



***Installation Instructions,
Owner's Manual
& Parts Book***

Purchase Date	
Serial Number	10204424 & 10204425
Model Number	40260 & 40199
Tractor Model	STX 485
Dealer	Titan - Moorhead, MN

Contents

Description	Page
To The Owner, Torque Specifications & Serial Number Location	3
Safety Precautions	4-5
Safety Decals	6-7
Maintenance	8
Lubrication	8
Undercarriage Installation	9-13
Joystick Installation & Operation	14-19
Attaching Loader	20-21
Detaching Loader	22-23
Maintenance Stand	23
Connecting Attachment	24
Pitch Indicator Adjustment	24
Disconnecting Attachment	25
Loader Parts	26-27
Hydraulic Parts	28-29
Grease Parts	30-31
Joystick Pitch and Lift Connection Information	32
Joystick Wire Harness	33
Hydraulic Schematic	34
Notes	35
Contact Us, Improvements, & Warranty	36

To The Owner

This manual contains information concerning the operation, adjustment, and maintenance of the loader. You have purchased dependable, long lasting equipment, but only by proper care and operation can you expect to receive the performance and long service built into our products. Please have all operators read this manual carefully and keep the manual available for ready reference. If you have any questions or concerns, contact Grouser Products.

Torque Specifications

All bolts should be tightened to the specifications that are stated. If specifications are not stated, follow torque charts below.

Size	Torque - Dry (ft-lbs)			
	SAE Grade 5		SAE Grade 8	
	UNC	UNF	UNC	UNF
5/16	19	20	29	31
3/8	33	36	47	51
7/16	54	58	78	85
1/2	78	85	119	129
9/16	114	124	169	184
5/8	154	167	230	250
3/4	257	280	380	414
7/8	382	416	600	654
1	587	639	903	984

Size	Torque - Dry (ft-lbs)
	Grade 10.9
M18 x 2.00	236
M20 x 2.50	432
M22 x 2.50	394
M24 x 3.00	570

Serial Number Location



Safety Precautions

Safety Instructions:

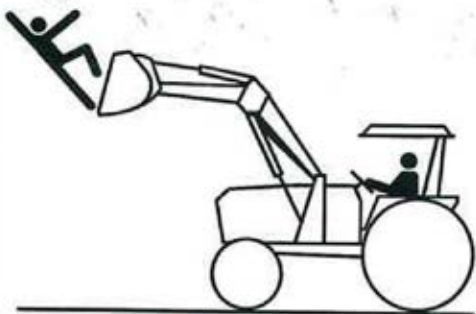
A careful operator is the best operator. Most accidents can be avoided by observing certain precautions. To help prevent accidents, read and take the following precautions before operating this equipment. In addition to these precautions, please follow all safety and operational instructions supplied by your tractor manufacturer.

Before Operating Loader:

- Read the owner's manual carefully before using this equipment. Lack of operating knowledge can lead to accidents.
- Inspect the loader for leaks, loose or missing components or damaged components prior to operation. If necessary, complete any repairs.
- Become familiar with all the loader controls. See Page 17.
- Keep the loader maintained and in good condition to ensure your safety.
- Keep pets and people away from the work area. Stop the machine if anyone enters the working area.
- It may be necessary to add rear weights as recommended by the tractor manufacturer.
- Do not modify or permit anyone else to modify or alter the equipment and its components without first consulting Grouser Products.

Operating Loader:

- The loader should be operated only by those who are responsible and instructed to do so.
- Operate the loader only from the operator's seat.
- If necessary, you can operate the loader from the valve location but ONLY if there is a spotter to watch the loader.
- Make sure the operating area is clear of others.
- NEVER allow anyone to ride on any part of the loader during operation. Failure to heed, may result in serious injury or death.



- Avoid overhead electrical wires when operating the loader. Any contact with a powerline may cause serious injury or death.



- Have local utilities locate and mark any underground wires, cables and pipelines before any digging.
- NEVER operate machinery when ill, tired, or under the influence of alcohol or drugs.
- ALWAYS wear a seat belt while operating the machine.
- NEVER leave a running machine unattended.
- NEVER reach inside any of the loader arms or go under the loader arms while the loader is in operation.



- ALWAYS secure the load
- Handle all loads with caution. Pay attention when raising and lowering loads
- Transport loads with the loader boom at the lowest level possible to avoid tipping.
- Be careful when working on inclines, near loose dirt or debris, rock and holes as they can all cause the machine to be unlevel and tip.



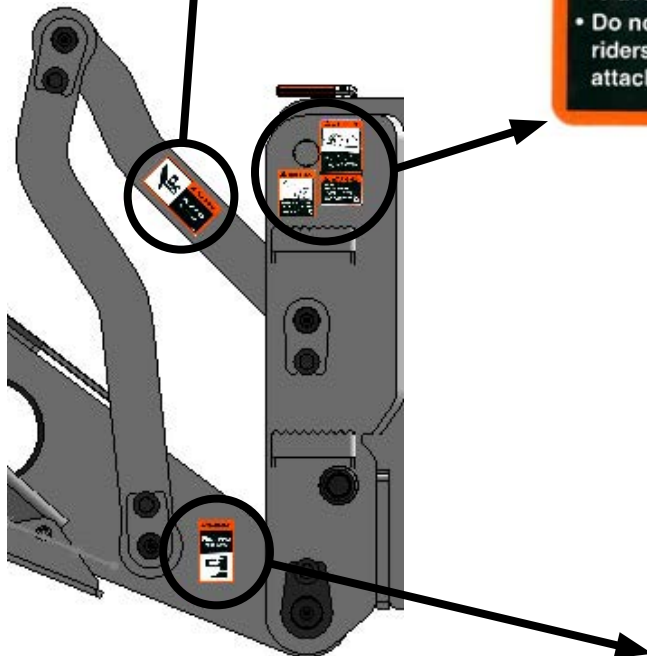
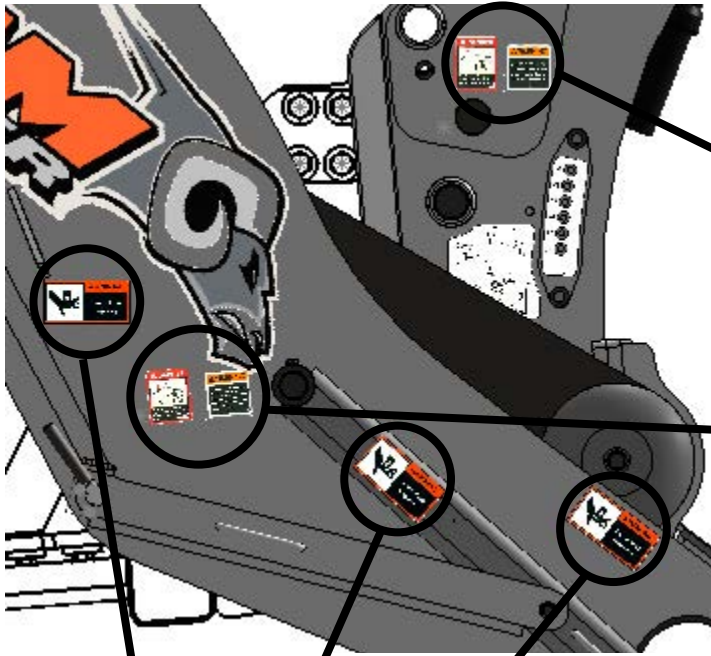
After Operating Loader:

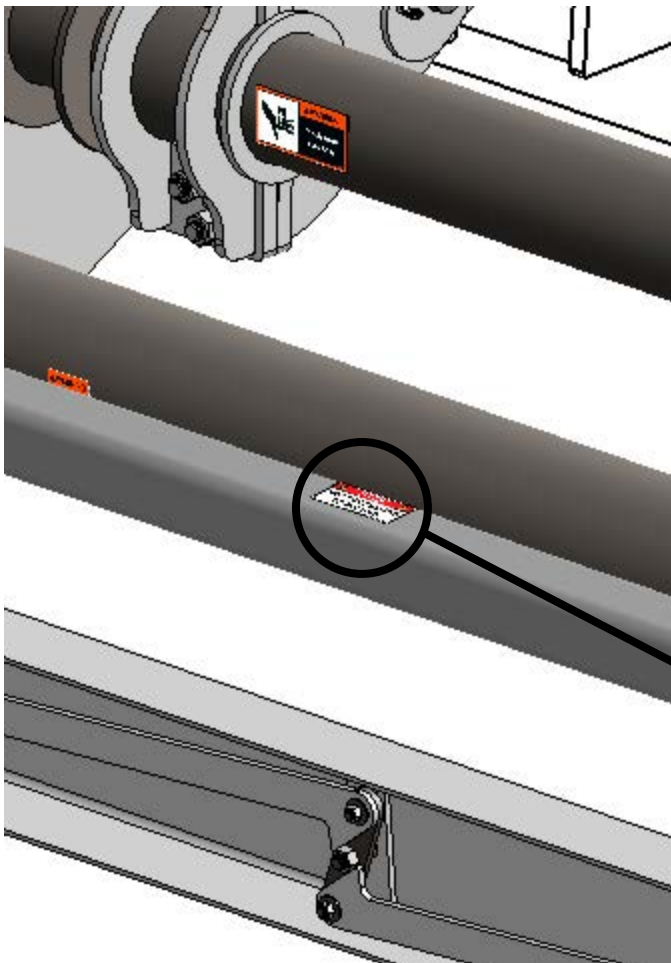
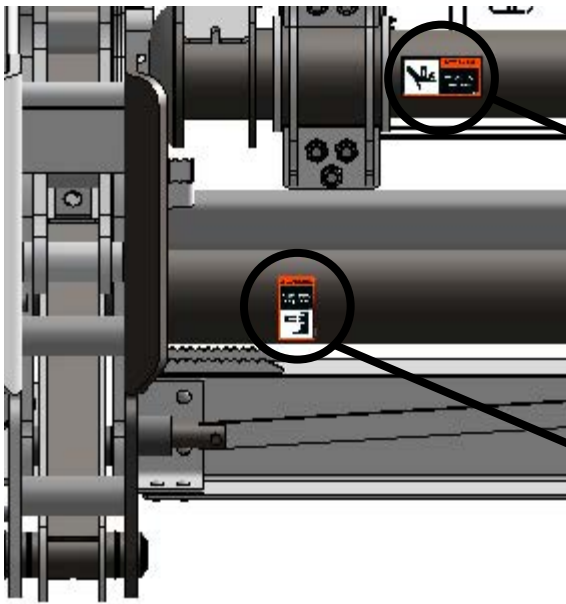
- When the loader is not being operated, lower the boom, set the parking brake, disengage the drive, shut the engine off, and remove the ignition key.
- If disengaging loader from the tractor, be sure the stand is securely engaged and the loader is securely supported on a hard, level surface.
- Never allow anyone to play on or around the loader.

Transporting Loader:

- Follow local and state codes for transporting equipment on roads and highways.
- Use safety lights and a slow moving vehicle (SMV) sign.
- Travel with a load as low to the ground as possible. Maintain good visibility and ground clearance.

Safety Decals





Maintenance

Servicing the Loader

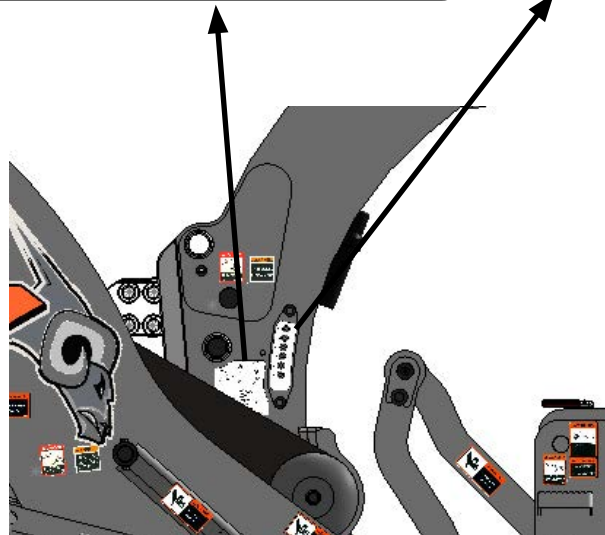
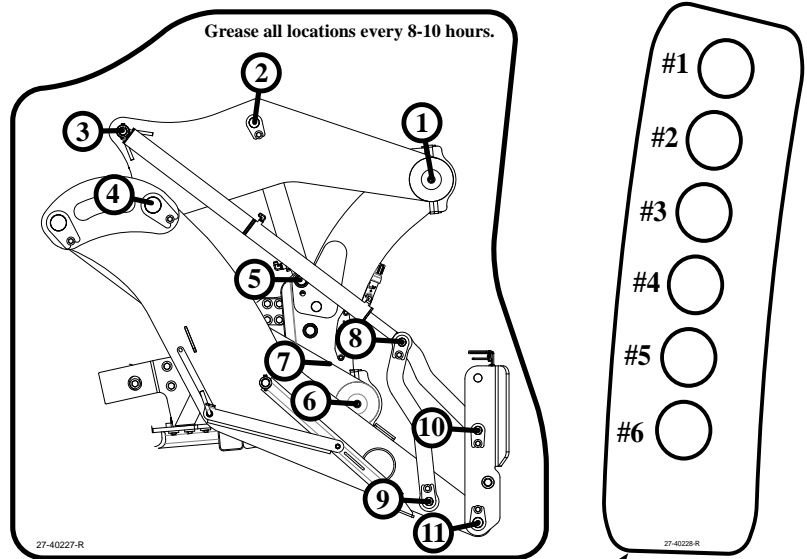
- ALWAYS engage the maintenance stand before any adjusting or maintenance is done on the loader or tractor. See page 23 for maintenance stand instructions.
- ALWAYS use proper personal safety gear when performing maintenance on equipment.
- Before servicing, relieve hydraulic pressure, stop engine and fully engage parking brake.
- Escaping hydraulic fluid under pressure can penetrate skin causing serious injury. If fluid is injected into skin, obtain medical attention immediately.
- DO NOT use your hand to check for leaks. Use a piece of cardboard or paper to search for leaks.
- Tighten all connections before starting the engine or pressurizing lines.

The following tasks should be performed every 8 - 10 hours or less.

- Inspect all equipment before operation for existing or potential damages.
- Lubricate all joints with high quality grease.
- Inspect and tighten all bolts to torque specifications on page 3.
- Make sure all non-rotating pins are secured properly.
- Check hydraulic cylinders and hoses for damage or leaks. For replacement parts, see hydraulic pages for the parts list.

Lubrication

1. Clean each grease fitting with a clean cloth before greasing, to avoid pushing dirt into the system.
2. Replace and repair any broken fittings.
3. If fitting does not accept grease, remove and clean or replace fitting.
4. Pump grease into fitting until you see grease coming out of the bushings or pins.
5. Use the grease bank on each side to grease locations #1-6 for both sides.
6. Grease locations #7-11 on both sides.



Undercarriage Installation

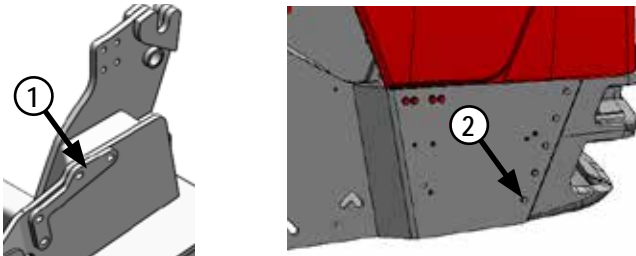
Caution:

- Always use caution when working around any equipment.
- Always wear safety glasses.
- Follow tractor manufacturer's safety guidelines when installing this product.
- When installing the undercarriage, be aware of the hoses on the undercarriage to prevent any from getting damaged.

Note:

- When installing hardware, only finger tighten until all hardware is in place.
- A full diagram of the assembly with the full list of parts is on pages 12-13.
- Tractor frame not shown in some diagrams for clarity.
- Read all instructions prior to performing installation.

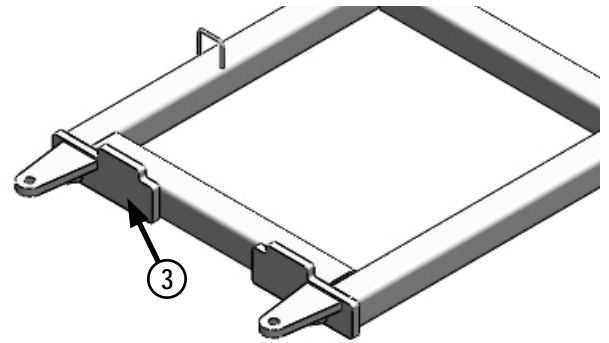
1. If applicable, remove front, weight bracket, and toolbox from front of tractor.
2. Remove the 2 - 24mm bolts and spacers from the front side of the front axle on both sides of the tractor. Retain the bolts and discard the spacers.
3. If applicable, remove brackets from the undercarriage to make room for installing the undercarriage on the tractor.



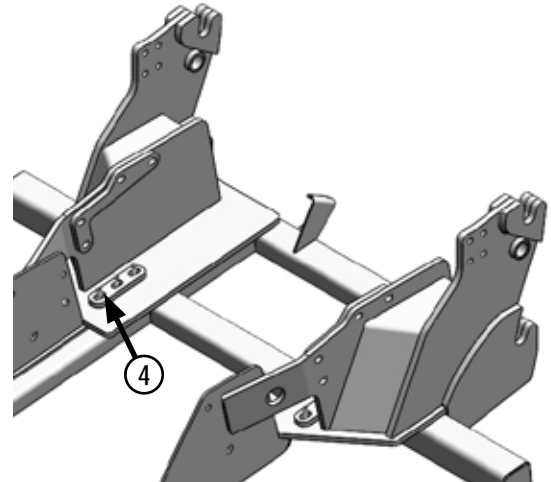
4. Position the undercarriage under tractor and back far enough so the spacer (1) on the inside of the undercarriage will clear the side bolts on the front nose casting (2). Center the undercarriage under the tractor frame.

