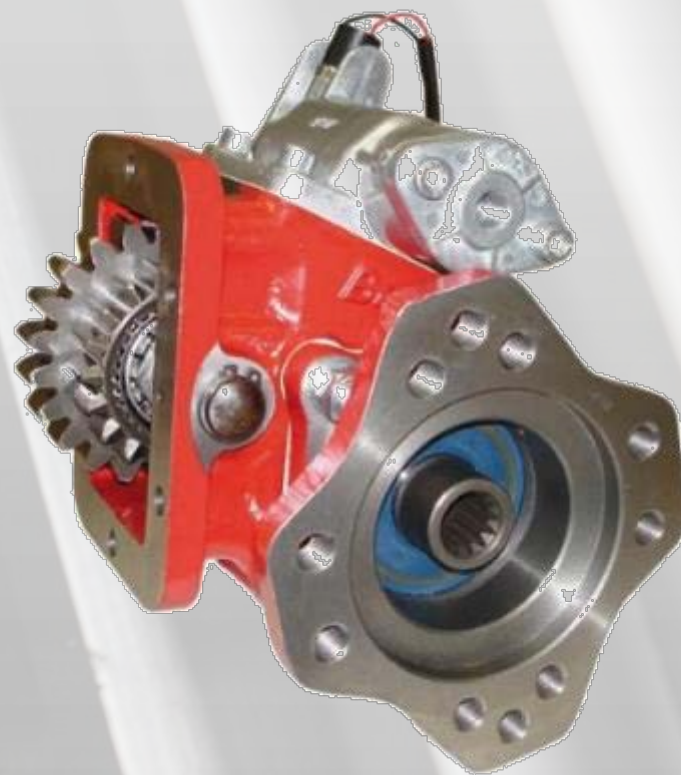


- **Oversize Pump flange bolts (Superior flange stability)**
- **TIMKEN/SKF/NTN and other(High Quality) Bearings**
- **Tapered Roller Bearings (Better side thrust capabilities)**
- **Viton Seals & O'rings (Less impervious to chemicals)**
- **Cast Iron Housings (Quieter/Stronger than aluminum)**
- **Garlock gaskets (Very high quality= chemical/oil resistant)**
- **Hot shift models have all necessary hoses and fittings standard**
- **DIN Output Options + Adapters (Versatility)**
- **HEAVY DUTY UNITS = Smooth engagement**
- **Engineering Support**

- The 1000 series has been engineered to work with existing transmissions. It is a durable with a wide range of input gears shifters, speed ratios and output shafts.
- Competitive with the
 - TG6 Muncie
 - 442 Chelsea
- Torque rating up to 250 lb. ft.



1000

X

J

N

01

1

RA

SERIES:

1000 Standard Mounting, 6 bolt
1010 Deep mount, 6 bolt

VERSIONS:

X Standard
G Greaseable Output Shaft
P Oil pressure lube idler Shaft

INTERNAL RATIOS:

1:0.55 (B) → 801034
1:0.73 (C) → 800534
1:0.8 (E) → 800634
1:0.95 (J) → 800734
1:1.25 (O) → 800834
1:1.50 (S) → 801434
1:1.65 (T) → 800934

SHIFTER TYPE:

C Cable
W Wire with 10' Cable
F Electric 24V
M Constant Mesh
N Air without 101 Air Kit

902099 POS 1/4
903599 POS 2/3

902099 POS 1/4
903599 POS 2/3

INPUT GEAR:

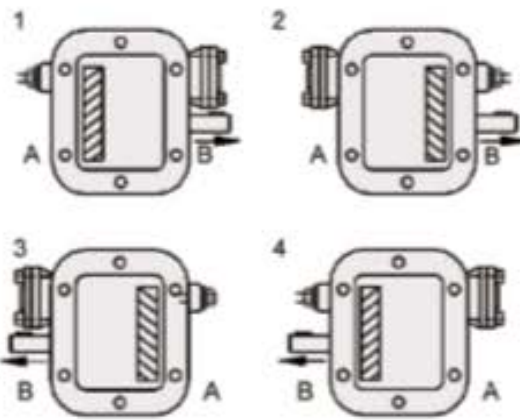
01 Fuller series (R/675)	27 Eaton / Fuller (R/692)
02 Universal (R/683)	28 Fuller (R/771)
03 Spicer (R/736)	30 Eaton / Fuller (R/698)
05 Spicer (R/677)	33 Spicer (R/697)
06 Fuller (TREMEC) (R/679)	34 Spicer (R/696)
07 Navistar (R/693)	36 New Process (R/739)
08 Spicer (R/682)	39 Warner (R/741)

OUTPUT TYPE:

