



NOTE

VAC-TRACTOR DRIVEN 8000 SERIES TRACTORS

SERIAL NUMBER

XXXXXXXXXX

Look for this symbol to point out important safety precautions. It means -- ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED.



GRAVELLY

NOTE

Read this manual carefully and learn to operate and service your grass catcher before using it.

To keep the warranty, the grass catcher must be maintained and operated as directed in this manual.

All references to "left-side", "right-side", "front", and "back" are given from the operator's position.

Use the serial number to ensure prompt and correct service when ordering parts, requesting service, or making inquiries.

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SECTION 1

Instructions for Safe Operation

Improper use of this grass vacuum can injure people and damage the equipment. People using or servicing this grass catcher must read and follow the instructions in this manual.

It is important to understand that this manual and any other Gravely instruction manuals do not cover every possible danger. It is impossible for Gravely to know of all possible dangers in operating and servicing the tractor and attachments.

The purchaser must give these instructions to the people operating and maintaining this grass catcher. These people must use eye and foot protection.

1.1 Preparation:

1. Read the tractor and the vac operator's manuals carefully.
2. Learn the location and function of all tractor and attachment controls.
3. Learn how to use the controls to stop the tractor and attachment.
4. Use caution with gasoline. Gasoline is very flammable. Keep it in a clean and tight container away from flames or hot items. Never put gasoline in the fuel tank while the engine is running or hot. Clean up spilled gasoline before starting engine.
5. Be certain that all shields, guards, and interlock switches are in the correct positions.
6. When hauling the tractor, connect the chassis and rear hitch to the transporting vehicle. Never connect from control levers, rods, or like items that could be damaged.
7. Operate the equipment only when discharge chute is in place or the complete grass catcher with collector boot and tube is in place.
8. As the vac basket fills with material, weight is removed from the front wheels. Limit the amount collected or add front weight to prevent loss of steering control.

SECTION 2

1.2 Operation:

1. Wear foot and eye protection. Do not wear loose clothing.
2. Do not use the equipment in the dark without adequate lighting.
3. Keep the grass catcher in good condition. Maintain it as directed in this manual.
4. Replace all parts that become damaged or lost.
5. USE ONLY GRAVELY ACCESSORIES AND ATTACHMENT OR ATTACHMENTS GRAVELY HAS APPROVED FOR USE WITH THIS TRACTOR.
6. Do not overspeed the engine. Do not override the governor.
7. Keep away from moving parts.
8. Keep people and animals away from the operating area.
9. Do not let people other than the operator ride on the tractor.
10. Use a slow speed and engage the direction control lever slowly when operating on slopes.
11. Look for and keep away from hazards.
12. Shut engine off, move the PTO Control to "OFF", and remove ignition key before unclogging chute or removing grass catcher.
13. Look behind when operating in reverse.
14. After hitting an object with the equipment, stop the engine and check for damage. Repair any damage before continuing operation.
15. Operate the tractor only from the seat.
16. Travel up and down, not across slopes.
17. Never permit children to operate the tractor.
18. Before leaving the tractor, move the PTO Control to "OFF", lower mower, lock the brake, and remove the ignition key.

19. If there is a sudden change in the sound or vibration of the equipment, stop the engine and check for damage. Repair any damage or failure before continuing operation.
20. Never run the engine indoors except to move it outside. Exhaust fumes are dangerous.
21. Go slow on slick surfaces.
22. Follow traffic laws when operating on or near a road.
23. Before making adjustments or servicing, move the PTO to "OFF", turn the ignition switch to "OFF", and wait until all moving parts completely stop.
24. Check the mounting hardware for the blade frequently.
25. Keep the PTO control in the "OFF" position when transporting.

SECTION 2

Operating Instructions

2.1 General:

1. When starting to cut grass with the vac in place, start at a slower than normal ground speed but with throttle set for high engine speed. Use the Gear Selector Lever to control speed. Select the gear for the best cutting and vac action. The heavier and wetter the grass, the slower the ground speed.
2. With lush, extra heavy or wet grass, it may be necessary to make two passes. First cut at maximum cutting height from ground surface, then recut at the lower setting. When the liners are full, they may be tied up while in the basket, then lifted from the baskets for disposal. It may be easier to remove the liners from the baskets by laying the basket on its side and removing the liner.
3. If the hose plugs, momentarily stop ground travel and allow it to clear. IF THE HOSE DOES NOT CLEAR, PUT THE PTO IN THE "OFF" POSITION AND STOP THE TRACTOR ENGINE BEFORE ATTEMPTING TO CLEAR THE HOSE.
4. Successful operation results from the thoughtful management of several variables:
 - a. Catcher will work best in dry grass. Between 10 a.m. and 6 p.m. would be an ideal time, after dampness has left in the morning but before evening dew.
 - b. Use fast throttle setting on the tractor at all times, since this gives better air flow in the basket or cart.
 - c. Try different travel speeds. Generally, third to fifth speeds are best.

