



C4T500 Case
TRACK TANK
INSTALLATION and PARTS MANUAL



INSTALLATION & PARTS





Table of Contents

Section	Page
Table of Contents	3
Warranty Registration	7
<i>Warranty Inspection Report</i>	7
Owner Register	9
General Information	10
Foreword to the Owner	11
SAFETY	13
<i>Safety Alert Symbols and Signal Words</i>	13
<i>General Safety</i>	14
Prepare for Emergencies	14
Wear Protective Clothing	14
Protect Against Noise	14
Practice Safe Maintenance	14
Support Raised Equipment	15
Avoid Heating Near Pressurized Fluid Lines	15
Avoid High-Pressure Fluids	15
Inspect Lift Circuit Hoses	16
Store Attachments Safely	16
Electrical	16
Service Tires Safely	16
Dispose of Waste Properly	17
Handle Agricultural Chemicals Safely	17
Reduce risk of exposure and injury:	17
Handle Chemical Products Safely	18
Operate Hydraulics Safely	18
Use Safety Lights and Devices	19
Keep Riders Off Machine	19
Observe Maximum Transport Speed	19
EC Compliance Notification	20
Use a Signal Person	20
Use a Safety Chain	20
Tow Loads Safely	20
Avoid Overhead Power Lines	21
Prepare for Transport	21
Transport Safely	22
Safety Sign Locations	22
Assembly Safety	22



INSTALLATION & PARTS

INSTALLATION	23
<i>Install Front Tank Mount</i>	<i>23</i>
<i>Install Cross Tube.....</i>	<i>23</i>
<i>Install Left Side Tank.....</i>	<i>24</i>
<i>Install Left Tank Mount Bracket.....</i>	<i>25</i>
<i>Install Right Side Tank.....</i>	<i>26</i>
<i>Install Right Tank Mount Bracket</i>	<i>27</i>
<i>Install Rear Tank (Option).....</i>	<i>29</i>
<i>Install Plumbing Components.....</i>	<i>30</i>
PARTS	31
<i>Base Assembly, Side Tanks.....</i>	<i>31</i>
Parts List 27370: Base Assembly, Side Tanks.....	33
<i>Base Assembly, Hardware</i>	<i>34</i>
Parts List 590890: Base Assembly, Hardware.....	36
<i>Side Tanks Mount Assembly</i>	<i>37</i>
Parts List 27700: Mount Assembly, Side Tanks	38
<i>Side Tank Hydraulic Kit</i>	<i>39</i>
Parts List 600108: Side Tank Hydraulic Kit.....	39
<i>Rear Tank, 300-Gallon</i>	<i>40</i>
Parts List 27199: Rear Tank, 300-Gallon.....	41
<i>Rear Tank Plumbing.....</i>	<i>42</i>
Parts List 27200: Rear Tank Plumbing	44
<i>No Rear Tank</i>	<i>45</i>
Parts List 27196: No Rear Tank.....	45
<i>Plumbing Without Pump</i>	<i>46</i>
Parts List 27260: Plumbing Without Pump	48
<i>Plumbing With Pump</i>	<i>50</i>
Parts List 27371: Plumbing With Pump.....	53
<i>Pump Option, Hypro.....</i>	<i>55</i>
Parts List 27187: Pump Option, Hypro	55
<i>Pump Hypro 9306C(S)-HM1, 3, 4C, and 5C-3U.....</i>	<i>56</i>
Parts List 550045/550046: Pump Hypro 9306C(S)-HM1, 3, 4C, and 5C-3U	56
<i>Pump Option, ACE</i>	<i>59</i>
Parts List 27195: Pump Option, ACE	59
<i>Pump ACE FMCSC-205F(S)-HYD-304</i>	<i>60</i>
Parts List 550025/550054: Pump ACE FMCSC-205F(S)-HYD-304.....	61
<i>Quick Fill Valve, 3"</i>	<i>62</i>

Parts List 90SA3QF45: Quick Fill Valve, 3"	63
Quick Fill Adapter, 2"	64
Parts List 27261: Quick Fill Adapter, 2"	64
TORQUE SPECIFICATIONS	65
<i>Metric Bolt and Screw Torque Values</i>	<i>65</i>
<i>Unified Inch Bolt and Screw Torque Values</i>	<i>66</i>
<i>Face Seal Fittings Assembly & Installation - All Pressure Applications</i>	<i>67</i>
Face Seal O-Ring to Stud End Installation	67
Face Seal Adjustable Stud End O-Ring Installation	67
Face Seal Straight Stud End O-Ring Installation	67
Fitting Installation	67
Assembly Torque	67
<i>SAE Face Seal and O-Ring Stud End Fitting Torque Chart</i>	<i>67</i>





Limited Warranty

Fast Ag Solutions warrants to the buyer that the new machinery is free from defects in material and workmanship.

This warranty is only effective as to any new machinery which has not been altered, changed, repaired or treated since its delivery to the buyer, other than by Fast Ag Solutions or its authorized dealers or employees, and does not apply to accessories, attachments, tools or parts, sold or operated with the new machinery, if they have not been manufactured by Fast Ag Solutions.

Fast Ag Solutions shall only be liable for defects in the materials or workmanship attributable to faulty material or bad workmanship that can be proved by the buyer, and specifically excludes liability for repairs arising as a result of normal wear and tear of the new machinery or in any other manner whatsoever, and without limiting the generality of the foregoing, excludes application or installation of parts not completed in accordance with this operator's manual, specifications, or printed instructions.

Written notice shall be given by registered mail, to the Manufacturer within seven (7) days after the defect shall have become apparent or the repairs shall have become necessary, addressed as follows:

Fast Ag Solutions
4130 Commerce Boulevard
Windom, MN 56101

This warranty shall expire one (1) year after the date of delivery of the new machinery.

If these conditions are fulfilled, Fast Ag Solutions shall at its own cost and at its own option either repair or replace any defective parts provided that the buyer shall be responsible for all expenses incurred as a result of repairs, labor, parts, transportation or any other work, unless Fast Ag Solutions has authorized such expenses in advance.

The warranty shall not extend to any repairs, changes, alterations, or replacements made to the new equipment other than by Fast Ag Solutions or its authorized dealers or employees.

This warranty extends only to the original owner of the new equipment.

Rubber parts (including tires, hoses, grommets) are not warrantied.

This warranty is limited to the terms stated herein and is in lieu of any other warranties whether express or implied, and without limiting the generality of the foregoing, excluded all warranties, express or implied or conditions whether statutory or otherwise as to quality and fitness for any purpose of the new equipment. The Manufacturer disclaims all liability for incidental or consequential damages.

This Track Tank is subject to design changes and Fast Ag Solutions shall not be required to retrofit or exchange items on previously sold units except at its own option.

Warranty void if not registered.



FAST TRACK TANK

Warranty Registration

This form must be filled out by the dealer and signed by both the dealer and the customer at the time of delivery.

Customer Name					
Address					
City		State		Zip	
Phone					

Dealer Name					
Address					
City		State		Zip	

Tank Model					
Serial Number					
Delivery Date					

Warranty Inspection Report

DEALER INSPECTION REPORT

- All Fasteners Tight
- Fertilizer Hoses and Fittings Free and Tight
- Frame and Tanks Level

SAFETY

- Safety Chain Installed
- All Guards Installed
- All Safety Signs Installed
- Reflectors, SMV, and Lights Clean
- Review Operating and
- Safety Instructions

I have thoroughly instructed the buyer on the above-described equipment in which review included the Manual content, equipment care, adjustments, safe operation, and applicable warranty policy.

Date _____
Dealer's Rep. Signature _____

The above equipment and Manual have been received by me, and I have been thoroughly instructed as to care, adjustments, safe operation, and applicable warranty policy.

Date _____
Owner's Signature _____

White - FAST
Yellow - Dealer
Pink - Customer



INSTALLATION & PARTS

FAST C4T500 Case Series Tank

TANK SERIAL NUMBER _____

DATE PURCHASED _____ / _____ / _____



INSTALLATION & PARTS

Owner Register

Model Number	P.I.N. Number
--------------	---------------

Name		
Address		
County	State	Date Purchased

Name		
Address		
County	State	Date Purchased

Name		
Address		
County	State	Date Purchased

Name		
Address		
County	State	Date Purchased

General Information

All rights, especially copying and distribution rights are reserved. No part of this publication may be reproduced in any form or by any means, electronic or mechanical, including photocopying, without express written permission from Fast Ag Solutions.

Parts information in this manual represents components installed when product was manufactured based upon the best available information. Modifications made subsequent to initial delivery are not included. Always verify the parts and color required when ordering parts.

If you have any questions, please contact your Fast Ag Solutions Parts and Service Department.

Explanation of Lists

The Manual is organized as follows:

Table of Contents

Warranty Registration

Owner Register

General Information

Foreword to the Owner

SAFETY

INSTALLATION

PARTS

TORQUE SPECIFICATIONS

The parts lists are broken down into sub-assemblies and listed in four (4) columns:

- **ITEM** - These numbers are found on the illustration associated with the parts list.
 - NS - This item is NOT SHOWN, included for reference.
- **QTY.** - This is the quantity of parts needed in an assembly.
 - AR - The quantity of this item is applied AS REQUIRED for the location.
- **PART NO.** - These are the part numbers associated with the ITEM.
- **DESCRIPTION** - This is the description of the part.

Foreword to the Owner



READ THIS MANUAL carefully to learn how to operate and service your machine correctly. Failure to do so could result in personal injury or equipment damage. This Manual and safety signs on your machine may also be available in other languages.

THIS MANUAL SHOULD BE CONSIDERED a permanent part of your machine and should remain with the machine when you sell it.

MEASUREMENTS in this manual are given in both metric and customary U.S. unit equivalents. Use only correct replacement parts and fasteners. Metric and inch fasteners may require a specific metric or inch wrench.

RIGHT-HAND AND LEFT-HAND sides are determined by facing in direction implement will travel when going forward.

WRITE PRODUCT IDENTIFICATION NUMBERS (P.I.N.) in the [Warranty Inspection Report](#) and [Owner Register](#) sections. Accurately record all numbers to help in tracing machine should it be stolen. Your dealer also needs these numbers when you order parts. File identification numbers in a safe place off-machine.

BEFORE DELIVERING THIS MACHINE, your dealer performed a pre-delivery inspection.



INSTALLATION & PARTS

THESE TRACK TANKS ARE DESIGNED SOLELY for use in customary agricultural or similar operations for the purpose of applying crop protection chemicals (“Intended Use”). Use in any other way is considered as contrary to the Intended Use. The manufacturer accepts no liability for damage or injury resulting from this misuse, and these risks must be borne solely by the user. Compliance with and strict adherence to the conditions of operation, service, and repair as specified by the manufacturer also constitute essential elements for the Intended Use.

THESE TRACK TANKS SHOULD BE OPERATED, serviced, and repaired only by persons familiar with all its particular characteristics and acquainted with the relevant safety rules (Accident Prevention). The Accident Prevention regulations, all other generally recognized regulations on safety and occupational medicine and the road traffic regulations must be observed at all times.

Any arbitrary modifications carried out on the Track Tank will relieve the manufacturer of all liability for any resulting damage or injury.

THIS DOCUMENT outlines the specific design and performance requirements for the use of a Fast Ag Solutions Track Tank assembly. The word “must” in this document indicates a mandatory requirement. The use of “should” indicates a recommendation of that which is advised but not required.

WARRANTY is provided as part of Fast Ag Solutions' support program for customers who operate and maintain their equipment as described in this Manual. The warranty is explained on the warranty certificate which you should have received from your dealer.

This warranty provides you assurance that Fast Ag Solutions will back its products where defects appear within the warranty period. In some circumstances, Fast Ag Solutions also provides field improvements, often without charge to customer, even if product is out of warranty. Should equipment be abused or modified to change its performance beyond original factory specifications, the warranty will become void and field improvements may be denied. Setting fuel delivery above specifications or otherwise overpowering machines will result in such action.

If you are not the original owner of this machine, it is in your interest to contact your local Fast Ag Solutions dealer to inform them of this unit's serial number. This will help Fast Ag Solutions notify you of any issues or product improvements.

SAFETY

The most important safety device on this equipment is a safe Operator. It is the Operator's responsibility to read and understand and follow all safety and operating instructions in this Manual.

As the Operator, you are responsible for the safe operation and maintenance of this equipment. You must ensure that you and anyone else who is going to operate, maintain or work around the machine is familiar with the operating and maintenance procedures and related safety information contained in this Manual.

You are the key to safety. Good safety practices protect you and the people around you. Be certain that everyone operating this equipment is familiar with the recommended operating and maintenance procedures and follows all safety precautions. Do not risk injury or death by ignoring good safety practices.

Safety Alert Symbols and Signal Words



This is a Safety Alert Symbol. When you see this symbol on your machine or in this Manual, be alert to the potential for personal injury.

Follow recommended precautions and safe operating practices.

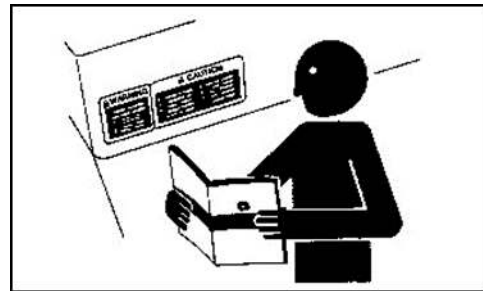
Understand Signal Words

Throughout this Manual, the terms *CAUTION*, *WARNING*, and *DANGER* are used along with the Safety Alert Symbol to indicate the degree of personal safety hazard. The term *IMPORTANT* is used to indicate that failure to observe the hazard can cause damage to the equipment.



DANGER identifies the most serious hazards. DANGER or WARNING safety signs are located near specific hazards. General precautions are listed on CAUTION safety signs. CAUTION also calls attention to safety messages in this Manual.

Follow Safety Instructions



Carefully read all safety messages in this Manual and on your machine's safety signs. Keep safety signs in good condition.

Replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs are available from your Fast Ag Solutions dealer. There can be additional safety information contained on parts and components sourced from suppliers that is not reproduced in this Operator's Manual.

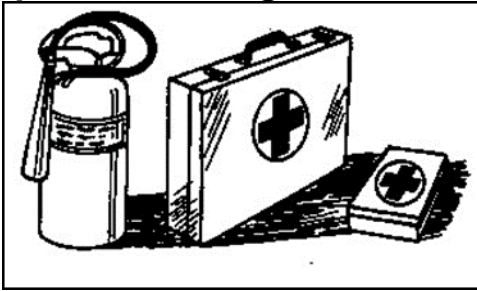
Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.

Keep your machine in proper working condition. Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.

If you do not understand any part of this Manual and need assistance, contact your Fast Ag Solutions dealer.

General Safety

Prepare for Emergencies

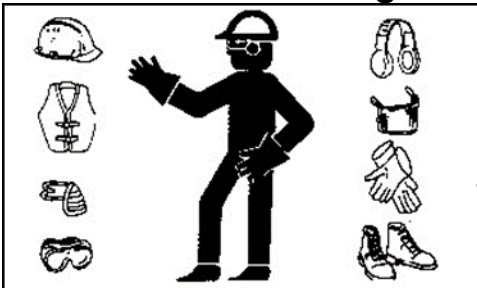


Be prepared if a fire starts.

Keep a first aid kit and fire extinguisher handy.

Keep emergency numbers for the poison control center, doctors, ambulance service, hospital, and fire department near your telephone.

Wear Protective Clothing



Wear close-fitting clothing and safety equipment appropriate to the job.

Operating equipment safely requires the full attention of the Operator. Do not wear radio or music headphones while operating the machine.

Protect Against Noise



Prolonged exposure to loud noise can cause impairment or loss of hearing.

Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises.

Practice Safe Maintenance



Understand service procedures before doing work. Keep the area clean and dry.

Never lubricate, service, or adjust the machine while it is moving. Keep hands, feet, and clothing away from power-driven parts. Disengage all power and operate controls to relieve pressure. Lower equipment to the ground. Stop the engine. Remove the key. Allow machine to cool. Securely support any

machine elements that must be raised for service work.

Keep all parts in good condition and properly installed. Fix any damage immediately. Replace worn or broken parts. Remove any buildup of grease, oil, or debris.

On self-propelled equipment, disconnect the battery ground cable (-) before making any adjustments on electrical systems or welding on the machine.

On towed implements, disconnect wiring harnesses from tractor before servicing electrical system components or welding on the machine.

Support Raised Equipment



Always use a safety support when working on, under, or around the machine. Transport/Service locks can be used for this purpose.

Shut off the tractor's engine and remove the key when working on the machine.

If air has been allowed to enter hydraulic hoses or cylinders, bleed the hydraulic system before use. If there is a failure in the hydraulic system, unsupported or raised equipment could suddenly lower, causing serious personal injury or death.

If support is not available, completely lower wings and frame, relieve hydraulic pressure and disconnect hoses from tractor.

Avoid Heating Near Pressurized Fluid Lines



Flammable spray can be generated by heating near pressurized fluid lines, resulting in severe burns to yourself and bystanders. Do not heat by welding, soldering, or using a torch near pressurized fluid lines or other flammable materials. Pressurized lines can accidentally burst when heat goes beyond the immediate flame area.

Avoid High-Pressure Fluids



Inspect hydraulic hoses periodically – at least once per year – for leakage, kinking, cuts, cracks, abrasion, blisters, corrosion, exposed wire braid, or any other signs of wear or damage.

Replace worn or damaged hose assemblies immediately with Fast Ag Solutions approved replacement parts.

Escaping fluid under pressure can penetrate the skin causing serious injury.

Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure.

Search for leaks with a piece of cardboard. Protect hands and body from high-pressure fluids.

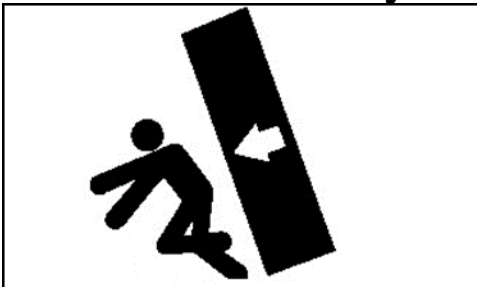
If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source.

Inspect Lift Circuit Hoses



Avoid serious injury or death while working under a raised implement. Hydraulic hoses between the lift cylinders and hydraulic lock-up valves should be inspected frequently for leakage, kinking, cuts, cracks, abrasion, blisters, corrosion, exposed wire braid, or any other signs of wear or damage. Worn or damaged hose assemblies can fail during use and should be replaced immediately. See your Fast Ag Solutions dealer for replacement hoses.

Store Attachments Safely



Stored attachments such as dual wheels can fall and cause serious injury or death.

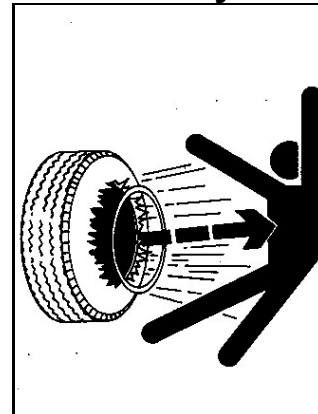
Securely store attachments and implements to prevent falling. Keep playing children and bystanders away from storage area.

Electrical



Check all electrical wiring and connections for damage. Keep the battery terminals clean and tight. Repair or replace any damaged part or wires that are loose or frayed.

Service Tires Safely



CAUTION: Explosive separation of a tire and rim parts can cause serious injury or death.

Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job.

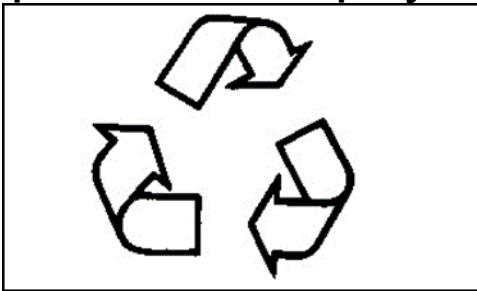
Always maintain the correct tire pressure. Do not inflate the tires above the recommended pressure. Never weld or heat a wheel and tire assembly. The heat can cause an increase in air pressure resulting in a tire explosion. Welding can structurally weaken or deform the wheel.

When inflating tires, use a clip-on chuck and extension hose long enough to allow you to

stand to one side and NOT in front of or over the tire assembly. Use a safety cage if available.

Check wheels for low pressure, cuts, bubbles, damaged rims, or missing lug bolts and nuts. Replace as necessary.

Dispose of Waste Properly



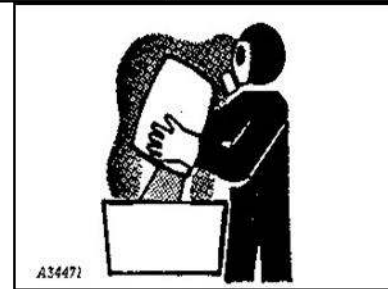
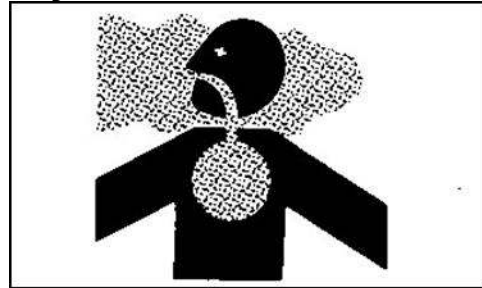
Improperly disposing of waste can threaten the environment and ecosystem. Potentially harmful waste used with equipment includes such items as oil, fuel, coolant, brake fluid, filters, and batteries.

Use leakproof containers when draining fluids. Do not use food or beverage containers that may mislead someone into drinking from them.

Do not pour waste onto the ground, down a drain, or into any water source.

Air conditioning refrigerants escaping into the air can damage the Earth's atmosphere. Government regulations may require a certified air conditioning service center to recover and recycle used air conditioning refrigerants.