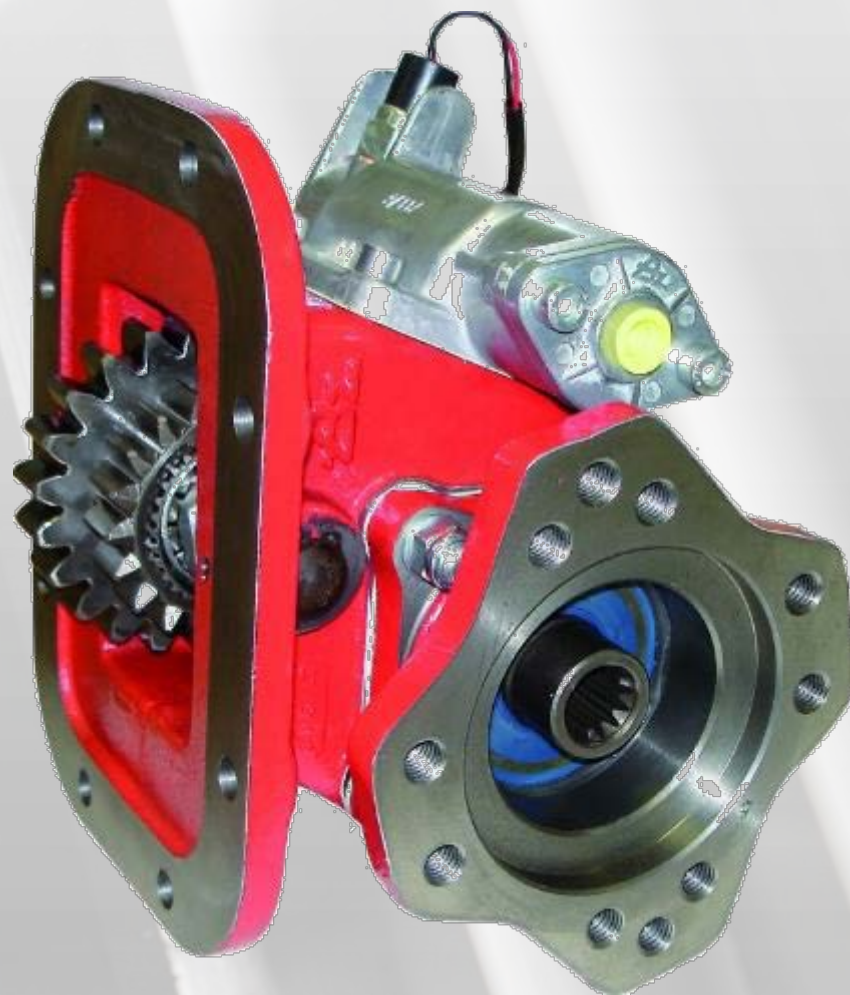
DA ISO 4 bolt
IA Flange SAE 1100
IB Flange SAE 1300
IC Flange SAE 1400
SE SAE Type 1 1/4" round shaft
SF SAE "A" 2 bolt 9T
SH SAE "AA" 2 bolt 11T
RA SAE "B" 2/4 bolt 13T, rotatable
RB SAE "BB" 2/4 bolt 15T, rotatable
TP Tyron pump (Chelsea type)
UN UNI 3 bolts 6T

ASSEMBLY ARRANGEMENTS:

- 1** Right, Forward
- 2** Right, Rear
- 3** Left, Forward
- 4** Left, Rear



- The 2000 Series PTO works with most of the existing transmissions. It is extremely durable with a wide range of input gears, shifters, speed ratios and output
- Competitive with
 - TG8 Muncie and
 - 489 Chelsea
- Torque rating up to 250 lb. ft.



- Hot Shift Power Take-Off
- Pneumatic & Hydraulic shifting
- Designed for ease of installation on older AT500, MT600, HT700 series 6 bolt Allison
- Low profile housing
- 310 lb-ft rating
- Competitive with
 - 271 Chelsea
 - CS6 Muncie



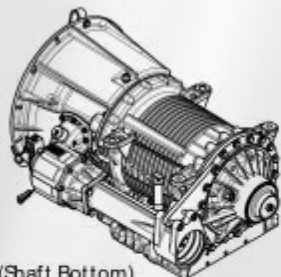
- Allison MD/HD/ 3000/4000 Series Hot Shift 10 bolt PTO
- High Torque 500 lb. ft.
- Ratios from 70% to 200% of engine RPM
- Competitive with
 - 859 Chelsea
 - CS10 Muncie “Better Profile”



3131RP 10-Bolt Standard Output Types & Brackets

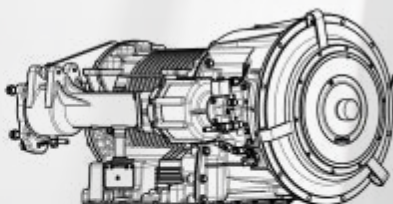


3000 (MH /RDS/TRV) P/N. 9070799

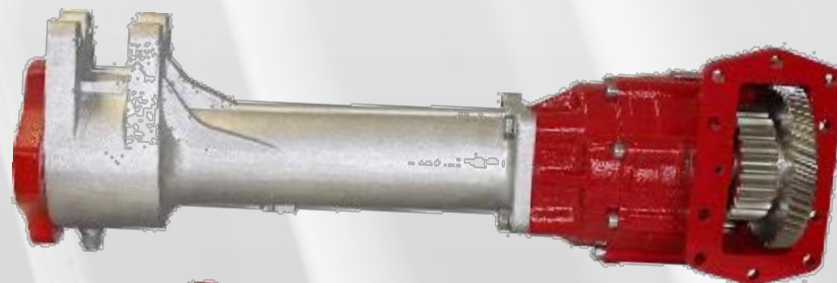


(Shaft Bottom)

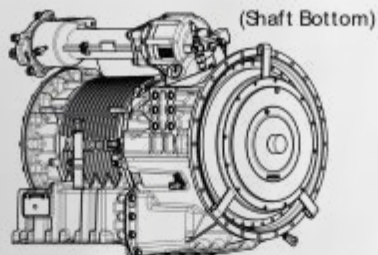
3000 (MH /RDS/TRV) P/N. 9076999



(Shaft Up)



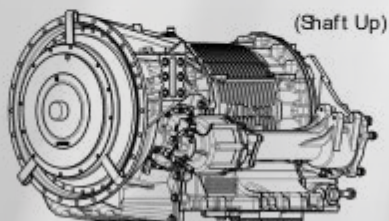
4000 (EVS/MH /RDS/TRV) 4500 (EVS/RDS) P/N. 9075999



(Shaft Bottom)

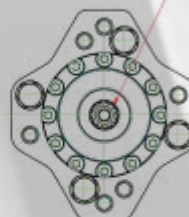


4000 (EVS/MH /RDS/TRV) 4500 (EVS/RDS) + Retarder P/N. 9076699



(Shaft Up)

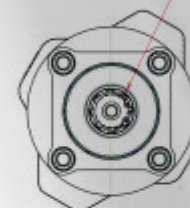
SAE B - 13Teeth
SAE B8 - 15Teeth



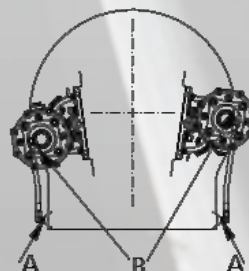
SAE C - 14Teeth



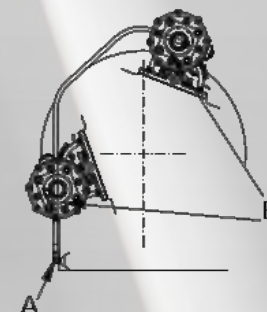
DIN 5462 - A8x32x36



- Allison MD/HD/3000/4000 series constant mesh PTO
- SAE "C", ISO 4 bolt (Din 5462), SAE 1300/1400
- 73% to 160% of engine RPM
- Torque rating to 500 lb. ft.
- Competitive with
 - CD40 Muncie
 - 877 Chelsea



