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5-Series

Parts and Operator's Manual

Model **MD** Serial No. _____

NOTES



ACTIVATE YOUR FINN EQUIPMENT WARRANTY

IMPORTANT INFORMATION ON ACTIVATING YOUR FINN EQUIPMENT WARRANTY!!!

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



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

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

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

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



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



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

- VERIFY THAT WE HAVE YOUR REGISTRATION ON FILE
 - VERIFY THAT THE WARRANTY PERIOD IS IN EFFECT
 - VERIFY THAT THE RELATED PART(S) ARE INCLUDED IN THE SCOPE OF WARRANTY (PENDING FINN'S INSPECTION OF DEFECTIVE PARTS)
 - SEND YOU REPLACEMENT PART(S) AND A WARRANTY INFORMATION PACKET
 - REQUEST YOU FOLLOW ALL INSTRUCTIONS AS NOTED IN THE PACKET
- **Completely fill out the Parts Tag.**
 - **Attach the Parts Tag to the defective part(s).**
 - **Return the part(s) and the completed Warranty Claim Form to FINN Corporation using the return shipping label. (Within 2 weeks)**
 - **Tape the Orange identifier sheet, marked with the W/RMA number, on the outside of the box in which you are shipping the defective part(s).**

**Warranty period:**

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

**Commercial Limited Warranty
Effective 4/1/2011****OUR WARRANTY TO YOU:**

Finn Corporation warrants to you, the original purchaser, for use (or rental to others for use) all new construction machinery, parts and attachments (except those referred to herein) that are manufactured by Finn to be free from defects in material and workmanship for a period noted above. Replacement parts provided under the terms of this warranty are warranted for the remainder of the warranty period applicable to the product to which parts are installed, as if parts were original components of the product.

WHAT FINN WILL DO:

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

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

WHAT YOU MUST DO TO OBTAIN WARRANTY SERVICE:

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

WHAT THE WARRANTY DOES NOT COVER:

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

4. The warranty shall be null and void to the extent any defect or failure of the products warranted arises out of or is caused by accessories or component parts not manufactured or supplied by Finn Corporation, whether same are supplied by purchaser, dealers, or any other party.

5. This Warranty does **NOT** cover any costs associated with transporting the equipment for warranty service, such as mileage, fuel, or man hours; such is the responsibility of the equipment owner.

6. Dealers & Customers are responsible to follow all guidelines related to Seasonal & Long Term Storage of Equipment, as advised in operation & equipment manuals. i.e. Finn, Engine, Clutch, Pump, Motor, etc. Equipment failures caused by neglect of these guidelines are not warrantable.

THIS IS THE ONLY EXPRESS WARRANTY ON OUR PRODUCTS:

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

THIS WARRANTY THEREFORE SHALL BE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

LIMITATIONS ON OUR RESPONSIBILITY WITH RESPECT TO PRODUCTS PURCHASED:

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

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

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

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

IN NO EVENT shall Finn be liable for any special, consequential, incidental or indirect damages, including lost profits or lost commercial opportunities, with respect to the sale of the above warranted product or anything done in connection therewith, or for property damage sustained by a person claiming to be a third party beneficiary of a surviving warranty under the law of any jurisdiction.

NOTICE:

FINN CORPORATION URGES the use of only Finn corporation supplied parts and attachments to assure proper performance and safe operation of Finn corporation equipment. Insist on parts and attachments manufactured or supplied by Finn corporation when you purchase, repair or replace your Finn equipment and attachments. Because Finn corporation cannot assure that parts and attachments not manufactured or supplied by Finn meet Finn corporation's quality standards, specifications, or operating requirements, our warranty is not effective to the extent any failure of or defect in a Finn corporation product arises from or is caused by parts, attachments or components not originating with Finn corporation. Use of Finn corporation equipment with parts and attachments not manufactured or supplied by Finn could result in personal injury.

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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.



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



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



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



Indicates practices that are not related to personal injury.

NOTE: Gives helpful information

CALIFORNIA

Proposition 65 Warning

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

CALIFORNIA

Proposition 65 Warning

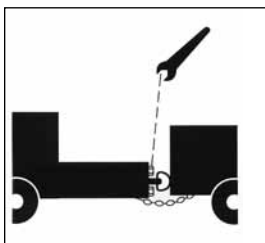
Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

BARK BLOWER SAFETY SUMMARY SECTION

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

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

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



2. Verify that all guards are in place.

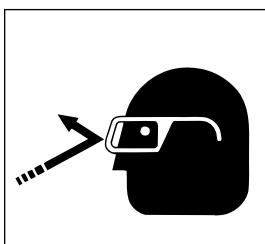
3. By carefully looking into the blower hopper and transition, inspect for and remove any foreign objects. Follow Occupational Safety and Health Administration (OSHA) lockout/tagout procedure (29 CFR 1910.147)

4. Inspect all hydraulic hoses and tubes for cracks, bulges, or damage. If hose is cracked, bulging, or damaged, replace immediately.

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

II. MACHINE OPERATION

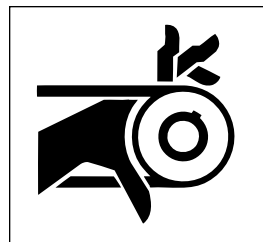
1. Always wear safety goggles when operating or feeding the machine. Other safety attire, such as safety shoes, ear protection, gloves, hard hats, dust masks, etc., should be worn as required by warning decals on machine, operator's manuals, or job site requirements. Remove rings, watches, etc. Avoid wearing loose-fitting clothing that may get caught in rotating machinery.



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

3. Do not operate the machine without all guards in place.

4. Never attempt to connect, or disconnect the discharge hose while the engine is running.



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



6. The driver of the towing vehicle is responsible for the safety of the operator(s) and feeder(s) of the machine. Make sure the driver is aware of and avoids all possible hazards, such as tree limbs, low power lines, etc.

7. Do not allow anyone to ride on the trailer or any other part of the blower for any reason.

8. Never operate machine in an enclosed area without venting the engine exhaust of both the equipment and vehicle on which the equipment is mounted. Deadly carbon monoxide fumes can accumulate.



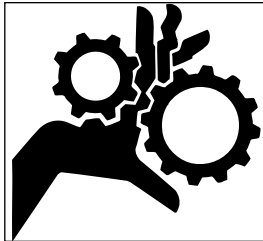
9. Never operate this or any other machinery when fatigued, tired, under the influence of alcohol, illegal drugs, or medication. You must be in good physical condition and mentally alert to operate this machine.

10. Never modify the machine. Never remove any part of the machine (except for service and then reinstall before operating).

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

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

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



14. Do not attempt to pull anything out of the blower hopper while machine is in operation. Shut down the engine using the OSHA lockout/tagout procedure (29 CFR 1910.147) before removing any foreign objects. Signal visually or audibly that all is clear before operating the machine.



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

- A. Shut off conveyor drive.
- B. Shut off vehicle engine and blower engine.
- C. Place transmission of the vehicle in NEUTRAL or PARK.
- D. Set parking brake firmly.
- E. Lock ignition and take keys with you.
- F. Lock vehicle cab.
- G. If parked on a steep grade, block the wheels.

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

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

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



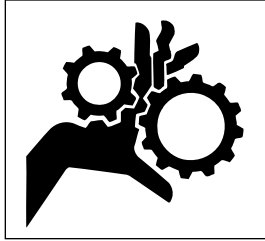
18. All personnel operating and/or around the machine must be aware that the blower can be controlled via remote control. For safety reasons and to prevent accidental starting, always keep the power switch on the remote receiver in the OFF position when the remote control is not being used.

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

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

III. MAINTENANCE

1. Before servicing the machine, turn off engine and allow all moving parts to stop. To prevent accidental starting, disconnect battery cables. Tag the engine operating area to show that the machine is being serviced. Use lock-out/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.

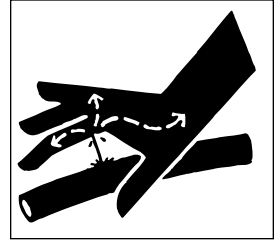


3. Radiator maintenance: Liquid cooling systems build up pressure as the engine gets hot. Before removing radiator cap, stop the engine and let the system cool. Remove radiator cap only after the coolant is cool. Mulch may accumulate in the radiator fins after extended usage based upon mulch properties. The radiator should be inspected prior to daily start-up and cleaned by pressure washing if obstruction is present.
4. Battery maintenance: Lead-acid batteries contain sulfuric acid, which will damage eyes or skin on contact. Always wear a face shield to avoid getting acid in the eyes. If acid contacts the eyes, flush immediately with clean water and get medical attention. Wear rubber gloves and protective clothing to keep acid off skin. Lead-acid batteries produce flammable and explosive gasses. Keep arcs, sparks, flames, and lighted tobacco away.
5. Filling of fuel: Never fill the tank with the engine running, while smoking, or when near an open flame. Never smoke while handling fuel or working on the fuel system. The fumes in an empty fuel container are explosive. Never cut or weld on fuel lines, tanks or containers. Move at least 10 ft (3 m) away from fueling point before starting engine. Wipe off any spilled fuel and let dry before starting engine.

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

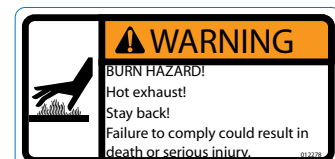
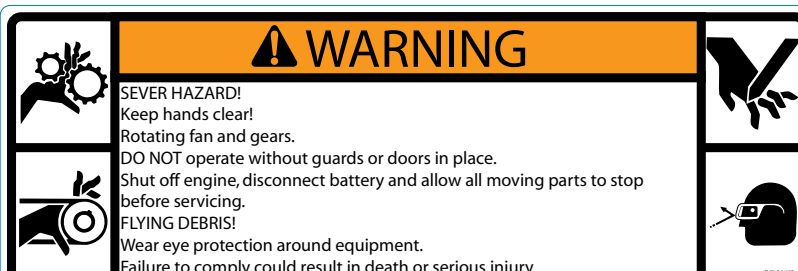
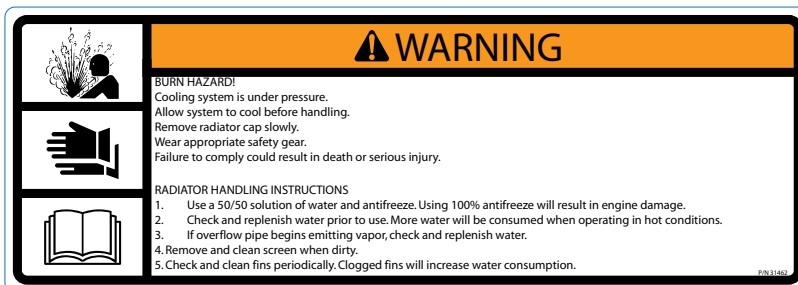
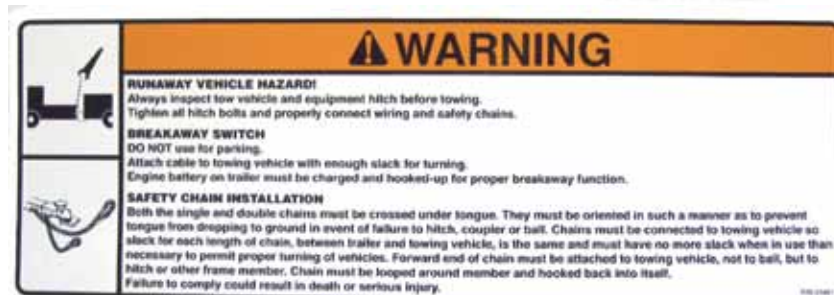
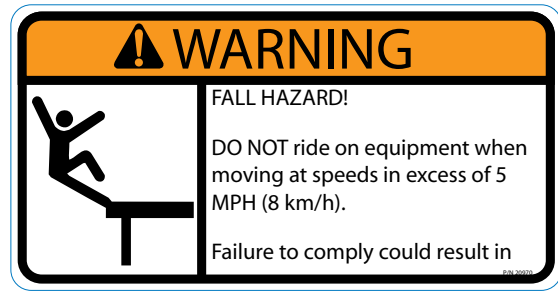
6. It is recommended that only authorized, genuine FINN replacement parts be used on the machine.

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



8. Diesel fuel or hydraulic fluid under pressure can penetrate the skin or eyes and cause injury, blindness, or death. To check for such leaks, use a piece of cardboard or wood instead of your hand. Pressure may build up in the hydraulic system; use caution when removing the cap.
9. Some parts and assemblies are quite heavy. Before attempting to unfasten any heavy part or assembly, arrange to support it by means of a hoist by blocking or by use of an adequate arrangement to prevent it from falling, tipping, swinging, or moving in any manner. Failure to do so could result in component damage, or physical injury to someone.
10. If repairs require use of a torch or electric welder, be sure that all flammable and combustible materials are removed. Fuel or oil reservoirs must be emptied, steam-cleaned, and filled with clean water before any cutting or welding on them is attempted. Do NOT weld or cut on any tank containing oil, gasoline, fumes, other flammable material, or on any container of which the previous contents were unknown.

CURRENT SET OF SAFETY DECALS



OPERATION AND MAINTENANCE MANUAL FOR FINN BARK BLOWER

INTRODUCTION

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

THE FINN BARK BLOWER AND ITS FUNCTION

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

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

HOW THE BARK BLOWER WORKS

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

NOTICE

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

TOWING VEHICLE

The truck used to tow the FINN 5-Series must be equipped with a 2-5/16-in. ball-type or pintle-type hitch. This hitch should be mounted as near to the end of the truck bed as possible. The tow vehicle should be fully wired for trailer marker, turn, and stop lights, as well as electric brakes, and be sized to be able to pull and stop a 11,500 lb (5,216 kg) trailer. (Loaded 5-Series assuming 1000 lb/yd³ mulch.)

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

CAUTION

When mounting a skid 5-Series, be sure to follow the 5-Series skid-mounting instructions. Ensure proper weight distribution and make sure the bark blower is properly supported by the truck. When mounting a skid model, contact FINN Corporation for proper instructions. Failure to comply could result in minor or moderate personal injury. Failure to comply could also result in product or property damage.

SELECTING A MULCHING MATERIAL

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

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

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

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

Most importantly, when selecting a material, consider the greenness of the wood and its moisture content. Wood that is well seasoned is easier to cut than green wood. It also processes better, making a less stringy mulch. High moisture in the mulch may cause it to bridge in the hopper, and pack in the airlock vanes.

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

PRE-START EQUIPMENT CHECK



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

Safety check to ensure operator safety:

1. Check all trailer connections to the towing vehicle, as well as the condition of the safety chains, and bolts connecting the ball coupler or pintle eye to the tongue.
2. Ensure that all guards are in place.
3. Tool Kit - see that it contains all prescribed items (see Tool Kit list, page 66).
4. Lubricate equipment - use hand gun only (see Lubrication Chart, page 22 and 23).
5. Check engine oil - refer to engine operator's manual.
6. Check liquid coolant level in radiator and overflow tank. (Protected to -34°F (-37°C) when shipped.)

7. Inspect the engine air cleaner (refer to the engine operator's manual), the radiator chaff screen, and blower air cleaner for dust and dirt. If necessary, clean or replace the air filter.
8. Check fuel level. Use Ultra-Low-Sulfur diesel fuel. Inspect the engine air cleaner, the radiator chaff screen, and the blower air cleaner for dust and dirt.
9. Check hopper and transition for foreign objects that could injure workers or damage equipment.
10. Check the fluid level in the hydraulic tank. Proper level is 3/4" from the top of the sight gauge. (See Lubrication Chart, pages 22 and 23 for oil specification.)
11. Install the discharge hose, using clamps and gaskets provided with the machine.
12. Check to verify the radiator is free of mulch and debris obstruction to ensure over heating does not occur.

CAUTION

Do not use radiator-type clamps. These clamps may not hold under machine-operating pressure. Failure to comply could result in minor or moderate personal injury. Failure to comply could also result in product or property damage.

