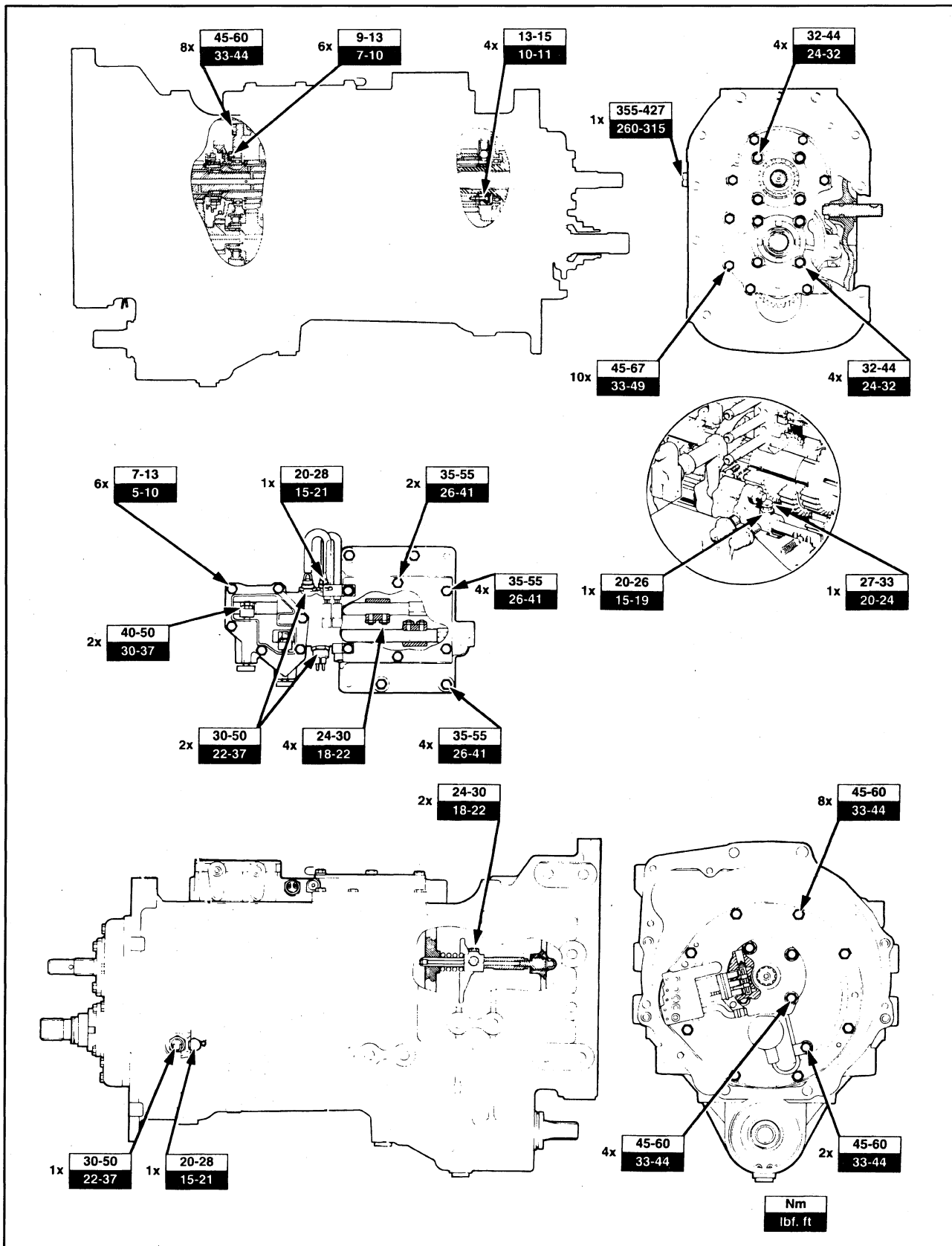
