

FINN **CORPORATION®**

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**Activate
Your Warranty
By Registering
TODAY!!!**



Bark Blower TM

Model BB-705 w/ Caterpillar Engine Operator's Manual

Model **SB** Serial No. _____

NOTES



ACTIVATE YOUR FINN EQUIPMENT WARRANTY

IMPORTANT INFORMATION ON ACTIVATING YOUR FINN EQUIPMENT WARRANTY!!!

IT IS IMPERATIVE THAT YOU, THE PURCHASER, COMPLETE THE FOLLOWING STEP IN ORDER TO
ACTIVATE THE FINN CORPORATION LIMITED WARRANTY.



**COMPLETE THE “EQUIPMENT REGISTRATION” FORM ON
THE NEXT PAGE AND MAIL TO THE FINN CORPORATION.**

**IF FINN CORPORATION DOES NOT HAVE YOUR COMPLETED REGISTRATION
FORM ON FILE, YOUR WARRANTY CLAIM WILL BE DENIED.**

**Once your Finn equipment has been registered, your Finn Limited Warranty will
be activated per the warranty statement on the other side of this notice.**

<<What should you do if you need repairs or parts under Warranty?>>



1. NOTIFY FINN CORPORATION OF THE FAILURE OF MATERIAL OR WORKMANSHIP
1-800-543-7166 Extension (246)
WARRANTY@FINNCORP.COM



2. AFTER YOU OR YOUR SERVICE DEALER NOTIFY FINN, FINN WILL:

- VERIFY THAT WE HAVE YOUR “REGISTRATION” ON FILE
- VERIFY THAT THE WARRANTY PERIOD IS IN EFFECT
- VERIFY THAT THE RELATED PART(S) ARE INCLUDED IN THE SCOPE OF WARRANTY (PENDING FINN’S INSPECTION OF DEFECTIVE PARTS)
- SEND YOU REPLACEMENT PART(S) AND A “WARRANTY INFORMATION PACKET”
- REQUEST YOU FOLLOW ALL INSTRUCTIONS AS NOTED IN THE “PACKET”

- Fill out the Parts Tag. (Completely)
- Attach the Parts Tag to the defective part(s).
- Return the part(s) and the completed Warranty Claim Form to Finn Corporation using the return shipping label. **(Within 2 weeks)**
- Tape the Orange identifier sheet, marked with the W / RMA# on the outside of the box you are shipping the defective part(s) to Finn in.



Finn Corporation Commercial Limited Warranty

Effective August 23, 2010

OUR WARRANTY TO YOU:

Finn Corporation warrants to you, the original purchaser, for use (or rental to others for use) all new construction machinery, parts and attachments (except those referred to herein) that are 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 to which parts are installed, as if parts were original components of the product.

WHAT FINN WILL DO:

Upon notification of Finn concerning a failure of material or workmanship in accordance with the above stated Warranty, Finn Corporation will:

- Verify claim falls within the valid warranty time frame.
- Verify the product and equipment has been **registered** with Finn in order to be eligible for warranty coverage.
- Upon affirmation of warranty period and registration, Finn will send to you a new or repaired replacement part(s), whichever Finn elects and a "Warranty Claim Information packet" containing instructions for processing the warranty claim.
- Evaluate the part when defective part is returned. Note: Failure to return defective part within **two weeks** will result in an invoice being sent to the customer. In addition, if damage to a part is determined not to be covered under the warranty, the customer will be billed for the replacement part.
- Reconcile costs with customer for parts and shipping, as determined by our inspection of failed parts, and confirmation of warranty coverage, per the terms of this warranty.
- Correction of nonconformities, in the manner provided above, shall constitute fulfillment of all liabilities of Finn Corporation under this warranty.

WHAT YOU MUST DO TO OBTAIN WARRANTY SERVICE:

- As the purchaser covered under the above limited warranty you must **REGISTER** the equipment with Finn as such owner. Should registration not be on file with Finn Corporation, your **warranty will be void**. (See Operators manual for Registration Form)
- All warranty labor must be pre-approved by providing Finn with an estimate of labor costs. Once approved, Finn will issue you a Work Authorization Number, prior to work being performed.
- The labor costs reimbursement will be based on the Labor Allowance Schedule established by Finn and where not applicable, on a reasonable number of hours as determined by Finn.
- Notify Finn Corporation of any failure of material or workmanship as described under this warranty.
 - Web notification: Warranty@Finncorp.com
 - Phone 1-800-543-7166 extension 246
- Complete the required steps in the "Warranty Claim Information packet" (which Finn will send you) and return the defective part(s) as directed in the packet to Finn Corporation.
- Should the failed part be a hydraulic component, Finn may send you an "**Oil Analysis Kit**", requesting that a sample of oil from the hydraulic system be taken, and mail it to a lab. Follow the instruction sheet, on how to use your Finn Oil Analysis Kit that comes with the Kit. Failure to comply when requested will void the warranty.

WHAT THE WARRANTY DOES NOT COVER:

1. Normal wear parts and Allied Equipment or trade accessories not manufactured by it, such as but not limited to items such as various filters, fluids, brakes, clutch linings, belts, hoses, light bulbs, mechanical seal, over center clutches, tires, ignitions, starters, batteries, magnetos, carburetors, engines and labor, or like or unlike equipment or accessories. (Such being subject to the warranty, if any, provided by their respective manufacture).
2. Secondhand, used, altered, or rebuilt machines or parts.
3. Defects, malfunctions or failures resulting from accidents, abuse, misuse, improper servicing, or neglect of required operational guidelines and maintenance service, as outlined in the Finn Corporation's Operators Manual(s).

4. The warranty shall be null and void to the extent any defect or failure of the products warranted arises out of or is caused by accessories or component parts not manufactured or supplied by Finn Corporation, whether same are supplied by purchaser, dealers, or any other party.
5. This Warranty does **NOT** cover any costs associated with transporting the equipment for warranty service, such as mileage, fuel, or man hours; such is the responsibility of the equipment owner.
6. Dealers & Customers are responsible to follow all guidelines related to Seasonal & Long Term Storage of Equipment, as advised in operation & equipment manuals. i.e. Finn, Engine, Clutch, Pump, Motor, etc. Equipment failures caused by neglect of these guidelines are not warrantable.

THIS IS THE ONLY EXPRESS WARRANTY ON OUR PRODUCTS:

We neither assume nor authorize anyone to assume for us any other express warranty. The Distributor/Dealer has no authority to make any representation or promise on behalf of Finn Corporation or to modify the terms or limitations of this warranty in any way.

THIS WARRANTY THEREFORE 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.

LIMITATIONS ON OUR RESPONSIBILITY WITH RESPECT TO PRODUCTS PURCHASED:

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.

ALL WARRANTY REPAIR MUST BE DONE BY A FINN AUTHORIZED SERVICE PROVIDER OR AUTHORIZED REPAIR SHOP OF FINN'S CHOICE.

TRANSPORTATION, HAULING, STORAGE, OR OTHER SIMILAR COSTS ARE NOT PART OF FINN'S OBLIGATION UNDER THE LIMITED WARRANTIES AND IS THE RESPONSIBILITY OF THE EQUIPMENT OWNER.

THE ESSENTIAL PURPOSE of this exclusive remedy shall be to provide the original 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 party 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 August 23, 2010

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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

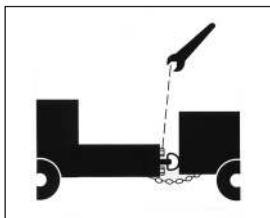
Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

BARK BLOWER SAFETY SUMMARY SECTION

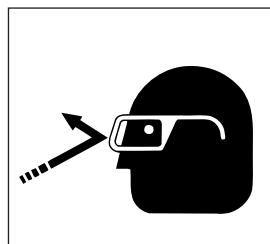
It is important that all operators of this machine are familiar with all the safety aspects mentioned below before operating the machine. Always keep a copy of this manual with the machine. It is the responsibility of the operator of the machine to fully understand this safety section. Remember that 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 break-away switch. Verify that the hitch ball or pintle hook is the correct size for the coupler.

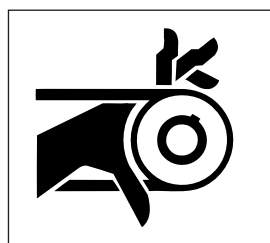


2. Verify that all guards are in place.
3. By carefully looking into the blower hopper and transition, inspect for and remove any foreign objects. Follow OSHA lockout/tagout procedure (29 CFR 1910.147)
4. Inspect all hydraulic hoses and tubes for cracks, bulges or damage. If hose is bad, replace immediately.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

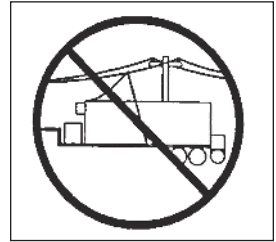
17. Be careful in getting on and off the blower, especially in wet, icy, snowy or muddy conditions. Clean mud, snow or ice from steps, fenders and footwear.



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.

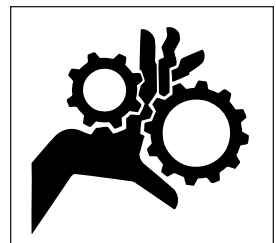
19. Be careful when operating the tarp near power lines. Raising the tarp into power lines may cause severe electrical shock. Always have the tarp either fully open or retracted when transporting the machine.



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.

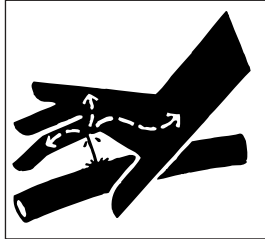
4. Battery maintenance. Lead-acid batteries contain sulfuric acid which may damage eyes or skin on contact. Always wear a face shield to avoid acid in the eyes. If acid contacts eyes, flush immediately with clean water and get medical attention. Wear rubber gloves and protective clothing to keep acid 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

CAUTION		Wear proper eye protection when feeding this machine.
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WARNING	<p>To prevent serious burning or scalding:</p> <ul style="list-style-type: none"> • Pressurized cooling system. • Allow system to cool. • Remove cap slowly with gloves on.
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WARNING	
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	DANGER Sharp knives.
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DANGER	HOT EXHAUST
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WARNING	<p>Do not operate without guards in place.</p>
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DANGER	<p>Rotating Parts.</p> <p>Turn off engine and allow all parts to stop completely before opening door, removing guards or attempting service.</p>
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WARNING	<p>Turn engine off, disconnect battery, and allow all moving parts to stop before servicing equipment.</p>
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CAUTION	<p>Always inspect tow vehicle and equipment hitch before towing. Tighten all hitch bolts and properly connect wiring and safety chains.</p>
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WARNING	<p>THROWN OBJECT HAZARD KEEP AWAY</p> <ul style="list-style-type: none"> • To prevent serious injury or death from thrown objects: • Stay away from discharge area during operation. Keep others away. • Do not point discharge toward people, animals or property
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WARNING	<p>BREAKAWAY SWITCH</p> <p>Do not use for parking. Attach cable to towing vehicle with slack for turning. Engine battery on trailer must be charged and hooked up for proper breakaway function.</p>
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CAUTION	<p>Both the single and double chains must be crossed under the tongue. They must be oriented in such a manner as to prevent the tongue from dropping to the ground in the event of failure to the hitch, coupler or ball. The Chains must be connected to the towing vehicle so that the slack for each length of chain, between the trailer and the towing vehicle, is the same and must have no more slack when in use than is necessary to permit proper turning of the vehicles. The forward end of the chain must be attached to the towing vehicle, not to the ball, but to the hitch or other frame member. The chain must be looped around the member and hooked back into itself.</p>
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CAUTION	<p></p> <p>Wear eye protection around operating equipment.</p>
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DANGER	<p></p> <p>Do not raise tarp under high voltage lines.</p>
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WARNING	<p></p> <p>Rotating fan hazard. Keep hands clear. Shut off engine before servicing.</p>
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DANGER	<p>ROTATING HAZARD INSIDE THIS UNIT</p> <p>NEVER PUT ARMS OR FEET NOR CLIMB ON OR IN THIS UNIT BEFORE FIRST:</p> <ul style="list-style-type: none"> • SHUTTING OFF ENGINE AND ALLOWING ALL MOVING PARTS TO STOP • DISCONNECTING BATTERY CABLES AND FOLLOWING PROPER LOCK-OUT/TAG-OUT PROCEDURE <p>FAILURE TO FOLLOW THESE INSTRUCTIONS WILL RESULT IN SERIOUS INJURY OR DEATH</p>
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OPERATION AND MAINTENANCE MANUAL FOR FINN BARK BLOWER

INTRODUCTION:

The FINN Corporation would like to thank you for your latest FINN purchase. In our efforts to maintain a quality and growing relationship with each and every customer, we would like to encourage you to contact us for help with service, genuine replacement parts, or any other information you may require.

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 composed 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 a feed 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 "airlock"). The airlock is specifically designed and built to handle tough, fibrous material. The function of the airlock 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 705 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, and be sized to pull and stop a 14,500 pound (6,600 kg) trailer. (Loaded 605 assuming 1000 #/yd³ mulch)

IMPORTANT: When towing tandem axle unit always insure the unit is level applying equal weight distribution across both axles.

NOTE: When mounting a skid 705 Bark Blower be sure to follow the 705 skid mounting instructions. To insure proper weight distribution and to make sure the bark blower is properly supported by the truck. When mounting a skid model contact FINN Corporation for proper instructions.

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 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 airlock 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.

There are many different types of material that can be successfully processed through your Bark Blower. These materials are categorized into three main groups. These classifications are important when considering machine performance, material feed rate, and overall operation.

- | | |
|----------------------------------|---|
| 1. Dry Aged Material: | Aged double and triple processed bark mulch, saw dust, or wood shavings. |
| 2. "Green" Material: | Single process hard wood mulch, "green" wood, or large chunky material. |
| 3. Wet or Heavy Material: | Wet heavy bark mulch and compost. Heavy fluid materials such as sand, dirt or gravel. |

Most importantly when selecting a material consider the "greenness" of the wood and it's moisture content. 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, and pack in the airlock vanes.

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 airlock.

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 61).
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 -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, 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 marks on the sight gauge. (See “Lubrication Specs.” page 21 for oil specification).
11. Install the discharge hose, using clamps and gaskets 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 1-5) before operating the machine.

1. Place the remote control switch to the “Off” position.
2. Turn the key clockwise until the starter engages and the engine fires.

NOTE: This engine is equipped with a shutdown system that will shut the engine off if the engine oil pressure drops below 15 psi (1.0 bar) or if the water temperature reaches 230 °F (110 °C). This shut down system is controlled by a relay that has a 15-second override period at start up. If the key switch is left in the “Run” position too long without the engine running, the Key Reset Light will come on to prompt you to turn the key switch “Off “ prior to any further attempts at starting.

3. Check that the “On/Fuse” and the “Door Switches” lights are illuminated. If the green “Door Switches” light is not, check that the door above the airlock is tightly closed. If both lights are off, but the voltmeter is reading correctly, check the ten-amp circuit breaker in the control box. If the voltmeter also shows no reading, then check the 30-amp circuit breaker in the control box.
4. Allow the engine to warm up for three to five minutes.
5. Prior to mulch application, move the throttle position to fully open and allow the governor to control the engine speed. This is a good place to start, refer to page 14 Bark Blower Adjustments for further information on control settings. Governed engine speed should be 2200-2400 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, bucket loader, belt conveyor or optional feed conveyor dumping material directly into the hopper.

THE MATERIAL FEED SYSTEM:

The material feed system on the Bark Blower has been designed to give fast and 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 or floor, the feed roll, and the rotary air valve (airlock).

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 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 (.8 bar), 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 airlock. The feed roll is powered by a variable speed hydraulic motor, which also powers the drag conveyor through a chain drive.

The airlock 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 airlock housing is equipped with 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 airlock is direct-coupled to a gearbox and driven by a bi-rotational hydraulic motor.

SUBSYSTEM 2: HYDRAULIC SYSTEM

Hydraulic power for the Bark Blower is generated by a flow and pressure compensated, load-sensing pump driven off of the engine auxiliary drive. This means the pump can measure how much load is on the hydraulic circuit and will only pump the oil needed to satisfy the demands of the circuit. The pump receives 10W-40 hydraulic fluid from the 32 gallon (120 L) reservoir through a service valve and suction hose, and delivers it to the valve manifold. The manifold has three separate valve sections with solenoids that control all the functions on the Bark Blower.

Two pressure gauges at the valve manifold read the valve inlet pressure (top gauge) and the load-sense pressure (bottom gauge). The top gauge should always read about 200 PSI more than the lower gauge. This 200 PSI is called the "margin pressure" and is a measure of the pump's ability to respond to changes in the hydraulic circuit. If the margin pressure is set too high (over 300 PSI), the pump will be too sensitive and can become unstable. If the margin pressure is too low (below 150 PSI), the pump can become "lazy" and not provide enough oil flow for the demand. The margin pressure can be adjusted using the lower compensator adjustment screw in-line with the load sense hose on the back of the hydraulic pump. The only time the gauges will not show the margin pressure is when one of the hydraulic circuits is stalled, such as if the floor conveyor somehow became jammed. In this case, both gauges will show the high pressure standby of 2800 PSI until the blockage is removed. High pressure standby is the maximum pressure the pump will produce. A system relief valve is set for 3500 PSI to protect the system if there is a failure in the pump compensator.

DESCRIPTION OF VALVE SECTIONS

Figure 2 shows the four valve sections and their locations. Each solenoid operates in only one direction, so circuits that require bi-directional flow have two solenoids, such as the floor and airlock. The valves can be stroked manually by pressing in the black buttons on the end of each solenoid. All of the sections see the same inlet pressure and the load sensing capabilities of the pump will supply only as much flow as the highest demand circuit requires. If an airlock vane needs to cut a tough piece of bark, the resistance in the motor will cause a pressure spike in the airlock forward circuit. The pump will sense this and marginally

increase flow until the load is overcome and the pressure drops, at which time the pump will de-stroke and return to its previous output. Each circuit in the hydraulic manifold block is pressure compensated so that each valve section will only accept the oil flow needed. This means that when the overall pressure increases in the system, or in any one circuit, the flow through all the circuits remains relatively constant.

