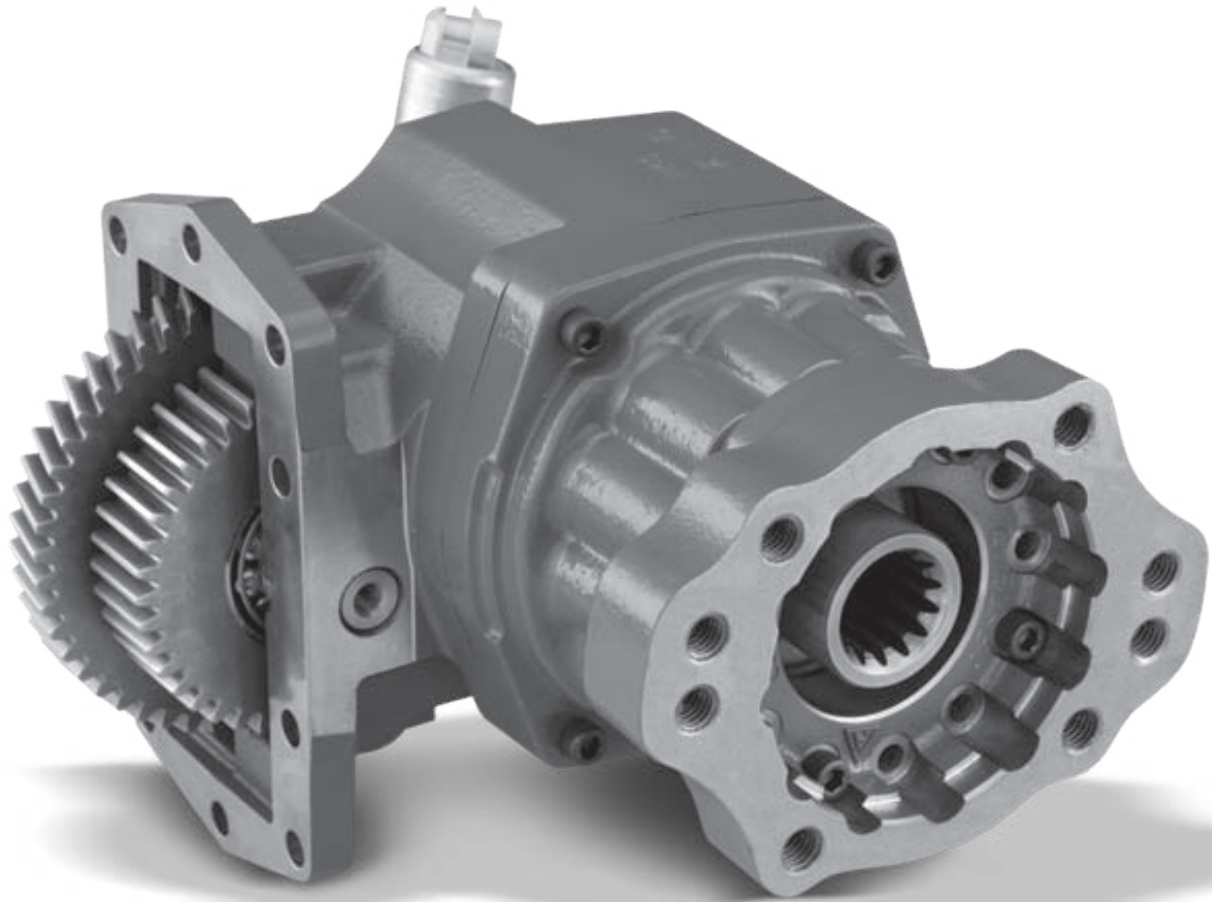


Effective: May 15, 2018
Supersedes: HY25-2280-M1/US July 15, 2015



Power Take-Offs Parts List

280, 287 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.

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287 Series

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Model Number Designator

Parts List
280 Series

280		G	B	FJ	P	-	B	5	XD
Basic Model 280									
Mounting Option G = Standard Mount 10-Bolt w/ Metric Studs									
Gear Ratio 3 & 5 Arr. B = 22/50 C = 25/47 D = 28/44 G = 31/41 K = 33/39 M = 35/37 P = 37/35 S = 39/33 T = 41/31 8 Arr. B = 22/53 C = 25/50 D = 28/47 G = 31/44 K = N/A M = 35/40 P = 37/38 S = 39/36 T = 42/33									
Input Option FJ KV NOTE: For more details, see Application Catalog (Transmission model number required)									
Lube Option Pressure P = Pressure Lube ⁴⁵ R = Valve Body Rotated 120° S = Valve Body Rotated 240° Wet Spline W = Wet Spline ⁴⁵ V = Valve Body Rotated 120° w/ Wet Spline Y = Valve Body Rotated 240° w/ Wet Spline									
		Output Option Driveline Output XD = Rd Standard Shaft (1-1/4" - 5/16" Key) XV = 1410 Series Companion Flange BV = Shaft Brake - 1410 Series Companion Flange BD = Shaft Brake - Rd Standard Shaft (1-1/4" - 5/16" Key) SD = Smart Start - Rd Standard Shaft (1-1/4" - 5/16" Key) SV = Smart Start - 1410 Series Companion Flange AB = DIN 120 Flange AC = DIN 100 Flange SB = Smart Start - DIN 120 Flange SC = Smart Start - DIN 100 Flange Pump Mount RB = Rotatable SAE B 4-Bolt Flange, SAE B Shaft (7/8" - 13T) ⁴⁷ RK = Rotatable SAE B 2 or 4-Bolt Flange, SAE B Shaft (7/8" - 13T) ⁴⁷ RF = Rotatable SAE B 2 or 4-Bolt Flange, SAE BB Shaft (1" - 15T) ⁴⁷ RZ = Rotatable SAE B 2 or 4-Bolt Flange, SAE C Shaft (1-1/4" - 14T) ⁴⁷ RS = Rotatable SAE C 2 or 4-Bolt Flange, SAE C Shaft (1-1/4" - 14T) ⁴⁷ RY = Rotatable ISO 7653 Pump Mount DIN 5462 Shaft XR = Chelsea Special (Cloverleaf), SAE B Shaft (7/8" - 13T) ♦ UN = UNI 8953, 3-Bolt Pump Flange 6T							
		Assembly Arrangement 3 = Right side - bulge down Left side - bulge up 5 = Left side - bulge down Right side - bulge up 8 = No Offset							
		Shift Option Hydraulic ⁴⁶ B = 12V Elec/Hyd ⁴⁶ D = 24V Elec/Hyd ⁴⁶ E = 12V Elec/Hyd w/o Installation Kit ⁴⁶ N = 24V Elec/Hyd w/o Installation Kit ⁴⁶ K = 12V Elec/Hyd Remote Valve w/ EOC ⁴⁶ L = 24V Elec/Hyd Remote Valve w/ EOC ¹⁵ G = 12V Elec/Hyd Remote Valve w/o EOC ¹⁵ H = 24V Elec/Hyd Remote Valve w/o EOC ²¹ ⁴⁶ S = Air Shift w/ PTO/Dump Pump Combo Valve w/ Kick Out w/ Neutral Spring Return ²¹ ⁴⁶ T = Air Shift w/ PTO/Dump Pump Combo Valve w/o Kick Out w/ Neutral Spring Return							

¹⁵ The remote mount solenoid option can not utilize the EOC option.

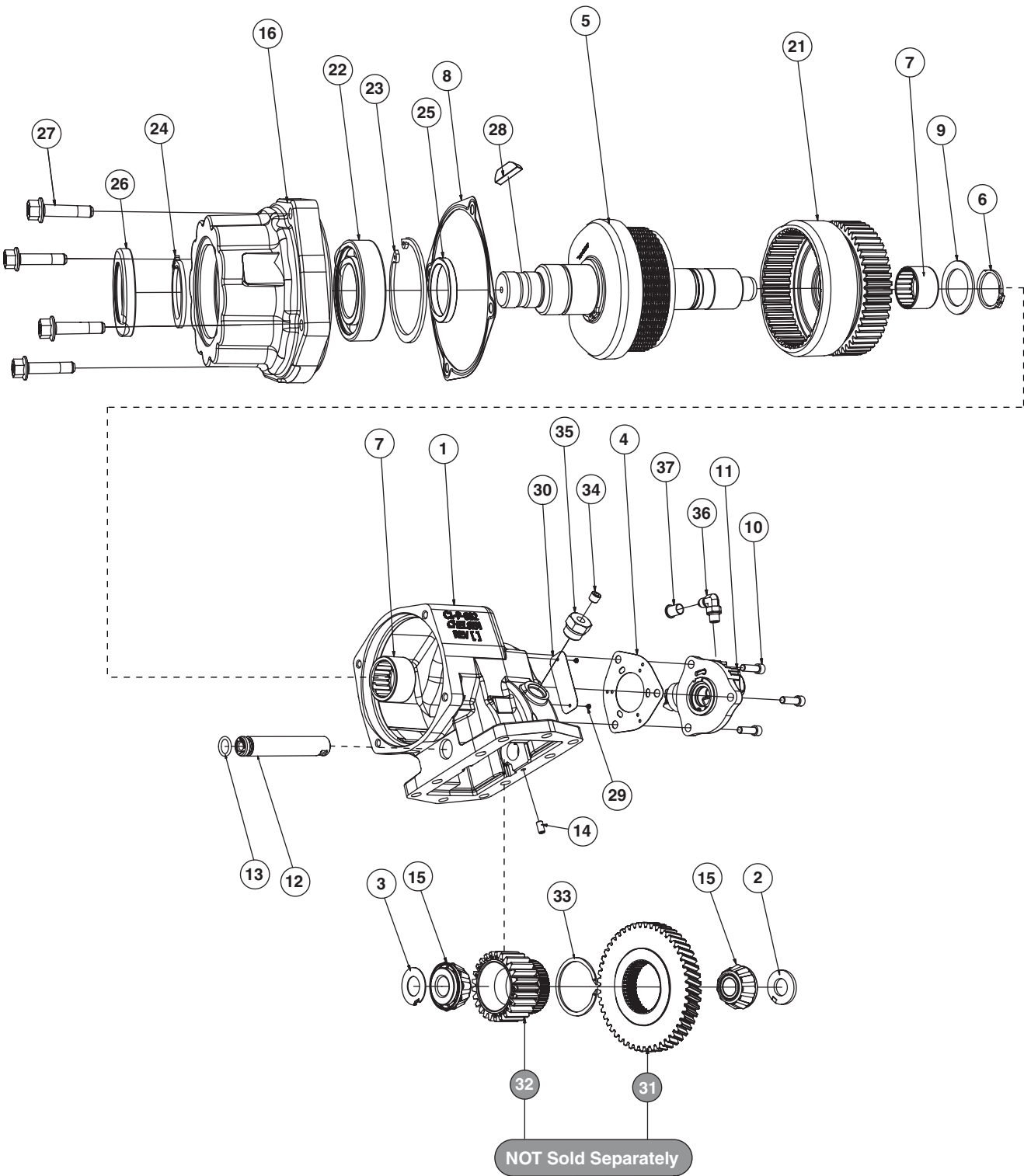
²¹ Includes Installation Kit, Console Sold Separately.

⁴⁵ Available on Shift Option B, D, K, L, M, N, S & T.

⁴⁶ Available with Rotated Valve.

⁴⁷ Available with Wet Spline.

♦ No longer a current option per 2018 Chelsea Suggested List Price.



Bill of Materials**Parts List
280 Series**

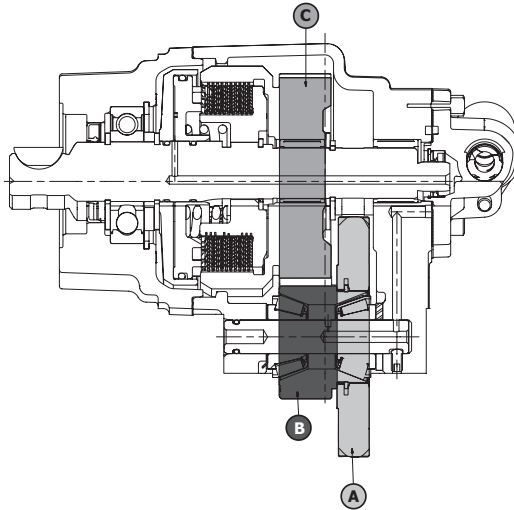
Item	Part Number	Description	Qty.
1	1-P-703	Housing (3 Arrangement) (w/ 5/16" Bearing Cap Bolts).....	1 or
	1-P-763	Housing (3 Arrangement) (w/ 3/8" Bearing Cap Bolts).....	1 or
	1-P-705	Housing (5 Arrangement) (w/ 5/16" Bearing Cap Bolts).....	1 or
	1-P-765	Housing (5 Arrangement) (w/ 3/8" Bearing Cap Bolts).....	1 or
	1-P-708	Housing (8 Arrangement) (w/ 5/16" Bearing Cap Bolts).....	1 or
	1-P-768	Housing (8 Arrangement) (w/ 3/8" Bearing Cap Bolts).....	1
2	14-P-73-1	Spacer (.762" x 1.500" x .150") Thickness as Required.....	1 or
	14-P-73-2	Spacer (.762" x 1.500" x .153").....	1 or
	14-P-73-3	Spacer (.762" x 1.500" x .156").....	1
3	31-P-102	Thrust Washer (.754" x .440" x .030").....	1
4	22-P-112	Gasket.....	1
5	329724-6X	Drive Shaft & Clutch Ass'y (XD) (See page 11).....	1 or
	329724-9X	Output Shaft 1.25" Keyed with Smart Start (SD) (See page 11).....	1
6	379746	Lockring.....	1
7	560972	Bearing Needle Roller Ass'y (1.500" x 1.875" x 1.000").....	2
8	22-P-151	Gasket.....	1
9	31-P-70	Thrust Washer (1.507" x 2.167" x .094").....	1
10	378447-6	Socket Head Capscrew (.312"-18 x 1.000").....	3
11	See Page 8	Valve Cap Assembly.....	1
12	9-P-106	Idler Shaft .75".....	1
13	28-P-191	O-Ring (.549" x .103").....	1
14	378452-7	Socket Head Set Screw (.250"-20 x .500").....	1
15	550439	Bearing Tapered Cone (.750" x .8598").....	2 or
	561006	Bearing Tapered Cone (.7505" x .655") (B Ratio Only).....	2
16	21-P-766	Bearing Cap (SD, XD, XV, SV, AB, AC, SB,SC) (w/ 5/16" Bearing Cap Bolts).....	1 or
	21-P-881	Bearing Cap (SD, XD, XV, SV, AB, AC, SB,SC) (w/ 3/8" Bearing Cap Bolts).....	1
21	See Page 5	Gear Output.....	1
22	550311	Ball Bearing (1.77" x 3.346" x .748").....	1
23	378263	Lockring.....	1
24	379555	Lockring.....	1
25	4-P-187	Spacer (1.776" x 2.200" x .239").....	1
26	28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
27	378447-8	Socket Head Capscrew (.312"-18 x 1.500") (w/ 5/16" Bearing Cap Bolts).....	4 or
	380563-14	Hex Flange Head Capscrew (.375"-16 x 1.500") (w/ 3/8" Bearing Cap Bolts).....	4
28	500007-29	Woodruff Key (XD & SD Output Only).....	1
29	378422	Drive Screw.....	2
30	68-P-51	Name Plate.....	1
Not Sold Separately			
31	See Page 5	Input Gear.....	1
32	See Page 5	Ratio Gear.....	1
33	379522	Lockring.....	1
34	379231	Pipe Plug (.125"-27) (w/o EOC Only).....	1
35	379242	Adapter Straight (.125"-27 x .750"-16) (w/o EOC Only).....	1
36	379486	90° Elbow (.438"-20).....	1
37	379564-2	Cap Thread (.438").....	1

Continued on Next Page

Bill of Materials

Parts List
280 Series

Item	Part Number	Description	Qty.
N.S.	379243	Speed Sensor (w/ EOC Only).....	1
N.S.	28-P-171	O-Ring (.644" x .087") (w/ EOC Only)	1
	See pages 44-48 for Bill of Materials for the below loose parts.		
		SERVICE KITS	
	329071-63X	Bearing Kit (All Outputs Except (BD, BV)	
	329071-64X	Bearing Kit (BV)	
	329071-80X	Gasket & Seal Kit (All Outputs Except BD, BV)	
	329071-82X	Gasket & Seal Kit (BD, BV)	
	329071-83X	Hydraulic Valve O-Ring Kit (BD, BV)	
	329678X	Gear & Clutch Plates Kit (All)	
		STUD KITS	
	7170-86X	Mounting Kit (FJ Gear) (3 & 5 Arrangement).....	1 or
	7170-107X	Mounting Kit (FJ Gear) (8 Arrangement)	1 or
	7170-117X	Mounting Kit (KV Gear) (3 & 5 Arrangement).....	1 or
	7170-118X	Mounting Kit (KV Gear) (8 Arrangement)	1
		INSTALLATION INSTRUCTIONS KITS	
	328948-47X	Gasket & Installation Instructions	
		HYDRAULIC INSTALLATION KITS	
	329024-12X	12V Installation Kit (FJ Gear, B Shift)	
	329024-24X	24V Installation Kit (FJ Gear, D Shift)	
	329237-12X	12V Remote Valve w/o EOC Installation Kit (FJ Gear, G Shift)	
	329237-24X	24V Remote Valve w/o EOC Installation Kit (FJ Gear, H Shift)	
	329076X	12V & 24V w/ EOC Installation Kit (FJ Gear, K, L Shift)	
	329650X	Electronic Overspeed Control (K, L Shift)	
	329443-12X	12V Installation Kit (KV Gear, B Shift)	
	329443-24X	24V Installation Kit (KV Gear, D Shift)	
	329444X	12V & 24V w/ EOC Installation Kit (KV Gear, K, L Shift)	
	329445-12X	12V Remote Valve w/o EOC Installation Kit (KV Gear, G Shift)	
	329445-24X	24V Remote Valve w/o EOC Installation Kit (KV Gear, H Shift)	
		AIR INSTALLATION KITS	
	328388-85X	Installation Kit Air Shift (S Shift)	
	328388-86X	Installation Kit Air Shift (T Shift)	
		SHIFTER CONVERSION KITS	
	329175-12X	12V w/ EOC Conversion Kit (FJ Gear)	
	329175-24X	24V w/ EOC Conversion Kit (FJ Gear)	
	329354-12X	12V Remote Hyd Valve Conversion Kit (All)	
	329354-24X	24V Remote Hyd Valve Conversion Kit (All)	
	329448-12X	12V w/ EOC Conversion Kit (KV Gear)	
	329448-24X	24V w/ EOC Conversion Kit (KV Gear)	
		HOSE ASSEMBLIES	
	328075X	Exhaust Hose Ass'y (G & H Shift)	1
	329057-3X	Lube Hose Ass'y (G & H Shift)	2
	329057-4X	Lube & Clutch Hose Ass'y (G & H Shift).....	2
	329075-5X	Pressure Hose Ass'y (KV Gear)	1
	329141-1X	Pressure Hose Ass'y (FJ Gear).....	1
N.S. — Not Shown			



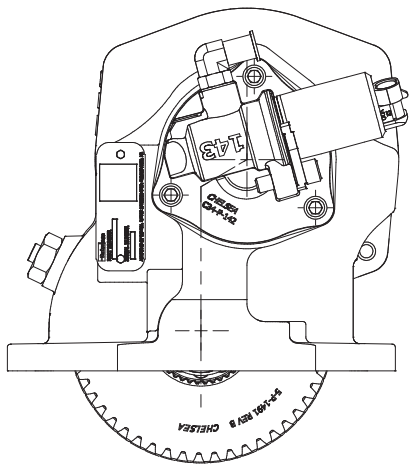
3 and 5 Assembly

GEAR DESIGNATOR	INPUT GEAR ASSEMBLY	NOT Sold Separately				OUTPUT GEAR (21)	NO. TEETH C
		INPUT GEAR (31)	NO. TEETH A	RATIO GEAR (32)	NO. TEETH B		
280*BFJ	5-P-1491-1X	5-P-1491	50	5-P-1478	22	2-P-926	50
280*CFJ	5-P-1491-2X	5-P-1491	50	5-P-1495	25	2-P-927	47
280*DFJ	5-P-1491-3X	5-P-1491	50	5-P-1479	28	2-P-928	44
280*GFJ	5-P-1491-4X	5-P-1491	50	5-P-1480	31	2-P-929	41
280*KFJ	5-P-1491-5X	5-P-1491	50	5-P-1481	33	2-P-931	39
280*MFJ	5-P-1491-6X	5-P-1491	50	5-P-1482	35	2-P-933	37
280*PFJ	5-P-1491-7X	5-P-1491	50	5-P-1483	37	2-P-935	35
280*SFJ	5-P-1491-8X	5-P-1491	50	5-P-1484	39	2-P-936	33
280*TFJ	5-P-1491-9X	5-P-1491	50	5-P-1497	41	2-P-937	31
280*BKV	5-P-1493-1X	5-P-1493	45	5-P-1478	22	2-P-926	50
280*CKV	5-P-1493-2X	5-P-1493	45	5-P-1495	25	2-P-927	47
280*DKV	5-P-1493-3X	5-P-1493	45	5-P-1479	28	2-P-928	44
280*GKV	5-P-1493-4X	5-P-1493	45	5-P-1480	31	2-P-929	41
280*KKV	5-P-1493-5X	5-P-1493	45	5-P-1481	33	2-P-931	39
280*MKV	5-P-1493-6X	5-P-1493	45	5-P-1482	35	2-P-933	37
280*PKV	5-P-1493-7X	5-P-1493	45	5-P-1483	37	2-P-935	35
280*SKV	5-P-1493-8X	5-P-1493	45	5-P-1484	39	2-P-936	33
280*TKV	5-P-1493-9X	5-P-1493	45	5-P-1497	41	2-P-937	31

