



# 5000 SERIES TRACTOR OPERATORS MANUAL

*[www.oldgravelys.net](http://www.oldgravelys.net)*

NOTE

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

To keep the warranty, the tractor 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 numbers to ensure prompt and correct service when ordering parts, requesting service, or making inquiries.

TRACTOR SERIAL NUMBER \_\_\_\_\_

ENGINE SERIAL NUMBER \_\_\_\_\_

ENGINE SPEC NUMBER \_\_\_\_\_



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 tractor can injure people and damage the equipment. People using or servicing this tractor 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 tractor. These people must use eye and foot protection.

#### 1.1 Preparation

1. Read the tractor and attachment 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.

## 1.2 Operation

1. Wear foot and eye protection. Do not wear loose clothing.
2. Do not use the tractor in the dark without adequate lighting.
3. Keep the tractor 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 ATTACHMENTS 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 sulky.
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. Before starting the engine, put the direction control lever in the "NEUTRAL" position and the PTO control in the "OFF" position.
13. Look behind when operating in reverse.
14. After hitting an object with the tractor or attachment, stop the engine and check for damage. Repair any damage before continuing operation.
15. Operate the tractor only from the operator's position, just behind the handlebars. Never walk between the handlebars.
16. Travel across, not up and down slopes.
17. Never permit children to operate the tractor.
18. Before leaving the tractor, move the PTO control to "OFF", lock the brake or put in gear and engage the direction control lever, and remove the ignition key.

19. If there is a sudden change in the sound or vibration of the tractor or attachments, 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.

## SECTION 2

### Controls

#### 2.1 Direction Control Lever:

The direction control lever controls the movement of the tractor. Push the control forward to go forward. Pull the control back to move the tractor backwards. See Figure 1.

#### 2.2 Gear Shift Lever:

The gear shift lever has two operating positions. The forward ("HIGH") position is the fast gear. The rearward ("LOW") position is the slow gear. See Figure 2.

When the lever is in the vertical position, it is in "NEUTRAL" and will not transmit power.


The gear shift lever also controls the PTO speed. The forward ("HIGH") position is the fast PTO speed. The rearward ("LOW") position is the slow PTO speed.

NOTE: The gear shift lever must be in the "HIGH" or "LOW" position to connect power to the PTO or wheels.

#### 2.3 Range Shift Handle (2-Speed Axle Tractors):

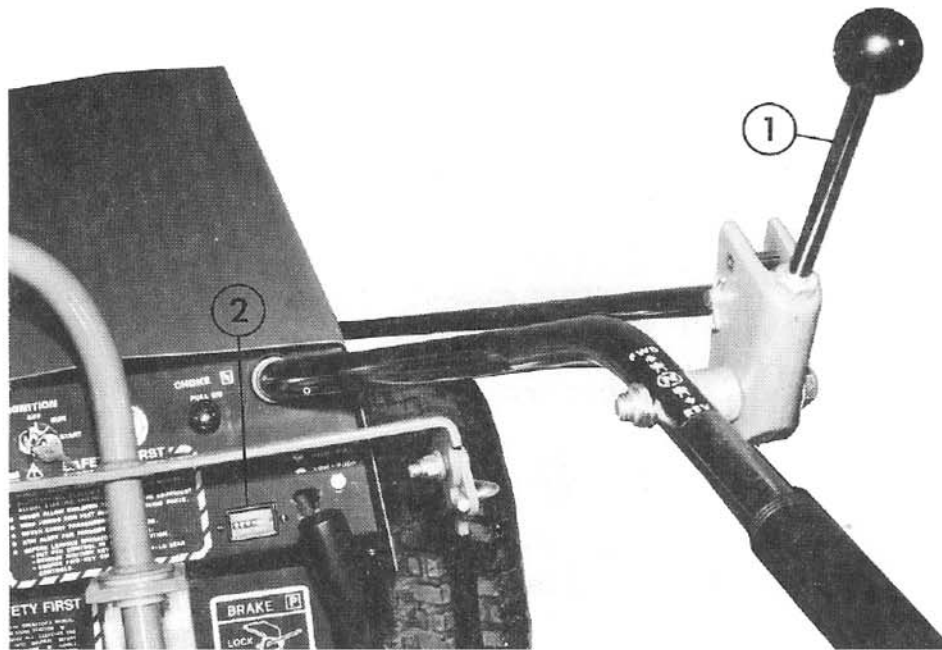
The range shift handle (Figure 2) has two operating positions. Pull the handle to the rearward ("HIGH") position for the fast speed. Push the handle to the forward ("LOW") position for the slow speed.

Rocking the tractor back and forth by moving the direction control lever back and forth while moving the range shift handle will assist in the aligning the clutch teeth for engagement of the two-speed axle.

 **WARNING:** Never move the handle while on a slope or while the tractor is moving. Move the handle only when the tractor is on level ground and stopped (except for rocking to engage the clutch described above).

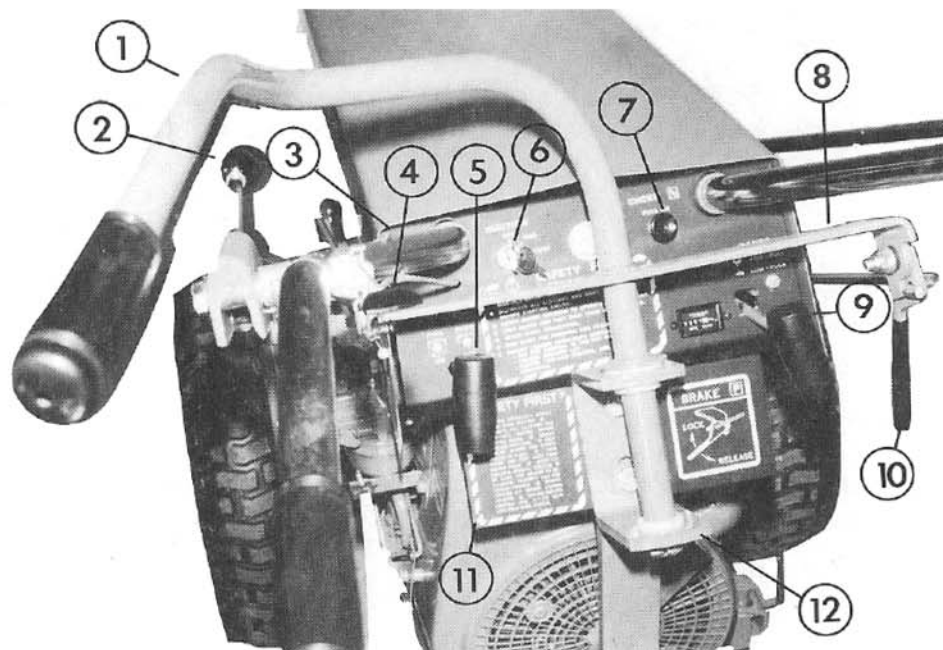
#### 2.4 Throttle Lever:

The throttle lever (Figure 2) is used to control the engine speed. To increase the engine speed, move the lever up to the "FAST" position. To decrease the engine speed, move the lever down to the "SLOW" position.



