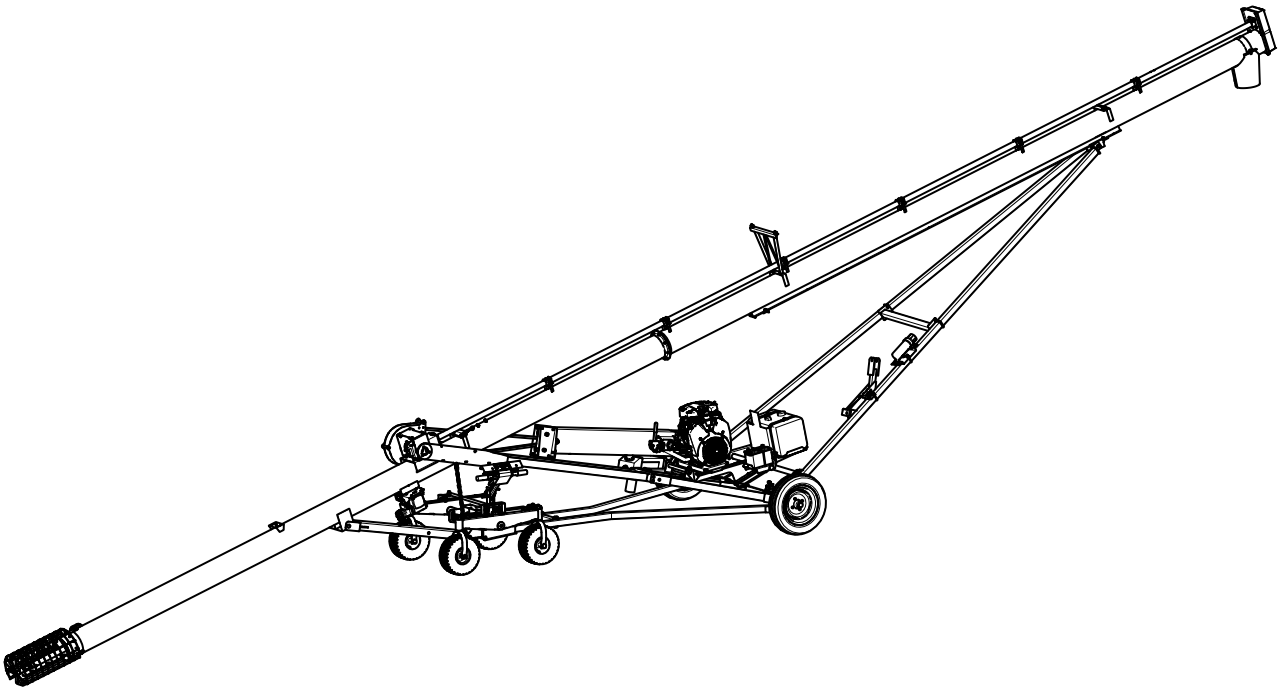
HD Self-Propelled Auger Kit

STX2 / XTA Series
Assembly Manual



Original Instructions

LOOKING FOR PARTS?

Check out our online Parts Catalog!

Read this manual before using product. Failure to follow instructions and safety precautions can result in serious injury, death, or property damage. Keep manual for future reference.

Part Number: 31038 R3

Revised: September 2019

New in this Manual

The following changes have been made in this revision of the manual:

Description	Section
Updated the illustration of the motor mount.	Section 3.5 – Install the Hydraulic Pump on page 14

CONTENTS

1. Introduction

This manual describes how to assemble a AGI HD Self-Propelled Auger Kit.

Before assembling, please read this manual. Familiarize yourself with the process and the necessary precautions for efficient and safe assembly.

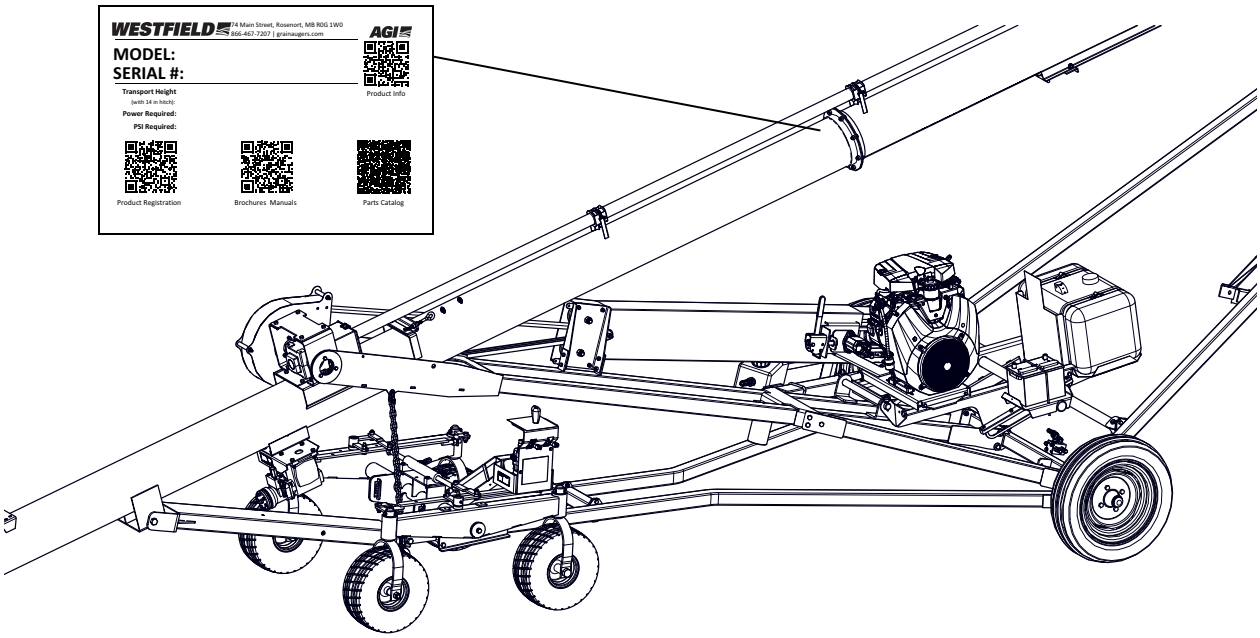
Everyone present at the assembly site is required to be familiar with all safety precautions.

Keep this manual available for frequent reference and review it with new personnel. Call your local distributor or dealer if you need assistance or additional information.

1.1. Serial Number Location

The serial number location for your self-propelled auger kit can be seen in the figure below. Always give your dealer the serial number on your self-propelled auger kit when ordering parts or requesting service or other information. Please record this information in the table below for easy reference.

Model Number	
Serial Number	
Date Received	



2. Safety

2.1. Safety Alert Symbol and Signal Words

This safety alert symbol indicates important safety messages in this manual. When you see this symbol, be alert to the possibility of injury or death, carefully read the message that follows, and inform others.

Signal Words: Note the use of the signal words **DANGER**, **WARNING**, **CAUTION**, and **NOTICE** with the safety messages. The appropriate signal word for each message has been selected using the definitions below as a guideline.

DANGER Indicates an imminently hazardous situation that, if not avoided, will result in serious injury or death.

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

CAUTION Indicates a hazardous situation that, if not avoided, may result in minor or moderate injury.

NOTICE Indicates a potentially hazardous situation that, if not avoided, may result in property damage.

2.2. General Safety

YOU are responsible for the **SAFE** assembly and installation of the self-propelled auger kit. **YOU** must ensure that you and anyone else who is going to assemble/install the self-propelled auger kit understands all procedures and related **SAFETY** information contained in this manual.

Remember, **YOU** are the key to safety. Good safety practices not only protect you, but also the people around you. Make these practices a working part of your safety program. All accidents can be avoided.

- It is the self-propelled auger kit assembler and installation personnel's responsibility to read and understand **ALL** safety instructions, safety decals, and manuals and follow them when assembling, operating, or maintaining the equipment.

- Only experienced personnel who are familiar with this type of assembly and installation should perform this work. Untrained assemblers/installers expose themselves and bystanders to possible serious injury or death.
- Do not modify the self-propelled auger kit in any way without written permission from the manufacturer. Unauthorized modification may impair the function and/or safety, and could affect the life of the self-propelled auger kit. Any unauthorized modification of the self-propelled auger kit will void the warranty.
- Follow a health and safety program for your worksite. Contact your local occupational health and safety organization for information.

2.3. Rotating Parts Safety

⚠ WARNING

- Keep body, hair, and clothing away from rotating pulleys, belts, chains, and sprockets.
- Do not operate with any guard removed or modified. Keep guards in good working order.
- Shut off and remove key or lock out power source before inspecting or servicing machine.

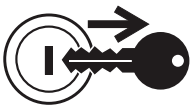
2.4. Hydraulic Winch Safety

⚠ WARNING **When Equipped:**

- Keep away from rotating cable drum and winch cable. Do not touch or grab cable while winch is being operated or use hands to guide the cable. Failure to heed could result in serious injury.
- Inspect cable and cable clamps before installing and using hydraulic winch. Replace cable if frayed or damaged. Tighten cable clamps if necessary.
- Do not continue to supply power to hydraulic winch after the self-propelled auger kit has reached full up position.
- Do not disconnect hydraulic quick couplers when lines are pressurized.
- Make sure lift cable is seated in cable pulley.
- Always keep a minimum of 3 cable wraps on the cable drum.

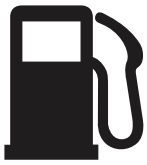
2.5. Drives and Lockout Safety

Inspect the power source(s) before using and know how to shut down in an emergency. Whenever you service or adjust your equipment, make sure you shut down the power source and unplug or remove the key (as applicable) to prevent inadvertent start-up and hazardous energy release. Know the procedure(s) that applies to your equipment from the following power source(s). Ensure that all personnel are clear before turning on power to equipment.



2.5.1 Gas Engine Safety

⚠ WARNING **Power Source**



- Keep guards in place and secure.
- Properly ventilate surrounding area.
- Never fill the fuel tank with the engine running, while smoking, or near an open flame. Always shut down and allow engine to cool before filling with fuel.
- Never overfill the tank or spill fuel. If fuel is spilled, clean it up immediately.
- Be sure to use the correct type and grade of fuel. Ground the fuel funnel or nozzle against the filler neck to prevent sparks that could ignite fuel vapors.
- Be sure to replace the fuel fill cap when you are done.

Lockout

- For engines with an electric start, remove the ignition key, the spark plug wire, or the spark plug.
- For engines with a rope or crank start, remove the spark plug wire or the spark plug.

2.5.2 Hydraulic Power Safety

⚠ WARNING **Power Source**

- Refer to the rules and regulations applicable to the power source operating your hydraulic drive.
- Do not connect or disconnect hydraulic lines while system is under pressure.
- Keep all hydraulic lines away from moving parts and pinch points.
- Escaping hydraulic fluid under pressure will cause serious injury if it penetrates the skin surface (serious infection or toxic reaction can develop). See a doctor immediately if injured.
- Use metal or wood as a backstop when searching for hydraulic leaks and wear proper hand and eye protection.
- Check all hydraulic components are tight and in good condition. Replace any worn, cut, abraded, flattened, or crimped hoses.
- Clean the connections before connecting to equipment.
- Do not attempt any makeshift repairs to the hydraulic fittings or hoses with tape, clamps, or adhesive. The hydraulic system operates under extremely high pressure; such repairs will fail suddenly and create a hazardous and unsafe condition.

Lockout

- Always place all hydraulic controls in neutral and relieve system pressure before disconnecting or working on hydraulic system.

2.6. Tire Safety

⚠ WARNING Failure to follow proper procedures when mounting a tire on a wheel or rim can produce an explosion that may result in serious injury or death.

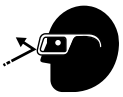
- DO NOT attempt to mount a tire unless you have the proper equipment and experience to do the job.
- Have a qualified tire dealer or repair service perform required tire maintenance.
- When replacing worn tires, make sure they meet the original tire specifications. Never undersize the replacement tire.
- DO NOT weld to the tire rim with the tire mounted on the rim. This action may cause an explosion which could result in serious injury or death.
- Inflate tires to the manufacturer's recommended pressure.
- Tires should not be operated at speeds higher than their rated speed.
- Keep wheel lug nuts tightened to manufacturer's recommendations.
- Never reinflate a tire that has been run flat or seriously under-inflated without removing the tire from the wheel. Have the tire and wheel closely inspected for damage before remounting.

2.7. Personal Protective Equipment

The following Personal Protective Equipment (PPE) should be worn when assembling the equipment.

Safety Glasses

- Wear safety glasses at all times to protect eyes from debris.



Work Gloves

- Wear work gloves to protect your hands from sharp and rough edges.

Steel-Toe Boots

- Wear steel-toe boots to protect feet from falling debris.

Coveralls

- Wear coveralls to protect skin.

Hard Hat

- Wear a hard hat to help protect your head.

2.8. Safety Equipment

The following safety equipment should be kept on site:

Fire Extinguisher

- Provide a fire extinguisher for use in case of an accident. Store in a highly visible and accessible place.

First-Aid Kit

- Have a properly-stocked first-aid kit available for use should the need arise, and know how to use it.

2.9. Safety Decals

- Keep safety decals clean and legible at all times.
- Replace safety decals that are missing or have become illegible. See decal location figures that follow.
- Replaced parts must display the same decal(s) as the original part.
- Replacement safety decals are available **free of charge** from your distributor, dealer, or factory as applicable.

2.9.1 Decal Installation/Replacement

1. Decal area must be clean and dry, with a temperature above 50°F (10°C).
2. Decide on the exact position before you remove the backing paper.
3. Align the decal over the specified area and carefully press the small portion with the exposed sticky backing in place.
4. Slowly peel back the remaining paper and carefully smooth the remaining portion of the decal in place.
5. Small air pockets can be pierced with a pin and smoothed out using the sign backing paper.

2.9.2 Safety Decal Locations and Details

Replicas of the safety decals that are attached to the self-propelled auger kit and their messages are shown in the figure(s) that follow. Safe operation and use of the self-propelled auger kit requires that you familiarize

yourself with the various safety decals and the areas or particular functions that the decals apply to, as well as the safety precautions that must be taken to avoid serious injury, death, or damage.

Figure 1. Decal Locations (Manual Steering)

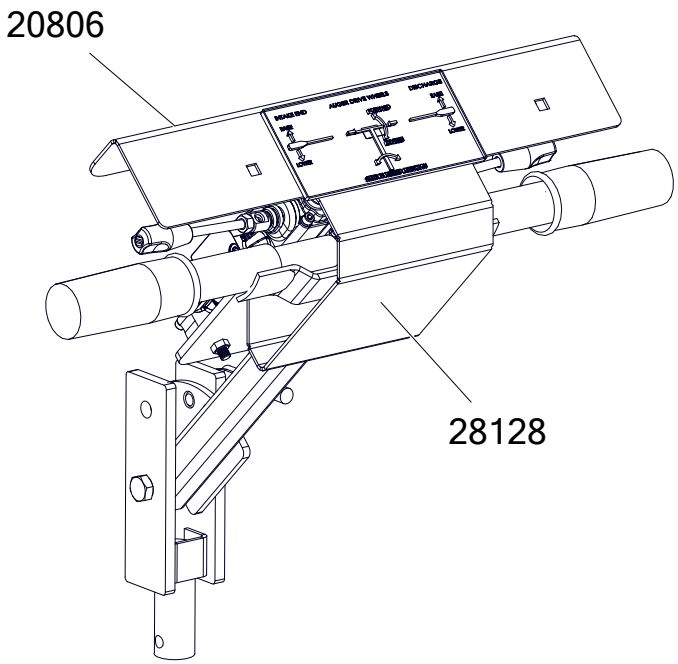


Figure 2. Decal Locations (Hydraulic Steering)

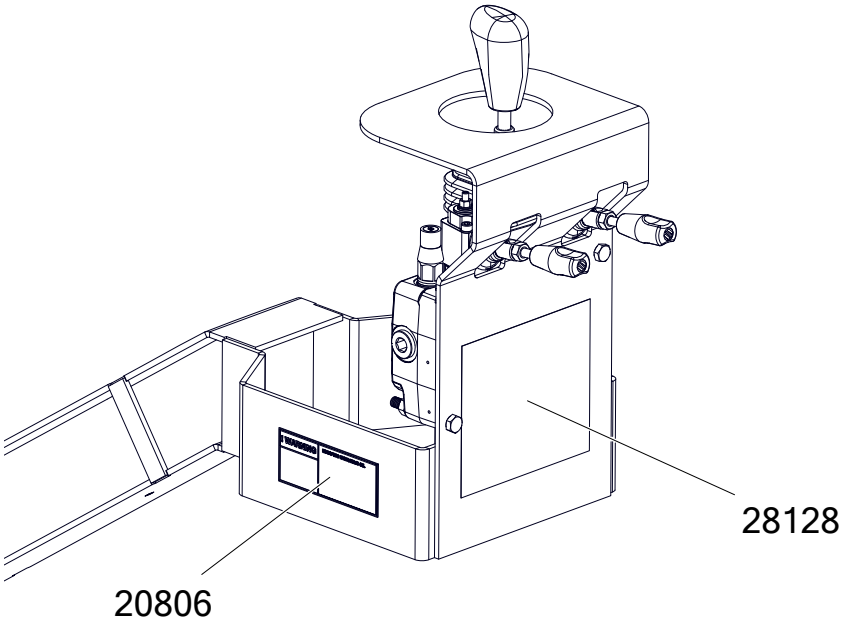


Figure 3. Decal Locations (Hydraulic Winch)

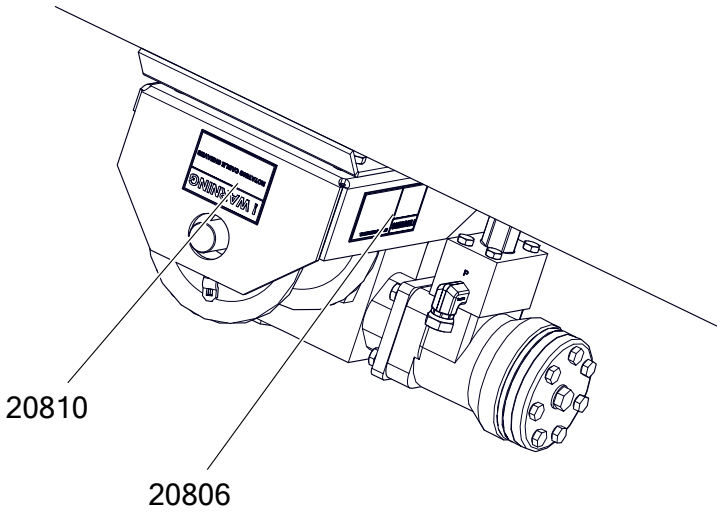
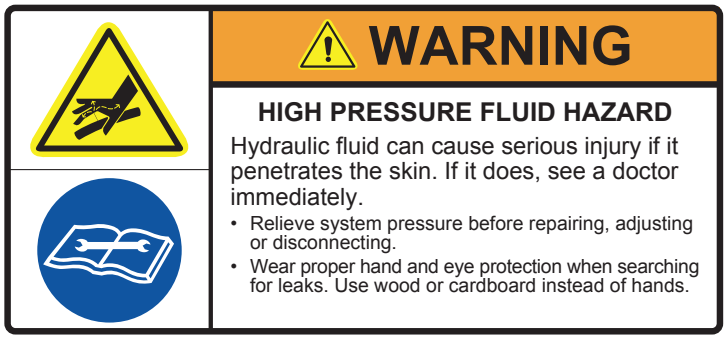
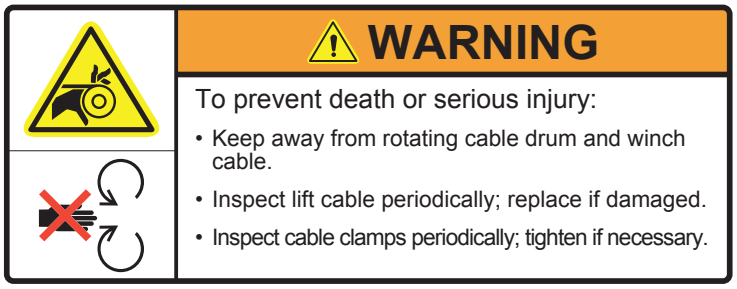


Table 1. Safety Decals

Part Number	Description
20806	
20810	
28128	

3. Assembly

Before continuing, ensure you have completely read and understood this manual's Safety section, in addition to the safety information in the section(s) below.

