual is intended to provide step by step instructions on the operation, care, and maintenance of the Bark Blower. In addition, it contains illustrations and a complete list of parts and components for easy identification.

HOW THE BARK BLOWER WORKS:

The bulk material is loaded into the hopper by a loader or by an infeed elevator. Located at the bottom of the hopper is a drag conveyor, which conveys the bulk material to an opening containing a feed roll. The feed roll and drag conveyor feed the bulk material into a rotary air valve. The rotary air valve is specifically designed and built to handle tough, fibrous material. The function of the rotary air valve is to take the bulk material into open pockets exposed to the outside air and to convey it to an area where the pocket is closed off. At that point a high-pressure air stream, created by the blower, is channeled through the pocket carrying the material off and through the hose for discharge.

IMPORTANT: For best results and to insure safe operation and long life of the equipment, please read and follow all instructions carefully.

TOWING VEHICLE:

The truck used to tow the FINN 302 Bark Blower must be equipped with a 2-5/16” ball or pintle type hitch. This hitch should be mounted as near to the end of the truck bed as possible. The tow vehicle should be fully wired for trailer marker, turn, and stop lights as well as electric brakes.

SELECTING A MULCHING MATERIAL:

Several factors must be considered when selecting material to convey through the Bark Blower. The variety of the wood used, how it is processed, its moisture content, and the presence of foreign objects all effect the ability of the Bark Blower to convey the mulch at a uniform and acceptable rate.

The mulch material must be processed and/or screened so that a minimum of material is over 2 inches (5.1 cm) in any direction with no material exceeding 4 inches (10.2 cm) in length. The Bark Blower is not a wood processor. It only reduces mulch fibers when they protrude above the rotary air valve vanes. As the vanes rotate past the knife, the protruding fibers are sheared off. If the mulch contains long or large fibers, and if the wood fibers are harder to cut, then the machine's throughput is reduced. For example, if two mulches have the same mix of material sizes that the Bark Blower rotor must cut, but one is softwood like pine, and one is hardwood such as oak, the pine would go through at a higher rate because it is easier to cut.

Two characteristics must be considered when selecting a material: the "greenness" of the wood and the moisture of the mulch as a whole. Wood that is well seasoned is easier to cut than "green" wood. It also processes better, making a less stringy mulch. High moisture in the mulch may cause it to bridge in the hopper.

Avoid using mulches that contain any hard foreign objects such as rocks, nails, steel, cans, glass, etc. These objects could cause bodily injury as well as damage to machine components, especially the cutting knife in the rotary air valve.

PRE-START EQUIPMENT CHECK:

CAUTION: Equipment check is made with the engine off and all rotating parts stopped.

SAFETY CHECK TO INSURE OPERATOR SAFETY:

1. Check all trailer connections to the towing vehicle, as well as the condition of the safety chains, and bolts connecting the ball coupler or pintle eye to the tongue.
2. Insure that all guards are in place.
3. Tool Kit - see that it contains all prescribed items (see tool kit list, page 51).
4. Lubricate equipment - use hand gun only (see lube chart, page 20-21).
5. Check engine oil - refer to engine operator' s manual.
6. Check liquid coolant level in radiator and overflow tank (protected to -34ºF (-37ºC) when shipped).
7. Check fuel level. Use #2-D diesel fuel oil unless operating at ambient temperature below 40ºF (4ºC) or at an altitude exceeding 5000 feet (1524 meters). In these instances use #1-D fuel oil.
8. Inspect the engine air cleaner (refer to the engine operator's manual), the radiator chaff screen, and the blower air cleaner for dust and dirt.
9. Check hopper and transition for foreign objects that could injure workers, or damage equipment.
10. Check the fluid level in the hydraulic tank. Proper level is when the sight gauge is completely full when unit is sitting on level ground. (See "Hydraulics" page 9-11 for oil specification).
11. Install the discharge hose. Use clamps provided with the machine.

CAUTION: **Do not use radiator type clamps. These clamps may not hold under machine operating pressure.**

STARTING PROCEDURE:

CAUTION: **See safety section of the manual (pages 2-5) before operating the machine.**

1. Turn key counter clockwise and hold it until the glow plug indicator light goes out.
2. Turn key until starter engages and the engine fires.

NOTE: This engine has a safety system that will shut the engine off if the engine oil pressure drops below 7 psi. or if the water temperature reaches 230º Fahrenheit (110º Centigrade).

3. Check that the "ON/FUSE" and "DOOR SWITCH" lights are illuminated. If not, check the 10 AMP fuse in the control box (see Figure 2) and verify that the doors are closed at the rotary air valve.
4. Initialize the remote by turning on the transmitter.
5. Allow the engine to warm up for three to five minutes.
6. Prior to mulch application, move the throttle position to fully open, and allow the governor to control the engine speed. Governed engine speed on the FINN Bark Blower should be 2700 to 2800 RPM under load.

CREW MEMBERS AND THEIR DUTIES:

1. The Operator controls the placement of the mulch by moving and aiming the discharge hose.
2. The Loader(s) feed material to the machine by using a skid steer or loader tractor dumping directly into the hopper or by shoveling from the tow vehicle to the feed floor.

THE MATERIAL FEED SYSTEM:

The material feed system on the Bark Blower has been designed to give fast, uniform, mechanical feeding. The adjustable feeding rate and the automatic reverse control system allow the use of varied mate-

rials while obtaining maximum production. The system is an integration of the following four subsystems, all of which contribute to efficient material flow:

SUBSYSTEM 1: MATERIAL HANDLING GROUP

The four major components of the material handling group are the blower, the drag conveyor or floor, the feed roll, and the rotary air valve.

The blower is a rotary lobe, positive displacement type unit having two double lobe impellers. It is direct driven off the engine flywheel by a flexible coupling; therefore whenever the engine is running, air is being pumped. The blower is equipped with a relief valve limiting maximum air pressure to 10 psi (69 kPa), an inlet and outlet silencer for noise attenuation, and an inlet air filter.

The drag conveyor receives material from the hopper and conveys it to an opening located at the rear of the hopper, where the feed roll is located. The feed roll insures a uniform feed of bulk material to the rotary air valve. The drag conveyor is powered by a variable speed hydraulic motor, which also powers the feed roll.

The rotary air valve receives the material from the drag conveyor and pressurized air from the blower. Its primary function is to convey the material from the atmospheric air to a sealed chamber where the blower air picks it up and blows it out of the hose. To enable the Bark Blower to convey fibrous material, the rotary air valve housing is equipped with a cutting knife, and the vanes on the rotor are angled and hardened. If any long material should protrude above a vane, it will be sheared off, before the vane enters the close tolerance of the housing, by a scissor like action between the vane and cutting knife. The rotor of the rotary air valve is direct coupled and driven by a bi-rotational hydraulic motor.

SUBSYSTEM 2: HYDRAULIC SYSTEM

Hydraulic power for the Bark Blower is generated by a fixed displacement tandem hydraulic pump driven off of the engine auxiliary drive. The pump receives AW46 hydraulic fluid from the 15 gallon (57 liter) reservoir through a service valve and suction hose, and delivers it to the solenoid control valves. Also, use equal to or better than 5 micron absolute filtration. Pressure driving the two individual hydraulic circuits can be monitored on the outlets of the pump by the gauges provided.

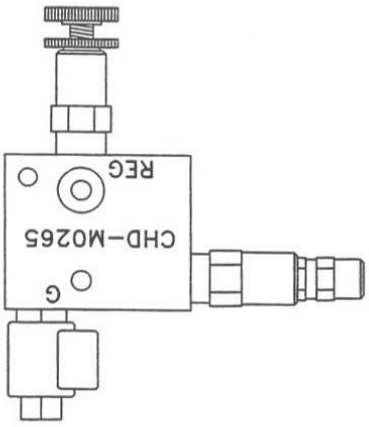
A. ROTARY AIR VALVE/FEED ROLL

The front section of the tandem pump feeds oil to the rotary air valve motor through a solenoid valve. The solenoid valve is an open center spool valve with built in relief set at 2100 psi (14500 kPa). The spool in the valve is spring centered, and is moved by actuating a 12V DC solenoid on either end of the spool. Spool movement can be checked manually by pushing the button located at either end. Energizing a solenoid produces high-pressure oil at the work port away from that solenoid. Thus, energizing the bottom solenoid on the valve channels oil from the pump to the top work port on the valve. This is "forward" position on the rotary air valve motor. Energizing the top solenoid produces "reverse" rotation on the rotary air valve motor.

B. FLOOR (DRAG CONVEYOR)/FEED ROLL

The rear section of the tandem pump feeds oil to the floor motor through a "dump" valve system. The floor speed control valve, located on the conveyor leg next to the control box is actually three valves in one manifold; a relief valve set at 1850 psi (12800 kPa) to protect this circuit, a 12 VDC normally open solenoid "dump" valve, and a flow control valve.

Oil entering this manifold flows back to tank. Energizing the solenoid valve forces oil through the flow control valve where a certain amount flows to the feed roll hydraulic motor causing the roll to rotate. Turning the adjustment knob on top of the valve increases or decreases the amount of oil going to the feed roll motor, and thus the speed. The floor is chain driven off of the feed roll motor.



Black Cartridge with 1" (25mm) Diameter Knob:
Turn Counter-Clockwise to Increase Speed.
Turn Clockwise to Decrease Speed.
Gold Cartridge with 1.5" (38mm) Diameter Knob.
Turn Clockwise to Increase Speed.
Turn Counter-Clockwise to Decrease Speed.

Figure 1

SUBSYSTEM 3: HYDRAULIC CONTROL SYSTEM

The hydraulic control system is an electrical system that controls the on-off function of the conveyor motor and the rotation direction of the rotary air valve motor. This 12-vold DC system runs off the engine electrical system. It is a self contained PLC system, located in the control box, which controls the solenoid valves in the hydraulic system.

When the “start” button is pushed, the “forward” solenoid on the solenoid valve is energized, starting the air lock and the drag conveyor, assuming the conveyor toggle switch is “on”. As material drops into the top of the rotary air valve, the pressure to turn the rotary air valve varies. If the pressure reaches the relief valve setting in the solenoid control valve, the oil is channeled through the relief to the hydraulic tank. Placed in the forward work line is a normally open pressure switch, when the pressure in the work line exceeds the pressure switch setting, the switch then closes and triggers the “auto-reverse” sequence.

During “auto-reverse”, the rotary air valve reverses direction for approximately one second. While in reverse, it also cuts power to the floor, shutting it off. At the end of the auto-reverse cycle, power is restored to the “forward” solenoid, putting the rotary air valve back into forward.

After the “start” button is pushed, there is a time delay before the floor begins operation. This delay keep material from feeding into the rotary air valve until the auto-reverse duration has passed. In the case of multiple auto-reverses, it keeps the transition area above the rotary air valve clear of any new material. There is also a time delay for the pressure switch. Since the electronics can reset faster than the hydraulics, this time delay activates the pressure switch after its set time passes following an auto-reverse cycle. This small amount of time, approximately 0.4 seconds, allows the relief valve to fully close and the flow switch to return to the open position, eliminating a false signal which would trigger another auto-reverse cycle.

When the “stop” button is pushed, power is cut to the floor and rotary air valve solenoids. Shutting off the ignition key can also stop the hydraulics. Please note that the hydraulics will also stop if either transition door, between the floor and the rotary air valve, is opened and cannot be restarted unless the doors are closed and the start button is pushed.

FIGURE 2

Main Control Panel

FIGURE 3
Radio Remote Transmitter

FIGURE 4
Radio Remote

SUBSYSTEM 4: RADIO REMOTE CONTROL

This Bark Blower is equipped with a Radio Remote to control the Material Feed Start and Stop. It also contains an Emergency Stop button that activates the safety shutdown system on the engine and the engine throttle control. To activate the remote, simply press and hold the small red button on the top of the transmitter. The two indicator lights on the top will begin alternately flashing. When they are no longer flashing, the unit is on and ready for operation.

To utilize the Material Feed Start/Stop feature of the Radio Remote, the initial "START" must occur at the Start/Stop station on the Bark Blower. The hard-wired Start/Stop on the unit is the primary and overriding set of controls. Pushing the "Stop" button, as well as a loss of power to the Material Feed Control (i.e. open transition door or blown main fuse), deactivates the Material Feed Start/Stop feature of the Radio Remote until power is restored to the Material Feed Control and the "Start" button on the machine is pushed.

BARK BLOWER WITH POWER STATUS LIGHTS:

The Bark Blower is equipped with four Power Status Lights on the Material Feed Control Box. Each glowing light indicates that a function is ready for operation. A list of the lights as they appear from top to bottom and the meaning of each follows:

LIGHT COLOR	FUNCTION	INDICATOR
Blue/Clear	ON/FUSE	Should be glowing when engine key is on. Shows power from the ignition switch through the 10 amp main fuse into the Material Feed Control Box.
Green	Door Switches	Should be glowing when engine key is on if the transition doors at the air lock are both closed and the interlock switches are making proper contact.
Amber	Feeding	Should be glowing whenever the "START" button is pushed activating the Bark Blower hydraulic system*.
Red	Auto-Reverse	Should be glowing whenever the unit Auto-Reverses while feeding*.

* Note: The amber light will deactivate whenever the Red Auto-Reverse light comes on.

MULCHING WITH THE BARK BLOWER:

1. Check all areas listed under "Pre-Start Equipment Check" (pages 7).
2. Start the engine following all the steps listed under "Starting Procedure" (page 8).
3. Set the floor speed control to ½ to 1 turn from minimum.
4. Press the "START" button on the start/stop station to activate the material start/stop feature on the remote.
5. Put the floor switch to the "on" position.
6. Press material stop on the remote.
7. Increase the throttle to full.
8. With a firm grip on the end of the hose, press the material start button on the remote.
9. Adjust floor speed for smooth flow. Watch for auto-reversing of the air lock as well as shock waves through the hose.
10. At the end of the load, press the material stop, shut down engine, and shut off remote control transmitter.

