

Power Take-Offs Parts List

871, 878 Series



WARNING – User Responsibility

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS 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 or system options for further investigation by users having technical expertise.

The user, through its own analysis and testing, is solely responsible for making the final selection of the system and components and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application, follow applicable industry standards, and follow the information concerning the product in the current product catalog and in any other materials provided from Parker or its subsidiaries or authorized distributors.

To the extent that Parker or its subsidiaries or authorized distributors provide component or system options based upon data or specifications provided by the user, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the components or systems.

Offer of Sale

The items described in this document are hereby offered for sale by Parker Hannifin Corporation, its subsidiaries or its authorized distributors. This offer and its acceptance are governed by the provisions stated in the "Offer of Sale".

© Copyright 2024, Parker Hannifin Corporation, All Rights Reserved

Table of Contents

871 Series

Model Number Designator 1

Exploded View 2

Bill of Materials 3-5

Gear Ratio Options 6

Lube Options 7-8

Shift Options 9

Assembly Arrangements 10

Output Options 11-21

Installation Sketches 22-27

878 Series

Model Number Designator 28

Exploded View 29

Bill of Materials 30-31

Gear Ratio Options 32

Lube Options 33

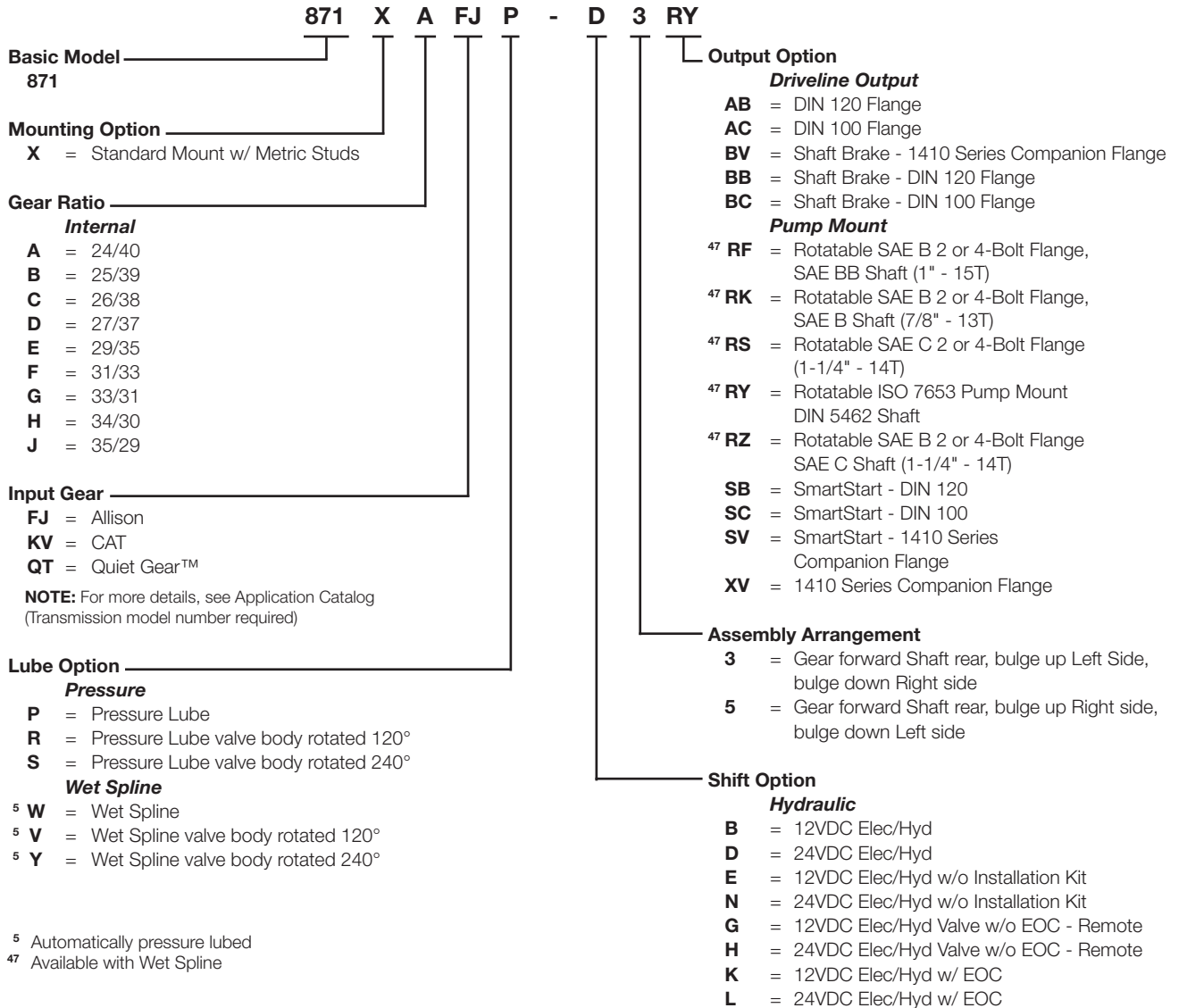
Assembly Arrangements 34

Output Options 35-39

Kits Bill of Materials 40-48

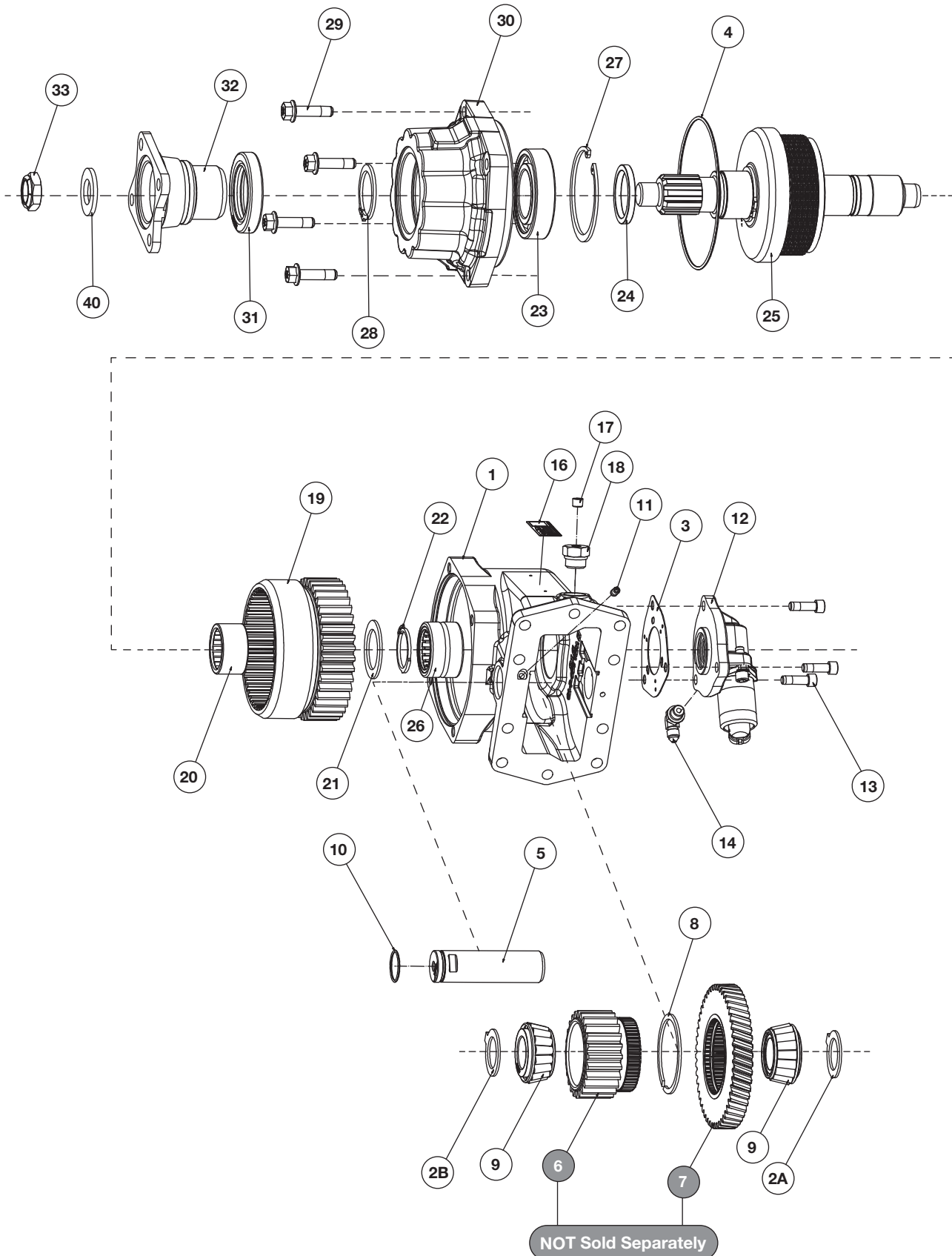
Offer of Sale 51-53

Model Number Designator



⁵ Automatically pressure lubed

⁴⁷ Available with Wet Spline



Bill of Materials

Item	Part Number	Description	Qty.
1	1-P-816	Housing (5 Arrangement) (w/ 3/8" Bearing Cap Bolts & O-ring)	1 or
	1-P-817	Housing (3 Arrangement) (w/ 3/8" Bearing Cap Bolts & O-ring).....	1
2A	14-P-82-1	Spacer (1.191" x 1.750" x .080")	1
2B	14-P-82-1	Spacer (1.191" x 1.750" x .080") (Thickness as Required)	1 or
	14-P-82-2	Spacer (1.191" x 1.750" x .085")	1 or
	14-P-82-3	Spacer (1.191" x 1.750" x .090")	1 or
	14-P-82-4	Spacer (1.191" x 1.750" x .094")	1
3	22-P-112	Gasket	1
4	28-P-329	O-ring (5.487" x .103").....	1
5	9-P-99	Idler Shaft.....	1
Not Sold Separately			
6	See page 6	Ratio Gear	1
7	See page 6	Input Gear	1
8	380064	Lockring	1
9	561026	Tapered Cone Bearing (1.181" x .984").....	2
10	28-P-42	O-ring (1.051" x .070").....	1
11	378452-7	Socket Head Set Screw (.250"-20 x .500").....	1
12	329463-12X	12VDC Valve Cap Assembly (FJ, QT Gear)	1
	329463-24X	24VDC Valve Cap Assembly (FJ, QT Gear)	1
	329442-12X	12VDC Valve Cap Assembly (KV Gear)	1
	329442-24X	24VDC Valve Cap Assembly (KV Gear)	1
13	378447-6	Socket Head Cap Screw (.312"-18 x 1.000").....	3
14	379486	90° Elbow (.438"-20)	1
16	68-P-51-1	Adhesive Label.....	1
17	379231	Pipe Plug (.125"-27) (w/o EOC only)	1
18	379242	Straight Adapter (.125"-27 x .750"-16) (w/o EOC only)	1
19	See page 6	Output Gear	1
20	560972	Needle Roller Bearing Assembly (1.500" x 1.875" x 1.000").....	1
21	31-P-70	Thrust Washer (1.507" x 2.167" x .094").....	1
22	379746	Lockring	1
23	550311	Ball Bearing (1.770" x 3.346" x .748").....	1
24	4-P-187	Spacer (1.776" x 2.200" x .239")	1
25	See page 11	Drive Shaft & Clutch Assembly	1
26	561047	Needle Roller Bearing Assembly (1.500" x 2.062" x 1.250").....	1
27	378263	Internal Lockring.....	1
28	379555	Lockring	1

Continued on Next Page

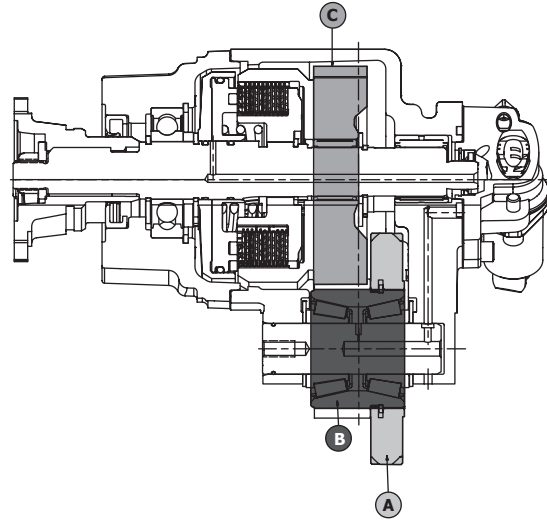
Bill of Materials

Item	Part Number	Description	Qty.
29	380563-14	Hex Flange Head Cap Screw (.375"-16 x 1.500").....	4
30	21-P-932	Bearing Cap (XV & SV Output Only) (w/ 3/8" Bearing Cap Bolts & O-ring).....	1
		See Output Options Section pages 11-21 for more options.	
31	28-P-211	Oil Seal (3.001" x 2.000" x .375") (XV & SV Output Only)	1
32	380503	1410 Series Companion Flange (XV & SV Output Only)	1
33	380486	Stop Nut (.875"-14) (XV & SV Output Only)	1
34	379243	Speed Sensor (w/ EOC Only)	1
N.S.	28-P-171	O-ring (.644" x .087") (w/ EOC Only).....	1
N.S.	379564-2	Thread Cap (.438").....	1
N.S.	379502	Pressure Switch	1
N.S.	69-P-30	Caution Tag.....	1
40	380076-13	Washer (.950" x 1.762" x .157") (XV Output Only).....	1
		See pages 40-48 for Bill of Materials for the below loose parts.	
		SERVICE KITS	
	329071-60X	Bearing Kit (AB, AC, RK, RF, RS, RY, RZ, XV Output)	
	329071-61X	Bearing Kit (BA, BB, BC, BV Output)	
	329071-79X	Gasket and Seal Kit	
	329071-83X	Solenoid Valve O-ring Kit	
	329678X	Inner Hub Gear and Clutch Kit	
		STUD KITS	
	7170-86X	Stud Kit (FJ Gear)	
	7170-117X	Stud Kit (KV Gear)	
		INSTALLATION INSTRUCTIONS KIT	
	328948-9X	Gasket & Installation Instructions Kit (All)	
		HOSE ASSEMBLY KITS	
	329141-1X	Pressure Hose Assembly.....	1
	329057-4X	Lube & Clutch Hose Assembly (G Shift, H Shift).....	2
	328075X	Exhaust Hose Assembly (G Shift, H Shift)	1

Continued on Next Page

Bill of Materials

Item	Part Number	Description	Qty.
		HYDRAULIC INSTALLATION KITS	
	329024-12X	12VDC Hyd Valve Installation Kit (FJ Gear, B Shift)	
	329024-24X	24VDC Hyd Valve Installation Kit (FJ Gear, D Shift)	
	329237-12X	12VDC Remote Hyd Valve Installation Kit (FJ Gear, G Shift)	
	329237-24X	24VDC Remote Hyd Valve Installation Kit (FJ Gear, H Shift)	
	329445-12X	12VDC Remote Hyd Valve Installation Kit (KV Gear, G Shift)	
	329445-24X	24VDC Remote Hyd Valve Installation Kit (KV Gear, H Shift)	
	329076X	EOC Installation Kit (FJ Gear, K, L Shift)	
	329650X	Electronic Overspeed Controls (K, L Shift)	
	329443-12X	12VDC Installation Kit (KV Gear, B Shift)	
	329443-24X	24VDC Installation Kit (KV Gear, D Shift)	
	329444X	12VDC & 24VDC Installation EOC Kit (KV Gear, K, L Shift)	
		CONVERSION KITS	
	329175-12X	12VDC w/ EOC Conversion Kit (FJ Gear)	
	329175-24X	24VDC w/ EOC Conversion Kit (FJ Gear)	
	329354-12X	12VDC Remote Hyd Valve Conversion Kit	
	329354-24X	24VDC Remote Hyd Valve Conversion Kit	
	329448-12X	12VDC Conversion Kit (KV Gear)	
	329448-24X	24VDC Conversion Kit (KV Gear)	
		OUTPUT CONVERSION KITS	
	See pages 45-48	Output Conversion Kits Bill of Materials	



GEAR DESIGNATOR	INPUT GEAR ASSEMBLY	NOT Sold Separately				OUTPUT GEAR (19)	NO. TEETH C
		INPUT GEAR (7)	NO. TEETH A	RATIO GEAR (6)	NO. TEETH B		
871*AFJ	5-P-1428-1X	5-P-1428	50	⁽¹⁾ 5-P-1545	24	2-P-891	40
871*BFJ	5-P-1428-2X	5-P-1428	50	⁽²⁾ 5-P-1546	25	2-P-892	39
871*CFJ	5-P-1428-3X	5-P-1428	50	5-P-1439	26	2-P-893	38
871*DFJ	5-P-1428-4X	5-P-1428	50	5-P-1440	27	2-P-894	37
871*EFJ	5-P-1428-5X	5-P-1428	50	5-P-1432	29	2-P-895	35
871*FFJ	5-P-1428-6X	5-P-1428	50	5-P-1433	31	2-P-896	33
⁽³⁾ 871*GFJ	5-P-1428-7X	5-P-1428	50	5-P-1457	33	2-P-897	31
⁽³⁾ 871*HFJ	5-P-1428-8X	5-P-1428	50	5-P-1455	34	2-P-898	30
⁽³⁾ 871*JFJ	5-P-1428-9X	5-P-1428	50	5-P-1474	35	2-P-901	29
871*AKV	5-P-1468-11X	5-P-1468	45	⁽¹⁾ 5-P-1545	24	2-P-891	40
871*BKV	5-P-1468-12X	5-P-1468	45	⁽²⁾ 5-P-1546	25	2-P-892	39
871*CKV	5-P-1468-13X	5-P-1468	45	5-P-1439	26	2-P-893	38
871*DKV	5-P-1468-14X	5-P-1468	45	5-P-1440	27	2-P-894	37
871*EKV	5-P-1468-15X	5-P-1468	45	5-P-1432	29	2-P-895	35
871*FKV	5-P-1468-16X	5-P-1468	45	5-P-1433	31	2-P-896	33
⁽³⁾ 871*GKV	5-P-1468-17X	5-P-1468	45	5-P-1457	33	2-P-897	31
⁽³⁾ 871*HKV	5-P-1468-18X	5-P-1468	45	5-P-1455	34	2-P-898	30
⁽³⁾ 871*JKV	5-P-1468-19X	5-P-1468	45	5-P-1474	35	2-P-901	29
871*AQT	5-P-1663-1X	5-P-1661X	50	5-P-1545	24	2-P-891	40
871*BQT	5-P-1663-2X	5-P-1661X	50	5-P-1546	25	2-P-892	39
871*CQT	5-P-1663-3X	5-P-1661X	50	5-P-1439	26	2-P-893	38
871*DQT	5-P-1663-4X	5-P-1661X	50	5-P-1440	27	2-P-894	37
871*EQT	5-P-1663-5X	5-P-1661X	50	5-P-1432	29	2-P-895	35
871*FQT	5-P-1663-6X	5-P-1661X	50	5-P-1433	31	2-P-896	33
871*GQT	5-P-1663-7X	5-P-1661X	50	5-P-1457	33	2-P-897	31
871*HQT	5-P-1663-8X	5-P-1661X	50	5-P-1455	34	2-P-898	30
871*JQT	5-P-1663-9X	5-P-1661X	50	5-P-1474	35	2-P-901	29

⁽¹⁾ Early production – 5-P-1429

⁽²⁾ Early production – 5-P-1438

⁽³⁾ G, H and J ratios available on MD transmissions only

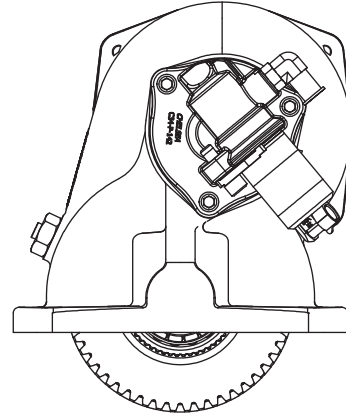
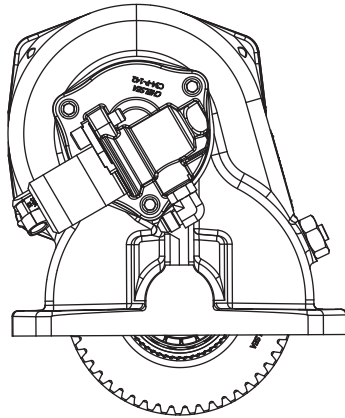
Lube Options

Integral Solenoid Valve

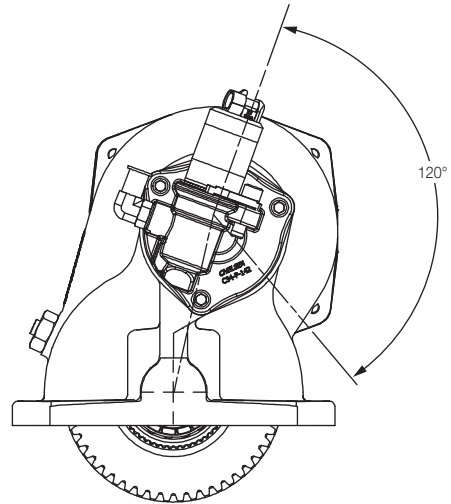
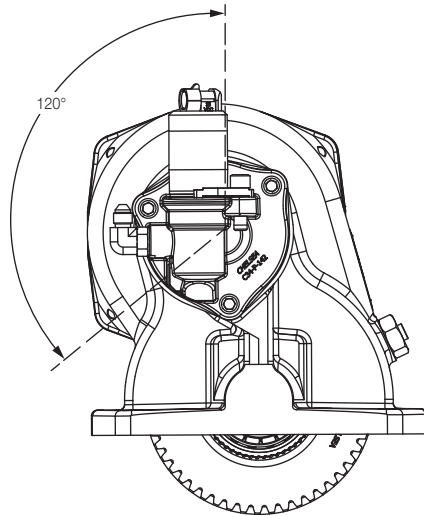
3 Arrangement

5 Arrangement

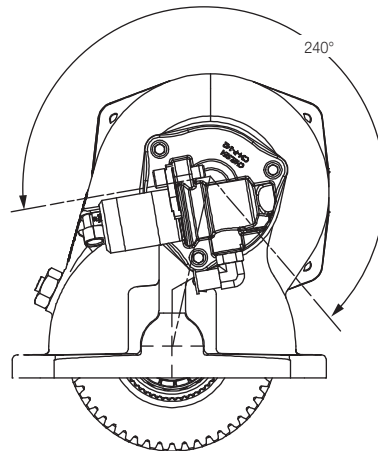
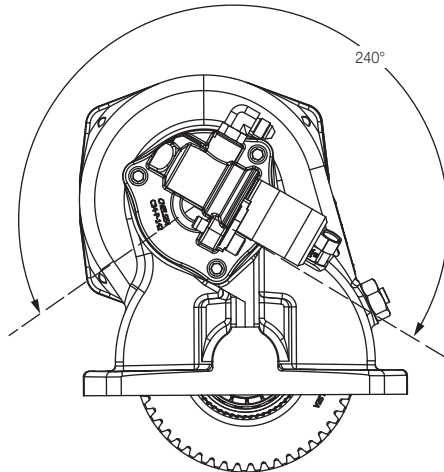
**Pressure Lube (P)
or Wet Spine (W)**



**Valve Cap Rotated 120° (R)
or Wet Spine (V)**



**Valve Cap Rotated 240° (S)
or Wet Spine (Y)**



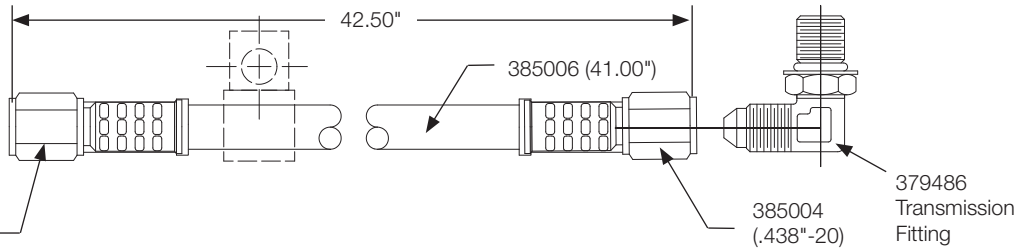
Lube Options

Pressure Lube

329141-1X

Transmission to PTO Hose

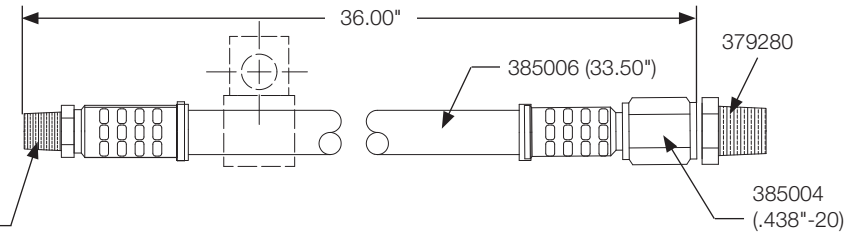
385004
(.438"-20)



