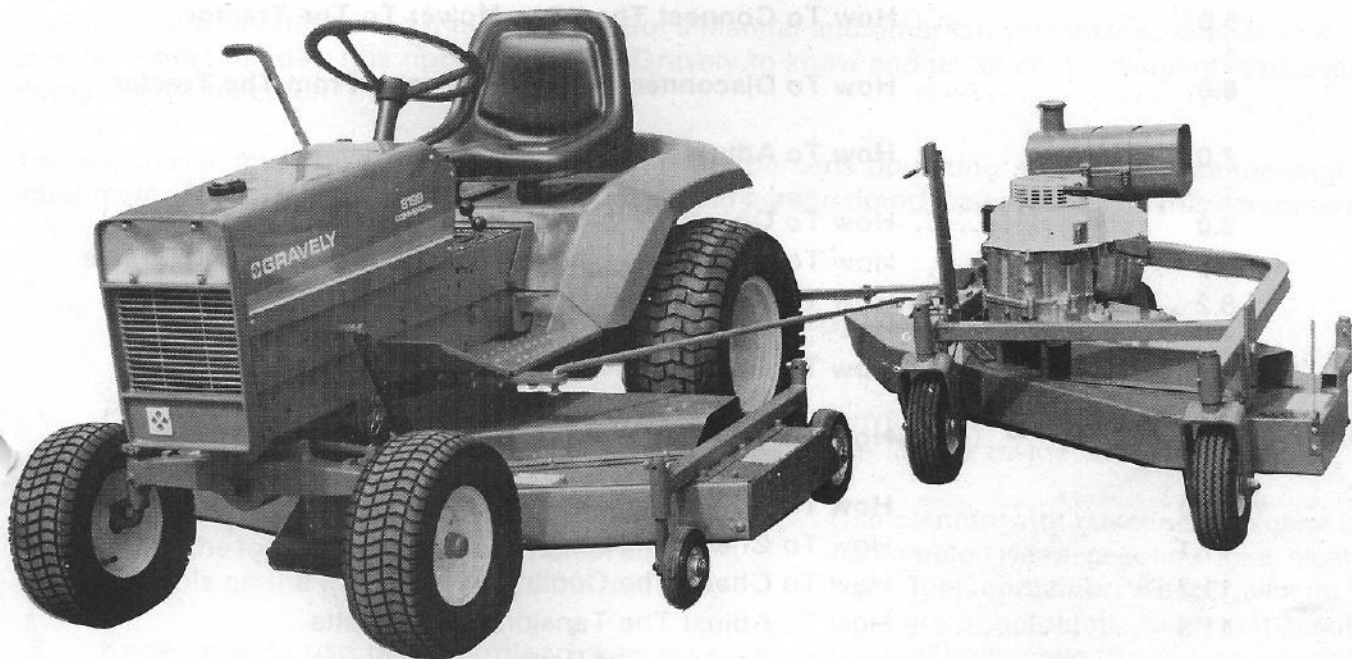


# **GRAVELY** OPERATOR'S MANUAL

**NAME: 40 INCH ENGINE DRIVEN  
WING MOWER**

**PART NUMBER(S): 31855**



The 40 Inch Engine Driven Wing Mower is for use with the Gravely 8000 Series tractor that is equipped with a 60 Inch Rotary Mower or a 50 Inch Rotary Mower. The wing mower can not be used with a tractor that is equipped with a 40 Inch Rotary Mower.

All reference to left side, right side, front and rear are given from the operator's position.

To continue its program of quality and design improvement, the manufacturer reserves the right to change specifications, designs and prices without notice and incurring obligation.

Form No. 32068 (2-80)


Printed in U.S.A.



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**NOTE:** This warning symbol  indicates that there is danger to persons or equipment. Read these warnings carefully and follow them.

This section gives warnings for you about operating and doing maintenance on this equipment.

Using this equipment the wrong way can cause injury to persons and damage to the equipment. Persons operating or doing maintenance on this equipment must read the Operator's Manual and follow the instructions.

It is important to understand that this Operator's Manual and other Gravely instruction books do not list every possible danger. It is not possible for Gravely to know and tell of all the dangers in operating and doing maintenance on the equipment.

The purchaser must give these instructions to the persons operating and doing maintenance on this equipment. The purchaser must get the operator and person doing maintenance on this equipment to use eye and foot protection.

### **1.1 Instructions Before Operation**

1. Read this Operator's Manual and the Operator's Manual for the tractor carefully before operating or doing maintenance.
2. Learn the location and the function of all the controls on the wing mower and the tractor.
3. Know how to use the controls to stop the tractor and the wing mower quickly.
4. Never permit children to operate or ride on the tractor or the wing mower.
5. Use caution with gasoline. Gasoline is very flammable. Keep gasoline in a clean and tight fuel container. Keep gasoline away from fire or hot items. Never put gasoline in the fuel tank while the engine is running or hot. Clean any leakage of gasoline from the wing mower before starting the engine.

### **1.2 Preparation For Operation**

1. Check the area of operation. Remove all material that will be thrown by the mower.
2. Make sure all the shields and the guards are in the correct position before operating.
3. Wear strong shoes. Wear clothing that is not loose. Wear protection for your eyes.
4. Before starting the engine of the tractor, put the direction control lever in the "NEUTRAL" position and the "PTO" control in the "OUT" position.
5. Keep the tractor and the mower in good operating condition. Do the maintenance as shown in the Operator's Manual.
6. Do not operate the tractor where the area of operation is too dark for the operator to see.
7. Never operate the tractor or the mower when there is damage to any part or when any part is not in the correct position. Replace all the parts that are damaged or missing before operating.



### 1.3 Operation

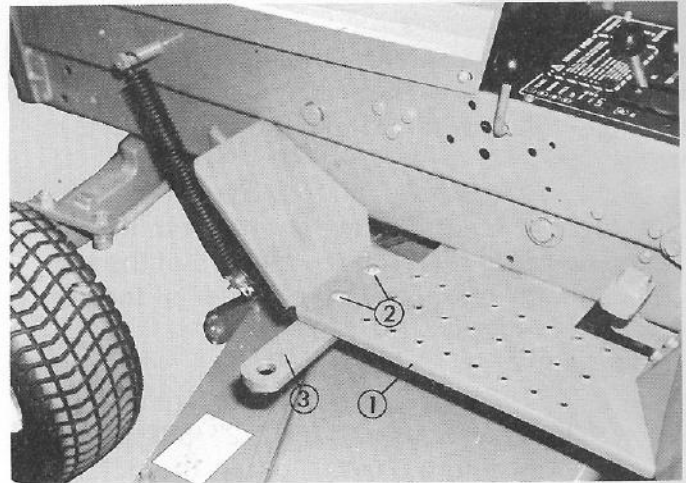
1. Keep away from moving parts.
2. Keep all persons and animals away from the area of operation.
3. Do not let persons ride on the tractor or the mower.
4. When operating on slopes, use a slow speed and engage the direction control lever slowly.
5. When operating on a slope, go up and down the slope.
6. Always look for and keep away from holes and other hazards.
7. Use caution when moving in the reverse direction. Look for persons and hazards.
8. After hitting an item, stop the tractor. Stop the engine on the tractor and the wing mower. Check for damage. If there is damage, make repairs before starting the engines.
9. Operate the equipment only when in the operator's position.
10. Before leaving the tractor, put the PTO control in the "OUT" position. Turn the key in the ignition switch to the "OFF" position and remove the key. Put the throttle lever on the wing mower in the "STOP" position.
11. If there is a sudden change in the sound or vibration of the tractor or the mower, stop the tractor. Stop the engine on the tractor and the wing mower. Check for damage. If there is damage, make repairs before operating.
12. Never start and run the engine inside a building except to move the equipment outside. Exhaust fumes are dangerous.
13. Always follow traffic laws while going on or near a road.
14. Go slow on surfaces where the tractor can slide.
15. Before leaving the operator's position to make adjustments or to do maintenance, put the PTO control lever in the "OUT" position. Turn the key in the ignition switch to the "OFF" position. Put the throttle lever on the wing mower in the "STOP" position. Wait until the engine and moving parts have stopped.



