

## Fuller® 10-Speed Transmissions

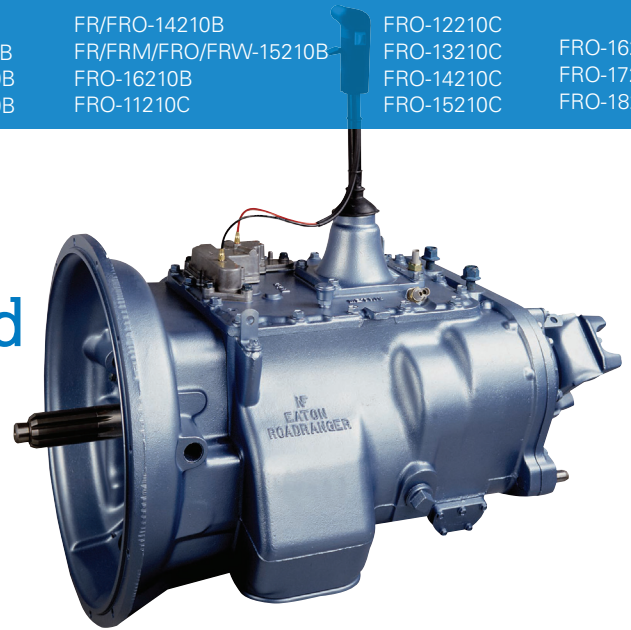
FR-9210B  
FR/FRO-11210B  
FR/FRO-12210B  
FR/FRO-13210B

FR/FRO-14210B  
FR/FRM/FRO/FRW-15210B  
FRO-16210B  
FRO-11210C

FRO-12210C  
FRO-13210C  
FRO-14210C  
FRO-15210C

FRO-16210C  
FRO-17210C  
FRO-18210C

# The FR Series 10-Speed ("B" ratio, "C" ratio and High Torque Models)



A standard in transmission performance, reliability and durability.

- Improved tolerance to driver abuse with larger diameter mainshaft and new mainshaft washer design.
- Patented SynchroSaver™ feature protects against range synchronizer damage caused by improper operation.
- Integrated air module improves reliability by eliminating separate components and external air hoses.
- Exclusive output seal design improves seal life and eliminates potential for seal damage during yoke removal.
- Better rail definition, more precise shifting and improved durability with patented single-rod shift controls.
- Increased payload capacity with up to 32 lb. weight reduction compared to RT Series.
- Enhanced PTO options, with relocated side opening and option for two through-shaft PTOs.
- Roadranger warranties are available for a wide variety of applications. To find the coverage that applies to your specific vocation, please see the Warranty Guide (TCWY0900) at [www.eaton.com/roadranger](http://www.eaton.com/roadranger).

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SUPPORT

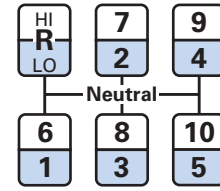
# Fuller® 10-Speed Transmissions

MODEL	CAPACITY	WEIGHT*	LENGTH**	SPEEDS
FR-9210B	950 lbs.ft. [1288 Nm]	592 lbs. [268.53 kg]	29.9 in. [760.22 mm]	10 forward, 2 reverse
FR/FRO-11210B	1150 lbs.ft. [1559 Nm]	592 lbs. [268.53 kg]	29.9 in. [760.22 mm]	10 forward, 2 reverse
FR/FRO-12210B	1250 lbs.ft. [1694 Nm]	592 lbs. [268.53 kg]	29.9 in. [760.22 mm]	10 forward, 2 reverse
FR/FRO-13210B	1350 lbs.ft. [1830 Nm]	592 lbs. [268.53 kg]	29.9 in. [760.22 mm]	10 forward, 2 reverse
FR/FRO-14210B	1450 lbs.ft. [1965 Nm]	592 lbs. [268.53 kg]	29.9 in. [760.22 mm]	10 forward, 2 reverse
FR/FRM/FRO/FRW-15210B	1550 lbs.ft. [2101 Nm]	592 lbs. [268.53 kg]	29.9 in. [760.22 mm]	10 forward, 2 reverse
FRO-16210B	1650 lbs.ft. [2237 Nm]	592 lbs. [268.53 kg]	29.9 in. [760.22 mm]	10 forward, 2 reverse
FRO-11210C	1150 lbs.ft. [1559 Nm]	592 lbs. [268.53 kg]	29.9 in. [760.22 mm]	10 forward, 2 reverse
FRO-12210C	1250 lbs.ft. [1694 Nm]	592 lbs. [268.53 kg]	29.9 in. [760.22 mm]	10 forward, 2 reverse
FRO-13210C	1350 lbs.ft. [1830 Nm]	592 lbs. [268.53 kg]	29.9 in. [760.22 mm]	10 forward, 2 reverse
FRO-14210C	1450 lbs.ft. [1965 Nm]	592 lbs. [268.53 kg]	29.9 in. [760.22 mm]	10 forward, 2 reverse
FRO-15210C	1550 lbs.ft. [2101 Nm]	602 lbs. [273.10 kg]	29.9 in. [760.22 mm]	10 forward, 2 reverse
FRO-16210C	1650 lbs.ft. [2237 Nm]	602 lbs. [273.10 kg]	29.9 in. [760.22 mm]	10 forward, 2 reverse
FRO-17210C	1750 lbs.ft. [2373 Nm]	602 lbs. [273.10 kg]	29.9 in. [760.22 mm]	10 forward, 2 reverse
FRO-18210C	1850 lbs.ft. [2508 Nm]	602 lbs. [273.10 kg]	29.9 in. [760.22 mm]	10 forward, 2 reverse

