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™
AIM-AND-SHOOT MULCH SPREADING

Model BB-1208

Parts and Operator's Manual

Model **MS** 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#, 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 . . .

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

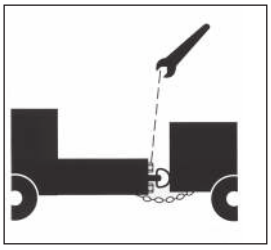
Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

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):

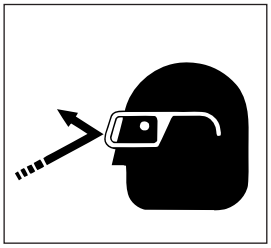
1. Check hitch and hitch bolts, safety chains, lights, brakes, and breakaway switch. Verify that the hitch ball or pintle hook is the correct size for the coupler.



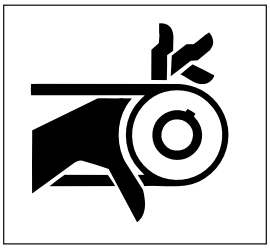
2. Verify that all guards are in place.
3. By carefully looking into the blower hopper and transition, inspect for and remove any foreign objects. Follow Occupational Safety and Health Administration (OSHA) lockout/tagout procedure (29 CFR 1910.147)
4. Inspect all hydraulic hoses and tubes for cracks, 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:

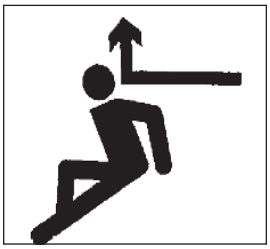
1. Always wear safety goggles when operating or feeding the machine. Other safety attire, such as safety shoes, ear protection, gloves, hard hats, dust masks, etc., should be worn as required by warning decals on machine, operator's manuals, or job site requirements. Remove rings, watches, etc. Avoid 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.

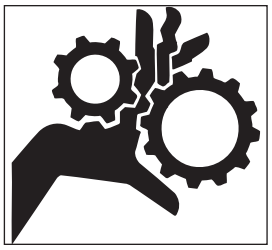
9. Never operate this or any other machinery when fatigued, tired, under the influence of alcohol, illegal drugs or medication. You must be in good physical condition and mentally alert to operate this machine.

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

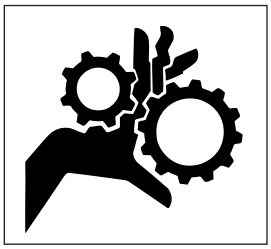
18. All personnel operating and/or around the machine must be aware that the blower can be controlled via remote control. For safety reasons and to prevent accidental starting, always keep the power switch on the remote receiver in the OFF position when the remote control is not being used.

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.

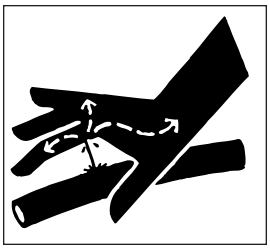
5. Filling of fuel: Never fill the tank with the engine running, while smoking, or when near an open flame. Never smoke while handling fuel or working on the fuel system. The fumes in an empty fuel container are explosive. Never cut or weld on fuel lines, tanks or containers. Move at least 10 ft (3 m) 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

WARNING

FLYING OBJECTS!
Wear proper eye protection when feeding machine.
Failure to comply could result in death or serious injury.

P/N 52680

WARNING

FLYING OBJECTS!
Wear proper eye protection when feeding machine.
Failure to comply could result in death or serious injury.

P/N 52680

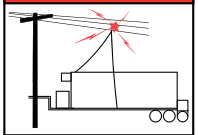
WARNING

BURN HAZARD!
Cooling system is under pressure.
Allow system to cool before handling.
Remove radiator cap slowly.
Wear appropriate safety gear.
Failure to comply could result in death or serious injury.

RADIATOR HANDLING INSTRUCTIONS
1. Use a 50/50 solution of water and antifreeze. Using 100% antifreeze will result in engine damage.
2. Check and replenish water prior to use. More water will be consumed when operating in hot conditions.
3. If overflow pipe begins emitting vapor, check and replenish water.
4. Remove and clean screen when dirty.
5. Check and clean fins periodically. Clogged fins will increase water consumption.
6. Protect radiator from fertilizer corrosion by washing radiator core with water.

P/N 31462

DANGER



ELECTROCUTION HAZARD!

DO NOT raise tarp under high voltage lines.

Failure to comply will result in death or serious injury.

P/N 45128

WARNING

Wear proper eye protection when operating machine.

Failure to comply could result in death or serious injury.

P/N 23618

WARNING

SEVER HAZARD!
Keep hands clear!
Sharp knives. Rotating fan and gears.
DO NOT operate without guards or doors in place.
Shut off engine, disconnect battery and allow all moving parts to stop before servicing.
FLYING DEBRIS!
Wear eye protection around equipment.
Failure to comply could result in death or serious injury.

P/N 31463B

CAUTION

Wear ear protection when operating machine.

The sound power level could exceed 80 dB(A) while the unit is in operation.

Failure to comply could result in moderate or minor injury.

P/N 13184

WARNING

FLYING OBJECTS!
STAY BACK!
Stay away from discharge area during operation. Keep bystanders away.
DO NOT point discharge toward people, animals or property.
ALWAYS wear appropriate protective gear.
Failure to comply could result in death or serious injury.

P/N 55280

WARNING

CONTENTS UNDER HIGH PRESSURE!
To prevent injury or death:
- Turn off engine to relieve air pressure on system before uncoupling any hoses or loosening any clamps.
- Wear proper eye and hand protection when operating equipment.
- Keep all hoses, couplings and clamps in good condition.

Failure to comply could result in death or serious injury.

P/N 55735

WARNING

BURN HAZARD!
Hot exhaust!
Stay back!
Failure to comply could result in death or serious injury.

P/N 12278

DANGER

ENTANGLEMENT HAZARD!
Keep arms and feet out!
Never climb on or in unit before:
Turning engine off.
Allow all moving parts to stop.
Disconnect battery cables and follow proper lock-out & tag-out procedures.
Failure to comply will result in death or serious injury.

P/N 52177

DANGER

SEVER HAZARD!

Keep hands and feet out!

Sharp knives will sever.

Failure to comply will result in death or serious injury.

P/N 55219

NOTES

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 while utilizing a minimum amount of manpower. The product to be used is generally composted and processed, then, used as a soil amendment, ground cover for erosion, weed control, or for decorative purposes on landscaping (bark mulch).

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

HOW THE BARK BLOWER WORKS

The bulk material is loaded into the hopper by a loader or by an infeed elevator. Located at the bottom of the hopper is a drag conveyor, which conveys the bulk material to an opening containing a feed roll. The feed roll and drag conveyor feed the bulk material into 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 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.

MOUNTING THE BARK BLOWER

The selection process of the vehicle onto which a blower is to be mounted has important safety aspects to avoid overloading:

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

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

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

⚠CAUTION

The FINN Bark Blower should be mounted by a qualified truck body installer. Failure to comply could result in minor to moderate personal injury. Failure to comply could also result in product or property damage.

NOTICE

The mounting of the blower to the truck must allow for tire clearance, as well as frame twist. Place hard-wood spacers along the length of truck rails or use FINN Spring Mounting Kit (number 011562) or equivalent.

Follow mounting instructions given in Figure 1 and Figure 2 on Page 8. If mounting conditions require deviation from these instructions, consult the factory.

DIMENSIONS, CAPACITIES, AND TRUCK REQUIREMENTS

*CF - Back of cab to end of frame
C - Distance from front of Bark Blower to center of gravity
*CA/CT - Back of cab to center of rear axle or trunnion
*FE - Front axle weight - Empty
FL - Front axle weight - Loaded
G - Distance from center of rear axle or trunnion to Bark Blower™ Center of gravity
BW - Bark Blower weight
*RE - Rear axle weight - Empty
*RL - Rear axle weight - Loaded
*WB - Truck wheel base

* These dimensions needed from the truck supplier, as well as Front axle capacity and Rear axle capacity.

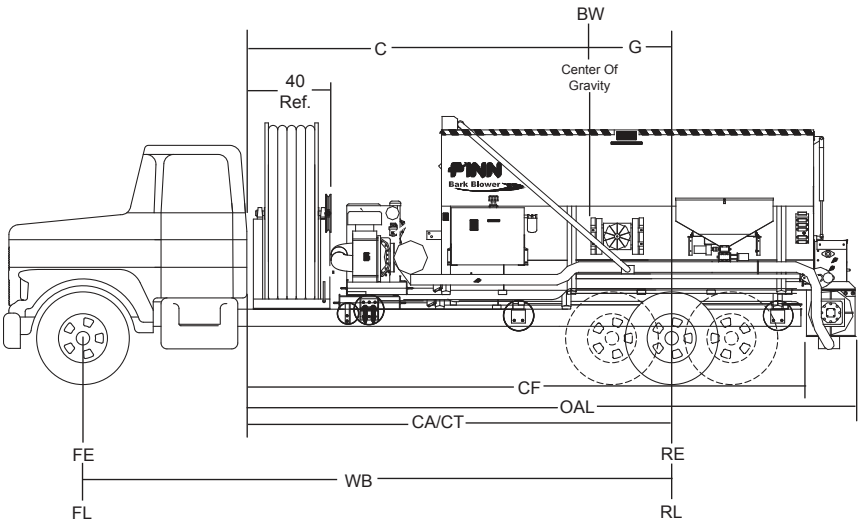
** Truck GVW depends on the truck weight. CA/CT dimensions are approximate only, and depend on the front and rear axle capacities, as well as the front and rear empty axle weights.

*** Weight of Bark Blower, hose reel, and mulch (800 lb per yard.) Weight may vary greatly due to the large variety of mulch materials.

OAL - Overall Length

		1208
Truck GVW **	Pounds (kg)	25,900 (11,748)
CA/CT **	Inches (cm)	156+ (396+)
C	Inches (cm)	136 (345)
OAL	Inches (cm)	236 (600)
BW ***	Pounds (kg)	16,640+ (7,548+)

TRUCK MOUNTING CALCULATIONS



$$\frac{(WB \times FL) - (WB \times FE)}{BW} = G$$

$$\frac{WB \times (RE + HW - RL)}{BW} = G$$

G + C must be equal to or less than CA

$$\frac{(WB \times FE) + (G \times BW)}{WB} = FL$$

$$\frac{(WB \times RE) + BW \times (WB - G)}{WB} = RL$$

Figure 1

GENERAL MOUNTING GUIDELINES

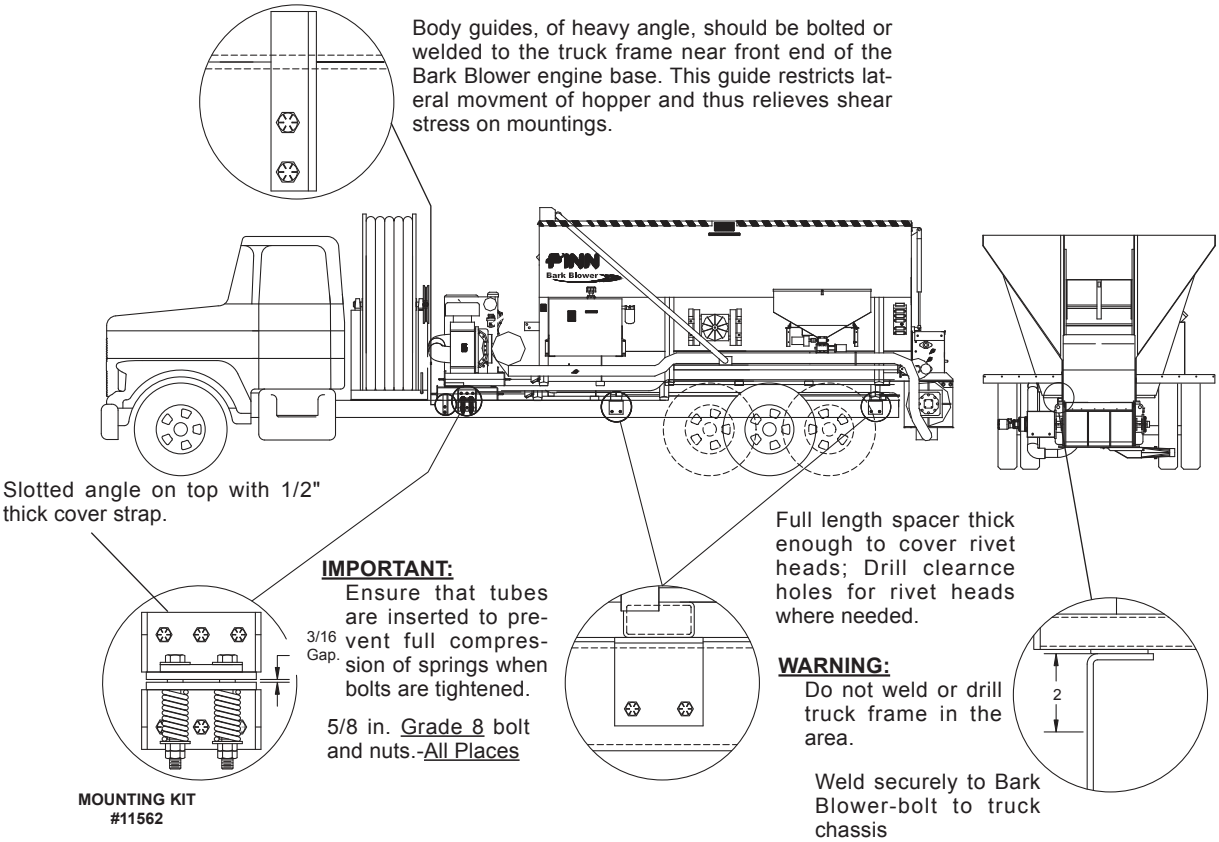


Figure 2

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 and acceptable 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. The Bark Blower 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 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 a softwood like pine and one is a hardwood such as oak, the pine would go through at a higher rate because it is easier to cut. Two characteristics must be considered when selecting a material: the greenness of the wood and the moisture of the mulch as a whole. Wood that is well seasoned is easier to cut than green wood. Seasoned wood also processes better, making a less stringy mulch. High moisture in the mulch may cause it to bridge in the hopper.

⚠CAUTION

Avoid using mulches that contain any hard foreign objects, such as rocks, nails, steel, cans, glass, etc. Failure to comply could result in minor to moderate personal injury. Failure to comply could also result in product or property damage.

PRE-START EQUIPMENT CHECK

⚠CAUTION

Equipment check must be made with the engine OFF and all rotating parts stopped. Failure to comply could result in minor to moderate personal injury. Failure to comply could also result in product or property damage.

Safety check to ensure operator safety:

1. Check that all the truck mountings are secure.
2. Ensure that all guards are in place.
3. Tool Kit - make sure that it contains all prescribed items (see tool kit list Parts Manual).
4. Lubricate equipment. Use handgun only (see Lubrication Chart, pages 32 and 33.
5. Check engine oil and fill or change if necessary. Refer to Engine Operator's Manual.
6. Check liquid coolant level in radiator and fill or replace if necessary (protected to -34ºF [-37ºC] when shipped.)
7. Check fuel level. Use number 2-D diesel fuel oil, unless operating at ambient temperature below 40ºF (4ºC) or at an altitude exceeding 5,000 ft (1,524 m). In these instances, use number 1-D diesel fuel oil.
8. Inspect the engine air cleaner (refer to the Engine Operator's Manual), the radiator chaff screen, and the blower air cleaner for dust and dirt. If necessary, clean or replace the air filter.

9. Check hopper and transition for foreign objects that could injure workers or damage equipment.

10. Check the fluid level in the hydraulic tank. Make sure that the service valve is open on reservoir. Proper level is midway between the upper and lower indicator mark on the sight gauge. (See page 29 for oil specification.)

11. Install the discharge hose. Use the short hot-air hose section as the first connection after the airlock. This will help extend the life of the other hoses. Use the clamps 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 to moderate personal injury. Failure to comply could also result in product or property damage.

STARTING PROCEDURE

⚠CAUTION

See safety section of the manual (pages 2 through 4) before operating the machine. Failure to comply could result in minor to moderate personal injury. Failure to comply could also result in product or property damage.

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

NOTE: This engine has a safety system that will shut the engine off if the engine oil pressure drops below 7 psi (48 kPa) or if the water temperature reaches 230ºF (110ºC).

3. Allow engine to warm up for 3 to 5 minutes.
4. Prior to mulch application, move the throttle position to fully open, and allow the governor to control the engine speed. Refer to page 16, Bark Blower Adjustments, for further information on control settings. Governed engine speed should be 2,575 to 2,625 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 bucket loader or belt conveyor, dumping material directly into the hopper.

THE MATERIAL-FEED SYSTEM

The material-feed system on the Bark Blower has been designed to give fast and uniform mechanical feeding. The adjustable feeding rate and the automatic reverse control system allow the use of varied materials while obtaining maximum production. The system is an integration of the following four subsystems, all of which contribute to efficient material flow:

SUBSYSTEM 1: MATERIAL HANDLING GROUP

The four major components of the material handling group are the blower, the drag conveyor, the feed roll, and the airlock.

The blower is a rotary lobe, positive-displacement-type unit having two double-lobe impellers. The blower is directly driven off the engine flywheel via a flexible coupling. Therefore, whenever the engine is running, air is being pumped. The blower is equipped with a relief valve, limiting maximum air pressure to 16 psi (110 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 drag conveyor is powered by a variable-speed hydraulic motor, which also powers the feed roll.

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

SUBSYSTEM 2: HYDRAULIC SYSTEM

Hydraulic power for the Bark Blower is generated by a flow-and-pressure-compensated, load-sensing pump that is driven off the engine auxiliary drive. This means the pump can measure how much load is on the hydraulic circuit and will only pump the oil needed to satisfy the demands of the circuit. The pump receives DTE-13M hydraulic fluid from the 36gal (136L) reservoir through a service valve and suction hose. It then delivers it to the valve manifold. The manifold is one block of machined aluminum, equipped with valve cartridges and solenoids that control all functions of the Bark Blower.

Two pressure gauges at the valve manifold read the valve inlet pressure. These gauges include the left/rear gauge and the load-sense pressure (right/front gauge). The left/rear gauge should always read about 300 psi (2,068 kPa) more than the right/front gauge. This 300 psi (2,068 kPa) difference is called the margin pressure. The margin pressure is a measurement of the pump's ability to respond to changes in the hydraulic circuit. If the margin pressure is set too high (over 500 psi [3,447 kPa]), the pump will be too sensitive and can become unstable. If the marging pressure is too low (below 200 psi [1,379 kPa]), the pump can become sluggish and not provide enough oil flow for the demand. The margin pressure can be adjusted using the lower compensator-adjustment screw in line with the load-sense hose on the back of the hydraulic pump. The only time the gauges will not show the margin pressure is when one of the hydraulic circuits has stalled, as if the floor conveyor somehow became jammed. In this case, both gauges will show the high-pressure standby of 2,800 psi (19,305 kPa) until the blockage is removed. High-pressure standby is the maximum pressure the pump will produce. A system relief valve is set for 3,500 psi (24,132 kPa) to protect the system if there is a failure in the pump compensator.

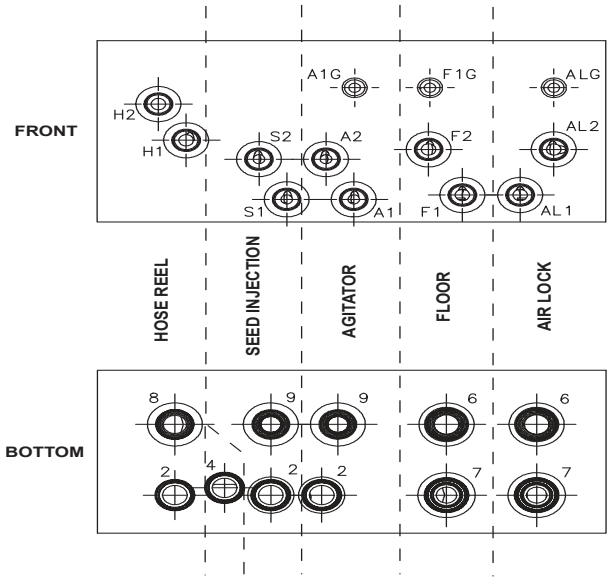


Figure 3

DESCRIPTION OF VALVE SECTIONS

Figure 3 shows the valve block and the different hydraulic circuits. Each circuit, except for 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 screwdriver 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. 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.

A. HOSE REEL

The left side of the manifold controls the hose reel. The flow rate is factory set, so the hose reel winds and unwinds at a rate of about 13 rpm.

B. AGITATOR

The third valve section controls the speed and rotation of the agitator. The spool in this section is factory set, so the agitator rotates at approximately 4 rpm. This section also has a pressure switch installed on the forward port that is set for 2,400 psi (16,547 kPa). This pressure switch triggers the agitator auto-reverse function. Normal rotation of the agitator is clockwise when viewing from the rear of the machine.