## 2.0 HOW TO PREPARE THE TRACTOR



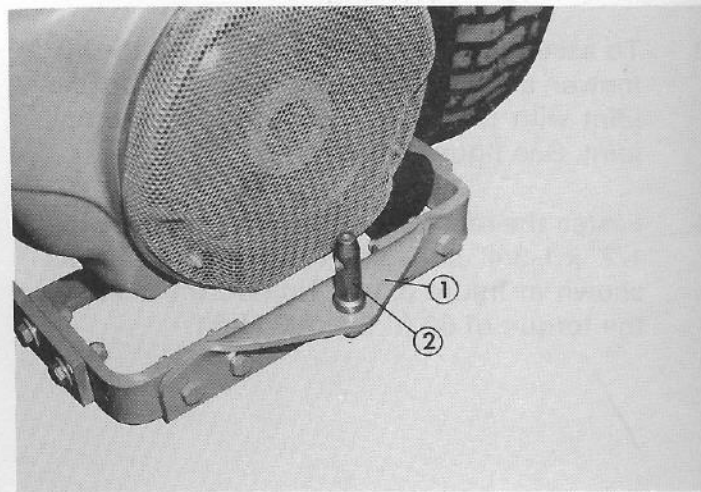
1. Put the two 3/8" x 1-3/4" bolts in the square holes that are in the footboard on the left side of the tractor. See figure 2.0-1.
2. Put six flat washers on each bolt. Put the support plate on the bolts. Put a 3/8" lock nut on each bolt. Tighten the nuts to the torque of 25 ft. lbs. (34 N.m). See figure 2.0-1.



- 1 - Footboard
- 2 - Bolts
- 3 - Support Plate

Figure 2.0-1

3. Put the threaded section of the hitch pin into the hole that is in the rear hitch plate on the tractor. Install the 5/8" lock nut on the hitch pin. Tighten the nut to the torque of 120 ft. lbs. (163 N.m). See figure 2.0-2.



- 1 - Hitch Plate
- 2 - Hitch Pin

Figure 2.0-2

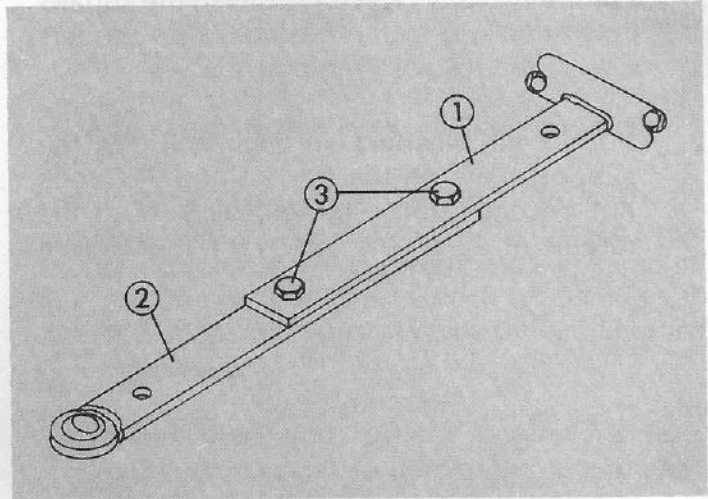


## 3.0 HOW TO ASSEMBLE THE DRAWBAR



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.

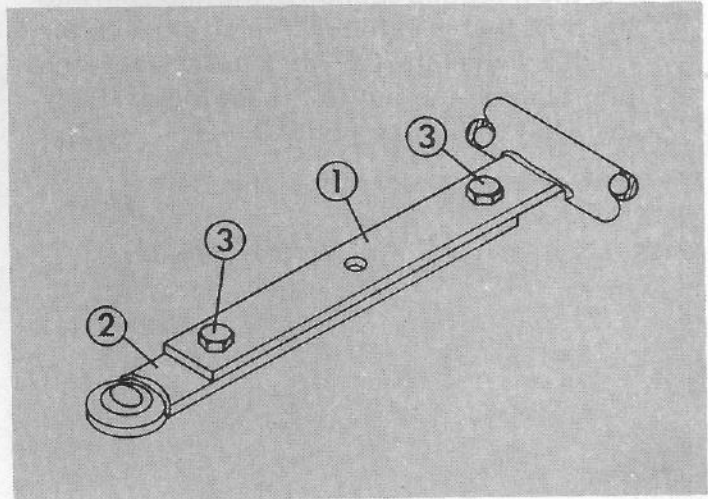
1. To assemble the drawbar to fit with the 60" mower, align the hole in the end of the rear joint with the hole in the center of the ball joint. See figure 3.0-1.
2. Fasten the rear joint to the ball joint with the 1/2" x 1-3/4" bolts and the 1/2" lock nuts as shown in figure 3.0-1. Tighten the bolts to the torque of 60 ft. lbs. (82 N.m).



- 1 - Rear Joint
- 2 - Ball Joint
- 3 - Bolts

Figure 3.0-1

3. 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. See figure 3.0-2.
4. Fasten the rear joint to the ball joint with the 1/2" x 1-3/4" bolts and the 1/2" lock nuts as shown in figure 3.0-2. Tighten the bolts to the torque of 60 ft. lbs. (82 N.m).



- 1 - Rear Joint
- 2 - Ball Joint
- 3 - Bolts

Figure 3.0-2





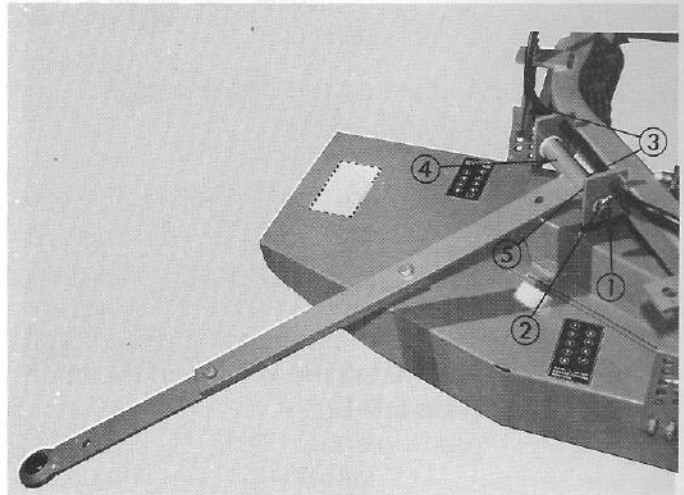
## 4.0 HOW TO INSTALL THE DRAWBAR ASSEMBLY



1. Remove the cotter pin from the pivot pin. Remove the pivot pin from the drawbar support. See figure 4.0-1.
2. If the wing mower is to be connected to a tractor that has a single cylinder engine, put the drawbar pivot in the drawbar support with the short side of the drawbar pivot toward the front. See figure 4.0-1.

If the wing mower is to be connected to a tractor that has a two cylinder engine, put the drawbar pivot in the drawbar support with the short side of the drawbar pivot toward the rear. See figure 4.0-1.

3. Align the hole in the drawbar pivot with the holes in the drawbar support. Put the pivot pin through the holes and install the cotter pin. See figure 4.0-1.



- 1 - Cotter Pin
- 2 - Pivot Pin
- 3 - Drawbar Support
- 4 - Drawbar Pivot
- 5 - Short Side

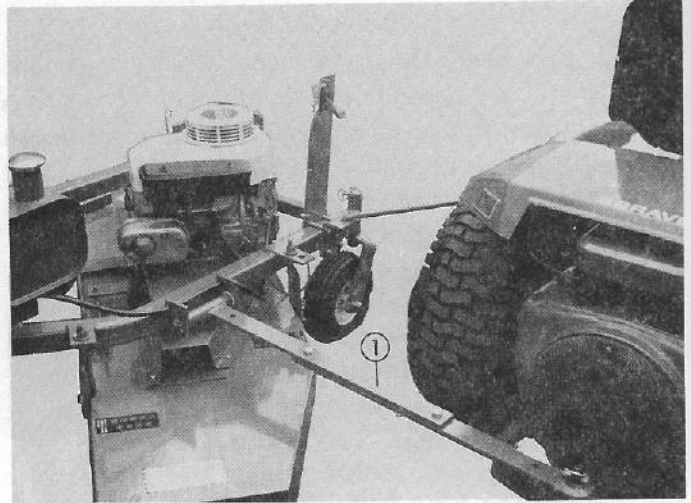
Figure 4.0-1



## 5.0 HOW TO CONNECT THE WING MOWER TO THE TRACTOR



1. Assemble and install the drawbar as shown in section 3.0 and 4.0.
2. Put the wing mower in position on the left side of the tractor. See figure 5.0-1.
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. See figure 5.0-1.



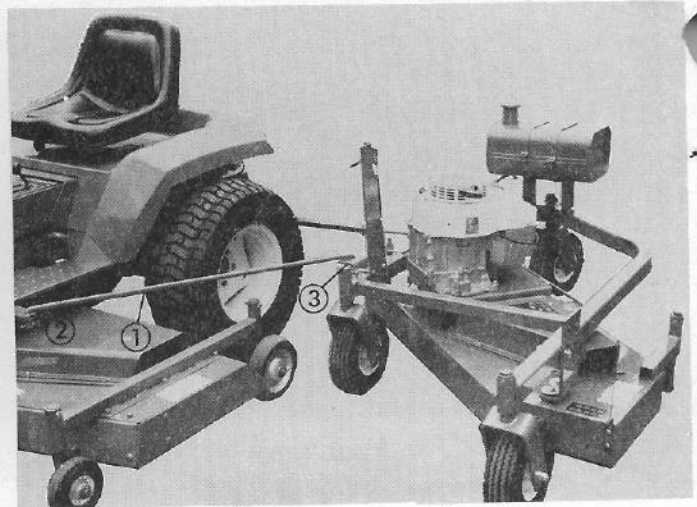
- 1 - Drawbar Assembly
- 2 - Hitch Pin
- 3 - Klik Pin

Figure 5.0-1

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. See figure 5.0-2.

