



# 40" WING MOWER OPERATOR'S MANUAL

NOTE

Read this manual carefully and learn to operate and service your 40" Wing Mower before using it.

To keep the warranty, the 40" Wing Mower 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.



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 Gravelly instruction manuals do not cover every possible danger. It is impossible for Gravelly 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 and the tractor 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 the engine.
5. Be certain that all shields, guards, and interlock switches are in the correct positions.
6. Never permit children to operate the tractor and mower.
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 direction control 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, on the tractor seat.
14. Travel up and down slopes.
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 completely stop.
20. Before leaving the operator's position, put the PTO lever in the "OFF" position, turn the ignition key to the "OFF" position. Set the brake lock for parking. Put the throttle control (on the Wing Mower) in the "SLOW" position and turn the ignition switch to the "OFF" position.


## SECTION 2

### Operating Instructions

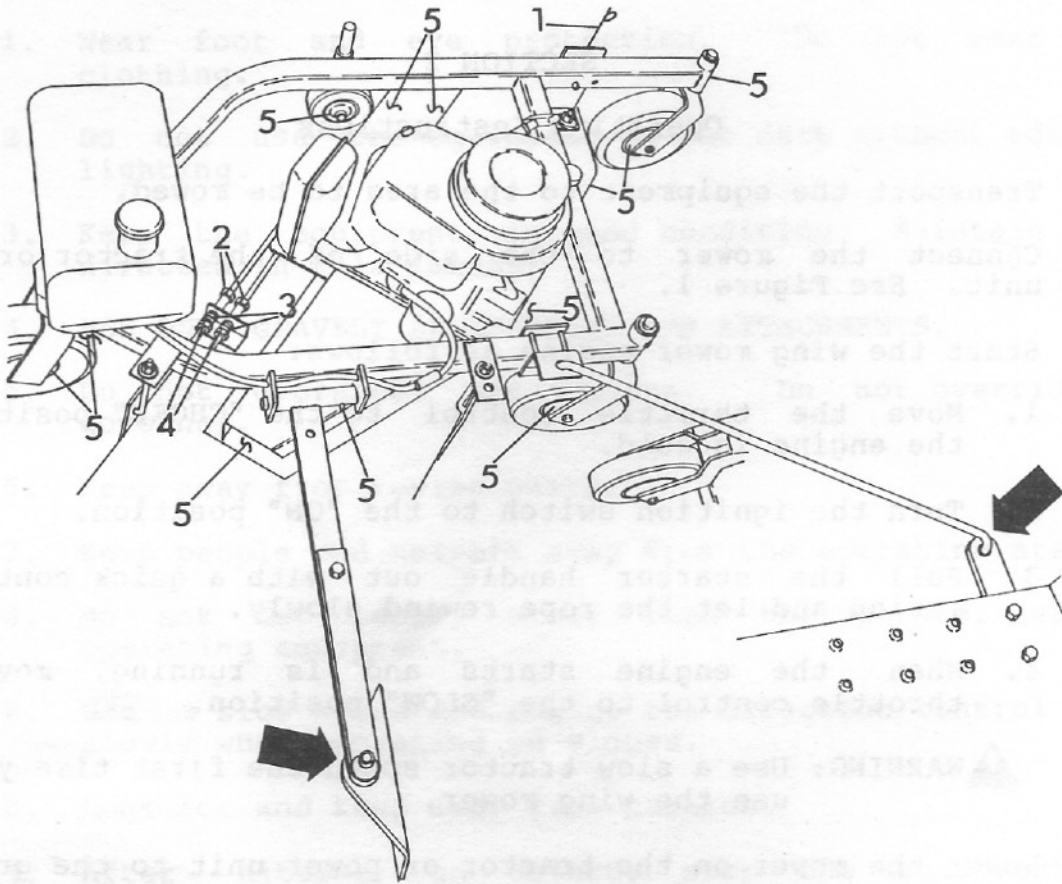
- 2.1 Transport the equipment to the area to be mowed.
- 2.2 Connect the mower to the side of the tractor or power unit. See Figure 1.
- 2.3 Start the wing mower engine as follows:
  1. Move the throttle control to the "CHOKE" position if the engine is cold.
  2. Turn the ignition switch to the "ON" position.
  3. Pull the starter handle out with a quick continuous motion and let the rope rewind slowly.
  4. When the engine starts and is running, move the throttle control to the "SLOW" position.

 **WARNING:** Use a slow tractor speed the first time you use the wing mower.

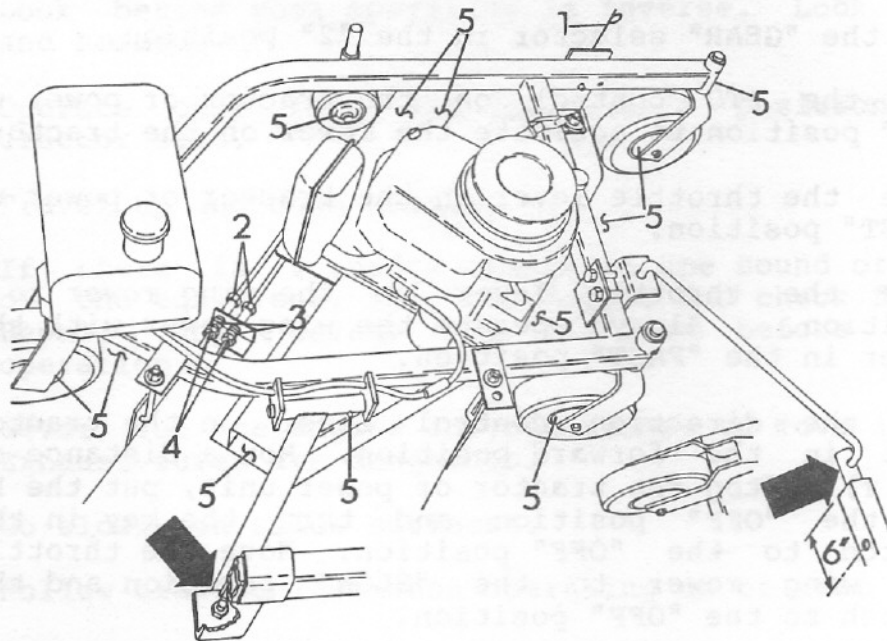
- 2.4 Lower the mower on the tractor or power unit to the ground.
- 2.5 Put the "RANGE" selector on the tractor or power unit in the "HI" position.
- 2.6 Put the "GEAR" selector in the "2" position.
- 2.7 Put the PTO control on the tractor or power unit in the "ON" position to activate the mower on the tractor.
- 2.8 Move the throttle lever on the tractor or power unit to the "FAST" position.
- 2.9 Move the throttle lever on the wing mower to the "FAST" position. Always operate the wing mower with the throttle lever in the "FAST" position.
- 2.10 Put the direction control lever on the tractor or power unit in the forward position. Mow a distance of ten feet (3 m). Stop the tractor or power unit, put the PTO control in the "OFF" position and turn the key in the ignition switch to the "OFF" position. Move the throttle lever on the wing mower to the "SLOW" position and the ignition switch to the "OFF" position.

 **WARNING:** Wait until both engines and mowers have completely stopped.

- 2.11 Check to see if both the mowers are cutting the grass to the height that is needed.



4-WHEEL TRACTOR



PROMASTER POWER UNIT

- |                 |                |
|-----------------|----------------|
| 1-Edge Locator  | 4-Locking Nut  |
| 2-Adjusting Nut | 5-Lube Fitting |
| 3-Spring        |                |

FIGURE 1



SECTION 3

Service Instructions

Chart 1 shows the recommended schedule for service that should be performed on a regular basis.

SERVICE PERFORMED	TIME INTERVALS BETWEEN SERVICE		
	DAILY	25 HR.	200 HR.
Check Tire Pressure (Section 7)	X		
Check Air Cleaner (Section 3.6)	X		
Check Cooling System (Section 3.5)		X	
Check Engine Oil (Section 3.3)		X	
General Lubrication (Section 3.1)		X	

2.12 If the cutting height needs to be adjusted, follow the instructions in Section 3 for the wing mower and the instructions in the Operator's Manual for the tractor or power unit.

2.13 Use the edge locator on the wing mower deck to see the location of the edge of the mower deck when trimming around an object. See Figure 1.

2.14 After you know how to operate the tractor with the wing mower, select the speed of the tractor or power unit that is best for your mowing conditions.

1. 1 - each on the pivot arms.
  2. 1 - each on two caster forks.
  3. 1 - each on four wheels.
  4. 1 - each on the drawbar.
- See Figure 1.

3.3 Checking the Engine Oil

Check the engine oil level daily. Never operate the engine with the oil level below the low mark on the dipstick. See your engine manual for oil specifications and oil filter service instructions.

1. To check the oil level:
  - a. Clean around the dipstick to prevent dirt from entering the tube.
  - b. Remove the dipstick and wipe off the oil.



## SECTION 3

### Service Instructions

Chart 1 shows the recommended schedule for service that should be performed on a regular basis.

