

FINN CORPORATION®

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Sales: 1-800-543-7166



Activate
Your Warranty
By Registering
TODAY!!!



T60-II HydroSeeder® Parts and Operator's Manual

Model **MO** Serial No. _____

NOTES



ACTIVATE YOUR FINN EQUIPMENT WARRANTY

IMPORTANT INFORMATION ON ACTIVATING YOUR FINN EQUIPMENT WARRANTY!!!

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



COMPLETE THE EQUIPMENT REGISTRATION FORM
AND MAIL TO THE FINN CORPORATION.

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

Once your FINN equipment has been registered, your FINN Limited Warranty will
be activated per the warranty statement on the next page.

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



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



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



VERIFY THAT WE HAVE YOUR REGISTRATION ON FILE



VERIFY THAT THE WARRANTY PERIOD IS IN EFFECT



VERIFY THAT THE RELATED PART(S) ARE INCLUDED IN THE SCOPE OF
WARRANTY (PENDING FINN'S INSPECTION OF DEFECTIVE PARTS)



SEND YOU REPLACEMENT PART(S) AND A WARRANTY INFORMATION PACKET



REQUEST YOU FOLLOW ALL INSTRUCTIONS AS NOTED IN THE PACKET

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



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

Commercial Limited Warranty
Effective 4/1/2011

OUR WARRANTY TO YOU:

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

WHAT FINN WILL DO:

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

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

WHAT YOU MUST DO TO OBTAIN WARRANTY SERVICE:

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

WHAT THE WARRANTY DOES NOT COVER:

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

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

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

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

THIS IS THE ONLY EXPRESS WARRANTY ON OUR PRODUCTS:

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

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

LIMITATIONS ON OUR RESPONSIBILITY WITH RESPECT TO PRODUCTS PURCHASED:

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

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

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

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

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

NOTICE:

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

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SAFETY FIRST

With any piece of equipment, new or used, the most important part of its operation is **SAFETY!**

FINN Corporation encourages you and your employees to familiarize yourselves with your new equipment and stresses safe operation.

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

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



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



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



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



Indicates practices that are not related to personal injury.

NOTE:

Gives helpful information.

<p style="text-align: center;">CALIFORNIA</p> <p style="text-align: center;">Proposition 65 Warning</p> <p>The engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.</p>
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<p style="text-align: center;">CALIFORNIA</p> <p style="text-align: center;">Proposition 65 Warning</p> <p>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.</p>
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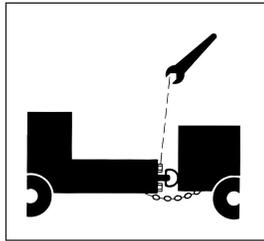
HYDROSEEDER® SAFETY SUMMARY SECTION

It is important that operators of this machine are familiar with all safety aspects covered in this section and have read the entire Operator's Manual 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 summary 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 section is written for this type of machine only. Practice all other usual and customary safe working precautions. Above all, remember that safety is up to you.

The FINN HydroSeeder® is designed to mix and apply water, seed, fertilizer, agricultural lime, and hydraulic mulch to the prepared seedbed. The resultant slurry from mixing one or more of the above materials may react, causing harmful or deadly gasses within the tank. Heat, evaporation, or extended emptying period can/will accelerate the formation of these gasses. Please contact your supplier(s) of these slurry components regarding their potential reactivity.

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

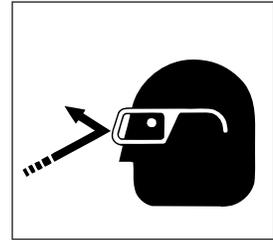
1. If you have a chassis-mounted unit, check devices securing HydroSeeder® to the truck or trailer frame.



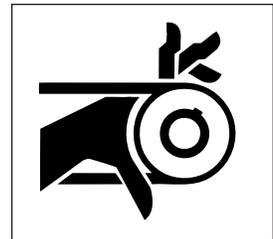
2. If HydroSeeder® is a trailer unit, check hitch and hitch bolts, lights, brakes, and all safety components.
3. Make sure loading hatch bag cutter is in place and secure.
4. Check that all guard railing is in place and secure.
5. Verify that all guards are in place.
6. With the ignition switch ON, verify that the signal horn is operating correctly.
7. By carefully looking down through the loading hatch, inspect the slurry tank for foreign objects. Never enter the tank without following the procedures described in step 3 of section IV. MAINTENANCE on page 4.
8. Remove unnecessary objects (or material) from the tank top.
9. Make sure no one is working on or inside the machine. Give a visual and audible signal that all is clear, before starting the engine.
10. Inspect all hydraulic hoses for cracks, bulges, or damage. If hoses are bad, replace immediately.
11. Inspect all discharge hoses for cracks, bulges, or damage. If hoses are bad, replace immediately.

II. MACHINE OPERATION

1. Always wear safety goggles when operating 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 operate the machine without all guards in place.



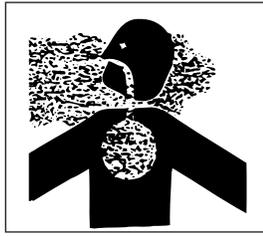
3. Do not load unit while in transit. Load only when parked and unit is as level as possible. Take care not to drop pens, lighters, etc. or pieces of paper or plastic bags into the tank, as these objects might plug the slurry system. Should any object be dropped into the tank, do NOT reach into the tank to retrieve the foreign object. See step 3 under section IV. MAINTENANCE on page 4 before allowing any personnel to enter the tank.
4. Make sure area to be sprayed is clear of all persons, animals, etc.

5. The driver of the carrying or towing vehicle is responsible for the safety of the operator(s) of the machine. Make sure the driver is aware of and avoids all possible hazards to the operator(s) of the machine, such as low tree limbs, low power lines, etc. Vehicles on which equipment is mounted or towed must be stopped and started gradually. Avoid abrupt starts or stops. Never operate on a slope or a hill that may endanger the driver and/or the operator(s). All personnel should review and be familiar with stop/start signals between the driver and operator(s) before going into operation. Only the operator should be located on the platform during operation.

6. Operator(s) of equipment should never ride on the machine at speeds of greater than 5 mph (8 km/h).



7. 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.



8. 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.

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

10. Use proper means (steps, ladder) for mounting and dismounting of the machine. Never mount or dismount a moving machine.

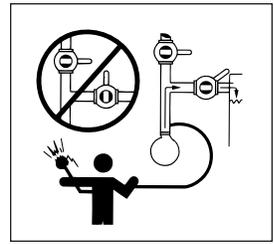


III. SLURRY APPLICATION

1. Do not aim discharge spray toward power-lines, transformers, or other high voltage electrical conductors. Also do not aim discharge spray towards people, animals or anything other than the intended application area.



2. Never engage (turn on) clutch when both the recirculation and discharge valves are closed. Operation with both valves closed will result in extreme heat generation that could cause severe bodily injury and damage to the equipment.

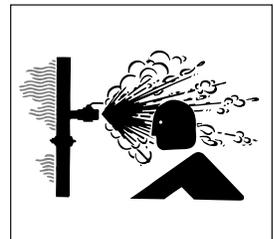


3. Recirculation valve must be open and material flowing back into the tank when using the remote valve. A closed or plugged recirculation line will cause extreme heat in the pump or discharge lines that will result in severe bodily injury and damage to the equipment.

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

5. Plan application so that the farthest area is covered first, then work back toward the HydroSeeder®, so individuals are not walking back over slippery ground.

6. Before opening any valves or pipe clamps, shut machine down and check if material in the pipe is hot. If hot, do NOT open valve or pipe clamps as the hot material may cause severe personal injury. Allow to cool and open with caution.

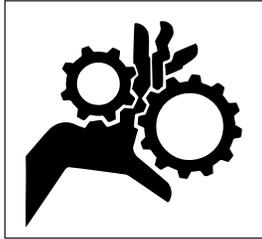


7. Except when loading materials, keep loading hatch lid closed to protect operator and prevent splashing of wet material onto the tank top.

8. Wash off spillage of slippery mulch or slurry additive from the tank top and platform before operating equipment.

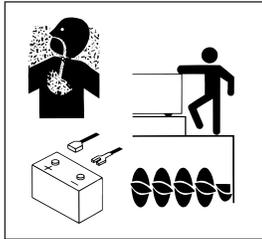
IV. MAINTENANCE

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



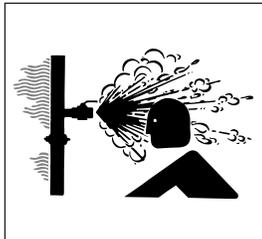
lockout/tagout procedure (Occupational Health and Safety Administration (OSHA) 29 CFR 1910.147).

2. Certain hydroseeding amendments, when combined with or without the addition of water or heat or the element of time, may react causing harmful or deadly gasses. Consult your material suppliers regarding reactivity information. The slurry tank must be flushed and drained after each day of operation.



3. Your slurry tank may be considered a confined space by OSHA under 29 CFR 1910.146. Before entering any confined space, your company must develop a procedure for safe entry. Make sure your company's plan meets all the requirements of 29 CFR 1910.146, or local legal requirement, including the following:
 - a) Drain, flush, and ventilate tank interior.
 - b) Turn off engine, disconnect battery cables, and perform lockout/tagout procedures (29 CFR 1910.147).
 - c) Provide continuous ventilation or proper breathing apparatus.
 - d) If tank must be entered, personnel entering the tank must be tethered to a lifeline.
 - e) Provide a stand-by individual outside of tank who is able to communicate with person inside and haul him out with the lifeline if necessary.

4. Before loosening any clamps or opening any valves, determine if material in the line is hot by feeling the pipe. Do NOT allow material to come in contact with personnel. Severe bodily injury could result.



5. On trailer units, perform general maintenance such as checking the safety chains, hitch and hitch bolts, tires, and brakes. Repair or replace if worn or broken. Never operate machine on improperly inflated or damaged tires. Always use a safety cage or cable restraints when inflating a repaired tire.
6. 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.
7. 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.
8. Filling of fuel: Never fill the tank with the engine running, while smoking, or when near an open flame. Never smoke while handling fuel or working on the fuel system. The fumes in an empty fuel container are explosive. Never cut or weld on fuel lines, tanks, or containers. Move at least 10 ft (3 m) away from fueling point before starting engine. Wipe off any spilled fuel and let dry before starting engine.

IMPORTANT: Be careful not to allow fuel, lubricant, hydraulic fluid, or cooling fluids to penetrate into the ground or be discharged into the water system. Collect all fluids and dispose of them in accordance with local municipal regulations.
9. It is recommended that only authorized, genuine FINN replacement parts be used on the machine.
10. Do not use either cold start fluid, if engine is equipped with glow plug-type preheater, or other intake manifold type preheater. It could cause an explosion or fire and severe injury or death.
11. Diesel fuel or hydraulic fluid under pressure can penetrate the skin or eyes and cause injury, blindness, or death. Pressure may build up in the hydraulic system; use caution when removing the cap.
12. Make certain that all decals on the machine are maintained in good legible condition. Replacement decals are available through FINN Corporation by specifying part number shown in the lower right-hand corner of the decal. See page 5 for the current safety decals mounted on the unit. See pages 54 and 55 in the Parts Manual for the location and quantity of all decals on this unit.

CURRENT SET OF SAFETY DECALS

⚠ WARNING	
	<p>RUNAWAY VEHICLE HAZARD! Always inspect tow vehicle and equipment hitch before towing. Tighten all hitch bolts and properly connect wiring and safety chains.</p> <p>BREAKAWAY SWITCH DO NOT use for parking. Attach cable to towing vehicle with enough slack for turning. Engine battery on trailer must be charged and hooked-up for proper breakaway function.</p> <p>SAFETY CHAIN INSTALLATION Both the single and double chains must be crossed under tongue. They must be oriented in such a manner as to prevent tongue from dropping to ground in event of failure to hitch, coupler or ball. Chains must be connected to towing vehicle so slack for each length of chain, between trailer and towing vehicle, is the same and must have no more slack when in use than necessary to permit proper turning of vehicles. Forward end of chain must be attached to towing vehicle, not to ball, but to hitch or other frame member. Chain must be looped around member and hooked back into itself. Failure to comply could result in death or serious injury.</p>
	<small>P/N 31461</small>

⚠ WARNING	
	
<p>BURN HAZARD! Contents could be under pressure. DO NOT come in contact with material. Ensure material in line is not hot before loosening clamps or opening valves. DO NOT operate pump with both recirculation and discharge valves closed. DO NOT use remote valve unless recirculation valve is open. Excessive heat or bodily injury could occur. Failure to comply could result in death or serious injury.</p>	
<small>P/N 5216</small>	

⚠ WARNING	
	<p>SEVERE HAZARD! Keep hands clear! Rotating fan and gears. DO NOT operate without guards or doors in place.</p>
	<p>Shut off engine, disconnect battery and allow all moving parts to stop before servicing. FLYING DEBRIS! Wear eye protection around equipment. Failure to comply could result in death or serious injury.</p>
	
<small>P/N 31463</small>	

⚠ WARNING	
	<p>FALL HAZARD! DO NOT ride on equipment when moving at speeds in excess of 5 MPH (8 km/h). Failure to comply could result in death or serious injury.</p>
<small>P/N 20070</small>	

⚠ CAUTION	
<p>FALL HAZARD! ALWAYS face ladder when mounting and dismounting. Failure to comply may result in moderate or minor injury.</p>	
<small>P/N 12088</small>	

⚠ WARNING	
	<p>FALL HAZARD! DO NOT ride on hitch when vehicle is moving. ALWAYS use step when mounting and dismounting. Failure to comply could result in death or serious injury.</p>
<small>P/N 20072</small>	

⚠ WARNING	
	<p>BURN HAZARD! Hot exhaust! Stay back! Failure to comply could result in death or serious injury.</p>
<small>012278</small>	

⚠ DANGER	
	
<p>CONFINED SPACE HAZARD! Before entering tank: 1. Drain, flush, and ventilate tank interior. 2. Turn off engine and disconnect battery cables. 3. Continuously ventilate area or wear appropriate breathing apparatus. 4. Provide standby individual outside tank able to communicate with person inside and able to remove him with a lifeline if necessary.</p> <p>FLYING MATERIAL HAZARD! Wear eye protection around operating equipment. Failure to comply will result in death or serious injury.</p>	
<small>P/N 12044</small>	

⚠ WARNING	
	
<p>Wear proper eye protection when operating machine. Failure to comply could result in death or serious injury.</p>	
<small>P/N 23519</small>	

⚠ DANGER	
	
<p>ELECTROCUTION HAZARD! DO NOT aim a stream toward electrical lines. Avoid spraying toward bystanders. Failure to comply will result in death or serious injury.</p>	
<small>P/N 11507</small>	

OPERATION AND MAINTENANCE MANUAL FOR FINN T60 SERIES II HYDROSEEDER®

This manual gives you step-by-step instructions for the operation and maintenance of the FINN T60 HydroSeeder®. For best results and to ensure longer life of the equipment, please follow the instructions carefully. For your safety, read the entire manual before operation of this unit.

DEFINITION OF HYDROSEEDING

Hydroseeding is the process whereby seed, fertilizer and/or lime, and fiber mulch (using water as a carrying medium) are applied on the soil to establish vegetation.

THE FINN HYDROSEEDER® AND HOW IT WORKS

The FINN HydroSeeder® will apply seed, fertilizer and/or lime, fiber mulch, or stabilizing materials in any prescribed or desired combination. The materials placed in the HydroSeeder® slurry tank are mixed with water and kept in suspension by a dual-agitation process, recirculation of slurry and mechanical agitation, thus, forming a slurry that is pumped to the discharge assembly and directed onto the seed bed by the operator. This equipment is designed to accomplish hydroseeding in one easy operation with maximum efficiency.

TOWING VEHICLE

The trailer-mounted HydroSeeder® is to be pulled with a truck that is built to take 1,400 lb (635 kg) vertical hitch load. The truck must be able to pull 7,700 lb (3,493 kg). The trailer has electric operated brakes, an electric breakaway switch, a standard tread of 60 in. (152.4 cm), and is available with either a ball hitch** or lunette eye.

HYDROSEEDER		TRUCK REQUIREMENTS
Type	Maximum Weight (Loaded)	
T60T	7,700 lb (3,490 kg)	Truck must be able to support 1,400 lb (635 kg) down on its hitch and safely tow 7,700 lb (3,490 kg)
T60S	6,200 lb (2,810 kg)	13,000 lb (5,900 kg) Approx. GVWR** (CA dimension 72 in+ (183 cm+))

** *Since truck weight will vary, ensure that vehicle's GVWR is sufficient for the particular application.*

This information can be obtained from the truck manufacturer or dealer.

Once the proper carrier has been selected, the HydroSeeder® must be securely mounted to it.

CAUTION

Your FINN HydroSeeder® should be mounted by a qualified truck body installer. Failure to comply could result in minor or moderate personal injury. Product damage could also occur.

When mounting the HydroSeeder® to the truck, one of the following methods of mounting is acceptable:

1. Bolt the HydroSeeder® directly to the truck bed. Installer must ensure that the bed-to-truck and HydroSeeder®-to-bed connections are adequate for the maximum weights loaded that are shown on page 6.
2. Mount the HydroSeeder® to the truck frame. The T60 II Skid HydroSeeder® is provided with an adapter frame that also allows the unit to be mounted directly to the truck's 34 in. (86.4 cm) wide frame using U-bolts.

NOTICE

Mounting the HydroSeeder® to the truck must allow for tire clearance and frame twist. Place hard wood spacers along the length of truck rails or use FINN Spring-Mounting Kit (part number 011562) or equivalent.

3. Place chains over the HydroSeeder® and around truck bed and secure with binders. Secure the HydroSeeder® with blocks tied to the truck bed.

CAUTION

When using a truck with a tilt bed, make sure to chain the truck bed down to prevent the bed from being accidentally hoisted. Failure to comply could result in minor or moderate personal injury. Failure to comply could also result in product or property damage.

ATTACHMENTS

1. Discharge Hoses: Discharge hoses are available in 50 ft (15.2 m) and 100 ft (30.5 m) lengths up to a total of 150 ft (45.7 m). Hose of a greater length may adversely affect the discharge distance and the discharge time of the HydroSeeder®. All connections are cam-lock, quick-operating fittings, including the connection to the end of the discharge piping. A nozzle is connected to the end of the hose, next to the remote discharge valve. Once the hose is connected, the HydroSeeder® is ready to operate. Flow through the hose and the nozzle is controlled by the remote discharge valve. When using this valve, the recirculation valve on the HydroSeeder® **MUST BE OPEN** to allow flow at times when the remote valve is closed. (See Figure 2 on page 10.)



The recirculation valve must be open when using a remote valve. Failure to comply will result in death or serious injury.

2. Operator's Platform: A bolt-on package is available to convert the base unit to include an operator's platform consisting of a discharge boom, guard rails, ladder, and all controls necessary to operate the unit (throttle, clutch control, signal horn, and agitator control).
3. Hose Reel: The live hose reel mounts on top of the unit. The 150 ft (45.7 m) capacity electric rewind reel will wind up and store empty hose. It is wired to the unit's battery.
4. Radio Remote Transmitter: A radio remote transmitter is available that allows the operator to control material flow by turning the clutch off and on from the end of the discharge hose.

