Activate Your Warranty By Registering TODAY!!!

FINN® CORPORATION

9281 LeSaint Drive • Fairfield, Ohio 45014
Phone (513) 874-2818 • Fax (513) 874-2914
Sales: 1-800-543-7166

Bark Blower™

Model BB-705

Parts and Operator's Manual

Attachment No. **MM** 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

  - **Completely fill out the Parts Tag.**
  - **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 number, on the outside of the box in which you are shipping the defective part(s).**

Warranty period:
Hydroseeders & Straw Blowers 2 years or 2000 hrs which ever comes 1st
All other equipment 1 year or 1200 hrs which ever comes 1st

Commercial Limited Warranty
Effective 4/1/2011

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 noted above. 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.
- 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.

WHAT YOU MUST DO TO OBTAIN WARRANTY SERVICE:

- As the purchaser covered under the above limited warranty you must **REGISTER** the equipment with Finn FAILURE TO REGISTER WILL VOID THE WARRANTY.
- Claim Number: Notify the warranty Dept. same day or next day of any intent to do warranty work and obtain a "Warranty Claim Number,"
- 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.(EXCEPTION: Unless the labor is per the Labor Allowance Schedule or less)
- 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.

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Continued

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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 stresses safe operation.

The first five pages of this manual are a summary of the main safety aspects associated with this unit. Be sure to read and understand completely before operating the machine.

The symbols below are used throughout the operation and maintenance sections of this manual to call attention to safety procedures.

⚠DANGER

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

⚠WARNING

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

⚠CAUTION

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

NOTICE

Indicates practices that are not related to personal injury.

NOTE: Gives helpful information

CALIFORNIA

Proposition 65 Warning

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

CALIFORNIA

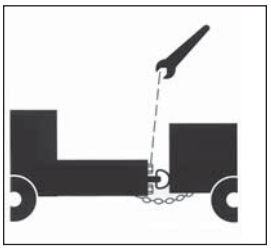
Proposition 65 Warning

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

BARK BLOWER SAFETY SUMMARY SECTION

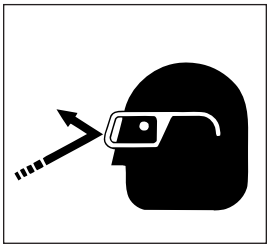
It is important that all operators of this machine are familiar with all the safety aspects mentioned below before operating the machine. Always keep a copy of this manual with the machine. It is the responsibility of the operator of the machine to fully understand this safety section. Remember that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

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

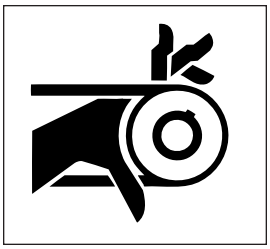


1. Check hitch and hitch bolts, safety chains, lights, brakes, and breakaway switch. Verify that the hitch ball or pintle hook is the correct size for the coupler.
2. Verify that all guards are in place.
3. By carefully looking into the blower hopper and transition, inspect for and remove any foreign objects. Follow Occupational Safety and Health Administration (OSHA) lockout/tagout procedure (29 CFR 1910.147)
4. Inspect all hydraulic hoses and tubes for cracks, bulges, or damage. If hose is cracked, bulging, or damaged, replace immediately.
5. Inspect the material discharge hose and connections for cracks or damage. If cracks or damage is found, replace affected part immediately.

II. MACHINE OPERATION

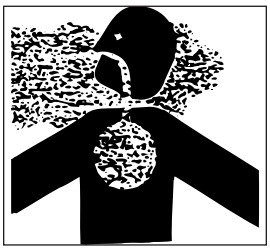


1. Always wear safety goggles when operating or feeding the machine. Other safety attire, such as safety shoes, ear protection, gloves, hard hats, dust masks, etc., should be worn as required by warning decals on machine, operator's manuals, or job site requirements. Remove rings, watches, etc. Avoid wearing loose-fitting clothing that 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 visually or audibly that all is 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 engine exhaust of both the equipment and vehicle on which the equipment is mounted. Deadly carbon monoxide fumes can accumulate.

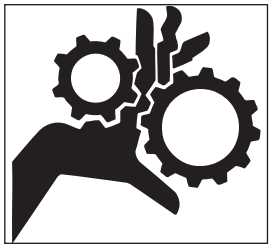


9. Never operate this or any other machinery when fatigued, tired, under the influence of alcohol, illegal drugs, or medication. You must be in good physical condition and mentally alert to operate this machine.
10. Never modify the machine. Never remove any part of the machine (except for service and then reinstall before operating).

11. During application through a hose, high pressure can be exerted at the end of the hose. Hose-holding personnel must establish good footing. The operator should apply gradual pressure to the hose only after hose-holding personnel are firmly positioned and have firm control of the hose. Additional personnel to direct hose may be necessary if working on slopes. The proper technique for grasping the hose used by hose-holding personnel is to route and firmly grasp the hose over the shoulder or under both arms. Never route/hold the hose so it goes between the legs. If the hose-holding personnel finds that it is uncomfortable for him to handle the hose by himself, additional hose-holders should be positioned at the end of the hose.

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 while machine is in operation. Shut down the engine using the OSHA lockout/tagout procedure (29 CFR 1910.147) before removing any foreign objects. Signal visually or audibly that all is clear before operating 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 parked 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 the equipment 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.

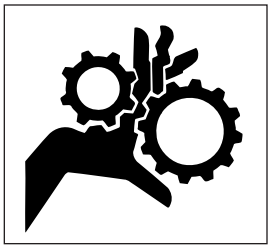
18. All personnel operating and/or around the machine must be aware that the blower can be controlled via remote control. For safety reasons and to prevent accidental starting, always keep the power switch on the remote receiver in the OFF position when the remote control is not being used.

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 carefully on rough surfaces and side slopes, especially with a loaded blower body.

III. MAINTENANCE

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



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

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

4. Battery maintenance: Lead-acid batteries contain sulfuric acid, which will damage eyes or skin on contact. Always wear a face shield to avoid getting acid in the eyes. If acid contacts the 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.

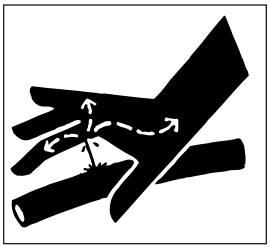
5. Filling of fuel: Never fill the tank with the engine running, while smoking, or when near an open flame. Never smoke while handling fuel or working on the fuel system. The fumes in an empty fuel container are explosive. Never cut or weld on fuel lines, tanks or containers. Move at least 10 ft (3 m)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

   IMPORTANT: 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 fluids and dispose of them properly.

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

7. Do not use either 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.

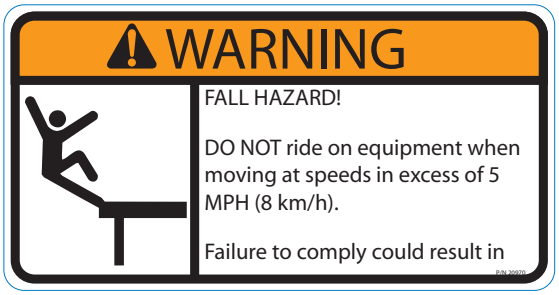
8. Diesel fuel or hydraulic fluid under pressure can penetrate the skin or eyes and cause injury, blindness, or death. To check for such leaks, use a piece of cardboard or wood instead of your hand. Pressure may build up in the hydraulic system; use caution when removing the cap.

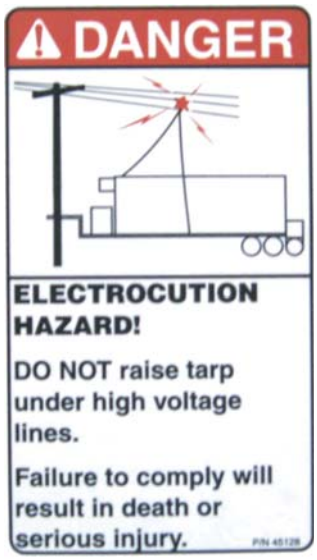


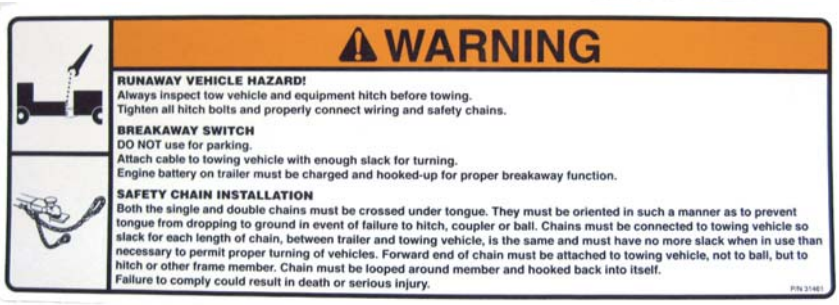
9. Some parts and assemblies are quite heavy. Before attempting to unfasten any heavy part or assembly, arrange to support it by means of a hoist by blocking or by use of an adequate arrangement to prevent it from falling, tipping, swinging, or moving in any manner. Failure to do so could result in component damage, or physical injury to someone.

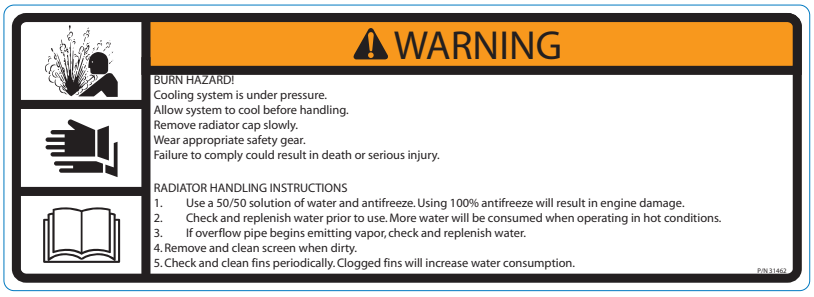
10. If repairs require use of a torch or electric welder, be sure that all flammable and combustible materials are removed. Fuel or oil reservoirs must be emptied, steam-cleaned, and filled with clean water before any cutting or welding on them is attempted. Do NOT weld or cut on any tank containing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

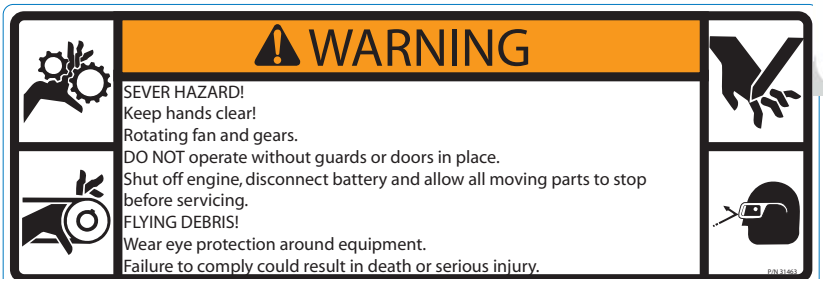
CURRENT SET OF SAFETY DECALS

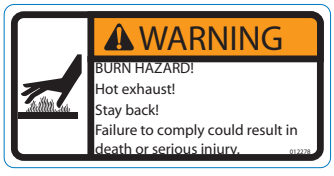












OPERATION AND MAINTENANCE MANUAL FOR FINN BARK BLOWER

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 every customer, we would like to encourage you to contact us for help with service, genuine replacement parts, or for 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, then 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 that conveys the bulk material to an opening containing a feed roll. The feed roll and drag conveyor feed the bulk material into an 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.

NOTICE

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

TOWING VEHICLE

The truck used to tow the FINN BB-705 must be equipped with a 2-5/16-in. ball-type 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 be able to pull and stop a 14,700 lb (6,670 kg) trailer. (Loaded 705 assuming 1000 yd^3 mulch.)

NOTE: When towing tandem axle unit, always ensure the unit is level, applying equal weight distribution across both axles.

⚠CAUTION

When mounting a skid BB-705, be sure to follow the 705 skid-mounting instructions. Ensure proper weight distribution and make sure the bark blower is properly supported by the truck. When mounting a skid model, contact FINN Corporation for proper instructions. Failure to comply could result in minor or moderate personal injury. Failure to comply could also result in product or property damage.

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 affect 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 in. (5.1 cm) in any direction with no material exceeding 4 in. (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 its 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. Failure to comply could result in minor or moderate personal injury. Failure to comply could also result in product or property damage.

Safety check to ensure 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. Ensure that all guards are in place.
3. Tool Kit - see that it contains all prescribed items (see Tool Kit list, page 66).
4. Lubricate equipment - use hand gun only (see Lubrication Chart, page 22 and 23).
5. Check engine oil - refer to engine operator's manual.
6. Check liquid coolant level in radiator and overflow tank. (Protected to -34ºF (-37ºC) when shipped.)

7. Inspect the engine air cleaner (refer to the engine operator's manual), the radiator chaff screen, and blower air cleaner for dust and dirt. If necessary, clean or replace the air filter.
8. Check fuel level. Use number 2-D diesel fuel oil unless operating at ambient temperature below 40ºF (4ºC) or at an altitude exceeding 5000 ft (1524 m). In these instances, use number 1-D fuel oil. 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 Chart, pages 22 and 23 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. Failure to comply could result in minor or moderate personal injury. Failure to comply could also result in product or property damage.

STARTING PROCEDURE

⚠CAUTION

See safety section of the manual (pages 1 through 5) before operating the machine. Failure to comply could result in minor or moderate personal injury. Failure to comply could also result in product or property damage.

1. Place the remote control switch to the OFF position.
2. Turn the key clockwise until the starter engages and the engine starts.

NOTE: This engine is equipped with a shutdown system that will shut the engine off if the engine oil pressure drops below 15 psi (103.4 kPa) or if the water temperature reaches 230°F (110°C). This shutdown 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 lit, check that the door above the airlock is tightly closed. If both lights are off, but the voltmeter is reading correctly, check the 10-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 3 to 5 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 15, BARK BLOWER ADJUSTMENTS for further information on control settings. Governed engine speed should be 2,500 to 2,700 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 to dump 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 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 (82.7 kPa), an inlet and outlet silencer for noise attenuation, and an inlet air filter.

The drag conveyor receives material from the hopper and conveys it to an opening located at the rear of the hopper where the feed roll is located. The feed roll ensures 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 fixed-displacement pump driven off the engine auxiliary drive. The pump receives DTR13 hydraulic fluid from the 32-gal (120-L) reservoir through a service valve and suction hose, then delivers it to the valve manifold through an unloading valve. The manifold has five separate valve sections with solenoids that control all the functions on the Bark Blower. Also, it uses equal to or better than 5 micron absolute filtration.

DESCRIPTION OF VALVE SECTIONS

Figure 1 shows the valve block and the different hydraulic circuits. Each circuit, except the Hose Reel (HR) circuit, is controlled by two valves. On the Floor (F) and AirLock (AL) circuits, the flow rate is controlled by the proportional valves. These valves can be manually stroked by inserting a small rod or screw driver into the hole in the bottom of the solenoid. The Floor and AirLock circuits also have a directional valve that can be manually stroked by pressing the red knob on the bottom of the solenoid. The Agitator (A) and Seed Injection (S) circuits are controlled by a three-position valve that is actuated by one of two solenoids. These valves can be stroked manually by pressing or pulling on the red knob located on the bottom of the solenoid. The Hose Reel (HR) circuit is controlled by a two-position ON/OFF valve, and its solenoid can only be actuated in one direction by pressing on the red knob, located on the bottom. The flow rates for the Hose Reel, Seed Injection, and Agitator circuits are adjusted using the flow control valves. These valves are located directly behind the solenoids for their respective circuits.

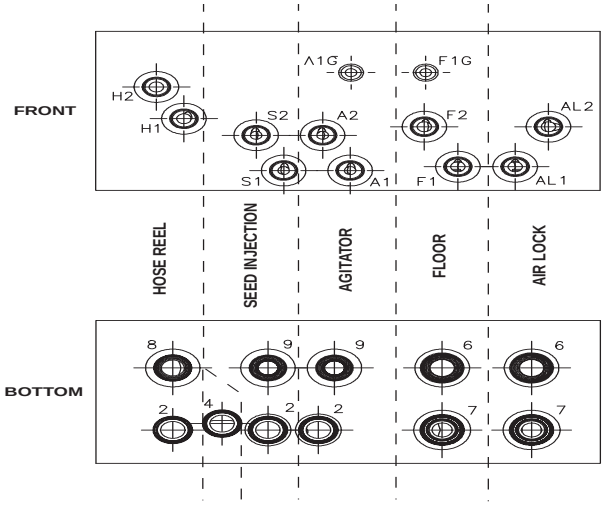


Figure 1 - Valve Block

A. AIRLOCK

The last valve section of the manifold runs the airlock. The spool in the valve is factory-set so the airlock turns at about 12 rpm. The proportional valve, in combination with the control box, provides adjustment of the airlock speed. There is a pressure switch on the forward circuit that is set for 2,400 psi (16,547 kPa) that triggers the auto-reverse function on the airlock. Normal rotation of the airlock is clockwise if viewing from the driver side of the machine.

