T75S HydroSeeder®

CE-Compliant

Operator Instructions and Parts Manual

Model **MN** Serial No. _____

FOR OFFICE USE ONLY		
DATE	**UPDATE DESCRIPTION**	**CODE**
09/29/16	Initial release.	MN0929

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).**

FINN CORPORATION®

WARRANTY PERIOD

Hydroseeders® and Straw Blowers: 2 years or 2000 hours whichever comes first.

All other equipment: 1 year or 1200 hours whichever comes first.

COMMERCIAL LIMITED WARRANTY

EFFECTIVE 04/01/2011

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

THIS IS THE ONLY EXPRESS WARRANTY ON OUR PRODUCTS

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

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

LIMITATIONS ON OUR RESPONSIBILITY WITH RESPECT TO PRODUCTS PURCHASED

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

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

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

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

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

NOTICE

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

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Continued . . .

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SAFETY FIRST

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

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

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

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

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

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

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

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

NOTE: This is helpful information.

CALIFORNIA PROPOSITION 65

⚠ WARNING ***The engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm. Wear protective equipment.***

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

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.

TheFINN 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)

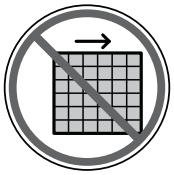
1. If you have a chassis-mounted unit, check the devices securing the HydroSeeder® to the carrier vehicle frame.

2. If the HydroSeeder® is a trailer-mounted unit, check the hitch and hitch bolts, lights, brakes, and all safety components.
3. Make sure loading hatch safety bars/bag cutter is in place and secure.
4. Check that all guard railing and machine guarding is in place and secure.
5. With the ignition switch in the ON position, verify that the signal horn is operating correctly.
6. 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. Take care not to drop any objects inside of the tank during the inspection process.
7. Remove unnecessary objects (or materials) from the tank top.
8. 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.
9. Inspect all hydraulic hoses for cracks, bulges, or damage. If hoses are bad, replace immediately.
10. 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 the warning decals on the machine, operator's manuals, or job site requirements. Remove rings, watches, etc. Avoid wearing loose-fitting clothing that could get caught in the rotating machinery.

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



3. Do not load unit while in transit. Load only when the unit is parked and 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 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 machine operator(s). All personnel should review and be familiar with stop/start signals between the driver and operator(s) before going into 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 the 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.

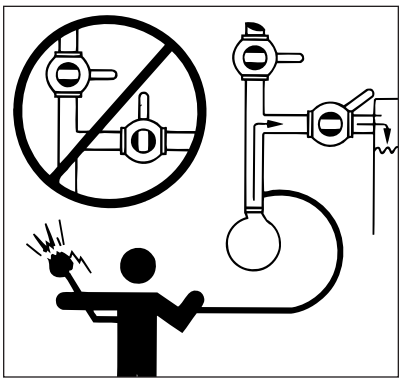
9. Never modify or remove any part of the machine (except for service and then reinstall all removed parts before operating).

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) the slurry pump when both the recirculation and discharge valves are closed (as illustrated to the right). Operation with both valves closed will result in extreme heat generation that will cause severe bodily injury and damage to the equipment.



3. The 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 slurry pump and/or discharge lines that will result in severe bodily injury and damage to the equipment.

4. During application through a hose, high pressures 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 the 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 to handle the hose, 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 the operators are not walking back over slippery ground.

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

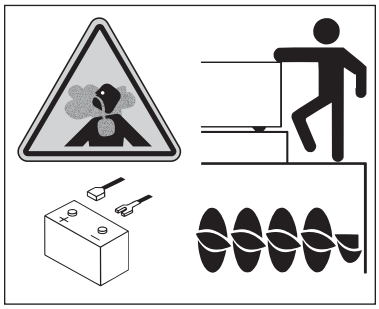
7. Except when loading materials, keep loading hatch lid closed to protect operator and prevent splashing of wet material onto the tank top.

8. Wash off spillage of slippery mulch or slurry additives from the tank top and work area 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 mounted 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. 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.

7. 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 or hydraulic fluid 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.

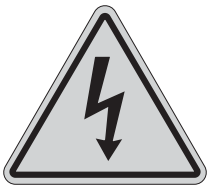
8. It is recommended that only authorized, genuine FINN replacement parts be used on the machine.

9. 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.

10. Make certain that all decals on the machine are maintained in good legible condition. Replacement decals are available through FINN Corporation. See current set of safety decals section for the decals mounted on the unit. See the Parts Section of this manual for the location and quantity of all decals on this unit.

COMMON SAFETY DECALS


Hazard/
Attention


Electrical
Shock Hazard

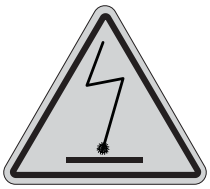

Hearing
Hazard


Arc Flash
Hazard or
Explosion
Hazard


Electrocution
Hazard

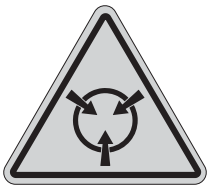

Fire Hazard


Body
Entanglement
Hazard

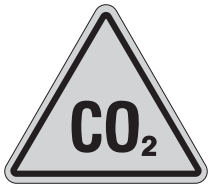

Electrostatic
Discharge
Hazard


Fumes/Dust
Hazard


Burn Hazard


Electrostatic
Sensitive Area
Hazard


Pinch Point/
Entanglement
Hazard



Carbon
Dioxide
Hazard


Explosive or
High Pressure
Hazard


Grounding
Required
Hazard


Corrosive
Hazard


Explosive
Material
Hazard


Crush Hazard


Cut/Crush
Hazard


Vision Damage
Hazard


Crush/Pinch-
point Hazard


Cut/Sever
Hazard


Vision and
Hearing
Damage
Hazard


Crush/
Entrapment
Hazard


Sever/Reach
Hazard


Vision,
Hearing and
Respiratory
Damage
Hazard


High Voltage
Hazard

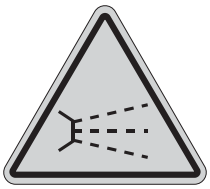
COMMON SAFETY DECALS

Heavy Object Hazard

Skin Puncture Hazard

Vision Protection Required

Hot Surface Hazard



Splash/Spray Hazard

Hearing Protection Required

Loose Clothing Entanglement Hazard

Stumble Hazard

Vision, Hearing and Head Protection Required

Pinch Point/ Moving Belt Hazard

Trip Hazard

Breathing, Vision, Hearing and Head Protection Required

Poison Hazard

Watch Head/ Overhead Hazard

Foot Protection Required

Radio Frequency Hazard

Fall/Loss of Balance Hazard

Lockout/ Tagout Procedure Required

Remote Start Hazard

Mandatory Operator Action Required

Gloves Required

Sever by Rotating Parts Hazard

Read Manual

Trailer Safety

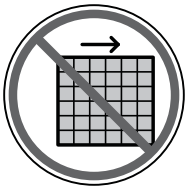
Rotating Shaft Hazard

Breathing Protection Required

Lift Point

COMMON SAFETY DECALS

Do Not Ride on Moving Vehicle



Do Not Remove Guards

Do Not Obstruct or Block

Do Not Spray Power Lines

Do Not Touch

ADDITIONAL SAFETY DECALS

DANGER

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

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.

FLYING MATERIAL HAZARD!

Wear eye protection around operating equipment.

Failure to comply will result in death or serious injury.

P/N 41392

HYDRAULIC SYSTEM INSTRUCTIONS

1. Check oil level weekly. Add oil when level goes down to first ring on filler screen.
2. Change filter on oil tank every 500 operating hours. (Use a 10 micron filter element only).
3. Check and clean suction strainer once a year or when oil is changed.
4. Change hydraulic oil when the color turns milky white. (Color change is due to water getting into hydraulic system).
5. Keep all fittings and hoses tight and leak free.
6. Keep system clean at all times.
7. DO NOT start or run engine without hydraulic oil in reservoir. Permanent pump damage will occur.

HYDRAULIC FLUID ONLY

See Operator's Manual for Type.

P/N 41386

WARNING

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/N 41385

DANGER

ELECTROCUTION HAZARD!

DO NOT aim stream toward electrical lines.

Avoid spraying towards bystanders.

Failure to comply will result in death or serious injury.

P/N 41384

NOTICE

Seal lubricator must be kept in operation at all times for pump seal protection. See operators manual for instructions.

P/N 41387

NOTICE

To avoid damage to suction cover, tighten all bolts to 15 ft-lbs. See Operator's Manual for instructions.

41389

STOPPING INSTRUCTIONS

Engine is equipped with a fuel shut-off solenoid. Move throttle to mid-range before stopping.

P/N 41434

CAUTION

Use on 2 5/16 inch ball only.

P/N 41388

OPERATION AND MAINTENANCE MANUAL FOR THE FINN T75S SERIES II HYDROSEEDER®

This manual gives you step-by-step instructions for the operation and maintenance of the FINN T75S 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 operating this unit.

DEFINITION OF HYDROSEEDING

Hydroseeding is the process whereby seed, fertilizer and/or lime and wood 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 T75S HydroSeeder® will apply seed, fertilizer and/or lime, wood 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 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.

CARRIER VEHICLE REQUIREMENTS

The HydroSeeder® is to be mounted on a truck or trailer that can carry a payload of 9,200 lb (4,173 kg). This is the weight of the fully loaded HydroSeeder®. Any auxillary loads due to material storage or optional equipment, as well as the weight of the carrier vehicle, must be added to obtain the proper carrier vehicle capacity.

HYDROSEEDER®		TRUCK REQUIREMENTS
Type	*Maximum Weight (Loaded)*	
T75S	9,200 lbs. (4,173 kg)	Carrier vehicle must be able to support 9,200 lbs. (4,173 kg) in addition to its own weight

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.***

MOUNTING THE HYDROSEEDER®

When mounting the HydroSeeder® to a 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, as well as the bed-to-truck and HydroSeeder®-to-bed connections are adequate for the maximum weights that are shown in the CARRIER VEHICLE REQUIREMENTS section.
2. Mount the HydroSeeder® to the truck frame. The T75 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.
3. Place chains over the HydroSeeder® and around truck bed and secure with binders. Secure the HydroSeeder® with blocks tied to the truck bed.

⚠ WARNING ***DO NOT lift this machine by the lift rings with water and/or material in the tank. Failure to comply could result in severe personal injury or death and equipment damage.***

⚠ 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.***

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.***

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 camlock, quick-operating fittings, including the connection at the end of the discharge piping. A nozzle is connected to the remote discharge valve which is connected to the working end of the discharge hose. Once everything 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 excess material flow back into the tank (see Figure 2).

⚠ DANGER ***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: The Operator's Platform includes a discharge boom, guard rails, ladder, and all controls necessary to operate the unit (throttle, slurry pump control, signal horn, hydraulics 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, and it is wired to the unit's battery.

PRE-START CHECK

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

1. Check condition of all mounting hardware that secures the HydroSeeder® to truck bed and/or frame rails or trailer.
2. Ensure that all guards are in place.
3. Inspect that all railings are in place and secure.

EQUIPMENT CHECK

⚠ WARNING ***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. Verify that the tool kit contains all the prescribed items. See PARTS SECTION.
2. Inspect the slurry tank for foreign objects. See Section IV. MAINTENANCE of the HYDROSEEDER® SAFETY SUMMARY SECTION.
3. Check fuel level. Fill if necessary.
4. Check hydraulic oil level and fill if necessary. See HYDRAULIC SYSTEM 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 or replace if necessary.
7. Secure the tank drain plug in the drain pipe, located in the center of the rear bumper.
8. Check to make sure the slurry pump drain plugs are 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 the slurry pump. If the stem is fully extended, with thumb nut all the way up, the automatic pressure lubricator contains lubricant. If not, lubricant must be replaced by the following procedure (See Figure 1):
      1. Turn thumb nut clockwise until stem rises to maximum height.
      2. Remove cap and fill cap with sodium- (water soluble) base grease (FINN part number 000698). DO NOT use lithium-base (chassis lube) grease.
      3. Replace cap.
      4. Turn thumb nut counterclockwise until thumb nut is at the top of the stem. The spring and pressure disk in the lubricator forces grease, under pressure, to the pump seal.

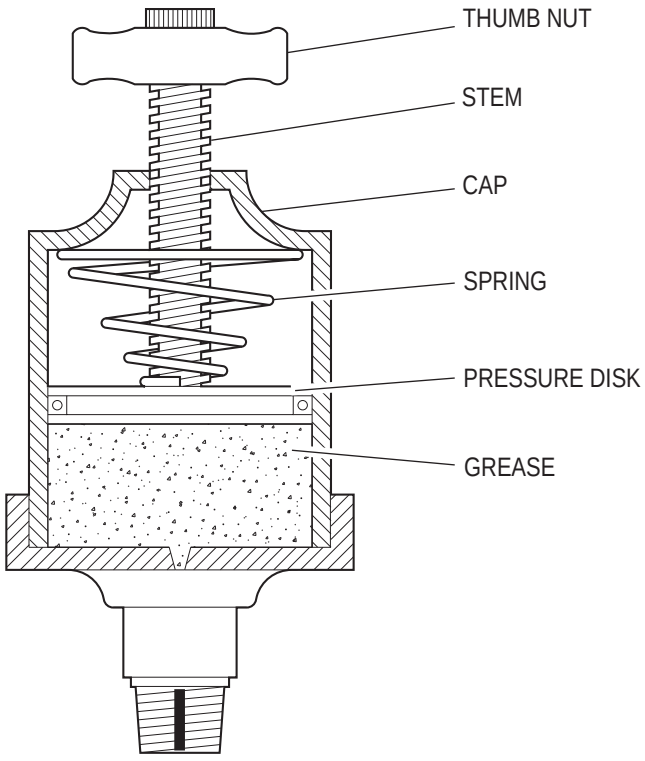


Figure 1 – Automatic Pressure Lubricator Components

EQUIPMENT CHECK (CONTINUED)

NOTICE ***When thumb nut has moved down to within 1/2 in. (1.25 cm) of touching the cap, re-service the automatic pressure lubricator.***

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

VALVE OPERATION

A. THREE-VALVE OPERATION

This 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 take off valve. The pump take off valve allows the material flow to be directed to the hose reel. The third ball valve is the upper discharge valve. An open upper discharge valve allows the material flow through the boom. The ball valves are open when the handle is in line with the piping and is closed when the handle is perpendicular to the piping.

⚠ DANGER ***Never engage (turn on) slurry pump when recirculation valve and either the pump discharge or remote valve is closed. This would create a situation where the slurry 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 valve will cause extreme heat. Failure to comply could result in death or serious injury.***

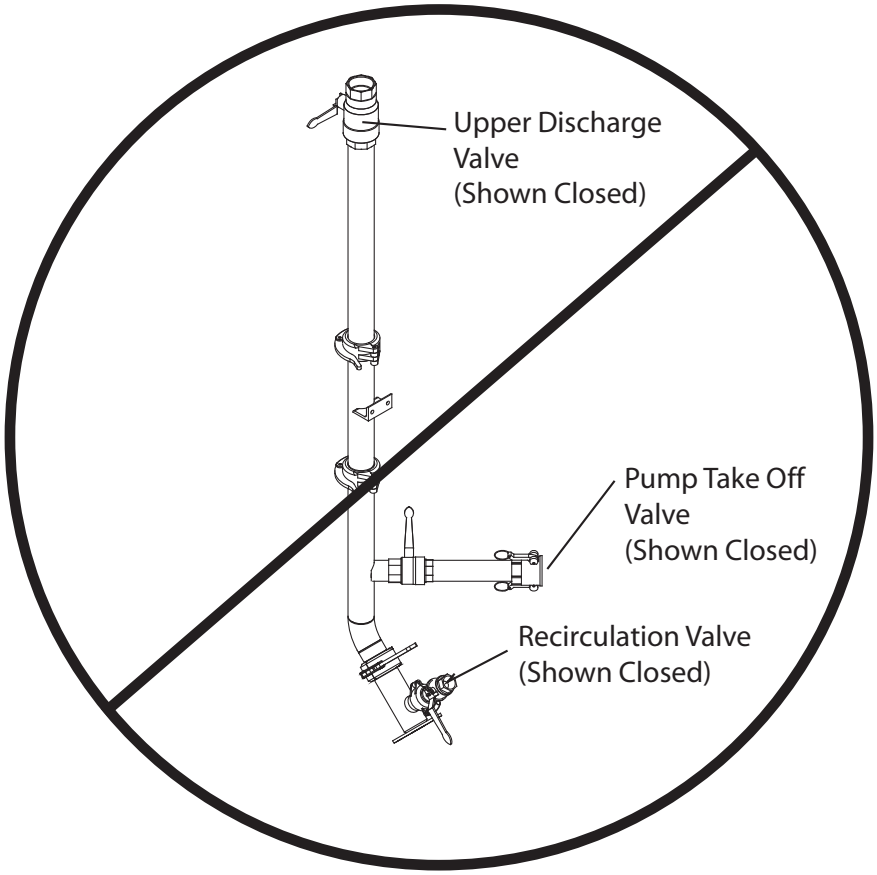


Figure 2 – NEVER Engage (Turn On) Slurry Pump Clutch With All Valves Closed

VALVE OPERATION (CONTINUED)

B. VALVE OPERATION (PLATFORM/BOOM OPTION)

1. DISCHARGE THROUGH BOOM

Flow is through boom with no flow through the closed recirculation valve and pump take off valve (see Figure 3). Flow through boom is controlled by engaging (turning on) and disengaging (turning off) the slurry pump and adjusting the engine RPM's.

NOTICE ***Do not use the discharge valve to control distance. Valve should be completely open. Control the spray volume and spray distance by adjusting the engine RPM.***

2. EXTENSION HOSE OR HOSE REEL THROUGH REMOTE PORT

Flow is through the open recirculation valve and pump take off valve with no flow through the closed upper discharge valve (see Figure 4). Flow through extension hose is controlled by the remote valve at end of hose. Open recirculation valve allows flow back into tank.

