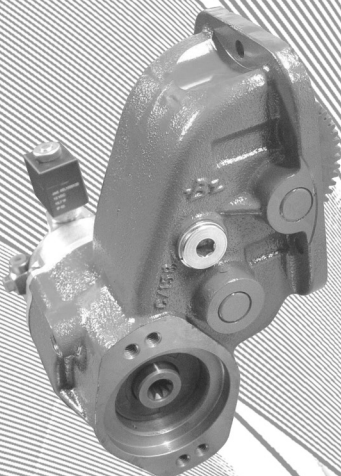


USER MANUAL

For Bezares Hot Shift FORD PTO S

**3900 Series for Ford
5R110 Transmission**



**3920 Series for Ford
6R140 Transmission**

BZ
bezaresusa

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CAUTION:

TO PREVENT POSSIBLE INJURY OR DEATH: DO NOT go underneath the vehicle with the engine running.

DO NOT attempt to work on an installed Power Take-Off with the engine running.

DO NOT operate the controls of the Power Take-Off or other driven equipment from underneath the vehicle with the engine running.

DO NOT operate the controls of the Power Take-Off or other driven equipment in any position that could result in getting caught in the moving machinery.

CAUTION:

Make sure to block any moving or raised device that may injure a person working on or under the truck. A lever or its linkage may be accidentally moved causing movement of the device which could cause injury to a person near the device.

IMPORTANT:

Because most of our Bezares Power Take-Offs and P.T.O. drive lines are sold through distributors, the product applications and the resulting degree of exposure to danger of the operators are beyond the knowledge and controls of PTO LTD.

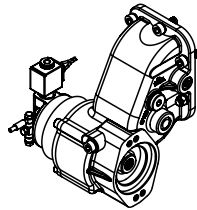
Therefore, the proper installation of the P.T.O. and its associated equipment, and the decisions of whether to install guards and/or warning signs shall be the responsibility of the designers or installers.

! DANGER		! PELIGRO	
NEVER GET UNDER THE TRUCK IF THE ENGINE IS RUNNING!		¡NUNCA SE META DEBAJO DEL CAMIÓN CUANDO EL MOTOR ESTÉ EN MARCHA!	
	<i>You may be hurt or killed.</i>		

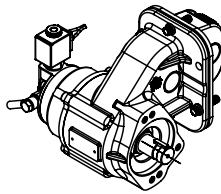


Since it is our major objective to show you how to get additional and more profitable miles from truck, tractor and trailer components, we want to provide you with information on the installation of 3900 and 3920 Series.

We all realize that an inadequate transmission will overwork any Power Take-Off in a very short period of time. In addition, a mismatched transmission/P.T.O. combination can result in unsatisfactory performance of the equipment right from the start.



P.T.O. 3900 SERIES



P.T.O. 3920 SERIES

Before you order new trucks be sure that you're getting the right transmission/P.T.O. combination. It is of vital importance for efficient performance to have adequate power. To help you select the proper type, size and design of P.T.O. it is advisable to discuss your specific requirements with a Bezares P.T.O. specialist. They know their products and Power Take-Offs. They can inform you about everything you need to know about power, at the right time, before you specify components.