B. FLOOR (DRAG CONVEYOR)/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. There is a pressure switch on the forward circuit that is set for 2,050 psi (14,134 kPa) that triggers the auto-reverse function on the floor.

C. AGITATOR

Not used.

D. SEED INJECTION

See the Seed Injection manual for operation of this circuit.

E. HOSE REEL

The last section of the manifold controls the hose reel. The flow rate is factory-set so that the hose reel winds, and unwinds at a rate of about 13 rpm.

SUBSYSTEM 3: HYDRAULIC CONTROL SYSTEM

The hydraulic control system is an electrical system that controls all the hydraulic functions on the Bark Blower. This 12V DC system runs off the engine electrical system. It is a series of relays, timers, and 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 lights 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 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 second, 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 2,400 psi (16,547 kPa) 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 2. If the switch remains closed for more than 0.5 second, 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 an airlock auto-reverse test button. If there is ever a problem with the airlock not auto-reversing, this can be 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 indictor 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 2,050 psi (14,134 kPa), 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 TRANSMITTER

This Bark Blower is equipped with a Kar-Tech® Radio Remote Transmitter to control the MATERIAL START/STOP, the MATERIAL DECREASE/INCREASE, and the ENGINE RPM INCREASE/DECREASE. It also contains an Emergency Stop button that activates the Murphy shutdown system on the engine.

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

1. Place the Radio Remote Transmitter On/Off switch, located on the control box, to the OFF position.
2. Place the switch, located on top of the Radio Remote 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 Transmitter switch, located on the control box, to the ON position.
5. Place the Radio Remote Transmitter switch to the ON position.

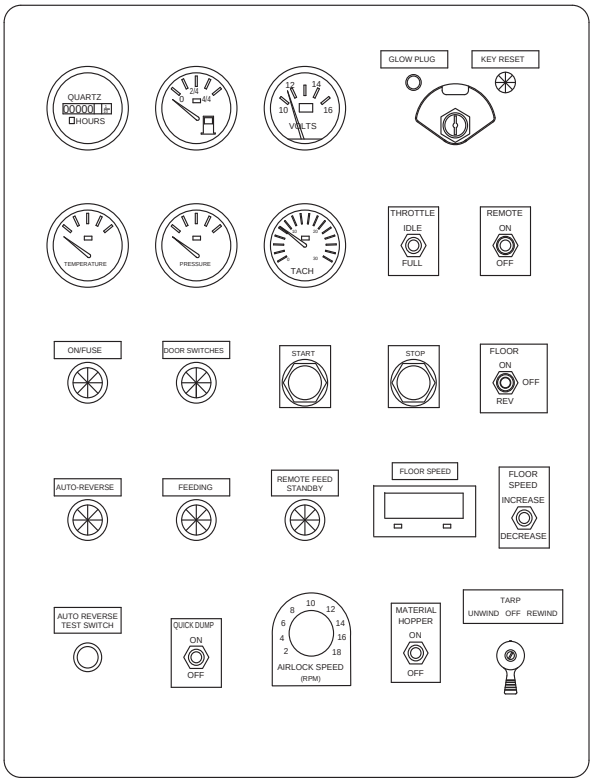
To utilize the Material Feed Start/Stop feature of the Radio Remote Transmitter, the initial start must occur at the Start/Stop station on the Bark Blower. The hard-wired, Start/Stop on the unit is the primary and overriding set of controls. When either the STOP button is pushed or a loss of power to 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 Transmitter 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 Radio Remote Transmitter 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 Radio Remote Transmitter will be shown on the FLOOR SPEED display on the control box.

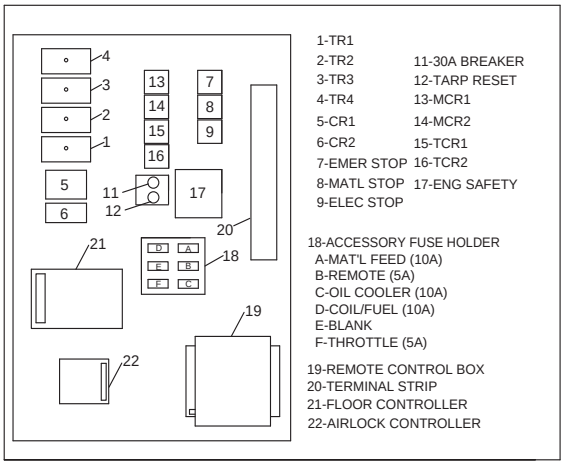
The Engine Increase/Decrease function on the Radio Remote Transmitter adjusts the throttle actuator on the engine. For use of the engine rpm function, refer to MULCHING WITH THE BARK BLOWER on page 14.

Pushing the red button located next to the antenna on the Radio Remote 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 Remote Transmitter On/Off switch to OFF.
2. Re-start the engine.
3. Flip the Radio Remote Transmitter On/Off switch to ON.

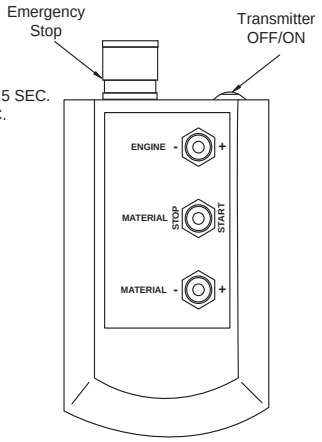


Main Control Panel



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 16 for timer instructions.)



Kar-Tech® Radio Remote

Figure 2 - Hydraulic Control System

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 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 Remote Transmitter. Warns other crew members that the Radio Remote Transmitter is active and feeding can begin remotely.
Red	AUTO-REVERSE	Should be glowing whenever the unit auto-reverses while feeding.

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.

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 Transmitter by first placing the REMOTE switch on the main control panel to the ON position, then, placing the switch on top of the Radio Remote Transmitter to the ON position.
7. Press the START button on the main control panel to activate the material START/STOP feature on the Radio Remote Transmitter control, then, quickly push the Material START/STOP switch on the Radio 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 Radio 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 overfeeding 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

The 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 Radio Remote Transmitter. 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 speed 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 then 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 this action can make the hose 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, as this can cause excessive plugging if there is 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 steam. Generally, the airlock should not be run slower than 10 rpm.

B. EXCESSIVE AUTO-REVERSING

If the airlock starts to auto-reverse more than three times per minute, that means the airlock is being overfed and the floor speed should be turned down. Excessive auto-reversing leads to less production than if the floor was just turned down to a slower 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 (83 kPa), 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 valve, which causes a loud whining noise to be heard from the engine area. Occasional blowing through the relief valve is expected, as long as the machine can clear itself. However, if the relief valve goes off repeatedly in a 10-second time 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 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. The closer the material is to Dry, Aged Material, the closer the gate should be to the feed roll, and the farther 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 Wet or Heavy Material, leaving 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 the material is, 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 Radio Remote Transmitter, 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, then 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. Failure to comply could result in minor or moderate personal injury. Failure to comply could also result in product or property damage.

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. Failure to comply could result death or serious injury.

7. Close the rear access door securely using the clamps.
8. The Bark Blower should be run with the FLOOR SWITCH in the OFF position for a few seconds so the airlock has a chance to clear itself before resuming normal operation. The STARTING PROCEDURE on page 8 will need to be followed again before remote operation can be used.

ELECTRONIC TIMER RANGE PROGRAMMING INSTRUCTIONS

The following instructions present all of the necessary steps to program the Electronic Timer. Turn selectors securely with use of a flat screwdriver (4 mm maximum wide blade).

NOTICE

An incomplete setting may cause a malfunction.

Be careful to not turn the selectors beyond their limits. Since changing a setting during timer operation may cause a malfunction, always turn off the power before changing any settings.

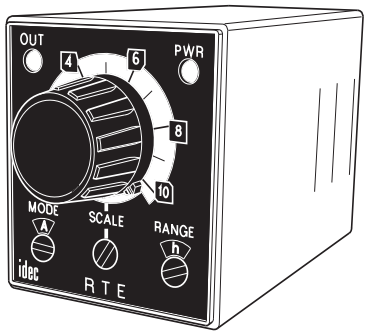


Figure 3 - Electronic Timer

SELECT MODE OF OPERATION

Select the operation mode by turning the selector with use of a flat screwdriver (4 mm wide maximum) until the appropriate node designation appears in the window directly above the selector. See Figure 4.

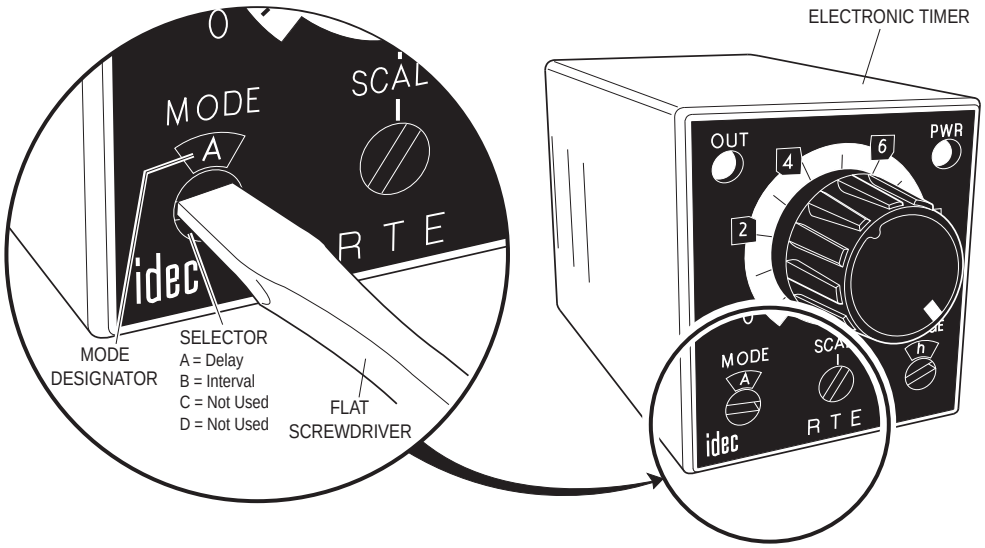


Figure 4 - Set Mode of Operation

SELECT THE TIME RANGE

Select the time range by turning the scale selector until the appropriate dial settings appear on the timer faceplate. Refer to Figure 5.

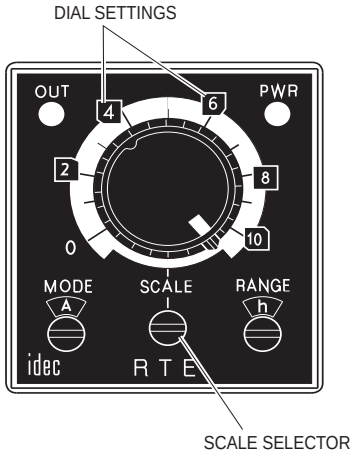


Figure 5 - Scale Setting

Next, turn the range selector until the appropriate range designator appears in the window directly above the selector. Refer to Figure 6.

Range Designator	DIAL SETTINGS				
	0-1	0-3	0-10	0-30	0-60
S	0.1 Sec. - 1 Sec.	0.1 Sec. - 3 Sec.	0.2 Sec. - 10 Sec.	0.6 Sec. - 30 Sec.	1.2 Sec. - 60 Sec.
min	1.2 Sec. - 1 Min.	3.6 Sec. - 30 Min.	12 Sec. - 10 Min.	3.6 Sec. - 30 Min.	1.2 Min - 60 Min.
h	1.2 Min. - 1 Hr.	3.6 Min. - 3 Hr.	12 Min. - 10 Hr.	3.6 Min. - 30 Hr.	1.2 Hr. - 60 Hr.
10h	12 Min. - 10 Hr.	36 Min. - 30 Hr..	2 Hr. - 100 Hr.	6 Hr. - 30 Hr.	12 Hr. - 600 Hr.

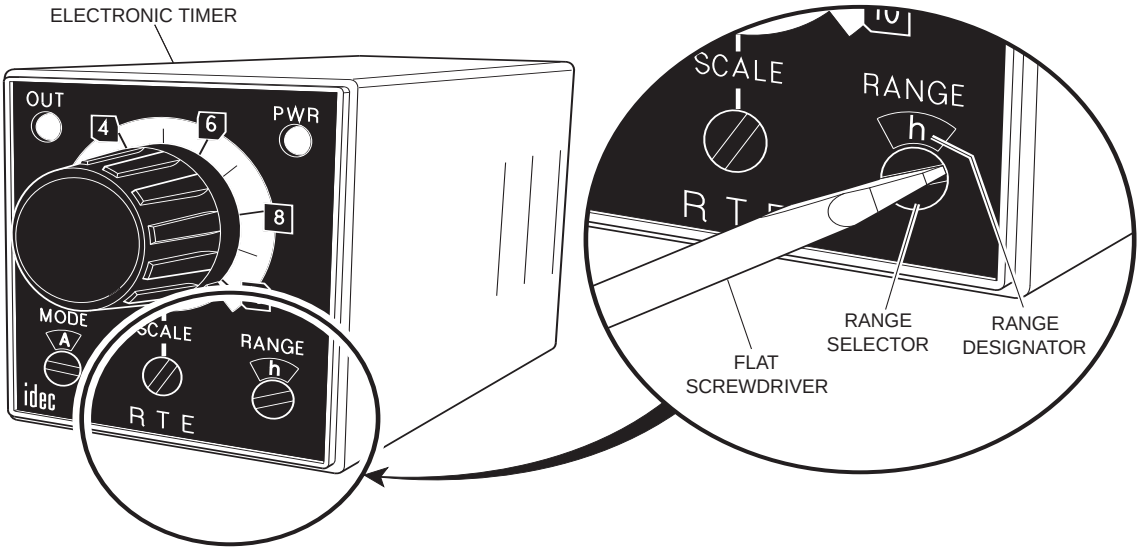


Figure 6 - Set Range

NOTE: Refer to Page 40 for Engine and Control Box Wiring Diagram and specific factory settings for the Electronic Timer.

Troubleshooting Chart

Symptom	Probable Cause	Suggested Solutions
Engine will not 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	Set 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	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	Bad timer; check settings or replace timer if bad.
	Feed Roll / Floor jammed	Check gauge reading; if 2,000 psi, push STOP button and reverse floor with floor switch.
Airlock constantly auto-reversing	Overfeeding airlock	Decrease floor speed. See Page 13 for tips.
	Dull airlock knives	Check knife clearance; sharp-en or replace knife 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 is not closing at 2,400 psi	Check pressure switch con-nections or replace switch if necessary. Check relief set-ting 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 dis-charge	Check airlock discharge pan for blockage and air leaks.

NOTES

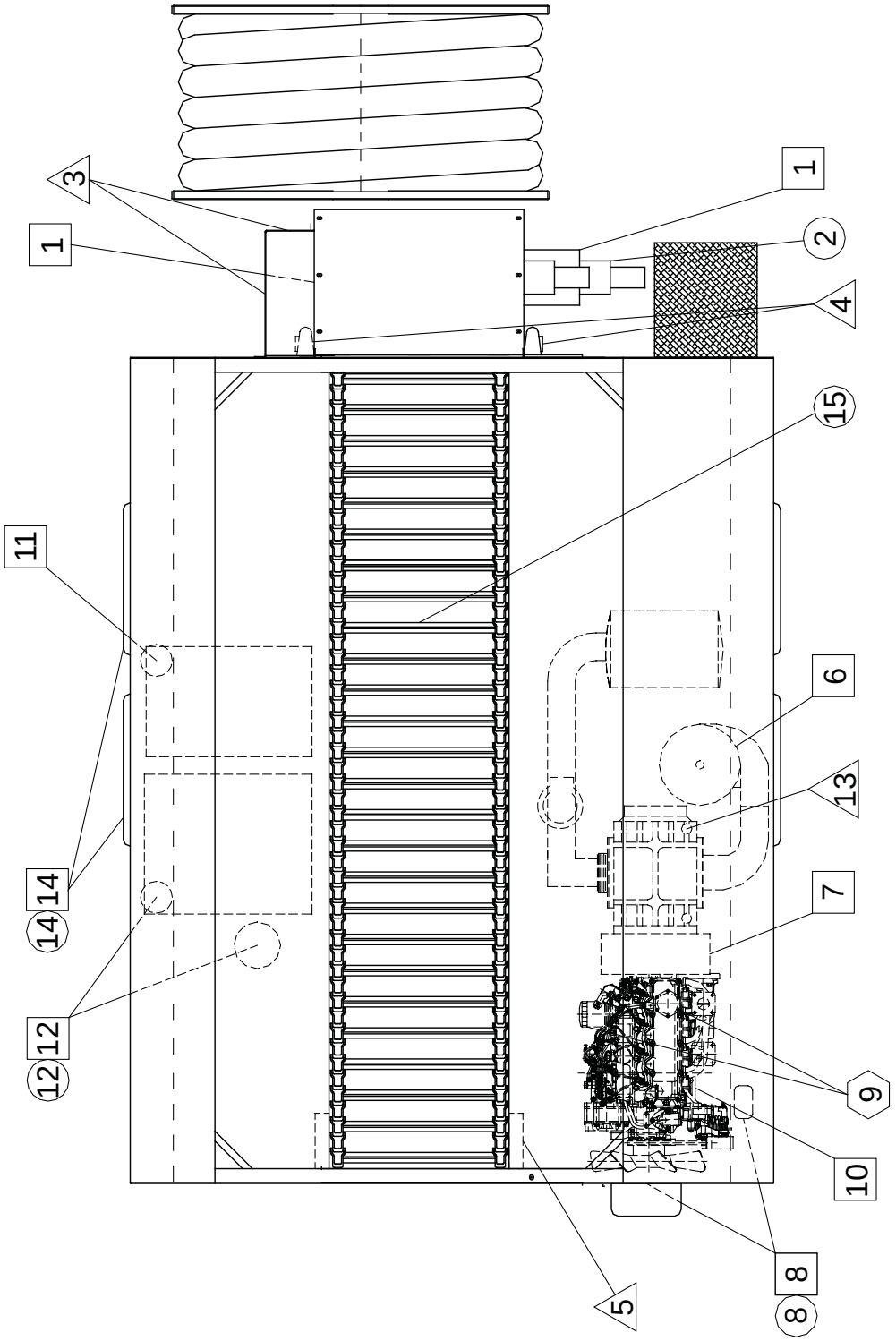


Figure 7 - Lubrication Chart

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 gal (103 L)
Airlock Gearbox Oil - 20 oz (0.6 L)
Engine Coolant - 3 gal (11.37 L) 50/50 Mix Only
Hydraulic Oil - 32 gal (120 L)
Engine Oil - 8 qt (7.3 L)
Blower Oil - 16.9 oz (500 mL)

MAINTENANCE:

⚠CAUTION

Turn engine OFF and disconnect battery before servicing equipment. Failure to comply could result in minor or moderate personal injury. Failure to comply could also result in product or property damage.