C. FLOOR (DRAG CONVEYOR)/FEED ROLL

The fourth valve from the left controls the floor and feed roll speed. It is an electrically-driven proportional valve that is controlled by the floor-speed settings on the control box. Adjusting the dial from 0 to 100 varies the input voltage to the solenoid and moves the spool in the valve accordingly, thus allowing more or less oil flow to the floor and feed roll. The feed roll is plumbed in series with the floor, meaning that the oil flows to the feed roll motor first and then down to the floor motors. This setup automatically causes the floor to slow down if the feed roll begins to jam up, which prevents overfeeding of the feed roll.

D. 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.

SUBSYSTEM 3: HYDRAULIC CONTROL SYSTEM

The hydraulic control system is an electrical system that controls all the hydraulic functions on the Bark Blower. This 12-VDC system runs off the engine electrical system. It is a programmable logic control (PLC) system located in the electrical control box on the passenger-rear side of the machine. This module controls 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 illuminates if the circuit is active. This is an easy way to check if a particular circuit has electrical power.

When Material Start is selected from the PANEL OPERATE screen, the proportional solenoid on the airlock valve section is energized, which starts the airlock. If the floor toggle switch is in the ON position, the floor and feed roll solenoid is also energized after a factory-set 1.5 second delay. This delay ensures that the airlock has a chance to clear itself. After the delay, the floor and feed roll will begin to move at the speed relative to the Floor Speed %. This speed can be set by using the Material Increase and Material Decrease buttons on the PANEL OPERATE screen. The default adjustments are in 5% increments which can be changed in the USER SETTINGS screen.

As material drops into the top of the airlock, the pressure required to cut the material is monitored by the pressure switch. This switch is located on the forward port of the airlock valve section, in the manifold labeled AL1G (see Figure 3 on page 13). The switch is normally open. When the airlock motor stalls due to the rotor encountering an object it cannot cut, high pressure is created in the airlock circuit and the pressure switch closes. The amount of time the pressure switch is closed is monitored by a setting in the PLC box. If the switch remains closed for more than 0.5 second, the system automatically reverses the rotor by energizing the reverse solenoid. It also de-energizes the floor solenoid, thus shutting off the floor and the feed roll. The airlock will remain in reverse for approximately 1.5 second. The system will then restart the floor and feed roll after allowing the airlock to clear itself.

The agitator is also controlled through the PLC box. The agitator will start on a 3-second delay (in a similar manner to the floor) and will stop during an auto-reverse. The agitator circuit on the Bark Blower also has an auto-reverse feature for when the agitator may bog down and become unable to turn itself. This most often occurs at the beginning of a load when the hopper is completely full of wet or packed down mulch. The PLC system receives a signal from the pressure switch on the forward port of the agitator circuit labelled A1G when the agitator motor stalls. When this signal is received, the system automatically de-energizes the solenoid before the pressure switch and energizes the reverse solenoid on the valve circuit, causing the agitator to rotate in reverse. The reverse-rotation time is set for 10 seconds, after which the forward solenoid will energize and the agitator will return to its normal rotation. This process may be repeated several times until the agitator sufficiently breaks up the packed mulch material. The agitator auto-reverse process does not interrupt or affect any other function(s) on the Bark Blower.

When the Material Stop is activated, power is shut off to solenoids controlling the hydraulic motors on the floor, airlock, feed roll, and agitator. The hydraulics can also be stopped by turning the ignition key OFF. Please note that the hydraulics will also stop if the folding door on the feed roll housing is opened and cannot be restarted until they are closed and the Material Start is activated.

SUBSYSTEM 4: RADIO REMOTE TRANSMITTER (RRT)

This Bark Blower is equipped with a RRT to control the MATERIAL FEED START/STOP, the FLOOR SPEED, and the ENGINE THROTTLE. It also contains an EMERGENCY STOP button that activates the Murphy shutdown system on the engine.

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

1. Set the RRT ON/OFF switch, located on the control box, to the OFF position.
2. Set the switch, located on top of the RRT, to the OFF position.
3. Start the engine and allow to warm up as specified in the Starting Procedure on page 11.
4. Select the RADIO option from the PANEL OPERATE screen.
5. Set the RRT switch to the ON position.

To utilize the Material Feed Start/Stop feature of the RRT, Material START option must be selected on the RADIO screen. This doesn't actually set the unit into operation, but does allow operation to begin from the Radio Remote. The control box is the primary and overriding set of controls. When either the Material STOP is selected on the screen or a loss of power to the safety circuit occurs (i.e. the rear door on the feed roll housing is opened or a circuit breaker trips), the Material Feed Start/Stop feature on the RRT 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 RRT can be used to change the floor speed and effectively adjust the output of mulch from the machine. Adjustments to the floor speed made from the remote control will be shown on the Floor Speed display on the control box.

The Engine Increase/Decrease function on the RRT adjusts the throttle actuator on the engine. For use of the engine rpm function, refer to Mulching with the Bark Blower on current page.

Pushing the large, red E-STOP button on the RRT activates the shutdown system. This will shut off the engine, automatically return the engine throttle back to idle, and cut power to all the hydraulic valve solenoids. To reset the safety system:

1. Turn and release the E-STOP button on the RRT
2. Start the engine
3. Allow to warm up as specified in the Starting Procedure on (page 11).

MULCHING WITH THE BARK BLOWER

1. Check all areas listed under Pre-Start Equipment Check (page 10).
2. Start the engine following all the steps listed under Starting Procedure (page 11).
3. Enter the SET-UP menu from the main screen to select a preset program or select No Program to manually enter the floor and airlock speeds on the PANEL OPERATE screen.
4. Fully open the gate.
5. Activate the Floor ON selecton on the PANEL OPERATE screen.
6. To activate the dust control system, select the water setting on the SET-UP screen.The dust control system will only operate when the floor setting is in the ON state. The needle valve above the airlock-discharge pan can be adjusted to vary flow.
7. Select RADIO to enter the RADIO screen, and then Material START to enable the Start/Stop functionality on the Radio Remote.
8. Increase the throttle to full throttle.

9. With a firm grip on the end of the hose, press the material start button on the RRT.
10. Floor speed can be adjusted for the desired flow. Watch for auto-reversing of the airlock as well as shock waves through the hose. Listen for the relief on the blower. Partial plugging in the airlock discharge or hose may cause it to open, causing a high-pitched whine indicating over-feeding of the airlock.
11. Use the engine rpm button on the RRT to decrease and increase air and material flow. A lower engine rpm may require a lower floor speed to avoid auto-reversing or plugging.
12. At the end of the load, press the material STOP button 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. The agitator has been designed to eliminate possible material bridging in the hopper and to help improve mulch consistency as it enters the feed roll chamber. However, material conditions can change from one load to the next or from one day to the next. The only adjustment the operator should have to make is to the drag conveyor speed. Adjusting the floor speed 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 (RRT). The floor speed can be adjusted from 0% to 100% on the Floor Speed display with 0% being the slowest (0 rpm) and 100% being the fastest (approx. 8 rpm). For most materials, a setting of 30% is a good starting point. The floor speed can be increased (5% increments are recommended) until certain warning signs appear. They include the following:

A. CONSISTENT HOSE SHOCK

The Bark Blower uses a large amount of air to blow the mulch material through the discharge hose, which can become difficult for an operator to handle. 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 the hose since there will be less air being pumped through the hose. Hose shock is usually due to partial plugging around the discharge. When the material gets dislodged, the larger clumps are shot through the hose and can make it jump significantly.

Another adjustment that could help with hose shock is the airlock speed itself. Refer to the Airlock section of the Material Feed System starting on page 11 for instructions on how to adjust the airlock speed. Certain materials may run more smoothly with a faster or slower airlock. Generally, the airlock should not be run any slower than 8 rpm and can be adjusted up to 15 rpm.

B. EXCESSIVE AUTO-REVERSING

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

C. REGULARLY TRIPPING THE BLOWER RELIEF

The blower on your machine has a relief valve in the air line. This relief valve protects the blower against a large back-pressure that could build if the line becomes plugged. The relief valve, set for 14 psi (97 kPa), is located directly behind the blower in the engine area on the front 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 is expected as long as the machine can clear itself. However, if the relief valve goes off repeatedly in a 10-second time span, 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. 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 out, from the feed roll. When changing the metering gate location, it is important to understand the main material groups (page 12). 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 when the material is closer to Wet or Heavy Material, leaving Green Material somewhere in the between the two. The better the material is, the less interaction the metering gate should have. The heaver, wetter, and harder the material, the more interaction the metering gate needs.

CLEARING A BLOCKAGE

If the unit does become plugged and the machine can not clear itself, immediately shut down the engine. Do so by pressing the emergency stop on the Radio Remote Transmitter (RRT), 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.
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, to permit a tight seal.
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 wide open 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 activating Material STOP on the control panel.
2. Open the access door above the airlock.
3. Select the QUICK DUMP program from the SET-UP screen.

⚠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. Please avoid being near the open gate at the rear of the machine. Failure to comply could reuslt in minor to moderate personal injury.

4. With Floor ON activated, activate Material START 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 close the control box lid using the four latches.

⚠WARNING

Do not place hands down inside the airlock vanes to remove material. Failure to comply could result in death or serious injury.

7. Close the rear access door securely using the clamps.
8. The Bark Blower should be run with the Floor OFF for a few seconds so the airlock has a chance to clear itself before resuming normal operation. The Starting Procedure on page 11 will need to be followed again before remote operation can be used.

DUST CONTROL SYSTEM

The Dust Control System on the Bark Blower is helpful in reducing the amount of dust that can be generated by blowing very dry materials. Water is pumped from the 75-gallon poly tank down to a nozzle in the discharge pan. A metering valve on the discharge pan allows for varying amounts of water to be sprayed into the mulch as it is blown from the machine. A pressure regulator set for 30 psi (207 kPa) is mounted near the pump and sends any excess flow produced by the pump through the recirculation hose and back into the tank. The Dust Control System is activated by setting the Dust Control Switch to ON while the floor conveyor is operating.

The water pump has an internal thermal switch that will shut the pump off if it gets too hot. A clogged nozzle, clogged pump inlet, or too high of a regulator pressure setting can all cause excessive heat in the pump. If the pump shuts off frequently, make sure the water flow is not restricted and the regulator is not set above 30 psi (207 kPa).

MAINTENANCE

⚠CAUTION

Turn engine OFF and disconnect battery before servicing equipment. Failure to comply could reuslt in minor to 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. Add or replace as necessary.
3. Check hydraulic oil level in reservoir. The oil should be about half-way up the sight glass. Add or replace if necessary.
4. Check blower oil level. Add or replace if necessary. 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, pulling toward the hitch, and finally, back toward the driver's side of the unit. Remove any buildup 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. Add if necessary.

WEEKLY - AFTER EVERY 50 HOURS OF OPERATION

1. Lubricate the bearings on the drag conveyor, airlock, the blower and on the feed roll shaft. See Lube Chart on pages 28 and 29. 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 or replace air cleaner elements on the engine and rotary blower. To clean elements, use clean compressed air.
4. Check the oil in the airlock gearbox. Add or replace if necessary.
5. Check the gear case on the blower (see blower manual).
6. Check airlock knife for wear, chips, and clearance. To adjust knife, follow the procedure below:

⚠ DANGER

Knives have very sharp edges that can cause serious injury. Adjust one at a time. Handle with care. Failure to comply will result in death or serious injury.

A) Using a 3/16-in. allen wrench, remove the six set-screw plugs in the access holes on the outside front/rear face of the airlock housing.

NOTE: To adjust the reversing knife, the rear catch pan will need to be removed to gain access to the reversing knife clamps.

B) Loosen the two outer bolts on each of the three knife clamps in the top of the airlock.

C) Slightly loosen the center bolt on each of the three knife clamps.

D) You can reach the knife adjusting screws 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 screw in until there is a uniform .003 in. to .006 in (.08 mm to .15 mm) gap between the knife and rotor. One full turn of the screw will move the knife approximately .055 in. (1.4 mm). Make sure the adjusting screws on each knife-clamp are adjusted equally.

E) Tighten the nine bolts on the three 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, follow the procedure below:
   A) Remove the nine bolts that hold the three 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 4. Loosely install the three knife clamps with the nine 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 .003 in. to .006 in (.08 mm to .15 mm.) gap.
   F) If necessary, use the jacking screws to close the gap. One full turn of the screw moves the knife 0.055 in. (1.4 mm).

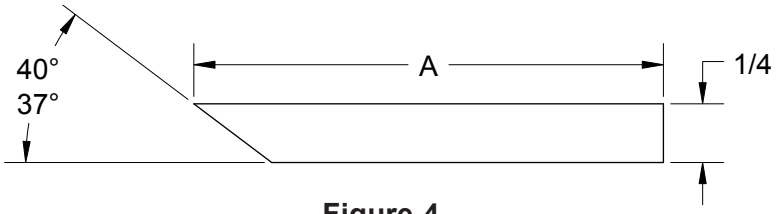


Figure 4

   G) Tighten mounting bolts.
   H) Immediately have the 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. Have the knife sharpener grind the knife to the profile shown in Figure 4:.

NOTICE

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

FLOOR CHAIN ADJUSTMENT: EVERY 50 HOURS

1. The floor chain tension should be checked every 50 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. The chain originally contains 164 links. Over time as the chain stretches, some links may need to be removed in order to tighten the chain. When the chain has been shortened to 156 links, the entire chain must be replaced.
2. Shut the machine off and open the rear access door above the airlock. Remove any build-up under the floor pan between the chain links and the rear catch pan so an accurate measurement can be made. Check the tension on the floor chain in the Bark Blower as shown in Figure. 5 below:

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.

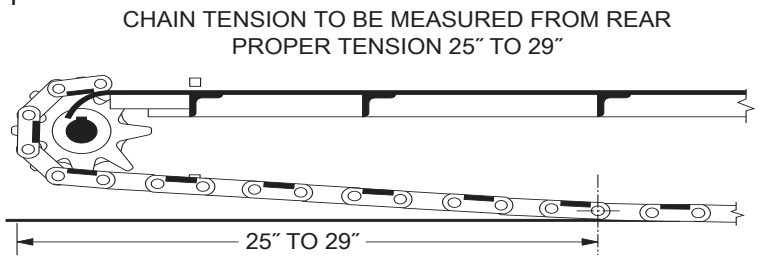


Figure 5

AFTER FIRST 100 HOURS OF OPERATION

1. Change engine oil and filter after 100 hours, then, every 250 hours after that, following the engine manufacturer's recommendations.
2. Change the gear box oil on the blower (see blower manual). Change oil every 500 hours after that.
3. Change the gearbox oil on the airlock using SAE 80W90 oil. Change every 1,000 hours after that.

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 internals of impeller cylinder with a rust inhibitor, such as WD-40. Reconnect piping to prevent foreign debris from entering blower chamber. Rotate the drive shaft three or four revolutions. Repeat this process every month or as conditions may require.
3. Remove any material buildup in the airlock vanes and endplates. Coat the rotor vane tips and airlock housing with a rust preventative. Rotate the airlock as necessary to coat all internal surfaces. Repeat this process as needed to prevent excessive rust buildup.

NOTICE

If the machine is stored outside, do not allow water to accumulate or ice to form in the airlock or the discharge pan. A severe buildup of rust on the rotor vanes can lock up a 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

TROUBLESHOOTING CHART		
Symptom	**Probable Cause**	**Remedy**
Engine will not start	No fuel	Check fuel gauge on engine sheet metal.
Airlock not turning	Safety switch open	Make sure rear cleanout door and airlock discharge are closed tightly and interlock switches are working properly.
	Blue light out on panel	Check 10A circuit breaker in control box.
	Airlock speed control turned down too far	Adjust airlock needle valve out. See page 12.
	Quick-Dump feature activated / left on	Deselect Quick-Dump from the Option screen.
Floor not turning	Motorized flow control valve closed	Increase material feed control.
Airlock constantly auto-reversing	Overfeeding airlock	Decrease floor speed; see pg. 15 for tips.
	Dull airlock knives	Check knife clearance; sharpen if dull.
	Pressure switch time delay set too low	Check timer TR1; should be set for 0.5 sec.
Airlock stalling, not auto-reversing	Pressure switch is not closing at 2,400 psi	Check pressure switch connections or replace switch in necessary.
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 15 for tips.
	Partial plugging in airlock discharge	Check airlock discharge pan fo blockages and air leaks.

THEORY OF OPERATION

NOTICE

If at anytime you are using the control panel and a red data box appears on the screen, do not press any buttons. Wait for the red data box to disappear before continuing.

METHODS OF OPERATIONS

The BB1208 is equipped with a microprocessor-based Radio Frequency (RF) and Controller Area Network (CAN) control system to accumulate data and communicate instructions between the primary sources of power on the unit. There are two methods to choose from to control the BB1208. Both methods are selected at the Main Control Panel at the right-side rear of the unit.

LOCAL

Local control enables the operator to run the unit by interacting and controlling all the Express Blower® functions from the Main Control Panel (see Figure 6, below). Running the unit in Local requires an individual to interact with the panel to start and stop the blower, to control the primary feeding functions, and to change the air and material flow settings.

RADIO

The preferred method of operation for most is through the radio remote transmitter. By selecting radio on the Main Control Panel and turning the radio remote transmitter on, the operator has the ability to control the Bark Blower from remote locations as dictated by the job site and the areas needing product distribution. Although auxiliary and optional equipment must be initially activated from the Main Control Panel, the powerful remote also has the ability to control these, either directly or through logic programmed into the system. The radio remote transmitter is powered by rechargeable batteries, charged by the DC charger.

Figure 6 MAIN CONTROL PANEL

The key switch on the control box has three positions. From left to right, they are OFF, ON, and START. When the key switch on the control box is turned to the ON position, the FINN loading screen will appear for a few seconds before advancing to the MAIN menu screen (see Figure 7, page 24). From this screen, one can access the Master Settings, Maint., Maint. Sched., Help, SET-UP, Program Settings, Display Settings, and Diag. menus.

NAVIGATING THE BARK BLOWER INTERFACE

NOTE: To return to the MAIN menu at any time, press the Home button on the Main Control Panel (see Figure 6).

Figure 7

On the right and left-hand sides of the MAIN menu screen (see Figure 7) are the names of eight sub menus. Pressing the corresponding button on the control box next to the sub-menu name will take you to the corresponding menu. From the MAIN menu screen, you can access the Main Settings, Maint., Maint, Sched., Help, SET-UP, Program Settings, Display Settings, and Diag. menu screens.

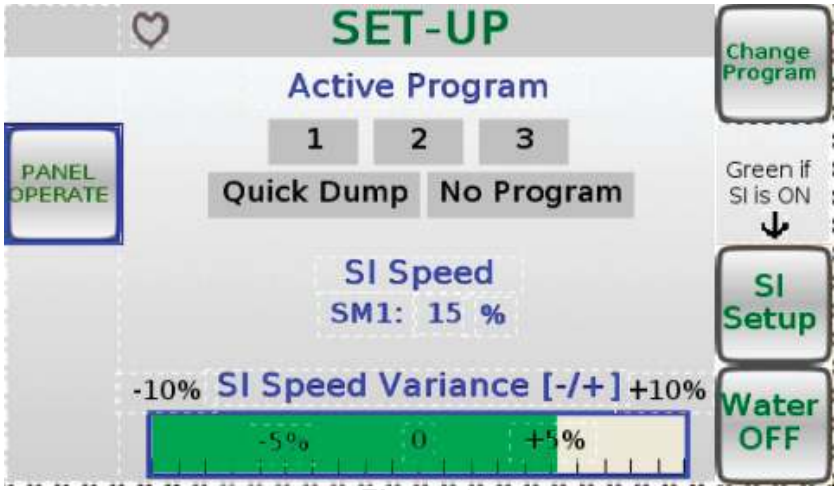


Figure 8

The PANEL OPERATE menu screen can be accessed by pressing the PANEL OPERATE button while in the SET-UP menu screen (see Figure 8). Seed Injection (SI) Speed Variance can be changed in the SET-UP menu screen. Turn the control knob located on the Main Control Panel to either the left or right to decrease or increase the SI Speed Variance.To turn the water control ON or OFF, press the Water ON/OFF toggle button while in the SET-UP menu screen (see Figure 8).

To select an Active Program to use during operation, press the button labeled Change Program. Programs 1,2, and 3 are all customizeable. To customize the settings for programs 1,2, and 3, select the button labeled Program Settings, located in the MAIN menu screen (see Figure 7).

Quick Dump is a program for which the default settings cannot be changed.

Selecting No Program will allow you to change any of the settings to meet the needs at hand.