5. Lift the undercarriage and slowly move the undercarriage forward while lifting to avoid colliding the front multi-coupler with the front of the tractor. Lift until the undercarriage is within 3/4" of touching the tractor frame.

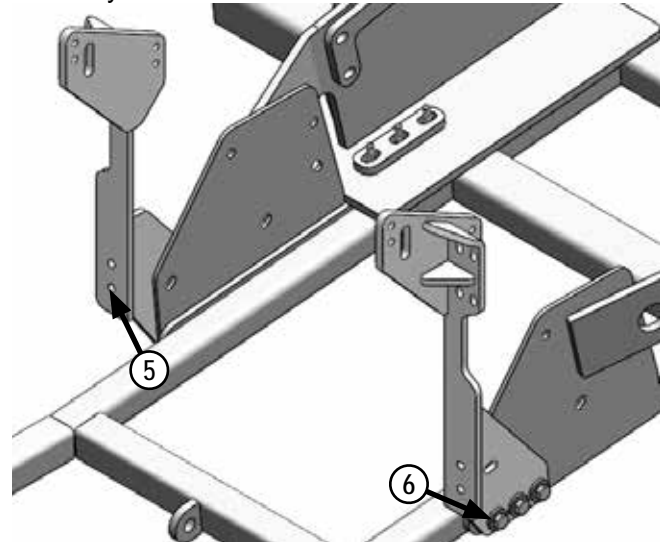
Note: When lifting the undercarriage, be very careful to not collide any part on the undercarriage with the tractor frame. Be aware of the hydraulic multi-coupler at the front and to not collide with the bolts on the front side nose casting.



6. Position the rear of the undercarriage with the vertical push plates firmly against the cross member (3). Clamp the rear mounting ears to the cross member to prevent movement of the undercarriage.

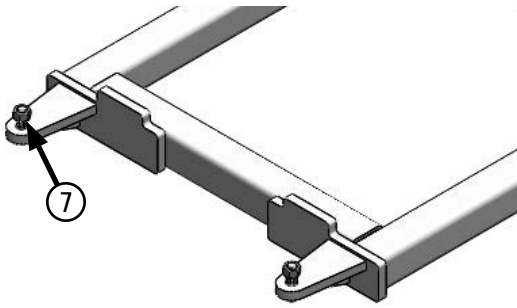


7. Install 6 - 20mm x 110mm bolts and 6 - 1/2" thick washers into the front vertical slots at the front of the undercarriage. (4) Tighten until frame is tight vertically.



8. Install the undercarriage side brackets to the front side of the front axle. Dip the 24mm bolts from step #2 in light oil and install with a 1" flat washer (5) Tighten until the brackets are tight against the axle.

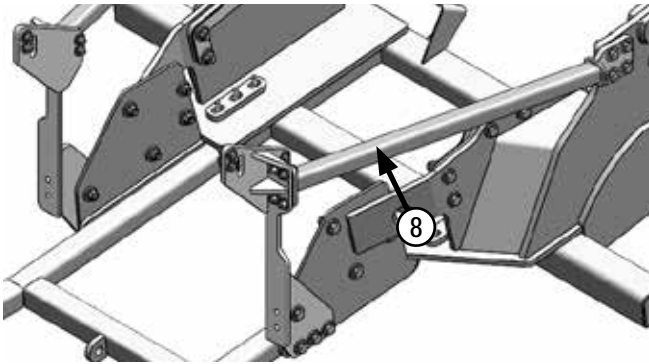
9. Attach the side brackets to the undercarriage with 3 - 1" x 2-3/4" bolts and 3 - 1" ID thick washers in the bottom slots on both sides (6).



10. Verify that the rear mounting ears and the vertical push plates are still tight against the cross member.

11. Using the holes in the ears as guides, drill 2 - 1-1/16" holes through the cross member and install 1 - 1" x 3" bolt with 1 - 1" nut in each ear (7).

Caution: When drilling, be aware of all parts behind the material being drilled so that you do not mistakenly hit or puncture components on engine side of tractor frame.

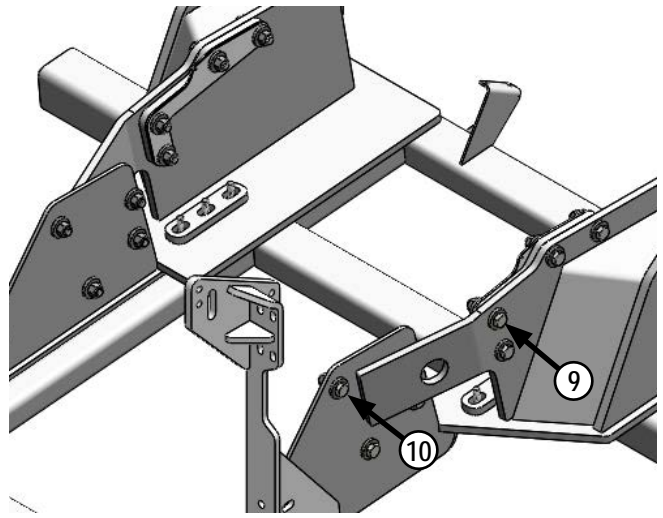


12. Temporarily install the support brackets (8) on each side to verify the side brackets are correctly aligned before drilling holes. Refer to steps #19-20 to install the support brackets.

13. Using the undercarriage as a guide, mark and drill 6 - 1-1/16" holes through both sides of the tractor frame.

14. Using the side brackets as a guide, mark the 4 top holes to be drilled on each side. Remove the undercarriage support brackets and drill 4 - 13/16" holes through both sides of the tractor frame.

Note: Add shims between undercarriage and the tractor frame to reduce any gap if necessary. Use shims until there is a gap of 1/16" or less. Place the shims equally on each side of the undercarriage.

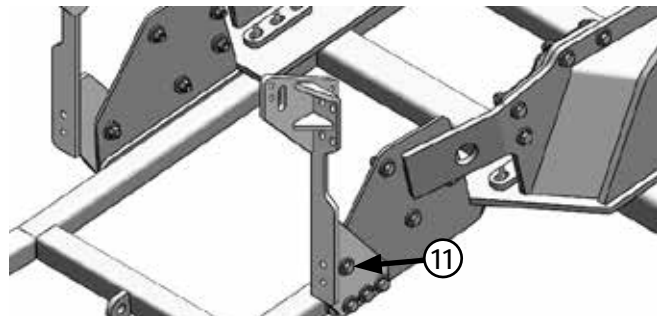


Note: Follow step #15 for the left side. Tighten the bolts until they are snug. If necessary, add more shims on the right side until there is a gap of 1/16" or less. Repeat step #15 for the right side.

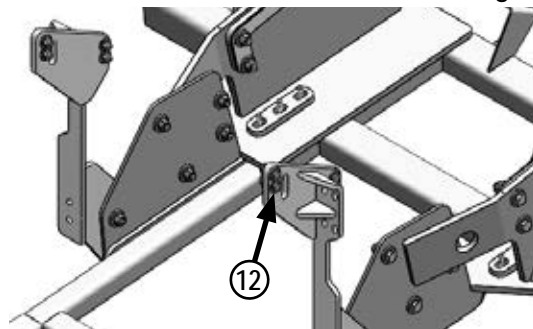
Note: Shim quantity may be unequal from side to side if more shims are added to the right side.

15. Install 4 - 1" x 4-1/2" bolts, 8 - 1" ID thick washers, and 4 - 1" nuts through the front 4 slots on the side of the undercarriage, shims if necessary, and the tractor frame (9).

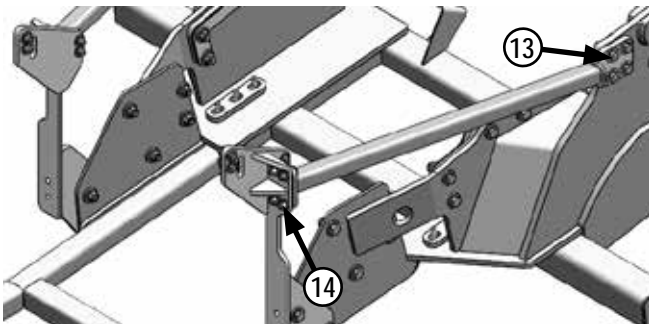
16. Install 4 - 1" x 3" bolts 8 - 1" ID thick washers, and 4 - 1" nuts through the 4 slots on each side of the undercarriage (10).



17. Install 1 - 1" x 3-1/2" bolt, 2 - 1" ID thick washers, and 1 - 1" nut through the slot in the side bracket on each side of the undercarriage (11).

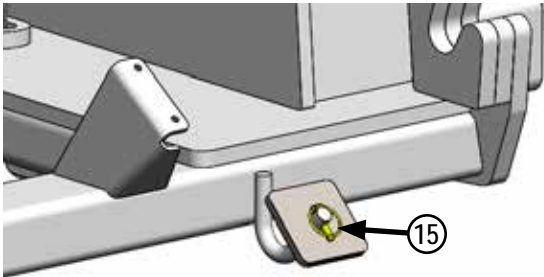


18. Attach the side brackets to the tractor frame with 4 - 3/4" x 2-3/4" bolts, 8 - 3/4" flat washers, and 4 - 3/4" nuts on each side (12).



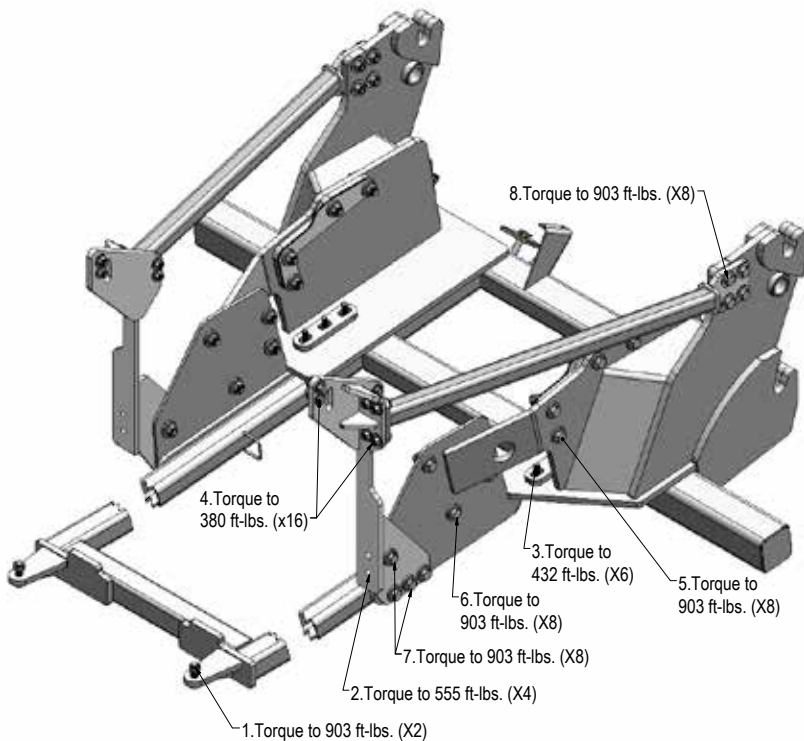
19. Attach the undercarriage support brackets to the undercarriage with 4 - 1" x 3-1/2" bolts, 8 - 1" flat washers, and 4 - 1" nuts on each side (13).

20. Attach the undercarriage support brackets to the side brackets with 4 - 3/4" x 2-3/4" bolts, 8 - 3/4" flat washers, and 4 - 3/4" nuts on each side (14).



21. If tow cable is present, hang the cable on the hook at the front of the undercarriage and secure with a retaining plate and locking pin (15).

22. Follow the diagram below for torque sequence.



23. Route the hoses through the hose loops on the undercarriage. At the rear of the undercarriage, begin to route the hoses up and follow the tractor hoses through the pivot area (16). Stay above the driveshaft and allow enough hose for when the tractor pivots.



24. Route the hoses through the bracket on the left side of the tractor and above the driveshaft at the pivot area (17). Secure the hoses to the bracket with zip ties.

25. Continue to route the hoses through the rear tractor frame by following the tractor hoses through the hose loops along the inside of the frame. Stay clear of any moving objects and follow the tractor hoses to the rear of the tractor.

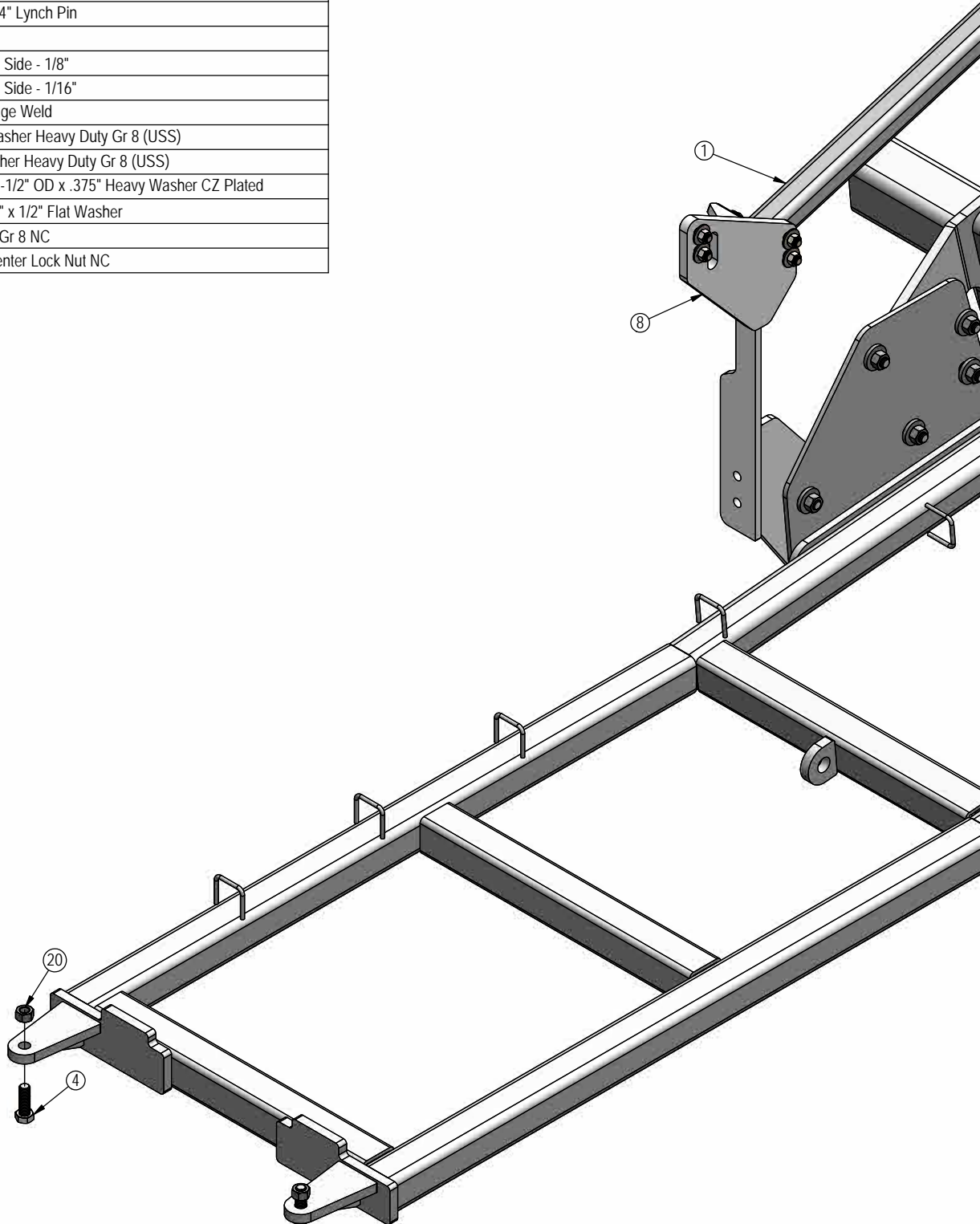
26. Hoses will be attached to the joystick valve on page 16.