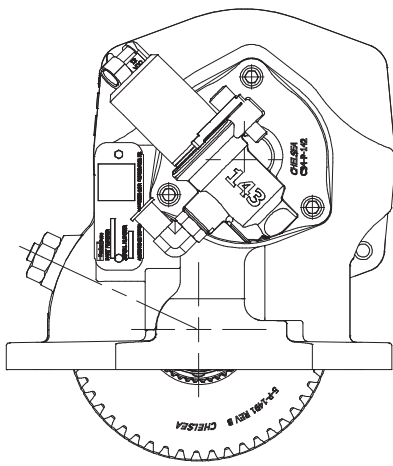
8 Assembly

GEAR DESIGNATOR	INPUT GEAR ASSEMBLY	NOT Sold Separately				OUTPUT GEAR (21)	NO. TEETH C
		INPUT GEAR (31)	NO. TEETH A	RATIO GEAR (32)	NO. TEETH B		
280*BFJ	5-P-1491-1X	5-P-1491	50	5-P-1478	22	2-P-925	53
280*CFJ	5-P-1491-2X	5-P-1491	50	5-P-1495	25	2-P-926	50
280*DFJ	5-P-1491-3X	5-P-1491	50	5-P-1479	28	2-P-927	47
280*GFJ	5-P-1491-4X	5-P-1491	50	5-P-1480	31	2-P-928	44
280*MFJ	5-P-1491-6X	5-P-1491	50	5-P-1482	35	2-P-930	40
280*PFJ	5-P-1491-7X	5-P-1491	50	5-P-1483	37	2-P-932	38
280*SFJ	5-P-1491-8X	5-P-1491	50	5-P-1484	39	2-P-934	36
280*TFJ	5-P-1491-10X	5-P-1491	50	5-P-1485	42	2-P-936	33
280*BKV	5-P-1493-1X	5-P-1493	45	5-P-1478	22	2-P-925	53
280*CKV	5-P-1493-2X	5-P-1493	45	5-P-1495	25	2-P-926	50
280*DKV	5-P-1493-3X	5-P-1493	45	5-P-1479	28	2-P-927	47
280*GKV	5-P-1493-4X	5-P-1493	45	5-P-1480	31	2-P-928	44
280*MKV	5-P-1493-6X	5-P-1493	45	5-P-1482	35	2-P-930	40
280*PKV	5-P-1493-7X	5-P-1493	45	5-P-1483	37	2-P-932	38
280*SKV	5-P-1493-8X	5-P-1493	45	5-P-1484	39	2-P-934	36
280*TKV	5-P-1493-10X	5-P-1493	45	5-P-1485	42	2-P-936	33

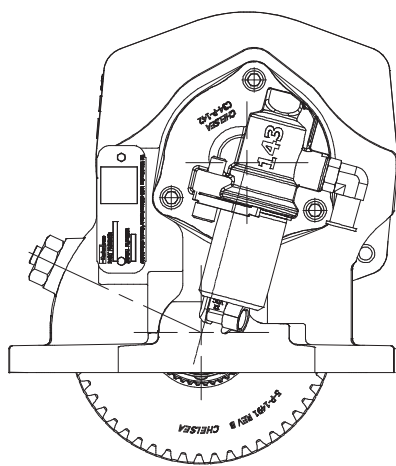
Pressure Lube



P = Pressure Lube

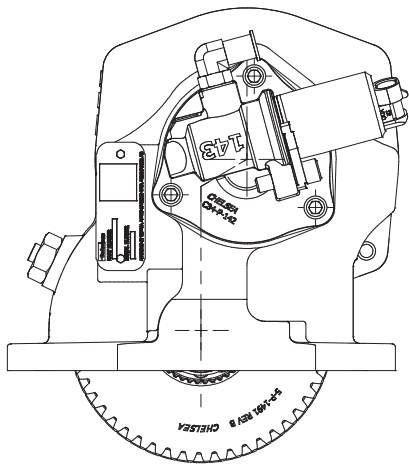


R = Valve Cap Rotated 120°

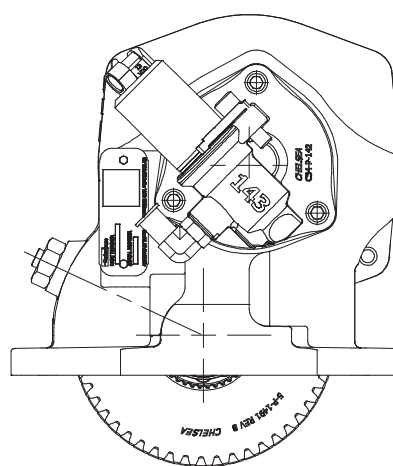


S = Valve Cap Rotated 240°

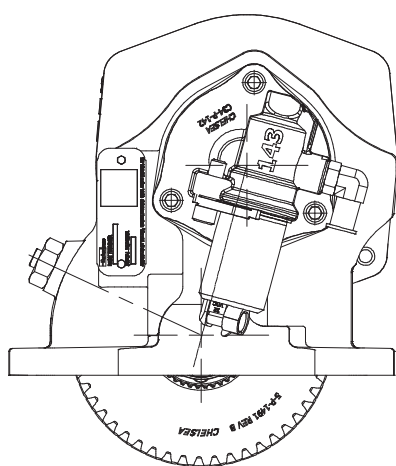
Wet Spline



W = Wet Spline

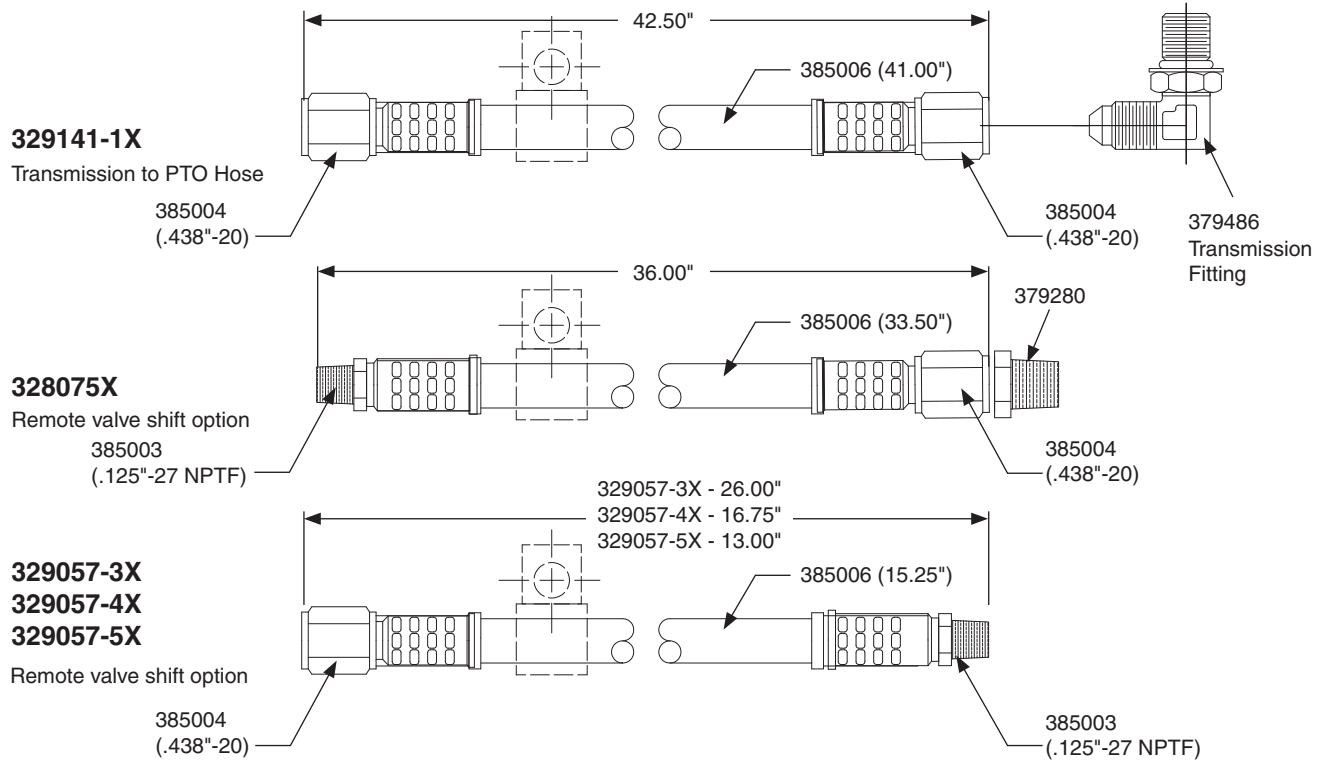


V = Valve Cap Rotated 120°
w/ Wet Spline



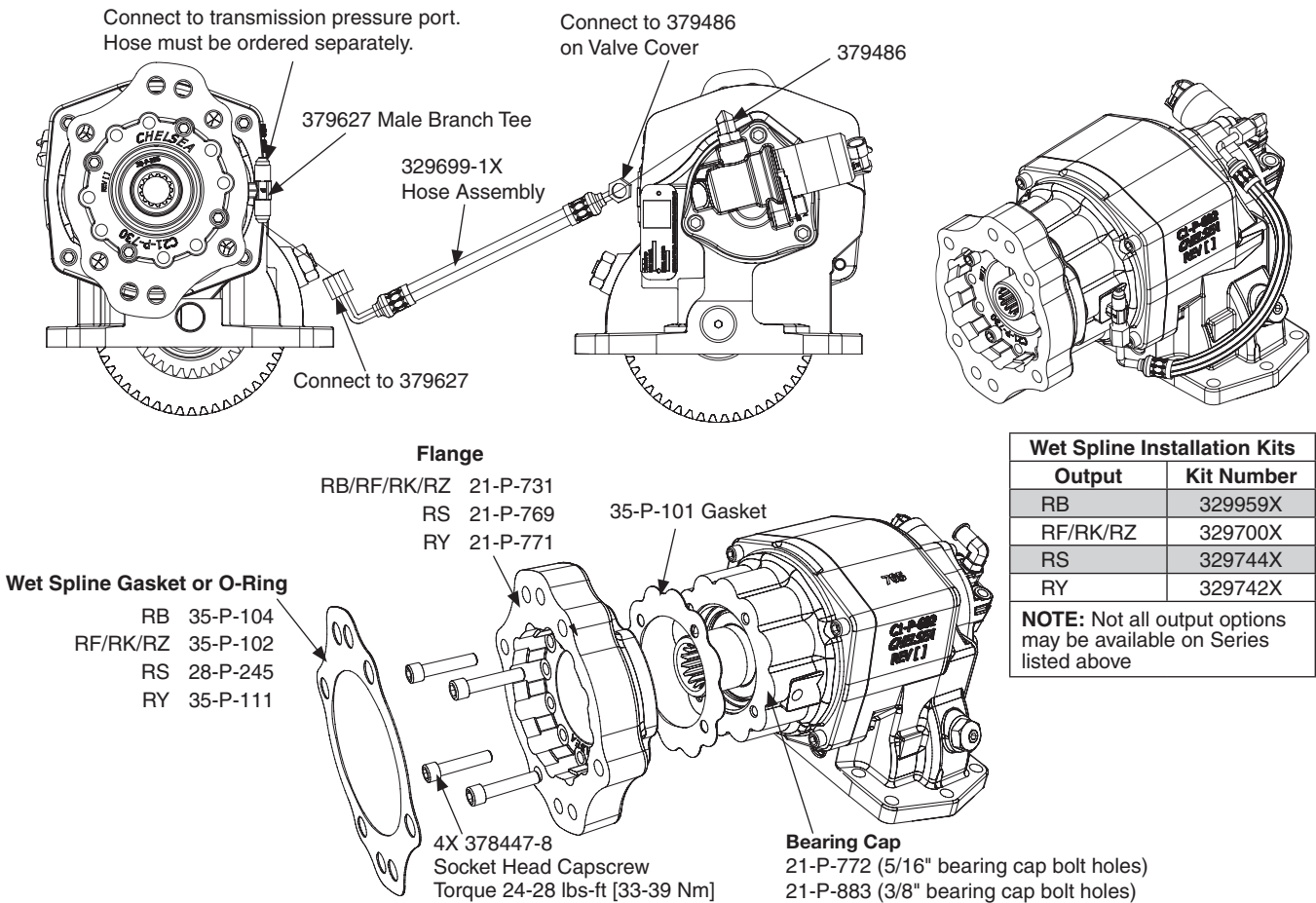
Y = Valve Cap Rotated 240°
w/ Wet Spline

Pressure Lube (Continued)

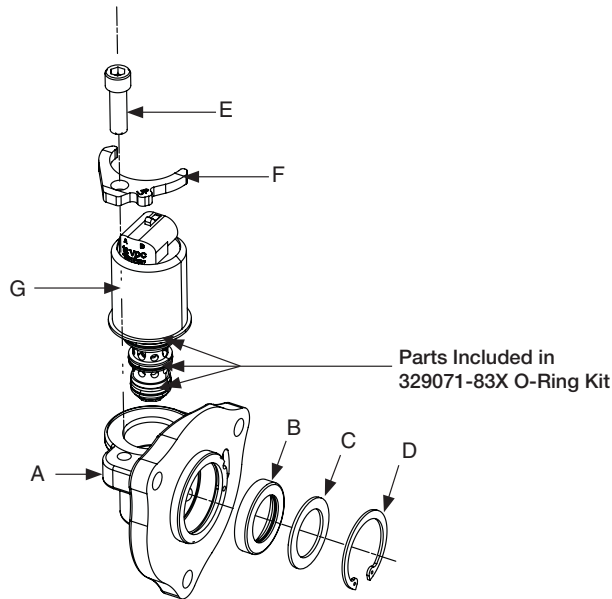


Wet Spline Installation – 280 Series RB, RF, RK, RS, RY & RZ

(SK-508 Rev B)

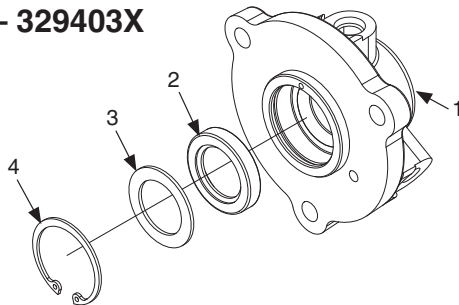


Valve Cap Assembly



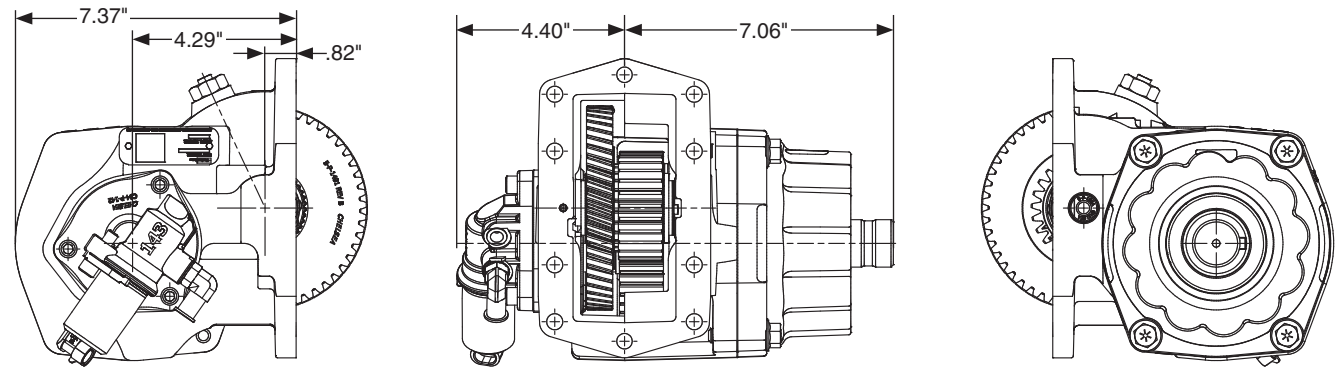
Item	Part Number	Description	Qty.
11	329442-12X	Valve & Cap Assembly (12V) (KV Gear Only)	1 or
	329442-24X	Valve & Cap Assembly (24V) (KV Gear Only)	1
	329463-12X	Valve & Cap Assembly (12V) (FJ Gear Only)	1 or
	329463-24X	Valve & Cap Assembly (24V) (FJ Gear Only)	1
A	34-P-143	Valve Cap	1
B	28-P-119	Oil Seal (Hi Pressure)	1
C	378811	Washer	1
D	378849	Snap Ring	1
E	378447-6	Socket Head Capscrew .312"-18 x 1.00"	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 (12V) (FJ) (White Connector Top) (New Style)	1 or
	380123-24	Hydraulic Valve (12V) (FJ) (Black Connector Top) (New Style)	1
	380011-12	Hydraulic Valve (12V) (FJ) (White Side Connector) N.L.A. – USE 380123-12	1 or
	380011-24	Hydraulic Valve (24V) (FJ) (Black Side Connector) N.L.A. – USE 380123-12	1
	379993-12	Hydraulic Valve (12V) (KV) (White Connector)	1 or
	379993-24	Hydraulic Valve (24V) (KV) (Black Connector)	1
	329071-83X	Hydraulic Solenoid Valve O-Ring Service Kit	1
		N.L.A. – No Longer Available	

Remote Valve Cap Assembly – 329403X

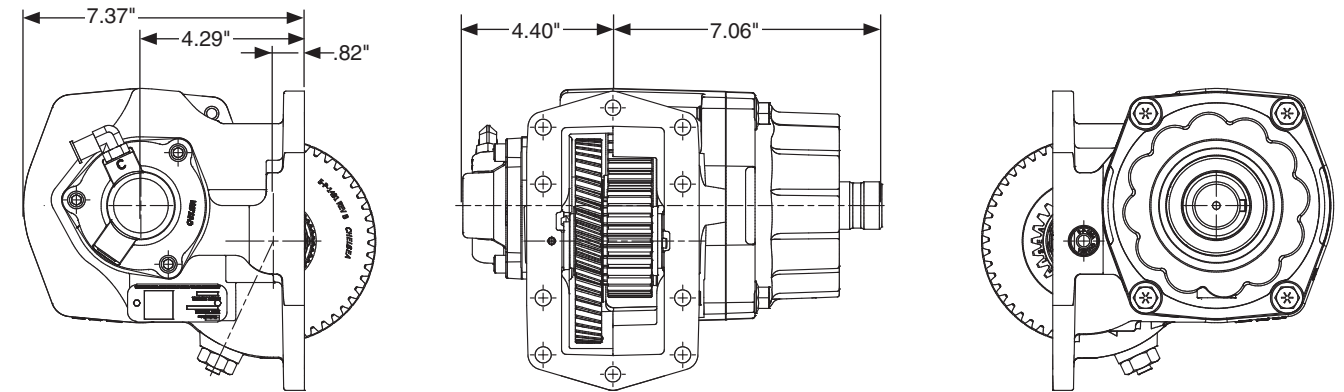


Item	Part Number	Description	Qty.
1	21-P-701	Cap Seal	1 or
2	28-P-119	Oil Seal 1.379" x .875" x .250"	1
3	378811	Washer	1
4	378849	Lockring	1

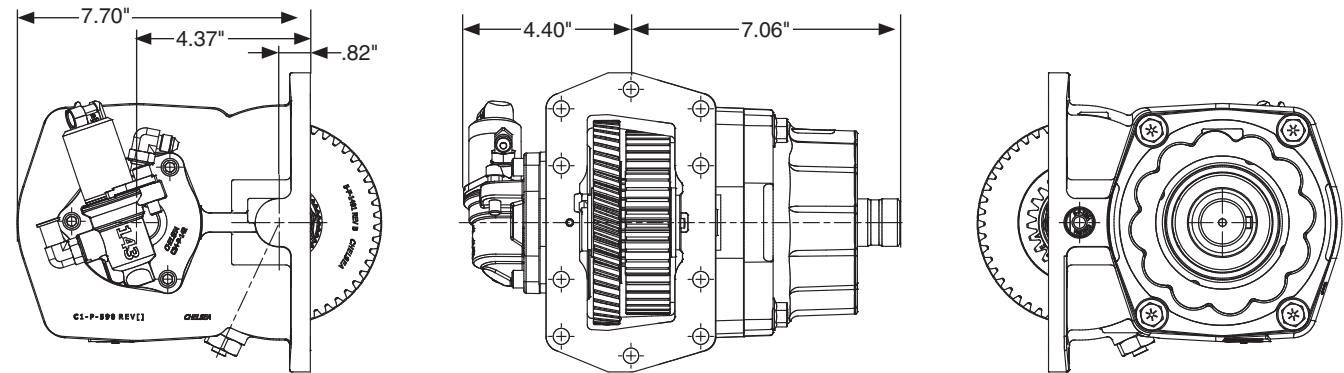
Housing Dimensions



Assembly 3

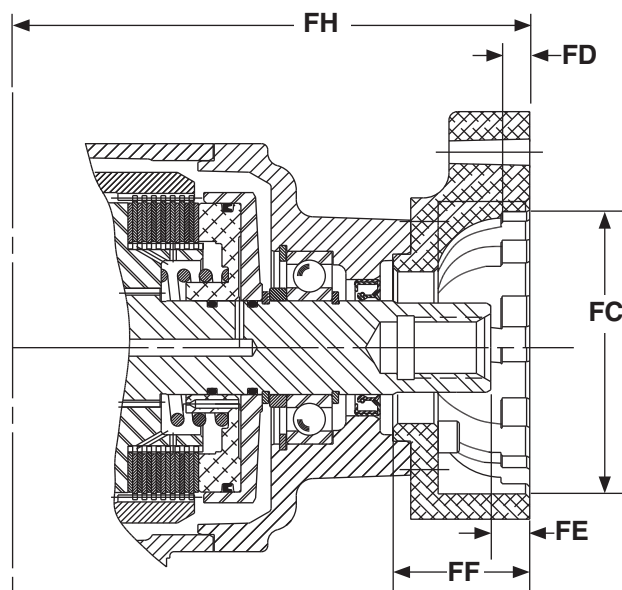


Assembly 5



Assembly 8

Pump Flange & Shaft Dimensions



Direct Mount

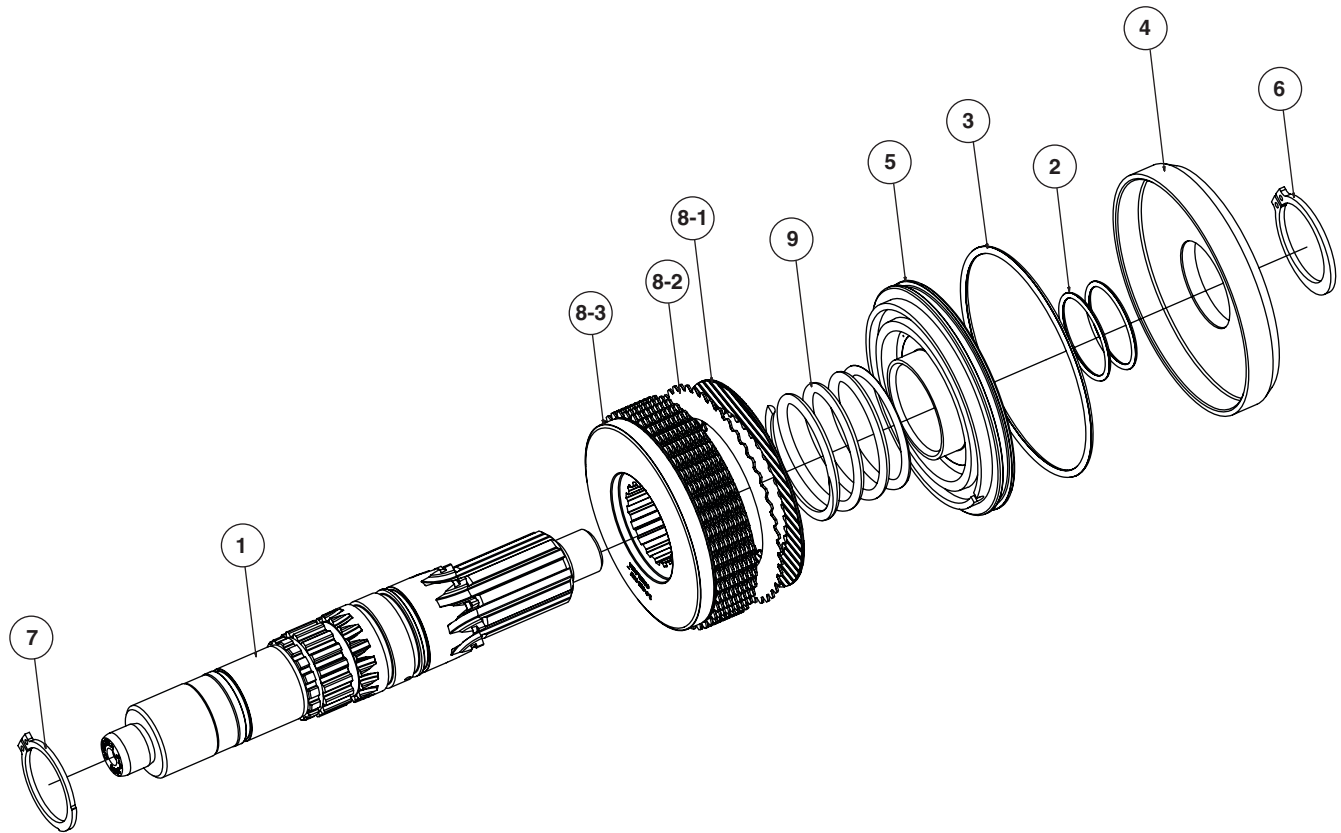
Pump Flange Suffix	Bolt Circle Diameter	Bolt Holes		FC	FD	FE	FF	FH	Output Shaft
		Hole Diameter	No. Equally Spaced	Female Pilot of Flange	Pilot Depth Hole	Face to End of PTO	Face Thru	Face to Center	Dimensions
RF•	5.750" 5.000"	1/2"-13 UNC	2 ■ 4	4.000"	0.406"	0.592"	2.060"	7.643"	1" - 15T Spline
RK•	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 x 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	Dimensions
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"	1-1/4" Rd.
BD								9.058"	1-1/4" Rd. Keyed (5/16")
BV	3.750"	0.440" ▶	4	2.751"	0.083"			8.986"	1-1/2" - 10T Spline
SD								6.570"	1-1/4" Keyed
XV, SV	3.750"	0.440" ▶	4	2.751"	0.083"			8.956"	1-1/2" - 10T Spline

