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climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



Chelsea® Power Take-Off

Applications Catalog



ENGINEERING YOUR SUCCESS.

WARNING

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS 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 and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.

The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by Parker Hannifin Corporation and its subsidiaries at any time without notice.

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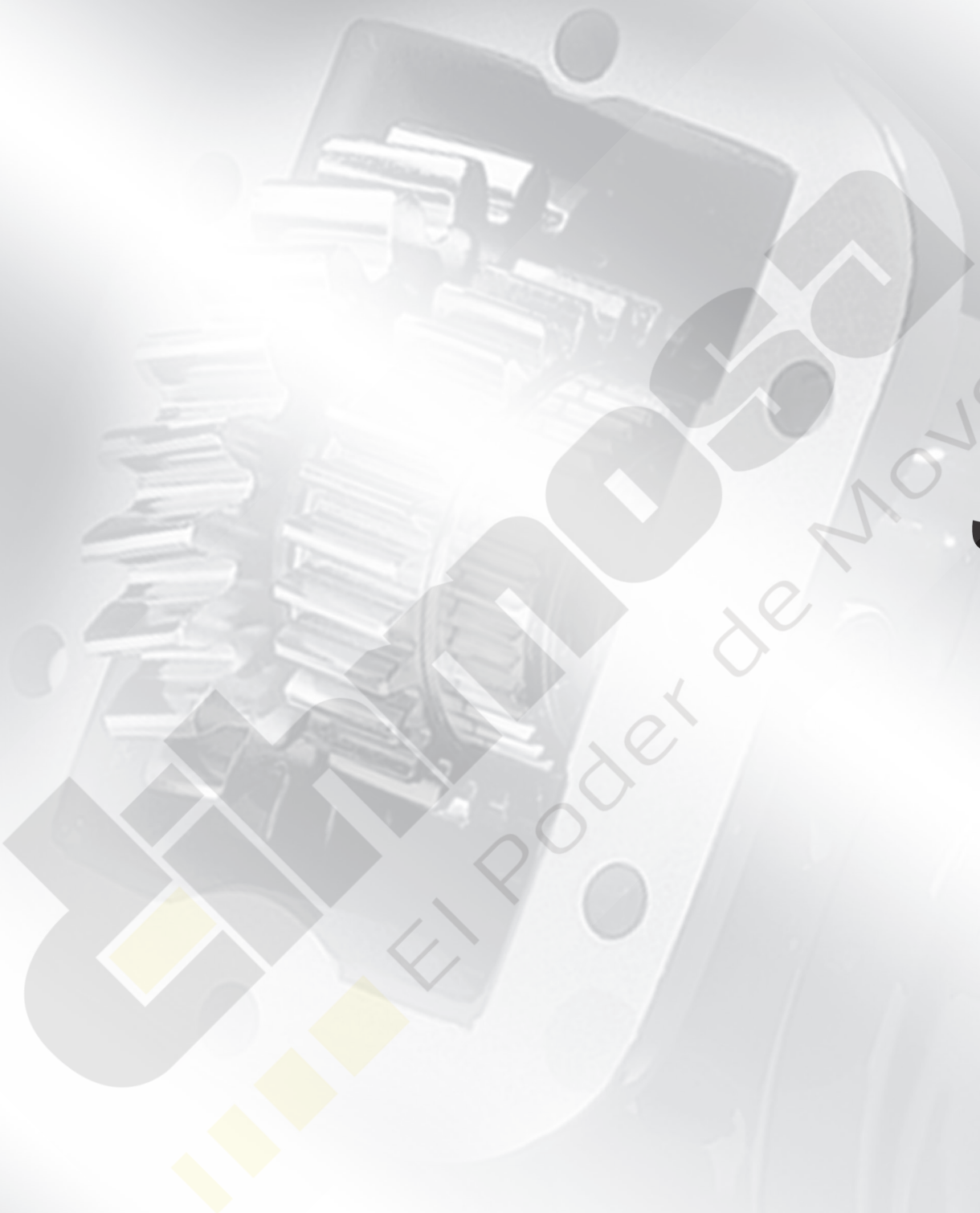
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Section 5



General Safety Information





General Safety Information

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The following instructions are for your safety and the safety of the end user. Read them carefully and make sure you understand them thoroughly.

To Prevent Injury to Yourself and/or Damage to the Equipment:

- Read carefully all owner's manuals, service manuals, and/or other instructions.
- Always follow proper procedures, and use proper tools and safety equipment.
- Be sure to receive proper training.
- Never work alone while under a vehicle or while repairing or maintaining equipment.
- Always use proper components in applications for which they are approved.
- Be sure to assemble components properly.
- Never use worn-out or damaged components.
- Always block any raised or moving device that may injure a person working on or under a vehicle.
- Never operate the controls of the Power Take-Off (P.T.O.) or other driven equipment from any position that could result in getting caught in the moving machinery.

Proper Matching of P.T.O.

 **WARNING:** A Power Take-Off must be properly matched to the vehicle transmission and to the auxiliary equipment being powered. An improperly matched Power Take-Off could cause severe damage to the vehicle transmission, the auxiliary driveshaft, and/or the auxiliary equipment being powered. Damaged components or equipment could malfunction causing serious personal injury to the vehicle operator or to others nearby.

To avoid personal injury and/or equipment damage:

- Always refer to Chelsea catalogs, literature, and owner's manuals and follow Chelsea recommendations when selecting, installing, repairing, or operating a Power Take-Off.
- Never attempt to use a Power Take-Off not specifically recommended by Chelsea for the vehicle transmission.
- Always match the Power Take-Off's specified output capabilities to the requirements of the equipment to be powered.
- Never use a Power Take-Off whose range of speed could exceed the maximum safe speed of the equipment to be powered.

Cold Weather Operation of Powershift P.T.O.s

 **WARNING:** During extreme cold weather operation [32°F (0°C) and lower], a disengaged Powershift Power Take-Off can momentarily transmit high torque that will cause unexpected output shaft rotation. This is caused by the high viscosity of the transmission oil when it is extremely cold. As slippage occurs between the Power Take-Off clutch plates, the oil will rapidly heat up and the viscous drag will quickly decrease.

The Power Take-Off output shaft rotation could cause unexpected movement of the driven equipment resulting in serious personal injury, death, or equipment damage.

To avoid personal injury and/or equipment damage:

- Driven equipment must have separate controls.
- The driven equipment must be left in the disengaged position when not in operation.
- Do not operate the driven equipment until the vehicle is allowed to warm up.



This symbol warns of possible personal injury.

Rotating Auxiliary Driveshafts



WARNING: Rotating auxiliary driveshafts are dangerous. You can snag clothes, skin, hair, hands, etc. This can cause serious injury or death.

- Do not go under the vehicle when the engine is running.
- Do not work on or near an exposed shaft when the engine is running.
- Shut off the engine before working on the Power Take-Off or driven equipment.
- Exposed rotating driveshafts must be guarded.

Guarding Auxiliary Driveshafts



WARNING: We strongly recommend that a Power Take-Off and a directly mounted pump be used to eliminate the auxiliary driveshaft whenever possible. If an auxiliary driveshaft is used and remains exposed after installation, it is the responsibility of the vehicle designer and P.T.O. installer to install a guard.

Using Set Screws



WARNING: Auxiliary driveshafts may be installed with either recessed or protruding set screws. If you choose a square head set screw, you should be aware that it will protrude above the hub of the yoke and may be a point where clothes, skin, hair, hands, etc. could be snagged. A socket head set screw, which may not protrude above the hub of the yoke, does not permit the same amount of torquing as does a square head set screw. Also a square head set screw, if used with a lock wire, will prevent loosening of the screw caused by vibration. Regardless of the choice made with respect to a set screw, an exposed rotating auxiliary driveshaft must be guarded.

Important: Safety Information and Owner's Manual

Chelsea Power Take-Offs are packaged with safety information decals, instructions, and an owner's manual. These items are located in the envelope with the P.T.O. mounting gaskets. Also, safety information and installation instructions are packaged with some individual parts and kits. Be sure to read the owner's manual and safety information before installing or operating the P.T.O. Always install the safety information decals according to the instructions provided. Place the owner's manual in the vehicle glove compartment.

Operating the P.T.O. with the Vehicle in Motion



WARNING: Some Power Take-Offs may be operated when the vehicle is in motion. To do so, the P.T.O. must have been properly selected to operate at highway speeds and correctly matched to the vehicle transmission and the requirements of the driven equipment.

If in doubt about the P.T.O.s specifications and capabilities, avoid operating the P.T.O. when the vehicle is in motion. Improper application and/or operation can cause serious personal injury or premature failure of the vehicle, the driven equipment, and/or the P.T.O.

Always remember to disengage the P.T.O. when the driven equipment is not in operation.



This symbol warns of possible personal injury.

Pump Installation Precautions

Use a bracket to support the pump to the transmission if:

- The pump weighs **40 pounds** or more.
- The combined length of the P.T.O. and pump is **18 inches** or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump shaft with grease before installing the pump on the P.T.O. See page 1.4.

Power Take-Off Maintenance

Due to the normal and sometime severe torsional vibrations that Power Take-Off units experience, operators should follow a set maintenance schedule for inspections. Failure to service loose bolts or Power Take-Off leaks could result in potential auxiliary Power Take-Off or transmission damage.

Periodic P.T.O. MAINTENANCE is required by the owner/operator to ensure proper, safe and trouble free operation.

Daily: Check all air, hydraulic and working mechanisms before operating P.T.O. Perform maintenance as required.

Monthly: Inspect for possible leaks and tighten all air, hydraulic and mounting hardware, if necessary. Torque all bolts, nuts, etc. to Chelsea specifications. Insure that splines are properly lubricated, if applicable. Perform maintenance as required.

With regards to the direct mounted pump splines, the P.T.O. requires the application of a specially formulated anti-fretting, high pressure, high temperature grease. The addition of the grease has been proven to reduce the effects of the torsional vibrations, which result in fretting corrosion on the P.T.O. internal splines as well as the pump external splines. Fretting corrosion appears as a "rusting and wearing" of the pump shaft splines. Severe duty applications, which require long P.T.O. running times and high torque may require more frequent regreasing. Applications such as Utility Trucks that run continuously and are lightly loaded also require frequent regreasing due to the sheer hours of running time. It is important to note that service intervals will vary for each and every application and is the responsibility of the end user of the product. Chelsea also recommends that you consult your pump owner's manuals and technical services for their maintenance guidelines. Fretting corrosion is caused by many factors and without proper maintenance the anti-fretting grease can only reduce its effectiveness on components.

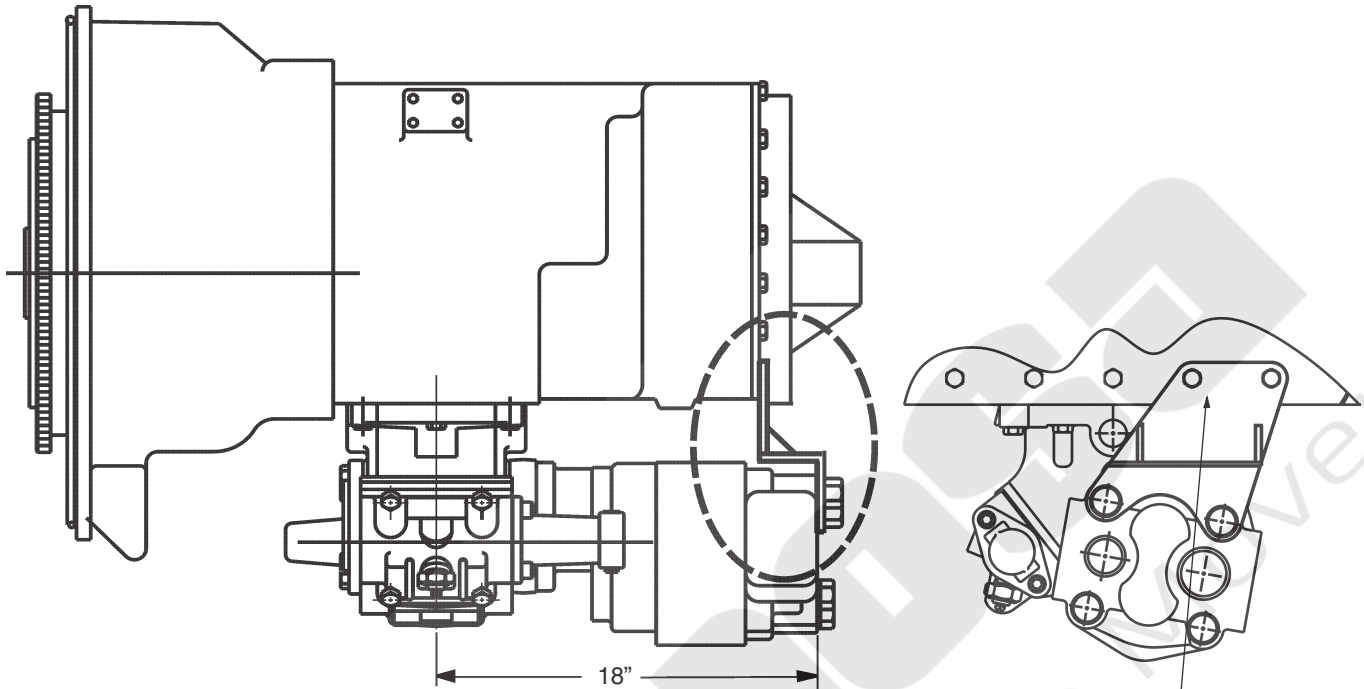
Chelsea offers the grease to our customers in two packages. The first is a 5/8 fluid ounce tube (379688), which is included with every applicable P.T.O., and the second is a 14-ounce grease cartridge (379831). Chelsea also offers greaseable shafts for most all output designators.

Warranty: Failure to comply entirely with the provisions set forth in the appropriate Owner's Manual will result in voiding of ALL Warranty consideration.



This symbol warns of possible personal injury.

Direct Mount Pump Support Recommendations



NOTE: For Proper Bracketing Attach at 2 or more Transmission Bolt Locations and 2 or more Pump Locations. Contact Transmission Manufacture for Proper Bracket Mounting Locations.

⚠ Use caution to ensure that bracket does not pre-load pump/P.T.O. mounting

Chelsea strongly recommends the use of pump supports (Support Brackets) in all applications. P.T.O. warranty will be void if a pump bracket is not used when:

- 1) The combined weight of pump, fittings and hose exceed **40 pounds**.
- 2) The combined length of the P.T.O. and pump is **18 inches** or more from the P.T.O. centerline to the end of the pump.

ALSO: Remember to pack the female pilot of the P.T.O. pump shaft with grease before installing the pump on the P.T.O. (reference Chelsea grease pack 379688)

⚠ This symbol warns of possible personal injury.

CHELSEA®

EATON FULLER

FLR-58

RTAO-10710C-AC	RTAO-14710C-AS	RTLO-12713A	RTLO-14718B-T2	RTLO-14918B-AS	RTLO-16913-T2	RTLO-18718B	RTLO-18918B
RTAO-10710C-AS	RTAO-16710C-AS	RTLO-12913A	RTLO-14913-T2	RTLO-16713A	RTLO-16913A	RTLO-18718B-T2	RTLO-18918B-AS
RTAO-12710C-AC	RTF-12709H	RTLO-14713A	RTLO-14913A	RTLO-16713A-T2	RTLO-16918A-AS	RTLO-18913A	RTLO-20913A
RTAO-12710C-AS	RTF-13709H	RTLO-14713A-T2	RTLO-14918A-AS2	RTLO-16718B	RTLO-16918B	RTLO-18913A-T2	RTLO-20918A-AS
RTAO-14710C-AC	RTF-14709H	RTLO-14718B	RTLO-14918B	RTLO-16718B-T2	RTLO-16918B-AS	RTLO-18918A-AS	RTLO-20918B

BOTTOM SIDE ONLY				RIGHT SIDE ONLY			
TRANSMISSION GEAR DATA: BOT 8-Bolt Opening Gear FORWARD of Centerline 47 Teeth - SPUR PITCH LINE TO APERTURE FACE: .8050" (20.4500MM)				TRANSMISSION GEAR DATA: R.H. 6-Bolt Opening Gear FORWARD of Centerline 45 Teeth - SPUR PITCH LINE TO APERTURE FACE: 1.0850" (27.5600MM)			

Caution: Application Approval Required for P.T.O. Output Shaft Speeds Above 2500 R.P.M.

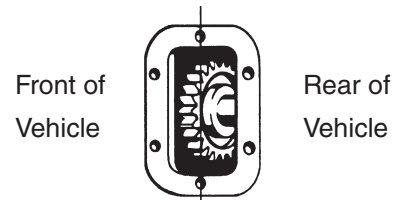
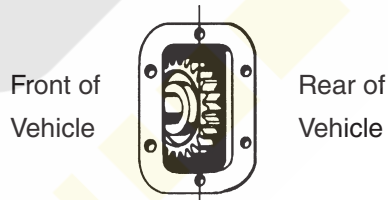
BOTTOM Side P.T.O. Model	Inter. Torq.	Dir. Rot.	Engine %		Filler Block	Adapter Assy.	Stud Kit	RIGHT Side P.T.O. Model	Inter. Torq.	Dir. Rot.	Engine %		Filler Block	Adapter Assy.	Stud Kit
			Hi	Rev							Hi	Rev			

E S T A B L I S H E D - TWO GEAR - MECHANICAL SHIFT															
880XDAH-X*3 (17)	357	Opp	77				Furnished								
880XGAHX-X*3 (18)	329	Opp	84				Furnished								
880XJAHX-X*3 (19)	279	Opp	99				Furnished								
880XMAHX-X*3 (20)	238	Opp	116				Furnished								
880XQAHX-X*3 (21)	203	Opp	136				Furnished								
880XRAHX-X*3 (22)	172	Opp	160				Furnished								

ONE SPEED - TWO GEAR - POWERSHIFT (AIR)															
230XAAJX-X*3	250	Opp	50		328481X	Furnished	230XAAJX-X*3	250	Opp	48					Furnished
230XBAJX-X*3	250	Opp	66		328481X	Furnished	230XBAJX-X*3	250	Opp	63					Furnished
230XDAJX-X*3	250	Opp	76		328481X	Furnished	230XDAJX-X*3	250	Opp	73					Furnished
230XKAJX-X*3	250	Opp	103		328481X	Furnished	230XKAJX-X*3	250	Opp	98					Furnished
230XQAJX-X*3	203	Opp	136		328481X	Furnished	230XQAJX-X*3	212	Opp	131					Furnished
230XUAJX-X*3 (23)	126	Opp	218		328481X	Furnished	230XUAJX-X*3 (23)	132	Opp	210					Furnished
236ZDAH-X*3 (7)	250	Opp	100		328564X	Furnished	236ZDAH-X*3 (7)	250	Opp	96					Furnished
236ZKAHX-X*3 (7)	215	Opp	129		328564X	Furnished	236ZKAHX-X*3 (7)	224	Opp	123					Furnished
885XBAHX-X*3 (16)	423	Opp	65			Furnished									
885XGAHX-X*3 (18)	329	Opp	84			Furnished									
885XJAHX-X*3 (19)	279	Opp	99			Furnished									
885XMAHX-X*3 (20)	238	Opp	116			Furnished									

- 1 **Transmission Models**
- Models that apply to this application page.

- 2 **Transmission Gear Data**
- Location of P.T.O. opening on the transmission and opening size (S.A.E. standard or non-standard).
 - Gear position within the opening - either Gear to Rear of Centerline or Gear Forward of Centerline by 1/2 inch.



- Description of the P.T.O. driver gear - tooth count of the gear and description of the cut of the gear teeth (Spur, Left Hand Helix, or Right Hand Helix).



SPUR - teeth are cut straight across from its face from the side



L.H. HELIX - teeth slant upwards from left to right

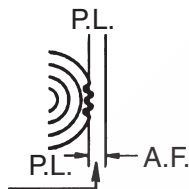


R.H. HELIX - teeth slant upwards from right to left

③ Pitch Line to Aperture Face

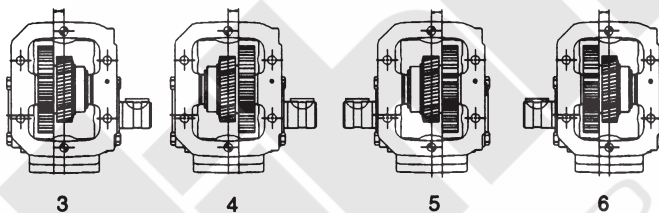
- The distance between the pitch line of the transmission P.T.O. driver gear and the mounting face (aperture).

Pitch Line (P. L.) to
Aperture Face (A.F.)
Dimension



④ P.T.O. Model

- The P.T.O.s listed are normally mounted to the transmission with the output shaft toward the rear of the vehicle, with the shaft below the center of the opening.
- To complete the model number refer to the Assembly Options charts in section 3.



⑤ Intermittent Torque Rating (shown in lbs. ft.)

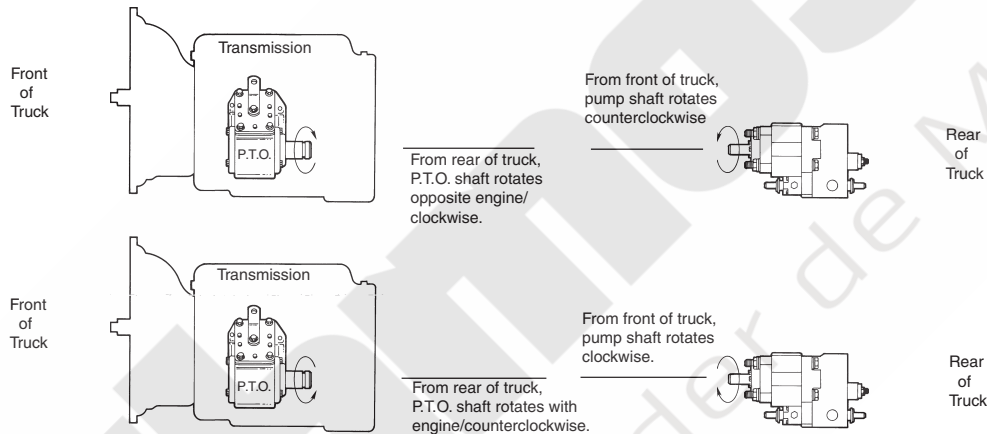
- An intermittent torque rating is when the P.T.O. operates only 5 minutes out of every 15. A P.T.O. being used more than 5 minutes at a time is considered continuous duty and should have its torque rating reduced by 30%. To do this, multiply the given torque rating by .7 (i.e. 140 lbs. ft. x .7 = 98 lbs. ft.).

6 P.T.O. Direction of Rotation

- Viewed by standing at the rear of the vehicle, looking forward at the P.T.O. shaft, with the P.T.O. shaft pointing toward the rear of the vehicle.

P.T.O.	Driven Equipment
OPP (looks “clockwise”)	Driven equipment must rotate counterclockwise (also called left-hand rotation, “A” for anti-clockwise or C.C.W. for counterclockwise).
ENG (looks “counterclockwise”)	Driven equipment must rotate clockwise (also called right-hand rotation or “C” for clockwise).

- Remember that the P.T.O. is specified looking from the rear of the truck to the front of the truck, and the driven equipment is specified looking from the front of the truck to the rear of the truck.



7 Shaft Speed Percentage

- The output shaft speed percentage is based upon engine R.P.M.
- Ex: If the engine speed is 1000 R.P.M. and the P.T.O. rating is 90% of engine speed, the P.T.O. output shaft will turn 900 R.P.M. ($1000 \times .90$). If the engine speed is 1000 R.P.M. and the P.T.O. rating is 127% of engine speed, the P.T.O. output shaft will turn 1270 R.P.M. (1000×1.27).

NOTE: Output shaft speeds should not exceed 2500 R.P.M. without application approval from Chelsea.

 8 Filler Block

- If a filler block is required to properly mount the P.T.O. or an adapter, the correct part number will be shown here. It must be ordered separately from the P.T.O.
- If a (T) is shown next to the part number, the filler block should be positioned next to the transmission.
- If a (P) is shown next to the part number, the filler block should be positioned next to the Power Take-Off.

 9 Adapter Assembly

- An adapter or adapter plate listed in this column is required to mount the P.T.O. to the transmission and must be ordered separately.
- Geared Adapters - used to change the rotation of the output shaft, clear an interference problem, or reach a drive gear that may be deep within the transmission.
- Adapter Plates - used to mount a six-bolt P.T.O. to an eight-bolt opening.
- A geared adapter should not be mounted to an adapter plate.
- Do not mount two or more geared adapters together.
- A geared adapter should not be used on automatic transmissions.

 10 Stud Kit

- When the word *Furnished* appears in this column, the stud kit is included with the P.T.O.
- A stud kit number listed in this column (i.e. 7170-1X) means that the stud kit must be ordered separately from the P.T.O.

 11 P.T.O. Header

- New P.T.O. headers with type of shift mechanism.
- Mechanical, Powershift (Air), Powershift (Hydraulic).

Information from the Customer:

1. Make and model of transmission.

2. Type of driven equipment.

3. Input horsepower required of driven equipment.

4. Desired operating speed of driven equipment.

5. Approximate engine speed desired during operation.

Figure the equipment speed expressed as a percentage of the desired engine speed during the duty cycle.

Driven equipment ÷ Engine speed = App. P.T.O. %

6. Direction of driven equipment shaft rotation in relation to direction of engine rotation (check one).

_____ Opp.
_____ Eng.

7. Type of connection between P.T.O. and driven equipment (check one).

_____ Driveshaft
_____ Direct mount pump flange
_____ Pulleys and belts (requires eng. approval)

8. Mounting location (check all suitable locations).

_____ Left
_____ Right
_____ Bottom
_____ Top
_____ Countershaft

9. Duty cycle (check one).

_____ Intermittent
_____ Continuous

10. Other P.T.O. speeds or reverse gear requirements.
- _____
- _____

Using the HY25-3000/US, Find:

11. Application page number for make and model of transmission.
- _____

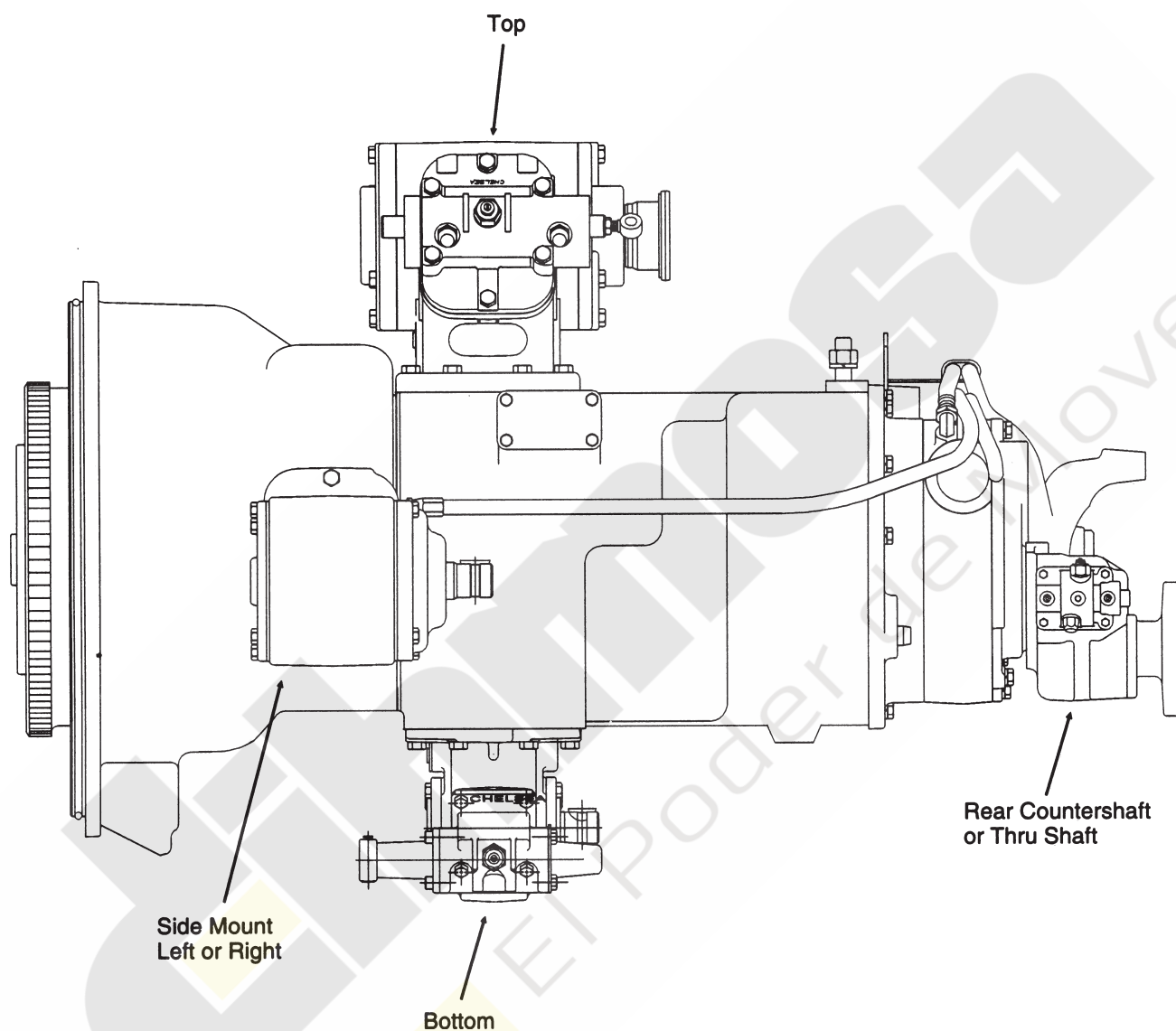
12. From items 3 and 4 determine the intermittent torque requirements of the driven equipment using this formula:

$$(HP \times 5252) \div R.P.M. = lb. ft.$$

$$T = \text{_____} lb. ft. (intermittent)$$

13. If torque requirements are continuous (more than 5 minutes operation every 15 minutes) divide the torque figure by .7. The result will be the torque required for continuous operation.
 14. Find the P.T.O. in the HY25-3000/US catalog that meets the torque, rotation, and speed percentage requirements of the application. Note the P.T.O. model number and all numbers for mounting parts on the lines below.
- _____
- _____

15. Determine what options are needed and change model number prefix and suffix to obtain correct options. (See Model Number Construction in section 3).
- _____
- _____



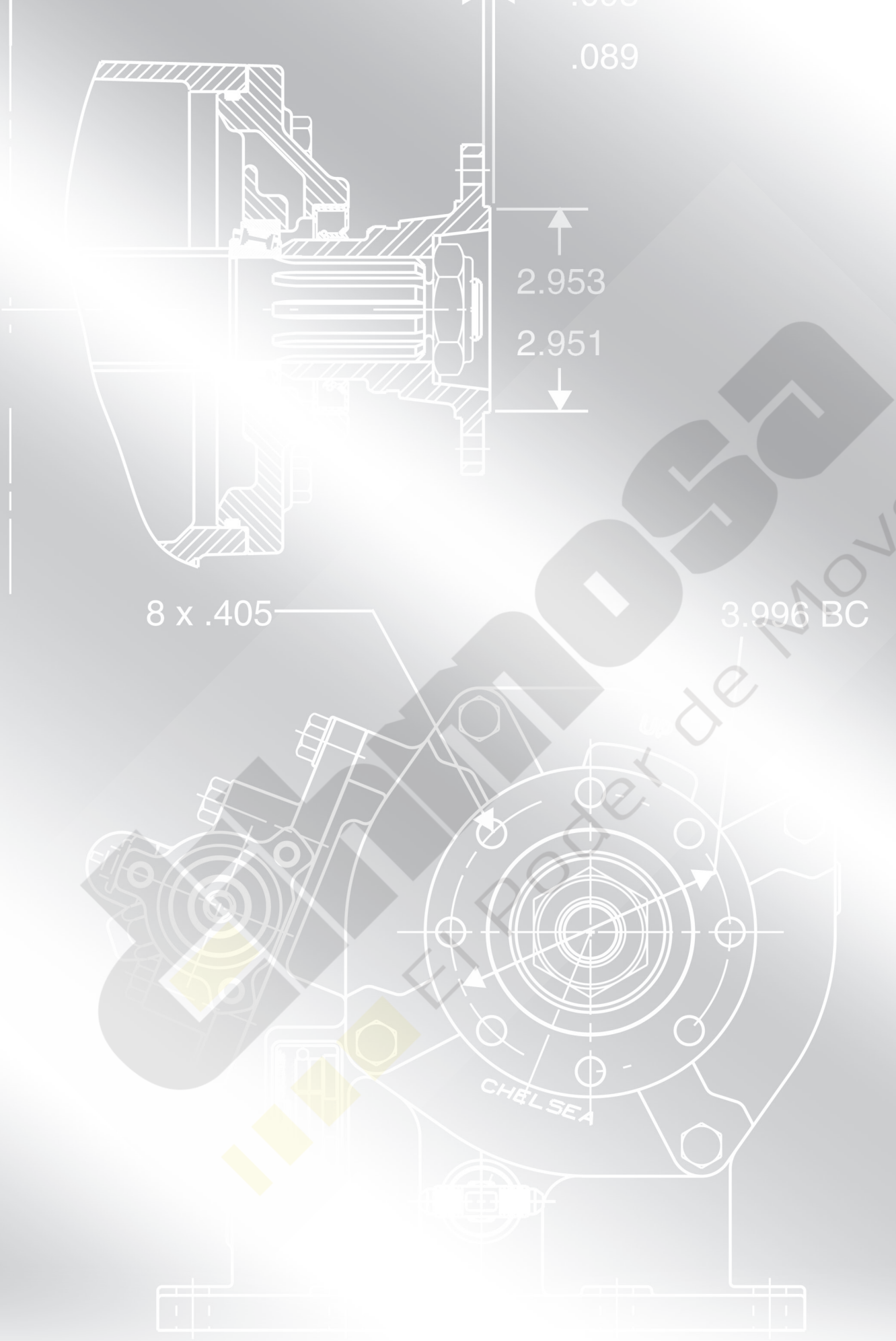
Input Gear Designators**Applications****General Safety Information**