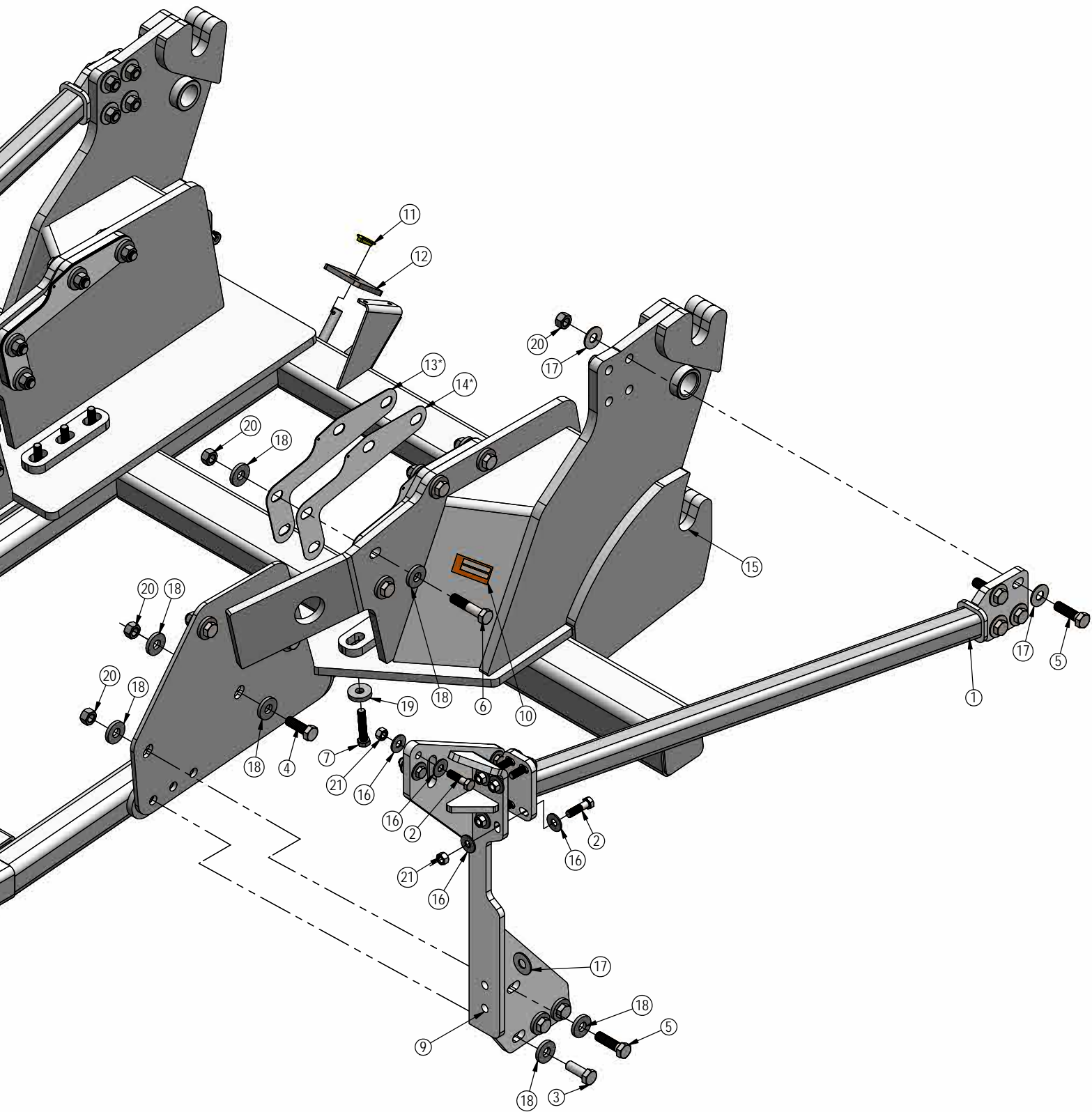
Note:

- Always protect the hoses around any sharp areas, secure the hoses with zip ties, and stay away from moving objects.
- After first 8 hours of use, re-torque all bolts.
- Check all fasteners regularly to ensure proper operation of equipment.

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	2	11-40030	UC Top Support Arm
2	16	16-20511	3/4" x 2-3/4" Hex Bolt Gr 8 NC
3	6	16-20561	1" x 2-3/4" Hex Bolt Gr.8 NC
4	10	16-20562	1" x 3" Hex Bolt Gr.8 NC
5	10	16-20564	1" x 3-1/2" Hex Bolt Gr.8 NC
6	8	16-20567	1" x 4-1/2" Hex Bolt Gr 8 NC
7	6	16-3712	20mm x 2.5mm x 110mm Gr. 10.9 Hex Bolt
8	1	18-40025-L	UC Side Brackets
9	1	18-40025-R	UC Side Brackets
10	1	27-9506	Serial Tag Decal
11	1	43-16764	7/16" x 1-3/4" Lynch Pin
12	1	44-15585	Plate
13*	3	44-40201	Shim, Front Side - 1/8"
14*	3	44-40202	Shim, Front Side - 1/16"
15	1	54-40000R1	Undercarriage Weld
16	32	57-20817	3/4" Flat Washer Heavy Duty Gr 8 (USS)
17	20	57-20819	1" Flat Washer Heavy Duty Gr 8 (USS)
18	42	57-3682	1.00" ID x 2-1/2" OD x .375" Heavy Washer CZ Plated
19	6	57-8836	7/8" x 2-1/2" x 1/2" Flat Washer
20	28	70-20599	1" Hex Nut Gr 8 NC
21	16	70-20607	3/4" Hex Center Lock Nut NC

* Quantities May Vary

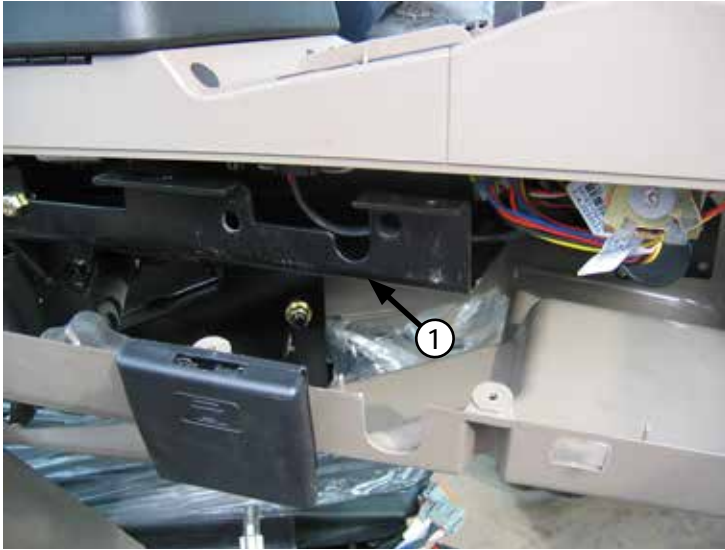




DWG. NO.: 40000-A

Joystick Installation

Note: Your machine may vary slightly from the machine in this manual, but the same installation procedure will be compatible.



1. Remove lower section of armrest to get at the armrest frame. Attach the joystick bracket to the armrest frame located underneath the armrest (1). Use 2 - 3/8" x 1" bolts and 2 - 3/8" nuts.

2. After joystick bracket is attached, reattach the lower section of the armrest.

Note: The following pictures show the joystick assembly already in place. The joystick will be installed in a later step.



3. Attach the adjusting plate to the joystick bracket with 2 - 3/8" x 1" carriage bolts and 2 - 3/8" nuts (2).

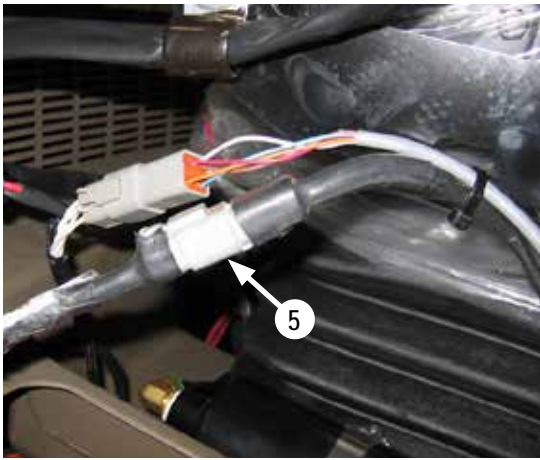


4. Attach the joystick mount to the joystick adjusting plate with 2 - 3/8" x 1" carriage bolts and 2 - 3/8" nuts (3).

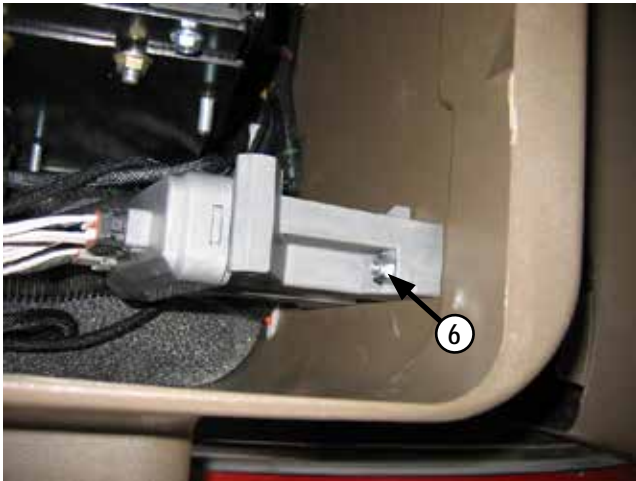


5. Hold the mounting ring inside the joystick mount, and attach the joystick to the top of the joystick mount and the mounting ring with 4 - 1" socket head cap screws (4).

6. Adjust the joystick and mounts to position the joystick to the operator's preference. Once the joystick is in the correct position, tighten all of the fasteners.



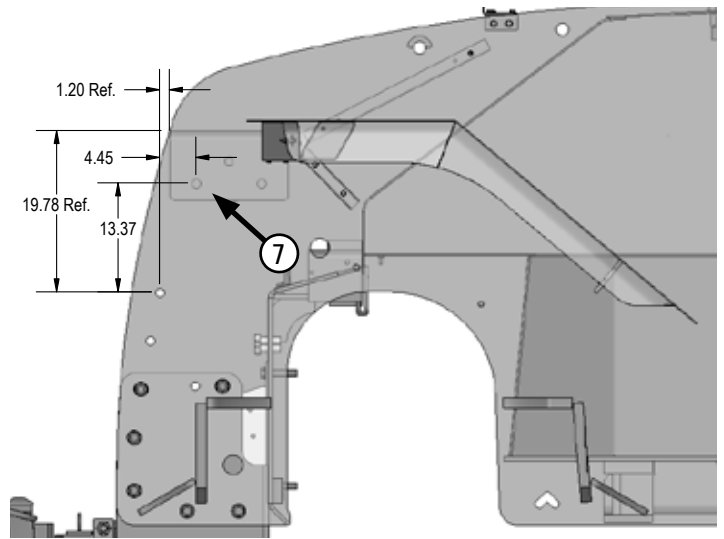
7. Connect the cable from the joystick to the wire harness (5).



8. Drill 1 - 5/16" hole in the fuse compartment and attach the joystick controller to the compartment with 1 - 1/4" bolt, 1 - 1/4" washer, and 1 - 1/4" nut (6).

9. Route the wire harness below the foam and through the bottom of the fuse compartment. Follow the lift and pitch hoses to the rear of the tractor.

10. Secure the wire harness with zip-ties and protect around sharp corners and moving objects.

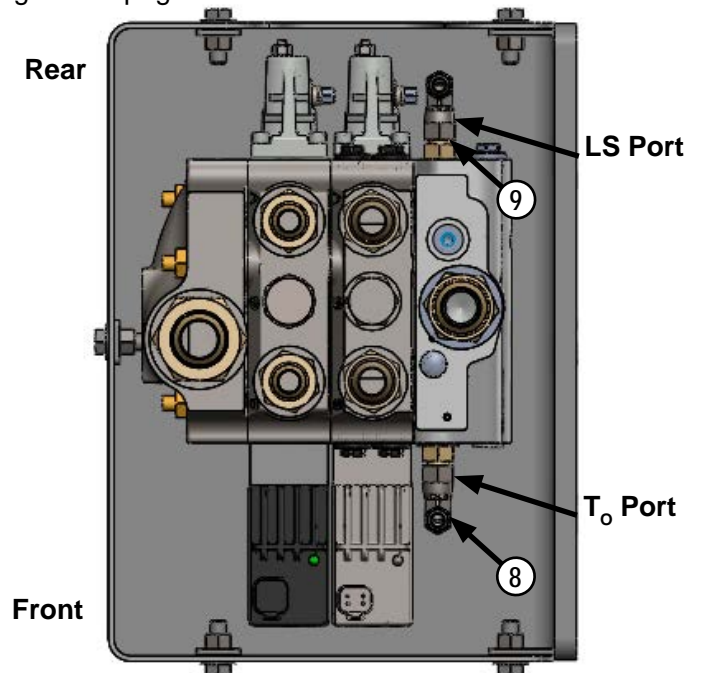


Note: Some tractor parts are not shown for clarity.
Note: Valve location is dependent on hose lengths and any aftermarket parts. Use dimensions as a reference, some adjusting may be necessary.

11. Drill 3 - 1-1/16" holes on the right side of the rear tractor frame to hold the valve mount. Use the diagram above to locate the first hole and then use the mount as a guide to mark the other 2 holes (7).

12. Attach the valve mount to the tractor with 3 - 1" x 2" bolts and 3 - 1" nuts.

13. Install all fittings into the control valve as seen in the diagram on page 18.

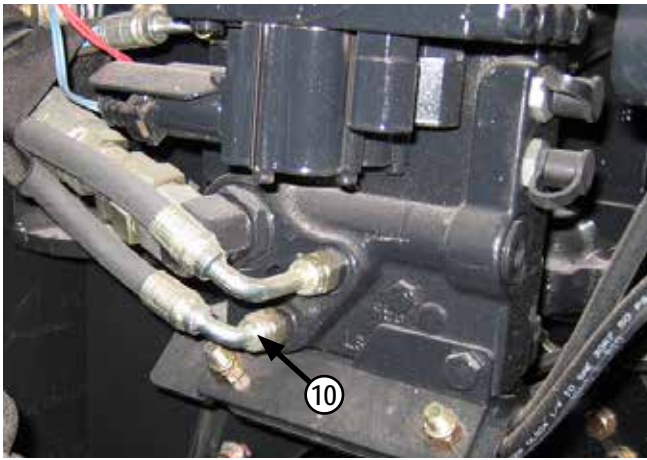


Note: Valve shown from the bottom.

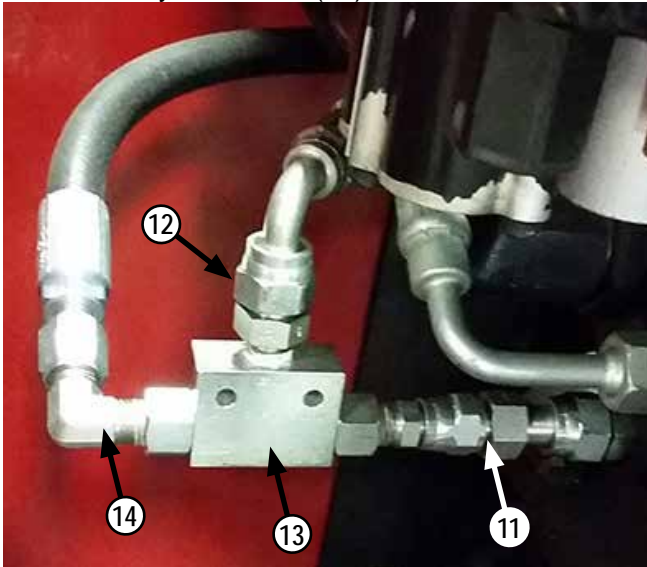
14. Attach 1 - 41" hose to the 90° fitting in the T_o port on the valve (8).

15. Attach 1 - 52" hose to the 90° fitting in the LS port on the valve (9).

16. Attach the control valve to the valve mount with 4 - 12mm x 30mm bolts and 4 - 12mm flat washers. See Page 19 for correct orientation of the valve.



17. On the left side of the manifold valve, disconnect the bottom hydraulic line (10).



18. Install a Male JIC x ORFS Swivel fitting (PN: 31-12331-6-6) to the fitting that the hydraulic line was removed from. Also install a Female JIC Swivel x Male Pipe fitting (PN: 31-12332-6-4) onto the previous fitting (11).

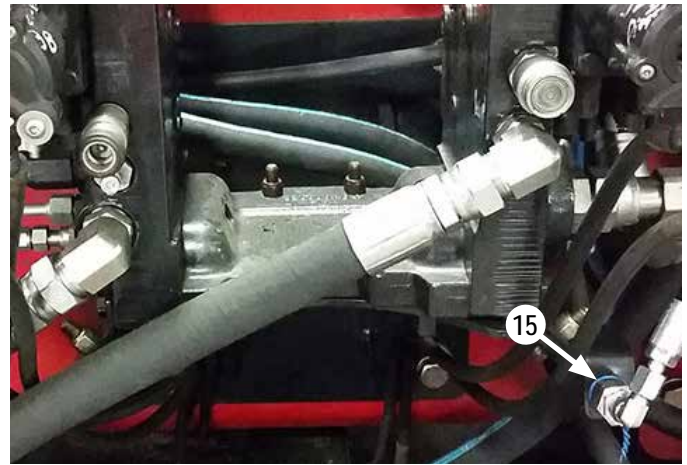
19. Install a OFS Male Pipe Connector fitting (PN: 31-FS-2404-06-04) (12) in the outlet port on the shuttle valve (13).

Note: It is critical that the original tractor hose is attached to the outlet/top port on the shuttle valve as shown in the above picture.

20. Install a Male Pipe x Male Elbow 90° JIC fitting (PN: 31-34169) (14) in the remaining port on the shuttle valve.

21. Attach the previously disconnected hydraulic line from Step #17 to the male fitting on the shuttle valve (12).

22. Attach the 52" hose from Step #15 to the 90° fitting on the shuttle valve (14).



23. Below the R port at the rear of the tractor, remove the coupler and fittings from the motor return line. Replace with an O-Ring Coupling (PN: 31-16592-8-8), a Straight JIC x O-Ring fitting (PN: 31-15KB608) and a Swivel Nut Elbow 90° JIC fitting (PN: 31-34099) (15).

