600 HI-CYCLE (EFFECTIVE SERIAL NO. 600-101)

JOHN DEERE

OPERATORS MANUAL

600 HI-CYCLE (EFFECTIVE SERIAL NO. 600-101)

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ENGLISH

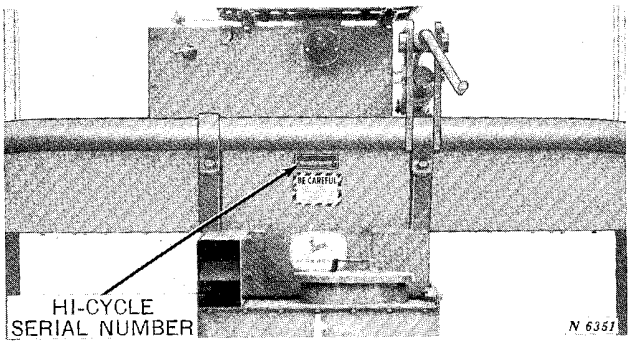
To the purchaser

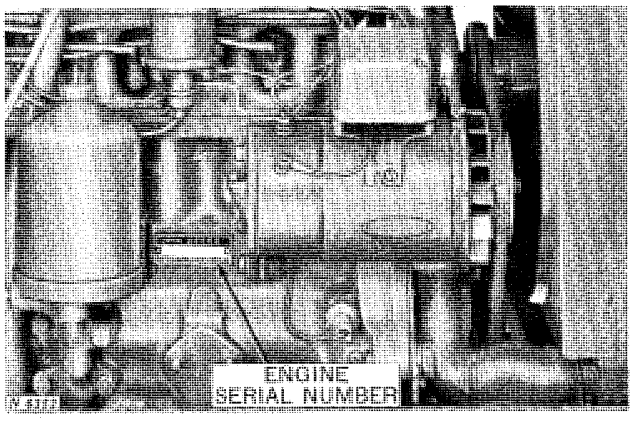
Your new Hi-Cycle was built to rigid manufacturing standards. Material and workmanship are the best. However, the machine will serve you only in direct proportion to the care you give it. How long it will last and continue its good work is a matter entirely in your hands.

The way you operate your Hi-Cycle and the care you give it have much to do with the service and satisfaction you will get from it. This manual has been carefully prepared and illustrated to show you what to do and when to do it. It explains the adjustments that are built into the machine and gives instructions on when and how to make these adjustments. The information given in this manual will afford a clear understanding of fundamentals in the use of this Hi-Cycle and spraying operations. The best use of these fundamentals to suit the conditions in which the machine is operating is a responsibility that is completely up to the operator.

If you find you need information not covered in this manual or if your Hi-Cycle requires special servicing, take advantage of the facilities offered by your John Deere dealer. He has trained mechanics, who are kept informed on the best methods of servicing and can give you prompt, "know-how" service in the field or in his shop.

Serial numbers





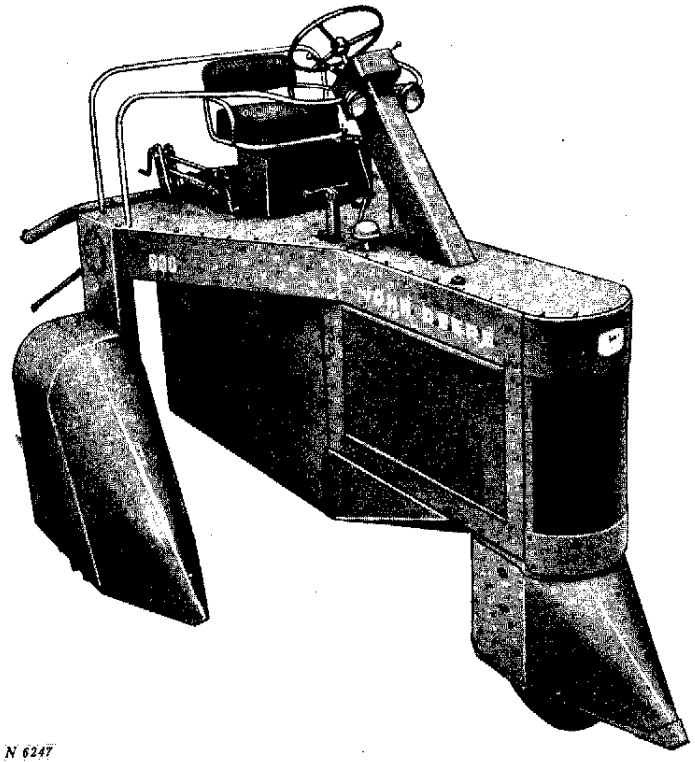
You will find the serial number of your Hi-Cycle stamped on a plate located on the rear of the main frame. The engine serial number is stamped on a plate on the right-hand side of the engine block. Write these serial numbers in the space provided below for handy reference later.

