



Ag Pro Plus/Ag Pro SS JD 9R IT4

Undercarriage Installation Instructions

Purchase Date
Serial Number
Model Number
Tractor Model
Dealer

Contents

Description	Page
To The Owner, Maintenance & Torque Specifications _____	2
Safety Precautions & Unpacking Components _____	3
Undercarriage Installation Instructions _____	4-6
Lift Components, Tow Cable Components & Notes _____	7
Undercarriage Assembly _____	8-11
Contact Us, Improvements, & Warranty _____	12

To The Owner

This manual contains information concerning the operation, adjustment, and maintenance of the Ag Pro Plus dozer system. 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.

Maintenance

Due to the harsh environment this equipment operates in, the following tasks should be performed every 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 2.
- 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 your specific system.

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

Safety Precautions

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 supply by your tractor manufacturer.

The Dozer:

1. The Ag Pro Plus Dozer should be operated only by those who are responsible and instructed to do so.
2. Read the owner's manual carefully before using this equipment. Lack of operating knowledge can lead to accidents.
3. Keep the dozer maintained and in good condition to ensure your safety.
4. Make sure the area around you is clear of people before moving any equipment.
5. Do not modify or permit anyone else to modify or alter the equipment and its components without first consulting Grouser Products.

Servicing the Dozer:

1. Read and follow all safety instructions provided by the tractor manufacturer.
2. Always use proper personal safety gear when performing maintenance on equipment.
3. Before servicing, relieve hydraulic pressure, stop engine and fully engage parking brake.
4. 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.
 - Stop the engine and relieve trapped hydraulic pressure before connecting or disconnecting lines.
 - Tighten all connections before starting the engine or pressurizing lines.

Storing the Dozer:

1. Thoroughly clean the dozer before storage. Use paint where necessary to prevent rust.
2. Check for worn or damaged parts. Install new parts as required.
3. Lubricate all pins and joints.

Unpacking Components

Unstrap and remove any components that are attached for shipping. If any components are missing, call Grouser.

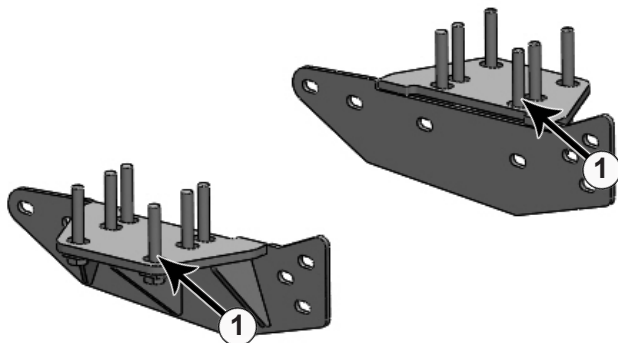
Caution:

- Always use caution when working around any equipment.
 - Always wear safety glasses.
 - Follow tractor manufacturer's safety guidelines when installing this product.
1. Read all instructions prior to performing installation.
 2. If applicable, remove front weights, weight bracket, toolbox, and front axle brace from front of tractor.

NOTE: When installing hardware, only finger tighten until all hardware is in place.

NOTE: A full diagram of the assembly with the full list of parts is on Page 8.

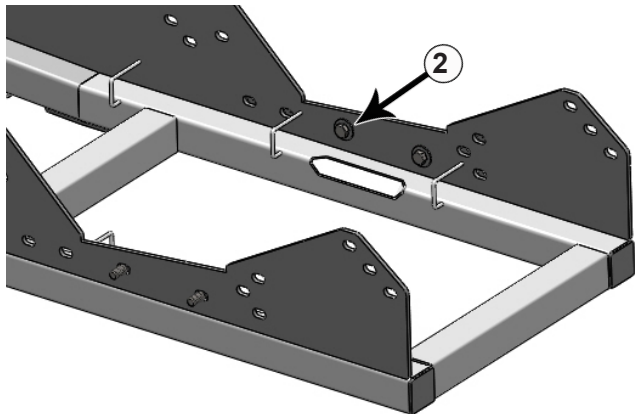
NOTE: Tractor frame not shown in diagrams for clarity.