STARTING PROCEDURE

CAUTION

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

1. To start the engine, disengage the E-Stop. All buttons on the keypad will flash amber. Input the following sequence on the keypad: RPM INC, FLOOR INC, FLOOR ON/OFF. The ENG START button will flash amber. Press ENG START once and the light will turn green. Once green, press and hold ENG START until the engine starts.
2. Allow the engine to warm up for 3 to 5 minutes.
3. Prior to mulch application, move the throttle position to fully open and allow the governor to control the engine speed. This is a good place to start, refer to page 15, BARK BLOWER ADJUSTMENTS for further information on control settings. Governed engine speed should be 2,500 to 2,700 rpm under load.



Figure 1 - Initiation Sequence

For additional info, see Cervis Engineered Application Specific Supplement: WSMB-7454 FINN.

CREW MEMBERS AND THEIR DUTIES

1. The Operator controls the placement of the mulch by moving and aiming the discharge hose.
2. The Loader(s) feed material to the machine by using a skid steer, bucket loader, belt con-

veyor, or optional feed conveyor to dump material directly into the hopper.

THE MATERIAL-FEED SYSTEM

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

SUBSYSTEM 1: MATERIAL-HANDLING GROUP

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

The blower is a rotary lobe, positive displacement-type unit having two double lobe impellers. It is direct driven off the engine flywheel by a coupling. Therefore, whenever the engine is running, air is being pumped. The blower is equipped with a relief valve limiting maximum air pressure to 12 psi (82.7 kPa), an inlet and outlet silencer for noise attenuation, and an inlet air filter.

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

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

SUBSYSTEM 2: HYDRAULIC SYSTEM

Hydraulic power for the Bark Blower is generated by a fixed-displacement pump driven off the engine auxiliary drive. The pump receives DTR13 hydraulic fluid from the 32-gal (120-L) reservoir through a service valve and suction hose, then delivers it to the valve manifold through an unloading valve. The manifold has three separate valve sections with solenoids that control all the functions on the Bark Blower. Also, it uses equal to or better than 5 micron absolute filtration.

DESCRIPTION OF VALVE SECTIONS

Figure 2 shows the Valve Block and different hydraulic circuits. Each circuit is controlled by two valves, with the exception of the Hose Reel (middle) circuit. The Floor and Airlock valves are directional valves that can be manually stroked by inserting a small rod or screw driver into the hole on

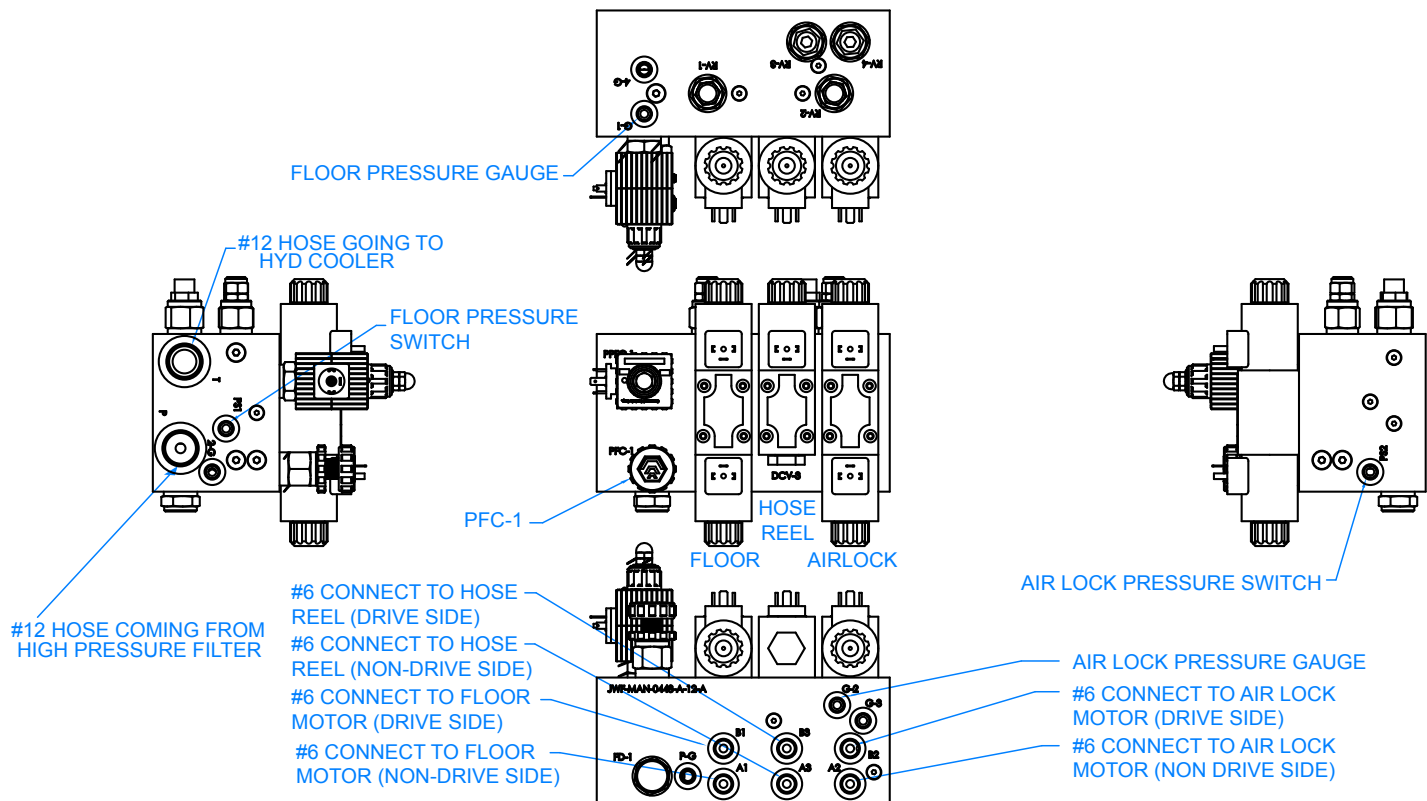


Figure 2 - Valve Block

top or bottom of the solenoid. The hose reel circuit is controlled by a two-position ON/OFF valve and its solenoid can only be actuated in one direction by inserting a small rod or screwdriver into the hole on top of the solenoid.

A. AIRLOCK

The right valve section of the manifold runs the airlock. The spool in the valve is factory-set so the airlock turns at about 16 rpm. The speed of the Airlock can be adjusted using PFC-1. There is a pressure switch on the forward circuit that is set for 2,400 psi (16,547 kPa) that triggers the auto-reverse function on the airlock. Normal rotation of the airlock is clockwise if viewing from the driver side of the machine.

B. FLOOR (DRAG CONVEYOR)/FEED ROLL

The left valve section controls the floor and feed roll speed. It is an electrically-driven proportional valve that is controlled by the Floor Speed INC and DEC buttons on the Keypad and Radio

Remote. Toggling the switch up or down varies the input voltage to the solenoid and moves the spool in the valve accordingly, allowing more or less oil flow to the floor and feed roll. There is a pressure switch on the forward circuit that is set for 2,050 psi (14,134 kPa) that triggers the auto-reverse function on the floor.

C. HOSE REEL

The middle section of the manifold controls the hose reel. The flow rate is factory-set so that the hose reel winds, and unwinds at a rate of about 12 rpm.

SUBSYSTEM 3: HYDRAULIC CONTROL SYSTEM

The hydraulic control system is an electrical system that controls all the hydraulic functions on the Bark Blower. This 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 the Material Start button is activated, the proportional solenoid on the airlock valve section is energized, which starts the airlock. If the Floor is turned on using the FLOOR ON/OFF button, the floor and feed roll solenoid is also energized after a factory-set 2 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 FLOOR INC and FLOOR DEC buttons on the Keypad or Radio Remote.

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 PS-2 (see Figure 2 on page 10). 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 3 seconds. The system will then restart the floor and feed roll after allowing the airlock to clear itself.

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 pressing the E-Stop button on the machine or the Radio Remote. Please note that the hydraulics will also stop if the rear door on the feed roll housing is opened and cannot be restarted until the door closed and the Material Start is activated.

SUBSYSTEM 4: RADIO REMOTE TRANSMITTER

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

To turn on the Radio Remote, twist the red E-Stop button clockwise to release it to its UP position, then press the green Power Up button located on the back side.

To utilize the Material Feed Start/Stop feature of the Radio Remote Transmitter, the initial start must occur at the Start/Stop station on the Bark Blower. Start the engine using the STARTING PROCEDURE on page 8. Turn on material flow using the START button on the Pendant, then turn off material flow using the MATERIAL START/STOP function of the Radio Remote.

The hard-wired, Start/Stop on the unit is the primary and overriding set of controls. When either the STOP button is pushed or a loss of power to the controls occurs (i.e. the rear door on the feed roll housing is opened), the Feed Start/Stop feature on the Radio Remote Transmitter is deactivated. This feature will remain inactive until the initial start is once again made at the machine by pressing the START button.

The Material Increase/Decrease function on the Radio Remote Transmitter can be used to change the floor speed and effectively adjust the output of mulch from the machine.

The Engine Increase/Decrease function on the Radio Remote Transmitter adjusts the throttle actuator on the engine.

For additional info, see Cervis Engineered Application Specific Supplement: WSMB-7454 FINN.

MULCHING WITH THE BARK BLOWER

1. Check all areas listed under PRE-START EQUIPMENT CHECK (page 7).
2. Start the engine following all the steps listed under STARTING PROCEDURE (page 8).
3. Press the START button on the Pendant to activate the MATERIAL START/STOP feature on the remote. This will allow the material flow speed to be adjusted from the remote.
4. Use the Radio Remote to stop material flow.
5. With material flow stopped, increase ENGINE RPM to full
6. With a firm grip on the hose, use the remote to start material flow.
7. Adjust floor speed and engine throttle to achieve desired amount of material flow.
8. At the end of the load, push MATERIAL STOP and shut down the engine.

BARK BLOWER ADJUSTMENTS

The Bark Blower has been designed to be as simple as possible to operate. The feed roll and airlock are designed to create a smooth, consistent flow of material from the hopper to the discharge. However, material conditions can change from one load to the next or from one day to the next. Adjusting the floor speed, engine rpm, and occasionally, the metering gate and airlock



Control Module



Keypad



Pendant



**Power Up Button
(Rear View)**

Cervis Radio Remote

Figure 3 - Controls

speeds will allow the Bark Blower to efficiently convey many different types of mulch.

Knowing when and how much to adjust the floor is the key to maximizing the machine's performance. The floor conveyor speed is controlled by the FLOOR INC on the Keypad and Radio Remote. The floor speed can be increased using these controls until certain warning signs appear. They include the following:

A. CONSISTENT HOSE SHOCK

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

B. EXCESSIVE AUTO-REVERSING

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

C. REGULARLY TRIPPING THE BLOWER RELIEF

The blower on your machine has a relief valve in the air line to protect the blower against a large back pressure that could build if the line becomes plugged. The relief valve, set for 12 psi (83 kPa), is located directly behind the blower in the engine area on the driver's side of the machine. A blockage, temporary or otherwise, can trip the relief valve, which causes a loud whining noise to be heard from the engine area. Occasional blowing through the relief valve is expected, as long as the machine can clear itself. However, if the relief valve goes off repeatedly in a 10-second time span, then the discharge area or hose is in danger of becoming completely blocked. The floor speed should be immediately reduced until the relief valve is not heard consistently going off. Partial plugging most often occurs with less-processed material or if the mulch is wet and dense.

D. MATERIAL METERING GATE

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

CLEARING A BLOCKAGE

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

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

Troubleshooting Chart		
Symptom	Probable Cause	Suggested Solutions
Engine will not start	Engine safety system override delay expired	Return ignition key to OFF before starting.
	No fuel	Check fuel gauge.
	Engine too cold	Preheat glow plugs.
Airlock not turning	Green light OUT on control panel, Blue light ON	Make sure rear cleanout door is closed tightly and interlock switches are working properly.
	Blue light OUT on control panel	Check 10A circuit breaker in control box.
	Airlock speed control turned down too far	Adjust airlock speed control. toward MAX. See page 9.
	Quick-Dump feature activated/ left on	Set Quick-Dump switch on control box to OFF.
Floor not turning	Motorized flow control valve closed	Increase material feed control.
	Make sure terminal A+ on timer TR3 has 12V	Low voltage; check interlock-switches for bad connections or bad switch.
	Out light on TR3 should come ON 1.5 sec. after turning FLOOR SWITCH ON	Bad timer; check settings or replace timer if bad.
	Feed Roll / Floor jammed	Check gauge reading; if 2,000 psi, push STOP button and reverse floor with floor switch.
Airlock constantly auto-reversing	Overfeeding airlock	Decrease floor speed. See Page 13 for tips.
	Dull airlock knives	Check knife clearance; sharpen or replace knife if dull or chipped.
	Pressure switch time delay is set too low	Check timer TR1. It should be set for 0.5 sec.
Airlock stalling, not auto-reversing	Pressure switch is not closing at 2,400 psi	Check pressure switch connections or replace switch if necessary. Check relief setting airlock.
Discharge material pulsing; not smooth	Too much air	Decrease engine throttle and-floor speed accordingly.
	Airlock turning too fast/slow	Adjust airlock speed, See Page 13 for tips.
	Partial plugging in airlock discharge	Check airlock discharge pan for blockage and air leaks.

Troubleshooting Chart		
Symptom	Probable Cause	Suggested Solutions
Engine Overheat	Lack of Coolant	Check for leaks and add coolant.
	Radiator Obstructed	Pressure wash radiator to clear obstruction.
	Temp Switch Malfunction	Replace Temp Switch.

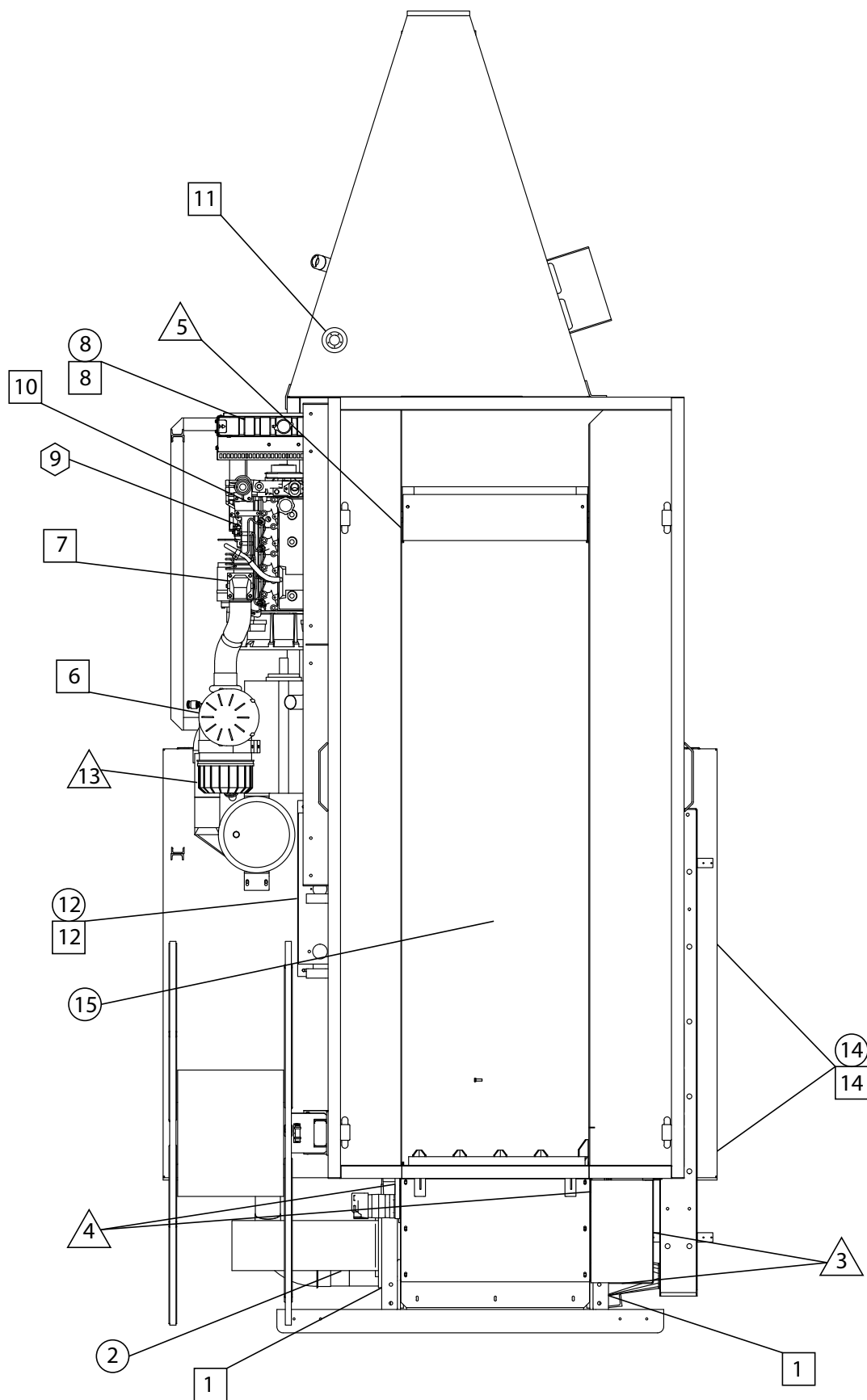


Figure 7 - Lubrication Chart

LUBRICATION CHART

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

TIME KEY

DAILY (8 hours)