Handle Agricultural Chemicals Safely



Chemicals used in agricultural applications such as fungicides, herbicides, insecticides, pesticides, rodenticides, and fertilizers can be harmful to your health or the environment if not used carefully.

Always follow all label directions for effective, safe, and legal use of agricultural chemicals.

Reduce risk of exposure and injury:

Wear appropriate personal protective equipment as recommended by the manufacturer. In the absence of manufacturer's instructions, follow these general guidelines:

Chemicals labeled 'Danger' (Most toxic) generally require use of goggles, respirator, gloves, and skin protection.

Chemicals labeled 'Warning' (Less toxic) generally require use of goggles, gloves, and skin protection.

Chemicals labeled 'Caution' (Least toxic) generally require the use of gloves and skin protection.

Avoid inhaling vapor, aerosol, or dust.

Always have soap, water, and a towel available when working with chemicals. If a chemical contacts skin, hands, or face, wash immediately with soap and water. If chemical gets into eyes, flush immediately with water.

Wash hands and face after using chemicals and before eating, drinking, smoking, or urination.

Do not smoke or eat while applying chemicals.

After handling chemicals, always bathe or shower and change clothes. Wash clothing before wearing it again.

Seek medical attention immediately if illness occurs during or shortly after use of chemicals.

Keep chemicals in original containers. Do not transfer chemicals to unmarked containers or to containers used for food or drink.

Store chemicals in a secure, locked area away from human or livestock food. Keep children away.

Always dispose of containers properly. Triple rinse empty containers and puncture or crush containers and dispose of properly.

Handle Chemical Products Safely



Direct exposure to hazardous chemicals can cause serious injury. Potentially hazardous chemicals used with FAST equipment

include such items as lubricants, coolants, paints, and adhesives.

A Material Safety Data Sheet (M/SDS) provides specific details on chemical products: physical and health hazards, safety procedures, and emergency response techniques.

Check the M/SDS before you start any job using a hazardous chemical. That way you will know exactly what the risks are and how to do the job safely. Then follow the procedures with the recommended equipment.

Operate Hydraulics Safely



Before operating, make sure air has been bled from wing-fold hydraulic system.

Be sure the area around the machine is clear before raising or lowering the machine's frame or wings.

Do not operate with wings folded.

Do not operate close to the edge of a ditch, creek, gully, or steep embankment. Avoid holes, ditches, and obstructions which may cause the tractor, machine, or towed equipment to roll over, especially on hillsides.

Avoid sharp turns on hillsides.

Slow down when turning, traveling over rough ground, or when turning on inclines.

Always shut off tractor and shift to PARK or set brakes when leaving tractor. Remove key when leaving tractor unattended.

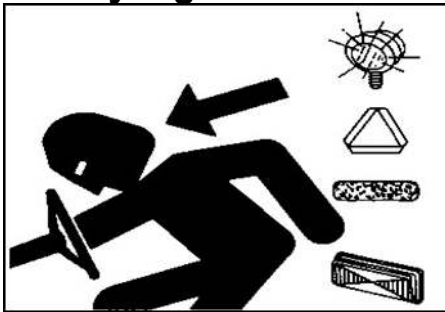
Always have the tractor stop on level ground when raising or lowering wings. Operate the machine from tractor seat only. If chemicals are used, follow the manufacturer's recommendations for handling and storage.

Tow the machine behind a properly equipped tractor only.

Only allow the Operator on the machine. Keep riders off.

Riders on the machine are subject to injury such as being struck by foreign objects and being thrown off of the machine. Riders also obstruct the Operator's view resulting in the machine being operated in an unsafe manner.

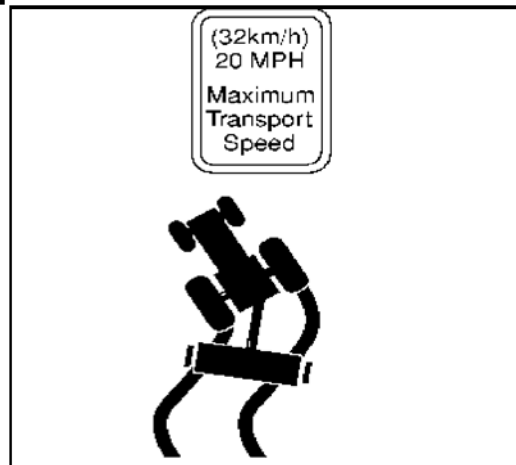
Use Safety Lights and Devices



Prevent collisions between other road users, slow moving tractors with attachments or towed equipment, and self-propelled machines on public roads. Frequently check for traffic from the rear, especially in turns, and use turn signal lights.

Use headlights, flashing warning lights, and turn signals during both day and night. Follow local regulations for equipment lighting and marking. Keep lighting and marking visible, clean, and in good working order. Replace or repair lighting and marking that has been damaged or lost.

Observe Maximum Transport Speed



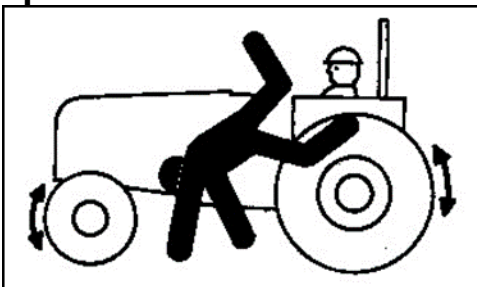
! CAUTION: Be sure all bystanders are clear of Tank.

! IMPORTANT: Transport Tank only with tank EMPTY to prevent Tank damage.

This implement is not equipped with service or parking brakes. The maximum transport speed for this implement is 20 mph (32 km/h).

Some tractors are capable of operating at speeds that exceed the maximum transport speed of this implement. Regardless of the maximum speed capability of the tractor being used to tow this implement, do not exceed the implement's maximum transport speed.

Keep Riders Off Machine



Exceeding the implement's maximum transport speed can result in:

- Loss of control of the tractor/implement combination.
- Reduced or no ability to stop during braking.
- Implement tire failure.
- Damage to the implement structure or its components.

Use additional caution and reduce speed when towing under adverse surface conditions, when turning, and when on inclines.

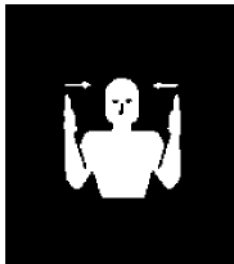
EC Compliance Notification



⚠ WARNING: Environmental transportation hazard. A loaded machine driven on public roads has a high risk of tire failure. Do not use the machine for transporting product(s) on public roads.

Never transport with a tank filled with water or chemical(s).

Use a Signal Person



Use a signal person to direct movement of the tractor/fertilizer cart combination,

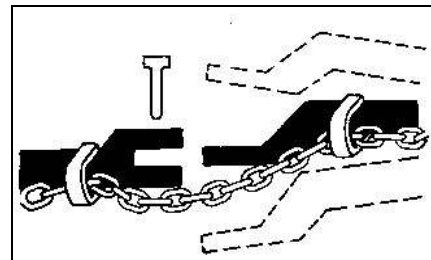
whenever the tractor operator's view is obstructed.

Designate one individual as THE signal person. Always have the signal person stand in clear view. Be sure the signal person stays a safe distance away from the machine when it is moving.

Prior to starting the tractor, discuss hand signals and what each signal means to avoid misunderstandings and confusion which could result in a serious injury or fatal accident for someone.

Keep all bystanders away whenever the machine is moved.

Use a Safety Chain



A safety chain will help control drawn equipment should it accidentally separate from the drawbar.

Using the appropriate adapter parts, attach the chain to the tractor drawbar support or other specified anchor location. Provide only enough slack in the chain to permit turning.

Tow Loads Safely



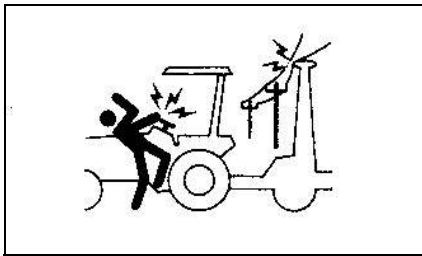
Stopping distance increases with speed and weight of towed loads and on slopes. Towed loads with or without brakes that are too heavy for the tractor or are towed too fast can cause loss of control. Consider the total weight of the equipment and its load.

Observe these recommended maximum road speeds or local speed limits which may be lower:

If towed equipment does not have brakes, do not travel more than 32 km/h (20 mph) and do not tow loads more than 1.5 times the tractor weight.

Ensure the load does not exceed the recommended weight ratio. Add ballast to the recommended maximum for the tractor, lighten the load, or get a heavier towing unit. The tractor must be heavy and powerful enough with adequate braking power for the towed load. Use additional caution when towing loads under adverse surface conditions, when turning, and on inclines.

Avoid Overhead Power Lines



⚠ WARNING: Keep away from overhead power lines. Serious injury or death may result.

Proceed cautiously under overhead power lines and around utility poles. Know the transport height of your machine. Electrocutation can occur without direct contact with overhead electrical lines.

Prepare for Transport

⚠ CAUTION: Avoid serious injury or death to your or others.

Never tow the machine behind a truck or other motor vehicle. This machine is designed only to be towed with a properly sized and ballasted tractor.

Use a tractor large enough to maintain control. Properly ballast tractor for towing your machine. Refer to tractor Operator's Manual and this Manual to ensure that machine can be safely transported with your tractor.

Be aware of height and width restrictions to avoid a collision with overpasses or other road users.

Always fold wings fully. If wing fold cylinders are removed, chain wings together to prevent accidental lowering. Fully raise frame, close hydraulic lock-up valve (if equipped) and install Transport/Service locks before transporting. Latch the tractor brakes together.

Attach a properly sized safety chain for the load being towed. Refer to [Use a Safety Chain](#).

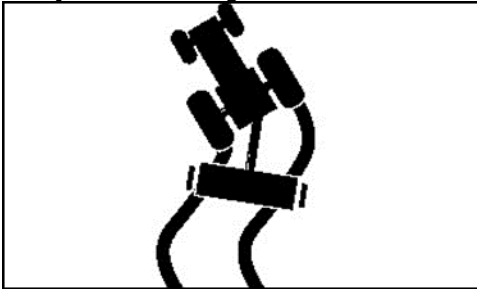
⚠ IMPORTANT: Do not transport on a roadway unless the machine is equipped with proper functioning lights and reflective markings or emblems.

Ensure that the lights and reflective markings or emblems are clean and visible. Contact your Fast Ag Solutions dealer for lights and lighting harnesses.

Always follow local and national regulations for equipment size, lighting and marking before driving on public roadways. You are responsible for understanding and complying with all requirements regarding roadway

transport. Refer to [Use Safety Lights and Devices](#).

Transport Safely



! CAUTION: When transporting, always travel at a reasonable and safe speed which permits adequate control of steering and stopping.

Reduce speed considerably when traveling over rough ground. Be certain everyone is clear of the machine.

Do not exceed weight and speed guidelines. Refer to [Observe Maximum Transport Speed](#).

Towed loads can swerve and upset or cause loss of control. Refer to [Tow Loads Safely](#). Shift tractor into a lower gear when transporting down steep slopes or hills; never coast. Stop slowly.

Wide turns may be required with the machine in tow. Use caution in traffic and in congested areas.

To improve stability when traveling through the field, wings should be unfolded from transport position as soon as possible after leaving the roadway.

! IMPORTANT: When transporting the machine on a roadway,

ALWAYS USE appropriate lamps and devices for adequate warning to operators of other vehicles.

Refer to [Use Safety Lights and Devices](#).

Safety Sign Locations

Safety signs and locations on machine are shown in the following illustrations. Familiarize yourself with safety signs, type of warning and area, or function related to that area, that requires your SAFETY AWARENESS.

Assembly Safety

Read and understand the assembly instructions before beginning.

Gather tools needed for assembly.

Contact Fast Ag Solutions with questions or for clarification.

The assembly of this equipment requires a minimum of two (2) people.



Wear appropriate PPE when assembling this equipment.

Do not place any part of your body under lifted or suspended components.

Be sure components are securely attached with all required hardware before removing lifting or supporting equipment.

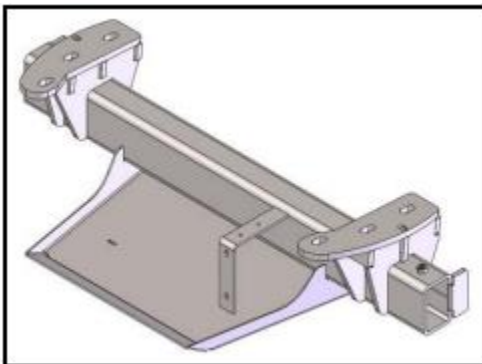
INSTALLATION

Install Front Tank Mount



1. Remove the toolbox and its bracket from the left front of the machine.

⚠ WARNING: The front tank mount weighs approximately 218 lbs. Use an appropriate lifting device to prevent injury.

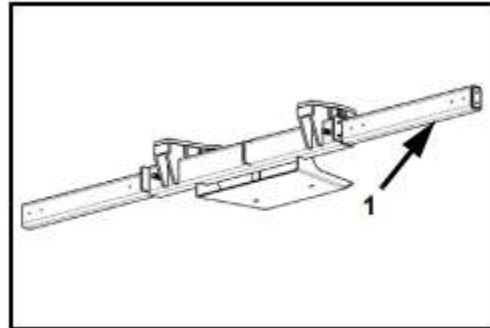


2. Install the front tank mount.



3. Install the hardware with six M20 x 90mm Class 10.9 bolts, lock washers, and nuts. See the [TORQUE SPECIFICATIONS](#) section for assembly torque values.

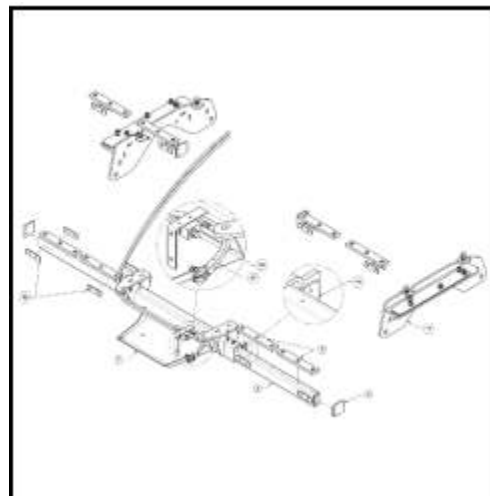
Install Cross Tube



⚠ WARNING: The cross tube weighs approximately 195 lbs. Use an appropriate lifting device to prevent injury.



1. Insert front carry tube (1) into the receiver tube and center it as illustrated.



2. Install pads onto the cross tube with twelve 3/8" x 1" bolts and lock washers. See the [TORQUE SPECIFICATIONS](#) section for assembly torque values.



3. Install four 5/8" x 2" bolts and jam nuts into the center tank mount. Tighten all.

Install Left Side Tank

- ▲ WARNING:** The left-hand tank weighs approximately 920 lbs. Use an appropriate lifting device to prevent injury.



1. Connect an appropriate lifting device to the top lift points on the tank.



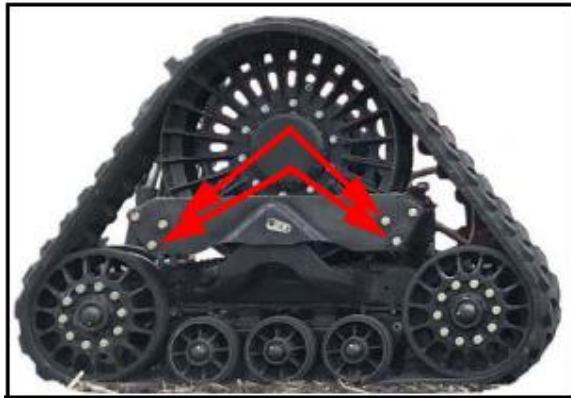
2. Raise the tank and guide it into the tractor as far as possible through the front 3" x 5" cross tube.



3. Lower the rear of the tank onto the axle and brace it with a 9-1/4" long, 2x4 between the track and tank.

Install Left Tank Mount Bracket

⚠ WARNING: The Lower Front tank mount bracket weighs approximately 170 lbs., and the Upper Front tank mount bracket weighs approximately 260 lbs. Use an appropriate lifting device to prevent injury.



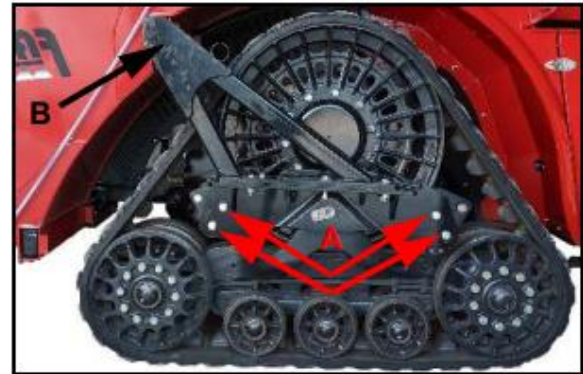
1. Remove the four inner bolts from the track. Do not remove the front outer and rear outer bolts.



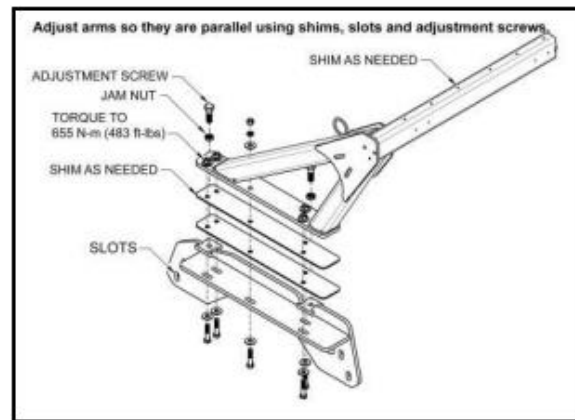
2. Install the left side lower tank mount bracket.



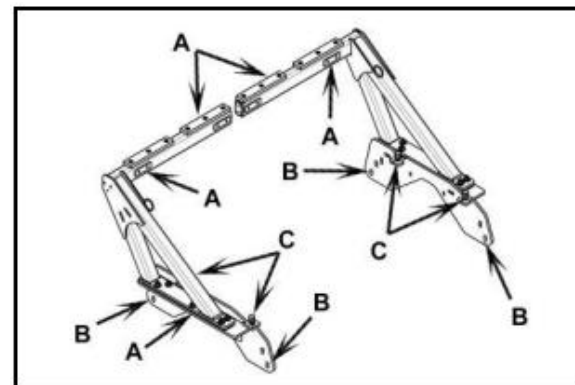
3. Raise the upper tank mount bracket.



4. Install four M24 x 75mm Class 10.9 bolts, lock washers, and nuts (A).
5. Install the left side upper tank mount bracket assembly (B) through the tank receiver onto the tractor.

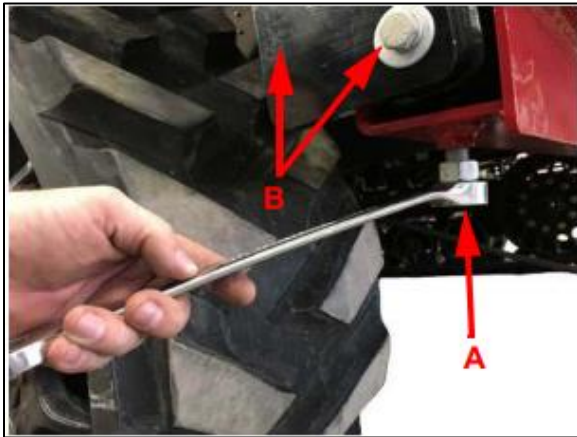


6. Shim the bracket as needed and tighten all hardware. See the [TORQUE SPECIFICATIONS](#) section for assembly torque values.



7. Adjust the arms so that they are parallel. Shim (A) as needed, use the

adjustable slots in (B), and use adjustment screws (C).



8. Install two 5/8" x 2" bolts and jam nuts (A) into the center tank mount. Tighten all hardware.
9. Install the bolt plates (B) on the end of the upper and lower tubes using two 1/2" x 2" bolts, lock washers, and flat washers. See the [TORQUE SPECIFICATIONS](#) section for assembly torque values.

Install Right Side Tank

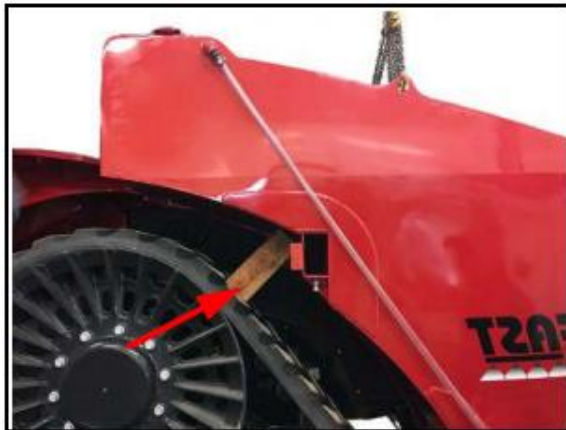
- ⚠ **WARNING:** Right-hand tank weighs approximately 920 lbs. Use an appropriate lifting device to prevent injury.



1. Connect an appropriate lifting device to the top lift points on the tank.



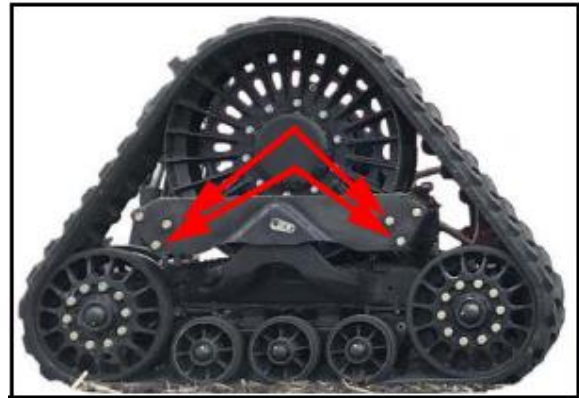
2. Raise the tank and guide it into the tractor as far as possible through the front 3" x 5" cross tube.



