

**GRAVELLY®**

**CONVERTIBLE 10  
CONVERTIBLE 12  
OWNERS  
MANUAL**



**THANK YOU** for your investment in Gravelly equipment. It is a good investment, for the Gravelly will save you work and worry for many years.

You will gain still greater satisfaction from your powerful Gravelly if you add the tools you need for your other jobs. From time to time we suggest you consult your dealer for the many Gravelly attachments that will help you save time and effort.

Numerous independent dealers and factory branches distribute Gravelly equipment. All are ready to give prompt and efficient service, with parts in stock and personnel trained in factory-service methods.

Your Gravelly Tractor and Attachments are warranted under terms shown herein. To qualify for this Warranty, your dealer will register your equipment by completing the attached Registration Card and returning it.

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# 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



## MODELS

The Gravely Convertible tractors are available in 2 models:

Convertible 10 — 10 HP

Convertible 12 — 12 HP

Your Gravely tractor will give long years of highly satisfactory performance if maintained and operated as outlined in this manual.

## SERIAL AND SPECIFICATION NUMBERS

It is important that you know the serial number of the tractor. It is located on the left side of the advance casting. Engine numbers are also important. They are located on the nameplate on the blower housing. For your future reference, please fill in the numbers as soon as possible.

Tractor Serial Number\_\_\_\_\_

Engine Model Number\_\_\_\_\_

Engine Specification Number\_\_\_\_\_

## ROUTINE MAINTENANCE

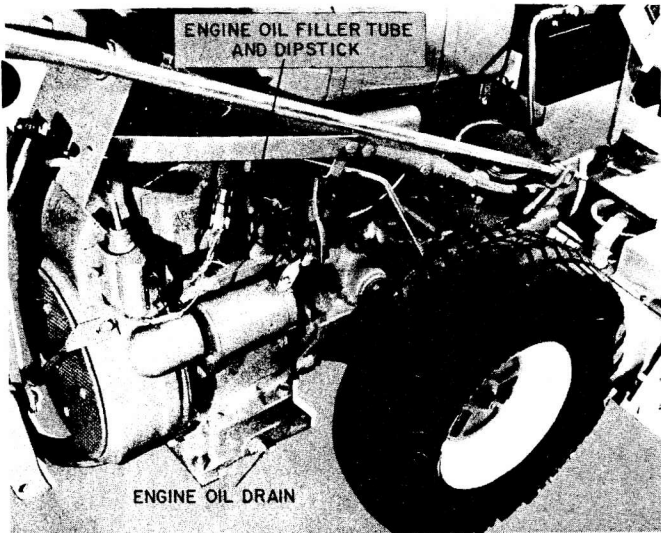


Figure 1

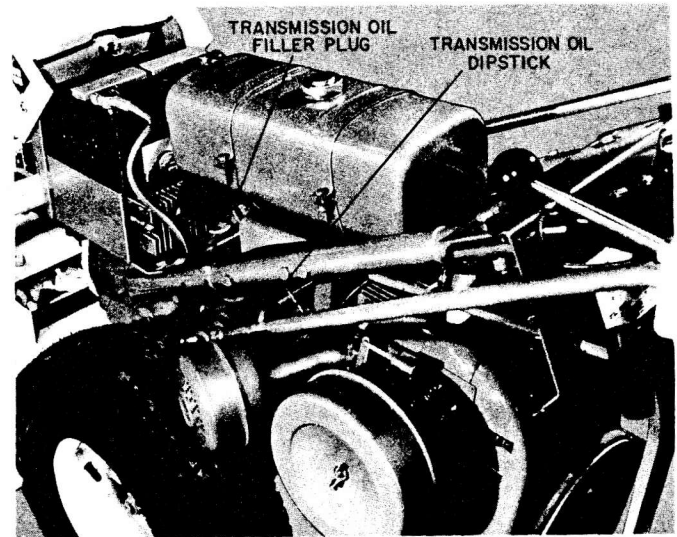


Figure 2

### Lubrication

#### Transmission

**Capacity** — 5 U.S. Quarts. API classification GL-6 Gear Lube, SAE 90.

Check oil level daily. Maintain at full mark, do not overfill. Regular draining of the oil in the transmission is not necessary. The transmission oil drain is the bottom bolt in left axle housing.