WEEKLY (50 hours)



SEASONALLY (500 hours)



3 MONTHS (250 hours)



LUBRICANT OR FLUID USED

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

FLUID CAPACITIES

Fuel - 28 gal (103 L)

Airlock Gearbox Oil - 20 oz (0.6 L)

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

Hydraulic Oil - 32 gal (120 L)

Engine Oil - 8 qt (7.3 L)

Blower Oil - 16.9 oz (500 mL)

MAINTENANCE:



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

DAILY - AFTER EVERY 4 TO 8 HOURS OF OPERATION

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

WEEKLY - AFTER EVERY 50 HOURS OF OPERATION

1. Lubricate the bearings on the drag conveyor, airlock, blower, and feed roll shaft. See Lubrication Chart on pages 22 and 23. Wipe each bearing before lubrication to remove dirt and prevent overheating.
2. Blow out radiator fins with dry compressed air. Do not use a pressure washer, as this will damage the radiator fins.
3. Remove and clean air cleaner elements on the engine and rotary blower using dry, clean compressed air. Change if element shows signs of damage
4. Check the oil in the airlock gearbox.
5. Check the gear case on the blower (see blower manual).
6. Check airlock knife for wear, chips, and clearance. To adjust knife:

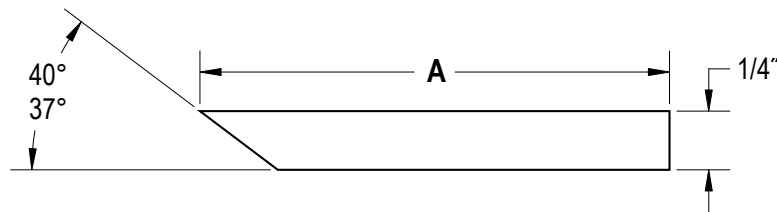


Knives have very sharp edges that can cause serious injury. Adjust one at a time. Failure to comply will result in death or serious injury.

- A) Loosen the two bolts on each of the four knife clamps in the top of the airlock.
- B) The knife-adjusting screws are reachable through the access holes in the outside front/rear face of the airlock housing. Using a 5/32-in. allen wrench, adjust each of the screws

- in until there is a uniform gap of 0.003 to 0.006 in. (0.08 mm to 0.15 mm) between the knife and rotor. One full turn of the screws will move the knife approximately 0.055 in. (1.4 mm). Make sure that the two adjusting screws on each knife clamp are adjusted equally.
- C) Tighten the eight bolts on the four knife clamps, and replace the set-screw plugs in the access holes.
7. If a knife is worn past adjustment and needs to be replaced:
- A) Remove the eight bolts that hold the four knife clamps in place, and remove the clamps and knife.
- B) Clean the knife shelf so that it is free of debris and smooth.
- C) Compare the replacement knife to the one removed. If the new knife is wider, back out the adjusting screws by at least that amount. Count the turns and back the screws out evenly.
- D) Lay the knife down on the knife shelf. Ensure the knife is installed with the cutting angle edge facing down, as shown in Figure 7. Loosely install the four knife clamps with the eight knife mounting bolts. Tighten the mounting bolts just enough to hold the knife in position, while still allowing it to be moved.
- E) Check the clearance between the knife and the rotor end walls and along the rotor vane, using a feeler gauge. There should be a gap of 0.003 to 0.006 in. (0.08 mm to 0.15 mm).
- F) Use the jacking screws to close the gap if necessary. One full turn of the screw moves the knife 0.055 in. (1.4 mm).
- G) Tighten mounting bolts.
- H) Immediately have removed knife sharpened. Do not attempt to grind the knife by hand. It must be ground straight and true on a surface grinder by an experienced knife sharpener. Grind the knife to the profile shown below: When dimension A has been reduced to 1-3/8 in. (3.5 cm), the knife must be discarded.

Figure 8 - Knife



AFTER FIRST 100 HOURS OF OPERATION

1. Change engine oil and filter after 100 hours, then every 250 hours after that, following engine manufacturer's recommendations.
2. Change the gear box oil on the blower (see blower manual). Change oil every 1000 hours thereafter.
3. Change the gearbox oil on the airlock using SAE 80W90 oil. Change oil every 1000 hours thereafter.

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

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

EVERY 12 MONTHS OR 12,000 MILES (19,300 KM) TRAILER UNITS

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

FLOOR CHAIN ADJUSTMENT: EVERY 500 HOURS

1. The floor chain tension should be checked every 500 hours. If the chain is too loose, the chain flights can buckle under the floor pan and damage the chain linkages and flights. If the chain is too tight, it can put added wear on the floor bearings and cause excessive chain stretch.
2. Shut the machine off and open the rear access door above the airlock. Remove any buildup under the floor pan between the chain links, and the rear catch pan, so that an accurate measurement can be made. Check the tension on the floor chain in the Bark Blower, as shown in Figure 8 below:

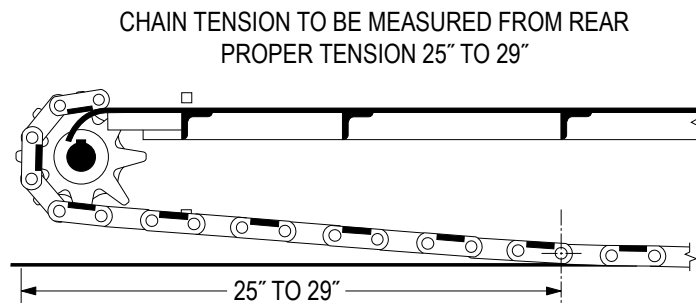


Figure 9 - Floor Chain

3. To adjust the chain tension, find the take-up bearings on either side of the floorsill, near the front of the hopper. Using a 1-1/2-in. wrench, turn the tensioning rod clockwise to tighten the chain and counterclockwise to loosen it. Always turn both tension rods the same amount so that the chain is always square with the drive shaft. A misaligned chain can come off the sprocket and buckle.

WINTER SHUTDOWN AND STORAGE

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

NOTICE

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

NOTES

BARK BLOWER

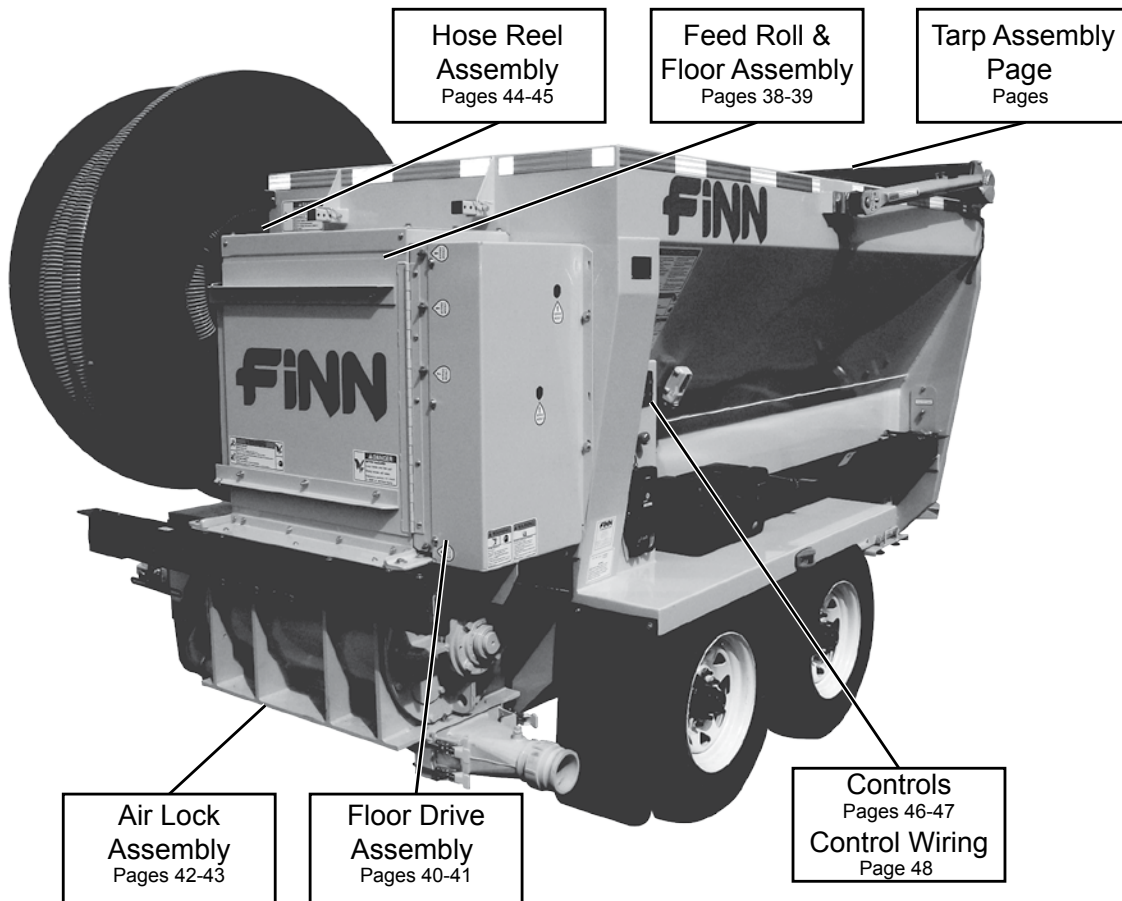
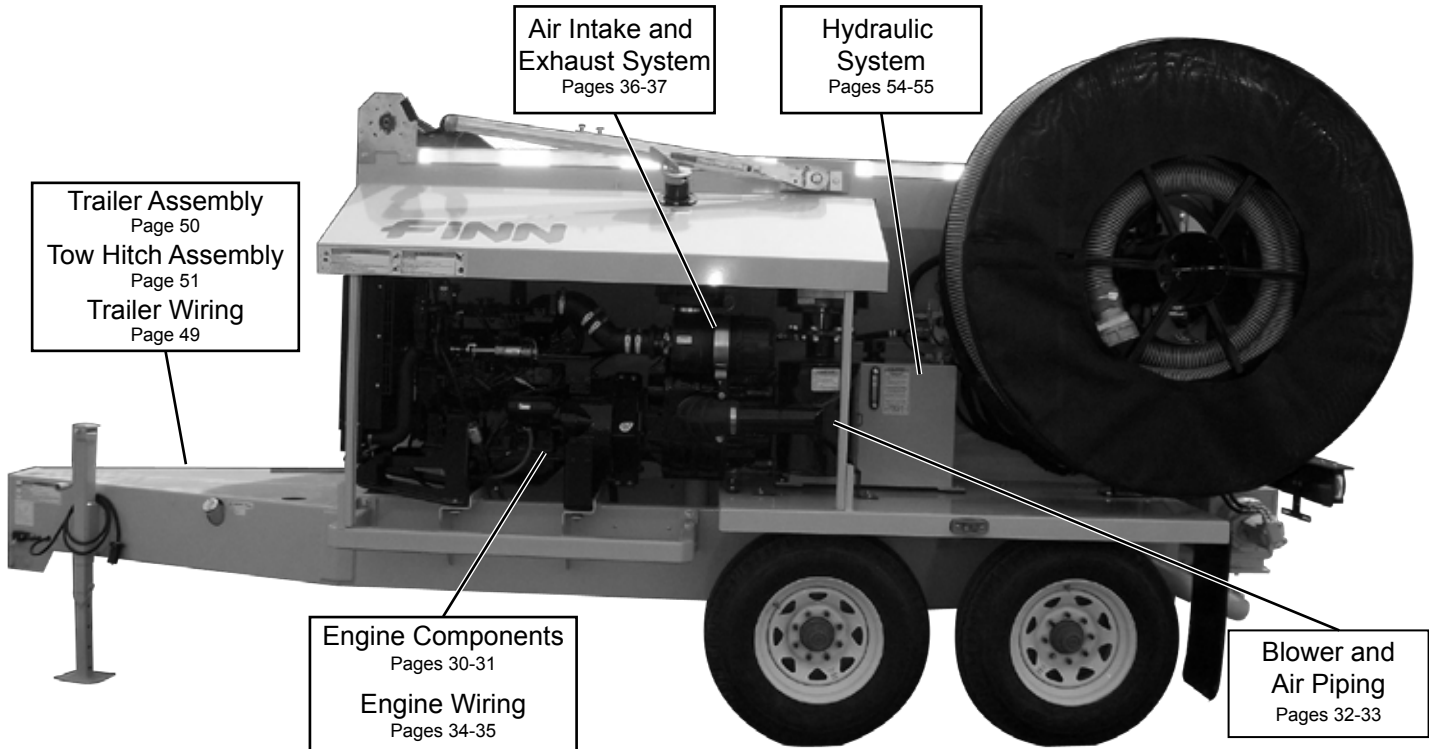
5-Series