3. Lower the rear of the tank onto the axle and brace it with a 9-1/4" long, 2x4 between the track and tank.

Install Right Tank Mount Bracket

⚠ WARNING: The Lower Front tank mount bracket weighs approximately 170 lbs., and the Upper Front tank mount bracket weighs approximately 260 lbs. Use an appropriate lifting device to prevent injury.



1. Remove the four inner bolts from the track. Do not remove the front outer and rear outer bolts.



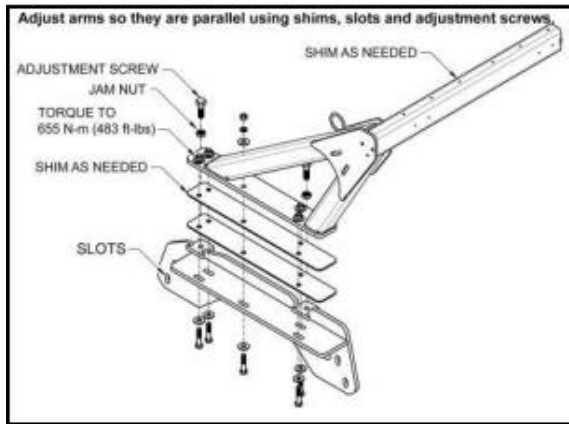
2. Install the left side lower tank mount bracket.



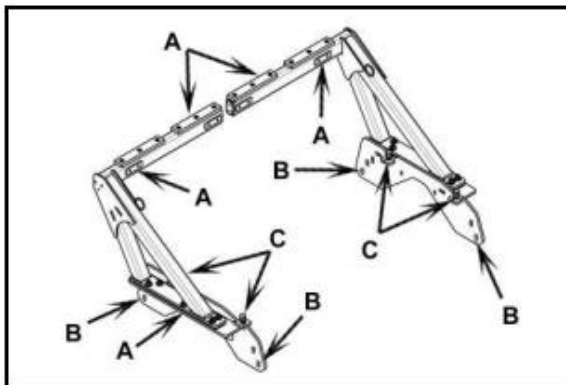
3. Raise the upper tank mount bracket.



4. Install four M24 x 75mm Class 10.9 bolts, lock washers, and nuts (A).
5. Install the left side upper tank mount bracket assembly (B) through the tank receiver onto the tractor.

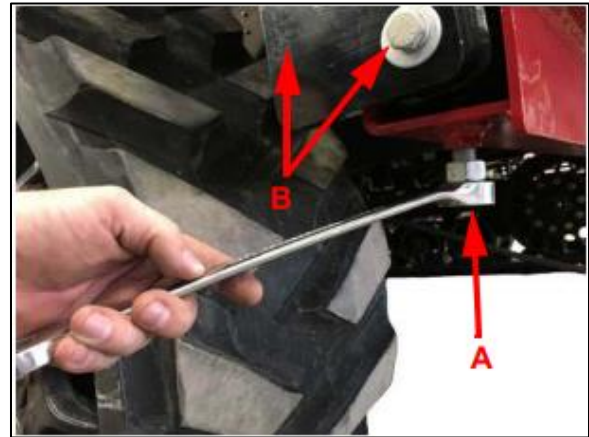


6. Shim the bracket as needed and tighten all hardware. See the [TORQUE SPECIFICATIONS](#) section for assembly torque values.



7. Adjust the arms so that they are parallel. Shim (A) as needed, use the

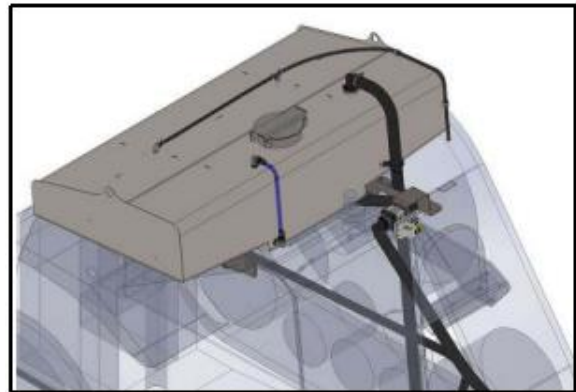
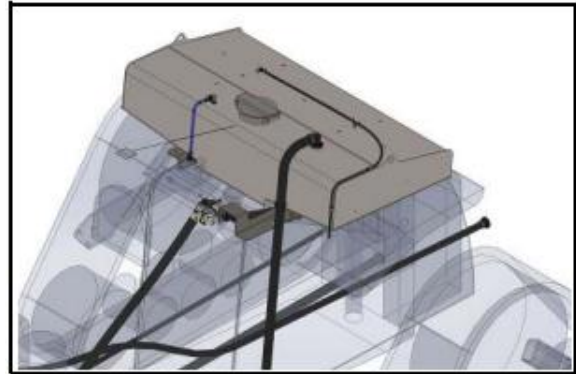
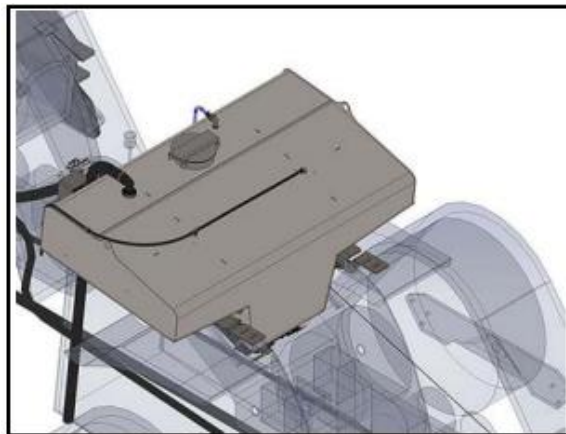
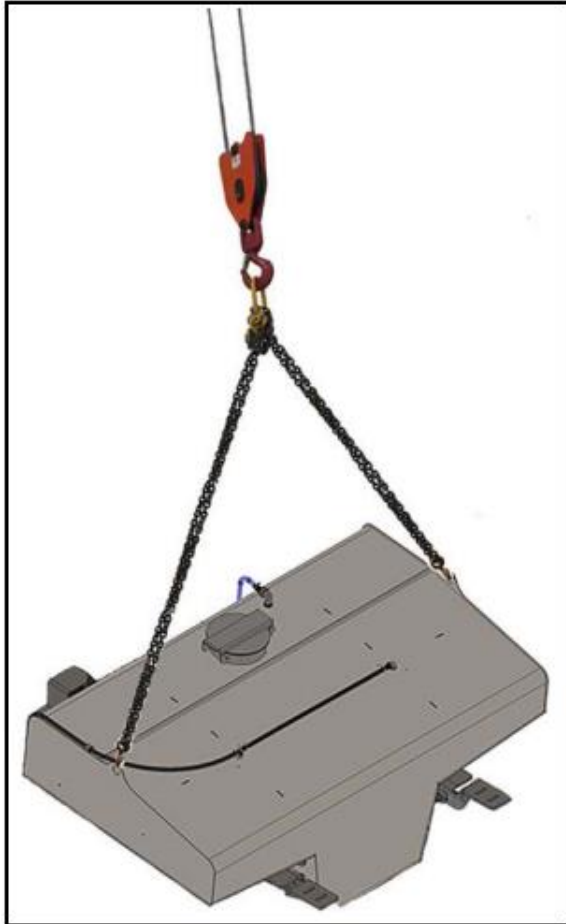
adjustable slots in (B), and use adjustment screws (C).



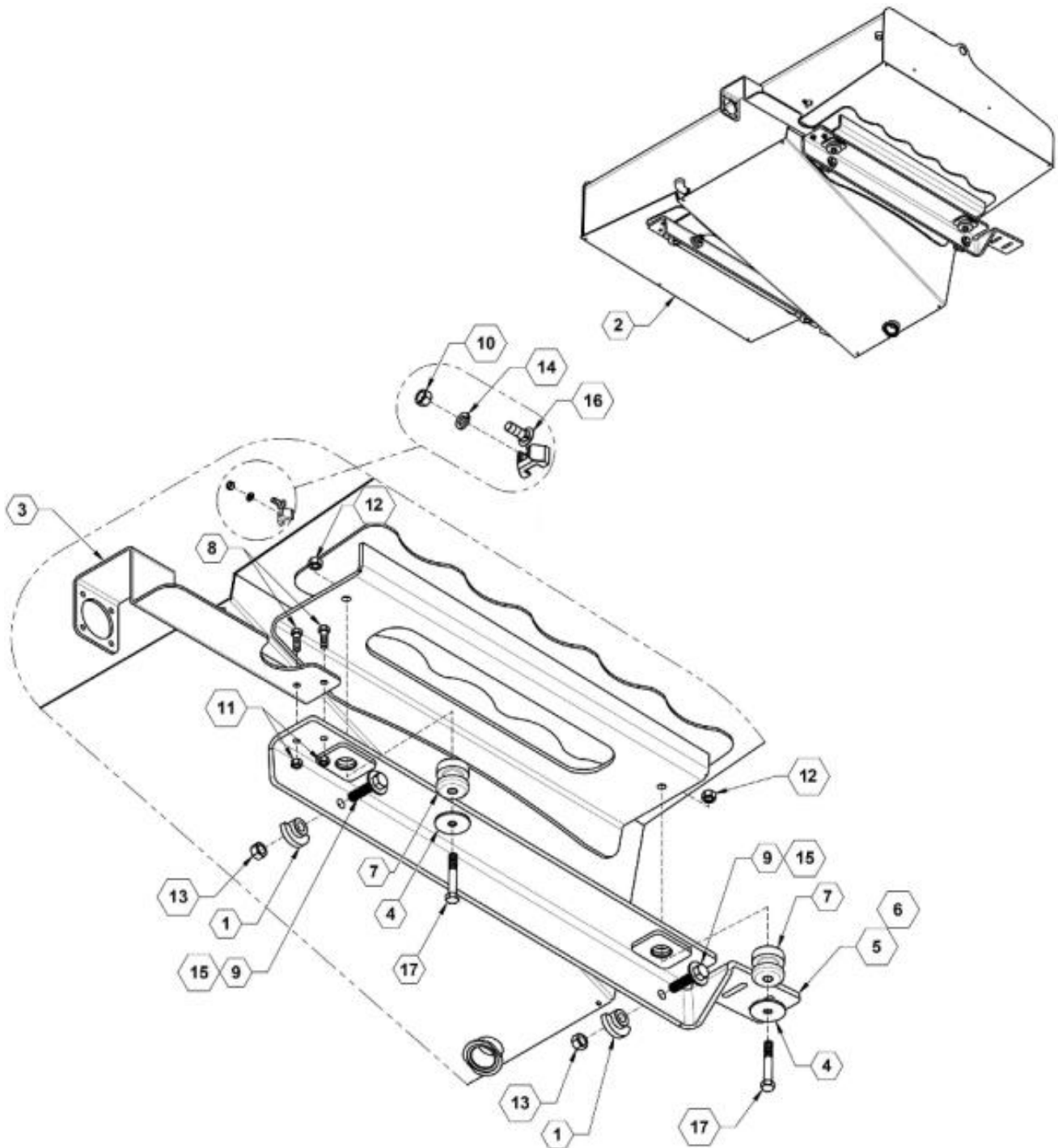
8. Install two 5/8" x 2" bolts and jam nuts (A) into the center tank mount. Tighten all hardware.
9. Install the bolt plates (B) on the end of the upper and lower tubes using two 1/2" x 2" bolts, lock washers, and flat washers. See the [TORQUE SPECIFICATIONS](#) section for assembly torque values.

Install Rear Tank (Option)

- ⚠ **WARNING:** The 300-gallon rear tank weighs approximately 690 lbs. Use an appropriate lifting device to prevent injury.



1. Connect an appropriate lifting device to the rear tank.
2. Position the tank into place.
3. Install and tighten the four bolts (17), washers (4), and isolates (7).
4. Install and tighten the four bolts (9), washers (15), pin mounts (1), and nuts (13).
5. See the [TORQUE SPECIFICATIONS](#) section for assembly torque values.



Install Plumbing Components

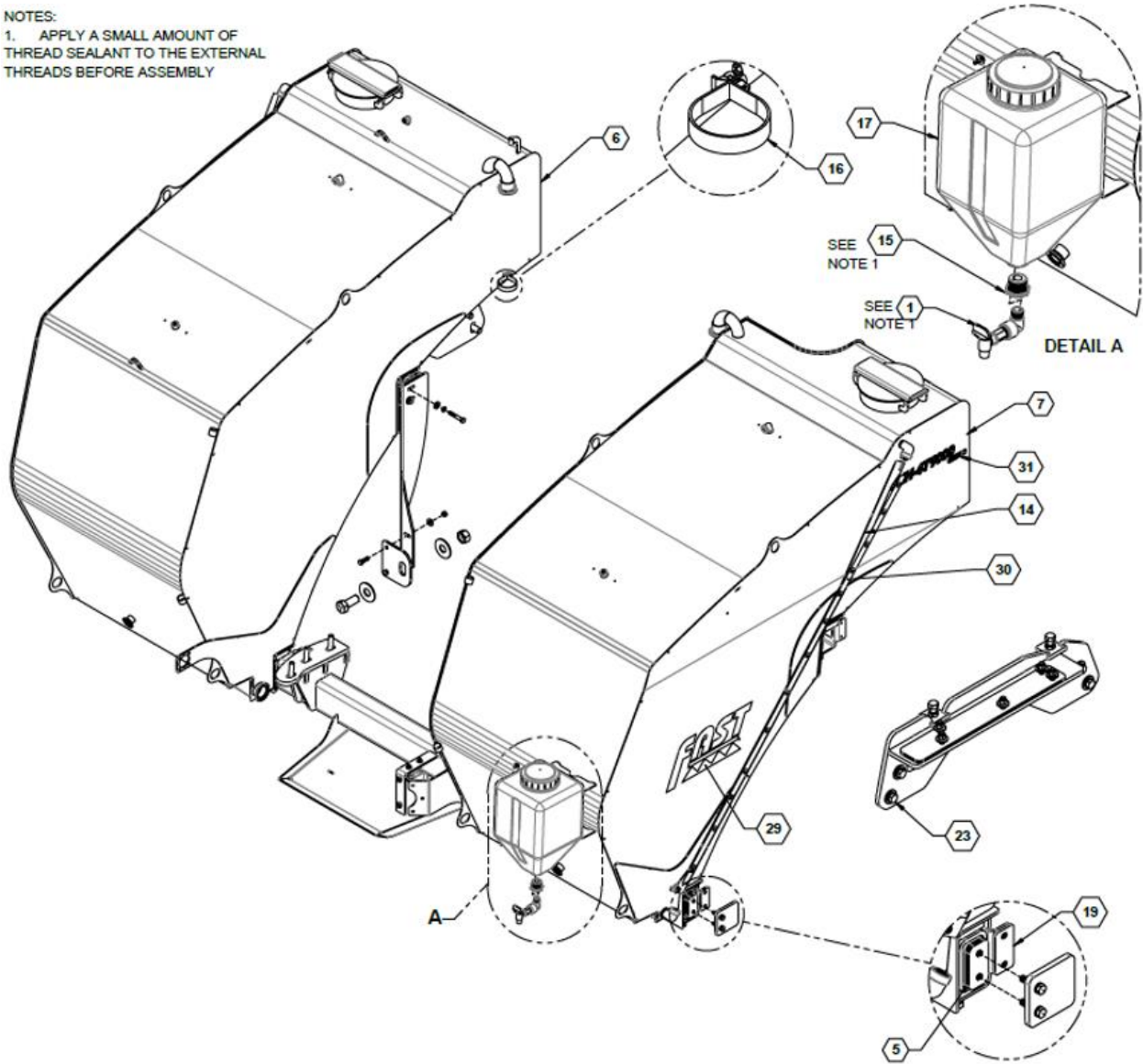
1. Install all plumbing components as shown in the [PARTS](#) section(s).

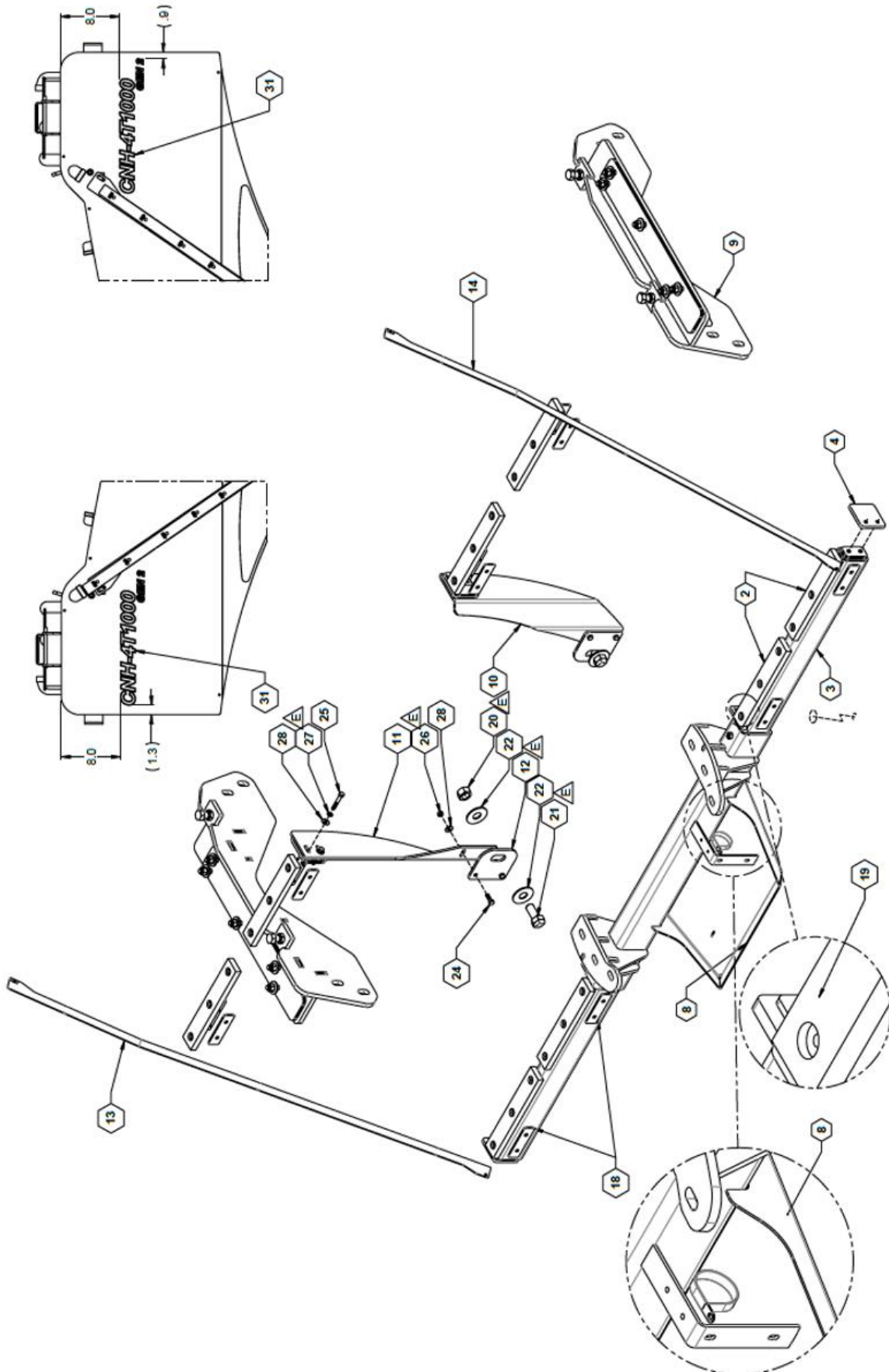
PARTS

Base Assembly, Side Tanks

NOTES:

1. APPLY A SMALL AMOUNT OF THREAD SEALANT TO THE EXTERNAL THREADS BEFORE ASSEMBLY



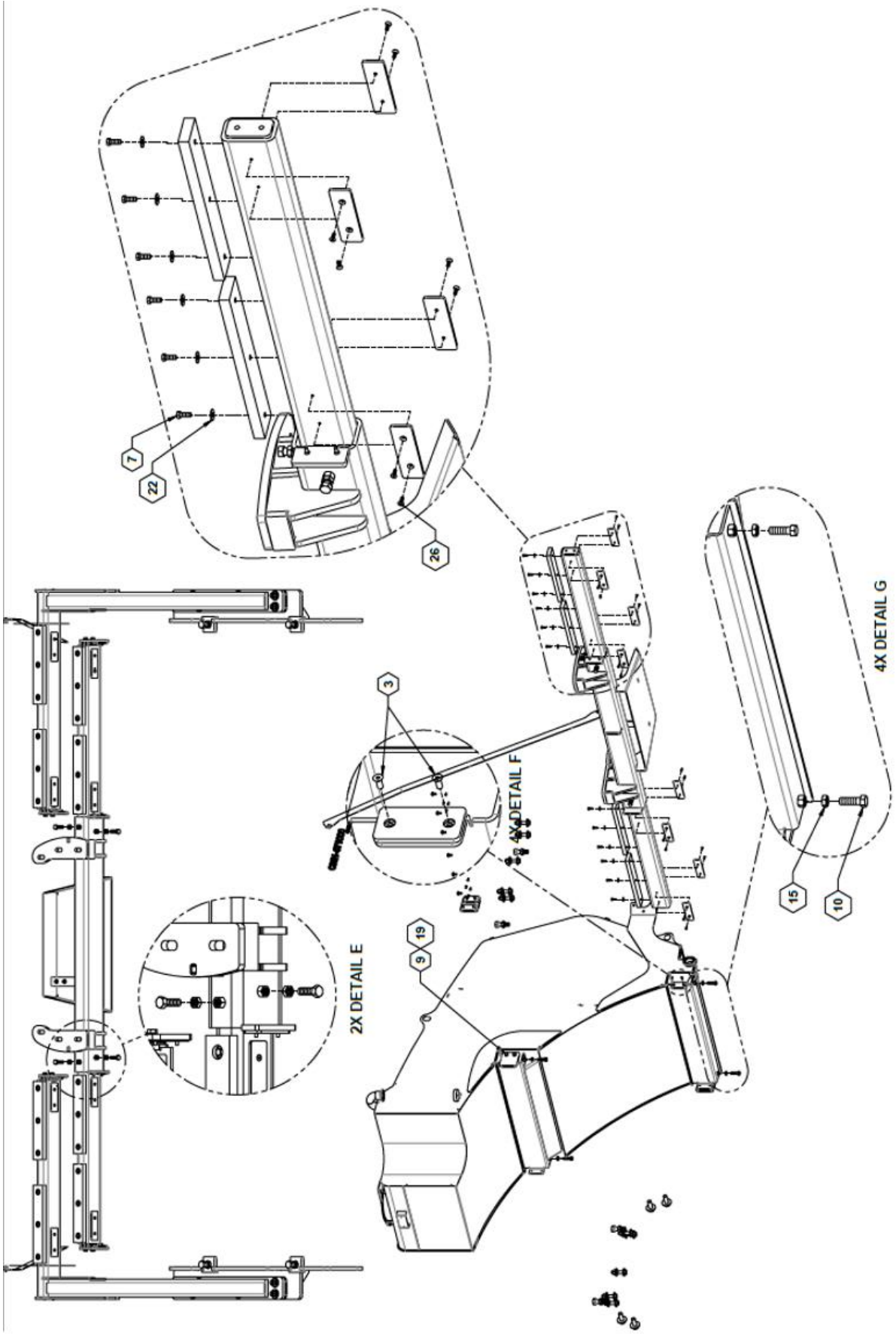




INSTALLATION & PARTS

Parts List 27370: Base Assembly, Side Tanks

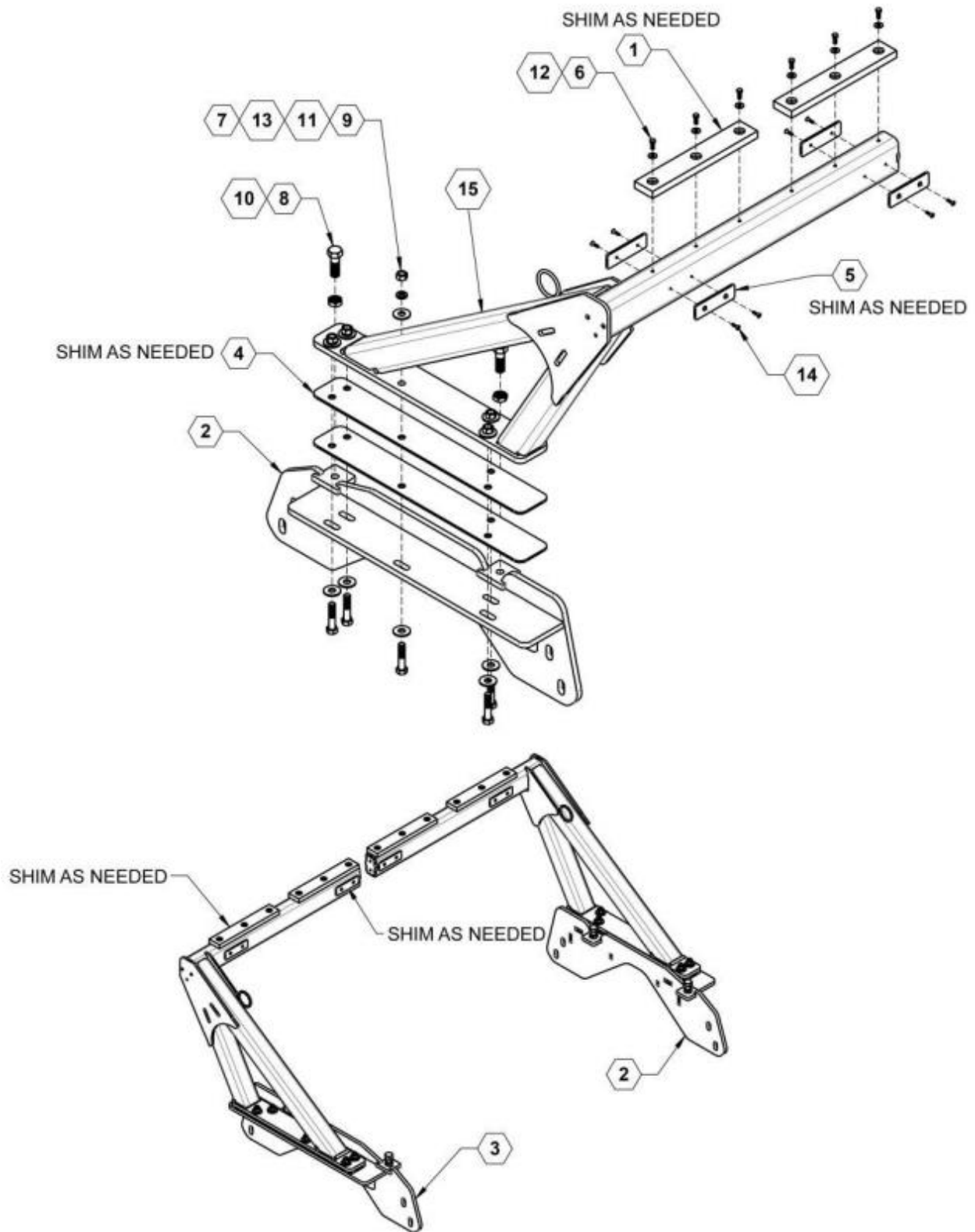
ITEM	PART	QTY	DESCRIPTION
1	90SAFCHWF	1	FC HAND WASH FAUCET ASSY
2	23637	4	PAD, RUBBER
3	23686	1	WELDMENT, CROSS TUBE
4	23689	4	PLATE, BOLT
5	23690	12	PLATE, SHIM
6	25100	1	WLDMT, RH TANK
7	25101	1	WLDMT, LH TANK
8	25150	1	CASE RT TANK MOUNT WLDMT.
9	27700	1	CASE RT TANK MOUNT, ASSY
10	28886	1	BRACKET, FORMED LEFT TANK SUPPORT, ROWTRAC TANKS
11	28887	1	BRACKET, FORMED RIGHT TANK SUPPORT, ROWTRAC TANKS
12	28888	2	LUG, FRAME ATTACHMENT, ROWTRAC TANKS
13	34682	1	PLATE, DECAL LEVEL STRIP RH
14	34684	1	PLATE, DECAL LEVEL STRIP RH
15	530143	1	REDUCER, 1-1/4" MPT X3 /4" FPT
16	540052	3	P-CLAMP, 3" W/3/8" HOLE
17	570094	1	TANK, 5 GAL, WHITE
18	590024	8	PLASTIC TRANSPORT
19	590109	6	PAD, RUB, SHORT
20	590152	2	NUT, CENTERLOCK, 1-1/4, ZP
21	590302	2	BOLT, 1-1/4 X 3" ZP
22	590434	4	WASHER, FLAT, 1-1/4 ID ZP
23	590890	1	KIT, STANDARD HARDWARE CASE SIDE TANKS
24	596153M	4	BOLT, HH 1/2-13X1-1/2 GR5 MAGNI
25	596156M	4	BOLT, HH 1/2 X 3 GR5 MAGNI
26	596239M	4	NUT, CENTERLOCK, 1/2-13 MAGNI
27	596251M	4	WASHER, LOCK, 1/2 MAGNI
28	596260M	8	WASHER, FLAT 1/2 MAGNI
29	800181	2	FAST TANK LOGO
30	800248	2	DECAL, CASE ROWTRAC TANK LEVEL
31	800290	2	DECAL, TANK CNH-4T1000 GEN 2



Parts List 590890: Base Assembly, Hardware

ITEM	PART	QTY	DESCRIPTION
1	596128M	9	BOLT, HH 3/8-16 X 1 GR5 MAGNI
2	596130M	1	BOLT, HH 3/8-16 X 2 GR5 MAGNI
3	596161M	4	BOLT, HH 1/2X5-1/2 GR5 MAGNI
4	596213M	2	NUT, HEX 3/8-16 MAGNI
5	596239M	4	NUT, CENTERLOCK, 1/2-13 MAGNI
6	596250M	2	LOCKWASHER, 3/8 MAGNI
7	596258M	4	WASHER, FLAT 3/8 MAGNI
8	596259M	8	WASHER, FLAT 3/4 MAGNI
9	596260M	14	WASHER, FLAT 1/2 MAGNI
10	596488M	8	BOLT, HH 3/4-10 X 8-1/2 G5 MAGNI
11	596592M	2	BOLT, CARRIAGE 3/8-16 X 1 MAGNI
12	596595M	8	BOLT, HH, M16 X 40MM GR 8.8 MAGNI
13	596603M	8	BOLT, FLANGE 3/4"-10 X 2.5" GR. 8 MAGNI
14	596627M	8	WASHER, FLAT, 16MM, MAGNI
15	596639M	6	BOLT, HH 1/2 X 1-3/4 GR5 MAGNI
16	596742M	4	NUT, TOP LOCK FLANGE 5/8-11 MAGNI
17	596769M	10	NUT, HEX FLANGE 3/8-16 MAGNI
18	596771M	10	NUT, HEX FLANGE 1/2-13 MAGNI
19	596814M	40	BOLT, HEX FLANGE 3/4-10 X 2 GR8 MAGNI
20	596831M	5	BOLT, FLANGED 5/8-11 X 2" GR8 MAGNI
21	596850M	56	NUT, HEX FLANGE TOPLOCK 3/4-10 GR8 MAGNI

Side Tanks Mount Assembly



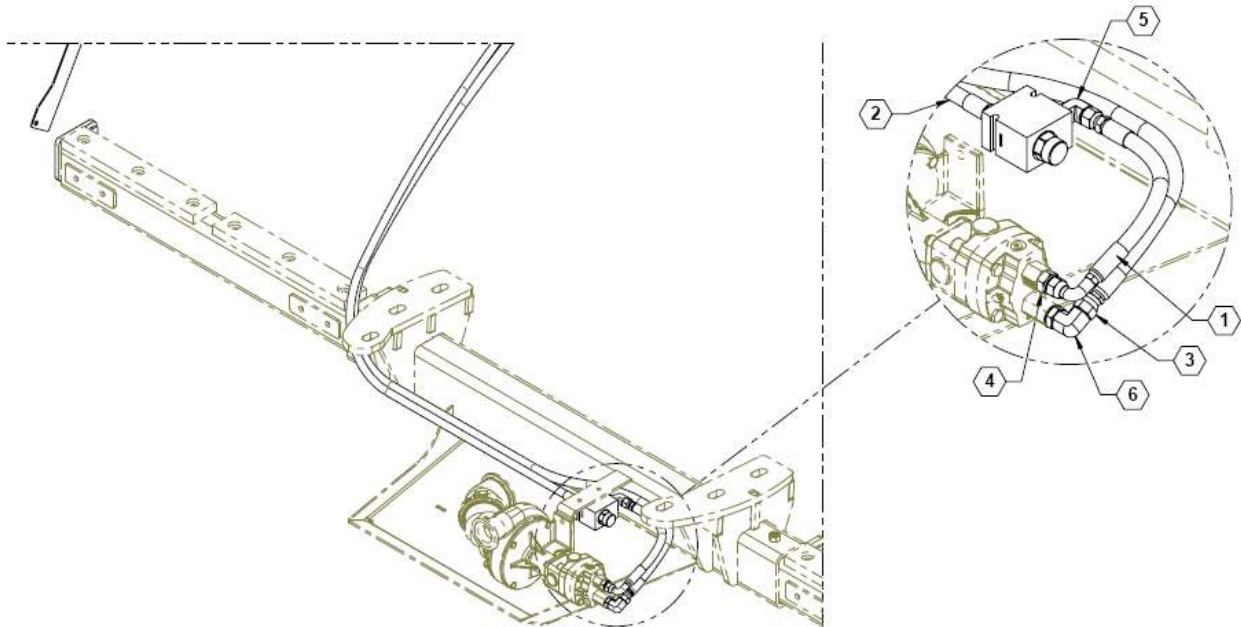


INSTALLATION & PARTS

Parts List 27700: Side Tanks Mount Assembly

ITEM	PART NO.	QTY.	DESCRIPTION
1	23637	4	PAD, RUBBER
2	27702	1	LOWER TANK MOUNT, RH
3	27703	1	LOWER TANK MOUNT, LH
4	27714	4	PLATE, SHIM
5	590024	8	PLASTIC TRANSPORT
6	596128M	12	BOLT, HH 3/8-16 X 1 GR5 MAGNI
7	596187M	10	BOLT, HH 3/4-10 X 3-1/2 GR5 MAGNI
8	596200M	4	BOLT, HEX 1-8 X 3-1/2 GR5 MAGNI
9	596217M	10	NUT, HEX 3/4-10 G5 MAGNI
10	596226M	4	NUT, HEX JAM 1-8 MAGNI
11	596254M	10	LOCKWASHER 3/4 MAGNI
12	596258M	12	WASHER, FLAT 3/8 MAGNI
13	596259M	20	WASHER, FLAT 3/4 MAGNI
14	596806M	16	FLAT HEAD 1/4-12 X 1 MAGNI
15	27972	1	UPPER TANK MOUNT, RH, 88" TRACK WIDTH
	27973		UPPER TANK MOUNT, LH, 88" TRACK WIDTH
	27704		UPPER TANK MOUNT, RH, 120" TRACK WIDTH
	27705		UPPER TANK MOUNT, LH, 120" TRACK WIDTH
	27974		UPPER TANK MOUNT, RH, 132" TRACK WIDTH
	27975		UPPER TANK MOUNT, LH, 132" TRACK WIDTH

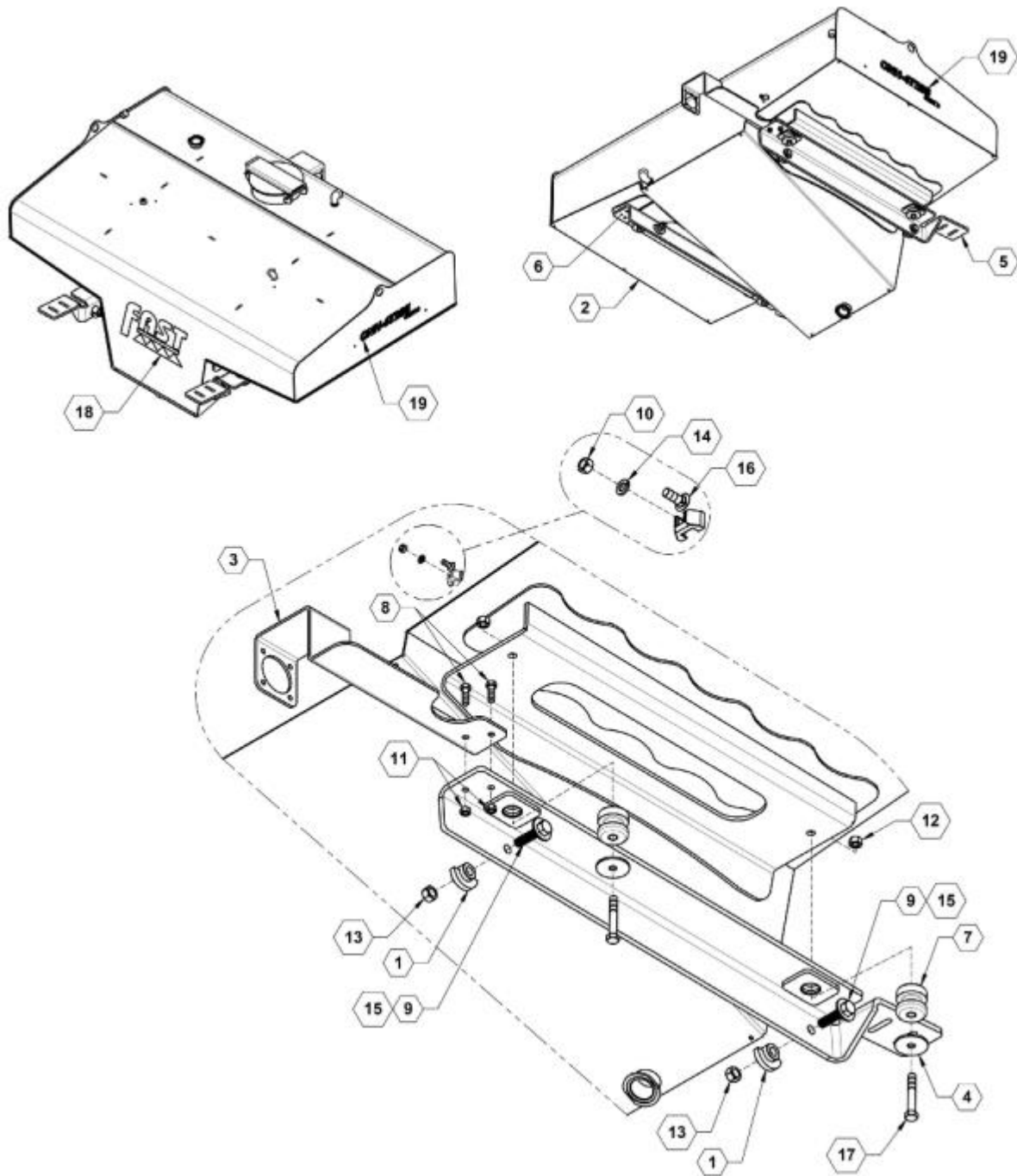
Side Tank Hydraulic Kit



Parts List 600108: Side Tank Hydraulic Kit

ITEM	PART NO.	QTY.	DESCRIPTION
1	600108-1	1	HOSE ASSY, 08-8FJX90-8FJX-16
2	600108-2	1	HOSE ASSY, 08-10MOR-8MOR-PIONEER-360
3	600108-3	1	HOSE ASSY, 10-10FJX-8MOR-PIONEER-384
4	610060	1	JIC #8 TO ORING #10
5	610086	1	JIC #8 TO O-RING #10 ELBOW 90°
6	610102	1	ADAPTER, -10MJIC X -10MORB90

Rear Tank, 300-Gallon



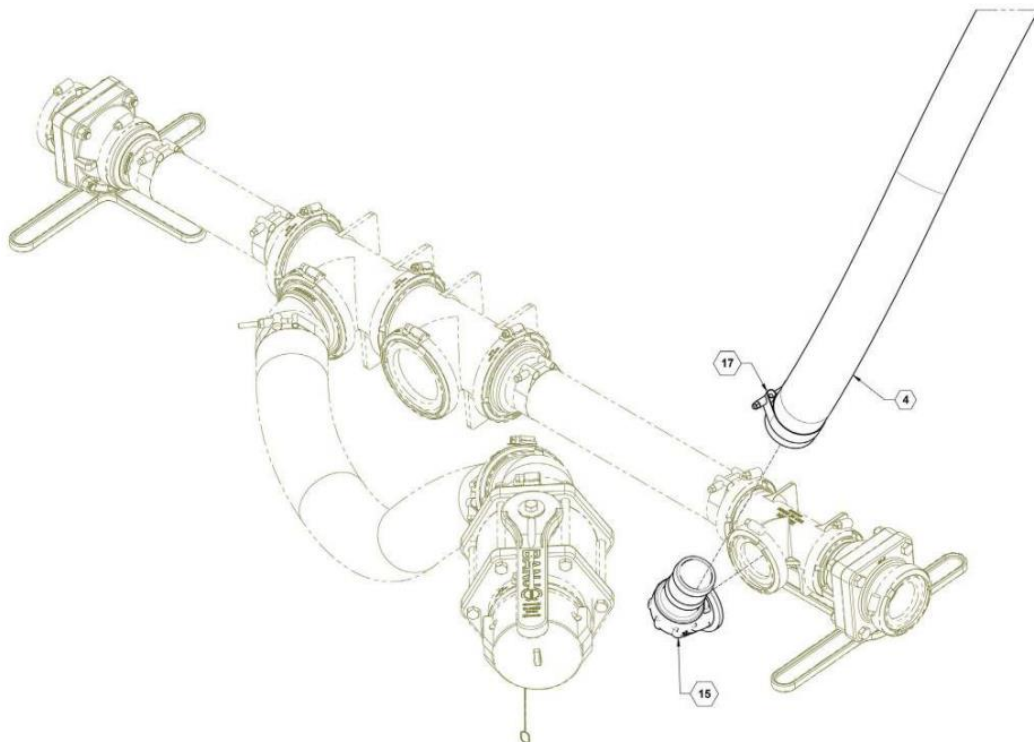
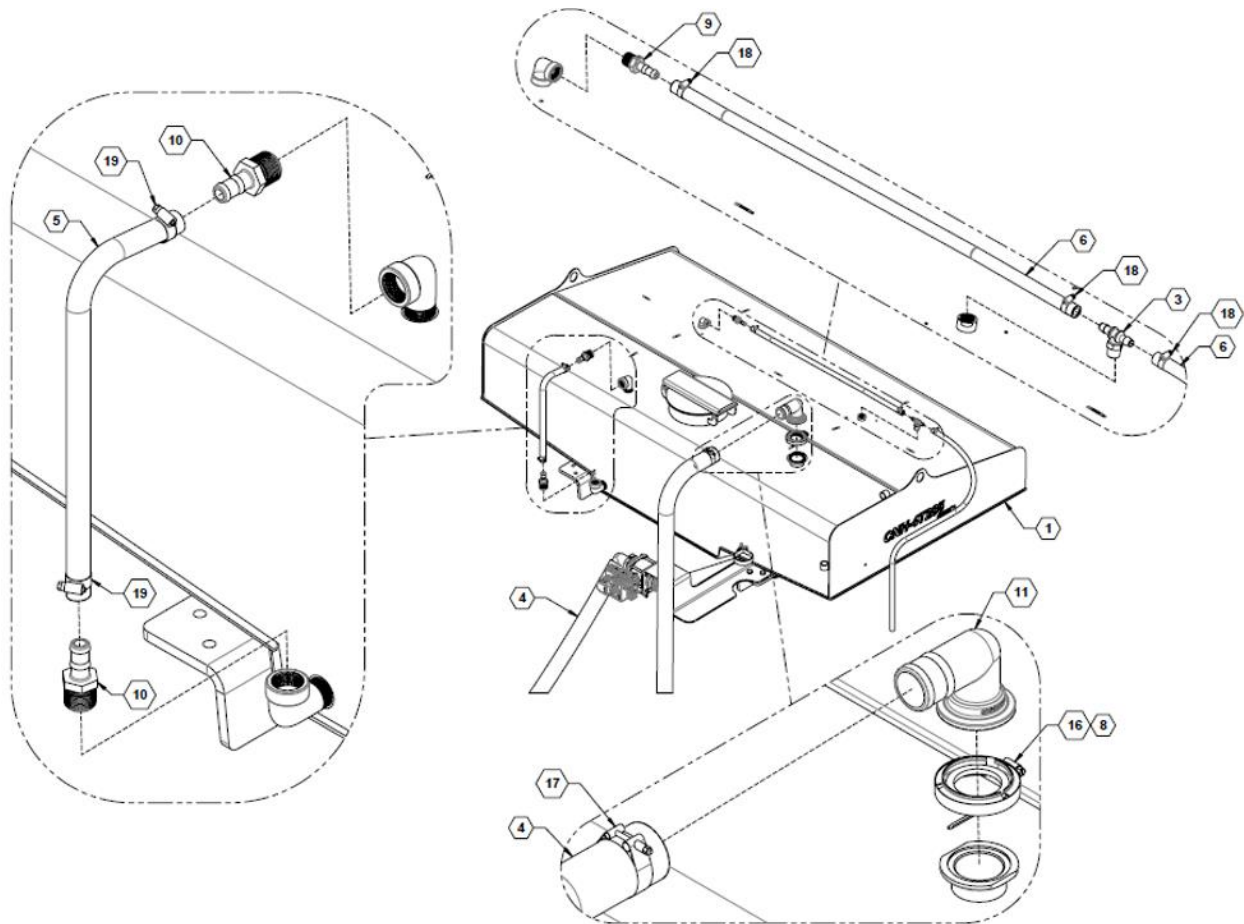