DAILY - AFTER EVERY 4 TO 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. Unclamp and remove the front clean out door from the front of the hopper by first, sliding the door toward the passenger side of the unit, then pulling toward the hitch, and finally, back toward the driver's 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, blower, and feed roll shaft. See Lubrication Chart on pages 22 and 23. 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, as 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. Failure to comply will result in death or serious injury.

A) Using a 3/16-in. 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-in. allen wrench, adjust each of the screws in until there is a uniform gap of 0.003 to 0.006 in. (0.08 mm to 0.15 mm) between the knife and rotor. One full turn of the screws will move the knife approximately 0.055 in. (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 to be replaced:

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. Ensure the knife is installed with the cutting angle edge facing down, as shown in Figure 7. 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.

E) Check the clearance between the knife and the rotor end walls and along the rotor vane, using a feeler gauge. There should be a gap of 0.003 to 0.006 in. (0.08 mm to 0.15 mm).

F) Use the jacking screws to close the gap if necessary. One full turn of the screw moves the knife 0.055 in. (1.4 mm).

G) Tighten mounting bolts.

H) 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: When dimension A has been reduced to 1-3/8 in. (3.5 cm), the knife must be discarded.

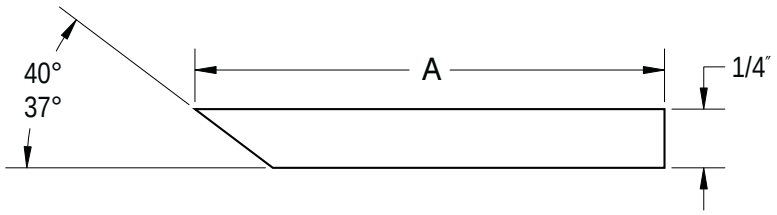


Figure 8 - Knife

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 oil every 1000 hours thereafter.

EVERY 3 MONTHS OR 3,000 MILES (4,800 KM) TRAILER UNITS

1. Check and adjust trailer brakes.
2. Re-torque wheel lug nuts 90 to 120 ft-lb (122 N•m).
3. Check tire condition.

EVERY 12 MONTHS OR 12,000 MILES (19,300 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 buildup 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 Figure 8 below:

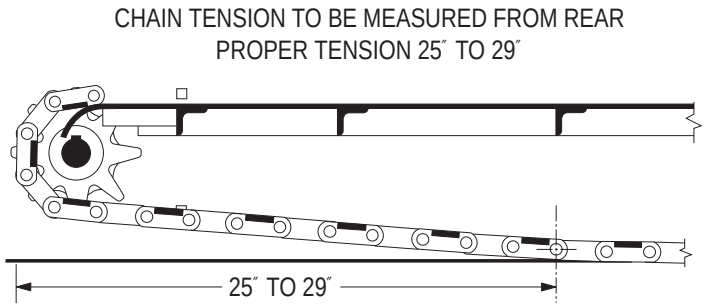


Figure 9 - Floor Chain

3. To adjust the chain tension, find the take-up bearings on either side of the floorsill, near the front of the hopper. Using a 1-1/2-in. wrench, turn the tensioning rod clockwise to tighten the chain and counterclockwise 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 come off the sprocket and buckle.

WINTER SHUTDOWN AND STORAGE

1. Blow all material out of machine, turn engine OFF, and disconnect battery cables.
2. Remove the inlet elbow to the blower air chamber and coat internal of impeller cylinder with a rust inhibitor, 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.

NOTICE

If the machine is stored outside, do not allow water to accumulate or ice to form in the airlock or 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

BARK BLOWER
Model 705

Parts Manual

Model MM

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

NOTES

PICTORIAL REFERENCE

AIR INTAKE & EXHAUST SYSTEM
Pages 40-41

HYDRAULIC SYSTEM
Pages 60-61

HOPPER LEFT FRONT
Page 33

ENGINE COMPONENTS
Pages 34-35

ENGINE WIRING
Pages 38-39

BLOWER & AIR PIPING
Pages 36-37

HOPPER RIGHT REAR
Page 32

FEED ROLL & FLOOR ASSEMBLY
Pages 42-43

TARP ASSEMBLY
Page 60

TRAILER ASSEMBLY
Page 58

TOW HITCH ASSEMBLY
Page 59

TRAILER WIRING
Page 57

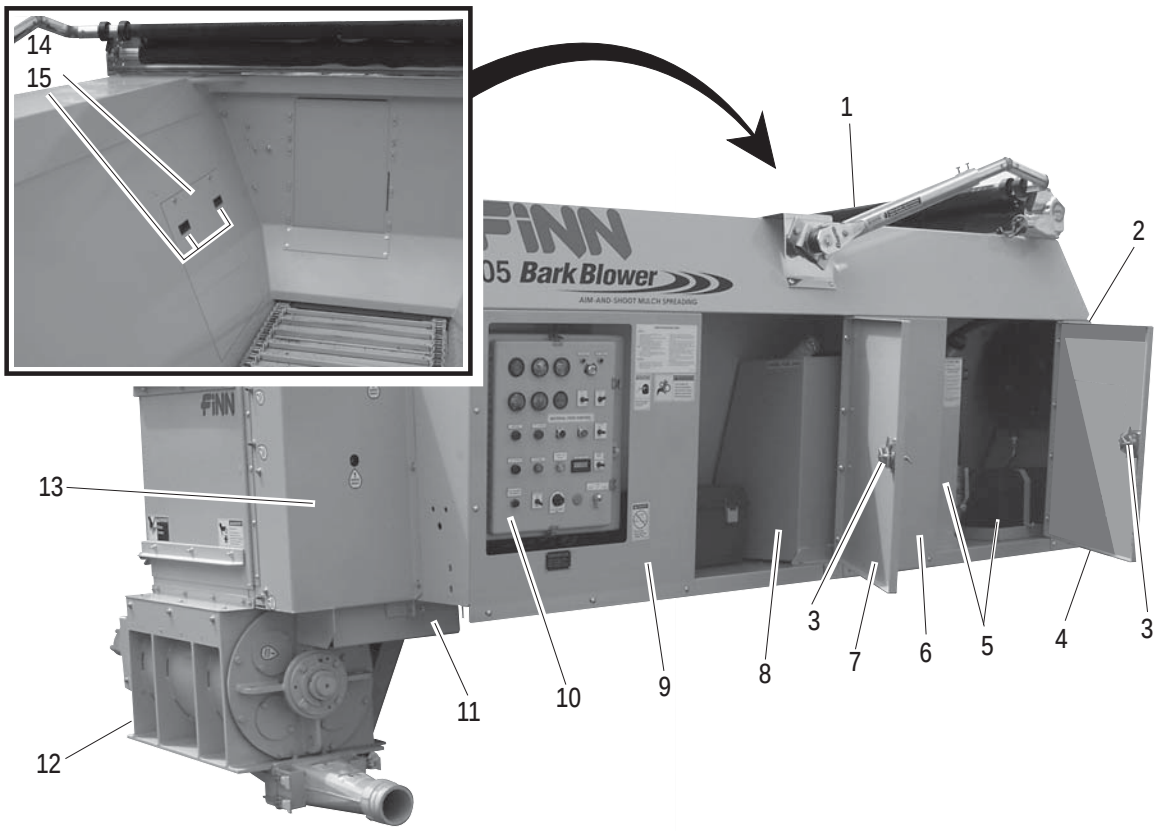
AIR LOCK ASSEMBLY
Pages 46-47

FLOOR DRIVE ASSEMBLY
Pages 44-45

CONTROL BOX FACE PANEL
Pages 50-51

CONTROL BOX ELECTRICAL COMPONENTS
Pages 52-53

CONTROL CABINET WIRING DIAGRAM
Pages 54-55

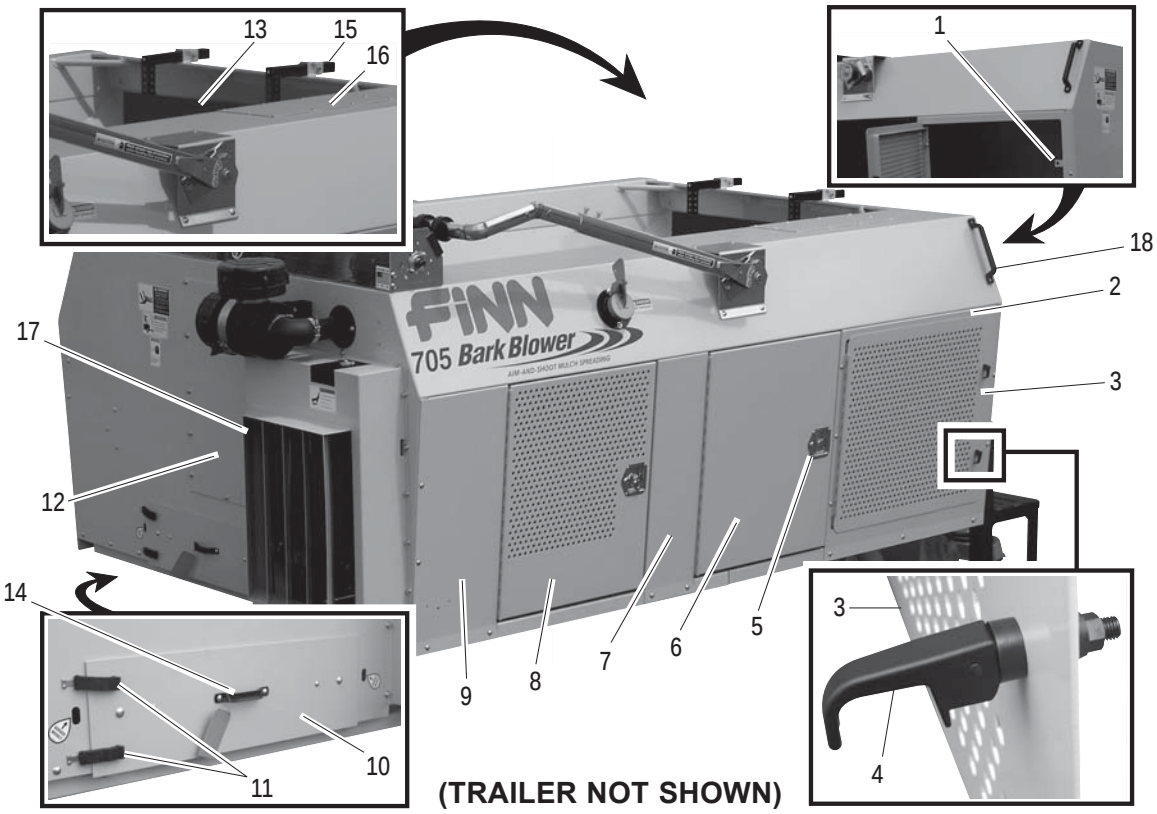


(TRAILER NOT SHOWN)

HOPPER - RIGHT REAR

Ref. No.	Part Numbers	Description	No. Required
1	075466	Tarp System	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
	005793	Hydac Filler/Breather	1
	080329	Sight Gauge	1
	011851	Battery	1
	011770	Battery Box	1
6	F605-0077	Right Side Door Jamb	1
7	F605-0041	Side Compartment Door	1
8	075426	Fuel Tank	1
	007914	Fuel Cap	1
9	F605-0078	Right Rear Panel	1
10	075698	Control Box Assembly	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	Engine Access Panel	1
15	075492	Handle	2

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

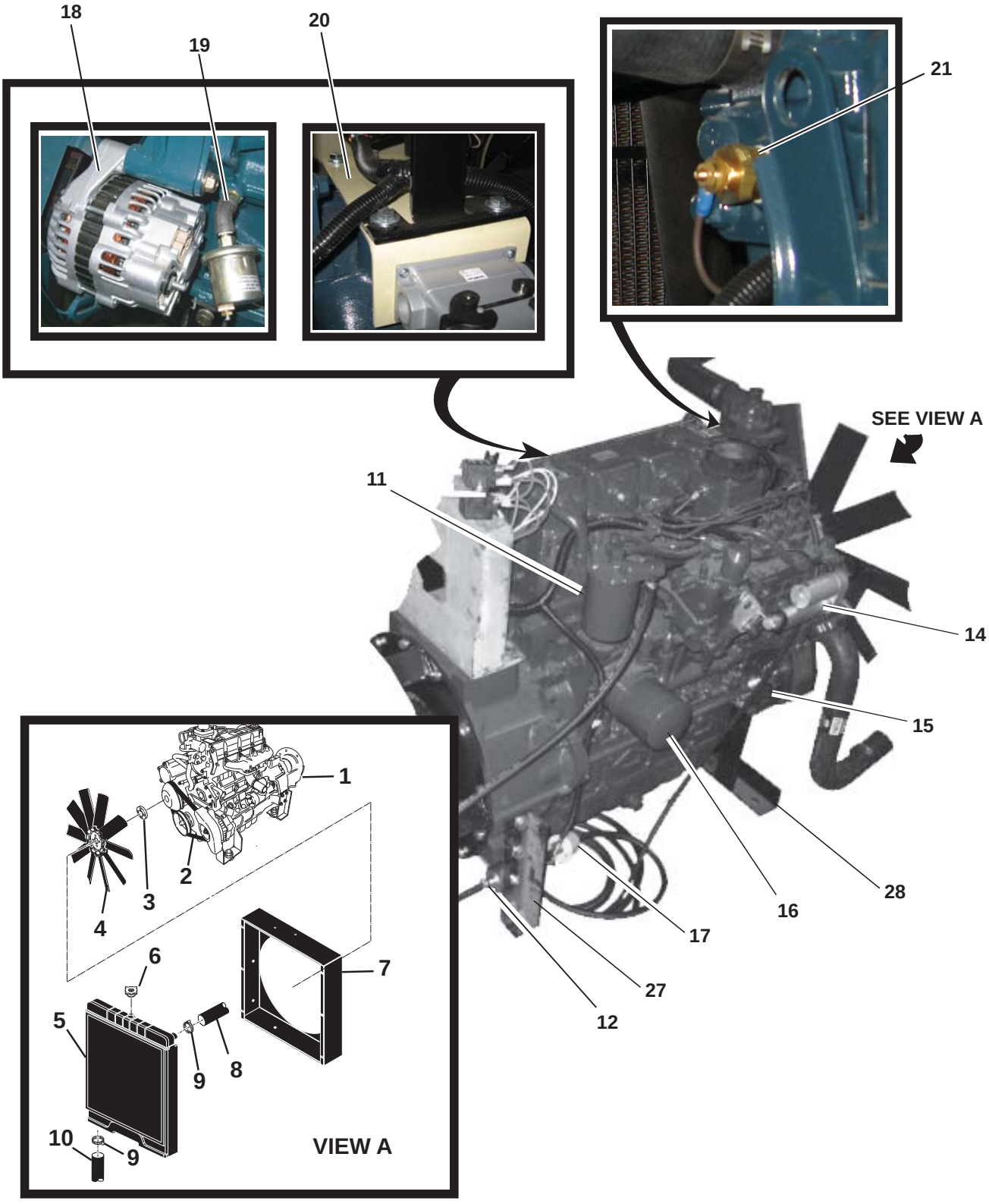


(TRAILER NOT SHOWN)