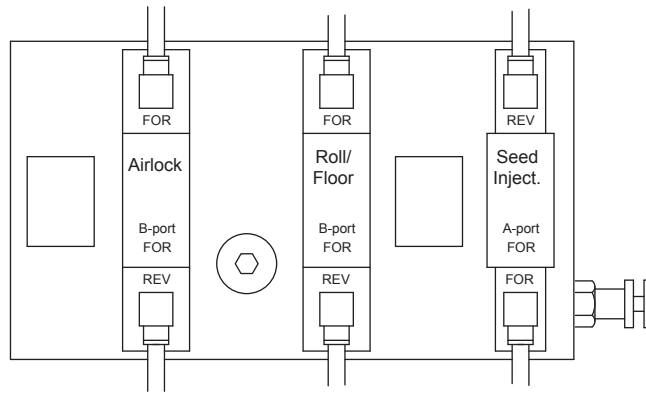


Figure 2

A. ROTARY AIR VALVE (AIRLOCK)

The inside valve section of the manifold runs the airlock. It is a bi-directional proportional valve that is controlled by the Airlock Speed adjustment knob on the control box. The speed can be varied from 0 to 18 RPM, and the unit is factory set for 12 RPM. There is a pressure switch on the forward circuit that is set for 2400 PSI (165 bar) that triggers the auto-reverse function on the airlock. Normal rotation of the airlock is clockwise if looking from the driver side of the machine.

B. DRAG CONVEYOR FLOOR & FEED ROLL

The middle valve controls the floor and feed roll speed. It is an electrically driven proportional valve that is controlled by the Floor Speed toggle switch on the control box. Toggling the switch up or down varies the input voltage to the solenoid and moves the spool in the valve accordingly, allowing more or less oil flow to the floor and feed roll. The feed roll is plumbed in series with the floor, meaning oil flows to the feed roll motor first and then down to the floor motors. This setup automatically causes the floor to slow down if the feed roll begins to jam up, preventing overfeeding of the feed roll. The floor motors are plumbed in parallel so that each one works evenly on the tandem gearbox. There is a pressure switch on the forward circuit that is set for 2050 PSI (139 bar) that triggers the auto-reverse function on the floor.

C. SEED INJECTION MOTOR

See the Seed Injection manual for operation of this circuit.

SUBSYSTEM 3: HYDRAULIC CONTROL SYSTEM

The hydraulic control system is an electrical system that controls all of the hydraulic functions on the Bark Blower. This 12-volt DC system runs off the engine electrical system. It is a series of relays, timers, analog and digital controllers located in the electrical control box on the rear passenger-side of the machine, which control the solenoid valves in the hydraulic system. The solenoids are energized by way of the white DIN connectors mounted on each solenoid. The DIN connectors each have a small red light in them that light up if the circuit is active. This is an easy way to check if a particular circuit has electrical power.

When the “Start” button is pushed the CR1 and CR2 relays in Figure 1 (pg. 13) are energized. This in turn energizes the forward solenoid on the airlock valve section, starting the airlock. If the floor toggle switch is “On”, the floor and feed roll solenoid is also energized after a short delay. Timer relay TR3 stops the floor for a brief moment so the airlock always has a chance to clear itself. TR3 should time out after 0.5 seconds, at which point the floor and feed roll will begin to move at a speed relative to the Floor Speed display in the forward direction. As material drops into the top of the airlock, the pressure required to cut the material is monitored by the pressure switch located in the bulkhead connector of the forward direction of the airlock valve section in the manifold. The switch is normally open. When the airlock motor stalls due to the rotor encountering an object it can not cut, high pressure (approximately 2400 psi) is created in the airlock circuit and the pressure switch closes. The amount of time the pressure switch is closed is monitored by the timer relay TR1 in Figure 1. If the switch remains closed for more than 0.5 seconds, TR1 energizes timer relay TR2. TR2 automatically reverses the rotor by energizing the reverse solenoid and de-energizing the forward solenoid. It also de-energizes the floor solenoid, shutting off the floor and feed roll. The airlock will remain in reverse until TR2 times out, which is approximately 1 second. Timer relay TR3 will then restart the drag conveyor after allowing the airlock to clear itself. Located on the control panel is a airlock auto-reverse test button. If there is ever a problem with the airlock not auto-reversing, this can a useful troubleshooting tool.

The feed roll/floor circuit is capable of being reversed manually from the electrical control box to clear jams. To use the feature, the "Stop" button must be pushed, and the blue and green indicator lights must be on. The "Floor Switch" is a three position switch with a momentary reverse feature. Pushing the switch down to reverse the feed roll and floor sends power to the TR4 relay. The floor and feed roll will reverse until TR4 times out, which is approximately 2 seconds. This setting will clear most jams.

There is a normally open pressure switch located in the bulkhead connector of the forward direction on the feed roll/floor valve section. The pressure switch monitors the pressure in the feed roll/floor circuit. If the pressure in the feed roll/floor circuit reaches the set pressure of the this switch (approximately 2050 psi), an electrical signal is sent to TR4 to trigger the feed roll/floor to auto-reverse for 2 seconds, and then re-start in forward to clear any obstruction.

When the "Stop" button is pushed, power is cut to the relays. This stops the hydraulic motors on the airlock and feed roll 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 the rear door on the feed roll housing is opened and cannot be restarted until they 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, the floor speed, and the engine throttle. It also contains an Emergency Stop button that activates the Murphy shutdown system on the engine.

If using the Radio Remote, a certain start-up sequence must be followed to activate the remote. When using the remote, start as follows:

1. Place the Radio Remote On/Off switch, located on the control 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. Place the radio remote switch located on the control box to the “On” position.
5. Place the radio transmitter switch to the “On” position.

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. When either the "Stop" button is pushed or a loss of power to the relays occurs (i.e. the rear door on the feed roll housing is opened, or a circuit breaker trips), the Feed Start/Stop feature on the Radio Remote is deactivated. This feature will remain inactive until the initial start is once again made at the machine by pressing the "Start" button.

The Material Increase/Decrease function on the remote can be used to change the floor speed and effectively adjust the output of mulch from the machine. Adjustments to the floor speed made from the remote control will be shown on the "Floor Speed" display on the control box.

The Engine Increase/Decrease function on the remote adjusts the throttle actuator on the engine. For use of the engine RPM function refer to "Mulching with the Bark Blower" on page 13.

Pushing the red button located next to the antenna on the Radio Transmitter activates the Murphy shutdown system. This will shut off the engine, automatically return the engine throttle back to idle, and cut power to all the relays which will shut down all of the hydraulics. To reset the safety system:

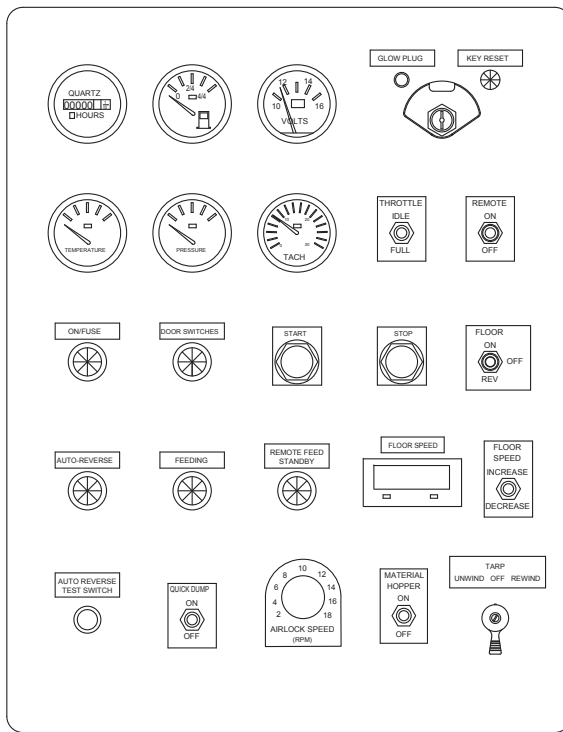
1. Flip the Radio Transmitter On/Off switch to "Off".
2. Re-start the engine.
3. Flip the radio transmitter On/Off switch to "On".

BARK BLOWER POWER STATUS LIGHTS:

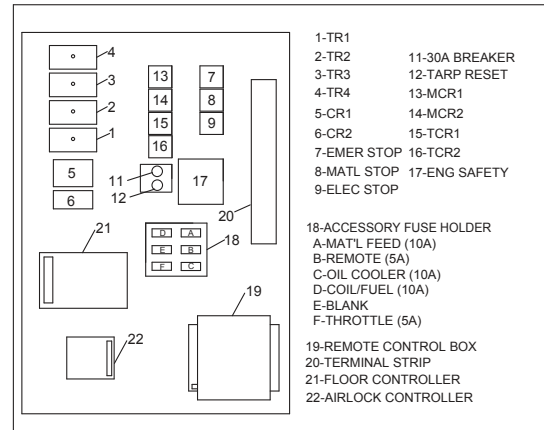
The Bark Blower is equipped with five Power Status Lights on the electrical control box. Each glowing light indicates that a function is ready for operation. A list of the lights as they appear from top to bottom and the meaning of each follows:

***NOTE:** The amber light will deactivate whenever the red "Auto-Reverse" light comes on, or the unit is put into "Remote Feed Standby".

<u>Light Color</u>	<u>Function</u>	<u>Indicator</u>
Blue	ON/FUSE	Should be glowing when engine key is on. Shows power from the ignition switch through the 10 amp circuit breaker in the electrical control box. (Will shut off when feeding)
Green	DOOR SWITCHES	Should be glowing when engine key is on if the rear door is closed and the interlock switches are making proper contact. (Will shut off when feeding)
Amber	FEEDING	Should be glowing whenever the "Start" button is pushed activating the Bark Blower hydraulic system.*
Clear	REMOTE FEED STANDBY	Should be glowing anytime feeding is stopped by pressing the Material Stop button on the Radio Transmitter. Warns other crew members that the Radio Transmitter is active and feeding can begin remotely.*
Red	AUTO-REVERSE	Should be glowing whenever the unit auto-reverses while feeding.*

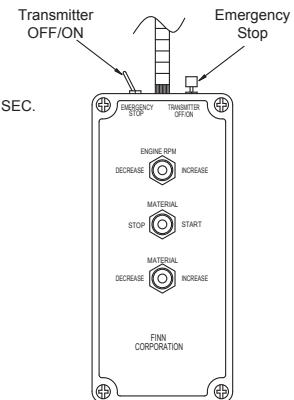


Main Control Panel



NORMAL TIMER SETTINGS:
 #1-TR1 (AIR LOCK PRESS SWITCH) 0.5 SEC.
 #2-TR2 (AIR LOCK REVERSE) 1.0 SEC.
 #3-TR3 (FLOOR DELAY) 1.5 SEC.
 #4-TR4 (FLOOR REVERSE) 1.5 SEC.

(See Page 14pg. for timer instructions.)



Radio Remote

Figure 1

MULCHING WITH THE BARK BLOWER:

1. Check all areas listed under "Pre-Start Equipment Check" (page 7).
2. Start the engine following all the steps listed under "Starting Procedure" (page 8).
3. Place the Quick Dump switch to the "Off" position.
4. Set the Airlock Speed dial to "18" RPM.
5. Place the Floor switch to the "On" position.
6. Activate the radio remote control by first placing the Remote switch on the main control panel to the "On" position, and then placing the switch on top of the transmitter to the "On" position.
7. Press the Start button on the main control panel to activate the material start/stop feature on the remote control and then quickly push the Material Start/Stop switch on the remote transmitter to Stop. The clear Remote Feed Standby light should be on.
8. Hold the Floor Speed switch in the "Decrease" position for 5 seconds. This will reset the floor speed to zero.
9. With a firm grip on the hose, and the engine throttle at full, press the Material Start/Stop switch to Start. The yellow Feeding light should activate.
10. Press the Material Increase on the remote transmitter and set the floor speed to 2.0.
11. Floor speed can be adjusted from 2.0 for smooth flow. Watch for auto reversing of the air lock, as well as shock waves through the hose. Listen for the relief valve on the blower. Partial plugging in the discharge or hose may cause it to open, causing a high pitched whine, indicating over-feeding of the airlock.
12. Use the Engine RPM switch on the remote to decrease and increase air and material flow. A lower engine RPM may require a lower floor speed setting to avoid auto reversing or plugging.
13. At the end of the load, push Material Stop and shut down the engine.

BARK BLOWER ADJUSTMENTS:

Your Bark Blower has been designed to be as simple as possible to operate. The feed roll and airlock are designed to create a smooth, consistent flow of material from the hopper to the discharge. However, material conditions can change from one load to the next or from one day to the next. Adjusting the floor speed, engine RPM, and occasionally the metering gate and airlock speeds will allow the Bark Blower to efficiently convey many different types of mulch.

Knowing when and how much to adjust the floor is the key to maximizing the machine's performance. The floor conveyor speed is controlled by the "Floor Speed" toggle switch on the electrical control box and by the "Material Feed" toggle switch on the remote. The floor speed can be adjusted from 0.0 to 10.0 on the "Floor Speed" display with 0.0 being the slowest (0 RPM) and 10.0 being the fastest (approx. 3 RPM). For most materials, a setting of 2.0 is a good starting point. The floor speed can be increased (1.0 increments are recommended) until certain warning signs appear. They include the following:

A. CONSISTENT HOSE SHOCK

The Bark Blower uses a large amount of air to blow the mulch material through the discharge hose, which can become difficult for an operator to handle. Hose shock is usually due to partial plugging around the discharge. When the material gets dislodged, the larger clumps are shot through the hose and can make it jump significantly. If rough shock waves become consistently tough on the operator at the end of the hose, the floor can be turned down to smooth out the flow of material into the airlock. Cutting back on the engine RPM can also smooth out hose shock by slowing down the air flow. Be careful not to lower the engine RPM too much, this can cause excessive plugging if there's not enough air to move the material, or if the material slows too much. When blowing wet heavy material slowing the air lock speed can smooth the material flow, by evenly introducing the material to the air stream. Generally the airlock should not be run slower than 10 RPM.

B. EXCESSIVE AUTO-REVERSING

If the airlock starts to auto-reverse regularly, i.e. more than three times a minute, then the airlock is being overfed and the floor should be turned down. Excessive auto-reversing leads to less production than if the floor was just turned down to a lower speed. This condition will occur more often with "green" stringy mulch or less processed material that contains larger chunks of wood that the airlock may have to cut.

C. REGULARLY TRIPPING THE BLOWER RELIEF

The blower on your machine has a relief valve in the air line to protect the blower against a large back pressure that could build if the line becomes plugged. The relief valve, set for 12 PSI(0.8 bar), is located directly behind the blower in the engine area on the driver's side of the machine. A blockage, temporary or otherwise, can trip the relief, which causes a loud whining noise to be heard from the engine area. Occasional blowing through the relief is expected, as long as the machine can clear itself. However, if the relief goes off repeatedly in a 10 second span, then the discharge area or hose is in danger of becoming completely blocked. The floor speed should be immediately reduced until the relief valve is not heard consistently going off. Partial plugging most often occurs with less processed material or if the mulch is wet and dense.

D. MATERIAL METERING GATE

The metering gate is a manually operated gate located inside the rear of the hopper. It is a vertical door that can be moved both up and down, as well as, in and away from the feed roll. When changing the metering gate location, it is important to understand the three main material groups on page 15. The closer the material is to material type 1 (Dry Aged Material), the closer the gate should be to the feed roll, and the further it should be from the floor. The metering gate should be moved away from the feed roll and closer to the floor, the closer the material is to material type 3 (Wet or Heavy Material), leaving material type 2 ("Green" Material) somewhere in between the two. The better the material is, the less interaction the metering gate should have, the heavier wetter, and harder material, the more interaction the metering gate needs.

CLEARING A BLOCKAGE

If the unit does become plugged and the machine can not clear itself, immediately shut down the engine, either by pressing the emergency stop on the remote or with the ignition key on the control box. Perform the following steps:

1. Disconnect the discharge hose and determine if the blockage is in the airlock discharge. Any blockage should be seen through the outlet. If there is no blockage, then the hose is plugged somewhere.
2. If there is blockage, loosen the two clamps on the front and the rear of the discharge.
3. Remove the discharge.
4. Remove any blockage and clean the discharge of any mulch debris, especially on the gasket surface so that it can seal tightly.
5. Install the discharge outlet and clamp into place.
6. Reconnect the discharge hose if it is not plugged.
7. Restart the machine with the floor off, and run the engine full to clear out the airlock and any mulch lying in the hose.
8. Resume normal operation.

QUICK DUMP FEATURE

The Bark Blower has a Quick Dump feature that can be used to unload bulk material quickly.

1. Shut off the feeding system by pressing the "Stop" button on the control panel.
2. Open the access door above the airlock.
3. Flip the "Quick Dump" switch to "On".



CAUTION:

In Quick Dump mode, the feed roll is exposed and can cause material to be thrown from the rear of the machine, especially at higher floor speeds.

4. With the "Floor Switch" On, press the "Start" button to begin unloading material. The material will pass through the feed roll housing and out the rear of the machine over the airlock, which will not be turning.
5. The floor conveyor speed can be adjusted higher for faster unloading.
6. When finished, press the "Stop" button and return the "Quick Dump" switch to the Off position.



WARNING: **Do not place hands down inside the airlock vanes to remove material, the knives are sharp and can cause serious injury.**

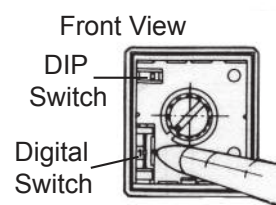
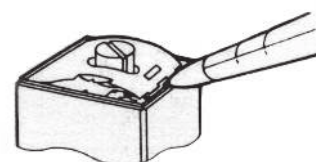
7. Close the rear access door securely using the clamps.
8. The Bark Blower should be run with the "Floor Switch" Off for a few seconds so that the airlock has a chance to clear itself before resuming normal operation. The startup sequence on page 8 will need to be followed again before remote operation can be used.

SEED INJECTION SYSTEM: SEE SUPPLEMENT MANUAL.

TIMER PROGRAMING INSTRUCTIONS:

Adjusting the timer relays should be unnecessary, but the operator should know how to set the timers if they become changed somehow.