#### Engine

**Capacity** — 4 U.S. Pints. Use API classification SC oils.

Summer — SAE 30

Winter — SAE 5W20

Check oil level daily. Maintain at full mark, do not overfill.

Change oil after initial 5 hours of operation and then every 25 hours or oftener under dusty conditions. Drain plug is on the right side of the engine base.

#### Maintenance

**Air Cleaner** — Clean or replace when necessary. A loss of power is an indication that air cleaner service is required.

The air cleaner element should be cleaned by gently tapping on a flat surface. Replace the element if it is bent, crushed or damaged in anyway.

When reinstalling, be sure the element fits the adapter plate and the wing nut on the cover is finger tight.

**Tire Pressure** — Regularly check and maintain tire pressure at 18 psi.

**Battery** — Regularly check the electrolyte level of the battery. Add distilled water as necessary to maintain proper level.

**Cooling System** — Clean tractor regularly. Pay particular attention to the cooling system to where a debris build-up can cause overheating.

**Clutch Adjustment** — When clutch shippage occurs, adjust the jam nuts on the clutch rods at the forward-reverse clutch and high-low clutch. Adjust the nuts so that as the control lever goes overcenter, the spring on the actuating shaft lever is nearly compressed.

**Spark Plug** — Gap .025". If tractor is hard-starting, check spark plug, clean or replace if fouled or wet.

**Fuel Strainer** — Periodically remove strainer from the bottom of the tank and clean.

**Carburetor** — Carburetor adjustment is set at the factory. If carburetor adjust has been altered, to reset, turn main fuel needle and idle fuel needle in (clockwise) until they just bottom, then back out main fuel needle 2 turns and idle fuel screw 1¼ turns. Start engine, while running at full throttle further adjust main fuel needle till engine runs best. Then idle engine and adjust idle fuel needle further if necessary. Engine should idle at about 1000 rpm.

**NOTE:** Main Fuel Needle is the screw on top of the carburetor. The Idle Fuel Needle is the screw on carburetor side next to engine.