TROUBLE SHOOTING CHART:

Symptom	Probable Cause	Remedy
No material discharge.	Floor not turning.	Turn floor switch on. Reset speed control.
	Electrical control system off.	Check status lights.
	Feed roll jammed.	Clear jam, reset speed control.
Air valve auto-reverses excessively.	Feed rate too high.	Slow speed control.
	Dull air valve knife.	Sharpen and reset knife.
	Poor material.	Change material.
Air valve motor stalls in reverse, cycling forward-reverse. or hose outlet.	Over-feeding.	Slow speed control.
	Foreign object in transition	Shut-off engine. Remove object.
Air valve motor stalls in forward, no auto reverse.	Knives dulled or chipped: Knife clearance too large.	Sharpen blades reset knife clearance.
Feed roll stops.	Floor speed control set too low.	Reset speed control ½-1 turns from minimum.
	Foreign object in material.	Stop engine-remove object.
	Relief too low on roll.	Reset relief to 1850 psi.

MAINTENANCE:

CAUTION: Turn off engine and disconnect battery before servicing equipment.

- AFTER EVERY 50 HOURS OF OPERATION:

1. Lubricate the bearings on the floor, the blower, and on each end of the feed roll shaft. Wipe each bearing before lubrication to remove dirt and prevent overheating.
2. Blow out radiator fins with dry compressed air. Do not use a pressure washer. This will damage the radiator fins.
3. Remove and clean air cleaner elements on the engine and rotary blower using dry, clean compressed air.
4. Check the oil in the rotary air valve gearbox.
5. Check the gear case on the blower (see Lube Chart pg. 20-21).
6. Check the tension on the floor conveyor chain. Adjust so chain slats clear bottom pans on the return side by ½" (13 mm) by turning the jackscrews on each end of the idler shaft. Adjust evenly; making sure the shaft does not "cock" sideways.
7. Check rotary air valve knives (or knife) for wear, chips, and clearance. To change:

DANGER: Knives have very sharp edges that can cause serious injury. Handle with care.

Remove five bolts holding knives and transition doors to rotary air valve knife shelves.

Remove doors and knives.

c) Clean all dirt or debris from shelves.

d) Back out the two center jacking screws on each shelf.

e) Compare replacement knives to those removed. If the new knife is wider, back the two outside jacking screws out at least this amount. Count the turns, and back both screws out evenly.

f) Lay the knife on the knife shelf. Insure the knife is installed with the cutting angle edge facing down as shown in Figure 4. Install loosely the two outer, and the middle knife mounting bolts. Tighten the mounting bolts just enough to hold the knife in position while still allowing it to be moved.

g) Install a block of wood (approximately 2" x 4" x 6" long (5x10x15 cm)) in between the knife and the closest vane at the center of the rotor length. Pinch the wood between the knife and the vane by turning the rotor shaft with a pipe wrench.

h) While keeping pressure on the knife, tighten the three mounting bolts.

i) Remove the wood block, and check the clearance between the knife and the rotor vane using a feeler gauge at the three mounting bolts.

NOTE: If the knife touches the vane at any point, loosen the three mounting bolts, back off the jacking screws evenly, and repeat steps g, h, and i until clearance is obtained.

j) Loosen the three mounting bolts, and use the jacking screws to close the gap. One full turn of the screw moves the knife 0.070 inches (1.8 mm).

k) Tighten mounting bolts as in step g and h.

l) Repeat steps, g, h, i, and j until a knife to vane clearance of no more than 0.006 inches (0.15 mm) is obtained at the closest point(s).

m) Once set, install the other two mounting bolts and tighten.

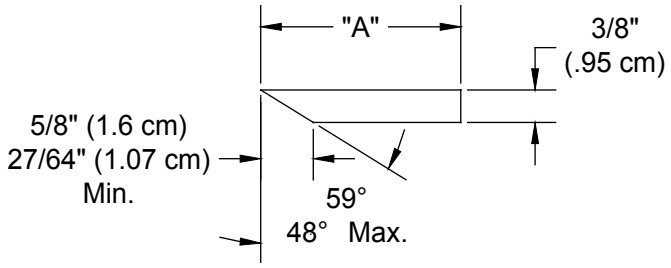
n) Run two center jacking screws in to contact the knives. Lock all jacking screws in place with the jam nuts.

o) Remove three mounting bolts for transition door, and install the door.

p) Repeat procedure for other knife (if equipped).

q) Immediately have removed knives sharpened. Do not attempt to grind the knives by hand. They must be ground straight and true on a surface grinder by an experienced knife sharpener. Grind the knives to the profile shown below:

Figure 4



When dimension “A” has been reduced to 2- 3/8 inches (6 cm) the knife must be discarded.

AFTER FIRST 100 HOURS OF OPERATION:

1. Change engine oil and filter after 100 hours, every 250 hours after that following engine manufacturer's recommendations.
2. Change the gear box oil on the blower, use Mobil SHC 630 synthetic only. Change oil every 1000 hours thereafter.
3. Change the gearbox oil on the rotary air valve using SAE 80W90 oil, filling to the side plug. Change every 1000 hours thereafter.

EVERY 3 MONTHS OR 3000 MILES (4800 KM):

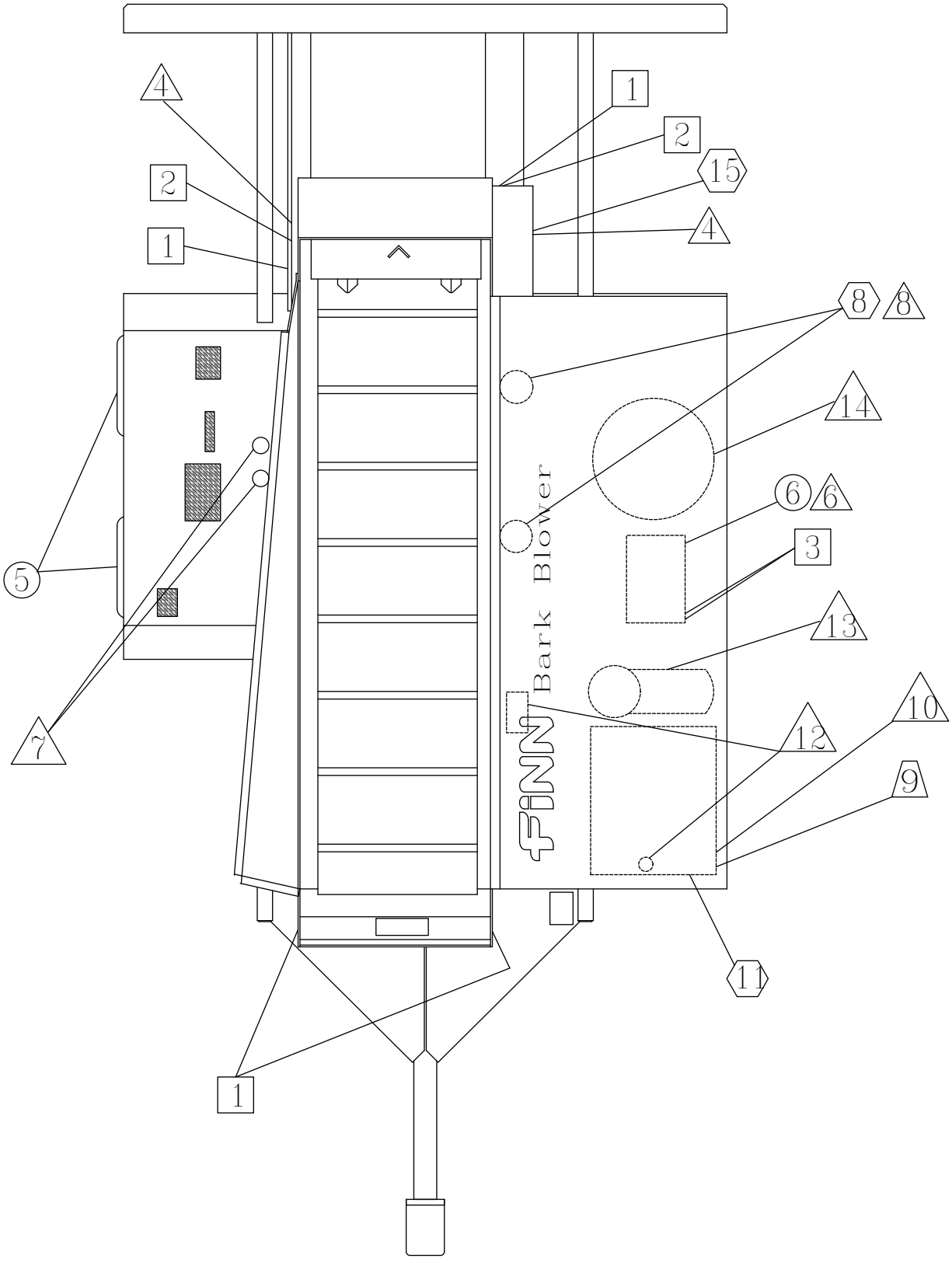
1. Check and adjust trailer brakes.
2. Re-torque wheel lug nuts (85-95 ft.lbs. (12-13 kg-m)).
3. Check tire condition.

EVERY 12 MONTHS OR 12000 MILES (19300 KM):

1. Inspect and repack wheel bearings.
2. Inspect trailer brake magnets, pads, drums, etc.

WINTER SHUTDOWN AND STORAGE:

1. Blow all material out of machine, turn off engine and disconnect battery cables.
2. Remove the inlet elbow to the blower air chamber and coat internals of impeller cylinder with a rust preventative such as "WD-40". Reconnect piping to prevent foreign debris from entering blower chamber. Rotate drive shaft three or four revolutions. Repeat this process every month or as conditions may require.
3. Store machine inside or protect as best as possible.


4
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FINN Bark Blower

LUBRICATION CHART ADDENDUM

Ref. No.	Location	Lubricant	Frequency	Number
1	Conveyor Bearings (Idle & Drive)	CL	Weekly	4
2	Feed Roll Bearings (Idle & Drive)	CL	Weekly	2
3	Blower Bearings	CL	Weekly	2
4	Grease Air Lock Bearing	CL	Weekly	1
	Grease Airlock Lip Seals	CL	Daily	2
5	Tire Air Pressure		Weekly	5
	Wheel Bearings	CL	Annually	4
6	Check Oil Level-Blower	BO	Daily	1
	Change Oil-Blower	BO	Annually	1
7	Check Fuel Level	DF	Daily	1
8	Check Hydraulic Oil Level	HO	Daily	1
	Change Hydraulic Oil & Filter	HO	Seasonally	1
9	Change Engine Oil & Filter	MO	See Engine Manual	1
10	Check Engine Oil Level	MO	Daily	1
11	Change Engine Coolant	AF	Seasonally	1
12	Check Coolant Level	AF	Daily	1
13	Check Air Cleaner-Engine		Daily	1
14	Check Air Cleaner-Blower		Daily	1
15	Check Airlock Gearbox Oil Level	GO	Monthly	1
	Change Air Lock Gear Box Oil	GO	Seasonally	1

LUBRICANT OR FLUID USED

CL	Chassis Lubricant
MO	Motor Oil SAE 10W-40
AF	50/50 Anti-Freeze and Water
DF	Diesel Fuel
HO	Hydraulic Oil, Gulf 46AW, Mobile DTE25, or Shell Tellus 46
GO	90 W Gear Oil
BO	Mobil SHC 630 Synthetic Oil

TIME KEY

Daily (8 hours) 

Weekly (40 hours) 

Seasonally (500 hours) 

Annually (1000 hours) 

See Engine Manual 

FLUID CAPACITIES

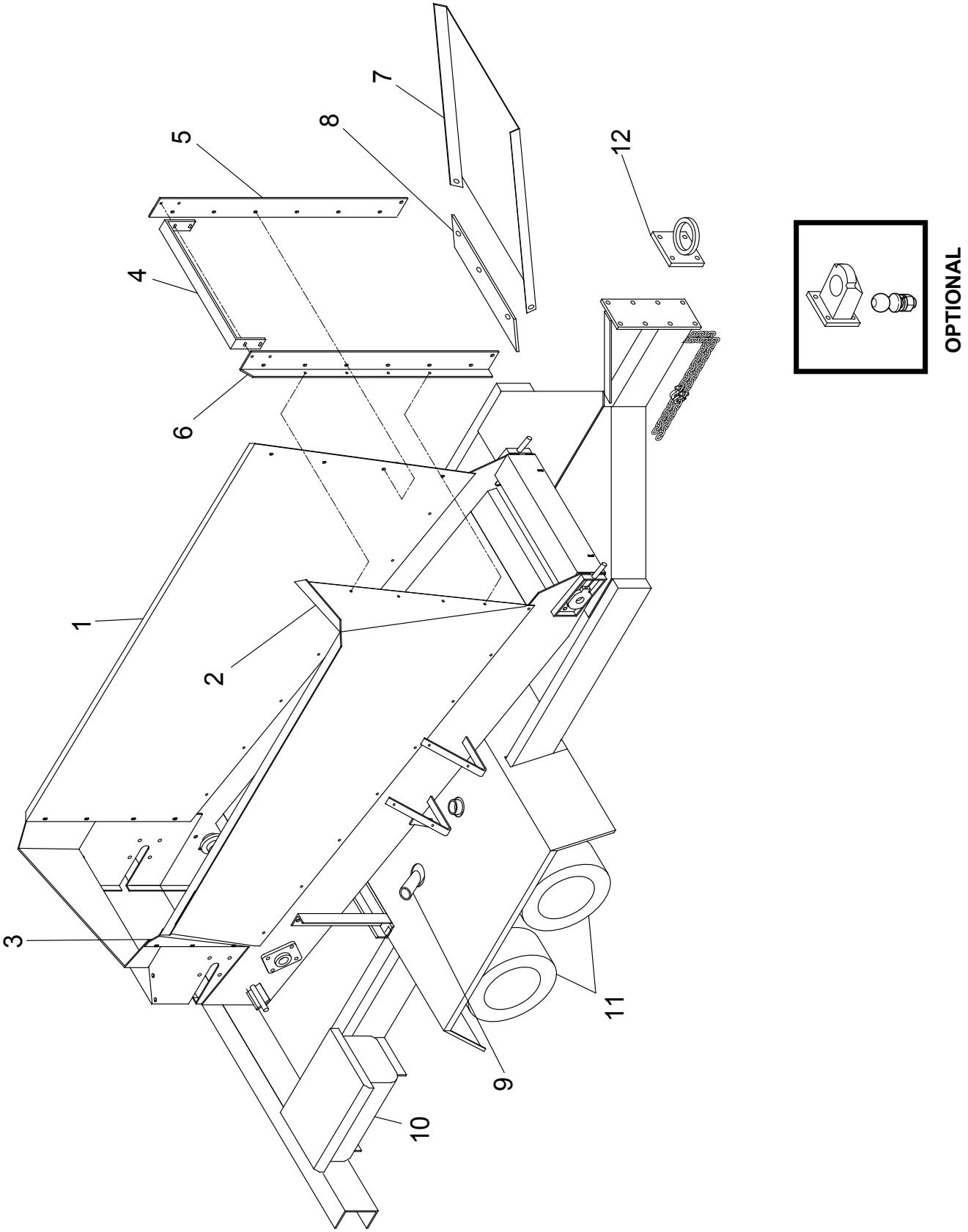
Fuel-15 Gallons (57 L)
Hydraulic Oil-15 Gallons (57 L)
Engine Coolant-1.5 Gallons (6 L) 50/50 Mix Only
Engine Oil-6 Quarts (6 L)
Gear Box Oil-9 ounces (.26L)
Blower Oil - See Blower Manual

