



STEERING BRAKE FOR 5465 TRACTOR

NOTE

Read this manual carefully and learn to operate and service your steering brake before using it.

To keep the warranty, the steering brake 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 part number to ensure prompt and correct service when ordering part, requesting service, or making inquiries.



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

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SECTION 1

Instructions for Safe Operation

Improper use of this equipment can injure people and damage the equipment. People using or servicing this equipment 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 all possible dangers in operating and servicing the equipment.

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

1.1 Preparation:

1. Read this manual carefully.
2. Learn the location and function of all controls.
3. Learn how to use the controls to stop the wheels and mower quickly.
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. Never permit children to operate the equipment.
7. Inspect area to be mowed and remove all material which could be thrown by the mower.
8. Before starting the engine, put the PTO control lever in the "OFF" position and the gear shift lever in the neutral "N" position.
9. When hauling the equipment, connect the chassis to the transporting vehicle. Never connect from control levers, rods, or like items that could be damaged.
10. Replace all parts that become damaged or lost.

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 equipment in good condition. Maintain it as directed in this manual.
4. USE ONLY GRAVELY ACCESSORIES AND ATTACHMENTS.
5. Do not overspeed the engine. Do not override the governor.
6. Keep away from moving parts.
7. Keep people and animals away from the operating area.
8. Do not let people other than the operator near the operating equipment.
9. Use a slow speed and engage the shift lever slowly when operating on slopes.
10. Look for and keep away from hazards.
11. After hitting an object, stop the equipment and engine. Check for damage. Repair any damage before operating.
12. Look behind when operating in reverse. Look for people and hazards.
13. Operate only from the operator's position, just behind the handlebars.
14. Travel across slopes only when using a sulky.
15. 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.
16. Never run the engine indoors except to move it outside. Exhaust fumes are dangerous.
17. Go slowly on slick surfaces.
18. Follow traffic laws when operating on or near a road.
19. Before making adjustments or servicing, move the PTO to "OFF," turn the ignition switch to "OFF," and wait until all moving parts stop.
20. Before leaving the operator's position, put the PTO lever in the "OFF" position, turn the ignition key to the "OFF" position. Lock the brake lock. Wait until all moving parts have stopped.

SECTION 2

Operation and Adjustment

2.1 Operation:

When the tractor is going forward, swing the brake handle bar clockwise for a right turn or counterclockwise for a left turn.

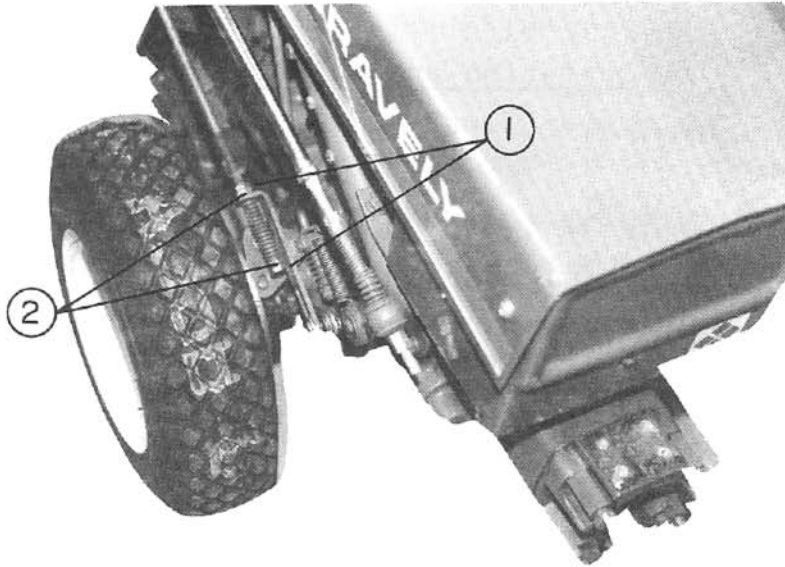
 **CAUTION:** Use only the tractor handle bars to steer when going in reverse.

2.2 Parking Brake Operation:

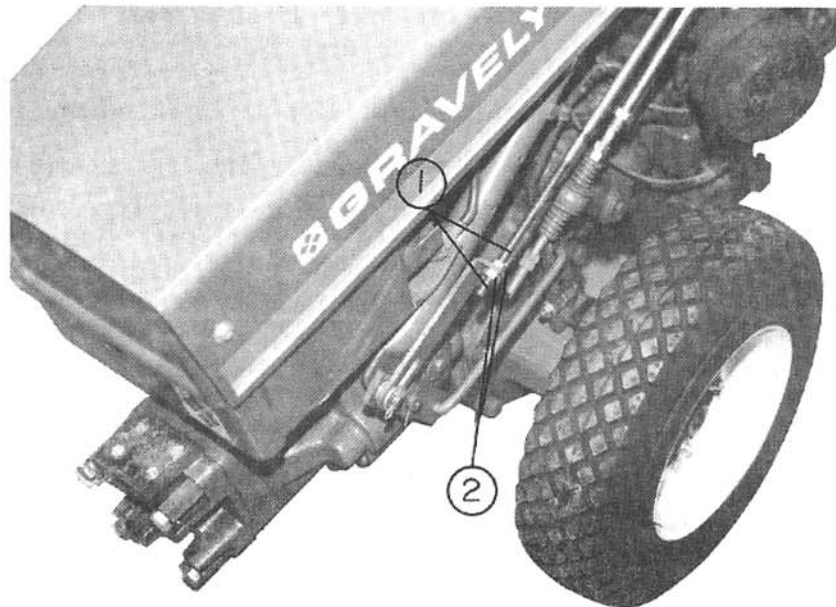
Pull the parking brake handle all the way up and release. To disengage, push the brake handle down.