- 1 - Direction Control Lever
- 2 - Hourmeter

FIGURE 1



- |                      |                            |
|----------------------|----------------------------|
| 1 - Brake Handlebar  | 7 - Choke Control          |
| 2 - Gear Shift Lever | 8 - Brake Handle Cross Bar |
| 3 - Conduit Clip     | 9 - Range Shift Handle     |
| 4 - Throttle Lever   | 10 - Parking Brake Handle  |
| 5 - PTO Control      | 11 - Instruction Plate     |
| 6 - Ignition Switch  | 12 - Brake Handle Support  |

FIGURE 2



## 2.5 Choke Control:

The choke control is used to choke a cold engine for starting. On the manual start tractor the choke control is located on the carburetor. Push the choke control down to choke the engine. When the engine is warm, lift the control to the "OFF" position.

The choke control on electric start tractors is located on the instrument panel (Figure 2). Pull the choke control out to the "ON" position to choke the engine. When the engine is warm, push the choke control in to the "OFF" position.

## 2.6 PTO Control:

The PTO control (Figure 2) is used to connect or disconnect the engine power to an attachment. The forward position is "OFF"; the rearward position is "ON".

## 2.7 Ignition Switch:

The ignition switch is used to start (electric start models) and stop the engine (Figure 2).

## 2.8 Hourmeter:

The hourmeter (on some models) shows total time which the ignition switch has been in the "ON" position (Figure 1).

## 2.9 Fuse:

Electric start models have a fuse to protect the electrical system. See Figure 3.

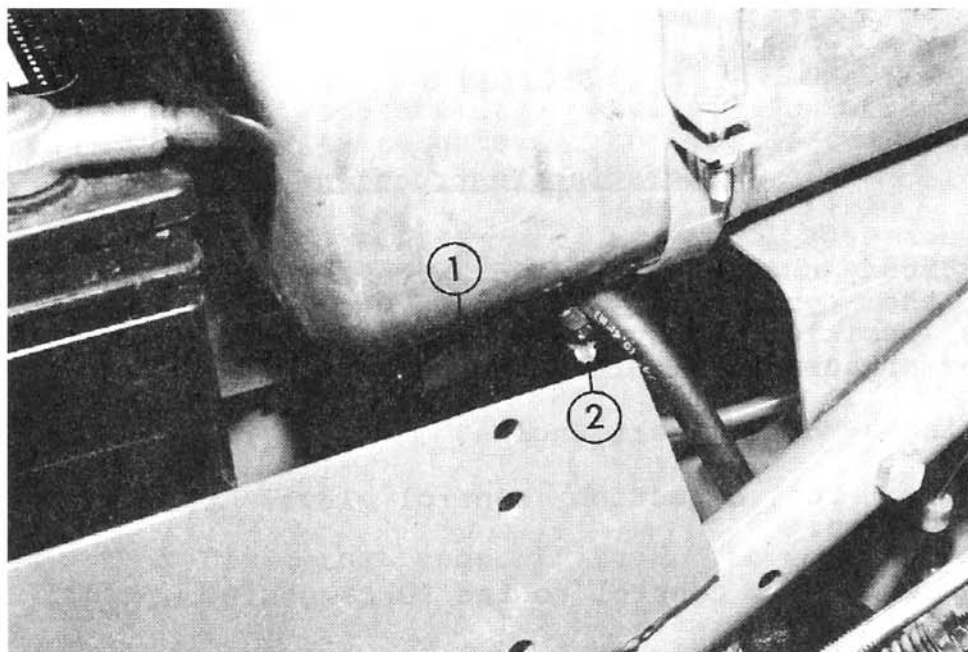
## 2.10 Kick Stand:

The kick stand is used to hold the tractor level when there is no attachment on the tractor. The kick stand must be in the raised position when moving the tractor. See Figure 4.

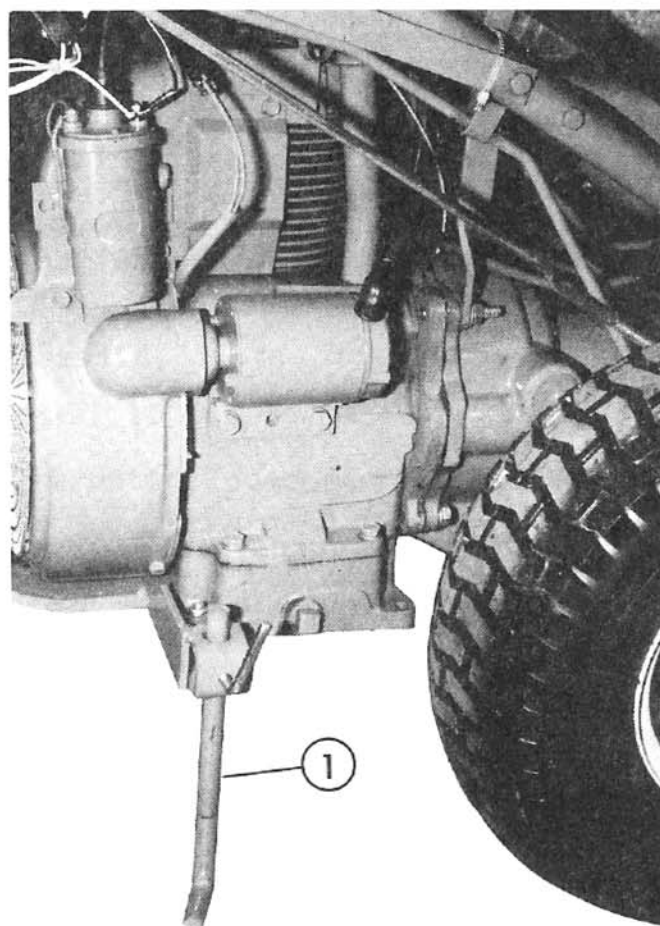
## 2.11 Brake Handlebar:

On tractors with steering brakes, the brake handlebar is used to steer the tractor. Swing the brake handlebar clockwise for a right turn or counterclockwise for a left turn (Figure 2).