SERIES MD
Rear view



SERIES HD
Rear view

- Hot shift 6 bolt PTO with multiple transmission applications
- Allison 1000/2000
- Aisin (Dodge)
- Eaton/Fuller
- Pneumatic & Hydraulic shifting
- All input gears from 1000/2000
- Ratios from 99% to 205%
- Competitive with
 - 270/271 Chelsea
 - CS6 Muncie



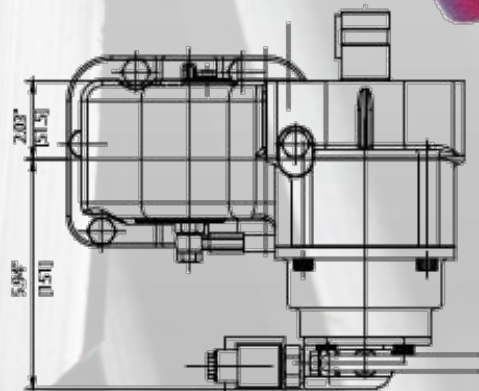
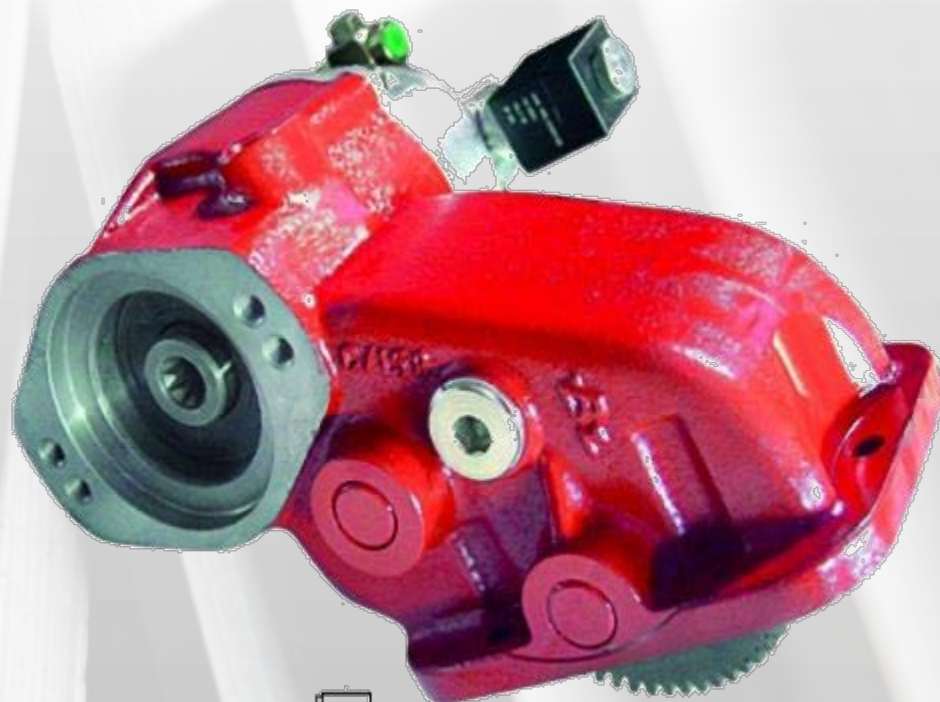
Note: The 3300 Series makes it possible to work with shaft-top or shaft bottom on either side, right or left location.

- Allison MD/HD/ 3000/4000 series 10 bolt PTO
- Low profile design competes with Chelsea 280
- Torque ratings 410 lb. ft. max
- Ratios from 55% to 220%
- Internal lubrication eliminates external hose line
- SAE "B", "BB", DIN 5462, 1 ¼ inch round keyed shaft, 1100, 1300, 1400 Companion flange

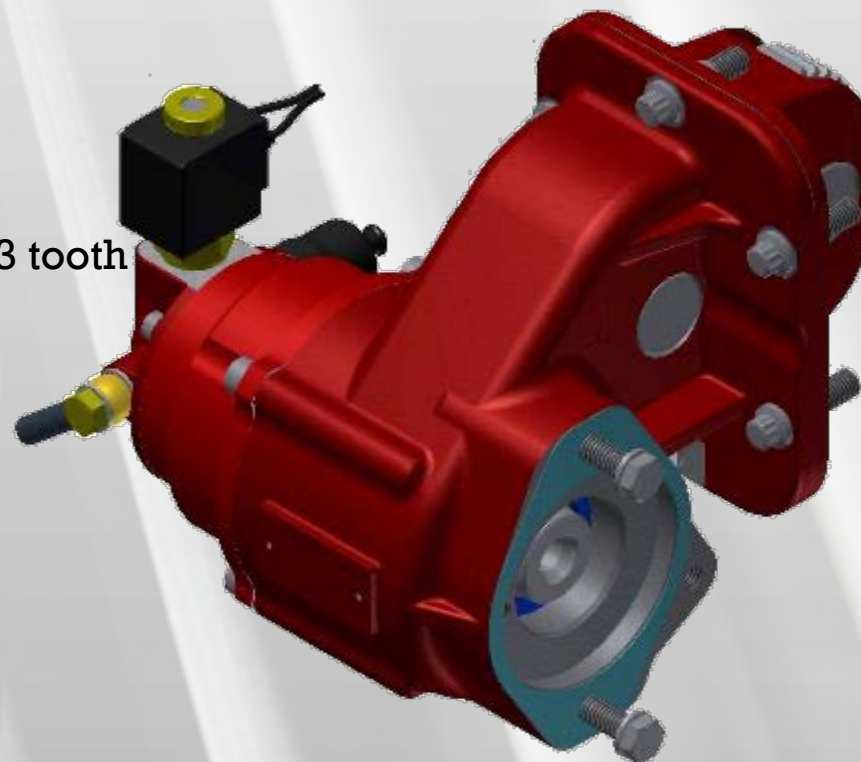


Clutch type PTOs are commonly used on refuse, utility, and emergency equipment—garbage trucks, aerial bucket trucks, and fire/rescue vehicles.