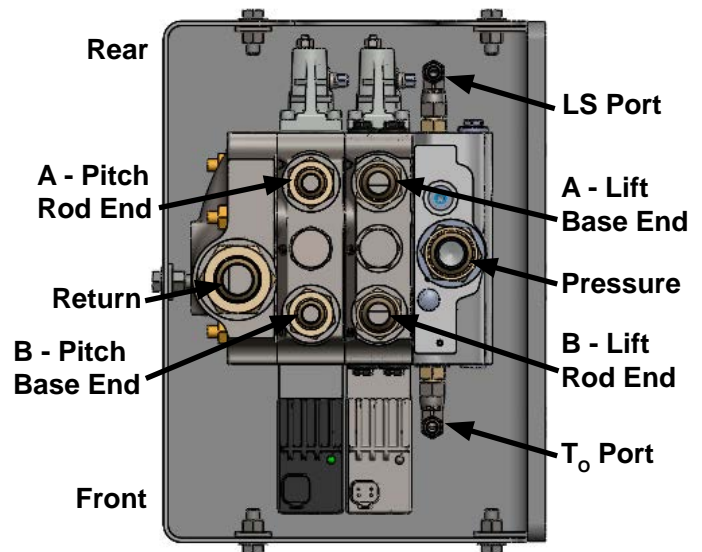
24. Attach the 41" hose from the T_o port in Step #14 to the 90° fitting.

25. Attach the loader lift hoses to the -12 fittings on the control valve. The cylinder base end hose attaches to the "A" port on the control valve. The cylinder rod end hose attaches to the "B" port on the control valve.

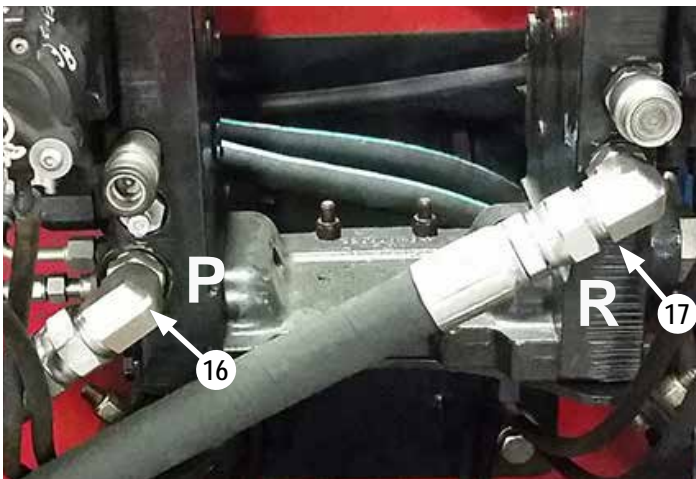
26. Attach the loader pitch hoses to the -10 fittings on the control valve. The cylinder rod end hose attaches to the "A" port on the control valve. The cylinder base end hose attaches to the "B" port on the control valve.

27. Protect all hoses around sharp corners and objects with cordura.

28. Use zip-ties to hold the hoses into place.



Note: Valve shown from the bottom.



Note: Oil will flow. Be ready with an oil pan.

29. Remove the plug or quick connect from the **P** and **R** ports at the rear of the tractor and replace each with a 90° fitting (PN: 31-34261) (16 & 17).

30. Attach the 75" hose from the **Pressure** fitting on the control valve to the 90° fitting at the **P** port (16).

31. Attach the 83" hose from the **Return** fitting on the control valve to the 90° fitting at the **R** port (17).



32. Connect the **lift** and **pitch** plug-ins on the joystick wire harness to the corresponding connections on the control valve (18).

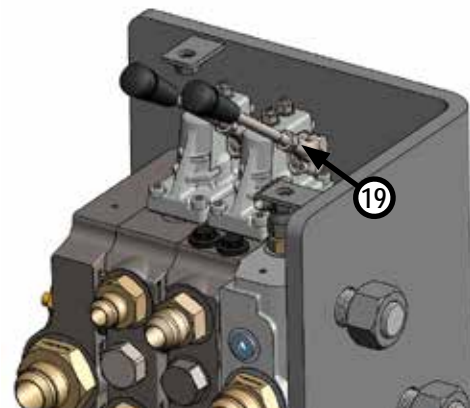
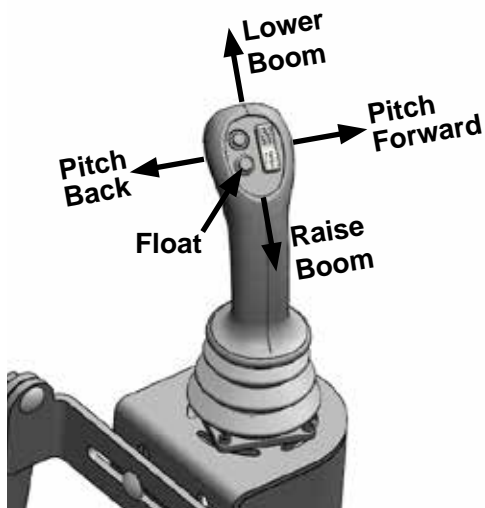
33. Use zip-ties to hold cables in place.

34. Attach the valve cover to the valve bracket with 5 - 3/8" x 1" bolts and 5 - 3/8" lock washers.

Joystick Operation

1. To **raise** the loader, **pull back** on joystick.
2. To **lower** the loader, **push forward** on joystick.
3. To **pitch** the attachment **back**, tilt the joystick to the **left**.
4. To **pitch** the attachment **forward**, tilt the joystick to the **right**.
5. To operate the float function, push the bottom button on the left side on the joystick handle.
6. To cancel the float function, actuate the joystick handle.

Note: If directions are not correct, go to Step #25 and #26 on Page 16 and verify that the hoses are installed correctly.

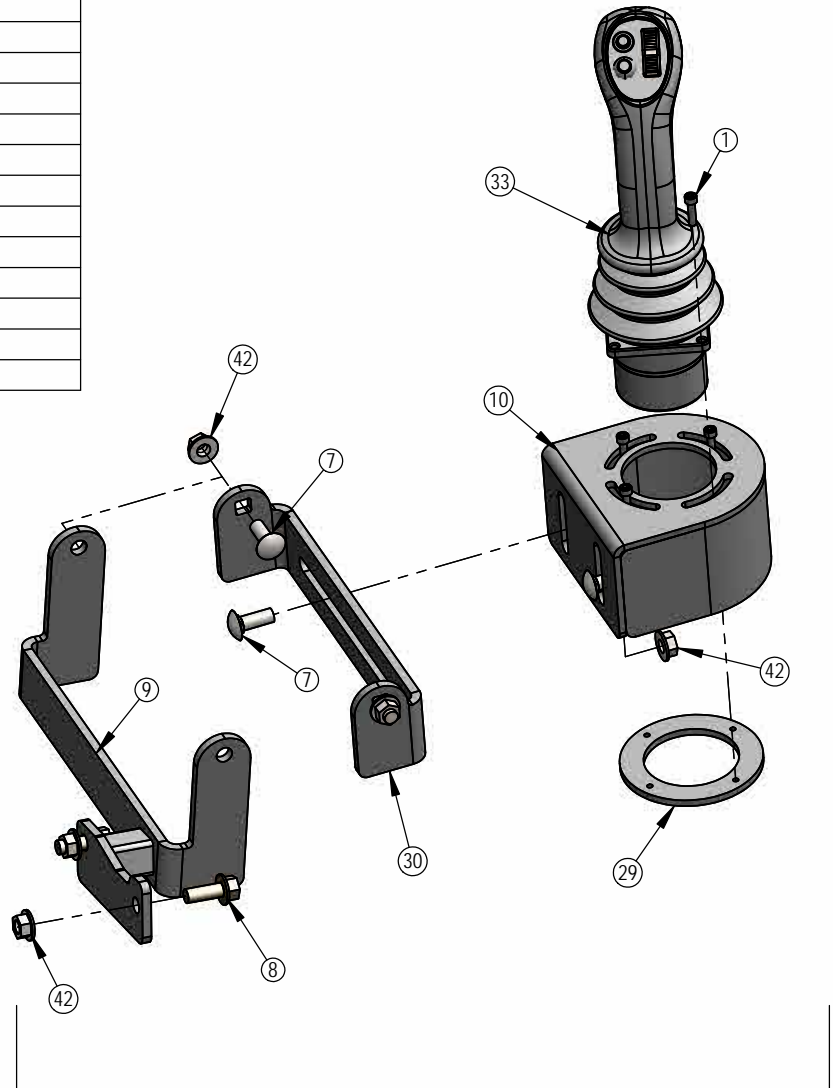


Note:

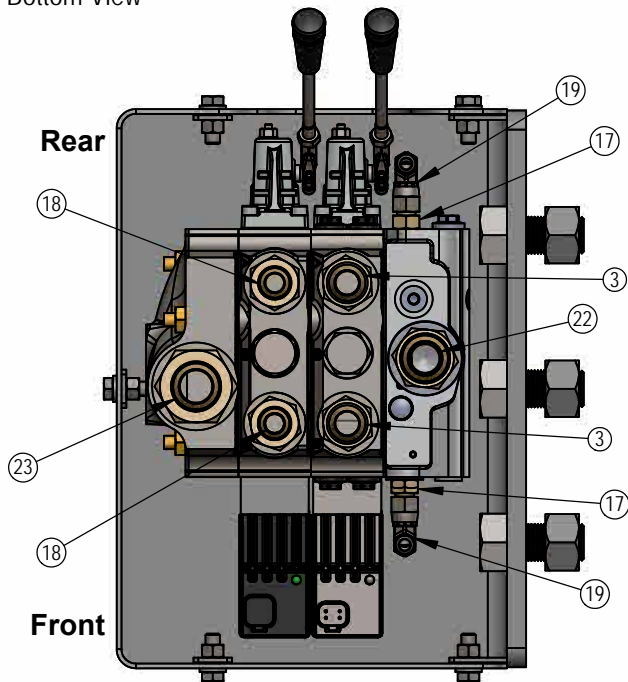
- If necessary, the electric loader functions can be overridden by attaching the supplied handles (19) to the control valve and operating them.
- **ONLY** operate loader from the valve location if there is a spotter to watch the loader.

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	4	16-11436	10-24 x 1.00" Socket Head Cap Screw
2	4	16-1217530	12mm x 1.75mm x 30mm Metric Hex Bolt Gr 10.9 Coarse
3	2	16-15KB1212	Straight JIC x O-Ring
4*	1	16-20006	1/4" x 1-1/2" Hex Bolt Gr 5 NC
5	5	16-20064	3/8" x 1" Hex Bolt Gr 5 NC
6	3	16-20558	1" x 2" Hex Bolt Gr. 8 NC
7	4	16-21064	3/8" x 1" Carriage Bolt Gr 5 NC
8	2	16-35C616	3/8" x 1" Flanged Bolt
9	1	18-12035R1	Joystick Bracket
10	1	18-12038	Joystick Mount
11	1	18-40195	Valve Mount
12	1	27-40256	Manual Override Decal
13*	1	31-12331-6-6	Male JIC x ORFS Swivel
14*	1	31-12332-6-4	Female JIC Swivel x Male Pipe
15*	1	31-15KB608	Straight JIC x O-Ring
16*	1	31-16592-8-8	Female O-Ring Coupling
17	2	31-34034	Straight JIC x O-Ring
18	2	31-34045	Straight JIC x O-Ring
19	3	31-34099	Swivel Nut Elbow 90° JIC
20*	1	31-34169	Male Elbow 90° JIC X Pipe
21*	2	31-34261	Straight Thread Elbow 90° JIC x Metric
22	1	31-6400-16-16	Straight JIC x O-Ring
23	1	31-6400-16-20	Straight JIC x O-Ring
24*	1	31-FS-2404-06-04	OFS Male Pipe Connector
25*	1	35-40205-0410	41" x 3/8" -6FJIC x -6FJIC Cold Temp Hose
26*	1	35-40205-0520	52" x 3/8" -6FJIC x -6FJIC Cold Temp Hose

* Parts Not Shown



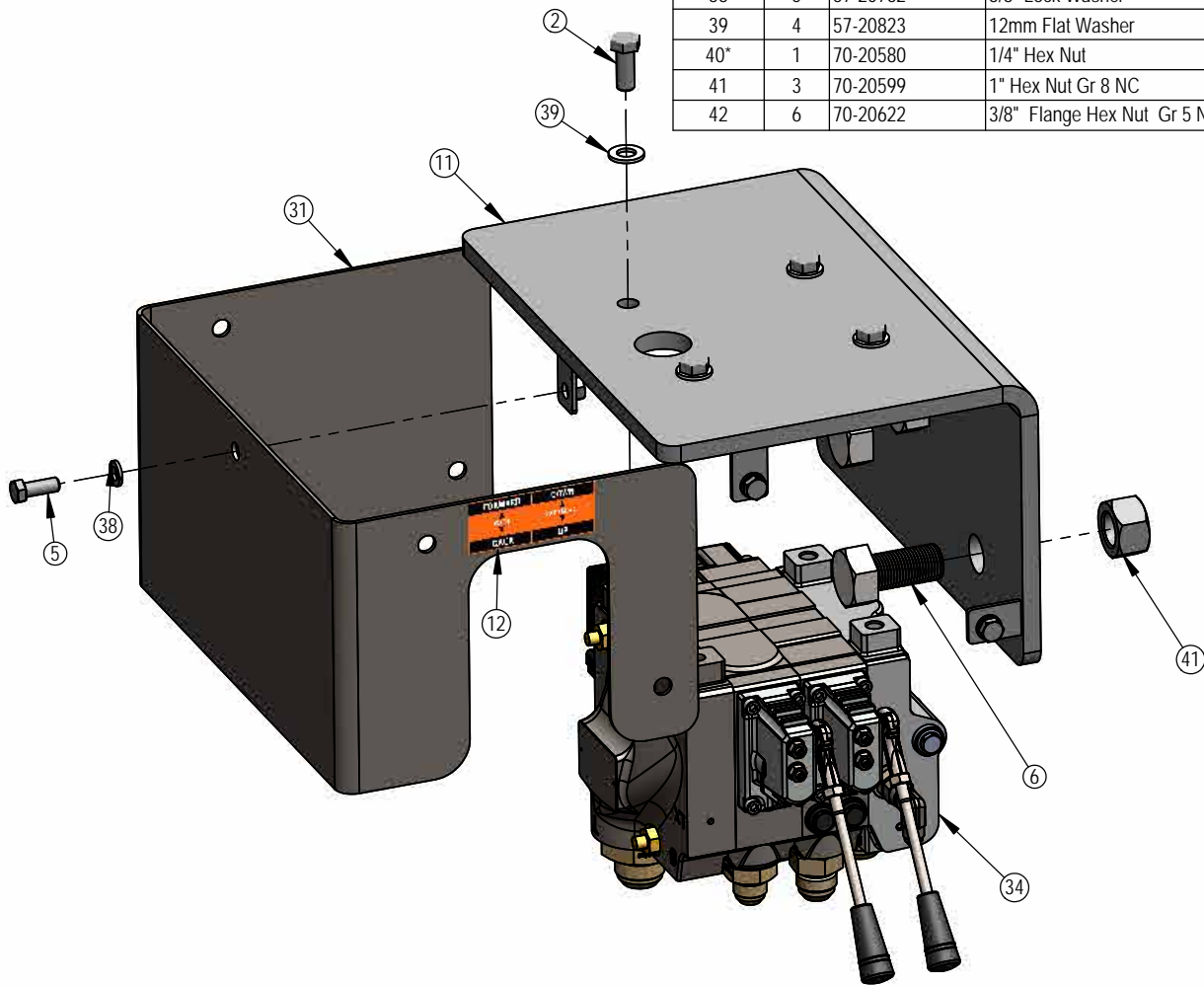
Bottom View



Joystick Mounted in Cab

ITEM NO.	QTY.	PART NO.	DESCRIPTION
27*	1	35-40220-0750	75" x 1" -16FJIC x -16FJIC Cold Temp Hose
28*	1	35-40220-0830	83" x 1" -16FJIC x -16FJIC Cold Temp Hose
29	1	44-11435	Mounting Ring
30	1	44-12032	Adjusting Plate
31	1	44-40193	Valve Cover </td
32*	1	56-11658	Shuttle Valve
33	1	56-12426	Joystick
34	1	56-19666	Joystick Valve
35*	1	56-40206	Joystick Controller
36*	1	56-40207	Joystick Wire Harness
37*	1	57-20740	1/4" Flat Washer
38	5	57-20762	3/8" Lock Washer
39	4	57-20823	12mm Flat Washer
40*	1	70-20580	1/4" Hex Nut
41	3	70-20599	1" Hex Nut Gr 8 NC
42	6	70-20622	3/8" Flange Hex Nut Gr 5 NC

* Parts Not Shown

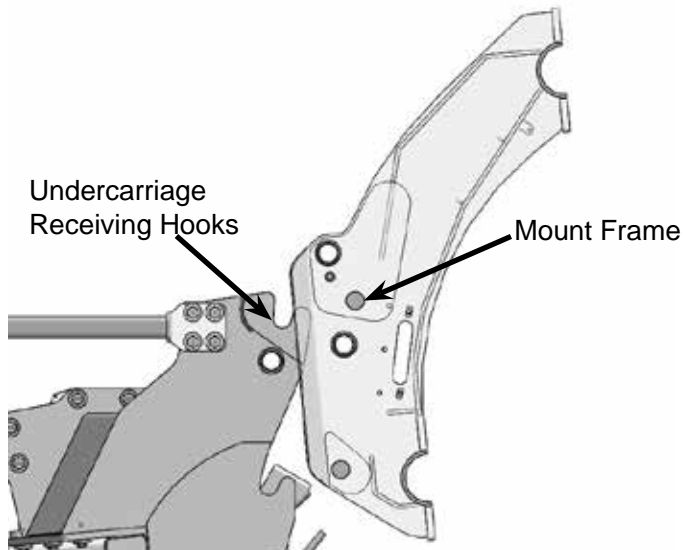


Joystick Valve Mounted at Rear of Tractor

DWG. NO.: 40199

Attaching Loader

1. Center the tractor between the loader arms and drive up slowly. Drive forward until undercarriage mount is about 1' from the mount frame.



