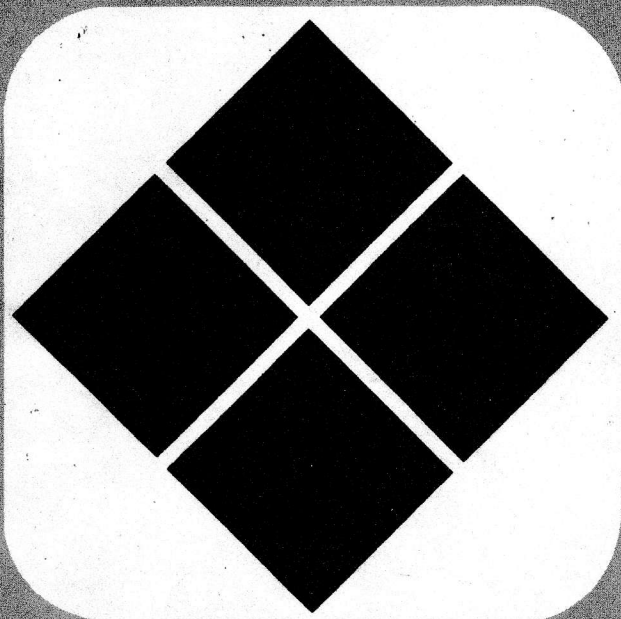


3⁰⁰ TAX



GRAVELLY®

**CONVERTIBLE
7.6**

**OWNERS
MANUAL**

Model Years 1967 — 1976



THANK YOU for your investment in Gravely equipment. It is an investment, for the Gravely will save you work and worry for many years.

You will gain still greater satisfaction from your Gravely if you add the tools you need for your other jobs. From time to time we suggest you consult your dealer for the many Gravely attachments that will eliminate grounds upkeep and garden drudgery.

Your Gravely Tractor and attachments are warranted under terms shown herein. To qualify for this Warranty, your dealer will register your tractor by completing the enclosed Registration Card and returning it.

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

TABLE OF CONTENTS

Safety Instructions _____	2
Introductions _____	3
Operation _____	4
Starting _____	4
Operating the Tractor _____	5
Maintenance _____	6
Specifications _____	8

SAFETY INSTRUCTIONS

TRAINING

1. Read the Instruction Manual carefully. Be thoroughly familiar with the controls and proper use of the equipment.
2. Never allow children to operate tractor.
3. Keep the area of operation clear of all persons, particularly small children and pets.

