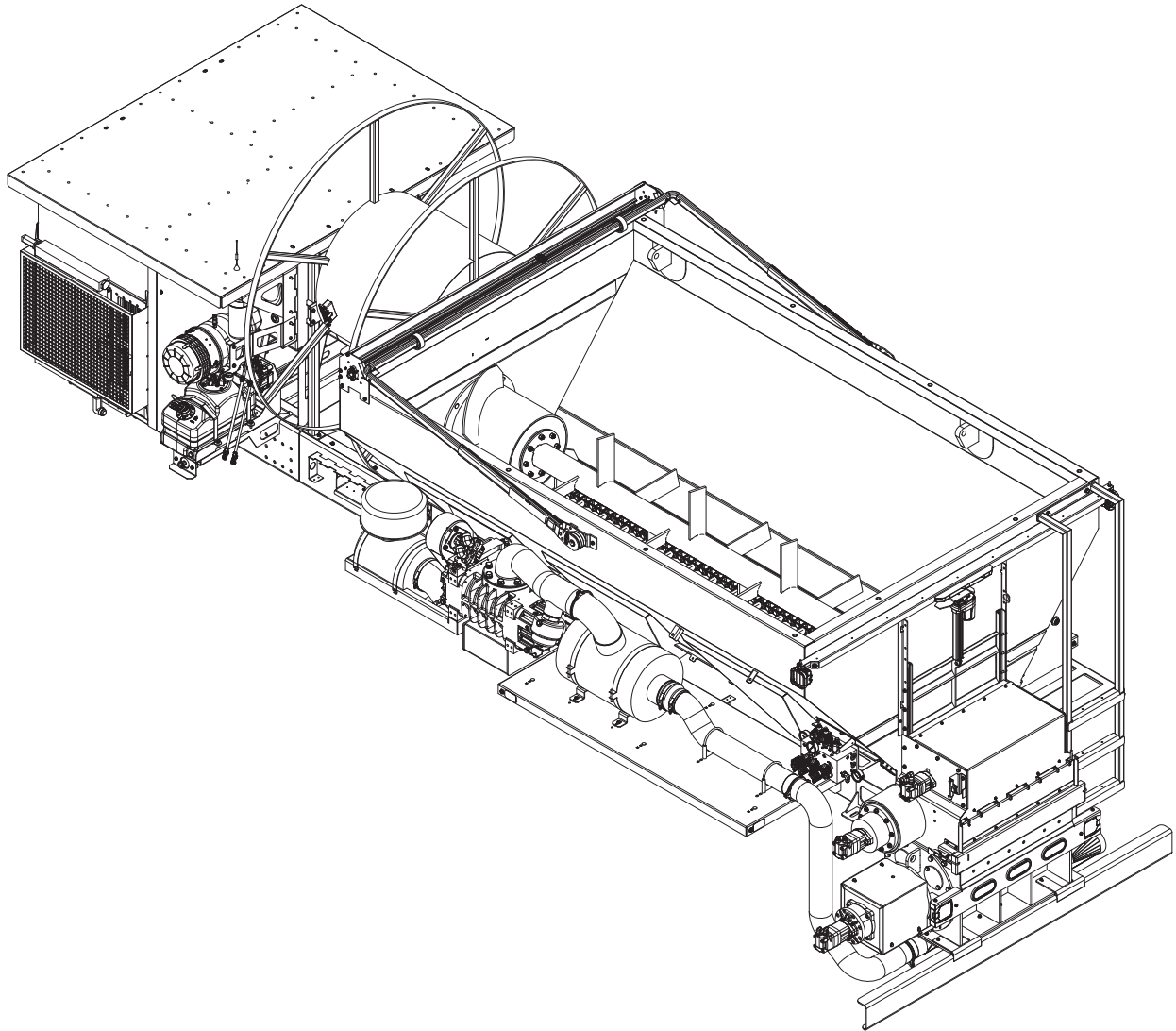


FINN CORPORATION[®]

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Sales: 1-800-543-7166



MBX Material Blower Operator Instructions and Parts Manual

Item **A2527-001** Serial No. _____



ACTIVATE YOUR FINN EQUIPMENT WARRANTY

☞ It is the responsibility of the Finn Dealer to register your Finn Equipment shortly after the equipment start-up and operation overview at which time you will be asked to sign off on the **WARRANTY VALIDATION FORM**.

Be sure to confirm with your sales representative that this has been done.

This registration process activates the Finn Limited Warranty.

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

How to get parts and or repairs done under warranty:

Notify **YOUR DEALER** immediately when you discover a faulty material, workmanship, or faulty component. **Do not** wait weeks or months to get it reported. Be sure to tell the dealer that this is a failure that occurred under warranty.

NOTE: Warranty work must be done by a Finn Authorized Dealer in order to be covered by the Finn Warranty Program, unless otherwise approved by the Finn Warranty Administrator.

Instructions to Dealer on processing warranty work:

Initiating a claim

1. Be sure to have the model, serial number and number of hours on unit.
2. A description of the problem as understood at the time.
3. Call Finn's Warranty Administrator to secure warranty claim authorization number.
4. Confirm with Warranty Administrator that the unit is eligible for warranty coverage.
5. Any parts needed for the repair work should be placed with the Warranty Administrator instead of the parts department. These will be shipped to you at no charge pending the outcome of the investigation.
6. Labor hours must coincide with the published "Labor Schedule" or estimate approved by the Finn Warranty Administrator.
7. Once work is done, a Finn Warranty Claim Form must be filled out and emailed along with any related receipts or invoices to the Warranty Administrator. We ask that this is done ASAP after work is completed.

Faulty or failed parts:

IF Finn wants you to return failed parts, you will receive a return shipping label in the package with new parts. On that Label will be marked a return authorization number. (Which is the same number as you claim number.)

Please also mark the outside of the package that you are shipping back (using a marker) with the claim/return number. **THESE PARTS MUST BE RETURNED WITHIN 10 DAYS!** Failure to do so can void warranty coverage.

NOTE: Further information and related forms can be found on the Finn Web site in the Dealer Portal warranty section.

Warranty Coverage Period:

HydroSeeders and Straw Blowers: Two (2) years or 2000 hours whichever comes FIRST
Bark Blowers: One (1) year or 1200 hours whichever comes FIRST

1) OUR WARRANTY TO YOU:

Finn Corporation warrants to you, the original purchaser, for use (or rental to others for use) and to a second owner who purchases a used machine from an Authorized Dealer Rental Program (the remaining warranty), or from the original purchaser, 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.

2) TO QUALIFY FOR WARRANTY CONSIDERATION:

- A. Your Finn Dealer will register your equipment with Finn.
- B. Notify your dealer same day or next day of any need for work under warranty. Equipment must be made available for warranty repair prior to additional operation.
- C. Warranty work must be done by an authorized Finn dealer or service provider of Finn's choice and any parts must be ordered through the Finn warranty administrator.

3) WHAT FINN WILL DO:

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

- A. Verify claim falls within the valid warranty time frame.
- B. Verify the product and equipment has been registered with Finn.
- C. Upon affirmation of warranty period and registration, Finn will provide new or repaired replacement part(s), whichever Finn elects and a return shipping label for returning failed parts if applicable.
- D. Evaluate the part when defective part is returned. If damage to a part is determined not to be covered under the warranty, the customer will be billed.
- E. 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.
- F. Correction of nonconformities, in the manner provided above, shall constitute fulfillment of all liabilities of Finn Corporation.

4) WHAT THE WARRANTY DOES NOT COVER:

- A. Normal wear parts, Allied Equipment, trade accessories not manufactured by Finn, such as but not limited to items such as engines, various filters, fluids, brakes, clutch linings, coupler insert, belts, hoses, light bulbs, mechanical seal, over center clutches, tires, ignitions, starters, batteries, carburetors, or like or unlike equipment or accessories (such being subject to the warranty, if any, by their respective manufacture).
- B. Secondhand, used, altered, or rebuilt machines or parts.
- C. 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).
- D. Any defect or failure of products warranted arises out of or is caused by accessories or parts not manufactured or supplied by Finn Corporation, whether same are supplied by purchaser, dealers, or any other party.
- E. Additional damage caused by continuous use of a failed or damaged component from keeping equipment in use with the failed component.

5) STORAGE:

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

6) 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.

7) LIMITATIONS ON OUR RESPONSIBILITY WITH RESPECT TO PRODUCTS PURCHASED:

- A. The remedies of the user set forth herein are exclusive, without regard to weather any defect was discoverable or latent at the time of delivery of the product to the purchaser.
- B. 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.
- C. **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.
- D. **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.

8) 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. Finn Corporation cannot assure that parts and attachments not manufactured or supplied by Finn meet Finn Corporation's quality standards, specifications or operating requirements. The Finn Limited Warranty is not effective to the extent any failure of or a defect in 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 Corporation could result in personal injury and void warranty coverage.

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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 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 *Danger indicates an imminently hazardous situation which, if not avoided, WILL result in death or serious injury.*

⚠ WARNING *Warning indicates a potentially hazardous situation which, if not avoided, COULD result in death or serious injury.*

⚠ CAUTION *Caution indicates a potentially hazardous situation which, if not avoided, MAY result in minor or moderate injury.*

NOTICE *Notice indicates important information, that if not followed, MAY cause damage to equipment.*

NOTE: This is helpful information.

The **DANGER**, **WARNING**, **CAUTION** and **NOTICE** notifications and instructions in this manual *cannot* cover all possible conditions and situations that may occur.

It must be understood by the operator that caution is a factor which *cannot* be built into this product; caution must be supplied by the operator.

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. Wear protective equipment.*



⚠ 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.*

MATERIAL 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.

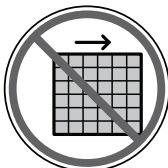


I. PRE-START EQUIPMENT CHECK (equipment check is to be made with the engine off)

1. Check devices securing unit to the truck.
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 are found, replace affected part immediately.

II. MACHINE OPERATION

1. Always wear safety goggles when operating and/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 airlock 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 unit 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 the hose, high pressure can be exerted at the end of the hose. Hose-holding personnel must establish good footing. The operator should only increase the engine RPM which increases the volume of air in 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.



II. MACHINE OPERATION (Continued)

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 and lockout the engine using the OSHA lockout/tagout procedure (29 CFR 1910.147) before removing any foreign objects. Signal visually and audibly that all is clear before operating the machine.



15. When leaving the blower unattended for any reason, be sure to:
- A. Shut off the material feed system using the **FLOOR** controls on the control panel or **MATERIAL** controls on the remote.
 - B. Shut off vehicle engine and blower engine.
 - C. Place transmission of the vehicle in "NEUTRAL" or "PARK".
 - D. Set parking brake firmly.
 - E. Remove keys from blower unit.
 - F. Lock vehicle cab and take all keys with you.
 - 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 unattended.

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

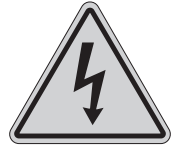
17. Be careful in getting on and off the blower, especially in wet, icy, snowy, or muddy conditions. Clean mud, snow, or ice from steps, fenders, and footwear.



18. All personnel operating in/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 Emergency Stop (e-stop) button depressed on the remote control hand held unit when unit 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 unit.

21. The battery charger for the machine remote may be in an enclosure (toolbox or remote case). Keep the surrounding area of the enclosure well ventilated. Do not cover the enclosure in any way. Open the enclosure carefully: if damage to the battery has occurred, battery acid can be harmful.



III. MAINTENANCE

1. Before servicing the machine, turn off engine and allow all moving parts to stop. To prevent accidental starting, disconnect battery. 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.



III. MAINTENANCE (Continued)

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. Avoid spark when working with tools around battery terminals.



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 or near 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 contaminate the surrounding environment. 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 ether cold start fluid, if engine is equipped with glow plug-type preheater, or other intake manifold-type preheater. It could cause an explosion or fire and severe injury or death.



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

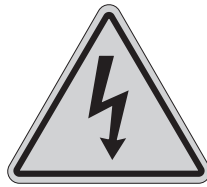
11. Do not pressure wash this unit. Do not pressure wash around any control boxes, radio remotes or control panels. Pressure washing this unit can cause damage to the electrical systems and components and also cause the unit to not function. Pressure washing injects water into sensitive electrical components. To clean the unit, use a method that controls the amount of water that is applied to the surface of the unit.



COMMON SAFETY SYMBOLS



Hazard/
Attention



Electrical
Shock Hazard



Hearing
Hazard



Arc Flash
Hazard or
Explosion
Hazard



Electrocution
Hazard



Fire Hazard



Body
Entanglement
Hazard



Electrostatic
Discharge
Hazard



Fumes/Dust
Hazard



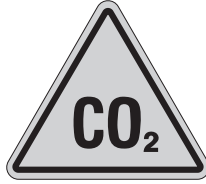
Burn Hazard



Electrostatic
Sensitive Area
Hazard



Pinch Point/
Entanglement
Hazard



Carbon
Dioxide
Hazard



Explosive or
High Pressure
Hazard



Grounding
Required
Hazard



Corrosive
Hazard



Explosive
Material
Hazard



Crush Hazard



Cut/Crush
Hazard



Vision Damage
Hazard



Crush/Pinch-
point Hazard



Cut/Sever
Hazard



Vision and
Hearing
Damage
Hazard



Crush/
Entrapment
Hazard



Sever/Reach
Hazard



Vision,
Hearing and
Respiratory
Damage
Hazard



High Voltage
Hazard

COMMON SAFETY SYMBOLS



Heavy Object Hazard



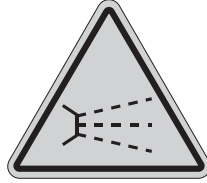
Skin Puncture Hazard



Breathing Protection Required



Hot Surface Hazard



Splash/Spray Hazard



Vision Protection Required



Loose Clothing Entanglement Hazard



Stumble Hazard



Hearing Protection Required



Pinch Point/
Moving Belt Hazard



Trip Hazard



Vision, Hearing and Head Protection Required



Poison Hazard



Watch Head/
Overhead Hazard



Breathing, Vision, Hearing and Head Protection Required



Radio Frequency Hazard



Fall/Loss of Balance Hazard



Foot Protection Required



Remote Start Hazard



Battery Charging in Enclosed Area Hazard



Lockout/
Tagout Procedure Required



Sever by Rotating Parts Hazard



Mandatory Operator Action Required



Gloves Required



Rotating Shaft Hazard



Read Manual



Trailer Safety

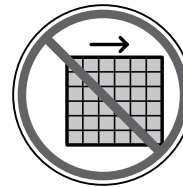
COMMON SAFETY SYMBOLS



Lift Point



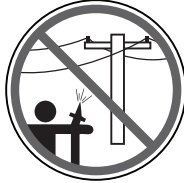
Do Not Ride on Moving Vehicle



Do Not Remove Guards



Do Not Obstruct or Block



Do Not Spray Power Lines



Do Not Touch



Do Not Pressure Wash

SAFETY DECAL EXAMPLES

! 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 and tag-out procedures.
 Failure to comply will result in death or serious injury.

! 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.

! DANGER
DO NOT ENTER!

ENTANGLEMENT HAZARD! MOVING MACHINERY!
 Keep arms and feet out!

CONFINED SPACE HAZARD! (Reference: OSHA 29 CFR 1910.146)
 Before entering:

1. Empty, flush and ventilate box interior.	4. Continuously ventilate area or wear appropriate breathing apparatus.
2. Allow all moving parts to stop.	5. Provide standby individual outside box able to communicate with person inside and remove him with lifeline if necessary.
3. Turn off engine and disconnect battery cables.	

FAILURE TO COMPLY WILL RESULT IN DEATH OR SERIOUS INJURY.

! DANGER

ELECTROCUTION HAZARD!
 DO NOT raise tarp under high voltage lines.
 Failure to comply will result in death or serious injury.

! WARNING

Wear proper eye protection when operating machine.
 Failure to comply could result in death or serious injury.

! DANGER

SEVER HAZARD!
 Keep hands and feet out!
 Sharp knives will sever.
 Failure to comply will result in death or serious injury.

OPERATION AND MAINTENANCE MANUAL FOR THE FINN MATERIAL BLOWER

This manual gives you instructions for the operation and maintenance of the FINN Material Blower. For best results and to ensure longer life of the equipment, please follow these instructions carefully. For your safety, read the entire manual before operating this unit.

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 MATERIAL BLOWER AND ITS FUNCTION

The FINN Material Blower is an apparatus for conveying and discharging bulk materials, such as bark mulch, at a fast and uniform rate utilizing a minimum amount of manpower. The product to be used is generally composted and processed, 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 Material Blower. In addition, it contains illustrations and a complete list of parts and components for easy identification.

HOW THE MATERIAL 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 chain conveyor that conveys the bulk material to an opening, in the rear of the hopper, containing a feed roll. The feed roll and drag chain 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 volume/low pressure air stream, created by the blower, is channeled through the pocket, carrying the material out of the airlock 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.

MOUNTING THE MATERIAL BLOWER

⚠ DANGER *Pick-up hooks on the Material Blower are for lifting EMPTY machines ONLY. Use appropriate spreader bar for the tank width. Ensure all capacities of lifting devices are rated for 15,000 lb (6,800 kg) or greater. Failure to comply will result in death or serious injury.*

A complete mounting kit is provided with the unit, but the mounting kit is shipped loose.

Before selecting a chassis for the Material Blower, carefully review this manual and consider the following:

- A. Never exceed either the Gross Axle Weight Rating (GAWR) or the Gross Vehicle Weight Rating (GVWR) for the chassis.
- B. Only install the Material Blower onto a vehicle with an end of frame dimension sufficient to fully support the Material Blower frame length.
- C. Position the Material Blower such that the required clearance zones are maintained.

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

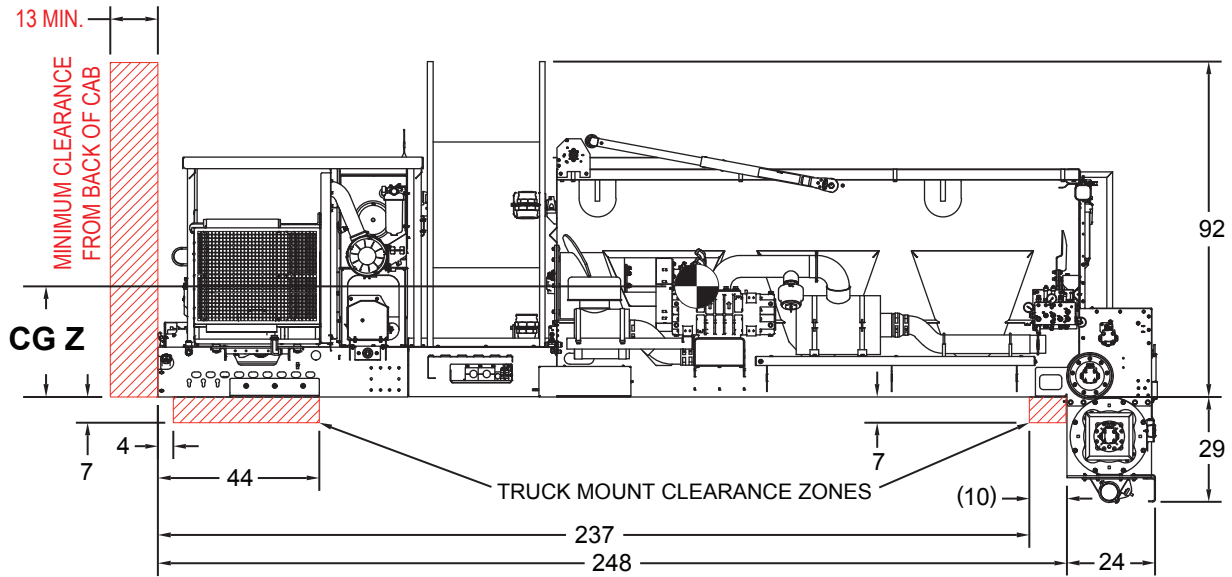
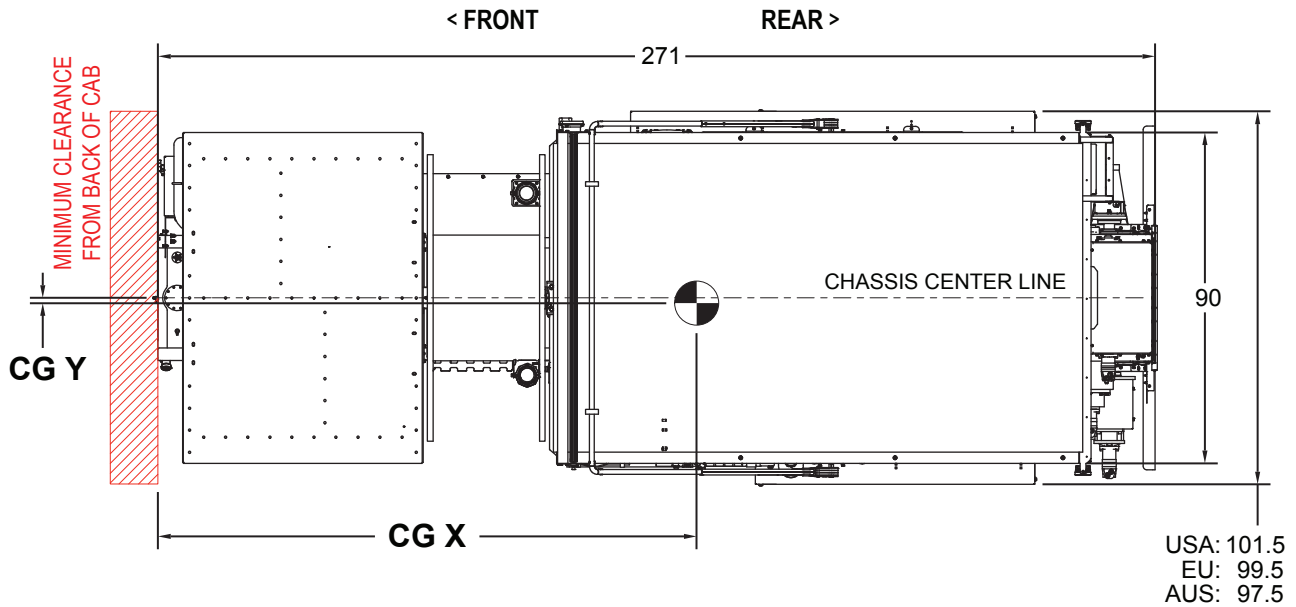
⚠ WARNING *The FINN Material Blower should be mounted by a qualified truck body installer. Failure to comply could result in personal injury. Failure to comply could also result in product or property damage.*

⚠ WARNING *Install/Mount the FINN Material Blower in compliance with the vehicle ratings, machine mounting requirements and applicable laws. Failure to do so could result in personal or property damage.*

NOTICE *The mounting of the blower to the truck must allow for tire clearance as well as frame twist.*

Follow mounting instructions given in the Truck Mounting/Loading Information section. Consult truck manufacturer for proper truck sizing and mounting recommendations. If mounting conditions require deviation from these instructions, consult the factory.

TRUCK MOUNTING/LOADING INFORMATION



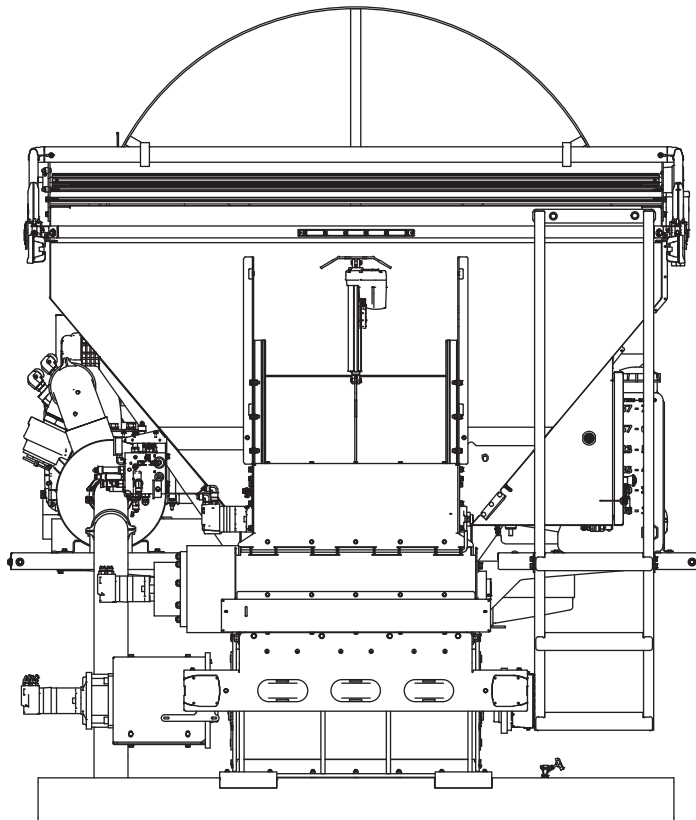
NOTE: MBX10 shown. MBX16/MBX22 models not shown (mounting/loading info provided).

TRUCK MOUNTING/LOADING INFORMATION (CONTINUED)

DESCRIPTION	CG X	CG Y	CG Z	WEIGHT	MAX CAPACITY
MBX10 (No Material)	146.5 in.	1.4 in.	30.0 in.	13,230 lbs.	--
MBX10 (Full, 10 yard)*	152.5 in.	1.9 in.	29.5 in.	21,740 lbs.	8,510 lbs.
MBX16 (No Material)	148.8 in.	1.3 in.	33.0 in.	14,050 lbs.	--
MBX16 (Full, 16 yard)*	158.8 in.	1.4 in.	40.0 in.	27,666 lbs.	13,616 lbs.
MBX22 (No Material)	150.8 in.	1.2 in.	37.0 in.	14,870 lbs.	--
MBX22 (Full, 22 yard)*	162.8 in.	1.1 in.	51.1 in.	33,592 lbs.	18,722 lbs.

* Assumes a material weight of 851 lbs./cu. yd.

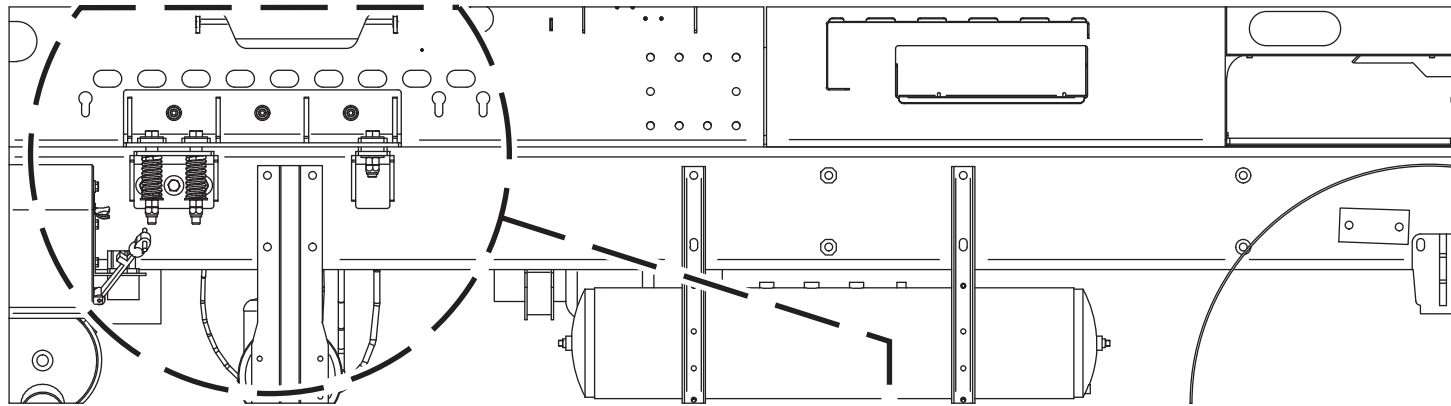
NOTE: All dimensions are in inches; drawings are not to scale.



NOTE: MBX10 shown. MBX16/MBX22 models not shown (mounting/loading info provided).

TRUCK MOUNTING/LOADING INFORMATION (CONTINUED)

< FRONT



POSITION TRUCK MOUNTING BRACKETS IN ANY AVAILABLE KEYSLOT CONFIGURATION TO AVOID INTERFERENCE WITH TRUCK FRAME AND COMPONENTS

TOP OF FRAME RAIL

0.38 [9.5mm]

GAP

3.38 [85.7mm]

MATCH THROUGH HOLES: DRILL 11/16 in. [17.5mm] THROUGH 3X, BOTH SIDES

FLANGED BOBTAIL FASTENERS RECOMMENDED: 16mm -OR- 5/8 in.

ALTERNATIVE ZINC PLATED HARDWARE

M16 x 2 CLASS 10.9

-OR- 5/8-11 (UNC) GRADE 8

TORQUE TO 204 ft./lb. (277 N-m)

DO NOT WELD TO CHASSIS

2.50 [63.5mm]

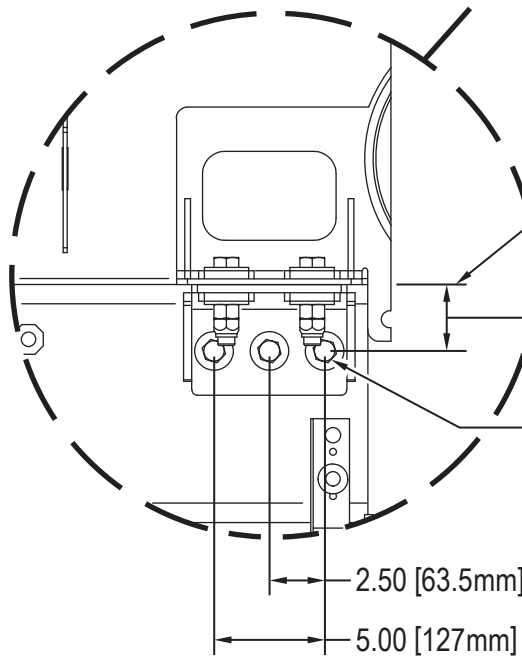
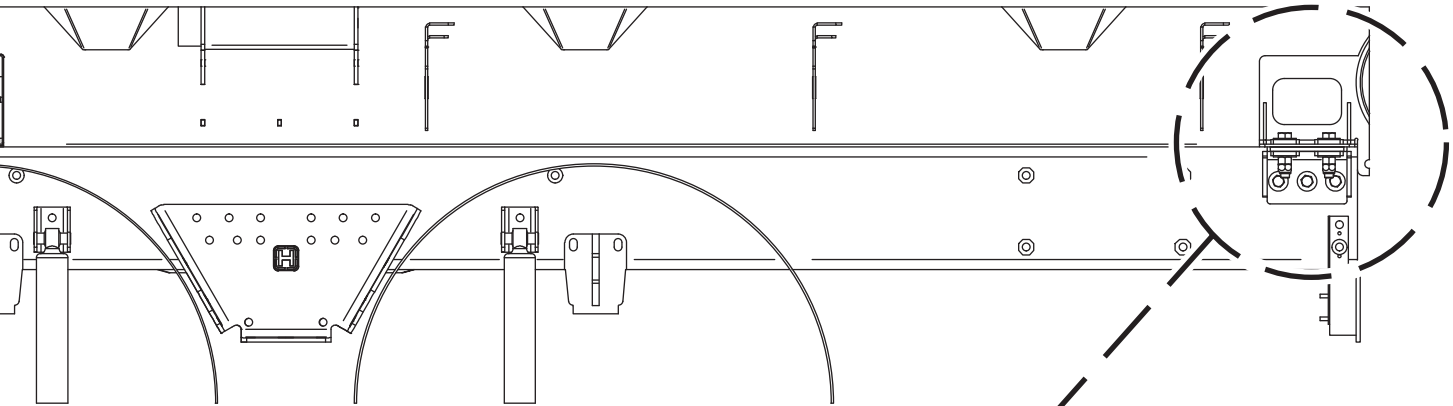
5.00 [127mm]

SPRING HARDWARE HIDDEN FOR CLARITY OF FRAME HARDWARE LOCATIONS

SPRING MOUNT

TRUCK MOUNTING/LOADING INFORMATION (CONTINUED)

REAR >



TOP OF
FRAME RAIL

3.00 [76.2mm]

MATCH THROUGH HOLES:
DRILL 11/16 in. [17.5mm] THROUGH
3X, BOTH SIDES

FLANGED BOBTAIL FASTENERS
RECOMMENDED: 16mm -OR- 5/8 in.

ALTERNATIVE ZINC PLATED
HARDWARE

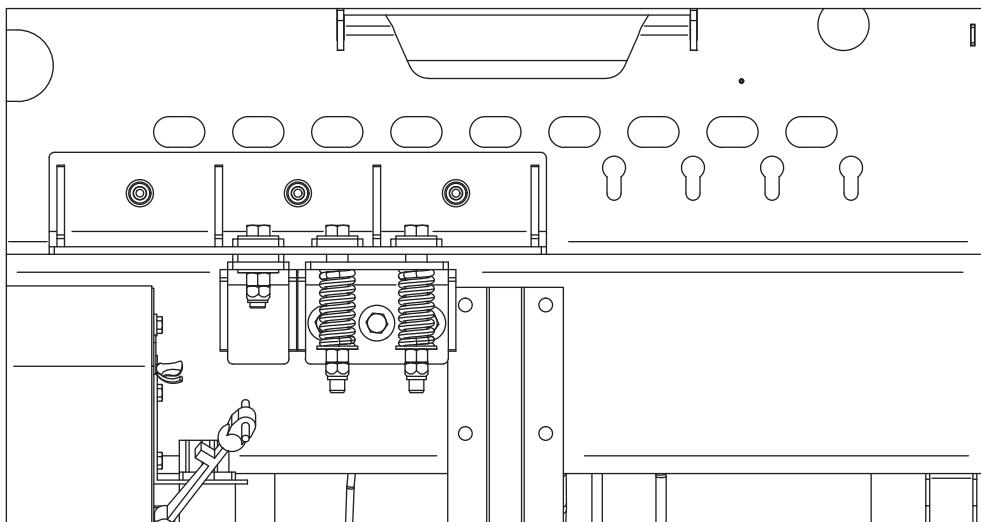
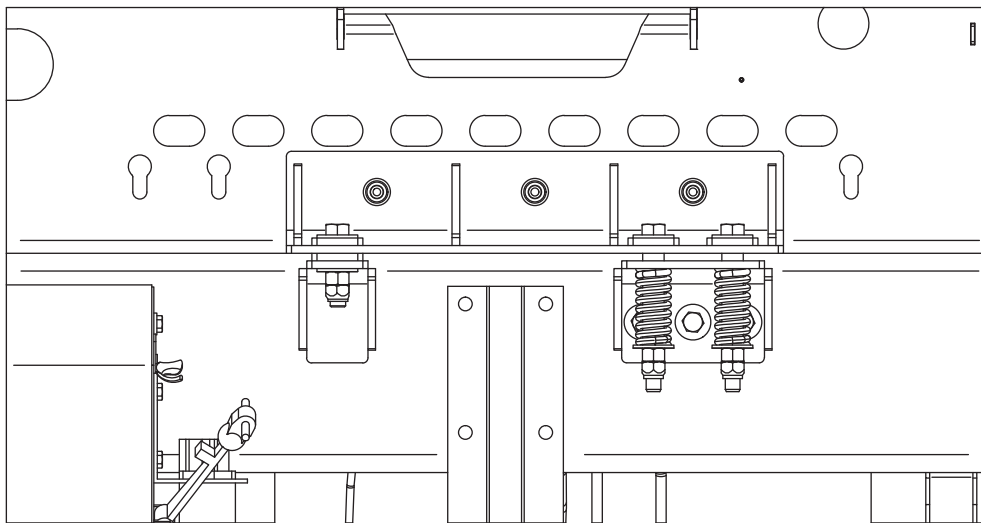
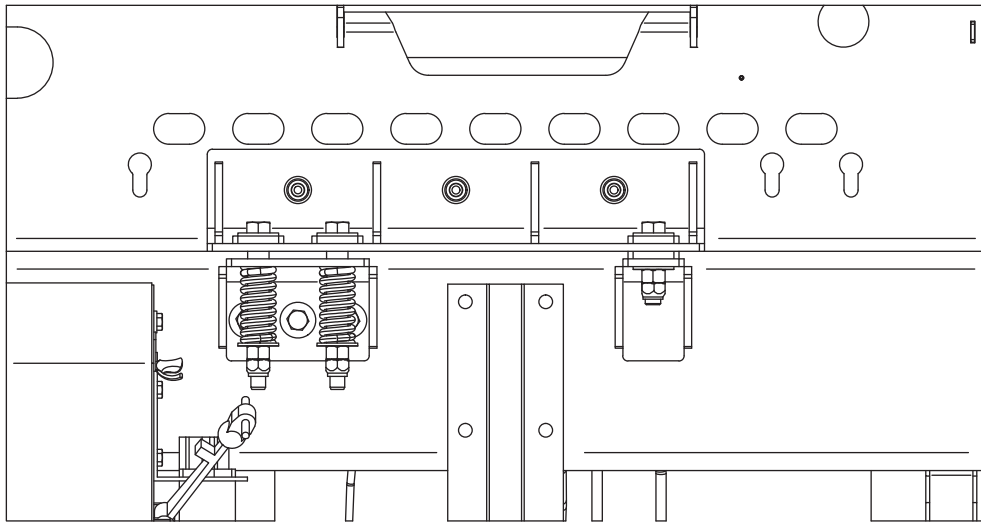
M16 x 2 CLASS 10.9
-OR- 5/8-11 (UNC) GRADE 8
TORQUE TO 204 ft./lb. (277 N-m)

DO NOT WELD TO CHASSIS

FIXED MOUNT

TRUCK MOUNTING/LOADING INFORMATION (CONTINUED)

The front spring mount and side shift mount can be located in any available configuration to avoid interference with the truck frame and components. Some example configurations are shown below.



TRUCK MOUNTING/LOADING INFORMATION (CONTINUED)

The complete mounting kit provided with the unit is shipped uninstalled. The components are shown in the illustration and listed below. Part and kit numbers/quantities can be found in the parts manual section of this manual. This section is for reference to the components.

Ref. No.	Description	Ref. No.	Description
1	Bracket Assembly, Lower Truck Mount	7	3/4 Type A Plain Washer, Wide*
2	Bracket Assembly, Upper Truck Mount	8	3/4 - 16 UNF - 7.5 Hex Bolt - UNC*
3	Bracket Assembly, Truck Mount Stop	9	3/4 - 16 UNF - 3.5 Hex Bolt - UNC*
4	Spring - Compression, Truck Mount	10	3/4 - 16 Hex Nut*
5	Square Washer, Truck Mount	11	3/4 - 16 Prevailing Torque Hex Nut*
6	Tube, Spring Spacer		

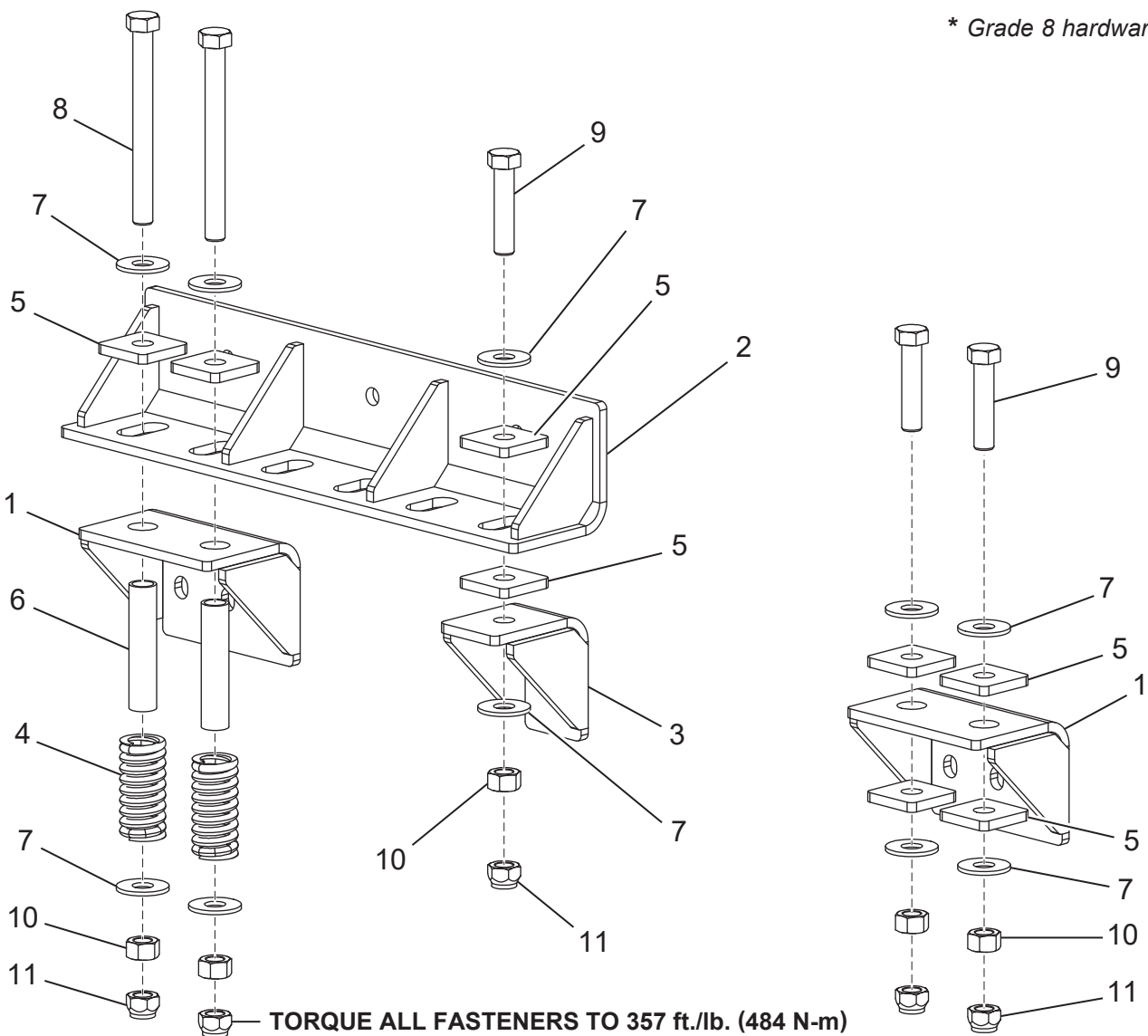
NOT SHOWN

**Hardware used for mounting brackets to MBX frame and to truck chassis.
Use if recommended flanged bobtail fasteners are not available.**

5/8 - 18 UNF x 2 Hex Cap Screw*
5/8 Type A Plain Washer, Wide*

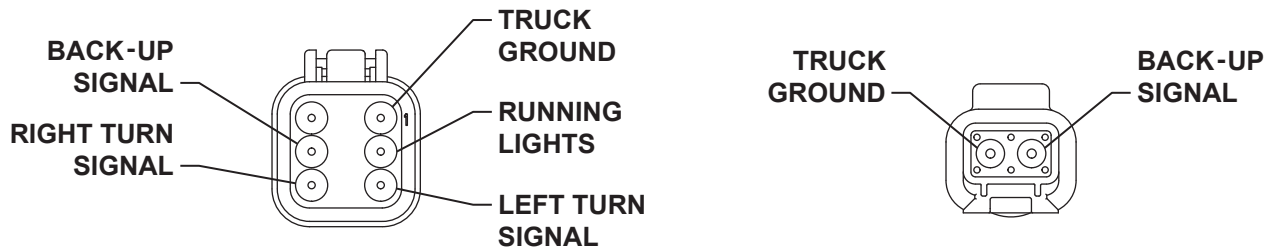
5/8 - 18 Prevailing Torque Hex Nut*
5/8 - 18 UNF x 2.5 Hex Cap Screw*

* Grade 8 hardware



TRUCK MOUNTING/LOADING INFORMATION (CONTINUED)

There are two connectors that need to be added to the truck's wiring for the MBX units during mounting and installation which are provided with the units in their own bag for truck mounting if the MBX unit is not mounted by Finn. The truck's original electrical connectors will be removed (cut off) and these two connectors will be installed/wired in their place. The left 6-way connector is for connecting the MBX unit's DOT lighting to the truck's lighting controls, and the right 2-way connector is for the truck's back-up alarm. These views are from the connector's wire insertion side and show which terminal positions correspond to which truck wire/circuit.



SELECTING A MULCHING MATERIAL

Several factors must be considered when selecting material to convey through the Material 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 Material Blower to convey the mulch at a uniform rate.

The mulch material must be processed and/or screened so that a minimum amount of material is over 2 in. (5.1 cm) in any direction with no material exceeding 4 in. (10.2 cm) in length. The Material Blower is not a wood processor. It only reduces mulch fibers when they protrude above the airlock vanes. As the vanes rotate past the knives, the protruding fibers are sheared off. If the mulch contains long or large fibers, and/ or 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 Material Blower airlock 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 Material 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 content in the mulch may also cause it to bridge in the hopper, and pack in the airlock vanes and discharge hose which will reduce the overall machine output.

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

PRE-START EQUIPMENT CHECK

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

Safety check to ensure operator safety:

1. Ensure that all guards are in place.
2. Tool Kit - see that it contains all prescribed items (see Tool Kit list).
3. Lubricate equipment - use hand gun only (see Lubrication Chart).
4. Check engine oil - refer to engine operator's manual.
5. Check the Diesel Exhaust Fluid (DEF) level, and ensure that it is adequate for the anticipated run-time.
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 filters.
8. Check fuel level. Use only Ultra-Low-Sulfur diesel fuel.
9. Check hopper and transition for foreign objects that could injure workers or damage equipment when the machine is started.
10. Ensure that tarp is open and secured in place. Never operate machine with tarp covering hopper.

⚠ CAUTION *Allowing the tarp to hang or sag over hopper during operation raises the risk that the tarp will be pulled into the equipment. This will cause damage to the unit and could be a risk to the safety of the operator.*

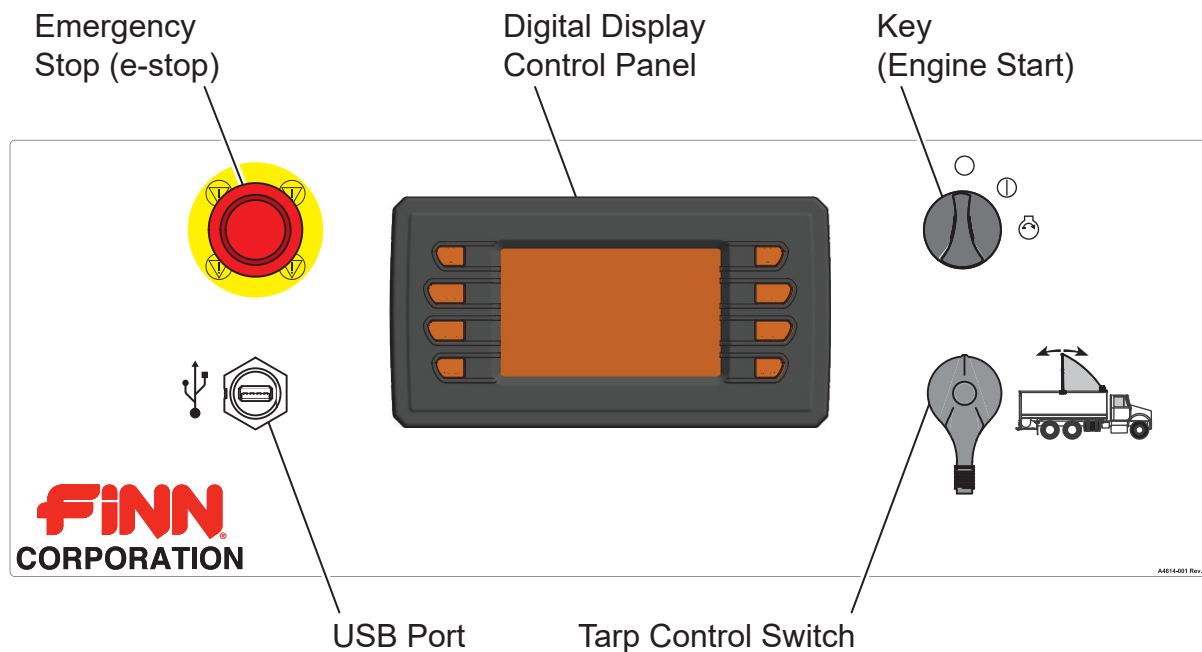
10. Check the fluid level in the hydraulic tank. Proper level is 3/4 in. from the top of the sight gauge. (See Lubrication Chart for oil specification.)
11. Install the discharge hose, using clamps and gaskets provided with the machine.

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

12. Check to verify the radiator is free of mulch and debris obstruction to ensure over heating does not occur.

NOTICE *Do NOT use high pressure water to clean out radiator fins because damage will occur to the delicate radiator fins.*

CONTROL GUIDE



Emergency Stop (E-Stop)		<p>The Emergency Stop (E-Stop) is a critical safety component. The button is colored red to be visible and to indicate a "stop" function. The button is made increasingly visible by the bright yellow that surrounds it.</p> <p>The E-Stop will cut all power to the machine when pushed (engaged). E-Stop devices should NEVER be disabled under any circumstances.</p>
Digital Display Control Panel		<p>Control interface for the unit which displays various functions of the unit. The digital display also shows information about the machine.</p>
Tarp Control Switch		<p>A toggle switch used to open and close the tarp on the unit. Make sure the tarp or tarp arms will not come into contact with anything above it before using the tarp control switch.</p>
USB Port		<p>An access point for system and software updates.</p>
Key (Engine Start)		<p>Ignition switch which turns on the unit for operation. It has three settings: an OFF position, a RUN position (which will activate the electronics of the unit without starting the unit), and a START position to activate the engine.</p>

	<p>OFF Symbol Key switch is in the OFF position cutting power from the unit.</p>		<p>RUN Symbol Key switch is in the RUN position while in operation.</p>		<p>START Symbol The key switch is turned to the START position to start the unit.</p>
--	---	--	--	--	--

Ignition Switch Symbols

CONTROL GUIDE (CONTINUED)



COMMONLY USED ICONS



FLOOR Button
Turns on the floor system, moving material toward blower [on (green)].



BLOWER Button
Turns on the blower [on (green)] and increases the engine speed to high idle.



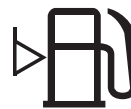
ADD Button
Used to increase a setting.



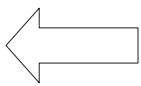
MINUS Button
Used to decrease a setting.



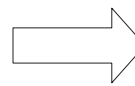
CONFIGURATION Button
Switches the screen to the other options screens.



FUEL LEVEL Icon
This meter indicate the fuel level in the unit; it does not indicate the fuel level of the truck the unit is attached.



LEFT ARROW Button
Used to go up to the next or previous screen option.



RIGHT ARROW Button
Used to go up to the next or previous screen option.



BACK Button
Returns to the previous screen (without saving).

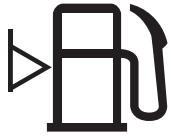


SAVE and BACK Button
Saves the changes made and returns to the previous screen.

CONTROL GUIDE (CONTINUED)

The digital display control panel uses icons to show information and alerts to the operator. The icons are listed below. The operator should be familiar with these icons and be aware of the warning or information that they represent.

COMMON DISPLAY ICONS



FUEL LEVEL Icon

This meter indicates the fuel level in the unit; it does not indicate the fuel level of the truck the unit is attached.



DEF FLUID LEVEL Icon

This meter indicates the Diesel Exhaust Fluid (DEF) level in the unit.



OIL TEMPERATURE Icon

This shows the oil temperature of the units engine.



WARNING Icon

This icon appears when a problem is detected. It is often used with other symbols to indicate an operation error to the operator.



WAIT TO START Icon

When this icon appears, do not start the engine. Wait until this icon disappears to start the engine.



STOP ENGINE Icon

This icon appears when a problem is detected. If the engine is on, shut it off immediately.



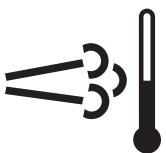
REGENERATION ACTIVE Icon

This shows the Regeneration System is active and working.



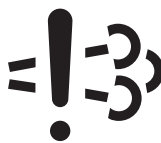
REGENERATION INHIBIT Icon

This shows the Regeneration System is NOT active and/or has been manually stopped or inhibited.



ENGINE HIGH TEMPERATURE Icon

When this icon appears, the engine temperature is high.

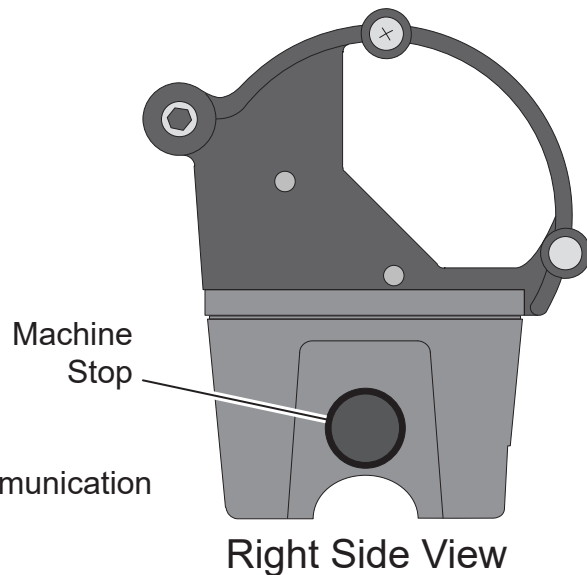
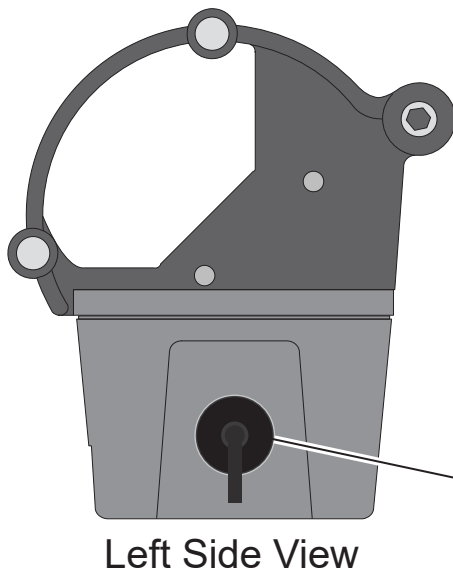
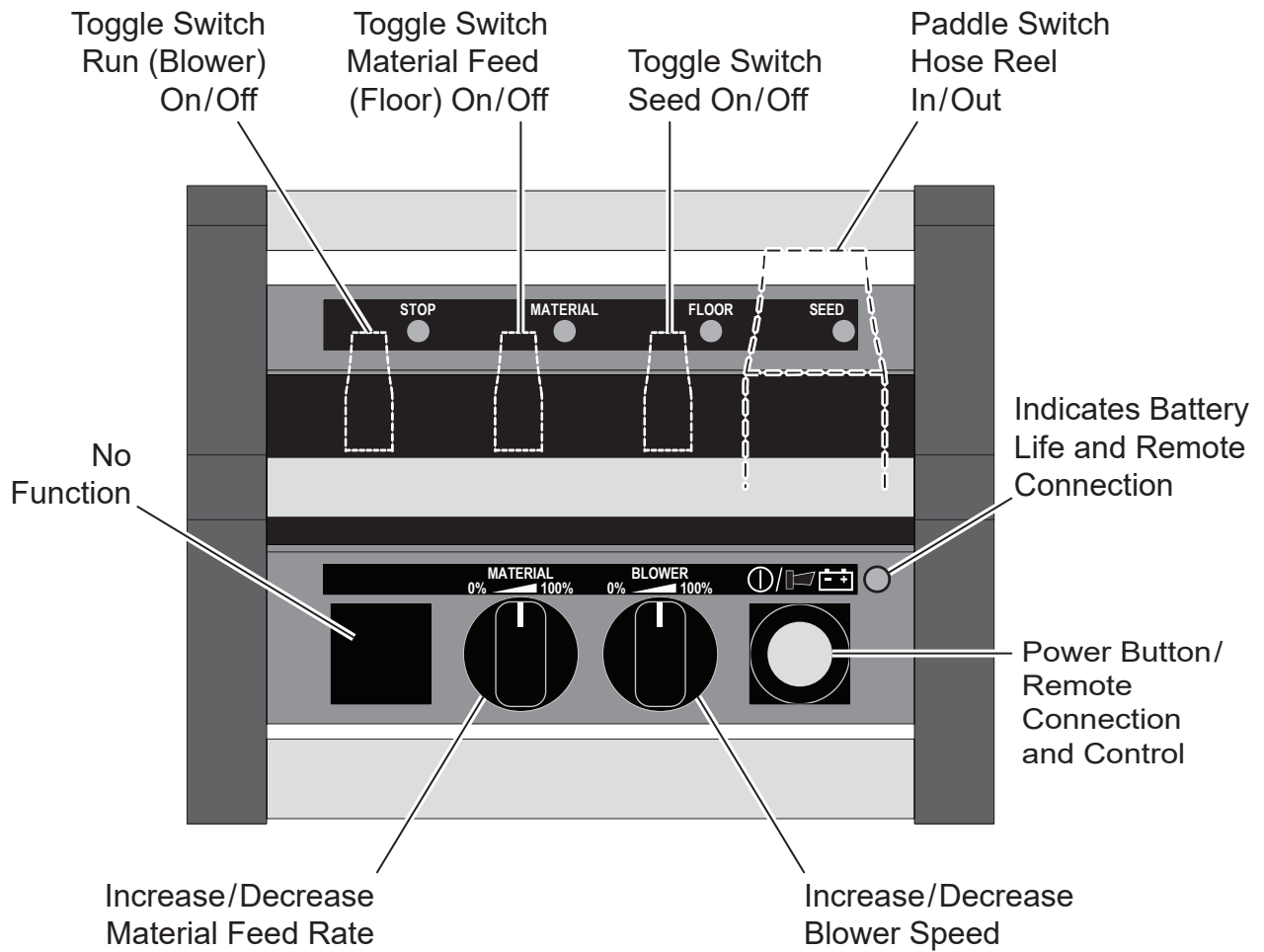


SCR INDUCEMENT SEVERITY Icon

This icon appears when there's an anomaly with the SCR system, such as tampering or low DEF tank level.

CONTROL GUIDE (CONTINUED)

Top View



Radio Remote Transmitter

CONTROL PANEL GUIDE AND SYSTEM OPERATION

The control panel has eight navigation buttons which are configured for use to properly operate and maintain the unit. Please read this entire section before starting the unit. This section will cover proper use of the control panel while the unit is running and the information should be familiar before starting the unit.

STARTING PROCEDURE

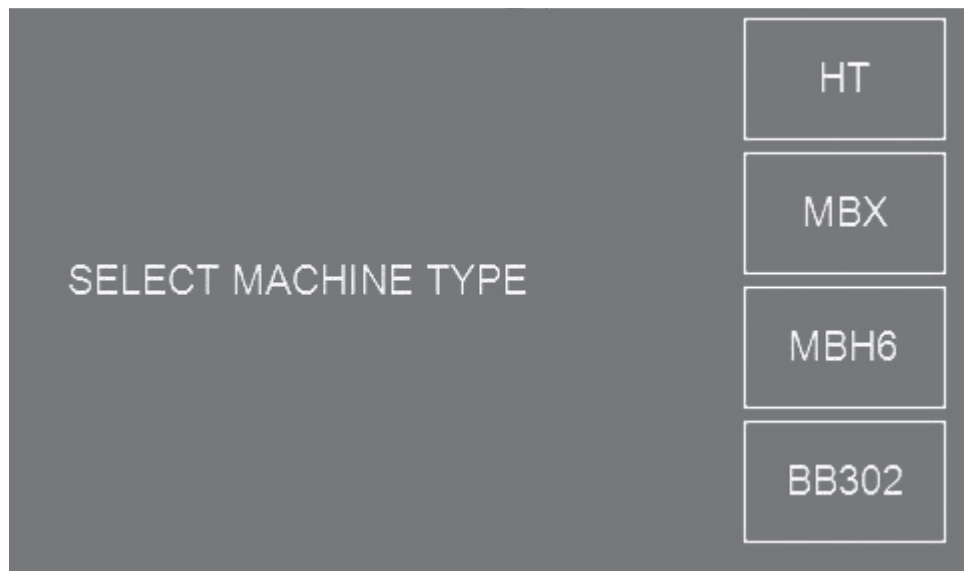
CAUTION See safety section of the manual before operating the unit. Failure to comply could result in minor or moderate personal injury. Failure to comply could also result in product or property damage.

Turn key clockwise to the **RUN** position and wait for control pad to illuminate and go through its start-up procedure.

MENU NAVIGATION

The eight system softkeys are used to navigate between displays, select menu items and change data. Pressing any of the navigation softkeys will display the softkey menu that is associated with each softkey.

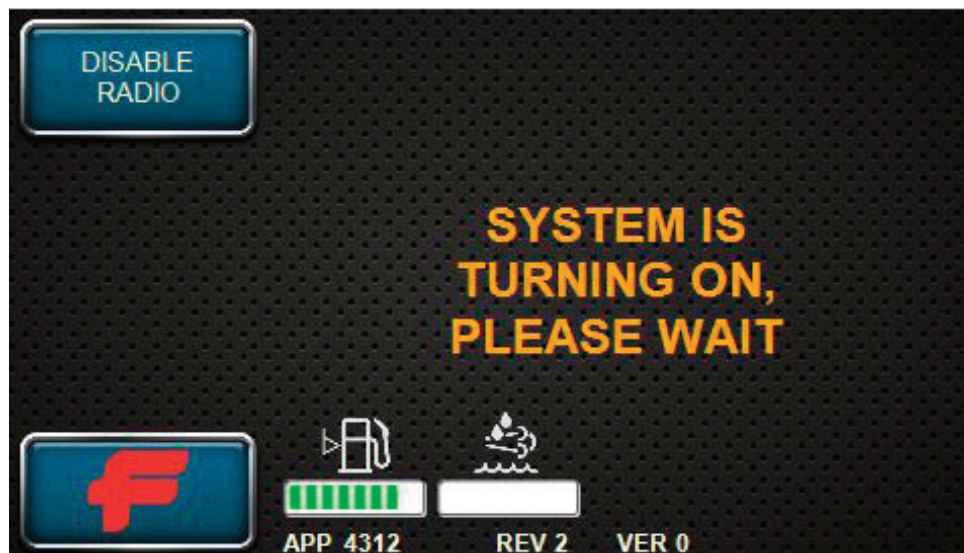
Your unit should display the normal Home/Engine Off screen at the beginning, but should the screen shown here appear, press the softkey labelled MBX to return the unit to valid operation.



START UP DISPLAY

The normal Home/Engine Off screen display should appear at the touch of the softkey. This screen allows you to see the status of the machine BEFORE the unit is turned on. At this point in startup, the radio remote will be OFF and the controller will be OFFLINE.

This screen shows the fuel level of the unit.



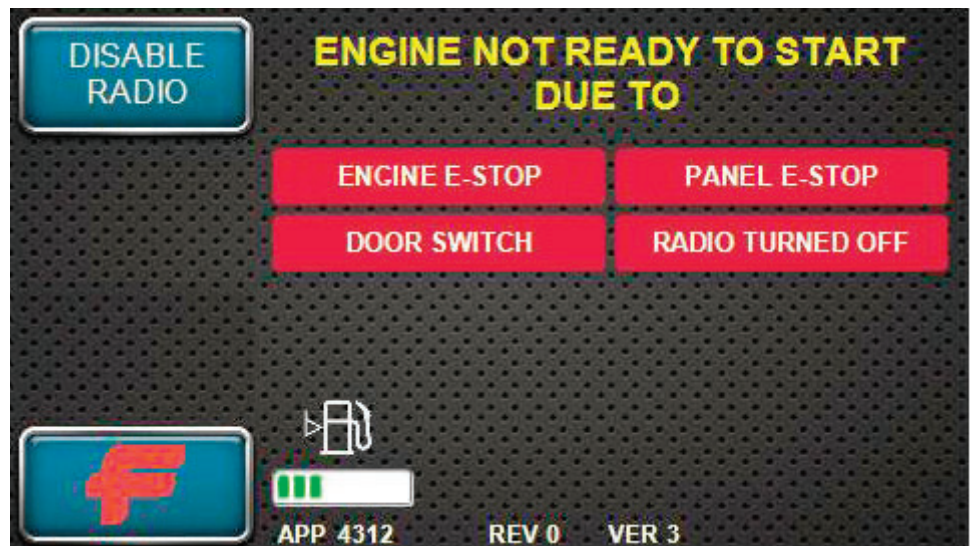
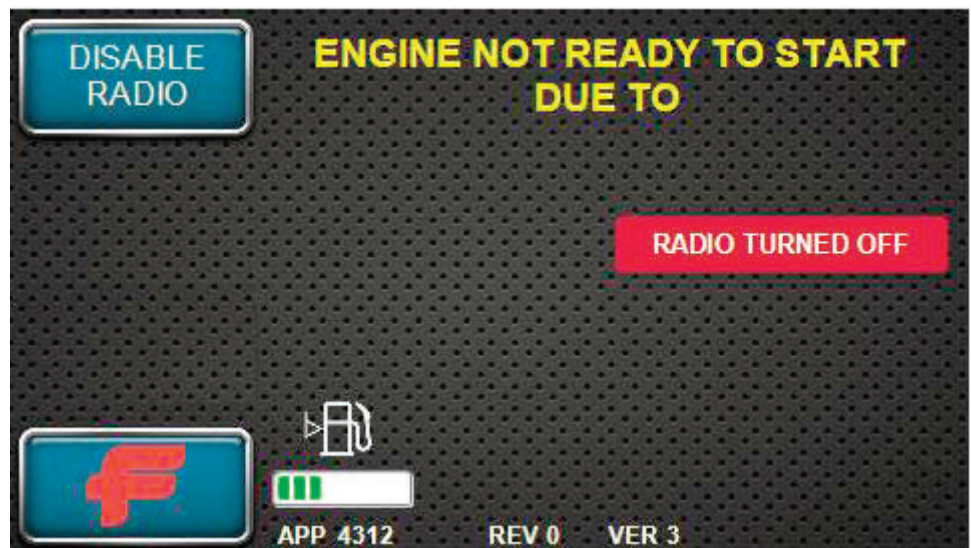
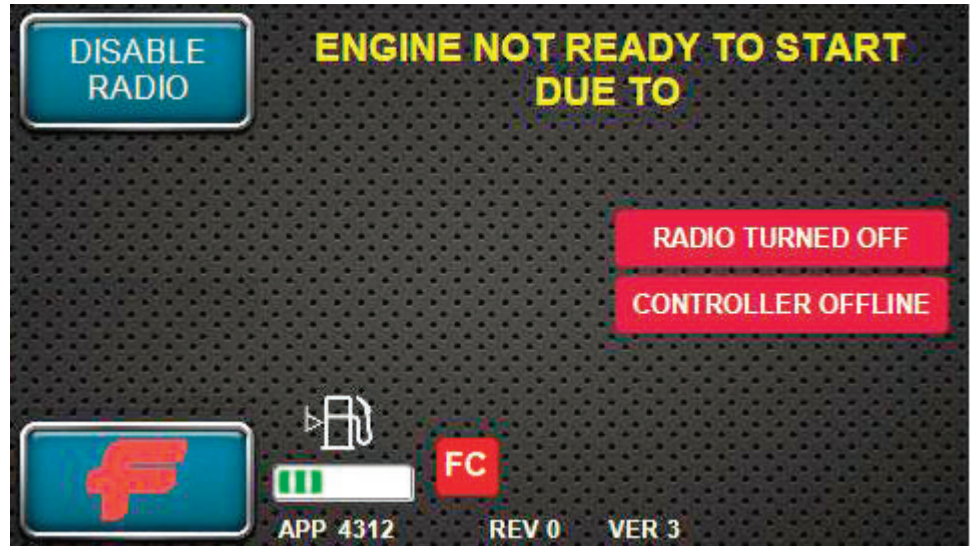
CONTROL PANEL GUIDE AND SYSTEM OPERATION (CONTINUED)

START UP DISPLAY (CONTINUED)

If the controller remains OFFLINE, a fault code will be generated and the "FC" icon will appear next to the fuel gauge and flash repeatedly. See the Fault Code section of the manual to address Fault Codes.

Under normal conditions, the controller should come ONLINE after five (5) seconds. There should be no Fault Codes. The display will still indicate that the radio remote is still turned off. At this point, the controller is awaiting a decision from the operator on whether or not the radio remote will be used during operation.

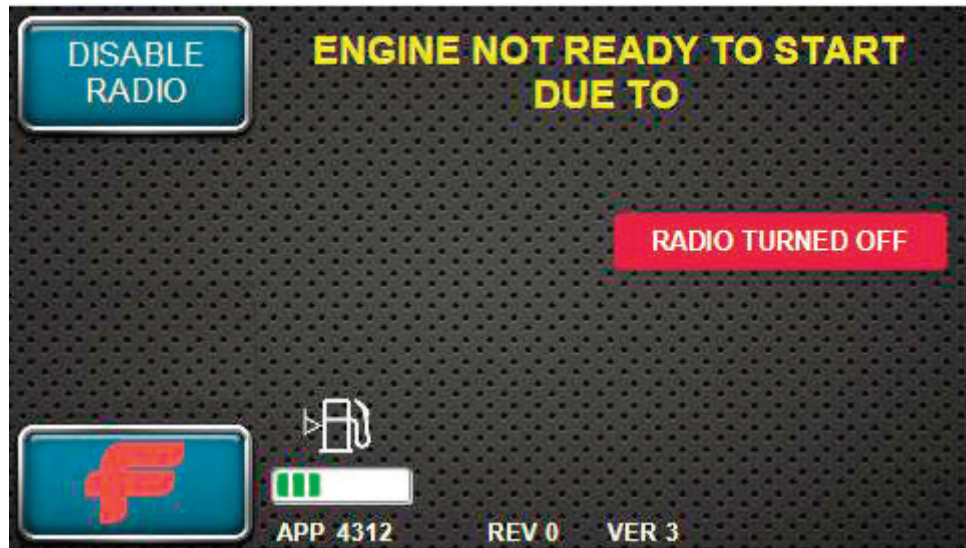
If machine interlock errors are present for the unit, they will appear after the controller is ONLINE. The screen shown here illustrates that there are multiple Emergency Stop (E-Stop) buttons that have been pushed. It also shows that the rear door on the unit is open or not completely closed. Before the engine can be started, the E-Stops must be released and the door must be closed completely.



CONTROL PANEL GUIDE AND SYSTEM OPERATION (CONTINUED)

RUNNING UNIT WITHOUT RADIO REMOTE

With the Fault Code(s) cleared and door(s) closed, the decision to run the unit without the radio remote is now an option.



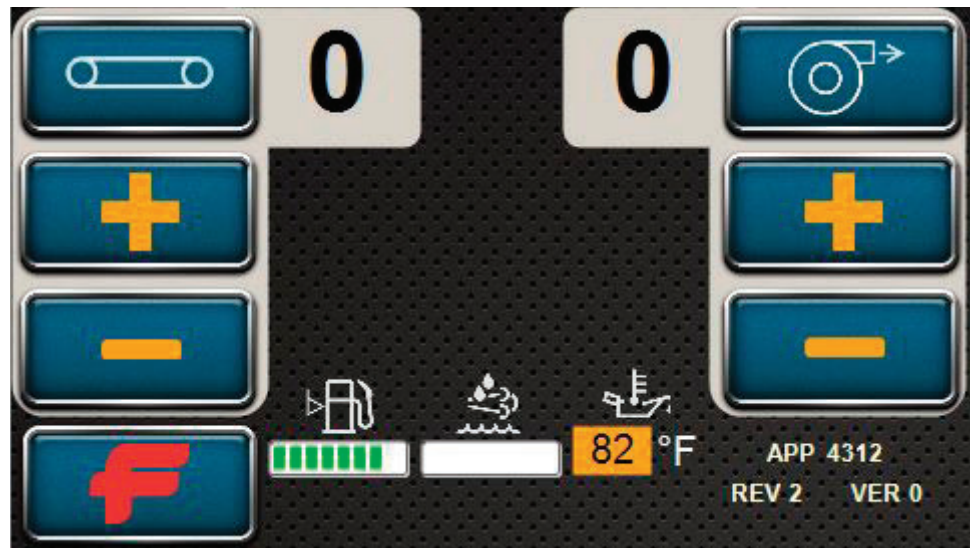
Press the DISABLE RADIO softkey at this time and the screen will change to the screen shown.



CONTROL PANEL GUIDE AND SYSTEM OPERATION (CONTINUED)

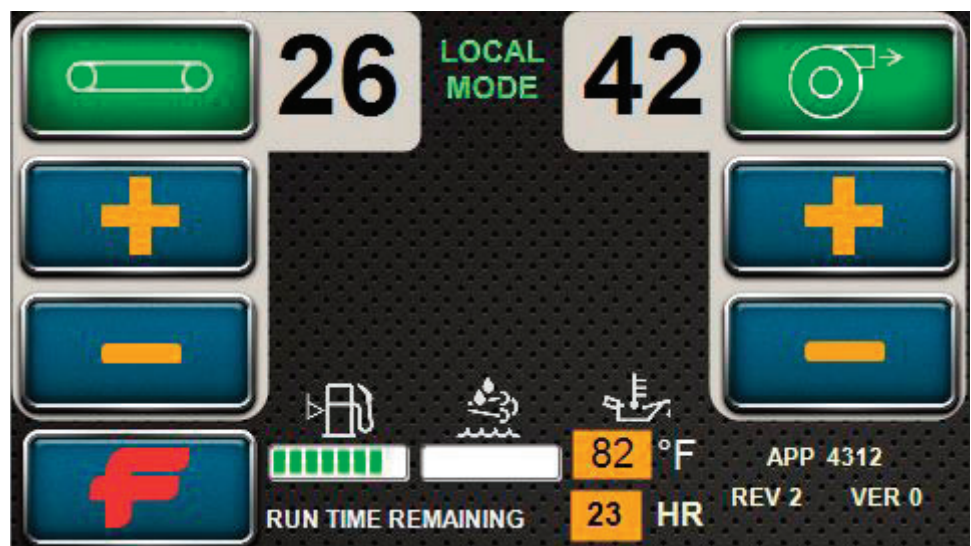
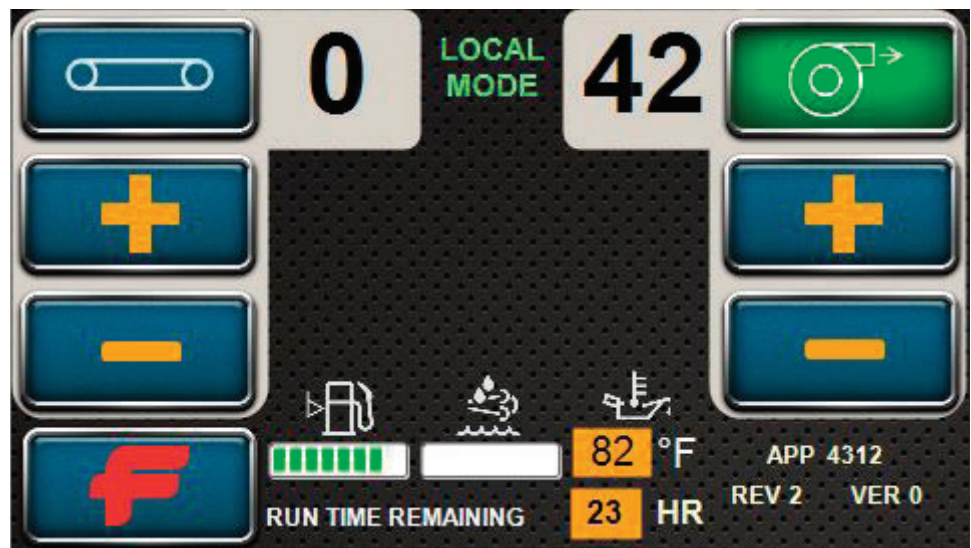
RUNNING UNIT WITHOUT RADIO REMOTE (CONTINUED)

Turn the ignition key clockwise to the **START** position. Once the engine starts, the key will return to **RUN** position during operation. This screen will appear on the display and the unit is now ready for operational commands.



