

## Chelsea PTO Applications Catalog

Pro Gear Chelsea PTO Applications Catalog to assist with technical information for your Chelsea Power Take Off unit.

If you need any assistance identifying the correct Power Take Off unit for your truck and equipment, contact your Chelsea replacement part specialists at Pro Gear and Transmission.

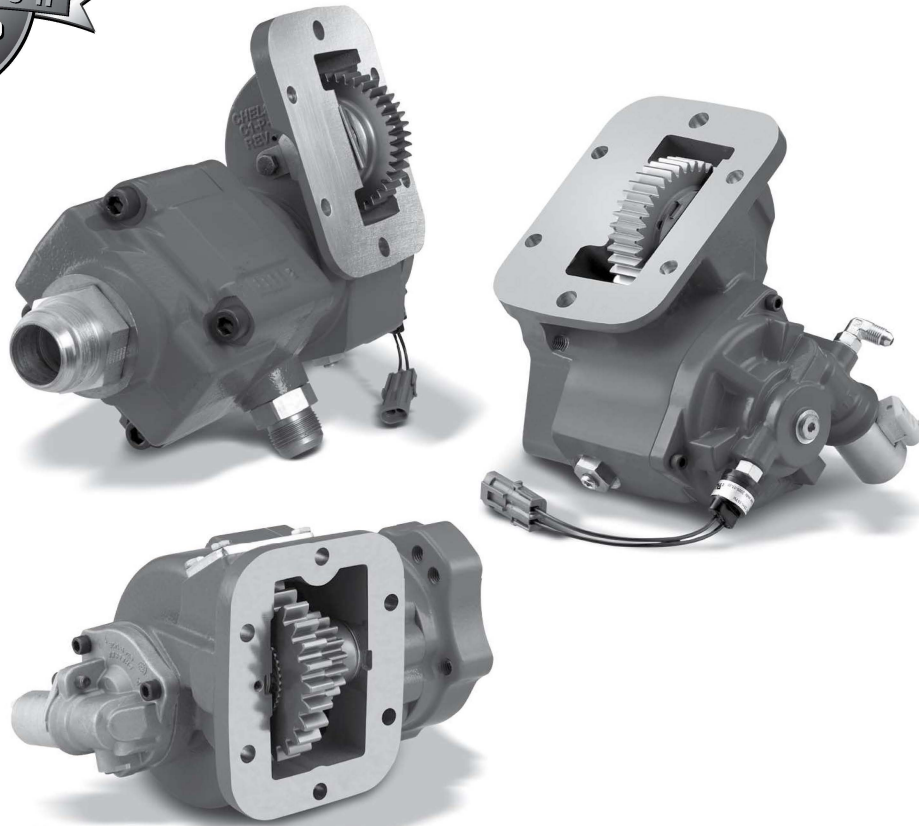
Pro Gear stocks every part for your Parker Chelsea PTO including: PTO housings, mounts, drive-shafts, gears, bearings, gaskets, cable shift cover assembly, post and plate assembly, brackets, stud kits, seal kits, lever control assembly, air shift cover assembly, direct mount pump conversion kits, stud kits including English and metric references, CAT D&H parts and much more.

Pro Gear Transmission has same day shipping and 1000's of products in stock and ready to ship internationally for your next project.

For parts or service contact the Chelsea specialists at Pro Gear & Transmission, Inc.

1 (877) 776-4600  
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# FORD



ENGINEERING YOUR SUCCESS.

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**WARNING — User Responsibility**

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

This document and other information from Parker-Hannifin Corporation, its subsidiaries and authorized distributors provide product or system options for further investigation by users having technical expertise.

The user, through its own analysis and testing, is solely responsible for making the final selection of the system and components and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application, follow applicable industry standards, and follow the information concerning the product in the current product catalog and in any other materials provided from Parker or its subsidiaries or authorized distributors.

To the extent that Parker or its subsidiaries or authorized distributors provide component or system options based upon data or specifications provided by the user, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the components or systems.

**Offer of Sale**

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## FORD TRANSMISSION INDEX

| Transmission Make and Model                          | PTO<br>Appl.<br>Number | Number<br>Forward<br>Speeds | Teeth in<br>PTO<br>Driver |
|--|------------------------|-----------------------------|---------------------------|
| 5R110 Diesel F350-550; MY2003-2010 (Stationary ONLY) | FRD-9                  | 5                           | L121                      |
| 5R110 Gas F350-550; MY2003-2016 (Stationary ONLY)    | FRD-9                  | 5                           | L121                      |
| 5R110WOJ233 (Ford Mexico)                            | FRD-9                  | 5                           | L121                      |
| 6R140 Diesel F250-550; MY2011-Current                | FRD-10                 | 6                           | L52                       |
| 6R140 Diesel F650/750; MY2016-Current                | FRD-10                 | 6                           | L52                       |
| 6R140 Gas F250-550; MY2017-Current                   | FRD-12                 | 6                           | L52                       |
| 6R140 Gas F650/750; MY2013-2015                      | FRD-11                 | 6                           | L52                       |
| 6R140 Gas F650/750; MY2016-Current                   | FRD-12                 | 6                           | L52                       |

Ford



**IMPORTANT:** See Safety Information  
in Section 1 of the Chelsea Applications  
catalog HY25-3000/US.

Transmission PTO Driver & Apertures (Viewed from Rear of Transmission)

L-Left Side R-Right Side B-Bottom Side T-Top Side CS-Countershaft

*For transmissions not listed, contact your authorized Chelsea Distributor.*



5R110WQJ233 (Ford Mexico)  
 5R110 Diesel F350-550; MY2003-2010 (Stationary ONLY)  
 5R110 Gas F350-550; MY2003-2016 (Stationary ONLY)

**LEFT SIDE ONLY****TRANSMISSION GEAR DATA:**

L.S. 06-BOLT Opening Gear REAR of Centerline  
 121 Teeth - SPUR

**PITCH LINE TO APERTURE FACE:**

1.3390" (33.7800MM)

**CAUTION: Application Approval Required for PTO Output Shaft Speeds Above 2500 RPM**

| PTO Model | Torq<br>I / C † | Dir<br>Rot | Engine %<br>Fwd Rev | Filler Block | Adapter<br>Assy | Stud Kit | PTO Model | Torq<br>I / C † | Dir<br>Rot | Engine %<br>Fwd Rev | Filler Block | Adapter<br>Assy | Stud Kit |
|-----------|-----------------|------------|---------------------|--------------|-----------------|----------|-----------|-----------------|------------|---------------------|--------------|-----------------|----------|
|-----------|-----------------|------------|---------------------|--------------|-----------------|----------|-----------|-----------------|------------|---------------------|--------------|-----------------|----------|

**ONE SPEED - TWO GEAR - POWERSHIFT (HYDRAULIC)**

|                 |       |     |     |  |  |           |
|-----------------|-------|-----|-----|--|--|-----------|
| 247FMKSP-*2 (1) | 120 I | Opp | 154 |  |  | Furnished |
| 247FMKSP-*4 (1) | 120 I | Opp | 154 |  |  | Furnished |

† I = Intermittent Torque Only - De-Rate Torque Rating 30% for Continuous Duty.