SERVICE PERFORMED	TIME INTERVALS BETWEEN SERVICE		
	DAILY	25 HR.	200 HR.
General Lubrication (Section 3.1)		X	
Check Engine Oil (Section 3.2)	X		
Check Cooling System (Section 3.5)		X	
Check Air Cleaner (Section 3.6)	X		
Check Tire Pressure (Section 7)		X	

CHART 1

#### 3.1 General Lubrication

There are eleven grease fittings to be greased at 25-hour intervals. Clean the fittings before attaching the grease gun. Use a multi-purpose grease. Add grease until it appears at the ends of the bearings. The locations of the eleven fitting are:

1. 1 - each on each spindle.
2. 1 - each on the pivot arms.
3. 1 - each on two caster forks.
4. 1 - each on four wheels.
5. 1 - each on the drawbar.

See Figure 1.

#### 3.2 Checking the Engine Oil

Check the engine oil level daily. Never operate the engine with the oil level below the low mark on the dipstick. See your engine manual for oil specifications and oil filter service instructions.


To check the oil level:

1. Clean around the dipstick to prevent dirt from entering the tube.
2. Remove the dipstick and wipe off the oil.

3. Put the dipstick back in place. Be sure it is all the way down.
4. Remove the dipstick again and note oil level.
5. Add oil, if needed. Do not overfill.
6. Repeat Step 3.

### 3.3 Changing the Engine Oil

1. Read your engine manual for recommended change schedule.
2. Move the tractor to a level area. Lock the brake.
3. If the engine is cold, let it run for 5 minutes.
4. When the engine is warm, stop it.

 **WARNING:** Engine muffler and other parts are hot.

5. Clean the areas around the dipstick and drain plug.
6. Remove the dipstick.
7. Put an open top container that will hold four quarts under the drain plug.
8. Remove the drain plug.
9. Allow the engine to drain completely.
10. Clean and reinstall the drain plug.
11. Remove the oil filter (some models), clean the oil filter port and install a new oil filter according to the instructions on the oil filter.
12. Fill with new oil to the "FULL" mark on the dipstick.
13. Replace the dipstick.
14. Start the engine and check for leakage at the drain plug. Tighten the plug if leakage occurs.

### 3.4 Checking the Fasteners

Check all fasteners periodically. Look for loose or missing fasteners any tire looseness of parts, rattles, or excess noise and vibration are noted. Make sure all bolts, screws, nuts, pins, snap rings, and cotter pins are in the correct position and replace any that are missing.


### 3.5 Checking the Air Intake Screen

Check the air intake screen on the engine each day. Remove any grass, dirt, or debris that may have accumulated on it. **THE AIR INTAKE SCREEN MUST BE KEPT CLEAN.**

### 3.6 Checking the Air Cleaner.

Check the air cleaner each day. See your engine manual for instructions.

### 3.7 Filling the Fuel Tank

 **WARNING:** Gasoline is very flammable. Follow safety instructions shown in Section 1.

Gasoline is added as required. Use clean lead free or regular grade gasoline. To add gasoline:

1. Put the tractor in an open area.
2. Stop the engine and lock the brake.
3. Clean the fuel cap area.
4. Remove the fuel tank cap.
5. Fill the tank with gasoline. Use caution. Do not overflow.
6. Reinstall fuel tank cap.
7. If gasoline is spilled, wipe it up.

3.8 Every 25 hours check and adjust the caster wheel tire air pressure to 20 psi (138 KN/r<sup>2</sup>).

3.9 Every 25 hours of operation inspect the mower blades. Replace any damaged blade. Remove the blades to sharpen. When replacing the blades, tighten the spindle nuts to a torque of 120 Ft. lb. (163 N.m.).

### 3.10 Replacing and Adjusting the Mower Belts.

Before each operation, check the belts for cracks or damage. The belts must be replaced if there is damage. To replace the belts, follow the instructions in this section.

1. Remove the right side and the left side belt covers.
2. Turn the adjusting nuts on the adjusting rods counter-clockwise until there is no tension on the belts.
3. Remove the old belts.
4. Install the new belts as shown in Diagram 1 and on the belt diagram decals on the mower deck.



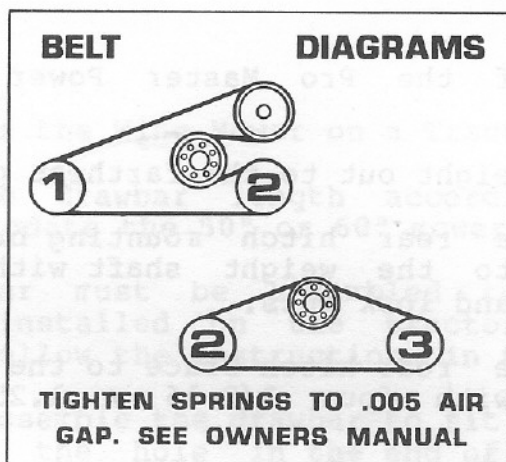


DIAGRAM 1

5. Install the right side and left side belt covers.

Before each operation, check the tension of the belts. To check the tension of the belts, follow the instructions in this section.

6. Stop the engine.

7. Turn the adjusting nuts clockwise to tighten the tension of the belts. Turn the adjusting nuts counter-clockwise to loosen the tension of the belts. See Figure 1.

8. Turn the adjusting nuts until there is a gap of .005" to .010" (.127 to .254 mm) between the coils of the springs.

### 3.11 Preparation of the Tractor for Wing Mower Installation.

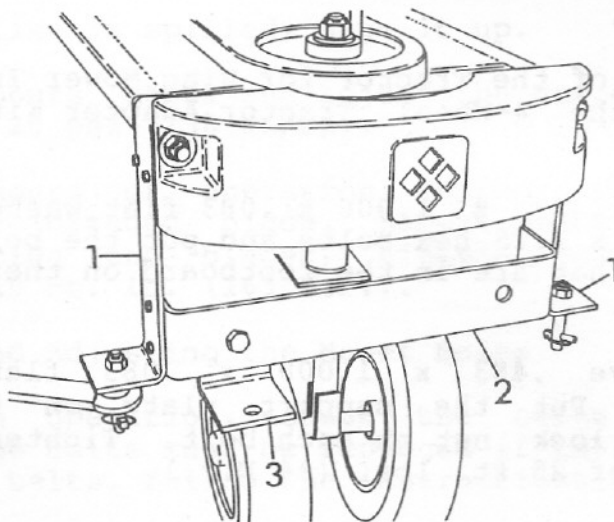
Refer to the 4-Wheel Tractor Adapter Kit Illustration in Section 6.

1. Put a .483 x 1.000 x .083 flat washer on each of the 3/8-16 x 1.75 hex bolts and put the bolts in the square holes that are in the footboard on the left side of the tractor.
2. Put five .483 x 1.000 x .083 flat washers on each bolt. Put the support plate on the bolts. Put a 3/8-16 lock nut on each bolt. Tighten the nuts to the torque of 25 ft. lbs. (34 N.m.).
3. Remove the hitch plate from the rear hitch on the tractor. Re-install the hitch plate with two .531 x 1.062 x .09 flat washers on each bolt between the rear hitch arms and the hitch plate.
4. Put the threaded section of the hitch pin into the hole that is in the rear hitch plate on the tractor. Put the 5/8-11 lock nut on the hitch pin. Tighten the nut to the torque of 120 ft. lbs. (163 N.m.).



3.12 Preparation of the Pro Master Power Unit for Wing Mower Installation.

1. Move the weight out to the farthest position.
2. Fasten the rear hitch mounting brackets and mounting brackets to the weight shaft with four 3/8-16 x 1.25 hex bolts and lock nuts.
3. Fasten the rear hitch brace to the rear hitch mounting brackets with four 3/8-16 x 1.25 hex bolts and lock nuts.
4. Fasten the towing bracket to the rear hitch brace on the left side with the 3/4-10 hex bolt and lock nut. See Figure 2.
5. Put a rear hitch pin in the hole in the towing bracket and retain with a 5/8-11 lock nut.
6. Drill a .406 dia. hole thru the left end of the tube of the mower frame weldment as shown in Figure 1.
7. Slide the stablizer rod mounting tube into the end of the tube just drilled and retain with 3/8-16 x 2.50 hex bolt and lock nut.



1-Rear Hitch Mounting Bracket  
2-Rear Hitch Brace  
3-Towing Bracket

FIGURE 2

### 3.13 Installation of the Wing Mower on a Tractor. See Figure 1.

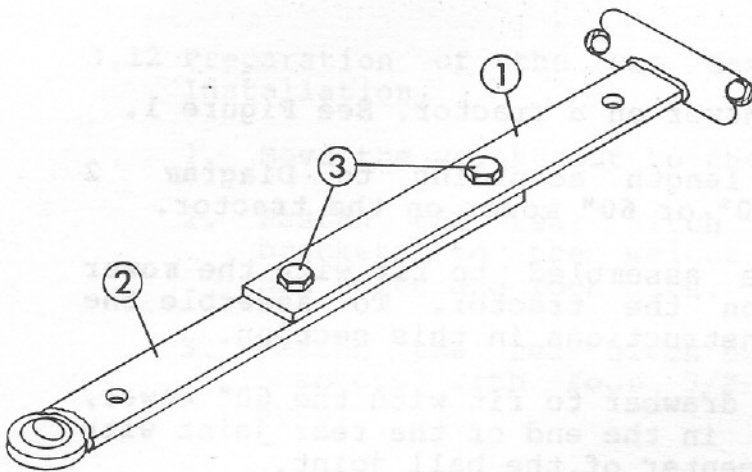
1. Adjust the drawbar length according to Diagram 2 to accommodate the 50" or 60" mower on the tractor.