Pressing the **BLOWER** softkey or the **FLOOR** softkey on the control panel will put the system in LOCAL MODE. At this point, FLOOR and BLOWER commands from the control panel will be accepted and the radio remote will be locked out from control.

To use the radio remote, both the floor and the blower will need to be turned off. Refer to the Running Unit with Radio Remote section for more information.



CONTROL PANEL GUIDE AND SYSTEM OPERATION (CONTINUED)

RUNNING UNIT WITH RADIO REMOTE

See Opening Display section of the Control Panel Guide. If any Fault Code(s) appear, clear them and close and open door(s) on the unit. At this point in the initial startup, the decision to run the unit with the radio remote is an option.

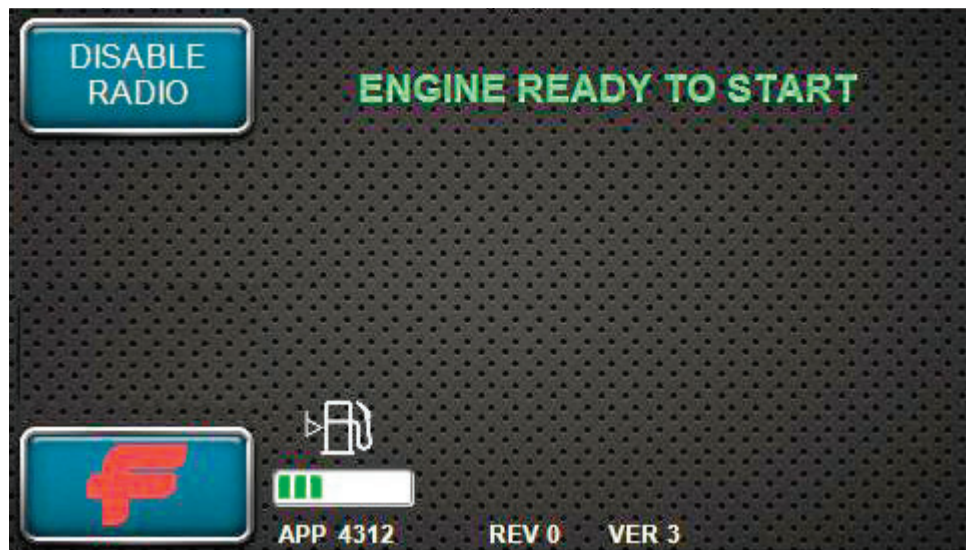
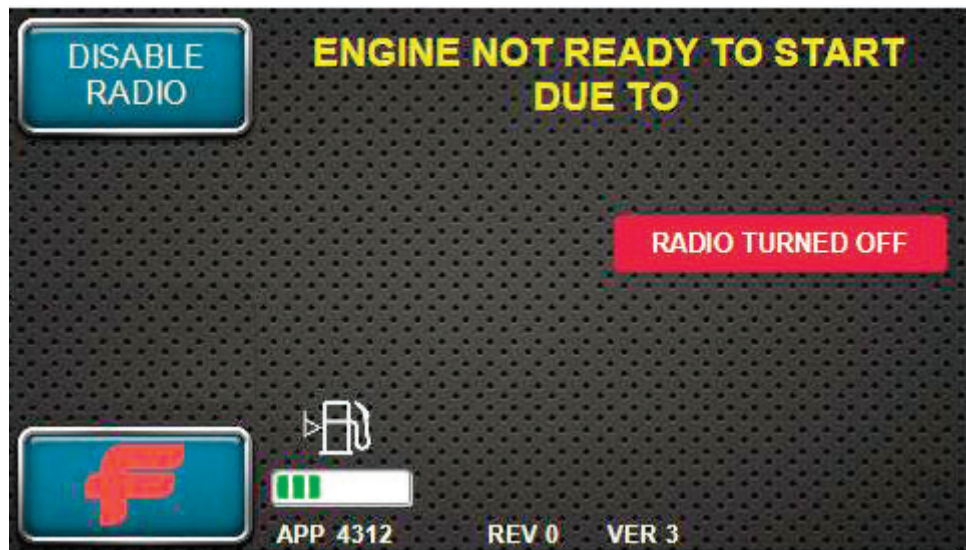
Make sure that the E-Stops on the remote and on the unit are disengaged.

Turn the ignition key clockwise to the **RUN** position. Wait for the "Controller Offline" error messages to clear on the unit display.

The "Radio Turned Off" message will remain on the unit display.

On the radio remote, press the silver power button, the LED lights on top will turn on.

On the radio remote, press and hold the silver button for about 2-3 seconds; the LED light next to the silver power button will remain on.



CONTROL PANEL GUIDE AND SYSTEM OPERATION (CONTINUED)

RUNNING UNIT WITH RADIO REMOTE (CONTINUED)

The “Radio Turned Off” message on the display will disappear.

Turn the ignition key clockwise to the **START** position. The key will return to **RUN** position during operation once released.

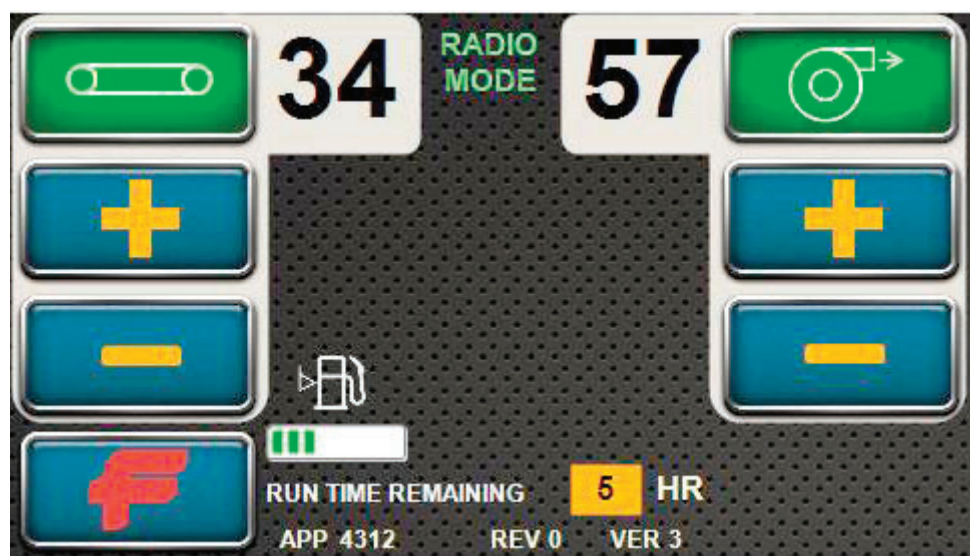
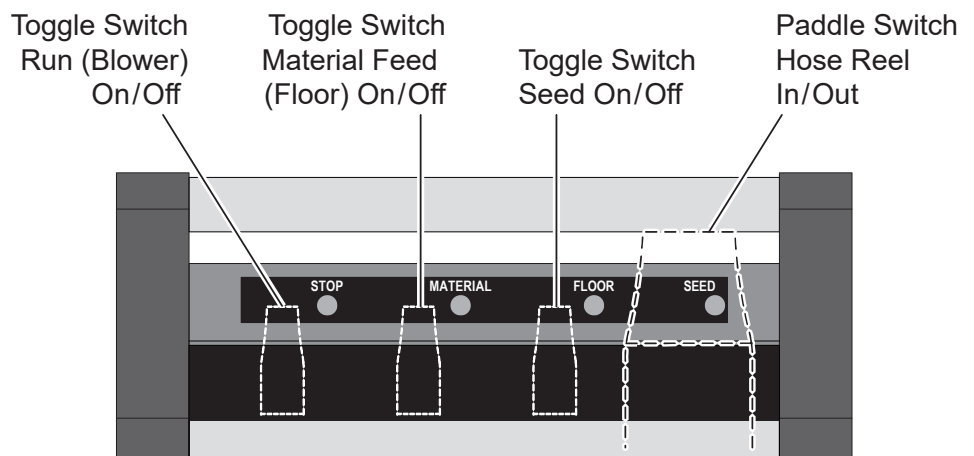
This screen will appear on the display. The unit is now ready for operational commands from the radio remote.



ON THE RADIO

REMOTE, press the **RUN** toggle switch before the **MATERIAL FEED** toggle switch on the radio remote to put the system in RADIO MODE. At this point, RUN (BLOWER) and MATERIAL FEED (FLOOR) commands from the radio remote will be accepted and FLOOR and BLOWER commands from the control panel will be locked out.

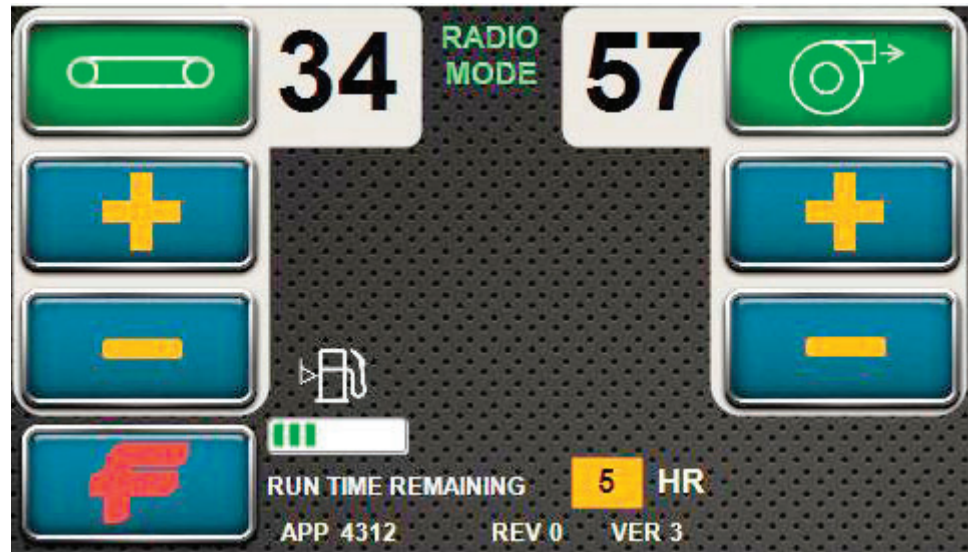
To return to control panel use, both the floor and the blower will need to be turned off and the radio remote will need to be powered off.



CONTROL PANEL GUIDE AND SYSTEM OPERATION (CONTINUED)

OPTIONS SCREEN

The options screen can be entered by pressing the FINN (F) softkey. It is the only functional softkey when the unit is in RADIO MODE. Pressing the F softkey will take you to the Options Menu.



The Options Menu is shown here. This menu allows you to activate certain features of the unit.

A feature at this screen include the Auto-Rev. Press and hold AUTO-REV softkey while blower is on to cycle airlock reverse/forward until softkey is released. The "Material" indicator light on the handheld radio remote flashes green during Auto-Rev Mode.



The GATE menu can be accessed from this options screen.

The operator can select the HR FREE WHEEL softkey to unlock the hose reel at this screen.

The arrow symbol pointing to the right is the softkey that will take the operator to additional options for the operation of the unit (which will be covered later in this section).

The bottom left softkey is the BACK command. This will take the operator to the previous screen.

The SEED softkey takes the user to the Seed Injection System control options.

The next softkey is DUST SUPPRESS. This is the Dust Suppression System of the unit.

The last softkey that appears on this screen is PROFILE. This will display show on this screen what *material* preset the unit is set to use. Pressing this softkey will take you to the Profile option screen.

CONTROL PANEL GUIDE AND SYSTEM OPERATION (CONTINUED)

OPTIONS SCREEN - DUST SUPPRESSION

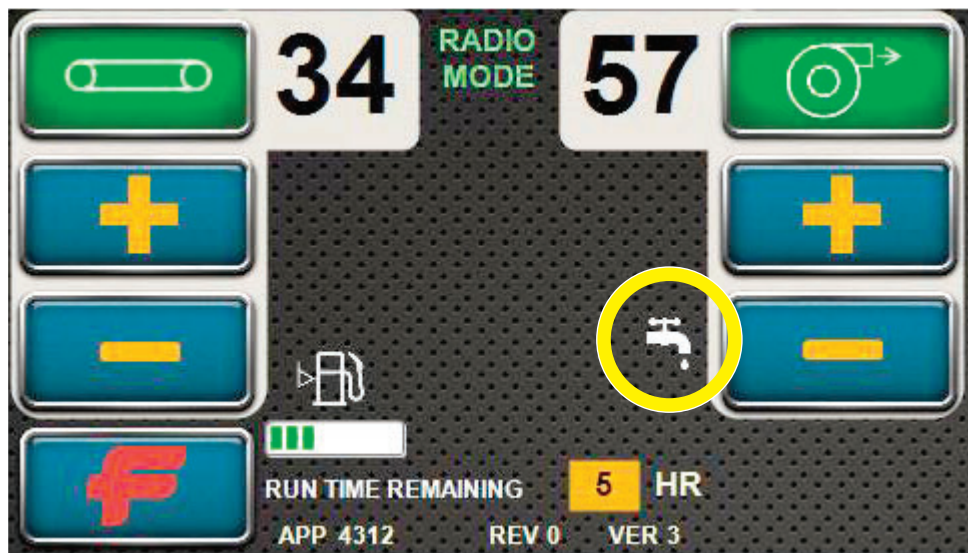
Pressing the DUST SUPPRESS softkey turns on the Dust Suppression System. This feature can be activated before pressing the FLOOR softkey or the BLOWER softkey on the control panel.

Make sure all E-Stops are released before attempting to activate the Dust Suppression System. The Dust Suppression System will not activate if any of the E-Stops on the unit are activated.

The Dust Suppression System will activate when the floor is moving forward.



A water icon will appear on the home screen when the Dust Suppression System is activated.



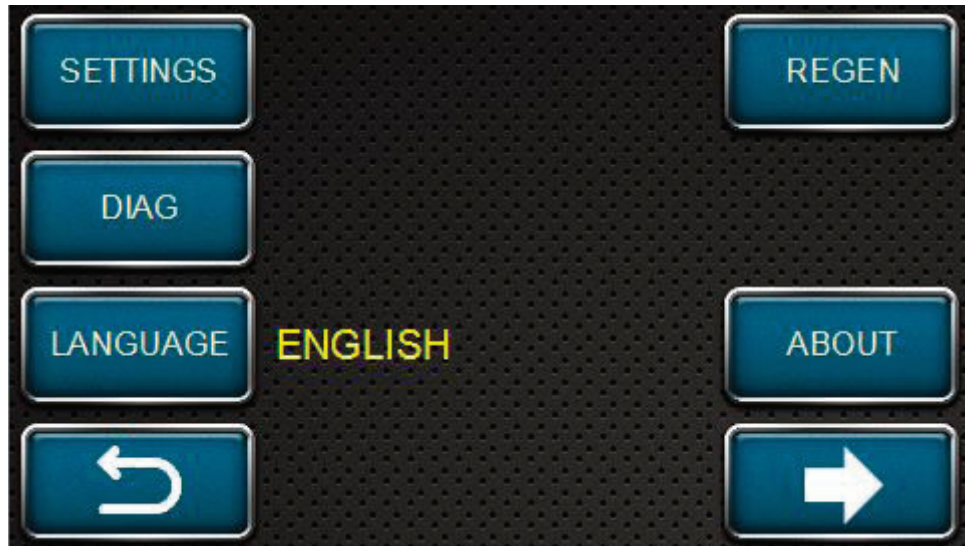
CONTROL PANEL GUIDE AND SYSTEM OPERATION (CONTINUED)

OPTIONS SCREEN - SETTINGS

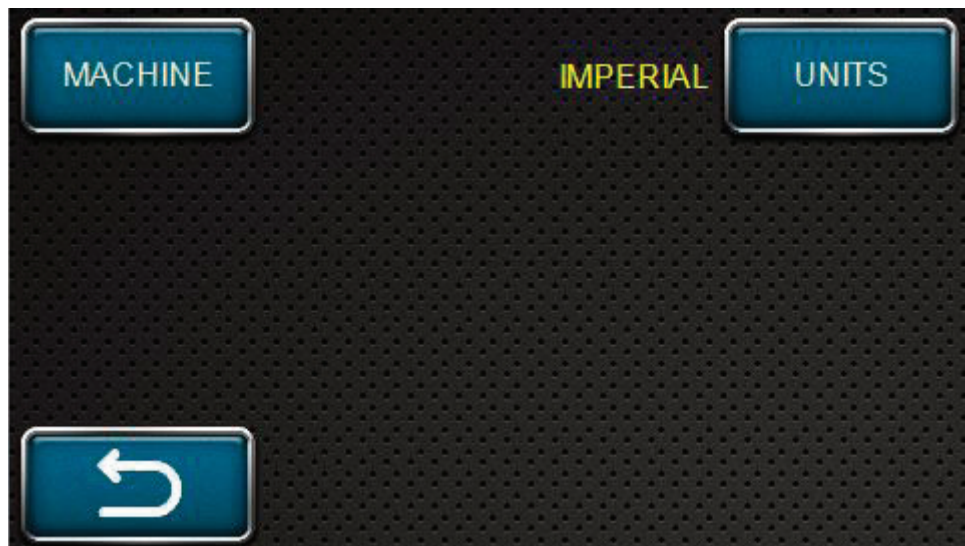
From the options screen, press the right arrow softkey to switch to more options.



The screen shown here is another set of options available on the unit. To enter the settings of the Material Blower, press the SETTINGS softkey.



Pressing the SETTINGS softkey will open up this screen. The Material Blower is set for Imperial units of measurement by default, but pressing the UNITS softkey will switch the unit to metric measurements.



CONTROL PANEL GUIDE AND SYSTEM OPERATION (CONTINUED)

OPTIONS SCREEN - SETTINGS (CONTINUED)

Press the MACHINE softkey to enter the machine settings.

Pressing the MACHINE softkey will open up this screen.

Press the BLOWER softkey to enter the settings screen for the blower.



The blower settings screen allows the operator to adjust the blower turn-off delay. The delay is factory-set for five (5) seconds.

Using the plus/ increase and minus/ decrease softkeys, the delay can be adjusted to the length of time desired.

If the operator would like to return the blower turn-off delay to factory settings, press and hold the RESET softkey shown on this screen. The turn-off delay will return to the factory-set time of five (5) seconds.



Press the BACK softkey to return to the MACHINE settings screen.

CONTROL PANEL GUIDE AND SYSTEM OPERATION (CONTINUED)

OPTIONS SCREEN - SETTINGS (CONTINUED)

Press the MACHINE softkey to enter the machine settings.

Pressing the MACHINE softkey will open up this screen.

Press the AIRLOCK softkey to enter the settings screen for the airlock.



The airlock settings screen allows the operator to adjust the speed and ramp settings.

Using the up/down softkeys, the desired setting can be selected (highlighted).

Using the plus/increase and minus/decrease softkeys, the selected (or highlighted) setting can be adjusted to the speed percentage desired or the length of ramp time desired.



If the operator changes the settings and would like to retain the altered airlock settings, press and hold the SAVE and BACK softkey shown on this screen. The altered airlock settings will be saved and the screen will return to the MACHINE settings screen.

If the operator would like to return the airlock to factory settings, press and hold the RESET softkey shown on this screen. The airlock settings will return to the factory-set percentage and time.

Press the BACK softkey to return to the MACHINE settings screen.

CONTROL PANEL GUIDE AND SYSTEM OPERATION (CONTINUED)

OPTIONS SCREEN - SETTINGS (CONTINUED)

Press the MACHINE softkey to enter the machine settings.

Pressing the MACHINE softkey will open up this screen.

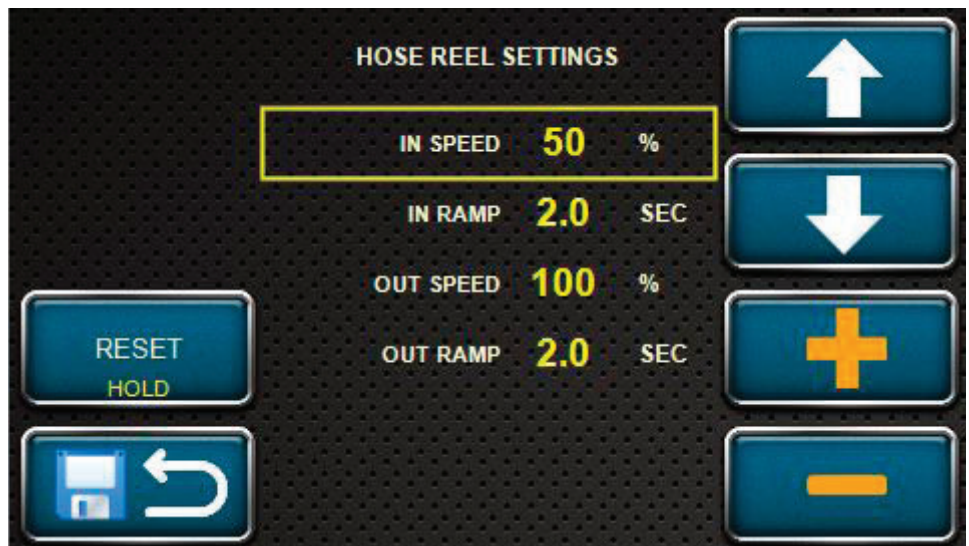
Press the HOSE REEL softkey to enter the settings screen for the hose reel.



The hose reel settings screen allows the operator to adjust the speed that the hose reel unwinds and winds.

Using the up/down softkeys, the desired setting can be selected (highlighted).

Using the plus/increase and minus/decrease softkeys, the selected (or highlighted) setting can be adjusted to the speed percentage desired or the length of ramp time desired.



If the operator changes the settings and would like to retain the altered hose reel settings, press and hold the SAVE and BACK softkey shown on this screen. The altered hose reel settings will be saved and the screen will return to the MACHINE settings screen.

If the operator would like to return the hose reel to factory settings, press and hold the RESET softkey shown on this screen. The hose reel settings will return to the factory-set percentage and time.

Press the BACK softkey to return to the MACHINE settings screen.

CONTROL PANEL GUIDE AND SYSTEM OPERATION (CONTINUED)

OPTIONS SCREEN - SETTINGS (CONTINUED)

Press the MACHINE softkey to enter the machine settings.

Pressing the MACHINE softkey will open up this screen.

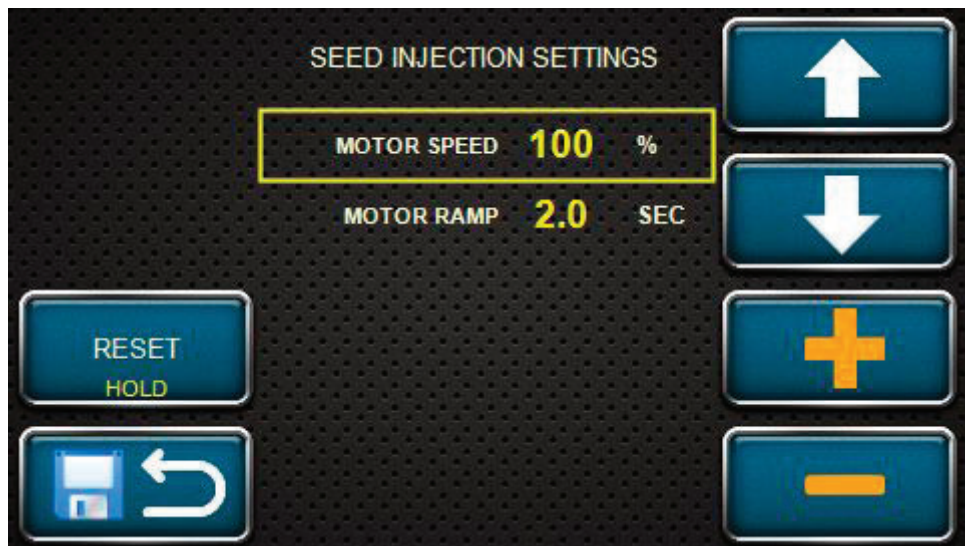
Press the SEED INJECTION softkey to enter the settings screen for the airlock.



The seed injection system settings screen allows the operator to adjust the speed and ramp settings of the seed injection system motor.

Using the up/down softkeys, the desired setting can be selected (highlighted).

Using the plus/increase and minus/decrease softkeys, the selected (or highlighted) setting can be adjusted to the speed percentage desired or the length of ramp time desired.



If the operator changes the settings and would like to retain the altered seed injection system settings, press and hold the SAVE and BACK softkey shown on this screen. The altered seed injection system settings will be saved and the screen will return to the MACHINE settings screen.

If the operator would like to return the airlock to factory settings, press and hold the RESET softkey shown on this screen. The airlock settings will return to the factory-set percentage and time.

Press the BACK softkey to return to the MACHINE settings screen.

CONTROL PANEL GUIDE AND SYSTEM OPERATION (CONTINUED)

OPTIONS SCREEN - DIAGNOSTICS

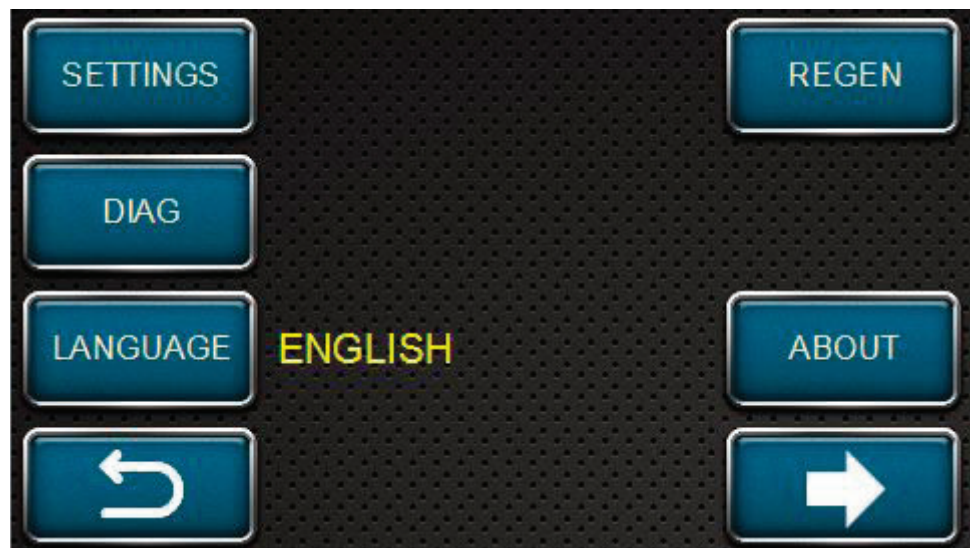
From the first options screen, press the right arrow softkey.



Returning to the screen shown here; there are other options available.

Pressing the DIAG softkey takes the operator to the DIAGNOSTICS screen.

The REGEN softkey will take the user to the regeneration controls for the engine.



The Diagnostics screen is shown here. The options include viewing engine information, listing FINN codes (fault codes) and controls for the radio remote.

Basic operational information is shown on this screen.

Press the ENGINE softkey to go to Engine Diagnostics screen.



CONTROL PANEL GUIDE AND SYSTEM OPERATION (CONTINUED)

OPTIONS SCREEN - DIAGNOSTICS (CONTINUED)

The Engine Diagnostics screen (shown here) provides the operator with engine fault codes and information that can assist in determining if there is an error in the engine or in a component of the engine.

Pressing the ENGINE CODES softkey will take the operator into one of two screens,

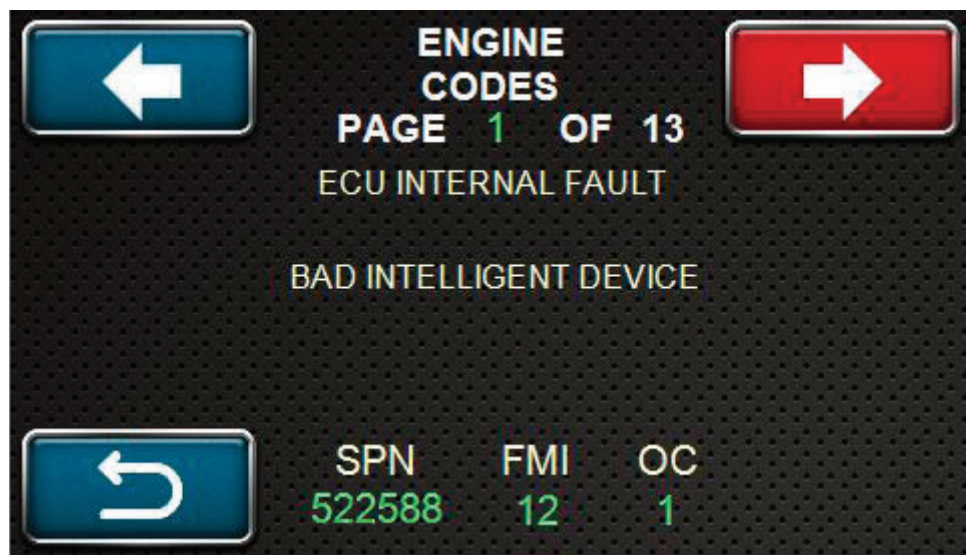


The first screen possibility is a 'no active codes' screen. The left and right softkeys can be pressed to see if any other codes exist, but seeing this screen informs the operator that there are no faults with the engine.



The second screen possibility is a screen like the one shown here that alerts the operator to a potential problem with the engine, a component of the engine or a part of the machine that interacts with the engine.

In this case, the engine code says that there is a fault with the engine control unit (ECU).



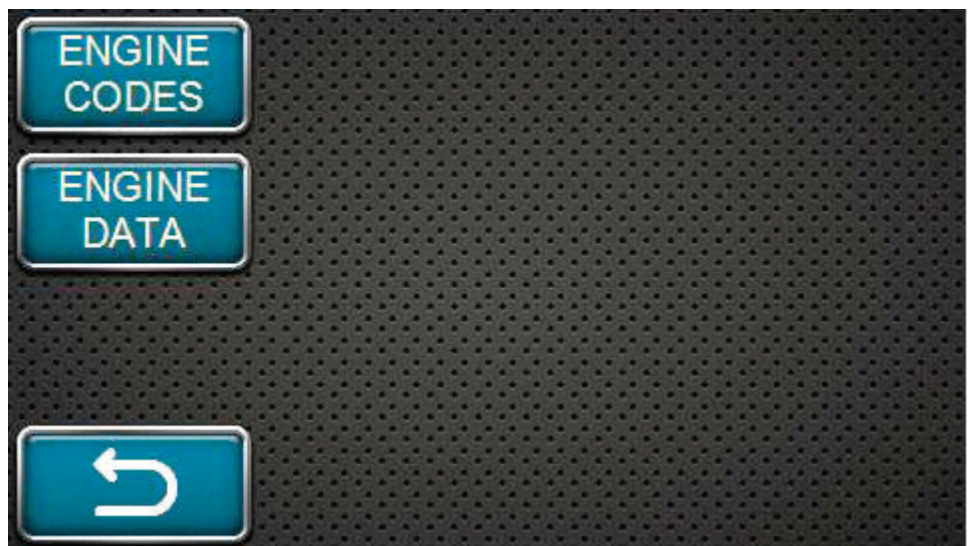
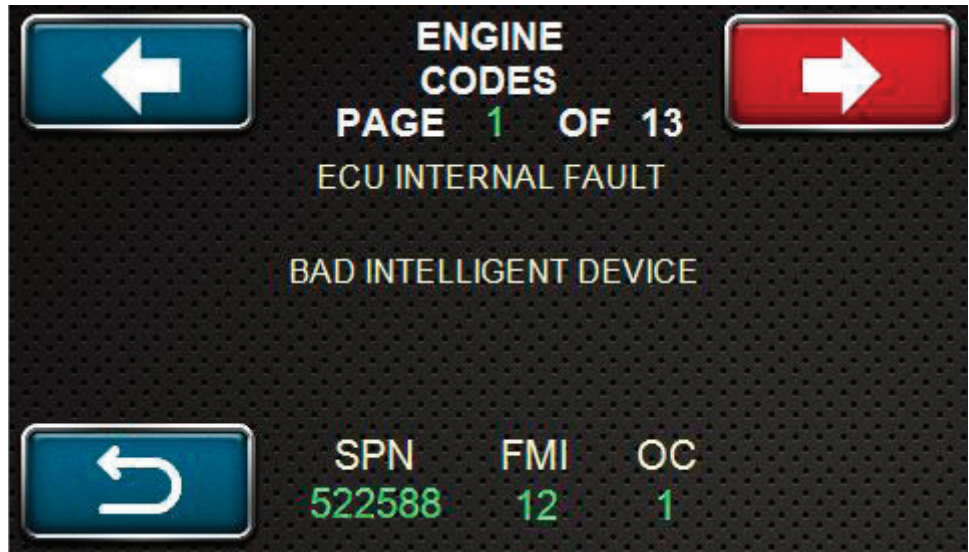
CONTROL PANEL GUIDE AND SYSTEM OPERATION (CONTINUED)

OPTIONS SCREEN - DIAGNOSTICS (CONTINUED)

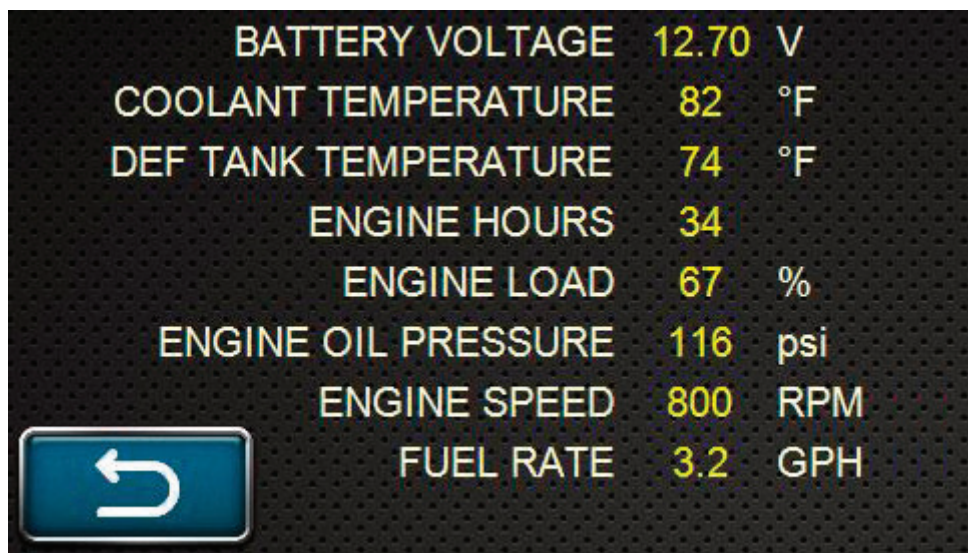
If there is more information or other codes past the first screen, the left and right arrow icons will flash blue and red.

This screen shows that there is an engine code that needs to be addressed. There is also another code to view since the right arrow icon is flashing red.

Press the BACK softkey to return to the Engine Diagnostics screen and press the ENGINE DATA softkey.



This screen appears when the ENGINE DATA softkey is pressed.



CONTROL PANEL GUIDE AND SYSTEM OPERATION (CONTINUED)

OPTIONS SCREEN - DIAGNOSTICS (CONTINUED)

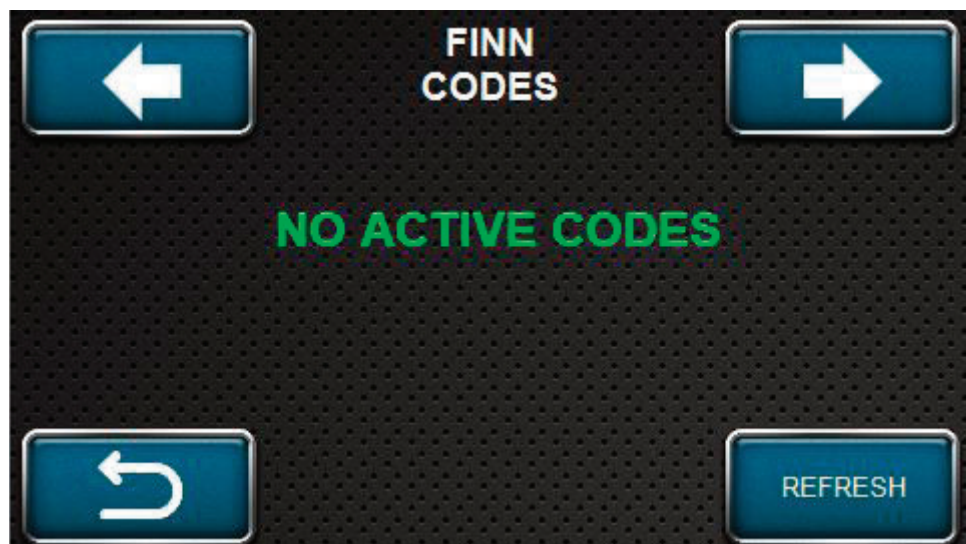
Return to the Diagnostics main screen (shown here). Press the FINN CODES softkey to view the active codes listed by the unit.



If there is an active code, a screen similar to the one shown here will appear. IF there are additional codes to view, the direction arrows at the top of the screen will flash red and blue. View the additional codes by pressing the arrow softkeys.



If there are no active Finn Codes, the screen should appear similar to the screen shown here. Also, if the code situations are corrected, the screen should look like this one once the REFRESH softkey is pressed.



CONTROL PANEL GUIDE AND SYSTEM OPERATION (CONTINUED)

OPTIONS SCREEN - DIAGNOSTICS (CONTINUED)

A list of Finn Codes is shown here.

FINN Code	Problem	Solution
1	E-stop normally closed circuit wire break	Check the normally closed contact block wiring to the e-stops, door switch, and safety relay
4	Panel e-stop normally open circuit shorted to another circuit	Check wiring to the normally open contact block on the panel e-stop
6	Engine e-stop normally open circuit shorted to another circuit or normally closed circuit failed to open when button pressed	Check wiring to the contact blocks on the engine e-stop
8	Controller is offline	Check the power/ground/CAN-High/CAN-Low wiring to the controller
9	Engine ECU is offline	Check the power/ground/CAN-High/CAN-Low wiring to the engine ECU
11	Hydraulic oil level switch input is reporting a low level condition	Check hydraulic oil level in tank and check wiring to the oil level switch
12	Hydraulic oil temperature input is reporting a hot oil condition (> 76C, 170F)	Wait for oil to cool down (< 71C, 160F) and start run mode again
13	Hydraulic oil temperature is below range (< -40C, -40F)	Check wiring to the oil temperature sensor (open circuit is likely)
14	Hydraulic oil temperature is above range (> 150C, 302F)	Check wiring to the oil temperature sensor (short circuit to ground wiring is likely)
15	Door switch normally open circuit shorted to another circuit or normally closed circuit failed to open when button pressed	Check wiring to the contact blocks on the door switch
16	Airlock Forward Solenoid output detected an open circuit condition	Check wiring to the solenoid and the controller, or replace the solenoid coil
17	Airlock Reverse Solenoid output detected an open circuit condition	Check wiring to the solenoid and the controller, or replace the solenoid coil
18	Airlock Speed Solenoid output detected an open circuit condition	Check wiring to the solenoid and the controller, or replace the solenoid coil
19	Floor Forward Solenoid output detected an open circuit condition	Check wiring to the solenoid and the controller, or replace the solenoid coil
20	Floor Reverse Solenoid output detected an open circuit condition	Check wiring to the solenoid (relay for MBH6) and the controller
21	Floor Speed Solenoid output detected an open circuit condition	Check wiring to the solenoid and the controller, or replace the solenoid coil
22	Hose Reel In Solenoid output detected an open circuit condition	Check wiring to the solenoid (relay for MBH6) and the controller

CONTROL PANEL GUIDE AND SYSTEM OPERATION (CONTINUED)

OPTIONS SCREEN - DIAGNOSTICS (CONTINUED)

A list of Finn Codes is shown here.

FINN Code	Problem	Solution
23	Hose Reel Out Solenoid output detected an open circuit condition	Check wiring to the solenoid and the controller, or replace the solenoid coil
24	Hose Reel Speed Solenoid output detected an open circuit condition	Check wiring to the solenoid and the controller, or replace the solenoid coil
25	Hose Reel Fee Wheel Solenoid output detected an open circuit condition	Check wiring to the solenoid and the controller, or replace the solenoid coil
26	Blower Speed Solenoid output detected an open circuit condition	Check wiring to the solenoid and the controller, or replace the solenoid coil
27	MBH6 water solenoid or MBX water relay output detected an open circuit condition	Check wiring to the solenoid or relay and the controller, or replace the component
28	Radio disable relay output detected an open circuit condition	Check wiring to the relay and the controller, or replace the relay
29	Safety reset relay output detected an open circuit condition	Check wiring to the relay and the controller, or replace the relay
30	Agitator FWD solenoid output detected an open circuit condition	Check wiring to the solenoid and the controller, or replace the solenoid coil
38	Engine Start relay output detected an open circuit condition	Check wiring to the relay and the controller, or replace the relay
39	Engine Ignition relay output detected an open circuit condition	Check wiring to the relay and the controller, or replace the relay
40	Engine Throttle relay output detected an open circuit condition	Check wiring to the relay and the controller, or replace the relay
42	Gate Down relay output detected an open circuit condition	Check wiring to the relay and the controller, or replace the relay
43	Quick Dump relay output detected an open circuit condition	Check wiring to the relay and the controller, or replace the relay
44	Fuel level sender voltage is below range (< 0.8V)	Check wiring to the fuel sender and the controller (open circuit is likely)
45	Fuel level sender voltage is above range (> 4V)	Check wiring to the fuel sender and the controller (short circuit to power wiring is likely)
46	The HFX controller application number received from the CAN bus is not the number expected by the VFX display (incorrect HFX model or application is not "Finn Common" project related)	Load the correct application software on the HFX controller or connect the appropriate hardware (HFX48m for HT/MBX, HFX20m for MBH6/BB302)

CONTROL PANEL GUIDE AND SYSTEM OPERATION (CONTINUED)

OPTIONS SCREEN - DIAGNOSTICS (CONTINUED)

A list of Finn Codes is shown here.

FINN Code	Problem	Solution
72	Measured agitator pressure of less than 50 psi (0.167V at controller input pin) is detected for 2 seconds when the agitator is enabled	Check wiring to the agitator pressure sensor and the controller for potential open circuit, or the issue could be hydraulic related
73	Measured agitator pressure is greater than 3300 psi (11V at controller input pin)	Check wiring to the agitator pressure sensor and the controller for potential short between signal and power
74	Measured airlock pressure of less than 50 psi (0.167V at controller input pin) is detected for 2 seconds when the airlock is enabled	Check wiring to the airlock pressure sensor and the controller for potential open circuit, or the issue could be hydraulic related
75	Measured airlock pressure is greater than 3300 psi (11V at controller input pin)	Check wiring to the airlock pressure sensor and the controller for potential short between signal and power
76	Measured floor pressure of less than 50 psi (0.167V at controller input pin) is detected for 2 seconds when the floor is enabled	Check wiring to the floor pressure sensor and the controller for potential open circuit, or the issue could be hydraulic related
77	Measured floor pressure is greater than 3300 psi (11V at controller input pin)	Check wiring to the floor pressure sensor and the controller for potential short between signal and power

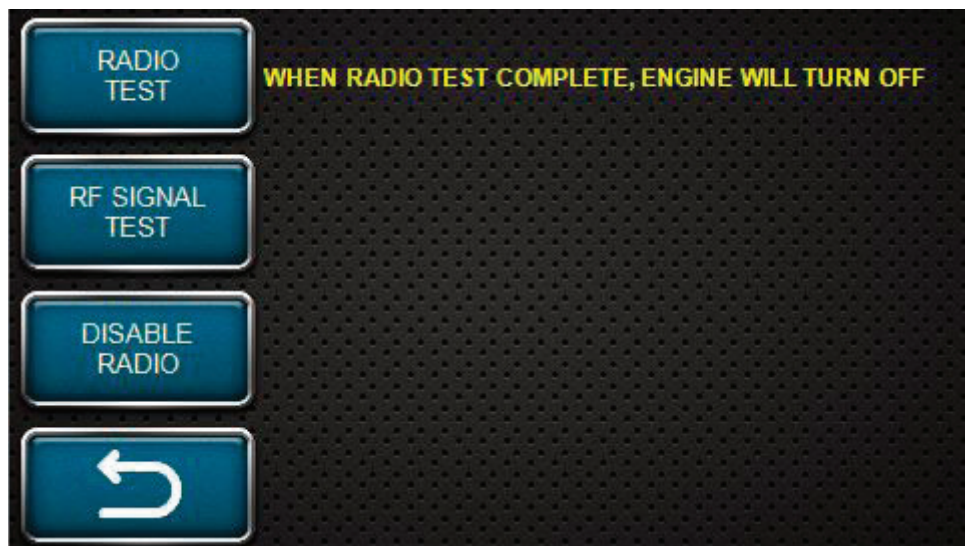
CONTROL PANEL GUIDE AND SYSTEM OPERATION (CONTINUED)

OPTIONS SCREEN - RADIO REMOTE DIAGNOSTICS

Return to the Diagnostics main screen (shown here). Press the RADIO softkey to view the radio remote diagnostics screen.

To do this test, the radio remote should be fully charged, the power on the remote should be ON and the remote should be linked to the unit. See the RUNNING UNIT WITH RADIO REMOTE section to activate and link the remote.

This is the radio remote diagnostics screen. Press RADIO TEST to begin a diagnostics test of the remote to ensure all switches and buttons on the remote are functioning correctly.



CONTROL PANEL GUIDE AND SYSTEM OPERATION (CONTINUED)

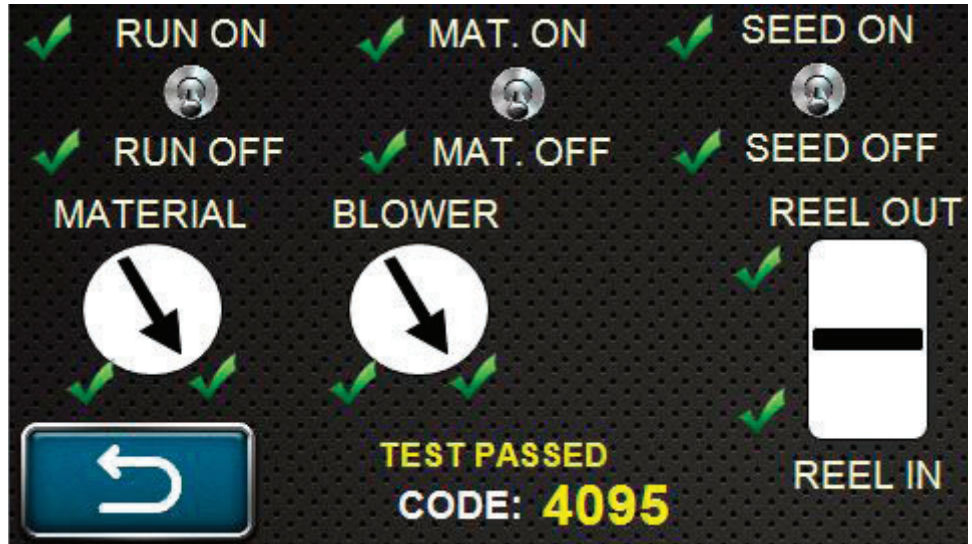
OPTIONS SCREEN - RADIO REMOTE DIAGNOSTICS (CONTINUED)

This screen will appear at the beginning of the test. Move each switch up and down or press each button on the radio remote to send a signal from the remote to the unit.



If the unit received each signal correctly to match each function, the screen shown here should be the final result.

Press the BACK softkey to return to the radio remote diagnostics screen.



CONTROL PANEL GUIDE AND SYSTEM OPERATION (CONTINUED)

OPTIONS SCREEN - RADIO REMOTE DIAGNOSTICS (CONTINUED)

Return to the radio remote diagnostics screen.

Press RF SIGNAL TEST softkey.

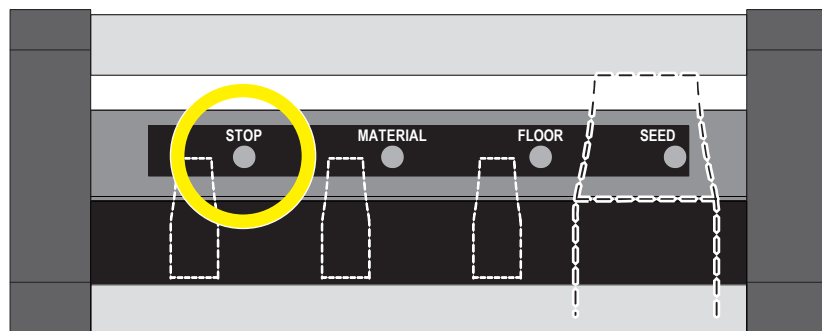


Pressing RF SIGNAL TEST softkey on the control panel will flash the "STOP" indicator light blue on the radio handheld at a constant rate. If rate becomes less consistent, the RF signal quality is dropping.

Use this feature to test RF signal quality when working in an environment that may be prone to RF signal interference.



This feature can be used to help prevent engine shutdowns due to loss of RF signal.



CONTROL PANEL GUIDE AND SYSTEM OPERATION (CONTINUED)

OPTIONS SCREEN - RADIO REMOTE DIAGNOSTICS (CONTINUED)

Return to the radio remote diagnostics screen.

Press DISABLE RADIO softkey.



Pressing DISABLE RADIO softkey on the control panel will hide the RADIO TEST and RF SIGNAL TEST softkey options.

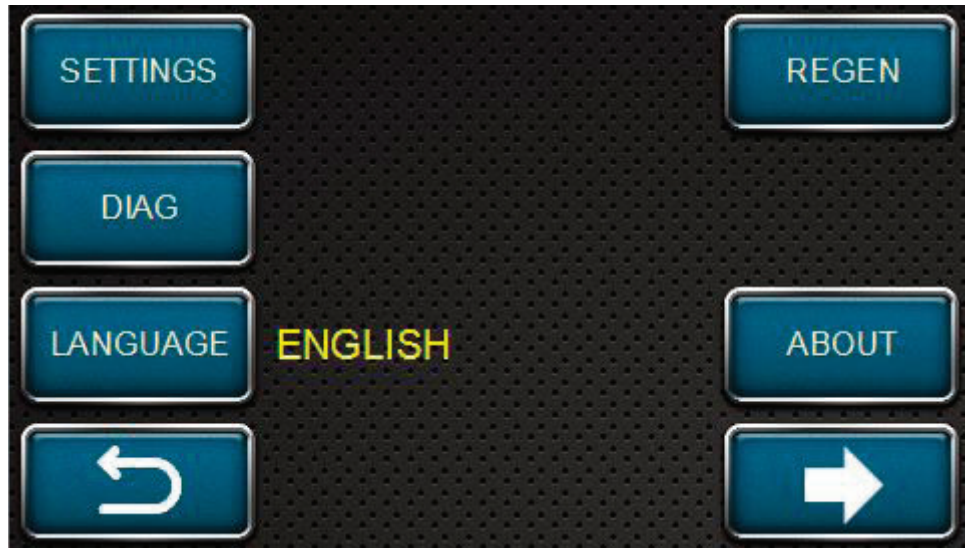
The unit will no longer take commands from the radio remote until the unit is reset.



CONTROL PANEL GUIDE AND SYSTEM OPERATION (CONTINUED)

OPTIONS SCREEN - LANGUAGE

Return to the options screen shown here. The screen displays the current language setting in yellow text next to the LANGUAGE softkey. As shown here, the current language setting is for English.



Pressing the LANGUAGE softkey switches the displayed language from English to Spanish.

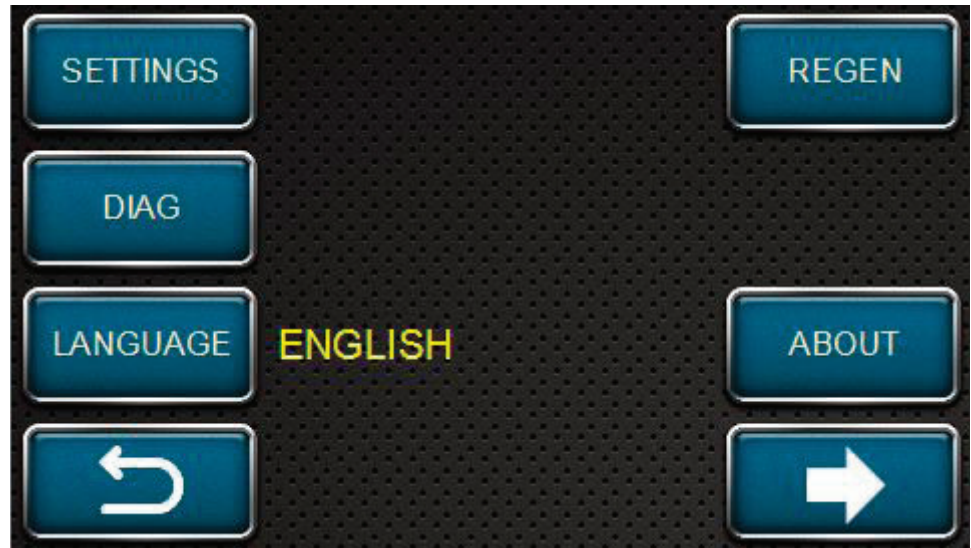
Press the LANGUAGE softkey again to return the display to English.



CONTROL PANEL GUIDE AND SYSTEM OPERATION (CONTINUED)

OPTIONS SCREEN - REGENERATION

The **REGEN** softkey takes the user to the MBX Regeneration (REGEN) status screen.



On the **REGEN** screen, the regen status info is displayed, as well as the controls to *INHIBIT* or *MANUALLY* begin a regeneration. In order to manually regenerate the diesel exhaust system, the **HYD. INTERLOCK** (Hydraulic Interlock) must be active. With the hydraulic interlock active, all hydraulic functions will not activate.



The **MANUAL REGEN** can be activated by pressing the **HYD. INTERLOCK** softkey first, and then holding the **MANUAL REGEN** softkey for 3 seconds.

It is possible to prevent automatic regeneration by pushing the softkey next to **REGEN INHIBIT**. It should be noted that if a regen cycle is required and soot/ash loads increase to an unacceptable level, the John Deere engine will eventually operate in a de-rated condition and potentially shut down until a regen cycle is completed to correct soot and ash load levels.

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) anyone responsible for adding material directly into the hopper.

THE MATERIAL-FEED SYSTEM

The material-feed system on the Material 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:

MATERIAL-HANDLING GROUP

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

The blower is a rotary lobe, positive displacement-type unit having two triple lobe impellers. The blower is equipped with a relief valve limiting maximum air pressure to 15 psi (103,4 kPa), an outlet silencer for noise attenuation, and an inlet air filter.

The drag chain 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. The drag chain/conveyor is powered by a hydraulic motor that is linked in series with the feed roll hydraulic motor.

The airlock receives the material from the drag chain conveyor and pressurized air from the blower. Its primary function is to convey the bulk material from the atmospheric air to a sealed chamber where the blower air stream picks it up and blows it through and out the discharge hose. To enable the Material 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 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.

HYDRAULIC SYSTEM

The hydraulic system on your Material Blower is designed to give trouble-free service, if maintained. The most important areas of maintenance are the hydraulic oil and filtration. The reservoir holds 82 gallons (310 L) of hydraulic oil. The hydraulic oil should be replaced per the LUBRICATION AND FLUIDS CHART, or if the oil becomes milky or gives off a burnt odor. The hydraulic oil filter must be replaced on schedule with a FINN hydraulic filter (part number A3055-001 and 075747-C).

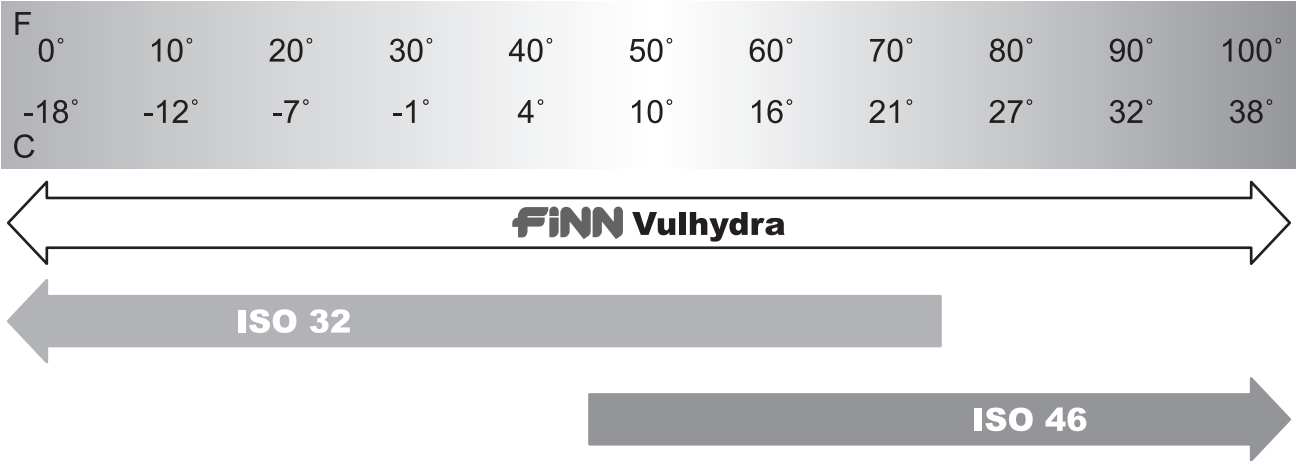
At time of manufacture, this unit contains Finn Vulhydra hydraulic oil. The chart below illustrates the operating temperature range of the Finn Vulhydra hydraulic oil as well as the closest ISO equivalents.

NOTE: Use equal to, or better than, a 5 micron absolute filtration.

NOTE: The Finn Vulhydra hydraulic oil may be substituted for either of the two ISO oils listed below. Please use the temperature chart to determine what oil works best in your situation.

THE MATERIAL-FEED SYSTEM (CONTINUED)

HYDRAULIC SYSTEM (CHART)



MULCHING WITH THE MATERIAL BLOWER

1. Check all areas listed under PRE-START EQUIPMENT CHECK section of this manual.
2. Start the engine following all the steps listed under STARTING PROCEDURE section of this manual.
3. Press the **BLOWER** softkey on the control panel (if in Local Mode) or press the **RUN** toggle switch (if in Radio Mode). Refer to the CONTROL PANEL GUIDE AND SYSTEM OPERATION section for running the unit in each mode. This will allow the material flow speed to be adjusted.
4. With a firm grip on the hose, start material flow. Press the **FLOOR** softkey on the control panel (if in Local Mode) or press the **MATERIAL FEED** toggle switch (if in Radio Mode). This will allow the material delivery speed to be adjusted.
5. Adjust floor speed and blower speed to achieve the desired amount of material flow.
6. At the end of the load, push **FLOOR** softkey to turn floor delivery system off (in Local Mode) or **MATERIAL FEED** toggle switch down on the radio remote transmitter (in Radio Mode) to stop flow of material to airlock.
7. At the end of the load, push **BLOWER** softkey to turn blower system off (in Local Mode) or **RUN** toggle switch down on the radio remote transmitter (in Radio Mode) to stop flow of material from the airlock.
8. Shut down the engine.

MATERIAL BLOWER ADJUSTMENTS

The Material 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. Weather conditions and material conditions can influence performance of the Material Blower. Adjusting the floor speed, blower speed, and occasionally, the metering gate and/or airlock speeds will allow the Material 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** controls on the control pad and the radio remote transmitter. Refer to the CONTROL PANEL GUIDE AND SYSTEM OPERATION section for more information on floor speed and floor speed settings.

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 the Main Control Panel. Allow Material Blower to come to a stop. Shut engine off and allow all moving components to stop. Perform the following steps for clearing a blockage.

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 clamps on the front and the rear of the discharge outlet.
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, then run the blower to full RPM to clear out the airlock and any mulch remaining in the hose.
8. Resume normal operation.

Troubleshooting Chart		
Symptom	Probable Cause	Suggested Solutions
Engine will not start	ECM has generated a fault code for the engine.	Check fault code and remedy.
	No fuel or fuel system has lost prime.	Add fuel or prime fuel system with fuel filter priming pump.
Airlock not turning	Material feed system has not been activated.	Press the FLOOR ON/OFF button on the controller.
	Airlock clean out door switches are not closed. Engine not starting.	Make sure door is closed and latched to ensure switches are closed. If door is closed and switches remain open, then the door will need to be adjusted.
Floor not turning	Floor circuit is not "on"/ activated.	Press the FLOOR ON/OFF button on the controller.
	Solenoid valves have lost power.	Check Deutsch connectors to make sure they have power and check voltage across the terminals.
Airlock constantly auto-reversing	Overfeeding airlock.	Decrease floor speed. See Material Blower Adjustments section for tips.
	Dull airlock knives.	Check knife clearance; sharpen or replace knife if dull or chipped.
	Bulk material is not processed enough causing airlock to cut materials.	Pick a more processed bulk mulch material.
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 blower speed and floor speed accordingly.
	Partial plugging in airlock discharge.	Check airlock discharge for blockage and air leaks.
Engine Overheat	There is a lack of Coolant.	Check for leaks and add coolant.
	Radiator is obstructed.	Wash radiator fins with a hose to remove any foreign material buildup. Do NOT use a pressure washer to clean radiator fins or damage will occur.

MAINTENANCE



CAUTION *Turn engine OFF and disconnect battery before servicing equipment. Failure to comply could result in minor personal injury, product damage, 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. If the filter cannot be cleaned, it must be replaced immediately.
2. Check engine coolant and oil levels. See engine manual.
3. Check hydraulic oil level in reservoir. The oil should be about three-fourths of the way up the sight glass located on the hydraulic tank.
4. Check blower oil level. See blower manual.
5. Clean out front floor chain compartment. Unclamp cleanout cover from the front of the hopper and remove cleanout cover to expose floor chain. Remove any built-up material from the cleanout 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 floor, the airlock, and the feed roll shaft. Wipe each bearing before lubrication to remove any accumulated 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 level in the airlock gearbox. Add or replace if necessary.
5. Check the gear case on the blower (see Lubrication Chart information).
6. Check the tension on the floor conveyor chain. Adjust so that the floor take up rod only displays one ring when the take up cover is installed. This corresponds to 1-3/8 in. spring compression by turning the jackscrews on each end of the idler shaft. Adjust evenly, making sure the shaft does not shift sideways.
7. Check airlock knives for wear, chips, and clearance.



DANGER *Knives have very sharp edges that can cause serious injury. Handle with care. Failure to comply WILL result in severe personal injury or death.*

MAINTENANCE (CONTINUED)

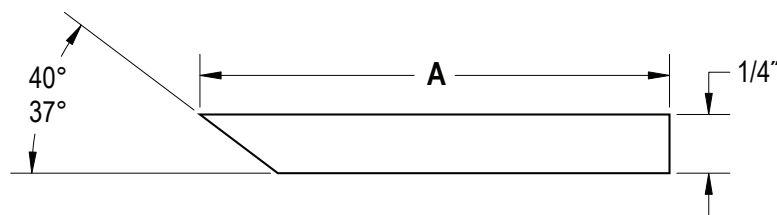
WEEKLY - AFTER EVERY 50 HOURS OF OPERATION (CONTINUED)

To change the knife (or knives), use the following:

- A) Remove the five bolts that hold the knives and transition doors to the airlock knife shelves.
- B) Remove the doors and knives.
- C) Clean all dirt and debris from shelves.
- D) Back out the two center jacking screws on each shelf.
- E) Compare the replacement knife to the removed knife. If the new knife is wider, back the two outside jacking screws out by at least that amount. Count the turns and back both screws out evenly.
- F) Lay the knife on the knife shelf. Ensure the knife is installed with the cutting angle edge facing down. Loosely install the two outer, and the middle knife mounting bolts. Tighten the mounting bolts enough to hold knife in position, while still allowing it to be moved.
- G) Install a block of wood, approximately 2 in. x 4 in. x 6 in. (5cm x 10cm x 15cm) between the knife and the closest vane at the center of the rotor length. Pinch the wood between the knife and the vane by turning the rotor shaft with a pipe wrench.
- H) While keeping pressure on the knife, tighten the three mounting bolts.
- I) Remove the wood block and check the clearance between the knife and the rotor vane, using a feeler gauge at the three mounting bolts.

NOTE: If the knife touches the vane at any point, loosen the three mounting bolts, back off the jacking screws evenly, and repeat steps G, H, and I until clearance is obtained.

- J) Loosen the three mounting bolts; use the jacking screws to close the gap. One full turn of the screw moves the knife 0.070 in. (1.8 mm).
- K) Tighten mounting bolts as explained in steps G and H.
- L) Repeat steps, G, H, I, and J until a knife-to-vane clearance of no more than 0.006 in. (0.15 mm) is obtained at the closest point(s).
- M) Once set, install the other two mounting bolts and tighten.
- N) Run the two center jacking screws into contact with the knives. Lock all jacking screws in place with the jam nuts.
- O) Remove three mounting bolts for transition door, and install the door.
- P) Repeat procedure for other knife (if equipped).
- Q) Immediately have the removed knives sharpened. Do not attempt to grind the knives by hand. The knives must be ground straight and true on a surface grinder by an experienced knife sharpener. Have the knives ground to the profile shown in the illustration below.



Knife Profile

NOTICE

When dimension "A" has been reduced to 1-3/8 in. (6 cm), the knife must be discarded.

MAINTENANCE (CONTINUED)

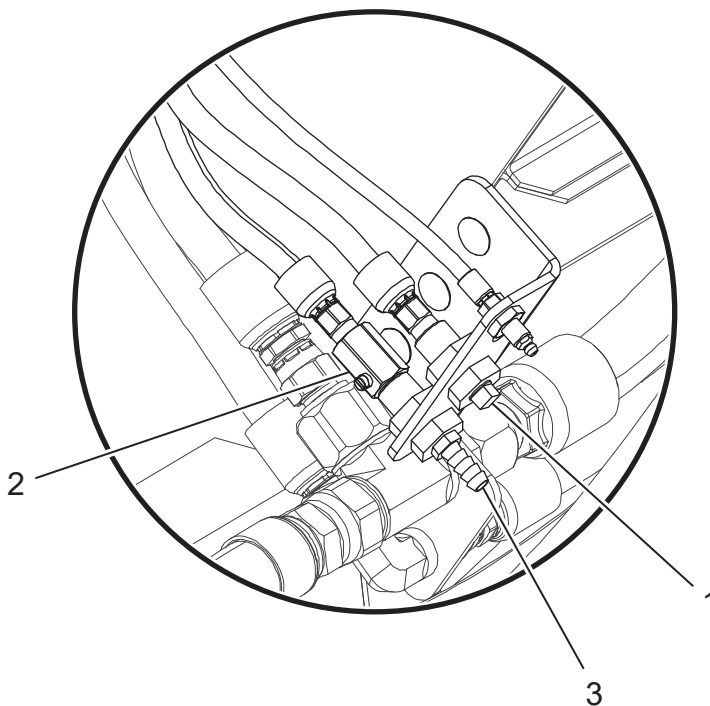
AGITATOR GEAR BOX OIL FILL: AFTER FIRST 50 HOURS OF OPERATION

To drain agitator gearbox, do the following:

1. Locate the grease and gearbox oil port on the unit.
2. Remove pipe plug (Item 1 below).
3. Open ball valve (item 2 below).
4. Allow old gearbox oil to drain.

Once all old oil has drained, to fill agitator gearbox, do the following:

1. Place gear oil pump on hose barb (item 3 below).
2. Pump oil until it flows out of the top bulkhead.
3. Close the ball valve and reinstall pipe plug.



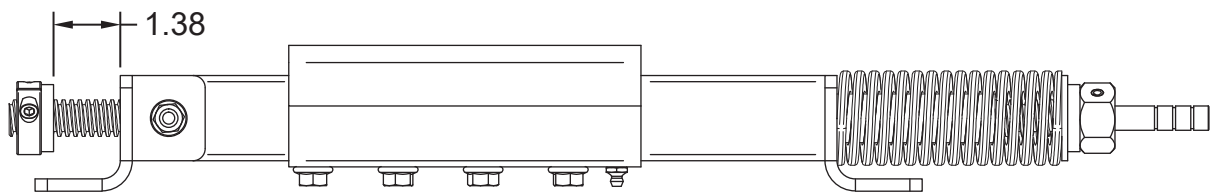
AFTER FIRST 100 HOURS OF OPERATION

1. Change engine oil and filter annually, following the engine manufacturer's recommendations.
2. Change the blower oil by following the blower manual recommendations.
3. Change the gearbox oil on the airlock using SAE 90W gear oil. Fill oil to the side plug. Change every 1000 hours after that.

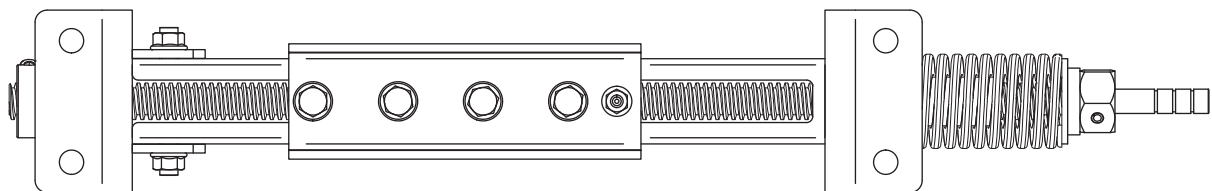
MAINTENANCE (CONTINUED)

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.
3. To adjust chain tension remove the take up covers on each side of the hopper near the front. Turn each take up rod such that the spring is compressed 1-3/8 in. Reinstall the take up covers and note that one ring is displayed on the end of the take up rod. If you ever see more than one ring on the take up rod that indicates the floor tension needs to be adjusted back to 1-3/8 in. spring compression.