C = Continuous or Intermittent Torque - No need to De-Rate Torque Rating.

**IMPORTANT:** Refer to the back of this transmission section and read all notes associated with this application page.  
 Some notes may affect the proper PTO selection.

**WARNING:** To guarantee full torque capability at the automatic transmission PTO gear, and the PTO, the TorqShift transmission torque converter must be locked (Engine RPM @ 1200 RPM), and hydraulic line pressure to the PTO clutch must be elevated to a minimum of 110 psi. On both Diesel and Gas engines, the Stationary Elevated Idle Control (SEIC) strategy is 1200 RPM. Therefore, for stationary operations, a discrete signal, which is supplied with Chelsea 247 wire harness 329598X, must be used to elevate engine idle to a minimum of 1200 RPM. Battery voltage must be applied to the PTO circuit to begin SEIC strategy for both mobile and stationary applications. Failure to follow these procedures may lead to PTO clutch wear and internal damage to the PTO/Transmission. See Chelsea Owner's/Installation Manual HY25-1715-M1/US or Contact Chelsea Technical Services (662-895-1052) for complete details.

(1) Input Gear Part No. 5-P-1387

6R140 Diesel F250-550; MY2011-Current  
6R140 Diesel F650/750; MY2016-Current

**LEFT SIDE ONLY****TRANSMISSION GEAR DATA:**

L.S. 06-BOLT Opening Gear FORWARD of Centerline  
52 Teeth - SPUR

**PITCH LINE TO APERTURE FACE:**

3.4550" (87.7640MM)

**CAUTION: Application Approval Required for PTO Output Shaft Speeds Above 2500 RPM**

| PTO Model | Torq<br>I / C † | Dir<br>Rot | Engine %<br>Fwd Rev | Filler Block | Adapter<br>Assy | Stud Kit | PTO Model | Torq<br>I / C † | Dir<br>Rot | Engine %<br>Fwd Rev | Filler Block | Adapter<br>Assy | Stud Kit |
|-----------|-----------------|------------|---------------------|--------------|-----------------|----------|-----------|-----------------|------------|---------------------|--------------|-----------------|----------|
|-----------|-----------------|------------|---------------------|--------------|-----------------|----------|-----------|-----------------|------------|---------------------|--------------|-----------------|----------|

**ONE SPEED - TWO GEAR - POWERSHIFT (HYDRAULIC)**

|                 |       |     |     |  |  |           |
|-----------------|-------|-----|-----|--|--|-----------|
| 249FMLLX-*2 (1) | 200 I | Opp | 124 |  |  | Furnished |
| 249FMLLX-*4 (1) | 200 I | Opp | 124 |  |  | Furnished |
| 249FMLLX-*V (1) | 200 I | Opp | 124 |  |  | Furnished |
| 272FCLLP-*8     | 300 I | Opp | 61  |  |  | Furnished |
| 272FDLLP-*8     | 300 I | Opp | 74  |  |  | Furnished |
| 272FGLLP-*8     | 300 I | Opp | 87  |  |  | Furnished |
| 272FKLLP-*8     | 300 I | Opp | 98  |  |  | Furnished |
| 272FMLLP-*8     | 274 I | Opp | 109 |  |  | Furnished |
| 272FPLLP-*8     | 246 I | Opp | 122 |  |  | Furnished |
| 272FSLLP-*8     | 220 I | Opp | 137 |  |  | Furnished |

**See next page for more pump options.**

**Continued on Next Page**

† I = Intermittent Torque Only - De-Rate Torque Rating 30% for Continuous Duty.

C = Continuous or Intermittent Torque - No need to De-Rate Torque Rating.

**IMPORTANT:** Refer to the back of this transmission section and read all notes associated with this application page.  
Some notes may affect the proper PTO selection.

**CAUTION:** FORD PTO Driver Gear Torque ratings and HP vary by platform (F250-550 or F650/750), fuel type (Gas or Diesel), and operating mode (Mobile or Stationary). Consult FORD BBAS for the current ratings. The applications on this page are rated for Stationary Mode.

**CAUTION:** 272 will only fit F650/750 chassis, not for use on F550 and below.

(1) Input Gear Part No. 5-P-1436

6R140 Diesel F250-550; MY2011-Current  
6R140 Diesel F650/750; MY2016-Current

**LEFT SIDE ONLY****TRANSMISSION GEAR DATA:**

L.S. 06-BOLT Opening Gear FORWARD of Centerline  
52 Teeth - SPUR

**PITCH LINE TO APERTURE FACE:**

3.4550" (87.7640MM)

**Pump Option Charts****249 Series Gear Pump Options****Chelsea CGP-P11 Series Pump Specifications for 4 x 2 and 4 x 4 Vehicles (3/4" - 11 Tooth Pump Spline - AD Output)**

| Order Code w/ PTO (C) | Chelsea Pump Model | Displacement in <sup>3</sup> /rev | GPM (A) | Pump (A) HP | Torque (A) ft-lbs | Pressure PSI |            | Max Speed RPM |            | Max Pump Flow GPM |
|-----------------------|--------------------|-----------------------------------|---------|-------------|-------------------|--------------|------------|---------------|------------|-------------------|
|                       |                    |                                   |         |             |                   | Intermittent | Continuous | Pump          | Engine (B) |                   |
| 16                    | CGP-P11A016-5GC    | 0.37                              | 2.15    | 4.5         | 16.0              | 3990         | 3625       | 4000          | 3226       | 6.41              |
| 26                    | CGP-P11A026-5GC    | 0.61                              | 3.54    | 7.5         | 26.4              | 3990         | 3625       | 3600          | 2903       | 9.51              |
| 32                    | CGP-P11A032-5GC    | 0.73                              | 4.23    | 9.0         | 31.6              | 3990         | 3625       | 3500          | 2823       | 11.06             |
| 37                    | CGP-P11A037-5GC    | 0.85                              | 4.93    | 10.4        | 36.8              | 3990         | 3625       | 3300          | 2661       | 12.14             |
| 42                    | CGP-P11A042-5GC    | 0.98                              | 5.68    | 12.0        | 42.4              | 3990         | 3625       | 3000          | 2419       | 12.73             |
| 55                    | CGP-P11A055-5GC    | 1.28                              | 7.42    | 14.8        | 52.1              | 3480         | 3410       | 2800          | 2258       | 15.52             |
| 61                    | CGP-P11A061-5GE    | 1.40                              | 8.12    | 15.5        | 54.6              | 3410         | 3265       | 2800          | 2258       | 16.97             |
| 71                    | CGP-P11A071-5GE    | 1.65                              | 9.57    | 15.4        | 54.3              | 2900         | 2755       | 2400          | 1935       | 17.14             |
| 82                    | CGP-P11A082-5GE    | 1.89                              | 10.96   | 15.3        | 54.0              | 2465         | 2395       | 2300          | 1855       | 18.82             |
| 87                    | CGP-P11A087-5GE    | 2.01                              | 11.65   | 15.3        | 54.0              | 2320         | 2250       | 2000          | 1613       | 17.40             |

