

Operator's Instruction Manual

150 and 190 Garden Tractors



J. I. CASE CO. RACINE, WISCONSIN U.S.A.

NOTICE

At the time your Case Dealer delivers your new tractor, he will acquaint you with its operation and maintenance as outlined in the "Delivery Procedure and Warranty Registration". When your Dealer has completed these instructions, he will ask you to sign the report and will then hand you a copy for your records.

NOTE

The "Delivery Procedure and Warranty Registration" also contains a record of the Pre-Delivery Checkup which your Dealer made on your tractor.

AFTER DELIVERY CHECKUP

The Authorized Case Dealer from whom you purchased your new tractor will perform the "After Delivery Checkup" outlined on the following page, if you will arrange to bring your tractor to his Service Shop within - - -

60 days after date of delivery or 200 hours of operation (whichever occurs first).

NOTE

The only charge your dealer will make for this inspection will be for oil, filters, or other accessories.

AFTER DELIVERY CHECKUP

(Owner's Name)

(Date Checkup Performed)

(Owner's Address)

(Dealership)

(Town)

Tractor has been operated.....hours

(Tractor Model and Serial Number)

TRACTOR

- | | |
|---|---|
| <input type="checkbox"/> Operate hydraulic system. | <input type="checkbox"/> Crankcase oil (Change oil if necessary). |
| <input type="checkbox"/> Check tire pressure. | <input type="checkbox"/> Oil level in transmission. |
| <input type="checkbox"/> Tighten cylinder head and adjust tappets. | <input type="checkbox"/> Lubricate all pressure fittings. |
| <input type="checkbox"/> Check ignition timing. | <input type="checkbox"/> Check air cleaner. |
| <input type="checkbox"/> Check spark plug and breaker point gap. | <input type="checkbox"/> Check tension of all belts. |
| <input type="checkbox"/> Check full governed no load engine speed and low idle speed. | <input type="checkbox"/> Check steering. |
| <input type="checkbox"/> Tighten all bolts (including rims). | <input type="checkbox"/> Check front wheel toe-in (190 only). |
| <input type="checkbox"/> Cooling system. | <input type="checkbox"/> Battery, starter - generator and lights. |
| | <input type="checkbox"/> Check operation of all instruments and levers. |

DEALER: Question purchaser carefully concerning his experience with tractor and answer any questions concerning maintenance or operation that are not clear to him.

Checkup.....

Performed by.....

Signed.....

Dealer

Signed.....

Customer

Original—Dealer

Duplicate—Leave in Operators Manual for Purchaser

TO THE PURCHASER OF A CASE TRACTOR

The care you give your new Case Tractor will greatly determine the satisfaction and service life you will obtain from it. Use this manual as your guide. By observing the instructions and suggestions in this manual, your Case Tractor will serve you well for many years.

As an Authorized Case Dealer, we stock Genuine Case Parts, which are manufactured with the same precision and skill as the original equipment. Our factory trained staff is kept well informed on the best methods of servicing Case equipment and is ready and able to help you.

Should you require additional aid or information, contact us.

Your Authorized Case Dealer



HI FOLKS!-I'm Sammy Safety.
Look for me to point out
important Safety Precautions

To insure efficient and prompt service, please furnish us with the Model, Serial, Engine Model Number and Engine Specification Number of your Tractor in all correspondence or contacts.

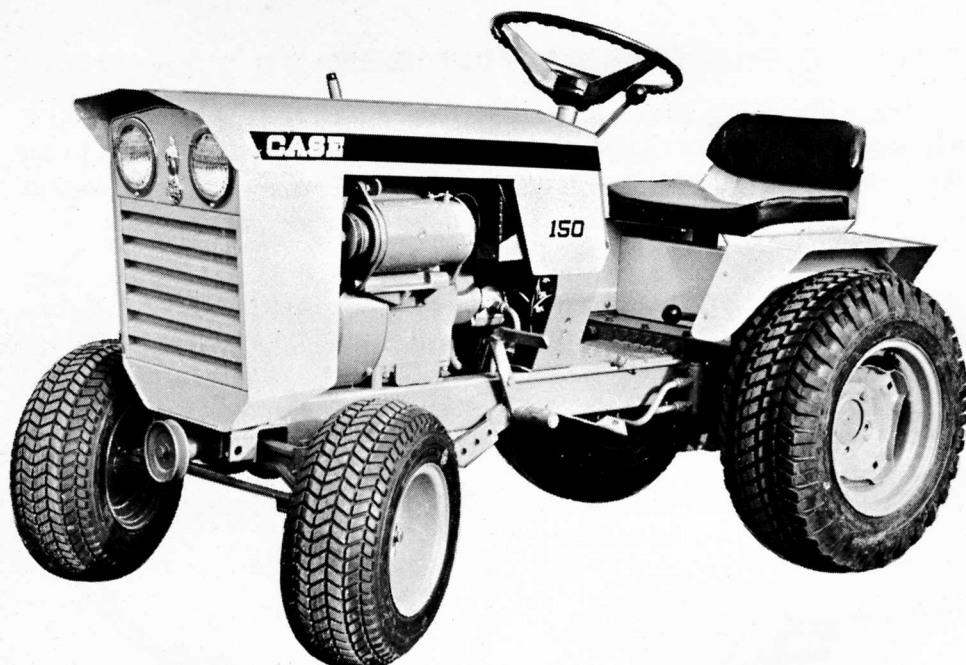


Figure 1. Left Hand View of Case 150 Tractor



Figure 2. Left Hand View of Case 190 Tractor

SERIAL NUMBER

When ordering parts from your Authorized Case Dealer and in all contacts or correspondence with your dealer relative to the Tractor always specify the Serial, Model and Engine Numbers of your Tractor.

The Model and Serial Numbers are stamped on the number plate located on the instrument panel, Figure 3. The Engine, Model, Serial and Engine Specification Numbers are stamped on a plate fastened to the right hand side of the engine, Figure 4.

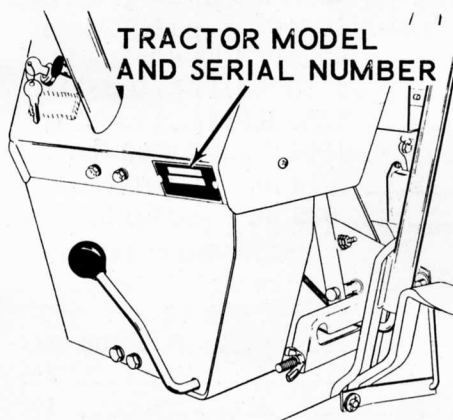


Figure 3

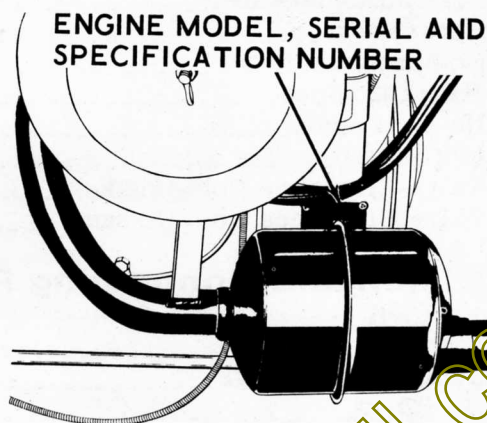


Figure 4

NOTE

The terms "Right Hand" and "Left Hand" whenever used in this manual apply to the tractor when facing in the direction the tractor will move in forward operation.