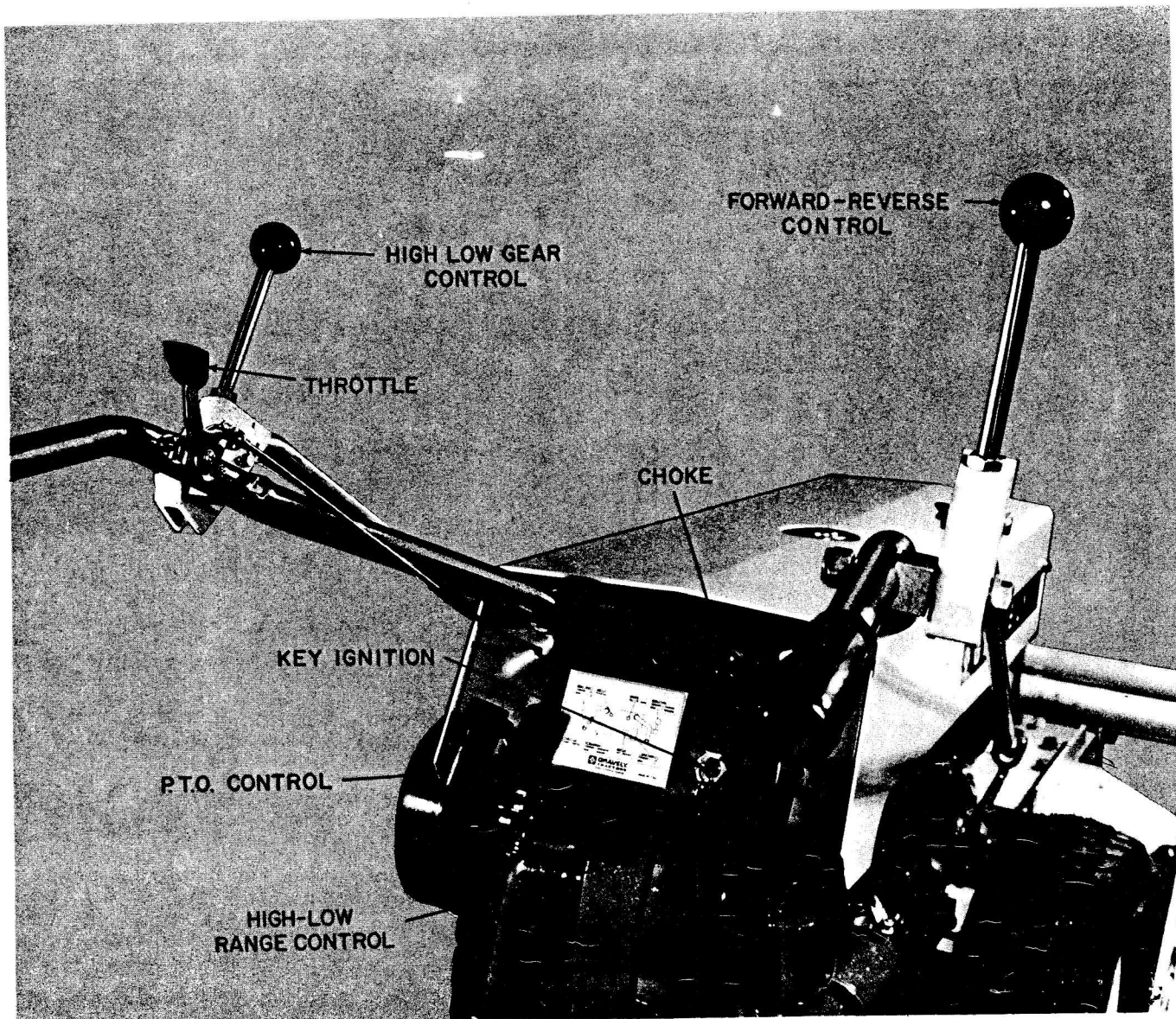


Figure 3

## OPERATION

### INITIAL OPERATION

For the first hour of operation, work under a light to moderate load. (Example: Taking a partial swath while mowing.)

### BEFORE STARTING:

- Check oil levels in transmission and engine.
- Check fuel level. Use high quality, regular grade leaded or low-lead, gasoline.
- Check to see that Forward-Reverse, PTO and High-Low controls are in neutral position.

**Starting** - If engine is cold, pull out choke. Depress throttle approximately  $\frac{1}{2}$ . Turn key to "ON" (clockwise) and then on to engage the starter. Release starter as engine starts. Push in choke gradually as engine warms up.

**CAUTION** - Do not hold starter engaged over 15 seconds without allowing a cooling period for the starter motor.

**Throttle** - Engine rpm is controlled by the internal governor at any throttle setting. *Engine performance is best at full throttle.*

**High and Low Gear** - The large lever on the outside of the left handle operates the high and low gears. When in a near-upright position the High and Low Gear Lever is in the neutral position. To put the Tractor in high gear, push it forward until it locks. Pulling this lever back (towards the operator) and locking it puts the transmission in low gear. This lever may be operated independently from the forward and reverse gear lever. It may be moved from either position to the other at any time during operation of the equipment, but it must be in one gear or the other.

**Swiftamatic-8 Transmission** - The Gravelly Commercial Tractor is equipped with the Swiftamatic-8 Transmission. This is an all-gear drive transmission which allows the operator to select one of 4 forward or 4 reverse speeds.

This is accomplished by selecting either high or low gear by means of the high-low control lever and also an optional selection of speed ranges by operating the Swiftamatic Control. The Swiftamatic transmission, when in the low range, reduces the ground speed by 1/2 without affecting attachment speed.

The speed range is always selected before controls are operated to move the equipment. Selection is made by moving the Swiftamatic Control in or out. IN is low range, OUT (towards the operator) is high range.

To change axle ranges, stop the tractor and reduce engine speed to an idle. Keep the High-Low Control in high or low, but keep the Forward-Reverse Control in neutral. Move the Swiftamatic control to high or low range. Move the Forward-Reverse Control back and forth slightly until control is fully engaged.

**CAUTION:** Never shift the Swiftamatic control while the tractor is moving. Always come to a complete stop prior to shifting.

Never shift the Swiftamatic control while stopped on a hill. If you must shift on an incline, stop the tractor so that it points across the hill rather than up or down it.

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 where a slower ground speed is needed to give the attachment longer to do its job. High axle range is generally satisfactory for mowing and other lawn jobs.

*Forward and Reverse* – The Tractor has a unique instant forward and reverse planetary clutch that gives you instant control of the tractor, under all conditions.

After the High and Low Lever has been put in the proper gear and the attachment has been put in operation, operation of the Forward-Reverse Control Lever is the next step. This control is located on the right handle.