**Chelsea PGP-315 Series Pump Specifications for 4 x 2 Vehicles Only (3/4" - 11 Tooth Pump Spline - AD Output)**

| Order Code w/ PTO | Chelsea Pump Model | Displacement in <sup>3</sup> /rev | GPM (A) | Pump (A) HP | Torque (A) ft-lbs | Pressure PSI |            | Max Speed RPM |            | Max Pump Flow GPM |
|-------------------|--------------------|-----------------------------------|---------|-------------|-------------------|--------------|------------|---------------|------------|-------------------|
|                   |                    |                                   |         |             |                   | Intermittent | Continuous | Pump          | Engine (B) |                   |
| 08                | CGP-P31B081-5AG    | 1.86                              | 10.78   | 20.8        | 73.3              | 3300         | 3300       | 3000          | 2419       | 24.16             |
| 09                | CGP-P31B094-5AG    | 2.17                              | 12.58   | 21.3        | 75.1              | 2900         | 2900       | 3000          | 2419       | 28.18             |
| 11                | CGP-P31B107-5AG    | 2.48                              | 14.38   | 21.0        | 74.0              | 2500         | 2500       | 3000          | 2419       | 32.21             |

**Chelsea P16 Series Pump Specifications for 4 x 2 Vehicles Only (7/8" - 13 Tooth Pump Spline - XP Output)**

| Order Code w/ PTO | Chelsea Pump Model | Displacement in <sup>3</sup> /rev | GPM (A) | Pump (A) HP | Torque (A) ft-lbs | Pressure PSI |            | Max Speed RPM |            | Max Pump Flow GPM |
|-------------------|--------------------|-----------------------------------|---------|-------------|-------------------|--------------|------------|---------------|------------|-------------------|
|                   |                    |                                   |         |             |                   | Intermittent | Continuous | Pump          | Engine (B) |                   |
| 15                | P16-150A-2D1       | 2.93                              | 16.99   | 29.7        | 104.9             | 3000         | 3000       | 2800          | 2258       | 35.52             |

(A) GPM & Pump Input HP @ 1200 Engine RPM (1488 PTO Output RPM - 124% Ratio) & Continuous Pressure Rating with 90% efficiency rating considered.

(B) Max Engine Speed = (Max Pump Speed) / (1.24) for PTO Ratio Increase. Max Speed determined by Max PTO output speed of 2500.

(C) For Pump Codes 61, 71, 82 & 87 - 45 degree fittings are required to connect hydraulic hoses for clearance. Order Kit number 329667X

**CAUTION:** 249 Gear Pump Options: The PTO drive gear delivers up to 250 Lbs. ft. torque to the aftermarket PTO, and can manage the heat of 60 HP continuously. Higher horsepower can be delivered, but for shorter durations depending on the amount of power required. Ref: Ford Body Builders Manual; TorqShift Automatic Transmission.

**FORMULAS:**

GPM = Cu. In. x .004329 = G/Rev x 1488 RPMs x .90 efficiency

HP = (GPM x Max PSI) / 1714

Torque = (HP x 5252) / 1488 RPMs

6R140 Diesel F250-550; MY2011-Current  
6R140 Diesel F650/750; MY2016-Current

**LEFT SIDE ONLY****TRANSMISSION GEAR DATA:**

L.S. 06-BOLT Opening Gear FORWARD of Centerline  
52 Teeth - SPUR

**PITCH LINE TO APERTURE FACE:**

3.4550" (87.7640MM)

**Pump Option Charts****249 Series Vane Pump Options****Chelsea 249V Integral Vane Pump Data for 4 x 2 or 4 x 4 Vehicles**

| Order Code w/ PTO | Chelsea Pump Cartridge Number | Displacement in <sup>3</sup> /rev | GPM (D) | Pump (D) HP | Torque (D) ft-lbs | Pressure PSI |            | Pump Speed RPM |      | Max Speed RPM Engine (B) |
|-------------------|-------------------------------|-----------------------------------|---------|-------------|-------------------|--------------|------------|----------------|------|--------------------------|
|                   |                               |                                   |         |             |                   | Intermittent | Continuous | Min.           | Max  |                          |
| 08                | 380418-08                     | 1.61                              | 9.33    | 11          | 38                | 4000         | 3500       | 400            | 2800 | 2015                     |
| 10                | 380418-10                     | 2.08                              | 12.06   | 14          | 50                | 4000         | 3500       | 400            | 2800 | 2015                     |
| 12                | 380418-12                     | 2.26                              | 13.10   | 15          | 54                | 4000         | 3500       | 400            | 2800 | 2015                     |
| 14                | 380418-14                     | 2.81                              | 16.29   | 19          | 67                | 4000         | 3500       | 400            | 2800 | 2015                     |
| 17                | 380418-17                     | 3.56                              | 20.64   | 24          | 85                | 4000         | 3500       | 400            | 2800 | 2015                     |
| 20                | 380418-20                     | 3.89                              | 22.55   | 26          | 93                | 4000         | 3500       | 400            | 2800 | 2015                     |
| 22                | 380418-22                     | 4.29                              | 24.87   | 29          | 102               | 4000         | 3500       | 400            | 2800 | 2015                     |
| 25                | 380418-25                     | 4.84                              | 28.06   | 33          | 116               | 4000         | 3500       | 400            | 2800 | 2015                     |

(A) GPM & Pump Input HP @ 1200 Engine RPM (1488 PTO Output RPM - 124% Ratio) & Continuous Pressure Rating with 90% efficiency rating considered.

(B) Max Engine Speed = (Max Pump Speed) / (1.24) for PTO Ratio Increase. Max Speed determined by Max PTO output speed of 2500.

(D) GPM & Pump Input HP @ 1200 Engine RPM (1488 PTO Output RPM - 124% Ratio) & 2000 PSI Continuous Pressure Rating.

See leakage chart for additional flow losses at other pressures.

**CAUTION:** 249V Pump Options: The PTO drive gear delivers up to 250 Lbs. ft. torque to the aftermarket PTO, and can manage the heat of 60 HP continuously. Higher horsepower can be delivered, but for shorter durations depending on the amount of power required. Ref: Ford Body Builders Manual; TorqShift Automatic Transmission.

