ORIGINAL
BOOKLET

FINN®
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BARK BLOWER

Models 808 & 816

Parts and Operator's Manual

Model **RU** Serial No. _____

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 IN 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

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

INDEX

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 seven pages of this manual are a summary of all the main safety aspects associated with this unit. Be sure to read these pages 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 that WILL result in severe personal injury or death.

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

CAUTION: Hazards or unsafe practices that 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.

CALIFORNIA

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P/N 12304

Finn Corporation

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 sheet. 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. Verify that all guards are in place.

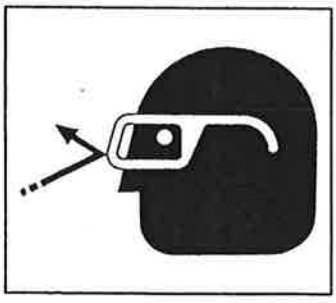
2. By carefully looking into the blower hopper and transition, inspect for and remove any foreign objects. Follow OSHA lockout/tagout procedure (29 CFR 1910.147)

3. Inspect all hydraulic hoses for cracks, bulges or damage. If hose is bad, replace immediately.

4. Inspect the material discharge hose and connections for cracks or damage. If damage is found, replace affected part immediately.

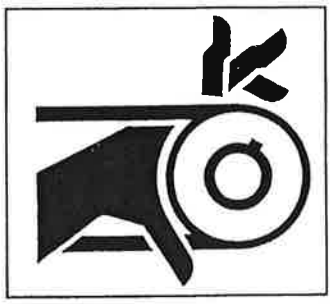
II. MACHINE OPERATION:

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.



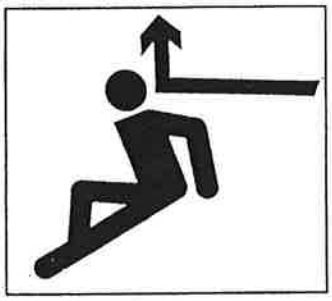
2. Do not override or tamper with the safety shutdown switches on the transition doors. If switches fail, use OSHA lockout/tagout procedure (29 CFR 1910.147) until switches are repaired or replaced.

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.

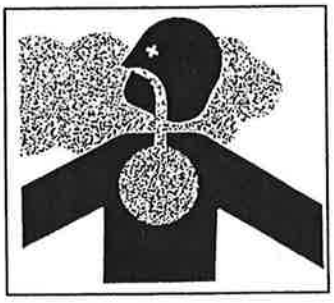
5. Make sure that no one is working in or on the machine. Make sure the discharge area is clear of all persons, animals, etc. Signal "All Clear" before starting the engine. Keep unauthorized personnel away from the machine and discharge hose at all times.



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 fenders 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 vehicle on which the equipment is mounted. 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.

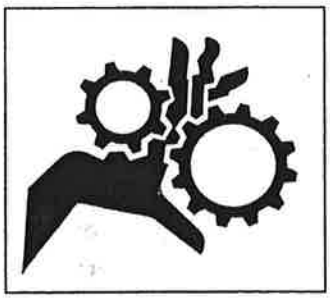
17. Be careful in getting on and off the blower, especially in wet, icy, snowy or muddy conditions. Clean mud, snow or ice from steps, fenders and footwear.

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.

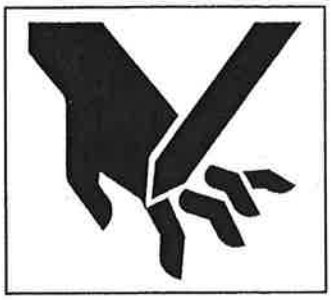
19. Turn slowly and travel on rough surfaces and side slopes carefully, especially with a loaded blower body.

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.

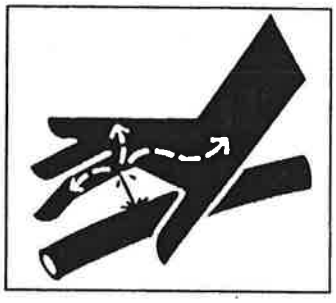
5. Filling of fuel. Never fill the fuel tank with the engine running, or while smoking or when near an open flame. Never smoke while handling fuel or working on the fuel system. The fumes in an empty container are explosive. Never cut or weld on fuel lines, tanks, or containers. Move at least 10 feet (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.

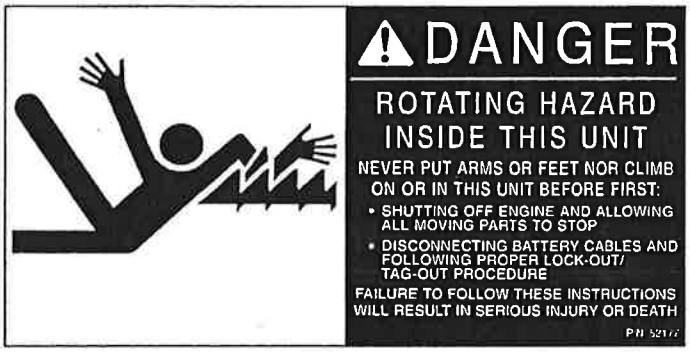
8. Diesel fuel or hydraulic fluid under pressure can penetrate the skin or eyes and cause injury, blindness or death. To check for such leaks, use a piece of cardboard or wood instead of your hand. Pressure may build up in the hydraulic system so use caution when removing the cap.

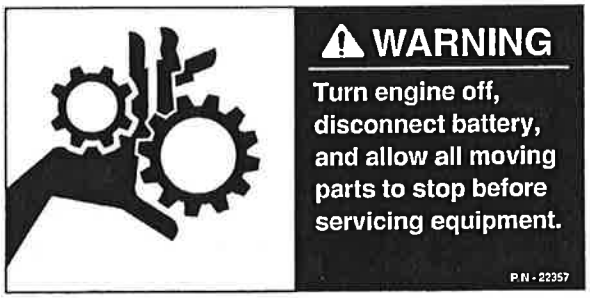


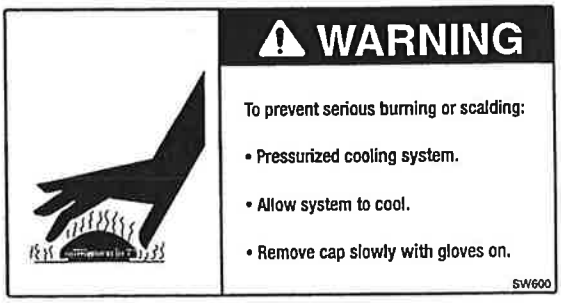
9. Some parts and assemblies are quite heavy. Before attempting to unfasten any heavy part or assembly, arrange to support it by means of a hoist, by blocking or by use of an adequate arrangement to prevent it from falling, tipping, swinging or moving in any manner which may damage it or injure someone.

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.**

MOUNTING THE BARK BLOWER:

The selection of the vehicle on which a blower is to be mounted has important safety aspects. To avoid overloading:

A. Do not mount a blower on a chassis which, when fully loaded with material to be spread, will exceed either the Gross Axle Weight Rating (GAWR) or the Gross Vehicle Weight Rating (GVWR) for the chassis, see below.

B. Do install the blower only on a vehicle with cab-to-axle dimension recommended for the blower body length selected, see below.

	MODEL 808	MODEL 816
General Truck Requirements	25,500 lbs. (subject to truck weight), 142" cab to axle.	33,000 lbs. (subject to truck weight), 166" cab to axle.

Once the proper carrier has been selected, the blower must be securely mounted to it.

CAUTION: Your FINN Bark Blower should be mounted by a qualified truck body installer.

IMPORTANT: Mounting the blower to the truck must allow for tire clearance as well as frame twist. Place hard wood spacers along the length of truck rails or use Finn spring mounting kit (#011562) or equivalent.

2. Follow mounting instructions given below in figure 1. If mounting conditions require deviation from these instructions, consult the factory.

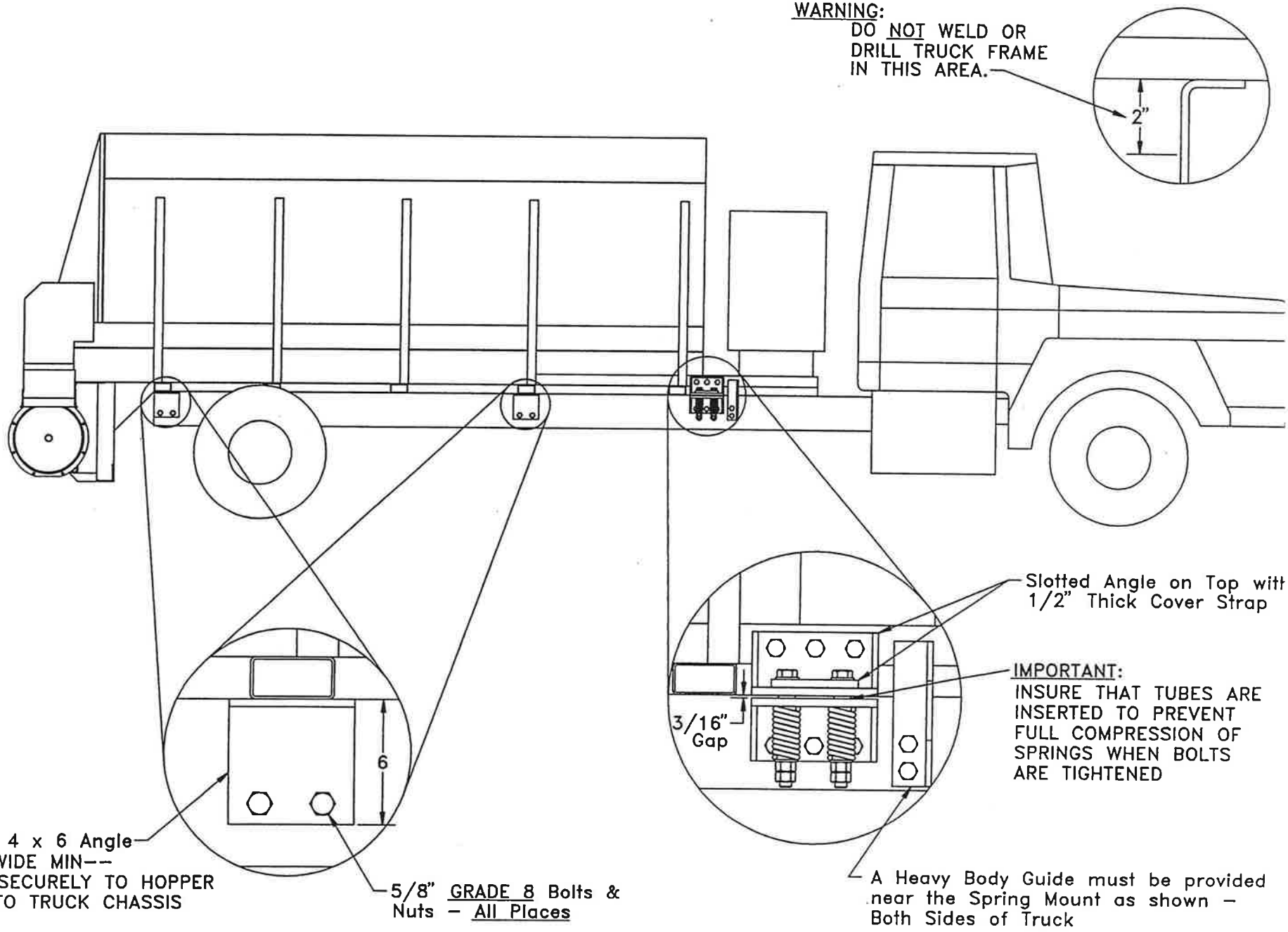

WARNING:
DO NOT WELD OR
DRILL TRUCK FRAME
IN THIS AREA.
2"
Slotted Angle on Top with
1/2" Thick Cover Strap
IMPORTANT:
INSURE THAT TUBES ARE
INSERTED TO PREVENT
FULL COMPRESSION OF
SPRINGS WHEN BOLTS
ARE TIGHTENED
3/16"
Gap
6
3/8 x 4 x 6 Angle
x 6" WIDE MIN--
WELD SECURELY TO HOPPER
BOLT TO TRUCK CHASSIS
5/8" GRADE 8 Bolts &
Nuts - All Places
A Heavy Body Guide must be provided
near the Spring Mount as shown -
Both Sides of Truck

Figure 1

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 then "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 knives 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 that all the truck mountings are secure.
2. Insure that all guards are in place.
3. Tool Kit - see that it contains all prescribed items (see tool kit list, page 52).
4. Lubricate equipment - use hand gun only (see lube chart, page 24-25).
5. Check engine oil - refer to engine operator' s manual.
6. Check liquid coolant level in radiator (protected to -34°F (-37°C) when shipped).
7. Check fuel level. Use #2-D diesel fuel oil unless operating at ambient temperature below 40°F (4°C) 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 midway between the upper and lower indicator mark on the sight gauge. (See "hydraulics" page 13 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 2-7) before operating the machine.**

1. Turn the remote control to the off position on the remote control panel.
2. While holding the safety switch button in, turn key until starter engages and the engine fires.
3. Continue holding the safety switch button in until the operating oil pressure is obtained and the button stays in.

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 230° Fahrenheit (110° Centigrade).

4. Check that the "ON/FUSE" and "DOOR SWITCH" lights are illuminated. If not, check the 10 AMP fuse in the control box (see Figure 4) and verify that the doors are closed at the air lock.
5. While holding in the safety switch button, initialize the remote by turning on the panel switch and then turning on the transmitter.
6. Allow the engine to warm up for three to five minutes.
7. 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 2300 to 2350 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.

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 materials 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, 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 12 psi (0.8 kg/cm^2), an inlet and outlet silencer for noise attenuation, and an inlet air filter.

The drag conveyor receives material from the agitated 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 two variable speed hydraulic motors mounted to a common gearbox.