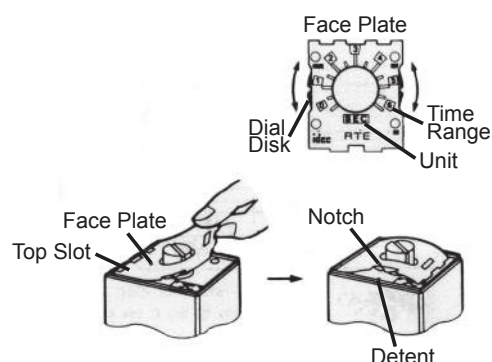
1. Removing The Face Plate
2. Selecting the Mode of Operation: Select the operation mode by moving the DIP switch to the right or the left position. (After installing the face plate, the knob set to the left position is visible through the face plate window.)
3. Selecting the Time Range: Select the time range by rotating the digital switch.



Digital Switch Position	0	1	2	3	4	5	6	7
Time Range	1 sec	3 sec	6 sec	10 sec	60 sec	30 sec	5 min	10 min
Face Color	Pink	Yellow	Yellow	Pink	Yellow	Yellow	Pink	Pink

NOTE: When the digital switch is at position 8 or 9, the time range setting is the same as at position 0 or 1, respectively.

4. Setting the Face Plate: Each timer is provided with a face indicating the time range on both sides in different colors per time range group. The dial disk has four notches on its perimeter at every 90 degrees. Choose the side with the correct face color from above chart containing your required time range and turn the dial disk to the position where the required time range figure and unit appear in the windows.
5. Installing the Face Plate: When the operation mode and timer range settings are complete, place the face plate onto the timer by inserting the edge into the top slots. Bend the face plate slightly and insert the bottom edge into the bottom slot on the timer. Make sure the dial disk notch is retained in place.



See the parts manual for full illustrations of timer faces with proper settings.

TROUBLE SHOOTING CHART:

Symptom	Probable Cause	Remedy
Engine won't start.	Engine safety system override delay expired.	Return ignition key to "OFF" before starting.
	No fuel.	Check fuel gauge.
	Engine too cold.	Preheat glow plugs.
Airlock not turning.	Green light out on control panel. Blue light on.	Make sure rear cleanout door is closed tightly and interlock switches are working properly.
	Blue light out on control panel.	Check 10A circuit breaker in control box.
	Airlock speed control turned down too far.	Adjust airlock speed control toward "Max". See page 9.
	Quick Dump feature activated/ left on.	Flip "Quick Dump" switch on control box to "OFF".
Floor not turning.	Motorized flow control valve closed.	Increase material feed control.
	Make sure terminal "A+" on timer TR3 has 12V.	No: Low voltage, check interlock switches for bad connections or bad switch.
	"Out" light on TR3 should come on 1.5 sec. after turning floor switch on.	No: Bad timer, check settings or replace if bad.
	Feed Roll / Floor jammed.	Check gauge reading: if 2,000 psi, push "Stop" button and reverse floor with floor switch.

TROUBLE SHOOTING CHART:

Symptom	Probable Cause	Remedy
Airlock constantly auto-reversing.	Overfeeding airlock.	Decrease floor speed, See Page 13 for tips.
	Dull airlock knives.	Check knife clearance, sharpen or replace if dull or chipped.
	Pressure switch time delay is set too low.	Check timer TR1. It should be set for 0.5 sec.
Airlock stalling, not auto-reversing.	Pressure switch isn't closing at 2,400 psi.	Check pressure switch connections or replace switch if necessary. Check relief setting airlock.
Discharge material pulsing, not smooth.	Too much air.	Decrease engine throttle and floor speed accordingly.
	Airlock turning too fast/slow.	Adjust airlock speed, See Page 13 for tips.
	Partial plugging in airlock discharge.	Check airlock discharge pan for blockage and air leaks.

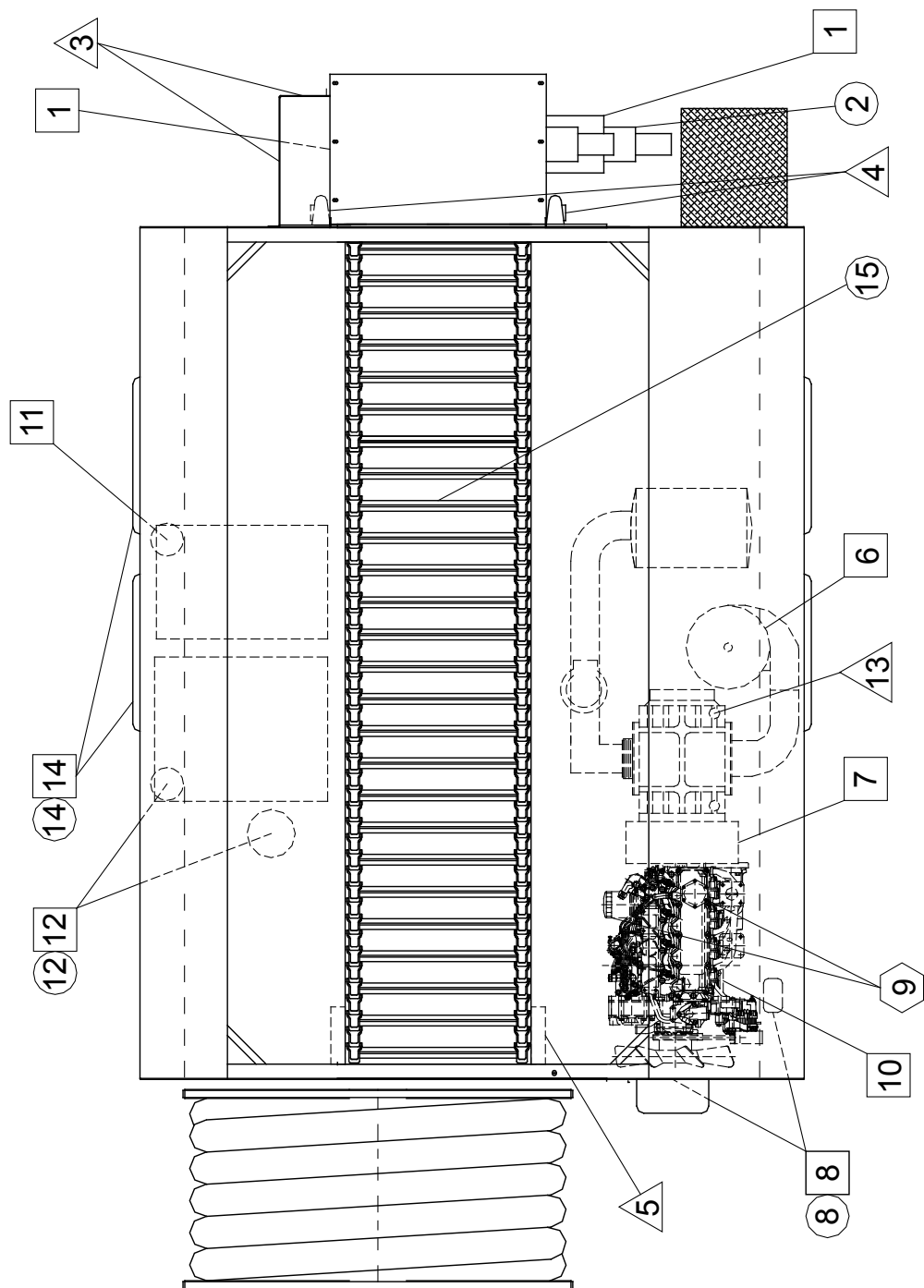


Figure 4

LUBRICATION CHART

Ref. No.	Location	Lubricant	Frequency	Number
1	Air Lock Bearing	CL	Weekly	2
2	Change Air Lock Gearbox Oil	GO	50,100, then Seasonally	1
3	Feeder Roll Bearing	CL	Weekly	5
4	Floor Pillow Block Bearing	CL	Weekly	2
5	Floor Take-Up Bearing	CL	Weekly	2
6	Check Blower Inlet Filter		Daily	1
7	Check Engine Air Cleaner		Daily	1
8	Check Engine Coolant Level	AF	Daily	1
	Change Engine Coolant	AF	Seasonally	1
9	Change Engine Oil and Filter	HO	250 or 3 Months	1
10	Check Engine Oil Level	HO	Daily	1
11	Check Fuel Level	DF	Daily	1
12	Check Hydraulic Oil Level	HO	Daily	1
	Change Hydraulic Oil and Filter	HO	Seasonally	1
13	Check Blower Oil Level	BO	Weekly	2
	Change Blower Oil	BO	50,100, then Seasonally	2
14	Tire Air Pressure		Weekly	4
	Wheel Bearings	CL	Annually	5
15	Lubricate Floor Chain	CH	Seasonally	1

TIME KEY

DAILY (8 hours)

WEEKLY (50 hours)

SEASONALLY (500 hours)

3 Months (250 hours)



LUBRICANT OR FLUID USED

CL	Chassis Lubricant
BO	Blower Oil Mobil SHC-630 Synthetic
AF	50/50 Anti-Freeze and Water Mixture
DF	Diesel Fuel
HO	Hydraulic Oil Mobil DTE-13M
GO	80 W Gear Oil
CH	Mineral oil or chain lubricant

FLUID CAPACITIES

Fuel - 28 Gallons (103 L)

Airlock Gearbox Oil - 20 Oz. (0.6 L)

Engine Coolant - 3 Gallons (11.37 L) 50/50 Mix Only

Hydraulic Oil - 32 Gallons (120 L)

Engine Oil - 8 Quarts (7.3 L)

Blower Oil - 16.9 Ounces (500 mL)

MAINTENANCE:



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

DAILY - AFTER EVERY 4 - 8 HOURS OF OPERATION:

1. Check engine and blower air cleaner filters for dirt and debris. Remove and clean with dry, compressed air if necessary.
2. Check engine coolant and oil levels. See engine manual.
3. Check hydraulic oil level in reservoir. The oil should be about half way up the sight glass.
4. Check blower oil level. See blower manual.
5. Clean out front floor chain compartment. Un-clamp and remove the front clean out door from the front of the hopper by first sliding the door towards the passenger side of the unit, then pulling towards the hitch, and finally back towards the drivers side of the unit. Remove any built-up material from under the floor pan and around the sprockets. This will minimize material overflow through the front take up bearings during daily operation.
6. Check fuel level.

WEEKLY - AFTER EVERY 50 HOURS OF OPERATION:

1. Lubricate the bearings on the drag conveyor, airlock, the blower and on the feed roll shaft. See Lube Chart on pages 20-21. 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. Change if element shows signs of damage
4. Check the oil in the airlock gearbox.
5. Check the gear case on the blower (see blower manual).
6. Check airlock knife for wear, chips, and clearance. To adjust knife:



DANGER: Knives have very sharp edges that can cause serious injury. Adjust one at a time. Handle with care.

- a) Using a 3/16" allen wrench, remove the four set screw plugs in the access holes on the outside front/rear face of the airlock housing.
- b) Loosen the two bolts on each of the four knife clamps in the top of the airlock.
- c) The knife adjusting screws are reachable through the access holes in the outside front/rear face of the airlock housing. Using a 5/32" allen wrench, adjust each of the screws in until there is a uniform .003" to .006" (.08 to .15 mm) gap between the knife and rotor. One full turn of the screws will move the knife approximately .055" (1.4 mm). Make sure that the two adjusting screws on each knife clamp are adjusted equally.
- d) Tighten the eight bolts on the four knife clamps and replace the set screw plugs in the access holes.

7. If a knife is worn past adjustment and needs replacing:
 - a) Remove the eight bolts that hold the four knife clamps in place and remove the clamps and knife.
 - b) Clean the knife shelf so that it is free of debris and smooth.
 - c) Compare the replacement knife to the one removed. If the new knife is wider, back out the adjusting screws by at least that amount. Count the turns and back the screws out evenly.
 - d) Lay the knife down on the knife shelf. Insure the knife is installed with the **cutting angle edge facing down** as shown in Figure 2. Loosely install the four knife clamps with the eight knife mounting bolts. Tighten the mounting bolts just enough to hold the knife in position while still allowing it to be moved.
 - c) Check the clearance between the knife and the rotor end walls and along the rotor vane using a feeler gauge. There should be .003" to .006" (.08 to .15 mm.) gap.
 - d) Use the jacking screws to close the gap, if necessary. One full turn of the screw moves the knife 0.055 inches (1.4 mm).
 - e) Tighten mounting bolts.
 - f) Immediately have removed knife sharpened. Do not attempt to grind the knife by hand. It must be ground straight and true on a surface grinder by an experienced knife sharpener. Grind the knife to the profile shown below:

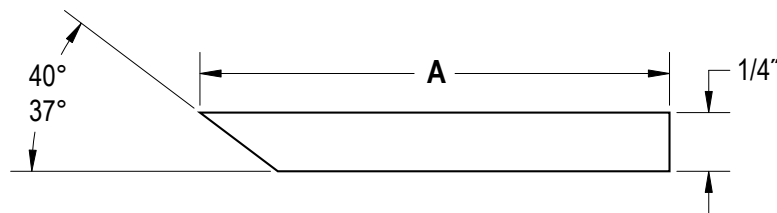


Figure 2

When dimension "A" has been reduced to 1-3/8 inches (3.5 cm) the knife must be discarded.

AFTER FIRST 100 HOURS OF OPERATION:

1. Change engine oil and filter after 100 hours, then 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 airlock, using SAE 80W90 oil. Change every 1000 hours thereafter.

EVERY 3 MONTHS OR 3000 MILES (4800 KM) TRAILER UNITS:

1. Check and adjust trailer brakes.
2. Re-torque wheel lug nuts (90-120 ft.lbs. (13-17 kg-m)).
3. Check tire condition.

EVERY 12 MONTHS OR 12000 MILES (19300 KM) TRAILER UNITS:

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

FLOOR CHAIN ADJUSTMENT: EVERY 500 HOURS

1. The floor chain tension should be checked every 500 hours. If the chain is too loose, the chain flights can buckle under the floor pan and damage the chain linkages and flights. If the chain is too tight, it can put added wear on the floor bearings and cause excessive chain stretch.
2. Shut the machine off and open the rear access door above the airlock. Remove any built-up material under the floor pan between the chain links and the rear catch pan so that an accurate measurement can be made. Check the tension on the floor chain in the Bark Blower as shown in Fig. 3 below:

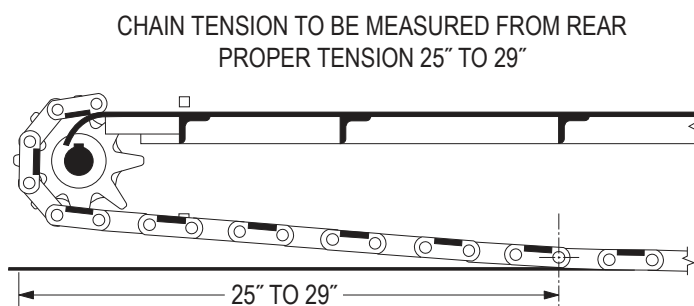


Figure 3

3. To adjust the chain tension, find the take up bearings on either side of the floor sill near the front of the hopper. Using a 1½" wrench, turn the tensioning rod clockwise to tighten the chain and counter-clockwise to loosen it. Always turn both tension rods the same amount so that the chain is always square with the drive shaft. A misaligned chain can jump off the sprocket and buckle.

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 internal 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.

IMPORTANT: If the machine is stored outside, do not allow water to sit or ice to form in the airlock or the discharge pan. A severe buildup of rust on the rotor vanes can lock up an airlock and ice expansion can damage the airlock discharge. Also, drain the water tank and water pump hoses to prevent freezing water from damaging the tank and pump.