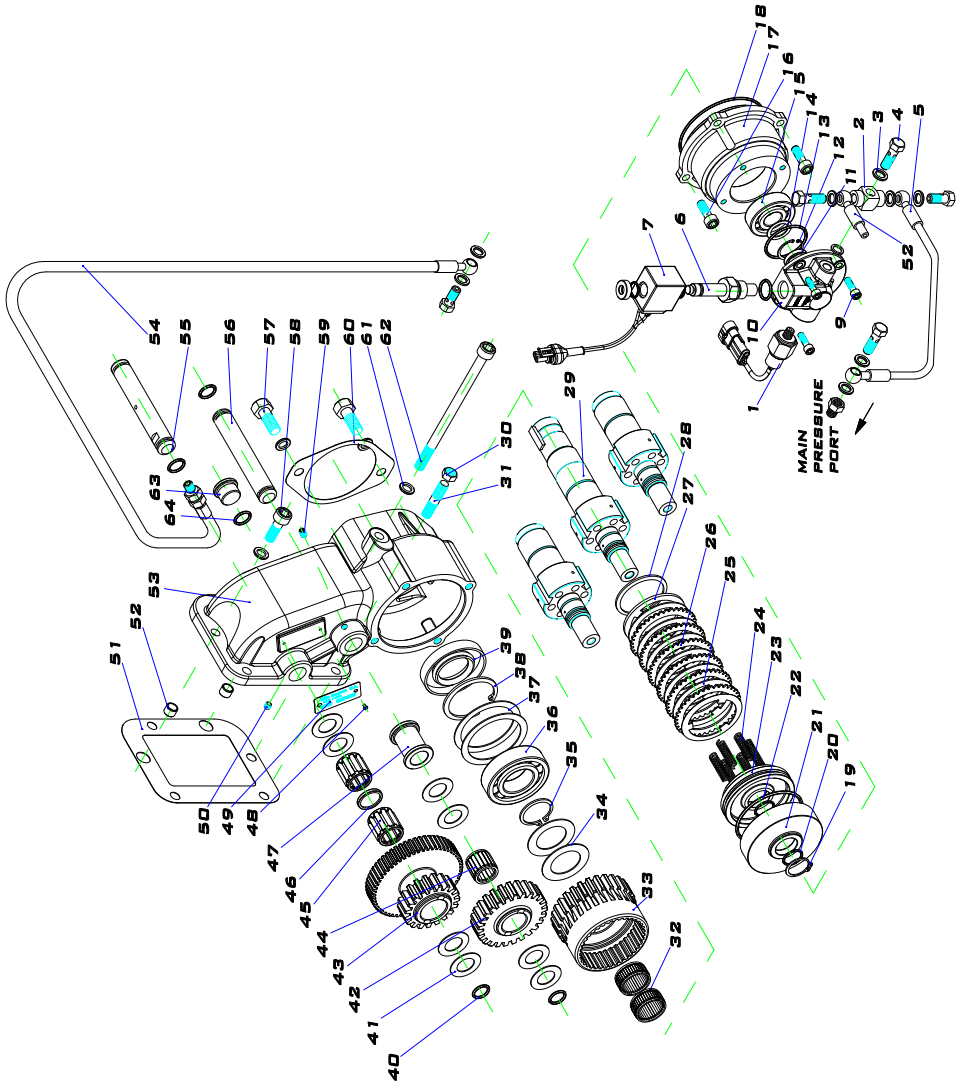
Application Questions

Here are some of the questions that are relevant to the proper selection of a Transmission mounted Power Take-Off.

1. What is the make and model of your transmission?
2. Which P.T.O. opening will be used?
3. What accessory is to be driven?
4. How much torque & horsepower is required to drive the accessory?
5. What is the rotation of the P.T.O. in order to make correct pump rotation selection?
6. What is the required P.T.O. output shaft speed as a percent of engine speed?

Once all of the questions above have been answered to these questions have been determined, a transmission mounted P.T.O. can be selected to meet the torque and % of engine RPM that you require.