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 two cutting knives, 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 10W-40 hydraulic fluid from the 25 gallon (95 liter) reservoir through a service valve and suction hose, and delivers it to the solenoid control valves. 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 back section of the tandem pump feeds oil to the rotary air valve and the feed roll motor through a series of hydraulic valves. The first valve is the solenoid valve. The solenoid valve is an open center spool valve with built in relief. The relief valve is set at 2500 psi (172 bar). 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 closest to that solenoid. Thus, energizing the bottom solenoid pushes the spool up and causes the oil supplied from the pump to be channeled to the bottom work port. This is "forward" position on the Bark Blower.

Oil flowing through the valve in the "forward" direction is directed to an adjustable flow control valve which splits the oil flow between the rotary air valve motor and the feed roll motor. Adjustment is made via a lever control with a set screw knob that rotates on a 90° quadrant. Proper flow control setting is between 6 and 8, allowing slightly more oil to flow to the rotary air valve motor. Excess oil flows to the three position, four way valve that controls the feed roll motor, speed and direction. (See figure 2 for valve orientation).

Oil flowing through the solenoid valve in the "reverse" direction (top solenoid energized) is channeled directly to the rotary air valve with no oil going to the roll motor.

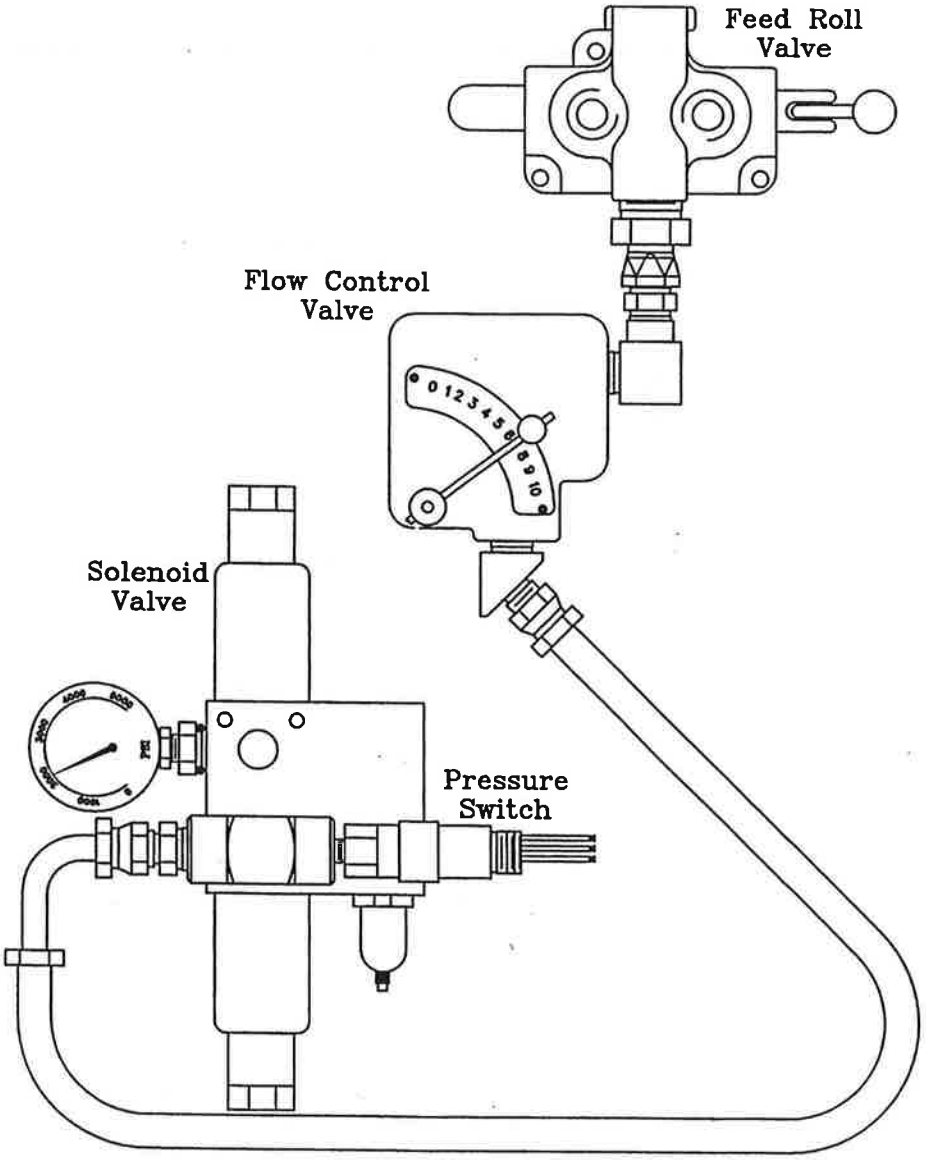


Figure 2

B. DRAG CONVEYOR/AGITATOR/GATE

The front section of the tandem pump feeds oil to the drag conveyor and agitator motors through a "dump" valve system. The oil first passes through a divider sending a small amount to the three position, four way valve controlling the hopper discharge gate. The gate will function any time the engine is running. The remainder of the oil flows through the open center dump valve to the tank line. Energizing this valve closes the flow path and forces the oil through an adjustable flow control valve which controls the speed of the drag conveyor. Excess oil from this divider powers the agitator. This circuit is protected by a relief valve located in the dump valve set at 2000 psi (138 bar). (See figure 3 for valve orientation).

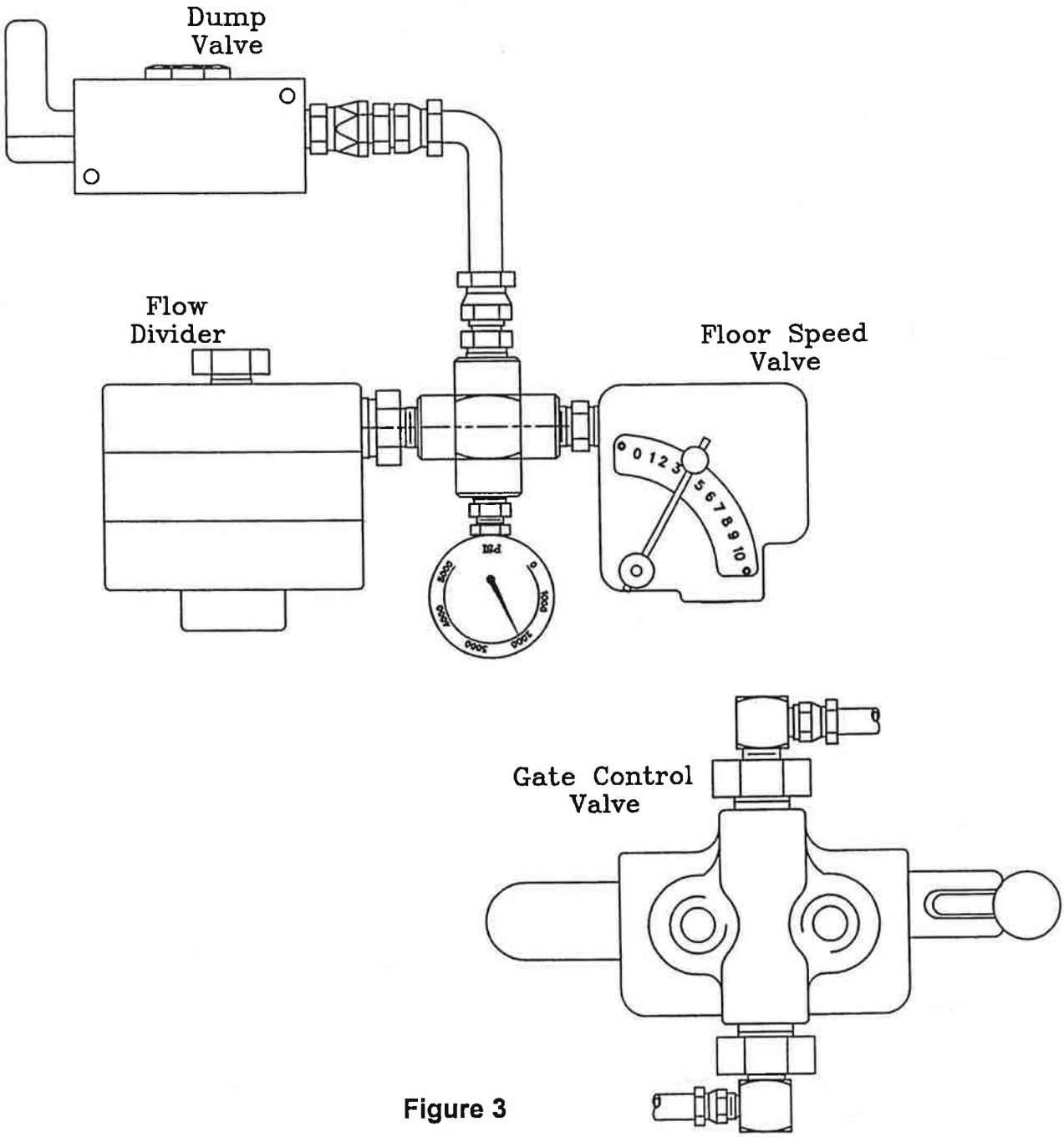


Figure 3

SUBSYSTEM 3: HYDRAULIC CONTROL SYSTEM

The hydraulic control system is an electrical system that controls the on-off function of the conveyor motors and the rotation direction of the rotary air valve motor. This 12-volt DC system runs off the engine electrical system. It is a series of relays, located in the box labeled "Material Feed Control", that controls the solenoid valves in the hydraulic system.

When the "start" button is pushed, the CR1 and CR2 relays in figure 4 are energized. This in turn energizes the "forward" solenoid on the solenoid valve, 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 required to cut the material is monitored by a pressure switch located on the bottom work port of the solenoid control valve (see figure 2). The switch is normally open. It closes when the rotary air valve motor stalls, causing high pressure due to the air valve encountering an object it can not cut. The amount of time the pressure switch is closed is monitored by the relay TR1 in figure 4. If the switch remains closed for more than 0.5 seconds, TR1 energizes timer relay TR2. TR2 automatically reverses the rotary air valve by energizing the "reverse" solenoid and de-energizing the "forward" solenoid, and de-energizes the dump valve, shutting off the drag conveyor. The unit will remain in "reverse" until TR2 times out, which is approximately 2 seconds.

When the "stop" button is pushed, power is cut to the relays. This stops the hydraulic motors on the conveyor and the rotary air valve by shutting off power to the solenoids. The hydraulics can also be stopped by shutting off the ignition key. Please note that the hydraulics will also stop if either transition door, between the conveyor and air lock, is opened and cannot be restarted unless the doors are closed, and the start button is pushed.

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 Murphy shutdown system on the engine, and engine throttle control.

If using the Radio Remote, a certain start-up sequence must be followed or engine shutdown will occur. When using the remote, start as follows:

1. Place the Radio Remote ON/OFF switch, located on the Radio Remote box, to the "OFF" position.

2. Place the switch, located on top of the Radio Transmitter, to the "OFF" position.

3. Start the engine and allow to warm up as specified in the Bark Blower instruction manual.

4. While holding in the Murphy button located on the engine panel.

    a) Place the Radio Remote switch located on the Radio Remote box to the "ON" position.

b) Place the Radio Transmitter switch to the "ON" position.

Pushing the red button located next to the antenna on the Radio Transmitter activates the Murphy shutdown system. To reset the warning system:

1. Flip the Radio Transmitter ON/OFF switch to "OFF".

2. Re-start the engine.

3. While holding the Murphy button in, flip the Radio Transmitter ON/OFF switch to "ON".

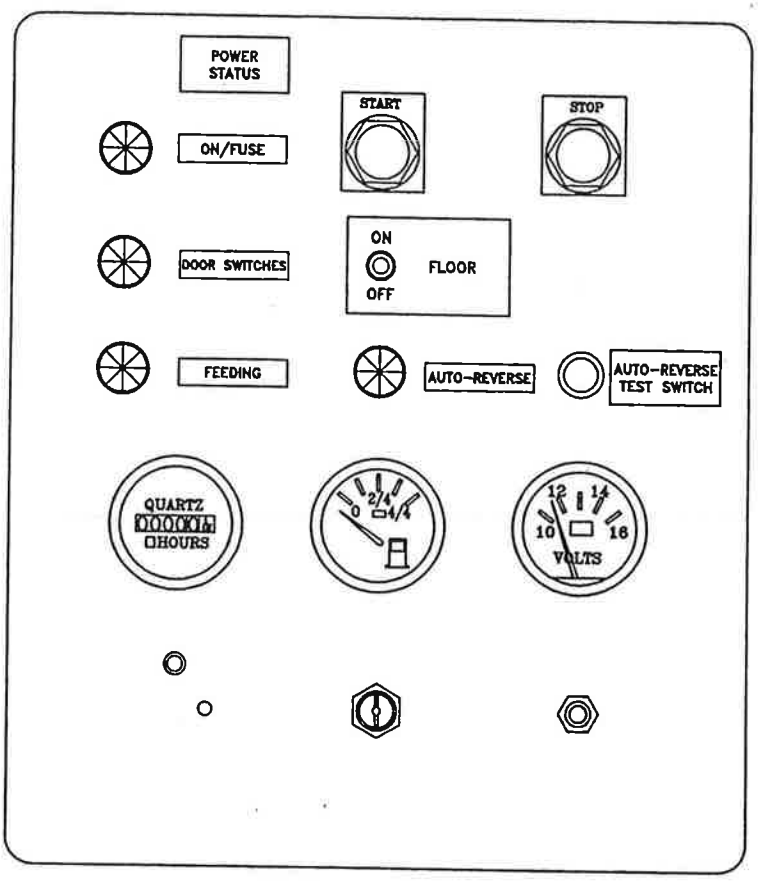
To utilize the Material Feed Start/Stop feature of the Radio Remote, the Initial "START" must occur at the Start/Stop station on the Bark Blower. The hard-wired, Start Stop on the unit is the primary and overriding set of controls. Pushing of the "Stop" button, as well as a loss of power to the Material 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: (See Figure 4)

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	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.