NOTES

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NOTES

BARK BLOWER
Model 705
w/Tier II Caterpillar Engine

Parts Manual

Model SB

NOTES

PICTORIAL REFERENCE

**AIR INTAKE &
EXHAUST SYSTEM**
Pages 40-41

**HYDRAULIC SYSTEM
LEFT SIDE**
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**HOPPER
LEFT FRONT**
Page 33

ENGINE COMPONENTS
Pages 34-35
ENGINE WIRING
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**BLOWER &
AIR PIPING**
Pages 36-37

**HOPPER
RIGHT REAR**
Page 32

**HYDRAULIC SYSTEM
RIGHT SIDE**
Pages 58-59

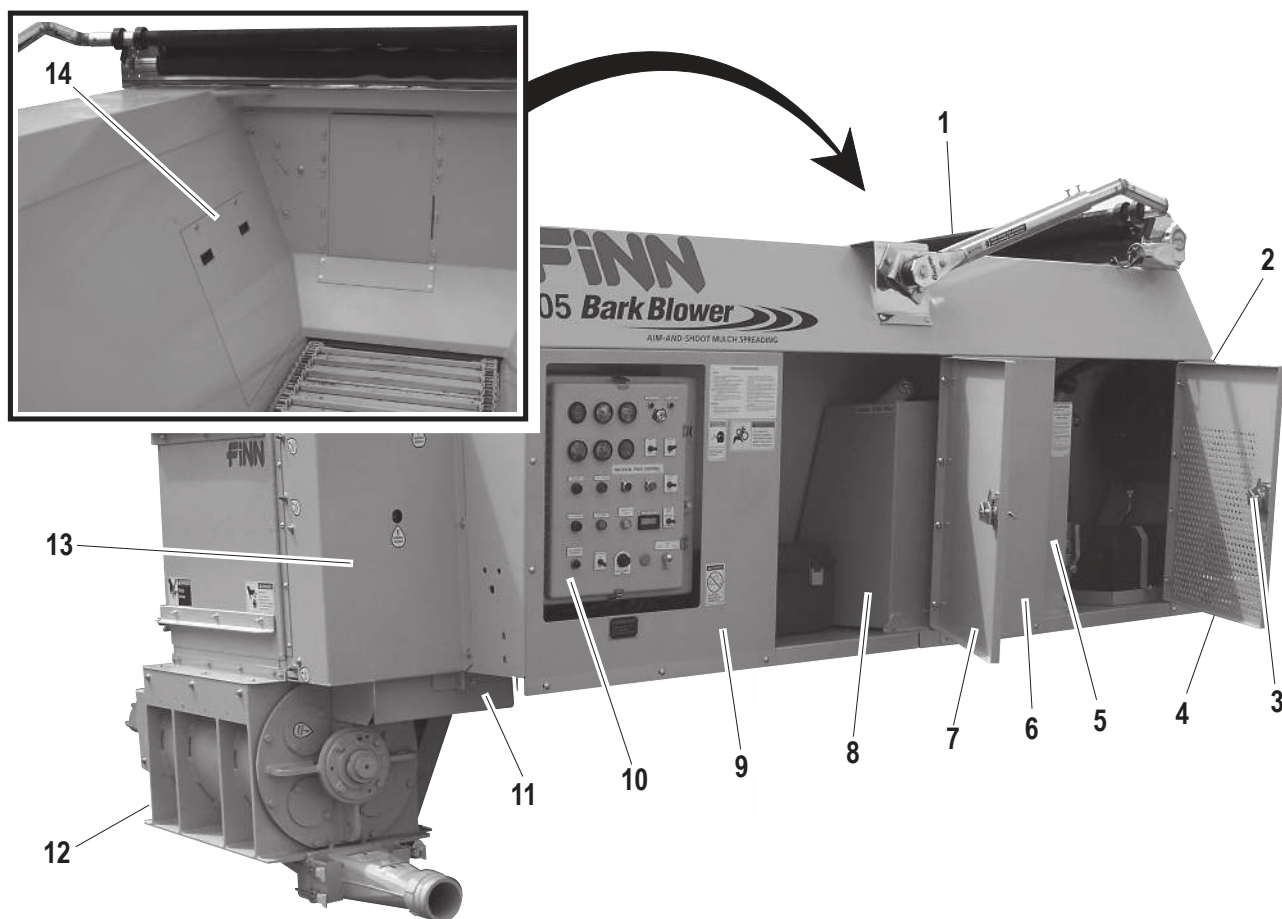
**FEED ROLL &
FLOOR ASSEMBLY**
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**AIR LOCK
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CONTROL BOX FACE PANEL
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CONTROL BOX ELECTRICAL COMPONENTS
Pages 52-53
CONTROL CABINET WIRING DIAGRAM
Pages 54-55

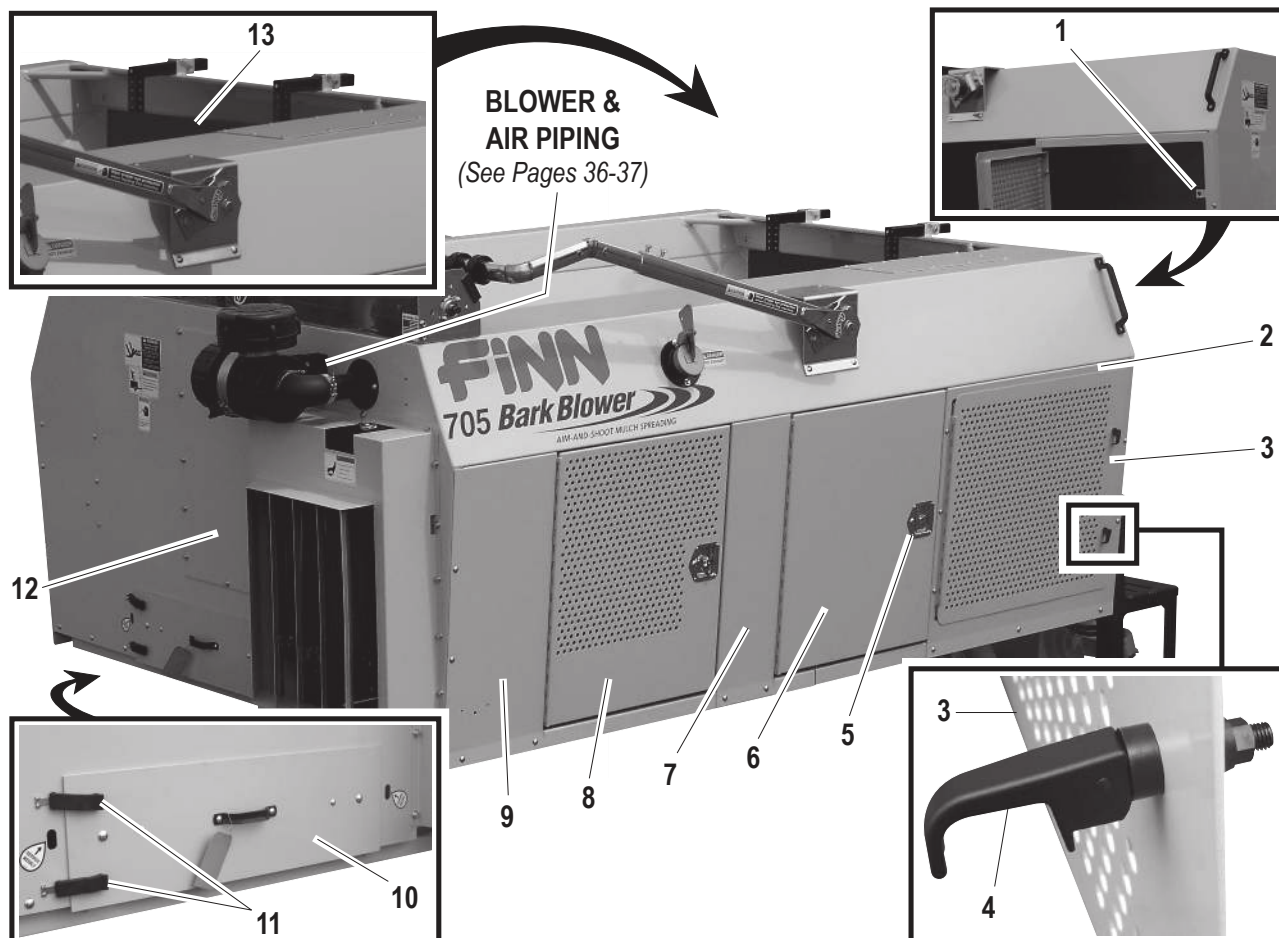
HOSE REEL ASSEMBLY *Pages 48-49*
CONTROLS WIRING *Page 60*
TOOL KIT & DISCHARGE HOSE *Page 61*



HOPPER - RIGHT REAR

Ref. No.	Part Numbers	Description	No. Req'd
1	075466	Tarp System	1
	RR1031	Electric Motor	1
	RR1050	Electric Kit (Switch, Breaker, Etc.)	1
2	F605-0069	Right Front Panel	1
3	075370	Side Door Latch - R.H.S	2
4	F605-0162	Side Compartment Door	1
5	075427	Hydraulic Reservoir	1
	011783	Breather Cap	1
	011851	Battery (Not Shown)	1
	011770	Battery Box (Not Shown)	1
6	F605-0077	Right Side Door Jamb	1
7	F605-0041	Side Compartment Door	3
8	075426	Fuel Tank	1
	007914	Fuel Cap	1
9	F605-0078	Right Rear Panel	1
10	075469	Control Box Face Panel (See Pages 50-51)	1
11	F605-0049-01	Chain Guard Bottom Pan	1
12	075203	Air Lock Assembly (See Pages 46-47)	1
13	F605-0112	Chain Guard	1
14	F605-0119	Access Panel	1

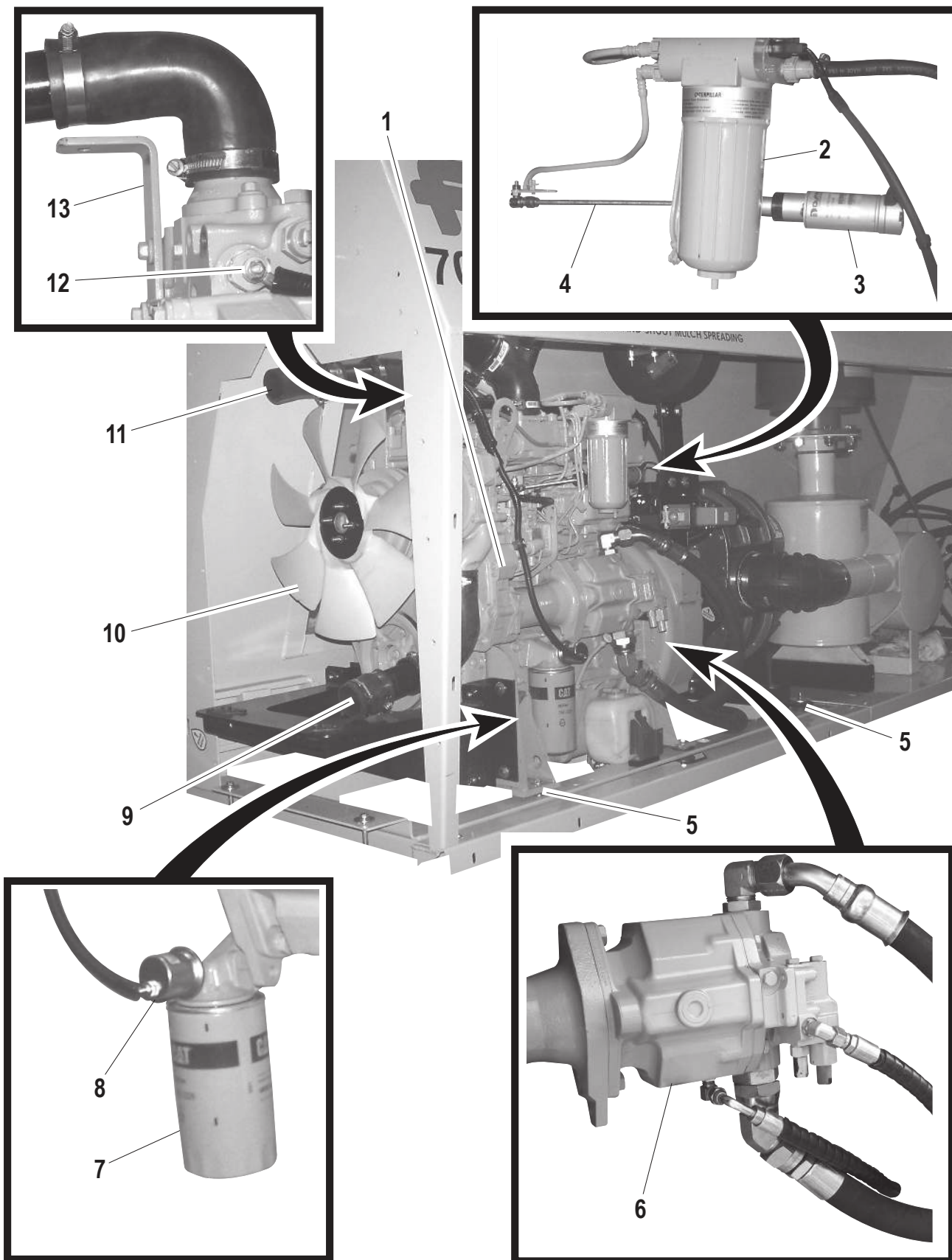
**WHEN ORDERING PARTS, BE SURE TO STATE
SERIAL NUMBER OF MACHINE**



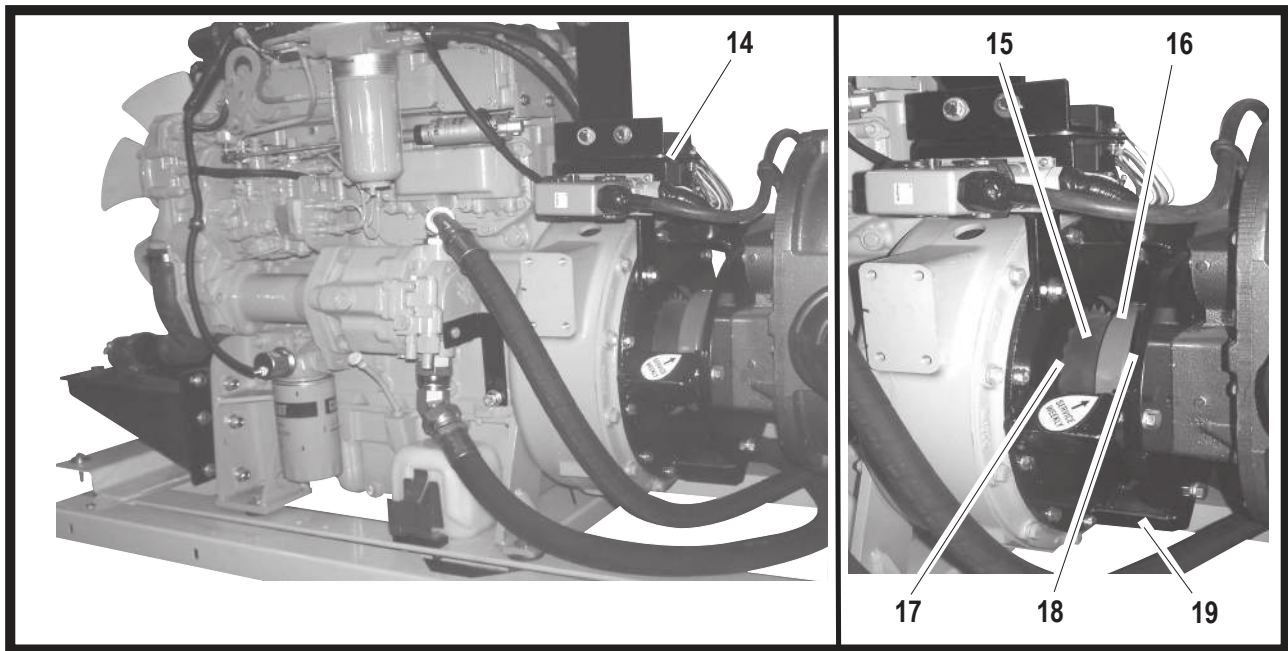
HOPPER - LEFT FRONT

Ref. No.	Part Numbers	Description	No. Req'd
1	F605-0055	Access Door Bracket	1
2	F605-0079	Left Rear Panel	1
3	075430	Access Door	1
4	075383	Compression Latch	2
5	075340	Side Door Latch L.H.S.	2
6	F605-0041	Side Compartment Door	1
7	F605-0043-01	Left Side Door Jamb	1
8	F605-0162	Side Compartment Door	1
9	F605-0042-01	Left Side Front Panel	1
10	F605-0039	Front Clean-Out Door	1
	F605-0133	Front Clean-Out Bracket	1
11	005592	Soft Latch	2
12	F605-0129	Hopper Front Cover	1
13	075401	Mulch Meter Gate	1

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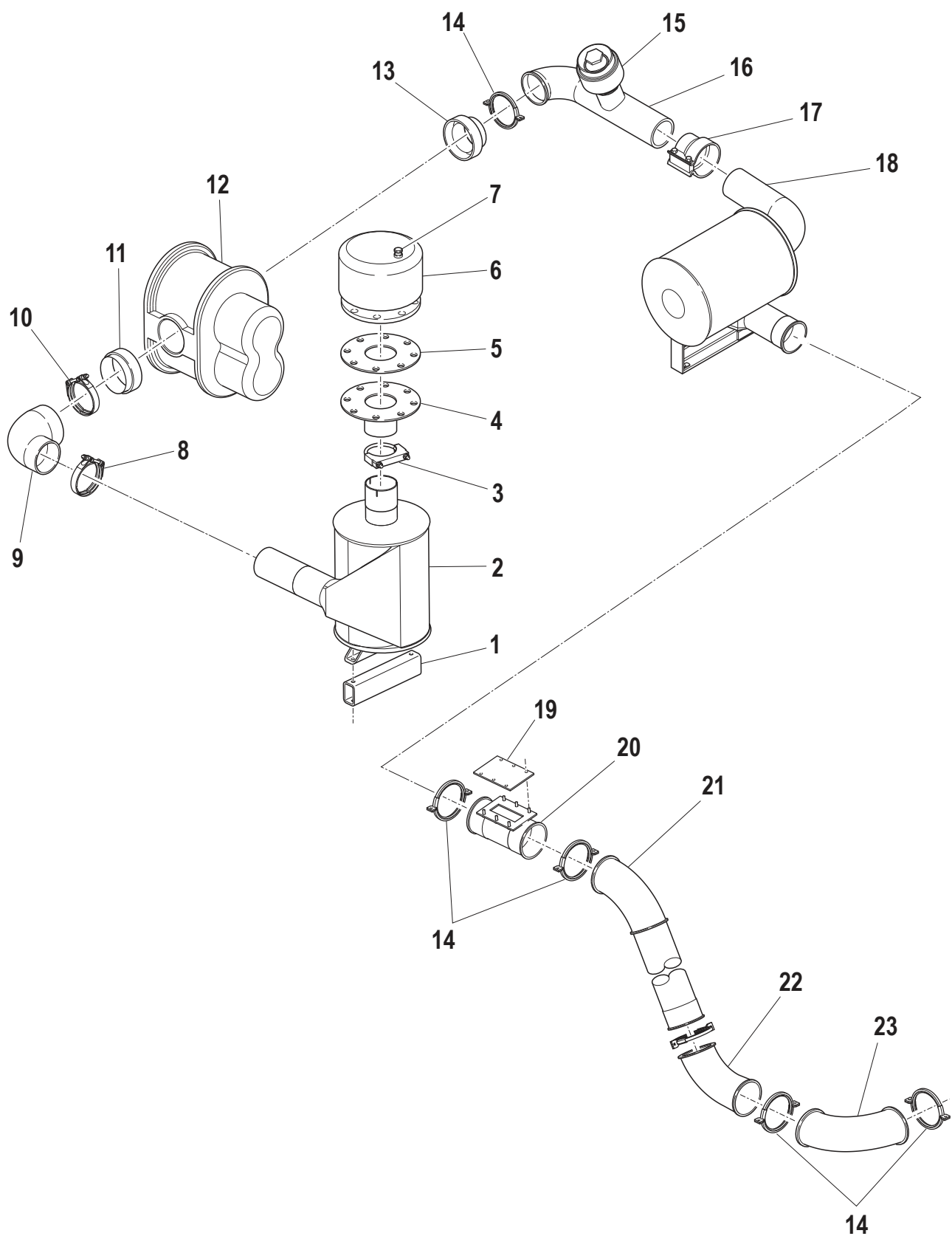
**WHEN ORDERING PARTS, BE SURE TO STATE
SERIAL NUMBER OF MACHINE**



