



Fuller® Automated Transmissions

FO-16D313E-LEP

FOM-16D313E-LEP

Roadranger®

More time on the road™

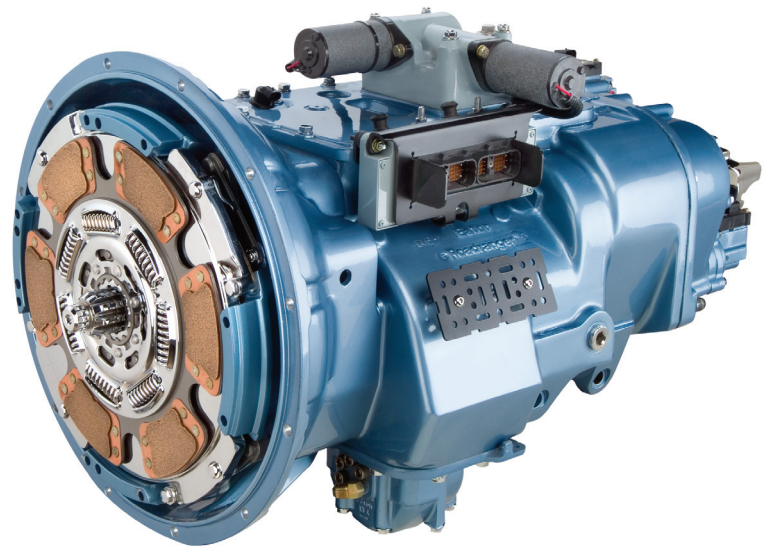
The Fuller UltraShift® LEP (Linehaul Efficient Performance) transmission is optimized for fuel efficiency and driveability

The UltraShift LEP transmission uses optimized shift calibrations tailored to each engine's unique fuel map, keeping RPM's low while maintaining driveability in virtually any terrain.

- The shift calibration software is optimized and unique for each individual heavy-duty commercial engine.
- Computer-controlled shifting provides a balance between efficiency and driveability for:
 - Low-speed maneuverability
 - Excellent launch quality with gathered ratios in hi-range for optimum control of engine torque and speed.
- Automation provides the driver with greater comfort, increasing satisfaction. Fully automatic operation (no clutch pedal) eliminates manual shifting for increased safety.
- Specifically suited for on-highway applications offering torque capacity up to 1650 lb-ft, and up to 1,750 lb-ft in top four gears with "M" multi-torque option. Designed for linehaul operations up to 80,000 lb. [36,287 kg] GCW at cruise speeds up to 65 mph [105 kph].

Driver is still in control

- "Manual" mode allows the driver to initiate and control shifts for flexibility during changing conditions or hold a gear as appropriate.
- "Low" mode boosts the rpm point at which downshifts occur to maximize engine braking.



Designed and built for reliability and easy service

- Electronic shift protection feature helps reduce the potential for drivetrain abuse...continuous electronic monitoring provides for quick, accurate diagnosis and repair.
- Modular components allow for easy service and replacement...often without removing the transmission.
- Automated clutch uses proven heavy-duty 15-1/2" two-plate design with an industry standard ceramic facing material for long service life.
- More than 6,000 factory-trained technicians at 2,000-plus dealer locations to support all Fuller automated products.

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SPECIFICATIONS	CAPACITY	WEIGHT**	LENGTH***	SPEEDS
FO-16D313E-LEP	1650 lbs.ft. [2237 Nm]	751 lbs. [340.65 kg]	33.1 in. [840.74 mm]	13 forward, 3 reverse
FOM-16D313E-LEP	1750 lbs.ft.* [2373 Nm]	751 lbs. [340.65 kg]	33.1 in. [840.74 mm]	13 forward, 3 reverse

* 1750 lbs.ft. in the top 2 gears, available in top four with a Caterpillar C13 & C15.

** Less clutch housing, lubricant and end yoke.

*** Lengths listed are from face of clutch housing to front bottoming surface of companion flange or yoke.

Clutch Housing:

- SAE #1 only.
- Standard or nodal aluminum only. (Standard 23 lbs. [10.35 kg], Nodal 34 lbs. [15.42 kg])

Power Take-Offs:

NOTE: The bottom heavy-duty 8-bolt PTO provision is not available.

For UltraShift PTO operation, after engaging the PTO, the operator must raise and maintain engine speed above 1000 RPM to adequately engage the clutch and prevent clutch slip or abuse. Some PTO application restrictions are in effect for UltraShift.

Please contact your Roadranger representative for specific Fuller UltraShift PTO information.

PTO Drive Gears:

- Right side, 45-tooth, 6/8 pitch, A ratio PTO gear turns at .79 engine speed
- Bottom 8-bolt, 47-tooth 6/8 pitch (see NOTE')
- A ratio PTO gear turns at .79 of engine speed.

Oil Capacity:

- Approx. 28 pints [13.3 liters].
- Integral oil pump standard.

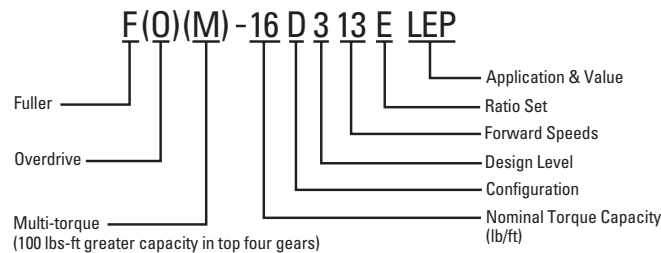
Oil Cooler:

- Required, per Roadranger Product Lubrication Manual, TCMT0021.

Axle Ratio Guidelines:

- Typical axle ratios are 3.21 to 3.73.

Model Nomenclature:



Top View of Pushbutton Shift Console:



Ratios and Steps:

GEAR	RATIO	% STEP
13th	0.73	17
12th	0.86	17
11th	1.00	17
10th	1.17	18
9th	1.38	17
8th	1.62	20
7th	1.94	17
6th	2.28	20
5th	2.73	37
4th	3.74	38
3rd	5.16	41
2nd	7.26	43
1st	10.40	
Reverse 1	13.09	
Reverse 2	11.17	
Reverse 3	3.50	
Overall	14.25:1	

Heavy-Duty Automated Operation:

All Fuller automated transmissions communicate with an electronic engine using the SAE-J1939 protocol for precise control of the engine, transmission and clutch functions.

Full Roadranger warranties are available for a wide variety of applications. You can find your specific vocation coverage on www.roadranger.com. Select the Vocational Warranty Guide.

Roadranger®



For spec'ing or service assistance, call 1-800-826-HELP (4357) 24 hours a day, 7 days a week (Mexico: 001-800-826-4357), for more time on the road. Or visit our web site at www.roadranger.com.

Roadranger: Eaton, Dana and other trusted partners providing the best products and services in the industry, ensuring more time on the road.