NOTES

BARK BLOWER

Model 302
Parts Manual

Model SB

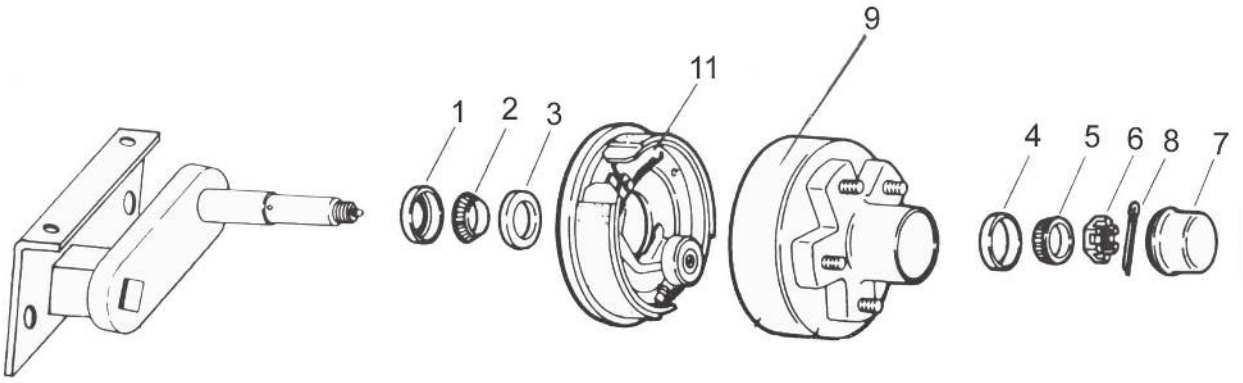


WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

HOPPER & TRAILER PARTS

Ref. No.	Part Number	Description	No. Req'd
1	055531	Hopper Left Side	1
2	055530	Hopper Right Side	1
3	055533	Hopper Corner	1
4	055583	Front Cross Member	1
5	055529-01	Front-Left Support Angle	1
6	055529-02	Front-Right Support Angle	1
7	055638	Feed Chute	1
	055629	Material Retaining Flaps	2
	055577	Feed Chute Support Jack Base	1
	055577-03	Support Jack Lower Tube (Inner)	1
	055577-04	Support Jack Top Tube (Outer)	1
	FW71225	Support Jack Locking Snap Pin	1
	007913	Retaining Tie Back Strap	2
8	055623-01	Lower Feed Chute Seal	1
	055582-21	Seal Retaining Strap	1
9	055593	Fuel Tank	1
	007914	Fuel Cap	1
	080305	Fuel Gauge	1
	000575	Shut-Off Drain Cock	2
10	052160	Tool Box	1
11	055737	Tire & Rim Assembly	4
	055736	Axle with Brake Assembly (See Page 26-27)	2
12	080043	Tow Ring (Standard)	1
	005134	Coupler (Optional)	1
	005135	2 5/16 Ball (Optional)	1
	190033	Safety Chain	6'
	004888	Coupling Link	2
	023485	Clevis Grab Hook	2
		NOT SHOWN FOR CLARITY	
	022588	Trailer Jack	1
	055527	Engine & Blower Canopy	1
	055709	Canopy Support	2
	055594	Hydraulic Reservoir (Shown on Page 37)	1

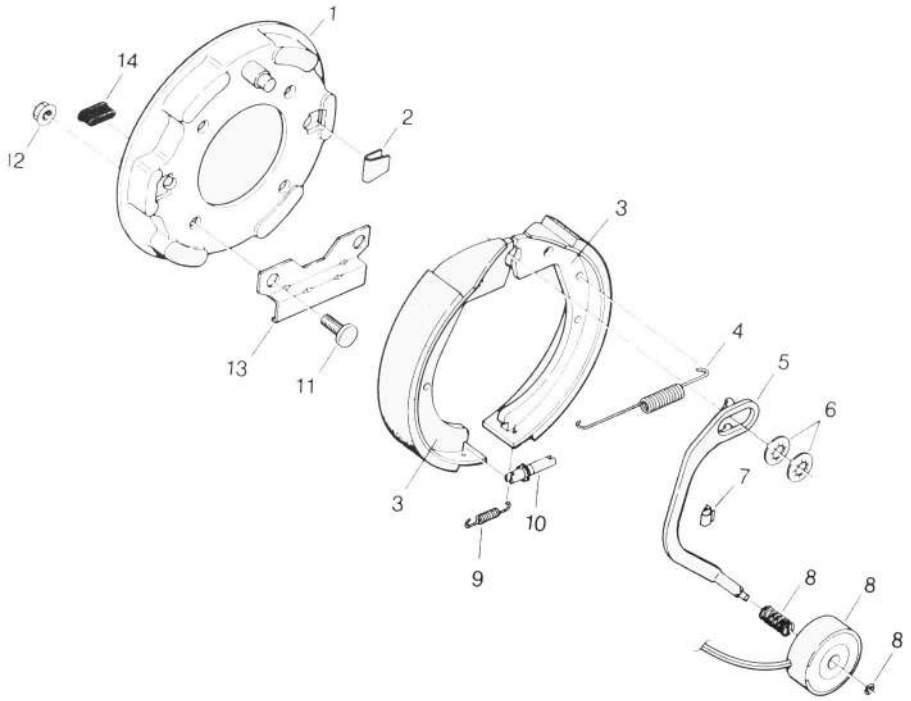
WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE



AXLE & HUB PARTS

Ref. No.	Part Number	Description	No. Req'd
	055736	Axle Assembly	2
1	WL10-9	Grease Seal	1
2	WL31-31-2	Inner Bearing Cone	1
3	WL31-31-1	Inner Bearing Cup	1
4	WL31-31-1	Outer Bearing Cup	1
5	WL31-31-2	Outer Bearing Cone	1
6	WL6-1	Spindle Nut	1
7	WL21-3	Grease Cap	1
8	WL19-2	Cotter Pin	1
9	WL8-247-5	Hub & Drum	1
	WL25-53	½ - 20 Stud	5
10	055737	Rim & Tire Assembly	1
	055737-R	Rim	1
	055737-T	Tire	1
11	WL23-26	Left-Hand Brake Assembly (See Page 27)	1
	WL23-27	Right-Hand Brake Assembly (See Page 27)	1

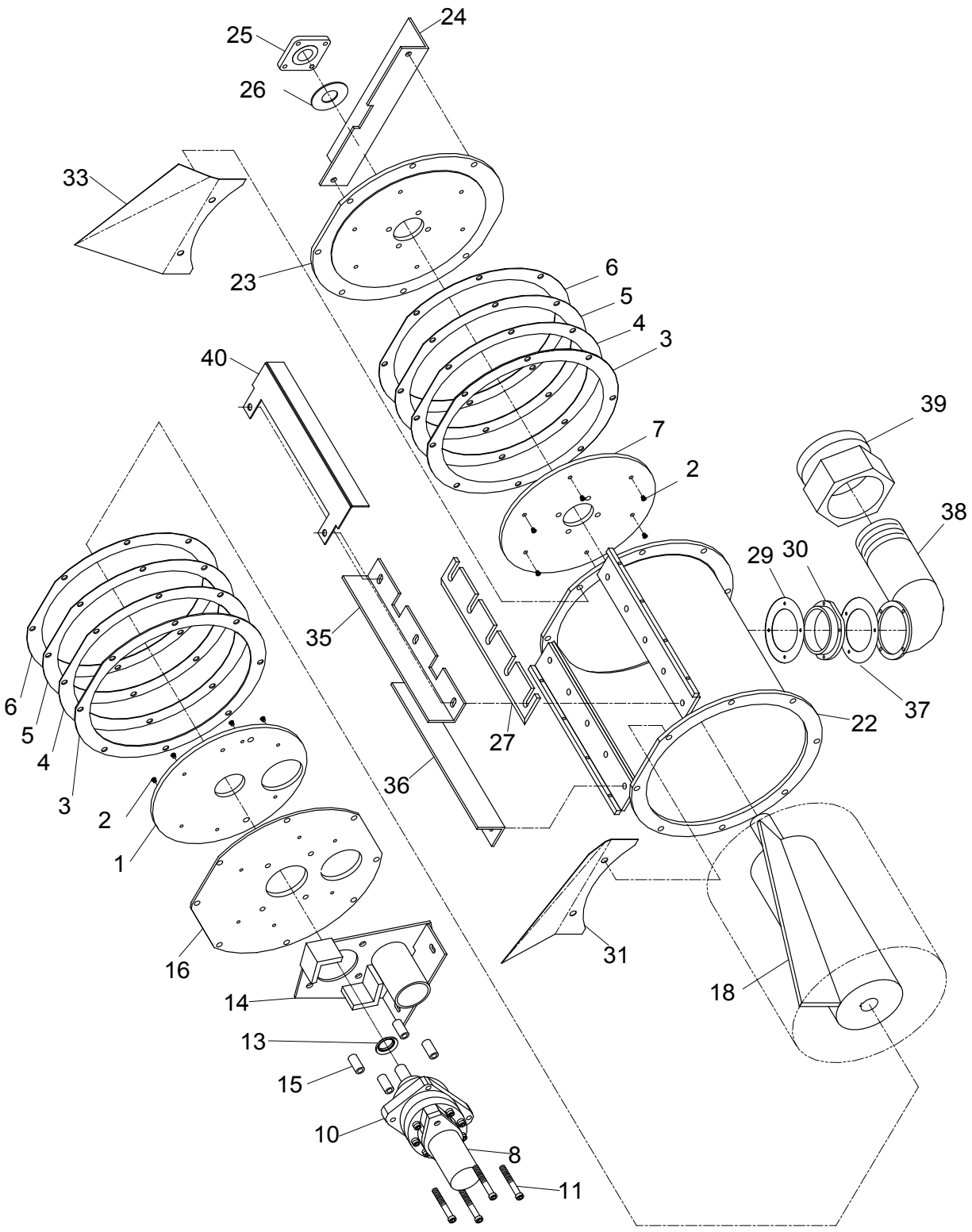
WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE



BRAKE PARTS

Ref. No.	Part Number	Description	No. Req'd
	WL23-26	Left-Hand Brake Assembly	1
	WL23-27	Right-Hand Brake Assembly	1
1	WL36-19-10	Backing Plate Assembly	1
2	WL47-19	Left-Hand Actuating Lever Arm	1
	WL47-20	Right-Hand Actuating Lever Arm	1
3	WL05-067	Washer	1
4	WL27-5	Wire Clip	3
5	WL46-9	Retractor Spring	2
6	WL71-47	Shoe & Linkage Kit:	1
	WL40-17	Secondary S & L	1
	WL40-21	Primary S & L	1
7	WL43-4	Adjuster Assembly	1
8	WL46-18	Adjusting Screw Spring	1
9	WL71-104	Magnet Kit:	1
	WL27-9	Magnet Clip	1
	WL42-97-1	Magnet	1
	WL46-80	Magnet Spring	1
10	WL46-7	Plug	1
11	WL46-16	Wire Grommet	1
12	WL7-41	Brake Mounting Bolt	4
13	WL6-17	Brake Mounting Nut	4

WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

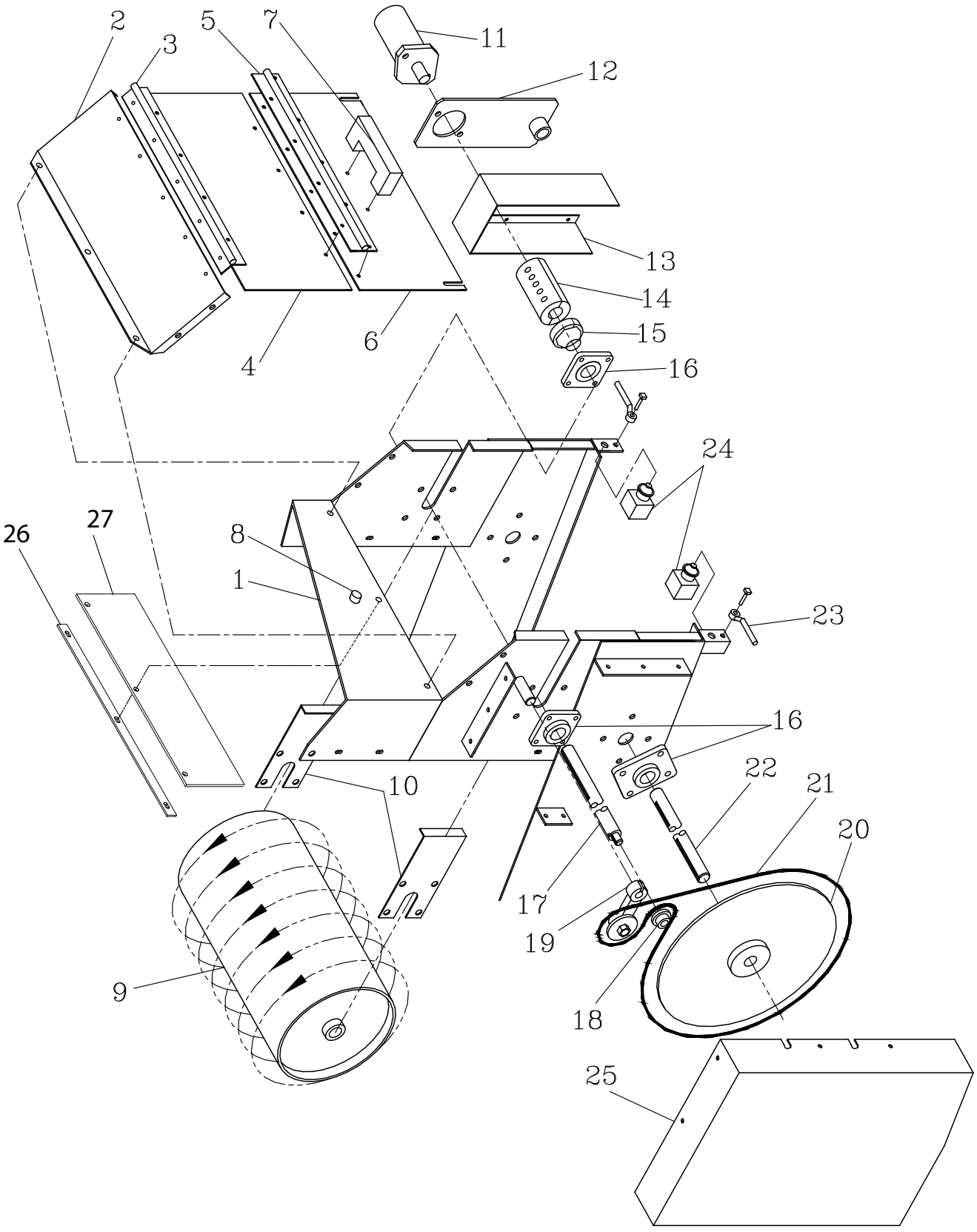


WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

AIR LOCK PARTS

Ref. No.	Part Number	Description	No. Req'd
	055653	Air Lock Assembly	1
	055657	Air Lock Seal Kit	1per
1	055442-01	Inlet Seal Plate	1per
2	055694	3/8-16 UNC X 3/4 Lg. Low Profile Soc Hd Bolt	8per
3	055148-01	1/32" Thick Style 50 Gasket	A/R
4	055148-02	1/16" Thick Style 50 Gasket	A/R
5	055148-03	1/64" Thick Style 50 Gasket	A/R
6	055148-04	0.006" Thick Style 50 Gasket	A/R
7	052128	Outlet Seal Plate	1per
8	055552	Hydraulic Motor	1per
9	055517	Motor Gasket (Not Shown)	1per
10	055464	Air Lock Gearbox	1per
11	X08060SH	1/2-13 X 3-3/4" Lg. Soc Hd Cap Bolt	4per
12	055464-1B	Gearbox Lip Seal (Not Shown)	1per
13	055700	Gearbox Slinger Seal	1per
14	055580	Inlet Flanged Gearbox Mount	1per
15	052139-03	Spacers (Must be within 0.002" of ea. other)	4per
16	055439-02	Air Lock Inlet End Plate	1per
17	055721	Inlet Seal Plate (Not Shown)	1per
18	055423	Finished Rotor	1per
19	Z0408	1/4-20 UNC X 1/2" Lg. Set Screw (Not Shown)	2per
20	055463	Hex Plug (Not Shown)	2per
21	055402	Hardened Rotor Key (Not Shown)	1per
22	055644	Air Lock Housing	1per
23	052103	Air Lock Outlet Plate	1per
24	055579-03	Air Lock Mounting Foot	1per
25	055701	Rotor Shaft Bearing	1per
26	SK990805	Bearing Seal	1per
27	055113	Chipper Knife	1per
28	XS0444	Chipper Knife Alignment Screw (Not Shown)	4per
29	055440	Plastic Shim	A/R
30	055597	Discharge Insert	1per
31	055619-01	Right Hand Deflector	1
32	055623-02	Deflector Skirt (Not Shown)	1
33	055619-02	Left Hand Deflector	1
34	055623-02	Deflector Skirt (Not Shown)	1
35	055635-01	Air Lock Seal Angle w/Knife	1
36	055635-02	Air Lock Seal Angle w/o Knife	1
37	055440-01	Discharge Elbow Gasket	1
38	055630	Disharge Elbow	1
39	055374A	Hose Adapter	1
40	F302-0005	Knife Screw Cover	1

WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

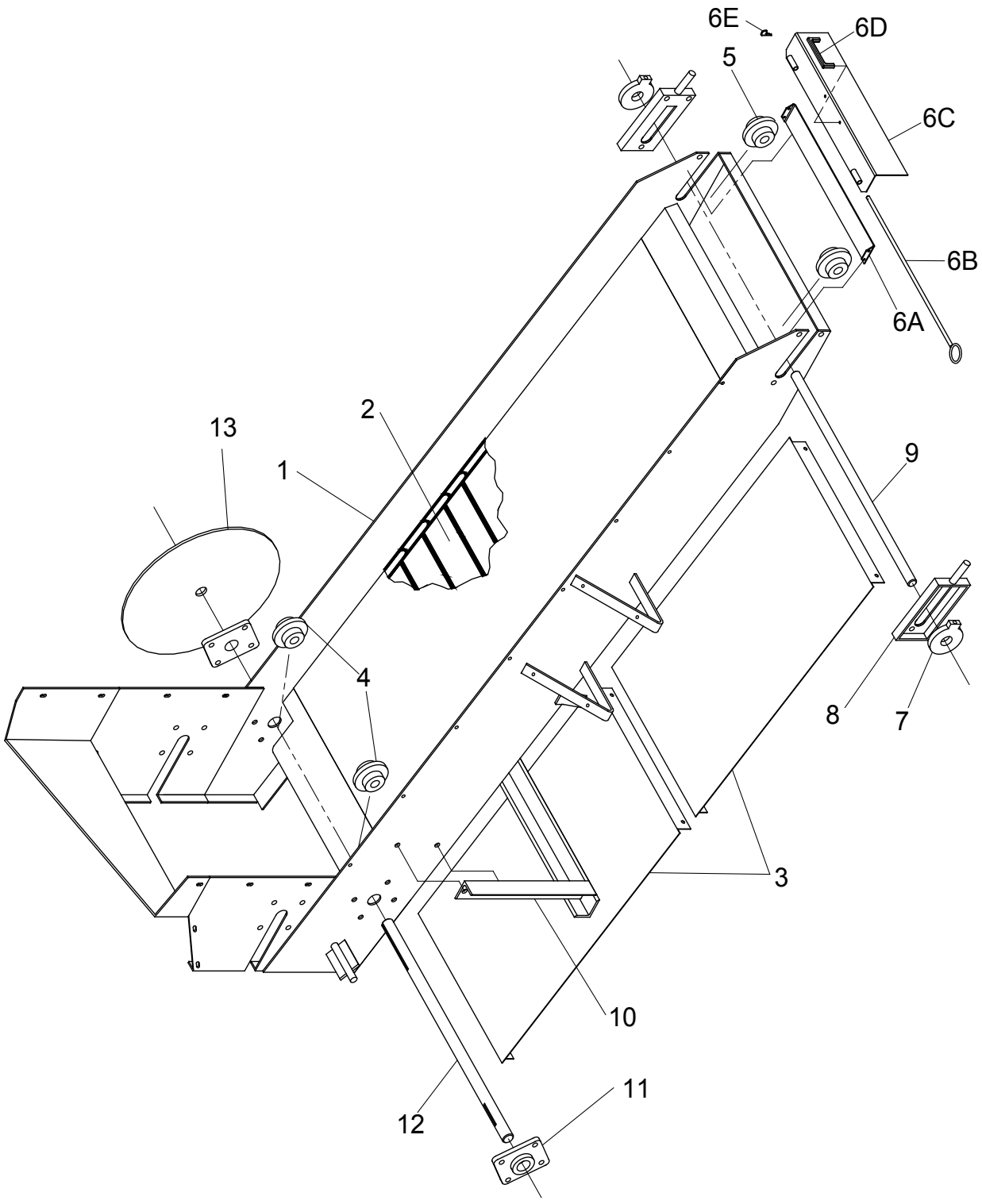


WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

FEEDER PARTS

Ref. No.	Part Number	Description	No. Req'd
1	055636	Conveyor Weldment	1
2	055532-01	Feeder Top Cover	1
3	055631-01	Top Cover Hinge	1
4	055532-02	Feeder Door (Center Panel)	1
5	055631-02	Feeder Door Hinge	1
6	055532-03	Feeder Door (Bottom Panel)	1
7	055586	Feeder Door Handle	1
8	085152	Feeder Door Stop	1
9	055625	Feed Roll	1
10	055563-01	Feed Roll Closure Plate	2
11	055698	Feed Roll Hydraulic Motor	1
12	055267-01	Hydraulic Motor Mounting Plate	1
	004630	Torque Arrester Insert	1
13	055537	Coupling Guard	1
14	055545	Feed Roll Coupling	1
	190123-32	Coupling Key	1
15	021440	Feeder Roll Bushing	1
	190123-32	Bushing Key	1
16	055502	1-1/4" Shaft Bearing	4
17	055596-03	Feed Roll Shaft	1
18	055544	Drive Sprocket	1
	190122-16	Drive Sprocket Key	1
19	055486	Idle Sprocket Tensioner	1
	055572-06	Conveyor Spacer	1
20	055547	Driven Sprocket	1
	190123-20	Driven Sprocket Key	1
21	055546	Roller Chain	1
22	055596-02	Conveyor Floor Drive Shaft	1
23	031258	Feeder Door Lock Lever	2
	Z0632SCP	Lever Stud	2
24	055407	Safety Switch	2
25	055528	Chain Cover	1
26	055745	Clamping Strap	1
27	055744	Closure Flap	1

WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

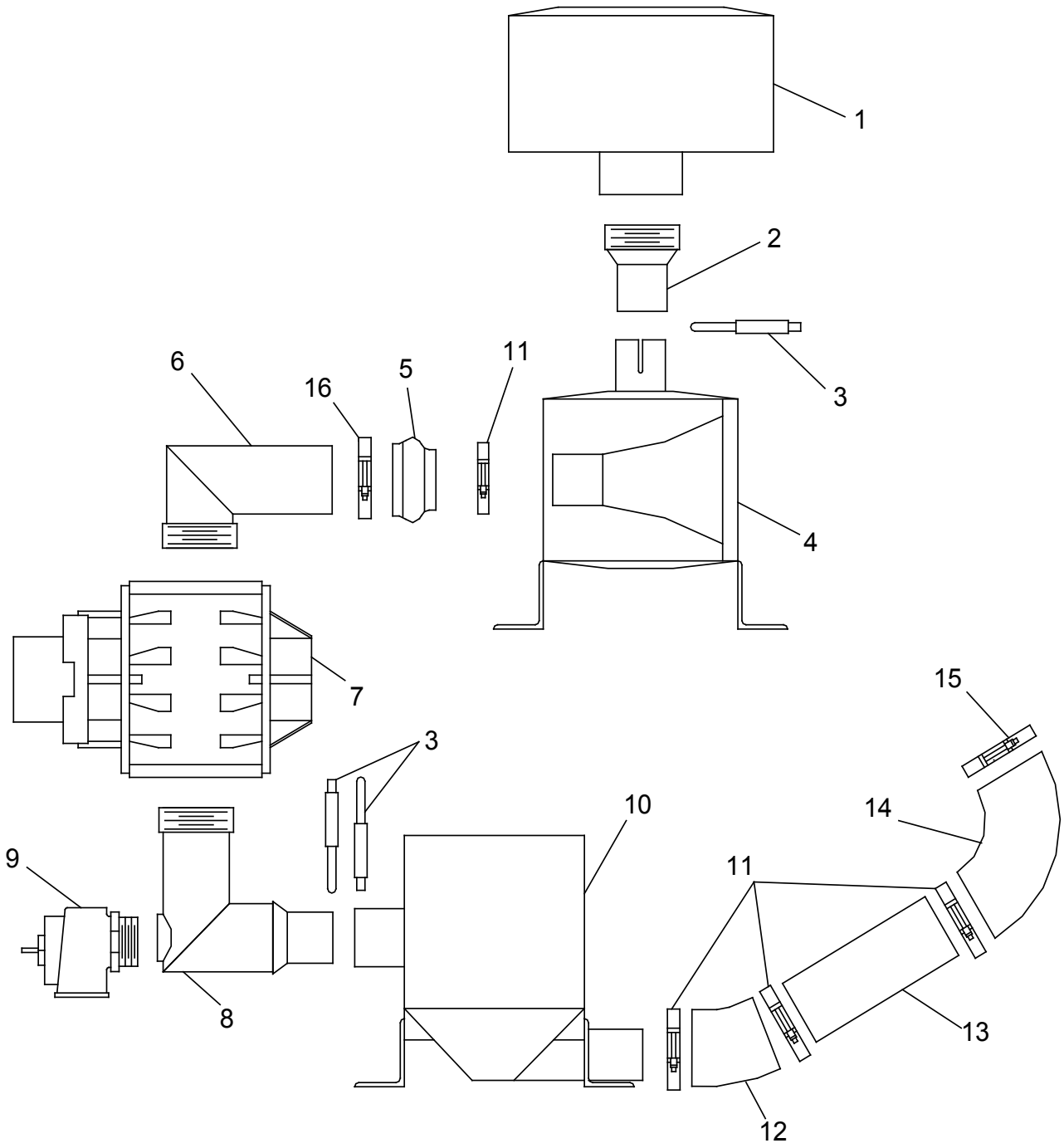


WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

CONVEYOR PARTS

Ref. No.	Part Number	Description	No. Req'd
1	055636	Conveyor Weldment	1
2	055483	Conveyor Drag Chain Assembly	1
	055703	Replacement Individual Slat	
	055704	Replacement Cotter and Pin	
	055677	Replacement Connecting Link	
3	055524	Conveyor Floor Pan	2
4	021517-04	Conveyor Drive Sprocket	2
	190123-32	Drive Sprocket Key	2
5	021517-02	Conveyor Take-Up Sprocket (no key)	2
6A	F302-0006-02	Front Clean Out Door Lip	1
6B	055728-02	Front Clean Out Door Pin	1
6C	055729	Front Clean Out Door	1
6D	055586	Clean Out Door Handle	1
6E	030894	Cotter Pin	1
7	055487	1" Take-up Bearing	2
8	055488	Take- Up Bearing Frame (Bearing Not Included)	2
9	055596-01	Conveyor Take-Up Shaft	1
10	055572	Conveyor Mounting Frame	1
11	055502	1-1/4" Shaft Bearing	2
12	055596-02	Conveyor Drive Shaft	1
13	055547	Driven Sprocket	1
	190123-20	Driven Sprocket Key	1

WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

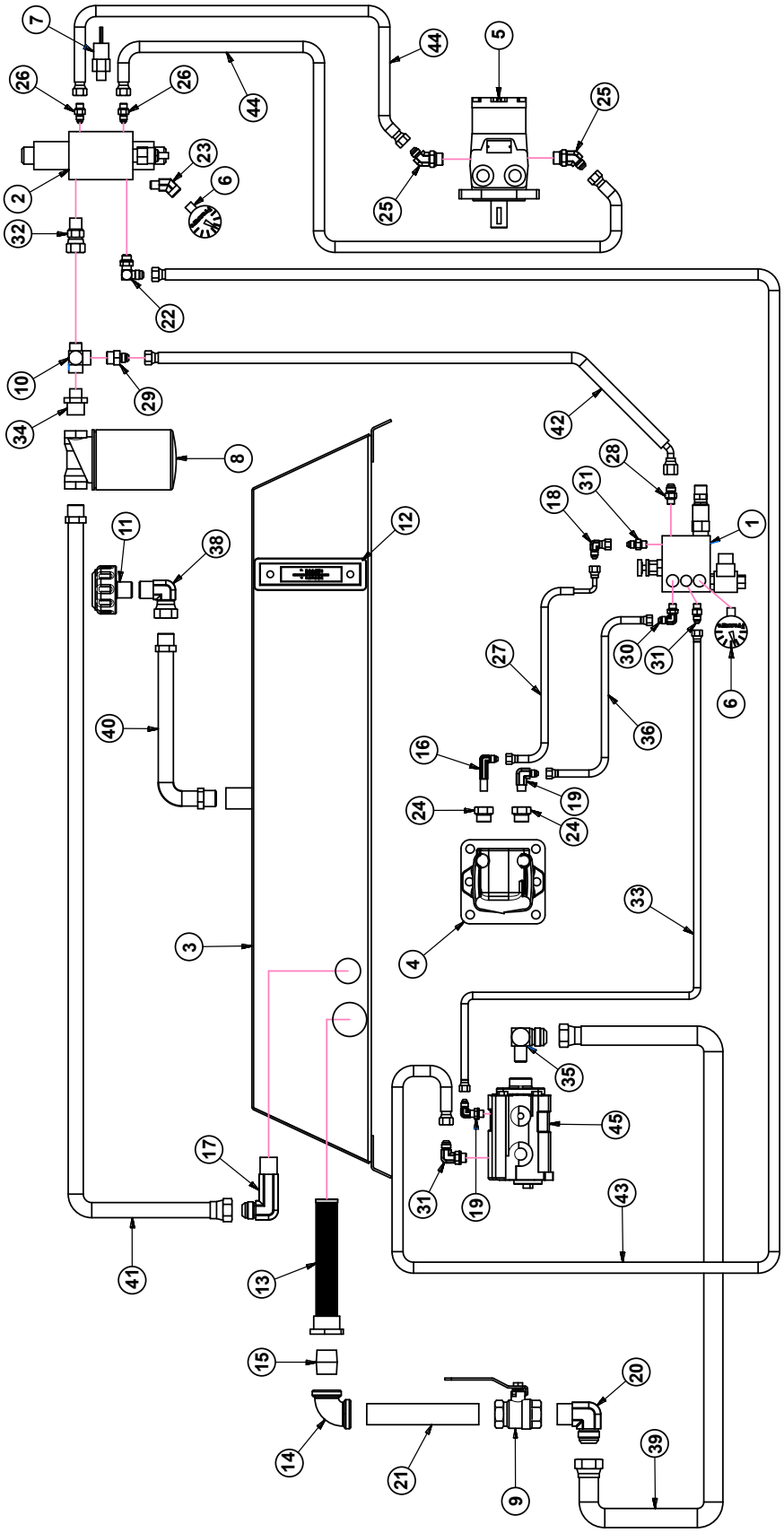


WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

BLOWER COMPONENTS

Ref. No.	Part Number	Description	No. Req'd
1	055144	Filter	1
	055145	Filter Element	1
2	055584-06	Blower Filter Adapter	1
3	055501	Muffler Clamp	3
4	055584	Inlet Silencer	1
5	055498	Hump Reducer	1
6	055575-02	Blower Inlet Adapter	1
7	055706	Blower	1
8	055575-01	Blower Outlet Adapter	1
9	055141	Relief Valve	1
10	055585	Outlet Silencer	1
11	055496	Clamp 300 Series	4
12	055499	Modified 45 Elbow	1
13	055574-11	Air Lock Extension Tube	1
14	060325	90 Reducer Elbow	1
15	055497	Clamp 350 Series	1
16	055335	Clamp 400 Series	1

WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

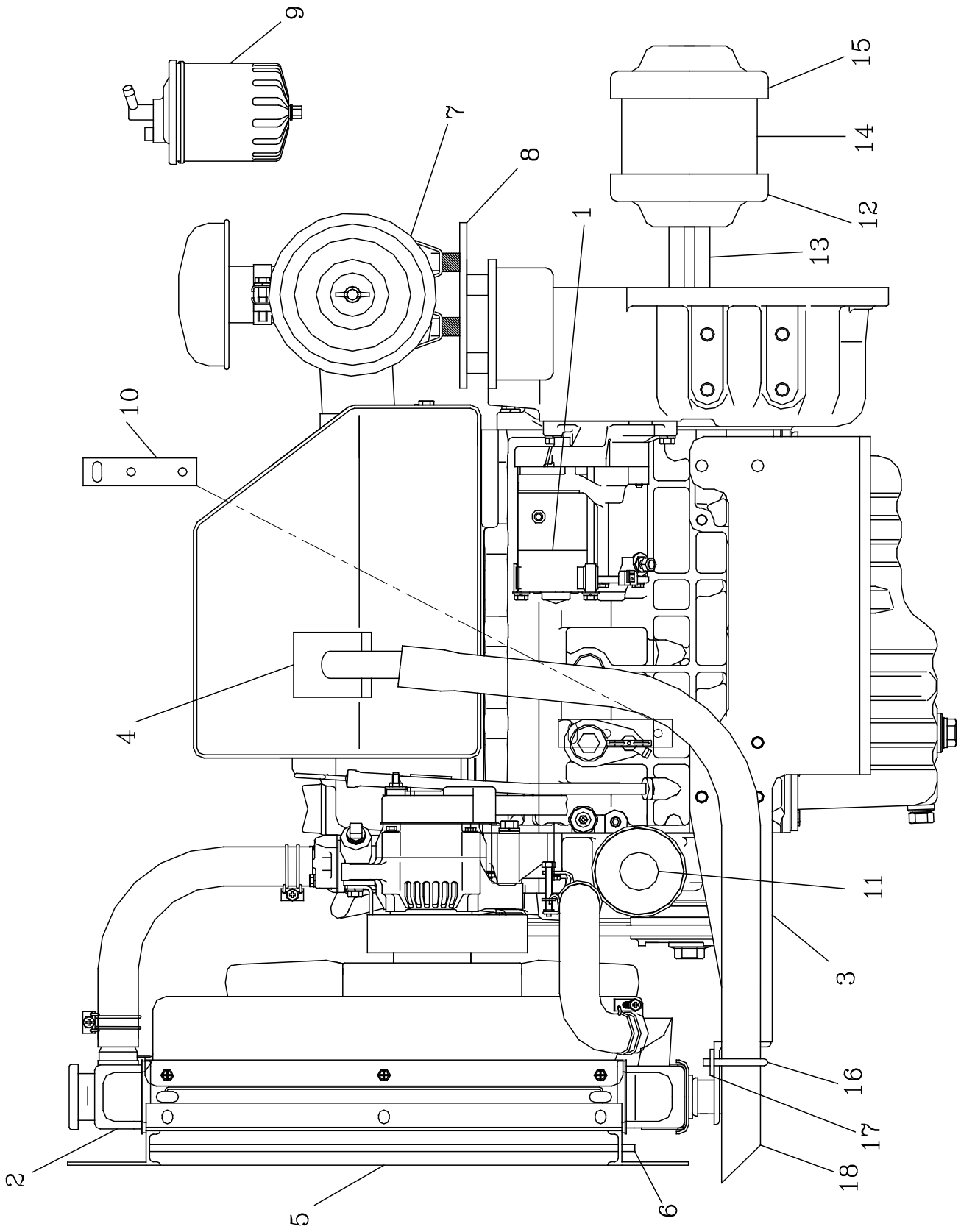


WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

HYDRAULIC PARTS

Ref. No.	Part Number	Description	No. Req'd
1	055730	Scott Manifold	1
2	055682	Scott Manifold	1
3	055594	Hydraulic Reservoir	1
4	055698	Floor/Feed Roll Hydraulic Motor	1
5	055552	Rotary Air Valve Hydraulic Motor	1
6	012044	Pressure Gauge	2
7	055659	Pressure Switch	1
8	021617	Return Filter	1
	021618	Filter Element	1
	055707	Return Filter Mount	1
9	021559	Suction Shut-Off Valve	1
10	022592	Street Tee	1
11	004900	Filler Breather Cap	1
12	080329	Sight Level Gauge	1
13	011466	Suction Strainer	1
14	160010	90 Elbow	1
15	160305	Std. Pipe Nipple	1
16	055598	90 Pipe Male Union Long	1
17	055599	90 Pipe Male Union Long	1
18	FW71909	90 Pipe Swivel Elbow	1
19	FW71450	90 Pipe Male Union	2
20	FW71452	90 Pipe Male Union	1
21	160498	Long Pipe Nipple	1
22	FW71448	90 Pipe Male Union	1
23	FW71609	45 Pipe Adapter	1
24	005686	Reducer Bushing	2
25	085014	Straight Adapter	2
26	055601	Straight Adapter	2
27	055616	Motor Hydraulic Hose	1
28	055602	Male Straight Union	1
29	085015	Male Straight Union	1
30	055274	90 Pipe Male Union	1
31	055308	Male Straight Union	2
32	070377	Straight Swivel Adapter	1
33	055615	Pump Hydraulic Hose	1
34	023206	Male Straight Union	1
35	055600	90 Pipe Male Union	1
36	055614	Motor Hydraulic Hose	1
37	055234	90 Pipe Male Union	1
38	022862	90 Pipe Swivel Adapter	1
39	055606	Suction Hose	1
40	055607	Hydraulic Fill Hose	1
41	055608	Hydraulic Return Hose	1
42	055688	Return Hydraulic Hose	1
43	055610	Pump Hydraulic Hose	1
44	055687	Motor Hydraulic Hose	2
45	KUK16285	Hydraulic Pump	1

WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

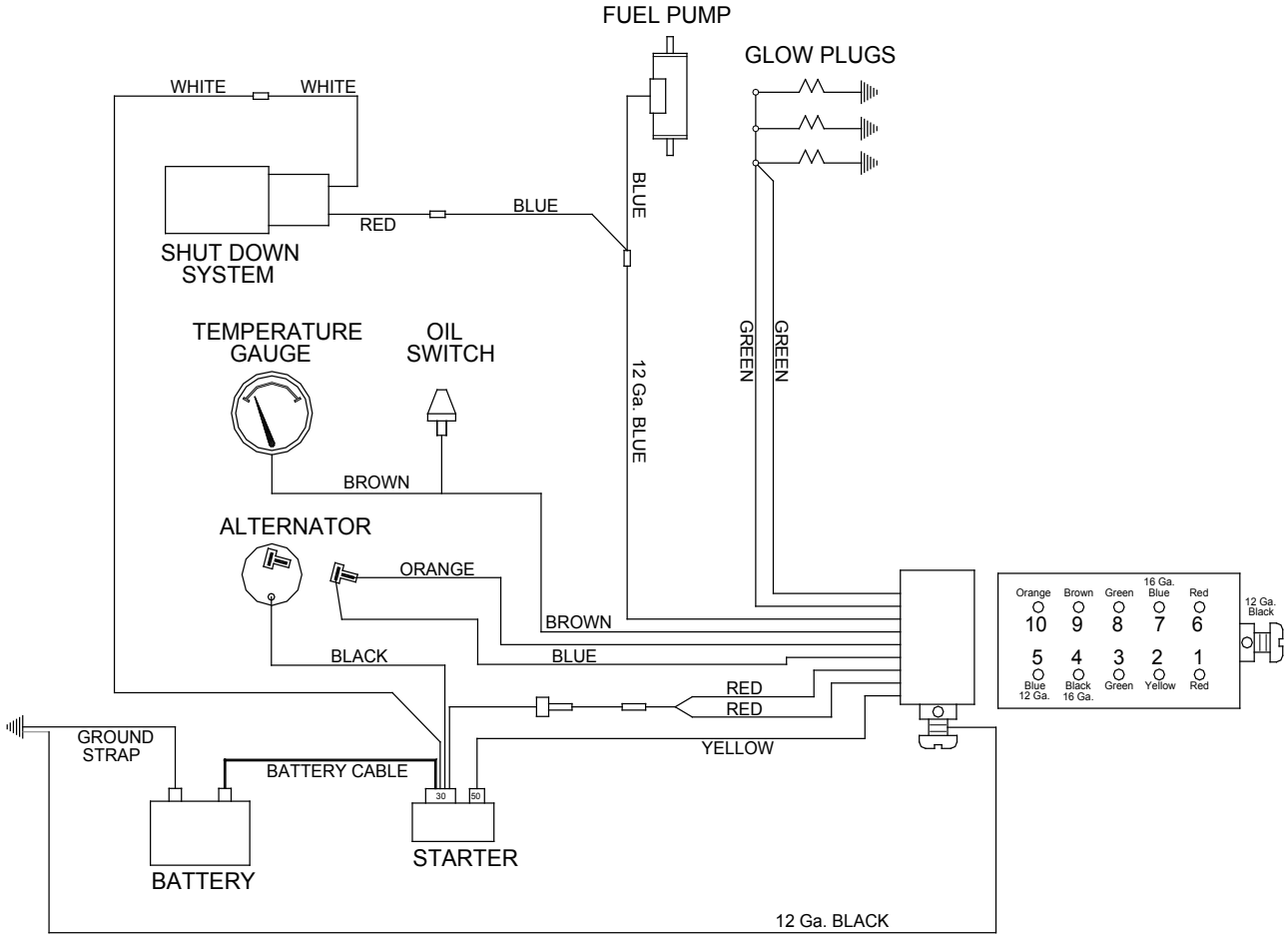


WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

ENGINE PARTS

Ref. No.	Part Number	Description	No. Req'd
1	031390	Kubota V1505B-86 Engine	1
2	KU16665-31470	Radiator Assembly	1
	031444	Upper Radiator Hose	1
	007695	2" Hose Clamp	2
	031445	Lower Radiator Hose	1
	007695	2" Hose Clamp	2
	KU16285-74110	Fan-Suction	1
3	031424	Engine Mount	1
	055504	Engine Shock Mount	4
	055505	Shock Mount Snubbing Washer	4
4	KU37410-88518	Muffler	1
5	055753	Screen Frame Weldment	1
	F302-0010	Screen Frame Shim	2
	055637	Radiator Screen (Removable)	1
6	055711-04	Screen Fastening Rod	1
	030894	Fastening Rod Cotter Pin	1
7	031354	Air Cleaner Assembly	1
	KU15741-11080	Element	1
	055548	Mounting Band	2
	031442	Pre-Cleaner	1
	031376	Shock Mount Stud	4
8	055620	Air Cleaner Mounting Plate	1
	055515-02	Mounting Plate Spacer	4
9	031355	Fuel Filter Assembly	1
	KU70000-43081	Filter Element	1
	080105	Pre-Fuel Filter	1
10	055691-01	Throttle Plate (See Pg. 46)	1
	023814	Electric Throttle (See Pg. 46)	1
11	KU16271-32090	Oil Filter	1
12	031273	Coupling Half	1
13	055595	Flywheel Drive Shaft	1
	190125-32	Square Key	1
14	031274	Coupling Insert	1
15	055102	Coupling Half	1
16	031421	Exhaust Clamp	2
17	005574-03	Tail-Pipe Support Bracket	1
18	005710	Exhaust Tail-Pipe	1
	055568	Temperature Switch	1
	080103	Fuel Pump	1
	KU155501-72400	Coolant Recovery Tank w/Bracket	1

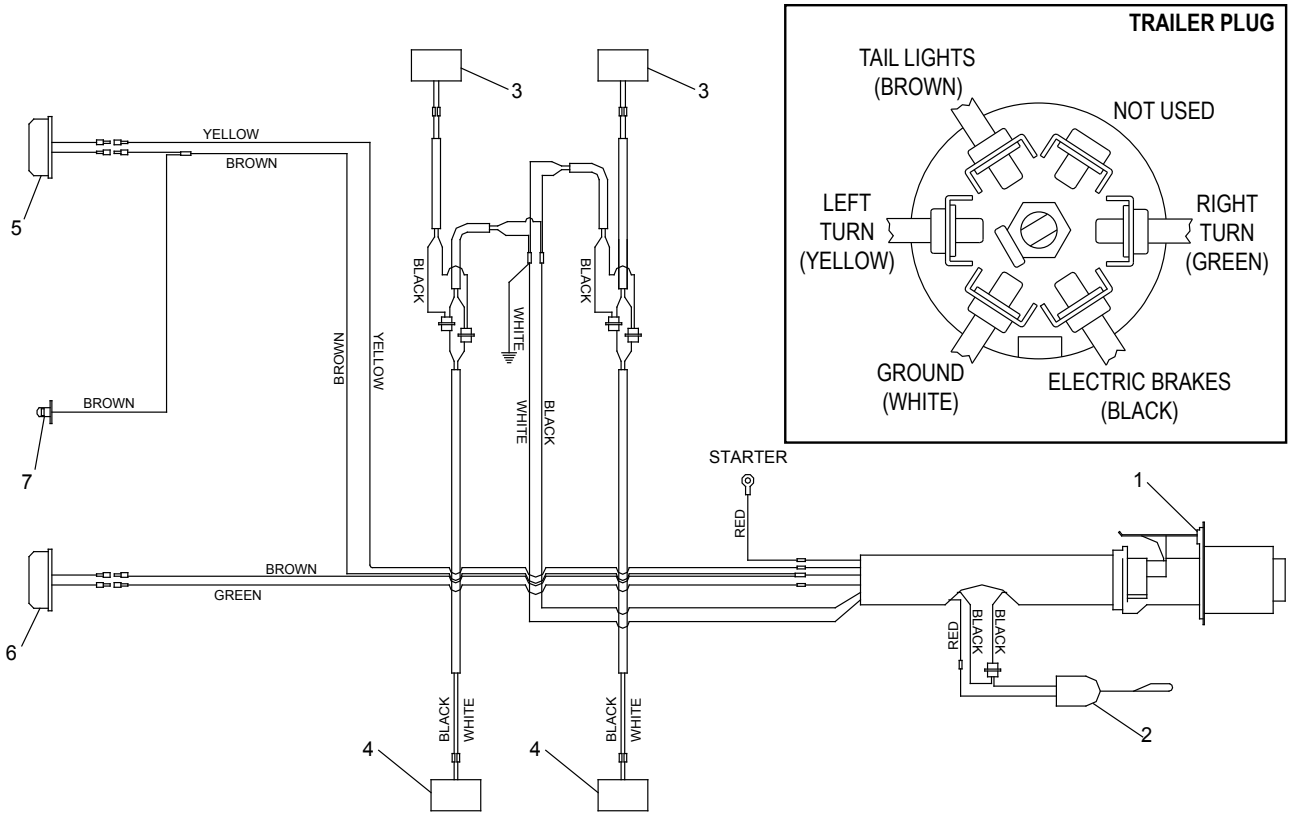
WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE



ENGINE WIRING

Part Number	Description	No. Req'd
031457	Wiring Harness	1
055568	Temperature Switch	1
004934	Oil Switch (Comes w/Engine)	1
002256-12	Battery (12-Volt)	1
031031	Battery Cable	1
000241	Ground Strap	1
080103	Fuel Pump	1
KU17208-60010	Shutdown Solenoid (Comes w/Engine)	1
170028	Fuse w/Holder	1
005561	Electrical Housing	1
023602	Electrical Housing Plug	1

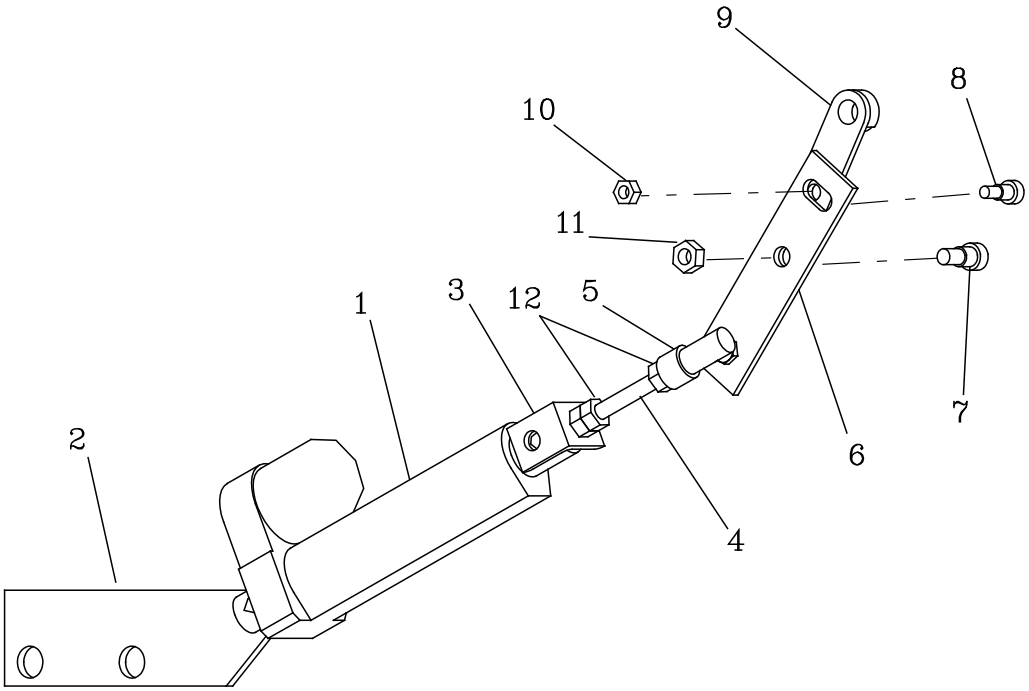
WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE



TRAILER WIRING

Ref. No.	Part Number	Description	No. Req'd
	055650	Trailer Wiring Harness	1
1	075592	7-Blade RV Style Trailer Plug	1
2	023424	Breakaway Switch	1
	190008	Chain	5
	005016	"S" Hook	2
	005017	Snap	1
3	WL23-26	Left-Hand Brake Assembly	1
4	WL23-27	Right-Hand Brake Assembly	1
5	005137	Taillight-Left Hand Side	1
	005137-A	Lens, Taillight	1
6	005138	Taillight-Right Hand Assembly	1
	005138-A	Lens, Taillight	1
7	005436	License Plate Light	1
	004720	License Plate Bracket	1

WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

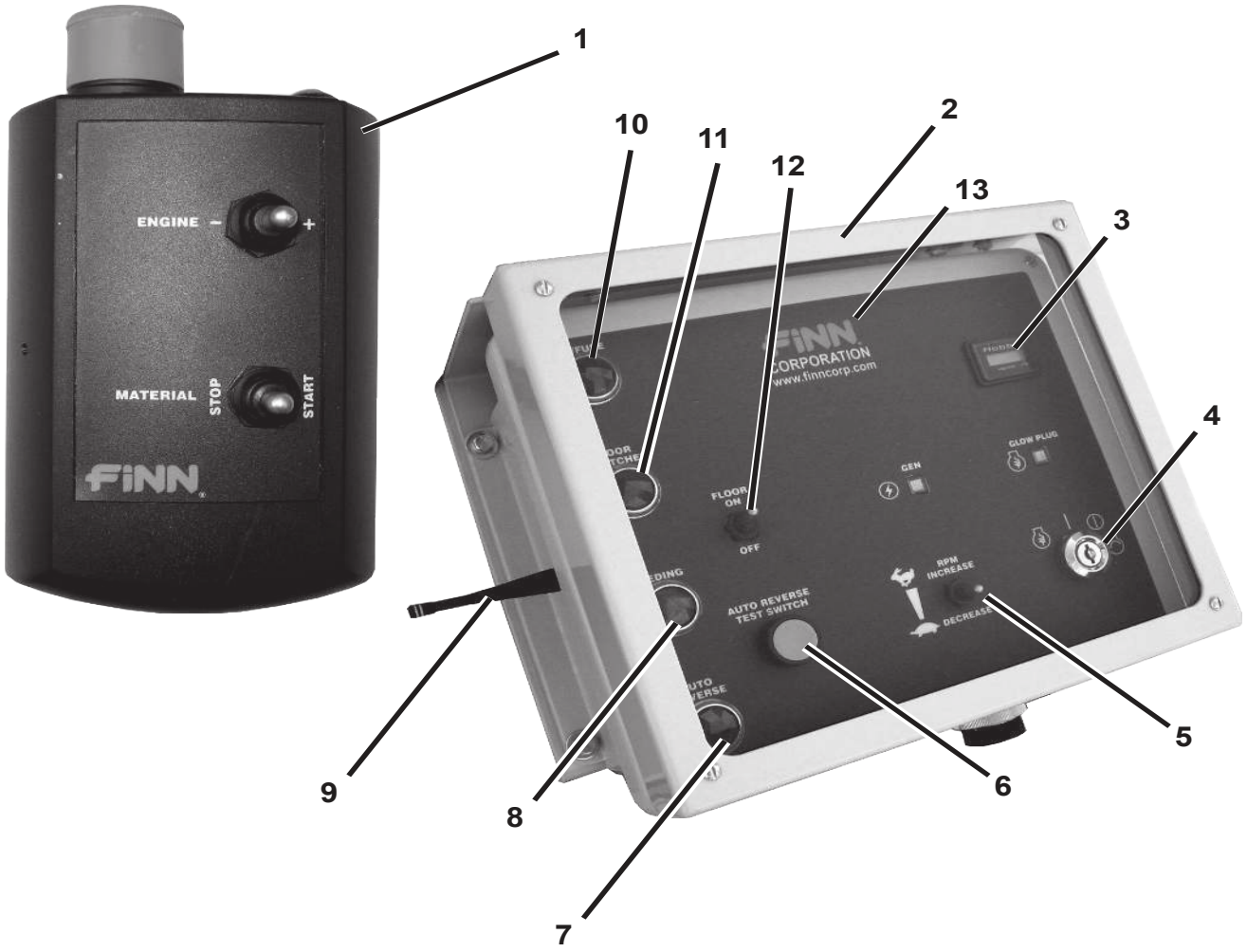


Wire Connection
White to Black
Red to Black

ELECTRIC THROTTLE

Ref. No.	Part Number	Description	No. Req'd
1	023814	Electric Throttle	1
2	055691-02	Engine Base Mount	1
3	F302-0007	Adjusting Rod Arm Mount	1
4	055695-02	Adjusting Rod	1
5	012193	Ball Joint	1
6	055691-01	Throttle Pivot Arm	1
7	055693	Pivot Shoulder Bolt	1
8	055692	Sliding Shoulder Bolt	1
9	KU16271-5715-0	Fuel Injector Arm	1
10	Y#10L	#10-24 Lock Nut	1
11	Y04L	¼-20 Lock Nut	1
12	Y04FJ	¼-28 Jam Nut	2