2.3 Adjusting Procedure:

1. Park the tractor in a level area.
2. Put the parking brake handle in the "OFF" (down) position.
3. Loosen the jam nuts on the right and left brake rod assemblies. See Figures 1 and 2.
4. Turn the adjusting nuts until the brake handle cross bar is parallel with the instrument panel.
5. Move the brake handle all the way to the right and measure the distance from the right end edge of the brake handle cross bar to the right side of the instrument panel. Move the brake handle all the way to the left and make the same measurement on the left. Adjust the nuts until the difference between the two measurements is 1/2" to 3/4" (13 to 19 mm). Turn both adjusting nuts the same amount, clockwise to increase the measurement difference or counterclockwise to decrease the measurement difference.
6. Tighten the jam nuts.



1 - Jam Nuts
2 - Adjusting Nuts
FIGURE 1



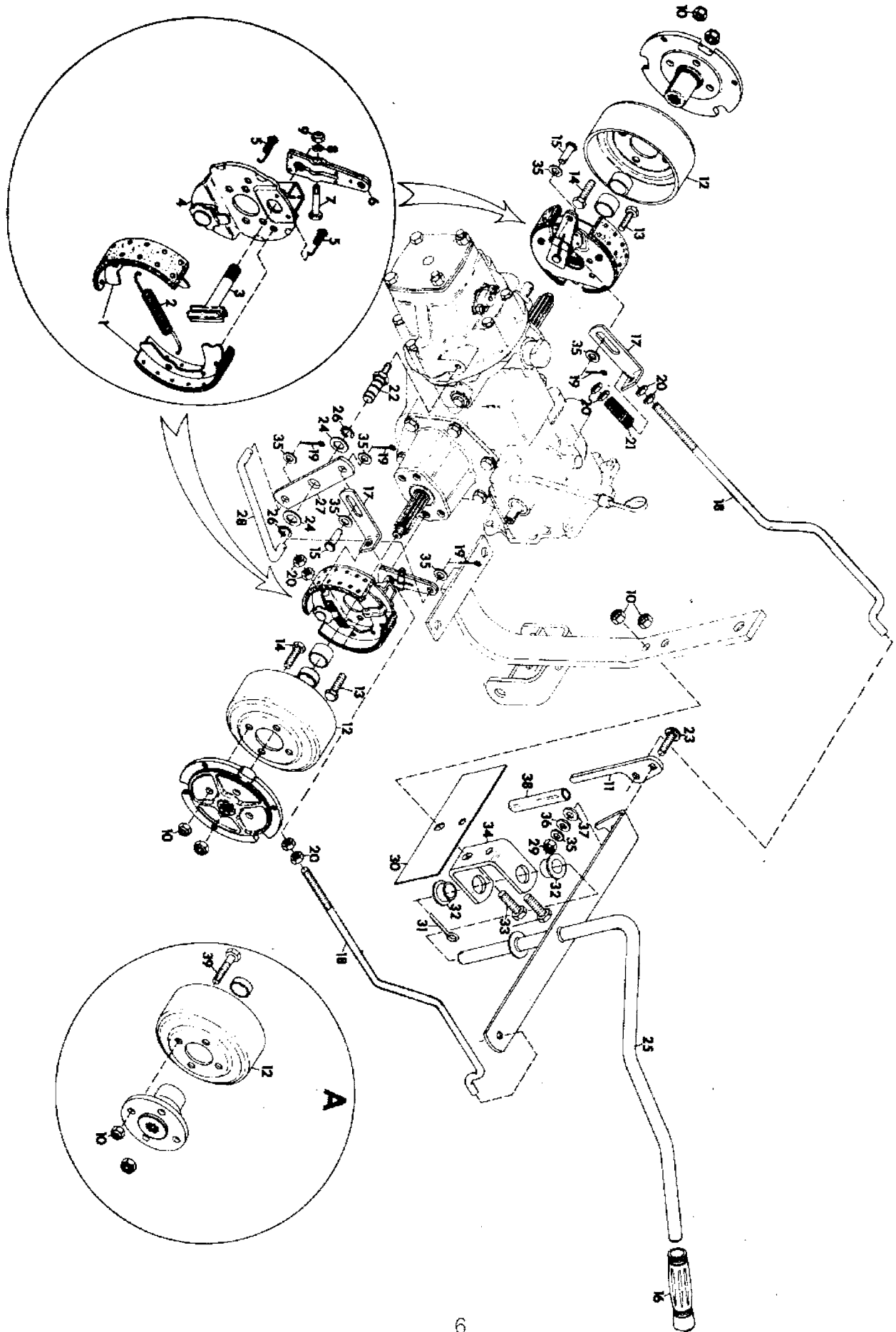
1 - Jam Nuts
2 - Adjusting Nuts
FIGURE 2