HI-CYCLE SERIAL NO. . . . . .

ENGINE SERIAL NO. . . . . .

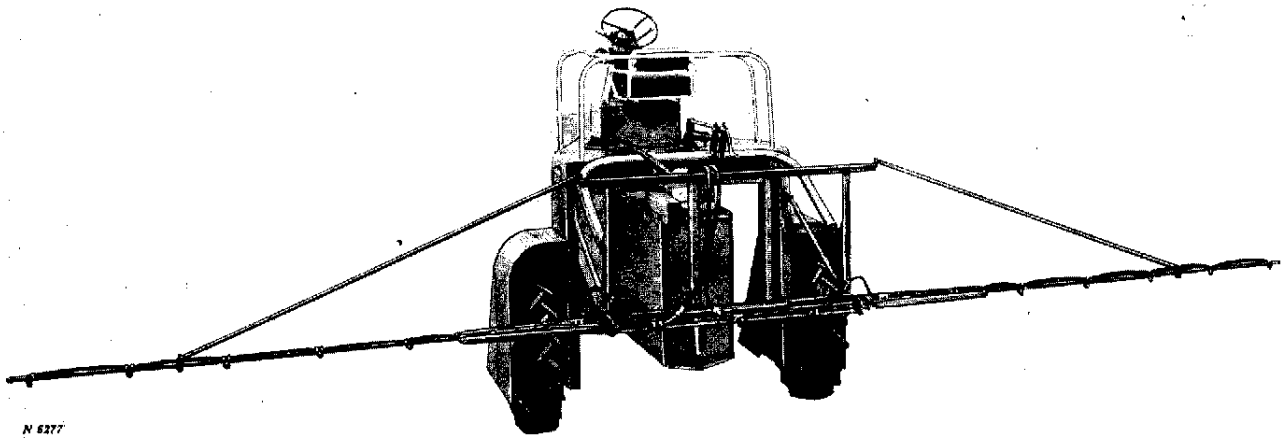
DATE PURCHASED . . . . . .