2.2 CAUTION:

1. Be sure the boot, hoses, and blower drive are properly assembled and secured prior to operating the vac and mower.
2. Always move the PTO to "OFF", turn the ignition switch to "OFF" and wait until all parts have stopped moving before unplugging the hoses.
3. To maintain steering control, mount wheel weights on the front wheels.

SECTION 3

Service Instructions

3.1 When the Vac Stops Collecting, Check the Following:

1. Be sure the mower has a sharp Gravely blade on it.
2. Low tip speed on blade--check engine RPM and increase to a maximum of 3300 RPM, decrease ground speed.
3. High ground speed on tractor--shift to lower gear.
4. Grass conditions--grass must be dry.

3.2 Vac Removal:

1. Loosen the four pan head cross machine screws which hold the belt cover to the belt guide. Remove the belt cover.
2. Put the handle in the "OFF" (right) position. Remove the drive belt.
3. Disconnect the hose from the blower inlet.
4. Remove the brace.
5. Remove the hair pin cotters and clevis pins which retain the tube support plate (left side of rear hitch). Remove the tube support plate.
6. Remove the hair pin cotter and washers which retain the frame weldment (right side of the rear hitch). Remove the vac.
7. Remove the mower boot.
8. Put the discharge chute on the deck and retain with two 3/8-16x1 carriage bolts (from under the deck), two 3/8 flat washers, and two 3/8-16 lock nuts.

3.3 Vac Installation:

Reverse the removal procedure.

3.4 Adjust the belt tension as follows (must be performed with engine off):

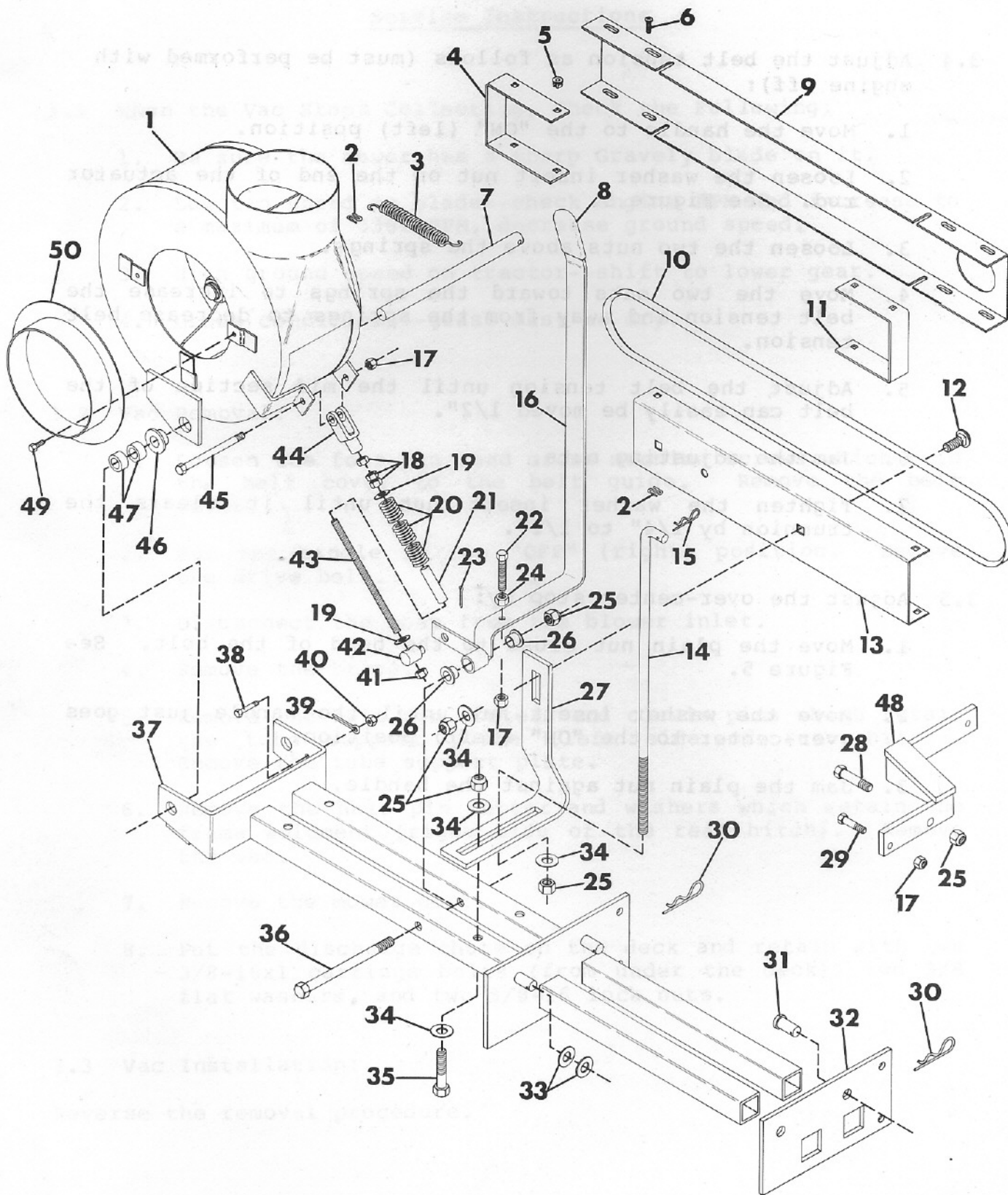
1. Move the handle to the "ON" (left) position.
2. Loosen the washer insert nut on the end of the actuator rod. See Figure 5.
3. Loosen the two nuts above the springs.
4. Move the two nuts toward the springs to increase the belt tension and away from the springs to decrease belt tension.
5. Adjust the belt tension until the mid section of the belt can easily be moved 1/2".
6. Jam the adjusting nuts.
7. Tighten the washer insert nut until it clears the trunnion by 1/4" to 1/2".