- Hot shift PTO for Ford 5R110 with “GAS” engine
- 148% of engine RPM
- 120 lb. ft. torque
- SF = SAE “A” 5/8th 9 spline hydraulic mount/shaft with two clocking positions (SE= SAE 1 ¼ shaft)
- SAE 1 ¼ inch keyed round shaft
- Competitive with
 - 245/246 Chelsea
 - FR64/67 Muncie



- Hot shift 6 bolt PTO for the Ford “TorqueShift” 6R140 6 speed
- 134% of engine RPM
- 200 lb. ft. torque
- Output same as 3900 plus SI = SAE A 13 tooth
- SAE 1 ¼ inch keyed round shaft
- Uses two piece mounting for ease of installation
- Competitive with
 - 248/249 Chelsea
 - FR66 Muncie



FORD:

Hot shift 10 bolt PTO for the Ford
10R140 in MY 2020

Outputs:

- SAE A 13 tooth
- SAE 1 ¼ keyed round shaft
- DIN

Competitive with:

- 210 Chelsea
- F20 Muncie



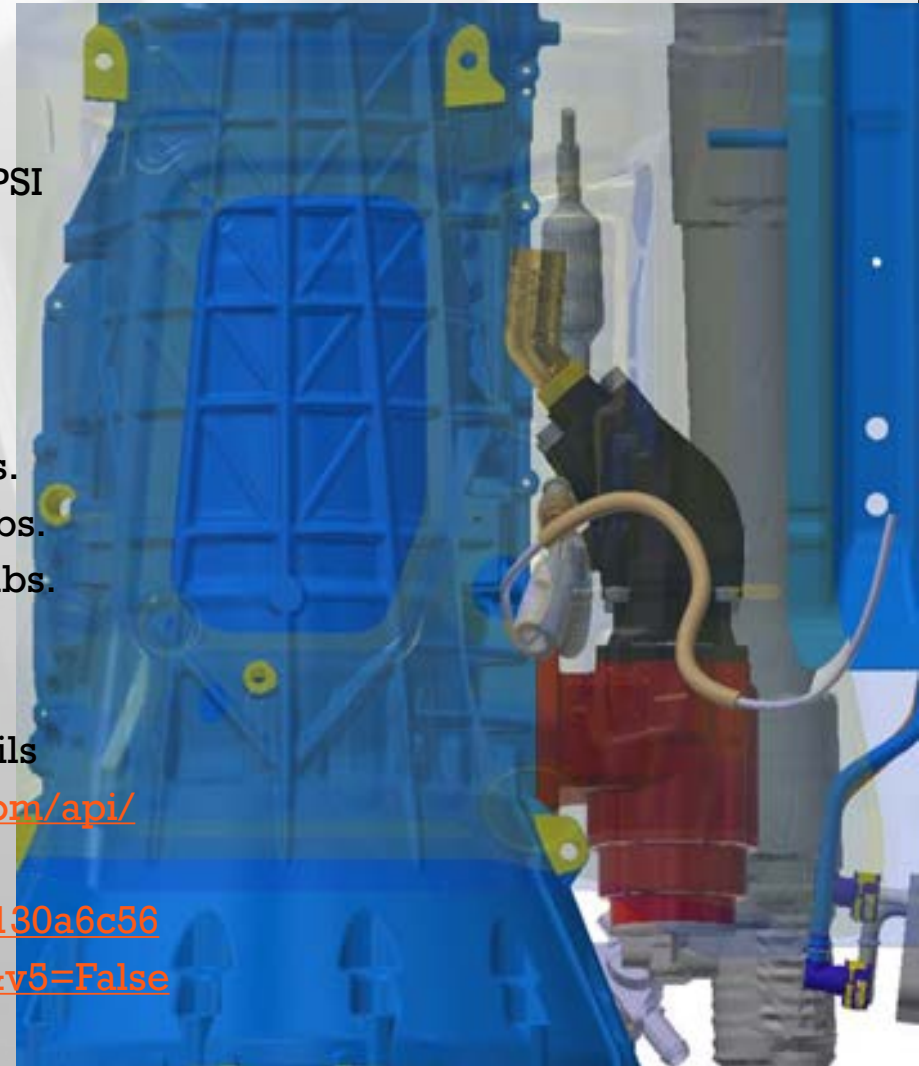
MAIN DATA	
INTERMITENT TORQUE	Up to 230 lb.ft
PTO INTERNAL RATIO	118%
TOTAL RATIO ENGINE-PTO	130%
Output:	DIN / SAE A