For reference, fill in the Serial Number, Model Number and Engine Numbers of your Tractor in the spaces provided below.

Tractor Model Number _____

Tractor Serial Number _____

Engine Model Number _____

Engine Serial Number _____

Engine Specification Number _____



SPECIFICATIONS

General

150

190

Type	Kohler	Kohler
Model	K241S	K301S
Cycle	4	4
Cylinders	1	1
Cylinder Bore	3-1/4 in.	3-3/8 in.
Stroke	2-7/8 in.	3-1/4 in.
Piston Displacement	23.9 cu. in.	29.07 cu. in.
Horsepower	10 HP	12 HP
Compression Ratio	6 to 1	6 to 1
Full Load Speed	3150 RPM	3150 RPM
No Load Speed	3250 RPM	3250 RPM
Idle Speed	1000 RPM	1000 RPM
Valve Clearance Cold (Intake)010 in.	.010 in.
Valve Clearance Cold (Exhaust)020 in.	.020 in.

Piston and Connecting Rod

Piston	Aluminum
Compression Rings	2
Oil Rings	1
Connecting Rod	Aluminum

Fuel System

Carburetor	1" SAE Flange
Filter Screen	In Sediment Bowl
Fuel Tank Capacity	5 Quarts

Ignition System

Breaker Point Gap020 in.
Ignition Timing (Static)	DC Mark
(Running)	SP Mark
Spark Plug	Prestolite 14 L7 or equivalent
Thread	14 MM
Gap025"



general specifications

Cooling System

Blower ----- Forced air with baffles directing air
around finned cylinder and head area

Electrical System

Type of System ----- 12 Volt, Negative Ground
Battery ----- Autolite LU7
Starter-Generator ----- 12 Volt
Voltage Regulator ----- Automatic Type
Head Lights ----- 12 Volt

Brake

Type ----- Hydraulic Brake operated by foot
pedal on left side of tractor

Transmission

Type ----- Hydra-Static
Mechanical Range ----- High and Low

SPEED RANGE		FORWARD	REVERSE
150	Low	0 to 3.0 MPH	0 to 3.0 MPH
	High	0 to 7.4 MPH	0 to 7.4 MPH
190	Low	0 to 3.3 MPH	0 to 3.3 MPH
	High	0 to 7.8 MPH	0 to 7.8 MPH

WHEELS AND TIRES

Tire Size	PLY	Type	PSI	
FRONT			Recommended	Max.
6.50-8	2	Terra	8	14
4.80-8	2	Rib	16	22
REAR				
8.50-12	2	Turf	8	10
8.00-16	2	Lug or Turf	8	14

Overall Measurements

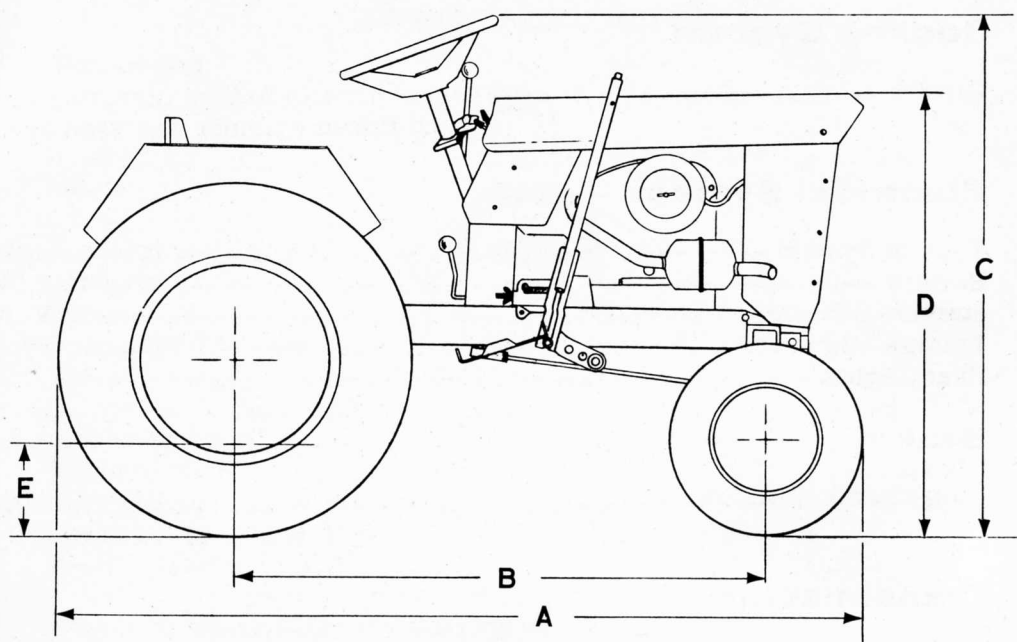


Figure 5

	150	190
A	66"	70"
B	46"	46"
C	40"	44"
D	34"	38"
E	7"	11"
Overall Width	35"	43"
Shipping Weight	705 lbs.	780 lbs.



CAUTION

NEVER FILL THE FUEL TANK WHEN THE ENGINE IS RUNNING OR WHEN NEAR AN OPEN FLAME. DO NOT SMOKE WHEN WORKING NEAR IN-FLAMMABLE FUELS.

GASOLINE

Kohler Gasoline Engines are designed to operate on REGULAR GRADE gasoline having a minimum research method rating of 90.7 Octane. This will give full power and economy together with long engine life and low maintenance cost.

The average Octane number ratings for regular grade gasoline (December 1964).

Motor Method -----	85.4 Octane Number
Research Method-----	93.7 Octane Number

These two Octane ratings are used to define the anti-knock quality of gasoline. It has become common practice in the Petroleum Industry to refer only to the RESEARCH METHOD RATING.

When only one Octane rating is given for gasoline and the rating method is not specified, it can be assumed to be the Research Method Rating.

FUEL CONDITIONER

The following "Fuel Conditioner" recommendations are made for areas troubled with gum and varnish in the fuel:

1. Obtain a "Case Conditioner" and use it as follows:
 - A. Add it to the fuel in the main storage tank.
 - B. Add a small quantity to the Tractor fuel tank daily.
 - C. Use the "Conditioner" periodically, or when any symptoms develop in the engine that indicate gum and varnish deposits in the Fuel System.

NOTE

Refer to the instructions furnished with the "Conditioner" as to the amount that should be used.