328075X

Remote valve shift option

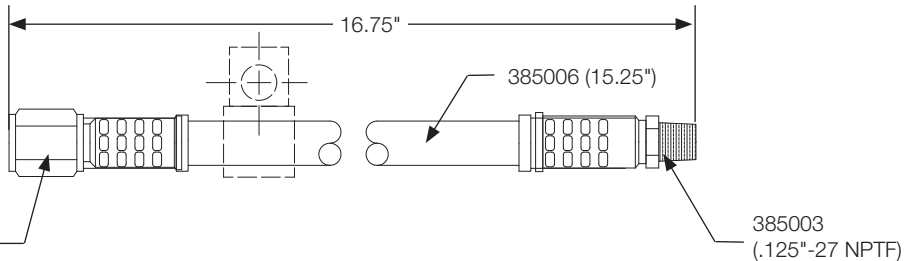
385003
(.125"-27 NPTF)



329057-4X

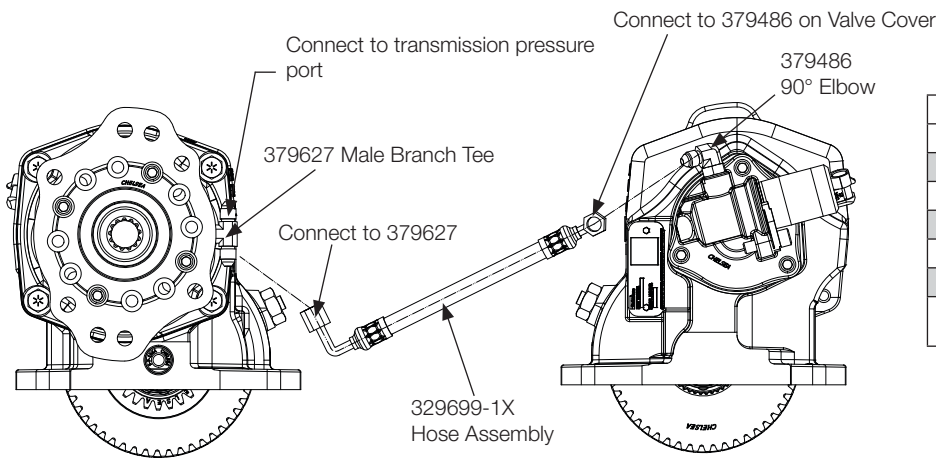
Remote valve shift option

385004
(.438"-20)



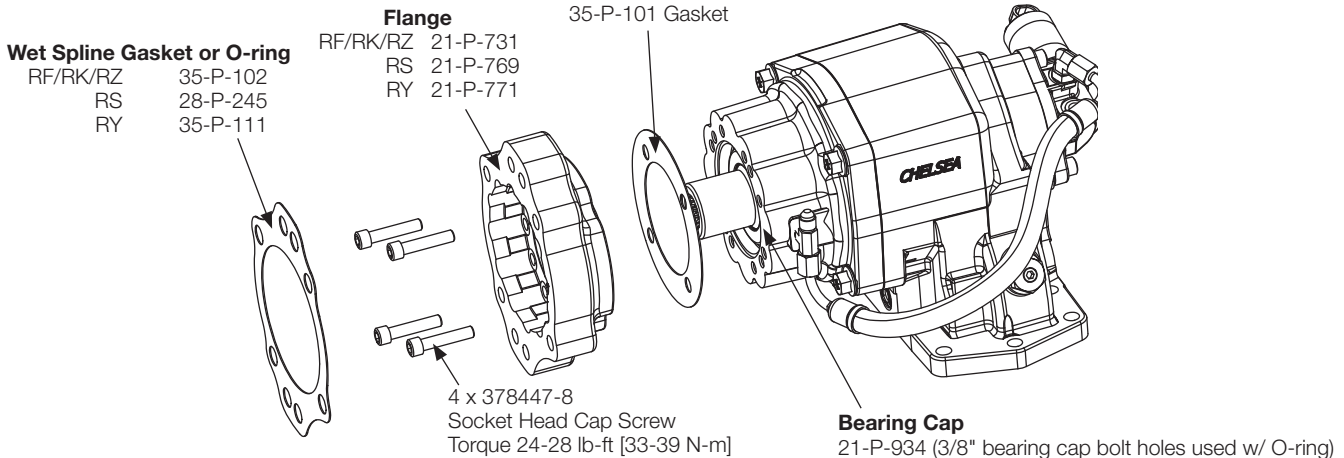
Wet Spine Installation – 871 Series RF, RK, RS, RY & RZ

(SK-508 Rev C)

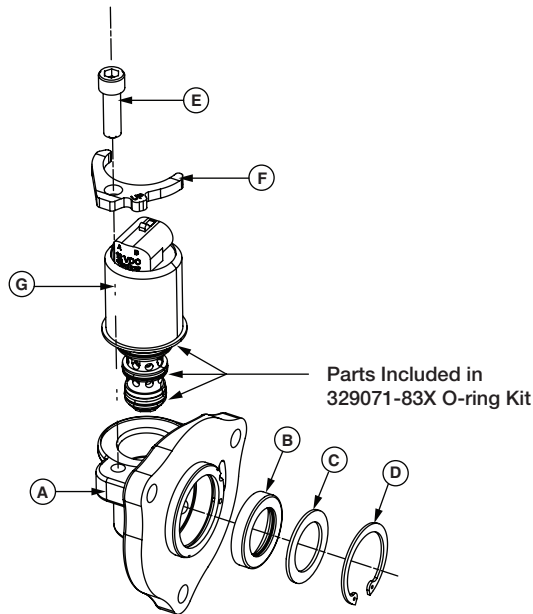


Wet Spine Installation Kits	
Output	Kit Number
RF	329700X
RK	329700X
RS	329744X
RY	329742X
RZ	329700X

NOTE: Not all output options may be available on Series listed above



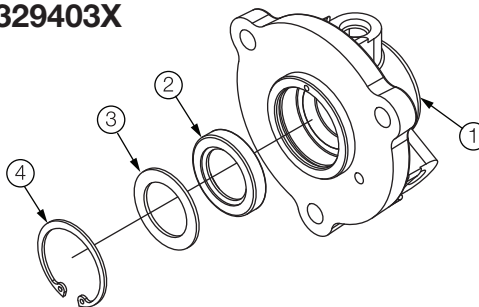
Valve Cap Assembly



Item	Part Number	Description	Qty.
12	329442-12X	12VDC Valve Cap Assembly (KV Gear Only)	1 or
	329442-24X	24VDC Valve Cap Assembly (KV Gear Only)	1
	329463-12X	12VDC Valve Cap Assembly (FJ Gear Only)	1 or
	329463-24X	24VDC Valve Cap Assembly (FJ Gear Only)	1
A	34-P-143	Valve Cap	1
B	28-P-119	Oil Seal (High Pressure)	1
C	378811	Washer	1
D	378849	Snap Ring	1
E	378447-6	Socket Head Cap Screw (.312"-18 x 1.000")	1
F	379995	Clamp (KV) Included with 379993 Valve	1 or
	380012	Clamp (FJ) used with 380011 Valve	1
	380124	Clamp (FJ) used with 380123 Valve	1
G	380123-12	Hydraulic Valve (12VDC) (FJ) (White Connector Top) (New Style)	1 or
	380123-24	Hydraulic Valve (24VDC) (FJ) (Black Connector Top) (New Style)	1
	380011-12	Hydraulic Valve (12VDC) (FJ) (White Side Connector) NLA – USE 38D123-12	1 or
	380011-24	Hydraulic Valve (24VDC) (FJ) (Black Side Connector) NLA – USE 38D123-24	1
	379993-12	Hydraulic Valve (12VDC) (KV) (White Connector)	1 or
	379993-24	Hydraulic Valve (24VDC) (KV) (Black Connector)	1
N.S.	329071-83X	Hydraulic Solenoid Valve O-ring Kit	1

N.S. – Not Shown

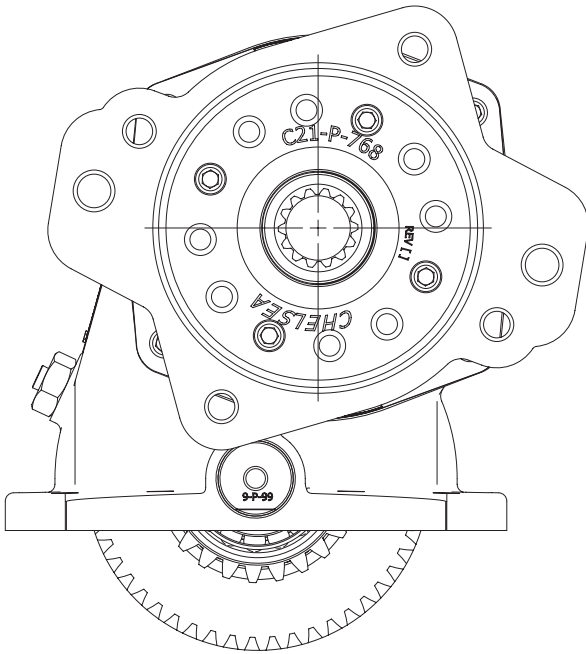
Remote Valve Cap Assembly – 329403X



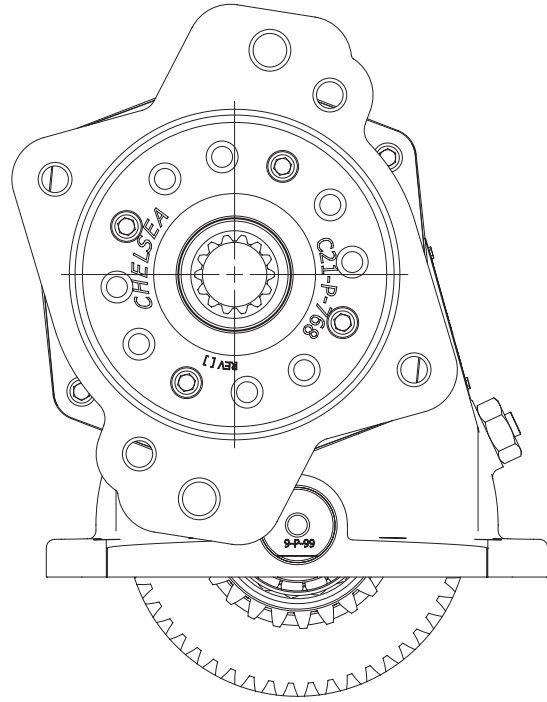
Item	Part Number	Description	Qty.
1	21-P-701	Cap Seal	1 or
2	28-P-119	Oil Seal (1.379" x .875" x .250")	1
3	378811	Washer	1
4	378849	Lockring	1

Assembly Arrangements

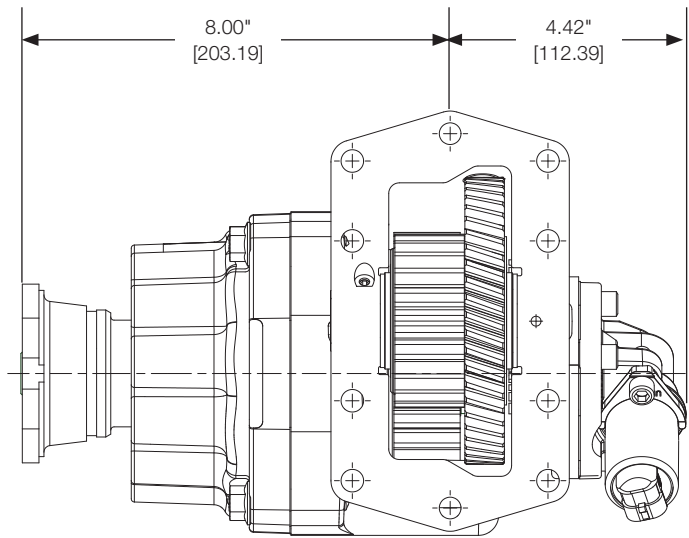
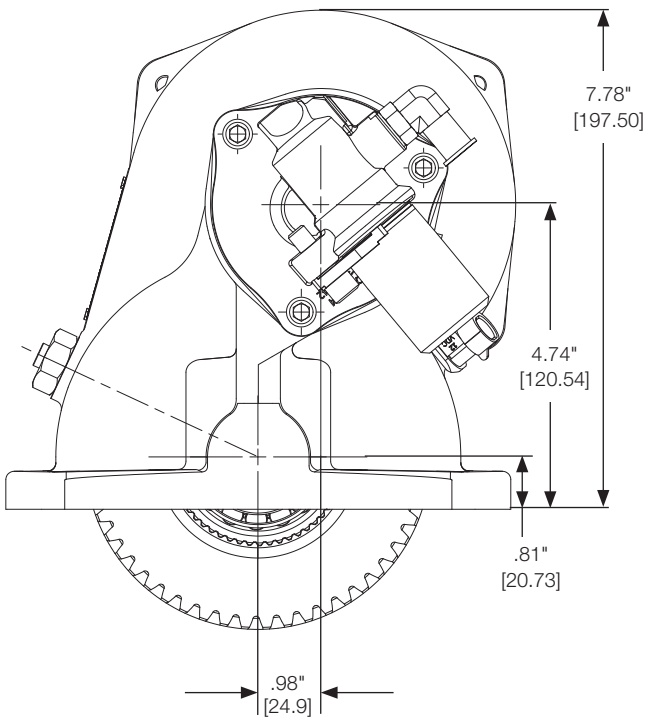
Housing Dimensions



3 Arrangement

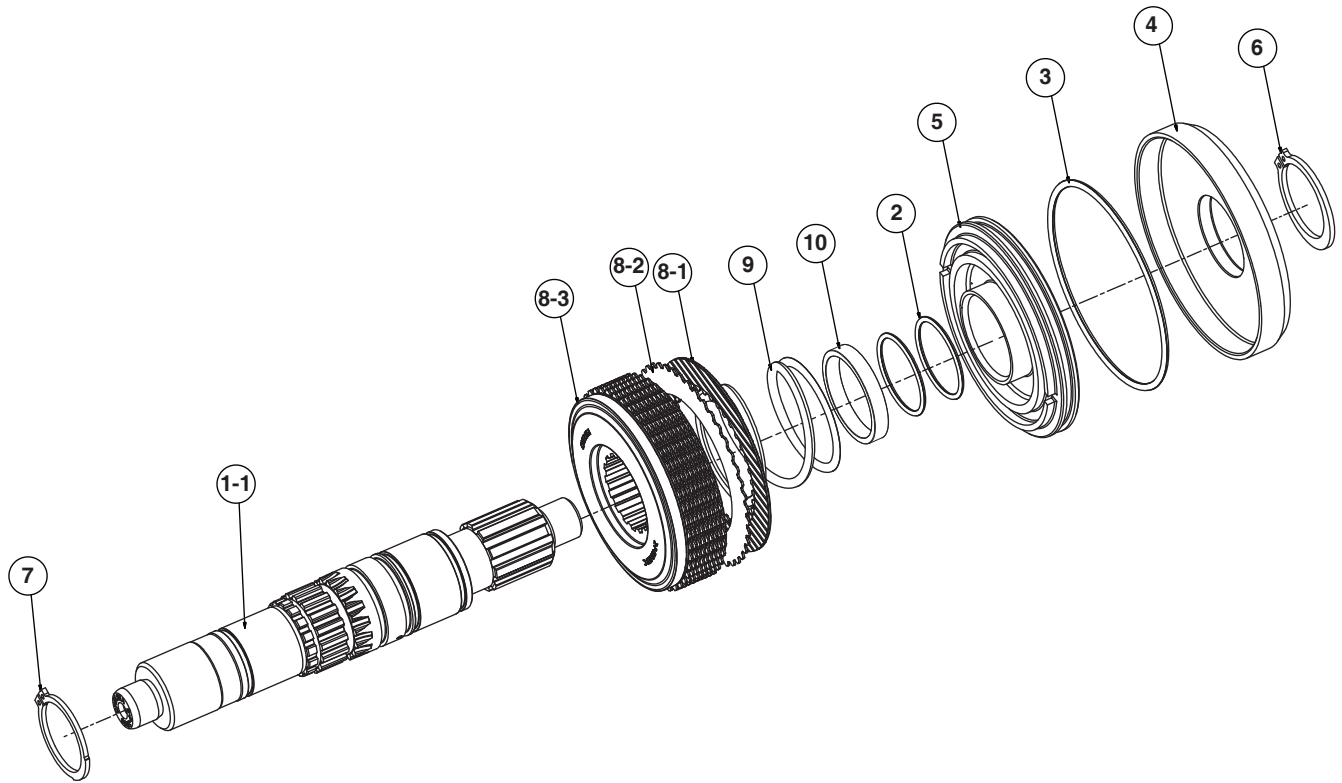


5 Arrangement



Output Options

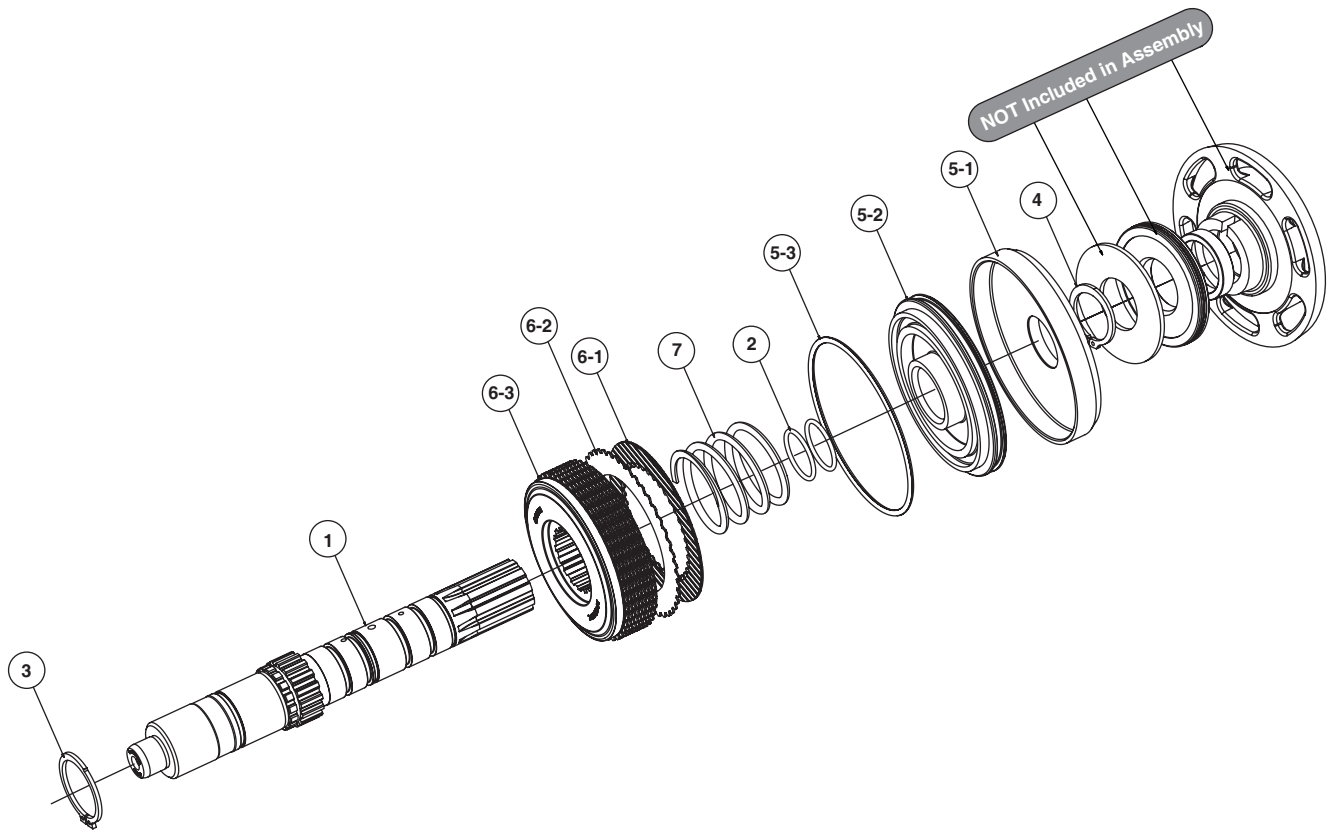
Assembly Drive Shaft & Clutch 329724-*X



Item	Part Number	Description	Qty.
1	3-P-1065	Output Shaft 10T Straight (329724-1X) (AB, AC, XV)	1 or
	3-P-1066	Output Shaft (1-1/4" - 14T) (329724-2X) (RS, RZ).....	1 or
	3-P-1067	Output Shaft DIN 8T (329724-3X) (RY)	1 or
	3-P-1126	Output Shaft (7/8" - 13T) (329724-4X) (RB, RK).....	1 or
	3-P-1127	Output Shaft (1" - 15T) (329724-5X) (RF)	1 or
	3-P-1161	Output Shaft 10T Straight (329724-8X) (SB, SC, SV).....	1
2	28-P-285	O-ring (1.597" x .103").....	2
3	28-P-178	O-ring (4.484" x .138").....	1
4	380051	Cylinder Clutch Back-Up	1
5	380110-1	Clutch Piston (Early 871 Series included piston w/ ball but is no longer necessary).....	1
6	379555	Lockring	1
7	380069	Lockring	1
8	329678X	Gear & Plates Kit	1
8-1	379485	Friction Disc.....	11
8-2	380065	Clutch Plate	10
8-3	2-P-858	Inner Gear Hub	1
9	37-P-72	Spring (2.140" x 1.729")	1
10	4-P-213	Spacer (1.800" x 2.070" x .330")	1

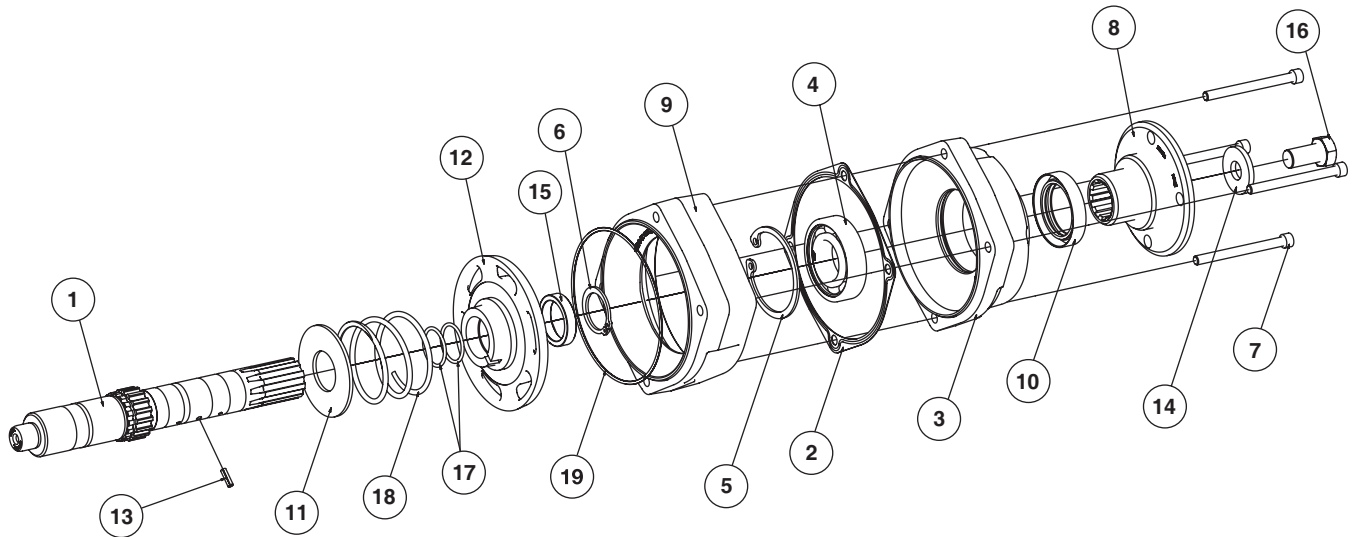
Output Options

Assembly Drive Shaft & Clutch 329723X



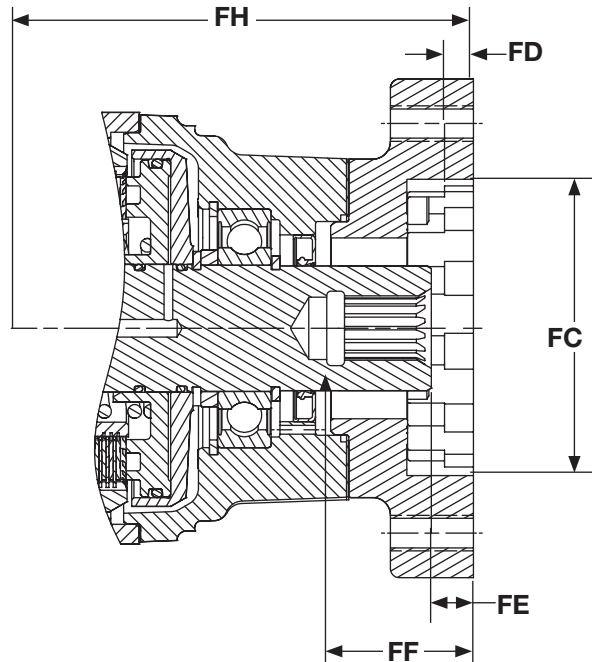
Item	Part Number	Description	Qty.
1	3-P-1072	Output Shaft 10T Straight (329723X) (BB, BC, BV).....	1
2	28-P-244	O-ring (1.174" x .103").....	2
3	380069	Lockring.....	1
4	378576	Lockring.....	1
5	329179-1X	Piston & Back-Up Cylinder Assembly.....	1
5-1	379323-1	Cylinder Clutch Back-Up.....	1
5-2	380057-1	Piston Clutch Hydraulic.....	1
5-3	28-P-178	O-ring (4.484" x .138").....	1
6	329678X	Gear & Plates Kit.....	1
6-1	379485	Friction Disc.....	11
6-2	380065	Clutch Plate.....	10
6-3	2-P-858	Inner Gear Hub.....	1
7	37-P-39	Spring (2.552" x 1.985").....	1