The drawbar must be assembled to fit with the mower that is installed on the tractor. To assemble the drawbar, follow the instructions in this section.

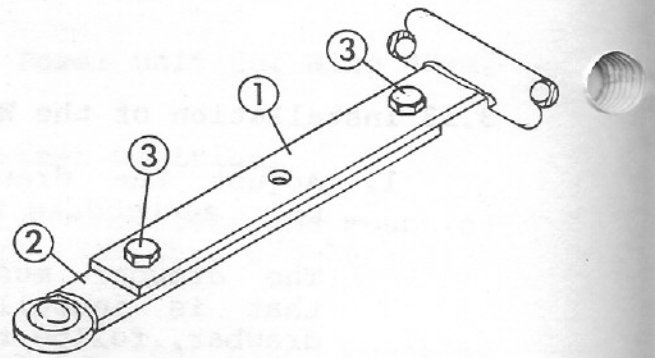
- a. To assemble the drawbar to fit with the 60" mower, align the hole in the end of the rear joint with the hole in the center of the ball joint.
  - b. Fasten the rear joint to the ball joint with the 1/2-13 x 1.75 hex bolts and the 1/2-13 lock nuts as shown in Diagram 2. Tighten the bolts to the torque of 60 ft. lbs. (82 N.m).
  - c. To assemble the drawbar to fit with the 50" mower, align the hole in each end of the rear joint with the hole in each end of the ball joint.
  - d. Fasten the rear joint to the ball joint with the 1/2-13 x 1.75 bolts and the 1/2-13 lock nuts as shown in Diagram 2. Tighten the bolts to the torque of 60 ft. lbs. (82 N.m).
2. Put the wing mower in position on the left side of the tractor.
  3. Put the ball joint of the drawbar assembly on the hitch pin that is fastened to the rear hitch on the tractor. Install the klik pin in the hitch pin.
  4. Put the end of the stabilizer rod in the hole in the support plate that is fastened to the footboard on the tractor. Fasten the rod in position with the klik pin.

NOTE: If the tractor is equipped with a 60 inch Rotary Mower, use the long stabilizer rod. If the tractor is equipped with a 50 inch Rotary Mower, use the short stabilizer rod.

5. Put the other end of the stabilizer rod in the hole in the rod bracket plate on the wing mower frame. Fasten the rod in position with the klik pin.
6. Position the inside front caster weldment parallel with the mower frame and retain with the 3/8 x 2.62 clevis pin and a klik pin.



60" ROTARY MOWER  
DRAWBAR ASSEMBLY



50" ROTARY MOWER  
DRAWBAR ASSEMBLY

DIAGRAM 2

3.14 Installation of the Wing Mower on the Tractor for Towing.  
See Figure 3.

**⚠ WARNING:** Stop the engines.

1. Remove the stabilizer rod from the support plate and the rod bracket plate.
2. Put one end of the stabilizer rod between the fuel tank support brackets. If the long stabilizer rod is used, put the other end of the rod in the hole in the rod bracket plate. If the short stabilizer rod is used, put the other end of the rod in the hole in the height adjustment bracket.
3. Remove the klik pin and the clevis pin from the caster wheel that is locked in position. Turn the caster fork 90 degrees. Align the hole in the shaft of the caster fork with the holes in the caster support. Install the clevis pin and the klik pin. Repeat this instruction for the gauge wheel that is on the mower deck.
4. Close the fuel valve on the fuel tank by turning the valve clockwise.

**NOTE:** Do not disconnect the drawbar assembly from the tractor.

5. Start the tractor engine. Move the tractor forward. The wing mower will move in position to be towed behind the tractor.

**⚠ WARNING:** Do not start the engine on the wing mower when the wing mower is being towed. Operate the wing mower only when the mower is in the mowing position. See Section 3.13.



6. To put the wing mower in the mowing position, repeat step 3 for the caster wheel and the gauge wheel.
7. Move the wing mower in position and connect the stabilizer rod as shown in Section 3.13.
8. Open the fuel valve on the fuel tank by turning the valve counterclockwise.

**! WARNING:** Always close the fuel valve on the fuel tank when the engine is not running.

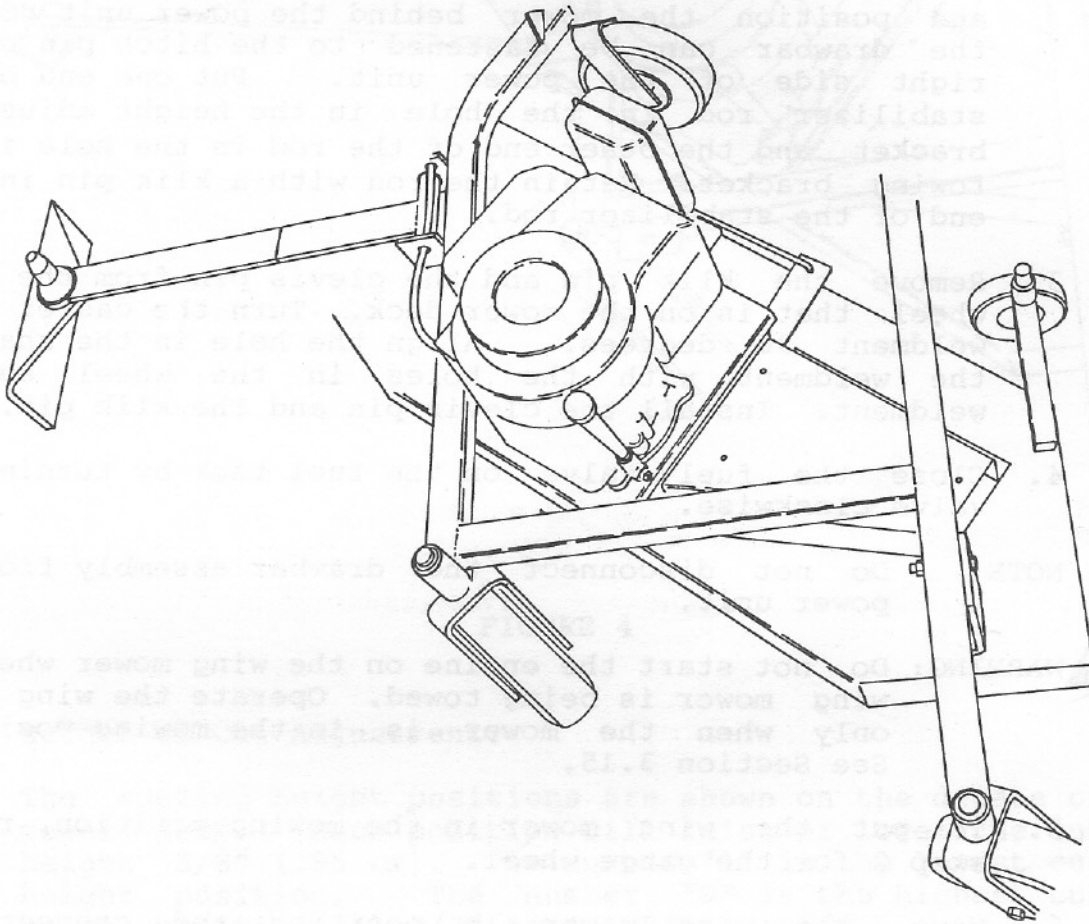



FIGURE 3

### 3.15 Installation of the Wing Mower on the Pro Master Power Unit. See Figure 1.

1. Put the wing mower in position on the left side of the power unit.
2. Put the ball joint of the drawbar assembly on the hitch pin and retain with a klik pin.
3. Put one end of the stabilizer rod in the rod bracket plate and the other end in the stabilizer rod mounting tube. Retain with klik pins.




3.16 Installation of the Wing Mower on the Pro Master Power Unit for Towing. See Figure 4.


 **WARNING:** Stop the engines.

1. Remove the stabilizer rod from the stabilizer rod mounting tube and the rod bracket plate.
2. Remove the drawbar from the hitch pin on the left side and position the mower behind the power unit so that the drawbar can be fastened to the hitch pin on the right side of the power unit. Put one end of the stabilizer rod in the hole in the height adjustment bracket and the other end of the rod in the hole in the towing bracket. Retain the rod with a klik pin in each end of the stabilizer rod.
3. Remove the klik pin and the clevis pin from the gauge wheel that is on the mower deck. Turn the caster wheel weldment 90 degrees. Align the hole in the shaft of the weldment with the holes in the wheel support weldment. Install the clevis pin and the klik pin.
4. Close the fuel valve on the fuel tank by turning the valve clockwise.

**NOTE:** Do not disconnect the drawbar assembly from the power unit.

 **WARNING:** Do not start the engine on the wing mower when the wing mower is being towed. Operate the wing mower only when the mower is in the mowing position. See Section 3.15.

5. To put the wing mower in the mowing position, repeat step 2 for the gauge wheel.
6. Move the wing mower in position and connect the stabilizer rod and drawbar as described in Section 3.15.
7. Open the fuel valve on the fuel tank by turning the valve counterclockwise.