NEW 3940 Series 10 bolt Hot Shift PTO



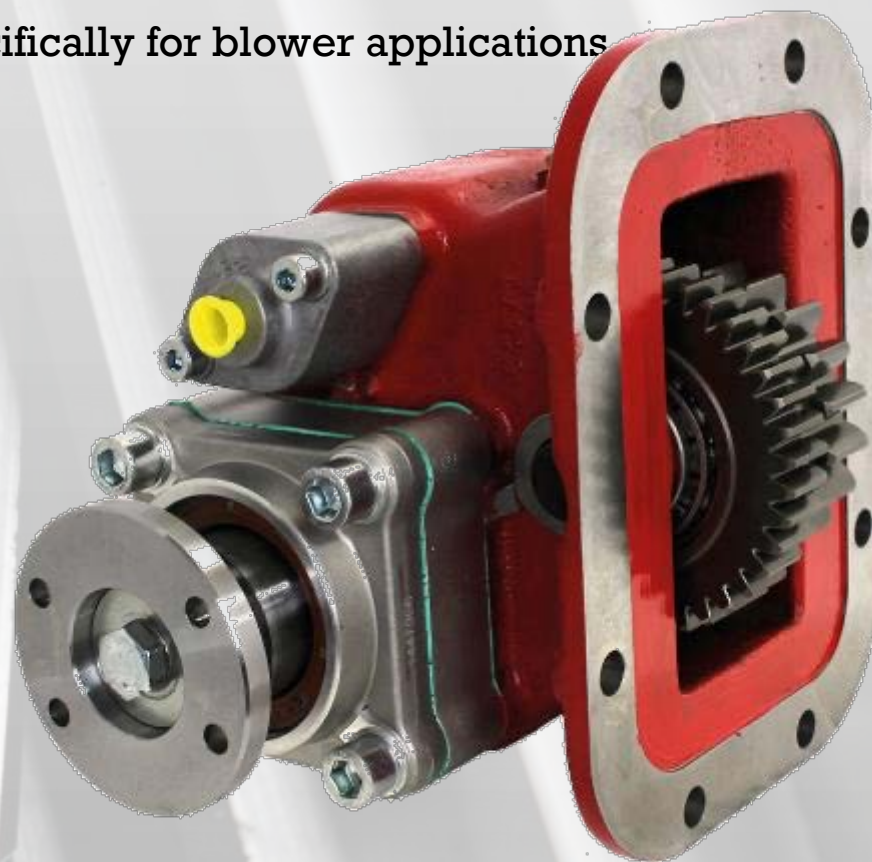
Notes & Specs:

- Reuse the gasket on tranny.
 - Tap into line pressure port on drivers' side, 200 PSI
 - 60 HP Diesel Stationary.
 - 40 Hp Gas Stationary.
 - Diesel Stationary = 300 ft-lbs.
 - Diesel Mobile 750-900 engine rpm = 150 ft-lbs.
 - Diesel Mobile above 900 engine rpm = 200 ft-lbs.
 - Gas 7.3L Stationary =250 ft-lbs. Mobile = 150 ft-lbs.
 - Gas 6.2L Stationary =250 ft-lbs. Mobile = 115 ft-lbs.
-
- Consult Ford Body Builders Layout Book for details
- <https://madocumentupload.marketingassociates.com/api/Document/GetFile?v1=5097845&v2=102519094303&v3=60&v4=41a86130a6c56dfa568f0ba186826ea3025ceb4d74679df335a0a035&v5=False>