Shaft Brake



Output Flange	Part Number	Description	Qty.
1	329723X	BB, BC & BV Assembly Drive Shaft & Clutch (3-P-1072 Shaft)	1
2	22-P-151	Gasket.....	1
3	21-P-884	Bearing Cap (w/ 3/8" Bearing Cap Bolts).....	1
4	550010	Bearing Ball (1.378" x 2.834" x .669").....	1
5	378895	Lockring	1
6	378576	Lockring	1
7	380563-28	Hex Flange Head Cap Screw (.375"-16 x 3.500")	4
8	380377	DIN 120 (BB)	1 or
	380378	DIN 100 (BC)	1 or
	380081	1410 Series Companion Flange (BV)	1
9	23-P-73	Drag Brake Bearing Cap Spacer (w/ 3/8" Bearing Cap Bolts & O-ring)	1
10	28-P-212	Oil Seal (2.506" x 1.750" x .315").....	1
11	31-P-113	Thrust Washer (1.385" x 3.125" x .125").....	1
12	329410X	Brake Assembly	1
13	379977	Spring Pin.....	1
14	4-P-130	Washer	1
15	4-P-186	Spacer (1.385" x 1.750" x .365")	1
16	378435-7	Hex Head Cap Screw (.625"-11 x 1.250")	1
17	28-P-244	O-ring (1.174" x .103").....	2
18	37-P-60	Spring (2.531" x 2.130" x .172")	1
19	28-P-329	O-ring (5.487" x .103").....	1

Output Options



Direct Mount

Pump Flange Suffix	Bolt Circle Diameter	Bolt Holes		FC	FD	FE	FF	FH	Output Shaft
		Hole Diameter	No. Equally Spaced	Female Pilot of Flange	Pilot Depth Hole	Face to End of PTO	Face Thru	Face to Center	Hole Diameter
RF•	5.750" 5.000"	1/2"-13 UNC	2■ 4	4.000"	0.406"	0.592"	2.060"	7.643"	1" - 15T Spline
RK•	5.750" 5.000"	1/2"-13 UNC	2■ 4	-	0.406"	0.497"	1.872"	7.671"	7/8" - 13T Spline
RS•	7.125" 6.375"	5/8"-11 UNC 1/2"-13 UNC	2 4	5.003"	0.531"	0.730"	2.700"	7.671"	1-1/4" - 14T Spline
RY•	4.454"	M12-1.75"	4	3.152"	0.530"	0.581"	2.281"	7.266"	B8x32x36
RZ•	5.750" 5.000"	1/2"-13 UNC	2■ 4	4.000"	0.406"	0.730"	2.700"	7.671"	1-1/4" - 14T Spline

Companion Flange Mount

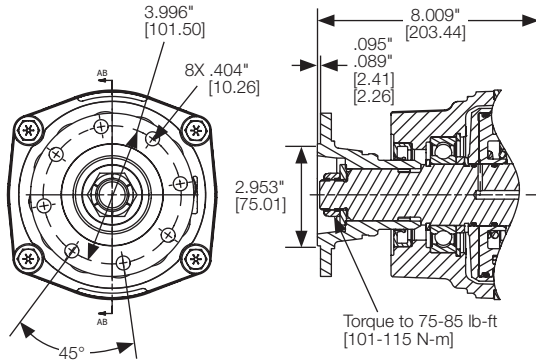
Pump Flange Suffix	Bolt Circle Diameter	Bolt Holes		FC	FD	FE	FF	FH	Output Shaft
		Hole Diameter	No. Equally Spaced	Male/Female Pilot of Flange	Pilot Depth Hole	Face to End of PTO	Face Thru	Face to Center	Hole Diameter
AB, SB	3.996"	0.404" ▶	8	2.952"	0.093" ◆	-	-	8.009"	1-1/2" - 10T Spline
AC, SC	3.307"	0.323" ▶	6	2.243"	0.080" ◆	-	-	7.978"	1-1/2" - 10T Spline
BB	3.996"	0.404" ▶	8	2.952"	0.092" ◆	-	-	8.986"	1-1/2" - 10T Spline
BC	3.307"	0.323" ▶	6	2.243"	0.080" ◆	-	-	8.906"	1-1/2" - 10T Spline
BV	3.750"	0.440" ▶	4	2.751"	0.083"	-	-	8.986"	1-1/2" - 10T Spline
XV, SV	3.750"	0.440" ▶	4	2.751"	0.083"	-	-	8.956"	1-1/2" - 10T Spline

- Rotatable Flange Rotates in 30° Increments
- Two Set of Holes Spaced 15° Apart
- ▶ Not Tapped
- ◆ Pilot is Not a Hole

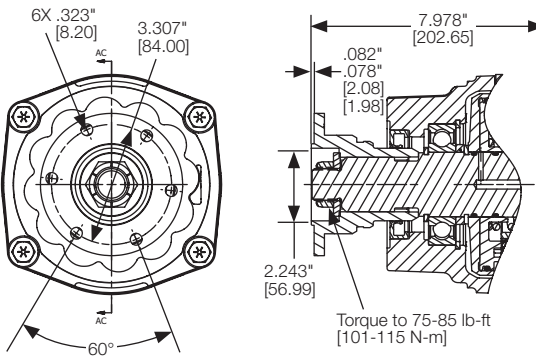
CAUTION: All pump mounting dimensions shown are compiled to conform to SAE/DIN standards; however it shall be the responsibility of the user to determine the correct fit at the time the pump is mounted to the PTO. Therefore carefully check the shaft and key or spline engagement.

Output Options

Bill of Materials — Driveline Output



AB Output Option DIN 120 Flange		
Part Number	Description	Qty.
3-P-1068	Output Shaft 10T Straight.....	1
21-P-932	Bearing Cap	1
380563-28	Hex Flange Head Cap Screw	4
28-P-211	Oil Seal (3.000" x 2.000" x .375").....	1
379558	DIN 120.....	1
380486	Thin Nylon Lock Nut (.875"-14).....	1
4-P-191	Spacer (.885" x 1.750" x .188")	1
28-P-329	O-ring (5.487" x .103").....	1
†329160-130X	Conversion Kit (XV to AB)	

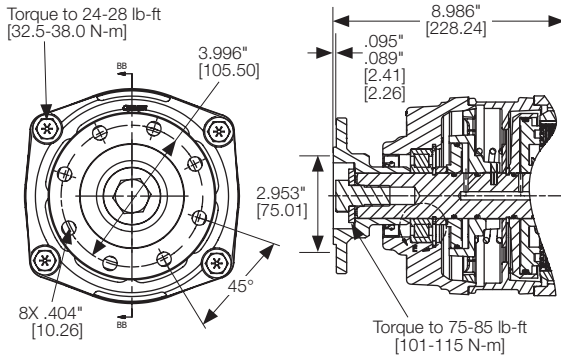


AC Output Option DIN 100 Flange		
Part Number	Description	Qty.
3-P-1068	Output Shaft 10T Straight	1
21-P-932	Bearing Cap	1
380563-28	Hex Flange Head Cap Screw	4
28-P-211	Oil Seal (3.000" x 2.000" x .375").....	1
379742	DIN 100.....	1
380486	Thin Nylon Lock Nut (.875"-14).....	1
4-P-191	Spacer (.885" x 1.750" x .188")	1
28-P-329	O-ring (5.487" x .103").....	1
†329160-134X	Conversion Kit (XV to AC)	

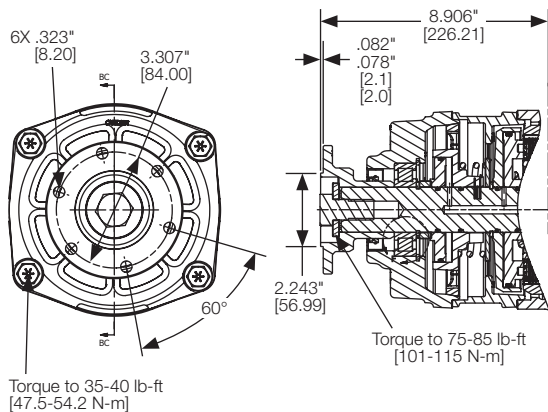
†Conversion Kits do not include all parts shown above. See pages 45-48 for Conversion Kit BOMs.

Output Options

Bill of Materials – Driveline Output (Continued)



BB Output Option Drag Brake with DIN 120 Flange		
Part Number	Description	Qty.
22-P-151	Bearing Cap Gasket	1
329723X	Drive Shaft and Clutch Assembly	1
380563-28	Hex Flange Head Cap Screw	4
21-P-884	Bearing Cap	1
28-P-212	Oil Seal (2.506" x 1.750" x .315")	1
380377	DIN 120	1
23-P-73	Drag Brake Bearing Cap Spacer	1
561048	Cylindrical Bearing Roller Assembly (1.378" x 2.835" x .670")	1
378576	Lockring	1
378895	Lockring	1
28-P-244	O-ring (1.174" x .103")	2
37-P-60	Spring (2.531" x 2.130" x .172")	1
31-P-113	Thrust Washer (1.385" x 3.125" x .125")	1
329410X	Brake Assembly	1
4-P-186	Spacer (1.385" x 1.750" x .365")	1
379977	Spring Pin	1
378435-7	Hex Head Cap Screw (.625"-11 x 1.250")	1
4-P-130	Washer	1
28-P-329	O-ring (5.487" x .103")	1
†329160-140X	Conversion Kit (XV to BB)	

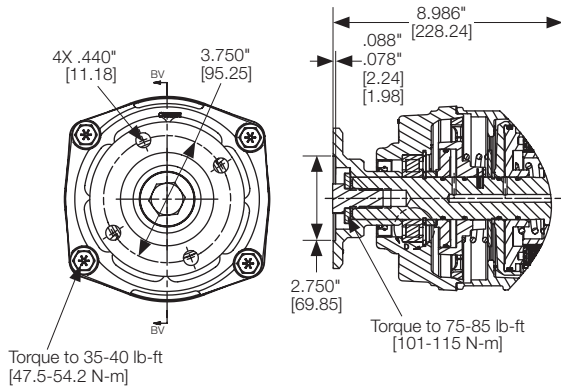


BC Output Option Drag Brake with DIN 100 Flange		
Part Number	Description	Qty.
22-P-151	Bearing Cap Gasket	1
329723X	Drive Shaft & Clutch Assembly	1
380563-28	Hex Flange Head Cap Screw	4
21-P-884	Bearing Cap	1
28-P-212	Oil Seal (2.506" x 1.750" x .315")	1
380378	DIN 100	1
23-P-73	Drag Brake Bearing Cap Spacer	1
561048	Cylindrical Bearing Roller Assembly (1.378" x 2.835" x .670")	1
378576	Lockring	1
378895	Lockring	1
28-P-244	O-ring (1.174" x .103")	2
37-P-60	Spring (2.531" x 2.130" x .172")	1
31-P-113	Thrust Washer (1.385" x 3.125" x .125")	1
329410X	Brake Assembly	1
4-P-186	Spacer (1.385" x 1.750" x .365")	1
379977	Spring Pin	1
378435-7	Hex Head Cap Screw (.625"-11 x 1.250")	1
4-P-130	Washer	1
28-P-329	O-ring (5.487" x .103")	1
†329160-141X	Conversion Kit (XV to BC)	

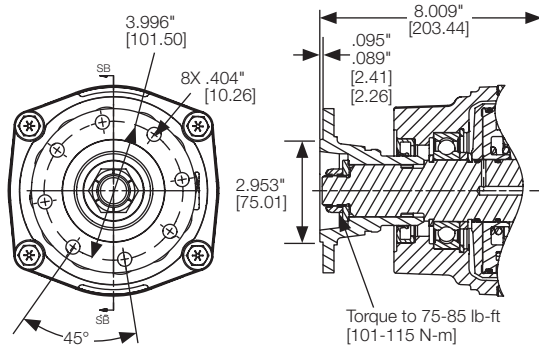
†Conversion Kits do not include all parts shown above. See pages 45-48 for Conversion Kit BOMs.

Output Options

Bill of Materials — Driveline Output (Continued)



BV Output Option Drag Brake with 1410 Companion Flange		
Part Number	Description	Qty.
22-P-151	Bearing Cap Gasket	1
329723X	Drive Shaft and Clutch Assembly	1
380563-28	Hex Flange Head Cap Screw.....	4
21-P-884	Bearing Cap	1
28-P-212	Oil Seal (2.506" x 1.750" x .315").....	1
380081	1410 Companion Flange	1
23-P-73	Drag Brake Bearing Cap Spacer.....	1
561048	Cylindrical Bearing Roller Assembly (1.378" x 2.835" x .670")	1
378576	Lockring	1
378895	Lockring	1
28-P-244	O-ring (1.174" x .103").....	2
37-P-60	Spring (2.531" x 2.130" x .172")	1
31-P-113	Thrust Washer (1.385" x 3.125" x .125").....	1
329410X	Brake Assembly	1
4-P-186	Spacer (1.385" x 1.750" x .365")	1
379977	Spring Pin.....	1
378435-7	Hex Head Cap Screw (.625"-11 x 1.250")	1
4-P-130	Washer	1
28-P-329	O-ring (5.487" x .103").....	1
†329160-123X	Conversion Kit (XV to BV)	

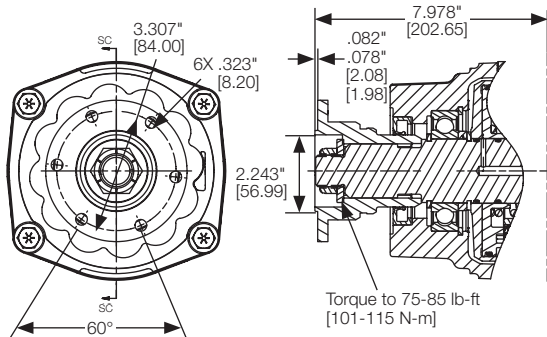


SB Output Option DIN 120 Flange		
Part Number	Description	Qty.
329724-1X	Drive Shaft & Clutch Assembly.....	1
21-P-932	Bearing Cap	1
380563-28	Hex Flange Head Cap Screw.....	4
28-P-211	Oil Seal (3.000" x 2.000" x .375").....	1
379558	Companion Flange	1
380486	Thin Nylon Lock Nut (.875"-14).....	1
4-P-191	Spacer (.885" x 1.750" x .188")	1
28-P-329	O-ring (5.487" x .103").....	1
†329160-147X	Conversion Kit (XV to SB)	

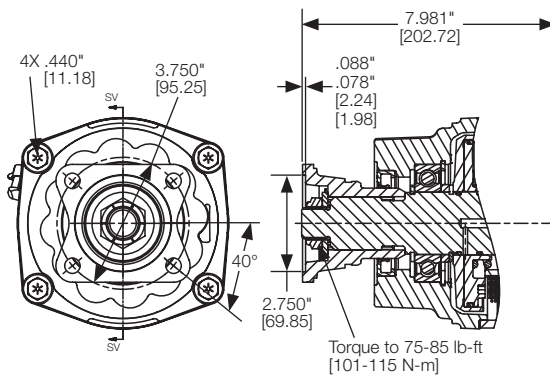
†Conversion Kits do not include all parts shown above. See pages 45-48 for Conversion Kit BOMs.

Output Options

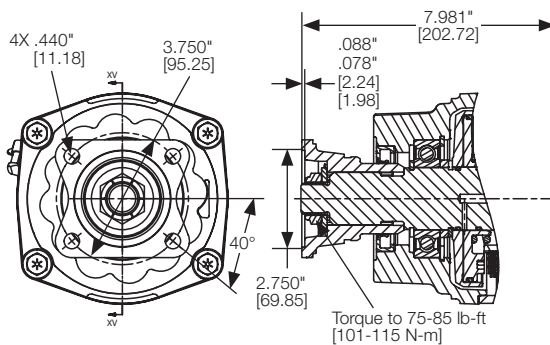
Bill of Materials – Driveline Output (Continued)



SC Output Option DIN 100 Flange		
Part Number	Description	Qty.
329724-1X	Drive Shaft and Clutch Assembly.....	1
21-P-932	Bearing Cap	1
380563-28	Hex Flange Head Cap Screw.....	4
28-P-211	Oil Seal (3.000" x 2.000" x .375").....	1
379742	Companion Flange	1
380486	Thin Nylon Lock Nut (.875"-14).....	1
4-P-191	Spacer (.885" x 1.750" x .188")	1
28-P-329	O-ring (5.487" x .103").....	1
†329160-148X	Conversion Kit (XV to SC)	



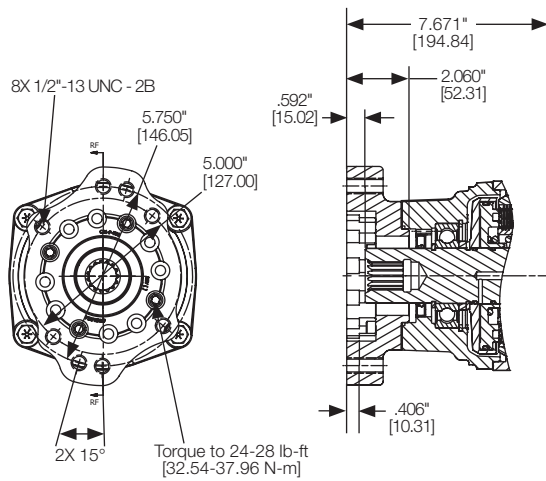
SV Output Option 1-1/2" - 10T Spline Shaft with 1410 Series Flange		
Part Number	Description	Qty.
329724-8X	Drive Shaft and Clutch Assembly	1
21-P-932	Bearing Cap	1
28-P-211	Oil Seal (3.000 x 2.000" x .375").....	1
380503	1410 Series Companion Flange.....	1
380076-13	Washer (.950" x 1.762" x .157").....	1
380486	Thin Nylon Lock Nut (.875"-14).....	1
28-P-329	O-ring (5.487" x .103").....	1
†329160-120X	Conversion Kit (XV to SV)	



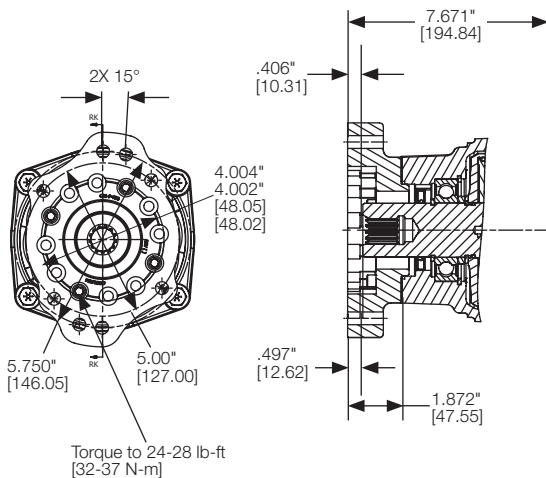
XV Output Option 1-1/2" - 10T Spline Shaft with 1410 Series Flange		
Part Number	Description	Qty.
3-P-1068	Output Shaft 10T Straight.....	1
380563-28	Bearing Cap Bolts	4
21-P-932	Bearing Cap	1
28-P-211	Oil Seal (3.001" x 2.000" x .375").....	1
380503	1410 Series Companion Flange.....	1
380076-13	Washer (.950" x .1.762" x .157").....	1
380486	Thin Nylon Lock Nut (.875"-14).....	1
28-P-329	O-ring (5.487" x .103").....	1

†Conversion Kits do not include all parts shown above. See pages 45-48 for Conversion Kit BOMs.

Bill of Materials — Pump Mount



RF Output Option		
Rotatable SAE B 2 or 4-Bolt Flange, SAE BB Shaft (1" - 15T)		
Part Number	Description	Qty.
329724-5X	Drive Shaft and Clutch Assembly.....	1
380563-28	Hex Flange Head Cap Screw.....	4
21-P-933	Bearing Cap	1 or
21-P-934	Bearing Cap (Wet Spline Only).....	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
328170-216X	Cap Screw Kit (378447-8 Qty. 4).....	1
35-P-101	Bearing Cap Gasket - Wet Spline (Ships w/ Kit).....	1
21-P-731	Pump Flange (Ship Loose w/ Unit).....	1
WET SPLINE LOOSE PARTS		
329700X	Wet Spline Loose Parts Kit	1
329699-1X	Hose Assembly	1
329658X	Cover Kit	1
28-P-329	O-ring (5.487" x .103").....	1
†329160-156X	Conversion Kit (XV to RF DRY)	
†329160-157X	Conversion Kit (XV to RF WET)	

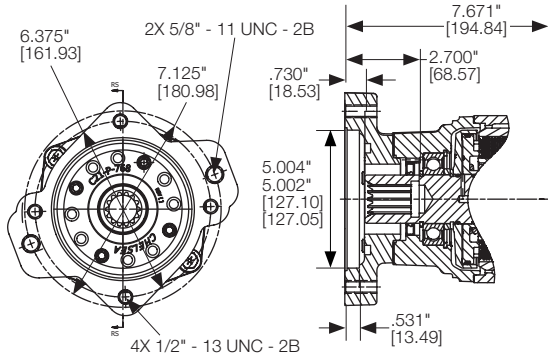


RK Output Option		
Rotatable SAE B 2 or 4-Bolt Flange, SAE B (7/8" - 13T)		
Part Number	Description	Qty.
329724-4X	Drive Shaft and Clutch Assembly.....	1
380563-28	Hex Flange Head Cap Screw.....	4
21-P-933	Bearing Cap	1 or
21-P-934	Bearing Cap (Wet Spline Only).....	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
328170-216X	Cap Screw Kit (378447-8 Qty. 4).....	1
35-P-101	Wet Spline Bearing Cap Gasket (Ships w/ Kit).....	1
21-P-731	Pump Flange (Ship Loose w/ Unit).....	1
WET SPLINE LOOSE PARTS		
329700X	Wet Spline Loose Parts Kit	1
329699-1X	Hose Assembly	1
329658X	Cover Kit	1
28-P-329	O-ring (5.487" x .103").....	1
†329160-154X	Conversion Kit (XV to RK DRY)	
†329160-155X	Conversion Kit (XV to RK WET)	

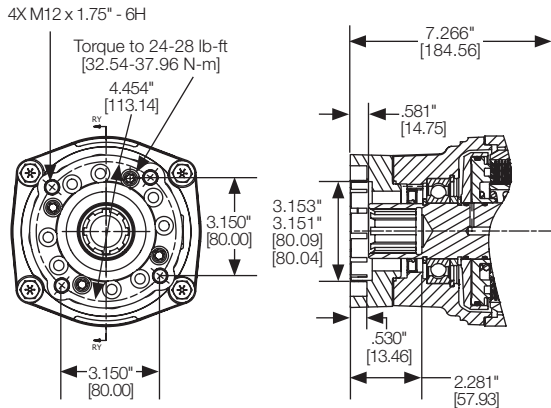
†Conversion Kits do not include all parts shown above. See pages 45-48 for Conversion Kit BOMs.