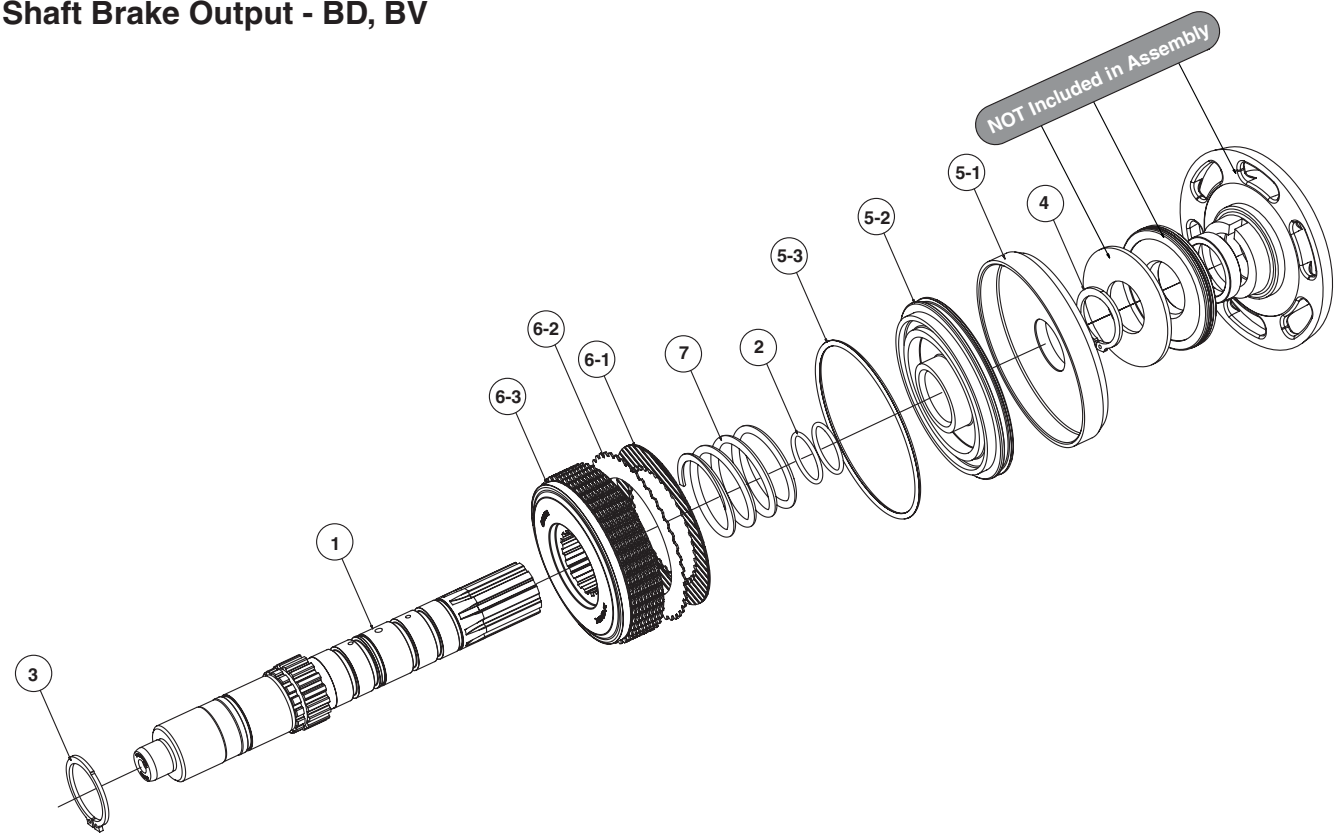
- Rotatable Flange Rotates in 30° Increments
- Two Set of Holes Spaced 14° Apart
- ▶ Not Tapped
- ◆ Pilot is Not a Hole

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.

Assembly Drive Shaft & Clutch 329724-*X

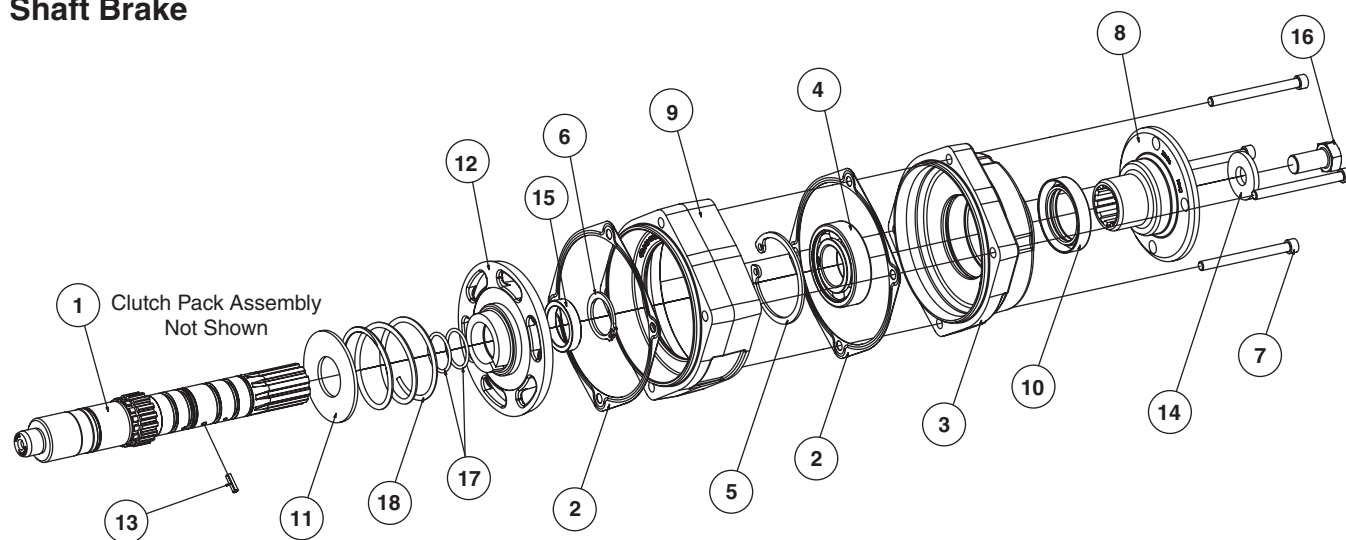
Item	Part Number	Description	Qty.
1	3-P-1065	Output Shaft 10T Straight (329724-1X) (AB, AC, XV)	1 or
	3-P-1066	Output Shaft 1.25" - 14T (329724-2X) (RS, RZ).....	1 or
	3-P-1067	Output Shaft DIN 8T (329724-3X) (RY).....	1 or
	3-P-1125	Output Shaft 1.25" Keyed (329724-6X) (XD).....	1 or
	3-P-1126	Output Shaft .875" - 13T (329724-4X) (RB, RK, XR)	1 or
	3-P-1127	Output Shaft 1" - 15T (329724-5X) (RF)	1 or
	3-P-1156	Output Shaft (329724-9X) (SD).....	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 280 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 2.14" x 1.729".....	1

Assembly Drive Shaft & Clutch 329723X
Shaft Brake Output - BD, BV

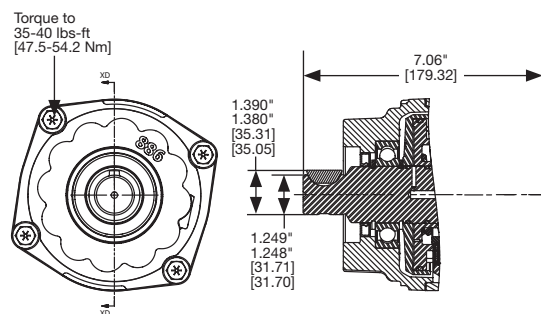


Item	Part Number	Description	Qty.
1	3-P-1072	Output Shaft 10T Straight (329723X) (BD, BV)	1 or
	3-P-1141	Output Shaft 1-1/4" Keyed (329723-1X) (BD, BV)	1
2	28-P-244	O-Ring 1.174" x .103"	2
3	380069	Lockring	1
4	378576	Lockring	1
5	329179-1X	Piston & Back-Up Cylinder Ass'y	1
5-1	379323-1	Cylinder Clutch 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

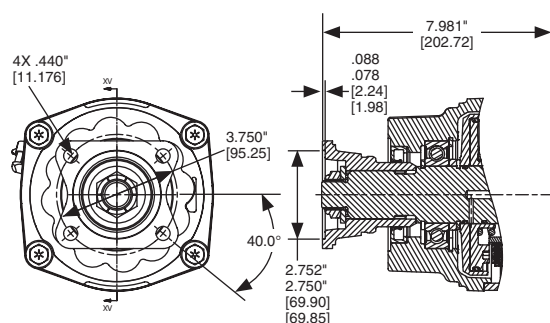
Shaft Brake



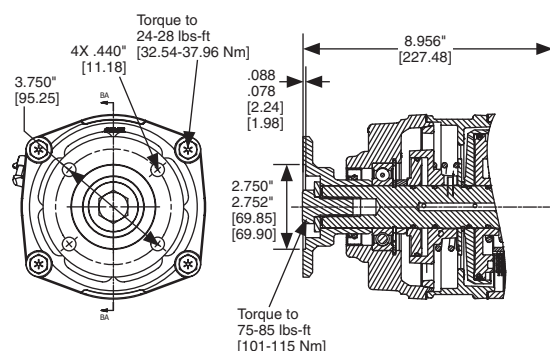
Output Flange	Part Number	Description	Qty.
1	329723X	BV Assembly Drive Shaft & Clutch (3-P-1072 Shaft)	1
2	22-P-151	Gasket	2
3	21-P-773	Bearing Cap (w/ 5/16" Bearing Cap Bolts)	1 or
	21-P-884	Bearing Cap (w/ 3/8" Bearing Cap Bolts)	1
4	550010	Bearing Ball 1.3780" x 2.8346" x .6693"	1
5	378895	Lockring	1
6	378576	Lockring	1
7	378447-16	Socket Head Capscrew .312"-18 x 3.500" (w/ 5/16" Bearing Cap Bolts)	4 or
	380563-28	Hex Flange Head Capscrew .375"-16 x 3.500" (w/ 3/8" Bearing Cap Bolts)	4
8	380081	1410 Series Companion Flange (BV)	1
9	23-P-68	Bearing Cap Spacer - Drag Brake (w/ 5/16" Bearing Cap Bolts)	1 or
	23-P-73	Bearing Cap Spacer - Drag Brake (w/ 3/8" Bearing Cap Bolts)	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 Capscrew .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 2.13" x .172"	1
1	329723-1X	BD Assembly Drive Shaft & Clutch (3-P-1141 Shaft)	1
2	22-P-151	Gasket	2
3	21-P-691	Bearing Cap (w/ 5/16" Bearing Cap Bolts)	1 or
	21-P-888	Bearing Cap (w/ 3/8" Bearing Cap Bolts)	1
4	550010	Ball Bearing 1.378" x 2.8346" x .6693"	2
5	378895	Lockring	1
6	378576	Lockring	2
7	378447-16	Socket Head Capscrew .312"-18 x 3.500" (w/ 5/16" Bearing Cap Bolts)	4 or
	380563-28	Hex Flange Head Capscrew .375"-16 x 3.500" (w/ 3/8" Bearing Cap Bolts)	4
9	23-P-68	Bearing Cap Spacer - Drag Brake (w/ 5/16" Bearing Cap Bolts)	1 or
	23-P-73	Bearing Cap Spacer - Drag Brake (w/ 3/8" Bearing Cap Bolts)	1
10	28-P-225	Oil Seal 2.004" x 1.375" x .315"	1
11	31-P-113	Thrust Washer 1.385" x 3.125" x .125"	1
12	329410X	Assembly Brake	1
13	379977	Spring Pin	1
15	4-P-186	Spacer 1.385" x 1.750" x .365"	1
17	28-P-244	O-Ring 1.174" x .103"	2
18	37-P-60	Spring 2.531" x 2.13" x .172"	1

Output Options**Parts List
280 Series****Bill of Materials - Driveline Output**

XD Output Option Rd Standard Shaft (1-1/4"-5/16" Key)			
Part Number		Description	Qty.
PTO w/ 5/16" Bearing Cap Bolts	PTO w/ 3/8" Bearing Cap Bolts		
329724-6X	329724-6X	Drive Shaft & Clutch Assembly (3-P-1125)	1
21-P-766	21-P-881	Bearing Cap.....	1
28-P-267	28-P-267	Oil Seal (2.627" x 1.750" x .312")	1
500007-29	500007-29	5/16" Woodruff, Key	1

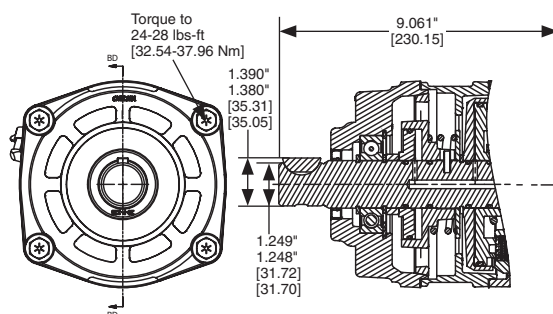


XV Output Option 1410 Series Companion Flange			
Part Number		Description	Qty.
PTO w/ 5/16" Bearing Cap Bolts	PTO w/ 3/8" Bearing Cap Bolts		
329724-1X	329724-1X	Drive Shaft & Clutch Assembly (3-P-1065)	1
21-P-766	21-P-881	Bearing Cap.....	1
28-P-211	28-P-211	Oil Seal (3.000" x 2.000" x .375")	1
380503	380503	1410 Series Companion Flange	1
380076-13	380076-13	Flat Washer (.950" x 1.762" x .157")	1
380486	380486	Lock Nut - Nylon, Thin (.875"-14)	1
†329160-97X	†329160-139X	Conversion Kit (XD to XV)	

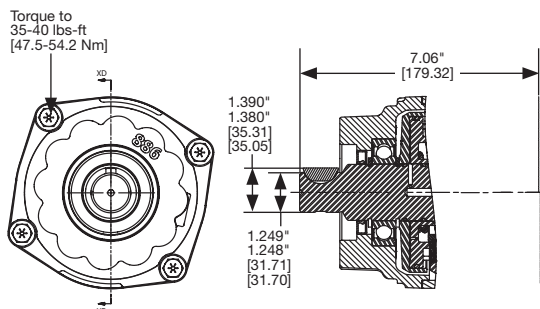


BV Output Option Drag Brake - 1410 Series Companion Flange			
Part Number		Description	Qty.
PTO w/ 5/16" Bearing Cap Bolts	PTO w/ 3/8" Bearing Cap Bolts		
329723X	329723X	Drive Shaft & Clutch Assembly (3-P-1072)	1
22-P-151	22-P-151	Gasket	1
21-P-773	21-P-884	Bearing Cap.....	1
550010	550010	Ball Bearing (1.378" x 2.349" x .6693")	1
378895	378895	Lockring	1
378576	378576	Lockring	1
378447-16	380563-28	Capscrew (.375"-16 x 3.5")	4
380081	380081	1410 Series Companion Flange	1
23-P-68	23-P-73	Bearing Cap Spacer - Drag Brake	1
28-P-212	28-P-212	Oil Seal (2.506" x 1.750" x .315")	1
31-P-113	31-P-113	Thrust Washer (1.385" x 3.125" x .125")	1
329410X	329410X	Brake Ass'y	1
379977	379977	Spring Pin (.187" x .625")	1
4-P-130	4-P-130	Spacer (.640" x 1.6205" x .188")	1
4-P-186	4-P-186	Spacer (1.385" x 1.750" x .365")	1
378435-7	378435-7	Hex Head Capscrew (.625"-11 x 1.250")	1
28-P-244	28-P-244	O-Ring (1.174" x .103")	2
37-P-60	37-P-60	Spring (2.531" x 2.13" x .172")	1
†329160-81X	†329160-123X	Conversion Kit (XD to BV)	

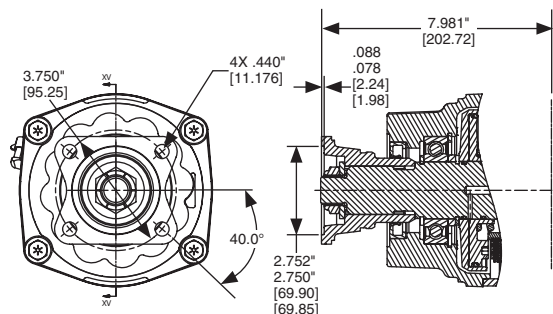
†Conversion Kits do not include all parts listed above. See [pages 49-57](#) for Conversion Kit BOMs.

Output Options**Parts List
280 Series****Bill of Materials - Driveline Output
(Continued)**

BD Output Option			
Drag Brake - Rd Standard Shaft (1-1/4" - 5/16" Key)			
Part Number		Description	Qty.
PTO w/ 5/16" Bearing Cap Bolts	PTO w/ 3/8" Bearing Cap Bolts		
329723-1X	329723-1X	Drive Shaft & Clutch Assembly (3-P-1141)	2
22-P-151	22-P-151	Gasket	1
21-P-691	21-P-888	Bearing Cap - Drag Brake	1
550010	550010	Ball Bearing (1.378" x 2.349" x .6693")	1
378895	378895	Lockring	1
378576	378576	Lockring	2
23-P-68	23-P-73	Bearing Cap Spacer - Drag Brake	1
28-P-225	28-P-225	Oil Seal (2.004" x 1.375" x .315")	1
31-P-113	31-P-113	Thrust Washer (1.385" x 3.125" x .125")	1
329410X	329410X	Brake Ass'y	1
379977	379977	Spring Pin (.187" x .625")	1
4-P-186	4-P-186	Spacer (1.385" x 1.750" x .365")	1
28-P-244	28-P-244	O-Ring (1.174" x .103")	2
37-P-60	37-P-60	Spring (2.531" x 2.13" x .172")	1
†329160-94X	†329160-136X	Conversion Kit (XD to BD)	

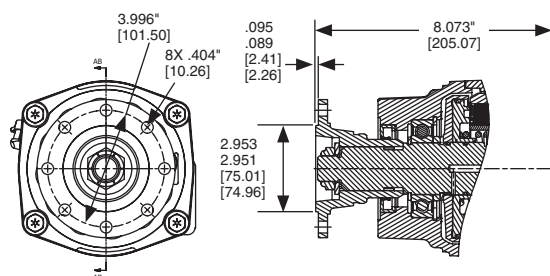


SD Output Option			
Smart Start - Rd Standard Shaft (1-1/4" - 5/16" Key)			
Part Number		Description	Qty.
PTO w/ 5/16" Bearing Cap Bolts	PTO w/ 3/8" Bearing Cap Bolts		
329724-9X	329724-9X	Drive Shaft & Clutch Assembly (3-P-1156)	1
21-P-766	21-P-881	Bearing Cap	1
28-P-267	28-P-267	Oil Seal (2.627" x 1.750" x .312")	1
379558	379558	DIN 120	1
380076-13	380076-13	Washer (.950" x 1.762" x .157")	1
380486	380486	Lock Nut - Nylon, Thin (.875"-14)	1
†329160-77X	†329160-119X	Conversion Kit (XD to SD)	

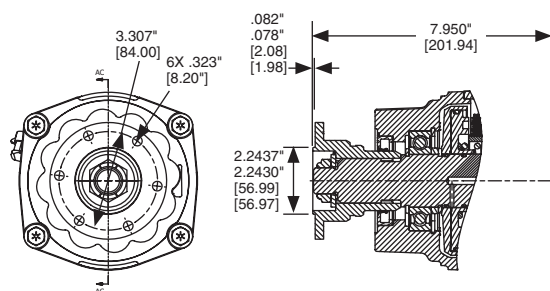


SV Output Option			
Smart Start - 1410 Series Companion Flange			
Part Number		Description	Qty.
PTO w/ 5/16" Bearing Cap Bolts	PTO w/ 3/8" Bearing Cap Bolts		
329724-8X	329724-8X	Drive Shaft & Clutch Assembly (3-P-1161)	1
21-P-766	21-P-881	Bearing Cap	1
28-P-211	28-P-211	Oil Seal (3.000" x 2.000" x .375")	1
380503	380503	1410 Series Companion Flange	4
380076-13	380076-13	Flat Washer (.950" x 1.762" x .157")	1
380486	380486	Lock Nut - Nylon, Thin (.875"-14)	1
†329160-117X	†329160-120X	Conversion Kit (XD to SV)	
†329160-117X	†329160-120X	Conversion Kit (XV to SV)	

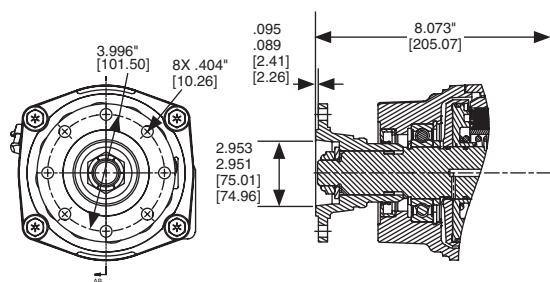
†Conversion Kits do not include all parts listed above. See [pages 49-57](#) for Conversion Kit BOMs.