3.1. Assembly Safety

- Do not take chances with safety. The components can be large, heavy, and hard to handle. Always use the proper tools, rated lifting equipment, and lifting points for the job.
- Carry out assembly in a large open area with a level surface.
- Always have two or more people assembling the self-propelled auger kit.
- Make sure you have sufficient lighting for the work area.
- Tighten all fasteners according to their specifications. Do not replace or substitute bolts, nuts, or other hardware that is of lesser quality than the hardware supplied by the manufacturer.
- Stay away from overhead power lines and other obstructions during assembly. Contact with power lines can cause electrocution.

⚠ CAUTION Ensure auger is in fully lowered position with intake end on the ground before proceeding with the assembly of the wheel move.

3.2. Check Shipment

Unload the self-propelled auger kit parts at the assembly site and compare the packing slip to the shipment. Ensure that all items have arrived and that none are damaged.

Report missing or damaged parts immediately to ensure that proper credit is received from AGI or your distributor/dealer, and to ensure that any missing parts can be shipped quickly to avoid holding up the assembly process.

Important

Do not assemble or install damaged components.

3.3. Before You Begin

Before you assemble the self-propelled auger kit:

- Familiarize yourself with all the sub-assemblies, components, and hardware that make up the equipment.
- Have all parts and components on hand, and arrange them for easy access.
- Separate the hardware (bolts, nuts, etc.) and lay them out into groups for easier identification during assembly.
- If assembling inside, confirm the ceiling and door width/height provide enough clearance when installing the undercarriage and to remove the self-propelled auger kit from the building.
- Ensure there is adequate space to remove the assembled self-propelled auger kit from the assembly area.

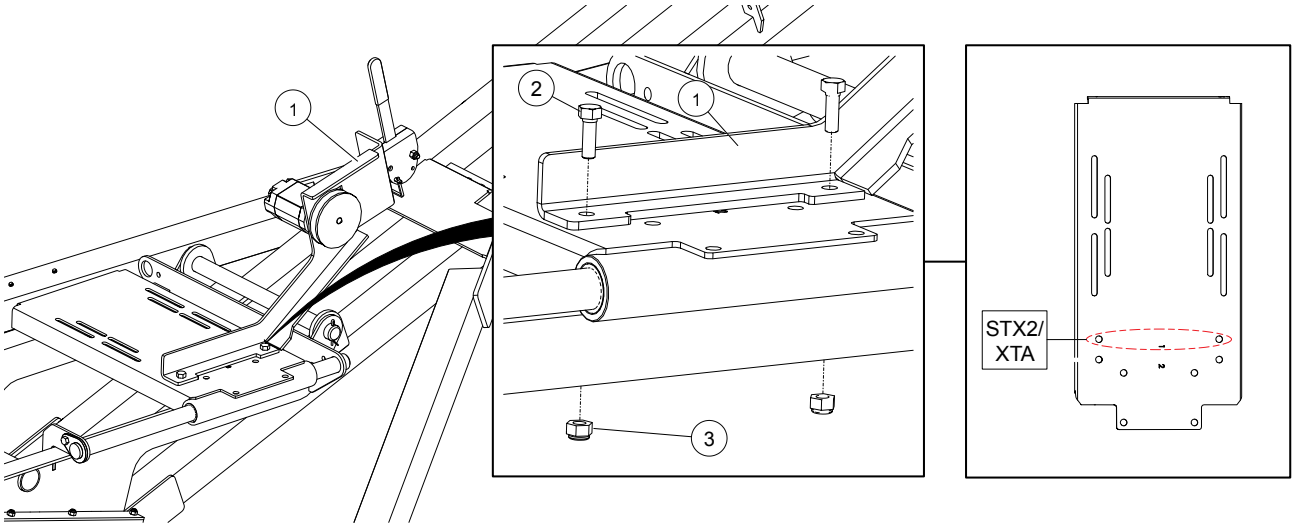
3.4. Hydraulic Fittings and Bolt Tightening

Remember the following basic considerations when tightening hydraulic fittings and bolts:

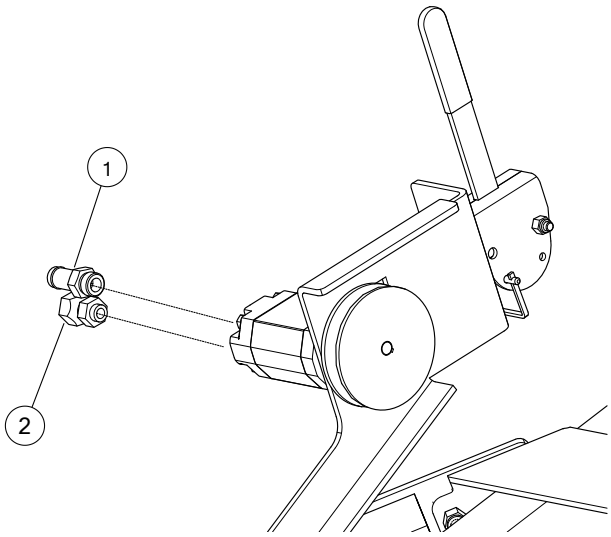
- Tighten all fasteners to the torque specified in Section 4.1 – Bolt Torque on page 55. Do not replace or substitute bolts, nuts, or other hardware that is of lesser quality than the hardware supplied by the manufacturer.
- All hydraulic fittings should be torqued to the recommended specifications. See Section 4.2 – Fittings Torque Values on page 56.

NOTICE Do not over-tighten fittings. Over-tightening hose fittings can crack the fittings or motor body and will void the warranty.

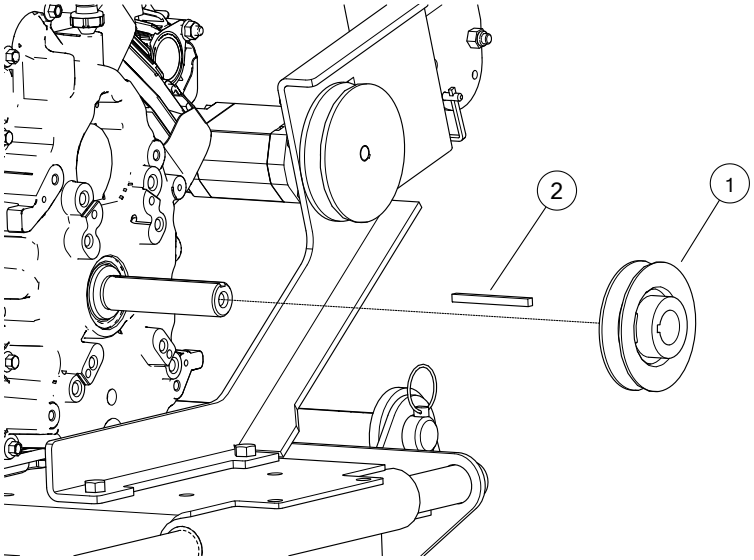
3.5. Install the Hydraulic Pump



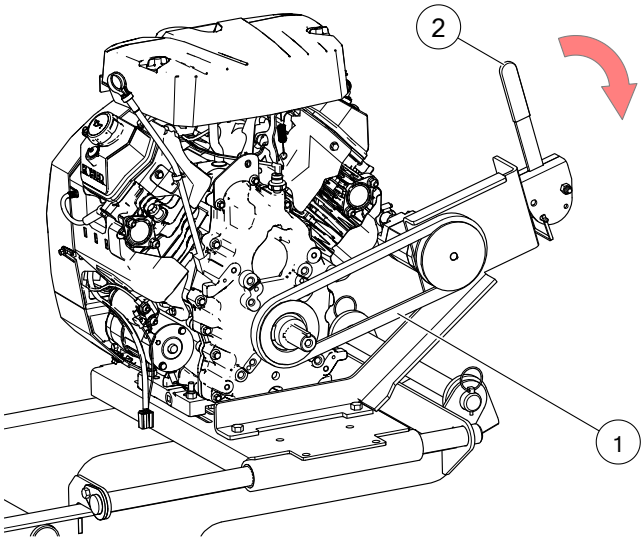
1	Hydraulic Pump Assembly	3	Locknut, 7/16"
2	Bolt, 7/16" x 1-1/4"		



1	Steel Fitting, 3/4" HB x 10 MORB
2	Steel Fitting, 8 MORB x 1/2" FNPSM



1	Pump Pulley, 4-1/2" x 1-1/8" Single
2	Square Key, 1/4" x 3"

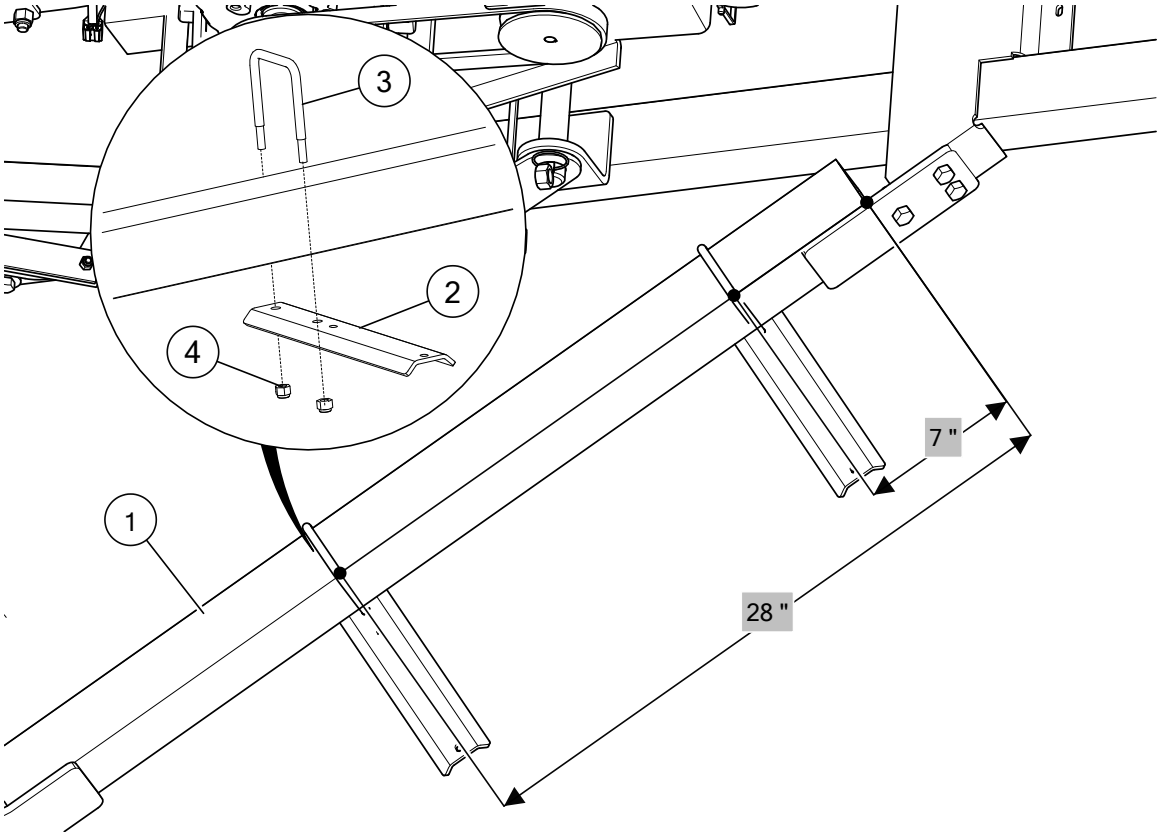


Assembly Note:

- Rotate the pump handle clockwise to apply tension to the pump belt and pull down the handle to lock the belt in place.

1	Pump Belt, BX35	2	Pump Handle

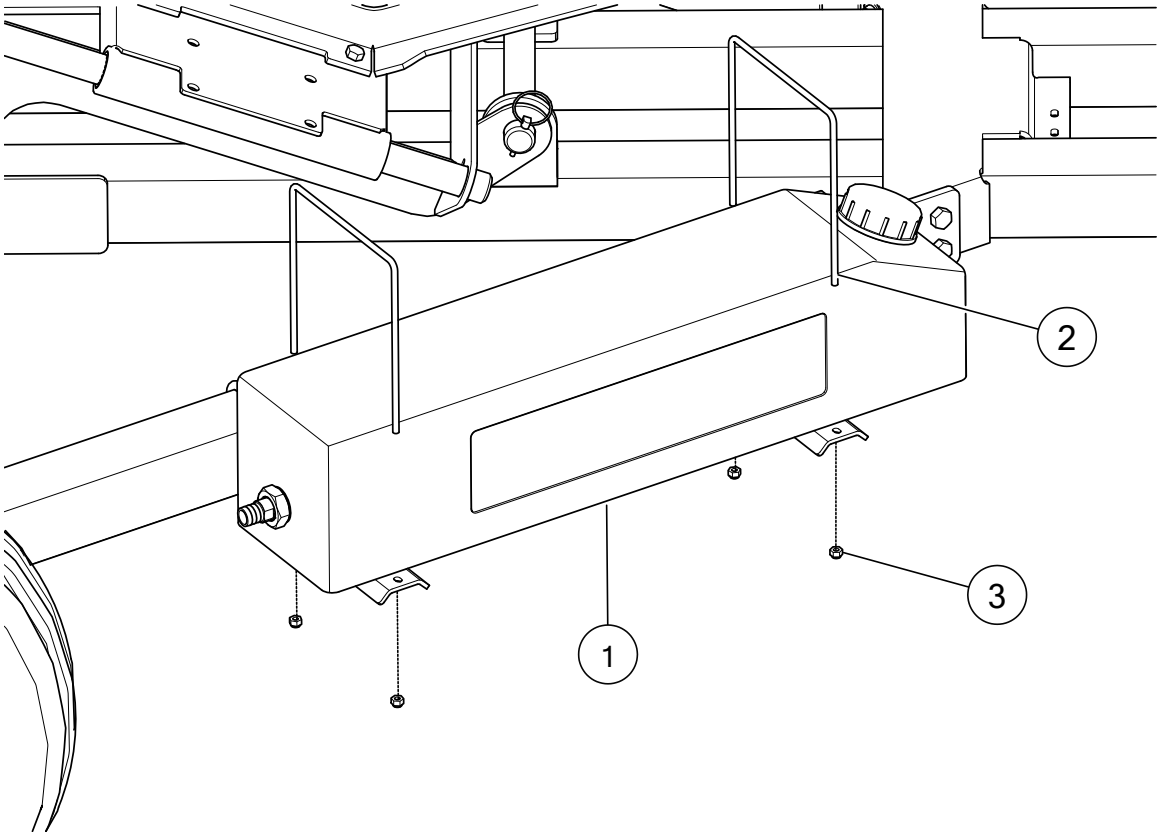
3.6. Install the Hydraulic Oil Tank



Assembly Notes:

- Place the first hydraulic tank mount 7" from the end of the tube.
- Place the second hydraulic tank mount 28" from the end of the tube.

1	Lower Support Frame, Right	3	Square U-Bolt, 3/8" x 3-1/16" x 4"
2	Hydraulic Tank Mount	4	Locknut, 3/8"

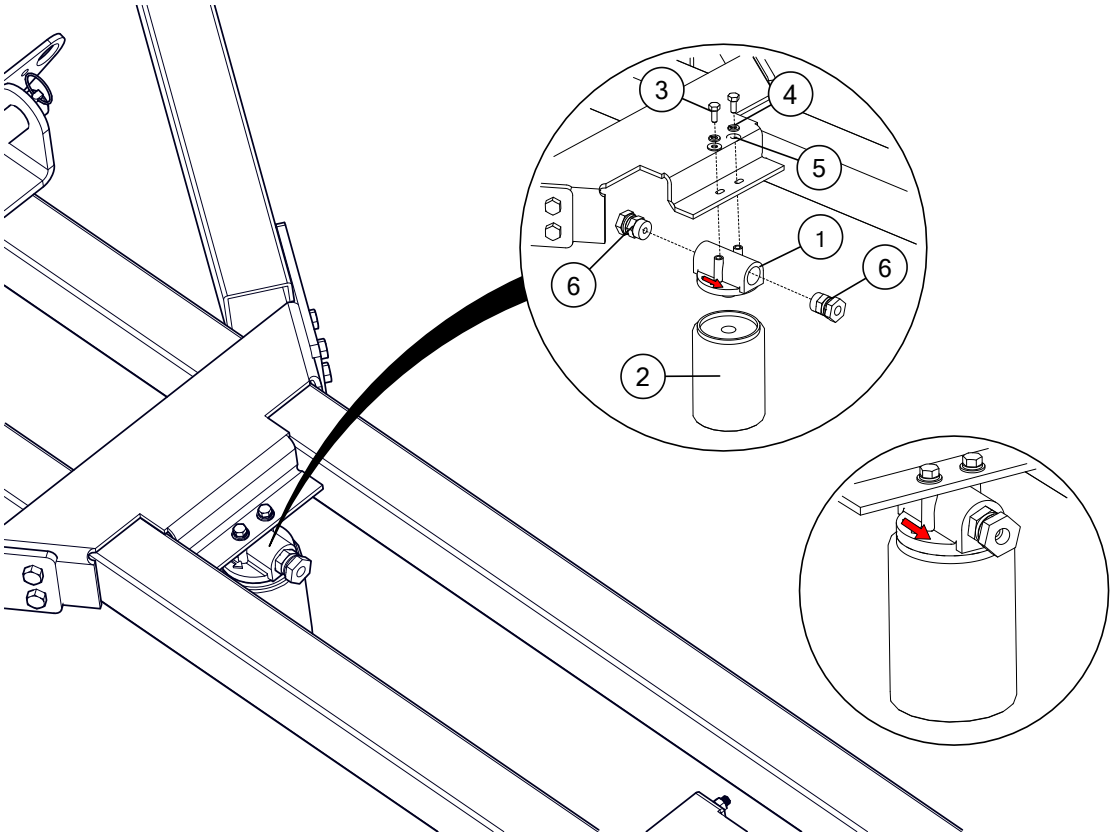


Assembly Note:

- Ensure the cap is located on the raised side.