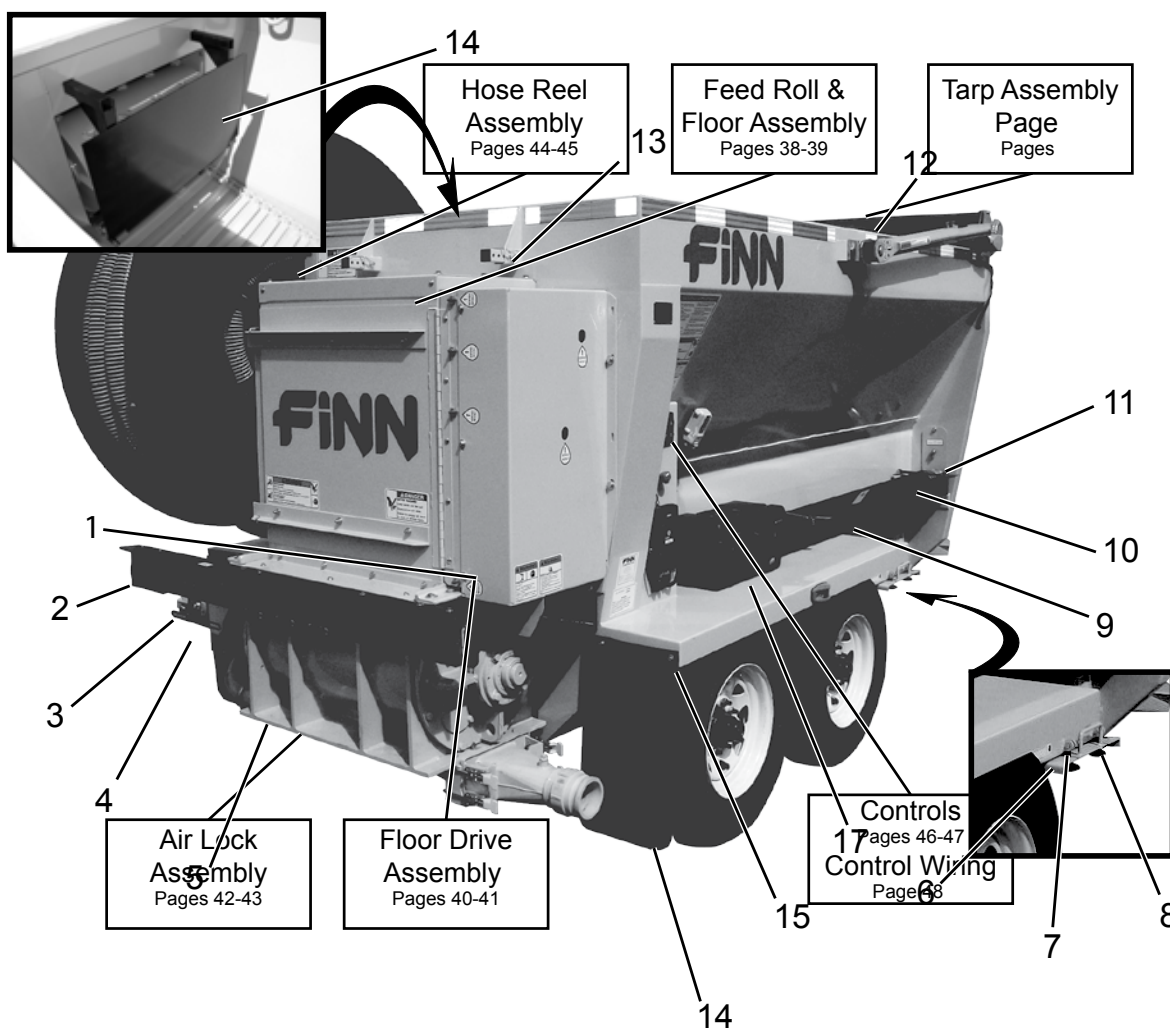
Parts Manual

Model **MD**

NOTES

PICTORIAL REFERENCE

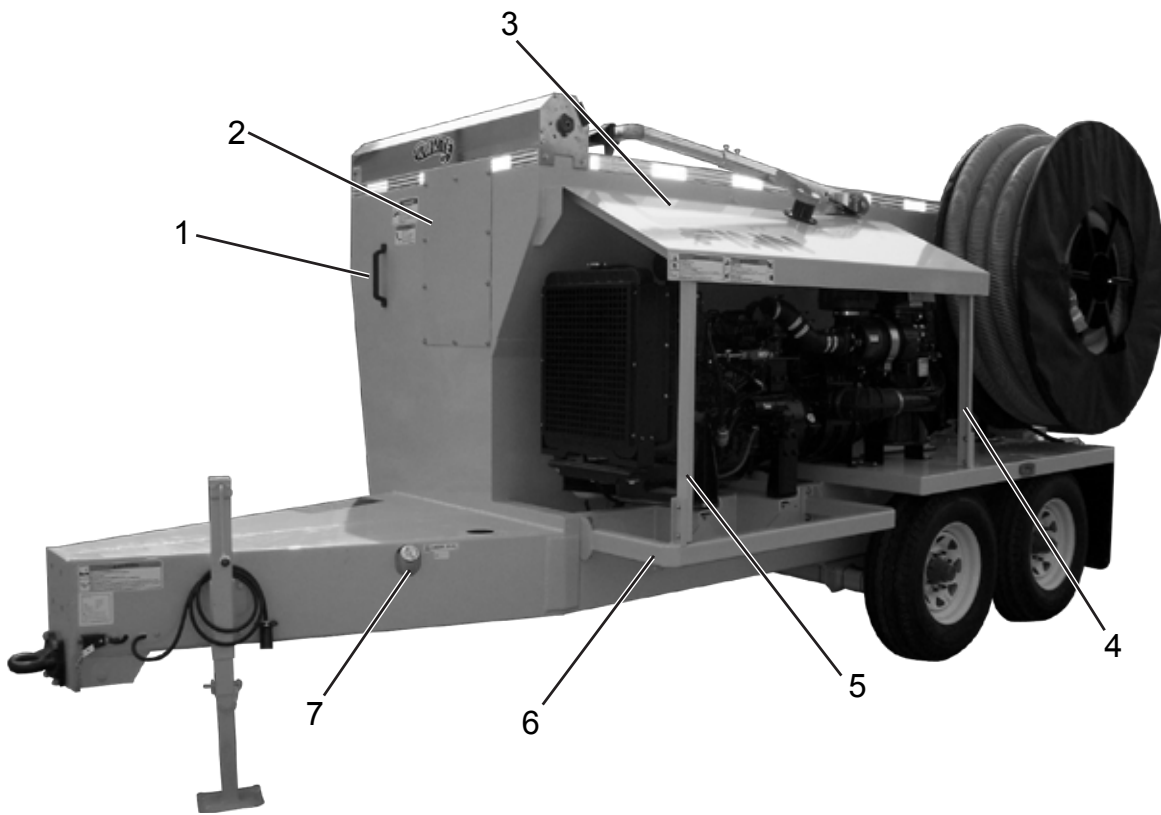




HOPPER - RIGHT REAR

Ref. No.	Part Numbers	Description	No. Required
1	F705-0013	Floor Drive Cover	1
2	F705-0028	Bumper Fab	1
3	005436	Licens Light	1
4	004720	License Plate Mount	1
5	075203	Air Lock Assembly	1
6	075728	Cleanout Door	1
7	052703	Swing Bolt	2
8	052699	Knob	2
9	052730-01	Hose Tray	1
10	045304	Hot Air Hose	1
11	F705-0045	Electronics Plate	1
12	075761	Tarp System	1
13	FW71225	Pin	4
14	075401	Metering Wall	1
15	075795	Mud Flap Mount	2
16	075732	Mud Flap	2
17	052160	Toolbox	1

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

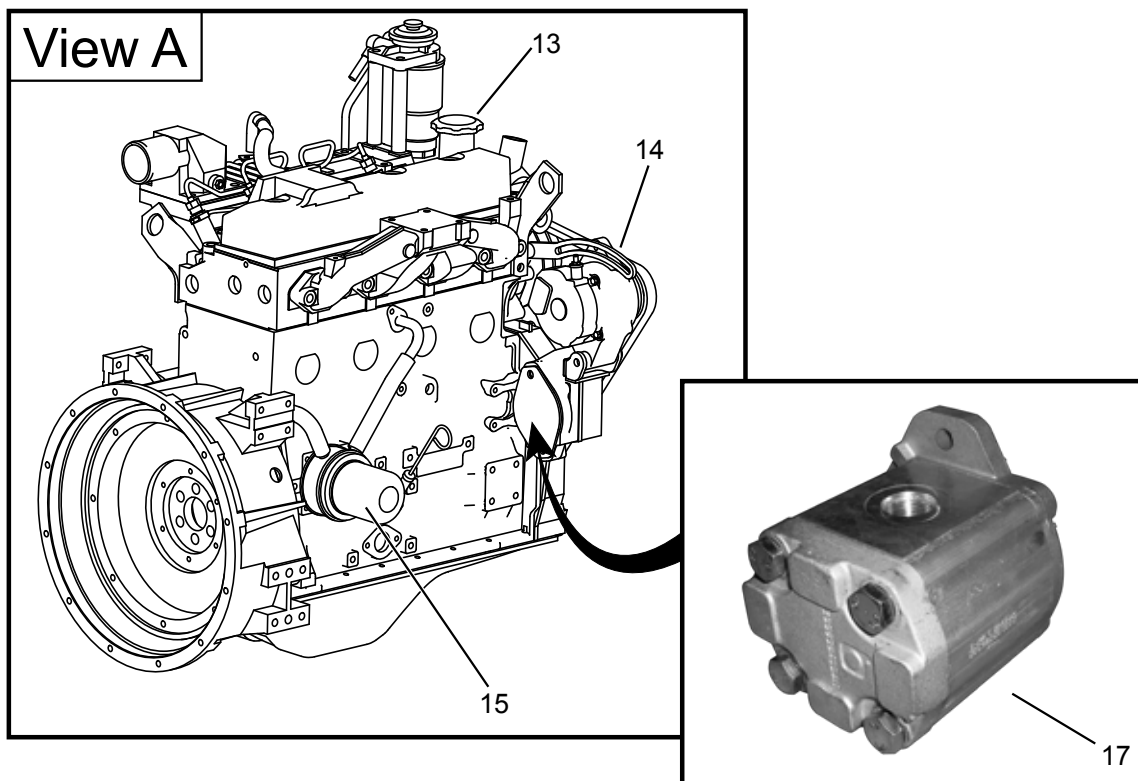
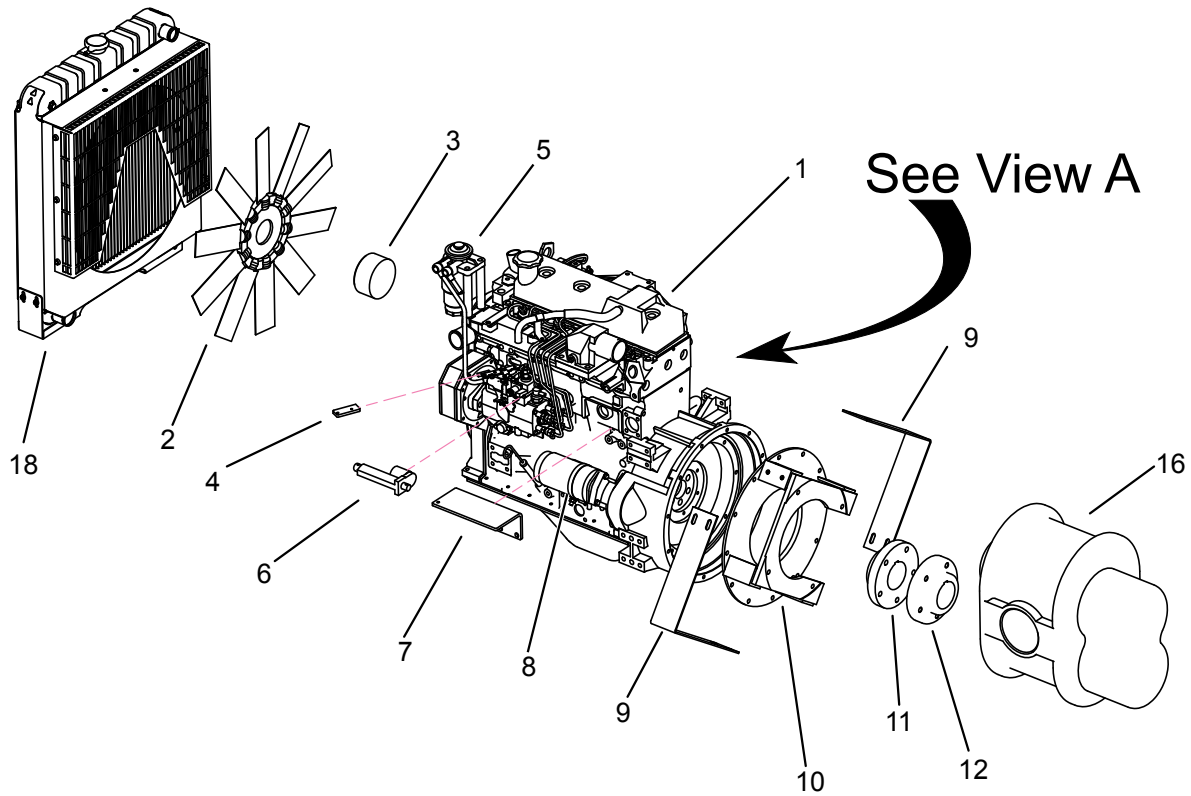


HOPPER - LEFT FRONT

Ref. No.	Part Numbers	Description	No. Required
1	075478	Plastic Handle	1
2	F705-0004	Cover Plate	1
3	F705-0009	Roof Panel	1
4	075730-02	Support Channel	1
5	075730-01	Support Channel	2
6	075729	Side Bumper Weldment	1
7	075710	Fuel Tank	1

NOT SHOWN

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

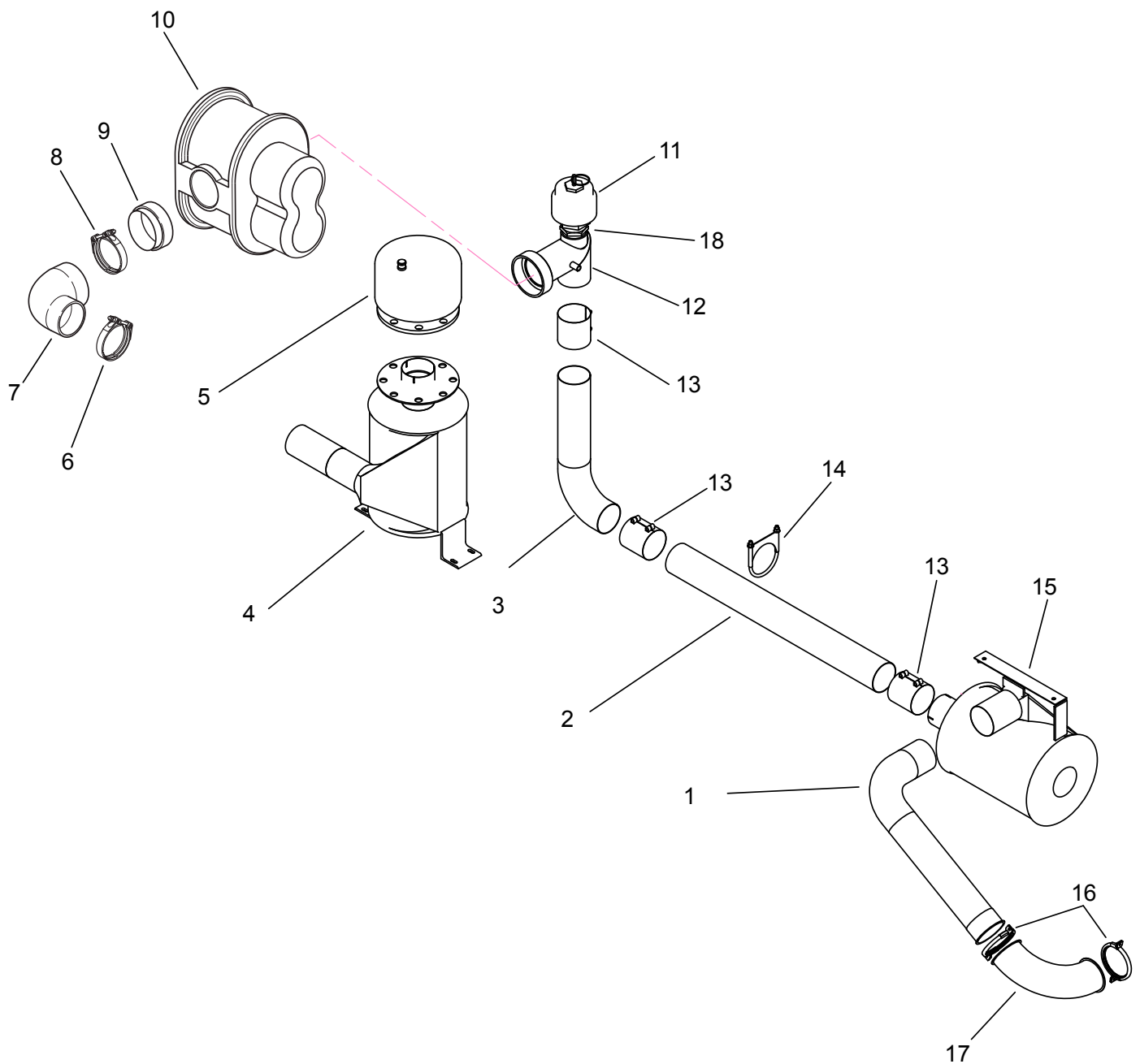


**WHEN ORDERING PARTS, BE SURE TO STATE
SERIAL NUMBER OF MACHINE**

ENGINE COMPONENTS

Ref. No.	Part Number	Description	No. Required
1	075714	Cummins B3.3 Diesel Engine	1
2	075726	Pusher Fan	1
3	075727	2 in. Fan Spacer	1
4	075756	Linkage Connector	1
5	75714-04	Fuel Filter	1
6	023814	Throttle Actuator	1
	075292-05	Throttle Pivot	1
	075284-01	Actuator Strap	1
7	F705-0035	Actuator Bracket	1
8	075714-05	Starter	1
9	F705-0031	Coupler Guard	2
10	075607	Machining Coupling Standoff	1
11	011772	Coupling Half 10S 1-3/8 DIA	1
	052025	Flywheel Adapter Plate	1
12	052001	Woods 10SC48 Flange	1
	011774	LoveJoy 10S-JES Coupling	1
13	075714-01	Oil Fill Cap	1
14	075714-03	Alternator	1
15	075714-02	Oil Filter	1
16	075290	6008 Blower	1
17	075737	Hydraulic Pump	1
	075737-OR	O-Ring for Hydraulic Pump	1
18	075715	Radiator	1