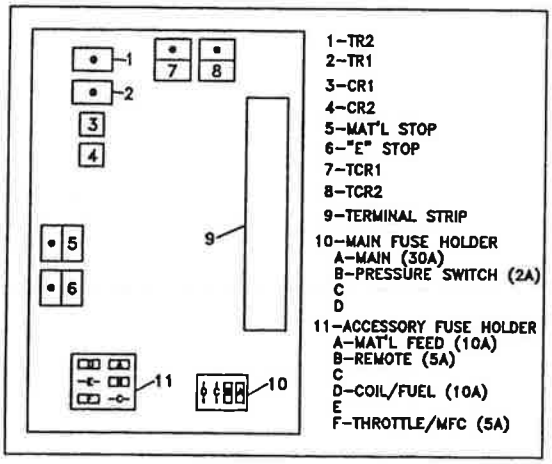


Figure 4

MULCHING WITH THE BARK BLOWER:

1. Check all areas listed under "Pre-Start Equipment Check" (pages 11-12).
2. Start the engine following all the steps listed under "Starting Procedure" (page 12).
3. Set the rotary air valve flow control on #7.
4. Set the Feed Roll Valve to the full speed forward direction.
5. Set the floor speed control to 2-1/2.
6. Open the gate to the maximum opening.
7. Press the "START" button on the material feed control to activate the material start/stop feature on the remote.
8. Put the drag conveyor switch to the "on" position.
9. Press material stop on the remote.
10. Increase the throttle to full.
11. With a firm grip on the end of the hose, press the material start button on the remote.
12. Adjust material feed speed from 2-1/2 for smooth flow. Watch for auto-reversing of the air lock as well as shock waves through the hose.
13. At the end of the load, hit material stop, close gate, and shut down engine.

BARK BLOWER ADJUSTMENTS:

There are three components on the Bark Blower that may need periodic adjustments while operating due to changing material conditions. These are the drag conveyor speed, the automatic reverse pressure switch setting, and the automatic reverse time interval. Knowing how and when to adjust these is the key to getting consistent material flow and high production from the Bark Blower. Below is a description and location for each item, its function and a list of symptoms indicating what settings to correct.

A. Drag Conveyor Speed Control:

This hydraulic valve is located on the left side of the hopper on the rear gusset. It is a control with a lever that rotates on a 90° quadrant. A set screw knob locks the lever into position. The quadrant is labeled from 0-10. Moving the lever to a lower number slows the drag conveyor thus decreasing the amount of material delivered to the rotary air valve, while moving the lever to a higher number increases the amount of material delivered to the rotary air valve. Optimum setting is usually between 2 and 4.

B. Automatic Reverse Pressure Switch Setting:

This switch is the interface between the hydraulic system and the electrical control system. The switch is normally open. It closes when the rotary air valve motor hydraulic pressure reaches the switch setting causing the motor to automatically reverse. (Note: The conveyor stops whenever the switch closes.) The switch is located on the "tee" mounted in the bottom work port of the solenoid control valve pointing toward the engine (see figure 2). Two different types of pressure switches have been used. The first consists of a brass mounting base (screwed into the hydraulics) and a black cap (connected to the electrical control system). The black cap can be turned clockwise to decrease the pressure setting. The second is all brass with a sliding collar. Sliding the collar toward the wires reveals a slotted cylinder which adjusts the switch setting. Using a small screw driver, adjust the cylinder in the same manner as the black knob on the previously described switch.

C. Automatic Reverse Time Interval:

When the pressure switch closes due to high pressure, a series of relays is triggered in the electrical control system that automatically reverses the rotary air valve and stops the drag conveyor. The length of time the system remains in reverse is determined by the setting on the timer relay TR2 (see figure 4). This relay is located inside and near the top of the electrical control box labeled "MATERIAL FEED CONTROL". The relay has a digital dial graduated 0-6 seconds, indicating the approximate length of time the reverse cycle will last. Optimum setting is 2 seconds.

TROUBLE SHOOTING CHART:

Symptom	Probable Cause	Remedy
No material discharge.	Drag conveyor not turning.	Turn conveyor switch on. Reset speed control.
	Electrical control system off.	Verify that engine key is on. Check that transition doors are closed.
	Reverse interval too long.	Reset time (2 seconds).
Air valve auto-reverses excessively.	Pressure switch set too low.	Increase pressure switch setting.
	Feed rate too high.	Slow speed control.
	Dull air valve knives.	Sharpen and reset knives.
Air valve motor stalls in reverse, cycling forward-reverse.	Over-feeding.	Slow speed control.
	Foreign object in transition or hose outlet.	Shut-off engine. Remove object.
Air valve motor stalls in forward, no auto reverse.	Pressure switch set too high.	Decrease pressure switch setting.
	Reverse time interval too short.	Reset timer (2 seconds).
	Knives dulled or chipped-knife clearance too large.	Sharpen blades, reset knife clearance.
Feed roll stops.	Air valve/roll split set too high.	Reset to a lower number (5-8).

MAINTENANCE:

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

Weekly - After every 50 hours of operation:

1. Lubricate the bearings on the drag conveyor, the blower, the agitator, and on each shaft of the feed roll. 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, the drag conveyor gearbox, and the agitator gearbox.

5. Check the gear case on the blower (see blower manual).

6. Check rotary air valve knives for wear, chips, and clearance. To change:

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

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

b) 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 5. 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 locknuts.

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

p) Repeat procedure for other knife.

q) Immediately have removed set of 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:

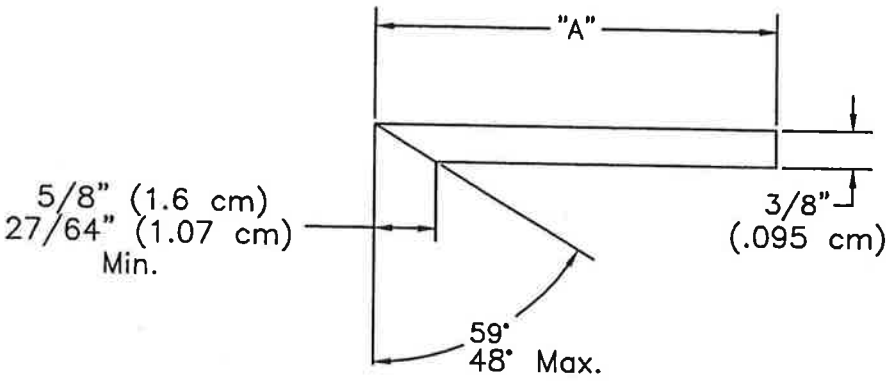


Figure 5

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 (see blower manual). Change oil every 1000 hours thereafter.

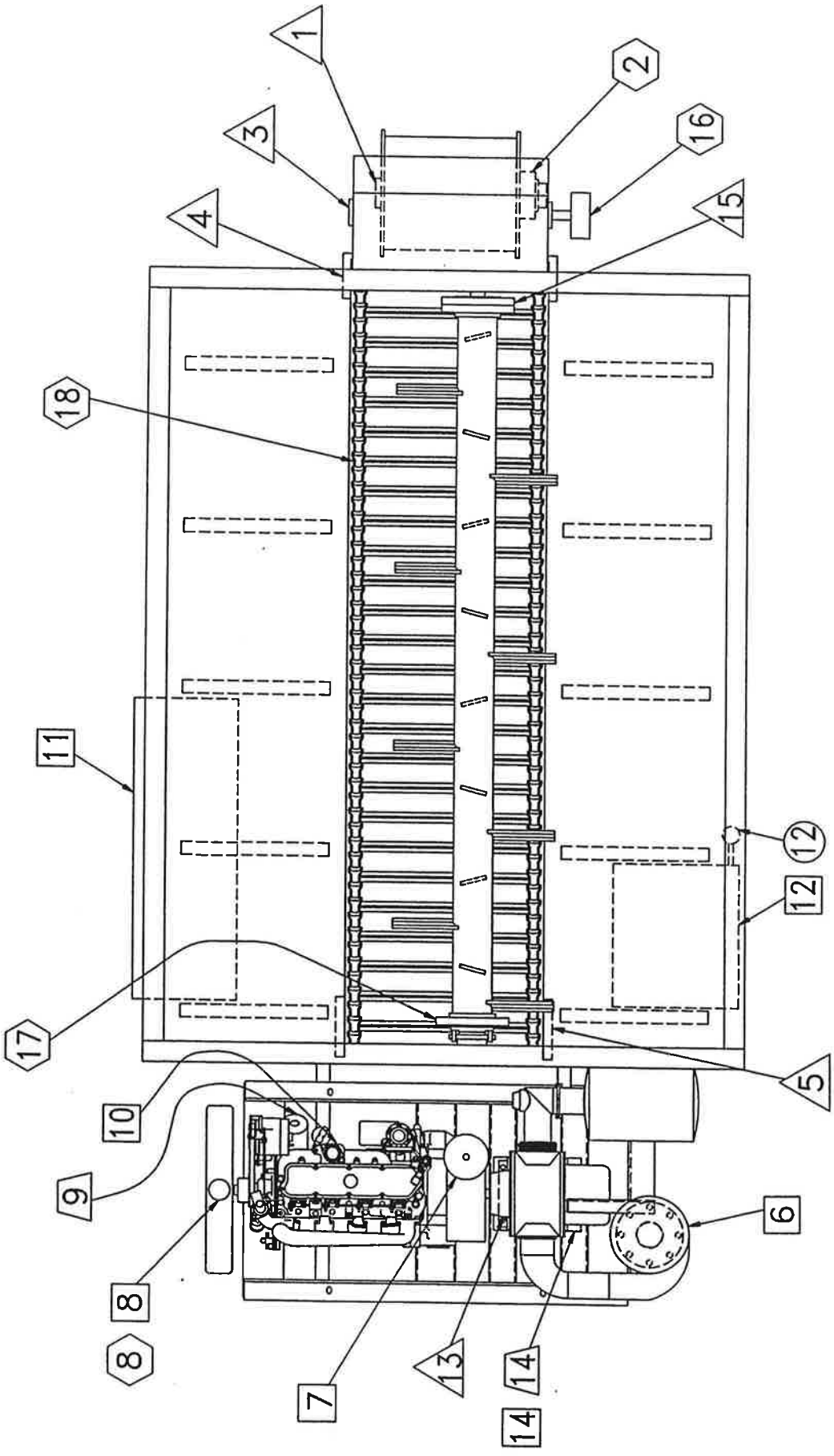
3. Change the gearbox oil on the rotary air valve, the drag conveyor and the agitator using SAE 80W90 oil, filling to the side plug. Change every 1000 hours thereafter.

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.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LUBRICATION CHART

Ref. No.	Location	Lubricant	Frequency	Number
1	Air Lock Bearing	CL	Weekly	1
2	Air Lock Gear Box	GO	Seasonally	1
3	Feeder Roll Bearing	CL	Weekly	2
4	Floor Bearing	CL	Weekly	2
5	Take-Up Bearing	CL	Weekly	2
6	Check Blower Inlet Filter		Daily	1
7	Check Engine Air Cleaner		Daily	1
8	Check Coolant Level	AF	Daily	1
	Change Engine Coolant	AF	Seasonally	1
9	Change Engine Oil and Filter	MO	See Engine Manual	1
10	Check Engine Oil Level	MO	Daily	1
11	Check Fuel Level	DF	Daily	1
12	Check Hydraulic Oil Level	HO	Daily	1
	Change Hydraulic Oil and Filter	HO	Annually	1
13	Blower Bearing	CL	Weekly	2
14	Check Blower Oil Lever	MO	Daily	1
	Change Blower Oil	MO	See Blower Manual	1
15	Agitator Bearing	CL	Weekly	1
16	Change Floor Drive Gear Box	GO	Seasonally	1
17	Change Agitator Gear Box	GO	Seasonally	1
18	Occasionally Lubricate Floor Chain (with light weight oil or chain lubricant)			

LUBRICANT OR FLUID USED

CL	Chassis Lubricant
MO	Motor Oil SAE 30 CD/SF
AF	50/50 Anti-Freeze and Water Mixture
DF	Diesel Fuel
HO	Hydraulic Oil 10W-40 SE Motor Oil
GO	90W Gear Oil

TIME KEY

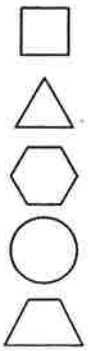
DAILY (8 hours)

WEEKLY (40 hours)

SEASONALLY (500 hours)

ANNUALLY (2000 hours)