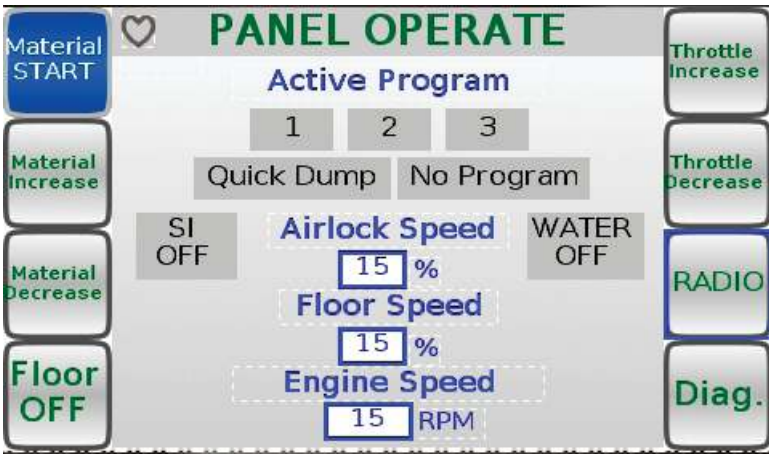


Figure 9

While in the PANEL OPERATE menu screen (see Figure 9), the operator can set the Airlock Speed, Floor Speed, and Engine Speed. The Floor, Material, Water (Dust Control), Quick Dump, and Seed Injection (SI) can all be turned either ON or OFF in this menu. The operator also has the ability to choose a preset program in the PANEL OPERATE menu screen.

By pressing the buttons now labeled Throttle Increase and Throttle Decrease, you can either increase or decrease the Engine Speed. By pressing the buttons now labeled Material Increase and Material Decrease, you can either increase or decrease the Floor Speed. The Floor and Airlock Speeds will range from 0% of capacity to 100% of capacity in 1% increments. The Engine Speed selection ranges from 1,250 rpm (idle) to 2,650 rpm (full throttle) in 1 rpm increments.

To turn the Floor ON or OFF, press the Floor ON/OFF toggle-button. To turn the material feed on, press the Material START/STOP toggle-button.

See Figure 10, below, for the Airlock Speed and Floor Speed for the three saved programs. To change the settings for any of the programs, use the control knob of the Main Control Panel. Turn the knob either left or right to highlight the setting you want to change. Once you have highlighted the setting you want to change, press in on the control knob. After pressing in on the control knob, turn the knob either left or right to either increase or decrease the setting. Once you have changed the setting, press the control knob in to deselect that setting. If you want to save the settings after you have changed them, press the Save button on the bottom-right of the screen. You can access the PROGRAM SETTINGS menu screen from the MAIN menu screen (see Figure 7, page 24).

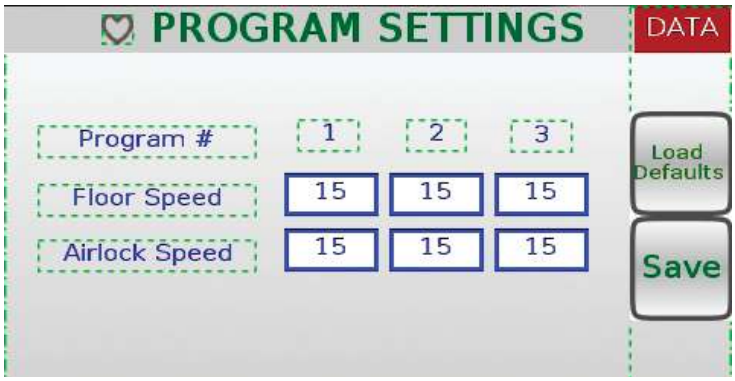


Figure 10

CHANGING AND SELECTING SEED MIX SETTINGS

To change your Seed Injection (SI) settings (if equipped), you will need to access the SI menu screen. To access the SI menu screen, you will need to press the SI Setup button, located in the bottom-right of the SET-UP menu screen (see Figure 8). The control knob can be used to change any of the SEED MIX settings (see Figure 11). Turn the knob either left or right to highlight the setting you want to change. Once you have highlighted the setting you want to change, press in on the control knob. After pressing in on the control knob, turn the knob either left or right to either increase or decrease the setting. Once you have changed the setting, press the control knob in to deselect that setting. If you want to save the settings after you have changed them, press the Save button on the right side of the screen.

To select a SEED MIX setting to use during blowing, press the button labeled Mix Select. The Mix Select button will allow you to select one of the four SEED MIX settings for use during blowing. To determine which SEED MIX setting you have selected to use, look for the Green colored circle to the left of the SEED MIX in the SI menu screen.

To turn the Seed Injection (SI) on, press the SI ON/OFF toggle on the bottom-left of the SI menu screen.

If the changed settings are not desireable you can either change them again, or press the button labeled Load Defaults. By pressing Load Defaults, all of the factory default settings are restored.

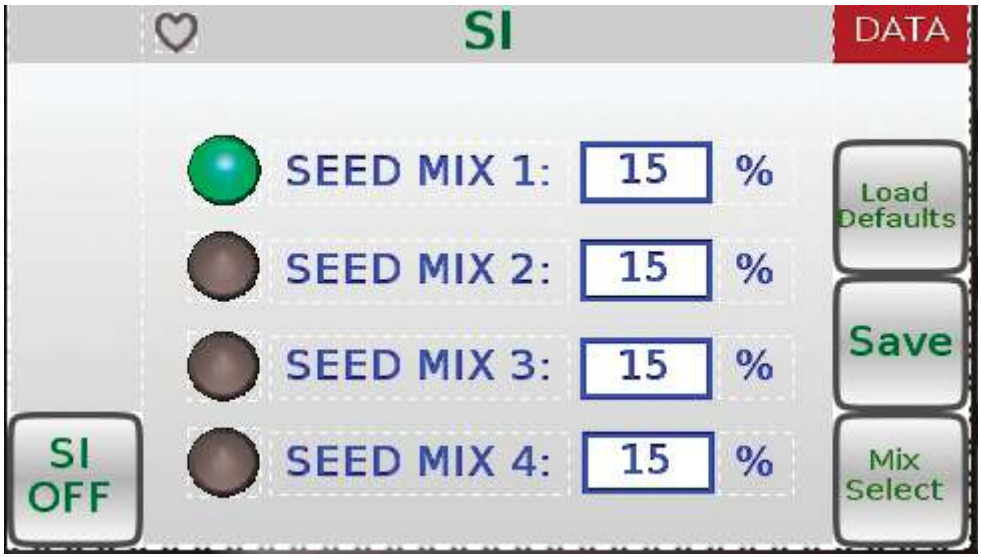


Figure 11

CHANGING AND SELECTING SEED MIX SETTINGS

To access the DIAGNOSTICS menu screen, press on the button labeled Diag., located on the bottom-right of the MAIN menu screen (see Figure 7).

Figure 12

The DIAGNOSTICS menu screen displays engine information read from the engine's ECU (see Figure 12). By pressing the Engine Codes button on the left side of the DIAGNOSTICS menu screen, you can access the Engine Codes DIAGNOSTICS menu (see Figure 13).

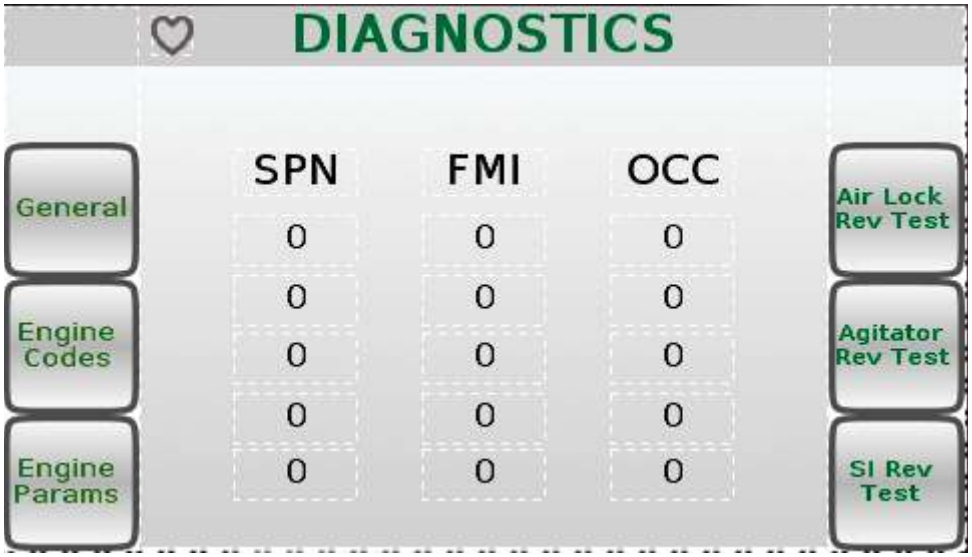


Figure 13

The Engine Code DIAGNOSTICS menu screen displays engine code information (see Figure 13). To return to the main DIAGNOSTICS menu screen, press the Esc button on the Main Control Panel

CHANGING THE MASTER SETTINGS

To change the master settings on your Bark Blower, you will need to press the button labeled Master Settings, located in the MAIN menu screen (see Figure 14 below).

Figure 14

Once you have pressed the Master Settings button, you will be taken to the Pass Code screen (see Figure). In order to access the Master Settings menu screen, you will have to enter a four digit pass code. The four digit pass code is the number zero, plus the 3-digit serial number of your Bark Blower. The serial number is located on the right-front of your Bark Blower on the serial number sticker. To enter the pass code please use the following steps (see Figure 15):

1. Press in on the control knob as this allows your to begin changing your pass code.
2. Press in on the control knob again to select the first number.
3. Once the first number is selected, make sure that number is zero.
4. Once you have confirmed that the first number of the pass code is zero, press in on the control knob again, this will take you to the next number to be changed.
5. Turn the control knob to either the left or right to change the number.
6. Press in on the control knob once you have selected the correct number, and are ready to move to the next.
7. Repeat steps 5 and 6 until you have all four numbers selected.
8. Once you have all four numbers selected, press in on the control knob again, in order to deselect the pass code box.
9. Press the button labeled User Access to continue to the Master Settings screen (see Figure 15).

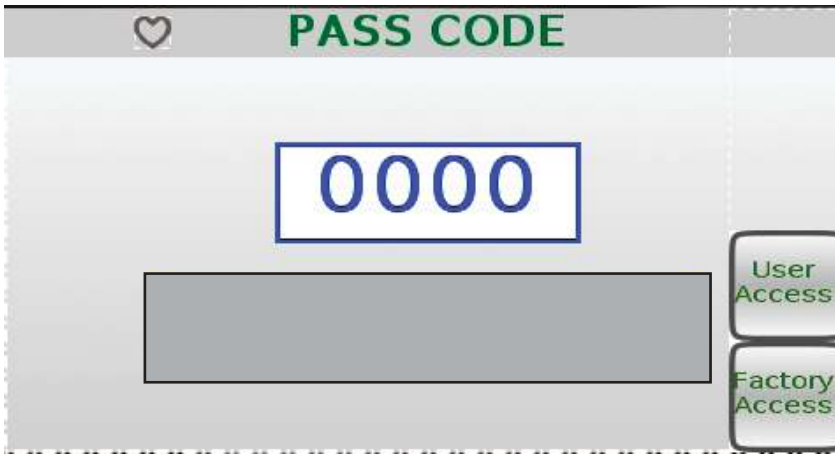


Figure 15

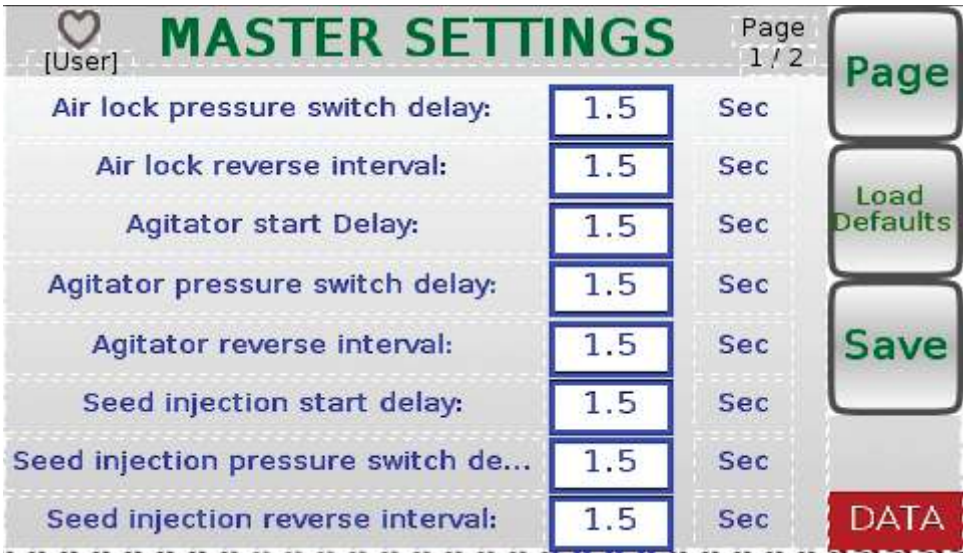


Figure 16

In the MASTER SETTINGS menu (see Figure 16), you can change all of the settings to meet your needs. There are two pages located in the MASTER SETTINGS menu. To change between pages, press the button labeled Page. If you want to change any settings, use the control knob located on the Main Control Panel. Turn knob either left or right to scroll through the settings. Press in on knob to select a setting you want to change and turn the knob either left or right to change the setting. Press in on control knob to deselect a setting. Once the settings are changed, you can save the settings by pressing the button labeled Save. If the changed settings are not desireable, you can either change them again or press the button labeled Load Defaults. By pressing Load Defaults, all of the factory default settings are restored.

NOTES

LUBRICATION LOCATIONS

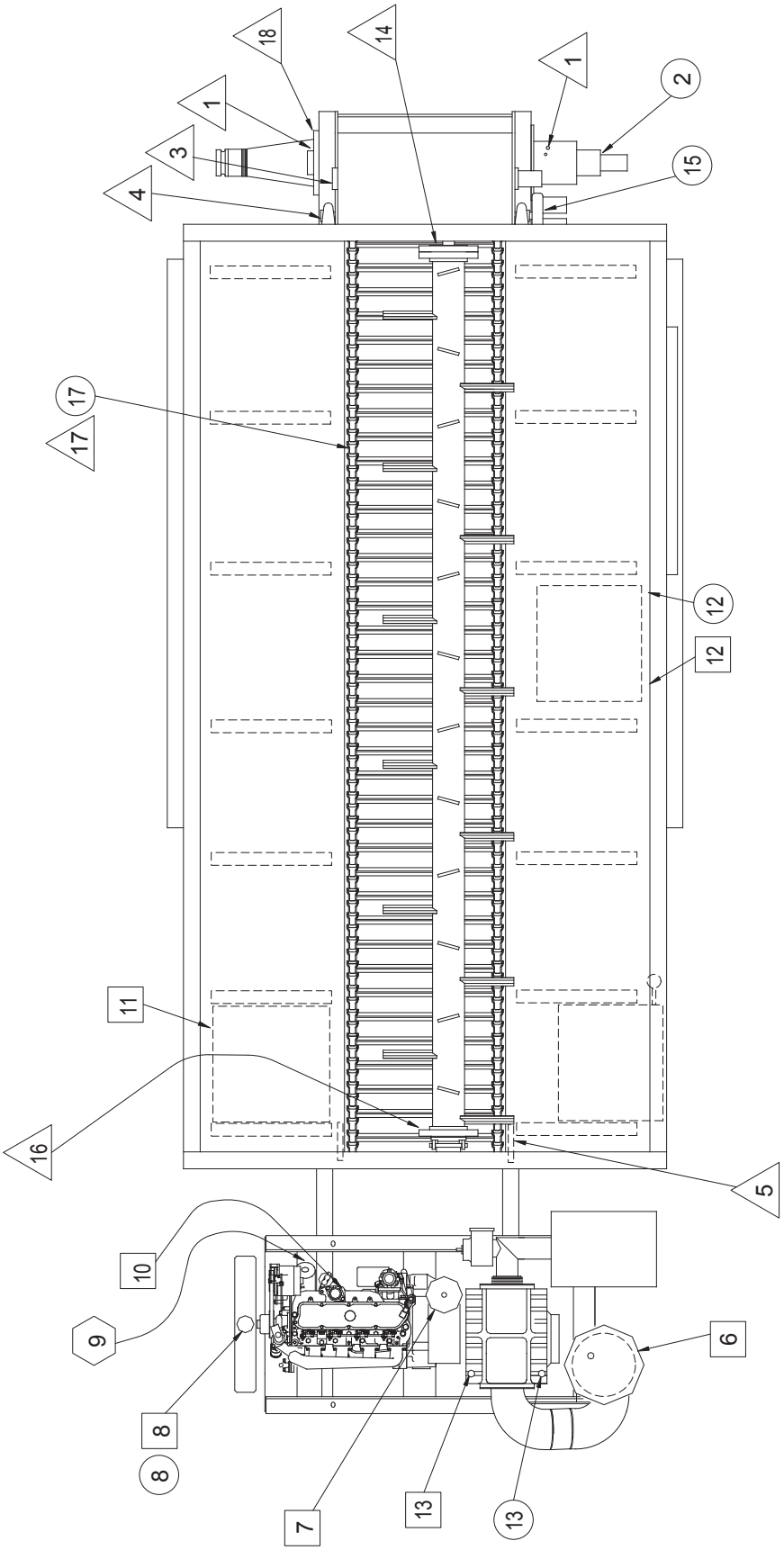


Figure 7

LUBRICATION CHART

Ref. No.	Location	Lubricant	Frequency	Number
1	Airlock Bearing	CL	Weekly	2
2	Change Air Lock Gearbox Oil	GO	50,100, then Seasonally	1
3	Feeder Roll Bearing	CL	Weekly	1
4	Floor Pillow Block Bearing	CL	Weekly	1
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	See Engine Manual	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	Daily	2
	Change Blower Oil	BO	50,100, then Seasonally	2
14	Agitator Bearing	CL	Weekly	1
15	Change Floor Drive Gearbox Oil	GO	50,100, then Seasonally	1
16	Change Agitator Gearbox Oil	GO	50,100, then Seasonally	1
17	Check Chain Tension		Weekly	1
	Lubricate Floor Chain	CH	Seasonally	1
18	Airlock Shaft Seals	CL	Weekly	2

TIME KEY

DAILY (8 hours) 

WEEKLY (50 hours) 

SEASONALLY (500 hours) 

SEE ENGINE MANUAL 

LUBRICANT OR FLUID USED

CL	Chassis Lubricant
BO	Blower Oil Mobil SHC-630 Synthetic
AF	50/50 Antifreeze and Water Mixture
DF	Number 1-D / Number 2-D Diesel Fuel
HO	Hydraulic Oil DTE-13M Hyd. Fluid
GO	SAE 80W90 Gear Oil
CH	Mineral Oil or Chain Lubricant

FLUID CAPACITIES

Fuel - 38 gal (143.8 L)
Hydraulic Oil - 36 gal (136.2 L)
Engine Coolant - 4 gal (15.1 L) 50/50 Mix Only
Engine Oil - See Engine Manual
Agitator Gearbox Oil - 2 qt (1.89 L)
Airlock Gearbox Oil - 20 oz (0.59 L)
Floor Gearbox Oil - Fill to Level Plug
Blower Oil - See Blower Manual