SIDE VIEW

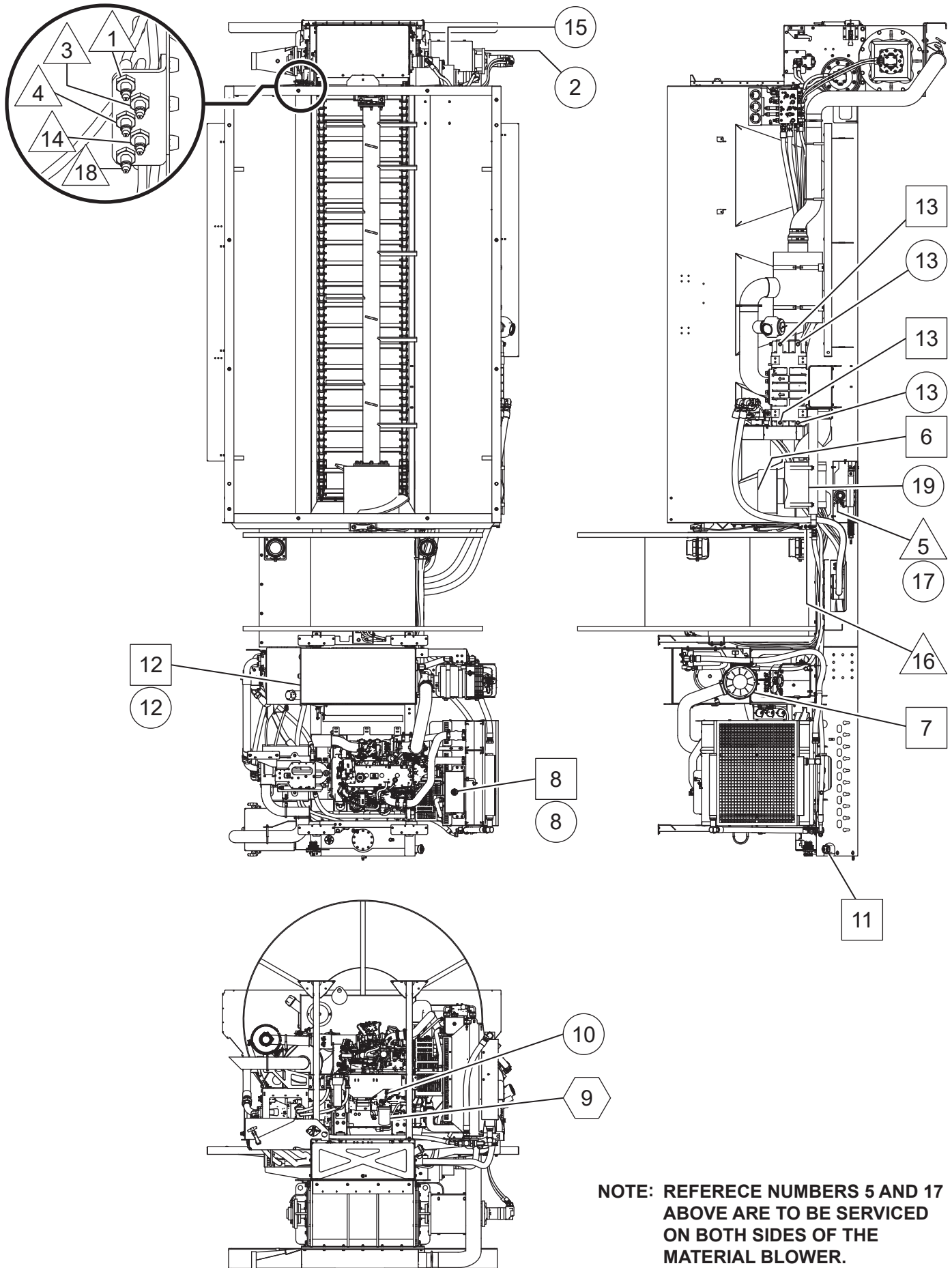


BOTTOM VIEW

WINTER SHUTDOWN AND STORAGE

1. Blow all material out of machine, turn engine OFF, set battery box disconnect to "OFF" and lockout switch for safety.
2. Remove the inlet sheet 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. Store machine inside if possible. If machine is being stored outside, protect machine from the elements 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 buildup of rust on the rotor vanes can lock up an airlock, and ice expansion can damage the airlock discharge.*



MAINTENANCE (CONTINUED)

LUBRICATION CHART

Ref. No.	Location	Lubricant	Frequency
1	Lubricate Air Lock Bearing	CL	Weekly
2	Change Air Lock Gearbox Oil	GO	50 hours, 100 hours, then Seasonally
3	Lubricate Feeder Roll Bearing	CL	Weekly
4	Lubricate Floor Pillow Block Bearing	CL	Weekly
5	Lubricate Floor Take-Up Bearing	CL	Weekly
6	Check Blower Inlet Filter		Daily
7	Check Engine Air Cleaner		Daily
8	Check Engine Coolant Level	AF	Daily
	Change Engine Coolant	AF	Seasonally
9	Change Engine Oil and Filter		See Engine Manual
10	Check Engine Oil Level		Daily
11	Check Fuel Level	DF	Daily
12	Check Hydraulic Oil Level	HO	Daily
	Change Hydraulic Oil and Filter	HO	Seasonally
13	Check Blower Oil Level	BO	Daily
	Change Blower Oil	BO	See Blower Manual
	Change Blower Belt		Seasonally
14	Lubricate Agitator Bearing	CL	Weekly
15	Change Floor Drive Gearbox Oil	GO	50 hours, 100 hours, then Seasonally
16	Change Agitator Gearbox Oil	GO	50 hours, 100 hours, then Seasonally
17	Check Floor Chain Tension		Weekly
	Lubricate Floor Chain	CH	Seasonally
18	Lubricate Airlock Shaft Seals	CL	Weekly
19	Change Blower Air Filter		Seasonally

LUBRICATION OR FLUID USED

CL	Chassis Lubricant
BO	Blower Oil See Blower Manual
AF	50/50 Anti-Freeze and Water Mixture
DF	Diesel Fuel
HO	Hydraulic Oil Finn Vulhydra hydraulic oil or the closest ISO equivalent (see Hydraulic System section).
GO	90 W Gear Oil
CH	Mineral Oil or Chain Lubricant

FLUID CAPACITIES

Fuel	50 Gallons (189 L)	Agitator Gearbox Oil	2 Quarts (1.89 L)
Hydraulic Oil	82 Gallons (310 L)	Airlock Gearbox Oil	20 ounces (0.59 L)
Engine Coolant	See Engine Manual	Floor Gearbox Oil	Fill to Level Plug
Engine Oil	See Engine Manual	Blower Oil	See Blower Manual

TIME KEY

□	Daily (8 hours)
△	Weekly (40 hours)
○	Seasonally (500 hours)
◇	See Engine Manual

MAINTENANCE (CONTINUED)

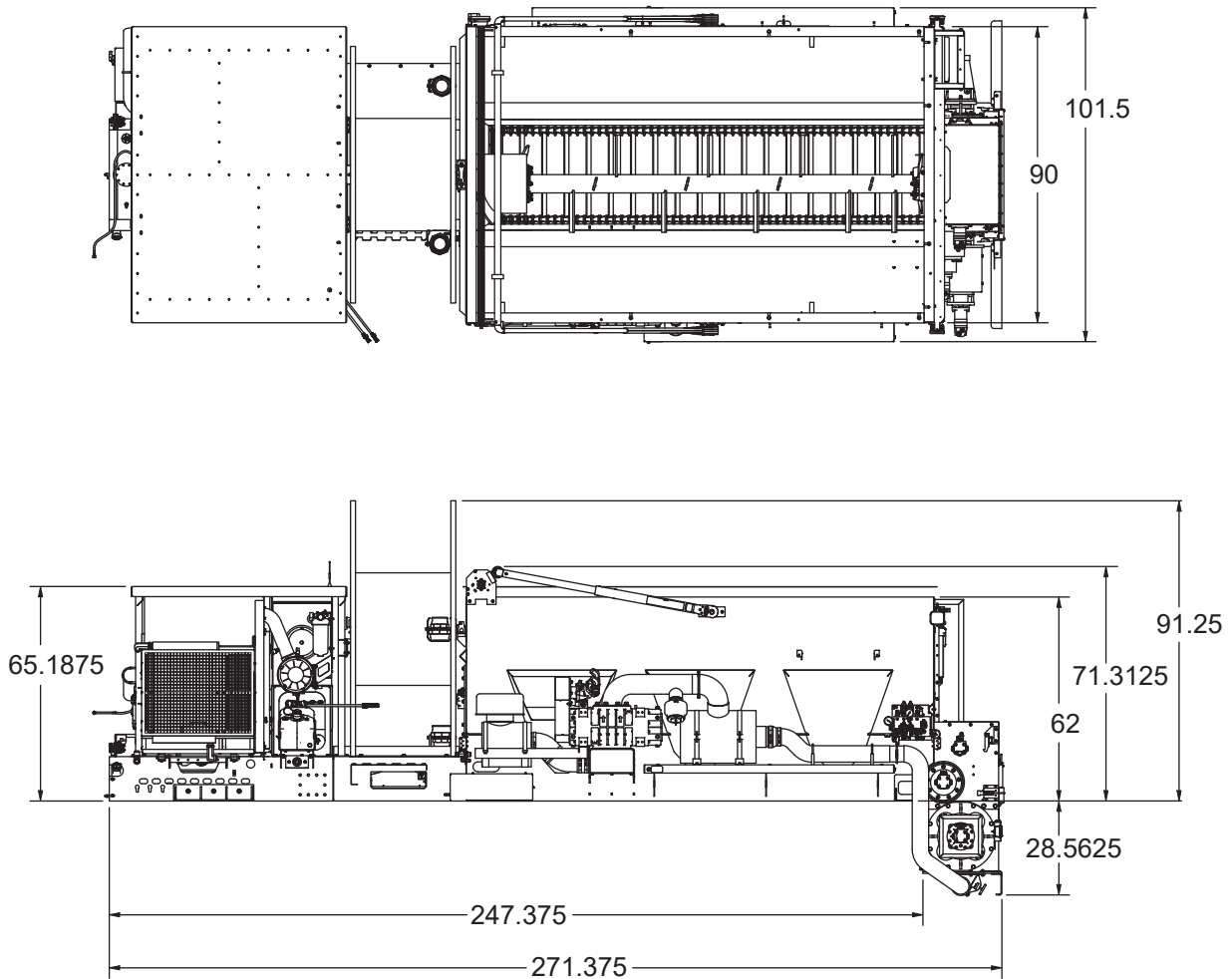
RECOMMENDED SPARE PARTS

Below is a list of recommended spare parts to keep on hand for minor repairs or maintenance needs that might develop while the MBX unit is out in the field in use. Having these parts on hand in the field could reduce or eliminate time spent returning for repairs.

This list is also repeated in the Parts Manual section.

Part Number	Description
A3055-001	Low Pressure Filter Element
075747-C	High Pressure Filter Element
A2021-001	Fuel Filter Element, Primary With Water Separator
A2022-001	Fuel Filter Element, Secondary
045296-01	Airlock Knife (2 per)
045296-02	Bottom Wiper Knife (1 per)
A5987-001	Airlock Door Interlock Switch
055385	4 in. Hose Gasket
052523	5 in. Hose Gasket
A7293-001	Fuel Cap
A4471-001	Harness, Coolant Level Switch
A4470-001	Coolant Level Sensor
A2021-001	Fuel Filter Element, Primary With Water Separator
A2022-001	Fuel Filter Element, Secondary
A1999-001	DEF Filter
A1927-001	Oil Filter
A1924-001	31AQ Alternator, 12V, 120A
A1926-001	3075 Starter Motor Kit
A1929-001	Filter Element, Ccv
A1928-001	Engine V-Belt
A3002-001	Filter Element, Primary Air, 4 in.
A3284-001	Filter Element, Safety Air, 4 in.
A3866-001	Blower Air Cleaner
A3867-001	Silencer Outlet Reducer
A2489-001	Blower Drive Belt
053174	Drop Pan Clean Out Gasket
A4509-001	Blower Inlet Cover Gasket
A7605-002	Ignition Key

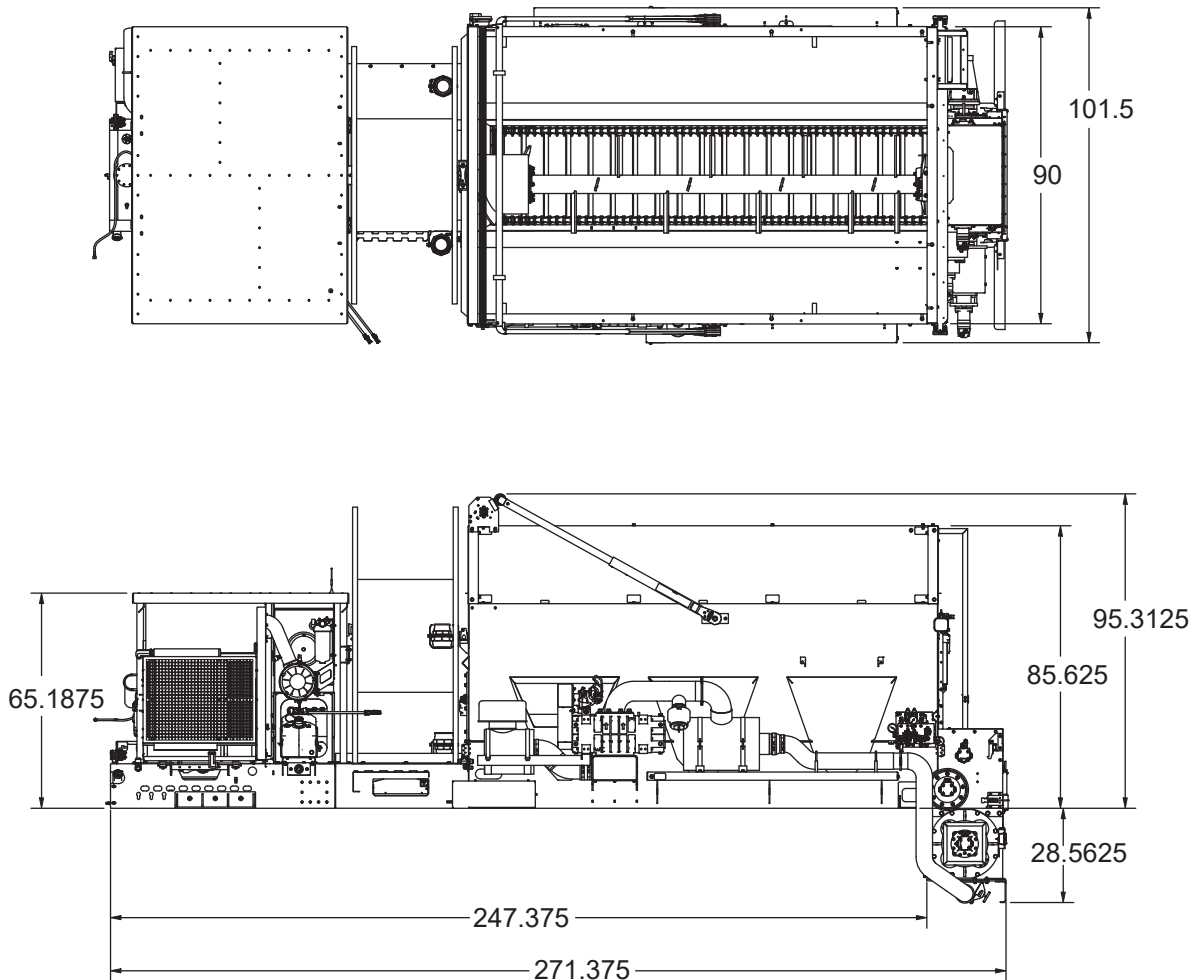
FINN MBX10 MATERIAL BLOWER TECHNICAL SPECIFICATIONS



POWER	John Deere 4045HFC04 Tier 4 Final Diesel, 134HP (100kW)
ENGINE SAFETY SYSTEM	Engine ECU with self diagnostics, including low oil pressure and high temperature shutoff
CAPACITY	approximately 10 cubic yd. (7.6m ³)
HOSE REEL CAPACITY.....	Up to 300 ft. (91.4 m) of 4 in. (10.2cm) hose or up to 200 ft. (61m) of 5 in. (12.7cm) hose
FUEL TANK CAPACITY	50 Gallon (189.3Liter)
BLOWER	1250 CFM @ 14 psi (35.4cmm @ 96.5kPa)
EMPTY WEIGHT	13,230 lbs. (6,001 kg)
(includes Hose Reel with Hose)	
WORKING WEIGHT*	21,740 lbs. (9,861 kg)
LIGHTS	D.O.T. including side marker lights, an identification light, and a license plate light

* Working weights are approximate and do not include options or stored materials. Working weight is based on a full load of mulch at 851 lbs./cu. yd.

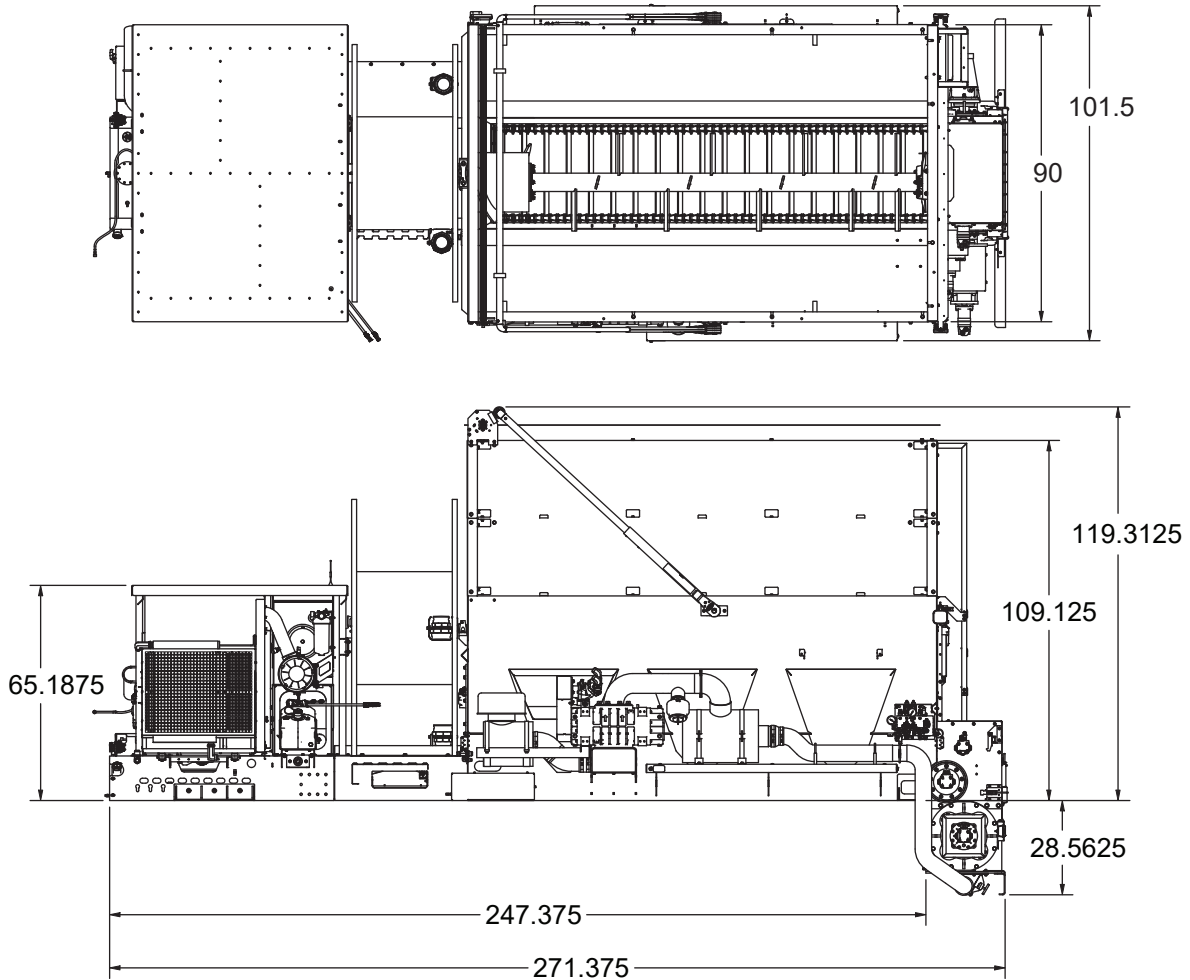
FINN MBX16 MATERIAL BLOWER TECHNICAL SPECIFICATIONS



- POWER John Deere 4045HFC04 Tier 4 Final Diesel, 134HP (100kW)
- ENGINE SAFETY SYSTEM Engine ECU with self diagnostics, including low oil pressure and high temperature shutoff
- CAPACITY approximately 16 cubic yd. (12.2m³)
- HOSE REEL CAPACITY..... Up to 300 ft. (91.4 m) of 4 in. (10.2cm) hose or up to 200 ft. (61m) of 5 in. (12.7 cm) hose
- FUEL TANK CAPACITY 50 Gallon (189.3 Liter)
- BLOWER 1250 CFM @ 14 psi (35.4cmm @ 96.5kPa)
- EMPTY WEIGHT 14,050 lbs. (6,373 kg)
(includes Hose Reel with Hose)
- WORKING WEIGHT* 27,666 lbs. (12,549 kg)
- LIGHTS D.O.T. including side marker lights, an identification light, and a license plate light

* Working weights are approximate and do not include options or stored materials.
Working weight is based on a full load of mulch at 851 lbs./cu. yd.

FINN MBX22 MATERIAL BLOWER TECHNICAL SPECIFICATIONS



POWER	John Deere 4045HFC04 Tier 4 Final Diesel, 134HP (100kW)
ENGINE SAFETY SYSTEM	Engine ECU with self diagnostics, including low oil pressure and high temperature shutoff
CAPACITY	approximately 22 cubic yd. (16.8m ³)
HOSE REEL CAPACITY.....	Up to 300 ft. (91.4 m) of 4 in. (10.2cm) hose or up to 200 ft. (61m) of 5 in. (12.7cm) hose
FUEL TANK CAPACITY	50 Gallon (189.3Liter)
BLOWER	1250 CFM @ 14 psi (35.4cmm @ 96.5kPa)
EMPTY WEIGHT	14,870 lbs. (6,745kg)
(includes Hose Reel with Hose)	
WORKING WEIGHT*.....	33,592 lbs. (15,237kg)
LIGHTS	D.O.T. including side marker lights, an identification light, and a license plate light

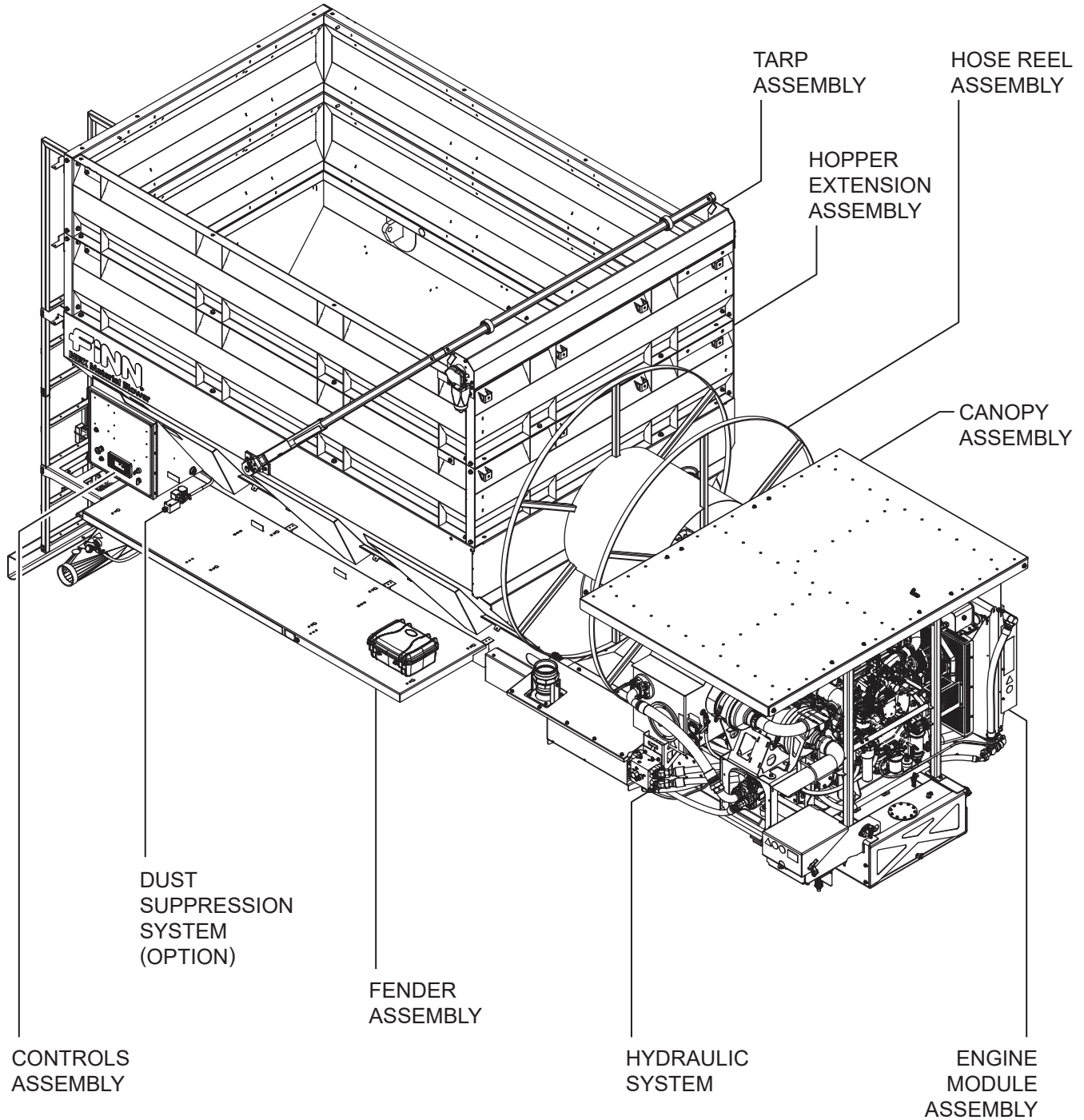
* Working weights are approximate and do not include options or stored materials. Working weight is based on a full load of mulch at 851 lbs./cu. yd.

MBX

Parts Manual

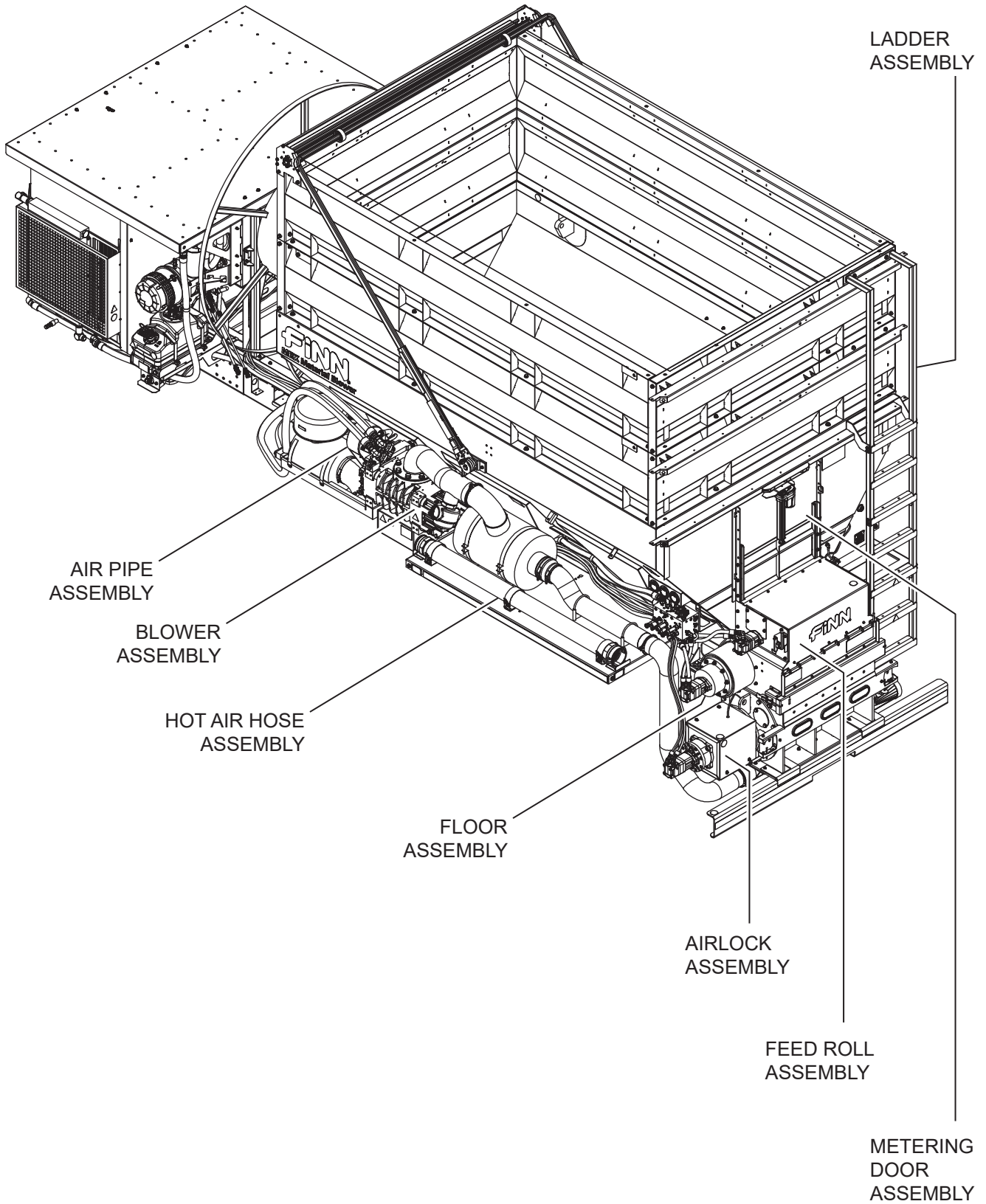
Model OO

MBX ASSEMBLY

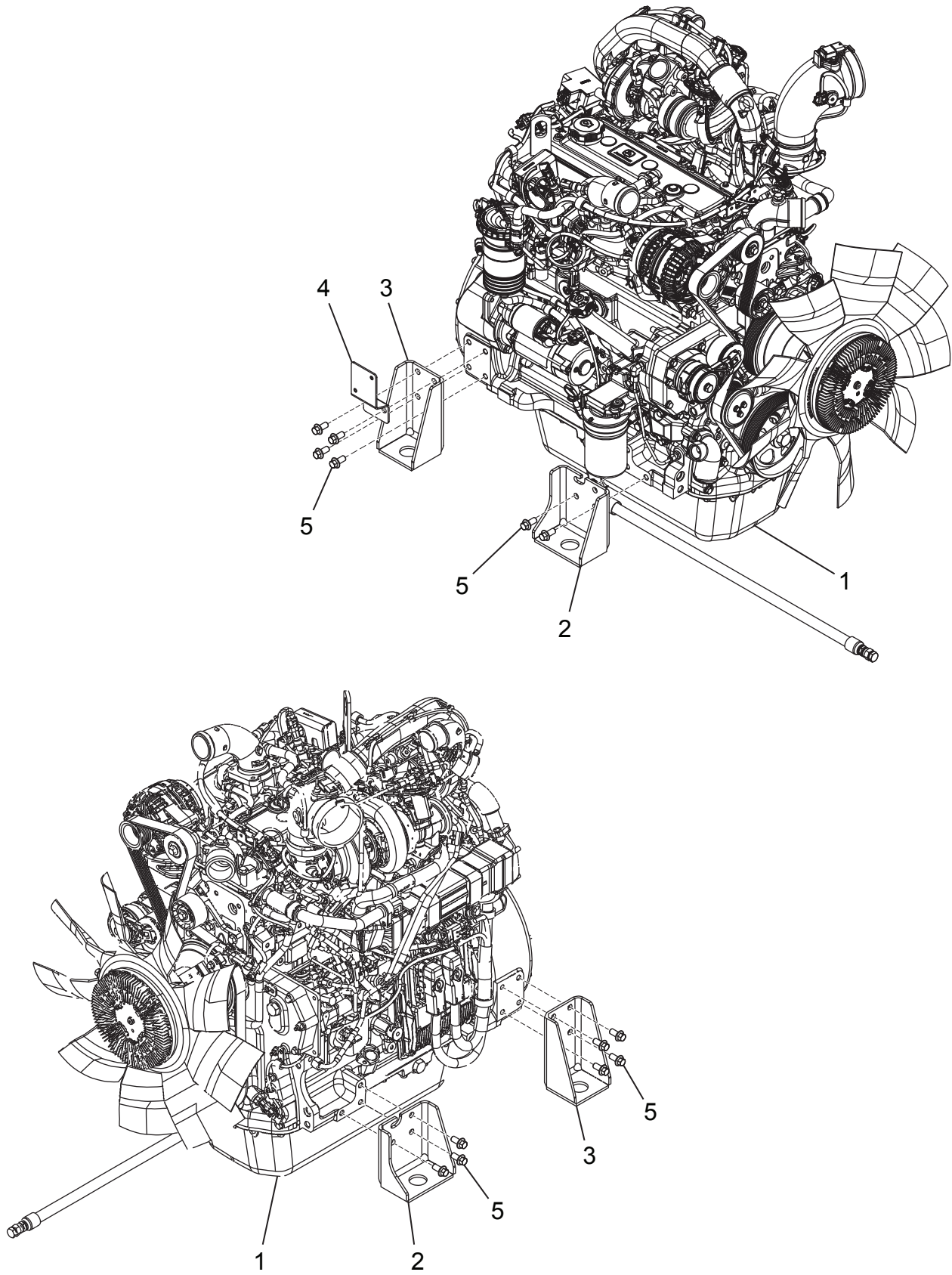


WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

MBX ASSEMBLY



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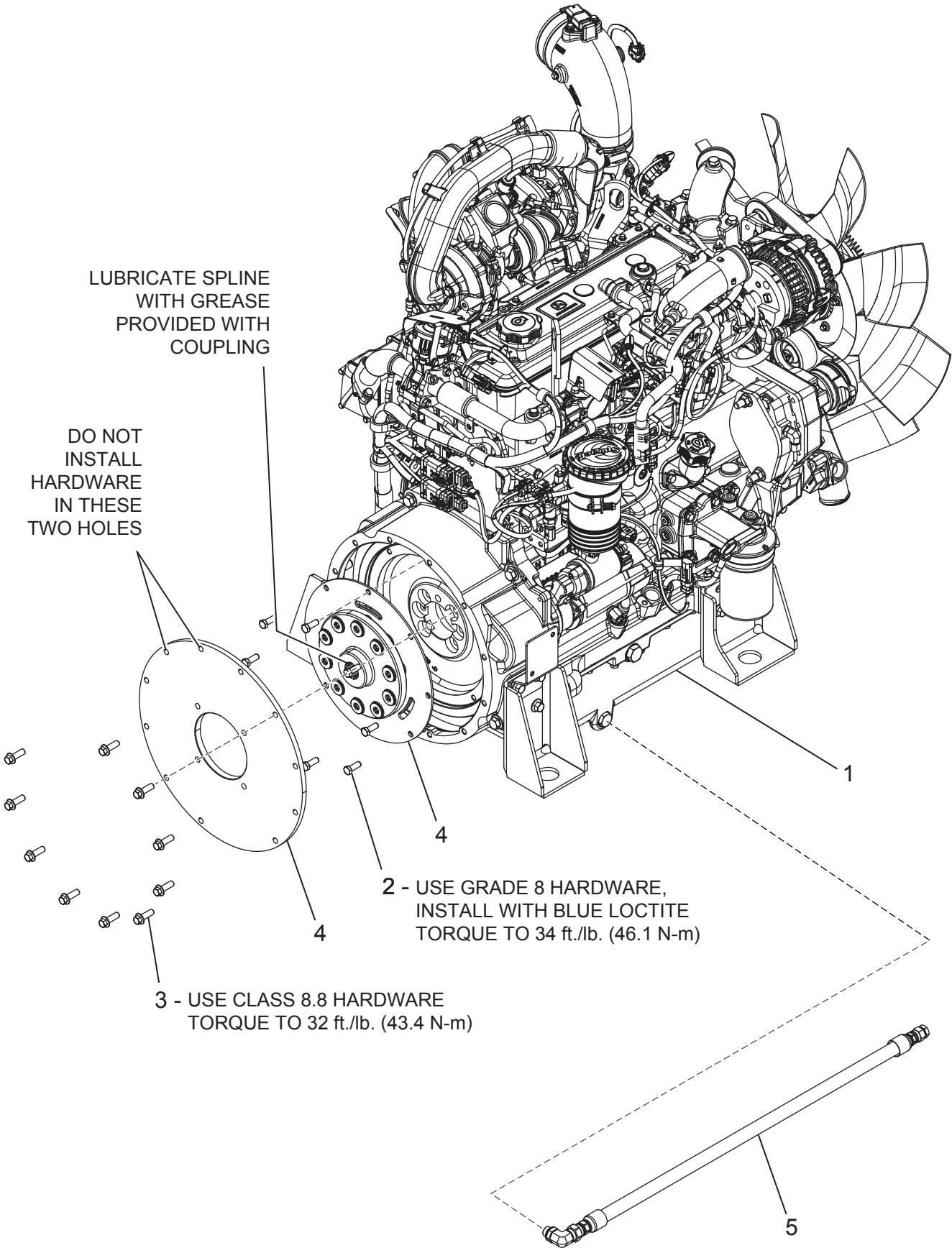
ENGINE AND ENGINE FOOT MOUNTING

Ref. No.	Part Number	Description	No. Req'd
1	A1930-001	Engine, Diesel, JD 4045HFC04, 134 HP	1
2	A2680-001	Engine Mounting Foot, Front	2
3	A2681-001	Engine Mounting Foot, Rear	2
4	A3428-001	Starter Relay Bracket Assembly	1
5	●	M12 x 1.75 x 25 Metric Hex Flange Screws	13

KITS AND MARKERS

- Standard Hardware Item - Available at your local hardware store.

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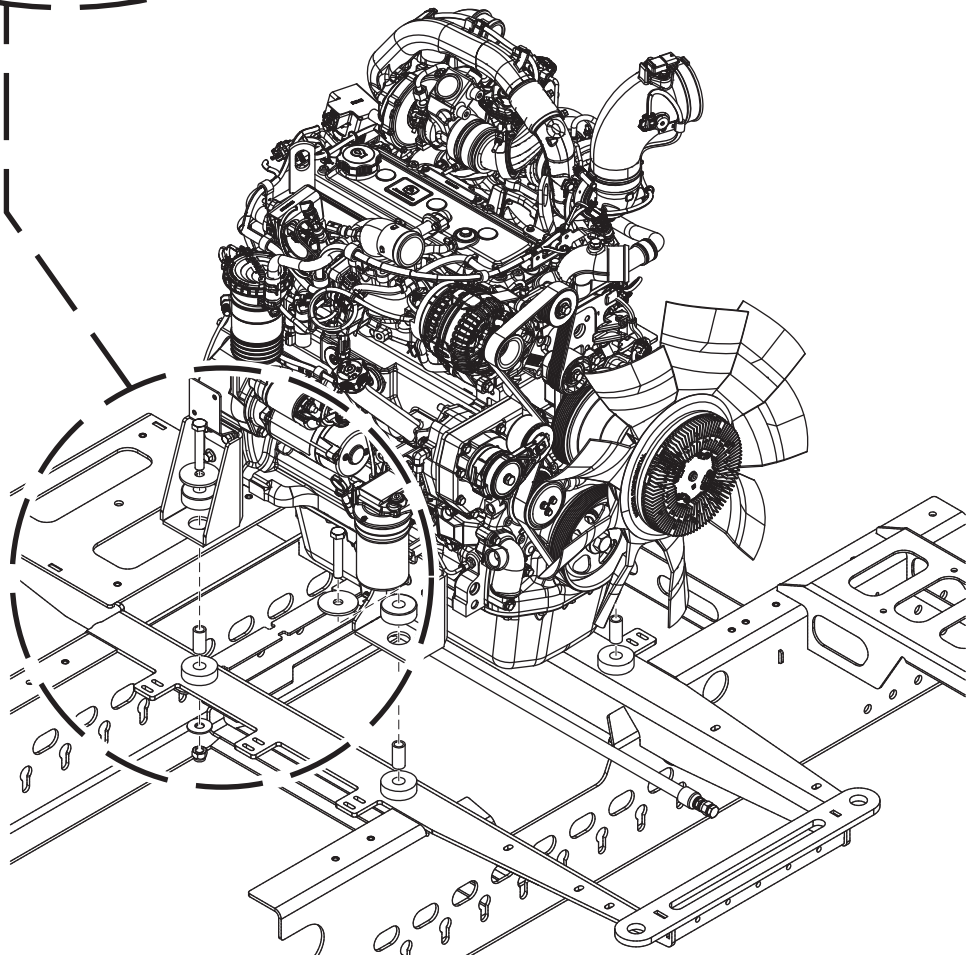
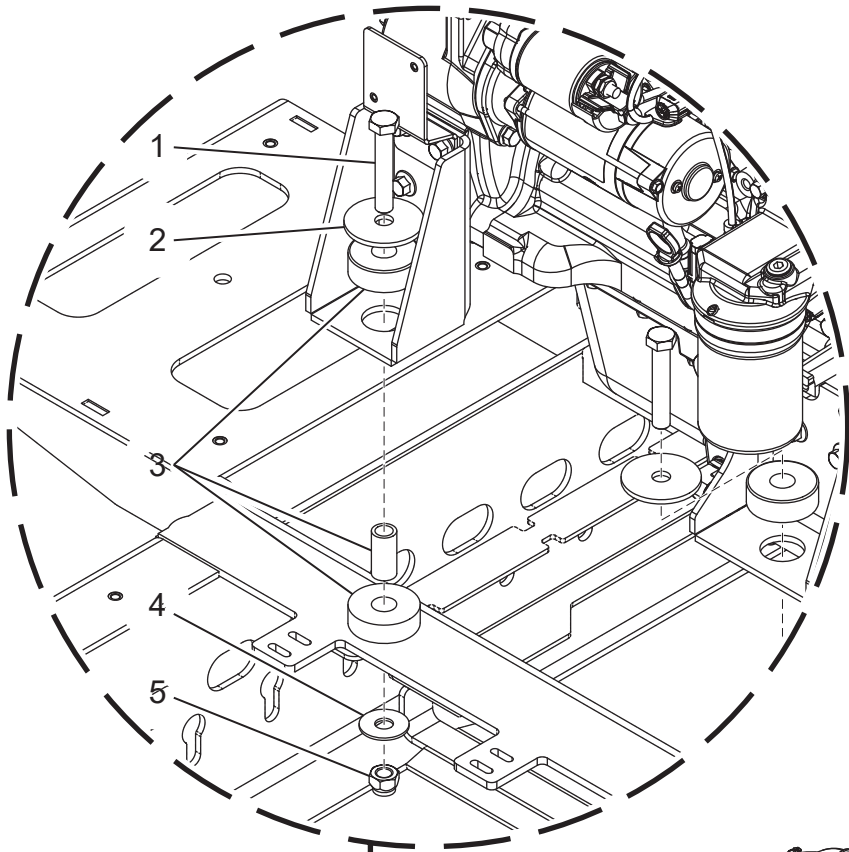
ENGINE COMPONENTS

Ref. No.	Part Number	Description	No. Req'd
1	A1930-001	Engine, Diesel, JD 4045HFC04, 134 HP	1
2	●	3/8-16 UNC - 1 Hex Cap Screw	8
3	●	M10 x 1.5 x 30 Metric Hex Flange Screws	10
4	A3559-001	Flywheel Coupling and Plate Kit, SAE 4 x SAE C	1
	A2399-001	Pump Flywheel Mounting Plate, SAE 4 x SAE C	1
	A2398-001	Flywheel Coupling, SAE 10 x SAE C Spline	1
5	A3395-001	Remote Oil Drain Hose Assembly	1

KITS AND MARKERS

- Standard Hardware Item - Available at your local hardware store.

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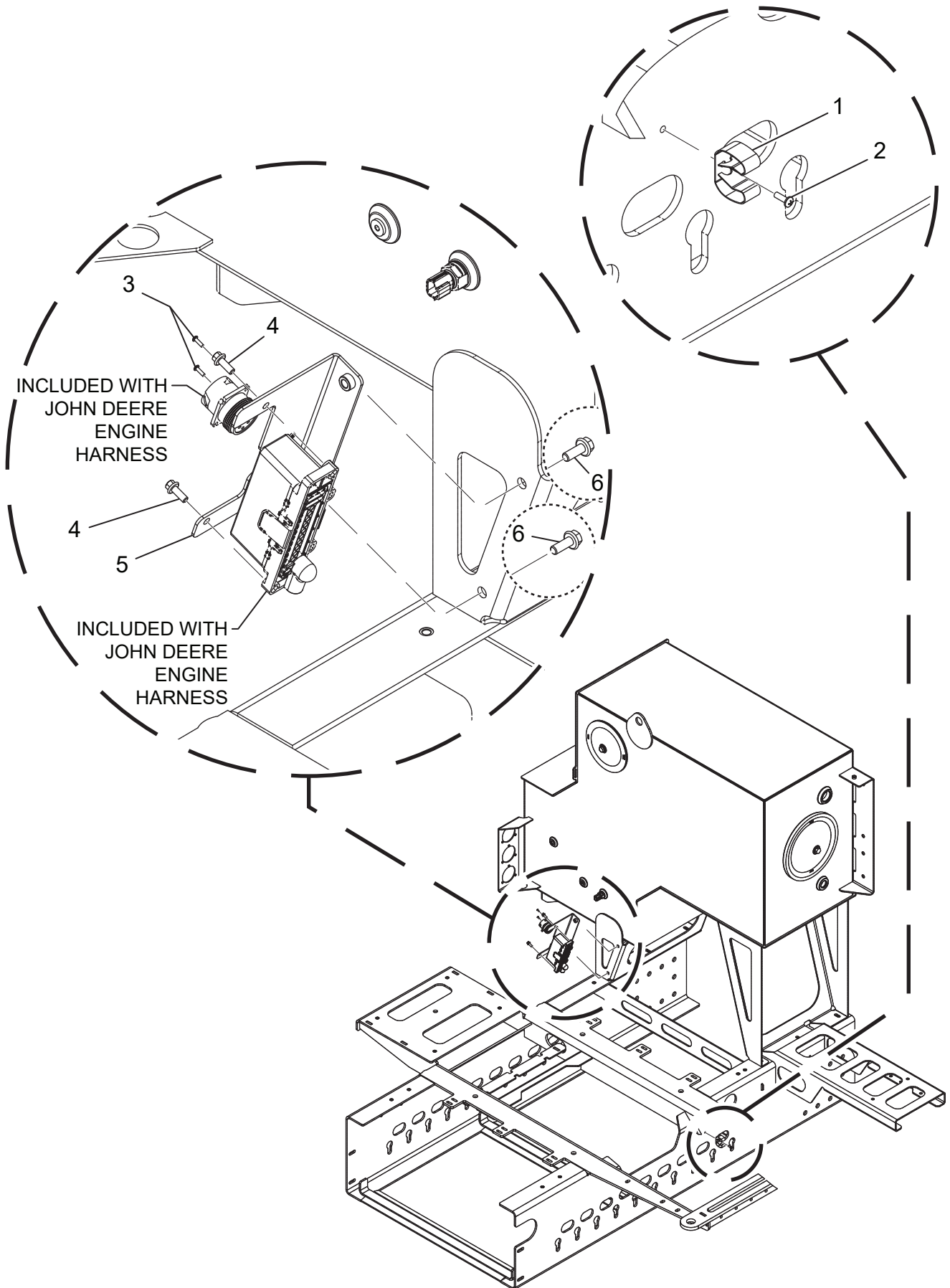
ENGINE FOOT ISOLATORS

Ref. No.	Part Number	Description	No. Req'd
1	●	5/8- 11 UNC - 3.5 Hex Cap Screw	4
2	005861	Zinc Plated Steel Snubbing Washer	4
3	005860-03	Engine Isolator With Wear Plate, Green	4
4	●	5/8 Regular - Type B Plain Washer	4
5	●	5/8- 11 Metal Type Prevailing Torque Type Hex Nut	4

KITS AND MARKERS

- Standard Hardware Item - Available at your local hardware store.

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ENGINE FUSE BLOCK MOUNTING

Ref. No.	Part Number	Description	No. Req'd
1	A3397-001	Spring Clip, Vinyl Coated Steel, 0.75 - 1.125 in. DIA.	1
2	●	#8 - 32 - 1/2 Cross Recessed Pan Head Machine Screw - Type I	1
3	●	#4 - 40 - 3/8 Cross Recessed Pan Head Machine Screw - Type I	2
4	●	M6 x 1 x 16 Hex Flange Head Machine Screw	2
5	A3426-001	Fuse Holder Bracket Assembly	1
6	●	3/8-16 UNC x 1 Hex Flange Screw - Regular Thread	2

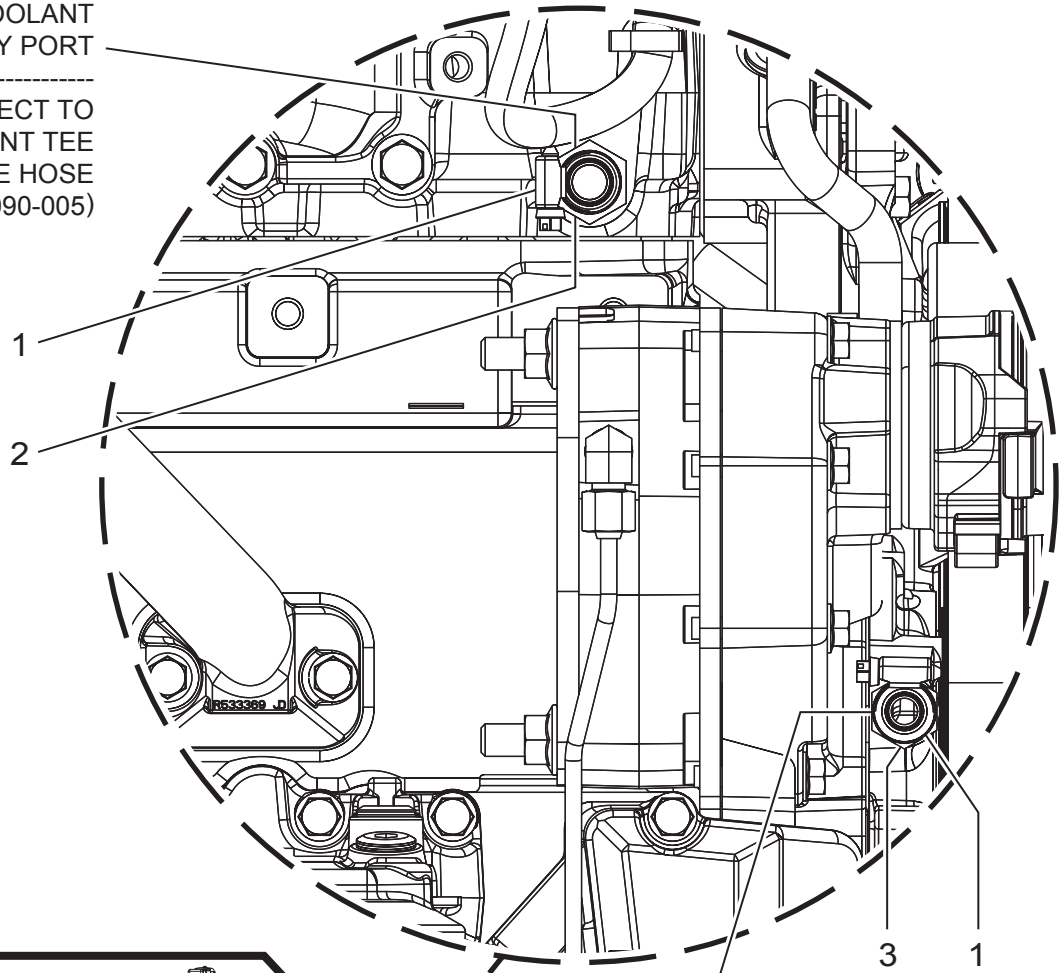
KITS AND MARKERS

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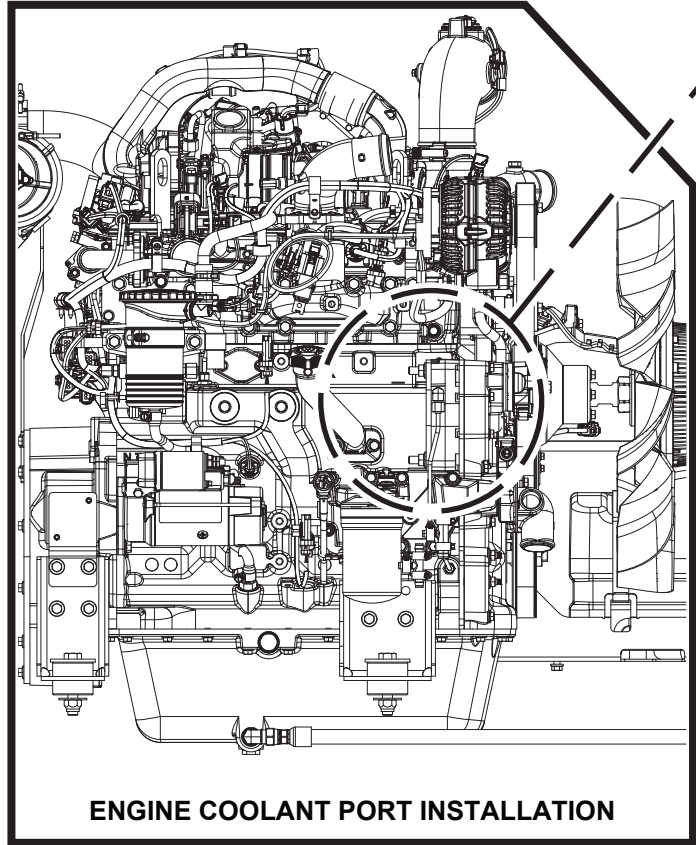
ENGINE COOLANT
SUPPLY PORT

CONNECT TO
BLACK COOLANT TEE
USING SAE HOSE
(PART NUMBER A3090-005)



ENGINE COOLANT
RETURN PORT

CONNECT TO
WHITE COOLANT TEE
USING SAE HOSE
(PART NUMBER A3090-004)



ENGINE COOLANT PORT INSTALLATION

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

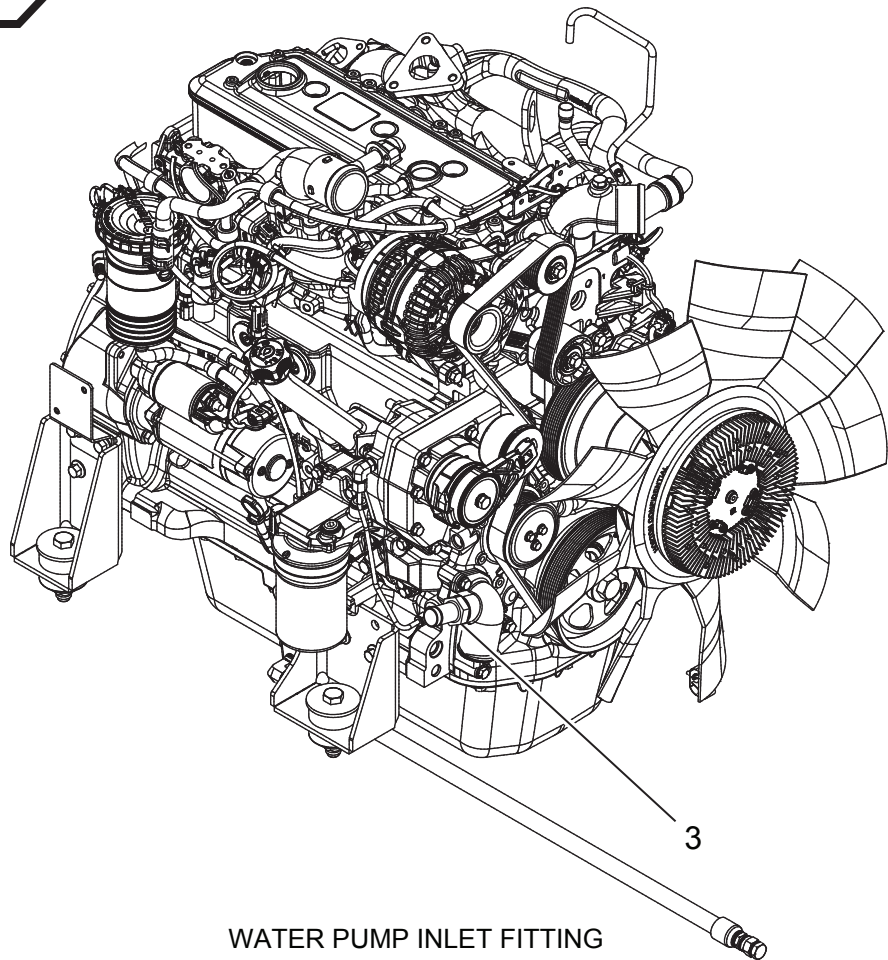
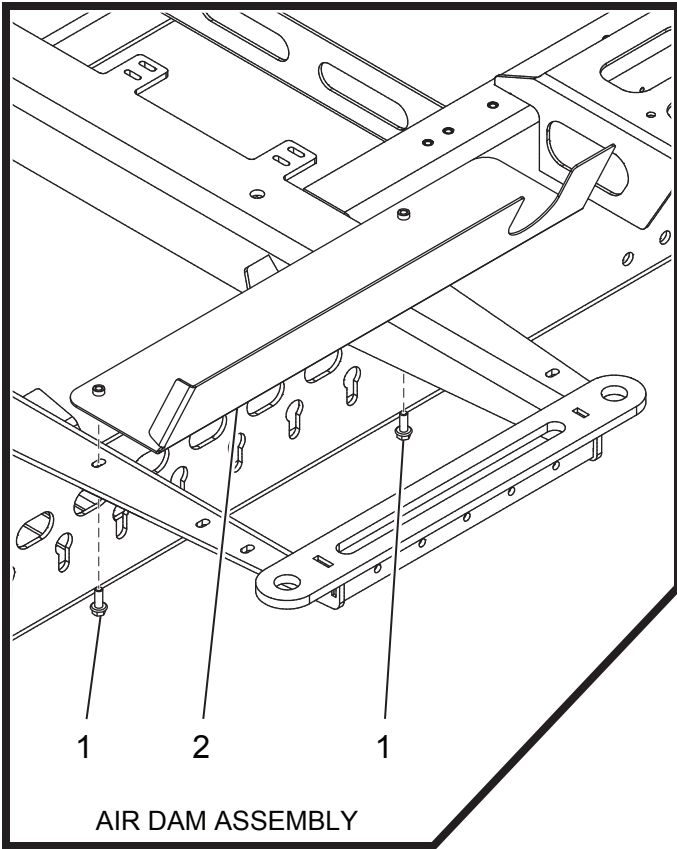
ENGINE COOLANT PORT

Ref. No.	Part Number	Description	No. Req'd
1	A4566-001	Hose Clamp, Worm Gear, SAE J1508 Type MX, Size 6	2
2	A2639-016	Adapter Fitting, M22 ORS x 0.625 I.D. Hose, Short	1
3	A2639-009	Adapter Fitting, M18 ORS X 0.5 I.D. Hose, Short	1

NOT SHOWN

A3090-004	Hose, SAE J20 R3 Class A, 0.5 in. I.D.
A3090-005	Hose, SAE J20 R3 Class A, 0.63 in. I.D.

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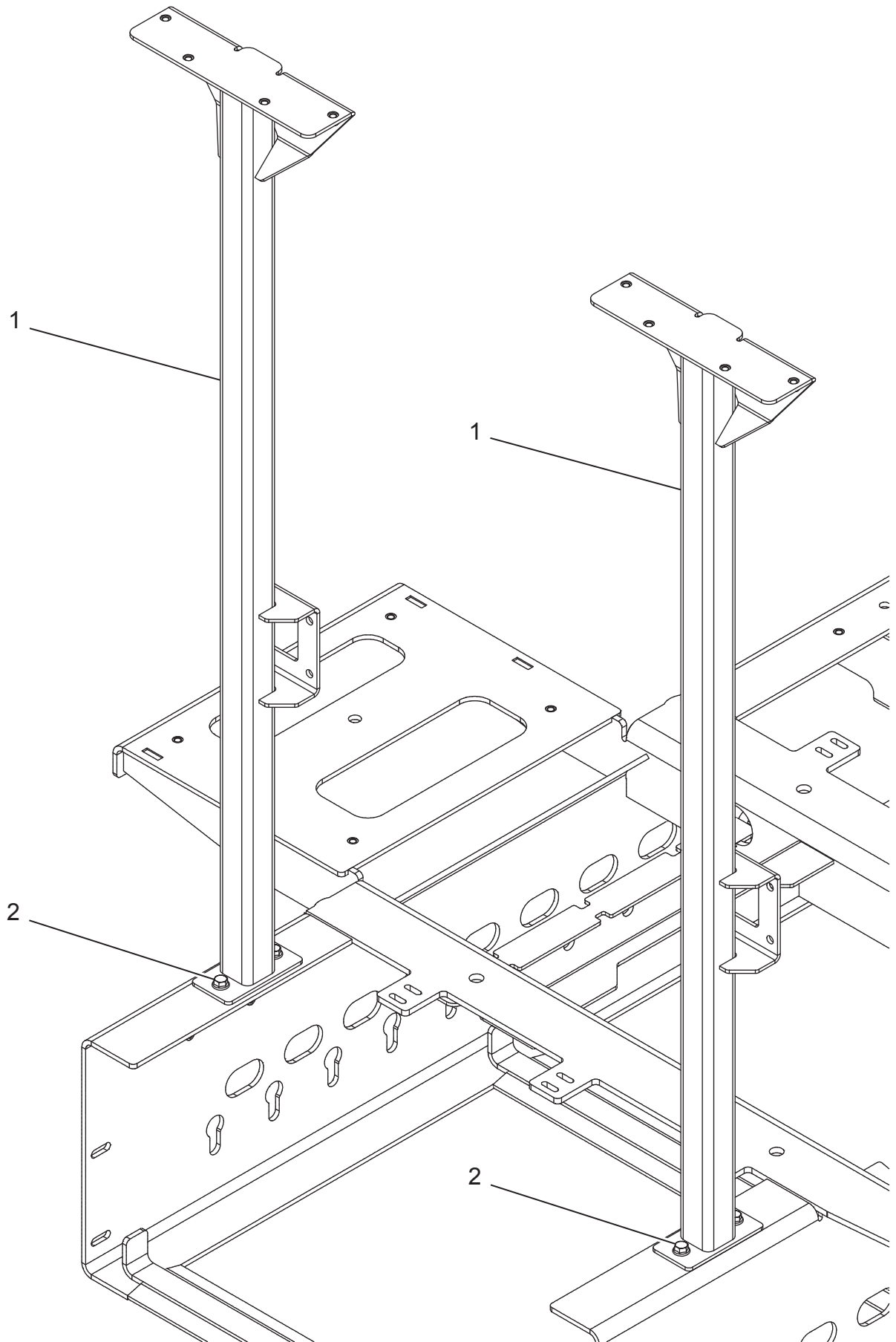
AIR DAM ASSEMBLY AND WATER PUMP INLET FITTING

Ref. No.	Part Number	Description	No. Req'd
1	●	3/8-16 UNC x 1 Hex Flange Screw - Regular Thread	2
2	A3286-001	Air Dam Assembly, Cooling Package	1
3	A2639-034	Adapter Fitting, M30 ORS x 1 I.D. Hose	1

KITS AND MARKERS

- Standard Hardware Item - Available at your local hardware store.

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



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SUPPORTS - ENGINE MODULE

Ref. No.	Part Number	Description	No. Req'd
1	A3051-001	Support Strunt Assembly	2
2	●	3/8-16 UNC x 1 Hex Flange Screw - Regular Thread	4

KITS AND MARKERS

- Standard Hardware Item - Available at your local hardware store.

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MISCELLANEOUS ELECTRICAL ENGINE COMPONENTS

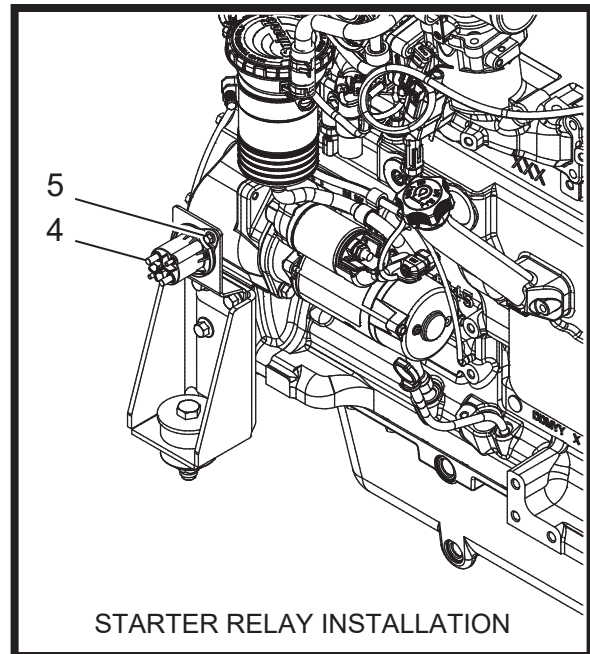
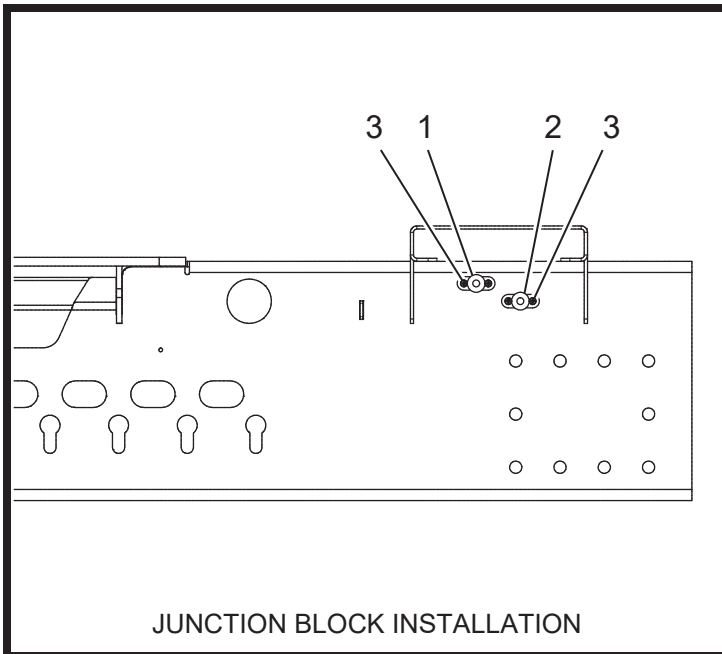
Ref. No.	Part Number	Description	No. Req'd
1	A2083-001	Junction Block, 3/8 in. Stud, Red	1
2	A2082-001	Junction Block, 3/8 in. Stud, Black	1
3	●	#10-24 - 3/4 Cross Recessed Pan Head Machine Screw	4
4	075893	Starter Relay	1
5	●	1/4-20 UNC x 0.5 Hex Flange Screw - Regular Thread	2

NOT SHOWN

A4571-001	Wiring Harness, Engine Module	1
A4578-001	Cable, Alternator	1
A4577-001	Cable, Junction Negative	1
A4576-001	Cable, Junction Positive	1
A4575-001	Cable, Engine Block	1
A4574-001	Cable, Starter	1

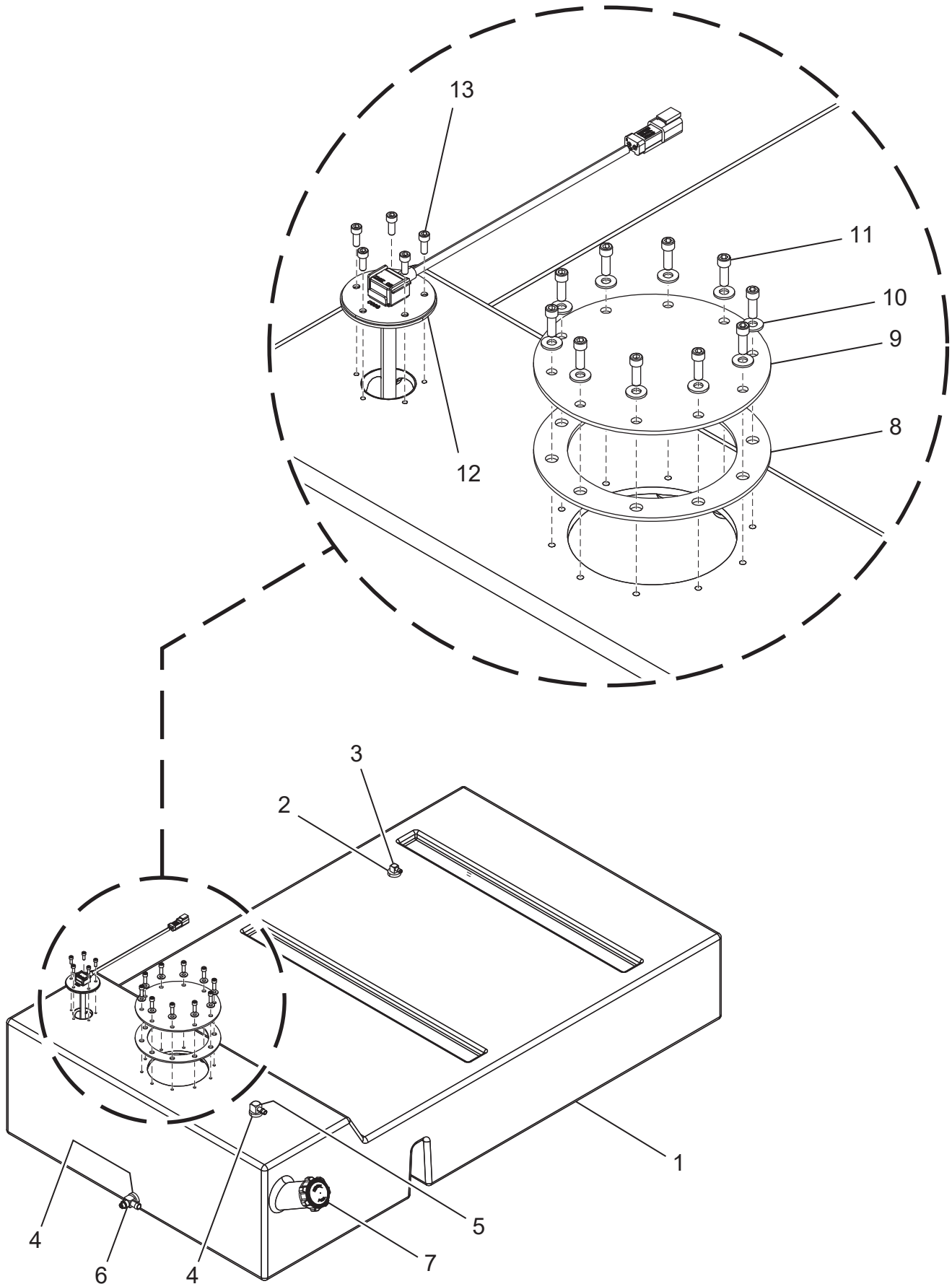
KITS AND MARKERS

- Standard Hardware Item - Available at your local hardware store.



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**WHEN ORDERING PARTS, BE SURE TO STATE
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FUEL TANK ASSEMBLY

Ref. No.	Kit Ref.	Part Number	Description	No. Req'd
1	■	A2523-001	Fuel Tank, Diesel, 50 Gallon	1
2	■	A2515-001	Fuel Tank Grommet Fitting, Small	1
3	■	A2516-001	Fuel Tank Fitting, 1/4	1
4	■	A2514-001	Fuel Tank Grommet Fitting, Large	2
5	■	A2517-001	Fuel Tank Fitting, 3/8	1
6	■	A2518-001	Fuel Tank Drain Valve	1
7	■	A7293-001	Diesel Fuel Cap	1
8		A2526-001	Fuel Tank Cleanout Cover Gasket	1
9		A2525-001	Fuel Tank Cleanout Cover	1
10	●		1/4 - narrow - Type A Plain Washer (Inch)	10
11	●		1/4-20 UNC - 3/4 HS HCS Hexagon Socket Head Cap Screw	1
12		A2508-001	Fuel Tank Sending Unit, 11 in. with Gasket	1
13	●		#10-24 UNC - 1/2 HS HCS Hexagon Socket Head Cap Screw	5

KITS AND MARKERS

- A2524-001 Fuel Tank Assembly, Diesel, 50 Gallon
- Standard Hardware Item - Available at your local hardware store.

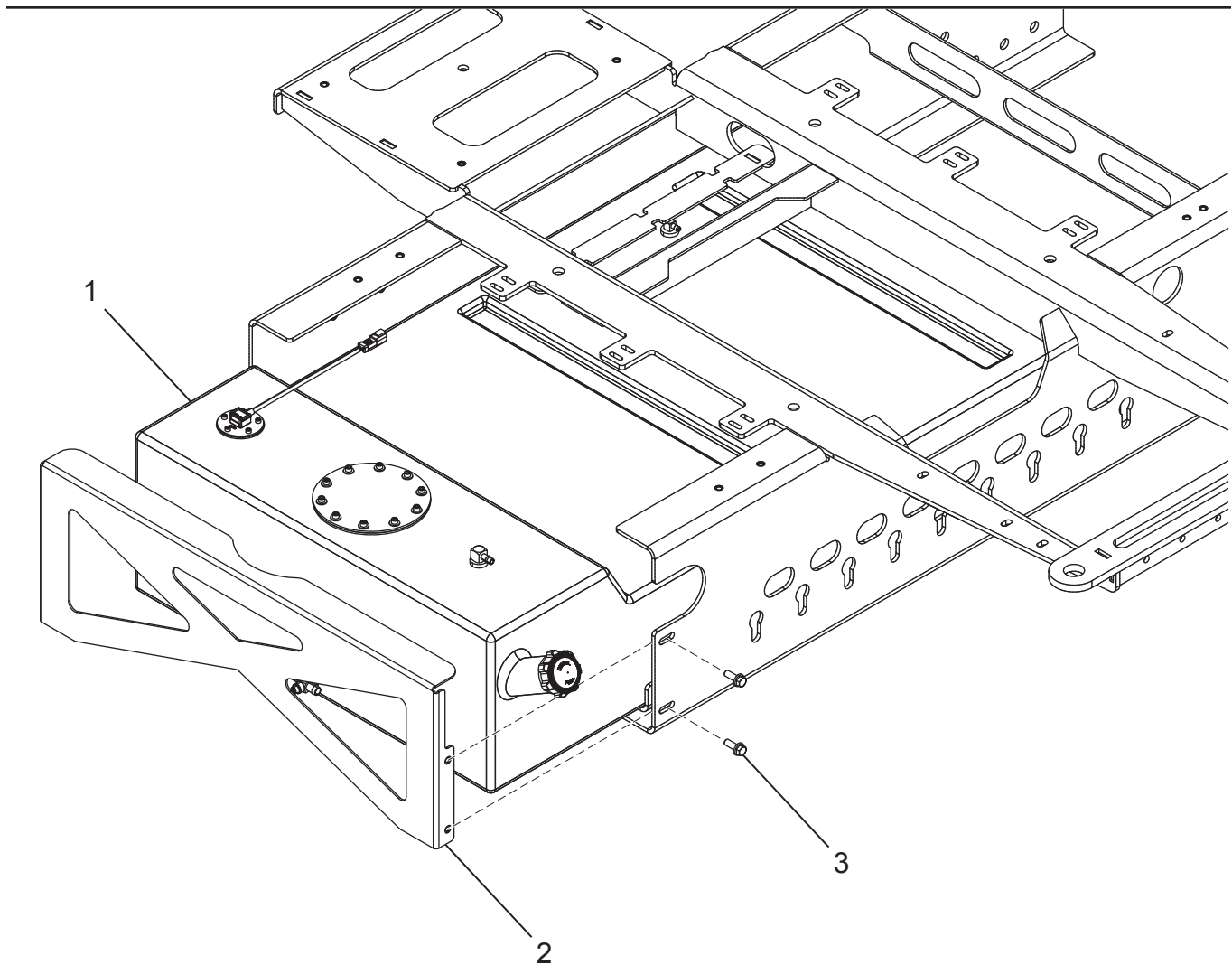
WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

FUEL TANK INSTALLATION

Ref. No.	Part Number	Description	No. Req'd
1	A2524-001	Fuel Tank Assembly, Diesel, 50 Gallon	1
2	A7631-001	Fuel Tank End Cover Plate Assembly	1
3	●	3/8-16 UNC x 1 Hex Flange Screw - Regular Thread	4

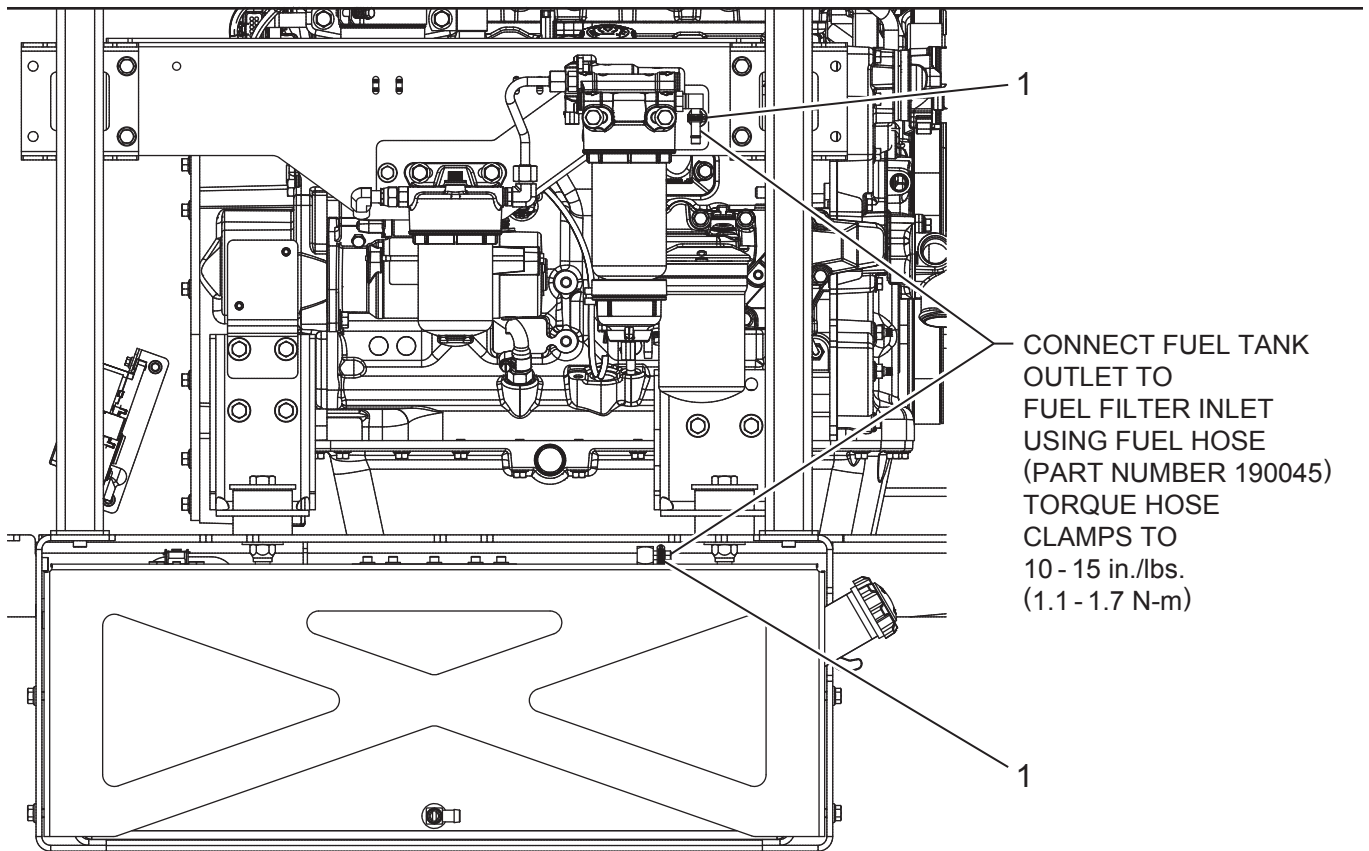
KITS AND MARKERS

- Standard Hardware Item - Available at your local hardware store.