3. Attach the axle brackets to the front axle vertical holes with a 24mm x 150mm bolt and a 1.05" ID washer in each hole (#1).

4. Push the brackets outwards away from the center of the tractor to make room for installing undercarriage.

NOTE: Some tractors only have 4 holes in the axle. The installation instructions are still compatible, but only use 4 bolts and washers instead of 6 on each side for Step #3.

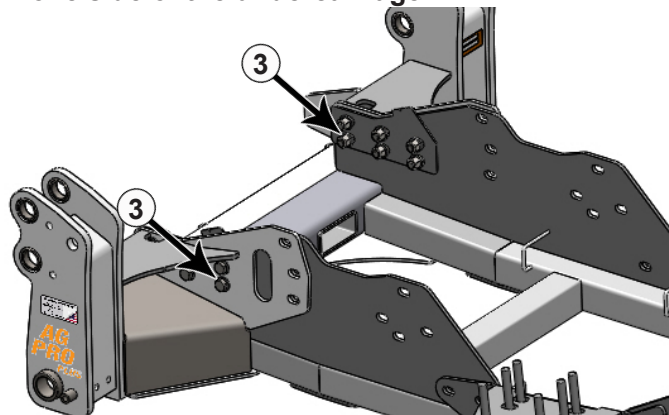


5. Install 2 - 7/8" x 2-1/2" bolts with a heavy duty flat washer (#2) on each bolt from the inside of the undercarriage into the 2 center bolting locations for the axle brackets.

NOTE: Be careful when lifting the undercarriage into place that the bolts from Step #5 don't hit the installed axle brackets on the tractor.

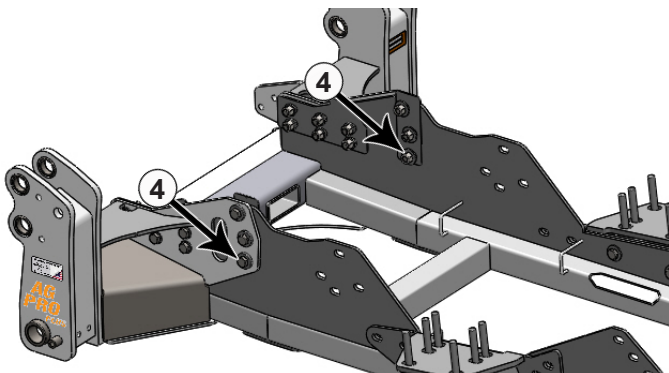
6. Position undercarriage under tractor, center on the frame of the tractor. Lift undercarriage until holes of undercarriage line up with holes in the side of the tractor frame.

NOTE: Add shims between the undercarriage and the tractor frame to reduce any gap if necessary. Use shims until there is a gap of 1/16" or less on the front. See attached diagram for the proper location and orientation of each shim. Don't put all the shims on one side of the undercarriage.

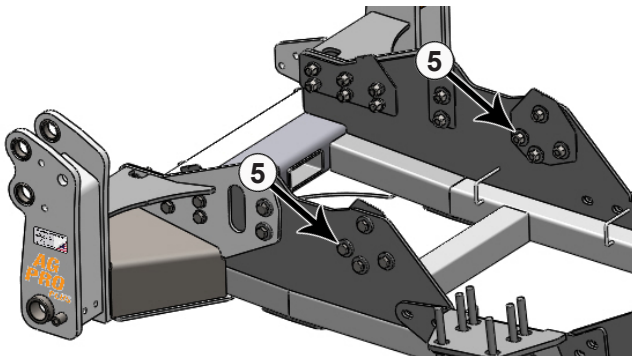


NOTE: Follow Steps #7-12 for the left side. After Step #12, tighten the bolts until they are snug. If necessary, add more shims on right side until a gap of 1/16" or less is on the right side. Proceed with Step #7-12 for the right side.