AB	Universal	DS	Warner	HD	Mitsubishi
AC	Fiat	DU	Eaton Fuller	HD	Ford
AD	Spicer	DX	Chevrolet	HE	Adapter Gear
AG	Spicer	DY	Clark	HF	Adapter Gear
AH	Universal			HG	Adapter Gear
AJ	Allison	EC	ZF	HH	Adapter Gear
AK	Universal	ED	ZF	HJ	Adapter Gear
AL	Eaton Fuller	EF	New Process	HK	Adapter Gear
AP	Spicer	EL	Isuzu	HL	Adapter Gear
AQ	Spicer	EP	Warner	HM	Adapter Gear
AR	Spicer	ER	Isuzu	HP	Adapter Gear
AU	Chelsea	ES	Eaton Fuller	HQ	Adapter Gear
AW	New Process	ET	Eaton Fuller	HR	Adapter Gear
AX	Eaton Fuller	EV	Eaton Fuller	HU	Mack
		EW	Eaton Fuller	HV	Allison
BA	Navistar			HY	ZF
BC	Eaton Fuller	FA	Jatco/Isuzu	HZ	Eaton Fuller
BE	Chevy	FB	GM/Chevy		
BF	Warner	FC	Dodge	JB	Adapter Gear
BG	Spicer	FE	Getrag	JD	Tremic
BH	Spicer	FJ	Allison	JE	Adapter Gear
BJ	Chevy	FL	ZF	JG	Mercedes
BK	New Process	FM	Nissan	JH	Mercedes
BL	New Process	FN	Spicer	JK	Eaton Fuller
BM	Eaton Fuller	FP	Mack/Renault	JL	Adapter Gear
BN	New Process	FQ	Mack/Renault	JM	Eaton Fuller
BP	Chevy/Spicer	FR	Eaton Fuller	JN	Adapter Gear
BQ	Chevy/Spicer	FS	Hino	JP	NVG
BR	Hino	FT	Mitsubishi	JQ	Adapter Gear
BS	New Process	FV	Isuzu	JR	Eaton Fuller
BU	Eaton Fuller	FW	Eaton Fuller	JS	Spicer
BY	Warner	FZ	Hino	JT	Spicer
BZ	Warner			JU	Spicer
		GE	Eaton Fuller	JV	Eaton Fuller
CB	New Process	GF	Eaton Fuller	JW	Eaton Fuller
CC	New Process	GP	Eaton Fuller	JX	Adapter Gear
CD	Warner	GQ	Tremec	JY	Adapter Gear
CJ	Saab/Scania	GR	ZF	JZ	Adapter Gear
CM	New Process	GS	ZF	KA	Adapter Gear
CR	Spicer	GW	Nissan	KB	Adapter Gear
		GX	Adapter Gear	KH	Mercedes
DA	Mack	GX	Mitsubishi	KJ	ZF
DB	Eaton Fuller	GY	Adapter Gear	KK	Adapter Gear
DC	Hino/Nissan	GZ	Adapter Gear	KL	ZF
DD	Spicer	GZ	Eaton Fuller	KM	Adapter Gear
DH	Renault			KN	TTC
DJ	Renault	HA	Adapter Gear	KP	TTC
DK	Renault	HA	Mitsubishi	KR	Adapter Gear
DM	Eaton Fuller	HB	Adapter Gear	KS	Ford
DN	Eaton Fuller	HB	Mitsubishi	KT	Universal
DQ	Saab/Scania	HC	Mitsubishi	KU	Aisin
		HD	Adapter Gear	KV	Caterpillar

Notes

Lined area for notes.

Technical Information





Chmossa
El Poder de Mover

Mechanical Six Bolt P.T.O.s

P.T.O. Options Chart	2.1 thru 2.2
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Installation Kits & Filler Blocks	2.17

Mechanical Eight Bolt P.T.O.s

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680 Pump Flange Conversion Chart	2.21
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Powershift Six and Eight Bolt P.T.O.s

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Powershift Ten Bolt P.T.O.s

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Ford P.T.O.s

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Rear Mount P.T.O.s

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Asia Pacific Transmission P.T.O.s

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6-Bolt Mechanical

P.T.O. Options Chart – 6-Bolt P.T.O.s

P.T.O. Series		100	221	2442	290
Lubrication					
X	Standard	x	x		x
P	Pressure		x		
W	Wet Spline		x		
Shifting					
A	Air	x	x	x	x
C	Heavy Duty Bracket Less Cable	x	x		
G	Air Shift w/cyl. Location Opposite of Output				
H	Less Wire Shift		x	x	x
M	Constant Mesh		x	x	
P	Electric/Air 12V	x	x	x	x
S	P.T.O./Dump Pump Combo	x	x	x	x
T	P.T.O. & Pump Valve Less Kick Out & Neutral Spring Return				
V	Air Shift Less Installation Kit	x	x	x	x
W	Wire	x	x	x	
X	Wire, Less Cable & Knob		x	x	
Output					
AA	Special Pump for Europe		x	x	x
AF	S.A.E. "B" 2 or 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth)		x(w)	x	x
AK	S.A.E. "B" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)		x	x	x
AZ	Non Standard Flange, "C" Shaft (1-1/4" 14 - Tooth)		x	x	x
GA	Rotatable "B" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)		x	x	
GB	Rotatable "B" 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)		x	x	
GE	Rotatable S.A.E. "A" 2 or 4 Bolt Flange, "A" Shaft (5/8" 9 - Tooth) (Greaseable)		x	x	
GF	S.A.E. "B" 2 or 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth) (Greaseable)		x	x	
GH	Rotatable "B" 2 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth) (Greaseable)		x	x	x
GJ	Rotatable "B" 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth) (Greaseable)		x	x	x
GK	S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)		x	x	
GP	S.A.E. "A" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)		x	x	
GQ**	S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)		x	x	
GR	Chelsea Special Pump Mount, "B" Shaft (7/8" 13 - Tooth) (Greaseable)		x	x	
GY	DIN 5462 Pump Mounting (Greaseable)		x	x	
GZ	Non Standard Flange, "C" Shaft (1-1/4" 14 - Tooth) (Greaseable)		x	x	
LA	S.A.E. "B" 2 Bolt Flange w/Lube Pump (Same as AK)		x	x	
LB	S.A.E. "A" 2 Bolt Flange w/Lube Pump (Same as XP)		x	x	
LC	S.A.E. "A" 2 Bolt Flange w/Lube Pump (Same as XQ)		x	x	
LD	1-1/4" Round Shaft w/Lube Pump (Same as XD)		x	x	
LF	S.A.E. "B" 2 or 4 Bolt Flange w/Lube Pump (Same as XK)		x	x	
RA	Rotatable "B" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)		x	x	x
RB	Rotatable "B" 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)		x	x	x
RC	Rotatable "A" 2 Bolt Flange, "A" Shaft (5/8" 9 - Tooth)		x	x	x
RD	Rotatable "A" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)		x	x	x
RE	Rotatable "B" 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth)		x	x	x
RF	Rotatable "B" 2 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth)		x	x	x
RY	Rotatable DIN 5462 Pump Flange			x	x
SQ	S.A.E. "B" 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)				
XA	7/8" Round Shaft w/key	x			
XD	1-1/4" Round Shaft		x	x	x
XE	S.A.E. "A" 2 or 4 Bolt Flange, "A" Shaft (5/8" 9 - Tooth)		x	x	x
XG	Non Standard S.A.E. "B" 2 Bolt Flange, Non Standard Shaft (3/4" w/ 3/16" key)		x	x	x
XJ	Non Standard S.A.E. "A" 2 Bolt Flange, Non Standard Shaft (3/4" w/ 3/16" key)		x	x	x
XK	S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)		x	x	x
XQ**	S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)		x	x	
XR	Non Standard Flange, "B" Shaft (7/8" 13 - Tooth)		x	x	x
XV	1-1/4" Rd. w/1310 Series Flanges			x	
XX***	1-1/4" S.A.E. Tapered Shaft w/ keyway		x	x	x
XY	DIN 5462 Pump Mounting		x	x	x

(w) = Wet Spline Flange Option

** XQ/GQ same as XK/GK except flange rotated 90°

*** Order companion (3-1-604) separately

NOTE: Always Check Price Book for Current Options

Continued on next page

P.T.O. Options Chart – 6-Bolt P.T.O.s

P.T.O. Series		442	447	660
Lubrication				
X	Standard	x	x	x
P	Pressure	x	x	x
Shifting				
A	Air	x	x	x
C	Heavy Duty Bracket Less Cable	x	x	x
H	Less Wire Shift	x	x	x
M	Constant Mesh	x	x	x
P	Electric/Air 12V	x	x	x
S	P.T.O./Dump Pump Combo	x	x	x
T	P.T.O. & Pump Valve Less Kick Out & Neutral Spring Return	x	x	x
V	Air Shift Less Installation Kit	x	x	x
W	Wire	x	x	x
X	Wire, Less Cable & Knob	x	x	x
Output				
AA	Special Pump for Europe	x	x	x
AF	S.A.E. "B" 2 or 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth)	x	x	x
AK	S.A.E. "B" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)	x	x	x
AZ	Non Standard Flange, "C" Shaft (1-1/4" 14 - Tooth)	x	x	x
GA	Rotatable "B" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)	x	x	x
GB	Rotatable "B" 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)	x	x	x
GE	Rotatable S.A.E. "A" 2 or 4 Bolt Flange, "A" Shaft (5/8" 9 - Tooth) (Greaseable)	x	x	x
GF	S.A.E. "B" 2 or 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth) (Greaseable)	x	x	x
GH	Rotatable "B" 2 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth) (Greaseable)	x	x	x
GJ	Rotatable "B" 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth) (Greaseable)	x	x	x
GK	S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)	x	x	x
GP	S.A.E. "A" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)	x	x	x
GQ**	S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)	x	x	x
GR	Chelsea Special Pump Mount, "B" Shaft (7/8" 13 - Tooth) (Greaseable)	x	x	x
GY	DIN 5462 Pump Mounting (Greaseable)	x	x	x
GZ	Non Standard Flange, "C" Shaft (1-1/4" 14 - Tooth) (Greaseable)	x	x	x
LA	S.A.E. "B" 2 Bolt Flange w/Lube Pump (Same as AK)	x	x	x
LB	S.A.E. "A" 2 Bolt Flange w/Lube Pump (Same as XP)	x	x	x
LC	S.A.E. "A" 2 Bolt Flange w/Lube Pump (Same as XQ)	x	x	x
LD	1-1/4" Round Shaft w/Lube Pump (Same as XD)	x	x	x
LF	S.A.E. "B" 2 or 4 Bolt Flange w/Lube Pump (Same as XK)	x	x	x
RA	Rotatable "B" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)	x	x	x
RB	Rotatable "B" 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)	x	x	x
RC	Rotatable "A" 2 Bolt Flange, "A" Shaft (5/8" 9 - Tooth)	x	x	x
RD	Rotatable "A" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)	x	x	x
RE	Rotatable "B" 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth)	x	x	x
RF	Rotatable "B" 2 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth)	x	x	x
RY	Rotatable DIN 5462 Pump Flange	x	x	x
SQ	S.A.E. "B" 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)	x		
XD	1-1/4" Round Shaft w/1/4" Key Way	x	x	x
XE	S.A.E. "A" 2 or 4 Bolt Flange, "A" Shaft (5/8" 9 - Tooth)	x	x	x
XG	Non Standard S.A.E. "B" 2 Bolt Flange, Non Standard Shaft (3/4" w/ 3/16" key)	x	x	x
XJ	Non Standard S.A.E. "A" 2 Bolt Flange, Non Standard Shaft (3/4" w/ 3/16" key)	x	x	x
XK	S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)	x	x	x
XQ**	S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)	x	x	x
XR	Non Standard Flange, "B" Shaft (7/8" 13 - Tooth)	x	x	x
XV	1-1/4" Rd. w/1410 Series Flange	x		x
XX***	1-1/4" S.A.E. Tapered Shaft w/ keyway	x	x	x
XY	DIN 5462 Pump Mounting	x	x	x

(w) = Wet Spline Flange Option

** XQ/GQ same as XK/GK except flange rotated 90°

*** Order companion (3-1-604) separately

NOTE: Always Check Price Book for Current Options

Pump Flange Field Conversion Chart**Applications
Mechanical Six Bolt**

For converting the 221, 267, 290, 442, 447, 489, 660 and 2442 Series Chelsea P.T.O.s from a driveshaft output or as listed to a new pump flange output, use the following kits. Consult the Chelsea price book for availability by series.

Pump Flange Field Conversion Kits				
Pump Suffix	Kit No. Suffix	Kit Number	Flange Type	Shaft Type
AF	XD to AF	328591-30X	S.A.E. "BB" 2 or 4 Bolt	1.00" - 15 Tooth Splined
AF (Wet Spline 221)	XD to AF	328591-140X	S.A.E. "BB" 2 or 4 Bolt	1.00" - 15 Tooth Splined
AK	XD to AK	328591-28X	S.A.E. "B" 2 Bolt	7/8" - 13 Tooth Splined
AK ("B" Ratio)	XD to AK	329436-7X	S.A.E. "B" 2 Bolt	7/8" - 13 Tooth Splined
AZ	XD to AZ	328591-70X	S.A.E. "B" 4 Bolt	1 1/4" - 14 Tooth Splined
GA	XD to GA XR to GA RA to GA	328591-72X 328591-73X 328591-106X	S.A.E. "B" 2 Bolt	*7/8" - 13 Tooth Internal Spline
GB	XD to GB XR to GB RB to GB	328591-74X 328591-75X 328591-107X	S.A.E. "B" 4 Bolt	*7/8" - 13 Tooth Internal Spline
GF	XD to GF AF to GF	328591-71X 328591-108X	S.A.E. "BB" 2 or 4 Bolt	*1.00" - 15 Tooth Internal Spline
GH	XD to GH RF to GH	328591-116X 328591-114X	S.A.E. "BB" 2 Bolt Rotatable	*1.00" - 15 Tooth Internal Spline
GJ	XD to GJ RE to GJ	328591-138X 328591-114X	S.A.E. "B" 4 Bolt Rotatable	*1.00" - 15 Tooth Splined
GK	XD to GK XK to GK	328591-89X 328591-86X	S.A.E. "B" 2 or 4 Bolt	*7/8" - 13 Tooth Internal Spline
GP	XD to GP XP to GP	358591-90X 328591-86X	S.A.E. "A" 2 Bolt	*7/8" - 13 Tooth Internal Spline
GQ	XD to GQ XQ to GQ	328591-91X 328591-86X	S.A.E. "B" 2 or 4 Bolt	*7/8" - 13 Tooth Internal Spline
GR	XD to GR	328591-76X	CHELSEA SPECIAL 4 Bolt	*7/8" - 13 Tooth Internal Spline
GY	XD to GY XY to GY	328591-92X 328591-87X	DIN 5462 Pump Mounting	*DIN 5462 Spline
GZ	XD to GZ AZ to GZ	328591-93X 328591-88X	S.A.E. "B" 4 Bolt	*1 1/4" - 14 Tooth Splined
GA (660 Series)	XD to GA RA to GA	328591-124X 328591-109X	S.A.E. "B" 2 Bolt	*7/8" - 13 Tooth Splined
GB (660 Series)	XD to GB RG to GB	328591-125X 328591-110X	S.A.E. "B" 4 Bolt	*7/8" - 13 Tooth Splined
GF (660 Series)	XD to GF AF to GF	328591-123X 329591-111X	S.A.E. "BB" 2 or 4 Bolt	*1.00" - 15 Tooth Splined
GH (660 Series)	XD to GH RF to GH	328591-117X 328591-115X	S.A.E. "BB" 2 Bolt Rotatable	*1.00" - 15 Tooth Splined
GJ (660 Series)	XD to GJ RE to GJ	328591-139X 328591-115X	S.A.E. "B" 4 Bolt Rotatable	*1.00" - 15 Tooth Splined
GK (660 Series)	XD to GK XK to GK	328591-99X 328591-96X	S.A.E. "B" 2 or 4 Bolt	*7/8" - 13 Tooth Splined
GP (660 Series)	XD to GP XP to GP	328591-100X 328591-96X	S.A.E. "A" 2 Bolt	*7/8" - 13 Tooth Splined
GQ (660 Series)	XD to GQ XQ to GQ	328591-101X 328591-96X	S.A.E. "B" 2 or 4 Bolt	*7/8" - 13 Tooth Splined
GR (660 Series)	XD to GR	328591-126X	CHELSEA SPECIAL 4 Bolt	*7/8" - 13 Tooth Splined
GY (660 Series)	XD to GY XY to GY	328591-102X 329591-97X	DIN 5462 Pump Mounting	*DIN 5462 Spline
GZ (660 Series)	XD to GZ AZ to GZ	328591-103X 328591-98X	S.A.E. "B" 4 Bolt	*1 1/4" - 14 Tooth Splined
LA (AK w/Lube Pump)		328591-44X	S.A.E. "B" 2 Bolt	7/8" - 13 Tooth Splined
LB (XP w/Lube Pump)		328591-45X	S.A.E. "A" 2 Bolt	7/8" - 13 Tooth Splined
LC (XQ w/Lube Pump)		328591-46X	S.A.E. "B" 2 or 4 Bolt	7/8" - 13 Tooth Splined
LF (XK w/Lube Pump)		328591-48X	S.A.E. "B" 2 or 4 Bolt	7/8" - 13 Tooth Splined

Note: Use 329097-1X to convert P.T.O.s with AK, XP, XQ, XN, or XK output to the self-lube pump option.

*Grease fitting on end of shaft

Continued on next page

Pump Flange Field Conversion Kits

Pump Suffix	Kit No. Suffix	Kit Number	Flange Type	Shaft Type
RA	XD to RA	328591-55X	S.A.E. "B" 2 Bolt Rotatable	7/8" - 13 Tooth Internal Spline
	XR to RA	328591-53X	S.A.E. "B" 2 Bolt Rotatable	7/8" - 13 Tooth Internal Spline
RA ("B" Ratio)	XD to RA	329436-1X	S.A.E. "B" 2 Bolt Rotatable	7/8" - 13 Tooth Internal Spline
RB	XD to RB	328591-56X	S.A.E. "B" 4 Bolt Rotatable	7/8" - 13 Tooth Internal Spline
	XR to RB	328591-54X	S.A.E. "B" 4 Bolt Rotatable	7/8" - 13 Tooth Internal Spline
RB ("B" Ratio)	XD to RB	329436-2X	S.A.E. "B" 4 Bolt Rotatable	7/8" - 13 Tooth Internal Spline
RC	XD to RC	328591-112X	S.A.E. "A" 2 Bolt Rotatable	5/8" - 9 Tooth Splined
RD	XD to RD	328591-113X	S.A.E. "A" 2 Bolt Rotatable	7/8" - 13 Tooth Splined
RE	XD to RE	328591-134X	S.A.E. "B" 4 Bolt Rotatable	1.00" - 15 Tooth Splined
RF	XD to RF	328591-78X	S.A.E. "BB" 2 Bolt Rotatable	1.00" - 15 Tooth Splined
RY	XD to RY	328591-131X	DIN 5462 Pump Mounting Rotatable	DIN 5462 Spline
XE	XD to XE	328591-27X	S.A.E. "A" 2 or 4 Bolt	5/8" - 9 Tooth Splined
XG	XD to XG	328591-10X	Non-Standard 2 Bolt	3/4" Round
XJ	XD to XJ	328591-11X	Non-Standard 2 Bolt	3/4" Round
XK	XD to XK	328591-16X	S.A.E. "B" 2 or 4 Bolt	7/8" - 13 Tooth Splined
XK ("B" Ratio)	XD to XK	329436-3X	S.A.E. "B" 2 or 4 Bolt	7/8" - 13 Tooth Splined
XQ	XD to XQ	328591-17X	S.A.E. "B" 2 or 4 Bolt	7/8" - 13 Tooth Splined
XQ ("B" Ratio)	XD to XQ	329436-6X	S.A.E. "B" 2 or 4 Bolt	7/8" - 13 Tooth Splined
XR	XD to XR	328591-52X	Chelsea Special	7/8" - 13 Tooth Splined
XV	XD to XV	328591-130X	1410 Companion Flange	1-1/4" Round
XX	XD to XX	328591-122X	1410 Companion Flange	1-1/4" S.A.E. Tapper
XY	XD to XY	328591-121X	DIN 5462 Pump Mounting	DIN 5462 Spline

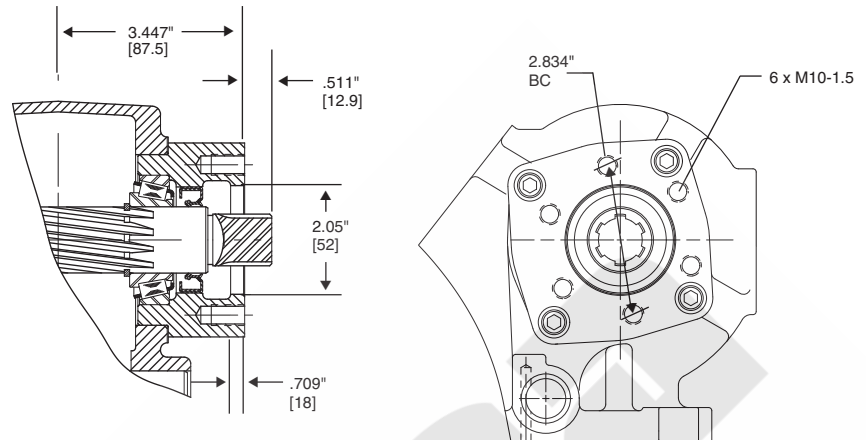
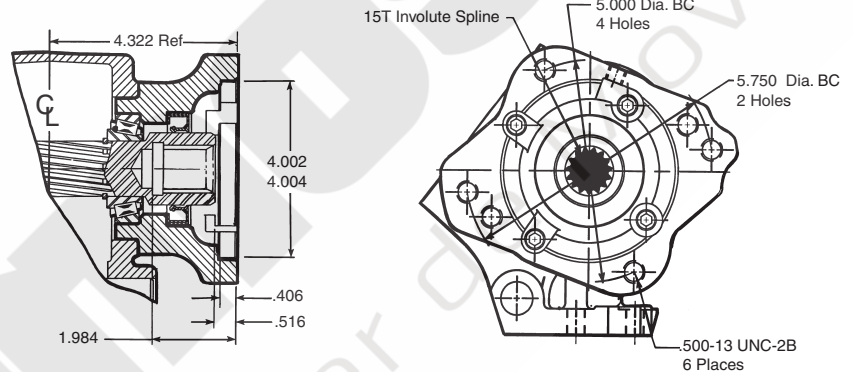
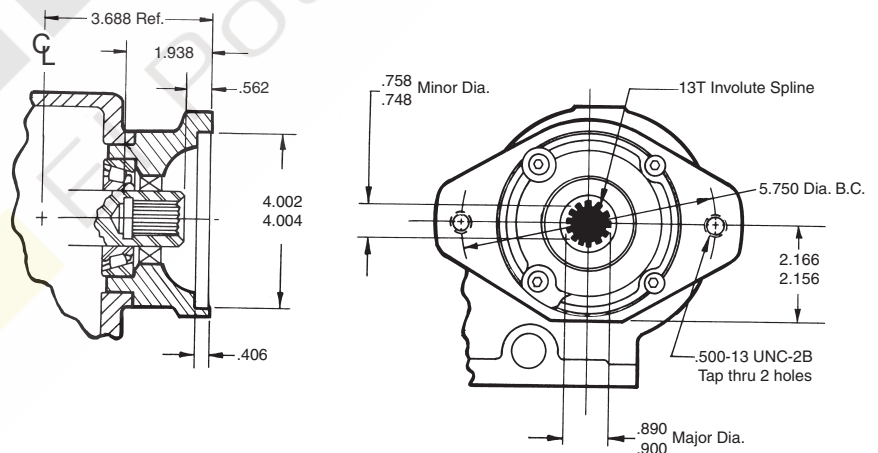
Note: Use 329097-1X to convert P.T.O.s with AK, XP, XQ, XN, or XK output to the self-lube pump option.

*Grease fitting on end of shaft

Six Bolt P.T.O. Flanges

Suffix AA

Special pump flange for Europe

Available for the following P.T.O.s:
221, 441, 442, 447, 660, 2442**Suffix AF**S.A.E. Class "BB" 2 or 4 Bolt
For 1" - 15 Splined ShaftAvailable for the following P.T.O.s:
221, 260, 290, 441, 442, 447,
489, 2442**Suffix AK**S.A.E. Class "B" 2 Bolt
For 7/8" - 13 Tooth Splined ShaftAvailable for the following P.T.O.s:
221, 260, 290, 441, 442, 447,
489, 2442

* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

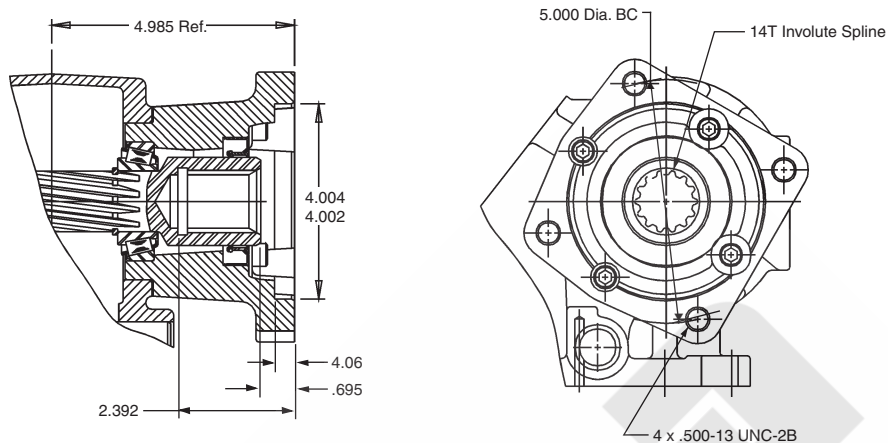
- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

Flange Dimensions**Applications
Mechanical Six Bolt****Suffix AZ**

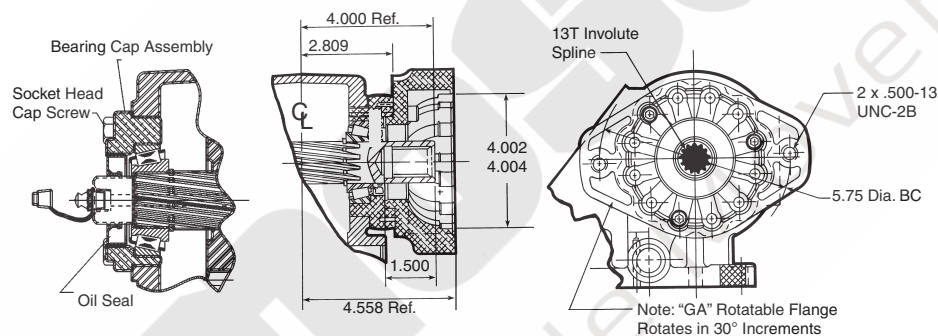
Non Standard 4 Bolt
For 1-1/4" - 14 Tooth Splined Shaft

Available for the following P.T.O.s:
221, 260, 290, 441, 442, 447,
489, 2442

**Suffix GA**

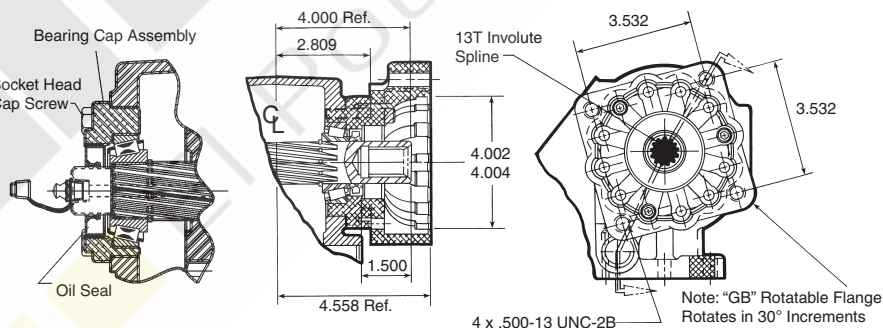
S.A.E. Class "B" 2 Bolt Rotatable
For 7/8" - 13 Tooth Splined Shaft,
(*Greaseable)

Available for the following P.T.O.s:
221, 260, 290, 441, 442, 447, 489,
660, 2442

**Suffix GB**

S.A.E. Class "B" 4 Bolt Rotatable
For 7/8" - 13 Tooth Splined Shaft,
(*Greaseable)

Available for the following P.T.O.s:
221, 260, 290, 441, 442, 447, 489,
660, 2442



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

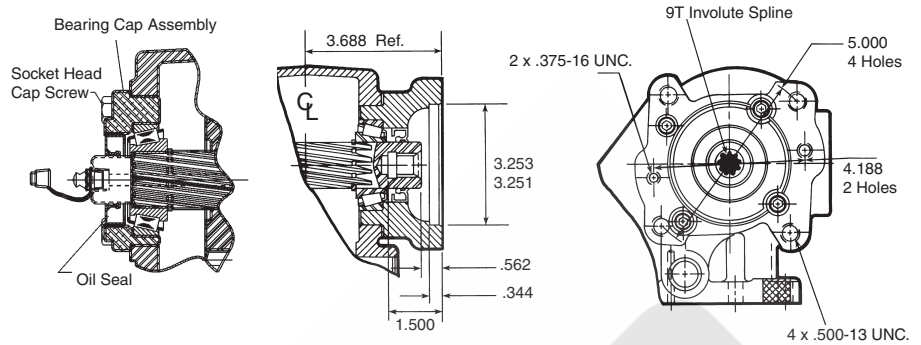
- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

Flange Dimensions**Applications
Mechanical Six Bolt****Suffix GE**

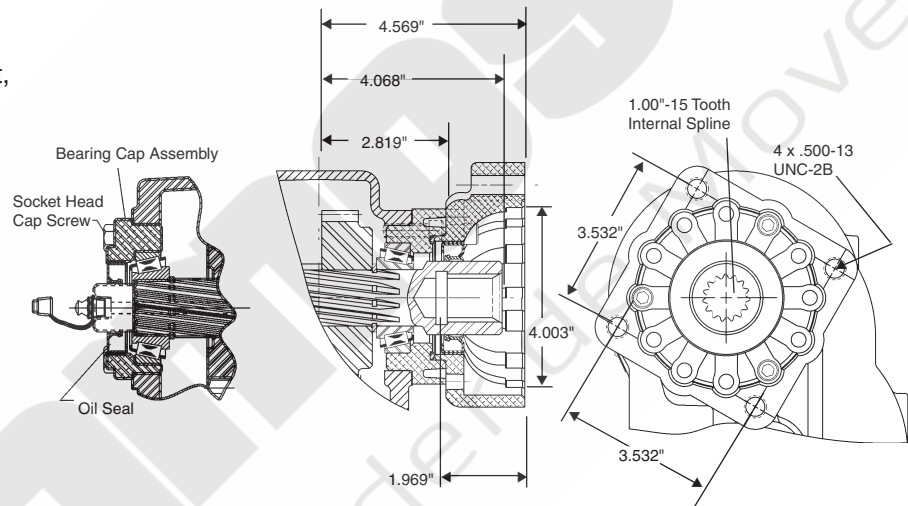
S.A.E. Class "A" 2 or 4 Bolt
For 5/8" - 9 Tooth Splined Shaft,
(*Greaseable)

