



80

RIDING LAWN MOWER
Operator's Manual 9-3864

J I Case
A Tenneco Company





This Safety Alert Symbol Indicates Important Safety Messages In This Manual When You See This Symbol Carefully Read The Message That Follows and Be Alert To The Possibility Of Personal Injury Or Death

IF THIS MACHINE IS USED BY AN EMPLOYEE OR IS LOANED OR RENTED, MAKE ABSOLUTELY CERTAIN THAT THE OPERATOR(S), PRIOR TO OPERATING:

- 1. IS INSTRUCTED IN SAFE AND PROPER USE.**
- 2. REVIEWS AND UNDERSTANDS THE MANUAL(S) PERTAINING TO THE MACHINE.**

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WARNING

BEFORE STARTING ENGINE

**STUDY OPERATOR'S MANUAL SAFETY MESSAGES
READ ALL SAFETY SIGNS ON MACHINE
CLEAR THE AREA OF OTHER PERSONS**

**LEARN & PRACTICE SAFE USE OF
CONTROLS BEFORE OPERATING**

IT IS YOUR RESPONSIBILITY TO UNDERSTAND AND FOLLOW MANUFACTURER'S INSTRUCTIONS ON MACHINE OPERATION, SERVICE, AND TO OBSERVE PERTINENT LAWS AND REGULATIONS. OPERATOR AND SERVICE MANUALS MAY BE OBTAINED FROM YOUR EQUIPMENT DEALER.

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SAFETY MESSAGES

The twenty-three safety messages which follow are provided by the American National Standards Institute * (ANSI). Safety rules to supplement those provided by ANSI also appear on the following pages.

Study these rules carefully before starting and operating your Case Riding Lawn Mower.

* Rule Number 10 has been modified for greater safety and rule number 24, which does not apply to this product, has been omitted.



CAUTION: Know the controls and how to stop quickly. READ THE OWNER'S MANUAL.



CAUTION: Do not allow children to operate the vehicle. Do not allow adults to operate it without proper instruction.



CAUTION: Do not carry passengers. Keep children and pets a safe distance away.



CAUTION: Clear the work area of objects which might be picked up and thrown.



CAUTION: Disengage all attachment clutches and shift into neutral before attempting to start the engine (motor).



CAUTION: Disengage power to attachment(s) and stop the engine (motor) before leaving the operator's position.



CAUTION: Disengage power to attachment(s) and stop the engine (motor) before making any repairs or adjustments.



CAUTION: Disengage power to attachment(s) when transporting or not in use.



CAUTION: Take all possible precautions when leaving the vehicle unattended, such as disengaging the power take-off, lowering the attachment(s), shifting into neutral, setting the parking brake, stopping the engine, and removing the key.



CAUTION: Do not stop or start suddenly when going uphill or downhill. Mow down the face of steep slopes; never across or up the face.



CAUTION: Reduce speed on the slopes and in sharp turns to prevent tipping or loss of control. Exercise extreme caution when changing direction on slopes.



CAUTION: Stay alert for holes in the terrain and other hidden hazards.



CAUTION: Use care when pulling loads or using heavy equipment.

- a. Use only approved drawbar hitch point.
- b. Limit loads to those you can safely control.
- c. Do not turn sharply. Use care when backing.
- d. Use counterweight(s) or wheel weights when suggested in the owner's manual.



CAUTION: Watch out for traffic when crossing or near roadways.



CAUTION: When using any attachments, never direct discharge of material toward bystanders nor allow anyone near the vehicle while in operation.



CAUTION: Handle gasoline with care -- it is highly flammable.

- a. Use approved gasoline container.
- b. Never remove the cap of the fuel tank or add gasoline to a running or hot engine, or fill the fuel tank indoors. Wipe up spilled gasoline.
- c. Open doors if the engine is run in the garage -- exhaust fumes are dangerous. Do not run the engine (motor) indoors.



CAUTION: Keep the vehicle and attachments in good operating condition, and keep safety devices in place.



CAUTION: Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.



CAUTION: Never store the equipment with gasoline in the tank inside a building where fumes may reach an open flame or spark. Allow the engine to cool before storing in any enclosure.



CAUTION: To reduce fire hazard, keep the engine free of grass, leaves, or excessive grease.



CAUTION: The vehicle and attachments should be stopped and inspected for damage after striking a foreign object, and the damage should be repaired before restarting and operating the equipment.



CAUTION: Do not change the engine governor settings or over-speed the engine.



CAUTION: When using the vehicle with mower, proceed as follows:

- (1) Mow only in daylight or in good artificial light.
- (2) Never make a cutting height adjustment while the engine (motor) is running if the operator must dismount to do so.
- (3) Shut the engine (motor) off when removing the grass catcher or unclogging chute.
- (4) Check the blade mounting bolts for proper tightness at frequent intervals.



Remember, a careful operator is always the best insurance against an accident. Give complete and undivided attention to the job at hand.



CAUTION: Always shut off engine, remove key, set parking brake, and wait until all engine and mower motion has stopped before dismounting from the operator's seat.



CAUTION: Only operate controls from the operator's seat to prevent injury.



CAUTION: Do not smoke when working near fuel.



CAUTION: Be sure gasoline is thoroughly drained and battery removed as described in the "Storage" section of this manual before standing mower on end for storage or service.



CAUTION: If necessary to move riding lawn mower on a trailer, always back up onto the trailer and drive off of trailer.



CAUTION: Highway travel should be avoided. If necessary, use SMV safety emblem for warning to the operators of other vehicles. Check local government regulations.



WARNING: Be sure that the mower drive lever is off, the engine is shut off, the key removed and the blade has stopped spinning before attempting to clean a plugged discharge chute.



Become thoroughly familiar with all riding lawn mower controls before operating.



Be certain whoever operates the mower has read and understands the safety rules in this manual.



DANGER: Spinning Blade. Keep clear. Contact can injure. Keep hands and feet away from mower discharge opening. Contact with the high speed spinning mower blade can cause severe injury.



CAUTION: An unbalanced blade is hazardous and will cause premature wear and failure of bearings and spindle. If the blade cannot be balanced by resharpening, replace it with a new one.



CAUTION: Move attachment drive clutch lever in OFF position, shut off engine, allow engine to cool, remove key and spark plug wire before making adjustments to or servicing the Riding Lawn Mower.



WARNING: Rotating Fan. Contact with rotating engine flywheel fins can injure. Keep clear. Do not allow anything to enter engine cooling air intake duct while engine is running. This duct is exposed only when the engine enclosure is raised. Avoid running engine with enclosure raised.



CAUTION: When working around storage batteries, remember that all of the exposed metal parts are "live". Never lay a metal object across the terminals as a 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 batteries is acid. Use care not to spill it on hands or clothing.



POISON: Batteries contain sulfuric acid which can cause severe burns. Avoid contact with skin, eyes or clothing. Antidote: **EXTERNAL**, flush with water; **INTERNAL**, drink large quantities of water or milk. Follow with milk of magnesia, beaten egg or vegetable oil. Call physician immediately; **EYES**, flush with water for 15 minutes and get prompt medical attention. Keep out of reach of children.



DANGER: Batteries produce explosive charges. Keep sparks, flame and cigarettes away. Ventilate when charging or using in enclosed space. Always shield eyes when working near batteries.



CAUTION: Never wear rings or metal watch bands when working with the tractor electrical system or battery as you may ground a live circuit.

WARNING: To jump start this machine:

1. Place travel control lever in neutral, set parking brake, and place mower drive lever in OFF.
2. Raise engine enclosure and prop open with support rod.
3. Connect positive (Red) (+) jumper cable to battery terminal on starter solenoid.
4. Connect other end of positive (Red) (+) jumper cable to the positive (+) terminal post of the booster battery.
5. Connect negative (Black) (-) jumper cable to negative (-) terminal of booster battery.
6. Connect other end of negative (Black) (-) jumper cable to the engine block. Avoid connection near fuel tank, carburetor and battery.
7. Stand on left side of machine and start using ignition key switch.
8. Disconnect jumper cables in the reverse order, that is, remove the negative (Black) (-) cable first. Keep ends from touching to prevent sparks.



CAUTION: Drive at a speed slow enough to insure safety and complete control at all times.



CAUTION: Do not wear loose clothing which may catch in moving parts.



- CAUTION:**
1. Keep all shields in place.
 2. Before leaving operator's position:
 - a. Shift transmission to neutral
 - b. Set parking brake
 - c. Disengage attachment clutch
 - d. Shut off engine
 - e. Remove ignition key
 3. Wait for all movement to stop before servicing machine.
 4. Keep people and pets a safe distance away from machine.



WARNING: Before starting engine study operator's manual safety messages. Read all safety signs on machine. Clear the area of other persons. Learn & practice safe use of controls before operating. Stop engine and wait for all movement to stop before dismounting, servicing, or making any adjustments. It is your responsibility to understand and follow manufacturer's instructions on machine operation, service, and to observe pertinent laws and regulations. Operator manuals may be obtained from your equipment dealer.



CAUTION: Either the entire grass catcher or the mower discharge chute guard must be in place before you operate the mower.



CAUTION: Avoid contacting hot exhaust pipe when you are adjusting carburetor.



WARNING: Improper operation of your riding lawn mower on hill-sides and slopes can be dangerous. Avoid improper operation! Read and follow the instructions given in the section titled "Hill-side Operation" in this manual before operating your tractor.



DANGER: Flying debris. Operate mower only with chute extension or grass catcher.

IMPORTANT: Always install new decals whenever the old decals are destroyed, lost, painted over or illegible. When individual parts are replaced that have decals attached, be sure to install a new decal with the new part. Replacement decals are available from your Case dealer.

HILLSIDE (SLOPE) OPERATION



WARNING: Improper operation of your riding lawn mower on hillsides and slopes can be dangerous. Avoid improper operation! Read and follow the instructions given in the section titled "Hillside Operation" in this manual before operating your tractor.

Avoid operating riding lawn mower on hillsides and slopes. To minimize the possibility of accidents while operating on hills and/or rough terrain, obey a combination of rules, practices and good common sense.

These include:

1. Reading, understanding, and obeying all written safety messages appearing on decals on the machine and in operator's manuals.
2. Learning from your operator's manual and carefully from EXPERIENCE how to operate your riding lawn mower correctly. Know your riding lawn mower's limitations.
3. Knowing the terrain on which you are operating your riding lawn mower. There are terrain conditions on which your riding lawn mower cannot be operated!
4. Learning to expect changes in operating conditions. Adding or removing attachments or weight to your riding lawn mower will make your riding lawn mower perform differently. Rain, snow, loose gravel, wet grass, etc., change the tractive conditions of the terrain requiring changes in your operating technique or not to operate on that terrain.

The following paragraphs will cover these practices one at a time. Read and study them. The examples provided are not all inclusive but will give you a firm understanding of the requirements for avoiding accidents while operating your riding lawn mower.

Case Riding Lawn Mowers are designed and built to comply with the Voluntary Standard ANSI B71.1 - 1972 and B71.1a - 1974 (American National Standards Institute).