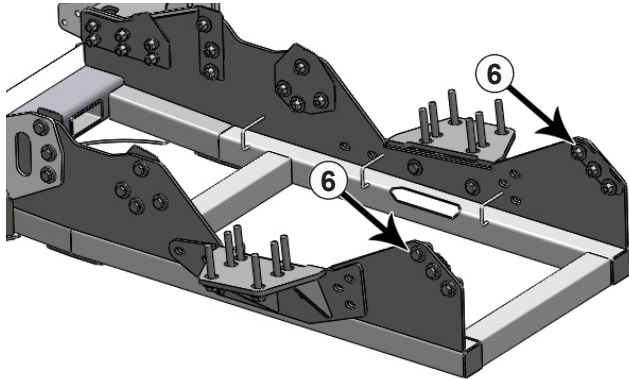
7. Install 6 - 7/8" x 3" bolts with a hardened flat washer (#3) through the front holes on each side of the U/C, shims if necessary, and the tractor frame.



8. Install 3 - 7/8" x 3" bolts with a 7/8" ID thick washer (#4) through the 2nd batch holes on each side of the U/C, shims if necessary, and the tractor frame.



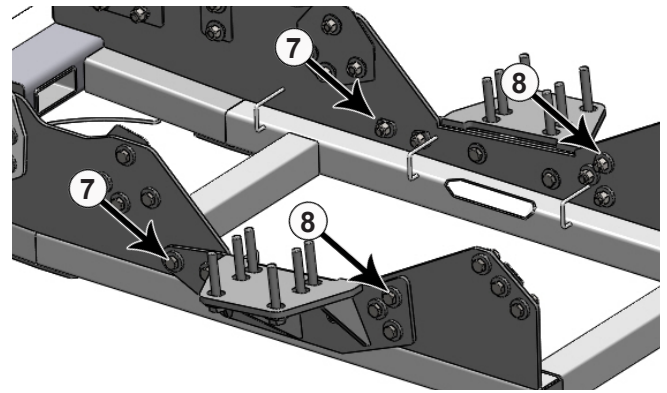
9. Install 4 - 7/8 " x 2-1/2" bolts with a 7/8" ID thick washer (#5) through the 3rd batch of holes on each side of the U/C, shims if necessary, and the tractor frame.



10. Install 3 - 7/8 " x 2-1/2" bolts with a 7/8" ID thick washer (#6) through the 3rd batch of holes on each side of the U/C, shims if necessary, and the tractor frame.

11. After all bolts are through the tractor frame, attach with a 7/8" hardened washer and a 7/8" nut on the front 6 bolts.

12. Install a 7/8" heavy duty flat washer and 7/8" nut on all remaining 7/8" bolts.



13. Slide the axle brackets toward the center of the tractor and attach the axle rear brackets (#7) to the undercarriage with a 7/8" ID thick washer and a 7/8" nut on each bolt that was installed in Step #5.

14. Install 5 - 7/8" x 3" bolts with a 7/8" ID thick washer on each bolt for the remaining holes in each of the axle brackets. Bolts can be installed from the outside (#7 & 8).

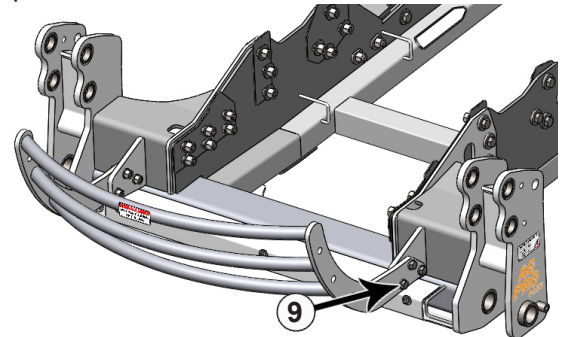
15. For the front 2 bolts on each side, install a 7/8" clipped washer and a 7/8" nut on each bolt (7).

16. For the remaining 3 bolts, install a 7/8" ID thick washer and a 7/8" nut on each bolt (8)

17. Torque the 7/8" undercarriage bolts on each side of the tractor frame to 600 ft-lbs.

18. Torque the vertical 24mm bolts to 909 ft-lbs.

19. Torque the 7/8" axle bracket bolts to 600 ft-lbs.



20. Install the grill guard to the front of the undercarriage with 3 - 3/4" x 2-1/2" bolts, 6 - 3/4" flat washers and 3 - 3/4" nuts on each side (#9).