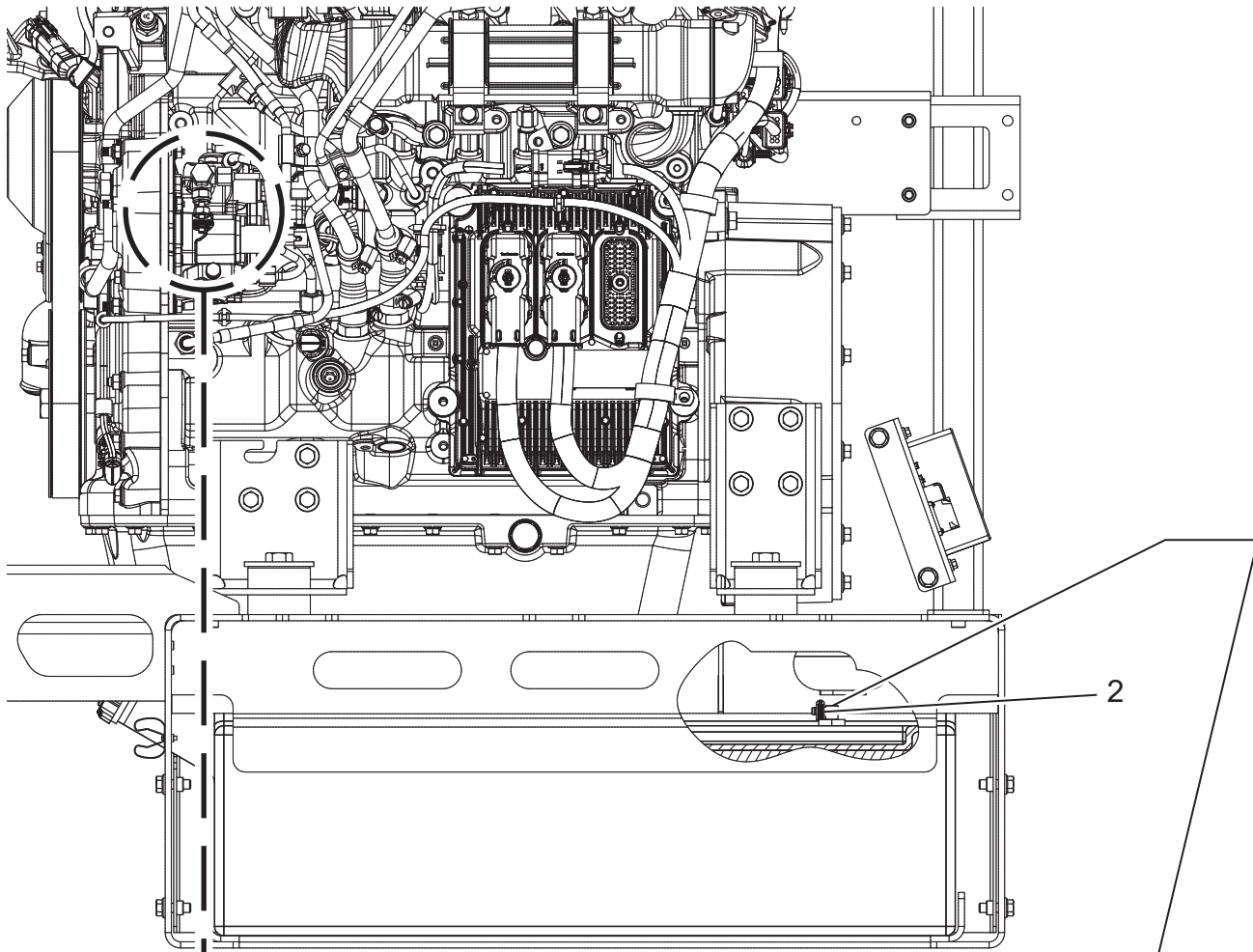


FUEL HOSE CONNECTIONS

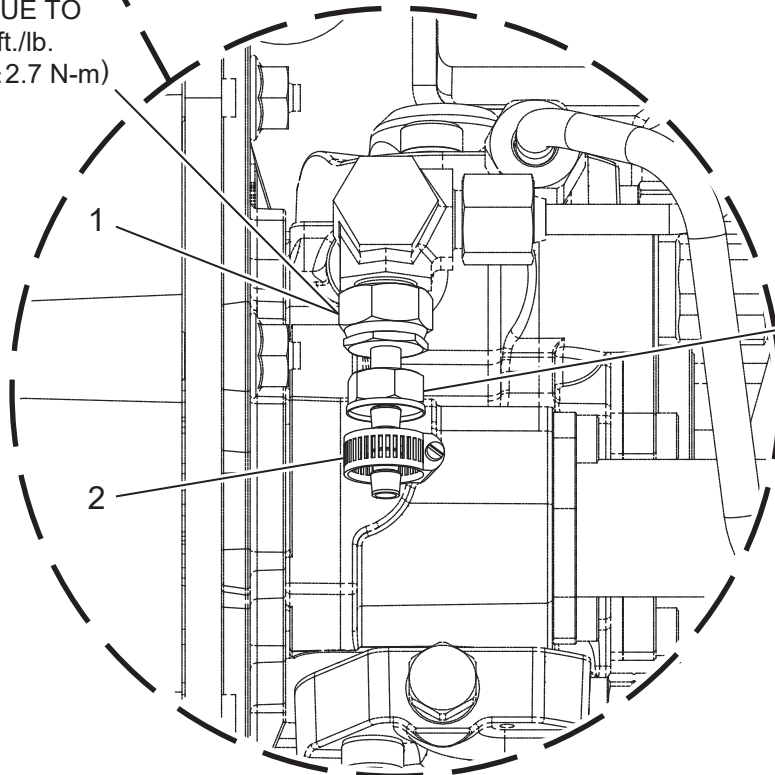
Ref. No.	Part Number	Description	No. Req'd
1	010321	5/8 in. Clamp Worm Gear	2



**WHEN ORDERING PARTS, BE SURE TO STATE
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TORQUE TO
 12 ± 2 ft./lb.
 $(16.3 \pm 2.7 \text{ N-m})$



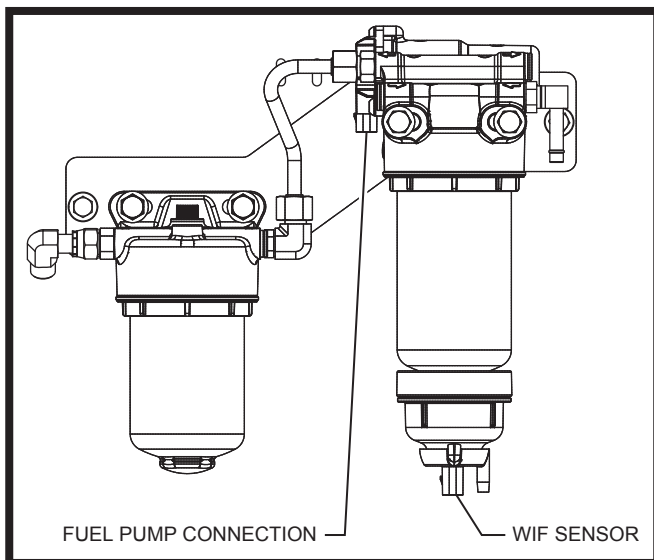
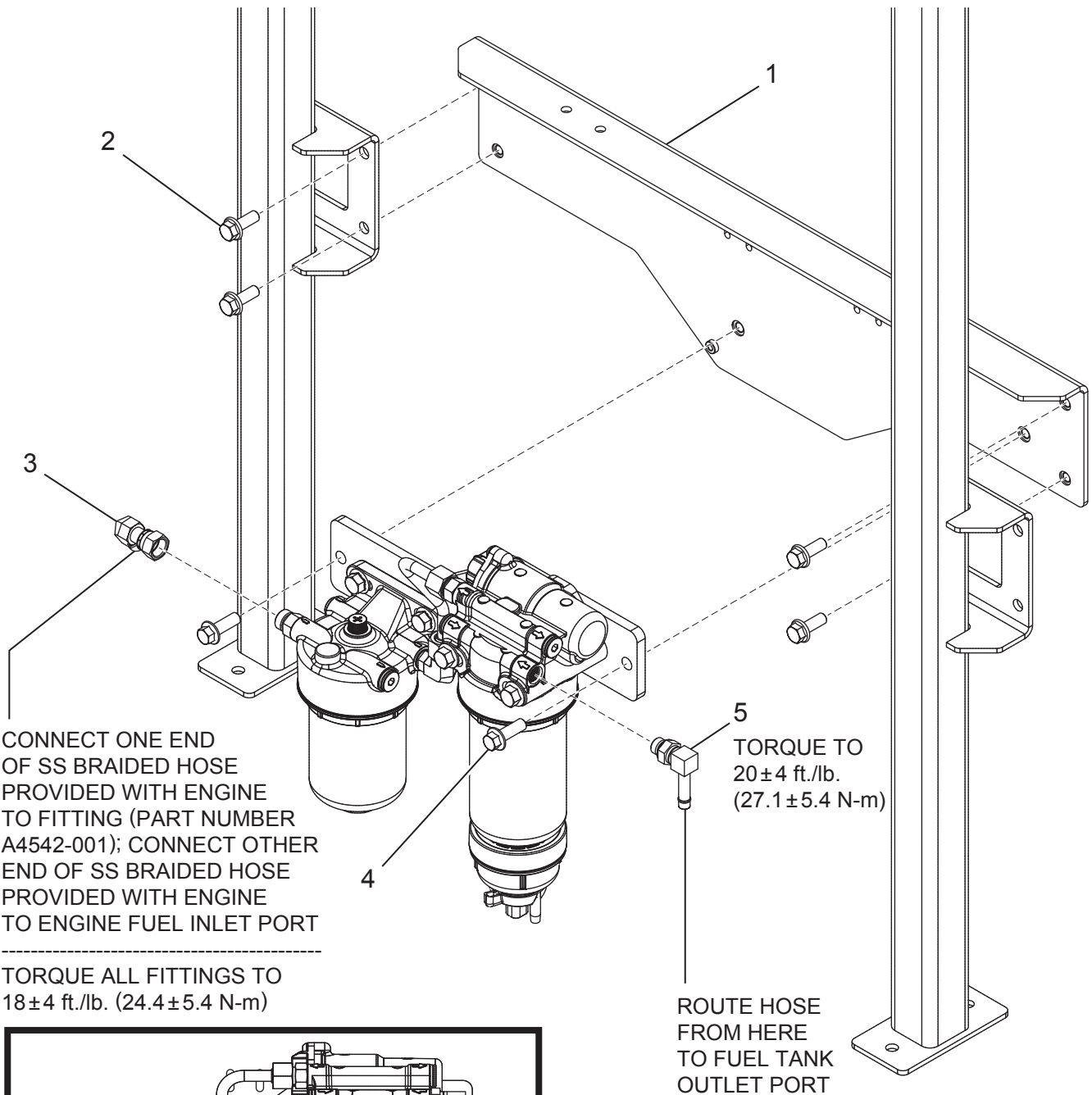
CONNECT
 ENGINE RETURN
 TANK PORT TO
 FUEL TANK
 RETURN INLET
 USING FUEL
 HOSE (PART
 NUMBER 190034)
 TORQUE HOSE
 CLAMPS TO
 $10 - 15$ in./lbs.
 $(1.1 - 1.7 \text{ N-m})$

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

FUEL TANK RETURN

Ref. No.	Part Number	Description	No. Req'd
1	A3826-001	Hose Fitting, #4 FORS Swivel x #4 Hose Barb	1
2	010321	5/8 in. Clamp Worm Gear	2

**WHEN ORDERING PARTS, BE SURE TO STATE
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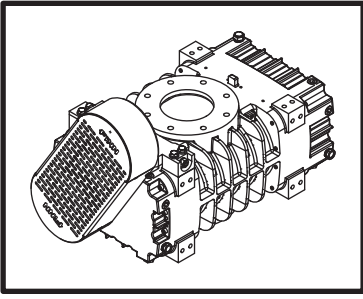
FUEL PUMP AND FUEL FILTER

Ref. No.	Part Number	Description	No. Req'd
1	A2981-001	Filter Mount Bracket Assembly	1
2	●	3/8-16 UNC x 1 Hex Flange Screw - Regular Thread	4
3	A4542-001	90° Elbow Fitting, -6 MORFS x -6 FORFS Swivel	1
4	●	M10 x 1.5 x 30 Metric Hex Flange Screws	2
5	A3213-001	Elbow Adapter Fitting, M14 ORS x 0.375 I.D. Hose	1

KITS AND MARKERS

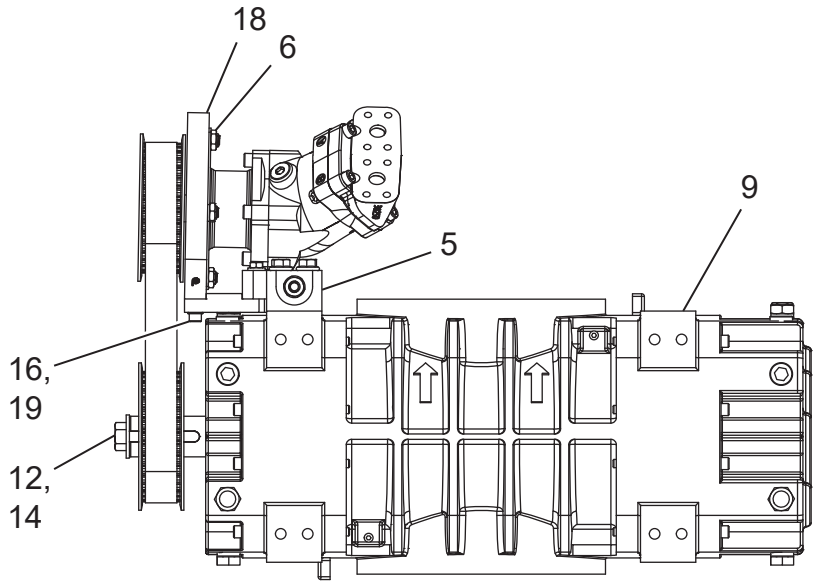
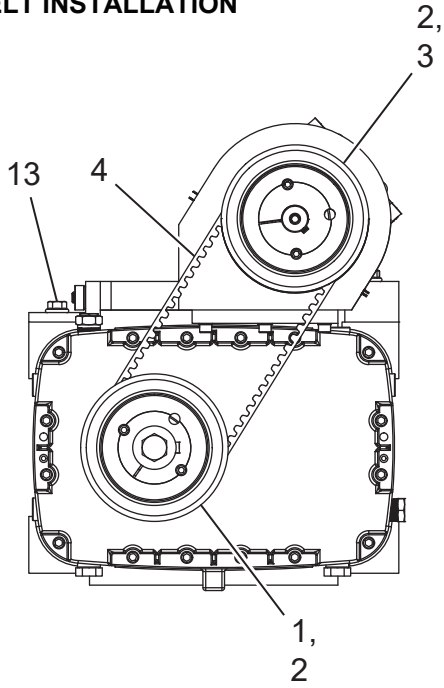
- Standard Hardware Item - Available at your local hardware store.

**WHEN ORDERING PARTS, BE SURE TO STATE
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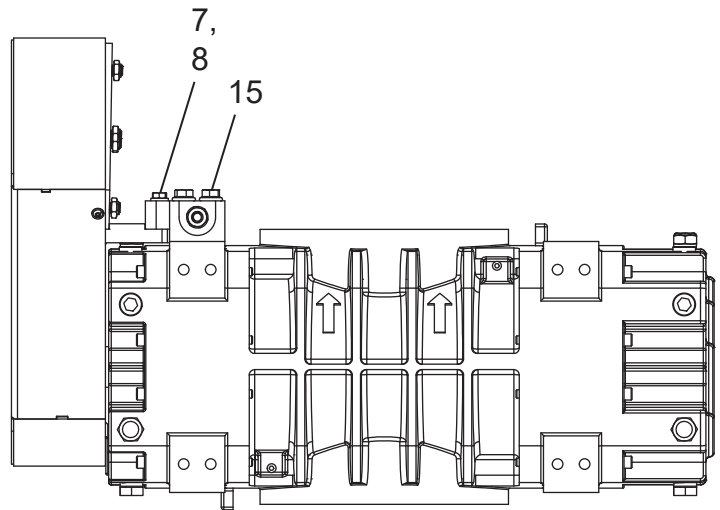
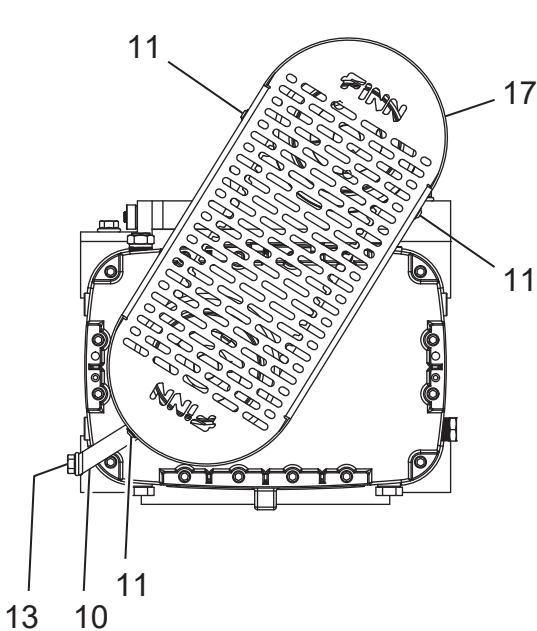


NOTE: TO CHANGE BELT, REMOVE BELT COVER (ITEM 17). LOOSEN RETAINING BOLTS (ITEM 8). REMOVE TENSION FROM BELT (ITEM 4) BY TURNING TAKE UP SCREW CLOCKWISE UNTIL THE BELT CAN BE REMOVE FROM THE BLOWER PULLEYS (ITEM 2). ALIGN BLOWER SHEEVES AND REINSTALL NEW BELT. TURN THE TAKE UP SCREW COUNTER CLOCKWISE TO TENSION THE BELT. MEASURE THE TENSION USING GATES 508C SONIC TENSION METER. SET THE BELT TENSION BETWEEN 134-140 Hz. ONCE THE BELT IS TENSIONED TORQUE RETAINING BOLTS (ITEM 8) TO 440 IN-LB.

BELT INSTALLATION



COVER INSTALLATION



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

BLOWER ASSEMBLY

Ref. No.	Part Number	Description	No. Req'd
1	A2485-001	Blower Bushing, Taper-Lock	1
2	A2486-001	Blower Pulley	2
3	A5570-001	Blower Bushing, Taper-Lock - Motor, Altered	1
4	A2489-001	Toothed Belt	1
5	A2494-001	Blower Motor Mount Assembly	1
6	A2506-001	1/2-13 Hex Locknut	4
7	A2635-001	3/8 Washer, 1/8 Thick Steel, Zinc	3
8	A2633-001	3/8-16 Locking Screw, Grade 8	3
9	A2640-001	Blower	1
10	A2648-001	Bracket, Cover	1
11	A2649-001	1/4-20 x 0.5 Button Head Hex Screw	3
12	●	3/4-10 UNC x 1 Hex Bolt - Regular Thread	1
13	●	1/2-13 UNC x 1 Hex Flange Screw - Regular Thread	4
14	●	3/4 in. Wide Type A Plain Washer	1
15	●	1/2-13 UNC x 2.5 Hex Flange Screw - Regular Thread	2
16	A4045-001	Leveling Washer - Steel, 0.375 in. Screw Size	3
17	A3883-001	Belt Drive Cover Weldment	1
18	A3918-002	Blower Motor Mount Assembly - LH	1
19	●	3/8-16 UNC x 1.25 Hex Socket Head Cap Screw	3

KITS AND MARKERS

- Standard Hardware Item - Available at your local hardware store.

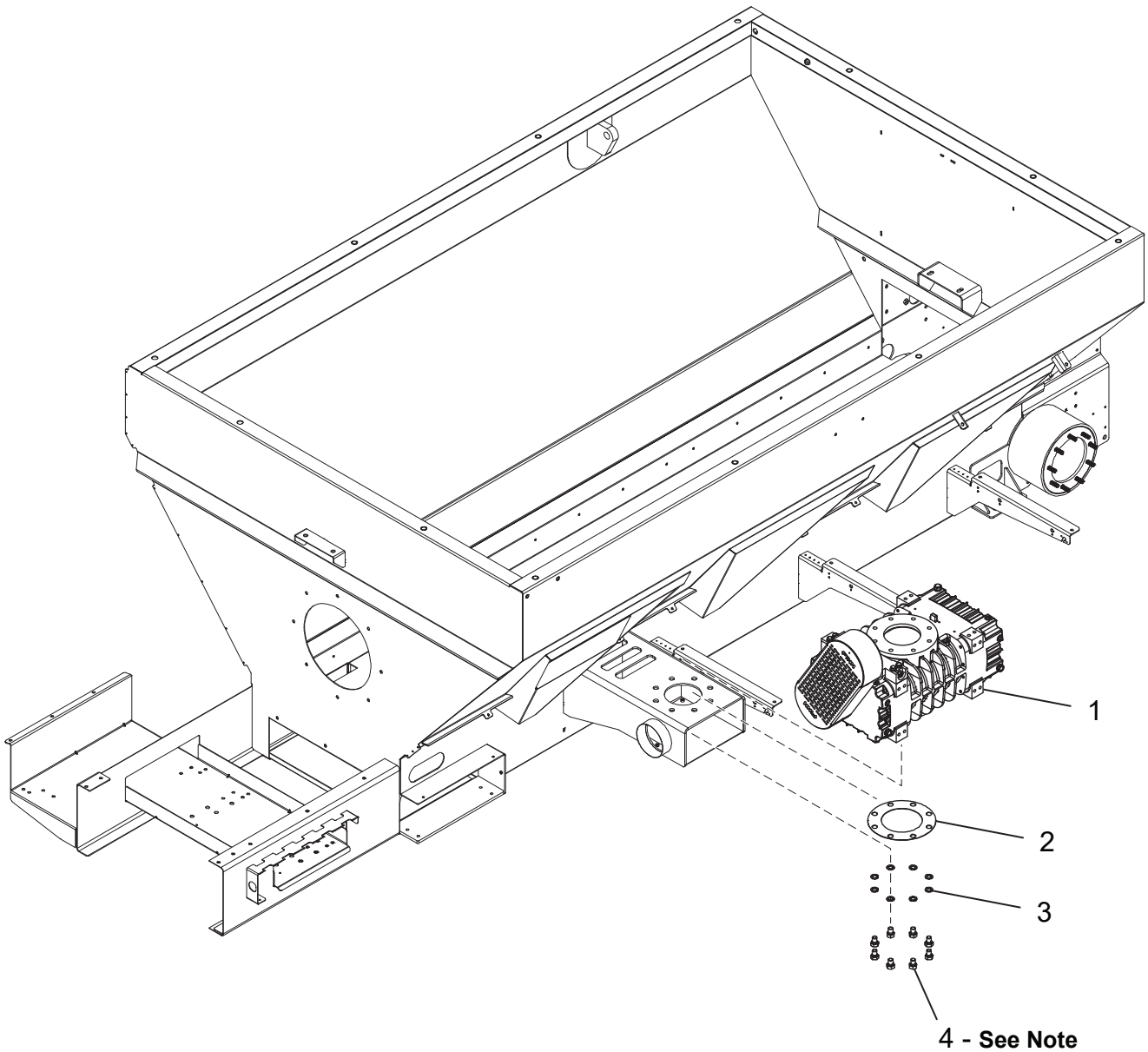
**WHEN ORDERING PARTS, BE SURE TO STATE
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BLOWER INSTALLATION

Ref. No.	Part Number	Description	No. Req'd
1	A2492-001	Blower Assembly	1
2	A1511-001	6 in. 125/150# ANSI Full Face Gasket	1
3	A4406-029	3/4 in. Washer	8
4	●	3/4-10 UNC x 1 Hex Bolt - Regular Thread	8

KITS AND MARKERS

- Standard Hardware Item - Available at your local hardware store.

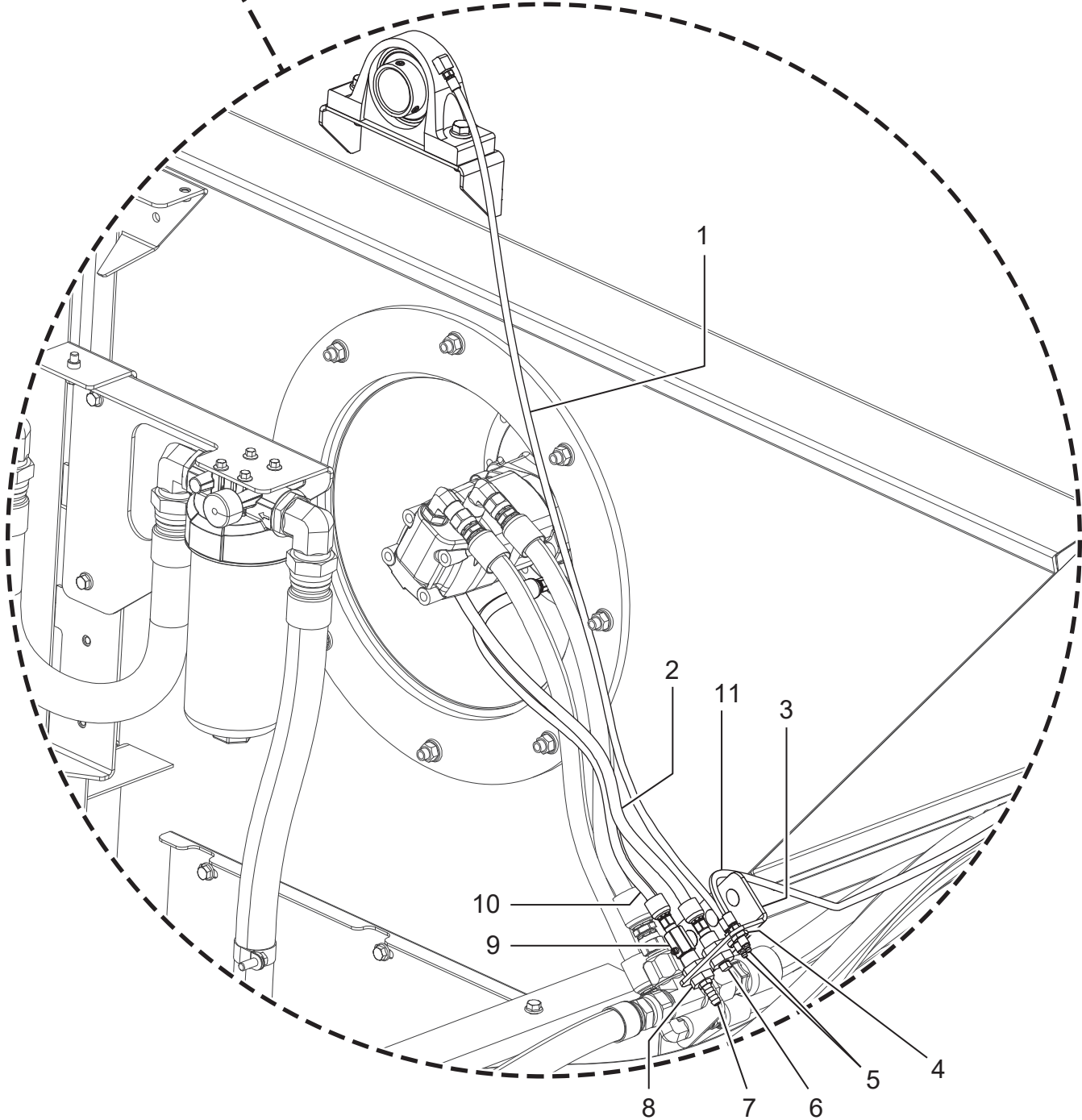
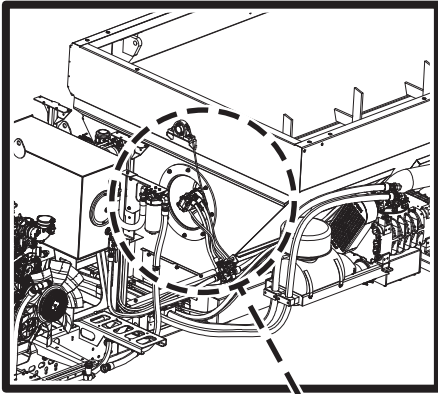


NOTE: TORQUE TO 300 FT-LB.

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

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**WHEN ORDERING PARTS, BE SURE TO STATE
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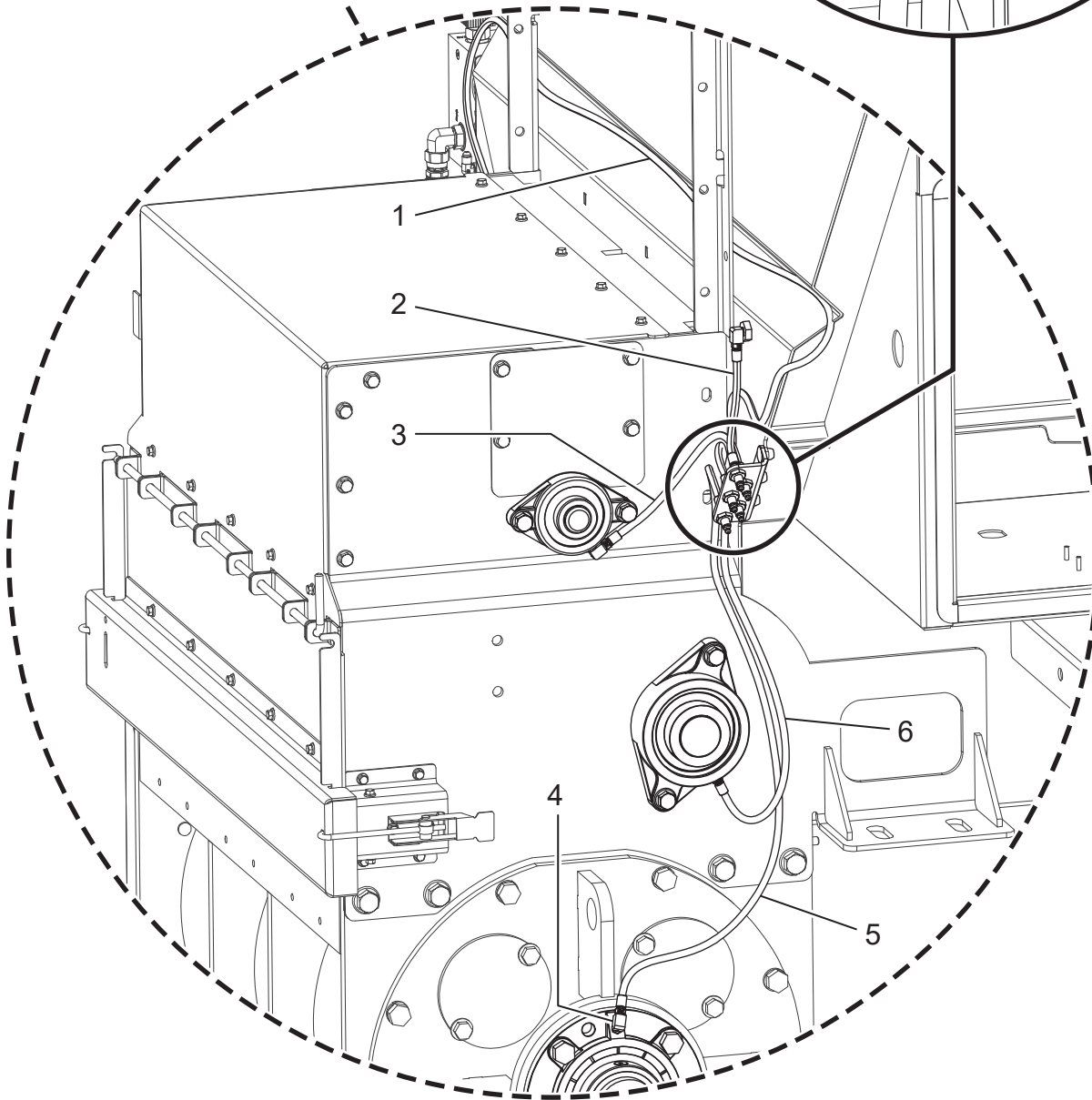
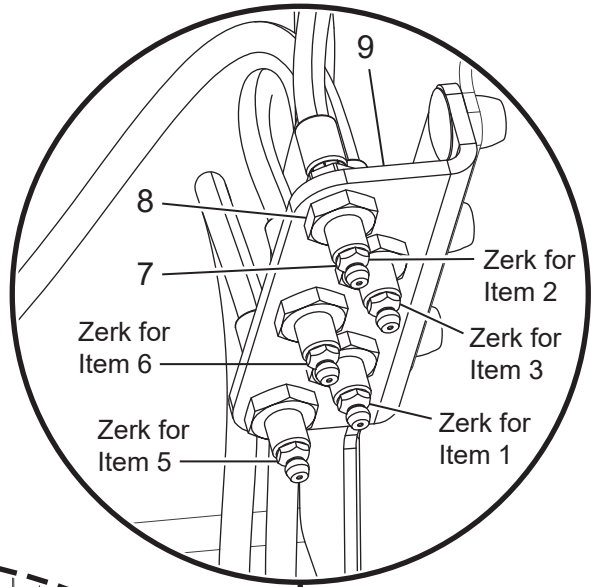
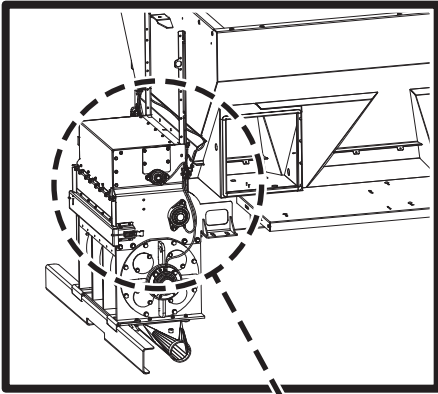
LUBRICATION SYSTEM - PART 1

Ref. No.	Part Number	Description	No. Req'd
1	A4949-001	1/8 in. 100R7 (31DC) Hose x 43 in. OAL with 1GKCY-2-2 Bulkhead Fitting x 1/8 in. MNPT Straight (101CY-2-2)	1
2	A4953-001	1/4 in. 3R30-04 Hose x 29 in. OAL with 1/4-18 NPT Fitting x 1/8-27 NPT Fitting	1
3	A4279-001	Grease Fitting Mount	1
4	●	1/8-27 Bulkhead Nut, NPSM	2
5	-----	Grease Zerk	2
6	160232	1/4 in. Pipe Plug Square Head	1
7	A4543-008	Hose Barb, NPT, Brass, Male	1
8	A4668-003	1/4 Bulkhead Fitting, NPT, Brass	2
9	A5099-001	1/4 in. Ball Valve, Screw Actuated, Brass	1
10	A4952-001	1/4 in. 3R30-04 Hose x 23.5 in. OAL with 1/4-18 NPT Fitting x 1/4-18 NPT Fitting	1
11 ★	A7079-001	1/8 in. 100R7 (31DC) Hose x 167 in. OAL with 1GKCY-2-2 Bulkhead Fitting x 1/8 in. MNPT Straight (101CY-2-2)	1

KITS AND MARKERS

- Standard Hardware Item - Available at your local hardware store.
- ★ MODEL OO and forward

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

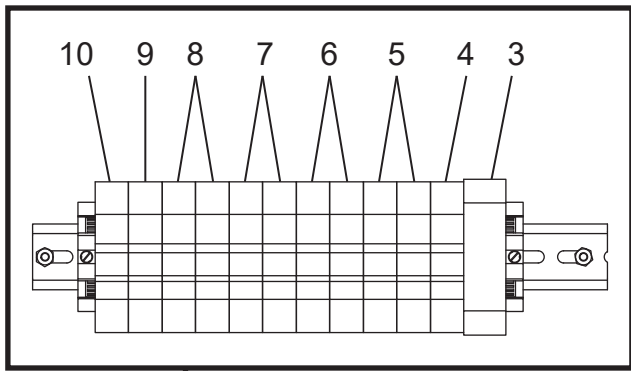
LUBRICATION SYSTEM - PART 2

Ref. No.	Part Number	Description	No. Req'd
1	A4945-001	1/8 in. 100R7 (31DC) Hose x 121 in. OAL with 1GKCY-2-2 Bulkhead Fitting x 1/8 in. MNPT Straight (101CY-2-2)	1
2	A4941-001	1/8 in. 100R7 (31DC) Hose x 8 in. OAL with 1GKCY-2-2 Bulkhead Fitting x 1/8 in. MNPT Straight (101CY-2-2)	1
3	A4942-001	1/8 in. 100R7 (31DC) Hose x 11 in. OAL with 1GKCY-2-2 Bulkhead Fitting x 1/8 in. MNPT Straight (101CY-2-2)	1
4	022407	1/8 M Npt x 1/8 F NPT - 90	3
5	A4944-001	1/8 in. 100R7 (31DC) Hose x 35.5 in. OAL with 1GKCY-2-2 Bulkhead Fitting x 1/8 in. MNPT Straight (101CY-2-2)	1
6	A4943-001	1/8 in. 100R7 (31DC) Hose x 26 in. OAL with 1GKCY-2-2 Bulkhead Fitting x 1/8 in. MNPT Straight (101CY-2-2)	1
7	-----	Grease Zerk	5
8	●	1/8-27 Bulkhead Nut, NPSM	5
9	A3238-001	Grease Fitting Mount	1

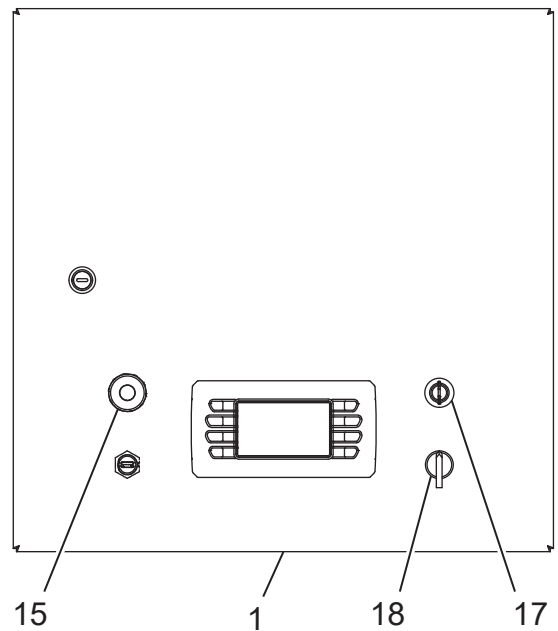
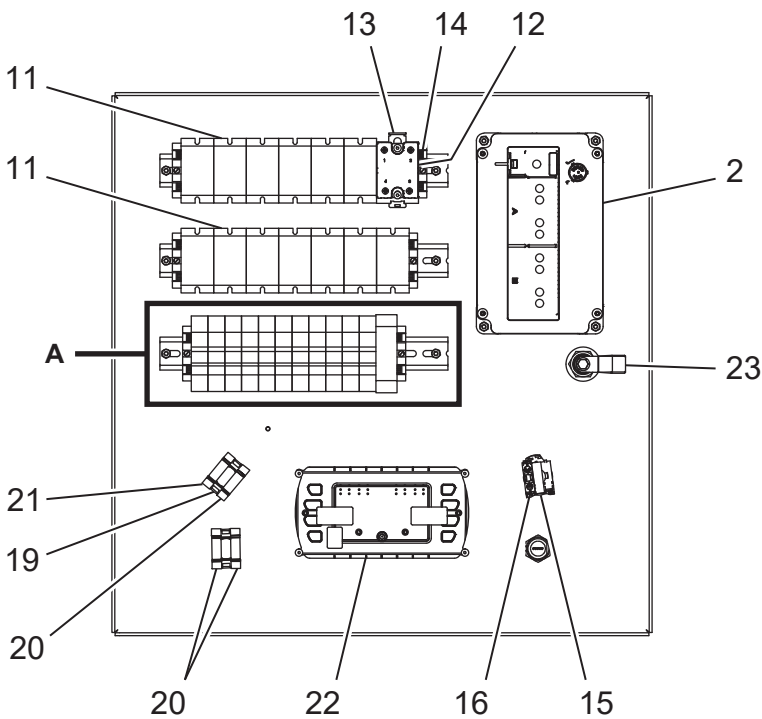
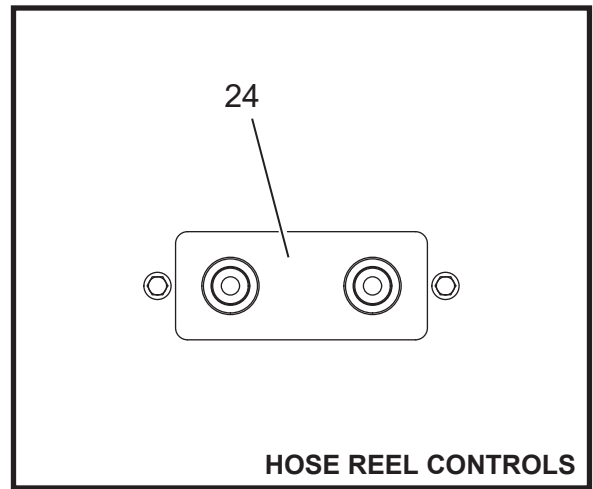
KITS AND MARKERS

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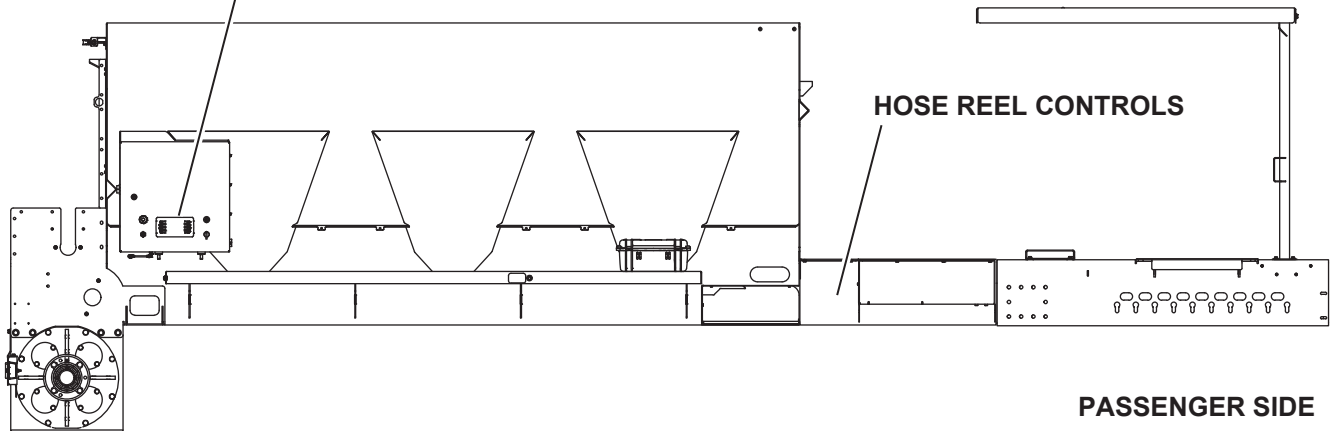


A



MAIN CONTROLS

HOSE REEL CONTROLS



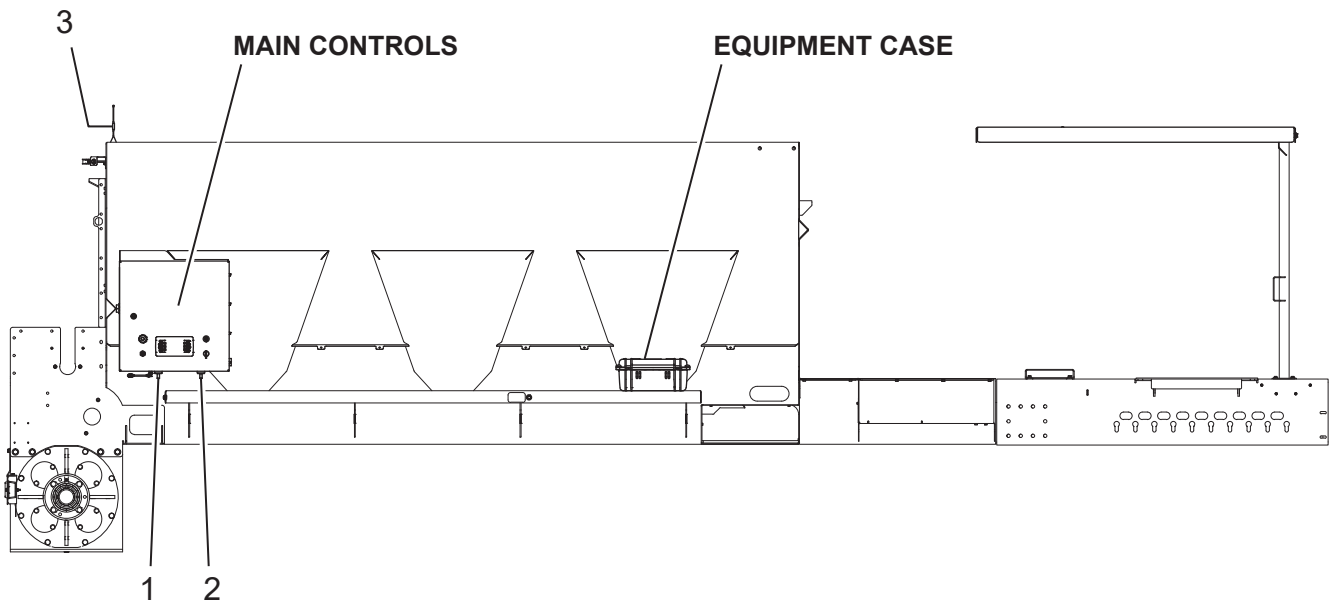
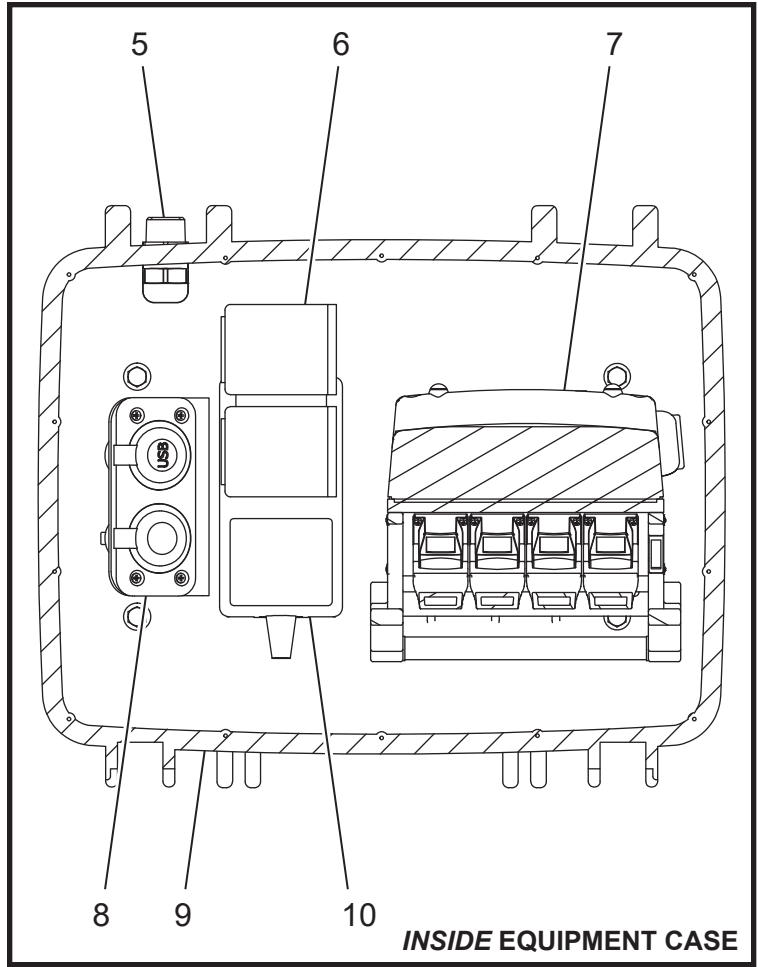
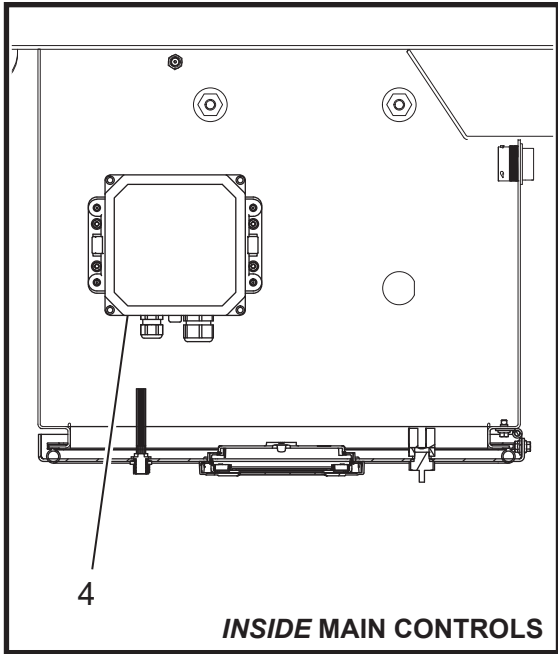
PASSENGER SIDE

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

CONTROL SYSTEMS

Ref. No.	Part Number	Description	No. Req'd
1	A4095-001	Electrical Panel Assembly, MBX	1
2	A4598-001	Controller, Flashed	1
3	A2950-001	Safety Relay	1
4	A2932-032	Circuit Breaker, 32 Amp, 48VDC, Type C Trip Curve	1
5	A2932-015	Circuit Breaker, 15 Amp, 48VDC, Type C Trip Curve	2
6	A4306-020	Circuit Breaker, 20 Amp, 48VDC, Type B Trip Curve	2
7	A4306-015	Circuit Breaker, 15 Amp, 48VDC, Type B Trip Curve	2
8	A4306-010	Circuit Breaker, 10 Amp, 48VDC, Type B Trip Curve	2
9	A4306-005	Circuit Breaker, 5 Amp, 48VDC, Type B Trip Curve	1
10	A4306-002	Circuit Breaker, 2 Amp, 48VDC, Type B Trip Curve	1
11	A2931-001	Relay, 12VDC 86ohm Coil, DPDT, 20A NO 3A NC	13
12	A5782-001	SSR, 4 to 32VDC, 40A	1
13	A5783-001	Heat Sink, SSR, Din Mount	1
14	013070	End Bracket for 35mm Din Rail	6
15	366164	Emergency Stop (E-Stop) Kit, 1 Yellow NC Block	1
16	080784	Contact Block, Green NO	1
17	A7605-001	Key Switch, Metal	1
18	A7603-001	Switch, Lever Actuated, Metal	1
19	A7604-001	Mounting Adapter, Metal	2
20	A4304-001	Contact Block, NO, Metal	3
21	A4305-001	Contact Block, NC, Metal	1
22	A4312-001	Display, Flashed	1
23	A4514-001	Cam Latch, Vise Action	1
24	A4853-001	Switch Plate, 2-Button, Waterproof	1
NOT SHOWN			
	A4596-001	Wiring Harness, MBX Control Panel	1
	013220	Din Rail, 36 in.	3
	A4311-001	Wiring Harness, Display USB	1

**WHEN ORDERING PARTS, BE SURE TO STATE
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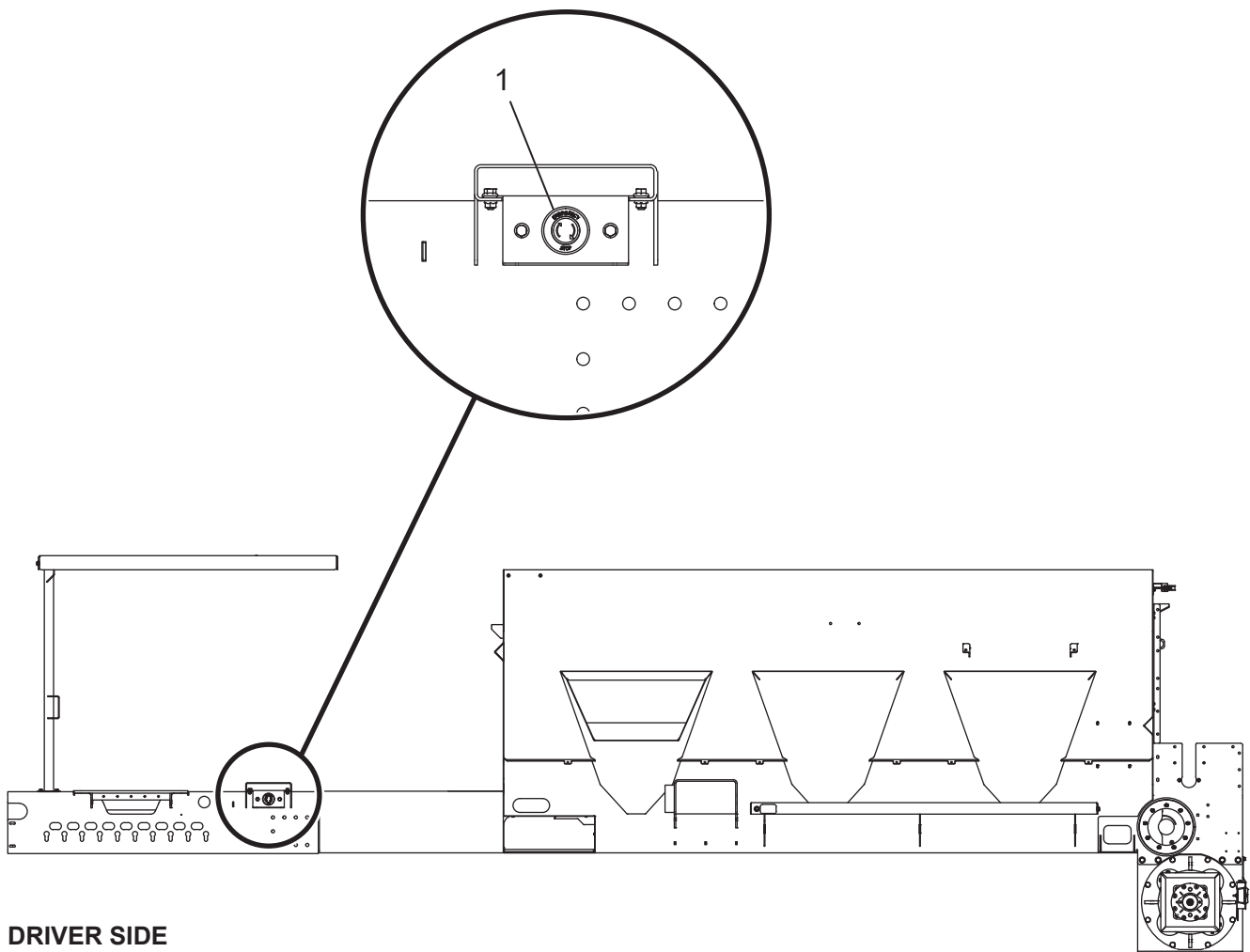
RADIO REMOTE CONTROL SYSTEM

Ref. No.	Part Number	Description	No. Req'd
1	A2080-001	Electrical Power Bushing, 1/2 in. Stud, Black	1
2	A2081-001	Electrical Power Bushing, 1/2 in. Stud, Red	1
3	A2200-004	Antenna, 900MHz with Mount Kit	1
4	A7259-002	MBX Radio, Basestation	1
5	FW71746	Cord Connector with Lock Nut	1
6	A4821-001	Battery, Handheld, NiMH 3.6V, 2100 mAh	2
7	A7259-003	MBX Radio, Handheld	1
8	A2195-001	Dual 2.1A USB Charger and 20A 12/24V Power Receptacle	1
9	A1198-001	Equipment Case, 16 in. Weatherproof	1
10	A4818-001	Battery Charger, 12VDC Single Slot	1
NOT SHOWN			
	A4822-002	Hip Belt	1
	A3974-001	Coaxial Adapter, BNC Female Bulkhead	1
	A4597-001	Coaxial Cable, BNC Male, 4 ft.	1

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EMERGENCY STOP ASSEMBLY

Ref. No.	Part Number	Description	No. Req'd
1	A2395-001	Emergency Stop (E-Stop) Station Assembly	1

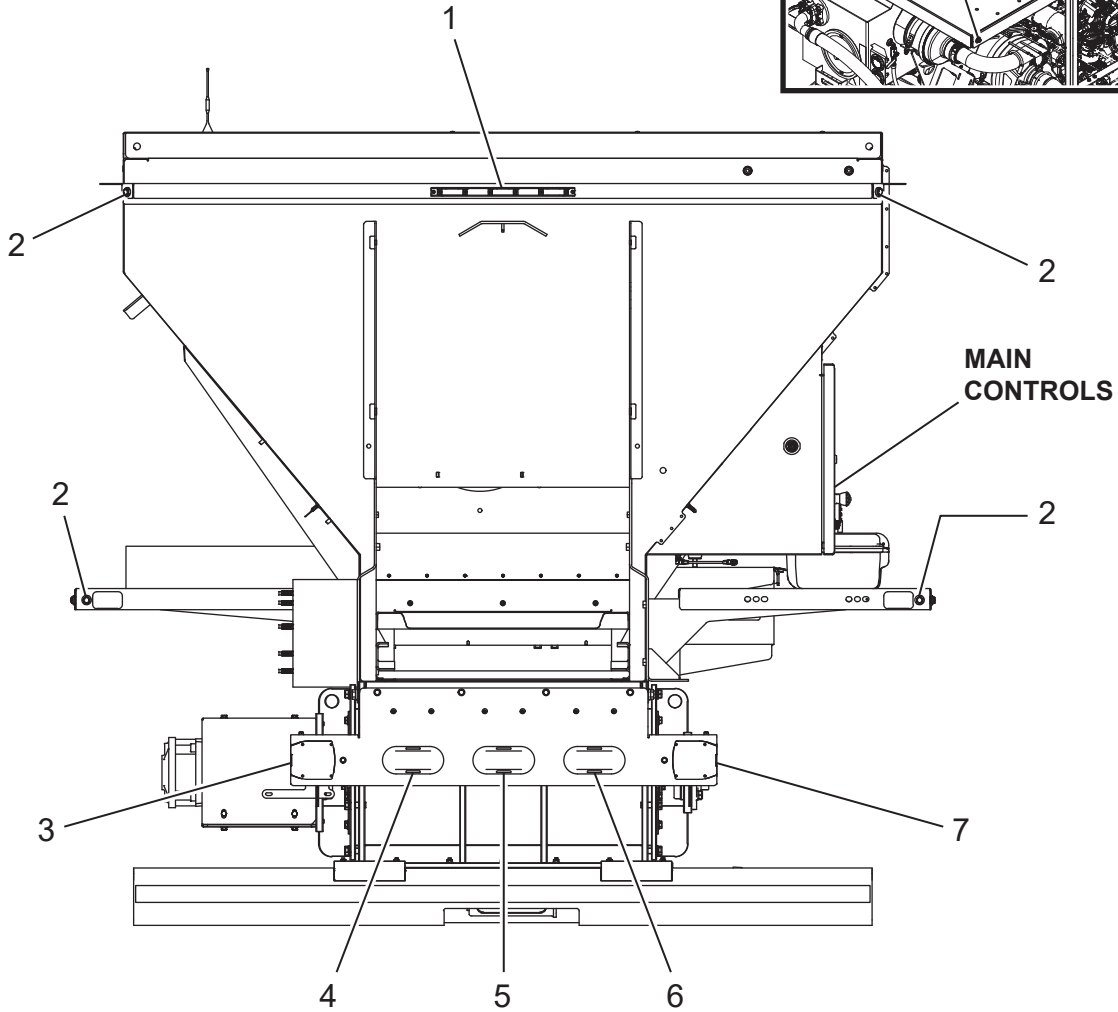
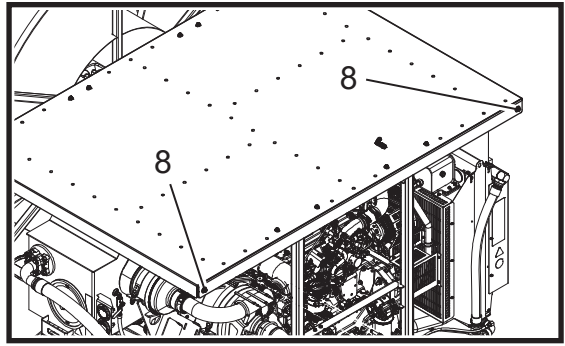


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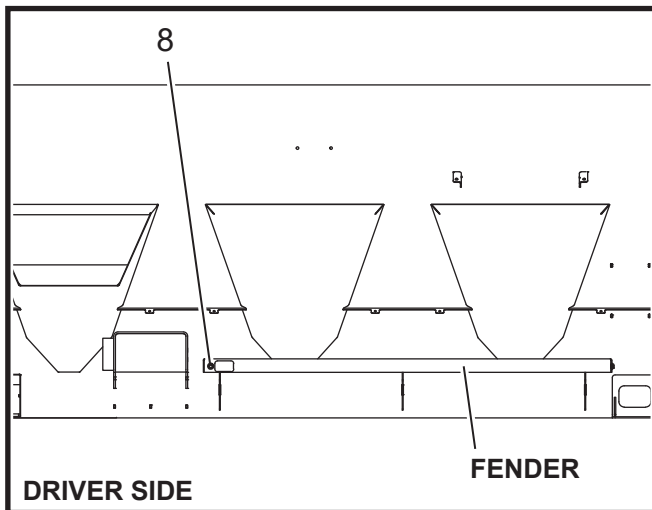
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**WHEN ORDERING PARTS, BE SURE TO STATE
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FRONT OF
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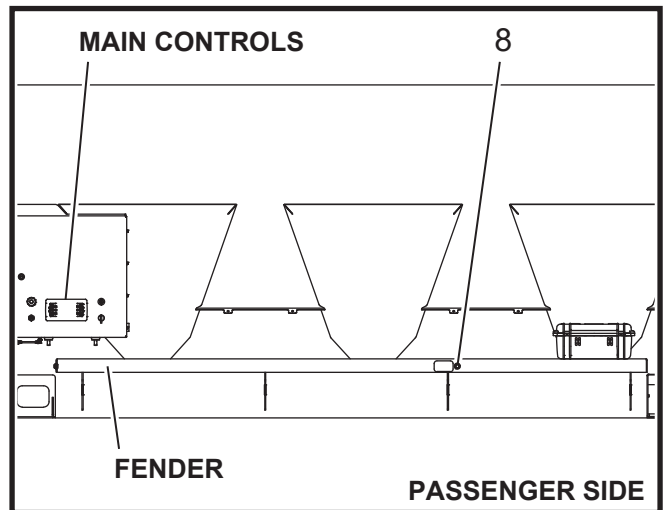


MAIN
CONTROLS



DRIVER SIDE

FENDER



MAIN CONTROLS

FENDER

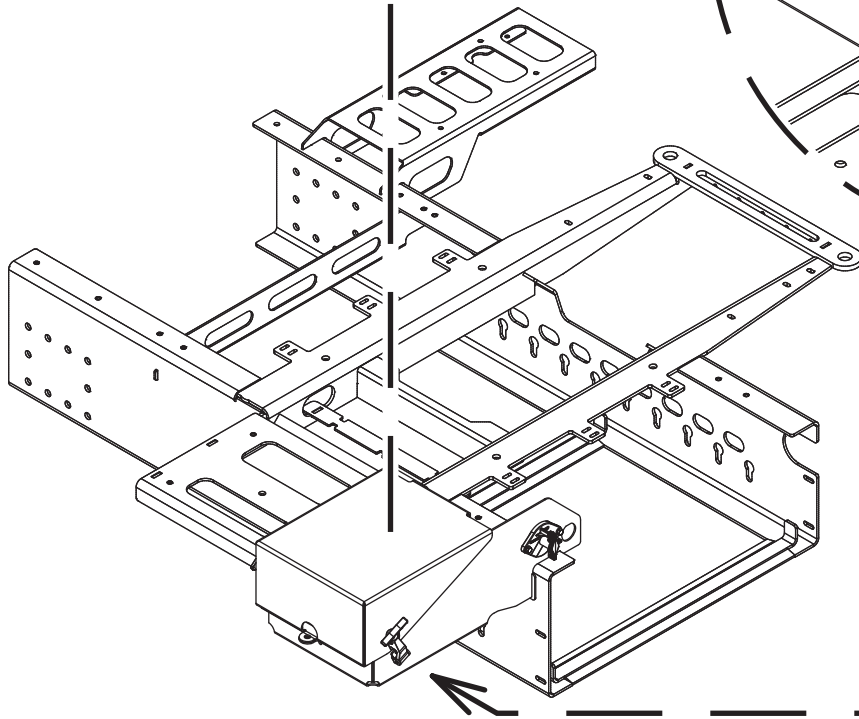
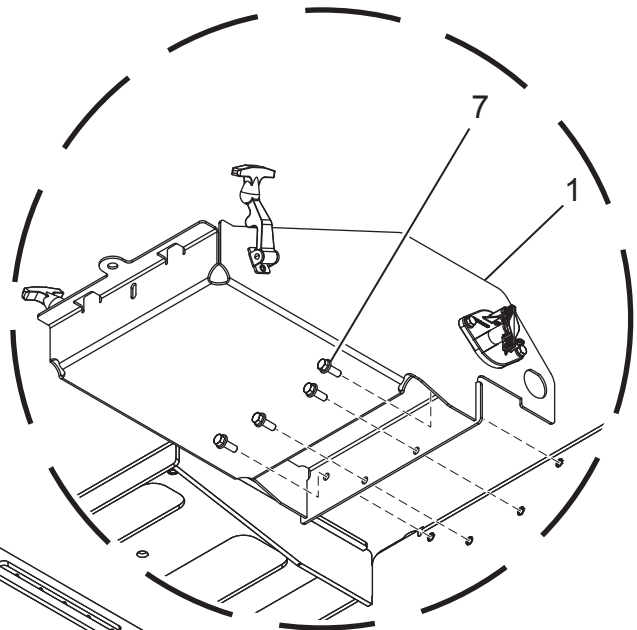
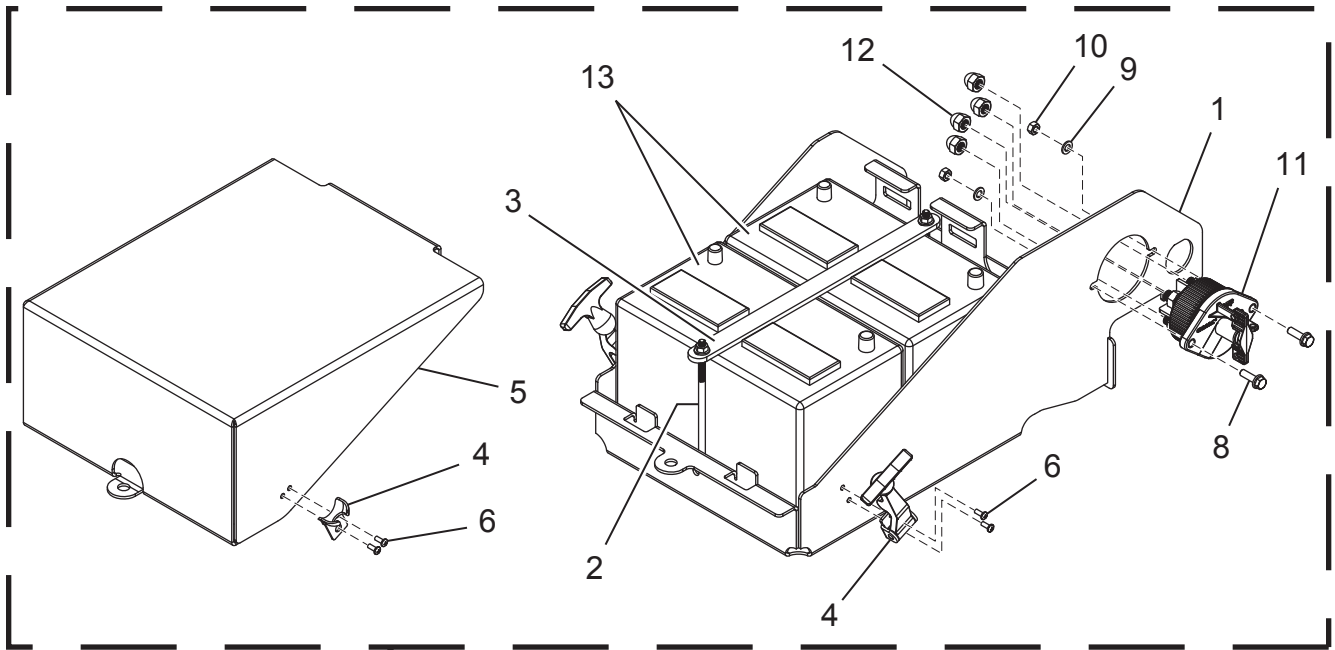
PASSENGER SIDE

**WHEN ORDERING PARTS, BE SURE TO STATE
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SAFETY LIGHTING SYSTEM

Ref. No.	Part Number	Description	No. Req'd
1	005944	LED Identification Light	1
2	A1227-002	Light, LED Marker Clearance, 12VDC, Red	4
3	A1451-001	Light, Left Hand Side Combination Tail, LED, 12VDC	1
4	A1295-002	Light, Warning, LED, 9-30VDC, Function 2	1
5	A2757-001	Light, Back-Up (White), 12VDC	1
6	A1295-001	Light, Warning, LED, 9-30VDC, Function 1	1
7	A1450-001	Light, Right Hand Side Combination Tail, LED, 12VDC	1
8	A1227-001	Light, LED Marker Clearance, 12VDC, Amber	4

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BATTERY BOX

Ref. No.	Part Number	Description	No. Req'd
1	A3023-001	Battery Tray Assembly	1
2	A3024-001	J-Bolt, 0.3125 in. - 18 UNC x 5.75 OAL	2
3	A3025-001	Battery Hold-Down Strap	1
4	A3040-001	T-Handle Flexible Draw Latch	2
5	A3043-001	Battery Box Lid Assembly	1
6	●	#10-24 - 1/2 Cross Recessed Pan Head Machine Screw	8
7	●	3/8-16 UNC x 1 Hex Flange Screw - Regular Thread	4
8	●	5/16-18 UNC x 1 Hex Flange Screw - Regular Thread	2
9	●	5/16-Type B Plain Washer	2
10	●	5/16-18 Hex Nut	2
11	013250	Battery Disconnect Switch	1
12	013284	Hex Cap Nut, M12 x 1.75, Black Nylon	4
13	011851	Battery, 12V - Group 27	2
	-- OR --		
	002256-12AGM	Battery, 12V - Group 34, AGM	2

NOT SHOWN

A4572-001	Battery Cable, Positive	1
A4573-001	Battery Cable, Negative	1

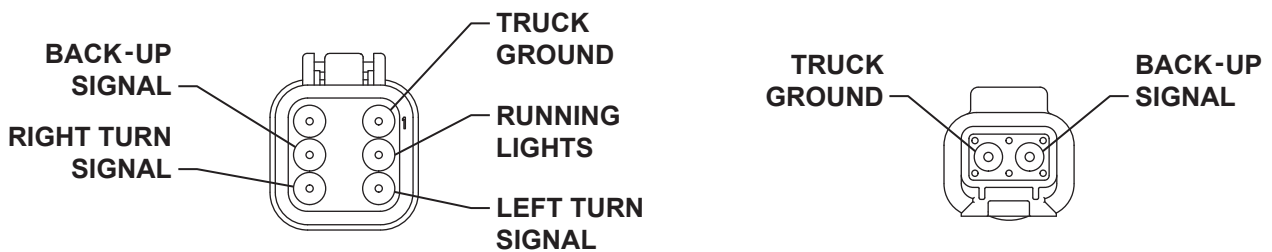
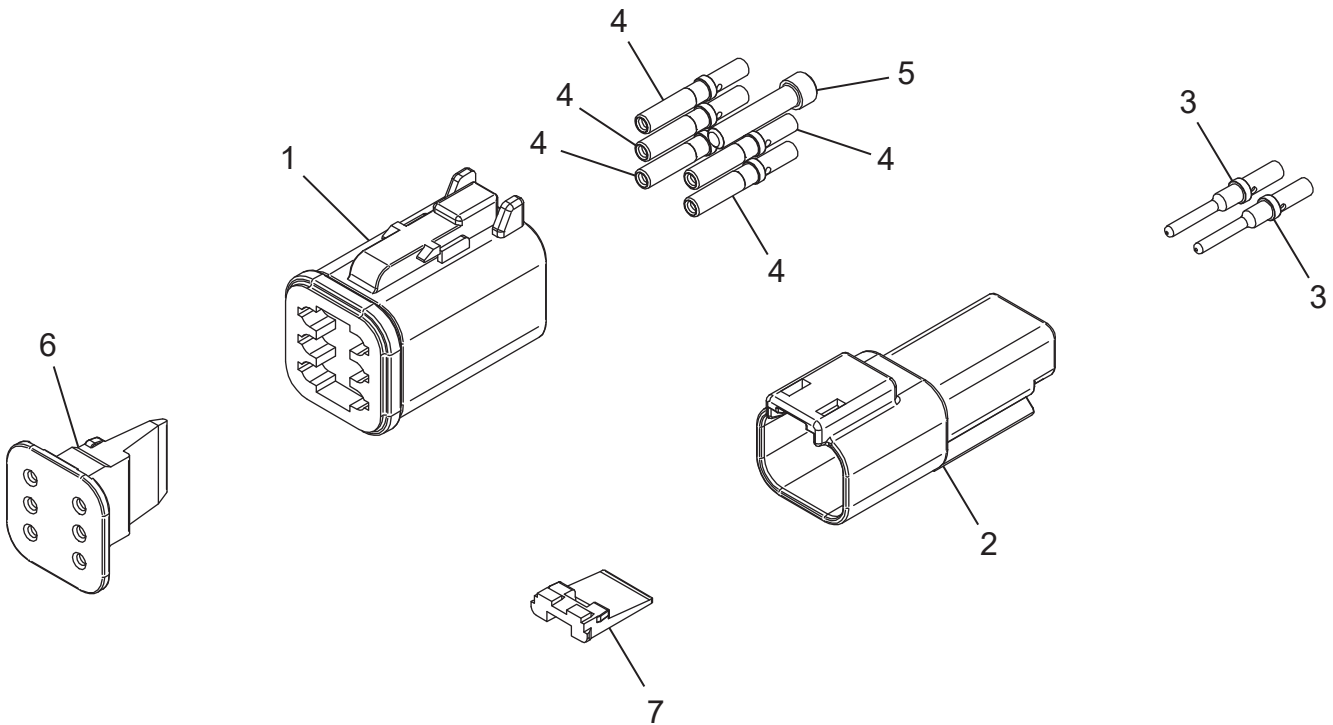
KITS AND MARKERS

- Standard Hardware Item - Available at your local hardware store.