Available for the following P.T.O.s:
221, 260, 442, 447, 489, 2442

**Suffix GJ**

S.A.E. Class "B" 4 Bolt Rotatable
For 1.00" - 15 Tooth Splined Shaft,
(*Greaseable)

Available for the following P.T.O.s:
221, 260, 441, 442, 447, 2442

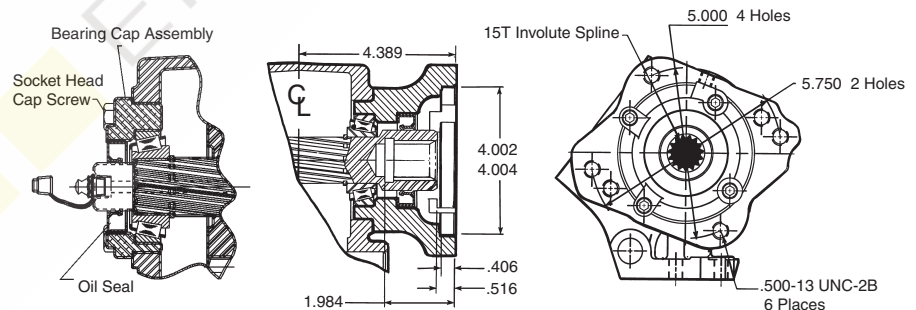


Note: "GJ" Rotatable Flange
Rotates in 90° Increments

Suffix GF

S.A.E. Class "BB" 2 or 4 Bolt
For 1" - 15 Tooth Splined Shaft,
(*Greaseable)

Available for the following P.T.O.s:
221, 260, 441, 442, 447, 489,
660, 2442



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

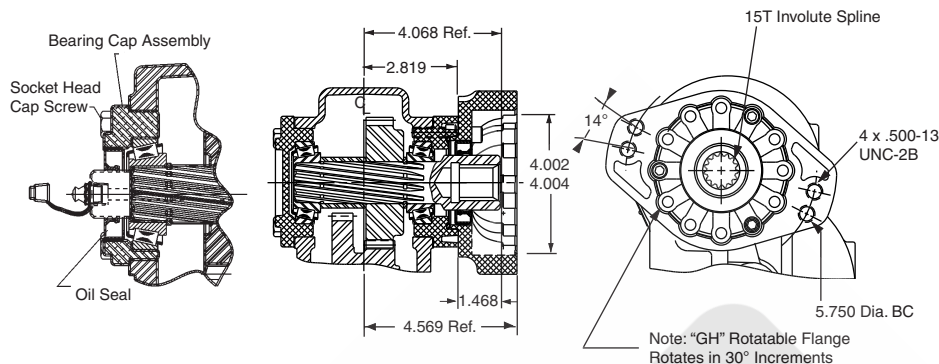
Flange Dimensions

Applications Mechanical Six Bolt

Suffix GH

S.A.E. Class "BB" 2 Bolt Rotatable
For 1" - 15 Tooth Splined Shaft,
(*Greaseable)

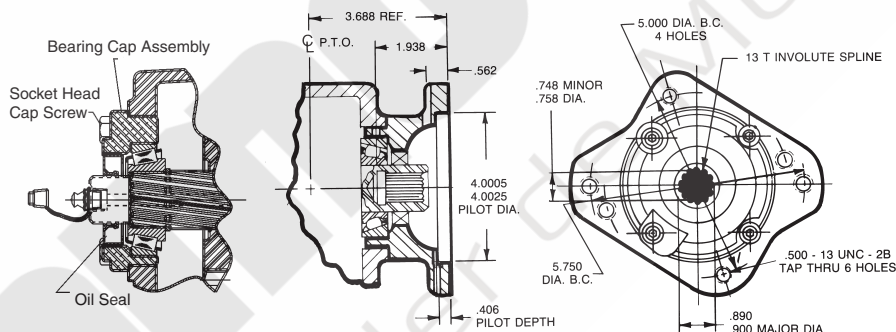
Available for the following P.T.O.s:
221, 260, 441, 442, 447, 489,
660, 2442



Suffix GK

S.A.E. Class "B" 2 or 4 Bolt
For 7/8" - 13 Tooth Splined Shaft,
(*Greaseable)

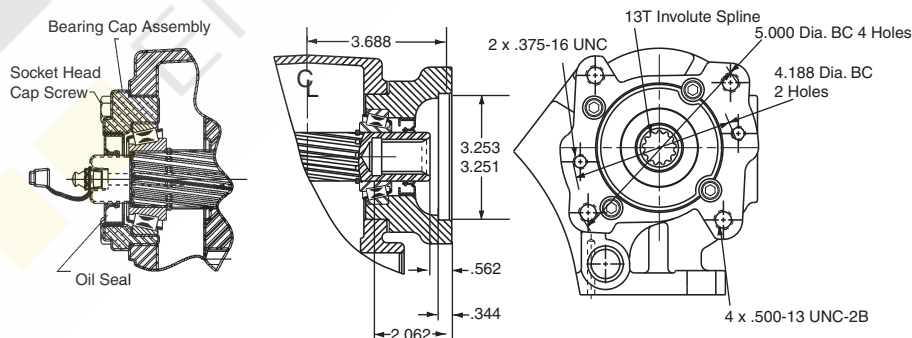
Available for the following P.T.O.s:
221, 260, 290, 441, 442, 447,
489, 660, 2442



Suffix GP

S.A.E. Class "A" 2 Bolt
For 7/8" - 13 Tooth Splined Shaft,
(*Greaseable)

Available for the following P.T.O.s:
221, 230, 260, 441, 442, 447, 489,
660, 2442



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

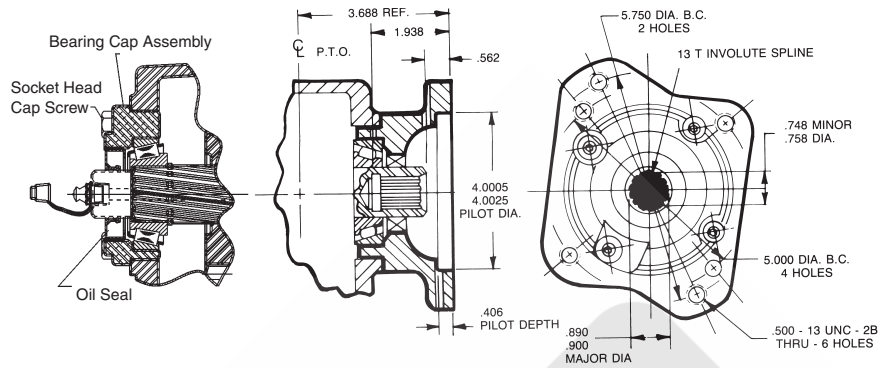
- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

Flange Dimensions**Applications
Mechanical Six Bolt****Suffix GQ**

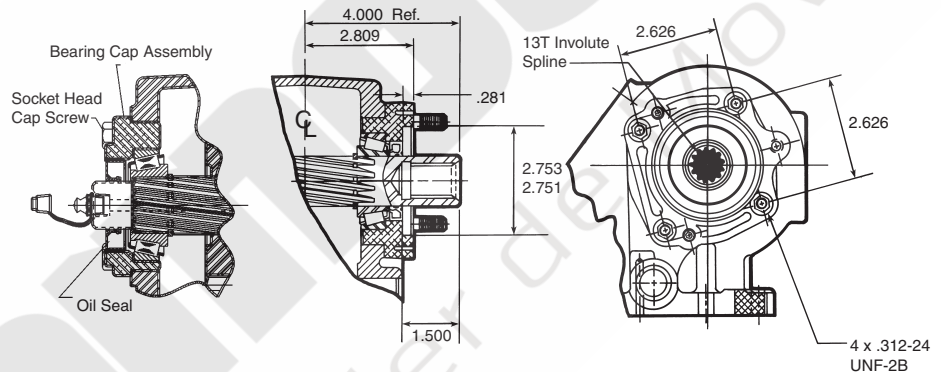
S.A.E. Class "B" 2 or 4 Bolt
For 7/8" - 13 Tooth Splined Shaft,
(*Greaseable)

Available for the following P.T.O.s:
221, 260, 435, 441, 442, 447,
489, 660, 2442

**Suffix GR**

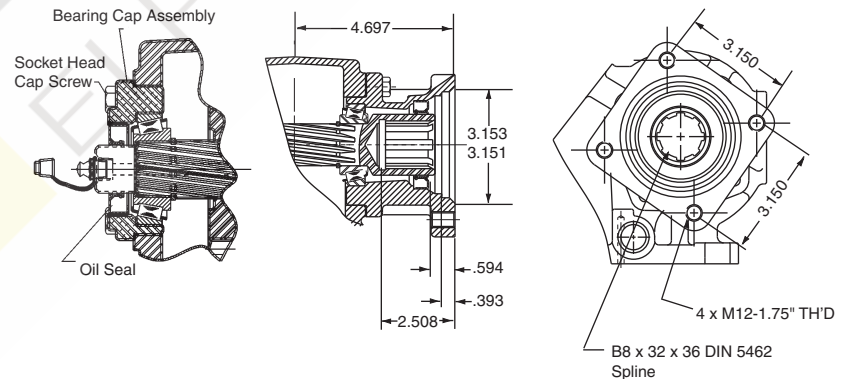
For Chelsea Pumps
For 7/8" - 13 Tooth Splined Shaft,
(*Greaseable)

Available for the following P.T.O.s:
221, 260, 290, 441, 442, 447, 489,
660, 2442

**Suffix GY**

DIN 5462 Pump Mounting
For B8 x 32 x 36 x 36 DIN 5462
Splined Shaft,
(*Greaseable)

Available for the following P.T.O.s:
221, 260, 441, 442, 447, 660, 2442



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

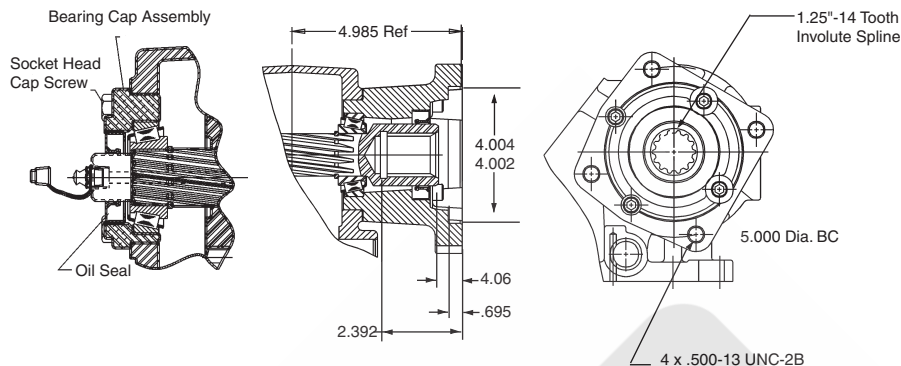
Flange Dimensions

Applications Mechanical Six Bolt

Suffix GZ

Non Standard 4 Bolt
For 1-1/4" - 14 Tooth Splined Shaft,
(*Greaseable)

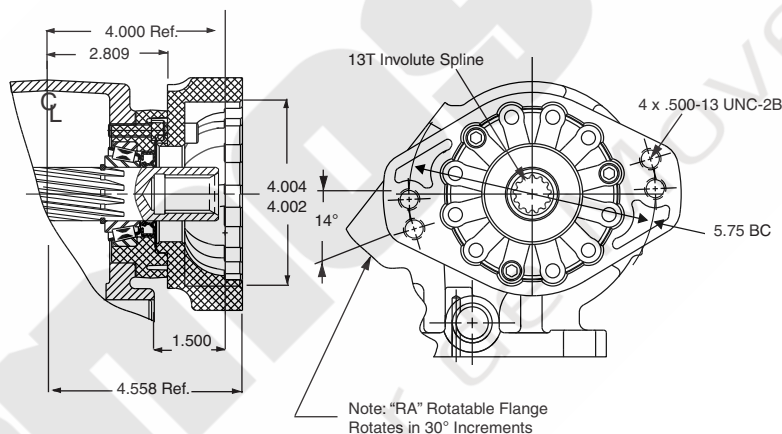
Available for the following P.T.O.s:
221, 260, 290, 441, 442, 447, 489,
660, 2442



Suffix RA

S.A.E. Class "B" 2 Bolt Rotatable
For 7/8" - 13 Tooth Splined Shaft

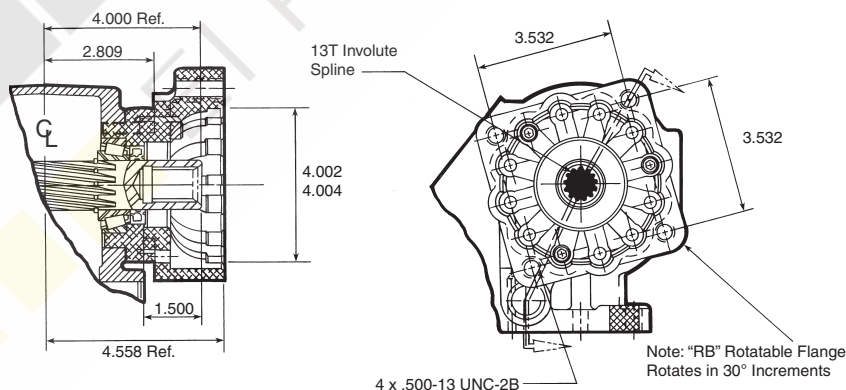
Available for the following P.T.O.s:
221, 260, 290, 435, 441, 442,
447, 489, 2442



Suffix RB

S.A.E. Class "B" 4 Bolt Rotatable
For 7/8" - 13 Tooth Splined Shaft

Available for the following P.T.O.s:
221, 260, 290, 435, 441, 442, 447,
489, 2442



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

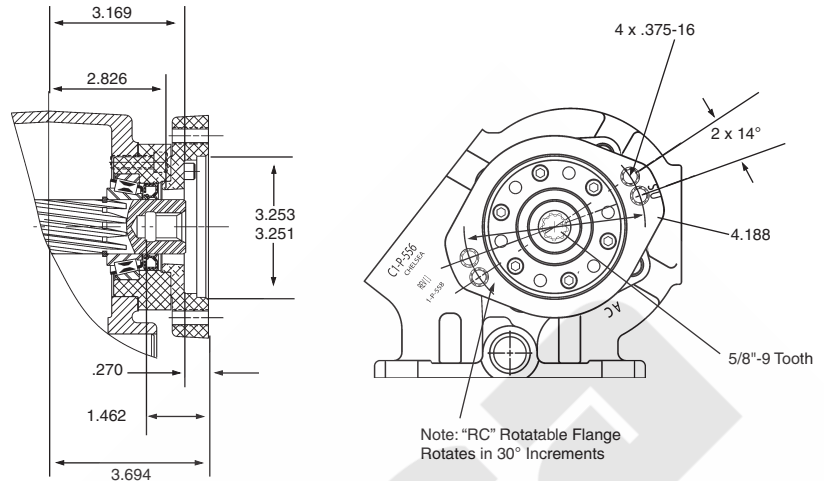
- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

Flange Dimensions**Applications
Mechanical Six Bolt****Suffix RC**

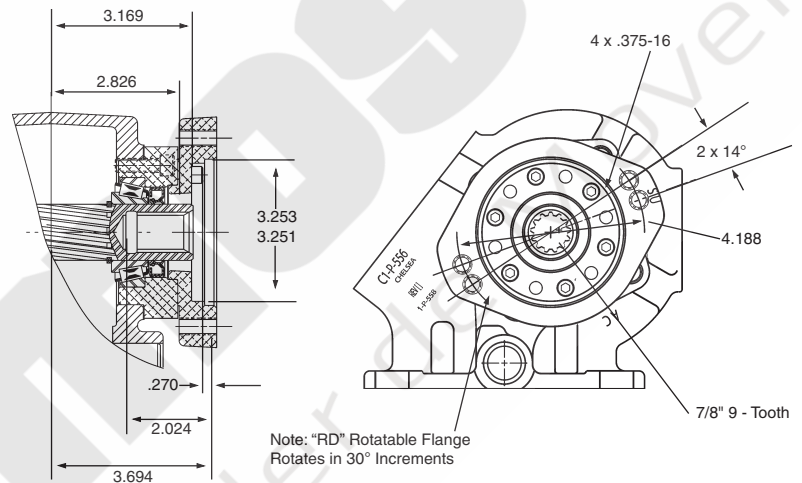
S.A.E. Class "A" 2 Bolt Rotatable
For 5/8" - 9 Tooth Splined Shaft

Available for the following P.T.O.s:
221, 260, 441, 442, 447, 2442

**Suffix RD**

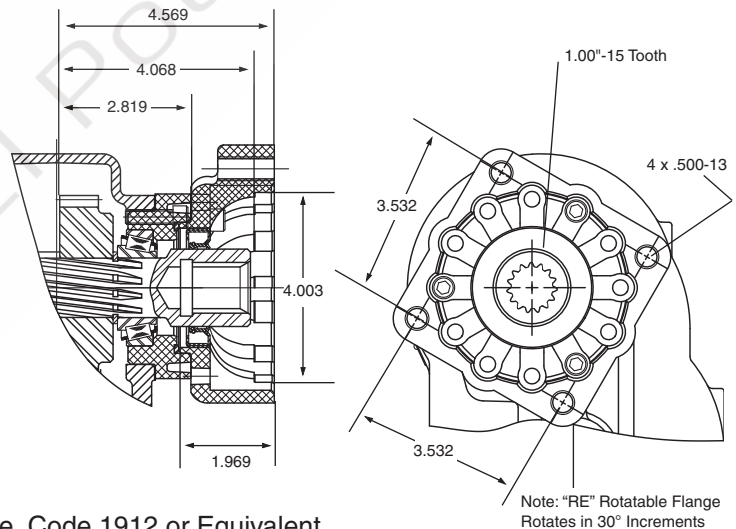
S.A.E. Class "A" 2 Bolt Rotatable
For 7/8" - 13 Tooth Splined Shaft

Available for the following P.T.O.s:
221, 260, 441, 442, 447, 2442

**Suffix RE**

S.A.E. Class "B" 4 Bolt Rotatable
For 1.00" - 15 Tooth Splined Shaft

Available for the following P.T.O.s:
267, 290, 441, 442, 447, 489, 660, 2442



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

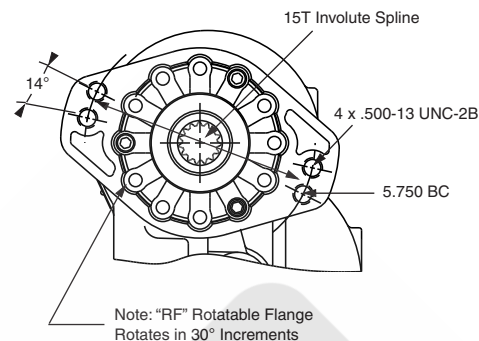
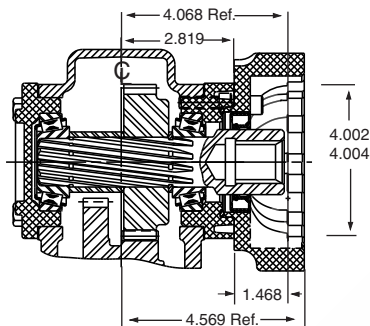
Flange Dimensions

Applications Mechanical Six Bolt

Suffix RF

S.A.E. Class "BB" 2 Bolt Rotatable
For 1" - 15 Tooth Splined Shaft

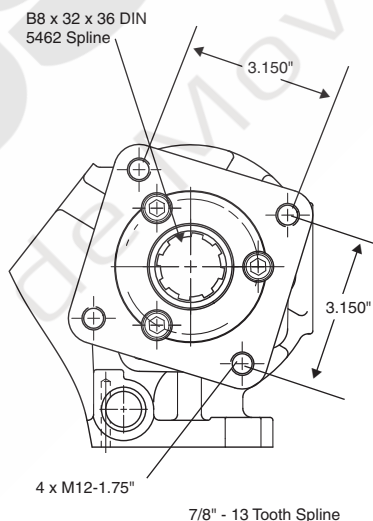
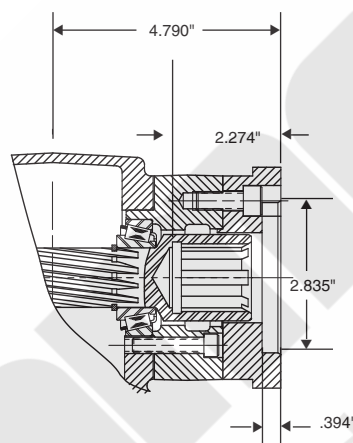
Available for the following P.T.O.s:
221, 260, 441, 442, 447, 489, 2442



Suffix RY

DIN 5462 Pump Mounting

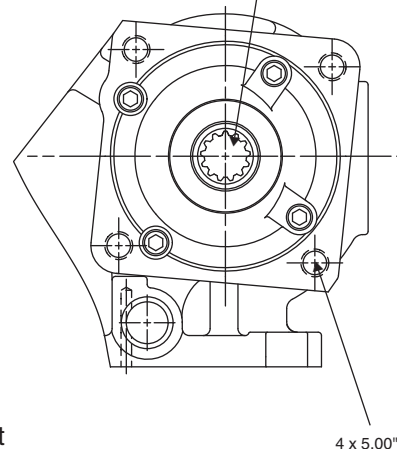
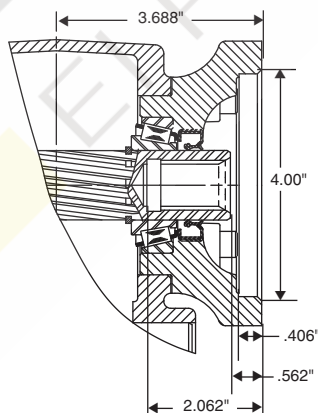
Available for the following P.T.O.s:
260, 442, 447, 660



Suffix SQ

S.A.E. Class "B" 4 Bolt
For 7/8" - 13 Tooth Splined Shaft

Available for the following P.T.O.s:
221, 260, 435, 441, 442, 447,
489, 2442



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

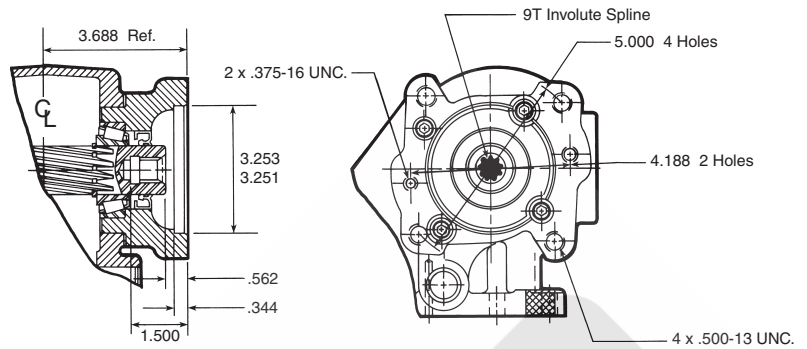
- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

Flange Dimensions**Applications
Mechanical Six Bolt****Suffix XE**

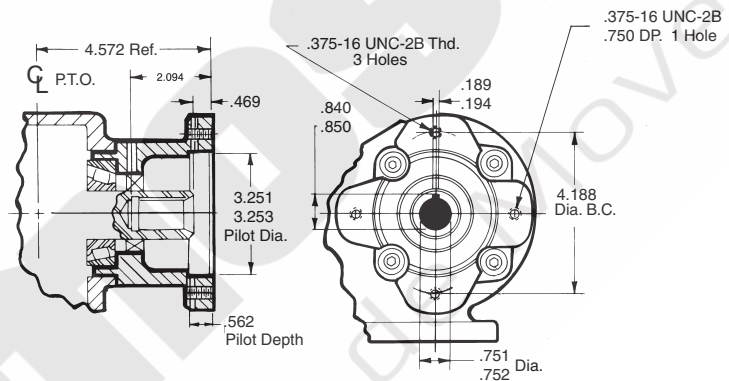
S.A.E. Class "A" 2 or 4 Bolt
For 5/8" - 9 Tooth Splined Shaft

Available for the following P.T.O.s:
221, 260, 442, 447, 489, 2442

**Suffix XG**

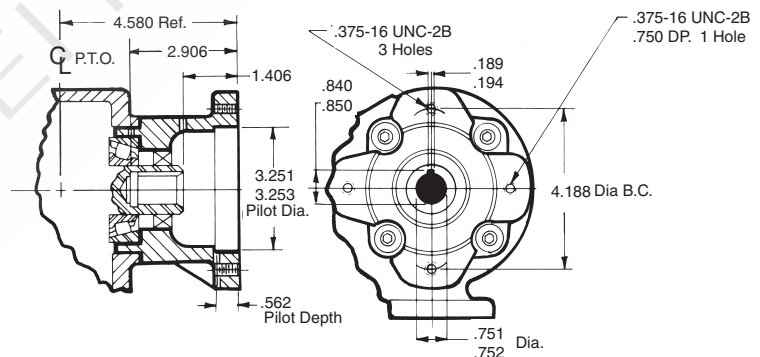
S.A.E. Class "A" 2 Bolt
For 3/4" Round Shaft

Available for the following P.T.O.s:
221, 260, 290, 442, 447, 489, 2442

**Suffix XJ**

S.A.E. Class "A" 2 Bolt
For 3/4" Round Shaft

Available for the following P.T.O.s:
221, 260, 290, 441, 442, 447,
489, 2442



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

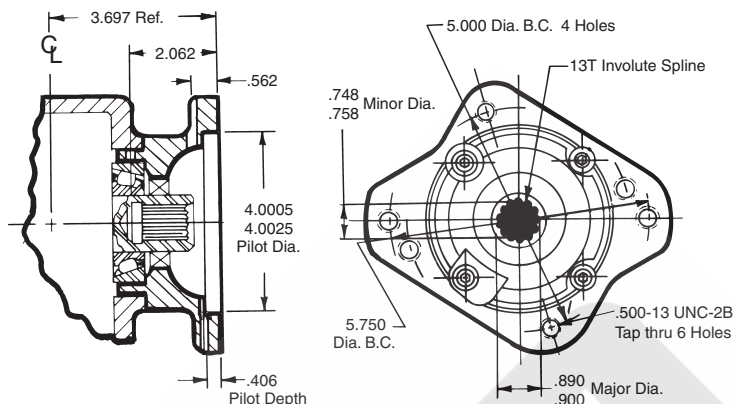
- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

Flange Dimensions**Applications
Mechanical Six Bolt****Suffix XK**

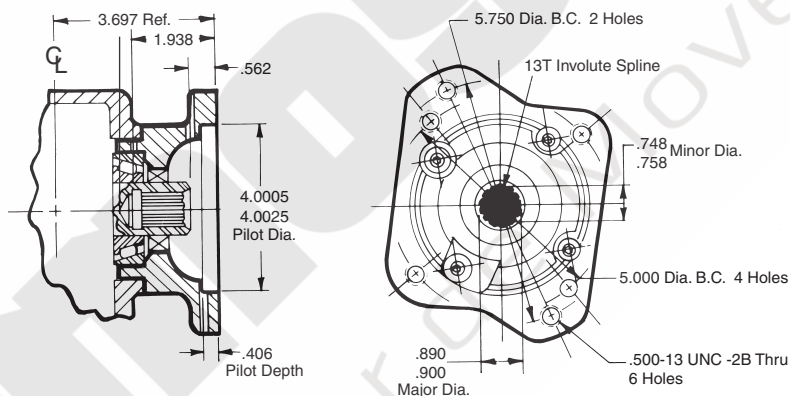
S.A.E. Class "B" 2 or 4 Bolt
For 7/8" - 13 Tooth Splined Shaft

Available for the following P.T.O.s:
221, 260, 290, 441, 442, 447,
489, 2442

**Suffix XQ**

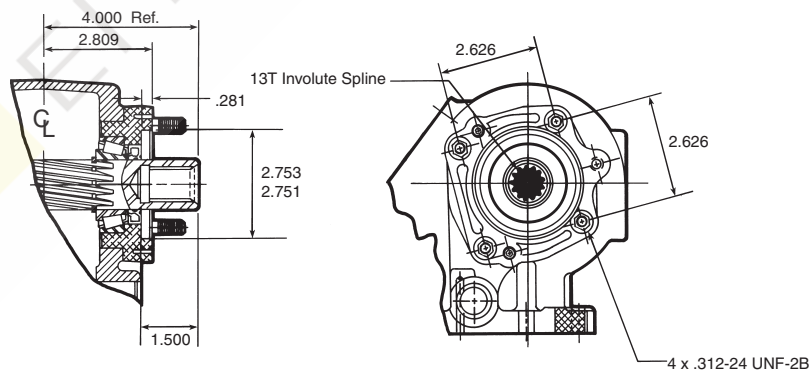
S.A.E. Class "B" 2 or 4 Bolt
For 7/8" - 13 Tooth Splined Shaft

Available for the following P.T.O.s:
221, 260, 435, 441, 442, 447,
489, 2442

**Suffix XR**

For Chelsea Pumps
For 7/8" - 13 Tooth Splined Shaft

Available for the following P.T.O.s:
221, 260, 290, 435, 441, 442, 447,
489, 2442



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

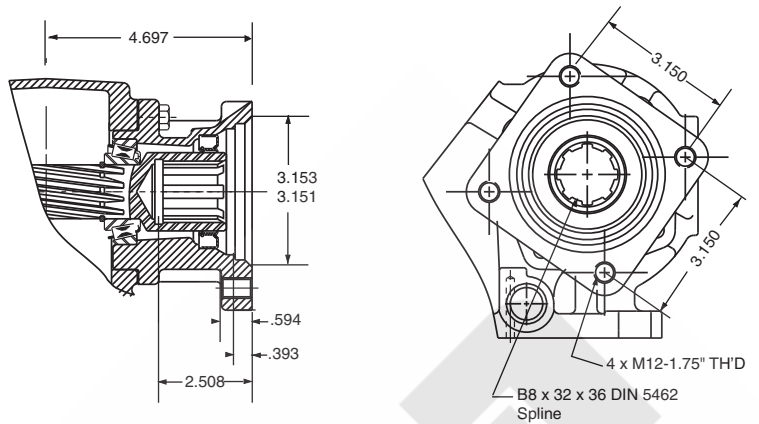
- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

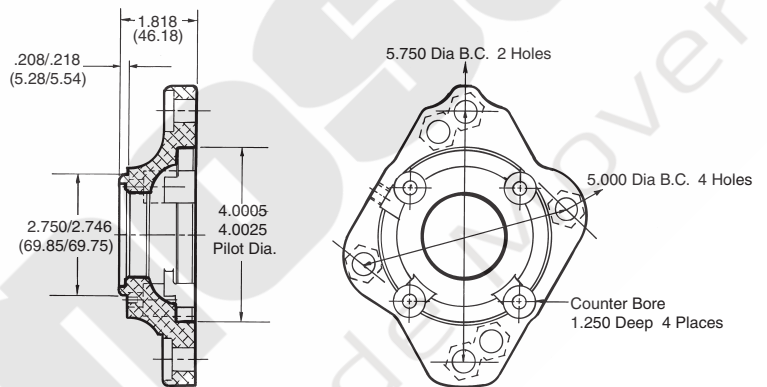
Flange Dimensions**Applications
Mechanical Six Bolt****Suffix XY**

DIN 5462 Pump Mounting
For B8 x 32 x 36 x 36 DIN 5462
Splined Shaft

Available for the following P.T.O.s:
221, 260, 441, 442, 447, 660, 2442

**21-P-525**

(XR to XK Conversion Flange)



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

P.T.O. Shift Mechanisms Field Conversion Kits

Series/ Application	Assembly Arrangement	Wire To Air	Lever To Air	Wire to Elec. over Air 12 Volt	Lever to Elec. Over Air 12 Volt
100	3 & 4	328390-86X	328390-85X		
221	3,4,5 & 6	328390-88X	328390-89X	328390-109X	328390-111X
290	3,4,5 & 6	328390-123X			
442	3,4,5 & 6	328390-117X	328390-117X	328390-119X	
447	3,4,5 & 6	328390-125X	328390-125X	328390-127X	
660	3,4,5 & 6	328390-117X	328390-117X	328390-119X	

Cover Assemblies

Series/ Application	Assembly Arrangement	Wire Control	Air Control
100	3	328932-1X	328851X
100	4	328932-2X	328851X
100 ISUZU		329009X	
221	3 & 6	328805-1X	328723X
221	4 & 5	328805-2X	328723X
290	3,4,5 & 6		329363X
442 Q, W & X	3 & 6	329119-1X	
442 Q, W & X	4 & 5	329119-2X	
442 F,L,R,S & U	3 & 6	329121-1X	
442 F,L,R,S & U	4 & 5	329121-2X	
442 A, B & C	3 & 6	329271-1X	
442 A, B & C	4 & 5	329271-2X	
442 (All Ratios)	All		329361X
447 Q & W	3 & 6	329151-1X	
447 Q & W	4 & 5	329151-2X	
447 S, U & R	3 & 6	329152-1X	
447 S, U & R	4 & 5	329152-2X	
447 (All Ratios)	All		329363X
660 Q & W	3 & 6	329119-1X	
660 Q & W	4 & 5	329119-2X	
660 F, S & U	3 & 6	329121-1X	
660 F, S & U	4 & 5	329121-2X	
660 (All Ratios)	All		329361X

Installation Kits

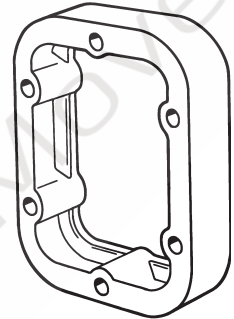
Series/ Application	Assembly Arrangement	Wire Control	Air Control	Electric Over Air		Air Shift w/ Modified Combo Valve	Air Shift w/ Combo Valve
				12 Volt	24 Volt		
100	3 & 4	328380X	328388-37X	328388-47X	328388-48X		328388-65X
221	3,4,5 & 6	328380X	328388-37X	328388-47X	328388-48X		328388-65X
290	3,4,5 & 6		328388-37X	328388-47X	328388-48X		328388-65X
442	3,4,5 & 6	328380X	328388-37X	328388-47X	328388-48X	328388-72X	328388-65X
447	3,4,5 & 6	328380X	328388-37X	328388-47X	328388-48X	328388-72X	328388-65X
660	3,4,5 & 6	328380X	328388-37X	328388-47X	328388-48X	328388-72X	328388-65X

Filler Blocks

Filler blocks are required as called for on the P.T.O. application pages, where it is necessary to use a spacer to adapt the Power Take-Off to a particular transmission.