PRE-START CHECK

The following safety checks should be made to ensure operator safety:

1. A. Skid Unit – Check condition of all mounting hardware that secures the HydroSeeder® to truck bed and frame rails.
B. Trailer Unit – Inspect hitch, safety chains, lights, brakes, and breakaway switch.
2. Ensure that all guards are in place.
3. Inspect that all railings are in place and secure (Platform Option only).

EQUIPMENT CHECK



Equipment check should be made with the engine OFF and all rotating parts stopped. Failure to comply could result in death or serious injury.

1. Make sure that the tool kit contains all the prescribed items. See PARTS MANUAL.
2. Inspect the slurry tank for foreign objects. See steps 2 and 3 in section IV, MAINTENANCE of the HYDROSEEDER® SAFETY SUMMARY SECTION on page 4.
3. Check fuel level. Fill if necessary.

4. Check hydraulic oil level and fill if necessary. See HYDRAULIC SYSTEM on page 23 for oil specifications.
5. Check engine oil level and fill if necessary. For oil type, refer to the engine manual.
6. Inspect air cleaner for dust and dirt; clean if necessary.
7. Secure the tank drain plug in the drain pipe located in the center of the bumper.
8. Check to make sure pump drain plug is in place.
9. Lubricate equipment – See LUBRICATION AND FLUIDS CHART.
 - A. Each lubrication point on the machine is marked with a decal.
 - B. Check automatic pressure lubricator at pump. If the stem is fully extended, with thumb nut all the way up, the automatic pressure lubricator contains lubricant. If the lubricator does not contain lubricant, the lubricant must be replaced by using the following procedure (see Figure 1, page 9):
 1. Turn thumb nut clockwise until stem rises to maximum height.
 2. Remove cap and fill cap with sodium- (water soluble) based grease (FINN part number 000698). Do not use lithium-based (chassis lube) grease.
 3. Replace cap.
 4. Turn thumb nut counterclockwise until the thumb nut is at the top of the stem. The spring and pressure disc in the lubricator forces the grease, under pressure, to the pump seal.

NOTICE

When the thumb nut has moved down to within 1/2 in. (1.27 cm) of touching the cap, re-service the automatic pressure lubricator.

10. Check nozzles and hoses and clean them of any obstructions.
11. Check pump discharge, recirculation, and remote valve handles for free movement.

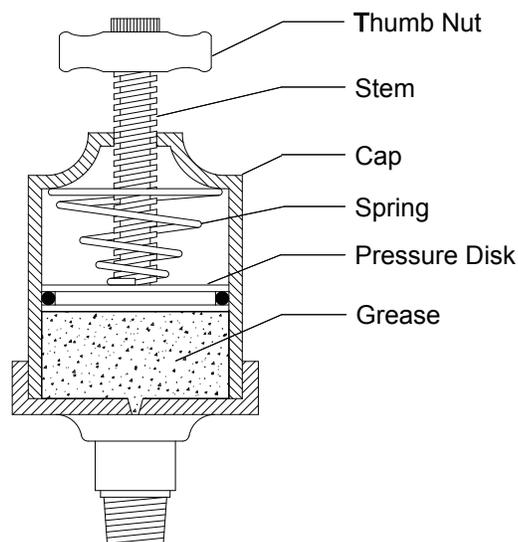


Figure 1 – Automatic Pressure Lubricator Components

VALVE OPERATION

A. THREE-VALVE OPERATION (BASE UNIT)

The base HydroSeeder® is equipped with three independently operated ball valves to control slurry flow. See Figure 2 below. The first valve is the recirculation valve. An open recirculation valve allows flow back into the tank. The second valve is the pump discharge valve. An open pump discharge valve allows slurry to flow through the discharge hose. The third valve, located at the end of the discharge hose, is the remote valve. An open remote valve allows discharge of the slurry onto the area being covered.

⚠ DANGER

Never engage (turn on) slurry pump clutch when recirculation valve and either the pump discharge or remote valve is closed. This would create a situation where the pump is running with slurry flow closed off, which will result in extreme heat generation, possibly causing damage and/or bodily injury. The recirculation valve must be open and material flowing back into the tank when using the remote valve. A closed remote valve in conjunction with a closed or plugged recirculation will cause extreme heat. Failure to comply will result in death or serious injury.

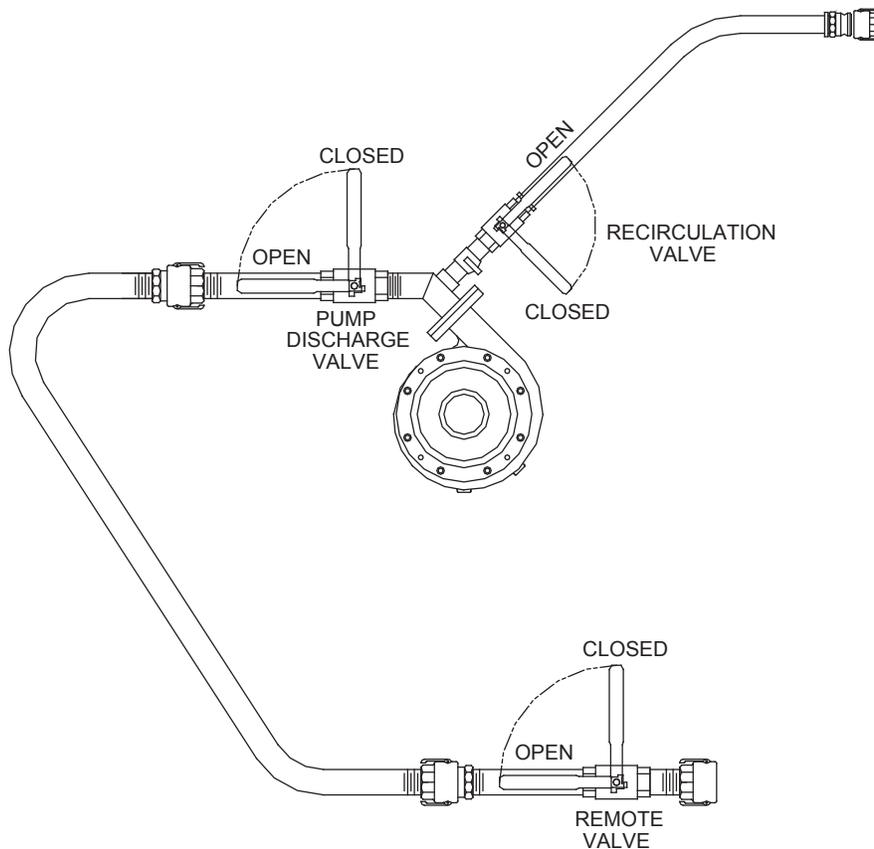


Figure 2 – Valve Operation (Base Unit)

B. VALVE OPERATION (PLATFORM/BOOM OPTION)

The platform option is equipped with two independently operated ball valves to control slurry flow. See Figure 3 below. With the platform option, discharge of the slurry is accomplished two different ways; either through the discharge boom or through a discharge hose that is coupled to the end of the discharge boom.

Through the discharge boom – Since the operator controls engagement of the pump with the foot switch when discharging through the boom, the recirculation valve may be left open or closed. With the recirculation valve closed, full pump flow is directed through the boom, resulting in additional flow distance achieved and a decrease in discharge time.

Through the discharge hose – When discharging through the discharge hose, both ball valves are used to control slurry. The recirculation valve is always open. The remote valve at the end of the discharge hose is the control device to allow application of the slurry. An open remote valve allows discharge of the slurry onto the area being covered.



Never engage (turn on) slurry pump clutch when recirculation valve and the remote valve are closed. Pump is running with slurry flow closed off, which will result in extreme heat generation, causing damage and/or bodily injury. The recirculation valve must always be open and material should be flowing back into the tank when using the remote valve. A closed remote valve, in conjunction with a closed or plugged recirculation, will cause extreme heat. Failure to comply could result in death or serious injury. Failure to comply could also result in product or property damage.

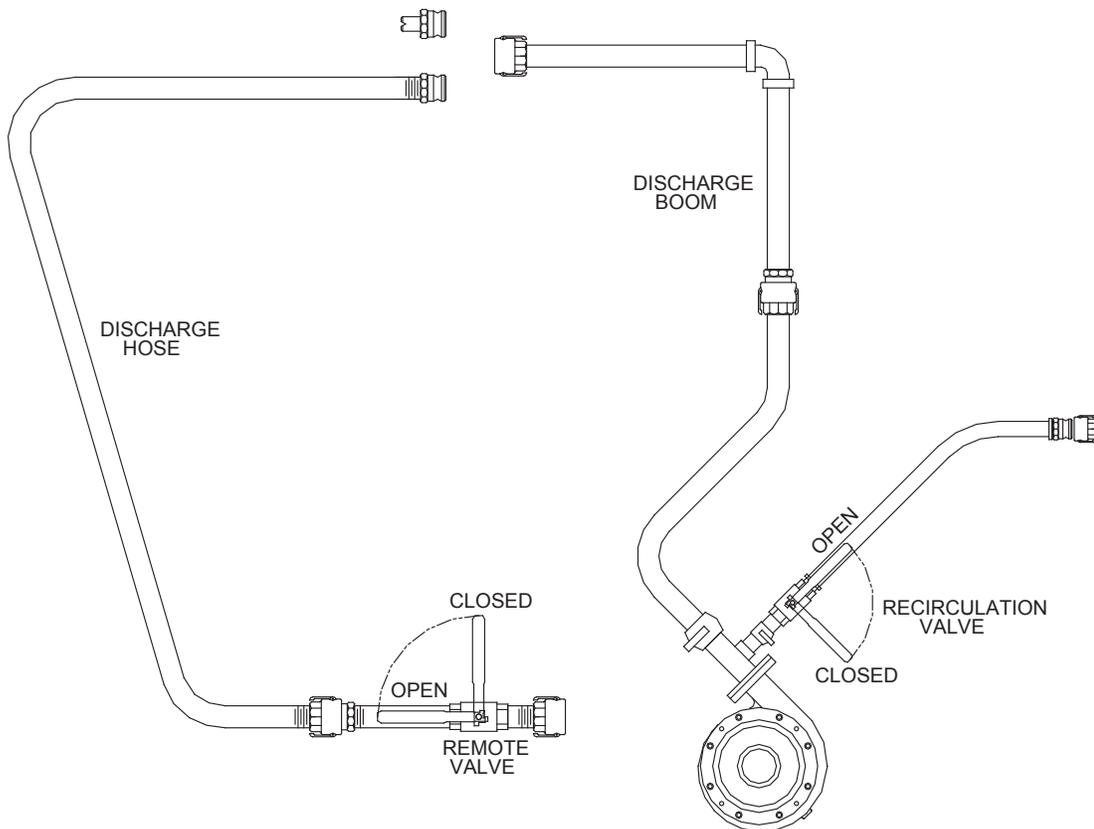


Figure 3 – Valve Operation (Platform / Boom)

STARTING PROCEDURE



See HYDROSEEDER® SAFETY SUMMARY SECTION on pages 2 through 4 before operating the machine. Failure to comply could result in death or serious injury. Failure to comply could also result in product or property damage.

Before starting, open the recirculation valve, close discharge valve, disengage (turn off) clutch, and place the agitator control in the NEUTRAL position.

1. Set throttle about 1/4 open.
2. Pull choke control out.
3. Turn the key clockwise until starter engages and engine starts.
4. Push choke control in for even running.

NOTE: This engine has a safety system that will shut the engine off if the engine temperature goes above a set temperature or if the oil pressure decreases below an acceptable level.

AREA COVERAGE – MATERIAL CAPACITY

To determine the coverage per load for any HydroSeeder®, three questions must be answered prior to the application. First, is the job to be done a one-step process (which is when the seed, fertilizer, and mulch are applied proportionally per load) or a two-step process (which is when the seed and fertilizer are applied alone and then covered by mulch as a second operation)? Second, at what rates (usually in pounds per 1,000 square feet, or pounds per acre) are the seeding materials to be applied? Finally, what are the loading capacities of the HydroSeeder®?

Application rates vary for different geographic locations, but in general, seed is applied at 6 to 10 lb (2.7 to 4.5 kg) per 1,000 square feet. Fertilizer is applied at a rate of approximately 400 lb (181 kg) per acre, and fiber mulch is applied at 1,500 to 2,000 lb (680 to 907 kg) per acre. (Note: There are 43,560 square feet in an acre.) Local agronomists, agricultural extension agents, or soil and water conservation officials should be contacted for more specific information on application rates for a given area.

The tables on page 13 show loading versus coverage rates for the FINN T60 II. Table A shows rates for one-step applications. The coverage area is determined by the fiber mulch capacity of the HydroSeeder® and the rate at which it is applied. Table B shows the area coverage when seeding only, where little or no mulch is applied. The coverage area is determined by the granular solids capacity of the HydroSeeder® and the rate at which the solids are applied.

TABLE A

USING SEED, FERTILIZER, AND MULCH

<u>Unit</u>	<u>Amount of Material in Tank in pounds (kilograms)</u>			<u>Coverage Area</u>
	<u>Seed</u>	<u>Fertilizer</u>	<u>Mulch</u>	<u>sq ft (sq. m)</u>
T60 II	46 (21)	53 (24)	200 (91)	5,790 (535)

Table is based on 1,500 lb (680 kg) of mulch, 400 lb (181 kg) of fertilizer, and 345 lb (156 kg) of seed at 8 lb (3.6 kg) / 1,000-sq ft per acre.

Table A Example:

$$\frac{200 \text{ lb (91 kg) Mulch per Tank}}{1,500 \text{ lb (680 kg) Mulch per Acre}} = 0.133 \text{ Acre per Load}$$

400 lb (181 kg) Fertilizer per Acre x 0.133 Acre = 53 lb (24 kg) Fertilizer per Load

345 lb (156 kg) Seed per Acre x 0.133 Acre = 46 lb (21 kg) Seed per Load

NOTE: 1000 sq ft = 92.9 sq m

TABLE B

SEED AND FERTILIZER ONLY

<u>Unit</u>	<u>Amount of Material in Tank in pounds (kilograms)</u>			<u>Coverage Area</u>	<u>Acreage (Hectare)</u>
	<u>Seed</u>	<u>Fertilizer</u>	<u>Total</u>	<u>sq ft (sq. m)</u>	
T60 II	522 (237)	600 (272)	1,122 (509)	65,340 (6,070)	1.5 (0.61)

Table is based on rates of 8 lb (3.6 kg) of seed and 9.2 lb (4.2 kg) of fertilizer per 1,000 sq ft

Table B Example:

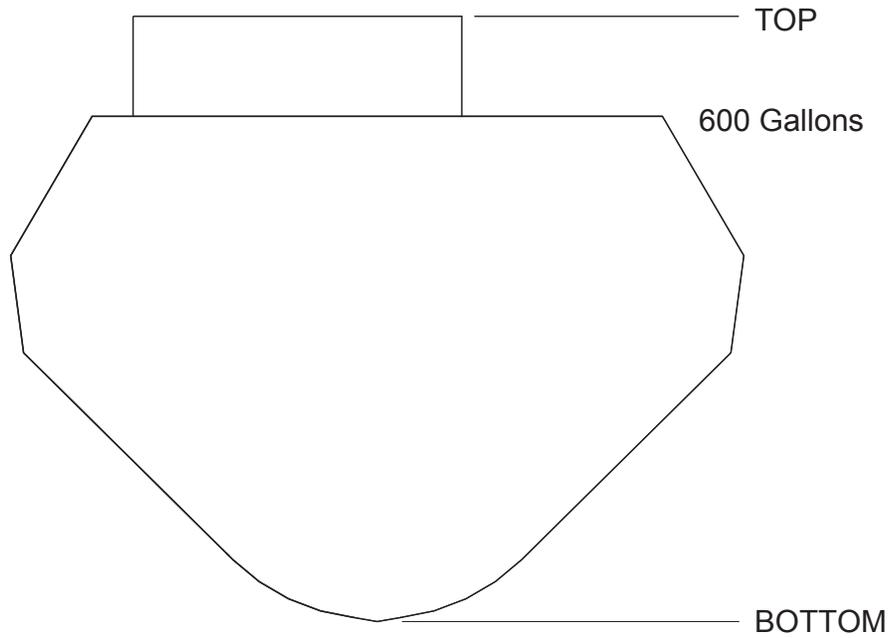
$$\frac{1,122 \text{ lb (508.9 kg) Tank Capacity (Solids)}}{8 \text{ lb (3.6) of Seed} + 9.2 \text{ lb (4.2 kg) of Fertilizer per 1,000 sq ft}} = 65,340 \text{ sq ft per Load}$$

$$\frac{8 \text{ lb (3.6 kg) of Seed}}{1,000 \text{ sq ft}} \times 65,340 \text{ sq ft} = 522 \text{ lb (237 kg) of Seed per Tank}$$

NOTE: 1000 sq ft = 92.9 sq m

NOTE: 1 Acre = 0.405 Hectare

TANK CAPACITY CHART



T-60 II		
Gallons (Liters)	in. (cm) From Top	in. (cm) From Bottom
600 (2271)	8 (20.3)	40.5 (102.9)
550 (2082)	11.25 (28.6)	37.25 (94.6)
500 (1893)	14.25 (36.2)	34.25 (87.0)
450 (1703)	16.75 (42.5)	31.75 (80.6)
400 (1514)	19.5 (49.5)	29 (73.7)
350 (1325)	22 (55.9)	26.5 (67.3)
300 (1136)	24.5 (62.2)	24 (61.0)
250 (946)	27 (68.6)	21.5 (54.6)
200 (757)	29.5 (74.9)	19 (48.3)
150 (568)	32.52 (82.6)	16 (40.6)
100 (379)	36.25 (92.1)	12.25 (31.1)
50 (189)	40.75 (103.5)	7.75 (19.7)

LOADING

WARNING

Take care not to lose pens, lighters, etc. from shirt pockets, or drop pieces of paper or plastic bags into the tank, as these might plug the slurry system. Failure to comply could result in death or serious injury. Failure to comply could also result in product or property damage.

1. With clutch disengaged (turned off) and agitator control in the NEUTRAL position, start engine and allow it to warm up. See STARTING PROCEDURE on page 12.
2. Start filling unit with water from one of the water sources as listed below. When water reaches the top of agitator shaft, move agitator control to full REVERSE position.

Tank can be filled by using one of the sources of water as follows:

- A. Water from any stream or pond using a fill pump. When filling from a pond or stream, be sure to use a suction strainer to filter out contaminants that could damage the pump and unit.
 - B. Any pressure source, eg. fire hydrant. An optional air gap fill port is available for this unit but it is necessary to consult with local authorities before using a water main, in order to abide by all local ordinances.
 - C. Water tanker.
3. Piping System Cleanout Procedure (Purging Line):
 - A. Remove discharge nozzle and coupler gasket from the remote valve coupler at the end of the discharge hose (or from boom on the platform option).
 - B. Aim discharge hose (or boom on the platform option) into an open area away from any persons, obstructions, or high voltage power lines.
 - C. Open discharge and remote valves and close recirculation valve.
 - D. Open throttle to approximately 1/2 to 3/4 full.
 - E. Engage (turn on) clutch.
 - F. When discharge stream is clear, open recirculation valve and close discharge valve. After recirculation stream is clear, disengage (turn off) clutch.
 - G. Replace coupler gasket in the remote valve coupler (or in boom on the platform option).
 4. Continue filling tank with water.
 5. Increase engine speed to full rpm.
 6. Start loading dry material, loading the lightest material first. Agitator control should be in full REVERSE for mixing.

