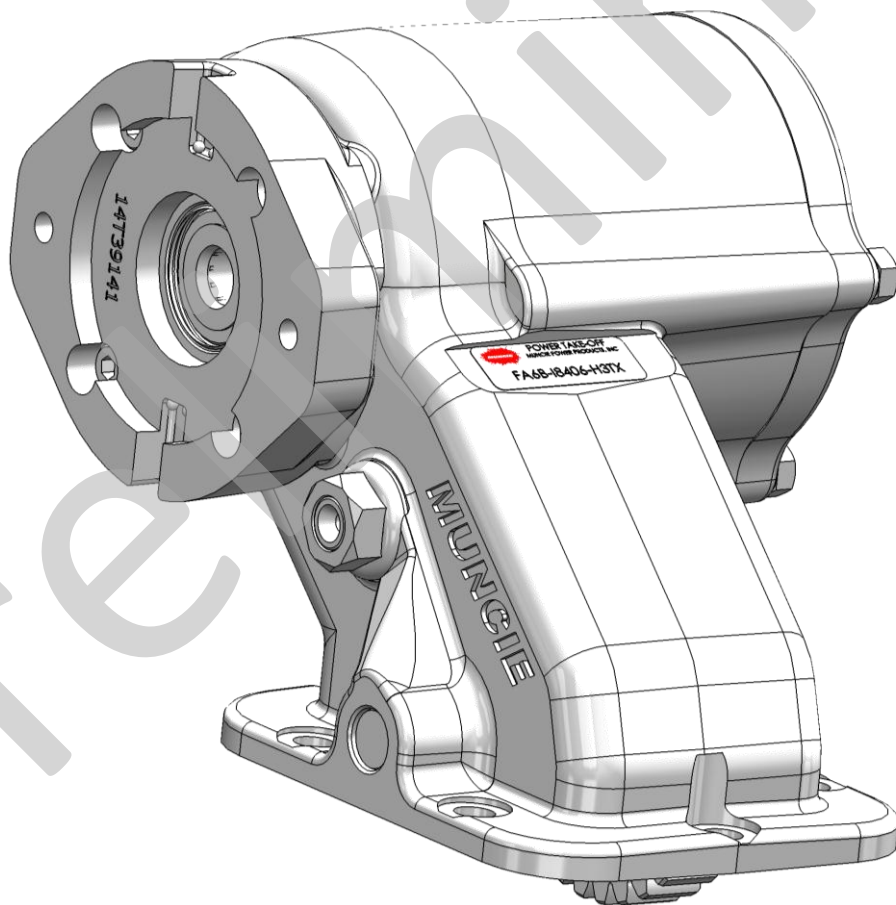




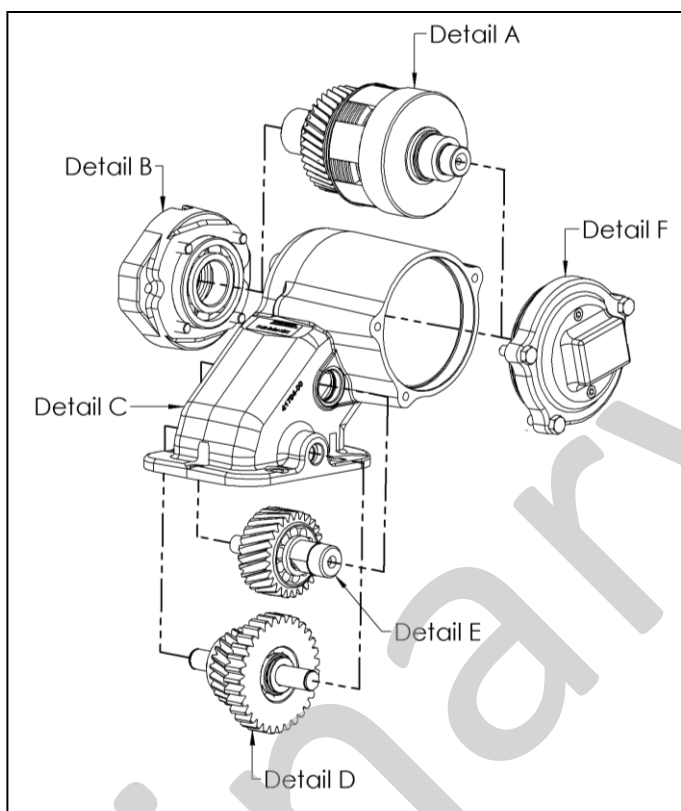
**Muncie®  
Power  
Products**

# FA6B Series PTO

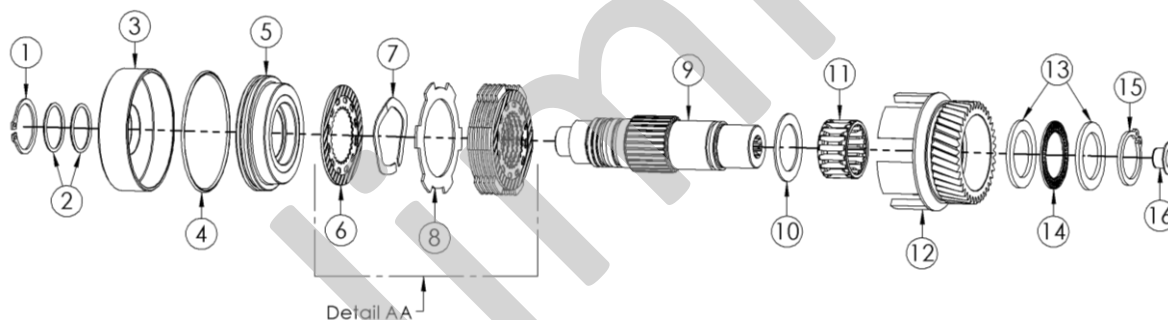
## Parts List and Service Manual



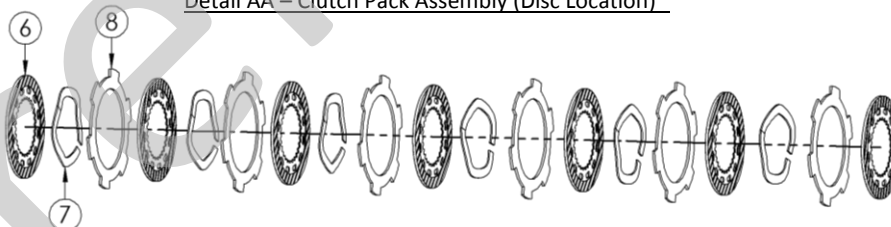
## FA6B PTO Exploded Views



Detail A – Output Shaft Assembly



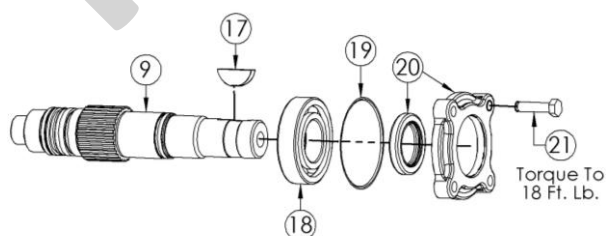
Detail AA – Clutch Pack Assembly (Disc Location)\*



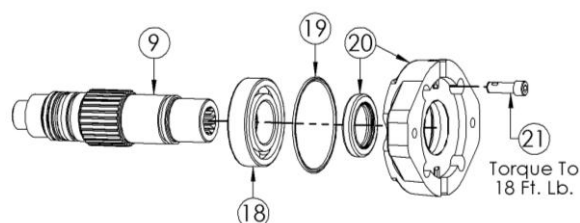
\*The clutch pack assembly contains a spring and a spacer disc in between each friction disc. The assembly should begin and end with a friction disc.