SEE ENGINE MANUAL



FLUID CAPACITIES

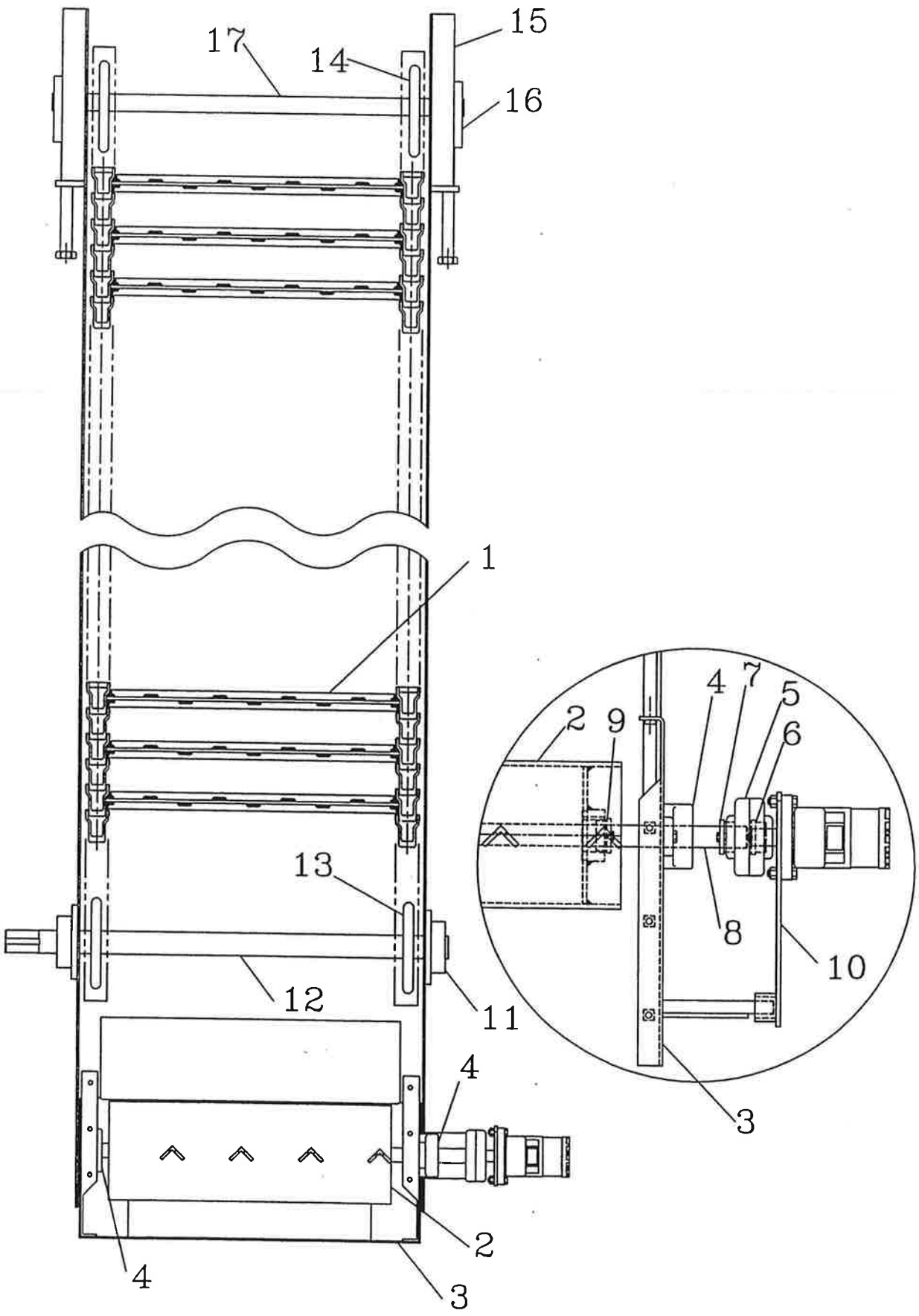
Fuel - 35 Gallons (132L)
Hydraulic Oil - 32 Gallons (121 L)
Engine Coolant - 2.75 Gallons (10.4 L) 50/50 Mix Only
Engine Oil - 6.5 Quarts (6.5 L)
Gear Box Oil - 9 ounces (.26 L)

BARK BLOWER
Models 808 & 816
Parts Manual

Model No. RU Serial No. _____

NOTE: The Parts Manual Section of this manual may be removed. The Operator's manual must remain with the machine at all times for continued reference.

INDEX



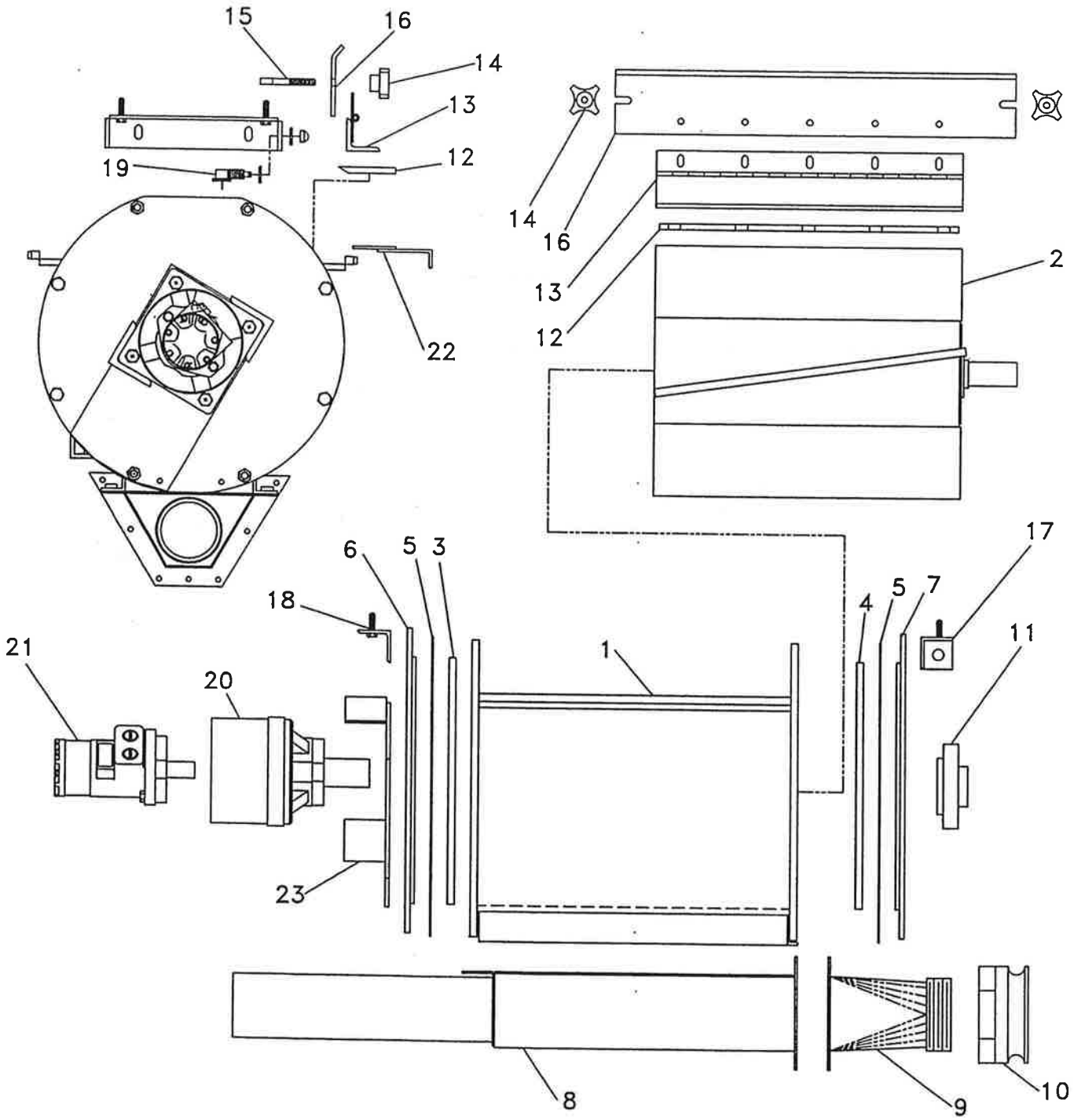
WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

FLOOR & FEED ROLL PARTS

Ref. No.	Part Number (808)	Part Number (816)	Description	No. Req'd
1	HW74131	HW74134	Drag Chain	1
2	052072	052072	Feed Wheel	1
3	052156	052156	Material Funnel	1
4	020586	020586	2-Bolt Flange Bearing	2
5	055259	055259	Coupling	1
6	020813B	020813B	H-1 Bushing	1
7	020679	020679	H1-1/4 Bushing	1
8	052078-05	052078-05	Feed Roll Shaft	1
9	021440	021440	P1-1/4 Bushing	1
10	055267-01	055267-01	Hydraulic Motor Mounting Plate	1
	004630	004630	Rubber Insert	1
11	HW6465	HW6465	4-Bolt Flange	2
12	HW38600	HW38600	Conveyer Driven Shaft	1
13	HW27275	HW27275	Sprocket 2" Bore	2
14	HW2130	HW2130	Sprocket 1-1/2" Bore	2
15	HW2126	HW2126	Take-up Bearing Frame	2
16	HW2121	HW2121	Take-up Bearing	2
17	HW10015	HW10015	Conveyer Idler Shaft	1
	052059	052059	Material Funnel Cover	1

Link - HW366699
Pin - HW366697
Cotter Pin - HW20817

#1 5282 28 " "
#2 52058
#2 52058
#14 07521 24 " "
#16 052220 052220
#17 052507-02 " "
Cover - 052059-01 " "

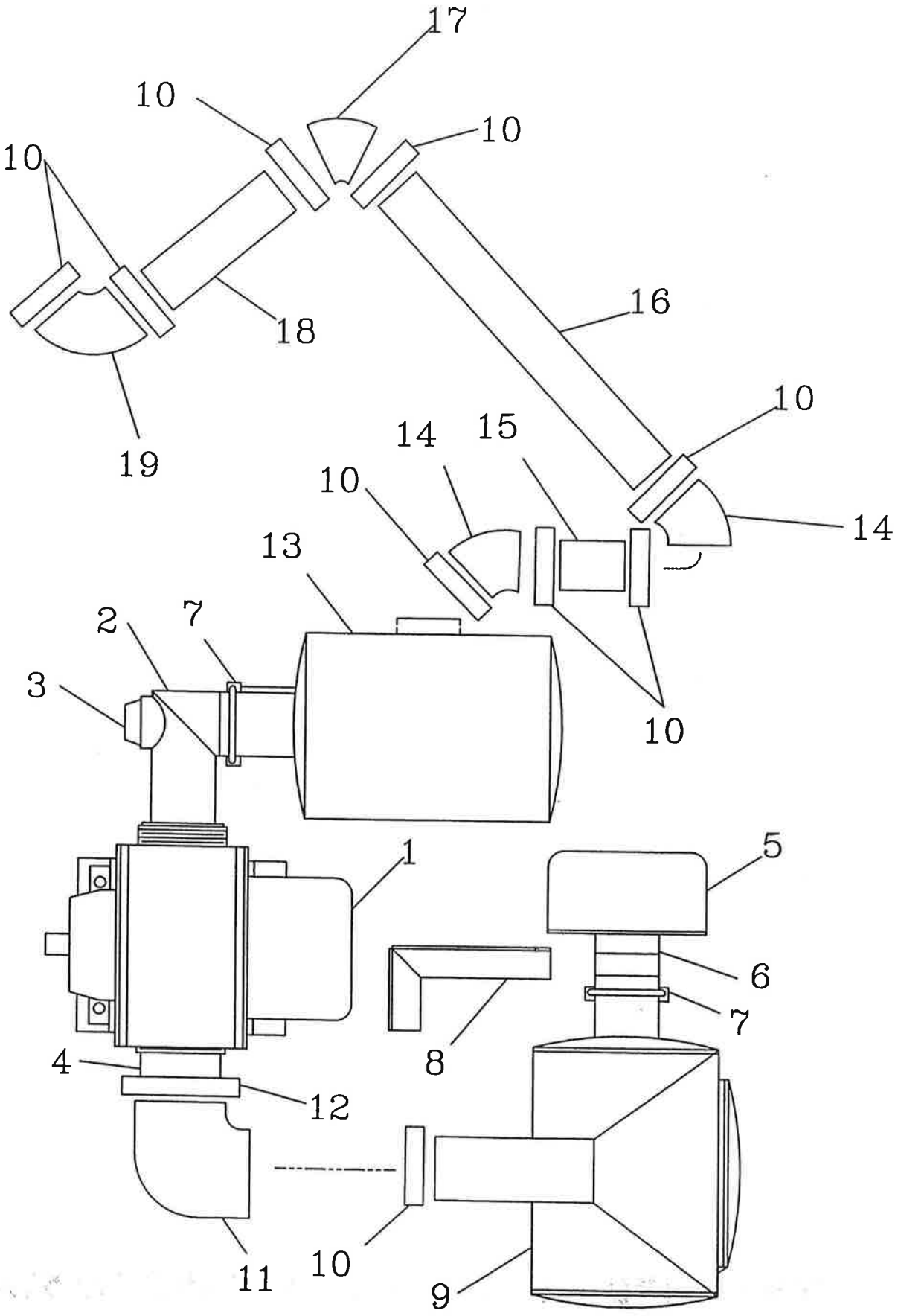


WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

AIR LOCK ASSEMBLY

Ref. No.	Part Number	Description	No. Req'd
	052153	Airlock Assembly	
1	052430	Air Lock Housing	1
	X0828	1/2" Bolt x 1 3/4" Long	11
	X0832	1/2" Bolt x 2" Long	5
	W08F	1/2" Flat Washer	16
	W08L	1/2" Lock washer	16
	Y08	1/2" Hex Nut	16
2	055423	Rotor	1
3	055721	Inlet Seal Plate	1
4	052128	Outlet Seal Plate	1
5	055214	Shim Set	1
6	055439-02	Inlet End Plate	1
7	052103	Outlet End Plate	1
8	052147	Air Lock Discharge	1
9	052148	Discharge Funnel Weld.	1
10	055375	4" Part A Male Adapter	1
11	005446	Bearing	1
	X0728	7/16" Bolt x 1 3/4" Long	4
	W07F	7/16" Flat Washer	4
	W07L	7/16" Lock washer	4
12	055113	Knife	2
	XS0444	1/4" Square Head Bolt x 2 3/4" Long	8
	Y04J	1/4" Jam Nut	8
13	055432-01	Hinge Weldment	2
14	070583	Black Knob	4
15	055433	Swing Bolt	4
16	055431-02	Door	2
	W05F	5/16" Flat Washer	10
	W05L	5/16" Lock washer	10
	Y05	5/16" Hex Nut	10
17	055432-02	Door Mount	1
18	055432-03	Door Mount	1
19	055407	Door Interlock Switch	2
20	055464	Gear Box	1
21	052007	Hydraulic Motor	1
22	052064	Screw Cover	1
23	052139	Inlet Flange	1
	055517	Gasket for Hydraulic Motor	
	052463-01	Left fab from floor to airlock	
	052463-02	Right fab from floor to airlock	