NOTES

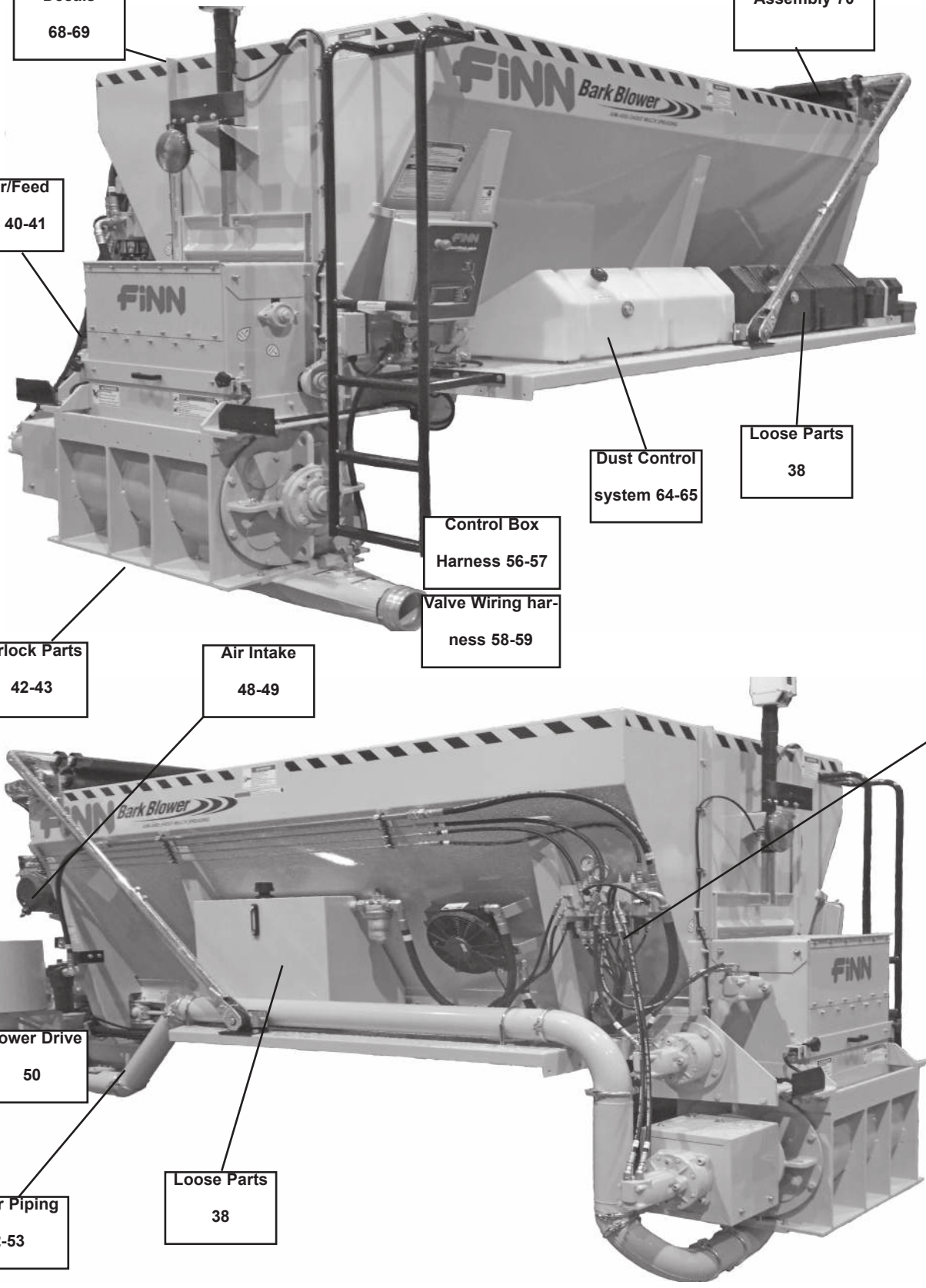
BARK BLOWER

Model 1208
Parts Manual

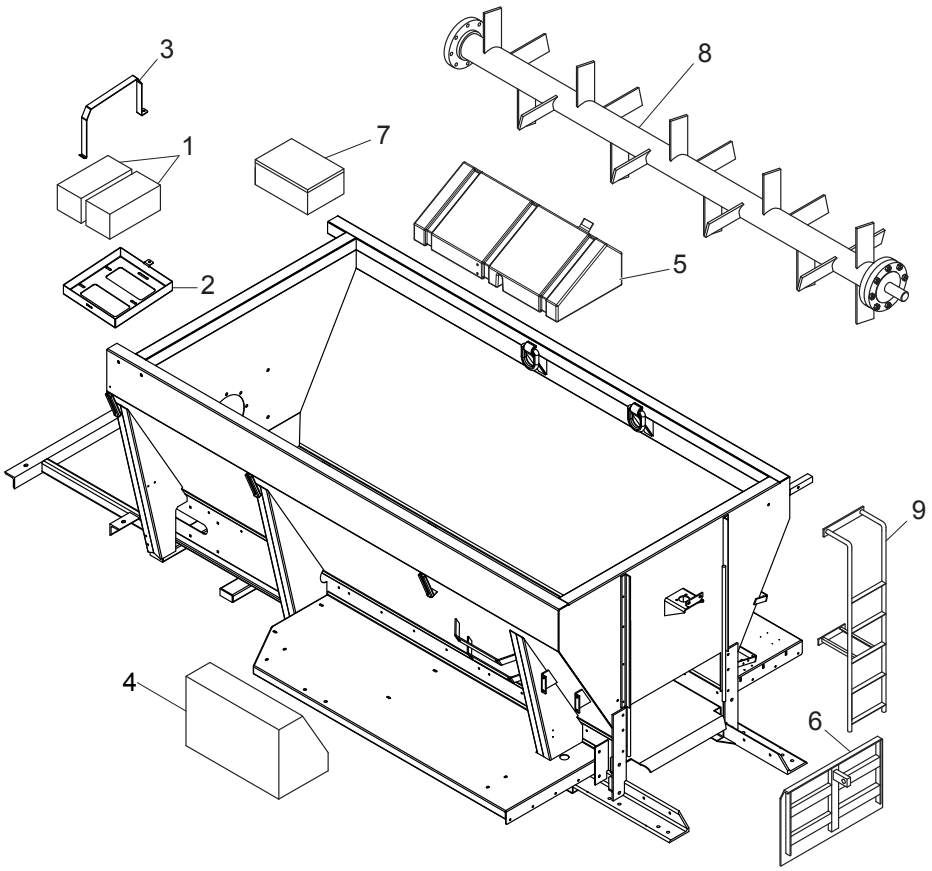
Model MS

NOTES

PICTORIAL REFERENCE



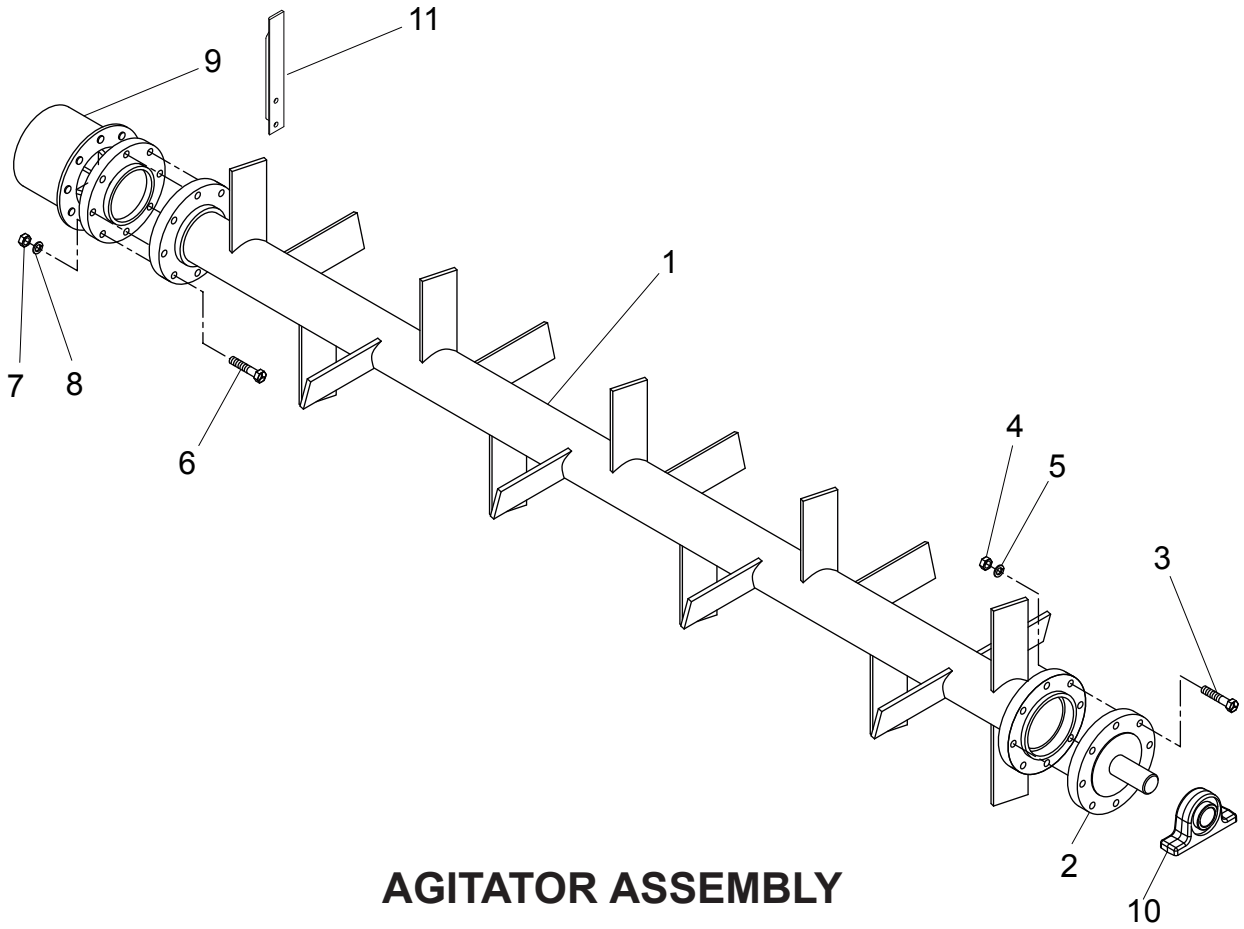
WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE



LOOSE PARTS

Ref. No.	Part Number	Description	No. Req'd
1	011770	Battery Box	2
	011851	Battery	2
2	F400-0031	Battery Tray	1
3	F400-0038	Battery Holddown Strap	1
4	053004	Hydraulic Reservior	1
	011927	Hydraulic Reservoir Suction Strainer	1
	008706	Hydraulic Reservoir Fill Cap	1
5	012693	Fuel Tank	1
	012694	Fuel Level Sender	1
6	052999	Rear Gate Weldment	1
7	052160	Tool Box	1
8	052872-01	Agitator Assembly (see pg. 35)	1
9	053025	Ladder	1
		NOT SHOWN	
	052730-01	Hot Air Hose Cradle	1
	052742	Hose Cradle Draw Latch	2
	052731	1-1/2 in. Rubber Grommet	2

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

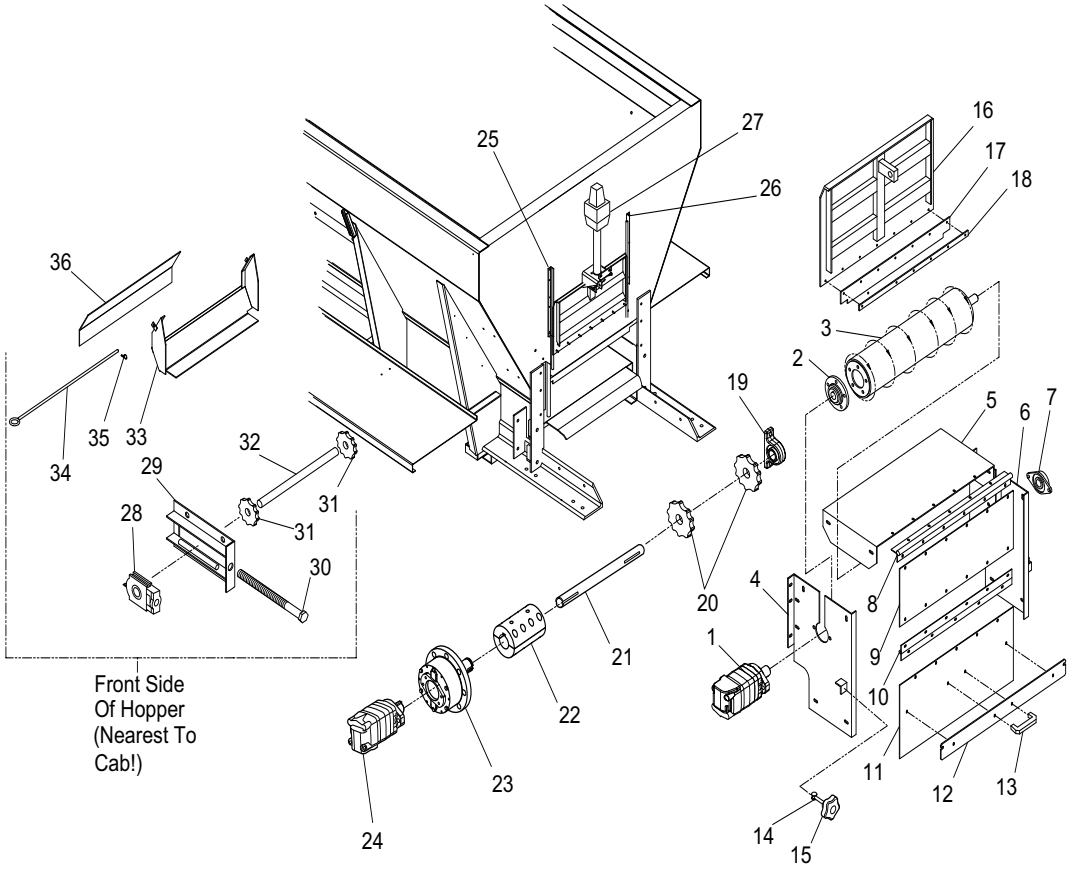


AGITATOR ASSEMBLY

Ref. No.	Part Number	Description	No. Req'd
1	052872-01	Agitator Shaft	1
2	052420	Special Agitator Stub Shaft	1
3	0X1260	3/4-10 UNC HHCS x 3-3/4" Lg.	8
4	00X12L	3/4-10 UNC Lock Nut	8
5	00W12L	3/4" Lock Washer	8
6	0X1040	5/8-11 UNC HHCS x 2-1/2" Lg.	8
7	00Y10L	5/8-11 UNC Lock Nut	8
8	00W10L	5/8" Lock Washer	8
9	052446	Gear Box	1
	WL7-122	1/2-20 Press-In Stud	8
10	052129	Agitator Bearing	1
11	053072	Agitator Scraper	1
		NOT SHOWN	
	052991	Hydraulic Motor	1

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

FLOOR AND FEED ROLL PARTS



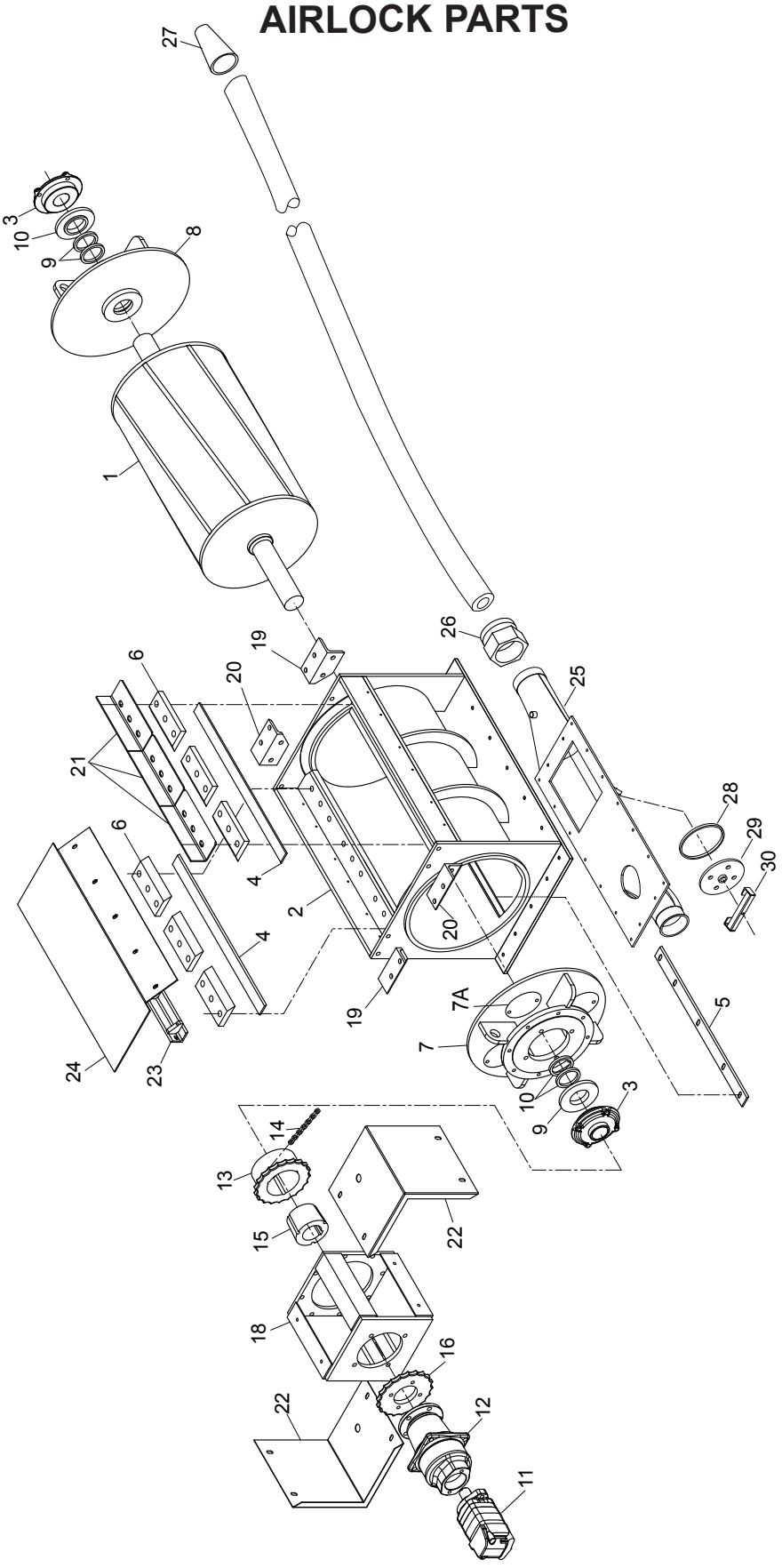
WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

FLOOR AND FEED ROLL PARTS

Ref. No.	Part Number	Description	No Req'd
1	052500	Feed Roll Hydraulic Motor	1
2	045031	Feed Roll Mount Hub	1
3	052676	Feed Roll	1
4	052517-01	Left-Hand Feeder Panel	1
5	F916-0004	Feeder Top Cover	1
6	052517-02	Right-Hand Feeder Panel	1
7	020586	2-Bolt Feed Roll Bearing	1
8	052506-01	Top Feeder Door Hinge	1
9	F916-0006-01	Top Feeder Door	1
10	052506-02	Lower Feeder Door Hinge	1
11	F916-0006-02	Bottom Feeder Door	1
12	052502-02	Door Stiffener Strap	1
13	055586	Feeder Door Pull Handle	1
14	052703	Swing Bolt	2
15	052699	Black Knob	2
16	052999	Rear Gate	1
17	052372-01	Rear Gate Seal	1
18	052372-02	Rear Gate Seal Strap	1
19	045019	Rear Floor Bearing	1
20	052224	Rear Floor Sprocket	2
21	052986	Rear Floor Drive Shaft	1
22	053023	Steel 2 Piece Coupling	1
23	052989	Floor Gear Box	1
24	052990	Hyd Motor - Floor	1
	055517	Floor Motor Gasket	1 per
25	F916-0001-07	Left-Hand Gate Rail	1
26	F916-0001-08	Right-Hand Gate Rail	1
27	052985	Gate Hydraulic Cylinder	1
28	052220	Take-up Bearing	2
29	052780	Bearing Frame	2
30	052780-06	Adjustment Rod	2
31	075218	Front Idler Sprocket	4
32	052507-02	Front Idler Shaft	2
33	F916-0045	Front Clean-out Frame	1
34	052352-08	Front Clean-Out Door Rod	1
36	052821	Front Clean-Out Door	1
		NOT SHOWN	
	052996	Floor Assy	1
	053032	Belt Scraper	1
	053054-01	Front Floor Seal	1
	053054-02	Front Seal Mount	1
	053054-03	Front Seal Retainer	1
	053068-01	Chain Cover Strap	6
	053068-03	Dog House Retainer Strap	2
	053069	Rubber Floor Chain Cover	2
	F1216-0024	Chain Guard Mount	6