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TRUCK CONNECTORS

Ref. No.	Part Number	Description	No. Req'd
1	DT06-6S	Connector, DT Plug, 6 Socket, 14-20AWG	1
2	DT04-2P	Connector, DT Receptacle, 2 Pin, 14-20AWG	1
3	0460-202-16141	Terminal, Pin, #16, 16-20AWG, Solid, Nickel	2
4	0462-201-16141	Terminal, Socket, #16, 16-20AWG, Solid Nickel	5
5	114017	Plug, #12-16 Size Terminal Cavity Seal	1
6	W6S	Wedge Lock, DT 6-Way Plug	1
7	W2P	Wedge Lock, DT 2-Way Receptacle	1



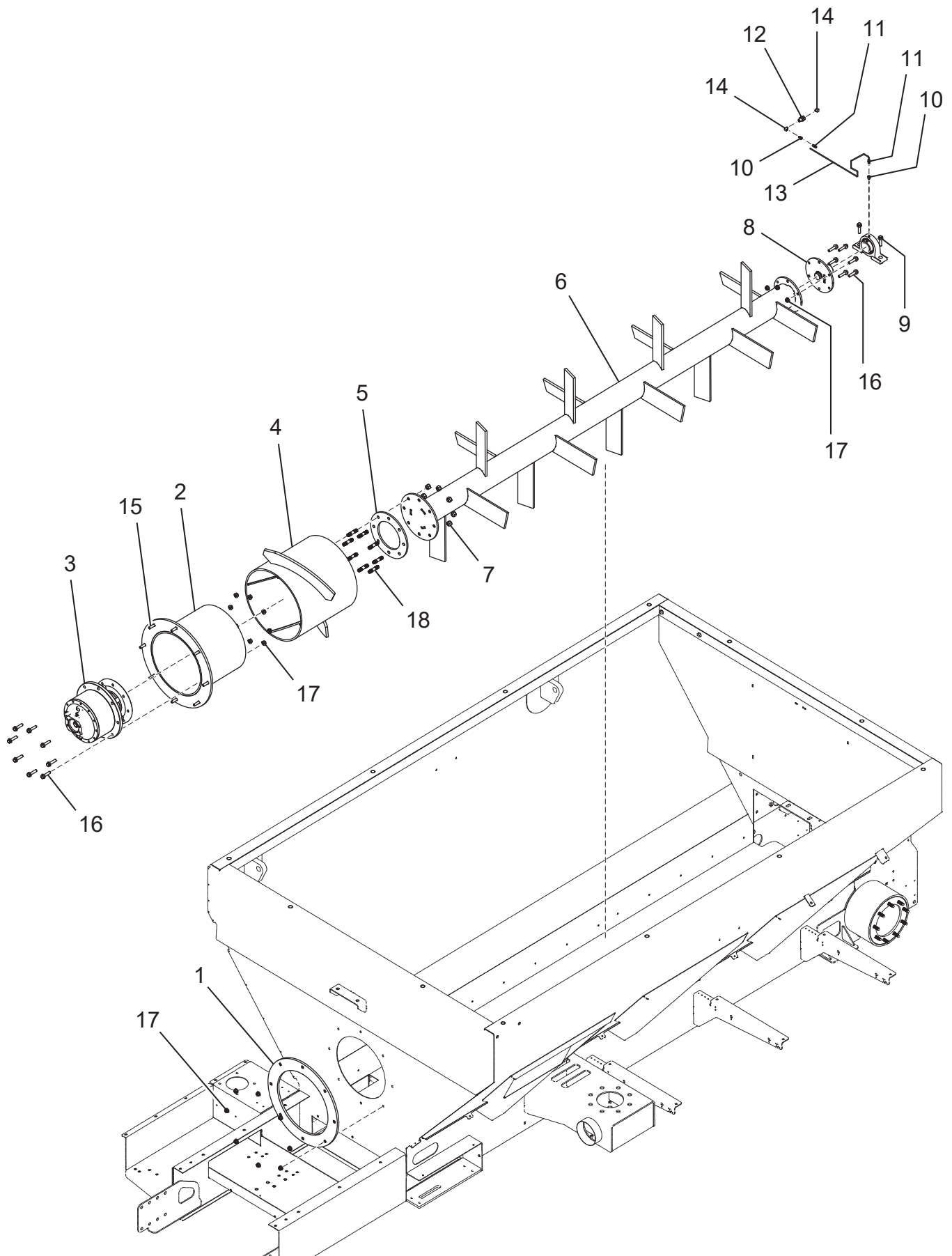
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WIRING HARNESSES AND MISCELLANEOUS ELECTRICAL

Part Number	Description	No. Req'd
A4301-001	Toolbox Wire Harness	1
A4588-001	Wiring Harness, MBX Hydraulics	1
A4589-001	Wiring Harness, MBX Valve Block	1
A4590-001	Wiring Harness, MBX Gate And Upper Lights	1
A4591-001	Wiring Harness, MBX Rear Lights	1
A4592-001	Wiring Harness, MBX Tarp	1
A4594-001	Battery Cable, Negative	1
A4593-001	Battery Cable, Positive	1
A5747-001	Computer Alarm	1

NOTE: This part replaces obsolete Computer Alarm part number 366129 which may or may not have been unavailable at time of print.

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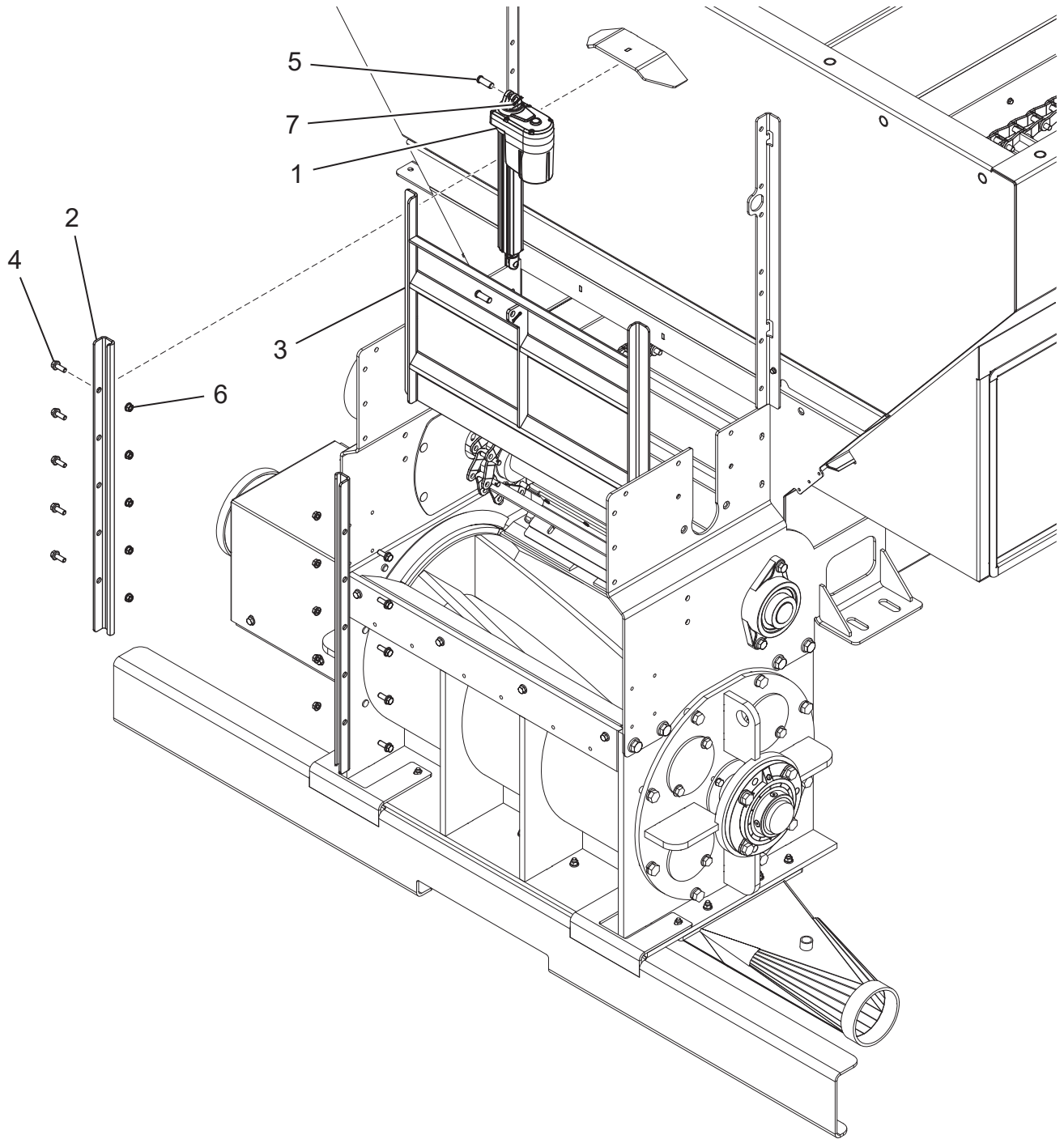
AGITATOR ASSEMBLY

Ref. No.	Part Number	Description	No. Req'd
1	A3925-001	Plate, Auger Stator Mounting	1
2	A3928-001	Stator Weldment, Auger	1
3	A7980-001	Gearbox, Agitator Drive	1
4	A3660-001	Auger Weldment, Mbx Agitator	1
5	A3760-001	Spacer, Agitator Pilot	1
6	A3662-001	Agitator Weldment - Mbx, Steel	1
7	A3768-001	Wheel Lug, 5/8-11 45°, ZPS	8
8	A3663-001	Agitator Idle Flange Weldment, Steel	1
9	052129	Bearing, Agitator Tail Shaft	1
10	008154	Grease Fitting Adapter	2
11	025248	Weatherhead 68-3 Male Connector	2
12	A4668-001	Bulkhead Fitting, NPT, Brass, 1/8	1
13	190050-MBX	MBX Agitator Grease Tube, Copper, 3/16 OD	1
14	022407	1/8M NPT x 1/8F NPT - 90	2
15	●	1/2-13 UNC - 2 Round Head Square Neck Bolt	8
16	●	1/2-13 UNC x 2 Hex Flange Screw - Regular Thread	16
17	●	1/2-13 Prevailing Torque Type Hex Flange Nut	24
18	A3767-001	Setup Stud, 5/8-11 X 3.0 Lg	8

KITS AND MARKERS

- Standard Hardware Item - Available at your local hardware store.

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



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

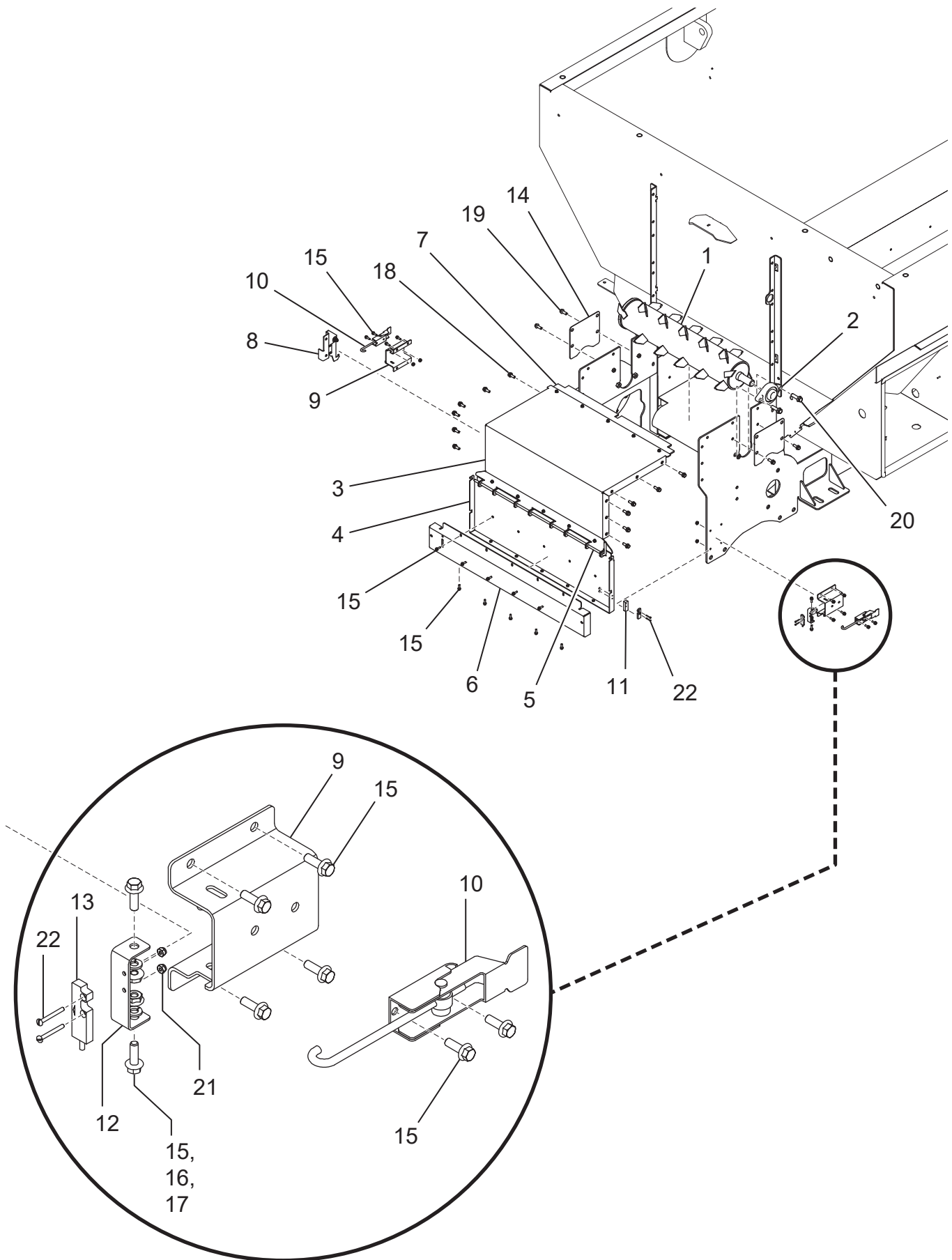
METERING DOOR

Ref. No.	Part Number	Description	No. Req'd
1	A3800-001	Metering Door Actuator	1
2	A3960-001	Metering Door Guide	2
3	A4047-001	Metering Door Weldment	1
4	●	3/8- 16 UNC x 1 Hex Flange Screw - Regular Thread	10
5	●	0.5 x 1.36 Clevis Pin	2
6	●	Hex Flange Nut	10
7	●	1/8 x 3/4 Extended Prong Square Cut Type Cotter Pin	2

KITS AND MARKERS

- Standard Hardware Item - Available at your local hardware store.

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



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

FEED ROLL ASSEMBLY

Ref. No.	Part Number	Description	No. Req'd
1	052676	Feed Roll	1
2	020586	1-1/4 In. 2 ~ Bolt Flange Bearing	1
3	A4443-001	Cover-Pick Wheel, Rear Door, Assembly	1
4	A4445-001	Cover-Quick Dump, Rear Door, Assembly	1
5	A4448-001	Pin-Hinge, Quick Dump, Rear Door	1
6	A4447-001	Bracket-Stiffener, Quick Dump, Rear Door	1
7	A4451-001	Flap-Rubber, Cover, Rear Door	2
8	A4467-001	Latch-Prop, Rear Door, Open	1
9	A4449-001	Bracket-Mount, Latch, Sensor, Rear Door	2
10	075224	Overcenter Draw Latch	2
11	A4450-001	Spacer-Mount, Sensor, Rear Door	1
12	A3995-001	Bracket-Mount, Sensor, Rear Door	1
13	A5897-001	Safety Switch, Magnetic (NO/NC), with Connector	1
14	A4633-001	Cover-Access Hole, Pick Wheel Mount	2
15	●	1/4-20 UNC x 0.75 Hex Flange Screw - Regular Thread	34
16	●	1/4 Regular Helical Spring Lock Washers	14
17	●	Hex Flange Nut	14
18	●	3/8 Regular Helical Spring Lock Washers	12
19	●	3/8-16 UNC x 1 Hex Flange Screw - Regular Thread	16
20	●	1/2-13 UNC x 1.75 Hex Flange Screw - Regular Thread	7
21	●	No. 4 - 40 Top Insert Type Prevailing Torque Type Hex Nut	4
22	●	No. 4 - 40 x 1 Slotted Pan Head Machine Screw	4

KITS AND MARKERS

- Standard Hardware Item - Available at your local hardware store.

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

TOOL KIT

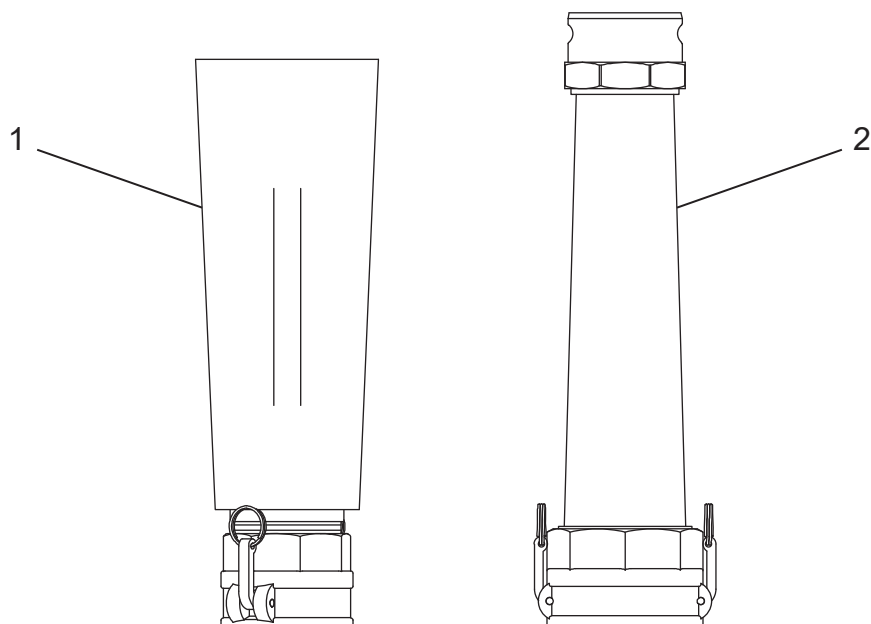
Ref. No.	Kit Ref.	Part Number	Description	No. Req'd
1	▲	053075	Red Cone Assembly	1
2	▲	061066	5 in. x 4 in. Aluminum Adapter Assembly	1

NOT SHOWN

▲■	012681A	Finn Beige Aerosol Paint	1
▲■	012305	Adhesive Label (for Aerosol Paint Can)	1
▲■	021375	Grease Gun	1
▲■	021741	12 in. Whip Hose with 1/8 in. Male Ends	1
▲■	020365	Multi Purpose Grease	1
▲	055385	4 in. Hose Gasket	1
■	052523	5 in. Coupler Gasket	1
	A1096-001	Manual Canister	1
		Engine Parts Manual	1
		Engine Operators Manual	1
		Blower Operators Manual	1
		Radio Remote Control Manual	1
		Bark Blower Operator Instructions and Parts Manual	1

KITS AND MARKERS

▲	A5433-001	Tool Kit, 4 in. Air Hose
■	A5433-002	Tool Kit, 5 in. Air Hose



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

CANOPY ASSEMBLY

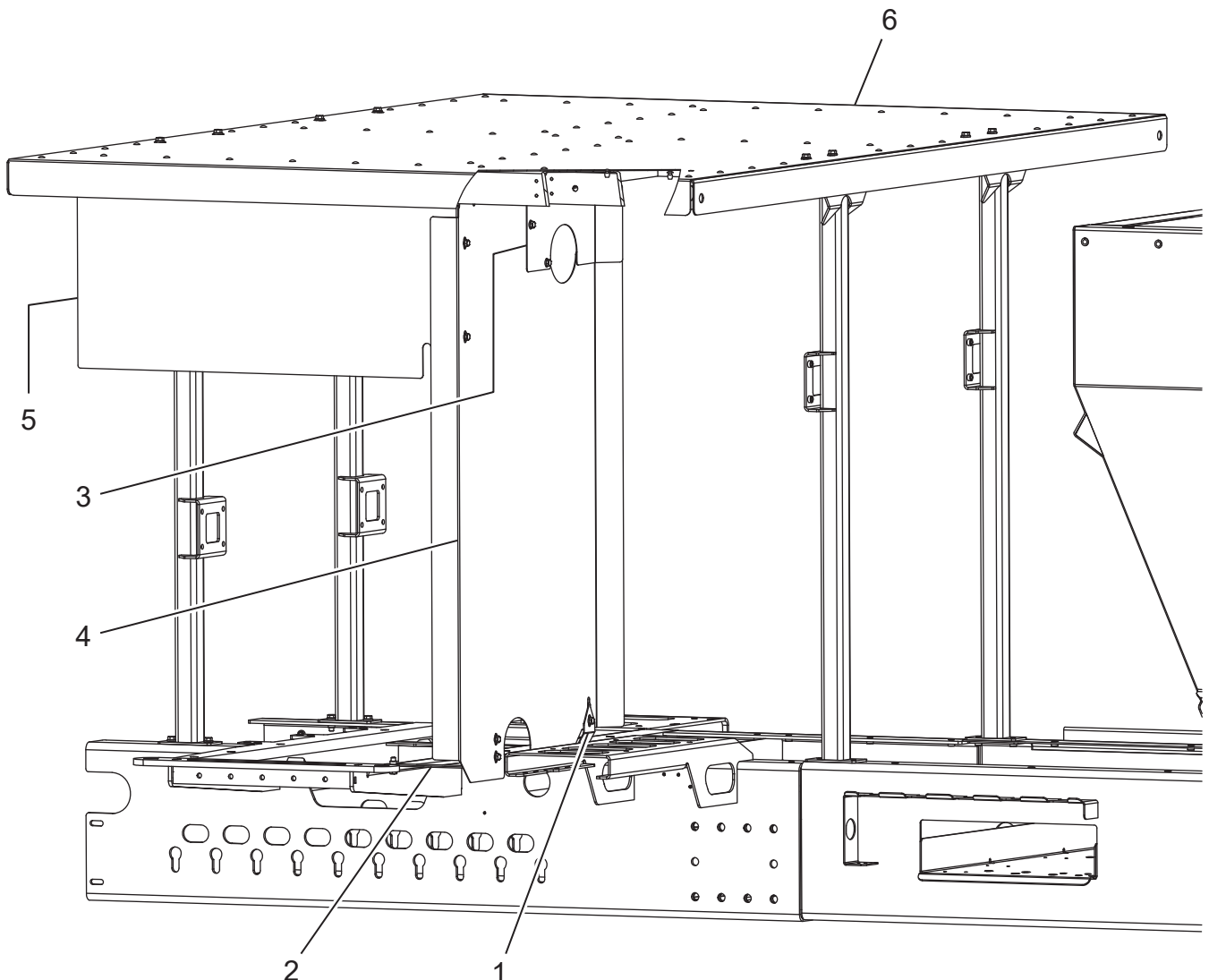
Ref. No.	Part Number	Description	No. Req'd
1	A4392-001	Shroud Flex Bracket	1
2	A4395-001	Radiator Shroud Bracket Assembly	1
3	A4495-001	Air Piping Shroud, MBX	1
4	A4496-001	Shroud Assembly, Radiator Side, MBX	1
5	A4498-001	Shroud Assembly, Upper Radiator, MBX	1
6	A4489-001	Engine Canopy Assembly	1

NOT SHOWN

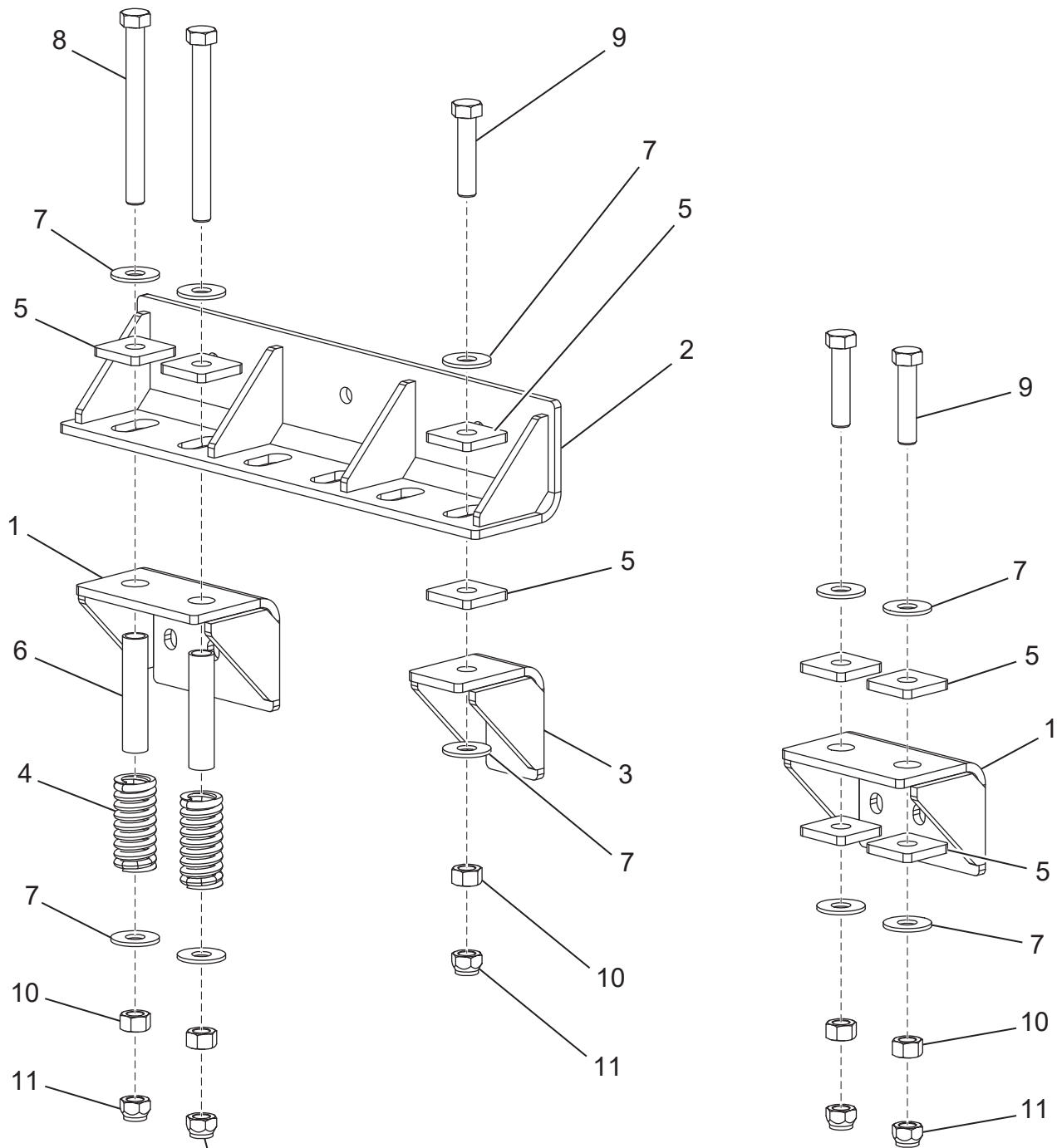
●	5/16-18 UNC x 0.75 Hex Flange Screw - Regular Thread	16
●	3/8-16 UNC x 1 Hex Flange Screw - Regular Thread	9

KITS AND MARKERS

- Standard Hardware Item - Available at your local hardware store.



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



TORQUE ALL FASTENERS TO 357 ft./lb. (484 N-m)

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

TRUCK MOUNTING KIT

Ref. No.	Kit Ref.	Part Number	Description	No. Req'd
1	▲	A3450-001	Bracket Assembly, Lower Truck Mount	4
2	▲	A3447-001	Bracket Assembly, Upper Truck Mount	2
3	▲	A3462-001	Bracket Assembly, Truck Mount Stop	2
4	▲	011563	Spring - Compression, Truck Mount	4
5	▲	A3448-001	Square Washer, Truck Mount	16
6	▲	A3453-001	Tube, Spring Spacer	4
7	▲	●	3/4 Type A Plain Washer, Wide*	20
8	▲	●	3/4-16 UNF - 7.5 Hex Cap Screw* - UNC (Regular Thread)	4
9	▲	●	3/4-16 UNF - 3.5 Hex Cap Screw* - UNC (Regular Thread)	6
10	▲	●	3/4-16 Hex Nut*	10
11	▲	●	3/4-16 Metal Type Prevailing Torque Type Hex Nut*	10

NOT SHOWN

Hardware used for mounting brackets to MBX frame and to truck chassis.

Use if recommended flanged bobtail fasteners are not available.

▲	●	5/8-18 UNF x 2 Hex Cap Screw*	6
▲	●	5/8-18 Prevailing Torque Hex Nut*	18
▲	●	5/8 Type A Plain Washer, Wide*	36
▲	●	5/8-18 UNF x 2.5 Hex Cap Screw*	12

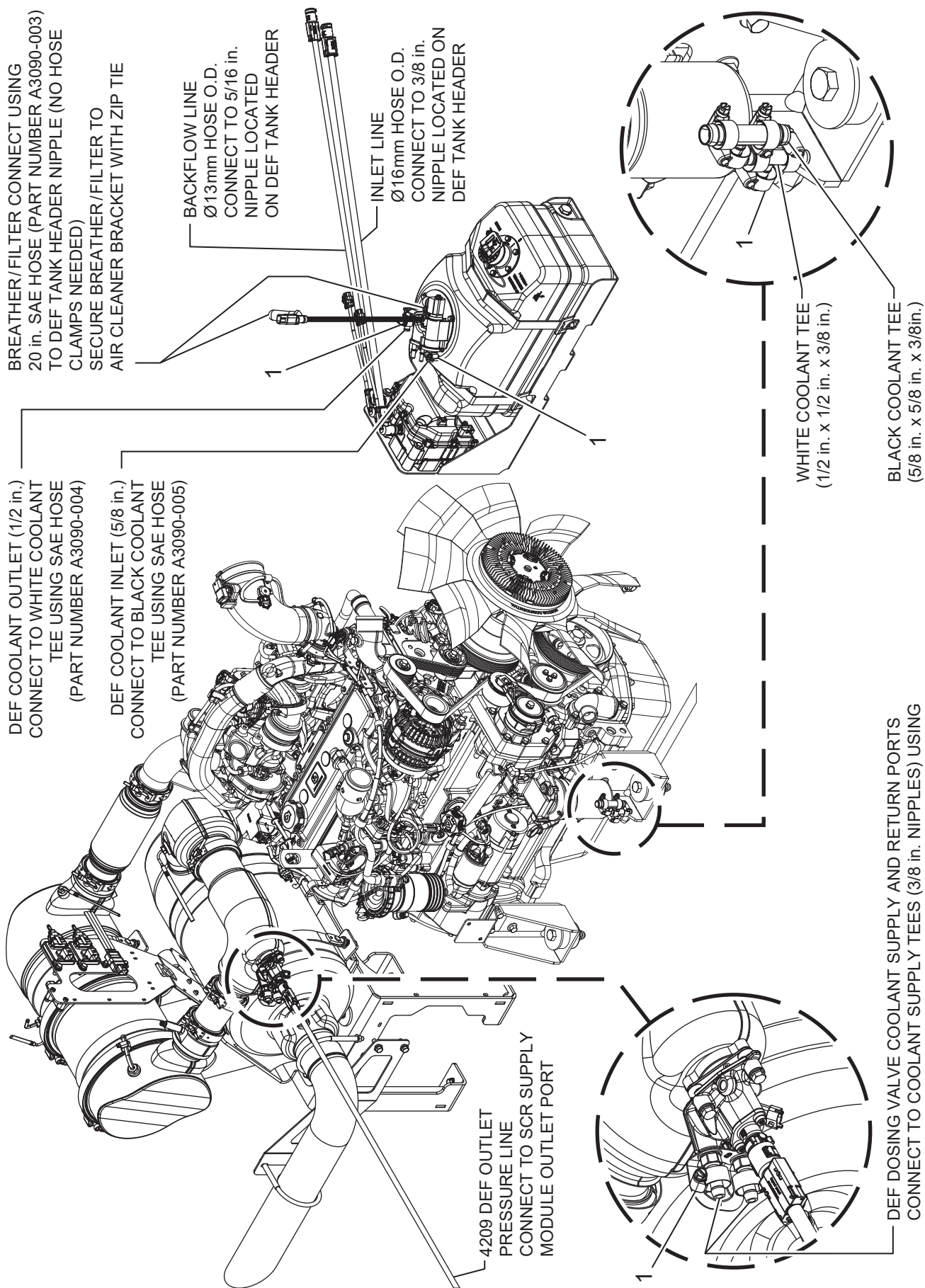
KITS AND MARKERS

▲	A4743-001	Complete Installation Kit
●	Standard Hardware Item - Available at your local hardware store.	

* Grade 8 hardware

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

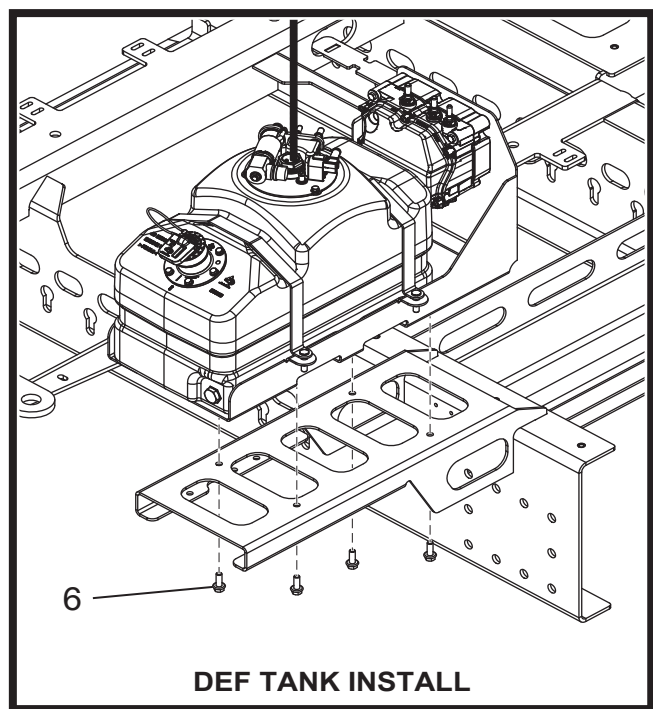
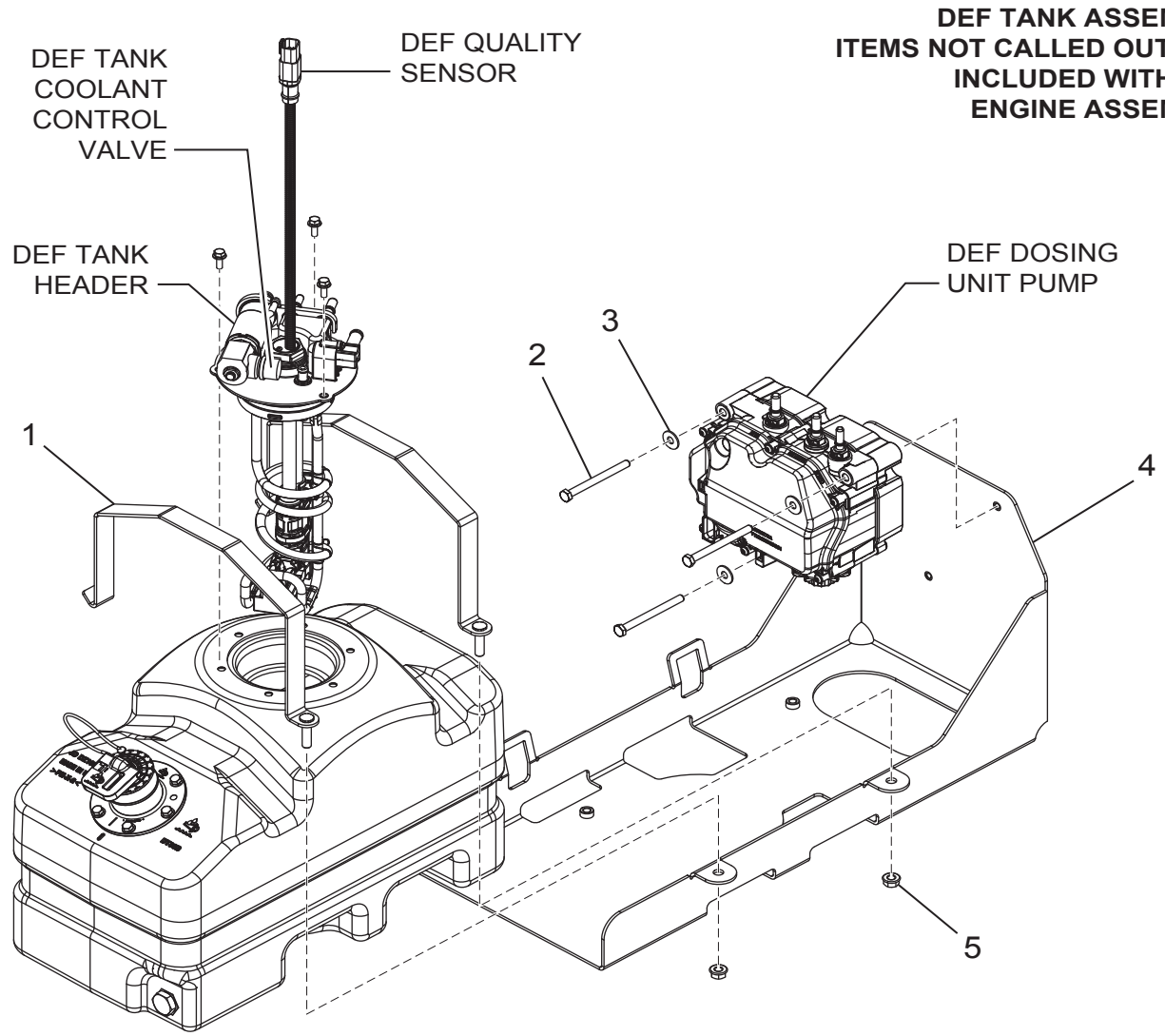
WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE



COMPLETE AFTERTREATMENT AND EXHAUST SYSTEM

Ref. No.	Part Number	Description	No. Req'd
1	A4566-001	Hose Clamp, Worm Gear, SAE J1508 Type MX, Size 6	10

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



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

DEF TANK ASSEMBLY AND INSTALLATION

Ref. No.	Part Number	Description	No. Req'd
1	A2964-001	Strap Assembly, DEF Tank	2
2	●	5/16-18 UNC - 3.5 Hex Cap Screw	3
3	●	5/16-Regular - Type B Plain Washer	3
4	A2969-001	Tray Assembly, DEF Tank And Supply Module	1
5	●	16 Hex Flange Nut	2
6	●	3/8-16 UNC x 1 Hex Flange Screw - Regular Thread	4

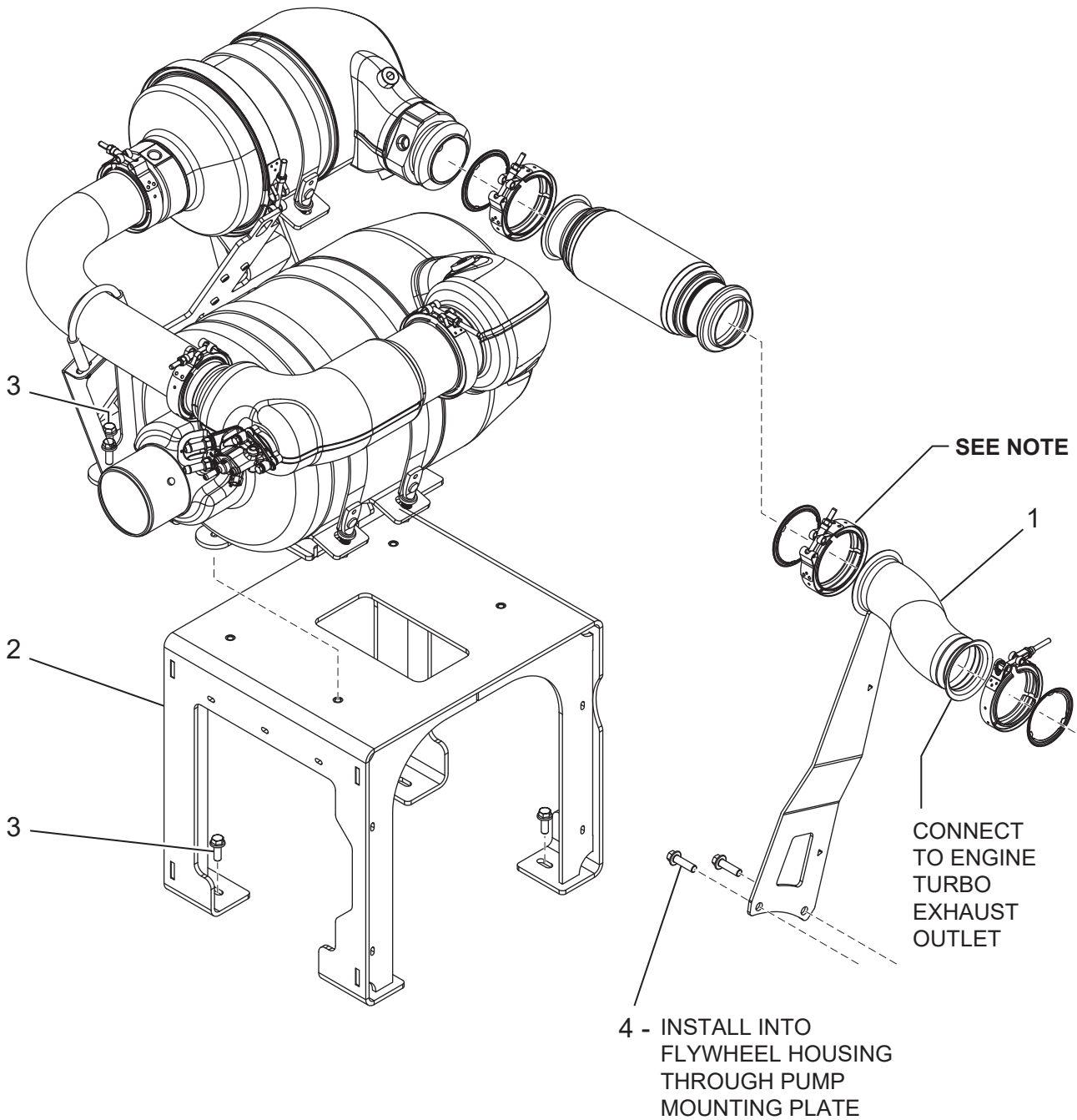
NOT SHOWN

A1999-001	DEF Filter
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KITS AND MARKERS

- Standard Hardware Item - Available at your local hardware store.

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



**AFTERTREATMENT CRADLE INSTALL
ITEMS NOT CALLED OUT ARE INCLUDED
WITH THE ENGINE ASSEMBLY**

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

AFTERTREATMENT CRADLE INSTALLATION

Ref. No.	Part Number	Description	No. Req'd
1	A2867-001	Exhaust Pipe Weldment	1
2	A2787-001	Aftertreatment Support Mount	1
3	●	3/8-16 UNC x 1 Hex Flange Screw - Regular Thread	8
4	●	M10 x 1.5 x 35 Metric Hex Flange Screws	2

KITS AND MARKERS

- Standard Hardware Item - Available at your local hardware store.

NOTE: For V-band clamp installation, ensure proper alignment of flanges. The clamp should not be required to force or pull the connection into alignment.

Inspect clamp threads and clean if necessary. Tighten the nut down to 7 ft./lb. (9.5 N-m). Do not exceed 200 RPM. Do not install clamp with impact wrench as this may damage clamp and strip threads.

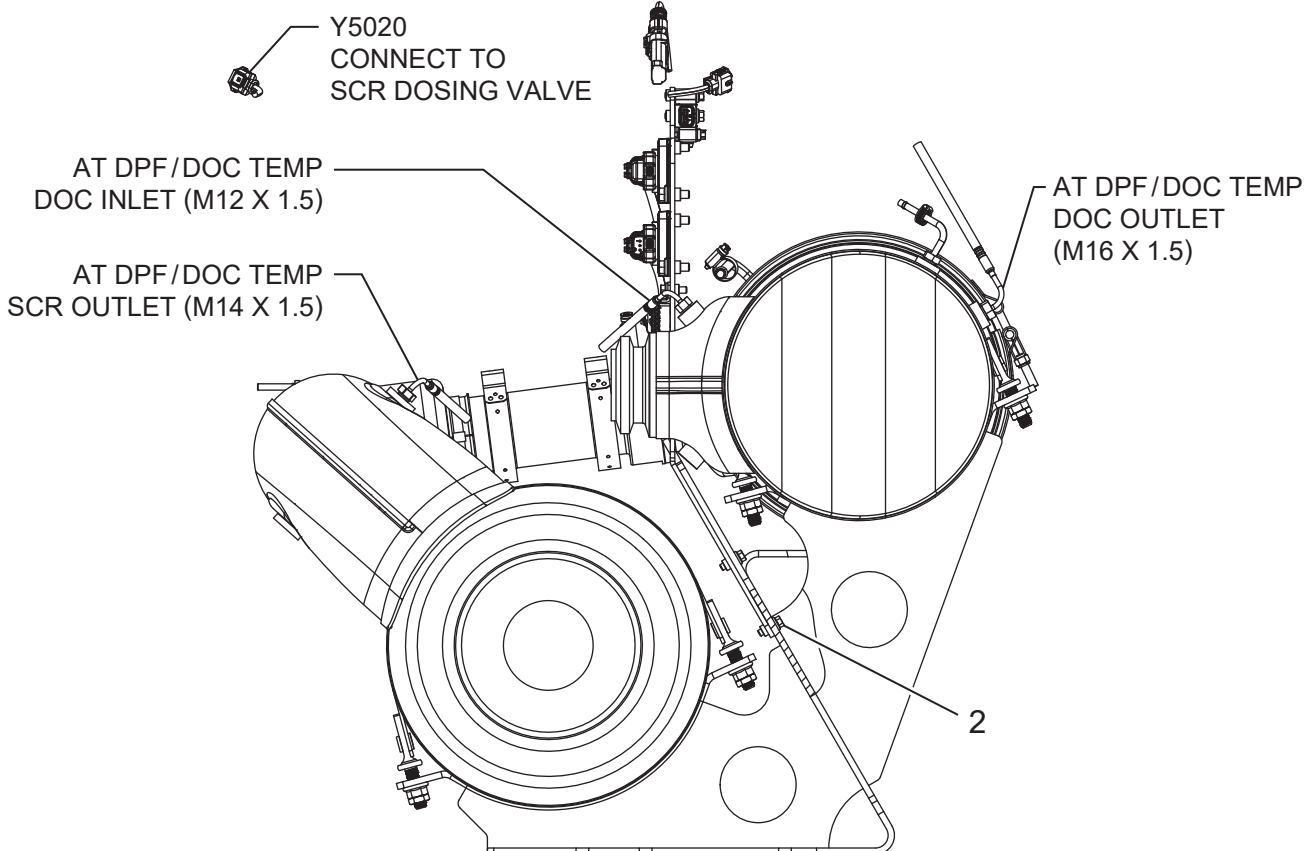
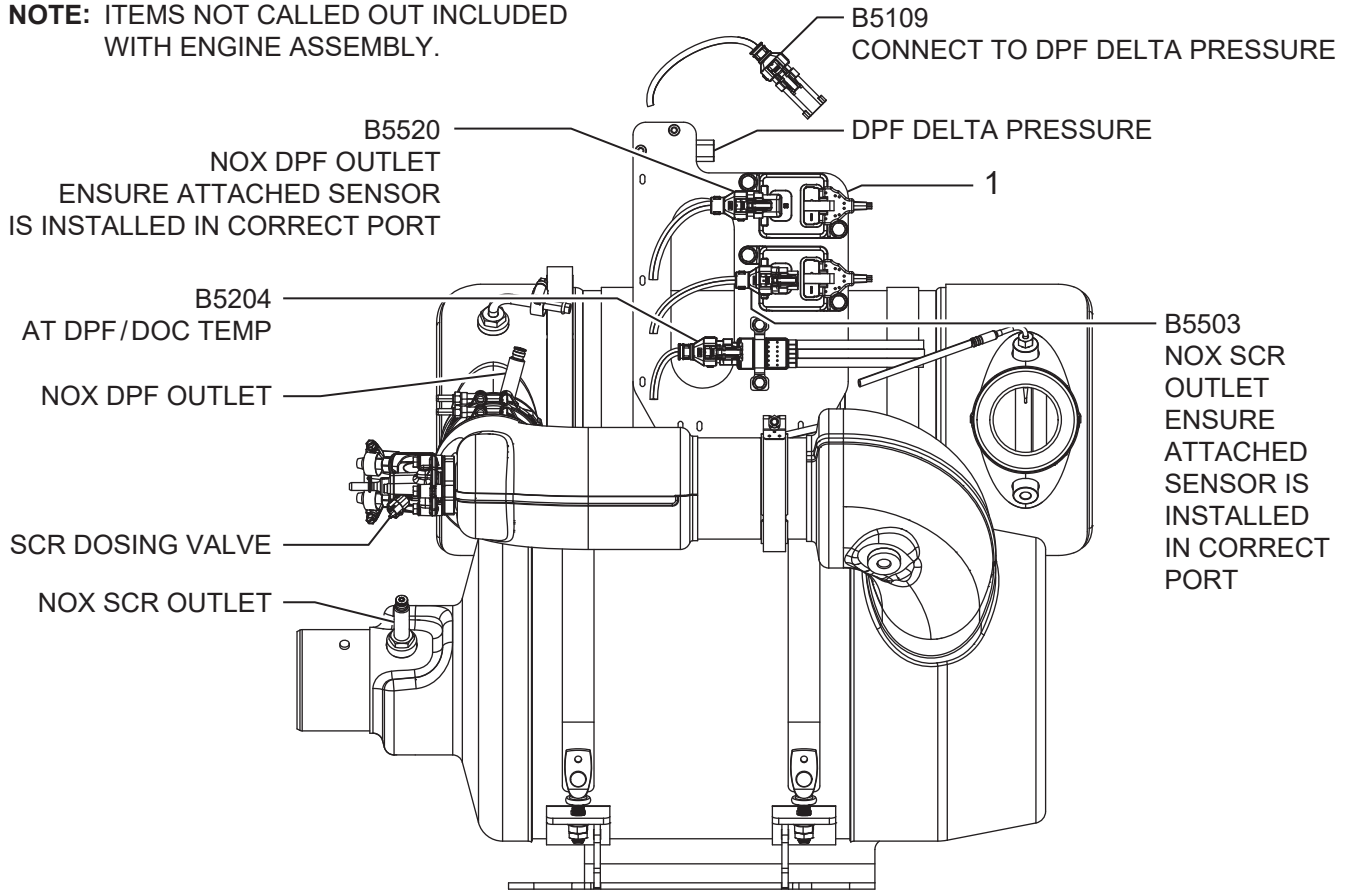
Gently tap around the perimeter of the clamp during tightening to ensure proper seating of the clamp onto the flange.

Retighten clamp to 15 ± 2 ft./lb. (20.3 ± 2.7 N-m) and inspect the joint after assembly to ensure proper alignment of the flanges and that the clamp is properly seated.

Verify that the two band loops are not touching.

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

NOTE: ITEMS NOT CALLED OUT INCLUDED WITH ENGINE ASSEMBLY.



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

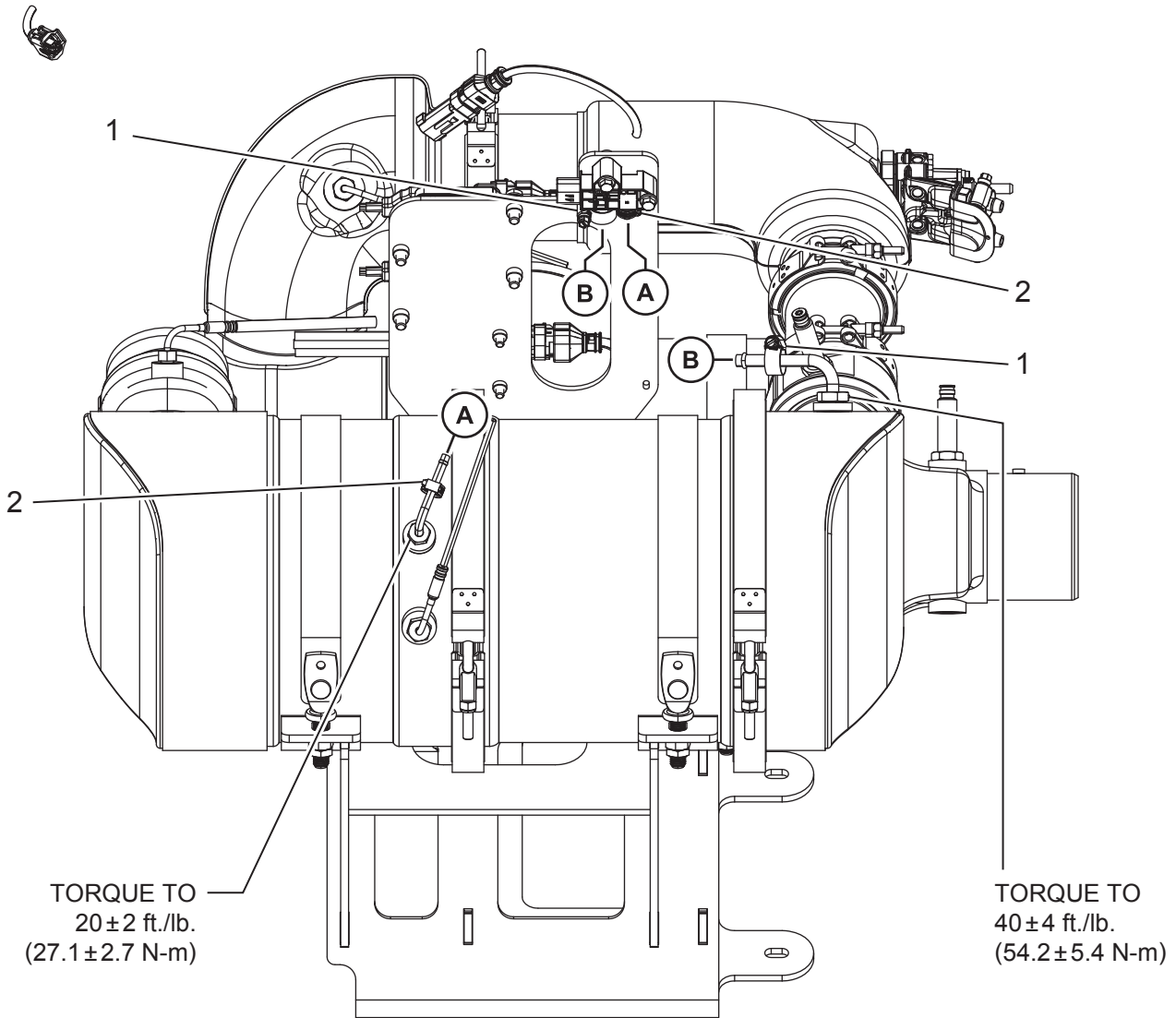
AFTERTREATMENT AND EXHAUST COMPONENTS

Ref. No.	Part Number	Description	No. Req'd
1	A3920-001	Aft Sensors Bracket Assembly	1
2	●	1/4-20 UNC x 0.75 Hex Flange Screw - Regular Thread	5

KITS AND MARKERS

- Standard Hardware Item - Available at your local hardware store.

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



A - A CONNECT THESE TWO HOSE BARBS USING
SAE HOSE (PART NUMBER A3090-001)

B - B CONNECT THESE TWO HOSE BARBS USING
SAE HOSE (PART NUMBER A3090-003)

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

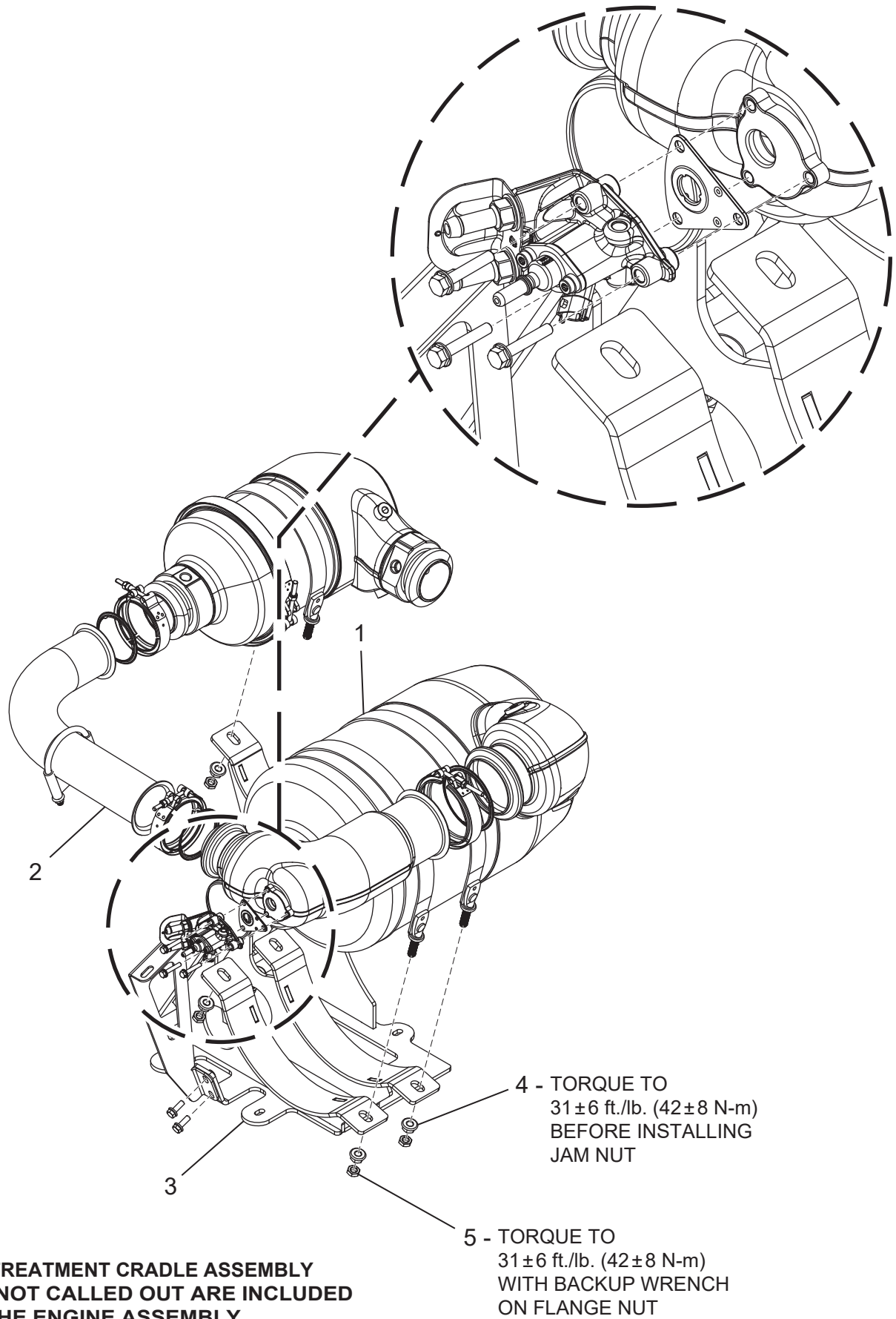
AFTERTREATMENT AND EXHAUST HOSE INSTALLATION

Ref. No.	Part Number	Description	No. Req'd
1	A4566-001	Hose Clamp, Worm Gear, SAE J1508 TYPE MX, Size 6	2
2	010321	5/8 in. Clamp Worm Gear	2

NOT SHOWN

A3090-001	Hose, SAE J20 R3 Class A, 0.25 in. I.D.
A3090-003	Hose, SAE J20 R3 Class A, 0.38 in. I.D.

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



**AFTERTREATMENT CRADLE ASSEMBLY
ITEMS NOT CALLED OUT ARE INCLUDED
WITH THE ENGINE ASSEMBLY**

- 4 - TORQUE TO
31±6 ft./lb. (42±8 N-m)
BEFORE INSTALLING
JAM NUT
- 5 - TORQUE TO
31±6 ft./lb. (42±8 N-m)
WITH BACKUP WRENCH
ON FLANGE NUT

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

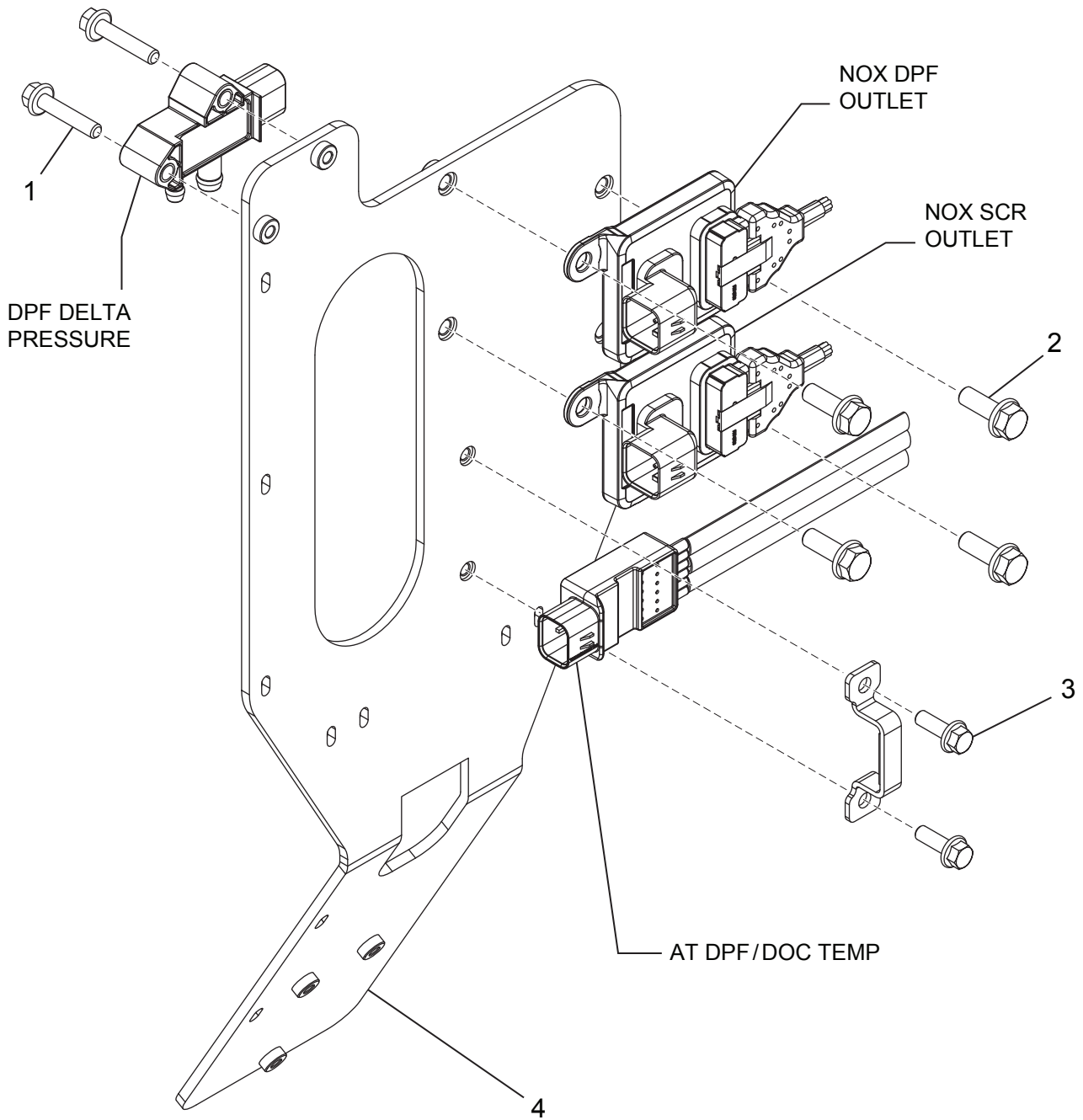
AFTERTREATMENT CRADLE ASSEMBLY

Ref. No.	Part Number	Description	No. Req'd
1	A2766-003	Aftertreatment Strap, Size 3/4 SCR	2
2	A2862-001	Exhaust Pipe	1
3	A2856-001	Mount, Aftertreatment, Size 2 DOC/3 SCR	1
4	●	M12 x 1.75 Metric Hex Flange Nuts	6
5	●	M12 x 1.75 Hex Jam Nut	6

KITS AND MARKERS

- Standard Hardware Item - Available at your local hardware store.

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



**SENSOR MASTER ASSEMBLY
 ITEMS NOT CALLED OUT ARE INCLUDED
 WITH THE ENGINE ASSEMBLY**

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

AFTERTREATMENT SYSTEM SENSOR MASTER ASSEMBLY

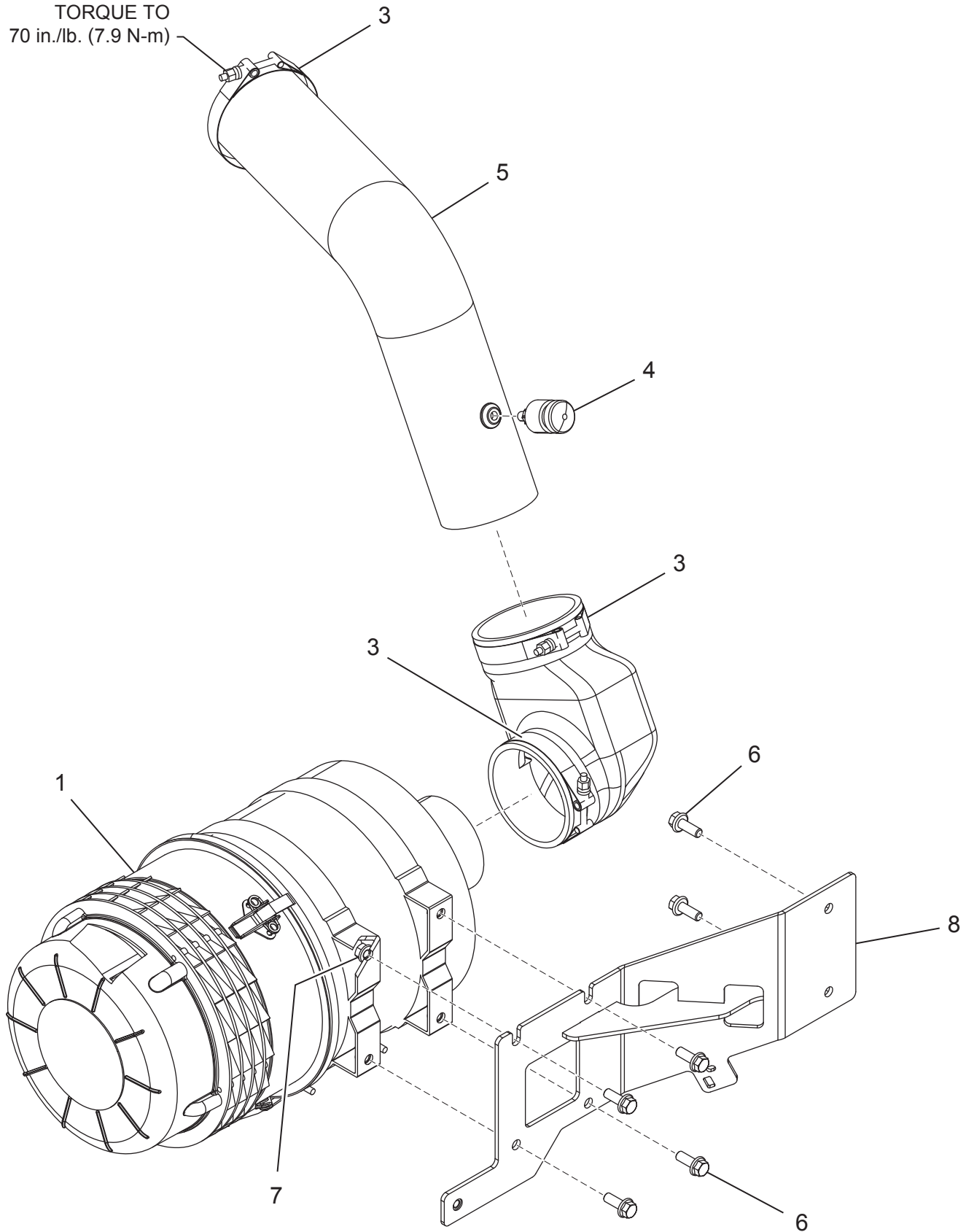
Ref. No.	Part Number	Description	No. Req'd
1	●	1/4-20 UNC x 1.25 Hex Flange Screw - Regular Thread	2
2	●	5/16-18 UNC x 0.875 Hex Flange Screw - Regular Thread	4
3	●	1/4-20 UNC x 0.75 Hex Flange Screw - Regular Thread	2
4	A3920-001	Aft Sensors Bracket Assembly	1

KITS AND MARKERS

- Standard Hardware Item - Available at your local hardware store.

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

TORQUE TO
70 in./lb. (7.9 N-m)



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

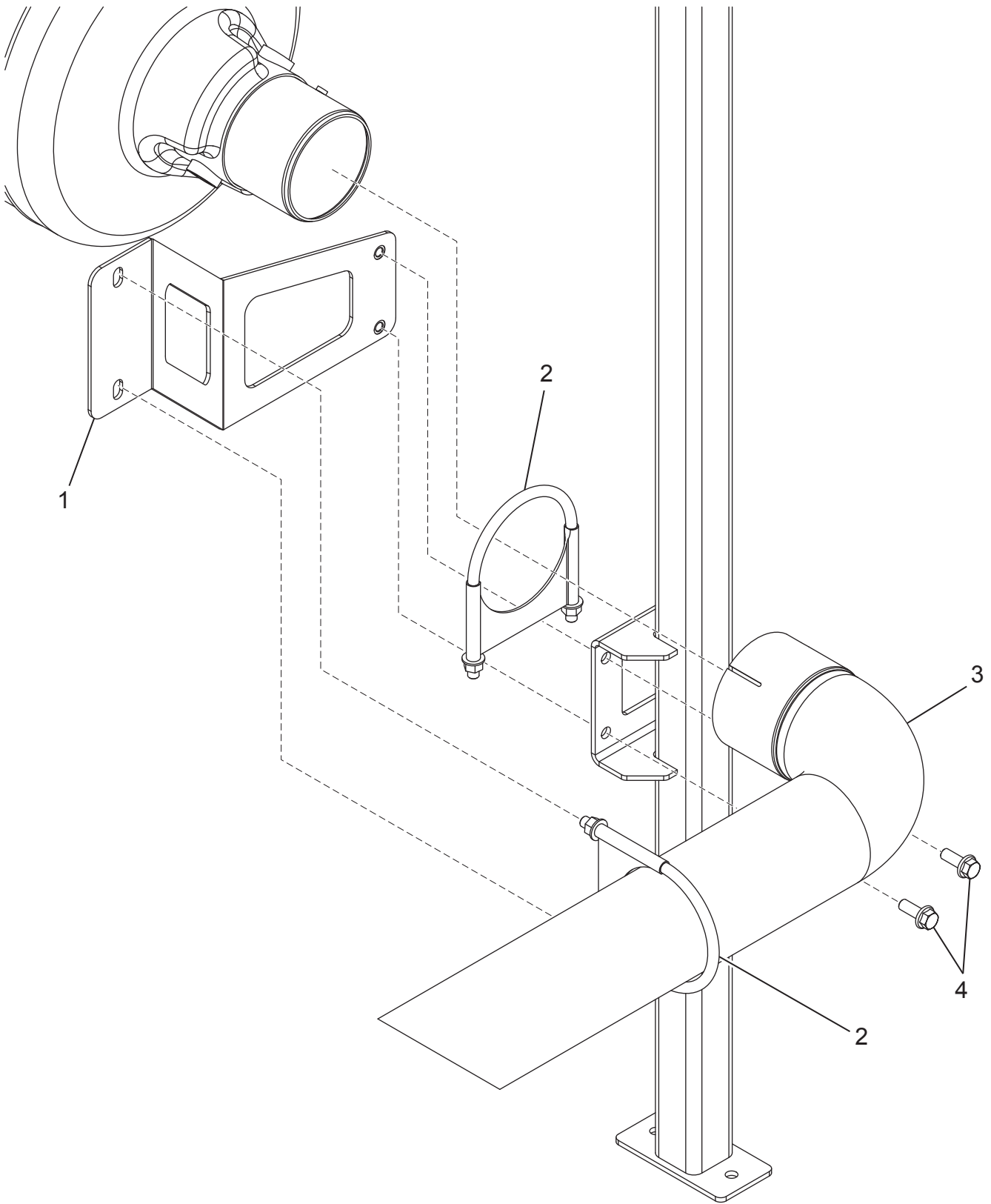
AIR INTAKE SYSTEM

Ref. No.	Part Number	Description	No. Req'd
1	A3005-001	Air Cleaner Assembly	1
	A3002-001	Primary Air Filter	1
	A3284-001	Secondary Air Filter	1
2	075247	4 in. 90° Cobra Elbow	1
3	055335	T-Bolt Band Clamp, 4.5 in. Nom. Dia.	3
4	A3041-001	Dust Load Indicator, 1/8 in. MNPT, 20 in.	1
5	A3062-001	Elbow Assembly, Air Intake Tube	1
6	●	3/8-16 UNC x 1 Hex Flange Screw - Regular Thread	6
7	●	16 Hex Flange Nut	4
8	A3288-001	Bracket Assembly, Air Cleaner Mount	1

KITS AND MARKERS

- Standard Hardware Item - Available at your local hardware store.