PREPARATION

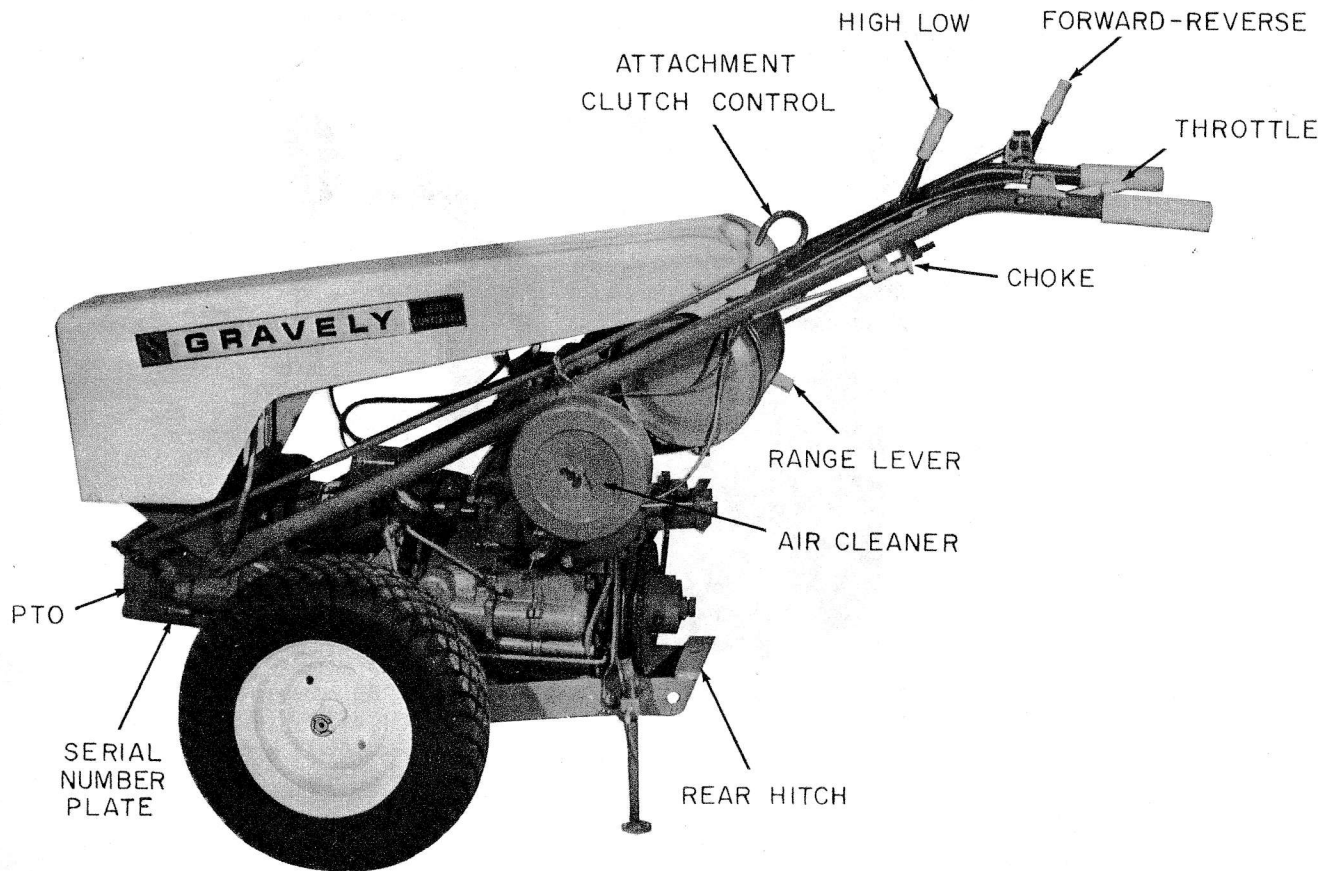
1. Thoroughly inspect the area where the equipment is to be used, remove all foreign objects.
2. Do not operate equipment when barefoot or wearing open sandals.
3. Check fuel before starting engine. Do not fill gasoline tank indoors, when engine is running or while engine is still hot. Wipe off any spilled gasoline before starting engine.
4. Check to be sure PTO is disengaged and put Forward-Reverse and High-Low in neutral before starting engine.
5. Never attempt to make an adjustment on attachments while engine is running.
6. Operate only in daylight or in good artificial light.
7. Always be sure of your footing; keep a firm hold on the handles and walk; never run.

OPERATION

1. Do not change engine governor settings to overspeed engine.
2. Do not put hands or feet near or under rotating parts. Keep clear of discharge openings at all times.
3. Stop mower attachment when crossing gravel drive, walks or roads.
4. If a foreign object is struck, stop engine and thoroughly inspect the attachment and tractor for any damage, and repair the damage before restarting and operating the attachment.
5. If the equipment should start to vibrate abnormally, stop the engine and check immediately for the cause. Vibration is generally a warning of trouble.
6. Stop engine and wait until all moving parts have come to a complete stop before you leave the equipment.
7. When cleaning, repairing or inspecting, make certain all moving parts have stopped. Disconnect spark plug wire and keep wire away from plug to prevent accidental starting.
8. Do not run engine indoors without proper ventilation.
9. Exercise extreme caution when changing direction on slopes. Do not mow excessively steep slopes.

MAINTENANCE AND STORAGE

1. Keep all nuts, bolts, and screws tight to be sure equipment is in safe working condition.
2. Never store equipment with gasoline in the tank inside of a building where fumes may reach an open flame or spark. Allow engine to cool before storing in any enclosure.
3. Keep engine free of grass, leaves, debris, or excessive grease to prevent overheating and possible fire hazard.



INTRODUCTION

The Gravelly Convertible 7.6 Tractor were produced in two models - the Custom and the Super. The Super has the added feature of electric starter.

The Convertible 7.6 Tractor is powered by a Gravelly engine producing 7.6 horsepower. All gear drive allows power to be transmitted directly from the engine to the power attachment by steel shafts and gears.

The Convertible 7.6 offers year-around, all-season versatility with many different attachments available. Out-front mounting of most attachments gives you maximum visibility and safety.

This tractor will give you highly satisfactory service if maintained and operated as outlined in this manual.

All references to Left Hand and Right Hand; front and rear are given from the operators position, as you stand behind the tractor.