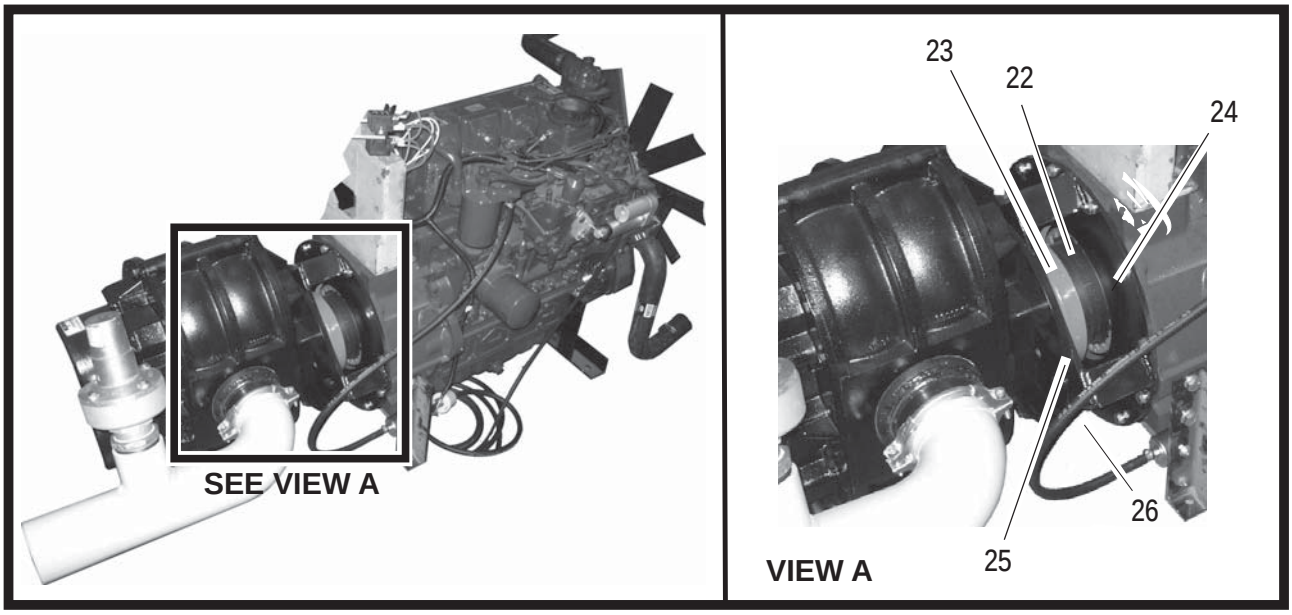
HOPPER - LEFT FRONT

Ref. No.	Part Numbers	Description	No. Required
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 Stiffer (Not Shown)	1
11	005592	Soft Latch	2
12	F605-0129	Hopper Front Cover	1
13	075401	Mulch Meter Gate	1
14	002909	Handle	1
15	075396	Angle Slide Weld	2
	075491	Horizontal Slide Tube (Not Shown)	2
16	F605-0083	Seed Injection Cover Plate	1
17	F605-0140	Radiator Shroud	1
18	075478	Steel Handle	1
		NOT SHOWN	
	F605-0123	Mulch Kick-In Cover	1

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



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



ENGINE COMPONENTS

Ref. No.	Part Number	Description	No. Required
1	075200	Kubota V-3300 Diesel Engine	1
2	KU1G521-9710	Fan Belt	1
3	075565	1/2 in. Fan Spacer	1
4	075563	Pusher Fan	1
5	075562	Radiator	1
6	023807	Radiator Cap	1
7	F605-0141	Radiator Fan Shroud	1
8	075227	Upper Radiator Hose	1
9	022450	2-1/2 in. Hose Clamp	4
10	075228	Lower Radiator Hose	1
11	KU16631-43560	Fuel Filter	1
12	075202	Electric Fuel Pump	1
13	075201	Pump Base Kit (Not Shown)	1
14	023814	Electric Throttle Actuator	1
	075292-05	Throttle Pivot	1
	075284-01	Actuator Strap	1
	075415	Throttle Bracket	1
15	075201	Hydraulic Pump	1
16	KU1C6010-32430	Oil Filter	1
17	080105	Pre-Fuel Filter	1
18	KU1C011-64010	Alternator	1
19	075308	Oil Pressure Sender	1
20	F605-0046-01	Air Cleaner Mounting Brkt.	1
21	075310	Temperature Sender	1
22	011774	Rubber Coupling Insert	1
23	011772	Blower Coupling Half	1
24	052001	Coupling Flange (Engine Half)	1
	052025	Flywheel Adapter Plate	1
25	325180	Blower Adapter Plate	1
26	075607	Coupling Stand-Off (Not Shown)	1
27	075281-02	Rear Inside Engine Foot	1
	075281-03	Rear Outside Engine Foot (Not Shown)	1
28	075281-01	Front Engine Foot	1

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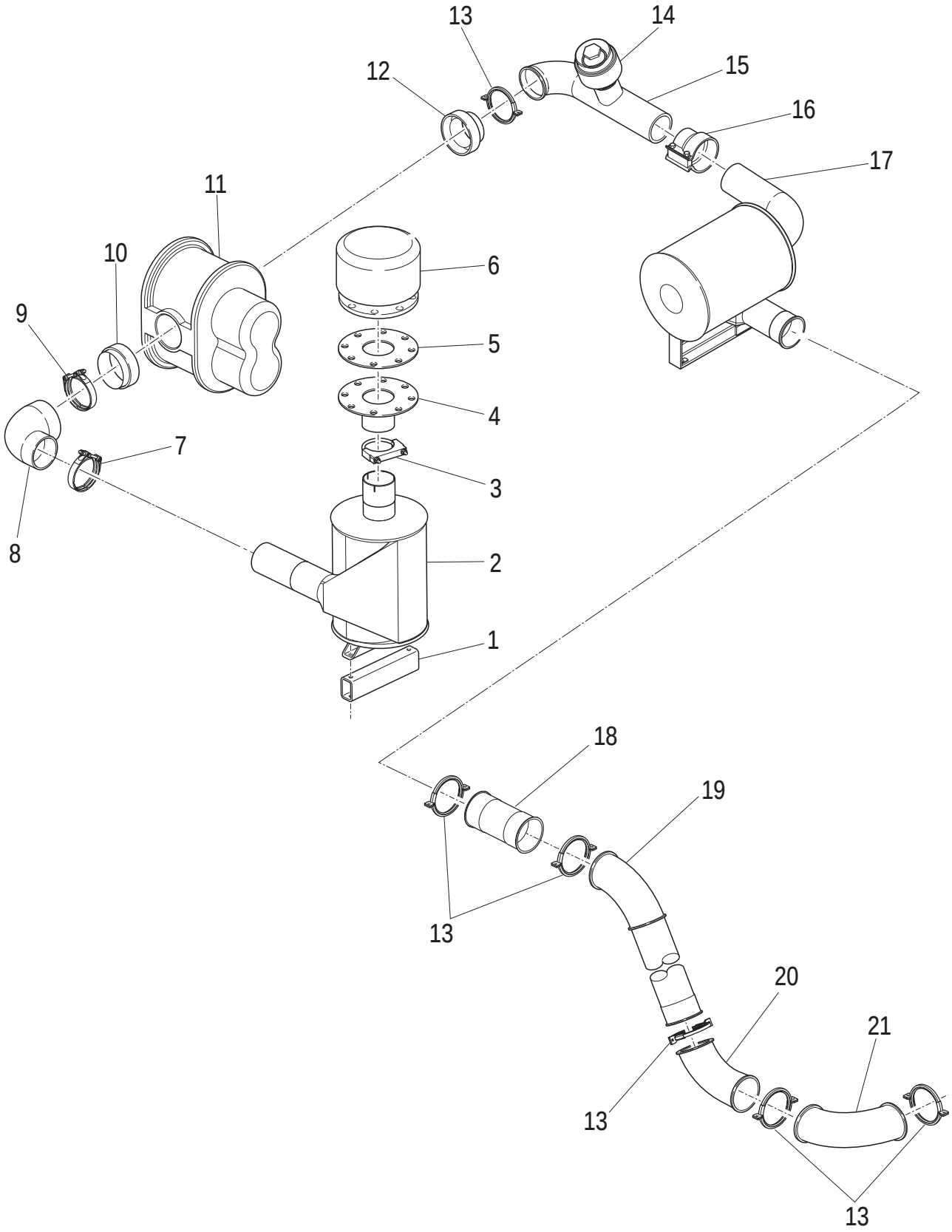

WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

BLOWER AND AIR PIPING SYSTEM

Ref. No.	Part Number	Description	No.Required
1	075293-01	Inlet Silencer Mount	1
2	052093	Inlet Silencer	1
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	055335	4 in. Band Clamp	1
8	052010	90 degree Reducer Elbow	1
9	052011	5 in. Band Clamp	1
10	075295-02	Blower Inlet Nipple	1
11	075290	Blower	1
12	075295-04	Blower Outlet	1
13	052737	4 in. Bolted Pull Ring	6
	052738-04	U-Shaped Gasket	6
14	052917	Relief Valve	1
15	075446	Outlet Air Piping	6
16	055137	Butt Joint Clamp	1
17	075445	Outlet Silencer Weldment	1
18	075614-01	Top Discharge Tube	1
19	075488-02	Bottom Discharge Tube	1
20	052741	4 in. 60 Degree Elbow	1
21	052740	4 in. 90 Degree Elbow	1

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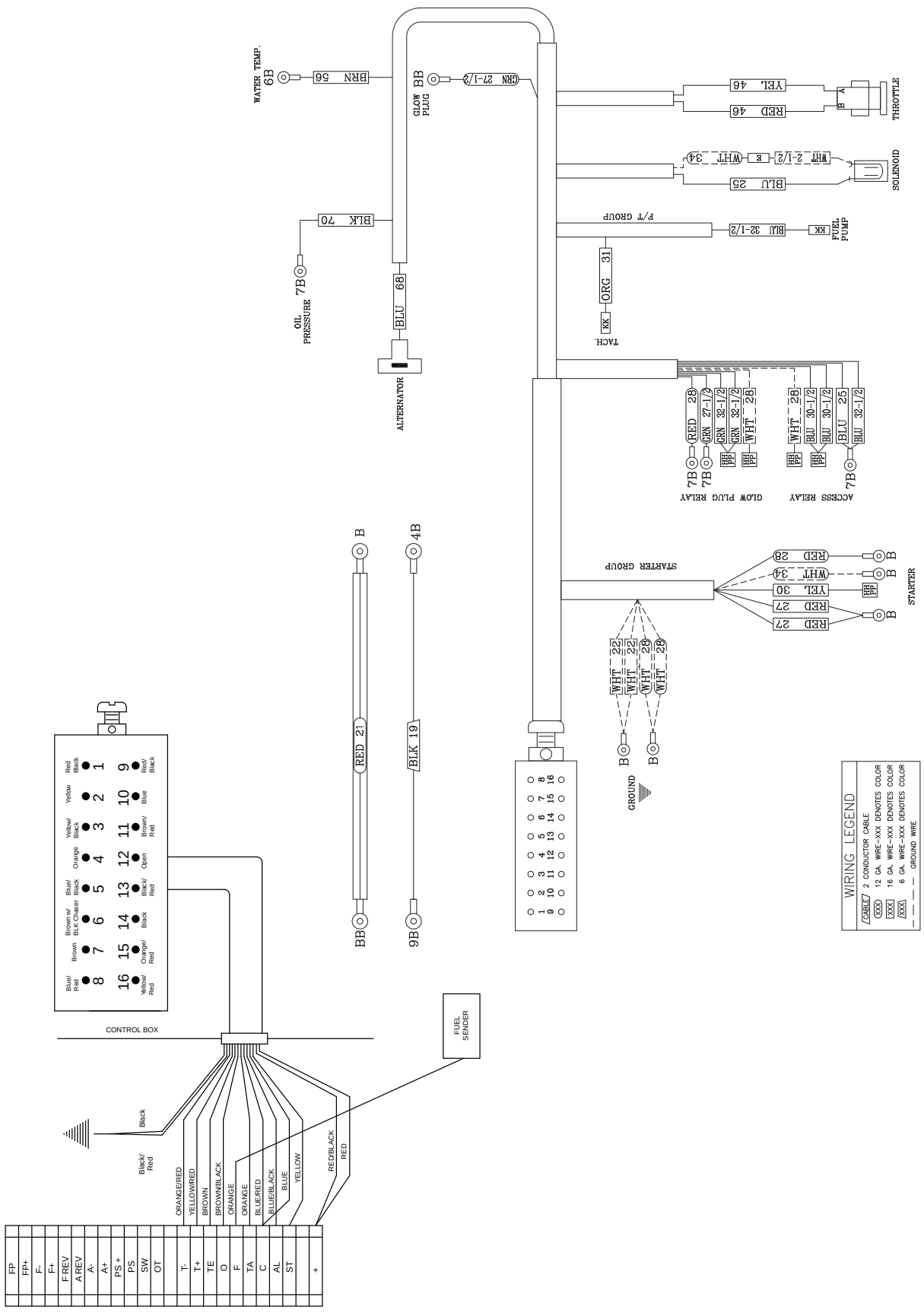


WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

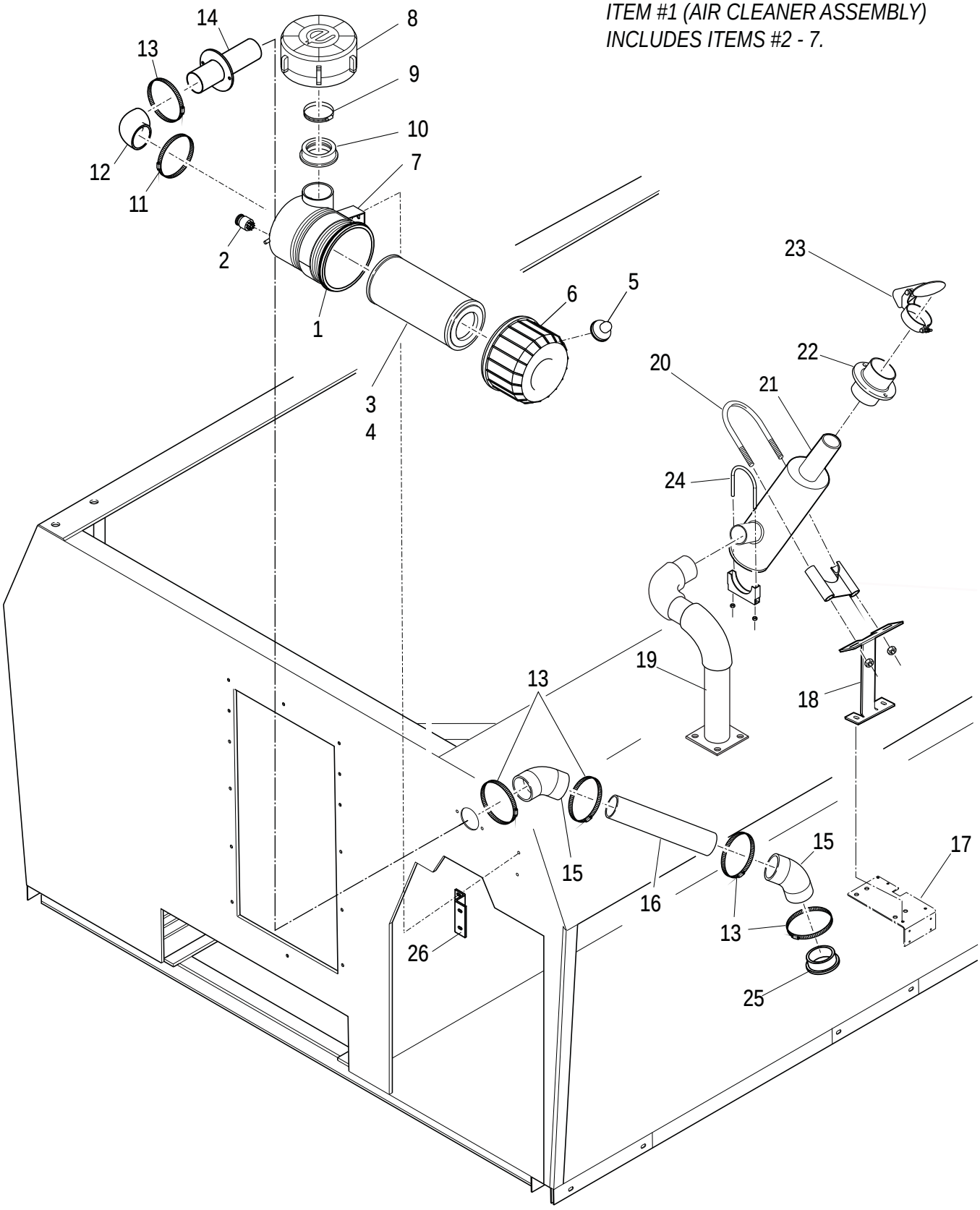
ENGINE WIRING

Part Number	Description	No. Required
075610	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
075480	Positive Battery Cable	1
075479	Negative Battery Cable	1
075308	Oil Pressure Sender	1
075310	Temperature Sender	1

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

NOTE:

ITEM #1 (AIR CLEANER ASSEMBLY) INCLUDES ITEMS #2 - 7.