**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. See figure 5.0-2.

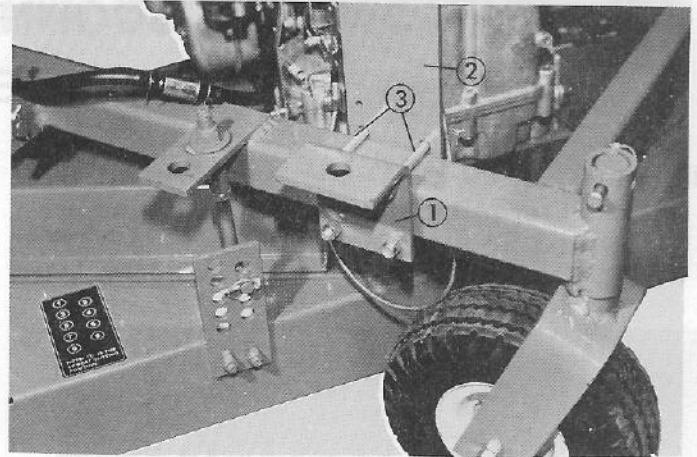


- 1 - Stabilizer Rod
- 2 - Support Plate
- 3 - Rod Bracket Plate

Figure 5.0-2



6. Loosen the bolts that fasten the rod bracket plate and the control plate to the wing mower frame. See figure 5.0-3.
7. Move the rod bracket plate and the control plate until the wing mower frame is parallel to the tractor. Tighten the bolts to a torque of 25 ft. lbs. (34 N.m).



- 1 - Rod Bracket Plate
- 2 - Control Plate
- 3 - Bolts

Figure 5.0-3



## 6.0 HOW TO DISCONNECT THE WING MOWER FROM THE TRACTOR



1. Remove the klik pin that fastens the stabilizer rod to the support plate. Remove the rod from the support plate. See figure 5.0-2.
2. Remove the klik pin that fastens the drawbar assembly to the hitch pin. Remove the drawbar assembly from the hitch pin. See figure 5.0-1.



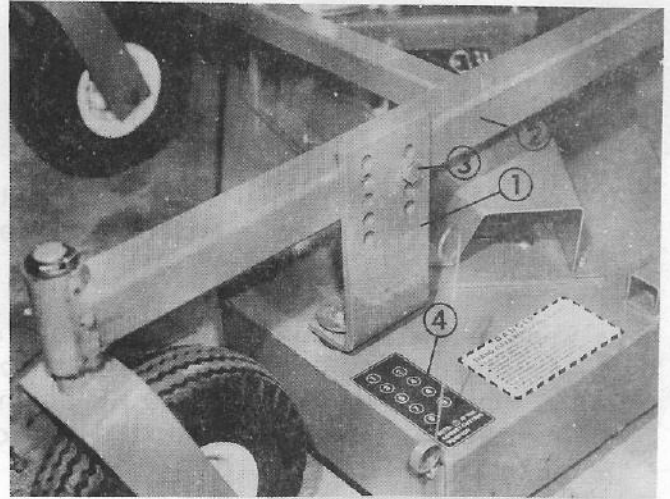
## 7.0 HOW TO ADJUST THE CUTTING HEIGHT



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.

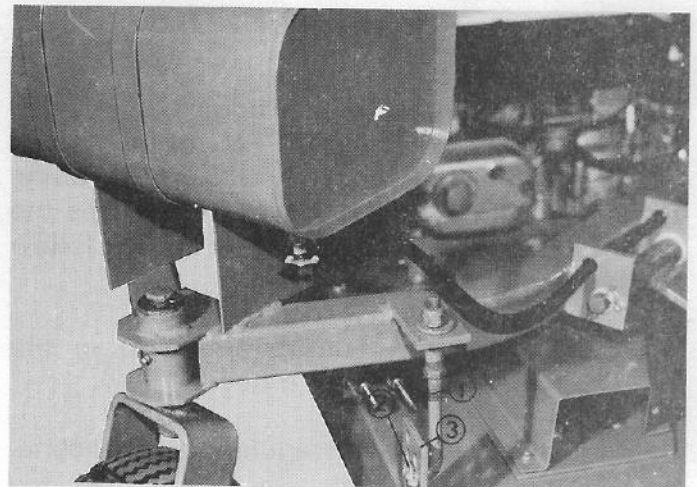
1. Remove the nut from the bolt that fastens the height adjustment bracket to the frame. Remove the bolt. See figure 7.0-1.
2. Select the hole in the height adjustment bracket that will give the needed cutting height. Align the hole in the height adjustment bracket with the hole in the frame. Put the bolt through the holes and install the nut. Tighten the bolt to the torque of 60 ft. lbs. (82 N.m). See figure 7.0-1.



- 1 - Height Adjustment Bracket
- 2 - Frame
- 3 - Bolt
- 4 - Decal

Figure 7.0-1

3. Remove the klik pin from the height adjustment rod. See figure 7.0-2.
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.
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.



- 1 - Height Adjustment Rod
- 2 - Klik Pin
- 3 - Adjustment Bracket

Figure 7.0-2





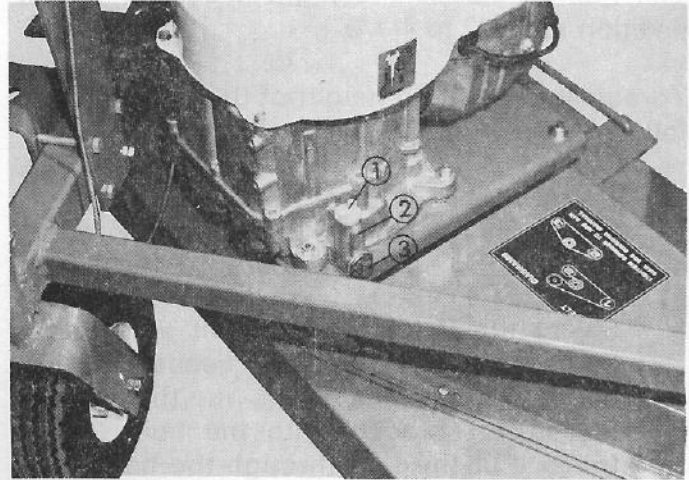
## 8.0 HOW TO OPERATE THE ENGINE



### 8.1 How To Check The Level Of The Lubricant In The Engine

Check the level of the lubricant in the engine before starting the engine.

1. Clean the fill plug and the area around the fill plug. Prevent dirt from falling into the fill tube. See figure 8.0-1.
2. To remove the fill plug, use a screwdriver to turn the fill plug counterclockwise. See figure 8.0-1.
3. Remove the fill plug. If the level of the lubricant is below the indicated full mark on the dipstick, add SAE 10W-40 SE engine lubricant. Put the lubricant into the hole for the fill plug.



- 1 - Fill Plug
- 2 - Fill Tube
- 3 - Drain Plug

Figure 8.0-1

**! WARNING:** Do not add lubricant when the level is at the full mark on the dipstick.

4. When the level of the lubricant is at the full mark on the dipstick, install the fill plug.

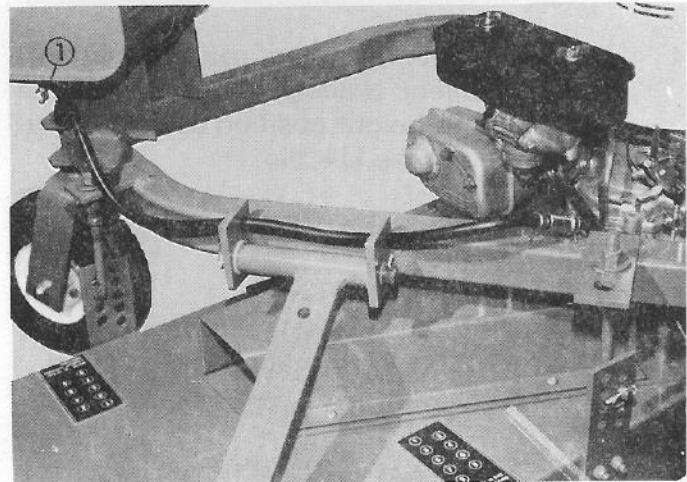
### 8.2 How To Start And Stop The Engine

Use caution when starting the engine. Increasing the revolutions per minute (RPM) of the engine causes the blades on the mower to rotate. Decreasing the RPM of the engine causes the blades to stop rotating. To start the engine, follow the instructions in this section.