Output Options

Bill of Materials – Pump Mount (Continued)



RS Output Option Rotatable SAE C 2 or 4-Bolt Flange, SAE C (1-1/4" - 14T)		
Part Number	Description	Qty.
329724-2X	Drive Shaft and Clutch Assembly.....	1
380563-28	Hex Flange Head Cap Screw.....	4
21-P-933	Bearing Cap	1 or
21-P-934	Bearing Cap (Wet Spline Only).....	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
328170-216X	Cap Screw Kit (378447-8 Qty. 4).....	1
35-P-101	Wet Spline Bearing Cap Gasket (Ships w/ Kit).....	1
21-P-769	Pump Flange (Ship Loose w/ Unit).....	1
69-P-18	Tag (Wet Spline Only).....	1
WET SPLINE LOOSE PARTS		
329744X	Wet Spline Loose Parts Kit	1
329699-1X	Hose Assembly	1
329654X	Cover Kit	1
28-P-329	O-ring (5.487" x .103").....	1
†329160-158X	Conversion Kit (XV to RS DRY)	
†329160-159X	Conversion Kit (XV to RS WET)	

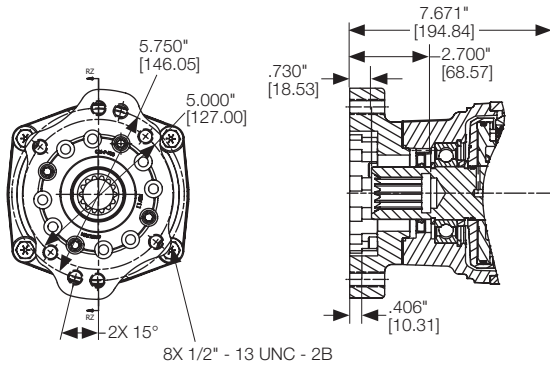


RY Output Option Rotatable DIN 5462 8T Shaft		
Part Number	Description	Qty.
329724-3X	Drive Shaft and Clutch Assembly.....	1
380563-28	Hex Flange Head Cap Screw.....	4
21-P-933	Bearing Cap	1 or
21-P-934	Bearing Cap (Wet Spline Only).....	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
328170-216X	Cap Screw Bag Kit (378447-8 Qty. 4).....	1
35-P-101	Wet Spline Bearing Cap Gasket (Ships w/ Kit).....	1
21-P-771	Pump Flange (Ship Loose w/ Unit).....	1
WET SPLINE LOOSE PARTS		
329742X	Wet Spline Loose Parts Kit	1
329699-1X	Hose Assembly	1
329659X	Cover Kit	1
28-P-329	O-ring (5.487" x .103").....	1
†329160-160X	Conversion Kit (XV to RY DRY)	
†329160-161X	Conversion Kit (XV to RY WET)	

†Conversion Kits do not include all parts shown above. See pages 45-48 for Conversion Kit BOMs.

Output Options

Bill of Materials — Pump Mount (Continued)

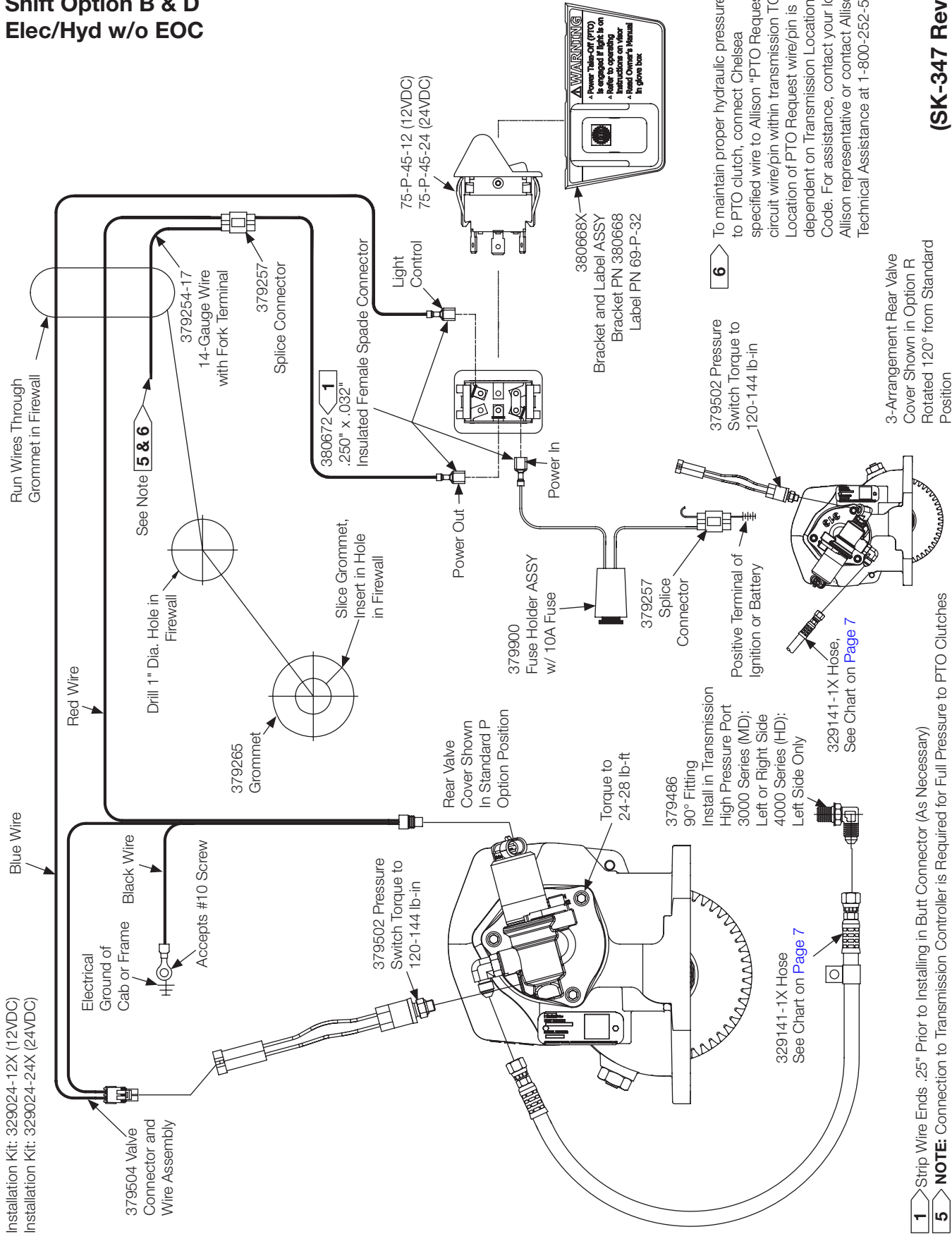


RZ Output Option		
Rotatable SAE B 2 or 4-Bolt Flange SAE C Shaft (1-1/4" - 14T)		
Part Number	Description	Qty.
329724-2X	Drive Shaft and Clutch Assembly.....	1
380563-28	Hex Flange Head Cap Screw	4
21-P-933	Bearing Cap	1 or
21-P-934	Bearing Cap (Wet Spline Only)	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
328170-216X	Cap Screw Kit (378447-8 Qty. 4)	1
35-P-101	Wet Spline Bearing Cap Gasket (Ships w/ Kit)	1
21-P-731	Pump Flange (Ship Loose w/ Unit).....	1
WET SPLINE LOOSE PARTS		
329700X	Wet Spline Loose Parts Kit	1
329699-1X	Hose Assembly	1
329658X	Cover Kit	1
28-P-329	O-ring (5.487" x .103").....	1
†329160-162X	Conversion Kit (XV to RZ DRY)	
†329160-163X	Conversion Kit (XV to RZ WET)	

†Conversion Kits do not include all parts shown above. See pages 45-48 for Conversion Kit BOMs.



Transmission 3000/4000
Shift Option B & D
Elec/Hyd w/o EOC

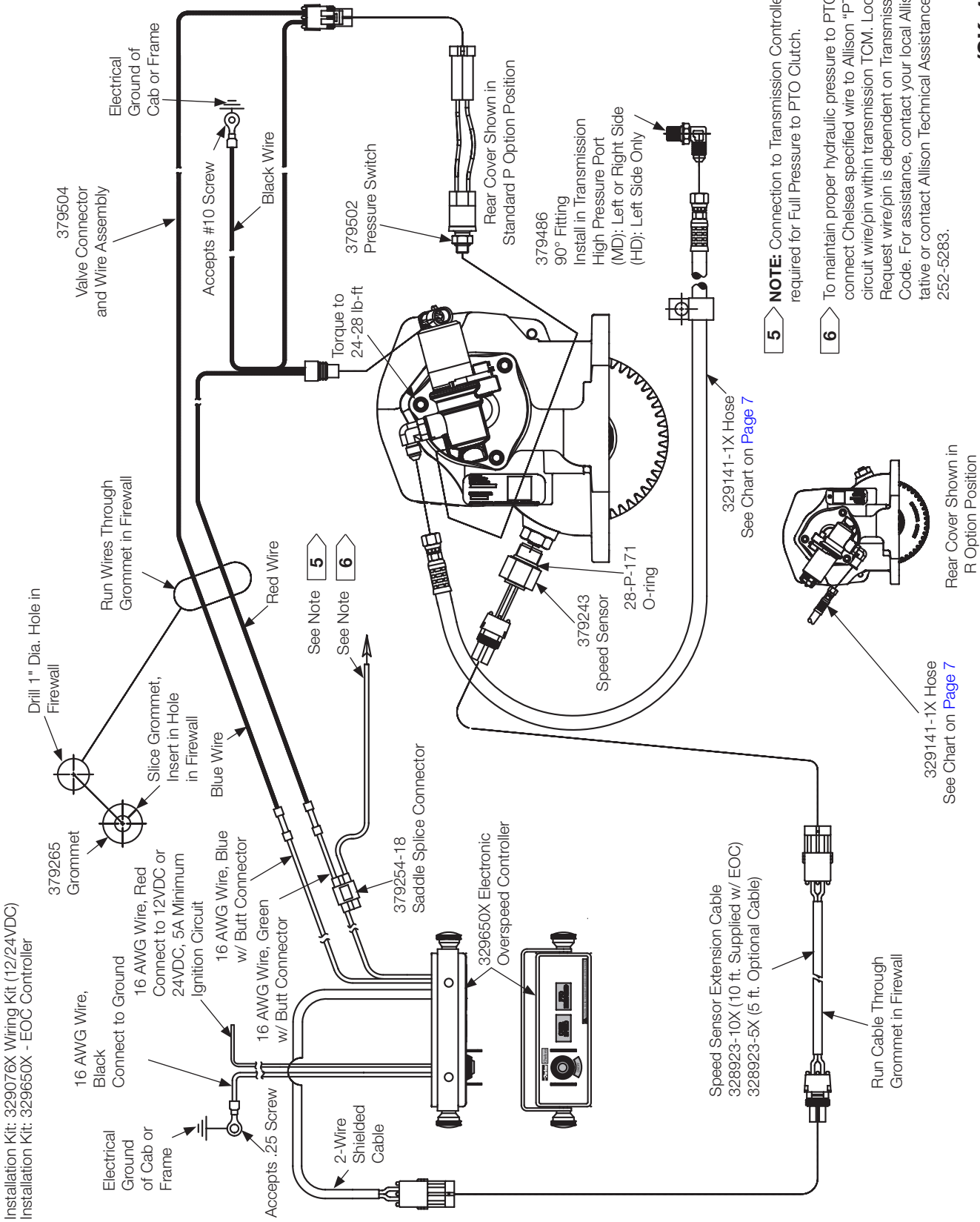


(SK-347 Rev M)



Installation Sketches

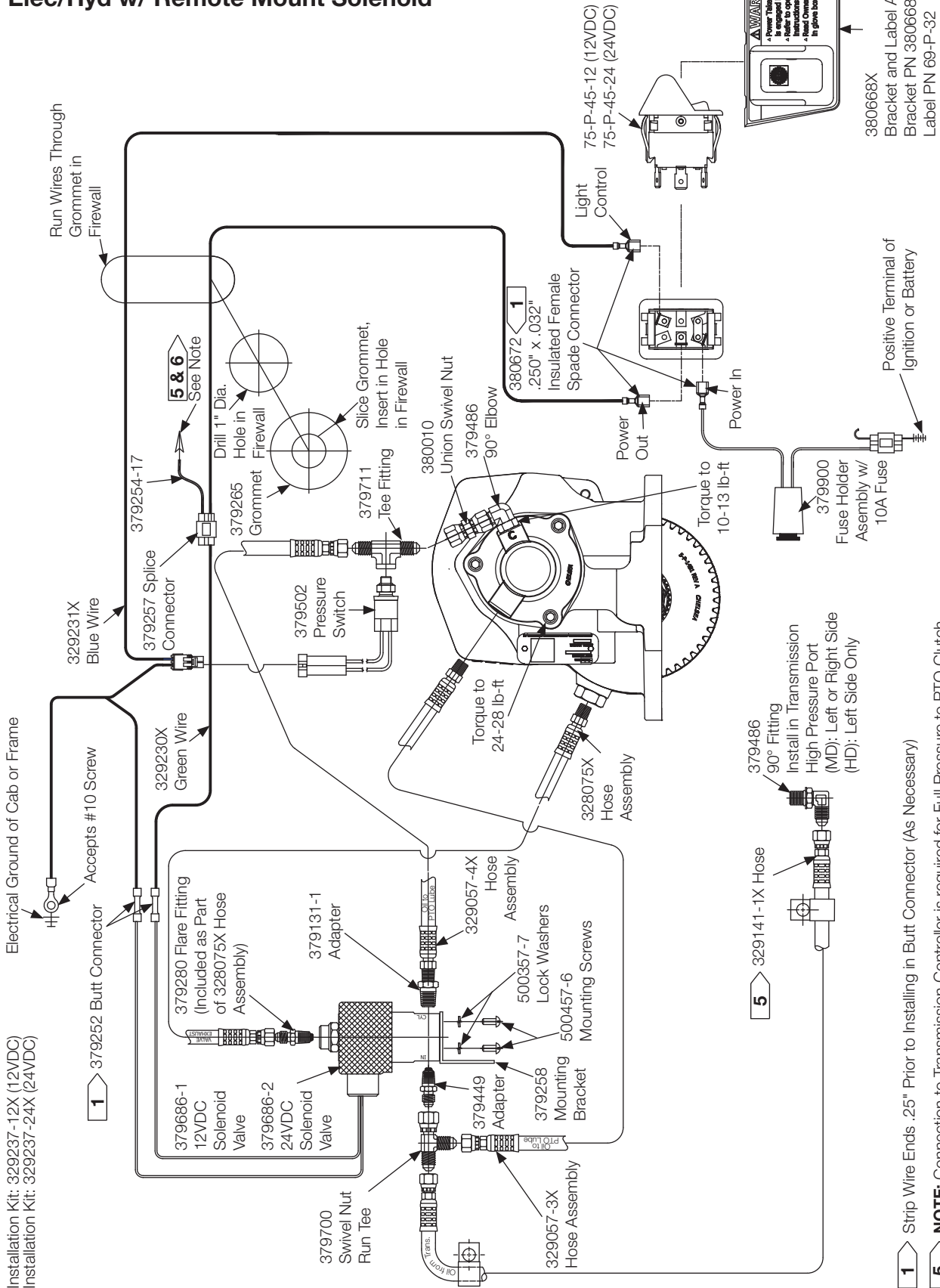
Transmission 3000/4000
Shift Option K & L
Elec/Hyd w/ EOC



(SK-472 Rev D)

**Transmission 3000/4000
 Shift Option G & H
 Elec/Hyd w/ Remote Mount Solenoid**

(SK-432 Rev H)



Installation Kit: 329237-12X (12VDC)
 Installation Kit: 329237-24X (24VDC)

Electrical Ground of Cab or Frame

Run Wires Through Grommet in Firewall

5 & 6 See Note

329231X Blue Wire

329230X Green Wire

1 379252 Butt Connector

379700 Swivel Nut Run Tee

379280 Flare Fitting (Included as Part of 328075X Hose Assembly)

379131-1 Adapter

329057-4X Hose Assembly

500357-7 Lock Washers

500457-6 Mounting Screws

379449 Adapter

379258 Mounting Bracket

329057-3X Hose Assembly

379254-17

379265 Grommet

Drill 1" Dia. Hole in Firewall

Slice Grommet, Insert in Hole in Firewall

379711 Tee Fitting

379502 Pressure Switch

380010 Union Swivel Nut

379486 90° Elbow

380672 1 .250" x .032" Insulated Female Spade Connector

328075X Hose Assembly

Torque to 24-28 lb-ft

329057-4X Hose Assembly

379486 90° Fitting

Install in Transmission High Pressure Port (MD): Left or Right Side (HD): Left Side Only

379486 90° Fitting

5 329141-1X Hose

379486 90° Fitting

379486 90° Fitting

379486 90° Fitting

379486 90° Fitting

379486 90° Fitting

379486 90° Fitting

379486 90° Fitting

379486 90° Fitting

379486 90° Fitting

379486 90° Fitting

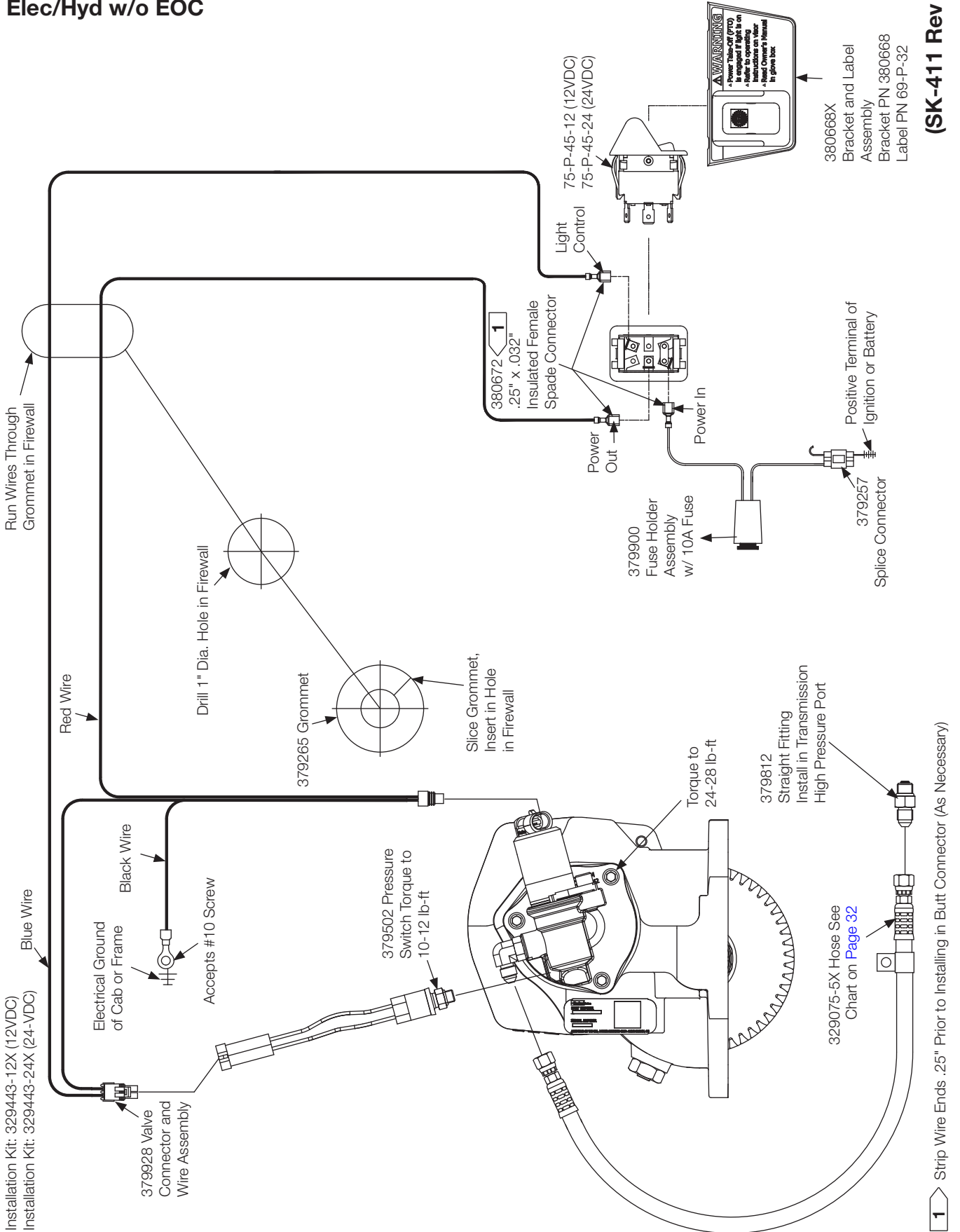
379486 90° Fitting

379486 90° Fitting

- 1 Strip Wire Ends .25" Prior to Installing in Butt Connector (As Necessary)
- 5 NOTE: Connection to Transmission Controller is required for Full Pressure to PTO Clutch.
- 6 To maintain proper hydraulic pressure to PTO clutch, connect Chelsea specified wire to Allison "PTO Request" circuit wire/pin within transmission TCM. Location of PTO Request wire/pin is dependent on Transmission Location Code. For assistance, contact your local Allison representative or contact Allison Technical Assistance at 1-800-252-5283.