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

AIR INTAKE AND EXHAUST SYSTEMS

Ref. No.	Part Number	Description	No. Required
1	012646	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 in. Clamp numberAC400	1
10	023840	Pre-Cleaner Adapter	1
11	055496	3 in. Clamp	1
12	060325	90 degree Elbow - 3-1/2 in. to 3 in.	1
13	055497	3-1/2 in. Clamp	5
14	075622	Air Cleaner Tube Weldment	1
15	055499	45 degree Elbow	1
16	075633	Air Cleaner Pipe	1
17	F605-0046	Air Cleaner Mount Weldment	1
18	F605-0171	Muffler Support Bracket	1
19	075640	Exhaust Extension	1
20	045013	U-Bolt	1
21	008694	Exhaust, Side Inlet,	1
22	075621	Exhaust Port	1
23	045014	3-1/2 in. Rain Cap	1
24	000461	Muffler Clamp	1
25	075244	Rubber Bushing	1
26	F605-0165	A.C. Mounting Bracket	1

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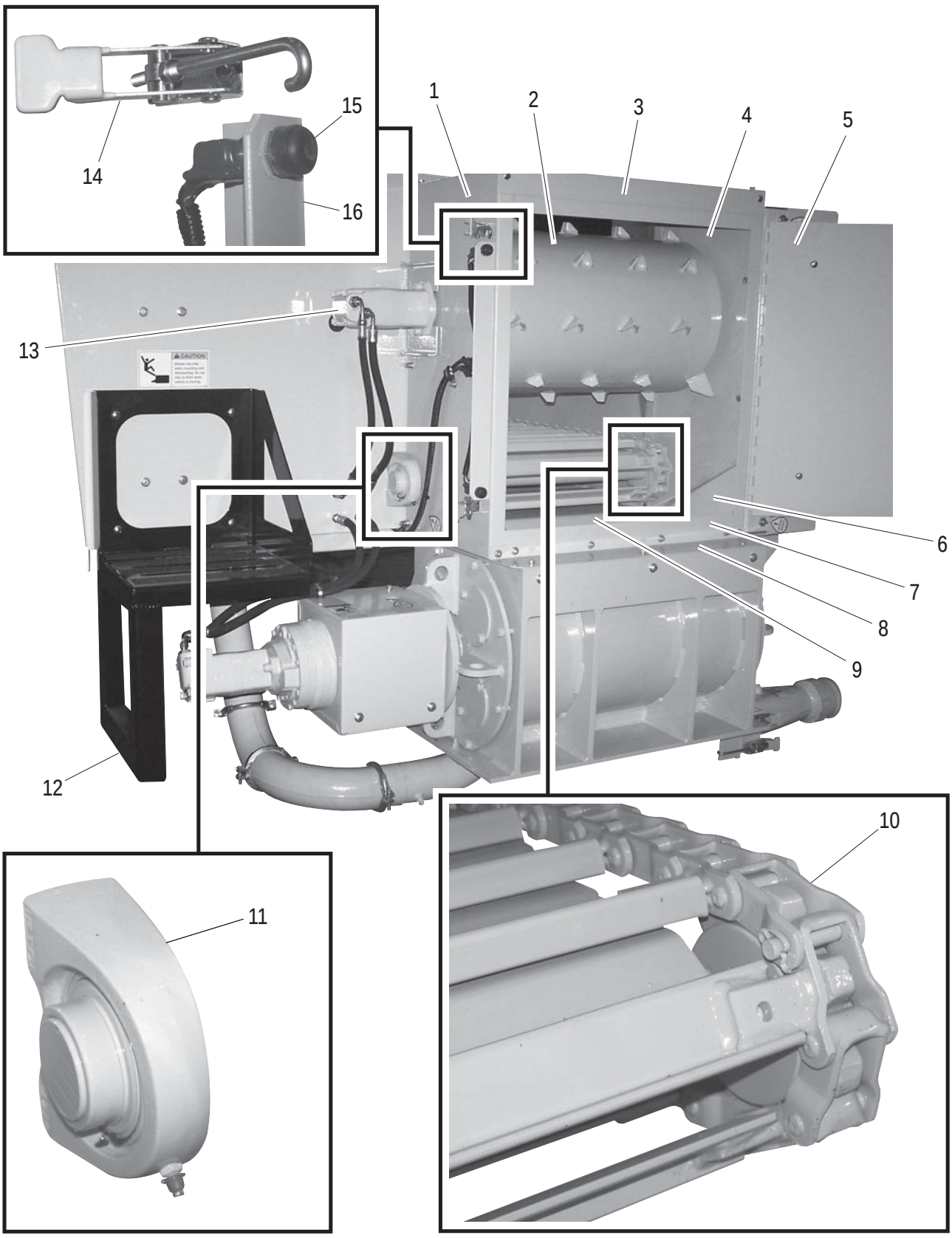
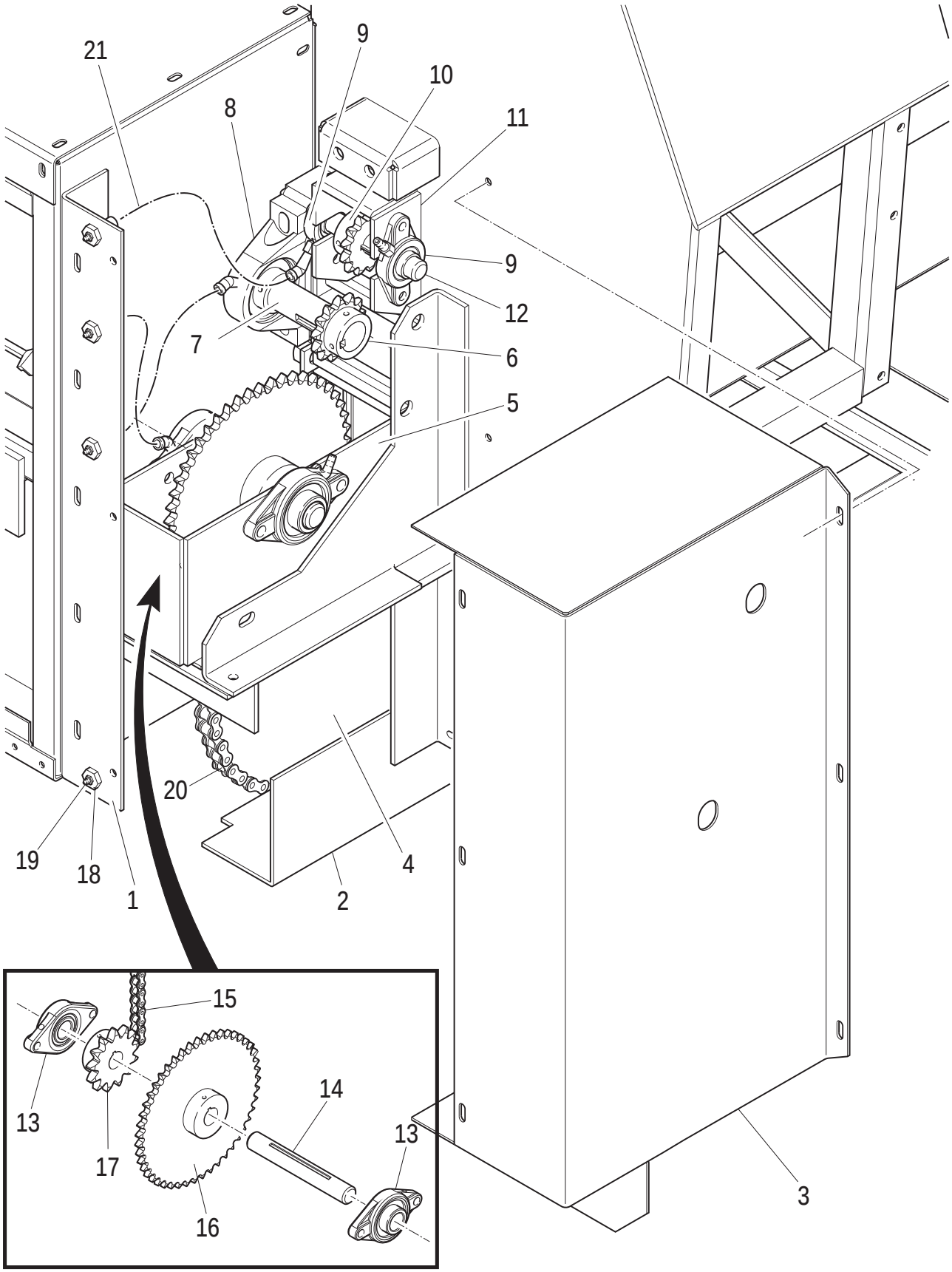


WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

FEED ROLL AND FLOOR ASSEMBLY

Ref. No.	Part Number	Description	No. Required
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 w/Speed Sensor	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
	F605-0038	Bottom Floor Pan	1

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

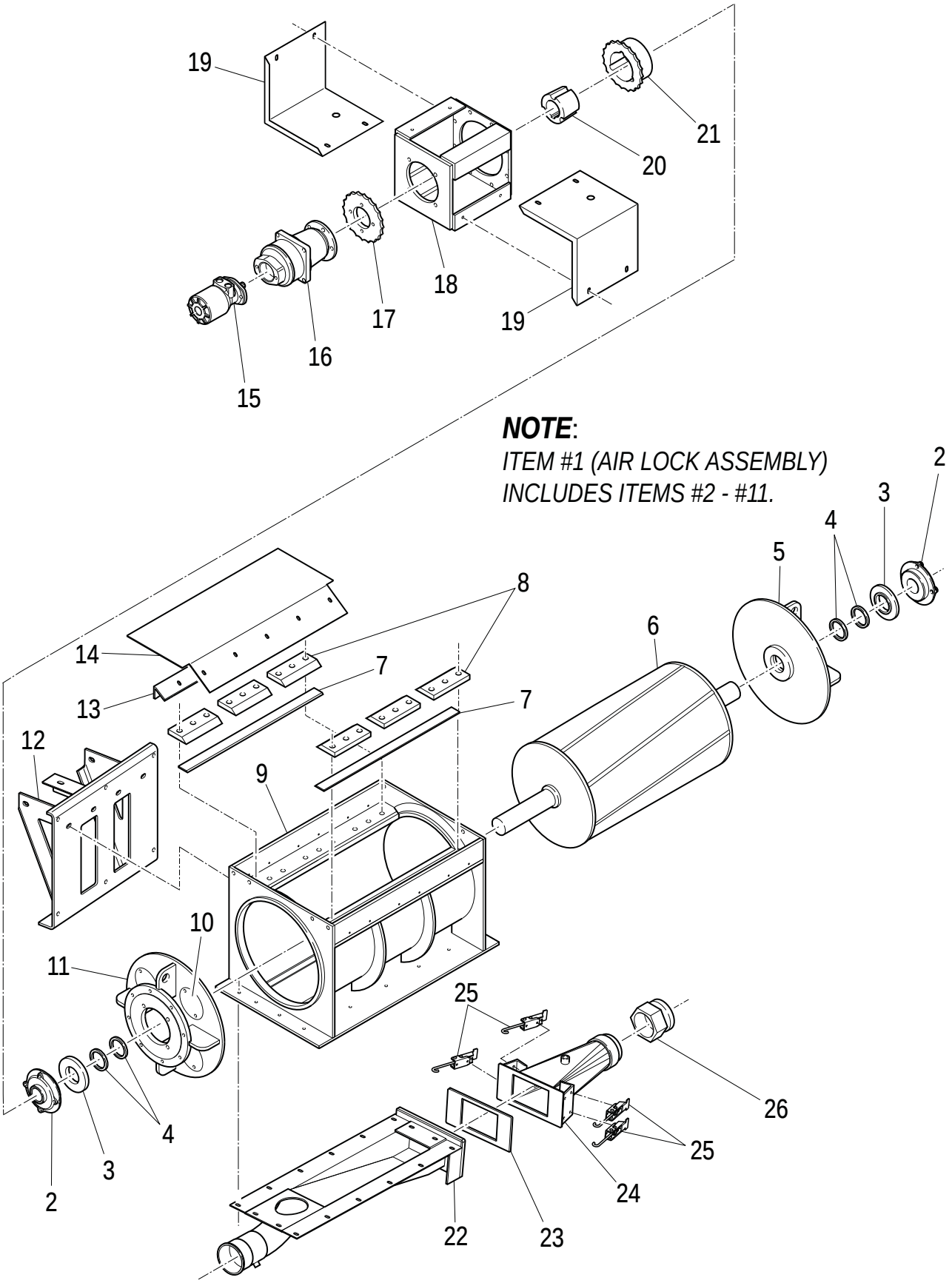


WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

FLOOR DRIVE ASSEMBLY

Ref. No.	Part Number	Description	No. Required
1	F605-0049-02	Chain Guard Angle	1
2	F605-0049-01	Chain Guard Bottom Pan	1
3	F605-0112	Chain Guard	1
4	075356	Large Floor Sprocket	1
5	075368-01	Lower Chain Pivot Weldment	1
6	075371	Drive Sprocket (1-1/2 in. Bore)	1
7	075366	Feed Roll Stub Shaft	1
8	075223	Pillow Block Bearing	1
9	075232	1 in. Flange Bearing	2
10	075359	Idler Sprocket (1 in. Bore)	1
11	075368-02	Upper Chain Pivot Weldment	1
12	075215-03	1 in. Dia x 7 in. LG. Idler Shaft	1
13	075360	1-1/4 in. Flange Bearing	2
14	075215-04	Dual Sprocket Idler Shaft (1 in. Dia. x 9 in. LG.)	1
15	075361	Floor Drive Chain	4
16	075358	Large Idler Sprocket	1
17	075357	Idler Sprocket (1-1/4 in. Bore)	1
18	012520	Bulkhead Fitting	4
19	007705	Grease Fitting	4
20	075363	Feed Roll Drive Chain	1
21	012521	Grease Hose	4
	008154	Grease Fitting Adapter	4
	160052	90ºElbow	4
	160078	45ºElbow	4

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



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

AIR LOCK ASSEMBLY

Ref. No.	Part Number	Description	No. Required
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
	075276-04	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
	055517	Gasket (Not Shown)	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	075611	Discharge Gasket	1
24	075351	Discharge Transmission	1
25	075224	Discharge Latch	4
26	055374	4 in. Male Nyglass Adapter	1

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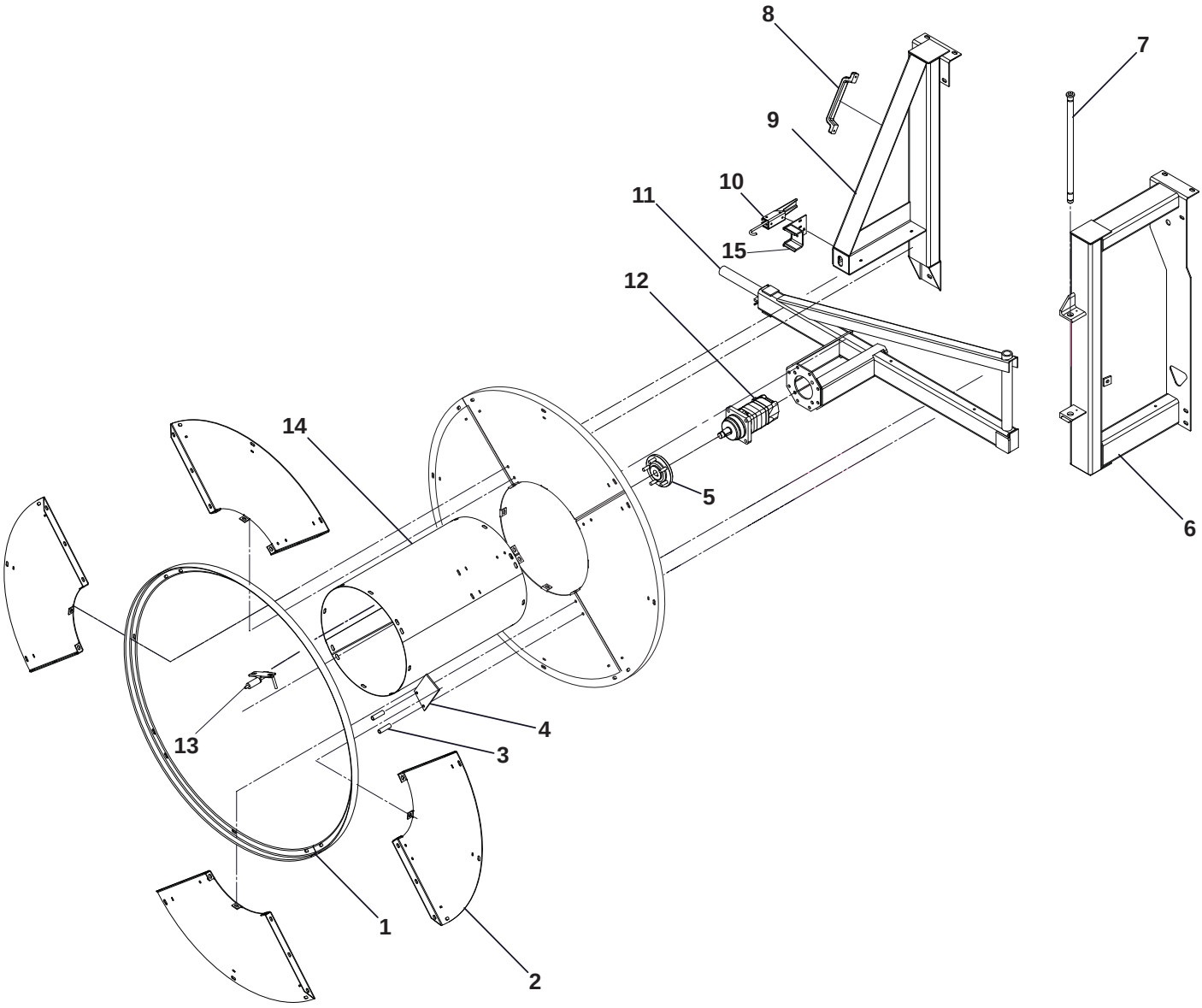

WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

HOSE REEL ASSEMBLY

Ref. No.	Part Number	Description	No. Required
1	F605-0097	Hose Rell Side ring	2
2	F605-0114	Hose Reel Side Flange	8
3	075470-07	Holder Spacer	2
4	075470-09	Hose Coupler Holder	1
5	045031	Machined Hub	1
6	075579	R.H. Hose Reel Mount	1
7	075589	Hose Reel Swing Pin	1
	075590	1 in. Heavy Duty Retaining Ring	1
8	075478	Steel Handle	1
9	075580	L.H. Hose Reel Mount Weldment	1
10	075584	Draw Latch	1
11	075429	Hose Reel Swing	1
	012515	1-1/4 in. Pipe Plug	1
12	071238	Hydraulic Motor	1
13	075630	Modified Pin Lock	1
14	075460	Hose Reel Drum Weldment	1
15	075582	Hose Reel Arm Catch	1
16	007705	Grease Fitting 1/8 in. (Not Shown)	2
17	020086	Hose Reel Button (Not Shown)	1
18	055407	Hose Reel Safety Switch (Not Shown)	1

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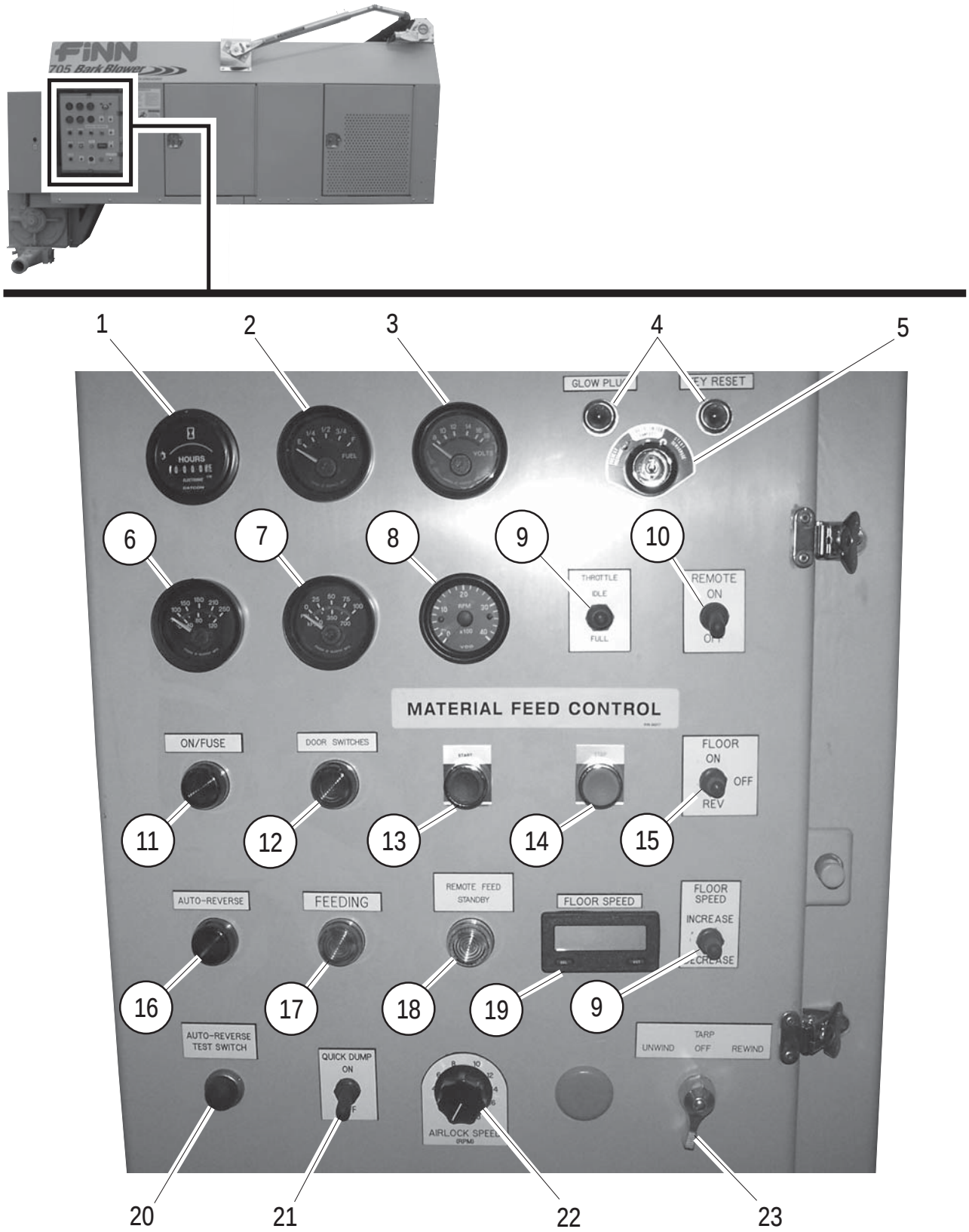
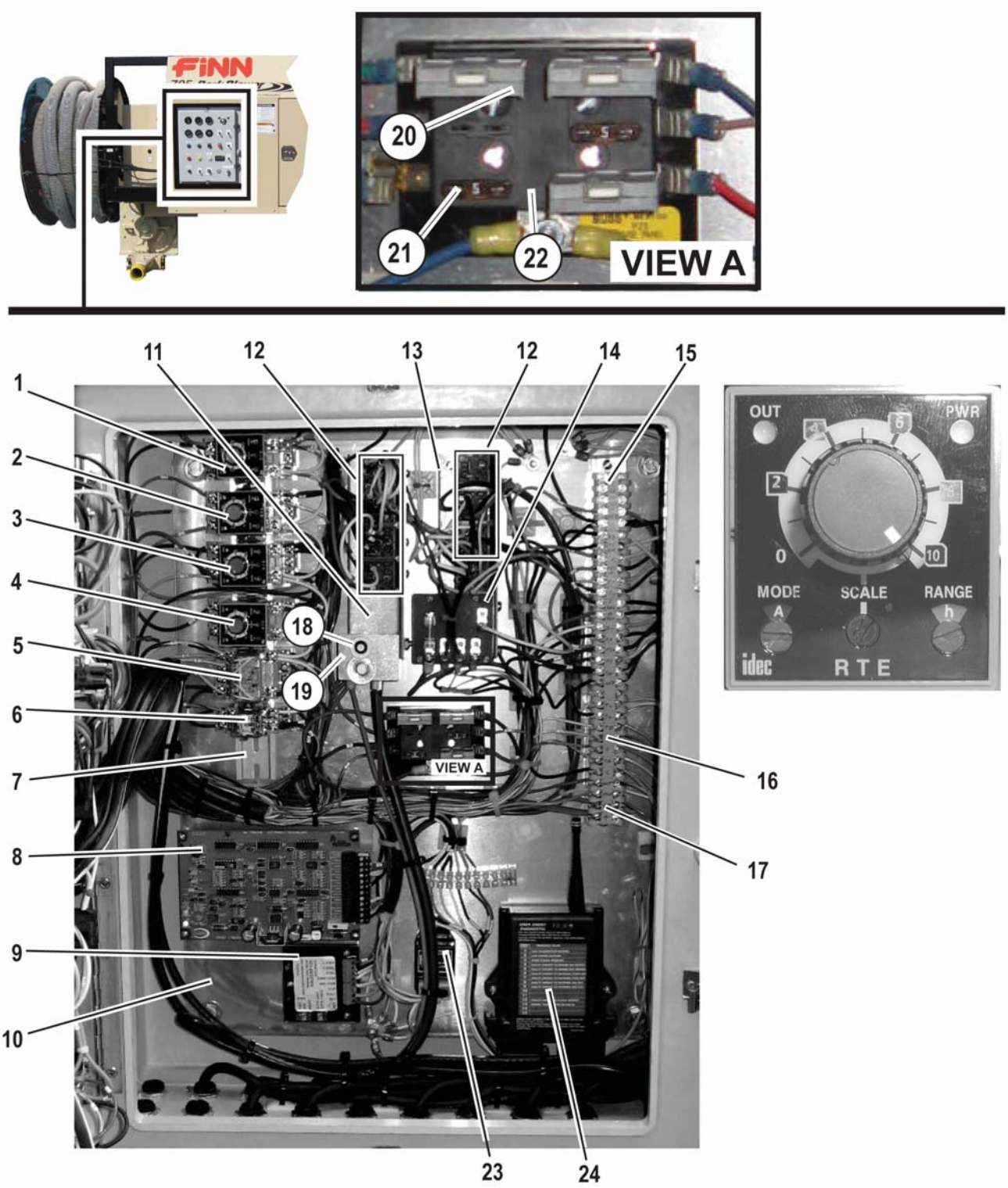


WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

CONTROL BOX FACE PANEL

Ref.	Part Number	Description	No. Required
1	075330	Hourmeter	1
2	075311	Fuel Gauge	1
	075312	Fuel Sender	1
3	075313	Voltmeter	1
4	006245	Pilot Light	2
5	KU66711-55131	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	1
	080526	Switch Rubber Boot	1
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/Rev 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	1
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

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



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CONTROL BOX ELECTRICAL COMPONENTS

Ref. No.	Part Number	Description	No. Required
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 Transmitter System	1
		Remote	1
		Receiver	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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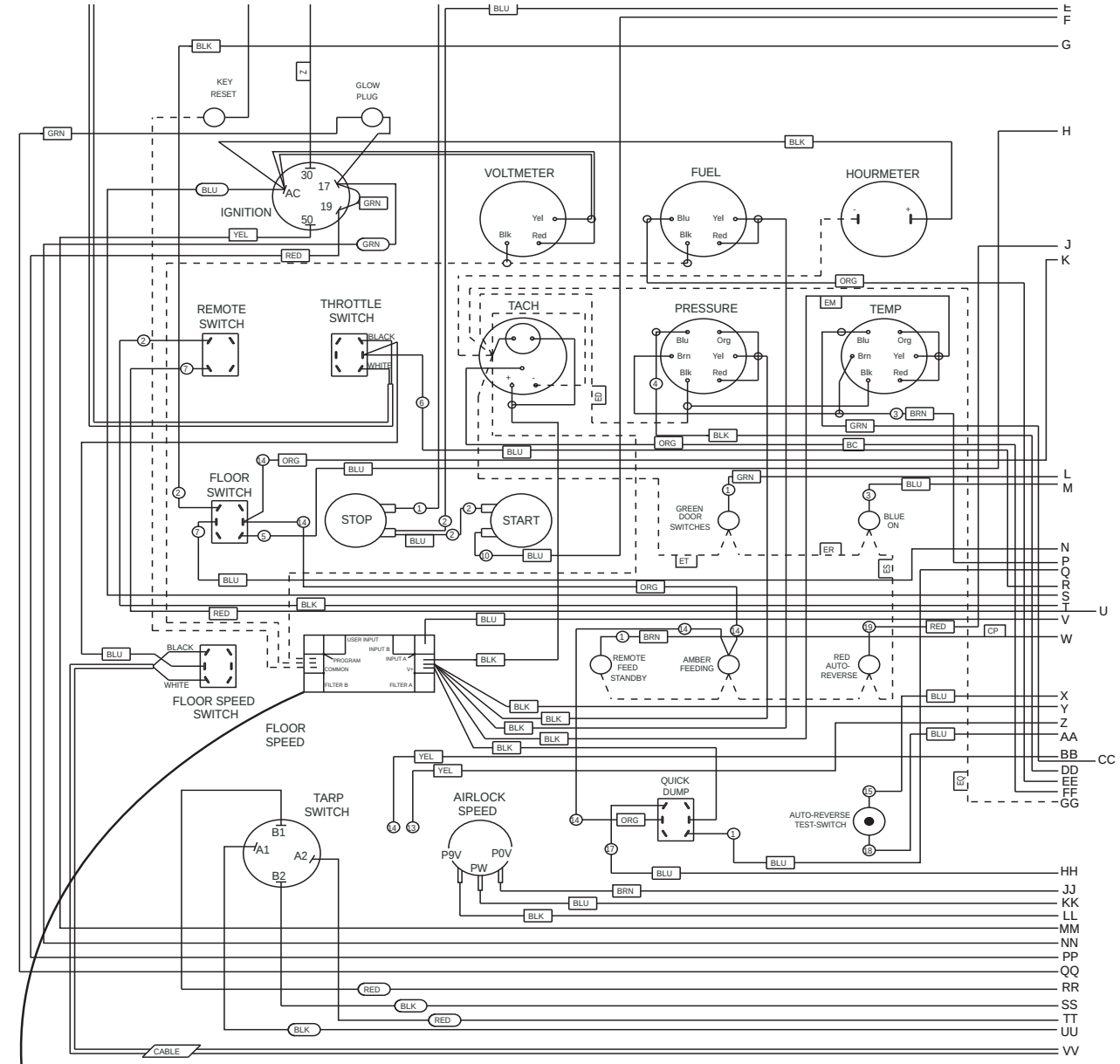
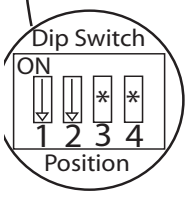
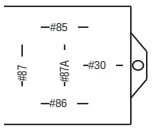
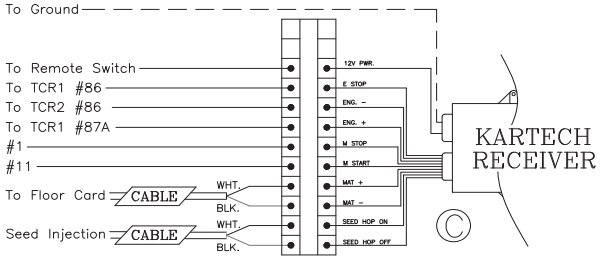