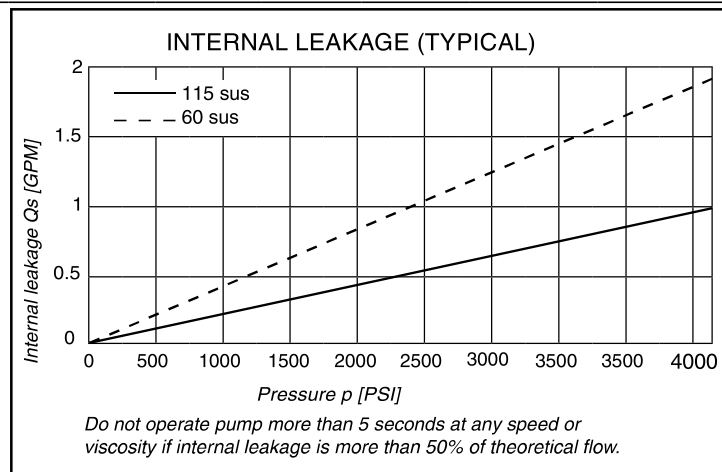
**NOTE:** Refer to Chelsea Owner's Manual HY25-1FRD-M1/US for complete vane pump information.

**FORMULAS:**

GPM = Cu. In. x .004329 = G/Rev x 1488 RPMs x .90 efficiency

HP = (GPM x Max PSI) / 1714

Torque = (HP x 5252) / 1488 RPMs





6R140 Gas F650/750, MY2013-2015

**LEFT SIDE ONLY****TRANSMISSION GEAR DATA:**L.S. 06-BOLT Opening Gear FORWARD of Centerline  
52 Teeth - SPUR**PITCH LINE TO APERTURE FACE:**

3.4550" (87.7640MM)

**CAUTION: Application Approval Required for PTO Output Shaft Speeds Above 2500 RPM**

| PTO Model | Torq<br>l / C † | Dir<br>Rot | Engine %<br>Fwd Rev | Filler Block | Adapter<br>Assy | Stud Kit | PTO Model | Torq<br>l / C † | Dir<br>Rot | Engine %<br>Fwd Rev | Filler Block | Adapter<br>Assy | Stud Kit |
|-----------|-----------------|------------|---------------------|--------------|-----------------|----------|-----------|-----------------|------------|---------------------|--------------|-----------------|----------|
|-----------|-----------------|------------|---------------------|--------------|-----------------|----------|-----------|-----------------|------------|---------------------|--------------|-----------------|----------|

**ONE SPEED - TWO GEAR - POWERSHIFT (HYDRAULIC)**

|                 |       |     |     |  |  |           |
|-----------------|-------|-----|-----|--|--|-----------|
| 249GMLLX-*2 (1) | 200 l | Opp | 124 |  |  | Furnished |
| 249GMLLX-*V (1) | 200 l | Opp | 124 |  |  | Furnished |
| 272JCLLP-*8     | 300 l | Opp | 61  |  |  | Furnished |
| 272JDLLP-*8     | 300 l | Opp | 74  |  |  | Furnished |
| 272JGLLP-*8     | 300 l | Opp | 87  |  |  | Furnished |
| 272JKLLP-*8     | 300 l | Opp | 98  |  |  | Furnished |
| 272JMLLP-*8     | 274 l | Opp | 109 |  |  | Furnished |
| 272JPLLP-*8     | 246 l | Opp | 122 |  |  | Furnished |
| 272JSLLP-*8     | 220 l | Opp | 137 |  |  | Furnished |

*See next page for more pump options.***Continued on Next Page**

† I = Intermittent Torque Only - De-Rate Torque Rating 30% for Continuous Duty.

C = Continuous or Intermittent Torque - No need to De-Rate Torque Rating.

**IMPORTANT:** Refer to the back of this transmission section and read all notes associated with this application page.  
Some notes may affect the proper PTO selection.**CAUTION:** FORD PTO Driver Gear Torque ratings and HP vary by platform (F250-550 or F650/750), fuel type (Gas or Diesel), and operating mode (Mobile or Stationary). Consult FORD BBAS for the current ratings. The applications on this page are rated for Stationary Mode.**CAUTION:** 272 will only fit F650/750 chassis, not for use on F550 and below.

(1) Input Gear Part No. 5-P-1436

6R140 Gas F650/750, MY2013-2015

**LEFT SIDE ONLY****TRANSMISSION GEAR DATA:**L.S. 06-BOLT Opening Gear FORWARD of Centerline  
52 Teeth - SPUR**PITCH LINE TO APERTURE FACE:**

3.4550" (87.7640MM)

**Pump Option Charts****249 Series Gear Pump Options****Chelsea CGP-P11 Series Pump Specifications for 4 x 2 and 4 x 4 Vehicles (3/4" - 11 Tooth Pump Spline - AD Output)**

| Order Code w/ PTO (C) | Chelsea Pump Model | Displacement in <sup>3</sup> /rev | GPM (A) | Pump (A) HP | Torque (A) ft-lbs | Pressure PSI |            | Max Speed RPM |            | Max Pump Flow GPM |
|-----------------------|--------------------|-----------------------------------|---------|-------------|-------------------|--------------|------------|---------------|------------|-------------------|
|                       |                    |                                   |         |             |                   | Intermittent | Continuous | Pump          | Engine (B) |                   |
| 16                    | CGP-P11A016-5GC    | 0.37                              | 2.15    | 4.5         | 16.0              | 3990         | 3625       | 4000          | 3226       | 6.41              |
| 26                    | CGP-P11A026-5GC    | 0.61                              | 3.54    | 7.5         | 26.4              | 3990         | 3625       | 3600          | 2903       | 9.51              |
| 32                    | CGP-P11A032-5GC    | 0.73                              | 4.23    | 9.0         | 31.6              | 3990         | 3625       | 3500          | 2823       | 11.06             |
| 37                    | CGP-P11A037-5GC    | 0.85                              | 4.93    | 10.4        | 36.8              | 3990         | 3625       | 3300          | 2661       | 12.14             |
| 42                    | CGP-P11A042-5GC    | 0.98                              | 5.68    | 12.0        | 42.4              | 3990         | 3625       | 3000          | 2419       | 12.73             |
| 55                    | CGP-P11A055-5GC    | 1.28                              | 7.42    | 14.8        | 52.1              | 3480         | 3410       | 2800          | 2258       | 15.52             |
| 61                    | CGP-P11A061-5GE    | 1.40                              | 8.12    | 15.5        | 54.6              | 3410         | 3265       | 2800          | 2258       | 16.97             |
| 71                    | CGP-P11A071-5GE    | 1.65                              | 9.57    | 15.4        | 54.3              | 2900         | 2755       | 2400          | 1935       | 17.14             |
| 82                    | CGP-P11A082-5GE    | 1.89                              | 10.96   | 15.3        | 54.0              | 2465         | 2395       | 2300          | 1855       | 18.82             |
| 87                    | CGP-P11A087-5GE    | 2.01                              | 11.65   | 15.3        | 54.0              | 2320         | 2250       | 2000          | 1613       | 17.40             |