1. Check the level of the lubricant in the engine. Add lubricant if needed.
2. Fill the fuel tank with regular grade gasoline. Do not use gasohol.

**! WARNING:** Gasoline is highly flammable.

3. Open the fuel valve on the fuel tank. Turn the fuel valve counterclockwise to open the valve. See figure 8.0-2.

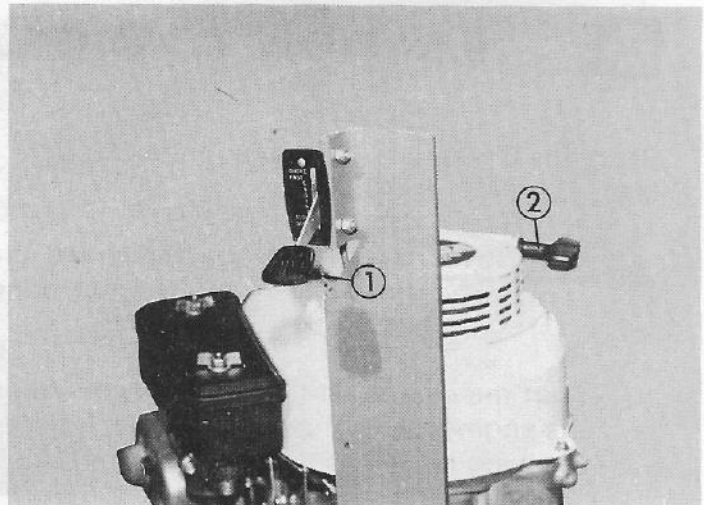


- 1 - Fuel Valve

Figure 8.0-2

4. Move the throttle lever to the "CHOKE" position. See figure 8.0-3.
5. Pull the starter handle out with a quick, continuous motion. Hold the starter handle and let the rope rewind slowly. See figure 8.0-3.
6. When the engine starts, and is running, move the throttle lever to the "SLOW" position.
7. If the engine does not start, repeat step 5. If the engine does not start after trying step 5 six times, see the Operator's Manual for the engine.
8. To stop the engine, move the throttle lever to the "SLOW" position to decrease the RPM of the engine. Move the throttle lever to the "STOP" position.

**⚠ WARNING:** Always close the fuel valve on the fuel tank when the engine is not running. To close the fuel valve, turn the valve clockwise.



1 - Throttle Lever  
2 - Starter Handle

Figure 8.0-3



## 9.0 HOW TO OPERATE THE WING MOWER



Read this Operator's Manual and the Operator's Manual for the tractor.

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

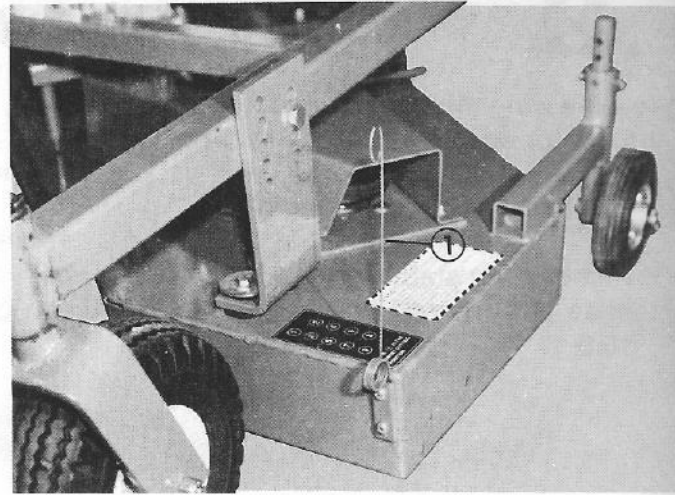
1. Start the engine on the wing mower. When the engine starts, move the throttle lever on the wing mower to the "SLOW" position.
2. Start the engine on the tractor. Wait until the engine is running smoothly before operating.
3. Lower the mower on the tractor to the ground.
4. Put the "RANGE" selector on the tractor in the "HI" position.
5. Put the "GEAR" selector on the tractor in the "2" position.
6. Put the PTO control on the tractor in the "IN" position to activate the mower on the tractor.
7. Move the throttle lever on the tractor to the "FAST" position.
8. 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.
9. Put the direction control lever on the tractor in the forward position. Mow a distance of ten feet (3 m). Stop the tractor, put the PTO control in the "OUT" position and turn the key in the ignition switch to the "OFF" position. Move the throttle lever on the wing mower to the "STOP" position.

**⚠ WARNING:** Wait until both engines and mower have stopped.

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



11. If the cutting height needs to be adjusted, follow the instructions in section 7.0 for the wing mower and the instructions in the Operator's Manual for the mower on the tractor.
12. 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 9.0-1.
13. After you know how to operate the tractor with the wing mower, select the speed of the tractor that is best for your mowing conditions.



1 - Edge Locator

Figure 9.0-1



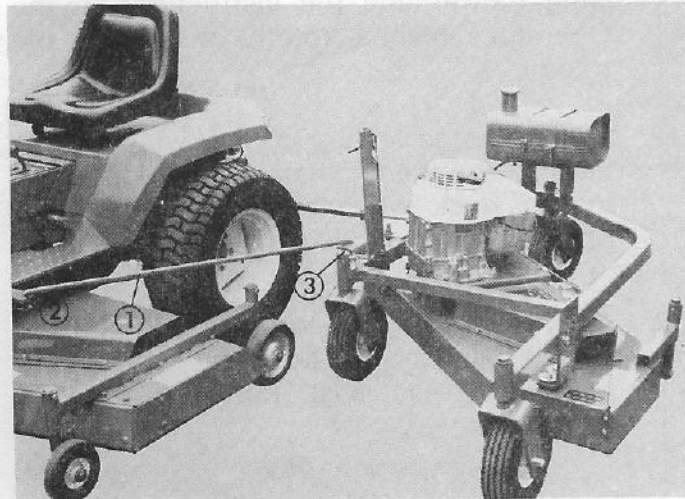
## 10.0 HOW TO TOW THE WING MOWER



To tow the wing mower, connect the wing mower to the tractor as shown in this section.

**⚠ WARNING: Stop the engines.**

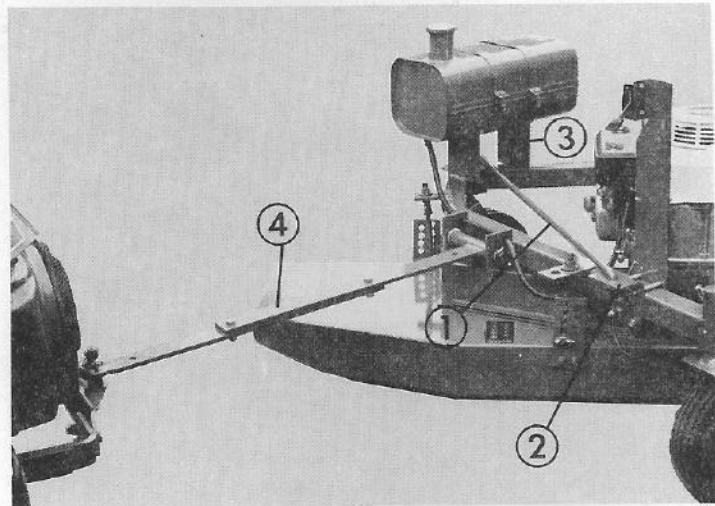
1. Remove the stabilizer rod from the support plate and the rod bracket plate. See figure 10.0-1.



- 1 - Stabilizer Rod
- 2 - Support Plate
- 3 - Rod Bracket Plate

Figure 10.0-1

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. See figure 10.0-2.



- 1 - Stabilizer Rod
- 2 - Rod Bracket Plate
- 3 - Fuel Tank Support Brackets
- 4 - Drawbar Assembly

Figure 10.0-2

3. Remove the klik pin and the clevis pin from the caster wheel that is locked in position. Turn the caster fork 90°. 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. See figure 10.0-2.

**⚠ 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 5.0.

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 5.0.
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.





## 11.0 HOW TO DO MAINTENANCE



**WARNING:** Stop the engine on the wing mower and the tractor engine before doing maintenance.

After Each Use:

1. Clean the wing mower.
2. Inspect all nuts, bolts and other fasteners to make sure they are tight. Replace any fasteners that are missing. Tighten the bolts to the torque shown in figure 11.0-1, unless given differently.

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

Figure 11.0-1

### 11.1 How To Check The Air Cleaner Element

Each day, check the air cleaner element.

1. Turn the wing nuts on the air cleaner cover counterclockwise. Remove the wing nuts and the cover.
2. Remove the air cleaner element.
3. To clean the air cleaner element, hit the element lightly on a flat surface. See figure 11.0-2.

**NOTE:** If the dirt can not be removed from the air cleaner element or if the element is damaged, the element must be replaced.

4. Install the air cleaner element carefully to prevent dirt from entering the engine.
5. Install the air cleaner cover and the wing nuts.