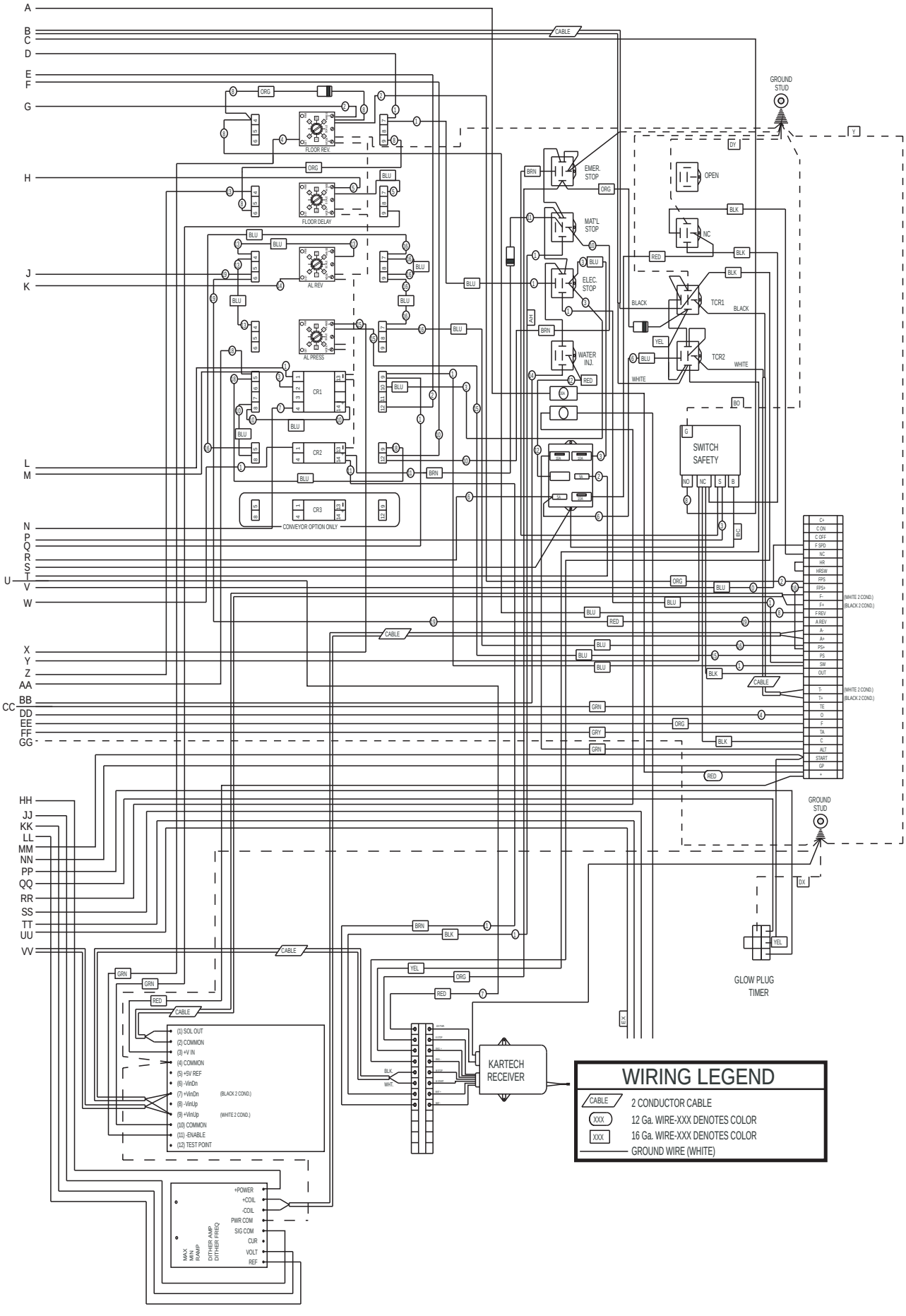




With Seed Injection

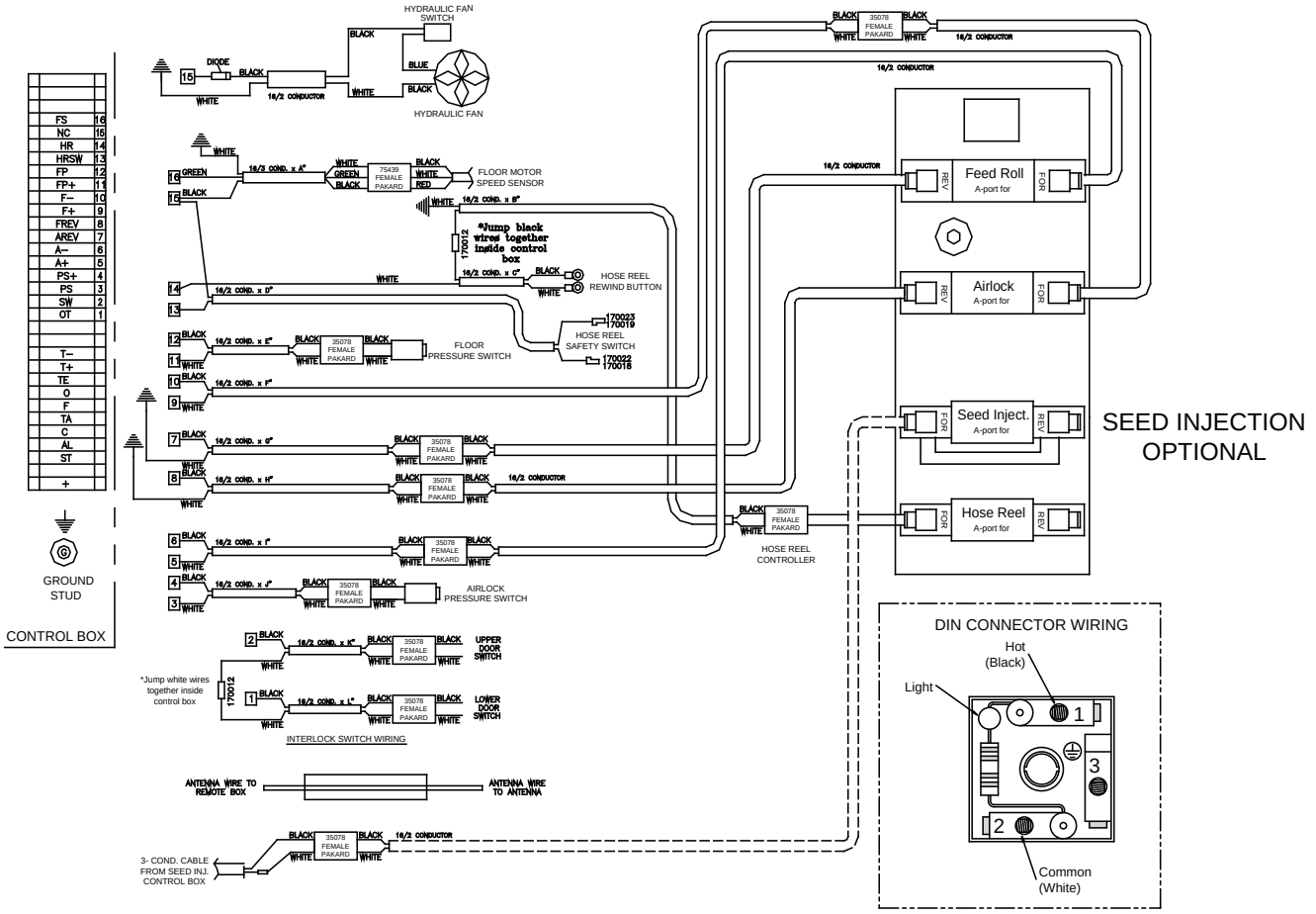


CONTROL CABINET WIRING DIAGRAM



WIRING LEGEND

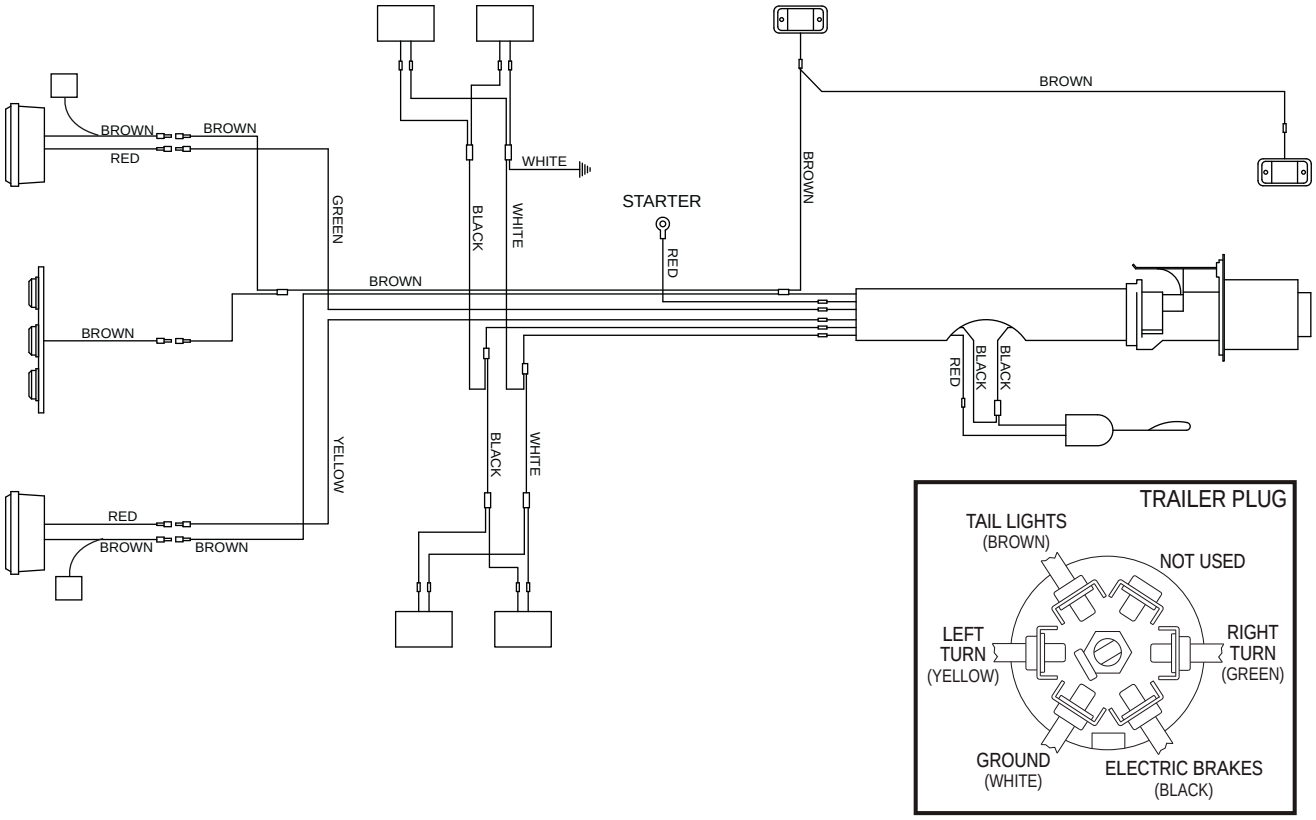
CABLE	2 CONDUCTOR CABLE
XXX	12 Ga. WIRE-XXX DENOTES COLOR
XXX	16 Ga. WIRE-XXX DENOTES COLOR
	GROUND WIRE (WHITE)



CONTROLS WIRING

Part Number	Description	No. Required.
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

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



TRAILER WIRING

Part Number	Description	No. Required
075349	Trailer Wiring Harness	1
075592	Trailer Plug	1
023424	Breakaway Switch	1
005016	S Hook	2
005017	Snapper Hook	1
005137	Left Taillight Assembly	1
005138	Right Taillight Assembly	1
005437	3 Bar Light	1
FW71090	Amber Marker Light	2
004720	License Plate Bracket	1
005436	License Plate Light	1

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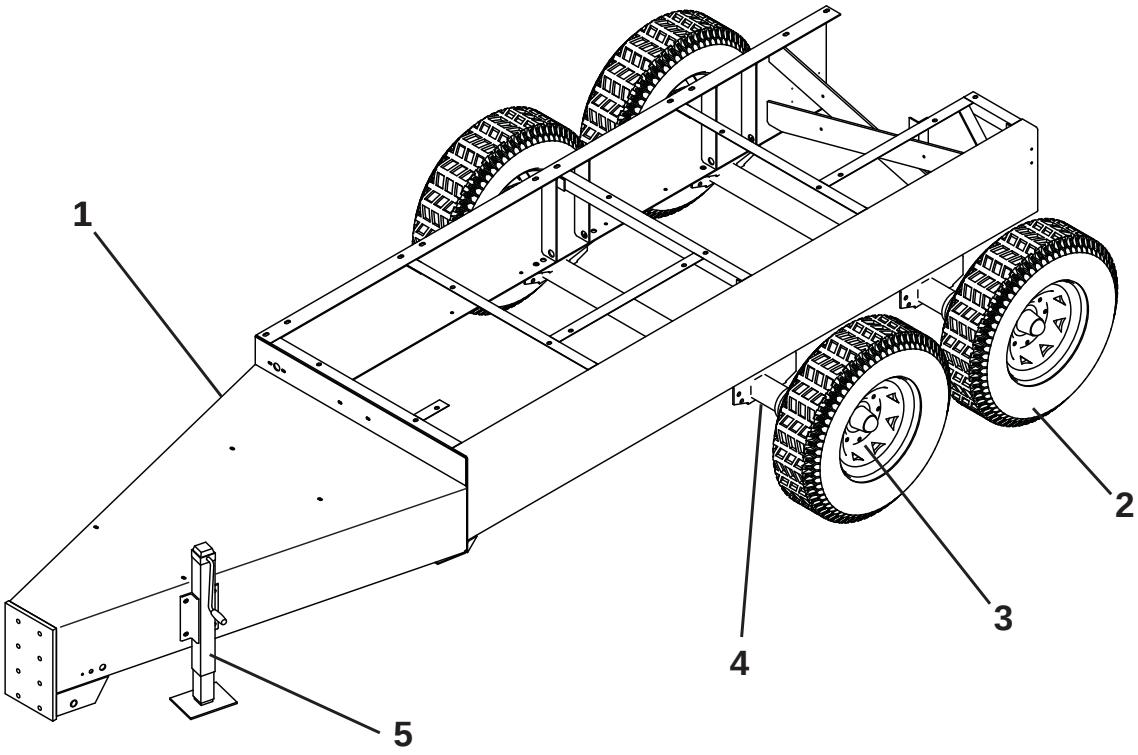

TRAILER ASSEMBLY

Ref. No.	Part Number	Description	No. Required
1	075435	Trailer	1
2	075625-GAL	Tire	4
3	005057	Rim	4
4	075608	Axle (8,000 lbs)	2
5	075586	Jack	1

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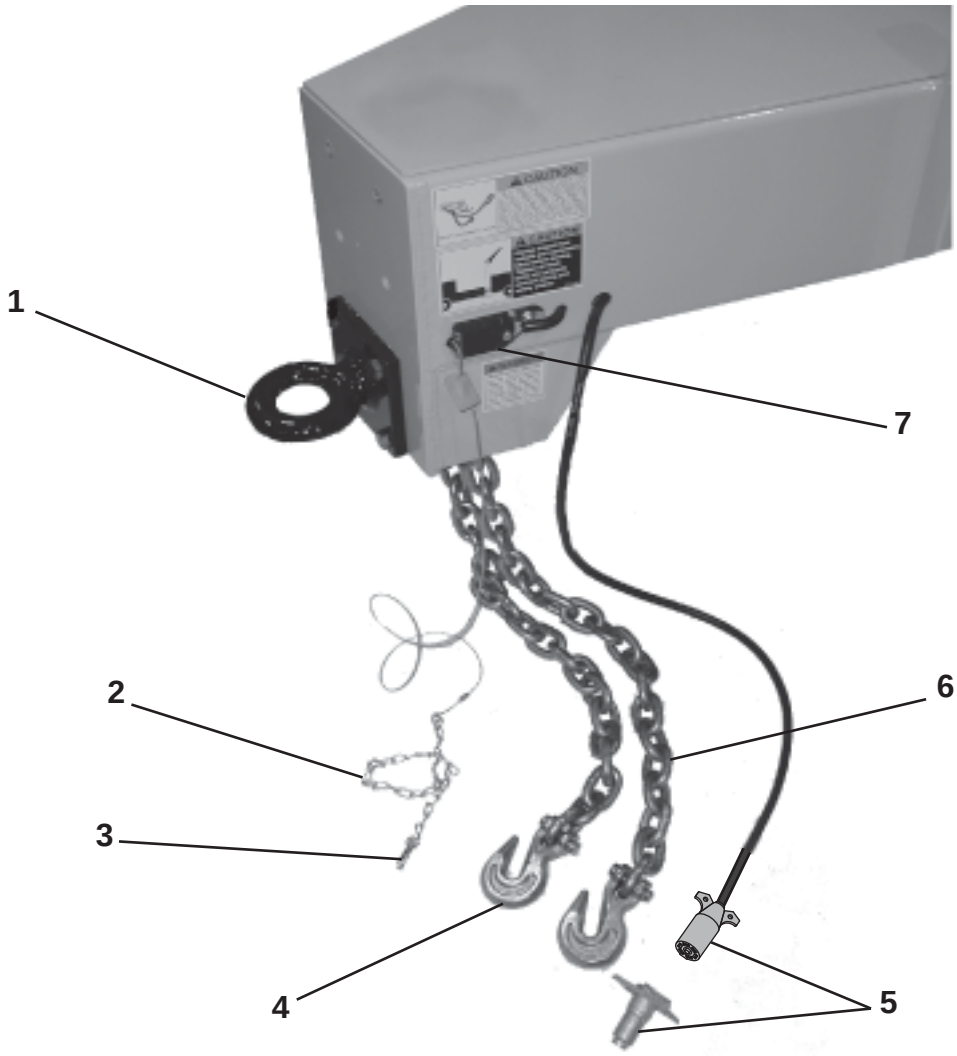

TOW HITCH ASSEMBLY

Ref. No.	Part Number	Description	No. Required
1	041007	Tow ring	1
2	190029	Chain	1'
3	005017	Snap Hook	1
4	005169	Clevis Grab Hook	2
5	075592	Trailer Plug	1
6	190007	Safety Chain	6'
7	023424	Break-Away Switch	1