3.5 Adjust the over-center stop by:

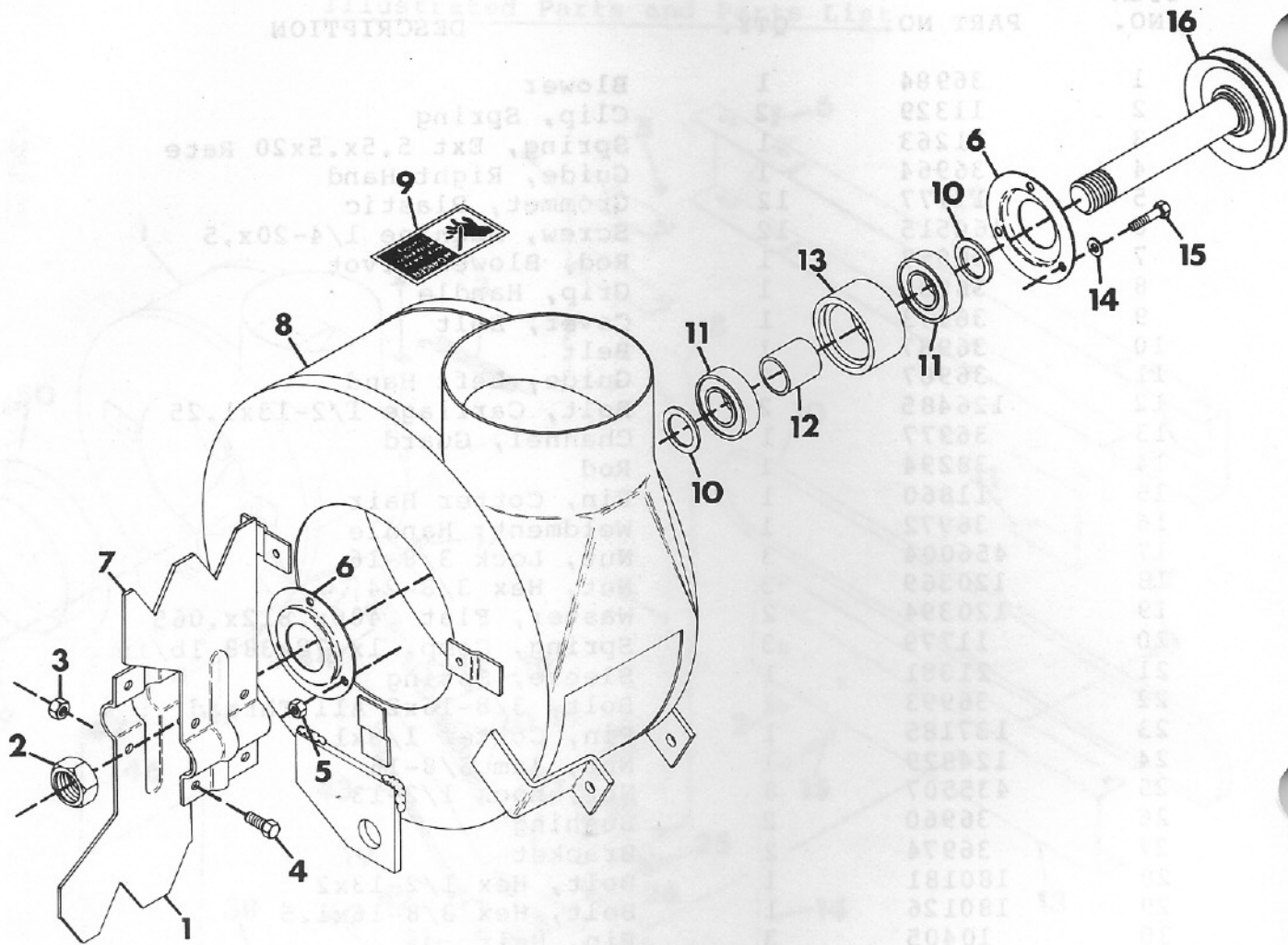
1. Move the plain nut close to the head of the bolt. See Figure 5.
2. Move the washer insert nut until the handle just goes over-center to the "ON" (left) position.
3. Jam the plain nut against the handle.