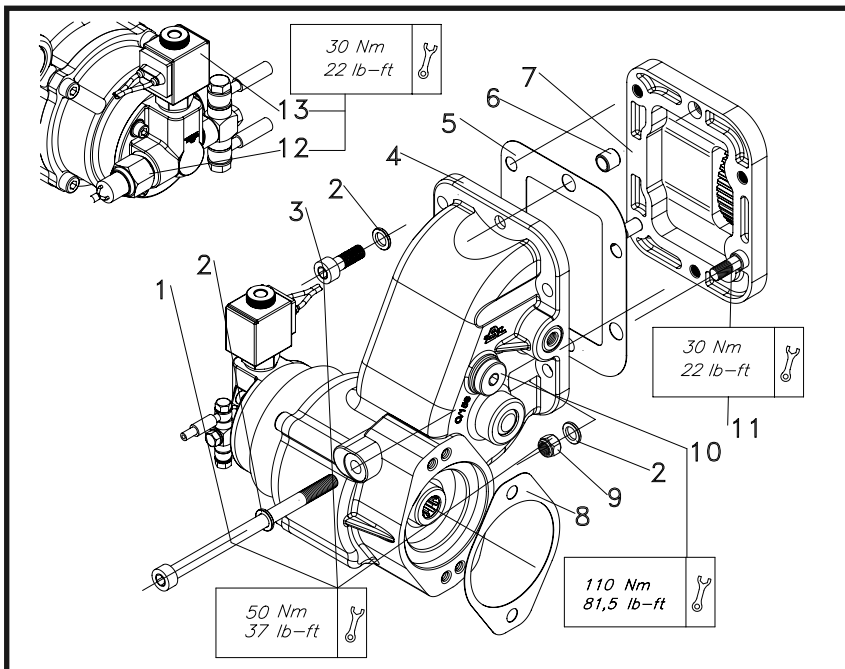
Having made the selection of a P.T.O., you are ready to start the installation.



P.T.O. Installation 3900

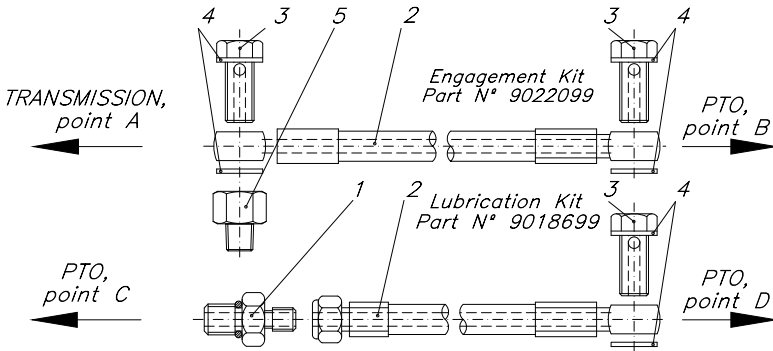
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1. Drain the oil from the transmission, clean the PTO aperture cover plate and surrounding area to prevent dirt from entering.
2. Remove the PTO cover and clean the sealing surface. Mount the guides (6) and the stud (11) on the transmission and install proper gasket (5).
3. Mount four of the Allen head cap screws with washers in each corner of the PTO mounting flange (4) and install it to the transmission applying pressure to it.
4. Remove the inspection plug (10) and check the backlash by rocking the input drive gear back and forth. The backlash must be between 0.006 and 0.012" (0.15 and 0.30 mm).
5. If the backlash is too loose, remove the PTO and re-install with thinner gasket. If the backlash is too tight, remove PTO and re-install with either a thicker gasket or by adding a second gasket.
6. Install the remaining washers (2) and Allen head cap screws (1&3) and torque to proper specification. Install nuts (9) on studs and tighten to proper torque shown below.
7. Install a gasket (8) between the pump and the PTO. Inspect transmission fluid level and top off with the proper fluid as needed.
8. Install the pressure switch (12) and the electric solenoid valve (13) in accordance with the drawing.



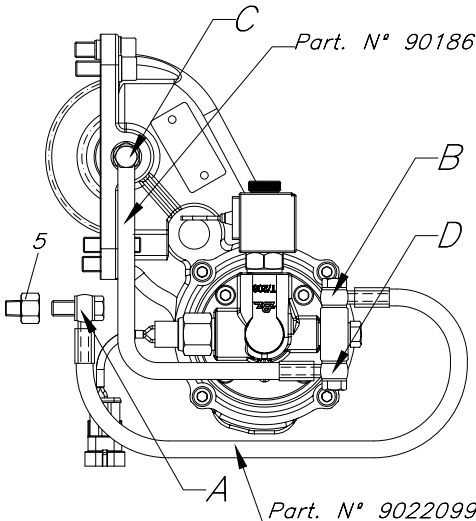
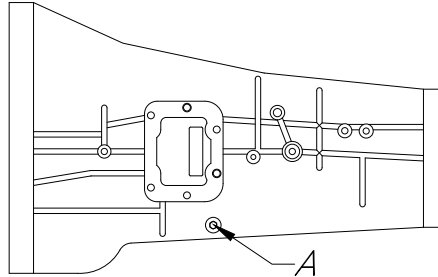
Installation Instructions for Lubrication Kit on 3900 Series PTO