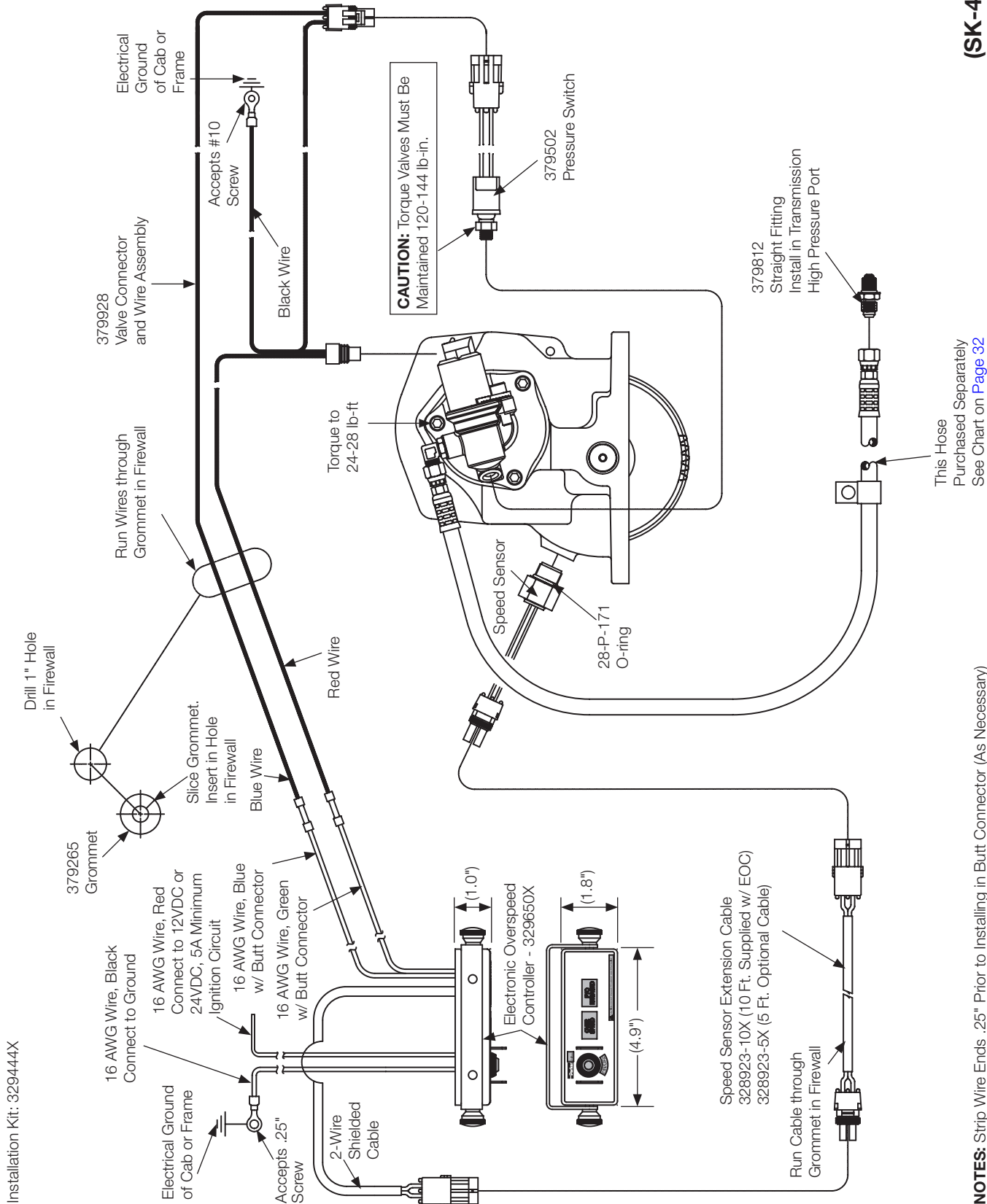
**Shift Option B & D
 Elec/Hyd w/o EOC**

(SK-411 Rev D)



**Shift Option K & L
 Elec/Hyd w/ EOC**

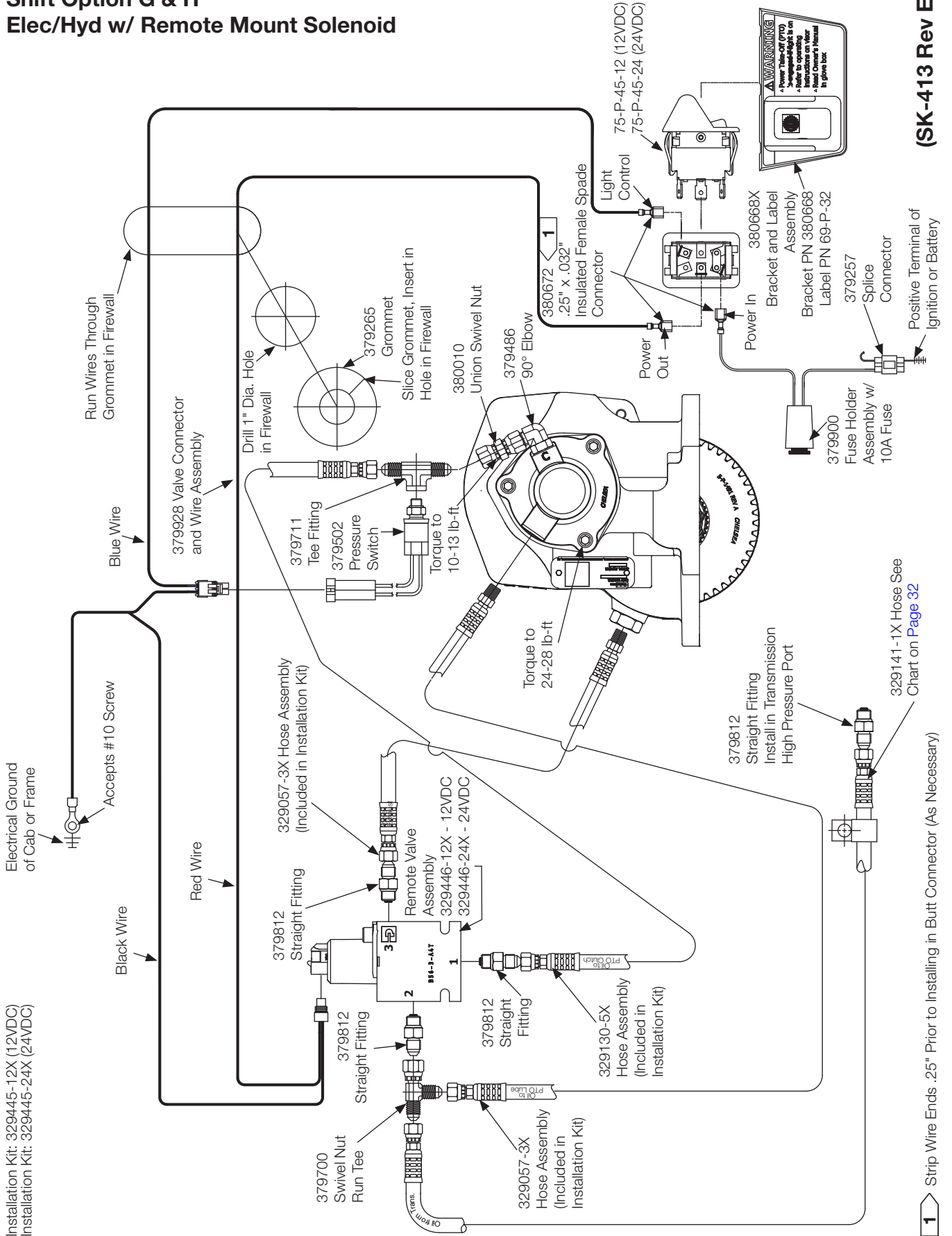
(SK-473 Rev B)



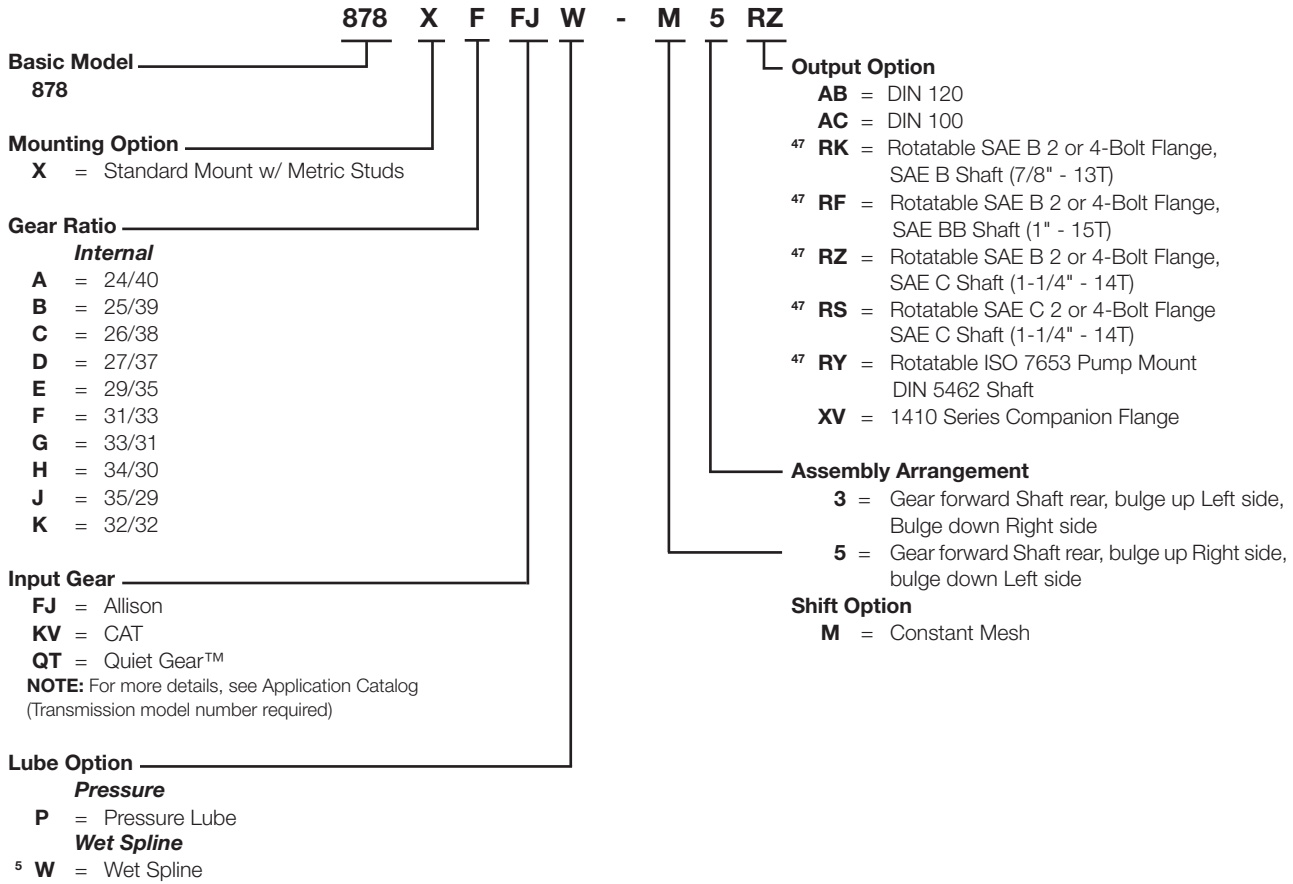
Installation Kit: 329444X

Shift Option G & H
Elec/Hyd w/ Remote Mount Solenoid

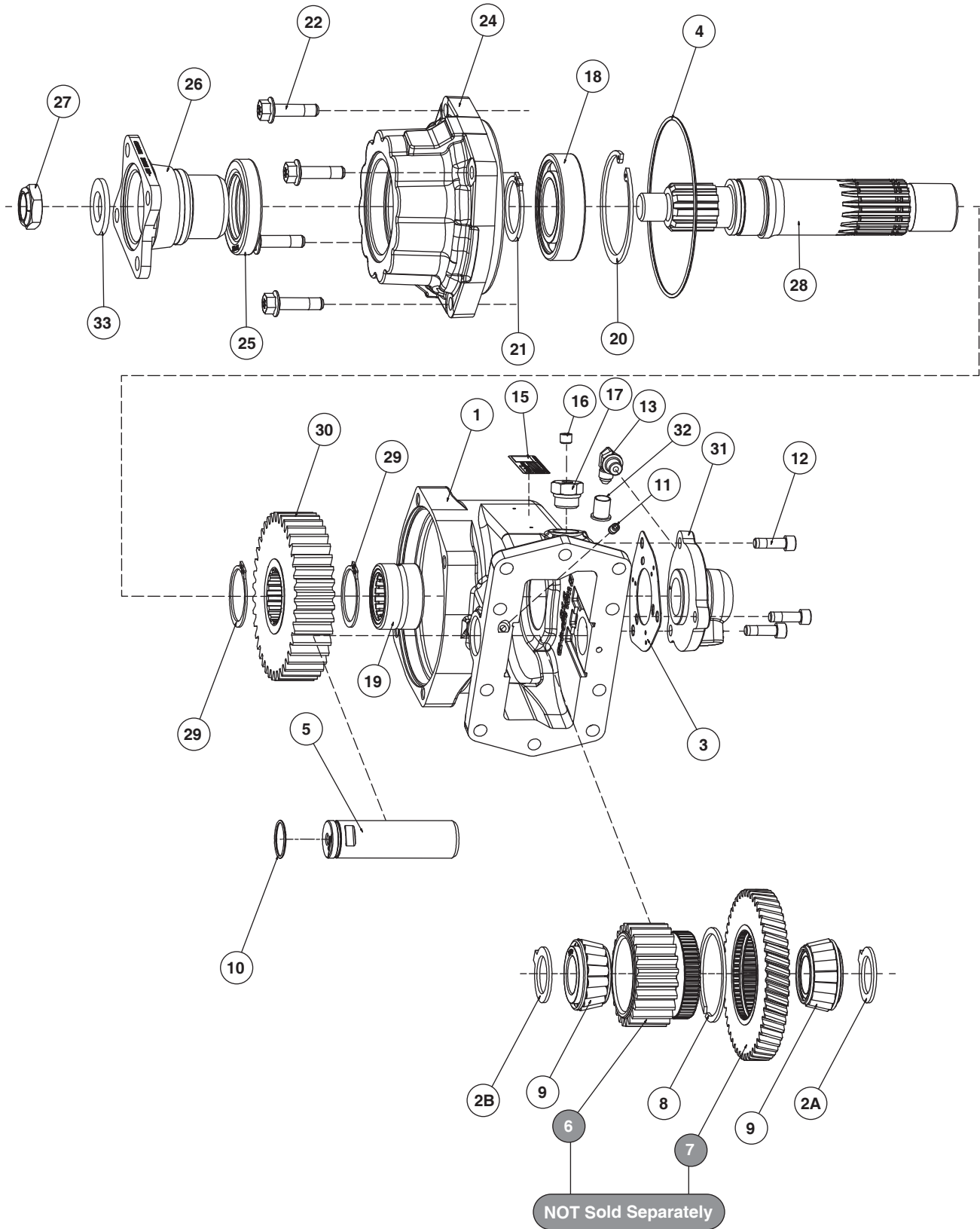
(SK-413 Rev E)



Model Number Designator



⁵ Automatically pressure lubed
⁴⁷ Available with Wet Spline



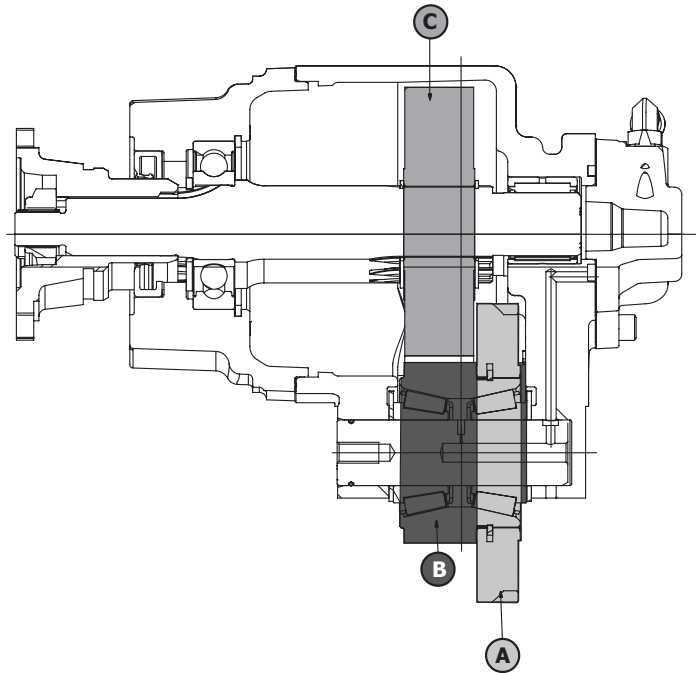
Bill of Materials

Item	Part Number	Description	Qty.
1	1-P-816	Housing (5 Arrangement) (w/ 3/8" Bearing Cap Bolts & O-ring).....	1 or
	1-P-817	Housing (3 Arrangement) (w/ 3/8" Bearing Cap Bolts & O-ring).....	1
2A	14-P-82-1	Spacer (1.191" x 1.750" x .080")	1
2B	14-P-82-1	Spacer (1.191" x 1.750" x .080") (Thickness as Required)	1 or
	14-P-82-2	Spacer (1.191" x 1.750" x .085")	1 or
	14-P-82-3	Spacer (1.191" x 1.750" x .090")	1 or
	14-P-82-4	Spacer (1.191" x 1.750" x .094")	1
3	22-P-112	Gasket	1
4	28-P-329	O-ring (5.487" x .103").....	1
5	9-P-99	Idler Shaft	1
Not Sold Separately			
6	See page 32	Ratio Gear	1
7	See page 32	Input Gear	1
8	380064	Lockring	1
9	561026	Tapered Cone Bearing (1.181" x .984").....	2
10	28-P-42	O-ring (1.050" x .070").....	1
11	378452-7	Set Screw Socket Head (.250"-20 x .500").....	1
12	378447-6	Cap Screw Socket Head (.312"-18 x 1.000").....	3
13	379486	90° Elbow (.438"-20)	1
15	68-P-51-1	Adhesive Label	1
16	379231	Pipe Plug (.125"-27)	1
17	379242	Straight Adapter (.125"-27 x .750"-16)	1
18	550311	Ball Bearing (1.770" x 3.346" x .748").....	1
19	561047	Needle Roller Bearing Assembly (1.500" x 2.062" x 1.250").....	1
20	378263	Internal Lockring.....	1
21	379555	Lockring	1
22	380563-14	Cap Screw Hex Flange Head (.375"-16 x 1.500")	4
24	21-P-932	Bearing Cap (XV & SV Output Only) (w/ 3/8" Bearing Cap Bolts & O-ring).....	1
See Output Options Section pages 35-39 for more options.			
25	28-P-211	Oil Seal (3.000" x 2.000" x .375") (XV Output Only)	1
26	380503	1410 Series Companion Flange (XV Output Only)	1
27	380486	Thin Nylon Lock Nut (.875"-14).....	1
28	3-P-1068	Output Shaft 10T Straight.....	1
29	379668	Lockring	2
30	See page 31	Output Gear	1
31	21-P-690	Seal Cap	1
32	379564-2	Thread Cap (.438").....	1
33	4-P-191	Spacer (.885" x 1.750" x .188")	1

Continued on Next Page

Bill of Materials

Item	Part Number	Description	Qty.
	See pages 40-48 for Bill of Materials for the below loose parts.		
	SERVICE PARTS		
	329071-79X	Gasket & Seal Kit	1
	329071-59X	Bearing Kit	1
	STUD KITS		
	7170-86X	Stud Kit (FJ, QT Gear)	1
	7170-117X	Stud Kit (KV Gear)	1
	INSTALLATION INSTRUCTIONS KIT		
	328948-9X	Gasket & Installation Instructions Kit (All).....	1
	HOSE ASSEMBLY KIT		
	329141-1X	Pressure Hose Assembly.....	1
	OUTPUT CONVERSION KITS		
	See pages 45-48	Output Conversion Kits Bill of Materials	



GEAR DESIGNATOR	INPUT GEAR ASSEMBLY	NOT Sold Separately				OUTPUT GEAR (30)	NO. TEETH C
		INPUT GEAR (7)	NO. TEETH A	RATIO GEAR (6)	NO. TEETH B		
878*AFJ	5-P-1428-1X	5-P-1428	50	⁽¹⁾ 5-P-1545	24	2-P-862	40
878*BFJ	5-P-1428-2X	5-P-1428	50	⁽²⁾ 5-P-1546	25	2-P-872	39
878*CFJ	5-P-1428-3X	5-P-1428	50	5-P-1439	26	2-P-873	38
878*DFJ	5-P-1428-4X	5-P-1428	50	5-P-1440	27	2-P-874	37
878*EFJ	5-P-1428-5X	5-P-1428	50	5-P-1432	29	2-P-865	35
878*FFJ	5-P-1428-6X	5-P-1428	50	5-P-1433	31	2-P-866	33
878*KFJ	5-P-1428-10X	5-P-1428	50	5-P-1524	32	2-P-940	32
⁽³⁾ 878*GFJ	5-P-1428-7X	5-P-1428	50	5-P-1457	33	2-P-888	31
⁽³⁾ 878*HFJ	5-P-1428-8X	5-P-1428	50	5-P-1455	34	2-P-881	30
⁽³⁾ 878*JFJ	5-P-1428-9X	5-P-1428	50	5-P-1474	35	2-P-902	29
878*AKV	5-P-1468-11X	5-P-1468	45	⁽¹⁾ 5-P-1545	24	2-P-862	40
878*BKV	5-P-1468-12X	5-P-1468	45	⁽²⁾ 5-P-1546	25	2-P-872	39
878*CKV	5-P-1468-13X	5-P-1468	45	5-P-1439	26	2-P-873	38
878*DKV	5-P-1468-14X	5-P-1468	45	5-P-1440	27	2-P-874	37
878*EKV	5-P-1468-15X	5-P-1468	45	5-P-1432	29	2-P-865	35
878*FKV	5-P-1468-16X	5-P-1468	45	5-P-1433	31	2-P-866	33
⁽³⁾ 878*GKV	5-P-1468-17X	5-P-1468	45	5-P-1457	33	2-P-888	31
⁽³⁾ 878*HKV	5-P-1468-18X	5-P-1468	45	5-P-1455	34	2-P-881	30
⁽³⁾ 878*JKV	5-P-1468-19X	5-P-1468	45	5-P-1474	35	2-P-902	29

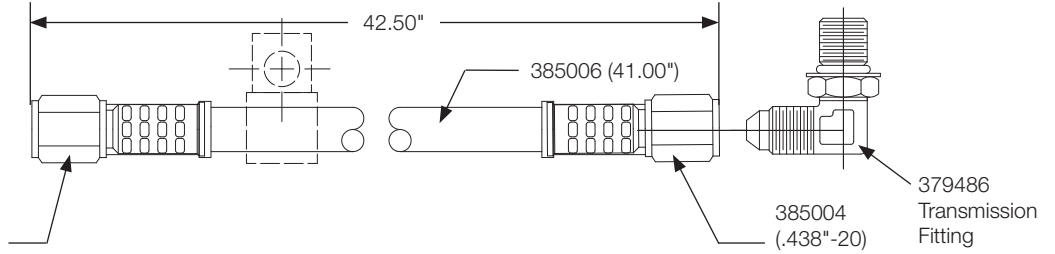
⁽¹⁾ Early production – 5-P-1429
⁽²⁾ Early production – 5-P-1438
⁽³⁾ G, H and J ratios available on MD transmissions only

Pressure Lube

329141-1X

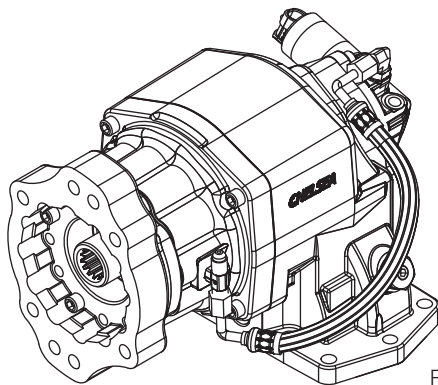
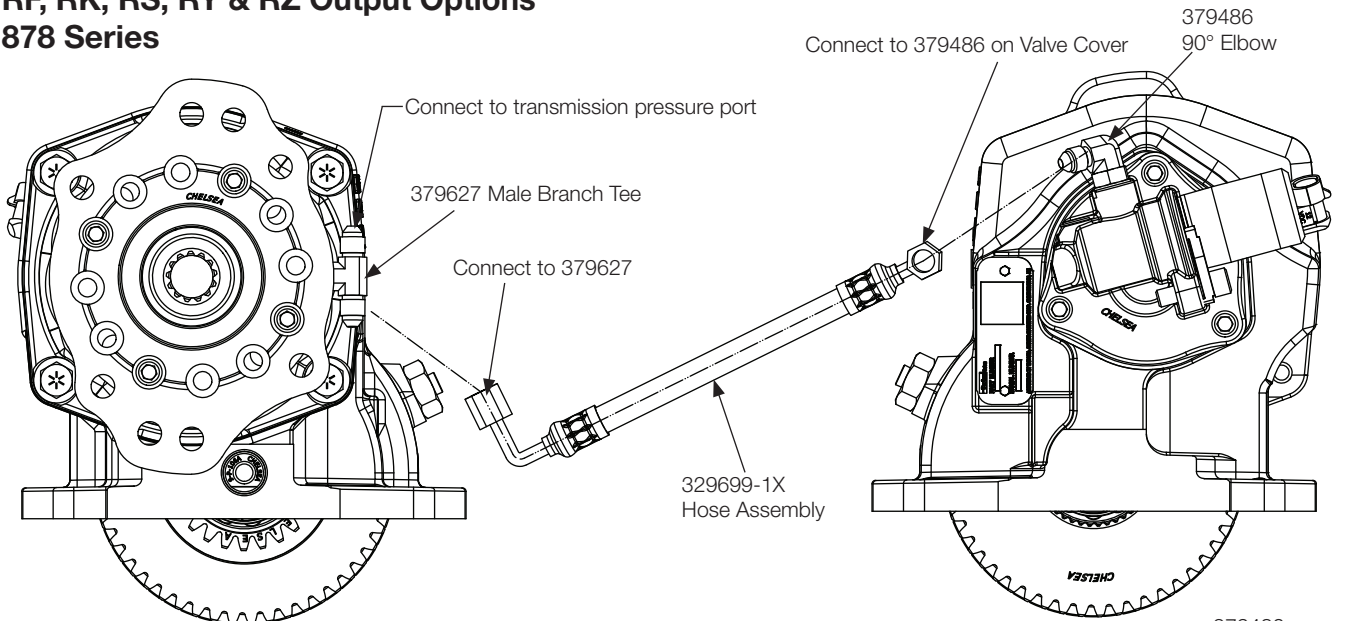
Transmission to PTO Hose

385004
(.438"-20)



**Wet Spline Installation
RF, RK, RS, RY & RZ Output Options
878 Series**

(SK-508 Rev C)

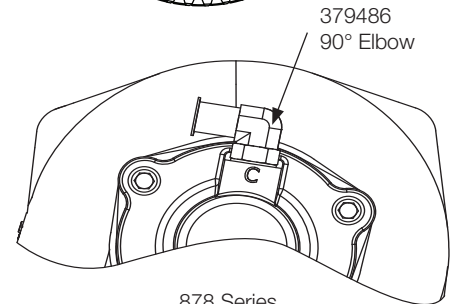


Wet Spline Gasket or O-ring

RF/RK/RZ 35-P-102
RS 28-P-245
RY 35-P-111

Wet Spline Installation Kits	
Output	Kit Number
RF	329700X
RK	329700X
RS	329744X
RY	329742X
RZ	329700X