contents



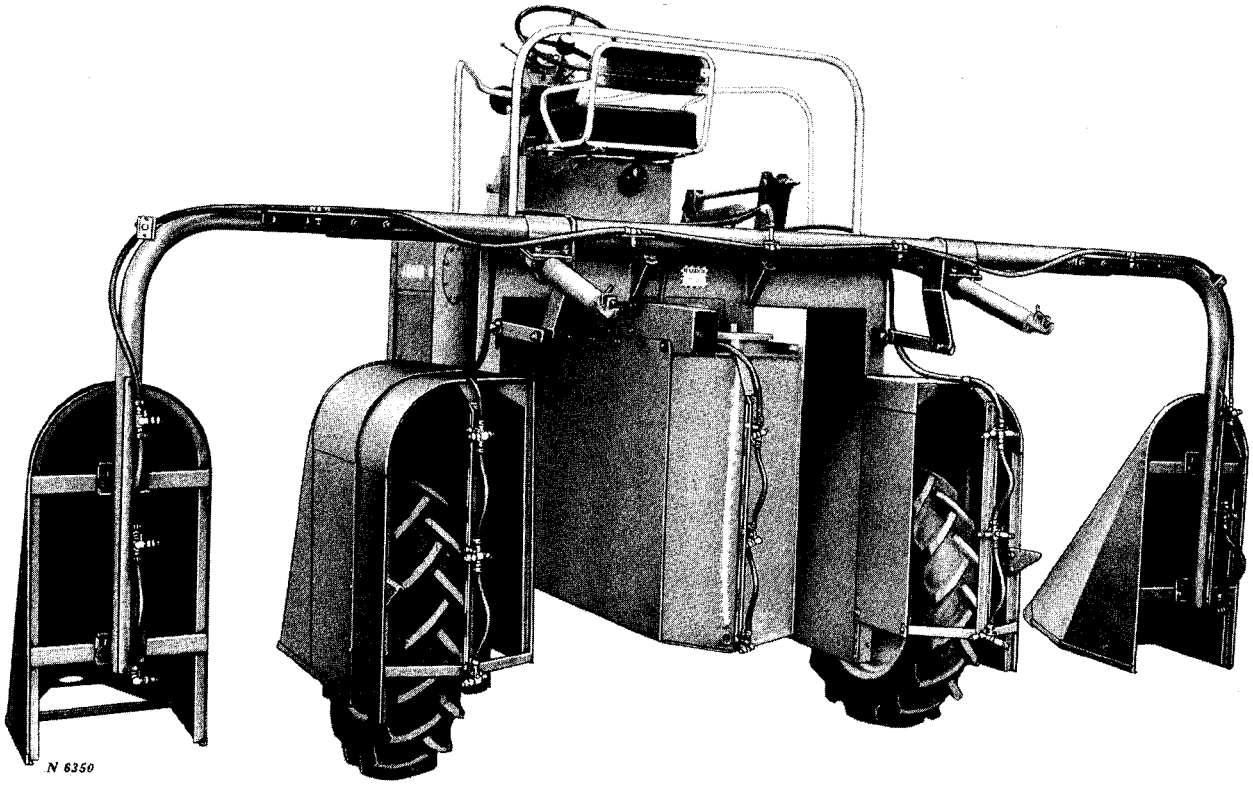
N 6247

John Deere 600 Hi-Cycle

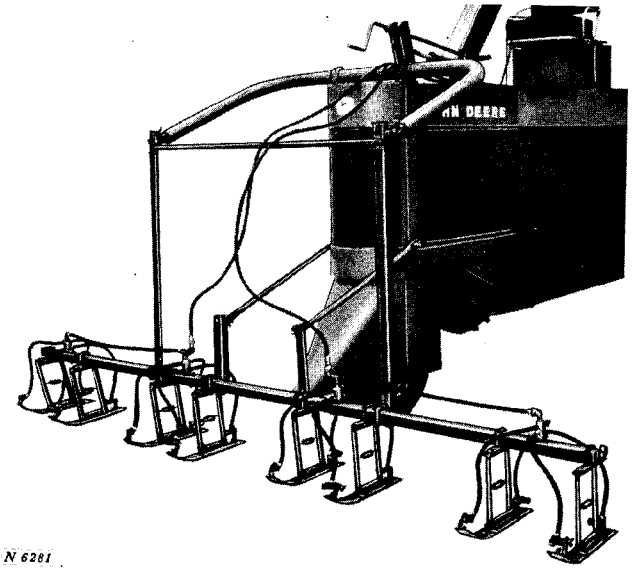


N 6277

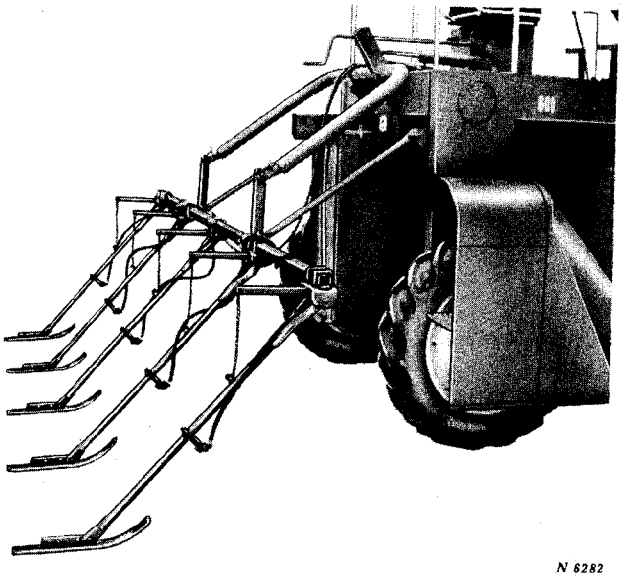
John Deere 600 Hi-Cycle equipped with General-Purpose Boom



John Deere 600 Hi-Cycle equipped with Defoliation Boom



John Deere 600 Hi-Cycle equipped with No. 4 Post Emerge Oiling Boom



John Deere 600 Hi-Cycle equipped with No. 2 Lay-By Boom

specifications

Hi-Cycle

Engine

Make of engine . . . . . John Deere NA115G
Number of cylinders 4
Bore and stroke, inches . . . . . 3-1/2 x 3
Piston displacement, cubic inches 115
Horsepower at flywheel (factory observed) 35
Compression ratio . . . . . 7.9 to 1
Type of fuel . . . . . gasoline

Engine speeds

Slow idle . . . . . 600 rpm
Full load . . . . . 2500 rpm
Fast idle (no load) . . . . . 2600 rpm

Ground speeds

MPH based on 9 x 24 tires with no wheel slippage

Engine speed (rpm)	Gear			
	1st	2nd	3rd	R
1100	1.23	2.62	6.00	3.26
1250	1.39	2.98	6.90	3.70
1500	1.67	3.57	8.18	4.45
1750	1.95	4.17	9.66	5.18
2000	2.23	4.77	11.04	5.92
2250	2.50	5.34	12.43	6.66
2500	2.79	6.00	13.80	7.30

Transmission

Selective sliding gear type with 3 speeds forward and 1 speed reverse

Transmission clutch

Single 8-1/2-inch plate automotive type, foot operated

Differential

Spiral bevel type gears

Brakes

Self-energizing disk-type, foot-operated individually or simultaneously

Final drives

Heavy-duty roller chain with run-in-oil lubrication

Cooling system

Pressurized, with water pump, thermostat and fixed bypass

Electrical system

Battery . . . . . 12 volts