Detail B – Output Cover Assembly

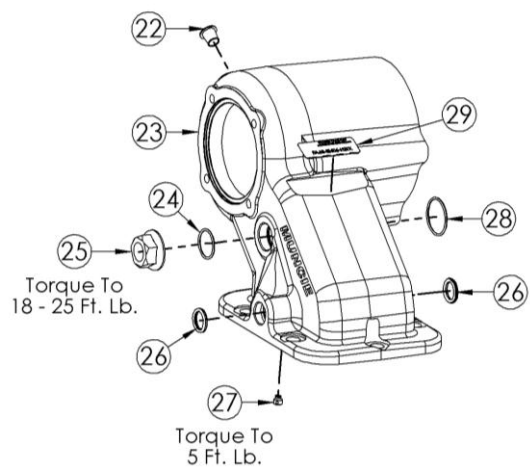
FA6B "B" Output



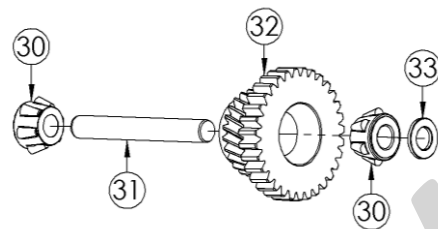
FA6B "Q & T" Output



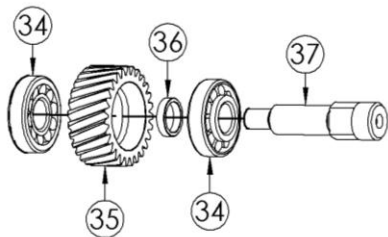
Detail C – PTO Housing Assembly



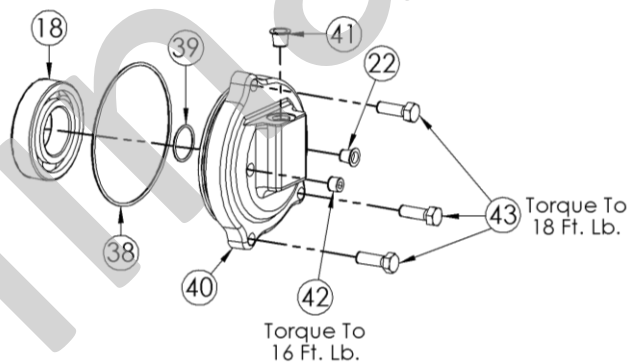
Detail D – Input Shaft Assembly



Detail E – Reverse Shaft Assembly



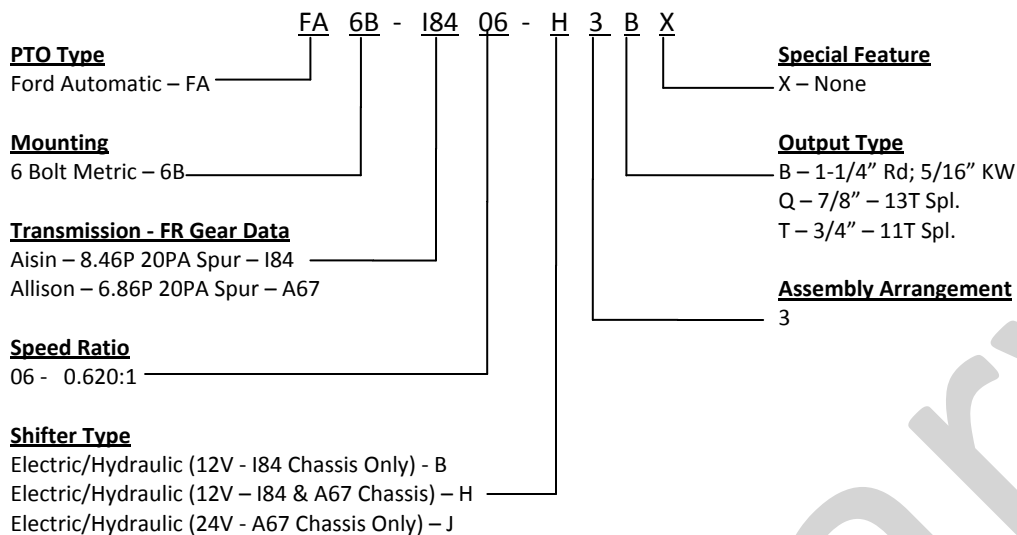
Detail F – Bearing Cover Assembly



Parts List and Description

ITEM	QTY	PART NO	DESCRIPTION	ITEM	QTY	PART NO	DESCRIPTION
<u>Detail A</u>				<u>Detail C</u>			
01	1	24T23937	Snap Ring	22	2	25T34029	Cap Plug
02	2	12T36877	O-ring	23	1	01T41795	PTO Housing
03	1	49T36288	Piston Cup	24	1	12T37203	O-ring
04	1	12T36863	O-ring	25	1	22T37322	Flange Nut
05	1	49T36287	Piston	26	2	12T37037	O-ring
06	7	49T36259	Friction Disc	27	1	19T36249	Set Screw
07	7	27T36286	Spring	28	1	12T37701	O-ring
08	6	49T36258	Spacer Disc	29	1	36MCL100	Nameplate
09	1	06T36295	Output Shaft ("B")	<u>Detail D</u>			
	1	06T38823	Output Shaft ("Q")				
	1	06T36253	Output Shaft ("T")				
10	1	21T37085	Washer	30	2	10T36244	Tapered Roller Bearing
11	1	10T37008	Needle Bearing	31	1	07T36243	Input Idler Shaft
12	1	02T36254	Output Gear	32	1	03T41922	Input Idler Gear – A67
13	2	21T29017	Washer		1	03T41796	Input Idler Gear – I84
14	1	10T37009	Bearing	33	1	See Table B	Bearing Spacer
15	1	24T35480	Snap Ring	<u>Detail E</u>			
16	1	25T37387	Cap Plug ("Q")	34	2	10T40073	Bearing*
	1	25T35724	Cap Plug ("T")	35	1	04TA4653	Reverse Idler Gear*
<u>Detail B</u>				36	1	See Below	Cone Spacer*
				37	1	08T37194	Idler Shaft
				<u>Detail F</u>			
17	1	26T01627	Woodruff Key ("B")	38	1	12T36279	O-ring
18	2	10T21017	Bearing	39	1	12T36280	O-ring
19	1	12T36751	O-ring	40	1	15T36568	Bearing Cover
20	1	See Table A	Flange/Seal Assembly	41	1	25T37702	Cap Plug
21	4	19T41756	Hex Head Capscrew ("B")	42	1	25T21684	Pipe Plug
	4	19T39257	Socket Capscrew ("Q" & "T")	43	3	19T32740	Hex Head Capscrew
N.S.	1	34T35872	Wire Harness A67/I84 "H" Shift Option				
N.S.	1	34T42079	Wire Harness I84 "B" Shift Option				
N.S.	1	FA62-GSK	<b>FA6B Gasket Kit Includes:</b> (2)2, (1)4, (1)19, (1)24, (2)26, (1)28, (1)38, (1)39 & 11T37790				
N.S.	1	FA62-RBK	<b>FA6B Rebuild Kit Includes:</b> (1)1, (2)2, (1)4, (7)6, (6)7, (6)8, (1)10, (1)11, (2)13, (1)14, (1)15, (2)18, (1)19, (1)24, (2)26, (1)28, (2)30, (1)33, (1)38, (1)39 & 11T37790				