DANGER

Keep hands and arms away from tank interior and agitator. Failure to comply will result in death or serious injury.

- A. Seed – Cut open the seed bag and dump contents into slurry tank. (When using inoculant, add it in the tank along with the seed.) When using quick-swelling seeds, load them just prior to application.

NOTICE

Hydraulic system will overheat if agitator shaft is jammed for extended period. This will damage hydraulic oil and system components.

- B. Fiber mulch – Empty the entire bag or cut open bag and drop in the sections of fiber. The amount of mulch to be used should be loaded by the time the water level is at 3/4 full. If agitator stalls, or a high-pitch squeal comes from the hydraulic system, reverse agitation to FORWARD for a moment to clear the obstruction, then return agitation to REVERSE.
 - C. Fertilizer – Cut open the fertilizer bag and dump contents into slurry tank.
 - D. All other additives – Consult with manufacturer for proper loading technique.
7. When all materials are loaded and in suspension, and the tank is full, move the agitator to NEUTRAL then full speed FORWARD to ensure all material is mixed. It may be necessary to change the agitator direction more than once to ensure a thorough mixture.
 8. After material is thoroughly mixed, slow agitator in forward direction to 1/2 to 3/4 speed, or enough to create movement in all of the corners of the tank. Do not over-agitate the slurry. Always discharge the material with the agitator control in the FORWARD position.
 9. Close hatch lid on slurry tank.

NOTE: If foaming occurs, reduce agitator speed.

LOADING AND MIXING BFM, FGM, SMM AND OTHER HIGHLY VISCOUS SLURRIES

1. With clutch disengaged (turned off) and agitator control in the NEUTRAL position, start engine and allow it to warm up. See STARTING PROCEDURE page 12.
2. Start filling unit with water from one of the water sources as listed below. When water reaches the top of agitator shaft, move agitator control to full REVERSE position.

Tank can be filled by using one of the sources of water as follows:

- A. Water from any stream or pond using a fill pump. When filling from a pond or stream, be sure to use a suction strainer to filter out contaminants that could damage the pump and unit.
 - B. Any pressure source, eg. fire hydrant. An optional air gap fill port is available for this unit but it is necessary to consult with local authorities before using a water main, in order to abide by all local ordinances.
 - C. Water tanker.
3. Piping System Cleanout Procedure:
 - A. Remove discharge nozzle and coupler gasket from the remote valve coupler at the end of the discharge hose (or from boom on the platform option).
 - B. Aim discharge hose (or boom on the platform option) into an open area away from any persons, obstructions, or high voltage power lines.
 - C. Open discharge and remote valves and close recirculation valve.
 - D. Open throttle to approximately 1/2 to 3/4 full.
 - E. Engage (turn on) clutch with a firm snap. Do NOT allow clutch to slip.

- F. When discharge stream is clear, open recirculation valve and close discharge valve. After recirculation stream is clear, disengage (turn off) clutch.
 - G. Replace coupler gasket in the remote valve coupler (or in boom on the platform option).
4. Continue filling tank with water.
 5. Increase throttle to 3/4 of full throttle.
 6. Start loading dry material, loading the lightest materials first. Agitator control should be in full REVERSE for mixing.

Seed - Cut open the seed bag and dump contents into slurry tank. (When using inoculant, add it in the tank along with the seed.) When using quick-swelling seeds, load them just prior to application.

BFM, FGM, SMM, and other highly viscous slurries - When the water level is above the top of the agitator blades, begin adding the entire bag of material into the tank. It may become necessary to slow the rate of water being added to the tank. Add all bales before the tank is 3/4 full. If agitator stalls or a high pitch squeal comes from the hydraulic system, reverse agitation to FORWARD for a moment to clear obstruction, then return agitator to REVERSE.

NOTE: BFM, FGM, and other viscous slurries will entrain air if proper mixing procedures are not followed. Ensure that the agitator blades are completely submerged prior to the addition of this material. This will prevent air from entering the slurry. Follow manufacturers suggested rates of materials as indicated on the packaging. Generally, this recommendation is 50 pounds of material to 125 gallons of water.

Fertilizer – Cut open the fertilizer bag and dump contents into slurry tank.

All other additives - Consult with manufacturer for proper loading technique.

7. When all materials are loaded and in suspension and the tank is full, move the agitator to NEUTRAL then full speed FORWARD to ensure all material is mixed. It may be necessary to change the agitator direction more than once to ensure a thorough mixture.
8. Agitate per the manufacturer's recommendations. Generally, the agitation time is 10 minutes to allow the proper viscosity to be generated. Follow manufacturer's recommendations.
9. Once material is thoroughly mixed, place the agitator in FORWARD direction to 1/4 speed, or just enough to create movement in all corners of the tank. DO NOT OVER-AGITATE the slurry. Always discharge the material with the agitator control in FORWARD and at a slow speed.

NOTE: As the application process commences and the slurry level is decreased, which will expose the agitator blades, it is extremely important to ensure that the speed of the agitators is slow.

NOTE: Use of recirculation should be kept to a minimum.

NOTE: If foaming occurs, reduce agitator speed.

NOTE: When mixing multiple loads of BFM, FGM, SMM, and other viscous slurries, make sure to purge the lines with clear water before mixing the next load.

PRIOR TO APPLICATION

1. Operator should familiarize himself with the area to be seeded and develop a plan to ensure uniform application.

PLATFORM OPTION

2. Develop a plan for communication between operator and driver of the carrying or towing vehicle to signal for start, stop, turn, etc. through the use of the signal horn.
3. Operator switches clutch control toggle switch (on the control panel) to Stand-By and then takes up position on the platform. From this point, application will be controlled by the use of the clutch, discharge assembly, and throttle.

DISCHARGE NOZZLE SELECTION

Nozzles are stored in the tool box. This HydroSeeder® is equipped with three nozzles – one long distance and two fan nozzles. The following chart tabulates the approximate distance, width, and discharge time of the nozzles when used with the platform option. When using the base unit, these factors will vary according to the type and length of hose being used.

Nozzle	Distance (A)	Width (B)	Discharge Time
Long Distance	Up to 100 ft (30 m)	-	16 min
Narrow Fan	Up to 60 ft (18 m)	10 ft (3 m)	12 min
Wide Fan	Up to 50 ft (15 m)	20 ft (6 m)	12 min

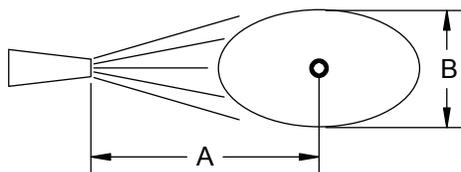


Figure 4 – Discharge Nozzle Spray Pattern

APPLICATION OF SLURRY

I. GENERAL APPLICATION TECHNIQUES

DANGER

Do not spray toward power lines, transformers or other high voltage conductors. Failure to comply will result in death or serious injury.

CAUTION

The driver of the carrying vehicle should remain alert for hazards to the operator, such as low power lines, hanging branches, etc. Driver should never start or stop abruptly. Failure to comply could result in minor or moderate personal injury. Failure to comply could also result in product or property damage.

1. Determine which nozzle would best suit the application needs according to the DISCHARGE NOZZLE SELECTION on page 18.
2. When applying seed and fertilizer, elevate discharge nozzle no less than 10 degrees (25 cm) above the area to be sprayed, allowing the slurry to gently rain onto the seed bed.
3. When applying wood and paper fiber, whenever possible, aim the stream toward the ground to create a surface with small pockmarks, which helps get seed in contact with ground. Do not allow the stream to blast away the surface of the seed bed.
4. Generally, the most remote area of the seed bed should be covered first. Distance is controlled by engine speed and nozzle selection.

CAUTION

Do NOT partially close the valve to control the distance. Failure to comply could result in minor or moderate personal injury. Failure to comply could also result in product or property damage.

5. While moving along area to be seeded, the operator should move the nozzle back and forth in a slow, even arc.
6. If application is to be interrupted for a short period of time, leave the valves open and disengage (turn off) clutch. Re-engage (turn on) clutch to continue application.
7. It may be necessary to slow the agitator as the tank empties, to reduce foaming.

II. PROCEDURES WHEN USING HOSES

Always pump clear water through the hose before pumping mulch. If the inside hose liner is dry, it may dewater the mulch, causing hose to plug.

A. DISCHARGE THROUGH HOSE OR HOSE REEL WITH REMOTE VALVE

1. Open recirculation valve, close discharge valve, and close remote valve at the end of the hose.
2. Engage (turn on) clutch. When stream is flowing freely through the recirculation line, open pump take-off valve.

CAUTION

The high pressure on the hose can exert strong forces, causing the potential for the hose operator to lose control of hose or footing. The hose will require additional hose holders when this operation occurs on slopes. Open the pump take-off valve and the remote valve slowly and only after the hose operator is firmly positioned and has firm control of hose. Failure to comply could result in minor or moderate personal injury. Failure to comply could also result in product or property damage.

3. With the engine at 3/4 speed, open remote valve at the end of hose to discharge load.
4. When finished spraying, close remote valve, disengage (turn off) clutch, and stop engine. If using fiber mulch, retain as much water as possible in the hose by elevating the hose ends or by coupling the hose ends together.
5. If another load is to be done, see RELOADING PROCEDURE on page 21. If finished for the day, follow the clean up procedure described in DAILY CLEANING AND MAINTENANCE on page 21, and flush out the hose.

DANGER

The recirculation valve must be open when using a remote valve. Failure to comply will result in death or serious injury.

III. DISCHARGE THROUGH THE BOOM (PLATFORM OPTION)

1. Move clutch toggle switch to the STAND-BY position and close recirculation valve. When ready to discharge the slurry, depress the clutch activation button on top of the platform, which engages (turns on) clutch. The slurry will discharge as long as this button is activated. To stop slurry, simply remove your foot from the clutch activation button.
2. When tank is empty, or when discontinuing discharge for an extended period of time, disengage (turn off) clutch and idle engine. This will retain moisture in the discharge piping and help prevent plugging. Move agitator control to the NEUTRAL position.

RELOADING PROCEDURE

1. Start at step 2 in LOADING on page 15.
2. After last load of the day, refer to CLEANING AND MAINTENANCE.

CLEANING AND MAINTENANCE

AFTER FIRST 4 TO 8 HOURS OF OPERATION

Torque wheel lugs. Torque again after 7 days (Trailer option only) to 75 lb-ft (102 N•m).

DAILY

1. Cleaning the HydroSeeder®:
 - A. Fill slurry tank to center of agitator shaft with clean water.
 - B. Move agitator lever to full speed to flush off inside of tank top and walls.
 - C. Remove discharge nozzle and coupler gasket from remote valve coupler at the end of the discharge hose (or from boom on the platform option).
 - D. While aiming discharge hose or boom toward an open area, open discharge and remote valve and engage (turn on) clutch. Allow to discharge until clear water is coming out.
 - E. Open the recirculation valve and allow to run until the stream is clear.
 - F. Disengage (turn off) clutch, idle the engine, move discharge valve handle to DISCHARGE position, move agitator handle to NEUTRAL, and turn off the engine.
 - G. Remove drain plug and allow tank to drain.
 - H. In freezing weather, leave main tank drain plug out and remove pump drain plug. Move all slurry valves to open position.
 - I. Wash the outside of HydroSeeder® to remove any corrosive materials.
 - J. Replace coupler gasket before reinstalling discharge nozzle onto remote valve coupler.
2. Lubricating the HydroSeeder® (see LUBRICATION AND FLUIDS CHART on pages 32 and 33):

CAUTION

Lubrication should be performed IMMEDIATELY AFTER cleaning of the equipment, making sure the engine is not running. Failure to comply could result in minor or moderate personal injury. Failure to comply could also result in product or property damage.

- A. Lubricate agitator shaft bearings located on the outside-front and rear of slurry tank.
- B. Service automatic pressure lubricator on pump as needed. See pages 8 and 9.
- C. Check engine oil and replenish when necessary. Change oil and filter after first 5 hours, then every 100 hours thereafter. Consult the engine operator's manual for correct grade of oil and engine break-in procedure.
- D. Lubricate swivel on discharge boom assembly (Platform Option only).

WEEKLY OR EVERY 40 HOURS OF OPERATING TIME

1. Clean air cleaner following the instructions in the engine operator's manual.
2. Lubricate all points on HydroSeeder® as outlined in DAILY in CLEANING AND MAINTENANCE on page 21. Additionally, lubricate the two grease fittings on clutch / pump.
3. Check the oil level in the hydraulic oil reservoir; maintain level with dipstick on filler cap.
4. Inspect slurry tank for buildup of residue in suction area and clear if necessary.

SEASONAL AND WINTER STORAGE MAINTENANCE

1. Drain slurry tank of all water, prior to storage, and remove drain plug.
2. Park unit in suitable location and chock wheels to prevent inadvertent movement.
3. If possible, cover machine with tarp or park inside of an enclosure.
4. Store HydroSeeder® with all slurry valve handles in the open position. To prevent damage from freezing, it is advisable to remove all slurry valves and store in a heated area.
5. Pour 1 qt (0.95 L) of mineral oil or environmentally safe lubricant into pump housing and spin pump by hand to prevent rust in pump. Remove drain plug.
6. Chip and steel-brush any interior rust spots in slurry tank and touchup with paint. See numbers 2 and 3 in IV. Maintenance of the HYDROSEEDER® Safety Summary Section on page 4.
7. Lubricate all fittings.
8. Lubricate equipment again just prior to putting into operation after having been in storage.
9. Change hydraulic oil and filter. (400 hours)
10. Disconnect battery cables. In cold weather, remove battery and store it in a safe, warm place.
11. Add fuel stabilizer to fuel tank.

HYDRAULIC SYSTEM

The hydraulic system on your FINN HydroSeeder® is designed to give trouble-free service when properly maintained. The most important areas of maintenance are the hydraulic oil and filtration. The reservoir holds 8 gal (30 L) of ISO Grade 46 Oil. Hydraulic oil should be replaced per the lubrication schedule or if the oil becomes milky or gives off a burnt odor. The hydraulic oil filter must be replaced on schedule with a 25 micron absolute filter – FINN part number 021618. The hydraulic system relief is factory-set at 2,250 psi (15,513 kPa).

PUMP MAINTENANCE

NOTE: Refer to Figure 5 on page 25 for callouts on pages 23 and 24.

CAUTION

Pump maintenance should be done only while engine is not running and battery cables are disconnected. Failure to comply could result in minor or moderate personal injury. Failure to comply could also result in product or property damage.

A. FACTORY TOLERANCES

1. To check pump tolerances, loosen the two clamps on pump suction piping and remove inlet elbow. Through the pump suction hole, insert a feeler gauge between the pump impeller (3) and the pump suction cover (1). This measurement on a new pump is between 0.030 to 0.045 in. (0.762 to 1.14 mm).

CAUTION

Tightening of the bolts should be performed in a criss-cross pattern. DO NOT TIGHTEN OVER 15 lb-ft (20 N•m). Overtightening will crack the flange of the pump suction cover.

B. IMPELLER CLEARANCE – TO BRING THE PUMP BACK TO PROPER TOLERANCE, PROCEED AS FOLLOWS:

1. Loosen four bolts (1B) and push pump suction cover (1) into pump casing (5) until pump suction cover touches the pump impeller (3). Pump impeller should be in full contact with pump suction cover.
2. Tighten eight bolts (5B), finger-tight. Pump impeller should rub the pump suction cover and not turn easily through one revolution.
3. Tighten four bolts (1B), hand-tight until they touch the pump casing (5).
4. Back off eight bolts (5B) 1-1/2 turn.
5. Tighten four bolts (1B) 1-1/2 turn and tighten four nuts (1N) to 15 lb-ft (20 N•m).
6. Tighten eight bolts (5B) to 15 lb-ft (20 N•m). Clearance gap should be about 0.040 in. (1.00 mm). Check to make sure pump impeller turns freely through one revolution.

C. CLEANING

1. To clean pump impeller (3), loosen the two Victaulic pipe clamps and remove suction pipe assembly. The eye of the pump impeller can then be seen through the pump suction cover (1) and is readily accessible for cleaning.
2. To further access pump impeller, remove eight bolts (5B) that hold pump suction cover (1) in place. Remove pump suction cover, being careful not to damage O-ring (2).
3. To remove pump impeller, take the pump impeller wrench, which is stored in the tool box, and position it so that the hole is aligned with any of the eight tapped holes in the front of the pump casing (4). The 90-degree leg of the pump impeller wrench should face inward, toward the pump impeller and be positioned between any two of the pump impeller fins. Bolt the wrench securely in place with one of the pump suction cover bolts (5B). Using a pipe wrench on the pump shaft (9), unscrew the pump impeller, turning the pump shaft in a clockwise direction. Be careful not to unscrew the pump impeller too far before removing the impeller wrench

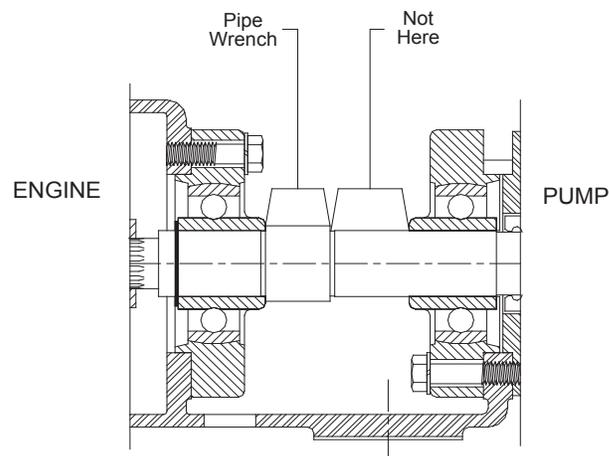


Figure 6 – Pump Impeller Removal

D. INSTALLING NEW SEAL ASSEMBLY

NOTICE

Do NOT unwrap new seal assembly until you are ready to install. All parts of assembly are packed in sequence of installation.

1. To replace seal assembly (5), perform the steps in CLEANING, and remove pump casing (4) by removing four bolts (7B) that hold casing and casing bearing (7) to pump frame (15).
2. After cleaning all parts, including pump shaft, begin reassembly of pump. Install radial lip seal (6) with the cavity portion of seal facing inward. Rebolt casing and casing bearing (7) onto clutch housing using four bolts (7B). Using a light oil lubricant (such as 3-in-1 oil), install the ceramic seat with its neoprene holder into the seal recess, making sure it is square with the shaft. Lubricate the inside of the bellows assembly with a light oil lubricant and check to make sure the steel ring is stuck (glued) to the end of the assembly. Slide the bellows assembly onto the shaft and push until the steel ring is against the ceramic seat.
3. Install seal spring on hub of pump impeller. After coating the threads on the pump shaft with an antiseize compound, install pump impeller, seating it securely.