Battery terminal grounded . . . . . positive
Starting . . . . . 12-volt electric motor

Ignition system

Type . . . . . Battery-distributor
Spark plug size . . . . . 14 mm

Fuel system

Type of fuel . . . . . Regular grade gasoline
Carburetor . . . . . Conventional up-draft
Air cleaner . . . . . Oil wash type

Engine lubrication

Full pressure to all crankshaft and camshaft bearings. Filter arrangement will provide approximately 1 gallon per minute bypass filtration.

Lifting mechanism

Lift arms mounted on either front or rear of Hi-Cycle, hydraulically operated

Dimensions

Wheel base	90 inches
Wheel tread	82 inches
Under axle clearance	60 inches
Over-all height	110 inches
Over-all length (tire to tire)	128 inches
Over-all length (front wheel shield to rear of lift arms—straight out)	163 inches
Over-all width (tires only)	92 inches
Over-all width (wheel shields)	98 inches

Capacities

Fuel tank	13 U.S. gallons
Cooling system	2-1/2 U.S. gallons
Crankcase (including filter)	5 U.S. quarts
Air cleaner	1 U.S. quart
Transmission	4 U.S. quarts
Differential	3 U.S. quarts
Hydraulic system	3 U.S. quarts
Final drives	2-1/4 U.S. gallons each

Tires

Front	6.70 x 15, 4-ply implement rib
Rear	9.00 x 24, 4-ply cleat

Weight

Hi-Cycle only	3000 pounds
Hi-Cycle with general-purpose sprayer	3420 pounds

Sprayer

Tank

200 U.S. gallons capacity, steel, inside plastic coated (epoxy-resin) to prevent corrosion. 9-1/4-inch filler opening at rear with bucket type strainer

Pump

Hypro Ni-Resist pump with 8 nylon rollers. Rubber rollers optional. "Live" belt driven, 20 gallons per minute capacity.