ENGINE COMPONENTS

Ref. No.	Part Number	Description	No. Req'd
1	075394	Cat 3054B Engine	1
2	CE159-6102	Fuel Filter	1
3	023814	Throttle Actuator	1
	075415	Throttle Actuator Mount	1
4	075416	Actuator Extension	1
5	075205	Rubber Shock Mount	4
6	052817	Hydraulic Pump	1
	JDR96934	Hydraulic Pump Gasket	1
	012237	Hydraulic Pump Seal Kit	1
7	CE7W-2327	Oil Filter	1
8	075308	Oil Pressure Sender	1
9	CE101-7535	Lower Radiator Hose	1
10	CE101-3770	Fan	1
11	CE161-8038	Upper Radiator Hose	1
12	075310	Coolant Temperature Sender	1
	075513-B	Temperature Sender Boot	1
13	075414	Fan Shroud Upper Mount	2
14	075412	Air Cleaner Mount	1
15	011774	Rubber Coupling Insert	1
16	011772	Blower Coupling Half	1
17	052001	Coupling Flange (Engine Half)	1
	052025	Flywheel Adapter Plate	1
18	325180	Blower Adapter Plate	1
19	075607	Coupling Stand-Off	1
	NOT SHOWN		
	CE163-1934	Radiator	1
	CE103-6710	Radiator Cap	1
	075419	Upper Radiator Mount	2
	075420	Radiator Shroud	1
	F605-0031	Radiator Screen	1
	075374-01	Radiator Screen Pin	1

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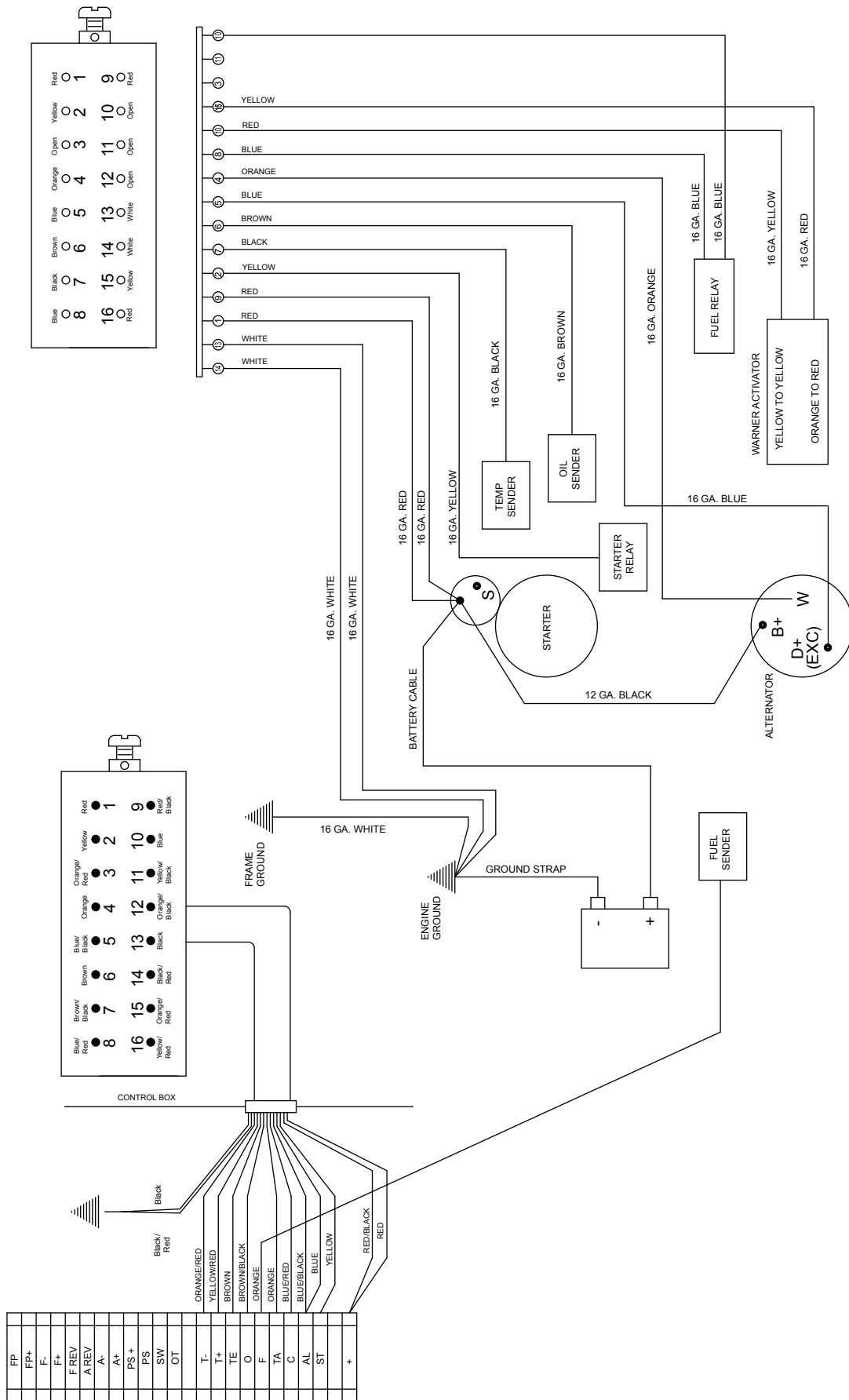


**WHEN ORDERING PARTS, BE SURE TO STATE
SERIAL NUMBER OF MACHINE**

BLOWER & AIR PIPING SYSTEM

Ref. No.	Part Number	Description	No. Req'd
1	075293-01	Inlet Silencer Mount	1
2	052093	Inlet Silencer	2
3	055336	Pipe Clamp	1
4	052023-01	Inlet Flange	1
5	052141	Inlet Filter Gasket	1
6	052469	Inlet Filter	1
	055145	Filter Element	1
7	045298	Filter Gauge	1
8	055335	4" Band Clamp	1
9	052010	90° Reducer Elbow	1
10	052011	5" Band Clamp	1
11	075295-02	Blower Inlet Nipple	1
12	075290	Blower	1
	052662	Rear Blower Foot	1
13	075295-04	Blower Outlet Nipple	1
14	052737	Tubing Clamp	5
	052738	Tubing Clamp Gasket	5
15	052008	Relief Valve	1
16	075446	Discharge Elbow Weldment	1
17	055137	Butt Joint Clamp	1
18	075445	Outlet Silencer	1
19	F916-0042-02	Tube Cover	1
20	075613	Top Discharge Tube	1
21	075488-02	Discharge Pipe Elbow	1
22	052471	4" 60° Elbow	1
23	052470	4" 90° Elbow	1

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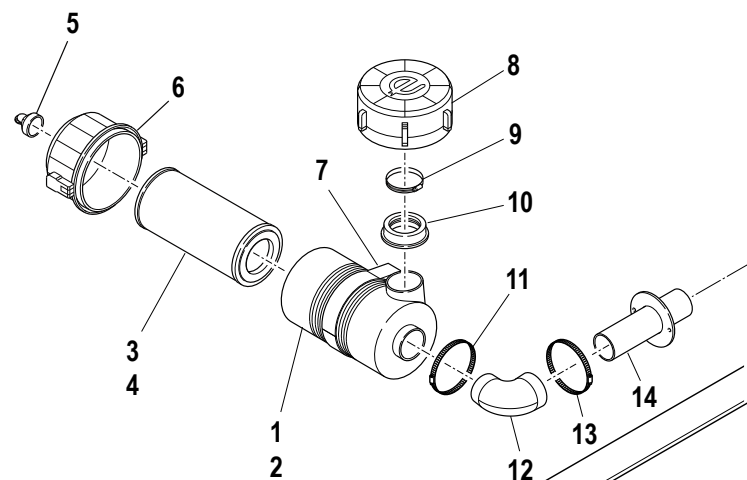


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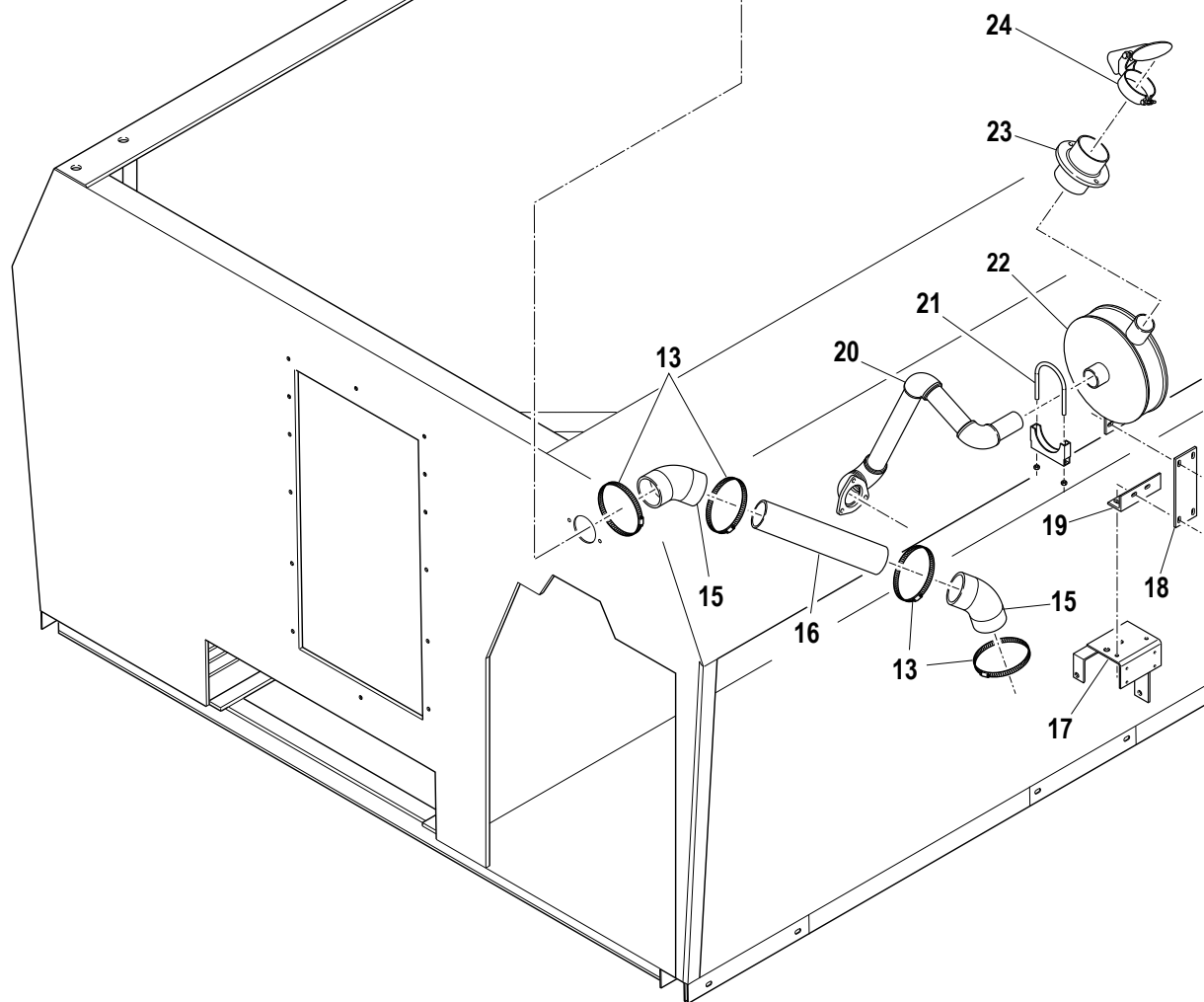
ENGINE WIRING

Part Number	Description	No. Req'd
SE0127-08	Engine Wiring Harness	1
FW71680	Surface Mount Housing	1
FW71357	Female Plug Insert	1
FW71359	Hood Housing	1
FW71356	Male Plug Insert	1
023814	Throttle Actuator	1
011851	12 Volt Battery	1
011770	Battery Box	1
080096	Positive Battery Cable	1
031350	Negative Battery Cable	1
075308	Oil Pressure Sender	1
075310	Temperature Sender	1

**WHEN ORDERING PARTS, BE SURE TO STATE
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NOTE:
ITEM #1 (AIR CLEANER ASSEMBLY)
INCLUDES ITEMS #2 - 7.

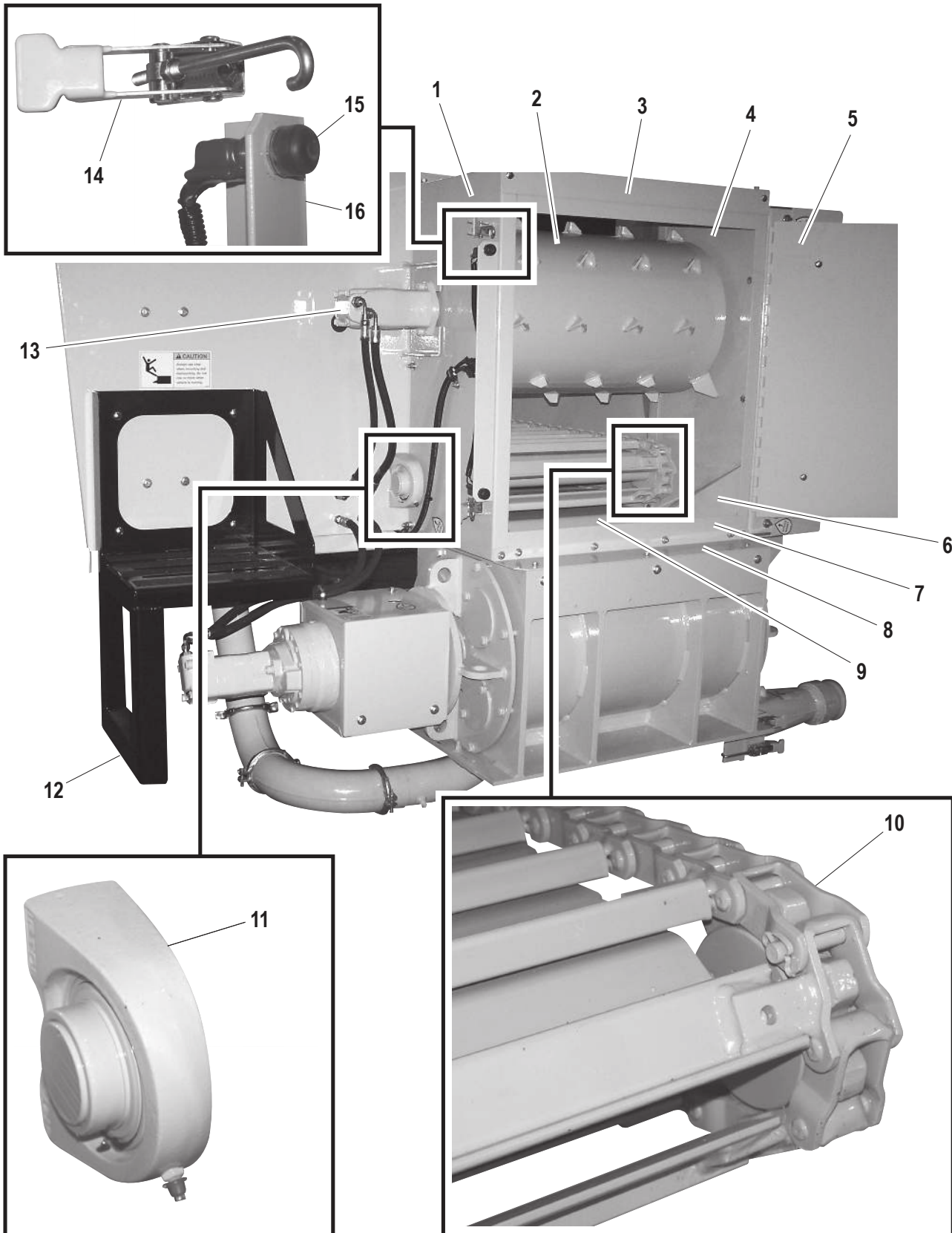


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SERIAL NUMBER OF MACHINE**

AIR INTAKE AND EXHAUST SYSTEMS

Ref. No.	Part Number	Description	No. Req'd
1	012621	Air Cleaner Assembly	1
2	012621B	Dust Load Indicator Gauge	1
3	012622	Main Filter Element (3.75-E1)	1
4	012623	Safety Filter Element (3.75-E2)	1
5	012621A	Flapper Valve	1
6	012621D	Filter Cap	1
7	012621C	Mounting Bracket	1
8	012608	Pre-Cleaner	1
9	055335	4" Clamp #AC400	1
10	012609	Pre-Cleaner Adapter	1
11	007391	3" Worm Gear Clamp	1
12	060325	90° Elbow - 3-1/2" to 3"	1
13	022451	3-1/2" Worm Gear Clamp	5
14	075622	Air Cleaner Tube Weldment	1
15	055499	45° Elbow	2
16	075633	Air Cleaner Pipe	1
17	075412	Air Cleaner Mount Weldment	1
18	SE0127-09	Air Cleaner Flat	1
19	075624-02	Muffler Mounting Bracket	1
20	SE0127-10	CAT Exhaust Piping	1
21	000461	2" Muffler Clamp	1
22	075619	Muffer Weldment	1
23	075621	Exhaust Port	1
24	045014	3-1/2" Rain Cap	1