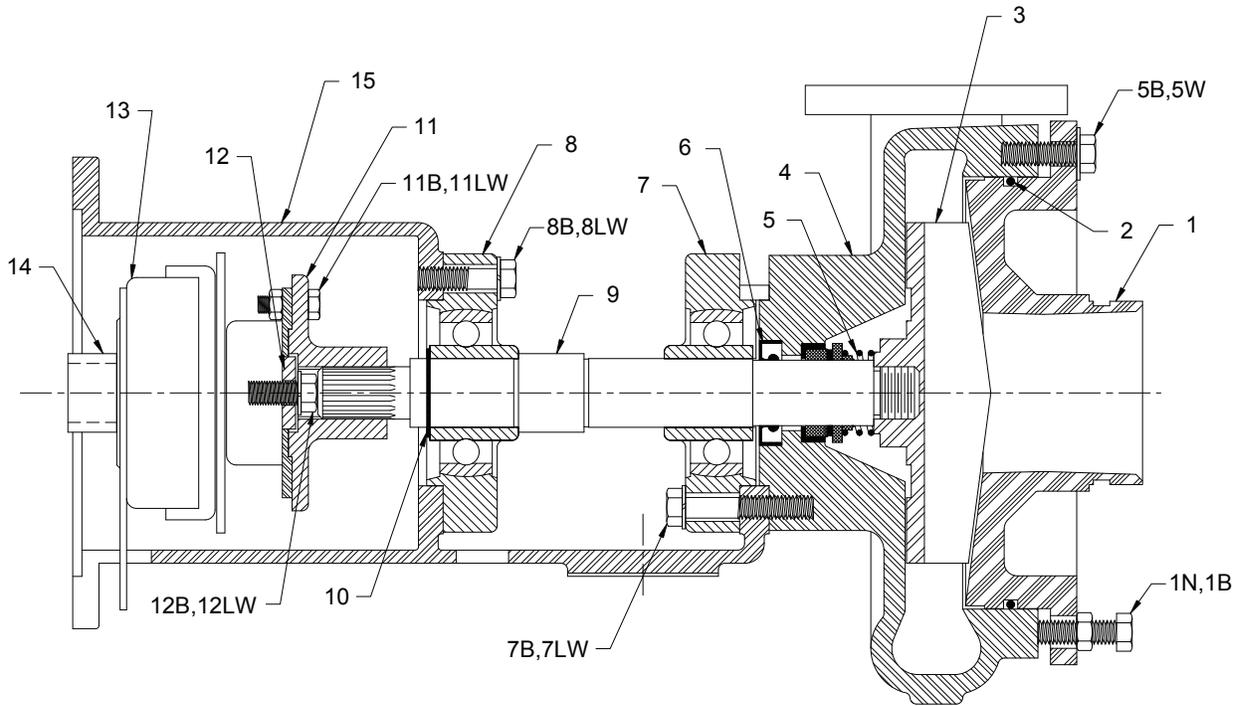


Figure 5 – Pump Assembly Components

PUMP ASSEMBLY

Ref. No.	Description	No. Required	Ref. No.	Description	No. Required
1	Pump Suction Cover	1	8B	Bearing Bolt	4
1B	Suction Cover Bolt	4	8LW	Bearing Lockwasher	4
1N	Suction Cover Nut	4	9	Pump Shaft	1
2	O-Ring	1	10	Retaining Ring	1
3	Pump Impeller	1	11	Drive Hub	1
4	Pump Casing	1	11B	Drive Hub Bolt	2
5	Mechanical Seal	1	11N	Drive Hub Locknut	2
5B	Suction Cover Bolt	8	12	Clutch Retainer	1
5W	Suction Cover Washer	8	12B	Retainer Bolt	1
6	Radial Lip Seal	1	12LW	Retainer Lockwasher	1
7	Casing Bearing	1	13	Electric Clutch	1
7B	Bearing Bolt	4	14	Clutch Spacer	1
7LW	Bearing Lockwasher	4	15	Pump Frame	1
8	Frame Bearing	1			

NOTE: See Parts Manual for FINN part numbers.

TROUBLESHOOTING YOUR HYDROSEEDER®

Because of the tremendous work load usually placed upon the HydroSeeder®, minor malfunctions will occur from time to time. If not remedied immediately, they could lead to poor performance and damage to the equipment. This section describes symptoms, possible causes, and the corrective actions to take.

1. Foam in tank and air entrainment:

The mixture of dry materials with water will sometimes cause excessive foaming, while other dry materials with water mixes will cause air entrainment. These situations will reveal themselves with the occurrences of an erratic slurry discharge, a drop in pressure of the discharge, and a drop off in distance of slurry discharge.

Some solutions are:

- A. As slurry level drops in tank, slow the agitator.
 - B. Add 2 to 3 oz (59 to 89 ml) of an anti-foaming agent to tank.
 - C. If you can determine which additive is causing the air problem, either add it last or not at all – unless it is the water.
 - D. Reduce recirculation time as much as possible.
- ### 2. Plugging or clogging:



Turn off engine and disconnect battery cables before working on equipment. Failure to comply will result in death or serious injury.

Sometimes, when a stoppage occurs, you will not be able to find anything in the line. When this happens, it means that the system became airborne. To remedy this, see FOAMING OF SOLUTION AND LACK OF DISTANCE on page 28. Plugging is caused by either foreign objects or dewatered fiber. Plugging can occur in any of four places: the valve and recirculation nozzle, the discharge nozzle, the pump area, and the sump area. If plugging does occur, perform any of the following tasks to clear the obstruction:

- A. Obstruction in discharge nozzle is determined by a change in or stoppage of the spray pattern. To clear an obstruction, perform the following steps:
 1. Disengage (turn off) clutch.
 2. Remove nozzle.
 3. Clean the discharge nozzle. To clean the discharge nozzle, use the nozzle cleaning rod attached to the underside of the guard rail. Insert the nozzle cleaning rod into nozzle to push and buildup out of the nozzle. Repeat procedure until nozzle is completely cleaned. (Platform Option only.)

 **DANGER**

Severe injury can result from opening clamps when piping is hot. Before loosening any clamps, determine if the pipe is hot. If so, let it cool before attempting to perform repairs. Failure to comply will result in severe personal injury or death.

- B. If the recirculation system is not working:
 - 1. Disengage (turn off) clutch and stop engine.
 - 2. Remove clamp attaching recirculation valve.
 - 3. Slide rubber seal back and remove valve assembly.
 - 4. Check valve assembly, recirculation nozzle in discharge pipe, and recirculation pipe going into tank. Clear any obstructions.
 - 5. Replace valve assembly and slide seal back into place. Lubricate outside of seal.
 - 6. Replace clamp.
- C. Obstruction in pump can be indicated by a drop in pressure. If a drop in pressure is accompanied by a frothy or whitish discharge stream, blockage is in the suction line or sump area. To clear the pump:
 - 1. Disengage (turn off) clutch and stop engine. Close suction shutoff valve if applicable.
 - 2. Loosen suction pipe clamps. If there is material in tank, stuff a rag into the suction piping.
 - 3. Remove suction pipe clamp closest to pump.
 - 4. Remove elbow and slowly open suction shutoff valve.

NOTE: If no water comes out, the obstruction is in sump area.

- 5. Reach into pump and remove obstruction. If it is jammed, the pump suction cover may have to be removed.
 - 6. Reassemble, removing rag plugging the suction piping.
- D. Obstruction in sump area, which is located at the bottom of the tank on the inside where the suction pipe is attached. Three methods to remove an obstruction in the sump area are as follows:
 - 1. Clear the sump by backflushing through the discharge plumbing with the water supply hose. This is the easiest method.
 - 2. Remove the drain plug and run a long pole through the opening and into the sump area. Remove the obstruction and replace the drain cap.
 - 3. Use a pipe or pole through the loading hatch opening to dislodge the obstruction.

 **CAUTION**

Do not turn the shaft backward with a pipe wrench. This will unscrew pump impeller from pump shaft. Consequently, when clutch is engaged (turned on), the pump impeller will screw onto pump shaft with a force great enough to break pump impeller. Failure to comply could result in minor or moderate personal injury. Failure to comply could also result in product or property damage.

TROUBLESHOOTING YOUR HYDROSEEDER®:

Problem	Probable Causes	Suggested Solutions
LEAKS:		
Tank Bearing	Lack of lubrication – seal worn	Replace seal and follow lube schedule.
	Bolts not tightened	Tighten uniformly to 25 lb–ft (34 N•m).
Pressure Pipe Clamps	Rubber seal cracked, pinched, or torn.	Replace, always grease seal before clamping shut.
Suction Pipe Clamps	Rubber seal cracked, pinched, or torn	Replace, always grease seal before clamping shut.
Discharge Swivels	Not greased often enough	Rebuild swivels w/repair kit (part number 006969, qty. 2 required).
Pump Shaft	Pressure lubricator not serviced	Replace pump seal. Service automatic pressure lubricator daily. See page 8.
Pump Suction Cover	O-ring bad	Replace O-ring; use grease when replacing.
Discharge Boom or Nozzle Camlock Fittings	Worn or no gasket	Replace gasket.
MACHINE JUMPS DURING OPERATION:		
Agitator	Agitator bent by heavy object falling on it	Straighten agitator or shim so it runs true.
Bent Paddles	Loading wood fiber mulch into tank before tank is half full	Straighten agitator paddle; realign agitator to run true.
FOAMING OF SOLUTION AND LACK OF DISTANCE:		
Pump loses prime – lacks distance – leaves excessive amount in tank –100 gal (378 L) or more	Sucking air in suction lines	Check all suction connections to see that rubber seals are in good shape. Grease seals before replacing clamps.
	Air entrainment	See page 26.
	Low engine rpm (Below 3,600 rpm – No load)	Check throttle cable and linkage. See authorized engine dealer.
	Soft water	Slow the agitator.
	Too much agitation	Slow the agitator.
	Pump worn	Reset pump tolerance. See page 23.
	Suction partially plugged	Clean out machine. See page pages 21.
	Nozzle worn or plugged	Clean nozzles; replace if necessary
	Fertilizer	Change fertilizer type.
Clutch slippage	Readjust clutch; See clutch manual.	

TROUBLESHOOTING YOUR HYDROSEEDER®:

Problem	Probable Causes	Suggested Solutions
VALVE:		
Valve stuck	Frozen	Thaw out ice and lubricate; leave in discharge position during storage.
Constant plugging during operation	Foreign material in slurry	Drain and clean out tank; check storage for foreign materials.
Constant plugging during loading and discharging	Loading HydroSeeder® before tank is half full of water	Reinstruct your operator. See pages 15 and 16.
	Incorrect loading procedure	Review Loading procedure on pages 15 and 16.
	Improper operation by operator	Reinstruct your operator. Review Operator's Manual.
	Not moving valve handle far enough	Valve should be fully open.
	Machine not being flushed out prior to reloading	See page 15.
	Machine not being run at correct RPM during loading	Reinstruct your operator. See pages 12 and 13.
Extension hose plugs after use	Letting water run out, leaving wood fiber mulch to dry out	If hose has to be uncoupled, seal ends, to keep water in hose and prevent wood fiber mulch from drying out.
PUMP:		
Excessive wear	Fertilizer with highly abrasive fillers	Change fertilizer – avoid abrasive fillers.
	Overloading machine with dry material	Load machine to recommended capacities.
	Too much time allowed between loading and discharging	After loading and mixing has been completed, set agitator at 1/2 discharging speed in reverse and disengage (turn off) pump.
	Recirculating all the time	Close recirculation valve when discharging through the boom.
Will not turn	Frozen	Warm housing to melt ice.
	Jammed with fertilizer or lime	Remove cover and clean interior.
	Impeller rusted to suction cover plate	Pull cover and remove rust.

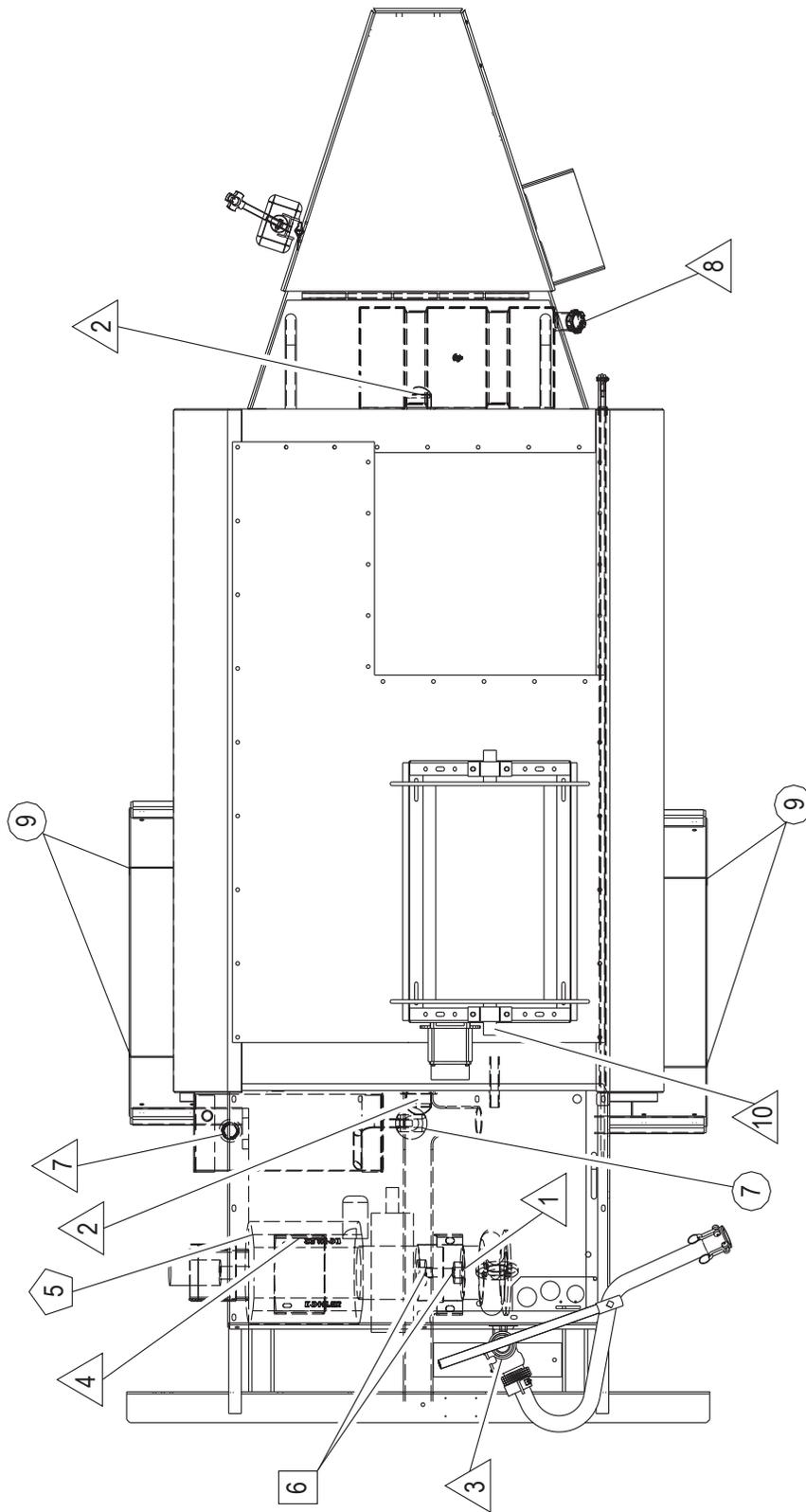


Figure 7 – Lubrication and Adjustment Points

LUBRICATION AND FLUIDS CHART

Ref. No.	Location	Lubricant	Frequency	Number
1	Check Grease Level in Automatic Pressure Lubricator	SL	Daily	1
2	Grease Agitator Shaft Bearings	CL	Daily	2
3	Grease Discharge Swivel	CL	Daily	1
4	Check Engine Oil Level	MO	Daily	1
5	Change Engine Oil and Filter	MO	See Engine Manual	1
6	Grease Pump Bearings	CL	Weekly	2
7	Check Hydraulic Fluid Level	HO	Weekly	1
	Change Hydraulic Fluid and Filter	HO	Seasonally	1
8	Check Fuel Tank	FU	Daily	1
9	Repack Wheel Bearings	CL	Seasonally	2
10	Check Hose Reel Swivel	CL	Daily	1

LUBRICANT OR FLUID USED

SL	Seal Lube (Sodium-Based)
CL	Chassis Lubricant
MO	Motor Oil (See Engine Manual for Recommendations)
HO	Hydraulic Oil, ISO Grade 46
FU	Gasoline

TIME KEY

DAILY (8 Hours)	
WEEKLY (40 Hours)	
SEASONALLY (500 Hours)	
SEE ENGINE MANUAL	

FLUID CAPACITIES

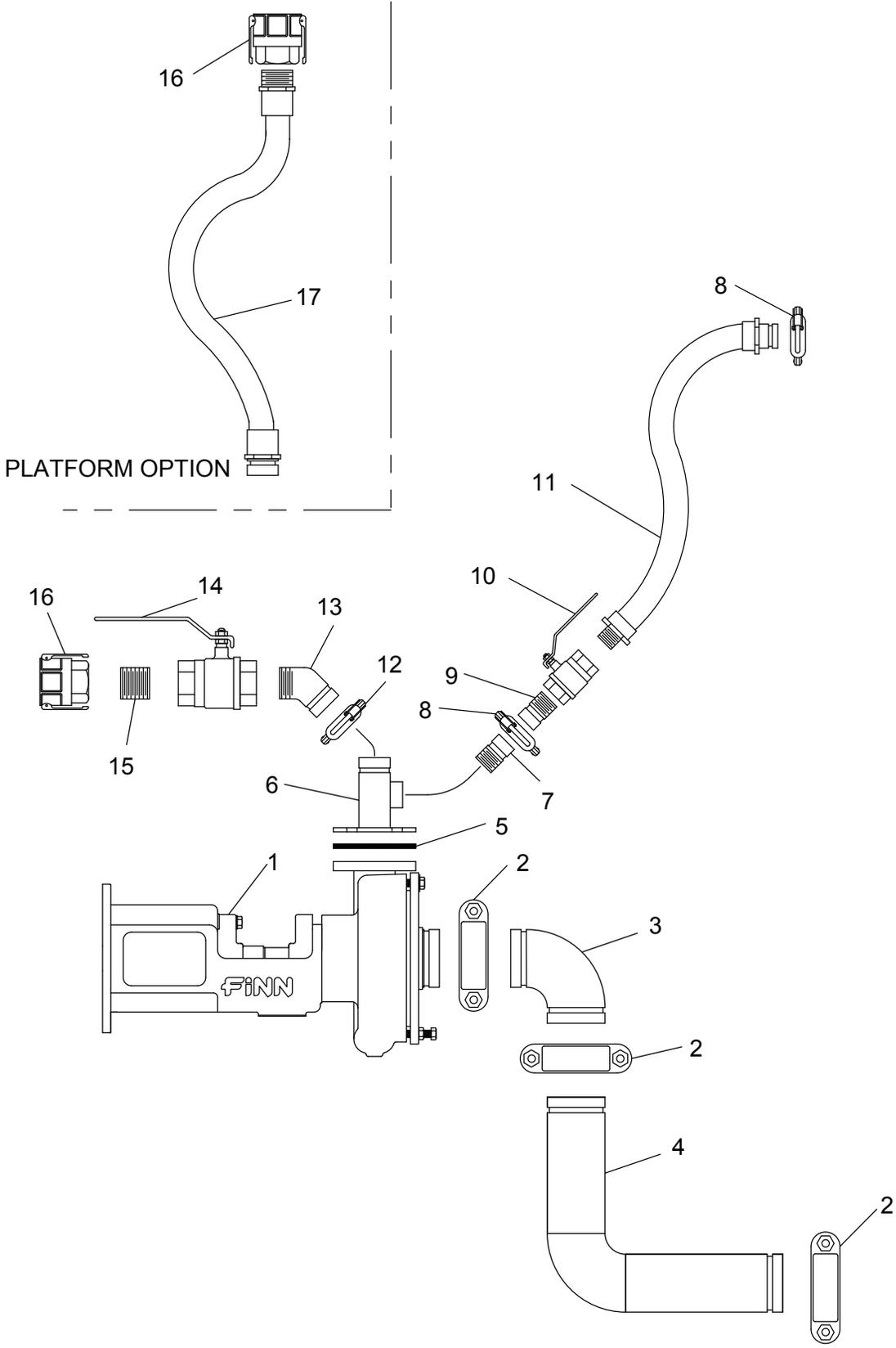
Gasoline – 10 gal (38 L)
 Engine Oil – 2 qt (1.9 L)
 Hydraulic Fluid – 8 gal (30 L)