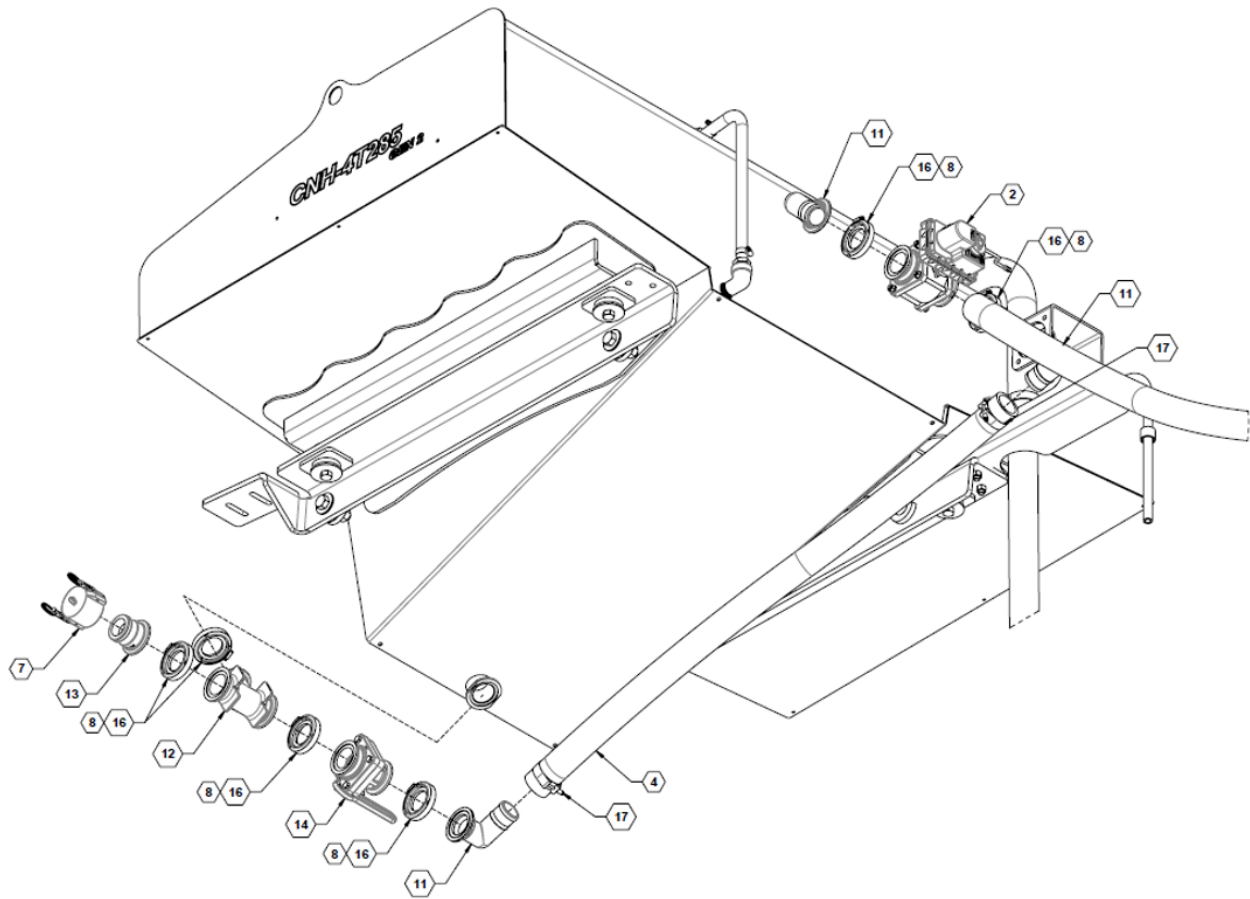
INSTALLATION & PARTS

Parts List 27199: Rear Tank, 300-Gallon

ITEM	PART NO.	QTY.	DESCRIPTION
1	23796	4	PIN, MOUNT, WING REST, WELDMENT
2	25175	1	WLDMT, REAR TANK
3	25185	1	TANK VALVE MOUNT BRACKET
4	26294	4	SNUBBING WASHER
5	26297	1	WLDMNT, REAR TANK MOUNT LH
6	26298	1	WLDMNT, REAR TANK MOUNT RH
7	590322	4	ISOLATOR (22003-14)
8	596153M	2	BOLT, HH 1/2-13X1-1/2 GR5 MAGNI
9	596186M	4	BOLT, HH 3/4-10 X 3 GR8 MAGNI
10	596213M	1	NUT, HEX 3/8-16 MAGNI
11	596215M	2	NUT, HEX 1/2 NC GR5 MAGNI
12	596216M	4	NUT, HEX 5/8-11 MAGNI
13	596217M	4	NUT, HEX 3/4-10 G5 MAGNI
14	596250M	1	LOCKWASHER, 3/8 MAGNI
15	596259M	4	WASHER, FLAT 3/4 MAGNI
16	596592M	1	BOLT, CARRIAGE 3/8-16 X 1 MAGNI
17	596800M	4	BOLT, HH 5/8-11 X 4 GR8 MAGNI
18	800181	1	FAST TANK LOGO
19	800289	2	DECAL, TANK CNH-4T285 GEN 2

Rear Tank Plumbing





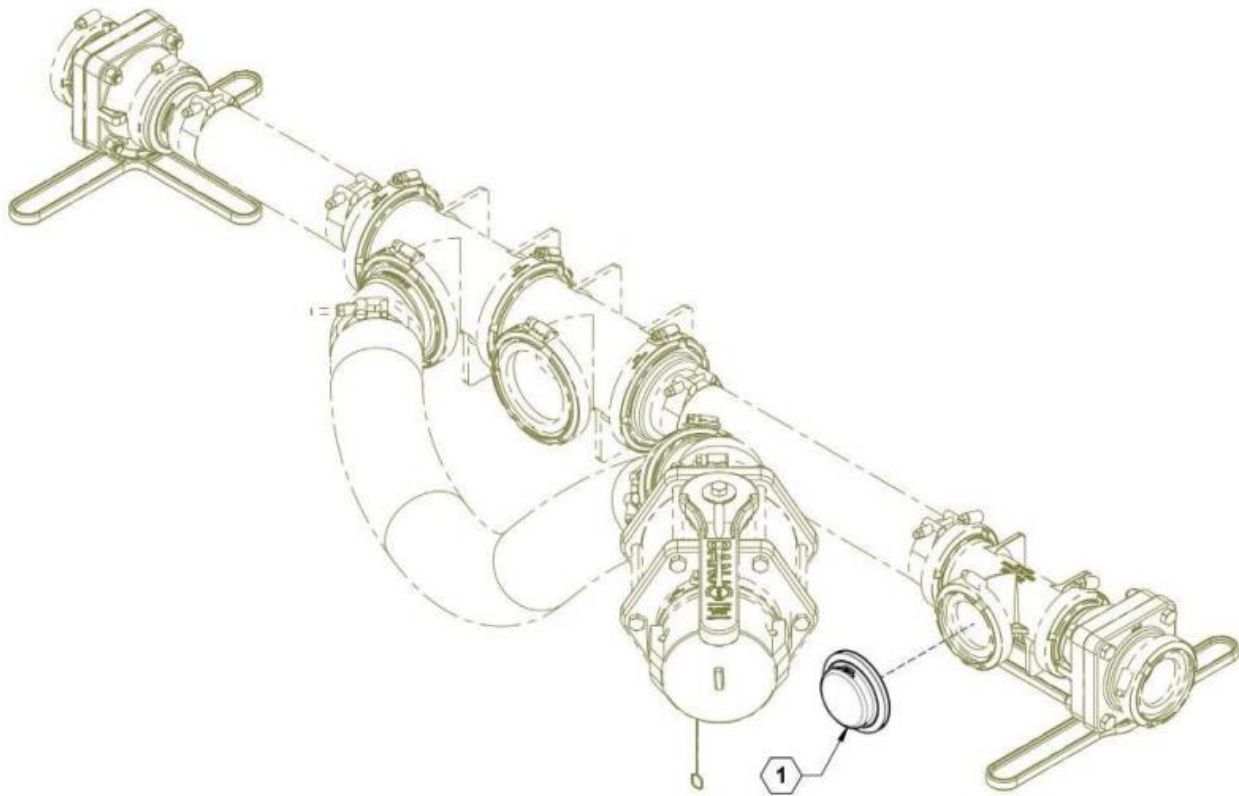


INSTALLATION & PARTS

Parts List 27200: Rear Tank Plumbing

ITEM	PART NO.	QTY.	DESCRIPTION
1	27199	1	ASSY, REAR TANK HARDWARE
2	500032	1	VALVE, 2" FP MANIFOLD ELEC SIDE LOAD
3	500065	1	TEE, .50 MPT X .50 HB
4	510003	1	HOSE 2.00 ID 35FT
5	510006	1	HOSE CLEAR VINYL 3/4 IN - 2FT
6	510012	1	HOSE EPDM 1/2IN EPDM - 8FT
7	530017	1	CAP, 2"
8	530019	7	GASKET, 2.00 EPDM
9	530035	1	STRAIGHT, 1/2 MPT 1/2" HB
10	530043	2	FITTING, 1.00 MPT X .75 HB
11	530104	4	ELBOW 90, 2.00 FP MANIFOLD X 2.00 HB
12	530110	1	MANIFOLD TEE, 2"
13	530271	1	ADAPTER, 2" FP X 2" MALE
14	530327	1	MANIFOLD, VALVE, 2" FP STUBBY
15	530334	1	2" FP PLANGE X HOSE SHK SWEEP
16	540002	7	CLAMP, FP WORM SCREW, 2.00
17	540069	4	HOSE CLAMP, 2.00 T-BOLT
18	540012	3	HOSE CLAMP, SS 1/2" #12
19	540013	2	HOSE CLAMP, SS .75 #12
20	540052	1	P-CLAMP, 3" W/3/8" HOLE