1	Hydraulic Tank	3	Locknut, 1/4"
2	Square U-Bolt, 1/4" x 7-1/4" x 7-5/8"		

3.7. Install the Hydraulic Filter

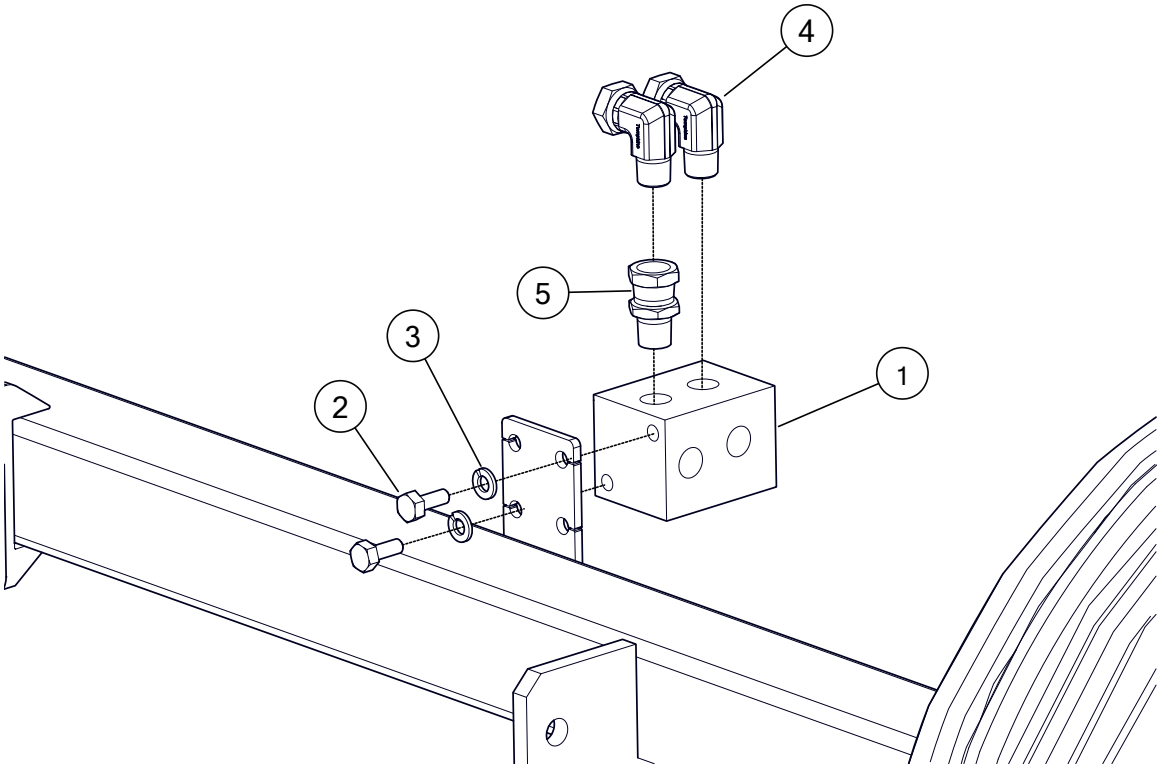


Assembly Note:

- The hydraulic hoses MUST be installed to ensure that the oil flows to the tank, in the same direction as the arrow on the filter head.

1	Hydraulic Filter Head	4	Lock Washer, 1/4"
2	Hydraulic Filter	5	Flat Washer, 1/4"
3	Bolt, 1/4" x 3/4"	6	Steel Fitting, 3/4" MNPT x 1/2" FNPSM

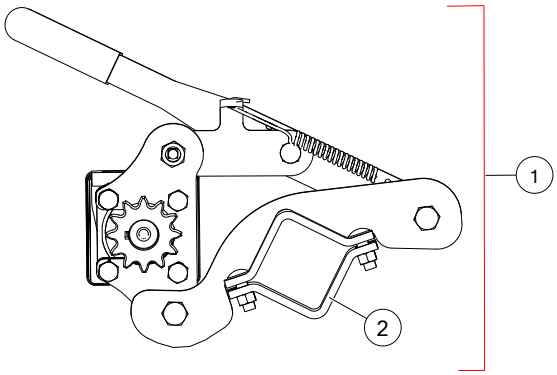
3.8. Install the Cushion Block



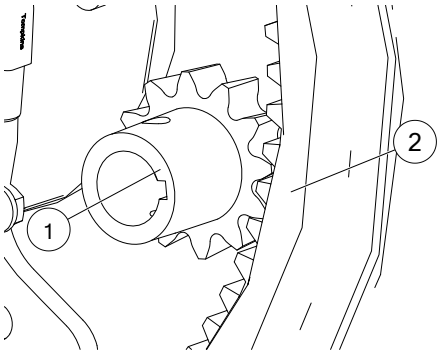
1	Cushion Block	4	Steel Elbow, 90, 6 MNPT x 6 FNPSM
2	Bolt, 5/16" x 3/4"	5	Steel Fitting, 3/8" MNPT x 3/8" FNPSM
3	Lock Washer, 5/16"		

3.9. Install the Over-Center Drive

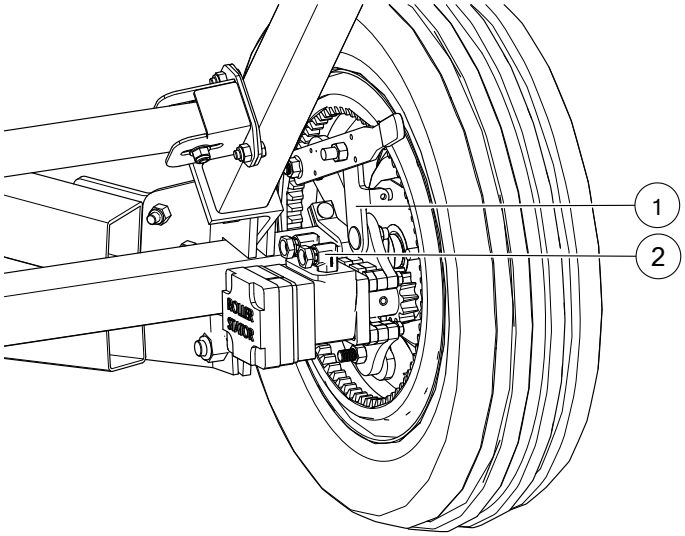
1. Once the wheel is bolted to the hub, the over-center drive assembly can be installed.
2. Position the axle cap of the over-center drive assembly squarely on the axle tube.
3. With the pinion gear flush with the ring gear, bolt the axle cap to the axle tube using four carriage bolts and locknuts.
4. Attach fittings to hydraulic motors.



1	Over-Center Drive Assembly
2	Bolt On Axle Cap



1	Pinion Gear
2	Ring Gear



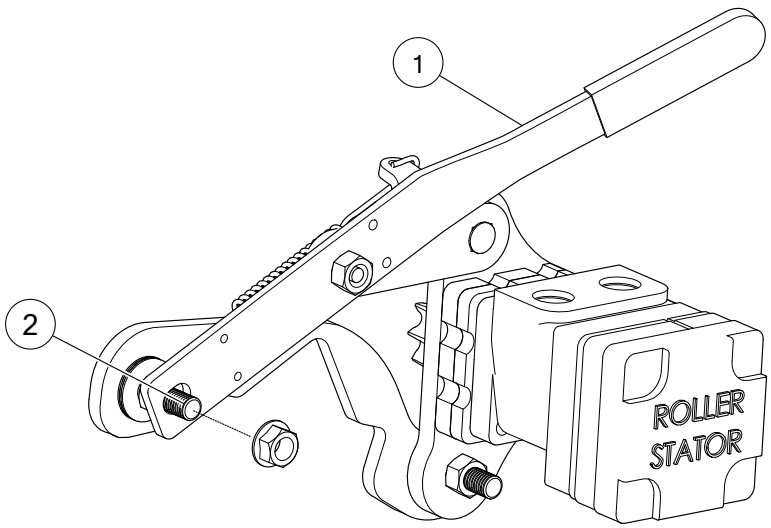
1	Over-Center Drive Assembly
2	Steel Fitting, 90, 8MNPT x 6 FNPSM

3.10. Adjust the Pinion Gear

NOTICE Failure to ensure proper gear meshing will result in gear damage. The pinion gear should mesh with the ring gear to provide maximum tooth contact.

Insufficient meshing

- If the pinion gear will barely mesh with the ring gear, loosen the slot bolt jam nuts and slide the handle towards the tire until the pinion gear teeth mesh with the ring gear teeth without binding.
- If the pinion gear does not mesh fully with the ring gear, adjust the handle slot bolt (which bolts to the drive mount clamp) so full meshing of pinion gear is achieved when handle is in over-center position.

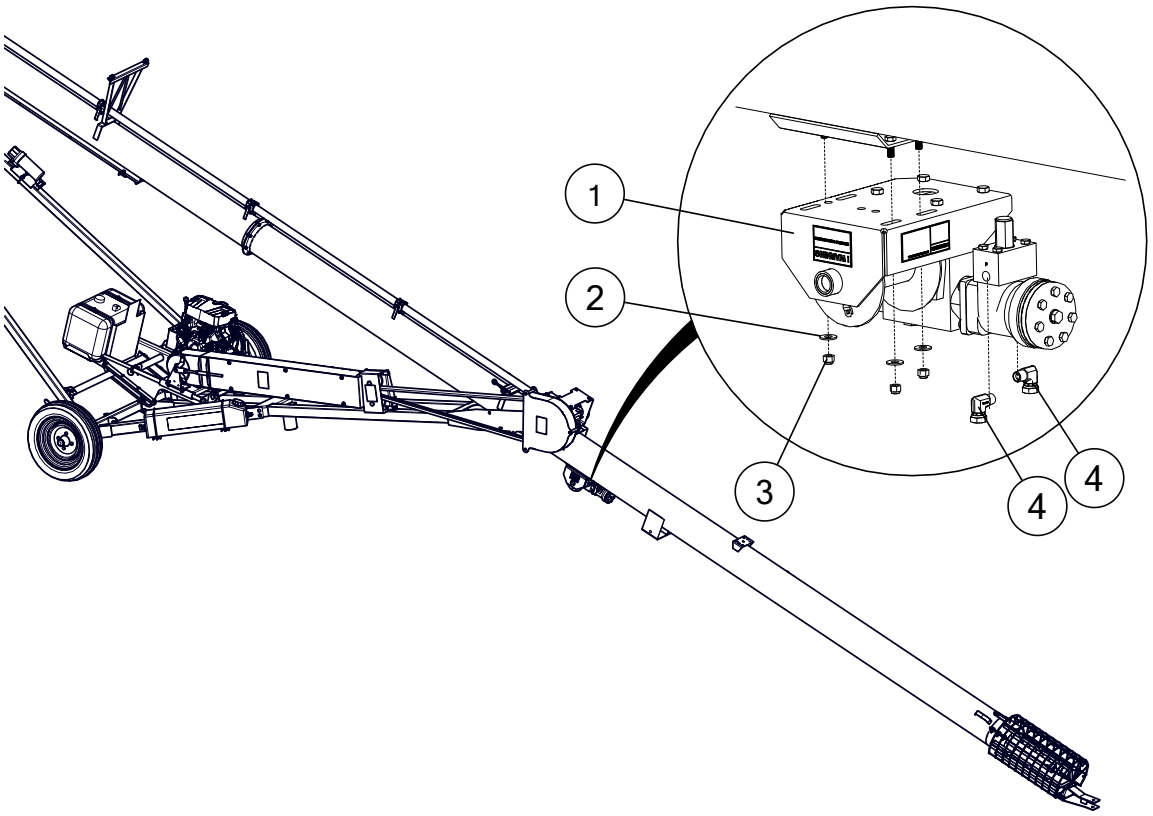


1	Handle
2	Handle Slot Bolt

Gear teeth binding

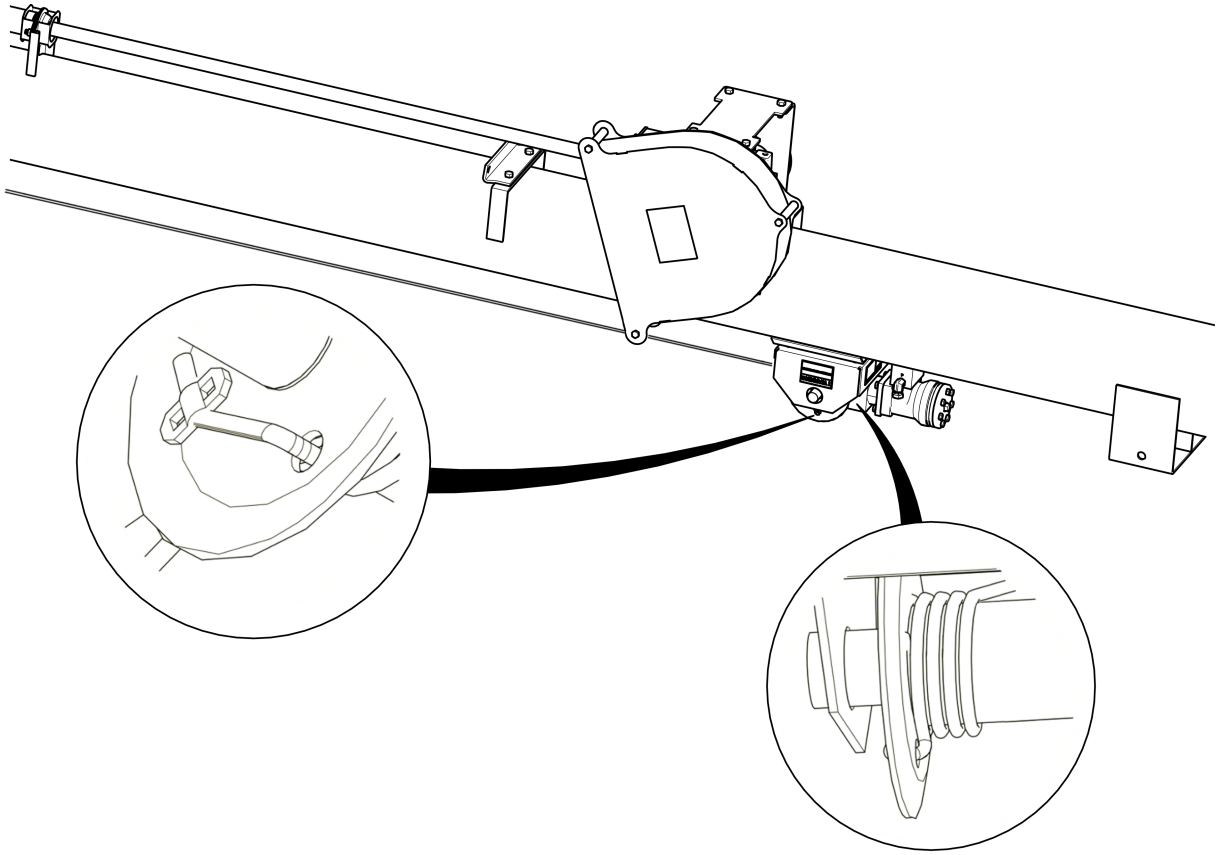
- If the handle will not ‘lock’ into over-center position, loosen the slot bolt nuts and slide the handle away from the tire.

3.11. Install the Hydraulic Winch



1	Hydraulic Winch Assembly	3	Locknut, 3/8"
2	Flat Washer, 3/8"	4	Steel Fitting, 90, 6 MNPT x 6 FNPSM

3.12. Connect the Lift Cable



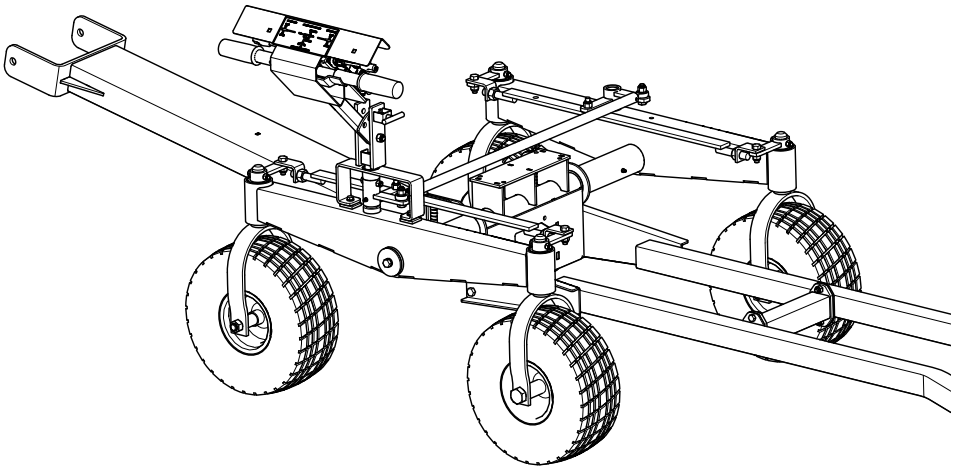
Important

Make sure there is a minimum of three wraps of cable on the winch drum when the auger is in transport position.

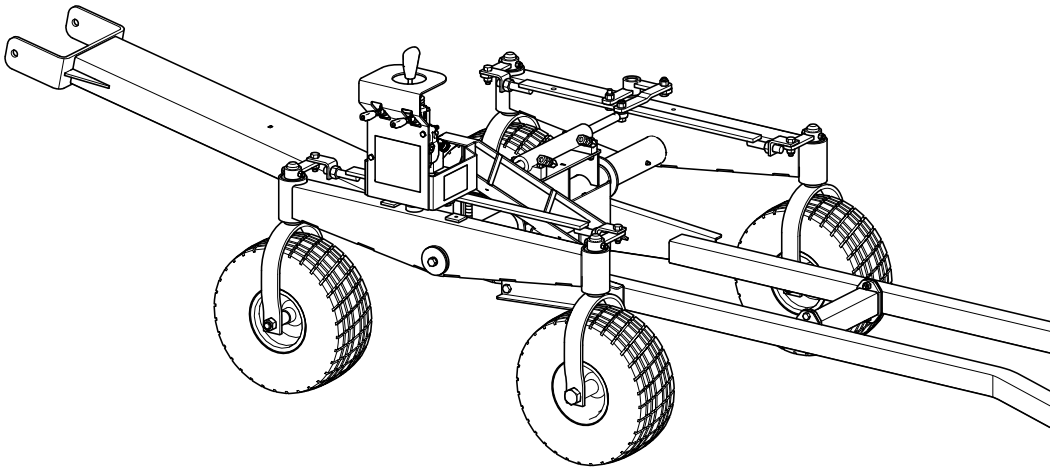
1. Pull cable to the winch.
2. Wrap the cable over and around the winch drum.
3. Thread the cable through the hole in the side of the winch drum and secure it using a cable clamp.