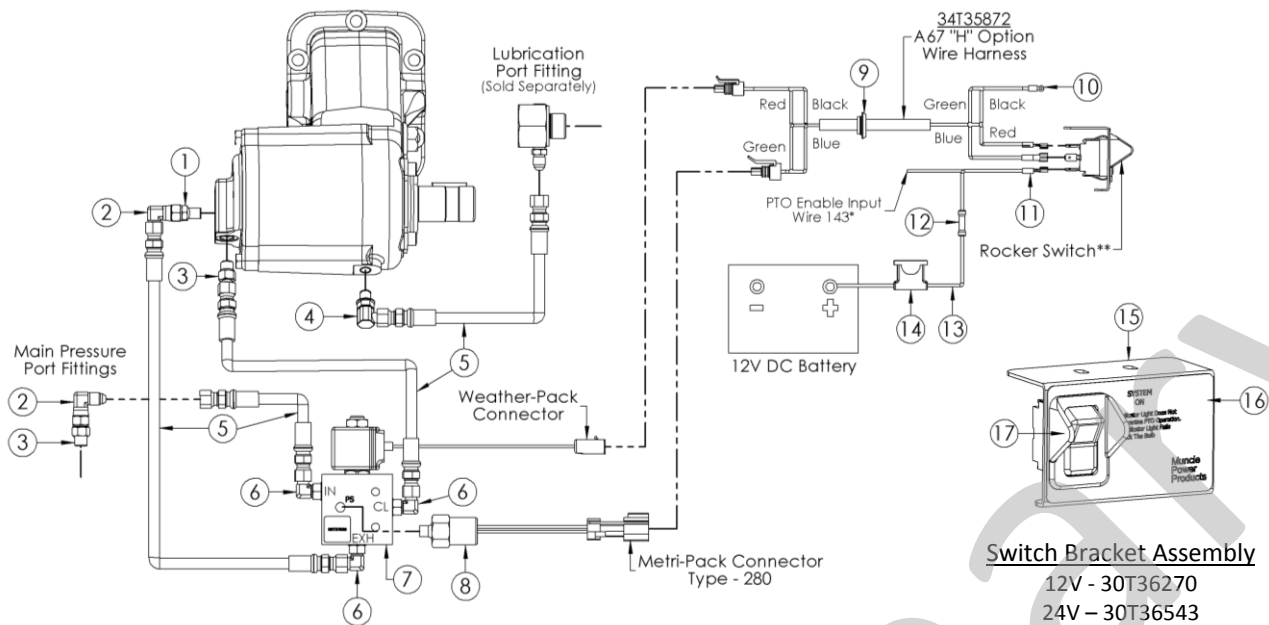
\*Reverse idler gear assembly includes bearings (34) and cone spacer (36) and is sold as an assembly only.

**Model Number Construction****Table A – Output Cover/Flange (Item 20)**

<b>PART NO</b>	<b>DESCRIPTION</b>	<b>COMPONENTS</b>
14TA5220	"B" Flange/Seal Assembly	Includes: 15T41683 Hydraulic Adapter & 11T37790 Output Shaft Seal
14TA3997	"Q" & "T" Flange/Seal Assembly	Includes: 14T39141 Hydraulic Flange & 11T37790 Output Shaft Seal

**Table B – Bearing Spacer (Item 33) – Only 1 Is Used**

<b>PART NO</b>	<b>DESCRIPTION</b>	<b>DIMENSION</b>
18T36255	Bearing Spacer	(0.1340"/0.1320")
18T36256	Bearing Spacer	(0.1265"/0.1245")
18T36257	Bearing Spacer	(0.1215"/0.1195")
18T36281	Bearing Spacer	(0.1140"/0.1120")
18T36282	Bearing Spacer	(0.1090"/0.1070")
18T38732	Bearing Spacer	(0.1365"/0.1345")
18T38733	Bearing Spacer	(0.1315"/0.1295")
18T38734	Bearing Spacer	(0.1290"/0.1270")
18T38735	Bearing Spacer	(0.1240"/0.1220")
18T38736	Bearing Spacer	(0.1190"/0.1170")
18T38737	Bearing Spacer	(0.1165"/0.1145")
18T38738	Bearing Spacer	(0.1115"/0.1090")
18T38789	Bearing Spacer	(0.1065"/0.1045")

FA6B - A67 12V Electric/Hydraulic "H" Activation Kit – 43TK5282\*Allison TCM (Pin 43)

Clutchshift PTO's require a connection to the Allison "PTO Enable Input" circuits. Check the vehicle dealer or body builder's information for this location.

