870
TRACTOR

Operators Manual

9-4671

CASE

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OPERATOR'S CAB (Continued)

Operator's Seat and Trim

Your Case Cab is equipped with a soft fabric trimmed seat and panels of soft foam material for maximum operator comfort. The care and maintenance of these parts will ensure many satisfactory hours of comfort.

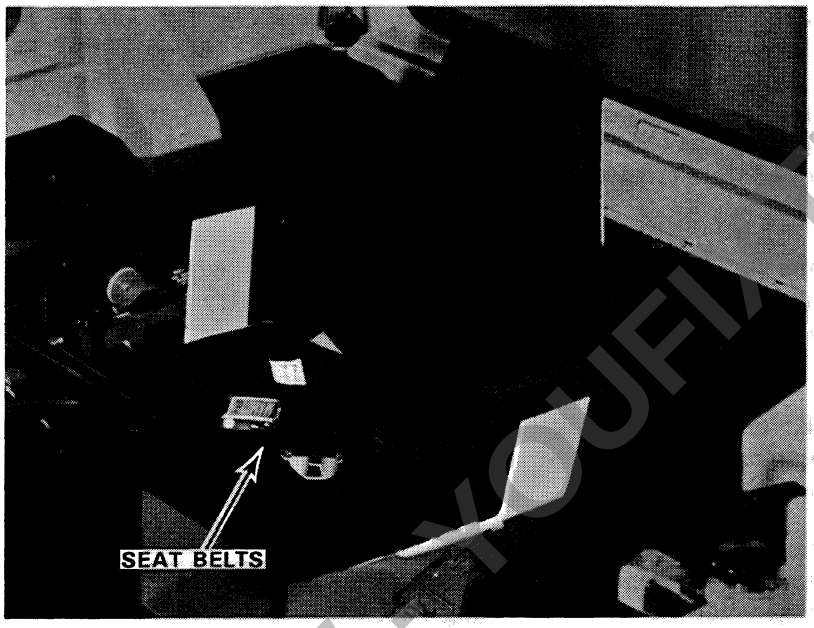


Figure 120

CARE AND CLEANING - Dust and loose dirt that accumulates on seat fabric should be removed frequently with a vacuum cleaner, wisk broom or soft brush. Normal cleanable soilage, spots or stain can be cleaned with the proper use of fabric cleaners.

Before attempting to remove spots or stains from upholstery, determine as accurately as possible the nature and age of the spot or stain. Some spots or stains can be removed satisfactorily with water or mild soap solution.

For best results, spots or stains should be removed as soon as possible. Some types of stains or soilage such as oil and certain types of grease are extremely difficult and, in some cases, impossible to completely remove. When cleaning this type of stain or soilage, care must be taken not to enlarge the soiled area. It is sometimes more desirable to have a small stain than an enlarged stain as a result of careless cleaning.

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This symbol means ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED. The message that follows the symbol contains important information about your safety. Carefully read the message. Make sure you fully understand the causes of possible injury or death. SB001

IF THIS MACHINE IS USED BY AN EMPLOYEE, IS LOANED, OR IS RENTED, MAKE SURE THAT THE OPERATOR UNDERSTANDS THE TWO INSTRUCTIONS BELOW.

BEFORE THE OPERATOR STARTS THE ENGINE:

1. GIVE INSTRUCTIONS TO THE OPERATOR ON SAFE AND CORRECT USE OF THE MACHINE.
2. MAKE SURE THE OPERATOR READS AND UNDERSTANDS THE OPERATOR'S MANUAL FOR THIS MACHINE.

WARNING

IMPROPER OPERATION OF THIS MACHINE CAN CAUSE INJURY OR DEATH.

BEFORE STARTING THE ENGINE, DO THE FOLLOWING:

1. READ THE OPERATOR'S MANUAL.
2. READ ALL SAFETY DECALS ON THE MACHINE.
3. CLEAR THE AREA OF OTHER PERSONS.

LEARN AND PRACTICE SAFE USE OF MACHINE CONTROLS IN A SAFE, CLEAR AREA BEFORE YOU OPERATE THIS MACHINE ON A JOB SITE.