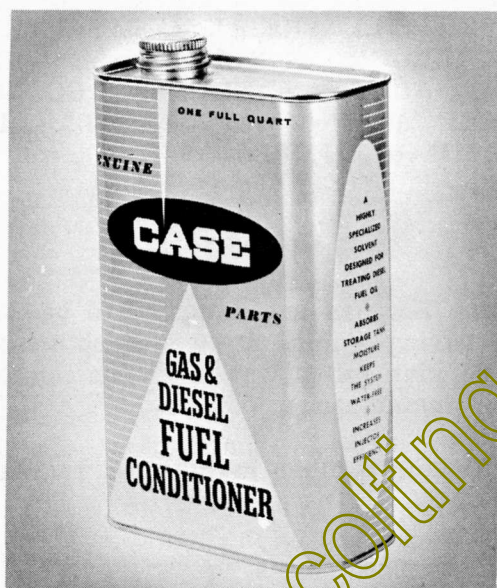


Figure 6

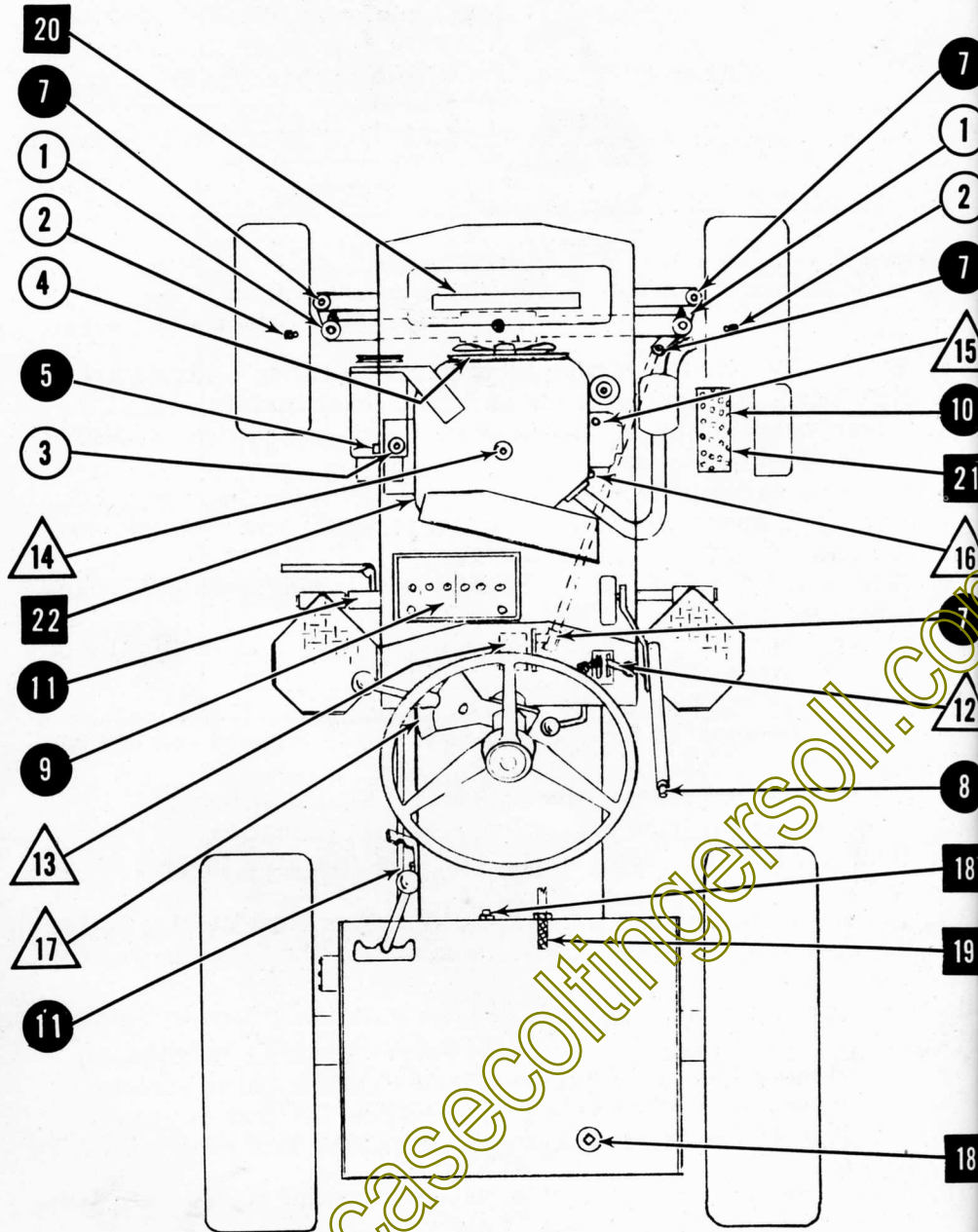
IMPORTANT

1. Buy Fuel in quantities that will be used up in 90 days or less.
2. Protect main storage tank with a shelter so the fuel can be kept as cool as possible.

SAFETY PRECAUTIONS



1. Before starting the engine, be sure all operating controls are in NEUTRAL and the tractor is on a flat, level surface.
2. Never operate any of the controls from any position but seated in the operator's seat.
3. Be extra careful when going down steep grades.
4. Drive at a speed slow enough to insure safety and complete control, especially over rough terrain.
5. Reduce ground speed when making a turn, going down hill or applying the hydraulic brake.
6. Always operate the tractor in low range whenever on hills or steep inclines.
7. Never park the tractor on a hill or incline.
8. Change direction of tractor only at low ground speed and low engine RPM.
9. Never leave the engine running while it is unattended.
10. Never dismount from a Tractor when it is in motion.
11. Never permit persons other than the operator to ride on the Tractor.
12. Never stand between a Tractor and machine when hitching unless the speed-control lever is in neutral and the brake is engaged and locked.
13. Do not oil, grease or adjust a Tractor when the engine is running.
14. Never refuel a Tractor when the engine is hot or running.
15. Do not smoke when refueling.
16. Never operate a Tractor in a closed shed or garage.
17. Do not wear loose fitting clothing which may catch in the moving parts.
18. To prevent highway accidents, use red warning flags in the daytime and red warning lamps at night.
19. Always have PTO lever disengaged and the brake pedal depressed and locked when parking or starting the Tractor.
20. REMEMBER, A CAREFUL OPERATOR IS ALWAYS THE BEST INSURANCE AGAINST AN ACCIDENT.



REF. NO.	SERVICE POINTS	NO. OF POINTS	GREASE	DRAIN	CHECK	CLEAN	CHANGE	OIL (Few Drops)	FREQUENCY
1	Front Spindles	2							5 HOURS OR DAILY
2	Front Wheel Bearings or Bushings	2							
3	Engine Oil *	1							
4	Blower Air Intake Screen	1							
5	Engine Oil	2							25 HOURS OR WEEKLY
6	Air Leaks **	**							
7	Tie Rod and Drag Link	4							
8	Implement Lever and Release	3							
9	Battery	1							100 HOURS OR MONTHLY
10	Air Cleaner ***	1							
11	Brake Pedal and Lock	2							
12	Throttle and Choke Controls	2							
13	Steering Gear Box °°°	1							1000 HOURS OR YEARLY
14	Spark Plug °	1							
15	Crankcase Breather ***	1							
16	Breaker Points °	1							
17	Speed Control Bracket and Pivot Points °°	1							1000 HOURS OR YEARLY
18	Transmission Oil +	2							
19	Transmission Filter Screen	1							
20	Oil Cooler Fins ***	1							
21	Air Cleaner Element ***	1							
22	Engine Cooling Fins ***	1							

*Keep oil level between marks on gauge (Capacity 3 pts.)

