

Chelsea® 247 Series

For Ford Super Duty



Overview:

The 247 Series Power Take-Off (PTO) is specifically designed for the Ford's 5R110 Automatic 5 speed transmission. The 247 Series will work on both 4 x 2 and 4 x 4 applications. A wide variety of specially designed pumps will provide maximum clearance on the 4 wheel drive Super Dutys. On the 4 x 2 applications, pump flows are available up to 31GPM at 1200 engine RPM. Four wheel drive applications can reach up to 15 GPM at 1200 engine RPM. The 247 is available with our Electronic Overspeed Control (EOC) to help protect driven equipment. The 247 Series was Ford tested tough as a rugged and reliable PTO.

- Tow and Recovery
- Aerial
- Dump Truck
- Service Vehicles



Contact Information:

Parker Hannifin Corporation
Chelsea Products Division
8225 Hacks Cross Road
Olive Branch, MS 38654 USA

Phone: 1-888-PH4-TRUK
(1-888-744-8785)

Fax: 1-662-895-1069
chelseacustserv@parker.com

www.parker.com/chelsea

Product Features and Benefits:

- **Simple Installation** – Reduces installation time and more cost effective.
- **Torque 120 Lbs. ft.** – Coverage for most application requirements.
- **Selection of Pump** – Flows from 3 GPM to 31GPM.
- **PTO Output Speed of 154% of Engine** – Allows for wide coverage of applications.
- **Single Hose Connection and Integrated Cartridge Valve** – Chelsea set these industry standards with the 247 Series.
- **Current Outputs** –
“XD” 1.25" Round w/Keyed Shaft,
“XE” SAE “A” 2 Bolt .625" – 9 Tooth,
“XP” SAE “A” 2 Bolt .875" – 13 Tooth
and “AD” SAE “A” .750" – 11 Tooth.



ENGINEERING YOUR SUCCESS.

247 SERIES POWER TAKE-OFF SPECIFICATIONS AND TECHNICAL DATA

FRD-9

FORD

CHELSEA®

TORQSHIFT 5R110 (Ford Super Duty MY2010 and prior)

LEFT SIDE ONLY

NO RIGHT SIDE APPLICATIONS AVAILABLE

TRANSMISSION GEAR DATA:

L.H. 6-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

LEFT Side PTO Model	Inter. Torq.	Dir. Rot.	Engine %		Filler Block	Adapter Assy.	Stud Kit	PTO Model	Inter. Torq.	Dir. Rot.	Engine %		Filler Block	Adapter Assy.	Stud Kit
			Hi	Rev							Hi	Rev			

ONE SPEED - TWO GEAR - POWERSHIFT (HYDRAULIC)

247FMKSP-*2 (A) (1)	120	Opp	154	Furnished
247FMKSP-*4 (B) (1)	120	Opp	154	Furnished

Chelsea CGP-P11 Series Pump Specifications for 4x4 or 4x2 Vehicles (3/4" - 11 Tooth Pump Spline)

Order Code w/ PTO (3)	Chelsea Pump Model	Displacement	GPM (1)	Pump (1)	Torque (1)	Pressure PSI		Max Speed RPM		Max Pump
		in ³ /rev		HP	Lbs.-ft.	Intermittent	Continuous	Pump	Engine (2)	Flow GPM
16	CGP-P11A016-5FC	0.37	2.66	6.3	17.8	3990	3625	3500	2273	5.6
26	CGP-P11A026-5FC	0.61	4.39	10.3	29.4	3990	3625	3400	2208	9.0
37	CGP-P11A037-5FC	0.85	6.12	14.4	40.9	3990	3625	2500	1623	9.2
42	CGP-P11A042-5FC	0.98	7.06	16.6	47.1	3990	3625	2350	1526	10.0
55	CGP-P11A055-5FC	1.28	9.22	20.4	57.9	3480	3410	1850	1201	10.3
61	CGP-P11A061-5FE	1.40	10.08	21.3	60.6	3410	3265	2750	1786	16.7
71	CGP-P11A071-5FE	1.65	11.88	21.2	60.3	2900	2755	2350	1526	16.8
82	CGP-P11A082-5FE	1.89	13.61	21.1	60.0	2465	2395	2100	1364	17.2
86	CGP-P11A087-5FE	2.01	14.47	21.1	60.0	2320	2250	2000	1299	17.4

Chelsea FGP-P17 Series Pump Specifications for 4x2 Vehicles Only (7/8" - 13 Tooth Pump Spline)

Order Code w/ PTO	Chelsea Pump Model	Displacement	GPM (1)	Pump (1)	Torque (1)	Pressure PSI		Max Speed RPM		Max Pump
		in ³ /rev		HP	Lbs.-ft.	Intermittent	Continuous	Pump	Engine (2)	Flow GPM
66	FGP-P17A066-2AN	1.53	11.02	25.9	73.6	3625	3625	3100	2013	20.5
87	FGP-P17A087-2AN	2.01	14.47	34.0	96.7	3625	3625	3100	2013	27.0
14	FGP-P17A137-2AN	3.14	22.61	42.5	120.8	2900	2900	2600	1688	35.3

NOTE: FGP-P17 Pumps have a special housing design for mounting to the Ford TorqShift transmission.

(1) GPM & Pump Input HP @ 1200 Engine RPM & 1850 PTO Output Shaft RPM & Continuous Pressure Rating

(2) Max Engine Speed = (Max Pump Speed) / (1.54) for PTO Ratio Increase

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

FORMULAS:

GPM = Cu. In. x .004329 = G/Rev x 1848 RPM's x .90 efficiency

HP = (GPM x Max PSI) / 1747

Torque = (HP x 5252) / 1848 RPM's

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 Diesel engines the Stationary Elevated Idle Control (SEIC) strategy is 1200 RPM and on the Gas engines Stationary Elevated Idle Control (SEIC) strategy is 900 RPM. Therefore for stationary operations a discrete signal, which is supplied with Chelsea 247 wire harness 329415X, 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 P.T.O./Transmission. See Chelsea Owner's/Installation Manual HY25-1715-M1/US or Contact Chelsea Technical Services (662-895-1052) for complete details.

NOTE (A): 247FMKSP-*2 -- 4 x 2 applications, all output options and all pumps listed in the pump chart are available.

NOTE (B): 247FMKSP-*4 -- 4 x 4 applications only and will come with a modified PGP-P11 (CGP-P11) pump with the PTO from the factory when one of the following output option codes is ordered; 16,26,32,37,42,55,61,71,82,86. (See Pump Chart)

NOTE: Standard Parker PGP-P17 pumps may interfere with the transmission shift lever, order Chelsea FGP-P17 Series pumps to assure shifter clearance.

NOTE: 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.

NOTE: 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)

(1) Input Gear Part No. 5-P1387