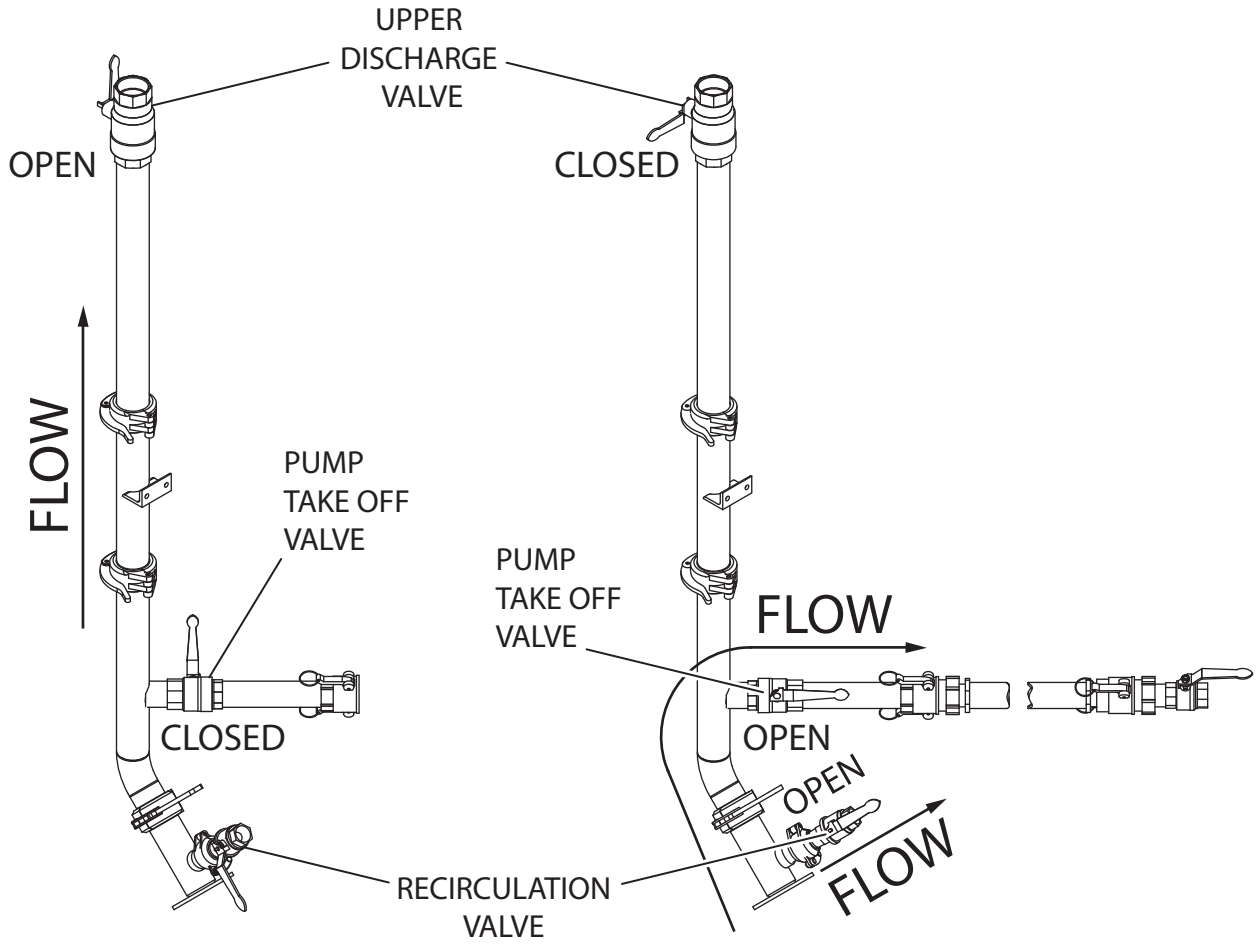


Figure 3 – Discharge Through Boom

Figure 4 - Discharge Through Extension Hose or Hose Reel Through Remote Port

⚠ WARNING ***Recirculation valve must be open and material must be flowing back into tank when using a remote valve. A closed or plugged recirculation line 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.***

CONTROL BOX

The FINN T75S HydroSeeder® control box is the operation point for the unit. The control box and corresponding control box icons are illustrated below.

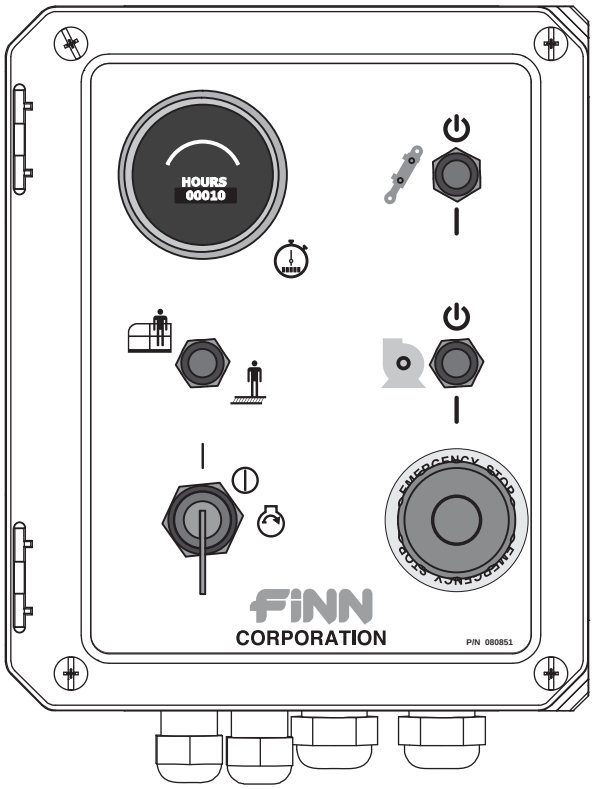


Figure 5 – Unit Control Box

	**RUN Symbol** Key switch is in the RUN position while in operation.
	**START Symbol** The key switch is turned to the START position to start the unit.
	**Slurry Pump Symbol** This orange symbol on the control panel represents the slurry pump of the unit. This is the switch used to start and stop the slurry pump.
	**Hydraulics Symbol** This blue symbol on the control panel represents the hydraulics system of the unit. This is the switch used to turn ON and OFF the hydraulic system.

	**Hour Meter Symbol** This gauge will keep track of how many hours the unit has operated.
	**ON Symbol** Toggle switch flipped up to the ON position to activate components.
	OFF Symbol Key switch is in the OFF position cutting power from the unit, or toggle switch flipped down to the OFF position.
	**Platform Symbol** This symbol on the control panel represents where operation control of the unit is located. Flip upwards to allow unit control from the platform.
	**Ground Symbol** This symbol on the control panel represents where operation control of the unit is located. Flip downwards to allow unit control from the ground.

STARTING PROCEDURE

⚠ WARNING ***See HYDROSEEDER® SAFETY SUMMARY SECTION 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 - toggle switch flipped down) the slurry pump [the orange icon **( )**], turn off (toggle switch flipped down) hydraulics [the blue icon **( )**] 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.
5. Allow engine to warm up for 3 to 5 minutes before operation.

   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.

6. After the engine has warmed up, turn on the hydraulics system by flipping the hydraulics switch [the blue icon **( )**] to the **ON (⏻)** position (all the way up). The switch will automatically center itself (which is the ON position). This will allow the agitators to work when the operator moves the control lever.

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 show loading versus coverage rates for the FINN T75S HydroSeeder®. 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

Unit	Amount of Material in Tank in pounds (kilograms)			Coverage Area
	Seed	Fertilizer	Mulch	sq. ft. (sq. m)
T75	69 (31)	80 (36)	300 (136)	8,712 (809)

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

TABLE A EXAMPLE:

$$\frac{\text{300 lbs. (136 kg) Mulch per Tank}}{\text{1,500 lbs. (680 kg) Mulch per Acre}} = \text{0.2 Acre per Load}$$

400 lbs. (181 kg) Fertilizer per Acre x 0.2 Acre = 80 lbs. (36 kg) Fertilizer per Load

345 lbs. (156 kg) Seed per Acre x 0.2 Acre = 69 lbs. (31 kg) Seed per Load

NOTE: 1000 sq. ft. = 92.9 sq. m

TABLE B

SEED AND FERTILIZER ONLY

Unit	Amount of Material in Tank in pounds (kilograms)			Coverage Area	
	Seed	Fertilizer	Total	sq. ft. (sq. m)	Acre (Hectare)
T75	698 (317)	602 (273)	1,500 (680)	87,209 (8,102)	2.0 (0.81)

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

TABLE B EXAMPLE:

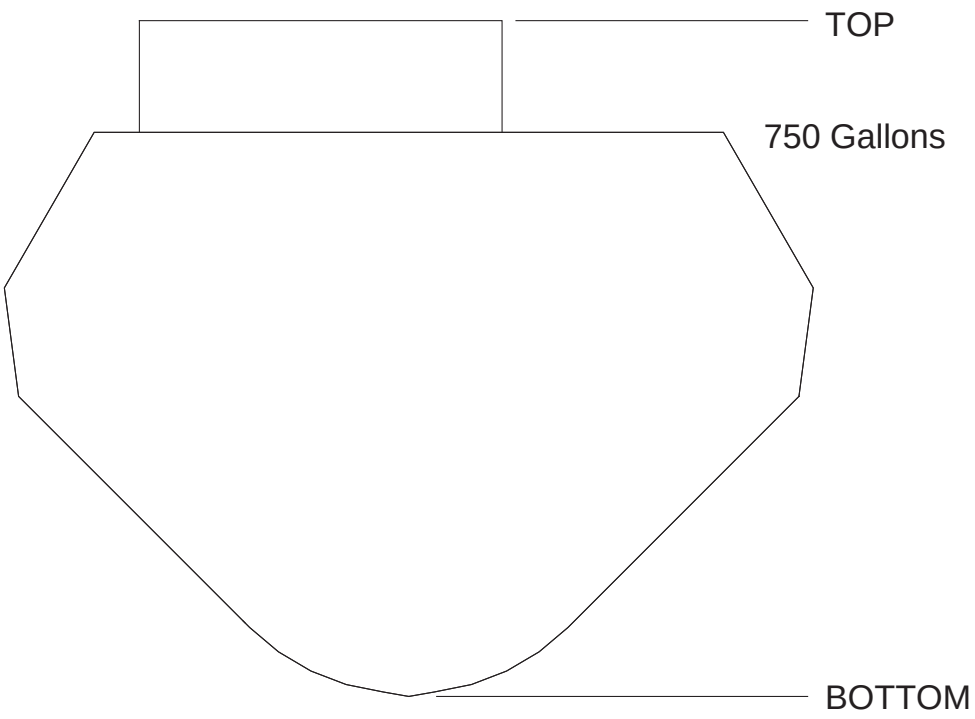
$$\frac{\text{1,500 lbs. (680 kg) Tank Capacity (Solids)}}{\text{8 lbs. (3.6 kg) of Seed + 9.2 lbs. (4.2 kg) of Fertilizer per-1,000-sq-ft.}} = \text{87,209 sq. ft per Load}$$

$$\frac{\text{8 lbs. (3.6 kg) of Seed}}{\text{1,000 sq. ft.}} \text{ X 87,209 sq. ft. = 698 lbs. (317 kg) of Seed per Tank}$$

NOTE: 1000 sq. ft. = 92.9 sq. m

NOTE: 1 Acre = 0.405 Hectare

TANK CAPACITY CHART:



T-75		
Gallons (liters)	in. (cm) from top	in. (cm) From Bottom
825 (3123)	8 (20.3)	40.5 (102.9)
800 (3028)	9 (22.9)	39.5 (100.3)
750 (2839)	11 (27.9)	37.5 (95.3)
700 (2650)	13 (33.0)	35.5 (90.2)
650 (2460)	15 (38.1)	33.5 (85.1)
600 (2271)	17.25 (43.8)	31.25 (79.4)
550 (2082)	19.5 (49.5)	29 (73.7)
500 (1893)	21.5 (54.6)	27 (68.6)
450 (1703)	23.25 (59.1)	25.25 (64.1)
400 (1514)	25.25 (64.1)	23.25 (59.1)
350 (1325)	27 (68.6)	21.5 (54.6)
300 (1136)	29 (73.7)	19.5 (49.5)
250 (946)	31 (78.7)	17.5 (44.5)
200 (757)	33.25 (84.5)	15.25 (38.7)
150 (568)	35.75 (90.8)	12.75 (32.4)
100 (379)	38.75 (98.4)	9.75 (24.8)
50 (189)	42.5 (108.)	6 (15.2)

LOADING PROCEDURE

⚠ 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 the slurry pump disengaged (turned off), the hydraulic system turned off and the agitator control lever in the NEUTRAL position, start the engine and allow it to warm up for 3 to 5 minutes (see STARTING PROCEDURE).
2. After the engine has warmed up, turn on the hydraulics system by flipping the hydraulics switch [the blue icon **( )**] to the **ON (⏻)** position (all the way up). The switch will automatically center itself (which is the ON position). This will allow the agitators to work when the operator moves the control lever.
3. 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 lever 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 transfer 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.

4. 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.
   B. Aim discharge hose or boom into an open area away from any persons, obstructions, or high voltage power lines.
   C. Open discharge and/or remote valve and close recirculation valve.
   D. With the engine at low idle, turn on the slurry pump by flipping the pump toggle switch [the orange icon **( )**] to the **ON (⏻)** position (all the way up). The switch will automatically center itself, which is the ON position.
   E. Increase engine speed to 1/2 to 3/4 of full throttle.
   F. When discharge stream is clear, open recirculation valve and close discharge and/or remote valve. After recirculation stream is clear, disengage (turn off) the slurry pump.
   G. Replace coupler gasket in the remote valve coupler.
5. Continue filling tank with water.
6. Increase engine speed to full RPM.

LOADING PROCEDURE (CONTINUED)

7. Start loading dry material, loading the lightest material first. Agitator control should be in full REVERSE for mixing.
    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.
    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.

⚠ DANGER ***Keep hands and arms away from tank interior and agitator. Failure to comply WILL result in serious personal injury or death.***

⚠ WARNING ***Hydraulic system will overheat if agitator shaft is jammed for an extended period. This will damage hydraulic oil and system components. Failure to comply could result in death or serious injury. Failure to comply could also result in product or property damage.***

8. 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.
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: Always discharge the material with the agitator control in the FORWARD position.

10. Close hatch lid on slurry tank.

    NOTE: The slurry should not be recirculated for more than 15 minutes prior to discharge to reduce wear and keep seed from swelling.

    NOTE: If foaming occurs, reduce agitator speed.

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

1. With the slurry pump disengaged (turned off), agitator control in the NEUTRAL position and hydraulic system off, start engine and allow it to warm up. See STARTING PROCEDURE.
2. After the engine has warmed up, turn on the hydraulics system by flipping the hydraulics switch [the blue icon **( )**] to the **ON (⏻)** position (all the way up). The switch will automatically center itself (which is the ON position). This will allow the agitators to work when the operator moves the control lever.
3. 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 transferpump. 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, e.g. 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.
4. 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.

   B. Aim discharge hose or boom into an open area away from any persons, obstructions, or high voltage power lines.

   C. Open discharge and/or remote valves and close recirculation valve.

   D. With the engine at low idle, turn on the slurry pump by flipping the pump toggle switch [the orange icon **( )**] to the **ON (⏻)** position (all the way up). The switch will automatically center itself, which is the ON position.

   E. Increase engine speed to 1/2 to 3/4 of full throttle.

   F. When discharge stream is clear, open recirculation valve and close discharge and/or remote valve. After recirculation stream is clear, disengage (turn off) slurry pump.

   G. Replace coupler gasket in the remote valve coupler.
5. Continue filling tank with water.
6. Increase engine speed to full RPM.

LOADING AND MIXING BFM, FGM, SMM AND OTHER HIGHLY VISCOUS SLURRIES (CONTINUED)

7. 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.

8. 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.
9. 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.
10. 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. Operators should familiarize themselves with the area to be seeded and develop a plan to ensure uniform application.
2. Develop a plan for communication between the operator and the driver of the carrying or towing vehicle to signal for start, stop, turn, etc.
3. If using the boom, the operator must switch the slurry pump control toggle switch, located on the control box, to the PLATFORM position **(** **)**. This activates the foot pedal on the platform labeled clutch. Once the pedal is active, the operator can start and stop the slurry pump using the foot pedal. From this point, the application will be controlled by the use of the slurry pump, discharge assembly and engine throttle.
4. If the operator wants to use the hose reel, the operator must switch the slurry pump control toggle switch, located on the control box, to the GROUND position **(** **)**. This deactivates the platform foot pedal controls and allows the operator to control the starting and stoping of the slurry pump from the control box. If using the hose reel, the operator must open the recirculation valve before starting the slurry pump. From this point, application will be controlled by the use of the engine throttle and the remote valve.

DISCHARGE NOZZLE SELECTION

Nozzles are stored in the tool box. This HydroSeeder® is equipped with four nozzles – two 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 boom. When using the hose reel, these factors will vary according to the type and length of hose being used.

Nozzle	Distance (A)	Width (B)	Discharge Time
Large Long Distance	Up to 150 ft (46 m)	-	5.5 min
Small Long Distance	Up to 110 ft (34 m)	-	12 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

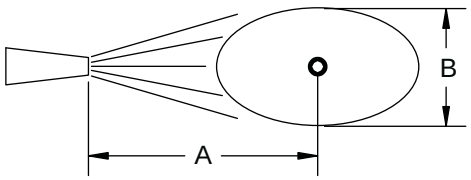


Figure 6 – Discharge Nozzle Spray Pattern

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.
2. When applying seed and fertilizer, elevate discharge nozzle no less than 10 degrees 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) slurry pump. Re-engage (turn on) slurry pump to resume application.
7. It may be necessary to slow the agitator speed as the tank empties to reduce foaming.