\*\*Rocker Switch

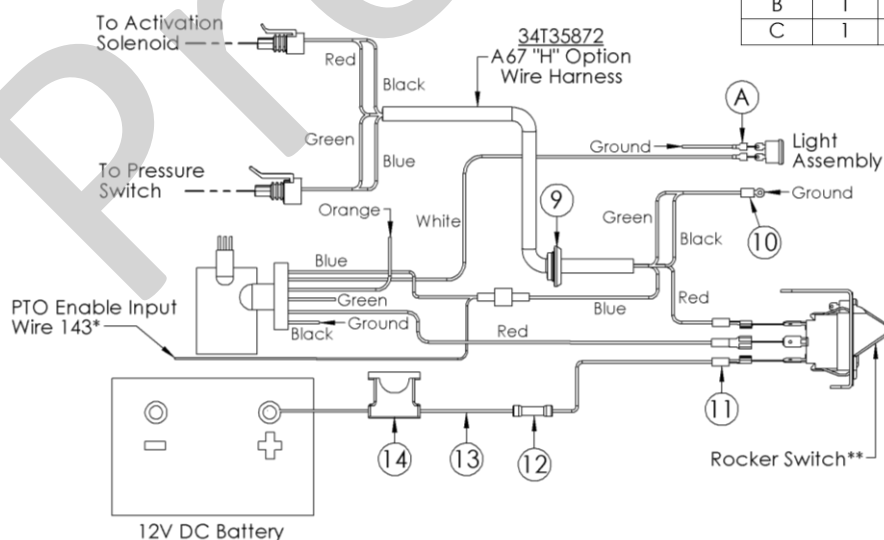
Green light in the rocker switch is to turn "ON" when the PTO is engaged and turn "OFF" when the PTO is disengaged.

For 24V Option (43TK5321)

Include items 15 & 16 and substitute item 7 with the 24V Solenoid Valve Block (35T37967) and substitute item 17 with the 24V Rocker Switch (30T35712). This kit also comes with the 24V light assembly (32MSR24V) and the faceplate with light access (36M01006).

ITEM	QTY	PART NO	DESCRIPTION
1	1	43T37503	Straight Fitting
2	2	43T36445	Elbow Fitting
3	2	43T36431	Straight Fitting
4	1	43T42012	Orifice Fitting
5	4	45T36274	28" Hose Assembly (JIC-JIC)
6	3	43M68014	JIC Fitting 90
7	1	35T37928	12V Solenoid Block
8	1	30T37954	Pressure Switch
9	1	37T35674	Grommet
10	1	34M18009	Ring Terminal
11	3	34M18250	Female Spade Connector

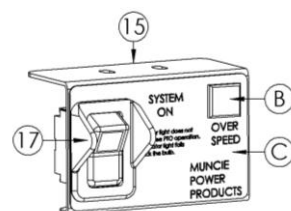
ITEM	QTY	PART NO	DESCRIPTION
12	1	34M18002	Buff Splice
13	6 Ft.	37M18000	Wire
14	1	33T36299	Fuse Assembly
15	1	36MA1005	Switch Bracket
16	1	36T36271	Face Plate (without light access)
17	1	30T35687	Rocker Switch (12V)
N.S.	1	36MK1007	Dash Bracket Bolt Kit
N.S.	2	19T36623	Capscrew (Solenoid Block)
N.S.	2	21T23153	Flat Washer (Solenoid Block)
N.S.	2	21T37991	Lock Washer (Solenoid Block)
N.S.	2	22T35140	Nut (Solenoid Block)

A67 Electric/Hydraulic "H" with Overspeed

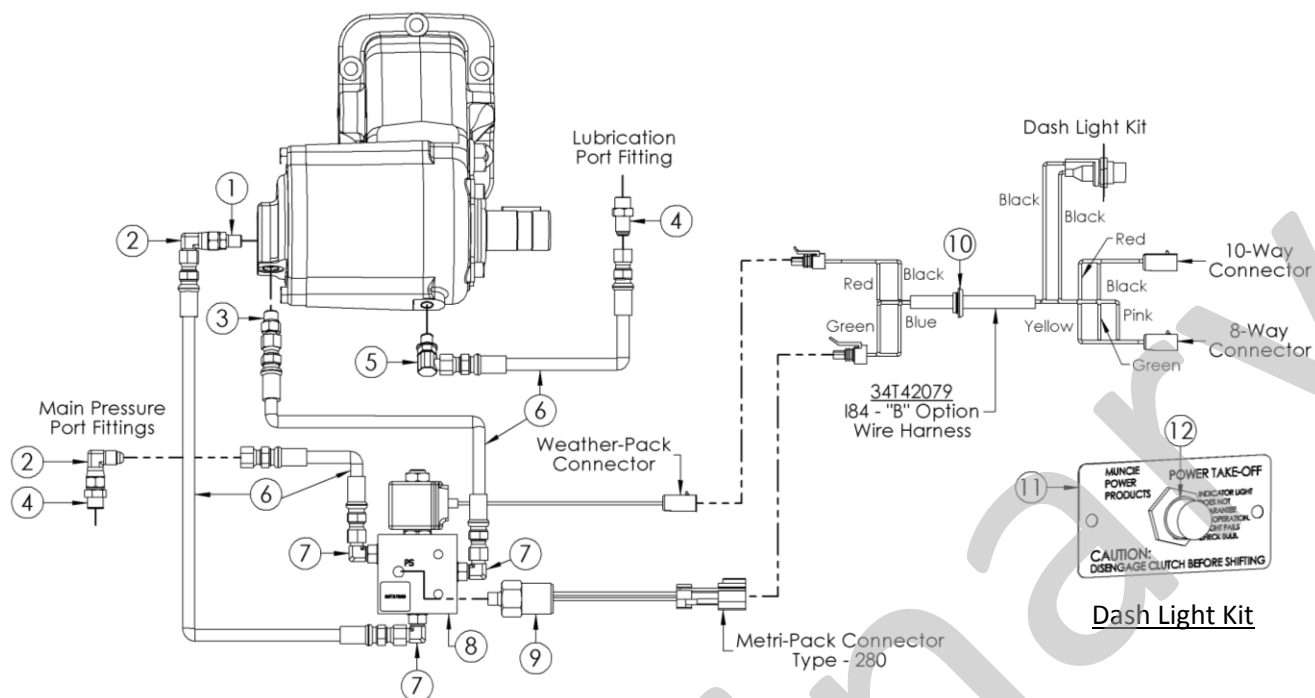
ITEM	QTY	PART NO	DESCRIPTION
A	2	34M18187	Female Spade Connector (3/16")
B	1	32MSR12V	Light Assembly - 12V
C	1	36M01006	Face Plate with Light Access

Overspeed Option

Items A, B & C are not included in 43TK5282 (A67 "H" kit) or 30T36270 (12V bracket assembly) and are to be ordered separately in kit 36TK4971. They are included in the 24V kit (43TK5321).