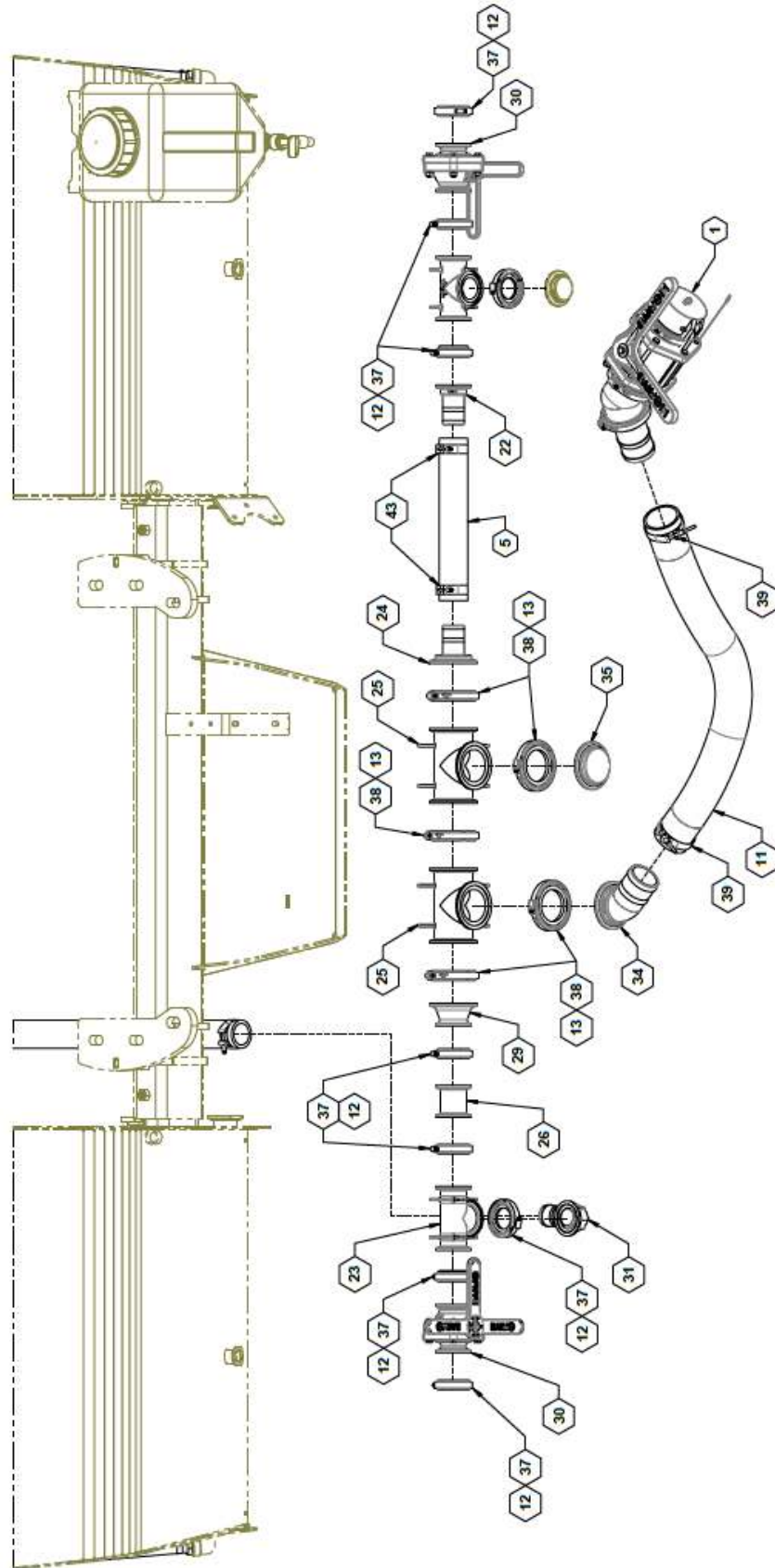
No Rear Tank

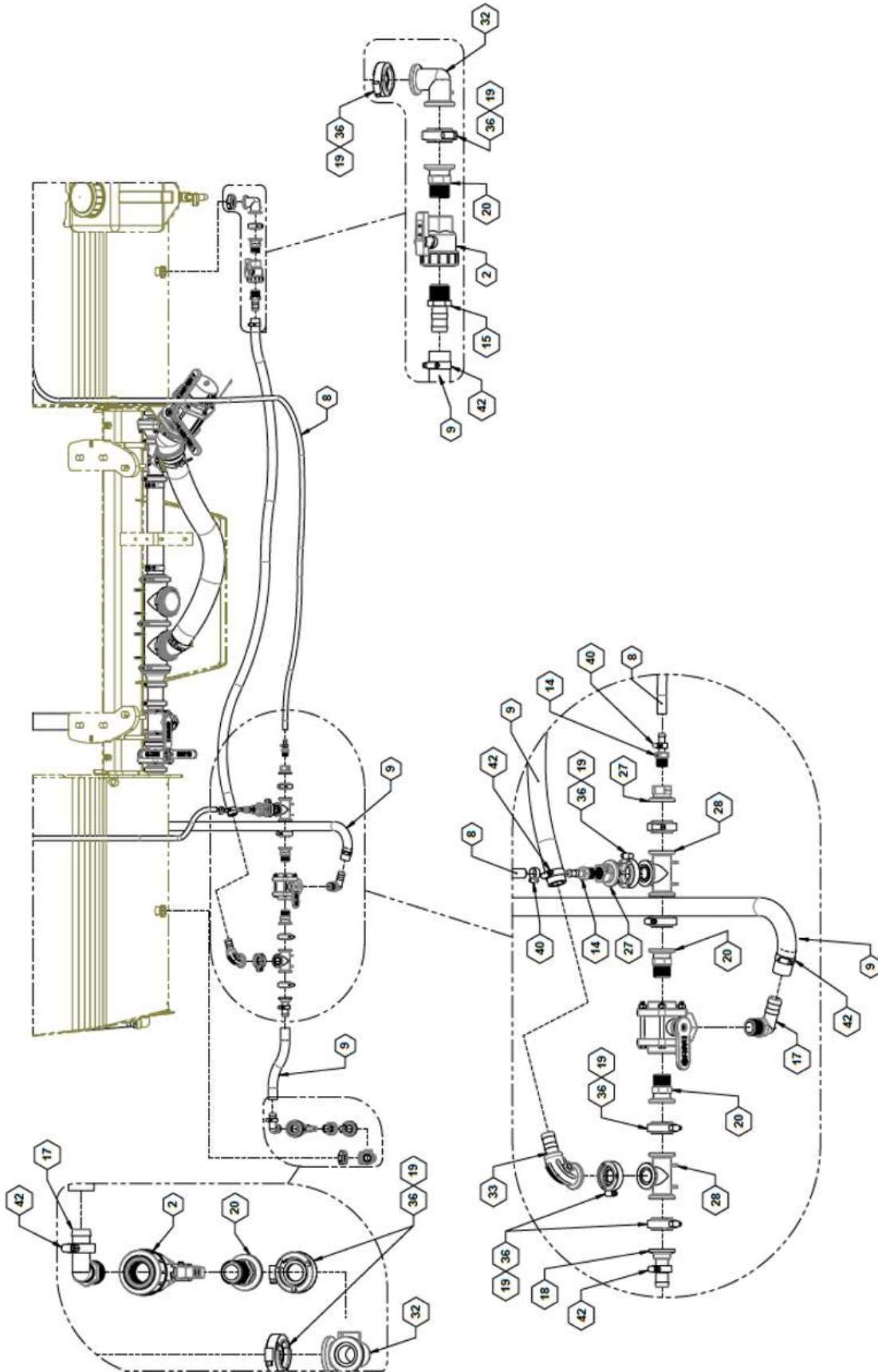


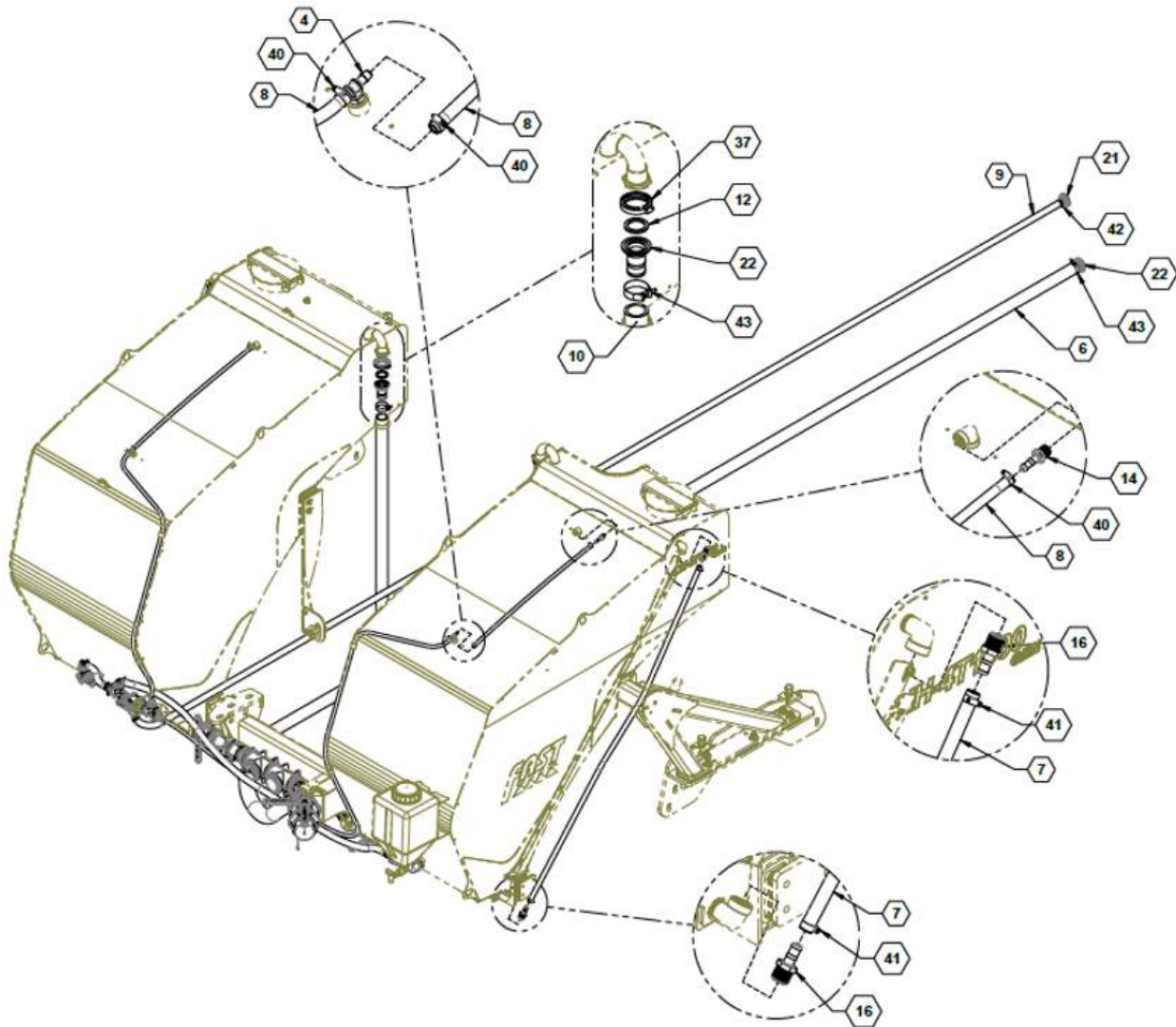
Parts List 27196: No Rear Tank

ITEM	PART NO.	QTY.	DESCRIPTION
1	530109	1	2" FULL PORT FLANGE CAP

Plumbing Without Pump







Parts List 27260: Plumbing Without Pump

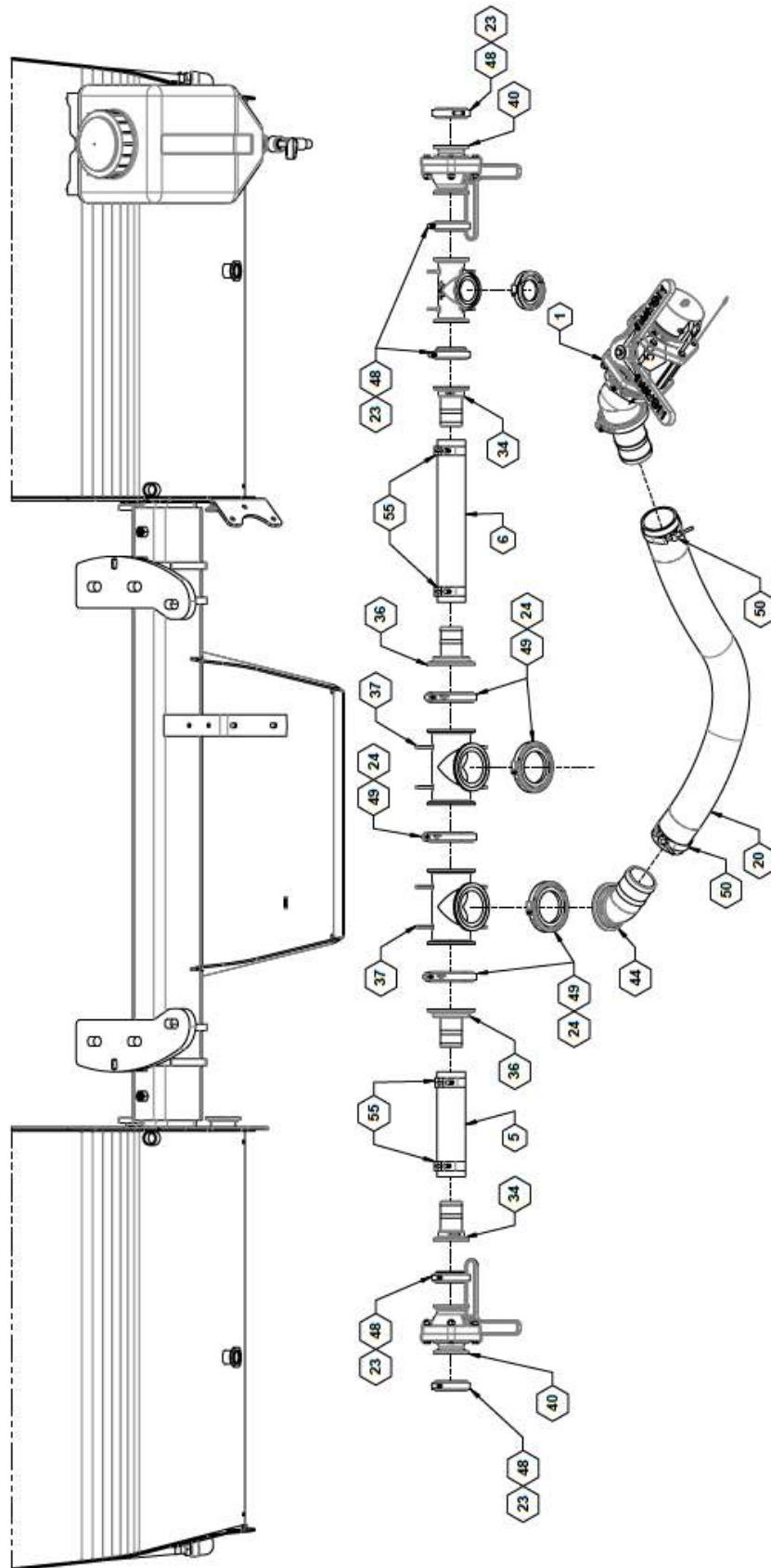
ITEM	PART NO.	QTY.	DESCRIPTION
1	90SA3QF45	1	3" QUICK FILL VALVE @ 45°
2	500009	2	VALVE, 1.00 FULL PORT SINGLE UNION
3	500050	1	VALVE 1" SIDE LOAD 3-WAY
4	500065	2	TEE, .50 MPT X .50 HB
5	510003	1	HOSE 2 IN FERTILIZER X 2FT
6	510003	1	HOSE 2 IN FERTILIZER X 23FT
7	510006	2	HOSE VINYL CLEAR 3/4 IN X 8FT LG
8	510012	4	HOSE 1/2 IN EPDM X 12FT
9	510016	3	HOSE 1 IN EPDM X 25FT
10	510025	2	HOSE 2" CLEAR PVC SUCTION X 8FT
11	510038	4	HOSE, 3" FERTILIZER, BLACK

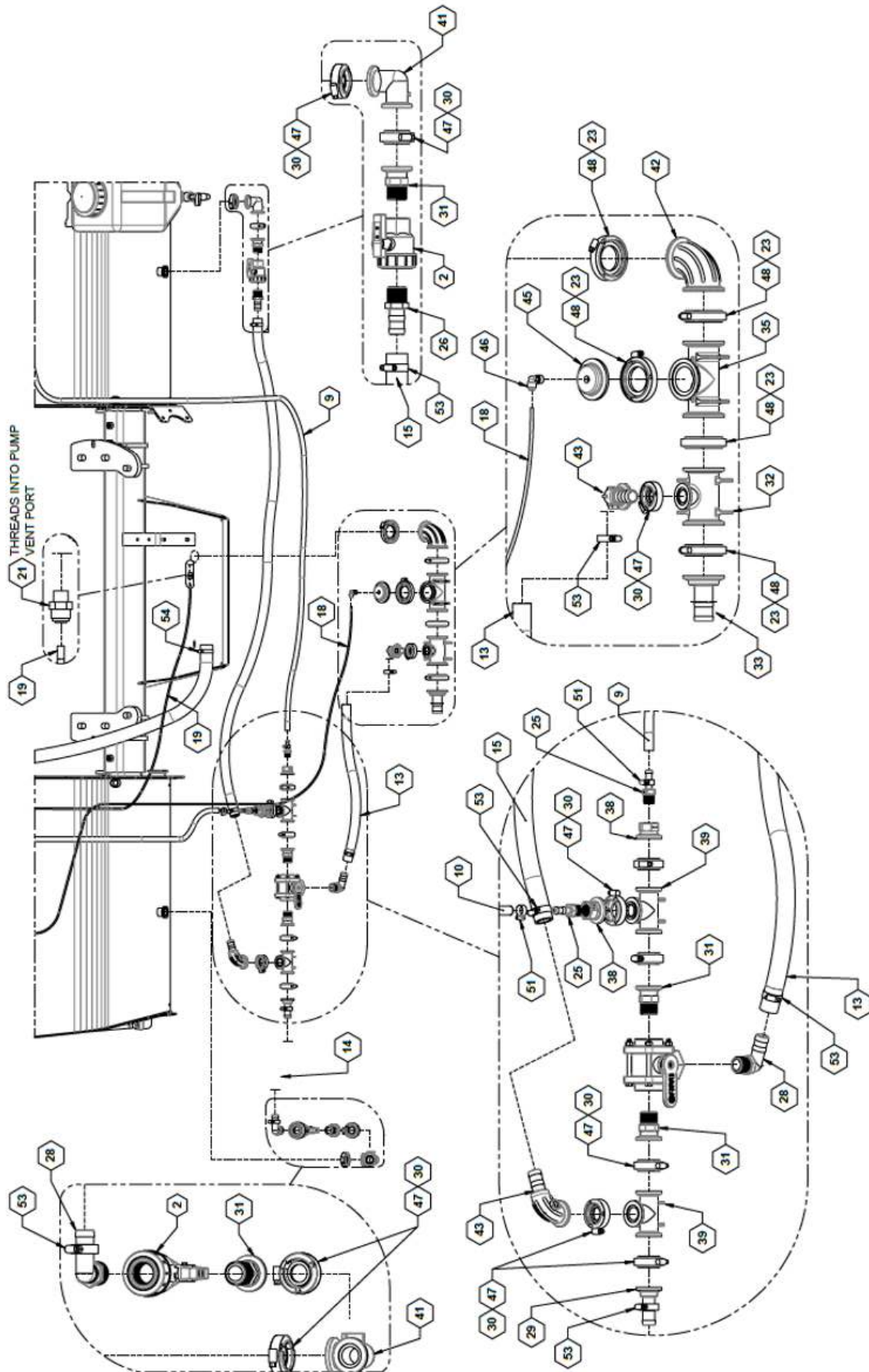


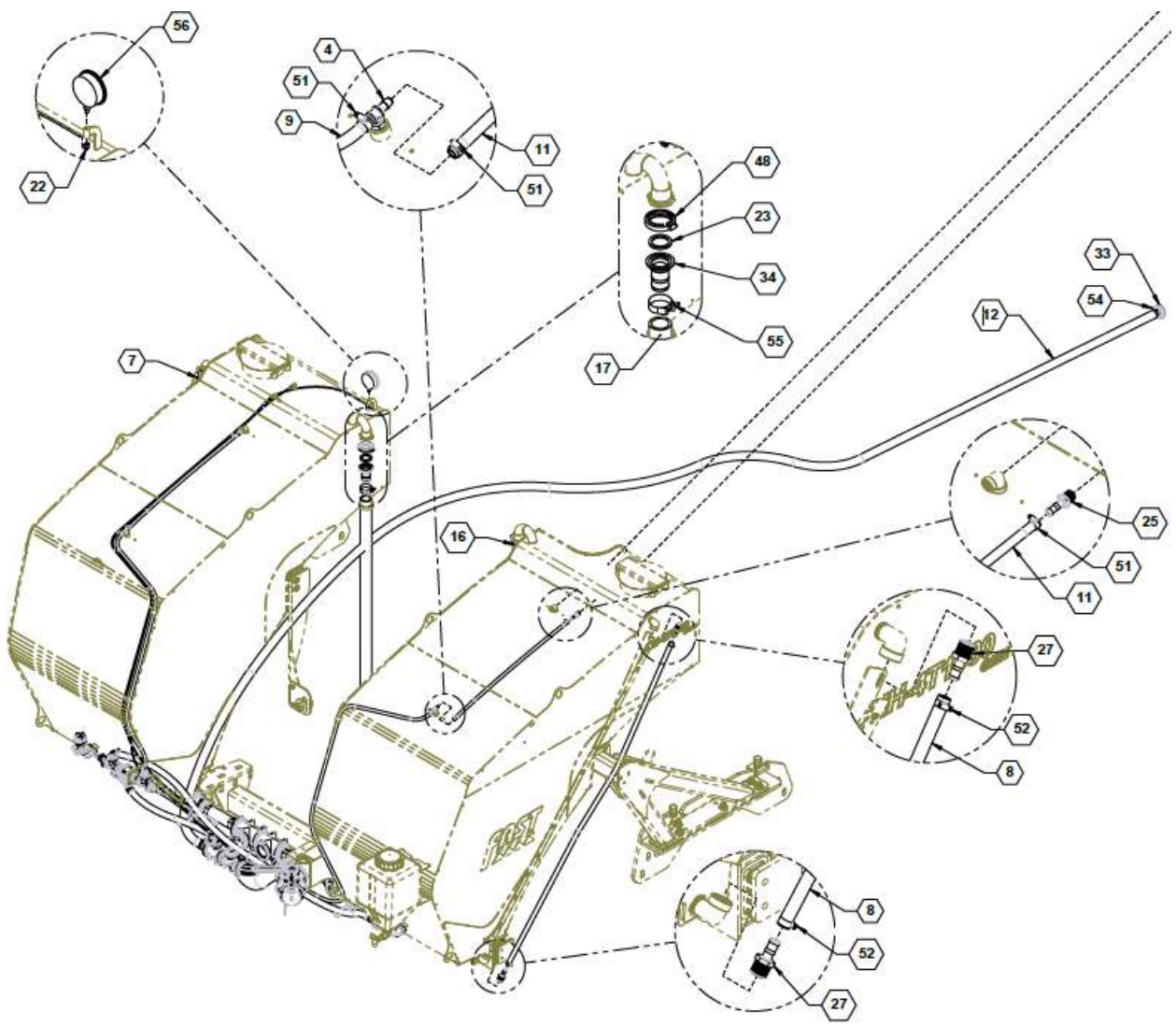
INSTALLATION & PARTS

ITEM	PART NO.	QTY.	DESCRIPTION
12	530019	11	GASKET, 2.00 EPDM
13	530024	5	GASKET, 3" EPDM
14	530035	4	STRAIGHT, 1/2 MPT 1/2" HB
15	530041	1	FITTING, 1.00 MNPT X 1.00 HB, POLY
16	530043	4	FITTING, 1.00 MPT X .75 HB
17	530044	2	FITTING, ELBOW, 90D, 1.00 MNPT X 1.00 HB, POLY
18	530066	1	FITTING, 1.00 MANIFOLD X 1.00 HB
19	530068	10	GASKET, 1.00 EPDM
20	530069	4	FITTING, 1.00 MANIFOLD X 1.00 MPT
21	530072	1	FITTING, 2.00 FLANGE X 1.00 HB, POLY
22	530103	4	FITTING, 2.00 FP FLANGE X 2.00 HB
23	530110	2	MANIFOLD TEE, 2"
24	530111	1	MANIFOLD, 3" X 2" HB
25	530115	2	MANIFOLD, 3" TEE
26	530244	1	FLANGE, 2" X 2" FULL PORT
27	530265	2	FITTING, 1.00 MANIFOLD X .50 FPT
28	530298	2	MANIFOLD TEE, 1"
29	530316	1	MANIFOLD REDUCER 3" X 2" CPLR
30	530327	2	MANIFOLD, VALVE, 2" FP STUBBY
31	530334	1	2" FP PLANGE X HOSE SHK SWEEP
32	530362	2	Coupling 90° 1" Flanged
33	530445	1	FLANGE SWEEP X 1 IN HB
34	530449	1	3" MANIFOLD TO HOSE BARB 45
35	530456	1	CAP, 3" MANIFOLD
36	540000	10	CLAMP, WORM SCREW, 1.00
37	540002	11	CLAMP, FP WORM SCREW, 2.00
38	540003	5	CLAMP, WORM SCREW 3"
39	540009	2	CLAMP, 3" T BOLT
40	540012	8	HOSE CLAMP, SS 1/2" #12
41	540013	4	HOSE CLAMP, SS .75 #12
42	540014	6	HOSE CLAMP, SS 1.00 #16
43	540069	6	HOSE CLAMP, 2.00 T-BOLT

Plumbing With Pump









INSTALLATION & PARTS

Parts List 27371: Plumbing With Pump

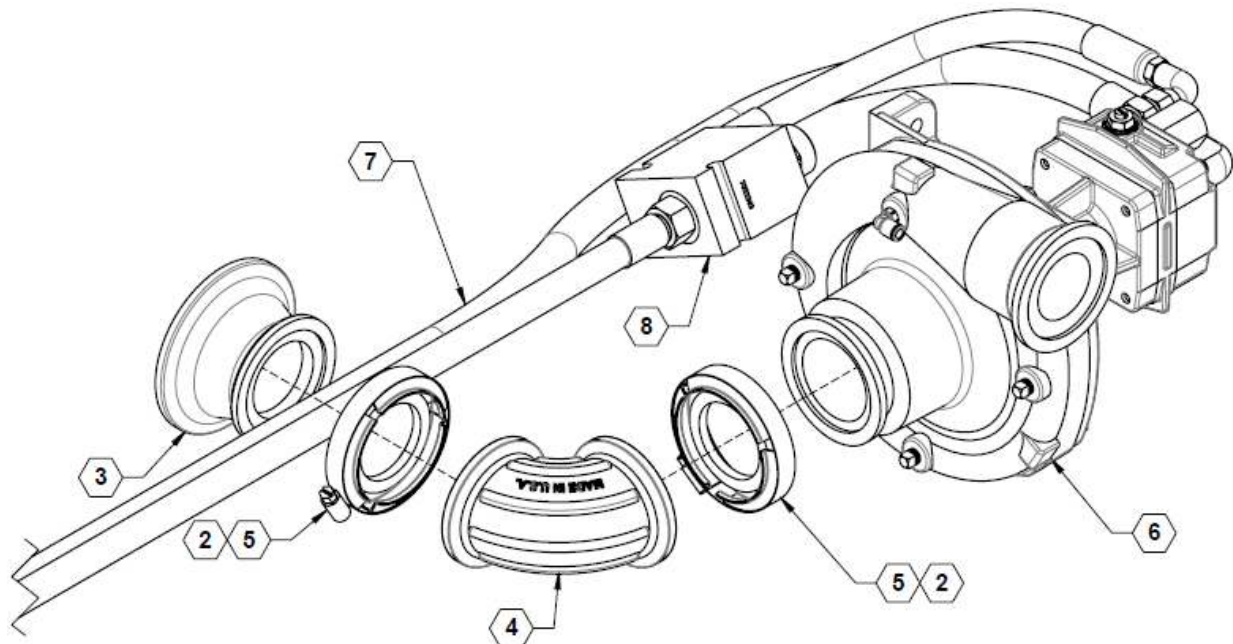
ITEM	PART NO.	QTY.	DESCRIPTION
1	90SA3QF45	1	3" QUICK FILL VALVE @ 45°
2	500009	2	VALVE, 1.00 FULL PORT SINGLE UNION
3	500050	1	VALVE 1" SIDE LOAD 3-WAY
4	500065	2	TEE, .50 MPT X .50 HB
5	510003	1	HOSE 2 IN FERTILIZER X 1FT
6	510003	1	HOSE 2 IN FERTILIZER X 2FT
7	510006	1	HOSE VINYL CLEAR 3/4 IN X 8FT LG
8	510006	1	HOSE VINYL CLEAR 3/4 IN X 8FT LG
9	510012	1	HOSE 1/2 IN EPDM X 12FT
10	510012	1	HOSE 1/2 IN EPDM X 6FT
11	510012	2	HOSE 1/2 IN EPDM X 4FT
12	510014	1	HOSE 1-1/2 IN FERTILIZER - 27FT
13	510016	1	HOSE 1 IN EPDM X 3FT
14	510016	1	HOSE 1 IN EPDM X 2FT
15	510016	1	HOSE 1IN EPDM X 8FT
16	510025	1	HOSE 2" CLEAR PVC SUCTION X 8FT
17	510025	1	HOSE 2" CLEAR PVC SUCTION X 8FT
18	510027	1	HOSE 3/16 IN EPDM X 15FT LG
19	510027	1	HOSE 3/16 IN EPDM X 14FT LG
20	510038	1	HOSE, 3" FERTILIZER, BLACK X 4FT
21	530001	2	MALE CONNECTOR, 1/4" X 1/4"
22	530004	1	FITTING, ELBOW, .250 QC X .250 MST, 90D
23	530019	13	GASKET, 2.00 EPDM
24	530024	5	GASKET, 3" EPDM
25	530035	4	STRAIGHT, 1/2 MPT 1/2" HB
26	530041	1	FITTING, 1.00 MNPT X 1.00 HB, POLY
27	530043	4	FITTING, 1.00 MPT X .75 HB
28	530044	2	FITTING, ELBOW, 90D, 1.00 MNPT X 1.00 HB, POLY
29	530066	1	FITTING, 1.00 MANIFOLD X 1.00 HB
30	530068	11	GASKET, 1.00 EPDM
31	530069	4	FITTING, 1.00 MANIFOLD X 1.00 MPT
32	530099	1	MANIFOLD, 2" FP X 1" FLANGE TEE