**Be sure there are no leaks between gaskets, joints at carburetor, air cleaner and cylinder block

***More often in dusty conditions. For Air Cleaner Service See Page 20

°Clean and regap. See Pages 22 and 23

°°Use a good grade wheel bearing grease

°°°One stroke - Do not overlubricate

+Maintain oil level one inch from top cover. Use SAE 5W20 Motor Oil in winter (below 32° F.) and SAE 20W40 Motor Oil in summer. Use only MS or DM Service Classification Oil that has passed Automotive Manufacturers Association (AMA) Test Sequences I, II, and III.

Use number 1 gun grease (Lithium Base) for all pressure fittings (As many strokes as required).

ENGINE LUBRICATION

Selection of Lubricating Oil

It is extremely important that you select and use in your Case Tractor a stable, high quality, "SAE - MS or DM Service Classification Oil that has passed Automotive Manufacturers Association (AMA) Test Sequences I, II, and III.

Engine Oil SAE Viscosity Rating

SAE 30 ----- Air Temperatures 30° F and Above

SAE 10-W ----- Air Temperatures 0° F to 30° F

SAE 5-W or 5W-20 ----- Air Temperatures 0° F or Below

REGULAR OIL CHANGE

Drain and refill the crankcase at least every 25 hours of operation.

If the engine service is severe - (frequent stopping and starting, high or low operating temperature) - the crankcase should be drained more often to prevent the formation of sludge or harmful deposits in the engine.

CRANKCASE OIL CHANGE

IMPORTANT

1. When just the crankcase is drained, always refill with 3 measured pints of oil. Do not refill using the dipstick as a guide.
2. Operate the engine for a few minutes; then check the oil level with the dipstick.

Be sure to allow sufficient time for the oil to run down off the engine parts.

3. By following the above procedure, you will prevent overfilling or underfilling the crankcase, either of which can be detrimental to the engine service life and will give you false oil consumption records.



RUN-IN PROCEDURE

Your new tractor should be subjected to a run-in period before it is operated at full load. Drive the tractor for several hours to get the feel of operation. Actuate the speed control lever through its full range during the run-in period.

PRE-STARTING CHECK LIST

Before starting your new Case Tractor for the first time and before each operating period thereafter, check the following.

1. **MAKE SURE EVERYONE RESPONSIBLE FOR THE TRACTOR'S OPERATION AND MAINTENANCE UNDERSTANDS THE IMPORTANCE OF CLEAN FUEL.**
2. Check that all lubricating fittings are serviced as directed in the Lubrication Chart.
3. Check that the crankcase and transmission housing is filled to levels indicated in the Lubrication Chart.
4. Be sure air cleaner and blower air intake screen on engine are free of obstructions and excessive dirt.
5. Check that tractor fuel tank is filled with clean fuel that meets requirements listed under Fuel Specifications. Always wipe fuel tank cap clean before removing it. Be sure vent hole in fuel tank is open.
6. Drain any accumulated water or sediment from the fuel tank sediment bowl.

OPERATING CONTROLS AND INSTRUMENTS

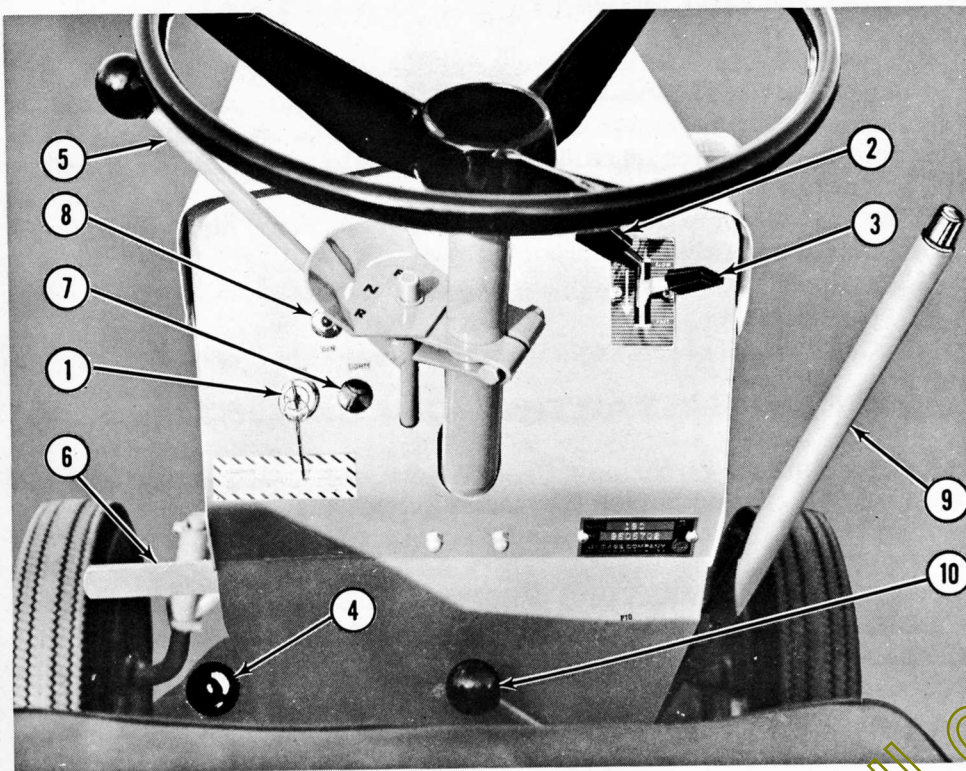


Figure 7



1. **STARTER KEY** - Turn the key to the right to start the engine. When turning off the engine, turn the key to the left and the key will be in an upright position. Do not turn the key all the way to the left as this is the accessory position.

DO NOT START THE ENGINE WITH THE PTO ENGAGED.

2. **CHOKE** - To start a cold engine, push choke lever down. Push lever up when engine is warmed up.
3. **THROTTLE** - When the throttle lever is all the way up, the engine should be idling. To increase the engine RPM, push the lever downward until the desired throttle setting is obtained.

4. **HIGH-LOW RANGE LEVER** - When moving this lever into Low High, make certain the lever is all the way to the left or to the right and is resting in the left or right notch.
5. **SPEED CONTROL LEVER** - When this lever is moved forward the tractor will move forward, and when moved rearward the Tractor will remove rearward. The further this lever is moved in either direction the faster the Tractor will go.



Make certain this lever is always in the NEUTRAL position when starting. When driving the Tractor in Low range and going down a steep grade, place the lever in the NEUTRAL position and the Tractor will creep down the steep incline slowly. High range is not recommended on hills or steep inclines.

