



# Ag Pro Plus

## Undercarriage Installation Instructions

### Versatile 350-610

**For Models:**

**Versatile:** 350, 375, 380, 400, 405, 430, 450, 460, 500, 520, 550, 570, 575, 610

Purchase Date
Serial Number
Model Number
Tractor Model
Dealer

# To The Owner

This manual contains information concerning the installation of the undercarriage. 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 read this manual carefully and keep the manual available for ready reference. If you have any questions or concerns, contact Grouser Products.

## Caution:

- Always use caution when working around any equipment.
- Always wear safety glasses.
- Follow tractor manufacturer's safety guidelines when installing this product.
- Use paint where necessary to prevent rust.
- Do not modify or permit anyone else to modify or alter the equipment and its components without first consulting Grouser Products.

## Note:

- Read all instructions prior to performing installation.
- 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 6-7.
- Unstrap and remove any components that are attached for shipping.

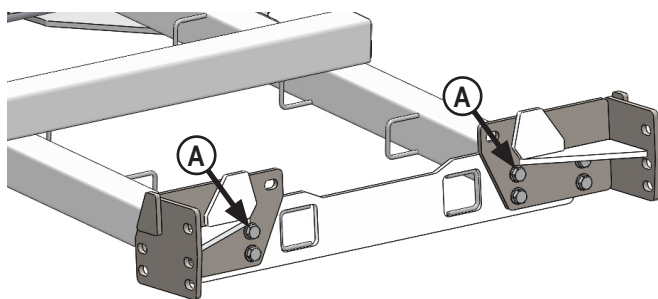


Serial Number Location

## Pre-Installation

1. Remove existing toolboxes, front weights, and tow cable holder if equipped. Tow cable holder can be reinstalled later with the undercarriage.
2. Remove the front cover on the undercarriage if necessary.
3. For tractor models 450 and 500-610, continue with Step #5.
4. For tractor models 350-430 and 460, continue with Step #7.

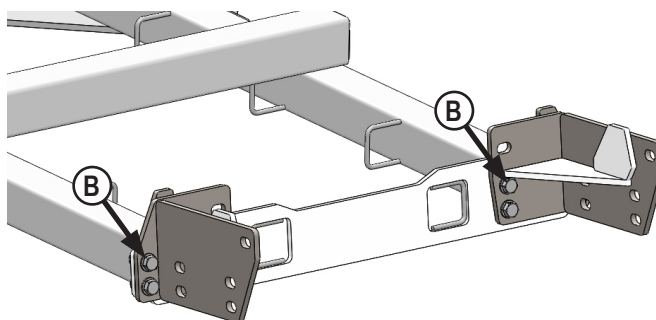
## Undercarriage Installation



5. Attach the rear brackets to the rear of the undercarriage with 8 - 3/4" x 2" bolts, 16 - 3/4" washers, and 8 - 3/4" nuts (A).

**Note:** The left bracket (long plate against undercarriage) attaches on the left side of the undercarriage and the right bracket on the right side.

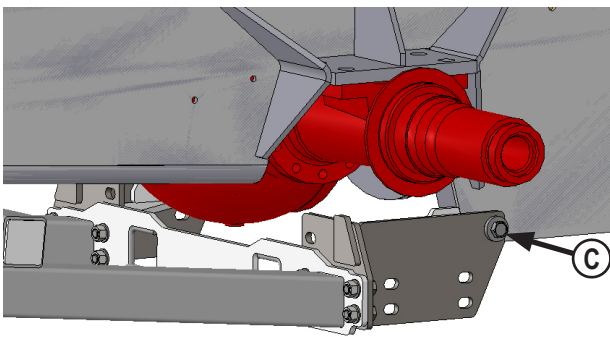
6. Continue with Step #8.



7. Attach the rear brackets to the rear of the undercarriage with 8 - 3/4" x 2" bolts, 16 - 3/4" washers, and 8 - 3/4" nuts (B).

**Note:** The right bracket (short plate against undercarriage) attaches on the left side of the undercarriage and the left bracket on the right side.