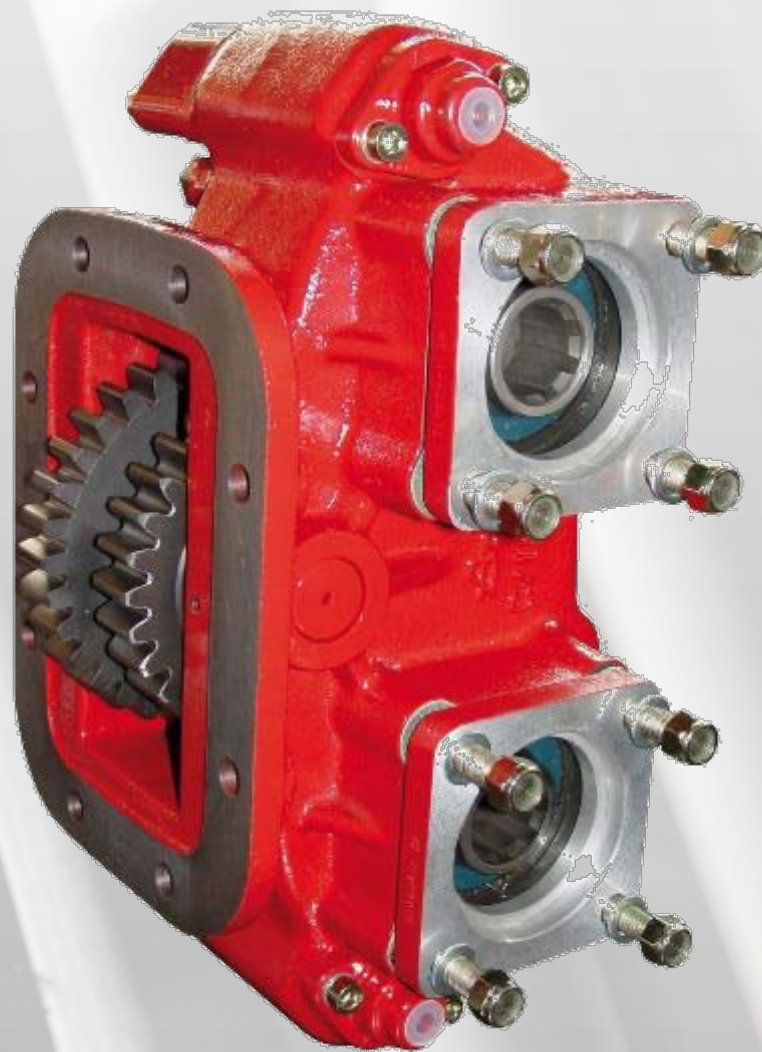


4x4 Ford vehicle
2020

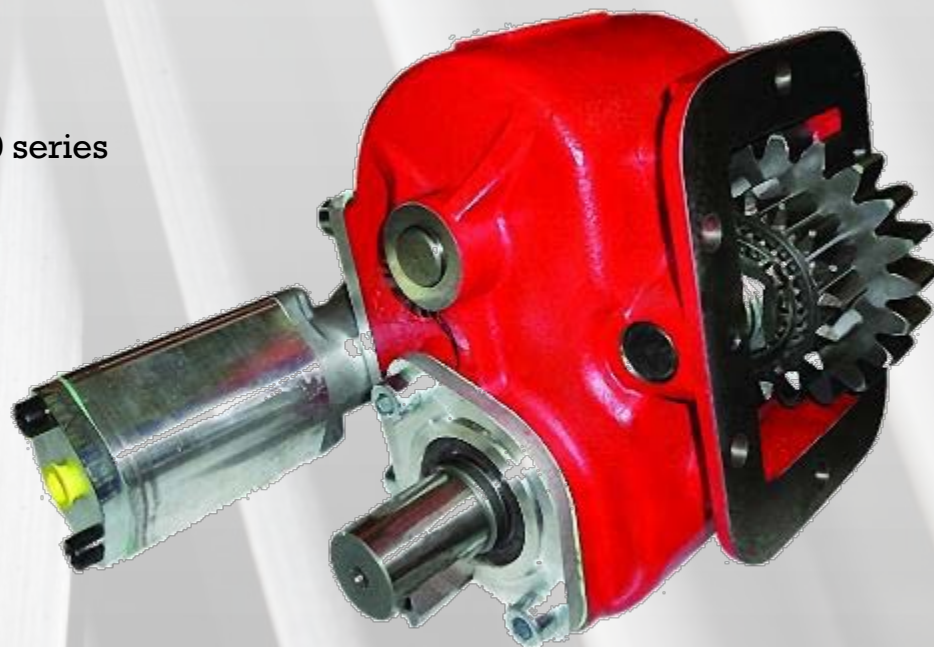
- Eaton-Fuller/ Rockwell-Meritor/ Spicer/ Mack
- Heavy duty 8 bolt PTO designed specifically for blower applications
- Up to 470 lb. ft. torque/ 90 HP
- Up to 191% of engine RPM ratios
- Low profile design & lighter (35lbs)
- Air Shift (pneumatic)
- Cost effective compared to
 - Chelsea 880
 - Muncie 828



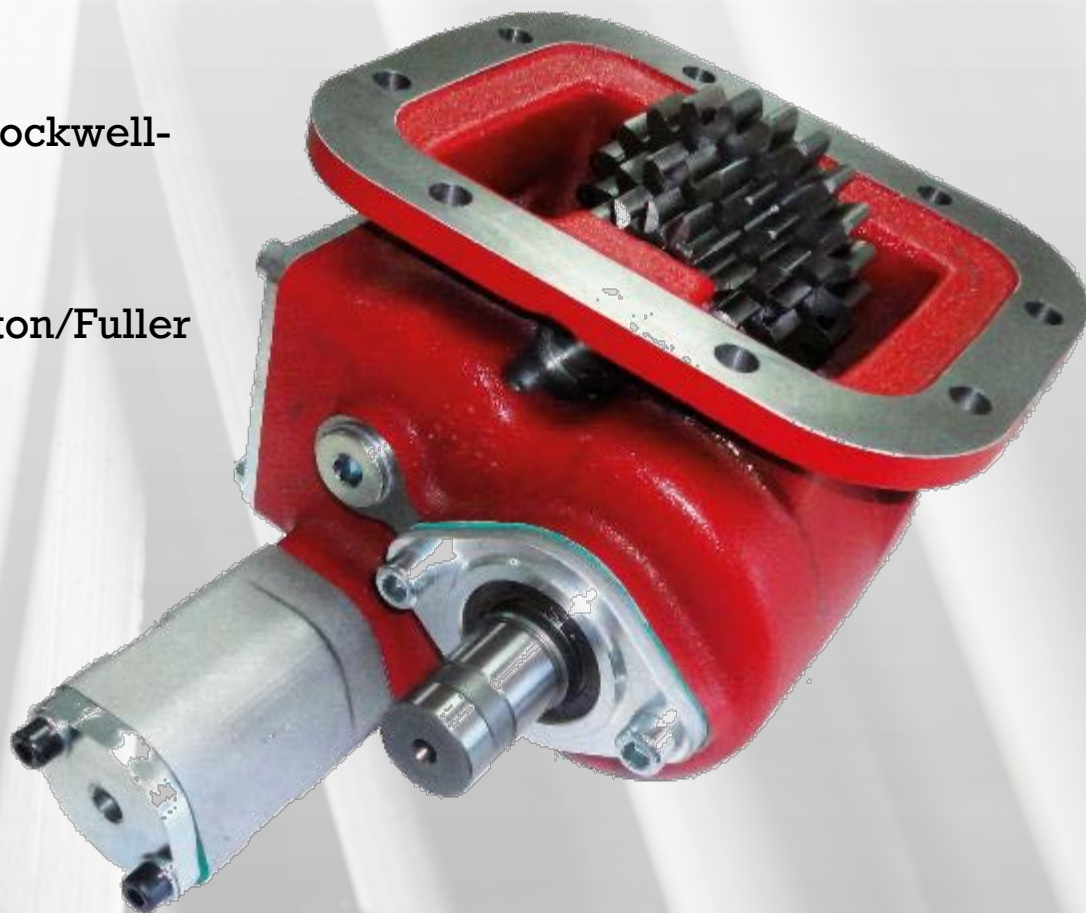
- MANUAL PTO'S: Eaton-Fuller/
Rockwell-Meritor/Spicer/ Mack
- Eliminates the need for an additional 6
bolt PTO with adapter **on** Eaton/Fuller
- Ideal for blower driveline on output # 1
& end dump/ walking floor trailer on
output # 2
- 500 lb. ft./ 90 HP
- SAE "B", "BB", "C" ,Din 5462, 1 ¼ inch
keyed round shaft, 1300/1400
companion flange



- MANUAL PTO'S: Eaton-Fuller/ Rockwell-Meritor/Spicer/ Mack
- Forward & Reverse output with 1 ¼ inch keyed round shaft
- 210 lb. ft. torque/ 30 HP
- Air shift or lever shift
- Uses the same input gears as the 1000/2000 series
- Competitive with
 - 340 Chelsea
 - RL6 Muncie



- Low speed-forward and reverse
- MANUAL PTO’S: Eaton-Fuller/ Rockwell-Meritor/Spicer/ Mack
- Average 80% engine RPM on Eaton/Fuller
- Air shift is Standard
- 210 Lb. Ft./30 HP
- 1 ¼ inch keyed round shaft
- Competitive with
 - 340 Chelsea
 - RL6 Muncie



- Heavy Duty Forward and Reverse
- MANUAL PTO'S: Eaton-Fuller/
Rockwell-Meritor/Spicer/Mack
- Designed for high torque winches
- 500 lb. ft. torque/95 HP
- SAE 1 ½ & 1 ¼ inch keyed round
shaft, 1400 companion flange, DIN
5462
- The 8000 series is the only reversible
PTO in the market that comes
standard with air shift