APPLICATION OF SLURRY (CONTINUED)

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 the hose to plug.

DISCHARGE THROUGH HOSE OR HOSE REEL WITH REMOTE VALVE

1. Open recirculation valve, close upper discharge valve, and close remote valve at the end of the hose.
2. With the engine in low idle, engage (turn on) the slurry pump. When stream is flowing freely through the recirculation line, open pump take-off valve (valve connected to the hose reel supply line).

⚠ CAUTION ***The high pressure on the hose can exert strong forces, causing the potential for the hose operator to lose control of the hose or their footing. If this happens, additional hose holding personnel will be required, especially when working 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) the slurry pump 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 section. If finished for the day, follow the clean up procedure described in DAILY CLEANING AND MAINTENANCE section 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

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

RELOADING PROCEDURE

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

CLEANING AND MAINTENANCE

DAILY

1. Cleaning the HydroSeeder®:
    A. Fill slurry tank to center of agitator shaft with clean water.
    B. With the engine running and the hydraulics system turned on, move agitator lever to full speed (forward or reverse) 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.
    D. With the engine at low idle and while aiming discharge hose or boom toward an open area, open discharge and/or remote valve and engage (turn on) the slurry pump. Allow to discharge until clear water is coming out.
    E. Increase the engine RPMs to increase the water flow.
    F. Open the recirculation valve and allow to run until the stream is clear.
    G. Disengage (turn off) the pump clutch, idle the engine, move discharge valve handles to OPEN position, move agitator handle to NEUTRAL, and turn off the engine.
    H. Remove drain plugs and allow tank to drain.
    I. In freezing weather, leave main tank drain plug out and remove pump drain plugs. Move all slurry valves to open position.
    J. Wash the outside of HydroSeeder® to remove any corrosive materials.
    K. Replace coupler gasket before reinstalling discharge nozzle onto remote valve coupler.

2. Lubricating the HydroSeeder® (see LUBRICATION AND FLUIDS section):

⚠ 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 slurry pump as needed.
    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.

        NOTE: Change engine oil and filter at least once annually even if the 100 hours have not been met.

    D. Lubricate swivels on discharge boom assembly.
    E. Check the hydraulic oil level in the hydraulic oil reservoir; maintain level with the sight gauge.

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 section. Additionally, lubricate the grease fittings on clutch / pump.
3. Inspect slurry tank for buildup of residue in suction area and clear if necessary.

CLEANING AND MAINTENANCE (CONTINUED)

SEASONAL AND WINTER STORAGE MAINTENANCE

1. Drain slurry tank of all water, prior to storage, and remove all drain plugs.
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 the slurry tank and touchup with paint. See numbers 2 and 3 in IV. Maintenance of the HYDROSEEDER® Safety Summary Section.
7. Lubricate all fittings.
8. Change hydraulic oil and filter. (400 hours)
9. Disconnect battery cables. In cold weather, remove battery and store it in a safe, warm place.
10. Add fuel stabilizer to fuel tank.

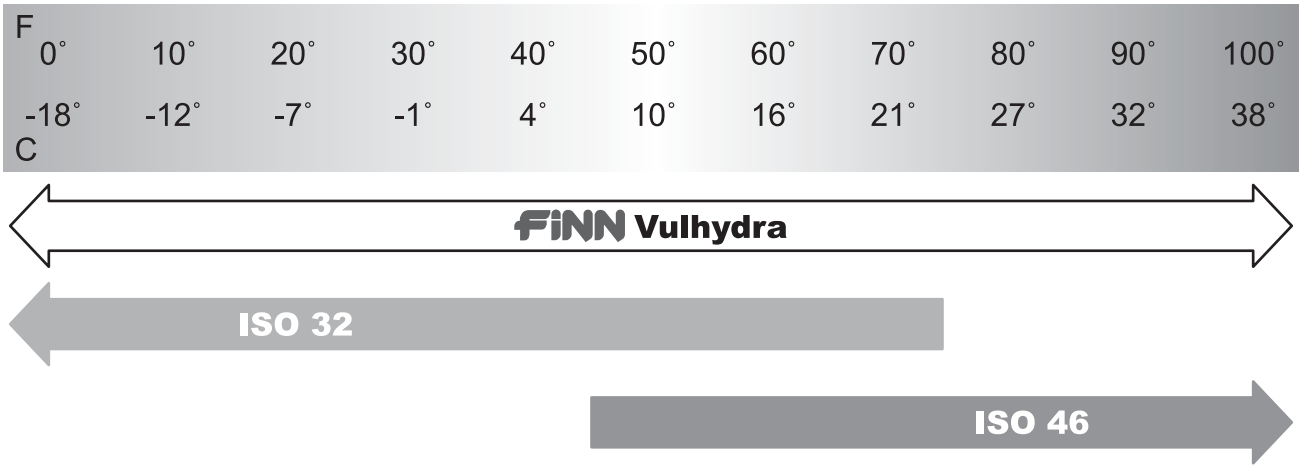
NOTE: Make sure to lubricate equipment after it has been removed from storage and before it is put back into operation. This will ensure that everything has a fresh coating of grease.

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 8.2 gallons (31 L) of hydraulic oil. The 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 5 absolute micron filter (FINN part number 023914). The hydraulic system relief is factory-set at 2,300 psi (15,858 kPa).

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

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



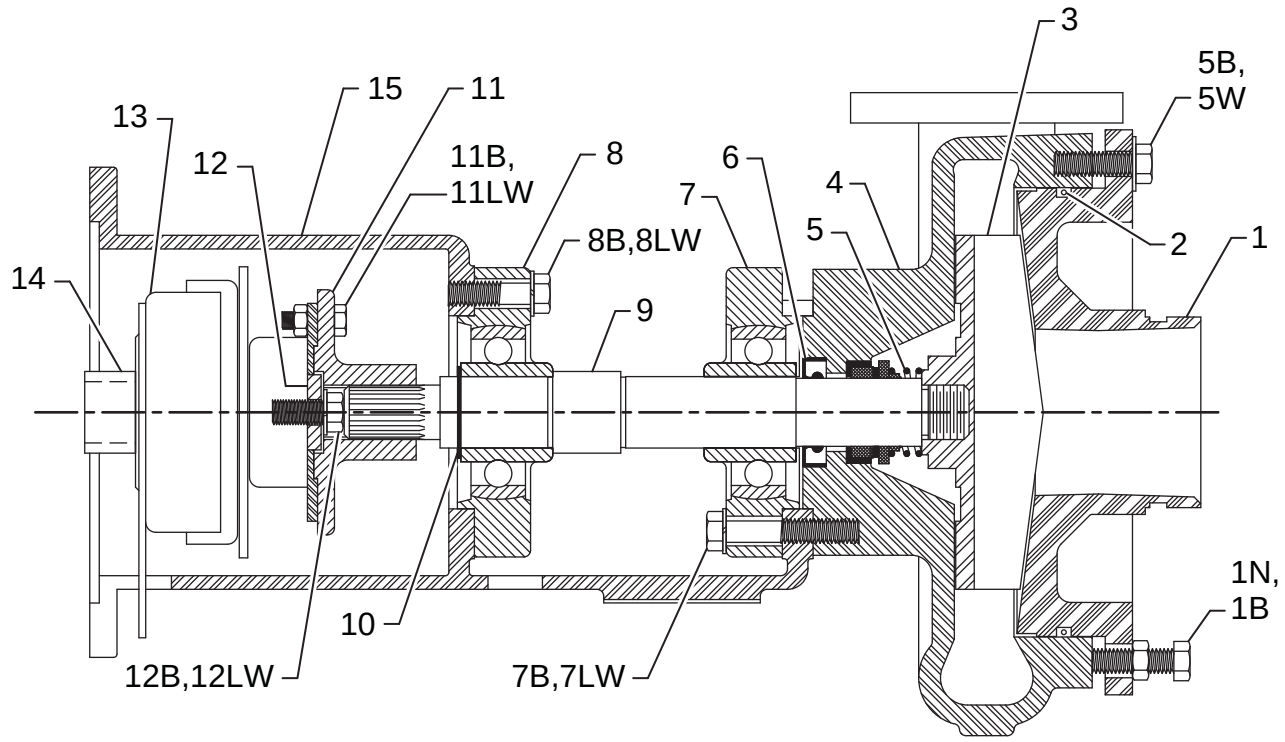


Figure 7 – Slurry Pump Assembly Components

SLURRY 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.

CLEANING AND MAINTENANCE (CONTINUED)

SLURRY PUMP MAINTENANCE

NOTE: Refer to Figure 7 for pump part callouts.

⚠ CAUTION ***Slurry 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 (4) 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 (4).
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).

CLEANING AND MAINTENANCE (CONTINUED)

PUMP MAINTENANCE (CONTINUED)

C. CLEANING (CONTINUED)

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. See Figure 8 for pipe wrench placement. Be careful not to unscrew the pump impeller too far before removing the impeller wrench.

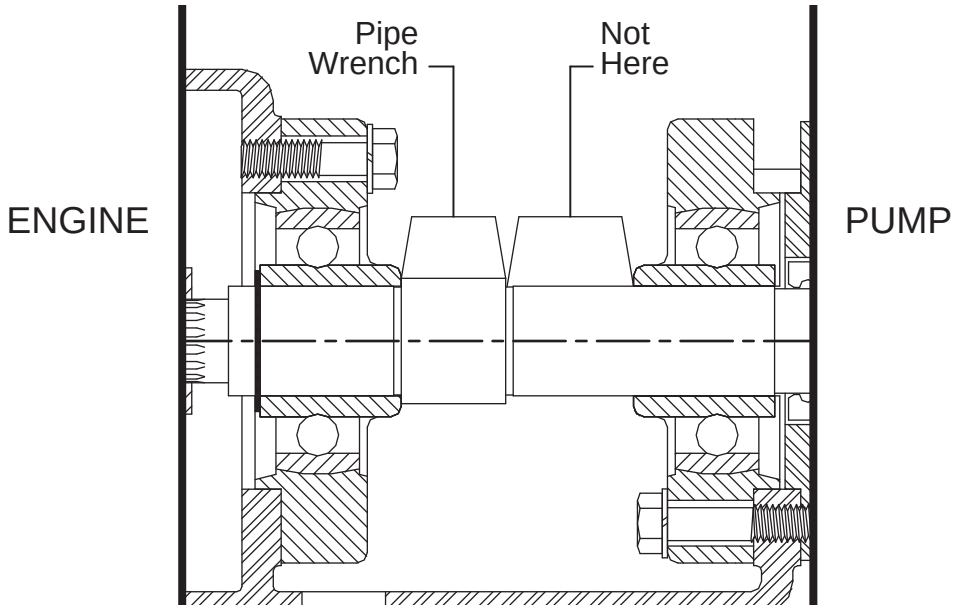


Figure 8 – Pump Impeller Removal

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.

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 occurences of an erratic slurry discharge, a drop in discharge pressure and a drop off in slurry discharge distance.

   Some solutions are:

   A. As slurry level drops in tank, slow the agitator speed.
   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:

⚠ DANGER ***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 airbound. To remedy this, see FOAMING OF SOLUTION AND LACK OF DISTANCE section of the Troubleshooting Chart. Plugging is caused by either foreign objects or dewatered fiber mulch. Plugging can occur in any of four places: the valve and recirculation nozzle, the discharge nozzle, the slurry 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) the slurry pump and shut down the engine.
      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 the nozzle to push any buildup out of the nozzle. Repeat procedure until nozzle is completely cleaned.

⚠ 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.***

2. Plugging or clogging (Continued):
   B. If the recirculation system is not working:
      1. Disengage (turn off) the slurry pump and stop engine.
      2. Remove clamps attaching recirculation valve assembly.
      3. Slide rubber seals back and remove valve assembly.
      4. Check valve assembly, recirculation nozzle and recirculation pipe going into tank. Clear any obstructions.
      5. Replace valve assembly and slide seals back into place. Lubricate outside of seals before clamping in place.
      6. Replace clamps.

   C. Obstruction in slurry 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 slurry pump:
      1. Disengage (turn off) the slurry pump and stop engine. Close suction shutoff valve.
      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 slurry pump.
      4. Remove elbow and inspect slurry pump inlet.

      NOTE: If no water comes out of the slurry pump or the suction line when the clamps are removed, the obstruction is in sump area.

      5. Reach into slurry 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 and reopen the suction shutoff valve.

   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 tank 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 the slurry pump 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 – seals worn	Replace seals and follow lube schedule.
	Bolts not torqued properly	Tighten uniformly to 25 lb–ft (34 N•m).
Pressure Pipe Clamps	Rubber seal cracked, pinched, torn or missing	Replace, always grease seal before clamping shut.
Suction Pipe Clamps	Rubber seal cracked, pinched, torn or missing	Replace, always grease seal before clamping shut.
Discharge Swivels (Platform and Loaded Units only)	Not greased often enough	Rebuild swivels with repair kit (part number 006969).
Pump Shaft	Pressure lubricator not serviced	Replace pump seal. Service automatic pressure lubricator daily.
Pump Suction Cover	O-ring cracked, pinched torn or missing	Replace O-ring; use grease when replacing.
Discharge Boom, Nozzle or Discharge Hose Camlock Fittings	Worn or no gasket	Replace gasket.
MACHINE JUMPS DURING OPERATION:		
Agitator	Agitator bent by heavy object falling on it	Straighten agitator shaft or shim so it runs true.
Bent Paddles	Loading mulch into tank before tank is half full / or loading frozen bails into the tank	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 gallons (378 L) or more	Sucking air through suction lines	Check all suction connections to ensure that rubber seals are in good shape. Grease seals before replacing clamps.
	Air entrainment	See Troubleshooting section.
	Low engine RPM during operation (Below 3,600 RPM – No load)	See authorized engine dealer.
	Soft water	Slow the agitator.
	Too much agitation	Slow the agitator.
	Pump worn	Reset pump tolerance.
	Suction partially plugged	Clean out machine.
	Nozzle worn or plugged	Clean nozzles; replace if necessary
	Fertilizer	Change fertilizer type.

TROUBLESHOOTING YOUR HYDROSEEDER®

Problem	Probable Causes	Suggested Solutions
VALVE:		
Valve stuck	Frozen	Thaw out ice and lubricate; leave valves in OPEN position during cold weather 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.
	Incorrect loading procedure	Review Loading procedure.
	Improper operation by operator	Reinstruct your operator. Review Operator's Manual.
	Not opening discharge handles far enough	Valve should be fully open.
	Machine not being flushed out prior to reloading	See cleaning instrructions.
	Machine not being run at correct RPM during loading	Reinstruct your operator.
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 speed in reverse and disengage (turn off) the slurry 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 the slurry pump cover and clean interior.
	Impeller rusted to suction cover plate	Pull cover and remove rust.

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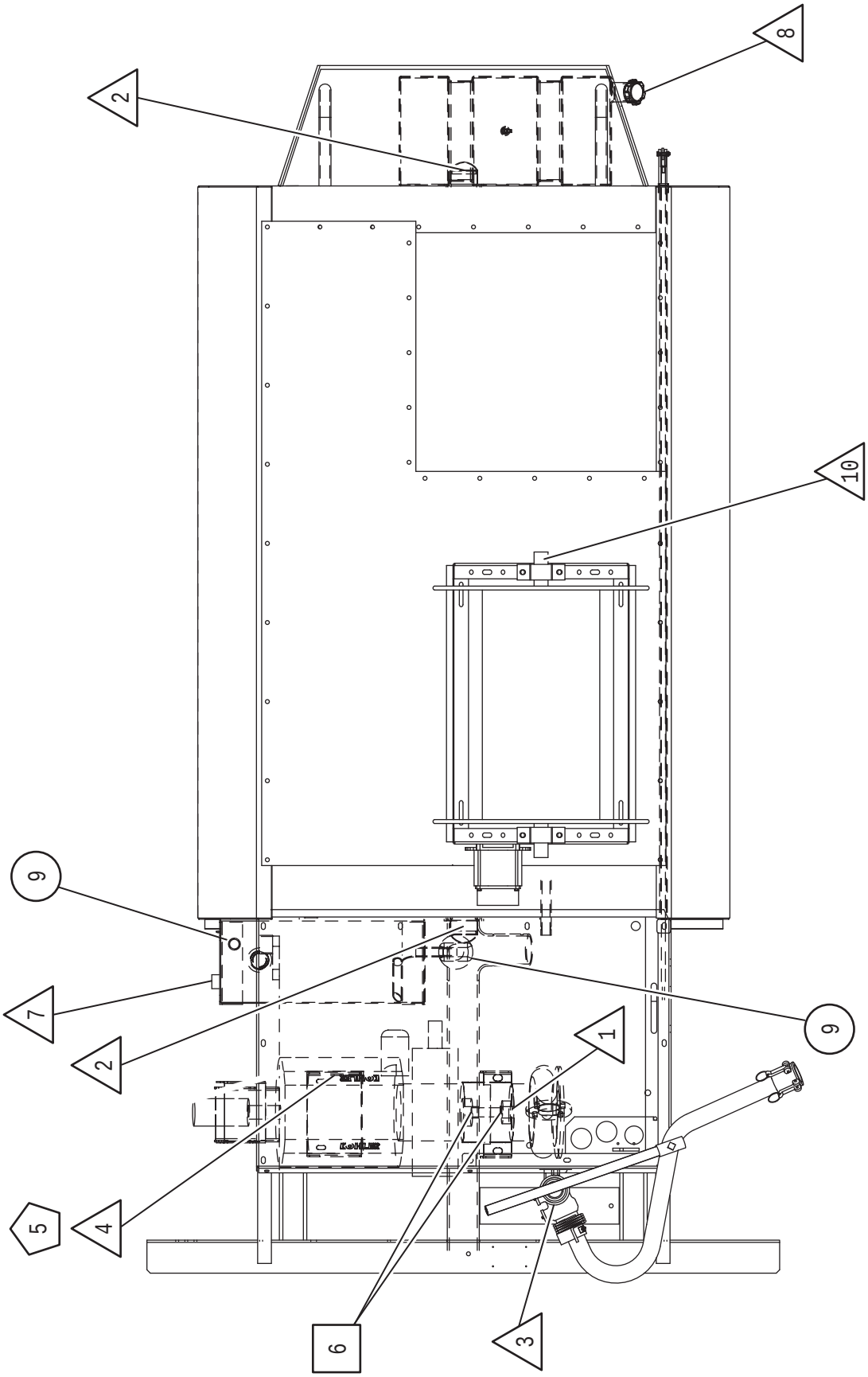