For detailed service information, a service manual is available through your dealer or through the home office.

It is important that you know the Serial Number of your tractor. The Serial Number is located on the Left Hand side of the advance casting. See Figure 1. The serial number of your tractor is _____.

For your future reference, please fill in your Serial Number as soon as possible.

Please refer to this number on all correspondence concerning your tractor to expedite prompt response to your needs.

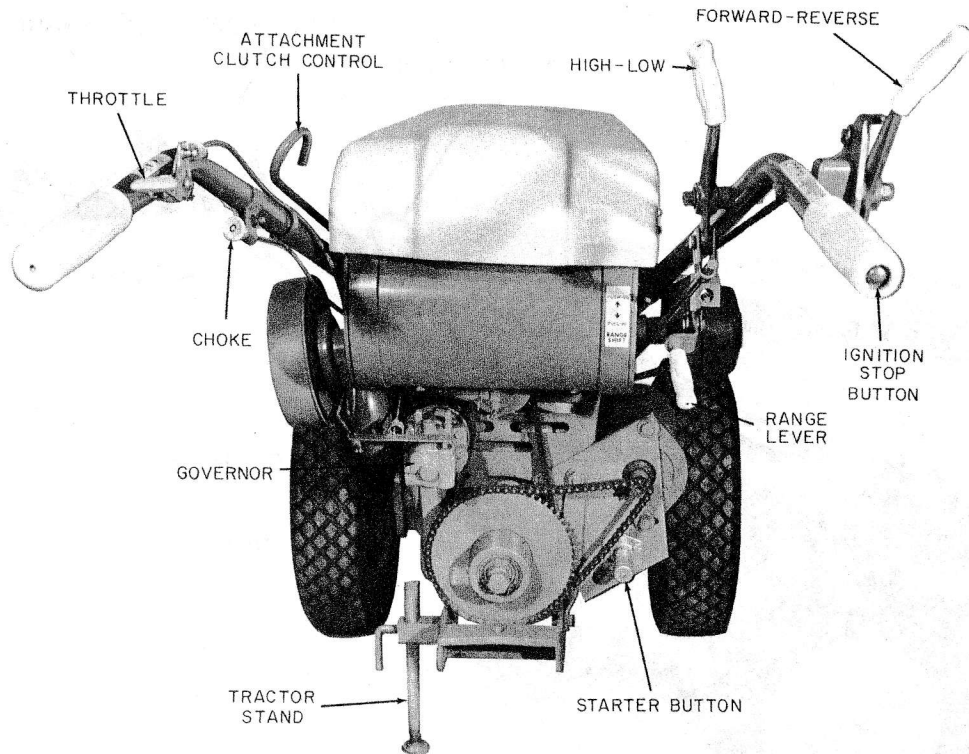


Figure 2

OPERATION

Throttle - Depress the throttle to accelerate engine, raise to decelerate engine.

Choke - Pull to choke; push forward fully for normal operation.

Operating Levers - The operating levers, one for high and low speeds and one for forward and reverse are located on the right tractor handle.

Range Control - On tractors with the optional eight speed transmission, the range selector lever is on the right by the fuel tank. Push forward fully for low range; pull rearward fully for high range.

Attachment Clutch Control - The attachment clutch control is the attachment clutch lever that enables you to engage or disengage the power attachment from your position at the tractor handles. Pull to engage the attachment; push to disengage.

Ignition Stop Button - To stop engine, depress the ignition stop button. Keep depressed until the engine stops completely.

STARTING

Whether you have a manual starter or an electric starter, before starting check to see if:

- ... Operating levers are in neutral.
- ... Attachment clutch control is in the disengaged position.
- ... Valve on fuel tank is open and fuel in tank.
- ... Oil level is on full mark.
- ... Throttle is open approximately half-way.
- ... An attachment or attachment boss cover is secured to the front of the tractor.

Normal Starting - On tractors with the manual starter, attach the strap to the pulley (place the hole in the strap over the pin in the pulley groove) and wind the strap onto the pulley in the direction of the arrow on pulley. Pull the strap hard and fast. Choke as required. With the electric starter, simply press the starter button with your toe. Choke as required.

NOTE: In proper working order, the engine should start with one or two attempts (a few more may be necessary in cold weather). If it doesn't, check the Trouble Shooting section to find and correct the trouble. Do not tamper with the carburetor - this will serve only to complicate things, for even with the carburetor out of adjustment, the engine should start.