8. Position the undercarriage under the tractor and center on the frame of the tractor.



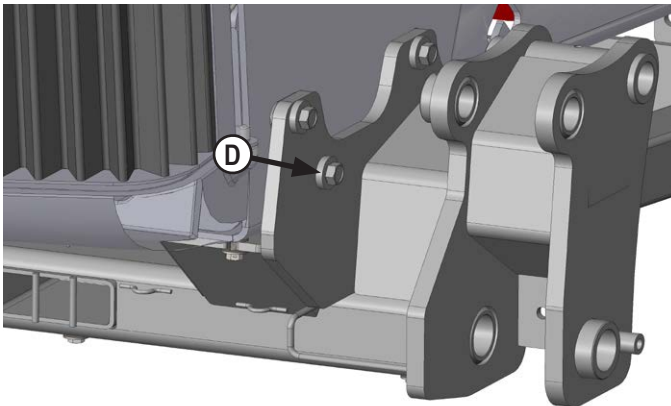
**NOTE:** When lifting the undercarriage, watch for any potential pinching of hoses or any other components to prevent any damage.

9. Raise the rear of the undercarriage and attach the rear brackets to the frame of the tractor behind the front axle with 2 - 20mm x 70mm bolts, 4 - 3/4" ID thick washers and 2 - 20mm nuts (C).

**Note:** The above photo shows the brackets installed on a narrow frame but the installation is the same for the wide frame.

10. Raise the front of the undercarriage until the holes line up with the holes on the tractor.

**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.



11. Install 8 - 20mm x 70mm bolts, 8 - 3/4" ID thick washers, 8 - 3/4" washers and 8 - 20mm nuts into the side holes of the undercarriage, shims if necessary, and the tractor frame (D).



**Note:** If the tow cable bracket was equipped, reinstall the bracket when installing the front 6 vertical bolts. See Page 5 for more hardware and installation information.

12. At the front of the undercarriage, install 6 - 20mm x 70mm bolts, 12 - 3/4" washers and 6 - 20mm nuts into the front vertical holes of the undercarriage and the tractor frame (E). The bolt has to be inserted from the bottom.

13. Push the undercarriage back until the rear brackets are pushing against the tractor frame.

14. Torque the rear 20mm bolts to 432 ft-lbs (C), the 3/4" bolts to 257 ft-lbs (A & B), the front vertical 20mm bolts to 432 ft-lbs (E), and then the side 20mm bolts to 432 ft-lbs (D).

15. If the front cover was removed, reattach with the original hardware.

**Note:** Installer is responsible to route hoses in a practical manner. The hoses need to be routed away from sharp and moving objects and need to be secure. Install all hoses when assembling the lift system in the Owner's Manual and Parts Book. Refer to Page 4 for some hose routing pictures.

# Maintenance

1. After first 8 hours of use, re-torque all bolts.
2. Check all fasteners regularly to ensure proper operation of equipment.
3. Inspect all equipment for existing or potential damages every 10 hours or less.
4. Make sure all non-rotating pins are secured properly.
5. Lubricate all joints with high quality grease.

## Assembling Lift Components

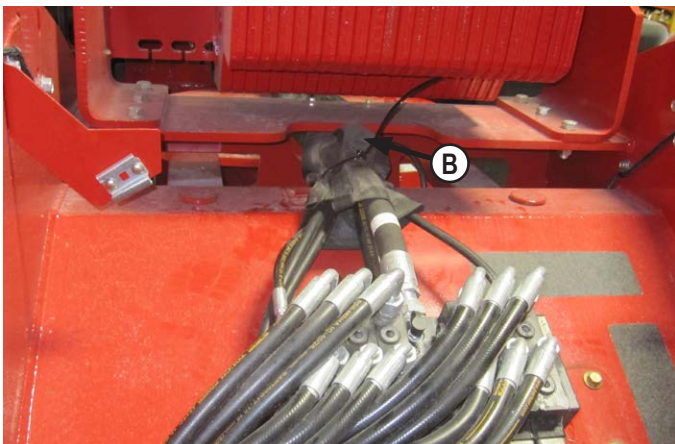
Refer to the Blade Owner's Manual & Parts Book for instructions on how to assemble the lift components.