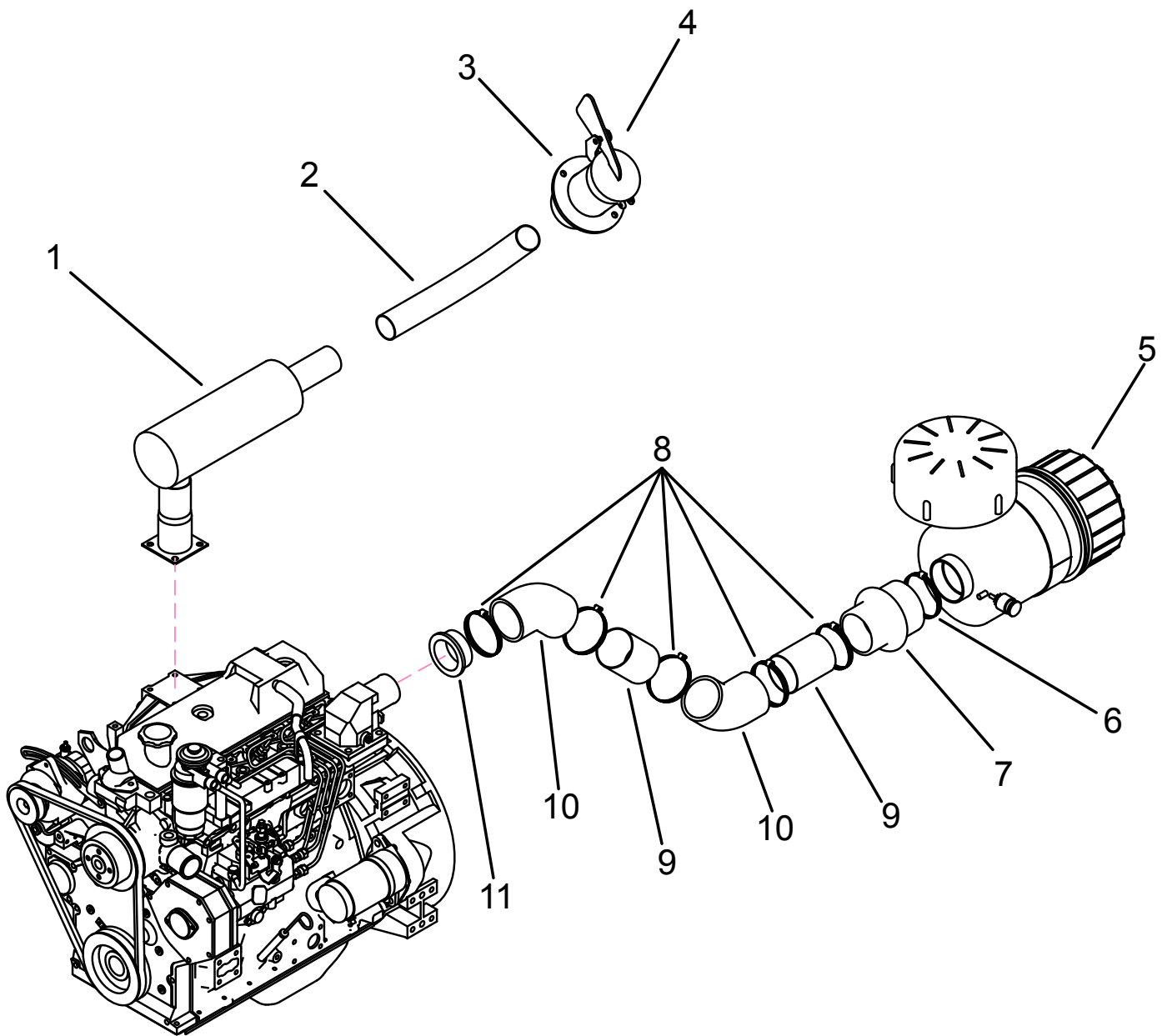
**WHEN ORDERING PARTS, BE SURE TO STATE
SERIAL NUMBER OF MACHINE**



BLOWER AND AIR PIPING SYSTEM

Ref. No.	Part Number	Description	No. Required
1	075717	Airlock Inlet Elbow Weldment	1
2	075741-02	Long Air Tube	1
3	075741	Silencer Elbow Weldment	1
4	075723	Inlet Silencer	1
5	052469	Inlet Filter	1
	055145	Filter Element	1
6	055335	4 in. Band Clamp	1
7	052010	90 degree Reducer Elbow	1
8	052011	5 in. Band Clamp	1
9	075295-02	Blower Inlet Nipple	1
10	075290	Blower	1
11	052917	Bayco Relief Valve	1
12	052137	Blower Discharge	1
13	055137	4" Butt Joint Clamp	3
14	055336	Muffler Clamp U400PL	1
17	075722	Outlet Silencer Weldment	1
16	052737	4" Bolted Pull Ring	2
	052738-04	U-Shaped Gasket	2
17	052740	4" 90 Deg Jacobs Elbow	1
18	160769	Reducer Bushing	1

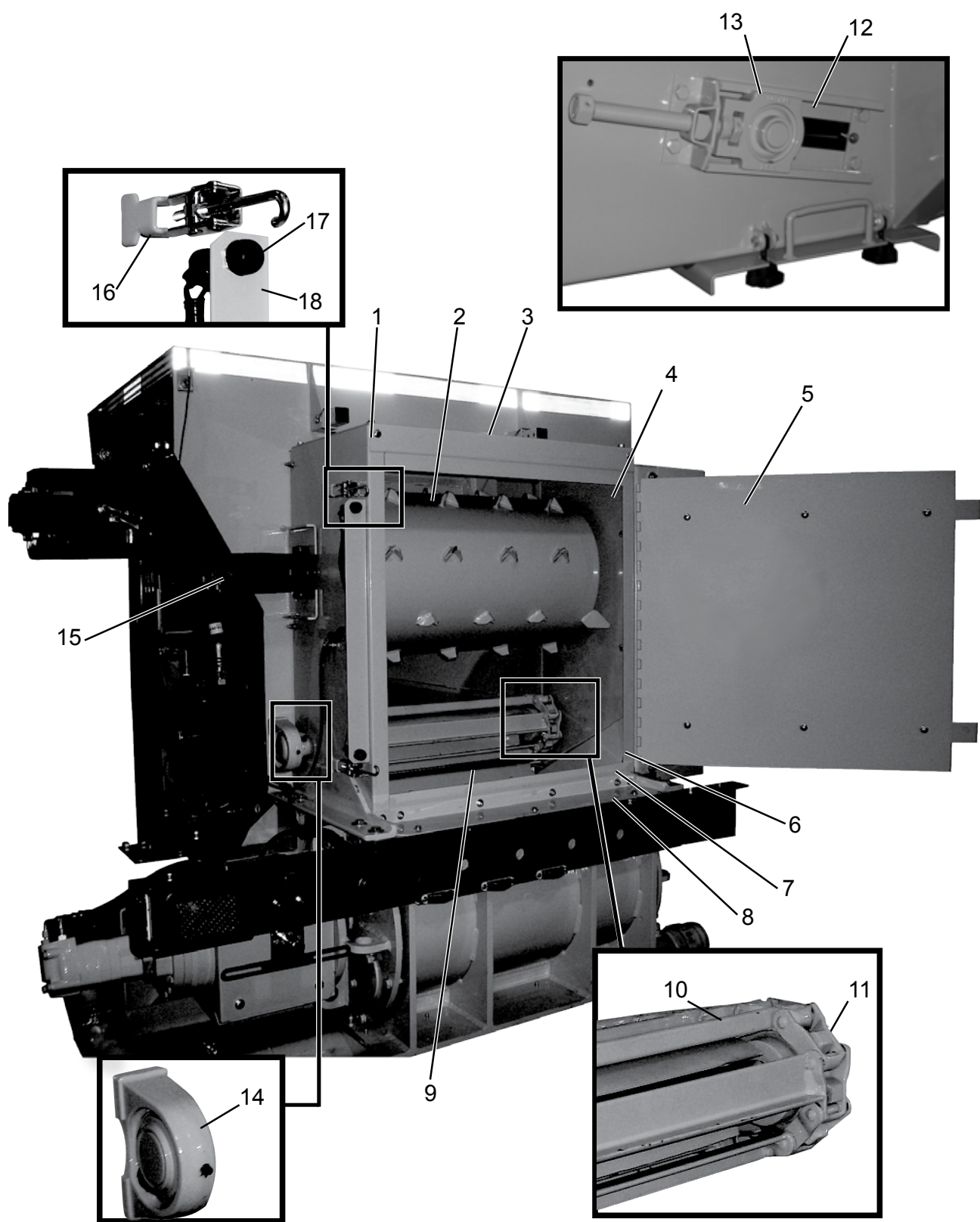
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AIR INTAKE AND EXHAUST SYSTEMS

Ref. No.	Part Number	Description	No. Required
1	075725	Exhaust Weldment	1
	075714-06	Exhaust Gasket	1
2	075725-02	Exhaust Pipe Elbow	1
3	075760	Exhaust Outlet	1
4	045014	Rain Cap	1
5	012646	Air Cleaner Assembly	1
	012623	Safety Filter Element (3.75-E2)	1
	012622	Main Filter Element (3.75-E1)	1
6	055497	3.5" Band Clamp	1
7	008618	Reducer Hose	1
8	055496	3" Band Clamp	5
9	005504-02	Intake Tube	2
10	055499	45 Degree Elbow	2
11	075244	Reducer	1

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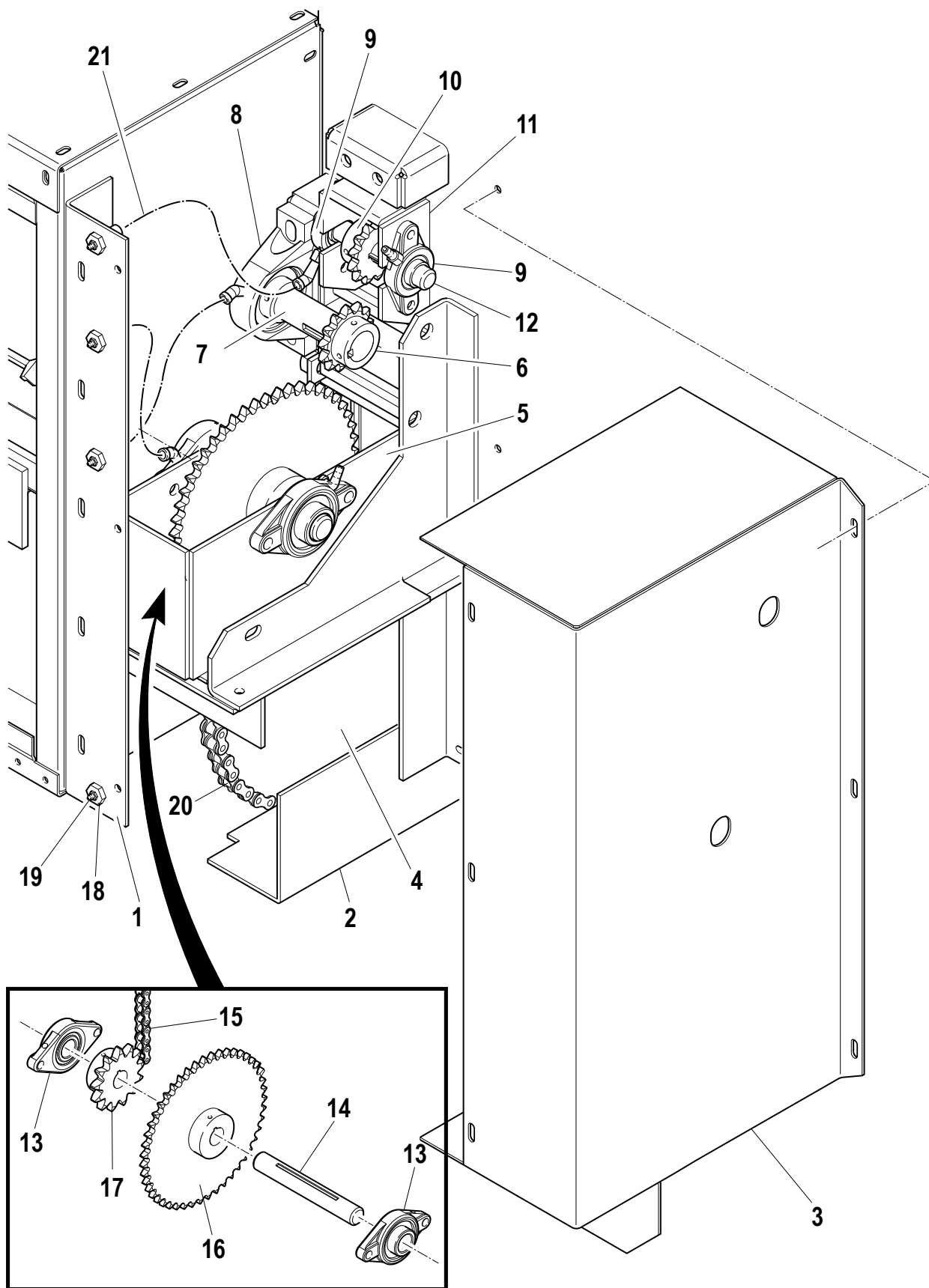
FEED ROLL AND FLOOR ASSEMBLY

Ref. No.	Part Number	Description	No. Required
1	F605-0109	Doghouse-Left Hand Side	1
2	075573	Feed Roll	1
3	F605-0110	Doghouse Cover	1
4	F605-0108	Doghouse-Right Hand Side	1
5	075317	Rear Door	1
6	F605-0124-01	Right Side Deflector	1
7	F605-0066	Rear Knife Cover	1
8	F605-0111	Rear Knife Filler	1
9	075604	Rear Floor Drive Shaft	1
10	075583	Floor Chain	1
	075218	Floor Chain Sprocket - Front	2
11	052224	Floor Chain Sprocket - Rear	2
12	075219	Front Take-Up Bearing Frame	2
13	075220	Front Take-Up Bearing	2
14	075606	Rear Floor Bearing	2
15	075453	Feed Roll Hydraulic Motor w/Speed Sensor	1
16	075224	Overcenter Draw Latch	2
17	055407	Door Safety Switch	2
18	075277-03	Door Switch Mounting Angle	1

NOT SHOWN

F705-0018	Floor Pan	1
045031	Feed Roll Hub	2
075366	Feed Roll Stub Shaft	1
075277-01	Top Door Support Angle	1
075277-02	Bottom Door Support Angle	1
F605-0124-02	Left Side Deflector	1
075277-05	Rear Knife Angle Bracket	1
075215-02	Front Floor Idler Shaft	1