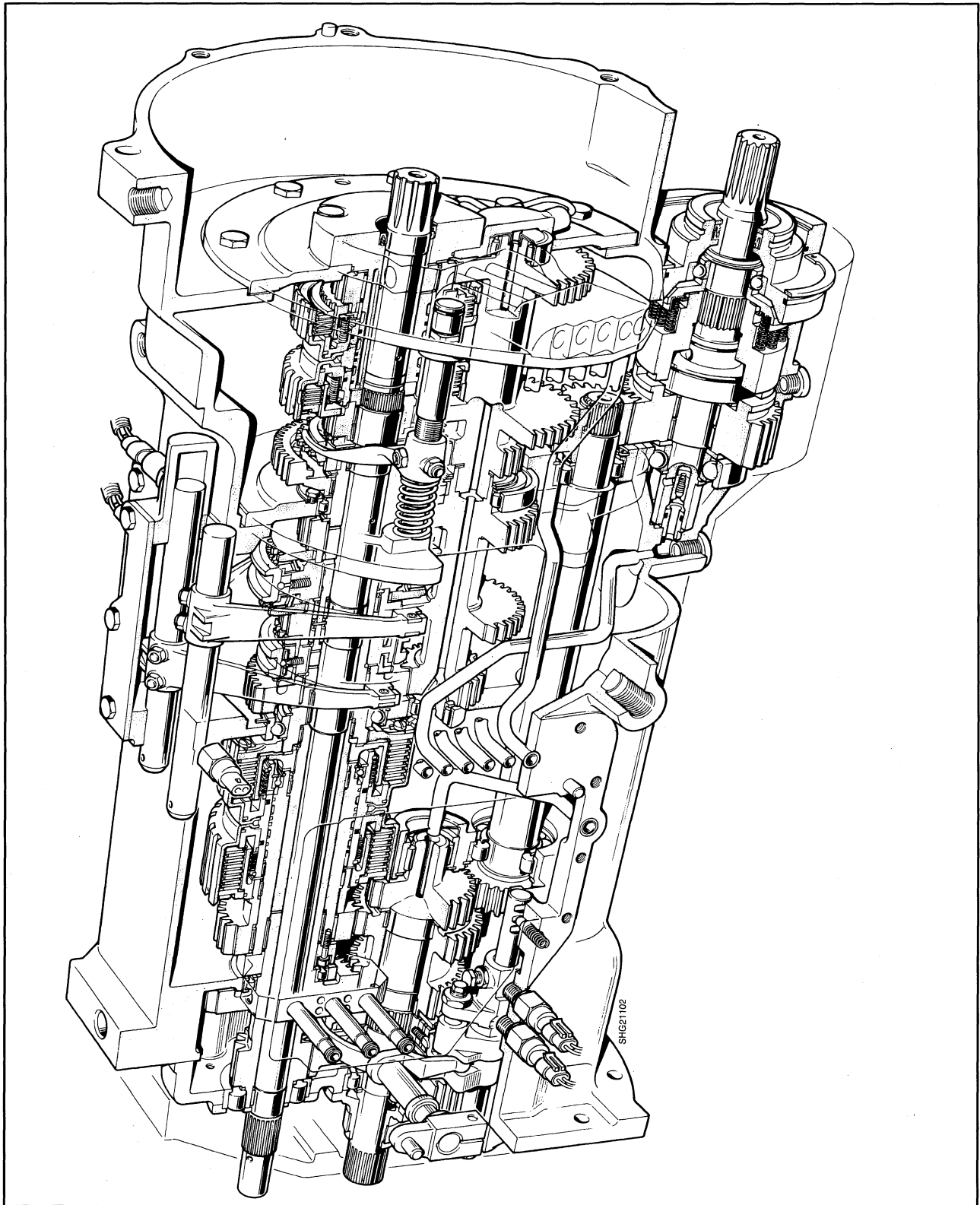