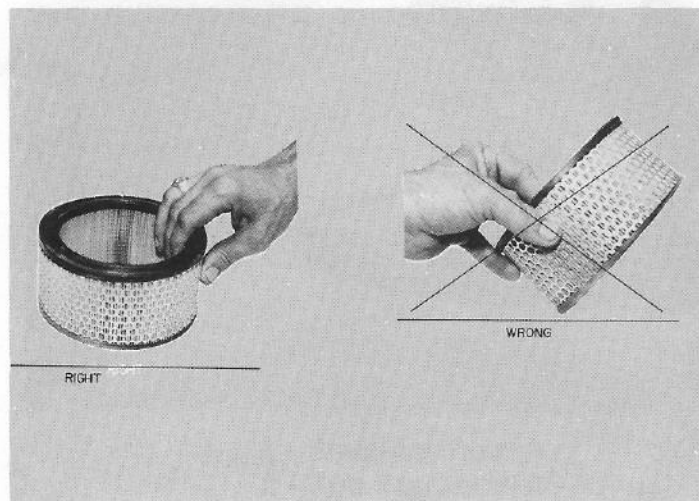


Figure 11.0-2

## 11.2 How To Check The Cooling System

Each day, check the cooling system for grass and other material.

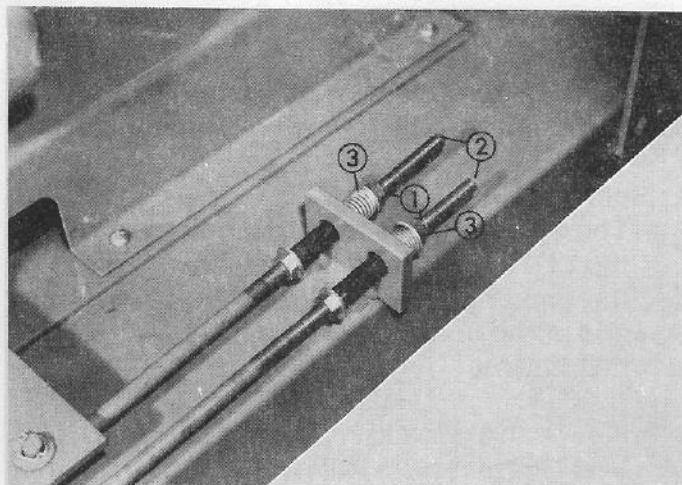
**⚠ WARNING: The engine parts are hot.**

1. Stop the engine.
2. Clean all the grass and other material from the air intake screen.
3. Clean all the grass and other material from the cooling fins of the engine.

## 11.3 How To Adjust The Tension Of The Belts

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

1. Stop the engine.
2. Turn the adjusting nuts clockwise to tighten the tension of the belts. Turn the adjusting nuts counterclockwise to loosen the tension of the belts. See figure 11.0-3.
3. Turn the adjusting nuts until there is a gap of .005" to .010" (.127 to .254 mm) between the coils of the springs. See figure 11.0-3.



- 1 - Adjusting Nuts
- 2 - Adjusting Rods
- 3 - Springs

Figure 11.0-3

## 11.4 How To Replace The 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 counterclockwise until there is no tension on the belts.

3. Remove the old belts.
4. Install the new belts as shown in figure 11.0-4 on the belt diagram on the mower deck.
5. Install the right side and left side belt covers.
6. Adjust the tension of the belts as shown in section 11.3.

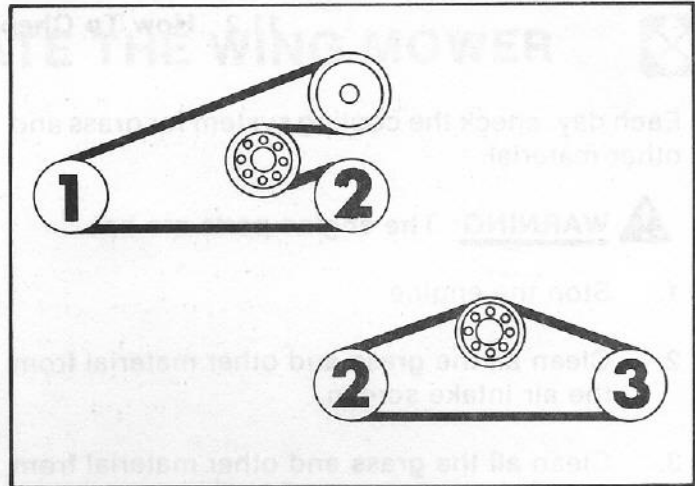


Figure 11.0-4

### 11.5 How To Lubricate The Wing Mower

After every eight hours of operation, add multi-purpose grease to the following grease fittings:

A. Spindles - 3:

The grease fittings for the spindles are on the top of the spindles. Lubricate the spindles at the opening at each end of the belt covers and at the opening at the back of the mower belt covers.

B. Idler Pivot Arms - 2:

See figure 11.0-5 for the location of the grease fittings.

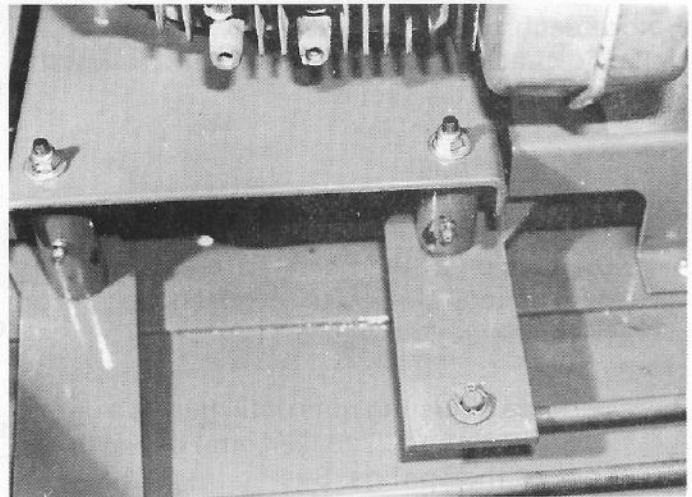


Figure 11.0-5

C. Caster Forks - 2:

See figure 11.0-6 for the location of the grease fittings.

D. Caster Wheels - 4:

See figure 11.0-6 for the location of the grease fittings.

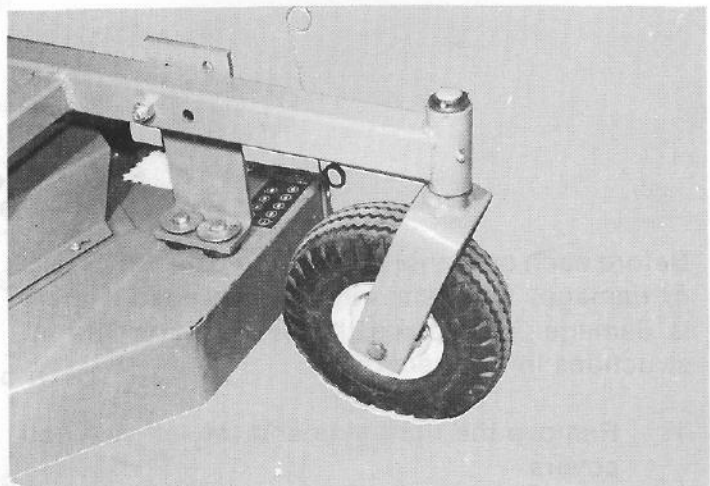


Figure 11.0-6



## 11.6 How To Check The Blades

1. After every eight hours of operation, inspect the blades. Replace any blade that is damaged.
2. Check to see that the blades are sharp. If the blades are not sharp, remove the blades. Grind the edges that have the bevel until they are sharp. Grind each edge the same amount. Make sure the blades have balance before installing the blades. Tighten the spindle nuts to a torque of 120 ft. lbs. (163 N.m)

## 11.7 How To Check The Air Pressure In The Tires

After every 25 hours of operation, check the air pressure in the tires on the caster wheels. Adjust the air pressure to 20 psi (14 kg/cm ).

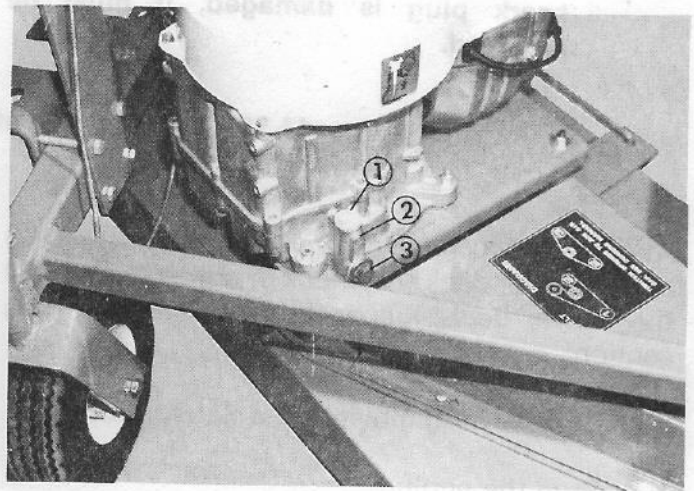
## 11.8 How To Change The Lubricant In The Engine

After every 25 hours of operation, change the lubricant in the engine. To change the lubricant, follow the instructions in this section. Use SAE 10W-40 SE engine lubricant.