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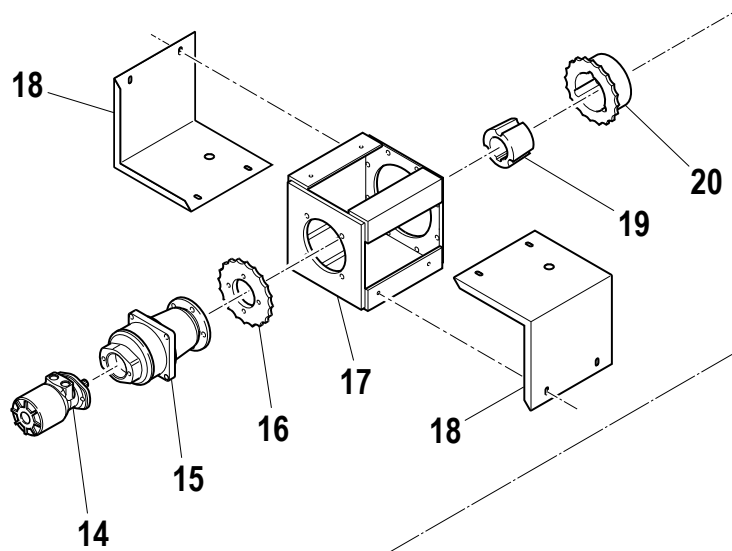


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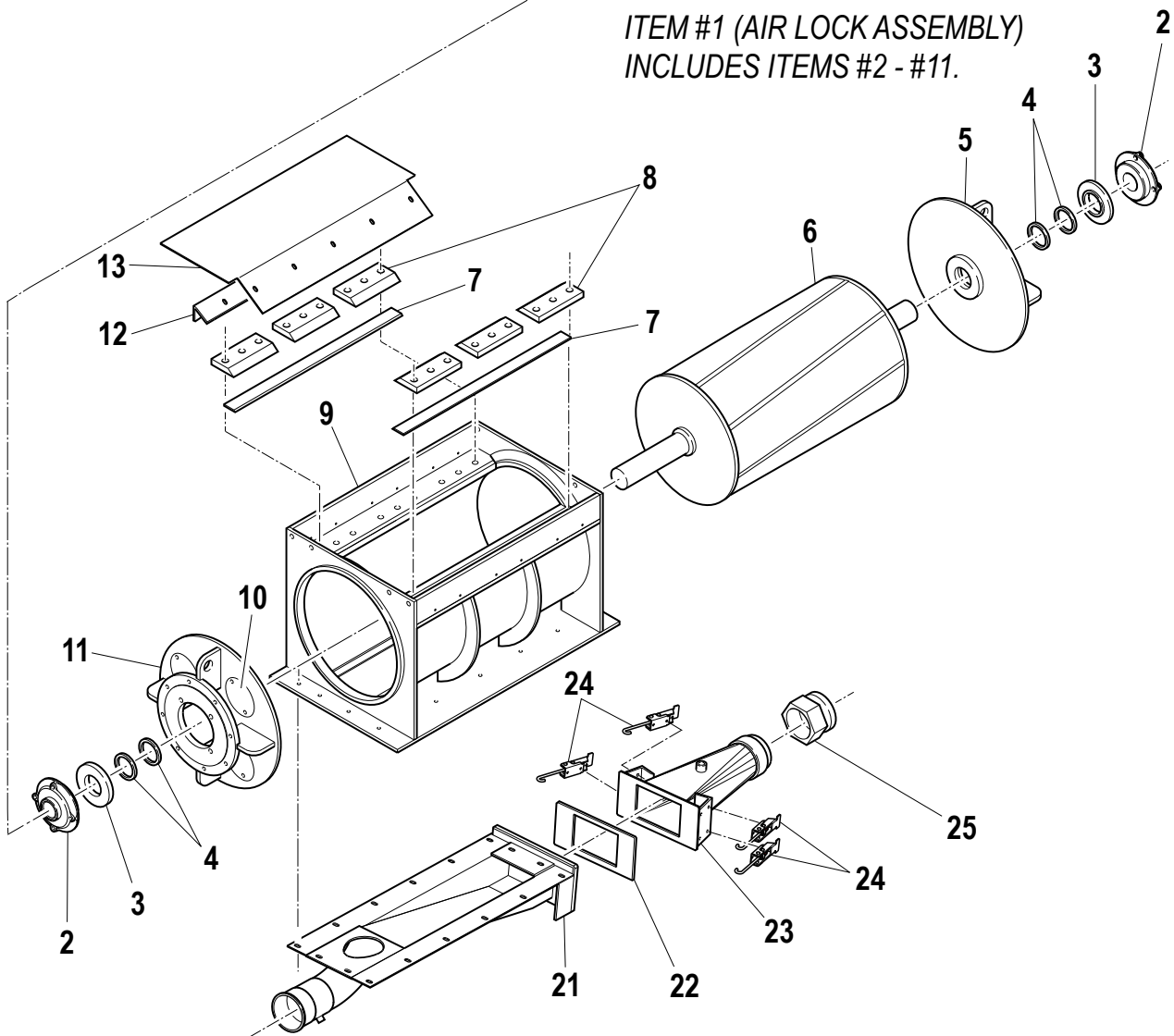
FLOOR DRIVE ASSEMBLY

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

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NOTE:
ITEM #1 (AIR LOCK ASSEMBLY)
INCLUDES ITEMS #2 - #11.

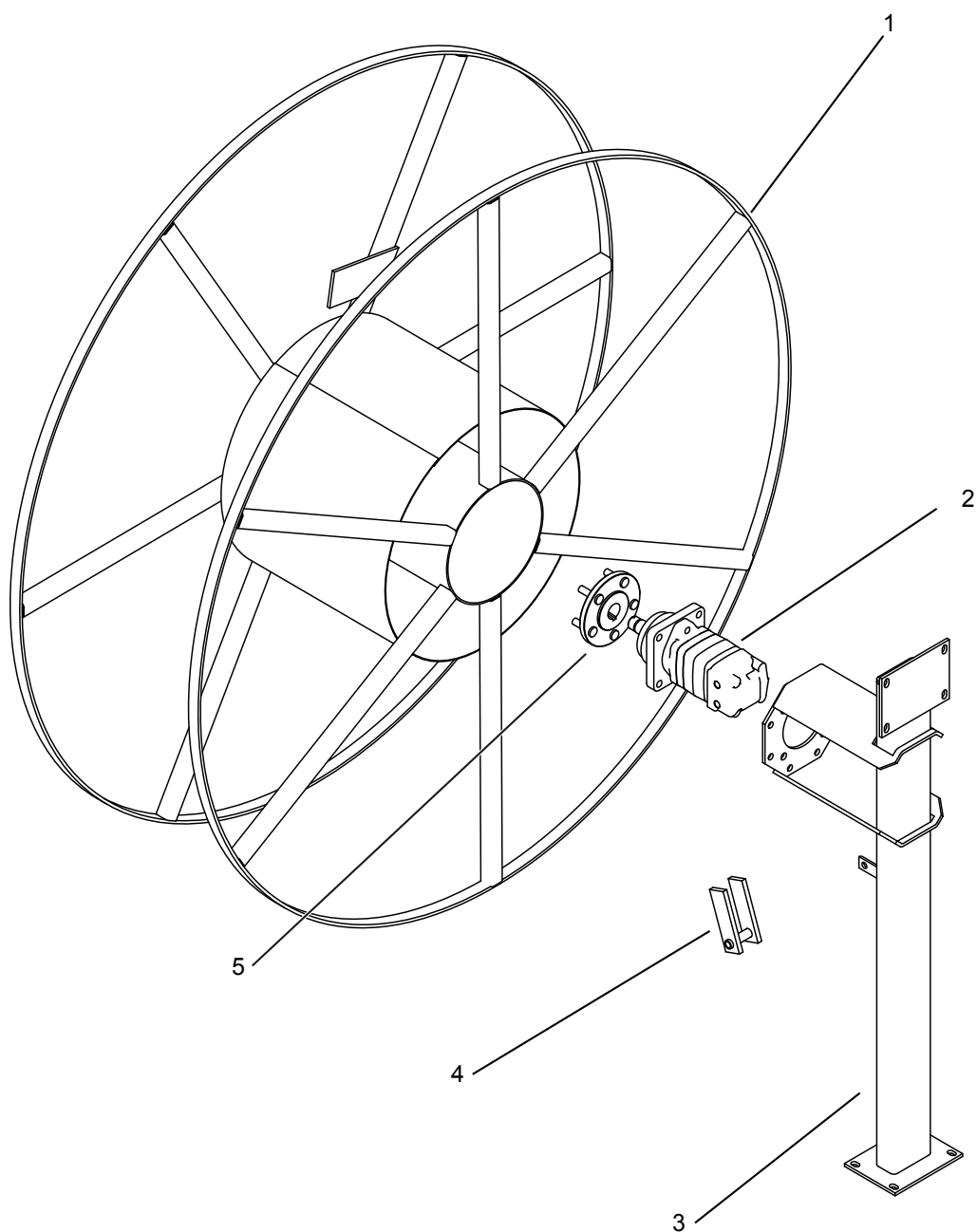


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AIR LOCK ASSEMBLY

Ref. No.	Part Number	Description	No. Required
1	075203	Air Lock Assembly	1
2	075239	Flange Bearing	2
3	075240	Packing Gland Retainer	2
4	075241	Packing Gland	4
5	075236	Discharge Endplate	1
6	075233	Rotor	1
7	075237	Knife	2
8	075238	Knife Clamp	8
9	075234	Housing	1
10	075242	Cleanout Door	4
11	075235	Drive Endplate	1
12	F605-0131	Airlock Filler Support	1
13	F605-0132	Airlock Filler Cover	1
14	075230	Hydraulic Motor	1
15	075204	Gearbox	1
	055517	Gasket (Not Shown)	1
16	075207	Sprocket	1
17	075210	Gearbox Standoff	1
18	F605-0021	Coupling Guard	2
19	075216	Bushing	1
20	045199	Coupling Half	1
	045201	Coupling Chain (Not Shown)	1
21	075352	Discharge Pan	1
22	075611	Discharge Gasket	1
23	075740	Discharge Transition	1
24	075224	Discharge Latch	4
25	055374	4 in. Male Nyglass Adapter	1

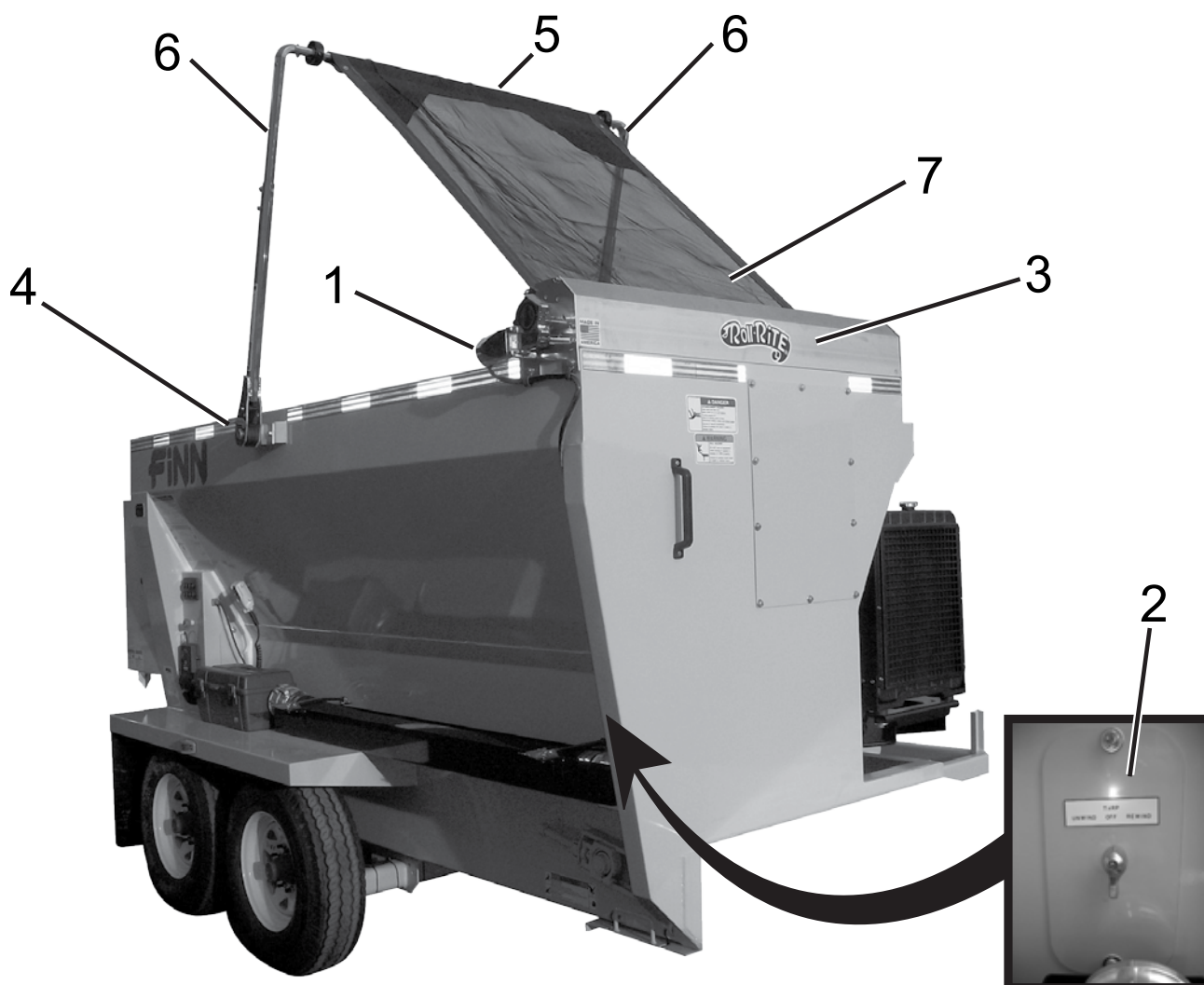
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HOSE REEL ASSEMBLY

Ref. No.	Part Number	Description	No. Required
1	075719	Hose Reel Drum	1
2	071238	Hydraulic Wheel Motor	1
3	075713	Hose Reel Mount	2
4	055715-01	Lock Mount	1
5	045031	Machined Hub	1
6	075739	Hose Reel Side Cover (Not Shown)	1

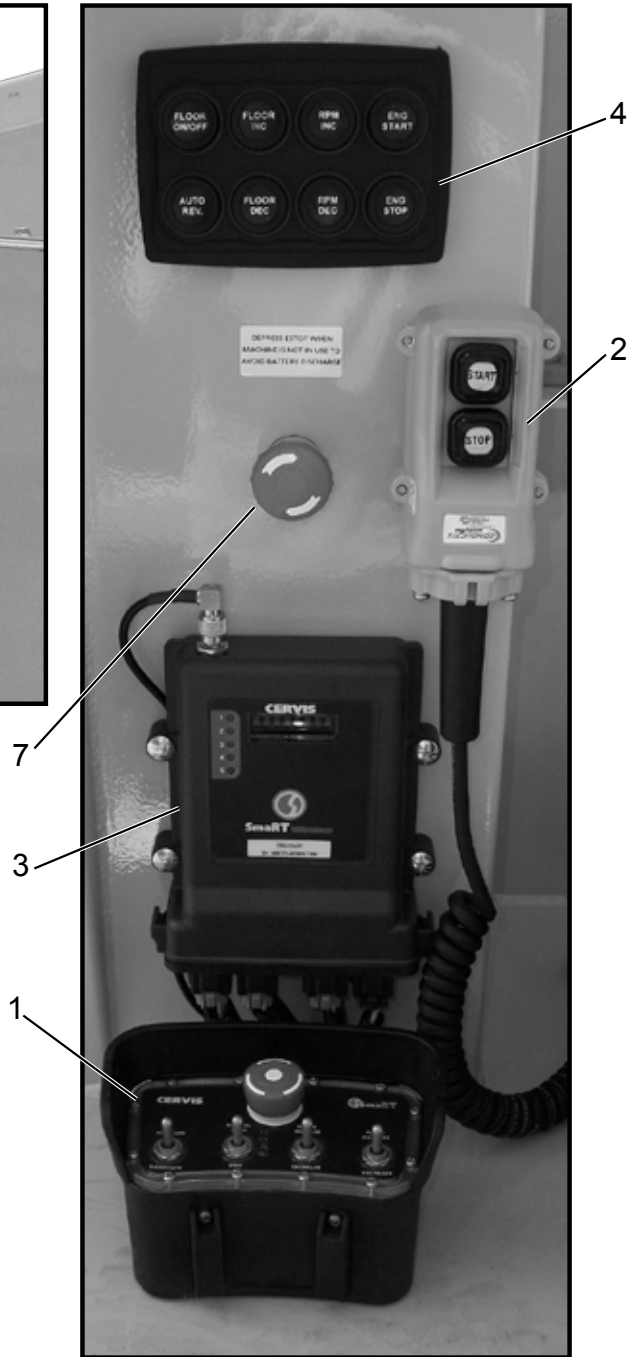
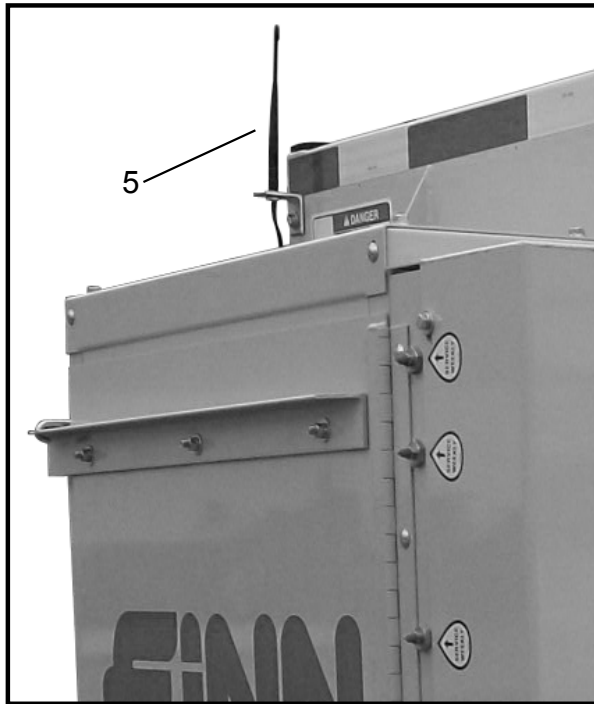
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TARP ASSEMBLY

