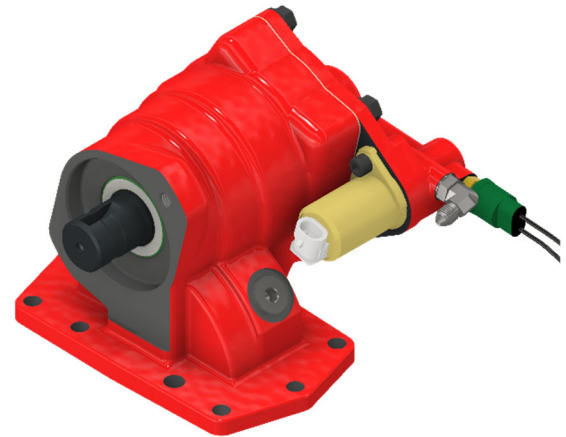


210 Series PTO for FORD 10R140 Transmission

The Parker Chelsea Products Division would like to announce the new 210 Series PTO specific for the 2020 FORD Super Duty. 2020 F250 through F600 trucks will ship with the 10R140 (10-Speed, 10-Bolt PTO aperture) transmission. **Note:** F650 and F750 Medium Duty Trucks will continue to ship with Fords 6R140, 6-Speed transmission.

The 210 features diesel and gas mounting options. The gas option includes an exhaust heat shield (gas wiring harnesses feature a high temperature wire loom). The output speed of this new PTO is 144% (slightly faster than Chelsea's 249 Series). This increase in speed yields greater flow rates out of smaller pumps. One common housing design covers both 4x2 and 4x4 applications. This housing design will also allow for fitment of Parker PGP315 pumps on 4x4 applications.



Launching with the 210 Series are 17 gear pump options featuring flow rates up to 34 GPM. Chelsea Smart Start option is standard for 4x2 driveshaft outputs. Electronic Overspeed Control (EOC) is available for both diesel and gas mounting options.

PTO Applications can be found on FRD-13 of the Chelsea online application database at parker.com/Chelsea, as well as the next revision of the Application Catalog HY25-3000/US releasing January 2020. Torque ratings vary by fuel type and operating mode. FRD-13 will be updated accordingly when FORD announces official specifications on fordbbas.com.

Pricing is available on Parker's A&H Distributor Forum (HY25-5119/US Addendum A).

Documents Included:

- Sales Flyer – HY25-0198-B1/US
- FRD-13 Preview

If you have questions about this bulletin or other technical questions, contact us at:

US: Chelsea Customer/Technical Services **1-888-PH4-TRUK** (1-888-744-8785)
Europe: Parker Hannifin Europe +49 (0) 371 3937 157

Stephen Uszak
Product Manager
Chelsea Products Division
Motion Systems Group

Chelsea® 210 Series

For Ford 10R140 Super Duty Transmission



Overview:

With the launch of the Ford 10R140 Transmission, Parker Chelsea is proud to offer our 210 Series Power Take-Off (PTO) specifically designed for this application. The 10-Bolt housing design of the 210 Series allows for larger pump applications when compared to our 249 Series (on Ford 6R140 Transmissions). Streamlined kitting offers 17 Parker gear pump options available in the same package as the PTO. The intelligent design of our 210 Series makes it the best choice for Ford applications.