Figure 7 – Lubrication and Adjustment Points

LUBRICATION AND FLUIDS CHART (Reference Figure 7)

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	Daily	1
8	Check Fuel Tank	FU	Daily	1
9	Change Hydraulic Fluid and Filter	HO	Seasonally	1
10	Grease Hose Reel Swivel	CL	Daily	1

LUBRICANT OR FLUID USED

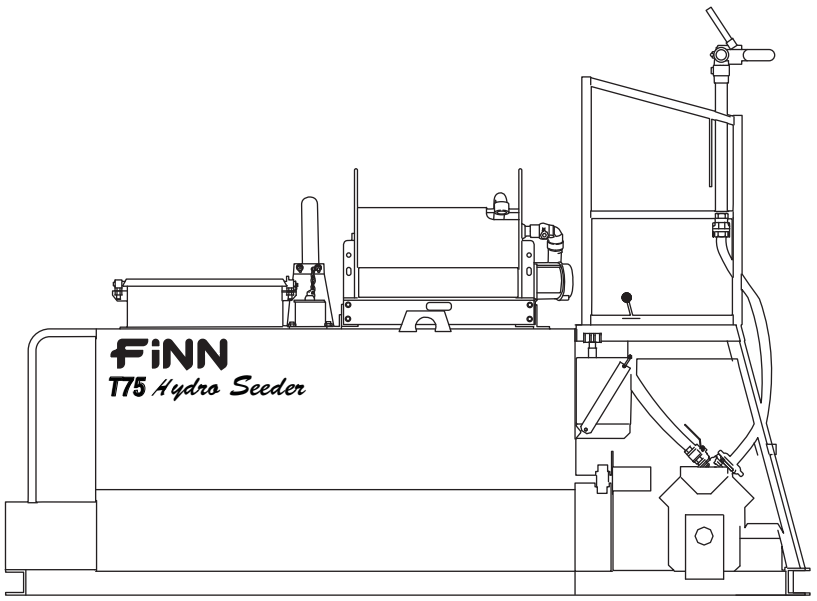
SL Bearing Lube (Sodium-Based)
CL Chassis Lubricant
MO Motor Oil (See Engine Manual Recommendations)
HO Hydraulic Oil, Finn Vulhydra or equivalent ISO grade oil (see Hydraulics System section for ISO grade oil selection)
FU Gasoline

TIME KEY

△ Daily (8 Hours)
□ Weekly (40 Hours)
○ Seasonally (500 Hours)
⬠ See Engine Manual

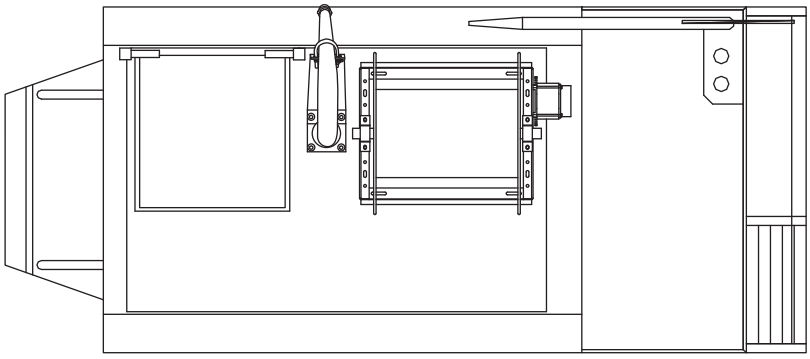
FLUID CAPACITIES

Gasoline - 8.2 gallons (31 L)
Engine Oil - 2 quarts (1.9 L)
Hydraulic Fluid - 8 gallons (30 L)



8 ft. 4 in.
(254 cm)

13 ft. 8 in. (417 cm)



5 ft. 9 in.
(175 cm)

FINN T75 SKID HYDROSEEDER® TECHNICAL SPECIFICATIONS

POWER	Kohler CH730, 23.5 hp (17.5 kW), 2 cylinder, OHV, air cooled gas
ENGINE SAFETY SYSTEM	Low oil pressure, high temperature shutoff
TANK SIZE	820 gallon (3,104 L) liquid capacity 700 gallon (2,650 L) working capacity
LOADS PER ACRE[1]	4.29
FUEL TANK CAPACITY	8.2 gallon (31 L)
PUMP	Centrifugal 3 in. x 1-1/2 in. (7.62 cm x 3.81 cm), 135 GPM @ 65 psi (511 liter pm @ 448kPa), with 3/4 in. (1.9 cm) solid clearance, adjustment
PUMP DRIVE	Direct drive through electrical clutch, pump drive is independent of agitator operation
AGITATION	Mechanical paddle agitation and liquid recirculation
AGITATOR DRIVE	Reversible, variable speed hydraulic motor drive (0 - 100 RPM) with control lever at front and rear of unit
DISCHARGE DISTANCE	Up to 150 ft. (46 m) from end of discharge tower
MATERIAL CAPACITY	2,333 lbs. (1,058 kg) granular solids, 350 lbs. (159 kg) fiber mulch
NOZZLES	(1) narrow fan, (1) wide fan, (2) long distance
EMPTY WEIGHT	2,450 lbs (1,111 kg)
WORKING WEIGHT*	9,200 lbs (4,173 kg)

[1] *Loads per acre based on an application rate of 1,500 lbs. mulch/acre.*

* *Working weights are approximate and do not include options or stored materials.*

FINN Corporation has a policy of continuous product improvement, and reserves the right to change design and specifications without notice.

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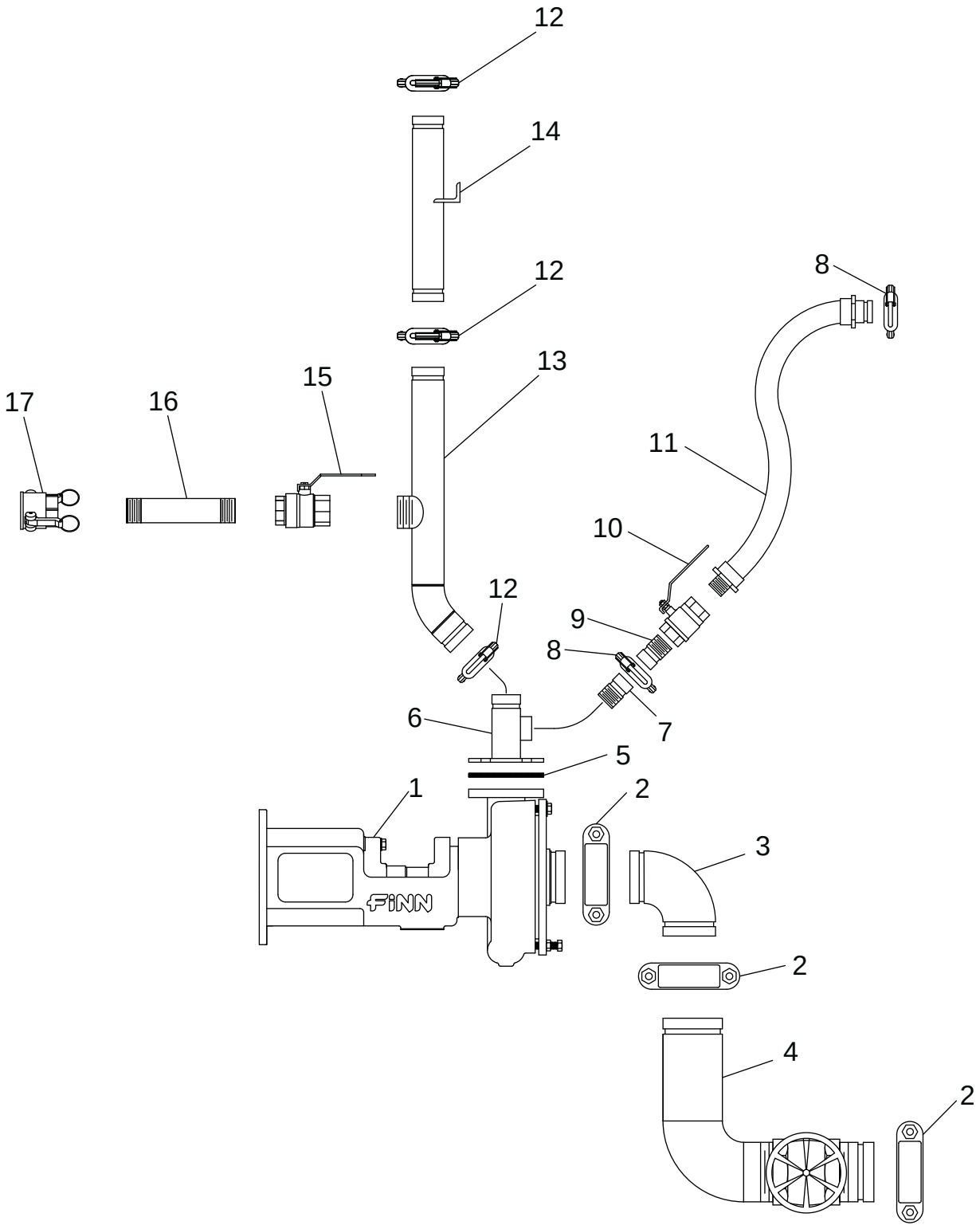
T75S HydroSeeder®

CE-Compliant

Parts Section

Model **MN**



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

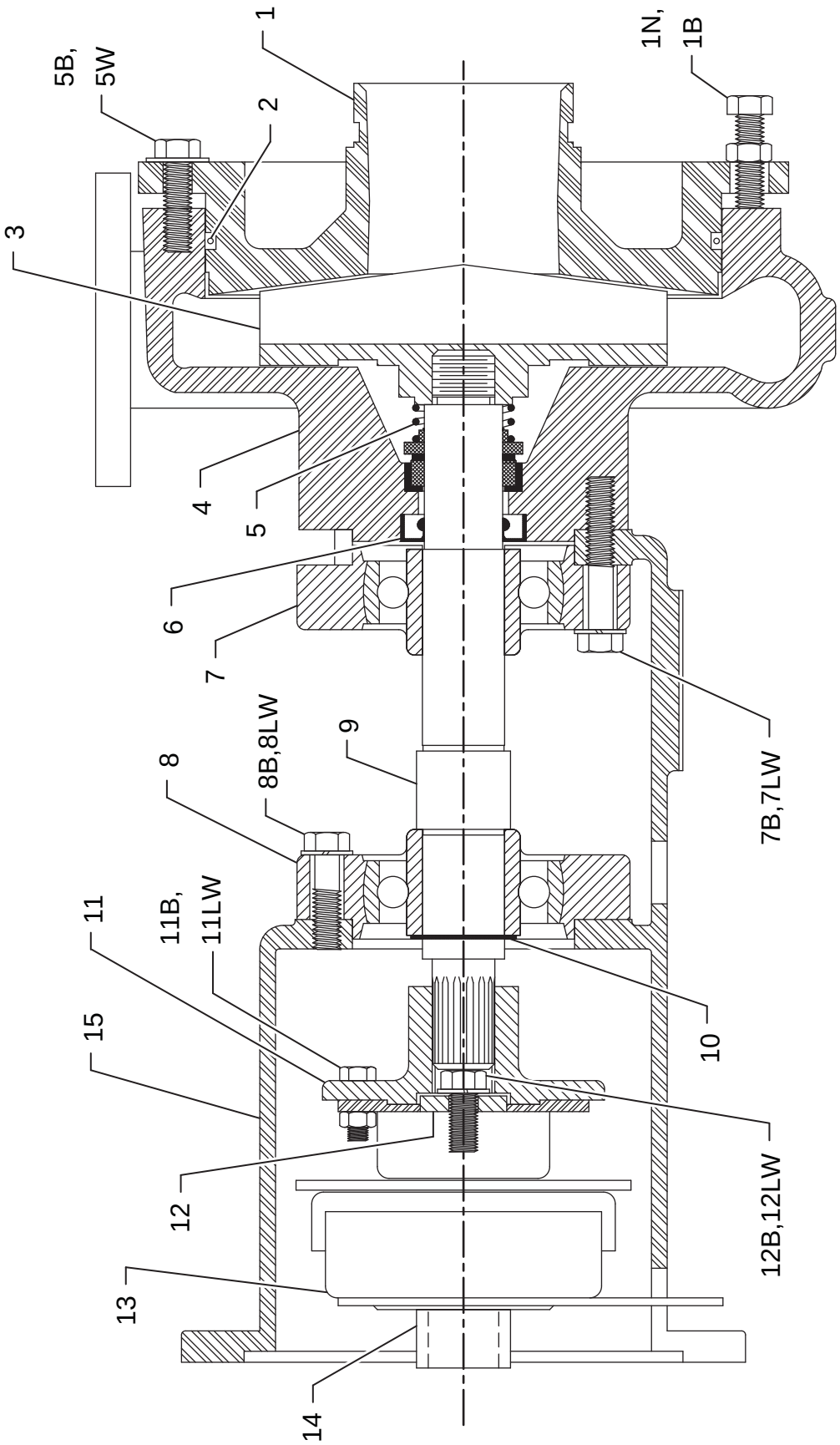
SUCTION, DISCHARGE AND RECIRCULATION PIPING

Ref. No.	Part Number	Description	No. Req'd
1	080713 *	Clump Assembly	1
2	080366	3 in. Pipe Clamp	3
	002439	3 in. Clamp Gasket	1 per
3	002868	90° Grooved Elbow	1
4	080732	Suction Line Valve Assembly	1
	004737	Suction Line Shutoff Valve	1 per
	080698	Suction Pipe Elbow Weldment	1 per
	080666-04	Short Suction Pipe Stub	1 per
5	008469	Discharge Flange Gasket	1
6	080718	Discharge Flange Pipe	1
7	005083-07	Recirculation Nozzle	1
8	005156	1 in. Pipe Clamp	2
	005183	1 in. Clamp Gasket	1 per
9	005083-08	Recirculation Nozzle	1
10	021559	1 in. Ball Valve	1
11	080650	Recirculation Hose	1
12	006250	2 in. Pipe Clamp	3
	006251	2 in. Clamp Gasket	1 per
13	080720	Intermediate Pipe	1
14	080810	Platform Pipe	1
15	007710	1-1/2 in. Ball Valve	1
16	003243	1-1/2 in. Aluminum Pipe Nipple	1
17	080377	1-1/2 in. Female Coupler	1
	006515	1-1/2 in. Coupler Gasket	1

KITS AND MARKERS

* When ordered: the Clump Assembly (Finn P/N: 080713) includes Pipe Clamps. [Quantity 2 (Part Number: 080366)] and a 90° Grooved Elbow [Quantity of 1 (Part Number: 002868)].