6. **BRAKING AND PARKING** - The speed control lever (Ref. 5) can also be used as a brake when in the NEUTRAL (detent) position. On level ground the Tractor will come to a nice slow stop when the speed control lever is placed in the NEUTRAL position. If a faster stop is desired, depress the hydraulic brake pedal and the Tractor will stop immediately. If it is necessary to get off Tractor, engage the brake rod lock to keep the brake engaged.

CAUTION Operate Tractor in low range on hills and inclines. Do not leave Tractor parked unattended on hills. Always engage and lock the brake when parking or starting Tractor.

NOTE The speed control lever can be used more effectively than the hydraulic brake for controlling the tractor ground speed on hillside operation.

7. **LIGHT SWITCH** - Pull the light switch out to turn on the head lights and push in to turn off the head lights.
8. **AMMETER WARNING LIGHT** - The warning light goes on when the key switch is turned on and should go off when the engine starts. If the ammeter warning light does not go off when the engine starts and is running, it is an indication that the battery is discharging and the generator is not supplying current. STOP THE ENGINE AND CHECK FOR THE CAUSE.

OPERATING CONTROLS (Continued)

If the ammeter light flickers when the engine is at low idle, the battery, generator or regulator may not necessarily require servicing. However, if the warning light remains on when engine speed is increased, stop the engine immediately and check for the cause.

9. **IMPLEMENT LIFT LEVER** - The implement lever is used to raise or lower the implement and also to hold the implement at any given level. The wing nut at the base can be turned in or out to adjust the minimum operating height of an attachment. When transporting the attachment, pull the lift lever back until the catch engages. Depress the button at the top of the lever to release and lower the attachment to desired operating height. A slight pulling pressure on the lever will permit the release button to be more easily depressed.



10. **PTO LEVER** - To engage the attachment drive clutch, move the PTO lever to the right. To disengage, move the lever back to the left. Be sure the PTO lever is in the off position when parking or starting the Tractor.

Shut-off Valve and Water Trap

Located under fuel tank. Turn valve fully in to shut off fuel from tank. Valve must be turned fully out before operation. The fuel strainer and glass bowl should be cleaned when a visual inspection shows water or sediment accumulation in the bowl. See Page 20.

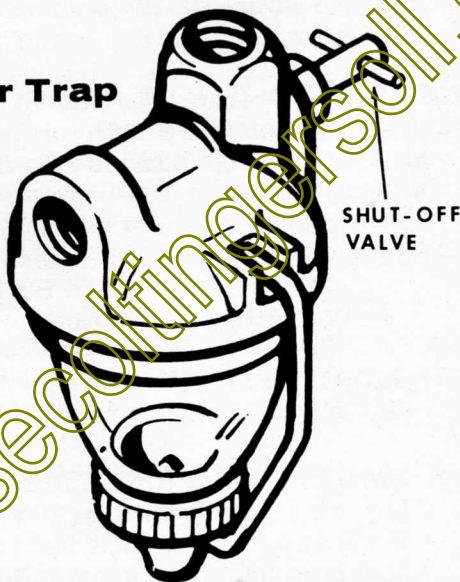


Figure 8

STARTING PROCEDURE

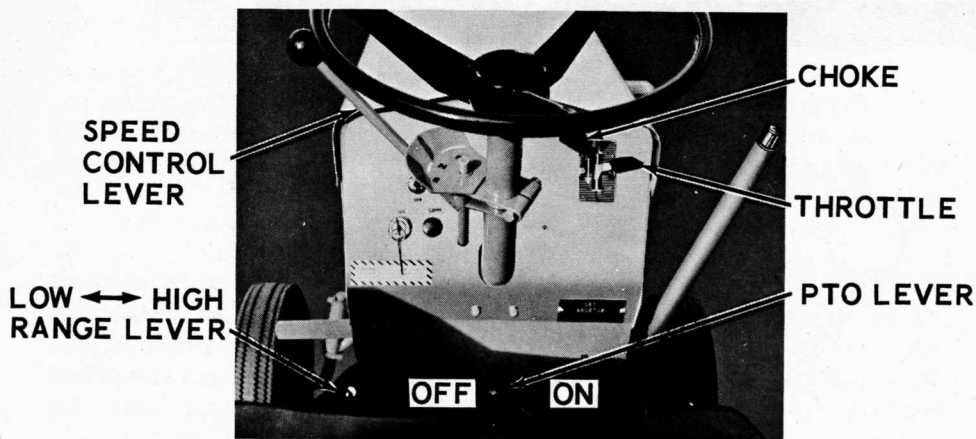


Figure 9

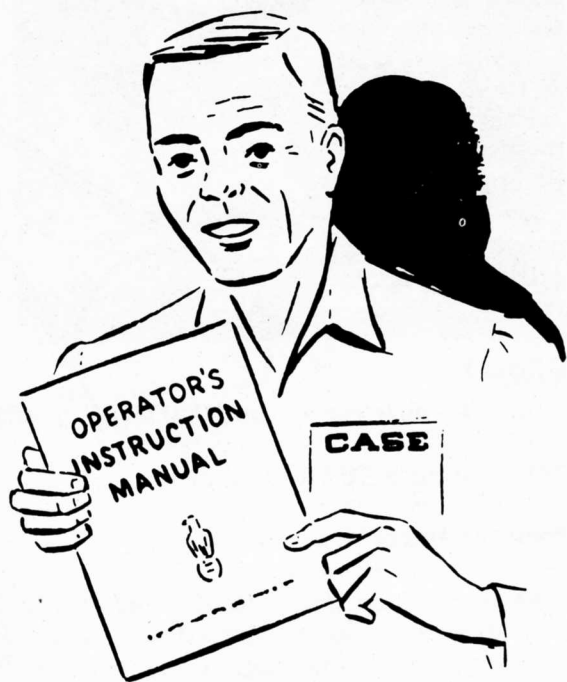
1. Place the speed control lever in the NEUTRAL position.
2. Place the PTO lever in NEUTRAL position.
3. Engage and lock the brake pedal.
4. Close the choke by pushing the control lever down. More or less choking may be necessary due to variations in temperature, grade of fuel, etc. Little or no choking will be needed when engine is warm. In cold weather, it is advisable to position the throttle lever about one-third open.
5. Turn the starter key to the right to start engine; then release key.
6. After the engine starts and runs, push the choke control lever all the way up. Always allow engine to warm up before applying a load. Release the brake pedal slowly after engine starts. If speed control lever is in proper NEUTRAL position, Tractor will not move.

CAUTION

DO NOT USE THE STARTER-GENERATOR LONGER THAN 30 SECONDS WITHOUT INTERRUPTION. WAIT AT LEAST 3 MINUTES SO THE STARTER-GENERATOR CAN COOL OR SERIOUS DAMAGE COULD RESULT.

STOPPING THE ENGINE

1. An engine that has been working under load should idle for a few minutes so the engine parts can cool evenly before it is shut off.
2. Turn starter key to "OFF" or upright position.



PREVENTIVE MAINTENANCE IS IMPORTANT TO YOU!

