



Powering Business Worldwide

Fuller® Automated Transmissions

RTO-10910B-DM3 RTO-14910B-DM3 FM-14D310B-LST RTOM-16910B-DM3
RTO-12910B-DM3 RTO-16910B-DM3 FM-15D310B-LST

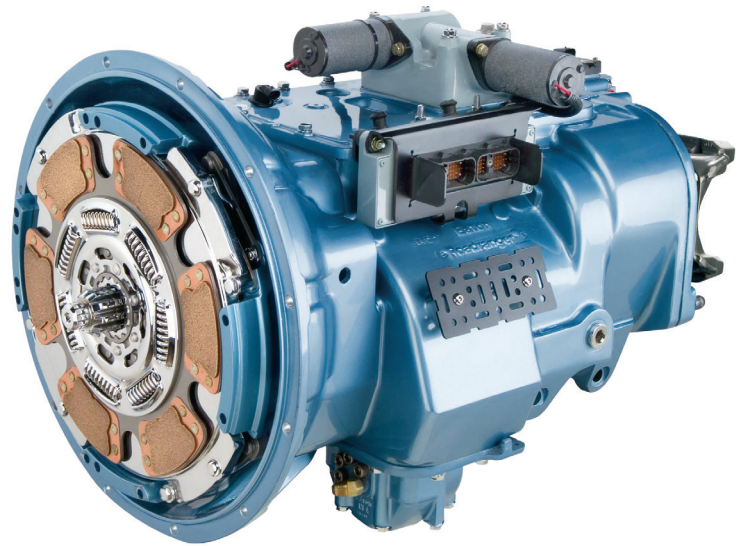
Roadranger®

More time on the road®

Fuller® UltraShift® Linehaul Standard (LST) Automated Transmission Family

Fully Automated Heavy-Duty Transmissions (no clutch pedal) for On-Highway Fleet Applications.

- Fully automatic operation using the industry-proven, and industry-preferred Fuller® 10-speed “B” ratio transmission.
- Full automation (no clutch pedal) provides:
 - Greater driver comfort and less stress than manual shifting...increases satisfaction and safety
 - Less time and expense to train new drivers
- The Fuller UltraShift LST “Multi-torque” automated transmissions provide additional torque in the top-two gears, 200 lb.ft. for the direct models and 100 lb.ft. for the overdrive model, improving efficiency and gradability in on-highway fleet applications.
 - Specifically suited for on-highway applications with “gear fast, run slow” drivetrains. Designed for linehaul operations up to 80,000 lbs. [36,287 kg] and 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.

Top View of Pushbutton Shift Console:



- Automated clutch uses proven heavy-duty 15-1/2” two-plate design with an industry standard ceramic facing material for long service life.

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SPECIFICATIONS	CAPACITY	WEIGHT**	LENGTH***	SPEEDS
RTO-10910B-DM3	1050 lbs.ft. [1424 Nm]	885 lbs. [401 kg]	29.9 in. [759.46 mm]	10 forward, 2 reverse
RTO-12910B-DM3	1250 lbs.ft. [1695 Nm]	885 lbs. [401 kg]	29.9 in. [759.46 mm]	10 forward, 2 reverse
RTO-14910B-DM3	1450 lbs.ft. [1966 Nm]	892 lbs. [404 kg]	29.9 in. [759.46 mm]	10 forward, 2 reverse
RTO-16910B-DM3	1650 lbs.ft. [2237 Nm]	892 lbs. [404 kg]	29.9 in. [759.46 mm]	10 forward, 2 reverse
FM-14D310B-LST	1450 lbs. ft.* [1966 Nm]	892 lbs. [404 kg]	29.9 in. [759.46 mm]	10 forward, 2 reverse
FM-15D310B-LST	1550 lbs. ft.+ [2102 Nm]	892 lbs. [404 kg]	29.9 in. [759.46 mm]	10 forward, 2 reverse
RTOM-16910B-DM3	1650 lbs. ft.+ [2237 Nm]	892 lbs. [404 kg]	29.9 in. [759.46 mm]	10 forward, 2 reverse

* 1650 lbs.ft. in the top 2 gears.

+ 1750 lbs.ft. in the top 2 gears.

** Dry weight including clutch.

*** 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:

The rear Thru-Shaft PTO is optional.

NOTE: †The bottom heavy-duty 8-bolt PTO provision may be available if the high capacity inertia brake has adequate chassis clearance when relocated to the right side 6-bolt location. The relocated high capacity inertia brake may be directly mounted or mounted utilizing a PTO Angle Adapter (see PTO Installation Guide TRIG2600). Please review specific chassis configurations for inertia brake clearance if considering a heavy-duty 8-bolt PTO application.

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, B ratio PTO gear turns at .94 engine speed
- Bottom 8-bolt, 47-tooth 6/8 pitch (see NOTE†)
- B ratio PTO gear turns at .94 of engine speed.

Oil Capacity:

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

Oil Cooler:

- Per application guidelines.

Axle Ratio Guidelines for multi-torque models:

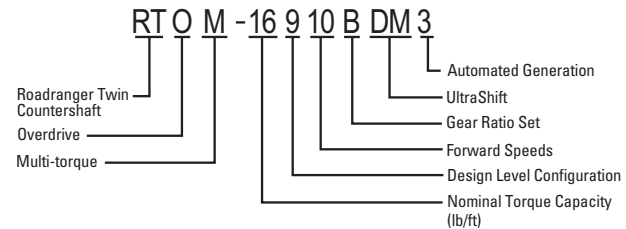
- **Direct Drive: 3.08 down to 2.53**
- **Overdrive: 3.36 and slower**

Heavy-Duty Automated Operation:

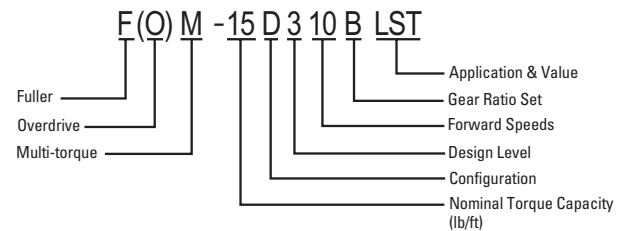
All Fuller automated transmissions communicate with an electronic engine utilizing the SAE-J1939 protocol for precise control of the engine, transmission and clutch functions.

More than 6,000 factory-trained technicians at 2,000-plus dealer locations to support all Fuller automated products.

Old Model Nomenclature:



New Model Nomenclature:



Ratios and Steps: Direct

GEAR	RATIO	% STEP
10th	1.00	34
9th	1.34	36
8th	1.83	35
7th	2.46	34
6th	3.30	35
5th	4.46	34
4th	6.00	36
3rd	8.17	35
2nd	11.00	34
1st	14.74	
HI Rev	3.38	
LO Rev	15.10	
Overall	14.74:1	

Ratios and Steps: Overdrive

GEAR	RATIO	% STEP
10th	.74	34
9th	1.00	36
8th	1.36	35
7th	1.83	34
6th	2.46	35
5th	3.32	34
4th	4.46	36
3rd	6.07	35
2nd	8.18	34
1st	10.96	
HI Rev	2.52	
LO Rev	11.23	
Overall	14.81	

Warranties:

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) or visit our web site at www.roadranger.com. In Mexico, call 001-800-826-4357.

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