 **WARNING:** Always close the fuel valve on the fuel tank when the engine is not running.

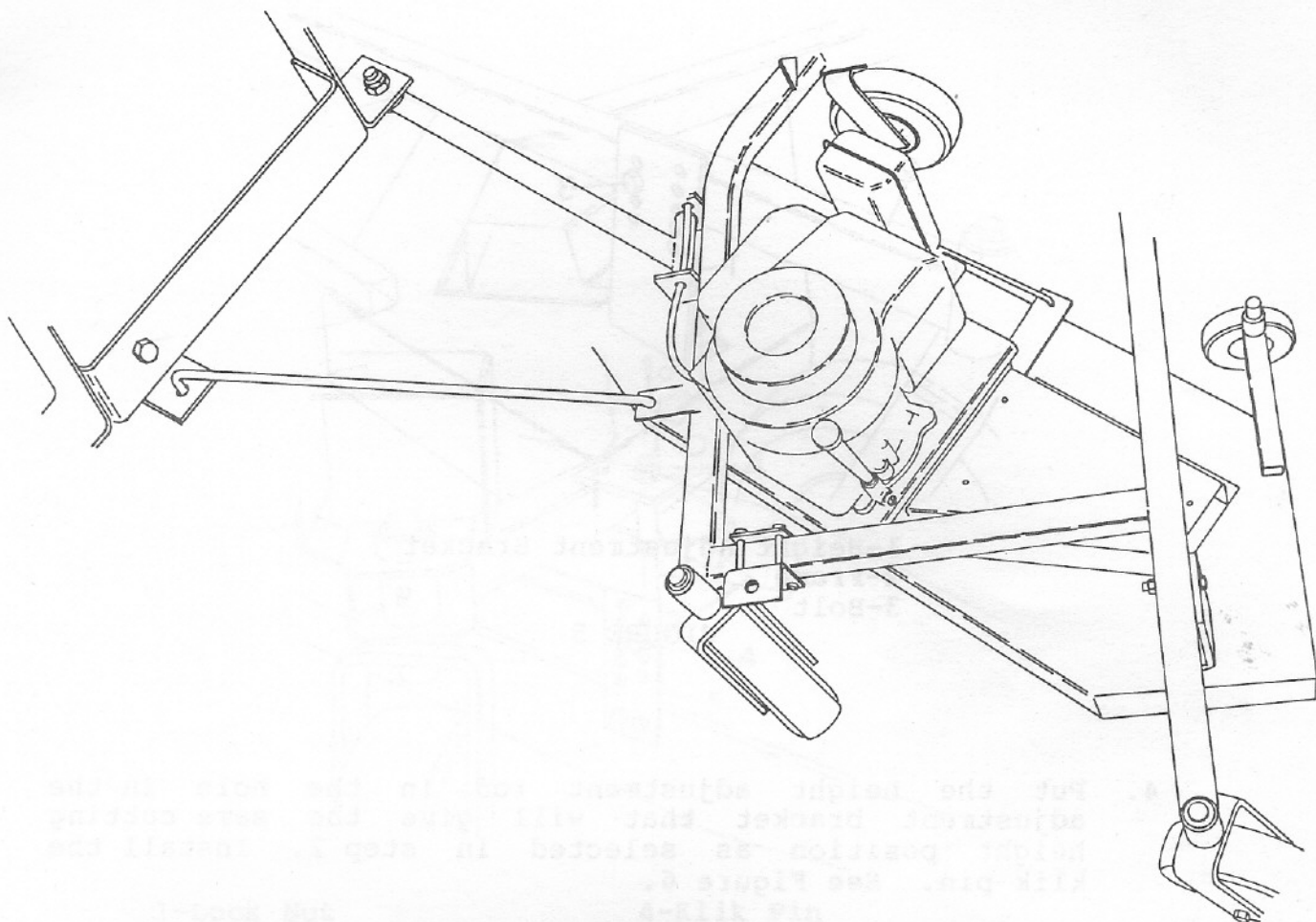


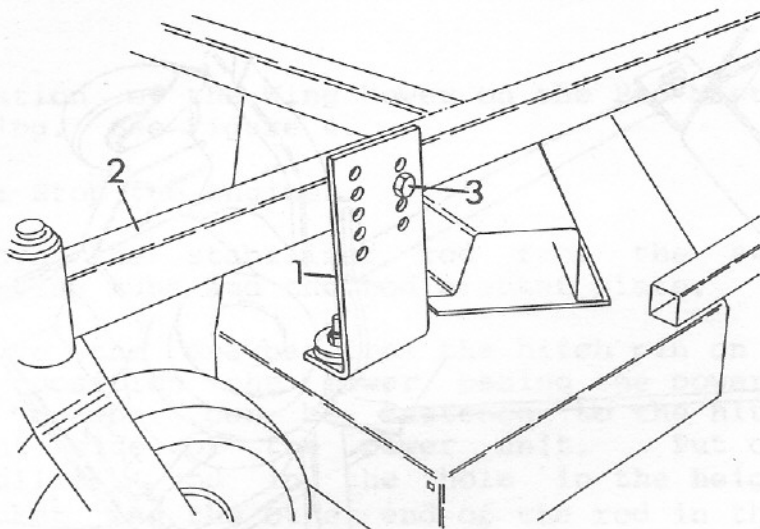
FIGURE 4

### 3.17 Height of Cut Adjustment:

The cutting height positions are shown on the decals on the mower deck. Each position will raise or lower the cutting height  $3/8$ " (.95 cm). The number "1" is the lowest cutting height position. The number "9" is the highest cutting height position. (1-1/2" to 4-1/2").

To adjust the cutting height of the wing mower, follow the instructions in this section.

1. Remove the nut from the bolt that fastens the height adjustment bracket to the frame. Remove the bolt. See Figure 5.
2. Select the hole in the height adjustment bracket that will give the needed cutting height. Align the hole in the height adjustment bracket with the hole in the frame. Put the bolt through the holes and install the nut. Tighten the bolt to the torque of 60 ft. lbs. (82 N.m).
3. Remove the klik pin from the height adjustment rod.



1-Height Adjustment Bracket  
 2-Frame  
 3-Bolt

FIGURE 5

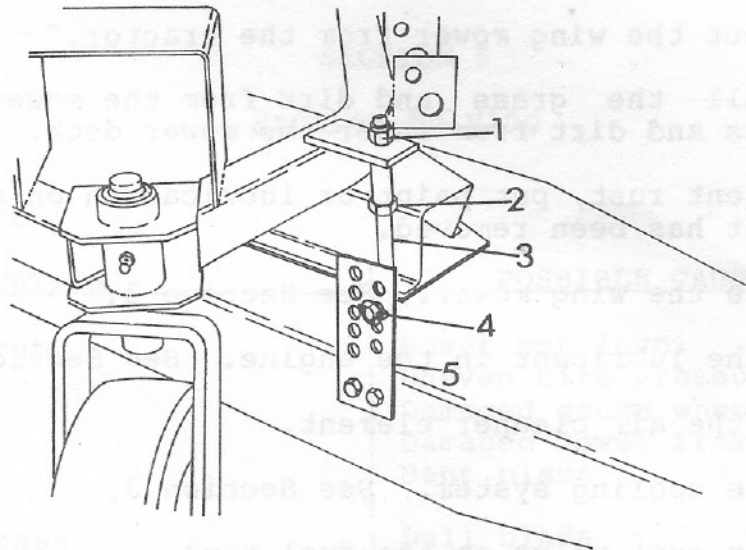
4. Put the height adjustment rod in the hole in the adjustment bracket that will give the same cutting height position as selected in step 2. Install the klik pin. See Figure 6.
5. Repeat steps 3 and 4 for the other adjustment rod.
6. Adjust the gauge wheel that is on the mower deck to 1/2" (1.27 cm) above the ground.

### 3.18 Wing Mower Leveling Adjustment:

After every 200 hours of operation, check the level of the mower deck. To check or adjust the level of the mower deck, follow the instructions in this section.

1. Put the wing mower on a flat surface.
2. Stop the engine.
3. Make sure all the height adjustments are in the same cutting height position.
4. Measure the distance from the top edge of the mower deck to the floor at the height adjustment bracket. See Figure 6 for the location of the height adjustment bracket.
5. Measure the distance from the top edge of the mower deck to the floor at the height adjustment rods. See Figure 6 for the location of the height adjustment rods.





- |                        |                            |
|------------------------|----------------------------|
| 1-Lock Nut             | 4-Klik Pin                 |
| 2-Jar Nut              | 5-Height Adjustent Bracket |
| 3-Height Adjustent Rod |                            |

FIGURE 6

6. If the distance is not the same, loosen the jar nut that is under the bracket.
7. Turn the lock nut on each height adjustent rod until the measurement from the top edge of the mower deck to the floor is the same as the measurement at the height adjustent bracket. Tighten the jar nut against the sleeve.
8. Repeat steps 4 through 7 until all the measurements are the same.




## SECTION 4

### Storage

When the wing mower will not be operated for three months or more, follow the instructions in this section.

1. Disconnect the wing mower from the tractor.
2. Clean all the grass and dirt from the mower. Remove all the grass and dirt from under the mower deck.
3. To prevent rust, put paint or lubrication on any area where the paint has been removed.
4. Lubricate the wing mower. See Section 3.
5. Change the lubricant in the engine. See Section 3.
6. Replace the air cleaner element.
7. Clean the cooling system. See Section 3.
8. Close the fuel valve on the fuel tank.