### Hose Routing

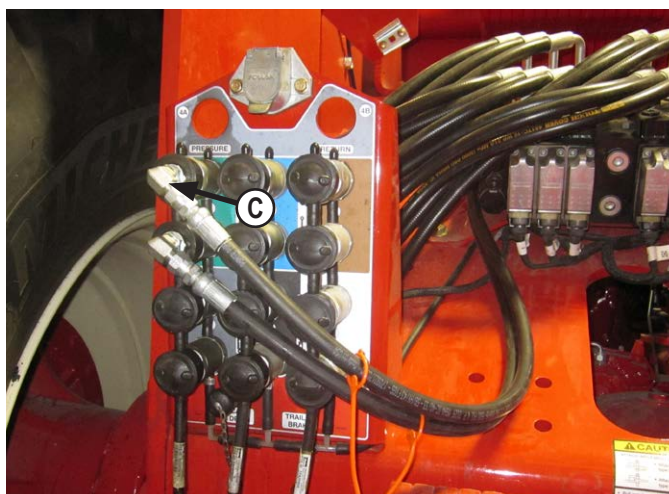
1. Route hoses through the hose loops on the undercarriage.



2. After routing the hoses through the undercarriage, route in the same location as the tractor's hoses (A). Replace zip ties if you run the hoses in the tractor's original hose cordura.



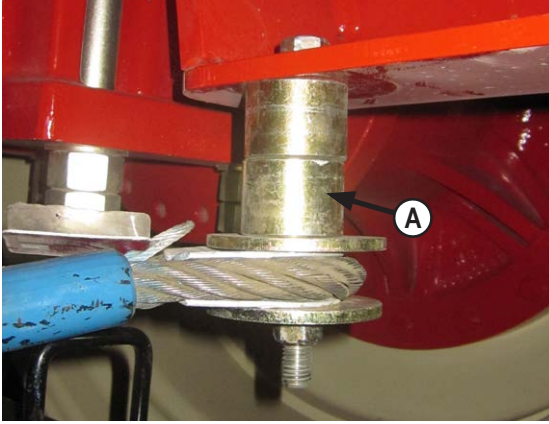
3. Exit the rear frame at the center of the frame as shown in the picture (B).
4. Use zip ties to attach hoses, where necessary, to avoid rubbing and pinch areas.



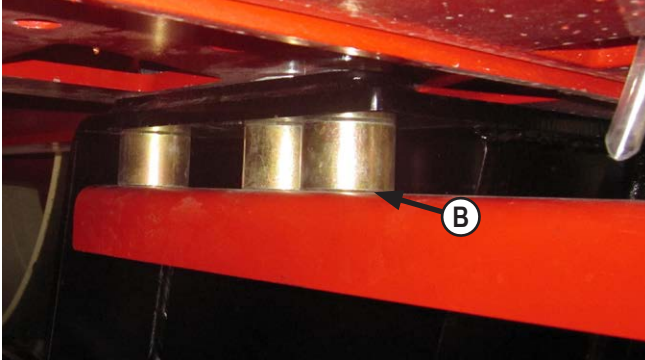
5. After installing the male couplers, plug each set into a set of rear SCV's (C).

# Tow Cable Installation

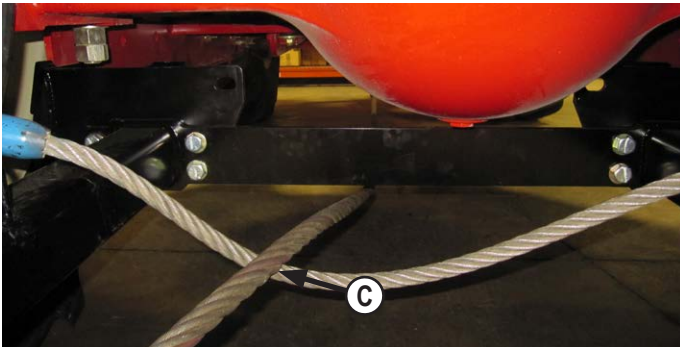
**Note:** Your undercarriage may vary slightly from the one shown in the pictures below, but the same installation procedure will be compatible.