NOTES

T60-II HydroSeeder® Parts Manual

Model MO

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

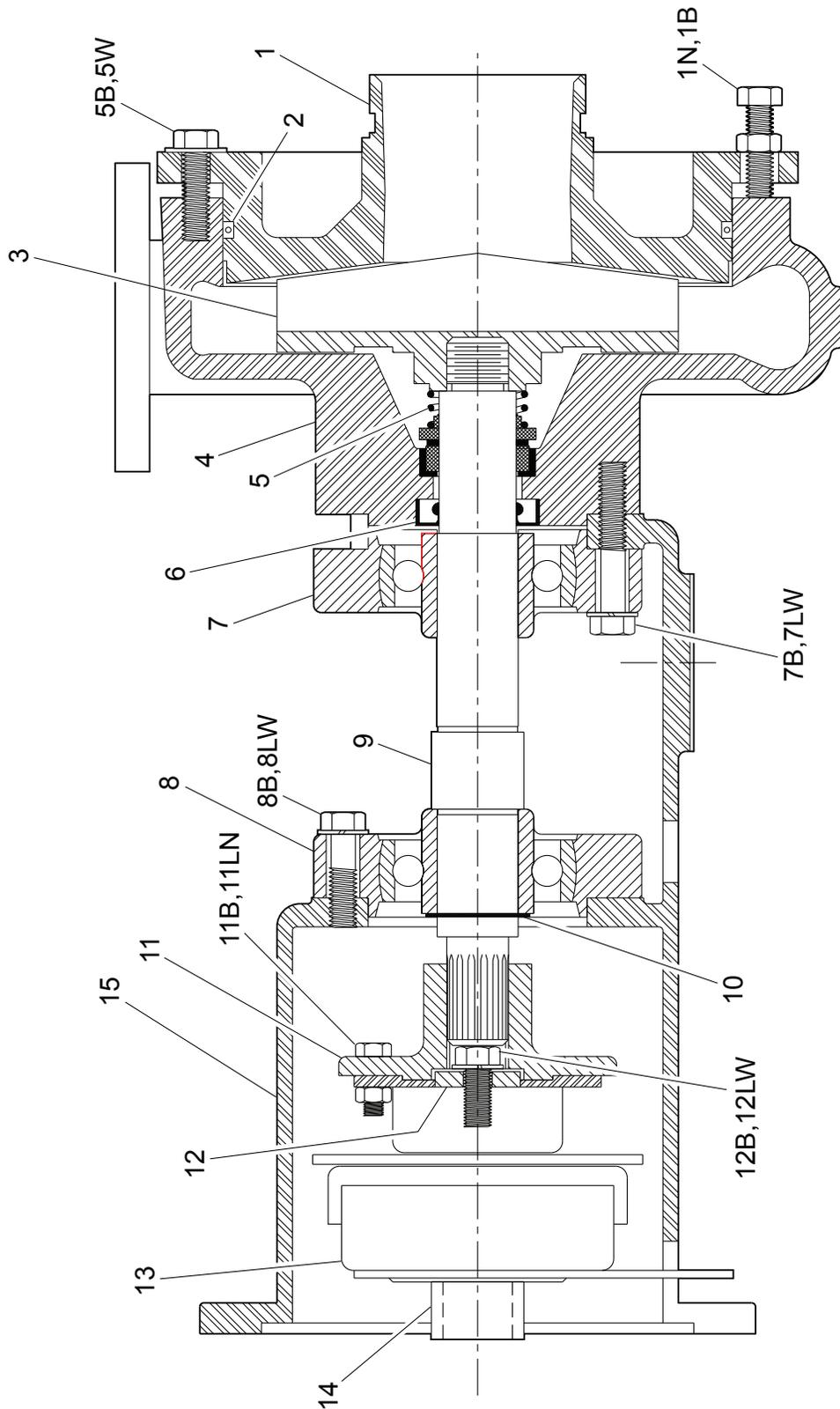


WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

SUCTION, DISCHARGE, AND RECIRCULATION PIPING

Ref. No.	Part Number		Description	No. Required	
	Base	Platform		Base	Platform
1	080713	080713	Clump Assembly	1	1
	002383	002383	Pressure Lubricator	1	1
	F60-0022-01	F60-0022-01	Clump Guard	1	1
2	080366	080366	Pipe Clamp	3	3
	002439	002439	Clamp Gasket	1 per	1 per
3	002868	002868	90° Grooved Elbow	1	1
4	080732	080732	Suction Line Valve Assembly	1	1
	004737	004737	Suction Line Shutoff Valve	1 per	1 per
5	008469	008469	Discharge Pipe Gasket	1	1
6	080558-01	080558-01	Discharge Pipe Weldment	1	1
7	005083-07	005083-07	Recirculation Nozzle	1	1
8	005156	005156	Pipe Clamp	2	2
	005183	005183	Clamp Gasket	1 per	1 per
9	005083-08	005083-08	Recirculation Nozzle	1	1
10	021559	021559	Ball Valve	1	1
11	080650	080650	Recirculation Hose	1	1
12	006252	006252	Pipe Clamp	1	1
	006253	006253	Clamp Seal	1 per	1 per
13	080679		45° Discharge Elbow	1	0
14	007710		Ball Valve	1	0
15	160309		Close Nipple	1	0
16	080377	080377	Female Coupler	1	1
	006515	006515	Coupler Gasket	1 per	1 per
17		080494	Platform Discharge Hose	0	1

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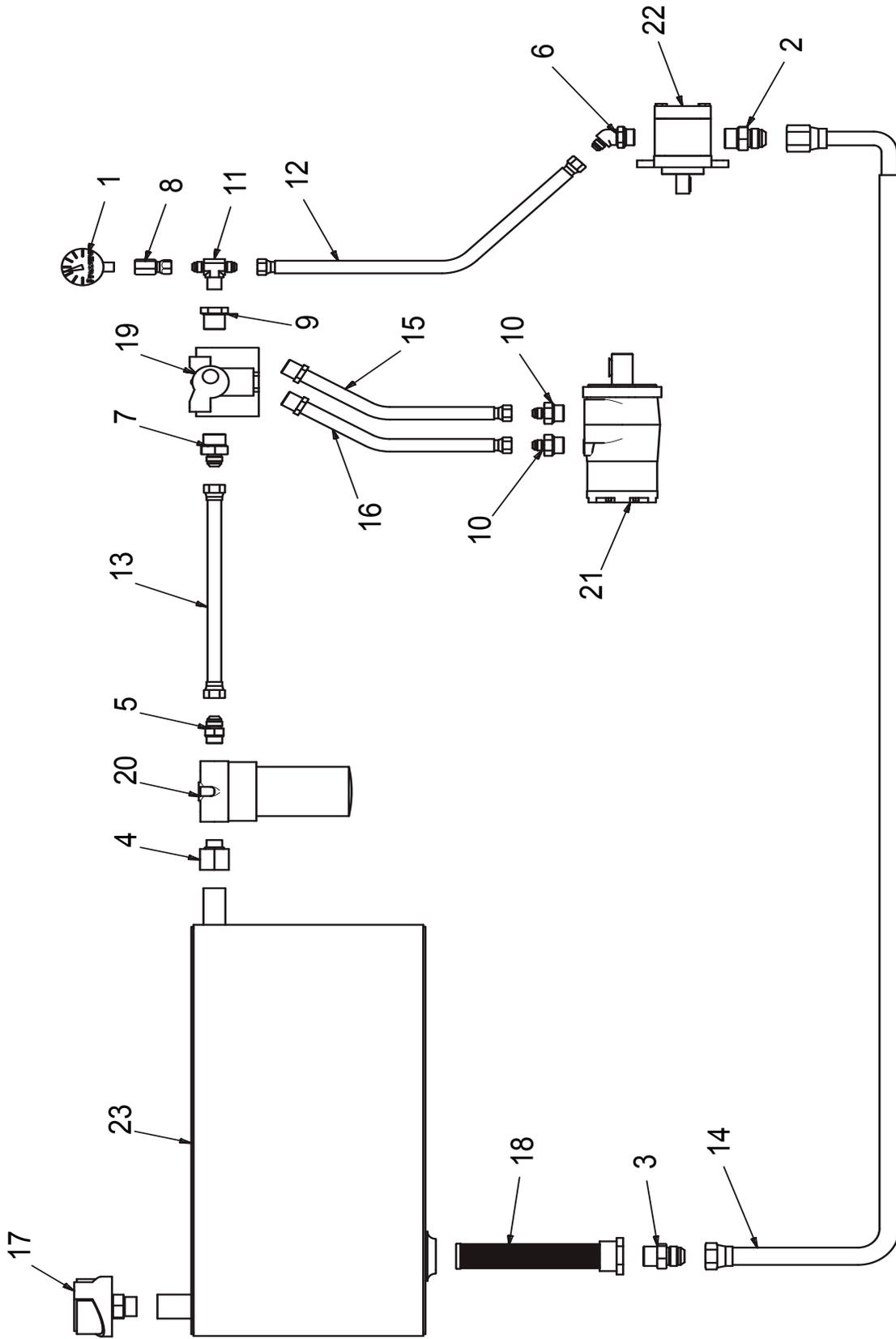


WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

CLUTCH/PUMP ASSEMBLY

Ref. No	Part Number	Description	No. Required
1	080489	Pump Suction Cover	1
1B	0X0720	Suction Cover Bolt	4
1N	000Y07	Suction Cover Nut	4
2	080499	O-Ring	1
3	080488	Pump Impeller	1
4	080487	Pump Casing	1
5	080485	Mechanical Seal	1
5B	0X0720	Suction Cover Bolt	8
5W	000W07	Suction Cover Washer	8
6	080493	Radial Lip Seal	1
7	080498	Pump Casing Bearing	1
7B	0X0740	Bearing Bolt	4
7LW	00W07L	Bearing Lockwasher	4
8	080498	Frame Bearing	1
8B	0X0728	Bearing Bolt	4
8LW	00W07L	Bearing Lockwasher	4
9	080491	Pump Shaft	1
10	080497	External Retaining Ring	1
11	080490	Drive Hub	1
11B	0X0516	Drive Hub Bolt	2
11LN	00Y05L	Drive Hub Locknut	2
12	080590-07	Clump Washer	1
12B	080741	Locking Bolt	1
12LW	00W07L	Retainer Lockwasher	1
13	035084	Electric Clutch	1
14	080590-08	Clump Spacer	1
15	080486	Pump Frame	1
	080492	Clump Nameplate	1
	F60-0022-01	Clump Guard	1

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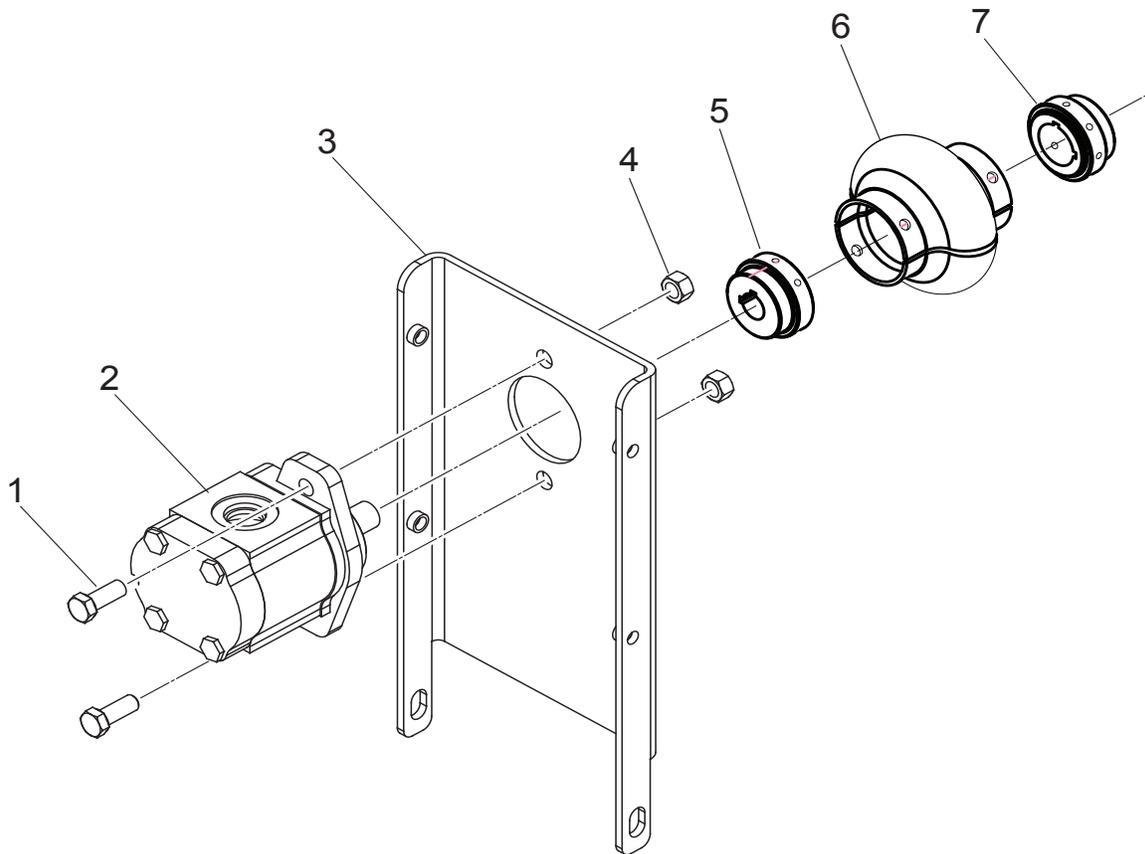
HYDRAULIC SYSTEM

Ref. No.	Part Number	Description	No. Required
	080806	Hydraulic Hose and Fittings Kit (<i>Items 1- 16</i>)	1
1	012044	Pressure Gauge	1
2	012087	MSAE - MJIC Adapter	1
3	023616	MNPT - MJIC Adapter	1
4	023911	FNPT - MSAE Adapter	1
5	055232	MSAE - MJIC Adapter	1
6	053019	MSAS - MJIC 45° Adapter Elbow	1
7	055359	MSAE - MJIC Adapter	1
8	075552	FNPT - FJIC Swivel Adapter	1
9	080789	NPT Reducer Bushing	1
10	085014	MSAE - MJIC Adapter	2
11	FW71872	Male Branch Tee	1
12	080578	3/8" Hyd. Hose x 75"	1
13	080683	1/2" Hyd. Hose x 18"	1
14	080684	3/4" Suction Hose x 35-1/2"	1
15	080787	3/8" Hyd. Hose x 32"	1
16	080788	3/8" Hyd. Hose x 33"	1
17	005793	Hydac Filler / Breather	1
18	004618	Hydraulic Suction Strainer	1
19	080743	Hydraulic Control Valve	1
	080591-02	Control Valve Handle	1
	023470	Handle Bracket	1
	0SF311	Knob for Handle	1
	0SF312	Roll Pin for Handle - 1/3 in. x 1-3/8 in.	1
	023120	Seal Kit for 080743	1
20	023913	Hydac Filter Assembly	1
	023914	Filter Element	1
21	080482	Hydraulic Motor	1
22	080642	Hydraulic Pump	1
23	080680	Hydraulic Reservoir	1

NOTE:

Items 1-16 are part of Hydraulic Kit part# 080806.