1. If the engine is cold, start the engine. Let the engine run for five minutes at a slow RPM.
2. Stop the engine.

**⚠ WARNING:** The muffler and other parts of the engine are hot.

3. Clean the area around the fill plug, the fill tube and the drain plug. See figure 11.0-7.
4. Put a two quart (2 liter) container under the drain plug.
5. Turn the fill plug counterclockwise and remove the fill plug.
6. Turn the drain plug counterclockwise and remove the drain plug.
7. Drain the old lubricant from the engine. Install the drain plug.
8. Put 2.54 U.S. pints (1.21 liters) of SAE 10W-



- 1 - Fill Plug
- 2 - Fill Tube
- 3 - Drain Plug

Figure 11.0-7


40 SE engine lubricant into the fill tube. Install the fill plug.

9. Start the engine. Check for a leak at the drain plug. If there is a leak, tighten or replace the drain plug.

### 11.9 How To Clean And Replace The Spark Plug

After every 100 hours of operation, clean the spark plug. After every 200 hours of operation, replace the spark plug. To clean or replace the spark plug, follow the instructions in this section:

1. Stop the engine.

 **WARNING:** The muffler and other parts of the engine are hot.

2. Remove the wire connector from the spark plug. Use caution, do not pull the wire from the connector.

**NOTE:** Spark plugs are easily damaged. If the spark plug is damaged, it must be replaced.

3. Use a socket wrench to turn the spark plug counterclockwise. Remove the spark plug.
4. Remove the dirt and the carbon from the spark plug.
5. Use a gauge to check the gap between the electrodes of the spark plug. The correct gap for the spark plug is .025" (.635 mm).
6. Install the spark plug. Tighten the spark plug to a torque of 18 to 22 ft. lbs. (24 to 30 N.m).
7. Install the wire connector on the spark plug.

### 11.10 How To Adjust The Level Of The Mower Deck

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 7.0-1 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 7.0-2 for the location of the height adjustment rods.
6. If the distance is not the same, loosen the jam nut that is under the bracket.
7. Turn the lock nut on each height adjustment rod until the measurement from the top edge of the mower deck to the floor is the same as the measurement at the height adjustment bracket. Tighten the jam nut against the sleeve.
8. Repeat steps 4 through 7 until all the measurements are the same.



## 12.0 HOW TO PUT THE WING MOWER IN 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 lubricant on any area where the paint has been removed.
4. Lubricate the wing mower. See section 11.5.
5. Change the lubricant in the engine. See section 11.8.
6. Replace the air cleaner element. See section 11.1.
7. Clean the cooling system. See section 11.2.
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 wire connector 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 wire connector on the spark plug.
16. Pull the starter handle five times.





## 13.0 HOW TO TAKE THE WING MOWER OUT OF STORAGE

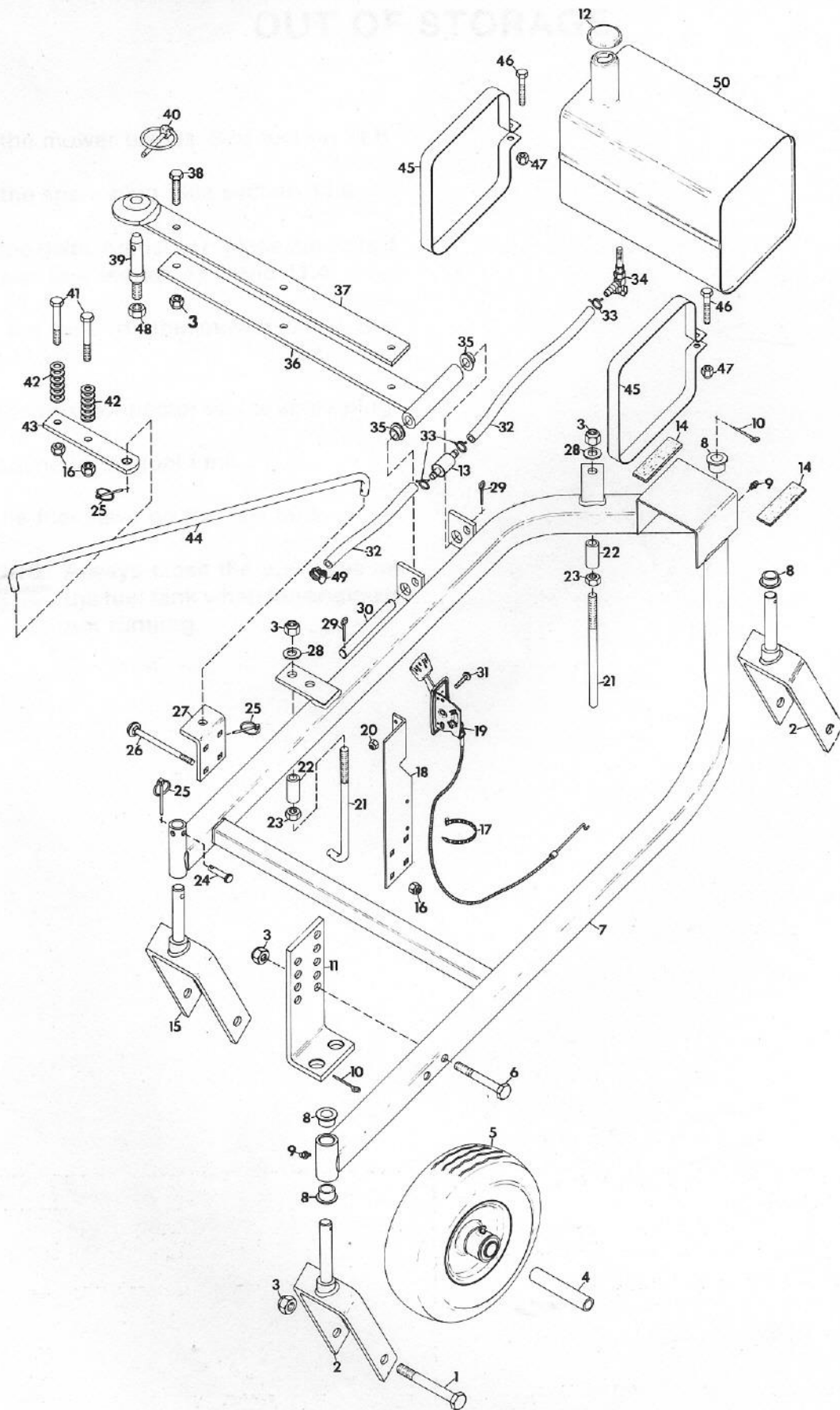


1. Check the mower blades. See section 11.6.
2. Check the spark plug. See section 11.9.
3. Check the belts. Adjust or replace the belts if necessary. See section 11.3 and 11.4.
4. Check the level of the mower deck. See section 11.10.
5. Install the wire connector on the spark plug.
6. Put gasoline in the fuel tank.
7. Open the fuel valve on the fuel tank.