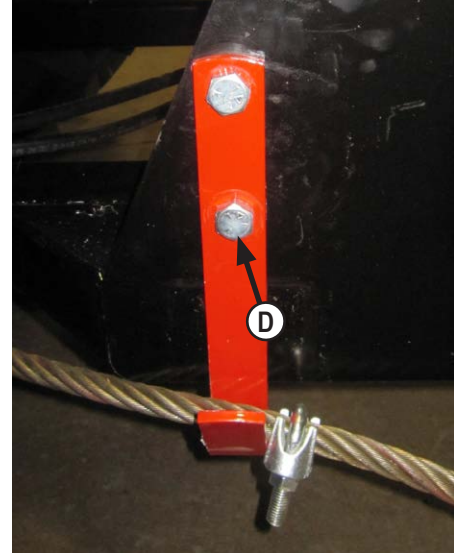
1. Add 2 spacers in between the cable holder and the tractor frame by the front tires. Use a 5/8" x 6" bolt (PN: 16-20200), 2 - 5/8" washers (PN: 57-20746) and a 5/8" top lock nut (PN: 70-20646) on each side (A).



2. Install the front cable support bracket at the front of the undercarriage. Install with 3 spacers on each side in between the undercarriage and the bracket. Use 3 - 20mm x 120mm (PN: 16-2489) to install the bracket and undercarriage. Use the same washers and nuts that were used in the mounting instructions on Page 3 (B).



3. Route the cable underneath the undercarriage, then over the cable support and under the undercarriage on the right side (C).



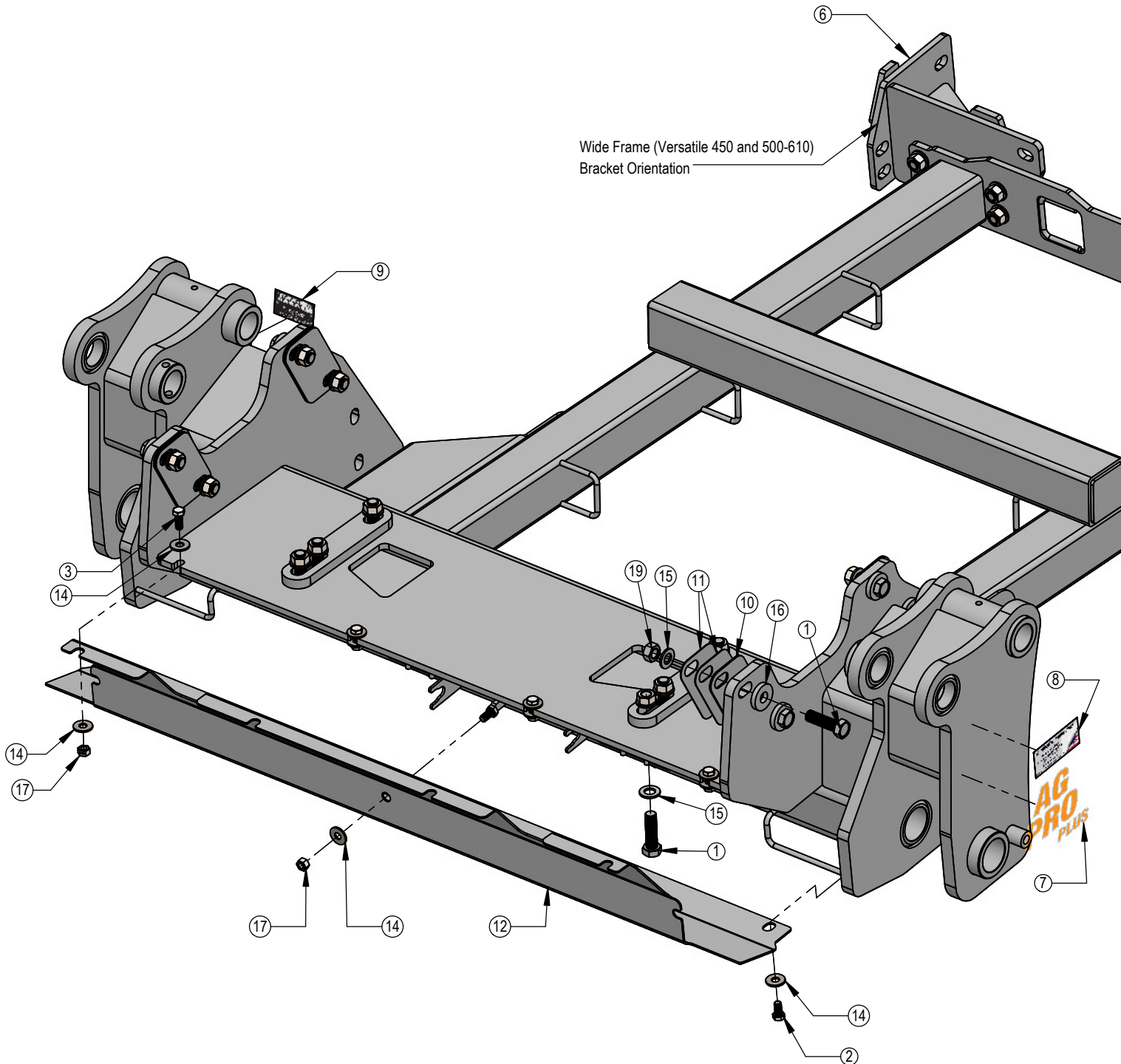
4. Install the original bracket to the side of the undercarriage with 2 - 3/4" x 2" bolts (PN: 16-20218) and 2 - 3/4" nuts (PN: 70-20607) (D). Cable clamp is installed in Step #6.