## 2.12 The parking brake (Figure 2) is used to hold the tractor in position when not in use.



1 - Fuse  
2 - Fuel Shut-Off Valve  
FIGURE 3



1 - Kick Stand  
FIGURE 4

## SECTION 3

### Operating Instructions

NOTE: Read the tractor and attachment(s) manuals before operating the equipment. Operate the tractor only from the operator's position, just behind the handlebars. Service the tractor and attachment before operating.

#### 3.1 Starting a Manual Start Engine:

1. Move the direction control lever to the "NEUTRAL" position.
2. Move the PTO control to the "OFF" position.
3. Put the key in the ignition switch and turn it to the "ON" position.
4. Move the throttle lever midway between the "SLOW" and "FAST" positions.
5. If the engine is cold, move the choke control to the "ON" (down) position.
6. Pull the starter handle out with one swift continuous pull. Hold the starter handle to allow a slow rewind of the rope.
7. After the engine starts and is warm, move the choke control (if used to start the engine) to the "OFF" (full up) position.
8. If the engine does not start after six pulls of the starter, see Section 6.

#### 3.2 Starting an Electric Start Engine:

1. Move the direction control lever to the "NEUTRAL" position.
2. Move the PTO control to the "OFF" position.
3. Move the throttle lever midway between the "SLOW" and "FAST" position.
4. If the engine is cold, move the choke control to the "ON" (out) position.
5. Put the key in the ignition switch. Turn the key to the "START" position. When the engine starts, release the key.

NOTE: Do not operate the starter for more than 15 seconds. Allow 45 seconds for cooling before operating the starter again.

6. After the engine starts and is warm, move the choke control (if used to start the engine) to the "OFF" (in) position.
7. If the engine does not start after six tries, see Section 6.

### 3.3 Stopping the Engine:

1. Move the direction control lever to the "NEUTRAL" position.
2. Move the PTO control to the "OFF" position.
3. Move the throttle control to the "SLOW" position.
4. Turn the ignition key to the "OFF" position. Remove the ignition key before leaving the tractor.

### 3.4 Operating the Transmission:

1. Learn to operate the tractor in an open area while using a slow gear and slow engine speed.
2. Start the engine.
3. Move the gear shift lever to the "HIGH" or "LOW" position.
4. Move the range shift handle (if the tractor has a two-speed axle) to the "HIGH" or "LOW" position.
5. Move the throttle lever above the "SLOW" position (fast enough so that the engine will not stall).
6. To go forward, move the direction control lever forward until the lever stays in the forward position. If the lever is not in the full forward position, the clutch will slip and cause clutch damage.
7. Move the direction control lever to the rear to move backwards. The lever will not stay in the rear drive position. The lever must be held in the rear drive position.
8. To stop the tractor, put the direction control lever in the "NEUTRAL" position.

9. Use slow gears when operating the tractor on rough ground, slopes, small areas, near buildings or other obstacles.
10. Use a slow gear and a fast engine speed when operating a snowblower, rotary cultivator, or a mower in heavy grass.
11. Walk behind, never between the handlebars.

### 3.5 Using the PTO:


1. Start the engine.
2. After the engine is warm, move the throttle lever just above the "SLOW" position.
3. Move the gear shift lever to the "NEUTRAL" position.
4. Pull the PTO control back to the "ON" position with one continuous fast pull.
5. Move the gear shift lever to the "HIGH" or "LOW" position.

NOTE: The gear shift lever must be in either the "HIGH" or "LOW" position to power the attachment.

6. Move the throttle lever to the "FAST" position.
7. Operate the direction control lever for desired travel.
8. To stop the power to the attachment, stop the tractor with the direction control lever, move the throttle lever to the "SLOW" position and push the PTO control in (forward) to the "OFF" position.
9. When powering an attachment, move the throttle lever to the "FAST" position and control ground speed by selecting gear positions.

### 3.6 Using the Steering Brakes (on some models):


1. The steering brakes are used when the tractor is being driven forward.
2. To make a right turn, swing the brake handlebar clockwise.
3. To make a left turn, swing the brake handlebar counterclockwise.

 **CAUTION:** Use only the tractor handlebars to steer when driving in reverse.

4. To use the parking brake, pull the parking brake handle all the way up and release. To disengage, push the parking brake handle down.

### 3.7 Stationary Power Operation:

1. Block the wheels at the front and back. On steering brake models, set the parking brake.
2. Start the engine and engage the PTO control as described in Section 3.5.
3. Do not make adjustments or repairs to the attachment while it is under power.

 **CAUTION:** Stay away from moving parts when away from the operator's position behind the handlebars.

SECTION 4

Service Instructions

Chart 1 shows the recommended service schedule that should be performed on a regular basis. See the engine manual for maintenance instructions.

MAINTENANCE ITEMS	SECTION	TIME INTERVALS-MAINTEN.			
		Daily	25 Hours	100 Hours	200 Hours
Check the Level of the Lubricant in the Engine	4.1	X			
Check the Cooling System	4.1	X			
Check the Air Cleaner Element	4.1	X			
Lubricate the Pivots of the Control Levers	4.2		X		
Check the Level of the Battery Fluid and Clean the Battery	4.3				X
Check the Fasteners	4.4		X		
Adjust the Fwd-Rev Clutch	4.5		X		
Adjust the Gear Clutch	4.6		X		
Adjust the Slip Clutch	4.7			X	
Check the Level of the Lubricant in the Transmission	4.8			X	

CHART 1

#### 4.1 Engine Maintenance:

1. See the engine manual for maintenance instructions.
2. Check the air cleaner, engine oil and cooling system daily.
3. Clean all of the grass and other material from the cooling fins and intake screen of the engine. If necessary, remove the engine shrouds to clean the engine.
4. See the engine manual for the type of oil, oil change, etc. Never operate the engine when the oil level is below the low mark on the dipstick.
5. See the engine manual for air cleaner maintenance instructions.