NOTE: Not all output options may be available on Series listed above

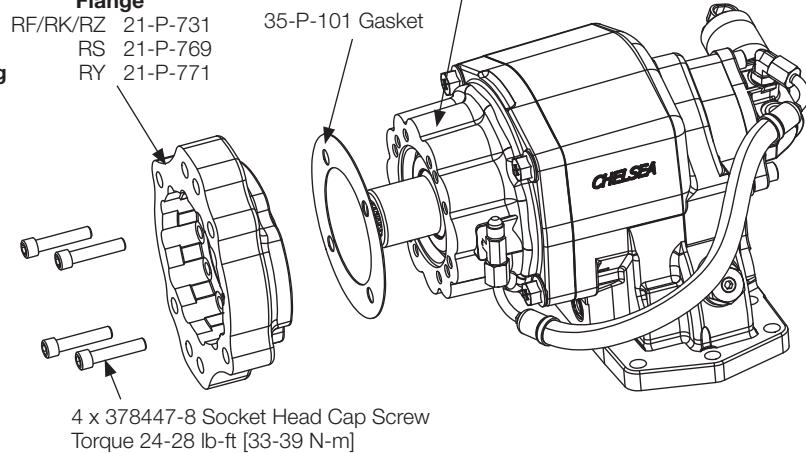


Flange
RF/RK/RZ 21-P-731
RS 21-P-769
RY 21-P-771

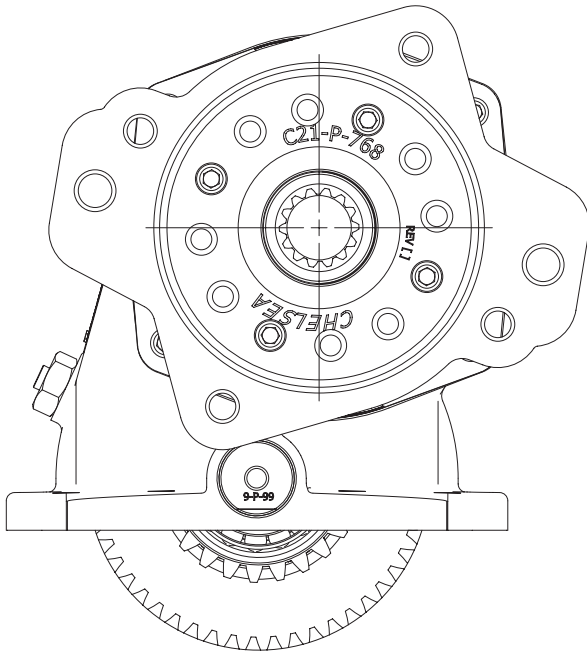
35-P-101 Gasket

Bearing Cap

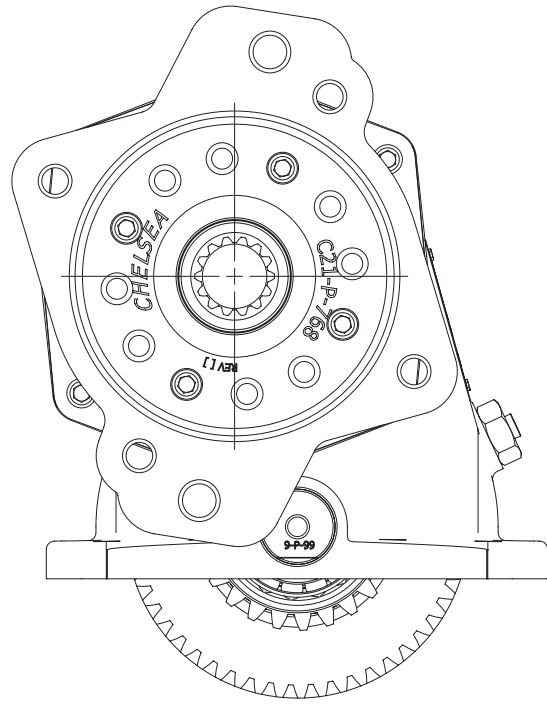
21-P-934 (3/8" bearing cap bolt holes used w/ O-ring)



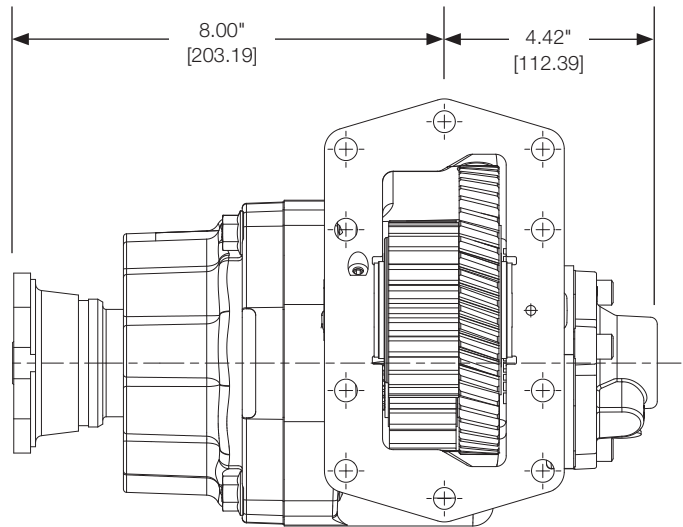
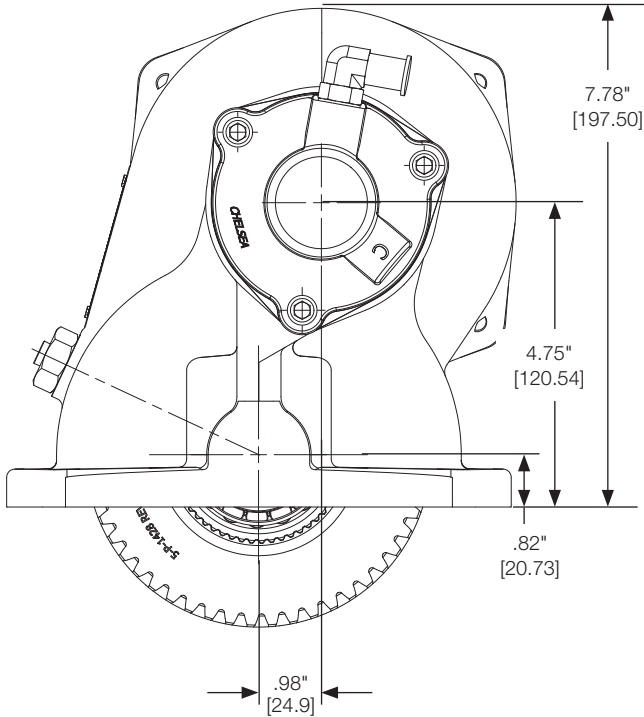
4 x 378447-8 Socket Head Cap Screw
Torque 24-28 lb-ft [33-39 N-m]



3 Arrangement

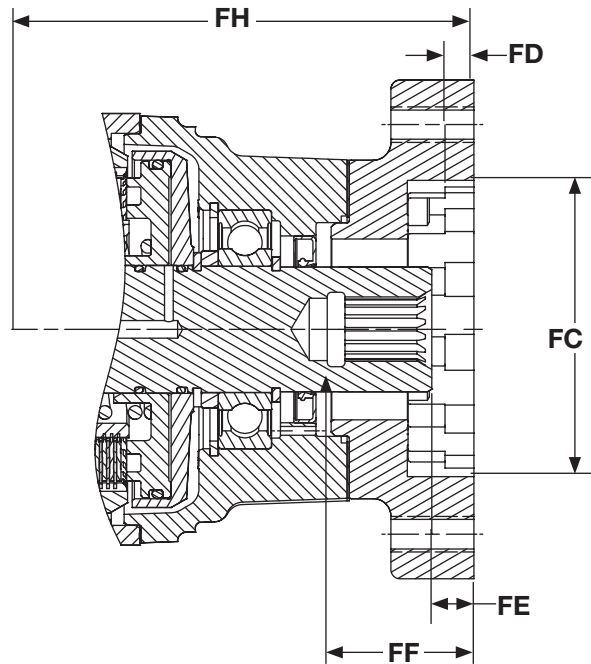


5 Arrangement



Output Options

Flange & Shaft Dimensions



Direct Mount

Pump Flange Suffix	Bolt Circle Diameter	Bolt Holes		FC	FD	FE	FF	FH	Output Shaft
		Hole Diameter	No. Equally Spaced	Female Pilot of Flange	Pilot Depth Hole	Face to End of PTO	Face Thru	Face to Center	Hole Diameter
RF●	5.750" 5.000"	1/2" -13 UNC	2■ 4	4.000"	0.406"	0.592"	2.060"	7.670"	1" - 15T Spline
RK●	5.750" 6.375"	1/2" -13 UNC	2■ 4	4.000"	0.406"	0.497"	1.872"	7.670"	7/8" - 13T Spline
RS●	7.125" 6.375"	5/8" -11 UNC 1/2" -13 UNC	2 4	5.003"	0.531"	0.730"	2.700"	7.670"	1-1/4" - 14T Spline
RY●	4.454"	M12-1.75	4	3.152"	0.700"	0.581"	2.281"	7.270"	B8x32x36
RZ●	5.750" 5.000"	1/2" -13 UNC	2■ 4	4.000"	0.406"	0.730"	2.700"	7.670"	1-1/4" - 14T Spline

Companion Flange Mount

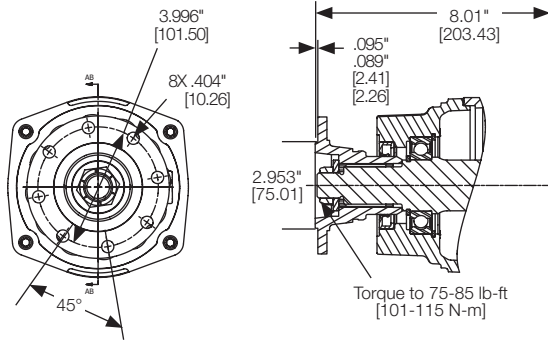
Pump Flange Suffix	Bolt Circle Diameter	Bolt Holes		FC	FD	FE	FF	FH	Output Shaft
		Hole Diameter	No. Equally Spaced	Female Pilot of Flange	Pilot Depth Hole	Face to End of PTO	Face Thru	Face to Center	Hole Diameter
AB	3.996"	0.404" ▶	8	2.952"	0.093" ◆	–	–	8.010"	1-1/2" - 10T Spline
AC	3.307"	0.323" ▶	6	2.243"	0.080" ◆	–	–	7.980"	1-1/2" - 10T Spline
XV	3.750"	0.440" ▶	4	2.751"	0.083"	–	–	8.000"	1-1/2" - 10T Spline

- Rotatable Flange Rotates in 30° Increments
- Two Set of Holes Spaced 15° Apart
- ▶ Not Tapped
- ◆ Pilot is Not a Hole

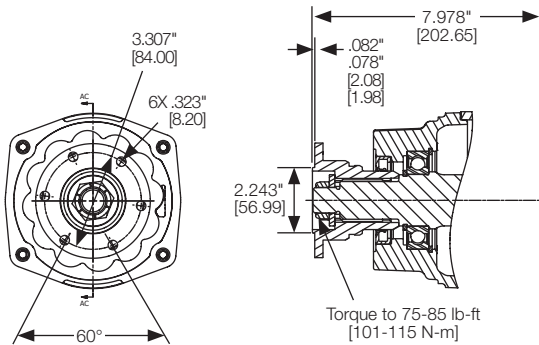
CAUTION: All pump mounting dimensions shown are compiled to conform to SAE/DIN standards; however it shall be the responsibility of the user to determine the correct fit at the time the pump is mounted to the PTO. Therefore carefully check the shaft and key or spline engagement.

Output Options

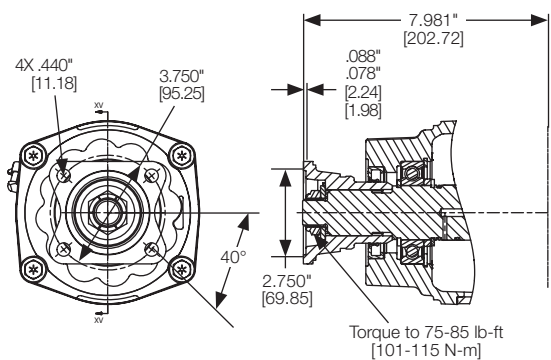
Bill of Materials – Driveline Output



AB Output Option DIN 120 Flange		
Part Number	Description	Qty.
3-P-1068	Output Shaft 10T Straight.....	1
21-P-932	Bearing Cap	1
28-P-211	Oil Seal (3.001" x 2.000" x .375").....	1
379558	Companion Flange	1
380486	Thin Nylon Lock Nut (.875"-14).....	1
4-P-191	Spacer (.885" x 1.750" x .188")	1
380563-28	Bearing Cap Bolts	4
28-P-329	O-ring (5.487" x .103").....	1

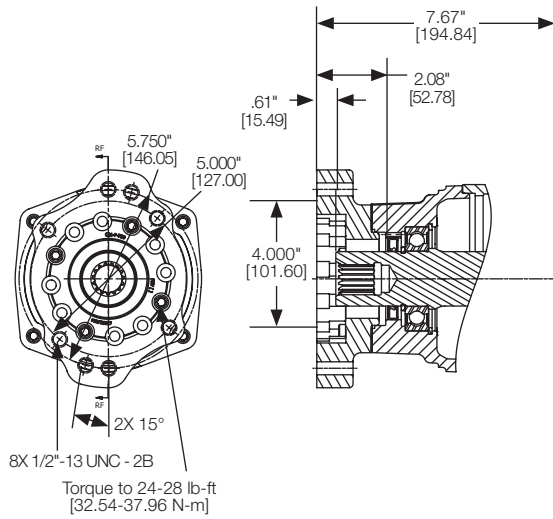


AC Output Option DIN 100 Flange		
Part Number	Description	Qty.
3-P-1068	Output Shaft 10T Straight.....	1
21-P-932	Bearing Cap	1
28-P-211	Oil Seal (3.001" x 2.000" x .375").....	1
379742	Companion Flange	1
380486	Thin Nylon Lock Nut (.875"-14).....	1
4-P-191	Spacer (.885" x 1.750" x .188")	1
380563-28	Bearing Cap Bolts	4
28-P-329	O-ring (5.487" x .103").....	1

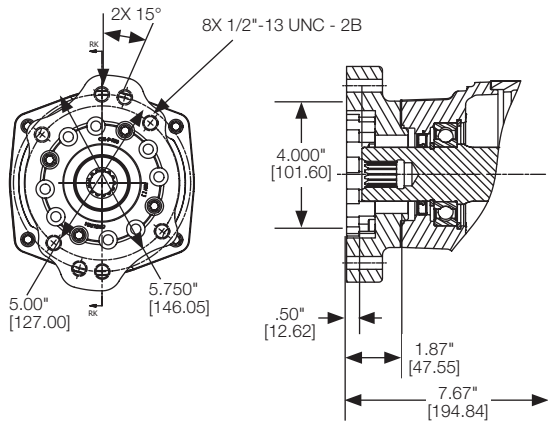


XV Output Option 1-1/2" - 10T Spline Shaft with 1410 Series Flange		
Part Number	Description	Qty.
3-P-1068	Output Shaft 10T Straight.....	1
380563-28	Bearing Cap Bolts	4
21-P-932	Bearing Cap	1
28-P-211	Oil Seal (3.001" x 2.000" x .375").....	1
380503	1410 Series Companion Flange.....	1
380076-13	Washer (.950" x 1.762" x .157").....	1
380486	Thin Nylon Lock Nut (.875"-14).....	1
28-P-329	O-ring (5.487" x .103").....	1

Bill of Materials — Pump Mount



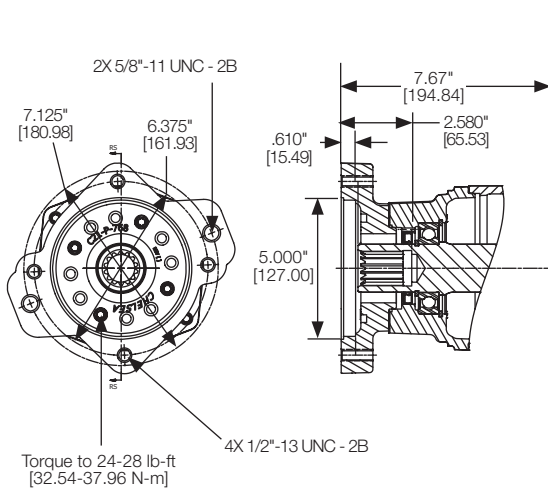
RF Output Option Rotatable SAE B 2 or 4-Bolt Flange, SAE BB Shaft (1" - 15T)		
Part Number	Description	Qty.
3-P-1099	Output Shaft (1" - 15T)	1
21-P-933	Bearing Cap	1 or
21-P-934	Bearing Cap (Wet Spline Only)	1
28-P-267	Oil Seal (2.627" x 1.750" x .312")	1
328170-216X	Cap Screw Kit (378447-8 Qty. 4)	1
35-P-101	Wet Spline Bearing Cap Gasket (Ships w/ Kit)	1
21-P-731	Pump Flange (Ship Loose w/ Unit)	1
69-P-18	Tag (Wet Spline Only)	1
380563-28	Bearing Cap Bolts	4
28-P-329	O-ring (5.487" x .103")	1
WET SPLINE LOOSE PARTS		
329700X	Wet Spline Loose Parts Kit	1
329699-1X	Hose Assembly	1
329658X	Cover Kit	1



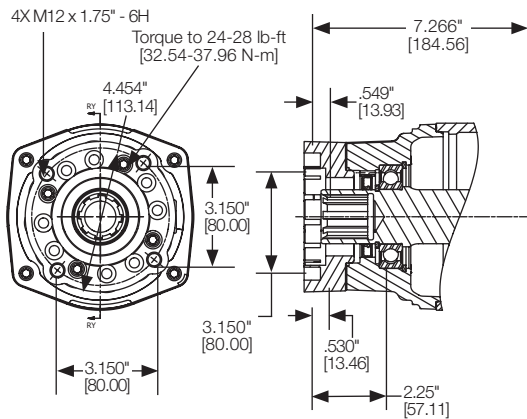
RK Output Option Rotatable SAE B 2 or 4-Bolt Flange, SAE B (7/8" - 13T)		
Part Number	Description	Qty.
3-P-1155	Output Shaft	1
21-P-933	Bearing Cap	1 or
21-P-934	Bearing Cap (Wet Spline Only)	1
28-P-267	Oil Seal (2.627" x 1.750" x .312")	1
328170-216X	Cap Screw Kit (378447-8 Qty. 4)	1
35-P-101	Wet Spline Bearing Cap Gasket (Ships w/ Kit)	1
21-P-731	Pump Flange (Ship Loose w/ Unit)	1
69-P-18	Tag (Wet Spline Only)	1
380563-28	Bearing Cap Bolts	4
28-P-329	O-ring (5.487" x .103")	1
WET SPLINE LOOSE PARTS		
329700X	Wet Spline Loose Parts Kit	1
329699-1X	Hose Assembly	1
329658X	Cover Kit	1

Output Options

Bill of Materials — Pump Mount (Continued)



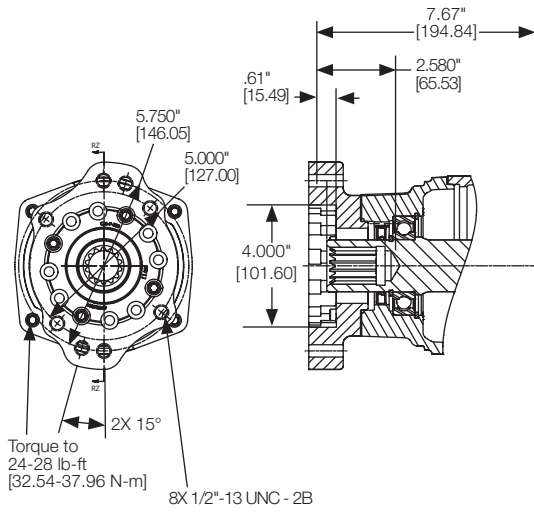
RS Output Option Rotatable SAE C 2 or 4-Bolt Flange, SAE C (1-1/4" - 14T)		
Part Number	Description	Qty.
3-P-1070	Output Shaft (1-1/4" - 14T).....	1
21-P-933	Bearing Cap	1 or
21-P-934	Bearing Cap (Wet Spline Only).....	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
328170-216X	Cap Screw Kit (378447-8 Qty. 4).....	1
35-P-101	Wet Spline Bearing Cap Gasket (Ships w/ Kit)	1
21-P-769	Pump Flange (Ship Loose w/ Unit).....	1
69-P-18	Tag (Wet Spline Only).....	1
380563-28	Bearing Cap Bolts	4
28-P-329	O-ring (5.487" x .103").....	1
WET SPLINE LOOSE PARTS		
329744X	Wet Spline Loose Parts Kit	1
329699-1X	Hose Assembly	1
329654X	Cover Kit	1



RY Output Option Rotatable DIN 5462 8T Shaft		
Part Number	Description	Qty.
3-P-1071	Output Shaft DIN 8T.....	1
21-P-933	Bearing Cap	1 or
21-P-934	Bearing Cap (Wet Spline Only).....	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
328170-216X	Cap Screw Kit (378447-8 Qty. 4).....	1
35-P-101	Wet Spline Bearing Cap Gasket (Ships w/ Kit)	1
21-P-771	Pump Flange (Ship Loose w/ Unit).....	1
69-P-18	Tag (Wet Spline Only).....	1
380563-28	Bearing Cap Bolts	4
28-P-329	O-ring (5.487" x .103").....	1
WET SPLINE LOOSE PARTS		
329742X	Wet Spline Loose Parts Kit	1
329699-1X	Hose Assembly	1
329659X	Cover Kit	1

Output Options

Bill of Materials — Pump Mount (Continued)



RZ Output Option Rotatable SAE B 2 or 4-Bolt Flange SAE C Shaft (1-1/4" - 14T)		
Part Number	Description	Qty.
3-P-1070	Output Shaft (1-1/4" - 14T).....	1
21-P-933	Bearing Cap	1 or
21-P-934	Bearing Cap (Wet Spline Only).....	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
328170-216X	Cap Screw Kit (378447-8 Qty. 4).....	1
35-P-101	Wet Spline Bearing Cap Gasket (Ships w/ Kit).....	1
21-P-731	Pump Flange (Ship Loose w/ Unit).....	1
69-P-18	Tag (Wet Spline Only).....	1
380563-28	Bearing Cap Bolts	4
28-P-329	O-ring (5.487" x .103").....	1
WET SPLINE LOOSE PARTS		
329700X	Wet Spline Loose Parts Kit	1
329699-1X	Hose Assembly	1
329658X	Cover Kit	1

Part Number	Description	Qty.
SERVICE KITS		
329071-59X	Bearing Kit (878 Series)	
378263	Internal Lockring.....	1
379668	Lockring	2
379555	Lockring	1
550311	Ball Bearing (1.770" x 3.346" x .748").....	1
561026	Tapered Bearing Cone (1.181" x .984").....	2
561047	Needle Roller Bearing (1.500" x 2.062" x 1.250")	1
14-P-82-1	Spacer (1.191" x 1.750" x .080")	2
14-P-82-2	Spacer (1.191" x 1.750" x .085")	1
14-P-82-3	Spacer (1.191" x 1.750" x .090")	1
14-P-82-4	Spacer (1.191" x 1.750" x .094")	1
329071-60X	Bearing Kit (871 Series) (XV, AB, AC, RK, RS, RZ, RY)	
379746	Lockring	1
378263	Internal Lockring.....	1
379555	Lockring	1
560972	Needle Roller Bearing Assembly (1.500" x 1.875" x 1.000")	1
550311	Ball Bearing (1.770" x 3.346" x .748").....	1
561026	Tapered Cone Bearing (1.181" x .984").....	2
561047	Needle Roller Bearing (1.500" x 2.062" x 1.250")	1
14-P-82-1	Spacer (1.191" x 1.750" x .080")	2
14-P-82-2	Spacer (1.191" x 1.750" x .085")	1
14-P-82-3	Spacer (1.191" x 1.750" x .090")	1
14-P-82-4	Spacer (1.191" x 1.750" x .094")	1
329071-61X	Bearing Kit - (BC, BB, BV) (871 Series)	
378576	Lockring	1
378263	Internal Lockring.....	1
379555	Lockring	1
378895	Lockring	1
560972	Needle Roller Bearing Assembly (1.500" x 1.875" x 1.000")	1
561048	Cylindrical Roller Bearing Assembly (1.378" x 2.835" x .670")	1
561026	Tapered Cone Bearing (1.181" x .984").....	2
561047	Needle Roller Bearing (1.500" x 2.062" x 1.250")	1
14-P-82-1	Spacer (1.191" x 1.750" x .080")	2
14-P-82-2	Spacer (1.191" x 1.750" x .085")	1
14-P-82-3	Spacer (1.191" x 1.750" x .090")	1
14-P-82-4	Spacer (1.191" x 1.750" x .094")	1

Part Number	Description	Qty.
SERVICE KITS		
329071-79X	Gasket & Seal Kit (871/878 Series)	
22-P-112	Valve Cap Gasket	1
22-P-151	Shim Gasket.....	1
28-P-42	O-ring (1.051" x .070").....	1
28-P-119	Oil Seal (1.379" x .875" x .250").....	1
28-P-211	Oil Seal (3.001" x 2.000" x .375").....	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
28-P-285	O-ring (1.597" x .103").....	2
28-P-178	O-ring (4.359" x .138").....	1
35-P-101	Wet Spline Bearing Cap Gasket.....	1
35-P-74	Shim Gasket.....	1
28-P-329	O-ring (5.487" x .103").....	1
329071-83X	Solenoid Valve Seal Kit (871 Series)	
2016V-7	O-ring (.614" x .070").....	1
2017V-7	O-ring (.676" x .070").....	1
2020V-7	O-ring (.864" x .070").....	2
329678X	Inner Hub Gear & Clutch Plates Kit (871 Series)	
379485	Friction Disc.....	11
380065	Clutch Plate.....	10
2-P-858	Clutch Gear.....	1

Continued on Next Page

BOMs in each kit group are listed in order based on part number.