The diagram depicts the maximum angles that the stationary riding lawn mower, less mounted equipment, was subjected to without tipping, measured on a perfectly flat, smooth, and hard surface.

This illustration does not recommend safe operating limits as the slope, type of terrain and all applicable factors as discussed in this manual must be taken into consideration by any person whenever operating the riding lawn mower.

THE OPERATOR IS THE SOLE JUDGE AS TO THE DEGREE OF SLOPE ON WHICH THIS RIDING LAWN MOWER CAN BE SAFELY OPERATED. IF IN DOUBT THAT THIS RIDING LAWN MOWER CAN BE SAFELY OPERATED ON A PARTICULAR SLOPE, DO NOT OPERATE ON THAT SLOPE! COMMON SENSE MUST PREVAIL.

Read, Understand, Obey:

Safety messages are found on the riding lawn mower and in the operator's manuals. These must be understood by the riding lawn mower operator to be of value. Be sure that these messages are studied before starting and/or operating the riding lawn mower by an operator not familiar with this particular riding lawn mower.

Learn to Operate:

Learn your riding lawn mower controls from decals on the riding lawn mower and from instructions in the operator's manual. Practice how to properly manipulate these controls. Practice must be done in a flat area, clear of obstacles and bystanders. Learn your riding lawn mowers operating characteristics and limitations. These include:

- a. amount of engine power available
- b. engine governor response
- c. tractive ability
- d. steering characteristics
- e. braking characteristics
- f. movement of travel lever
- g. forward and reverse ground speeds
- h. speed of attachment lift
- i. and others

Attempting any operation which approaches or exceeds the riding lawn mower's limitation is risking an accident.

Know the Terrain:

Know the terrain on which you are working. Find hidden obstacles by walking through and inspecting the area prior to operating your riding lawn mower on it. Mark obstacles, such as, rocks, ruts or holes with a 6 ft. long pole and red flag and stay well clear of these obstacles when operating.

Operate your riding lawn mower at a ground speed slow enough to insure complete control at all times.

Regulate the travel control lever slowly and smoothly to maintain this safe speed.

Always drive in a forward direction when proceeding downhill. Never drive up a hill. If necessary, back up a hill to the desired position. Always back up loading ramps and tilt bed trailers. If necessary to turn while on a hill, always turn downward.

Your judgement, based on operating experience is the final word in deciding if you should negotiate any given hill or slope. If you are in doubt about safety, **STAY OFF THE SLOPE.**

Under no circumstances should an inexperienced operator attempt to use your riding lawn mower on slopes or hillsides.

You may encounter some terrain on which your riding lawn mower cannot be operated even if a different piece of equipment has operated there in the past.

Learn to Compensate for Changes in Operating Conditions:

Adding or removing attachments (such as bagging attachment) change the weight and weight distribution of your riding lawn mower and, therefore, change your riding lawn mower's operating characteristics.

Be alert to these changes. Practice operating the riding lawn mower after each change has been made.

Adding an attachment (weight) to the rear of the riding lawn mower reduces the weight on the front axle.

Tractive conditions will vary with weather and terrain and equipment.

Areas wet with dew or rain will be more slippery than when dry. Areas covered with loose gravel are more slippery than firm dry ground. Greater stopping distances are required in these slippery areas.

Spinning rear wheels tend to move the riding lawn mower sideways.

The final word in safe riding lawn mower operation rests on your judgement.

If in doubt of your safety, **STAY OFF THE SLOPE.**

TO THE PURCHASER OF A CASE RIDING LAWN MOWER

The care you give your new Case Riding Lawn Mower 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 Riding Lawn Mower 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 skills 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

NOTICE

Laws of some states or provinces may require that this unit be equipped with a SPARK ARRESTOR OR SPARK ARRESTING MUFFLER. The State of California, as an example, is one state which has such regulations for agricultural and forestry applications, plus a regulation for construction applications in forest-covered, brush-covered, or grass-covered lands.

Typically such laws and regulations require spark arresting devices to be maintained in good working order and typically to be attached to the exhaust system of naturally aspirated engines (engines without a turbo charger).

CANADIAN RADIO INTERFERENCE REGULATIONS

The Canadian Government, under authority granted by the Radio Act, has promulgated regulations covering this gasoline powered Case Riding Lawn Mower if imported into Canada on or after September 1, 1976.

The spark plug(s) in this machine when replaced must have a resistor type spark plug installed.

The certification label applied to the engine must not be removed or obliterated.

3-80-SL-800

U. S. Price \$1.40

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FIGURE 1
Left View Model 80 Riding Lawn Mower



FIGURE 2
Right View Model 80 Riding Lawn Mower

SERIAL NUMBER

When ordering parts from your Authorized Case Dealer and in all contacts or correspondence with your dealer relative to the Riding Lawn Mower always specify the Serial and Model Number of both the Riding Lawn Mower and the Engine.

The Riding Lawn Mower Model and Product Identification Numbers are stamped on the number plate located on the Frame Side panel, Figure 3. The Engine, Model, Serial and Engine Specification Numbers are stamped on a plate fastened to the top center of engine shroud.

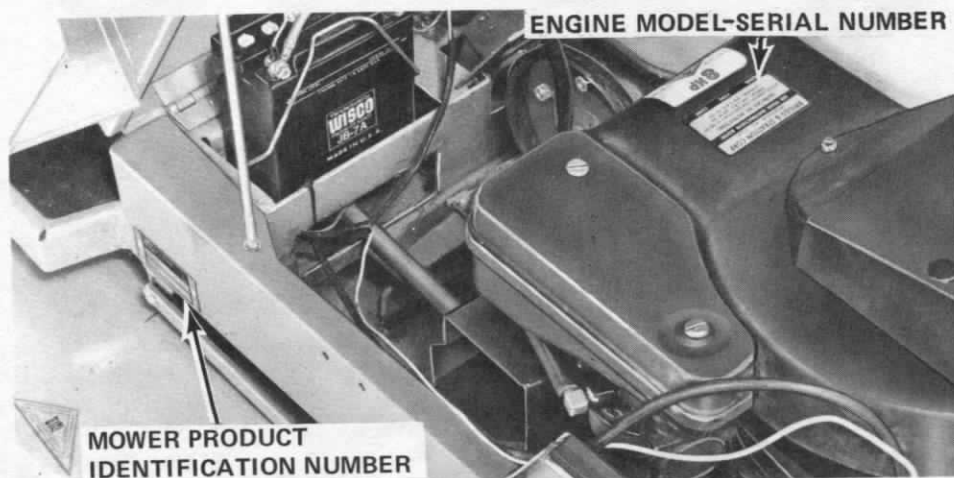


FIGURE 3

For reference, fill in Product Identification Number, Model Number and Engine Number of your Riding Lawn Mower in the spaces provided below.

Riding Lawn Mower Model Number 80

Riding Lawn Mower
Product Identification Number

Engine Model Number 190705

Engine Specification Number

NOTE: The terms "Right Hand," "Left Hand," "Front" and "Rear" whenever used in this manual apply to the Riding Lawn Mower when facing in the direction it will move in forward operation.

OVERALL MEASUREMENTS

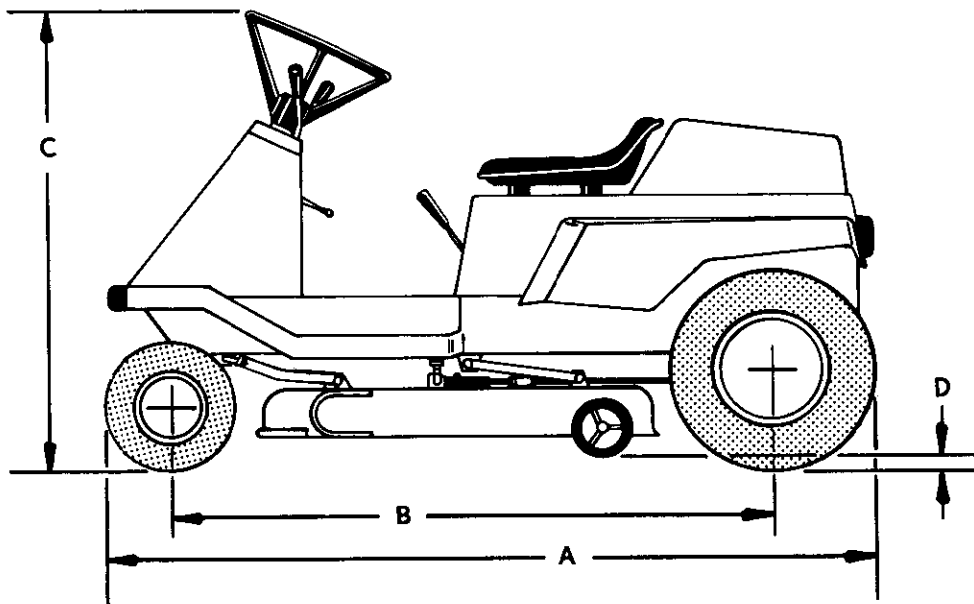


FIGURE 4

A	Overall Length	61" (1540 mm)
B	Wheel Base	47" (1200 mm)
C	Overall Height	36" (920 mm)
D	Minimum Ground Clearance With Mower Fully Raised	2" (50 mm)
	Rear Wheel Tread	22-3/4" (580 mm)
	Front Wheel Tread	23-7/8" (610 mm)
	Overall Width With Discharge Chute	41-1/2" (1060 mm)
	Shipping Weight	340 lbs. (154 Kg)

GENERAL SPECIFICATIONS

ELECTRICAL SYSTEM

Battery 12 Volt 12 Amp Hour
Starter 12 Volt Bendix Drive
Battery Charger..... Input: 120v AC, 60 Hz, 25 Watts
Output: 12v DC, 1 Amp DC
For Use Indoors Only

CLUTCH BRAKE..... Friction drive clutch-brake
mechanically operated
with park lock.

TRANSMISSION

Type Friction drive
Speed Range -- Forward..... 0 - 5.5 MPH (0 - 8.8 Km/hr)
Reverse 2 MPH (3.2 Km/hr)

TIRES	TIRE SIZE	PLY	TYPE	PRESSURE
Front	11 x 4 - 5	2	High Flotation	*8 PSI (55 kPa)
Rear	16 x 6.50 - 8	2	High Flotation	8 PSI (55 kPa)

* Early production without bead-lock rims inflate to 16 PSI (110 kPa)

MOWER

Type Single spindle rotary mower
Size 30 inch (760 mm)

ENGINE SPECIFICATIONS

GENERAL

Type 079301 - Briggs & Stratton - Vertical Crankshaft
Model 190705
Cycle 4
Cylinders 1
Cylinder Bore 3" (80 mm)
Stroke 2-3/4" (70 mm)
Piston Displacement 19.44 cu. in. (320 cc)
Horsepower 8 H.P. (5.9 kw) @ 3600 R.P.M.
Compression Ratio 6.2 to 1
Full Load Speed 3500 R.P.M.
No Load Speed 3600 R.P.M.
Idle Speed 1750 R.P.M.
Valve Clearance-Cold (Intake)006" (0.15 mm)
Valve Clearance-Cold (Exhaust)010" (0.25 mm) Rotator Keeper
Torque (Ft. Lbs.) 12.7 Ft. Lbs. (17.2 Nm) @ 2500 R.P.M.