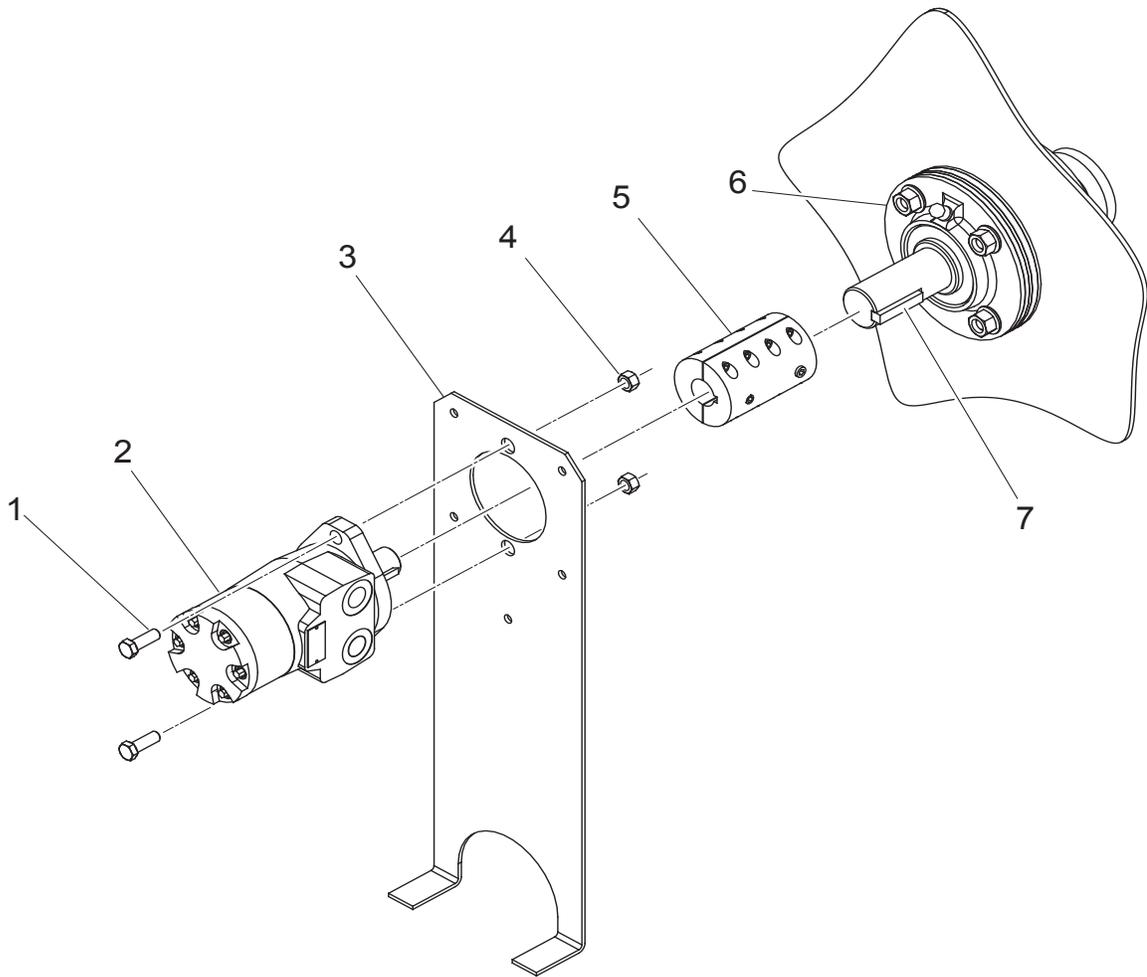
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HYDRAULIC PUMP DRIVE ASSEMBLY

Ref. No.	Part Number	Description	No. Required
1		3/8 X 1 in. Lg. Bolt	2
2	080642	Hydraulic Pump	1
3	F60-0016-03	Hydraulic Pump Mounting Plate	1
4		3/8 Hex Nut	2
5	080807	Coupling Half 5/8" Bore w/ Keyway	1
6	080809	Coupling Sleeve	1
7	080808	Coupling Half 1" Bore	1
NOT SHOWN			
	F60-0022-03	Hydraulic Pump Coupling Guard	1

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HYDRAULIC AGITATOR DRIVE ASSEMBLY

Ref. No.	Part Number	Description	No. Required
1		1/2 X 1-1/2 in. Lg. Bolt	2
2	080482	Hydraulic Motor	1
3	F60-0016-01	Torque Arrestor Plate	1
4		1/2 Hex Nut	2
5	080523	Rigid Coupling Assembly	1
6	007420	Bearing and Seal Assembly (<i>See page 40</i>)	2
7	005081-02	Agitator Drive Stub Shaft	1

NOT SHOWN

F60-0022-02	Agitator Coupling Guard	1
080583	Torque Arrestor Pad	1
080582	Worm Gear Clamp	2

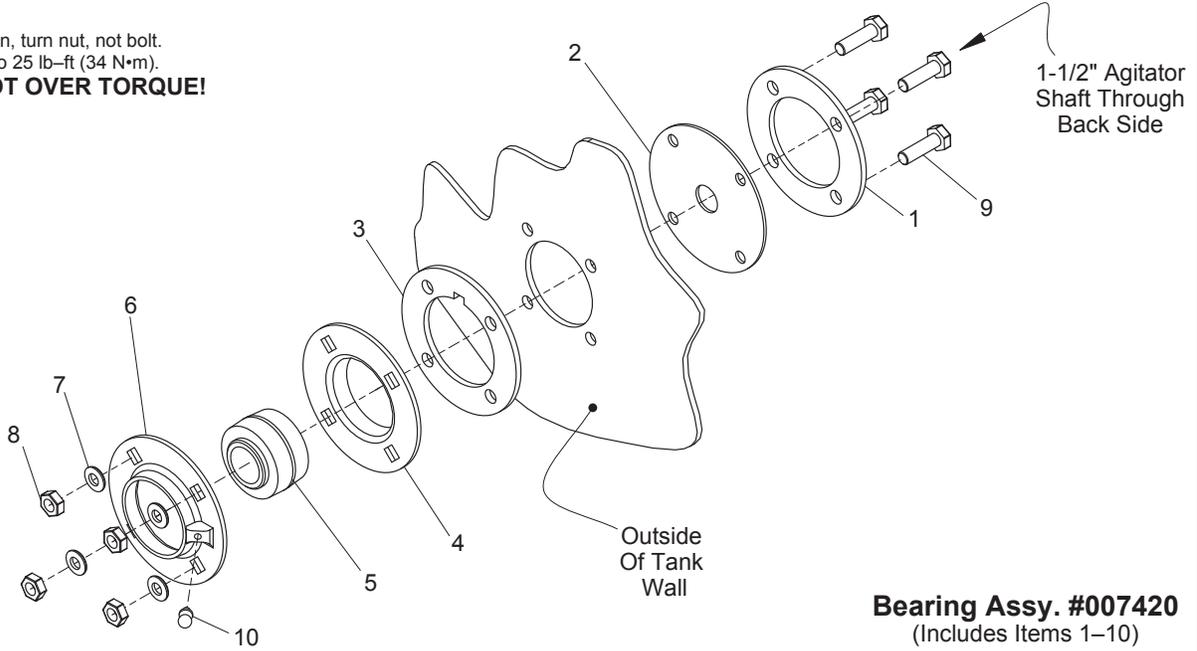
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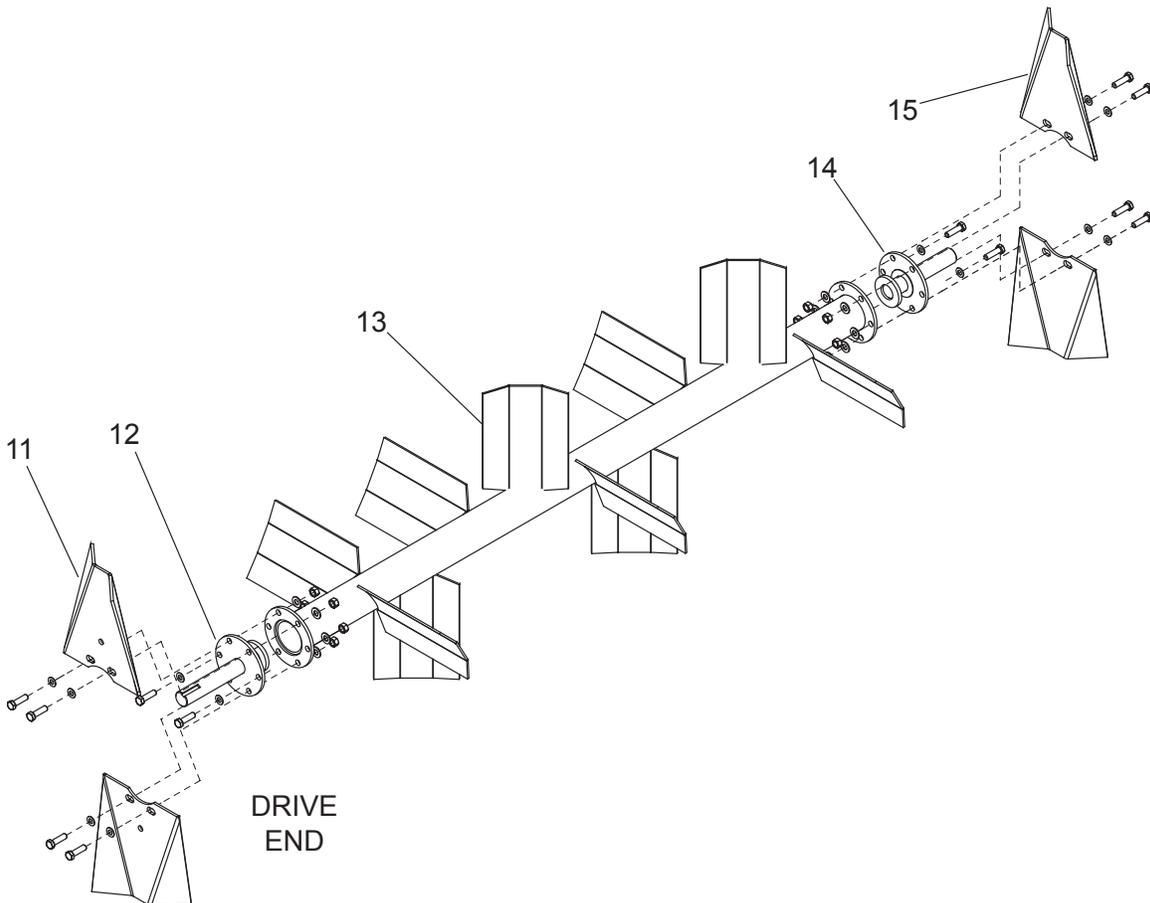
To tighten, turn nut, not bolt.

Torque to 25 lb-ft (34 N·m).

DO NOT OVER TORQUE!



AGITATOR ASSEMBLY



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

AGITATOR AND BEARING ASSEMBLY

Ref. No.	Part Number	Description	No. Required
	007420	Bearing and Seal Assembly (Includes Items 1-10)	2
1	007417	Clamping Ring	1 per
2	007416	Agitator Rotary Gasket	1 per
3	006975	Agitator Bearing Gasket	1 per
4	007212-02	Flangette w/ Groove	1 per
5	003022	Bearing	1 per
6	007211-02	Flangette w/ Lube Coupling	1 per
7	012605	Bevel Sealing Washer	4 per
8	Y08SS	Agitator Nut	4 per
9	X0828SS	Agitator Bolt	4 per*
10	007705	Grease Fitting	1 per

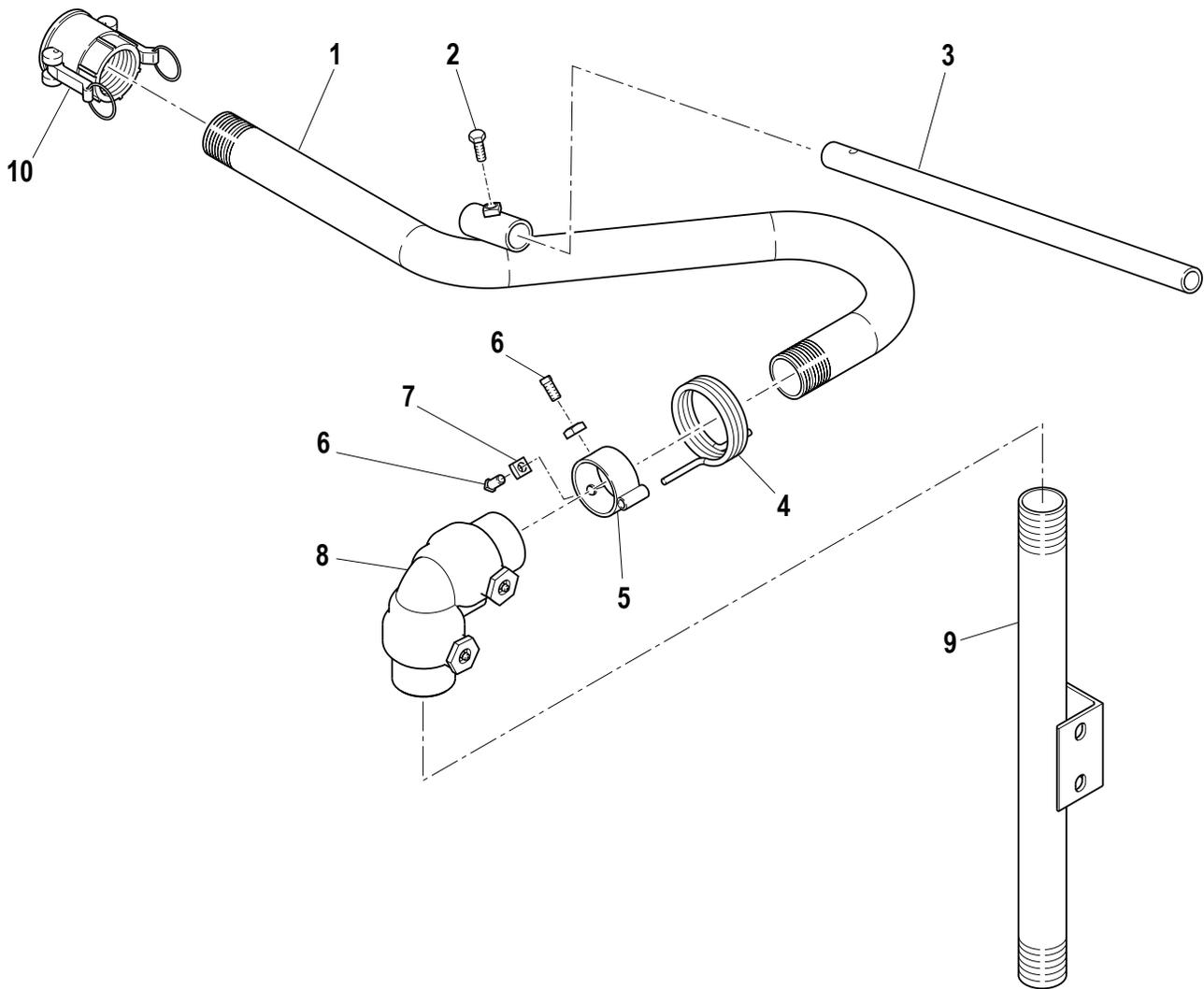
AGITATOR ASSEMBLY

11	F60-0011-01	Rear Bolt-On Paddle w/ I.D. Hole	2
12	005081-02	Agitator Drive Stub Shaft	1
13	080661	Main Agitator Section w/ Paddles	1
14	005081-03	Agitator Stub Shaft	1
15	F60-0011-02	Bolt-On Paddle w/o I.D. Hole	2
<i>Not Ill.</i>	005399	Agitator Shaft Toe Guard	1

***NOTE:**

On the T60 Series II, the quantity of part # X0828SS is a total of 8 per unit, except for the T60 Series II Trailer Unit, which replaces two of this part with part # X0840SS. The two replacement bolts are used for the lower two bolts on the front of the unit to hold the agitator shaft toe guard.

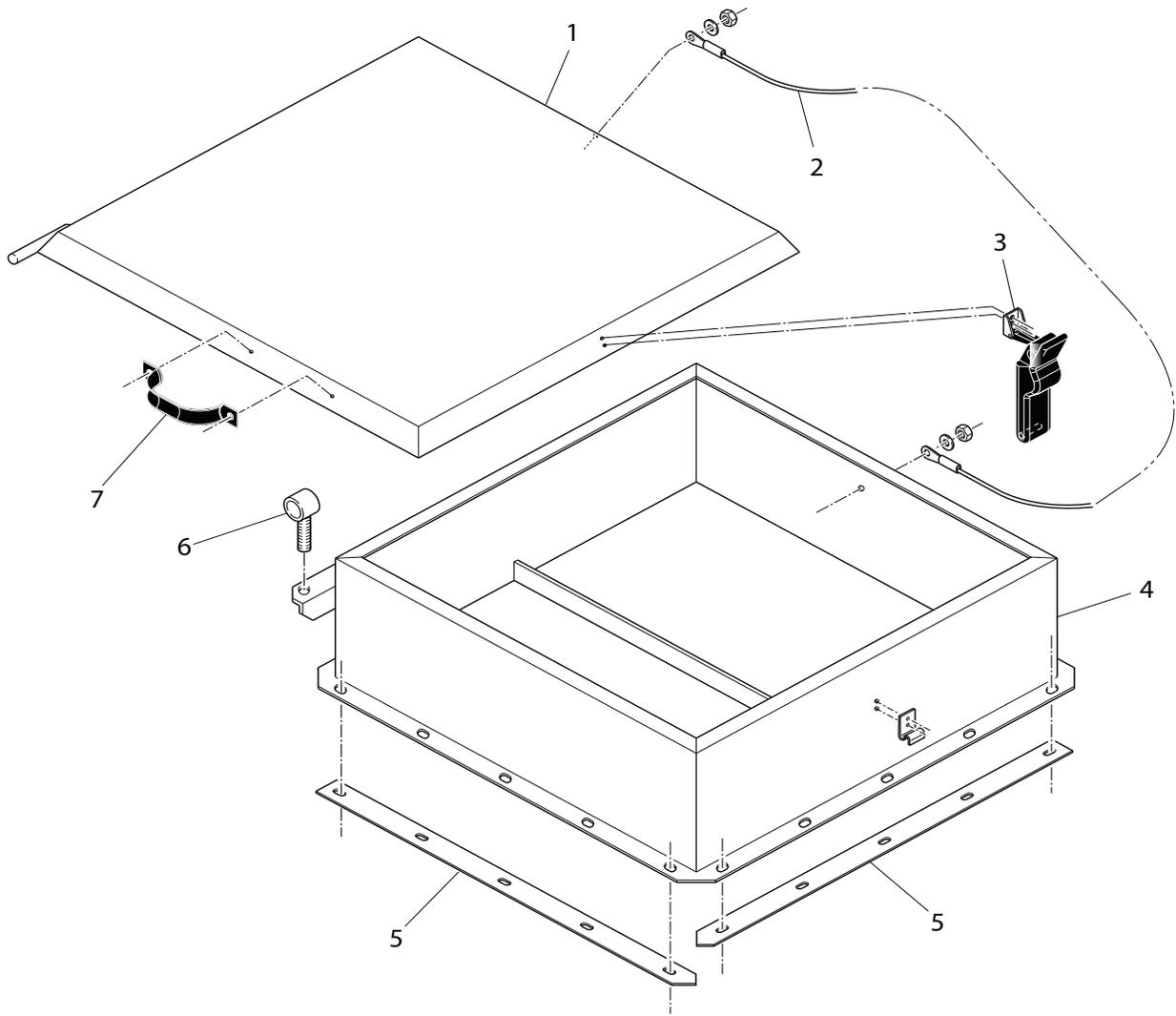
**WHEN ORDERING PARTS, BE SURE TO STATE
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DISCHARGE BOOM OPTION

Ref. No.	Part Number	Description	No. Required
	080736	Discharge Boom Assembly Consisting of:	1
1	080708	Boom Weldment	1
2	0X0624	3/8-16 UNC-2A x 1-1/2" Lg. Hex Hd Cap Screw	1
3	080559-01	Boom Handle	1
4	003299	Discharge Balance Torsion Spring	1
5	080560-02	Adjusting Collar	1
6	Z0612SCP	3/8-16 x 3/4" Lg. Square Hd. Set Screw	2
7	00Y06S	3/8-16 Square Nut	1
8	003207	1-1/2" x 90° Swivel Joint	1
	003355	Swivel Repair Kit	2
9	080733	Boom Stand Pipe	1
10	080377	Female Nyglass Coupler	1
	006515	1-1/2" Coupler Gasket	1