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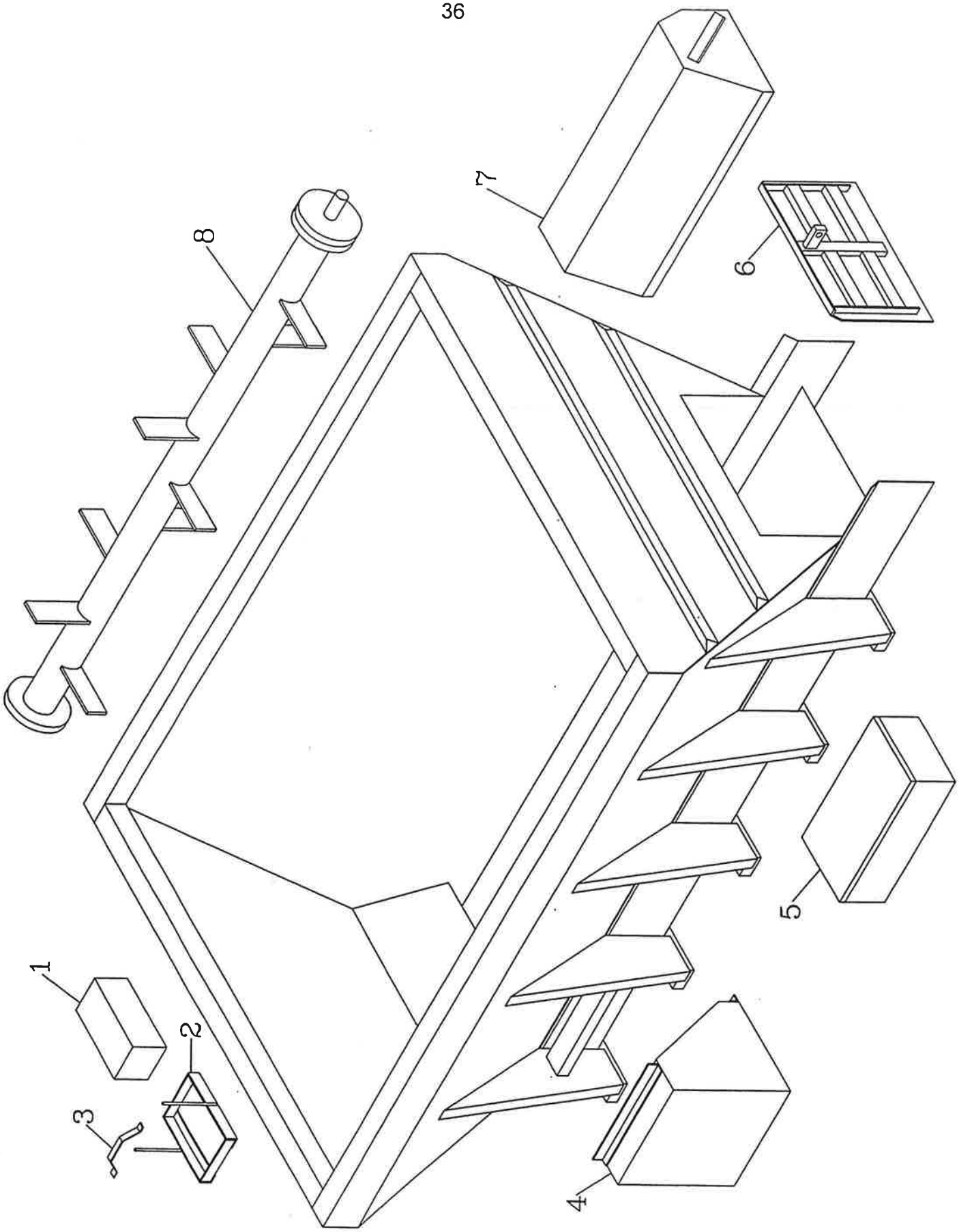
BLOWER COMPONENTS

Ref. No.	Part Number (808)	Part Number (816)	Description	No. Req'd
1	052005	052005	Blower Model 68	1
2	052137	052137	Blower Discharge	1
3	052008	052008	Relief Valve	1
4	052023-02	052023-02	Blower Inlet Nipple	1
5	052003	052003	Air Cleaner Filter 5"	1
	052004	052004	Replacement Element	1
6	052023-01	052023-01	Air Cleaner Flange	1
7	055336	055336	4" Clamp	2
8	052021	052021	Air Cleaner Support	1
9	052093	052093	Inlet Silencer	1
10	055335	055335	4" Clamp	9
11	052010	052010	90°Reducer Elbow	1
12	052011	052011	5" Clamp	1
13	052020	052020	Outlet Silencer	1
14	055367	055367	Rubber Hump Hose	2
15	052022-11	052022-11	Short Air Tube	1
16	052022-07	052022-09	Long Air Tube	0
17	052012	052012	45° Rubber Elbow	1
18	052022-06	052022-06	35" Air Tube	1
19	055334	055334	90° Rubber Elbow	1

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

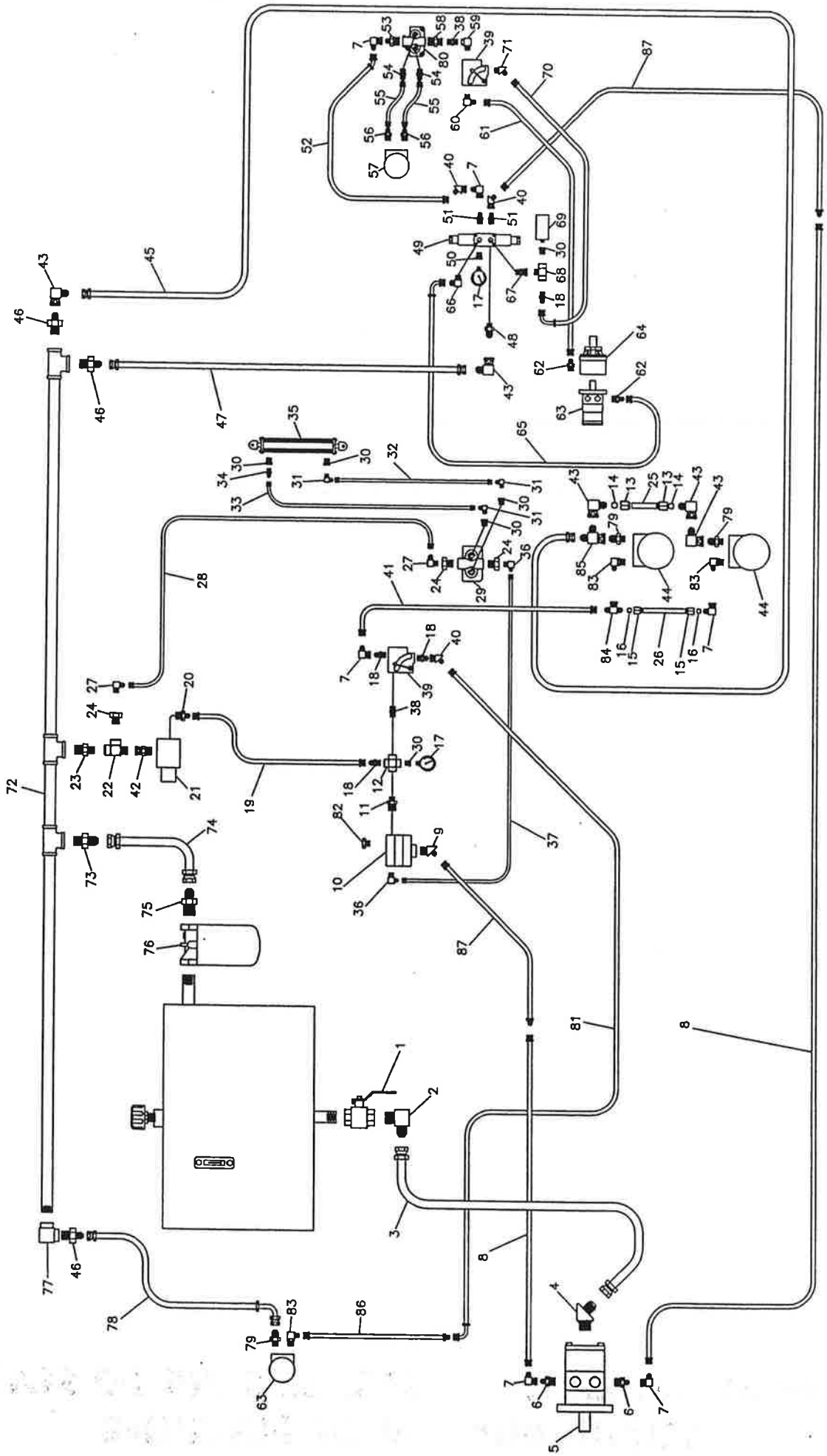


WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

LOOSE PARTS

Ref. No.	Part Number (808)	Part Number (816)	Description	No. Req'd
1	011770	011770	Battery Box	1
	011851	011851	Battery	1
2	052142	052142	Battery Tray	1
3	080220	080220	Battery Holddown Strap	1
4	HW39346	HW39346	Hydraulic Reservoir	1
5	052160	052160	Tool Box	1
6	HW70292	HW70292	Rear Feed Gate	1
7	052090	052090	Fuel Tank	1
8	052106-06	052106-04	Agitator	1
	052129	052129	Agitator End Shaft Bearing	1
		052111	Agitator Gearbox	
		052437	Agitator Hydraulic Motor	
		052494	Ladder	

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

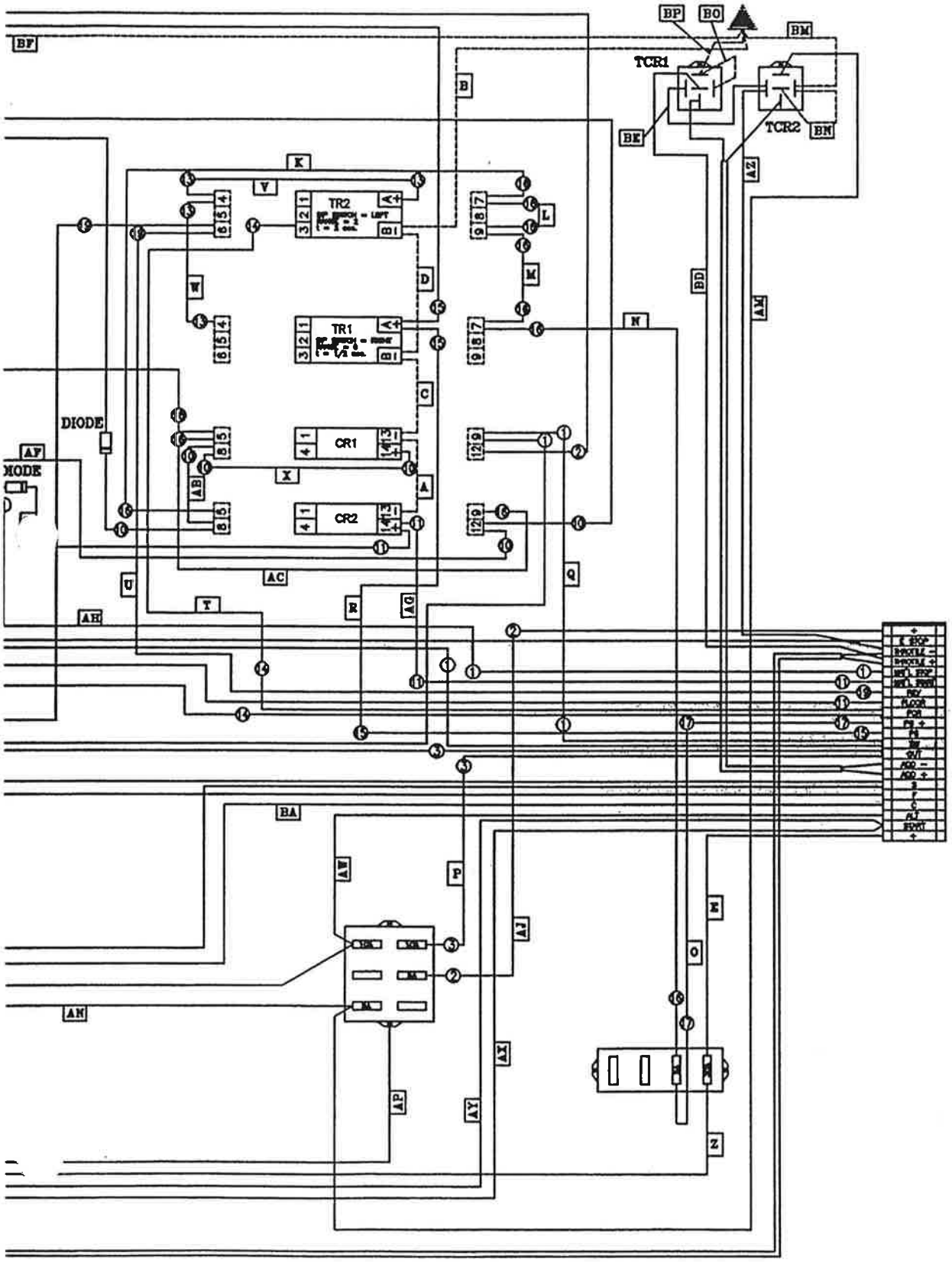


HYDRAULIC SYSTEM

Ref. No.	Part Number 808	Part Number 816	Description	No. Req'd
1	020511	020511	Ball Valve	1
2	052030	052030	90° Male Elbow Adapter	1
3	052042	052100	Suction Hose	1
4	052031	052031	45° Male Elbow Adapter	1
5	052006	052006	Hydraulic Pump	1
6	055359	055359	Straight Adapter Union	2
7	FW71870	FW71870	90° Adapter Union	6
8	052054	052054	Pressure Hose	2
9	052034	052034	45° Male Elbow Adapter	1
10	022292	022292	Priority Divider Valve	1
11	023206	023206	Nipple	1
12	052033	052033	Pipe Cross	1
13	052096	052096	Tubing Nut	2
14	052098	052098	Ferrule	2
15	052097	052097	Tubing Nut	2
16	052099	052099	Ferrule	2
17	012044	012044	Pressure Gauge	2
18	041053	041053	Straight Male Adapter	4
19	052037	052037	Floor Dump Valve Hose	1
20	055359	055359	Straight Male Adapter	1
21	041163	041163	Floor Dump Valve	1
22	022346	022346	Street Tee	1
23	FW65222	FW65222	Pipe Nipple	1
24	080268	080268	Hex Bushing	3
25	190168	190168	Hydraulic Tube	4.5"
26	190169	190169	Hydraulic Tube	5.25"
27	055234	055234	90° Male Elbow Adapter	2
28	052044	052044	Cylinder Return Hose	1
29	052157	052157	Feed Gate Valve	1
30	055229	055229	Hex Bushing	6
31	FW71450	FW71450	90° Male Elbow Adapter	3
32	052046	052046	Cylinder Work Hose	1
33	052047	052047	Cylinder Work Hose	1
34	FW71910	FW71910	Male Straight Adapter	1
35	052185	052185	Hydraulic Cylinder	1
36	055273	055273	90° Male Elbow Adapter	2
37	052045	052045	Floor Work Hose	1
38	011504	011504	Pipe Nipple	2
39	055140	055140	Speed Control Valve	2
40	FW71504	FW71504	45° Adapter Union	3
41	052038	052038	Floor Control Hose	1
42	041191	041191	Straight Adapter Union	1
43	FW71492	FW71492	90° Adapter Union	5
44	052392		Floor Hydraulic Motor	2
45	052039	052039	Floor Return Hose	1