**Chelsea PGP-315 Series Pump Specifications for 4 x 2 Vehicles Only (3/4" - 11 Tooth Pump Spline - AD Output)**

| Order Code w/ PTO | Chelsea Pump Model | Displacement in <sup>3</sup> /rev | GPM (A) | Pump (A) HP | Torque (A) ft-lbs | Pressure PSI |            | Max Speed RPM |            | Max Pump Flow GPM |
|-------------------|--------------------|-----------------------------------|---------|-------------|-------------------|--------------|------------|---------------|------------|-------------------|
|                   |                    |                                   |         |             |                   | Intermittent | Continuous | Pump          | Engine (B) |                   |
| 08                | CGP-P31B081-5AG    | 1.86                              | 10.78   | 20.8        | 73.3              | 3300         | 3300       | 3000          | 2419       | 24.16             |
| 09                | CGP-P31B094-5AG    | 2.17                              | 12.58   | 21.3        | 75.1              | 2900         | 2900       | 3000          | 2419       | 28.18             |
| 11                | CGP-P31B107-5AG    | 2.48                              | 14.38   | 21.0        | 74.0              | 2500         | 2500       | 3000          | 2419       | 32.21             |

**Chelsea P16 Series Pump Specifications for 4 x 2 Vehicles Only (7/8" - 13 Tooth Pump Spline - XP Output)**

| Order Code w/ PTO | Chelsea Pump Model | Displacement in <sup>3</sup> /rev | GPM (A) | Pump (A) HP | Torque (A) ft-lbs | Pressure PSI |            | Max Speed RPM |            | Max Pump Flow GPM |
|-------------------|--------------------|-----------------------------------|---------|-------------|-------------------|--------------|------------|---------------|------------|-------------------|
|                   |                    |                                   |         |             |                   | Intermittent | Continuous | Pump          | Engine (B) |                   |
| 15                | P16-150A-2D1       | 2.93                              | 16.99   | 29.7        | 104.9             | 3000         | 3000       | 2800          | 2258       | 35.52             |

(A) GPM &amp; Pump Input HP @ 1200 Engine RPM (1488 PTO Output RPM - 124% Ratio) &amp; Continuous Pressure Rating with 90% efficiency rating considered.

(B) Max Engine Speed = (Max Pump Speed) / (1.24) for PTO Ratio Increase. Max Speed determined by Max PTO output speed of 2500.

(C) For Pump Codes 61, 71, 82 &amp; 87 - 45 degree fittings are required to connect hydraulic hoses for clearance. Order Kit number 329667X

**CAUTION:** 249 Gear Pump Options: The PTO drive gear delivers up to 250 Lbs. ft. torque to the aftermarket PTO, and can manage the heat of 60 HP continuously. Higher horsepower can be delivered, but for shorter durations depending on the amount of power required. Ref: Ford Body Builders Manual; TorqShift Automatic Transmission.**FORMULAS:**

GPM = Cu. In. x .004329 = G/Rev x 1488 RPMs x .90 efficiency

HP = (GPM x Max PSI) / 1714

Torque = (HP x 5252) / 1488 RPMs

6R140 Gas F650/750; MY2013-2015

**LEFT SIDE ONLY****TRANSMISSION GEAR DATA:**L.S. 06-BOLT Opening Gear FORWARD of Centerline  
52 Teeth - SPUR**PITCH LINE TO APERTURE FACE:**

3.4550" (87.7640MM)

**Pump Option Charts****249 Series Vane Pump Options****Chelsea 249V Integral Vane Pump Data for 4 x 2 or 4 x 4 Vehicles**

| Order Code w/ PTO | Chelsea Pump Cartridge Number | Displacement in <sup>3</sup> /rev | GPM (D) | Pump (D) HP | Torque (D) ft-lbs | Pressure PSI |            | Pump Speed RPM |      | Max Speed RPM Engine (B) |
|-------------------|-------------------------------|-----------------------------------|---------|-------------|-------------------|--------------|------------|----------------|------|--------------------------|
|                   |                               |                                   |         |             |                   | Intermittent | Continuous | Min.           | Max  |                          |
| 08                | 380418-08                     | 1.61                              | 9.33    | 11          | 38                | 4000         | 3500       | 400            | 2800 | 2015                     |
| 10                | 380418-10                     | 2.08                              | 12.06   | 14          | 50                | 4000         | 3500       | 400            | 2800 | 2015                     |
| 12                | 380418-12                     | 2.26                              | 13.10   | 15          | 54                | 4000         | 3500       | 400            | 2800 | 2015                     |
| 14                | 380418-14                     | 2.81                              | 16.29   | 19          | 67                | 4000         | 3500       | 400            | 2800 | 2015                     |
| 17                | 380418-17                     | 3.56                              | 20.64   | 24          | 85                | 4000         | 3500       | 400            | 2800 | 2015                     |
| 20                | 380418-20                     | 3.89                              | 22.55   | 26          | 93                | 4000         | 3500       | 400            | 2800 | 2015                     |
| 22                | 380418-22                     | 4.29                              | 24.87   | 29          | 102               | 4000         | 3500       | 400            | 2800 | 2015                     |
| 25                | 380418-25                     | 4.84                              | 28.06   | 33          | 116               | 4000         | 3500       | 400            | 2800 | 2015                     |

(A) GPM &amp; Pump Input HP @ 1200 Engine RPM (1488 PTO Output RPM - 124% Ratio) &amp; Continuous Pressure Rating with 90% efficiency rating considered.

(B) Max Engine Speed = (Max Pump Speed) / (1.24) for PTO Ratio Increase. Max Speed determined by Max PTO output speed of 2500.

(D) GPM &amp; Pump Input HP @ 1200 Engine RPM (1488 PTO Output RPM - 124% Ratio) &amp; 2000 PSI Continuous Pressure Rating.