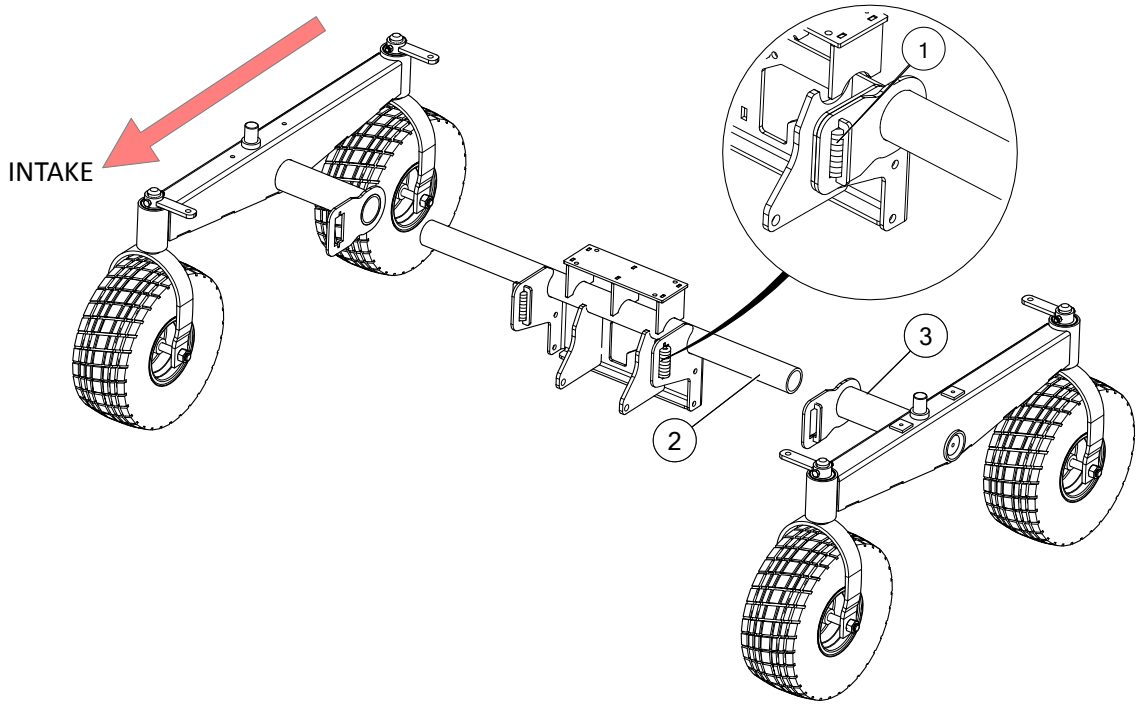
3.13. Install the Undercarriage

HD SP Kit Undercarriage (Manual Steering)



HD SP Kit Undercarriage (Hydraulic Steering)

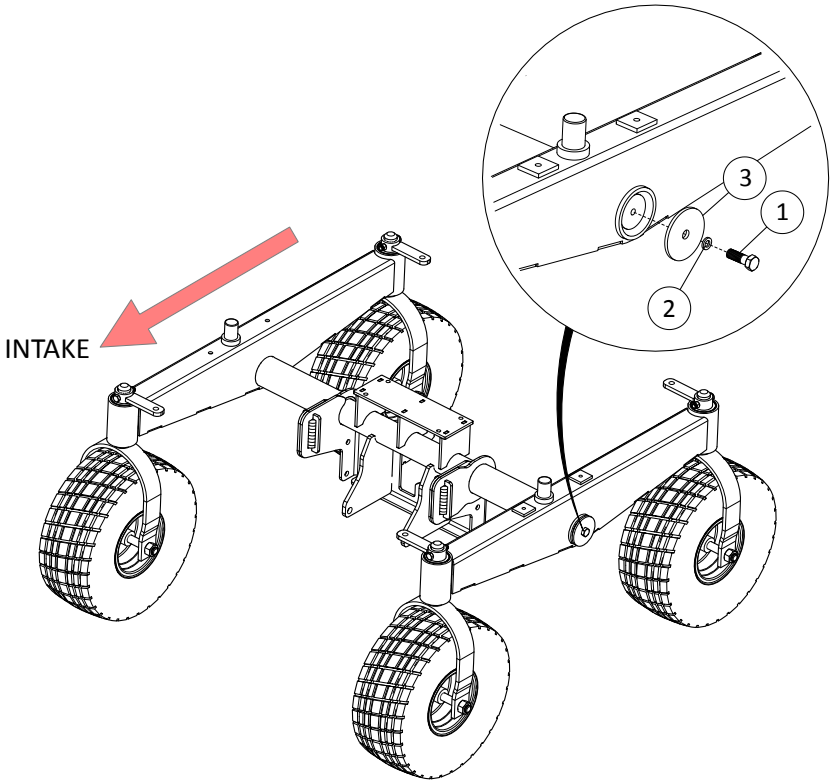




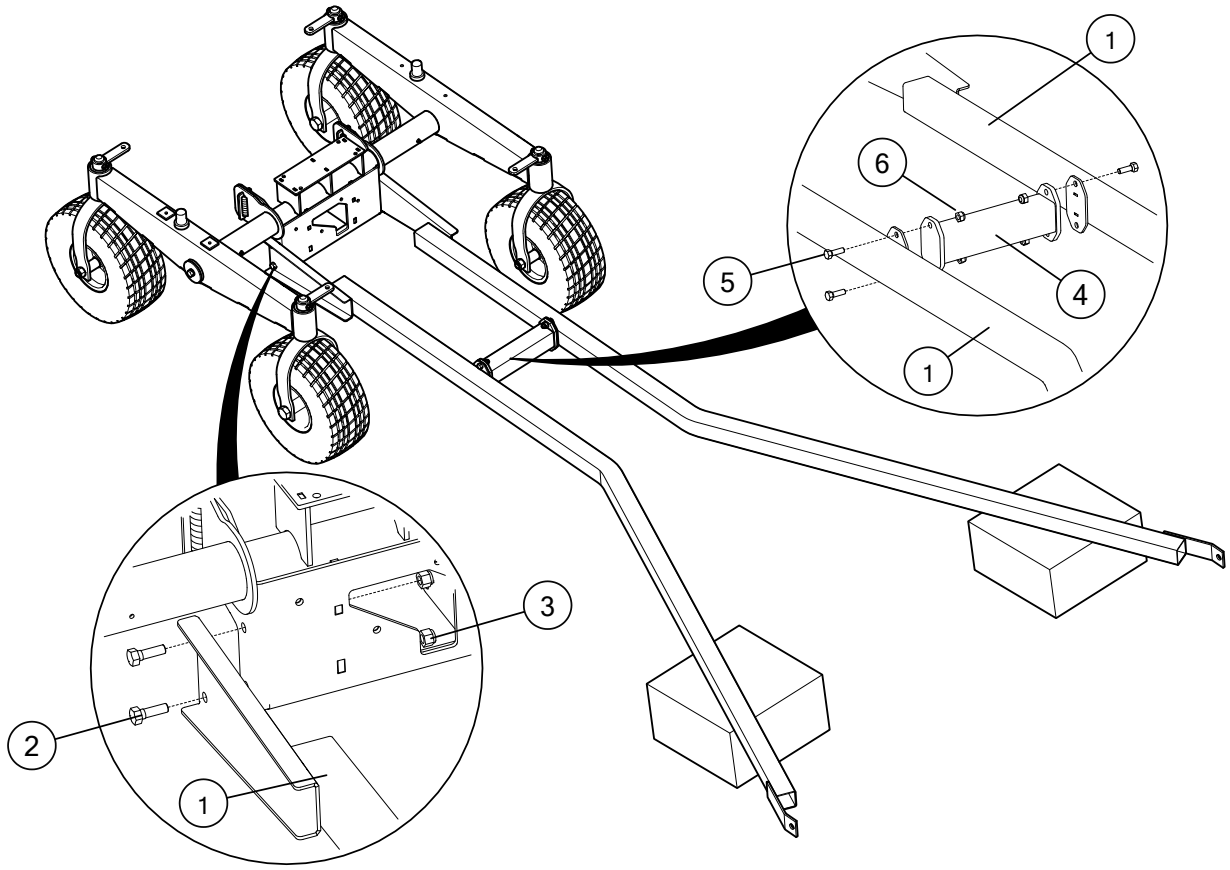
Assembly Note:

- Ensure the flanges where the walking beams and main axle meet are all aligned toward the intake end of the auger.
- Identify the walking beam that includes threaded plates on the top surface.

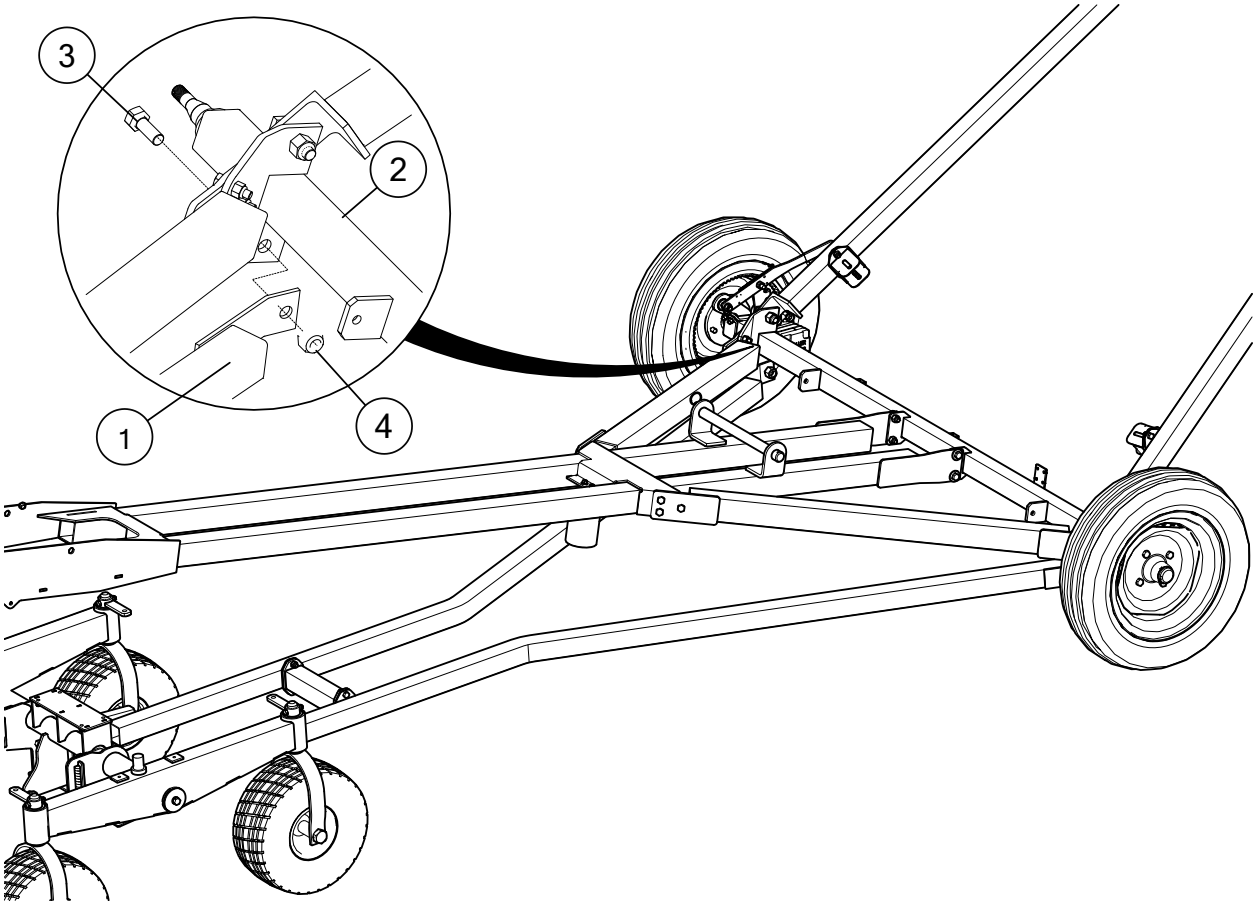
1	Support Spring	3	Walking Beam
2	Mover Axle		



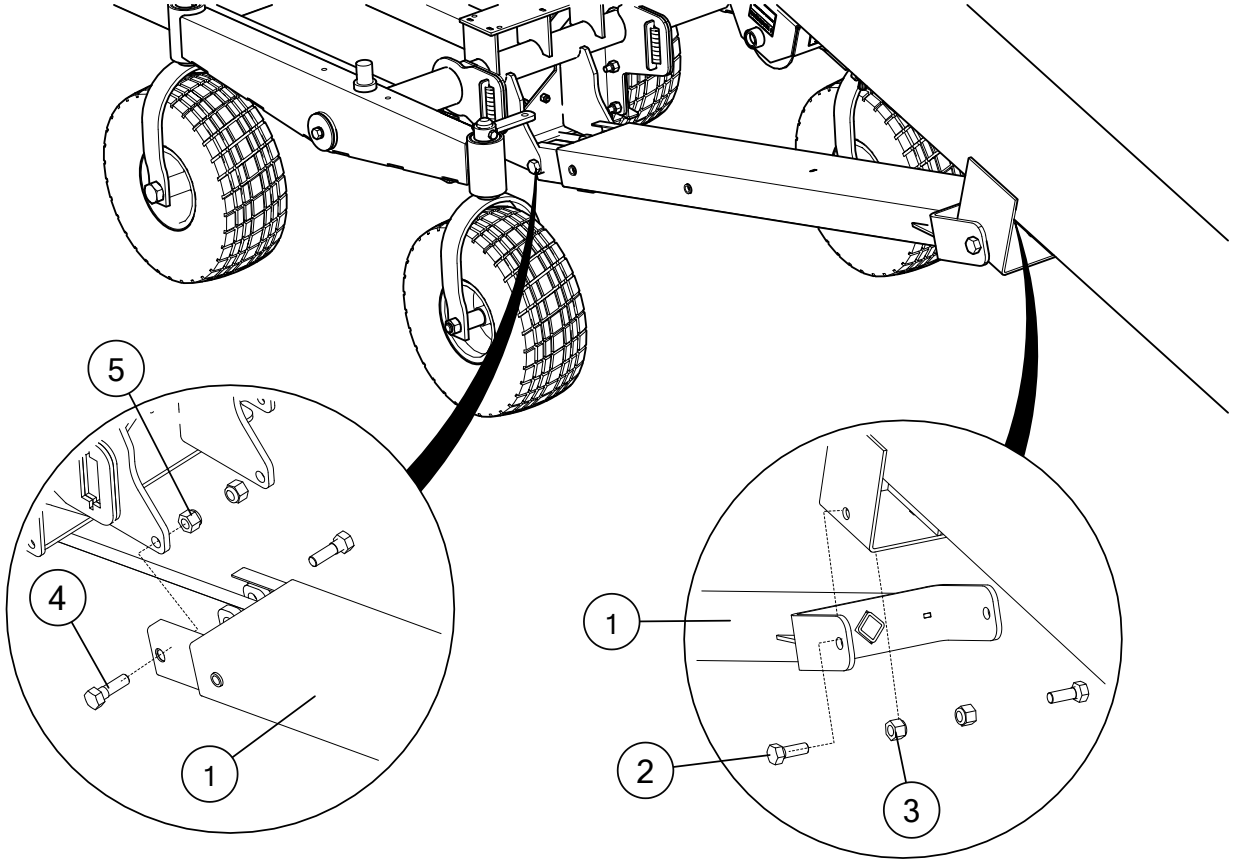
Assembly Note:			
• This joint must pivot - do not over-tighten.			
1	Bolt, 1/2" x 1-1/2"	3	Axle End Cap
2	Lock Washer, 1/2"		



1	HD SP Reach Arm	4	Frame Crossmember
2	Bolt, 1/2" x 1-1/2"	5	Bolt, 7/16" x 1-1/4"
3	Locknut, 1/2"	6	Locknut, 7/16"



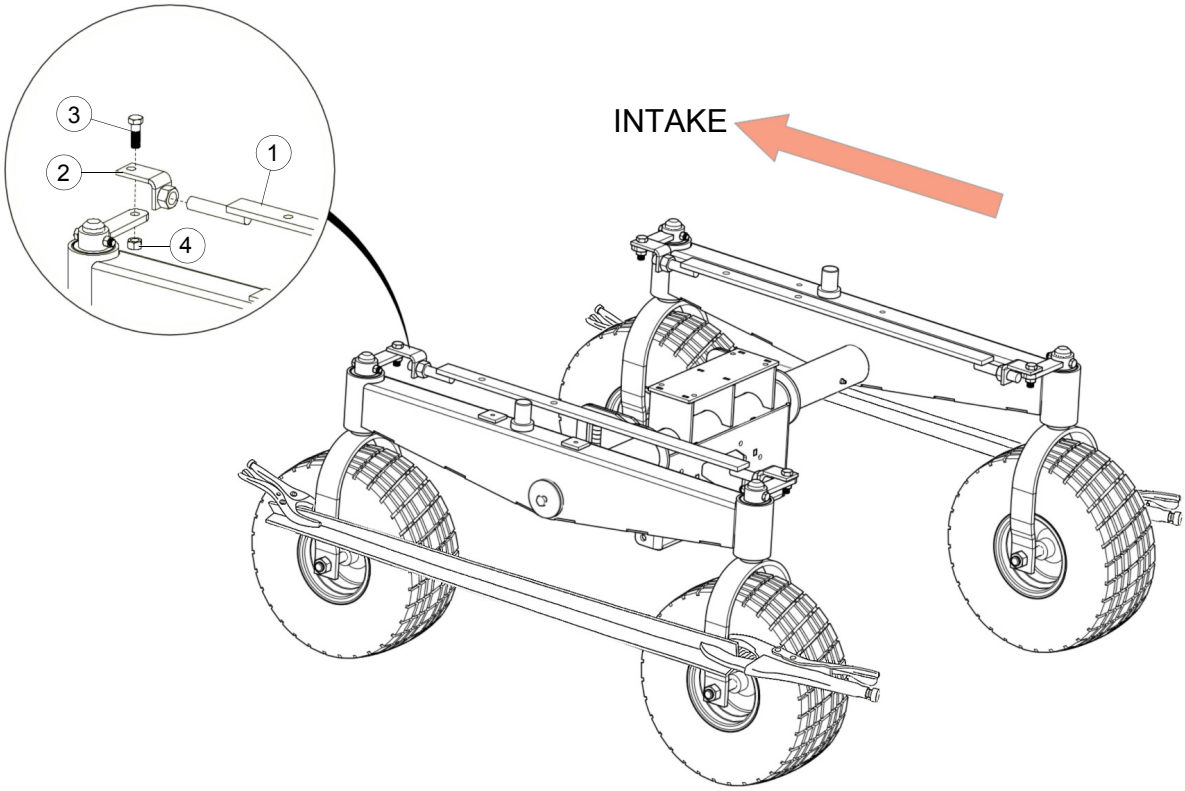
1	HD SP Reach Arm	3	Bolt, 3/4" x 2"
2	Axle	4	Locknut, 3/4"



Assembly Note:

- These joints must pivot — do no over-tighten.

1	Slider Assembly	4	Bolt, 5/8" x 2"
2	Bolt, 3/4" x 2"	5	Locknut, 5/8"
3	Locknut, 3/4"		

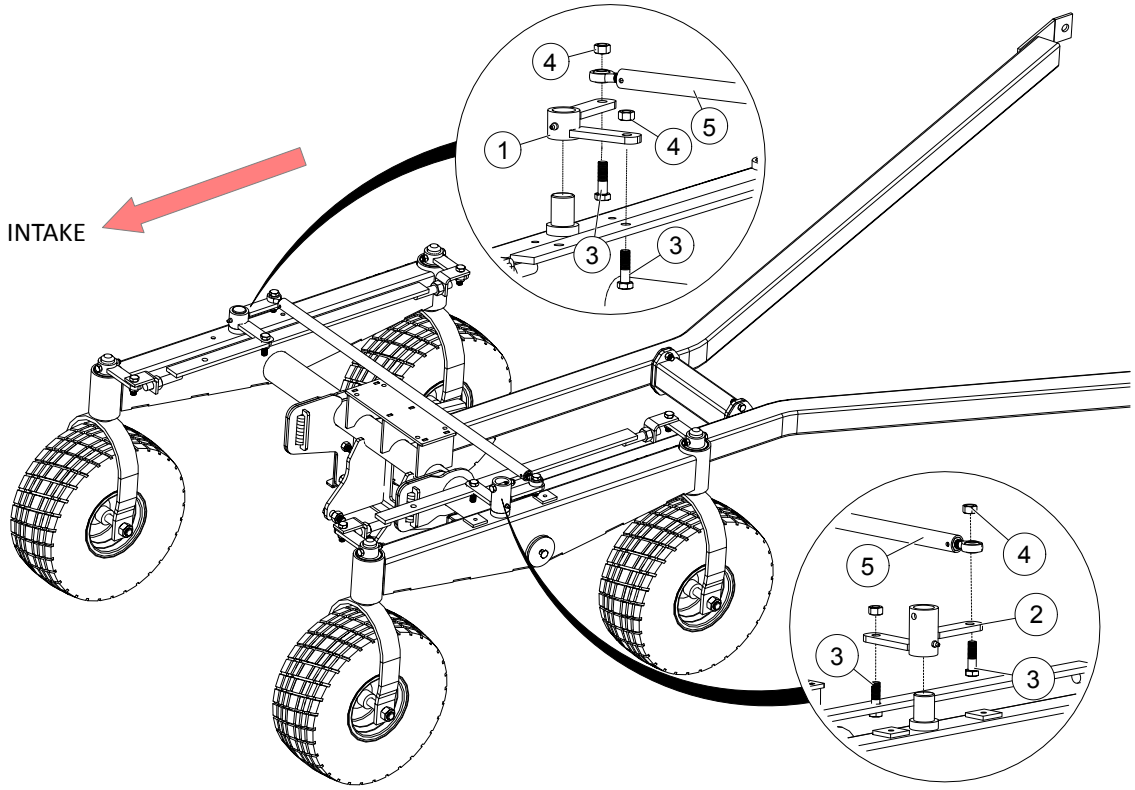


Assembly Note:

- On each walking beam, attach a piece of angle iron and clamp it onto the wheel forks to ensure all wheels are straight and parallel.
- This joint must pivot — do not over-tighten