To go forward, grasp the ball on the control and move it forward until it locks in forward position.

To put the tractor in reverse simply grasp the round handle and pull it back and towards the operator. This is a safety reverse, and requires pressure on this handle to keep the tractor moving in reverse. Releasing the handle permits it to return to neutral.

*P.T.O. Control Handle* – Power attachments must be placed in gear with the High-Low Control in neutral and engine speed reduced to a fast idle. To put the attachment in gear, grasp the P.T.O. Control Handle, and pull back until it locks in the proper position. Now put High-low Control in gear.



## MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS

ENGINE	C-12	C-10A
Type .....	4-cycle, air cooled .....	4-cycle, air cooled
Horsepower .....	12 @ 3600 RPM .....	10 @ 3600 RPM
Bore .....	3.375 inches .....	3.250 inches
Stroke .....	3.250 inches .....	2.875 inches
Piston Displacement .....	29.07 cubic inches .....	23.90 cubic inches
Oil Sump Capacity .....	4 U.S. Pints .....	4 U.S. Pints
Oil Specification .....	API, Service MS .....	API, Service MS
Oil Recommendations .....	See Chart .....	See Chart
<b>ELECTRICAL SYSTEM</b>		
Battery .....	SAE Type 17MI 42 Amp-hr. ....	SAE Type 17MI 42 Amp-hr.
Type of Starter .....	Electrical Bendix Type with Flywheel Alternator ..	Electrical Bendix Type with Flywheel Alternator
Spark Plug .....	Chamption H-10, (Gap, 0.25 inch) .....	Champion H-10 (Gap, .025 inch)
<b>FUEL SYSTEM</b>		
Fuel Tank Capacity .....	2.0 U.S. Gallons .....	2.0 U.S. Gallons
Filter .....	Mesh Type located in tank .....	Mesh Type located in tank
Fuel Grade .....	Regular, 90 octane or higher .....	Regular, 90 octane or higher
Air Cleaner .....	Dry, single element .....	Dry, single element
Choke .....	Manual .....	Manual
Fuel Pump .....	Automotive Diaphragm type .....	Automotive Diaphragm type
<b>TRANSMISSION</b>		
Type .....	All Gear Planetary .....	All Gear Planetary
Transmission Oil Capacity ..	5 U.S. Quarts .....	5 U.S. Quarts
Speeds Forward .....	4 Gears — 0 to 4 MPH .....	4 Gears — 0 to 4 MPH
Speeds Reverse .....	4 Gears — 0 to 3½ MPH .....	4 Gears — 0 to 3½ MPH
Oil Recommendations .....	See Chart .....	See Chart
<b>GENERAL DATA</b>		
Tire Size .....	18 x 6.50 — 8 .....	18 x 6.50 — 8
Tire Pressure .....	18 psi .....	18 psi
Tread Width .....	25 inches .....	25 inches
Length .....	56 7/8 inches .....	56 7/8 inches
Width .....	25 1/4 inches .....	25 1/4 inches
Height .....	36 3/4 inches .....	36 3/4 inches
Ground Clearance .....	4 3/8 inches .....	4 3/8 inches
Net Weight .....	460 lbs. ....	460 lbs.
Operating Weight .....	480 lbs. ....	480 lbs.
Shipping Weight .....	480 lbs. ....	480 lbs.

# Maintenance Check List

CONVERTIBLE – 10 TRACTOR

CONVERTIBLE – 12 TRACTOR

## RECOMMENDED ENGINE OILS (API Service SC)

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AIR TEMPERATURE	SINGLE VISCOSITY OIL	MULTIPLE VISCOSITY OIL
O° F and Above Below O° F.	SAE 30	SAE 10W-30 SAE 5W-20

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## RECOMMENDED TRANSMISSION OIL (API SERVICE GL-6) SAE 90.

**OIL LEVELS.** Check oil levels daily before starting Engine. Fill to FULL mark on engine dipstick and on transmission dipstick.

**OIL CHANGES.** Change engine oil at least every 25 hours.

**AIR CLEANER.** Clean as required according to directions on air cleaner decal.

**BATTERY.** Check liquid level regularly. Maintain at proper level.

**TIRES.** Check tire pressure regularly. Maintain at 18 P.S.I.

**GREASE FITTINGS.** Use General Purpose Grease occasionally on all grease fittings as needed. Once a season minimum.

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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 obligation.