TRANSMISSION

TRQ 7220 overgear
*TRQL 7220 overgear

*Weight-Saver Aluminum Design

EIGHTEEN-SPEED QUADRUPLEX

MACK designed and manufactured — These Quadruplex transmissions provide, in a single unit, eighteen different forward speeds. The weight saver TRQL version has an aluminum main case.

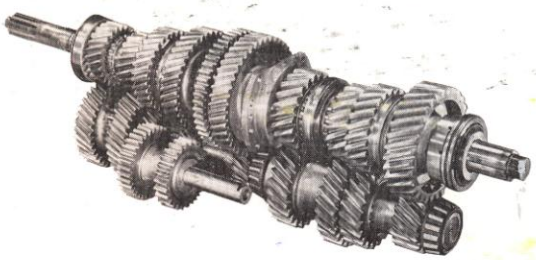
The gear arrangement is a five-speed primary gear set with overgear fifth and a four-speed compound. In the compound is a direct, a high splitter, a low splitter and the ratio to give the low series of speeds. Thus from each of the five basic forward speeds and the reverse, four final changes are obtainable. The main and compound sections are a unified assembly. Shifting is by two levers.

These transmissions provide ratios comparable to a five-speed transmission and a separate four-speed auxiliary. With the TRQ 7220 or TRQL 7220, the chassis can be geared for fast road travel and have the shifts suitable for highway operation and also have the low series of ratios that provide total gear ratios that are numerically ample for heavy pulls.

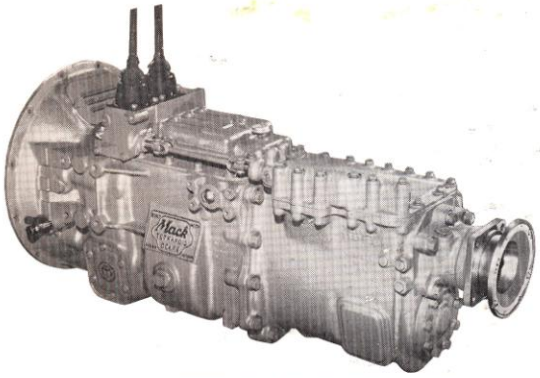
Compared to the separate auxiliary combination, the TRQ 7220 and TRQL 7220 do not necessitate as long a wheelbase.

Tower type power take-offs are not applicable to the TRQ 7220 or TRQL 7220. The necessity for a tower type power take-off dictates usage of the separate auxiliary.

This transmission is fully sized for duty behind the higher powered engines of high-gross vehicles.



Gear set showing sturdy gears and shafts.



Transmission showing compact design.

MACK TRUCKS, INC. • Allentown, Pa.

Illustrations are not necessarily a representation of standard specifications with respect to all details.

TRANSMISSION MODEL TRQ 7220 • TRQL 7220

Gearset, Model ..... TRQ 7220 & TRQL 7220
Make ..... Mack
Type ..... Two-lever Quadruplex, selective, shift, constant mesh
Number of speeds,
Forward ..... Eighteen
Reverse ..... Four

Case, material { TRQ 7220 ..... Iron
TRQL 7220 ..... Aluminum main case; iron compound case

Lubrication ..... Splash to gear faces

Face of gears and type:
Main transmission
Fifth ..... 1-15/16″ Helical
Fourth ..... 1-13/16″ Helical
Third ..... 1-5/8″ Helical
Second ..... 1-5/8″ Helical
First ..... 1-5/8″ Helical
Reverse ..... 1-1/16″ Spur
Control ..... Hand lever
Compound transmission:
High ..... 1-7/8″ Helical
High splitter ..... 1-23/32″ Helical
Low Splitter ..... 1-3/4″ Helical
Low ..... 2-1/4″ Helical
Control ..... Hand lever

Bearings:
Main transmission:
Main drive pinion ..... Radial, single-row ball
Spigot ..... Cylindrical roller, single-row
Splineshaft, rear ..... Tapered roller, double-row
Countershaft, front ..... Cylindrical roller, single-row
rear ..... Tapered roller, single-row
Reverse idler ..... Cylindrical roller, single-row (2)

Compound transmission:
Spigot ..... Cylindrical roller, single-row
Splineshaft, rear ..... Tapered roller, double-row
Countershaft, front and rear ..... Tapered roller, single-row (2)

Main splineshaft:
Diameter over maximum spline ..... 3″
Diameter at root of minimum spline ..... 2″

Compound splineshaft:
Diameter over maximum spline ..... 3″
Diameter at root of minimum spline ..... 2″

Main countershaft:
Minimum diameter ..... 2-3/8″

Compound countershaft:
Minimum diameter ..... 3″

Oil capacity ..... 36 pints

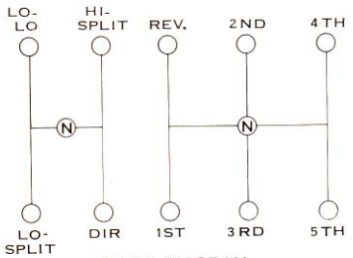
RATIOS

Shift	High Split	Main	Low Split	Low Low
5th	0.70	0.84	1.01	2.13
4th	0.84	1.00	1.20	2.53
3rd	1.47	1.76	2.10	4.44
2nd	2.61	3.13	3.74	7.92
1st	4.55	5.45	6.52	13.80
Rev.	3.91	4.69	5.60	11.86

POWER-TAKE-OFF OPENINGS

STANDARD—Main Case, right and left side, SAE opening, special depth.

OPTIONAL—Compound Case, right and left side, SAE opening, for high capacity vendor PTO (*In addition to Standard*).



SHIFT DIAGRAM

2-67 Rev. 10M ML

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