Ref. No.	Part Number	Description	No. Required
	075761	Tarp Assembly	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
	RR7670-08	Tarp Bow Set	1
5	RR7677-08	Crossbar	1
6	RR7676-08	Upper Arm	2
7	RR8100-08	Knit Mesh Tarp	1

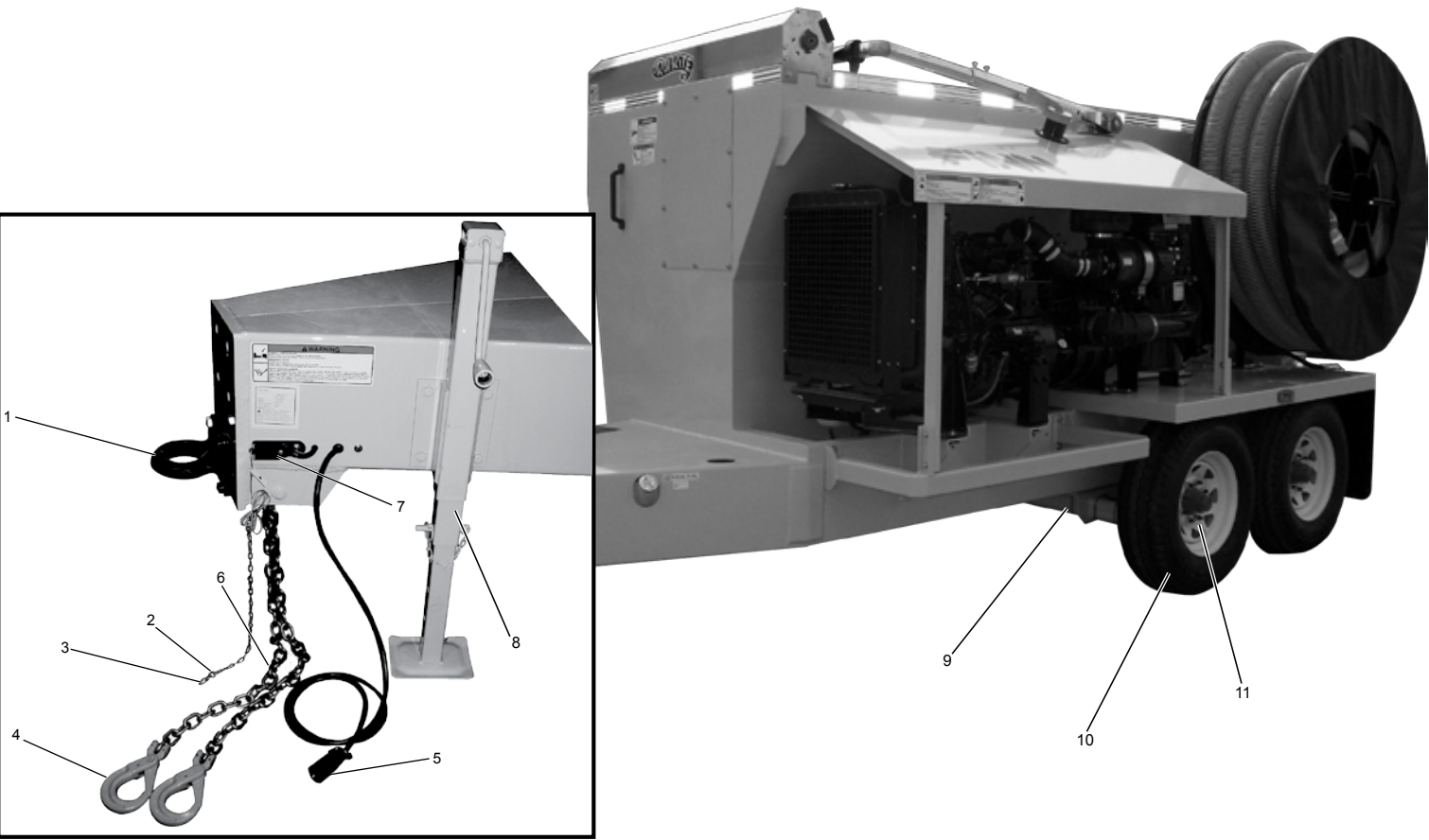
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CONTROL SYSTEM

Ref.	Part Number	Description	No. Required
	075736	Cervis Wireless Remote System	1
1	075736-R	Wireless Remote	1
2	075736-P	Pendant	1
3	075736-M	Module	1
4	075736-KP	Keypad	1
5	075736-A	Antenna	1
6	075787-01	Pendant Plug	1
7	366164	E-Stop Button	1

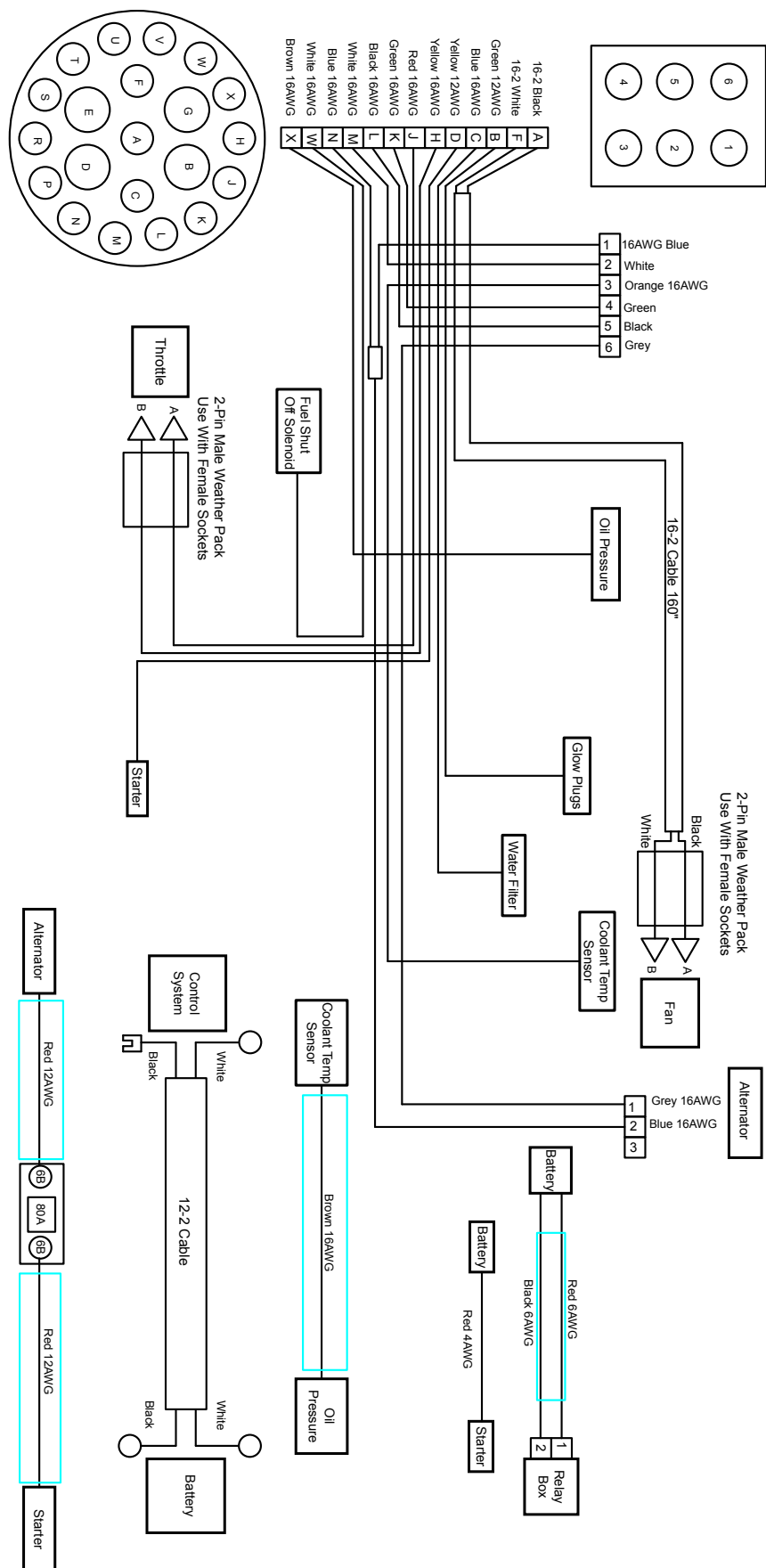
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TRAILER & TOW HITCH ASSEMBLY

Ref. No.	Part Number	Description	No. Required
1	041007	Tow ring	1
2	190029	Chain	1'
3	005017	Snap Hook	1
4	005169	Clevis Grab Hook	2
5	075592	Trailer Plug	1
6	190007	Safety Chain	6'
7	023424	Break-Away Switch	1
8	080701	Jack	1
9	005798	Axle (7,000 lbs)	2
10	075625-GAL	Tire	4
11	005057	Rim	4

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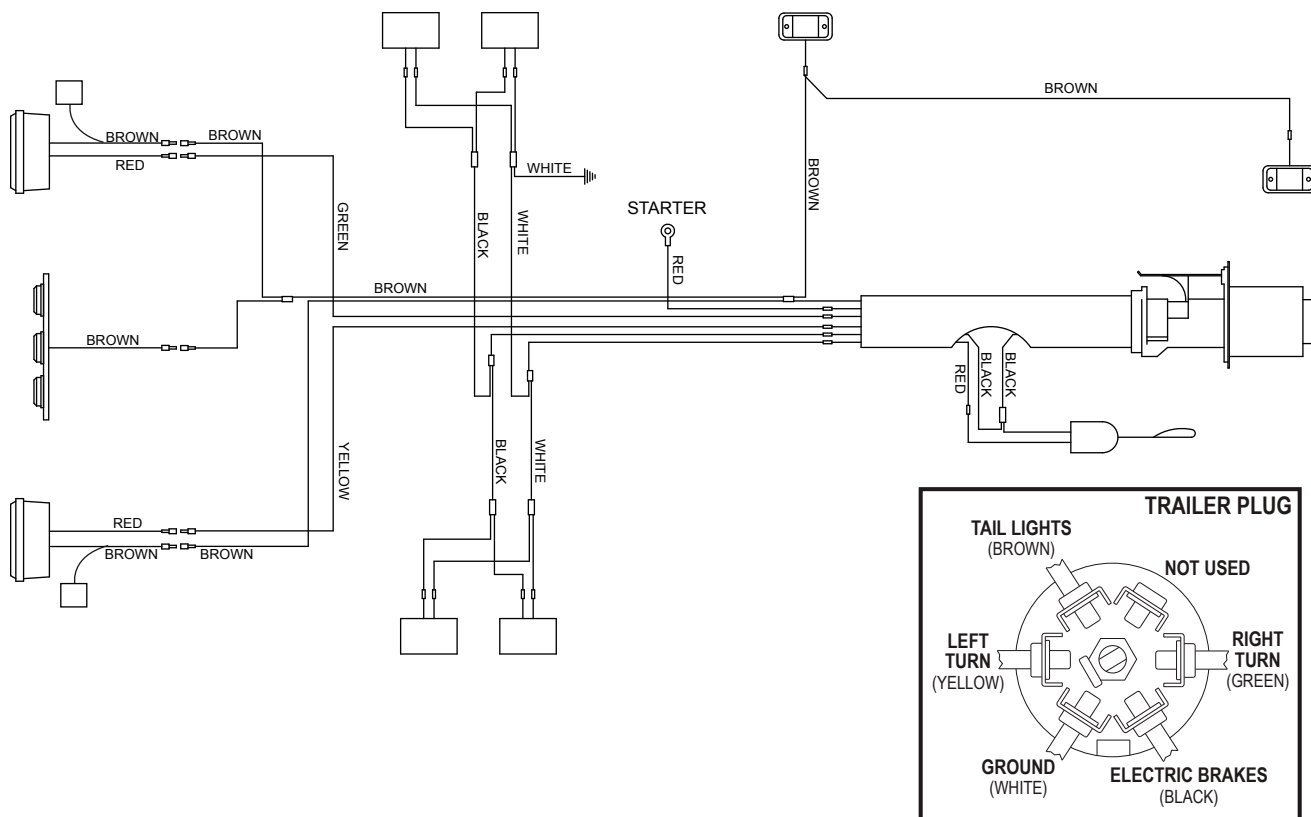


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ENGINE WIRING

Part Number	Description	No. Required
075733	Engine Wiring Harness	1
075772-06	Deutsch Receptacle	1
075733-07	Housing	1
075733-08	Terminal	1
170000	Ring Tongue 12-10 3/8 Stud	1
170001	Ring Tongue 12-10 1/4 Stud	1
170002	Ring Tongue 12-10 Ga. #10 Stud	2
170005	Ring Tongue 16-14 Ga. #10 Stud	5
170006	Ring Tongue 16-14 #8 Stud	2
170108	Deutsch #DT06-6S Plug	1
170109	Deutsch #W6S Wedge Lock	1
170111	Deutsch #0462-201-16141 16Ga. Socket	17
170112	Deutsch #0462-203-12141 12Ga. Socket	2
170113	Deutsch Sealing Plug	8
075772-06	Deutsch HD36-24-21SE Receptacle	1
075772-02	Deutsch HD36-18-6SN-C030 Receptacle	1
075735-09	Deutsch Socket Size 4	2
FW71359	Hood Housing	1
FW71356	Male Plug Insert	1
023814	Throttle Actuator	1
011851	12 Volt Battery	1
011770	Battery Box	1
085213	Positive Battery Cable	1
035130	Negative Battery Cable	1