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

AIRLOCK PARTS



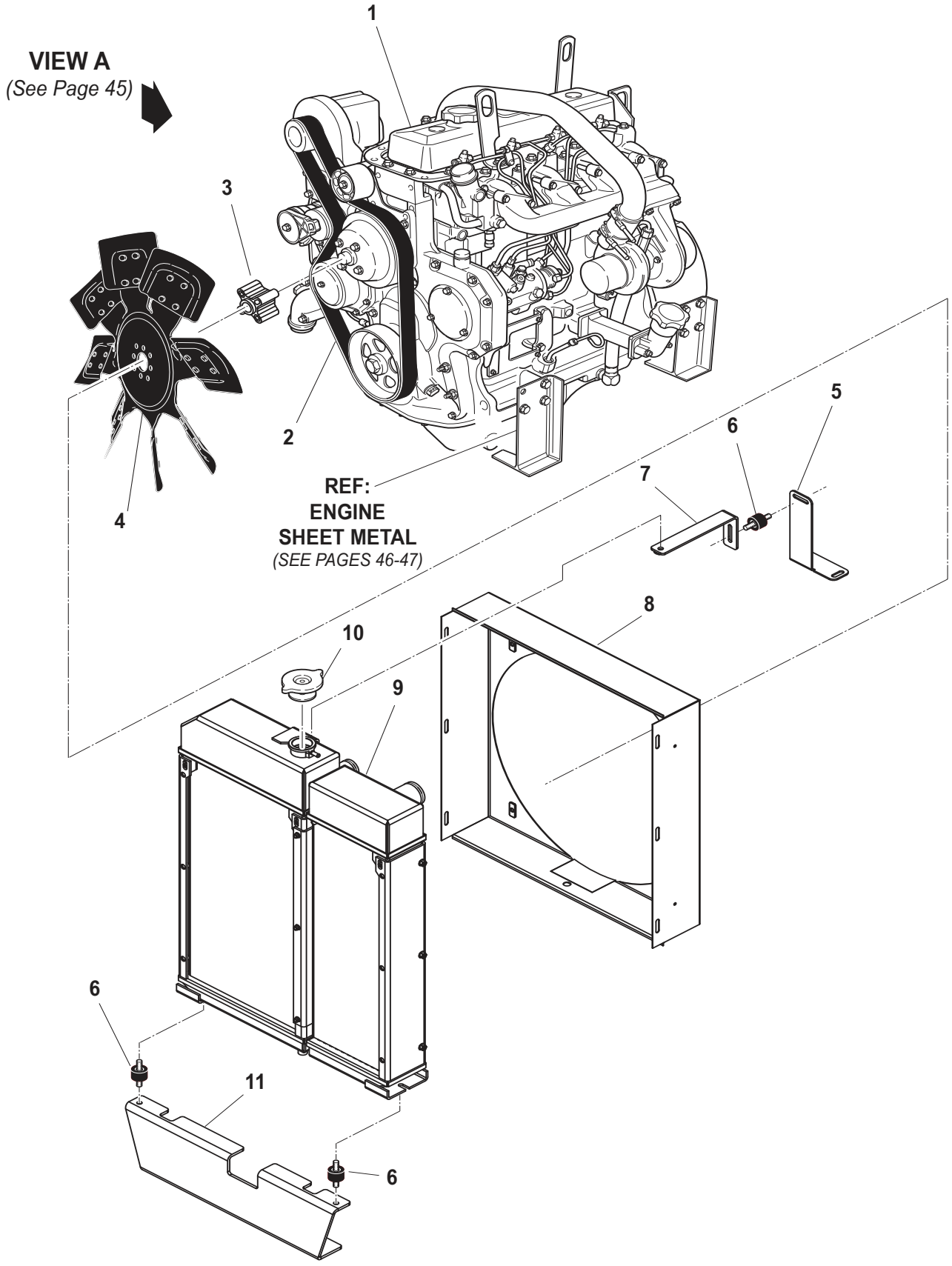
WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

AIRLOCK PARTS

Ref. No.	Part Number	Description	No. Req'd
	052665	18 x 33 Standard Duty Airlock	1
1	052752	Rotor Weldment	1
2	052753	Housing Weldment	1
3	052754	Flange Bearing	2
4	045296-01	Top Knife	2
5	045296-02	Bottom Wiper Knife	1
6	052757	Top Knife Clamp	6
7	052758	Drive Endplate	1
7A	052762	Cleanout Door	8
8	052759	Discharge Endplate	1
9	052760	Packing Media	2
10	052761	Packing Gland	2
11	052535	Airlock Hydraulic Motor	1
12	045378	Gearbox	1
13	045199	Coupling Half	1
14	045201	Coupling Chain	1
15	045202	Taper Bore Bushing	1
16	045230	Machined Coupling Sprocket	1
17	190131-48	3/4 Keystock x 3" Lg. (Not Shown)	1
18	045254	Gearbox Mount	1
19	045273-01	Left Mounting Angle	2
20	045273-02	Right Mounting Angle	2
21	F1240-0039-02	Knife Cover Plate	3
22	F1240-0041	Coupling Gaurd	2
23	F916-0064	Rear Catch Pan Mount	1
24	F1216-0017	Rear Catch Pan	1
25	052987	Inlet Pan Weldment	1
26	012306	5" Male Aluminum Adapter	1
27	052878	Red Diffuser Cone 4"	1
28	053059	Clean Out Door Gasket	1
29	F1216-0015	Burnout Door	1
30	053001	Burnout Door Clamp Assy	1

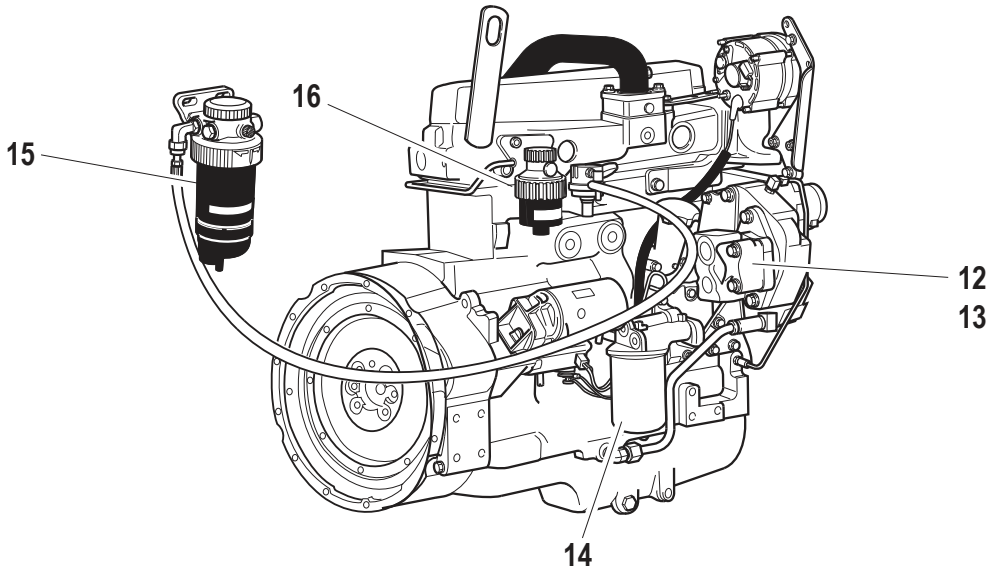
WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

ENGINE AND RADIATOR



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

VIEW A

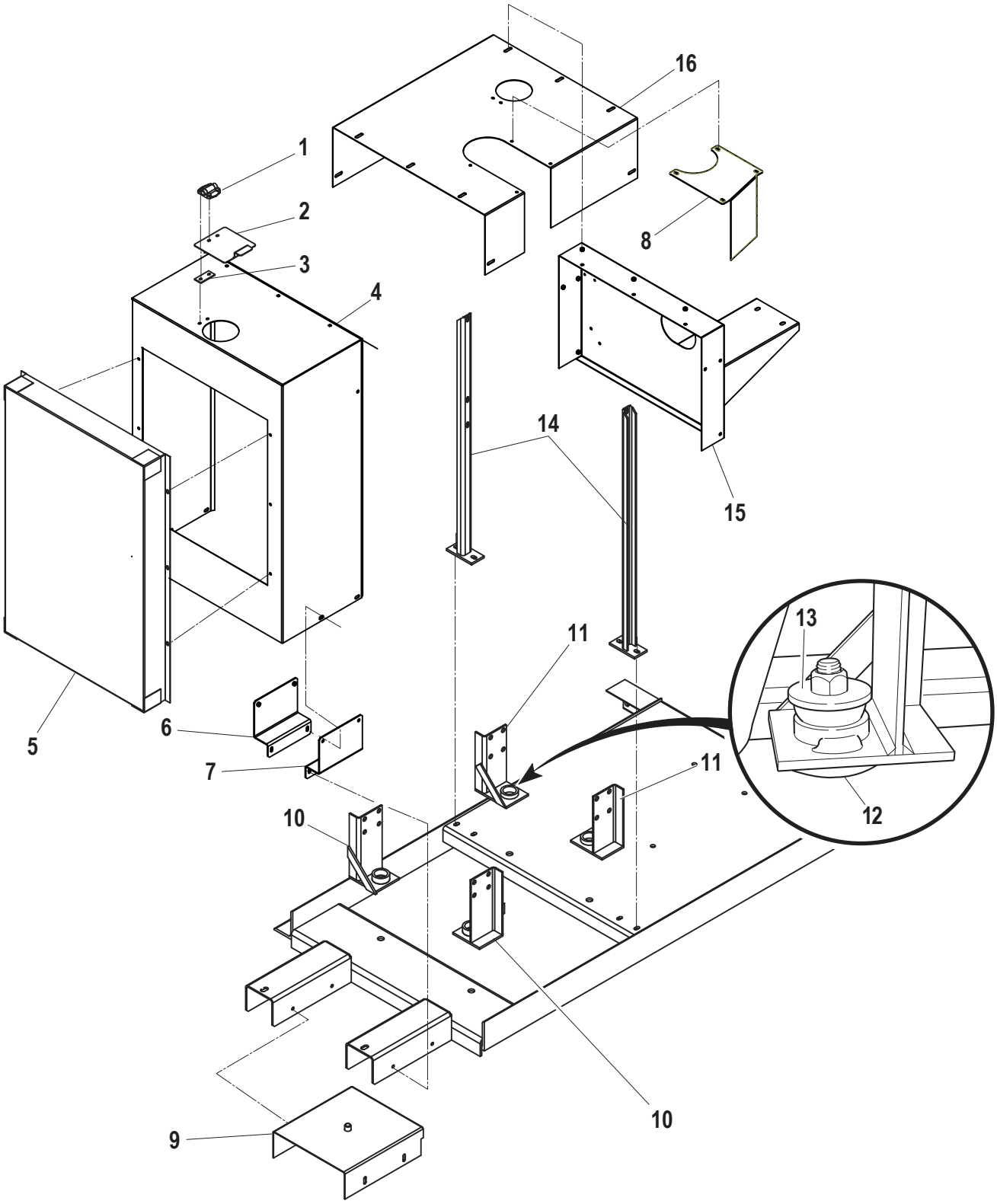


ENGINE AND RADIATOR

Ref. No.	Part Number	Description	No. Req'd
1	023916	4045T Tier 3 Engine Assembly	1
2	JDR524005	Fan Belt	1
3	JDSD443	Fan Spacer	1
4	JDART24834	Pusher Fan	1
5	F330-0135	Radiator Arm Support Bracket	1
6	023438	Rubber Mount	3
7	F330-0131	Radiator Support Bracket	1
8	JDSD284	Fan Guard	1
9	JD50-0532	Radiator	1
10	023807	Radiator Cap	1
11	F330-0130	Radiator Mount	1
12	053085	Hydraulic Pump	1
13	JDR96934	Pump Gasket	1
14	JDRE504836	Oil Filter	1
15	JDRE517181	Secondary Fuel Filter	1
16	JDRE509031	Primary Fuel Filter	1

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

ENGINE SHEET METAL



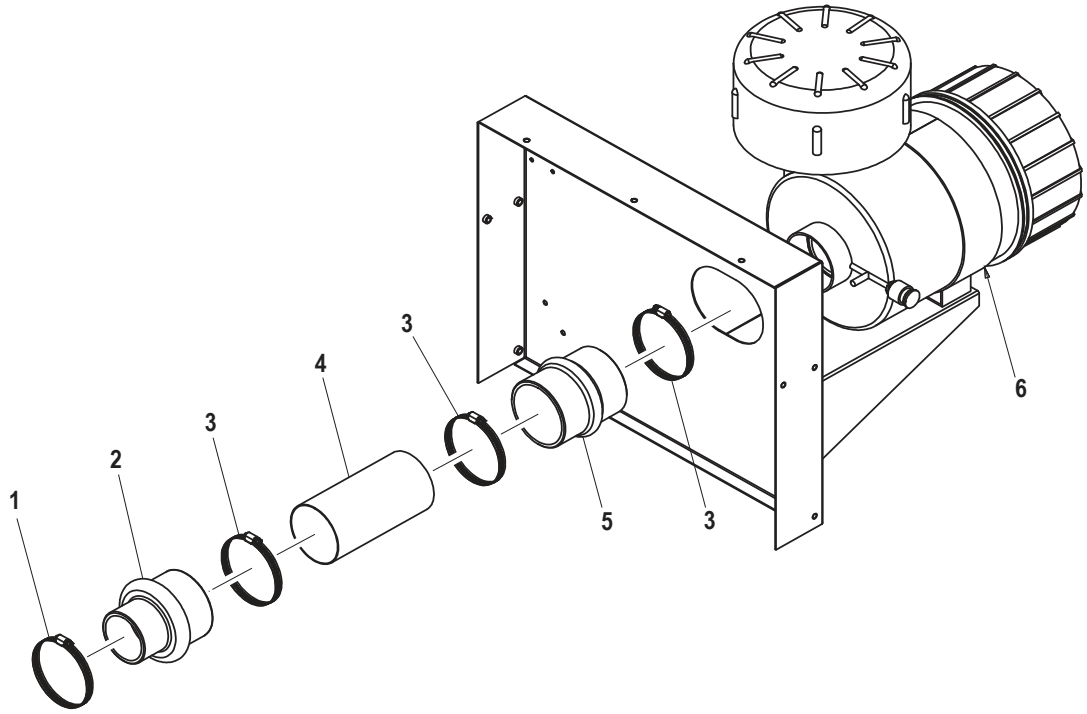
WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

ENGINE SHEET METAL

Ref. No.	Part Number	Description	No. Req'd
1	055669	Lock Positioning Hinge	1
2	F260-0006-02	Radiator Cap Cover	1
3	F260-0006-03	Hinge Spacer	1
4	F1216-0027	Radiator Shroud	1
5	F1216-0012	Radiator Screen	1
6	F1216-0031-01	Left Radiator Shroud Mount	1
7	F1216-0031-02	Right Radiator Shroud Mount	1
8	F1216-0030	Engine Exhaust Cover	1
9	F170-0020	Radiator Pan	1
10	012753	Front Engine Foot	2
11	052397	Rear Engine Foot	2
12	007433	Rubber Shock Mount	6
13	007887	Snubbing Washer	4
14	008664	Rear Panel Mount	2
15	F1216-0028	Rear Engine Panel	1
16	F1216-0029	Engine Top Cover	1

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

ENGINE AIR INTAKE

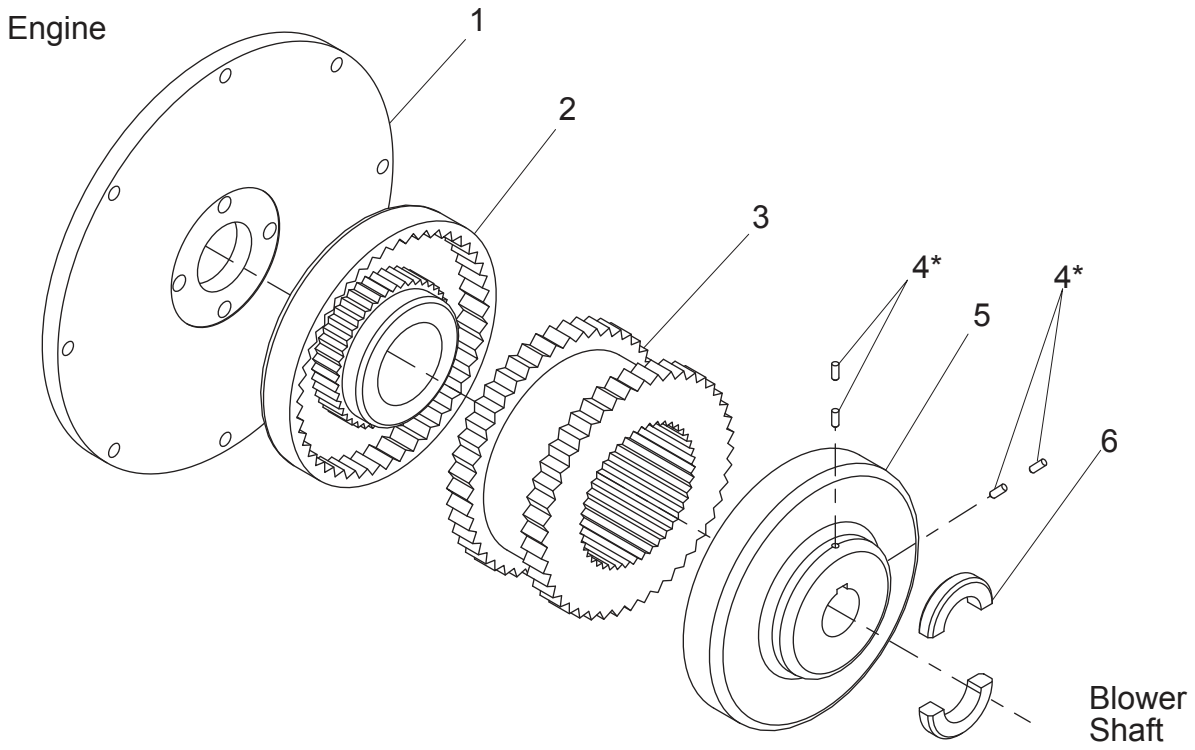


WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

ENGINE AIR INTAKE

Ref. No.	Part Number	Description	No. Req'd
1	055496	AC 300 Clamp	1
2	055498	Hump Adapter #RH430	1
3	055335	AC 400 Clamp	3
4	053084	Air Cleaner Tube	1
5	055367	Hump Adapter #RH440	1
6	013135	Engine Air Cleaner Assembly	1
	013135-M	Main Filter Element	1
	013135-M	Safety Filter Element	1

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

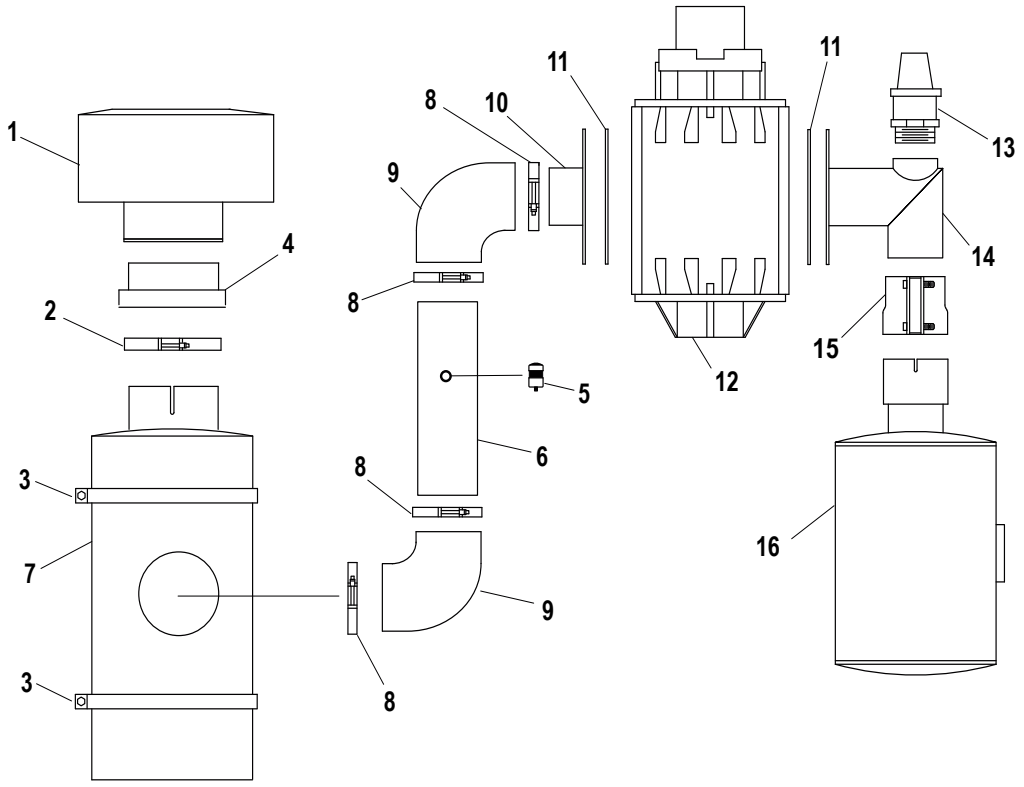


***Note:** Part number 045003 blower coupling half must be locked with double setscrews (two on top of each other.)

BLOWER DRIVE ASSEMBLY

Ref. No.	Part Number	Description	No. Req'd
1	045039	Flywheel	1
2	045002	Flywheel Mount Coupling Half	1
3	045004	Coupling Insert	1
4	Z0606CPK	Coupling Set Screw	4
5	045003	Blower Coupling Half	1
6	045118	Lock Collar	1
		NOT SHOWN	
	F1240-0003-01	Left Coupling Gaurd	1
	F1240-0003-02	Right Coupling Gaurd w/Weldnut	1