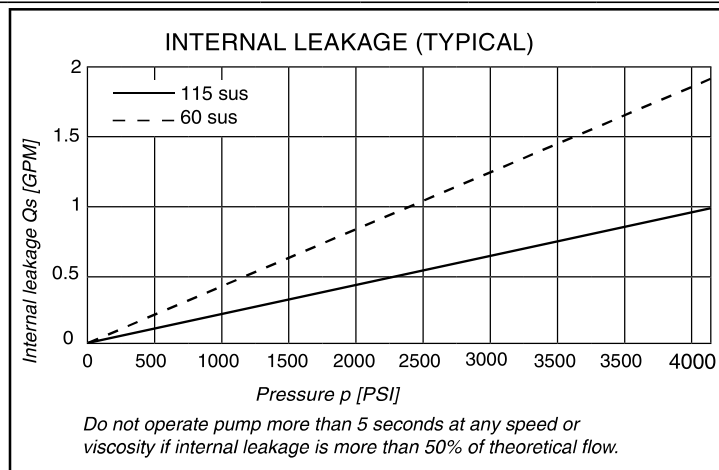
See leakage chart for additional flow losses at other pressures.

**CAUTION:** 249V Pump Options: The PTO drive gear delivers up to 250 Lbs. ft. torque to the aftermarket PTO, and can manage the heat of 60 HP continuously. Higher horsepower can be delivered, but for shorter durations depending on the amount of power required. Ref: Ford Body Builders Manual; TorqShift Automatic Transmission.**NOTE:** Refer to Chelsea Owner's Manual HY25-1FRD-M1/US for complete vane pump information.**FORMULAS:**

GPM = Cu. In. x .004329 = G/Rev x 1488 RPMs x .90 efficiency

HP = (GPM x Max PSI) / 1714

Torque = (HP x 5252) / 1488 RPMs



6R140 Gas F250-550, MY2017-Current  
6R140 Gas F650/750, MY2016-Current

**LEFT SIDE ONLY****TRANSMISSION GEAR DATA:**

L.S. 06-BOLT Opening Gear FORWARD of Centerline  
52 Teeth - SPUR

**PITCH LINE TO APERTURE FACE:**

3.4550" (87.7640MM)

**CAUTION: Application Approval Required for PTO Output Shaft Speeds Above 2500 RPM**

| PTO Model  | Torq<br>I / C <sup>†</sup> | Dir<br>Rot | Engine %<br>Fwd Rev | Filler Block | Adapter<br>Assy | Stud Kit  | PTO Model | Torq<br>I / C <sup>†</sup> | Dir<br>Rot | Engine %<br>Fwd Rev | Filler Block | Adapter<br>Assy | Stud Kit |
|--|----------------------------|------------|---------------------|--------------|-----------------|-----------|-----------|----------------------------|------------|---------------------|--------------|-----------------|----------|
| <b>ONE SPEED - TWO GEAR - POWERSHIFT (HYDRAULIC)</b> |                            |            |                     |              |                 |           |           |                            |            |                     |              |                 |          |
| 249HMLLX-*2 (1)                                      | 200 I                      | Opp        | 124                 |              |                 | Furnished |           |                            |            |                     |              |                 |          |
| 249HMLLX-*4 (1)                                      | 200 I                      | Opp        | 124                 |              |                 | Furnished |           |                            |            |                     |              |                 |          |
| 249HMLLX-*V (1)                                      | 200 I                      | Opp        | 124                 |              |                 | Furnished |           |                            |            |                     |              |                 |          |
| 272HCLLP-*8  | 300 I                      | Opp        | 61                  |              |                 | Furnished |           |                            |            |                     |              |                 |          |
| 272HDLLP-*8  | 300 I                      | Opp        | 74                  |              |                 | Furnished |           |                            |            |                     |              |                 |          |
| 272HGLLP-*8  | 300 I                      | Opp        | 87                  |              |                 | Furnished |           |                            |            |                     |              |                 |          |
| 272HKLLP-*8  | 300 I                      | Opp        | 98                  |              |                 | Furnished |           |                            |            |                     |              |                 |          |
| 272HMLLP-*8  | 274 I                      | Opp        | 109                 |              |                 | Furnished |           |                            |            |                     |              |                 |          |
| 272HPLLP-*8  | 246 I                      | Opp        | 122                 |              |                 | Furnished |           |                            |            |                     |              |                 |          |
| 272HSLLP-*8  | 220 I                      | Opp        | 137                 |              |                 | Furnished |           |                            |            |                     |              |                 |          |

*See next page for more pump options.*

**Continued on Next Page**

<sup>†</sup> I = Intermittent Torque Only - De-Rate Torque Rating 30% for Continuous Duty.

C = Continuous or Intermittent Torque - No need to De-Rate Torque Rating.

**IMPORTANT:** Refer to the back of this transmission section and read all notes associated with this application page.  
Some notes may affect the proper PTO selection.

**CAUTION:** FORD PTO Driver Gear Torque ratings and HP vary by platform (F250-550 or F650/750), fuel type (Gas or Diesel), and operating mode (Mobile or Stationary). Consult FORD BBAS for the current ratings. The applications on this page are rated for Stationary Mode.

**CAUTION:** 272 will only fit F650/750 chassis, not for use on F550 and below.

(1) Input Gear Part No. 5-P-1436

6R140 Gas F250-550; MY2017-Current  
6R140 Gas F650/750; MY2016-Current

**LEFT SIDE ONLY****TRANSMISSION GEAR DATA:**

L.S. 06-BOLT Opening Gear FORWARD of Centerline  
52 Teeth - SPUR

**PITCH LINE TO APERTURE FACE:**

3.4550" (87.7640MM)

**Pump Option Charts****249 Series Gear Pump Options****Chelsea CGP-P11 Series Pump Specifications for 4 x 2 and 4 x 4 Vehicles (3/4" - 11 Tooth Pump Spline - AD Output)**

| Order Code w/ PTO (C) | Chelsea Pump Model | Displacement in <sup>3</sup> /rev | GPM (A) | Pump (A) HP | Torque (A) ft-lbs | Pressure PSI |            | Max Speed RPM |            | Max Pump Flow GPM |
|-----------------------|--------------------|-----------------------------------|---------|-------------|-------------------|--------------|------------|---------------|------------|-------------------|
|                       |                    |                                   |         |             |                   | Intermittent | Continuous | Pump          | Engine (B) |                   |
| 16                    | CGP-P11A016-5GC    | 0.37                              | 2.15    | 4.5         | 16.0              | 3990         | 3625       | 4000          | 3226       | 6.41              |
| 26                    | CGP-P11A026-5GC    | 0.61                              | 3.54    | 7.5         | 26.4              | 3990         | 3625       | 3600          | 2903       | 9.51              |
| 32                    | CGP-P11A032-5GC    | 0.73                              | 4.23    | 9.0         | 31.6              | 3990         | 3625       | 3500          | 2823       | 11.06             |
| 37                    | CGP-P11A037-5GC    | 0.85                              | 4.93    | 10.4        | 36.8              | 3990         | 3625       | 3300          | 2661       | 12.14             |
| 42                    | CGP-P11A042-5GC    | 0.98                              | 5.68    | 12.0        | 42.4              | 3990         | 3625       | 3000          | 2419       | 12.73             |
| 55                    | CGP-P11A055-5GC    | 1.28                              | 7.42    | 14.8        | 52.1              | 3480         | 3410       | 2800          | 2258       | 15.52             |
| 61                    | CGP-P11A061-5GE    | 1.40                              | 8.12    | 15.5        | 54.6              | 3410         | 3265       | 2800          | 2258       | 16.97             |
| 71                    | CGP-P11A071-5GE    | 1.65                              | 9.57    | 15.4        | 54.3              | 2900         | 2755       | 2400          | 1935       | 17.14             |
| 82                    | CGP-P11A082-5GE    | 1.89                              | 10.96   | 15.3        | 54.0              | 2465         | 2395       | 2300          | 1855       | 18.82             |
| 87                    | CGP-P11A087-5GE    | 2.01                              | 11.65   | 15.3        | 54.0              | 2320         | 2250       | 2000          | 1613       | 17.40             |