1	Steering Link	3	Bolt, 1/2" x 1-1/2"
2	Steering Link End	4	Locknut, 1/2"

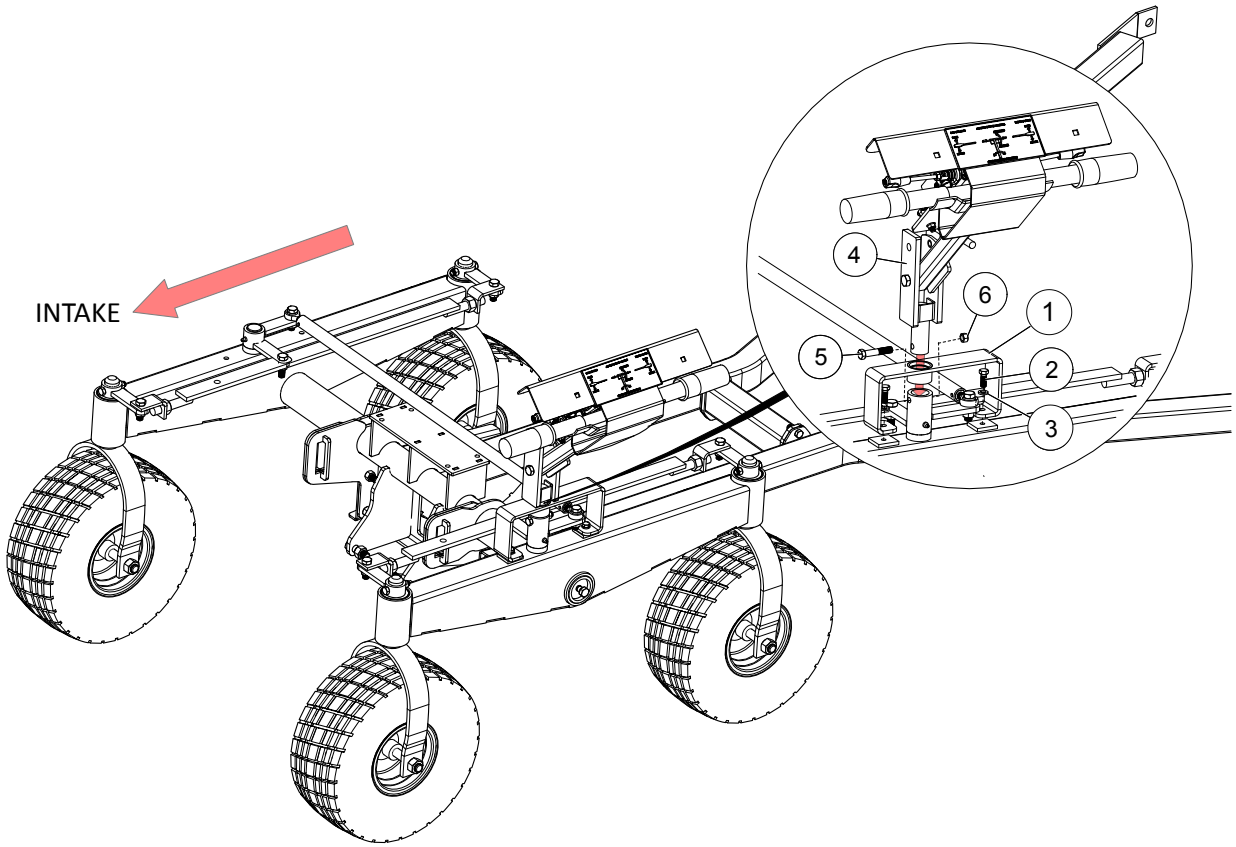
3.13.1 Install the Manual Steering Handle



Assembly Note:

- Ensure the orientation of each steering pivot is correct.
- The walking beam with the steering bracket must use the manual steering pivot (2).
- This joint must pivot - do not over-tighten.
- Apply paint on top of pivot shafts to prevent rust.

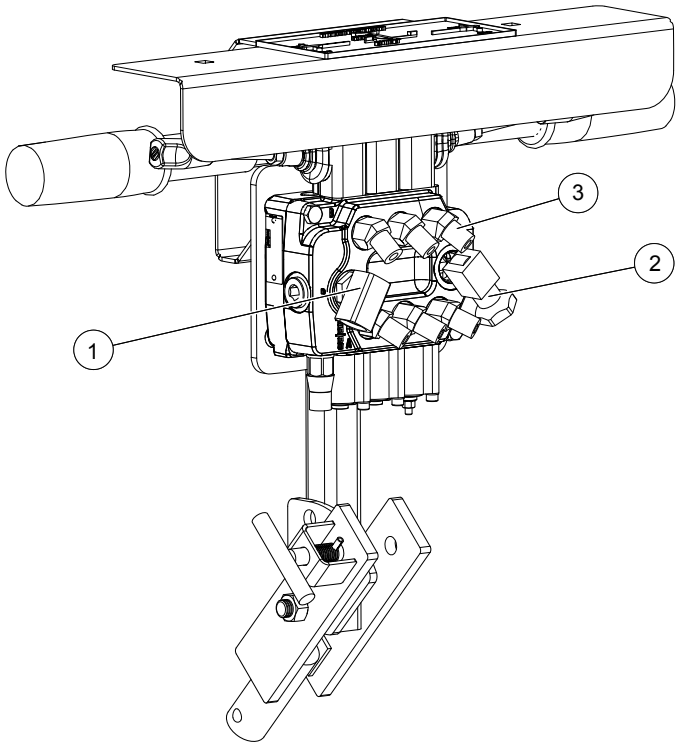
1	Steering Pivot	4	Locknut, 1/2"
2	Manual Steering Pivot	5	Manual Steering Shaft Assembly
3	Bolt, 1/2" x 1-3/4"		



Assembly Note:

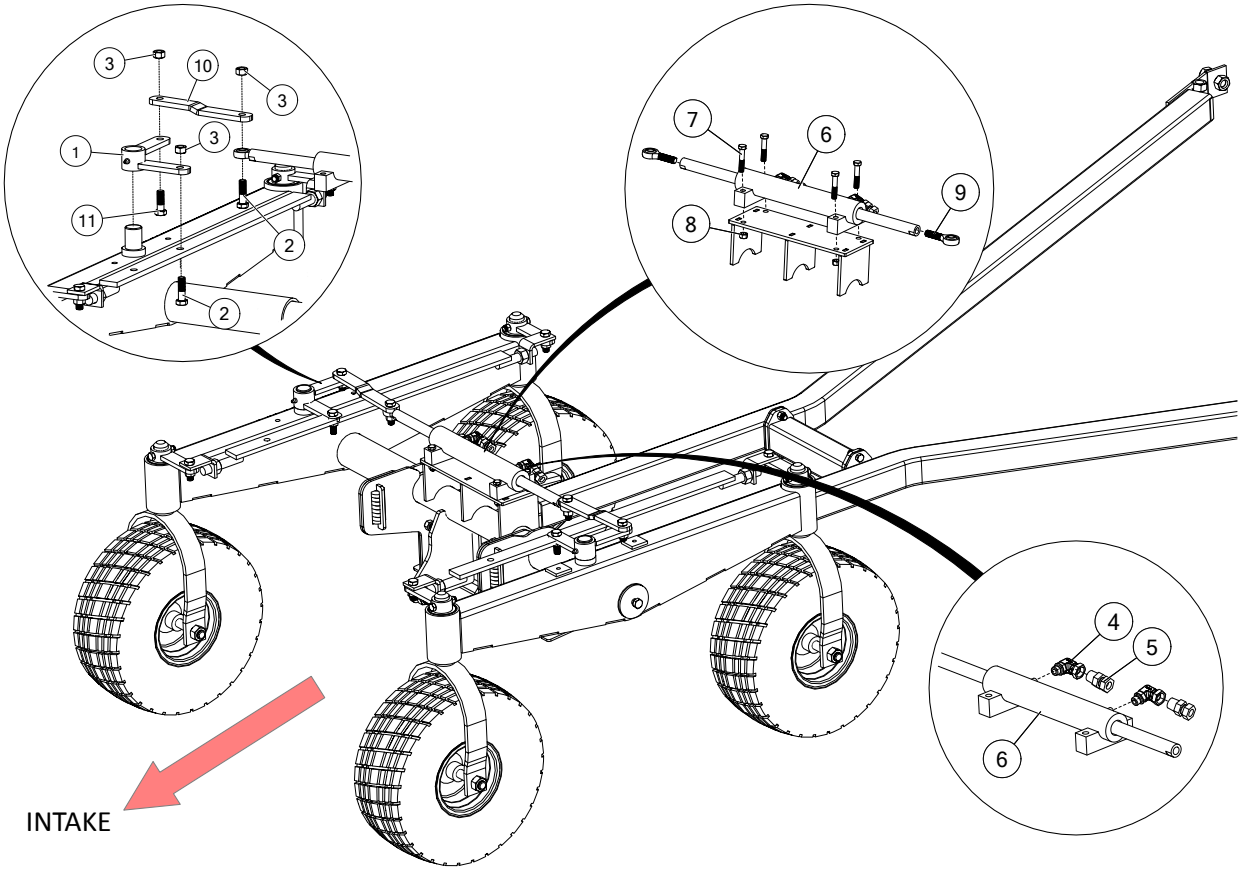
- Remove the angle irons attached on the walking beams.
- Ensure that all wheels are engaged and the linkage functions smoothly.
- Check for clearance between the tires and transport frame pipes in all steering positions.

1	Manual Steering Bushing Bracket	4	Manual Steering Handle Assembly
2	Bolt, 3/8" x 1"	5	Bolt, 3/8" x 2-1/4"
3	Lock Washer, 3/8"	6	Locknut, 3/8"



1	Steel Fitting, 90, 8 MORB x 1/2 FNPT	3	Steel Fitting, 45, 6 MORB x 6 MJIC
2	Steel Fitting, 90, 10 MORB x 1/2 NSPM		

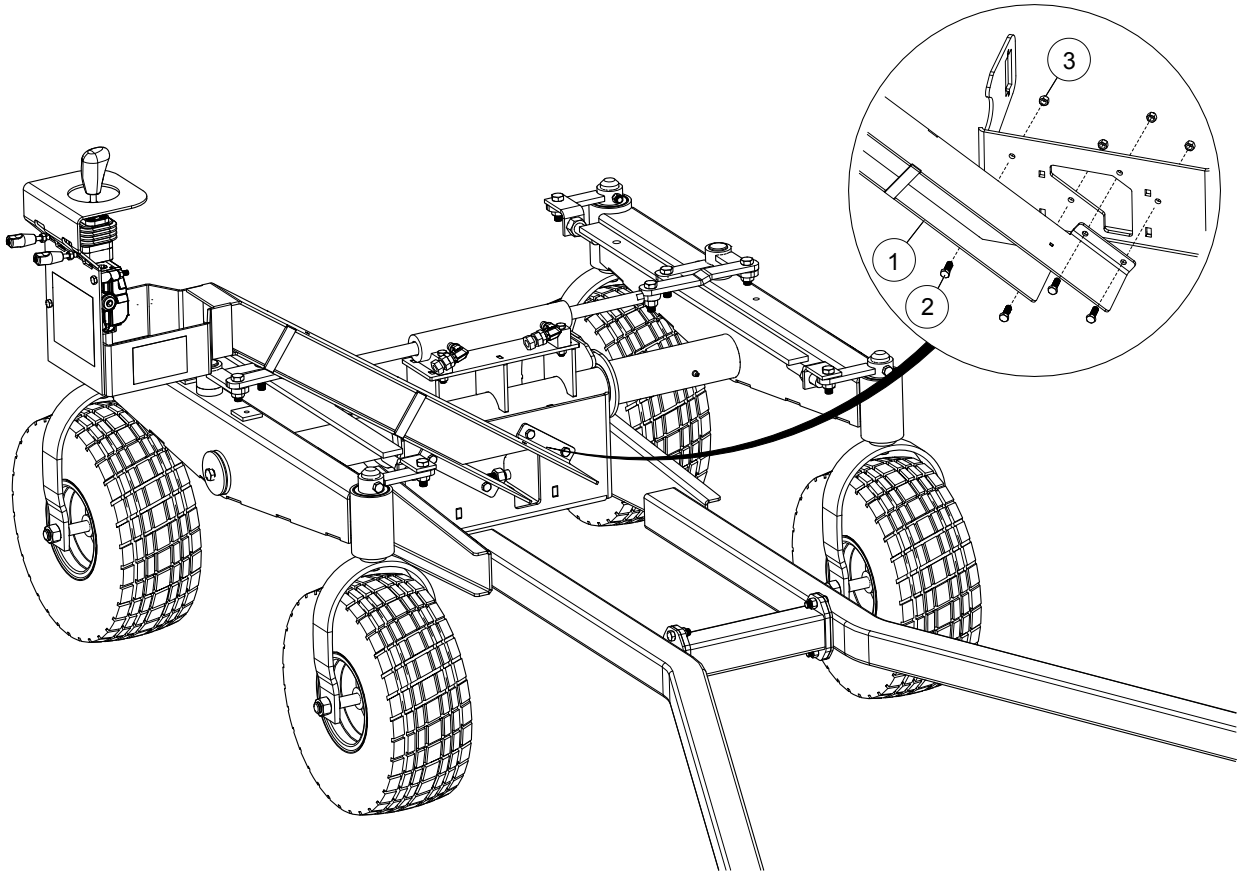
3.13.2 Install the Hydraulic Steering Control Arm



Assembly Note:

- Ensure the orientation of each steering pivot is correct.
- This joint must pivot - do not over-tighten.
- Apply paint on top of pivot shafts to prevent rust.

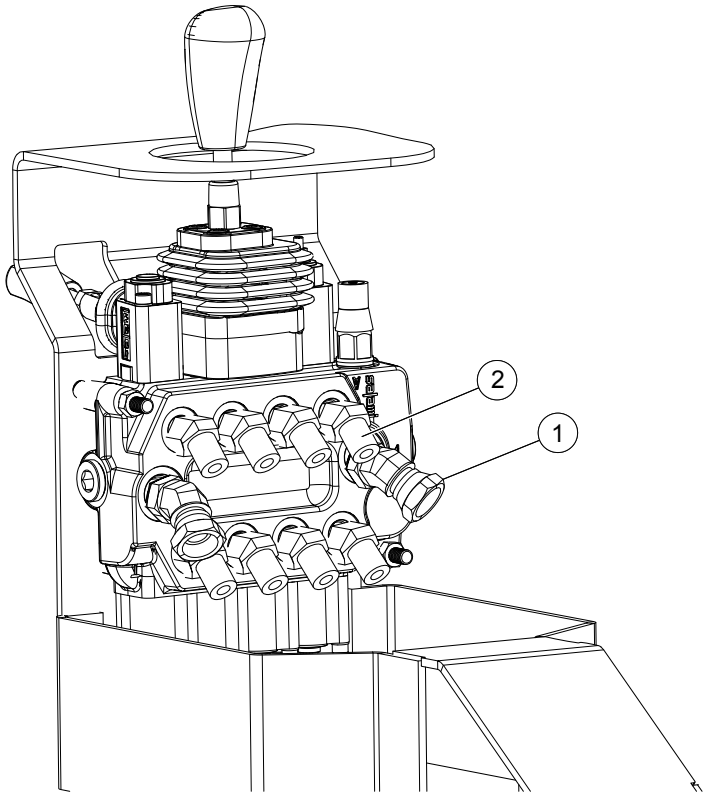
1	Steering Pivot	7	Bolt, 3/8" x 2"
2	Bolt, 1/2" x 1-3/4"	8	Locknut, 3/8"
3	Locknut, 1/2"	9	Rod End Ball Joint
4	Steel Elbow, 90, 6 MORB x 3/8 NPSM	10	Hydraulic Cylinder Link
5	Orifice, 6 MPT x 6 FPTS	11	Bolt, 1/2" x 1-1/2"
6	Hydraulic Double Cylinder		



Assembly Note:

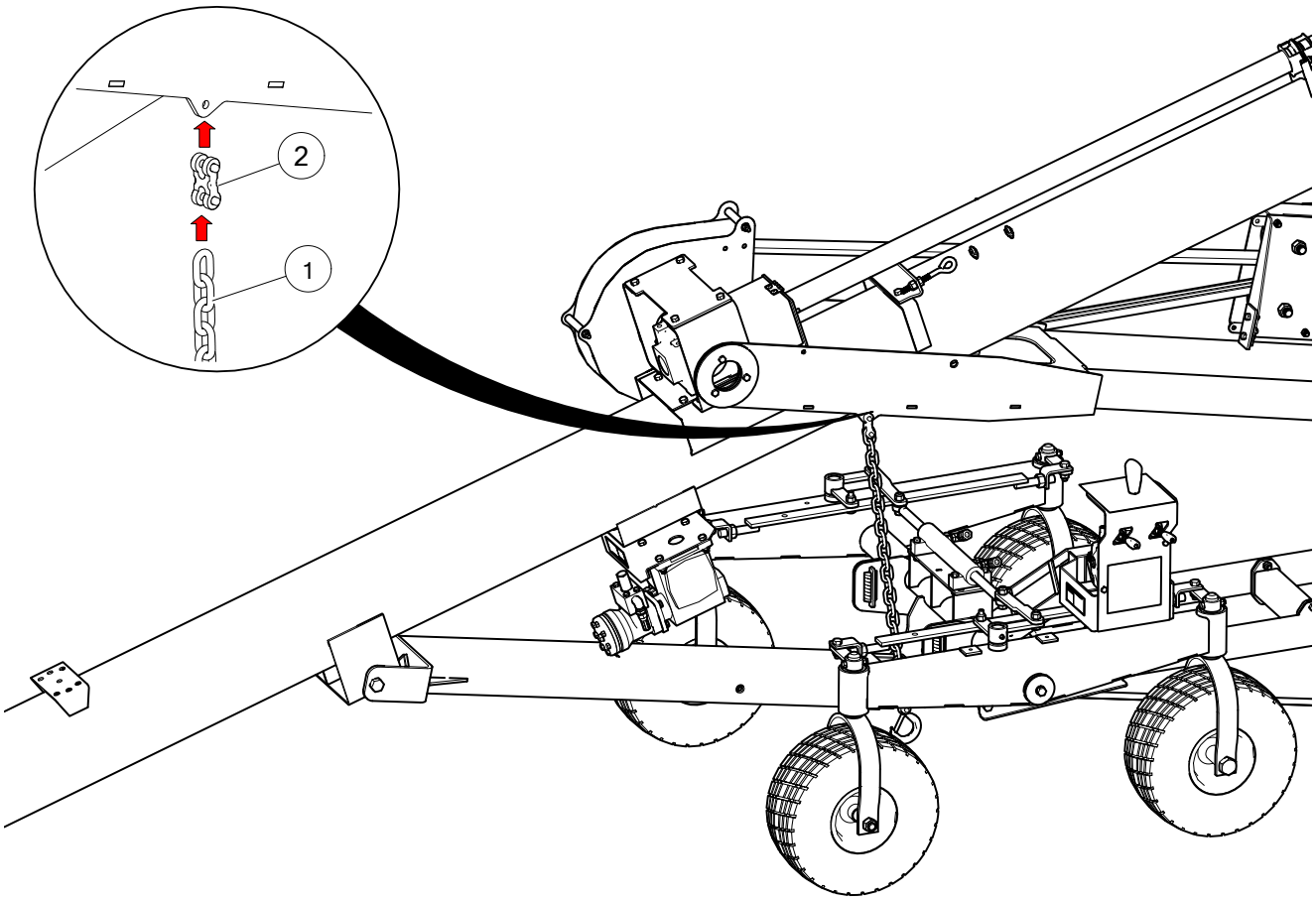
- Remove the angle irons attached on the walking beams.
- Ensure that all wheels are engaged and the linkage functions smoothly.
- Check for clearance between the tires and transport frame pipes in all steering positions.