SECTION 4

Illustrated Parts and Parts List



| ITEM NO. | PART NO. | QTY. | DESCRIPTION |
|----------|----------|------|-------------------------------|
| 1 | 36984 | 1 | Blower |
| 2 | 11329 | 2 | Clip, Spring |
| 3 | 11263 | 1 | Spring, Ext 5.5x.5x20 Rate |
| 4 | 36964 | 1 | Guide, Right Hand |
| 5 | 11777 | 12 | Grommet, Plastic |
| 6 | 160515 | 12 | Screw, Machine 1/4-20x.5 |
| 7 | 36957 | 1 | Rod, Blower Pivot |
| 8 | 36994 | 1 | Grip, Handle |
| 9 | 36973 | 1 | Cover, Belt |
| 10 | 36987 | 1 | Belt |
| 11 | 36967 | 1 | Guide, Left Hand |
| 12 | 126485 | 2 | Bolt, Carriage 1/2-13x1.25 |
| 13 | 36977 | 1 | Channel, Guard |
| 14 | 38294 | 1 | Rod |
| 15 | 11860 | 1 | Pin, Cotter Hair |
| 16 | 36972 | 1 | Weldment, Handle |
| 17 | 456004 | 3 | Nut, Lock 3/8-16 |
| 18 | 120369 | 3 | Nut, Hex 3/8-24 |
| 19 | 120394 | 2 | Washer, Flat .406x.812x.065 |
| 20 | 11779 | 3 | Spring, Comp. 1x.78x388 lb/in |
| 21 | 21381 | 1 | Sleeve, Spring |
| 22 | 36993 | 1 | Bolt, 3/8-16x2 All Thread |
| 23 | 137185 | 1 | Pin, Cotter 1/8x1 |
| 24 | 124829 | 1 | Nut, Jam 3/8-16 |
| 25 | 435507 | 8 | Nut, Lock 1/2-13 |
| 26 | 36960 | 2 | Bushing |
| 27 | 36974 | 2 | Bracket |
| 28 | 180181 | 1 | Bolt, Hex 1/2-13x2 |
| 29 | 180126 | 1 | Bolt, Hex 3/8-16x1.5 |
| 30 | 10405 | 3 | Pin, Hair |
| 31 | 20499 | 2 | Pin, Clevis 5/8x1.125 |
| 32 | 36989 | 1 | Plate |
| 33 | 131016 | 2 | Washer, Flat .656x1.312x.095 |
| 34 | 37842 | 11 | Washer, Flat 1.38x.56 |
| 35 | 180188 | 4 | Bolt, Hex 1/2-13x2.75 |
| 36 | 445608 | 1 | Bolt, Hex 1/2-13x5.5 |
| 37 | 36978 | 1 | Weldment, Blower Frame |
| 38 | 180020 | 1 | Bolt, Hex 1/4-20x.75 |
| 39 | 103422 | 1 | Pin, Cotter .25x2 |
| 40 | 419454 | 1 | Nut, Lock 1/4-20 |
| 41 | 192481 | 1 | Nut, Lock 3/8-24 |
| 42 | 36951 | 1 | Trunnion |
| 43 | 36969 | 1 | Rod, Actuator |
| 44 | 18380 | 1 | Clevis, 3/8-24 Adjustable |
| 45 | 189295 | 1 | Bolt, Hex 3/8-16x4.5 |
| 46 | 10174 | 2 | Bushing, Nylon .76x1x.6 Flg. |
| 47 | 18485 | 4 | Spacer .760x1x.540 |
| 48 | 38318 | 1 | Weldment, Support |
| 49 | 180077 | 2 | Bolt, Hex 5/16-18x.75 |
| 50 | 38585 | 1 | Adaptor, Hose |
| NS | 24608 | 1 | Decal, Gravely Logo |
| NS | 36995 | 1 | Decal, PTO |