It is your responsibility to observe pertinent laws and regulations and to follow manufacturer's instructions on machine operation and maintenance.

See your Authorized Case dealer for additional operator's manuals, parts catalogs, and service manuals.

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Diesel Engine

SPECIFICATIONS

General

Type	4 Cylinder, 4 Stroke Cycle, Valve-in-Head.
Firing Order	1-3-4-2
Bore	4-5/8 Inches (122.5mm)
Stroke	5 Inches (127mm)
Piston Displacement	336 Cubic In. (5 506.1 cm^3)
Compression Ratio	16.5 to 1
Cylinder Sleeves	Removable Wet Type
No Load Governed Speed	2240 to 2280 RPM
Rated Engine Speed	2100 RPM
Engine Idling Speed	725 to 775 RPM
*Valve Tappet Clearance (Exhaust)	(Hot) .020 Inch (0.508mm)
	(Cold .025 Inch (0.635mm)
(Intake) - (Hot and Cold)	.015 Inch (0.381mm)

*Hot Settings Are Made After The Engine Has Operated At Thermostat Controlled Temperature For At Least Fifteen Minutes.

Piston and Connecting Rods

Rings per Piston	3
Number of Compression Rings	2
Number of Oil Rings	1
Type Pins	Full Floating Type
Type Bearing	Replaceable Precision, Steel Back, Copper-Lead or Aluminum Alloy Liners

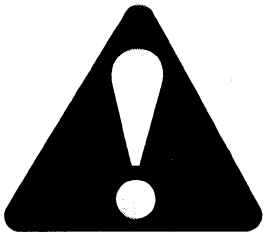
Main Bearings

Number of Bearings	5
Type Bearings	Replaceable Precision Steel Back, Copper-Lead or Aluminum Alloy Liners

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fuel specifications



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

GASOLINE

Case 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 are:

Motor Research ---------- 86.2 Octane Number
Research Method ---------- 94.2 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 to only 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.

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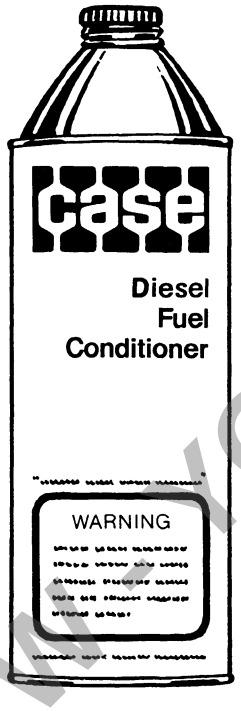
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FUEL CONDITIONERS

The following fuel conditioners are available from your Authorized Case Dealer to help insure continued fine performance that was designed into your Case Engine.

Case Diesel Fuel Conditioner is recommended for use in all Case Diesel engine fuel systems.

This fuel conditioner should be used as directed on the container.



CASE DIESEL FUEL CONDITIONER

Prevents gummy deposits from forming in the fuel system.

Improved lubrication to the upper internal parts of the engine.

Eliminates fouling of injector nozzles, valves and manifolds.

Helps keep condensation suspended in the fuel, allowing it to be burned with the fuel.

Maintains a higher degree of fuel combustion and engine performance from fuel the engine burns.

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Flashing Amber Warning Lights