Muncie Power Products, Inc.  
FA6B – I84 12V “B” Activation Kit – 43TK5281 (Isuzu Chassis)

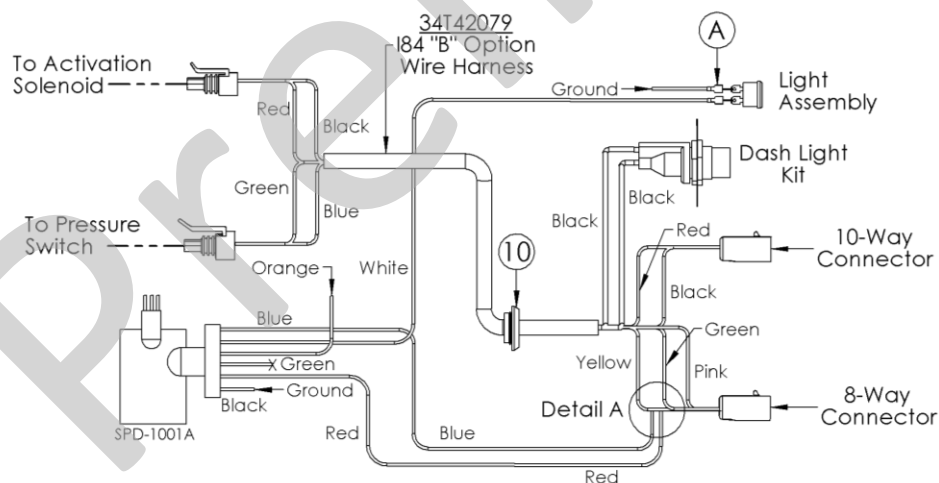


ITEM	QTY	PART NO	DESCRIPTION
1	1	43T37503	Straight Fitting
2	2	43T36445	Elbow Fitting
3	1	43T36431	Straight Thread Fitting
4	2	43T39222	Straight Fitting
5	1	43T42012	Orifice Fitting
6	4	45T36274	28" Hose Assembly (JIC-JIC)
7	3	43M68014	JIC Fitting 90
8	1	35T37928	12V Solenoid Block

ITEM	QTY	PART NO	DESCRIPTION
9	1	30T37954	Pressure Switch
10	1	37T35674	Grommet
11	1	36M16818	Dash Plate
12	1	32M12001	Light Assembly 12V
N.S.	2	19T36623	Capscrew (Solenoid Block)
N.S.	2	21T23153	Flat Washer (Solenoid Block)
N.S.	2	21T37991	Lock Washer (Solenoid Block)
N.S.	2	22T35140	Nut (Solenoid Block)

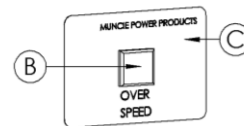
I84 Electric/Hydraulic “B” with Overspeed

ITEM	QTY	PART NO	DESCRIPTION
A	2	34M18187	Female Spade Connector (3/16")
B	1	32MSR12V	Light Assembly - 12V
C	1	36T42200	Decal with Light Access

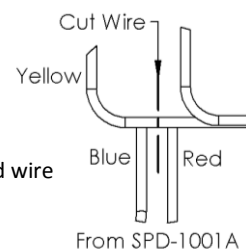


Overspeed Option

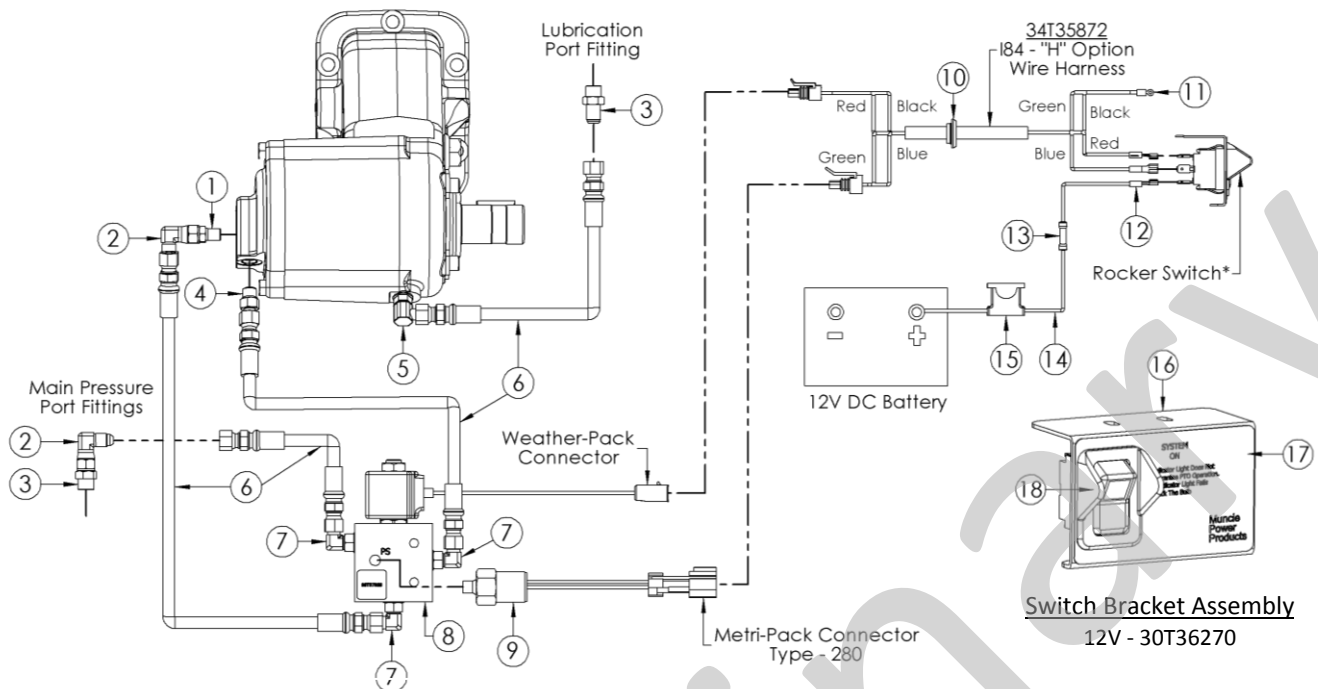
Items A, B & C are not included in 43TK5281 (I84 “B” kit) and are to be ordered separately in kit 36TK4971.



Detail A



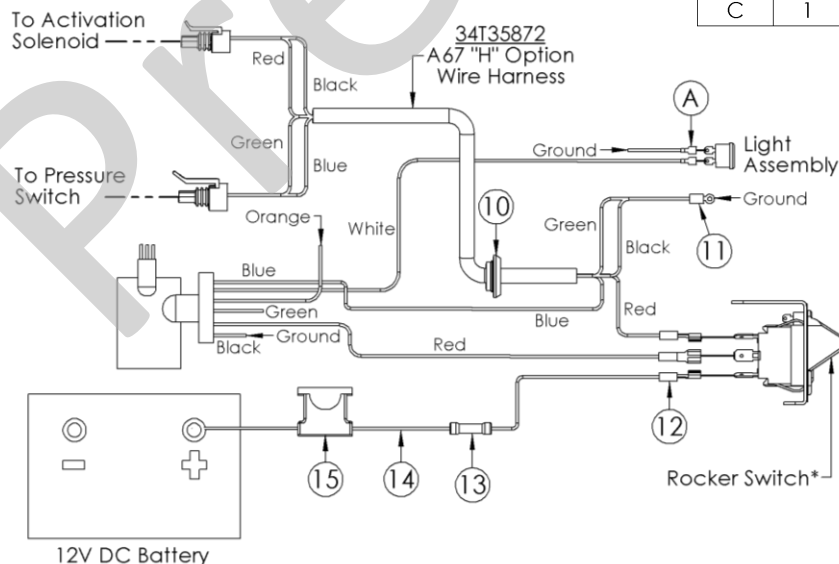
1. Cut the Yellow wire.
2. Connect the Blue and Red wire from the SPD-1001A.