21. Torque the 3/4" bolts to 257 ft-lbs.

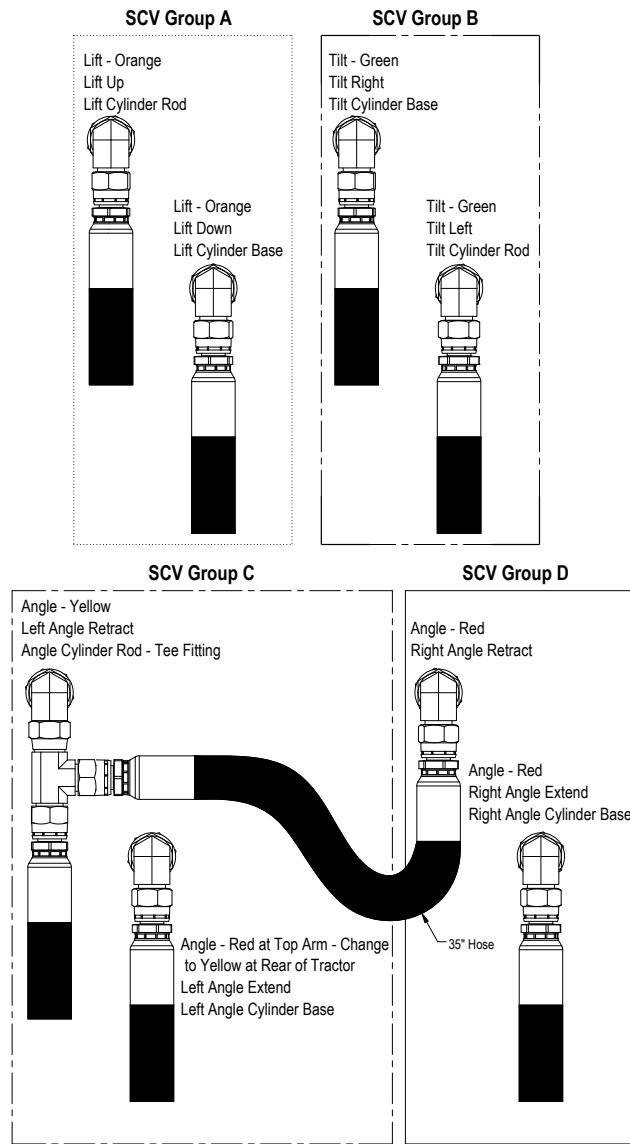
NOTE: If applicable, refer to Page 7 to attach the front of the tow cable.

22. After first 8 hours of use, re-torque all bolts.

23. Check all fasteners regularly to ensure proper operation of equipment.

24. Route hoses through the hose loops on the undercarriage. After reaching the end of the undercarriage, route the hoses through the tractor frame. Attach hoses where necessary to avoid rubbing and pinch areas.

25. Plug the hoses into the open SCV's at the back of the tractor. See Page 6.



NOTE: The quantity of hoses may vary depending on blade system.

NOTE: If blade system has Dual Remote Hydraulic Angle, verify that the 35" hose is used and installed correctly. Refer to hydraulic schematic in the Owner's Manual & Parts Book if necessary.

Special Note:

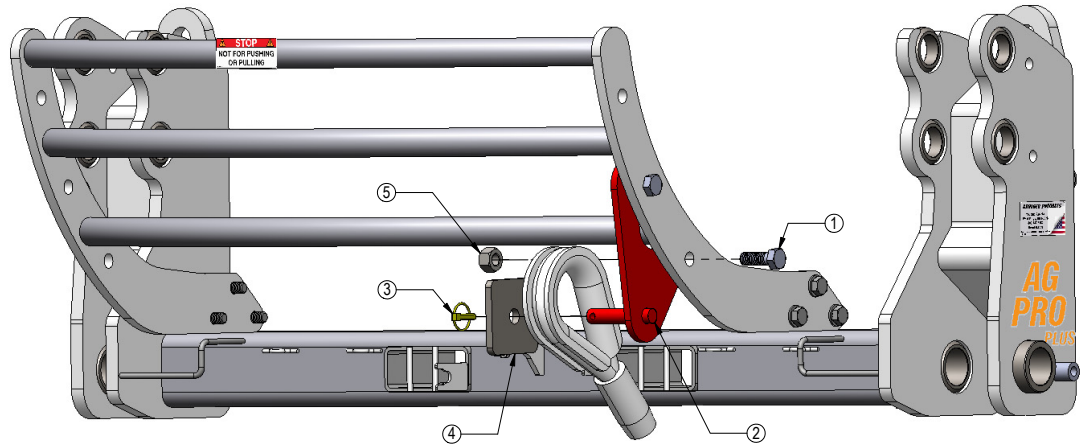
John Deere 9R tractors (non scraper versions) can experience a condition that will cause a cavitation or squealing in the hydraulic pump. This cavitation will cause a chatter when the operator raises their blade. Another symptom is a spongy feel in the lift circuit that will result in the blade wanting to ride up the pile instead of stay where the operator intended.