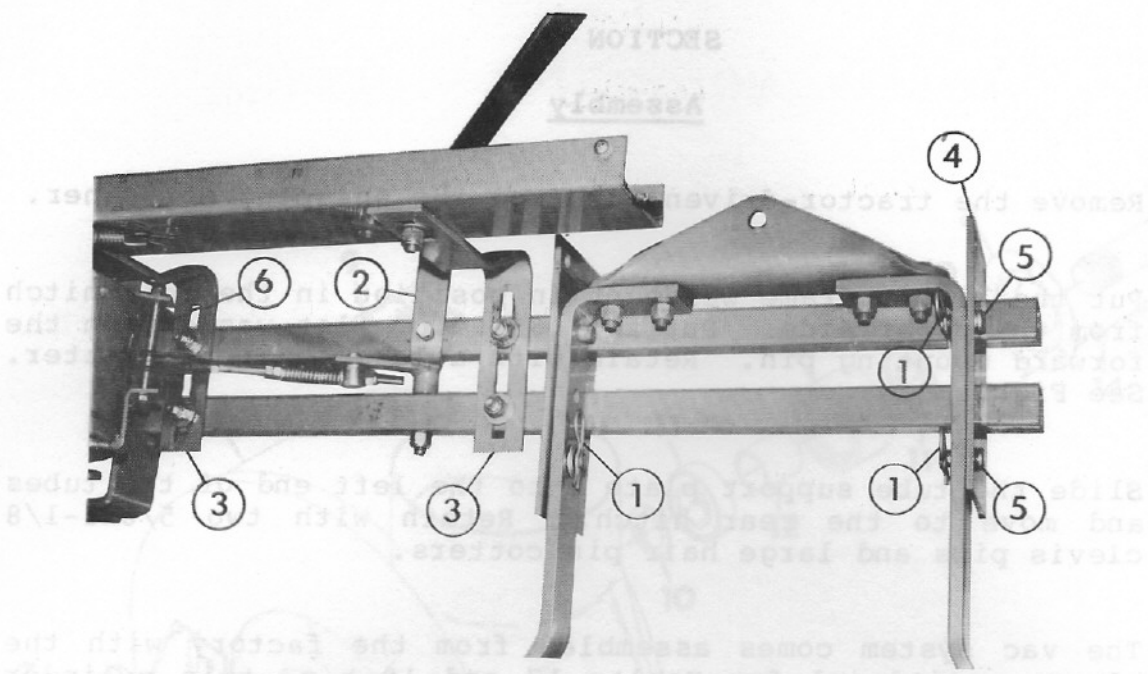


| ITEM NO. | PART NO. | QTY. | DESCRIPTION |
|----------|----------|------|--------------------------------|
| 1 | 39018 | 1 | Blade, Fan |
| 2 | 39019 | 1 | Nut, Hex 1-14 Jam Lock |
| 3 | 413447 | 4 | Nut, Lock 5/16-18 |
| 4 | 180075 | 4 | Bolt, Hex 5/16-18x.625 |
| 5 | 424215 | 3 | Nut, Lock 1/4-20 |
| 6 | 36874 | 2 | Bearing, Flange |
| 7 | 39020 | 1 | Blade, Fan |
| 8 | 39021 | 1 | Housing, Fan |
| 9 | 33926 | 1 | Decal, Danger Hand |
| 10 | 39022 | 2 | Washer, 1.000/1.031x1.500x.125 |
| 11 | 39023 | 2 | Bearing, Ball |
| 12 | 39024 | 1 | Spacer |
| 13 | 39025 | 1 | Housing |
| 14 | 39026 | 3 | Washer, .263/.273x.562x.046 |
| 15 | 180044 | 3 | Bolt, Hex 1/4-20x2.00 |
| 16 | 39027 | 1 | Weldment, Spindle |

SECTION 5

Assembly

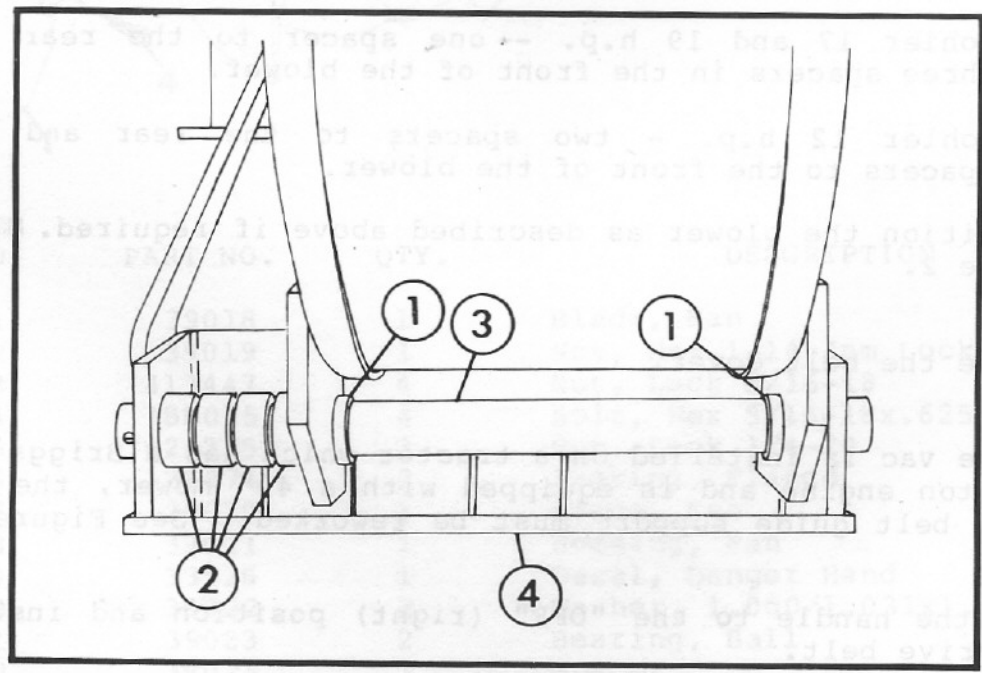
- 5.1 Remove the tractor-driven vac from the shipping container.
- 5.2 Put the blower frame weldment in position in the rear hitch from the right side. Put two .656 I.D. flat washers on the forward mounting pin. Retain with a large hair pin cotter. See Figure 1.
- 5.3 Slide the tube support plate onto the left end of the tubes and move to the rear hitch. Retain with two 5/8x1-1/8 clevis pins and large hair pin cotters.
- 5.4 The vac system comes assembled from the factory with the blower positioned for Kohler 17 and 19 h.p. twin cylinder engines. If your tractor is equipped with an engine other than a Kohler twin, it will be necessary to remove the blower from the frame and reassemble it with the spacers positioned as follows:
 1. Briggs and Stratton - four spacers to the rear of the blower.
 2. Kohler 17 and 19 h.p. - one spacer to the rear and three spacers in the front of the blower.
 3. Kohler 12 h.p. - two spacers to the rear and two spacers to the front of the blower.Reposition the blower as described above if required. See Figure 2.
- 5.5 Remove the belt cover.
- 5.6 If the vac is installed on a tractor which has a Briggs and Stratton engine and is equipped with a 40" mower, the in-board belt guide support must be reworked. See Figure 3.
- 5.7 Move the handle to the "OFF" (right) position and install the drive belt.