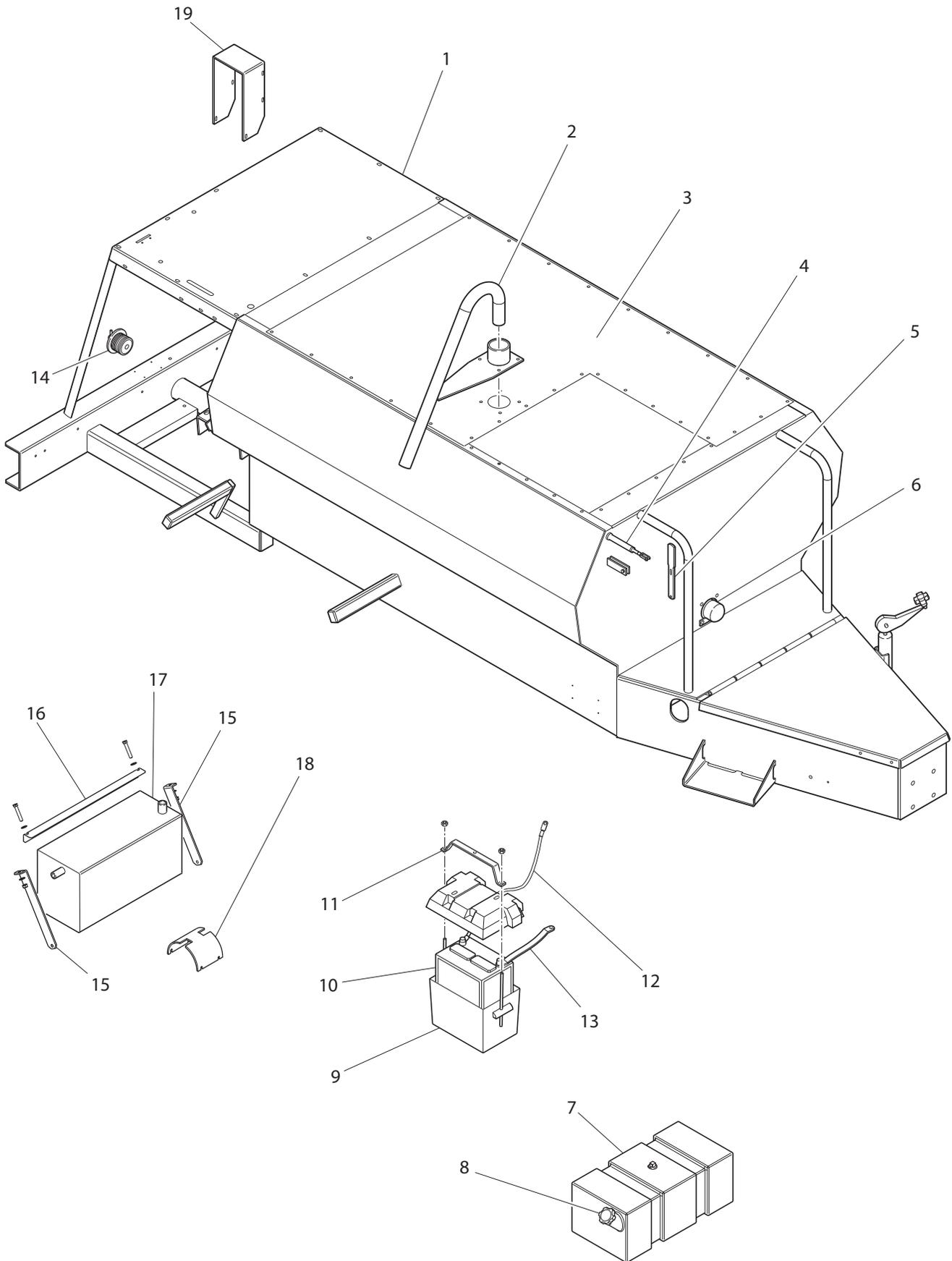
WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE



HATCH ASSEMBLY

Ref. No.	Part Number	Description	No. Required
1	080674	Hatch Lid	1
2	005565	Hatch Lid Lanyard	1
3	005433	Soft Latch	1
4	080675	Hatch Liner	1
5	F60-0002-01	Hatch Shim	2
6	070627	Hatch Lid Hinge	2
7	002909	Handle	2
	190044	Foam Gasket	12.5 (Ft)

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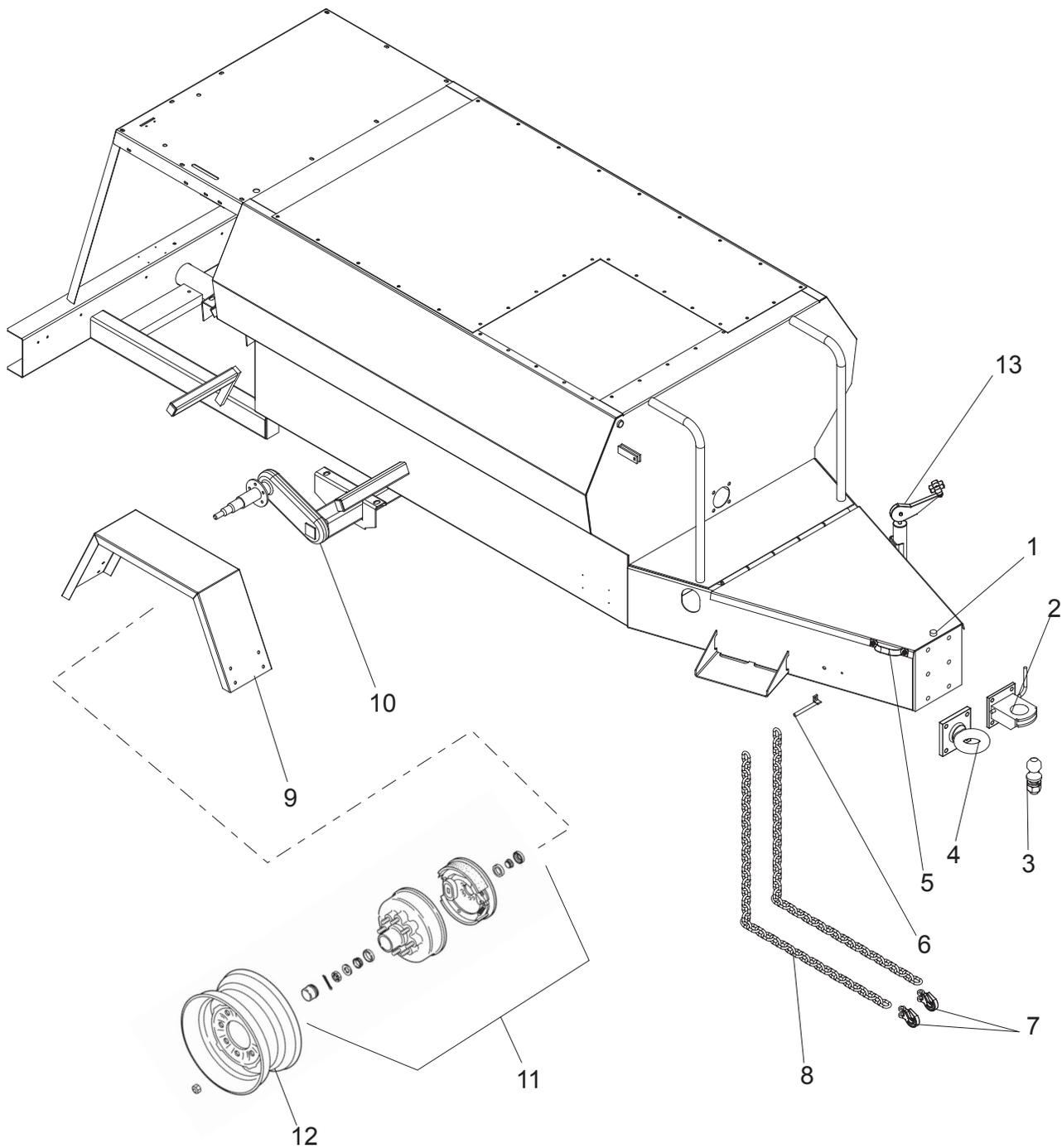


WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

COMMON LOOSE PARTS AND ENGINE

Ref. No.	Part Number	Description	No. Required
1	F60-0005	Platform	1
	F75-0013	Right Support Angle	1
	F75-0012	Left Support Angle	1
2	080731	Fill Port Weldment	1
	005280	Fill Port Plug	1
	080378	Male Nyglass Coupler	1
3	F60-0002	Tank Top	1
4	080589-02	Agitator Control Rod	1
	022801	Clevis and Pin	1
	080218	Agitator Control Rod Conduit	1
	005178	O-Ring	1
5	F60-0020	Control Handle	1
	022202	Black Handle Grip	1
6	005399	Agitator Shaft Guard	1
7	080823	Fuel Tank	1
8	080823C	Fuel Tank Cap	1
9	080223	Battery Box	1
10	002256-12	12V Battery - Interstate Battery MT34	1
11	005559-03	Battery Tie-Down Strap	1
12	008171	Positive Battery Cable	1
13	000241	Ground Strap	1
14	080626	Tank Drain Plug	1
15	F60-0024	Hydraulic Reservoir End Strap	2
16	F60-0023	Hydraulic Reservoir Tie-Down Strap	1
17	080680	Hydraulic Reservoir	1
18	F60-0022-01	Clump Shaft Guard	1
19	F60-0022-03	Hydraulic Pump Coupling Guard	1
		NOT SHOWN	
	080566	Throttle Control Cable Assembly	1
	080567	Choke Cable Assembly	1
	080483	Kohler 25 HP Engine	1
	KL1205001	Oil Filter	1
	KL2488303-S1	Air Filter	1
	KL2406857-S	Muffler	1
	KL2405013-S	Fuel Filter	1

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

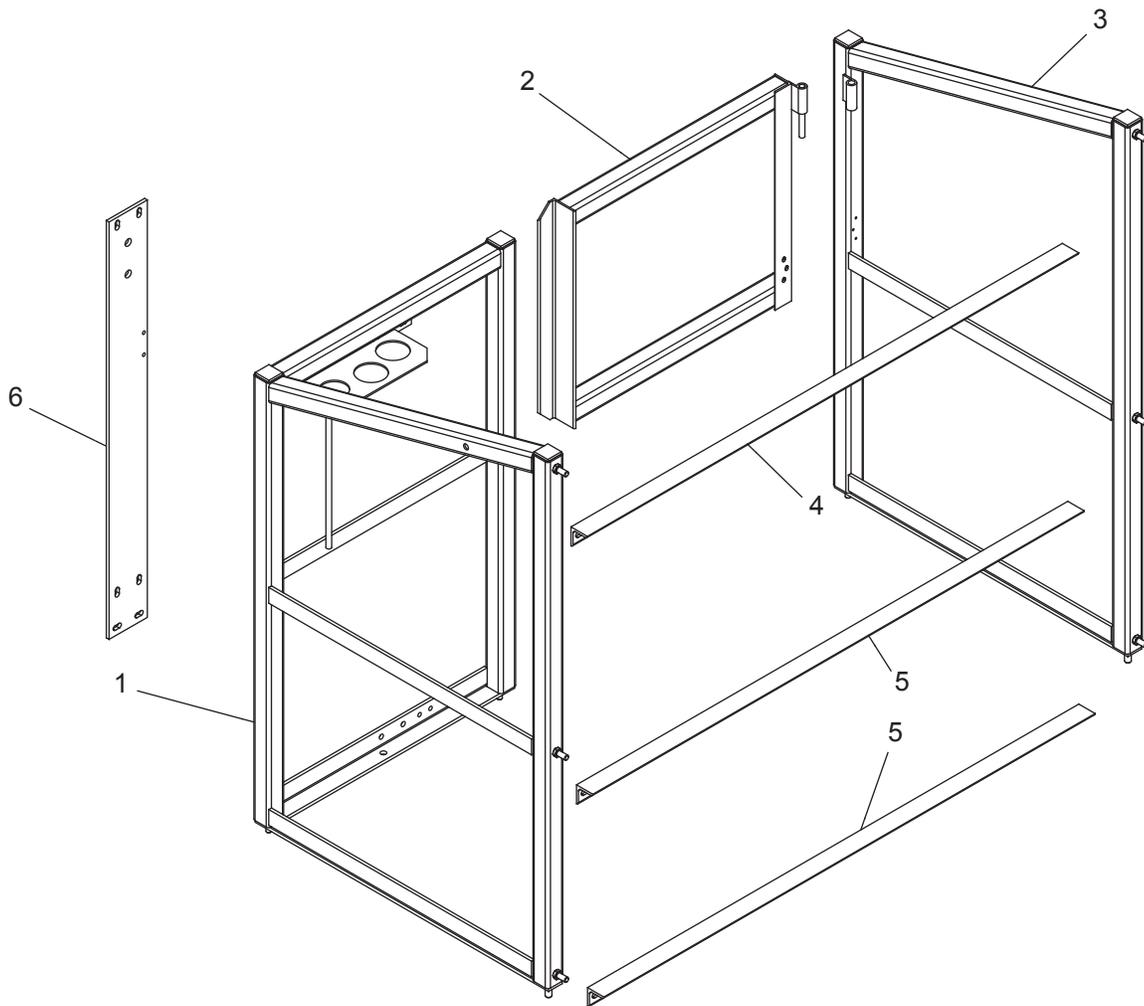
TRAILER ASSEMBLY PARTS

Ref. No.	Part Number	Description	No. Required
1	085152	Rubber Stud Mount	1
2	005134	2-5/16" Ball Coupler	1
3	005135	2-5/16" Ball	1
4	080043	2-1/2" Tow Ring	1
5	002909	Handle	1
6	080591-03	Safety Chain Rod Weldment	1
7	023915	Clevis Grab Hook - Self-Lock	2
8	190028	Safety Chain (3 ft)	2
9	F60-0015	Fender	2
10	080814	7000# Axle Assembly	1
	080814-08	Brake Assembly, Left-Hand side	1 per axle
	080814-09	Brake Assembly, Right-Hand side	1 per axle
11	WL8-219-4	Hub and Drum Assembly	2
	080814-010	3/8 in Nut	5 per *
	080814-011	Drum	1 per *
	080814-012	Wheel Bearing	1 per *
	080814-013	Wheel Bearing	1 per *
	080814-014	Seal	1 per *
	080814-015	Washer	1 per *
	080814-016	Castle Nut	1 per *
	080814-017	Cotter Pin	1 per *
	080814-018	Grease Cap	1 per *
	080814-019	Rubber Plug	1 per *
12	080669	Wheel and Tire Assembly	2
	080663	Wheel	1 per
	080668	Tire	1 per
13	080701	Jack Weldment w/ Bracket	1
	005438E	Jack Repair Kit	

***NOTE:**

All of these required quantities are quantities required per Hub and Drum Assembly, not per axle.

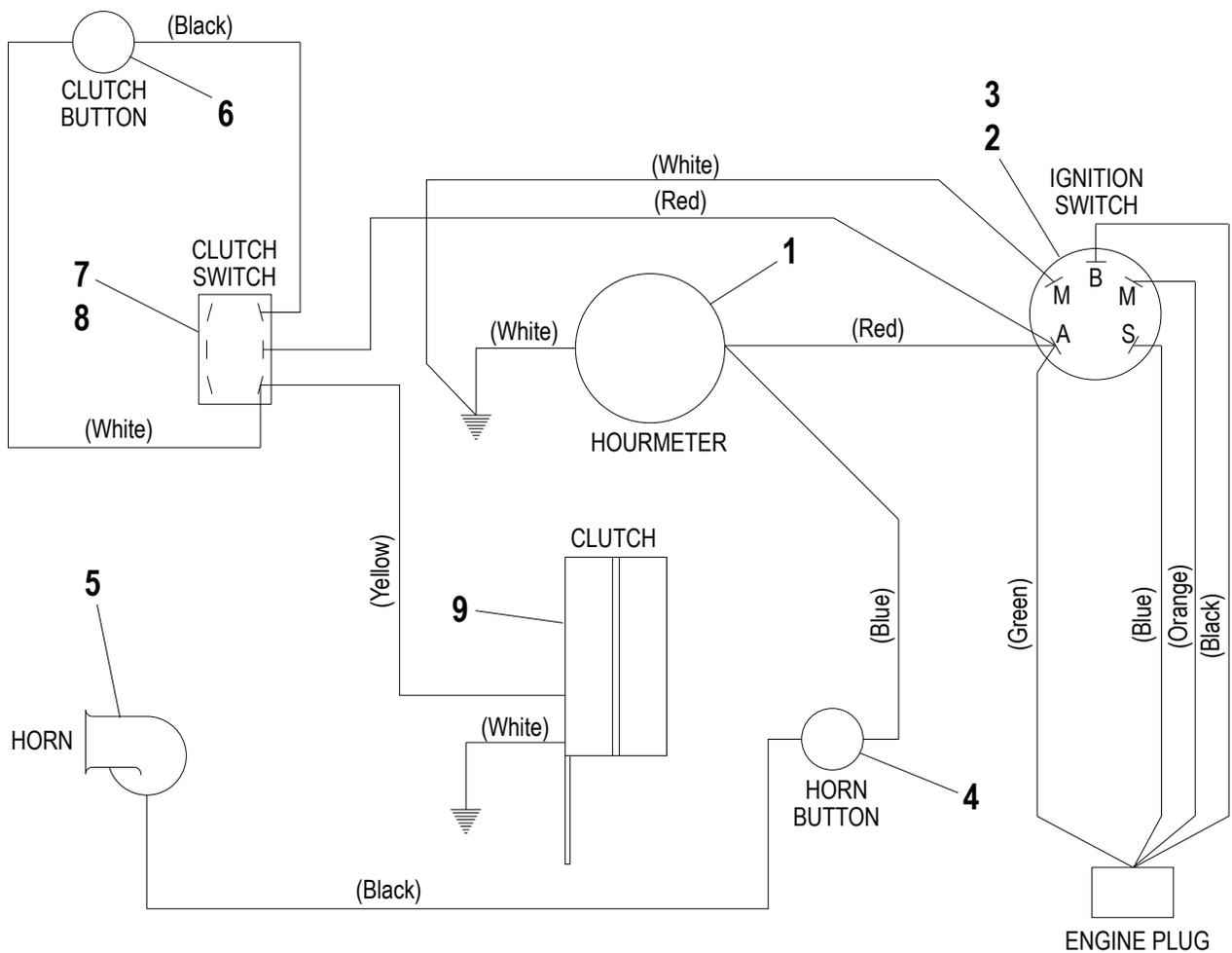
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GUARD RAILS

Ref. No.	Part Number	Description	No. Required
1	080726	Right Guard Rail	1
2	080539-01	Gate	1
	080521	Gate Spring Hinge	1
3	080537	Left Guard Rail	1
4	080536-18	Top Cross Rail	1
5	080536-13	Cross Rail	2
6	F75-0008	Boom Support Plate	1
		NOT SHOWN	
	F75-0014	Ladder	1