Cold Weather Starting - Cold weather starting troubles usually can be avoided if you:

- ... Make sure the proper weight oil is used. Oils heavier than those recommended will stiffen at low temperature thus making starting more difficult.
- ... Use fresh high quality regular grade gasoline.
- ... Store the tractor in a heated building if possible.

OPERATING THE TRACTOR

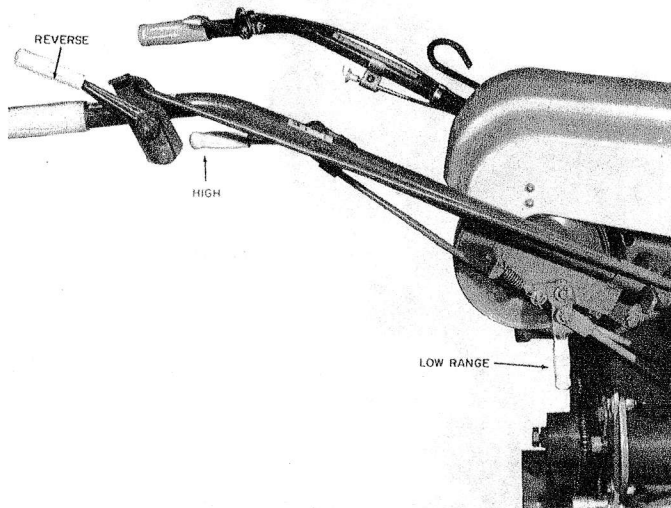


Figure 3

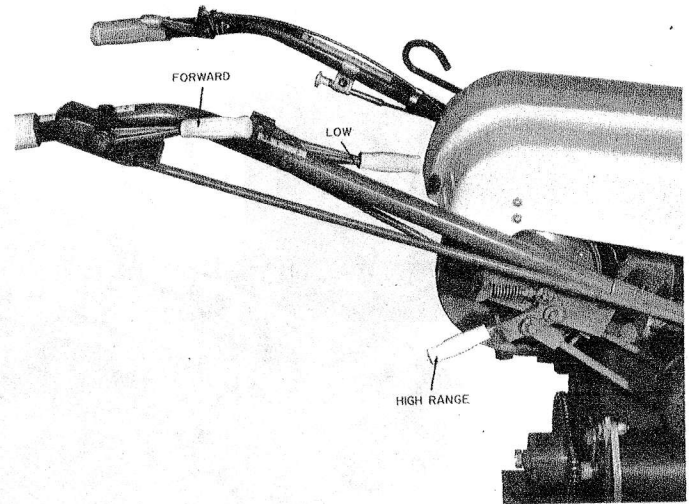


Figure 4

When starting the tractor, have high-low and forward-reverse control levers in neutral and the attachment clutch control pushed forward fully in the disengaged position.

If the tractor is the eight speed transmission model the Range Selection Lever should be in the position for the range in which the tractor will be operated initially.

Engaging wheels - To put tractor in motion, first move the high-low control lever to either the high or low position (figure 3). Then move the forward-reverse control lever into forward or reverse. Depress the throttle to the desired speed.

NOTE: WITH ONLY THE HIGH-LOW CONTROL LEVER IN HIGH OR LOW, THE TRACTOR WILL NOT MOVE.

Engaging Power Attachment - Before attempting to put a power attachment in gear, be sure that the tractor is stopped, with high-low and forward-reverse control in neutral and the engine running at idle speed.

After the attachment is engaged, increase the engine speed to about half-throttle. Move the high-low control lever to high or low.

Braking - The forward-reverse control lever is used as a brake when you must stop. Move the lever out of forward, pass through neutral, and apply pressure at reverse position - enough pressure to stop the forward motion of the tractor.

STANDARD TRANSMISSION - The standard transmission models have four speeds - high and low in forward and high and low in reverse. These speeds control both ground speed and attachment speed, with low gear having about 75% of the speed obtainable in high gear.

EIGHT-SPEED TRANSMISSION - The eight speed transmission models feature a two-speed axle giving the tractor four speeds forward and four speeds in reverse.

Shifting the axle between high and low ranges controls only the tractor's ground speed. Shifting the high-low control lever between high and low provides a further control over ground speed as well as attachment speed.

To change axle ranges: Stop the tractor. Keep the high-low control lever in high or low, but move the forward-reverse control to neutral. Move the range selection lever to high or low range. Move the forward-reverse control lever back and forth slightly if necessary to allow the gears to mesh.