Output Options**Parts List
280 Series****Bill of Materials - Driveline Output
(Continued)**

AB Output Option DIN 120 Flange			
Part Number		Description	Qty.
PTO w/ 5/16" Bearing Cap Bolts	PTO w/ 3/8" Bearing Cap Bolts		
329724-1X	329724-1X	Drive Shaft & Clutch Assembly (3-P-1065)	1
21-P-766	21-P-881	Bearing Cap.....	1
28-P-211	28-P-211	Oil Seal (3.00" x 2.00" x .375")	1
379558	379558	DIN 120	1
380076-13	380076-13	Washer (.950" x .1.762" x .157")	1
380486	380486	Lock Nut - Nylon, Thin (.875"-14)	1
†329160-88X	†329160-130X	Conversion Kit (XD to AB)	



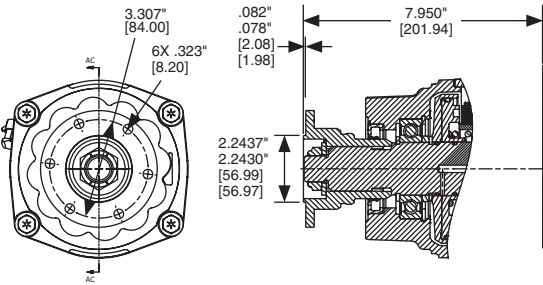
AC Output Option DIN 100 Flange			
Part Number		Description	Qty.
PTO w/ 5/16" Bearing Cap Bolts	PTO w/ 3/8" Bearing Cap Bolts		
329724-1X	329724-1X	Drive Shaft & Clutch Assembly (3-P-1065)	1
21-P-766	21-P-881	Bearing Cap.....	1
28-P-211	28-P-211	Oil Seal (3.00" x 2.00" x .375")	1
379742	379742	DIN 100	1
380076-13	380076-13	Washer (.950" x .1.762" x .157")	1
380486	380486	Lock Nut - Nylon, Thin (.875"-14)	1
†329160-92X	†329160-134X	Conversion Kit (XD to AC)	



SB Output Option DIN 120 Flange			
Part Number		Description	Qty.
PTO w/ 5/16" Bearing Cap Bolts	PTO w/ 3/8" Bearing Cap Bolts		
329724-8X	329724-8X	Drive Shaft & Clutch Assembly (3-P-1161)	1
21-P-766	21-P-881	Bearing Cap.....	1
28-P-211	28-P-211	Oil Seal (3.00" x 2.00" x .375")	1
379558	379558	DIN 120	1
380076-13	380076-13	Washer (.950" x .1.762" x .157")	1
380486	380486	Lock Nut - Nylon, Thin (.875"-14)	1
†329160-89X	†329160-131X	Conversion Kit (XD to SB)	

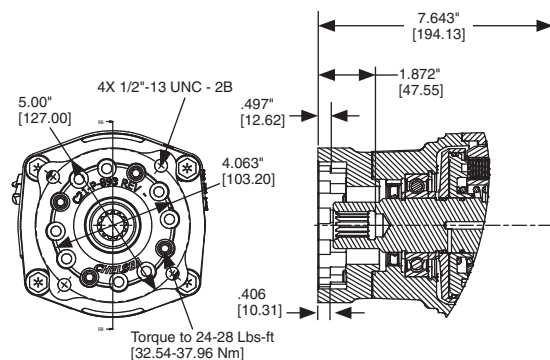
†Conversion Kits do not include all parts listed above. See [pages 49-57](#) for Conversion Kit BOMs.

Bill of Materials - Driveline Output
(Continued)

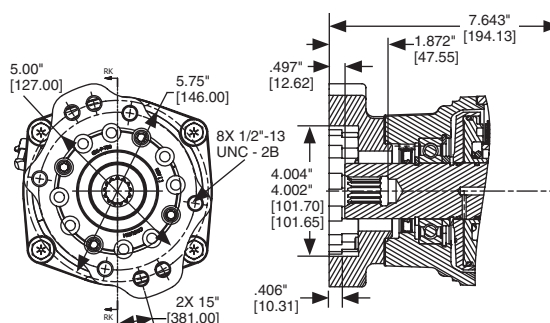


SC Output Option DIN 100 Flange			
Part Number		Description	Qty.
PTO w/ 5/16" Bearing Cap Bolts	PTO w/ 3/8" Bearing Cap Bolts		
329724-8X	329724-8X	Drive Shaft & Clutch Assembly (3-P-1161)	1
21-P-766	21-P-881	Bearing Cap.....	1
28-P-211	28-P-211	Oil Seal (3.00" x 2.00" x .375")	1
379742	379742	DIN 100	1
380076-13	380076-13	Washer (.950" x .1762" x .157")	1
380486	380486	Lock Nut - Nylon, Thin (.875"-14)	1
†329160-93X	†329160-135X	Conversion Kit (XD to SC)	

†Conversion Kits do not include all parts listed above. See [pages 49-57](#) for Conversion Kit BOMs.

Output Options**Parts List
280 Series****Bill of Materials - Pump Mount**

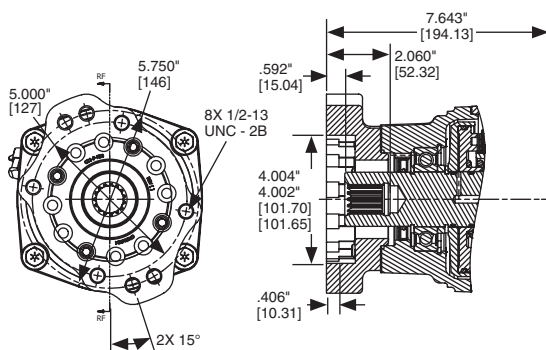
RB Output Option Rotatable SAE B 4-Bolt Flange, SAE B Shaft (7/8" - 13T)			
Part Number		Description	Qty.
PTO w/ 5/16" Bearing Cap Bolts	PTO w/ 3/8" Bearing Cap Bolts		
NA	329724-4X	Drive Shaft & Clutch Assembly (3-P-1126)	1
	21-P-882	Bearing Cap.....	1 or
	21-P-883	Bearing Cap (Wet Spline Only)	1
	28-P-267	Oil Seal (2.627" x 1.750" x .312")	1
	328170-216X	Capscrew Bag Kit	1
	35-P-101	Rotatable Flange Gasket (Wet Spline) (Ships with Kit)	1
	21-P-894	Pump Flange (Ships Loose with Unit)	4
		Wet Spline LOOSE PARTS	1
	329699-1X	Hose Assembly.....	1
	329959X	Wet Spline Loose Parts Kit.....	1
	329658X	Cover Kit.....	1
NA	†329160-149X	Conversion Kit (XD to RB DRY)	
	†329160-150X	Conversion Kit (XD to RB WET)	



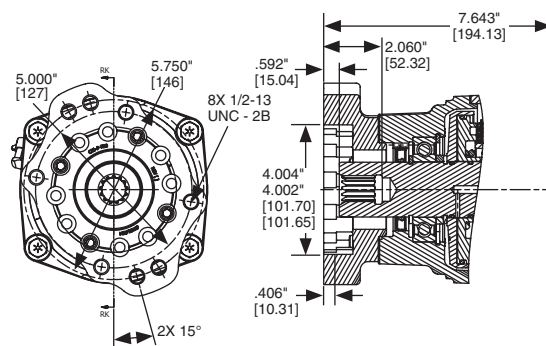
RK Output Option Rotatable SAE B 2 or 4-Bolt Flange, SAE B Shaft (7/8" - 13T)			
Part Number		Description	Qty.
PTO w/ 5/16" Bearing Cap Bolts	PTO w/ 3/8" Bearing Cap Bolts		
329724-4X	329724-4X	Drive Shaft & Clutch Assembly (3-P-1126)	1
21-P-767	21-P-882	Bearing Cap.....	1 or
21-P-772	21-P-883	Bearing Cap (Wet Spline Only)	1
28-P-267	28-P-267	Oil Seal (2.627" x 1.750" x .312")	1
328170-216X	328170-216X	Capscrew Bag Kit	1
35-P-101	35-P-101	Rotatable Flange Gasket (Wet Spline) (Ships with Kit)	1
21-P-731	21-P-731	Pump Flange (Ships Loose with Unit)	4
		Wet Spline LOOSE PARTS	1
329699-1X	329699-1X	Hose Assembly.....	1
329700X	329700X	Wet Spline Loose Parts Kit.....	1
329658X	329658X	Cover Kit.....	1
†329160-79X	†329160-121X	Conversion Kit (XD to RK DRY)	
†329160-80X	†329160-122X	Conversion Kit (XD to RK WET)	

†Conversion Kits do not include all parts listed above. See [pages 49-57](#) for Conversion Kit BOMs.

Output Options

Parts List
280 SeriesBill of Materials - Pump Mount
(Continued)

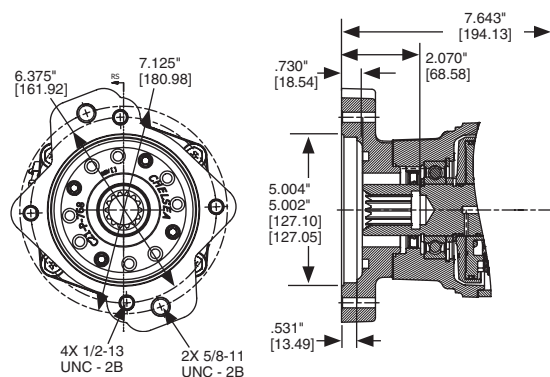
RF Output Option			
Rotatable SAE B 2 or 4-Bolt Flange, SAE BB Shaft (1" - 15T)			
Part Number		Description	Qty.
PTO w/ 5/16" Bearing Cap Bolts	PTO w/ 3/8" Bearing Cap Bolts		
329724-5X	329724-5X	Drive Shaft & Clutch Assembly (3-P-1127)	1
21-P-767	21-P-882	Bearing Cap.....	1 or
21-P-772	21-P-883	Bearing Cap (Wet Spline Only)	1
28-P-267	28-P-267	Oil Seal (2.627" x 1.750" x .312")	1
328170-216X	328170-216X	Capscrew Bag Kit.....	1
35-P-101	35-P-101	Rotatable Flange Gasket (Wet Spline) (Ships with Kit)	1
21-P-731	21-P-731	Pump Flange (Ships Loose with Unit)	4
329699-1X	329699-1X	Hose Assembly (Wet Spline)	1
		Wet Spline LOOSE PARTS	1
329700X	329700X	Wet Spline Loose Parts Kit.....	1
329658X	329658X	Cover Kit (Wet Spline)	1
†329160-82X	†329160-124X	Conversion Kit (XD to RF DRY)	
†329160-83X	†329160-125X	Conversion Kit (XD to RF WET)	



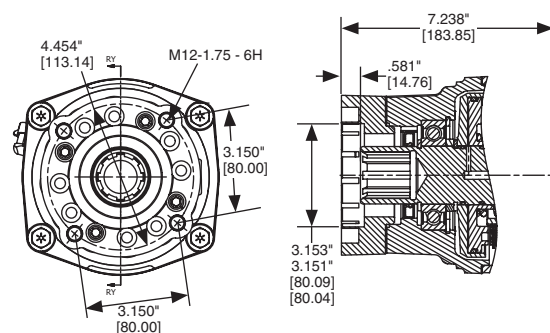
RZ Output Option			
Rotatable SAE B 2 or 4-Bolt Flange, SAE C Shaft (1-1/4" - 14T)			
Part Number		Description	Qty.
PTO w/ 5/16" Bearing Cap Bolts	PTO w/ 3/8" Bearing Cap Bolts		
329724-2X	329724-2X	Drive Shaft & Clutch Assembly (3-P-1066)	1
21-P-767	21-P-882	Bearing Cap.....	1 or
21-P-772	21-P-883	Bearing Cap (Wet Spline Only)	1
28-P-267	28-P-267	Oil Seal (2.627" x 1.750" x .312")	1
328170-216X	328170-216X	Capscrew Bag Kit.....	1
35-P-101	35-P-101	Rotatable Flange Gasket (Wet Spline) (Ships with Kit)	1
21-P-731	21-P-731	Pump Flange (Ships Loose with Unit)	4
		Wet Spline LOOSE PARTS	1
329699-1X	329699-1X	Hose Assembly.....	1
329700X	329700X	Wet Spline Loose Parts Kit.....	1
329658X	329658X	Cover Kit.....	1
†329160-95X	†329160-137X	Conversion Kit (XD to RZ DRY)	
†329160-96X	†329160-138X	Conversion Kit (XD to RZ WET)	

†Conversion Kits do not include all parts listed above. See [pages 49-57](#) for Conversion Kit BOMs.

Output Options

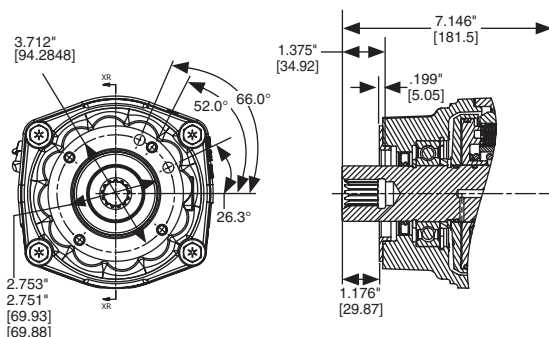
Parts List
280 SeriesBill of Materials - Pump Mount
(Continued)

RS Output Option			
Rotatable SAE C 2 or 4-Bolt Flange, SAE C Shaft (1-1/4" - 14T)			
Part Number		Description	Qty.
PTO w/ 5/16" Bearing Cap Bolts	PTO w/ 3/8" Bearing Cap Bolts		
329724-2X	329724-2X	Drive Shaft & Clutch Assembly (3-P-1066)	1
21-P-767	21-P-882	Bearing Cap.....	1 or
21-P-772	21-P-883	Bearing Cap (Wet Spline Only)	1
28-P-267	28-P-267	Oil Seal (2.627" x 1.750" x .312")	1
328170-216X	328170-216X	Capscrew Bag Kit.....	1
35-P-101	35-P-101	Rotatable Flange Gasket (Wet Spline) (Ships with Kit)	1
21-P-769	21-P-769	Pump Flange (Ships Loose with Unit)	1
		Wet Spline LOOSE PARTS	1
329699-1X	329699-1X	Hose Assembly.....	1
329744X	329744X	Wet Spline Loose Parts Kit.....	1
329654X	329654X	Cover Kit.....	1
†329160-84X	†329160-126X	Conversion Kit (XD to RS DRY)	
†329160-85X	†329160-127X	Conversion Kit (XD to RS WET)	

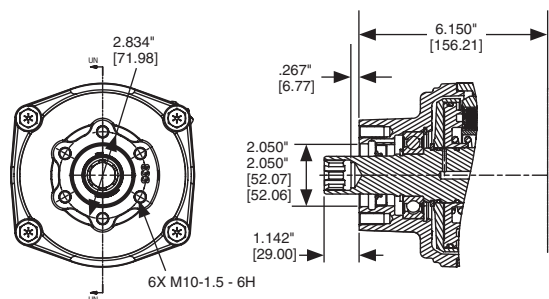


RY Output Option			
Rotatable ISO 7653 Pump Mount DIN 5462 Shaft			
Part Number		Description	Qty.
PTO w/ 5/16" Bearing Cap Bolts	PTO w/ 3/8" Bearing Cap Bolts		
329724-3X	329724-3X	Drive Shaft & Clutch Assembly (3-P-1067)	1
21-P-767	21-P-882	Bearing Cap.....	1 or
21-P-772	21-P-883	Bearing Cap (Wet Spline Only)	1
28-P-267	28-P-267	Oil Seal (2.627" x 1.750" x .312")	1
328170-216X	328170-216X	Capscrew Bag Kit.....	1
35-P-101	35-P-101	Rotatable Flange Gasket (Wet Spline) (Ships with Kit)	1
21-P-771	21-P-771	Pump Flange (Ships Loose with Unit)	1
		Wet Spline LOOSE PARTS	1
329699-1X	329699-1X	Hose Assembly.....	1
329742X	329742X	Wet Spline Loose Parts Kit.....	1
329659X	329659X	Cover Kit.....	1
†329160-86X	†329160-128X	Conversion Kit (XD to RY DRY)	
†329160-87X	†329160-129X	Conversion Kit (XD to RY WET)	

†Conversion Kits do not include all parts listed above. See [pages 49-57](#) for Conversion Kit BOMs.

Bill of Materials - Pump Mount
(Continued)

XR Output Option Chelsea Special (Cloverleaf), SAE B Shaft (7/8" - 13T)			
Part Number		Description	Qty.
PTO w/ 5/16" Bearing Cap Bolts	PTO w/ 3/8" Bearing Cap Bolts		
329724-4X	329724-4X	Drive Shaft & Clutch Assembly (3-P-1126)	1
21-P-767	21-P-882	Bearing Cap.....	1
28-P-267	28-P-267	Oil Seal (2.627" x 1.750" x .312")	1
380563-14	380563-14	Hex Flange Head Capscrew (.375-16" x 1.500")	4
4-P-209	4-P-209	Spacer	1
329906X	329906X	Pump Installation Kit.....	1



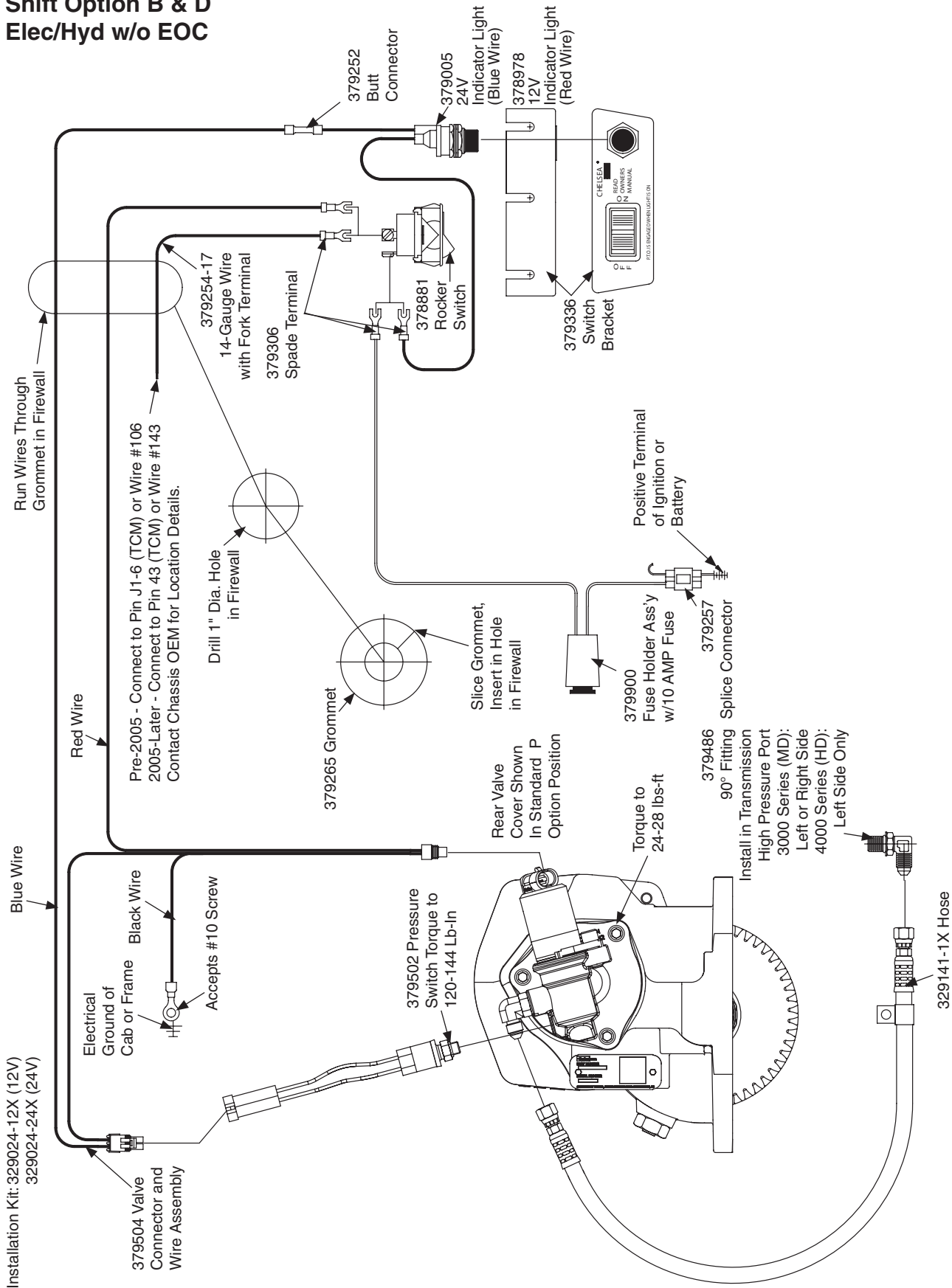
*UN Output Option UNI 8953, 3-Bolt Pump Flange DIN 5462 Shaft			
Part Number		Description	Qty.
PTO w/ 5/16" Bearing Cap Bolts	PTO w/ 3/8" Bearing Cap Bolts		
N/A	329724-7X	Drive Shaft & Clutch Assembly (3-P-1129)	1
	21-P-832	Bearing Cap.....	1 or
	21-P-833	Bearing Cap (Wet Spline Only)	1
	28-P-216	Oil Seal (2.004" x 1.250" x .374")	1
		Wet Spline LOOSE PARTS	1
	329699-1X	Hose Assembly.....	1
N/A	329821X	Wet Spline Loose Parts Kit.....	1
	†329160-132X	Conversion Kit (XD to UN DRY)	
	†329160-133X	Conversion Kit (XD to UN WET)	

* No longer a current option per 2018 Chelsea Suggested List Price.