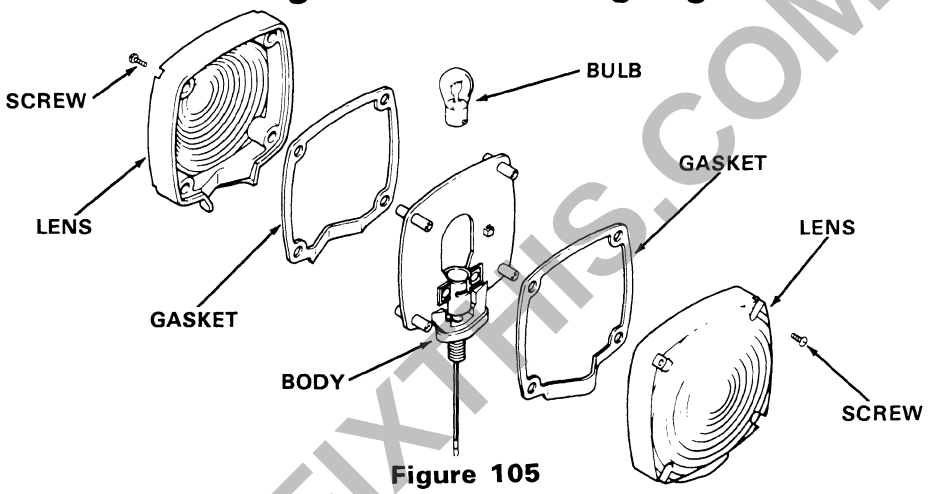


Figure 105

To replace bulb, remove the lens retaining screws, lens and gaskets. Press down on the bulb, turn and pull up to remove. Install new bulb by pressing down and turning. Replace gaskets or lens if cracked or broken. Wipe lens clean before reinstalling. Reinstall gaskets, lens and retaining screws.

Implement Warning Lamp

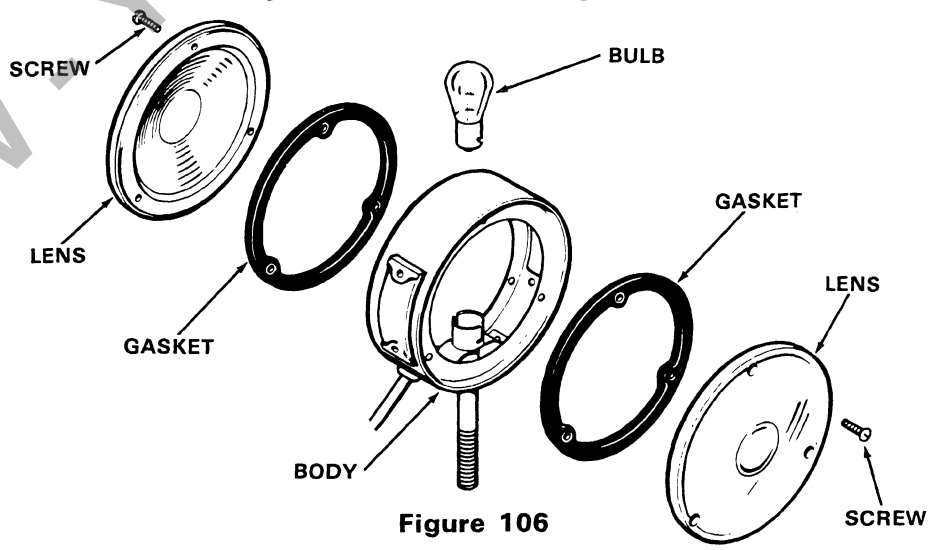


Figure 106

To replace bulb, remove the retainer screws, lens and gaskets. Press down on bulb, turn and pull up to remove. To install new bulb press down and turn. Reinstall gaskets, lens and screws.

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Operating Controls (Continued)

5. HEATER TEMPERATURE CONTROL - Turn blower switch on to desired speed. Pull heater temperature control out for desired heating temperature. **NOTE:** The air louvers must be closed in conjunction with heater to obtain an even heated air circulation of cab. Push control full in to shut heat off.
6. AIR LOUVERS - The air louvers are adjustable, up and down, or to the left and right, for controlling the air flow direction.
7. AIR DEFLECTORS - The air deflectors are of the swivel and rotating adjusting type and remain open constantly, for adjusting air flow for air conditioning and heating.
8. CAB LIGHT SWITCH - Move light switch rearward to turn "ON" cab light, move light switch forward to turn cab light "OFF".
9. RADIO - A radio for your Case Cab is available through your Authorized Case Dealer. To turn the radio "ON", turn the volume knob-clockwise and "OFF" counter-clockwise. Station selection is done by turning the tuning knob.
10. CIGAR - CIGARETTE LIGHTER - Push in on lighter to ignite. Lighter will pop out and hold when ready to use.
11. REAR VIEW MIRROR - Adjustable for desired rear viewing.