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

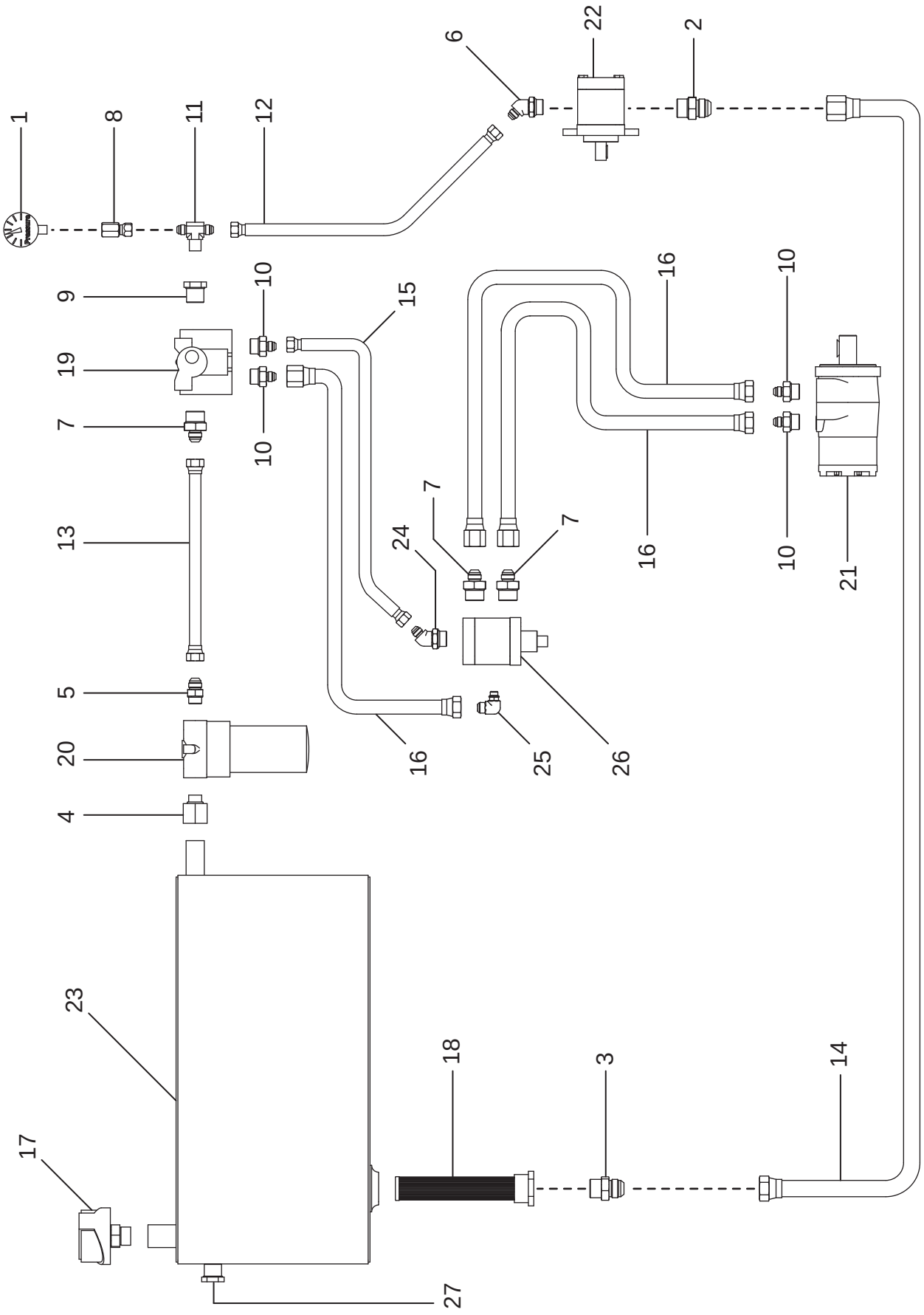


WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

CLUTCH/PUMP ASSEMBLY

Ref. No.	Kit Ref.	Part Number	Description	No. Req'd
1	▲	080489	Pump Suction Cover	1
1B	▲	0X0720	Suction Cover Bolt - 7/16 - 14 x 1-1/2 in.	4
1N	▲	000Y07	Suction Cover Nut - 7/16 - 14	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 - 7/16 - 14 x 1-1/2 in.	8
5W	▲	000W07	Suction Cover Washer - 7/16 in.	8
6	▲	080493	Radial Lip Seal	1
7	▲	080498	Pump Casing Bearing	1
7B	▲	0X0740	Bearing Bolt - 7/16 - 14 x 2-1/2 in.	4
7LW	▲	00W07L	Bearing Lockwasher - 7/16 in.	4
8	▲	080498	Frame Bearing	1
8B	▲	0X0728	Bearing Bolt - 7/16 - 14 x 1-3/4 in.	4
8LW	▲	00W07L	Bearing Lockwasher - 7/16 in.	4
9	▲	080491	Pump Shaft	1
10	▲	080497	External Retaining Ring	1
11		080490	Drive Hub	1
11B		0X0516	Drive Hub Bolt - 5/16 - 18 x 1 in.	2
11LN		00Y05L	Drive Hub Locknut - 5/16	2
12		080590-07	Clump Washer	1
12B		080741	Locking Bolt - 7/16 - 20 x 1-1/4 in. (with Thread Locker)	1
12LW		00W07L	Retainer Lockwasher - 7/16 in.	1
13		035084	Electric Clutch	1
14		080590-08	Clump Spacer	1
15	▲	080486	Pump Frame	1
NOT SHOWN				
	▲	080492	Clump Nameplate	1
	▲	160082	45° Elbow	1
	▲	160234	Pipe Plug	1
		160388	3/8 in. x 2 in. Nipple	1
		160160	3/8 in. Coupling	1
		002383	Pressure Lubricator	1
KITS AND MARKERS				
▲		080713	Clump Assembly	

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



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

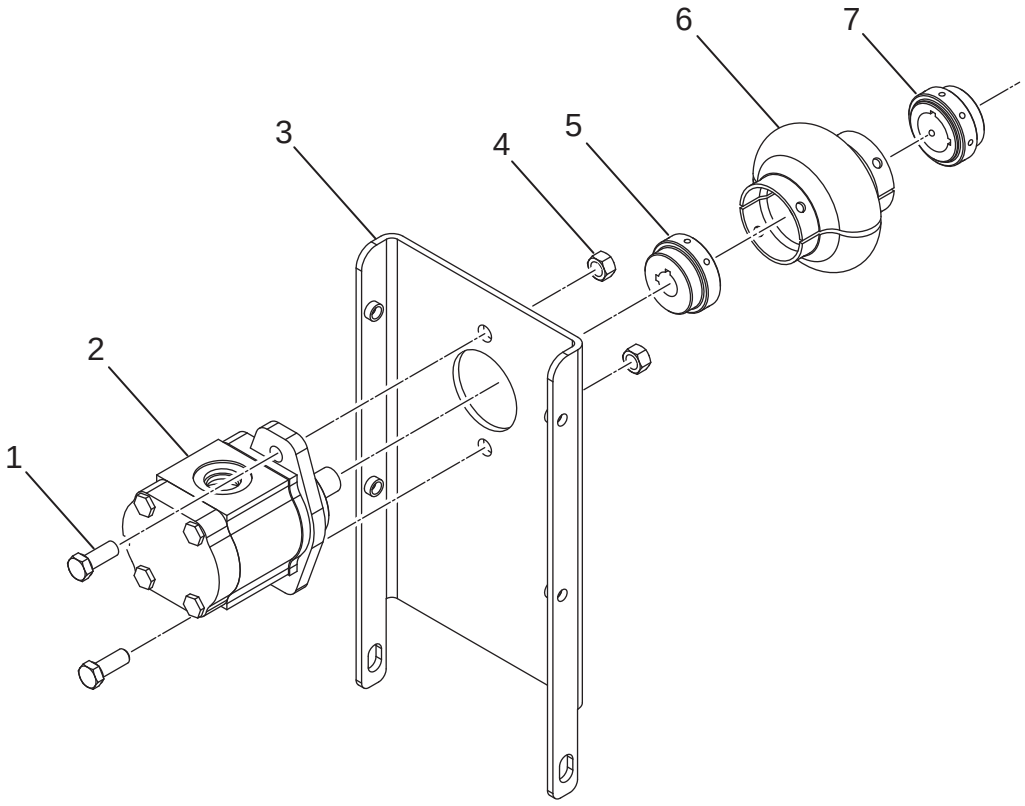
HYDRAULIC SYSTEM

Ref. No.	Kit Ref.	Part Number	Description	No. Req'd
1	▲	012044	Pressure Gauge	1
2	▲	012087	#12 MSAE - #12 MJIC Adapter	1
3	▲	023616	3/4 in. MNPT - #12 MJIC Adapter	1
4	▲	023911	3/4 in. FNPT - #8 MSAE Adapter	1
5	▲	055232	#8 MSAE - #8 MJIC Adapter	1
6	▲	053019	#10 MSAE - #6 MJIC 45° Adapter Elbow	1
7	▲	055359	#12 MSAE - #8 MJIC Adapter	3
8	▲	075552	1/4 in. FNPT - #6 FJIC Swivel Adapter	1
9	▲	080789	#12 MSAE - 3/8 in. FNPT Reducer Adapter	1
10	▲	012086	#10 MSAE - #8 MJIC Adapter	4
11	▲	FW71872	#6 MJIC x #6 MJIC x 3/8 in. MNPT Branch Tee	1
12	▲	080578	3/8 in. Hydraulic Hose x 75 in.	1
13	▲	080683	1/2 in. Hydraulic Hose x 18 in.	1
14	▲	080684	3/4 in. Suction Hose x 35-1/2 in.	1
15	▲	080830-01	1/2 in. Hydraulic Hose x 17 in.	1
16	▲	080830-02	1/2 in. Hydraulic Hose x 21 in.	3
17		005793	Hydac Filler / Breather	1
18		004618	Hydraulic Suction Strainer	1
19		080743	Hydraulic Control Valve	1
		080591-02B	Control Valve Handle	1
		023470-01	Handle Bracket	1
		0SF311	Knob for Handle	1
		0SF312-01	Pivot Pin for Handle	1
20		023913	Filter Assembly	1
		023913IN	Filter Indicator	1
		023914	Filter Element	1
21		080482	Hydraulic Motor	1
22		080642	Hydraulic Pump	1
23		080680	Hydraulic Reservoir	1
24	▲	005933	#12 MSAE - #8 MJIC 45° Adapter Elbow	1
25	▲	005923	#12 MSAE - #8 MJIC 90° Adapter Elbow	1
26		085276	Dump Valve	1
		085276-01	Dump Valve Solenoid	1
27		080534	Hydraulic Sight Gauge	1

KITS AND MARKERS

▲	080830	Hydraulic Hoses and Fittings Kit

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

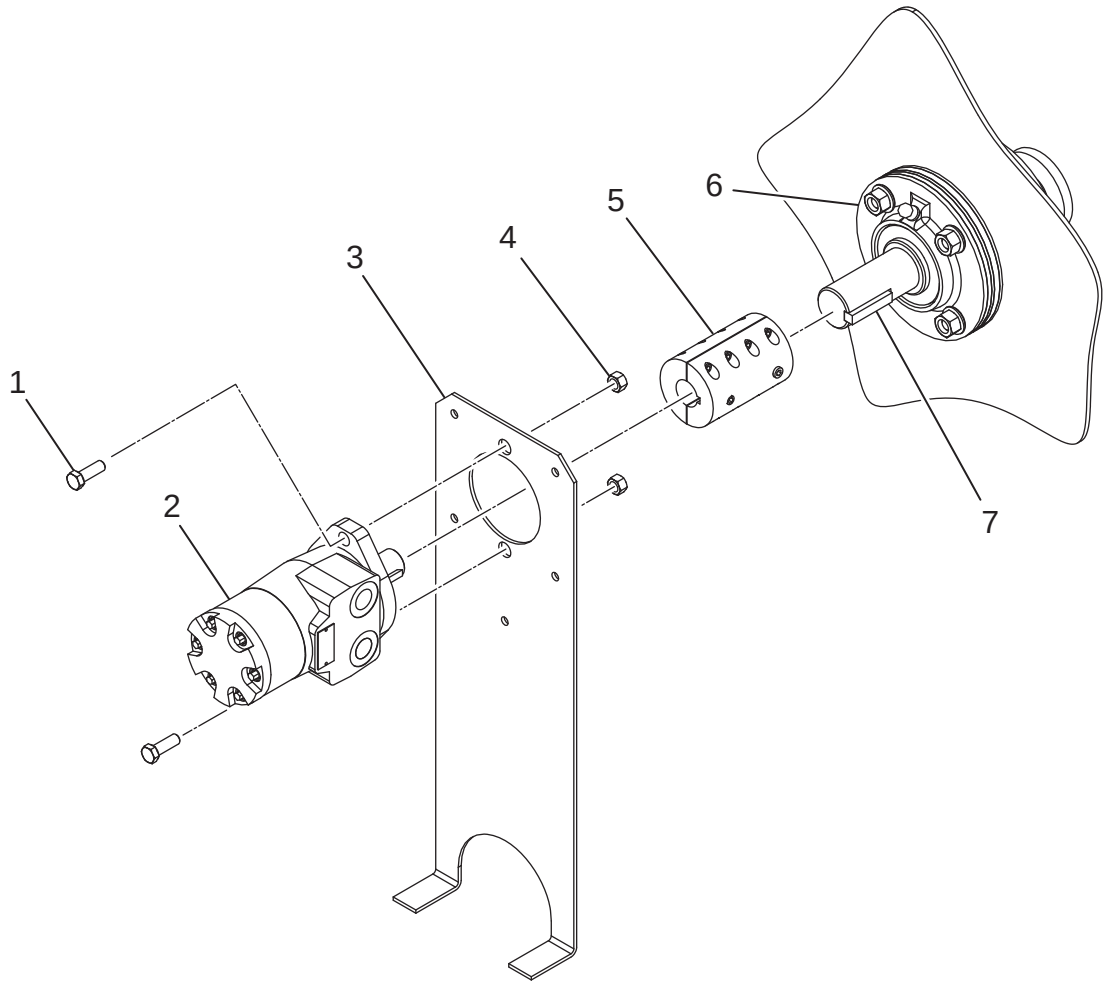


HYDRAULIC PUMP DRIVE ASSEMBLY

Ref. No.	Part Number	Description	No. Req'd
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 in. Hex Nut	2
5	080807	Coupling Half 5/8 in. Bore with 5/32 Keyway	1
6	080809	Coupling Sleeve	1
7	080808	Coupling Half 1 in. Bore	1
NOT SHOWN			
	F60-0022-03	Hydraulic Pump Coupling Guard	1
KITS AND MARKERS			

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

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



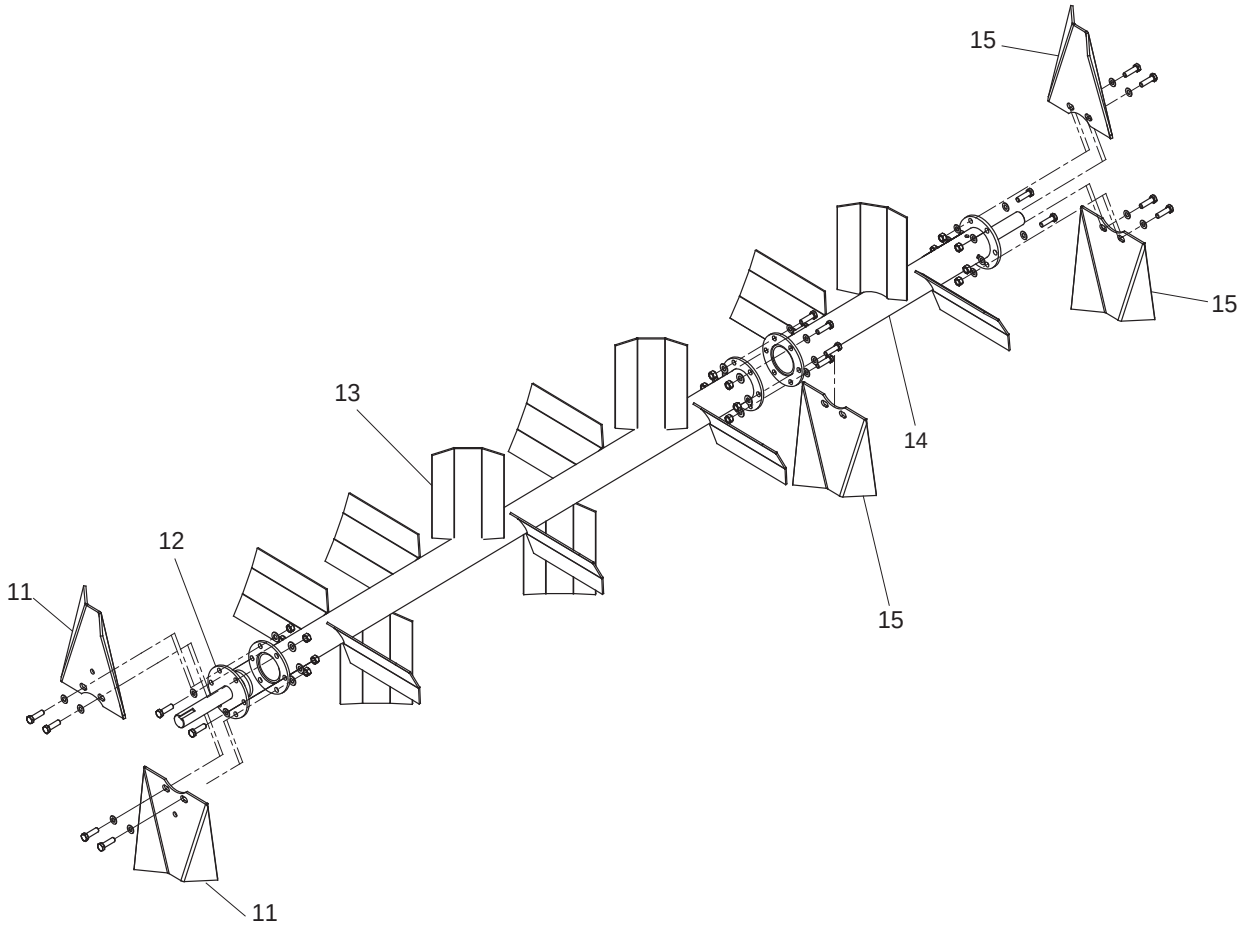
HYDRAULIC AGITATOR DRIVE ASSEMBLY

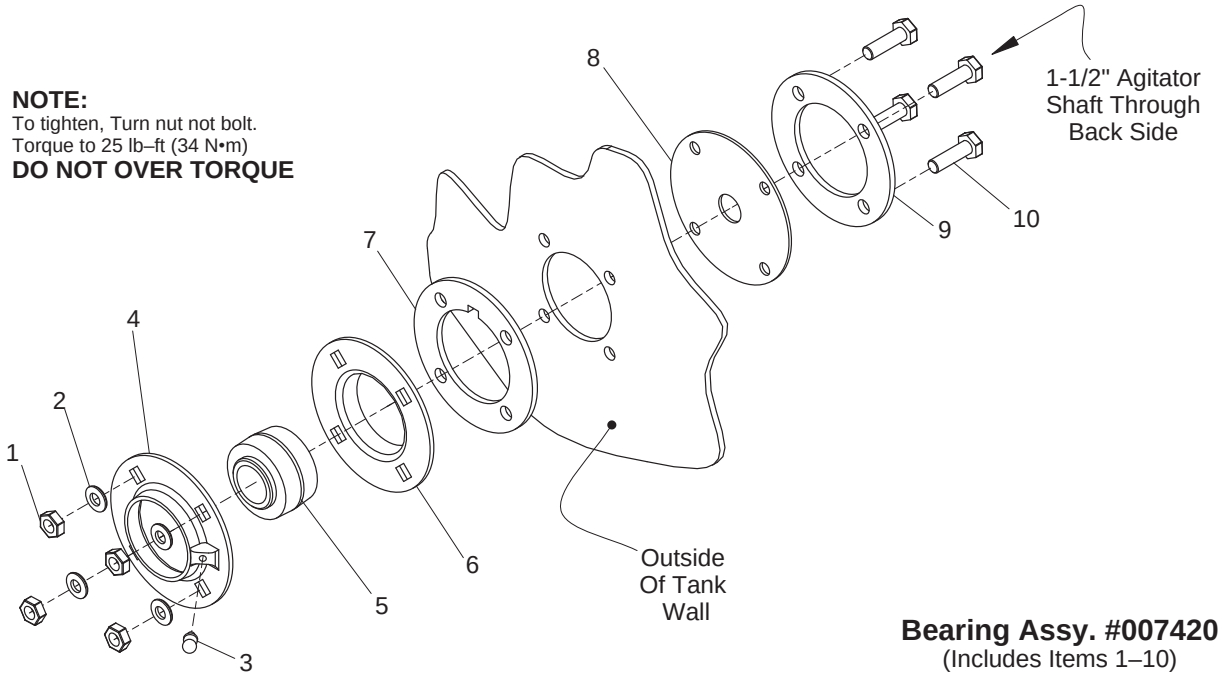
Ref. No.	Part Number	Description	No. Req'd
1	●	1/2 X 1-1/2 in. Lg. Bolt	2
2	080482	Hydraulic Motor	1
3	F60-0016-01	Torque Arrestor Plate	1
4	●	1/2 Hex Nut	2
5	080523	Rigid Coupling Assembly	1
6	007420	Bearing and Seal Assembly *(See Bearing/Agitator Assembly)*	2
7	005081-02	Agitator Drive Stub Shaft with 3/8 Keyway	1
NOT SHOWN			
	F60-0022-02	Agitator Coupling Guard	1
	080583	Torque Arrestor Pad	1
	080582	Worm Gear Clamp	2