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|---------------------------|--------------------------|
| 1 - Large Hair Pin Cotter | 4 - Tube Support Plate |
| 2 - Handle Assembly | 5 - 5/8x1-1/8 Clevis Pin |
| 3 - Belt Guide Support | 6 - 3/8-16x4.50 Bolt |

FIGURE 1



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|--------------------|
| 1 - Bushings |
| 2 - Spacers |
| 3 - Rod |
| 4 - Blower Support |

FIGURE 2

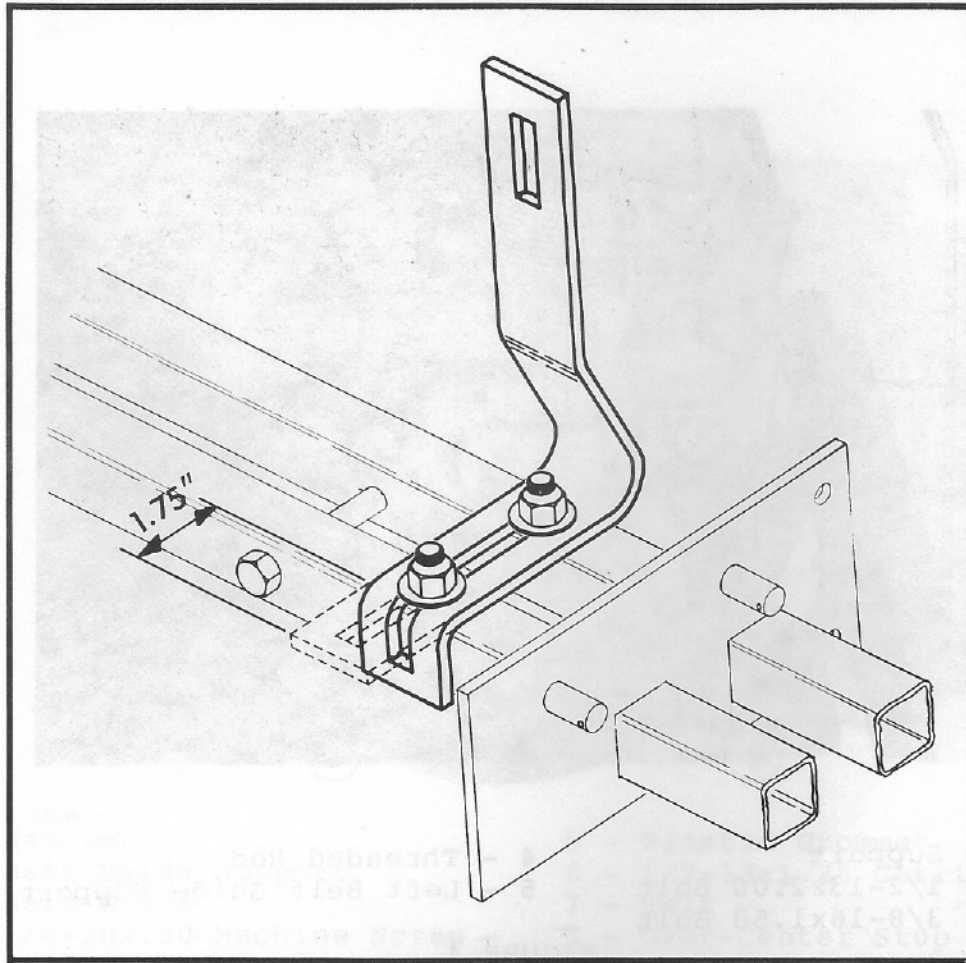
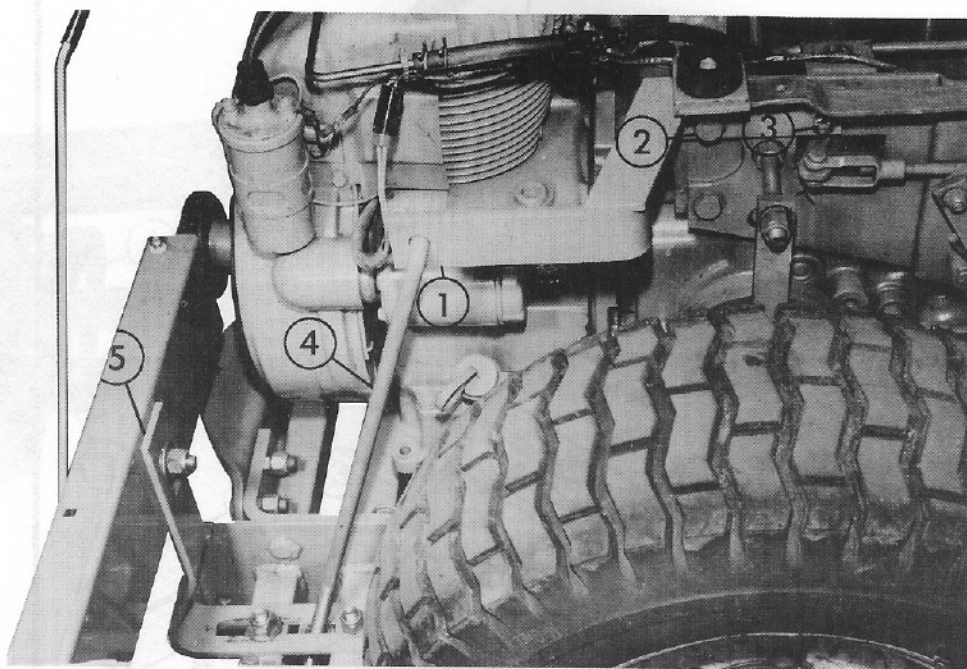