- 8500 designed for maximum torque & HP
- MANUAL PTO'S: Eaton-Fuller/ Rockwell-Meritor/Spicer/Mack
- Up to 500 lb. ft. torque/ 95HP
- Comes standard with air shift
- Same smooth shift design as our 4100
- At 60 lbs. it is the lightest Heavy Duty PTO
- More economical than the 880 Chelsea or the 828 Mun
- SAE"BB","C", DIN5462, 1400 companion flange



Base PTO 1196K03, 116504 Quill Shaft

- Pneumatic Shift
- Max. Torque: 600 Lb.ft
- Max. Power: 84 HP
- Optional lube line 9070599
- 116504 Quill Shaft



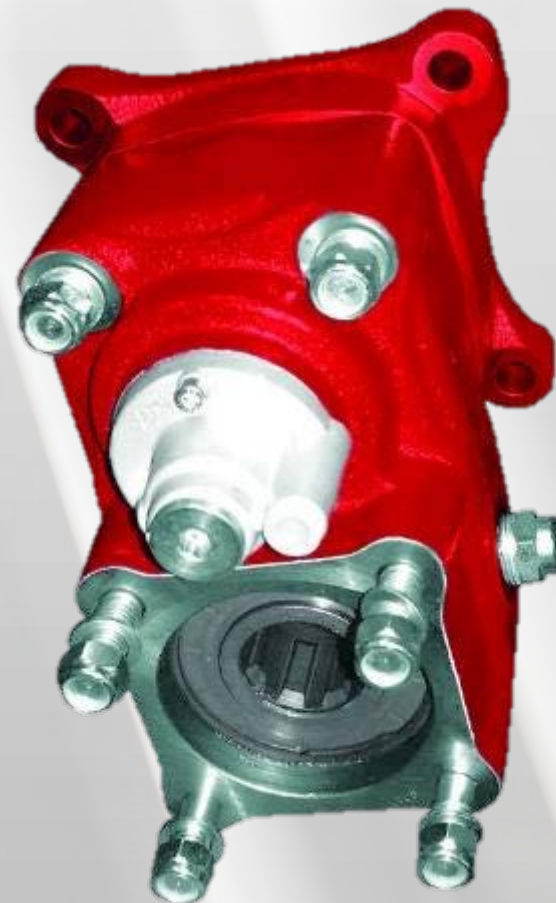
Optional Adapter
Shaft



Base PTO 1198K03

- Two gear
- Pneumatic Shift
- Max. Torque: 310 Lb.ft
- Max. Power: 42 HP
- 116504 Quill Shaft

Optional Adapter
Shaft



Base PTO 11113K03

- Two gear – Offset Housing
- Heavy Duty
- Pneumatic Shift
- Max. Torque: 465 Lb.ft
- Max. Power: 64 HP

Base PTO 11112K03

- Two gear – Offset Housing
- Heavy Duty
- Pneumatic Shift
- Max. Torque: 410 Lb.ft
- Max. Power: 57 HP

Base PTO 11111K03

- Two gear – Offset Housing
- Heavy Duty
- Pneumatic Shifting
- Max. Torque: 360 Lb.ft
- Max. Power: 50 HP

Optional Adapter
Shaft

R1000, SR1700, ... (L=267 mm)	R1000, ... Retarder (L=302 mm)	DT-2412C, V2412, (L=229 mm)
110104	110304	116504



Base PTO 11107K---

- Three Independent Outputs
- Heavy Duty
- Pneumatic Shift
- Max. Torque: 370 Lb.ft
- Max. Power: 71 HP (*)
- 116704 Quill Shaft



Optional Adapter
Shaft



Outputs 1, 2 & 3 can be combined
among: Pump, Drive Flange or Null
Output

P/N: 7022904

- **REPTO (Rear Engine PTO)**
- Volvo Engines D13 & D16 Series
- Various Mack Engines
- Continuous Duty/Non-Shiftable
- DIN 5462 Output
- Max. Torque: 400 Lb.ft
- Max. Power: 64 HP





Part Number Breakdown Codificación PTO

Series Serie	Shaft Type Tipo de eje	Internal Ratio Relación interna	Transmission Maker Marca / Modelo	Output Type Tipo de Salida
95	X	13	E	IB
	X – Estándar -Standard	10 – 100% 13 – 130% 15 – 150%	E – Endurant	SA – SAE B 13T. SB – SAE BB 15T. DA – ISO 4 -DIN 5462 IB – Flange SAE 1300 IC – Flange SAE 1400

NOTE! PTO must have indicator switch part # **9024999** for Endurant circuit feedback.



Part Number Breakdown Codificación PTO

Series Serie	Shaft Type Tipo de eje	Internal Ratio Relación interna	Transmission Maker Marca / Modelo	Output Type Tipo de Salida
120	X	13	D	SB
	X – Standard R – Retarder A – Aquatarder	13 – 130%	D – Daimler	SB – SAE BB 15T. DA – ISO 4 IB – Flange SAE 1300 IC – Flange SAE 1400



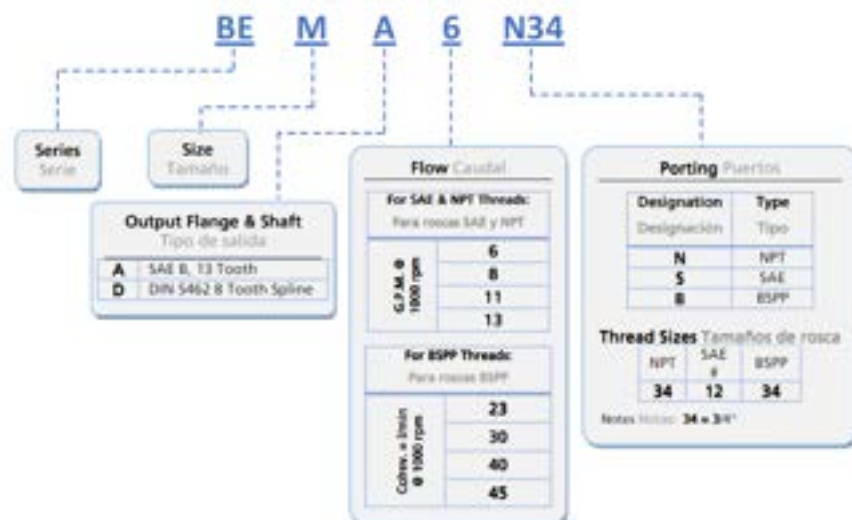
Pumps

BEZARES USA LTD.