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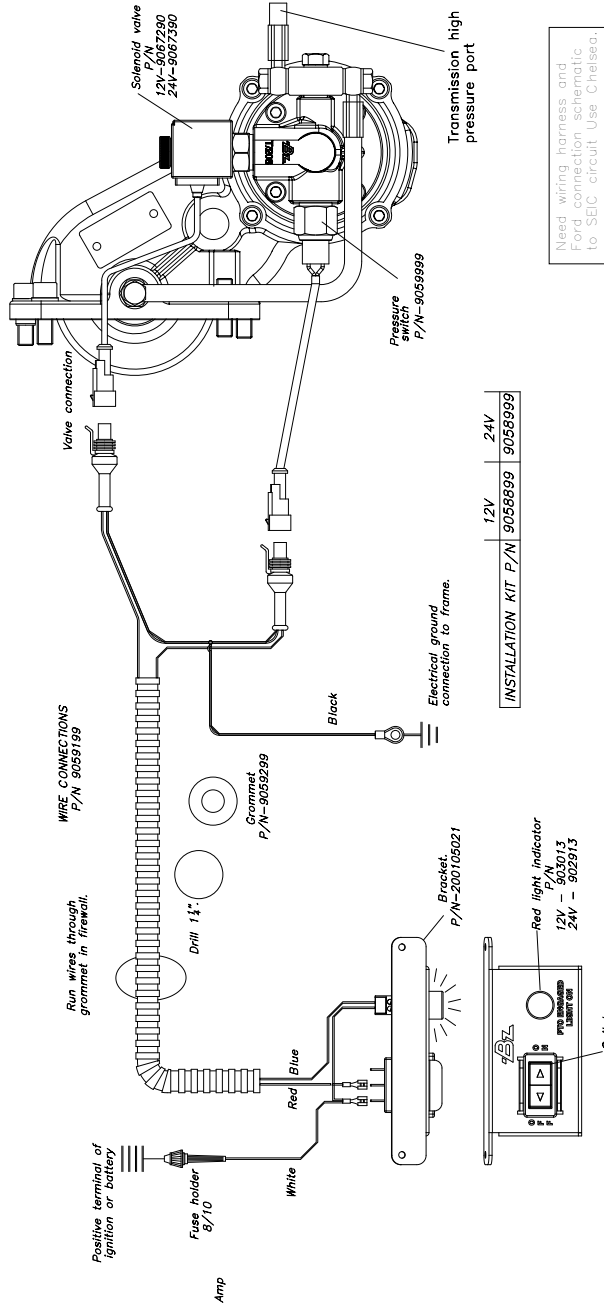
Item	Description
1	Fitting
2	Hose
3	Fitting
4	Washer
5	Adapter



INSTALLATION METHOD

- 1.- Remove the transmission plug "A"
- 2.- Remove the plastic protection plugs placed on the PTO in "B", "C" and "D" position.
- 3.- Install the adapter (5) in "A" port shown above and the engagement kit in "A" port and "B" port on rear cover.
- 4.- Install the lubrication hose (9018699) in "C" and "D" ports on PTO.