Line strainer

Located between spray tank and pump, equipped with 50-mesh screen, 100 mesh screen (B11910B) optional.

Boom selector valve

One handle control which controls spray delivery to full length of boom or either side individually. Also handle controls turning "on" or "off" in any of the selected positions.

Pressure regulator

Adjustable up to 200 psi

Pressure gauge

Calibrated up to 200 psi

Hoses

Braided, chemical resistant, rated 200 psi (general-purpose and defoliator booms only)

Booms

General purpose—8-row, front or rear mounted
Defoliation—4-row, rear mounted
No. 4 Post Emerge Oiling Applicator—4-row, front mounted
No. 2 Lay-By—4-row, rear mounted

Nozzle tips

Variety of nozzle tips for either cone or fan spray patterns, calibrated for different application rates.

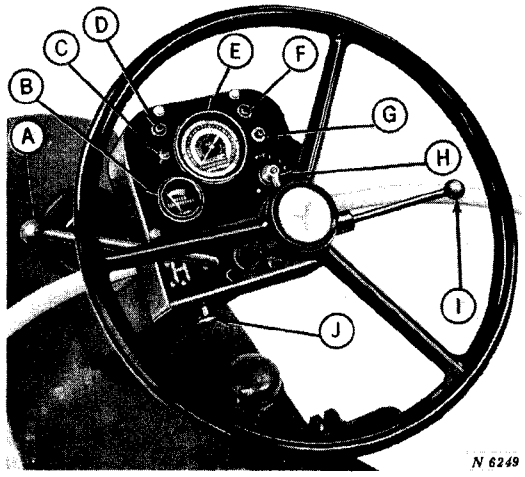
Special equipment

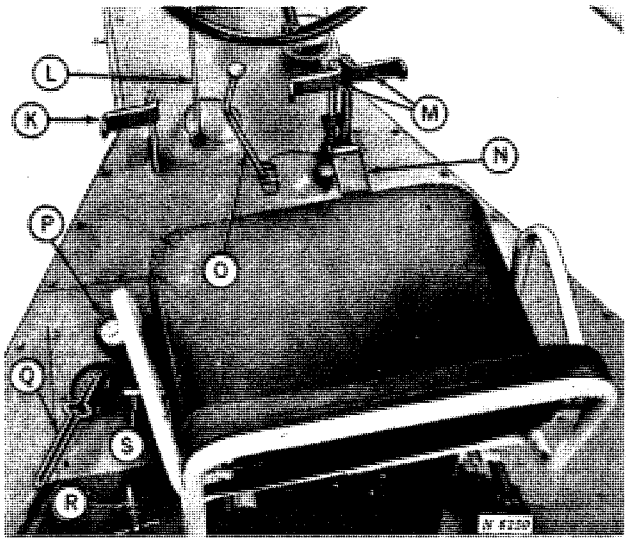
BB10339B Handgun with 25-foot hose
BB10559B Handgun with 50-foot hose
N85381N Hose adapter for handgun
BN85004N Row-Crop drops, long (9)
BN85005N Row-Crop drops, short (9)