 **WARNING:** Gasoline is highly flammable.

9. Remove the fuel line from the fuel valve.
10. Open the fuel valve and drain the gasoline into an approved fuel container.
11. Connect the fuel line to the fuel valve.
12. Start the engine and let it run until all the fuel is used and the engine stops.
13. Remove the electrical cable from the spark plug and remove the spark plug.
14. Put 20 drops of engine lubricant into the hole for the spark plug.
15. Install the spark plug. Do not install the electrical cable on the spark plug.
16. Pull the starter handle five times.

WHEEL TRACTOR  
 MOWER ADAPTER KIT FOR  
 STUMP PULLER UNIT  
 PRO PARTS DEPARTMENT

## SECTION 5

Problem Solving

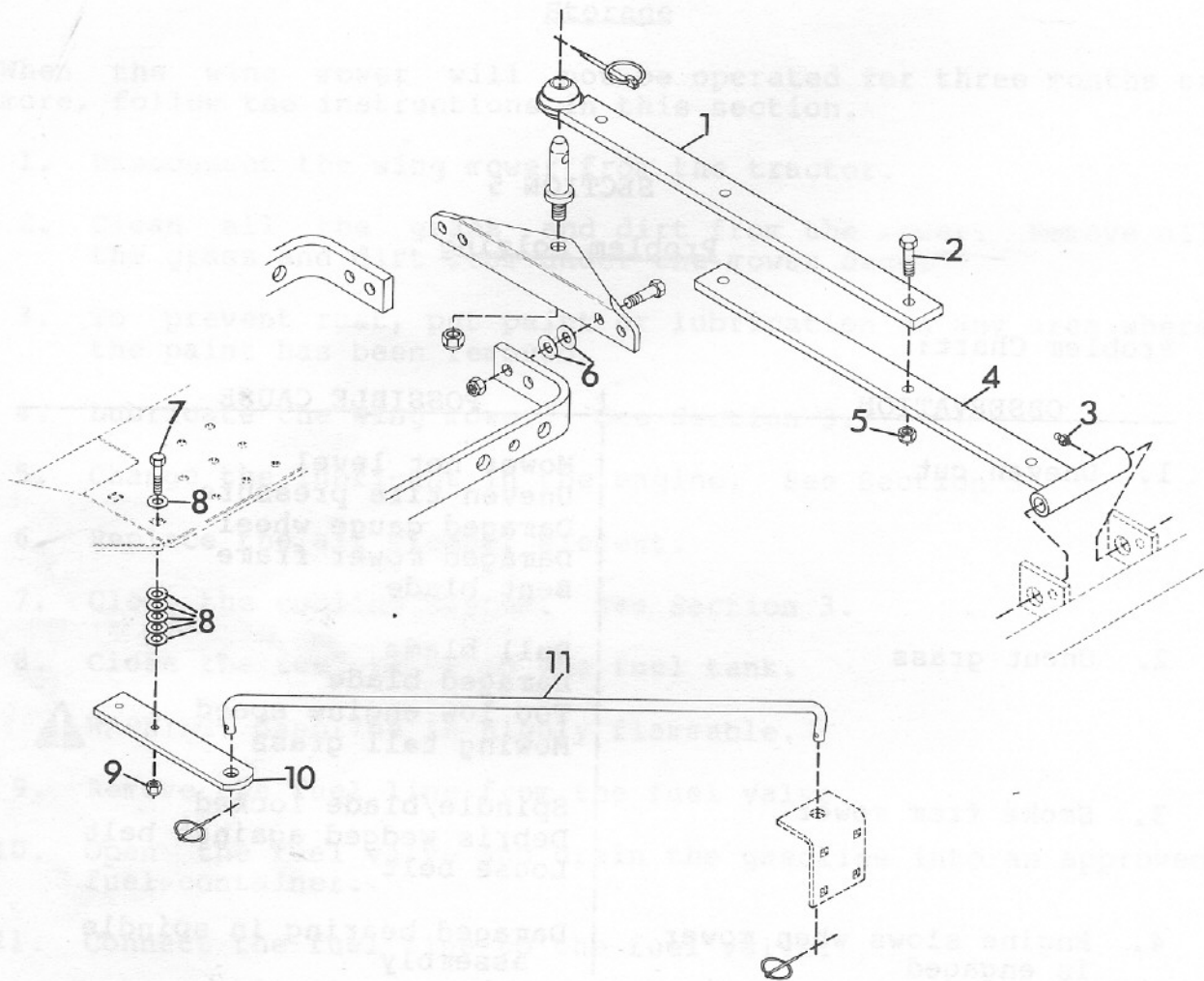
Problem Chart:

OBSERVATION	POSSIBLE CAUSE
1. Uneven cut	Mower not level Uneven tire pressure Damaged gauge wheel Damaged mower frame Bent blade
2. Uncut grass	Dull blade Damaged blade Too low engine speed Mowing tall grass
3. Smoke from mower	Spindle/blade locked Debris wedged against belt Loose belt
4. Engine slows when mower is engaged	Damaged bearing in spindle assembly
5. Excessive noise	Unbalanced blade(s) Idler bearings Damaged bearings in spindle assembly

SECTION 6

Illustrated Parts and Parts List

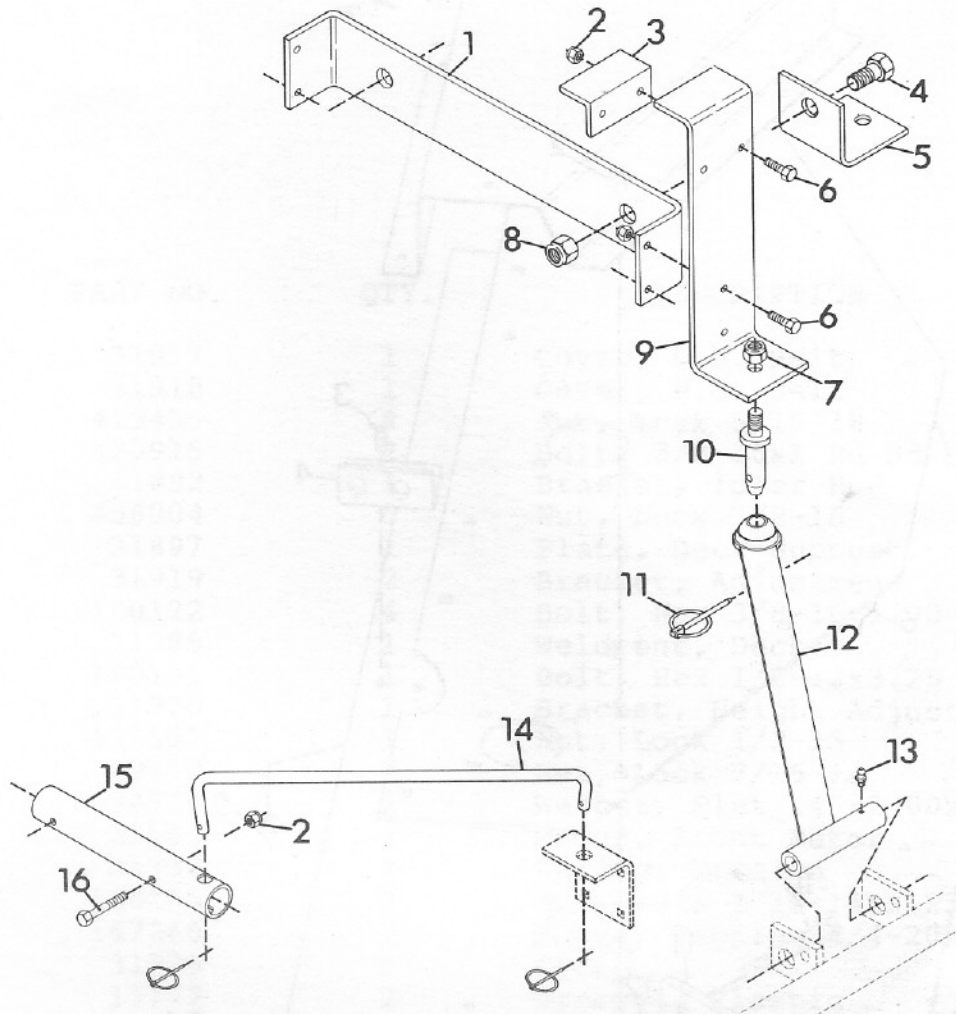
WING MOWER ADAPTER KIT FOR  
4-WHEEL TRACTORS



ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	31872	1	Weldment, Rear Ball Joint
2	180179	2	Bolt, Hex 1/2-13x1.75
3	411027	1	Fitting, Lube 1/4-28
4	31874	1	Weldment, Rear Joint
5	435507	2	Nut, Lock 1/2-13
6	120390	8	Washer, Flat .563x1.375x.109
7	180128	2	Bolt, Hex 3/8-16x1.75
8	120388	12	Washer, Flat .438x1.000x.083
9	456004	2	Nut, Lock 3/8-16
10	31926	1	Plate, Support
11	31927	1	Rod, Stabilizer
	31928	1	Rod, Stabilizer 60"