Kits Bill of Materials

Part Number	Description	Qty.
STUD KITS		
7170-86X	Mounting Kit (FJ, QT, LN Gear) (871, 878 Series)	
379451	Pilot Screw (M10-1.5 x .984").....	2
379453-10	Cap Screw FC (M10-1.5 x 1.378").....	8
379486	90° Elbow (.438"-20)	1
SK-355	Mounting Kit Installation Card	1
7170-117X	Mounting Kit (KV Gear) (871, 878 Series)	
379451	Pilot Screw (M10-1.5 x .984").....	2
379453-10	Cap Screw FC (M10-1.5 x 1.378").....	8
379812	Male Connector (.438"-20)	1

Part Number	Description	Qty.
INSTALLATION INSTRUCTIONS KITS		
328948-9X	Gasket & Installation Instructions Kit (All) (871, 878 Series)	
328946X	Caution Label Kit	1
35-P-74	Shim Gasket.....	1
379085-2	Instructions Label	1
379624	Product Warranty Card	1
Owner's Manual	HY25-1380-M1/US	1
Safety Guide	HY25-1002-M1/US	1

Continued on Next Page

BOMs in each kit group are listed in order based on part number.

Part Number	Description	Qty.
HYDRAULIC INSTALLATION KITS		
329024-12X	12VDC Installation Kit (FJ, QT Gear, B Shift) (871 Series)	
380672	Female Spade Connector	3
380668X	Bracket & Label Assembly	1
379061	Plastic Wire Tie	6
379252	Electrical Speed Limiter Butt Connector.....	2
379257	Electrical Speed Limiter Connector	1
379265	Grommet	1
75-P-45-12	Electrical Light Rocker Switch.....	1
SK-347	Installation Sketch	1
379502	Pressure Switch	1
379504	Electrical Valve Connector	1
379900	Fuse Holder Assembly.....	1
379254-17	Electrical Wire Fork 14G	1
329024-24X	24VDC Installation Kit (FJ, QT Gear, D Shift) (871 Series)	
75-P-45-24	Electical Rocker Switch 24VDC	1
380668X	Bracket & Label	1
379061	Plastic Wire Tie	6
379252	Electrical Speed Limiter Butt Connector.....	2
379257	Electrical Speed Limiter Connector	1
379265	Grommet	1
380672	Female Spade Connector (.250").....	3
SK-347	Installation Sketch	1
379502	Pressure Switch	1
379504	Valve Connector	1
379900	Fuse Holder Assembly.....	1
379254-17	Electrical Wire Fork 14G	1
329076X	Installation EOC Kit (FJ, QT Gear, K, L Shift) (871 Series)	
379061X	Plastic Wire Tie Assembly	1
379252	Electrical Speed Limiter Butt Connector.....	2
379257	Electrical Speed Limiter Connector	1
379265	Grommet with Speed Control	1
379502	Pressure Switch	1
379504	Connector and WireValve	1
75-P-46X	Wire and Connections Kit	1

Part Number	Description	Qty.
HYDRAULIC INSTALLATION KITS (Continued)		
329237-12X	12VDC Remote Valve Installation w/o EOC Kit (FJ, QT Gear, G Shift) (871 Series)	
380672	Female Spade Connector (.250").....	3
329231X	Valve Connector Wire Assembly	1
378881	Rocker Switch	1
379252	Electrical Speed Limiter Butt Connector.....	2
379257	Electrical Speed Limiter Connector	1
379258	Mounting Bracket	1
379265	Grommet with Speed Control	1
75-P-45-12	Electrical Rocker Switch 12VDC	1
380668X	Bracket & Label Assembly	1
379449	Male Connector (.438"-20 x .250"-18).....	1
379502	Pressure Switch	1
379900	Fuse Holder Assembly.....	1
379686-1	Hydraulic Solenoid Valve Shifter 12VDC.....	1
500357-7	Lock Washer (.194" x .337" x .047")	2
500457-6	Round Head Slotted Screw (.190"-32 x .438").....	2
379711	Tee (.375"-24 x .438"-20 x .438"-20).....	1
379700	Swivel Nut Tee (.438"-20)	1
380010	Union Female SAE Swivel Nut (.438"-20).....	1
379131-1	Pipe Reducer Bushing (.125"-27 x .250"-18).....	1
SK-432	Remote Valve Installation Sketch	1
379254-17	Electrical Fork Wire	1
75-P-46X	Wire and Connectors Kit.....	1
329237-24X	24VDC Remote Valve Installation w/o EOC Kit (FJ, QT Gear, H Shift) (871 Series)	
75-P-45-24	Electrical Rocker Switch 24VDC	1
329231X	Valve Connector Wire Assembly	1
380672	Female Spade Connector (.250")	3
379005	Indicator Light 24VDC	1
379252	Electrical Speed Limiter Butt Connector	3
379257	Electrical Speed Limiter Connector	1
379258	Mounting Bracket	1
379265	Grommet with Speed Control	1
380668X	Bracket and Label Assembly	1
75-P-46X	Wire and Connections Kit	1
379449	Male Connector (.438"-20 x .250"-18).....	1
379502	Pressure Switch	1
379900	Fuse Holder Assembly.....	1
379686-2	Solenoid Valve Hydraulic Shift 24VDC.....	1
500357-7	Lock Washer (.194" x .337" x .047")	2
500457-6	Round Head Slotted Screw (.190"-32 x .438").....	2
379711	Tee (.375"-24 x .438"-20 x .438"-20).....	1
379700	Swivel Nut Tee (.438"-20)	1
380010	Union Female SAE Swivel Nut (.438"-20).....	1
379131-1	Pipe Reducing Bushing (.125"-27 x .250"-18).....	1
SK-432	Remote Solenoid Installation Sketch.....	1
379254-17	Fork Terminal	1

Continued on Next Page

BOMs in each kit group are listed in order based on part number.

Part Number	Description	Qty.
HYDRAULIC INSTALLATION KITS (Continued)		
329443-12X	12VDC Installation (KV Gear, B Shift) (871 Series)	
378881	Rocker Switch	1
378978	Indicator Light 12VDC	1
379061X	Plastic Wire Tie	1
379252	Electrical Butt Connector	1
379257	Electrical Connector	1
379265	Grommet	1
379306	Electrical Fork Terminal	3
379336	Electrical Air Shifter Switch Bracket	1
379502	Pressure Switch	1
379928	Valve & Wire Connector	1
379900	Fuse Holder Assembly	1
329443-24X	24VDC Installation Kit (KV Gear, D Shift) (871 Series)	
378881	Rocker Switch	1
379005	Indicator Light 24VDC	1
379061X	Plastic Wire Tie	1
379252	Electrical Butt Connector	1
379257	Electrical Connector	1
379265	Grommet	3
379306	Electrical Fork Terminal	1
379336	Electrical Air Shifter Switch Bracket	1
379502	Pressure Switch	1
379928	Valve & Wire Connector	1
379900	Fuse Holder Assembly	1
329444X	12VDC & 24VDC Installation EOC Kit (KV Gear, K, L Shift) (871 Series)	
379061X	Plastic Wire Tie	1
379252	Electrical Butt Connector	1
379257	Electrical Connector	1
379265	Grommet	1
379502	Pressure Switch	1
379928	Valve & Wire Connector	1
329445-12X	12VDC Remote Valve Installation Kit (KV Gear, G Shift) (871 Series)	
329446-12X	Remote Mount Valve Assembly 12VDC	1
378881	Rocker Switch	1
378978	Indicator Light 12VDC	1
379252	Electrical Butt Connector	1
379257	Electrical Connector	1
379265	Grommet	1
379306	Electrical Fork Terminal	3
379336	Electrical Air Shift Switch Bracket	1
379502	Pressure Switch	1
379812	Male Connector (.438"-20)	3
379900	Fuse Holder Assembly	1
379928	Valve & Wire Connector	1
380010	Female Union SAE Swivel Nut (.438"-20)	1
379700	Swivel Nut Tee (.438"-20)	1
379711	Tee (.375"-24 x .438"-20 x .438"-20)	1

Part Number	Description	Qty.
HYDRAULIC INSTALLATION KITS (Continued)		
329445-24X	24VDC Remote Valve Installation Kit (KV Gear, H Shift) (871 Series)	
329446-24X	Remote Mount Valve Assembly 24VDC	1
378881	Rocker Switch	1
379005	Indicator Light 24VDC	1
379252	Electrical Butt Connector	1
379257	Electrical Connector	1
379265	Grommet	1
379306	Electrical Fork Terminal	3
379336	Electrical Air Shifter Switch Bracket	1
379502	Pressure Switch	1
379812	Male Connector (.438"-20)	3
379900	Fuse Holder Assembly	1
379928	Valve & Wire Connector	1
380010	Female Union SAE Swivel Nut (.438"-20)	1
379700	Swivel Nut Tee (.438"-20)	1
379711	Tee (.375"-24 x .438"-20 x .438"-20)	1
329650X	Electronic Overspeed Control (K, L Shift) (871 Series)	
328923-10X	Speed Sensor Cable - 10 ft	1
	(1/4"-20) NC Hex Bolt x 1" Lg.	2
	Flat Washer (.250")	2
	Lock Washer (.250")	2
	Hex Nut (.250")	2
Owner's Manual	HY25-1650-M1/US (5.500" x 7.500")	1
20071-3	EOC Unit (NSS)	1

Continued on Next Page

BOMs in each kit group are listed in order based on part number.

Part Number	Description	Qty.
SHIFTER CONVERSION KITS		
329175-12X	12VDC/24VDC EOC Conversion Kit (All Except KV Gear) (871 Series)	
28-P-171	O-ring (.644" x .087").....	1
329650X	Speed Limiter Assembly 12VDC.....	1
329076X	12VDC & 24VDC Installation Kit w/ EOC.....	1
379243	Speed Sensor	1
329175-15X	24VDC EOC Conversion Kit	
28-P-171	O-ring (.644" x .087").....	1
329650X	EOC Controller	1
329076X	12VDC & 24VDC Installation Kit w/ EOC.....	1
379243	Speed Sensor	1
329354-12X	12VDC Remote Hyd Valve Conversion Kit (871 Series)	
22-P-112	Valve Cap Gasket	1
500457-6	Round Head Slotted Screw (.191"-32 x .438").....	2
500357-7	Lock washer (.337" x .190" x .047").....	2
379686-1	Solenoid Valve Shifter 12VDC	1
379449	Male Connector (.438"-20 x .250"-18).....	1
379258	Solenoid Valve Mounting Bracket.....	1
379564-2	Shipping Cap	2
329231X	Valve Connector and Wiring.....	1
329230X	Wire & Butt Connector.....	1
328075X	Hose Assembly (36")	1
379700	Swivel Nut Tee (.438"-20)	1
380010	Female SAE Swivel Nut (.438"-20) Union	1
379486	90° Elbow (.438"-20)	1
329403X	Seal Cap Assembly	1
379711	Tee (.375"-24 x .438"-20 x .438"-20).....	1
379131-1	Pipe Reducer Bushing.....	1
SK-432	Remote Solenoid 12VDC Install Sketch	1
329057-4X	Hose Assembly (16.75")	1
329354-24X	24VDC Remote Hyd Valve Conversion Kit (871 Series)	
500457-6	Round Head Slotted Screw (.190"-32 x .438").....	2
500357-7	Lock washer (.337" x .190" x .047").....	2
379686-2	Hydraulic Shift 24VDC Solenoid Valve.....	1
379449	Male Connector (.438"-20 x .250"-18).....	1
379258	Solenoid Valve Mounting Bracket.....	1
379564-2	Shipping Cap	2
329231X	Valve & Wiring Connector	1
329230X	Electrical Wire and Butt Connector	1
328075X	Hose Assembly (36")	1
22-P-112	Valve Cap Gasket	1
379700	Swivel Nut Tee (.438"-20)	1
380010	Female SAE Swivel Nut (.438"-20) Union	1
379486	90° Elbow (.438"-20)	1
329403X	Seal Cap Assembly	1
379711	Tee (.375"-24 x .438"-20 x .438"-20).....	1
379131-1	Pipe Reducer Bushing.....	1
SK-432	Remote Solenoid 12VDC Install Sketch	1
329057-4X	Hose Assembly (16.75")	2

Part Number	Description	Qty.
SHIFTER CONVERSION KITS (Continued)		
329448X-12X	EOC Conversion Kit (KV Gear) (871 Series)	
28-P-171	O-ring (.644" x .087").....	1
379243	Air Cylinder Cover.....	1
329650X	Speed Limiter Assembly 12VDC.....	1
329444X	12VDC & 24VDC Installation Kit w/ EOC.....	1
329448X-24X	EOC Conversion Kit (KV Gear) (871 Series)	
28-P-171	O-ring (.644" x .087").....	1
379243	Air Cylinder Cover.....	1
329650X	Speed Limiter Assembly 12VDC.....	1
329444X	12VDC & 24VDC Installation Kit w/ EOC.....	1

Continued on Next Page

BOMs in each kit group are listed in order based on part number.

Part Number	Description	Qty.
OUTPUT CONVERSION KITS		
329160-120X	Conversion Kit (XV to SV) (871 Series)	
3-P-1161	Output Shaft 10T Straight.....	1
22-P-151	Gasket Shim.....	1
28-P-211	Oil Seal (3.001" x 2.000" x .375").....	1
28-P-285	O-ring (1.597" x .103").....	2
380563-14	Hex Flange Cap Screw (3/8"-16 x 1.500").....	4
379555	Lockring	2
379746	Lockring	1
380069	Lockring	1
380076-13	Hardened Flat Washer (.950" x 1.762" x .157")	1
380486	Thin Nylon Lock Nut (.875"-14).....	1
380503	1410 Series Companion Flange.....	1
28-P-329	O-ring (5.487" x .103").....	1
329160-123X	Conversion Kit (XV to BA) (871 Series)	
378576	Lockring	2
378895	Lockring	1
379746	Lockring	1
379977	Spring Pin (.187" x .625")	1
380069	Lockring	1
380081	1410 Series Companion Flange.....	1
550010	Ball Bearing (1.378" x 2.835" x .669").....	1
21-P-884	Bearing Cap	1
22-P-151	Gasket Shim.....	1
23-P-73	Drag Brake Bearing Cap Spacer.....	1
28-P-212	Oil Seal (2.506" x 1.750" x .315").....	1
28-P-244	O-ring (1.174" x .103").....	4
31-P-113	Thrust Washer (1.385" x 3.125" x .125").....	1
329410X	Brake Assembly	1
378435-7	Hex Head Cap Screw (.625"-11 x 1.250")	1
380563-28	Hex Flange Head Cap Screw (.375"-16 x 3.500").....	4
328170-216X	Bag Kit	1
37-P-60	Spring (2.531" x 2.130" x .172")	1
3-P-1072	Output Shaft 10T Straight.....	1
4-P-130	Spacer (.640" x 1.620" x .188")	1
4-P-186	Spacer (1.385" x 1.750" x .365")	1
28-P-329	O-ring (5.487" x .103").....	1

Part Number	Description	Qty.
OUTPUT CONVERSION KITS (Continued)		
329160-130X	Conversion Kit (XV to AB) (871 Series)	
379555	Lockring	2
379558	Companion Flange DIN 120	1
379746	Lockring	1
380069	Lockring	1
380486	Thin Nylon Lock Nut (.875"-14).....	1
22-P-151	Gasket Shim.....	1
28-P-211	Oil Seal (3.001" x 2.000" x .375").....	1
28-P-285	O-ring (1.597" x .103").....	2
380563-14	Hex Flange Head Cap Screw (.375"-16 x 1.500").....	4
380076-13	Hardened Flat Washer (.950" x 1.762" x .157")	1
3-P-1065	Output Shaft 10T Straight.....	1
550311	Ball Bearing (1.770" x 3.346" x .748").....	1
378263	Lockring	1
28-P-329	O-ring (5.487" x .103").....	1
329160-134X	Conversion Kit (XV to AC) (871 Series)	
379555	Lockring	2
379742	Companion Flange DIN 100	1
379746	Lockring	1
380069	Lockring	1
380486	Thin Nylon Lock Nut (.875"-14).....	1
22-P-151	Gasket Shim.....	1
28-P-211	Oil Seal (3.001" x 2.000" x .375").....	1
28-P-285	O-ring (1.597" x .103").....	2
380563-14	Hex Flange Head Cap Screw (.375"-16 x 1.500").....	4
380076-13	Hardened Flat Washer (.950" x 1.762" x .157")	1
3-P-1065	Output Shaft 10T Straight.....	1
550311	Ball Bearing (1.770" x 3.346" x .748").....	1
378263	Lockring	1
28-P-329	O-ring (5.487" x .103").....	1

Continued on Next Page

BOMs in each kit group are listed in order based on part number.

Part Number	Description	Qty.
OUTPUT CONVERSION KITS (Continued)		
329160-140X	Conversion Kit (XV to BB) (871 Series)	
378576	Lockring	2
378895	Lockring	1
379746	Lockring	1
379977	Spring Pin (.187" x .625")	1
380069	Lockring	1
380377	Companion Flange DIN 120	1
561048	Cylindrical Roller Bearing Assembly (1.378" x 2.835" x .670")	1
21-P-884	Bearing Cap	1
22-P-151	Gasket Shim	1
23-P-73	Drag Brake Bearing Cap Spacer	1
28-P-212	Oil Seal (2.506" x 1.750" x .315")	1
28-P-244	O-ring (1.174" x .103")	4
31-P-113	Thrust Washer (1.385" x 3.125" x .125")	1
329410X	Brake Assembly	1
378435-7	Hex Head Cap Screw (.625"-11 x 1.250")	1
380563-28	Hex Flange Head Cap Screw (.375"-16 x 3.500")	4
328170-216X	Bag Kit	1
37-P-60	Spring (2.531" x 2.130" x .172")	1
3-P-1072	Output Shaft 10T Straight	1
4-P-130	Spacer (.640" x 1.620" x .188")	1
4-P-186	Spacer (1.385" x 1.750" x .365")	1
28-P-329	O-ring (5.487" x .103")	1
329160-141X	Conversion Kit (XV to BC) (871 Series)	
378576	Lockring	2
378895	Lockring	1
379746	Lockring	1
379977	Spring Pin (.187" x .625")	1
380069	Lockring	1
380378	Companion Flange DIN 100	1
561048	Cylindrical Roller Bearing Assembly (1.378" x 2.835" x .670")	1
21-P-884	Bearing Cap	1
22-P-151	Gasket Shim	2
23-P-73	Drag Brake Bearing Cap Spacer	1
28-P-212	Oil Seal (2.506" x 1.750" x .315")	1
28-P-244	O-ring (1.174" x .103")	4
31-P-113	Thrust Washer (1.385" x 3.125" x .125")	1
329410X	Brake Assembly	1
378435-7	Hex Head Cap Screw (.625"-11 x 1.250")	1
380563-28	Hex Flange Head Cap Screw (.375"-16 x 3.500")	4
328170-216X	Bag Kit	1
37-P-60	Spring (2.531" x 2.130" x .172")	1
3-P-1072	Output Shaft 10T Straight	1
4-P-130	Spacer (.640" x 1.620" x .188")	1
4-P-186	Spacer (1.385" x 1.750" x .365")	1
28-P-329	O-ring (5.487" x .103")	1

Part Number	Description	Qty.
OUTPUT CONVERSION KITS (Continued)		
329160-147X	Conversion Kit (XV to SB) (871 Series)	
379555	Lockring	1
379558	Companion Flange DIN 120	1
379746	Lockring	1
380069	Lockring	1
380486	Thin Nylon Lock Nut (.875"-14)	1
22-P-151	Gasket Shim	1
28-P-211	Oil Seal (3.001" x 2.000" x .375")	1
28-P-285	O-ring (1.597" x .103")	2
380563-14	Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
380076-13	Hardened Flat Washer (.950" x 1.762" x .157")	1
3-P-1161	Output Shaft 10T Straight	1
550311	Ball Bearing (1.770" x 3.346" x .748")	1
378263	Lockring	1
28-P-329	O-ring (5.487" x .103")	1
329160-148X	Conversion Kit (XV to SC) (871 Series)	
379555	Lockring	1
379742	Companion Flange DIN 100	1
379746	Lockring	1
380069	Lockring	1
380486	Thin Nylon Lock Nut (.875"-14)	1
22-P-151	Gasket Shim	1
28-P-211	Oil Seal (3.001" x 2.000" x .375")	1
28-P-285	O-ring (1.597" x .103")	2
380563-14	Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
380076-13	Hardened Flat Washer (.950" x 1.762" x .157")	1
550311	Ball Bearing (1.770" x 3.346" x .748")	1
378263	Lockring	1
3-P-1161	Output Shaft 10T Straight	1
28-P-329	O-ring (5.487" x .103")	1
329160-154X	Conversion Kit (XV to RK DRY) (871 Series)	
21-P-933	Bearing Cap	1
28-P-267	Oil Seal (2.627" x 1.750" x .312")	1
21-P-731	Pump Flange	1
3-P-1126	Output Shaft (7/8" - 13T)	1
28-P-285	O-ring (1.597" x .103")	2
379555	Lockring	2
380069	Lockring	1
28-P-329	O-ring (5.487" x .103")	1
328170-216X	Bag Kit	1
380563-14	Hex Flange Head Cap Screw (3/8"-16 x 1.500")	4
379746	Lockring	1
379688	Spline Lubricant	1
550311	Ball Bearing (1.770" x 3.346" x .748")	1
378263	Lockring	1

Continued on Next Page

BOMs in each kit group are listed in order based on part number.