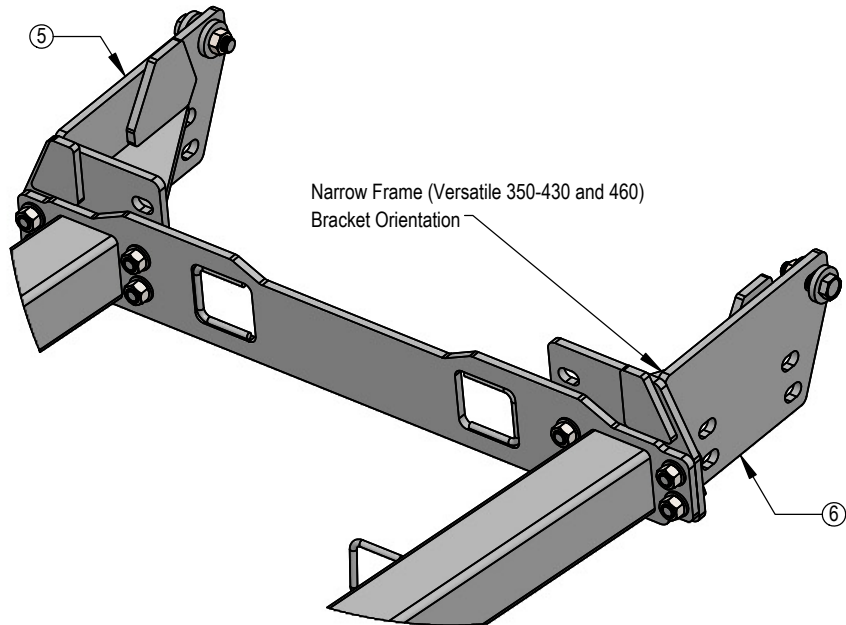
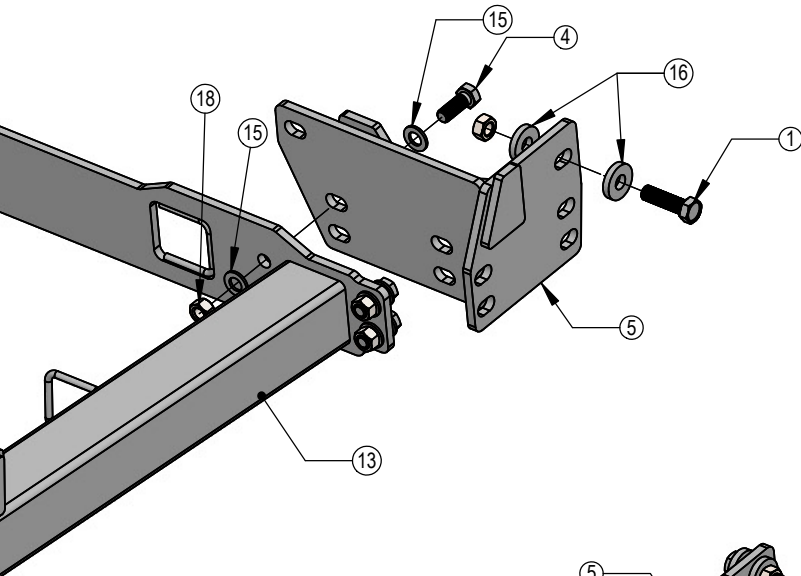
5. Finish routing the cable under the lift frame and up over the cable bracket. Attach to the bracket with the original hardware (E).