SECTION 3

Assembly

- 3.1 Remove the brake parts from the shipping container. Set up the tractor according to the tractor set-up instructions.
- 3.2 Fasten the instruction plate and the brake handle support to the rear hitch with the 1/2-13x1-3/4" bolts and 1/2" lock nuts.
- 3.3 Right Side Installation: Hook the rear of the right brake rod assembly (has compression spring) in the parking brake handle. Connect the adjustment bracket (at the front end) to the cam lever arm with a 3/8"x3/4" clevis pin, two .406x.812x .065 flat washers and .09x.75 cotter pin as shown in the illustration in Section 4.
- 3.4 Left Side Installation: Hook the rear of the left brake rod assembly into the left end of brake handle bar weldment. Connect the other end to the pivot plate with a 3/8x3/4" clevis pin, two .406x.812x.065 flat washers, and a .09x.75 cotter pin as shown in the illustration in Section 4.
- 3.5 Adjust the brakes according to the instructions in Section 2.

SECTION 4
Illustrated Parts and Parts List



ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	23539	2	Kit, Brake Shoe
2	23508	2	Spring, Shoe Return
3	23506	2	Cam, Brake
4	23507	2	Plate, Back
5	23509	4	Spring, Shoe Retaining
6	23505	2	Arm, Cam Lever
7	181618	2	Bolt, Hex 5/16-24x1.75
8	120214	2	Washer, Lock 5/16 SP
9	120368	2	Nut, Hex 5/16-24
10	435507	10	Nut, Lock, 1/2-13
11	23391	1	Handle, Parking Brake
12	23385	2	Drum, 7x1.75
13	428638	8	Bolt, Hex 3/8-16x.625
14	180176	8	Bolt, Hex 1/2-13x1.375
15	431780	2	Pin, Clevis .375x.750
16	10671	1	Grip, Hand
17	23389	2	Bracket, Adjustment
18	24568	2	Rod, Brake
19	121222	4	Pin, Cotter .09x.75
20	124829	8	Nut, Jam 3/8-16
21	23392	1	Spring, Compression
22	23386	1	Stud, Pivot
23	126411	1	Bolt, 3/8-16x1.50 Rd Hd Sq Nk
24	131016	2	Washer, Flat .656x1.312x.095
25	23379	1	Weldment, Brake Handle Bar
26	18053	2	E-Ring, .625 Shaft
27	23387	1	Plate, Pivot
28	23388	1	Rod, Brake Link
29	456004	1	Nut, Lock 3/8-16
30	23383	1	Plate, Instruction
31	103409	1	Pin, Cotter .188x1.500
32	18355	2	Bushing, Pivot
33	180179	2	Bolt, Hex 1/2-13x1.75
34	23382	1	Support, Brake Handle
35	120394	7	Washer, Flat .406x.812x.065
36	23394	1	Washer, Rubber .375x.750x.125
37	20775	1	Washer, Nylon .375x.75x.060
38	23393	1	Grip, Parking Brake Handle
39	120382	1	Washer, Lock 3/8 Reg.
40	23384	2	Brake, 7x1.75 Mechanical

NOTE: Circle "A" pertains to wheel and hub assembly - 18x8.50-8

SECTION 5

GRAVELY LIMITED WARRANTY

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

1. Only the original purchaser of new Gravely equipment is covered by this Warranty.
2. This Warranty covers repair or replacement of parts manufactured by Gravely which are defective in material or workmanship. Gravely will pay for parts and labor only.
3. The Warranty starts the date of purchase and lasts for NINETY (90) DAYS for products used in commercial applications, and TWELVE (12) MONTHS for products used by the owner to maintain his personal residence. Commercial means any use other than to maintain the grounds around the personal residence of the owner of the product.
4. Some components of Gravely equipment are not covered by the Gravely 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 Gravely equipment including components not manufactured by Gravely, use this procedure:
 - a. Notify the Gravely 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 Gravely 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 Gravely Limited Warranty, they should be referred to:

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

Attn: Manager of Customer Services
 - e. Warranty service on Gravely equipment must be performed by an authorized Gravely dealer or Gravely 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. GRAVELY 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. GRAVELY 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 Gravely product registration card is supplied with each Gravely product. Please complete the card and return it to Gravely at the address listed on the card. The equipment registration card will be used by Gravely 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 Gravely dealers and no Gravely dealer is authorized to make any representations or promises on Gravely's behalf.

 **GRAVELY**
One Gravely Lane, Clemmons, NC 27012