Two filler blocks may be used in combination with one or more gaskets between the filler block surfaces.

In computing the total thickness of the filler block and gasket combination, use a factor of .012" (compressed thickness of a .020" gasket 35-P-9-2 or 35-P-15-2) for every .020" gasket required in the installation.



S.A.E. 6-Bolt Filler Blocks

Part Number	"A" Thickness	Material	Part Number	"A" Thickness	Material
7-A-032	.032"	Fiber	7-A-550	.550"	Cast Iron
7-A-062	.062"	Fiber	7-A-562	.562"	Cast Iron
7-A-093	.093"	Steel	7-A-700	.700"	Cast Iron
7-A-125	.125"	Steel	7-A-800	.800"	Cast Iron
7-A-140	.140"	Steel	7-A-1000	1.000"	Cast Iron
7-A-165	.165"	Steel	7-A-1180	1.180"	Cast Iron
7-A-187	.187"	Steel	7-A-1250	1.250"	Cast Iron
7-A-200	.200"	Cast Iron	7-A-1468	1.468"	Cast Iron
7-A-240	.240"	Cast Iron	7-A-1520	1.520"	Cast Iron
7-A-270	.270"	Cast Iron	7-A-1640	1.640"	Cast Iron
7-A-300	.300"	Cast Iron	7-A-1875	1.875"	Cast Iron
7-A-350	.350"	Cast Iron	7-A-2000	2.000"	Cast Iron
7-A-400	.400"	Cast Iron			
7-A-450	.450"	Cast Iron			
7-A-500	.500"	Cast Iron			

8-Bolt Mechanical

P.T.O. Options Chart – 8-Bolt P.T.O.s

P.T.O. Series		489	680	812	823	880
Lubrication						
X	Standard	X	X	X	X	X
P	Pressure	X	X		X	X
Shifting						
A	Air	X	X	X	X	X
C	Heavy Duty Bracket Less Cable	X	X			
D	Air Shift, Disengaged, Ship Loose					X
H	No Shifter	X	X			X
M	Constant Mesh	X	X		X	X
P	Electric/Air 12V	X	X	X		
Q	Electric/Air 24V	X	X	X		
S	P.T.O. & Combo Valve	X	X			
T	P.T.O. & Pump Valve Less Kick Out & Neutral Spring Return	X	X			
V	Air Shift Less Installation Kit	X	X	X	X	X
W	Wire	X	X	X		
X	Less Cable & Knob	X	X			
Y	Lever Control			X	X	X
Output						
AA	Special Pump for Europe	X	X			
AB	DIN 120 Flange				X	X
AC	DIN 100 Flange				X	X
AF	S.A.E. "B" 2 or 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth)	X	X			X
AK	S.A.E. "B" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)	X	X	X		
AZ	Non Standard Flange, "C" Shaft (1-1/4" 14 - Tooth)	X	X			
FF	S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (.875" - 1/4" w/ 1/4" Key)					
GA	Rotatable "B" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)	X	X			
GB	Rotatable "B" 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)	X	X			
GE	Rotatable S.A.E. "A" 2 or 4 Bolt Flange, "A" Shaft (5/8" 9 - Tooth) (Greaseable)	X	X			
GF	S.A.E. "B" 2 or 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth) (Greaseable)	X	X			
GH	Rotatable "B" 2 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth) (Greaseable)	X	X			
GJ	Rotatable "B" 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth) (Greaseable)	X	X			
GK	S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)	X	X			
GP	S.A.E. "A" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)	X	X			
GQ*	S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)	X	X			
GR	Chelsea Special Pump Mount, "B" Shaft (7/8" 13 - Tooth) (Greaseable)	X	X			
GS	S.A.E. "C" 2 or 4 Bolt Flange, "C" Shaft (1-1/4" 14 - Tooth) (Greaseable)				X	X
GY	DIN 5462 Pump Mounting (Greaseable)	X	X			
GZ	Non Standard Flange, "C" Shaft (1-1/4" 14 - Tooth) (Greaseable)	X	X			
LA	S.A.E. "B" 2 Bolt Flange w/Lube Pump (Same as AK)	X	X			
LB	S.A.E. "A" 2 Bolt Flange w/Lube Pump (Same as XP)	X	X			
LC	S.A.E. "A" 2 Bolt Flange w/Lube Pump (Same as XQ)	X	X			
LD	1-1/4" Round Shaft w/Lube Pump (Same as XD)	X	X			
LF	S.A.E. "B" 2 or 4 Bolt Flange w/Lube Pump (Same as XK)	X	X			X
LG	1-1/2" 10 Spline w/1410 & Lube Pump (Same as XV)				X	X
LH	S.A.E. "C" 2 or 4 Bolt Flange w/Lube Pump (Same as XS)				X	X
LJ	S.A.E. "C" 2 Bolt Flange w/ Lube Pump (Same as XU)				X	
PA	Special Rotatable S.A.E. "B" 2 Bolt Flange for Parker P Series Sculptured Pump, "B" Shaft (7/8" 13 - Tooth)	X				
PF	Special Rotatable S.A.E. "B" 2 Bolt Flange for Parker P Series Sculptured Pump, "BB" Shaft (1.00" 15 - Tooth)	X				
RA	Rotatable "B" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)	X	X	X		
RB	Rotatable "B" 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)	X	X	X		
RC	Rotatable "A" 2 Bolt Flange, "A" Shaft (5/8" 9 - Tooth)	X	X			
RD	Rotatable "A" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)	X	X			
RE	Rotatable "B" 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth)	X	X			

* XQ/GQ same as XK/GK except flange rotated 90°

** Order companion (3-1-604) separately

NOTE: Always Check Price Book for Current Options

Continued on next page

8-Bolt Mechanical (continued)

P.T.O. Options Chart – 8-Bolt P.T.O.s						
P.T.O. Series		489	680	812	823	880
RF	Rotatable “B” 2 Bolt Flange, “BB” Shaft (1.00" 15 - Tooth)	x	x			
RY	Rotatable DIN 5462 Pump Flange	x	x			
SK	Double Pump S.A.E. “B” 2 & 4 Bolt Flange, “B” Shaft (7/8" 13 - Tooth) & S.A.E. “C” 2 & 4 Bolt Flange, “C” Shaft (1-1/4" 14 - Tooth)					x
SS	Double Pump S.A.E. “C” 2 & 4 Bolt Flanges, “C” Shafts (1-1/4" 14 - Tooth)					x
XD	1-1/4" Round Shaft	x	x	x		
XE	S.A.E. “A” 2 or 4 Bolt Flange, “A” Shaft (5/8" 9 - Tooth)	x	x			
XG	Non Standard S.A.E. “B” 2 Bolt Flange, Non Standard Shaft (3/4" w/ 3/16" key)	x	x			
XJ	Non Standard S.A.E. “A” 2 Bolt Flange, Non Standard Shaft (3/4" w/ 3/16" key)	x	x			
XK	S.A.E. “B” 2 or 4 Bolt Flange, “B” Shaft (7/8" 13 - Tooth)	x	x			x
XQ*	S.A.E. “B” 2 or 4 Bolt Flange, “B” Shaft (7/8" 13 - Tooth)	x	x			
XR	1-1/2" 10 spline w/1410 Series Flange	x	x	x		
XS	S.A.E. “C” 2 or 4 Bolt Flange, “C” Shaft (1-1/4" 14 - Tooth)				x	x
XU	S.A.E. “C” 2 Bolt Flange, “C” Shaft (1-1/4" 14 - Tooth)				x	
XV	1-1/2" 10 Spline w/1410 Series Flange		x		x	x
XW	S.A.E. “C” 2 or 4 Bolt Wet Spline				x	
XX**	1-1/4" Tapered Shaft for Companion Flange 3-1-604	x	x	x		
XY	DIN 5462 Pump Mounting	x	x	x	x	x
YY	Double Pump DIN 80				x	x

* XQ/GQ same as XK/GK except flange rotated 90°

** Order companion (3-1-604) separately

NOTE: Always Check Price Book for Current Options

489 Flange Conversion Chart**Applications
Mechanical Eight Bolt**

For converting 8-Bolt Chelsea P.T.O.s from a driveshaft output to a pump flange output, use the following kits.

489 Series				
Pump Suffix	Kit No. Suffix	Kit Number	Flange Type	Shaft Type
AF	XD to AF	328591-30X	S.A.E. "BB" 2 or 4 Bolt	1.00" - 15 Tooth Splined
AK	XD to AK	328591-28X	S.A.E. "B" 2 Bolt	7/8" - 13 Tooth Splined
AZ	XD to AZ	328591-70X	S.A.E. "B" 4 Bolt	1-1/4" - 14 Tooth Splined
GA	XD to GA	328591-72X	S.A.E. "B" 2 Bolt	*7/8" - 13 Tooth Internal Spline
	XR to GA	328591-73X		
	RA to GA	328591-106X		
GB	XD to GB	328591-74X	S.A.E. "B" 4 Bolt	*7/8" - 13 Tooth Internal Spline
	XR to GB	328591-75X		
	RB to GB	328591-107X		
GF	XD to GF	328591-71X	S.A.E. "BB" 2 or 4 Bolt	*1.00" - 15 Tooth Internal Spline
	AF to GF	328591-108X		
GH	XD to GH	328591-116X	S.A.E. "BB" 2 Bolt Rotatable	*1.00" - 15 Tooth Internal Spline
	RF to GH	328591-114X		
GJ	XD to GJ	328591-138X	S.A.E. "B" 4 Bolt Rotatable	*1.00" - 15 Tooth Splined
	RE to GJ	328591-114X		
GK	XD to GK	328591-89X	S.A.E. "B" 2 or 4 Bolt	*7/8" - 13 Tooth Internal Spline
	XK to GK	328591-86X		
GP	XD to GP	328591-90X	S.A.E. "A" 2 Bolt	*7/8" - 13 Tooth Internal Spline
	XP to GP	328591-86X		
GQ	XD to GQ	328591-91X	S.A.E. "B" 2 or 4 Bolt	*7/8" - 13 Tooth Internal Spline
	XQ to GQ	328591-86X		
GR	XD to GR	328591-76X	CHELSEA SPECIAL 4 Bolt	*7/8" - 13 Tooth Internal Spline
GY	XD to GY	328591-92X	DIN 5462 Pump Mounting	*DIN 5462 Spline
	XY to GY	328591-87X		
GZ	XD to GZ	328591-93X	S.A.E. "B" 4 Bolt	*1-1/4" - 14 Tooth Splined
	AZ to GZ	328591-88X		
LA (AK w/Lube Pump)	XD to LA	328591-44X	S.A.E. "B" 2 Bolt	7/8" - 13 Tooth Splined
LB (XP w/Lube Pump)	XD to LB	328591-45X	S.A.E. "A" 2 Bolt	7/8" - 13 Tooth Splined
LC (XQ w/Lube Pump)	XD to LC	328591-46X	S.A.E. "B" 2 or 4 Bolt	7/8" - 13 Tooth Splined
LF (XK w/Lube Pump)	XD to LF	328591-48X	S.A.E. "B" 2 or 4 Bolt	7/8" - 13 Tooth Splined
RA	XD to RA	328591-55X	S.A.E. "B" 2 Bolt Rotatable	7/8" - 13 Tooth Internal Spline
	XR to RA	328591-53X	S.A.E. "B" 2 Bolt Rotatable	7/8" - 13 Tooth Internal Spline
RB	XD to RB	328591-56X	S.A.E. "B" 4 Bolt Rotatable	7/8" - 13 Tooth Internal Spline
	XR to RB	328591-54X	S.A.E. "B" 4 Bolt Rotatable	7/8" - 13 Tooth Internal Spline
RC	XD to RC	328591-112X	S.A.E. "A" 2 Bolt Rotatable	5/8" - 9 Tooth Splined
RD	XD to RD	328591-113X	S.A.E. "A" 2 Bolt Rotatable	7/8" - 13 Tooth Splined
RE	XD to RE	328591-134X	S.A.E. "B" 4 Bolt Rotatable	1.00" - 15 Tooth Splined
RF	XD to RF	328591-78X	S.A.E. "BB" 2 Bolt Rotatable	1.00" - 15 Tooth Splined
RY	XD to RY	328591-131X	DIN 5462 Pump Mounting Rotatable	DIN 5462 Spline
XE	XD to XE	328591-27X	S.A.E. "A" 2 or 4 Bolt	5/8" - 9 Tooth Splined
XG	XD to XG	328591-10X	Non-Standard 2 Bolt	3/4" Round
XJ	XD to XJ	328591-11X	Non-Standard 2 Bolt	3/4" Round
XK	XD to XK	328591-16X	S.A.E. "B" 2 or 4 Bolt	7/8" - 13 Tooth Splined
XQ	XD to XQ	328591-17X	S.A.E. "B" 2 or 4 Bolt	7/8" - 13 Tooth Splined
XR	XD to XR	328591-52X	Chelsea Special	7/8" - 13 Tooth Splined
XV	XD to XV	328591-130X	1410 Companion Flange	1-1/4" Round
XX	XD to XX	328591-122X	1410 Companion Flange	1-1/4" S.A.E. Tapper
XY	XD to XY	328591-121X	DIN 5462 Pump Mounting	DIN 5462 Spline

NOTE: Use 329097-1X to convert P.T.O.s with AK, XP, XQ, XN, or XK output to the self-lube pump option.

*Grease fitting on end of shaft

680 Flange Conversion Chart**Applications
Mechanical Eight Bolt**

680 Series				
Pump Suffix	Kit No. Suffix	Kit Number	Flange Type	Shaft Type
AF	XD to AF	328591-30X	S.A.E. "BB" 2 or 4 Bolt	1.00" - 15 Tooth Internal Spline
AK	XD to AK	328591-28X	S.A.E. "B" 2 Bolt	7/8" - 13 Tooth Internal Spline
AZ	XD to AZ	328591-70X	Non Standard 4 Bolt	1- 1/4" - 14 Tooth Internal Spline
GA	XD to GA RA to GA	328591-124X 328591-109X	S.A.E. "B" 2 Bolt	*7/8" - 13 Tooth Internal Spline
GB	XD to GB RB to GB	328591-125X 328591-110X	S.A.E. "B" 4 Bolt	*7/8" - 13 Tooth Internal Spline
GF	XD to GF AF to GF	328591-123X 328591-111X	S.A.E. "BB" 2 or 4 Bolt	*1.00" - 15 Tooth Internal Spline
GH	XD to GH RF to GH	328591-117X 328591-115X	S.A.E. "BB" 2 Bolt Rotatable	*1.00" - 15 Tooth Internal Spline
GJ	XD to GJ RE to GJ	328591-139X 328591-115X	S.A.E. "B" 4 Bolt Rotatable	*1.00" - 15 Tooth Splined
GK	XD to GK XK to GK	328591-99X 328591-96X	S.A.E. "B" 2 or 4 Bolt	*7/8" - 13 Tooth Internal Spline
GP	XD to GP XP to GP	328591-100X 328591-96X	S.A.E. "A" 2 Bolt	*7/8" - 13 Tooth Internal Spline
GQ	XD to GQ XQ to GQ	328591-101X 328591-96X	S.A.E. "B" 2 or 4 Bolt	*7/8" - 13 Tooth Internal Spline
GR	XD to GR	328591-126X	CHELSEA SPECIAL 4 Bolt	*7/8" - 13 Tooth Internal Spline
GY	XD to GY XY to GY	328591-102X 328591-97X	DIN 5462	B8 x 32 x 36 DIN 5462 Spline
GZ	XD to GZ AZ to GZ	328591-103X 328591-98X	Non Standard 4 Bolt	*1-1/4" - 14 Tooth Internal Spline
LA (AK w/Lube Pump)	XD to LA	328591-44X	S.A.E. "B" 2 Bolt	7/8" - 13 Tooth Splined
LB (XP w/Lube Pump)	XD to LB	328591-45X	S.A.E. "A" 2 Bolt	7/8" - 13 Tooth Splined
LC (XQ w/Lube Pump)	XD to LC	328591-46X	S.A.E. "B" 2 or 4 Bolt	7/8" - 13 Tooth Splined
LF (XK w/Lube Pump)	XD to LF	328591-48X	S.A.E. "B" 2 or 4 Bolt	7/8" - 13 Tooth Splined
RA	XD to RA XR to RA	328591-55X 328591-53X	S.A.E. "B" 2 Bolt Rotatable	7/8" - 13 Tooth Internal Spline
RB	XD to RB XR to RB	328591-56X 328591-54X	S.A.E. "B" 4 Bolt Rotatable	7/8" - 13 Tooth Internal Spline
RC	XD to RC	328591-112X	S.A.E. "A" 2 Bolt Rotatable	5/8" - 9 Tooth Internal Spline
RD	XD to RD	328591-113X	S.A.E. "A" 2 Bolt Rotatable	7/8" - 13 Tooth Internal Spline
RE	XD to RE	328591-134X	S.A.E. "B" 4 Bolt Rotatable	1.00" - 15 Tooth Splined
RF	XD to RF	328591-78X	S.A.E. "BB" 2 Bolt Rotatable	1.00" - 15 Tooth Internal Spline
RY	XD to RY	328591-131X	DIN 5462 Pump Mounting Rotatable	DIN 5462 Spline
XE	XD to XE	328591-27X	S.A.E. "A" 2 or 4 Bolt	5/8" - 9 Tooth Internal Spline
XG	XD to XG	328591-10X	Non-Standard 2 Bolt	3/4" Round
XJ	XD to XJ	328591-11X	Non-Standard 2 Bolt	3/4" Round
XK	XD to XK	328591-16X	S.A.E. "B" 2 or 4 Bolt	7/8" - 13 Tooth Internal Spline
XQ	XD to XQ	328591-26X	S.A.E. "A" 2 Bolt	3/4" Round
XR	XD to XR	328591-23X	S.A.E. "A" 2 Bolt	7/8" - 13 Tooth Internal Spline
XV	XD to XV	328591-17X	S.A.E. "B" 2 or 4 Bolt	7/8" - 13 Tooth Internal Spline
XX	XD to XX	328591-52X	CHELSEA SPECIAL 4 Bolt	7/8" - 13 Tooth Internal Spline
XY	XD to XY	328591-121X	DIN 5462	B8 x 32 x 36 DIN 5462 Spline

NOTE: Use 329097-1X to convert P.T.O.s with AK, XP, XQ, or XK output to the self-lube pump option.

*Grease fitting on end of shaft

812 Series

Pump Suffix	Kit No. Suffix	Kit Number	Flange Type	Shaft Type
RB	XD to RB XR to RB	328591-66X 328591-54X	S.A.E. "B" 4 Bolt Rotatable	7/8" - 13 Tooth Internal Spline
XR	XD to XR	328591-64X	CHELSEA SPECIAL 4 Bolt	7/8" - 13 Tooth Internal Spline
RA	XR to RA XD to RA	328591-53X 328591-65X	S.A.E. "B" 2 Bolt Rotatable	7/8" - 13 Tooth Internal Spline

823 Series

Pump Suffix	Kit No. Suffix	Kit Number	Flange Type	Shaft Type
GS	XS to GS XV to GS	328591-136X 328591-137X	S.A.E. "C" 2 or 4 Bolt Flange S.A.E. "C" 2 or 4 Bolt Flange	"C" Shaft (1-1/4" - 14 Tooth) "C" Shaft (1-1/4" - 14 Tooth)
L*	XV to LG XS to LH XS to LJ XU to LH XU to LJ	329111X 329112X 329112X 329112X 329112X	1410 Series Flange S.A.E. "C" 2 or 4 Bolt Flange S.A.E. "C" 2 or 4 Bolt Flange S.A.E. "C" 2 or 4 Bolt Flange S.A.E. "C" 2 or 4 Bolt Flange	"C" Shaft (1-1/4" - 14 Tooth) "C" Shaft (1-1/4" - 14 Tooth) "C" Shaft (1-1/4" - 14 Tooth) "C" Shaft (1-1/4" - 14 Tooth)

880 Series

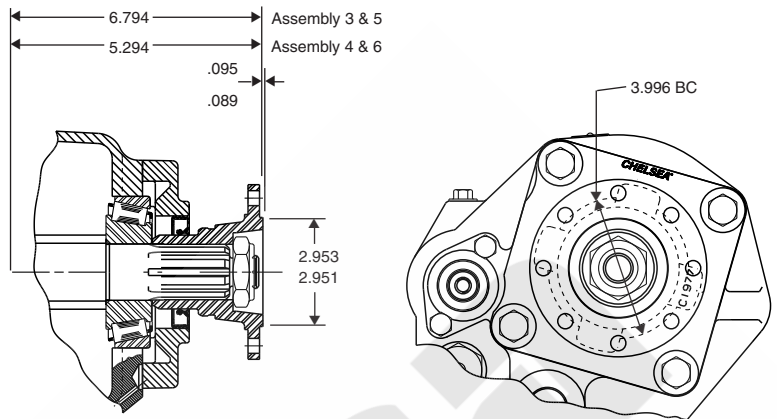
Pump Suffix	Kit No. Suffix	Kit Number	Flange Type	Shaft Type
AB (Splash Lube)	XV to AB	328591-59X	DIN 120 Companion Flange	1-3/4" - 16 Tooth Spline
AB (Pressure Lube)	XV to AB	328591-60X	DIN 120 Companion Flange	1-3/4" - 16 Tooth Spline
AZ (Splash Lube)	XV to AZ	328591-127X	S.A.E. "B" 2 & 4 Bolt	1-1/4" - 14 Tooth Involute Internal Spline
AZ (Pressure Lube)	AV to AZ	328591-128X	S.A.E. "B" 2 & 4 Bolt	1-1/4" - 14 Tooth Involute Internal Spline
GS	XS to GS XV to GS	328591-133X 328591-135X	S.A.E. "C" 2 & 4 Bolt S.A.E. "C" 2 & 4 Bolt	1-1/4" - 14 Tooth Spline 1-1/4" - 14 Tooth Spline
L*	XV to LG XS to LH XK to LF	329111-1X 329111-2X 329111-2X	1410 Companion Flange S.A.E. "C" 2 & 4 Bolt S.A.E. "B" 2 & 4 Bolt	1-1/2" - 10 Spline (Each End) 1-1/4" - 14 Tooth Spline 7/8" - 13 Tooth Involute Internal Spline
SS (Splash Lube)	XV to SS	328591-50X	S.A.E. "C" 2 & 4 Bolt	1-1/4" - 14 Tooth Involute Internal Spline
SS (Pressure Lube)	XV to SS	328591-51X	S.A.E. "C" 2 & 4 Bolt	1-1/4" - 14 Tooth Involute Internal Spline
YY (Splash Lube)	XV to YY	328591-61X	DIN 80mm (Both Ends)	1.748/1.540 - 16 Tooth & 1.424/1.267 - 10 Tooth Spline
SK (Pressure Lube)	XV to SK	328591-67X	S.A.E. "B" 2 & 4 Bolt & S.A.E. "C" 2 & 4 Bolt	7/8"-13 Involute & 1 -1/4" Involute - Internal Splines
XK (Splash Lube)	XV to XK	328591-32X	S.A.E. "B" 2 & 4 Bolt	7/8" - 13 Tooth Involute Internal Spline
XK (Pressure Lube)	XV to XK	328591-58X	S.A.E. "B" 2 & 4 Bolt	7/8" - 13 Tooth Involute Internal Spline
XS (Splash Lube)	XV to XS	328591-31X	S.A.E. "C" 2 & 4 Bolt	1-1/4" - 14 Tooth Spline
XS (Pressure Lube)	XV to XS	328591-49X	S.A.E. "C" 2 & 4 Bolt	1-1/4" - 14 Tooth Spline
XY	XV to XY	328591-34X	DIN 80mm	B8 x 32 x 36 DIN 5462 Spline

Note: See pages 2.5 thru 2.15 for 489 and 680 Flange Dimensions.

Suffix AB

Din 120 Companion Flange
For 1-3/4" - 16 Tooth Splined Shaft

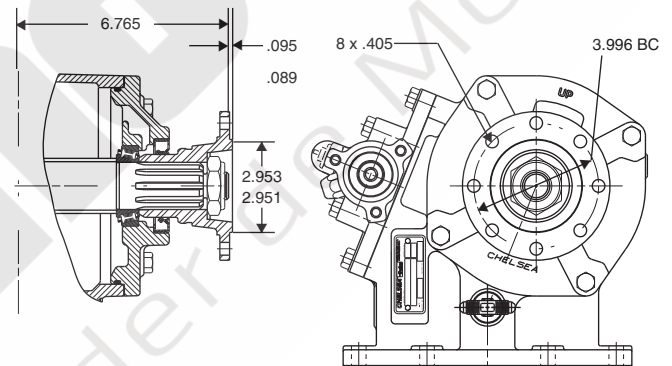
Available for the following P.T.O.s:
823



Suffix AB

Din 120 Companion Flange
For 1-3/4" - 16 Tooth Flange

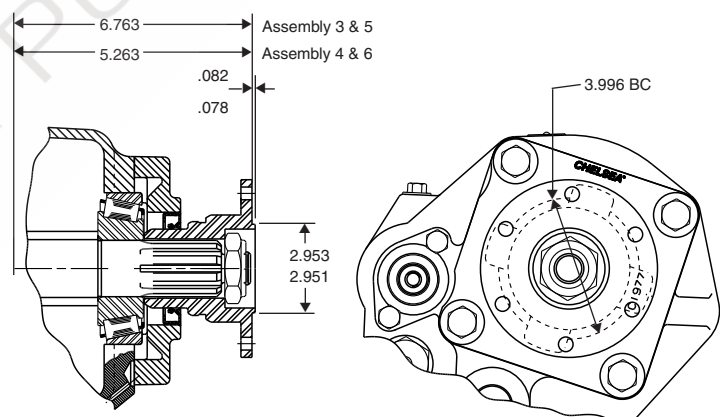
Available for the following P.T.O.s:
880



Suffix AC

DIN 100 Companion Flange
For 1-3/4" - 16 Tooth Splined Shaft

Available for the following P.T.O.s:
823



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

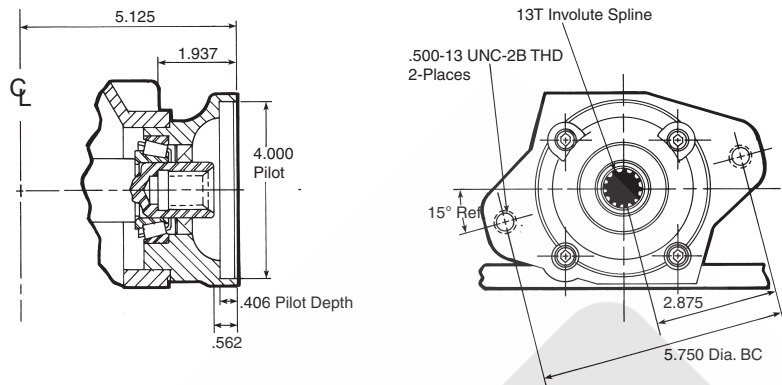
- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

Suffix AK

S.A.E. Class "B" 2 Bolt
 For 7/8" - 13 Tooth Splined Shaft

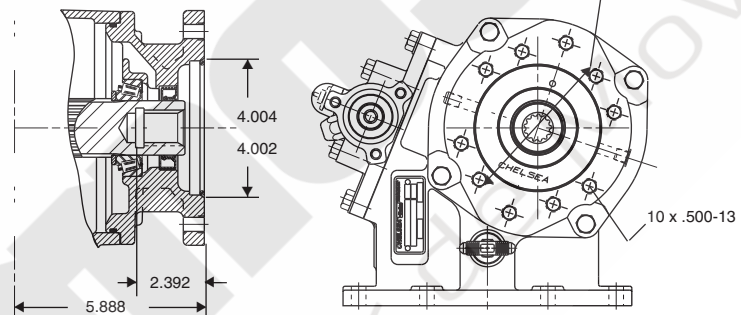
Available for the following P.T.O.s:
 812



Suffix AZ

S.A.E. Class "B" 2 & 4 Bolt Flange
 For 1-1/4" - 14 Tooth Spline Shaft

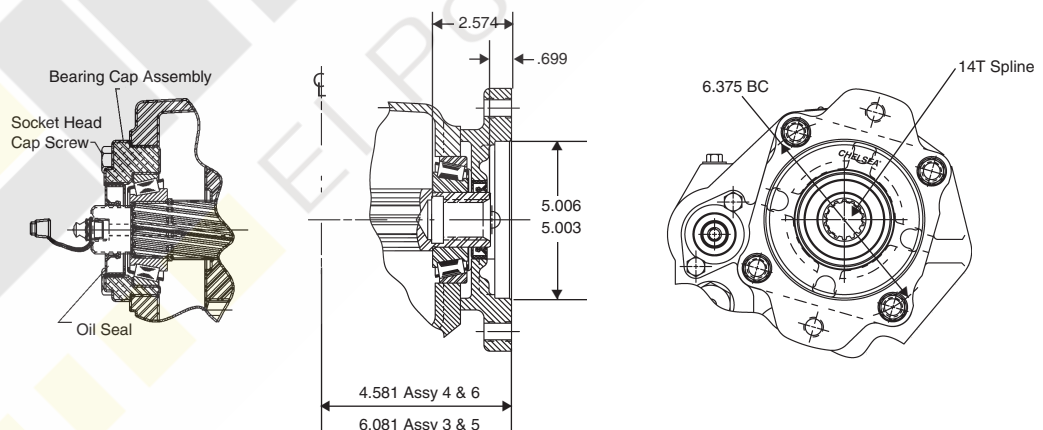
Available for the following P.T.O.s:
 880



Suffix GS

S.A.E. "C" 2 or 4 Bolt
 For 1-1/4" - 14 Tooth
 Splined Shaft,
 (*Greaseable)