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

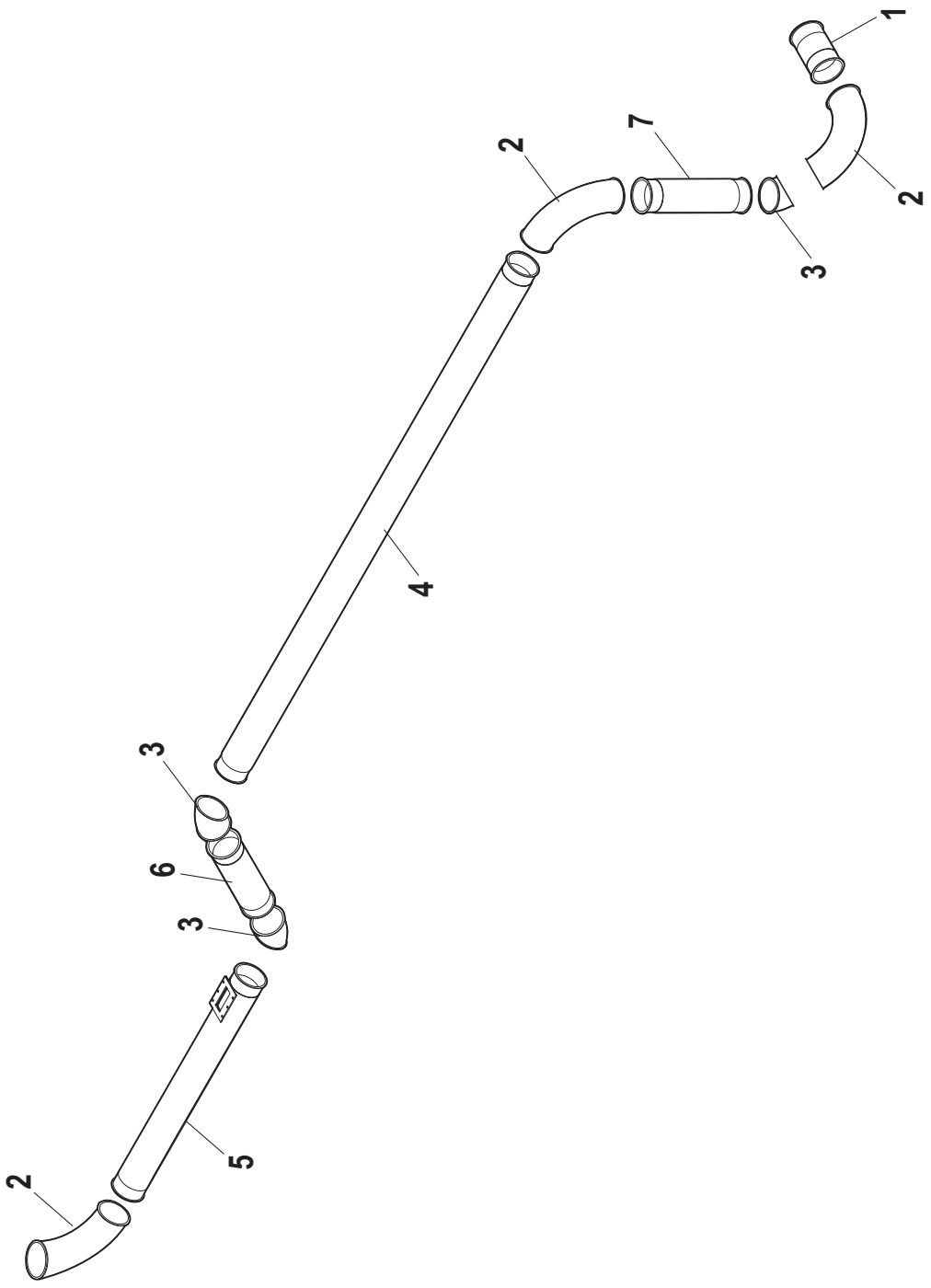


BLOWER SYSTEM

Ref. No.	Part Number	Description	No. Req'd
1	052905	Pre-Cleaner	1
2	052905-C	Pre-Cleaner Clamp	1
3	052907	Filter Bracket	2
4	052905-B	Pre-Cleaner Bushing	1
5	053055	Filter Gauge	1
6	052919-02	Inlet Tube	1
7	052906	Canister Filter	1
	052904-01	Filter Stand (Not Shown)	1
8	052908	7" Band Clamp	4
9	052915	7" Rubber Elbow	2
10	052919-01	Blower Inlet Flange	1
11	045192-01	Blower Gasket	2
12	045001	Blower	2
	052532-01	Blower Foot (not shown)	2
13	052937	Relief Valve	1
14	052994	Blower Discharge Weldment	1
	052778	Pressure Gauge (not shown)	1
15	045186	5" Lap Joint Clamp	1
16	053000	Outlet Silencer	1
	052997	Silencer Support (not shown)	1

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

BLOWER PIPING

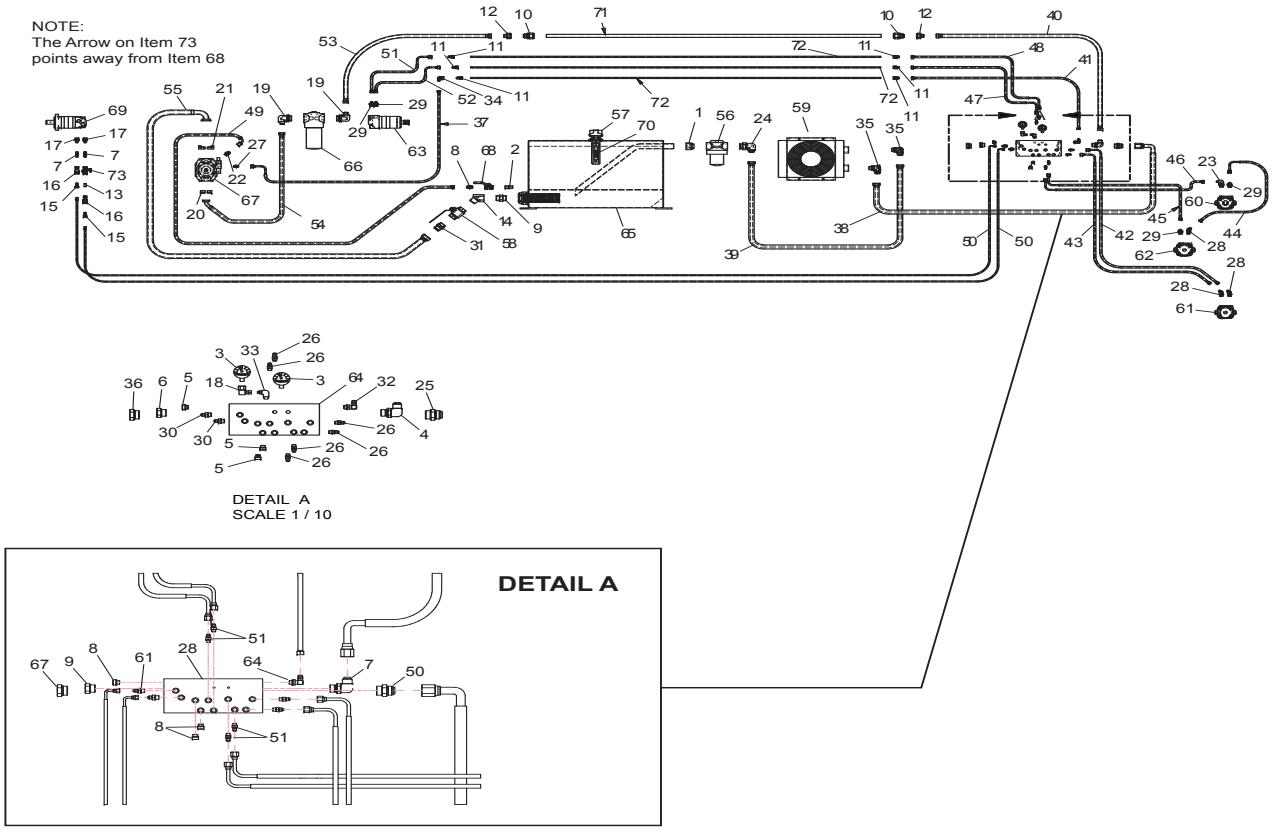


WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

BLOWER PIPING

Ref. No.	Part Number	Description	No. Req'd
		Model 1208 Blower Piping Assembly	1
1	052981-01	1208/1216 Short Air Tube Weldment	1
2	045338	5” 90° Elbow	3
3	045362	5” 45° Elbow Segment	3
4	052981-05	1208 Long Air Tube Weldment	1
5	053029-01	1216 Seed Hopper Air Tube Weldment	1
6	052981-06	1208 Connector Air Tube Weldment	1
7	052981-02	1208/1216 Vertical Air Tube Weldment	1
		NOT SHOWN	
	045336	5" Jacobs Pull Ring	12
	045337	5" Jacobs Gasket	12

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



HYDRAULIC SYSTEM

Ref. No.	Part Number	Description	No. Req'd
1	008708	Lenz #20-APC	1
2	011504	Lenz #8PN	1
3	012044	Pressure Gauge #CF-5000-25	2
4	012091	Lenz #A3405-12	1
5	012103	Lenz #STP-06	3
6	012362	Lenz #12 STP Plug	1
7	012419	Midstate #6505-04-04	2
8	041053	Lenz #3105-8-8	1
9	041150	Lenz #20PN	1
10	045203	Lenz #100-16-F16	2
11	045204	Lenz #100-6-F6	6
12	052028	Lenz #2406-16-12	2
13	052748	Lenz #4SPN	1
14	053018	Lenz #20-45SE	1
15	053046	1/4" Plug x 1/4" Female Pipe - H2F2	2
16	053047	1/4" Socket x 1/4" Female Pipe - 2HF2	2
17	053051	Lenz #A3105-4-10	2
18	053076	Airway #6503-4-4	1
19	053078	Lenz #A3405-12-20 (Midstate #6801-12-20)	2
20	053114	Flange Kit #SKS-12	1
21	053115	Flange Kit #SKS-20	1
22	055232	Lenz #A3105-8-8 (Midstate#6400-08-08)	1
23	055309	Lenz #A3405-6-10 (Midstate #6801-6-10)	1
24	055358	Lenz #A3405-16-20	1
25	055383	Lenz #A3105-16 (Midstate #6400-16-16)	1

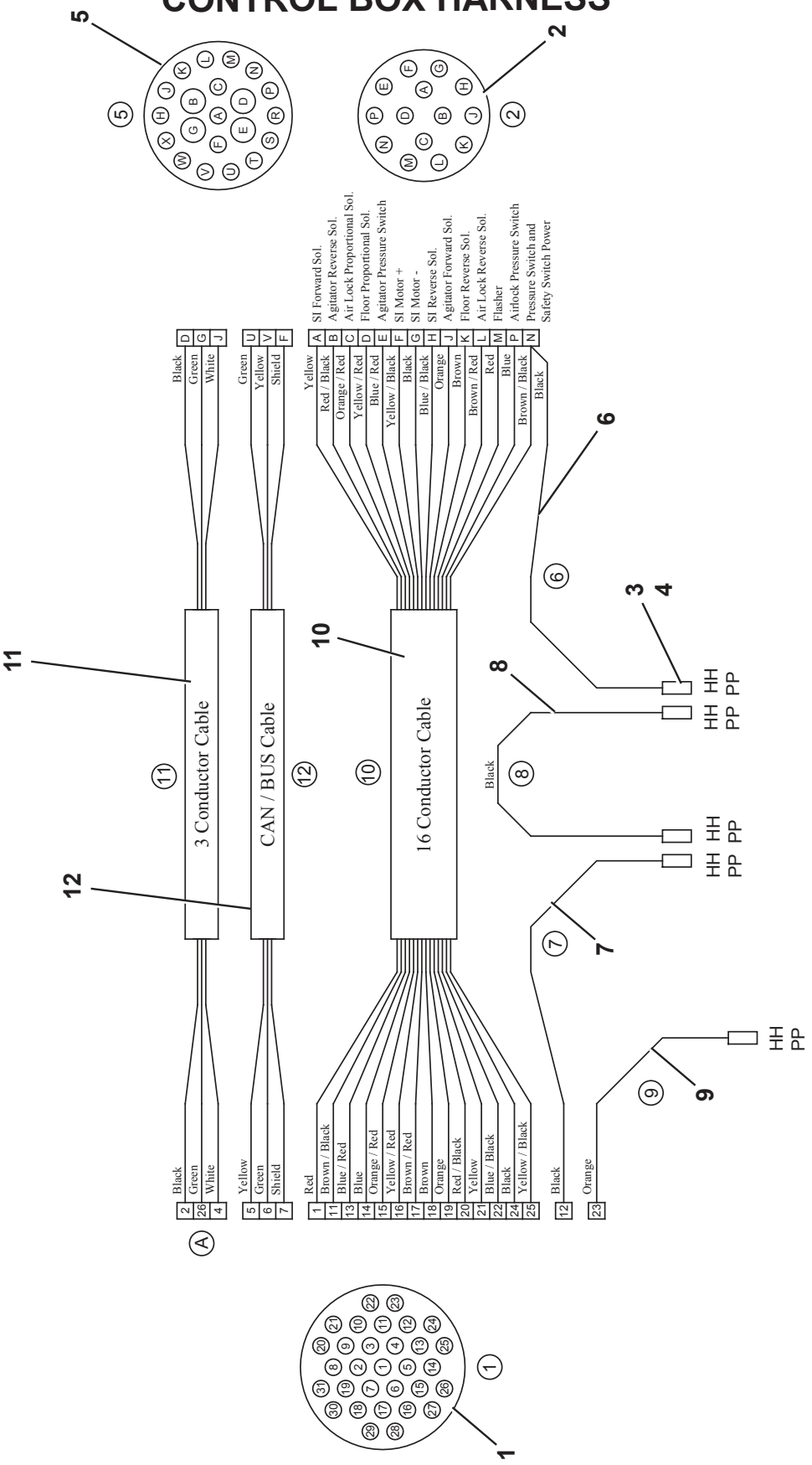
WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

HYDRAULIC SYSTEM

Ref. No.	Part Number	Description	No. Req'd
26	055601	Lenz #A3105-6-6	6
27	055602	Lenz #A3105-6-4 (Midstate #6400-6-4)	1
28	055741	Lenz #A3355-6-10	3
29	085014	Lenz #A3105-6-10 (Midstate #6400-6-10)	4
30	FW65217	Lenz #A3105-4-6 (Midstate #6400-04-06)	2
31	FW65348	Lenz #3105-20-20 (Midstate #2404-20-20)	1
32	FW71448	Lenz #A3405-6-6	1
33	FW71450	Lenz#3405-4-4	1
34	FW71636	Lenz #3505SW-6 (Midstate #6500-06-06)	1
35	FW75113	Lenz #A3405-12-16 (Midstate #6801-12-16)	2
36	FW75199	Lenz #STP-16	1
37	052554	3/8" 100R17 Hose	1
38	053015-01	1" 100R1 Hose	1
39	053015-02	1" 100R1 Hose	1
40	053015-03	3/4" 3000 psi Hose	1
41	053015-04	3/8" 100R17 Hose w/ #6 FJIC BE x 42"	1
42	053015-05	3/8" 100R17 Hose w/ #6 FJIC x #6	1
43	053015-06	3/8" 100R17 Hose w/ #6 FJIC x #6	1
44	053015-07	3/8" 100R17 Hose w/ #6 FJIC x #6	1
45	053015-08	3/8" 100R17 Hose w/ #6 FJIC x #6	1
46	053015-09	3/8" 100R17 Hose w/ #6 FJIC x #6	1
47	053015-10	3/8" 100R17 Hose w/ #6 FJIC x #6	1
48	053015-11	3/8" 100R17 Hose w/ #6 FJIC x #6	1
49	053015-12	1/2" 100R17 Hose w/ #8	1
50	053015-13	1/4" 100R17 Hose w/ #4	2
51	053045-04	3/8" 100R17 Hose w/ #6	1
52	053045-05	3/8" 100R17 Hose w/ #6	1
53	053079-02	3/4" 100R17 Hose w/ #12	1
54	053089-03	3/4" 300 psi Hose w/ #12	1
55	053089-04	1-1/4" 100R4 Hose w/ #20	1
56	008702	Hydac Low Pressure Filter Assembly	1
57	008706	Hydac Filler Breather Assembly	1
58	012083	1-1/4" Stainless Steel Ball Valve	1
59	013192	AKG DC16S-12-TC115 Heat Exchanger	1
60	052500	Char-lynn Hyd Motor #104-1009	1
61	052535	Eaton Hyd. Motor #104-1021-006	1
62	052990	Char-Lynn Motor 104-1017-006	1
63	052991	Char-Lynn Motor 104-1032-006	1
64	053086	Custom Manifold	1
65	053004	Hydraulic Resevoir	1
66	053077	Hydac Filter Ass'y #02071996	1
67	053085	Rexroth Pump	1
68	070122	1/2 NPT Ball Valve	1
69	070660	Hydraulic Motor 104-1028-006	1
70	080329	Hydraulic Level Gauge	1
71	202576SS	Tubing 1 OD X .049 Wall SS	1
72	202097SS	Tubing 3/8 OD X .035 Wall SS	3
73	FW71203	Deltrol F20BK Flow Control Valve	1

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

CONTROL BOX HARNESS



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

CONTROL BOX HARNESS

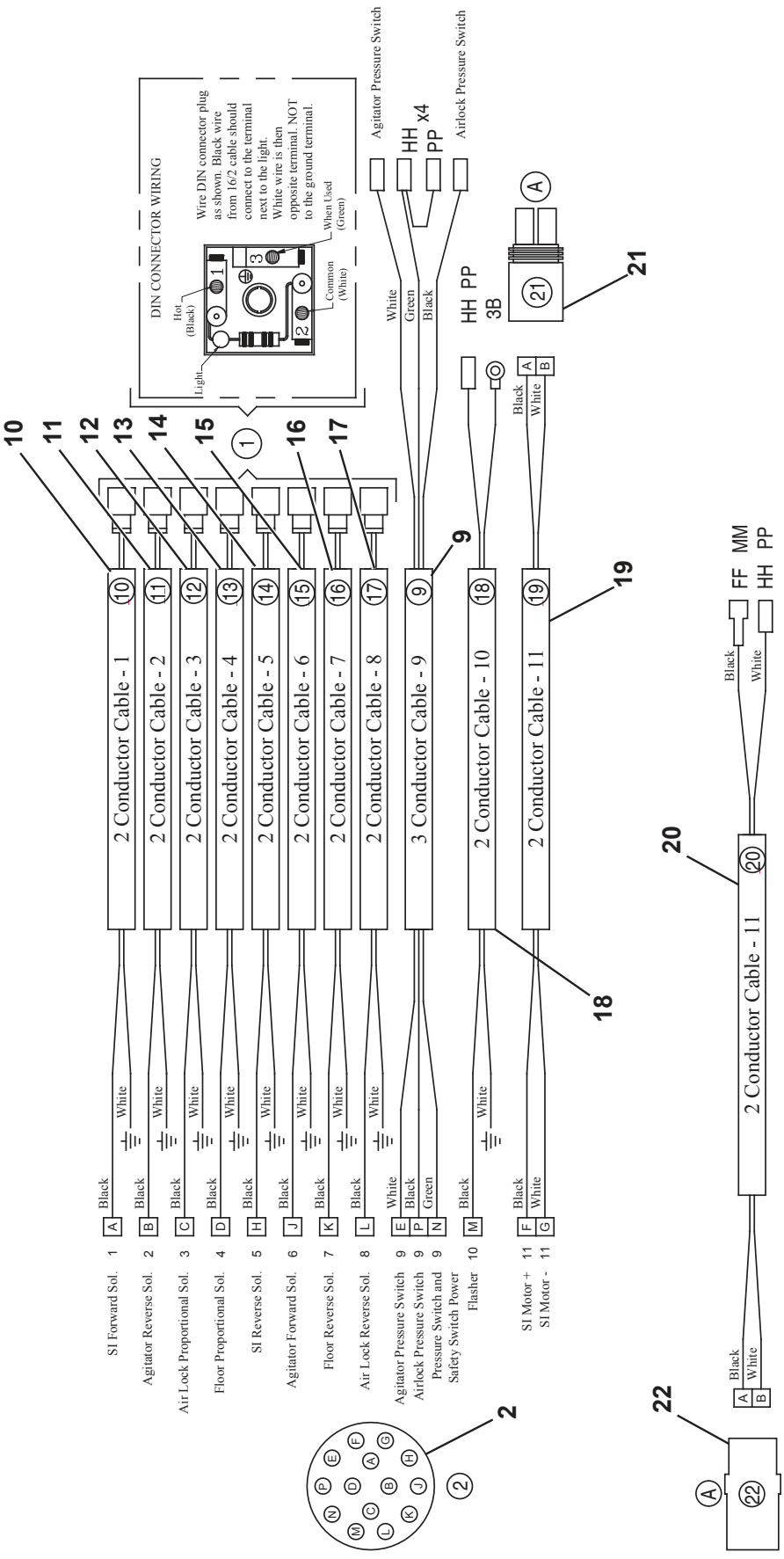
	Part Number	Description	No. Req'd
	053060	Control Box Wiring Harness	
1	053017	Deutsch #HD36-24-31ST	1
2	053042	Deutsch #34-18-14PT Receptacle	1
3	170019	SINGLE CIR RECEPT HSG 480054-3	5
4	170023	FASTON RECEPT #42282-2	5
5	170101	Deutsch #HDP26-24-21SE Plug	1
6	190051	WIRE 16GA BLACK SAE SXL	48"
7	190051	WIRE 16GA BLACK SAE SXL	59"
8	190051	WIRE 16GA BLACK SAE SXL	100"
9	190058	WIRE 16GA ORANGE SAE SXL	37"
10	190108	16 CONDUCTOR SDN CABLE	96"
11	190146	16 GA./3 Conductor SOW-A Cable	242"
12	190228	Datacell 1939 TF Can-Bus Cable	242"
13	170111	Deutsch Socket (16 Ga.)	41
14	170112	Deutsch Socket (12 Ga.)	2
15	170110	Deutsch Socket (16 Ga.)	24