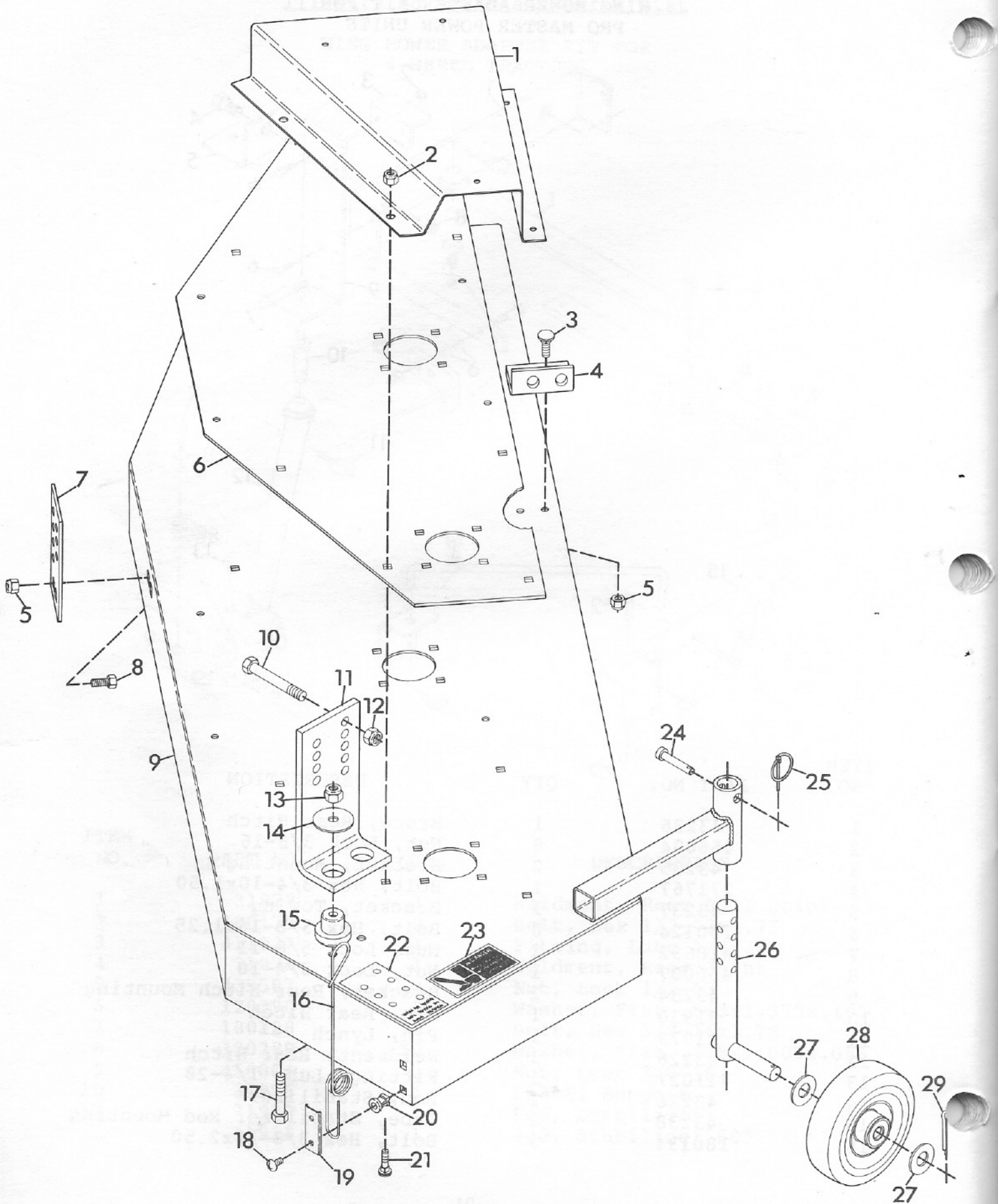


WING MOWER ADAPTER KIT FOR  
PRO MASTER POWER UNITS



ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	43236	1	Brace, Rear Hitch
2	456004	9	Nut, Lock 3/8-16
3	43235	2	Bracket, Mounting
4	271767	1	Bolt, Hex 3/4-10x1.50
5	43237	1	Bracket, Towing
6	180124	8	Bolt, Hex 3/8-16x1.25
7	418692	1	Nut, Lock 5/8-11
8	456007	1	Nut, Lock 3/4-10
9	43234	2	Bracket, Rear Hitch Mounting
10	31930	1	Pin, Rear Hitch
11	21979	1	Pin, Lynch
12	43226	1	Weldment, Rear Hitch
13	411027	1	Fitting, Lube 1/4-28
14	43228	1	Rod, Stabilizer
15	43238	1	Tube, Stabilizer Rod Mounting
16	180134	1	Bolt, Hex 3/8-16x2.50

# MOWER DECK

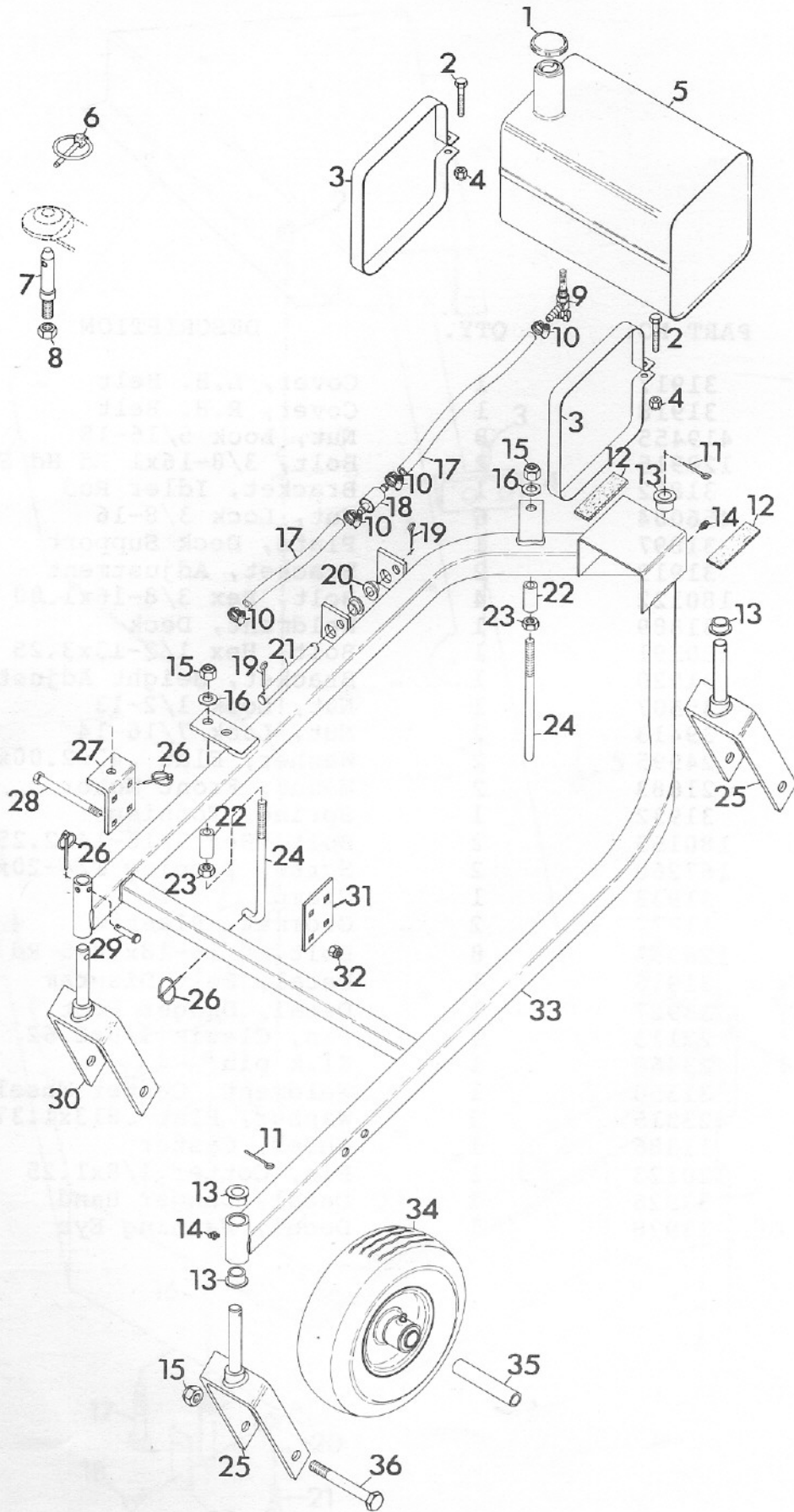


## MOWER DECK

ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	31917	1	Cover, L.H. Belt
	31918	1	Cover, R.H. Belt
2	419455	8	Nut, Lock 5/16-18
3	120915	2	Bolt, 3/8-16x1 Rd Hd Sq Nk
4	31892	1	Bracket, Idler Rod
5	456004	6	Nut, Lock 3/8-16
6	31897	1	Plate, Deck Support
7	31919	2	Bracket, Adjustment
8	180122	4	Bolt, Hex 3/8-16x1.00
9	31889	1	Weldment, Deck
10	180191	1	Bolt, Hex 1/2-13x3.25
11	31920	1	Bracket, Height Adjustment
12	435507	1	Nut, Lock 1/2-13
13	39413	2	Nut, Lock 7/16-14
14	24995	2	Washer, Flat .45x2.00x.080
15	21683	2	Mount, Front Motor
16	31932	1	Spring, Torsion
17	180155	2	Bolt, Hex 7/16-14x2.25
18	167260	2	Screw, Tapping 1/4-20x.625 P/HD
19	31933	1	Clamp
20	11777	2	Grommet, Plastic
21	126353	8	Bolt, 5/16-18x.875 Rd Hd Sq Nk
22	31916	1	Decal, Belt Diagram
23	33927	1	Decal, Danger Foot
24	22113	1	Pin, Clevis 3/8x2.62
25	23468	1	Klik pin
26	31350	1	Weldment, Caster Wheel Axle
27	423315	2	Washer, Flat .813x1.37x.100
28	11386	1	Wheel, Caster
29	120123	1	Pin, Cotter 1/8x1.25
NS	33926	1	Decal, Danger Hand
NS	33928	1	Decal, Warning Eye