PISTON AND CONNECTING ROD

Piston Chrome Plated
Compression Rings 2
Oil Rings 1
Connecting Rod Aluminum Alloy

FUEL SYSTEM

Carburetor Large, One Piece, Flo-Jet
Fuel Strainer In Tank Outlet Fitting
Fuel Tank Capacity 6.7 Pints (3.2 l)

IGNITION SYSTEM

Breaker Point Gap020" (9.51 mm)
Magneto Armature Air Gap012" (0.30 mm)
Spark Plug Prestolite 14L7 or equivalent
(Prestolite 14RL7 or equivalent in Canada)
Thread 14 MM
Gap030" (0.76 mm)
Plug Wrench Size 3/4" (19 mm) Deep-Well Socket

COOLING SYSTEM

Flywheel Blower Forced air inside baffles
directing air around finned
cylinder and head area

FUEL SPECIFICATIONS

CARBURETION ON SMALL GASOLINE ENGINES IS ALWAYS CRITICAL OF DIRT. IT IS RECOMMENDED THAT A FILTERING FUEL FUNNEL ALWAYS BE USED ALONG WITH CLEAN GASOLINE.

AT ANY EVIDENCE OF FUEL STARVATION, CLEAN THE FILTER IN THE TANK OUTLET FITTING.

DO NOT MIX OIL WITH GASOLINE FOR THIS ENGINE.



FIGURE 5



CAUTION: Never store the equipment with gasoline in the tank inside a building where fumes may reach an open flame or spark. Allow the engine to cool before storing in any enclosure.

GASOLINE

The typical Octane number ratings for regular grade gasoline (March 1967).

Motor Method	86.2 Octane Number
Research Method	<u>94.2</u> Octane Number
Average	90.2 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 although in the United States the average of the two figures is posted on gasoline pumps.

When only one Octane rating is given for gasoline and the rating method is not specified, it can be assumed to be the average rating in the United States or the Research Method Rating elsewhere in the World.

Engines used in Case Riding Lawn Mowers 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.

Non-leaded gas is a suitable alternative for use in all 4-cycle air cooled engines used on Case Riding Lawn Mowers provided the Average Octane Rating in the United States and the Research Method Octane Rating elsewhere in the World is 90 or higher.



CAUTION: Do not smoke when working near fuel.



CAUTION: Handle gasoline with care - it is highly flammable.

- a. Use approved gasoline container.
- b. Never remove the cap of the fuel tank or add gasoline to a running or hot engine, or fill the fuel tank indoors. Wipe up spilled gasoline.
- c. Open doors if the engine is run in the garage — exhaust fumes are dangerous. Do not run the engine (motor) indoors.

LUBRICATION

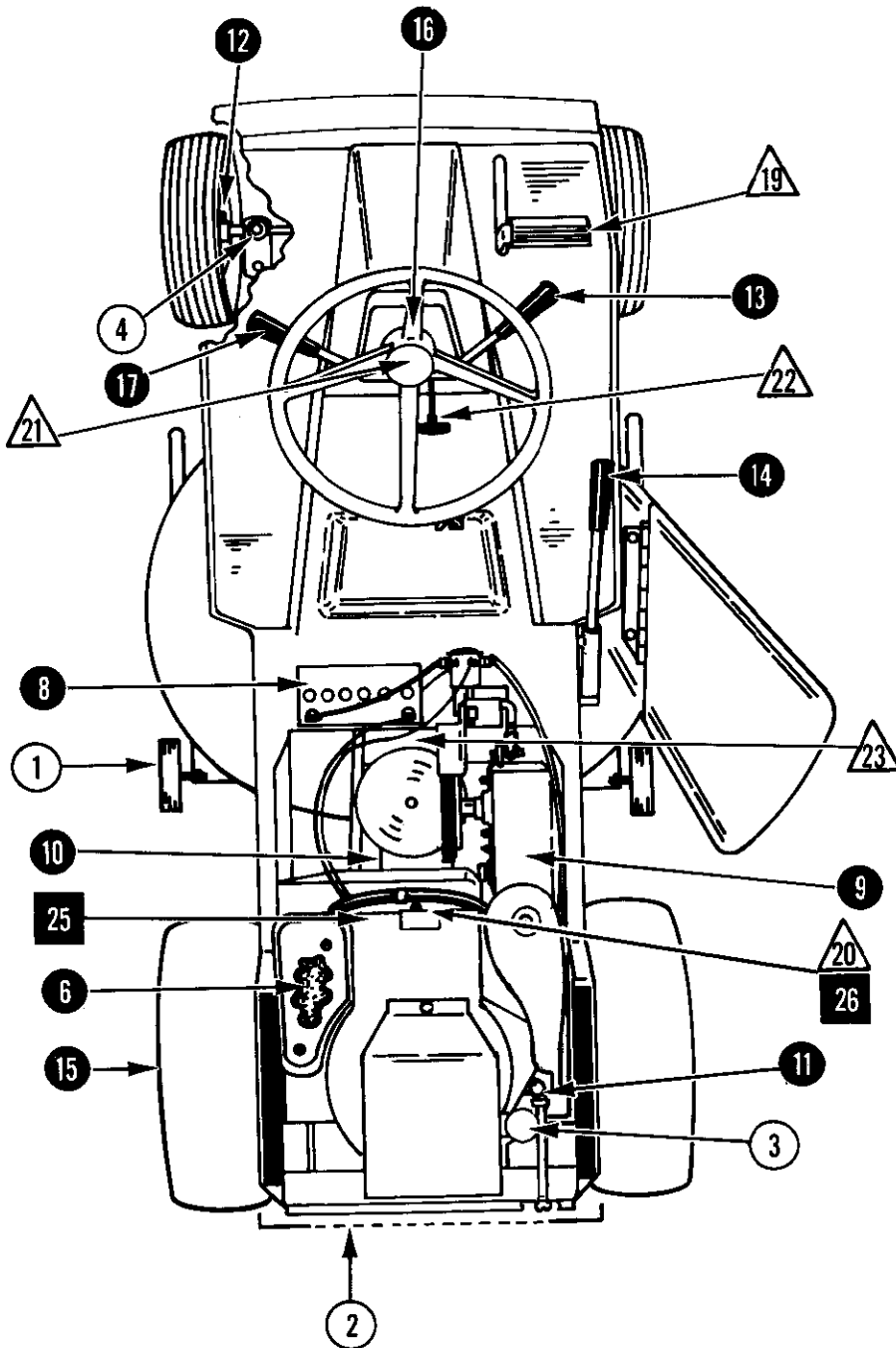


FIGURE 6

LUBE CHART

REF. NO.	SERVICE POINTS	NO. OF POINTS	GREASE	DRAIN	CHECK	CLEAN	CHANGE OIL	FREQUENCY
1	Anti-Scalping Wheels	2						<div>5</div> <div>HOURS OR DAILY</div>
2	Engine Cooling Air Intake Screen	1						
3	Engine Oil *	1						
4	Front Spindles (king pins)	2						
6	Air Cleaner ***	1						<div>25</div> <div>HOURS OR WEEKLY</div>
7	Air Leaks **							
8	Battery	1						
9	Chain and Chain Bracket Pivot	6						
10	Drive Belts							
11	Engine Oil	2						
12	Front Wheel Bearings	2						
13	Mower Drive Clutch	3						
14	Mower Height Adjust Lever Pivot Points	6						<div>50</div> <div>HOURS OR MONTHLY</div>
15	Rear Axle Bearings	2						
16	Steering Column	1						
17	Travel Control	2						
19	Clutch Brake Linkage	5						<div>200</div> <div>HOURS OR YEARLY</div>
20	Spark Plug ^o	1						
21	Steering Gear	1						
22	Throttle and Choke Control	1						
23	Transmission Pivot Support Plate	1						<div>200</div> <div>HOURS OR YEARLY</div>
25	Engine Cooling Fins ***	1						
26	Spark Plug	1						

* Always check engine oil level before each use of Riding Mower. Keep oil level to the full mark on the dip stick. See page 12 for engine lubrication recommendations.

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

*** More often in dusty conditions. Remove shroud to clean.

o Clean and regap.

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

ENGINE LUBRICATION

SELECTION OF OIL

It is extremely important that you select and use in your Case Riding Lawn Mower Engine a detergent type, high quality, SD or SC API Service Classification Oil.

Always check engine oil level before each use of Riding Lawn Mower or every 5 hours of operation, whichever occurs first .

OIL SAE VISCOSITY RATING

	Air Temperatures
SAE 30	40°F (2°C) and Above
SAE 5W-20 or 5W-30	between 40°F (2°C) and 0°F (-18°C)
SAE 10W or 10W-30 diluted 10% with Kerosene	Below 0°F (-18°C)



OIL CHANGE

Drain and refill the crankcase after the first 5 hours of operation, and every 25 hours of operation thereafter. Check oil level daily and keep level to the full mark on the dip stick.

If possible, run engine just prior to changing oil -- the oil will flow more freely and carry away a greater amount of contaminant when hot.

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.



CAUTION: Disengage power to attachment(s) and stop the engine (motor) before making any repairs or adjustments.

- IMPORTANT:**
1. When the crankcase is drained, refill with 2-1/4 measured pints (1.0 l) of oil.
 2. Operate the engine for a few minutes, allow sufficient time for the oil to run down off the engine parts. Then check the oil level with the dipstick.
 3. This 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.

OPERATING INSTRUCTIONS

OPERATING CONTROLS

IMPORTANT: This Riding Lawn Mower is equipped with NEUTRAL START SWITCHES.

A. Lawn Mowers prior to S/N 9746098

The engine cannot be started unless the travel control lever is in neutral and the mower drive lever* is in the "OFF" position.

B. Lawn Mowers S/N 9746098 and after

The engine cannot be started unless the clutch-brake pedal is depressed and the mower drive lever* is in the "OFF" position. Release pedal slowly after engine starts.

* The engine may not start when the mower is in the lowest cutting position. Raise the mower or pull the mower drive lever toward the "OFF" position to allow the engine to start.

1. **IGNITION KEY AND STARTER SWITCH** - Turn key all the way to the right until starter engages to start the engine. When stopping the engine, turn the key to the left "Off" position. Be sure the mower drive lever, Reference 7 is in the "Off" position and travel control lever, Reference 5, is in "Neutral" before starting or stopping the engine.
2. **CHOKE AND THROTTLE** - When starting a cold engine, position the lever all the way to the "Choke" position. Move the lever from the choke position immediately after the engine begins to run. Choking may not be necessary when restarting a warm engine. Start with the lever in the "Slow" position. Experience will soon tell you how much choking is necessary for different starting conditions.