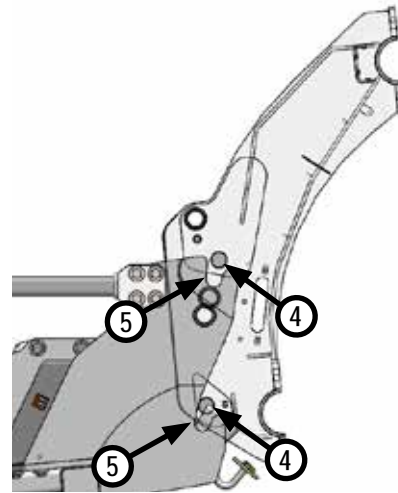
2. Place tractor in park, set the parking brake, shut off the engine.



3. Remove the loader locking pin from the mount frame (1)

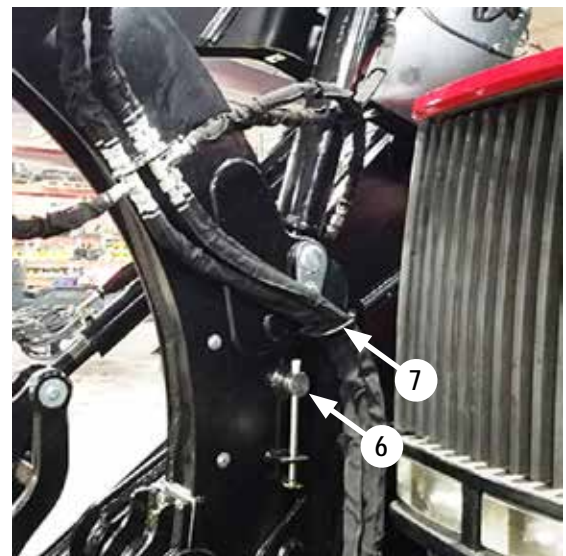


4. Remove the multi-coupler cover and connect the hydraulic multi-coupler to the base on the undercarriage (2). Install the cover on the parking station on the mount frame (3).



NOTE: If necessary, use the lift and pitch cylinders to adjust the mount frame until it is positioned as shown in the picture above.

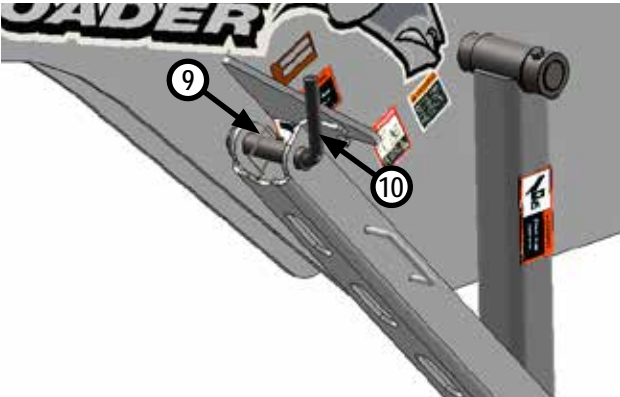
5. Slowly drive tractor forward between the mount frame until the frame (4) contacts the uprights on the undercarriage (5).
6. Extend the lift cylinders to raise the loader and engage the mount frame into the receiving hooks on the undercarriage.
7. Verify that both mounts are fully seated into the hooks on the undercarriage, place tractor in park, set parking brake and shut off the engine.



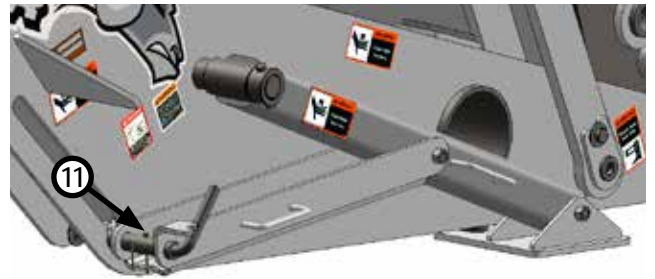
8. Install the loader locking pins and use the handle to lock in place (6).
9. Place the hoses behind the hook (7).



10. Connect the chains to the undercarriage on both sides (8).



11. Remove the locking pin (9) from the parking stand pin (10) and pull the parking stand pin to disengage.



12. Lift the parking stand until the parking stand pin engages.

13. Install the locking pin (11) into the parking stand pin.

14. Repeat Steps #11-13 for the opposite side.

Detaching Loader

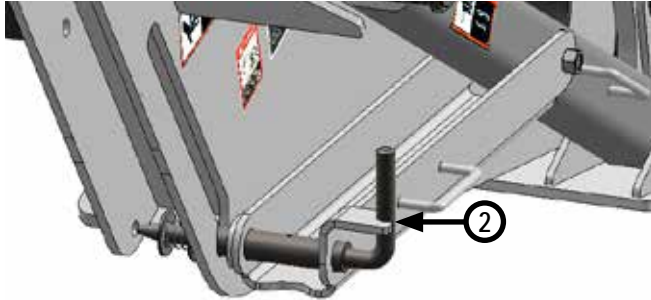
Note:

- Only detach the loader on a solid and level surface.
- Always leave the attachment connected when detaching the loader.
- If necessary, use additional blocking for detaching the loader.

1. Raise the loader enough to deploy the parking stand.
2. Place tractor in park, set the parking brake and shut off the engine.



3. Remove the locking pin (1) from the parking stand pin.



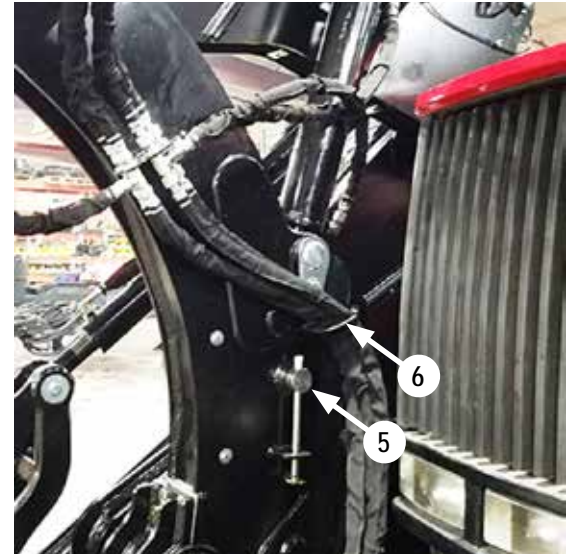
4. Pull the parking stand pin and position the handle into the notch provided on the shoe brace to keep the pin disengaged (2).



5. Lift the shoe stand and brace to release the pin from the bottom slot and help guide it up until the pin engages at the top (3).

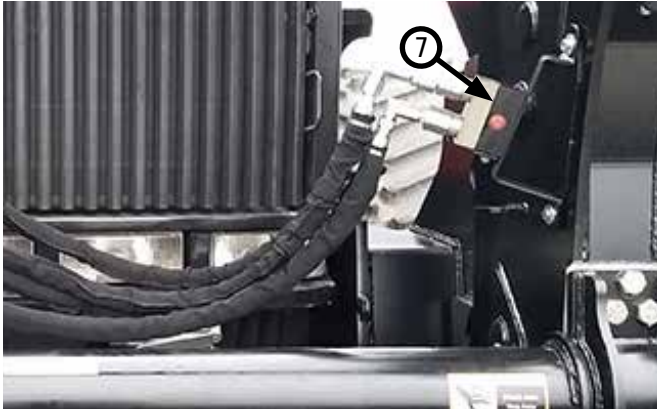


6. Install the locking pin (4) into the parking stand pin.
7. Follow Steps #3-6 for the opposite side.



8. Remove the loader locking pins (5) and remove the hoses from behind the hook (6).
9. Verify that the chains are still attached to the undercarriage and mount frame.
10. Lower the loader until the blade stands are both on the ground.
11. Pitch the attachment forward until level.
12. Retract the lift cylinders to lower the boom until the pins on the mount frame disengage from the undercarriage receiving hooks.
13. Back the tractor up until mount frame is disengaged. Chains are there for safety.
14. Install the loader locking pins back into the mount frame.

15. Disconnect the hydraulic multi-coupler and remove the cover from the parking station.



16. Connect the hydraulic multi-coupler to the parking station (7).



17. Install the hydraulic multi-coupler cover on the base on the undercarriage (8).

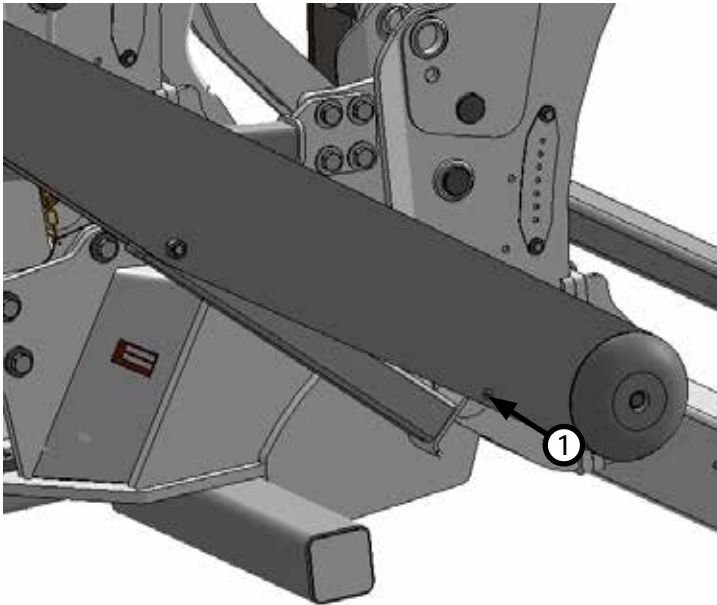
18. Disconnect the chains.

19. Back away from the loader.

NOTE: Never play on or around the loader.

Maintenance Stand

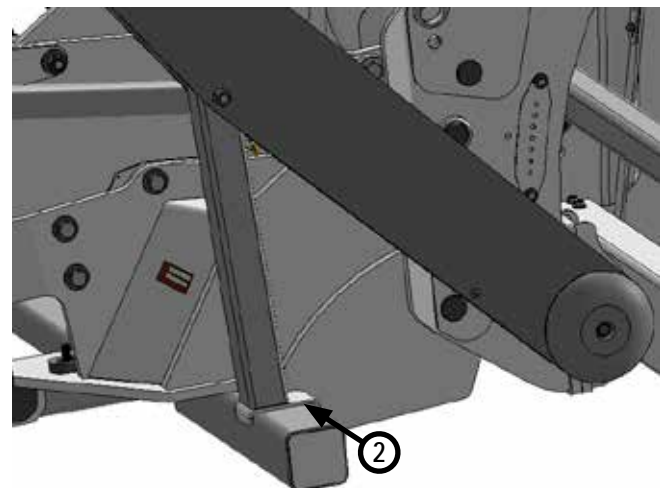
NOTE: Always engage the maintenance stand before any adjusting or maintenance is done on the loader or tractor.



NOTE: Some parts are not shown for clarity.

1. Remove the maintenance stand pin to lower the stand on both sides (1).

2. Raise the loader until the maintenance stand engages the tube support on the undercarriage.



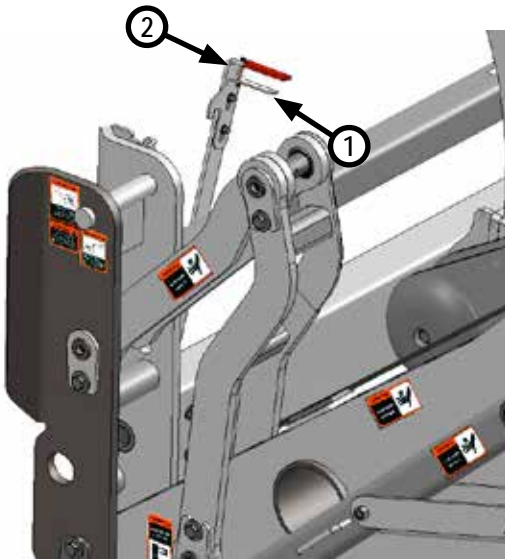
3. Lower the loader until the maintenance stands are on the tube support on the undercarriage (2).

4. Place tractor in park, set the parking brake and shut off the engine.

5. After loader maintenance is complete, raise the loader, place the tractor in park, set the parking brake, and shut off the engine.

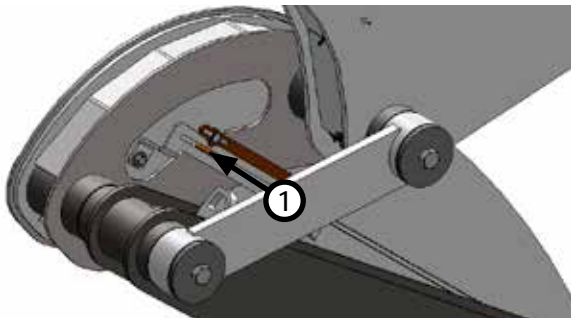
6. Raise the maintenance stand and install the maintenance stand pin to secure the stand (1).

Connecting Attachment



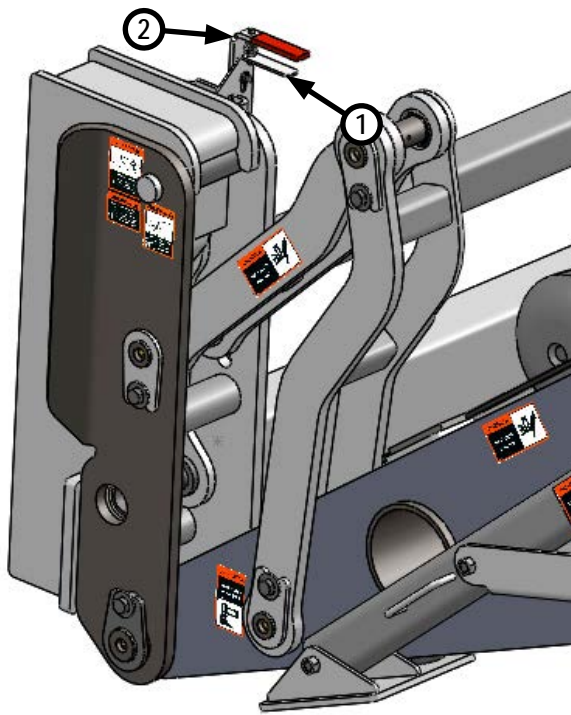
1. Lift the locking latch (1) and push the quick attach handle (2) toward the center to open the quick attach system.
2. Drive the tractor forward slowly, and if necessary, pitch the quick attach until the top bar of male quick attach is under the top hook of the female quick attach on the attachment.
3. Raise the lift system until the male quick attach fully engages the female quick attach.
4. Shut off the tractor engine and set the parking brake.
5. Pull the quick attach handle and lift the locking latch to lock the handle in place.

Pitch Indicator Adjustment



1. At ground level, pitch the attachment until it is level with the ground. Loosen the nuts on the pitch indicator plate and adjust the plate until the arrow is lined up with the pitch position link (1).