052631 Flow Control for floor creep

46	005640	005640	Straight Male Adapter	3
47	052055	052055	Solenoid Valve Return Hose	1
48	055233	055233	Straight Male Adapter	1
49	055115	055115	Solenoid Valve	1
50	FW71618	FW71618	Reducing Adapter	1
51	055232	055232	Straight Male Adapter	2
52	052049	052049	Feeder Roll Control Hose	1
53	023617	023617	Straight Male Adapter	1
54	085015	085015	Straight Male Adapter	2
55	052036	052036	Feeder Roll Work Hose	2
56	085014	085014	Straight Male Adapter	2
57	080482	080482	Feeder Roll Hydraulic Motor	1
58	070497	070497	Straight Adapter Union	1
59	052029	052029	Street Elbow	1
60	023652	023652	90° Male Elbow Adapter	1
61	052048	052048	Air Lock Motor Work Hose	1
62	012086	012086	Straight Male Adapter	2
63	052007	052007	Hydraulic Motor	2
64	055464	055464	Gear Box	1
65	052052	052052	Air Lock Return Hose	1
66	055230	055230	90° Male Elbow Adapter	1
67	070377	070377	Straight Adapter Union	1
68	005547	005547	Female Run Tee	1
69	055474	055474	Pressure Switch	1
70	052050	052050	Solenoid Work Hose	1
71	080383	080383	45° Male Elbow Adapter	1
72	052187-02	052187-01	Return Header Assembly	1
73	FW71712	FW71712	Straight Male Adapter	1
74	052041	052041	Return Hose	1
75	041152	041152	Straight Male Adapter	1
76	011868	011868	Hydraulic Return Filter	1
	011869	011869	Filter Element	1
77	005639	005639	Pipe Elbow	1
78	052040	052040	Agitator Return Hose	1
79	FW75148	FW75148	Straight Male Adapter	3
80	022850	022850	Feeder Roll Valve	1
81	052053	052053	Agitator Work Hose	1
82	052164	052164	Hex Plug	1
83	023621	023621	90° Male Elbow Adapter	3
84	052095	052095	Tee Union Adapter	1
85	FW71873	FW71873	Tee Union Adapter	1
86		052166	Extender Hose	1
87		052101	Extender Hose	2


BF
BP
BO
BM
TCR1
TCR2
BK
BN
B
K
V
TR2
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D
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TR1
N
C
DIODE
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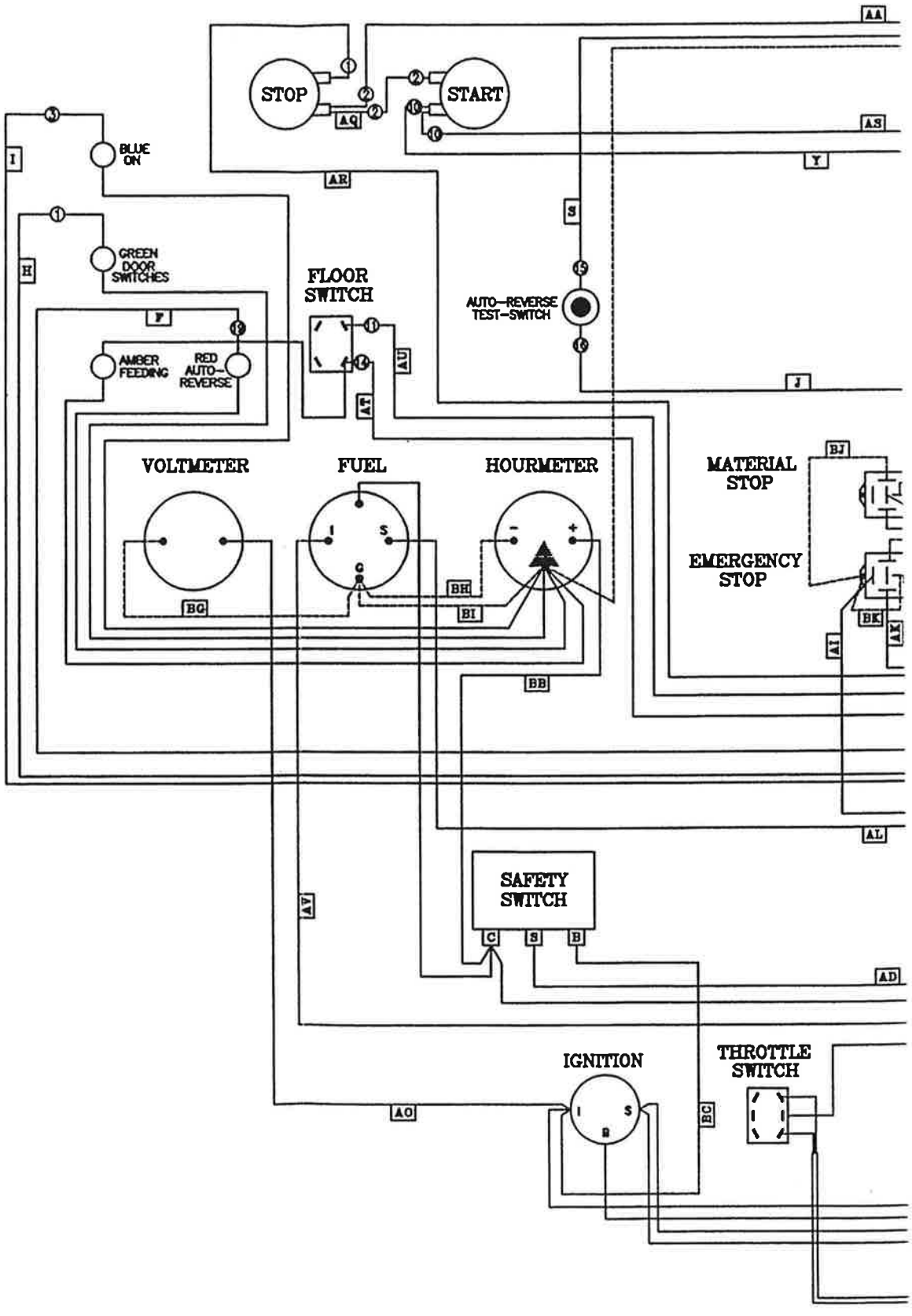
STOP
START
AQ
BLUE ON
GREEN DOOR SWITCHES
FLOOR SWITCH
AUTO-REVERSE TEST-SWITCH
AMBER FEEDING
RED AUTO-REVERSE
VOLTMETER
FUEL
HOURMETER
MATERIAL STOP
EMERGENCY STOP
SAFETY SWITCH
IGNITION
THROTTLE SWITCH
AA
AS
Y
AR
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AU
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BJ
BK
AX
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BH
BI
BG
BB
AL
AV
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AO
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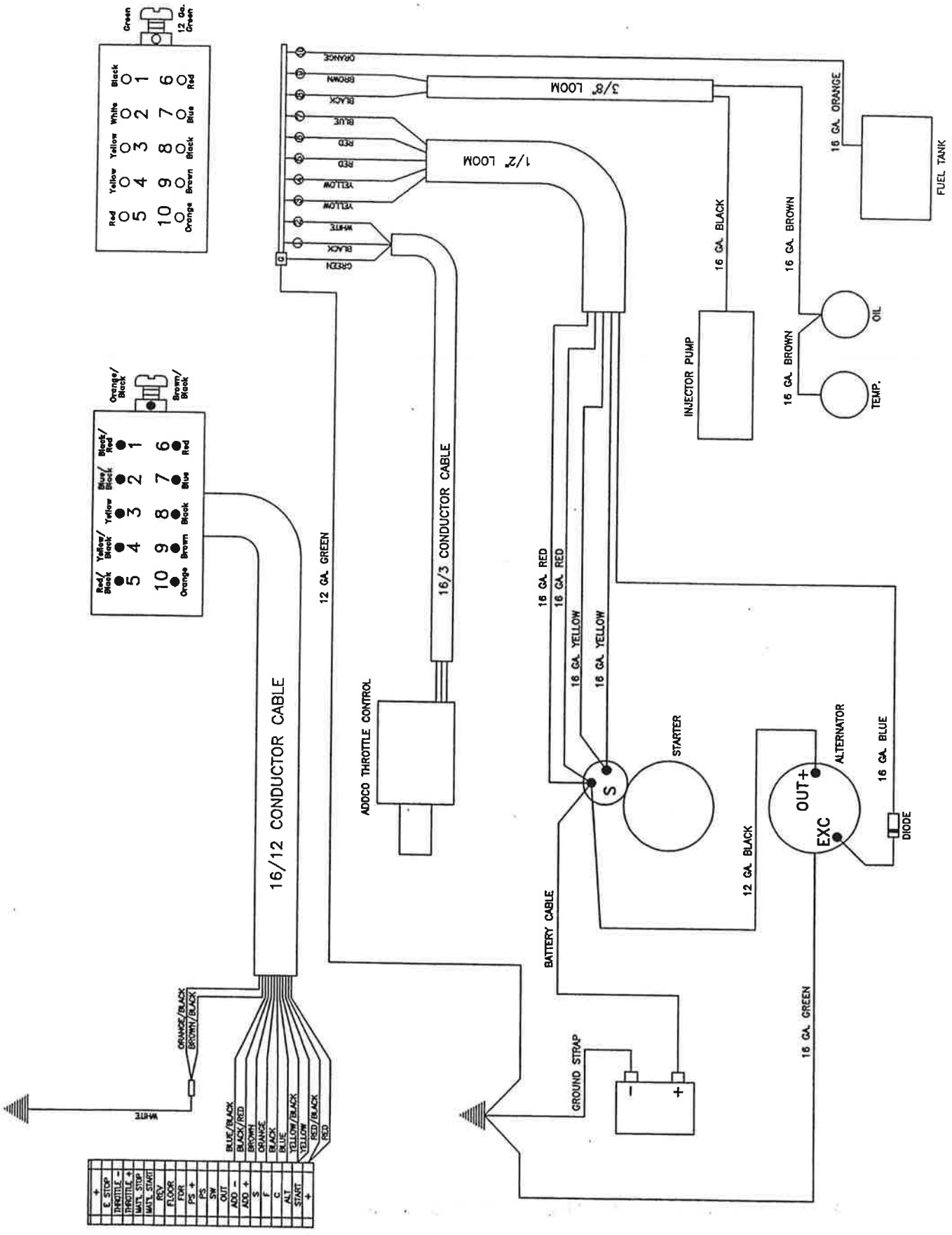
CONTROL BOX WIRING

Part Number	Description	No. Req'd
007274	Hourmeter	1
FW71972	Fuel Gauge	1
007958	Voltmeter	1
022219	Safety Switch	1
052076	Ignition Switch	1
FW71555	Throttle Switch	1
052112	Floor Switch	1
080526	Toggle Switch Boot	2
020886	Auto-Reverse Test Button	1
055127	Start Button	1
055128	Stop Button	1
055403	Amber Light	1
055404	Blue Light	1
055405	Green Light	1
055406	Red Light	1
FW71749-02	30 AMP Relay	4
055120	12V Relay	2
055122	12V Timer	2
055123	Relay Socket	2
055125	Timer Socket	2
055132	Terminal Block	21
055451	Terminal End Piece	1
052118	6 Circuit Fuse Panel	1
055447	4 Circuit Fuse Panel	1
052119	30 AMP Fuse	1
055449	10 AMP Fuse	2
055450	5 AMP Fuse	2
052120	2 AMP Fuse	1
052069	Enclosure Box	1
052070	Sub-Panel	1
023076	Ignition Key	

