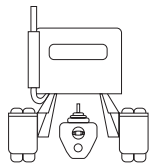
# FORD TRANSMISSION

RIGHT SIDE ONLY
(LEFT SIDE TURN PAGE)



## TORQSHIFT (6R140 6-SPEED)

2011–2016 (Diesel Only) Super Duty F-250—F-550

4x2 OR 4x4 AUTOMATIC

PTO DRIVE GEAR DATA:

LOCATION: PLMF:
PLV: RPM:

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6-BOLT TYPE | | | | | | | | | | | | |
| SINGLE GEAR | | | | | | | | | | | | |
| SINGLE SPEED MULTI GEAR | | | | | | | | | | | | |
| SH SERIES | | | | | | | | | | | | |
| CLUTCH SHIFT | | | | | | | | | | | | |
| 1 FWD. 1 REV. | | | | | | | | | | | | |

**NO PTO OPENING - SEE OTHER SIDE**

| ADAPTER TO CHANGE ROTATION | | No Adapter Available | REFER TO ADAPTER GEAR ASSEMBLIES IN INDEX |
|---|---|---|---|

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8-BOLT TYPE | | | | | | | | | | | | |
| SINGLE SPEED MULTI GEAR | | | | | | | | | | | | |
| 1 FWD. 1 REV. | | | | | | | | | | | | |

MODEL BREAK DOWN

- PTO SERIES & HOUSING DESIGNATOR
- GEAR PITCH
- INTERNAL RATIO
- SHIFT OPTIONS (see page 7)
- ASSEMBLY ARRANGEMENT (see pages 18-19)
- OUTPUT SHAFT (see page 7)
- SPECIAL OPTIONS (see page 7)

EX: TG 6S - U68 07 - C 1 B X

**IMPORTANT: FOOTNOTES MAY AFFECT PTO SELECTION**

**FOOTNOTES:**

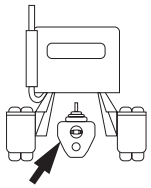
# FORD TRANSMISSION

**LEFT SIDE ONLY**
(RIGHT SIDE TURN PAGE)

## SUPER DUTY CHASSIS F-250—F-550
## TORQSHIFT (6R140 6-SPEED)
*2011 -2016 (Diesel Only)*
## 4x2 OR 4x4 AUTOMATIC
**Footnotes (1, 2, 5, 6, 7, 8)**

**FORD 6-BOLT OPENING**

**PTO DRIVE GEAR DATA:**
**52T 12.09P 20° PA Spur**
**LOCATION: Front PLMF: 3.439**
**PLV: 1,126 FPM RPM: 1,000**



| 6-BOLT TYPE | PTO MODEL NUMBER | FOOT NOTES | SHAFT ROTATION | ENGINE % HI | ENGINE % LO | ENGINE % REV | ADAPTER | SPACER | STUD KIT | SHIFT TYPE | INTERMITTENT RATING @ 1,000 RPM of PTO TORQUE | INTERMITTENT RATING @ 1,000 RPM of PTO HP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SINGLE SPEED | FR6Q-F1209-D3BX | 2, 3 | Opp | 127 | | | | | Included | Power | 200 (2) | 38 |
| MULTI GEAR | FR6Q-F1209-D3NX | 2, 4 | Opp | 127 | | | | | Included | Power | 200 (2) | 38 |

**FOOTNOTES:**
1. Engine driven direct drive PTO gear.
2. Rating shown is for stationary applications only. For Mobile applications the PTO torque rating is 120 lb.ft. for continuous or intermittent duty. For switchable stationary to mobile, order with feature option "B".
3. Remote mount 1¼" Rd keyed output Shaft. Remote shaft is only usable on 4x2 chassis.
4. Direct Mount Pump Output - see charts below for hydraulic pump applications. Max pump RPM shown at 0 in.Hg.
5. PTO output toque rating is based on the maximum available torque from the transmission.
6. Optional overspeed protection, order SPD-1001, sold separately.
7. The use of the Muncie Power FR6Q and PF Series PTO/Pump combination with Ford "Live Drive" can be used successfully on mobile applications including snow & ice control central hydraulic systems. Please request and review Muncie Power document IN10-12 for important information.
8. Available with Muncie Start®; Special Feature Code "6" for stationary applications, "7" for switchable stationary to mobile.

**CAUTION: MAXIMUM OUTPUT SHAFT SPEED NOT TO EXCEED 2,500 RPM.**

**Pump Selection Example:**

a. First you need to know the flow and pressure requirement of your application.
b. Next find the closest pump output flow from the chart that is based on the most appropriate engine speed for your application. Follow the grid up to the top to read the basic pump series and size. This is the pump that will give you the flow you desire.
c. If your system required 8 GPM to operate. Then you would look for 8 GPM in the columns. Finding the first one under the pump PF4-502 would give you a pump which will deliver the 8 GPM you require at an engine speed of 1,300 RPM. You would also get 8 GPM if you select the PF4-368 pump, but you would need to operate the engine at 1,800 RPM.
d. After you have selected the Pump Series and size the complete pump model number can be ordered.