KITS AND MARKERS

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

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





Bearing Assy. #007420
(Includes Items 1–10)

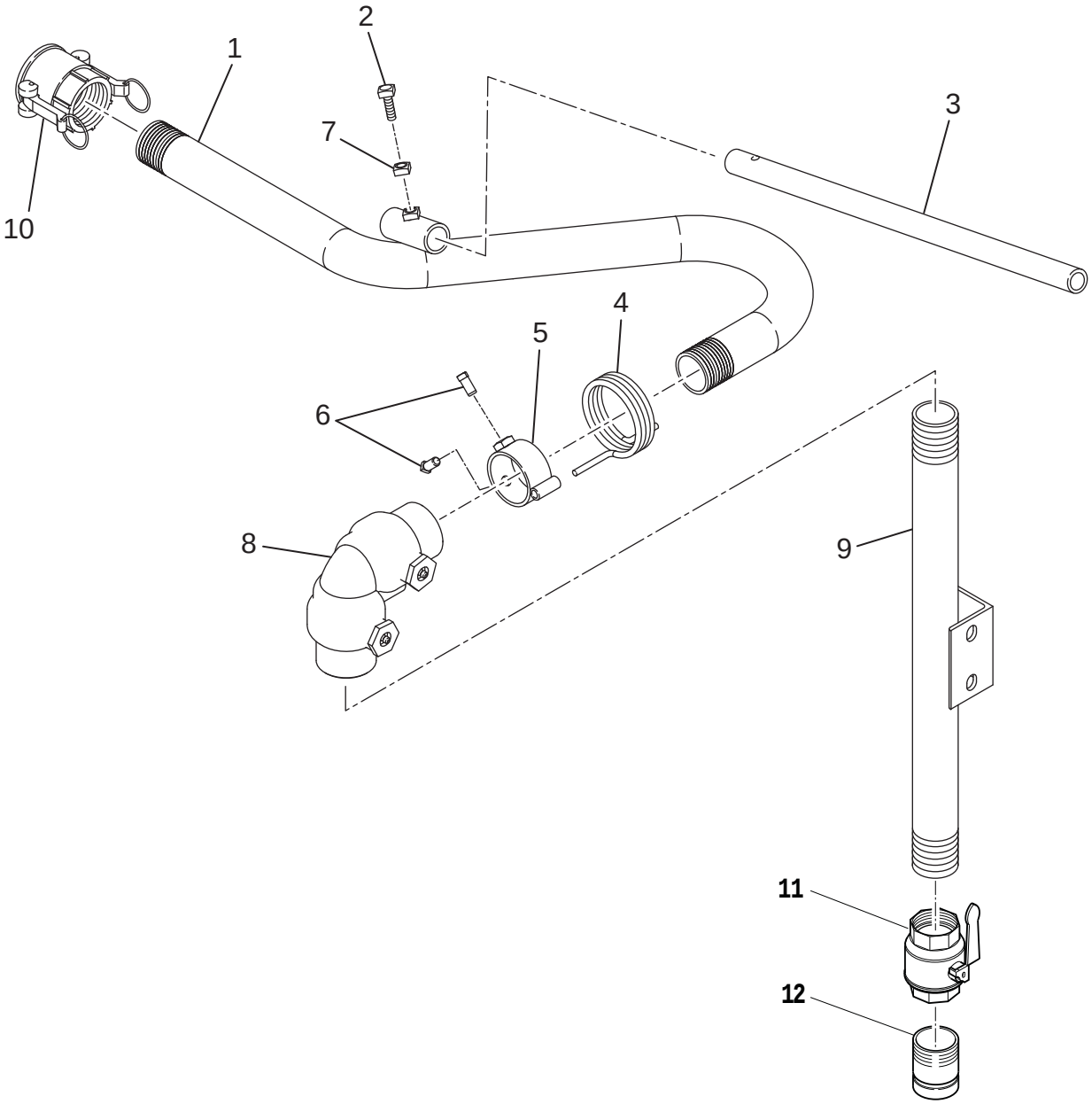
WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

BEARING/AGITATOR ASSEMBLY

Ref. No.	Kit Ref.	Part Number	Description	No. Req'd
1	▲	Y08SS	Agitator Nut	4 per
2	▲	012605	Bevel Sealing Washer	4 per
3	▲	007705	Grease Fitting	1 per
4	▲	007211	Flangette with Lube Coupling	1 per
	▲	008154	Male to Female Adapter	1
5	▲	003022	Bearing	1 per
6	▲	007212	Flangette with Groove	1 per
7	▲	006975	Agitator Bearing Gasket	1 per
8	▲	007416	Agitator Rotary Gasket	1 per
9	▲	007417	Clamping Ring	1 per
10	▲	X0828SS	Agitator Bolt	4 per*
11		F60-0011-01	Rear Bolt-On Paddle with I.D. Hole	2
12		005081-02	Agitator Drive Stub Shaft	1
13		080661	Main Agitator Section with Paddles	1
14		080723	Agitator Extension	1
15		F60-0011-02	Bolt-On Paddle without I.D. Hole	3
KITS AND MARKERS				
	▲	007420	Bearing and Seal Assembly (Includes Items 1 – 10)	

***** ***NOTE:*** *On the T60 unit, the quantity of part # X0828SS is a total of 8 per unit, except for the T60 Skid, 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 SERIAL NUMBER OF MACHINE

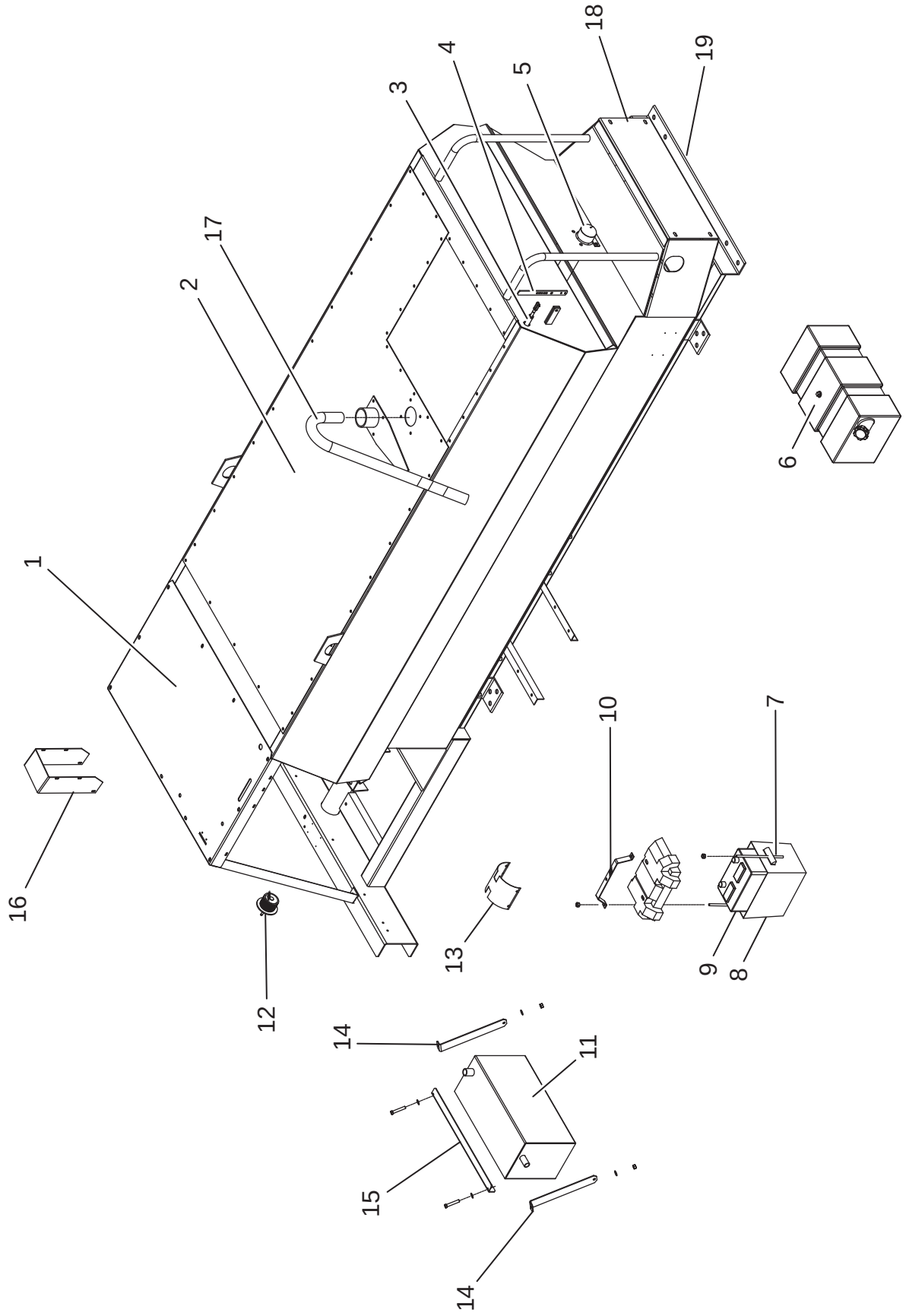


WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

DISCHARGE BOOM

Ref. No.	Kit Ref.	Part Number	Description	No. Req'd
1	▲	005734	Boom Weldment	1
2	▲	Z0632SCP	Square Head Set Screw - 3/8 - 16 x 2 in. Long	1
3	▲	080559-01	Boom Handle	1
4	▲	007286	Discharge Balance Torsion Spring	1
5	▲	005528-03	Adjusting Collar	1
6	▲	Z0616SCP	3/8 - 16 x 1 in. Long Square Head Set Screw	2
7	▲	00Y06J	3/8 - 16 Jam Nut	1
8	▲●	007288	2 in. x 90° Swivel Joint	1
9	▲	080734	Boom Stand Pipe	1
10	▲	006102	2 in. Female Nyglass Coupler	1
		006514	2 in. Coupler Gasket	1
11	▲	012287	2 in. Ball Valve	1
12	▲	006483	Adapter Pipe	1
NOT SHOWN				
		005931	Boom Handle Protective Cap	1
		005528-02	Boom Hold Down	1
		031245	Hold Down Pin	1
KITS AND MARKERS				
	▲	080716	Discharge Boom Assembly	
	●	006969	Swivel Repair Kit (2 Required)	

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



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

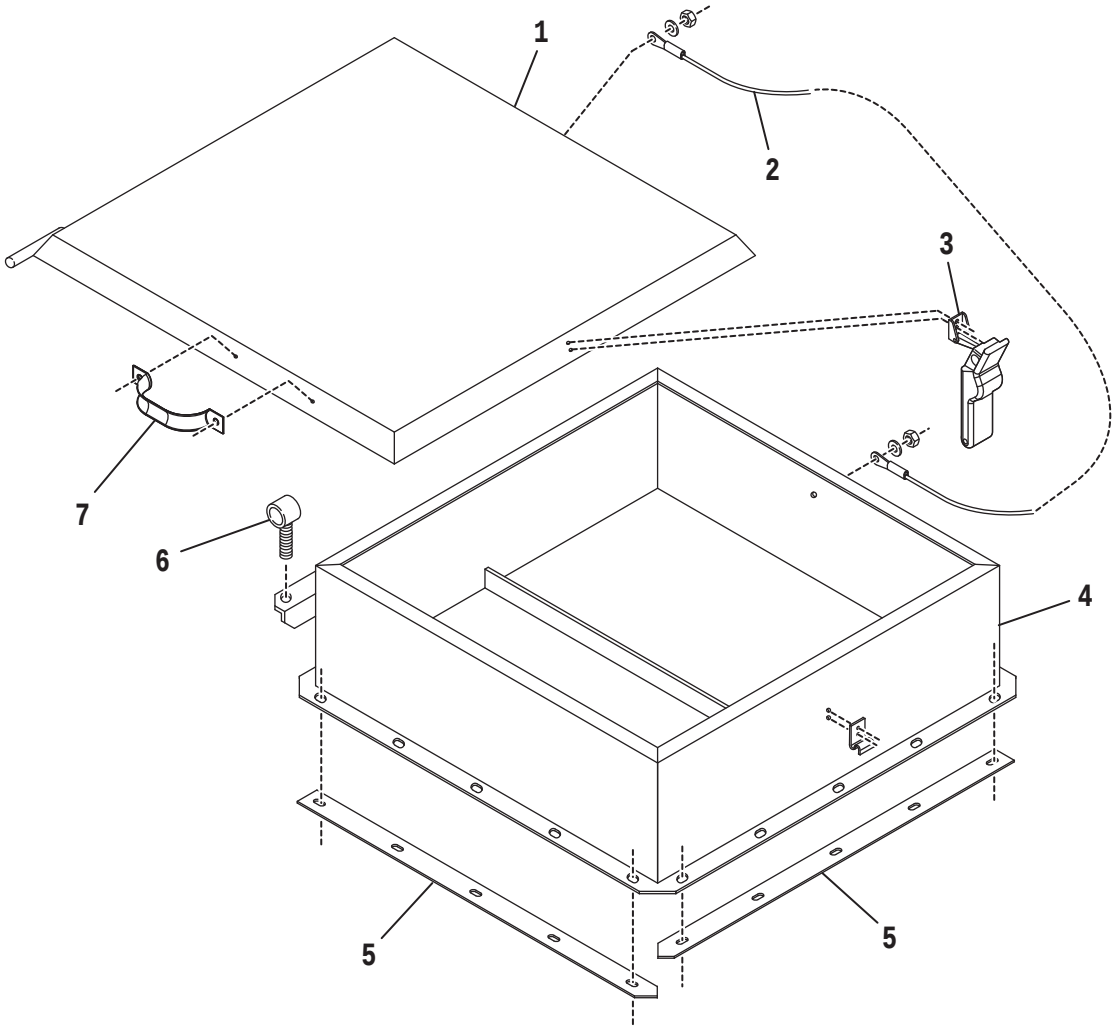
COMMON LOOSE PARTS AND ENGINE

Ref. No.	Part Number	Description	No. Req'd
1	F60-0005	Platform	1
	F75-0013	Right Support Angle	1
	080590-01	Platform Support Angle	1
	080766	Ladder	1
2	F75-0002	Tank Top	1
	190044	Tank Top Gasket	20 ft.
3	080706	Agitator Control Rod	1
	022801	Clevis and Pin	1
	080705	Agitator Control Rod Conduit	1
	005178	O-ring	1
4	F60-0020	Control Handle	1
	022202	Black Handle Grip	1
5	005399	Agitator Shaft Toe Guard	1
6	080826	Fuel Tank	1
	080827	Fuel Tank Cap/Gauge	1
	035123G	Pickup Tube Grommet	1
	035142-V	Rollover Vent/Grommet	1
7	005495-22	Battery Hold-Down Bolt	2
8	080223	Battery Box	1
9	002256-12	12V Battery	1
10	005559-03	Battery Tie-Down Strap	1
11	080680	Hydraulic Reservoir	1
12	080626	Tank Drain Plug	1
13	F60-0022-01	Clump Shaft Guard	1
14	F60-0024	Hydraulic Reservoir End Strap	2
15	F60-0023	Hydraulic Reservoir Tie-Down	1
16	F60-0022-03	Hydraulic Pump Coupling Guard	1
17	080731	Fill Port Weldment	1
	005280	Fill Port Plug	1
18	080602-02	Front Tube End Plate	1
19	080606-10	Skid Frame Weldment	1

Continued on next page

COMMON LOOSE PARTS AND ENGINE (CONTINUED)