FIGURE 3

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- 5.8 Remove the top 1/2" bolt which mounts the rear hitch bracket (item 22, page 20, 8000 Series IPL) to the transmission. See Figure 4.
- 5.9 Remove the rear 3/8 bolt which attaches the clutch arm bracket to the forward-reverse mounting plate.
- 5.10 Put the support in position on the tractor and secure with a 1/2-13x2 and 3/8-16x1-1/2 bolts and washer insert nuts.
- 5.11 Put the threaded rod through the slot in the left belt guide support and hook the top end in the support. Secure with a small hair pin cotter. On the 17 h.p. and 19 h.p. tractors, it may be necessary to cut 1/2" off the muffler outlet to allow clearance for the brace.
- 5.12 Install a flat washer and washer insert nut on the lower end of the rod. Tighten until the frame is not loose in the hitch. Do not overtighten as it will cause difficult operation of the direction control lever.



84013

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|----------------------|-----------------------------|
| 1 - Support | 4 - Threaded Rod |
| 2 - 1/2-13x2.00 Bolt | 5 - Left Belt Guide Support |
| 3 - 3/8-16x1.50 Bolt | |

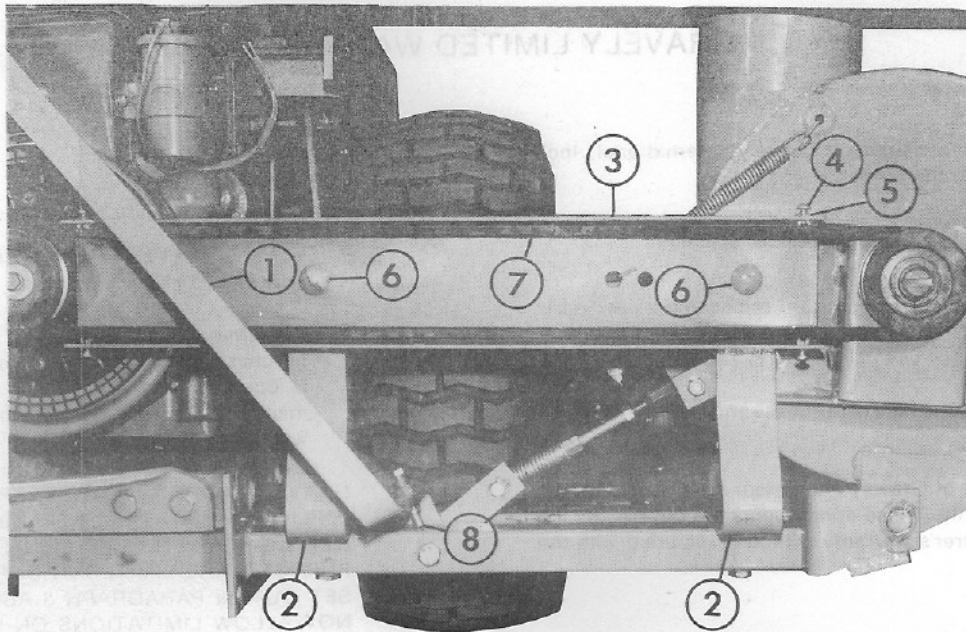
FIGURE 4

5.13 Move the handle to the "ON" (left) position. Adjust the guide channel fore and aft so that the belt is midway between the plastic grommet and the wall of the guide channel. Tighten bottom four bolts. See Figure 5.