AS THE OWNER OF CASE TRACTOR, YOU POSSESS A MACHINE THAT IS MADE TO THE HIGHEST STANDARDS POSSIBLE.

PREVENTIVE MAINTENANCE BY YOU OR YOUR OPERATOR IS THE EASIEST AND MOST ECONOMICAL MEANS OF ASSURING MANY SATISFACTORY PRODUCTIVE HOURS OF OPERATION.

The preceding sections of this operator's manual have dealt with instructions necessary for daily operation of your Tractor. The following subjects present detailed instructions concerning the care and adjustment of the Tractor.

STARTER-GENERATOR BELT REPLACEMENT

The starter-generator drive belt should be checked for excessive looseness and wear after the first 10 hours of operation and each 25 hours of operation thereafter. The belt tension is correct when the belt can be depressed 1/4" (finger pressure) midway between the pulleys, Figure 10.

IMPORTANT

Under no circumstances should a pry bar be used on the starter-generator to obtain belt tension, as damage to the bearings could result.

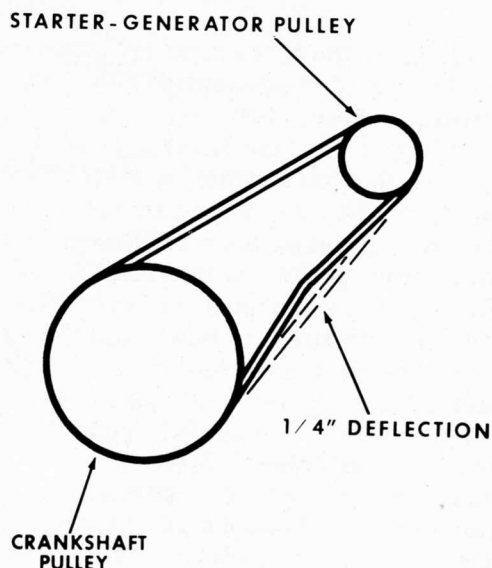


Figure 10

STARTER-GENERATOR BELT ADJUSTMENT

Loosen the adjusting bracket bolt and the two mounting bolts, swing the starter-generator toward engine and remove belt, Figure 11.

Install new belt and using hand pressure, pull the starter-generator outward until proper belt adjustment is obtained, Figure 10. Tighten the two mounting bolts and adjusting bracket bolt.

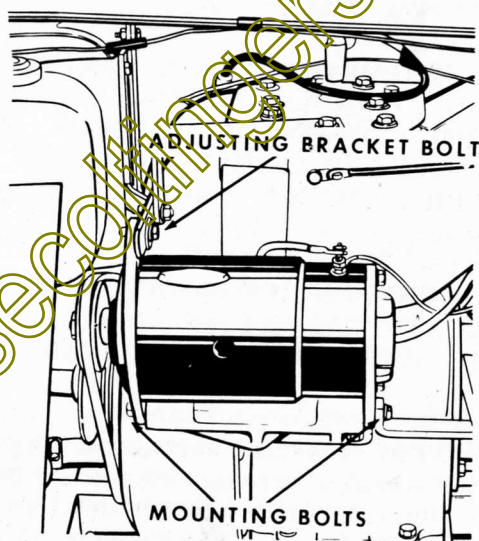


Figure 11

FUEL SYSTEM

Fuel Filter

Inspect the filter bowl daily for traces of condensation and water. Every 100 hours or monthly, clean the filter. To do so, shut off the fuel valve, unscrew the jam nut and swing the bail up out of the way. Remove the glass bowl with a gentle downward pull. Clean out the sediment bowl and rinse it in clean fuel. To clean the brass screen carefully remove the gasket and extract the screen from the filter body. If the gasket becomes damaged or broken, use a new gasket to prevent leakage of fuel. Tighten jam nut enough to prevent leaks.

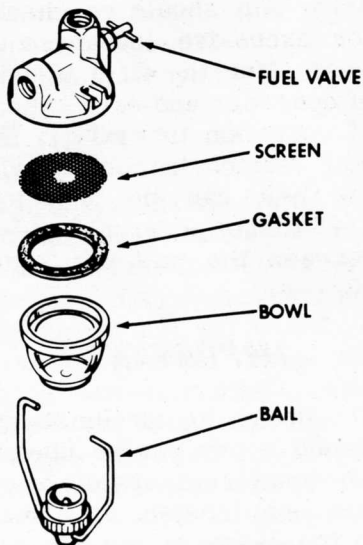


Figure 12

AIR CLEANER

Remove and clean element after each 25 hours or weekly. Install new element every 1000 hours or yearly or when loss of power is noticeable.

To clean the element, remove the wing nut, washer, cleaner cover and remove the element. Tap element lightly on a flat surface to cause the loose dirt to fall off. Handle the paper element with care to avoid damage to element.

CAUTION

Do not wash, use compressed air or solvent to clean element.

Replace the element with a new one if dirt does not drop

off easily or if it is bent, crushed or damaged. When replacing the element, be sure it fits snugly around the inside edge of the air cleaner base. Then replace the cover, washer and tighten the wing nut finger tight.

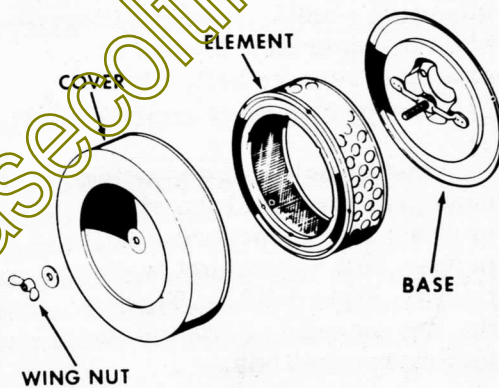


Figure 12A

CARBURETOR

The carburetor has three simple adjustments:

1. High Speed Adjustment
2. Idle Mixture Adjustment
3. Idle Speed Adjustment

High Speed Adjustment

Adjust the high speed screw, Figure 13, by turning the adjusting screw clockwise (in) until the engine misfires or falls off; then turn the adjusting screw counterclockwise (out) until the engine runs smoothly, approximately two turns.

Place the tractor under load and observe how the engine handles the load. Loss of power or tendency to stall indicates a lean mixture. Turn adjusting screw counterclockwise not more than $1/8$ of a turn and again try the engine performance. When the high speed screw is correctly adjusted, it will not be necessary to reset the carburetor unless load conditions or fuel quality have been radically changed.

Operating an engine on too lean a mixture causes loss of power and high exhaust heat.