FA6B – I84 12V Electric/Hydraulic “H” Activation Kit – 43TK5287\*Rocker Switch

Green light in the rocker switch is to turn “ON” when the PTO is engaged and turn “OFF” when the PTO is disengaged.

ITEM	QTY	PART NO	DESCRIPTION
1	1	43T37503	Straight Fitting
2	2	43T36445	Elbow Fitting
3	2	43T39222	Straight Fitting
4	1	43T36431	Straight Fitting
5	1	43T42012	Orifice Fitting
6	4	45T36274	28" Hose Assembly (JIC-JIC)
7	3	43M68014	JIC Fitting 90
8	1	35T37928	12V Solenoid Block
9	1	30T37954	Pressure Switch
10	1	37T35674	Grommet
11	1	34M18009	Ring Terminal
12	3	34M18250	Female Spade Connector (1/4")

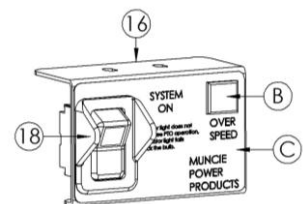
ITEM	QTY	PART NO	DESCRIPTION
13	1	34M18002	Butt Splice
14	6 Ft.	37M18000	Wire
15	1	33T36299	Fuse Assembly
16	1	36MA1005	Switch Bracket
17	1	36T36271	Face Plate without Light Access
18	1	30T35687	Rocker Switch - 12V
N.S.	1	36MK1007	Dash Bracket Bolt Kit
N.S.	2	19T36623	Capscrew (Solenoid Block)
N.S.	2	21T23153	Flat Washer (Solenoid Block)
N.S.	2	21T37991	Lock Washer (Solenoid Block)
N.S.	2	22T35140	Nut (Solenoid Block)

I84 Electric/Hydraulic “H” with Overspeed

ITEM	QTY	PART NO	DESCRIPTION
A	2	34M18187	Female Spade Connector (3/16")
B	1	32MSR12V	Light Assembly - 12V
C	1	36M01006	Face Plate with Light Access

Overspeed Option

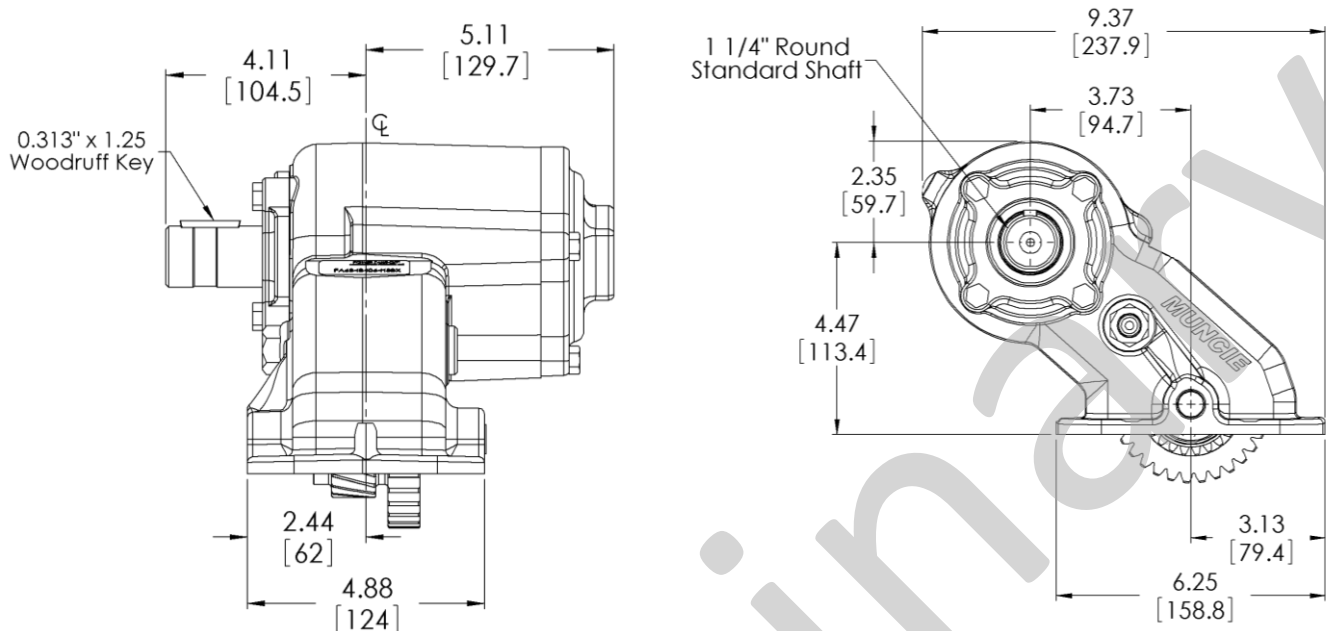
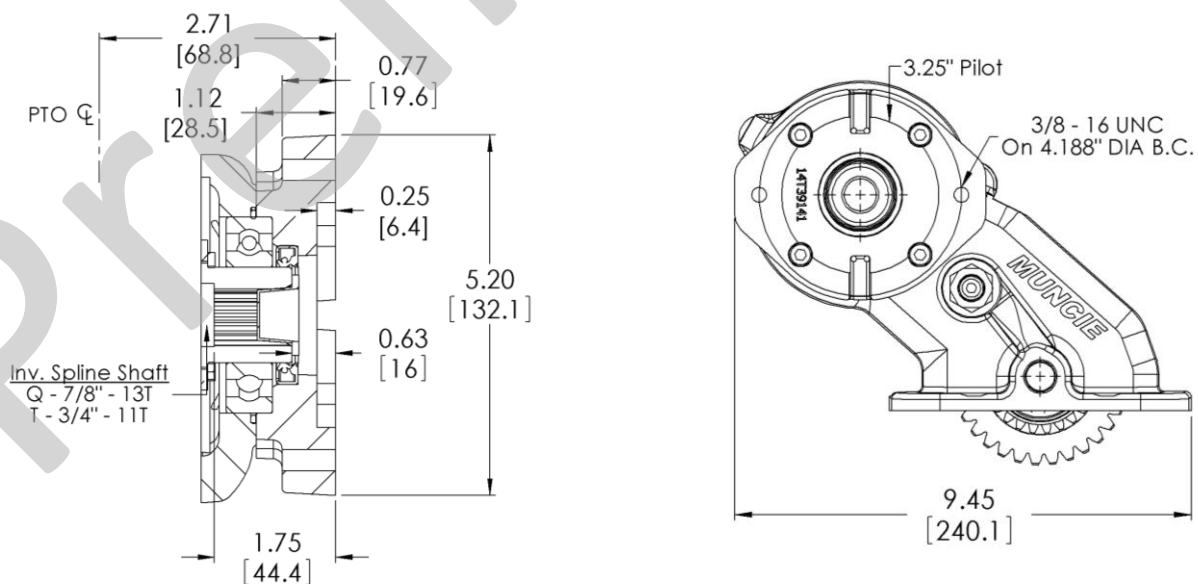
Items A, B & C are not included in 43TK5287 (I84 “H” kit) or 30T36270 (12V bracket assembly) and are to be ordered separately in kit 36TK4971.