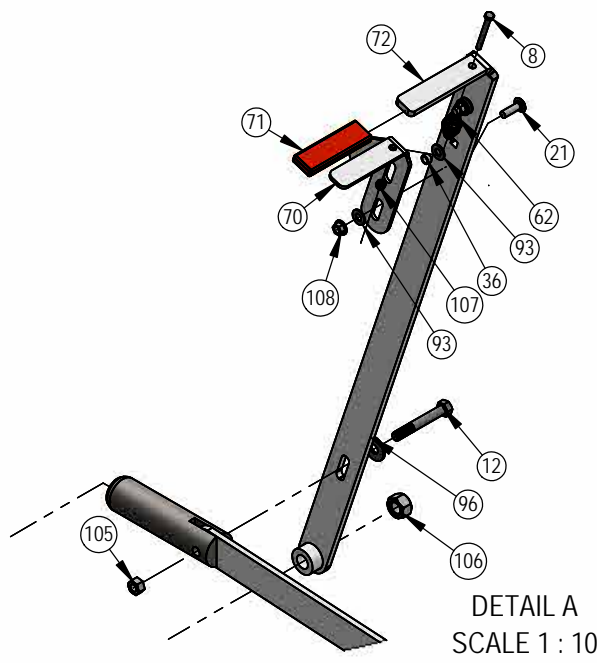
Disconnecting Attachment



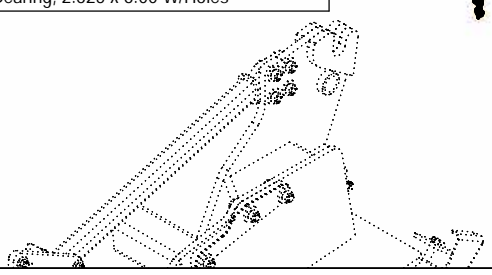
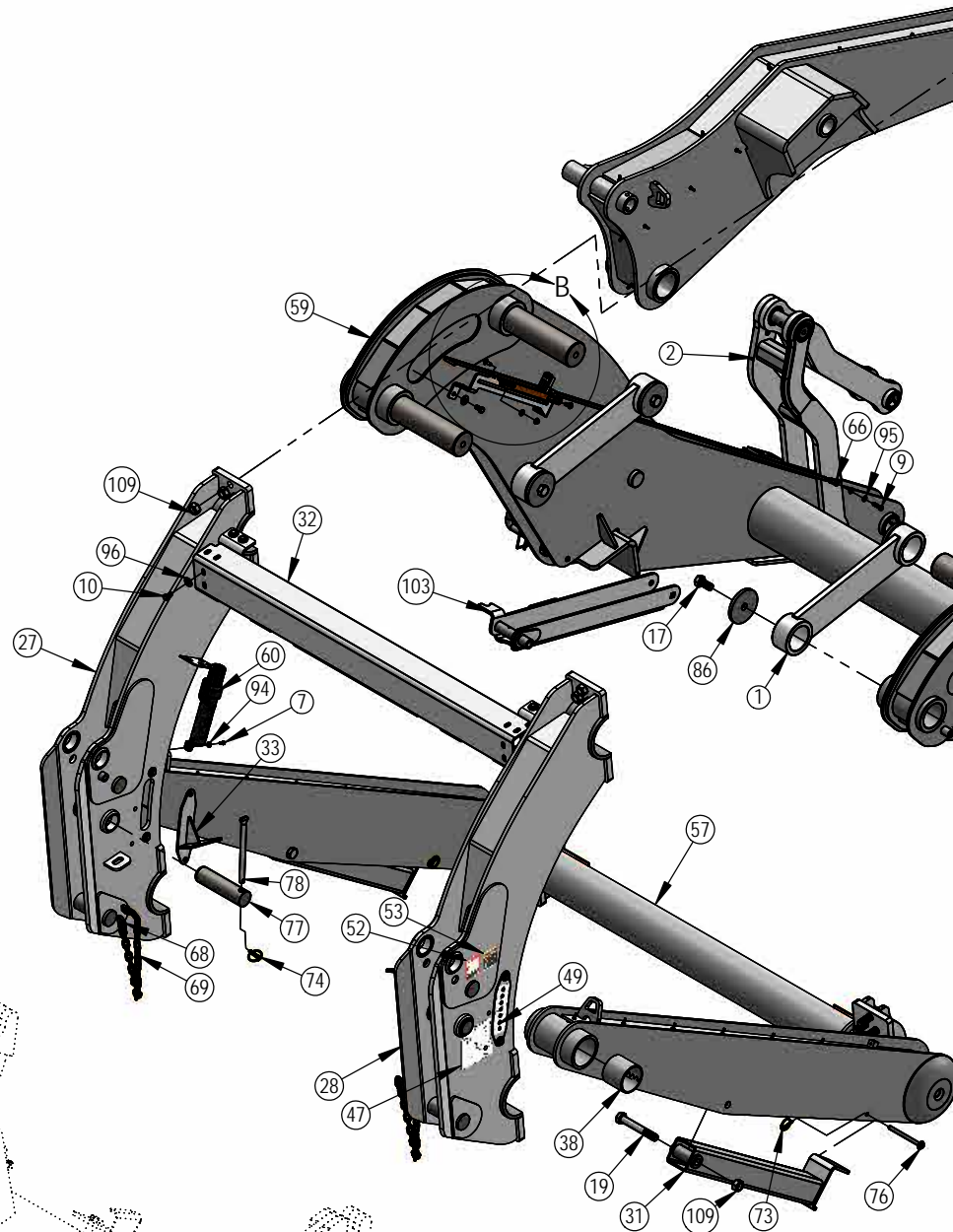
1. Lower the attachment onto a flat surface.
2. Shut off the tractor engine and set the parking brake.
3. Lift the locking latch (1) and push the quick attach handle (2) toward the center to unlock the quick attach system.
4. Slowly lower the lift system to disengage the attachment.
5. Slowly back away from the attachment. When the male quick attaches are free of the attachment, raise the lift system.

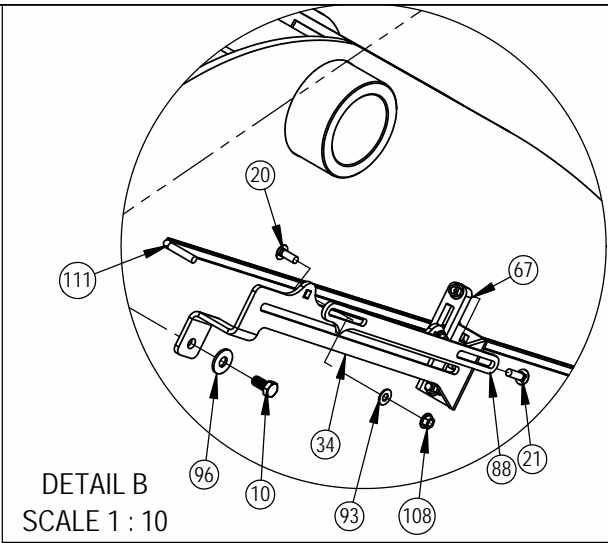
ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	2	11-40105	Boom Pin Support Arm
2	1	11-40110-L	Pitch Link, Vertical
3	1	11-40110-R	Pitch Link, Vertical
4	2	11-40115	Pitch Link, Horizontal
5	2	11-40145	Shoe Stand Weld
6	4	16-16305	3/8" x 1.25" Flanged Elevator Bolt
7	2	16-20002	1/4" x 3/4" Hex Bolt Gr 5 NC
8	1	16-20011	1/4" x 2-3/4" Hex Bolt Gr 5 NC
9	1	16-20066	3/8" X 1-1/2" Hex Cap Screw Gr 5 NC
10	14	16-20124	1/2" x 1" Hex Bolt Gr.5 NC
11	1	16-20130	1/2" x 2-1/2" Hex Bolt Gr 5 NC
12	1	16-20134	1/2" x 3-1/2" Hex Bolt Gr. 5 NC
13	8	16-20214	3/4" x 1" Hex Bolt Gr 5 NC
14	4	16-20217	3/4" x 1-3/4" Hex Bolt Gr 5 NC
15	4	16-20220	3/4" x 2-1/2" Hex Bolt Gr 5 NC
16	2	16-20424	1/2" X 3-1/2" Hex Bolt Gr. 8 NC
17	4	16-20558	1" x 2" Hex Bolt Gr. 8 NC
18	24	16-20563	1" x 3-1/4" Hex Bolt Gr.8 NC
19	2	16-20572	1" x 7" Hex Bolt Gr 8 NC
20	2	16-21064	3/8" x 1" Carriage Bolt Gr 5 NC
21	4	16-21065	3/8" x 1.25 Carriage Bolt Gr 5 NC
22	12	16-21125	1/2" x 1-1/4" Carriage Bolt Gr 5 NC
23	2	16-21126	1/2" x 1-1/2" Carriage Bolt Gr 5 NC
24	4	16-21230	3/4" x 6" Carriage Bolt GR 5 NC
25	4	16-35C616	3/8" x 1" Flanged Bolt
26	4	16-40238	Set Screw
27	1	17-40040-L	Mount Frame
28	1	17-40040-R	Mount Frame
29	4	17-40055	Bearing Cap Mount
30	1	17-40135	Quick Attach Brace
31	2	17-40180	Maintenance Stand Weld
32	1	18-40175R1	Cross Member
33	1	18-40234	Coupler Parking Station
34	1	18-40245	Pitch Position Bracket
35	4	19-13515	Spacer, NR Pin
36	2	19-13577	Bushing, Spacer
37	4	19-16328	2.75 x 2.50 x 2.00 Spring Bushing
38	8	19-19810	4.50 x 4.00 x 4.00 Spring Bushing
39	12	19-19815	2.25 x 2.00 x 1.00 Spring Bushing
40	2	19-40144	Collar
41	2	19-40237	Collar
42	1	27-18882	Not For Pushing or Pulling Decal
43*	1	27-40217-L	RAM Loader Decal - Left
44	1	27-40217-R	RAM Loader Decal - Right
45	2	27-40218	Grouser Loader Decal
46*	1	27-40227-L	Grease Locations Decal - Left
47	1	27-40227-R	Grease Locations Decal - Right
48*	1	27-40228-L	Grease Number Decal - Left
49	1	27-40228-R	Grease Number Decal - Right
50	2	27-40252	Falling Loader Warning
51	2	27-40253	No Riders Decal
52	4	27-40254	Electrocution Decal
53	4	27-40255	Warning Decal
54	1	27-9506	Serial Tag Decal
55	10	27-KV10895	Hand Pinch Decal
56	4	27-T225824	Foot Pinch Decal
57	1	32-40060R1	Lower Arm Weld
58	1	32-40070R1	Top Arm Weld
59	1	32-40085R1	Boom Weld
60	1	34-14961	Manual Canister Small
61	2	34-16158	Bearing, 2.625 x 6.00 W/Holes

* Parts Not Shown

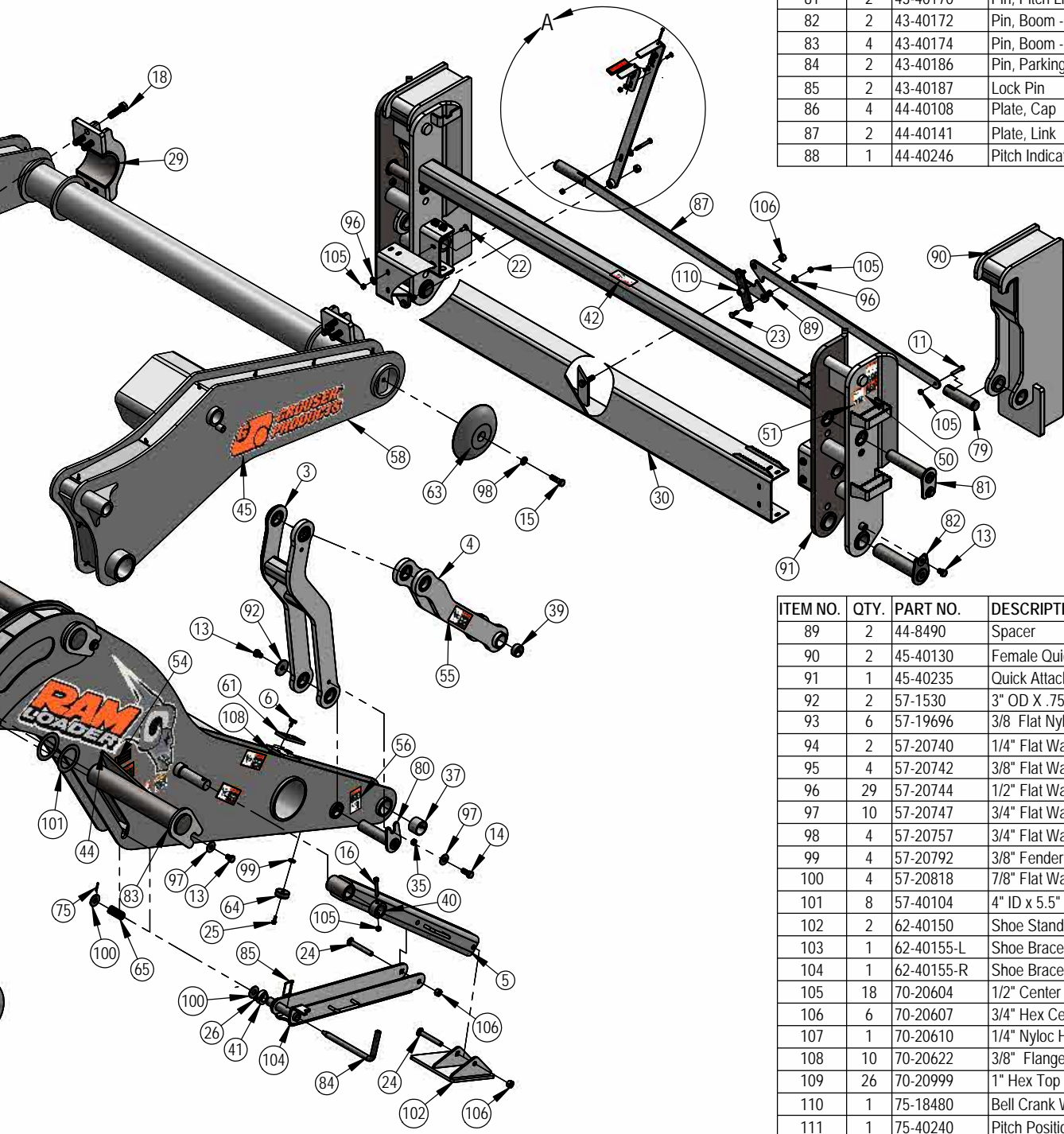


DETAIL A
SCALE 1 : 10





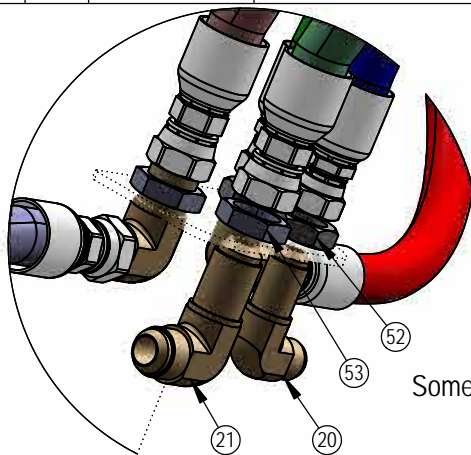
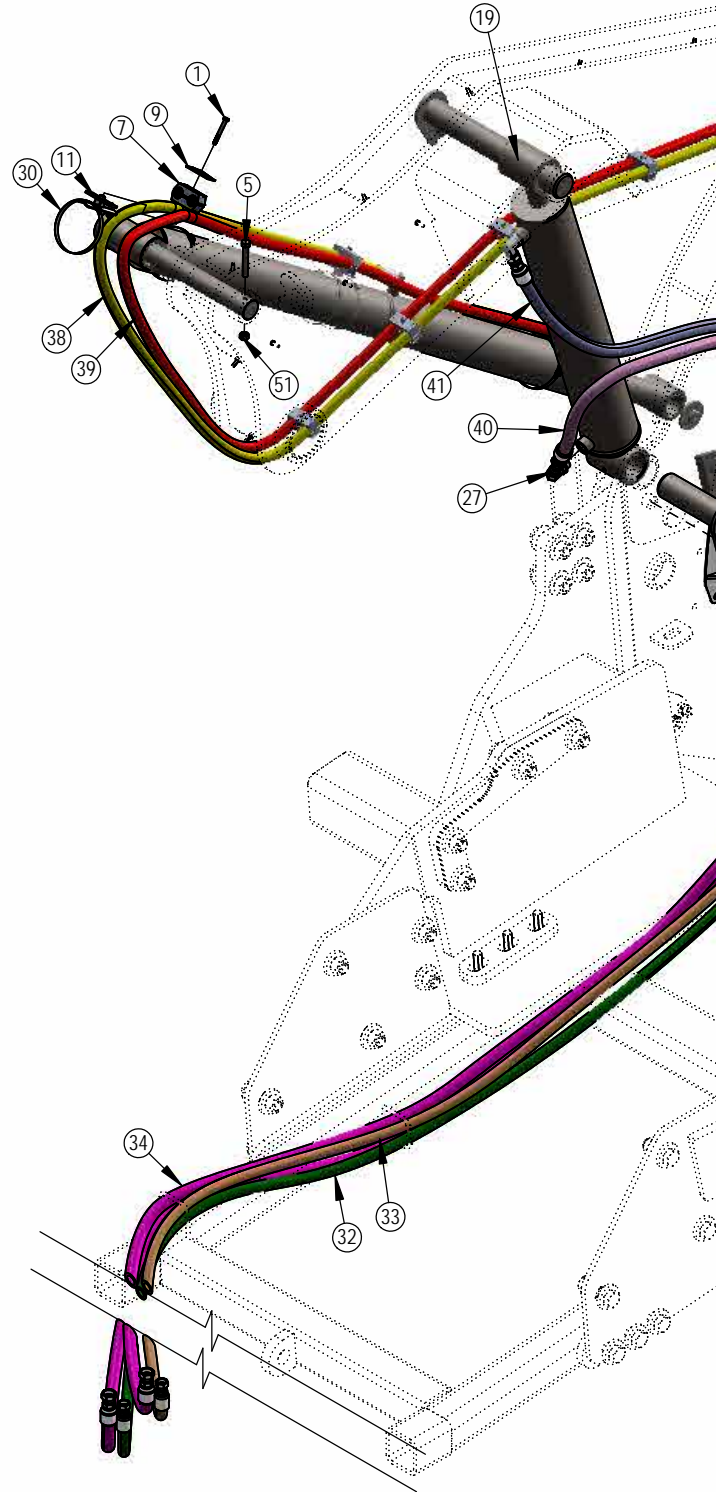
ITEM NO.	QTY.	PART NO.	DESCRIPTION
62	1	34-17799	Latch Spring
63	4	34-19737R1	Cover
64	4	34-40164	Rubber Foot
65	2	34-40185	Spring, Compression
66	1	34-40244	Ball Joint Rod End
67	1	34-40247	Pitch Link Guide
68	2	34-40249	Oval Threaded Connecting Link
69	2	34-40250	1/4" Chain - 34" Long
70	1	39-19366R1	Latch
71	1	39-3072	Rubber Handle
72	1	39-40140	Handle Weld
73	2	43-15601	1/4" x 1-3/4" Lynch Pin
74	2	43-16764	7/16" x 1-3/4" Lynch Pin
75	2	43-16945	3/16" x 1-1/2" Roll Pin
76	2	43-40157	Pin, .50 x 6.25
77	2	43-40161	Pin
78	2	43-40162	Pin Handle
79	2	43-40163	Pin, Quick Attach
80	2	43-40166	Pin, Vertical Pitch Link
81	2	43-40170	Pin, Pitch Link - Male Quick
82	2	43-40172	Pin, Boom - Male Quick
83	4	43-40174	Pin, Boom - Arms
84	2	43-40186	Pin, Parking Stand
85	2	43-40187	Lock Pin
86	4	44-40108	Plate, Cap
87	2	44-40141	Plate, Link
88	1	44-40246	Pitch Indicator Plate