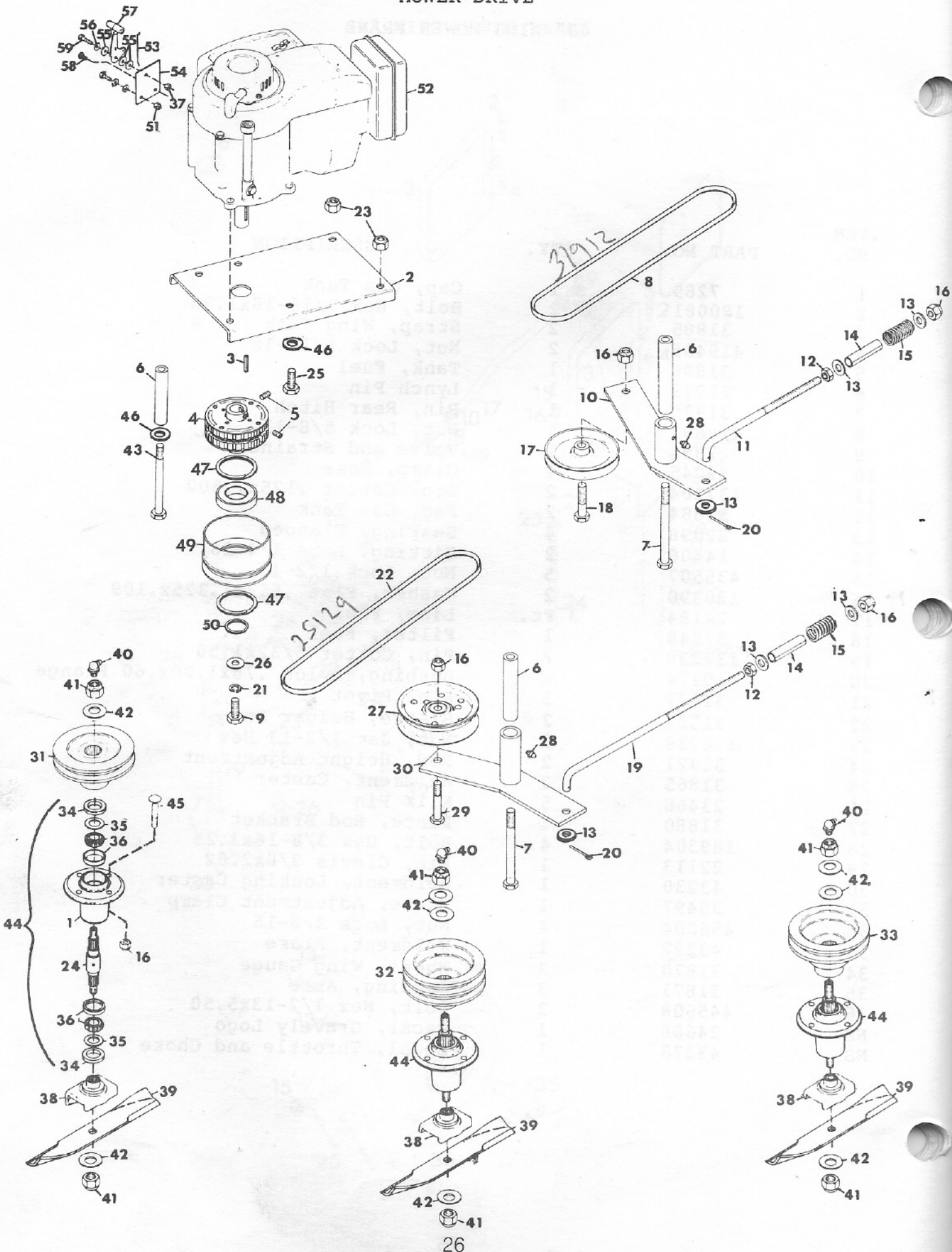
# 40" WING MOWER FRAME



40" WING MOWER FRAME

ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	7289	1	Cap, Gas Tank
2	180081	2	Bolt, Hex 5/16-18x1.25
3	31885	2	Strap, Wing Tank
4	419455	2	Nut, Lock 5/16-18
5	31886	1	Tank, Fuel
6	21979	1	Lynch Pin
7	31930	1	Pin, Rear Hitch
8	418692	1	Nut, Lock 5/8-11
9	7354	1	Valve and Strainer
10	32045	4	Clamp, Hose
11	137204	2	Pin, Cotter .125x1.500
12	31884	2	Pad, Gas Tank
13	22098	4	Bearing, Flanged
14	14406	2	Fitting, Lube 1/4-28
15	435507	5	Nut, Lock 1/2-13
16	120390	2	Washer, Flat .563x1.375x.109
17	21134	3 Ft.	Line, Fuel
18	31848	1	Filter, Fuel
19	137228	2	Pin, Cotter 5/32x1.50
20	10174	2	Bushing, Nylon .76x1.00x.60 Flange
21	31877	1	Pin, Pivot
22	31883	2	Sleeve, Height Rod
23	120238	2	Nut, Jar 1/2-13 Hex
24	31921	2	Rod, Height Adjustment
25	31865	2	Weldment, Caster
26	23468	5	Klik Pin
27	31880	1	Plate, Rod Bracket
28	189304	4	Bolt, Hex 3/8-16x3.25
29	22113	1	Pin, Clevis 3/8x2.62
30	43230	1	Weldment, Locking Caster
31	35497	1	Plate, Adjustment Clamp
32	456004	4	Nut, Lock 3/8-16
33	43222	1	Weldment, Frame
34	31870	3	Wheel, Wing Gauge
35	31871	3	Bushing, Axle
36	445608	3	Bolt, Hex 1/2-13x5.50
NS	24608	1	Decal, Gravely Logo
NS	43373	1	Decal, Throttle and Choke

# MOWER DRIVE





## MOWER DRIVE

ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	21215	1	Housing, Bearing
2	31908	1	Plate, Engine
3	9213	1	Key, Square 1/4x1
4	31910	1	Clutch, Rotor Asr.
5	102569	2	Screw, Set 1/4-20x.375 HSCP
6	31911	4	Spacer, Engine
7	417278	2	Bolt, Hex 5/16-18x4.75
8	31912	1	V-Belt, Driven
9	43317	1	Bolt, Hex M10x1.50x25mm
10	31903	1	Weldrent, Idler R.H.
11	31914	1	Rod, Idler R.H.
12	120377	2	Nut, Hex 3/8-16
13	120394	6	Washer, Flat .406x.812x.065
14	21381	2	Sleeve, Spring For.-Rev.
15	31915	2	Spring, Idler Compression
16	456004	16	Nut, Lock 3/8-16
17	31906	1	Pulley, V-Idler
18	180128	1	Bolt, Hex 3/8-16x1.75
19	31913	1	Rod, Idler L.H.
20	121224	2	Pin, Cotter 3/32x1.00
21	120383	1	Washer, Lock 7/16 Reg.
22	25129	1	Belt, 40 Inch Mower
23	413447	2	Nut, Lock 5/16-18
24	21216	1	Shaft, Spindle
25	21913	2	Bolt, Hex M8x1.25 25mm
26	120389	1	Washer, Flat .500x1.250x.083
27	21060	1	Sheave, Idler
28	14406	2	Fitting, Lube 1/4-28
29	180130	1	Bolt, Hex 3/8-16x2.00
30	31900	1	Weldrent, Idler L.H.
31	25125	1	Sheave, Spindle
32	31899	1	Pulley, Center
33	31898	1	Pulley, L.H.
34	21211	2	Seal, Steel
35	20743	2	Washer, Flat .975x1.970x.030
36	38199	2	Assembly, Bearing
37	424215	1	Nut, Lock 1/4-20
38	23026	3	Weldrent, Blade Cradle
39	11234	3	Blade
40	411019	3	Fitting, Lube 1/8 Pipe 90 Deg.
41	418692	6	Nut, Lock 5/8-11
42	22545	8	Spring, Belleville
43	43316	2	Bolt, Hex M8x1.25x140mm
44	21306	3	Spindle Assembly
45	126402	12	Bolt, 3/8-16x1.25 Rd Hd Sq Nk