†Conversion Kits do not include all parts listed above. See [pages 49-57](#) for Conversion Kit BOMs.

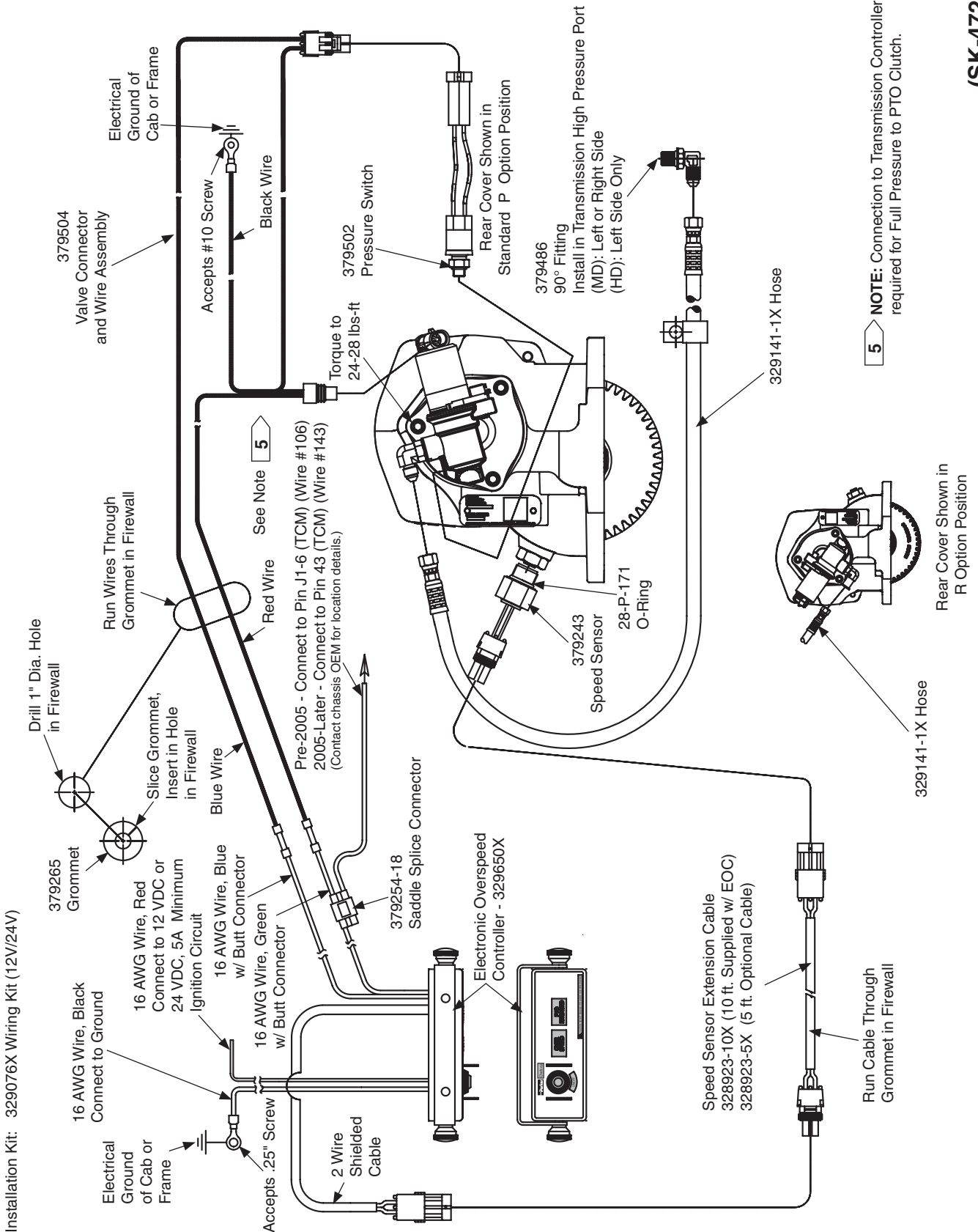
Transmission 3000/4000
Shift Option B & D
Elec/Hyd w/o EOC

(SK-347 Rev G)

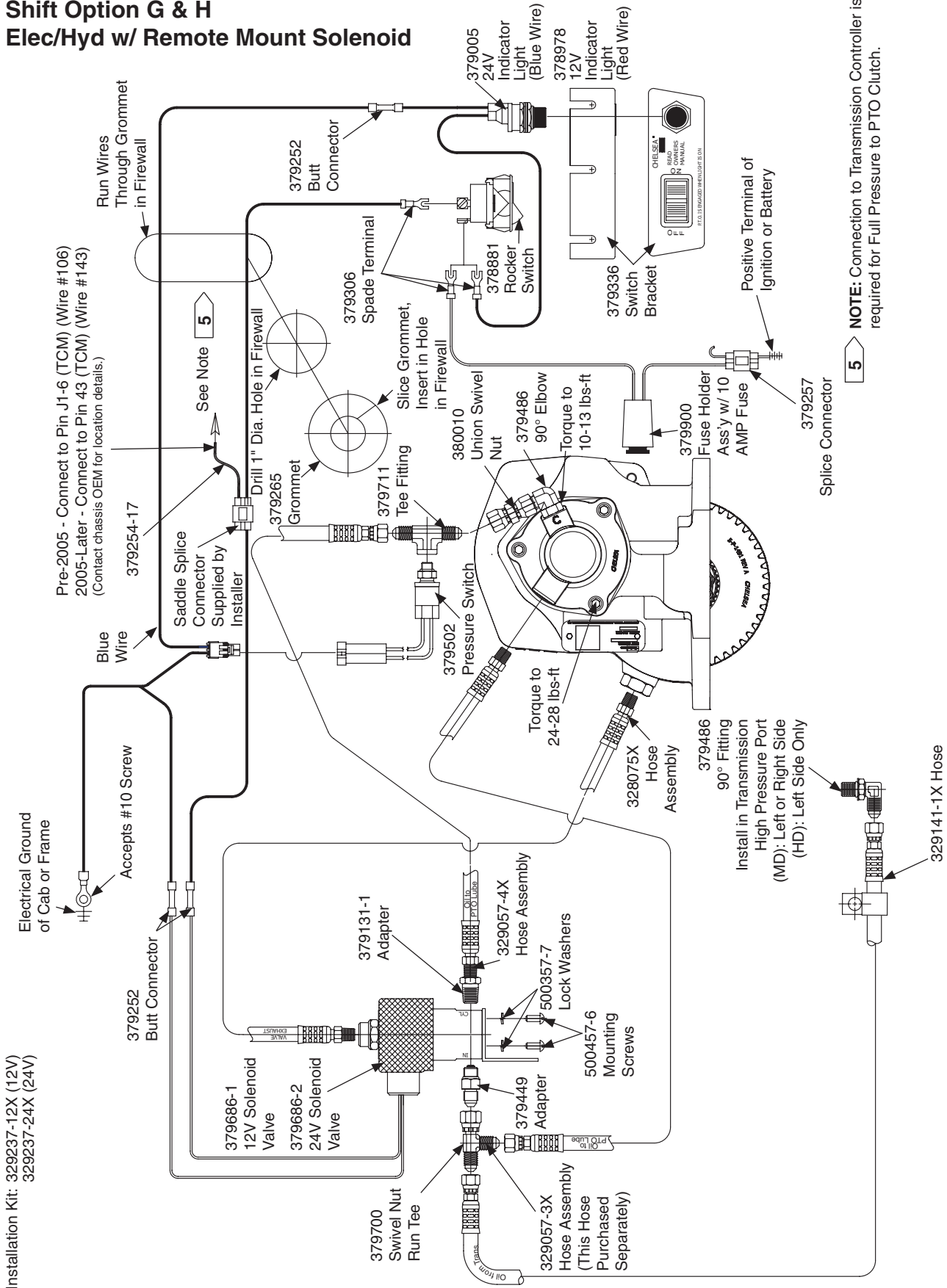


Transmission 3000/4000
Shift Option K & L
Elec/Hyd w/ EOC

(SK-472 Rev C)



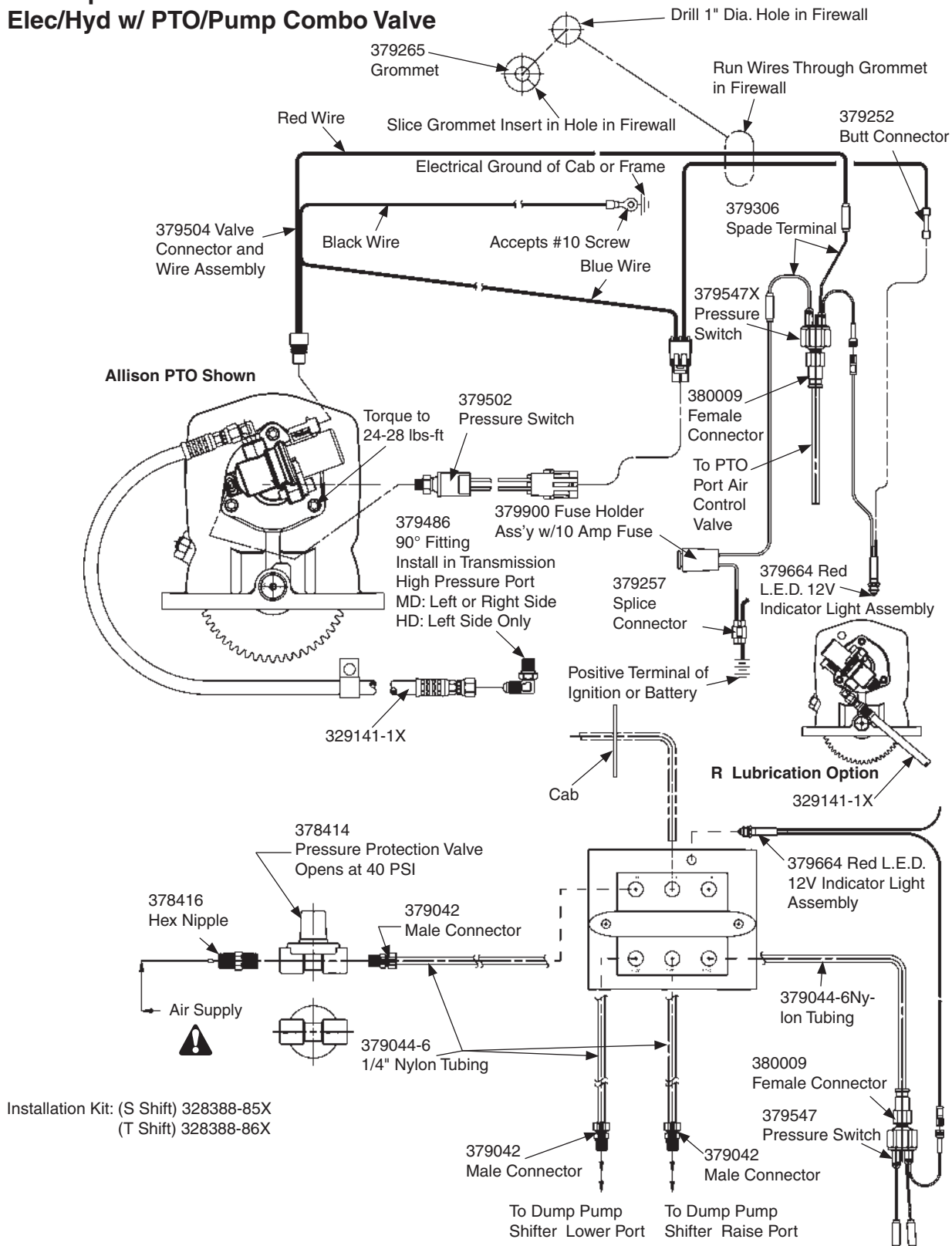
Transmission 3000/4000
Shift Option G & H
Elec/Hyd w/ Remote Mount Solenoid



(SK-432 Rev F)

Transmission 3000/4000
Shift Option S & T
Elec/Hyd w/ PTO/Pump Combo Valve

(SK-427 Rev C)



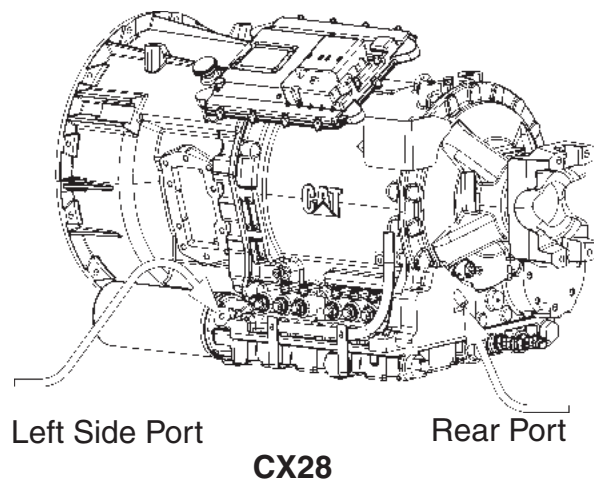
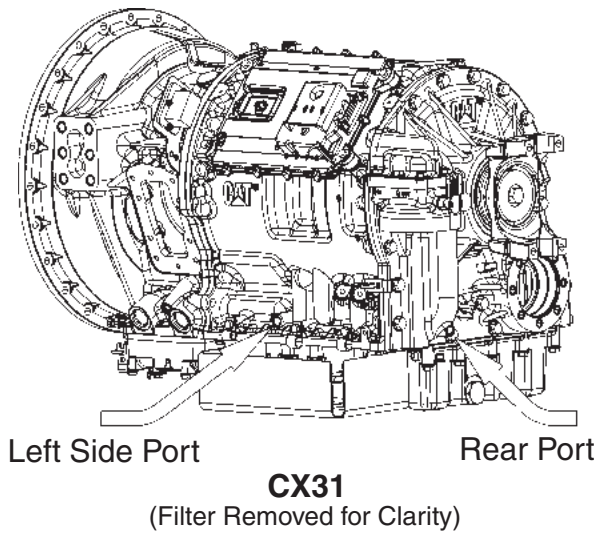
NOTE: Air control valve must be fitted inside a waterproof housing when installed outside the driver's cab

 **WARNING:** Connect directly to air supply. Do not use tubing between air supply and pressure protection valve.

Caution: When installing nylon tubing avoid sharp angles, exhaust and manifold systems.

Pressure Port Locations & Hose Chart

(SK-414 Rev B)



Both High Pressure Connections are -4 O-Ring Boss

HOSE CHART

Trans.	PTO	PTO Location	High Oil Pressure Location	PTO Valve Location	PTO Fitting	Trans. Fitting	Trans.-PTO Valve Hose #
CX31 CX28	280, 287	Driver (LHS)	LHS	Attached	379486	379812	329075-1X
		Driver (LHS)	Rear				329075-5X
		Pass. (RHS)	LHS				329075-2X
		Pass. (RHS)	Rear			379486	329075-5X
		Driver (LHS)	LHS	Remote	379486	379812	329130-6X
		Driver (LHS)	Rear				329130-6X
		Pass. (RHS)	LHS				329130-6X
		Pass. (RHS)	Rear				329130-6X

LHS = Left Hand Side of Transmission, 8 o'clock position

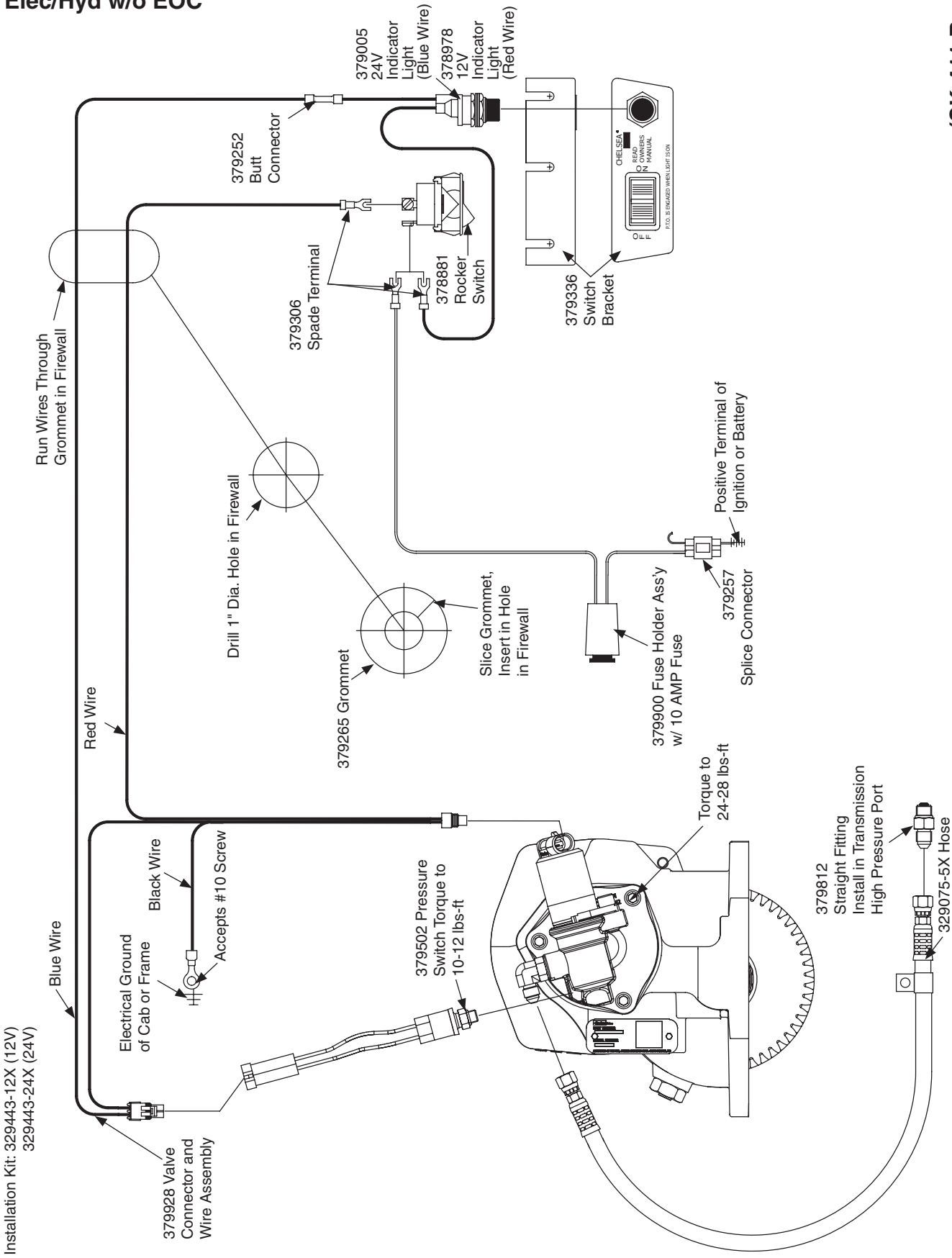
RHS = Right Hand Side of Transmission, 1 o'clock position

NOTES:

1. One PTO Fitting 379486 and one transmission fitting 379812 are included with the PTO unit. If using 379486 in transmission it must be purchased separately.
2. Hoses to be purchased separately.
3. 379486 elbow will not install on left hand (driver) side oil port due to transmission interference.
4. If 379486 is listed as transmission fitting for rear location, route hose along right hand (passenger) side of transmission and under transmission output yoke.