**Chelsea PGP-315 Series Pump Specifications for 4 x 2 Vehicles Only (3/4" - 11 Tooth Pump Spline - AD Output)**

| Order Code w/ PTO | Chelsea Pump Model | Displacement in <sup>3</sup> /rev | GPM (A) | Pump (A) HP | Torque (A) ft-lbs | Pressure PSI |            | Max Speed RPM |            | Max Pump Flow GPM |
|-------------------|--------------------|-----------------------------------|---------|-------------|-------------------|--------------|------------|---------------|------------|-------------------|
|                   |                    |                                   |         |             |                   | Intermittent | Continuous | Pump          | Engine (B) |                   |
| 08                | CGP-P31B081-5AG    | 1.86                              | 10.78   | 20.8        | 73.3              | 3300         | 3300       | 3000          | 2419       | 24.16             |
| 09                | CGP-P31B094-5AG    | 2.17                              | 12.58   | 21.3        | 75.1              | 2900         | 2900       | 3000          | 2419       | 28.18             |
| 11                | CGP-P31B107-5AG    | 2.48                              | 14.38   | 21.0        | 74.0              | 2500         | 2500       | 3000          | 2419       | 32.21             |

**Chelsea P16 Series Pump Specifications for 4 x 2 Vehicles Only (7/8" - 13 Tooth Pump Spline - XP Output)**

| Order Code w/ PTO | Chelsea Pump Model | Displacement in <sup>3</sup> /rev | GPM (A) | Pump (A) HP | Torque (A) ft-lbs | Pressure PSI |            | Max Speed RPM |            | Max Pump Flow GPM |
|-------------------|--------------------|-----------------------------------|---------|-------------|-------------------|--------------|------------|---------------|------------|-------------------|
|                   |                    |                                   |         |             |                   | Intermittent | Continuous | Pump          | Engine (B) |                   |
| 15                | P16-150A-2D1       | 2.93                              | 16.99   | 29.7        | 104.9             | 3000         | 3000       | 2800          | 2258       | 35.52             |

(A) GPM & Pump Input HP @ 1200 Engine RPM (1488 PTO Output RPM - 124% Ratio) & Continuous Pressure Rating with 90% efficiency rating considered.

(B) Max Engine Speed = (Max Pump Speed) / (1.24) for PTO Ratio Increase. Max Speed determined by Max PTO output speed of 2500.

(C) For Pump Codes 61, 71, 82 & 87 - 45 degree fittings are required to connect hydraulic hoses for clearance. Order Kit number 329667X

**CAUTION:** 249 Gear Pump Options: The PTO drive gear delivers up to 250 Lbs. ft. torque to the aftermarket PTO, and can manage the heat of 60 HP continuously. Higher horsepower can be delivered, but for shorter durations depending on the amount of power required. Ref: Ford Body Builders Manual; TorqShift Automatic Transmission.

**FORMULAS:**

GPM = Cu. In. x .004329 = G/Rev x 1488 RPMs x .90 efficiency

HP = (GPM x Max PSI) / 1714

Torque = (HP x 5252) / 1488 RPMs



6R140 Gas F250-550, MY2017-Current  
6R140 Gas F650/750, MY2016-Current

**LEFT SIDE ONLY****TRANSMISSION GEAR DATA:**

L.S. 06-BOLT Opening Gear FORWARD of Centerline  
52 Teeth - SPUR

**PITCH LINE TO APERTURE FACE:**

3.4550" (87.7640MM)

**Pump Option Charts****249 Series Vane Pump Options****Chelsea 249V Integral Vane Pump Data for 4 x 2 or 4 x 4 Vehicles**

| Order Code w/ PTO | Chelsea Pump Cartridge Number | Displacement in <sup>3</sup> /rev | GPM (D) | Pump (D) HP | Torque (D) ft-lbs | Pressure PSI |            | Pump Speed RPM |      | Max Speed RPM Engine (B) |
|-------------------|-------------------------------|-----------------------------------|---------|-------------|-------------------|--------------|------------|----------------|------|--------------------------|
|                   |                               |                                   |         |             |                   | Intermittent | Continuous | Min.           | Max  |                          |
| 08                | 380418-08                     | 1.61                              | 9.33    | 11          | 38                | 4000         | 3500       | 400            | 2800 | 2015                     |
| 10                | 380418-10                     | 2.08                              | 12.06   | 14          | 50                | 4000         | 3500       | 400            | 2800 | 2015                     |
| 12                | 380418-12                     | 2.26                              | 13.10   | 15          | 54                | 4000         | 3500       | 400            | 2800 | 2015                     |
| 14                | 380418-14                     | 2.81                              | 16.29   | 19          | 67                | 4000         | 3500       | 400            | 2800 | 2015                     |
| 17                | 380418-17                     | 3.56                              | 20.64   | 24          | 85                | 4000         | 3500       | 400            | 2800 | 2015                     |
| 20                | 380418-20                     | 3.89                              | 22.55   | 26          | 93                | 4000         | 3500       | 400            | 2800 | 2015                     |
| 22                | 380418-22                     | 4.29                              | 24.87   | 29          | 102               | 4000         | 3500       | 400            | 2800 | 2015                     |
| 25                | 380418-25                     | 4.84                              | 28.06   | 33          | 116               | 4000         | 3500       | 400            | 2800 | 2015                     |

(A) GPM & Pump Input HP @ 1200 Engine RPM (1488 PTO Output RPM - 124% Ratio) & Continuous Pressure Rating with 90% efficiency rating considered.

(B) Max Engine Speed = (Max Pump Speed) / (1.24) for PTO Ratio Increase. Max Speed determined by Max PTO output speed of 2500.

(D) GPM & Pump Input HP @ 1200 Engine RPM (1488 PTO Output RPM - 124% Ratio) & 2000 PSI Continuous Pressure Rating.

See leakage chart for additional flow losses at other pressures.