Available for the
 following P.T.O.s:
 823



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

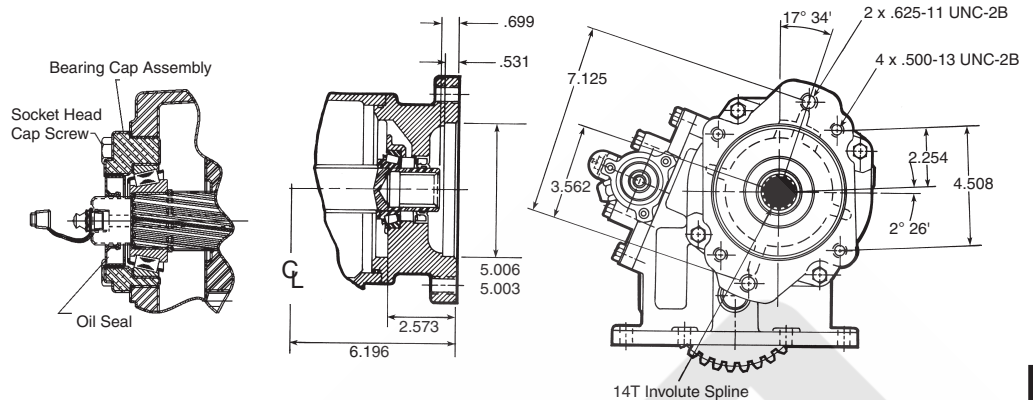
- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

Suffix GS

S.A.E. Class "C" 2 or 4 Bolt
 For 1 1/4" - 14 Tooth Involute
 Splined Shaft,
 (*Greaseable)

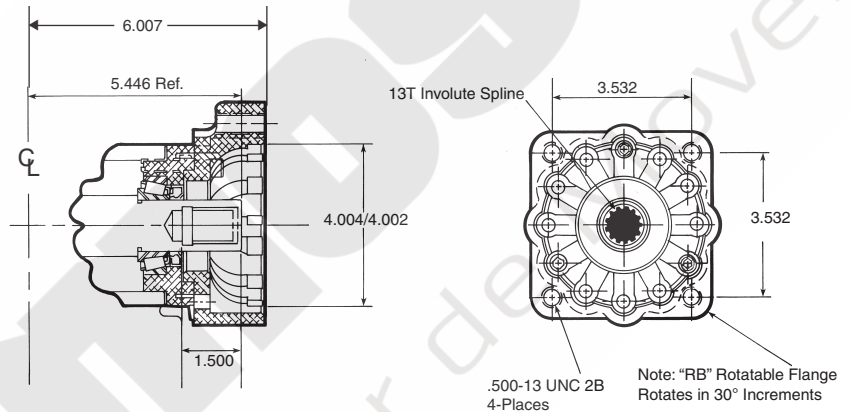
Available for the
 following P.T.O.s:
 880



Suffix RB

S.A.E. Class "B" 4 Bolt Rotatable
 For 7/8" - 13 Tooth Splined Shaft

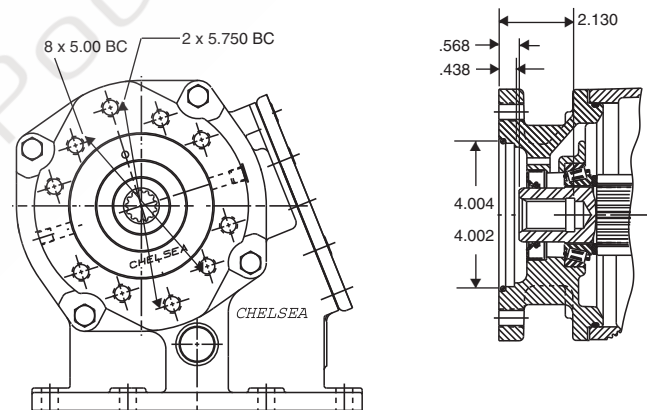
Available for the following P.T.O.s:
 812



Suffix SK

S.A.E. Class "B" 2 & 4 Bolt Flange
 S.A.E. Class "B" Shaft (7/8" - 13T Involute Spline)

Available for the following P.T.O.s:
 880



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

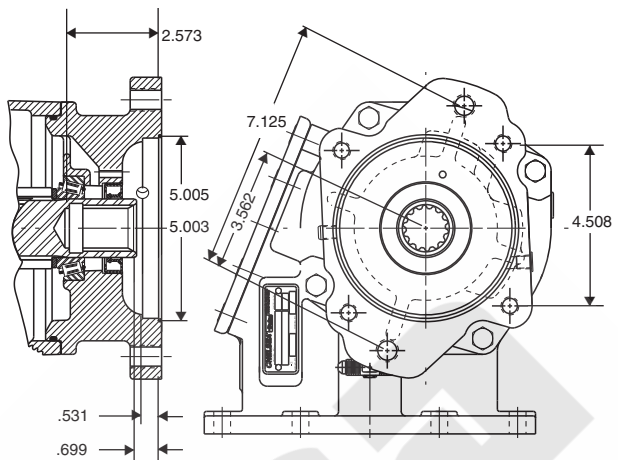
- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

Suffix SK

S.A.E. Class "C" 2 & 4 Bolt Flange
 S.A.E. Class "C" Shaft (1-1/4" - 14T Involute Spline)

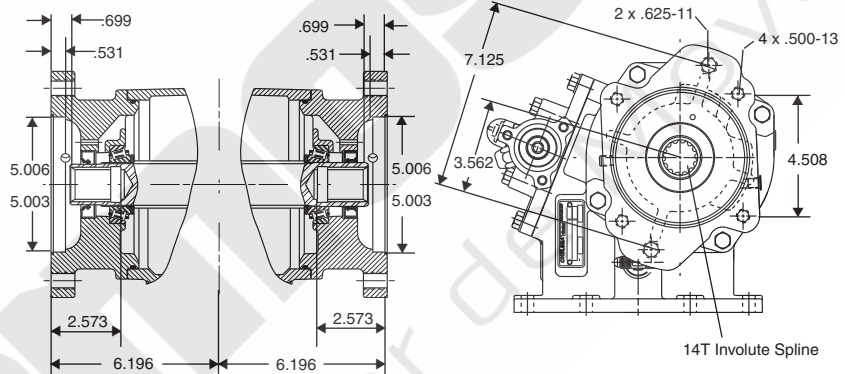
Available for the following P.T.O.s:
 880



Suffix SS

S.A.E. Class "C" 2 & 4 Bolt Flange
 S.A.E. Class "C" Shaft
 (1-1/4" - 14T Involute Spline) Both Ends

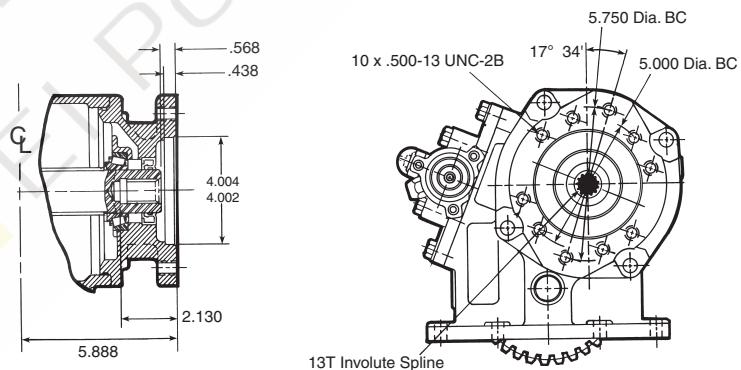
Available for the following P.T.O.s:
 880



Suffix XK

S.A.E. Class "B" 2 or 4 Bolt
 For 7/8" - 13 Tooth Splined Shaft

Available for the following P.T.O.s:
 880



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

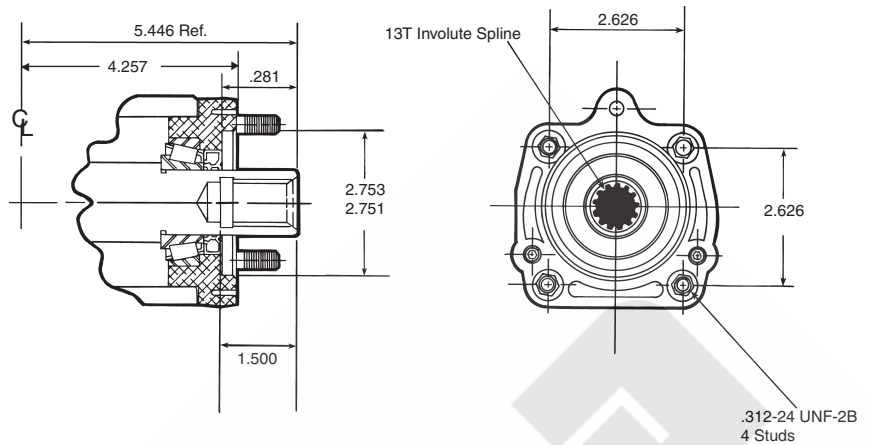
- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

Suffix XR

For Chelsea/Tyrone Pumps
 For 7/8" - 13 Tooth Splined Shaft

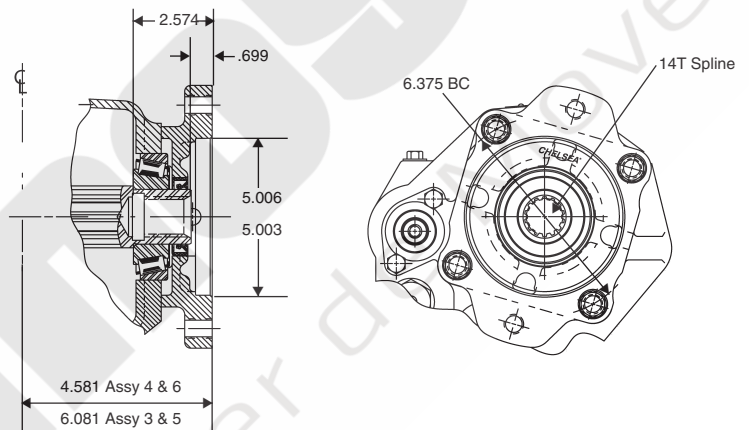
Available for the following P.T.O.s:
 812



Suffix XS

S.A.E. "C" 2 or 4 Bolt
 For 1-1/4" - 14 Tooth Splined Shaft

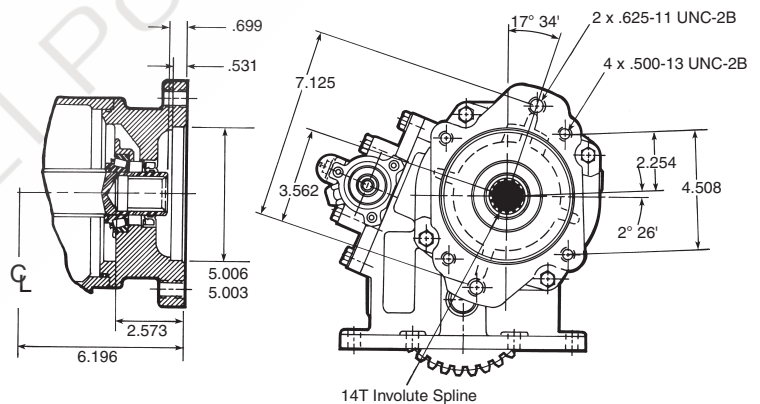
Available for the following P.T.O.s:
 823



Suffix XS

S.A.E. Class "C" 2 or 4 Bolt
 For 1 1/4" - 14 Tooth Involute Splined Shaft

Available for the following P.T.O.s:
 880



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

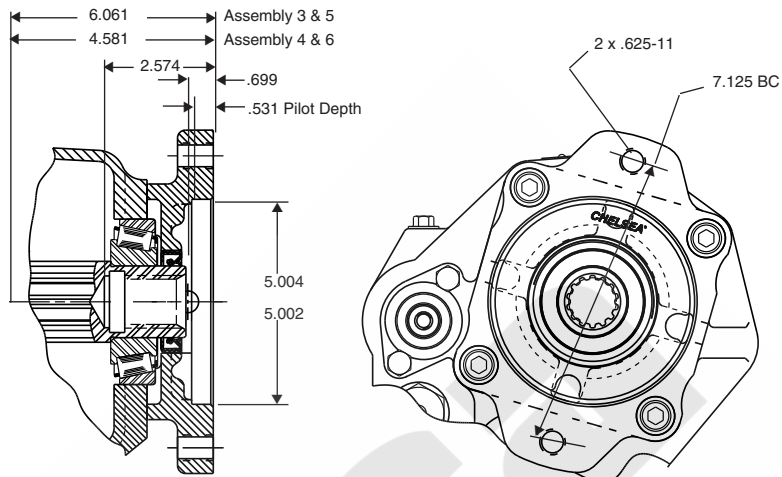
- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

Suffix XU

S.A.E. Class "C" 2 Bolt
 For 1-1/4" - 14 Tooth Splined Shaft

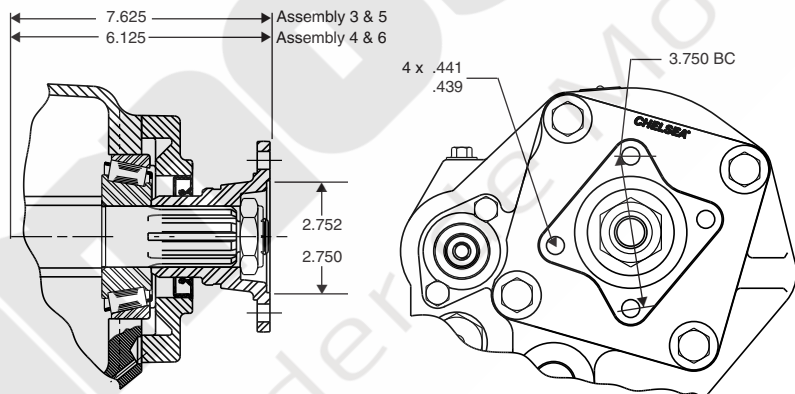
Available for the following P.T.O.s:
 823



Suffix XV

Spicer 1410 Flange

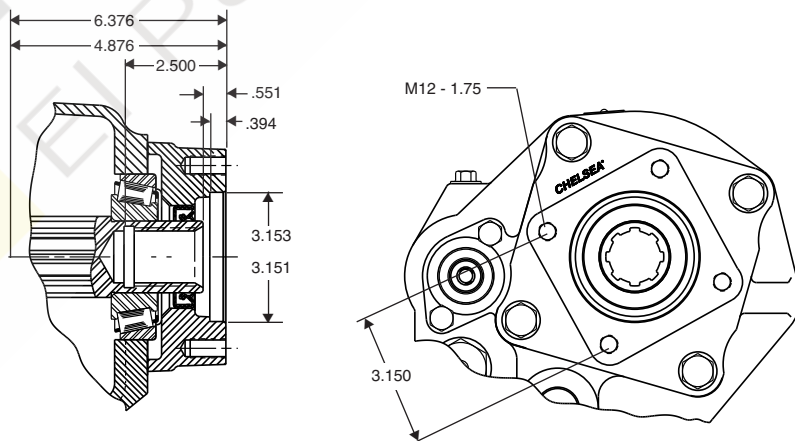
Available for the following P.T.O.s:
 823



Suffix XY

DIN 5462 / ISO 14
 For 32mm x 36mm - 8 Tooth Splined Shaft

Available for the following P.T.O.s:
 823



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

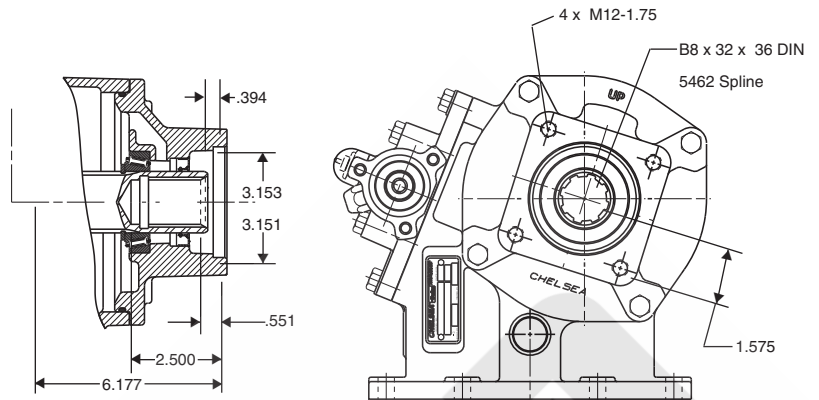
- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

Suffix XY

Din 5462 Pump Mounting
 For B8 x 32 x 36 Din 5462 Spline Shaft

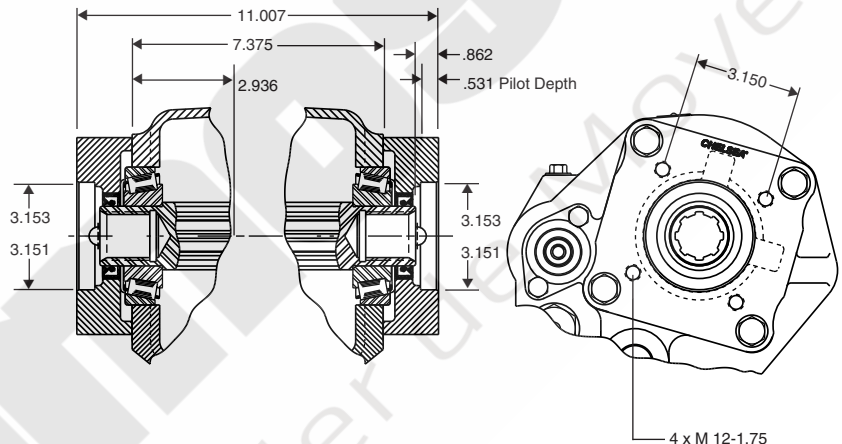
Available for the following P.T.O.s:
 880



Suffix YY

Double output
 For 32mm x 36mm - 8 Tooth Splined Shaft

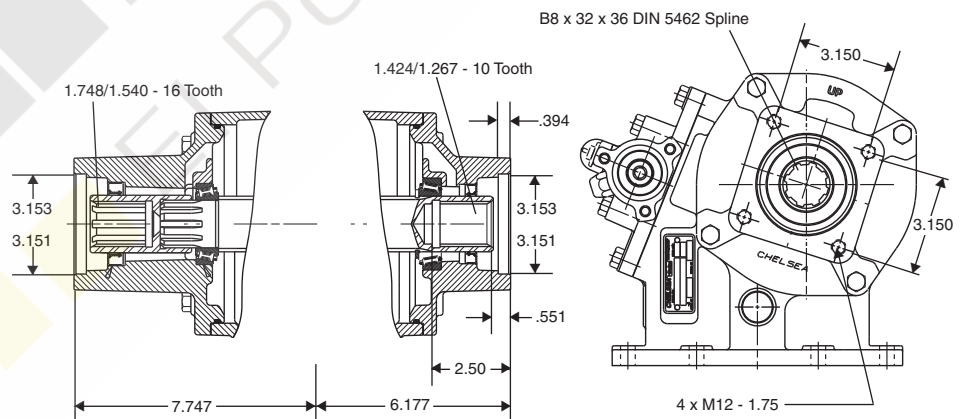
Available for the following P.T.O.s:
 823



Suffix YY

DIN 80mm Pump Mounting
 For dual Shaft 16 Tooth External /
 10 Tooth Internal Spline

Available for the following P.T.O.s:
 880



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

P.T.O. Shift Mechanisms Field Conversion Kits

Series	Assembly Arrangement	Wire To Air	Lever To Air	Wire to Elec. over Air		Lever to Elec. Over Air	
				12 Volt	24 Volt	12 Volt	24Vol
489	3, 4, 5 & 6	328390-117X	328390-117X	328390-119X	328390-120X	No Longer Available	No Longer Available
680	3, 4, 5 & 6	328390-117X	328390-117X	328390-119X	328390-120X		
812	3, 4, 5 & 6	328390-90X	328390-89X	328390-113X	328390-114X	328390-111X	328390-112X
823	3, 4, 5 & 6		328390-154X				

Cover Assemblies

Series/ Application	Assembly Arrangement	Wire Control	Lever Control	Air Control
489 Q, W & X	3 & 6	329119-1X	No Longer Available	329036-1X
489 Q, W, & X	4 & 5	329119-2X		329036-2X
489 F,L,R,S & U	3 & 6	329121-1X		329036-1X
489 F,L,R,S & U	4 & 5	329121-2X		329036-2X
680 Q	3 & 6	329119-1X	No Longer Available	329036-1X
680 Q	4 & 5	329119-2X		329036-2X
680 F & S	3 & 6	329121-1X		329036-1X
680 F & S	4 & 5	329121-2X		329036-2X
812	3 & 6	328804-1X	328752X	328753X
812	4 & 5	328804-2X	328752X	328753X
880	3,4,5,6		329125X	329126X

Installation Kits

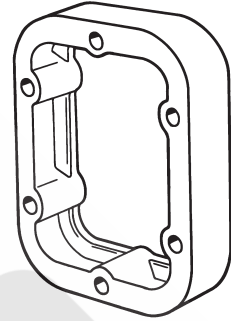
Series/ Application	Wire Control	Air Control	Electric Over Air		Air Shift w/ Combo Valve	Air Shift w/ Valve Combo
			12 Volt	24 Volt P.T.O. Kick Out		
489	328380X	328388-37X	328388-12X	328388-24X		
680	328380X	328388-37X	328388-47X	328388-48X	328388-72X	328388-65X
812	328380X	328388-37X	328388-47X	328388-48X		
823		328388-61X				
880		329216-3X				

Filler Blocks

Filler blocks are required as called for on the P.T.O. application pages, where it is necessary to use a spacer to adapt the Power Take-Off to a particular transmission.

Two filler blocks may be used in combination with one or more gaskets between the filler block surfaces.

In computing the total thickness of the filler block and gasket combination, use a factor of .012" (compressed thickness of a .020" gasket 35-P-9-2 or 35-P-15-2) for every .020" gasket required in the installation.

**S.A.E. 6-Bolt Filler Blocks**

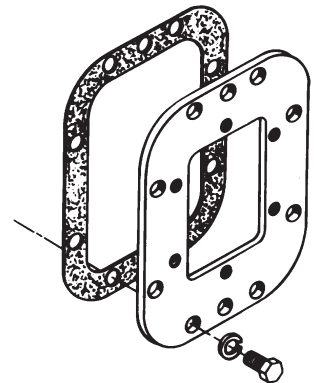
Part Number	"A" Thickness	Material	Part Number	"A" Thickness	Material
8-A-032	.032"	Fiber	8-A-375	.375"	Cast Iron
8-A-093	.093"	Steel	8-A-500	.500"	Cast Iron
8-A-062	.062"	Fiber or Steel	8-A-600	.600"	Cast Iron
8-A-165	.165"	Steel	8-A-650	.650"	Cast Iron
8-A-190	.190"	Steel			
			8-A-700	.700"	Cast Iron
8-A-248	.248"	Steel or Cast Iron	8-A-1005	1.005"	Cast Iron
8-A-295	.295"	Cast Iron	8-A-1200	1.200"	Cast Iron

S.A.E. 8-Bolt Adapter Plates

8-Bolt adapter plates are used to convert an S.A.E. 8-Bolt aperture or a non-standard opening to an S.A.E. 6-Bolt aperture.

Adapter Plates

Adapter Kit Number	"A" Thickness or Angularity	Adapter Plate Part Number	Stud Kit Number
310778X	.375"	26-P-22	328170-127X
328787X	.460"	26-P-27	328170-129X
328564X	.460"	26-P-27	328170-127X
328481X	.248"	328453X	328170-128X



Powershift P.T.O.s

P.T.O. Options Chart – Powershift P.T.O.s

P.T.O. Series	230/231	236	243	250	270/271	800	852	885
Lubrication								
X Standard	x	x		x	x	x		x
P Pressure	x	x	x		x	x	x	x
Shifting								
A Air Shift (Pilot Valve)	x	x						x
B Electric/Hydraulic 12V			x	x	x	x	x	
D Electric/Hydraulic 24V			x	x	x	x	x	
F No Valve							x	
J Elec./Air 24V w/EOC	x							x
K Elec./Hyd. 12V w/EOC			x		x	x	x	
L Elec./Hyd. 24V w/EOC			x		x	x	x	
N Elec./Air 12V w/EOC	x							x
P Electric/Air 12V	x	x						x
Q Electric/Air 24V	x	x						x
S Air Shift w/P.T.O./Dump Pump Combo Valve	x	x			x			
T Air Shift w/P.T.O./Dump Pump Combo Valve Less Kick Out & Spring Return	x	x			x			
V Air Shift, Less Installation Kit								x
Output								
AB DIN 120								x
AD S.A.E. "A" 2 Bolt			x					
AF S.A.E. "BB" 2 Bolt	x	x			x			
BA 1-1/4" Round Shaft w/ Self Adjusting Shaft Brake (Automatic Transmissions)	x				x			
BD* 1-1/4" Round Shaft w/ Self Adjusting Shaft Brake (Manual Transmissions)	x	x						
RA Rotatable "B" 2 Bolt	x	x			x			
RB Rotatable "B" 4 Bolt	x	x			x			
RF Rotatable "B" 2 Bolt	x	x			x			
XB 1" Round Shaft			x	x				
XC 1-1/8" Round Shaft						x		
XD 1-1/4" Round Shaft	x	x			x			
XE S.A.E. "A" 2 Bolt	x	x	x	x	x			
XK S.A.E. "B" 2 or 4 Bolt	x	x			x			
XP S.A.E. "A" 2 Bolt	x	x			x			
XR Chelsea Special	x	x			x			
XS S.A.E. "C" 2 or 4 Bolt							x	x
XU S.A.E. "C" 2 Bolt							x	
XV 1-1/2" 10 Spline w/1410 Flange							x	x
XX 1-1/4" Tapered Shaft w/ DIN 100 Flange	x	x			x			
XY Special (DIN 5462)	x	x			x			
XZ 1-1/8" Tapered Shaft							x	
45 P16-45A-1D6			x					
65 P16-65A-1D6			x					
85 P16-85A-1D6			x					
00 P16-100A-1D6			x					
15 P16-115A-1D6			x					
45 P16-45C-1D6				x				



***Not For Use on Automatic Transmissions**

NOTE: Always Check Price Book for Current Options

Continued on next page

P.T.O. Options Chart – Powershift P.T.O.s

P.T.O. Series	230/231	236	243	250	270/271	800	852	885
65 P16-65C-1D6				X				
85 P16-85C-1D6				X				
15 P16-115C-1D6				X				
508 CGP-P5C008-1AA				X				
510 CGP-P5C010-1AA				X				
513 CGP-P5C013-1AA				X				
519 CGP-P5C019-1AA				X				
1116 CGP-P11C016-1AC				X				
1121 CGP-P11C021-1AC				X				
1126 CGP-P11C026-1AC				X				
1129 CGP-P11C029-1AC				X				
1137 CGP-P11C037-1AC				X				
1449 CGP-P31C054-1AE				X				
1462 CGP-P31C061-1AE				X				



*Not For Use on Automatic Transmissions

NOTE: Always Check Price Book for Current Options

Installation Kits

Series Application	Electric Over Air	
	12 Volt	24 Volt
270/271 w/o E.O.C.	328715X	328749X
800 w/o E.O.C.		
852 w/o E.O.C.		
270/271 w/ E.O.C.	328924-12X	328924-24X
800 w/ E.O.C.		
852 w/ E.O.C.		

Powershift P.T.O.s

For converting Chelsea Powershift P.T.O.s from a driveshaft output to a pump flange output, use the following kits.

230/231, 236 & 2230 Series

Pump Suffix	Kit No. Suffix	Kit Number	Assembly	Flange Type	Shaft Type
AF	XD to AF	329160-50X	3 & 5	S.A.E. "B" 2 or 4 Bolt	1" - 15 Tooth Splined
	XD to AF	329160-51X	4 & 6	S.A.E. "B" 2 or 4 Bolt	1" - 15 Tooth Splined
BD*	XD to BD	329043-9X	3 & 5	XD w/ Shaft Brake	1-1/4" Round Shaft
	XD to BD	329043-10X	4 & 6	XD w/ Shaft Brake	1-1/4" Round Shaft
XK	XD to XK	329160-11X	3 & 5	S.A.E. "B" 2 or 4 Bolt	7/8" - 13 Tooth Splined
	XD to XK	329160-15X	4 & 6	S.A.E. "B" 2 or 4 Bolt	7/8" - 13 Tooth Splined
XP	XD to XP	329160-12X	3 & 5	S.A.E. "A" 2 Bolt	7/8" - 13 Tooth Splined
	XD to XP	329160-16X	4 & 6	S.A.E. "A" 2 Bolt	7/8" - 13 Tooth Splined
XR	XD to XR	329160-13X	3 & 5	Chelsea Special	7/8" - 13 Tooth Splined
RA	XD to RA	329160-33X	3 & 5	S.A.E. "B" 2 Bolt Rotatable	7/8" - 13 Tooth Splined
	XR to RA	329160-35X	3 & 5	S.A.E. "B" 2 Bolt Rotatable	7/8" - 13 Tooth Splined
RB	XD to RB	329160-34X	3 & 5	S.A.E. "B" 4 Bolt Rotatable	7/8" - 13 Tooth Splined
	XR to RB	329160-36X	3 & 5	S.A.E. "B" 4 Bolt Rotatable	7/8" - 13 Tooth Splined
RF	XD to RF	329160-46X	3 & 5	S.A.E. "B" 2 Bolt Rotatable	1" - 15 Tooth Splined
XE	XD to XE	329160-55X	3 & 5	S.A.E. "A" 2 Bolt	5/8" - 9 Tooth Splined
XX	XD to XX	329160-43X	3 & 5	DIN 100 Companion Flange	1-1/4" Tapered Shaft
XY	XD to XY	329160-14X	3 & 5	DIN 5462	8 Tooth Splined

270/271 Series

Pump Suffix	Kit No. Suffix	Kit Number	Assembly	Flange Type	Shaft Type
AF	XD to AF	329160-52X	3 & 5	S.A.E. "B" 2 or 4 Bolt	1" - 15 Tooth Splined
	XD to AF	329160-53X	4 & 6	S.A.E. "B" 2 or 4 Bolt	1" - 15 Tooth Splined
XK	XD to XK	329160-1X	3 & 5	S.A.E. "B" 2 or 4 Bolt	7/8" - 13 Tooth Splined
	XD to XK	329160-5X	4 & 6	S.A.E. "B" 2 or 4 Bolt	7/8" - 13 Tooth Splined
XP	XD to XP	329160-2X	3 & 5	S.A.E. "A" 2 Bolt	7/8" - 13 Tooth Splined
	XD to XP	329160-6X	4 & 6	S.A.E. "A" 2 Bolt	7/8" - 13 Tooth Splined
XR	XD to XR	329160-3X	3 & 5	Chelsea Special	7/8" - 13 Tooth Splined
RA	XD to RA	329160-31X	3 & 5	S.A.E. "B" 2 Bolt Rotatable	7/8" - 13 Tooth Splined
	XR to RA	329160-35X	3 & 5	S.A.E. "B" 2 Bolt Rotatable	7/8" - 13 Tooth Splined
RB	XD to RB	329160-32X	3 & 5	S.A.E. "B" 4 Bolt Rotatable	7/8" - 13 Tooth Splined
	XR to RB	329160-36X	3 & 5	S.A.E. "B" 4 Bolt Rotatable	7/8" - 13 Tooth Splined
RF	XD to RF	329160-47X	3 & 5	S.A.E. "B" 2 Bolt Rotatable	1" - 15 Tooth Splined
XE	XD to XE	329160-54X	3 & 5	S.A.E. "A" 2 Bolt	5/8" - 9 Tooth Splined
XX	XD to XX	329160-42X	3 & 5	DIN 100 Companion Flange	1-1/4" Tapered Shaft
XY	XD to XY	329160-4X	3 & 5	DIN 5462	8 Tooth Splined

885 Series

Pump Suffix	Kit No. Suffix	Kit Number	Assembly	Flange Type	Shaft Type
XS	XV to XS	328591-37X	3, 4, 5, 6	S.A.E. "C" 2 or 4 Bolt	1-1/4" - 14 Tooth



*Not For Use on Automatic Transmissions

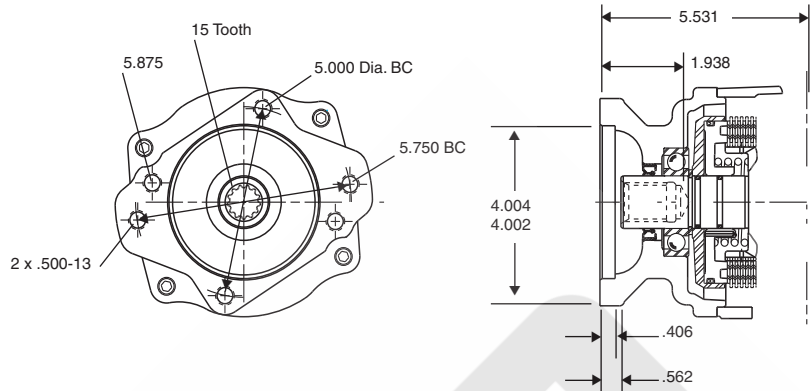
Flange Dimensions**Applications
Powershift Six & Eight Bolt****Suffix AF** (Assy 3 & 5)