ITEM NO.	QTY.	PART NO.	DESCRIPTION
89	2	44-8490	Spacer
90	2	45-40130	Female Quick Weld
91	1	45-40235	Quick Attach Weld
92	2	57-1530	3" OD X .75 ID X .25" HD Flat Washer
93	6	57-19696	3/8" Flat Nylon Washer
94	2	57-20740	1/4" Flat Washer
95	4	57-20742	3/8" Flat Washer
96	29	57-20744	1/2" Flat Washer
97	10	57-20747	3/4" Flat Washer
98	4	57-20757	3/4" Flat Washer - 1-1/2" OD
99	4	57-20792	3/8" Fender Washer
100	4	57-20818	7/8" Flat Washer Heavy Duty Gr 8 (USS)
101	8	57-40104	4" ID x 5.5" OD Washer
102	2	62-40150	Shoe Stand
103	1	62-40155-L	Shoe Brace Weld
104	1	62-40155-R	Shoe Brace Weld
105	18	70-20604	1/2" Center Lock Hex Nut
106	6	70-20607	3/4" Hex Center Lock Nut NC
107	1	70-20610	1/4" Nyloc Hex Nut Gr 5 NC
108	10	70-20622	3/8" Flange Hex Nut Gr 5 NC
109	26	70-20999	1" Hex Top Lock Nut Gr 8 NC (YZ)
110	1	75-18480	Bell Crank Weld
111	1	75-40240	Pitch Position Link

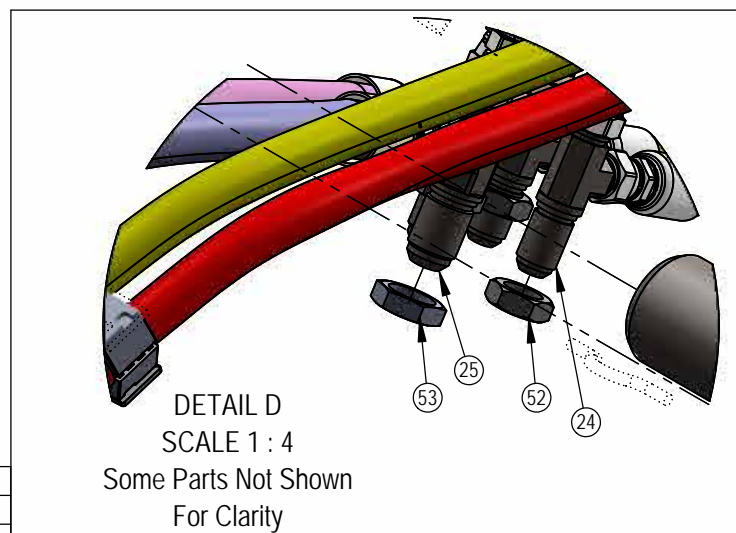
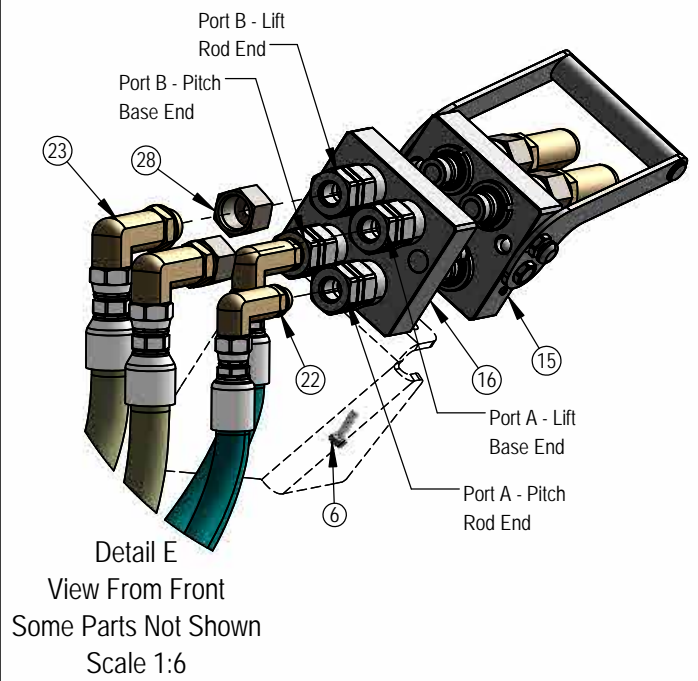
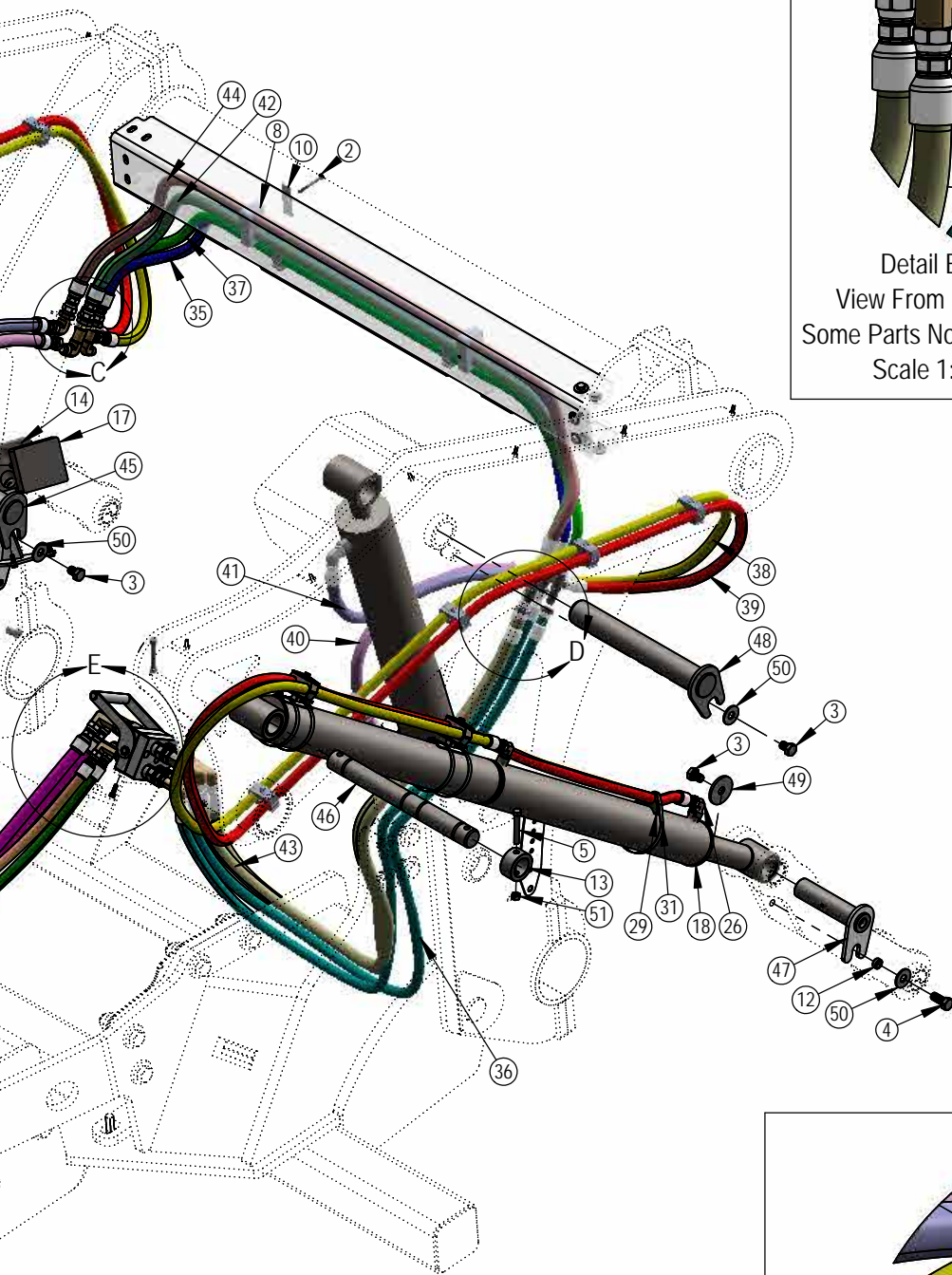
ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	16	16-20040	5/16" x 2-1/2" Hex Bolt Gr 5 NC
2	2	16-20042	5/16" x 2.50" Gr.5 Hex Bolt NC
3	6	16-20214	3/4" x 1" Hex Bolt Gr 5 NC
4	2	16-20217	3/4" x 1-3/4" Hex Bolt Gr 5 NC
5	4	16-20424	1/2" X 3-1/2" Hex Bolt Gr. 8 NC
6	4	16-812525	8mm x 1.25mm x 25mm Metric Hex Bolt Gr 10.9
7	16	18-19311-04-P-105	Hose Clamp (TS-CLH-04-P-105)
8	2	18-19311-05-P-125	Hose Clamp (TS-CLH-05-P-125)
9	16	18-19312-04	Twin Cover Plate (TS-TCP-04-Z)
10	2	18-19312-05	Twin Cover Plate (TS-TCP-05-Z)
11	4	18-40224	Hose Clamp Bracket
12	2	19-13515	Spacer, NR Pin
13	2	19-40144	Collar
14	1	25-18956	Multi-Coupling Plate - 4 Port Parking Station
15	1	25-19864	Multi-Coupling Plate - 4 Port Fixed
16	1	25-19866	Multi-Coupling Plate - 4 Port Mobile
17	1	25-19867	Multi-Coupling Plate - 4 Port - Cap
18	2	26-34754	4 x 30 Cylinder Tube Ends
19	2	26-34755	5 x 28 Cylinder Tube Ends
20	2	31-13669-10-10	Male JIC 90° Elbow Bulkhead Fitting
21	2	31-13669-12-12	Male JIC 90° Elbow Bulkhead Fitting (2701-12-12)
22	4	31-15676-LL-10-8	Straight Thread Extra Long Elbow 90° JIC x O-Ring
23	4	31-15676-LL-12-12	Straight Thread Extra Long Elbow 90° JIC x O-Ring
24	2	31-34031	Bulkhead Run Tee JIC (2704-10-10-10)
25	2	31-34032	Bulkhead Run Tee JIC (2704-12-12-12)
26	4	31-34053	Straight Thread Elbow 90° JIC x O-Ring (6801-10-8)
27	4	31-34055	Straight Thread Elbow 90° JIC x O-Ring (6801-12-12)
28	4	31-6410-8-12	O-Ring Reducer Expander
29	2	34-12932	Cylinder Saddle
30	8	34-12994	#10 Hose Clamp
31	2	34-16578	Hose Clamp (worm drive - 4.5)
32	1	35-40210-3490	349" x 5/8" -10 FJIC x -10FJIC Cold Temp
33	1	35-40210-3570	357" x 5/8" -10 FJIC x -10FJIC Cold Temp
34	2	35-40215-3320	332" x 3/4" -12 FJIC x -12FJIC Cold Temp
35	1	35-40225-0850	85" x 5/8" -10 FJIC x -10FJIC Cold Temp W/ Cordura
36	2	35-40225-0855	85.5" x 5/8" -10 FJIC x -10FJIC Cold Temp W/ Cordura
37	1	35-40225-0865	86.5" x 5/8" -10 FJIC x -10FJIC Cold Temp W/ Cordura
38	2	35-40225-1925	192.5" x 5/8" -10 FJIC x -10FJIC Cold Temp W/ Cordura
39	2	35-40225-2265	226.5" x 5/8" -10 FJIC x -10FJIC Cold Temp W/ Cordura
40	2	35-40230-0390	39" x 3/4" -12 FJIC x -12FJIC Cold Temp W/ Cordura
41	2	35-40230-0410	41" x 3/4" -12 FJIC x -12FJIC Cold Temp W/ Cordura
42	1	35-40230-0815	81.5" x 3/4" -12 FJIC x -12FJIC Cold Temp W/ Cordura
43	2	35-40230-0850	85" x 3/4" -12 FJIC x -12FJIC Cold Temp W/ Cordura
44	1	35-40230-0860	86" x 3/4" -12 FJIC x -12FJIC Cold Temp W/ Cordura
45	2	43-40158	Pin, Lift Cyl Bottom
46	2	43-40165	Pin, Base Pitch
47	2	43-40166	Pin, Vertical Pitch Link
48	2	43-40178	Pin, Lift Cyl Top
49	2	57-1530	3" OD X .75 ID X .25" HD Flat Washer
50	6	57-20747	3/4" Flat Washer
51	4	70-20604	1/2" Center Lock Hex Nut
52	4	70-20808	3/4" Hex Jam Nut NF
53	4	70-20809	1-1/16" Hex Jam Nut

Some Parts Not Shown For Clarity



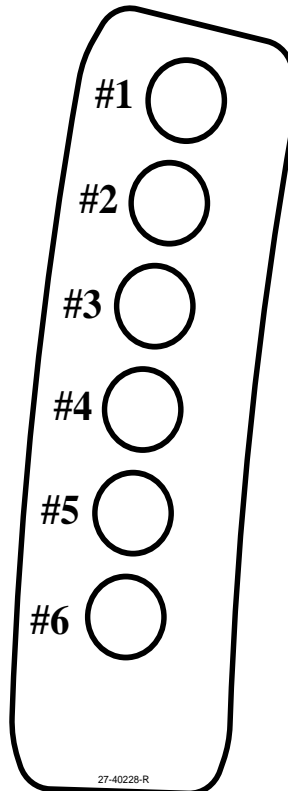
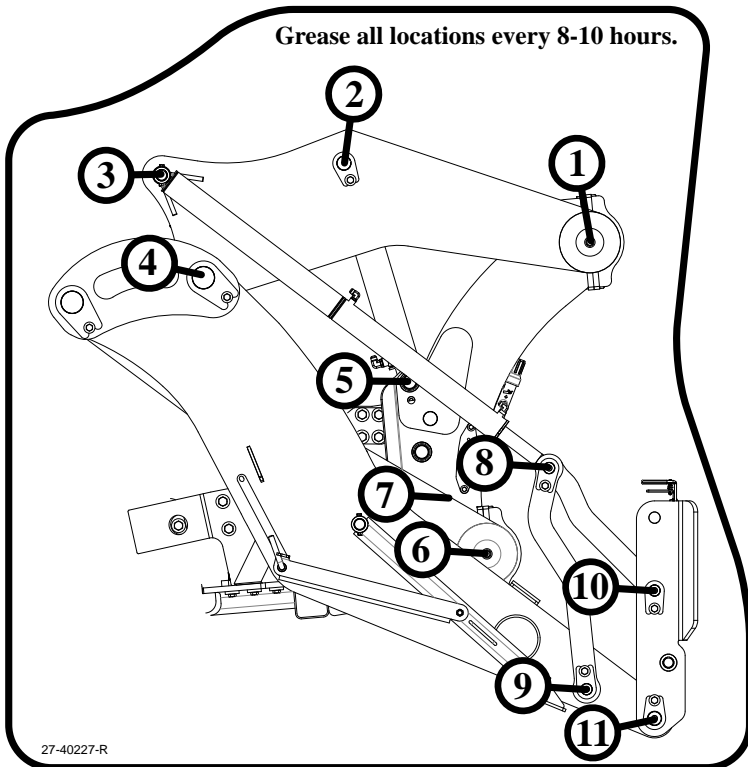
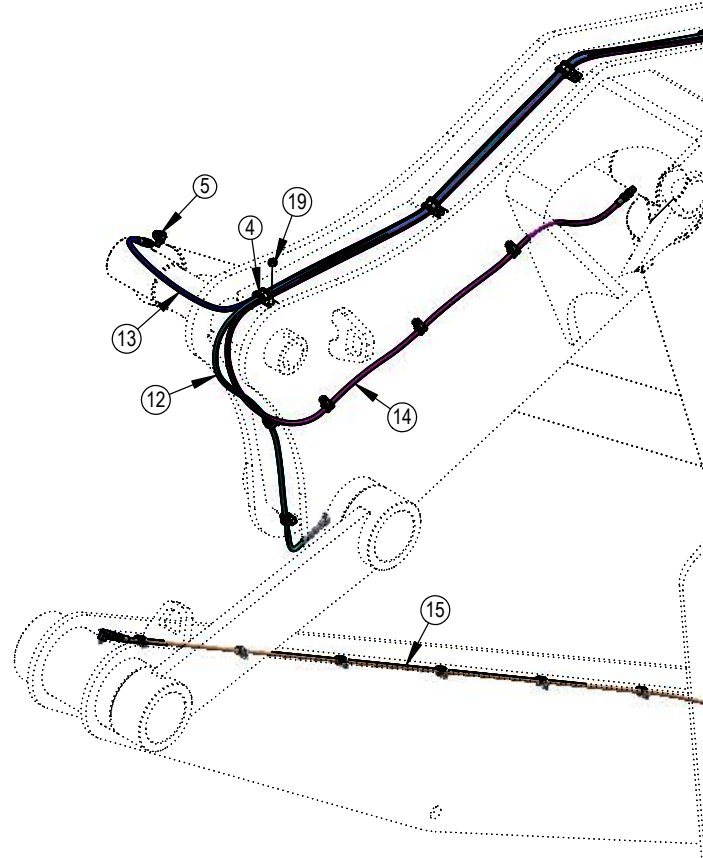
DETAIL C
SCALE 1 : 4
Some Parts Not Shown
For Clarity

See Page 34 for the Hydraulic Schematic.



