

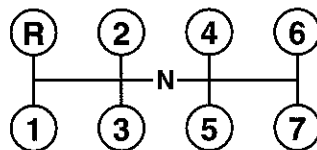
SHIFTING THE 7-SPEED

TRANSMISSION DRIVER INSTRUCTIONS

The 7-speed is a versatile transmission to fit the new slow speed fuel efficient engines as well as the conventional 2100 RPM governed speed engines. By designing wider steps into the transmission, it helps the driver utilize the full range of torque and horsepower to minimize shifting and maximize fuel economy.

Shift Pattern

PS110-7A PS145-7A PS110-7B



As professionals, you know clash-free shifts are made when engine speed and driveline speeds are matched. Double clutching is recommended when changing gears for smooth shifts.

This transmission has four shift rails. First and reverse on extreme left and 6th and 7th on extreme right. To prevent accidental selection of either rail and to give the driver a "Feel" for the 2nd and 3rd rails, we placed spring loaded detents in 1st and 4th rails. To get into 1st or reverse, move the lever toward you and compress the detent spring. Then move the lever into the desired gear. To get 6th or 7th gear, compress the detent spring by moving the lever away from you (see pattern) and complete the shift as before. To select 2nd or 3rd rail, just move the lever toward the desired gear.

Driving for fuel economy means a change from old driving patterns. When starting the load, use 1st gear to get maximum reduction. This reduces strain on the entire drive train. Use a progressive shifting technique. Only use enough throttle to satisfy the needs in each gear. Upshift to the next gear without going to the governor before each shift. Because of the wider steps, you spend more time in each gear before shifting is required. Let the engine operating range do the job. It minimizes shifting, reduces driver fatigue as well as saving fuel.

Gear Ratios

Gear	PS145-7A		PS110-7A		PS110-7B	
	Ratio	%	Ratio	%	Ratio	%
R	10.13		10.13		12.27	
1	10.13	69	10.13	69	12.27	75
2	5.99	68	5.99	68	7.00	69
3	3.56	39	3.56	39	4.13	63
4	2.57	40	2.57	40	2.54	38
5	1.84	38	1.84	38	1.84	38
6	1.33	33	1.33	33	1.33	33
7	1.00		1.00		1.00	

Clutch Brake

The clutch brake used with this unit is designed for stopping gears to get into 1st and reverse. The last one inch of the clutch pedal travel activates the clutch brake. So on shifts other than first or reverse from a stop, only depress the clutch pedal enough to release the clutch. Depressing the pedal to the floorboard will activate the clutch brake and could cause gear hang up or hard shifting.

When starting, if you have a butt tooth condition, gradually release clutch. The drive gear can then roll over to align teeth to complete the shift.

Upshifting

The normal double clutching technique is suggested. When the shift is desired depress the clutch, move the lever to neutral. Engage the clutch, allow engine RPM to drop so engine and driveline speed are matched. Depress the clutch and move lever into gear. Engage clutch and accelerate as conditions permit.

Downshifting

This is really the reverse of upshifting. Again the double clutching technique is suggested. When downshifting is required, depress the clutch and move lever to neutral. Engage the clutch and raise the engine speed until the engine RPM and driveline speed are equal (normally governed speed). Depress the clutch, move the shift lever into the next lower gear. Engage the clutch and keep on trucking.

For further assistance, contact your local truck dealer or call:

Transmission Technologies Corporation
14700 Helm Court
Plymouth, MI 48170
Toll Free: (800) 401-9866
Direct: (734) 456-3770
Fax (734) 456-3739
www.ttcautomotive.com