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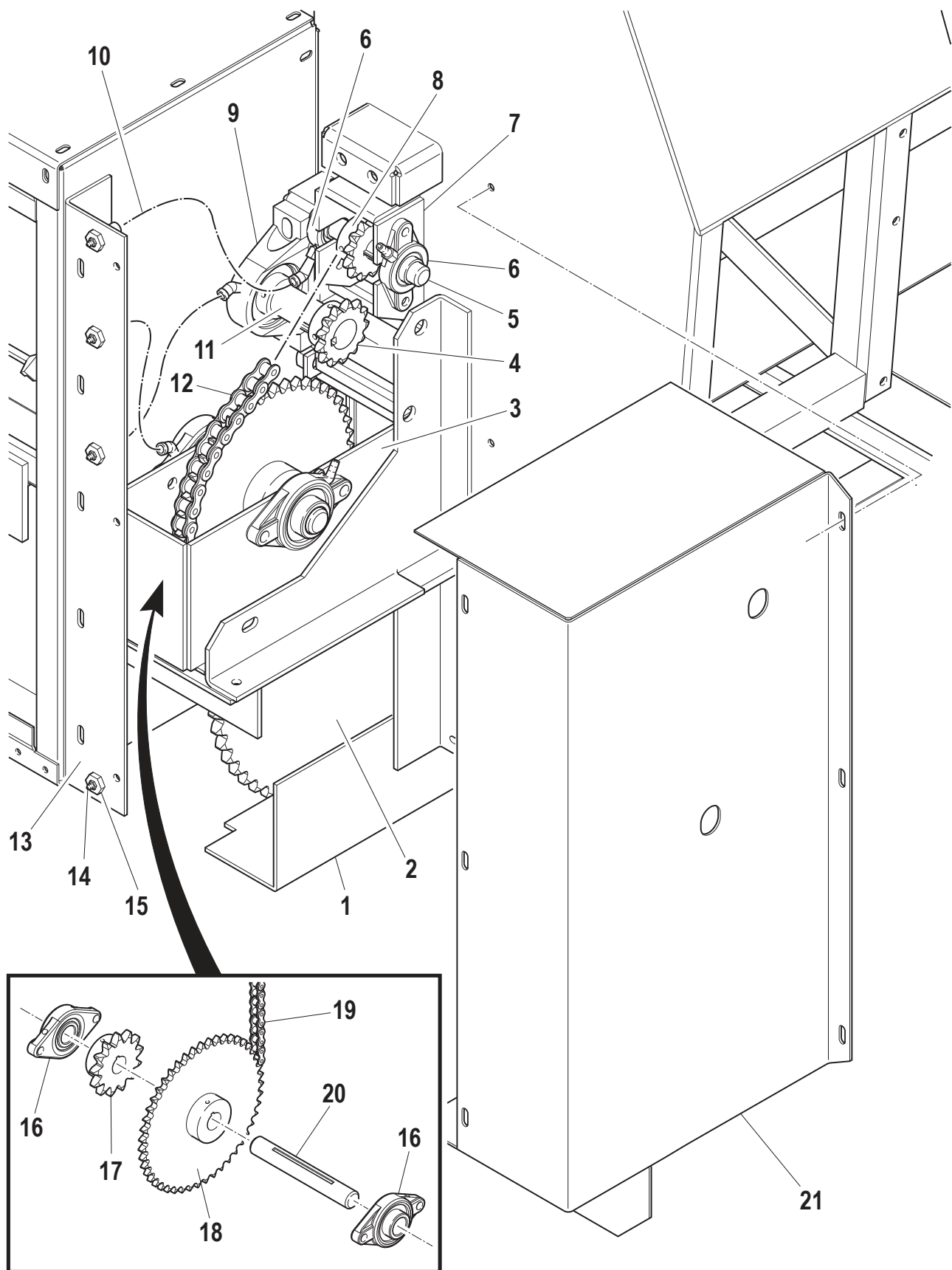


**WHEN ORDERING PARTS, BE SURE TO STATE
SERIAL NUMBER OF MACHINE**

FEED ROLL & FLOOR ASSEMBLY

Ref. No.	Part Number	Description	No. Req'd
1	F605-0108	Doghouse-Left Hand Side	1
2	075573	Feed Roll	1
	045031	Feed Roll Hub	1
	075366	Feed Roll Stub Shaft	1
3	F605-0110	Doghouse Cover	1
4	F605-0109	Doghouse-Right Hand Side	1
5	075317	Rear Door	1
	075277-01	Upper Door Support Angle	1
	075277-02	Lower Door Support Angle	1
6	F605-0124-01	Right Side Deflector	1
	F605-0124-02	Left Side Deflector	1
7	F605-0066	Rear Knife Cover	1
	075277-05	Rear Knife Angle Bracket	1
8	F605-0111	Rear Knife Filler	1
9	075604	Rear Floor Drive Shaft	1
	075215-02	Front Floor Idler Shaft	1
10	075583	Floor Chain	1
	075218	Floor Chain Sprocket - Front	2
	052224	Floor Chain Sprocket - Rear	2
	075219	Front Take-Up Bearing Frame	2
	075220	Front Take-Up Bearing	2
11	075606	Rear Floor Bearing	2
12	F605-0150	Observation Platform	1
13	075453	Feed Roll Hydraulic Motor	1
14	075224	Overcenter Draw Latch	2
15	055407	Door Safety Switch	2
16	075277-03	Door Switch Mounting Angle	1
NOT SHOWN			
	075478	Handle	2

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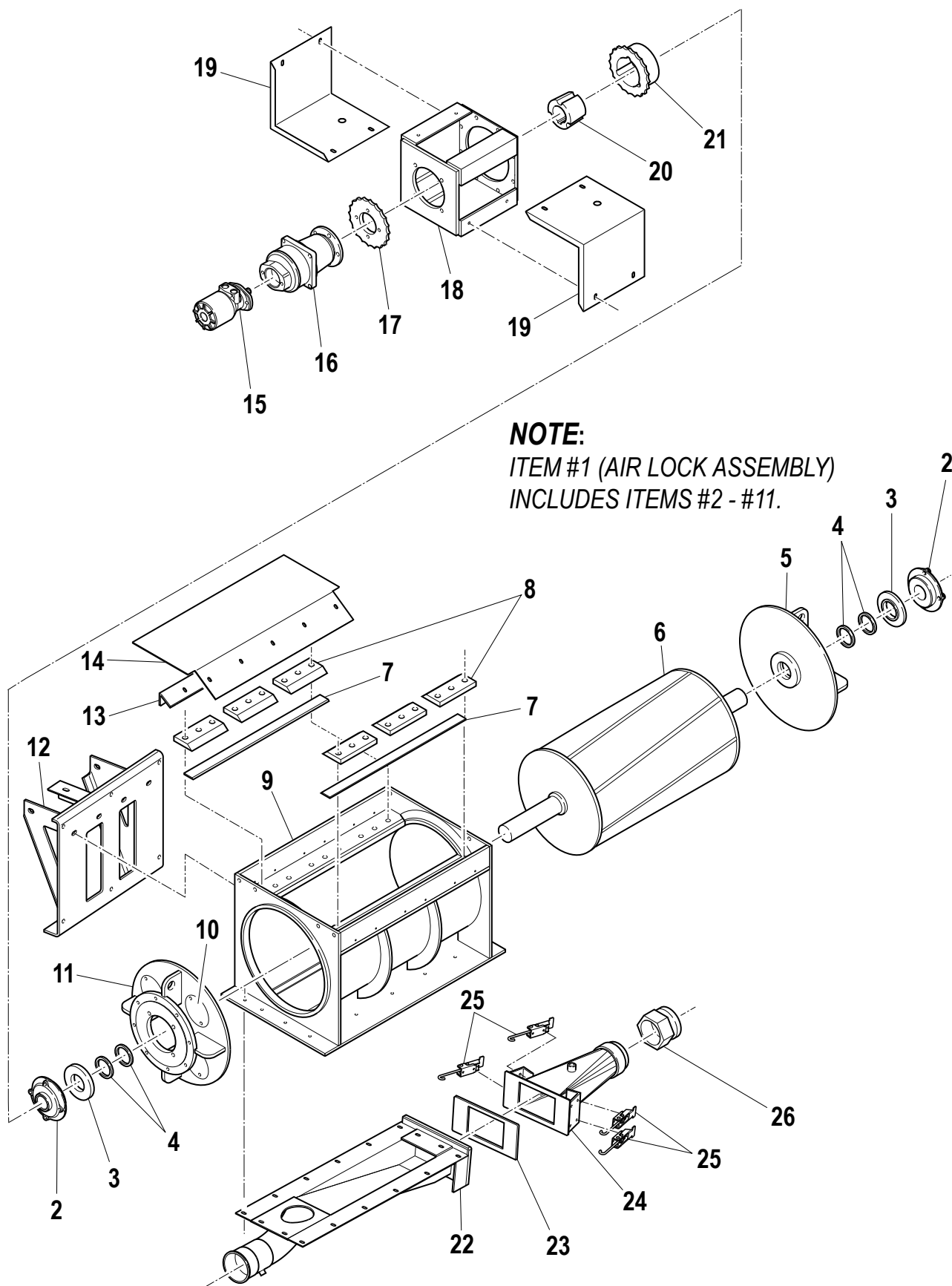


**WHEN ORDERING PARTS, BE SURE TO STATE
SERIAL NUMBER OF MACHINE**

FLOOR DRIVE ASSEMBLY

Ref. No.	Part Number	Description	No. Req'd
1	F605-0049-01	Chain Guard Bottom Pan	1
2	075356	Large Floor Drive Sprocket	1
3	075368-01	Lower Chain Tensioner	1
4	075359	Feed Roll Sprocket	1
5	075215-03	Idler Shaft	1
6	075360	Flange Bearing	2
7	075368-02	Upper Chain Tensioner	1
8	075359	Idler Sprocket	1
9	075233	Bearing	1
10	012521	Grease Hose	4
	008154	Grease Fitting Adapter	2
	160052	90° Elbow	2
	160078	45° Elbow	4
11	075214	Feed Roll Stub Shaft	1
12	075363	Feed Roll Drive Chain	1
13	F605-0049-02	Chain Guard Mount Angle	1
14	007705	Grease Fitting	6
15	012520	Bulkhead Fitting	4
16	075232	Flange Bearing	2
17	075357	Small Floor Drive Sprocket	1
18	075358	Large Idler Sprocket	1
19	075361	Floor Drive Chain	1
20	075215-04	Dual Sprocket Idler Shaft	1
21	F605-0048	Chain Guard	1

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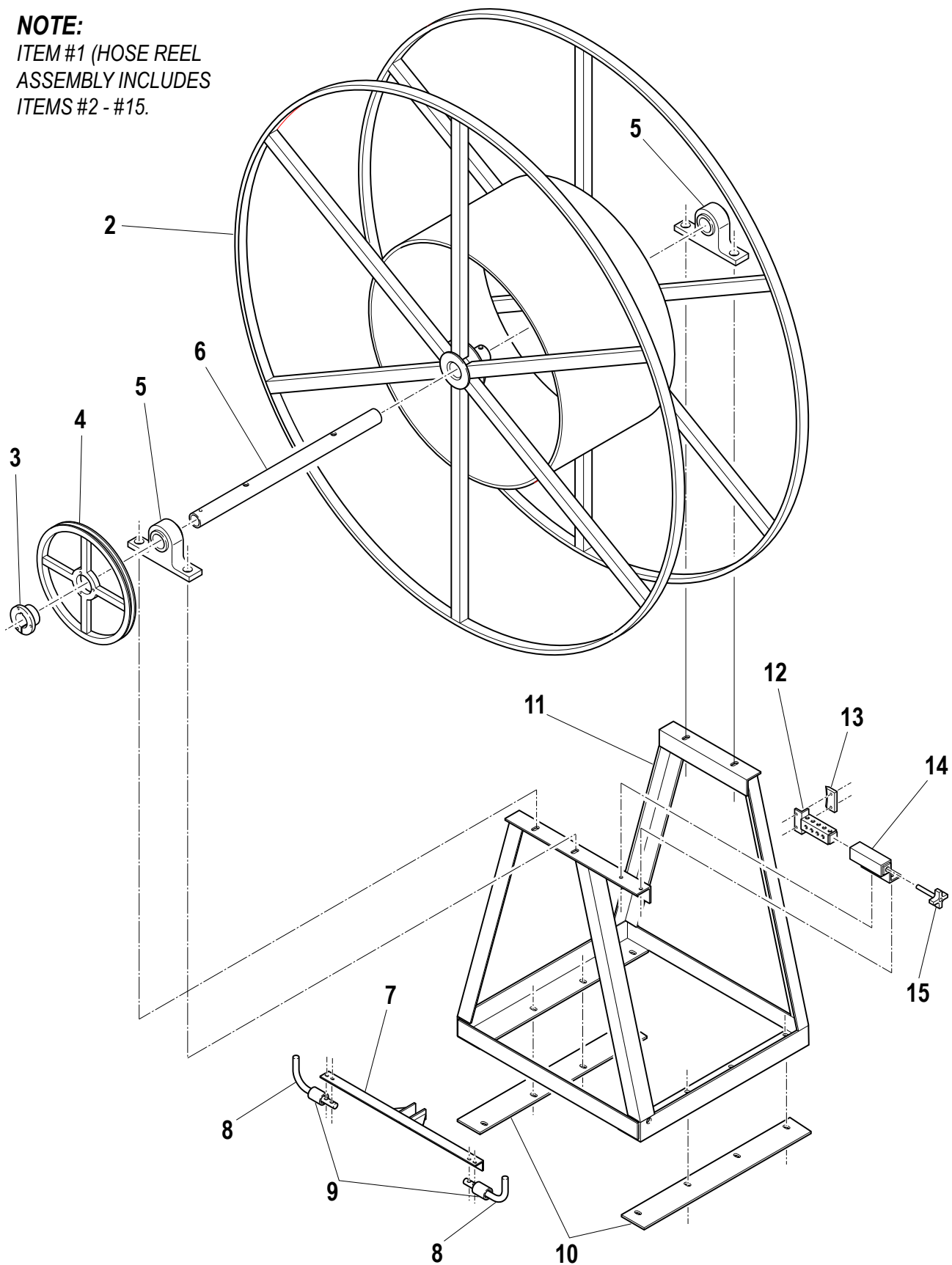
AIR LOCK ASSEMBLY

Ref. No.	Part Number	Description	No. Req'd
1	075203	Air Lock Assembly	1
2	075239	Flange Bearing	2
3	075240	Packing Gland Retainer	2
4	075241	Packing Gland	4
5	075236	Discharge Endplate	1
6	075233	Rotor	1
7	075237	Knife	2
8	075238	Knife Clamp	8
9	075234	Housing	1
10	075242	Cleanout Door	4
11	075235	Drive Endplate	1
12	075451	Airlock Mounting Plate	1
	07526-04	Lower Mounting Angle (Not Shown)	3
13	F605-0131	Airlock Filler Support	1
14	F605-0132	Airlock Filler Cover	1
15	075230	Hydraulic Motor	1
16	075204	Gearbox	1
17	075207	Sprocket	1
18	075210	Gearbox Standoff	1
19	F605-0021	Coupling Guard	2
20	075216	Bushing	1
21	045199	Coupling Half	1
	045201	Coupling Chain (Not Shown)	1
22	075352	Discharge Pan	1
23	075333	Discharge Gasket	1
24	075351	Discharge Transmission	1
25	075224	Discharge Latch	4
26	055374	4" Male Nyglass Adapter	1

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NOTE:

ITEM #1 (HOSE REEL
ASSEMBLY INCLUDES
ITEMS #2 - #15.

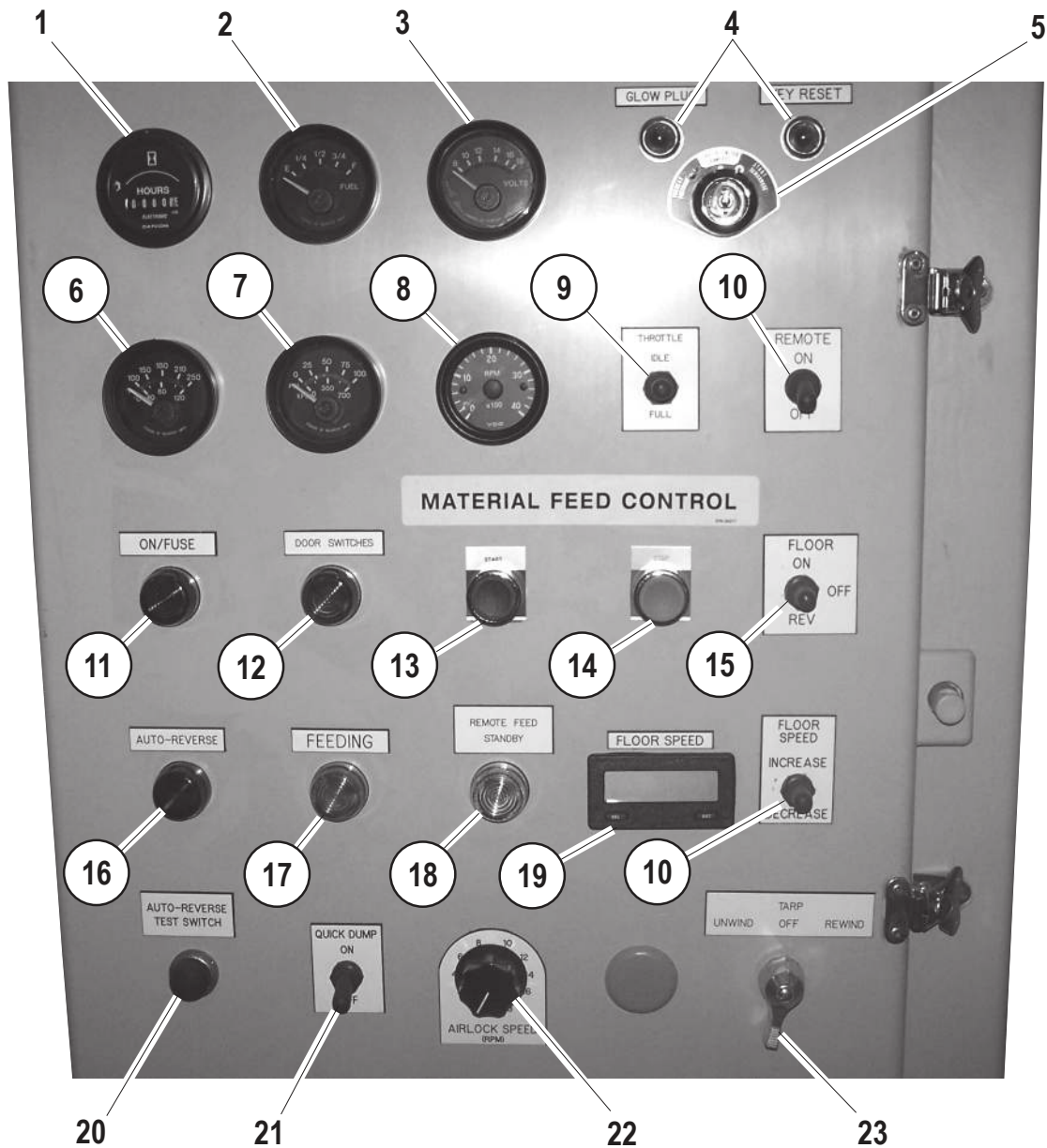


**WHEN ORDERING PARTS, BE SURE TO STATE
SERIAL NUMBER OF MACHINE**

200' HOSE REEL ASSEMBLY

Ref. No.	Part Number	Description	No. Req'd
1	052417	200' Hose Reel Assembly includes:	1
2	052416	Hose Reel Drum	1
3	052339	Locking Bushing	1
4	052338	Brake Sheave	1
5	052337	2" Pillow Block Bearing	2
6	052384-01	Drum Shaft	1
7	052350	Hose Reel Lock	1
8	052350-02	Lock Handle	2
9	052384-05	Handle Spacer	2
10	052384-06	Reel Mounting Pad	2
11	052383	Hose Reel Mounting Frame	1
12	052346-03	Brake Extension Arm	1
13	052347-02	Brake Pad	1
14	052346-14	Brake Mount LH	1
15	052346-02	Brake Adjusting Knob	1