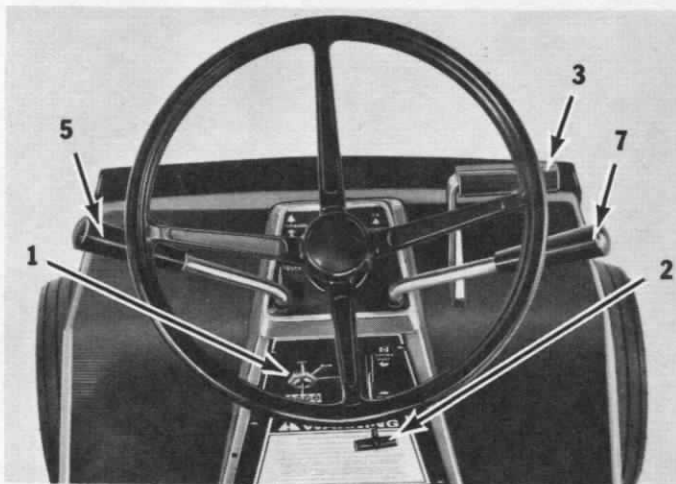


FIGURE 8

3. **CLUTCH-BRAKE PEDAL** - Depressing the combination clutch-brake pedal through the first part of its travel disengages the traction drive. Depressing it further engages the brake.
4. **PARKING BRAKE** - Raise the lock lever while the clutch-brake pedal is depressed to hold the brake in the engaged position when parking the tractor.
5. **TRAVEL CONTROL LEVER** - Shifting from neutral to forward and reverse can be done without use of the clutch-brake pedal. Smoother starts may be obtained by slowly and gradually moving the travel control lever from neutral into either forward or reverse. Preventing jerky starts will eliminate shock loads and possible damage to the drive train.

If desired to start motion using the clutch-brake pedal, position the travel control lever in the SLOWEST position, release the pedal slowly and then increase forward speed slowly using the travel lever only. (There is only a single reverse speed.)

A third method for smooth starts is to place the engine throttle at 1/2 speed and then advance the throttle after drive engagement.

Maximum reverse speed is less than forward, therefore, the travel control lever will not move as far in the reverse arc of travel as in the forward arc of travel. The travel control lever must be held in the reverse position.

6. **MOWER ADJUST LEVER** - This lever is used to raise and lower the mower through a range of five height selections. Pull handle out to disengage pin from hole, then move to the cutting height desired. Release handle to allow pin to engage selected hole.
7. **MOWER DRIVE LEVER** - To engage the mower, slowly push this lever forward to the full ON position. Pull the lever rearward to the OFF position to stop the mower.



FIGURE 9

IMPORTANT: To increase drive belt life, engage attachment Drive Lever at slow engine speed and also before encountering heavy grass.

8. **SEAT ADJUSTMENT** - Three sets of mounting holes are provided in the seat support. Select the seat position which gives the maximum comfort with your hands holding the steering wheel and your feet on the foot rests. To change position lift the engine enclosure and remove the four capscrews, relocate seat and reinstall capscrews and lockwashers.

PRE-STARTING CHECK LIST

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

1. Make sure everyone responsible for the mower's operation and maintenance understands the importance of clean fuel, oils, containers and funnels.
2. Check that all lubricating fittings are serviced as directed in the Lubrication Chart.
3. Check engine oil level and add as necessary.
4. Be sure that air cleaner, and blower air intake screen on engine are free of obstructions and excessive dirt.
5. Check that the 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 cap is open.
6. Check all operating controls for proper function.



Become thoroughly familiar with all riding lawn mower controls before operating.

RUN IN PROCEDURE

Your new Riding Lawn Mower should be subjected to a run in period before it is operated at full load. Drive it for approximately an hour to get the feel of operation. Shift the travel control lever through its full range of forward travel and reverse during the run in period.

MOUNTING AND DIS-MOUNTING THE RIDING LAWN MOWER

Mount the mower from the left side, starting with your left foot on the left foot rest, your left hand on steering wheel and right hand on seat back. Then swing your right foot through between steering wheel and seat.

Dismount using the reverse of the above procedure.

STARTING PROCEDURE

1. For Lawn Mowers prior to S/N 9746098, place the travel control lever in neutral and the mower drive lever in the "OFF" position.

For Lawn Mowers S/N 9746098 and after, place in neutral, depress the clutch-brake pedal and place the mower drive lever in the "OFF" position.

*The engine may not start when the mower is in the lowest cutting position. Raise the mower or pull the mower drive lever toward the "OFF" position to allow the engine to start.

2. Position the Choke Throttle Lever all the way to the "Choke" position if the engine is cold. If engine is warm, leave the lever set at the "Slow" position. Experience will quickly tell you which lever setting to use under various temperature conditions.

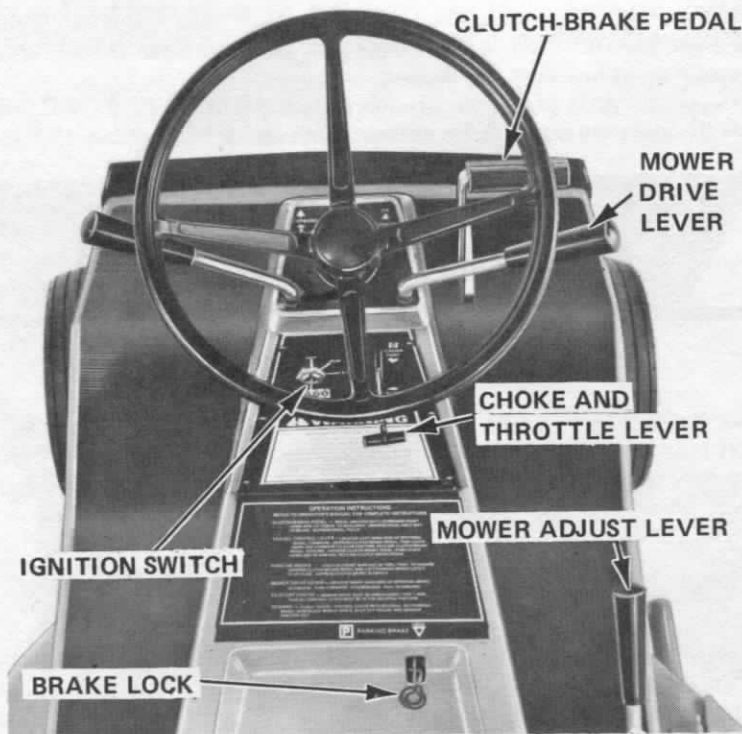


FIGURE 10

3. Turn the Ignition Key all the way to the right to start the engine.

IMPORTANT: In the event of a "false start," that is, if the engine gets up sufficient speed to disengage the starter but fails to continue running, the engine must be allowed to come to a complete halt before a restart attempt is made. If the flywheel is still rotating when the switch is engaged, the flywheel and starter gears will clash and could be damaged.

Cranking time must be limited to 30 seconds followed by a 60 second cooling period to prevent overheating of the starting motor. If an engine fails to start after this length of time, ignition or carburetion troubles are indicated and should be corrected before the engine is placed in operation.

4. After the engine starts and runs, move the lever out of the choke position.

IMPORTANT: Do not attempt to start mower by pushing or towing as serious damage to the drive system may result.

5. Always allow the engine to "warm-up" for a few minutes before operating under load.



CAUTION: Disengage all attachment clutches and shift into neutral before attempting to start the engine (motor).



WARNING: Improper operation of your riding lawn mower on hill-sides and slopes can be dangerous. Avoid improper operation! Read and follow the instructions given in the section titled "Hill-side Operation" in this manual before operating your tractor.

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. Place all operating controls in neutral.
3. Turn ignition key to the "OFF" or upright position.



CAUTION: Always shut off engine, remove key, set parking brake, and wait until all engine and mower motion has stopped before dismounting from the operator's seat.

LAWN MOWING

1. Operate engine at approximately 3/4 to full throttle and regulate the Travel Control Lever according to mowing conditions. As a general rule, set the throttle as low as practical to obtain maximum fuel economy but high enough to avoid engine lug down or labor which could cause overheating and poor mowing performance. Unless grass is unusually light, always operate in "Low" speed range.
2. If grass is heavy and higher than normal, results can be improved by mowing twice. Make the first cut with the mower set higher than normal; then repeat with the mower set at desired finished cut height. When mowing heavy grass, always discharge clippings away from the uncut area.



WARNING: Be sure that the mower drive lever is off, the engine is shut off, the key removed and the blade has stopped spinning before attempting to clean a plugged discharge chute.

3. Figures 11 and 12 illustrate two systems for mowing. If the grass is high or heavy, always mow to throw the clippings away from the uncut area. Figure 12. If the grass is light and more thorough mulching is desired, discharge the clippings toward the center of the uncut area, Figure 11. When mowing in this manner, a final strip of mulched clippings about three to four feet wide will remain near the center of the lawn. This can be easily swept up to leave a well groomed appearance.
4. Trimming will be neater and closer by using the left side of the mower since the clippings will be discharged away from the object. Also the safety shield over the discharge opening prevents mowing as close to objects.
5. Always engage riding mower and mower drive systems smoothly.



Be certain whoever operates the mower has read and understands the safety rules in this manual.



Remember, a careful operator is always the best insurance against an accident. Give complete and undivided attention to the job at hand.



CAUTION: Clear the work area of objects which might be picked up and thrown.



CAUTION: Reduce speed on the slopes and in sharp turns to prevent tipping or loss of control. Exercise extreme caution when changing direction on slopes.



CAUTION: Stay alert for holes in the terrain and other hidden hazards.



CAUTION: Do not allow children to operate the vehicle. Do not allow adults to operate it without proper instruction.



CAUTION: Do not carry passengers. Keep children and pets a safe distance away.