#### 4.2 Control Linkage Lubrication:

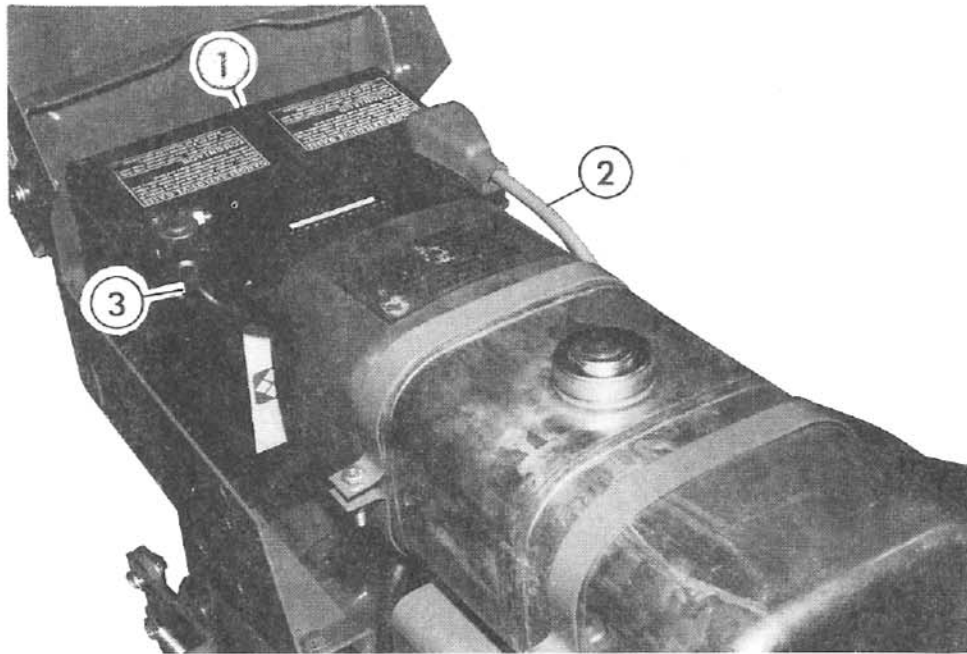
1. Every 25 hours of operation put a drop of engine oil on the pivots of the throttle lever, the direction control lever, the gear shift lever, the PTO control, and range shift handle.

NOTE: There are no grease fittings on the tractor.

#### 4.3 Battery Service (Electric Start Models):

1. The tractor is equipped with a low maintenance battery. Check the fluid level every 200 hours or at the end of the year. See Figure 5.
2. Keep the battery clean.
3. Clean the battery before checking the fluid level. If acid is on the outside of the battery or the electrical connections are corroded, clean the outside of the battery with a water and baking soda solution.
4. If the fluid level is below the split rings in the filler tube, add only distilled water. Do not fill above the split ring. Do not use a metal funnel.
5. Make sure that the filler caps are pushed down in place.
6. Anytime the battery cables are disconnected, remove the negative (-) (ground) cable first. When replacing the battery cable connect the positive (+) cable first.
7. Anytime the battery cables are disconnected, the cable clamps and the battery post or connection should be cleaned until shiny. There are brushes made to clean the clamps and battery posts.





- 1 - Battery
- 2 - Positive Battery Cable
- 3 - Negative Battery Cable

FIGURE 5

4.4 Fastener Check:

1. Check all fasteners after 25 hours of operation to make sure that they are tight.
2. Replace any fastener that is missing.
3. Tighten the fasteners according to Chart 2.

BOLT TORQUE SPECIFICATIONS		
BOLT SIZE	FOOT POUNDS (ft. lbs.)	NEWTON METERS (N.m)
1/4"	7	9.5
5/16"	14	19
3/8"	25	34
7/16"	40	54
1/2"	60	82
9/16"	83	113
5/8"	120	163
3/4"	200	271

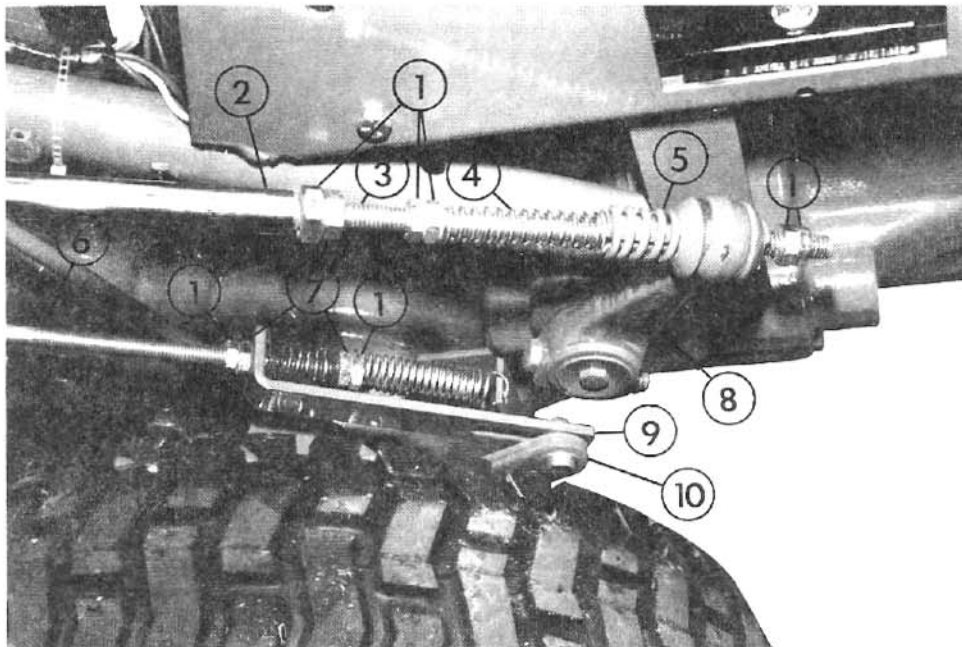
CHART 2

#### 4.5 Forward-Reverse Clutch Adjustment:

1. After 25 hours of operation check the adjustment of the forward-reverse clutch.

**⚠ WARNING:** Stop the engine before adjusting the forward-reverse clutch.

2. The reverse clutch is adjusted correctly when the direction control lever stops 15° past vertical to the rear.
3. To adjust the reverse clutch, loosen the jam nuts on the end of the control extension rod in the fwd-rev control rod. Adjust the rear nut so that the direction control lever stops 15° past vertical to the rear. Hold the rear nut and jam with the forward nut. See Figure 6.
4. The forward clutch is adjusted correctly when the direction control lever is in the full forward position and the large spring has a coil clearance of .010" (.254mm).
5. To adjust the forward clutch, put the direction control in the forward position. Loosen the rear set of jam nuts on the control extension rod in the fwd-rev control rod. Adjust the forward nut until the large spring coils are .010" (.254mm) apart. Hold the forward nut and jam with the rear nut.




