Overview:
Parker Chelsea makes PTO installation simpler, quieter and more cost-effective with its 249 Series PTO. The patented concept reduces torsional noise levels that are common on PTO applications for these trucks. A wide selection of pump sizes are available to provide optimum flow rates. The 249 Series also provides ease of installation through a single hose connection and an integrated cartridge valve and pressure switch helping to reduce installation time. Chelsea robust design makes the 249 the best choice for any application.

- Aerial
- Tow & Recovery
- Fire & Rescue
- Water Drilling

Chelsea® 249 Series
249 Series for Ford Super Duty
Featuring the Patented Chelsea Noise Suppression System

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Product Features and Benefits:

- Noise Suppression System – Provides quiet PTO applications on Ford Super Duty Trucks (Patent #9,494,227 B2)
- Smart Start Available – Shock load dampening feature to protect driven equipment
- Single Hose connection and Integrated Actuation Valve – Single hose simplifies installation and reduces installation time along with eliminating leak paths
- Intermittent Torque Rating of 200 lbs-ft – 58 HP @ 1200 engine RPM
- Pump flows up to 25.1 GPM at 1200 Engine RPM – Standard SAE flanges and shafts allow for a wider variety of flows and pressures
- Simple – PTO, pump, wiring harness and shift kits available under one part number and package
- Two Year Warranty – Greater bearing capacity, larger gear width and greater clutch engagement surface provide a robust design
Basic Model

**249** Ford TorqShift® 6 Transmission

Mounting Option

- **F** = 6.7L Diesel w/ Ford TorqShift 6 (6R140)
- **H** = 6.8L Gas 2016 & Later w/ Ford TorqShift 6 (6R140)
- **X** = 6.7L Diesel or 6.8L Gas (Use for No Harness)

Gear Ratio

- **M** = 124% Engine Speed

Input Option

- **LL** = 35 Tooth, Spur

NOTE: For more details, see Application Catalog (Transmission model number required)

Lube Option

- **X** = Internal Pressure Lube

Shift Option

- **B** = 12V Hydraulic
- **K** = 12V Hydraulic w/ EOC (Electronic Overspeed Control)
- **E** = Less Wiring Harness

Output Option

- **SD** = Smart Start - Rd Standard Shaft (1-1/4" - 5/16" Key)
- **XD** = Rd Standard Shaft (1-1/4" - 5/16" Key)

**Pump Mount**

- **08** = Hyd. Pump 1.86 In³/rev - 0.0081 GPR
- **09** = Hyd. Pump 2.17 In³/rev - 0.0094 GPR
- **11** = Hyd. Pump 2.48 In³/rev - 0.0107 GPR
- **15** = Hyd. Pump 2.93 In³/rev - 0.0127 GPR
- **16** = Hyd. Pump 0.37 In³/rev - 0.0016 GPR
- **26** = Hyd. Pump 0.61 In³/rev - 0.0026 GPR
- **32** = Hyd. Pump 0.73 In³/rev - 0.0032 GPR
- **37** = Hyd. Pump 0.85 In³/rev - 0.0037 GPR
- **42** = Hyd. Pump 0.98 In³/rev - 0.0042 GPR
- **55** = Hyd. Pump 1.28 In³/rev - 0.0055 GPR
- **61** = Hyd. Pump 1.40 In³/rev - 0.0061 GPR
- **71** = Hyd. Pump 1.65 In³/rev - 0.0071 GPR
- **82** = Hyd. Pump 1.89 In³/rev - 0.0082 GPR
- **87** = Hyd. Pump 2.01 In³/rev - 0.0087 GPR

**Assembly Arrangement**

- **2** = 4 x 2 Vehicles
- **4** = 4 x 4 Vehicles

### Chelsea CGP-P11 Series Pump Specs 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 in³/rev | GPM (A) | Pump (A) HP | Torque (A) ft-lbs | Pressure PSI Max Speed RPM Intermittent Continuous Pump Engine (B) Max Pump Flow GPM |
|-----------------------|--------------------|----------------------|--------|-------------|-----------------|---------------------------------|---------------------------------|
| 16                    | CGP-P11A016-5GC    | 0.37                 | 2.15   | 4.5         | 16.0            | 3990 3625                       | 4000 3625 2016                  | 3.6                             |
| 26                    | CGP-P11A026-5GC    | 0.61                 | 3.54   | 7.5         | 26.4            | 3990 3625                       | 3600 2016 2016                  | 5.9                             |
| 32                    | CGP-P11A032-5GC    | 0.73                 | 4.23   | 9.0         | 31.6            | 3990 3625                       | 3500 2016 2016                  | 7.1                             |
| 37                    | CGP-P11A037-5GC    | 0.85                 | 4.93   | 10.4        | 36.8            | 3990 3625                       | 3300 2016 2016                  | 8.3                             |
| 42                    | CGP-P11A042-5GC    | 0.98                 | 5.68   | 12.0        | 42.4            | 3990 3625                       | 3000 2016 2016                  | 9.5                             |
| 55                    | CGP-P11A055-5GC    | 1.28                 | 7.42   | 14.8        | 52.1            | 3480 3410                       | 2800 2016 2016                  | 12.5                            |
| 61                    | CGP-P11A061-5GE    | 1.40                 | 8.12   | 15.5        | 54.6            | 3410 3265                       | 2800 2016 2016                  | 13.6                            |
| 71                    | CGP-P11A071-5GE    | 1.65                 | 9.57   | 15.4        | 54.3            | 2900 2755                       | 2400 1935 1935                  | 15.4                            |
| 82                    | CGP-P11A082-5GE    | 1.89                 | 10.96  | 15.3        | 54.0            | 2465 2395                       | 2300 1855 1855                  | 16.9                            |
| 87                    | CGP-P11A087-5GE    | 2.01                 | 11.65  | 15.3        | 54.0            | 2320 2250                       | 2000 1613 1613                  | 15.7                            |

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

| Order Code w/ PTO (C) | Chelsea Pump Model | Displacement in³/rev | GPM (A) | Pump (A) HP | Torque (A) ft-lbs | Pressure PSI Max Speed RPM Intermittent Continuous Pump Engine (B) Max Pump Flow GPM |
|-----------------------|--------------------|----------------------|--------|-------------|-----------------|---------------------------------|---------------------------------|
| 08                    | CGP-P31B081-5AG    | 1.86                 | 10.78  | 20.8        | 73.3            | 3300 3300                       | 3000 2016 2016                  | 18.1                            |
| 09                    | CGP-P31B094-5AG    | 2.17                 | 12.58  | 21.3        | 75.1            | 2900 2900                       | 3000 2016 2016                  | 21.1                            |
| 11                    | CGP-P31B107-5AG    | 2.48                 | 14.38  | 21.0        | 74.0            | 2500 2500                       | 3000 2016 2016                  | 24.2                            |

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

| Order Code w/ PTO (C) | Chelsea Pump Model | Displacement in³/rev | GPM (A) | Pump (A) HP | Torque (A) ft-lbs | Pressure PSI Max Speed RPM Intermittent Continuous Pump Engine (B) Max Pump Flow GPM |
|-----------------------|--------------------|----------------------|--------|-------------|-----------------|---------------------------------|---------------------------------|
| 15                    | P16-150A-2D1       | 2.93                 | 16.99  | 29.7        | 104.9           | 3000 3000                       | 2800 2016 2016                  | 28.5                            |

(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

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