IMPORTANT: For the most efficient operation of the air conditioning system, operate the blower fan at either medium or high speed and then vary the temperature control to arrive at a comfortable setting.

NEVER Operate the blower fan in the medium speed position when the Air Conditioning temperature control is in the coldest position. Failure to operate the blower fan at a high enough speed when the air conditioner is operating can result in evaporator icing (freeze) up and no cooling.

The blower speed and temperature control will have to be adjusted together for the most efficient cooling depending upon ambient temperature. Remember-high cooling- high fan speed. If the cab air is too cold ALWAYS adjust the temperature control to a warmer setting before reducing theblower speed.

Under normal operating conditions, with the cab sealed properly and the windows and doors closed, temperatures of 10^{0}F to 25^{0}F (-12^{0}C to 4^{0}C) (depending upon relative humidity) lower than the ambient temperature can be expected. Humidity is also greatly reduced when operating the air conditioning system, making the cab even more comfortable to the operator.

NOTE: The air conditioning system on your Case Tractor is equipped with two safety devices to protect the system from low refrigerant level and high restrictions. If during the course of operation you notice the air conditioning stops working, refer to pages 142 and 143.

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POWER SHIFT FILTER

Element Change Interval ---------- After the first 20 hours of operation and every 250 hours thereafter.
Type Fluid ---------- Case TFD (Trans.-Final Drive) Fluid
Filter Capacity ---------- 1-1/2 U.S. Quarts (1.4 liters)
Type of Filter ---------- (White Element) 10 Micron Filtration

Regular interval replacement of the filter element is very important to the service life of the hydraulic system. The filter is easily accessible and is located beneath and to the front of the platform on the right hand side, Figure 5. It is identified by a white label. **IMPORTANT:** Do not intermix white filter elements with red filter elements.

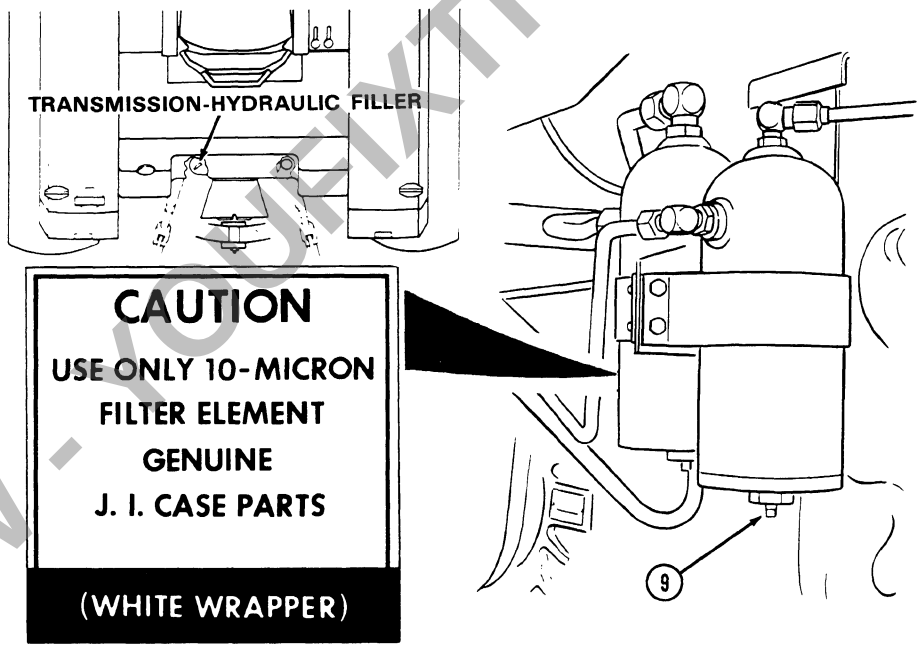


Figure 5

1. Remove the drain plug (9) and drain the hydraulic fluid from the filter, Figure 5.

2. Remove the cap (8), Figure 6, with back-up ring (7), "O" ring (6), spring (5) relief valve (4) and the element (3) from the filter body (1). Discard the element, "O" ring and the back-up ring.