- |                                   |                            |
|-----------------------------------|----------------------------|
| 1 - Jam Nut                       | 6 - Brake Rod Assembly     |
| 2 - Fwd-Rev Control Rod           | 7 - Adjusting Nut          |
| 3 - Control Extension Rod         | 8 - Fwd-Rev Lever Assembly |
| 4 - Fwd-Rev Neutral Return Spring | 9 - Adjustment Bracket     |
| 5 - Large Spring                  | 10 - Cam Lever Arm         |

FIGURE 6

#### 4.6 Gear Clutch Adjustment:


1. After every 25 hours of operation, check the adjustment of the gear clutch.

 **WARNING:** Stop the engine before adjusting the gear clutch.

2. The clutch is adjusted correctly when the gear shift lever is in the "HIGH" or "LOW" position and the spring coils are .010" (.254mm) apart.
3. To adjust the "HIGH" clutch, loosen and separate the jam nuts on the rear of the control extension rod in the HI-LO control rod. Put the gear shift lever in the "HIGH" position. Adjust the nut (front) near the spring until the spring coils are .010" (.254mm) apart. Move the gear shift lever to the "NEUTRAL" position. Hold the nut adjusted to the spring and jam with the other (rear) nut. See Figure 7.
4. To adjust the "LOW" clutch, loosen and separate the jam nuts on the end of the control extension rod in the HI-LO control rod. Put the gear shift lever in the "LOW" position. Adjust the nut (rear) near the spring until the spring coils are .010" (.254mm) apart. Move the gear shift lever to the "NEUTRAL" position. Hold the nut adjusted to the spring and jam with the other (front) nut.

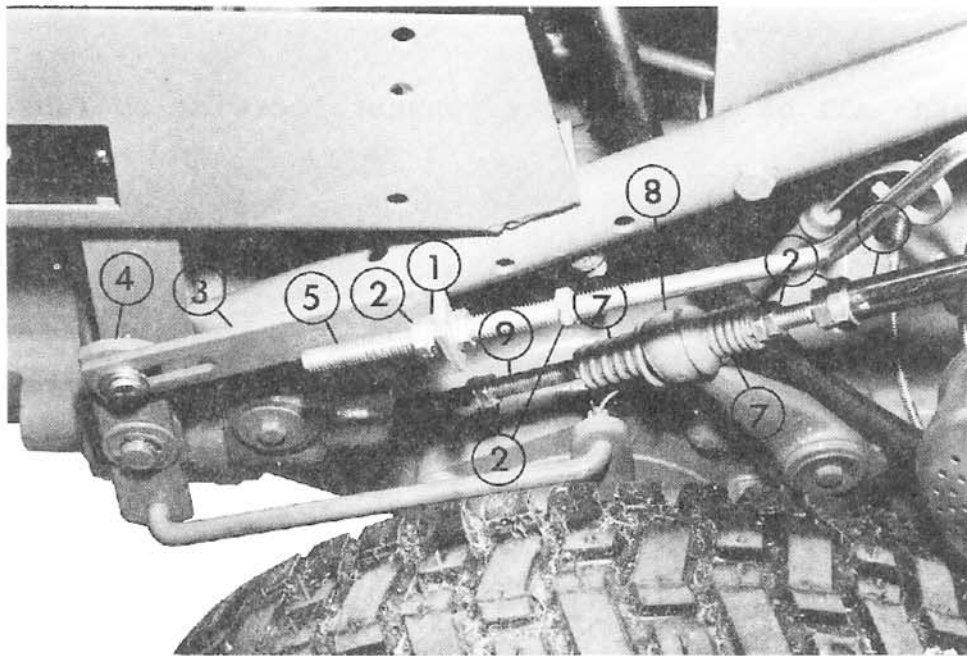
#### 4.7 Slip Clutch Adjustment:

1. Adjust the slip clutch after every 100 hours of operation.

 **WARNING:** Stop the engine before adjusting the slip clutch.

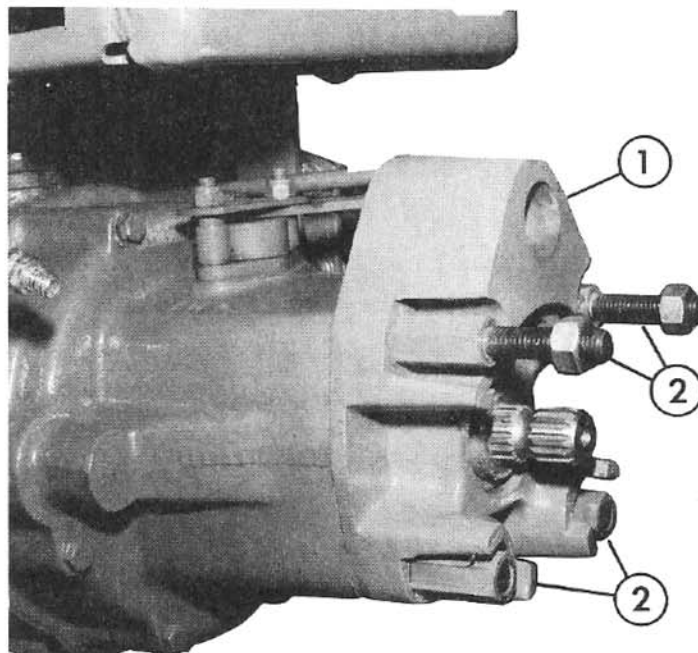
2. Remove the attachment and lower the rear of the tractor to the ground.
3. Carefully clean the front of the transmission.
4. Remove the quick hitch studs from the transmission and remove the quick hitch adaptor. See Figure 8.

**NOTE:** The attachment gasket must be replaced if damaged.



- |                        |                           |
|------------------------|---------------------------|
| 1 - Adjusting Nut      | 6 - Hi-Lo Control Rod     |
| 2 - Jam Nut            | 7 - Large Spring          |
| 3 - Adjustment Bracket | 8 - Hi-Lo Lever Assembly  |
| 4 - Pivot Plate        | 9 - Control Extension Rod |
| 5 - Brake Rod Assembly |                           |

FIGURE 7



- |                         |
|-------------------------|
| 1 - Quick Hitch Adaptor |
| 2 - Quick Hitch Stud    |

FIGURE 8


5. Turn all of the jam nuts counterclockwise to loosen. See Figure 9.
6. Turn all of the adjusting bolts uniformly clockwise until the springs are solid. Then turn all of the bolts counterclockwise one-half turn.
7. Tighten the jam nuts against the back plate.
8. Install the quick hitch adaptor and the quick hitch studs.