If you experience these conditions and would like to fix it, please refer to John Deere Accumulator Kit RE 337241.

Assembling Lift Components

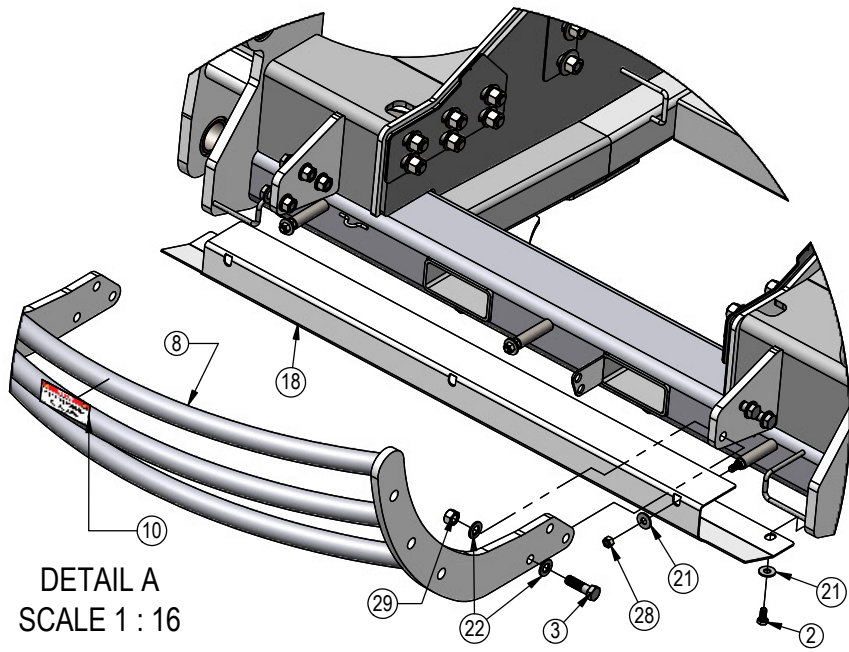
Refer to the Ag Pro Plus Owner's Manual & Parts Book for instructions on how to assemble the lift components.