S.A.E. Class "BB" 2 or 4 Bolt

For 1" - 15 Tooth Splined Shaft

Available for the following P.T.O.s:

230, 231, 236, 270, 271, 2230

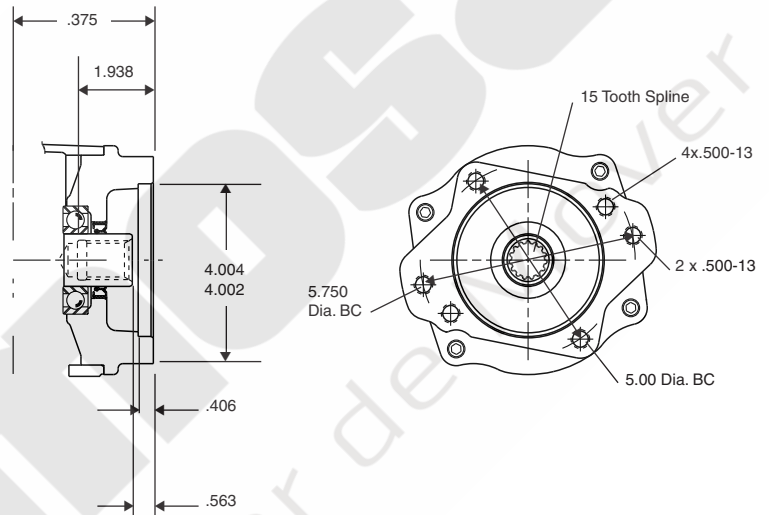
**Suffix AF** (Assy 4 & 6)

S.A.E. Class "BB" 2 or 4 Bolt

For 1" - 15 Tooth Splined Shaft

Available for the following P.T.O.s:

230, 231, 236, 270, 271, 2230

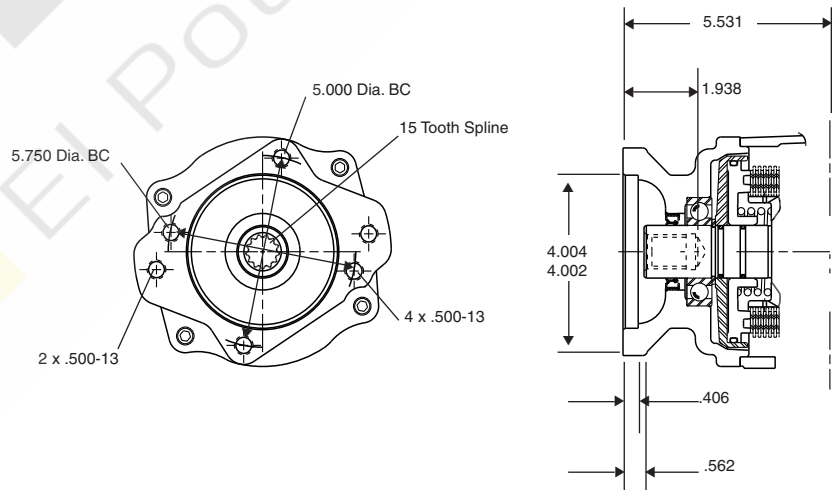
**Suffix XK** (Assy 3 & 5)

S.A.E. Class "B" 2 or 4 Bolt

For 7/8" - 13 Tooth Splined Shaft

Available for the following P.T.O.s:

230, 231, 236, 270, 271, 2230



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

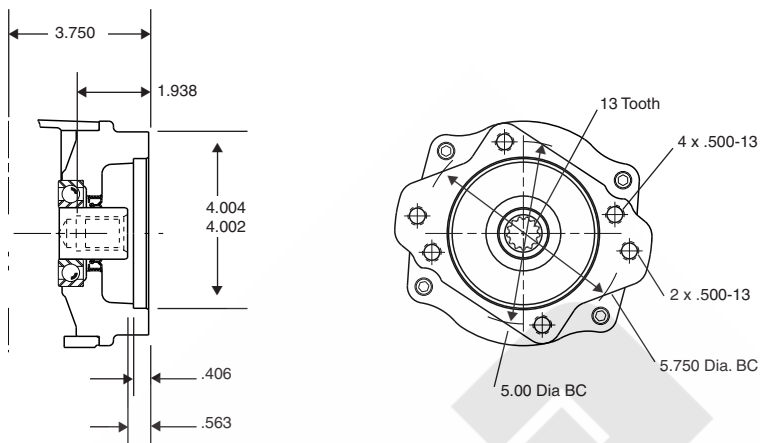
- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

Flange Dimensions**Applications
Powershift Six & Eight Bolt**

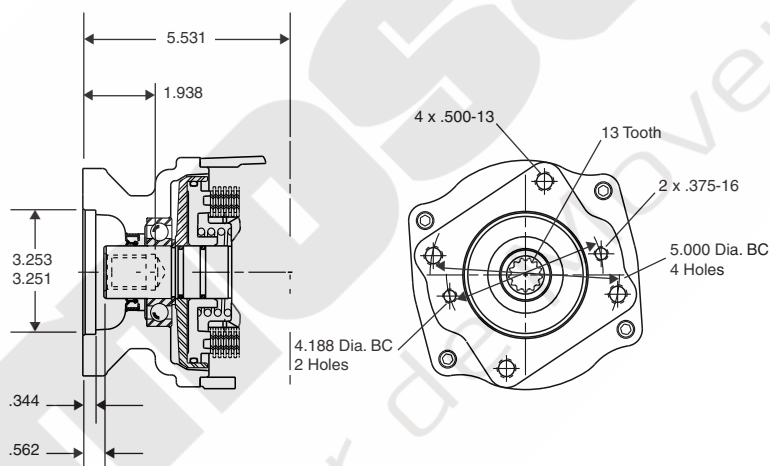
Suffix XK (Assy 4 & 6)
S.A.E. Class "B" 2 or 4 Bolt
For 7/8" - 13 Tooth Splined Shaft

Available for the following P.T.O.s:
230, 231, 236, 270, 271, 2230



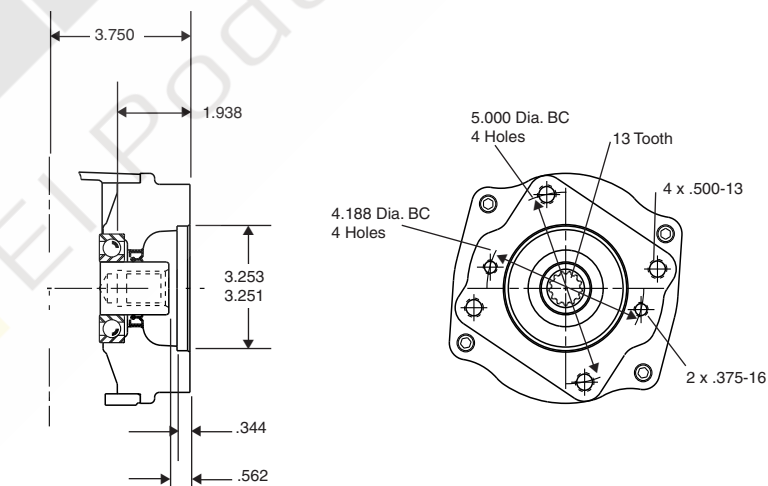
Suffix XP (Assy 3 & 5)
S.A.E. Class "A" 2 Bolt
For 7/8" - 13 Tooth Splined Shaft

Available for the following P.T.O.s:
230, 231, 236, 270, 271, 2230



Suffix XP (Assy 4 & 6)
S.A.E. Class "A" 2 Bolt
For 7/8" - 13 Tooth Splined Shaft

Available for the following P.T.O.s:
230, 231, 236, 270, 271, 2230



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

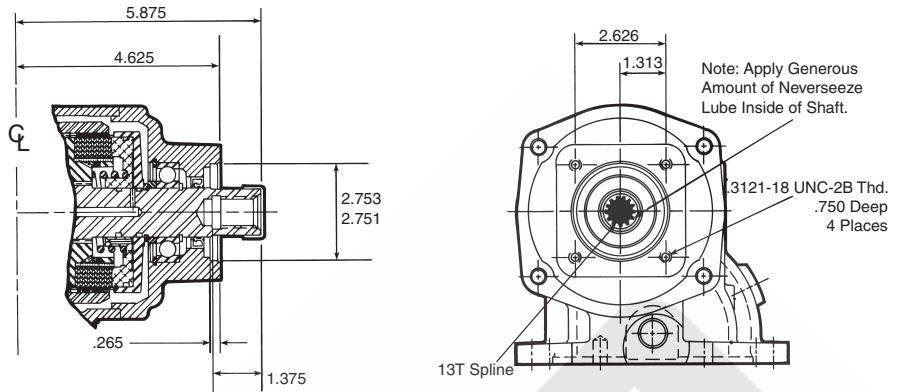
Use a bracket to support the pump to the transmission if:

- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

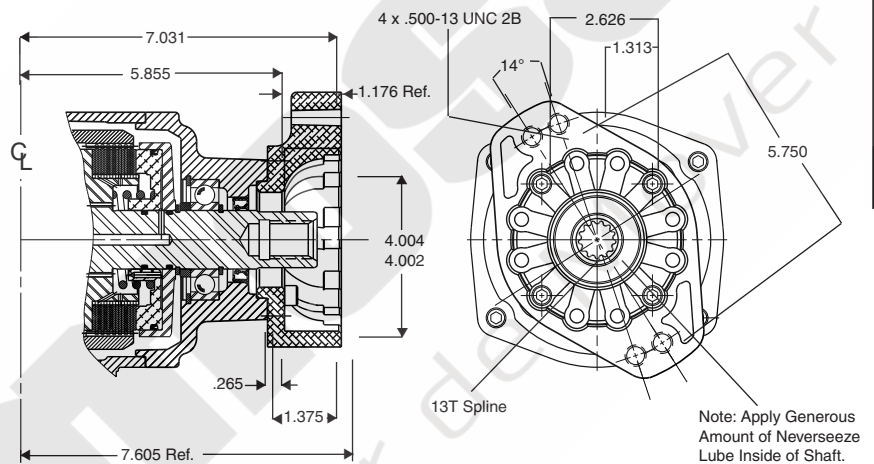
Suffix XR (Assy 3 & 5)
 For Chelsea Pumps
 For 7/8" - 13 Tooth Splined Shaft

Available for the following P.T.O.s:
 230, 231, 236, 270, 271, 2230



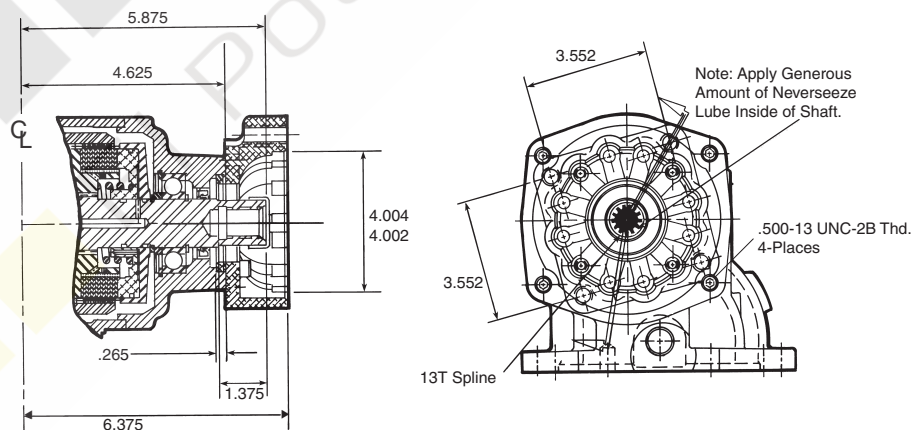
Suffix RA (Assy 3 & 5)
 S.A.E. Class "B" 2 Bolt Rotatable
 For 7/8" - 13 Tooth Splined Shaft

Available for the following P.T.O.s:
 230, 231, 236, 270, 271, 2230



Suffix RB (Assy 3 & 5)
 S.A.E. Class "B" 4 Bolt Rotatable
 For 7/8" - 13 Tooth Splined Shaft

Available for the following P.T.O.s:
 230, 231, 236, 270, 271, 2230



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

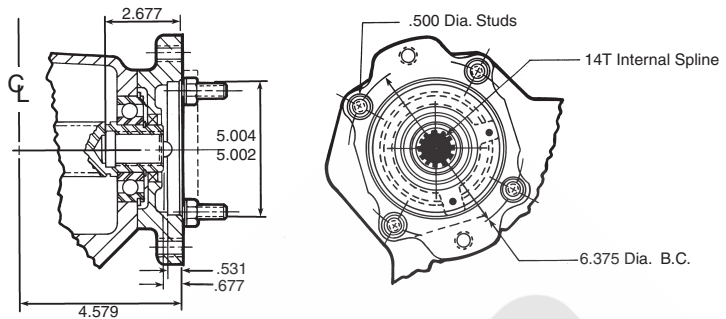
- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

Flange Dimensions**Applications
Powershift Six & Eight Bolt****Suffix XS**

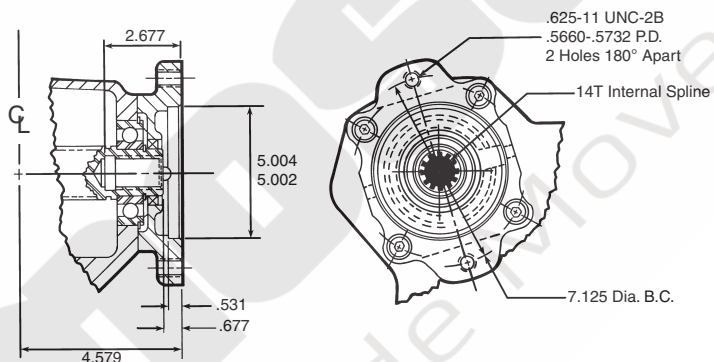
S.A.E. Class "C" 4 Bolt
For 1-1/4" - 14 Tooth Splined Shaft

Available for the following P.T.O.s:
852, 885

**Suffix XU**

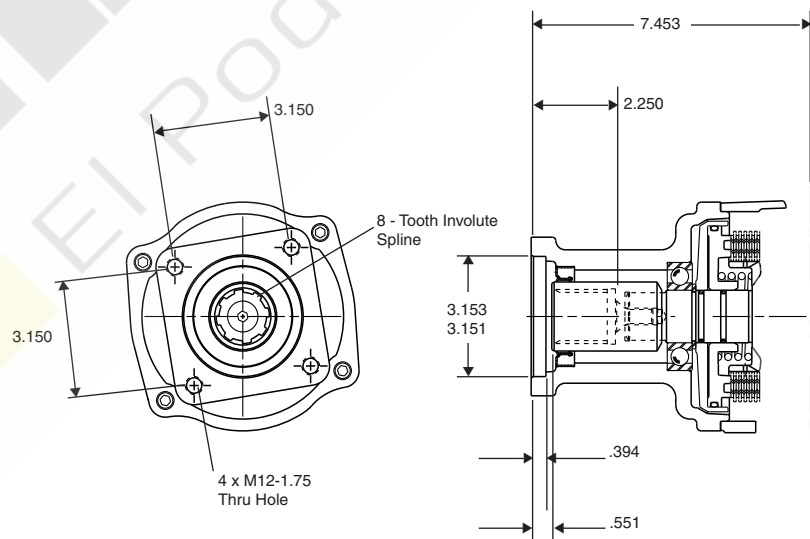
S.A.E. Class "C" 2 Bolt
For 1-1/4" - 14 Tooth Splined Shaft

Available for the following P.T.O.s:
852

**Suffix XY**

Special for 1.4205/1.2645-8 Tooth
Splined Shaft

Available for the following P.T.O.s:
230, 236, 270, 271



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

P.T.O. Options Chart

P.T.O. Series		267**	269	277/278	859	867
Lubrication						
P	Pressure Lube	x		x	x	x
R	Pressure Lube with Solenoid Cap Rotated 120 Degrees			x	x	
V	Rotated Valve Cap, Wet Spline			x		
W	Wet Spline	x	x	x	x	
Shifting						
B	12 Volt Electric/Hydraulic			x	x	
D	24 Volt Electric/Hydraulic			x	x	
G	12 Volt Electric/Hydraulic w/Remote Mounted Solenoid Valve			x	x	
H	24 Volt Electric/Hydraulic w/Remote Mounted Solenoid Valve			x	x	
K	12 Volt Electric/Hydraulic w/Electronic Overspeed Control			x	x	
L	24 Volt Electric/Hydraulic w/Electronic Overspeed Control			x	x	
M	Constant Engagement No Shifter	x	x			x
M	12 Volt w/o Installation Kit (Europe Only)			x	x	
N	24 Volt w/o Installation Kit (Europe Only)			x	x	
S	Air Shift w/P.T.O./Dump Pump Combo Valve			x		
T	Air Shift w/P.T.O./Dump Pump Combo Valve less Kick Out & Spring Return			x		
Output						
AB	DIN 120 Flange				x	x
AC	DIN 100 Flange				x	x
AF*	S.A.E. "B" 2 or 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth)	x (w)		x (w)		x (w)
AK*	S.A.E. "B" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)	x (w)				
AZ	S.A.E. "B" 2 or 4 Bolt Flange, "C" Shaft (1.25" 14 - Tooth)	x			x	
BA	Shaft Brake w/ 1-1/4" Round Shaft			x	x	
BB	Shaft Brake, DIN 120				x	
BC	Shaft Brake, DIN 100				x	
GA	Rotatable "B" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)	x				
GB	Rotatable "B" 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)	x				
GE	Rotatable S.A.E. "A" 2 or 4 Bolt Flange, "A" Shaft (5/8" 9 - Tooth) (Greaseable)	x				
GF	S.A.E. "B" 2 or 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth) (Greaseable)	x				
GH	Rotatable "B" 2 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth) (Greaseable)	x				
GJ	Rotatable "B" 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth) (Greaseable)	x				
GK	S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)	x				
GQ	S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)	x				
GR	Chelsea Special Pump Mount, "B" Shaft (7/8" 13 - Tooth) (Greaseable)	x				
GY	DIN 5462 Pump Mounting (Greaseable)	x				
GZ	Non Standard Flange, "C" Shaft (1-1/4" 14 - Tooth) (Greaseable)	x				
PA	Special Rotatable S.A.E. "B" 2 Bolt Flange for Parker P Series Sculptured Pump, "B" Shaft (7/8" 13 - Tooth)	x		x		
PF	Special Rotatable S.A.E. "B" 2 Bolt Flange for Parker P Series Sculptured Pump, "BB" Shaft (1.00" 15 - Tooth)	x		x		
RA	Rotatable "B" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)	x		x		
RB	Rotatable "B" 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)	x		x		
RC	Rotatable "A" 2 Bolt Flange, "A" Shaft (5/8" 9 - Tooth)	x				
RD	Rotatable "A" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)	x				
RE	Rotatable "B" 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth)	x				
RF	Rotatable "B" 2 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth)	x		x		

* Must use the "W" Lube Option on the 267 Series for this Output

** Any 267 Series using a "3" Arrangement Requiring a S.A.E. "B" Output Must use the "XQ" or "AK" Output Option Due to Interference Between the "XK" Flange and the Pressure Lube Fitting.

(w) = Wet Spline Flange Option

NOTE: Always Check Price Book for Current Options

Continued on next page

P.T.O. Options Chart

P.T.O. Series		267**	269	277/278	859	867
RG	Rotatable "B" 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth)			x		
RY*	Rotatable DIN 5462 Pump Flange	x				
XD	S.A.E. "A" 2 or 4 Bolt Flange, "A" Shaft (5/8" 9 - Tooth)	x		x		
XE	S.A.E. "A" 2 or 4 Bolt Flange, "A" Shaft (5/8" 9 - Tooth)	x		x		
XK	S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)			x		
XP	Special S.A.E. "A" Pilot 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)			x		
XQ	S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)	x				
XR	Non Standard Flange, "B" Shaft (7/8" 13 - Tooth)	x		x		
XS	S.A.E. "C" 2 or 4 Bolt Flange, "C" Shaft (1.25" 14 - Tooth)				x	x (w)
XV	10 Tooth Straight Spline Shaft w/ 1410 Flange (3-1-3881)			x	x	x
XX	1-1/4" S.A.E. Tapered Shaft w/ keyway	x		x		
XY	DIN 5462 Pump Mounting	x	x (w)	x	x	x

* Must use the "W" Lube Option on the 267 Series for this Output

** Any 267 Series using a "3" Arrangement Requiring a S.A.E. "B" Output Must use the "XQ" or "AK" Output Option Due to Interference Between the "XK" Flange and the Pressure Lube Fitting.

(w) = Wet Spline Flange Option

NOTE: Always Check Price Book for Current Options

Flange Field Conversion Kits

For converting Chelsea Powershift P.T.O.s from a driveshaft output (XD or XV) to a pump flange output, use the following kits.

267 Series				
Pump Suffix	Kit Number	Assembly	Flange Type	Shaft Type
AF	328591-30X	3,4,5,6	S.A.E. "B" 2 or 4 Bolt	1.0" 15 - Tooth Spline
AK	328591-28X	3,4,5,6	S.A.E. "B" 2 Bolt	7/8" 13 - Tooth Spline
AZ	328591-70X	3,4,5,6	Non-Standard 4 Bolt	1-1/4" 14 - Tooth Spline
GA	328591-72X	3,4,5,6	Greaseable Rot. S.A.E. "B" 2 Bolt	7/8" 13 - Tooth Spline
GB	328591-74X	3,4,5,6	Greaseable Rot. S.A.E. "B" 4 Bolt	7/8" 13 - Tooth Spline
GF	328591-71X	3,4,5,6	Greaseable S.A.E. "B" 2 or 4 Bolt	1.0" 15 - Tooth Spline
GH	328591-116X	3,4,5,6	Greaseable S.A.E. "BB" 2 Bolt	1.0" 15 - Tooth Spline
GJ	328591-138X	3,4,5,6	Rotatable "B" 2 Bolt Flange, "BB" ShaftGreaseable	1.0" 15 - Tooth Spline
GK	328591-89X	3,4,5,6	Greaseable S.A.E. "B" 2 or 4 Bolt	7/8" 13 - Tooth Spline
GQ	328591-91X	3,4,5,6	Greaseable S.A.E. "B" 2 or 4 Bolt	7/8" 13 - Tooth Spline
GR	328591-76X	3,4,5,6	Greaseable Chelsea Special	7/8" 13 - Tooth Spline
GY	328591-92X	3,4,5,6	Greaseable DIN 5462	DIN 5462
GZ	328591-93X	3,4,5,6	Greaseable Non-Standard 4 Bolt	1-1/4" 14 - Tooth Spline
PA	328591-143X	3,4,5,6	Rotatable S.A.E. "B" 2 Bolt for Parker P Series Sculptered Pump	7/8" 13 - Tooth Spline
PF	328591-142X	3,4,5,6	Rotatable S.A.E. "B" 2 Bolt for Parker P Series Sculptered Pump	7/8" 13 - Tooth Spline
RA	328591-55X	3,4,5,6	Rotatable S.A.E. "B" 2 Bolt	7/8" 13 - Tooth Spline
RB	328591-56X	3,4,5,6	Rotatable S.A.E. "B" 4 Bolt	7/8" 13 - Tooth Spline
RC	328591-112X	3,4,5,6	Rotatable S.A.E. "A" 2 Bolt	5/8" 9 - Tooth Spline
RD	328591-113X	3,4,5,6	Rotatable S.A.E. "B" 2 Bolt	7/8" 13 - Tooth Spline
RE	328591-134X	3,4,5,6	Rotatable "B" 4 Bolt Flange, "BB" Shaft	1.0" 15 - Tooth Spline
RF	328591-78X	3,4,5,6	Rotatable S.A.E. "B" 2 Bolt	1.0"zz 15 - Tooth Spline
RY	328591-131X	3,4,5,6	Rotatable DIN 5462	DIN 5462
XE	328591-27X	3,4,5,6	S.A.E. "A" 2 or 4 Bolt	5/8" 9 - Tooth Spline
XK	328591-16X	4,5,6	S.A.E. "B" 2 or 4 Bolt	7/8" 13 - Tooth Spline
XQ	328591-17X	3,4,5,6	S.A.E. "B" 2 or 4 Bolt	7/8" 13 - Tooth Spline
XR	328591-52X	3,4,5,6	Chelsea Special	7/8" 13 - Tooth Spline
XY	328591-121X	3,4,5,6	DIN 5462	DIN 5462

277/278 Series				
Pump Suffix	Kit Number	Assembly	Flange Type	Shaft Type
AF	329160-25X	5 (277), 3 (278)	S.A.E. "B" 2 or 4 Bolt	1.0" 15 - Tooth Spline
PA	329160-57X	5 (277), 3 (278)	Rotatable S.A.E. "B" 2 Bolt for Parker P Series Sculptered Pump	7/8" 13 - Tooth Spline
PF	329160-56X	5 (277), 3 (278)	Rotatable S.A.E. "B" 2 Bolt for Parker P Series Sculptered Pump	1.0" 15 - Tooth Spline
RA	329160-37X	5 (277), 3 (278)	Rotatable S.A.E. "B" 2 Bolt	7/8" 13 - Tooth Spline
RA (XR to RA)	329160-35X	5 (277), 3 (278)	Rotatable S.A.E. "B" 2 Bolt	7/8" 13 - Tooth Spline
RB	329160-38X	5 (277), 3 (278)	Rotatable S.A.E. "B" 4 Bolt	7/8" 13 - Tooth Spline
RB (XR to RB)	328160-36X	5 (277), 3 (278)	Rotatable S.A.E. "B" 4 Bolt	7/8" 13 - Tooth Spline
RF	329160-39X	5 (277), 3 (278)	Rotatable S.A.E. "B" 2 Bolt	1.0" 15 - Tooth Spline
RG	329160-45X	5 (277), 3 (278)	Rotatable S.A.E. "B" 4 Bolt	1.0" 15 - Tooth Spline
XE	329160-58X	5 (277), 3 (278)	S.A.E. "A" 2 or 4 Bolt	5/8" 9 - Tooth
XK	329160-21X	5 (277), 3 (278)	S.A.E. "B" 2 or 4 Bolt	7/8" 13 - Tooth Spline
XP	329160-23X	5 (277), 3 (278)	S.A.E. "A" 2 Bolt	7/8" 13 - Tooth Spline
XR	329160-22X	5 (277), 3 (278)	Chelsea Special	7/8" 13 - Tooth Spline
XY	329160-24X	5 (277), 3 (278)	DIN 5462 Pump Mounting	

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Flange Field Conversion Kits (continued)

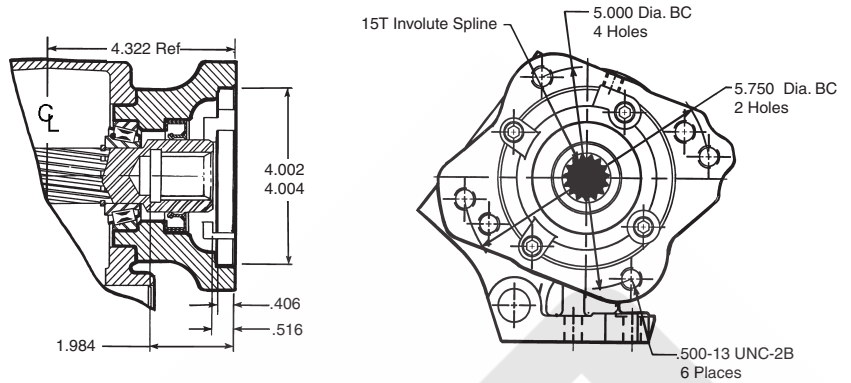
For converting Chelsea Powershift P.T.O.s from a driveshaft output (XD or XV) to a pump flange output, use the following kits.