#### 4.8 Transmission Lubrication:

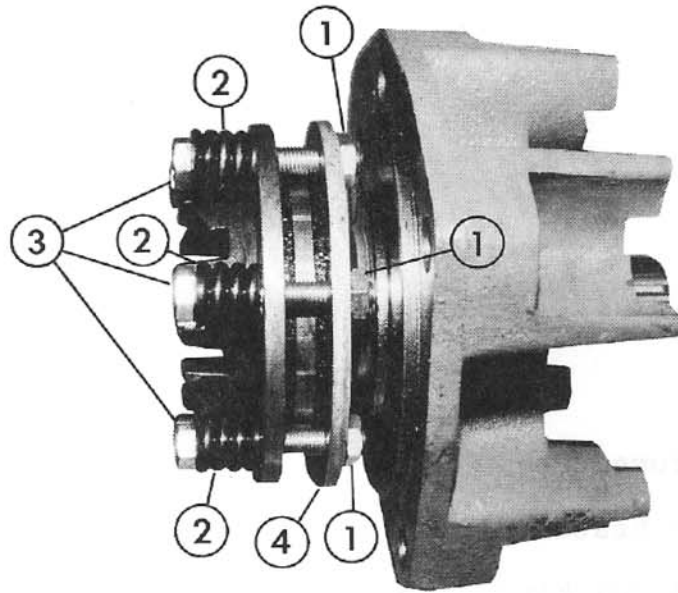
1. After every 100 hours of operation, check the level of the lubricant in the transmission.
2. Never operate the tractor when the transmission oil level is below the "LOW" mark on the dipstick.
3. Stop the engine and raise the hood (if equipped).
4. Clean the dipstick tube and the dipstick. See Figure 10.
5. Remove the dipstick, wipe it with a clean cloth or towel and put it back in the tube.
6. Pull the dipstick out again and look at the oil.
7. If the oil level is below the low mark on the dipstick, clean the area around the filler plug and remove the filler plug.
8. Add new clean lubricant until the dipstick indicates that the oil level is correct. See Section 7.
9. Install the filler plug and the dipstick.

#### 4.9 Steering Brake Operation and Adjustment (on some models):

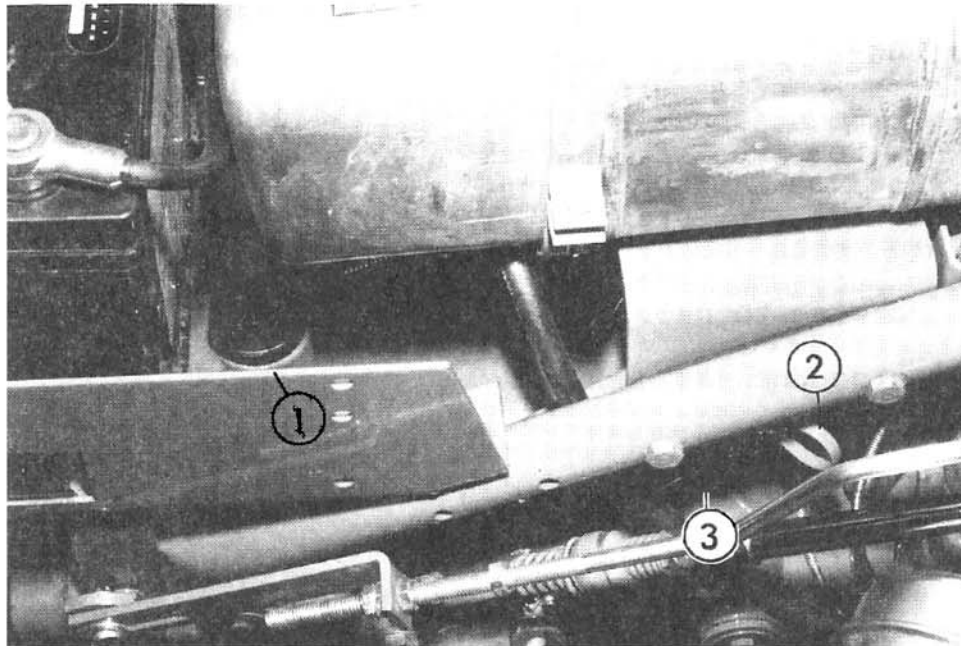
1. When the tractor is going forward, swing the brake handlebar clockwise for a right turn or counterclockwise for a left turn.

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

2. To engage the parking brake, pull the parking brake handle all the way up and release. To disengage, push the parking brake handle down.



- 1 - Jam Nut
  - 2 - Spring
  - 3 - Adjusting Bolt
  - 4 - Back Plate
- FIGURE 9



- 1 - Oil Filler Plug
  - 2 - Dipstick
  - 3 - Dipstick Tube
- FIGURE 10

### 3. Adjusting Procedure:

- a. Park the tractor in a level area.
- b. Put the parking brake handle in the "OFF" (down) position.
- c. Loosen the jam nuts on the right and left brake rod assemblies. See Figures 6 and 7.
- d. Turn the adjusting nuts until the brake handle cross bar is parallel with the instrument panel. See Figure 2.
- e. Move the brake handlebar 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 handlebar all the way to the left and make the same measurement on the right. 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 counter-clockwise to decrease the measurement difference.
- f. Tighten the jam nuts.

## SECTION 5

### Storage

- 5.1 When the tractor will not be operated for two months or more:
1. Do the daily and 25-hour maintenance, but do not add gasoline.
  2. Clean the tractor. Paint or oil bare metal surfaces to prevent rust.
  3. Refer to the engine manual and prepare the engine for storage.
  4. Charge the battery initially and then every three weeks.
- 5.2 To put the tractor into service:
1. Refer to the engine manual and prepare the engine for service.
  2. Charge the battery.
  3. Put fresh, clean gasoline in the fuel tank.