**The PF Series would follow the form of: PF4-***-16QSRL.**

**NOTE: PF Series pump shown because chassis envelope limitations prevent the use of larger pump frame sizes on 4x4 chassis.**

## APPROXIMATE PUMP OUTPUT FLOW* AND MAXIMUM PRESSURE

| ENGINE SPEED | PF4-870 2.01 cu.in./Rev GPM | PF4-870 MAX. PSI | PF4-818 1.83 cu.in./Rev GPM | PF4-818 MAX. PSI | PF4-714 1.71 cu. in./Re GPM | PF4-714 MAX. PSI | PF4-606 1.4 cu.in./Rev GPM | PF4-606 MAX. PSI | PF4-502 1.16 cu.in./Rev GPM | PF4-502 MAX. PSI | PF4-424 0.98 cu. n./Rev GPM | PF4-424 MAX. PSI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 900 | 9.9 | 2,320 | 9.0 | 2,900 | 8.4 | 2,900 | 6.9 | 3,625 | 5.7 | 3,625 | 4.8 | 3,625 |
| 1,000 | 11.1 | 2,320 | 10.0 | 2,900 | 9.4 | 2,900 | 7.7 | 3,625 | 6.4 | 3,625 | 5.4 | 3,625 |
| 1,100 | 12.2 | 2,320 | 11.0 | 2,900 | 10.3 | 2,900 | 8.5 | 3,625 | 7.0 | 3,625 | 5.9 | 3,625 |
| 1,200 | 13.3 | 2,320 | 12.0 | 2,900 | 11.2 | 2,900 | 9.2 | 3,625 | 7.7 | 3,625 | 6.5 | 3,625 |
| 1,300 | 14.4 | 2,320 | 13.0 | 2,900 | 12.2 | 2,900 | 10.0 | 3,625 | 8.3 | 3,625 | 7.0 | 3,625 |
| 1,500 | 16.6 | 2,320 | 15.0 | 2,900 | 14.1 | 2,900 | 11.5 | 3,625 | 9.6 | 3,625 | 8.1 | 3,625 |
| 1,700 | 18.8 | 2,320 | 17.1 | 2,900 | 15.9 | 2,900 | 13.1 | 3,625 | 10.8 | 3,625 | 9.2 | 3,625 |
| 1,900 | 21.0 | 2,320 | 19.1 | 2,900 | 17.8 | 2,900 | 14.6 | 3,625 | 12.1 | 3,625 | 10.2 | 3,625 |
| 2,100 | | | | | | | | | 13.4 | 3,625 | 11.3 | 3,625 |
| 2,300 | | | | | | | | | 14.7 | 3,625 | 12.4 | 3,625 |
| 2,500 | | | | | | | | | | | | |

**EXCEEDS MAX RPM**

| ENGINE SPEED | PF4-368 0.85 cu.in./Rev GPM | PF4-368 MAX. PSI | PF4-290 0.73 cu.in./Rev GPM | PF4-290 MAX. PSI | PF4-264 0.61 cu.in./Rev GPM | PF4-264 MAX. PSI | PF4-212 0.49 cu.in./Rev GPM | PF4-212 MAX. PSI | PF4-160 0.37cu.in./Rev GPM | PF4-160 MAX. PSI |
|---|---|---|---|---|---|---|---|---|---|---|
| 900 | 4.2 | 3,625 | 3.6 | 3,625 | 3.0 | 3,625 | 2.4 | 3,625 | 1.8 | 3,625 |
| 1,000 | 4.7 | 3,625 | 4.0 | 3,625 | 3.4 | 3,625 | 2.7 | 3,625 | 2.0 | 3,625 |
| 1,100 | 5.1 | 3,625 | 4.4 | 3,625 | 3.7 | 3,625 | 3.0 | 3,625 | 2.2 | 3,625 |
| 1,200 | 5.6 | 3,625 | 4.8 | 3,625 | 4.0 | 3,625 | 3.2 | 3,625 | 2.4 | 3,625 |
| 1,300 | 6.1 | 3,625 | 5.2 | 3,625 | 4.4 | 3,625 | 3.5 | 3,625 | 2.6 | 3,625 |
| 1,500 | 7.0 | 3,625 | 6.0 | 3,625 | 5.0 | 3,625 | 4.0 | 3,625 | 3.1 | 3,625 |
| 1,700 | 7.9 | 3,625 | 6.8 | 3,625 | 5.7 | 3,625 | 4.6 | 3,625 | 3.5 | 3,625 |
| 1,900 | 8.9 | 3,625 | 7.6 | 3,625 | 6.4 | 3,625 | 5.1 | 3,625 | 3.9 | 3,625 |
| 2,100 | 9.8 | 3,625 | 8.4 | 3,625 | 7.0 | 3,625 | 5.7 | 3,625 | 4.3 | 3,625 |
| 2,300 | 10.7 | 3,625 | 9.2 | 3,625 | 7.7 | 3,625 | 6.2 | 3,625 | 4.7 | 3,625 |

*** Theoretical Flow Shown.** **Speed shown for pump at 0 in.Hg. vacuum.**

**PLEASE NOTE:**

If you are accustomed to ordering a hydraulic pump based on the pump model number, you may be ordering a pump larger than you require when you apply that pump to this application.

**To calculate the PTO output speed:**

Engine speed × 127% = PTO output speed. Example: Engine speed of 1,400 RPM would yield the following:

**1,400 × 1.27 = 1,778 RPM PTO**

A 6 GPM pump (like the PF4-606) would deliver a theoretical output flow of: Disp × RPM / 231

**1.4 × 1,778 / 231 = 10.7 GPM**