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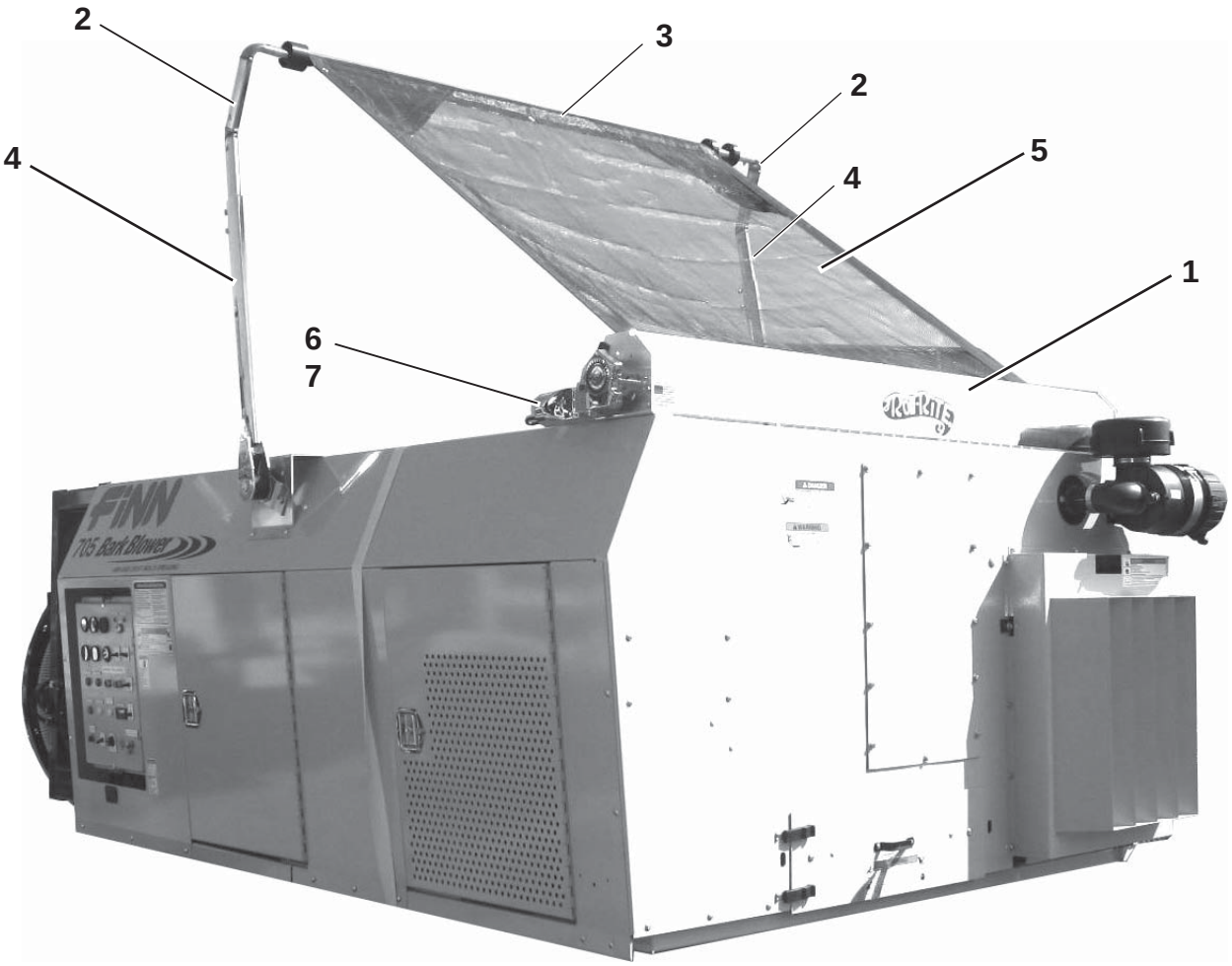

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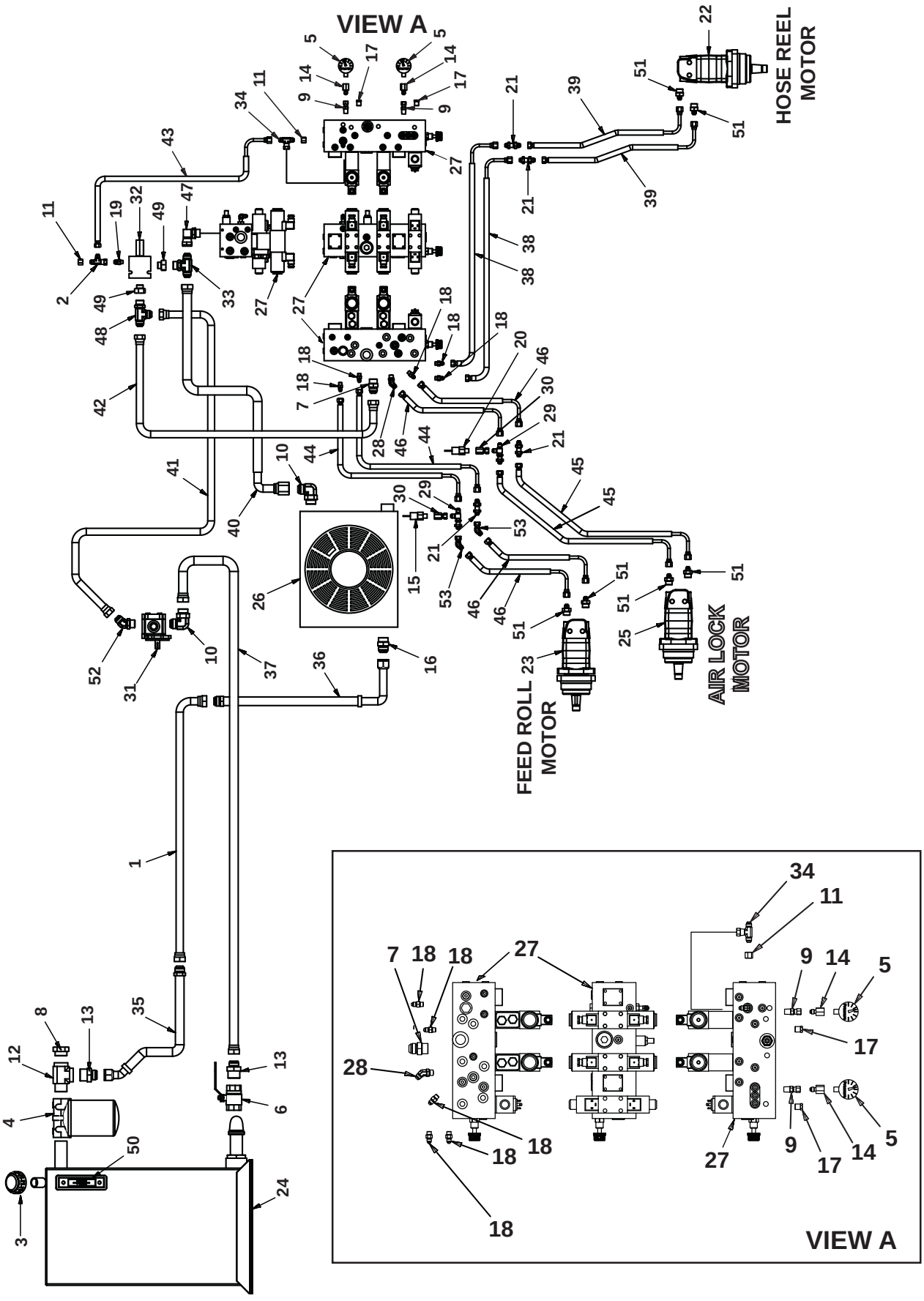
TARP ASSEMBLY

Ref. No.	Part Number	Description	No. Required
	075466	Tarp Assembly	1
1	RR3103-16	Aluminum Tarp Axle	1
2	RR7670-05A	Tarp Bow set for BB705	1
3	RR7677-05A	Tarp Cross Bar for BB705	1
4	RR4643-05A	Tarp arm Pivot set BB705 31 in.	2
5	RR8101-05	Knit Mesh Tarp 70 in. X 12'	1
6	RR1031	Electric Motor	1
7	RR1050	Electric Kit (Switch, Breaker, Etc)	1



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LBBB-705-MM

HYDRAULIC SYSTEM

Ref. No.	Part Number	Description	No. Required
1	075512-04	Hydraulic Tube	1
2	FW71784	Swivel Nut Run Tee	1
3	004900	Hydraulic Filler Cap	1
4	011868	Return Line Filter	1
	011869	Hydraulic Filter Element	1
5	012044	Pressure Gauge	2
6	012083	1-1/4 in. Ball Valve	1
7	012087	1-1/16M SAE ST X 1-1/16M JIC	1
8	012328	1-1/4 in.NPT Hydraulic Pipe Plug	1
9	012419	1/4 in. Adapter RandD	2
10	023620	1-5/16M SAE ST X 1-5/16M JIC90	2
11	040496	Fitting	2
12	041151	Pipe Tee	1
13	041152	JIC Adapter Fitting	2
14	045083	SAE Swivel Adapter	2
15	052336	Pressure Switch	1
16	055383	SAE Adapter Fitting	1
17	055463	Pipe Plug	2
18	055601	SAE Adapter Fitting	5
19	055602	SAE Adapter Fitting	1
20	055659	Pressure Switch	1
21	071095	Bulkhead Fitting	4
22	071238	Hydraulic Motor	1
23	075230	Hydraulic Motor	1
24	075425	Hydraulic Reservoir	1
25	075453	Hydraulic Motor	1
26	075523	Heat Exchanger	1
27	075574	Valve Manifold Assembly	1
28	075550	SAE 45 degree Adapter Elbow	1
29	075551	JIC Bulkhead Tee	2
30	075552	JIC Adapter Swivel	2
31	075560	Hydraulic Pump	1
32	075568	Hydraulic Valve	1
33	075641	Tee Tube End	1
34	075643	Swivel Tube End	1
35	075644	1 in. Return Hose X 26-1/2 in. LG	1
36	075645	1 in. Return Hose X 36 in. LG	1
37	075646	1 in. Suction Hose X 50 in. LG	1
38	075647	3/8 in. 100R2 Hose X 90 in. LG	2
39	075648	3/8 in. 100R2 Hose X 70 in. LG	2
40	075649	1 in. Return Hose x 144-1/2 in. LG	1
41	075650	3/4 in. 100R12 Hose X 126 in. LG	1
42	075651	3/4 in. 100R12 Hose X 29 in. LG	1
43	075652	3/8 in. 100R2 Hose X 25 in. LG	1
44	075653	3/8 in. 100R2 Hose X 30 in. LG	2
45	075654	3/8 in. 100R2 Hose X 29 in. LG	2
46	075655	3/8 in. 100R2 Hose X 21 in. LG	4
47	075658	JIC 90 degree Elbow Fitting	1
48	075659	SAE Tube End	1
49	075663	SAE Straight Thread Port Bushing	2
50	080329	Hydraulic Level Gauge	1
51	085014	SAE Tube End	6
52	085157	SAE Straight Tube End	1
53	085189	Nut 45 degree Elbow Tube End	2

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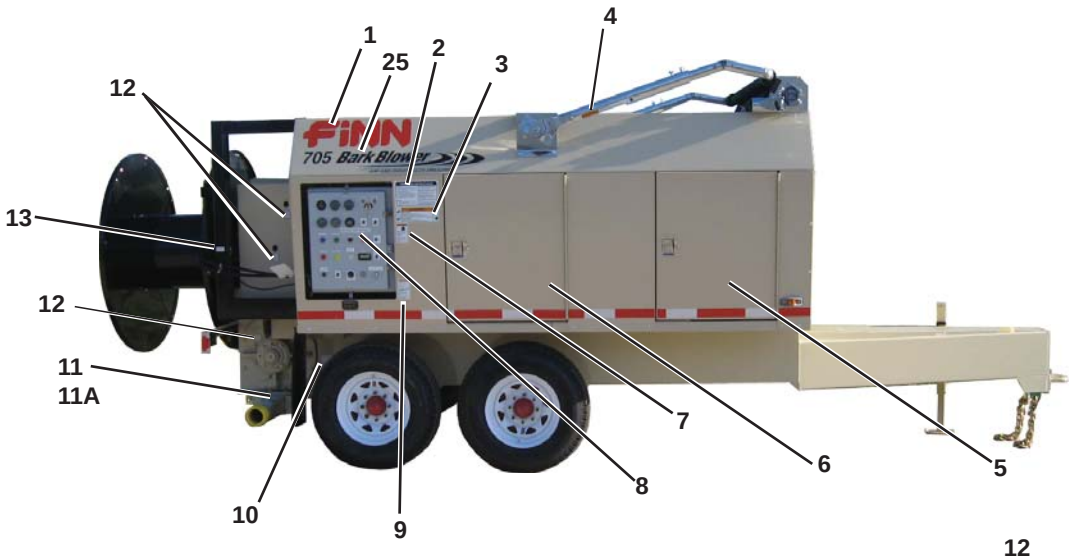

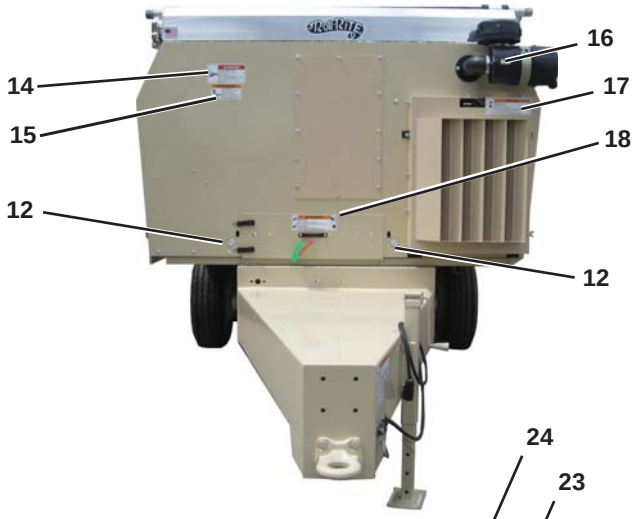

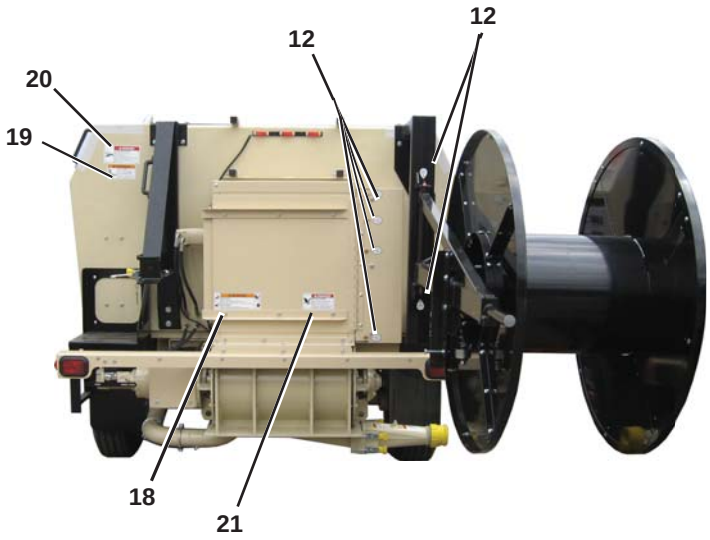

WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

DECALS

Ref. No.	Part Number	Description	No. Required
	075639	BB705 Decal Sheet	
1	023174**	"FINN" Decal	2
2	075347	Operating Instructions Decal	1
3	31463B	"WARNING" Sever Hazard Decal	1
4	022690	"WARNING" Flying Objects	1
5	012687*	CAUTION Decal (Not Shown)	1
6	023391	DIESEL FUEL Decal (Not Shown)	1
7	023519	"WARNING" Wear Eye Protection Decal	1
8	055217	Material Feed Control Decal	1
9	045128	"DANGER" Do Not Raise Decal	1
10	011662	"U.S. Patent No." Decal	1
11	055735	"WARNING" High Pressure Decal	1
11A	055280	"WARNING" Flying Objects Decal	1
12	007231	Service Weekly Decal	12
13	012868	HOSE REEL REWIND Decal	1
14	052177	"DANGER" Rotating Hazard	1
15	080107	"CAUTION" Always Use Step	1
16	019426	"CAUTION" Decal	1
17	031462	"WARNING" Burn Hazard Decal	1
18	31463B	"WARNING" Sever Hazard Decal	3
19	020970	"CAUTION" Do Not Ride Decal	1
20	052177	"DANGER" Entanglement Hazard Decal	1
21	055219	"DANGER" Sharp Knives Decal	1
22	020970	"CAUTION" Do Not Ride Decal	1
23	012278	"DANGER" Hot Decal	1
24	022690	"WARNING" Flying Objects Decal	1
25	055639	"BARK BLOWER" Decal	2
26	031461	"WARNING" Runaway Hazard	1
27	075632	Trailer GVWR Decal	1
28	007231	Service Weekly Decal (Not Shown)	1
29	007230	Service Daily Decal (Not Shown)	1
30	052178	Important- If The Mach. Decal (Not Shown)	1

NOTE

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

****** **These Decals are not included with the Decal Sheet "075639" and must be ordered separately.**

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

TOOL KIT

Part Number	Description	No. Required
055385	Coupler Gasket	1
012681A	FINN Beige Aersol Touch-Up	1
020365	Multi-Purpose Grease	1
021375	Grease Gun	1
021741	12 in. WHIP HOSE with 1/8 in. Male ends	1
053075	Red Cone Assembly Kit	1
052878	Red Diffuser Cone, 4 in.	1
160317	Close Nipple	1
055375A	4 in. Aluminum Coupler	1
012305	Adhesive Label	1
	Engine Operator's Manual	1
	Blower Operator's Manual	1
	Radio Remote Transmitter Manual	1
	Bark Blower Operator's/Parts Manual	1

DISCHARGE HOSE

Part Number	Descritpion	No. Required
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
053075	Discharge Deflector Assembly	1
055337	Shoulder Strap	1

NOTES