SECTION 6 - POWER TRAIN



SECTION 6 - POWER TRAIN

DESCRIPTION AND OPERATION



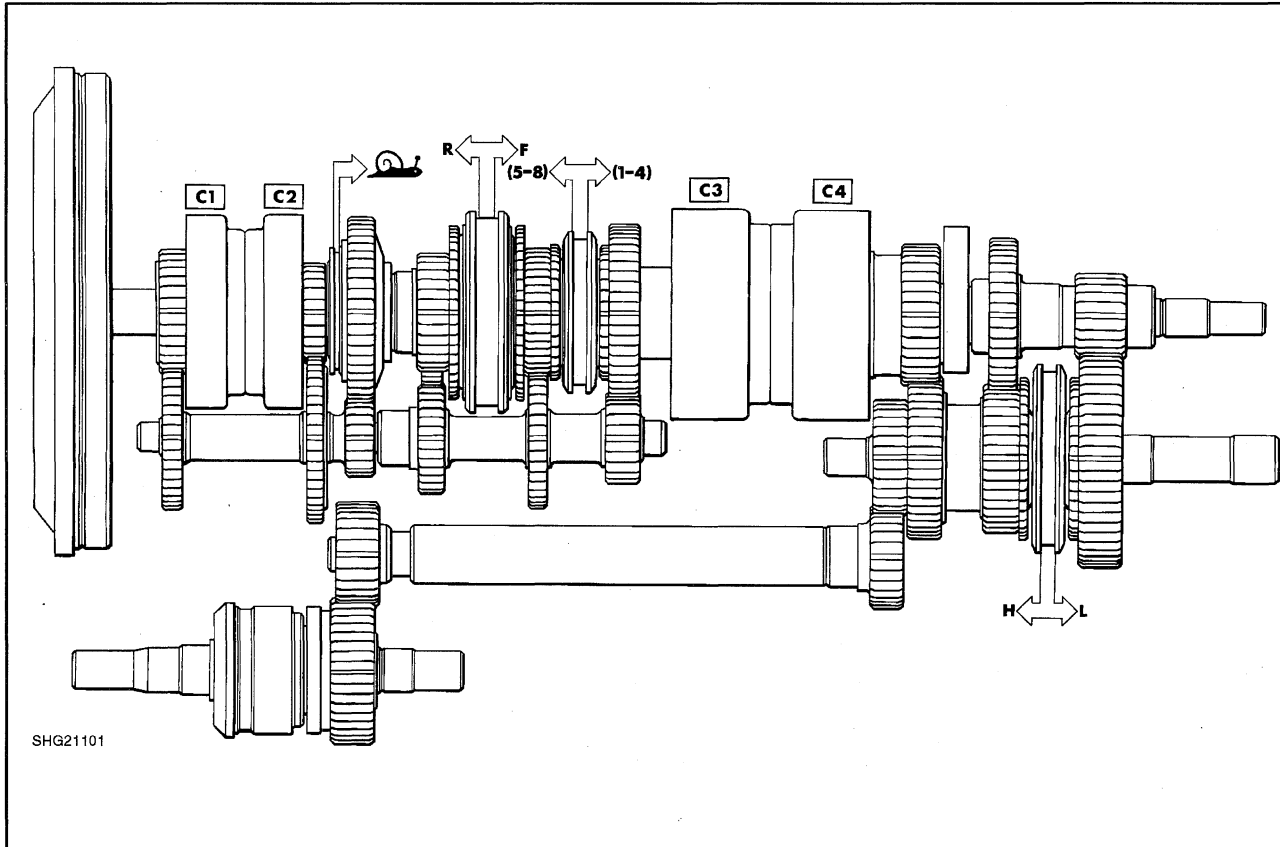
ELECTRO SHIFT TRANSMISSION

Introduction

The Electro Shift transmission is available in 30 or 40 kph, with 16 forward and 16 reverse gears, 2 or 4WD and with a creep option giving an additional eight gears.