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



EXHAUST PIPE INSTALL
ITEMS NOT CALLED OUT
ARE FOR REFERENCE ONLY

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

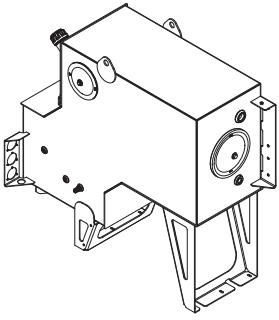
EXHAUST PIPE

Ref. No.	Part Number	Description	No. Req'd
1	A3294-001	Exhaust Pipe Support Bracket Assembly	1
2	055336	Muffler Clamp, 4 in.	2
3	A2829-001	Exhaust Tailpipe, 4 in.	1
4	●	3/8-16 UNC x 1 Hex Flange Screw - Regular Thread	2

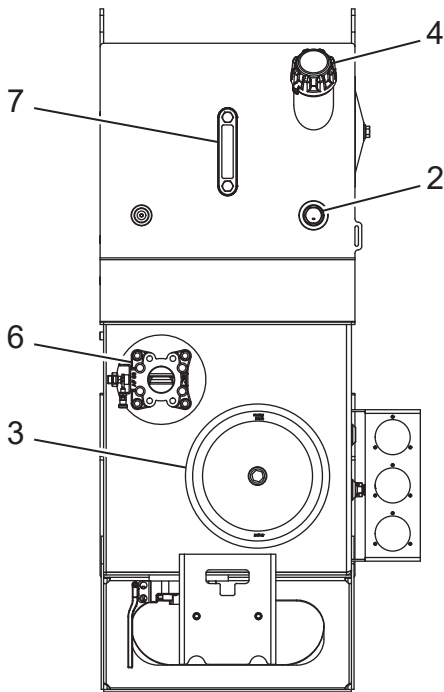
KITS AND MARKERS

- Standard Hardware Item - Available at your local hardware store.

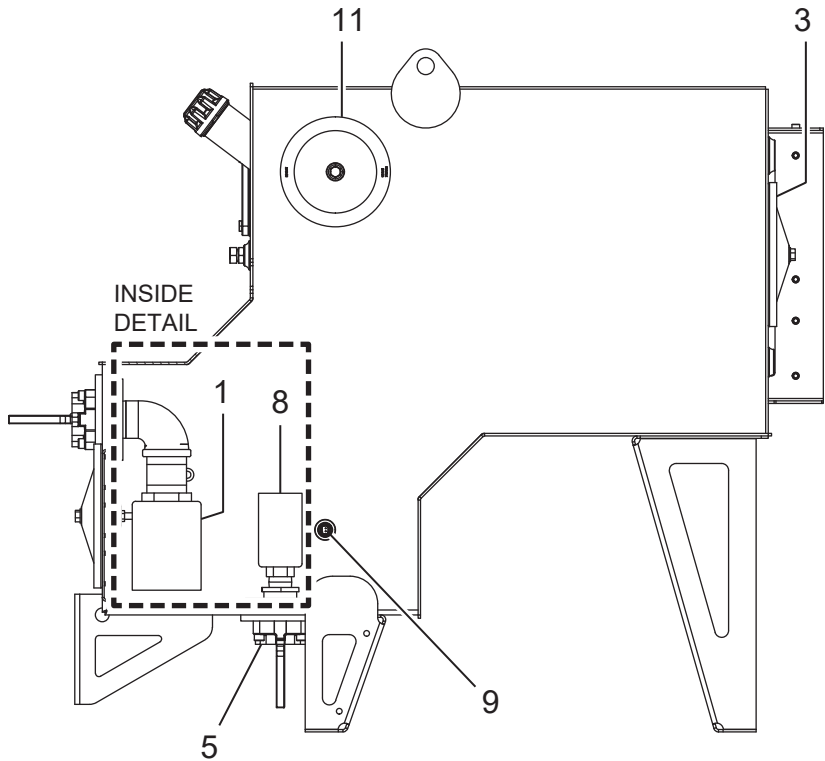
**WHEN ORDERING PARTS, BE SURE TO STATE
SERIAL NUMBER OF MACHINE**



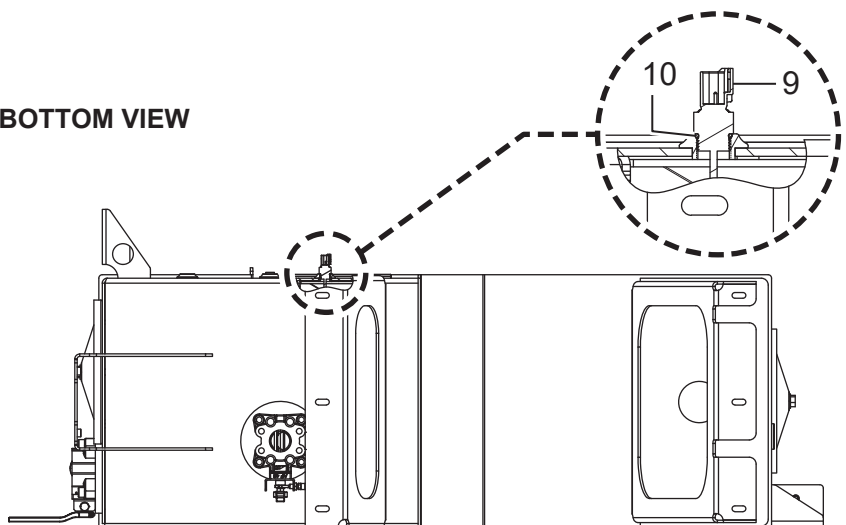
FRONT VIEW



SIDE VIEW



BOTTOM VIEW



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

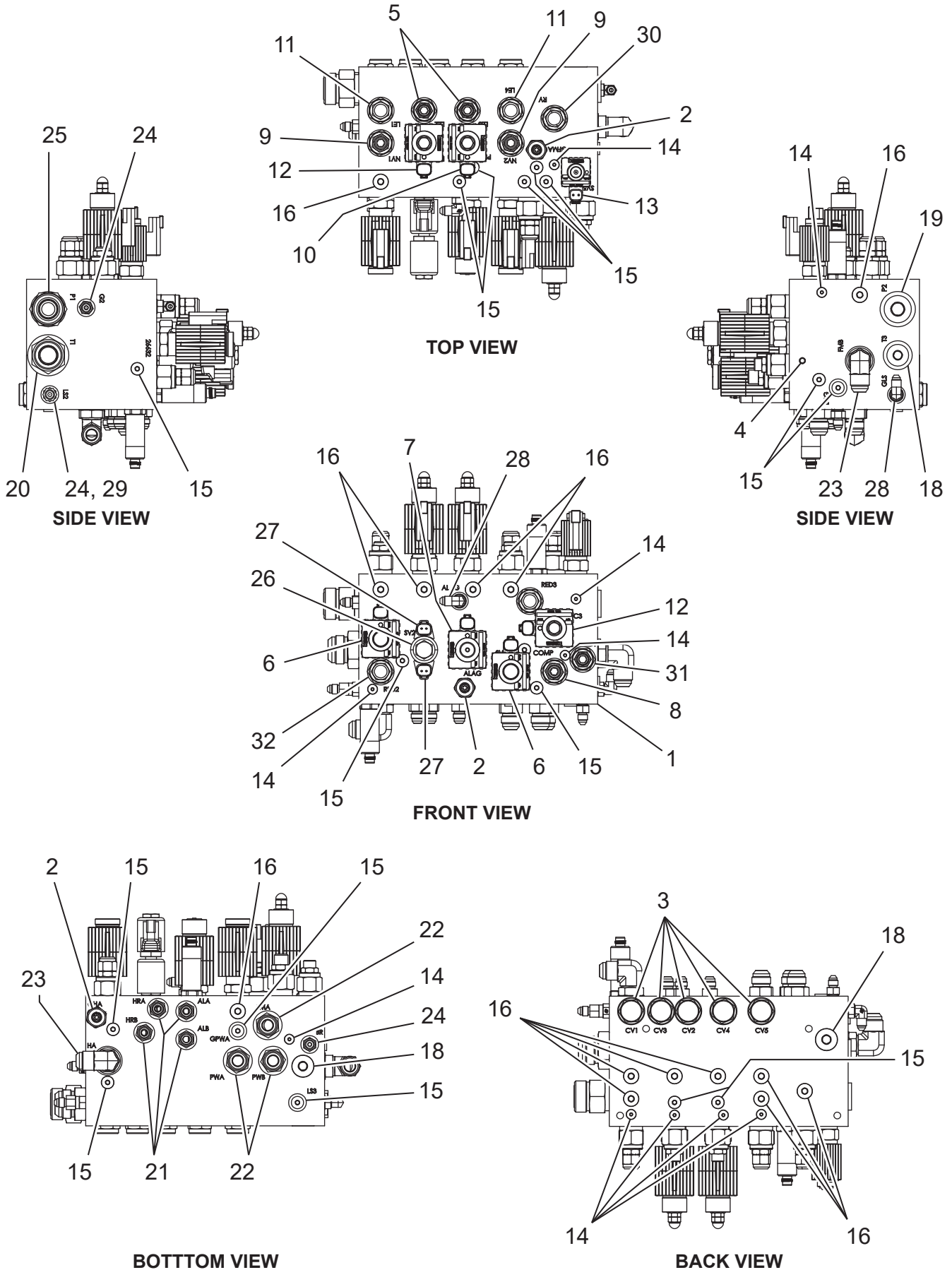
HYDRAULIC RESERVOIR ASSEMBLY

Ref. No.	Kit Ref.	Part Number	Description	No. Req'd
1	▲	A1119-001	75 GPM Suction Strainer, 100 Mesh, 3 psi Bypass	1
2	▲	A1003-001	Level Switch, Side Mount (-10 SAE)	1
3	▲	A0946-003	Cleanout Cover, 10 in.	2
4	▲	A1123-001	RB2 Filler Cap, Snap Ring, Strainer Basket	1
5	▲	A1328-001	Butterfly Flange Plate	1
6	▲	A1328-002	Butterfly Flange Plate	1
7	▲	080329	Sight Gauge with Thermometer	1
8	▲	A1120-001	20 GPM Suction Strainer, 100 Mesh, 3 psi Bypass	1
9	▲	A3515-001	Temperature Sensor, NTC, SAE-08, Deutsch DT04-2P	1
10	▲	A3521-006	#3-908 O-ring, NBR, 90 Shore A	1
11	▲	A0946-002	Cleanout Cover, 8 in.	1

KITS AND MARKERS

- ▲ A2936-001 Hydraulic Reservoir Assembly, 82 Gallon
- Standard Hardware Item - Available at your local hardware store.

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



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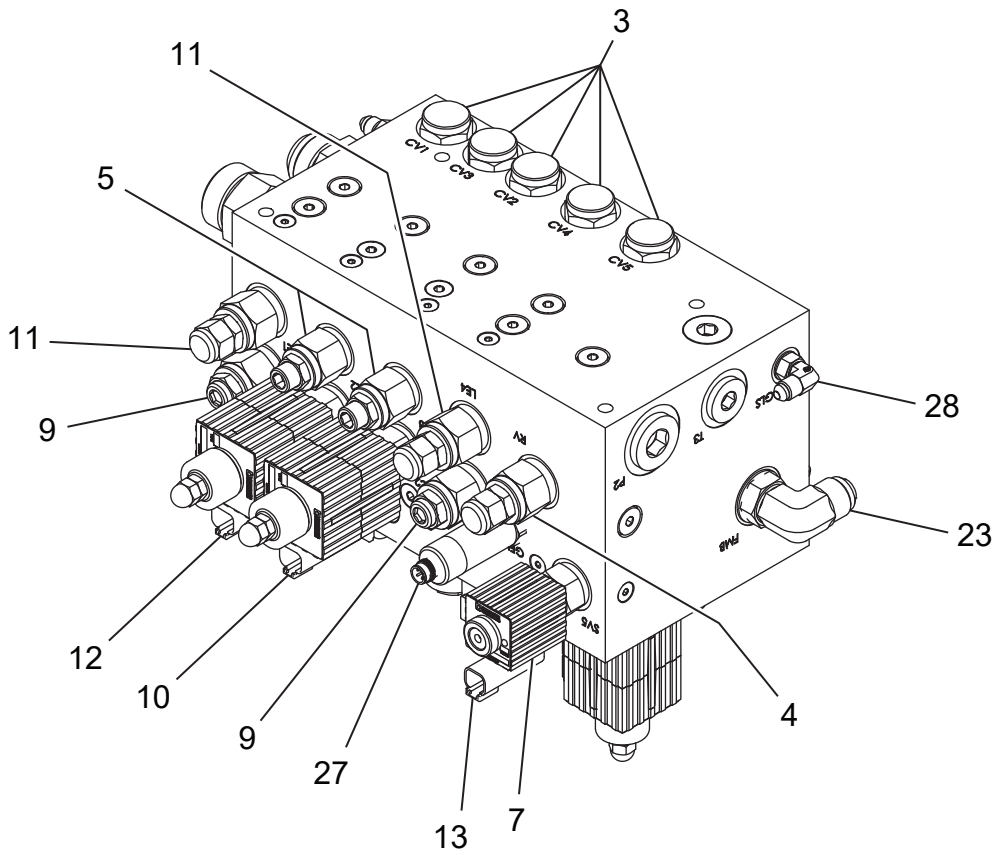
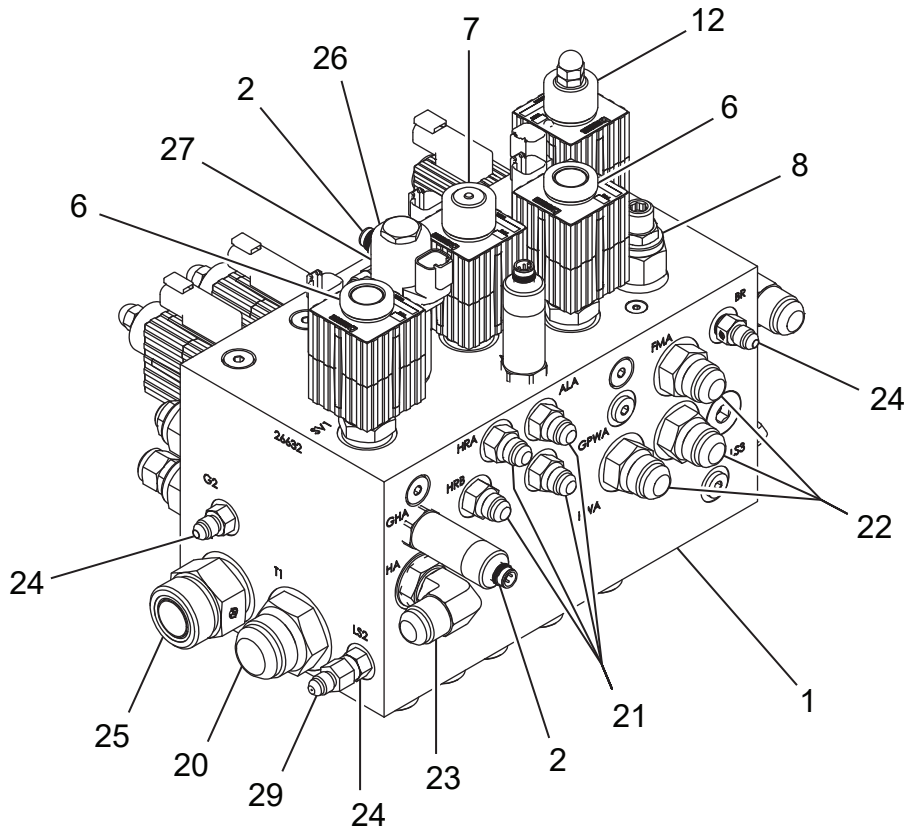
HYDRAULIC MANIFOLD (SERIAL NUMBERS OS-0018 ONWARD)

Ref. No.	Kit Ref.	Part Number	Description	No. Req'd
1	■	A6208-001	Manifold, MBX Hydraulic, Reliefs	1
2	■	A3177-001	Pressure Transducer, 3000 psi, SAE #4	3
3	■	A3170-001	Check Valve Cartridge, 10 GPM, 5 psi, SAE 08	5
4	■	A5785-001	Ball Expander, Stainless Steel, MB Series - 7 Mm	1
5	■	A3171-001	LCE Cartridge, Spool Type, Pilot To Open, SAE 08	2
6	■	A3613-001	Solenoid Valve Cartridge, Nc, Pilot Operated, Poppet Type, 18 GPM, SAE 10, with Coils	2
7	■	A3615-001	Solenoid Valve Cartridge, 4-Way, 2-Position, Direct Acting, Spool Type, 10 GPM, SAE 10, with Coils	1
8	■	A3616-001	Pressure Compensator Cartridge, Spool Type, Priority-Type Compensator, 12 GPM, SAE 10	1
9	■	A3618-001	Flow Control Cartridge, Needle Valve, without Free Flow Check, 20 GPM, SAE 10	2
10	■	A3623-001	PFC Valve Cartridge, NC, 12 GPM, SAE 10 with Coil	1
11	■	A3624-001	LCE Cartridge, Spool Type, Pilot to Open, SAE 10	2
12	■	A3632-001	PFC Valve Cartridge, NC, 8 GPM, SAE 10 with Coil	2
13	■	A4679-001	DC Valve Cartridge, 3-Way, 2-Position, 5 GPM, SAE 08, with Coils	1
14	■	A3522-001	#2 Hex Socket O-Ring Boss Plug, SAE J514 090109b	11
15	■	A3522-003	#4 Hex Socket O-Ring Boss Plug, SAE J514 090109b	17
16	■	A3522-005	#6 Hex Socket O-Ring Boss Plug, SAE J514 090109b	14
17	■	A4886-001	Plug, Restricted Pipe - 0.015	3
18	■	A3522-007	#10 Hex Socket O-Ring Boss Plug, SAE J514 0901098	3
19	■	A3522-008	#12 Hex Socket O-Ring Boss Plug, SAE J514 0901098	1
20	■	-----	Adapter, Straight, SAE ORB, 16-16, Steel	1
21	■	-----	Adapter, Straight, #6 SAE #6 ORB, Steel	4
22	■	-----	Adapter, Straight, #10 SAE #10 ORB, Steel	3
23	■	-----	Adapter, 90 Elbow, #10 SAE #10 ORB, Steel	2
24	■	-----	Adapter, Straight, #4 SAE #4 ORB, Steel	3
25	■	-----	Adapter, Straight, ORFS ORB, 16-12, Steel	1
26	■	A4946-001	DC Valve Cartridge, 4-Way, 3-Position, 3.5 GPM, SAE 08	1
27	■	A4947-001	Solenoid Coil, Type P, 12 VDC, Deutsch DT04-2P	2
28	■	-----	Adapter, 90, #4 SAE #4 ORB, Steel	2
29	■	-----	Restrictor, Straight, #4JIC, #4JIC, 0.032, Steel	1
30	■	A3087-003	Cartridge Valve, Pilot Operated Relief, 50-5000 psi	1
31	■	A5766-001	Pressure Reducing Valve, Pilot Operated, 50 - 1500 psi, SAE 08	1
32	■	A5976-001	Pressure Reducing Valve, Pilot Operated, 50 - 3000 psi, SAE 10	2

KITS AND MARKERS

- A6207-001 MBX Hydraulic Manifold Assembly, Reliefs
- Standard Hardware Item - Available at your local hardware store.

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



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

HYDRAULIC MANIFOLD (SERIAL NUMBERS OS-0001 TO OS-0017)

Ref. No.	Kit Ref.	Part Number	Description	No. Req'd
1	▲	A3592-001	MBX Hydraulic Manifold, Bare	1
2	▲	A3177-001	Pressure Transducer, 3000 psi, SAE #4	3
3	▲	A3170-001	Check Valve Cartridge, 10 GPM, 5 psi, SAE 08	5
4	▲	A3087-003	Cartridge Valve, Pilot Operated Relief, 50-5000 psi	1
5	▲	A3171-001	LCE Cartridge, Spool Type, Pilot to Open, SAE 08	2
6	▲	A3613-001	Solenoid Valve Cartridge, NC, Pilot Operated, Poppet Type, 18 GPM, SAE 10, with Coils	2
7	▲	A3615-001	Solenoid Valve Cartridge, 4-Way, 2-Position, Direct Acting, Spool Type, 10 GPM, SAE 10, with Coils	1
8	▲	A3616-001	Pressure Compensator Cartridge, Spool Type, Priority-Type Compensator, 12 GPM, SAE 10	1
9	▲	A3618-001	Flow Control Cartridge, Needle Valve, without Free Flow Check, 20 GPM, SAE 10	2
10	▲	A3623-001	PFC Valve Cartridge, NC, 12 GPM, SAE 10 with Coil	1
11	▲	A3624-001	LCE Cartridge, Spool Type, Pilot to Open, SAE 10	2
12	▲	A3632-001	PFC Valve Cartridge, NC, 8 GPM, SAE 10 with Coil	2
13	▲	A4679-001	DC Valve Cartridge, 3-Way, 2-Position, 5 GPM, SAE 08, with Coils	1
14	▲	A3522-001	#2 Hex Socket O-Ring, SAE	9
15	▲	A3522-003	#4 Hex Socket O-Ring, SAE	8
16	▲	A3522-004	#5 Hex Socket O-Ring, SAE	14
17	▲	A4886-001	Restricted Pipe Plug - 0.015	5
18	▲	A3522-007	#10 Hex Socket O-Ring, SAE	3
19	▲	A3522-008	#12 Hex Socket O-Ring, SAE	1
20	▲	-----	Adapter, Straight, SAE ORB, 16-16, Steel	1
21	▲	-----	Adapter, Straight, #6 SAE #6 ORB, Steel	4
22	▲	-----	Adapter, Straight, #10 SAE #10 ORB, Steel	3
23	▲	-----	Adapter, 90 Elbow, #10 SAE #10 ORB, Steel	2
24	▲	-----	Adapter, Straight, #4 SAE #4 ORB, Steel	3
25	▲	-----	Adapter, Straight, ORFS ORB, 16-12, Steel	1
26	▲	A4946-001	DC Valve Cartridge, 4-Way, 3-Position, 3.5 GPM, SAE 08	1
27	▲	A4947-001	Solenoid Coil, Type P, 12VDC	2
28	▲	-----	Adapter, 90, #4 SAE #4 ORB, Steel	2
29	▲	-----	Restrictor, Straight, #4JIC,#4JIC, 0.032, Steel	1

KITS AND MARKERS

- ▲ A3596-001 MBX Hydraulic Manifold Assembly
- Standard Hardware Item - Available at your local hardware store.

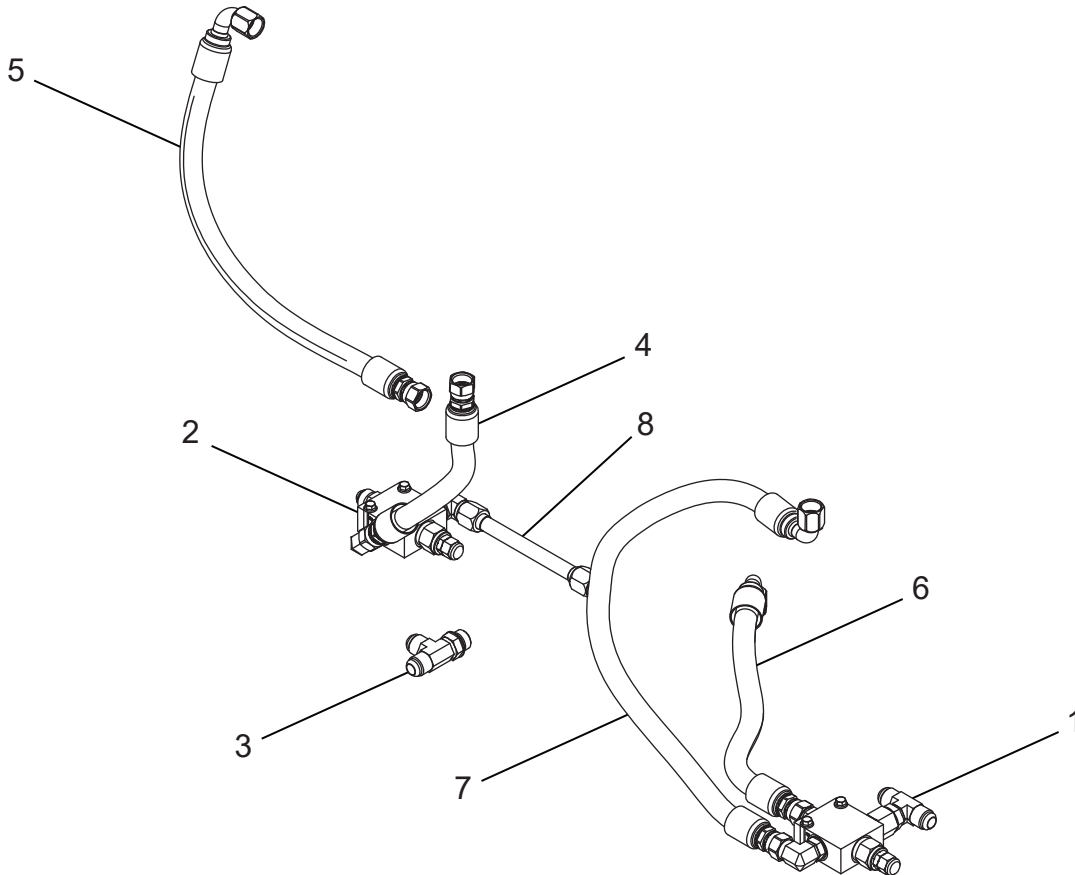
WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

PRESSURE REDUCING KITS - FLOOR AND AGITATOR

Ref. No.	Kit Ref.	Part Number	Description	No. Req'd
1	■	A5977-001	Pressure Reducing Manifold, 1700 psi	1
2	■	A5978-001	Pressure Reducing Manifold, 2400 psi	1
3	■	-----	Fitting, Tee, #10 MJIC x #10 MSAE x #10 MJIC	1
4	■	A5980-001	5/8 in. ID 100R17 Hose x 14.5 in. OAL with #10 JIC, #10 JIC	1
5	■	A5981-001	5/8 in. ID 100R17 Hose x 24.25 in. OAL with #10 90 JIC, #10 JIC	1
6	■	A7077-001	5/8 in. ID 100R17 Hose x 24.0 in. OAL with #10 90 JIC, #10 JIC	1
7	■	A5983-001	5/8 in. ID 100R17 Hose x 33.25 in. OAL with #10 90 JIC, #10 JIC	1
8	■	A5984-001	5/8 in. Tubing, JIC	1
9	■	●	1/4-20 UNC x 1.75 Hex Flange Screw - Regular Thread	4
10	■	●	1/4-20 Prevailing Torque Type Hex Flange Nut	4

KITS AND MARKERS

- A5979-001 MBX Floor and Agitator Pressure Reducing Kit
- Standard Hardware Item - Available at your local hardware store.



NOTE: This component is used with the Hydraulic Manifold on Models OS with redesigned floor and Models OO.

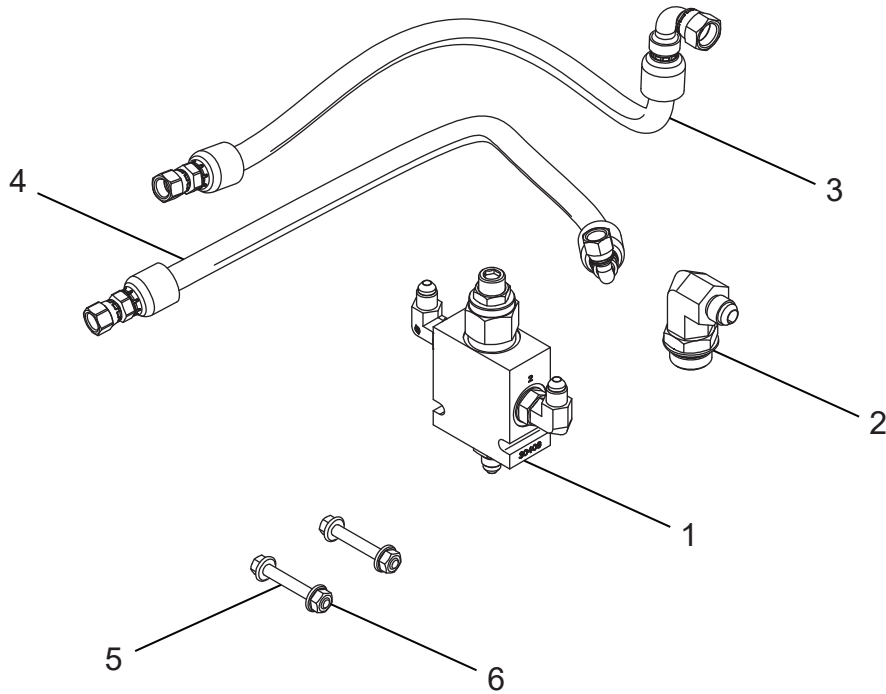
**WHEN ORDERING PARTS, BE SURE TO STATE
SERIAL NUMBER OF MACHINE**

PRESSURE REDUCING KITS - HOSE REEL

Ref. No.	Kit Ref.	Part Number	Description	No. Req'd
1	▲	A5765-001	Manifold, Inline, PRRS-08-N-S-06TA	1
2	▲	-----	Adpater, 90 Elbow, #6 SAE, #10 ORB, Steel	1
3	▲	A5771-001	1/4 in. ID 100R17 Hose x 18 in. OAL with #4 JIC x #6 90 JIC	1
4	▲	A5772-001	1/4 in. ID 100R17 Hose x 16 in. OAL with #4 JIC x #4 90 JIC	1
5	▲	●	1/4-20 UNC x 1.75 Hex Flange Screw - Regular Thread	2
6	▲	●	1/4-20 Prevailing Torque Type Hex Flange Nut	2

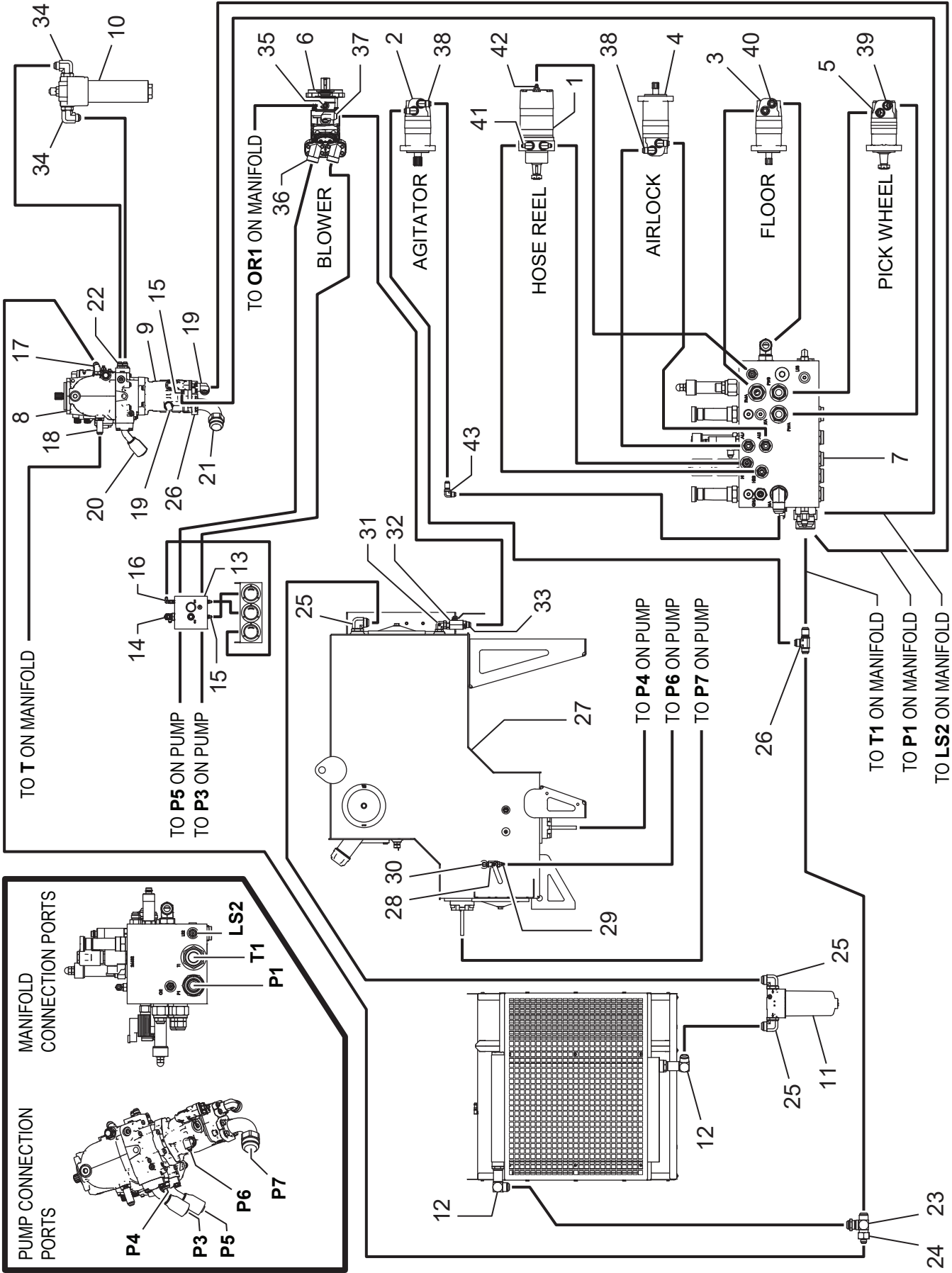
KITS AND MARKERS

- ▲ A5770-001 MBX Hose Reel Pressure Reducing Kit
- Standard Hardware Item - Available at your local hardware store.



NOTE: This component is used with the Hydraulic Manifold on units with Serial Numbers OS-0001 to OS-0017.

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



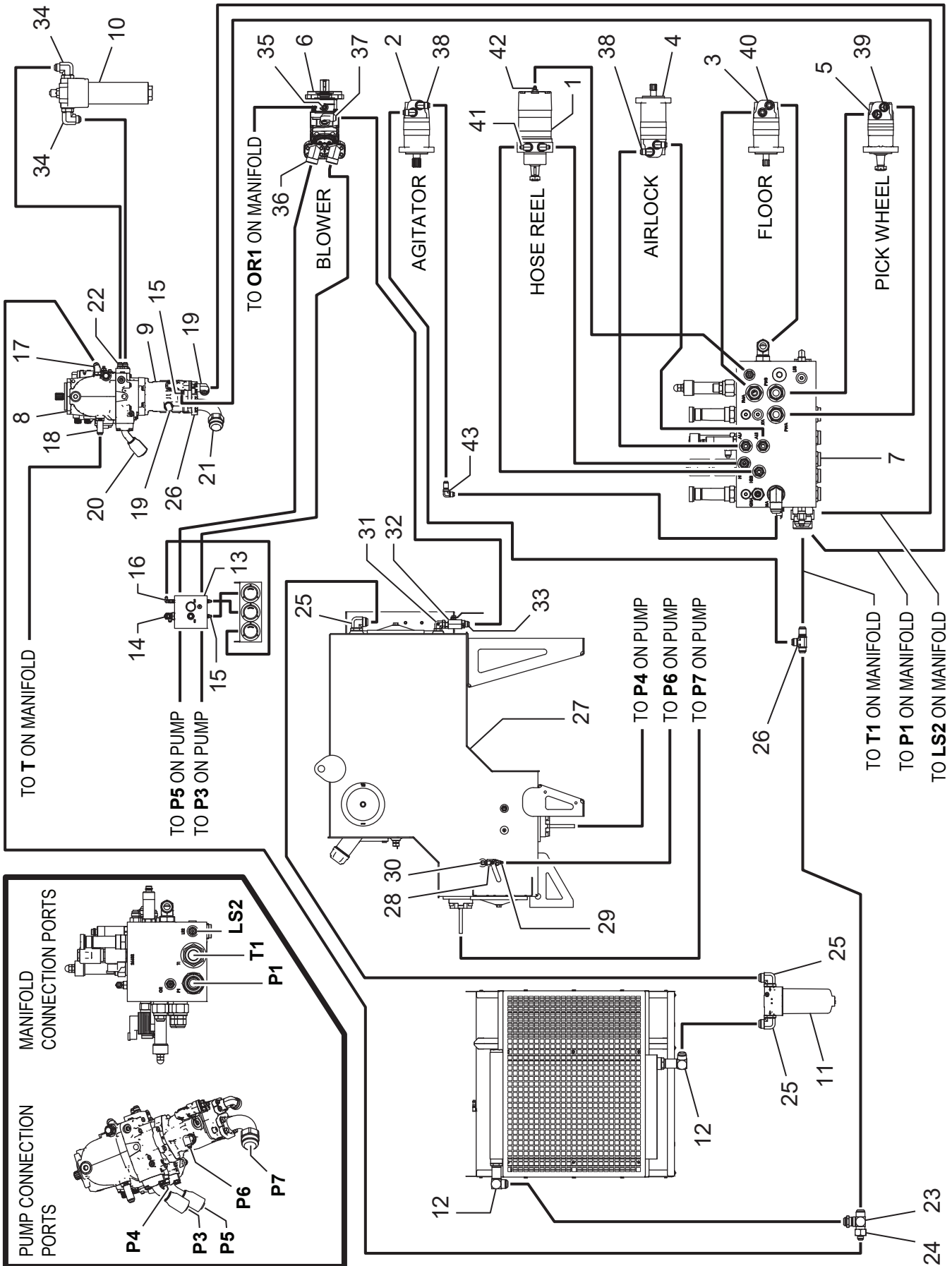
WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

HYDRAULIC SYSTEM COMPONENTS (SERIAL NUMBERS OS-0018 ONWARD)

Ref. No.	Part Number	Description	No. Req'd
1	A4224-001	Hydraulic Motor - Hose Reel	1
2	052991	Hydraulic Motor - Agitator	1
3	052990	Hydraulic Motor - Floor	1
4	052535	Hydraulic Motor - Airlock	1
5	052500	Hydraulic Motor - Pick Wheel	1
6	A2209-001	Hydraulic Motor, Bent Axis - Blower	1
7	A3596-001	Hydraulic Manifold Assembly, MBX System	1
8	A2207-001	Hydraulic Pump, Closed Loop	2
9	A2849-001	Hydraulic Pump, Press. And Flow Comp.	2
10	075747-H	Filter Housing	1
11	A3054-001	Housing, Hydraulic Filter Assembly	1
12	-----	Fitting, #20 MJIC x #20 MSAE ADJ, Extra Long Straight	2
13	A3084-001	Manifold, Closed Loop Flush	1
14	-----	Fitting, #12 MJIC x #12 MSAE ADJ, 90° Elbow	1
15	-----	Fitting, #4 MJIC x #4 MSAE, Straight	5
16	-----	Fitting, #4 MJIC x #4 FJIC SW, 90° Elbow	1
17	-----	Fitting, #12 MJIC x #12 MSAE, 45° Elbow	2
18	-----	Fitting, # 12 MJIC x #12 MSAE, Long Straight	2
19	-----	Fitting, #6 MJIC x #12 MSAE ADJ, 90° Elbow	2
20	-----	Hose Fitting, #16 C62 Flange x #16 Hose, 45° Elbow	4
21	-----	Fitting, #32 MJIC x #32 C61 Flange, 90° Elbow	2
22	-----	Adapter Fitting, #16 C61 Flange x #20 MORS, 90° Elbow	2
23	-----	Fitting, #20 MJIC Bulkhead Branch Tee	1
24	-----	Fitting, Reducing Adapter, #20 FJIC x #13 MJIC	1
25	-----	Fitting, #20 MJIC x #20 MSAE ADJ, 90° Elbow	3
26	-----	Adapter, Run Tee Bulkhead, #16 SAE, Steel	1
27	A2936-001	Hydraulic Reservoir Assembly, 82 Gallon	1
28	A3896-006	Ball Valve, #6 SAE, Full-Port, Steel	1
29	-----	Fitting, #6 MJIC x #6 MSAE, Straight	1
30	-----	Fitting, #6 MSAE ADJ x #6 MSAE ADJ, 90° Elbow	1
31	-----	Fitting, #12 MSAE ADJ x #12 MSAE ADJ, 90° Elbow	1
32	A3896-012	Ball Valve, #12 SAE, Full-Port, Steel	1
33	-----	Fitting, #12 MJIC x #12 MSAE, Straight	1
34	-----	Fitting, #10 MJIC x #12 MSAE ADJ, 90° Elbow	2
35	-----	Adapter, 45° Elbow, #6 SAE #10 ORB, Steel	1
36	-----	Adapter, Elbow, ORFS to ORB, #20 to #12	2

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



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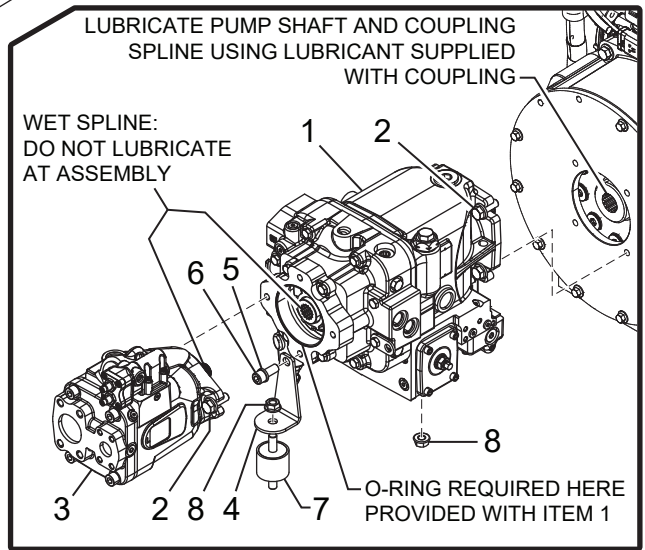
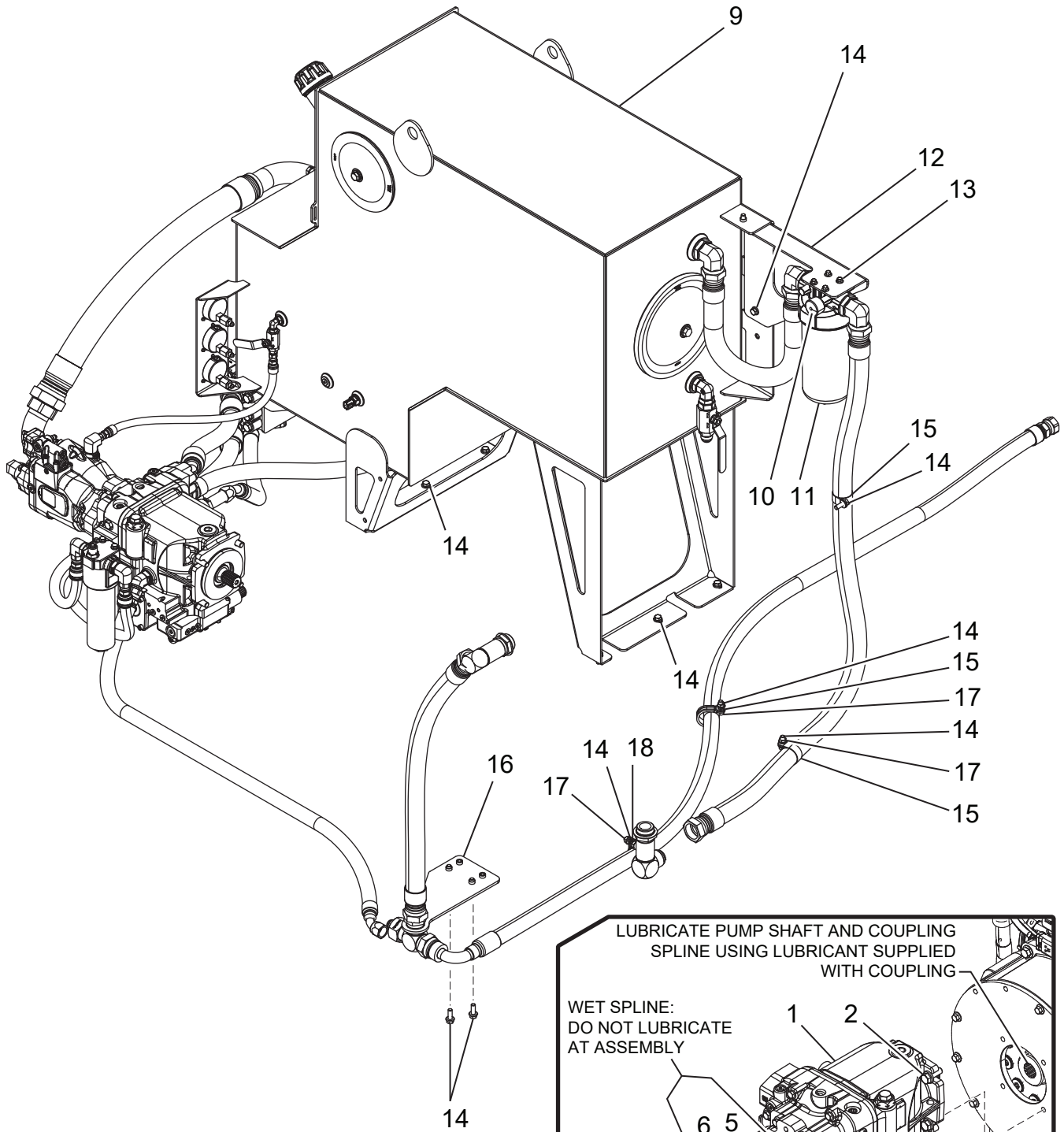
HYDRAULIC SYSTEM COMPONENTS (SERIAL NUMBERS OS-0018 ONWARD)

Ref. No.	Part Number	Description	No. Req'd
37	-----	Adapter, 90° Elbow, #10 SAE #12 JIC, Steel	1
38	-----	Adapter, Long 90° Elbow, #10 SAE #10 ORB, Steel	2
39	-----	Adapter, 45° Elbow, #6 SAE #10 ORB, Steel	2
40	-----	Adapter, Straight, #10 SAE #10 ORB, Steel	2
41	-----	Adapter, 90° Elbow, #6 SAE, #10 ORB, Steel	2
42	-----	Adapter, Straight, #4 SAE #6 ORB, Steel	1
43	-----	Adapter, 90° Elbow Bulkhead, #10 SAE, Steel	1

KITS AND MARKERS

- Standard Hardware Item - Available at your local hardware store.

**WHEN ORDERING PARTS, BE SURE TO STATE
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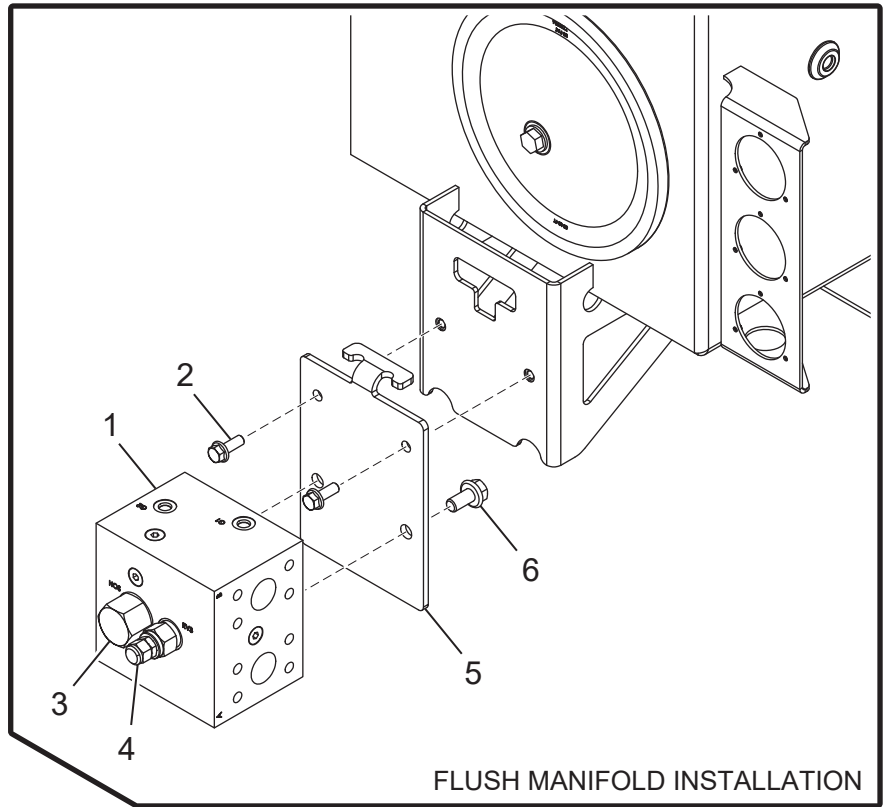
HYDRAULIC SYSTEM INSTALLATION COMPONENTS

Ref. No.	Part Number	Description	No. Req'd
1	A2207-001	Hydraulic Pump, Closed Loop	1
2	●	1/2-13 UNC x 1.25 Hex Flange Screw - Regular Thread	6
3	A2849-001	Hydraulic Pump, Open Loop	1
4	A2682-001	Bracket, Pump Tail Support	1
5	●	1/2 Regular Helical Spring Lock Washers	1
6	●	1/2-13 UNC - 1 1/4 HS HCS Hex. Socket Head Cap Screw	1
7	A2683-001	Isolator, Stud Mount, Type SS, 1/2-13	1
8	●	13 Hex Flange Nut	2
9	A2936-001	Hydraulic Reservoir Assembly, 82 Gallon	1
10	A3058-001	Clogging Indicator, Hydraulic Filter	1
11	A3056-001	Filter Assembly, Hydraulic, 77 GPM, 10 Micron	1
	A3055-001	Hydraulic Filter Element	1
12	A3285-001	Bracket, Hydraulic Return Filter Mount	1
13	●	M8 x 1.25 x 16 Metric Hex Flange Screws	4
14	●	3/8-16 UNC x 1 Hex Flange Screw - Regular Thread	15
15	005650	Cushioned Loop Clamp	3
16	A3258-001	Bracket Assembly, Hydraulic Cooler Bulkhead	1
17	●	16 Hex Flange Nut	3
18	013112	Cushioned Loop Clamp	1

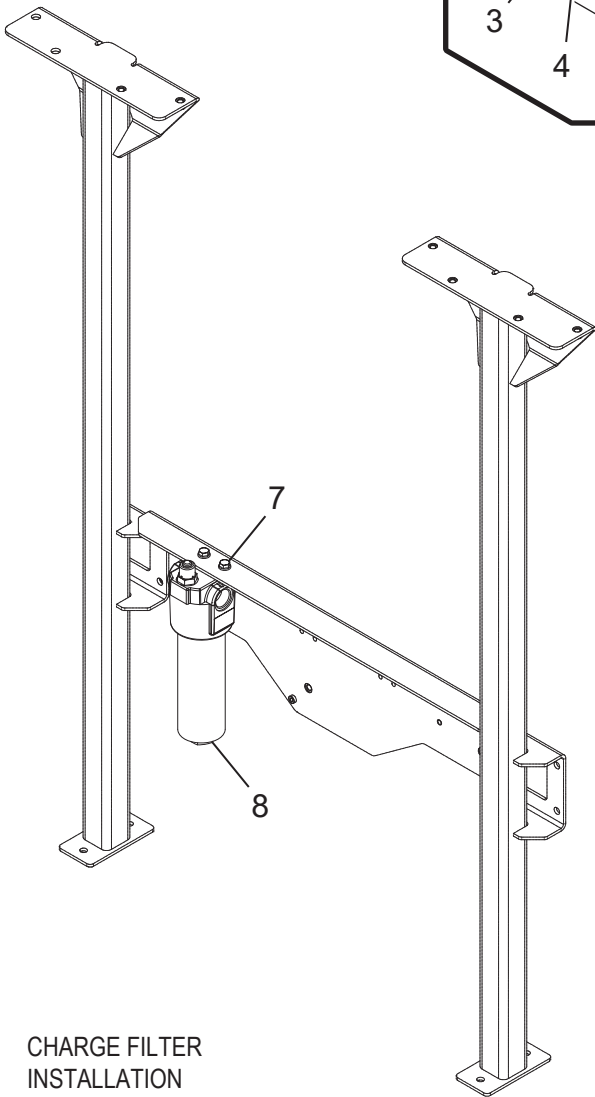
KITS AND MARKERS

- Standard Hardware Item - Available at your local hardware store.

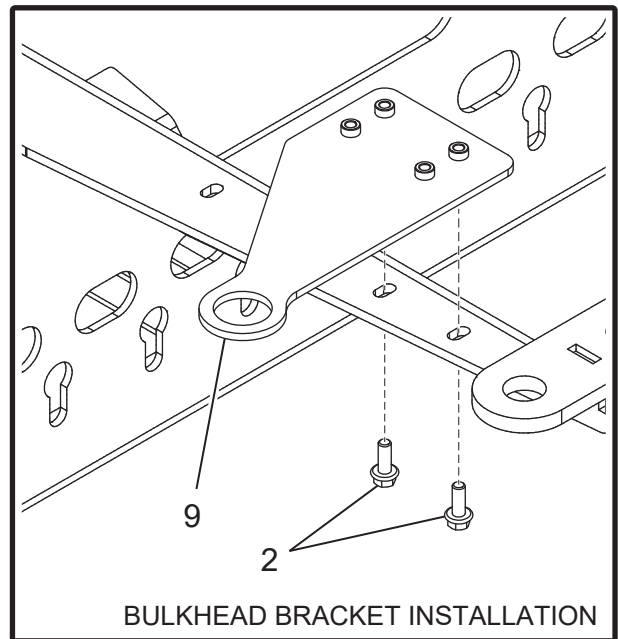
**WHEN ORDERING PARTS, BE SURE TO STATE
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FLUSH MANIFOLD INSTALLATION



CHARGE FILTER
INSTALLATION



BULKHEAD BRACKET INSTALLATION

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

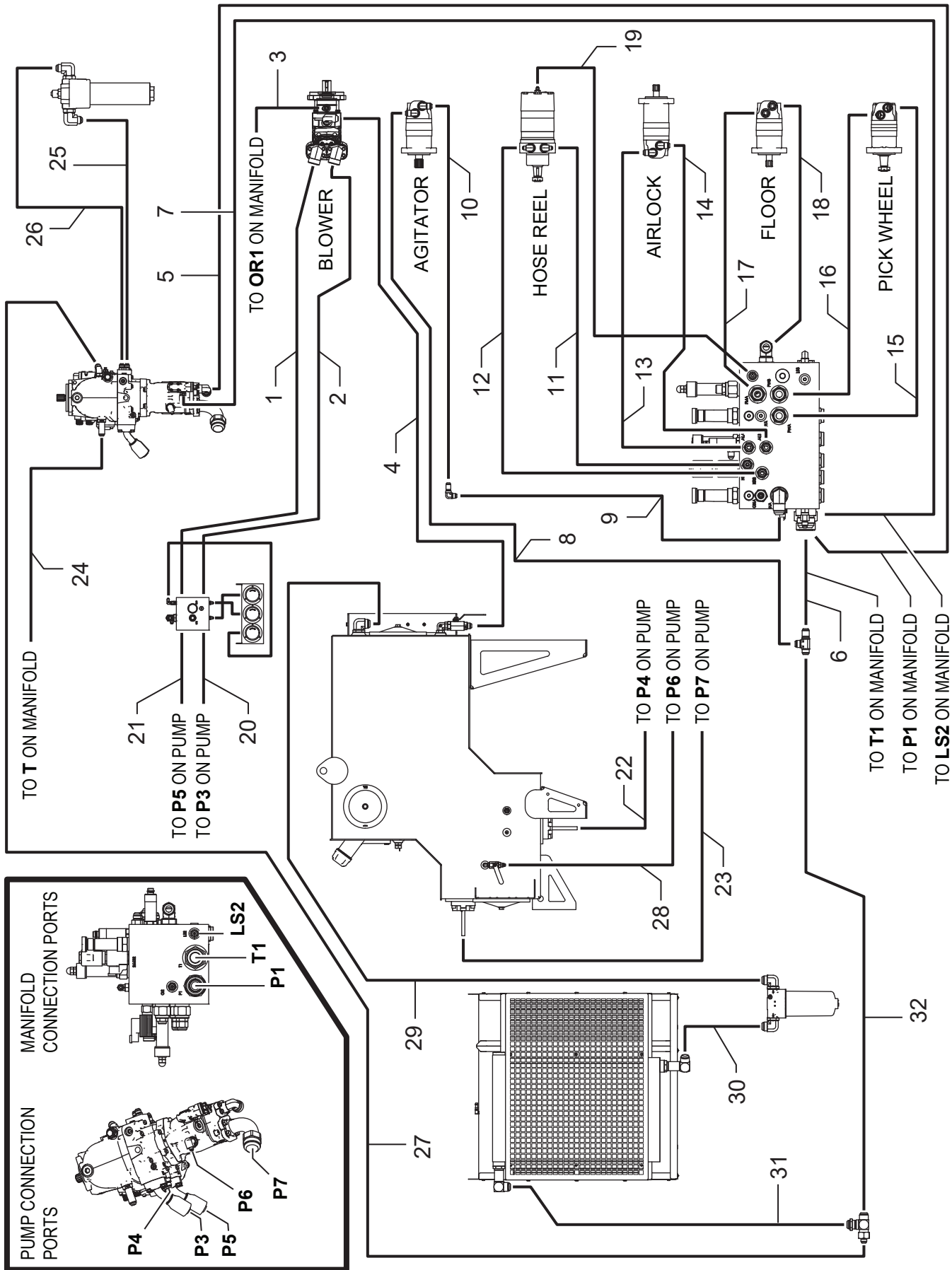
ADDITIONAL HYDRAULIC SYSTEM INSTALLATION COMPONENTS

Ref. No.	Part Number	Description	No. Req'd
1	A3088-001	Manifold Assembly, Closed Loop Flush	1
2	●	3/8-16 UNC x 1 Hex Flange Screw - Regular Thread	4
3	A3086-001	Cartridge Valve, Hot Oil Shuttle	1
4	A3087-001	Cartridge Valve, Pilot Operated Relief, 50-1500 psi	1
5	A4434-001	Bracket, Manifold Drop	1
6	●	1/2-13 UNC x 1 Hex Flange Screw - Regular Thread	2
7	●	5/16-18 UNC x 0.625 Hex Flange Screw - Regular Thread	2
8	075747	Filter Assembly, High Pressure Hydraulic	1
	075747-C	Filter Element	1
	A3588-001	Filter Indicator	1
9	A3258-001	Hydraulic Cooler Bulkhead Bracket Assembly	1

KITS AND MARKERS

- Standard Hardware Item - Available at your local hardware store.

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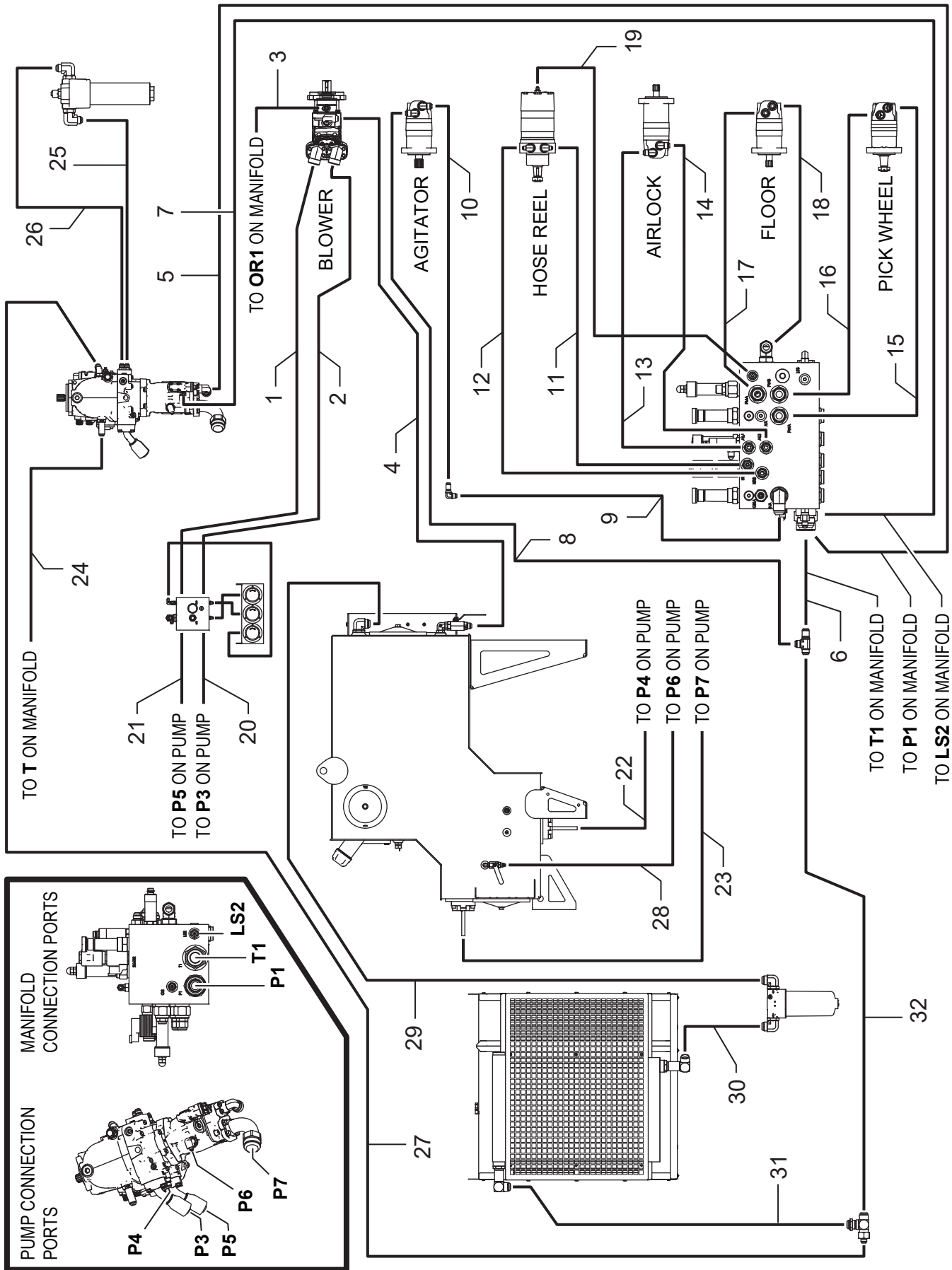
WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

HYDRAULIC SYSTEM HOSES (SERIAL NUMBERS OS-0018 ONWARD)

Ref. No.	Part Number	Description	No. Req'd
1	A4799-001	1/4 in. ID 100R13 Hose x 161 in. OAL with #20 C62 90 x #20ORFS	1
2	A4813-001	1/4 in. ID 100R13 Hose x 158 in. OAL with #20 C62 90 x #20ORFS	1
3	A4814-001	3/8 in. ID 100R17 Hose x 145 in. OAL with #6 JIC x #6 JIC	1
4	A4815-001	3/4 in. ID 100R4 Hose x 113 in. OAL with #12 90 JIC x #12 JIC	1
5	A4817-001	1 in. ID 100R17 Hose x 267 in. OAL with #16 ORFS x #16 ORFS	1
6	A4819-001	1 in. ID 100R4 Hose x 133 in. OAL with #16 JIC x #16 JIC	1
7	A4820-001	1/4 in. ID 100R17 Hose x 274 in. OAL with #4 JIC x #4 JIC	1
8	A4825-001	5/8 in. ID 100R17 Hose x 23.5 in. OAL with #10 JIC x #10 JIC	1
9	A4826-001	5/8 in. ID 100R17 Hose x 132 in. OAL with #10 JIC x #10 JIC	1
10	A4827-001	5/8 in. ID 100R17 Hose x 25.5 in. OAL with #10 JIC x #10 JIC	1
11	A4828-001	3/8 in. ID 100R17 Hose x 243 in. OAL with #6 JIC x #6 JIC 90	1
12	A4829-001	3/8 in. ID 100R17 Hose x 236 in. OAL with #6 JIC x #6 90 JIC	1
13	A4830-001	3/8 in. ID 100R17 Hose x 36.5 in. OAL with #6 90 JIC x #6 JIC	1
14	A4831-001	3/8 in. ID 100R17 Hose x 36.5 in. OAL with #6 JIC x #6 90 JIC	1
15	A4833-001	5/8 in. ID 100R17 Hose x 14.5 in. OAL with #10 90 JIC x #10 JIC	1
16	A4834-001	5/8 in. ID 100R17 Hose x 16 in. OAL with #10 JIC x #10 90 JIC	1
17*	A7876-001	5/8 in. ID 100R17 HOSE x 22.0 in. OAL with #10 90 JIC x #10 JIC	1
17★	A7190-001	5/8 in. ID 100R17 HOSE x 19.0 in. OAL with #10 90 JIC x #10 JIC	1
18**	A7875-001	5/8 in. ID 100R17 HOSE x 26.0 in. OAL with #10 JIC x #10 JIC	1
19	A4838-001	1/4 in. ID 100R17 Hose x 240 in. OAL with #4 JIC x #4 90 JIC	1

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

HYDRAULIC SYSTEM HOSES (SERIAL NUMBERS OS-0018 ONWARD)

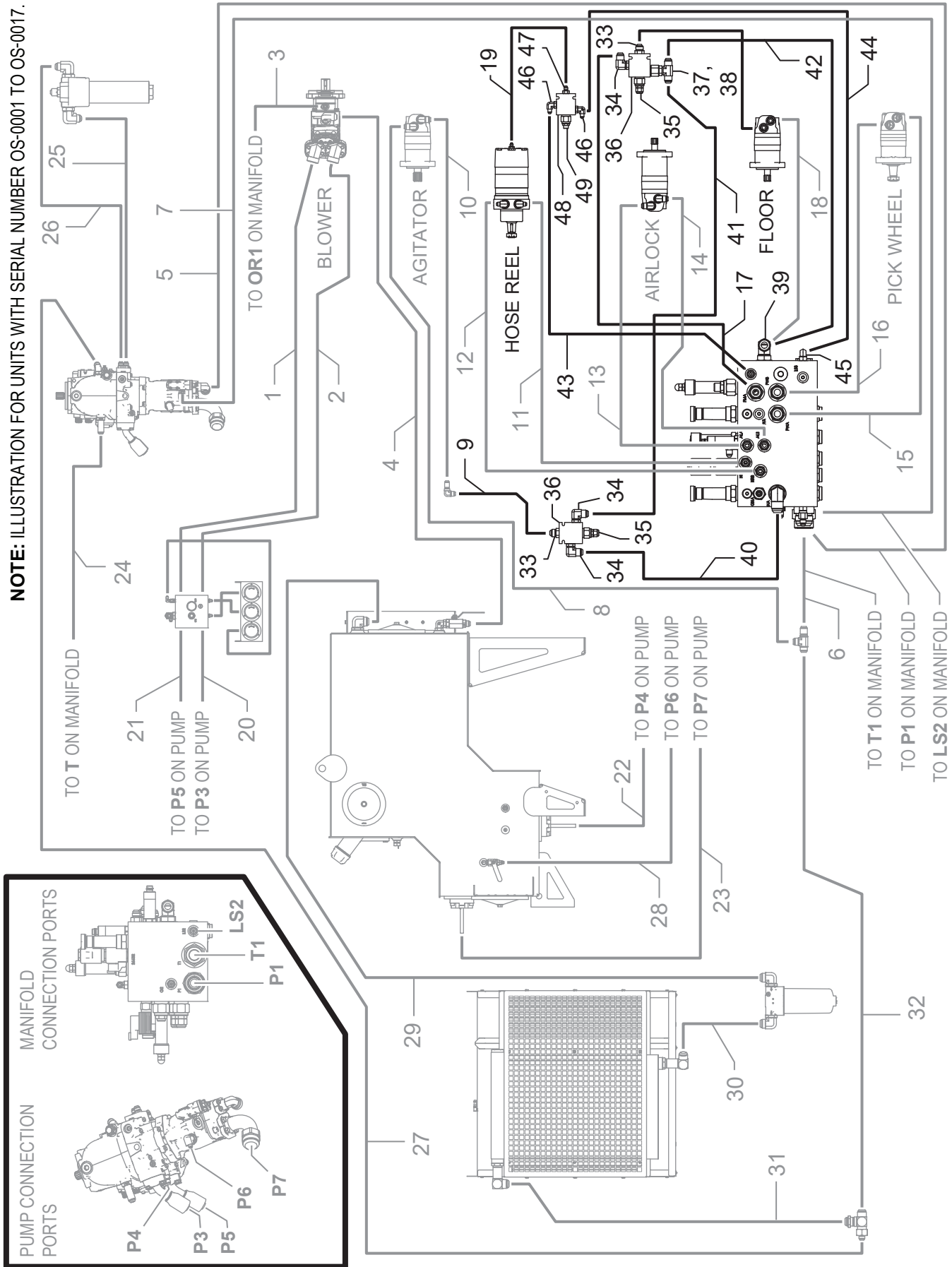
Ref. No.	Part Number	Description	No. Req'd
20	A4624-001	1 in. 100R13 Hose x 25.5 in. OAL with #16 C62 45° Elbow x #20 FORS ST SW	1
21	A4625-001	1 in. 100R13 Hose x 25 in. OAL with #16 C62 45° Elbow x #20 FORS ST SW	1
22	A4626-001	1 in. 100R4 Hose x 30.5 in. OAL with #24 C61 90° Elbow x #16 FJIC ST SW	1
23	A4627-001	2 in. 100R4 Hose x 35 in. OAL with #32 C61 90° Elbow x #32 FJIC ST SW	1
24	A4628-001	3/4 in. 100R4 Hose x 35 in. OAL with #12 FJIC ST x #12 FJIC 45° Elbow	1
25	A4629-001	5/8 in. 100R17 Hose x 26 in. OAL with #10 FJIC ST x #10 FJIC ST	1
26	A4630-001	5/8 in. 100R17 Hose x 33 in. OAL with #10 FJIC ST x #10 FJIC ST	1
27	A4631-001	3/4 in. 100R4 Hose x 55 in. OAL with #12 FJIC ST x #12 FJIC 45° Elbow	1
28	A4632-001	3/8 in. 100R1S Hose x 26 in. OAL with #6 FJIC ST x #6 FJIC ST	1
29	A4634-001	1-1/4 in. 100R4 Hose x 26 in. OAL with #20 FJIC ST SW x #20 FJIC ST SW	1
30	A4635-001	1-1/4 in. 100R4 Hose x 74 in. OAL with #20 FJIC ST SW x #20 FJIC ST SW	1
31	A4637-001	1-1/4 in. 100R4 Hose x 34.5 in. OAL with #20 FJIC ST SW x #20 FJIC ST SW	1
32	A4706-001	1 in. 100R4 Hose x 101 in. OAL with #16 FJIC ST SW x #20 FJIC 90° Elbow	1

KITS AND MARKERS

- | | |
|-----------|---|
| A4704-001 | Hydraulic Hose and Fitting Kit, MBX |
| * | MODEL OS with Pressure Reduction and Redesigned Floor |
| ★ | MODEL OO and forward |

**WHEN ORDERING PARTS, BE SURE TO STATE
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NOTE: ILLUSTRATION FOR UNITS WITH SERIAL NUMBER OS-0001 TO OS-0017.