6. Pull the cable so there is some slack at the front under the lift frame as shown in the picture above. Then put a cable clamp up by the side bracket as shown in the picture from Step #4 to keep the cable in place.

**Note:** Narrow frame uses the left rear bracket on the right side of the undercarriage and the right bracket on the left side of the undercarriage as shown in the diagram below.



ITEM NO.	QTY.	PART NO	DESCRIPTION
1	16	16-1876	20mm x 2.5mm x 70mm Gr. 10.9 Hex Bolt
2	4	16-20124	1/2" x 1" Hex Bolt Gr.5 NC
3	4	16-20125	1/2" x 1-1/4" Hex Bolt Gr 5 NC
4	8	16-20218	3/4" x 2" Hex Bolt Gr.5 NC
5	1	18-15945-L	Adapter Bracket
6	1	18-15945-R	Adapter Bracket
7	2	27-18880	Ag Pro Plus Decal
8	1	27-18887	Grouser Name Plate Decal
9	1	NA	Grouser Dozer Metal Serial Tag
10	4	44-15966	Versatile T4 Shim Plate (.125")
11	8	44-15967	Versatile T4 Shim Plate (.06")
12	1	44-19646	Plate, Hose Cover
13	1	54-40550	Undercarriage Weld, Ag Pro Plus
14	13	57-20744	1/2" Flat Washer
15	36	57-20757	3/4" Flat Washer - 1-1/2" OD
16	12	57-3680	3/4" ID x 2.00 OD x .375" Heavy Washer CZ Plated
17	5	70-20604	1/2" Center Lock Hex Nut
18	8	70-20607	3/4" Center Lock Hex Nut NC
19	16	70-20872-10	20mm Hex Nut 2.5 Pitch Class 10 Zinc



# Improvements

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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

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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 (2) years for Agriculture Series Blades and one (1) year for Heavy Duty Series from date of original retail delivery.**

### The obligation of the consumer under this warranty:

1. To read the operators manual and to operate, lubricate, maintain and store equipment in accordance with the instructions listed in the operators manual.
2. To inspect equipment and if any part needs repair or replacement when continued use would cause damage or wear to other parts or safety.
3. 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.

### The obligation of the dealer under this warranty:

1. Complete warranty registration form and submit within 30 days of sale.
2. Contact Grouser Products for authorization prior to performing any warranty repairs or part replacement.
3. Complete warranty request form and submit with photos and supporting documentation.

### The obligation of Grouser Products under this warranty:

1. Repair or replace, any equipment or parts, in the judgment of Grouser Products to be defective in material or workmanship.
2. Grouser Products will cover the cost of parts and ground shipping at dealer invoice only.
3. 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.

### This warranty does not cover:

1. Depreciation or damage caused by normal wear, accident, improper assembly, improper adjustments.
2. Improper maintenance including lack of proper lubrication, or improper use. Including loose bolts, nuts, or fitting due to over tightening or vibration after 20 hours of operation.
3. Repairs or alterations without authorization from a Grouser Products representative.
4. 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.

**NO EMPLOYEE OR REPRESENTATIVE OF GROUSER PRODUCTS IS AUTHORIZED TO CHANGE THE WARRANTY IN ANY WAY OR GRANT ANY OTHER WARRANTY.**

## Contact Us

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



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