CAUTION: THIS SHIFT SHOULD ONLY BE MADE ON LEVEL GROUND.

Individual jobs will dictate the combination of axle range and gear to be used. In general, low axle range should be used for plowing, cultivating, snow blowing, heavy mowing, and other jobs where a slower ground speed is needed to give the attachment longer to do its job. High axle range generally is satisfactory for mowing and other lawn jobs.

Other Points - Don't slip the clutch. If you find the ground speed of the tractor too fast for the job, shift to a lower gear. If you can't shift any lower, take a smaller cut - one on which the attachment can do the job with the tractor fully in gear. Repeated clutch slipping causes undue wear and should be avoided.

STOPPING

To shut off the engine, depress ignition stop button (figure 2) after disengaging attachment and moving both operating levers to neutral.

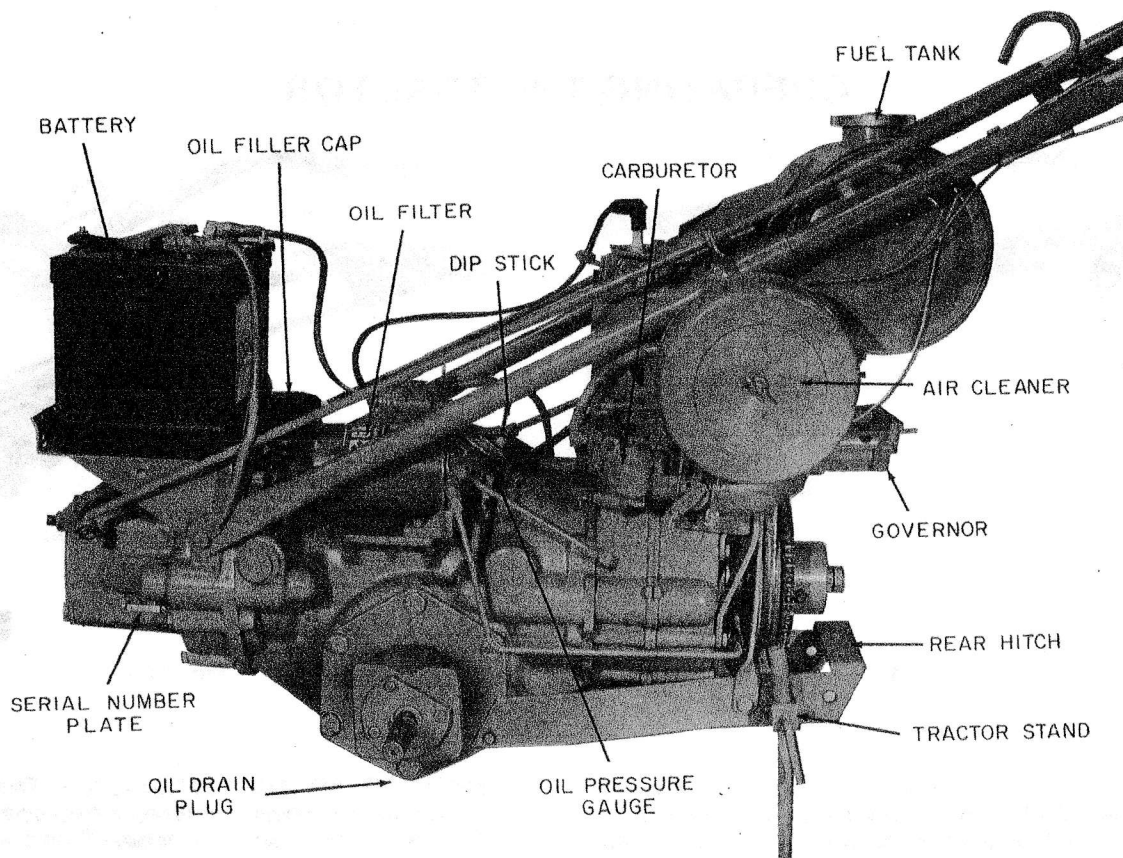


Figure 5

MAINTENANCE

LUBRICATION

Filling the chassis to its 5 pint (2.36L.) capacity with motor oil lubricates both the engine and transmission. Do not use transmission oil or grease. The following is recommended:

Summer - SAE 30 or SAE 10W-30. API Classification - SC or SD

Winter - (32 degrees F or below) SAE 10W or SAE 10W-30 API Classification - SC or SD

Oil Level - Regularly check the oil level with the Dipstick (figure 5) before starting. Be sure the tractor is level.