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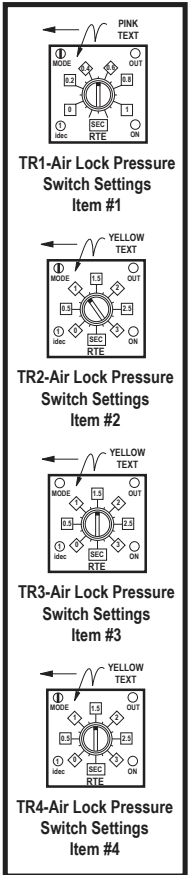
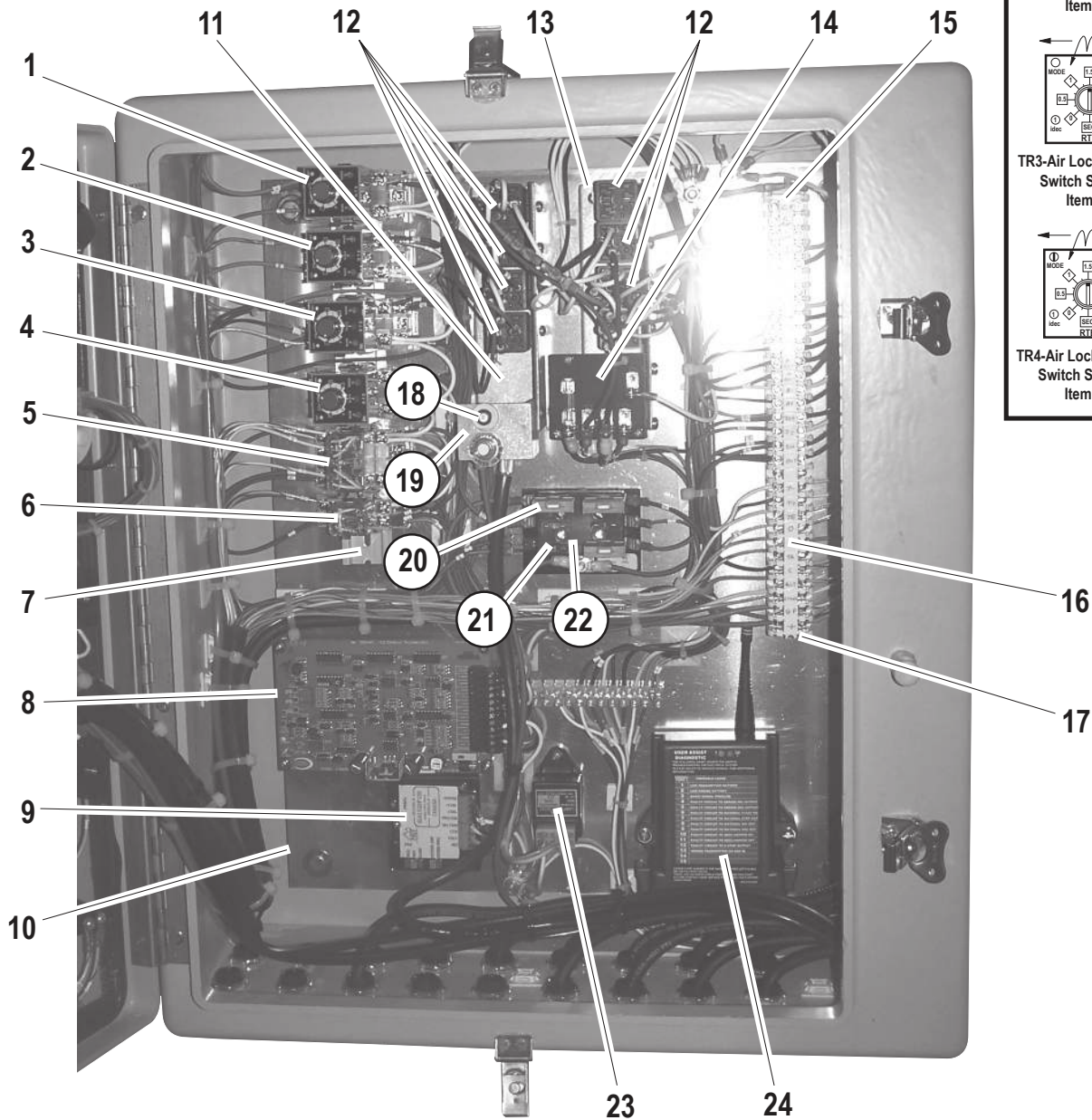
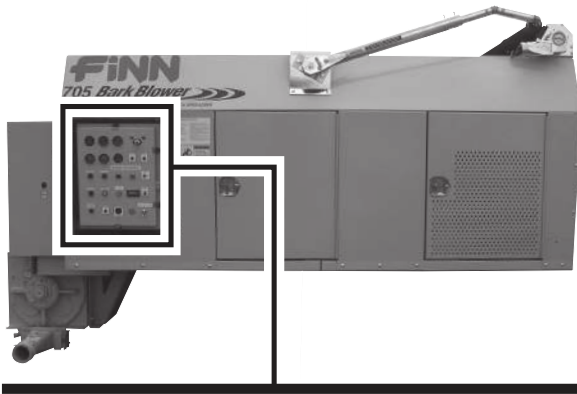


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CONTROL BOX FACE PANEL

Ref.	Part Number	Description	No. Req'd
1	075330	Hourmeter	1
2	075311	Fuel Gauge	1
	075312	Fuel Sender	1
3	075313	Voltmeter	1
4	006245	Pilot Light	2
5	004933	Ignition Switch	1
6	075309	Temperature Gauge	1
	075310	Temperature Sender	1
7	075307	Pressure Gauge	1
	075308	Pressure Sender	1
8	045265	Tachometer	1
9	FW71555	Throttle/Floor Speed Switch	2
	080526	Switch Rubber Boot	2
10	010531	Remote/Material Hopper On/Off Switch	2
	080526	Switch Rubber Boot	2
11	*045060	Blue "On/Fuse" Lens	1
12	*045057	Green "Door Switches" Lens	1
13	075321	Black "START" Button	1
	075322	"START" Button Contact	1
	075323	"START" Button Placard	1
14	075318	Red "STOP" Button	1
	075319	"STOP" Button Contact	1
	075320	"STOP" Button Placard	1
15	075314	Floor On/Off Switch	1
	080526	Switch Rubber Boot	1
16	*045058	Red "Auto-Reverse" Lens	1
17	*045059	Amber "Feeding" Lens	1
18	*045061	Clear "Remote Feed Standby" Lens	1
19	075468	Floor Speed Indicator	1
20	020886	Auto Reverse Test Switch	1
21	045311	Quick Dump Switch	1
	080526	Switch Boot	5
22	075454-D	Airlock Speed Dial	1
23	RR1050	Tarp Electrical Kit w/ Switch	1
*NOTE:	045062	Light Socket Base	1 per
	045067	Replacement Light Bulb	1 per

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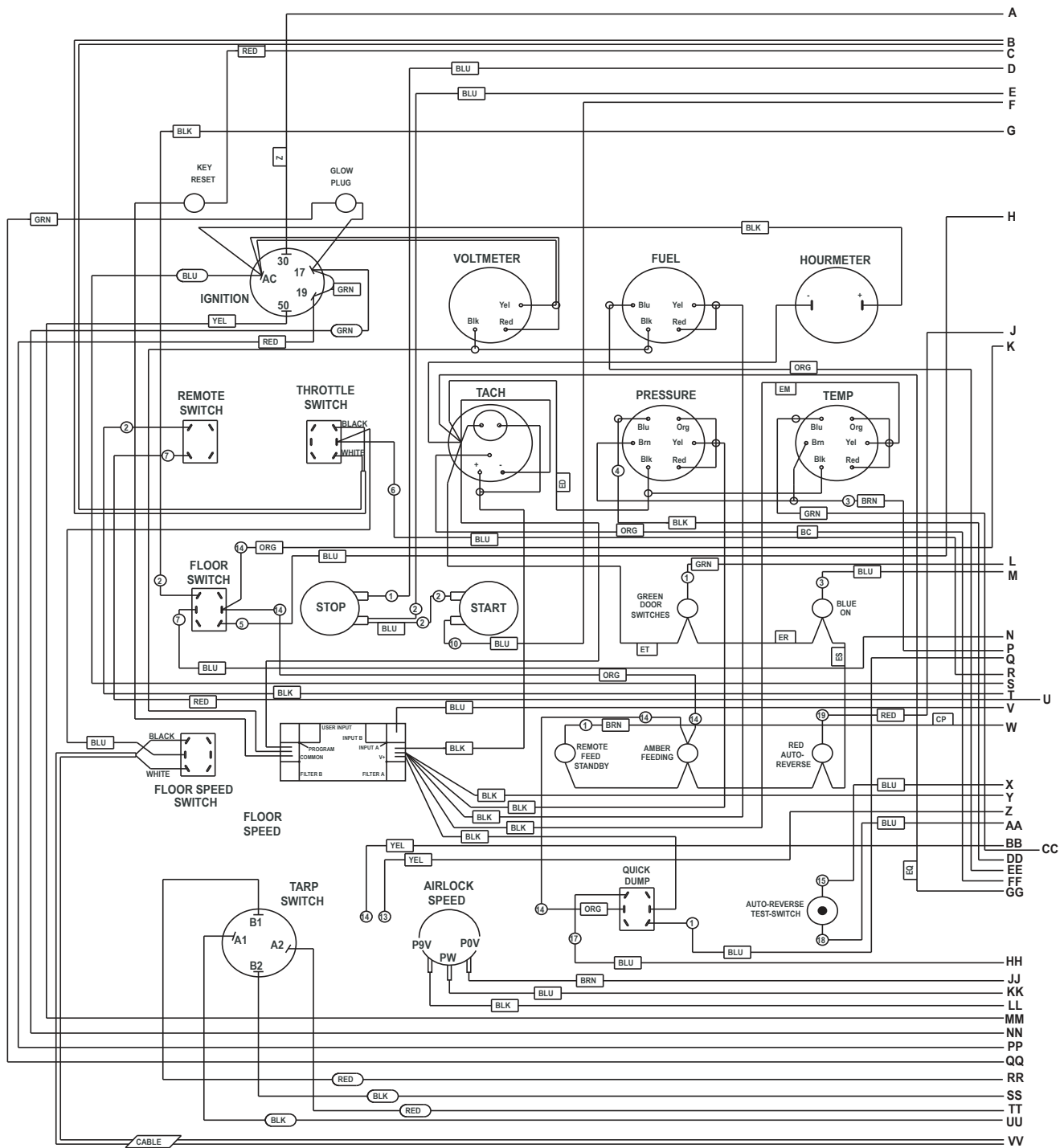
WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

CONTROL BOX ELECTRICAL COMPONENTS

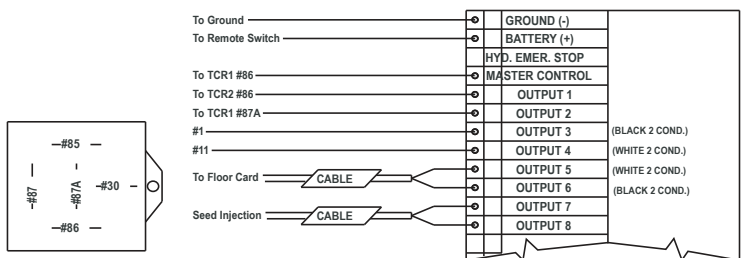
Ref. No.	Part Number	Description	No. Req'd
1-4	055122	12 Volt Timer (TR1, TR2, TR3, TR4)	4
	055125	Timer Socket	4
5	055121	12 Volt Relay	1
	055124	Relay Socket	1
6	055120	12 Volt Relay	1
	055123	Relay Socket	1
7	075346-04	Timer Mounting Rail	1
8	045289	Floor Controller Card	1
9	075454	Airlock Controller Card	1
10	075336	Sub Panel	1
11	075346-01	Left Relay Mounting Angle	1
12	FW71749-02	30A Relay	7
13	075346-02	Right Relay Mounting Angle	1
14	023802	Murphy Safety Switch	1
15	055451	Terminal Block End Cap	1
16	055132	Terminal Block	28
17	075346-05	Terminal Block Mounting Rail	1
18	045055	30A Main Circuit Breaker	1
19	075346-03	Circuit Breaker Mounting Angle	1
20	045056	10A Circuit Breaker	2
21	055450	5A Fuse	2
22	052118	6 Circuit Fuse Panel	1
23	KU15694-65592	Lamp Timer	1
24	052978	3-Function Radio Remote Control System	1

Ref. No.	Function
1	Floor Reverse Timer
2	Floor Delay Timer
3	Air Lock Auto Reverse Timer
4	Air Lock Pressure Switch Delay Timer
14	Electric Stop Relay
15	Material Stop Relay
16	Emergency Shutdown Relay
17	Throttle Control Relay
18	Throttle Control Relay
19	Material Speed Control Relay
20	Material Speed Control Relay