3. Wipe the inner wall of the filter body (1) with a clean lint free cloth.

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ADJUSTABLE FRONT AXLE ADJUSTMENT

1. Raise and securely block the tractor front end and block the rear wheels.

2. Remove the drag link inner two clamp bolts and nuts.

3. Remove the axle tube extension locating bolts and nuts.

4. Slide the axle extensions to the desired tread spacings and re-install the tube locating bolts and nuts.

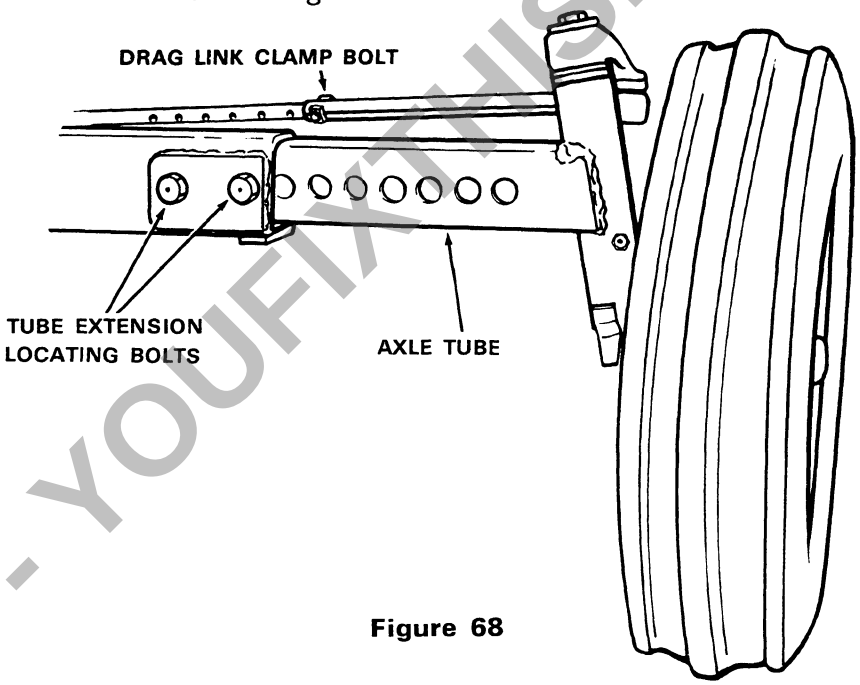


Figure 68

5. Notches spaced 2 inches (50.8mm) apart are provided on the drag links to maintain proper toe-in as the axles are moved in or out. You must locate the inner clamps on the drag link over the notches that correspond with the axle extension hole in which the locating bolt is installed. Refer to Page 15 for tread spacings.
   EXAMPLE: If the locating bolt is in the Number 3 hole in the ext-tension, the clamps must be located over the third notch from the outer end of the drag link.

Be sure to replace and tighten all clamp bolts. **NOTE:** Tighten the tube bolts 320 to 380 ft. lbs. (434 to 515 Nm) and the drag link clamp bolts to 65 ft. lbs. (88 Nm). **IMPORTANT:** If this procedure is not followed the turning angle will be affected.

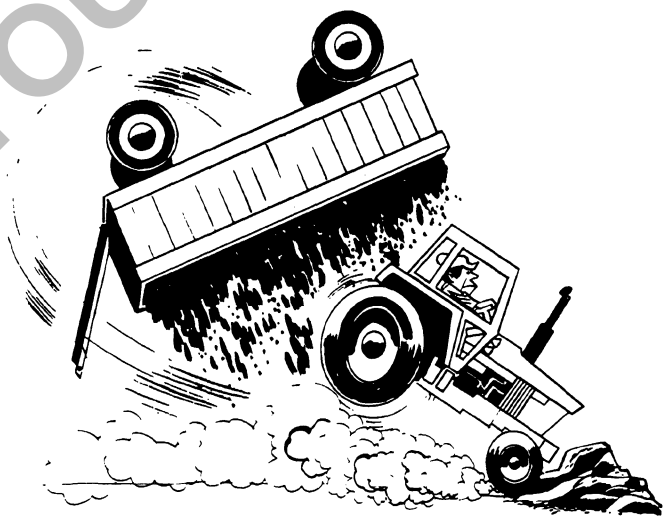
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⚠ Engine starting and control operation must be performed from the operators seat only.