5.14 With the handle in the "ON" position (left position--belt tight), adjust the guide channel up and down until the belt is midway in the guide channel. Tighten two carriage bolts.

5.15 Adjust the belt tension as follows:

1. Move the handle to the "ON" (left) position.
2. Compress the springs on the actuator rod with the two nuts until the first nut makes light contact with the spring sleeve.
3. Jam the adjusting nuts.



84011

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|------------------------------|--------------------------------|
| 1 - Handle | 5 - Plastic Grommet |
| 2 - Belt Guide Support | 6 - 1/2-13x1.25 Carriage Bolts |
| 3 - Belt Guide | 7 - Belt |
| 4 - 1/4-20x.50 Machine Screw | 8 - Over-Center Stop |

FIGURE 5

5.16 Adjust the over-center stop by:

1. Move the plain nut close to the head of the bolt. See Figure 5.
2. Move the washer insert nut until the handle just goes over-center to the "ON" (left) position.
3. Jam the plain nut against the handle.

5.17 Put the handle in the "ON" (left) position.

5.18 Put the belt cover in position on the guide channel. Tighten the four mounting screws. Move the right end guide until it is about 1/8" from the belt and tighten the mounting screws. Move the left guide until it is about 1/2" from the belt and tighten the mounting screws.

5.19 Run in for 10 minutes and check belt declutching. Readjust if necessary to stop blower.

SECTION 6

GRAVELY LIMITED WARRANTY

This Limited Warranty is issued by Gravelly International, Inc., and consists of the following terms:

1. Only the original purchaser of new Gravelly equipment is covered by this Warranty.
2. This Warranty covers repair or replacement of parts manufactured by Gravelly which are defective in material or workmanship. Gravelly will pay for parts and labor only.
3. The Warranty starts the date of purchase and lasts for TWELVE (12) MONTHS.
4. Some components of Gravelly equipment are not covered by the Gravelly Warranty. These components are covered by the original manufacturer's warranty, which is included with the product. They are:
 - a. Engines
 - b. Tires
5. To obtain warranty service on Gravelly equipment including components not manufactured by Gravelly, use this procedure:
 - a. Notify the Gravelly dealer from whom you purchased the equipment.
 - b. If you have moved and it is not convenient to notify the selling dealer, notify the nearest Gravelly dealer. You should supply this dealer with a copy of the bill of sale as proof of the date of purchase.
 - c. Make arrangements to have the equipment delivered to the dealer (refer to paragraph 6(a) below).
 - d. If you have any questions concerning the Gravelly Limited Warranty, they should be referred to:

Gravelly International, Inc.
One Gravelly Lane
Clemmons, NC 27012

Attn: Manager of Customer Services
 - e. Warranty service on Gravelly equipment must be performed by an authorized Gravelly dealer or Gravelly factory branch.
6. This Warranty does not cover the following:
 - a. Transportation between owner's home or place of business and the dealership. If the dealer provides the transportation of the equipment, he will charge the owner his usual rate for such service.
 - b. Normal maintenance services and normal replacement of items such as spark plugs, belts, oil, oil filters, air filters, and mower, plow or cultivator blades.
 - c. Alterations or Modifications - All obligations under this warranty shall be terminated if the equipment is altered or modified in any way.
 - d. Customer Neglect or Lack of Proper Maintenance - The purchaser is responsible for making sure that the tractor is operated and serviced as directed in the operator's manual. Incorrect use or maintenance will void the warranty.
7. GRAVELLY MAKES NO OTHER EXPRESS WARRANTIES. ANY IMPLIED WARRANTIES, INCLUDING WARRANTIES AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE PERIOD SET OUT IN PARAGRAPH 3 ABOVE. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE STATEMENT MAY NOT APPLY TO YOU.
8. GRAVELLY SHALL HAVE NO RESPONSIBILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE BREACH OF ANY WARRANTY, INCLUDING, BUT NOT LIMITED TO, INCONVENIENCE, RENTAL OR PURCHASE OF REPLACEMENT EQUIPMENT, LOSS OF PROFITS OR COMMERCIAL LOSS. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.
9. This Warranty gives you specific legal rights, and you may have other rights which vary from state to state.
10. A Gravelly product registration card is supplied with each Gravelly product. Please complete the card and return it to Gravelly at the address listed on the card. The equipment registration card will be used by Gravelly for:
 - a. Recording date of purchase.
 - b. Notification of owners in compliance with the Consumer Product Safety Act, should any notification be necessary.The return of registration card is not required in order to take advantages of this Warranty.
11. This Warranty is not subject to change or modification by anyone, including Gravelly dealers and no Gravelly dealer is authorized to make any representations or promises on Gravelly's behalf.

 **GRAVELLY**