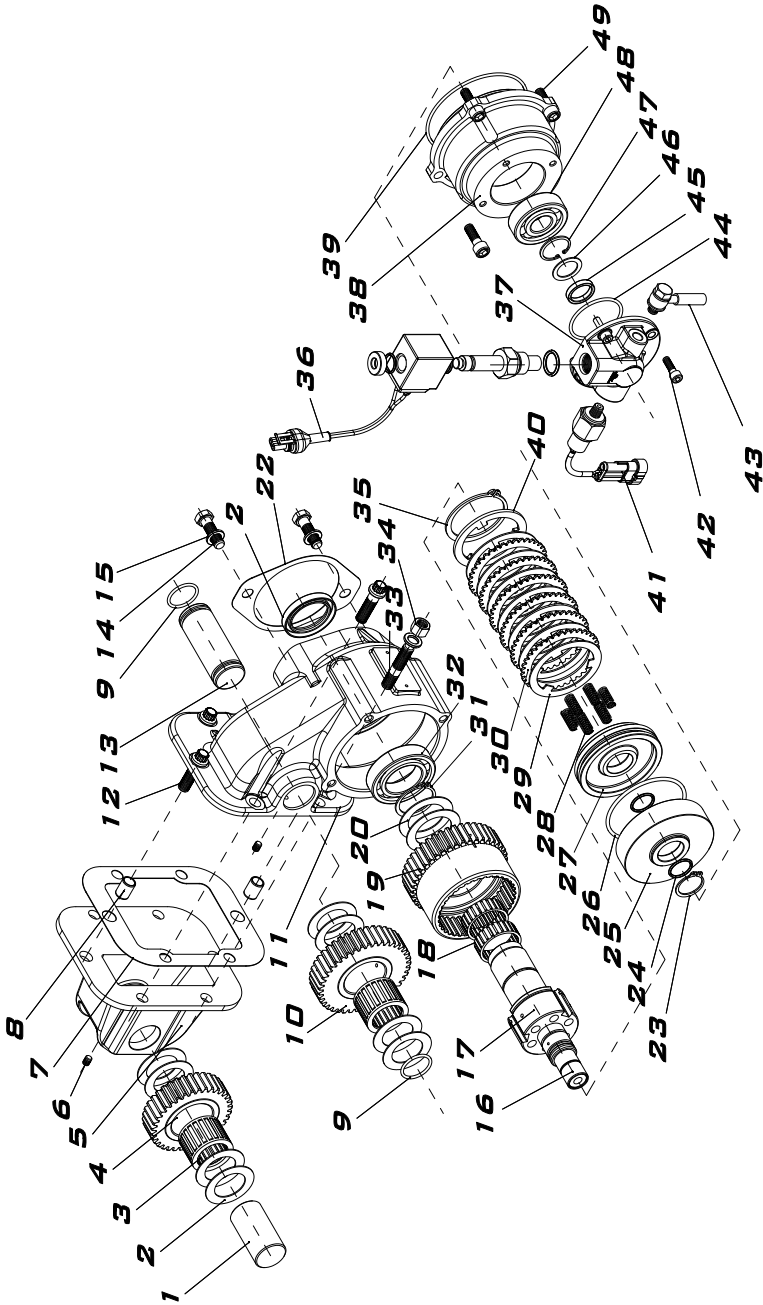
Electric over Hydraulic Wiring Schematic for Installation on 3900 Series PTO



Need wiring harness and Ford connection schematic to SEC circuit. Use Chelsey.