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



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

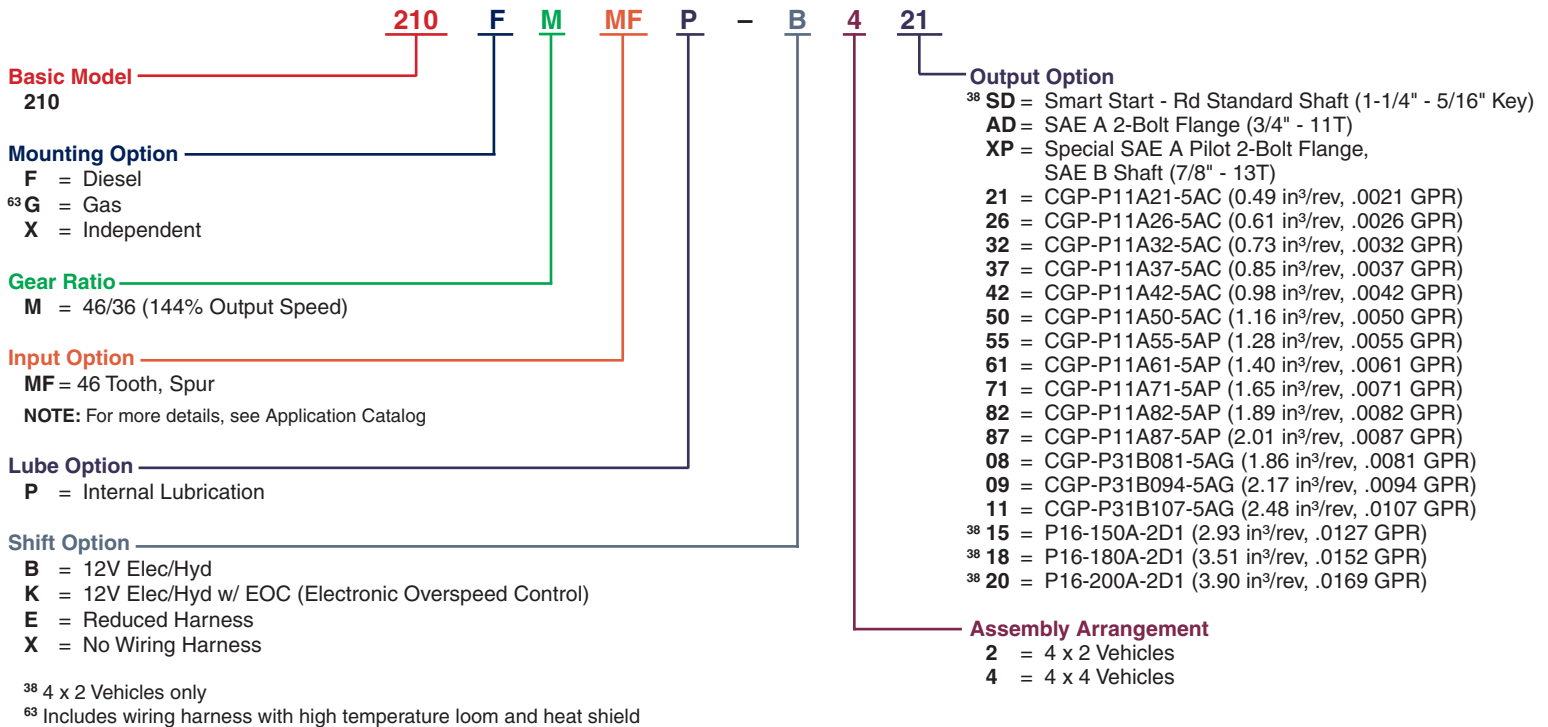
Product Features and Benefits:

- **Patent(s) Pending Noise Suppression System** – Dampens gear rattle between transmission and PTO
- **Standard Smart Start Drive Line Output** – Shock load dampening feature to protect driven equipment
- **Simplification** – Same housing can be used for 2WD and 4WD installations
- **Continuous Torque Rating** – Up to 300 lbs-ft from transmission PTO drive gear
- **Ease of Ordering** – PTO, pump, wiring harness and shift kits available under one part number and package
- **Standard SAE Output Flange and Shafts** – Allowing for wider variety of flows and pressures



ENGINEERING YOUR SUCCESS.