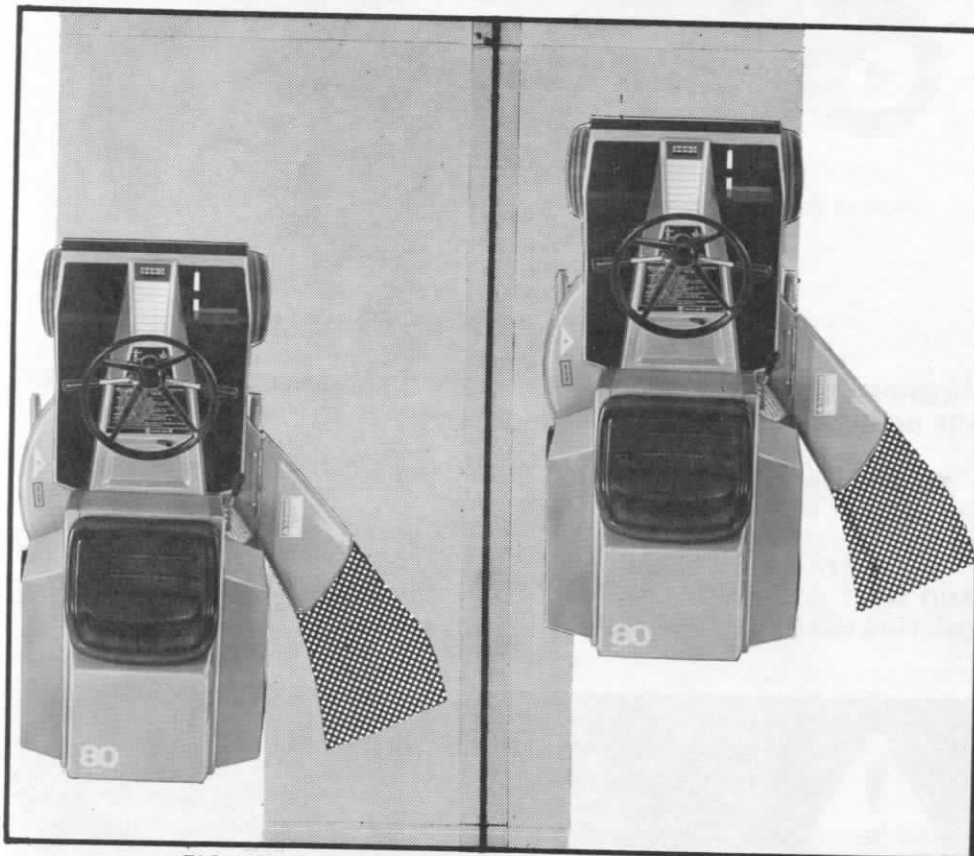


FIGURE 11

FIGURE 12

PREVENTIVE MAINTENANCE AND ADJUSTMENTS



FIGURE 13

CORRECTLY PERFORMED PREVENTIVE MAINTENANCE AND ADJUSTMENTS ARE IMPORTANT TO YOU!

AS THE OWNER OF A CASE RIDING LAWN MOWER, YOU POSSESS A MACHINE THAT IS MADE TO HIGH STANDARDS.

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



WARNING: Rotating Fan. Contact with rotating engine flywheel fins can injure. Keep clear. Do not allow anything to enter engine cooling air intake duct while engine is running. This duct is exposed only when the engine enclosure is raised. Avoid running engine with enclosure raised.

ENGINE MAINTENANCE

AIR CLEANER

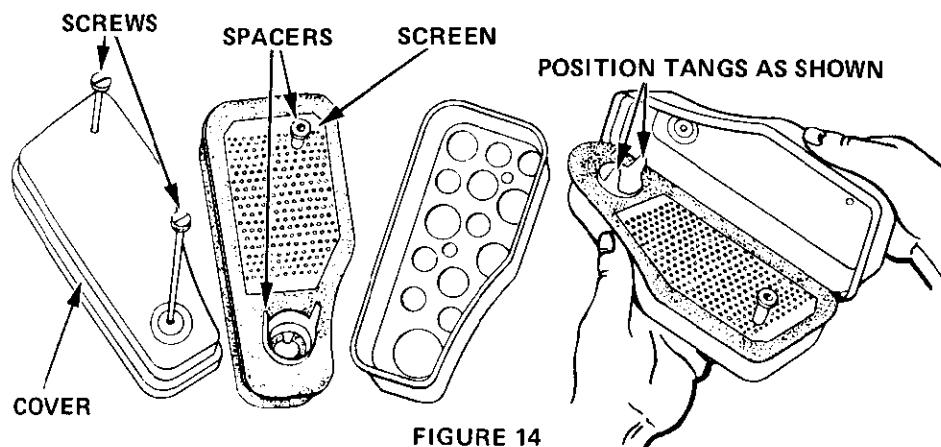


FIGURE 14

Clean air cleaner and re-oil element every 25 hours under normal conditions.

1. Remove two screws and lift off complete air cleaner assembly.
2. Remove screen and spacers from foam element.
3. Remove foam element from air cleaner body.
4. A. Wash foam element in kerosene or liquid detergent and water.
B. Wrap foam in cloth and squeeze dry. Be sure foam is free of any solvents.
C. Saturate foam in engine oil. Squeeze to remove.
D. Assemble parts - fasten to carburetor with screw.

When assembling make certain the lip of the foam element extends over edge of the air cleaner body. The foam element lip will form a protective seal.

IMPORTANT: If the foam element is damaged in any way or if the lip does not fully overlap the edge of the air cleaner body, it must be replaced or serious damage to the engine can result.

CLEANING ENGINE COOLING AIR INTAKE SCREEN

The gasoline engine on your Mod 80 Rider must have an unrestricted flow of cooling air to perform properly and prevent premature failure.

The rear grille of the engine enclosure must be cleaned of lint, chaff, dust, grass clippings, leaves, etc. The rear grille must be cleaned daily or more often when debris accumulates during daily usage.

When used with the M-91 Bagger attachment, the rear grille must be cleaned EACH TIME THE BAG IS EMPTIED.

CARBURETOR ADJUSTMENT

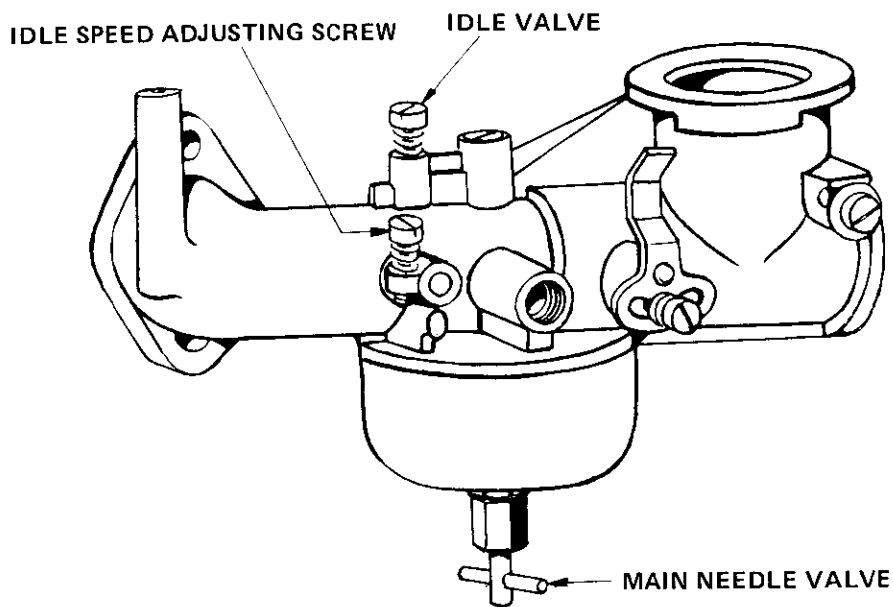


FIGURE 15

Minor carburetor adjustments may be required to compensate for differences in fuel temperature, altitude and load.

The carburetor has three simple adjustments:

1. High Speed Fuel Mixture Adjustment (Main Needle Valve)
 2. Idle Fuel Mixture Adjustment. (Idle Valve)
 3. Idle Speed Adjustment.
1. Initial Adjustment:
 - A. Turn main needle valve clockwise until it just closes.
Valve may be damaged by turning it in too far.
 - B. Then open main needle valve 1-1/8 turns counterclockwise. Close idle valve in same manner and open 1-1/8 turns.

This initial adjustment will permit the engine to be started and warmed up prior to final adjustment.



CAUTION: Avoid contacting hot exhaust pipe when you are adjusting carburetor.

2. Final Adjustment:

- A. Turn main needle valve in until engine misses (lean mixture). Then turn it out past smooth operating point until engine runs unevenly (rich mixture). Now turn to the mid-point between rich and lean so the engine runs smoothly.
- B. Hold throttle at idle position and set idle speed adjusting screw until fast idle is obtained (1750 RPM).
- C. Hold throttle in idle position and turn idle valve in (lean) and out (rich) until engine idles smoothly.
- D. Then reset idle speed adjusting screw so that engine idles at 1750 RPM.

3. Acceleration:

Engine should accelerate without hesitation or sputtering. If engine does not accelerate properly, the carburetor should be re-adjusted to a slightly richer mixture (i.e., open main needle valve slightly).

4. Riding Lawn Mower Under Load:

Loss of power, tendency to stall, or excessive backfiring all indicate a lean mixture. Open the "Main" needle valve in 1/8 turn graduations until engine runs smoothly. Operating the engine on too lean a mixture causes loss of power and high exhaust heat. If mixture is too rich, the engine will sound as though flooded and dark smoke will appear in the exhaust fumes.

NOTE: Erratic engine operation can also be caused by dirt or other foreign material in the carburetor. Carburetion on small gasoline engines is always critical of dirt. It is recommended that a filtering fuel funnel always be used along with clean gasoline. Also check the filter in the tank outlet fitting periodically.



CAUTION: Do not change the engine governor settings or over-speed the engine.

ENGINE LUBRICATION

See ENGINE LUBRICATION on page 12 of this manual.

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. (Prestolite 14RL7 or equivalent in Canada)

Shank Length	7/16 Inch (11.11 mm)
Thread Size	14 MM
Gap Setting	.025 Inch (0.64 mm)

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 the 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

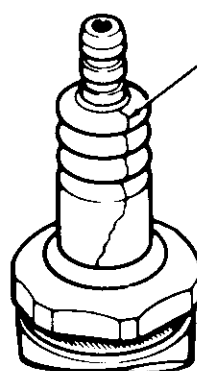
It is important to select the exact size spark plug wrench. The wrong size or type wrench may cause distortion and insulator breakage. Always use a spark plug wrench or thin wall deep socket wrench of the recommended size.

Thoroughly clean the spark plug, including the threads, with a pen knife or wire brush and solvent. A very slight drag should be felt when the gauge wire passes between the electrodes.

Reset the gap by bending the side electrode only. Never bend the center electrode.

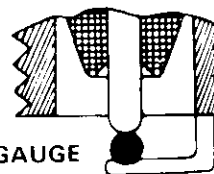
INSTALLING

Install the spark plug in the engine, with a new gasket, and seat the plug finger tight on the gasket. 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 (36.6 Newton-metre). This will assure proper seating and sealing of the spark plug.



THIS TYPE OF CRACK
USUALLY CAUSED BY

1. DROPPING PLUG
2. STRIKING PLUG WITH
WRENCH DURING
INSTALLATION



ROUND FEELER GAUGE
WILL GIVE A MORE
ACCURATE READING

FIGURE 16

Do not use abrasive cleaning machines.

TOE-IN ADJUSTMENT

1. Locate the riding mower on a hard level surface preferably concrete. Place front wheels in a straight ahead position.
2. Make sure the front tire pressures are equal.
3. The front tires should show a mold part-line which coincides with the centerline of the tire. If the centerline of the tire is not readily visible, then the wheel can be raised off the ground, spun and marked at the approximate centerline location.
4. Measure the distance between the tire center lines or the chalk marks.

MEASUREMENT "A" MUST BE 1/8 TO 3/8-INCH (3 mm TO 10 mm) LESS THAN MEASUREMENT B. BOTH MEASUREMENTS - FRONT AND REAR MUST BE TAKEN AT SPINDLE HEIGHT ABOVE THE FLOOR.