BEM Series Gear Pump

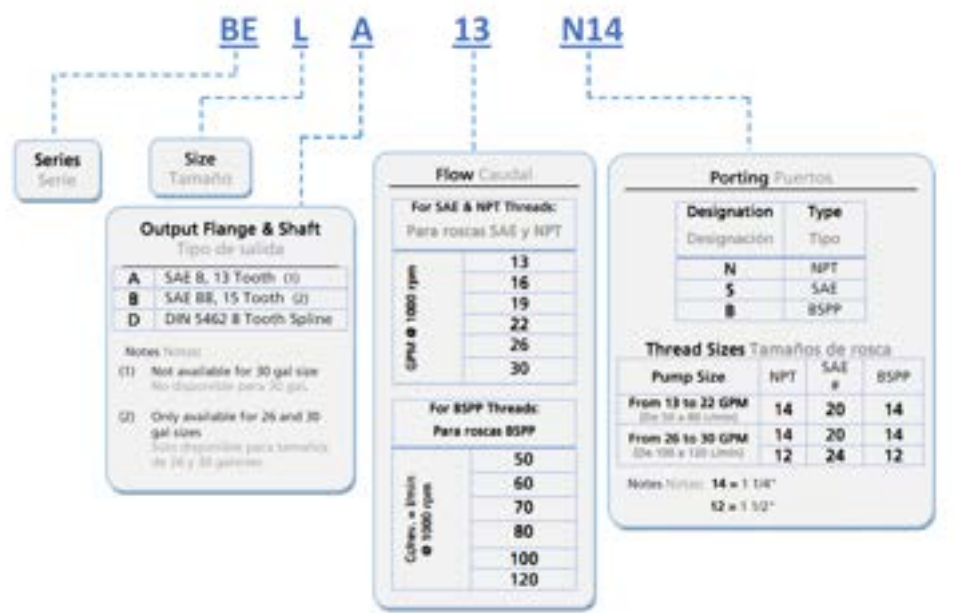
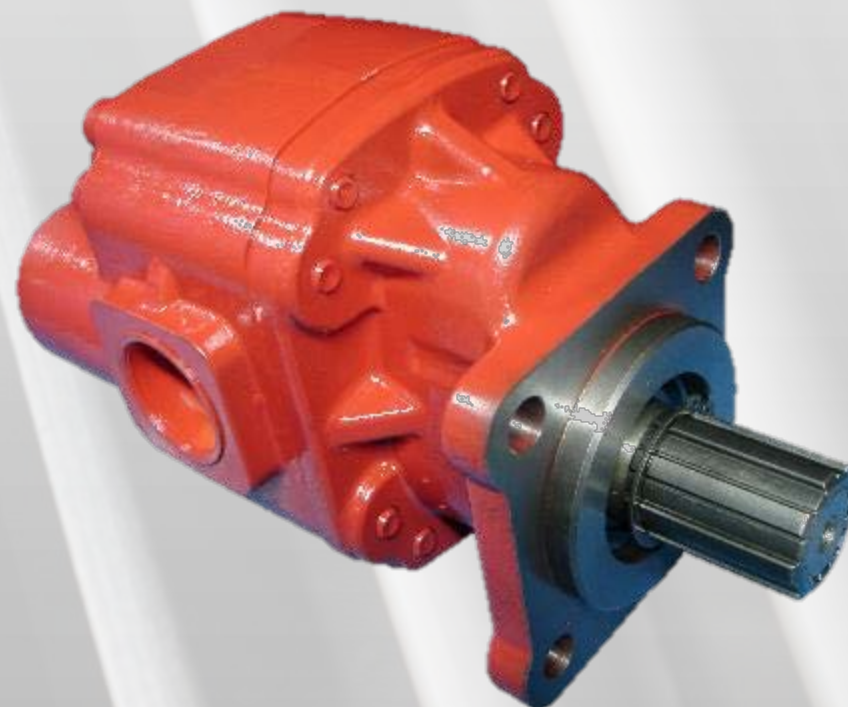
- Bi-Rotational
- Side and Rear Ports
- Bushing Style Pump
- Wide Range Of Flows
- High Pressure Gear Pump

BE	M	A	6	N34
Series	Size	Output	Flow	Porting



- **BEL Series Gear Pump**
- Bi-Rotational
- Side and Rear Ports
- Bushing Style Pump
- Wide Range Of Flows
- High Pressure Gear Pump

BE	L	A	13	N14
Series	Size	Output	Flow	Porting



BZ Series Dump Pump

- All in one Pump
- Direct or Remote Shafts
- Built-In Pressure Relief Valve
- Flows From 16-39 GPM
- Max. Pressure: 2500 PSI (*)
- Bearing Style pump

BZ	102	L	AS	25
Series	Type	Rotation	Control	Displacement



FR Series

- Spherical Head Pistons
- Long Life Span
- High Efficiency and Compact
- Max. Displacement: 6.71 cu in. (*)
- Max. Pressure: 4500 PSI (*)



TDZ vane pumps are characterized by their small size in relation to the power output, quiet operation, flexibility of the positions of oil input and output/s and low maintenance costs.

The construction of the pump offers a replaceable cartridge containing all moving parts this ensures low maintenance costs.





Valves

BEZARES USA LTD.

Tipping Valve BZD 180 Series

- Single or Dual Pressure Relief
- Piston Check Valve
- Max. Flow: 47.5 GPM
- Max. Pressure: 5100 PSI



3Way Pneumatic Flow Diverter

- Pneumatic Shift
- Max. Flow: 66 GPM
- Max. Pressure: 5075 PSI (*)