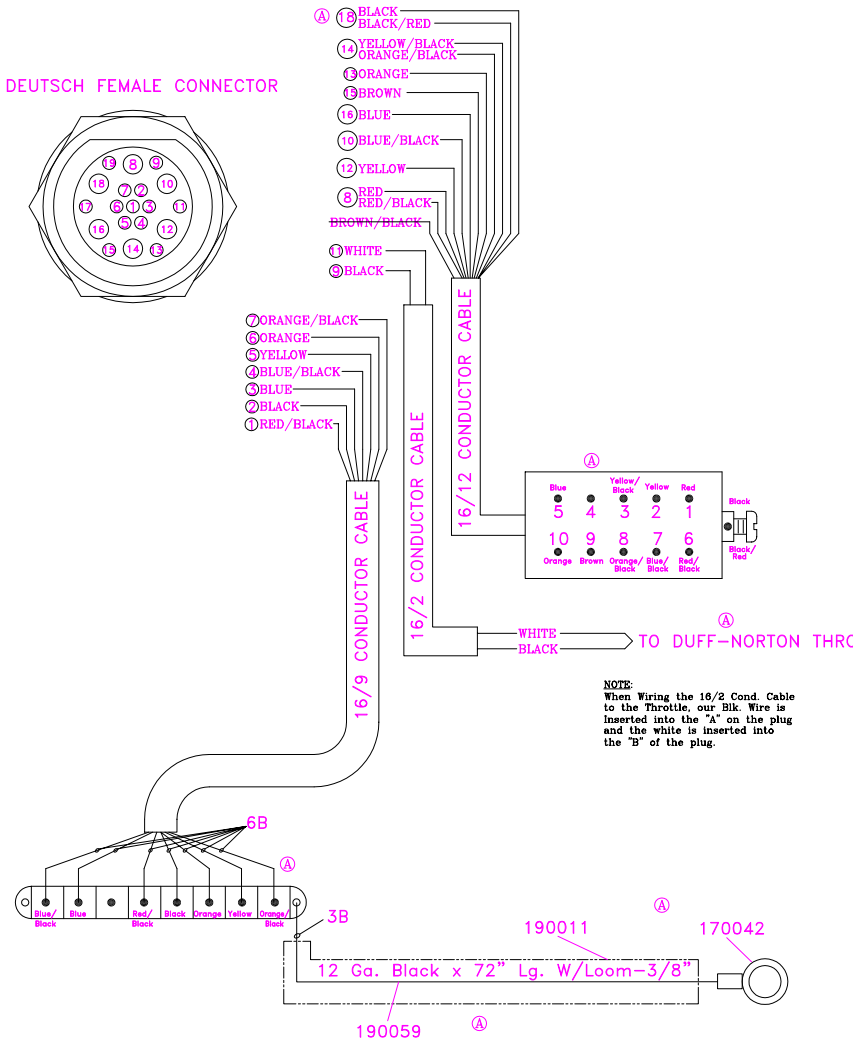
WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE



REMOTE AND CONTROL BOX

	Part Number	Description	No. Req'd
1	055747-T	2 Function Radio Remote Transmitter	1
2	055750	BB302 PLC Control Box Assembly	1
	055750-B	Box Only	1
3	055750-H	Hour Meter	1
4	004933	Ignition Switch	1
5	055750-G	RPM Speed Switch	1
6	055750-F	Auto Reverse Test Switch	1
7	055750-RL	Red Light	1
8	055750-AL	Amber Light	1
9	055750-C	Antenna	1
10	055750-BL	Blue Light	1
11	055750-GL	Green Light	1
12	055750-E	Floor On/Off Switch	1
13	055750-D	Decal	1

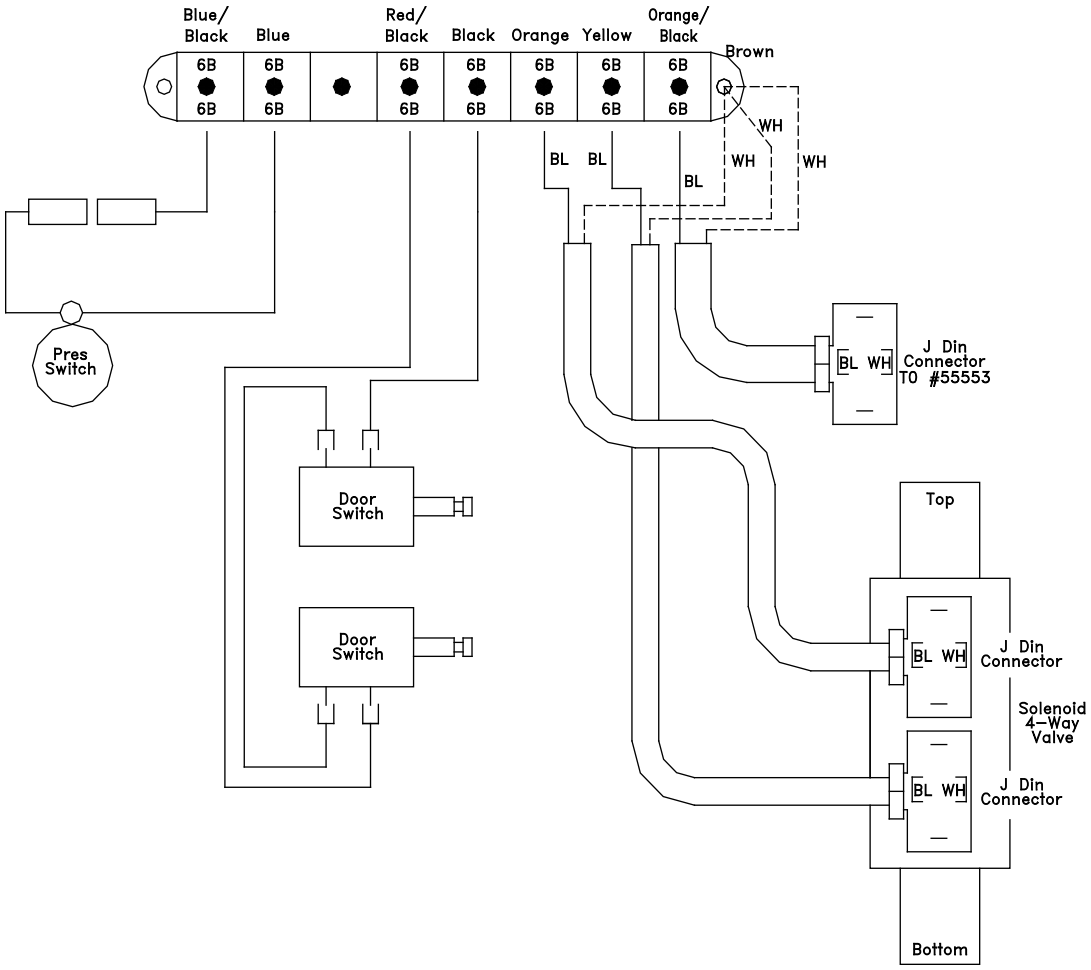
WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE



CONTROLS WIRING/ENGINE

	Part Number	Description	No. Req'd
1	190080	16/9 Conductor Cable	6'
2	190155	16/12 Conductor Cable	8'
3	190156	16/2 Conductor Cable	7.5'
4	055751	Deutsch Female Receptacle	1
5	023604	Hood, Side Entry	1
6	023601	Male Insert	1
7	170004	Terminal Ring	1
8	170005	Terminal Ring	7
9	170111	Deutsch 16 Ga. Socket	11
10	170112	Deutsch 12 Ga. Socket	6
11	170113	Deutsch Sealing Plug	2
12	170042	Ring Tongue: 12-10 GA 1/2"Stud	1
13	190011	3/8 Corrugated Loom	72"
14	190059	Wire 12 Ga. Black SAE SXL	72"

WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

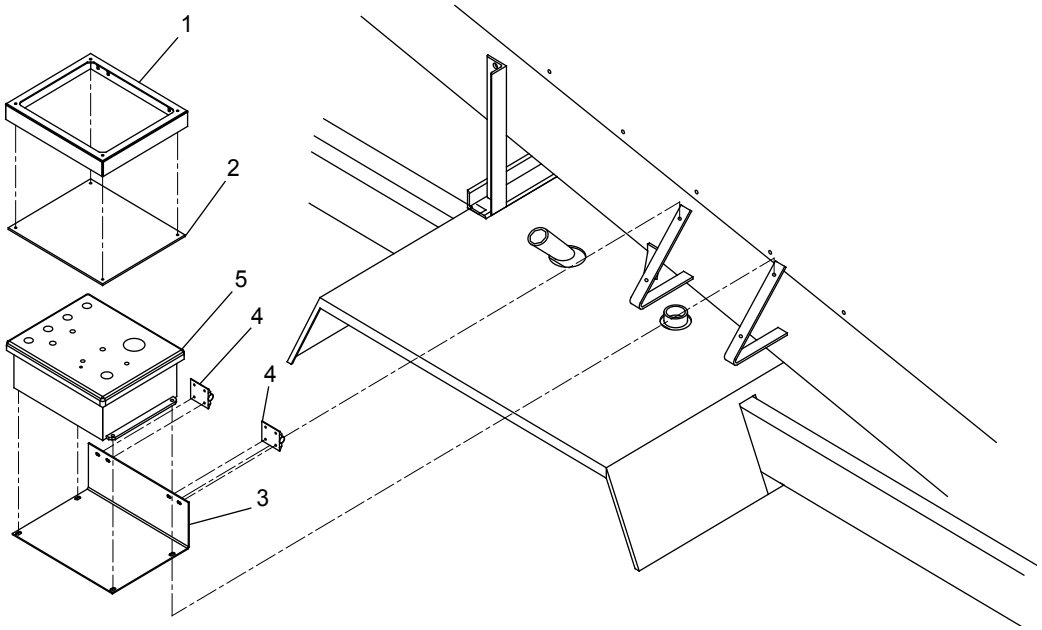


CONTROLS WIRING

Part Number	Description	No. Req'd
055689	Wiring Harness	1
031401	Stud Junction Block	1
FW71548	J Din Connector	3
055407	Door Switch	2
*55682	4-Way Solenoid Valve	1
*55659	Pressure Switch	1

* Note: See Hydraulic Schematic On Page 34-35

WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE



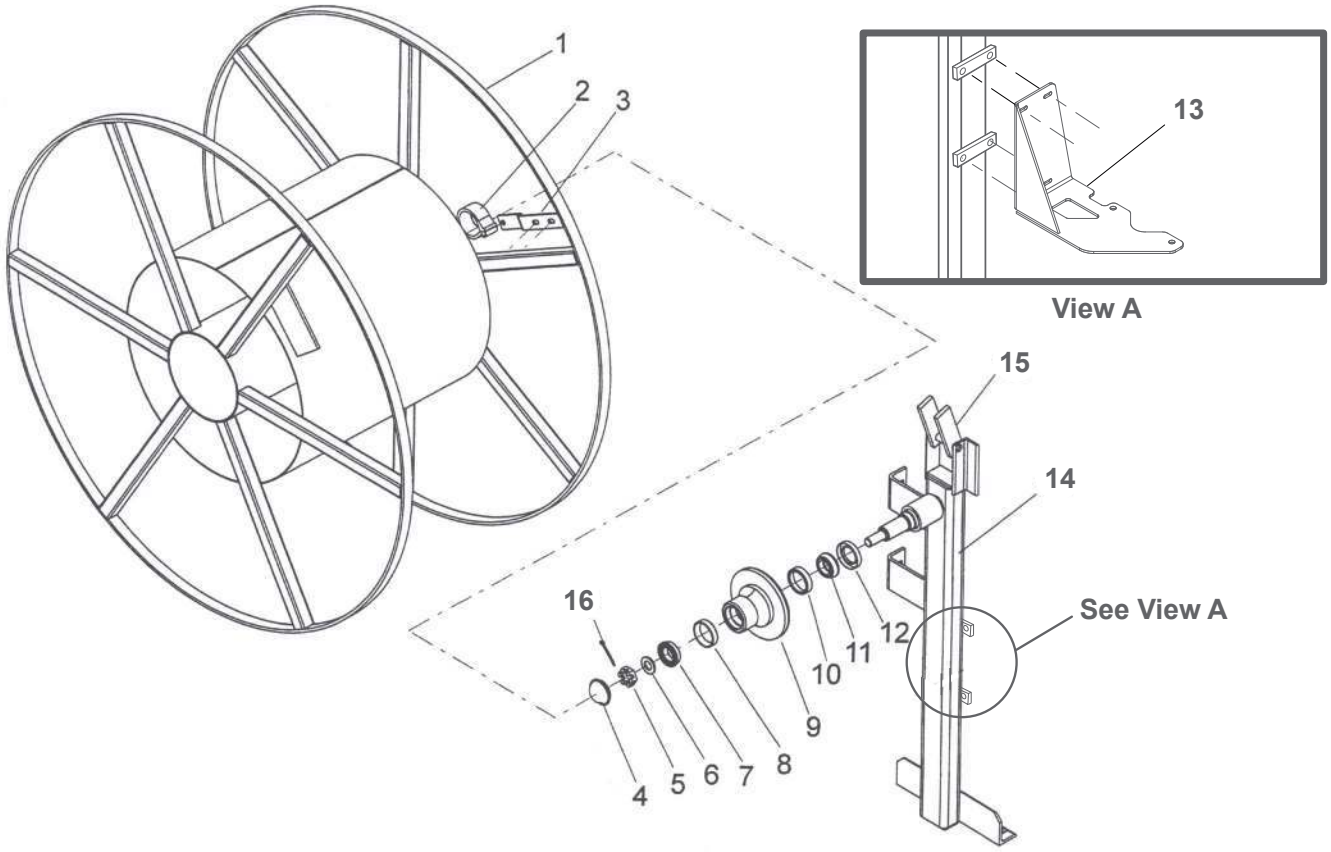
CONTROL BOX COVER ASSEMBLY

Ref. No.	Part Number	Description	No. Req'd
	055671	Control Box Cover Assembly: (Items 1-4)	
1	055666	Cover Frame	1
2	055670	Clear Cover Lens	1
	X#1008R	#10-24 x ½" Lg. RD Bolts	4
	Y#10K	#10-24 Keps nut	4
3	055665	Cover Mounting Base	1
4	055669	Cover Hinge	2
	X#1008R	#10-24 x ½" Lg. RD Bolts	8
	Y#10K	#10-24 Keps Nut	8
	WF#10F	#10 Flat Washer	8
5	055750	Control Box Assembly	1

WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

NOTES

WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE



HOSE REEL ASSEMBLY

Ref. No.	Part Number	Description	No. Req'd
	055716	Hose Reel Assembly:	
1	055714	Hose Reel Drum	1
2	055725	Drum Brake	1
3	F302-0004-03	Brake Arm	1
4	WL1504	Dust Cap	1
5	WLSN-750	Spindle Nut	1
6	WLSW-751	Spindle Washer	1
7	WLLM11949	Outer Cone	1
8	WLLM11910	Outer Cup	1
9	WLH-15-450E	Hub Assembly	1
	WLSTN-509	Lug Nuts	4
10	WLLM67010	Inner Cup	1
11	WLLM67048	Inner Cone	1
12	WLSL-150	Seal	1
13	F302-0008	Hose Reel Bracket	1
14	055713	Hose Reel Mount	1
15	055715-01	Hose Reel Lock	1
16	WLSCP-100	Cotter Pin	1
	055715-02	Hose Filter Guard Bar	1

WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

TOOL KIT

Part Number	Description	No.Req'd
055337	Shoulder Strap Adjustment	1
055385	4" Coupler Gasket	1
012681A	FINN Beige Aerosol Paint	1
012681T	FINN Beige Touch-Up Paint	1
052878	Red Diffuser Cone 4"	1
020365	Grease, Multi Purpose	1
021375	Grease Gun (Hose Not Included)	1
021741	12" Whip Hose W/1/8" Male Ends	1
	Engine Parts Manual	1
	Engine Operators Manual	1
	Blower Operators Manual	1
	Bark Blower 302 Parts/Operators Manual	1

DISCHARGE HOSE

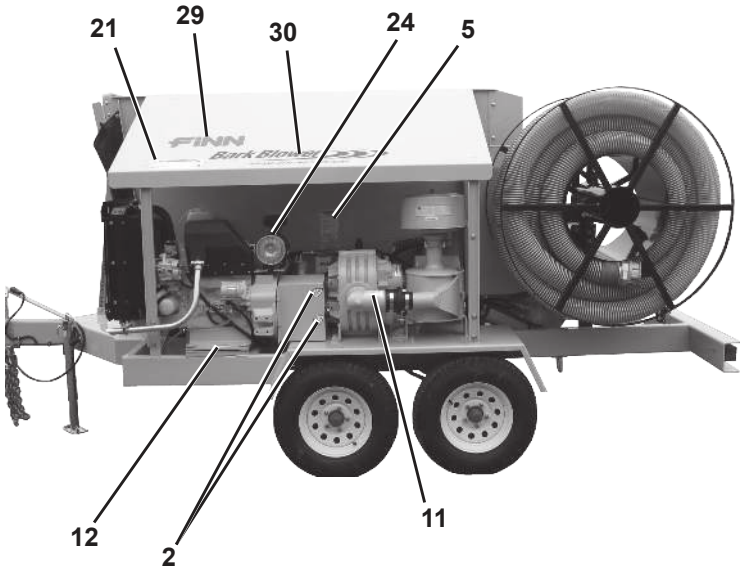
Part Number	Description	No. Req'd
055399B	4"X100' BB Hose Assy.	1
055398	50' Discharge Hose Assembly	3
055392-05	50' Discharge Hose	1 per
055377	Hose Adapter	2 per
055304	Clamp	2 per
055374A	Aluminum Adapter Part A	1 per
055375A	Aluminum Coupler Part D	1 per
055337	Shoulder Strap	1
052380	Deflector Assembly	1

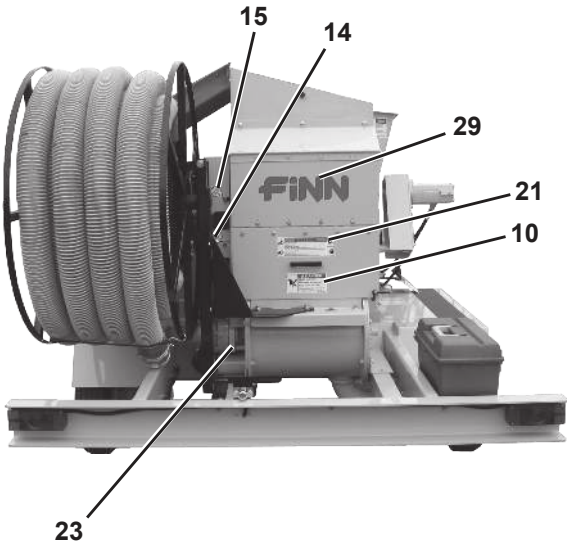
RECOMMENDED SPARE PARTS

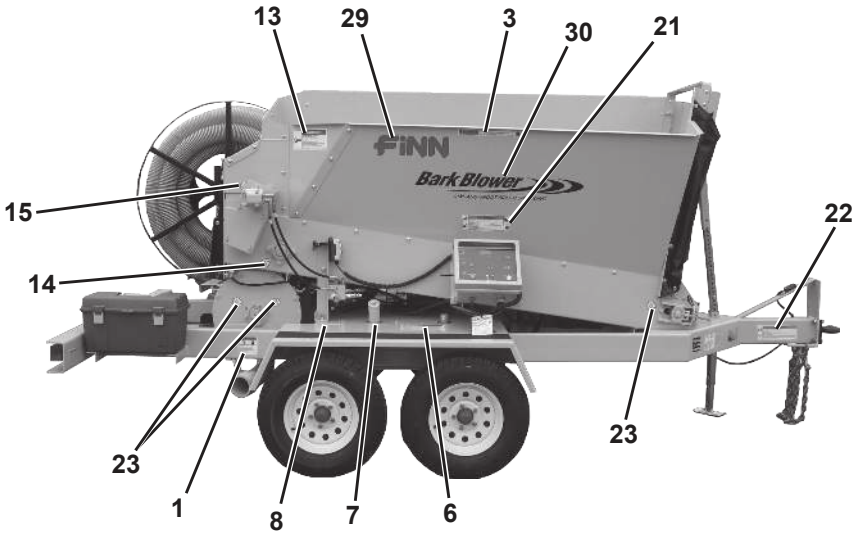
Part Number	Description
055145	Blower Filter Element
021618	Hydraulic Oil Return Filter Element
KU7000-43081	Fuel Filter
080105	Pre-Fuel Filter
KU16271-32090	Engine Oil Filter
KU15741-11080	Air Cleaner Element
055113	Air Lock Knife

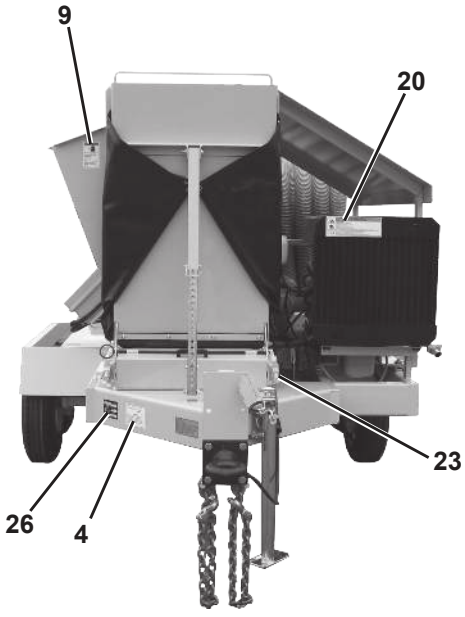
Recommended spare parts are available to help avoid unnecessary down time.

WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE









WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

DECAL LOCATION

Ref. No.	Part Number	Description	No. Req'd
	055478	**BB302 Decal Sheet**	
1	055280	"WARNING! FLYING OBJECTS" Decal	1 per
2	007231	"SERVICE WEEKLY"	3 per
3	022690	"WARNING! FLYING OBJECT" Decal	1 per
4	055216	"U.S. PAT NO'S NOTICE" Decal	1 per
5	**012687***	"CAUTION. Hydraulic System Instructions" Decal	3 per
6	055724	"Operating Instructions" Decal	1 per
7	023391	"DIESEL FUEL" Decal	1 per
8	055723	"FLOOR-Slow-Fast" Decal	1 per
9	023519	"WARNING! Wear Proper Eye Protection" Decal	1 per
10	055219	"DANGER! SEVER HAZARD" Decal	1 per
11	052178	"CAUTION Rotary Blower Maint." Decal	1 per
12	012278	"WARNING! Burn Hazard" Decal	1 per
13	052177	"DANGER! Entanglement Hazard" Decal	1 per
14	007231-02	"SERVICE WEEKLY Up Arrow" Decal	2 per
15	007231-01	"SERVICE WEEKLY Down Arrow" Decal	5 per
16	022082	"Hold Button in for 10 sec...." Decal (Not Shown)	1 per
17	007535	"Throttle" Decal (Not Shown)	1 per
18	006870-GEN	"GEN" Decal (Not Shown)	1 per
19	080108-03	"Glow Plug" Decal (Not Shown)	1 per
20	031462	"WARNING! Burn Hazard" Radiator Decal	1 per
21	031463	"WARNING! Sever Hazard/Flying Debris" Decal	3 per
22	031461	"WARNING! Runaway Vehicle Hazard...."	1 per
23	007230-01	"SERVICE DAILY" Down Arrow	4 per
24	19426-87903	"CAUTION, Do Not Use Ether or..." Decal	1 per
25	055217	"MATERIAL FEED CONTROL" Decal (Not Shown)	1 per
26	011690	FINN Name Plate	1
27	012260	"IMPORTANT-Maintain all Safety..." (Not Shown)	1
28	055740	BB302 GVWR Decal (Not Shown)	3
29	031235	Red "FINN" Medium Decal	3
30	035639	"BARK BLOWER" Die Cut Decal	2

NOTE **(012687* Use equal to or better than 5 Micron Absolute Filtration)**

WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

WARRANTY

Finn warrants to the original Purchaser for use (or rental to others for use) all new construction machinery and attachments therefore manufactured by Finn to be free from defects in material and workmanship for a period of 12 months from date of purchase or 1200 hours of use, whichever comes first. Replacement parts provided under the terms of this warranty are warranted for the remainder of the warranty period applicable to the product in which installed, as if such parts were original components of that product. Finn makes no warranty with respect to (a) allied equipment or trade accessories not manufactured by it (such as, but not limited to tires, ignitions, starters, hose, batteries, magnetos, carburetors, engines or like or unlike equipment or accessories), such being subject to the warranty, if any, provided by their respective manufactures; or (b) secondhand, used, altered, or rebuilt machines. Further, the warranty herein expressed shall be rendered null and void to the extent any defect or failure of the products warranted hereby arises out of or is caused by accessories or component parts not manufactured or supplied by Finn, whether same are supplied by Purchaser, dealers or any other party. THE WARRANTY DESCRIBED IN THIS PARAGRAPH SHALL BE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Upon notification of Finn during the above-stated warranty period of any failure to conform to this warranty, and upon inspection by Finn to verify said nonconformity and verify the continuing existence of the warranty period, Finn will provide a new part or a repaired part, whichever Finn elects, to replace the part found to be defective. Such parts will be provided without charge to the Purchaser during normal working hours at a place of business of a Finn dealer or other establishment authorized by Finn to effect said repairs or replacements, but Purchaser shall bear all costs of transporting the product to and from such place of business or establishment. Correction of nonconformities, in the manner and for the period time provided above, shall constitute fulfillment of all liabilities of Finn under this contract.

THE REMEDIES OF THE USER SET FORTH HEREIN ARE EXCLUSIVE, WITHOUT REGARD TO WHETHER ANY DEFECT WAS DISCOVERABLE OR LATENT AT THE TIME OF DELIVERY OF THE PRODUCT TO THE PURCHASER.

The essential purpose of this exclusive remedy shall be to provide the Purchaser with repair or replacement of parts that prove to be defective within the period and under the conditions previously set forth. This exclusive remedy shall not have failed of its essential purpose (as that term is used in the Uniform Commercial Code) provided Finn remains willing to repair or replace defective parts within a commercially reasonable time after it obtains actual knowledge of the existence of a particular defect.

IN NO EVENT SHALL FINN BE LIABLE FOR ANY SPECIAL, CONSEQUENTIAL, INCIDENTAL OR INDIRECT DAMAGES, INCLUDING LOST PROFITS OR LOST COMMERCIAL OPPORTUNITIES, WITH RESPECT TO THE SALE OF THE ABOVE WARRANTED PRODUCT OR ANYTHING DONE TN CONNECTION THEREWITH, OR FOR PROPERTY DAMAGE SUSTAINED BY A PERSON CLAIMING TO BE A THIRD PART BENEFICIARY OF A SURVIVING WARRANTY UNDER THE LAW OF ANY JURISDICTION.

NOTICE

FINN CORPORATION URGES THE USE OF ONLY FINN CORPORATION SUPPLIED PARTS AND ATTACHMENTS TO ASSURE PROPER PERFORMANCE AND SAFE OPERATION OF FINN CORPORATION EQUIPMENT. INSIST ON PARTS AND ATTACHMENTS MANUFACTURED OR SUPPLIED BY FINN CORPORATION WHEN YOU PURCHASE, REPAIR OR REPLACE YOUR FINN EQUIPMENT AND ATTACHMENTS. BECAUSE FINN CORPORATION CANNOT ASSURE THAT PARTS AND ATTACHMENTS NOT MANUFACTURED OR SUPPLIED BY FINN MEET FINN CORPORATION'S QUALITY STANDARDS, SPECIFICATIONS, OR OPERATING REQUIREMENTS, OUR WARRANTY IS NOT EFFECTIVE TO THE EXTENT ANY FAILURE OF OR DEFECT IN A FINN CORPORATION PRODUCT ARISES FROM OR IS CAUSED BY PARTS, ATTACHMENTS OR COMPONENTS NOT ORIGINATING WITH FINN CORPORATION. USE OF FINN CORPORATION EQUIPMENT WITH PARTS AND ATTACHMENTS NOT MANUFACTURED OR SUPPLIED BY FINN COULD RESULT IN PERSONAL INJURY.

Effective December 8, 1995

CALIFORNIA

Proposition 65 Warning

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

CALIFORNIA

Proposition 65 Warning

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