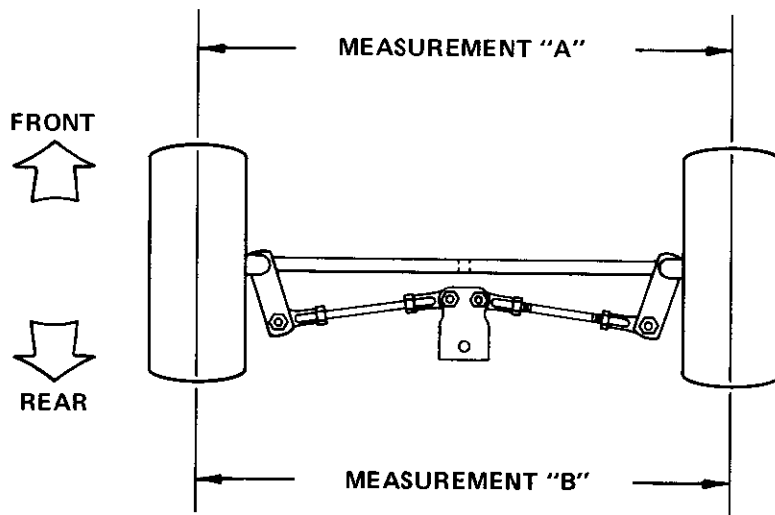


FIGURE 17 AS VIEWED FROM THE BOTTOM

5. Loosen both jam nuts on each drag link and turn rods equally.
6. Turn the tie rod in or out of the ball joints as required. Retighten the jam nuts when correct toe in is obtained. One ball joint has left hand threads and the other right hand so it is unnecessary to disconnect it from the king pin lugs. Turning the joints off the tie rod increases the toe in. Turning the joints on the tie rod decreases the toe in.

BATTERY AND BATTERY CHARGER

Your Model 80 Riding Lawn Mower is equipped with a 12 volt, 12 amp hour lead acid storage battery, used for starting the engine only. The engine has magneto ignition which does not drain the battery while operating.

In order to maintain the battery state of charge, the battery charger supplied with your machine should be used as follows:

1. During average usage charge battery for one 24 hour interval at least once every 3 days.
2. If engine is stopped and started frequently, charge battery at least once every 2 weeks for one 24 hour interval or more often if necessary.
3. To increase battery service life, avoid allowing it to discharge completely between charge intervals.
4. If a battery charger other than the one supplied with your machine is used, do not charge battery at a rate to exceed 1.8 AMPS.
5. Battery charger is designed for inside use only.

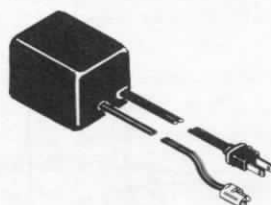


FIGURE 18 BATTERY CHARGER

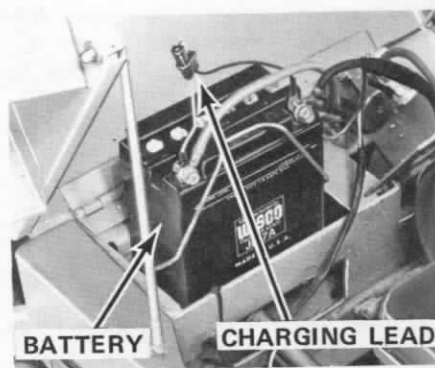


FIGURE 19

CONNECTING THE BATTERY CHARGER

1. Raise engine enclosure and prop open with rod.
2. Connect the special polarized plug from the battery charger to the matching plug at the battery.
3. Plug battery charger into 110 volt A.C. outlet.
4. Charge battery for a 24 hour interval.
5. To disconnect charger, first unplug from 110 volt A.C. outlet, then disconnect special plug at battery.

WINTER STORAGE OF BATTERY

When your Riding Lawn Mower is put into storage, the battery should be removed, cleaned and placed in a cool dry area.



CAUTION: When removing a battery, always disconnect the (-) negative ground cable first. When installing the battery, always connect the (-) negative ground cable last.

Reconnect the battery charging lead to the battery terminals after removal. Connect the red lead to the battery positive (+) terminal first and the black lead to the battery negative (-) terminal last.

The battery should then be recharged monthly as described on page 26. Under no conditions should the battery be allowed to stand with a specific gravity of 1.225 or less.

Recharge completely when battery is returned to service in the spring.

WARNING: To jump start this machine:

1. Place travel control lever in neutral, set parking brake, and place mower drive lever in OFF.
2. Raise engine enclosure and prop open with support rod.
3. Connect positive (Red) (+) jumper cable to battery terminal on starter solenoid.
4. Connect other end of positive (Red) (+) jumper cable to the positive (+) terminal post of the booster battery.
5. Connect negative (Black) (-) jumper cable to negative (-) terminal of booster battery.
6. Connect other end of negative (Black) (-) jumper cable to the engine block. Avoid connection near fuel tank, carburetor and battery.
7. Stand on left side of machine and start using ignition key switch.
8. Disconnect jumper cables in the reverse order, that is, remove the negative (Black) (-) cable first. Keep ends from touching to prevent sparks.



RULES FOR BATTERY CARE



CAUTION: When working around storage batteries, remember that all of the exposed metal parts are "live". Never lay a metal object across the terminals as a 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 batteries is acid. Use care not to spill it on hands or clothing.



POISON: Batteries contain sulfuric acid which can cause severe burns. Avoid contact with skin, eyes or clothing. Antidote: **EXTERNAL**, flush with water; **INTERNAL**, drink large quantities of water or milk. Follow with milk of magnesia, beaten egg or vegetable oil. Call physician immediately; **EYES**, flush with water for 15 minutes and get prompt medical attention. Keep out of reach of children.



DANGER: Batteries produce explosive charges. Keep sparks, flame and cigarettes away. Ventilate when charging or using in enclosed space. Always shield eyes when working near batteries.



CAUTION: Never wear rings or metal watch bands when working with the tractor electrical system or battery as you may ground a live circuit.

1. Add approved tap water 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 (30 ml.) every 25 hours of operation. If it is greater, either the case is leaking or the battery charger is overcharging and must be replaced.
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 lay on the battery container.
4. Keep the battery clean and dry.

IMPORTANT: The full charge gravity reading is 1.265 for a fully charged battery. A battery having a reading of 1.175 will freeze at approximately 0°F Fahrenheit (-18°C) temperature.

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

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. Add water according to lines on battery case. **DO NOT OVERFILL.**

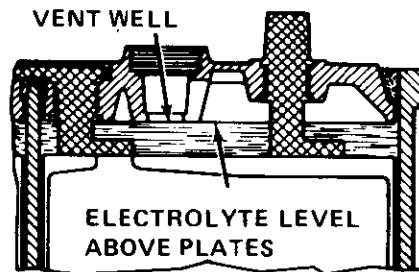


FIGURE 20

CELL COVERS AND VENT TUBE

Always keep the cell covers in place and tight. Be sure the vent tube is in place and free of dirt to prevent gas pressure in cells.

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.

IMPORTANT: Do not apply excessive torque when tightening leads on battery terminals because internal battery connections can be damaged.

TRACTION DRIVE MAINTENANCE

FRICTION DRIVE WHEEL REPLACEMENT

1. Raise engine enclosure. Prop open with support rod.
2. Remove five (5) capscrews securing drive wheel to hub.
3. Install new drive wheel using new capscrews and self locking nuts.



CAUTION: Move attachment drive clutch lever in OFF position, shut off engine, allow engine to cool, remove key and spark plug wire before making adjustments to or servicing the Riding Lawn Mower.



FIGURE 21

ADJUSTING THE CLUTCH LINK

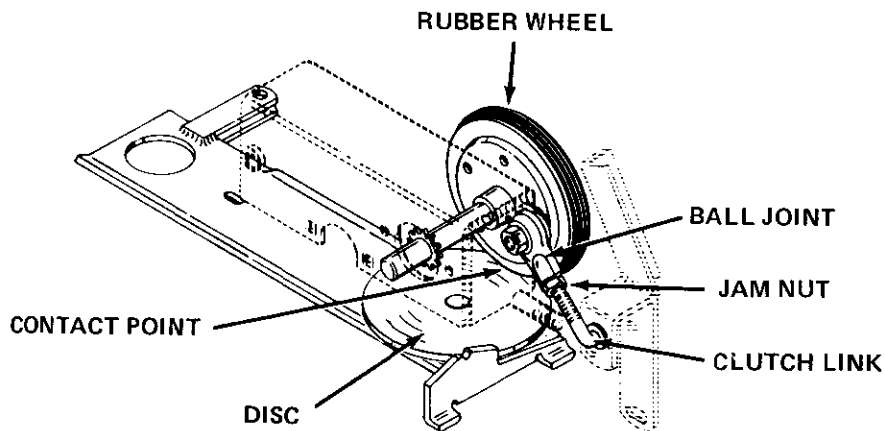


FIGURE 22

Ease of shifting and proper drive wheel engagement are controlled by the clutch link.

Correct adjustment exists when the:

- a. rubber drive wheel is in contact with disc when clutch-brake pedal is released and clutch link is free (that is under neither tension nor compression) and
- b. rubber wheel lifts clear of disc with clutch-brake pedal depressed halfway. (The second half of pedal travel applies the brake.)

To adjust:

- a. loosen jam nut
- b. remove bolt securing ball joint to tab on sprocket housing
- c. turn ball joint as required
- d. install bolt and tighten jam nut

DRIVE BELT REPLACEMENT

1. The mower and mower drive belt must be removed before attempting to replace traction drive belt. Refer to pages 34 and 35.
2. After the mower drive belt has been removed. Push idler arm in to remove tension from belt.
3. Slip old belt off pulleys and install new belt.



CAUTION: Be sure gasoline is thoroughly drained and battery moved as described in the "Storage" section of this manual before standing mower on end for storage or service.