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



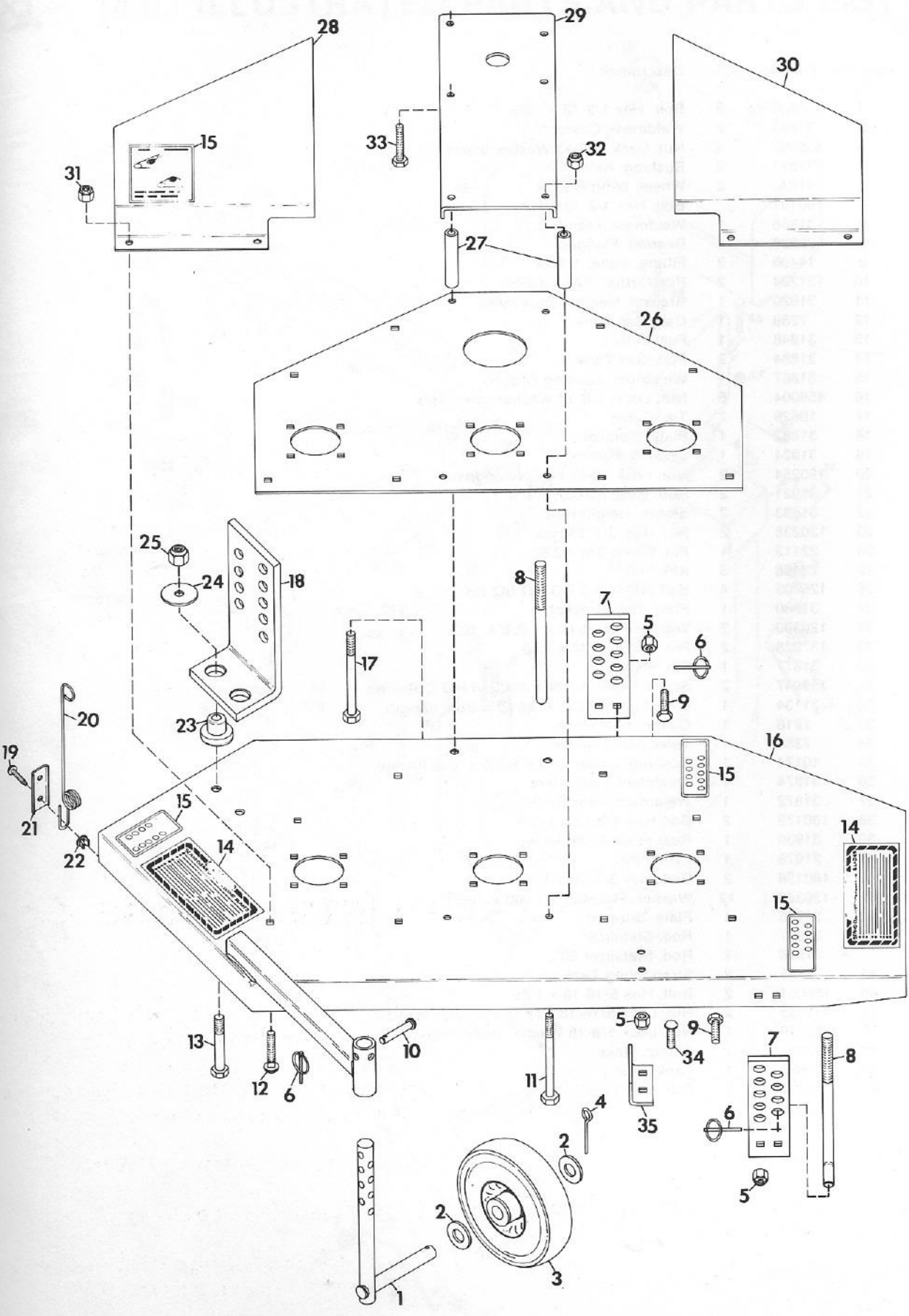
# 14.0 ILLUSTRATED PARTS AND PARTS LIST



## MOWER FRAME ASSEMBLY

Item No.	Part No.	Qty.	Description
1	445608	3	Bolt, Hex 1/2-13 x 5.50
2	31865	2	Weldment, Caster
3	435507	8	Nut, Lock; 1/2-13 Washer Insert
4	31871	3	Bushing, Axle
5	31870	3	Wheel, Wing Gauge
6	180191		Bolt, Hex 1/2-13 x 3.25
7	31856	1	Weldment, Frame
8	22098	4	Bearing, Flanged
9	14406	2	Fitting, Lube; 1/4-28
10	137204	2	Pin, Cotter; .125 x 1.500
11	31920	1	Bracket, Height Adjustment
12	7289	1	Cap, Gas Tank
13	31848	1	Fuel Filter
14	31884	2	Pad, Gas Tank
15	31867	1	Weldment, Locking Caster
16	456004	6	Nut, Lock; 3/8-16 Washer Insert Hex
17	10629	2	Tie, Cable
18	31882	1	Plate, Control
19	31924	1	Lever, Throttle
20	190254	2	Nut, Lock 10-24 Hex Nylon Insert
21	31921	2	Rod, Height Adjustment
22	31883	2	Sleeve, Height Rod
23	120238	2	Nut, Jam 1/2-13 Hex
24	22113	1	Pin, Clevis 3/8 x 2.62
25	23468	3	Klik Pin
26	126705	4	Bolt 3/8-16 x 3 RD HD SQ NK
27	31880	1	Plate, Rod Bracket
28	120390	2	Washer Flat; 9/16 x 1-3/8 x .109
29	137228	2	Pin, Cotter 5/32 x 1.50
30	31877	1	Pin, Pivot
31	159947	2	Screw Mach. 10-24 x 3/4 Pan HD C-Recess
32	21134	1	Line, Fuel .50 OD x .25 ID x Bulk Length
33	7216	1	Clamp, Fuel Hose
34	7354	1	Valve and Strainer
35	10174	1	Bushing, Nylon .760 x 1.000 x .600 Flange
36	31874	1	Weldment, Rear Joint
37	31872	1	Weldment, Rear Ball Joint
38	180179	2	Bolt Hex 1/2-13 x 1-3/4
39	31930	1	Rear Hitch 8000 Series
40	21979	1	Lynch Pin
41	180128	2	Bolt, Hex 3/8-16 x 1.75
42	120388	12	Washer, Flat .436 x 1.000 x .083
43	31926	1	Plate, Support
44	31927	1	Rod, Stabilizer
	31928	1	Rod, Stabilizer 60"
45	31885	2	Strap, Wing Tank
46	180081	2	Bolt, Hex 5/16-18 x 1.25
47	419455	2	Nut, Lock 5/16-18 Hex HD Washer Insert
48	272739	1	Nut, Lock 5/8-18 Washer Insert Hex
49	32045	1	Clamp, Hose
50	31886	1	Tank, Fuel
51	31884	2	Pad, Gas Tank