Add oil - Add oil by removing the Oil Filler Cap (Figure 5). Stop when the oil reaches the FULL mark on the dipstick. (Allow time for the oil to drain down prior to checking. This prevents overfilling.)

Oil Filler Cap - Periodically check the breather-type oil filler cap. Wash it in solvent at least every oil change.

Oil Changes - Change the oil after the initial eight hours of operation. Then change the oil every 40 hours under normal conditions, oftener under dusty conditions and/or periods of extended operation under heavy load.

Drain oil by removing the oil drain plug, the bottom bolt on the Left Hand axle housing.

Be sure oil drain washer is in place when replacing the bolt.

Oil Filter - Under normal conditions, change the oil filter every 80 hours, however, under extremely dusty conditions and/or extended operation under

heavy loads, change the oil filter every 40 hours.

The oil filter must be installed by hand. Install the filter following the instructions printed on the filter.

Oil Pressure - Check the oil pressure gauge when starting. The level should raise quickly after starting, and at full throttle be about 2/3 of the way over in the normal range. If the oil pressure is not correct, stop the engine and check oil level. If the oil level is not low, check your service manual or call your dealer.

Battery (Electric Start models only) - daily check the electrolyte level of the battery. Maintain at proper level by adding only distilled water.

AIR INTAKE SYSTEM

The importance of maintaining an air cleaner in proper condition cannot be over-emphasized! Dirt inducted through improperly installed, improperly serviced elements, wears out more engines than does long hours of operation. Furthermore, operating with a clogged element causes a richer fuel mixture which can lead to formation of harmful sludge deposits. Always cover carburetor or air horn when air cleaner is removed for servicing.

Dry type air cleaner elements should be serviced only when required. Need for air cleaner service is evident by a loss of power for no apparent reason.

To clean, remove element and tap lightly on a flat surface to remove loose surface dirt. Replace element if dirt does not drop off easily or if the element is

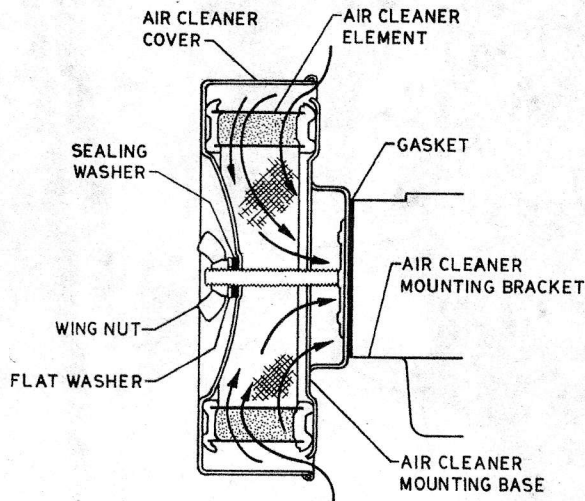


Figure 6

damaged in any way. Also, replace element if there is any evidence of dirt on the inside surface of the element.

DO NOT wash dry elements in any liquid or attempt to blow dirt off with air hose as this will puncture the filter element.

Handle new element carefully - do not use if the gasket surfaces are bent, twisted, or damaged in any way. Use only genuine Gravelly elements. Use of other elements will void warranty. Not only must the proper element be used but it must be properly installed to prevent unfiltered air from entering the engine.

Install the air cleaner assembly in this sequence on the air cleaner mounting bracket:

1. Rubber gasket
2. Air cleaner mounting base
3. Element
4. Air cleaner cover
5. Rubber sealing washer
6. Flatwasher
7. Wing Nut

Be sure the element gasket surfaces fit tightly on the base and cover. The wing nut should be finger tight.

Fuel - Use a good grade of regular gas. Premium grade should not be used. Fuel tank capacity is approximately 1 3/4 gallons (6.63 L.).

It is good practice to periodically clean the tractor. Dirt accumulation on tractor allows heat buildup.

Troubleshooting

Fuel Troubles - Check to see if:

- ... Fuel tank contains fuel
- ... Vent hole in fuel tank cap is open
- ... Fuel shut off valve is open. (Turn counterclockwise to open)
- ... Fuel line is clear. Close shutoff valve. Remove fuel line from carburetor, and reopen valve. If fuel flows, the line is clear; if not, check the fuel hose and fittings, and strainer in fuel tank.
- ... Carburetor is getting fuel. With the fuel line intact, close the shut-off valve. Drain any fuel remaining in the carburetor by removing the plug from the bottom of the carburetor. Open the shutoff valve. If fuel does not flow out of the carburetor there is a restriction in the carburetor. See service manual or call your dealer.