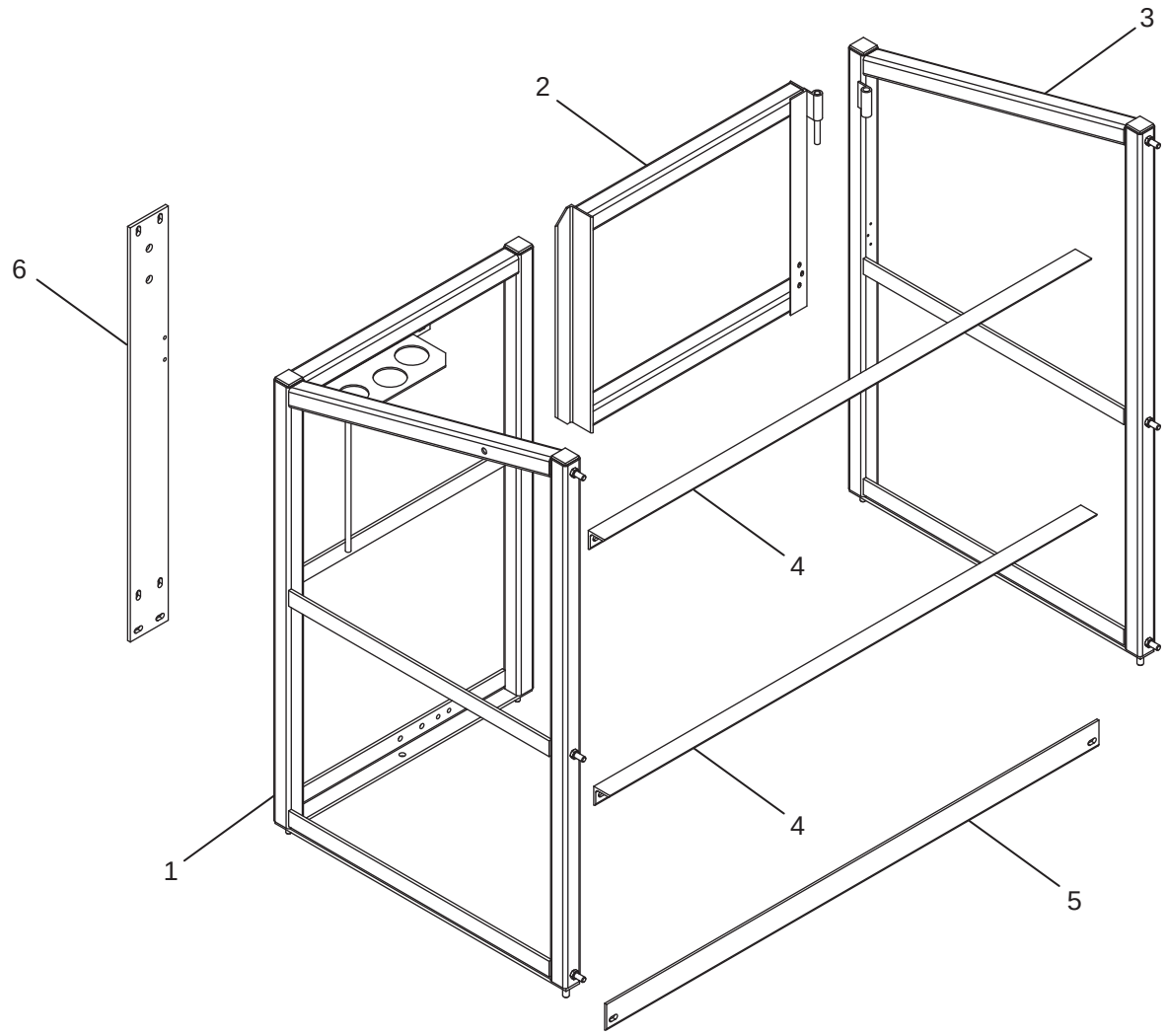
Ref. No.	Part Number	Description	No. Req'd
NOT SHOWN			
	052160	Tool Box	1
	080566	Throttle Control Cable Assembly	1
	080567	Choke Cable Assembly	1
	080483	Kohler 23.5 HP Engine	1
	KL1205001	Oil Filter	1
	KL2488303-S1	Air Filter	1
	KL2478605	Muffler	1
	080105	Fuel Filter	1
	KL24-755-114-S	Side Shield Kit	1
	KL24-755-80-S	Muffler Guard Kit	1
	080657-02	Tail Pipe Support	1
	080657-04	Exhaust Pipe Weldment	1
	F60-0029	Control Box Mount Plate	1
	F60-0030	CE Starter Cover	1
	F60-0035	Hose Reel Button Box Mount	1



HATCH ASSEMBLY

Ref. No.	Part Number	Description	No. Req'd
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	1
NOT SHOWN			
	190044	Foam Gasket	12.5 (Ft)

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



GUARD RAILS

Ref. No.	Part Number	Description	No. Req'd
1	080762	Right Guard Rail	1
2	080818	Gate	1
3	080817	Left Guard Rail	1
4	080536-18	Cross Rail	2
5	080765	CE Front Toe Rail	1
6	F75-0008	Boom Support Plate	1
NOT SHOWN			
	080766	Ladder	1
	080773	CE Foot Pedal Guard	1
	080767	CE Ladder Hand Rail	2
	013122	Gate Spring	1

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

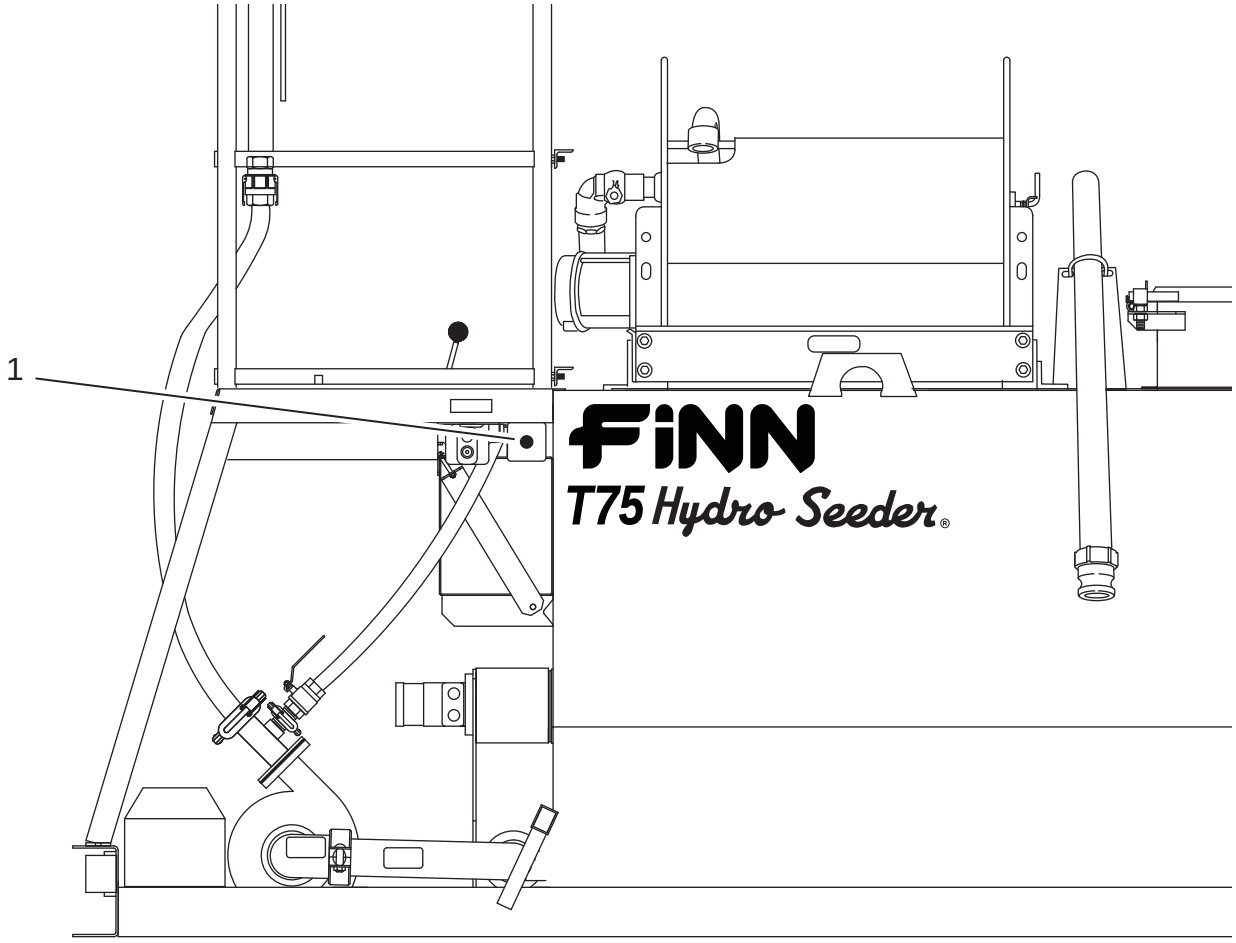
TOOL KIT

Part Number	Description	No. Required
410101-01	T75 Tool Kit	1
000698	Automatic Pressure Lubricator Grease (1 lb Can)	1
005220	Impeller Wrench	1
080273	Hose Reel Long Distance Nozzle Assembly	1
080131	Long Distance Nozzle	1
080260	Male Adapter	1
160749	Reducer Bushing	1
080394	Hose Reel Wide Fan Nozzle Assembly	1
006604	Wide Fan Nozzle	1
080260	Male Adapter	1
160750	Reducer Bushing	1
080395	Hose Reel Narrow Fan Nozzle Assembly	1
006605	Narrow Fan Nozzle	1
080260	Male Adapter	1
160750	Reducer Bushing	1
008187	Boom Long Distance Nozzle	1
006632	Boom Long Distance Nozzle Assembly	1
001042	Long Distance Nozzle	1
006096	Male Adapter	1
160763	Reducer Bushing	1
160309	Close Nipple	1
006619	Boom Wide Fan Nozzle Assembly	1
006493	Wide Fan Nozzle	1
006096	Male Adapter	1
160762	Reducer Bushing	1
005603	Boom Narrow Fan Nozzle Assembly	1
012117	Narrow Fan Nozzle	1
006096	Male Adapter	1
160762	Reducer Bushing	1
006515	Coupler Gasket - 1-1/2 in.	1
006514	Coupler Gasket - 2 in.	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
	HydroSeeder® Parts/Operator's Manual	1

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

SEAL REPAIR KITS

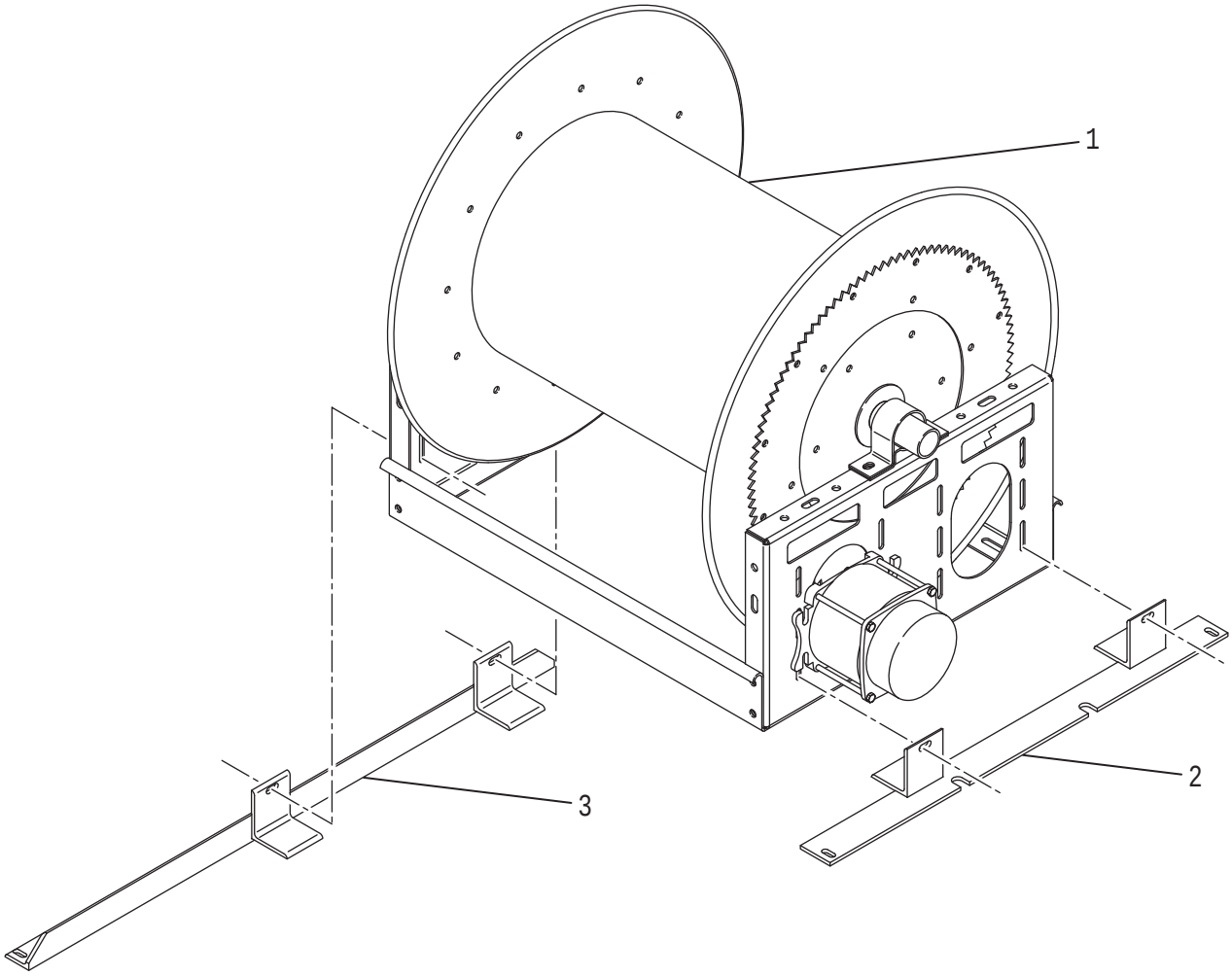
Part Number	Description	No. Required
023120	Seal Kit for Hydraulic Valve #080743	1
080615	Seal Kit for Hydraulic Motor #080482	1
080616	Seal Kit for Hydraulic Pump #080642	1
080183	Boom Swivel Seal Kit	2
007420	Agitator Bearing and Seal Kit	2
008190	Pressure Lubricator Repair Kit #002383	1



HOSE REEL BUTTON BOX ASSEMBLY

Ref. No.	Part Number	Description	No. Req'd
1	080780	Hose Reel Button Box Assembly	1
	080757	Push Button	1
	080779	Modified Enclosure	1
	080304	Liquid Tight Fitting	1
	080783	Push Button Mounting Latch	1
	080784	Push Button Contact Block	1

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

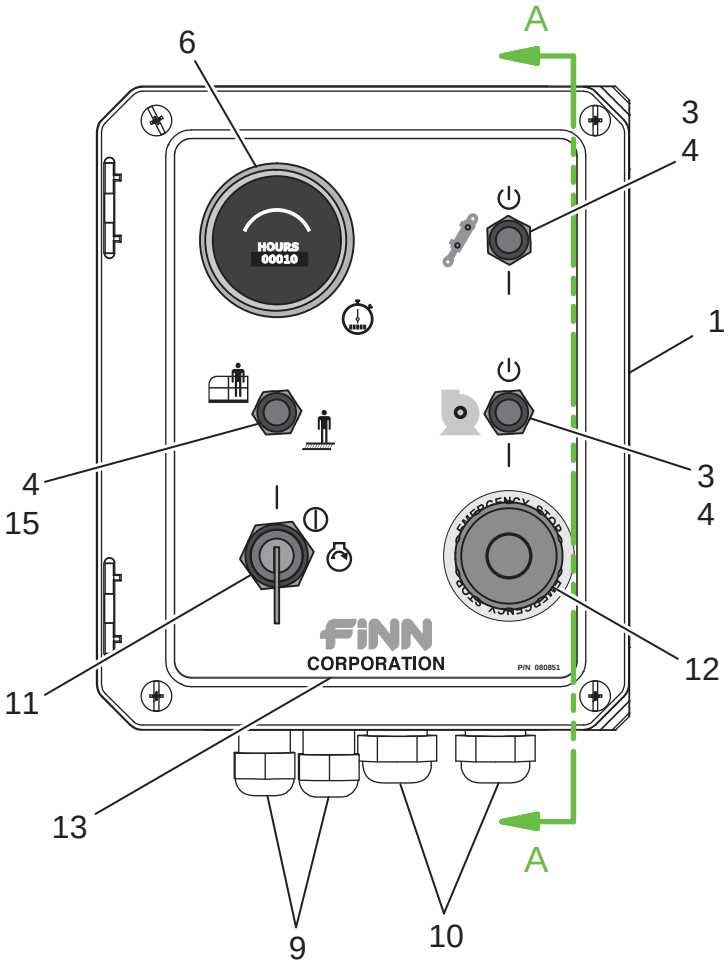


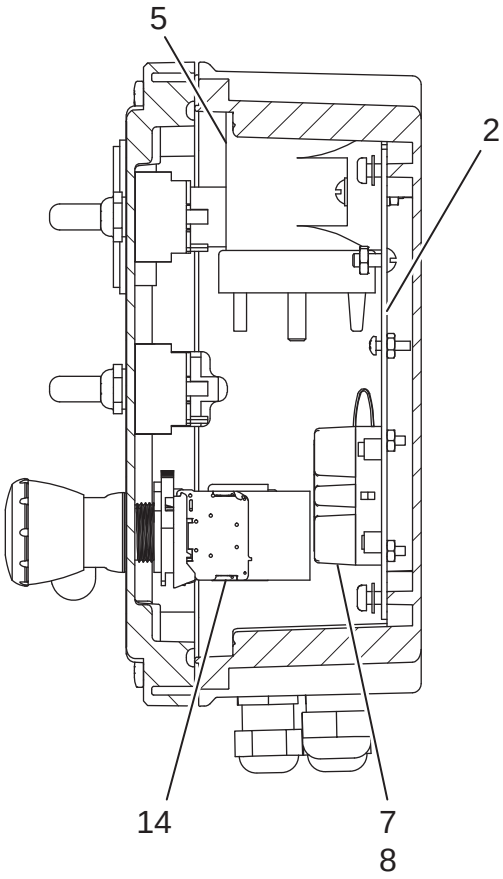
WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