1	Hydraulic Steering Control Arm Assembly	3	Locknut, 3/8"
2	Bolt, 3/8" x 1"		



1	Steel Fitting, 45, 8 MORB x 1/2 FNPSM	2	Steel Fitting, 45, 6 MORB x 6 MJIC

3.14. Attach the Transport Chain



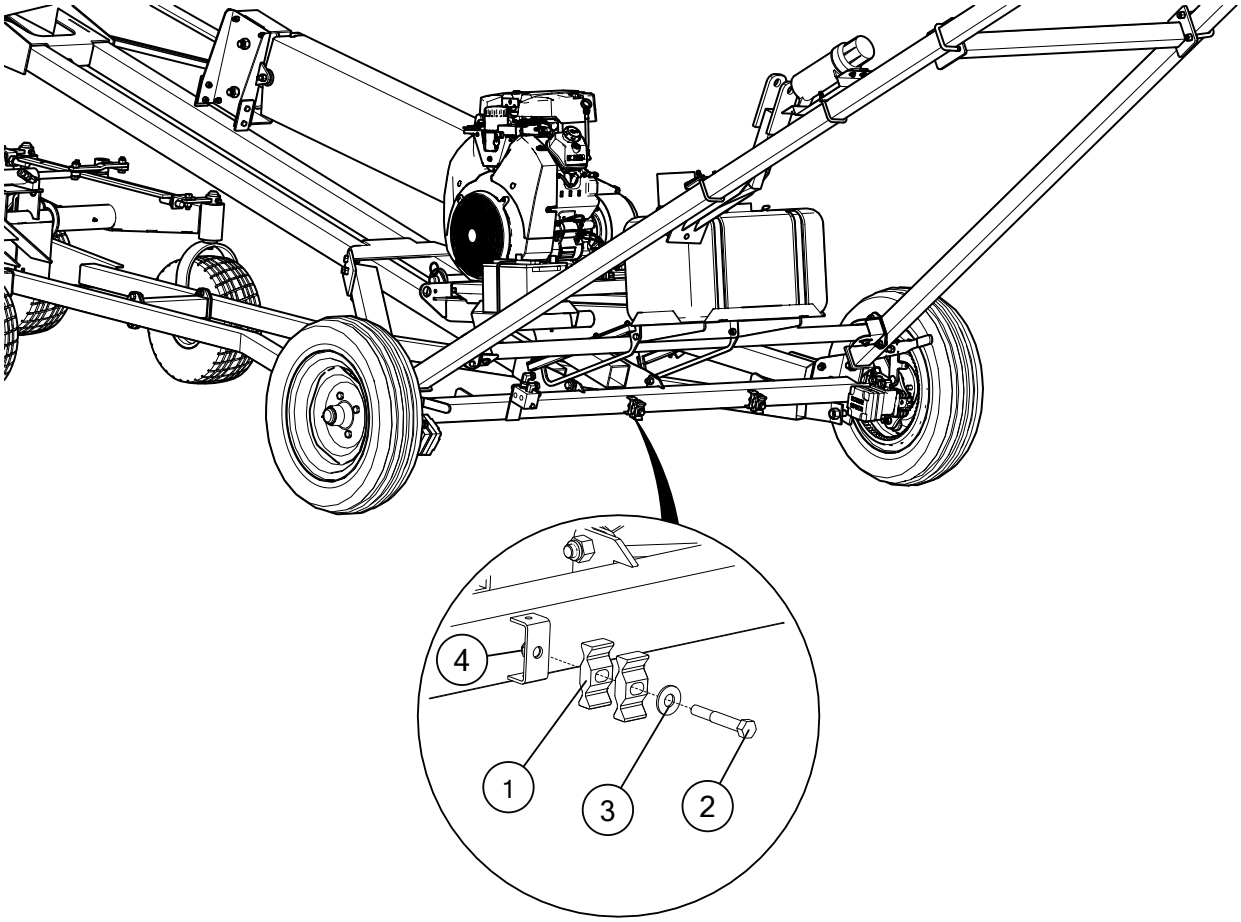
Assembly Note:

If necessary, the transport chain assembly can be shortened.

- Remove mid link from chain.
- Attach mid link to the appropriate chain link.

1	Transport Chain	2	Mid Link

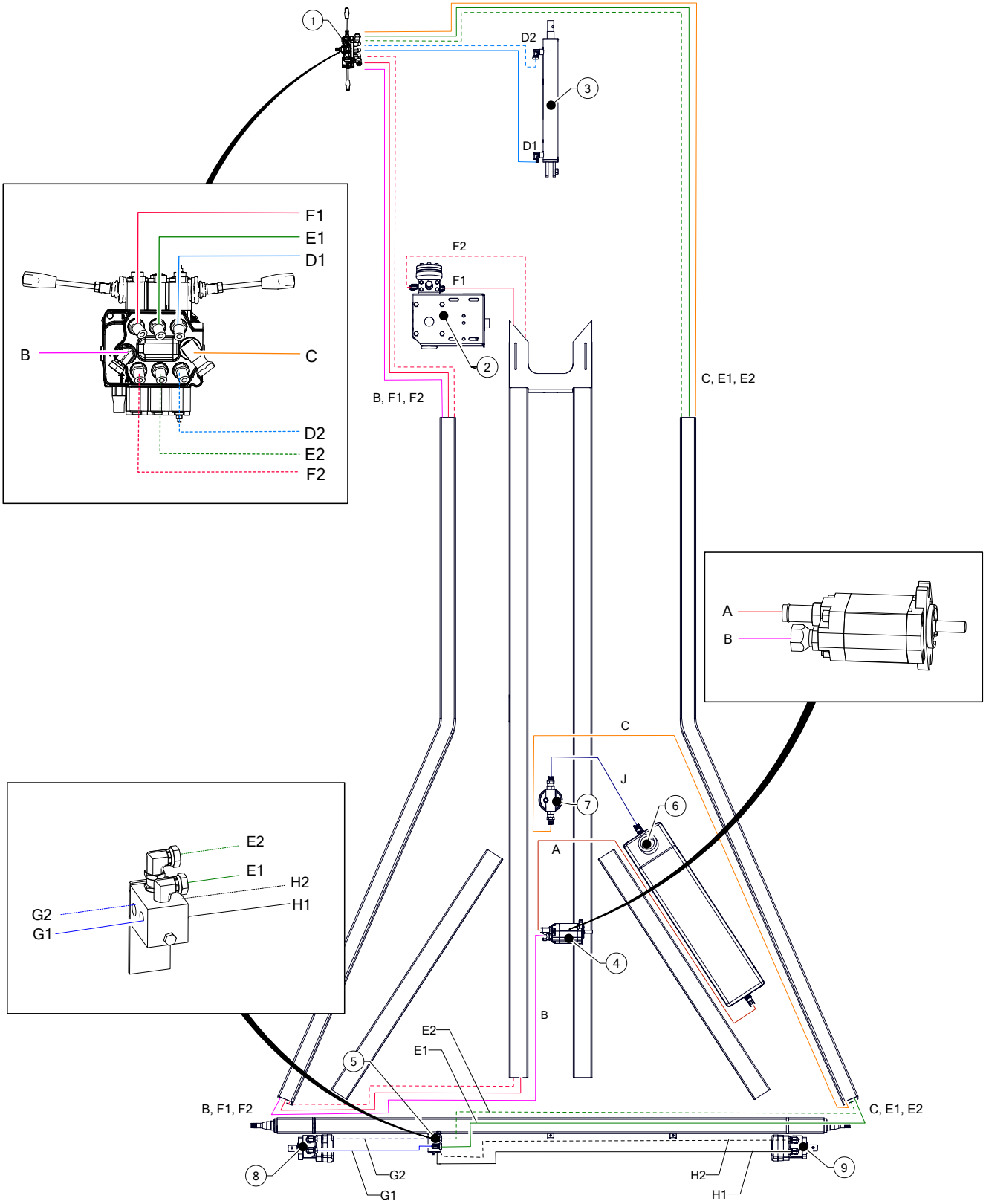
3.15. Install the Line Blocks



1	Line Block	3	Flat Washer, 3/8"
2	Bolt, 3/8" x 2-1/2"	4	Locknut, 3/8"

3.16. Attach the Hydraulic Hoses

Manual Steering



Hydraulic Hoses, HD SP Kit with Manual Steering

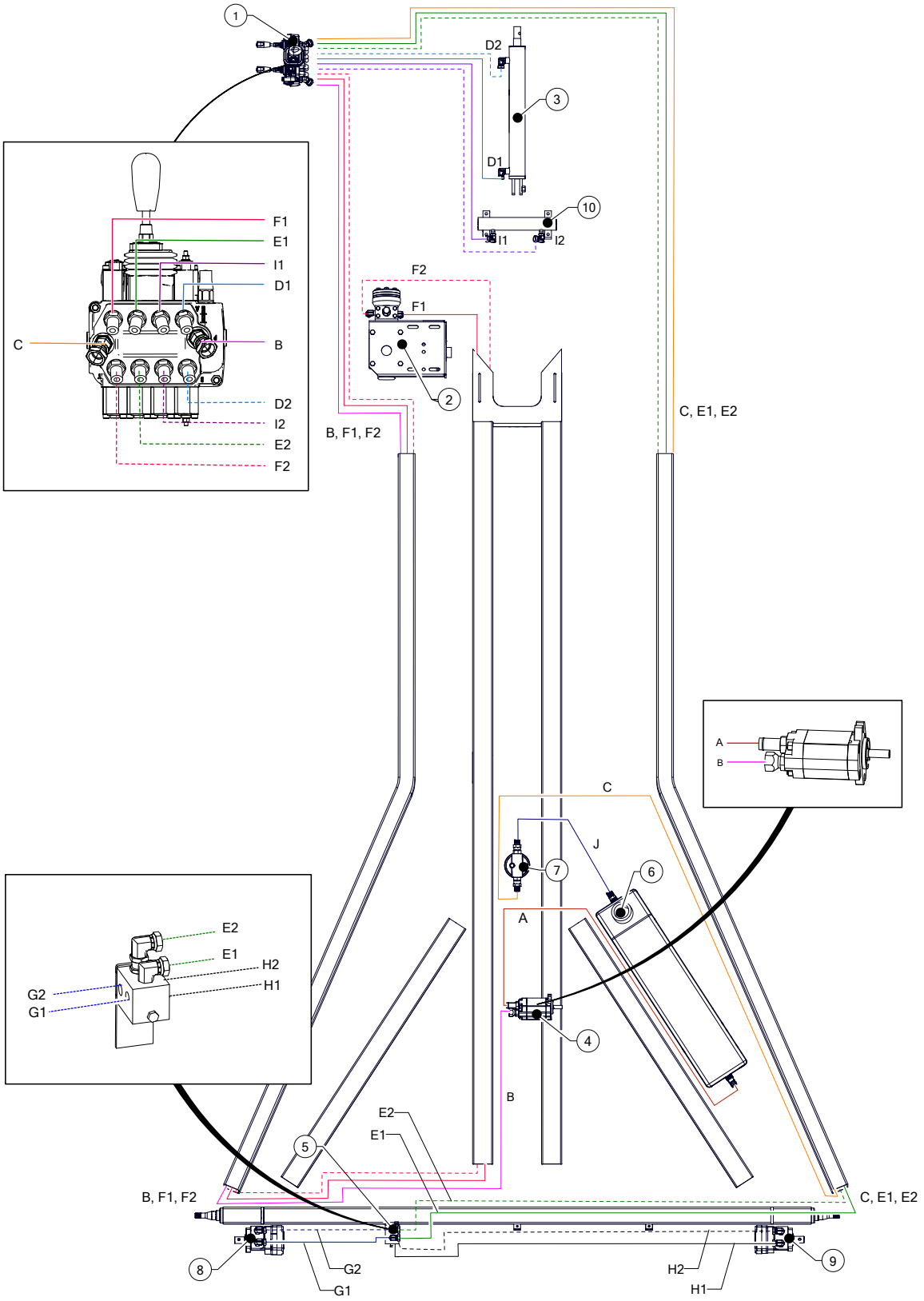
Item	Hose Ends	Length			
		36'	41'	46'	51'
A	N/A	3/4" x 78"			
B	1/2 MNPT x 1/2 MNPT	1/2" x 220"	1/2" x 231"	1/2" x 240"	1/2" x 256"
C	1/2 MNPT x 1/2 MNPT	1/2" x 220"	1/2" x 231"	1/2" x 240"	1/2" x 256"
D1	6 FJIC x 3/8 MNPT	3/8" x 60"			
D2	6 FJIC x 3/8 MNPT	3/8" x 74"			
E1/E2	6 FJIC x 3/8 MNPT	3/8" x 156"	3/8" x 168"	3/8" x 180"	3/8" x 192"
F1/F2	6 FJIC x 3/8 MNPT	3/8" x 278"	3/8" x 334"	3/8" x 358"	3/8" x 376"
G1/G2	3/8 MNPT x 3/8 MNPT	3/8" x 18"			
H1/H2	3/8 MNPT x 3/8 MNPT	3/8" x 56"			
J	1/2 MNPT x 1/2 FNPSM	1/2" x 22"			

Hose identification is defined by a single band of colour on the valve end of the hose: Blue - D1/D2, Green - E1/E2, White - F1/F2

HD SP Kit Hydraulic Components with Manual Steering

1	Hydraulic Valve	6	Oil Tank
2	Hydraulic Winch	7	Oil Filter
3	Hydraulic Cylinder	8	Drive Motor
4	Hydraulic Pump	9	Drive Motor
5	Cushion Block		

Hydraulic Steering



Hydraulic Hoses, HD SP Kit with Hydraulic Steering

Item	Hose Ends	Length			
		36'	41'	46'	51'
A	N/A	3/4" x 78"			
B	1/2 MNPT x 1/2 MNPT	1/2" x 220"	1/2" x 231"	1/2" x 240"	1/2" x 256"
C	1/2 MNPT x 1/2 MNPT	1/2" x 220"	1/2" x 231"	1/2" x 240"	1/2" x 256"
D1	6 FJIC x 3/8 MNPT	3/8" x 60"			
D2	6 FJIC x 3/8 MNPT	3/8" x 74"			
E1/E2	6 FJIC x 3/8 MNPT	3/8" x 156"	3/8" x 168"	3/8" x 180"	3/8" x 192"
F1/F2	6 FJIC x 3/8 MNPT	3/8" x 278"	3/8" x 334"	3/8" x 358"	3/8" x 376"
G1/G2	3/8 MNPT x 3/8 MNPT	3/8" x 18"			
H1/H2	3/8 MNPT x 3/8 MNPT	3/8" x 56"			
I1/I2	6 FJIC x 3/8 MNPT	3/8" x 62"			
J	1/2 MNPT x 1/2 FNPSM	1/2" x 22"			

Hose identification is defined by a single band of colour on the valve end of the hose: Blue - D1/D2, Green - E1/E2, White - F1/F2, Red - I1/I2

HD SP Kit Hydraulic Components with Hydraulic Steering

1	Hydraulic Valve	6	Oil Tank
2	Hydraulic Winch	7	Oil Filter
3	Hydraulic Cylinder	8	Drive Motor
4	Hydraulic Pump	9	Drive Motor
5	Cushion Block	10	Hydraulic Cylinder, Double

Hose Routing

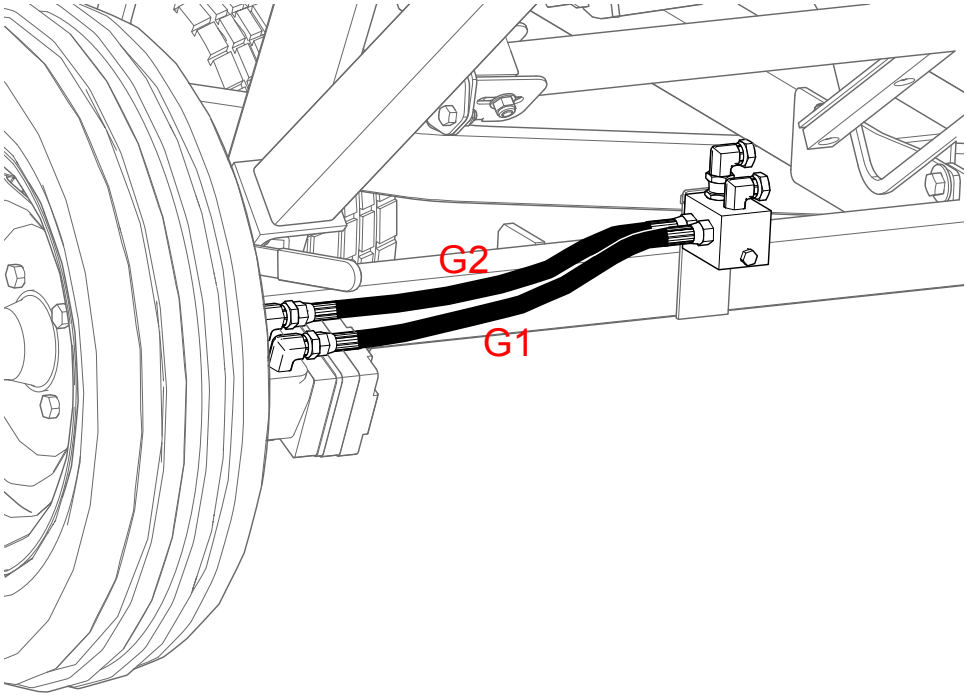
⚠ WARNING Serious operator injury could occur if the transport unit and hydraulic hoses are not assembled correctly. If necessary, disconnect the hoses and re-assemble.

The SP Transport unit MUST operate as indicated on the control panel decal. The auger MUST move in the direction that the handle is moved.

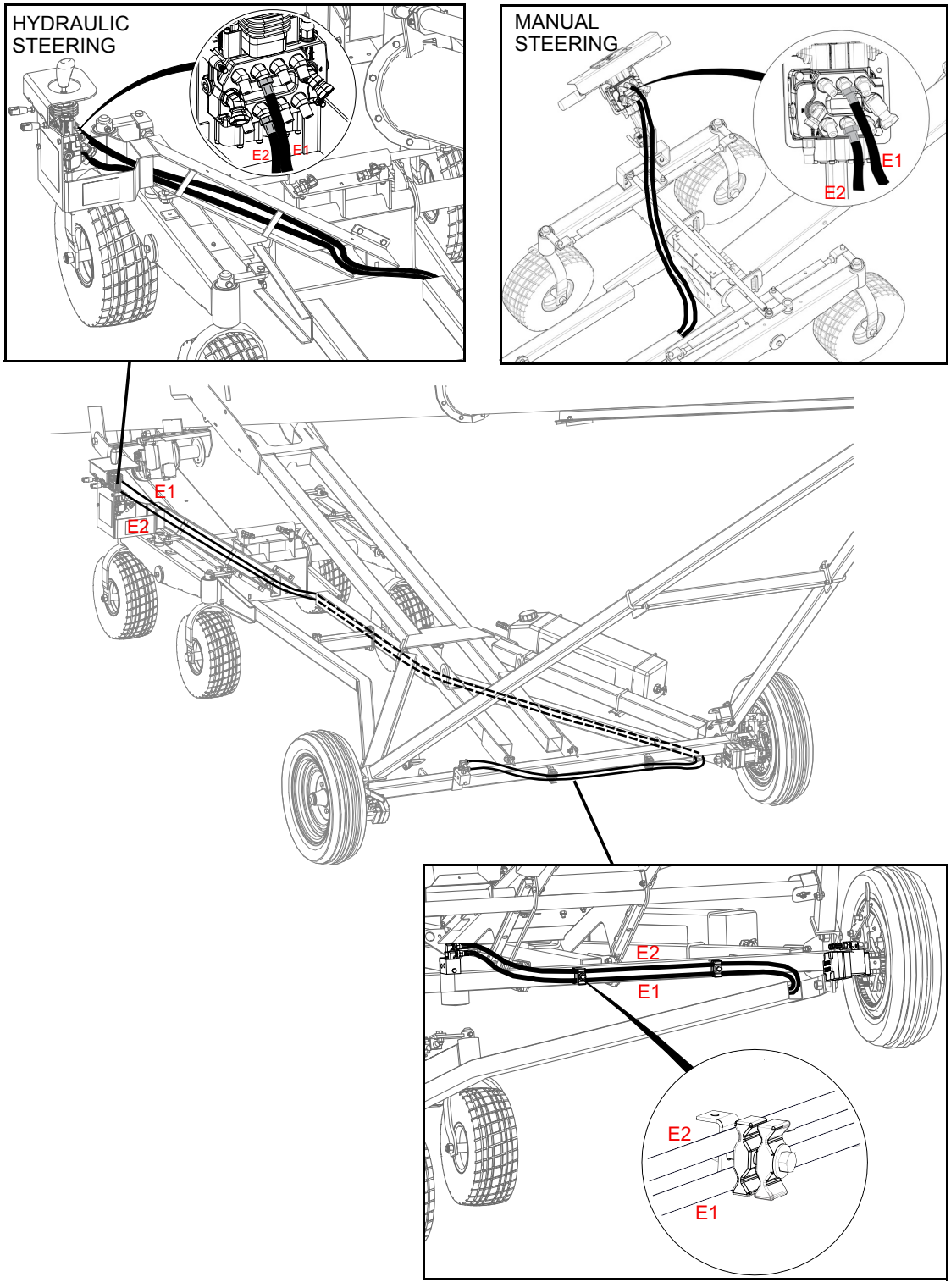
Assembly Note:

- Assemble hoses as illustrated.
- Keep hoses free of dirt while assembling.
- Keep pressure and return sides aligned.
- Tighten after being satisfied that the hoses are in the proper position.
- Check operation.
- Secure hoses in place with the cable ties supplied.