⚠ Tractor travel speed should be such that complete control and tractor stability is maintained at all times. There is potential danger in manuevering around ditches, gullies, slopes, uneven ground, holes and rocks.



⚠ Brake pedals must be locked together for road travel. This will insure uniform brake application and maximum stopping ability.

⚠ Excess tractor speed is the big killer. Only experienced drivers should be permitted on highways. Use SMV safety emblem and lights for adequate warning to the operators of other vehicles. In this regard, check local government regulations.

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4 Speed Mechanical Range Section (Cont)

Depressing the inching pedal, applies one of the hydraulic clutches in the power shift which slows down the rotating shafts in the transmission to make the mechanical shift smooth and fast.

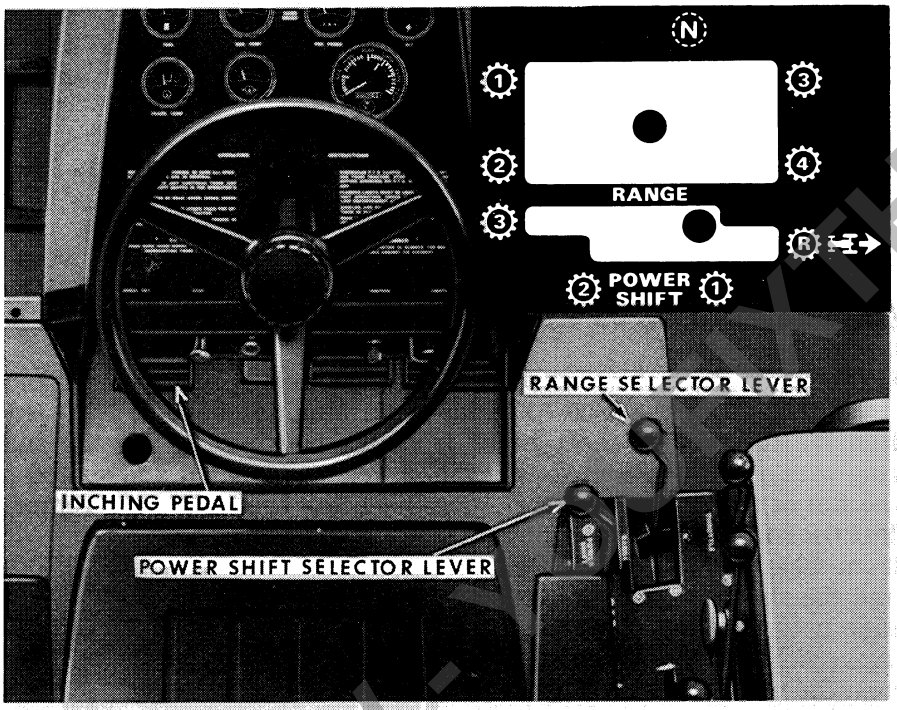


Figure 45

Ground Speed Selection

Governed speed should be selected so that you place the range selector lever in speed (1,2,3 or 4) that will allow the major part of the field to be operated with the power shift selector lever in 2 Intermediate position. This will allow the operator to shift "down" on the go into 1 Low for terrain or soil condition changes and shift "up" on the go where faster travel speeds are applicable and desired.

Whenever the tractor is operated at top speed with power shift in 3rd speed gear, the range lever in 4th speed and the operator depresses the inching pedal, always brake the tractor to a halt or a reasonable slow speed before releasing the inching pedal.

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