\* Less clutch housing, lubricant and end yoke.

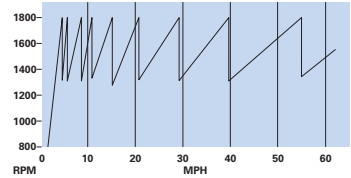
\*\* Lengths listed are from face of clutch housing to front bottoming surface of companion flange or yoke.

## Shift Pattern:



FRO Series models feature an "X" style shift pattern as standard. No "U" style shift pattern is available.

## Performance Chart:



Based on 1800 RPM engine operating at 1550 RPM/62 MPH.

## Specifications:

### Clutch Housing Size:

- SAE #1 and #2. Grey iron or aluminum available.

### Power Take-Offs:

- 2 SAE standard openings.
- Right side, regular duty, 6-bolt. Bottom, heavy-duty, 8-bolt. Thru-shaft PTO upper right and/or lower left available.

### PTO Drive Gears:

- Right: 6 bolt; 45-tooth; 6/8 pitch gear. Left: 8 bolt; 47-tooth; 6/8 pitch gear turn at .65 engine speed -direct, .87 for overdrive.

### Oil Capacity:

- Approx. 23.5 pints [11.1 liters].
- Integral oil pump, internal and external oil coolers are available.

## Ratios and Steps:

Models	Reverse		Overall Ratio	Forward Gears														
	L	H		LL	L	1	2	3	4	5	6	7	8	9	10			
FR-9210B*	16.21	3.63	14.80			14.80	10.95	8.09	5.97	4.46	3.32	2.45	1.81	1.34	1.00			
FR-11210B*																		
FR-12210B*																		
FR-13210B*						% Step			35	35	35	34	35	35	35	35	34	
FR-14210B*																		
FR-15210B*																		
FRM-15210B**																		
FRW-15210B																		
FRO-11210B*	12.12	2.72	14.75			11.06	8.19	6.05	4.46	3.34	2.48	1.83	1.36	1.00	.75			
FRO-12210B*																		
FRO-13210B*																		
FRO-14210B*						% Step			35	35	35	34	35	35	35	35	34	
FRO-15210B*																		
FRO-16210B*																		
FRO-11210C*				13.75	2.81	17.15			12.69	9.29	6.75	4.90	3.62	2.59	1.90	1.38	1.00	.74
FRO-12210C*																		
FRO-13210C*																		
FRO-14210C*			% Step						37	38	38	35	40	37	38	38	35	
FRO-15210C*																		
FRO-16210C*																		
FRO-17210C*	13.75	2.80	17.49						12.94	9.29	6.75	4.90	3.62	2.64	1.90	1.38	1.00	.74
FRO-18210C						% Step			39	38	38	35	37	39	38	38	35	

\* These (950 lb-ft. - 1750 lb-ft.) transmissions can be rated at 100 additional lb-ft. torque above the stated limit in the top two gears only.

\*\* This transmission can be rated at 200 additional lb-ft. torque above the stated limit in the top two gears only.

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SUPPORT

For spec'ing or service assistance, call 1-800-826-HELP (4357) or visit [www.eaton.com/roadranger](http://www.eaton.com/roadranger). In Mexico, call 001-800-826-4357.

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