SECTION 6

Problem Solving

OBSERVATION	POSSIBLE CAUSE
1. Starter will not operate when the ignition key is turned to the "S" position.	Defective Solenoid Switch Blown Fuse Discharged Battery Loose Battery Cable(s) Defective Starter
2. Solenoid switch clicks but starter will not operate when the ignition key is turned to the "S" position.	Discharged Battery Defective Starter Loose Battery Cable(s)
3. Engine starter operates but engine will not start when the ignition switch is turned to the "S" position.	Fuel Tank empty Fuel Shut-off Valve at the Fuel Tank turned off Engine Failure--See Engine Manual
4. Engine starts but runs roughly.	Restricted Fuel Cap Vent Engine Carburetor malfunction--see Engine Manual Engine Choke in "ON" Position Restricted Air Cleaner Element Engine Electrical System Trouble--see Engine Manual
5. The tractor will not move when the direction control lever is moved to "FORWARD" or "REVERSE" position.	Gear Shift Lever in "NEUTRAL" Position Range Shift Handle in "NEUTRAL" Position Fwd-Rev Clutch needs Adjustment
6. Attachment will not operate.	Attachment jammed or damaged Gear Shift Lever in "NEUTRAL" Position Attachment Slip Clutch needs adjustment or repair
7. Attachment operates slowly.	Attachment Slip Clutch needs adjustment or repair Attachment damaged Engine Problems--see Engine Manual
8. The transmission will not go into "HIGH" range when range shift handle is moved to "HIGH" position.	Debris Blocking the Linkage Rust on the Clutch Sliding Pin

## SECTION 7

### Specifications and Wiring

#### 7.1 Specifications:

Engine Fuel	See Engine Manual
Engine Oil	See Engine Manual
Fuel Tank Capacity	.9 US Gallons (3.6 liters) Engine Mtd. Tank 2 US Gallons (7.6 liters) Frame Mtd. Tank
Transmission Oil Capacity	5 US Quarts (4.75 liters)
Transmission Oil Type	10W-30 Engine Oil
Tire Sizes Available	4.00-8 Diamond Tread 4.00-8 Ground Grip Tread 18x6.50-8 Turf Tread 18x8.50-8 Turf Tread 16x5Wx3 Semi-Pneumatic Ground Grip 19x5 Semi-Pneumatic Ground Grip
Tire Pressure	18 psi (124 kN/m <sup>2</sup> )
Weight Range:	355 lbs. (161kg) to 476 lbs. (215.9kg)
Dimensions	58"Lx25"Wx36.5"H (1470mmx640mmx930mm)

#### Ground Speeds (at 3300 rpm engine speed):

(NOTE: Grounds speeds are faster with bigger tires)

##### 5200 - 2-speed with 4:00x8 tires

Fwd: 2.0 mph (3.2 kmph) to 2.5 mph (4.0 kmph)  
Rev: 1.9 mph (3.1 kmph) to 2.4 mph (3.9 kmph)

##### 5240 and 5260 - 4-speed with 4:00x8 tires

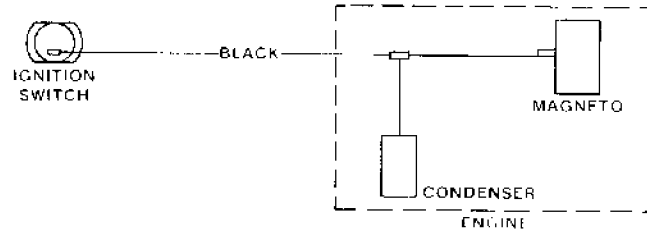
Fwd: Lo range-1.3 mph (2.1 kmph); 1.7 mph (2.7 kmph)  
Hi range-2.6 mph (4.2 kmph); 3.4 mph (5.5 kmph)  
Rev: Lo range-1.2 mph (2.0 kmph); 1.6 mph (2.6 kmph)  
Hi range-2.4 mph (3.9 kmph); 3.1 mph (5.0 kmph)

##### 5465, 5645 and 5665 - 4-speed with 18x6.50-8 tires

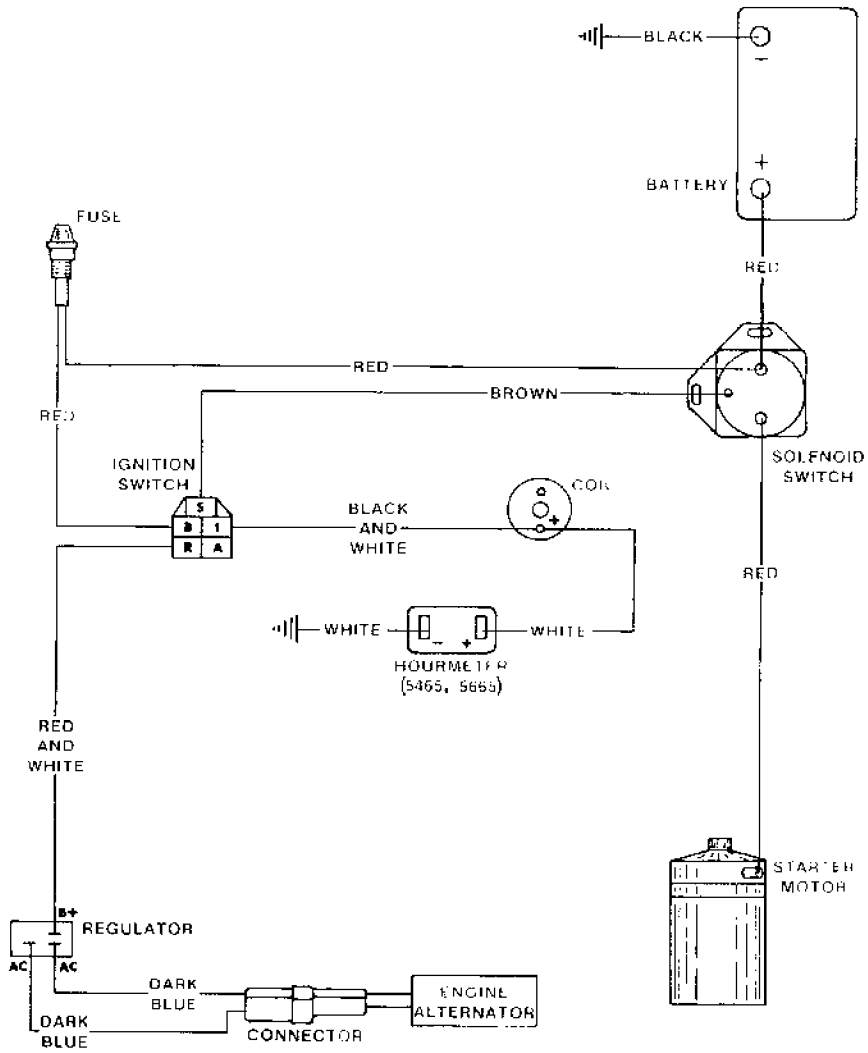
Fwd: Lo range-1.4 mph (2.3 kmph); 1.8 mph (2.9 kmph)  
Hi range-2.7 mph (4.4 kmph); 3.7 mph (6.0 kmph)  
Rev: Lo range-1.3 mph (2.1 kmph); 1.7 mph (2.7 kmph)  
Hi range-2.6 mph (4.2 kmph); 3.3 mph (5.3 kmph)