859 Series				
Pump Suffix	Kit Number	Assembly	Flange Type	Shaft Type
AZ	329160-44X	5	S.A.E. "B" 2 & 4 Bolt	1-1/4" 14 - Tooth Spline
XY	329160-40X	5	DIN 5462	DIN 5462 8 - Tooth Spline
XS	329160-29X	5	S.A.E. "C" 2 or 4 Bolt Flange	1.25" 14 - Tooth Spline

Suffix AF

S.A.E. Class "BB" 2 or 4 Bolt
 For 1" - 15 Splined Shaft

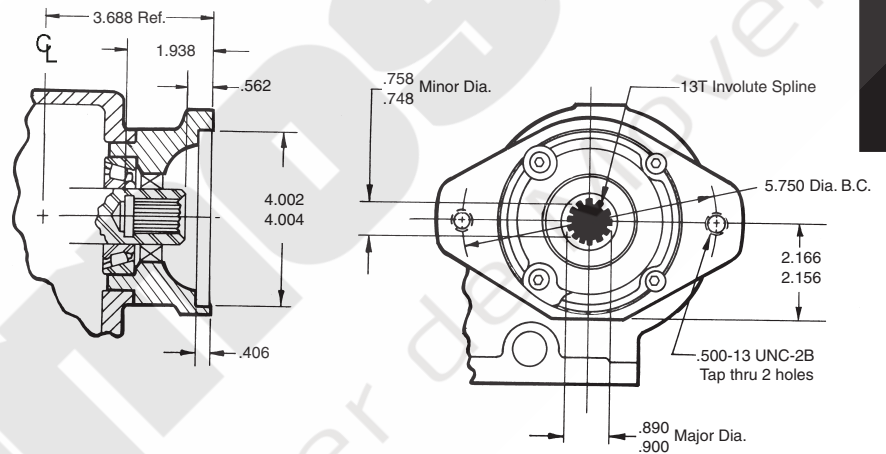
Available for the following P.T.O.s:
 267



Suffix AK

S.A.E. Class "B" 2 Bolt
 For 7/8" - 13 Tooth Splined Shaft

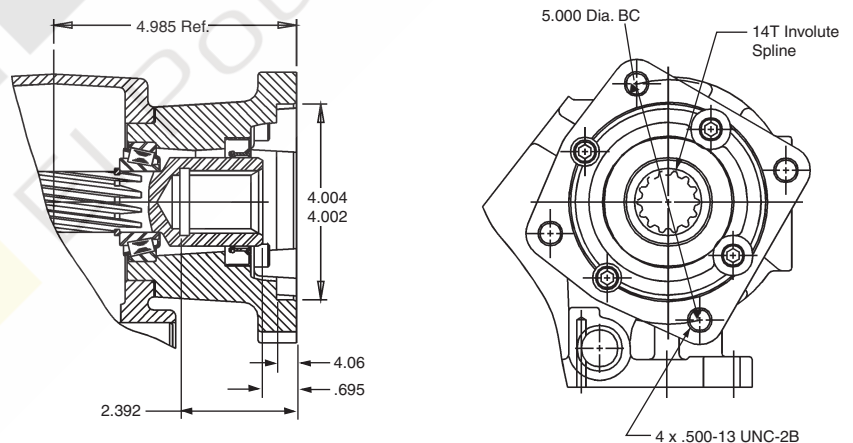
Available for the following P.T.O.s:
 267



Suffix AZ

S.A.E. Class "B" 4 Bolt
 For 1-1/4" - 14 Tooth Splined Shaft

Available for the following P.T.O.s:
 267



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

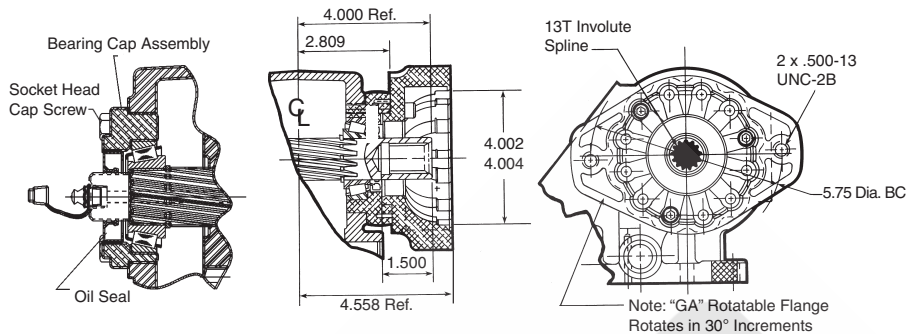
- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

Suffix GA

S.A.E. Class "B" 2 Bolt Rotatable
For 7/8" - 13 Tooth Splined Shaft,
(*Greaseable)

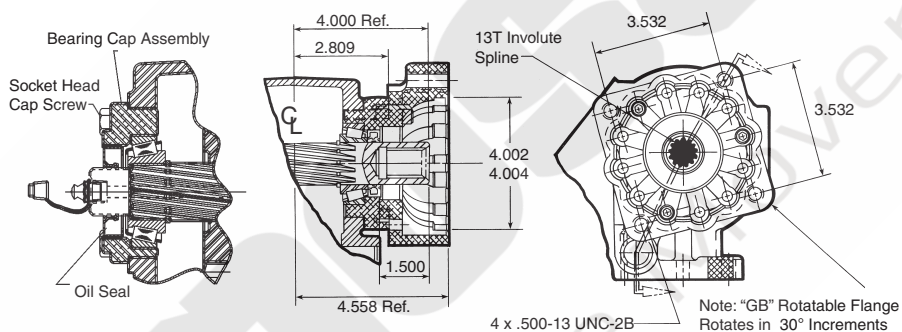
Available for the following P.T.O.s:
267



Suffix GB

S.A.E. Class "B" 4 Bolt Rotatable,
For 7/8" - 13 Tooth Splined Shaft,
(*Greaseable)

Available for the following P.T.O.s:
267



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

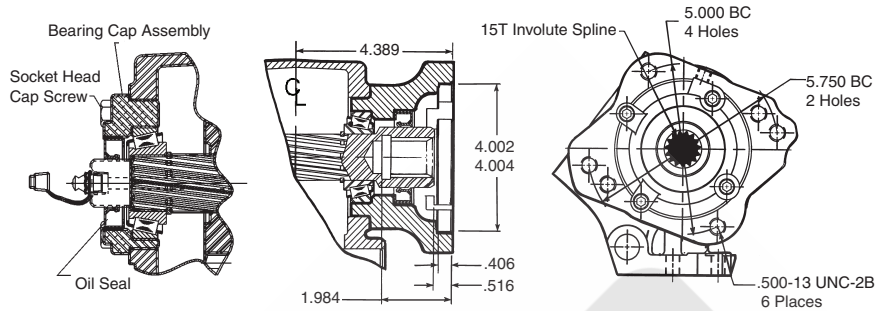
- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

Suffix GF

S.A.E. Class "BB" 2 or 4 Bolt
 For 1" - 15 Tooth Splined Shaft,
 (*Greaseable)

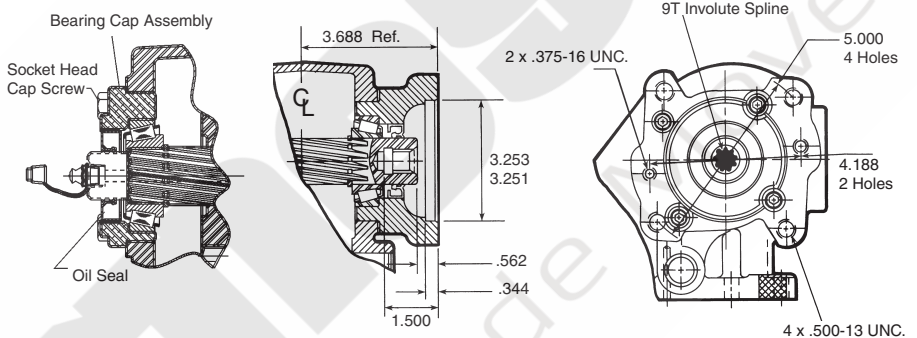
Available for the following P.T.O.s:
 267



Suffix GE

S.A.E. Class "A" 2 or 4 Bolt
 For 5/8" - 9 Tooth Splined Shaft,
 (*Greaseable)

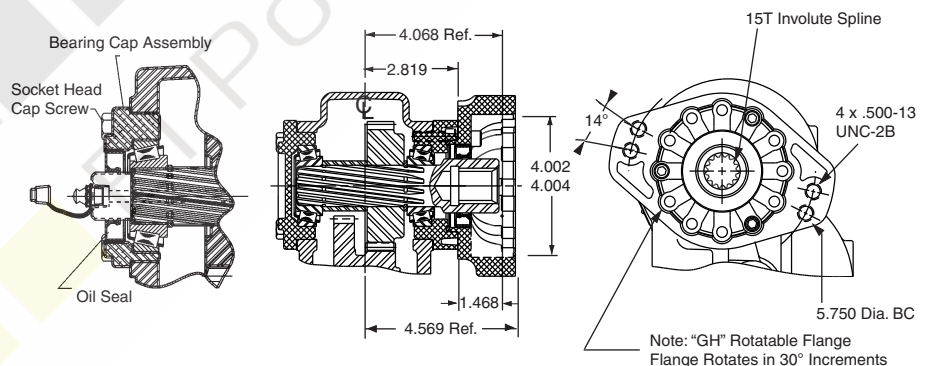
Available for the following P.T.O.s:
 267



Suffix GH

S.A.E. Class "BB" 2 Bolt Rotatable
 For 1" - 15 Tooth Splined Shaft,
 (*Greaseable)

Available for the following P.T.O.s:
 267



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

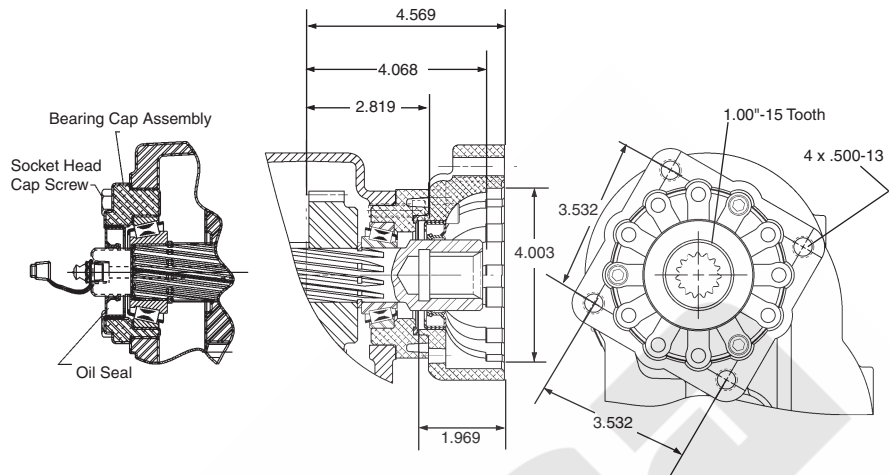
- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

Suffix GJ

S.A.E. Class "B" 4 Bolt Rotatable
 For 1" - 15 Tooth Splined Shaft,
 (*Greaseable)

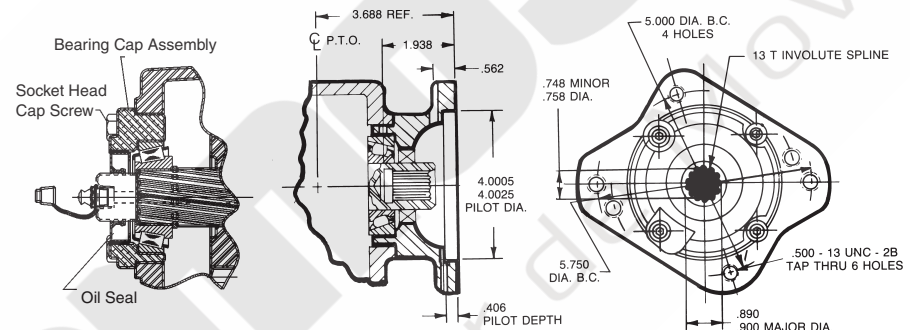
Available for the following P.T.O.s:
 267



Suffix GK

S.A.E. Class "B" 2 or 4 Bolt
 For 7/8" - 13 Tooth Splined Shaft,
 (*Greaseable)

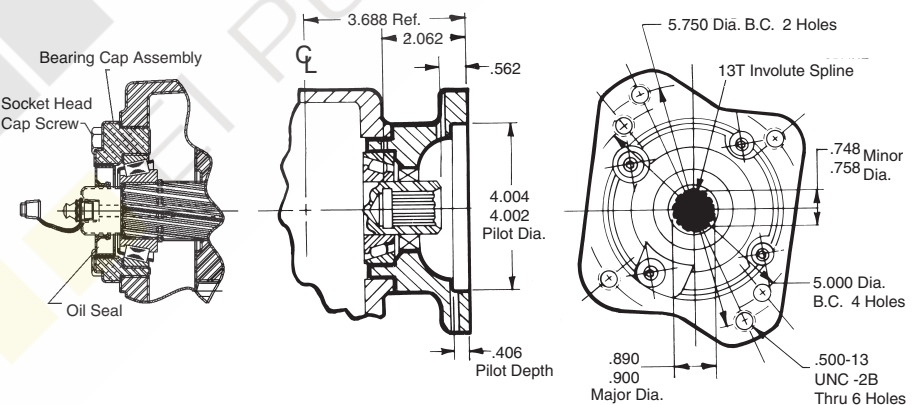
Available for the following P.T.O.s:
 267



Suffix GQ

S.A.E. Class "B" 2 Bolt
 For 7/8" - 15 Tooth
 (*Greaseable)

Available for the following P.T.O.s:
 267



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

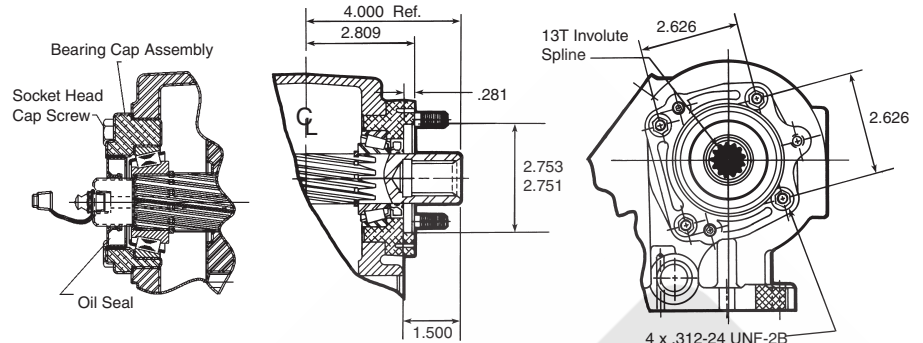
- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

Suffix GR

For Chelsea Pumps
 For 7/8" - 13 Tooth Splined Shaft,
 (*Greaseable)

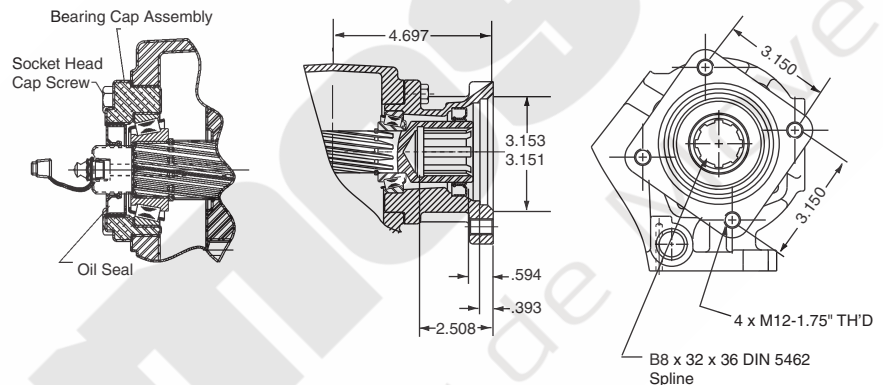
Available for the following P.T.O.s:
 267



Suffix GY

DIN 5462
 Pump Mounting
 (*Greaseable)

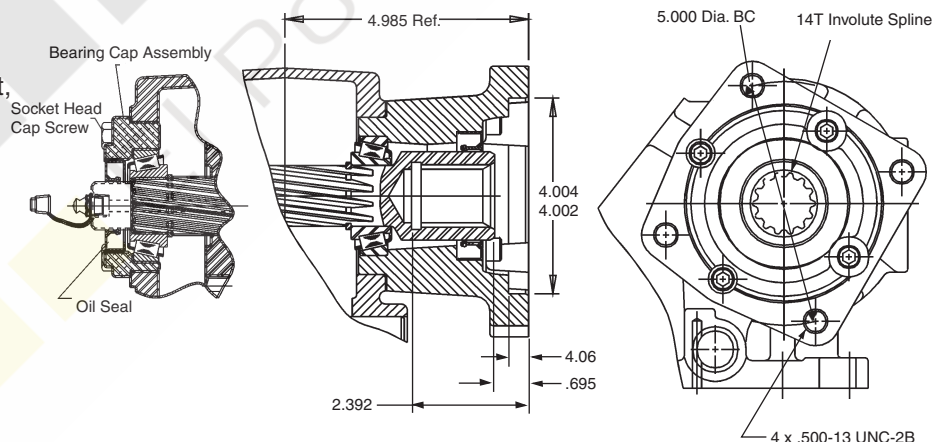
Available for the following P.T.O.s:
 267



Suffix GZ

S.A.E. Class "B" 4 Bolt
 For 1-1/4" - 14 Tooth Splined Shaft,
 (*Greaseable)

Available for the following P.T.O.s:
 267



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

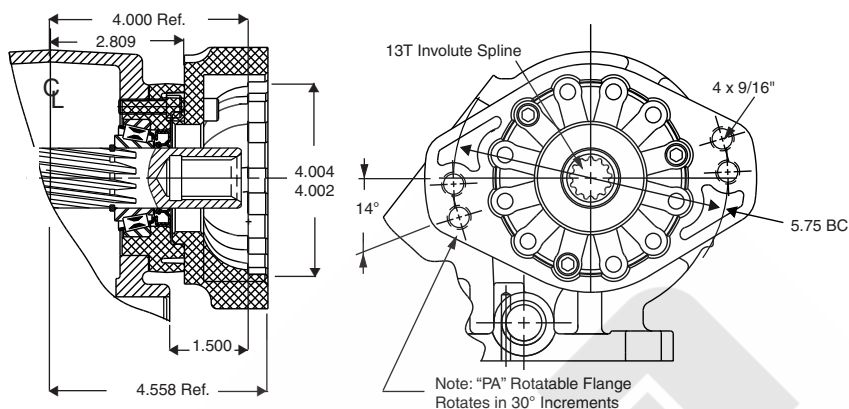
- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

Suffix PA

S.A.E. Class "B" 2 Bolt Rotatable
 For 7/8" - 13 Tooth Splined Shaft

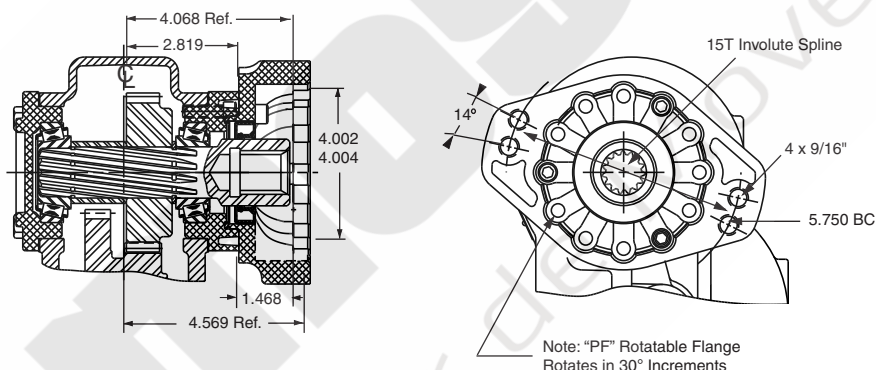
Available for the following P.T.O.s:
 267



Suffix PF

S.A.E. Class "BB" 2 Bolt Rotatable
 For 1" - 15 Tooth Splined Shaft

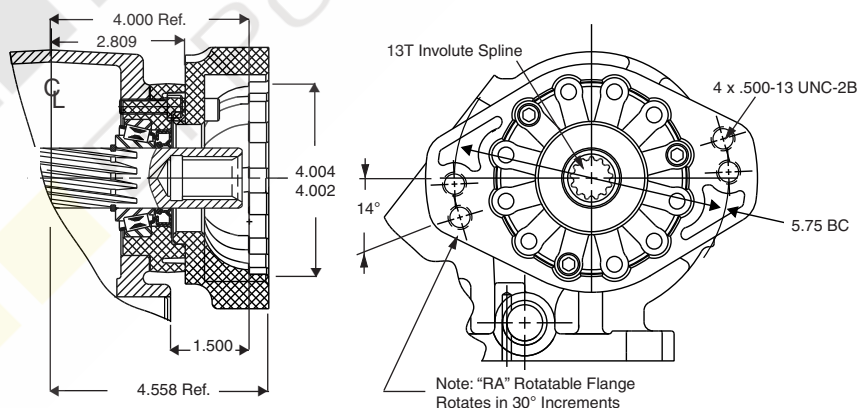
Available for the following P.T.O.s:
 267



Suffix RA

S.A.E. Class "B" 2 Bolt Rotatable
 For 7/8" - 13 Tooth Splined Shaft

Available for the following P.T.O.s:
 267



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

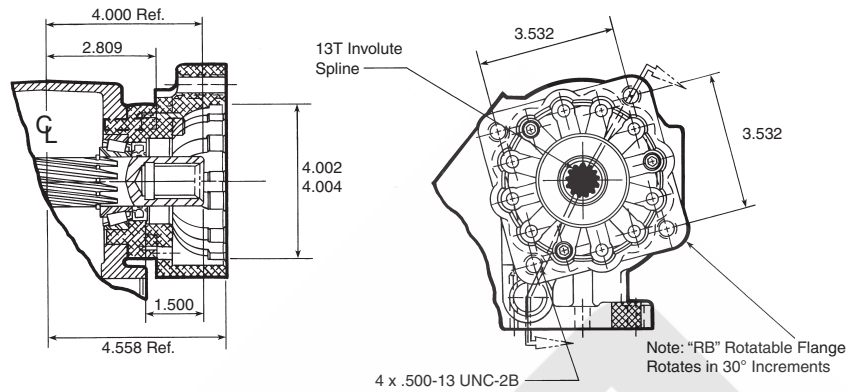
- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

Suffix RB

S.A.E. Class "B" 4 Bolt Rotatable
 For 7/8" - 13 Tooth Splined Shaft

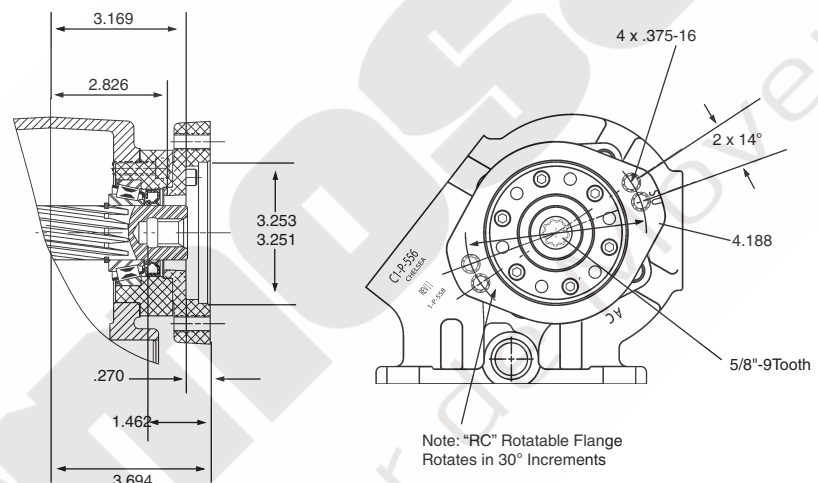
Available for the following P.T.O.s:
 267



Suffix RC

S.A.E. Class "A" 2 Bolt Rotatable
 For 5/8" - 9 Tooth Splined Shaft

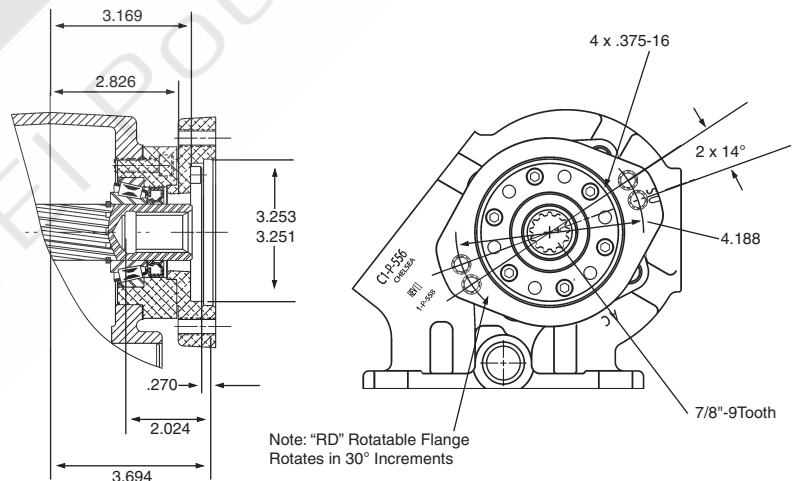
Available for the following P.T.O.s:
 267



Suffix RD

S.A.E. Class "A" 2 Bolt Rotatable
 For 7/8" - 13 Tooth Splined Shaft

Available for the following P.T.O.s:
 267



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

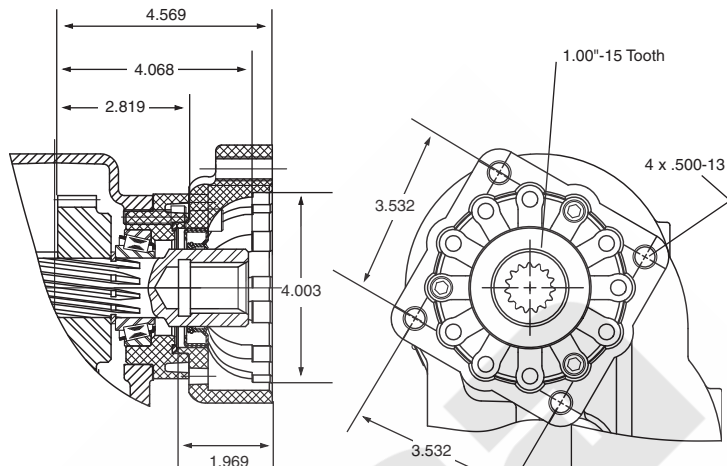
- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

Suffix RE

S.A.E. Class "B" 4 Bolt Rotatable
 For 1.00" - 15 Tooth Splined Shaft

Available for the following P.T.O.s:
 267

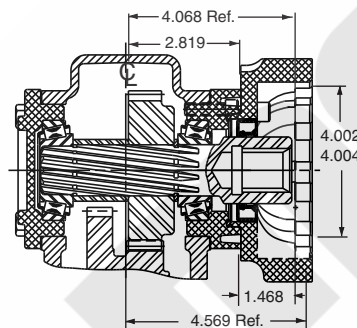


Note: "RE" Rotatable Flange
 Rotates in 30° Increments

Suffix RF

S.A.E. Class "BB" 2 Bolt Rotatable
 For 1" - 15 Tooth Splined Shaft

Available for the following P.T.O.s:
 267

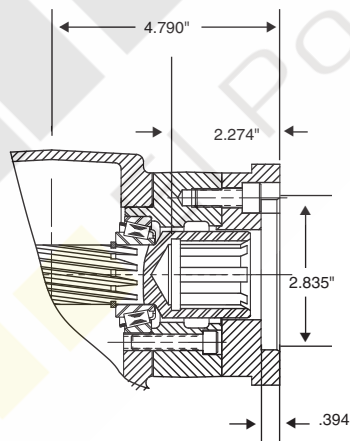


Note: "RF" Rotatable Flange
 Rotates in 30° Increments

Suffix RY

DIN 5462 Pump Mounting

Available for the following P.T.O.s:
 267



B8 x 32 x 36 DIN
 5462 Spline

4 x M12-1.75"

* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

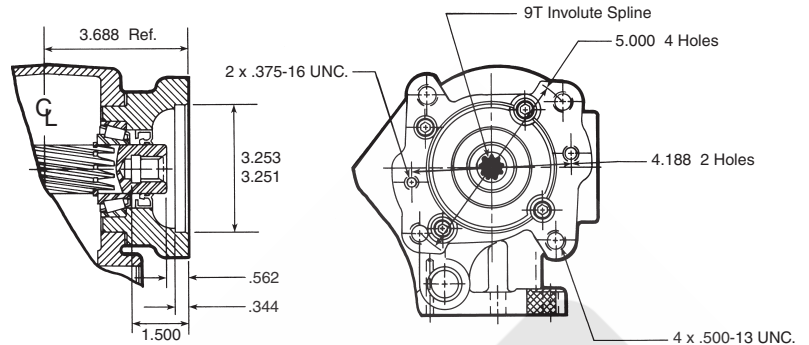
- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

Suffix XE

S.A.E. Class "A" 2 or 4 Bolt
 For 5/8" - 9 Tooth Splined Shaft

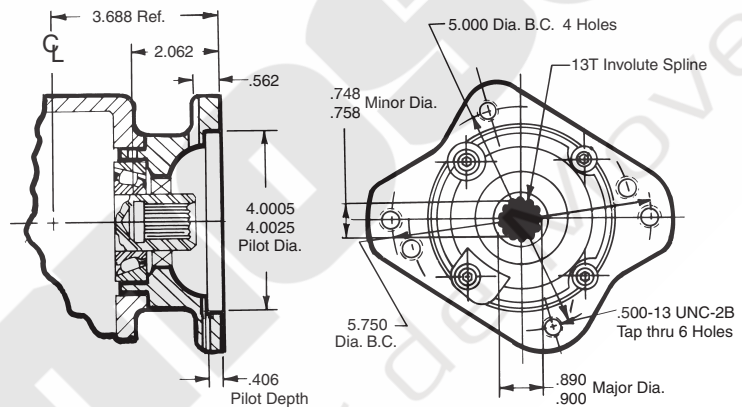
Available for the following P.T.O.s:
 267



Suffix XK

S.A.E. Class "B" 2 or 4 Bolt
 For 7/8" - 13 Tooth Splined Shaft

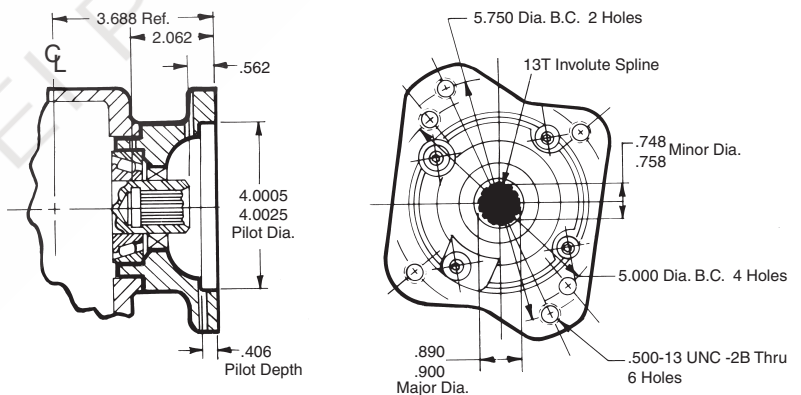
Available for the following P.T.O.s:
 267



Suffix XQ

S.A.E. Class "B" 2 or 4 Bolt
 For 7/8" - 13 Tooth Splined Shaft

Available for the following P.T.O.s:
 267



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

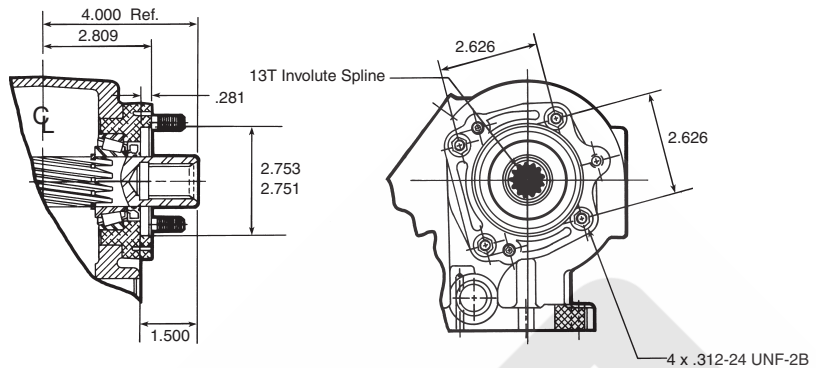
- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

Suffix XR

For Chelsea Pumps
 For 7/8" - 13 Tooth Splined Shaft

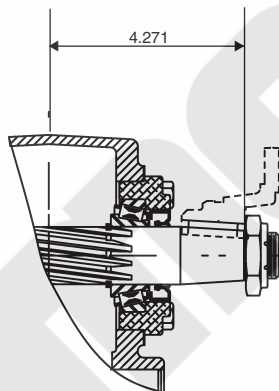
Available for the following P.T.O.s:
 267



Suffix XX

1-1/4" S.A.E. Tapered Shaft w/keyway
 For Companion Flange 3-1-604

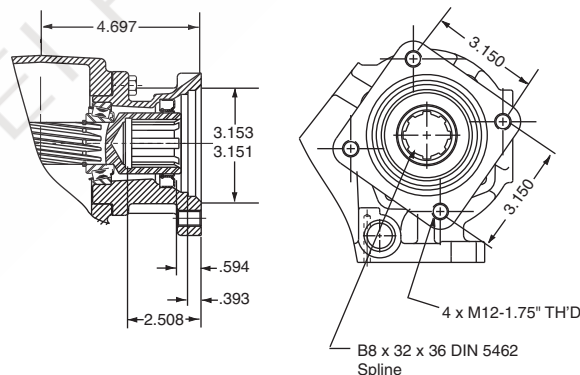
Available for the following P.T.O.s:
 267



Suffix XY

DIN 5462 Pump Mounting

Available for the following P.T.O.s:
 267



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

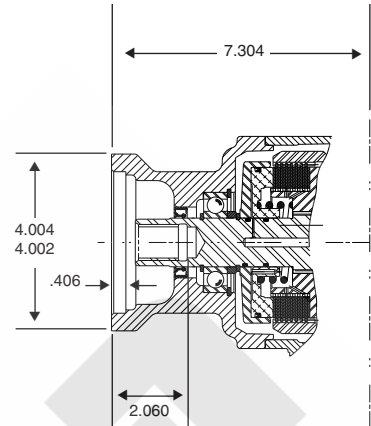
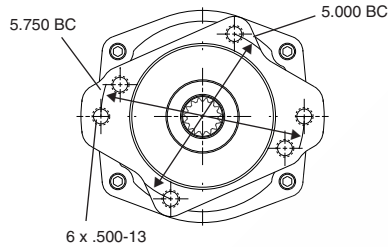
- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

Suffix AF

S.A.E. Class "B" 2 or 4 Bolt
For 1.00" - 15 Tooth Splined Shaft

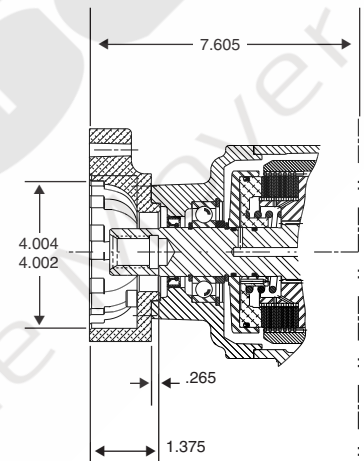
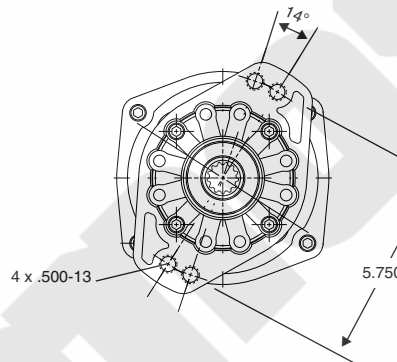
Available for the following P.T.O.s:
277, 278



Suffix PA

S.A.E. Class "B" 2 Bolt Rotatable
For 7/8" - 13 Tooth Splined Shaft

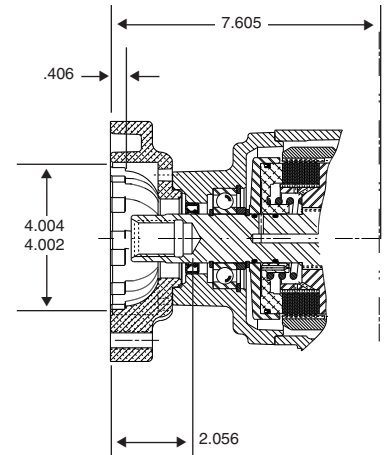
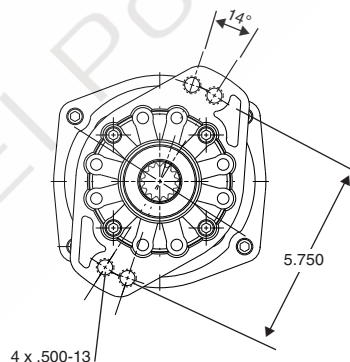
Available for the following P.T.O.s:
277, 278