Graziano Synchronizer

- Identified by a "G" next to the serial #.
- New status switches
- New shift rails
- New solenoids



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Four electro-hydraulic clutches provide four powershift (without clutch pedal) gear changes.

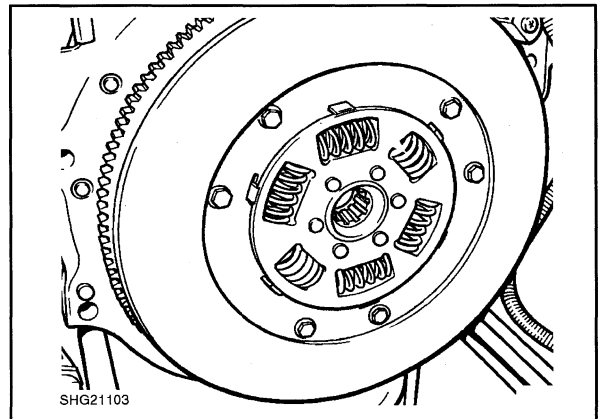
The main range mechanical synchroniser enables electro-hydraulic gears, 1 up to 4, or 5 up to 8, to be selected.

The High/Low synchroniser provides field or road speeds for the above 1 to 8 gears.

The mechanical synchroniser for Forward/Reverse, combined with the dump button which disengages drive to the electro-hydraulic clutches, provides a clutchless shuttle.

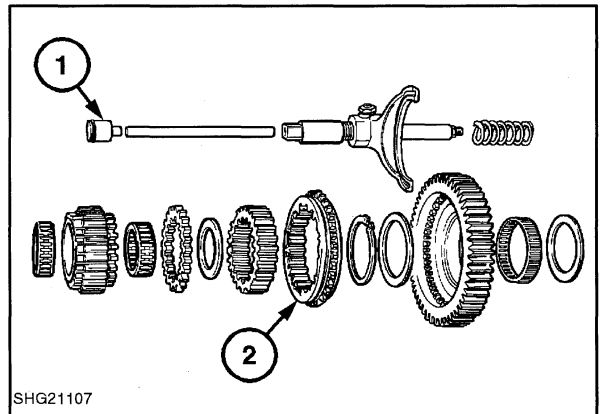
SECTION 6 - POWER TRAIN

The transmission has a flywheel damper and no conventional clutch.



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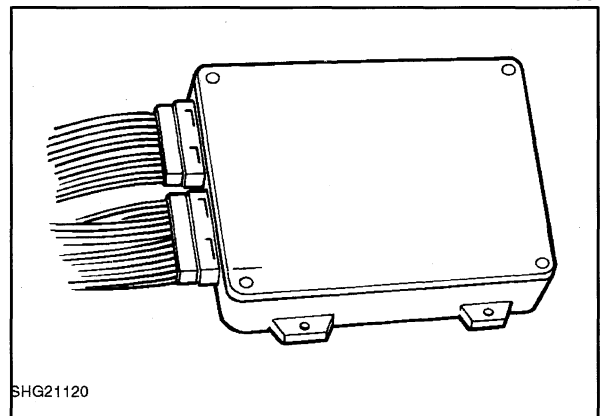
Electro-hydraulic control of a piston (1) which activates a coupler (2) provides an optional creep range. This only operates in Low range, giving a total of 24 x 24 gears.



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The processor gives accurate control, via Pulse Width Modulated (PWM) valves, of the four wet multiplate clutches.

This also enables clutchless shuttle operations, speed matching of gears, sequential powershifting and high range gear logic.