MOWER DRIVE

ITEM NO.	PART NO.	QTY.	DESCRIPTION
	21215	1	Housing, Bearing
	31908	1	Plate, Engine
	3213	1	Key, Square 1/4x1
	31910	1	Clutch, Rotor Ass.
	102569	2	Screw, Set 1/4-20x.375 HSCP
	31911	4	Spacer, Engine
	417278	2	Bolt, Hex 5/16-18x4.75
	31912	1	V-Belt, Driven
	43317	1	Bolt, Hex M10x1.50x25mm
	31903	1	Weldment, Idler R.H.
	31914	1	Rod, Idler R.H.
	120377	2	Nut, Hex 3/8-16
	120394	6	Washer, Flat .406x.812x.062
	31987	2	Sheave, Spring Rev.
	31913	2	Spring, Idler Compression
46	21909	4	Nut, Lock 3/8-16
47	32143	2	Washer, Lock 8mm Spring
48	32144	1	Ring, Retaining Internal Spiral
49	32145	1	Bearing, Ball 2.677x1.574x.590
50	32142	1	Housing, Clutch
51	419454	1	Ring, Retaining External Spiral
52	42973	1	Nut, Lock 1/4-20
53	43371	1	Engine, Kawasaki Spec. ES01
54	43372	1	Wire, Throttle
55	11772	3	Plate, Throttle
56	11774	1	Washer, Friction
57	11773	1	Washer, Spring
58	160515	1	Assembly, Knob and Lever
59	180020	1	Screw, Machine 1/4-20x.50
		1	Bolt, Hex 1/4-20x.75
	25125	1	Sheave, Spindle
	31899	1	Pulley, Center
	31898	1	Pulley, L.H.
	21211	2	Seal, Steel
	20743	2	Washer, Flat .975x1.970x.030
	38199	2	Assembly, Bearing
	424215	1	Nut, Lock 1/4-20
	23026	3	Weldment, Blade Cradle
	11234	3	Blade
	41109	3	Fitting, Lube 1/8 Pipe 90 Deg.
	41892	6	Nut, Lock 5/8-11
	22245	8	Spring, Belleville
	43316	2	Bolt, Hex M8x1.25x140mm
	21306	3	Spindle Assembly
	126402	12	Bolt, 3/8-16x1.25 Rd Hd Sp Nk

SECTION 7

Specifications

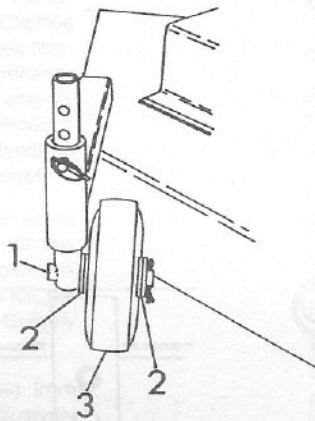
<u>Item</u>	<u>4-Wheel Tractor</u>	<u>Pro Master Power Unit</u>
Width of Cut:	40" (1016mm)	
Height of Cut:	1.5"	(38mm)
	1.88"	(48mm)
	2.25"	(57mm)
	2.63"	(67mm)
	3.00"	(76mm)
	3.38"	(86mm)
	3.75"	(95mm)
	4.13"	(105mm)
4.50"	(114mm)	
No. of Spindles/Blades	3	
Weight:	442 lbs.	
Width: Operating Position	75.0"	(1905mm)
	57.0"	(1448mm)
Towing Position	66.0"	(1676mm)
	45.0"	(1143mm)
Height:	15.0"	(381mm)
	15.0"	(381mm)
Length: Operating Position	80.0"	(2032mm)
	69.0"	(1753mm)
Towing Position	74.0"	(1880mm)
	83.0"	(2108mm)
Tire Pressure:	20-psi (138 kN/m <sup>2</sup> )	



## SECTION 8

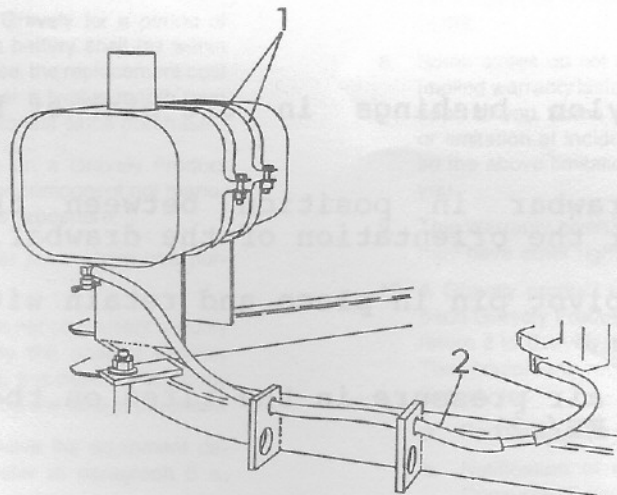
### Set-up Instructions

1. Remove the wing mower and completing kits from the shipping container.
2. Put a .813 x 1.37 x .100 flat washer on the caster wheel weldment. Follow with the caster wheel (lube fitting away from spindle). Add another .813 x 1.37 x 1.37 flat washer and retain with a 1/8 x 1.25 cotter pin.
3. Put a film of grease on the spindle of the caster wheel weldment.
4. Slide the caster wheel weldment into the bracket on the mower deck from the bottom. Retain with a 3/8 x 2.62 clevis pin and a klik pin. See Figure 7.
5. Set the frame weldment in position over the mower deck. See Figure 1.
6. Put a 1/2-13 x 3.25 bolt through the height adjustment bracket then through the frame. Secure with a 1/2-13 lock nut. See Figure 5. NOTE: Select the hole in the bracket which corresponds to the desired height of cut. See Section 3.17.
7. Similarly install the height adjustment rods between the bracket and the frame. (Same hole number as in step #6). Retain with 1/2-13 lock nuts and klik pins.
8. Level the mower. See Section 3.18.
9. Set the fuel tank, centered, on the fuel tank bracket.
10. Put the fuel tank straps around the fuel tank and the fuel tank bracket in line with the fuel tank pads. Retain with 5/16-18 x 1.25 bolts and 5/16-18 lock nuts. Tighten the bolts just enough to keep the fuel tank from moving.
11. Route the fuel line through the bracket holes on the frame and onto the fitting at the fuel tank. Secure with a worm clamp. See Figure 8.
12. Put a plastic grommet in each hole on the corner of the mower deck.
13. Put edge locator in position followed by the clamp. Retain with two 1/4-20 x .50 pan head machine screws. See the illustration.
14. Put the rod bracket and plate in position on the frame. See Diagram 3. Note the position for use of the wing mower for the tractor or the Pro Master. Retain with four 3/8-16 x 3 bolts and 3/8-16 lock nuts.



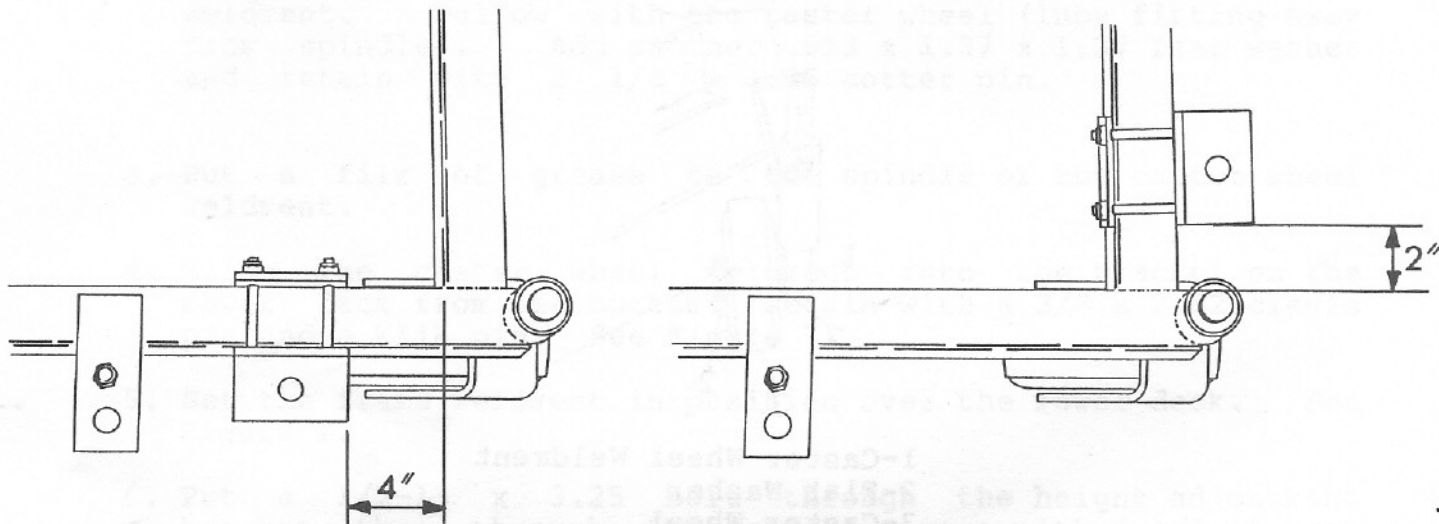
- 1-Caster Wheel Weldment
- 2-Flat Washer
- 3-Caster Wheel

FIGURE 7



- 1 - Fuel Tank Strap
- 2 - Fuel Line

FIGURE 8



4-WHEEL TRACTOR

PROMASTER POWER UNIT

DIAGRAM 3

15. Put the nylon bushings in the bracket holes on the mower frame.
16. Put the drawbar in position between the bushings. See Figure 1 for the orientation of the drawbar.
17. Slide the pivot pin in place and retain with two 5/32 x 1.50 cotter pins.
18. Adjust the air pressure in the tires on the caster wheels to 20 psi (138 KN/π<sup>2</sup>).



## 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.

 **GRAVELY.**

One Gravely Lane, Clemmons, NC 27012