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

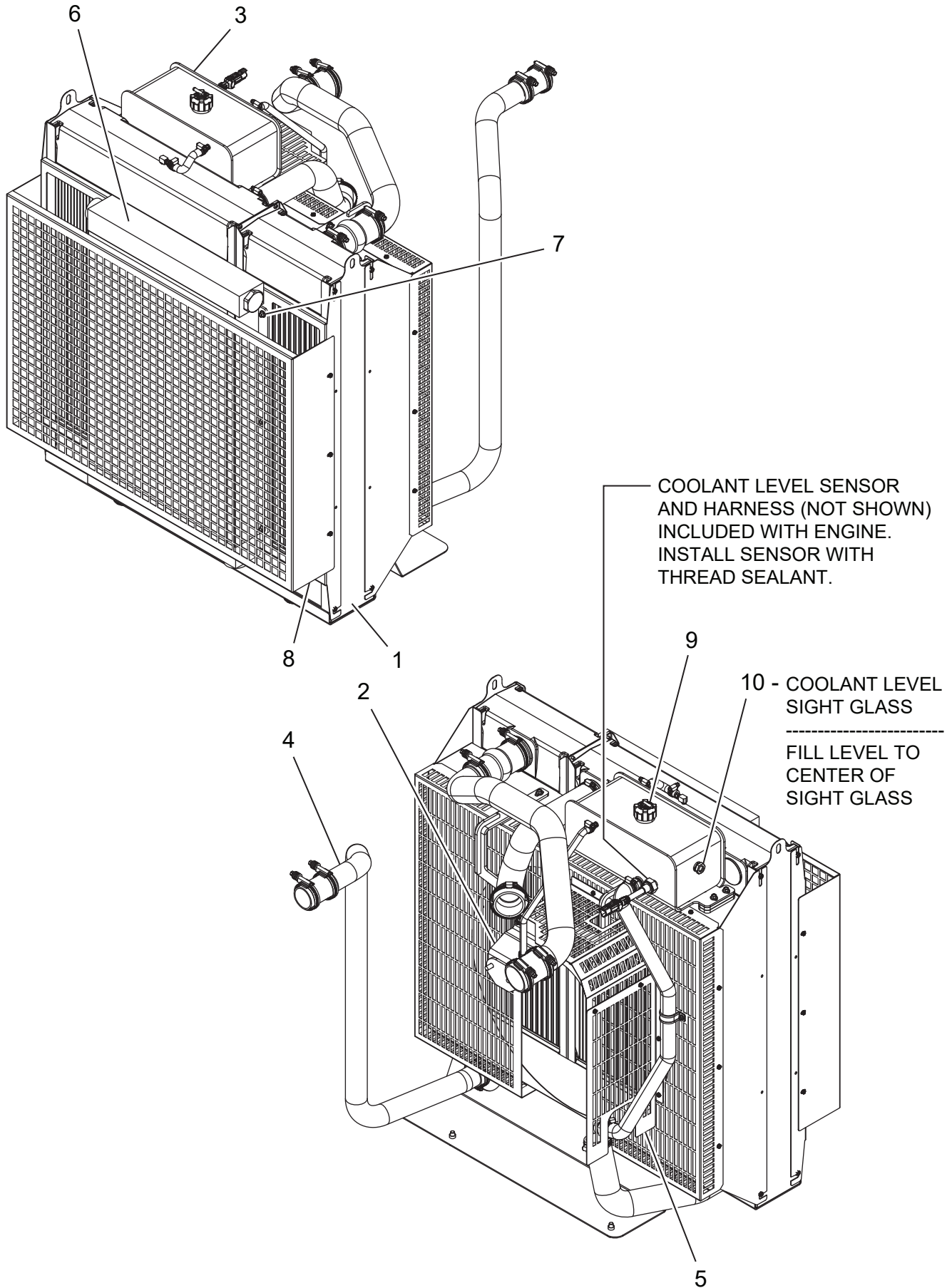
HYDRAULIC SYSTEM HOSES (SERIAL NUMBERS OS-0001 TO OS-0017)

Ref. No.	Part Number	Description	No. Req'd
1 - 16	<i>Illustrated for Reference; Same Part Numbers as Shown on Previous Pages for Serial Numbers OS-0018 Onward</i>		
17	A5983-001	5/8 in. ID 100R17 Hose x 33.25 in. OAL with #10 90 JIC, #10 JIC	1
18 - 32	<i>Illustrated for Reference; Same Part Numbers as Shown on Previous Pages for Serial Numbers OS-0018 Onward</i>		
33	-----	Fitting, #10 MIJC x #8 MSAE, Straight	2
34	-----	Fitting, #10 MIJC x #8 MSAE ADJ, 90° Elbow	3
35	A5976-001	Pressure Reducing Valve, Pilot Operated, 50 - 3000 psi, SAE 10	2
36	A5974-001	Manifold, Inline, SAE 10	2
37	-----	Fitting, #8 MSAE x #10 FSAE, Straight	1
38	-----	Fitting, Tee, #10 MJIC x #10 MJIC x #10 MJIC	1
39	-----	Fitting, Tee, #10 MJIC x #10 MSAE x #10 MSAE	1
40	A5980-001	5/8 in. ID 100R17 Hose x 14.5 in. OAL with #10 JIC, #10 JIC	1
41	A5984-001	5/8 in. ID 100R17 Hose x 24.25 in. OAL with #10 90 JIC, #10 JIC	1
42	A5981-001	5/8 in. Tubing, JIC	1
43	A5772-001	1/4 in. ID 100R17 Hose x 16 in. OAL with #4 JIC x #4 90 JIC	1
44	A5771-001	1/4 in. ID 100R17 Hose x 18 in. OAL with #4 JIC x #6 90 JIC	1
45	-----	Adapter, 90° Elbow, #6 SAE x #10 ORB, Steel NOTE: This item is connected to port T3 on original manifold configuration.	1
46	-----	Fitting, #4 MJIC x #6 MSAE ADJ, 90° Elbow	2
47	-----	Fitting, Restrictor, O-Ring, Straight	1
48	A5764-001	Manifold, Inline	1
49	A5766-001	Pressure Reducing Valve, Pilot Operated	1

NOTE: *These pages illustrate the Hydraulic System that had pressure reducing kits on units with Serial Numbers OS-0001 to OS-0017. All other components are the same. Refer to the previous pages for part numbers shown above to be the same as illustrated in units with serial numbers OS-0018 onward.*

NOTE: *The darker items illustrated show the different layout on units with Serial Numbers OS-0001 to OS-0017. The lighter items illustrated are the common items on units with Serial Numbers OS-0018 onward.*

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



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COOLING SYSTEM COMPONENTS

Ref. No.	Part Number	Description	No. Req'd
1	A2592-001	Cooling Package, JD404HFC04, CAC & RAD	1
2	A2622-001	Cooling Package Bracket Kit, JD404HFC04	1
3	A3362-001	Coolant Degas Tank Assembly, JD404HFC04	1
4	A2624-001	Hose And Pipe Kit, JD404HFC04	1
5	A2593-001	Belt Guards Kit, JD404HFC04	1
6	A2625-001	Hydraulic Oil Heat Exchanger	1
7	●	M8 x 1.25 x 16 Indented Hex Flange Head Machine Screw	6
8	A2627-001	Cooling Package Stone Guard Kit, JD404HFC04	1
9	A2614-001	Radiator Cap, 1.00 Bar	1
10	A4693-001	Sight Glass, 1/2 NPT	1

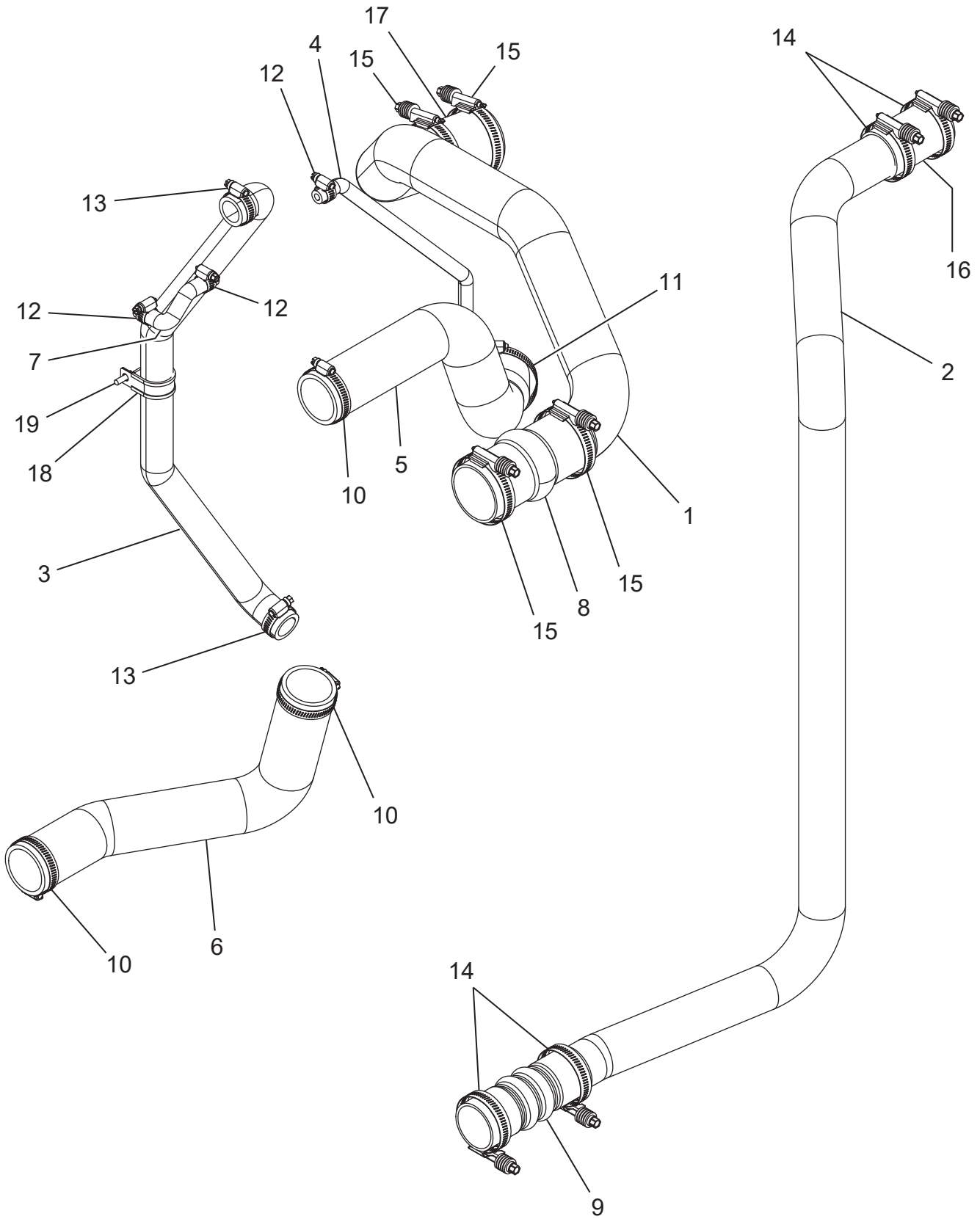
NOT SHOWN

A4470-001	Coolant Level Sensor	1
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KITS AND MARKERS

- Standard Hardware Item - Available at your local hardware store.

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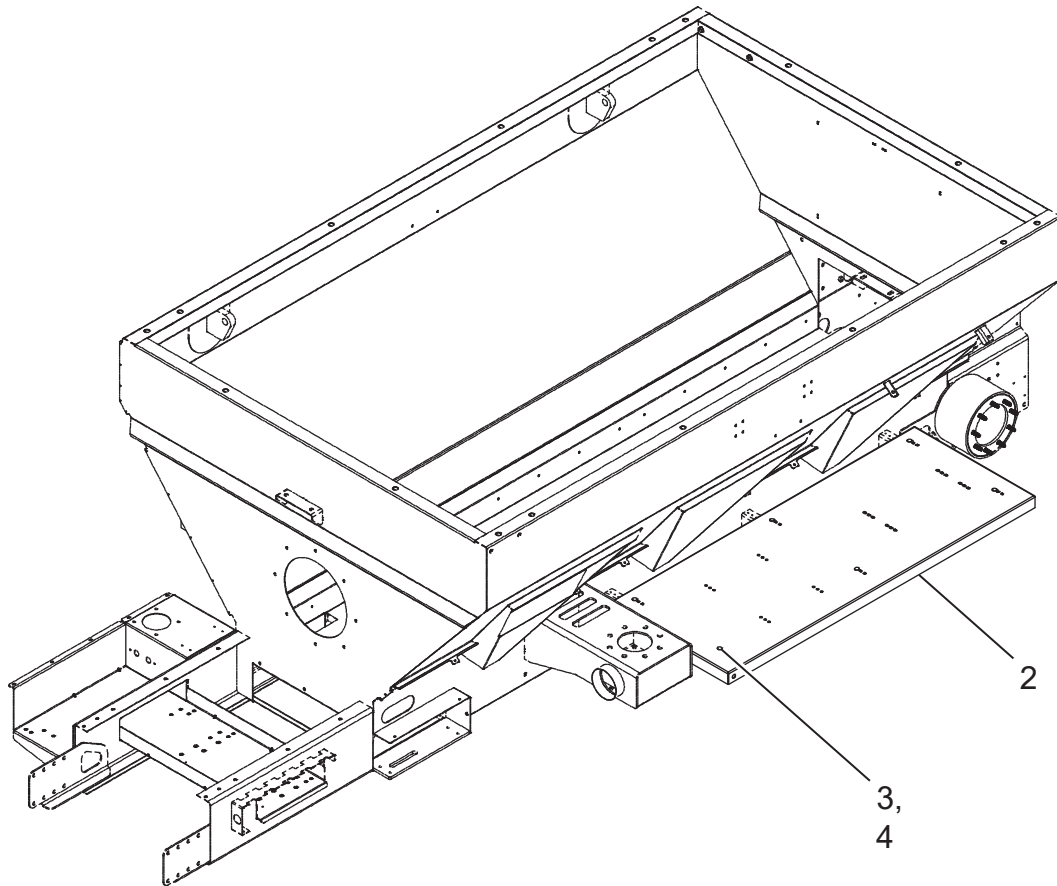
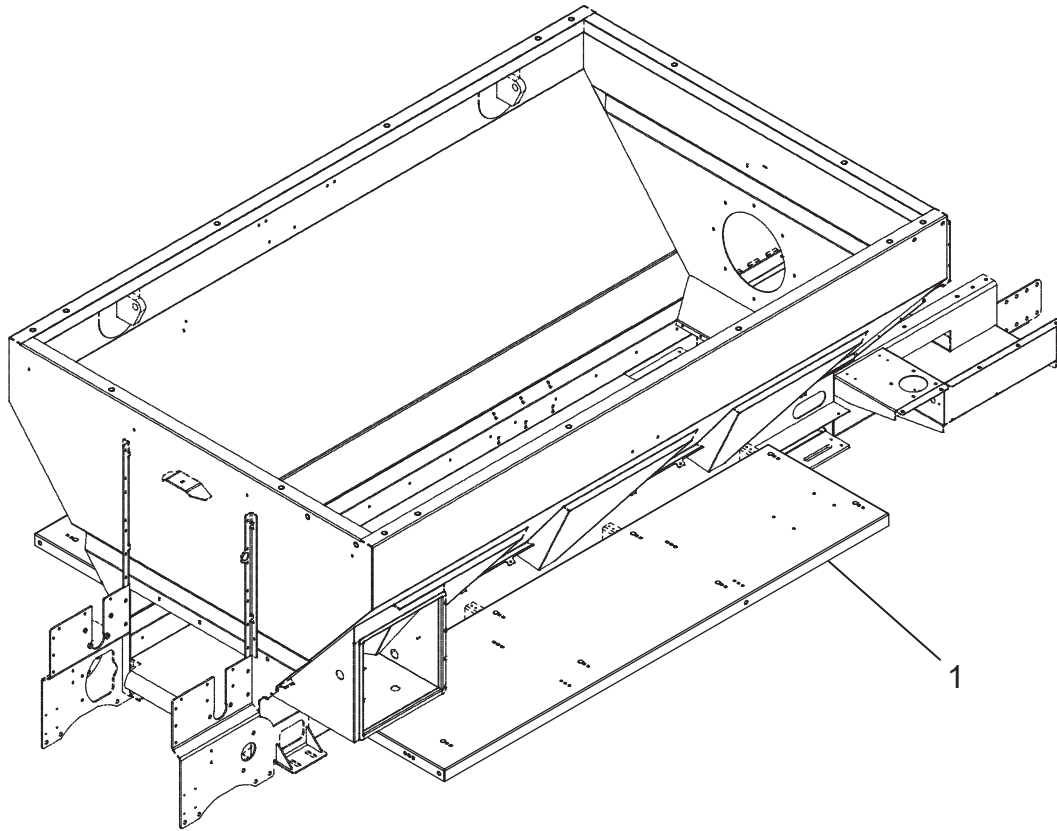
COOLING SYSTEM COMPONENTS

Ref. No.	Kit Ref.	Part Number	Description	No. Req'd
1	▲	A2596-001	CAC Pipe, Cold Side	1
2	▲	A2597-001	CAC Pipe, Hot Side	1
3	▲	A2600-001	Hose, Degas Return	1
4	▲	A2601-001	Hose, Degas Vent to Thermostat Housing	1
5	▲	A2598-001	Radiator Hose, Upper	1
6	▲	A2599-001	Radiator Hose, Lower	1
7	▲	A3358-001	Hose, Degas Vent to Radiator	1
8	▲	A3359-001	Pipe Coupling, Hump, CAC, Cold Side 2.5 in.	1
9	▲	A3360-001	Pipe Coupling, CAC, Hot Side 2.0 in.	1
10	▲	A2182-006	Hose Clamp, Worm Gear, SAE J1508 Type F, Size 32	3
11	▲	A2182-008	Hose Clamp, Worm Gear, SAE J1508 Type F, Size 48	1
12	▲	A2182-001	Hose Clamp, Worm Gear, SAE J1508 Type F, Size 6	4
13	▲	A2182-004	Hose Clamp, Worm Gear, SAE J1508 Type F, Size 16	2
14	▲	A2605-003	Hose Clamp, CT, SAE J1508 SLHD, Size 262	4
15	▲	A2605-004	Hose Clamp, CT, SAE J1508 SLHD, Size 312	4
16	▲	A2603-001	Pipe Coupling, CAC, Hot Side	1
17	▲	A2604-001	Pipe Coupling, CAC, Cold Side	1
18	▲	A2623-001	Loop Clamp, Cushioned, 1.375 in. Dia.	1
19	▲	●	M6 x 1 x 16 Indented Hex Flange Head Machine Screw	1

KITS AND MARKERS

- ▲ A2624-001 Hose And Pipe Kit, JD404HFC04
- Standard Hardware Item - Available at your local hardware store.

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



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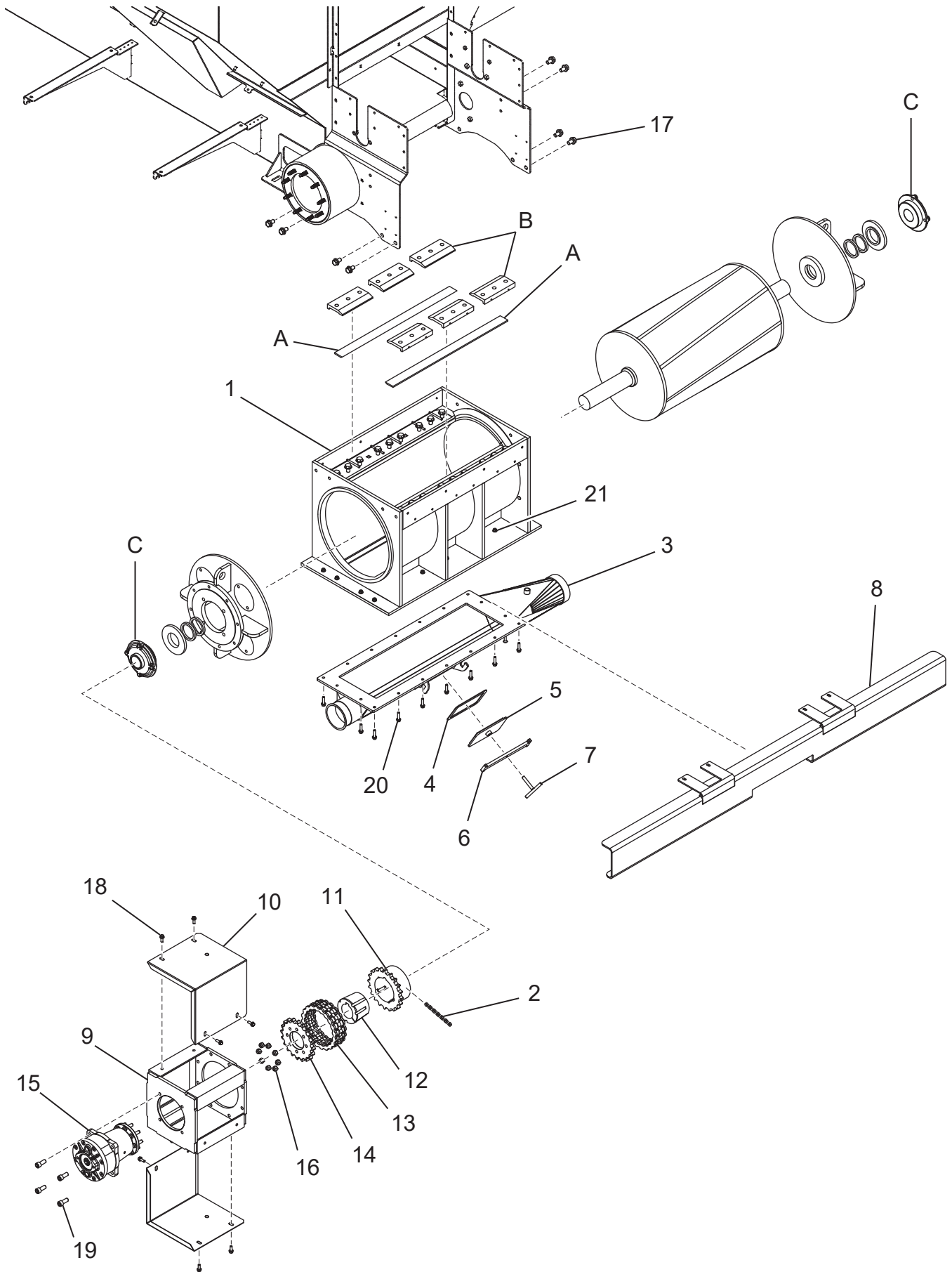
UNIT FENDERS

Ref. No.	Part Number	Description	No. Req'd
1	A3821-001	Fender, Passenger Side	1
2	A3819-001	Fender, Driver Side	1
3	●	3/8-16 UNC - 1 Round Head Square Neck Bolt	14
4	●	3/8-16 Hex Flange Nut	14

KITS AND MARKERS

- Standard Hardware Item - Available at your local hardware store.

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AIRLOCK ASSEMBLY

Ref. No.	Kit Ref.	Part Number	Description	No. Req'd
1	▲	053192	18 x 33 Standard Duty Airlock	1
	■	045214	18 x 33 Severe Duty Airlock	1
A	▲■	053200	Airlock Knife	2
B	▲■	053201	Clamp, Airlock Knife	6
C	▲■	052754	Flange Bearing	2
2	▲■	045201	Coupling Chain	1
3	▲■	053171	5 in. Flow Thru Discharge Weldment	1
4	▲■	053174	Clean Out Panel Gasket	1
5	▲■	F1216-0049	Airlock Cleanout Panel	1
6	▲■	F1216-0048	Airlock Cleanout Clamp Bar	1
7	▲■	053172	Airlock Cleanout T-Bolt	1
8	▲■	A4259-001	Rear Impact Guard	1
9	▲■	045254	Gearbox Standoff	1
10	▲■	F1240-0041	Airlock Coupling Guard	2
11	▲■	045199	Coupling, Chain, Taper-Lock	1
12	▲■	045202	Bushing, Taper, 2-15/16	1
13	▲■	045201	Chain Couplings	1
14	▲■	045230	Coupling Sprocket Machining	1
15	▲■	A7838-001	Feeder Gearbox	1
	▲■	A7837-001	Gearbox, SunGear	1
16	▲■	WL6-80	Wheel Lug, 1/2-20 60°, ZPS	8
17	▲■	●	5/8-11 UNC x 1 Hex Flange Screw - Regular Thread	8
18	▲■	●	3/8-16 UNC x 1 Hex Flange Screw - Regular Thread	8
19	▲■	●	5/8-11 UNC - 1-1/2 Hexagon Socket Head Cap Screw	4
20	▲■	●	3/8-16 UNC x 1.5 Hex Flange Screw - Regular Thread	16
21	▲■	●	3/8-16 Prevailing Torque Type Hex Flange Nut	18

NOT SHOWN

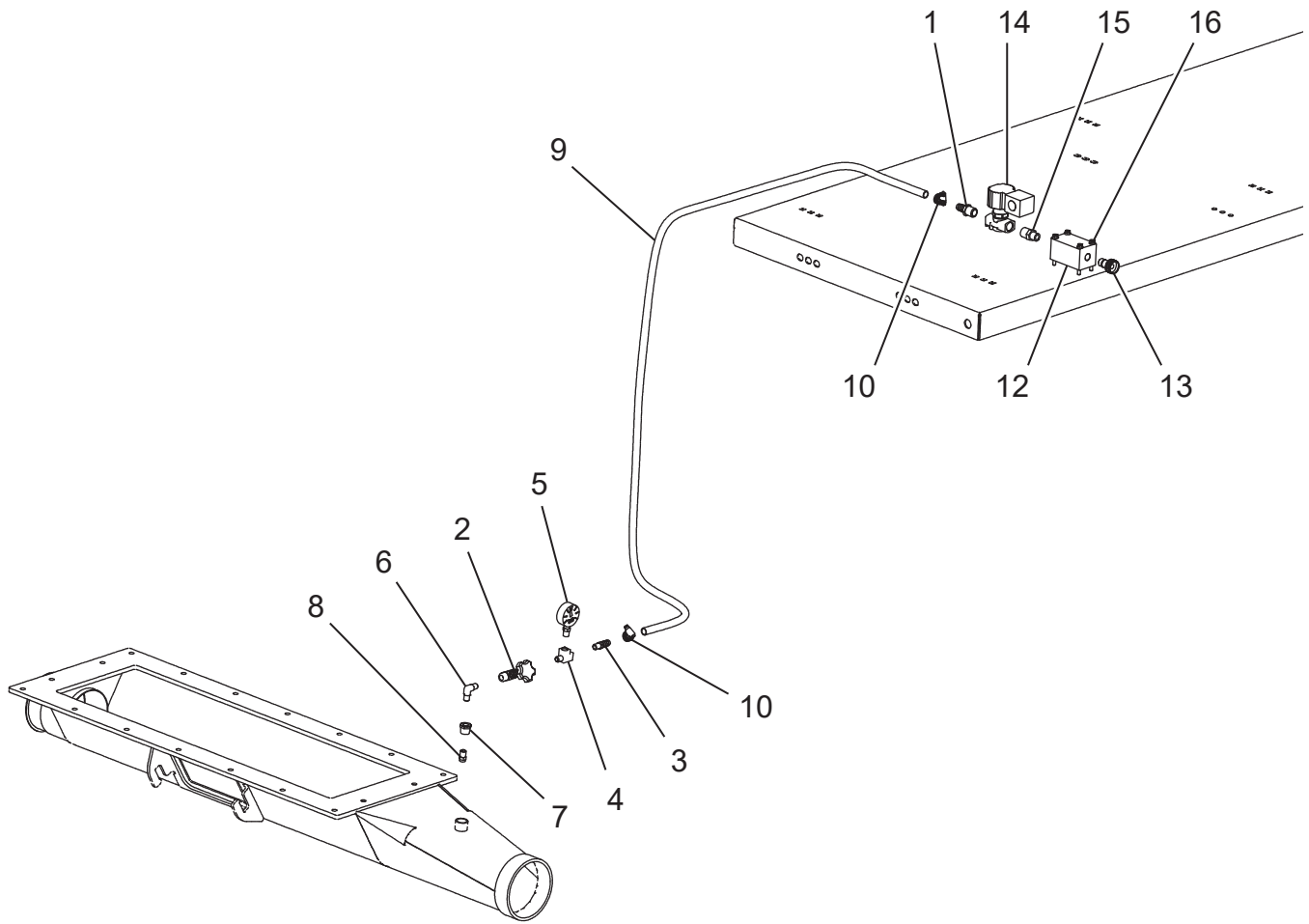
▲■	012306	5 in. Hose Coupler for Drop Pan	1
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KITS AND MARKERS

▲	A2532-001	Standard Duty Airlock, Top Level Assembly
■	A2532-002	Severe Duty Airlock, Top Level Assembly
●	Standard Hardware Item - Available at your local hardware store.	

NOTE: Items A, B and C are part of the Airlock that will need to be serviced or replaced as the machine is in service.

**WHEN ORDERING PARTS, BE SURE TO STATE
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DUST SUPPRESSION SYSTEM - HOSE HOOKUP

Ref. No.	Part Number	Description	No. Req'd
1	371044-16	Straight, 1/2 in. NPTM x 1/2 in. Hose	2
2	052941	1/4 in. Brass Needle Valve	1
3	A4543-011	Hose Barb, NPT, Male, Brass	1
4	A4546-002	Street Tee, NPT, M-F-F, Brass	1
5	052771	Pressure Gauge, 100 psi	1
6	A4544-002	Pipe Elbow, NPT, M-M, Brass	1
7	160735	Reducer Bushing 1/2 in. to 1/4 in.	1
8	052481	Brass Nozzle Bex 1/4S14	1
9	190030	1/2 in. Black Hose (80 in. Long)	1
10	A2182-001	Hose Clamp, Worm Gear, SAE J1508 Type F, Size 6	6
11	●	10-24 Hex Machine Screw Nut	4
12	A3091-001	Manifold-Adapter, Dust Supress	1
13	A4396-001	Fitting - Hose, Garden, Female	1
14	371801	DEMA Water Valve with Actuator	1
15	005032	Lenz #6-8 RPN	1
16	●	1/4-20 UNC x 2.5 Hex Flange Screw - Regular Thread	4

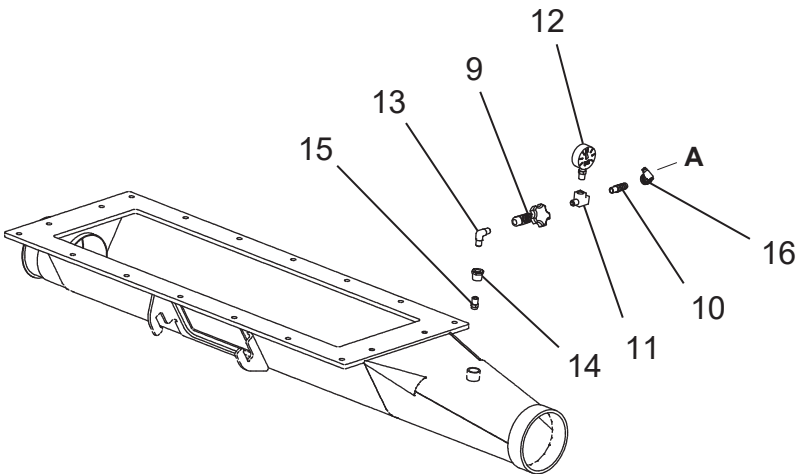
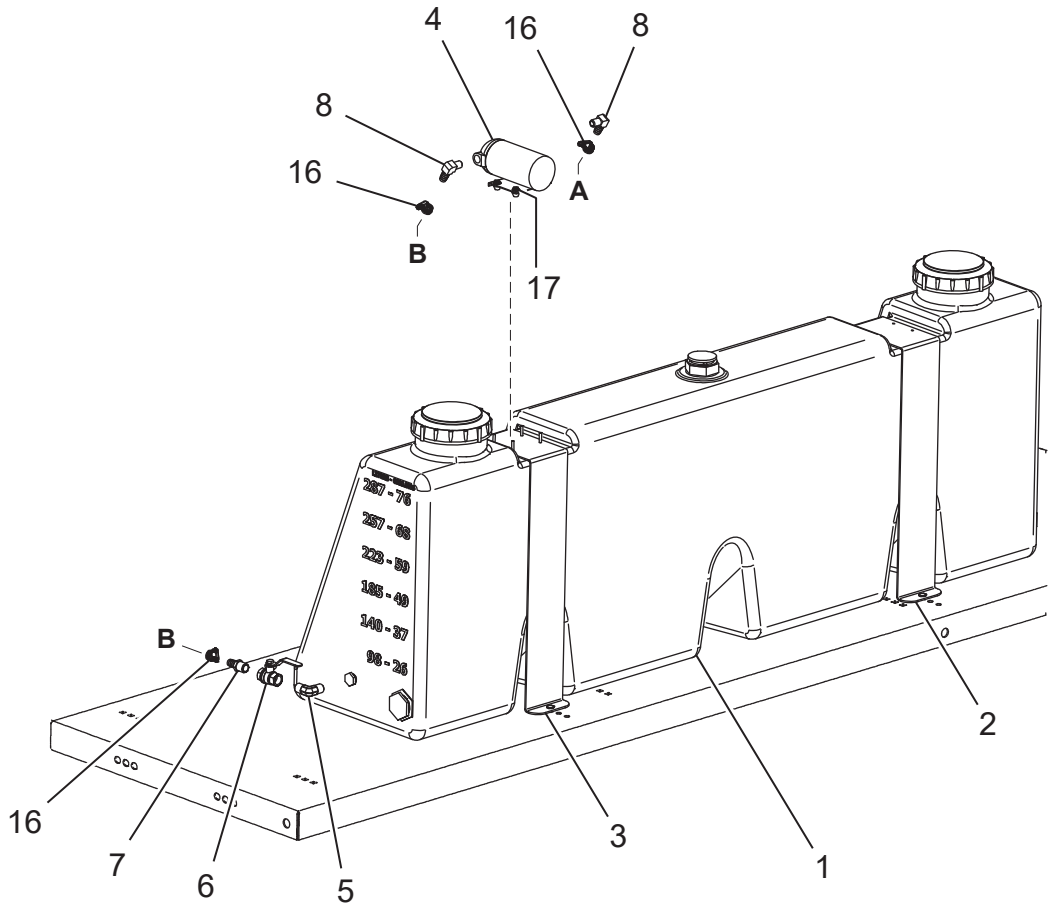
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FW71746	Liquid Tight Fitting, connected to Water Valve	1
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KITS AND MARKERS

- Standard Hardware Item - Available at your local hardware store.

**WHEN ORDERING PARTS, BE SURE TO STATE
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OPTIONAL DUST SUPPRESSION SYSTEM - ONBOARD TANK

Ref. No.	Part Number	Description	No. Req'd
1	052718	Tank, 75 Gallon	1
2	A4455-001	Water Tank Strap	1
3	A4456-001	Water Tank Pump Strap	1
4	052667	Pump	1
5	A4544-004	Pipe Elbow, NPT, M-M, Brass	1
6	070122	1/2 NPT Ball Valve	1
7	371044-16	Straight, 1/2 in. NPTM x 1/2 in. Hose	2
8	371044-11	Elbow, 3/8 in. NPT x 1/2 in. Hose	2
9	052941	1/4 in. Brass Needle Valve	1
10	A4543-011	Hose Barb, NPT, Male, Brass	1
11	A4546-002	Street Tee, NPT, M-F-F, Brass	1
12	052771	Pressure Gauge, 100 psi	1
13	A4544-002	Pipe Elbow, NPT, M-M, Brass	1
14	160735	Reducer Bushing 1/2 in. to 1/4 in.	1
15	052481	Brass Nozzle Bex 1/4S14	1
16	A2182-001	Hose Clamp, Worm Gear, SAE J1508 Type F, Size 6	4
17	●	10-24 Hex Machine Screw Nut	4

NOT SHOWN

190030	●	1/2 in. Black Hose (80 in. Long)	1
●		Hex Flange Nut (used to fasten water tank strap to underside of fender)	4

KITS AND MARKERS

- Standard Hardware Item - Available at your local hardware store.

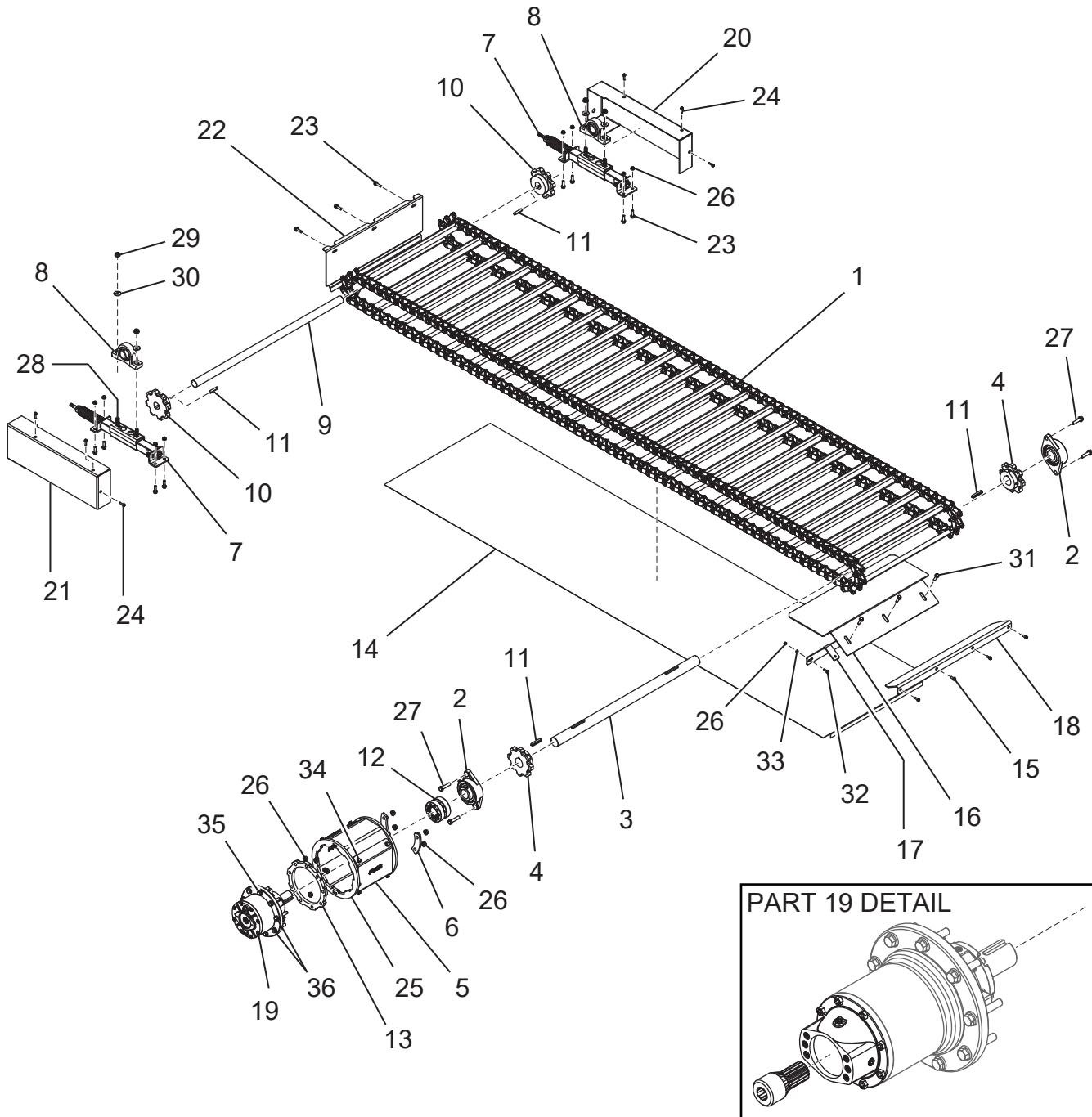
NOTE: Connections **A-A** and **B-B** shown in the illustration are made using the 1/2 in. Black Hose (part number 190030; not shown).

**WHEN ORDERING PARTS, BE SURE TO STATE
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CHAIN FLOOR ASSEMBLY

Ref. No.	Part Number	Description	No. Req'd
1	A3404-001	Floor Chain Assembly - Slatted	1
2	A2289-001	Rear Floor Shaft Bearing	2
3	A6952-001	Drive Shaft, Rear Floor	1
4	052224	Sprocket, 2 in. Bore, Steel	2
5	A6951-001	Sheet - Torque Arm Cover	2

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

CHAIN FLOOR ASSEMBLY

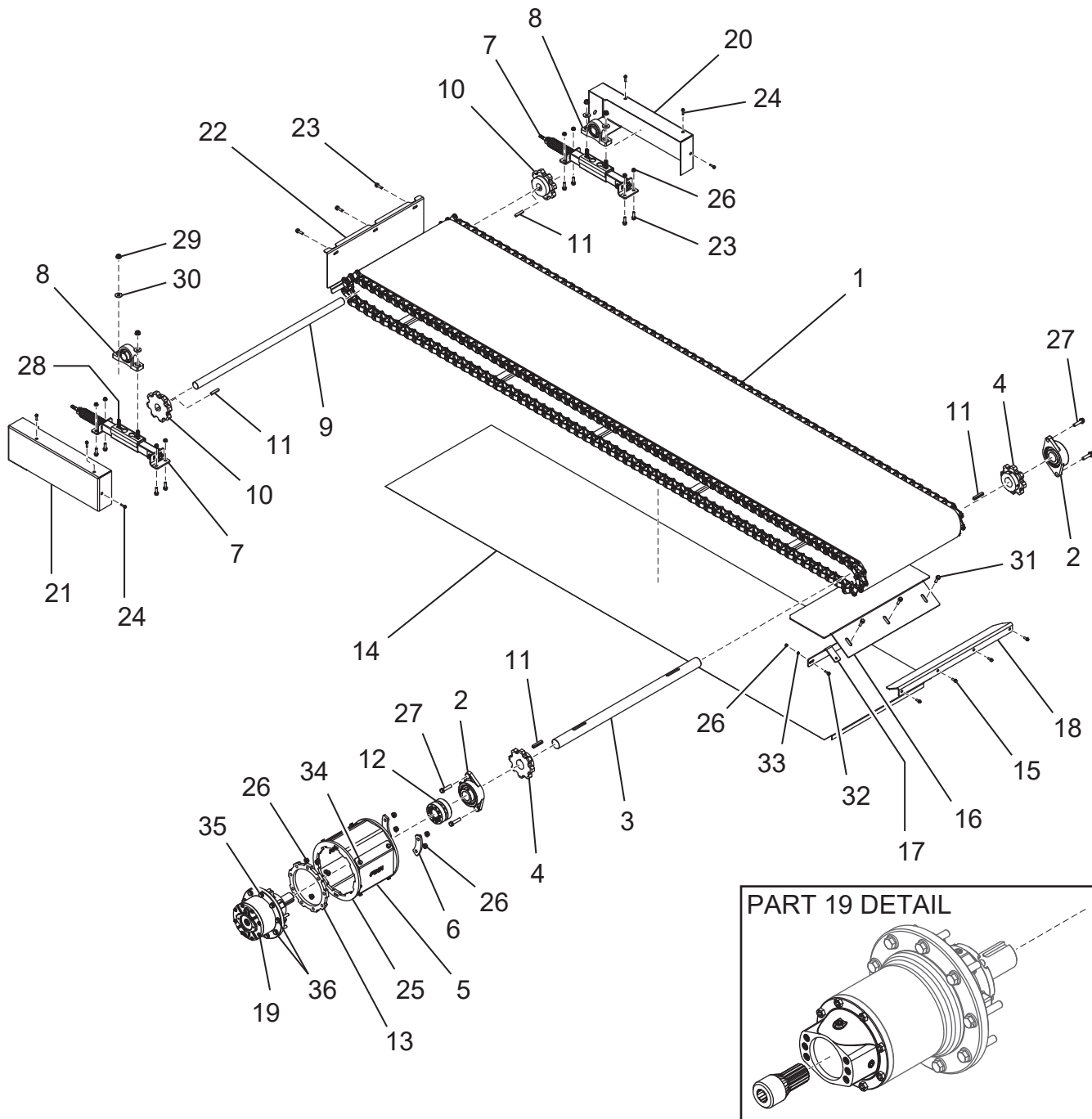
Ref. No.	Part Number	Description	No. Req'd
6	A6953-001	Plate - Torque Ring Retainer	2
7	A4907-001	Floor Take Up Assembly	2
8	A4044-001	Bearing, Take-Up	2
9	A3373-001	Idler Shaft, Front Floor	1
10	075218	Sprocket, 1-1/2 in. Bore, Steel	2
11	A4066-003	Keyway, Floor - Front Gear	4
12	A6950-001	Coupling, Keyless Locking, 2 in.	1
13	A6958-001	Plate - Torque Ring Inner	1
14	A2242-001	Pan, Floor Drop	1
15	●	3/8-16 UNC x 1.5 Hex Flange Screw - Regular Thread	4
16	A4035-001	Bracket - Floor Scraper	1
17	A4039-001	Mount Assembly, Floor Scraper	1
18	A4930-001	Airlock Slope Assembly	1
19	A7839-001	Floor Gearbox	1
	A7837-001	Gearbox, SunGear	1
20	A3206-001	Mount, Hopper Take-Up - Left	1
21	A3206-002	Mount, Hopper Take-Up - Right	1
22	A3904-001	Cover, Front Floor	1
23	●	3/8-16 UNC x 1.25 Hex Flange Screw - Regular Thread	11
24	●	1/4-20 UNC x 1 Hex Flange Screw - Regular Thread	6
25	A6954-001	Weldment, Torque Arm	1
26	●	3/8-16 Hex Flange Nut	17
27	●	1/2-13 UNC x 2 Hex Flange Screw, Regular Thread	4
28	A3392-001	Carriage Bolt	4
29	●	1/2-13 Hex Flange Nut	4
30	●	1/2 Type A Plain Washer - Wide	4
31	●	5/16-18 UNC x 1 Hex Flange Screw - Regular Thread	3
32	●	3/8-16 UNC x 1.75 Hex Flange Screw - Regular Thread	4
33	●	3/8 Regular Helical Spring Lock Washers	4
34	●	3/8-16 UNC x 1.25 Hex Flange Screw, Regular Thread	19
35	●	1/2-13 UNC x 2.25 Hex Flange Screw, Regular Thread	5
36	●	1/2-13 UNC x 2.75 Hex Flange Screw, Regular Thread	4
NOT SHOWN			
	A4041-001	Seal Assembly, Chain Floor	1
KITS AND MARKERS			
	●	Standard Hardware Item - Available at your local hardware store.	

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BELT FLOOR ASSEMBLY

Ref. No.	Part Number	Description	No. Req'd
1	A3404-002	Floor Chain Assembly - Belted	1
2	A2289-001	Rear Floor Shaft Bearing	2
3	A6952-001	Drive Shaft, Rear Floor	1
4	052224	Sprocket, 2 in. Bore, Steel	2
5	A6951-001	Sheet - Torque Arm Cover	2

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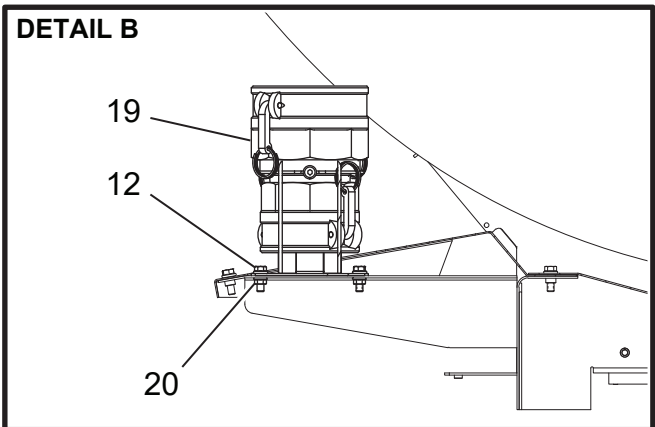
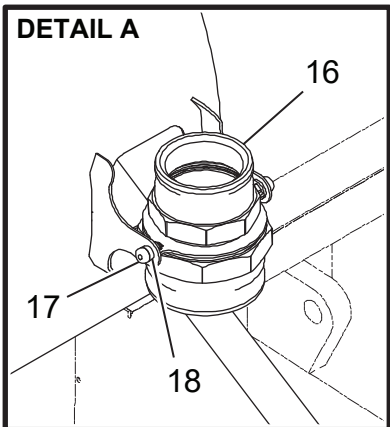
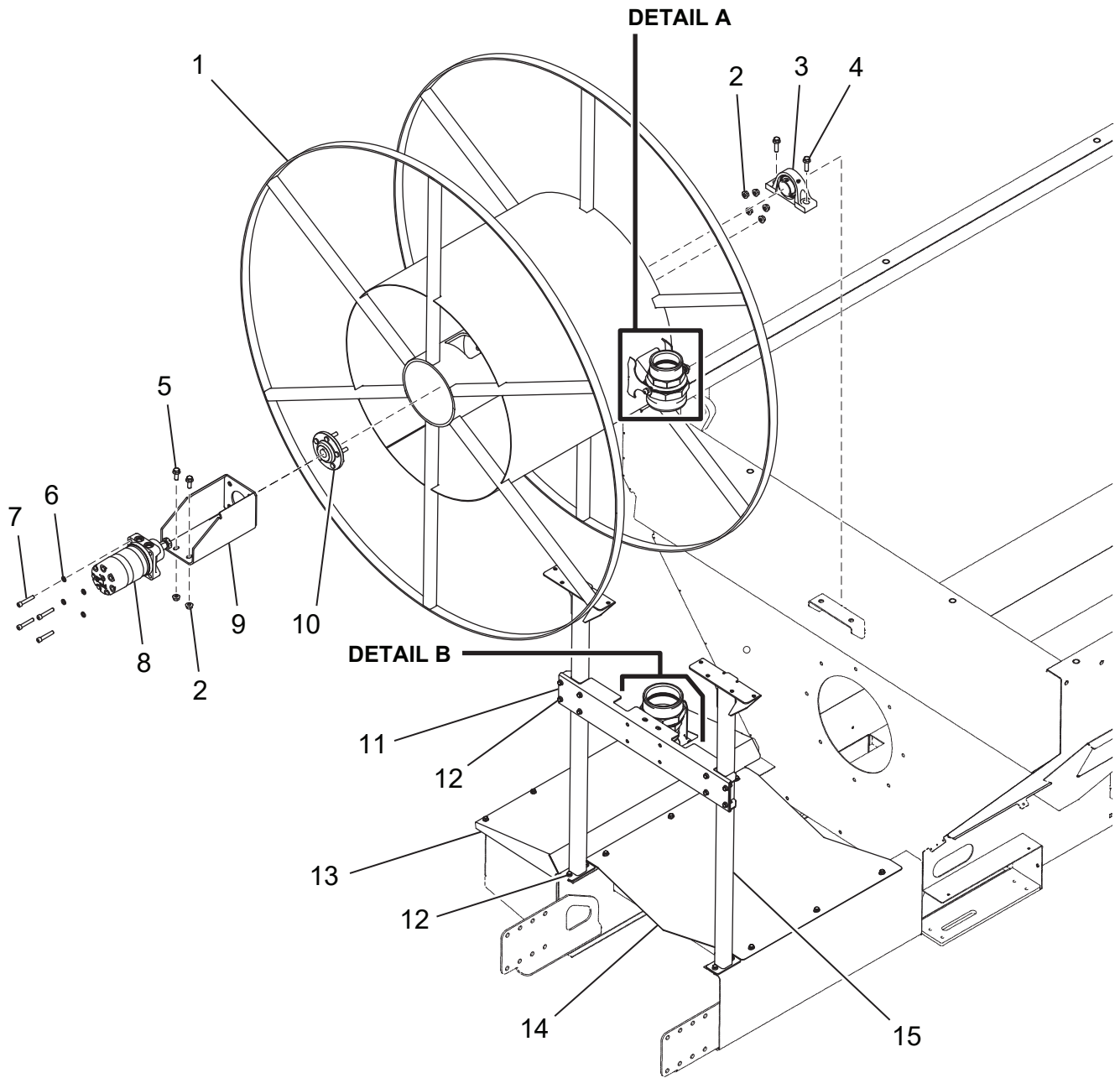


WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

BELT FLOOR ASSEMBLY

Ref. No.	Part Number	Description	No. Req'd
6	A6953-001	Plate - Torque Ring Retainer	2
7	A4907-001	Floor Take Up Assembly	2
8	A4044-001	Bearing, Take-Up	2
9	A3373-001	Idler Shaft, Front Floor	1
10	075218	Sprocket, 1-1/2 in. Bore, Steel	2
11	A4066-003	Keyway, Floor - Front Gear	4
12	A6950-001	Coupling, Keyless Locking, 2 in.	1
13	A6958-001	Plate - Torque Ring Inner	1
14	A2242-001	Pan, Floor Drop	1
15	●	3/8-16 UNC x 1.5 Hex Flange Screw - Regular Thread	4
16	A4035-001	Bracket - Floor Scraper	1
17	A4039-001	Mount Assembly, Floor Scraper	1
18	A4930-001	Airlock Slope Assembly	1
19	A7839-001	Floor Gearbox	1
	A7837-001	Gearbox, SunGear	1
20	A3206-001	Mount, Hopper Take-Up - Left	1
21	A3206-002	Mount, Hopper Take-Up - Right	1
22	A3904-001	Cover, Front Floor	1
23	●	3/8-16 UNC x 1.25 Hex Flange Screw - Regular Thread	11
24	●	1/4-20 UNC x 1 Hex Flange Screw - Regular Thread	6
25	A6954-001	Weldment, Torque Arm	1
26	●	3/8-16 Hex Flange Nut	17
27	●	1/2-13 UNC x 2 Hex Flange Screw, Regular Thread	4
28	A3392-001	Carriage Bolt	4
29	●	1/2-13 Hex Flange Nut	4
30	●	1/2 Type A Plain Washer - Wide	4
31	●	5/16-18 UNC x 1 Hex Flange Screw - Regular Thread	3
32	●	3/8-16 UNC x 1.75 Hex Flange Screw - Regular Thread	4
33	●	3/8 Regular Helical Spring Lock Washers	4
34	●	3/8-16 UNC x 1.25 Hex Flange Screw, Regular Thread	19
35	●	1/2-13 UNC x 2.25 Hex Flange Screw, Regular Thread	5
36	●	1/2-13 UNC x 2.75 Hex Flange Screw, Regular Thread	4
NOT SHOWN			
	A4042-001	Seal Assembly, Belt Floor	1
KITS AND MARKERS			
	●	Standard Hardware Item - Available at your local hardware store.	

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HOSE REEL ASSEMBLY

Ref. No.	Kit Ref.	Part Number	Description	No. Req'd
1	▽▲■◆▼	A3454-001	Hose Reel Weldment	1
2	▽▲■◆▼	●	1/2-13 Prevailing Torque Type Hex Flange Nut	7
3	▲■◆▼	053195	2 in. Pillow Block Bearing	1
4	▲■◆▼	●	1/2-13 UNC x 1.75 Hex Flange Screw - Regular Thread	2
5	▲■◆▼	●	1/2-13 UNC x 1.25 Hex Flange Screw - Regular Thread	2
6	▽▲■◆▼	●	7/16 Regular Helical Spring Lockwasher	4
7	▽▲■◆▼	●	7/16-14 UNC - 2-1/2 Hexagon Socket Head Cap Screw	4
8	▽▲■◆▼	A4224-001	Hydraulic Motor	1
9	▽▲■◆▼	A3483-001	Hose Reel Motor Bracket	1
10	▽▲■◆▼	045031	Machined Hub	1
11	▲■◆▼	A4070-001	Hose Reel Bracket	1
12	▲■◆▼	●	3/8-16 UNC x 1 Hex Flange Screw - Regular Thread	27
13	▲■◆▼	A4206-001	Hose Reel Switchover Cover	1
14	▲■◆▼	A4200-001	Hopper Extension Cover	1
15	▲■◆▼	A4067-001	Canopy Strut Weldment	2
16	▽▲■◆▼	A3491-001	Hose Reel Receptacle Assembly	1
17	▽▲■◆▼	●	B18.3 - 0.5 x 0.38 Hex Socket Head Shoulder Screw	2
18	▽▲■◆▼	A3496-001	Flange Bearing, 0.5 in. ID, 0.75 in. OD, 0.5 in. Long	2
19	▲■◆▼	A3501-001	Hose Reel Receptacle Assembly	1
20	▲■◆▼	●	16 Hex Flange Nut	4

NOT SHOWN

▲■◆▼	053012	Hose Reel Side Cover	2
▲	055398B	4 in. x 50 ft. Bark Blower Hose Assembly	2
▲	055399B	4 in. x 100 ft. Bark Blower Hose Assembly	1
◆	052952	4 in. x 50 ft. Severe Duty Hose Assembly	2
◆	052965	4 in. x 100 ft. Severe Duty Bark Blower Hose Assembly	1
■	052744B	5 in. x 50 ft. Bark Blower Hose Assembly	2
■	052745B	5 in. x 100 ft. Bark Blower Hose Assembly	1
▼	052958	5 in. x 50 ft. Severe Duty Bark Blower Hose Assembly	4

KITS AND MARKERS

▽	A3472-001	Hose Reel Weldment Assembly
▲	A2549-001	Hose Reel, Top Level Assembly - 4 in. Standard Duty Hose
■	A2549-002	Hose Reel, Top Level Assembly - 5 in. Standard Duty Hose
◆	A2549-003	Hose Reel, Top Level Assembly - 4 in. Heavy Duty Hose
▼	A2549-004	Hose Reel, Top Level Assembly - 5 in. Heavy Duty Hose
●	Standard Hardware Item - Available at your local hardware store.	

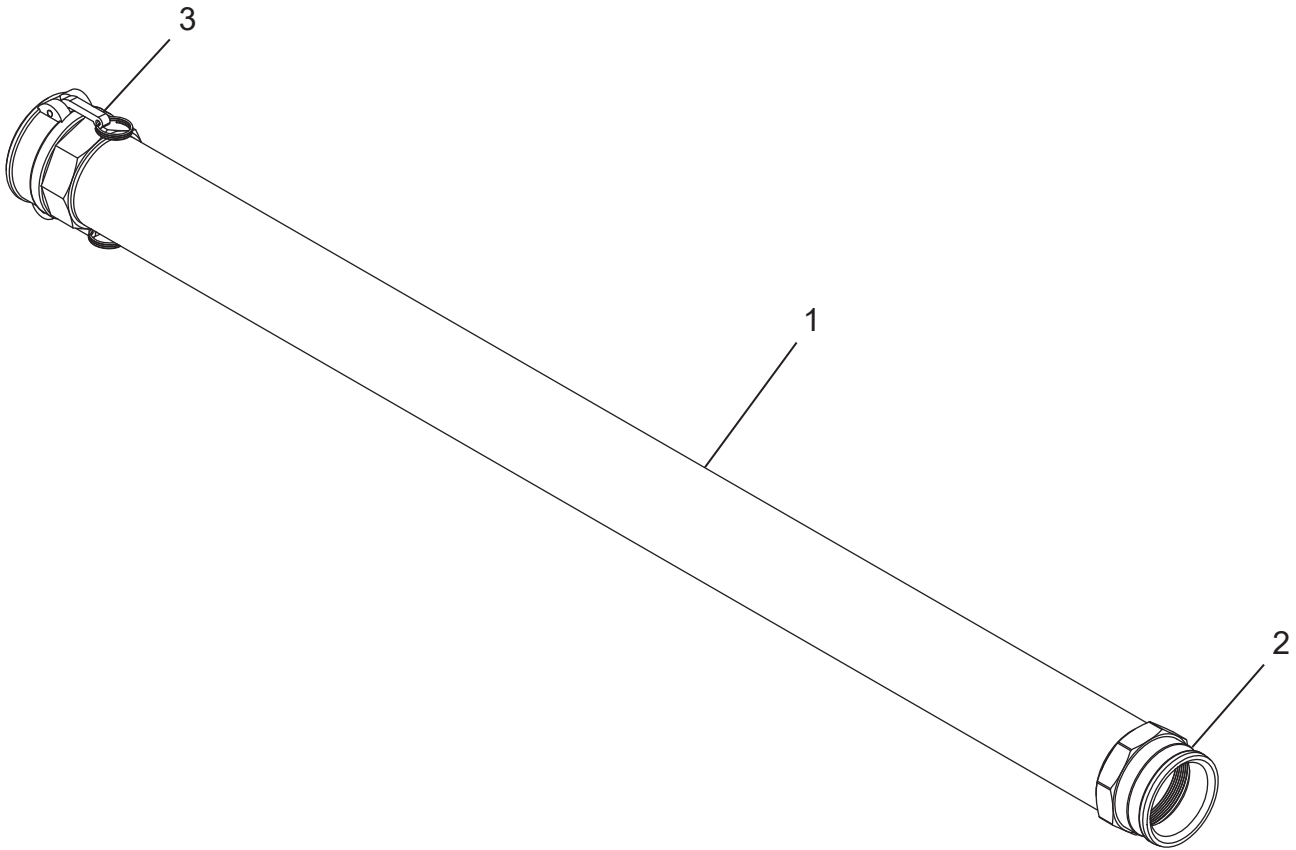
**WHEN ORDERING PARTS, BE SURE TO STATE
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HOT AIR HOSE ASSEMBLY - 4 INCH

Ref. No.	Part Number	Description	No. Req'd
1	045304	Hot Air Hose, 4 in.	1
2	055374A	4 in. Aluminum Male Coupler	1
3	055375A	4 in. Aluminum Female Coupler	1

NOT SHOWN

A8315-001	Hot Air Hose Bracket	3
A5205-002	Hot Air Hose Adhesive Pad	3
007913	Hot Air Hose Strap	3

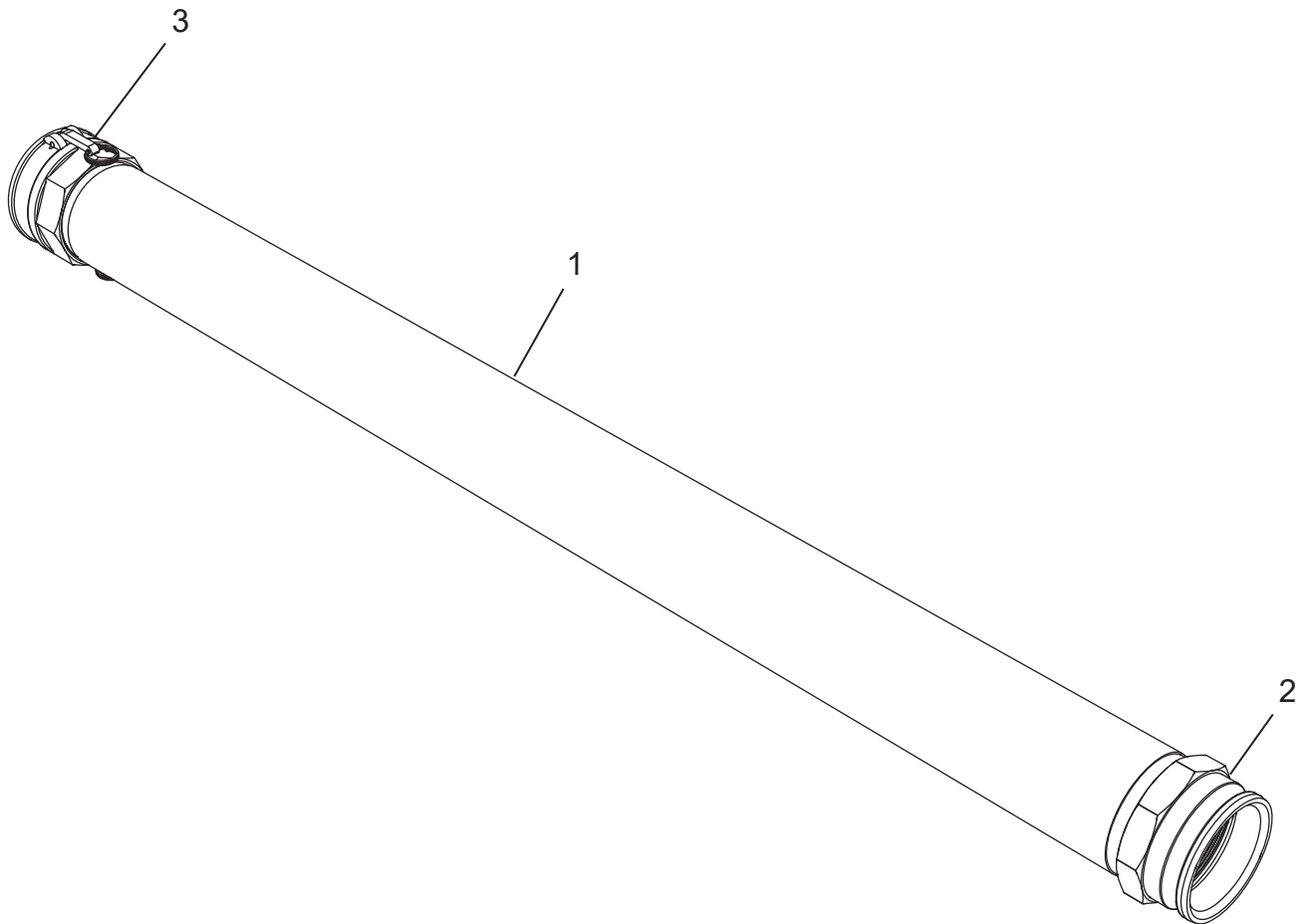


HOT AIR HOSE ASSEMBLY - 5 INCH

Ref. No.	Part Number	Description	No. Req'd
1	045307	Hot Air Hose, 5 in.	1
2	012306	5 in. Aluminum Male Coupler	1
3	052379	5 in. Aluminum Female Coupler	1

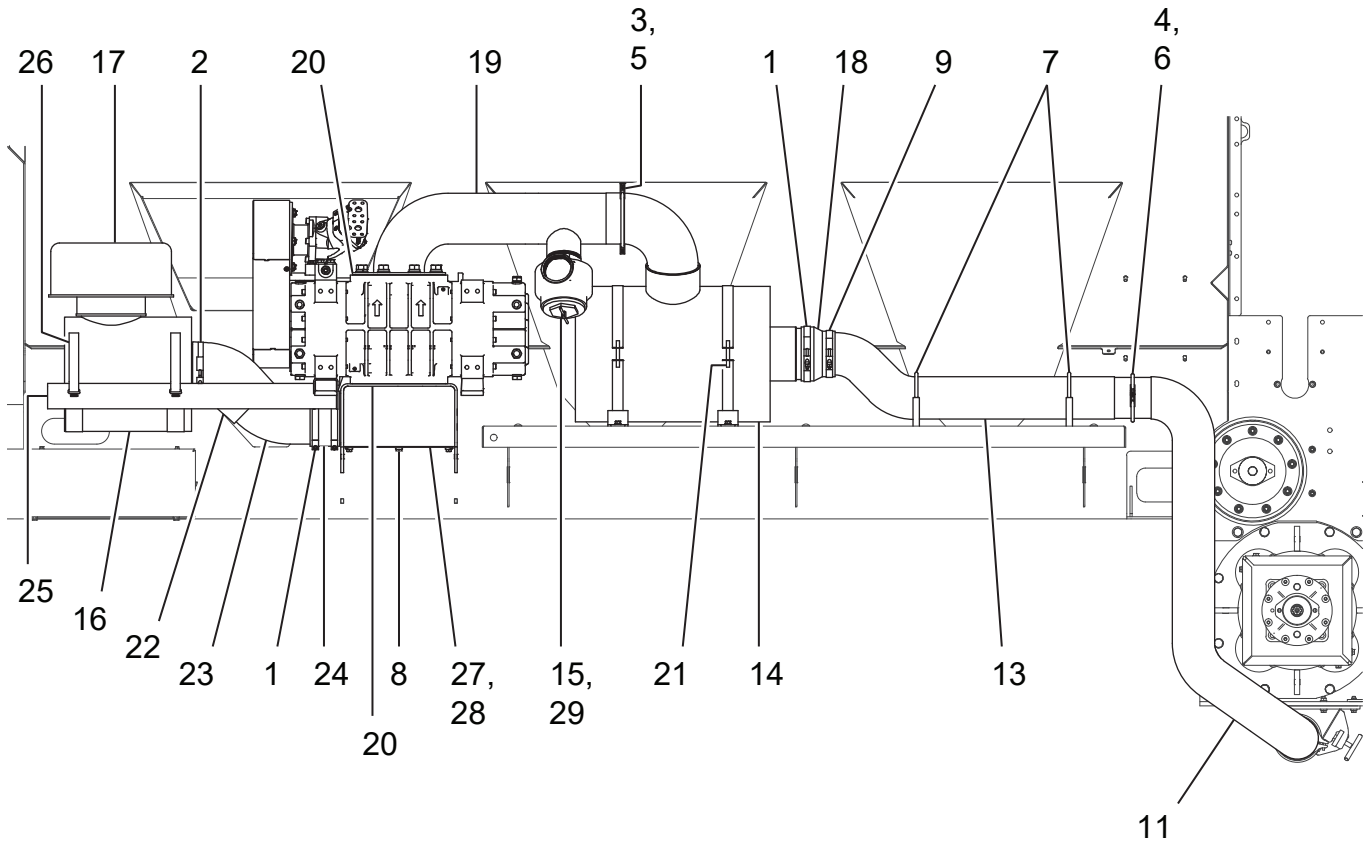
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A8315-001	Hot Air Hose Bracket	3
A5205-002	Hot Air Hose Adhesive Pad	3
007913	Hot Air Hose Strap	3

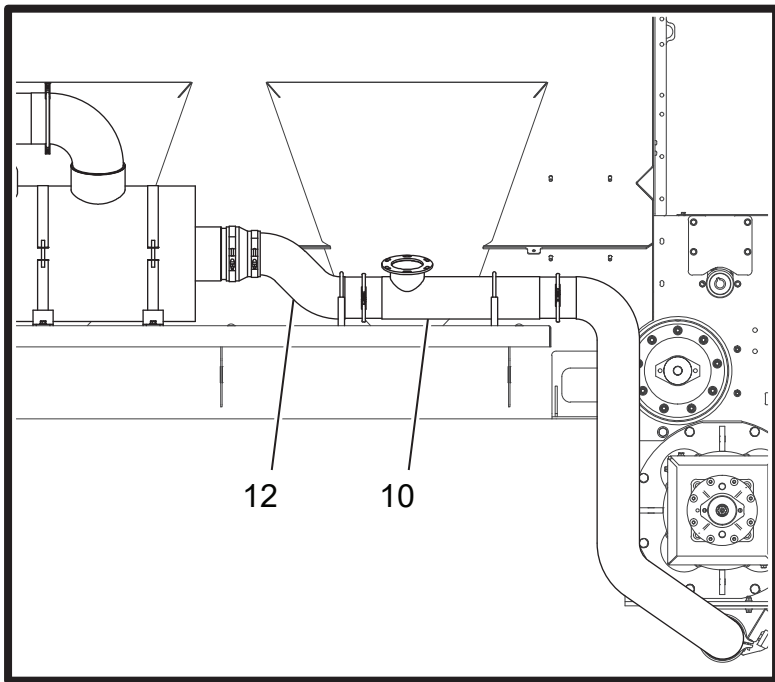


**WHEN ORDERING PARTS, BE SURE TO STATE
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A2535-001 STANDARD CONFIGURATION



A2535-002 SEED INJECTION OPTION



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

AIR PIPE SYSTEM ASSEMBLIES

Ref. No.	Part Number	Description	Req'd	
			A2543-010	A2543-016
1	052912	Clamp, T-Bolt Band, 6.5 in. Nom. Dia.	4	4
2	052908	Clamp, T-Bolt Band, 7.5 in. Nom. Dia.	1	1
3	A2921-060	Gasket, Jacobs, 14 gauge, 6.0 in.Ø	1	1
4	A2921-050	Gasket, Jacobs, 14 gauge, 5.0 in.Ø	2	3
5	A2922-060	Pull Ring, Jacobs, 14-19 gauge, 6.0 in.Ø	1	1
6	A2922-050	Pull Ring, Jacobs, 14-19 gauge, 5.0 in.Ø	2	3
7	045013	5 in. U-Bolt Clamp	2	2
8	●	3/8-16 UNC x 1 Hex Flange Screw - Regular Thread	12	12
9	052011	Clamp, T-Bolt Band, 5.5 in. Nom. Dia.	1	1
10	A3850-001	Tube-Round, Blower Out, SI, Weldment	0	1
11	A3849-001	Tube-Round, Blower Out, Weldment	1	1
12	A3858-001	Tube-Round, Blower Out, Curve, SI, Weld	0	1
13	A3857-001	Tube-Round, Blower Out, Weldment	1	0
14	A3863-001	Silencer - Blower, Outlet, 6 in., Weldment	1	1
15	A3865-001	Safety Valve - Blower, 3 in.	1	1
16	A3866-001	Air Cleaner - Blower, Intake	1	1
17	A3864-001	Air Cleaner - Prefilter, Heavy Duty	1	1
18	A3867-001	Reducer - Silencer Out, 6 in. I.D. to 5 in. I.D., Silicone	1	1
19	A3872-001	Tube - Round, Blower Out, Weldment	1	1
20	A1511-001	6 in. 125/150# ANSI Full Face Gasket	2	2
21	A3971-016	Band Clamp with Base Mount, Swivel - Charted	2	2
22	A4441-760	Reducing Elbow, 45° EPDM - 7 in. to 6 in.	1	1
23	A4433-001	Tube - Round, Blower In	1	1
24	A4440-600	EPDM Straight Sleeve - 6 in. I.D., 3.5 in. Long	1	1
25	A4481-001	Weldment, Air Cleaner Bracket	1	1
26	A4483-001	Clamp, Air Cleaner, Assembly	2	2
27	A4509-001	Gasket, Blower Inlet Cover	1	1
28	A4508-001	Sheet - Blower Inlet Cover	1	1
29	160232	Plug Square Head	1	1

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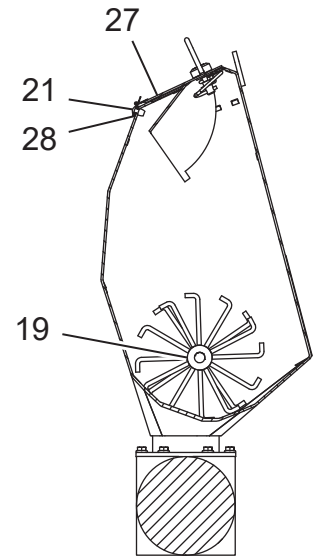
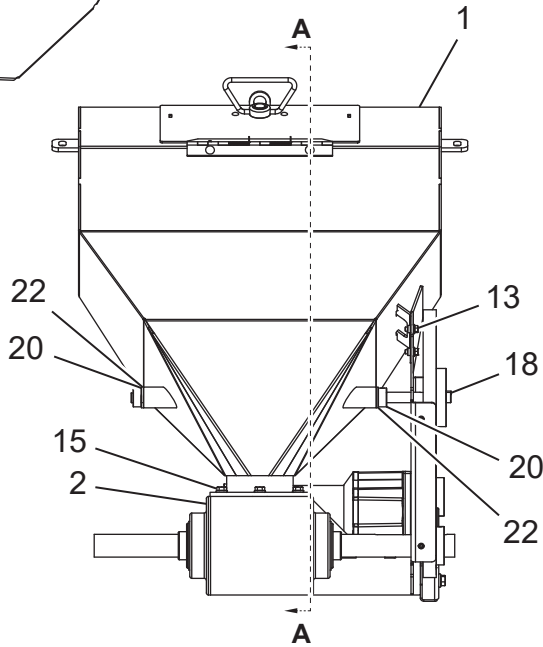
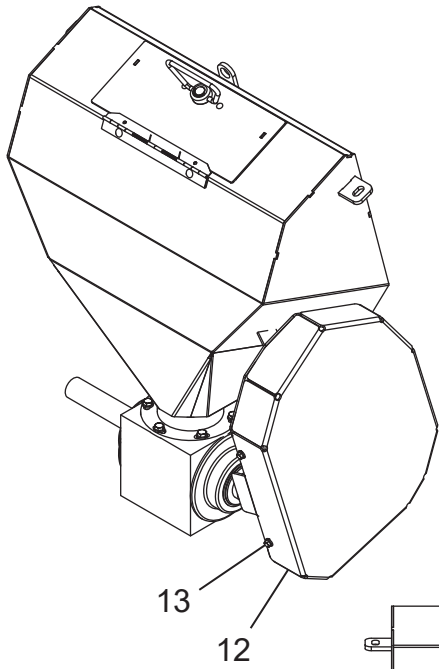
A3868-001	Adapter Ring - Reducer, Insert, 8 in. to 7 in.	1	1
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KITS AND MARKERS

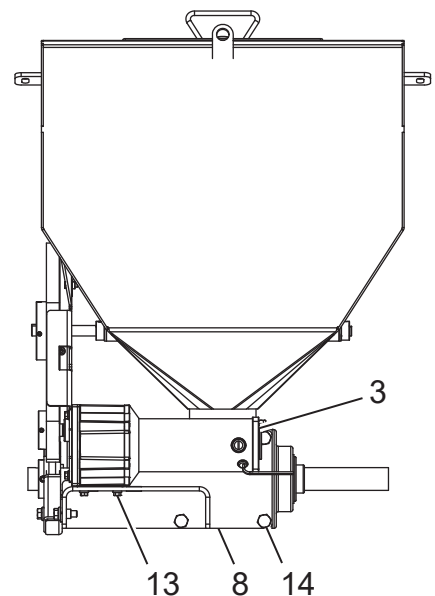
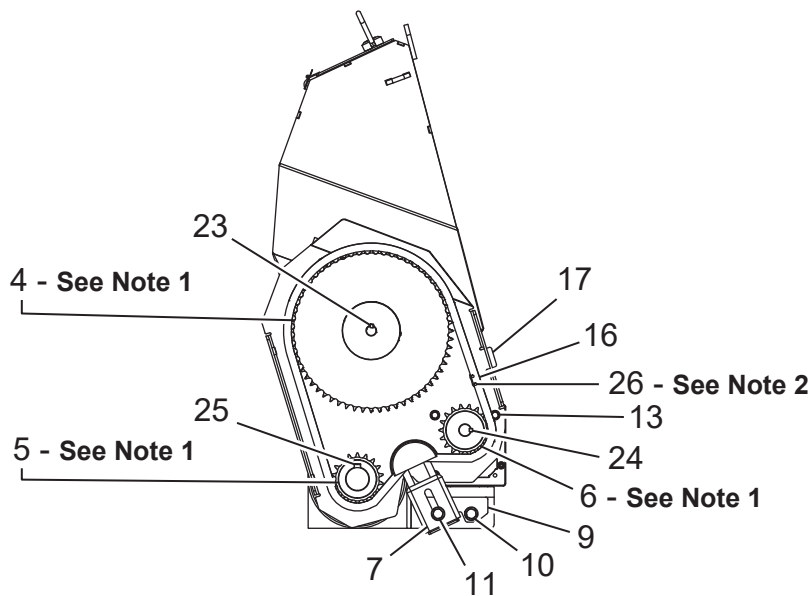
- Standard Hardware Item - Available at your local hardware store.