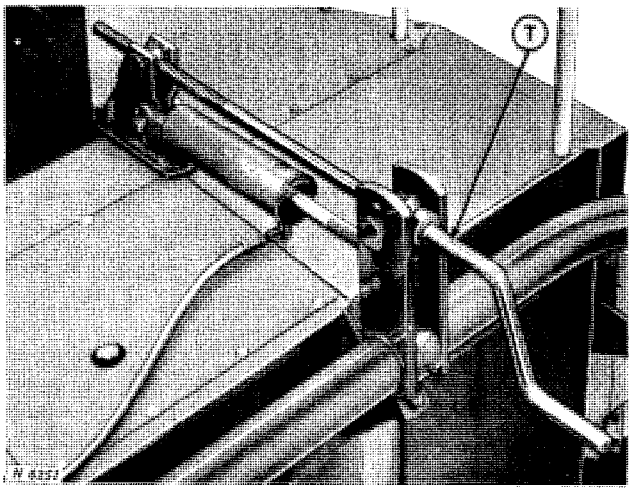
Specifications and design subject to change without notice.

controls and instruments

Before attempting to operate your new Hi-Cycle, become familiar with the location and purpose of all controls and instruments. See the pages indicated for detailed information.







A — Lift arm control lever (page 12)
B — Engine temperature gauge
C — Fuse (page 64)
D — Generator tel-light (page 8)
E — Speed-hour meter (page 10)
F — Oil pressure tel-light (page 8)
G — Starter button (page 7)
H — Ignition and light switch (pages 7 and 10)
I — Hand throttle (page 8)
J — Choke control (page 7)
K — Clutch pedal (page 9)
L — Spray pump control lever (page 15)
M — Brake pedals (page 9)
N — Brake lock (page 9)
O — Gearshift lever (page 9)
P — Pressure gauge (page 16)
Q — Spray control lever (page 16)
R — Pressure regulator (page 16)
S — Seat adjusting lever (page 11)
T — Hydraulic cylinder stop (page 12)

operation

Hi-Cycle

Complete instructions for operating your Hi-Cycle safely and efficiently are given on the following pages. By following these directions carefully, you can be sure that you are taking full advantage of the many features built into your Hi-Cycle.

Prestarting checks

Perform the following checks and services before starting the engine for the first time each day:

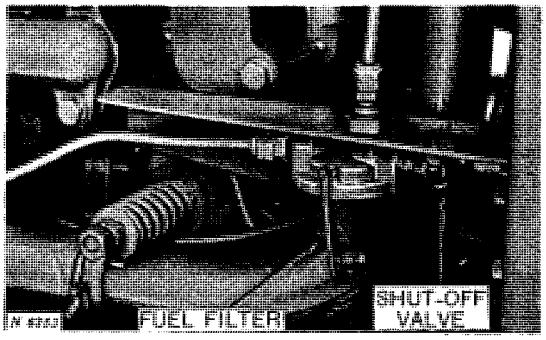
1. Check the engine crackcase oil level—see page 38.

2. Check the radiator coolant level.

3. Check the fuel filter sediment bowl.

4. Lubricate the lift arm bearings—see page 38.

Starting the engine

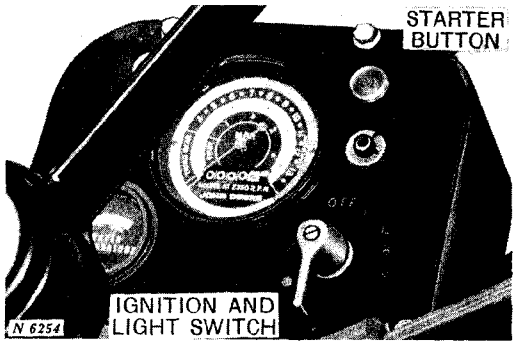


1. Make sure the fuel shut-off valve, located on the fuel filter is open.

2. Place the gearshift lever in neutral position (see page 9) and depress the clutch pedal to decrease drag on the engine.

3. Advance the throttle to about half-way open position.

4. Pull the choke control outward full distance. If the engine has been running a short time previously, it may not be necessary to use the choke and it is advisable to try starting the engine without choking.



5. Turn the ignition switch clockwise to first position "I." Depress the starter button and hold it until the engine has had time to rotate several revolutions or until it starts. If engine fails to start, see "Trouble Shooting," page 49.