Tow Cable Components

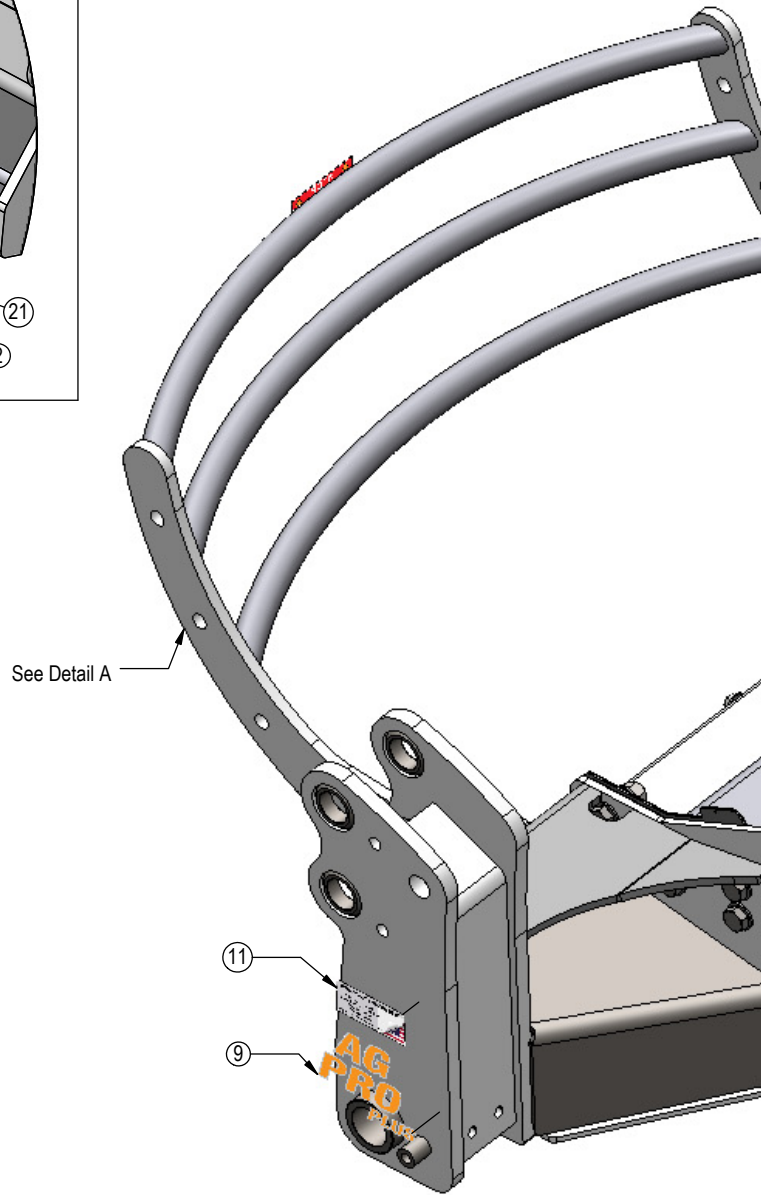


Item No.	Qty.	Part No.	Description
1	2	16-20540	7/8" X 2-1/2" Hex Bolt Gr 8 NC
2	1	18-19095	Tow Cable Bracket
3	1	43-16764	7/16" x 1-3/4" Lynch Pin
4	1	44-15585	Tow Cable Holding Plate
5	2	70-20598	7/8" Hex Nut Gr 8 NC