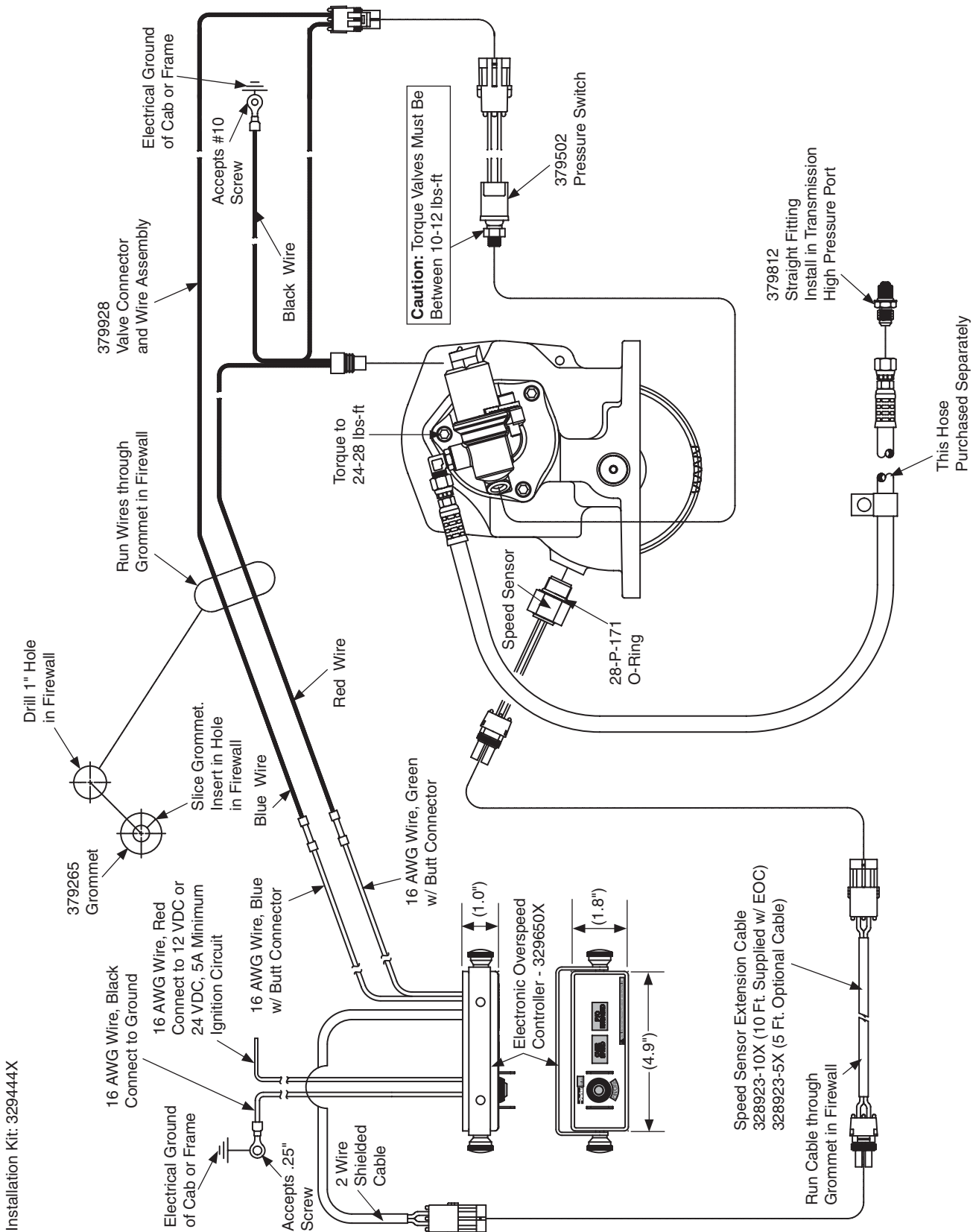
Shift Option B & D
Elec/Hyd w/o EOC

(SK-411 Rev C)



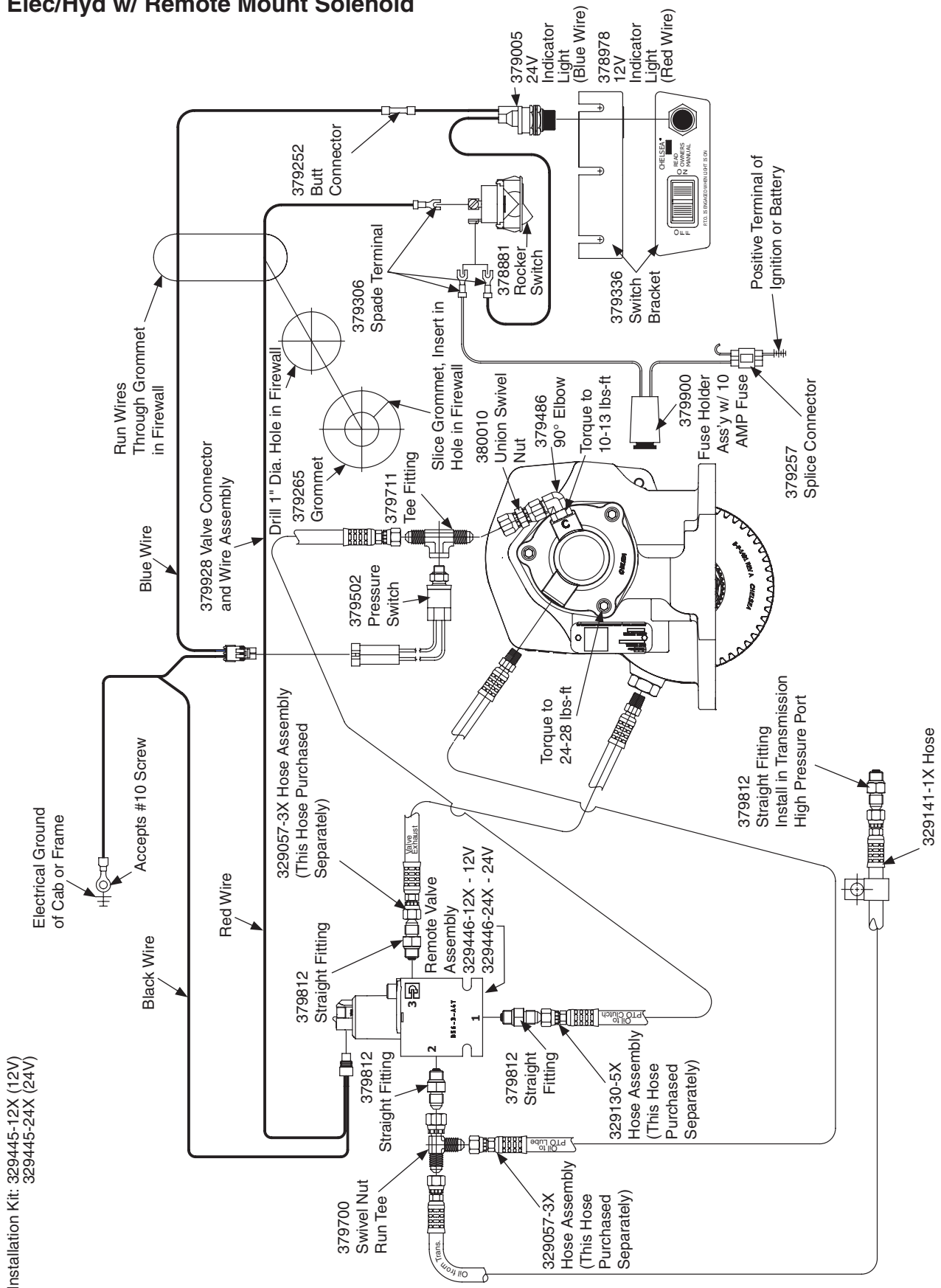
Shift Option K & L
Elec/Hyd w/ EOC

(SK-473 Rev B)

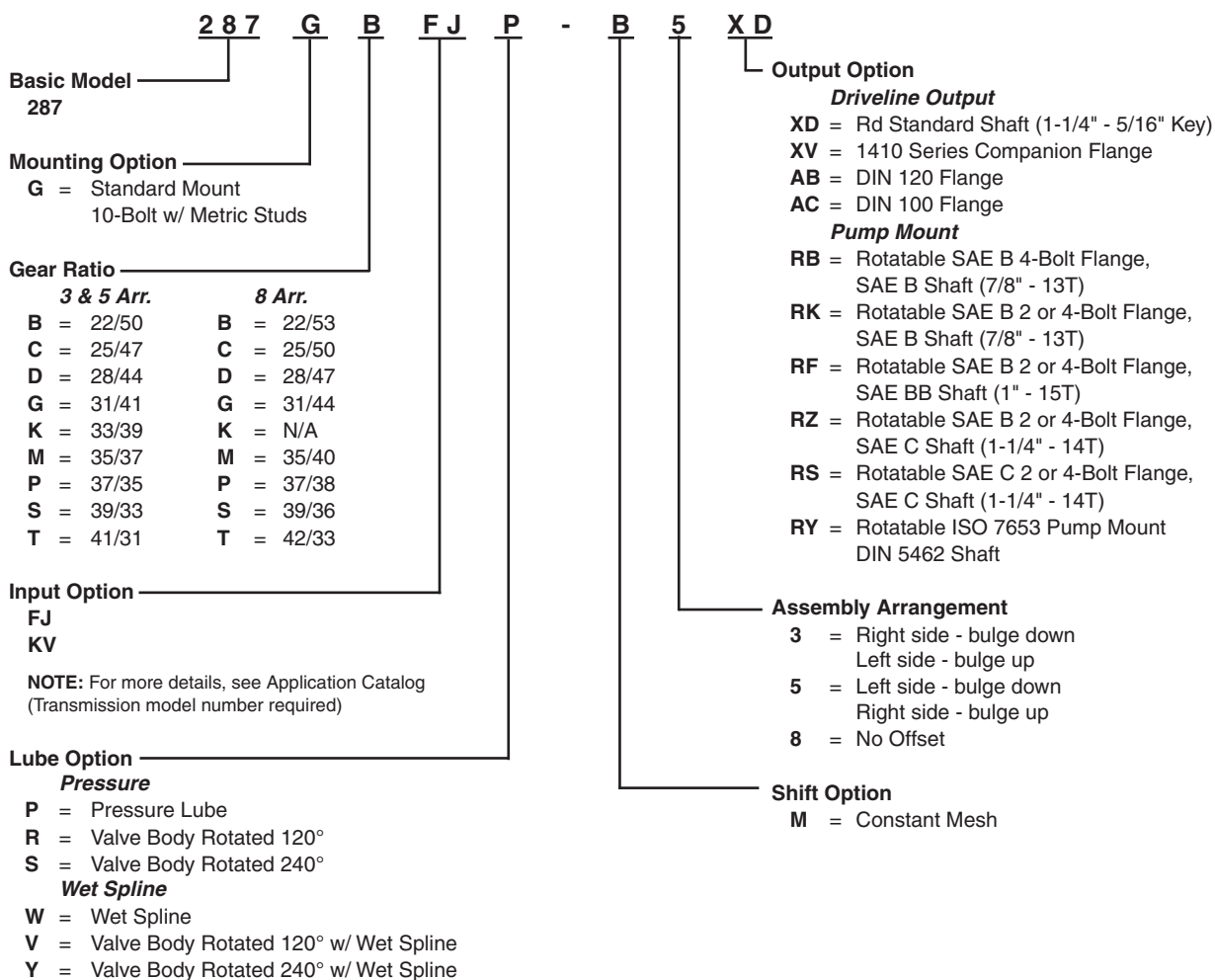


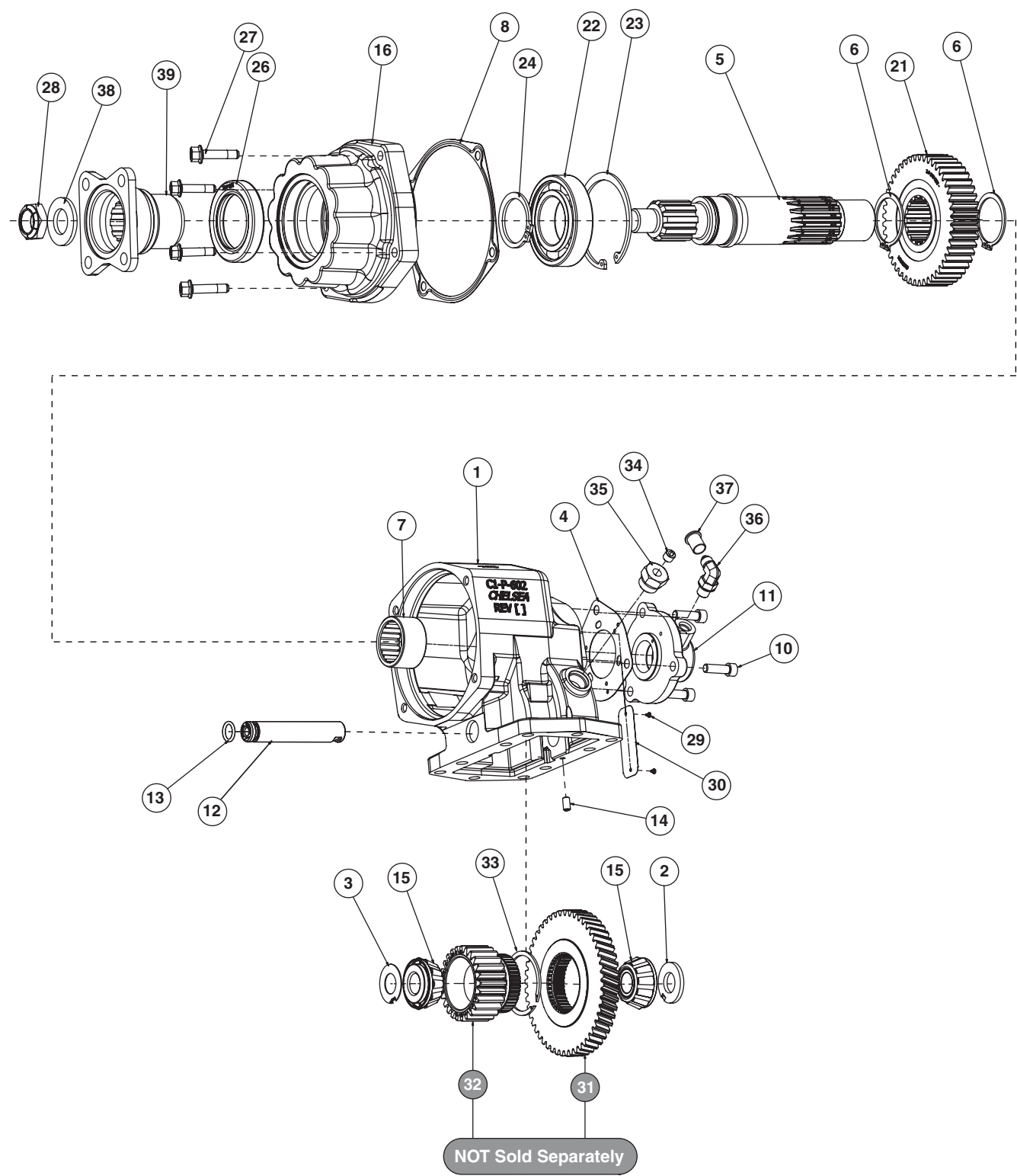
NOTES: Strip Wire Ends .25" Prior to Installing in Butt Connector (As Necessary)

(SK-413 Rev D)



This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There is no text or other markings on the paper.

Model Number Designator**Parts List
287 Series**

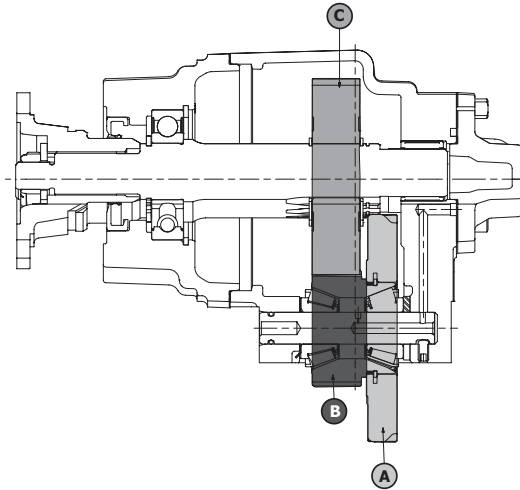


Bill of Materials**Parts List
287 Series**

Item	Part Number	Description	Qty.
1	1-P-703	Housing (3 Arrangement) (w/ 5/16" Bearing Cap Bolts).....	1 or
	1-P-763	Housing (3 Arrangement) (w/ 3/8" Bearing Cap Bolts).....	1 or
	1-P-705	Housing (5 Arrangement) (w/ 5/16" Bearing Cap Bolts).....	1 or
	1-P-765	Housing (5 Arrangement) (w/ 3/8" Bearing Cap Bolts).....	1 or
	1-P-708	Housing (8 Arrangement) (w/ 5/16" Bearing Cap Bolts).....	1 or
	1-P-768	Housing (8 Arrangement) (w/ 3/8" Bearing Cap Bolts).....	1
2	14-P-73-1	Spacer (.762" x 1.500" x .150") Thickness as Required.....	1 or
	14-P-73-2	Spacer (.762" x 1.500" x .153").....	1 or
	14-P-73-3	Spacer (.762" x 1.500" x .156").....	1
3	31-P-102	Thrust Washer (.754" x .440" x .030").....	1
4	22-P-112	Gasket.....	1
5	3-P-1068	Output Shaft - 10T Straight (AB, AC, XV).....	1
	3-P-1155	Output Shaft (RK).....	1
	3-P-1099	Output Shaft 1.0" - 15T (RF).....	1
	3-P-1070	Output Shaft 1.125" - 14T (RS, RZ).....	1
	3-P-1071	Output Shaft DIN 8T (RY).....	1
6	379668	Lockring.....	2
7	560972	Bearing Needle Roller Ass'y (1.500" x 1.875" x 1.000").....	1
8	22-P-151	Gasket.....	1
10	378447-6	Socket Head Capscrew (.312"-18 x 1.000").....	1
11	21-P-690	Cap Seal.....	1
12	9-P-106	Idler Shaft (.75").....	1
13	28-P-191	O-Ring (.549" x .103").....	1
14	378452-7	Socket Head Set Screw (.250" - 20 x .500").....	1
15	550439	Tapered Bearing Cone (.750" x .8598").....	2 or
	561006	Tapered Bearing Cone (.7505" x .655") (B Ratio Only).....	2
16	21-P-766	Bearing Cap (w/ 5/16" Bearing Cap Bolts).....	1 or
	21-P-881	Bearing Cap (w/ 3/8" Bearing Cap Bolts).....	1
21	See Page 35	Gear Output.....	1
22	550311	Ball Bearing (1.77" x 3.346" x .748").....	1
23	378263	Lockring.....	1
24	379555	Lockring.....	1
26	28-P-211	Oil Seal (3.001" x 2" x .375").....	1
27	378447-8	Socket Head Capscrew (.312"-18 x 1.500") (w/ 5/16" Bearing Cap Bolts).....	4 or
	380563-14	Hex Flange Head Capscrew (.375"-16 x 1.500") (w/ 3/8" Bearing Cap Bolts).....	4
28	380486	Lock Nut - Nylon, Thin (.875"-14).....	1
29	378422	Drive Screw.....	2
30	68-P-51	Name Plate.....	1
Not Sold Separately			
31	See Page 35	Input Gear.....	1
32	See Page 35	Ratio Gear.....	1
33	379522	Lockring.....	1
34	379231	Pipe Plug .125"-27.....	1
35	379242	Adapter Straight .125"-27 x .750"-16.....	1
36	379486	90° Elbow .438"-20.....	1
Continued on Next Page			

Bill of Materials**Parts List
287 Series**

Item	Part Number	Description	Qty.
37	379564-2	Cap Thread .438"	1
38	380076-13	Washer Flat Hardened (.950" x 1.762" x .157").....	1
39	380503	1410 Series Companion Flange (XV).....	1
	379558	DIN 120 (AB)	1
	379742	DIN 100 (AC)	1
	See pages 44-45 for Bill of Materials for the below loose parts.		
		SERVICE KITS	
	329071-66X	Bearing Kit.....	1
	329071-81X	Gasket & Seal Kit	1
		STUD KITS	
	7170-86X	Mounting Kit (FJ Gear) (3 & 5 Arrangement).....	1
	7170-117X	Mounting Kit (KV Gear) (3 & 5 Arrangement).....	1
		INSTALLATION INSTRUCTIONS KITS	
	328948-47X	Gasket & Installation Instructions	1
		HOSE ASSEMBLIES	
	329075-5X	Pressure Hose Ass'y (KV Gear)	1
	329141-1X	Pressure Hose Ass'y (FJ Gear).....	1
	329699-1X	Wet Spline Lube Ass'y (W, V & YShift)	1



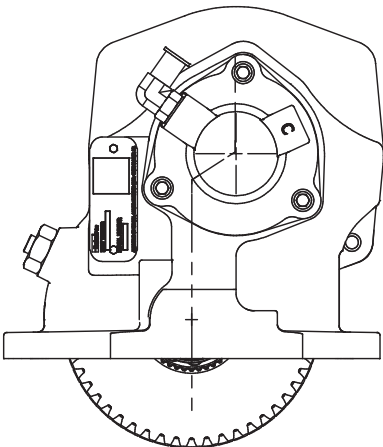
3 and 5 Assembly

GEAR DESIGNATOR	INPUT GEAR ASSEMBLY	NOT Sold Separately				OUTPUT GEAR (21)	NO. TEETH C
		INPUT GEAR (31)	NO. TEETH A	RATIO GEAR (32)	NO. TEETH B		
287*BFJ	5-P-1491-1X	5-P-1491	50	5-P-1478	22	2-P-944	50
287*CFJ	5-P-1491-2X	5-P-1491	50	5-P-1495	25	2-P-945	47
287*DFJ	5-P-1491-3X	5-P-1491	50	5-P-1479	28	2-P-946	44
287*GFJ	5-P-1491-4X	5-P-1491	50	5-P-1480	31	2-P-947	41
287*KFJ	5-P-1491-5X	5-P-1491	50	5-P-1481	33	2-P-949	39
287*MFJ	5-P-1491-6X	5-P-1491	50	5-P-1482	35	2-P-951	37
287*PFJ	5-P-1491-7X	5-P-1491	50	5-P-1483	37	2-P-953	35
287*SFJ	5-P-1491-8X	5-P-1491	50	5-P-1484	39	2-P-954	33
287*TFJ	5-P-1491-9X	5-P-1491	50	5-P-1497	41	2-P-955	31
287*BKV	5-P-1493-1X	5-P-1493	45	5-P-1478	22	2-P-944	50
287*CKV	5-P-1493-2X	5-P-1493	45	5-P-1495	25	2-P-945	47
287*DKV	5-P-1493-3X	5-P-1493	45	5-P-1479	28	2-P-946	44
287*GKV	5-P-1493-4X	5-P-1493	45	5-P-1480	31	2-P-947	41
287*KKV	5-P-1493-5X	5-P-1493	45	5-P-1481	33	2-P-949	39
287*MKV	5-P-1493-6X	5-P-1493	45	5-P-1482	35	2-P-951	37
287*PKV	5-P-1493-7X	5-P-1493	45	5-P-1483	37	2-P-953	35
287*SKV	5-P-1493-8X	5-P-1493	45	5-P-1484	39	2-P-954	33
287*TKV	5-P-1493-9X	5-P-1493	45	5-P-1497	41	2-P-955	31