INSTALLATION & PARTS

ITEM	PART NO.	QTY.	DESCRIPTION
33	530100	2	MANIFOLD FLANGE, 2" FP X 1-1/2" HB
34	530103	4	FITTING, 2.00 FP FLANGE X 2.00 HB
35	530110	2	MANIFOLD TEE, 2"
36	530111	2	MANIFOLD, 3" X 2" HB
37	530115	2	MANIFOLD, 3" TEE
38	530265	2	FITTING, 1.00 MANIFOLD X .50 FPT
39	530298	2	MANIFOLD TEE, 1"
40	530327	2	MANIFOLD, VALVE, 2" FP STUBBY
41	530362	2	Coupling 90° 1" Flanged
42	530386	1	MANIFOLD SWEEP, 2" FP FLANGE
43	530445	2	FLANGE SWEEP X 1 IN HB
44	530449	1	3" MANIFOLD TO HOSE BARB 45
45	530451	1	2" MANIFOLD PLUG W/ 3/8" PORT
46	530455	1	PUSH CONNECT 1/4 X 3/8" MPT
47	540000	11	CLAMP, WORM SCREW, 1.00
48	540002	13	CLAMP, FP WORM SCREW, 2.00
49	540003	5	CLAMP, WORM SCREW 3"
50	540009	2	CLAMP, 3" T BOLT
51	540012	8	HOSE CLAMP, SS 1/2" #12
52	540013	4	HOSE CLAMP, SS .75 #12
53	540014	6	HOSE CLAMP, SS 1.00 #16
54	540016	2	CLAMP, SS 1.500 #24
55	540069	6	HOSE CLAMP, 2.00 T-BOLT
56	790020	1	GAUGE, FAST LOGO 160PSI

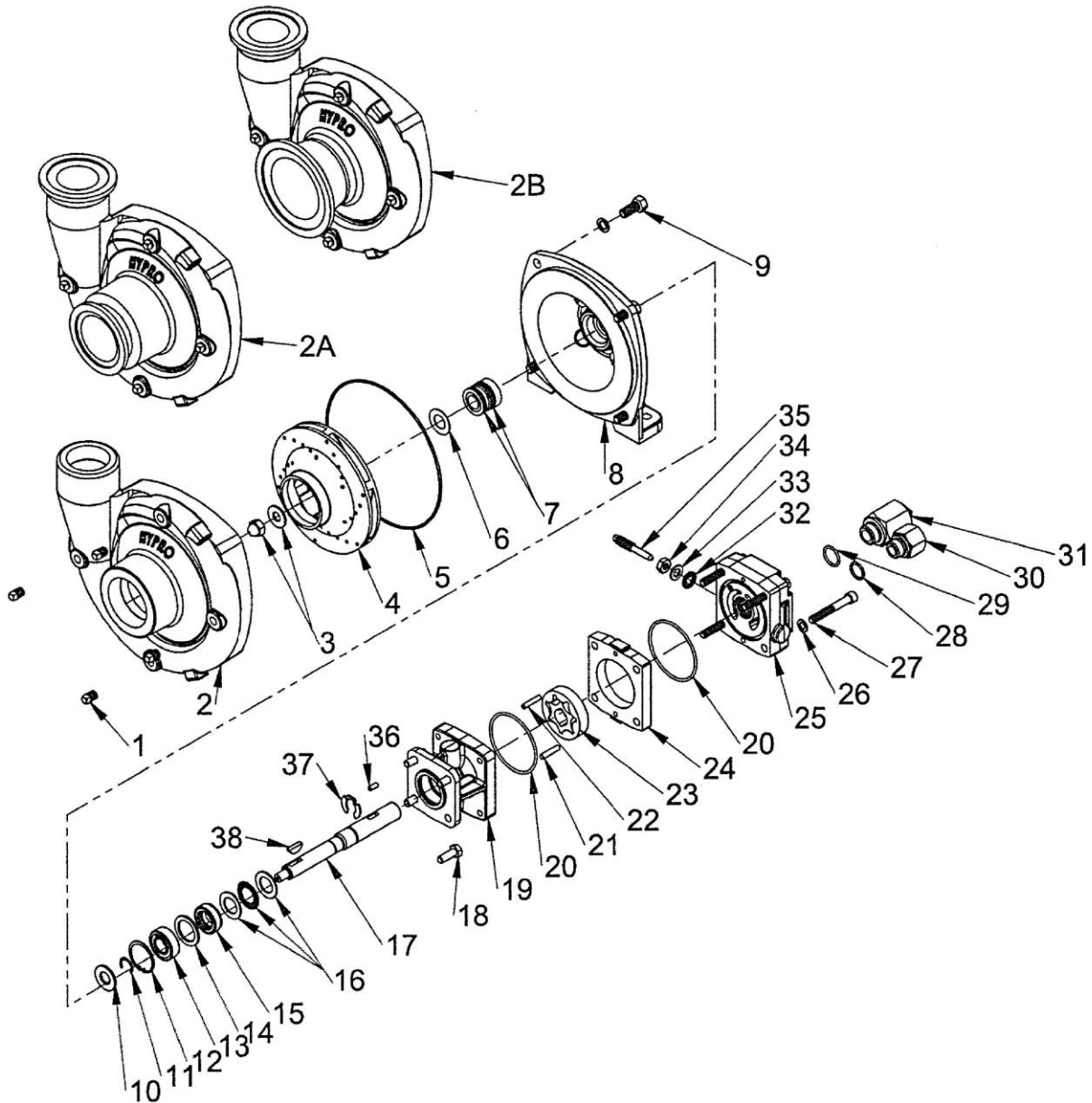
Pump Option, Hypro



Parts List 27187: Pump Option, Hypro

ITEM	PART	QTY.	DESCRIPTION
1	530004	1	FITTING, ELBOW, .250 QC X .250 MST, 90D
2	530019	2	GASKET, 2.00 EPDM
3	530316	1	MANIFOLD REDUCER 3" X 2" CPLR
4	530386	1	MANIFOLD SWEEP, 2" FP FLANGE
5	540002	2	CLAMP, FP WORM SCREW, 2.00
6	550045	1	PUMP, HYPRO 9306 CAST
7	600108	1	CASE RT SIDE TANK HYD KIT
8	610099	1	VALVE, FLOW CONTROL, P.C.

Pump Hypro 9306C(S)-HM1, 3, 4C, and 5C-3U



Parts List 550045/550046: Pump Hypro 9306C(S)-HM1, 3, 4C, and 5C-3U

ITEM	PART	QTY.	DESCRIPTION
0	550045	1	COMPLETE PUMP ASSEMBLY, CAST
0	550046	1	COMPLETE PUMP ASSEMBLY, STAINLESS
1	2406-0016	4	DRAIN/VENT PLUG



INSTALLATION & PARTS

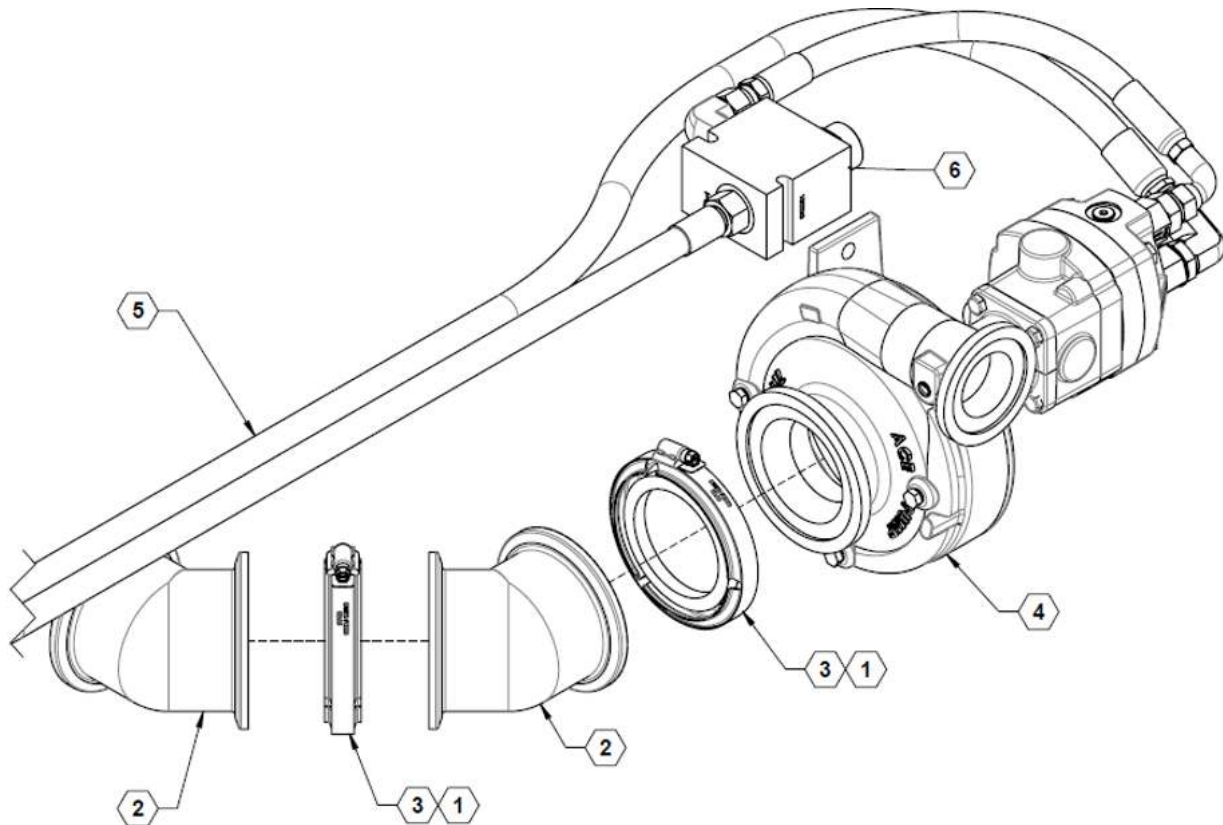
ITEM	PART	QTY.	DESCRIPTION
2	0154-9200C1	1	PUMP CASING (9306C)
2	0154-9200S1	1	PUMP CASING (9306S)
2A	0157-9200C	1	PUMP CASING (UNIVERSAL FLANGE 2' X 2' CAST)
2A	0157-9200S	1	PUMP CASING (UNIVERSAL FLANGE 2' X 2' SS)
2B	0158-9200C	1	PUMP CASING (UNIVERSAL FLANGE 3' X 2' CAST)
2B	0158-9200S	1	PUMP CASING (UNIVERSAL FLANGE 3' X 2' SS)
3	3430-0825	1	IMPELLER NUT (9306C and 9306S)
4	0401-9200P2	1	IMPELLER (NYLON STD 9306S)
4	0405-9100P2	1	IMPELLER (POLY OPTIONAL) (STD 9306S)
4	0405-9100P2	1	IMPELLER (GTX OPTIONAL)
5	3430-0332	1	O-RING
6	3430-0332	1	GASKET
7	3430-0332	1	MECHANICAL SEAL (VITON/CERAMIC (STD 9306C)
7	3430-0589	1	MECHANICAL SEAL (SILICON CARBIDE) (STD 9306S)
8	0750-9300C2	1	MOUNTING FLANGE (9306C)
8	0756-9300S	1	MOUNTING FLANGE (9306S)
9	2210-0020	4	HEX HEAD CAP SCREW (9306C)
9	2210-0125	4	HEX HEAD CAP SCREW (9306S)
10	1410-0056	1	SLINGER RING
11	1810-0015	1	SNAP RING
12	1820-0013	1	RETAINING RING
13	3430-0881	1	BALL BEARING
14	1410-0154	1	SPACER
15	3430-0881	1	LIP SEAL
16	2029-0014	1	THRUST BEARING ASSEMBLY
17	3430-0852	1	SHAFT (HM1C/HM5C)
17	3430-0855	1	SHAFT (HM3C)
18	2210-0005	1	HEX HEAD CAP SCREW
19	0150-2540C	1	MOTOR BODY (INCLUDES NEEDLE BEARING)
19	0150-2542C	1	MOTOR BODY CASE DRAIN SAE-4 (INCLUDES NEEDLE BEARING)
20	3430-0881	1	O-RING
21	1600-0095	1	DOWEL PIN (HMIC/HM5C)
21	1600-0096	1	DOWEL PIN (HMIC/HM3C)
22	1600-0084	1	DOWEL PIN (HMIC/HM5C)
22	1600-0085	1	DOWEL PIN (HMIC/HM3C)
23	3900-0022	1	GEROTOR (HM1C)



INSTALLATION & PARTS

ITEM	PART	QTY.	DESCRIPTION
23	3900-0048	1	GEROTOR (HM3C)
23	3900-0048	1	GEROTOR (HM5C)
24	0720-2603	1	GEROTOR HOUSING (HM1C MODELS) 1/2" WIDE
24	0720-2606	1	GEROTOR HOUSING (HM3C MODELS) 1" WIDE
24	0720-2604	1	GEROTOR HOUSING (HM5C MODELS) 5/8" WIDE
25	0254-2500C2	1	MOTOR END PLATE (INCLUDES NEEDLE BEARING)
25	0254-2500C3	1	MOTOR END PLATE, -8, -10 SAE, NO BYPASS (INCLUDES NEEDLE BEARING)
26	2270-0039	4	WASHER
27	2220-0021	4	CAP SCREW (HM1C MODELS)
27	2220-0044	4	CAP SCREW (HM3C MODELS)
27	2220-0032	4	CAP SCREW (HM5C MODELS)
28	3430-0881	1	O-RING
29	3430-0881	1	O-RING
30	3360-0021A	1	PRESSURE PORT ADAPTER (INCLUDES O-RING)
31	3320-0051A	1	TANK PORT ADAPTER (INCLUDES O-RING)
32	3430-0881	1	GASKET
33	3430-0881	1	WASHER
34	2250-0038	1	LOCK NUT
35	3220-0029	1	BYPASS ADJUSTING SCREW
36	1610-0031	1	GEROTOR KEY (HM1C/HM5C)
36	1610-0055	1	GEROTOR KEY (HM3C)
37	1810-0026	1	SNAP RING
38	1610-0012	1	WOODRUFF KEY (9306C)
38	04432-SHW	1	WOODRUFF KEY (9306S)
REF	3430-0589	1	SILICON CARBIDE SEAL KIT (CONTAINS: ITEM # 7 & 5)
REF	3430-0332	1	REPAIR PARTS KIT (CONTAINS: ITEM 7, 5 AND 6)
REF	3430-0881	1	PARTS KIT (CONTAINS: ITEM 13, 15, 32, 33, 20, 28 & 29)
REF	2540-0806C	1	HYDRAULIC MOTOR (HM1C)
REF	2540-1606C	1	HYDRAULIC MOTOR (HM3C)
REF	2540-1006C	1	HYDRAULIC MOTOR (HM5C)

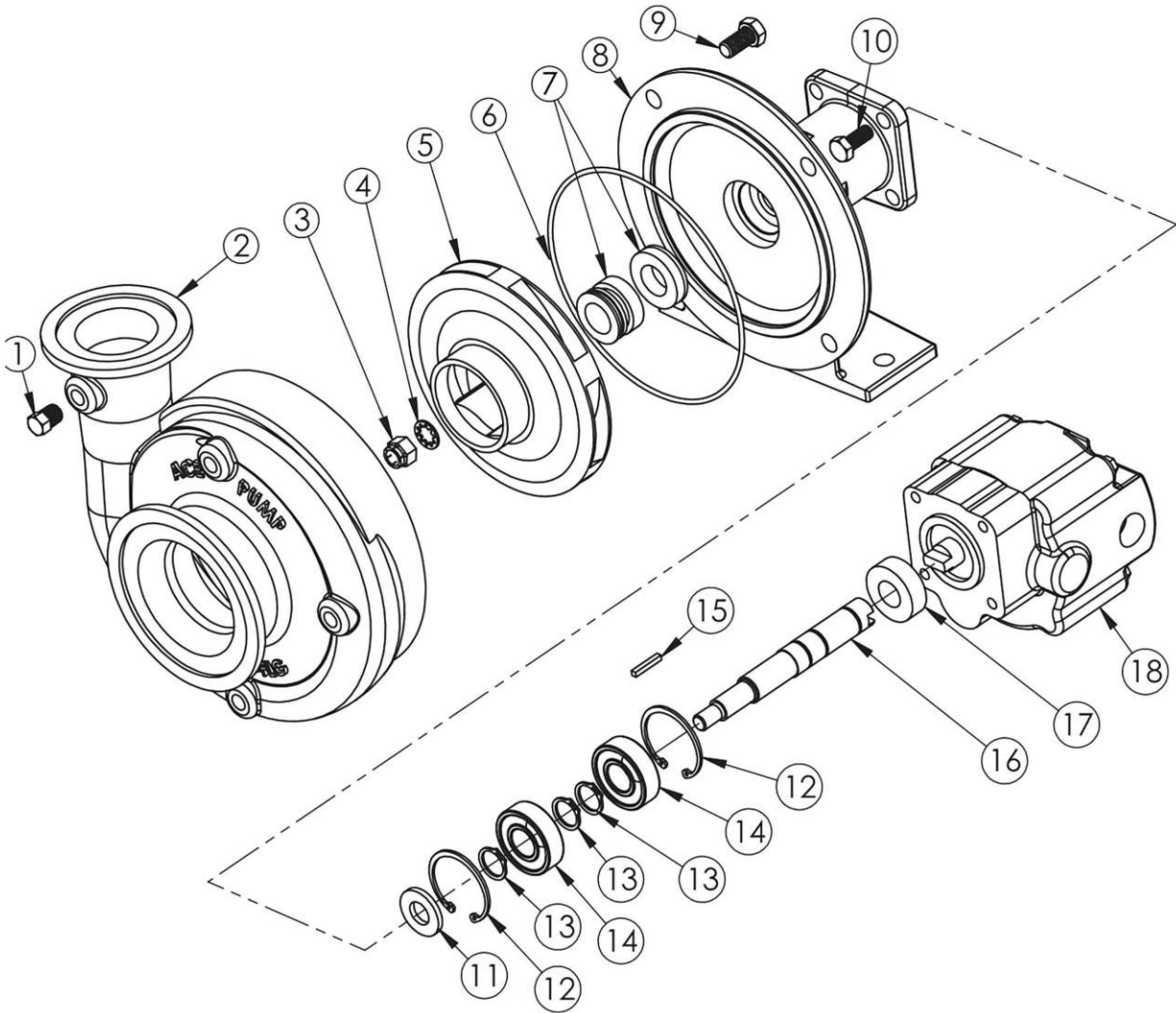
Pump Option, ACE



Parts List 27195: Pump Option, ACE

ITEM	PART	QTY.	DESCRIPTION
1	530024	2	GASKET, 3" EPDM
2	530234	2	COUPLER, 3" X 45°
3	540003	2	CLAMP, WORM SCREW 3"
4	550025	1	PUMP, ACE 205F 304 ASSEMBLY
5	600108	1	CASE RT SIDE TANK HYD KIT
5	610099	1	VALVE, FLOW CONTROL, P.C.