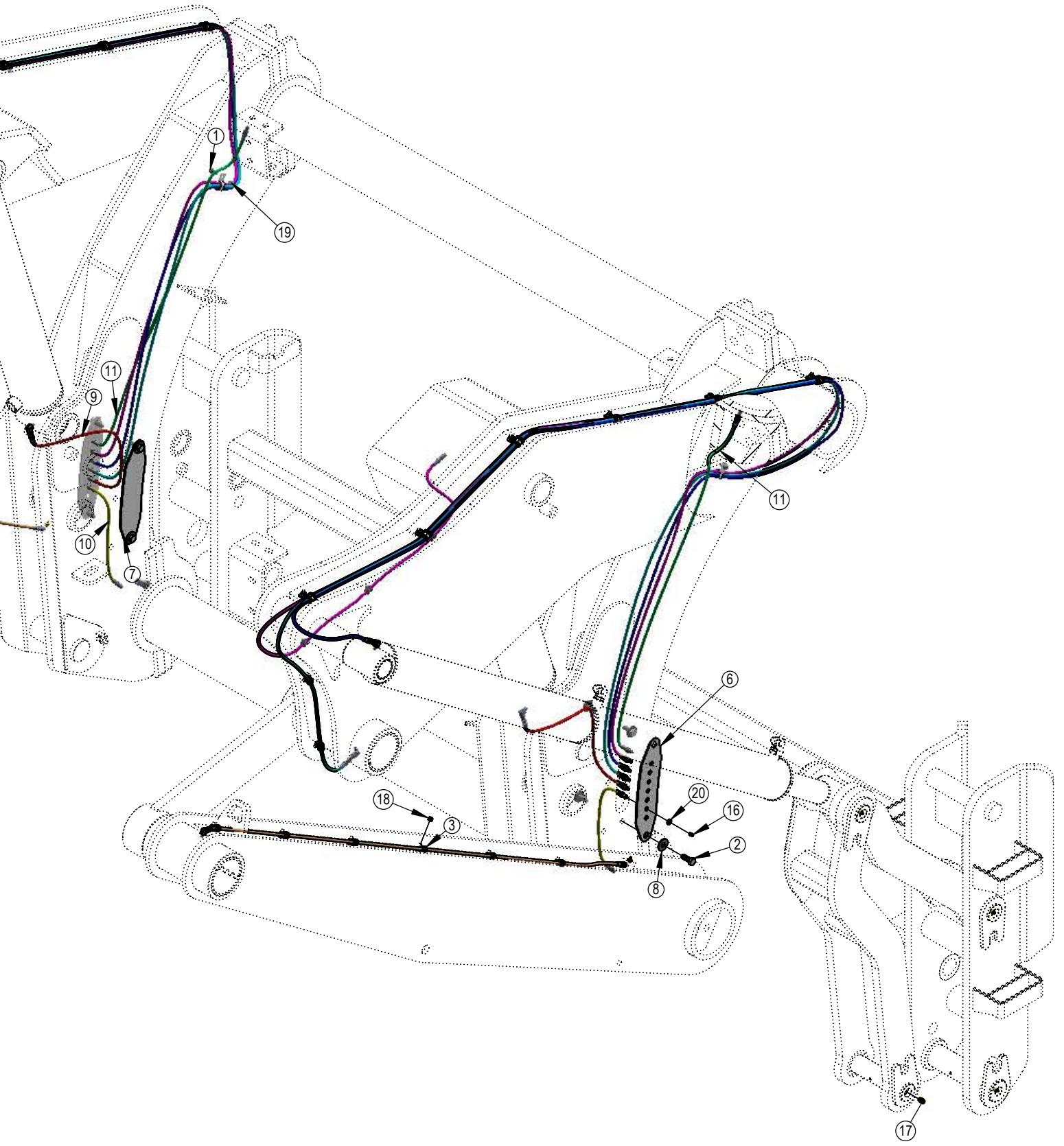
Cylinder	Part No.	Description
26-34754	49-12274	Seal Kit 4" (647210) Nitrided Rod
26-34755	49-12275	Seal Kit 5" (658457) Nitrided Rod

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	2	16-20032	5/16" x 3/4" Hex Bolt Gr 5 NC
2	8	16-20125	1/2" x 1-1/4" Hex Bolt Gr 5 NC
3	22	18-12992	3/8 x 1/2 Cushion P-Clamp
4	14	18-40184	Double P Clamp
5	8	31-13933-2-2	1/8" NPT Street Elbow
6	2	44-40142	Plate, Grease Line Cover
7	2	44-40143	Plate, Cover
8	8	57-20744	1/2" Flat Washer
9	2	58-40212-0240	Grease Hose - 24" Male Swivel & Bulkhead (#5)
10	2	58-40212-0260	Grease Hose - 26" Male Swivel & Bulkhead (#6)
11	2	58-40212-0490	Grease Hose - 49" Male Swivel & Bulkhead (#1)
12	2	58-40212-1890	Grease Hose - 189" Male Swivel & Bulkhead (#4)
13	2	58-40212-1970	Grease Hose - 197" Male Swivel & Bulkhead (#3)
14	2	58-40212-2050	Grease Hose - 205" Male Swivel & Bulkhead (#2)
15	2	58-40213-0780	Grease Hose - 78" Male Swivels (#7)
16	18	58-40216	Grease Zerk (For Grease Hose)
17	10	58-9369	Straight 1/8" NPT Grease Zerk
18	18	70-20610	1/4" Nyloc Hex Nut Gr 5 NC
19	18	70-20611	5/16" Nyloc Hex Nut Gr 5 NC
20	12	70-40214	Nut (For Grease Bulkhead)



27-40227-R

27-40228-R



Joystick Pitch Connection Information

Connection PVEH

- also with float B four pin

Connector	U_s	U_{DC}	Gnd	Error
Deutsch	pin 1	pin 4	pin 3	pin 2

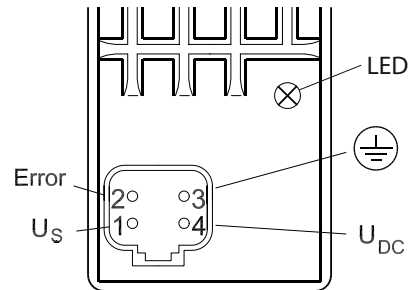
- Ground pins are internally connected.

Control (U_s) for standard mounted PVEH

Function	Voltage relative	PWM
Neutral	$0,5 \cdot U_{DC}$	50%
Q: P → A	$0,5 \rightarrow 0,25 \cdot U_{DC}$	50% → 25%
Q: P → B	$0,5 \rightarrow 0,75 \cdot U_{DC}$	50% → 75%

Deutsch version PVEH

PVEH float B



Joystick Lift Connection Information

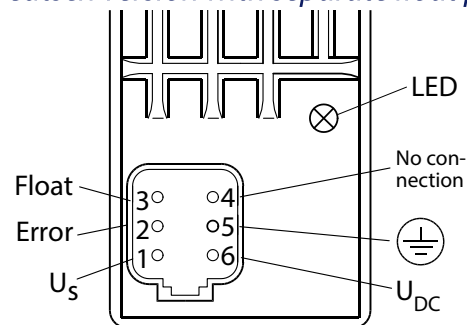
Connection PVEH with float A six pin

Connector	U_s	U_{DC}	Float	Ground	Error
Deutsch	pin 1	pin 6	pin 3	pin 5	pin 2

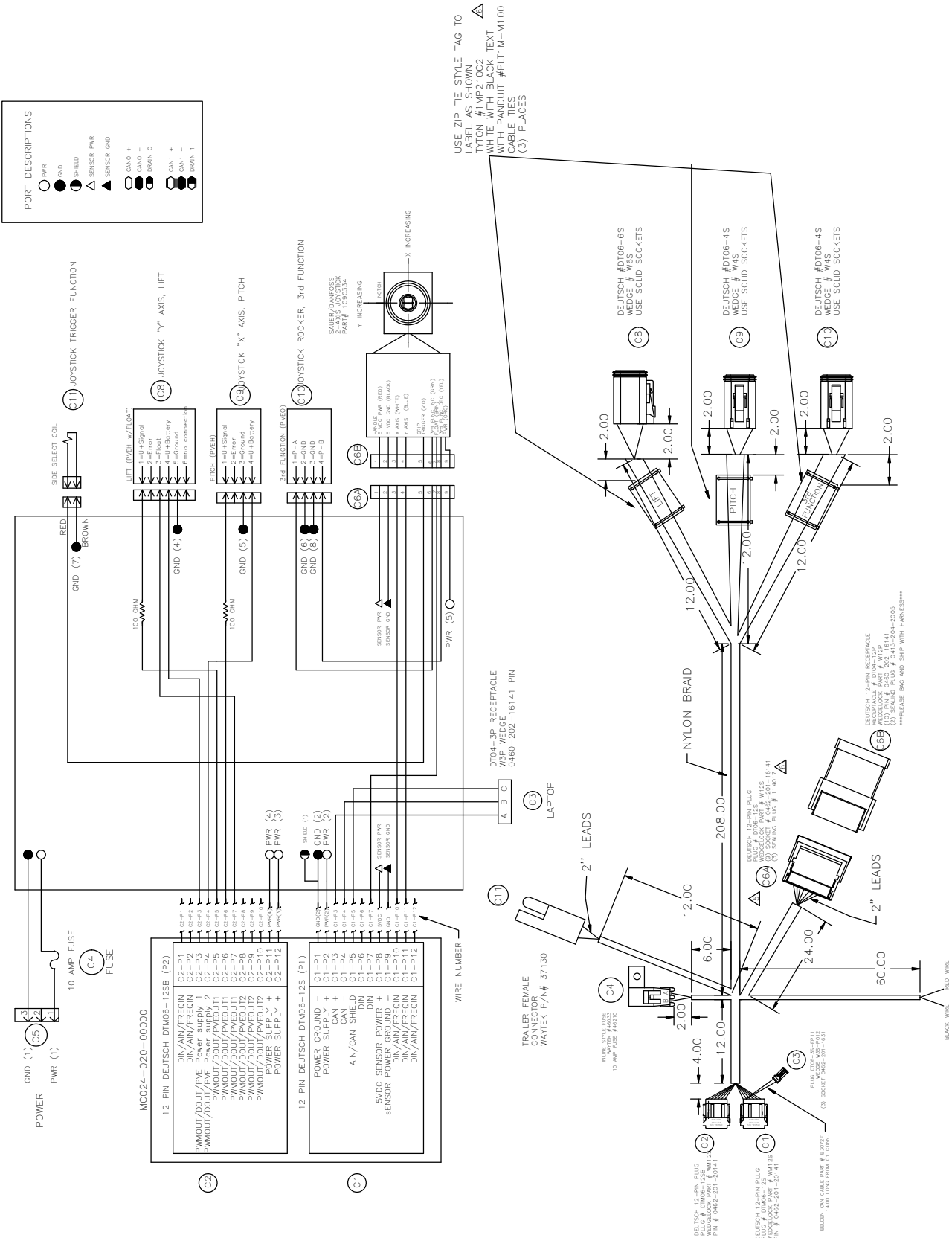
Control (U_s) for standard mounted PVEH float A six pin version

Function	PWM A	PWM B
Neutral	$0,5 \cdot U_{DC}$	50%
Q: P → A	$0,5 \rightarrow 0,25 \cdot U_{DC}$	50% → 25%
Q: P → B	$0,5 \rightarrow 0,75 \cdot U_{DC}$	50% → 75%
Float	U_{DC} on float pin	

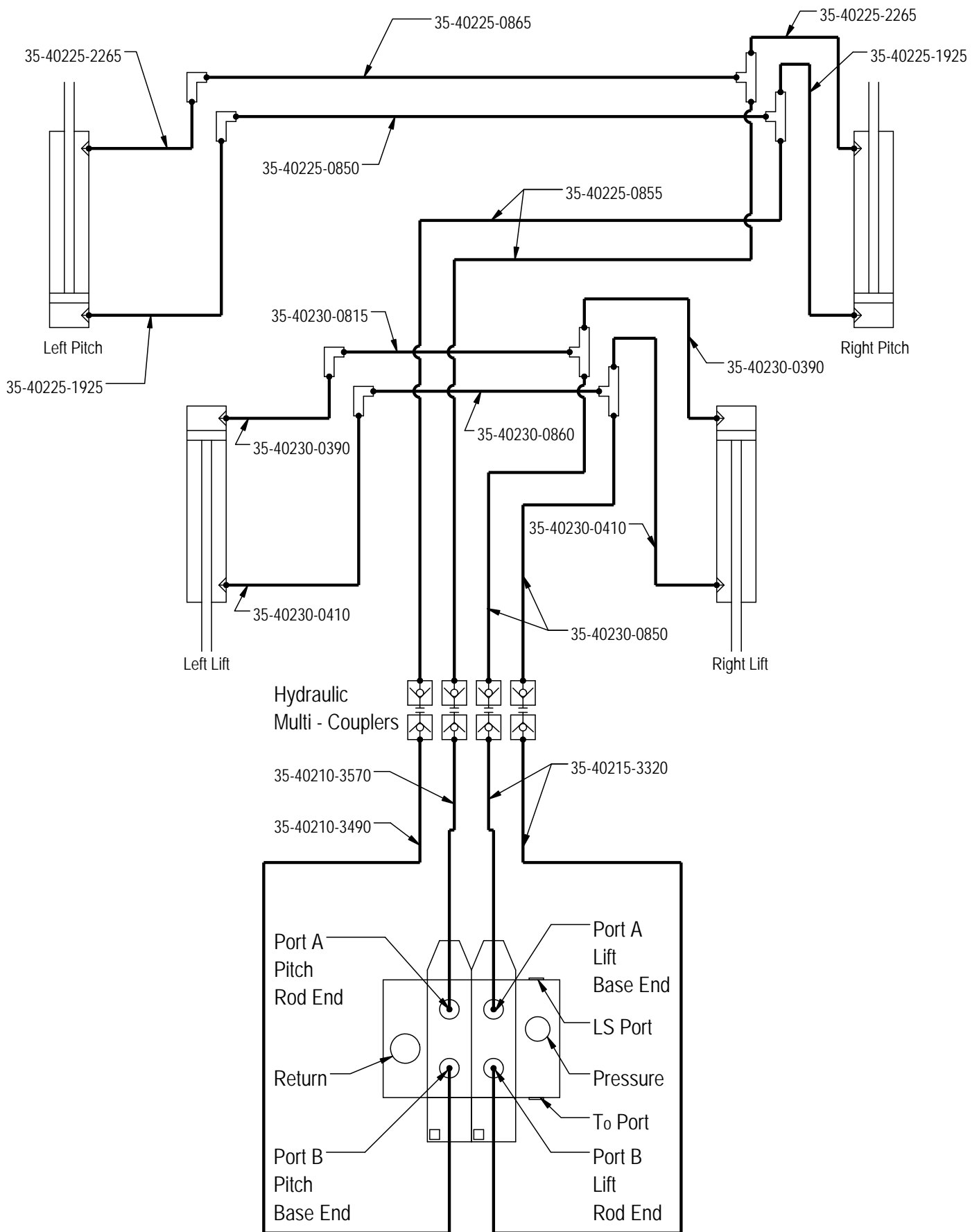
Deutsch version with separate float pin



Joystick Wire Harness



Hydraulic Schematic



Notes

Contact Us

As always, if you have any questions about your Loader or other products made by Grouser, feel free to contact us.

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Improvements

Grouser Products Inc. is continually striving to improve its products. We reserve the right to change prices, specification, or equipment at any time without notice. We also reserve the right to make improvements or changes when it becomes practical and possible to do so without incurring any obligation to make changes or additions to the equipment sold previously.

Warranty

Grouser Products warrants to the original purchaser of each item that the product be free from defects in material and workmanship under normal use and service for a period of two years from date of original retail delivery. If such equipment is found to be defective within two years, it is the obligation of Grouser Products under this warranty to repair or replace (exclusive of the cost of labor and transportation), any equipment or parts, in the judgment of Grouser Products to be defective in material or workmanship.

All equipment or parts claimed to be defective in material or workmanship must be made available for inspection at the place of business of a dealer authorized to handle the equipment covered by this warranty, or, upon request by Grouser Products, shipped to the Grouser Products factory in West Fargo, North Dakota. Grouser Products shall have no obligation to bear the cost of labor or transportation in connection with replacement or repair of any such defective parts in the setup process.

This warranty covers only defects in material and workmanship. It does not cover depreciation or damage caused by normal wear, accident, improper assembly, improper adjustments, improper maintenance including lack of proper lubrication, or improper use. Therefore, Grouser Products liability under this warranty shall not be effective or actionable unless the equipment is assembled, maintained and operated in accordance with the operating instructions accompanying the equipment. Grouser Products shall have no liability if the equipment has been altered or reworked without the written authorization of Grouser Products.

Grouser Products' parts, which are furnished under this warranty and properly installed, shall be warranted to the same extent as the original parts under this warranty if, and only if, such parts are found to be defective within the original warranty period covering the original equipment.