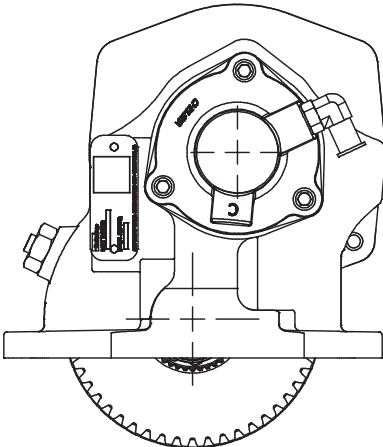
8 Assembly

GEAR DESIGNATOR	INPUT GEAR ASSEMBLY	NOT Sold Separately				OUTPUT GEAR (21)	NO. TEETH C
		INPUT GEAR (31)	NO. TEETH A	RATIO GEAR (32)	NO. TEETH B		
287*BFJ	5-P-1491-1X	5-P-1491	50	5-P-1478	22	2-P-943	53
287*CFJ	5-P-1491-2X	5-P-1491	50	5-P-1495	25	2-P-944	50
287*DFJ	5-P-1491-3X	5-P-1491	50	5-P-1479	28	2-P-945	47
287*GFJ	5-P-1491-4X	5-P-1491	50	5-P-1480	31	2-P-946	44
287*MFJ	5-P-1491-6X	5-P-1491	50	5-P-1482	35	2-P-948	40
287*PFJ	5-P-1491-7X	5-P-1491	50	5-P-1483	37	2-P-950	38
287*SFJ	5-P-1491-8X	5-P-1491	50	5-P-1484	39	2-P-952	36
287*TFJ	5-P-1491-10X	5-P-1491	50	5-P-1485	42	2-P-954	33
287*BKV	5-P-1493-1X	5-P-1493	45	5-P-1478	22	2-P-943	53
287*CKV	5-P-1493-2X	5-P-1493	45	5-P-1495	25	2-P-944	50
287*DKV	5-P-1493-3X	5-P-1493	45	5-P-1479	28	2-P-945	47
287*GKV	5-P-1493-4X	5-P-1493	45	5-P-1480	31	2-P-946	44
287*MKV	5-P-1493-6X	5-P-1493	45	5-P-1482	35	2-P-948	40
287*PKV	5-P-1493-7X	5-P-1493	45	5-P-1483	37	2-P-950	38
287*SKV	5-P-1493-8X	5-P-1493	45	5-P-1484	39	2-P-952	36
287*TKV	5-P-1493-10X	5-P-1493	45	5-P-1485	42	2-P-954	33

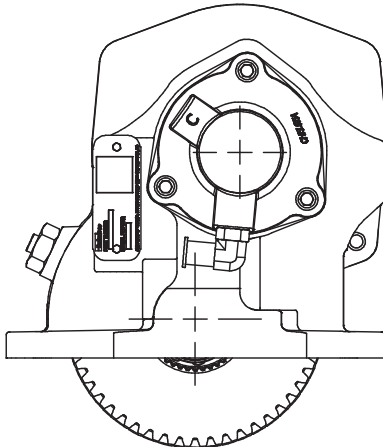
Pressure Lube



P = Pressure Lube

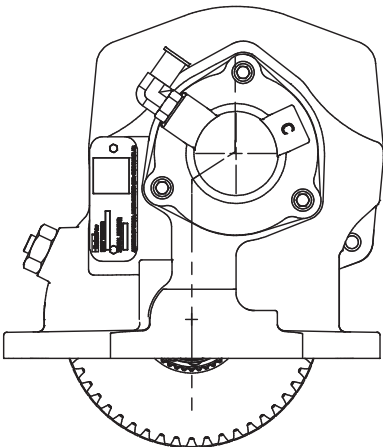


R = Valve Cap Rotated 120°

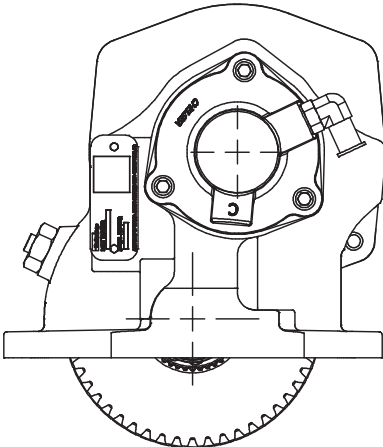


S = Valve Cap Rotated 240°

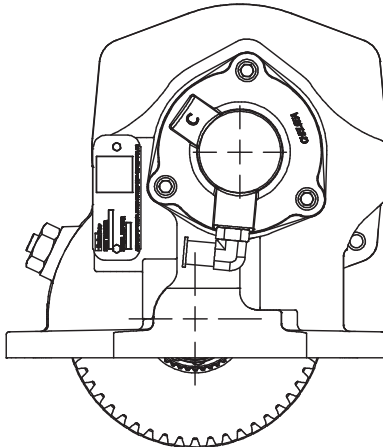
Wet Spline



W = Wet Spline



V = Valve Cap Rotated 120°
w/ Wet Spline

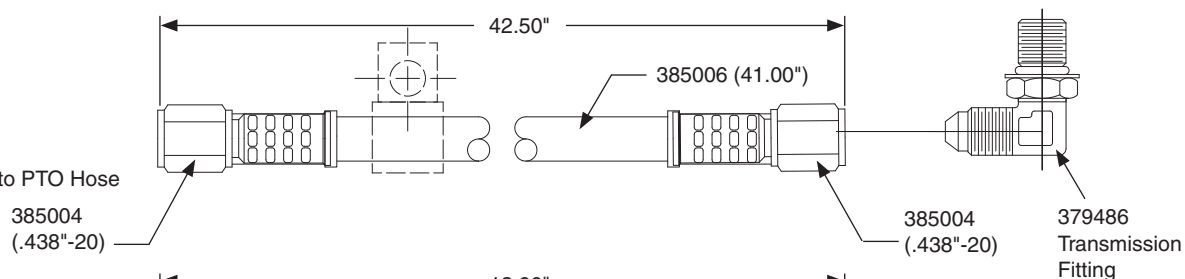


Y = Valve Cap Rotated 240°
w/ Wet Spline

Pressure Lube (Continued)

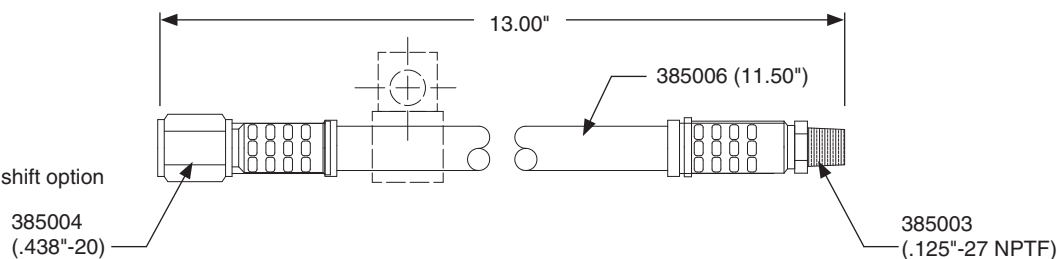
329141-1X

Transmission to PTO Hose



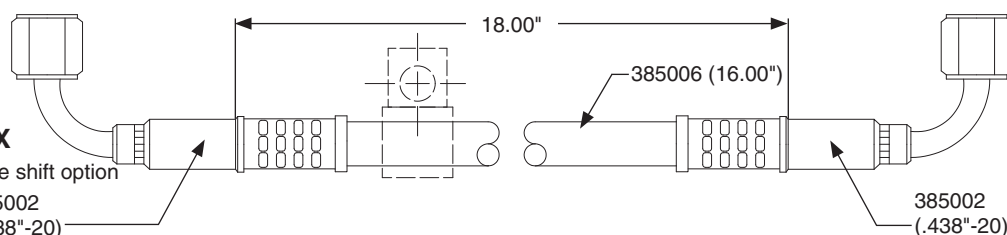
329057-5X

Remote valve shift option



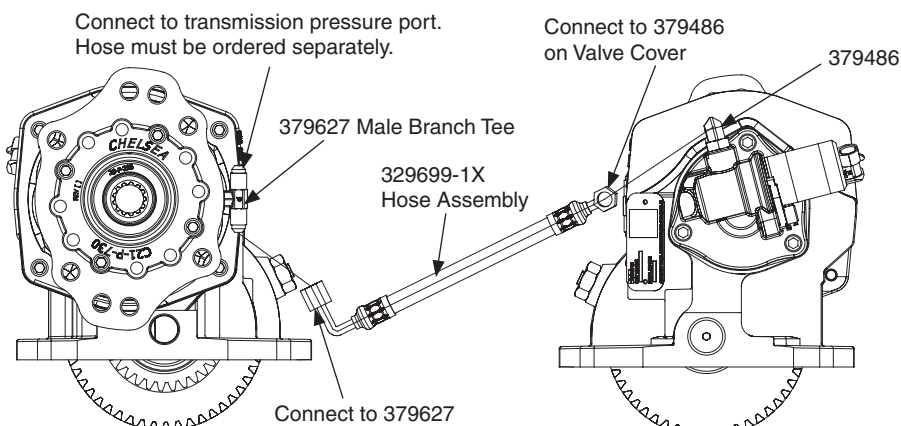
329699-1X

Remote valve shift option



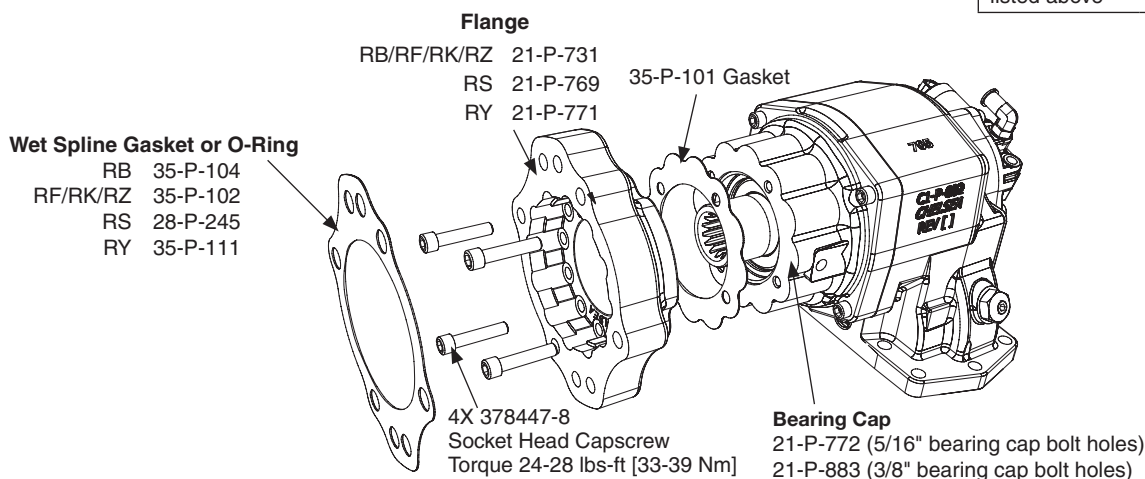
Wet Spline Installation – 287 Series RB, RF, RK, RS, RY & RZ

(SK-508 Rev B)

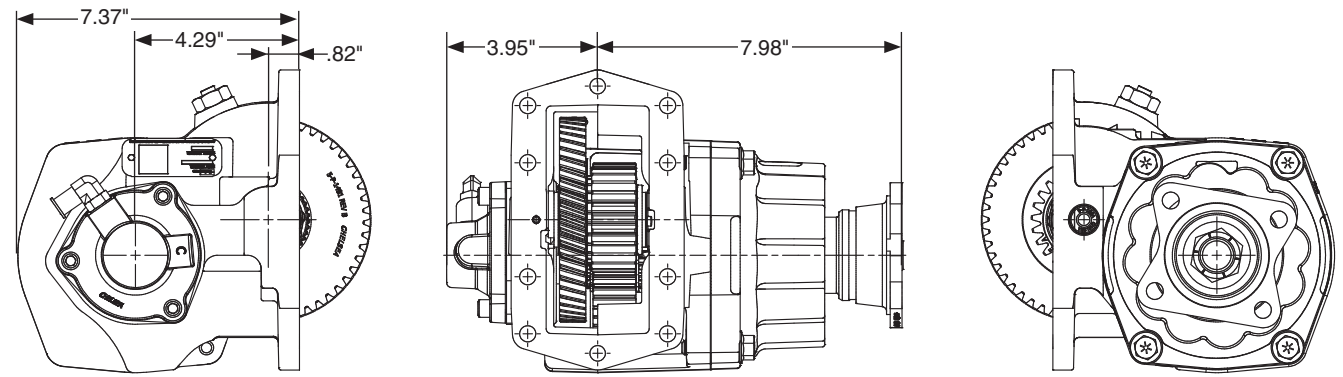


Wet Spline Installation Kits	
Output	Kit Number
RB	329959X
RF/RK/RZ	329700X
RS	329744X
RY	329742X

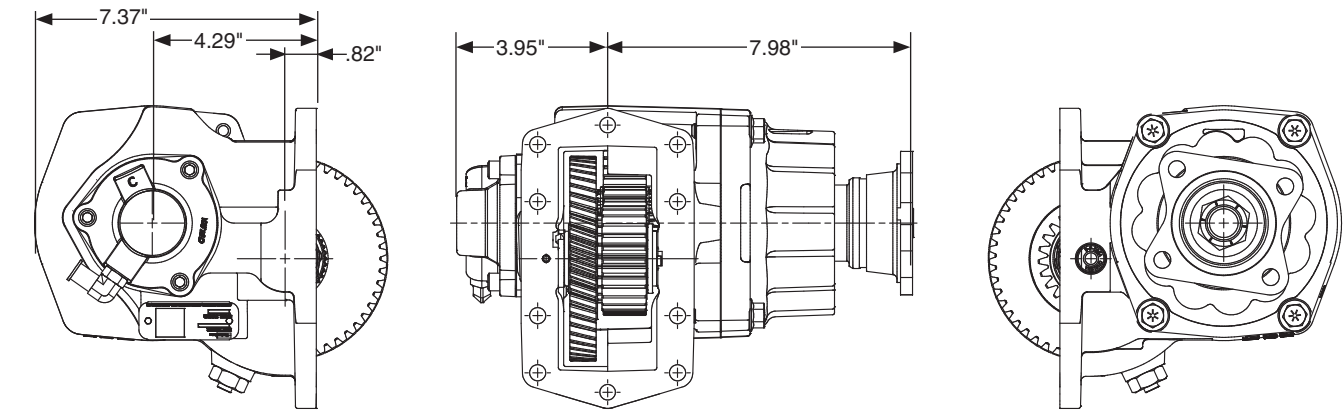
NOTE: Not all output options may be available on Series listed above



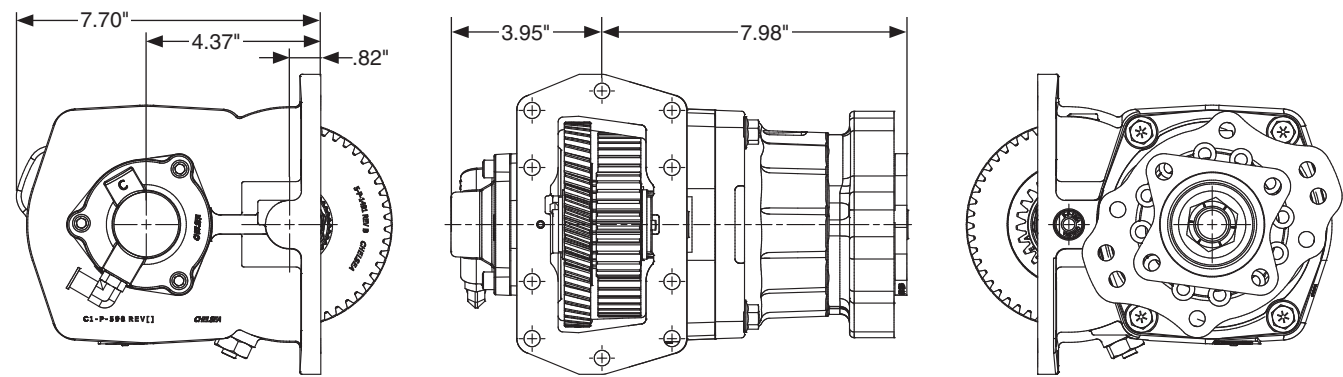
Housing Dimensions



Assembly 3

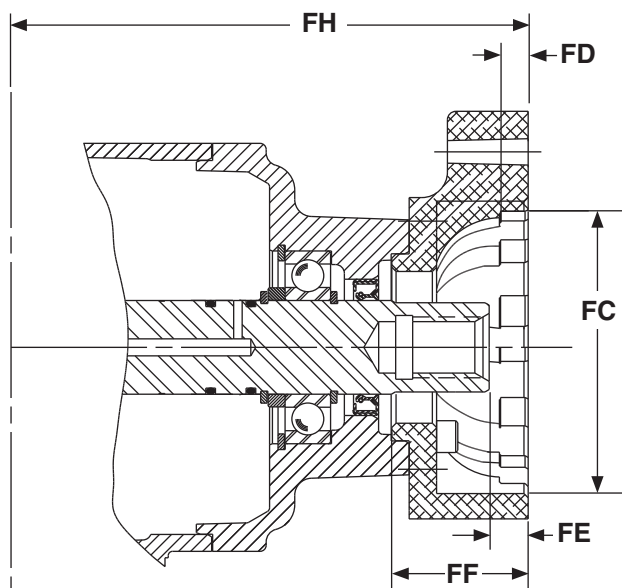


Assembly 5



Assembly 8

Direct Mount Pump Flange & Shaft Dimensions



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	Dimensions
RF•	5.750" 5.000"	1/2"-13 UNC	2■ 4	4.00"		.610"	2.080"	7.67"	1" - 15T Spline
RK•	5.750" 5.000"	1/2"-13 UNC	2/2 4	4.00"		.500 "	1.872"	7.67"	7/8" - 13T Spline
RS•	7.125" 6.375"	5/8"-11 UNC 1/2"-13 UNC	2■ 4	5.003"	.531"	.610"	2.580"	7.67"	1-1/4" - 14T Spline
RY•	4.454"	M12 x 1.75"	4	3.152"		.549"	2.250"	7.27"	B8x32x36
RZ•	5.750" 5.000"	1/2"-13 UNC	2■ 4		.406"	.610"	2.580"	7.67"	1-1/4" - 14T Spline

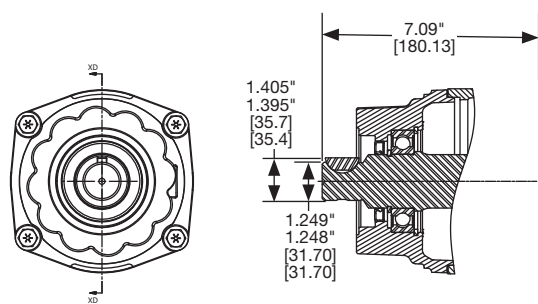
CAUTION: All pump mounting dimensions shown are compiled to conform to SAE/DIN standards; however it shall be the responsibility of the user to determine the correct fit at the time the pump is mounted to the PTO Therefore carefully check the shaft and key or spline engagement.

Companion Flange Mounts & Shaft Dimensions

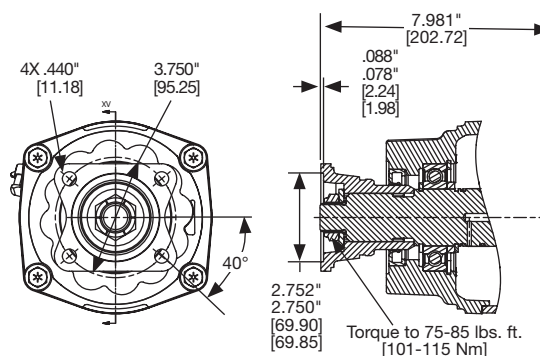
Pump Flange Suffix	Bolt Circle Diameter	Bolt Holes		FC	FD	FE	FF	FH	Output Shaft
		Hole Diameter	No. Equally Spaced	Female Pilot of Flange	Pilot Depth Hole	Face to End of PTO	Face Thru	Face to Center	Dimensions
AB	3.996"	.404" ▶	8	2.952"	.093" ◆			8.073"	1-1/2" - 10T Spline
AC	3.307"	.323" ▶	6	2.243"	.080" ◆			7.950"	1-1/2" - 10T Spline
XD								7.090"	1-1/4" Rd. Keyed (5/16")
XV	3.750"		4	2.751"	.083"			7.981"	1-1/2" - 10T Spline

- Rotatable Flange Rotates in 30° Increments
- Two Set of Holes Spaced 14° 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.

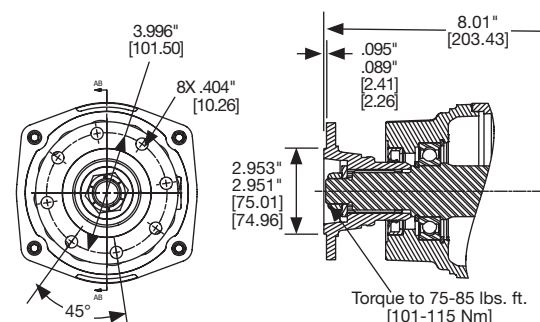
Output Options**Parts List
287 Series****Bill of Materials — Driveline Output**

XD Output Option Rd Standard Shaft (1-1/4" - 5/16" Key)			
Part Number		Description	Qty.
PTO w/ 5/16" Bearing Cap Bolts	PTO w/ 3/8" Bearing Cap Bolts		
3-P-1154	3-P-1154	Output Shaft	1
21-P-766	21-P-881	Bearing Cap.....	1
28-P-267	28-P-267	Oil Seal (2.627" x 1.750" x .312")	1
500007-29	500007-29	Woodruff Key	1

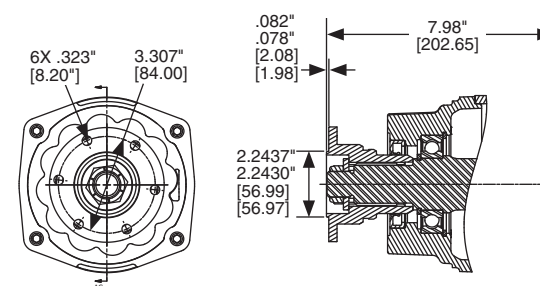


XV Output Option 1-1/2" - 10T Spline shaft with 1410 Series Flange			
Part Number		Description	Qty.
PTO w/ 5/16" Bearing Cap Bolts	PTO w/ 3/8" Bearing Cap Bolts		
3-P-1068	3-P-1068	Output Shaft 10T Straight.....	1
378447-16	380563-28	Bearing Cap Bolts.....	1
21-P-766	21-P-881	Bearing Cap.....	1
28-P-211	28-P-211	Oil Seal (3.001" x 2.00" x .375")	1
380503	380503	1410 Series Companion Flange	1
380076-13	380076-13	Washer (.950" x .1.762" x .157")	1
380486	380486	Nut - Nylon Lock, Thin (.875"-14)	1

Must order 378447-16 Capscrews separately.