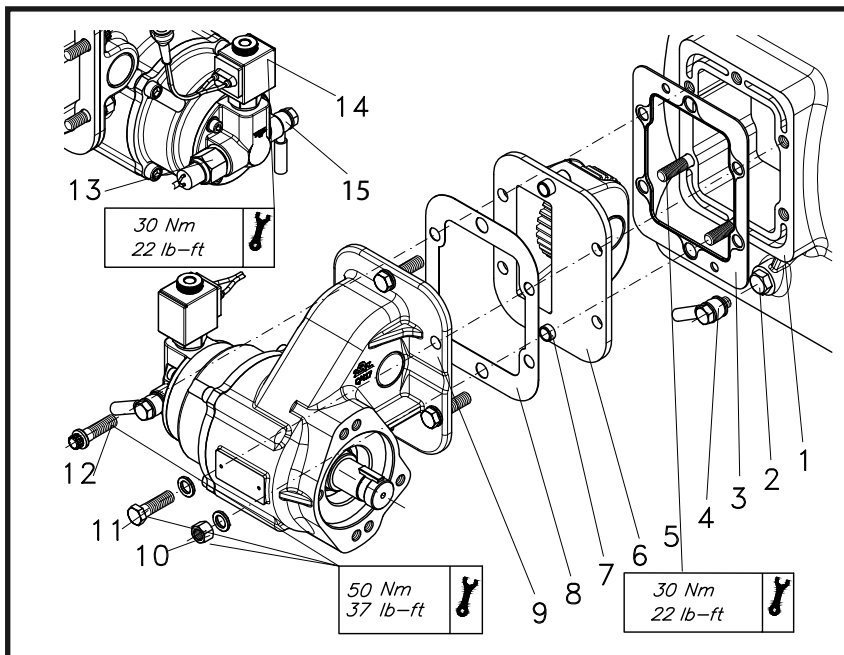
2. P.T.O. 3920

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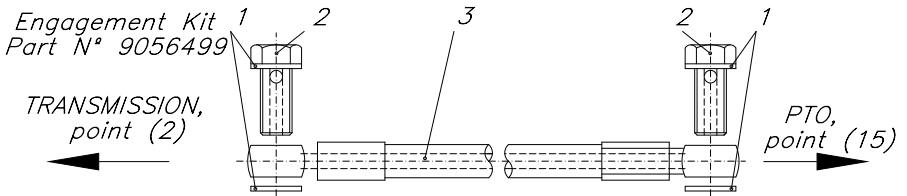


P.T.O. Installation 3920

1. Drain the oil from the transmission, clean the PTO aperture cover plate and surrounding area to prevent dirt from entering.
2. Remove the PTO cover and clean the sealing surface and gasket (3). Do not discard the gasket, it will be used during the PTO installation on the transmission.
3. Remove the pipe plug (2) from the transmission pressure port and install engagement kit hose & fitting (4) into the port. Be careful not to cross thread fitting. (See page 11 for complete lubrication kit instructions).
4. Install the 2 studs into the transmission as shown below. Place the Ford factory gasket between the PTO opening and the adapter. Install the geared adapter on to the transmission PTO mounting face. Next install gasket (8) over the studs.
5. Install the PTO (9) and attach the nuts (10) with washers. Next install the hex cap screw (11) and the 12 point cap screw (12) in the remaining holes. Tighten the nuts and the cap screws to specifications shown below.
6. Install the other end of hose & fitting (15) into PTO rear cover. Install pressure switch (13) and electric solenoid valve (14) in accordance with the drawing below.

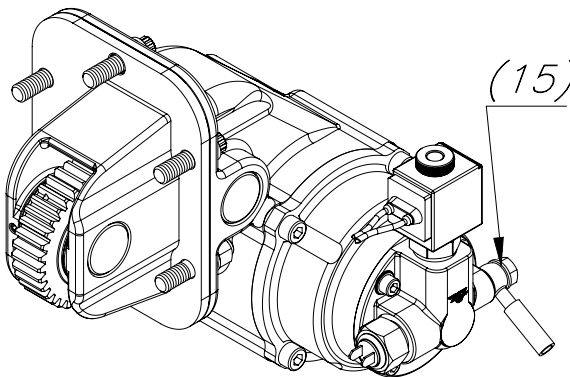
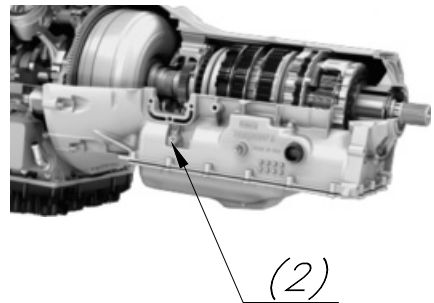