210 SERIES POWER TAKE-OFF SPECIFICATIONS AND TECHNICAL DATA



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 in ³ /rev	GPM (A)	Pump (A) HP	Torque (A) ft-lbs	Pressure PSI		Max Speed RPM		Max Pump Flow GPM
						Intermittent	Continuous	Pump	Engine (B)	
21	CGP-P11A021-5AC	0.49	3.30	7.0	24.6	3988	3625	4000	1736	4.8
26	CGP-P11A026-5AC	0.61	4.11	8.7	30.7	3988	3625	3600	1736	5.9
32	CGP-P11A032-5AC	0.73	4.91	10.4	36.7	3988	3625	3500	1736	7.1
37	CGP-P11A037-5AC	0.85	5.72	12.1	42.7	3988	3625	3300	1736	8.3
42	CGP-P11A042-5AC	0.98	6.60	14.0	49.3	3988	3625	3000	1736	9.5
50	CGP-P11A050-5AC	1.16	7.81	16.5	58.3	3770	3625	3000	1736	11.3
55	CGP-P11A055-5AP	1.28	8.62	17.1	60.5	3480	3410	2800	1736	12.5
61	CGP-P11A061-5AP	1.40	9.43	18.0	63.4	3408	3265	2800	1736	13.6
71	CGP-P11A071-5AP	1.65	11.11	17.9	63.0	2900	2755	2300	1597	14.8
82	CGP-P11A082-5AP	1.89	12.72	17.8	62.8	2465	2395	2300	1597	16.9
87	CGP-P11A087-5AP	2.01	13.53	17.8	62.7	2320	2250	2000	1389	15.7

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

Order Code w/ PTO	Chelsea Pump Model	Displacement in ³ /rev	GPM (A)	Pump (A) HP	Torque (A) ft-lbs	Pressure PSI		Max Speed RPM		Max Pump Flow GPM
						Intermittent	Continuous	Pump	Engine (B)	
8	CGP-P31B081-5AG	1.86	12.52	24.1	85.1	3300	3300	3000	1736	18.1
9	CGP-P31B094-5AG	2.17	14.61	24.7	87.2	2900	2900	3000	1736	21.1
11	CGP-P31B107-5AG	2.48	16.70	24.4	86.0	2500	2500	3000	1736	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	Chelsea Pump Model	Displacement in ³ /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	19.73	34.5	121.9	3000	3000	2800	1736	28.5
18	P16-180A-2D1	3.51	23.63	30.3	107.1	2200	2200	2500	1736	34.2
20	P16-200A-2D1	3.90	26.26	30.6	108.1	2000	2000	2200	1528	33.4

(A) GPM & Pump Input HP @ 1200 Engine RPM (1488 PTO Output RPM - 144% Ratio) & Continuous Pressure Rating with 90% efficiency rating considered.

(B) Max Engine Speed = (Max Pump Speed) / (1.44) for PTO Ratio Increase. Max Speed determined by Max PTO output speed of 2500.

(C) Minimum ideal speed for Ford Super Duty in stationary mode is 900 RPM.

210 GEAR PUMP OPTIONS: The Transmission PTO drive gear delivers up to 300 lbs.-ft. torque to PTO. Consult fordabas.com for power and torque limitations.

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

10R140 Diesel F250-600; MY2020-Current
 10R140 Gas F250-600; MY2020-Current

LEFT SIDE ONLY

TRANSMISSION GEAR DATA:

L.S. 10-BOLT Opening Gear FORWARD of Centerline
 46 Teeth - SPUR

PITCH LINE TO APERTURE FACE:

1.75" (44.45MM)

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

PTO Model	Torq	Dir Rot	Engine %		Filler Block	Adapter Assy	Stud Kit	PTO Model	Torq	Dir Rot	Engine %		Filler Block	Adapter Assy	Stud Kit
	I / C †		Fwd	Rev					I / C †		Fwd	Rev			
ONE SPEED - TWO GEAR - POWERSHIFT (HYDRAULIC)															

210FMMFP-*2 (1)	I	Opp	144				Furnished								
210FMMFP-*4 (1)	I	Opp	144				Furnished								
210GMMFP-*2 (1)	I	Opp	144				Furnished								
210GMMFP-*4 (1)	I	Opp	144				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: If any Chelsea PTO is purchased without a Chelsea supplied activation switch, warning light, and warning light installation instructions, which are normally included with the PTO, it is the full responsibility of the installer to ensure the PTO is properly installed and electrically interfaced with the OE truck communication system. The installer assumes full responsibility for warning the operator of the truck that the PTO is engaged or disengaged. Failure to adequately warn the operator could result in death, personal injury, and/or property damage.

CAUTION: FORD PTO Driver Gear Torque ratings and HP vary fuel type (Gas or Diesel) and operating mode (Mobile or Stationary). Consult

(1) Input Gear Part No. 5-P-1597