ELECTRICAL COMPONENTS NOT INCLUDED IN HARNESSES

023814	Electric Throttle Actuator	1
FW71978	Fuel Level Sender	1
007706	Oil Gauge	1
008473	Oil Line Kit	1
021839	Temperature Gauge	1
012537	Temperature Adapter Kit	1
FW71972	Fuel Gauge	1
JDRE54092	Engine Starter	1
JDTY24485	95A Alternator	1
022891	Solenoid Relay	1
011851	12-Volt Battery	1
031031	Battery Cable	1
010516	Ground Strap	1
011770	Battery Box	1
FW75186	Hydraulic Oil Cooler w/Fan	1
FW75186-F	Fan Only	1

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

VALVE WIRING HARNESS



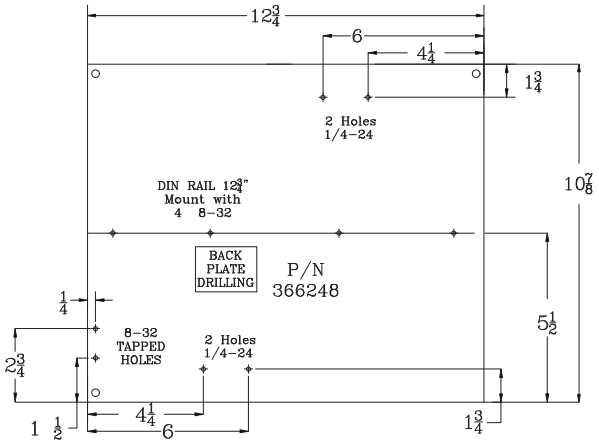
WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

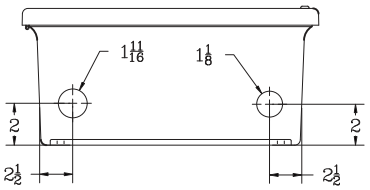
VALVE WIRING HARNESS

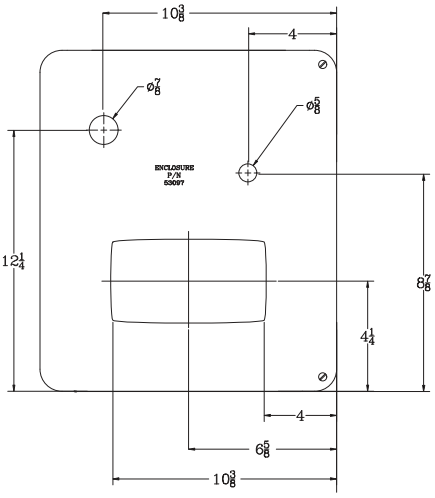
	Part Number	Description	No. Req'd
1	045136	Lighted DIN (2+GND)	8
2	053042	18-14PT Receptacle	1
3	170004	Ring Tongue 16-14 1/4	1
4	170018	Single CIR HSG	1
5	170019	Single CIR Recept HSG	6
6	170022	Tab	1
7	170023	Recept	6
8	190055	Wire 16GA Green SAE SXL	2"
9	190146	16 GA./3 Conductor SOW-A Cable	25"
10	190156	16 GA./2 Cond. SOW-A Cable (Black)	25"
11	190156	16 GA./2 Cond. SOW-A Cable (Black)	25"
12	190156	16 GA./2 Cond. SOW-A Cable (Black)	25"
13	190156	16 GA./2 Cond. SOW-A Cable (Black)	25"
14	190156	16 GA./2 Cond. SOW-A Cable (Black)	25"
15	190156	16 GA./2 Cond. SOW-A Cable (Black)	25"
16	190156	16 GA./2 Cond. SOW-A Cable (Black)	25"
17	190156	16 GA./2 Cond. SOW-A Cable (Black)	25"
18	190156	16 GA./2 Cond. SOW-A Cable (Black)	72"
19	190156	16 GA./2 Cond. SOW-A Cable (Black)	3"
20	190156	16 GA./2 Cond. SOW-A Cable (Black)	
21	035078	Male Connector	1
22	071208	Female Connector Assy.	1

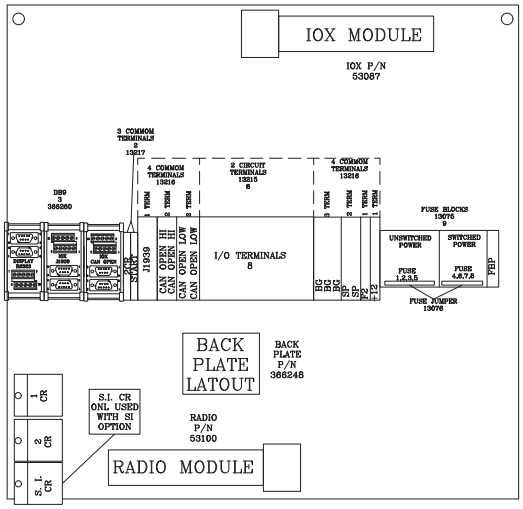
WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

ENGINE WIRING









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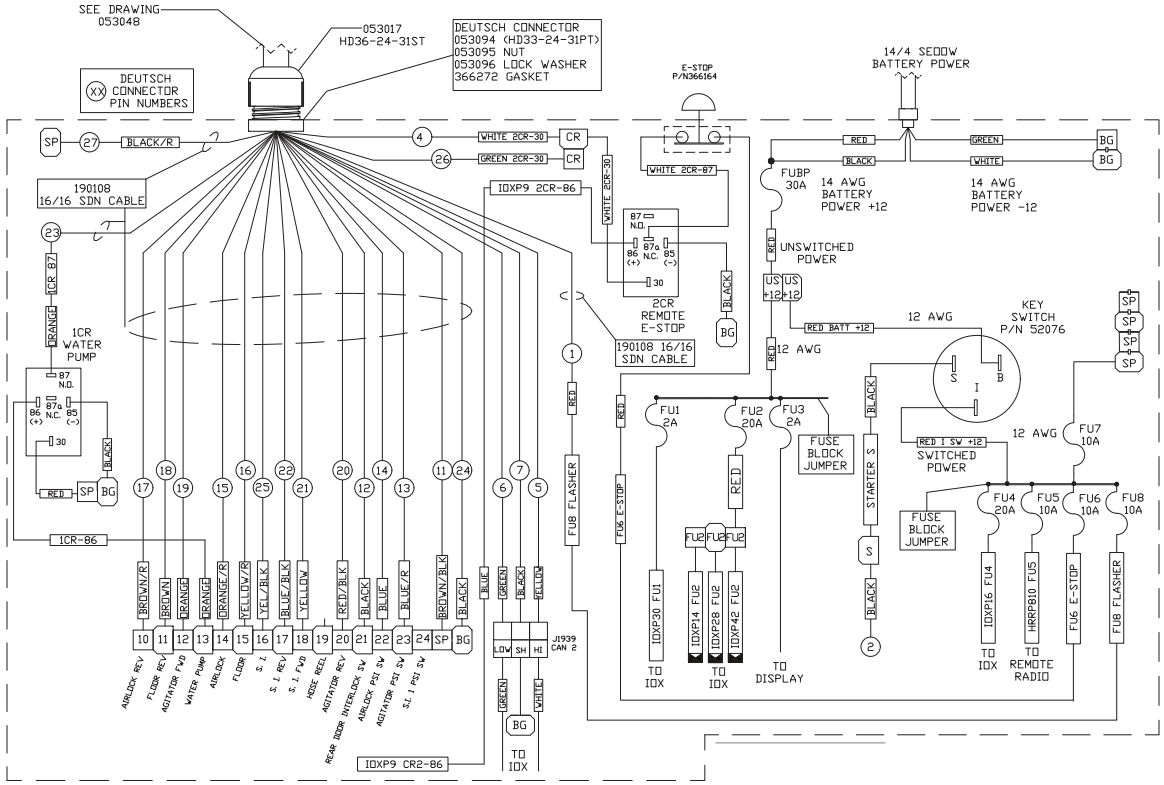
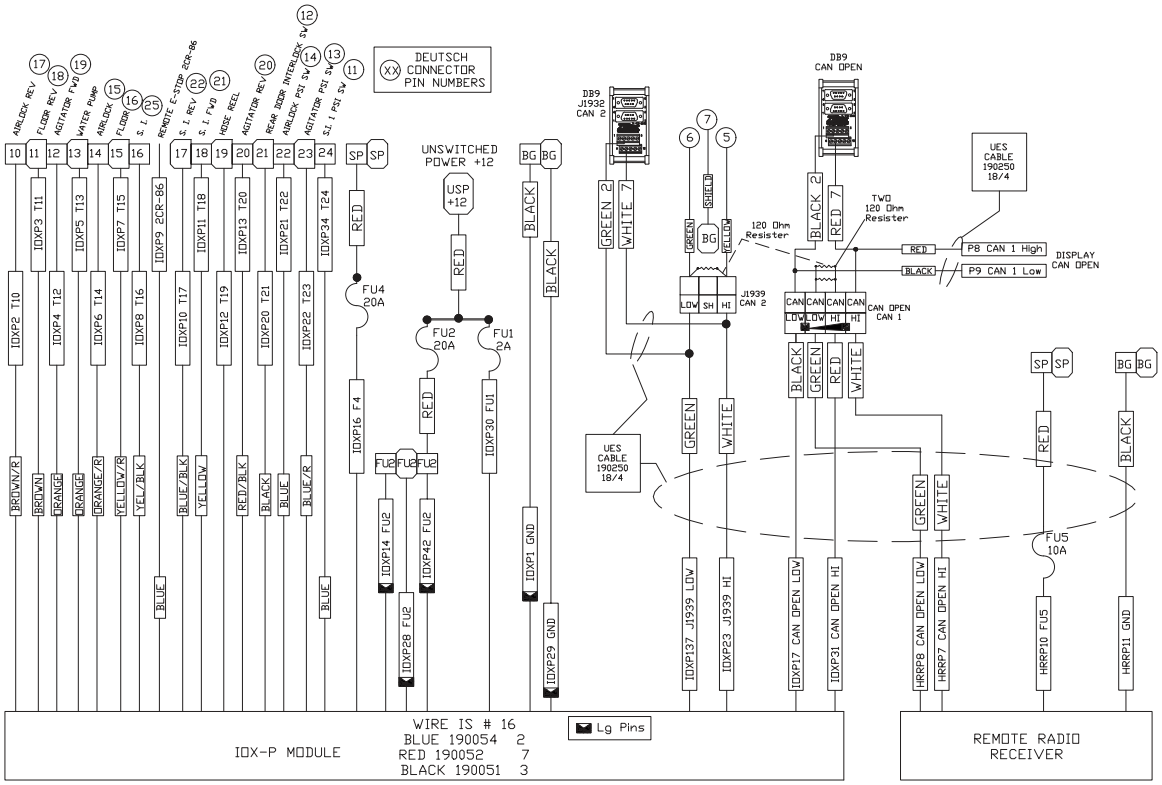
ENGINE WIRING



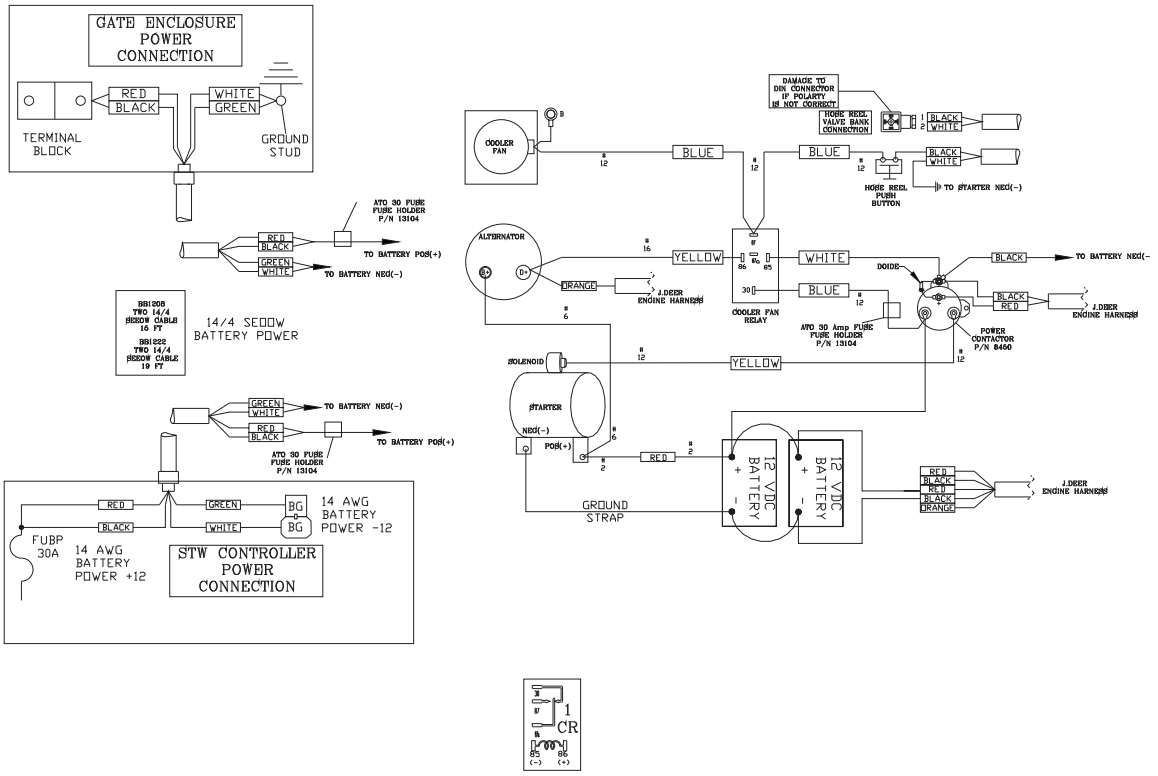


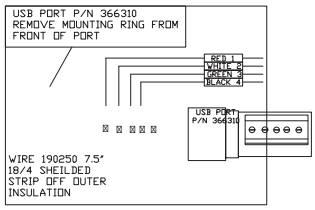
NOTE
MUST HAVE A 120 OHM TERMINATION RESISTOR AT END OF CAN BUS FOR 60 OHMS TOTAL RESISTANCE
ALL WIRING IS 16 GAUGE UNLESS NOTED

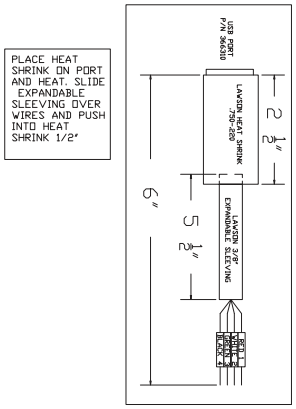
FU1 FU3 FU5 IS 2 AMP
FU4 FU7 FU8 IS 10 AMP
FU6 IS 15 AMP
FU2 IS 20 AMP

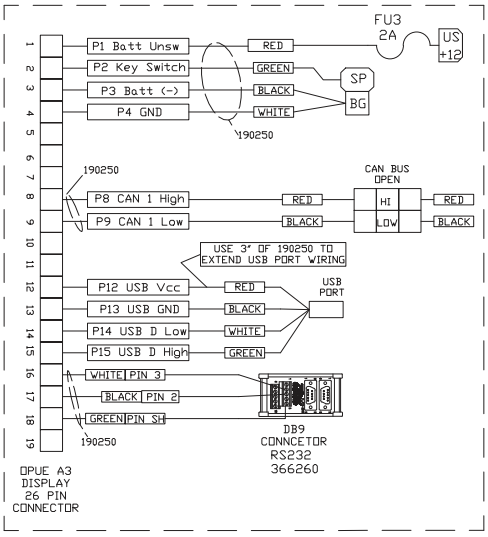
WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

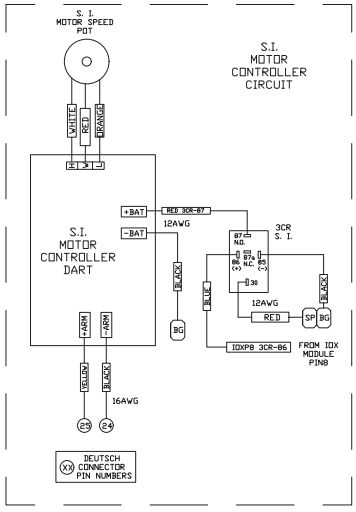
ENGINE WIRING











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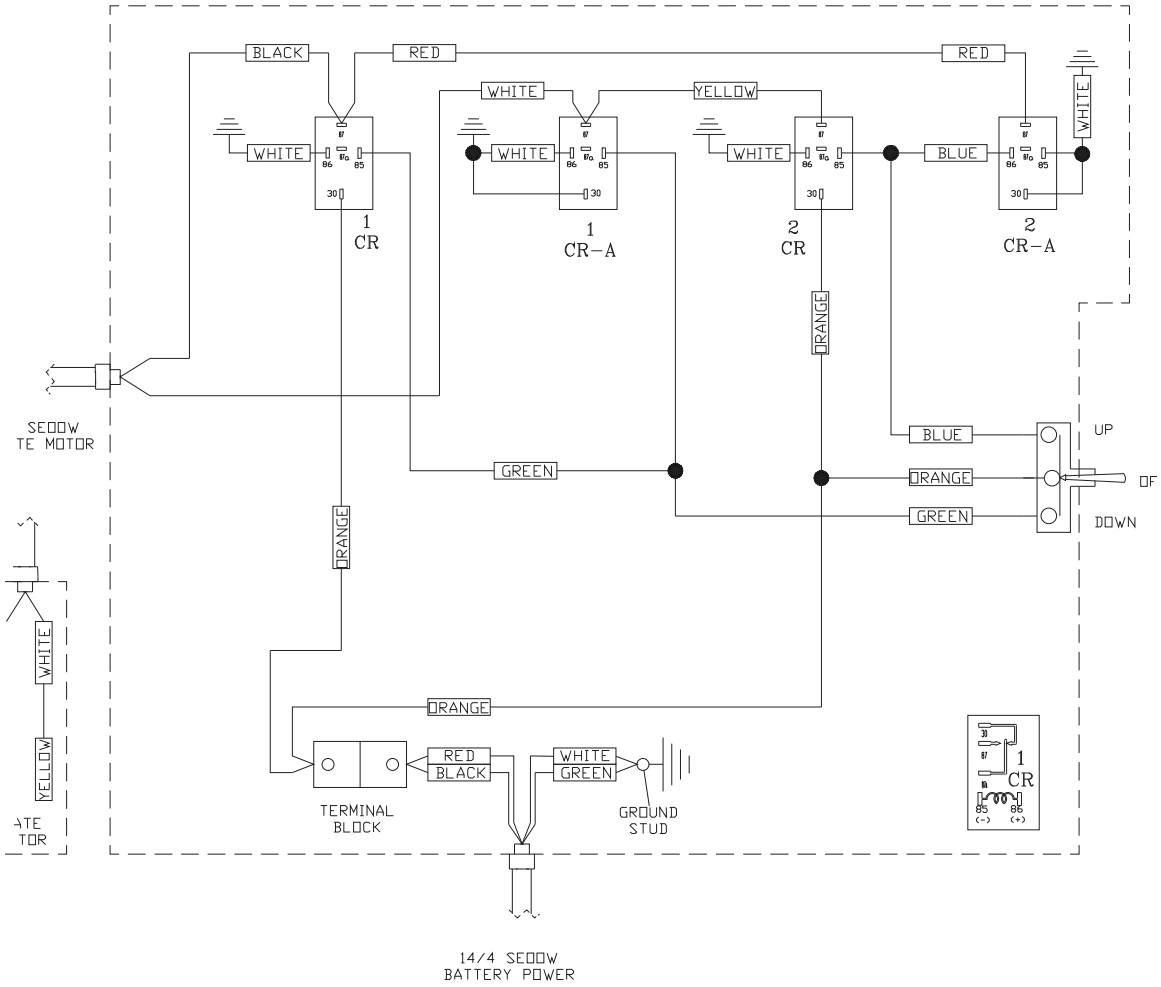
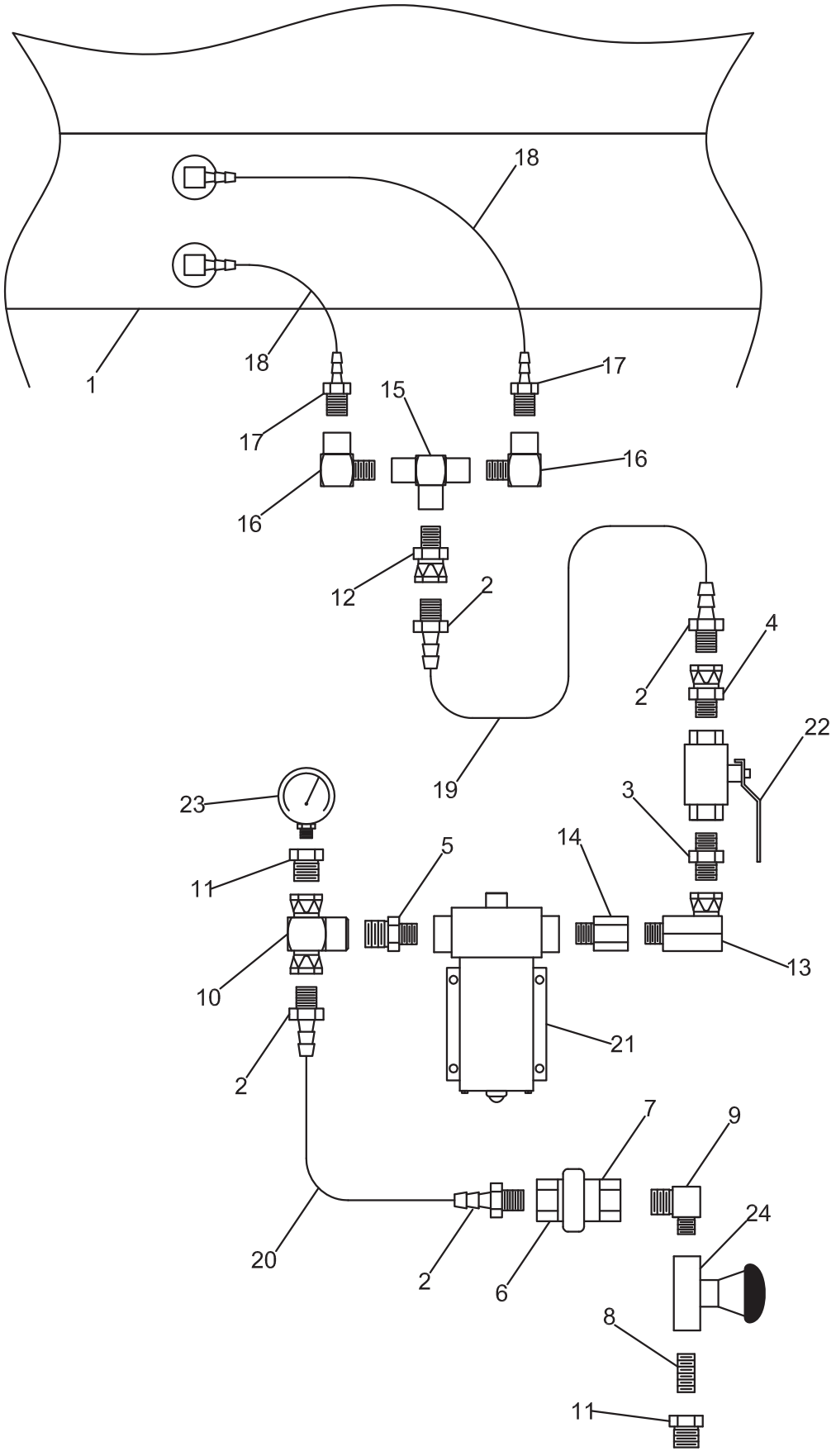
ENGINE WIRING



