

Eaton Roadranger Transmissions P.T.O. Drive Gear Torque Capacity

We apologize for the delay in getting the Eaton/Fuller application section printed and in your hands. Eaton Transmission Division made several changes late last year on P.T.O. driver gear torque capacities for the Roadranger transmissions.

Previously Eaton published a 500 Ft-lbs capacity for P.T.O. drive gear on the countershaft. Some in the industry assumed that this 500 Ft-lbs capacity was for continuous operations and used a 650 Ft-lbs capacity for intermittent operations. After careful review of design limits and test results, Eaton has published the following requirements for all heavy-duty transmissions with P.T.O. applications. (Ref: Eaton Information Bulletin # TMIB-0127).

- In the future, Eaton will no longer differentiate between intermittent and continuous operation, but publish all P.T.O. torque capacity based on continuous operation.
- These capacities are maximum allowable torque ratings that are not to be exceeded under any operating condition, continuous or intermittent.
- All **FR/FRO/FRLO** transmissions are rated at **500 Ft-lbs**, while all **RT/RTO/RTLO** transmissions are rated at **350 Ft-lbs**.
- **RT/RTO/RTLO** transmissions may be upgraded to allow for **500 Ft-lbs** by using a roller type main shaft input bearing, Eaton **P/N 4301417**. Contact truck manufacture for OEM specific order codes.

It is realized that, especially in used or older vehicles, it might be impossible to determine what bearing is installed. In these cases it is better to assume that an upgraded bearing needs to be installed if the higher torque capacity is desired.

How does this affect Chelsea P.T.O.s? The new published P.T.O. intermittent torque values listed on each application page affected by the change are calculated not to exceed the Eaton transmission torque capacity for that transmission. This means that if a P.T.O. has an intermittent torque rating of 126 Ft-lbs on the application page, this stated rating would not exceed the 350 Ft-lbs rating for RT/RTO/RTLO transmissions as an example. Chelsea still requires you to consider if the application is continuous or intermittent for the power take-off being used.

The Transmission/Chelsea Torque Charts located in the front section of the Eaton/Fuller transmission index pages provide you complete information as to the Standard Chelsea torque rating, the transmission 350 Ft-lbs and 500 Ft-lbs torque capacities of each P.T.O. Also the chart should be used to look up **P.T.O. Continuous** torque values for each series of P.T.O. In some cases **Continuous** P.T.O. ratings may be the same as the stated intermittent rating as long as it does not exceed the Standard Chelsea **Continuous** torque rating.



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