## 7.2 Wiring:

### 1. Manual Start Models



### 2. Electric Start Models



## SECTION 8

### Set-Up Instructions

- 8.1 Remove the tractor from the shipping container.
- 8.2 Remove the bolts which mount the instrument panel to the support tubes.
- 8.3 Put the handlebar with the "FWD-REV" decal in the right support so that the holes align. Secure with the bolt and nut just removed.
- 8.4 Similarly put the other handlebar in the left support and secure with the bolt and nut just removed.
- 8.5 Screw the control extension rods into the control rods and secure by jamming the jam nut against the rod.
- 8.6 Put two 3/8-16 jam nuts all the way up on both control extension rods.
- 8.7 Slide the Fwd-Rev neutral return spring on the control extension rod in the Fwd-Rev (straight) control rod. Then slide the control extension rod through the Fwd-Rev lever assembly from the rear. Put two 3/8-16 jam nuts on the control extension rod. See Figure 6.
- 8.8 Fasten the rear of the Fwd-Rev control rod to the Fwd-Rev shifter rod support with a 3/8x1-1/4 clevis pin and 1/8x3/4 cotter pin.
- 8.9 Slide the control extension rod on the HI-LO control rod through the HI-LO lever assembly from the rear. Put two 3/8-16 jam nuts on the control extension rod. See Figure 7.
- 8.10 Connect the rear of the HI-LO control rod to the HI-LO shifter rod support with a 3/8x1-1/4 clevis pin and 1/8x3/4 cotter pin.
- 8.11 Refer to Section 4.6 and adjust the gear clutch.
- 8.12 Refer to Section 4.5 and adjust the Fwd-Rev clutch.
- 8.13 Mount the throttle control lever to the inside of the left handlebar with 10-24x1-1/2" machine screws and the 10-24 lock nuts.
- 8.14 Secure the throttle cable to the handlebar with the conduit clip. See Figure 2.
- 8.15 Mount the wheel assemblies with 3/8-16 hex bolts.

- 8.16 On electric start models, charge the battery according to the following schedule: 40 amps for 30 minutes, or 20 amps for 60 minutes, or 10 amps for 120 minutes.
- 8.17 Check lubricant levels in the transmission and the engine.
- 8.18 Adjust the air pressure in the tires to 18 psi (124 kN/m<sup>2</sup>).
- 8.19 On models with steering brakes, set-up the brakes as follows:
1. 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.
  2. Right Side Installation: Hook the rear of the right brake rod assembly (has compression spring) in the parking brake handlebar. Connect the adjustment bracket (at the front end) to the cam lever arm with a 3/8x3/4" clevis pin, two .406x.812x.065 flat washers and .09x.75" cotter pin as shown in Figure 6.
  3. Left Side Installation: Hook the rear of the left brake rod assembly into the left end of brake handlebar weldment. Connect the other end of 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 Figure 7.
  4. Adjust the brakes according to the instructions in Section 4.9.

## SECTION 9

### LIMITED FIVE-YEAR WARRANTY

1. This Limited Five-Year Warranty is issued by Gravely International, Inc., only to the original purchaser. If Gravely equipment is leased by Gravely, this Warranty shall extend also to the original lessee as if such lessee were the original purchaser.
2. Gravely warrants that all new equipment manufactured by Gravely ("Gravely Products") shall be free of defects in material and workmanship for the term described in paragraph 4, below. Except as hereinafter provided, this Warranty does not cover any engine, tires or battery forming a part of the Gravely Product. Engine and tires are covered by and subject to separate warranties of the manufacturers thereof.
3. In the event that any Gravely Product warranted hereunder shall be defective or fail to conform with this Warranty, Gravely shall, subject to the provisions hereof, pay for, or provide labor and materials for, the repair or replacement of such defective Gravely Product.
4. This Warranty is for five years (60 months) from purchase date for Gravely Products used exclusively for personal, family or household purposes, and two years (24 months) for products used for other purposes (commercial use), excluding rental firms. Gravely products used for rental purposes will be warranted for 90 days. Repair of Gravely Products after the second year (24 months from date of purchase) shall be subject to a \$50.00 deductible for each repair. (After two years, Gravely agrees to repair or replace defective Gravely Products used exclusively for personal, family or household purposes only to the extent that the cost of such warranty covered repair or replacement exceeds \$50.00.)

Batteries are warranted by Gravely for a period of twelve (12) months only. If a battery shall fail within twelve (12) months of purchase, the replacement cost thereof shall be prorated over a twelve-month term based upon the number of months since purchase.
5. To obtain Warranty Service on a Gravely Product (including any battery or other component 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: Customer Service Department
  - e. Warranty service on Gravely Products must be performed by an authorized Gravely dealer.
6. This Warranty does not cover the following:
  - a. Transportation to the Gravely dealership. (If the Gravely dealer provides transportation, he will charge 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, gauge wheels, skids and other wear items.
  - c. Any Gravely Product which has been altered or modified in any way.
  - d. Any repair or replacement occasioned by customer neglect or lack of proper maintenance. (The purchaser is responsible for making sure that Gravely Products are operated and serviced as directed in the applicable manual or service instruction. Incorrect use or maintenance will void this Warranty.)
  - e. Any repair occasioned by the use of any attachment not approved by Gravely. (The use of any such unapproved attachment will void this Warranty.)
7. GRAVELY MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES, OR WARRANTIES AS TO THE MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ALL WARRANTIES ARE LIMITED IN DURATION TO THE TERMS SET OUT IN PARAGRAPH 4, ABOVE. GRAVELY SHALL HAVE NO LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE BREACH OF ANY WARRANTY, INCLUDING, BUT NOT LIMITED TO, LIABILITY FOR INCONVENIENCE, RENTAL OR PURCHASE OF REPLACEMENT EQUIPMENT, OR FOR LOSS OF PROFITS OR OTHER COMMERCIAL LOSS.
8. Some states do not allow limitations on how long an implied warranty lasts, so the above statement may not apply to you. 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 such card is necessary for your warranty to be effective.
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.