Pump ACE FMCS-205F(S)-HYD-304



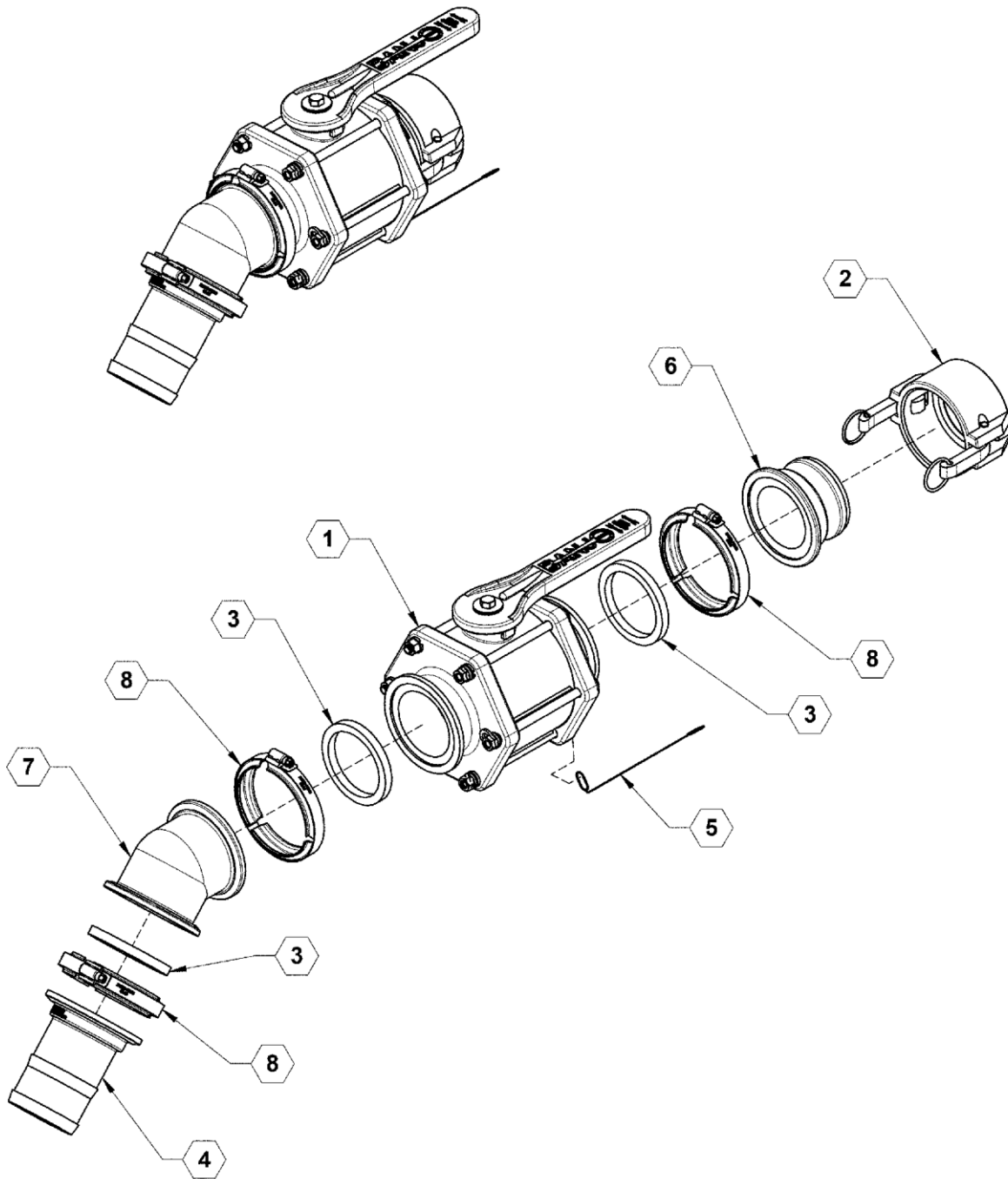


INSTALLATION & PARTS

Parts List 550025/550054: Pump ACE FMCSC-205F(S)-HYD-304

ITEM	PART	QTY.	DESCRIPTION
0	550025	1	PUMP, 205-304 FLANGED, COMPLETE PUMP
0	550054	1	PUMP, 205-304 FLANGED, STAINLESS STEEL, COMPLETE
1	BAC-53	1	PIPE PLUG
1	41120	1	PIPE PLUG, STAINLESS STEEL (OPTIONAL)
2	7AC-14-FLG	1	VOLUTE, 300 STANDARD FLANGE X 220 FULL PORT FLANGE
3	BAC-23-A	1	NUT, 3/8" NF, CAD PLATED
3	BAC-23-A-SS	1	NUT, 3/8" NF, STAINLESS STEEL (OPTIONAL)
4j	BAC-24-HYD-SS	1	WASHER, 3/8" STAR, STAINLESS STEEL
5	BAC-26-200-P	1	IMPELLER, WITH EXTENDED KEYWAY, THERMOPLASTIC
5	BAC-26-200-CI	1	IMPELLER, WITH EXTENDED KEYWAY, CAST IRON (OPTIONAL)
5	BAC-26-200-SS	1	IMPELLER, WITH EXTENDED KEYWAY, 316 STAINLESS STEEL (OPTIONAL)
6j	BAC-4A	1	O-RING, BODY SEAL
7j	BAC-7SC-205V	1	SEAL, SILICON CARBIDE
8	BAC-14-205-HYD	1	MOUNTING FRAME FOR 205 PUMP
9	40950	4	CAP SCREW, 3/8" NC X 3/4" HEX HEAD
10	41330	4	CAP SCREW, 5/16" NC X 3/4" HEX HEAD, MOTOR TO PUMP
11	BAC-54	1	SLINGER
12	BACH-33	1	SNAP RING, INTERNAL, BAC-14-205 MOUNTING FRAME
13	BACH-32-HD	3	SNAP RING, EXTERNAL, BAC-6-205 SHAFT
14	40880	1	BALL BEARING, SEALED, BAC-6-205 SHAFT
15	BAC-25	1	KEY, 1/8" X 1/8" X 13/16", EXTENDED KEYWAY
16	BAC-6-205-HYD-SS	1	SHAFT, EXTENDED KEYWAY, TANG, STAINLESS STEEL
17	S305	1	SEAL SUPPORT SPACER FOR 205 SERIES PUMP
18	BAC-75-HYD-304A	1	HYDRAULIC MOTOR, 13 GPM, 1/2" NPT PORTS
18	BAC-75-HYD-304A-12SAE	1	HYDRAULIC MOTOR, 13 GPM, #12 SAE END PORTS (OPTIONAL)
j	RK-FMCSC-205	1	REPAIR KIT FOR FMC-205 PUMP WITH SILICON CARBIDE SHAFT SEAL
#	RK-BAC-75-HYD-300-L	1	REPAIR KIT FOR 300 SERIES HYDRAULIC MOTOR

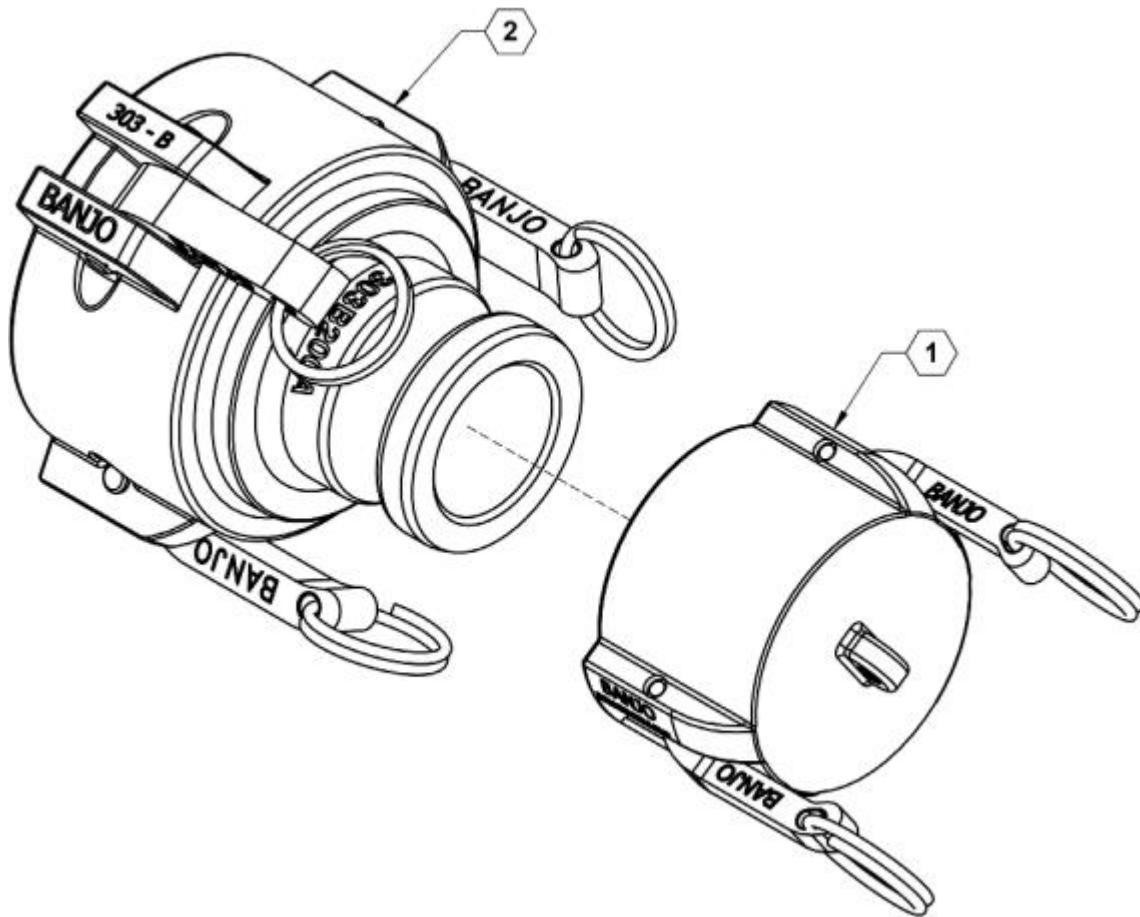
Quick Fill Valve, 3"



Parts List 90SA3QF45: Quick Fill Valve, 3"

ITEM	PART NO.	QTY.	DESCRIPTION
1	500042	1	VALVE, 3" FLANGED MANIFOLD
2	530023	1	CAP, 3"
3	530024	3	GASKET, 3" EPDM
4	530113	1	Flanged 3 Inch Hose Barb
5	530179	1	CABLE LANYARD
6	530233	1	3" MANIFOLD X 3" MALE ADAPTER
7	530234	1	3" MANIFOLD COUPLER, 45
8	540003	3	CLAMP, 3" WORM SCREW

Quick Fill Adapter, 2"



Parts List 27261: Quick Fill Adapter, 2"

ITEM	PART NO.	QTY.	DESCRIPTION
1	530017	1	2" QUICK FILL CAP
2	530357	1	3" FE COUPLING-2" MALE ADPTR

TORQUE SPECIFICATIONS

Check the tightness of ALL BOLTS, U-BOLTS, and CAP SCREWS after the first 10-15 hours of operation and again at end of the first week (50 hours) of operation. Tighten all bolts to torques specified unless otherwise noted. Check tightness of hardware periodically.

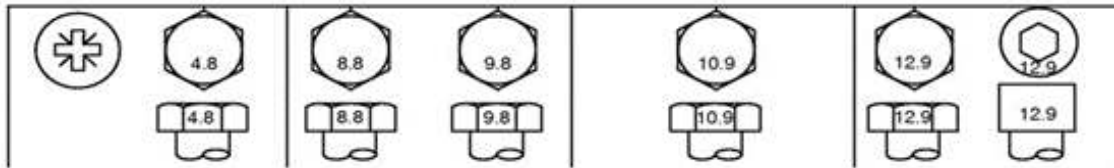


Figure 1: Common metric bolt grade markings

Metric Bolt and Screw Torque Values

Screw Size	Class 4.8				Class 8.8 or 9.8				Class 10.9				Class 12.9			
	Lubricated ¹		Dry ²		Lubricated ¹		Dry ²		Lubricated ¹		Dry ²		Lubricated ¹		Dry ²	
	N-m	lb.-in.	N-m	lb.-in.	N-m	lb.-in.	N-m	lb.-in.	N-m	lb.-in.	N-m	lb.-in.	N-m	lb.-in.	N-m	lb.-in.
M6	4.7	42	6	53	8.9	79	11.3	100	13	115	16.5	146	15.5	137	19.5	172
									N-m	lb.-ft.	N-m	lb.-ft.	N-m	lb.-ft.	N-m	lb.-ft.
M8	11.5	102	14.5	128	22	194	27.5	243	32	23.5	40	29.5	37	27.5	47	35
			N-m	lb.-ft.	N-m	lb.-ft.	N-m	lb.-ft.								
M10	23	204	29	21	43	32	55	40	63	46	80	59	75	55	95	70
	N-m	lb.-ft.														
M12	40	29.5	50	37	75	55	95	70	110	80	140	105	130	95	165	120
M14	63	46	80	59	120	88	150	110	175	130	220	165	205	150	260	190
M16	100	74	125	92	190	140	240	175	275	200	350	255	320	235	400	300
M18	135	100	170	125	265	195	330	245	375	275	475	350	440	325	560	410
M20	190	140	245	180	375	275	475	350	530	390	675	500	625	460	790	580
M22	265	195	330	245	510	375	650	480	725	535	920	680	850	625	1080	800
M24	330	245	425	315	650	480	820	600	920	680	1150	850	1080	800	1350	1000
M27	490	360	625	460	950	700	1200	885	1350	1000	1700	1250	1580	1160	2000	1475
M30	660	490	850	625	1290	950	1630	1200	1850	1350	2300	1700	2140	1580	2700	2000
M33	900	665	1150	850	1750	1300	2200	1625	2500	1850	3150	2325	2900	2150	3700	2730
M36	1150	850	1450	1075	2250	1650	2850	2100	3200	2350	4050	3000	3750	2770	4750	3500

Torque values listed are for general use only, based on the strength of the bolt or screw. DO NOT use these values if a different torque value or tightening procedure is given for a specific application. For stainless steel fasteners or for nuts on U-bolts, see the tightening instructions for the specific application. Tighten plastic insert or crimped steel type lock nuts by turning the nut to the dry torque shown in the chart, unless different instructions are given for the specific application.

Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical property class. Replace fasteners with the same or higher property class. If higher property class fasteners are used, tighten these to the strength of the original. Make sure fastener threads are clean and that you properly start thread engagement. When possible, lubricate plain or zinc plated fasteners other than lock nuts, wheel bolts, or wheel nuts, unless different instructions are given for the specific application.

¹ "Lubricated" means coated with a lubricant such as engine oil, fasteners with phosphate and oil coatings, or M20 and larger fasteners with JDM F13C, F13F or F13J zinc flake coating.

² "Dry" means plain or zinc plated without any lubrication, or M6 to M18 fasteners with JDM F13B, F13E or F13H zinc flake coating.

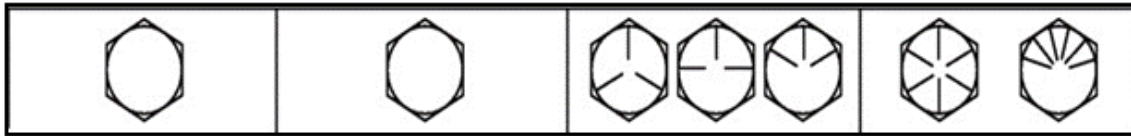


Figure 2: Common imperial bolt grade markings

Unified Inch Bolt and Screw Torque Values

Screw Size	SAE Grade 1				SAE Grade 2 ³				SAE Grade 5, 5.1 or 5.2				SAE Grade 8 or 8.2			
	Lubricated ⁴		Dry ⁵		Lubricated ⁴		Dry ⁵		Lubricated ⁴		Dry ⁵		Lubricated ⁴		Dry ⁵	
	N-m	lb.-in.	N-m	lb.-in.	N-m	lb.-in.	N-m	lb.-in.	N-m	lb.-in.	N-m	lb.-in.	N-m	lb.-in.	N-m	lb.-in.
1/4	3.7	33	4.7	42	6	53	7.5	66	9.5	84	12	106	13.5	120	17	150
													N-m	lb.-ft.	N-m	lb.-ft.
5/16	7.7	68	9.8	86	12	106	15.5	137	19.5	172	25	221	28	20.5	35	26
									N-m	lb.-ft.	N-m	lb.-ft.				
3/8	13.5	120	17.5	155	22	194	27	240	35	26	44	32.5	49	36	63	46
			N-m	lb.-ft.	N-m	lb.-ft.	N-m	lb.-ft.								
7/16	22	194	28	20.5	35	26	44	32.5	56	41	70	52	80	59	100	74
	N-m	lb.-ft.														
1/2	34	25	42	31	53	39	67	49	85	63	110	80	120	88	155	115
9/16	48	35.5	60	45	76	56	95	70	125	92	155	115	175	130	220	165
5/8	67	49	85	63	105	77	135	100	170	125	215	160	240	175	305	225
3/4	120	88	150	110	190	140	240	175	300	220	380	280	425	315	540	400
7/8	190	140	240	175	190	140	240	175	490	360	615	455	690	510	870	640
1	285	210	360	265	285	210	360	265	730	540	920	680	1030	760	1300	960
1-1/8	400	300	510	375	400	300	510	375	910	670	1150	850	1450	1075	1850	1350
1-1/4	570	420	725	535	570	420	725	535	1280	945	1630	1200	2050	1500	2600	1920
1-3/8	750	550	950	700	750	550	950	700	1700	1250	2140	1580	2700	2000	3400	2500
1-1/2	990	730	1250	930	990	730	1250	930	2250	1650	2850	2100	3600	2650	4550	3350

Torque values listed are for general use only, based on the strength of the bolt or screw. DO NOT use these values if a different torque value or tightening procedure is given for a specific application. For plastic insert or crimped steel type lock nuts, for stainless steel fasteners, or for nuts on U-bolts, see the tightening instructions for the specific application.
 Shear bolts are designed to fail under predetermined loads.
 Always replace shear bolts with identical grade.

Replace fasteners with the same or higher grade. If higher grade fasteners are used, tighten these to the strength of the original. Make sure fastener threads are clean and that you properly start thread engagement. When possible, lubricate plain or zinc plated fasteners other than lock nuts, wheel bolts, or wheel nuts, unless different instructions are given for the specific application.

³ Grade 2 applies for hex cap screws (not hex bolts) up to 6 in. (152 mm) long. Grade 1 applies for hex cap screws over 6 in. (152 mm) long, and for all other types of bolts and screws of any length.

⁴ "Lubricated" means coated with a lubricant such as engine oil, fasteners with phosphate and oil coatings, or 7/8 in. and larger fasteners with JDM F13C, F13F or F13J zinc flake coating.

⁵ "Dry" means plain or zinc plated without any lubrication, or 1/4 to 3/4 in. fasteners with JDM F13B, F13E or F13H zinc flake coating.

Face Seal Fittings Assembly & Installation - All Pressure Applications

Face Seal O-Ring to Stud End Installation

1. Inspect the fitting surfaces. They must be free of dirt and defects.
2. Inspect the O-ring. It must be free of damage and defects.
3. Lubricate the O-rings and install them into the groove using petroleum jelly to hold them in place.
4. Push the O-ring into the groove with petroleum jelly so that the O-ring is not displaced during assembly.
5. Index any angle fittings and tighten by hand, pressing the joint together to ensure that the O-ring remains in place.
6. Tighten the fitting or nut to the torque value shown on the chart per dash size stamped on the fitting. DO NOT allow hoses to twist when tightening fittings.

Face Seal Adjustable Stud End O-Ring Installation

1. Back off the lock nut (jam nut) and washer to fully expose turned down section of the fitting.
2. Install a thimble over the fitting threads to protect the O-ring from nicks.
3. Slide the O-ring over the thimble into the turned down section of the fitting.
4. Remove thimble.

Face Seal Straight Stud End O-Ring Installation

1. Install a thimble over the fitting threads to protect the O-ring from nicks.
2. Slide the O-ring over the thimble into the turned down section of the fitting.
3. Remove thimble.

Fitting Installation

1. Install the fitting by hand until it is snug.
2. Position adjustable fittings by unscrewing the fitting no more than one turn.
3. Apply with an assembly torque per table.

Assembly Torque

1. Use one wrench to hold the connector body and one wrench to tighten the nut.
2. For a hydraulic hose, it may be necessary to use three wrenches to prevent twist: one on the connector body, one on the nut, and one on the body of the hose fitting.

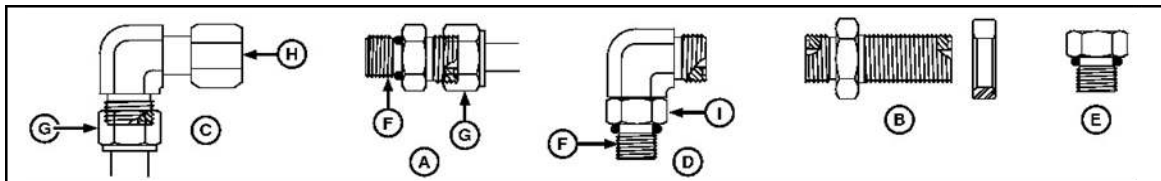


Figure 3: Common hydraulic fitting shapes and components

- | | |
|---|---------------|
| A. Stud Straight and Tube Nut | E. Port Plug |
| B. Bulkhead Union and Bulkhead Lock Nut | F. Stud End |
| C. 90° Swivel Elbow and Tube Nut | G. Tube Nut |
| D. 90° Adjustable Stud Elbow | H. Swivel Nut |
| | I. Lock Nut |

SAE Face Seal and O-Ring Stud End Fitting Torque Chart

SAE Face Seal and O-Ring Stud End Fitting Torque Chart - Standard Pressure-Below 27.6 MPA (4,000 PSI)



INSTALLATION & PARTS

Nominal Tube OD Hose ID				O-Ring Face Seal/ Tube Swivel Nut				Bulkhead Jam Nut Torque			O-Ring Straight, Adjustable, and External Port Plug Stud Ends ⁶						
Metric Tube OD	Inch Tube OD			Thread Size	Swivel Nut Hex Size	Tube Nut Swivel Nut Torque		Jam Nut Hex Size	Jam Nut Torque		Thread Size	Straight Hex Size ⁷	Adj Lock Nut Hex Size	Steel or Gray Iron Torque		Aluminum or Brass Torque ⁸	
	mm	Dash Size	in.			mm	in.		N-m	lb.- ft				N- m	lb.- ft	in.	in.
5	-3	0.188	4.78	—	—	—	—	—	—	—	3/8-24	5/8	9/16	12	9	8	6
6	-4	0.250	6.35	9/16-18	11/16	16	12	13/16	32	24	7/16-20	5/8	5/8	16	12	11	8
8	-5	0.312	7.92	—	—	—	—	—	—	—	1/2-20	3/4	11/16	24	18	16	12
10	-6	0.375	9.53	11/16-16	13/16	24	18	1	42	31	9/16-18	3/4	3/4	37	27	25	18
12	-8	0.500	12.70	13/16-16	15/16	50	37	1-1/8	93	69	3/4-16	7/8	15/16	50	37	33	25
16	-10	0.625	15.88	1-14	1-1/8	69	51	1-5/16	118	87	7/8-14	1-1/16	1-1/16	69	51	46	34
20	-12	0.750	19.05	13/16-12	1-3/8	102	75	1-1/2	175	129	11/16-12	1-1/4	1-3/8	102	75	68	50
22	-14	0.875	22.23	13/16-12	—	102	75	—	175	129	13/16-12	1-3/8	1-1/2	122	90	81	60
25	-16	1.000	25.40	17/16-12	1-5/8	142	105	1-3/4	247	182	15/16-12	1-1/2	1-5/8	142	105	95	70
32	-20	1.25	31.75	1-11/16-12	1-7/8	190	140	2	328	242	1-5/8-12	1-3/4	1-7/8	190	140	127	93
38	-24	1.50	38.10	2-12	2-1/4	217	160	2-3/8	374	276	1-7/8-12	2-1/8	2-1/8	217	160	145	107
50.8	-32	2.000	50.80	—	—	—	—	—	—	—	2-1/2-12	2-3/4	2-3/4	311	229	207	153

⁶ Tolerance is +15%/-20% of mean tightening torque unless otherwise specified.

⁷ The straight hex wrench sizes listed apply to connectors only and may not be the same as the corresponding plug of the same thread size.

⁸ These torques were established using steel plated connectors in aluminum and brass.



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