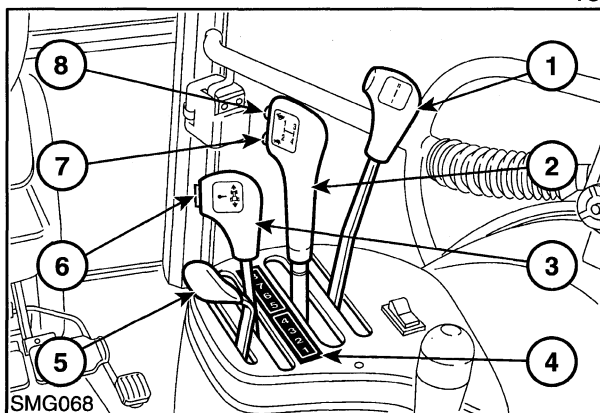


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Operation

Downshifting or Upshifting is achieved by pressing the required button.

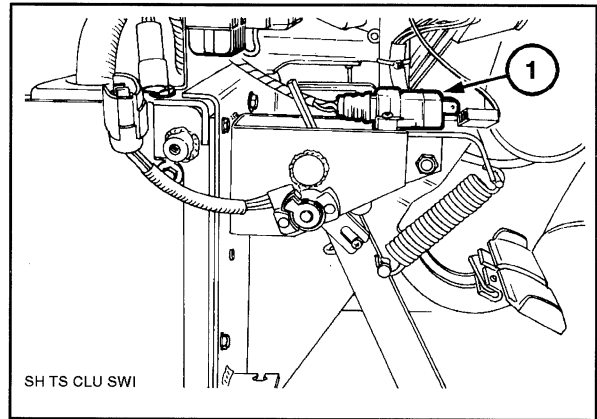
The clutch or inching pedal is used for all synchroniser changes and must be depressed when operating the High/Low, main shift (1-4 to 5-8) and the Forward/Reverse levers.



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SECTION 6 – POWER TRAIN

However, the Forward/Reverse lever also has a dump button which performs the same function as the interrupt button (1) when depressing the clutch/inching pedal.



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Creeper gear engagement (1) must only be undertaken with the tractor stopped, low range selected and inching pedal depressed.

Clutchless shuttle/drive off

The dump button enables gear engagement and drive off, without using the clutch pedal and is particularly useful for shuttle operations.

When the dump switch button is depressed, drive is instantly disengaged. When the button is released, transmission output speed and clutch pack engagement are automatically monitored to take up the drive smoothly.

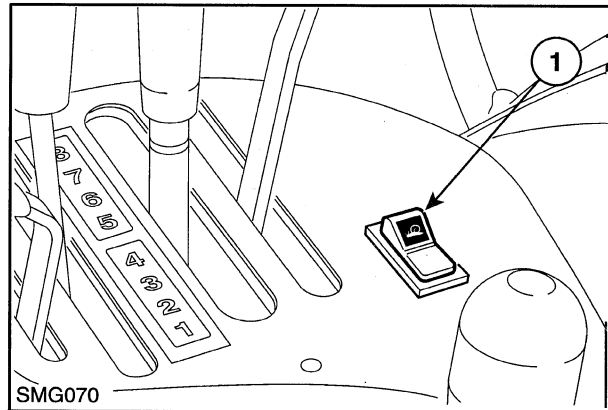
NOTE: To prevent inadvertent shuttle lever engagement, an electronic interlock is provided. If the tractor is stationary with the shuttle lever in neutral the following procedure must be used to drive away.:

Depress and release the dump switch then, within one second, depress and hold in the switch. Move the shuttle lever into gear. The drive will engage when the button is released. If this sequence is not followed a warning 'bleeper' will sound and the fault code 'CP' will appear in the digital display.

To change from forward to reverse motion, press the dump button, apply the brakes to slow the tractor, move the shuttle lever fully rearward, release the button and control tractor speed by means of the throttle.

IMPORTANT: To reduce clutch damage caused by shuttle shifting in too high a gear or at too high a speed, a warning 'bleeper' will be heard and a symbol 'N' will appear in the instrument cluster under the following condition:

- In high range: ratios 5-8 and Shuttle shifting while the tractor is still rolling.



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