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

DUST CONTROL SYSTEM



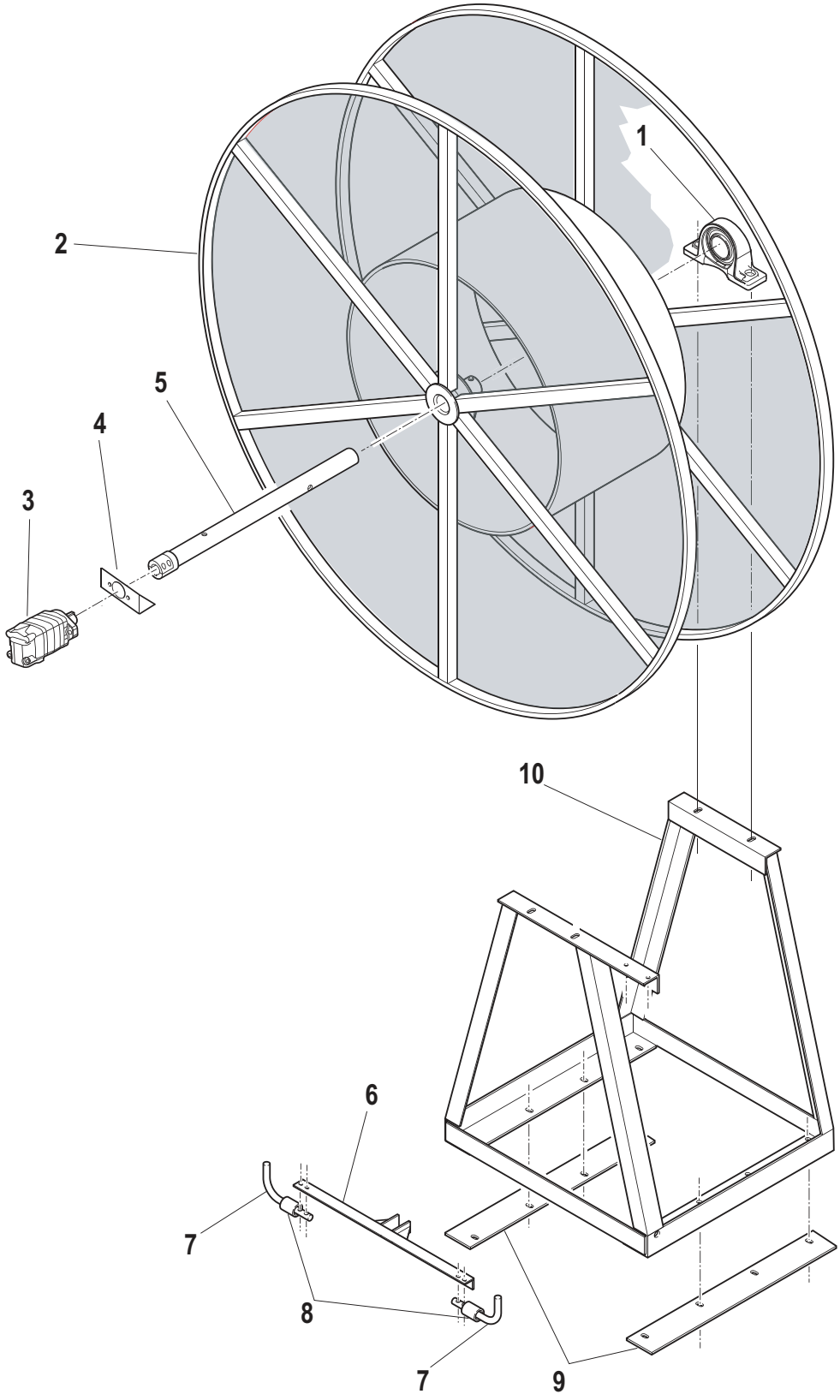
WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

DUST CONTROL SYSTEM

Ref. No.	Part Number	Description	No. Req'd
1	053007	Dust Suppression Tank	1
2	6772	Hose Bar	4
3	011504	8PN	1
4	022305	8M-8UAD	1
5	052032	6-8 RPN	1
6	052734	Female Disconnect	1
7	052735	Male Disconnect	1
8	052748	4SPN Close Nipple	1
9	052749	Pipe Elbow	1
10	052901	8FT-8UAD	1
11	055229	8-4HB	2
12	052722-07	Discharge Hose	1
13	021669	8MP x 8FPSW-90 Elbow	1
14	053066	6MP-8FP Reducer	1
15	FW71498	6F NPT Tee	1
16	FW71502	6M NPT x 4F NPT-90 Elbow	2
17	010583	4M NPT x 5 Hose Barb	2
18	190013	5/16 ID Hose 5139 1 Braid	2 x 25-1/2"
19	190030	1/2 Black Hose 2 Braid P287	41"
20	190030	1/2 Black Hose 2 Braid P287	32"
21	052667	Pump	1
22	070122	Ball Valve, 1/2 Inch	1
23	052771	100 psi Gauge	1
24	052941	Brass Needle Valve	1

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

HYDRAULIC HOSE REEL



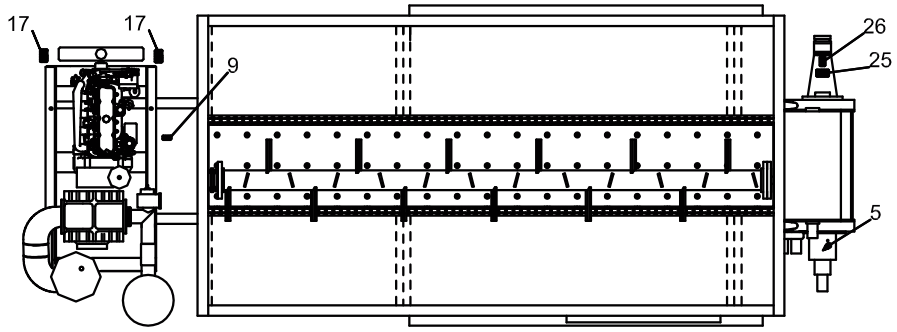
WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

HYDRAULIC HOSE REEL

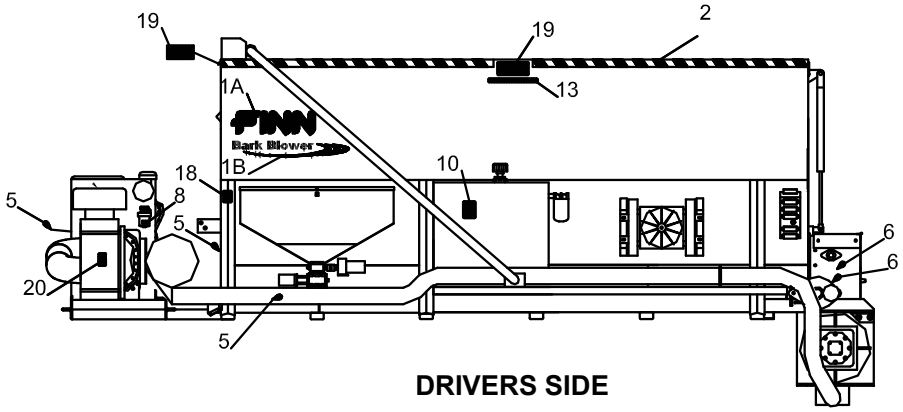
Ref. No.	Part Number	Description	No. Req'd
	053011	Hydraulic Hose Reel Assy	1
1	052337	2" Special Pillow Block Brg.	1
2	052416	Reel Weldment	1
3	070660	Hydraulic Motor	1
4	F1216-0019	Hose Reel Motor Mount	1
5	053014-05	Hose Reel Shaft	1
6	053013	Hose Reel Latch	1
7	052350-02	Latch Handle Rod	2
8	052384-05	Lock Spacer Tube	2
9	052384-06	Mounting Strap	2
10	052383	Hose Reel Mounting Frame	1

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

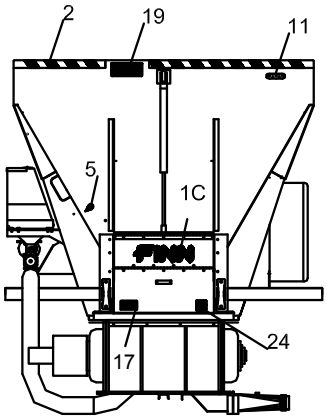
DECALS



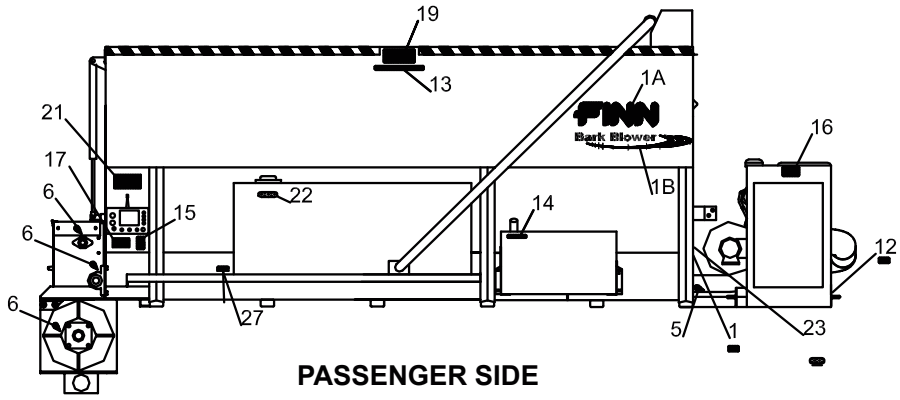
TOP VIEW



DRIVERS SIDE



REAR VIEW



PASSENGER SIDE

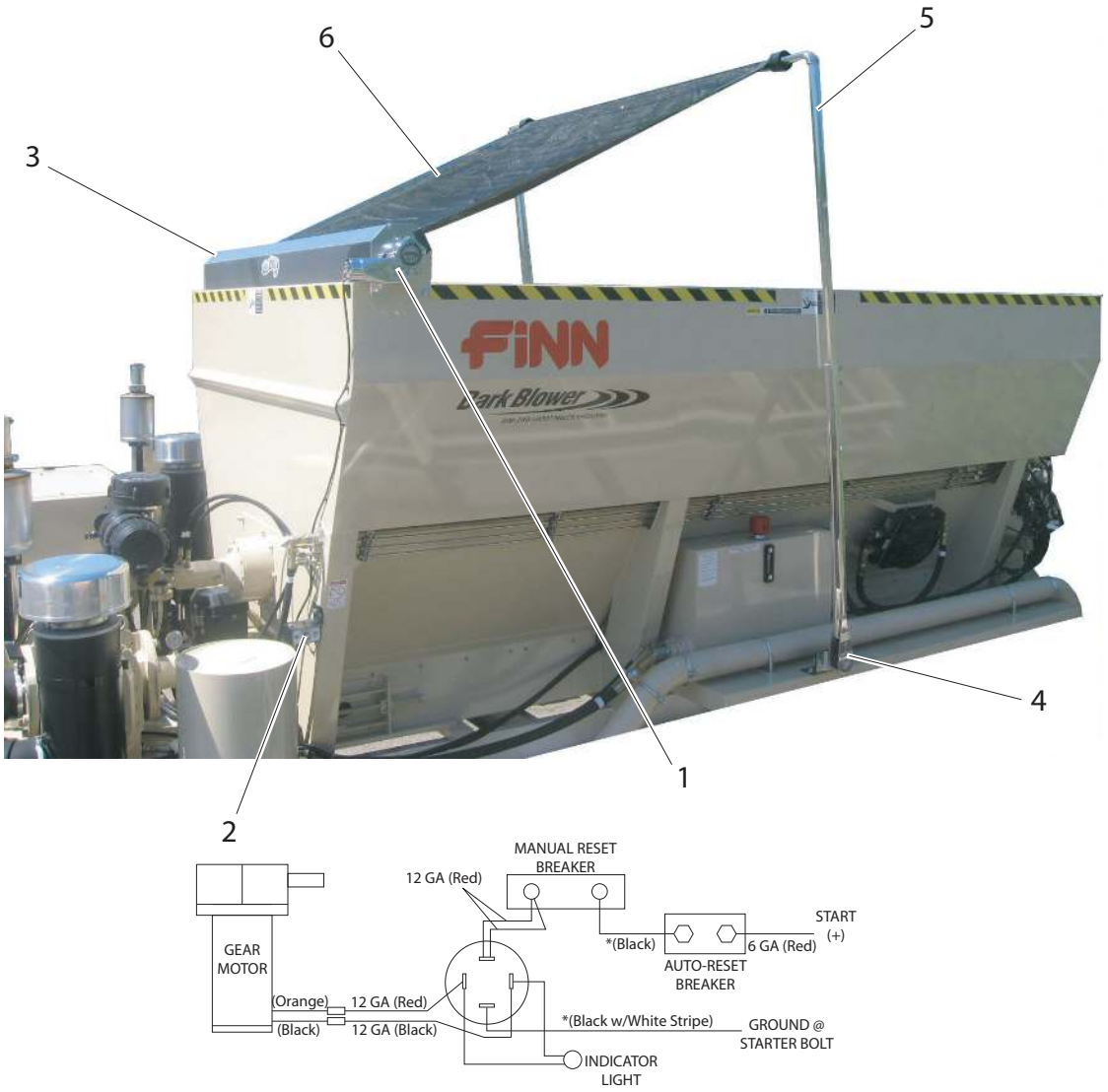
WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

DECALS

Ref. No.	Part Number	Description	No. Req'd
*1	011690	FINN Name Plate	1
*1A	023174	Decal "FINN" Large	2
*1B	055639	Decal "Bark Blower"	2
*1C	031235	Decal "FINN" Medium Red	1
*2	190173	2" Yellow-Black Warning Tape	40'
3	007230	Decal "Service Daily"	2
4	007230-02	Decal "Service Daily"	1
5	007231	Decal "Service Weekly"	6
6	007231-01	Decal "Service Weekly"	5
7	007231-02	Decal "Service Weekly"	1
8	007607	Decal "Drain Water Daily"	1
9	012278	Decal "Warning! Burn Hazard"	1
10	012687	Decal "Caution-Hydraulic System..."	1
11	012688	Decal "Caution-Fall Hazard"	1
12	012868	Decal "Hose Reel Rewind"	1
13	022690	Decal "Wear Eye Protection"	2
14	023391	Decal "Diesel Fuel Only"	1
15	023519	Decal "Wear Eye Protection"	1
16	031462	Decal "Warning! Radiator"	1
17	031463	Decal "Warning! Sever Hazard"	4
18	045128	Decal "Danger Do Not Raise"	1
19	052177	Decal "Danger - Rotating Hazard"	4
20	052178	Decal "Important - If The Machine..."	1
21	053038	Decal "Operating Instructions"	1
22	053062	Decal "Water Only"	1
23	055216	Decal "PATENT NUMBERS"	1
24	055219	Decal "Danger, Sharp Knives"	1
25	055280	Decal "Warning! Flying Objects"	1
26	055375	Decal "Warning! Contents Under..."	1
*27	012260	Metal Plate: Important...."	1

***Note:** These items are not part of the 12 Series Decal Sheet (P/N053037). All other decals are not available individually, they are only available by ordering 053037. Decals are shown on page 62 for location purposes only.

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



TARP ASSEMBLY

Ref. No.	Part Number	Description	No. Req`d
	052588	Tarp Assembly Includes:	1
1	RR1031	Electric Gear Tarp Motor w/Protective Cover	1
	RR3103-08	Pre-Threaded Aluminum Tarp Axle	1
	RR3105	Flange Bearing	2
2	RR1050	Electric Kit (Switch, Bracket, Breaker, Etc.)	1
3	RR3636-08	Wind Deflector Housing	1
4	RR4643	3-Spring Pivot Set	2
5	RR7670-08	Tarp Bow Set	1
	RR7677-08	Crossbar	1
	RR7676-08	Upper Arm	2
6	RR8100-08	Knit Mesh Tarp	1

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

TOOL KIT

Part Number	Description	No. Req'd
012681A	FINN Beige Touch-Up Paint (Aerosal - 4.5 Oz.)	1
012681T	FINN Beige Touch-Up Paint (Wet - 0.5 Oz.)	1
	Engine Parts Manual	1
	Engine Operators Manual	1
	Blower Operators Manual	1
	Radio Remote Control Manual	1
	Bark Blower Parts/Operators Manual	1

DISCHARGE HOSE

Part Number	Description	No. Req'd
052952	Severe Duty Discharge Hose Assy (4" Dia x 50' Lg)	4
055377	Hose Adapter	8
055374A	Aluminum Male Coupler	4
055375A	Aluminum Female Coupler	4
045347	5" x 4" Reducer w/ Couplings	1
045304	Hot Air Hose	1

RECOMMENDED SPARE PARTS

Part Number	Description
008703	Low Pressure Filter Element
013049	High Pressure Filter Element
008706	Hydraulic Reservoir Breather Filter
JDRE60021	Fuel Filter
JDRE59754	Engine Oil Filter
JDR123442	Fan Belt
012622	Main Filter Element
012623	Safety Filter Element
045296-01	Airlock Knife (2 per)
045296-02	Bottom Wiper Knife (1 per)
052436	Airlock Door/Discharge Interlock Switch
013135-S	Air Cleaner Safety Filter Element (4.50-E2)
013135-M	Air Cleaner Main Filter Element (4.50-E1)
JDR123442	Fan Belt
JDRE529643	Primary Fuel Filter
JDRE522878	Secondary Fuel Filter
JDRE504836	Oil Filter
008703	Hydraulic Filter Element
JDR96934	Hydraulic Pump Gasket

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

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