Suffix PF

S.A.E. Class "B" 2 Bolt Rotatable
For 1.00" - 15 Tooth Splined Shaft

Available for the following P.T.O.s:
277, 278



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

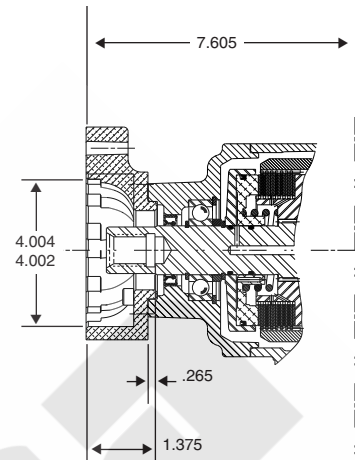
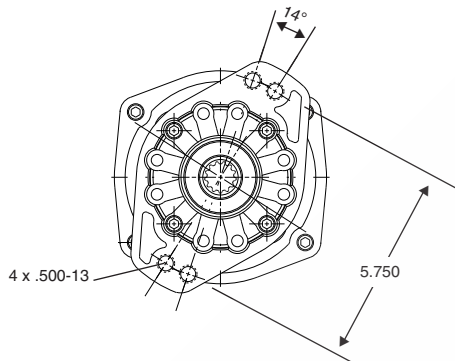
- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

Suffix RA

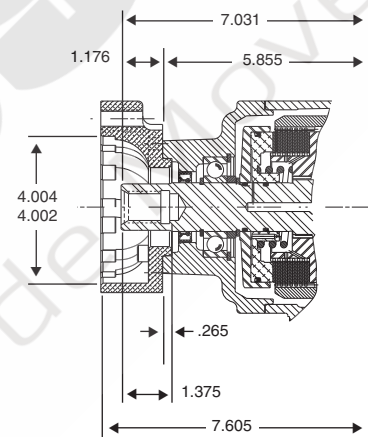
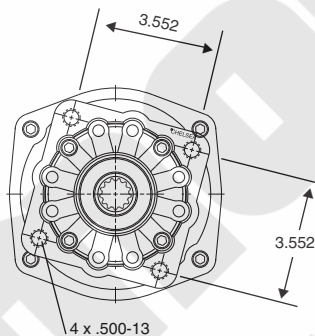
S.A.E. Class "B" 2 Bolt Rotatable
For 7/8" - 13 Tooth Splined Shaft

Available for the following P.T.O.s:
277, 278

**Suffix RB**

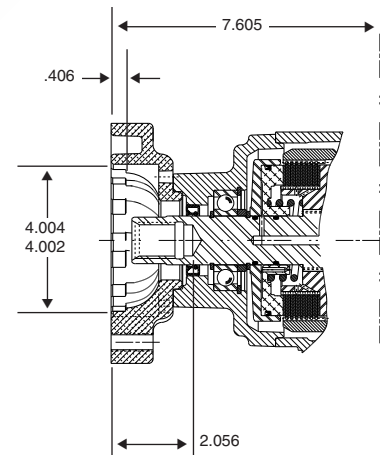
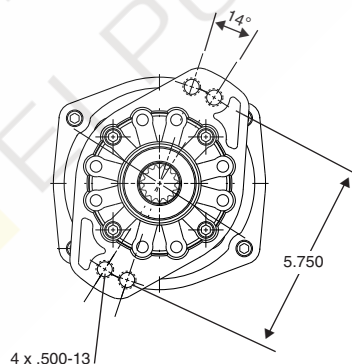
S.A.E. Class "B" 4 Bolt Rotatable
For 7/8" - 13 Tooth Splined Shaft

Available for the following P.T.O.s:
277, 278

**Suffix RF**

S.A.E. Class "B" 2 Bolt Rotatable
For 1.00" - 15 Tooth Splined Shaft

Available for the following P.T.O.s:
277, 278



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

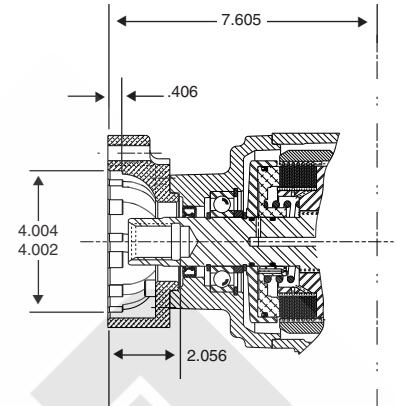
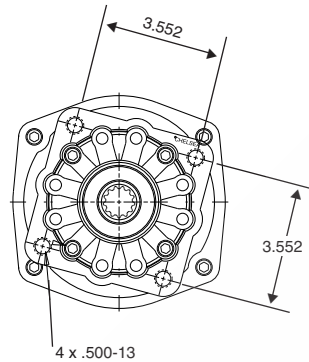
- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

Suffix RG

S.A.E. Class "B" 4 Bolt Rotatable
 For 1.00" - 15 Tooth Splined Shaft

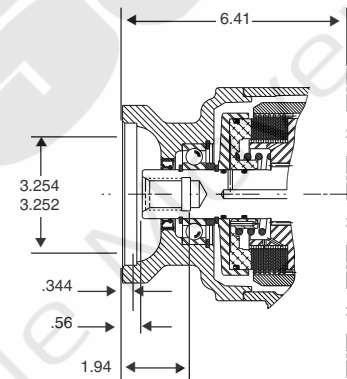
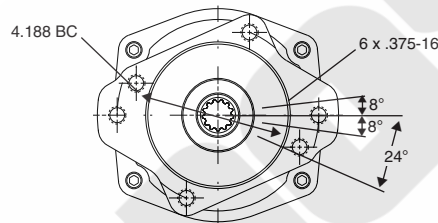
Available for the following P.T.O.s:
 277, 278



Suffix XE

S.A.E. Class "A" 2 Bolt
 for 5/8" - 9 Tooth Splined Shaft

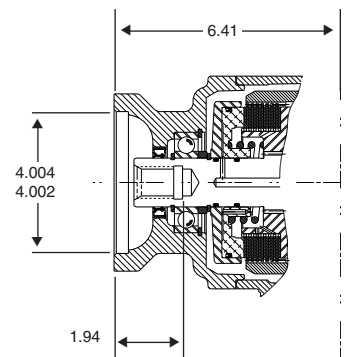
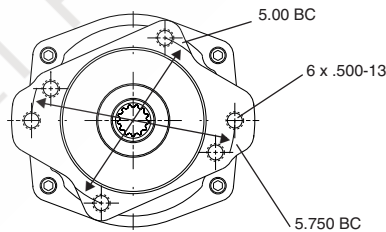
Available for the following P.T.O.s:
 277, 278



Suffix XK

S.A.E. Class "B" 2 or 4 Bolt
 for 7/8" - 13 Tooth Splined Shaft

Available for the following P.T.O.s:
 277, 278



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

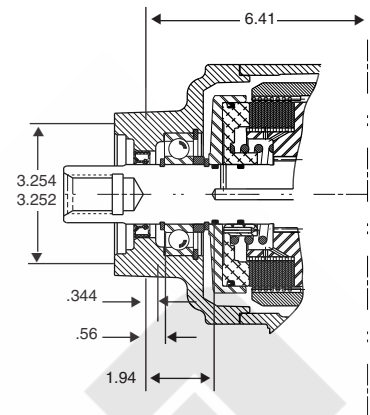
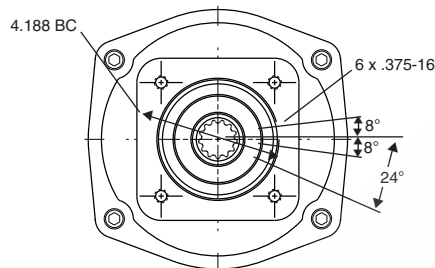
- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

Suffix XP

S.A.E. Class "A" 2 Bolt
 for 7/8" - 13 Tooth Splined Shaft

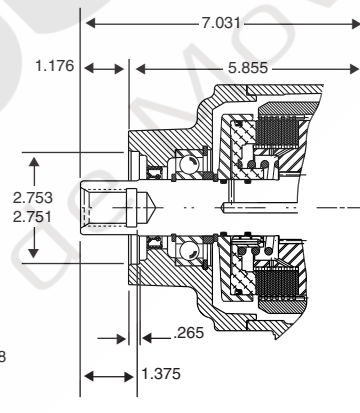
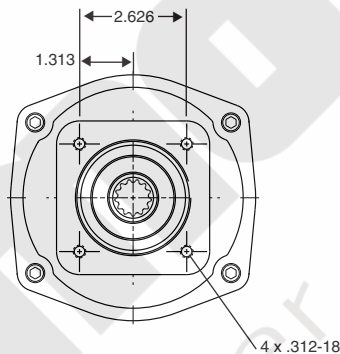
Available for the following P.T.O.s:
 277, 278



Suffix XR

Chelsea Special for
 7/8" - 13 Tooth Splined Shaft

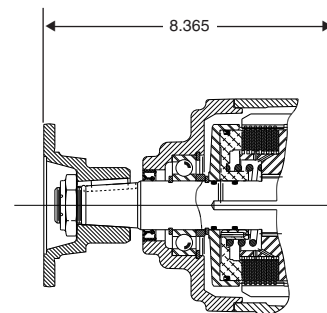
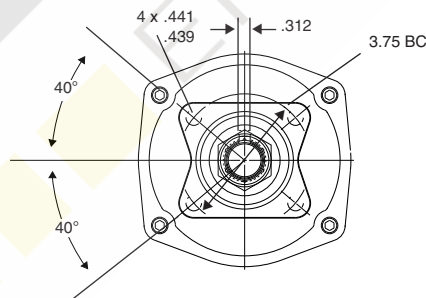
Available for the following P.T.O.s:
 277, 278



Suffix XX

DIN 100 Flange for
 1.25" Tapered Shaft

Available for the following P.T.O.s:
 277, 278



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

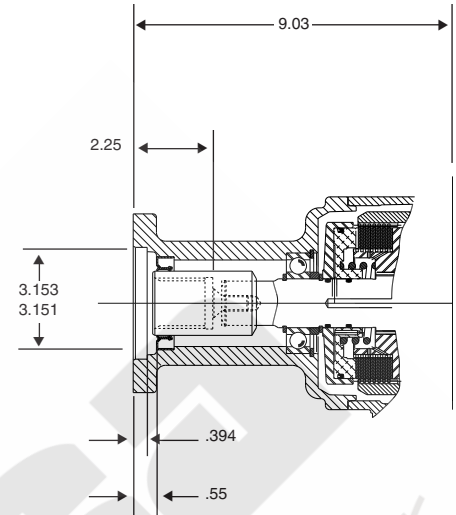
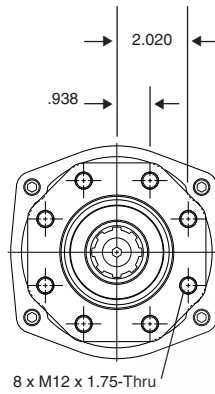
- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

Suffix XY

DIN 5462 Pump Mounting for
8 Tooth Internal Spline

Available for the following P.T.O.s:
277, 278



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

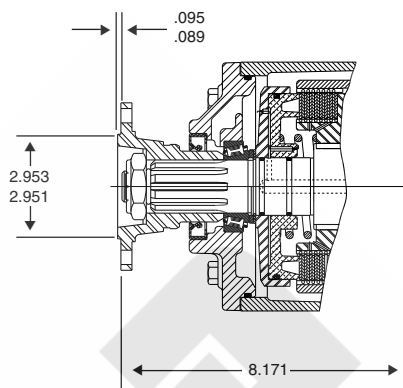
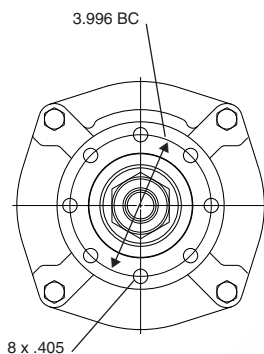
- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

Suffix AB

DIN 125 Flange

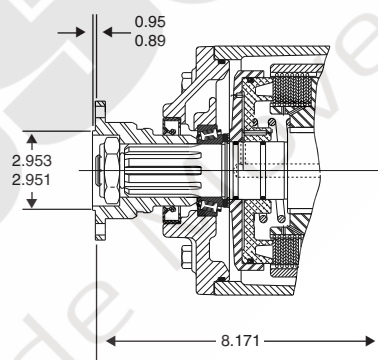
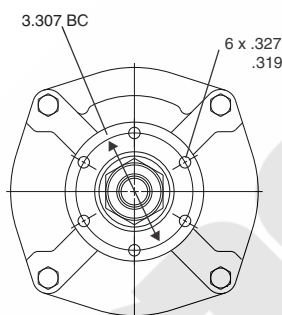
Available for the following P.T.O.s:
 859



Suffix AC

DIN 100 Flange

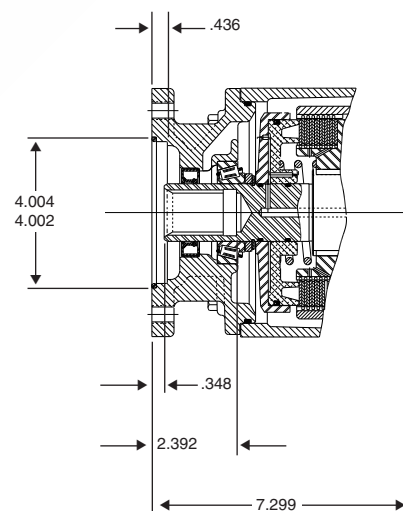
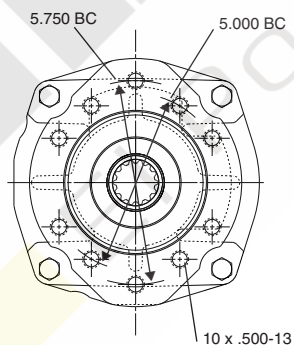
Available for the following P.T.O.s:
 859



Suffix AZ

S.A.E. Class "B" 2 or 4 Bolt
 for 1.25" - 14 Tooth Splined Shaft

Available for the following P.T.O.s:
 859



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

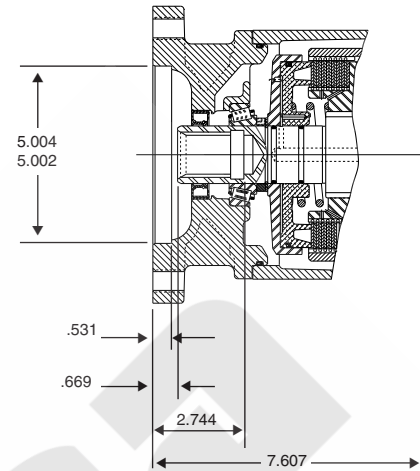
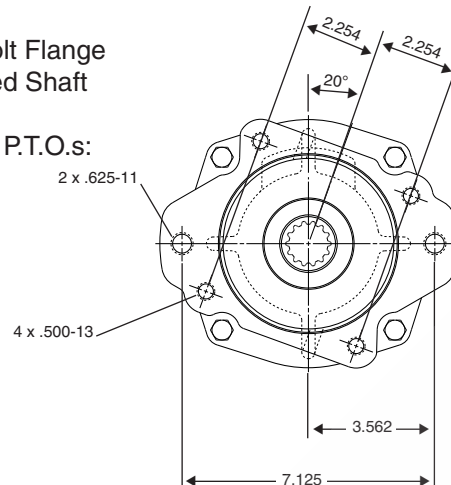
- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

Suffix XS

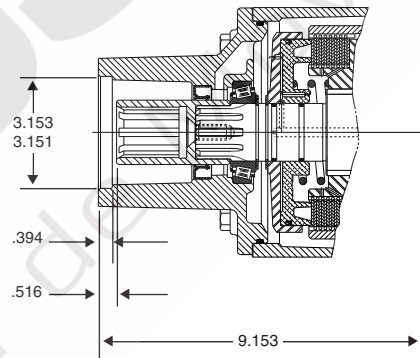
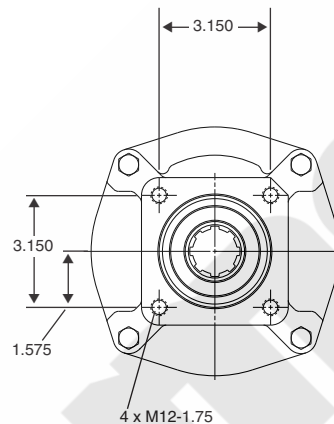
S.A.E. Class "C" 2 or 4 Bolt Flange
for 1.25" - 14 Tooth Splined Shaft

Available for the following P.T.O.s:
859

**Suffix XY**

DIN 5462 for 8 Tooth DIN Spline
(B8 x 32 x 36)

Available for the following P.T.O.s:
859



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

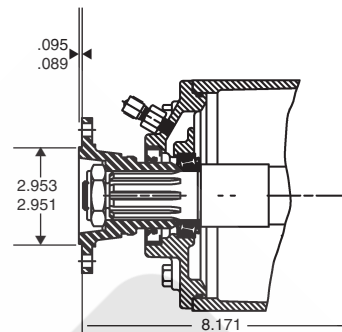
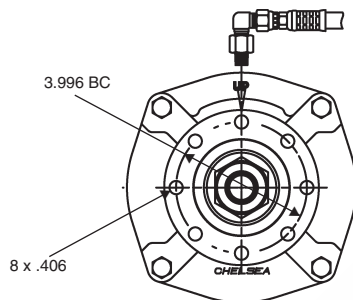
- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

Suffix AB

DIN 120 Flange

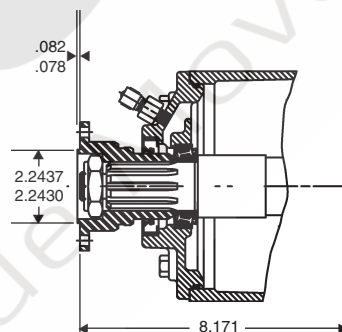
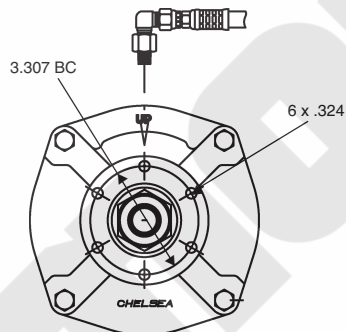
Available for the following P.T.O.s:
 867



Suffix AC

DIN 100 Flange

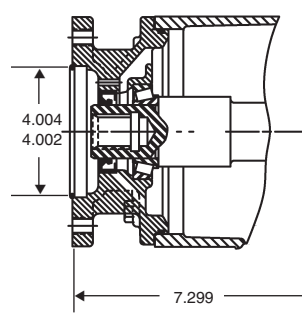
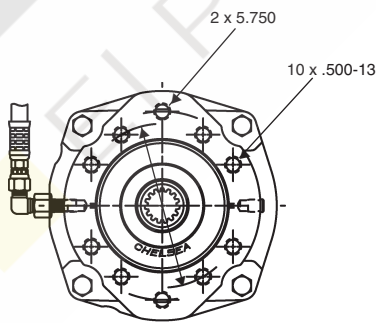
Available for the following P.T.O.s:
 867



Suffix AF

S.A.E. Class "B" 2 or 4 Bolt Flange
 for 1.00" - 15 Tooth

Available for the following P.T.O.s:
 867



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

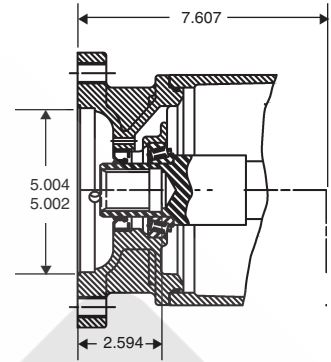
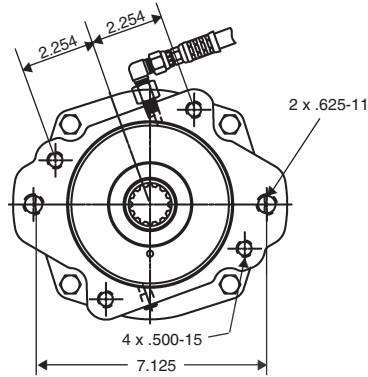
- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

Suffix XS

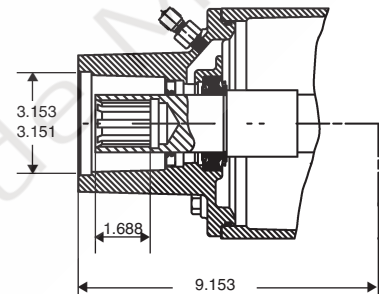
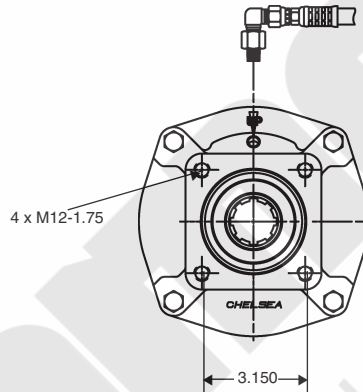
S.A.E. Class "C" 2 or 4 Bolt Flange
for 1.25" -14 Tooth Splined Shaft

Available for the following P.T.O.s:
867

**Suffix XY**

DIN 5462 Pump Mounting

Available for the following P.T.O.s:
867



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

Use a bracket to support the pump to the transmission if:

- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

Ford Transmission

P.T.O. Options Chart – Ford Transmission

P.T.O. Series		246
Lubrication		
P	Pressure Lube	x
Shifting		
B	12 Volt Electric/Hydraulic	x
K	12 Volt Electric Overspeed Control	x
Output		
AD	S.A.E. "A" 2 Bolt Flange w/ 3/4" 11 - Tooth Splined	x
XD	1.25" Dia. Keyed Shaft	x
XE	S.A.E. "A" 2 Bolt Flange w/ 5/8" 9 - Tooth Splined	x
XP	S.A.E. "A" 2 Bolt Flange w/ 7/8" 13 - Tooth Splined	x
Pumps		
16	Hyd. Pump 2.9 GPM @1200 R.P.M. w/ 3/4" 11 - Tooth Spline	x
26	Hyd. Pump 4.9 GPM @1200 R.P.M. w/ 3/4" 11 - Tooth Spline	x
32	Hyd. Pump 5.8 GPM @1200 R.P.M. w/ 3/4" 11 - Tooth Spline	x
37	Hyd. Pump 6.8 GPM @1200 R.P.M. w/ 3/4" 11 - Tooth Spline	x
42	Hyd. Pump 7.8 GPM @1200 R.P.M. w/ 3/4" 11 - Tooth Spline	x
55	Hyd. Pump 10.3 GPM @1200 R.P.M. w/ 3/4" 11 - Tooth Spline	x
61	Hyd. Pump 11.3 GPM @1200 R.P.M. w/ 3/4" 11 - Tooth Spline	x
71	Hyd. Pump 13.2 GPM @1200 R.P.M. w/ 3/4" 11 - Tooth Spline	x
82	Hyd. Pump 15.1 GPM @1200 R.P.M. w/ 3/4" 11 - Tooth Spline	x
50	Hyd. Pump 9.3 GPM @1200 R.P.M. w/ 7/8" 13 - Tooth Spline (4 x 2 Only)	x
66	Hyd. Pump 12.2 GPM @1200 R.P.M. w/ 7/8" 13 - Tooth Spline (4 x 2 Only)	x
87	Hyd. Pump 16.1 GPM @1200 R.P.M. w/ 7/8" 13 - Tooth Spline (4 x 2 Only)	x
10	Hyd. Pump 18.6 GPM @1200 R.P.M. w/ 7/8" 13 - Tooth Spline (4 x 2 Only)	x
14	Hyd. Pump 25.4 GPM @1200 R.P.M. w/ 7/8" 13 - Tooth Spline (4 x 2 Only)	x
18	Hyd. Pump 28.1 GPM @1200 R.P.M. w/ 7/8" 13 - Tooth Spline (4 x 2 Only)	x
20	Hyd. Pump 31.2 GPM @1200 R.P.M. w/ 7/8" 13 - Tooth Spline (4 x 2 Only)	x

NOTE: Always Check Price Book for Current Options

Rear Mount P.T.O.s

P.T.O. Options Chart – Rear Mount P.T.O.s					
P.T.O. Series		522	541	CAT-H	CAT-D
Mounting Designator					
AA	ZF 6S-850	X			
AB	Iveco 2845.6	X			
AC	ZF/Meritor Freedomliner Astronic	X			
AD	ZF 16S151/181/221	X			
AM	Eaton FS-4106	X			
AT	Fuller		X		
AU	Fuller		X		
BD	Fuller		X		
BJ	Fuller		X		
LA	Caterpillar CX Series			X	X
Lubrication					
X	Standard	X	X	X	X
W	Wet Spline			X	X
Shifting					
A	Air	X	X		
B	12 Volt Elec/Hyd			X	
D	24 Volt Elec/Hyd			X	
F	ZMTEC Installation, “AC” Input Gear (Freedomline Transmissions)	X			
H	Less Shifter Kit	X			
M	Constant Mesh				X
P	12 Volt Elec/Air	X			
Q	24 Volt Elec/Air	X			
V	Air, Less Installation Kit	X			
Y	Lever		X		
Output					
AF	S.A.E. “B” 2 or 4 Bolt Flange, 1.00" 15 - Tooth Shaft			X (w)	X (w)
AZ	S.A.E. “B” 2 or 4 Bolt Flange, 1.25" 14 - Tooth Shaft			X (w)	X (w)
XD	1-1/4" Round Shaft w/keyway	X		X	
XK	S.A.E. “B” 2 or 4 Bolt Flange, 7/8" 13 - Tooth Shaft		X	X (w)	X (w)
XS	S.A.E. “C” 2 or 4 Bolt Flange, 1.25" - 14Tooth Shaft				X (w)
XV	1-1/2" 10 Spline w/1410 Series Flange		X		X (w)
XX	1-1/4" S.A.E. Tapered Shaft w/keyway	X			
XY	DIN 5462 Pump Mounting	X		X (w)	X (w)

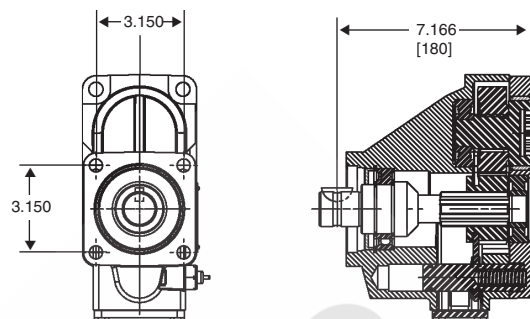
* Order companion flange (3-1-604) separately

(w) = Also Available as a Wet Spline "W" Option

NOTE: Always Check Price Book for Current Options

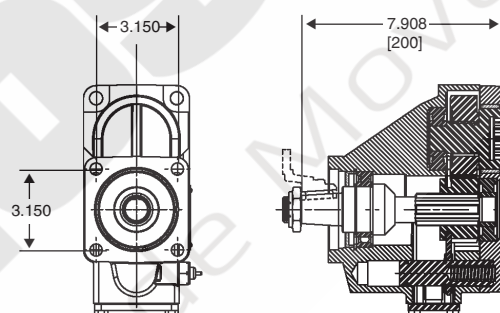
XD Output

Available for the following P.T.O.s:
522



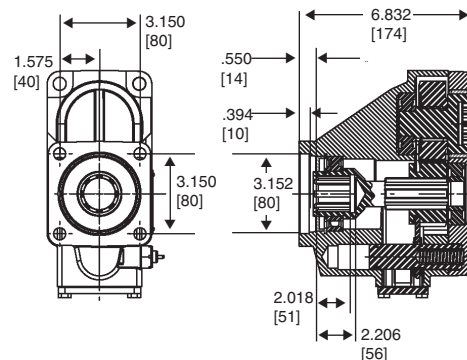
XX Output

Available for the following P.T.O.s:
522



XY Output

Available for the following P.T.O.s:
522



* Recommended Grease: Texaco Coupling Grease, Code 1912 or Equivalent

NOTE: PUMP INSTALLATION PRECAUTIONS

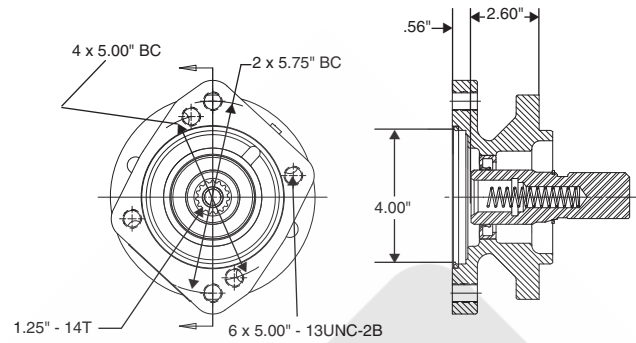
Use a bracket to support the pump to the transmission if:

- The pump weighs 40 pounds or more.
- The combined length of the P.T.O. and pump is 18 inches or more from the P.T.O. centerline to the end of the pump.

Also remember to pack the female pilot of the P.T.O. pump flange with grease before installing the pump on the P.T.O.

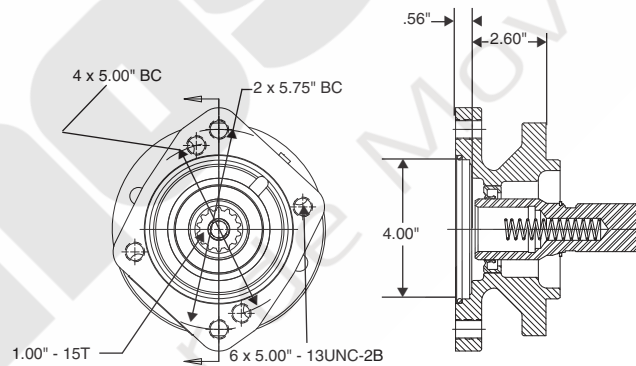
AF Output

Available for the following P.T.O.s:
CAT-D



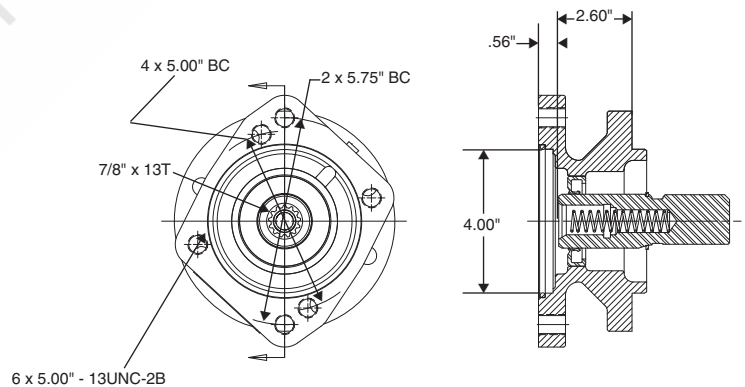
AZ Output

Available for the following P.T.O.s:
CAT-D



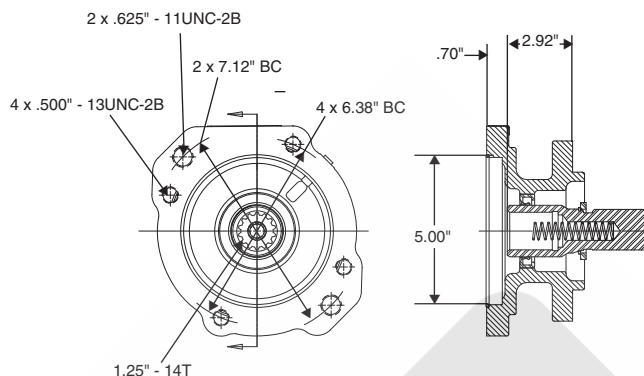
XK Output

Available for the following P.T.O.s:
CAT-D



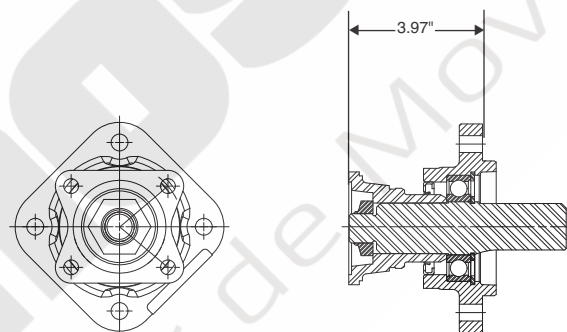
XS Output

Available for the following P.T.O.s:
CAT-D



XV Output

Available for the following P.T.O.s:
CAT-D



XY Output

Available for the following P.T.O.s:
CAT-D