Installation instructions for lubrication Kit on 3920 series PTO



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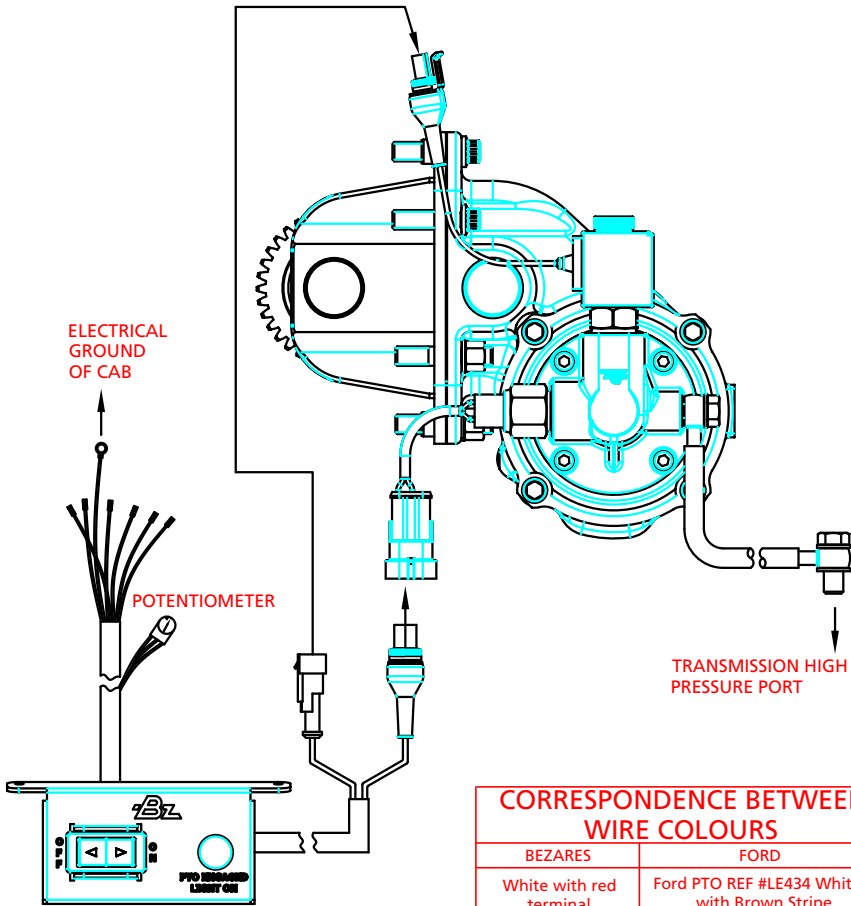
Item	Description
1	Washer
2	Fitting
3	Hose



INSTALATION METHOD

- 1.- Remove the transmission plug in point (2).
- 2.- Remove the plastic protection plug in port (15).
- 3.- Install the engagement kit (9056499) in ports (2) and (15).

Electric over Hydraulic Wiring Schematic for installation on 3920 Series PTO



To adjust the potentiometer to the desired engine R.P.M.

- a) Make sure the P.T.O. installation is complete and all wiring and auxiliary equipment is connected. Start engine.
- b) Locate the potentiometer on the wiring harness under the dash.
- d) Rotate the potentiometer COUNTER CLOCKWISE until desired engine R.P.M. is attained.

POTENTIOMETER

RPM	Volts
900	0.400
1000	0.590
1200	0.971
1400	1.352
1600	1.733
1800	2.114
2000	2.495
2200	2.876
2400	3.257
2600	3.638
2800	4.019
3000	4.400

CORRESPONDENCE BETWEEN WIRE COLOURS

BEZARES	FORD
White with red terminal	Ford PTO REF #LE434 White with Brown Stripe
Gray	Ford PTO RTH #RE327 Gray with Violet Stripe
Green	Ford PTO_RPM #CE914 Green
White with blue terminal	Ford 12V #CDC64 White with Blue Stripe
Blue	Ford PTO_RLY #CE326 Blue with White Stripe
Black with size ring terminal	Ford Chassis Ground in Dash
Green/Yellow	Ford PTO RS1 #CE912 Yellow with Green Stripe