Ignition Troubles - Check to see if:

- ... Hood is touching the plug. Raise the hood and attempt to start the engine.
- ... Spark plug is fouled or wet. Remove the plug and clean, dry, or replace it. Correct gap to .025 inch (.635 mm).
- ... Engine is getting a spark from the magneto. Remove the magneto from the spark plug and crank the engine by hand, holding the cable end so that the spark can jump to the cylinder head. If there is no spark when the magneto is heard to click, or a weak spark (less than 3/16 inch or (4.76mm)). Check the connections. If these are all right, the magneto is defective.
- ... Ignition stop button is shorted out. To test, remove the ground wire from the magneto stop button and attempt to start the engine. See service manual or call your dealer. (See 5, figure 7.)

Carburetor and Air Cleaner Trouble - A flooded carburetor or a clogged air cleaner may keep the engine from starting.

If gas is dripping from the carburetor, it is flooded. Wait 10 to 15 minutes before further attempting to start the engine.

Check air cleaner element; if dirty, clean or replace (See Air Intake System)

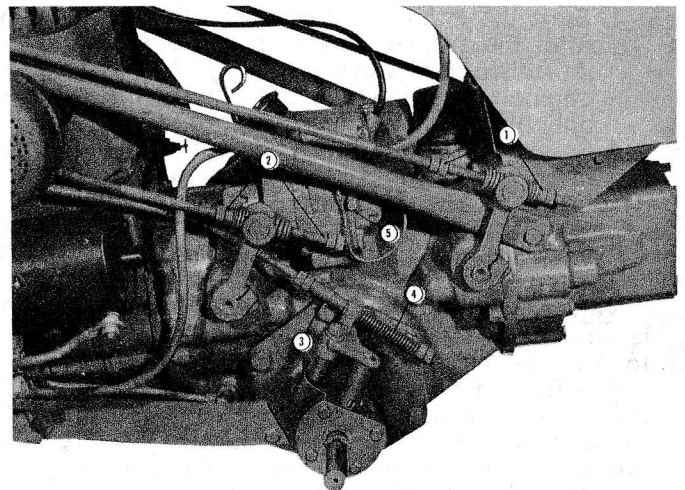


Figure 7

Adjustments

Following are common adjustments which most users can readily perform:

Spark Plug - The spark plug should have its gap set at .025 inch (.635 mm.).

Clutch Rods - To adjust clutches, tighten the lock-nuts, 1 and 2 in Figure 7, until the clutch rod springs are compressed fully as each lever goes over center in the fully engaged position, either high or low gear or forward or reverse.

Range Selection Linkage - The toggle spring (located by the range lever) occasionally may require adjustment by tightening the hex nuts on the toggle rod until the spring is compressed to 15/16 inch (23.81 mm). Figure 3 and 4. To adjust springs, (3 and 4 in Figure 7), have the range selection lever engaged fully in high or low range, move the hex nuts (1 and 2 in Figure 7) on the spring rod until each spring is compressed 2 1/2 inches (63.5 mm).

Carburetor - If absolutely necessary to adjust the carburetor, follow these instructions:

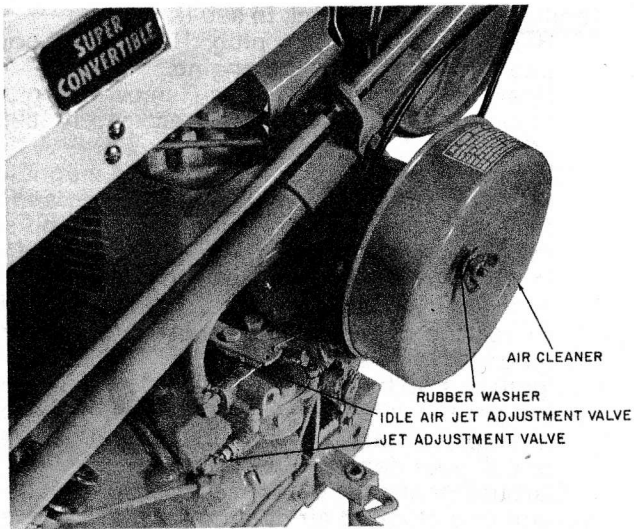


Figure 8

1. Screw the jet adjustment valve (a brass T-valve) in until it is snug. Do not force or screw it tightly.
2. Back off the jet adjustment valve 1 1/2 turns.
3. Start the engine and open the throttle halfway. After the engine warms up, begin screwing the jet adjustment valve in slowly. As soon as the engine slows down, stop and back the valve off until engine picks up speed.
4. Screw the idle air jet adjustment valve (a slotted-head screw with a spring around it) all the way in; then back off 1 turn. Start the engine and allow it to idle. Screw the idle air jet adjustment valve in until the engine begins to run rough. Then back the valve off the engine runs smooth.

Valves - Adjust the valves only when the engine is cold. Remove the valve cover cap, adjust tappet to .015 (.397mm) inch.

Fan Belt - Fan belt tension is adjusted by moving the fan belt pulley (the pulley at the fan) upwards, to increase tension. To adjust; loosen the large thin nut between the fan belt pulley and fan housing. Tighten after proper tension is reached.

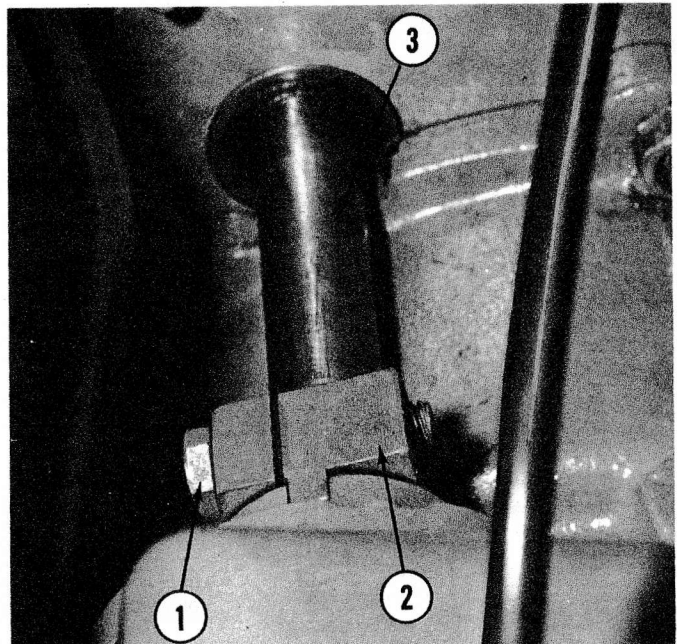


Figure 9

Timing - The magneto should be set to fire approximately 20 degrees before top dead center. To adjust:

1. Loosen magneto coupling nut (1, Figure 9) until the coupling slips on the camshaft. It may be necessary to tap the coupling gently.
2. Remove the cylinder head.
3. Bring the piston to top dead center on the compression stroke (both valves closed).
4. Turn the starter pulley counterclockwise until the piston goes down the cylinder approximately one inch. Then bring the piston back up the cylinder to 3/8 inch (9.525mm) from top of cylinder. This procedure takes up any backlash in the gears.
5. Align the timing marks (straight marks) on the magneto.
6. Be sure that there is at least .015 inch (.397mm.) end play in the magneto coupling so it will not cramp the impulse. Use feeler gauge between the fiber block (2, Figure 9) before tightening nut. Tighten nut.
7. Check your settings by backing the piston not more than two inches down the cylinder barrel (to avoid picking up the magneto impulse) and bring the piston up to 3/8 inch from top of cylinder, magneto marks should align.
8. When timing is correct, install cylinder head and magneto cover.

SPECIFICATIONS

Model	Custom	Super
Engine	Gravely	Gravely
Type	4-cycle air cooled	4-cycle air cooled
Horsepower	7.6	7.6
Bore & Stroke	3.25 x 3.50 (82.55mm x 88.80mm)	3.25 x 3.50 (82.55mm x 88.80mm)
Displacement	29.0 cu. inch(475.1cc)	29.0 cu. in (475.1cc)
Speed	2600-2800 RPM	2600-2800 RPM
Valve Setting	.015 in. (.397 mm)	.015 in. (.397 mm)
Fuel	Regular	Regular
Sparkplug	1.75 U. S. Gal. (6.63L)	1.75 U. S. Gal. (6.63L)
Capacity	5 pts. (2.36L)	5 pts. (2.36L)
Fuel Tank	Champion H-8	Champion H-8
Chassis		