Hydraulic Hoses G1 and G2



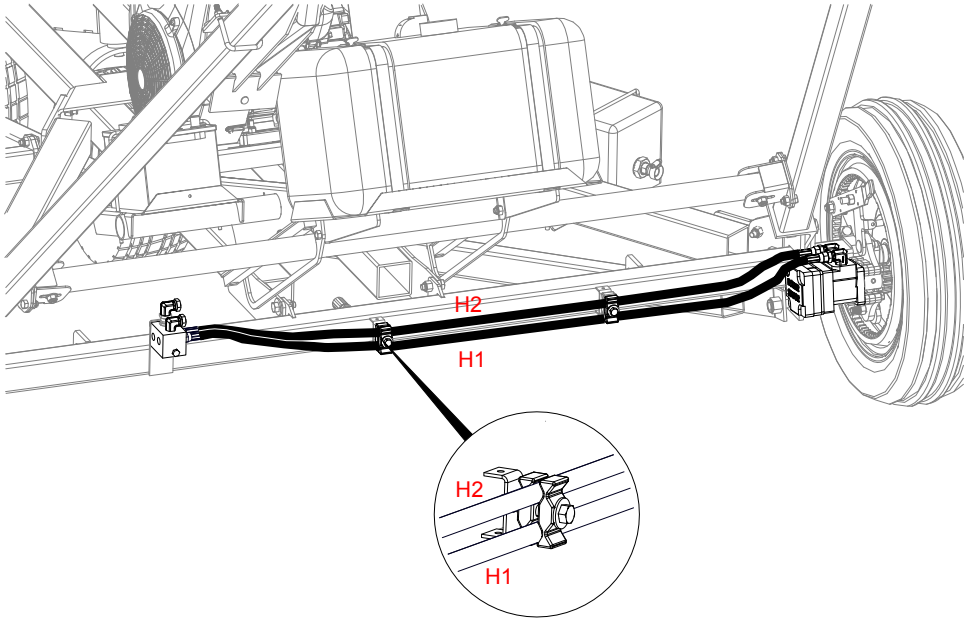
Hydraulic Hoses E1 and E2



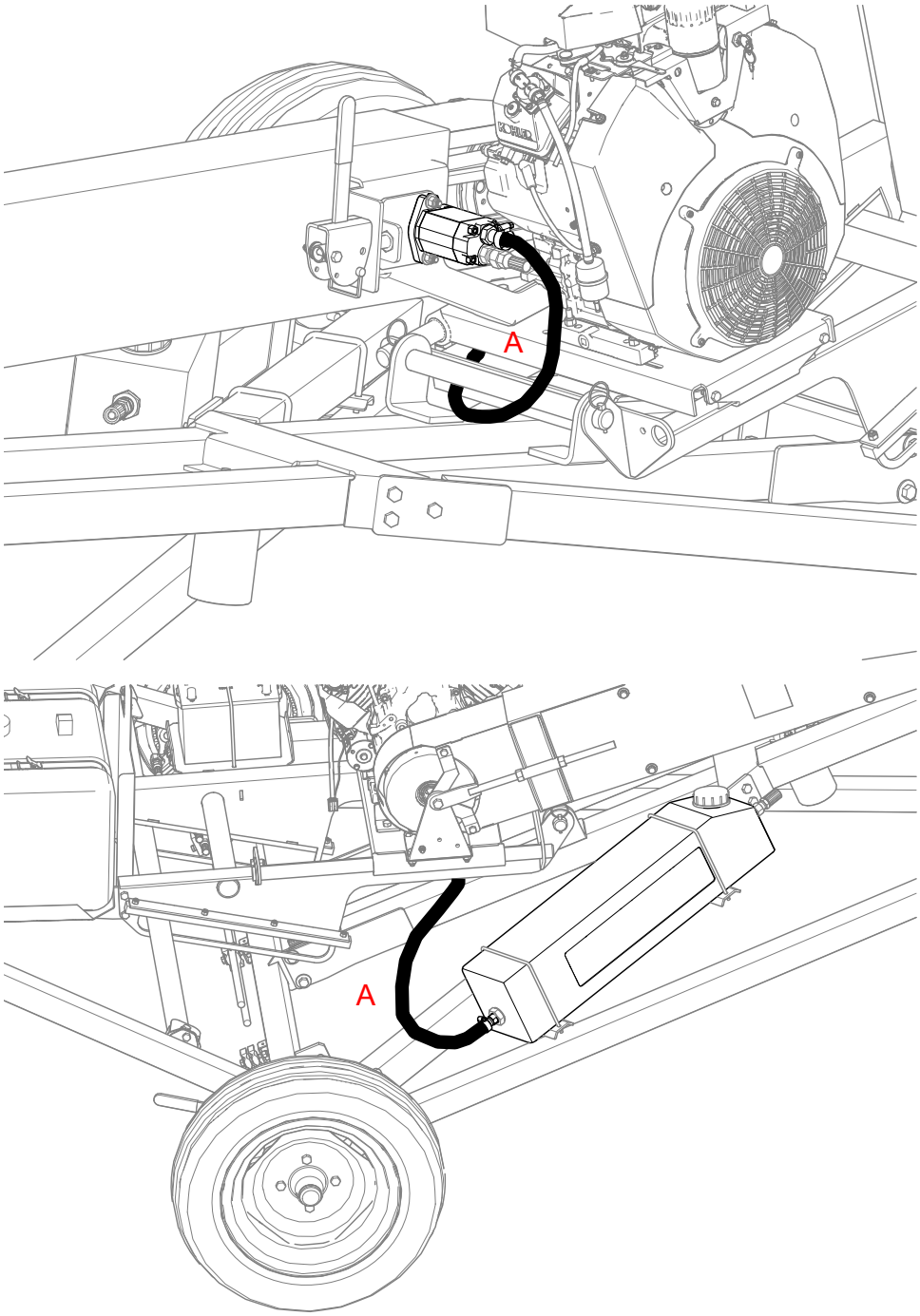
Note

Route hoses E1 and E2 along the axle using the line blocks, through the HDSP reach arm and route to the valve.

Hydraulic Hoses H1 and H2



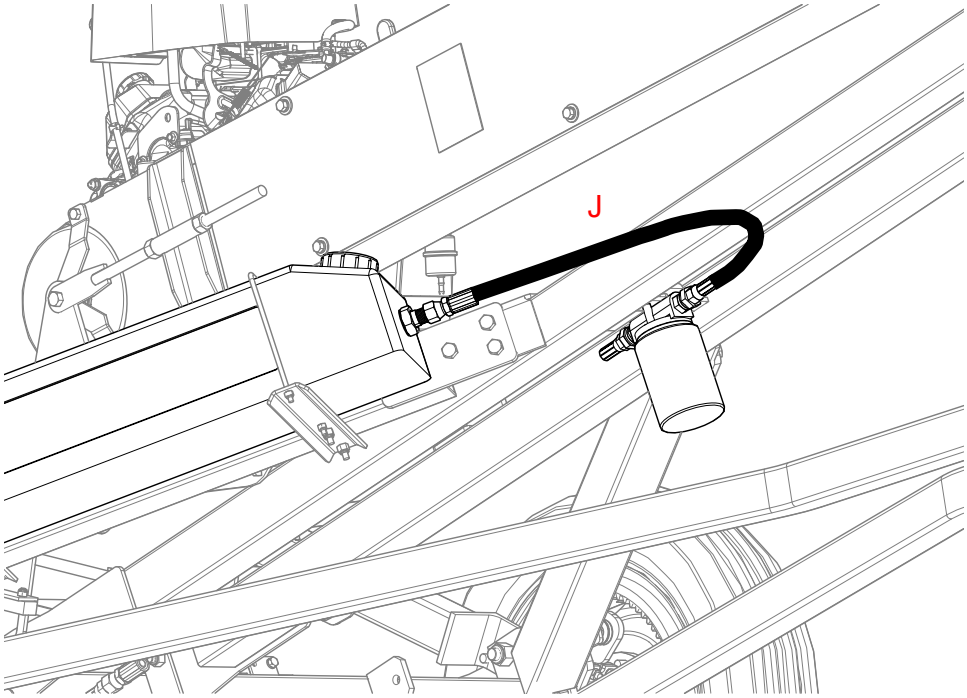
Hydraulic Hose A



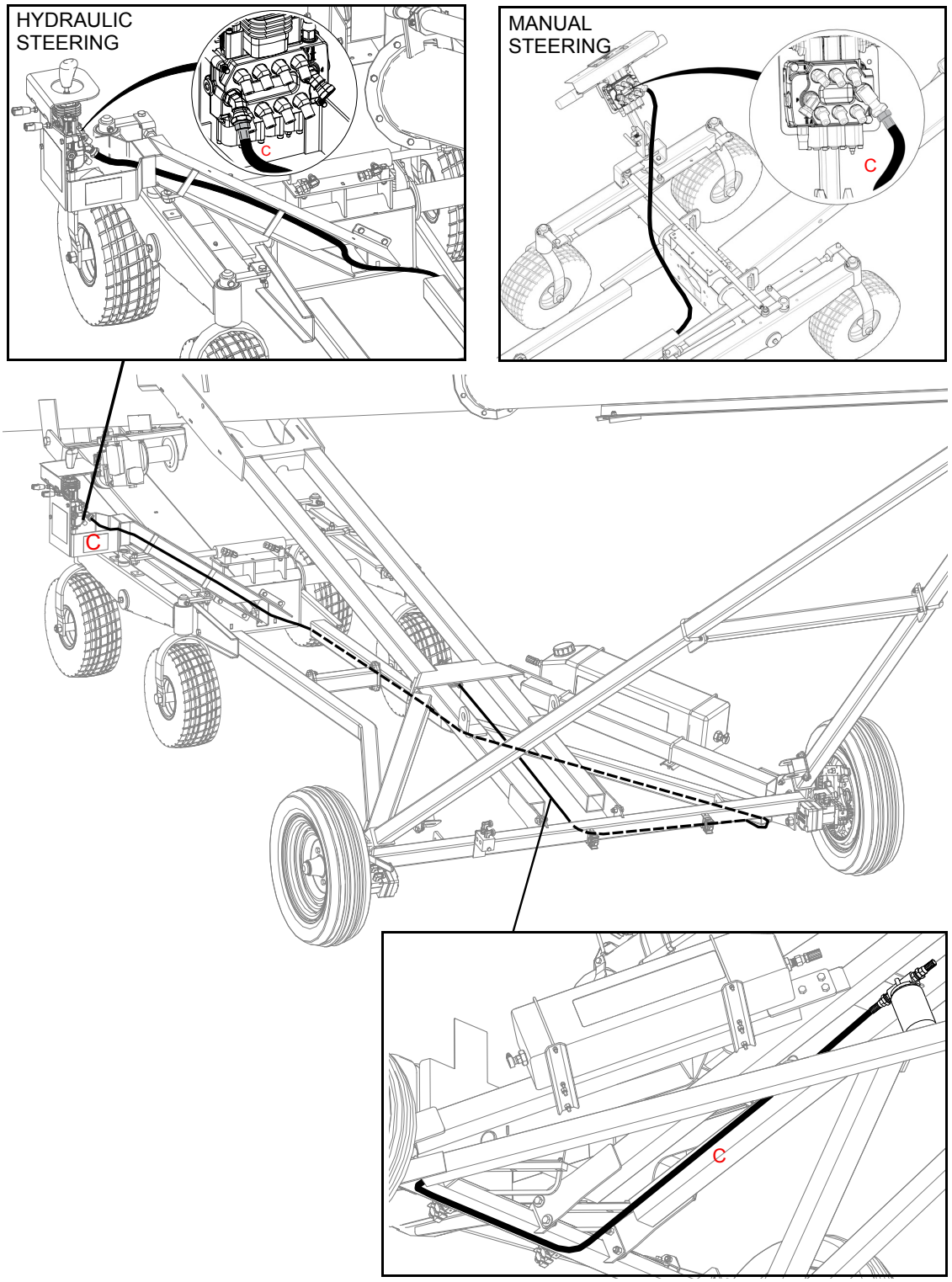
Note

Route hose A under the engine slider assembly along the lower frame.

Hydraulic Hose J



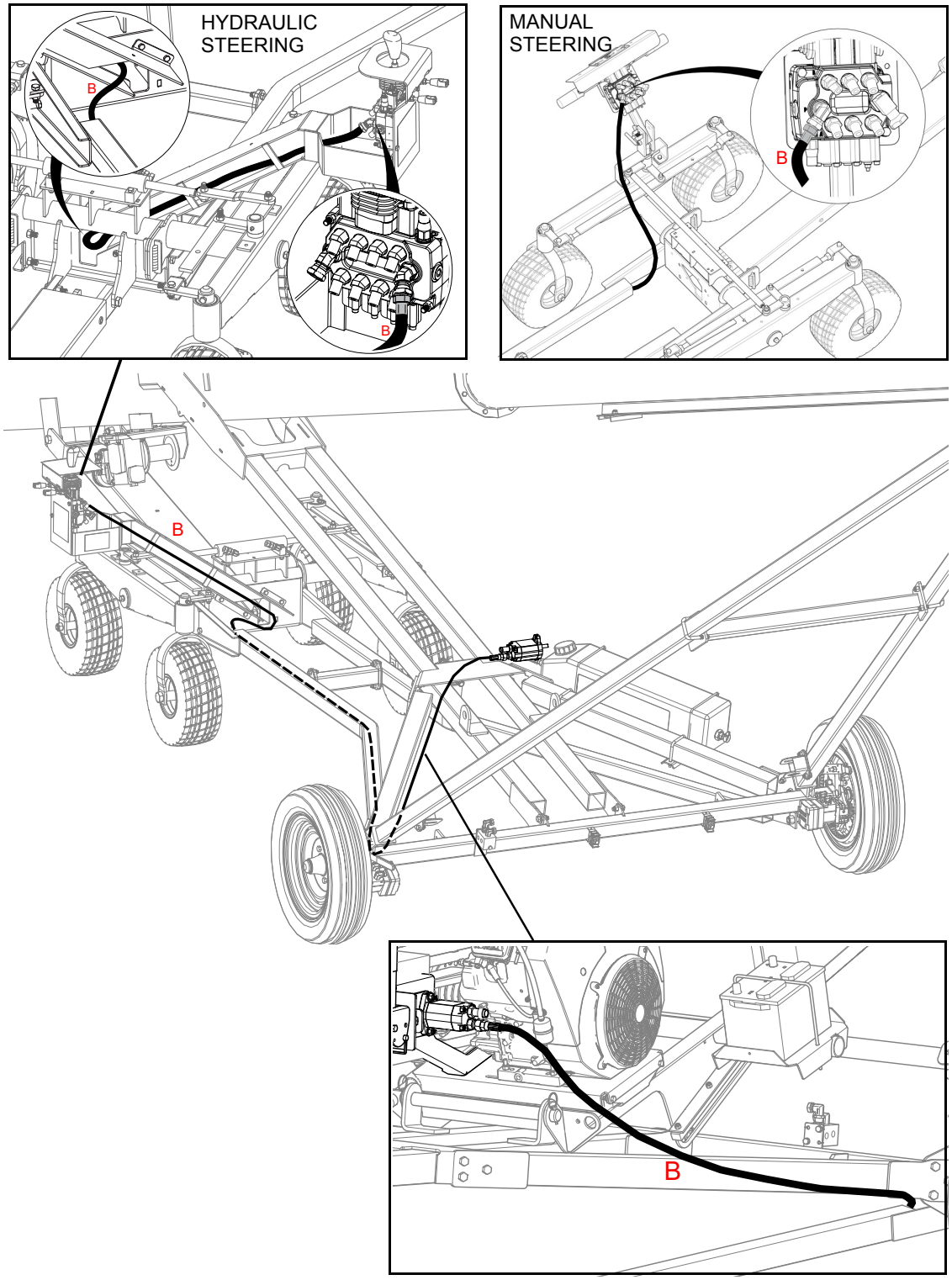
Hydraulic Hose C



Note

Route hose C along the axle, through the HDSP reach arm and route to the valve.

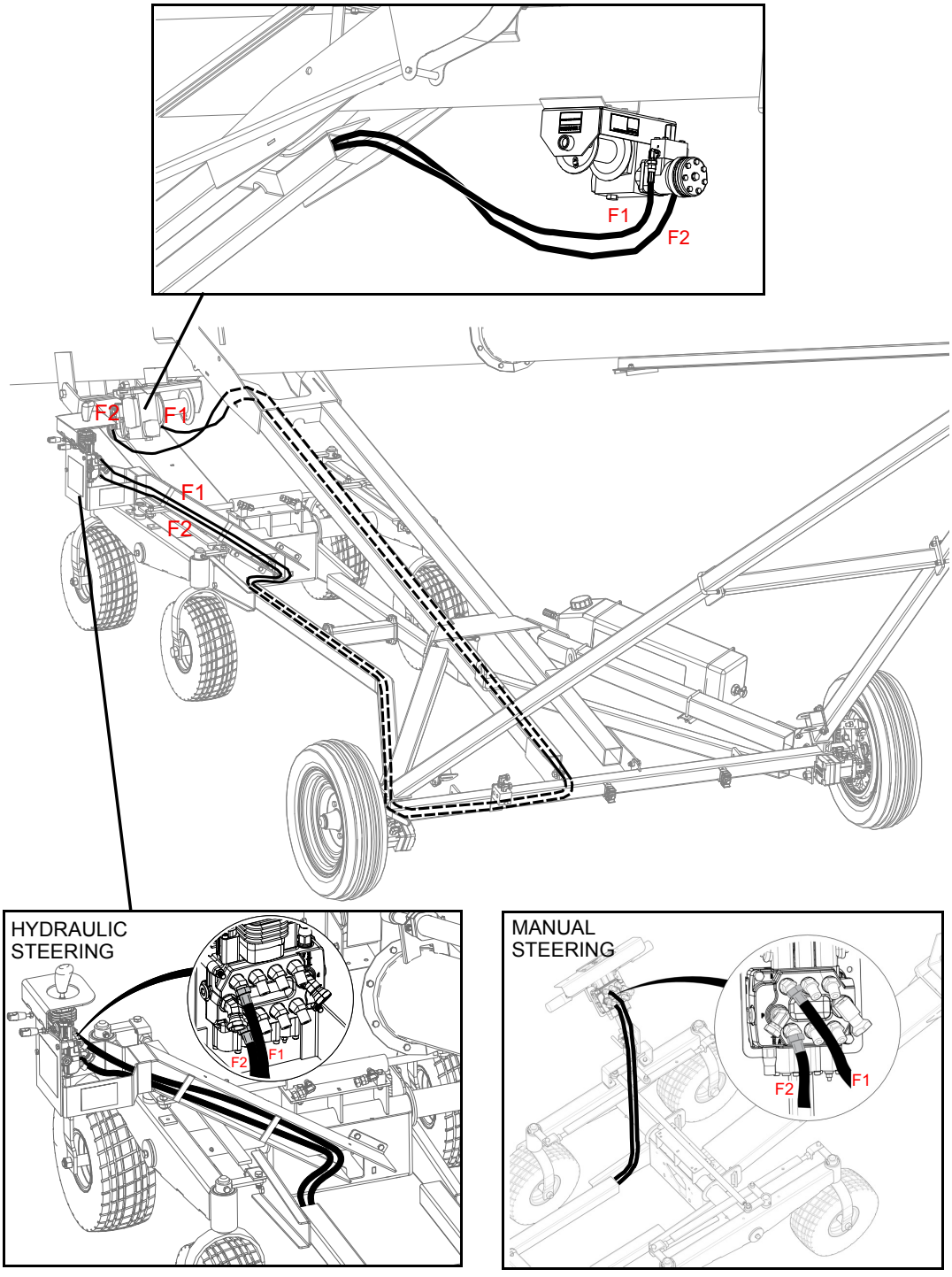
Hydraulic Hose B



Note

Route hose B up through the HDSP reach arm and route to the valve.