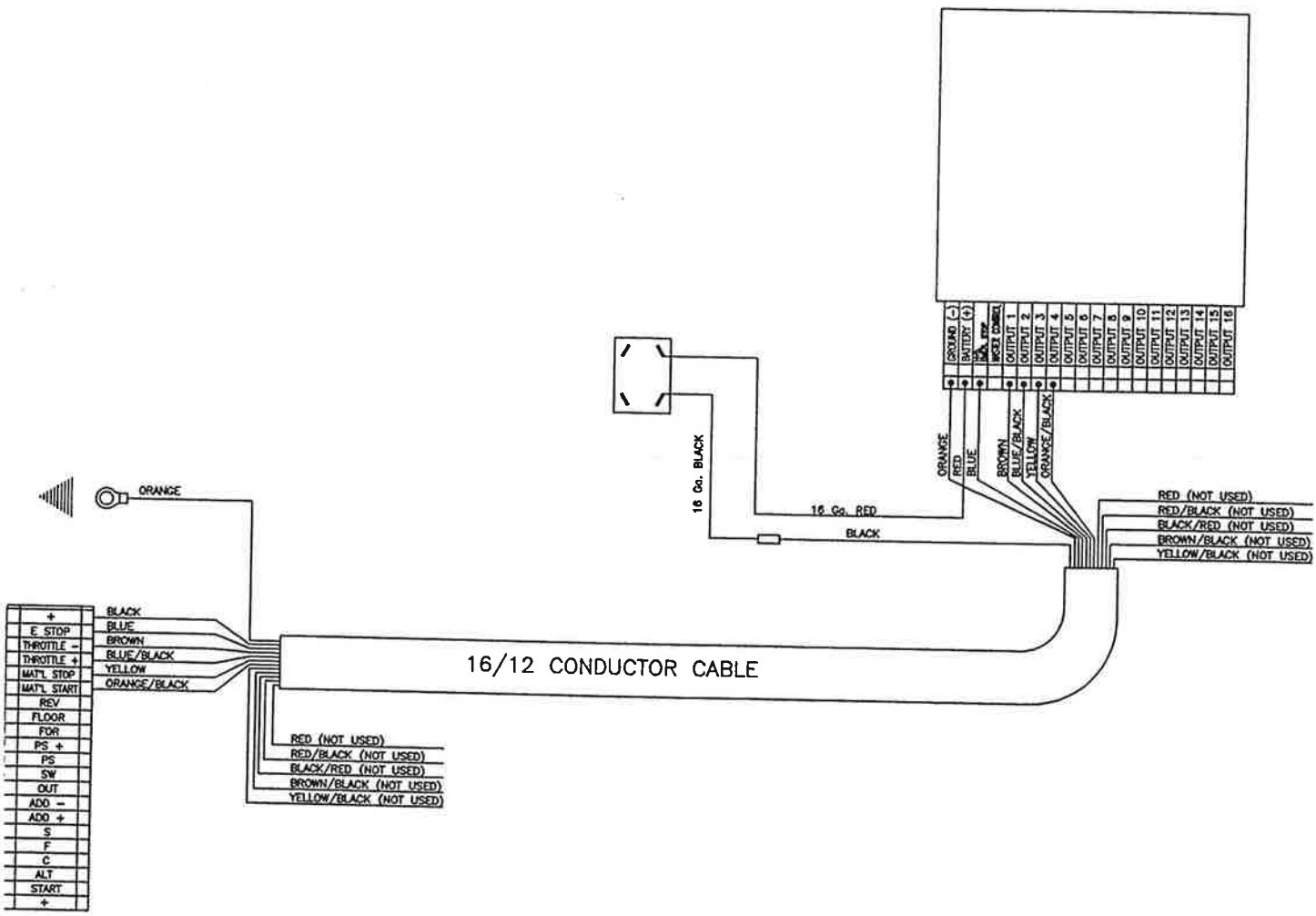
WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE


Green
12 Ga. Green
Red
Yellow
Yellow
White
Black
Red
Orange
Brown
Black
Blue
Orange/ Black
Brown/ Black
Red/ Black
Yellow/ Black
Yellow
Blue/ Black
Black/ Red
Red
Orange
Brown
Black
Blue
16/12 CONDUCTOR CABLE
12 GA. GREEN
16/3 CONDUCTOR CABLE
ADDCO THROTTLE CONTROL
3/8" LOOM
1/2" LOOM
GREEN
BLACK
WHITE
YELLOW
YELLOW
RED
RED
BLUE
BROWN
ORANGE
16 GA. ORANGE
FUEL TANK
16 GA. BLACK
INJECTOR PUMP
16 GA. BROWN
OIL
16 GA. BROWN
TEMP.
16 GA. RED
16 GA. RED
16 GA. YELLOW
16 GA. YELLOW
STARTER
S
OUT+
EXC
ALTERNATOR
16 GA. BLUE
DIODE
12 GA. BLACK
BATTERY CABLE
GROUND STRAP
16 GA. GREEN
ORANGE/BLACK
BROWN/BLACK
WHITE
BLUE/BLACK
BLACK/RED
BROWN
ORANGE
BLACK
BLUE
YELLOW/BLACK
YELLOW
RED/BLACK
RED
+
E STOP
THROTTLE -
THROTTLE +
WATL STOP
WATL START
REV
FLOOR
FOR
PS +
PS
SW
OUT
ADD -
ADD +
S
F
C
ALT
START
+

ENGINE WIRING

Part Number (808)	Part Number (816)	Description	No. Req'd
052169	052169	Engine Wiring Harness	1
052212-01	052212-02	Engine Extension Harness	1
005561	005561	Electrical Housing	1
023604	023604	Electrical Hood	1
023601	023601	Male Insert	1
023602	023602	Female Insert	1
011851	011851	Battery	1
031031	031031	Battery Cable	1
010516	010516	Ground Strap	1
FW71536	FW71536	Electric Throttle Assembly	1
055384	055384	Temperature Gauge	1
007706	007706	Oil Gauge	1
FW71978	FW71978	Fuel Level Sender	1
023511	023511	Alternator/Regulator Assembly	1
022425	022425	Diode	1

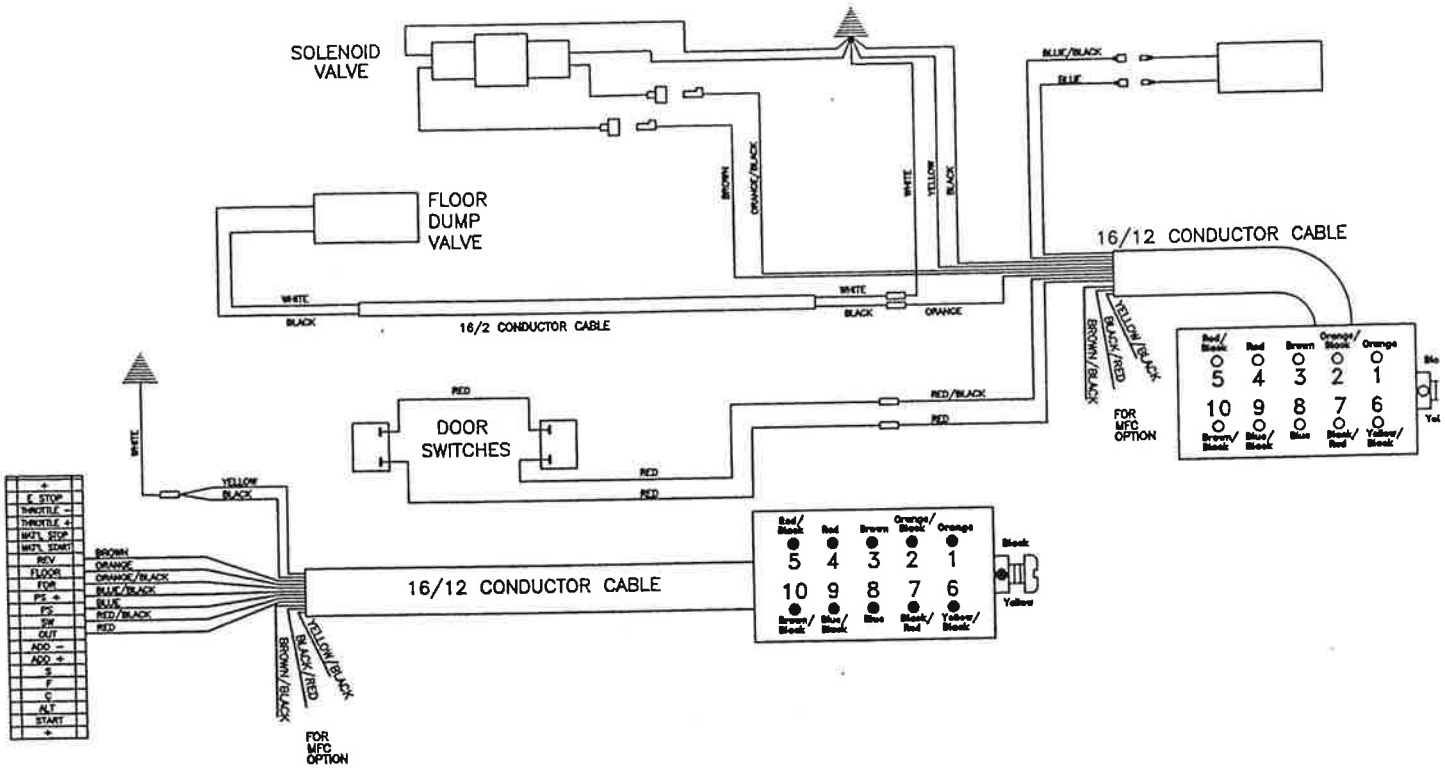
WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE



RADIO REMOTE CONTROL WIRING

Part Number	Description	No. Req'd
052009A	Radio Remote Controller	1
052009B	Radio Remote Receiver	1
052009C	Radio Remote Antenna	1
052112	Toggle Switch	1
080526	Toggle Switch Boot	1
052056-01	Radio Remote Receiver Enclosure	1
052215	Radio Remote Control Wiring Harness	1

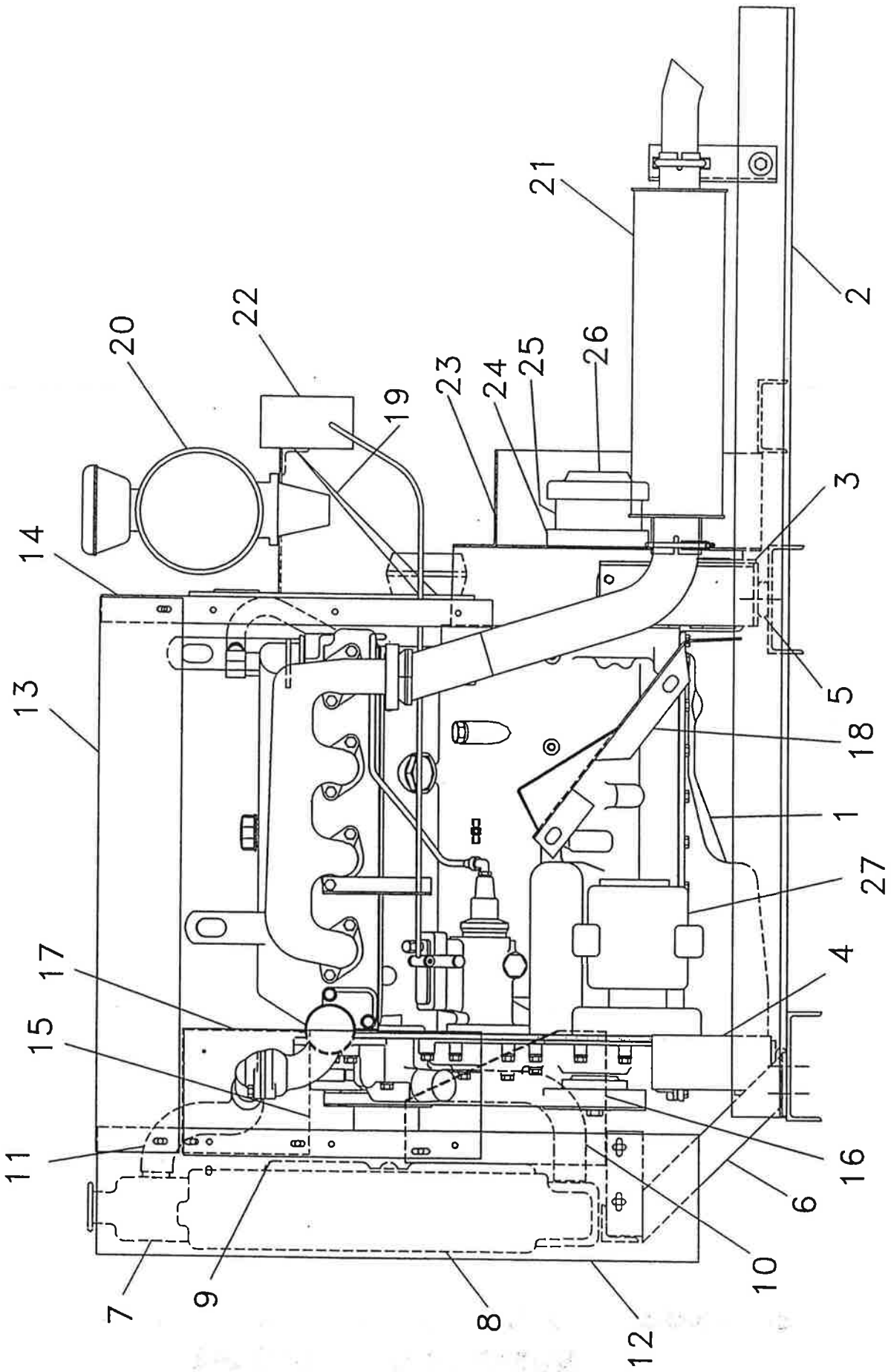
WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE



CONTROLS WIRING

Part Number	Description	No. Req'd
052213	Controls Wiring Harness	1
052214	Controls Extension Harness	1
005561	Electrical Housing	1
023604	Electrical Hood	1
023601	Male Insert	1
023602	Female Insert	1
055407	Air Lock Door Switch	2
055115	Solenoid Valve	1
055474	Pressure Switch	1
041163	Floor Dump Valve	1