**CAUTION:** 249V Pump Options: The PTO drive gear delivers up to 250 Lbs. ft. torque to the aftermarket PTO, and can manage the heat of 60 HP continuously. Higher horsepower can be delivered, but for shorter durations depending on the amount of power required. Ref: Ford Body Builders Manual; TorqShift Automatic Transmission.

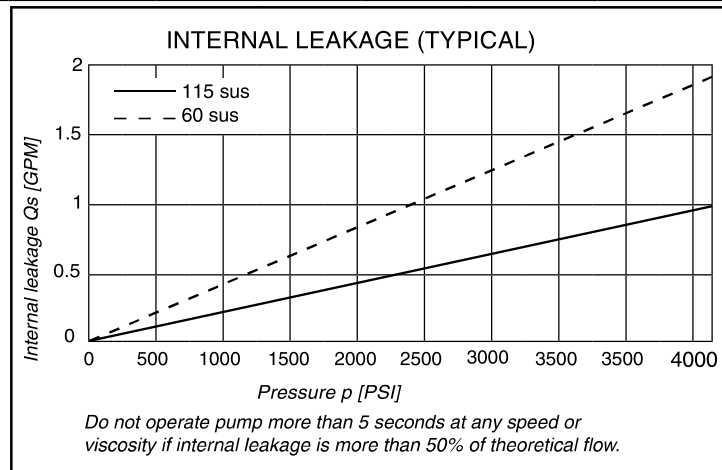
**NOTE:** Refer to Chelsea Owner's Manual HY25-1FRD-M1/US for complete vane pump information.

**FORMULAS:**

GPM = Cu. In. x .004329 = G/Rev x 1488 RPMs x .90 efficiency

HP = (GPM x Max PSI) / 1714

Torque = (HP x 5252) / 1488 RPMs



## Ford Notes

### FRD-9

1. Standard Parker PGP-P17 pumps may interfere with the transmission shift lever, order Chelsea FGP-P17 Series pumps to assure shifter clearance.
2. The PTO mounting gasket (22-P-120) is supplied with the PTO. It is the correct thickness and material so that the customer does not have to set backlash. DO NOT use gasket supplied with the transmission under the 6-bolt cover plate.
3. 247FMKSP-\*2 -- 4 x 2 applications: all output options and all pumps listed in the pump chart are available.
4. 247FMKSP-\*4 -- 4 x 4 applications will only work with a modified PGP-P11 (CGP-P11) pump. Use one of the following output option codes when ordering: 16, 26, 37, 42, 55, 61, 71, 82, 86 (See Pump Chart).
5. Ford provides an option for the use of one of the "Upfitter" Switches to be used as a PTO switch. Chelsea does not recommend the use of the UNPROTECTED switch for PTO function, but if required, contact Chelsea Technical Services for assistance.(662-895-1052)

### FRD-10

1. Mobile and Stationary Mode Operations are supported. The maximum load (Torque) allowable for Mobile Mode is 150 Ft.lbs at the transmission PTO driver gear. If the PTO feature is used for extended periods of time without vehicle movement it is recommended to switch to Stationary Mode. In Stationary Mode maximum load (Torque) is 250 Ft.lbs at the transmission PTO driver gear.
2. Ford provides an option for the use of one of the "Upfitter" Switches to be used as a PTO switch. Chelsea does not recommend the use of the UNPROTECTED switch for PTO function, but if required, contact Chelsea Technical Services for assistance.(662-895-1052)
3. 249FMLLX-\*2 -- 4 x 2 applications, all output options and all gear pumps listed in the pump chart are available.
4. 249FMLLX-\*4 -- 4 x 4 applications only and will come with a modified PGP-P11 (CGP-P11) gear pump with the PTO from the factory when one of the following output option codes is ordered; 16,26,32,37,42,55,61,71,82,87 (See Pump Chart). Or one of the following output shafts "XD", "XP" or "AD".
5. For Pump Codes 61, 71, 82 & 87 - 45 degree fittings are required to connect hydraulic hoses for clearance. Order Kit number 329667X in addition to the PTO.
6. 249FMLLX-\*V-- Both 4 x 2 and 4 x 4 applications. 249 Series with integral vane pump options (See Pump Chart).

### FRD-11

1. Only Stationary Mode Operations are supported for this application page. The Maximum Load (Torque) in Stationary Mode is 250 Ft.lbs at the transmission PTO driver gear and 200 Ft.lbs at the PTO output.
2. Ford Does Not Recommend PTO Operation At or Below 900 rpm for the 6.8L Gas Engine. Minimum Engine Speed 910 rpm and Maximum 2400 rpm. Reference Ford Bulletin Q-215 for Latest Information.
3. For MY2013 Ford F-650 4 x 2 w/Gas engine will come with a 6R140 transmission. This will require a heat shield (329931X) to protect the PTO from the exhaust. Also a new Chelsea wiring harness (329789X) will be required. These are included with the PTO when ordering the 249"G" mounting option.
4. 249GMLLX-\*2 -- 4 x 2 applications, all output options and all pumps listed in the pump chart are available.
5. Ford provides an option for the use of one of the "Upfitter" Switches to be used as a PTO switch. Chelsea does not recommend the use of the UNPROTECTED switch for PTO function, but if required, contact Chelsea Technical Services for assistance.(662-895-1052)
6. For Pump Codes 61, 71, 82 & 87 - 45 degree fittings are required to connect hydraulic hoses for clearance. Order Kit number 329667X in addition to the PTO.
7. PTO Pressure Switch - if the PTO pressure switch needs to be re-indexed due to interference, use P/N 380451 90 degree fitting.

### FRD-12

1. MY2016 F650/750 is only operable in Stationary Mode. Mobile Mode is supported for 2017 F250-750 and the Torque to the Transmission gear is reduced to 125 ft-lbs and 100 ft lbs to the PTO output.
2. 249HMLLX-\*2 -- 4 x 2 applications, all output options and all gear pumps listed in the pump chart are available.
3. Ford Does Not Recommend PTO Operation At or Below 900 rpm for the 6.8L Gas Engine. Minimum Engine Speed 910 rpm and Maximum 2400 rpm. Reference Ford Bulletin Q-215 for Latest Information.
4. FORD Gas applications require a Heat Shield Kit (329931X) that will be provided with the PTO to protect the PTO and its related components from the extreme temperatures near the exhaust pipes.
5. Ford provides Upfitter Switches that can be used as a PTO switch. Chelsea only recommends the use of protected circuits for PTO operations. Ensure the switch is protected by a fuse before use.
6. For Pump Codes 61, 71, 82 & 87 - 45 degree fittings are required to connect hydraulic hoses for clearance. Order Kit number 329667X in addition to the PTO.
7. PTO Pressure Switch - if the PTO pressure switch needs to be re-indexed due to interference, use P/N 380451 90 degree fitting.