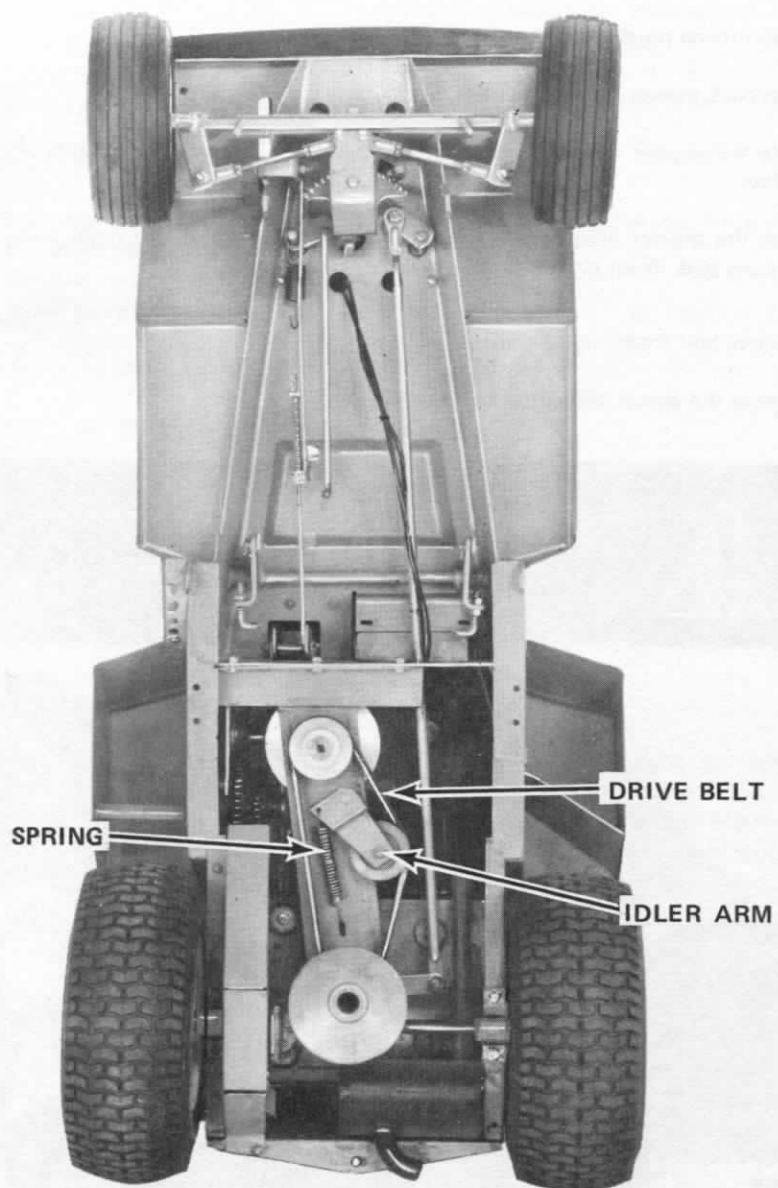


FIGURE 23 SHOWN WITH MOWER DECK REMOVED FOR CLARITY

MOWER DRIVE BELT SERVICE

1. Place mower height selection in lowest position.
2. Approach mower from left side.
3. Place the mower drive lever in the OFF position. Slip belt off left side of mower drive pulley.
4. Place the mower drive lever in the ON position (this lifts belt-brake away from belt). Remove belt from right side of mower drive pulley.
5. Remove belt from engine pulley.
6. Reverse the above procedure for installation.



CAUTION: Move attachment drive clutch lever in OFF position, shut off engine, allow engine to cool, remove key and spark plug wire before making adjustments to or servicing the Riding Lawn Mower.

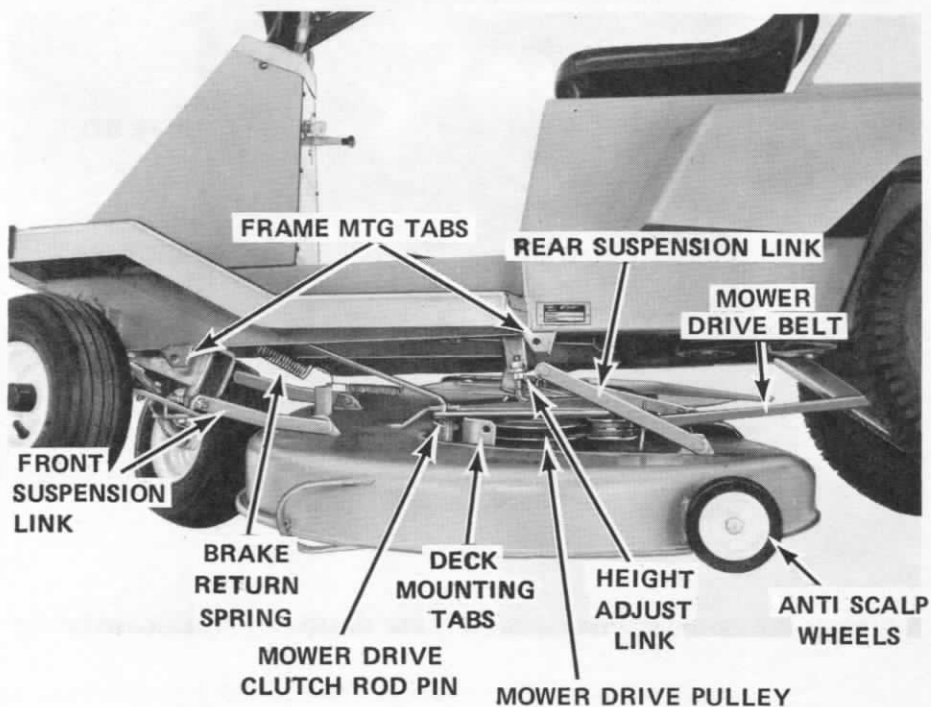


FIGURE 24

SHOWN WITH LEFT SIDE MOWER SUSPENSION DISCONNECTED FOR CLARITY

MOWER DECK SERVICE

DECK REMOVAL

1. Place mower height adjust in lowest position.
2. Remove mower drive belt (see page 34).
3. Remove front and rear suspension link and height adjust link cotter pin, left side first as shown in Figure 24.
4. Remove mower drive clutch rod pin and brake return spring.
5. Remove right hand side suspension and height adjust link.
6. Remove deck from under mower chassis.



CAUTION: Keep the vehicle and attachments in good operating condition, and keep safety devices in place.

CLEANING THE MOWER DECK

With the engine shut off and after the blade has stopped spinning, check and clean out the inside of the deck housing periodically. Remove any grass wrappings between the blade mounting adapter and spindle housing. Grass wrappings, if allowed to accumulate, may work their way under the bearings and damage the seals. Excessive grass accumulation in the deck housing will waste horsepower and cause plugging, streaking, and corrosion.



WARNING: Be sure that the mower drive lever is off, the engine is shut off, the key removed and the blade has stopped spinning before attempting to clean a plugged discharge chute.

MOWER ANTI-SCALP WHEELS

The Anti-Scalp wheels should be oiled after each five hours of operation. Make sure the oil penetrates to the inside of the bushings by holding the deck at an angle while lubricating.

DECK LEVELING PROCEDURE

1. Side to Side Level

Position mower on level surface such as concrete garage floor.

- a. Set mower adjust lever in middle hole.
- b. Place mower drive lever in the OFF position.
- c. Position blade at right angles to the Riding Lawn Mower chassis.
- d. Turn Height-Adjust Link adjusting nuts until blade tips are the same height from the floor (about 2-1/2 inches (65 mm)).

2. Fore-Aft Level

Position mower on level surface such as concrete garage floor. Follow Side to Side Level adjustments, above, first.

- a. Check to make sure that the mower drive lever is still in the OFF position and that the mower adjust lever is in the middle hole.
- b. Rotate the blade so it is parallel to the Riding Lawn Mower chassis.
- c. Turn the front suspension link adjustment nuts equally so the front tip of blade is:
 - a. 3/8" to 1/2" (10 mm to 12 mm) lower than rear if M-91 bagger is installed.
 - b. 1/4" to 3/8" (7 mm to 10 mm) lower than rear if NOT equipped with M-91 bagger.
- c. This adjustment should be made with operator's seat unoccupied and bagger (if so equipped) empty.
- d. Recheck side to side level as described above and readjust if required.

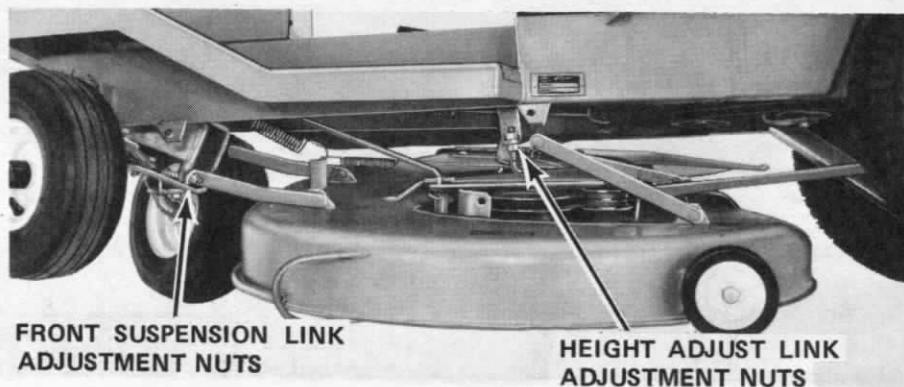


FIGURE 25

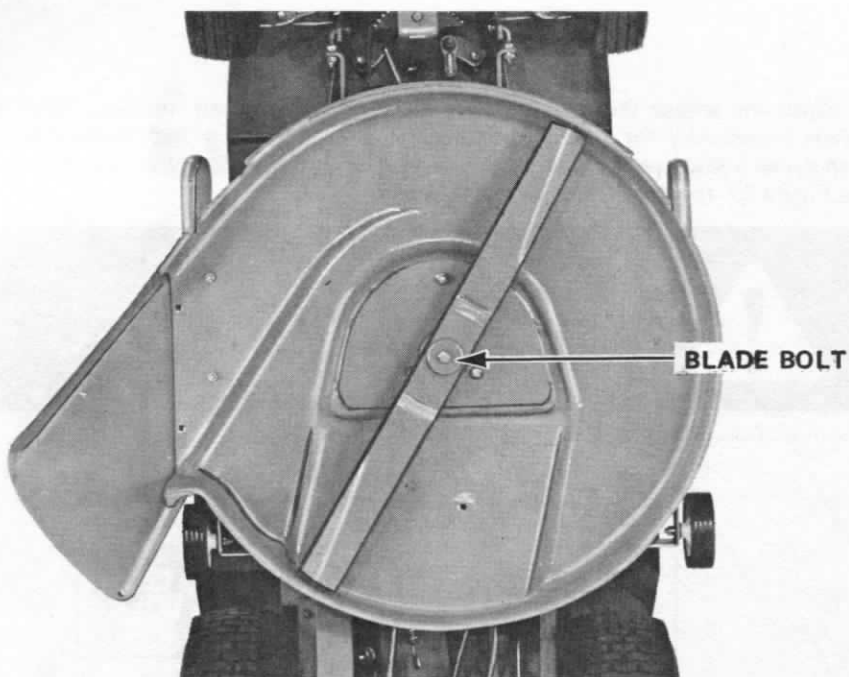


FIGURE 26

MOWER BLADE BOLT

Before operating the mower for the first time, check the bolt holding the blade. It must be tight. After the first 8 hours of operation, check it again. Whenever the blade is removed, it is good practice to install a new lockwasher under the bolt, and again check tightness after the next 8 hours of operation.



CAUTION: Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.

BENT BLADE

Check for bent blade before mounting the mower and after impact. Blade tips should be within 1/4 inch (6 mm) of the same horizontal plane. Mowing with bent blade will cause missed strips and a poor mowing job. A bent blade should be replaced immediately.



CAUTION: The vehicle and attachments should be stopped and inspected for damage after striking a foreign object, and the damage should be repaired before restarting and operating the equipment.

SHARPENING BLADE

With the engine shut off and after the blade has stopped spinning, check the mower blade periodically for nicks and dullness. A damaged, dull or improperly sharpened blade can cause a shattered, rather than, clean cut and brown areas or grass may develop. Refer to Figure 27 for the correct sharpening angle.