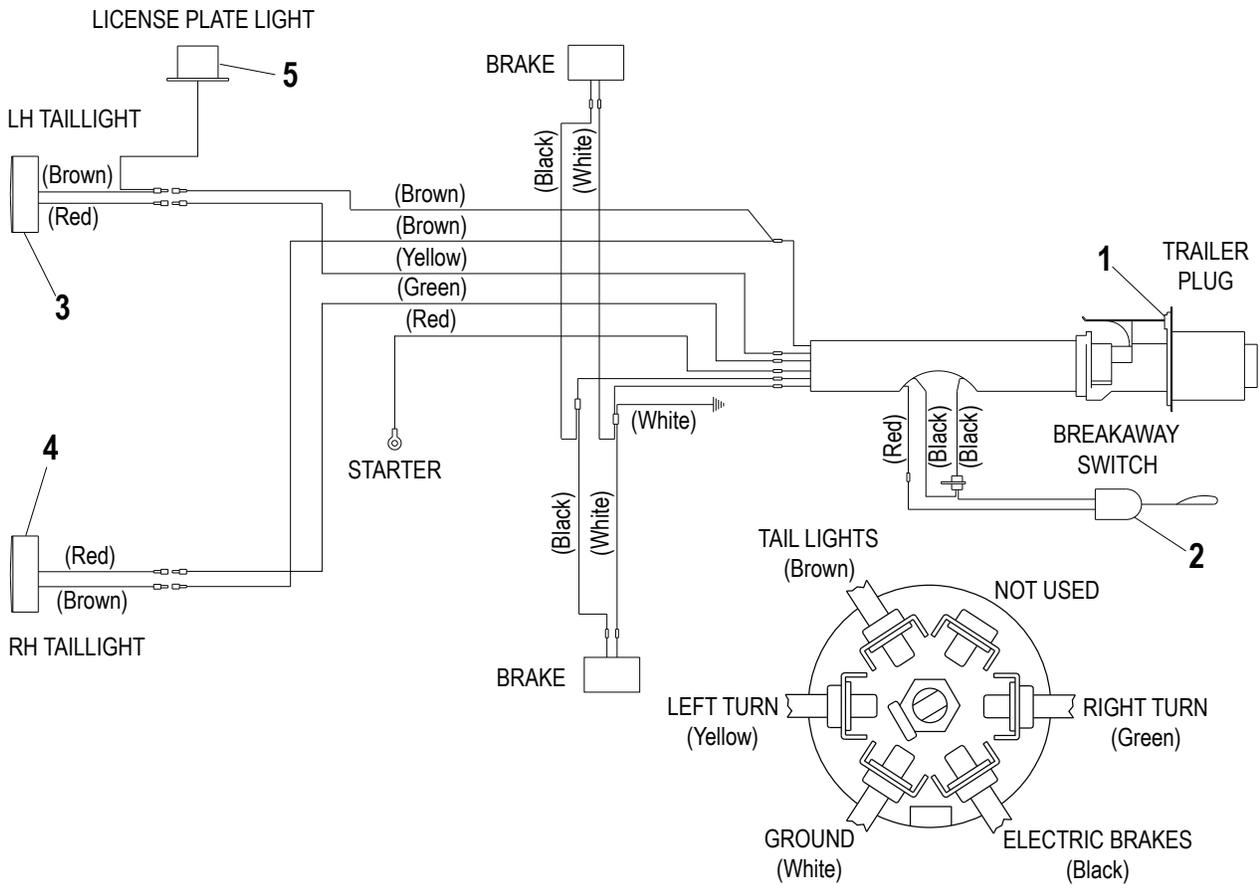
WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE



CONTROL PANEL WIRING

Ref. No.	Part Number	Description	No. Required
1	007274	Hour Meter	1
2	080654	Ignition Switch	1
3	080654-K	Ignition Key	1
4	020886	Horn Button	1
5	006499	Horn	1
6	020886	Clutch Button (Same P/N as Horn Button)	1
7	080525	Clutch Toggle Switch	1
8	080526	Clutch Toggle Switch Dust Boot	1
9	035084	Electric Clutch	1
	080607-01	Control Panel Wiring Harness	1

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



TRAILER PLUG CONNECTIONS

TRAILER WIRING

Ref. No.	Part Number	Description	No. Required
1	075592	7-Blade Trailer Plug	1
2	023424	Breakaway Switch	1
	190029	Chain	3.5 ft
	005016	"S" Hook	6
	005017	Snap Hook	1
3	005137	Taillight - Left-Hand Side	1
	005137A	Lens	1
4	005138	Taillight - Right-Hand Side	1
	005137A	Lens	1
5	005436	License Plate Light	1
	004720	License Plate Bracket	1
	080609	Trailer Wiring Harness	1

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TOOL KIT

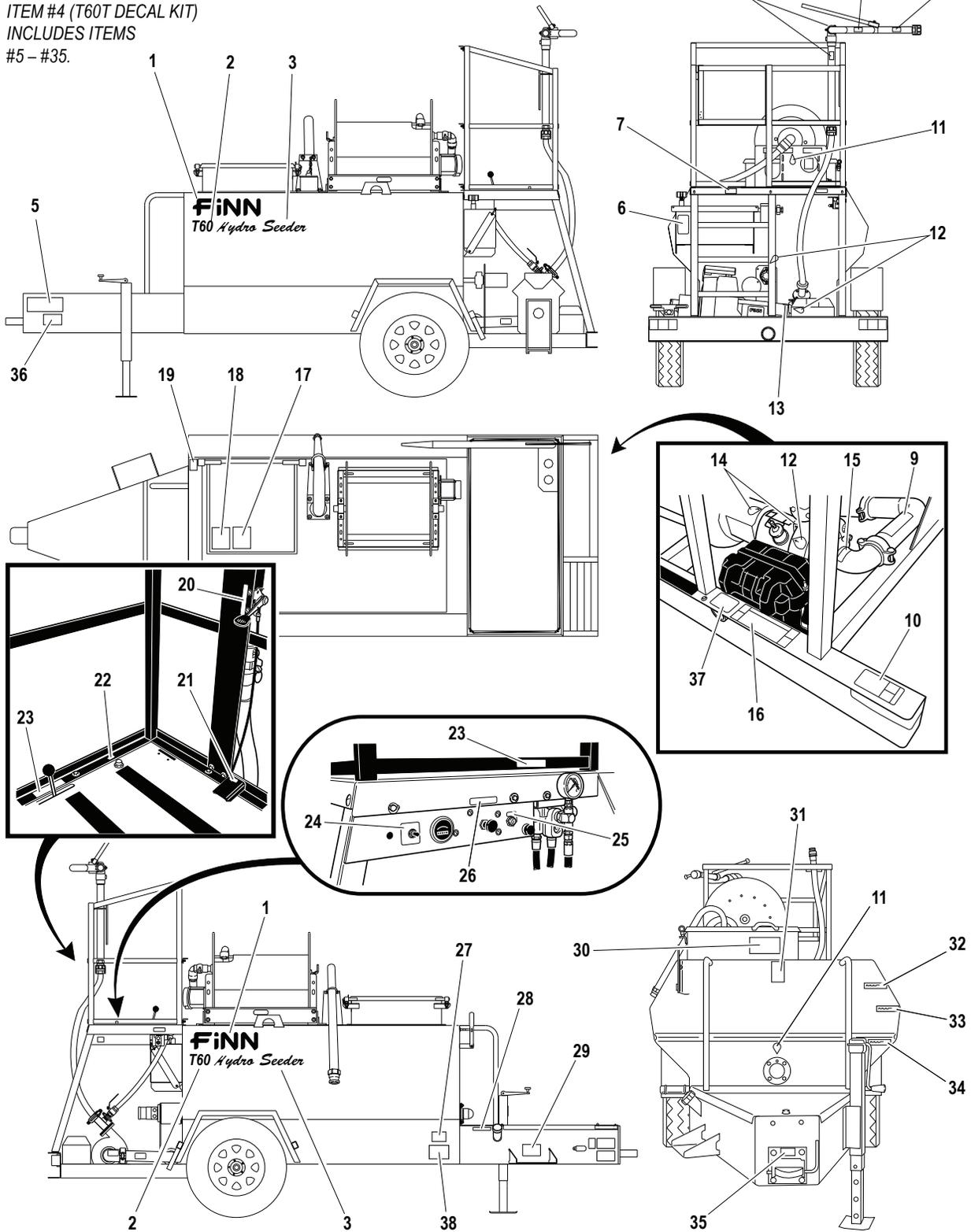
Part Number	Description	No. Required
000698	Automatic Pressure Lubricator Grease (1 lb Can)	1
005220	Impeller Wrench	1
080273	Long Distance Nozzle Assembly	1
080131	Long Distance Nozzle	1
080260	Male Adapter	1
160749	Reducer Bushing	1
080394	Wide Fan Nozzle Assembly	1
006604	Wide Fan Nozzle	1
080260	Male Adapter	1
160750	Reducer Bushing	1
080395	Narrow Fan Nozzle Assembly	1
006605	Narrow Fan Nozzle	1
080260	Male Adapter	1
160750	Reducer Bushing	1
006515	Coupler Gasket	1
012681A	FINN Beige Aerosol Paint	1
080535	Remote Valve Assembly	1
012083	Full Port Ball Valve	1
080260	Male Adapter	1
080261	Female Coupler	1
160307	Close Nipple	1
160520	Nipple	1
	Engine Parts Manual	1
LBT60-MO	T60 II HydroSeeder® Parts and Operator's Manual	1

SEAL REPAIR KITS

Part Number	Description	No. Required
023120	Seal Kit for Hydraulic Valve #80743	
080615	Seal Kit for Hydraulic Motor #080482	
080616	Seal Kit for Hydraulic Pump #080642	
003355	Boom Swivel Seal Kit	
007420	Agitator Bearing and Seal Kit	

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NOTE:
 ITEM #4 (T60T DECAL KIT)
 INCLUDES ITEMS
 #5 – #35.



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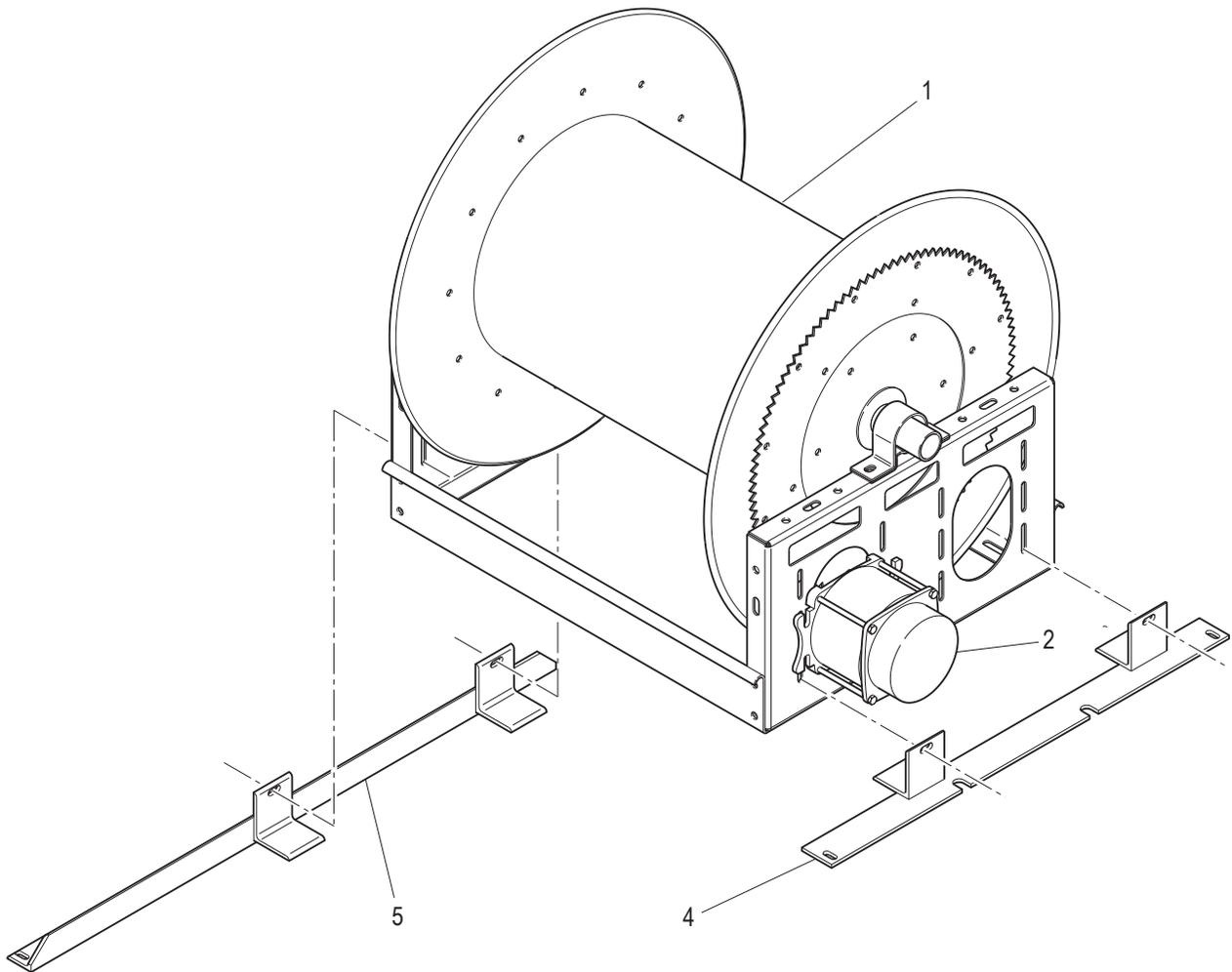
DECALS

Ref. No.	Part Number	Description	No. Required
*1	023174	Decal "FINN"	2
*2	012661-06	Decal "T60"	2
*3	011595	Decal "Hydro Seeder"	2
4	080699	Decal Kit "T60"	1
5	031461	Decal "WARNING! Runaway Vehicle Hazard . . ."	1
6	012687	Decal "CAUTION! Hydraulic System Instructions . . ."	1
7	012688	Decal "CAUTION!" Fall Hazard!"	1
8	007230-02	Decal "Service Daily"	2
9	005216	Decal "WARNING! Burn Hazard!"	2
10	011567	Decal "DANGER!" Electrocutation Hazard!"	2
11	007230-01	Decal "Service Daily"	2
12	007230	Decal "Service Daily"	5
13	006869	Decal "CAUTION! Pressure Lubricator Must Be Kept. . ."	1
14	007231	Decal "Service Weekly"	3
15	012180	Decal "CAUTION! To Avoid Damage To . . ."	1
16	031463	Decal "WARNING! Sever Hazard!"	1
17	012686	Decal "DANGER! Confined Space Hazard!"	1
18	085078	Decal "Operating Instructions"	1
19	008286-01	Decal "Agitator . . . Mix/Spray . . ."	1
20	022199	Decal "Throttle"	1
21	080699-01	Decal "Clutch"	1
22	080699-02	Decal "Horn"	1
23	008286-02	Decal "Agitator Operation . . ."	2
24	080540	Decal "Clutch Operation"	1
25	080699-03	Decal "Keyswitch"	1
26	KL2511317	Decal "Stopping Instructions . . ."	1
27	011662	Decal "U. S. Patent Numbers . . ."	1
28	031331	Decal "Gasoline"	1
29	080107	Decal "WARNING! Fall Hazard!"	1
30	023519	Decal "WARNING! Wear Proper Eye Protection . . ."	1
31	020970	Decal "WARNING! Fall Hazard!"	1
32	005186	Decal "500 Gallons"	1
33	005185	Decal "400 Gallons"	1
34	005184	Decal "250 Gallons"	1
35	005022	Decal "Use 2-5/16" Ball Only"	1
*36	080707	Decal "T60T GVWR" (Trailer Version Only)	1
*37	012260	"IMPORTANT" Metal Plate	1

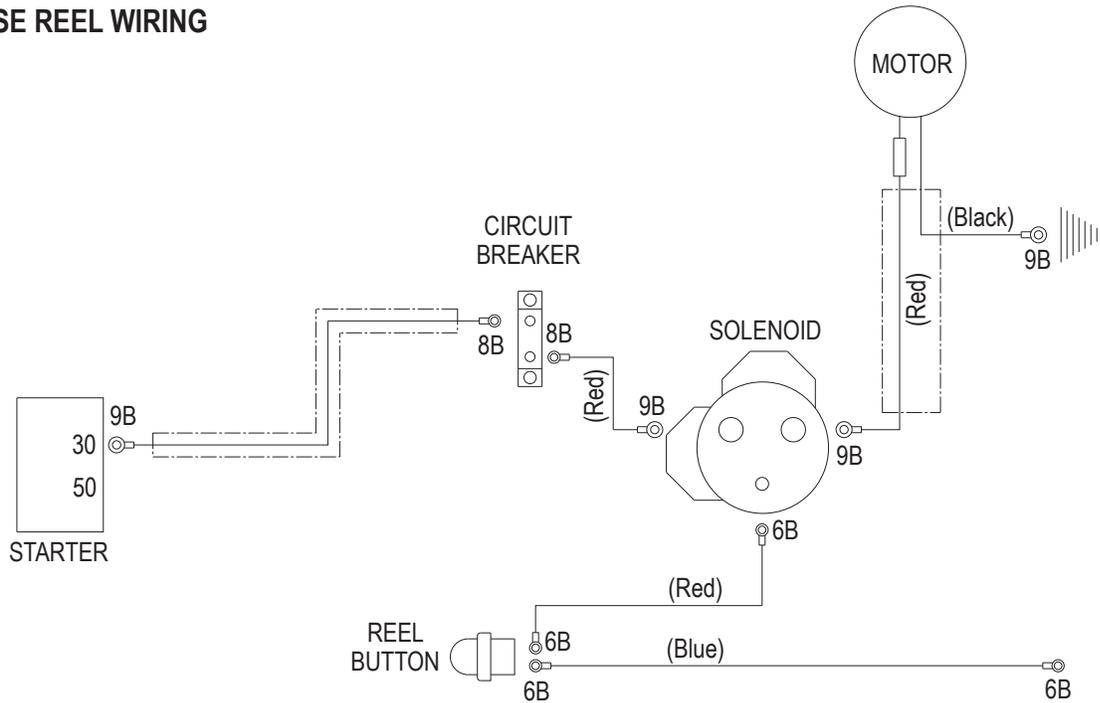
*** NOTE:**

All of the decals depicted and listed on pages 54-55 (except those identified with an asterisk) are shown for location purposes only. To order replacements you must order T60 Decal Kit (part# 080699). Replacement decals and plates that are not part of the decal kit and must be ordered separately.

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HOSE REEL WIRING



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HOSE REEL

Ref. No.	Part Number	Description	No. Required
1	080801	Hose Reel With 1/2 HP (12V) Motor	1
2	008188	Electric Motor	1
	080801-01	Friction Brake Assembly	1
	080801-02	90 Degree Inlet	1
	080801-03	Bearing Housing Sub Assembly	1
	080801-04	Spindle 1-1/2" Female Pipe - Ductile	1
	080801-06	Gooseneck - 11"	1
	080801-07	Snap Ring - 2" ID	1
	080801-08	O-Ring 2" OD x 1-3/4" ID x 1/8" Thick	1
	080801-09	Bearing, Self Aligning	1
	080801-09A	Bearing, Self Aligning, 0.945 ID	1
	080801-10	Sprocket	1
	080801-11	Hose Reel Motor Sprocket	1
	080801-12	Chain Assembly	1
	080801-14	ReelCraft Elbow Seal Kit	1
4	F75-0011	Live Reel Flat Support	1
5	F75-0010	Live Reel Angle Support	1

NOT SHOWN

005593	Remote Holder	1
005210	Lead-In Hose	1
005592	Soft Latch	1
080378	Male Coupler	1
080611	T60 II Hose Reel Wiring Harness	1
020886	Red Button	1
008450	Solenoid Kit, Hose Reel	1
011653	Circuit Breaker (50 Amp)	1

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NOTES