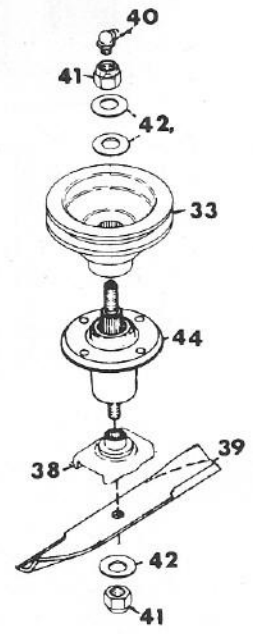
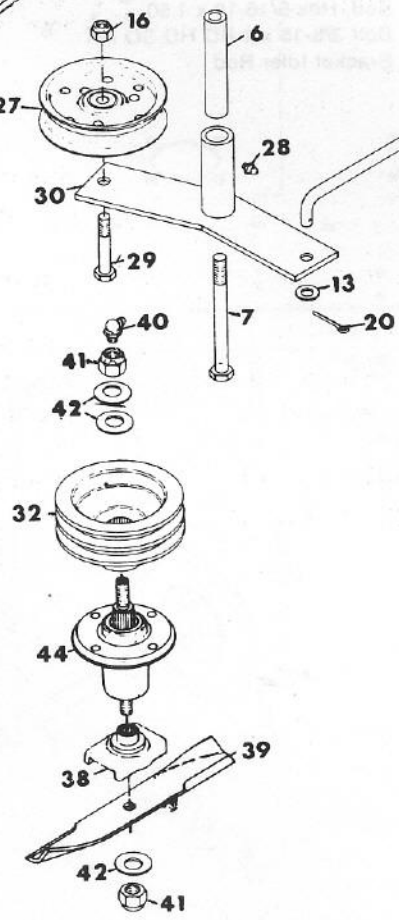
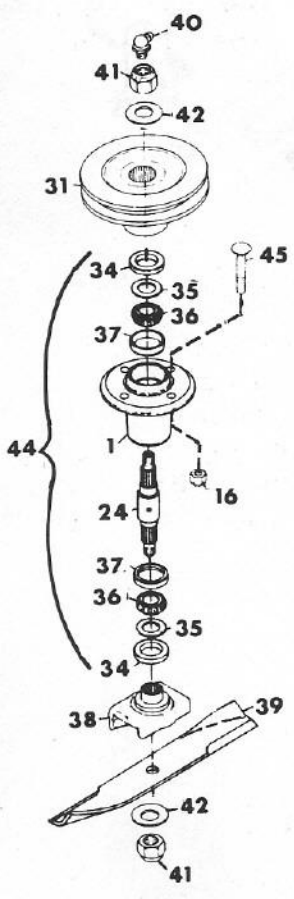
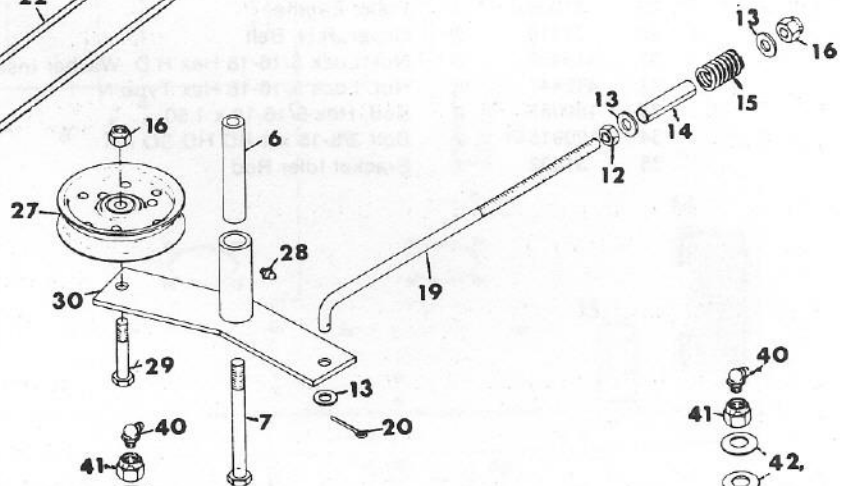
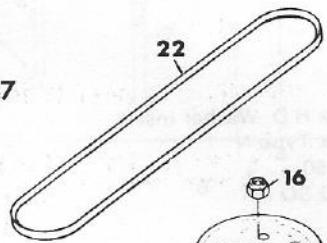
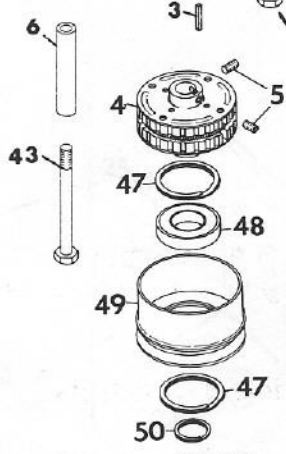
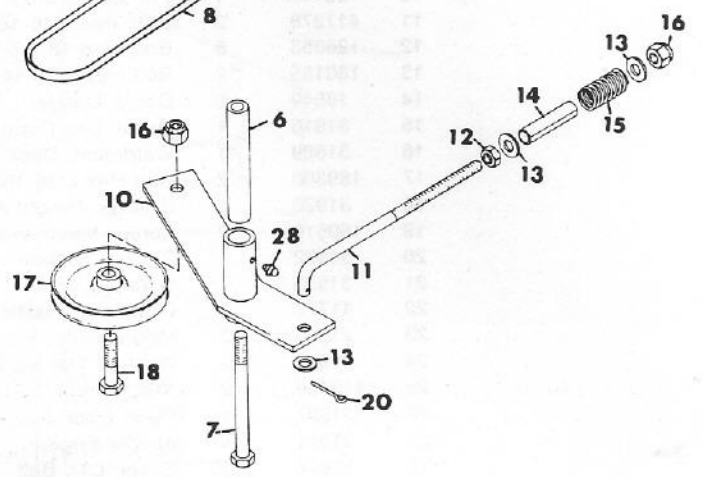
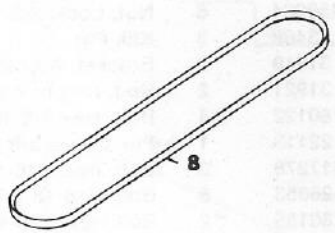
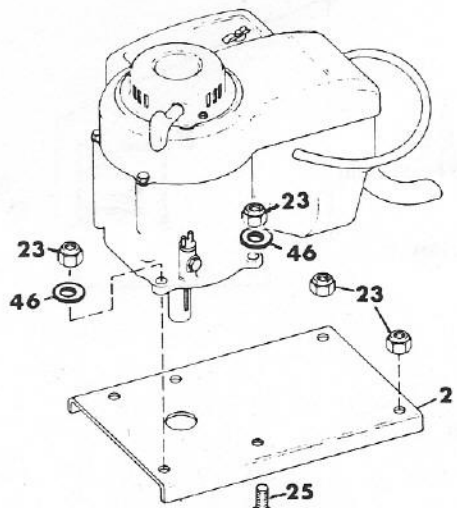




# MOWER FRAME ASSEMBLY

Item No.	Part No.	Qty.	Description
1	31350	1	Weldment, Caster Wheel Axle
2	423315	2	Washer Flat 13/16 x 1-3/8 x .100 Phos Coat
3	11386	1	Wheel, Caster
4	120123	1	Pin, Cotter 1/8 x 1.25
5	456004	6	Nut, Lock; 3/8-16 Washer Insert Hex
6	23468	3	Klik Pin
7	31919	2	Bracket, Adjustment
8	31921	2	Rod, Height Adjustment
9	180122	4	Bolt, Hex 3/8-16 x 1.00
10	22113	1	Pin, Clevis 3/8 x 2.62
11	417278	2	Bolt, hex 5/16-18 x 4-3/4
12	126353	8	Bolt 5/16-18 x 7/8 RD HD SQ NK
13	180155	2	Bolt Hex 7/16-14 x 2-1/4
14	18549	2	Decal, Danger
15	31916	1	Decal, Belt Diagram
16	31889	1	Weldment, Deck
17	189300	2	Bolt Hex 5/16-18 x 5-1/2
18	31920	1	Bracket, Height Adjustment
19	160515	2	Screw, Mach; 1/4-20 x 1/2 Pan HD C-Recess
20	31932	1	Spring, Torsion
21	31933	1	Clamp
22	11777	2	Grommet, Plastic
23	21683	2	Mount, Front Motor
24	24995	2	Washer, Flat .45 x 2.00 x .080
25	419456	2	Nut, Lock; 7/16-14 Washer Insert Hex
26	31897	1	Plate, Deck Support
27	31911	4	Spacer Engine
28	31917	1	Cover, L.H. Belt
29	31908	1	Plate, Engine
30	31918	1	Cover, R.H. Belt
31	419455	8	Nut, Lock 5/16-18 Hex H.D. Washer Insert
32	413447	6	Nut, Lock 5/16-18 Hex Type-N
33	180083	2	Bolt, Hex 5/16-18 x 1.50
34	120915	2	Bolt 3/8-16 x 1 RD HD SQ NK
35	31892	1	Bracket Idler Rod

POWER FRAME ASSEMBLY





# MOWER DRIVE

Item No.	Part No.	Qty.	Description
1	21215	3	Housing, Bearing
2	31908	1	Plate, Engine
3	9213	1	Key, Square 1/4 x 1
4	31910	1	Clutch, Rotor Asm.
5	102569	2	Screw, Set 1/4-20 x 1/4 Hex Socket Cup PT.
6	31911	4	Spacer, Engine
7	417278	2	Bolt, Hex 5/16-18 x 4-3/4
8	31912	1	V-Belt, Driven
9	181666	1	Bolt Hex 7/16-20 x 1
10	31903	1	Weldment, Idler R.H.
11	31914	1	Rod, Idler R.H.
12	120377	2	Nut, Hex 3/8-16
13	120394	6	Washer, Flat; .406 x .812 x .065
14	21381	2	Sleeve, Spring, For. - Rev.
15	31915	2	Spring, Idler Compression
16	456004	16	Nut, Lock; 3/8-16 Washer Insert Hex
17	31906	1	Pulley, V-Idler
18	180126	1	Bolt, Hex 3/8-16 x 1.50
19	31913	1	Rod, Idler L.H.
20	121224	2	Pin, Cotter 3/32 x 1.00
21	120383	1	Washer, Lock 7/16 Reg.
22	25129	1	Belt, 40 Inch Mower
23	413447	6	Nut, Lock 5/16-18 Hex Type-N
24	21216	1	Shaft, Spindle
25	180083	2	Bolt, Hex 5/16-18 x 1.50
26	120389	1	Washer, Flat; .500 x 1.250 x .083
27	21060	1	Sheave, Idler
28	14406	2	Fitting, Lube; 1/4-28
29	180130	1	Bolt, Hex; 3/8-16 x 2.00
30	31900	1	Weldment, 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; .975 x 1.970 x .030
36	9246	2	Cone, Roller Bearing
37	9245	2	Cup, Roller Bearing
38	23026	3	Cradle, Blade
39	11234	3	Blade
40	411019	3	Fitting, Lube 1/8 Pipe 90 Deg.
41	418692	6	Nut Lock; 5/8-11 Washer Insert Hex
42	22545	8	Spring, Belleville
43	189300	2	Bolt Hex 5/16-18 x 5-1/2
44	21306	1	Spindle Assembly
45	126402	12	Bolt 3/8-16 x 1-1/4 RD HD SQ NK
46	120393	4	Washer, Flat .344 x .688 x .065 Zink
47	32143	2	Internal Spiral Retaining Ring
48	32144	1	Bearing Ball
49	32145	1	Housing, Clutch
50	32142	1	External Spiral Retaining Ring

## GRAVELY COMMERCIAL TRACTORS LIMITED WARRANTY

This Limited Warranty is issued by Gravelly, 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. Engine - Briggs and Stratton
  - b. Tires - Goodyear and Armstrong
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  
One Gravelly Lane  
Clemmons, NC 27012

Attn: Manager of Customer Services
  - e. Warranty service on Gravelly equipment must be performed by an authorized Gravelly commercial dealer or Gravelly 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 blades.
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.