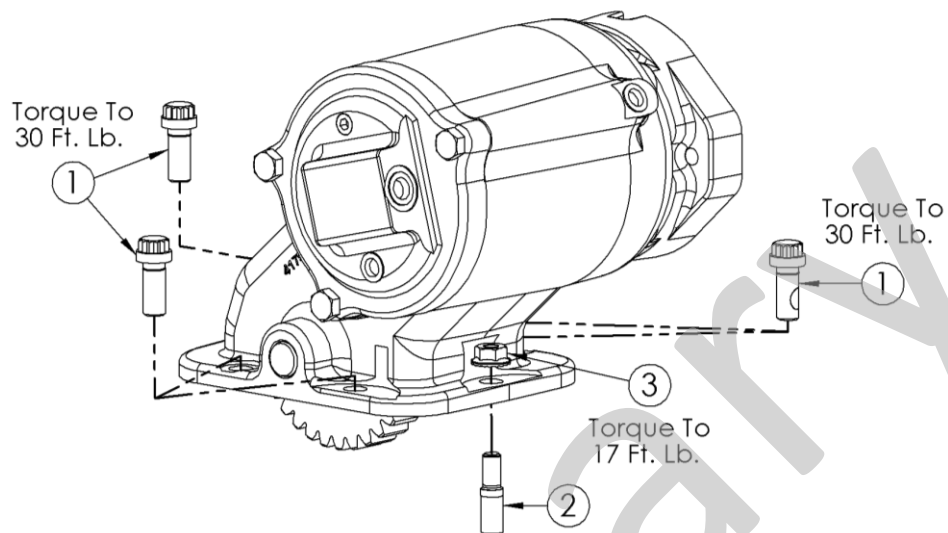




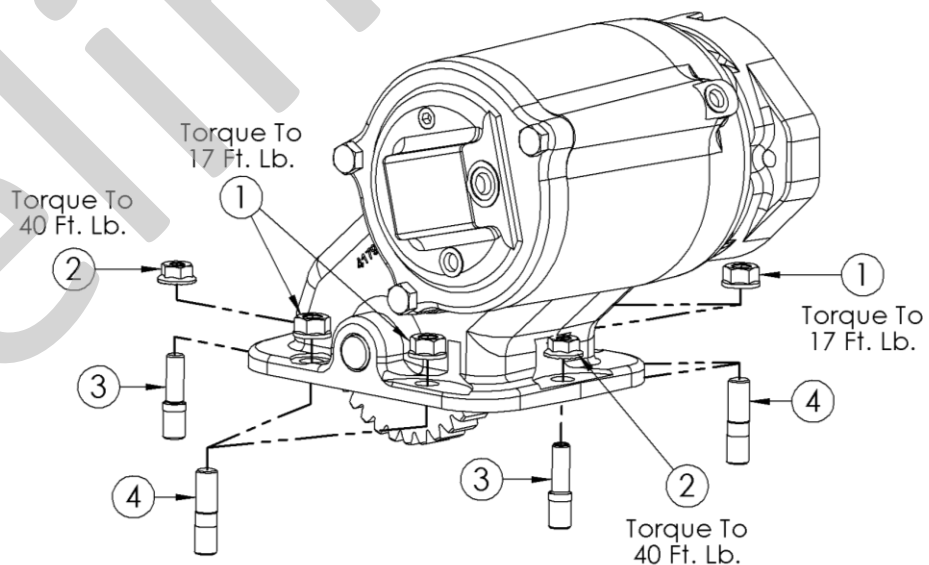
**FA6B PTO Dimensions**

IN INCHES (MM)

**"B" Output Option – 1 1/4" Round Keyed Shaft****"Q" Output Option – SAE "A" 2-Bolt with 7/8" – 13T****"T" Output Option – SAE "A" 2-Bolt with 3/4" – 11T**

**FA6B Accessory Kits****FA6B – A67 Bolt Kit 20TK5283**

ITEM	QTY	PART NO	DESCRIPTION
1	5	19T37727	12 Pt. Metric Capscrew
2	1	20T39529	Step Stud
3	1	22T37605	Whiz-Lock Nut

**FA6B – I84 Bolt Kit 20TK5169**

ITEM	QTY	PART NO	DESCRIPTION
1	4	22T39282	Spirallock Nut
2	2	22T37605	Whiz-Lock Nut
3	2	20T41354	Step Stud
4	4	20T37990	Shoulder Stud

**FA6B Disassembly & Reassembly****Disassembly Process**

Reference exploded views and parts list on pages 2-4

Avoid contact with any oil that may escape from the FA6B PTO during the disassembly process because it may be HOT.

1. Remove the input gear (32), tapered roller bearings (30) and bearing spacer (33) by removing the set screw (27) in the mounting pad and driving the input shaft (31) from the housing (23).
2. Next, remove the intermediate gear (35), bearings (34) and cone spacer (36) by removing the hex nut (25) and driving the intermediate shaft (37) from the PTO housing (23).
3. Remove the three hex head capscrews (43) using a 9/16" wrench. Remove the bearing cover (40) from the PTO housing (23). *See figure 1.*
4. Remove the flange/seal assembly (20) by removing the four socket head capscrews (hex head capscrews for a "B" output) (21) from the flange (20) using a 5/16" Allen wrench (9/16" wrench for "B" option). *See figure 2.*