CAUTION: Move attachment drive clutch lever in OFF position, shut off engine, allow engine to cool, remove key and spark plug wire before making adjustments to or servicing the Riding Lawn Mower.

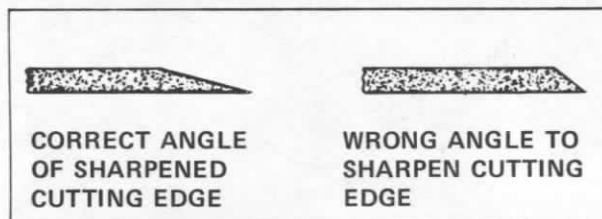


FIGURE 27

BALANCING BLADE

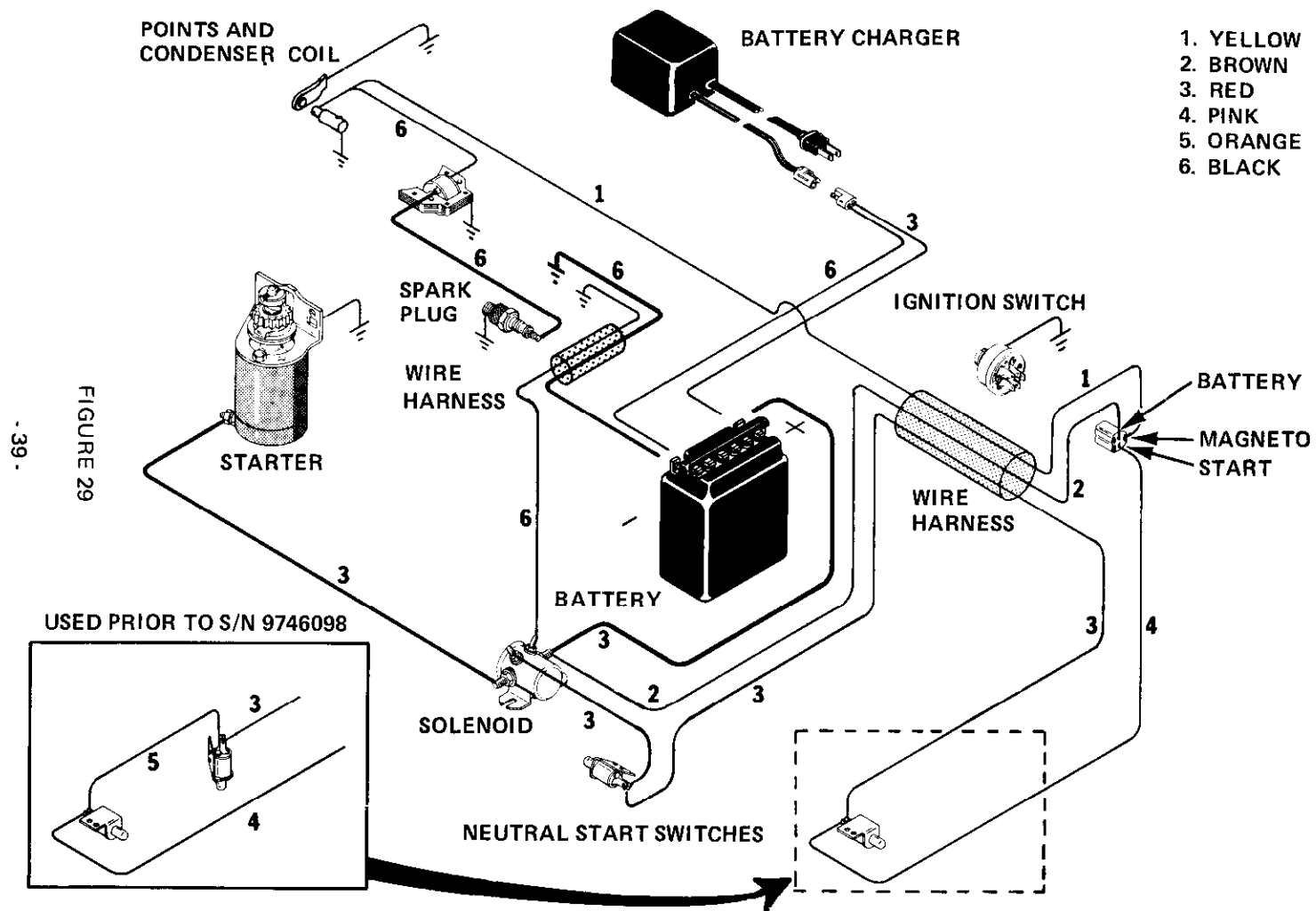
After a blade is sharpened always check it for balance. A balancing tool, such as shown below, can be obtained from your local supplier for this purpose. A properly balanced blade will level itself when placed on the balancing tool.



FIGURE 28



CAUTION: An unbalanced blade is hazardous and will cause premature wear and failure of bearings and spindle. If the blade cannot be balanced by resharpening, replace it with a new one.



STORING THE RIDING LAWN MOWER

If your Riding Lawn Mower will not be used for 30 days or more, the following storage procedures should be followed.

ENGINE STORAGE

1. To prevent gum deposits from forming in the fuel system, completely drain fuel tank and run engine until gasoline in carburetor is completely consumed.
2. While engine is still warm, drain oil from crank case and refill with fresh oil. See engine lubrication page for proper type and weight.
3. Remove spark plug, pour 2 or 3 tablespoons (30 ml) of SAE 30 oil into cylinder and crank momentarily to distribute oil. Replace spark plug.
4. Clean dirt and chaff from cylinder head fins and blower housing.

MOWER DECK

Clean grass accumulations from mower deck. See **CLEANING THE MOWER DECK** in **MOWER DECK SERVICE** section of this manual.

BATTERY STORAGE

When your Riding Lawn Mower is put into storage the battery should be removed, cleaned and placed in a cool dry area.



CAUTION: When removing a battery, always disconnect the (-) negative ground cable first. When installing the battery, always connect the (-) negative ground cable last.

Reconnect the battery charging lead to the battery terminals after removal. Connect the red lead to the battery positive (+) terminal and the black lead to the battery negative (-) terminal.

The battery should then be recharged monthly as described under **BATTERY MAINTENANCE**. Under no conditions should the battery be allowed to stand with a specific gravity of 1.225 or less.

Recharge completely when battery is returned to service in the spring.

LAWN MOWER CHASSIS

Thoroughly clean lawn mower chassis. Completely lubricate lawn mower as described in the Lubrication section of this manual.

The Riding Lawn Mower may then be pushed to its storage area and stood on its end.

1. Be sure gasoline is thoroughly drained into an approved container to prevent leakage when mower is stood on end.



CAUTION: Be sure gasoline is thoroughly drained and battery removed as described in the "Storage" section of this manual before standing mower on end for storage or service.

2. Be sure to **REMOVE BATTERY** before lifting. Tipping the battery on end will cause minute particles of sediment from the bottom of the battery to lodge between the cell plates and consequently ruin the battery. Warranty will not be allowed on this type of failure.
3. Care should be used when lifting the unit to avoid strain and physical injury. Be sure the unit is standing securely before working on it.
4. Reach under and lift by the front frame area and **NOT THE FRONT RUBBER BUMPER**.
5. Attach a cord or chain between the upper part of the Lawn Mower Chassis and the wall or ceiling. This will prevent the unit from falling if it is accidentally pushed or bumped.

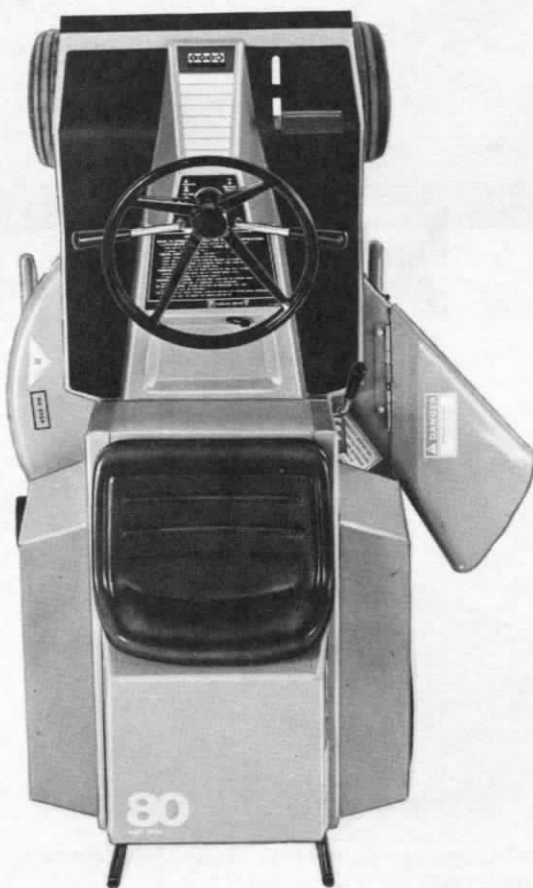


FIGURE 30 SHOWN IN STORAGE POSITION

— NOTICE —

At the time your Case Dealer delivers your new riding mower, he will acquaint you with its operation and maintenance as outlined in the "Owner 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.



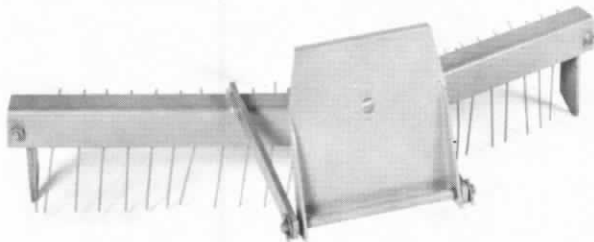
CAUTION: Use care when pulling loads or using heavy equipment.

- a. Use only approved drawbar hitch point.
- b. Limit loads to those you can safely control.
- c. Do not turn sharply. Use care when backing.
- d. Use counterweight(s) or wheel weights when suggested in the owner's manual.

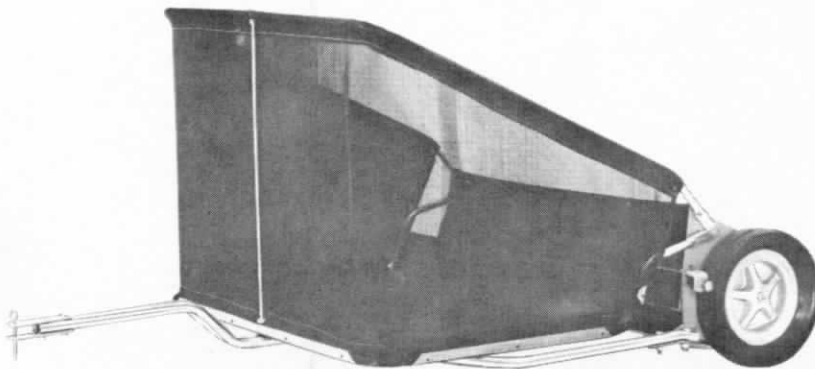
ATTACHMENTS



MODEL M-91 BAGGER



MODEL M-92 THATCHER



MODEL L-90 SWEEPER

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