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


21
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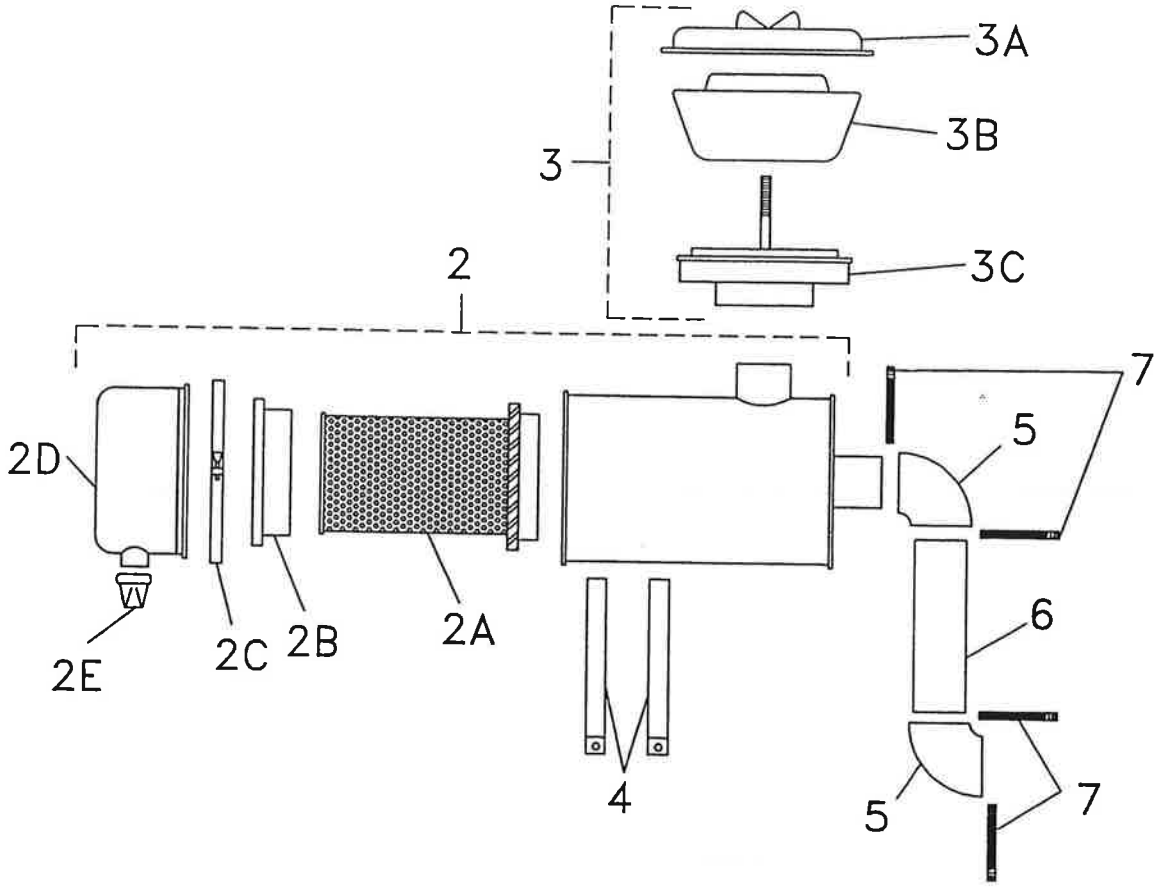
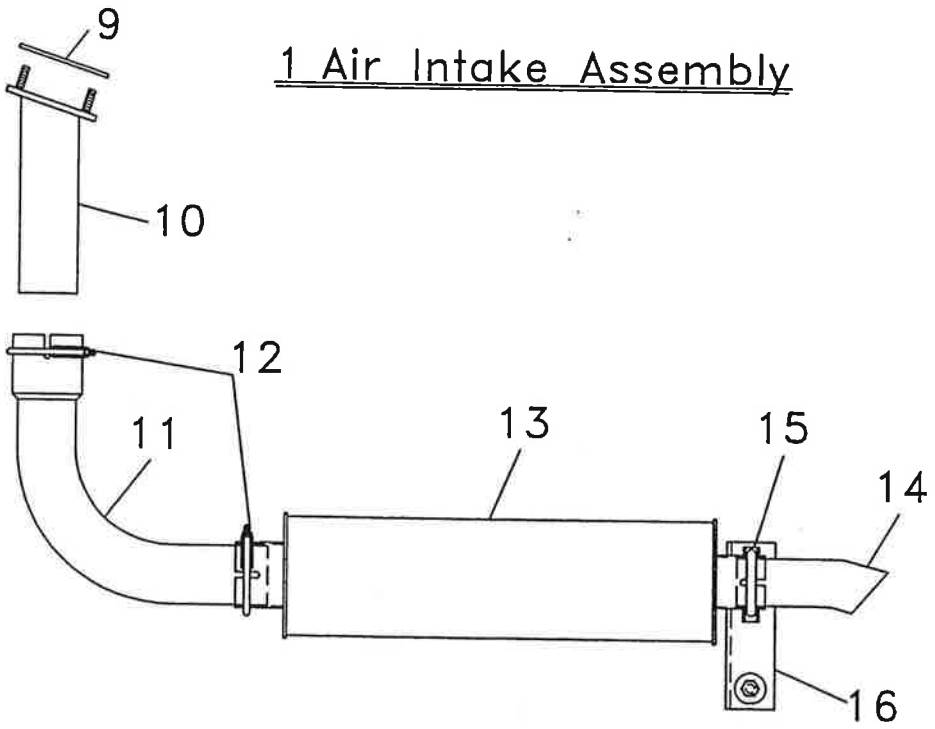
ENGINE ASSEMBLY

Ref. No.	Part Number	Description	No. Req'd
1	008462	Engine Assembly	1
2	052016	Engine Cradle	1
3	011344	Rear Engine Mount	2
4	008460	Front Engine Mount	2
5	007433	Shock Mount	4
	007887	Snubbing Washer	4
6	008458	Radiator Mount	1
7	007676	Radiator Assembly	1
	008279	Shock Mount	2
	022452	Drain Cock	1
	007878	Radiator Cap	1
8	007677	Fan Shroud	1
9	007678	Fan	1
10	008510	Lower Radiator Hose	1
	022450	Hose Clamp	2
11	007679	Upper Radiator Hose	1
	007695	Hose Clamp	2
12	008479	Radiator Cover	1
	011885-02	Spacer	2
	011885-01	Spacer	1
13	008476	Top Cover	1
14	052149	Rear Engine Panel	1
	008317	Spacer	1
15	008556	Fan Guard	1
16	023717	Lower Fan Guard	1
17	052079	Front Fan Guard	1
18	011925	Heat Shield	1
	011885-06	Spacer	1
19	023526-01	Air Cleaner Mount	1
20	008520-01	Air Intake Assembly (see pages 48-49)	1
21	052168	Exhaust Assembly (see pages 48-49)	1
22	FW71536	Electric Throttle	1
	011670	Spacer Bolt	1
	052019-02	Mounting Bracket	1
23	052088	Coupling Guard	1
24	052001	Coupling Half-Engine	1
25	011774	Rubber Coupling Insert	1
26	011772	Coupling Half-Blower	1
27	052006	Hydraulic Pump	1
	011712	Single Groove Pulley	1
	012426	Alternator Guard	1
	023511	Alternator	1
	011796-06	Alternator Spacer	1
	052025	Flywheel Adapter Plate	1



1 Air Intake Assembly

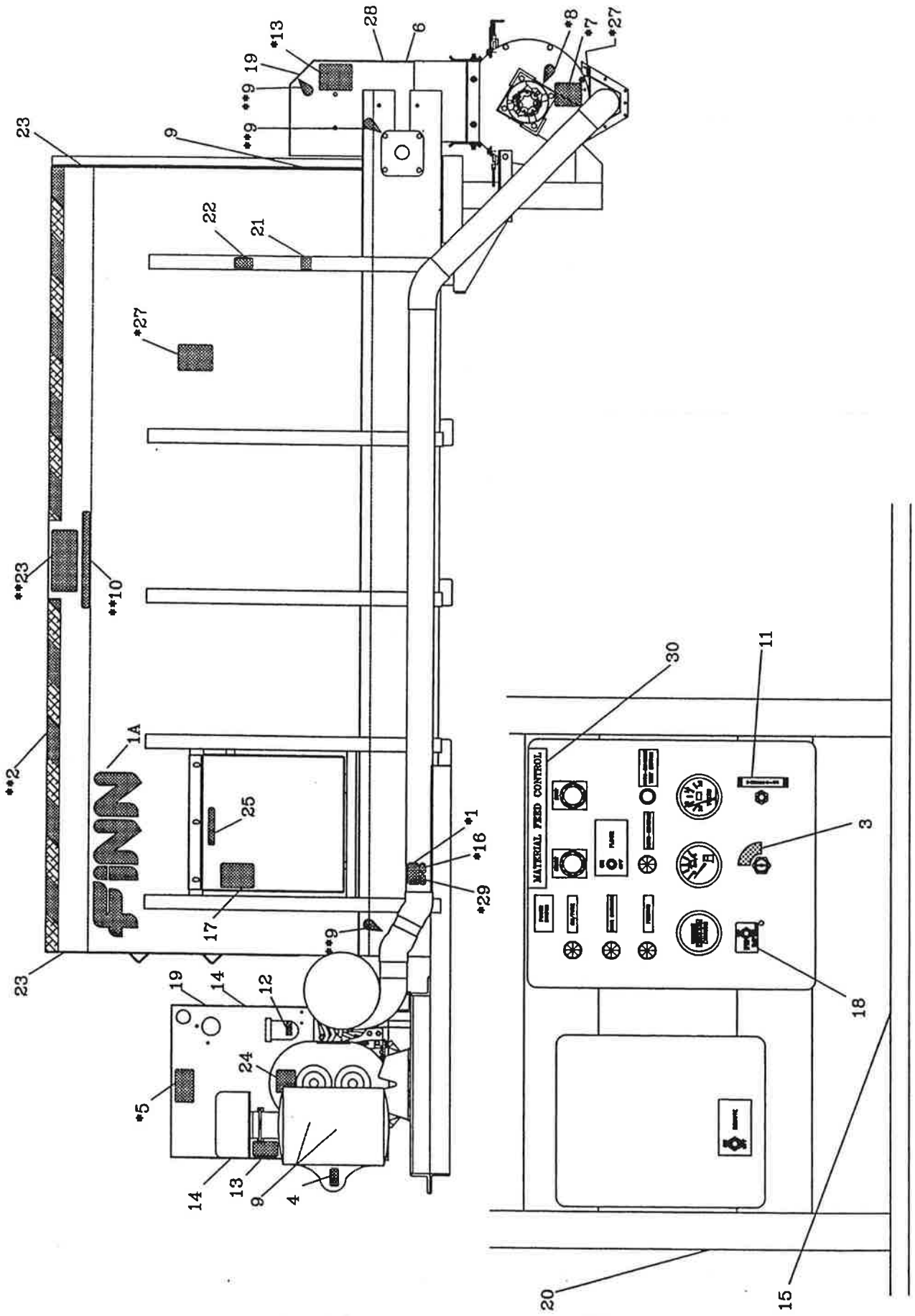


8 Exhaust Assembly

AIR INTAKE AND EXHAUST ASSEMBLIES

Ref. No.	Part Number	Description	No. Req'd
1	008520-01	Air Intake Assembly (Items 2-7)	1
2	007987	Air Cleaner Assembly	1
2A	007739	Filter Element	1 per
2B	DNP10-2510	Baffle Assembly	1 per
2C	DNP00-2940	Clamp Assembly	1 per
2D	DNP10-3836	Vacuator Cup Assembly	1 per
2E	007994	Vacuator Valve	1 per
3	007988	Pre Cleaner Assembly	1
3A	DNP02-0648	Cover	1 per
3B	DNP02-0227	Bowl	1 per
3C	DNP02-0653	Sleeve	1 per
4	007990	Mounting Band	2
5	007993	Rubber Elbow	2
6	023581-05	Connecting Tube	1
7	022450	Clamp	4
8	052168	Exhaust Assembly (Items 11-16)	1
9	011218	Flange Gasket	1
10	052013	Exhaust Extension	1
11	011211	Exhaust Elbow	1
12	020052	Muffler Clamp	2
13	007456	Muffler	1
14	052110	Tail Pipe	1
15	000461	Muffler Clamp	1
16	052019-06	Tail Pipe Support Bracket	1
	023438	Rubber Shock Mount	1

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



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

DECALS

Ref. No.	Part Number	Description	No. Req'd
1	011690	FINN Name Plate	1
1A	023174	"FINN" Decal	2
2	190173	Yellow-Black Warning Tape	40'
3	KL2411303	Decal "IGN" Kohler	1
4	012278	Decal "DANGER! HOT EXHAUST" #SW-7	1
5	012279	Decal "WARNING! RADIATOR" #SW-600	1
6	055219	Decal "DANGER! SHARP KNIVES"	1
7	055280	Decal #SW805 "WARNING OBJECTS MAY BE THROWN"	1
8	007230	Decal "SERVICE DAILY"	1
9	007231	Decal "SERVICE WEEKLY"	9
10	022690	Decal "WEAR EYE PROTECTION"	2
11	007535	Decal "THROTTLE"	1
12	007607	Decal "DRAIN WATER DAILY"	1
13	012179	Decal "WARNING! DO NOT OPERATE WITHOUT"	2
14	012251	Decal "WARNING! ROTATING FAN"	2
15	012260	MAINTAIN SAFETY DECAL PLATE	1
16	020976	Decal "PATENT INFRINGEMENT"	1
17	021665	Decal "HYDRAULIC INSTRUCTIONS	1
18	022082	Decal "HOLD BUTTON IN"	1
19	022357	Decal "WARNING! TURN OFF ENGINE	2
20	052170	Decal "FEED ROLL-FOR/REV."	1
21	052171	Decal "GATE-OPEN/CLOSE"	1
22	052172	Decal "FLOOR-FAST/SLOW"	1
23	052177	Decal "DANGER-ROTATING HAZARD"	4
24	052178	Decal "IMPORTANT"	1
25	012272	Decal "HYDRAULIC OIL ONLY"	1
26	023391	Decal "DIESEL FUEL ONLY"	1
27	023519	Decal "CAUTION! WEAR EYE PROTECTION"	2
28	020068	Decal "DANGER! DO NOT OPEN DOOR"	1
29	055216	Decal "PATENT NUMBERS"	1
30	055217	Decal "MATERIAL FEED CONTROL"	1

Note: Safety Decals Must be ordered as a kit-
Part # 053037

NOTE: 1. * Located on opposite side
** Located on both sides
2. Item 26. Not shown; Located on fuel tank near fill neck.

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

TOOL KIT

Part Number	Description	No. Req'd
012681A	Spray Paint	1
	Engine Parts Manual	1
	Engine Operators Manual	1
	Blower Operators Manual	1
	Radio Remote Control Manual	1
	Bark Blower Parts/Operators Manual	1

DISCHARGE HOSE

Part Number	Description	No. Req'd
055398B	50' Discharge Hose Assembly	1.5
055399B	100" Discharge Hose Assembly	4
055377	Hose Adapter	4
055304	Clamp	1
055337	Shoulder Strap	2
055374A	Aluminum Adapter	2
055375A	Aluminum Coupler	

RECOMMENDED SPARE PARTS

Part Number	Description
052004	Blower Filter Element
011869	Hydraulic Oil Return Filter Element
JDRE58367	Fuel Filter
JDT19044	Engine Oil Filter
007739	Air Cleaner Element
055113	Air Lock Knives (2 Sets)
055407	Air Lock Door Interlock Switch

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