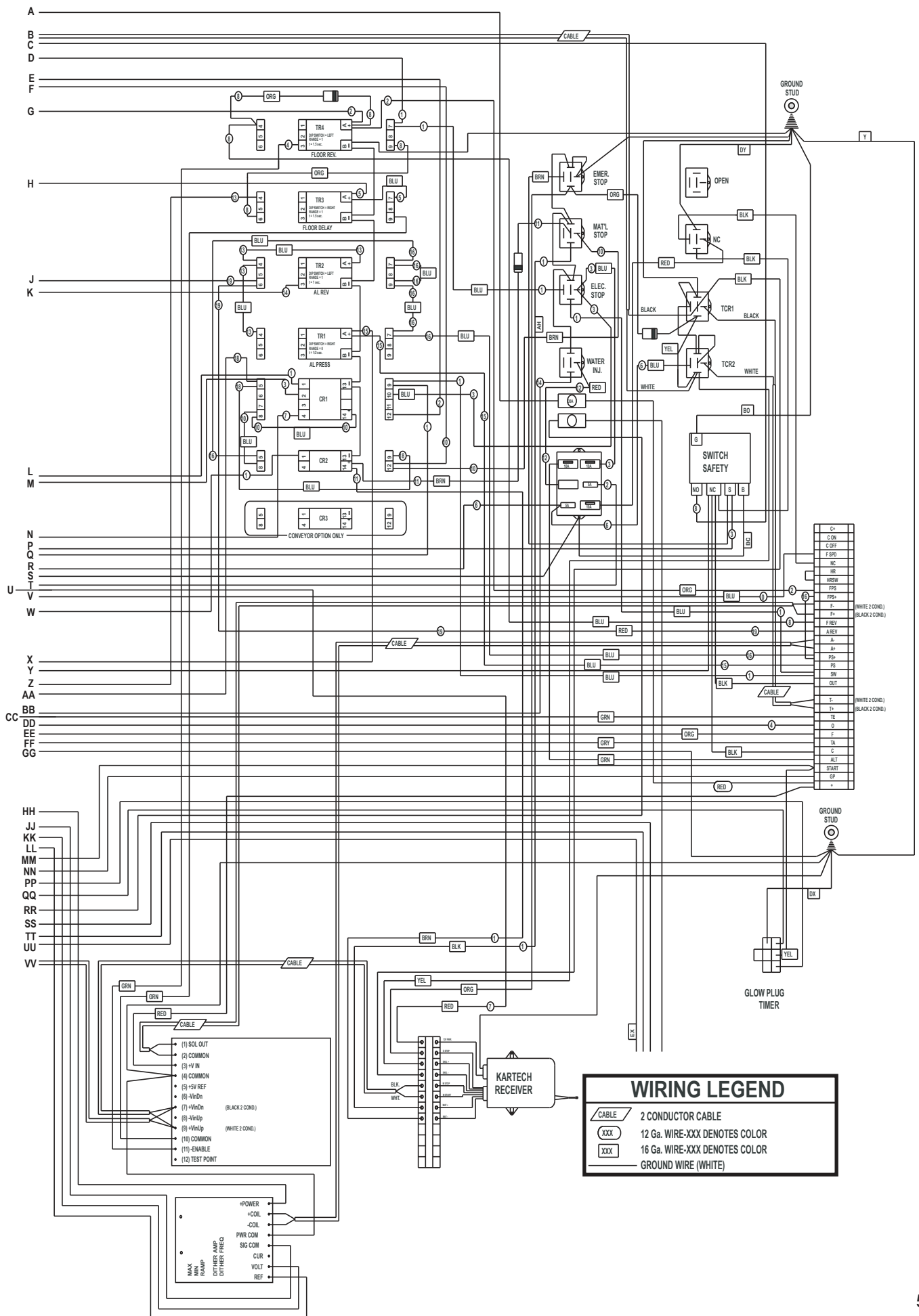
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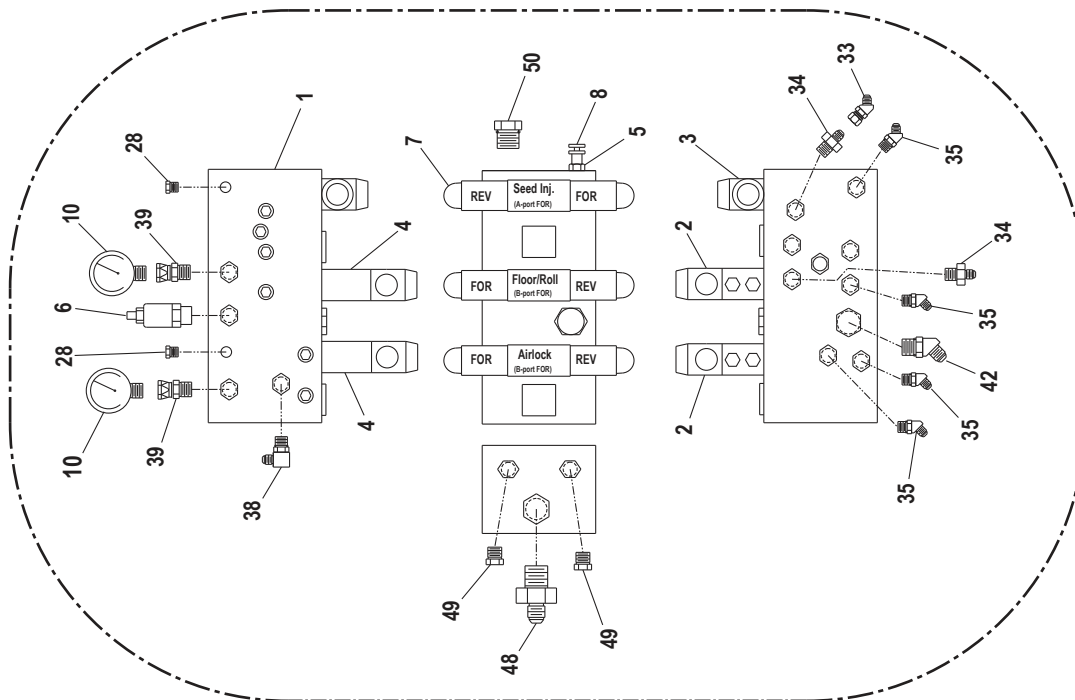
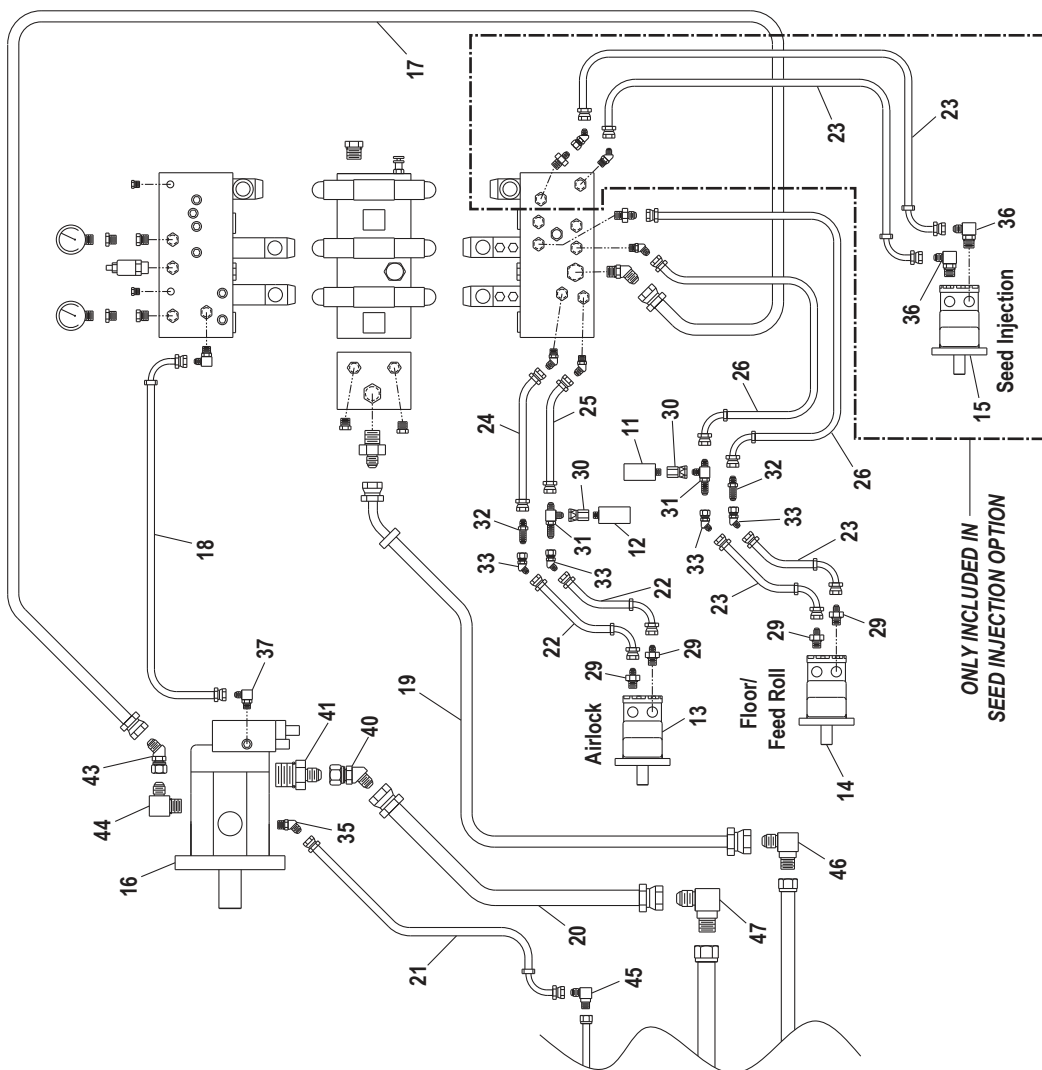


With Seed Injection



CONTROL CABINET WIRING DIAGRAM

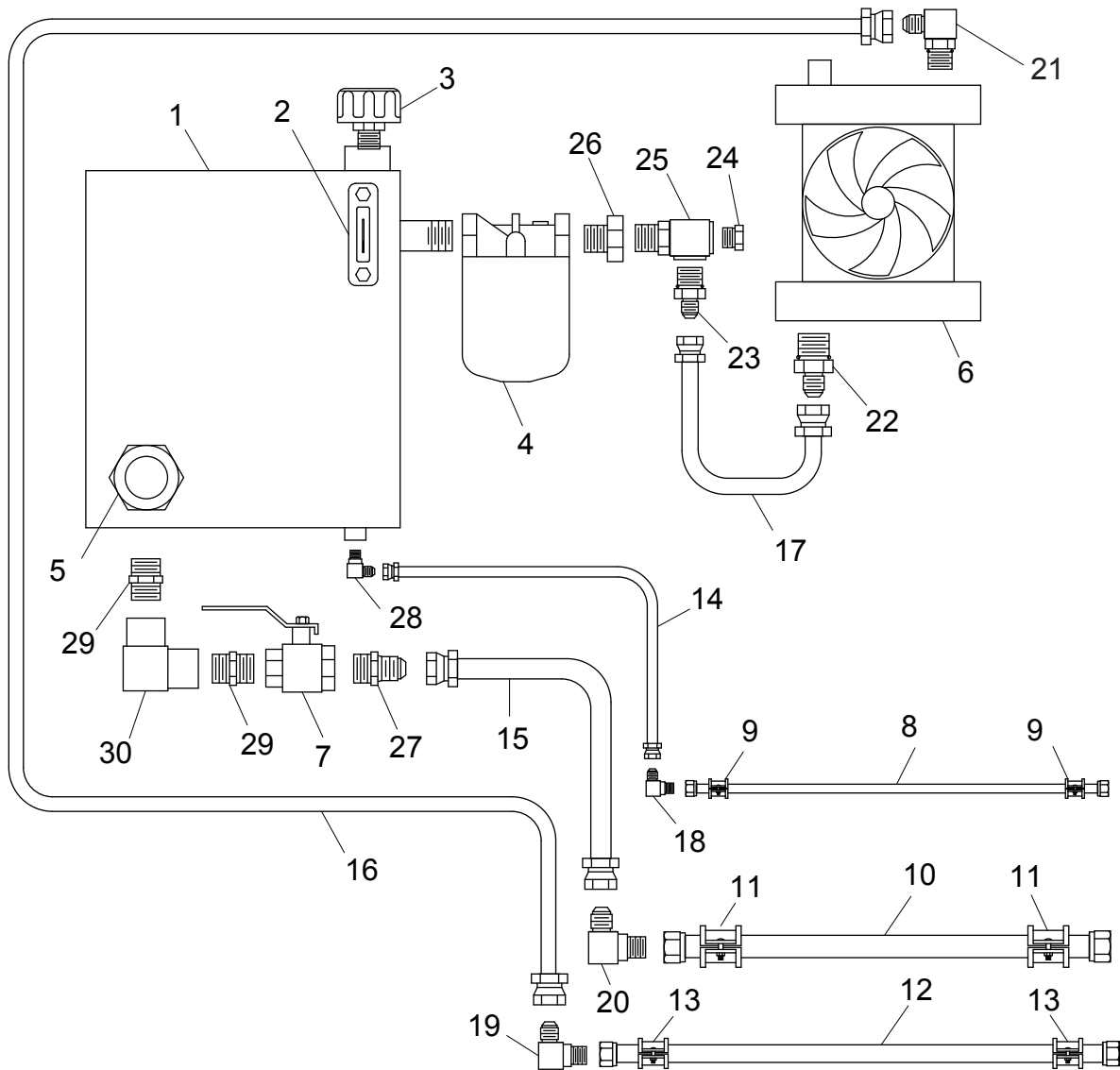




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HYDRAULIC SYSTEM - LEFT SIDE

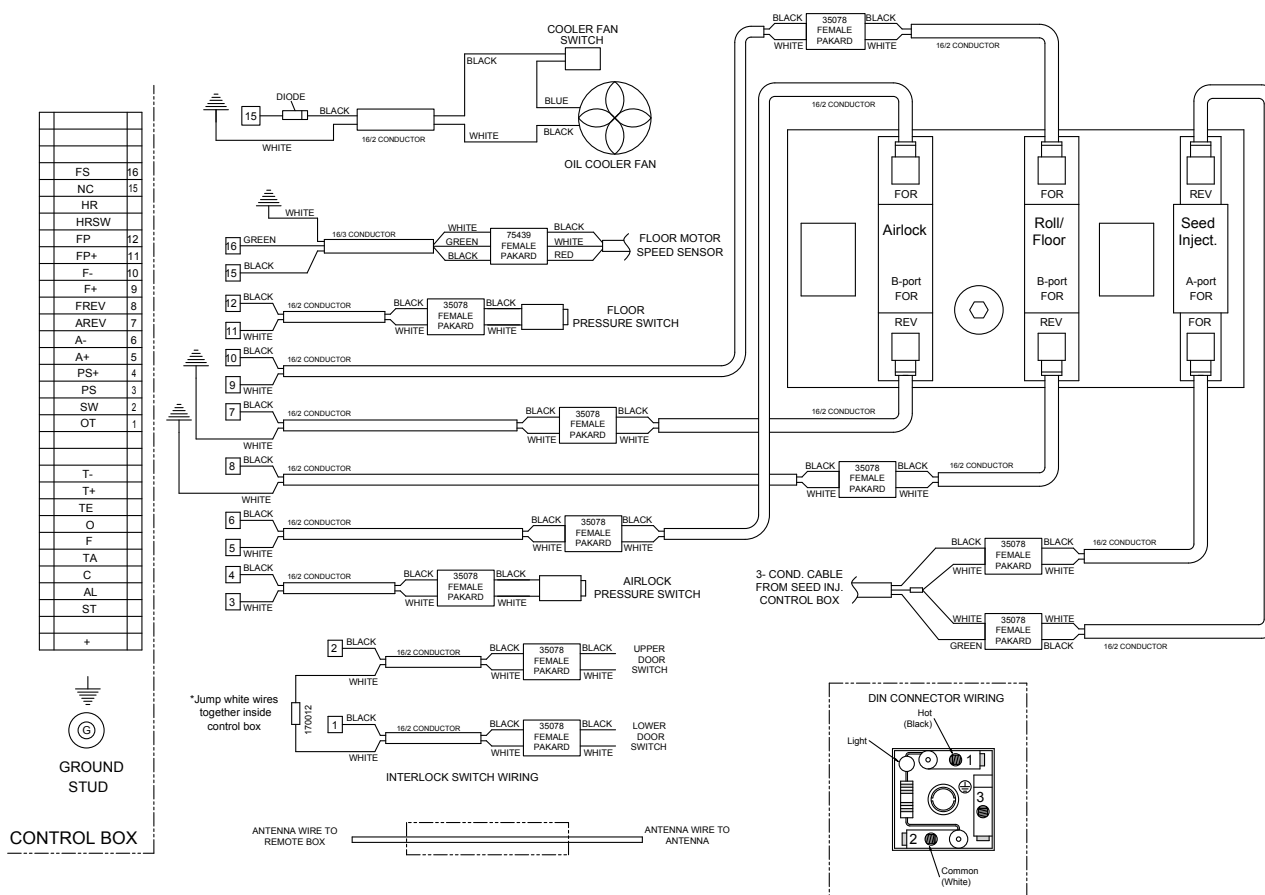
Ref. No.	Part Number	Description	No. Req'd
1	075525	Valve Manifold - Complete	1
2	075526	Proportional Solenoid Valve	2
3	052864	Directional Solenoid Valve	1
4	045308	Hydrostat Compensator	2
5	045302	Pressure Comp. Control Valve	1
6	045316	Relief Valve	1
7	045320	Boot w/ Override Stem	6
8	045342	Knob Kit	1
10	012044	Pressure Gauge	2
11	055659	Floor Pressure Switch	1
12	052336	Airlock Pressure Switch	1
13	075230	Airlock Motor	1
14	075453	Feed Roll Motor	1
15	055698	Seed Injection Motor	1
16	052817	Hydraulic Pump	1
17	075541	Main Supply Hose	1
18	075544	Load Sense Hose	1
19	075540	Return Hose	1
20	075537	Suction Hose	1
21	075543	Case Drain Hose	1
22	075549	Airlock Outboard Hose	2
23	075545	Floor/Seed Inj. Outboard Hose	4
24	075547	Airlock Inboard Hose	1
25	075548	Airlock Inboard Hose	1
26	075546	Floor Inboard Hose	2
28	055463	Pipe Plug	2
29	085014	SAE Adapter Fitting	4
30	075552	JIC Adapter Swivel	2
31	075551	JIC Bulkhead Tee	2
32	071095	JIC Bulkhead Straight	2
33	085189	JIC 45° Swivel Elbow	5
34	055601	SAE Adapter Fitting	2
35	075550	SAE 45° Adapter Elbow	5
36	055309	SAE 90° Adapter Elbow	2
37	075553	SAE 90° Adapter Elbow	1
38	FW71448	SAE 90° Adapter Elbow	1
39	022304	SAE Swivel Adapter	2
40	075554	JIC 45° Swivel Elbow	1
41	012580	SAE Adapter Fitting	1
42	085157	SAE 45° Adapter Elbow	1
43	FW71868	JIC 45° Swivel Elbow	1
44	011932	SAE 90° Elbow Fitting	1
45	075555	JIC 90° Elbow Fitting	1
46	075556	JIC 90° Elbow Fitting	1
47	075557	JIC 90° Elbow Fitting	1
48	FW65225	SAE Adapter Fitting	1
49	012130	SAE Plug	2
50	012362	SAE Plug	1



HYDRAULIC SYSTEM - RIGHT SIDE

Ref. No.	Part Number	Description	No. Req'd
1	075427	Hydraulic Reservoir	1
2	080329	Sight Gauge	1
3	011783	Breather Cap	1
4	011868	Hydraulic Filter	1
5	011466	Suction Strainer	1
6	075494	Oil Cooler	1
7	012083	Ball Valve	1
8	075512-03	Case Drain Tube	1
9	075517	3/8" Tube Clamp	2
10	075512-01	Suction Tube	1
11	075515	1-1/4" Tube Clamp	2
12	075512-02	Return Tube	1
13	075514	1" Tube Clamp	2
14	075542	Case Drain Hose	1
15	075536	Suction Hose	1
16	075539	Long Return Hose	1
17	075538	Short Return Hose	1
18	075555	JIC 90° Elbow Fitting	1
19	075556	JIC 90° Elbow Fitting	1
20	075557	JIC 90° Elbow Fitting	1
21	075558	SAE 90° Elbow Adapter	1
22	FW65225	SAE Adapter Fitting	1
23	FW71712	JIC Adapter Fitting	1
24	012327	Pipe Plug	1
25	041196	Pipe Tee	1
26	041153	Reducer Bushing	1
27	FW65348	JIC Adapter Fitting	1
28	055234	JIC 90° Adapter Elbow	1
29	041150	Pipe Nipple	2
30	160012	90° Pipe Elbow	1

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CONTROLS WIRING

Part Number	Description	No. Req'd.
045136	DIN Connector (2+GND)	6
052336	Airlock Pressure Switch	1
055659	Floor Pressure Switch	1
052463	Door Switch	2
035078	Female Packard Connector (2-way)	10
071208	Male Packard Connector (2-way)	10
075439	Female Packard Connector (3-way)	1
075494-TS	Oil Cooler Temperature Switch	1

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TOOL KIT

Part Number	Description	No. Req'd
	Cat Yellow Touch Up Paint	1
	Engine Operator's Manual	1
	Blower Operator's Manual	1
	Radio Remote Control Manual	1
	Bark Blower Operator's/Parts Manual	1

DISCHARGE HOSE

Part Number	Description	No. Req'd
055339A	100' Discharge Hose Ass'y w/ Aluminum Couplers	1
055398A	50' Discharge Hose Ass'y w/Aluminum Couplers	1
055374A	Aluminum Male Adapter	1
055375A	Aluminum Female Coupler	1
045303	Hot Air Hose	1
052380	Discharge Deflector Assembly	1
055337	Shoulder Strap	1

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