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

NOTE:
 1. ALIGN SPROCKETS TO WITHIN 0.06 AXIALLY.
 2. CHAIN LENGTH IS 43 LINKS.



SECTION A - A



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

OPTIONAL SEED INJECTION SYSTEM

Ref. No.	Part Number	Description	No. Req'd
1	A4115-001	Hopper - Seed Injection, Weld	1
2	368618	Seed Airlock	1
3	A4134-001	Gear Motor, 12V, 56 rpm, 174 in-lb., 0.15 Hp, IP66	1
4	A4146-001	Roller Chain Sprocket, ANSI 40 Chain, 60 Teeth, for 5/8 in. Shaft	1
5	A4145-001	Roller Chain Sprocket, ANSI 40 Chain, 18 Teeth, for 1-3/8 in. Shaft	1
6	A4144-001	Roller Chain Sprocket, ANSI 40 Chain, 18 Teeth, for 3/4 in. Shaft	1
7	A4140-001	Tensioner - Chain ANSI 40	1
8	A4135-001	Bracket - Motor Mount, Seed Injection, Weld	1
9	A4114-001	Sheet - Chain Tensioner Spacer	1
10	●	3/8-16 UNC x 1 Hex Flange Screw - Regular Thread	1
11	●	3/8-16 UNC x 1.75 Hex Flange Screw - Regular Thread	1
12	A4141-001	Sheet - Chain Cover	1
13	●	1/4-20 UNC x 0.5 Hex Flange Screw - Regular Thread	11
14	●	1/2-13 UNC x 1 Hex Bolt UNC - Regular Thread	4
15	●	5/16-18 UNC x 1 Hex Flange Screw - Regular Thread	6
16	A4139-001	Roller Chain - ANSI 40, 1/2 in. Pitch, Self-Lubricating	1
17	A4142-001	Bracket - Mount, Chain Cover, Assembly	1
18	A4124-001	Rod - Seed Injection Agitator Shaft	1
19	368617-13	Seed Injection Agitator Vane (Set Of 3)	1
20	A4117-001	Shaft Collar 5/8" Diameter, Stainless Steel	2
21	●	Regular Protruding Head Pull Through Mandrel Blind Rivet	2
22	A4130-001	Flange Sleeve Bearing, Bronze, 5/8 in. ID, 7/8 in. OD, 1.25 in. Long	2
23	A4133-001	Keyway, Seed Injection	1
24	A4133-002	Keyway, Seed Injection	1
25	A4133-003	Keyway, Seed Injection	1
26	A4168-001	Master Link, ANSI 40, Extended Life Self-Lubricating	1
27	A4570-001	Seed Injection Lid Assembly	1
28	A5566-001	Sheet - Hinge Spacer	1
NOT SHOWN			
	005938	Connector Kit	1
	A5784-001	Wiring Harness, TVS Diode Jumper	1
KITS AND MARKERS			
	●	Standard Hardware Item - Available at your local hardware store.	

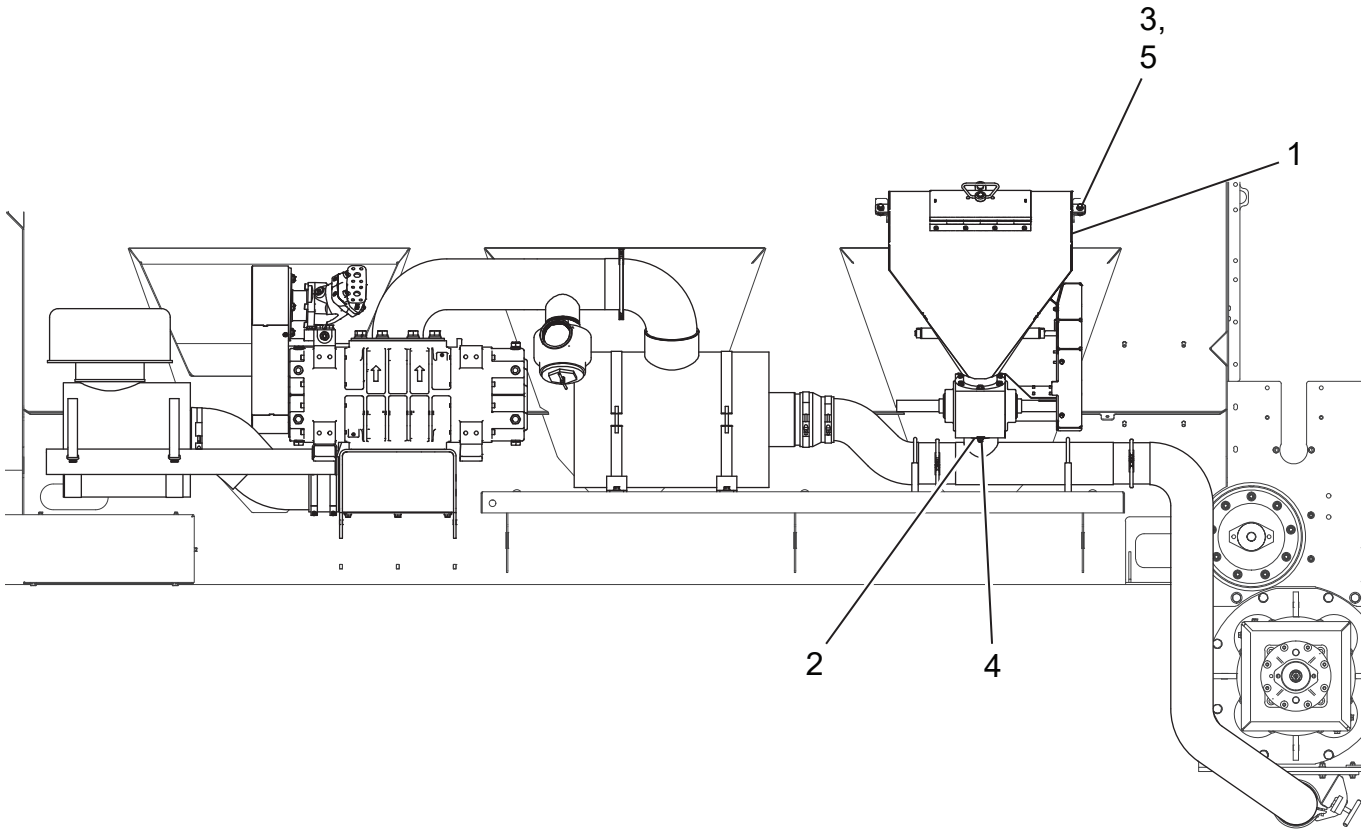
**WHEN ORDERING PARTS, BE SURE TO STATE
SERIAL NUMBER OF MACHINE**

OPTIONAL SEED INJECTION SYSTEM INSTALLATION

Ref. No.	Part Number	Description	No. Req'd
1	A4156-001	Seed Injection Assembly	1
2	A4132-001	Gasket - Seed Injection Feeder	1
3	●	3/8-16 UNC x 1 Hex Flange Screw - Regular Thread	2
4	●	5/16-18 UNC x 1 Hex Flange Screw - Regular Thread	6
5	●	3/8-16 Hex Flange Nut	2

KITS AND MARKERS

- Standard Hardware Item - Available at your local hardware store.



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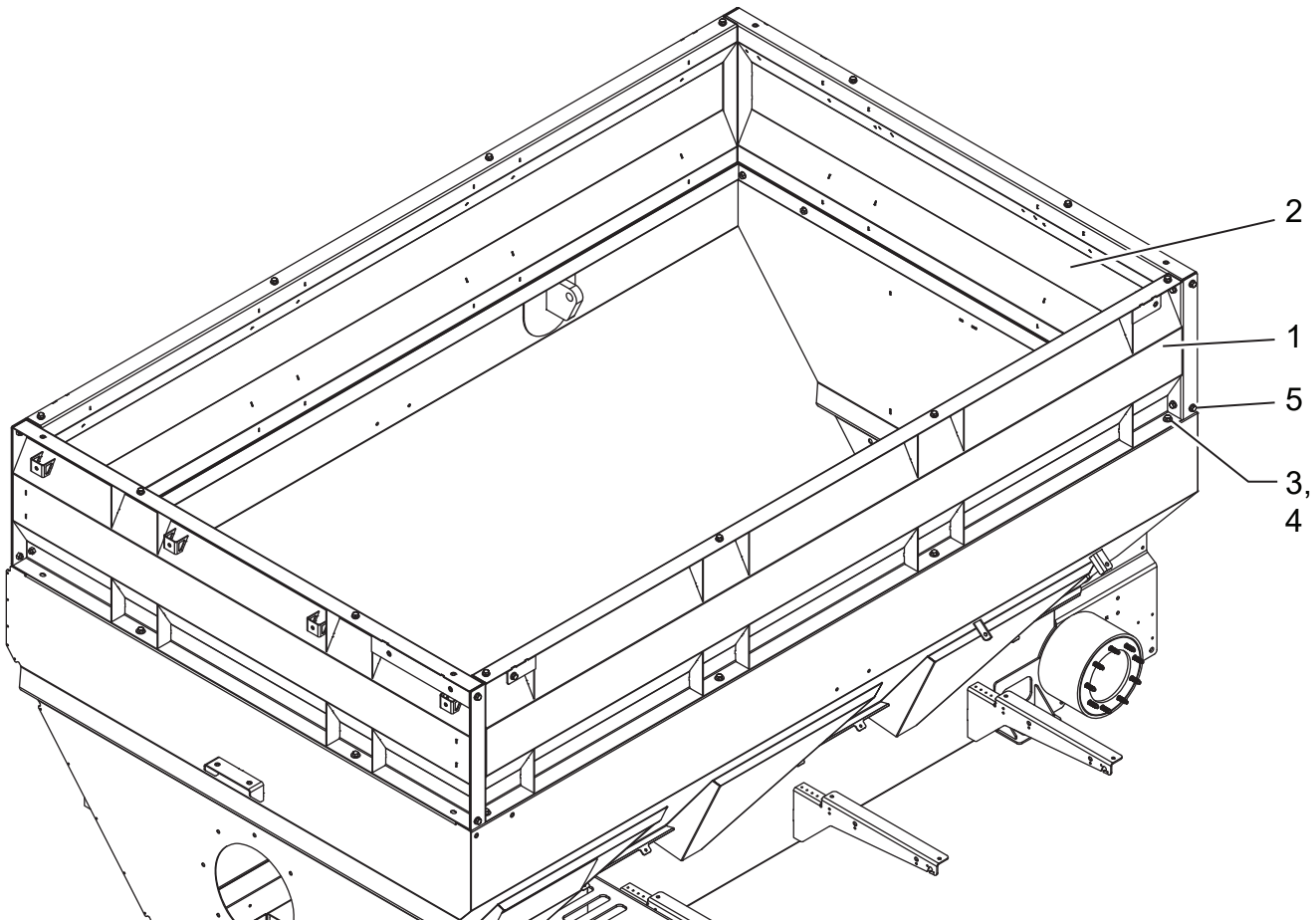
**WHEN ORDERING PARTS, BE SURE TO STATE
SERIAL NUMBER OF MACHINE**

HOPPER EXTENSION - 16 YARD

Ref. No.	Part Number	Description	No. Req'd
1	A4082-001	Hopper Extension Assembly, Longitudinal	2
2	A4073-001	Hopper Extension Assembly, Lateral	2
3	●	1/2-13 UNC - 4 Hex Bolt - UNC (Regular Thread	12
4	●	1/2 - Regular - Type B Plain Washer	12
5	●	1/2-13 UNC x 1 Hex Flange Screw - Regular Thread	34

KITS AND MARKERS

- Standard Hardware Item - Available at your local hardware store.



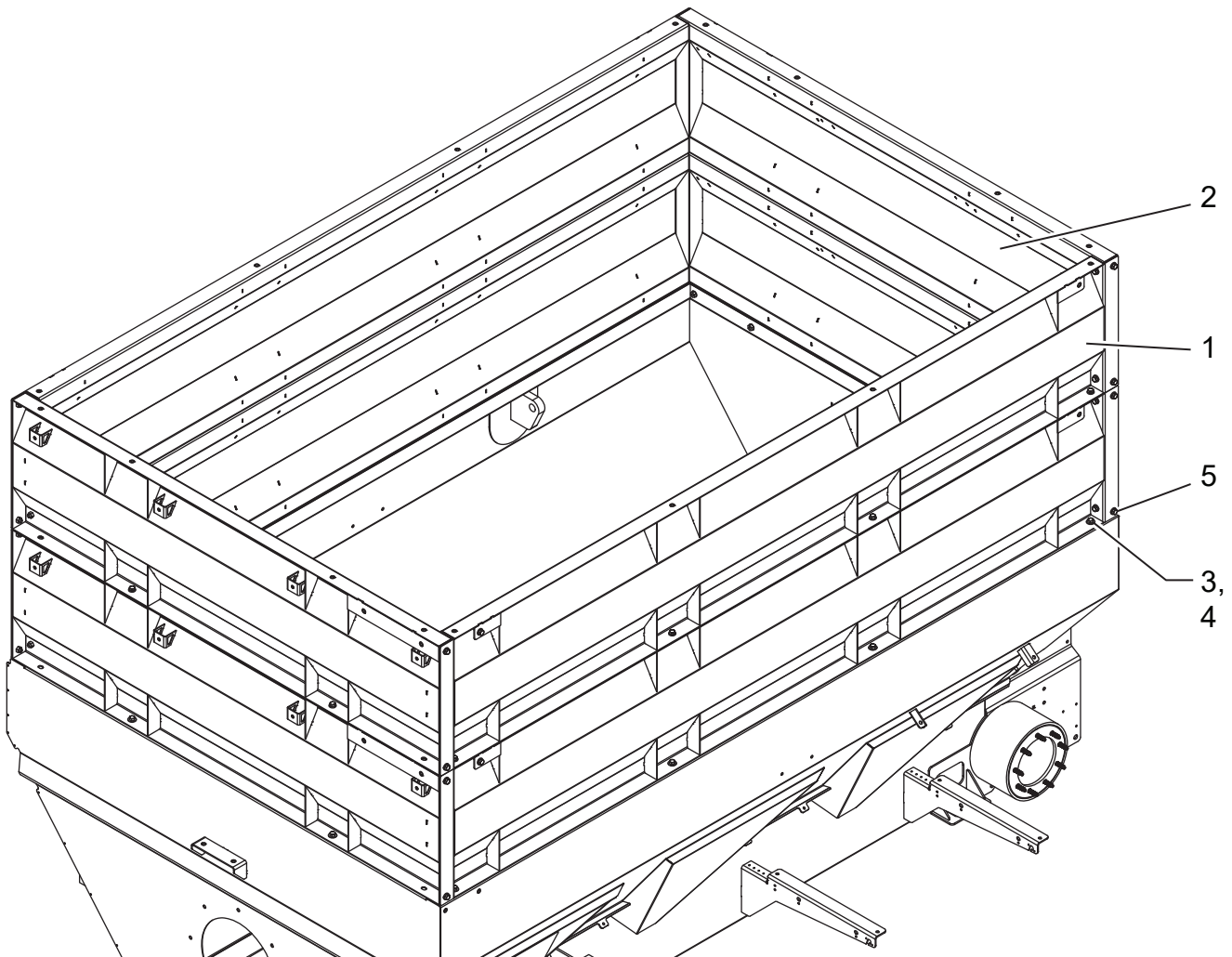
**WHEN ORDERING PARTS, BE SURE TO STATE
SERIAL NUMBER OF MACHINE**

HOPPER EXTENSION - 22 YARD

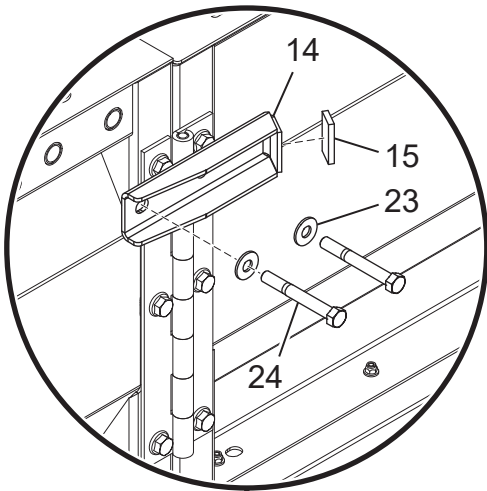
Ref. No.	Part Number	Description	No. Req'd
1	A4082-001	Hopper Extension Assembly, Longitudinal	4
2	A4073-001	Hopper Extension Assembly, Lateral	4
3	●	1/2-13 UNC - 4 Hex Bolt - UNC (Regular Thread	12
4	●	1/2 - Regular - Type B Plain Washer	12
5	●	1/2-13 UNC x 1 Hex Flange Screw - Regular Thread	56

KITS AND MARKERS

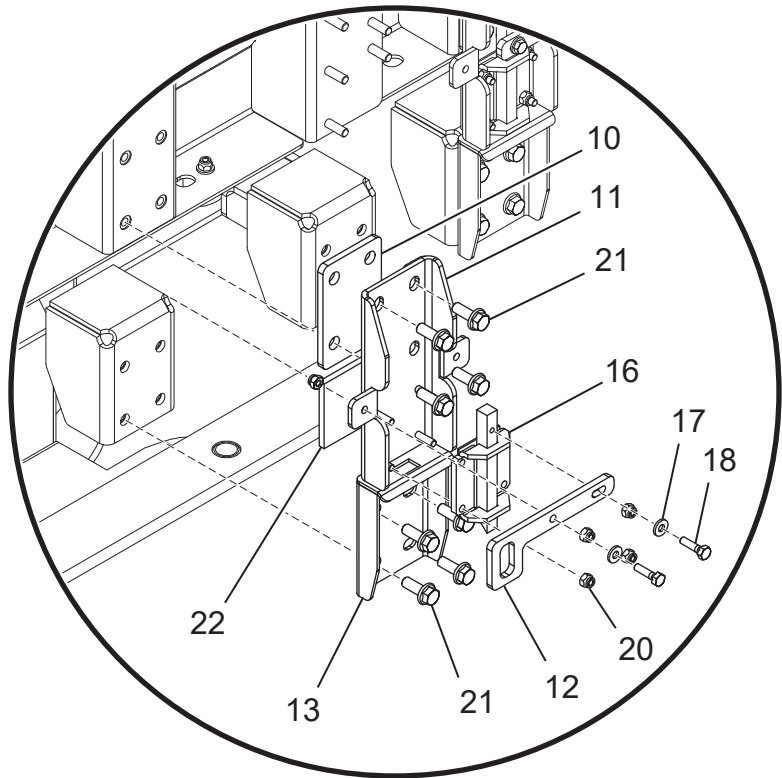
- Standard Hardware Item - Available at your local hardware store.



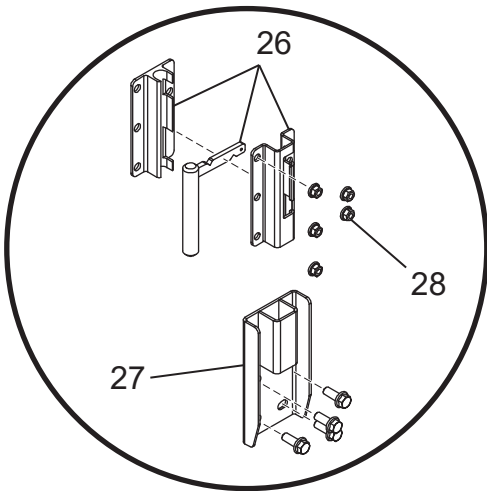
**WHEN ORDERING PARTS, BE SURE TO STATE
SERIAL NUMBER OF MACHINE**



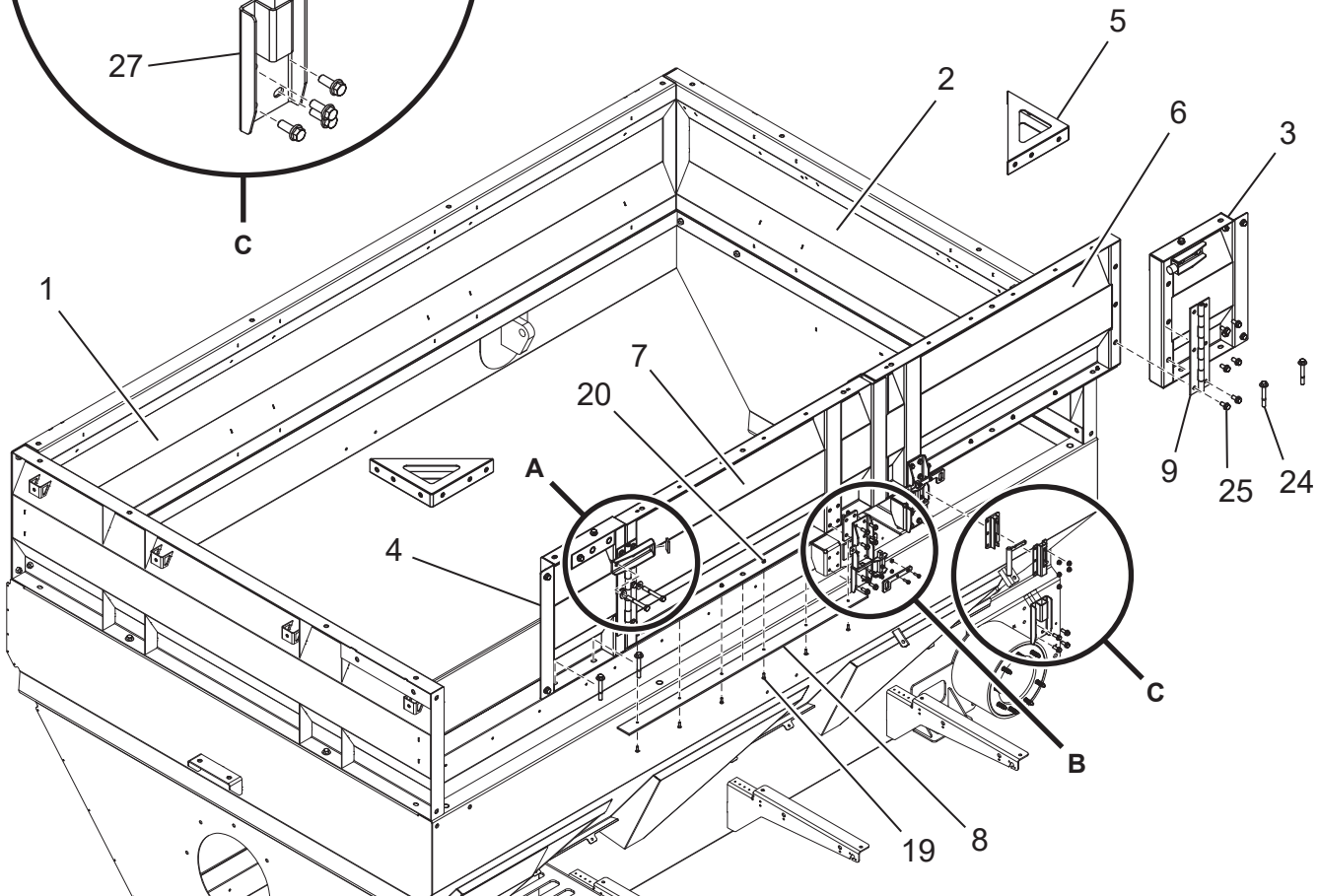
A



B



C



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

HOPPER EXTENSION - SIDE DOORS, 16 YARD

Ref. No.	Part Number	Description	No. Req'd
1	A4082-001	Hopper Extension Assembly, Longitudinal	1
2	A4073-001	Hopper Extension Assembly, Lateral	2
3	A5164-001	Hopper Side Load Assembly, Right Hand	1
4	A5185-001	Hopper Side Load Assembly, Left Hand	1
5	A5177-001	Weldment, Side Load Corner Gusset	2
6	A5157-001	Weldment, Side Load Door, Right Hand	1
7	A5170-001	Weldment, Side Load Door, Left Hand	1
8	A5156-001	Bar, UHMW, Slip Plate	2
9	A5153-001	Piano Hinge, 1/2 in. Pin, 16 in. Long	2
10	A5190-001	Plate - Latch Spacer	2
11	A5191-001	Weldment - Slam Latch Bracket	2
12	A5189-001	Plate - Latch Linkage	2
13	A5195-001	Weldment - Latch Catch Plate	2
14	A5174-001	Sheet - Door Stop Bracket	2
15	A5740-001	Bumper - Door Opening	2
16	A5397-001	Slam Latch, 1/2 in. Pin, Zinc	2
17	●	1/4 Washer A	18
18	●	1/4-20 UNC x 1 Hex Bolt UNC Regular Thread	4
19	●	1/4-20 UNC x 1 Hex Socket Flat Countersunk Head Cap Screw	12
20	●	1/4-20 Prevailing Torque Type Hex Nut	22
21	●	3/8-16 UNC x 1 Hex Flange Screw - Regular Thread	20
22	A5739-001	Bumper - Door Closing	2
23	●	1/2 - Regular - Type B Plain Washer	18
24	●	1/2-13 UNC x 4 Hex Bolt UNC Regular Thread	16
25	●	1/2-13 UNC x 1 Hex Flange Screw - Regular Thread	43
26	A5728-001	Lock Bolt Assembly	1
27	A5729-001	Weldment - Lock Bolt Striker	1
28	●	5/16-18 Prevailing Torque Type Hex Flange Nut	5

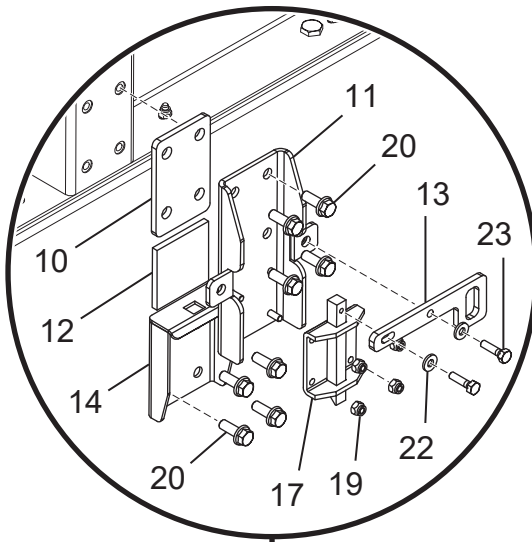
NOT SHOWN

●	3/8-16 Hex Flange Nut	12
A5726-001	Isolator Strip	2

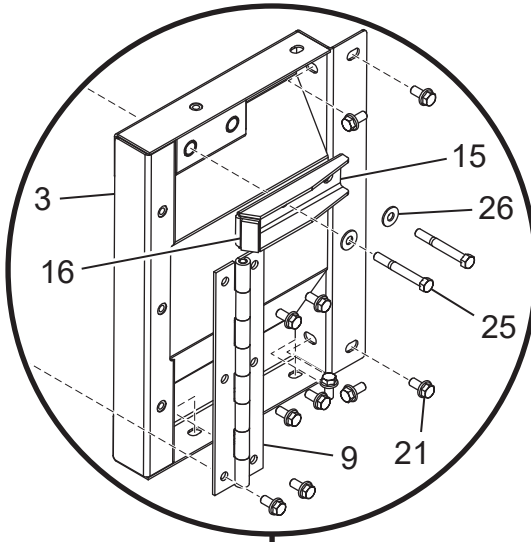
KITS AND MARKERS

- Standard Hardware Item - Available at your local hardware store.

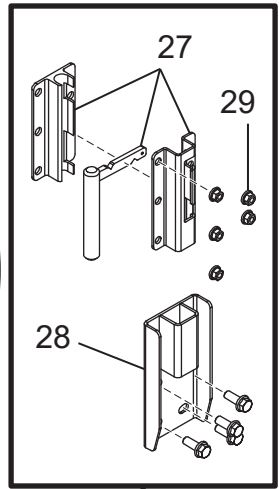
**WHEN ORDERING PARTS, BE SURE TO STATE
SERIAL NUMBER OF MACHINE**



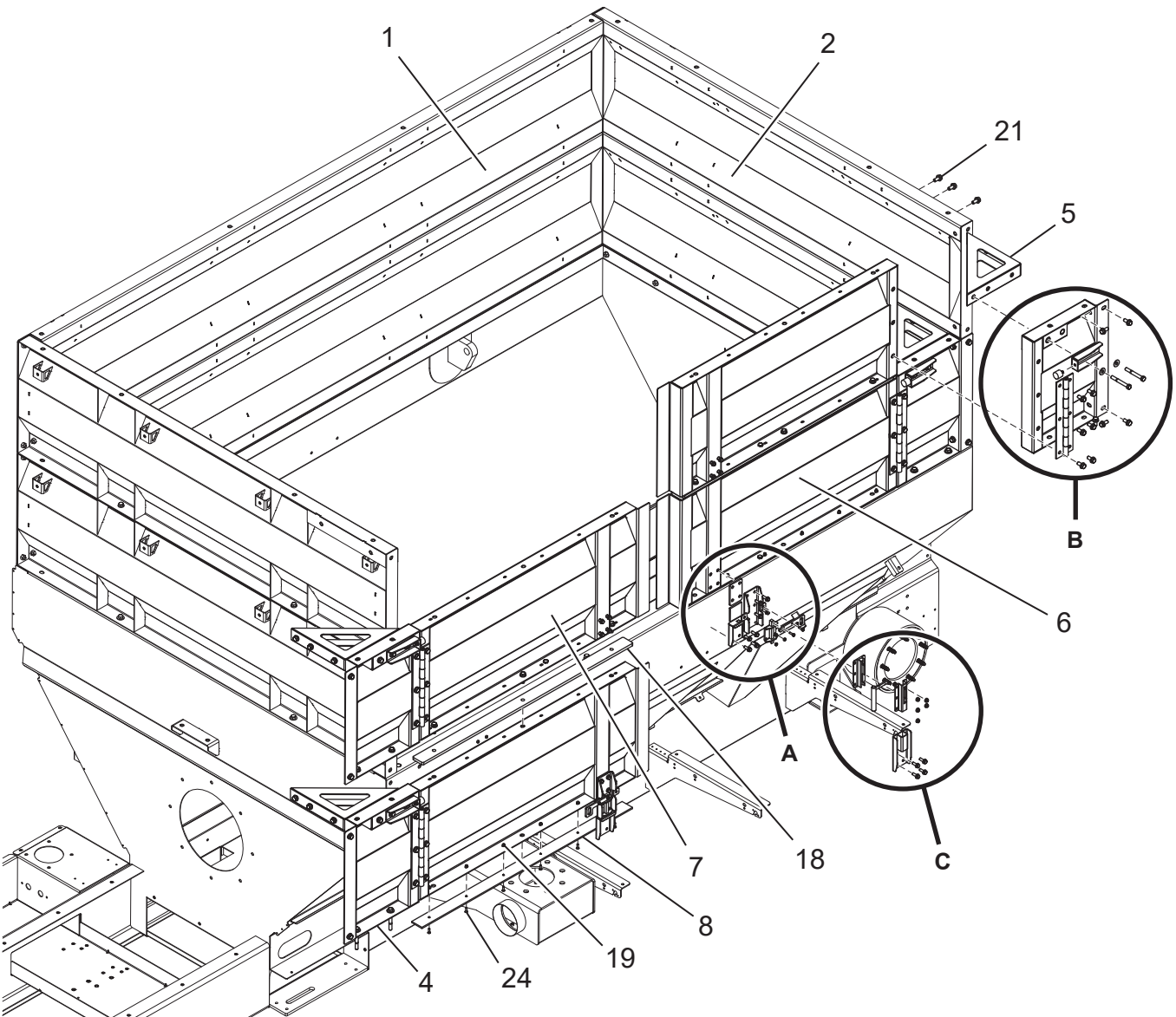
A



B



C



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

HOPPER EXTENSION - SIDE DOORS, 22 YARD

Ref. No.	Part Number	Description	No. Req'd
1	A4082-001	Hopper Extension Assembly, Longitudinal	2
2	A4073-001	Hopper Extension Assembly, Lateral	4
3	A5164-001	Hopper Side Load Assembly, Right Hand	2
4	A5185-001	Hopper Side Load Assembly, Left Hand	2
5	A5177-001	Weldment, Side Load Corner Gusset	4
6	A5157-001	Weldment, Side Load Door, Right Hand	2
7	A5170-001	Weldment, Side Load Door, Left Hand	2
8	A5156-001	Bar, UHMW, Slip Plate	2
9	A5153-001	Piano Hinge, 1/2 in. Pin, 16 in. Long	4
10	A5190-001	Plate - Latch Spacer	2
11	A5191-001	Weldment - Slam Latch Bracket	2
12	A5178-001	Bumper - Door Closing	1
13	A5189-001	Plate - Latch Linkage	2
14	A5195-001	Weldment - Latch Catch Plate	2
15	A5174-001	Sheet - Door Stop Bracket	4
16	A5179-001	Bumper - Door Opening	4
17	A5397-001	Slam Latch, 1/2 in. Pin, Zinc	2
18	A5188-001	Bar - Side Load Door Spacer	2
19	●	1/4-20 Top Insert Type Prevailing Torque Type Hex Nut	22
20	●	3/8-16 UNC x 1 Hex Flange Screw - Regular Thread	36
21	●	1/2-13 UNC x 1 Hex Flange Screw - Regular Thread	96
22	●	1/4 Washer A	18
23	●	1/4-20 UNC x 1 Hex Bolt UNC Regular Thread	4
24	●	1/4-20 UNC x 0.875 Hexagon Socket Flat Countersunk Head Cap Screw	12
25	●	1/2-13 UNC x 4 Hex Bolt UNC Regular Thread	20
26	●	1/2 - Regular - Type B Plain Washer	22
27	A5728-001	Lock Bolt Assembly	1
28	A5729-001	Weldment - Lock Bolt Striker	1
29	●	5/16-18 Prevailing Torque Type Hex Flange Nut	5

NOT SHOWN

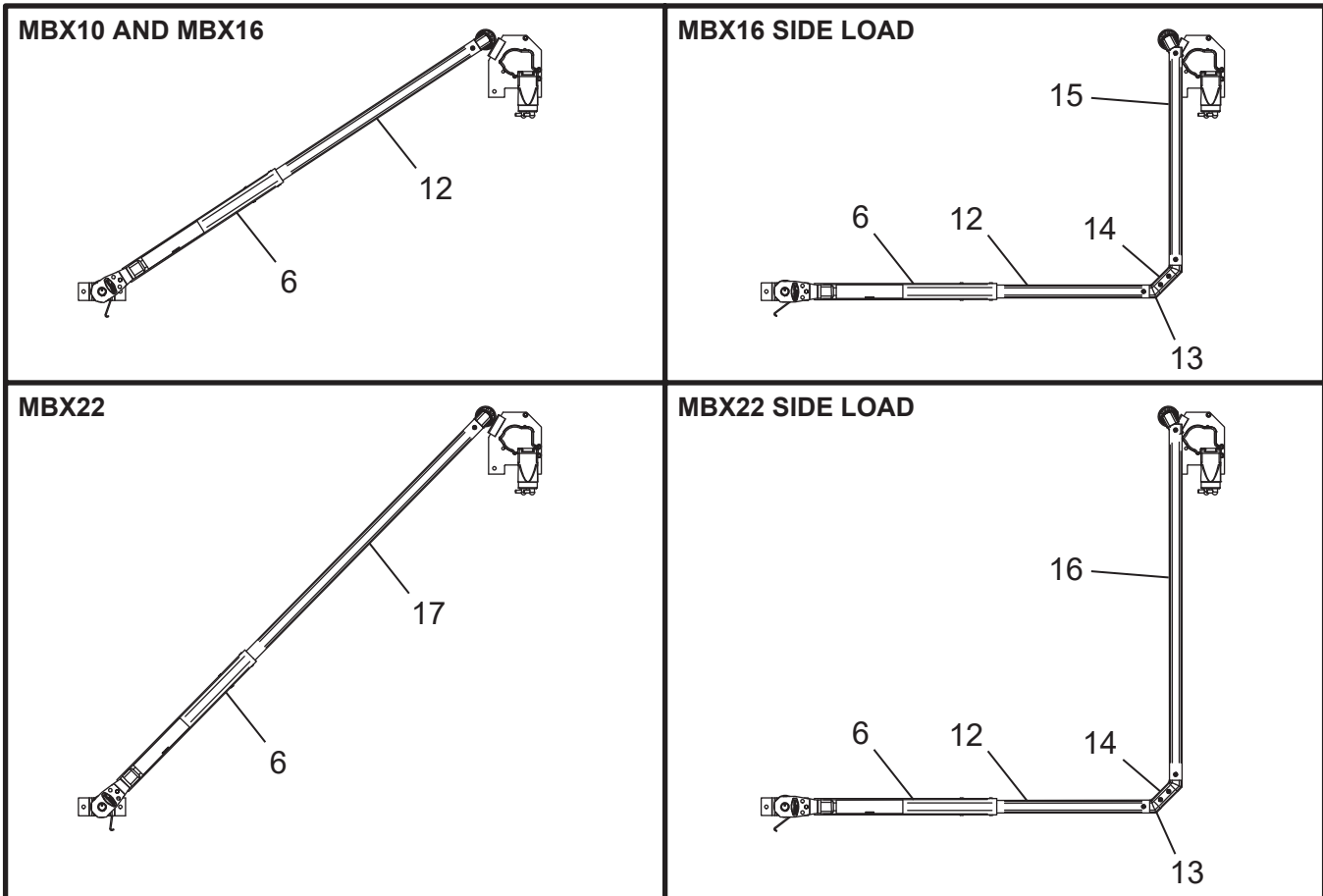
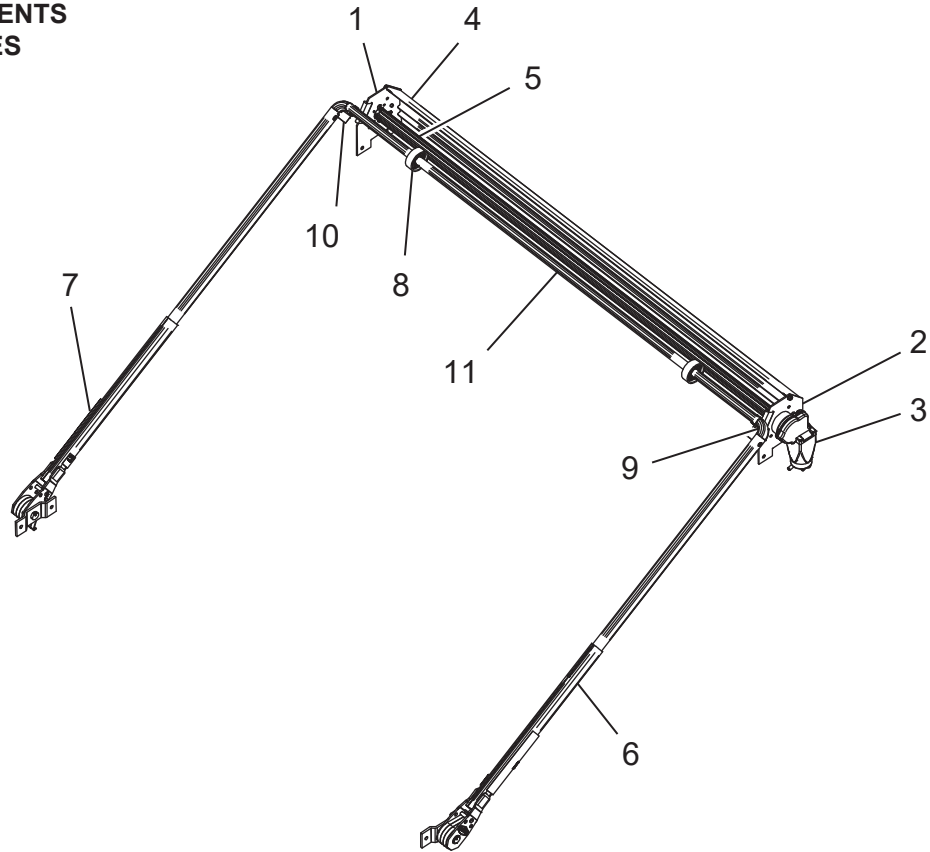
A5726-001	Isolator Strip	2
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KITS AND MARKERS

- Standard Hardware Item - Available at your local hardware store.

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

**COMMON COMPONENTS
TO ALL ASSEMBLIES**



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

TARP ASSEMBLIES

Ref. No.	Kit Ref.	Part Number	Description	Req'd	Req'd	Req'd	Req'd
				A4064-002	A4064-003	A4064-004	A4064-005
1	▲■◆▼	A2739-001	Bracket, Tarp Mounting - Driver Side	1	1	1	1
2	▲■◆▼	A2739-002	Bracket, Tarp Mounting - Passenger Side	1	1	1	1
3	▲■◆▼	A2716-001	Tarp Gear Motor	1	1	1	1
4	▲■◆▼	A2743-002	Wind Deflector - MBX	1	1	1	1
5	▲■◆▼	A2749-002	Tarp Axle, Pre-Threaded Aluminum - MBX	1	1	1	1
6	▲■◆▼	A3509-001	Torque Arm Assembly, 3-Spring - Right Hand Side	1	1	1	1
7	▲■◆▼	A3509-002	Torque Arm Assembly, 3-Spring - Left Hand Side	1	1	1	1
8	▲■◆▼	A2715-001	Bumper, Tarp Bow	2	2	2	2
9	▲■◆▼	A2702-001	Casting, Aluminum Corner - 90°	2	2	2	2
10	▲■◆▼	A2705-001	Tether Cable for 90° Corner	2	2	2	2
11	▲■◆▼	A2707-002	Bow Tube - MBX	1	1	1	1
12	▲◆▼	A2714-002	Arm Tube - MBX	2	0	2	2
13	◆▼	A5220-001	Casting, Aluminum - 45°	0	0	4	4
14	◆▼	A2714-006	Arm Tube - 45° Joint	0	0	2	2
15	◆	A2714-004	Arm Tube - MBX16 Side Load	0	0	2	0
16	▼	A2714-005	Arm Tube - MBX22 Side Load	0	0	0	2
17	■	A2714-003	Arm Tube - MBX22	0	2	0	0

NOT SHOWN

▲■◆▼	A2750-002	Tarp, Premium Mesh - MBX	1	1	1	1
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KITS AND MARKERS

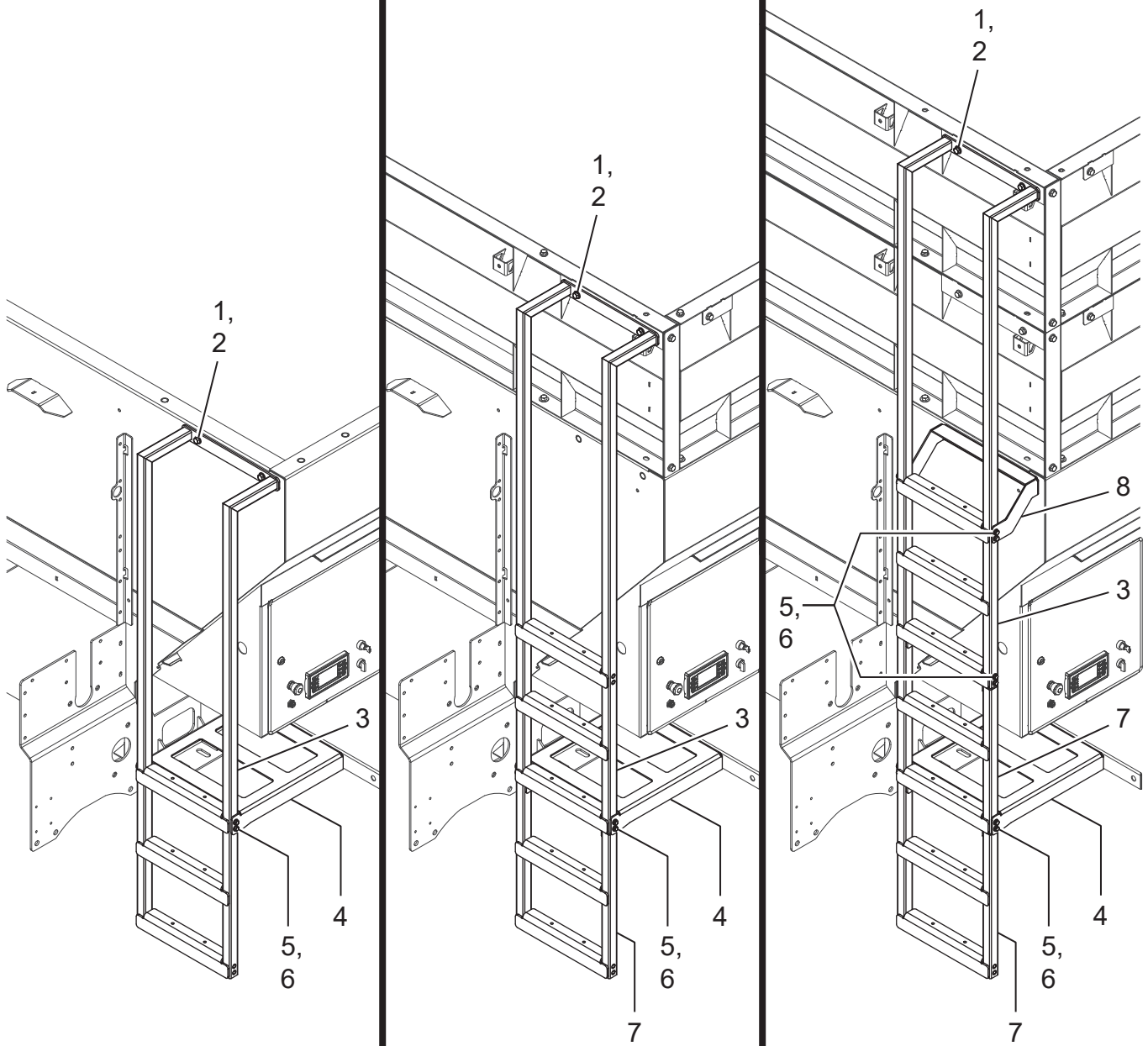
- ▲ A4064-002 MBX Tarp Assembly - 10 Yard and 16 Yard
- A4064-003 MBX Tarp Assembly - 22 Yard
- ◆ A4064-004 MBX Tarp Assembly - 16 Yard, Side Load Door Assembly
- ▼ A4064-005 MBX Tarp Assembly - 22 Yard, Side Load Door Assembly
- Standard Hardware Item - Available at your local hardware store.

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

10 YARD UNIT

16 YARD UNIT

22 YARD UNIT



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

LADDER ASSEMBLIES

Ref. No.	Kit Ref.	Part Number	Description	Req'd A2543-010	Req'd A2543-016	Req'd A2543-022
1	▲■◆●	●	1/2-13 UNC - 4 Hex Bolt - UNC - Regular Thread	2	2	2
2	▲■◆●	●	1/2 Plain Washer, Narrow - Type A	2	2	2
3	▲■◆	A4051-001	Ladder Weldment	1	1	1
4	▲■◆	A4056-001	Ladder Support	1	1	1
5	▲■◆●	●	3/8 - 16 UNC x 2.25 Hex Flange Screw - Regular Thread	4	8	16
6	▲■◆●	●	16 Hex Flange Nut	4	8	16
7	■◆	A4060-001	Ladder Extension Weldment	0	1	2
8	◆	A4059-001	Ladder Mid Brace	0	0	1
NOT SHOWN						
	▲■◆	A4057-001	Ladder Bracket Assembly	1	1	1
	▲■◆●	●	1/2 - 13 UNC x 1.25 Hex Flange Screw - Regular Thread	4	4	4
	▲■◆	190027	Safety Walk (1 in. Wide), General Purpose	6 ft.	9 ft.	12 ft.
KITS AND MARKERS						
	▲	A2543-010	Ladder, Top Level Assembly - 10 Yard			
	■	A2543-016	Ladder, Top Level Assembly - 16 Yard			
	◆	A2543-022	Ladder, Top Level Assembly - 22 Yard			
	●		Standard Hardware Item - Available at your local hardware store.			

NOTE: The Ladder Bracket Assembly from the NOT SHOWN section above is mounted under the passenger side fender and bolted to the Ladder Support using the 1/2-13 UNC x 1.25 Hex Flange Screws also from the NOT SHOWN section. These items are not visible in the illustrations presented as they are obscured by the passenger side fender.

NOTE: The Safety Walk General Purpose is a slip-resistant, adhesive tape material placed on each rung of the ladder to help reduce slip or fall hazards. It is not meant to be the only safety tool, hazard deterrent or safety practice when using the ladder of this machine.

NOTE: If the Safety Walk General Purpose material begins to get worn or is somehow removed, it should be replaced immediately.

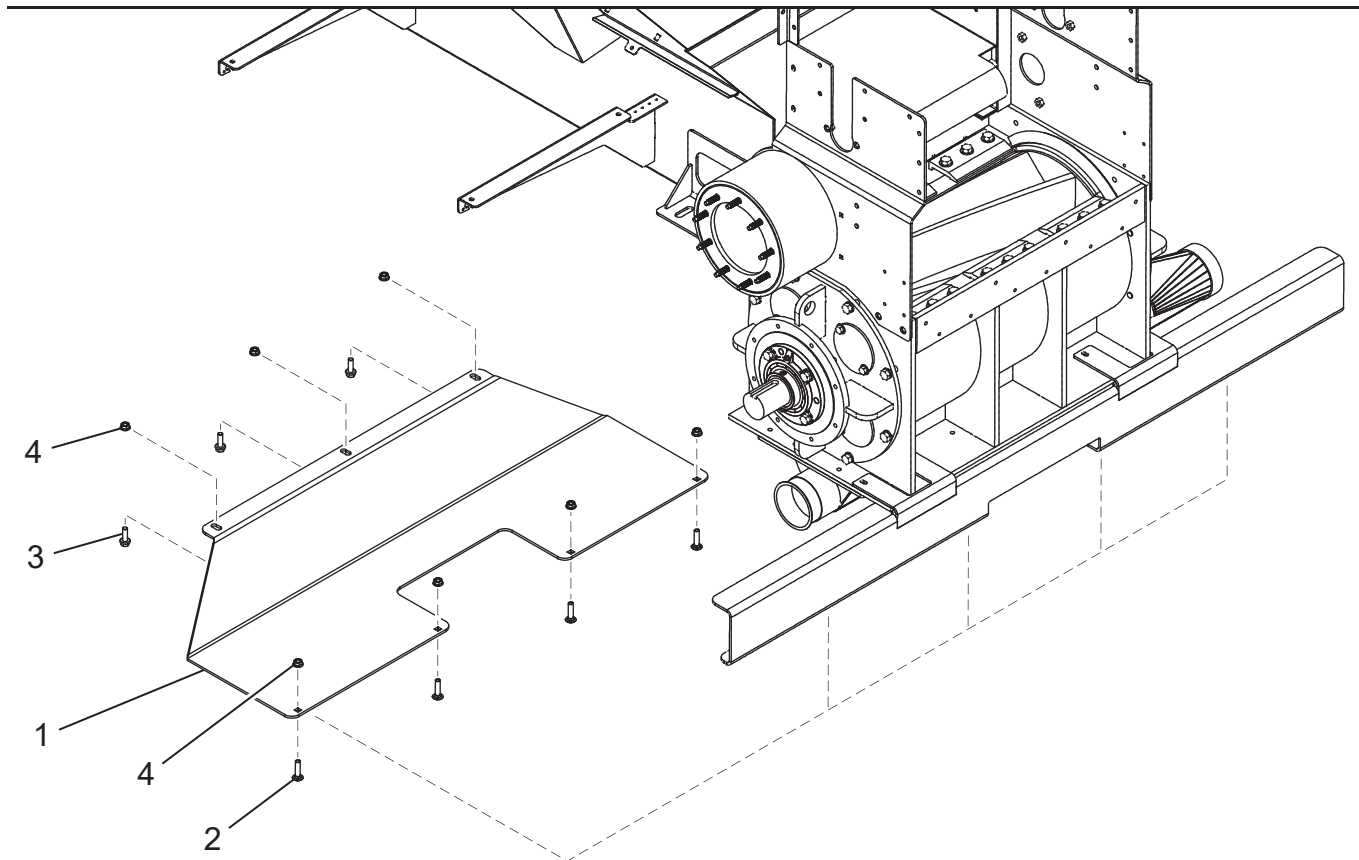
**WHEN ORDERING PARTS, BE SURE TO STATE
SERIAL NUMBER OF MACHINE**

OPTIONAL SKID PLATE ASSEMBLY

Ref. No.	Part Number	Description	No. Req'd
1	A5505-001	Skid Plate, Drop Pan	1
2	●	1/2-13 UNC - 2 Round Head Square Neck Bolt	4
3	●	1/2-13 UNC x 1.5 Hex Flange Screw - Regular Thread	3
4	●	13 Hex Flange Nut	7

KITS AND MARKERS

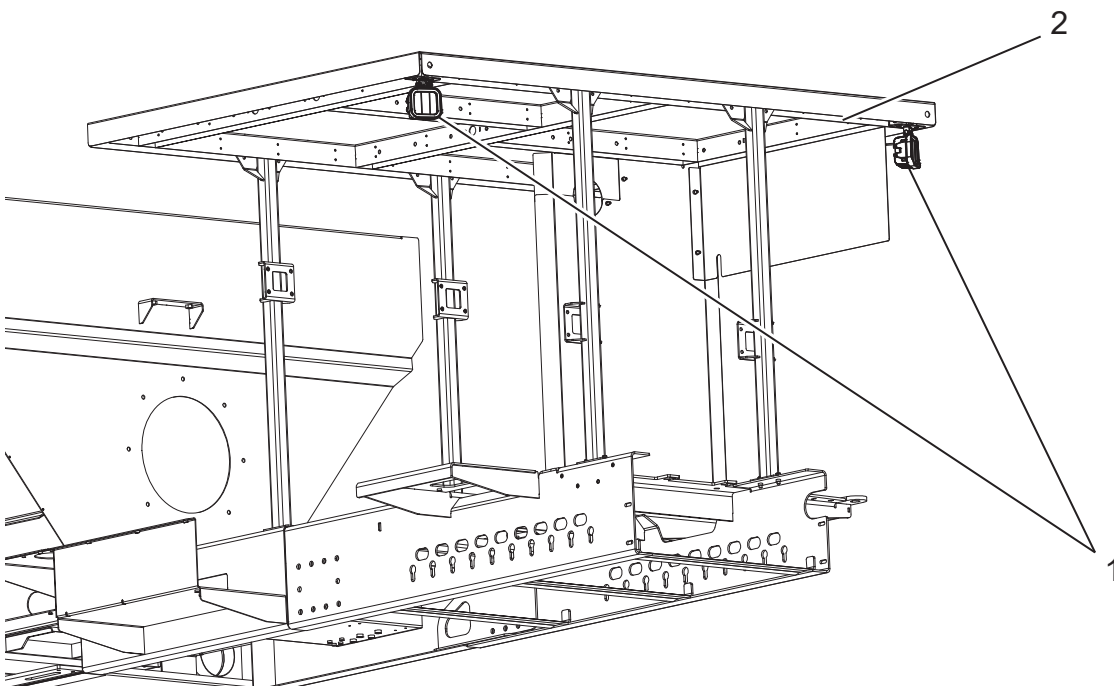
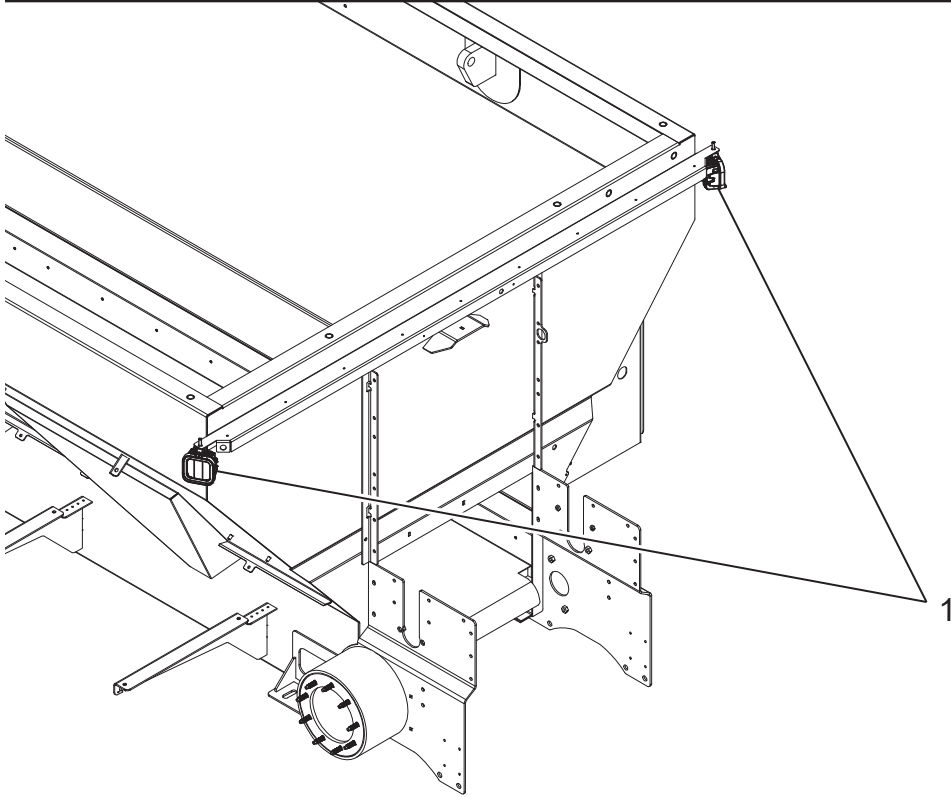
- Standard Hardware Item - Available at your local hardware store.



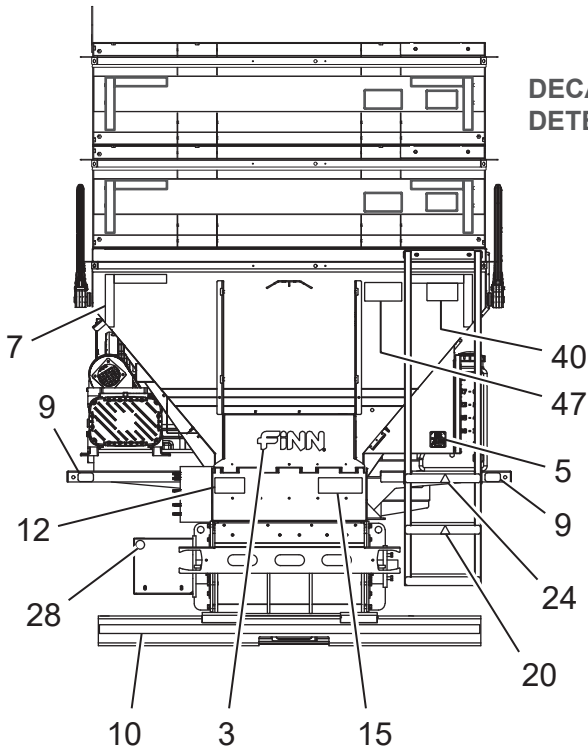
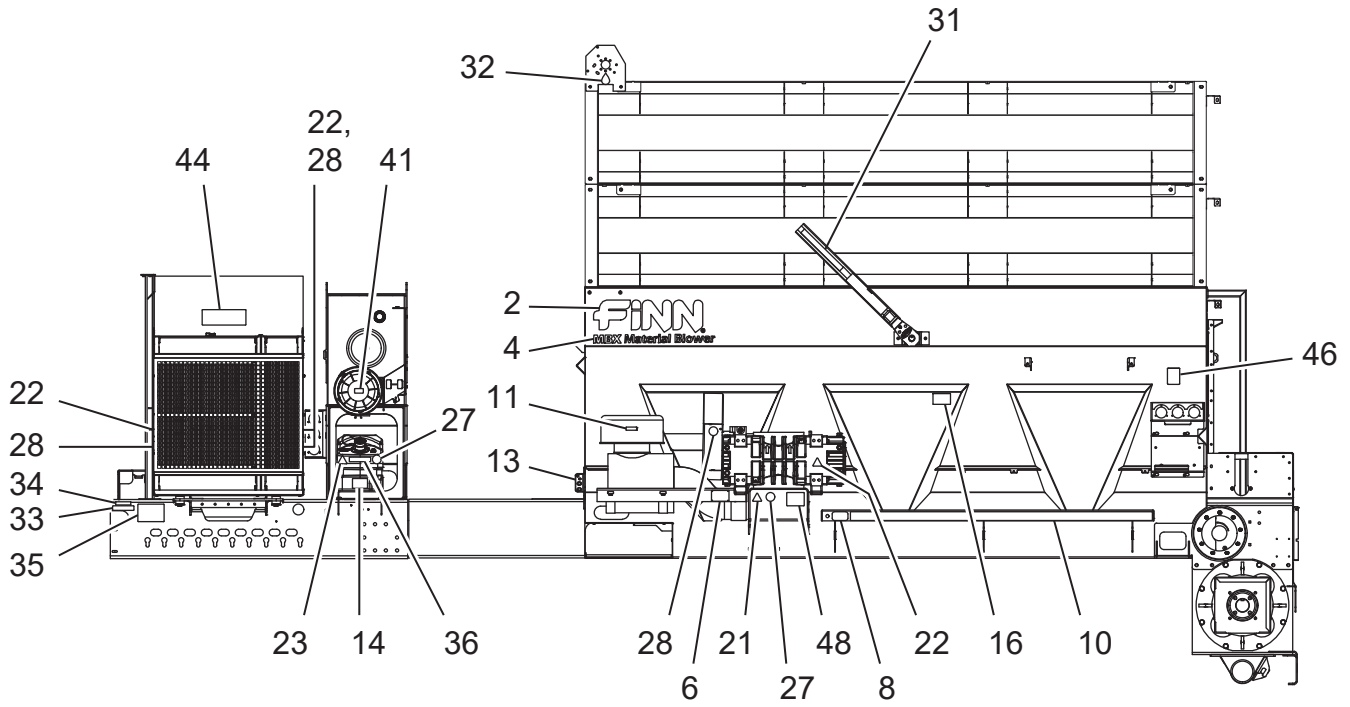
**WHEN ORDERING PARTS, BE SURE TO STATE
SERIAL NUMBER OF MACHINE**

OPTIONAL WORK LIGHT ASSEMBLY

Ref. No.	Part Number	Description	No. Req'd
1	A1456-001	Work Light, Flood Beam, LED, 12-24VDC	4
2	A4991-001	Work Light Bracket	2



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



DECALS 7, 40, 47 LOCATION
DETERMINED BY UNIT CAPACITY

DECALS VIEW 1

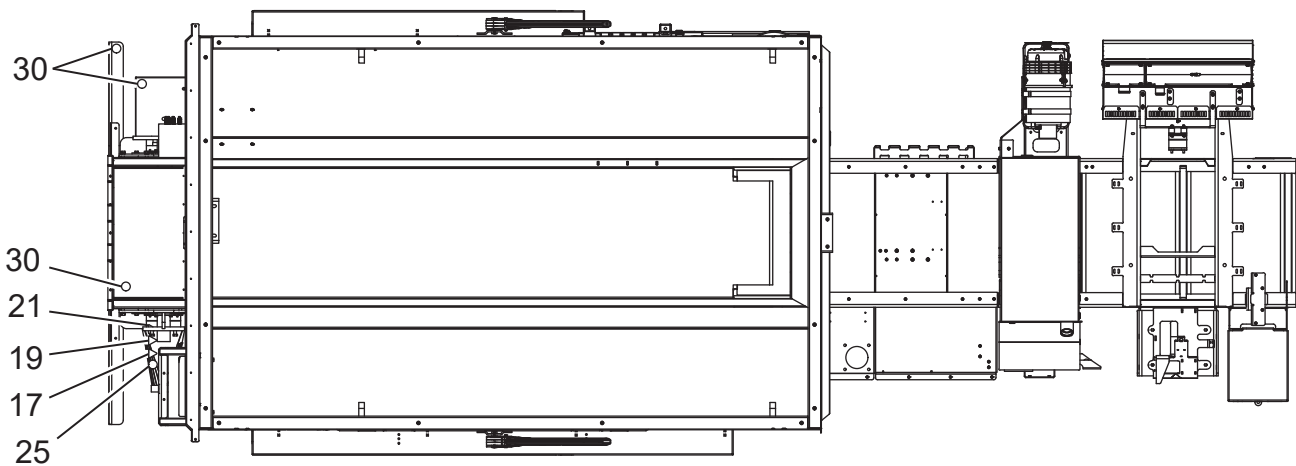
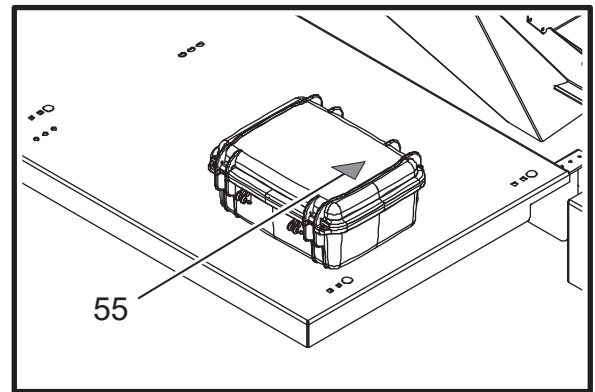
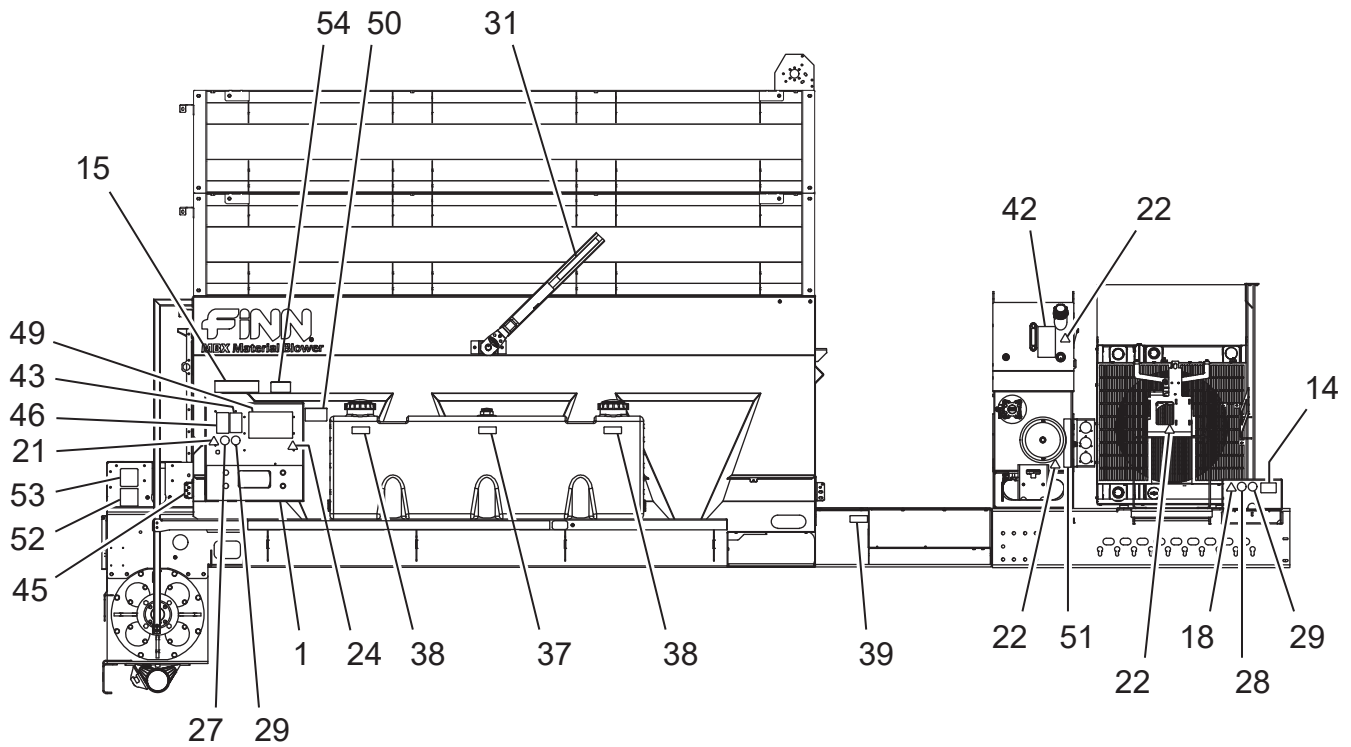
**WHEN ORDERING PARTS, BE SURE TO STATE
SERIAL NUMBER OF MACHINE**

DECALS

Ref. No.	Kit Ref.	Part Number	Description	No. Req'd
1		A4614-001	MBX Control Panel Decal	1
2		023174	Finn Decal, Large, Red	2
3		031235	Finn Decal, Medium, Red	1
4		A4607-001	Material Blower Decal	2
5		A4691-001	Finn Nameplate	1
6		012260	"Important" Metal Plate	1
7		190137	White Conspicuity Tape, 4 ft. length total	1
8		A1304-001	Rectangular Reflector, Amber	2
9		A1304-002	Rectangular Reflector, Red	2
10		190136	Red/White Conspicuity Tape, 19 ft. length total	1
11	<input type="checkbox"/>	-----	Rectangular Service Daily Decal	1
12	<input type="checkbox"/>	-----	Decal, Sever Hazard	1
13	<input type="checkbox"/>	-----	Decal, MBX Grease and Gearbox Port	1
14	<input type="checkbox"/>	-----	Decal, Caution, DEF System	2
15	<input type="checkbox"/>	-----	Decal, Sever Hazard/Flying Debris	2
16	<input type="checkbox"/>	-----	Decibel Decal	1
17	<input type="checkbox"/>	-----	Icon Decal - Burn Hazard	1
18	<input type="checkbox"/>	-----	Icon Decal - Electrical Shock Hazard	1
19	<input type="checkbox"/>	-----	Icon Decal - Eye Hazard	1
20	<input type="checkbox"/>	-----	Icon Decal - Fall Off Edge	1
21	<input type="checkbox"/>	-----	Icon Decal - Hazard/Attention	3
22	<input type="checkbox"/>	-----	Icon Decal - Hot Surface Hazard	7
23	<input type="checkbox"/>	-----	Icon Decal - Poison Hazard	1
24	<input type="checkbox"/>	-----	Icon Decal - Remote Start Hazard	2
25	<input type="checkbox"/>	-----	Icon Decal - Eye Protection	1
26	<input type="checkbox"/>	-----	Icon Decal - Lift Point	4
27	<input type="checkbox"/>	-----	Icon Decal - Read Manual	3
28	<input type="checkbox"/>	-----	Icon Decal - Do Not Remove Guard	5
29	<input type="checkbox"/>	-----	Icon Decal - Do Not Power/Pressure Wash	2
30	<input type="checkbox"/>	-----	Icon Decal - Do Not Step	3
31	<input type="checkbox"/>	-----	Decal, Flying Objects	2
32	<input type="checkbox"/>	-----	Decal "Service Weekly"	1
33	<input type="checkbox"/>	-----	Diesel Fuel Decal	1
34	<input type="checkbox"/>	-----	Ultra Low Sulfur Fuel Decal	1
35	<input type="checkbox"/>	-----	Decal - Fire Hazard	1
36	<input type="checkbox"/>	-----	Decal, DEF Fluid	1

Continued to next page.

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



DECALS VIEW 2

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

DECALS

Ref. No.	Kit Ref.	Part Number	Description	No. Req'd
37	<input type="checkbox"/>	-----	Decal, Water Tank	1
38	<input type="checkbox"/>	-----	Decal, Water Only	2
39	<input type="checkbox"/>	-----	Decal, Hose Reel Controls	1
40	<input type="checkbox"/>	-----	Decal, Danger, Do Not Enter	1
41	<input type="checkbox"/>	-----	Decal, Do Not Use Ether Or Starting Fluid	1
42	<input type="checkbox"/>	-----	Hydraulic Fluid Only Decal	1
43	<input type="checkbox"/>	-----	Decal, Eye Protection	1
44	<input type="checkbox"/>	-----	Decal, Burn Hazard/Radiator Handling	1
45	<input type="checkbox"/>	-----	Decal, Grease Port	1
46	<input type="checkbox"/>	-----	Decal, Electrocution Hazard	2
47	<input type="checkbox"/>	-----	Decal, Entanglement Hazard	1
48	<input type="checkbox"/>	-----	Decal, Rotary Blower Maintenance Instructions	1
49	<input type="checkbox"/>	-----	Decal, Operating Instructions	1
50	<input type="checkbox"/>	-----	Decal, US Patent	1
51	<input type="checkbox"/>	-----	Decal, Hydraulic Gauge Panel	1
52	<input type="checkbox"/>	-----	Decal, Warning, Flying Objects	1
53	<input type="checkbox"/>	-----	Decal, Explosion Hazard	1
54	<input type="checkbox"/>	-----	Decal, Ear Protection	1
55		041382-49	Battery Charging in Enclosed Area Hazard	1
NOT SHOWN				
	<input type="checkbox"/>	-----	Decal, Hose Reel Switch Cover	1
KITS AND MARKERS				
	<input type="checkbox"/>	A4701-001	MBX Decal Kit	

NOTE: All of the decals listed here with a in the part number space are available only in the MBX Decal Kit. Replacement decals and plates for those identified with a part number are **NOT** part of the decal kit and **must** be ordered separately.

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

RECOMMENDED SPARE PARTS

Part Number	Description
A3055-001	Low Pressure Filter Element
075747-C	High Pressure Filter Element
A2021-001	Fuel Filter Element, Primary With Water Separator
A2022-001	Fuel Filter Element, Secondary
045296-01	Airlock Knife (2 per)
045296-02	Bottom Wiper Knife (1 per)
A5987-001	Airlock Door Interlock Switch
055385	4 in. Hose Gasket
052523	5 in. Hose Gasket
A7293-001	Fuel Cap
A4471-001	Harness, Coolant Level Switch
A4470-001	Coolant Level Sensor
A2021-001	Fuel Filter Element, Primary With Water Separator
A2022-001	Fuel Filter Element, Secondary
A1999-001	DEF Filter
A1927-001	Oil Filter
A1924-001	31AQ Alternator, 12V, 120A
A1926-001	3075 Starter Motor Kit
A1929-001	Filter Element, Ccv
A1928-001	Engine V-Belt
A3002-001	Filter Element, Primary Air, 4 in.
A3284-001	Filter Element, Safety Air, 4 in.
A3866-001	Blower Air Cleaner
A3867-001	Silencer Outlet Reducer
A2489-001	Blower Drive Belt
053174	Drop Pan Clean Out Gasket
A4509-001	Blower Inlet Cover Gasket
A7605-002	Ignition Key

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