Kits Bill of Materials

**Parts List
871/878 Series**

Part Number	Description	Qty.
OUTPUT CONVERSION KITS (Continued)		
329160-155X	Conversion Kit (XV to RK WET) (871 Series)	
21-P-934	Bearing Cap	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
21-P-731	Pump Flange.....	1
329699-1X	Overall Hose Assembly.....	1
329700X	Wet Spline Parts Kit.....	1
329658X	Cover Kit	1
3-P-1126	Output Shaft (7/8" - 13T)	1
28-P-285	O-ring (1.597" x .103").....	2
379555	Lockring	2
380069	Lockring	1
28-P-329	O-ring (5.487" x .103").....	1
380563-14	Hex Flange Head Cap Screw (3/8"-16 x 1.500").....	4
328170-216X	Bag Kit	1
379746	Lockring	1
550311	Ball Bearing (1.770" x 3.346" x .748").....	1
378263	Lockring	1
329160-156X	Conversion Kit (XV to RF DRY) (871 Series)	
3-P-1127	Output Shaft (1" - 15T)	1
28-P-329	O-ring (5.487" x .103").....	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
28-P-285	O-ring (1.597" x .103").....	2
328170-216X	Bag Kit	1
380563-14	Hex Flange Head Cap Screw (.375"-16 x 1.500").....	4
379555	Lockring	2
379746	Lockring	1
380069	Lockring	1
21-P-933	Bearing Cap	1
21-P-731	Pump Flange.....	1
379688	Spline Lubricant.....	1
550311	Ball Bearing (1.770" x 3.346" x .748").....	1
378263	Lockring	1
329160-157X	Conversion Kit (XV to RF WET) (871 Series)	
379555	Lockring	2
379746	Lockring	1
380069	Lockring	1
21-P-934	Bearing Cap	1
28-P-329	O-ring (5.487" x .103").....	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
28-P-285	O-ring (1.597" x .103").....	2
21-P-731	Pump Flange.....	1
329658X	Cover Kit	1
329699-1X	Overall Hose Assembly.....	1
329700X	Wet Spline Parts Kit.....	1
328170-216X	Bag Kit	1
380563-14	Hex Flange Head Cap Screw (.375"-16 x 1.500").....	4
3-P-1127	Output Shaft (1" - 15T)	1
550311	Ball Bearing (1.770" x 3.346" x .748").....	1
378263	Lockring	1

Part Number	Description	Qty.
OUTPUT CONVERSION KITS (Continued)		
329160-158X	Conversion Kit (XV to RS DRY) (871 Series)	
3-P-1066	Output Shaft (1-1/4" - 14T).....	1
28-P-285	O-ring (1.597" x .103").....	2
379555	Lockring	1
380069	Lockring	1
21-P-933	Bearing Cap	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
328170-216X	Bag Kit	1
21-P-769	Pump Flange.....	1
28-P-329	O-ring (5.487" x .103").....	1
380563-14	Hex Flange Head Cap Screw (.375"-16 x 1.500").....	4
379746	Lockring	1
379688	Spline Lubricant.....	1
550311	Ball Bearing (1.770" x 3.346" x .748").....	1
378263	Lockring	1
329160-159X	Conversion Kit (XV to RS WET) (871 Series)	
3-P-1066	Output Shaft (1-1/4" - 14T).....	1
28-P-285	O-ring (1.597" x .103").....	2
379555	Lockring	1
380069	Lockring	1
21-P-934	Bearing Cap	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
328170-216X	Bag Kit	1
21-P-769	Pump Flange.....	1
329699-1X	Overall Hose Assembly.....	1
329744X	Wet Spline Parts Kit.....	1
329654X	Cover Kit	1
28-P-329	O-ring (5.487" x .103").....	1
380563-14	Hex Flange Head Cap Screw (.375"-16 x 1.500").....	4
379746	Lockring	1
550311	Ball Bearing (1.770" x 3.346" x .748").....	1
378263	Lockring	1
329160-160X	Conversion Kit (XV to RY DRY) (871 Series)	
3-P-1067	Output Shaft DIN 8T.....	1
28-P-285	O-ring (1.597" x .103").....	2
379555	Lockring	2
380069	Lockring	1
21-P-933	Bearing Cap	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
21-P-771	Pump Flange.....	1
28-P-329	O-ring (5.487" x .103").....	1
328170-216X	Bag Kit	1
380563-14	Hex Flange Head Cap Screw (.375"-16 x 1.500").....	4
379746	Lockring	1
379688	Spline Lubricant.....	1
550311	Ball Bearing (1.770" x 3.346" x .748").....	1
378263	Internal Lockring.....	1

Continued on Next Page

BOMs in each kit group are listed in order based on part number.

Part Number	Description	Qty.
OUTPUT CONVERSION KITS (Continued)		
329160-161X	Conversion Kit (XV to RY WET) (871 Series)	
379746	Lockring	1
550311	Ball Bearing (1.770" x 3.346" x .748").....	1
378263	Internal Lockring	1
3-P-1067	Output Shaft DIN 8T	1
21-P-934	Bearing Cap	1
28-P-285	O-ring (1.597" x .103").....	2
379555	Lockring	2
380069	Lockring	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
21-P-771	Pump Flange	1
329699-1X	Overall Hose Assembly	1
329742X	Wet Spline Parts Kit	1
329659X	Conversion Kit	1
28-P-329	O-ring (5.487" x .103").....	1
328170-216X	Bag Kit	1
380563-14	Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
68-P-18	Wet Spline Tag	1
329160-162X	Conversion Kit (XV to RZ DRY) (871 Series)	
3-P-1066	Output Shaft (1-1/4" - 14T).....	1
28-P-285	O-ring (1.597" x .103").....	2
379555	Lockring	2
380069	Lockring	1
21-P-933	Bearing Cap	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
21-P-731	Pump Flange	1
28-P-329	O-ring (5.487" x .103").....	1
328170-216X	Bag Kit	1
380563-14	Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
379746	Lockring	1
379688	Spline Lubricant.....	1
550311	Ball Bearing (1.770" x 3.346" x .748").....	1
378263	Lockring	1

Part Number	Description	Qty.
OUTPUT CONVERSION KITS (Continued)		
329160-163X	Conversion Kit (XV to RZ WET) (871 Series)	
3-P-1066	Output Shaft (1-1/4" - 14T).....	1
28-P-285	O-ring (1.597" x .103").....	2
379555	Lockring	2
380069	Lockring	1
21-P-934	Bearing Cap	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
21-P-731	Pump Flange	1
329699-1X	Overall Hose Assembly	1
329700X	Wet Spline Parts Kit	1
329658X	Cover Kit	1
28-P-329	O-ring (5.487" x .103").....	1
328170-216X	Bag Kit	1
380563-14	Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
379746	Lockring	1
550311	Ball Bearing (1.770" x 3.346" x .748").....	1
378263	Lockring	1

BOMs in each kit group are listed in order based on part number.

Offer of Sale



WARNING: This product can expose you to chemicals including Lead and Lead Compounds, and Di(2-ethylhexyl)phthalate (DEHP) which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

1. Definitions. As used herein, the following terms have the meanings indicated.

Buyer: means any customer receiving a Quote for Products.

Buyer's Property: means any tools, patterns, plans, drawings, designs, specifications materials, equipment, or information furnished by Buyer, or which are or become Buyer's property.

Confidential Information: means any technical, commercial, or other proprietary information of Seller, including, without limitation, pricing, technical drawings or prints and/or part lists, which has been or will be disclosed, delivered, or made available, whether directly or indirectly, to Buyer.

Goods: means any tangible part, system or component to be supplied by Seller.

Intellectual Property Rights: means any patents, trademarks, copyrights, trade dress, trade secrets or similar rights.

Products: means the Goods, Services and/or Software as described in a Quote.

Quote: means the offer or proposal made by Seller to Buyer for the supply of Products.

Seller: means Parker-Hannifin Corporation, all divisions, subsidiaries and businesses selling products under these terms.

Seller's IP: means patents, trademarks, copyrights, or other intellectual property rights relating to the Products, including without limitation, names, designs, images, drawings, models, software, templates, information, any improvements or creations or other intellectual property developed prior to or during the relationship contemplated herein.

Services: means any services to be provided by Seller.

Software: means any software related to the Goods, whether embedded or separately downloaded.

Special Tooling: means equipment acquired by Seller or otherwise owned by Seller necessary to manufacture Goods, including but not limited to tools, jigs, and fixtures.

Terms: means the terms and conditions of this Offer of Sale.

2. Terms. All sales of Products by Seller will be governed by, and are expressly conditioned upon Buyer's assent to, these Terms. These Terms are incorporated into any Quote provided by Seller to Buyer. Buyer's order for any Products whether communicated to Seller verbally, in writing, by electronic data interface or other electronic commerce, shall constitute acceptance of these Terms. Seller objects to any contrary or additional terms or conditions of Buyer. Reference in Seller's order acknowledgement to Buyer's purchase order or purchase order number shall in no way constitute an acceptance of any of Buyer's terms or conditions of purchase. Any Quote made by Seller to Buyer shall be considered a firm and definite offer and shall not be deemed to be otherwise despite any language on the face of the Quote. Seller reserves all rights to accept or reject any purported acceptance by Buyer to Seller's Quote if such purported acceptance attempts to vary the terms of the Quote. If Seller ships Products after Buyer issues an acceptance to the Quote, any additional or different terms proposed by Buyer will not become part of the parties' business relationship unless agreed to in a writing that is signed by an authorized representative of Seller, excluding email correspondence. If the transaction proceeds without such agreement on the part of Seller, the business relationship will be

governed solely by these Terms and the specific terms in Seller's Quote.

3. Price; Payment. The Products set forth in the Quote are offered for sale at the prices indicated in the Quote. Unless otherwise specifically stated in the Quote, prices are valid for thirty (30) days and do not include any sales, use, or other taxes or duties. Seller reserves the right to modify prices for any reason and at any time by giving ten (10) days prior written notice. Unless otherwise specified by Seller, all prices are F.C.A. Seller's facility (INCOTERMS 2020). All sales are contingent upon credit approval and full payment for all purchases is due thirty (30) days from the date of invoice (or such date as may be specified in the Quote). Under any circumstances, Buyer may not withhold or suspend payment of any amounts due and payable as a deduction, set-off or recoupment of any amount, claim or dispute with Seller. Unpaid invoices beyond the specified payment date incur interest at the rate of 1.5% per month or the maximum allowable rate under applicable law. Seller reserves the right to require advance payment or provision of securities for first and subsequent deliveries if there is any doubt, in Seller's sole determination, regarding the Buyer's creditworthiness or for other business reasons. If the requested advance payment or securities are not provided to Seller's satisfaction, Seller reserves the right to suspend performance or reject the purchase order, in whole or in part, without prejudice to Seller's other rights or remedies, including the right to full compensation. Seller may revoke or shorten any payment periods previously granted in Seller's sole determination. The rights and remedies herein reserved to Seller are cumulative and in addition to any other or further rights and remedies available at law or in equity. No waiver by Seller of any breach by Buyer of any provision of these terms will constitute a waiver by Seller of any other breach of such provision.

4. Shipment; Delivery; Title and Risk of Loss. All delivery dates are approximate, and Seller is not responsible for damages or additional costs resulting from any delay. All deliveries are subject to our ability to procure materials from our suppliers. Regardless of the manner of shipment, delivery occurs and title and risk of loss or damage pass to Buyer, upon placement of the Products with the carrier at Seller's facility. Unless otherwise agreed prior to shipment and for domestic delivery locations only, Seller will select and arrange, at Buyer's sole expense, the carrier and means of delivery. When Seller selects and arranges the carrier and means of delivery, freight and insurance costs for shipment to the designated delivery location will be prepaid by Seller and added as a separate line item to the invoice. Buyer shall be responsible for any additional shipping charges incurred by Seller due to Buyer's acts or omissions. Buyer shall not return or repackage any Products without the prior written authorization from Seller, and any return shall be at the sole cost and expense of Buyer.

5. Warranty. The warranty for the Products is as follows: (i) Seller warrants that all products sold conform to the applicable Parker Chelsea standard specification for the lesser period of 2 years (24 Months) from date of service or 2-1/2 years (30 Months) from date of build (as marked on the product name plate; (ii) Services shall be performed in accordance with generally accepted practices and using the degree of care and skill that is ordinarily exercised and customary in the field to which the Services pertain and are warranted for a period of six (6) months from the date of completion of the Services; and (iii) Software is only warranted to perform in accordance with applicable specifications provided by Seller to Buyer for ninety (90) days from the date of delivery or, when downloaded by a Buyer or end-user, from the date of the initial download. All prices are based upon the exclusive limited warranty stated above, and upon the following disclaimer: **EXEMPTION CLAUSE; DISCLAIMER OF WARRANTY, CONDITIONS, REPRESENTATIONS: THIS WARRANTY IS THE SOLE AND ENTIRE WARRANTY, CONDITION, AND REPRESENTATION,**

Continued on Next Page

Offer of Sale (Continued)

PERTAINING TO PRODUCTS. SELLER DISCLAIMS ALL OTHER WARRANTIES, CONDITIONS, AND REPRESENTATIONS, WHETHER STATUTORY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THOSE RELATING TO DESIGN, NONINFRINGEMENT, MERCHANTABILITY, AND FITNESS FOR A PARTICULAR PURPOSE. SELLER DOES NOT WARRANT THAT THE SOFTWARE IS ERROR-FREE OR FAULT-TOLERANT, OR THAT BUYER'S USE THEREOF WILL BE SECURE OR UNINTERRUPTED, UNLESS OTHERWISE AUTHORIZED IN WRITING BY SELLER, THE SOFTWARE SHALL NOT BE USED IN CONNECTION WITH HAZARDOUS OR HIGH-RISK ACTIVITIES OR ENVIRONMENTS. EXCEPT AS EXPRESSLY STATED HEREIN, ALL PRODUCTS ARE PROVIDED "AS IS".

6. Claims; Commencement of Actions. Buyer shall promptly inspect all Products upon receipt. No claims for shortages will be allowed unless reported to Seller within ten (10) days of delivery. Buyer shall notify Seller of any alleged breach of warranty within thirty (30) days after the date the non-conformance is or should have been discovered by Buyer. Any claim or action against Seller based upon breach of contract or any other theory, including tort, negligence, or otherwise must be commenced within twelve (12) months from the date of the alleged breach or other alleged event, without regard to the date of discovery.

7. LIMITATION OF LIABILITY. IN THE EVENT OF A BREACH OF WARRANTY, SELLER WILL, AT ITS OPTION, REPAIR OR REPLACE THE NON-CONFORMING PRODUCTS, RE-PERFORM THE SERVICES, OR REFUND THE PURCHASE PRICE PAID WITHIN A REASONABLE PERIOD OF TIME. IN NO EVENT IS SELLER LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING ANY LOSS OF REVENUE OR PROFITS, WHETHER BASED IN CONTRACT, TORT OR OTHER LEGAL THEORY. IN NO EVENT SHALL SELLER'S LIABILITY UNDER ANY CLAIM MADE BY BUYER EXCEED THE PURCHASE PRICE PAID FOR THE PRODUCTS.

8. Confidential Information. Buyer acknowledges and agrees that Confidential Information has been and will be received in confidence and will remain the property of Seller. Buyer further agrees that it will not use Seller's Confidential Information for any purpose other than for the benefit of Seller and shall return all such Confidential Information to Seller within thirty (30) days upon request.

9. Loss to Buyer's Property. Buyer's Property will be considered obsolete and may be destroyed by Seller after two (2) consecutive years have elapsed without Buyer ordering the Products manufactured using Buyer's Property. Also, Seller shall not be responsible for any loss or damage to Buyer's Property while it is in Seller's possession or control.

10. Special Tooling. Seller may impose a tooling charge for any Special Tooling. Special Tooling shall be and remain Seller's property. In no event will Buyer acquire any interest in the Special Tooling, even if such Special Tooling has been specially converted or adapted for manufacture of Goods for Buyer and notwithstanding any charges paid by Buyer. Unless otherwise agreed, Seller has the right to alter, discard or otherwise dispose of any Special Tooling or other property owned by Seller in its sole determination at any time.

11. Security Interest. To secure payment of all sums due from Buyer, Seller retains a security interest in all Products delivered to Buyer and, Buyer's acceptance of these Terms is deemed to be a Security Agreement under the Uniform Commercial Code. Buyer authorizes Seller as its attorney to execute and file on Buyer's behalf all documents Seller deems necessary to perfect Seller's security interest.

12. User Responsibility. Buyer, through its own analysis and testing, is solely responsible for making the final selection of the Products and assuring that all performance, endurance, maintenance, safety and warning requirements of the application of the Products are met. Buyer must analyze all aspects of the application and follow applicable industry standards, specifications, and any technical information provided with the Quote or the Products, such as Seller's instructions, guides and specifications.

If Seller provides options of or for Products based upon data or specifications provided by Buyer, Buyer is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the Products. In the event Buyer is not the end-user of the Products, Buyer will ensure such end-user complies with this paragraph.

13. Use of Products, Indemnity by Buyer. Buyer shall comply with all instructions, guides and specifications provided by Seller with the Quote or the Products. If Buyer uses or resells the Products in any way prohibited by Seller's instructions, guides or specifications, or Buyer otherwise fails to comply with Seller's instructions, guides and specifications, Buyer acknowledges that any such use, resale, or non-compliance is at Buyer's sole risk. Further, Buyer shall indemnify, defend, and hold Seller harmless from any losses, claims, liabilities, damages, lawsuits, judgments and costs (including attorney fees and defense costs), whether for personal injury, property damage, intellectual property infringement or any other claim, arising out of or in connection with: (a) improper selection, design, specification, application, or any misuse of Products; (b) any act or omission, negligent or otherwise, of Buyer; (c) Seller's use of Buyer's Property; (d) damage to the Products from an external cause, repair or attempted repair by anyone other than Seller, failure to follow instructions, guides and specifications provided by Seller, use with goods not provided by Seller, or opening, modifying, deconstructing, tampering with or repackaging the Products; or (e) Buyer's failure to comply with these Terms, including any legal or administrative proceedings, collection efforts, or other actions arising from or relating to such failure to comply. Seller shall not indemnify Buyer under any circumstance except as otherwise provided in these Terms.

14. Cancellations and Changes. Buyer may not cancel or modify, including but not limited to movement of delivery dates for the Products, any order for any reason except with Seller's written consent and upon terms that will indemnify, defend and hold Seller harmless against all direct, incidental and consequential loss or damage and any additional expense. Seller, at any time, may change features, specifications, designs and availability of Products.

15. Assignment. Buyer may not assign its rights or obligations without the prior written consent of Seller.

16. Force Majeure. Seller is not liable for delay or failure to perform any of its obligations by reason of any events or circumstances beyond its reasonable control. Such circumstances include without limitation: accidents, labor disputes or stoppages, government acts or orders, acts of nature, pandemics, epidemics, other widespread illness, or public health emergency, cyber related disruptions, cyber-attacks, ransomware sabotage, delays or failures in delivery from carriers or suppliers, shortages of materials, sudden increases in the price of raw material or components, shutdowns or slowdowns affecting the supply of raw materials or components, or the transportation thereof, oil shortages or oil price increases, energy crisis, energy or fuel interruption, war (whether declared or not) or the serious threat of same, riots, rebellions, acts of terrorism, embargoes, fire or any reason whether similar to the foregoing or otherwise. Seller will resume performance as soon as practicable after the event of force majeure has been removed. All delivery dates affected by an event of force majeure shall be tolled for the duration of such event of force majeure and rescheduled for mutually agreed dates as soon as practicable after the event of force majeure ceases to exist. The right to allocate capacity is in the Seller's sole discretion. An event of force majeure shall not include financial distress, insolvency, bankruptcy, or other similar conditions affecting one of the parties, affiliates and/or subcontractors. An event of force majeure in the meaning of these Terms means any circumstances beyond Seller's control that permanently or temporarily hinders performance, even where that circumstance was already foreseen. Buyer shall not be entitled to cancel any orders following its claim of an event of force majeure.

17. Waiver and Severability. Failure to enforce any provision of these Terms will not invalidate that provision; nor will any such

Continued on Next Page

Offer of Sale (Continued)

WARNING: This product can expose you to chemicals including Lead and Lead Compounds, and Di(2-ethylhexyl)phthalate (DEHP) which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

failure prejudice either party's right to enforce that provision in the future. Invalidation of any provision of these Terms shall not invalidate any other provision herein and, the remaining provisions will remain in full force and effect.

18. Duration. Unless otherwise stated in the Quote, any agreement governed by or arising from these Terms shall: (a) be for an initial duration of one (1) year; and (b) shall automatically renew for successive one-year terms unless terminated by Buyer with at least 180-days written notice to Seller or if Seller terminates the agreement pursuant to Section 19 of these Terms.

19. Termination. Seller may, without liability to Buyer, terminate any agreement governed by or arising from these Terms for any reason and at any time by giving Buyer thirty (30) days prior written notice. Seller may immediately terminate, in writing, if Buyer: (a) breaches any provision of these Terms, (b) becomes or is deemed insolvent, (c) appoints or has appointed a trustee, receiver or custodian for all or any part of Buyer's property, (d) files a petition for relief in bankruptcy on its own behalf, or one is filed against Buyer by a third party, (e) makes an assignment for the benefit of creditors; or (f) dissolves its business or liquidates all or a majority of its assets.

20. Ownership of Rights. Buyer agrees that (a) Seller (and/or its affiliates) owns or is the valid licensee of Seller's IP and (b) the furnishing of information, related documents or other materials by Seller to Buyer does not grant or transfer any ownership interest or license in or to Seller's IP to Buyer, unless expressly agreed in writing. Without limiting the foregoing, Seller retains ownership of all Software supplied to Buyer. In no event shall Buyer obtain any greater right in and to the Software than a right in a license limited to the use thereof and subject to compliance with any other terms provided with the Software. Buyer further agrees that it will not, directly or through intermediaries, reverse engineer, decompile, or disassemble any Software (including firmware) comprising or contained within a Product, except and only to the extent that such activity may be expressly permitted, either by applicable law or, in the case of open-source software, the applicable open-source license.

21. Indemnity for Infringement of Intellectual Property Rights. Seller is not liable for infringement of any Intellectual Property Rights except as provided in this Section. Seller will defend at its expense and will pay the cost of any settlement or damages awarded in an action brought against Buyer based on a third-party claim that one or more of the Products infringes the Intellectual Property Rights of a third party in the country of delivery of the Products by Seller to Buyer. Seller's obligation to defend and indemnify Buyer is contingent on Buyer notifying Seller within ten (10) days after Buyer becomes aware of any such claim, and Seller having sole control over the defense of the claim including all negotiations for settlement or compromise. If one or more Products is subject to such a claim, Seller may, at its sole expense and option, procure for Buyer the right to continue using the Products, replace or modify the Products to render them non-infringing, or offer to accept return of the Products and refund the purchase price less a reasonable allowance for depreciation. Seller has no obligation or liability for any claim of infringement: (i) arising from information provided by Buyer (including Seller's use of Buyer's Property); or (ii) directed to any Products for which the designs are specified in whole or part by Buyer; or (iii) resulting from the modification, combination or use in a system of any Products. The foregoing provisions of this Section constitute Seller's sole and exclusive liability and Buyer's sole and exclusive remedy for claims of infringement of Intellectual Property Rights.

22. Governing Law. These Terms, the terms of any Quote, and the sale and delivery of all Products are deemed to have taken place in, and shall be governed and construed in accordance with, the laws of the State of Ohio, as applicable to contracts executed and wholly performed therein and without regard to conflicts of laws principles. Buyer irrevocably agrees and consents to the exclusive jurisdiction

and venue of the courts of Cuyahoga County, Ohio with respect to any dispute, controversy or claim arising out of or relating to the sale and delivery of the Products.

23. Entire Agreement. These Terms, along with the terms set forth in the Quote, forms the entire agreement between the Buyer and Seller and constitutes the final, complete and exclusive expression of the terms of sale and purchase. In the event of a conflict between any term set forth in the Quote and these Terms, the terms set forth in the Quote shall prevail. All prior or contemporaneous written or oral agreements or negotiations with respect to the subject matter shall have no effect. No modification to these Terms will be binding on Seller unless agreed to in a writing that is signed by an authorized representative of Seller, excluding email correspondence, 'clickwrap' or other purported electronic assent to different or additional terms. Sections 2-25 of these Terms shall survive termination or cancellation of any agreement governed by or arising from these Terms.

24. No 'Wrap' Agreements/No Authority to Bind. Seller's clicking any buttons or any similar action, such as clicking "I Agree" or "Confirm," to utilize Buyer's software or webpage for the placement of orders, is NOT an agreement to Buyer's Terms and Conditions. **NO EMPLOYEE, AGENT OR REPRESENTATIVE OF SELLER HAS THE AUTHORITY TO BIND SELLER BY THE ACT OF CLICKING ANY BUTTON OR SIMILAR ACTION ON BUYER'S WEBSITE OR PORTAL.**

25. Compliance with Laws. Buyer agrees to comply with all applicable laws, regulations, and industry and professional standards, including those of the United States of America, and the country or countries in which Buyer may operate, including without limitation the U.S. Foreign Corrupt Practices Act ("FCPA"), the U.S. Anti-Kickback Act ("Anti-Kickback Act"), U.S. and E.U. export control and sanctions laws ("Export Laws"), the U.S. Food Drug and Cosmetic Act ("FDCA"), and the rules and regulations promulgated by the U.S. Food and Drug Administration ("FDA"), each as currently amended. Buyer agrees to indemnify, defend, and hold harmless Seller from the consequences of any violation of such laws, regulations and standards by Buyer, its employees or agents. Buyer represents that it is familiar with all applicable provisions of the FCPA, the Anti-Kickback Act, Export Laws, the FDCA and the FDA and certifies that Buyer will adhere to the requirements thereof and not take any action that would make Seller violate such requirements. Buyer represents and agrees that Buyer will not make any payment or give anything of value, directly or indirectly, to any governmental official, foreign political party or official thereof, candidate for foreign political office, or commercial entity or person, for any improper purpose, including the purpose of influencing such person to purchase Products or otherwise benefit the business of Seller. Buyer further represents and agrees that it will not receive, use, service, transfer or ship any Products from Seller in a manner or for a purpose that violates Export Laws or would cause Seller to be in violation of Export Laws. Buyer agrees to promptly and reliably provide Seller all requested information or documents, including end-user statements and other written assurances, concerning Buyer's ongoing compliance with Export Law.

09/22



Parker-Hannifin Corporation

Chelsea Products Division
8225 Hacks Cross Rd
Olive Branch, MS 38654
United States

Phone: +1 (662) 895-1011
Email: chd_support@support.parker.com

www.Parker.com/Chelsea

PN: HY25-2871-M1/US
Rev: 01/24