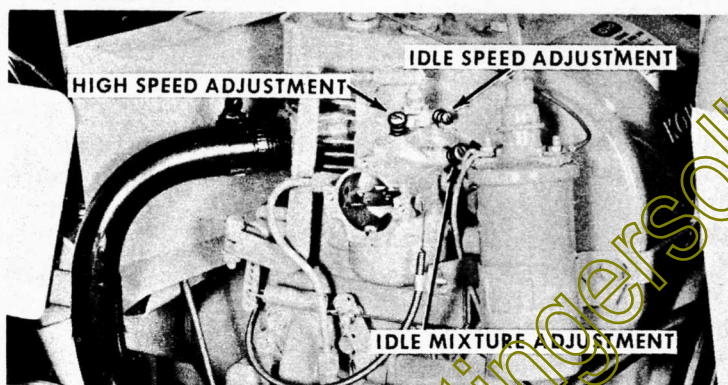


Figure 13

Idling Speed and Idling Mixture Adjustment

Turn the idle mixture screw, Figure 13, counterclockwise approximately $1-1/4$ turns from the closed position. Place the throttle in $1/2$ open position and start engine. With the throttle all the way in, turn the idle speed adjusting screw, Figure 13, until 1000 RPM is obtained. The idle mixture screw can be adjusted in or out until the engine runs smoothly while maintaining 1000 RPM with the idle speed adjusting screw.

Spark Plug

The type spark plug provided in your engine is listed as medium in the spark plug heat range chart - Prestolite 14 L7 or equivalent.

Shank Length ----- 7/16"

Thread Size ----- 14 MM

Gap Setting ----- .025 Inch

NOTE

It is possible that under unusual conditions, "colder" type spark plug may be required. Consult your Authorized Case Dealer regarding the proper type spark plug to use for your particular condition.

The spark plug plays a very important part in the power fuel economy and general performance of your engine. The outside of plug should be cleaned frequently to prevent shorting of the plug.

The spark plug should be removed, checked, cleaned and gapped at the end of every 100 hours of operation.

Removing

It is important to select the exact size spark plug wrench. The wrong size or type wrench may cause distortion and insulator breakage. Always use a spark plug wrench or a thin wall deep socket wrench of the recommended size.

Thoroughly clean the spark plug, including the threads. Check the electrode gaps using a .025 inch gauge. A very slight drag should be felt when the gauge wire passes between the electrodes.

Reset the gaps by bending the side electrode only. Never touch the center electrode.

Installing

Install the spark plug, with a new gasket, in the engine and seat the plug on the gasket, finger tight. Tighten the plug about 3/4 of a turn after the plug is seated firmly on its gasket. If a torque wrench is available, tighten the plug to 27 foot-pounds. This will assure proper seating and sealing of the spark plug.

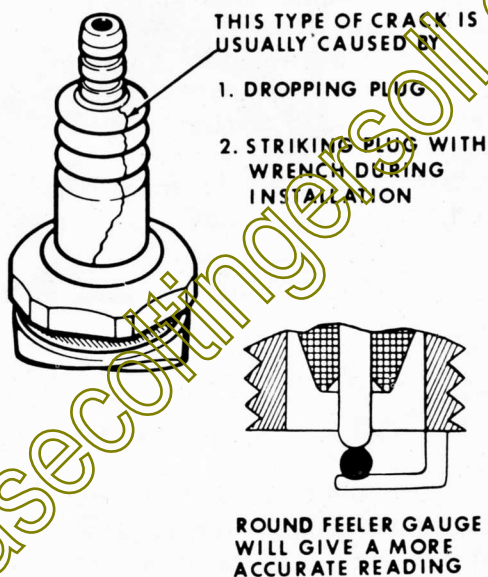


Figure 14

IGNITION TIMING

Adjusting Breaker Points

Every 100 hours of operation, the breaker point cover should be removed and the points cleaned and reset. Pitted or burned points should be replaced. Regap the points to .020 inch. Loosen the point retaining screw and using a screwdriver in the adjusting slot, increase or decrease the point gap to obtain .020 inch, Figure 15. Retighten the point retaining screw.

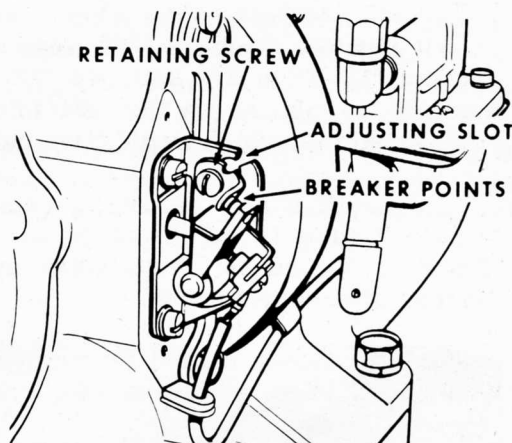


Figure 15

Static Timing

The static timing can be checked by removing the plug from the timing hole located on the left hand side of the bearing plate. Turn the engine by hand clockwise (looking from front of tractor). The breaker points should just start to open on the compression stroke when the DC mark is centered in the timing hole, Figure 16.

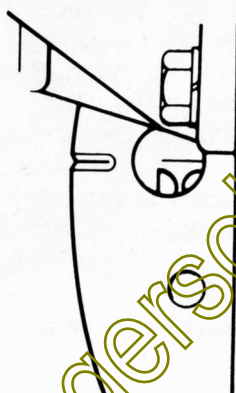


Figure 16

Running Timing

When the running timing is checked with a timing light, the SP mark must be centered in the timing hole, Figure 17. If not, adjust the breaker points as described above.

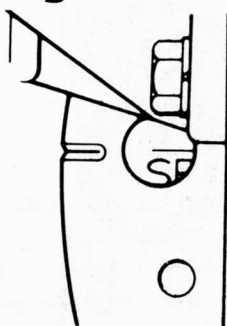


Figure 17

ELECTRICAL SYSTEM

Headlights

All genuine Case 12 Volt Replacement Sealed Units have a label marked "12-V" or are stamped "12-V" on the back of the unit. This marking is placed on the unit to make sure you do not install a 6 volt sealed unit which would burn out immediately.

To install a new headlight, remove the retainer screws and retainer, Figure 18. Pull out the old unit and disconnect the wires as shown in Figure 18. Install the new gasket furnished with your replacement case headlight.



Figure 18

When installing the new sealed unit, make sure the connections are tight.



"YES, MR. DEALER, I'VE
STUDIED THE MANUAL"

STORAGE BATTERY



When working around a storage battery, remember all of its exposed metal parts are "live". Never lay a metal object across the terminals as spark or short circuit may result. Sparks, lighted matches and exposed flames must be kept away from the battery due to the presence of explosive gas in the battery.

The liquid in the battery is acid. Use care not to spill it on hands or clothing.

Rules for Battery Care

1. Add pure or distilled water, as needed, to keep the separators covered. Check every 25 hours or weekly depending on air temperature. Normal water consumption would be approximately 1 ounce every 25 hours of operation. If it is greater, either the case is leaking or the regulator is overcharging and must be adjusted.
2. Keep the battery in a healthy state of charge as shown by hydrometer readings.
3. Make sure the battery is securely fastened in position. Cable leading from the battery should not touch cell connectors or lay on the battery container.
4. Keep the battery clean and dry.

If a battery will not hold a charge, replace it with a new one meeting the specifications as listed in the specification section.

Each week, and before adding water, take a hydrometer reading from every cell. The gravity reading from each cell should show full charge.