HOSE REEL

Ref. No.	Part Number	Description	No. Req'd
1	080801	Hose Reel With 1/2 HP (12V) Motor	1
	008188	Electric Motor	1
	080801-01	Friction Brake Assembly	1
	080801-02	90° Inlet	1
	080801-03	Bearing Housing Sub Assembly	1
	080801-04	Spindle 1-1/2 in. Female Pipe - Ductile	1
	080801-06	Gooseneck - 11 in.	1
	080801-07	Snap Ring - 2 in. ID	1
	080801-08	O-Ring 2 in. OD x 1-3/4 in. ID x 1/8 in. Thick	1
	080801-09	Bearing, Self Aligning (without grease fitting)	1
	080801-09A	Bearing, Self Aligning (with grease fitting)	1
	080801-10	Sprocket	1
	080801-11	Hose Reel Motor Sprocket	1
	080801-12	Chain Assembly	1
	080801-14	Elbow Seal Kit	1
2	F75-0011	Live Reel Flat Support	1
3	F75-0010	Live Reel Angle Support	1
NOT SHOWN			
	005593	Remote Holder	1
	041109	Lead-In Hose	1
	005592	Soft Latch	1
	080378	Male Coupler	1
	085245	Composite Hose Reel Chain Guard	1
	080800	Hose Roller and Spool Guide	1
	008433	Hose Reel Lock Pin and Bracket	1
	003309	50 ft. Hose with Couplers	
	003309-10	100 ft. Hose with Couplers	
	003309-15	150 ft. Hose with Couplers	

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





SECTION A-A

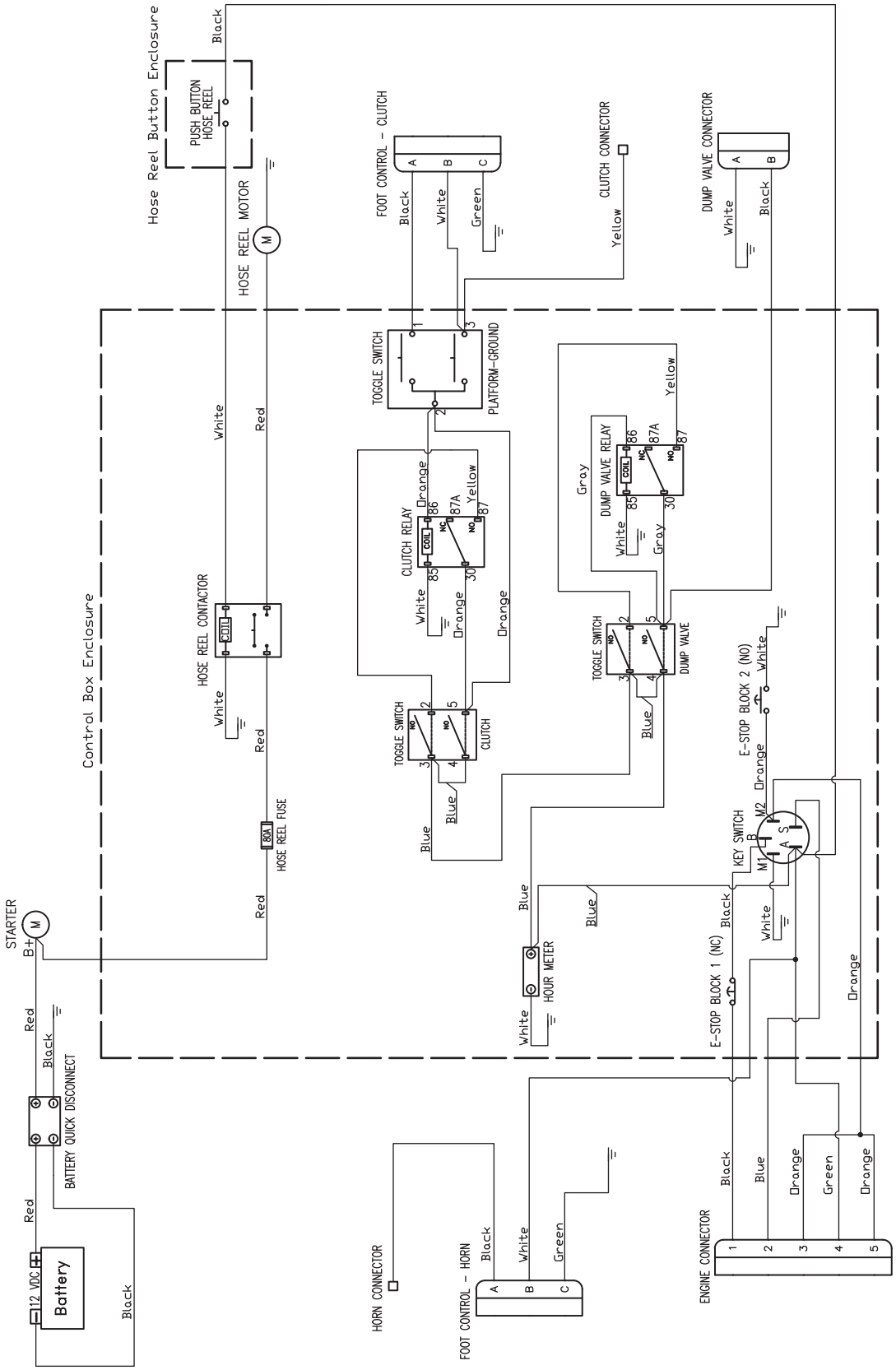
WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

CONTROL PANEL

Ref. No.	Kit Ref.	Part Number	Description	No. Req'd
1	▲	080833	Control Box	1
2	▲	080835	Sub Panel	1
3	▲	008793	Momentary "ON" Toggle Switch	2
4	▲	080526	Toggle Switch Boot	3
5	▲	080753	CE Hose Reel Relay	1
6	▲	007274	Hour Meter	1
7	▲	366279	Fuse Holder	1
8	▲	075764	80 Amp Fuse	1
9	▲	FW71746	Cord Connector with Locknut	2
10	▲	080304	Liquid Tight Fitting	2
11	▲	080654	Starter Switch	1
	▲	080654-K	Starter Key	1
12	▲	366164	Emergency Stop Button (E-Stop)	1
13	▲	080851	Control Box Decal	1
14	▲	080784	Contact Block	1
15	▲	080768	Pump Toggle Switch	1
NOT SHOWN				
	▲	080834	Wire Harness	1
		080776	CE Male Battery Cables	1
		080777	CE Female Battery Cables	1
		035084	Electric Clutch	1
		080759	CE Foot Pedal Button	2
KITS				
▲		080850	T75S CE Control Box Assembly	

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

CONTROL PANEL WIRING



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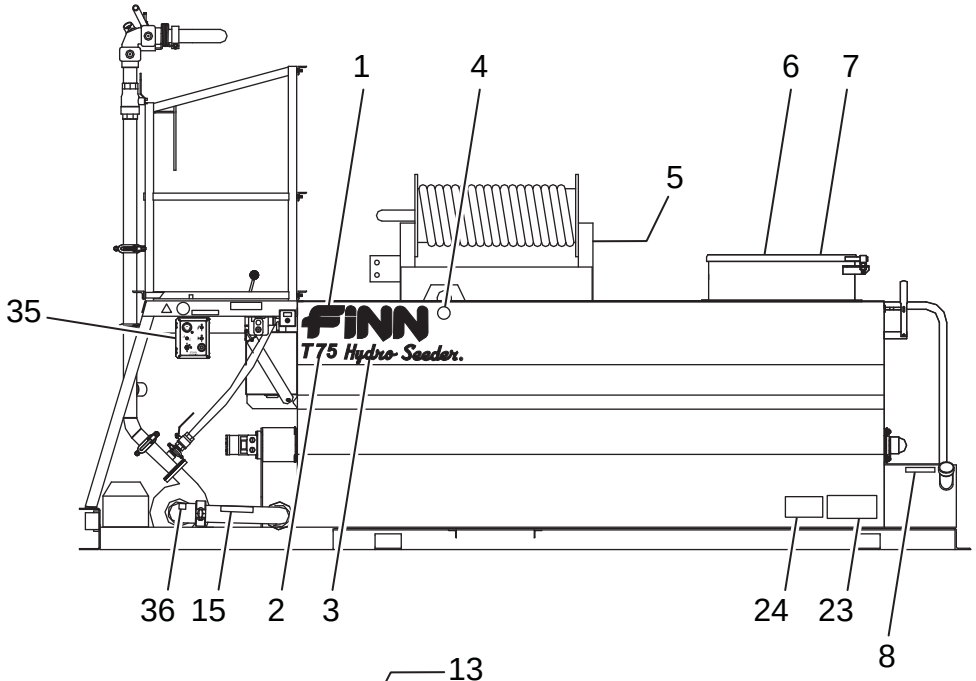
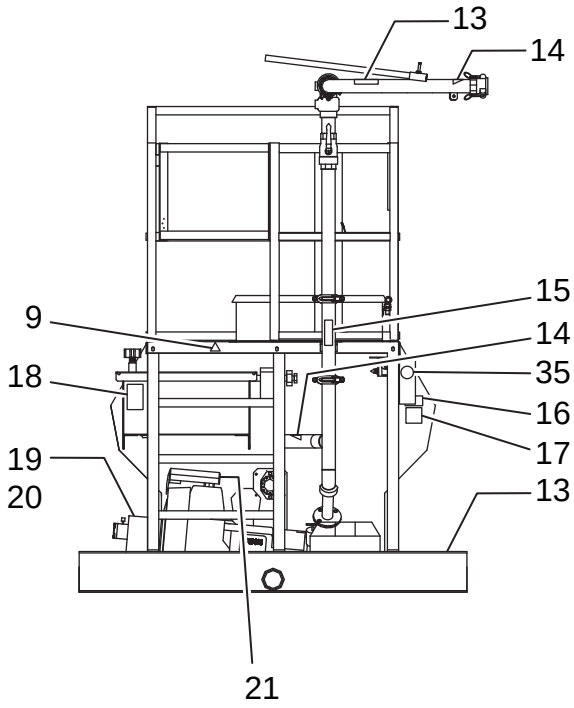
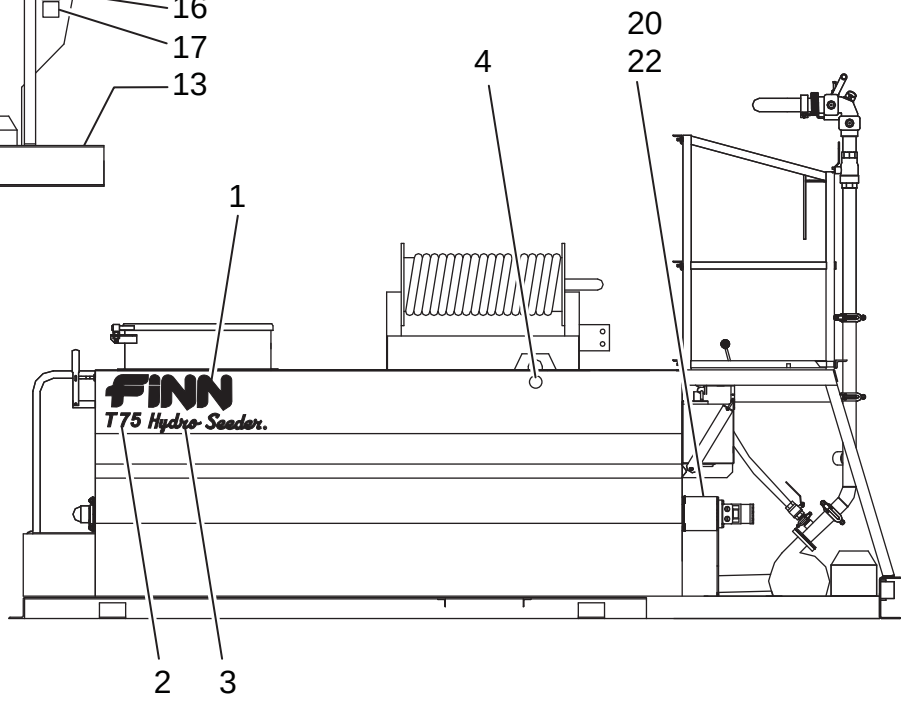




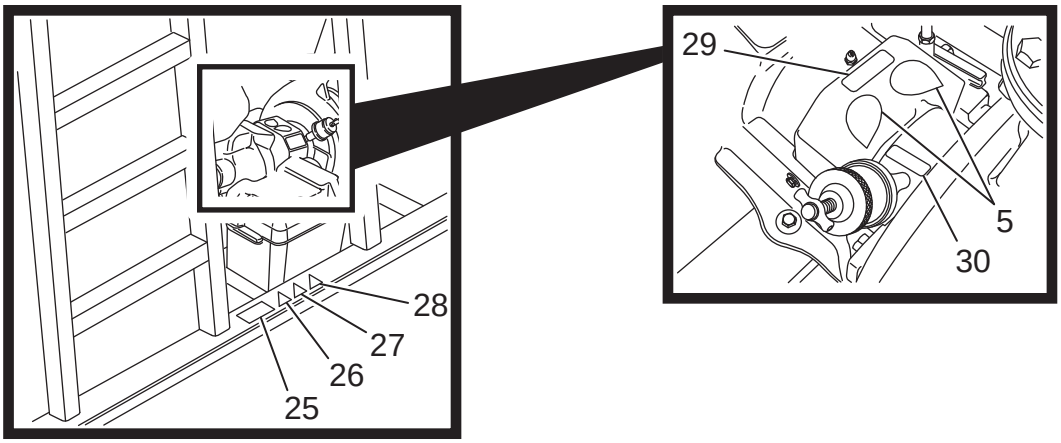


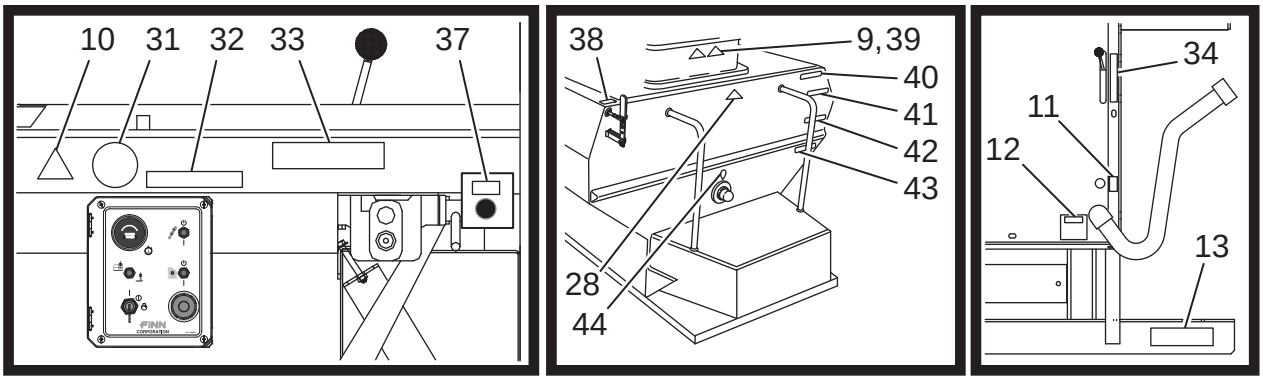
WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

DECALS

Ref. No.	Part Number	Description	No. Req'd
1	023174	Decal "FINN"	2
2	012661-07	Decal "T75"	2
3	011595	Decal "HydroSeeder"	2
4	☐	Lift Point Decal	4
5	☐	Decal "Service Weekly"	4
6	☐	"DANGER! Confined Space Hazard" Decal	1
7	☐	"Operating Instructions" Decal	1
8	☐	Decal "Gasoline"	1
9	☐	Fall Hazard Decal	2
10	☐	Attention Decal	2
11	☐	Decal "HORN"	1
12	☐	Decal "CLUTCH"	1
13	☐	"DANGER! Electrocution Hazard! Do Not Aim..." Decal	2
14	☐	Splash/Spray Hazard Decal	2
15	☐	"WARNING! Burn Hazard..." Decal	2
16	☐	"CAUTION! SPL Exceeds 80dBA . . ." Decal	1
17	☐	Decibel Decal	1
18	☐	Hydraulic System Instructions Decal	1
19	☐	Sever/Reach Hazard Decal	1
20	☐	Do Not Remove Guard Decal	2
21	☐	Hot Surface Hazard Decal	1
22	☐	Decal "Service Daily"	1
23	005807	*GVWR* Data Plate	1
24	☐	U.S. Patent Nos. Decal	1
25	012260	"IMPORTANT" Metal Plate	1
26	☐	Pinch Point/Entanglement Hazard Decal	1
27	☐	Pinch Point/Moving Belt Hazard Decal	1
28	☐	Vision Damage Hazard Decal	1
29	☐	"NOTICE Seal Lubricator..." Decal	1
30	☐	Decal "Service Daily" (Rectangular)	1
31	☐	Read Manual Decal	1
32	☐	Decal "Stopping Instructions"	1
33	☐	Decal "AGITATOR" Operation	1
34	☐	Decal "AGITATOR" Operation	1
35	☐	CE Decal	1
36	☐	"NOTICE To Avoid Damage..." Decal	1
37	☐	Decal "Hose Reel Rewind"	1

Continued to next page.





DECALS

Ref. No.	Part Number	Description	No. Req'd
38	☐	Decal "AGITATOR" Operation	1
39	☐	Body Entanglement Hazard Decal	1
40	☐	Decal "750 Gallons"	1
41	☐	Decal "500 Gallons"	1
42	☐	Decal "400 Gallons"	1
43	☐	Decal "250 Gallons"	1
44	☐	Decal "Service Daily" (U/D)	1

KITS AND MARKERS

☐	041400-01	T60/T75 Decal Kit

NOTE: *All of the decals depicted and listed (except those identified with a ☐) are shown for location purposes only. To order replacements you must order the T90/T120 Decal Kit (041400-01). Replacement decal and plates identied with a part number are not part of the decal kit and must be ordered separately.*

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