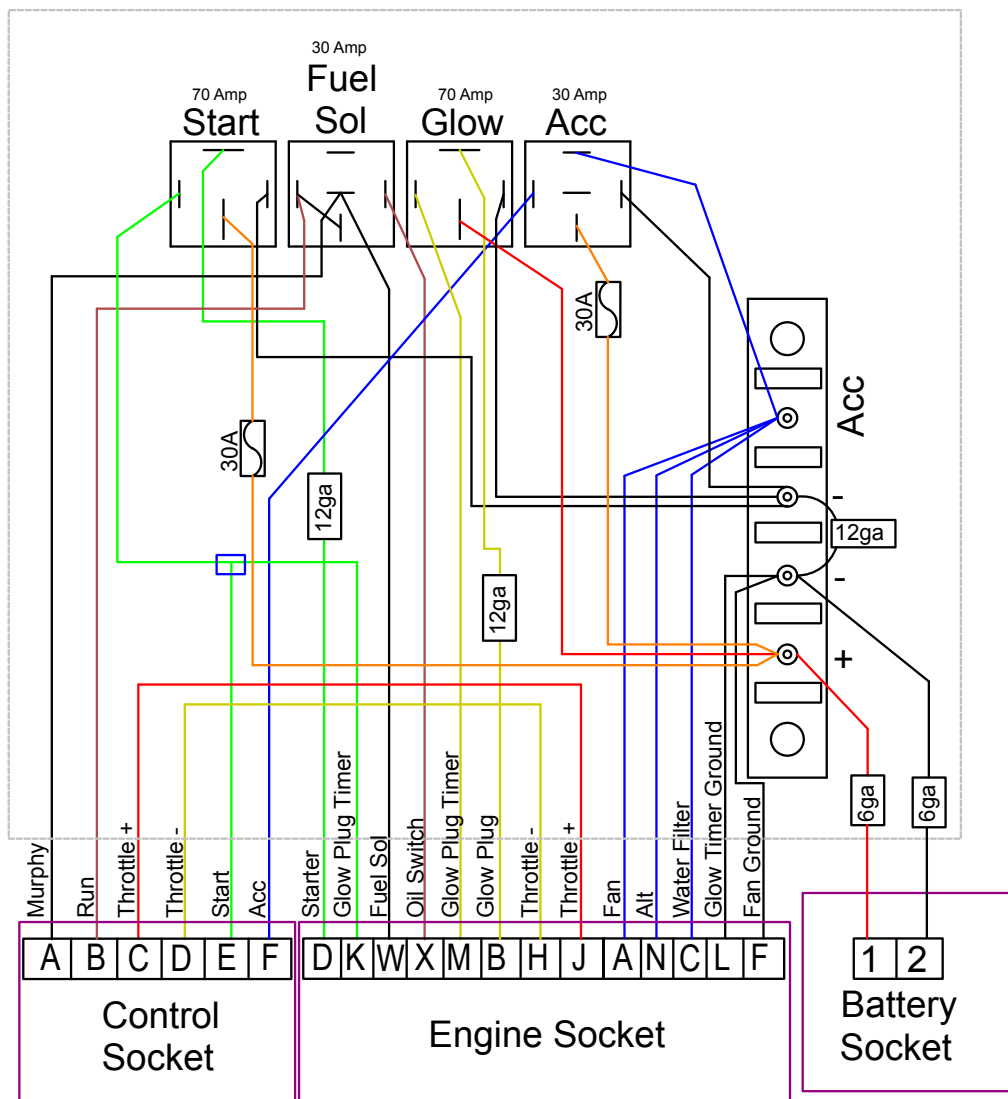
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TRAILER WIRING

Part Number	Description	No. Required
075781	Trailer Wiring Harness	1
075592	Trailer Plug	1
023424	Breakaway Switch	1
005016	S Hook	2
005017	Snapper Hook	1
005137	Left Taillight Assembly	1
005138	Right Taillight Assembly	1
005437	3 Bar Light	1
FW71090	Amber Marker Light	2
004720	License Plate Bracket	1
005436	License Plate Light	1

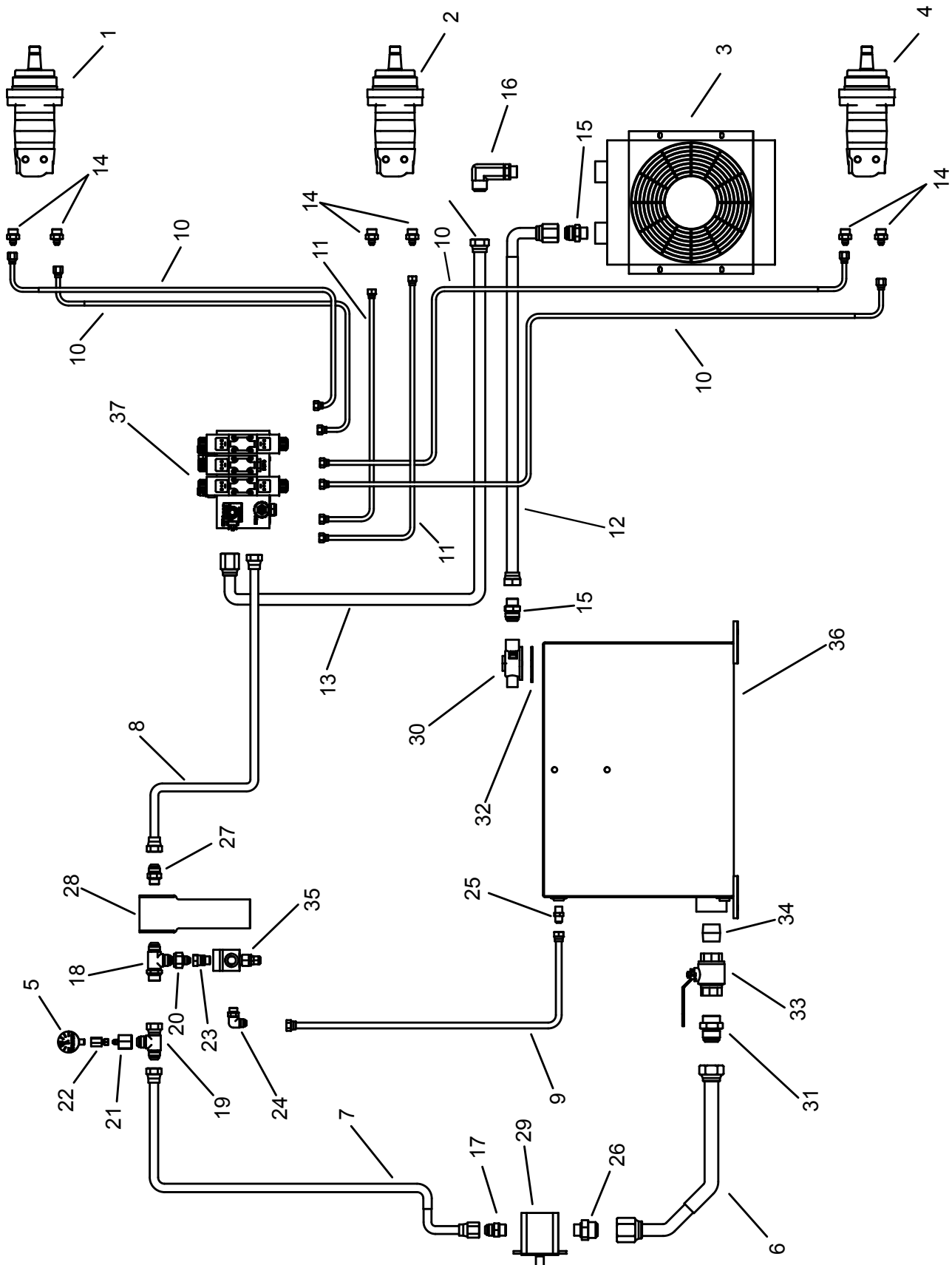
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RELAY BOX WIRING

Part Number	Description	No. Required.
FW71749-02	30 Amp Relay	2
75766	70 Amp Relay	2
75772-01	Deutsch HD34-18-6PN Receptacle	1
75772-03	Deutsch HD34-24-16PE Receptacle	1
75772-05	Deutsch HD34-24-21PE Receptacle	1
170220	Deutsch 16 Ga. Pin	11
170132	Deutsch #12 Pin	8
170005	Ring Tongue 16-14 Ga. #10 Stud	6
170002	Ring Tongue 12-10 Ga. #10 Stud	3
75783	Back Panel	1
75790	Enclosure	1
75763	4 Post Terminal Block	1
52119	ATO/ATC 30 Amp Fuse	2
13104	ATO/ATC In Line Fuse Holder	2

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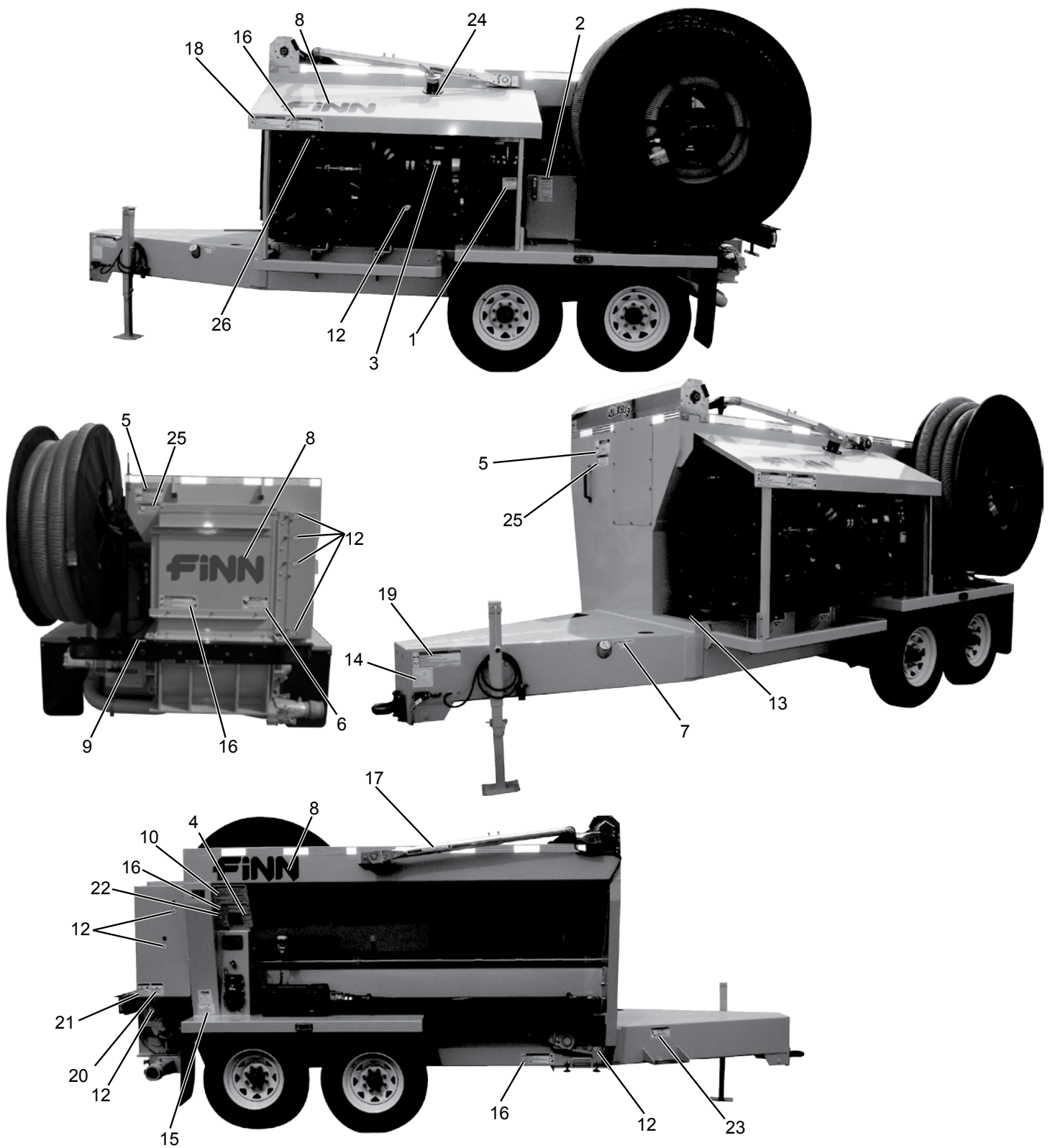


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HYDRAULIC SYSTEM

Ref. No.	Part Number	Description	No. Required
1	071238	Hose Reel Motor	1
2	075453	Floor Drive Motor	1
3	013192	Hydac Cooler	1
4	075230	Airlock Motor	1
5	012044	Pressure Gauge	1
6	075745-01	1 1/4" Suction Hose	1
7	075745-02	3/4" Hose	1
8	075745-03	3/4" Hose	1
9	075745-04	1/2 " Hose	1
10	075745-06	3/8" Hose	4
11	075745-07	3/8" Hose	2
12	075745-08	1" Return Hose	1
13	075745-09	1" Return Hose	1
14	085014	7/8 SAE x 9/16 JIC Straight	6
15	FW65225	#12 x #16 JIC Male	2
16	075796	#16 x #12 JIC Extra Long 90	1
17	012087	1 1/16 SAE x 1 1/16 JIC	1
18	075659	12 - 12 - 12 JIC	1
19	FW71873	#12 JIC Swivel Nut Run T	1
20	FW65226	#12 F x #8 M JIC	1
21	012420	Reducing Adapter	1
22	055757	#4 x #4	1
23	055357	#8 M O-Ring x #8 FJ Swivel	1
24	055230	3/4 M SAE ST x 3/4 M JIC 90	1
25	FW71911	3/8" M NPT x #8M JIC Adapter	1
26	075797	#20M JIC x #12M SAE	1
27	FW75148	#10 SAE x #12 JIC Straight	1
28	075747	Pressure Filter	1
29	075737	Hydraulic Pump	1
30	075746	Return Filter	1
31	FW65348	1 1/4" NPT X #20 JIC Adapter	1
32	075746-01	Return Filter Gasket	1
33	012083	Ball Valve, 1 1/4" Full Port	1
34	160307	Close Nipple 1 1/4 STD	1
35	075770	Relief Valve	1
36	075716	Oil Tank Weldment	1
37	075757	Hydraulic Valve Assembly	1

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DECALS

Ref. No.	Part Number	Description	No. Required
	075744	5-Series Decal Sheet	
1	052178	"CAUTION" Decal	1
2	012687	"CAUTION" Decal	1
3	19426-87903	"CAUTION" Do Not Use Ether	1
4	045128	"DANGER" Do Not Raise Decal	1
5	052177	"DANGER" Entanglement Hazard Decal	2
6	055219	"DANGER" Sharp Knives Decal	1
7	075780	DIESEL FUEL Decal	1
8	023174*	"FINN" Decal	3
9	012868	HOSE REEL REWIND Decal	1
10	075347	Operating Instructions Decal	1
11	7230-02	Service Daily Decal (Not Shown)	1
12	007231	Service Weekly Decal	12
13	7231-01	Service Weekly Decal	1
14	075779	Trailer GVWR Decal	1
15	055216	"U.S. Patent No." Decal	1
16	31463B	"WARNING" Sever Hazard Decal	5
17	022690	"WARNING" Flying Objects	2
18	031462	"WARNING" Burn Hazard/Radiator Decal	1
19	031461	"WARNING" Runaway Hazard	1
20	055735	"WARNING" High Pressure Decal	1
21	055280	"WARNING" Flying Objects Decal	1
22	023519	"WARNING" Wear Eye Protection Decal	1
23	080107	"WARNING" Hitch Fall Hazard	1
24	012278	"WARNING" Burn Hazard Decal	1
25	020970	"WARNING" Fall Hazard	2
26	075788	"WATER/FUEL" Decal	1

NOTE

Decals are not sold individually unless otherwise stated. To obtain replacement decals, order entire Decal Sheet "075744."

*

These Decals are not included with the Decal Sheet "075744" and must be ordered separately.

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TOOL KIT

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

DISCHARGE HOSE

Part Number	Description	No. Required
055339A	100' Discharge Hose Ass'y w/ Aluminum Couplers	1
055398A	50' Discharge Hose Ass'y w/Aluminum Couplers	1
055374A	Aluminum Male Adapter	1
055375A	Aluminum Female Coupler	1
045303	Hot Air Hose	1
053075	Discharge Deflector Assembly	1
055337	Shoulder Strap	1

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NOTES