Hydraulic Hoses F1 and F2

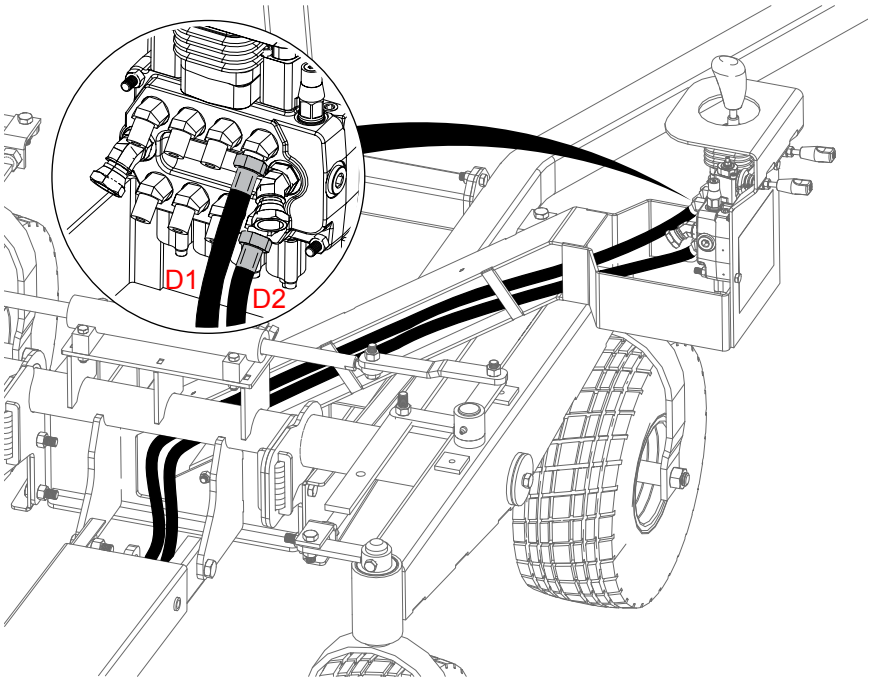


Note

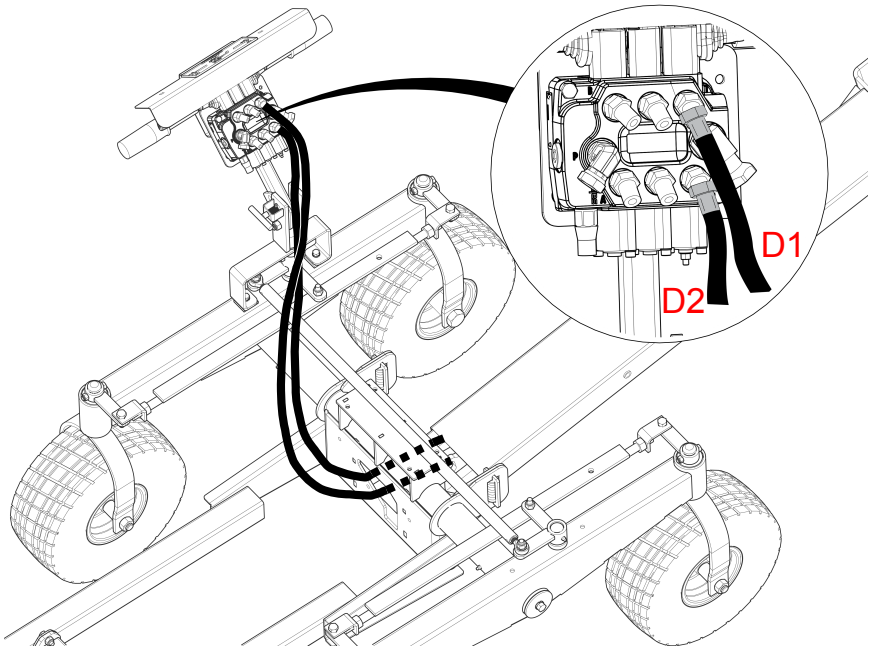
Route hoses F1 and F2 down through the lower frame, along the axle, up through the HDSP reach arm and route to the valve.

Hydraulic Hoses D1 and D2

Hydraulic Steering



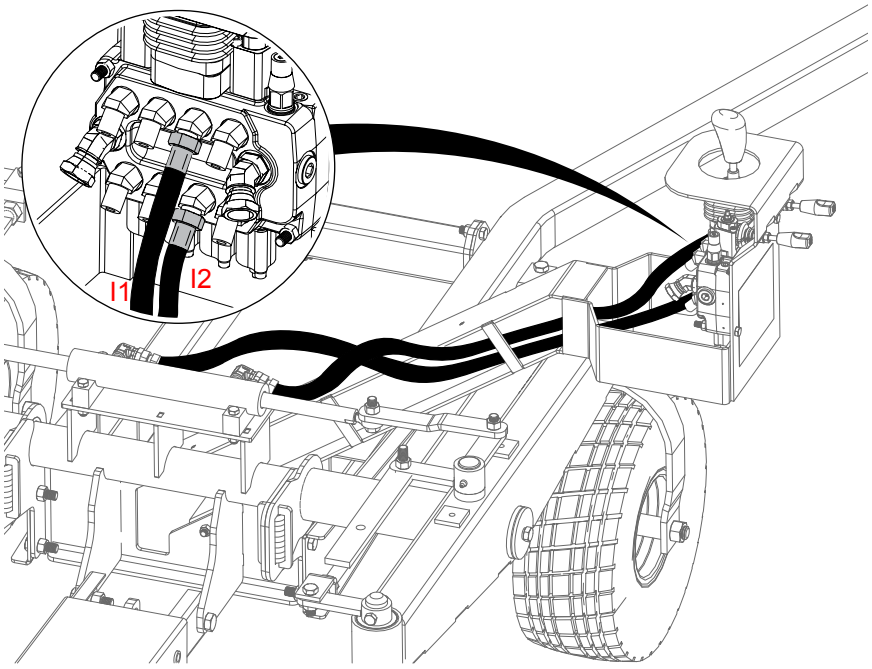
Manual Steering



Note

Route hoses D1 and D2 to the valve.

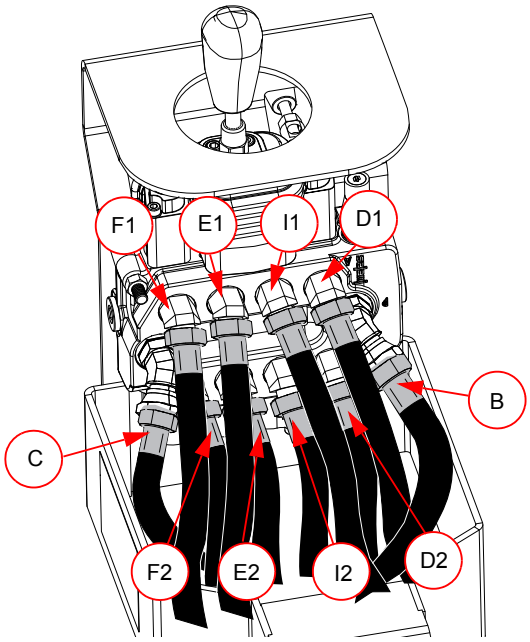
Hydraulic Hoses I1 and I2 (For Hydraulic Steering)



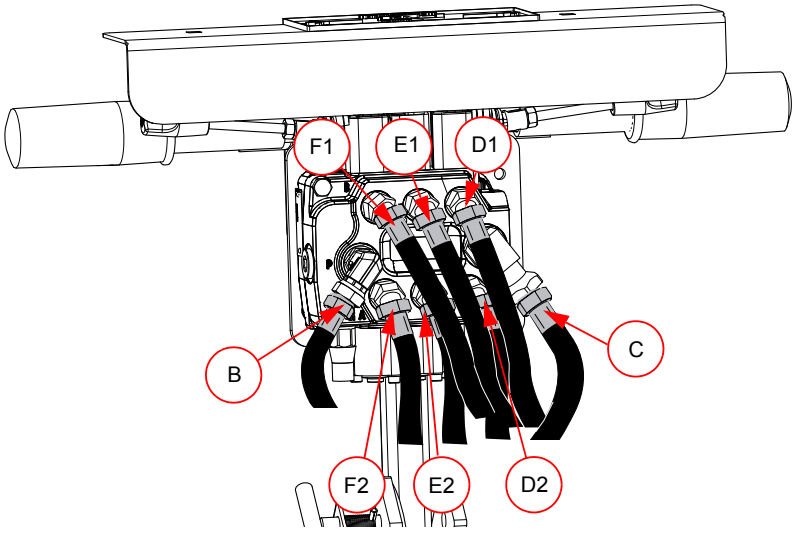
Note

Route hoses I1 and I2 to the valve.

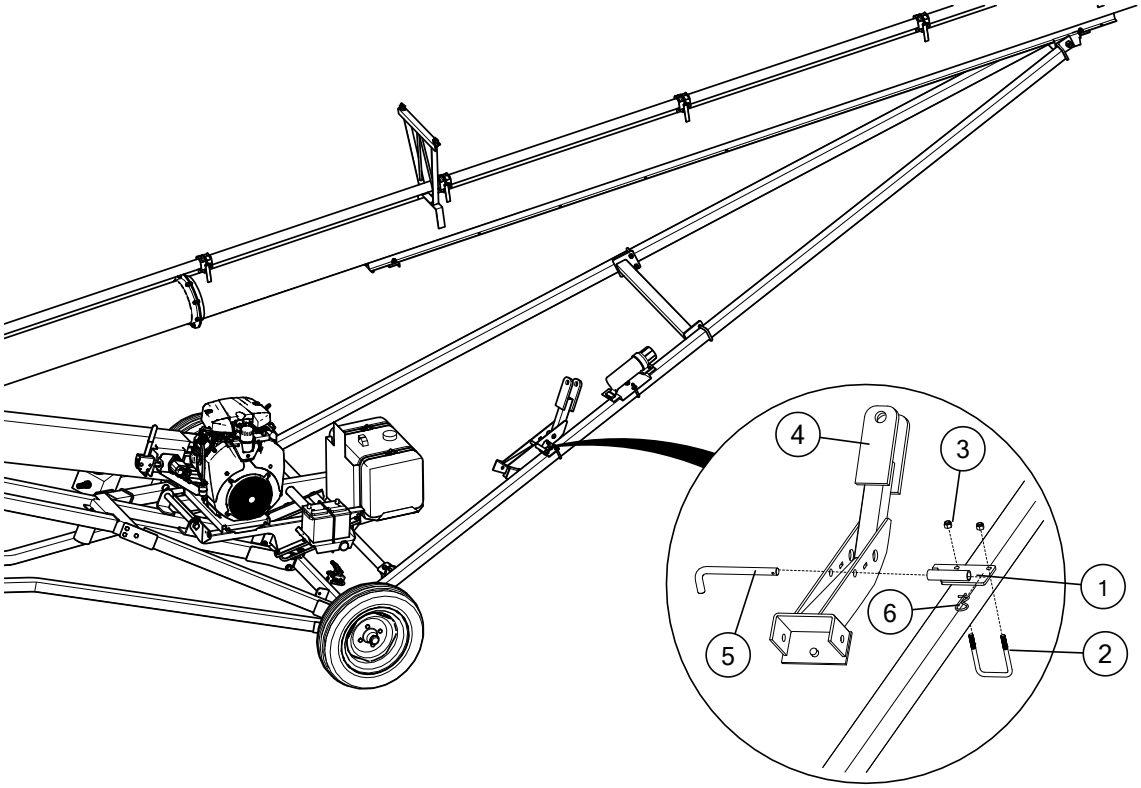
Hydraulic Steering Valve



Manual Steering Valve



3.17. Install the Offset Hitch and Hitch Mount



Assembly Note:

- The offset hitch replaces the stock hitch that was originally supplied with the auger.
- The offset hitch provides better road clearance when towing, and must be used in place of the stock hitch.
- Attach the offset hitch to the hitch mount when not in transport.

1	Hitch Mount	4	Offset Hitch
2	Square U-Bolt, 3/8" x 2-5/8" x 3-3/4"	5	Clevis Pin, 5/8"
3	Locknut, 3/8"	6	Hair Pin

4. Appendix

4.1. Bolt Torque

Table 2 gives the correct torque values for various hardware. Tighten all bolts to the torque specified, unless otherwise noted. Check tightness periodically, using Table 2 as a guide. Replace the hardware with the same strength bolt, contact AGI if you are unsure.

Table 2. Recommended Bolt Torque[1]

Size	Dry or Lubricated	Threads per inch (Course/ Fine)	Area of Bolt (sq in.)		Recommended Torque (ft-lb)							
					Grade 2		Grade 5		Grade 8		8.8 S/S	
			Coarse	Fine	Coarse	Fine	Coarse	Fine	Coarse	Fine	Coarse	Fine
1/4"	Dry	20/28	0.0318	0.0364	5.5	6.3	8	10	12	14	6.3	7.8
	Lubricated				6.3	4.7	6.3	7.2	9	10	-	-
5/16"	Dry	18/24	0.0524	0.058	11	12	17	19	24	27	11	11.8
	Lubricated				8	9	13	14	18	20	-	-
3/8"	Dry	16/24	0.0775	0.0878	20	23	30	35	45	50	20	22
	Lubricated				15	17	23	25	35	35	-	-
7/16"	Dry	14/20	0.1063	0.1187	32	36	50	55	70	80	31	33
	Lubricated				24	27	35	40	50	80	-	-
1/2"	Dry	13/20	0.1419	0.1599	50	55	75	85	110	120	43	45
	Lubricated				35	40	55	65	80	90	-	-
9/16"	Dry	12/18	0.182	0.203	70	80	110	120	150	170	57	63
	Lubricated				55	60	80	90	110	130	-	-
5/8"	Dry	11/18	0.226	0.256	100	110	150	170	210	240	93	104
	Lubricated				75	85	110	130	160	180	-	-
3/4"	Dry	10/16	0.334	0.373	175	200	260	300	380	420	128	124
	Lubricated				130	140	200	220	280	310	-	-
7/8"	Dry	9/14	0.462	0.508	170	180	430	470	600	670	194	193
	Lubricated				125	140	320	350	180	180	-	-
1"	Dry	8/14	0.606	0.679	250	280	640	720	910	1020	287	289
	Lubricated				190	210	480	540	680	760	-	-
1-1/8"	Dry	7/12	0.763	0.856	350	400	790	890	1290	1440	288	290
	Lubricated				270	300	590	670	970	1080	-	-
1-1/4"	Dry	7/12	0.989	1.073	500	550	1120	1240	1820	2010	289	291
	Lubricated				380	420	840	930	1360	1510	-	-
1-1/2"	Dry	6/12	1.405	1.581	870	960	1950	2200	3160	3560	-	-
	Lubricated				650	730	1460	1640	2370	2670	-	-

1. Torque value for bolts and cap screws are identified by their head markings. Established at 75% of yield strength of bolt given the cross-sectional area.

Note

Torque figures in table are valid for non-greased or non-oiled threads and head unless otherwise specified. Therefore, do not grease or oil bolts or cap screws unless otherwise specified in this manual. When using locking elements, increase torque values by 5%.

4.2. Fittings Torque Values

These specifications are for carbon steel. With Zinc plating always lubricate threads and seals. For stainless steel, use the high value of the torque range of steel. For brass, use 70% of the torque value of steel. For mixed metals, use the torque of the lower of the two metals. Torque range is normally calculated +/- 10%.

Table 3. Pipe Rigid - Tapered Pipe Threads (NPTF, N/NF) - Carbon Steel

Pipe Size	Turns-from-finger	Max ft-lbs	Max N-m
1/8" (-2)	3/4 - 1 3/4	12	16
1/4" (-4)	3/4 - 1 3/4	25	34
3/8" (-6)	3/4 - 1 3/4	40	54
1/2" (-8)	1/2 - 1 1/2	54	73
3/4" (-12)	1/2 - 1 1/2	78	106
1" (-16)	1/2 - 1 1/2	112	152
1 1/4" (-20)	1/2 - 1 1/2	154	209
1 1/2" (-24)	1/2 - 1 1/2	211	286
2" (-32)	1/2 - 1 1/2	300	407

Table 4. Pipe Swivel - Straight Pipe Threads (NPSM, N/NFS) - Carbon Steel

Pipe Size	Max ft-lbs	Max N-m
1/8" (-2)	12	16
1/4" (-4)	25	3
3/8" (-6)	40	54
1/2" (-8)	54	73
3/4" (-12)	78	106
1" (-16)	112	152
1 1/4" (-20)	154	209
1 1/2" (-24)	211	286
2" (-32)	300	407
Note: seals on an internal male 30° seat		

Table 5. Stud End O-Ring Boss (ORB) SAE (U/UF) – Carbon Steel

Tube Size	Thread UNF-2A	Max ft-lbs	Max N-m
-2	5/16" - 24	6-7	8-9
-3	3/8" - 24	8-9	11-12
-4	7/16" - 20	13-15	18-20
-5	1/2" - 20	17-19	23-26

Table 5 Stud End O-Ring Boss (ORB) SAE (U/UF) – Carbon Steel (continued)

Tube Size	Thread UNF-2A	Max ft-lbs	Max N-m
-6	9/16" - 18	22-24	29-33
-8	3/4" - 16	40-43	49-53
-10	7/8" - 14	43-48	59-64
-12	1 1'16" - 12	68-75	93-102
-14	1 3/16" - 12	90-99	122-134
-16	1 5/16" - 12	112-123	151-166
-20	1 5/8" - 12	146-161	198-218
-24	1 7/8" - 12	154-170	209-231

Table 6. JIC 37° Flare Tube Fitting (J/JFS)

Tube Size	Thread UNF-2A	Torque ft-lbs	Torque N-m
-2	5/16 - 24	6-7	8-9
-3	3/8 - 24	8-9	11-12
-4	7/16 - 20	11-12	15-16
-5	1/2 - 20	14-15	19-21
-6	9/16 - 18	18-20	24-28
-8	3/4 - 16	36-39	49-53
-10	7/8 - 14	57-63	77-85
-12	1 1/16 - 12	79-88	107-119
-14	1 3/16 - 12	94-103	127-140
-16	1 5/16 - 12	108-113	147-154
-20	1 5/8 - 12	127-133	172-181
-24	1 7/8 - 12	158-167	215-226
-32	2 1/2 - 12	245-258	332-350

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Please include the part number listed on the cover page in your message.