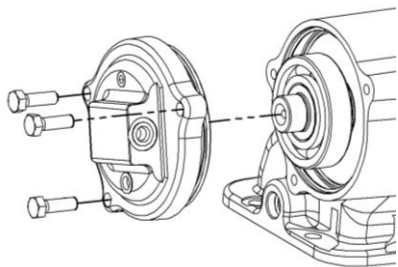


Figure 1 – Bearing Cover Removal

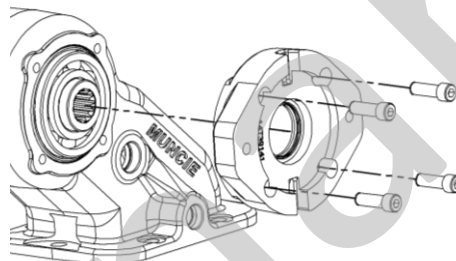


Figure 2 – Flange/Seal Assembly Removal

5. Next, position the housing (23) against a bench block and hit the end of the output shaft (9) with a soft face to remove the entire output shaft assembly from the PTO housing (23). *See figure 3.*
6. Using a bearing puller, remove the front bearing (18) from the output shaft (9) and then remove the rear bearing (18) from the output shaft (9).
7. Staying at the rear of the output shaft, remove the snap ring (1) using snap ring pliers while gently pushing on the piston cup (3).
8. Pull the piston cup (3) from the output shaft (9) and the piston (5) will go with it. *See figure 4.*

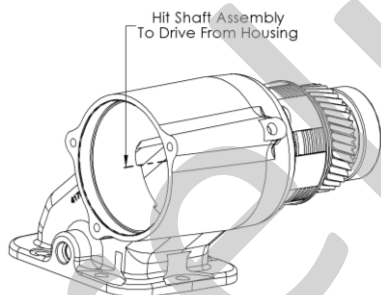


Figure 3 – Output Shaft Drive

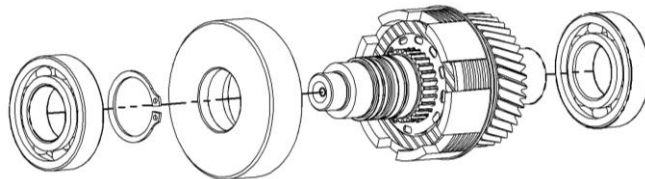


Figure 4 – Output Shaft component's Removal

9. Tap the piston cup (3) on a wood surface to remove the piston (5).
10. Remove the friction discs (6), wave springs (7) and spacer discs (8) by pointing the shaft end downward. *See figure 5.*
11. Shift to the front of the output shaft (9) and remove the snap ring (15) using snap ring pliers. Proceed to remove the washers (13), bearing (14), output gear (12), needle bearing (11) and washer (10). *See figure 6.*

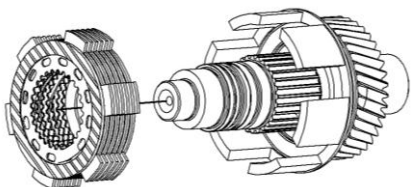


Figure 5 – Output Shaft component's Removal

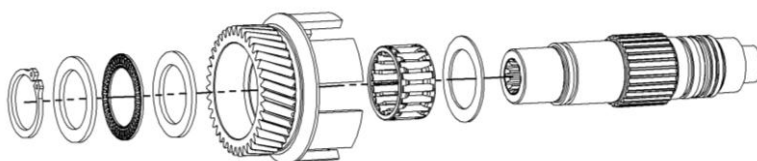


Figure 6 – Output Shaft component's Removal

## Reassembly Process

12. The reassembly is made in reverse of the disassembly. The re-use of seals, o-rings and snap rings are not recommended. See page 4 for gasket and rebuild kits.

13. Be sure to lubricate all o-rings and bearings upon installation. Torque all capscrews to the appropriate values:

- **Step #3** – Three hex head capscrews for the bearing cover – 18 Ft. Lb.
- **Step #4** – Four socket head capscrews for the output flange – 18 Ft. Lb.

**Important:** The intermediate gear is replaced as a sub-assembly to ensure proper shimming of the bearings. This sub-assembly includes the intermediate gear (35), two bearings (34) and a cone spacer (36).

14. Place lubricated o-ring (28) into the groove in the housing located on the bearing cover (40) side of the PTO housing (23) and place lubricated o-ring (24) into the groove in the housing located on the output cover (20) side of the PTO housing (23).

15. Slide this sub assembly into the PTO housing (23) to line up the intermediate shaft (37). See figure 7.

16. Tap the intermediate shaft (37) into the PTO housing (23) and secure using the hex nut (25) and torque to 18-25 Ft. Lb. The intermediate shaft (37) has a groove cut-out and needs to be positioned towards the aperture opening to allow clearance from the input gear. See figure 8.

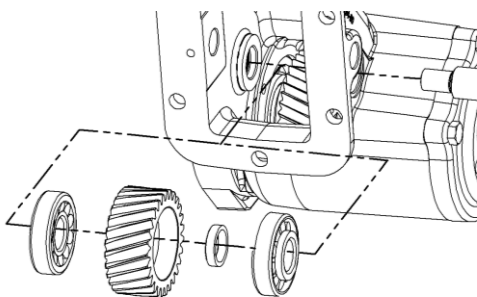


Figure 7 – Intermediate Gear Sub Assembly

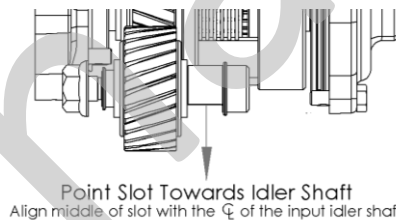


Figure 8 – Intermediate Shaft Positioning

18. Place lubricated o-ring's (26) into each of the grooves located on each side of the PTO housing (23).

19. Place the input gear (32) and tapered roller bearings (30) into the PTO housing and begin to tap in the input shaft (31) at the set screw side of the PTO housing (23) so the input shaft (31) will line up with the set screw once in place. See figure 9.

20. Rotate the input gear 6 times to fully seat the tapered bearings. Continue to drive the input shaft (31) through the PTO housing until it is flush with the bearing in this assembly.

21. Insert the thickest bearing spacer (33) that can be installed by hand in the gap between the bearing and the housing. Remove the bearing spacer (33) and select the next thickest spacer and drive into the gap. Rotate the input gear (32) to make sure it properly rotates; the recommended bearing pre-load is .002" - .006" loose. See figure 10.

22. When proper pre-load has been established, continue to install the input shaft (31) and then secure using the set screw (27). Torque the set screw to 5 Ft. Lb.

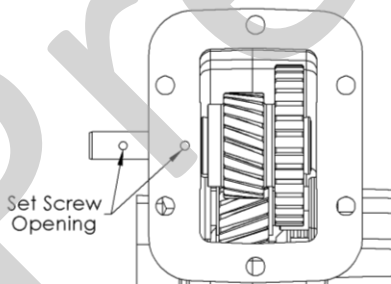


Figure 9 – Input Shaft & Input Gear Installation

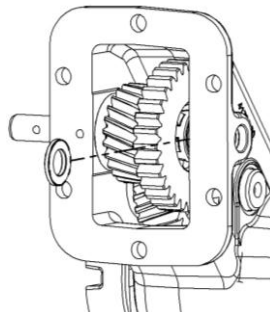


Figure 10 – Bearing Spacer Installation



SP11-01 - Preliminary Printed in the U.S.A.  
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