NOTE

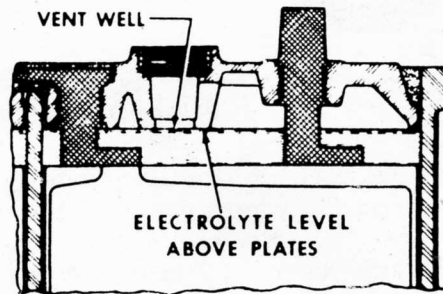
The full charge gravity reading will usually be indicated on the battery. A battery having a reading of 1.175 will freeze at approximately 0° Fahrenheit temperature.

Adding Water

Unless the tap water in your area is "approved" (water free of scale-forming minerals), always add distilled water to the battery.

When water is added during freezing weather, the battery must receive a charge immediately to mix the water and electrolyte. If it is not mixed, the water will remain at the top and freeze.

Check the liquid level in each cell weekly by removing the vent plugs. Water must be added before the tops of the separators are exposed. DO NOT OVERFILL.



Vent Plugs

Always keep the vent plugs in place and tight. Be sure the vent holes are free of dirt to prevent gas pressure in cells from breaking the sealing or the container.

Cable Terminals and Battery Posts

The battery terminals must be kept clean and tight. A good method of cleaning terminals is to remove all excess corrosion with a wire brush, then wash with a weak baking soda solution or ammonia. After cleaning, a thin coating of vaseline or light cup grease will retard further corrosion.

Idle Battery

When the Tractor is not in active use, the battery will require a charge at sufficient intervals to keep the hydrometer reading at or above 1.250. An idle storage battery will slowly discharge.

WIRING DIAGRAM

WIRE COLOR CODE

- 1 RED
- 2 YELLOW
- 3 WHITE
- 4 BLACK
- 5 GREEN
- 6 BLUE

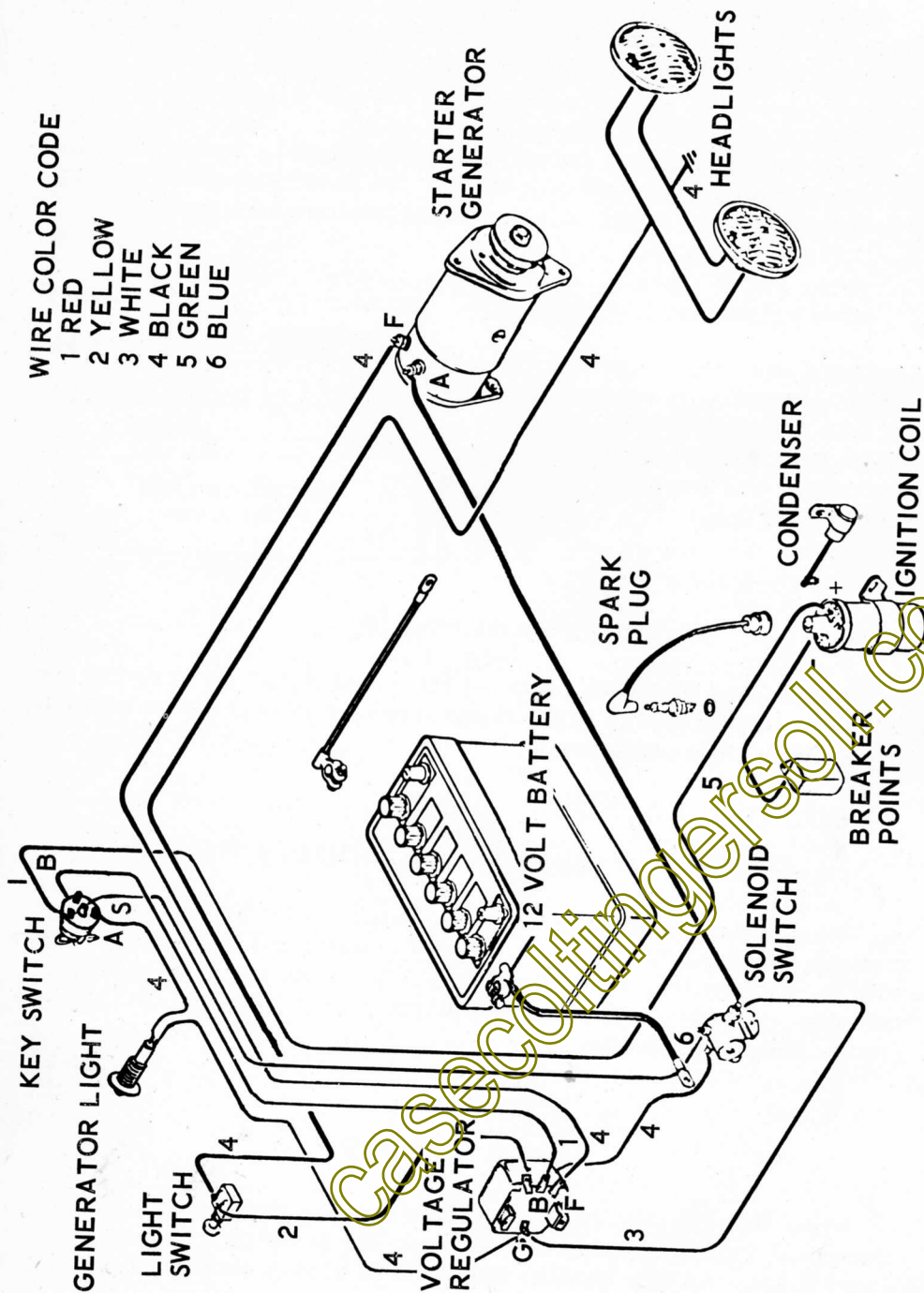


TABLE OF CONTENTS

SERIAL NUMBER	3
ENGINE SPECIFICATIONS	4
GENERAL SPECIFICATIONS	5
Cooling System	5
Electrical System	5
Brake	5
Transmission	5
Wheels and Tires	5
Overall Measurements	6
FUEL SPECIFICATIONS	7
Fuel Conditioner	8
SAFETY PRECAUTIONS	9
LUBRICATION	10
Lubrication Chart	10-11
Engine Lubrication	12
OPERATING INSTRUCTIONS	13
Run-In Procedure	13
Pre-Starting Check List	13
Operating Controls and Instruments	14 thru 16
Starting Procedure	17
PREVENTIVE MAINTENANCE	18
Starter-Generator Belt Adjustment	19
Starter-Generator Belt Replacement	19
Fuel System	20
Carburetor Adjustments	21
Spark Plug	22
Ignition Timing	23
Adjusting Breaker Points	23
Electrical System	24
Storage Battery	25-26
Wiring Diagram	27

**LUBRICATION AND PREVENTIVE MAINTENANCE
RECORDS**

DESCRIPTION	HOURS

casecoltingersoll.com



**be careful.....
avoid accidents**



As a member of the National Safety Council, we are privileged to use the Green Cross for Safety to designate not only our interest in Safety, but to point out more clearly the safety precautions in this manual.



casecollectorsoll.com

Win. Form 9-1851

PRICE 25 CENTS

MBNBO

PRINTED
IN
U.S.A.