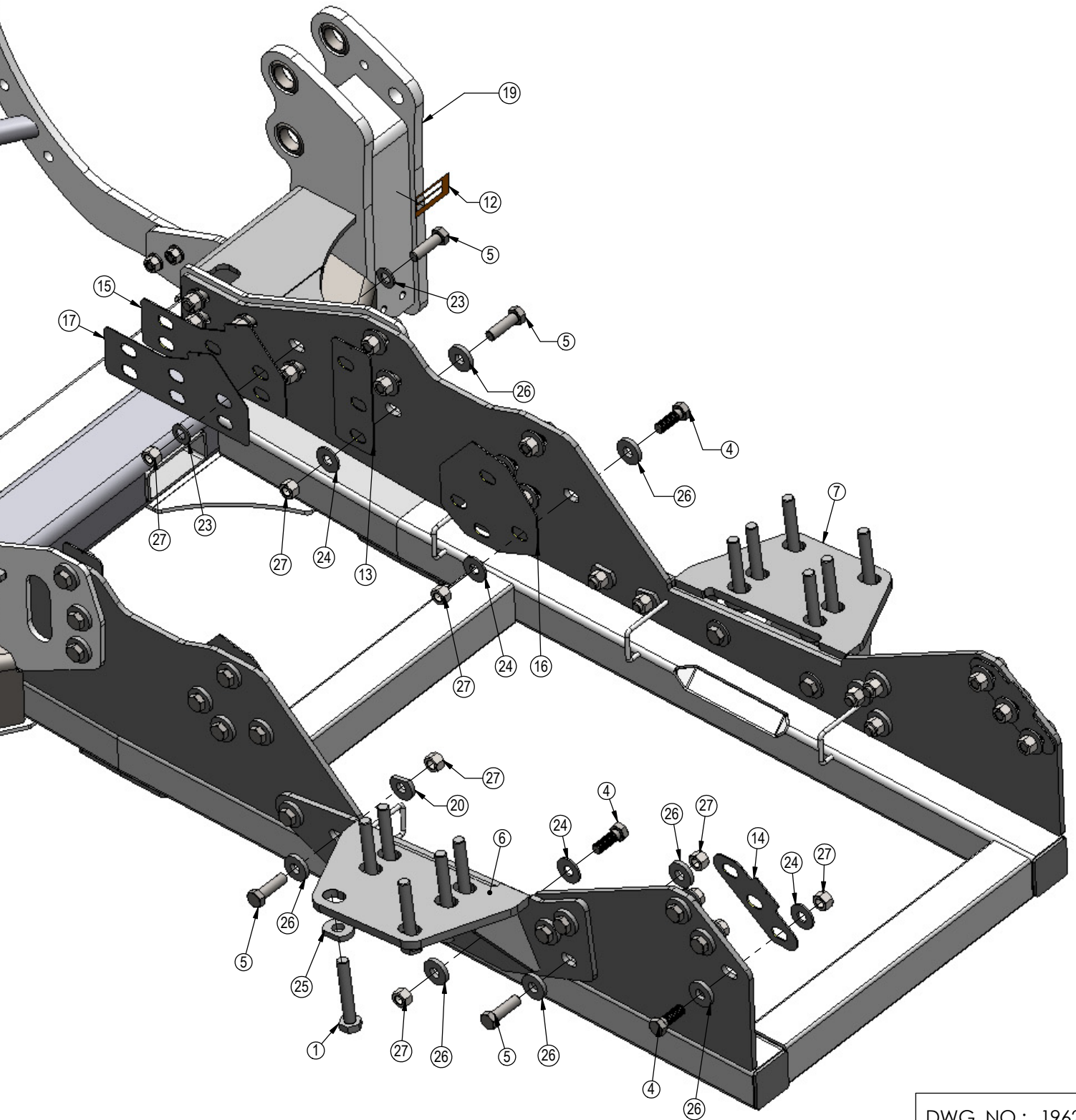
Notes



DETAIL A
SCALE 1 : 16



ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	12	16-1875	24mm x 3mm x 150mm Hex Bolt
2	4	16-20124	1/2" x 1" Hex Bolt Gr.5 NC
3	6	16-20220	3/4" x 2-1/2" Hex Bolt Gr 5 NC
4	18	16-20540	7/8" x 2-1/2" Hex Bolt Gr 8 NC
5	28	16-20542	7/8" X 3" Hex Bolt Gr 8 NC
6	1	18-15380-L	Bracket, Axle Weld
7	1	18-15380-R	Bracket, Axle Weld
8	1	18-18059R1	Grill Guard Weld
9	2	27-18880	Ag Pro Plus Decal
10	1	27-18882	Not For Pushing or Pulling Decal
11	1	27-18887	Grouser Name Plate Decal
12	1	27-9506	Serial Tag Decal
13	2	44-11847	Plate, Mid-Front
14	2	44-11849	Plate, Rear
15	2	44-15543	Plate,Front
16	2	44-15573	Plate,Mid-Rear
17	2	44-16811	Plate,Front
18	1	44-19486	Plate, Cover
19	1	54-19620	Undercarriage Weld
20	4	57-15594	7/8" ID x 2-1/4" OD x .375" Heavy Washer CZ Plated
21	7	57-20744	1/2" Flat Washer
22	12	57-20757	3/4" Flat Washer - 1-1/2" OD
23	24	57-20758	7/8" SAE Hardened Flat Washer - 1-3/4" OD
24	24	57-20818	7/8" Flat Washer Heavy Duty Gr 8 (USS)
25	12	57-3098	1.05" ID x 2.50" OD - JD Axle Mount Washer
26	40	57-3681	7/8" ID x 2-1/4" OD x .375" Heavy Washer CZ Plated
27	46	70-20598	7/8" Hex Nut Gr 8 NC
28	3	70-20604	1/2" Center Lock Hex Nut
29	6	70-20607	3/4" Hex Center Lock Nut NC



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Contact Us

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

Grouser Products

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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.