Due to the heavy amperage required from the battery whenever the starter is used, and due to the heat generated in the starter, it is advisable to limit the length of time the starter is used to 30 seconds. A two-minute rest period is then recommended to permit the battery to restore to a more satisfactory charge. This rest period will also allow the heat to escape from the starter.

6. After the engine has started or after it has turned 4 or 5 revolutions, push the choke control all the way in. This will prevent flooding of the carburetor. Usually enough gasoline for starting has been drawn into the combustion chamber by this time.

7. With the engine running at about half throttle, the oil pressure Tel-Light should go out. If indicator glows bright red after the engine has been running 10 seconds, turn off the ignition immediately and determine the cause of reduced oil pressure.

8. The Generator Tel-Light will glow red after the ignition switch is turned on during cranking, and for a few seconds after the engine has started. If the Tel-Light continues to glow after the engine has been running about 10 seconds, the battery is discharging and the cause of trouble should be determined.

NOTE: The generator Tel-Light may glow continuously with the engine speed at slow-idle. This is normal and does not indicate a malfunction unless the Tel-Light continues to glow after increased acceleration.

9. Regulate the engine speed by using the throttle.

Cold weather starting

For greater starting efficiency in cold weather, conform to recommendations for gasoline and crankcase oil as listed on pages 35 and 36.

The oil used in the air cleaner should be the same viscosity as used in the crankcase. Do not dilute the oil in the air cleaner.

The battery should be brought up to full charge so that maximum cranking speed can be obtained.

Engine warm-up period

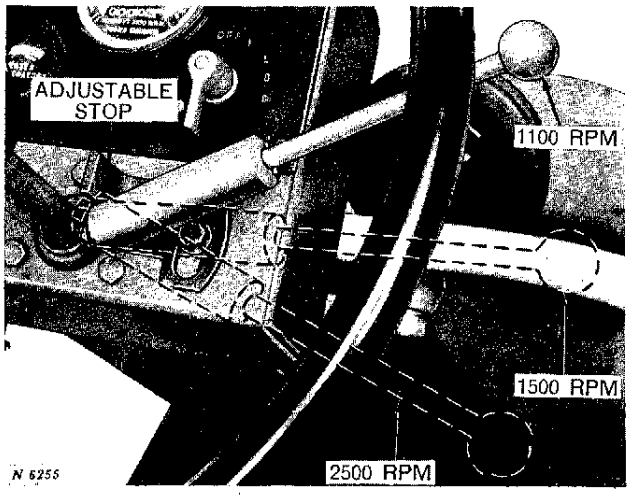
Before putting the engine under full load be sure it is warmed up sufficiently. Oil will then circulate freely. preventing excessive wear on piston rings, cylinders, and bearings. Do not race the engine during warm-up period. This wastes fuel and causes extreme wear on engine parts.

Engine speeds

The engine is designed to operate at speeds ranging from 1100 rpm to 2500 rpm. These are variable governed speeds, and the engine can be operated at any speed between the two extremes to meet various working conditions.

An adjustable stop is provided at the base of the throttle lever so that once the speed of work has been determined, the throttle lever can always be returned to the same position, giving the desired engine rpm without watching the speed-hour meter.

Using the throttle



Use the throttle to select slow idle or any of the variable governed speeds. Moving the lever down increases engine speed; moving the lever up decreases engine speed.

Set the adjustable stop by loosening the lock nut and rotating the stop. This stop can be set so the throttle lever will be stopped at the desired engine rpm within the 1100 to 2500 rpm range. When it is desired to increase the speed beyond that set by the stop, pull outward on the throttle lever and select the speed desired.

Stopping the engine

To stop the engine, first allow it to operate for a short time at full throttle. Then turn the ignition switch counter-clockwise to the vertical "off" position.

During cold or freezing weather, run the engine at slow idle for a few minutes before turning off the ignition. Sudden cooling of a hot engine causes extreme contraction of heated parts. In freezing weather, never drain water immediately after stopping.

Place the gearshift lever in neutral position and lock the brakes—see page 9.

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