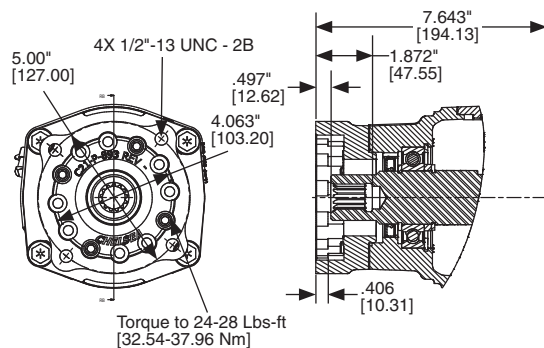


AB Output Option DIN 120 Flange			
Part Number		Description	Qty.
PTO w/ 5/16" Bearing Cap Bolts	PTO w/ 3/8" Bearing Cap Bolts		
3-P-1068	3-P-1068	Output Shaft 10T Straight.....	1
21-P-766	21-P-881	Bearing Cap.....	1
28-P-211	28-P-211	Oil Seal (3.001" x 2.00" x .375")	1
379558	379558	Companion Flange	1
380486	380486	Nut - Nylon Lock, Thin (.875"-14)	1
4-P-191	4-P-191	Spacer (.885" x .1.75" x .188")	1

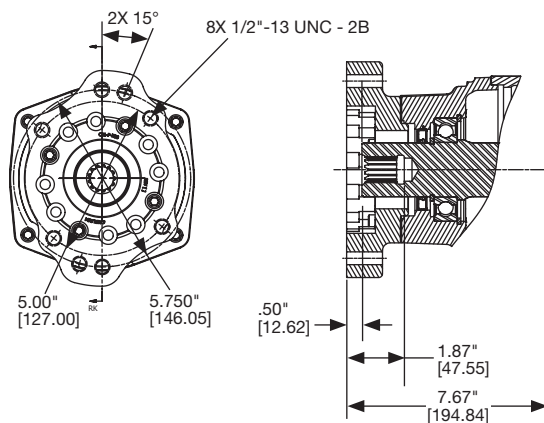


AC Output Option DIN 100 Flange			
Part Number		Description	Qty.
PTO w/ 5/16" Bearing Cap Bolts	PTO w/ 3/8" Bearing Cap Bolts		
3-P-1068	3-P-1068	Output Shaft 10T Straight.....	1
21-P-766	21-P-881	Bearing Cap.....	1
28-P-211	28-P-211	Oil Seal (3.001" x 2.00" x .375")	1
379742	379742	Companion Flange	1
380486	380486	Nut - Nylon Lock, Thin (.875"-14)	1
4-P-191	4-P-191	Spacer (.885" x .1.75" x .188")	1

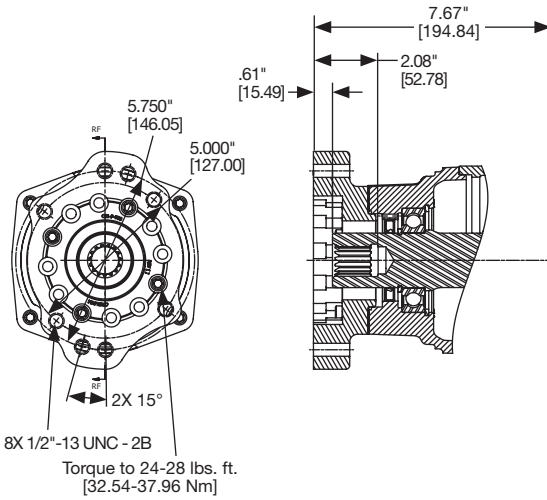
Bill of Materials — Pump Mount



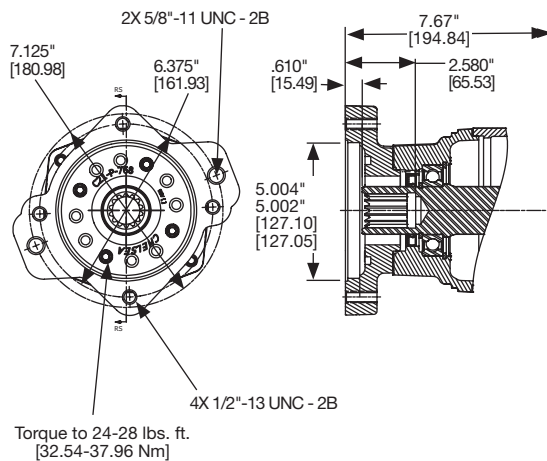
RB Output Option Rotatable SAE B 4-Bolt Flange, SAE B Shaft (7/8" - 13T)			
Part Number		Description	Qty.
PTO w/ 5/16" Bearing Cap Bolts	PTO w/ 3/8" Bearing Cap Bolts		
NA	3-P-1155	Output Shaft	1
	21-P-882	Bearing Cap.....	1 or
	21-P-883	Bearing Cap (Wet Spline Only)	1
	28-P-267	Oil Seal (2.627" x 1.750" x .312")	1
	328170-216X	Capscrew Bag Kit	1
	35-P-101	Rotatable Flange Gasket (Wet Spline) (Ships with Kit)	1
	21-P-894	Pump Flange (Ships Loose with Unit)	4
		Wet Spline LOOSE PARTS	1
	329699-1X	Hose Assembly.....	1
	329959X	Wet Spline Loose Parts Kit.....	1
	329658X	Cover Kit.....	1
NA	†329160-149X	Conversion Kit (XD to RB DRY)	
	†329160-150X	Conversion Kit (XD to RB WET)	



RK Output Option Rotatable SAE B 2 or 4-Bolt Flange, SAE B (7/8" - 13T)			
Part Number		Description	Qty.
PTO w/ 5/16" Bearing Cap Bolts	PTO w/ 3/8" Bearing Cap Bolts		
3-P-1155	3-P-1155	Output Shaft	1
21-P-767	21-P-881	Bearing - Cap	1 or
21-P-772	21-P-883	Bearing - Cap (Wet Spline Only)	1
28-P-267	28-P-267	Oil Seal (2.627" x 1.750" x .312")	1
328170-216X	328170-216X	Capscrew Kit (378447-8 Qty. 4).....	1
35-P-101	35-P-101	Rotatable Flange Gasket (Wet Spline) (Ships with Kit)	1
21-P-731	21-P-731	Pump Flange (Ships Loose with Unit)	1
69-P-18	69-P-18	Tag (Wet Spline Only).....	1
		Wet Spline LOOSE PARTS	
329700X	329700X	Wet Spline Loose Parts Kit.....	1
329699-1X	329699-1X	Hose Assembly.....	1
329658X	329658X	Cover Kit.....	1

Output Options**Parts List
287 Series****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.
PTO w/ 5/16" Bearing Cap Bolts	PTO w/ 3/8" Bearing Cap Bolts		
3-P-1099	3-P-1099	Output Shaft 1.0" - 15T.....	1
21-P-767	21-P-882	Bearing - Cap	1 or
21-P-772	21-P-883	Bearing - Cap (Wet Spline Only)	1
28-P-267	28-P-267	Oil Seal (2.627" x 1.750" x .312")	1
328170-216X	328170-216X	Capscrew Kit (378447-8 Qty. 4)	1
35-P-101	35-P-101	Rotatable Flange Gasket (Wet Spline) (Ships with Kit)	1
21-P-731	21-P-731	Pump Flange (Ships Loose with Unit)	1
69-P-18	69-P-18	Tag (Wet Spline Only)	1
Wet Spline LOOSE PARTS			
329700X	329700X	Wet Spline Loose Parts Kit	1
329699-1X	329699-1X	Hose Assembly	1
329658X	329658X	Cover Kit	1

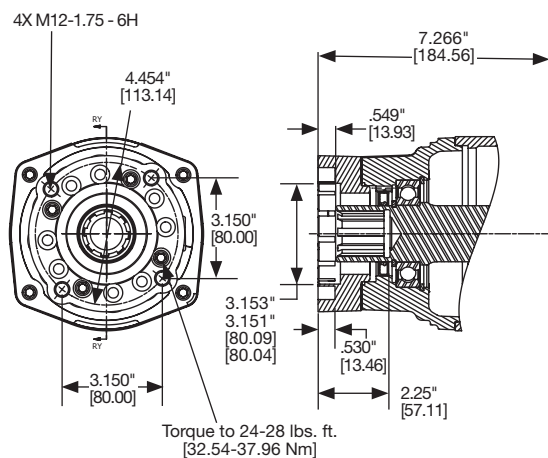


RS Output Option Rotatable SAE C 2 or 4-Bolt Flange, SAE C (1-1/4" - 14T)			
Part Number		Description	Qty.
PTO w/ 5/16" Bearing Cap Bolts	PTO w/ 3/8" Bearing Cap Bolts		
3-P-1070	3-P-1070	Output Shaft 1.125" - 14T.....	1
21-P-767	21-P-882	Bearing Cap.....	1 or
21-P-772	21-P-883	Bearing Cap (Wet Spline Only)	1
28-P-267	28-P-267	Oil Seal (2.627" x 1.750" x .312")	1
328170-216X	328170-216X	Capscrew Kit (378447-8 Qty. 4)	1
35-P-101	35-P-101	Rotatable Flange Gasket (Wet Spline) (Ships with Kit)	1
21-P-769	21-P-769	Pump Flange (Ships Loose with Unit)	1
69-P-18	69-P-18	Tag (Wet Spline Only)	1
Wet Spline LOOSE PARTS			
329744X	329744X	Wet Spline Loose Parts Kit	1
329699-1X	329699-1X	Hose Assembly	1
329654X	329654X	Cover Kit	1

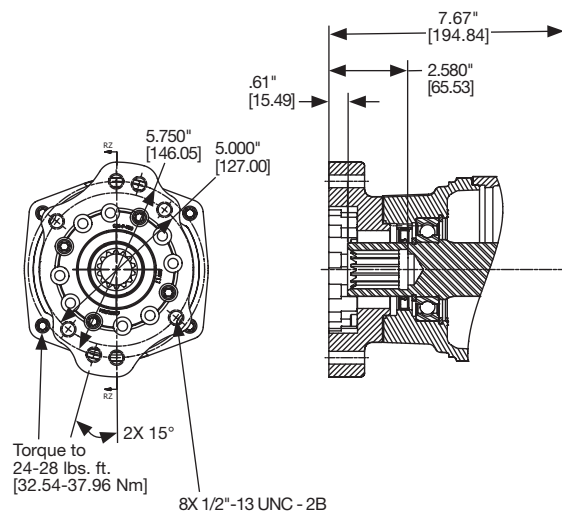
Output Options

Parts List
287 Series

Bill of Materials — Pump Mount



RY Output Option Rotatable DIN 5462 8T Shaft			
Part Number		Description	Qty.
PTO w/ 5/16" Bearing Cap Bolts	PTO w/ 3/8" Bearing Cap Bolts		
3-P-1071	3-P-1071	Output Shaft DIN 8T	1
21-P-767	21-P-882	Bearing Cap.....	1 or
21-P-772	21-P-883	Bearing Cap (Wet Spline Only)	1
28-P-267	28-P-267	Oil Seal (2.627" x 1.750" x .312")	1
328170-216X	328170-216X	Capscrew Kit (378447-8 Qty. 4)	1
35-P-101	35-P-101	Rotatable Flange Gasket (Wet Spline) (Ships with Kit)	1
21-P-771	21-P-771	Pump Flange (Ships Loose with Unit)	1
69-P-18	69-P-18	Tag (Wet Spline Only)	1
Wet Spline LOOSE PARTS			
329742X	329742X	Wet Spline Loose Parts Kit.....	1
329699-1X	329699-1X	Hose Assembly.....	1
329659X	329659X	Cover Kit.....	1



RZ Output Option Rotatable SAE B 2 or 4-Bolt Flange SAE C Shaft (1-1/4" - 14T)			
Part Number		Description	Qty.
PTO w/ 5/16" Bearing Cap Bolts	PTO w/ 3/8" Bearing Cap Bolts		
3-P-1070	3-P-1070	Output Shaft 1.125" - 14T	1
21-P-767	21-P-882	Bearing Cap.....	1 or
21-P-772	21-P-883	Bearing Cap (Wet Spline Only)	1
28-P-267	28-P-267	Oil Seal (2.627" x 1.750" x .312")	1
328170-216X	328170-216X	Capscrew Kit (378447-8 Qty. 4)	1
35-P-101	35-P-101	Rotatable Flange Gasket (Wet Spline) (Ships with Kit)	1
21-P-731	21-P-731	Pump Flange (Ships Loose with Unit)	1
69-P-18	69-P-18	Tag (Wet Spline Only)	1
Wet Spline LOOSE PARTS			
329700X	329700X	Wet Spline Loose Parts Kit.....	1
329699-1X	329699-1X	Hose Assembly.....	1
329658X	329658X	Cover Kit.....	1

Part Number	Description	Qty.	Part Number	Description	Qty.
SERVICE KITS			SERVICE KITS (continued)		
329071-63X	Bearing Kit (All Outputs Except BV, BD) (280 Series)		329071-80X	Gasket & Seal Kit (All Outputs Except BV) (280 Series)	
379746	Lock ring	1	28-P-211	Oil Seal 3.000" x 2.000" x .375"	1
378263	Internal Lock ring	1	28-P-285	O-Ring 1.597" x .103"	2
379555	Lock ring	1	28-P-178	O-Ring 4.359" x .138"	1
560972	Needle Roller Bearing Ass'y 1.500" x 1.875" x 1.000"	2	35-P-101	Rotatable Flange Gasket (Wet Spline)	1
550311	Ball Bearing 1.77" x 3.346" x .748"	1	28-P-191	O-Ring .549" x .103"	1
550439	Tapered Cone Bearing .750"x .8598"	2	28-P-267	Oil Seal 2.627" x 1.750" x .312"	1
31-P-102	Thrust Washer .754" x .440" x .030"	1	22-P-151	Bearing Cap Gasket	1
14-P-73-1	Spacer .762" x 1.500" x .150"	1	22-P-112	Gasket	1
14-P-73-2	Spacer .762" x 1.500" x .153"	1	35-P-74	10-Bolt Mounting Gasket	1
14-P-73-3	Spacer .762" x 1.500" x .156"	1			
329071-64X	Bearing Kit (BV & BD Output) (280 Series)		329071-81X	Gasket & Seal Kit (287 Series)	
379746	Lock ring	1	22-P-151	Gasket	1
378263	Internal Lock ring	1	28-P-191	O-Ring .549" x .103"	1
379555	Lock ring	1	28-P-211	Oil Seal 3.001" x 2.000" x .375"	1
378895	Lock ring	1	28-P-267	Oil Seal 2.627" x 1.750" x .312"	1
378576	Lock ring	1	35-P-101	Rotatable Flange Gasket (Wet Spline)	1
550010	Ball Bearing 1.378" x 2.8346" x .6693"	1	35-P-74	10-Bolt Mounting Gasket	1
560972	Needle Roller Bearing Ass'y 1.500" x 1.875" x 1.000"	2			
550439	Tapered Cone Bearing .750"x .8598"	2	329071-82X	Gasket & Seal Kit (BV, BD) (280 Series)	
31-P-102	Thrust Washer .754" x .440" x .030"	1	28-P-225	Oil Seal 2.004" x 1.375" x .315"	1
14-P-73-1	Spacer .762" x 1.500" x .150"	1	28-P-244	O-Ring 1.174" x .103"	4
14-P-73-2	Spacer .762" x 1.500" x .153"	1	22-P-151	Gasket	2
14-P-73-3	Spacer .762" x 1.500" x .156"	1	22-P-112	Valve Cap Gasket	1
			28-P-212	Oil Seal 2.506" x 1.750" x .315"	1
329071-66X	Bearing Kit (287 Series)		28-P-191	O-Ring .549" x .103"	1
378263	Lockring	1	28-P-252	O-Ring 2.987" x .103"	1
379555	Lockring	1	28-P-178	O-Ring 4.359" x .138"	1
560972	Needle Roller Bearing Ass'y 1.500" x 1.875" x 1.000"	1	28-P-119	Oil Seal 1.379" x .875" x .250"	1
550311	Ball Bearing 1.77" x 3.346" x .748"	1			
550439	Tapered Cone Bearing .750"x .8598"	2	329071-83X	Solenoid Valve Seal Kit (280 Series)	
31-P-102	Thrust Washer .754" x .440" x .030"	1	2016V-7	O-Ring .614" x .070"	1
14-P-73-1	Spacer .762" x 1.500" x .150"	1	2017V-7	O-Ring .676" x .070"	1
14-P-73-2	Spacer .762" x 1.500" x .153"	1	2020V-7	O-Ring .864" x .070"	2
14-P-73-3	Spacer .762" x 1.500" x .156"	1			
379668	Lockring	2	329678X	Gear & Clutch Plates Kit (280 Series)	
			2-P-858	Inner Hub Gear	1
			379485	Friction Disc	11
			380065	Clutch Plate	10

Continued on Next Page

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

Part Number	Description	Qty.	Part Number	Description	Qty.
STUD KITS			INSTALLATION INSTRUCTION KITS		
7170-86X	Mounting Kit (FJ Gear) (3 & 5 Arr.) (287 Series)		328948-47X	Gasket & Installation Kit Instructions (280 & 287 Series)	
379451	Screw Pilot.....	2	328946X	Caution Label Kit	1
379453-10	Capscrew M10 - 1.500" x 1.378"	8	35-P-74	Mounting Gasket	1
379486	90° Elbow .438"-20	1	379085-2	Instructions Label	1
SK-355	Installation	1	379624	Product Warranty Card	1
7170-107X	Mounting Kit (FJ Gear) (8 Arr.) (280 Series)		Owners Manual	HY25-1280-M1/US	1
379451	Screw Pilot.....	2	Safety Guide	HY25-1002-M1/US	1
379453-8	Ferry Head Capscrew M10 - 1.500" x 1.181"	2	Continued on Next Page		
379453-10	Capscrew M10 - 1.500" x 1.378"	8			
379486	90° Elbow .438"-20	1			
SK-355	Installation	1			
7170-117X	Mounting Kit (KV Gear) (3 & 5 Arr.) (287 Series)				
379451	Screw Pilot.....	2			
379453-10	Capscrew M10 - 1.500" x 1.378"	8			
379812	Male Connector .438"-20.....	1			
7170-118X	Mounting Kit (KV Gear) (8 Arr.) (280 Series)				
379451	Screw Pilot.....	2			
379453-8	Ferry Head Capscrew M10 - 1.500" x 1.181"	1			
379453-10	Capscrew M10 - 1.500" x 1.378"	8			
SK-355	Installation	1			
379812	Male Connector	1			

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

Part Number	Description	Qty.	Part Number	Description	Qty.
HYDRAULIC INSTALLATION KITS			HYDRAULIC INSTALLATION KITS (Continued)		
329024-12X	12V Installation Kit (FJ Gear, B Shift) (280 Series)		329237-24X	24V Remote Valve w/o EOC Installation Kit (FJ Gear, H Shift) (280 Series)	
378881	Rocker Switch.....	1	379900	Fuse Holder Ass'y w/ 10 AMP Fuse	1
378978	12V Indicator Light.....	1	329230X	Electrical Wire & Butt Connector	1
379252	Butt Connector.....	1	329231X	Valve Connector Wiring	1
379257	Splice Connector	1	378881	Rocker Switch.....	1
379265	Grommet.....	1	379005	24V Indicator Light.....	1
379306	Fork Connector.....	3	379252	Butt Connector.....	3
379336	Switch Bracket.....	1	379257	Splice Connector	1
379502	Pressure Switch.....	1	379258	Bracket.....	1
379504	Valve Connector Wiring	1	379265	Grommet.....	1
379900	Fuse Holder Ass'y w/ 10 AMP Fuse	1	379306	Fork Connector.....	3
379254-17	Fork Terminal	1	379336	Switch Bracket	1
379061	Plastic Wire Tie	6	379449	Screen Adapter.....	1
329024-24X	24V Installation Kit (FJ Gear, D Shift) (280 Series)		379502	Pressure Switch.....	1
378881	Rocker Switch.....	1	379686-2	24V Hydraulic Solenoid Valve.....	1
379005	24V Indicator Light.....	1	500357-7	Lock washer .337" x .194" x .438"	2
379252	Butt Connector.....	1	500457-6	Round Head Slotted Screw .191"-32 x .438"	2
379257	Splice Connector	1	379711	Female Bracket.....	1
379265	Grommet.....	1	379700	Swivel Nut Run Tee .438"-20	1
379306	Fork Connector.....	3	380010	Union Female	1
379336	Switch Bracket.....	1	379131-1	Pipe Reducer Bushing.....	1
379502	Pressure Switch.....	1	SK-432	Installation	1
379504	Valve Connector Wiring	1	379254-17	Fork Terminal	1
379900	Fuse Holder Ass'y w/ 10 AMP Fuse	1	329076X	Installation Kit EOC (FJ Gear, K, L Shift) (280 Series)	
379254-17	Fork Terminal	1	379252	Butt Connector.....	1
379061	Plastic Wire Tie	6	379257	Splice Connector	1
329237-12X	12V Remote Valve w/o EOC Installation Kit (FJ Gear, G Shift) (280 Series)		379265	Grommet.....	1
329230X	Electrical Wire & Butt Connector	1	379502	Pressure Switch.....	1
329231X	Valve Connector Wiring	1	379504	Valve Connector Wiring	1
378881	Rocker Switch.....	1	379254-18	Electrical Connector Valve	1
378978	12V Indicator Light.....	1	379061	Plastic Wire Tie	1
379252	Butt Connector.....	3	329650X	Electronic Overspeed Control (K, L Shift) (280 Series)	
379257	Splice Connector	1	328923-10X	Speed Sensor Cable - 10 ft	1
379258	Bracket.....	1		.250"-20 NC Hex Bolt x 1" Lg.....	2
379265	Grommet.....	1		.250" Flat Washer	2
379306	Fork Connector.....	3		.250" Lock Washer.....	2
379336	Switch Bracket.....	1		.250" Hex Nut	2
379449	Screen Adapter.....	1	Owner's Manual	HY25-1650-M1/US	1
379502	Pressure Switch.....	1		EOC Unit (NSS).....	1
379686-1	12V Hydraulic Solenoid Valve.....	1	329443-12X	12V Installation Kit (KV Gear, B Shift) (280 Series)	
500357-7	Lock washer .337" x .194" x .438"	2	378881	Rocker Switch.....	1
500457-6	Round Head Slotted Screw .191"-32 x .438"	2	378978	Indicator Light.....	1
379900	Fuse Holder Ass'y w/ 10 AMP Fuse	1	379252	Butt Connector.....	1
379711	Female Bracket.....	1	379257	Splice Connector	1
379700	Swivel Nut Run Tee .438"-20	1	379265	Grommet.....	1
380010	Union Female	1	379306	Fork Connector.....	3
379131-1	Pipe Reducer Bushing.....	1	379336	Switch Bracket	1
SK-432	Installation	1	379502	Pressure Switch.....	1
379254-17	Fork Terminal	1	379928	Valve Connector	1
			379900	Fuse Assembly	1
			379061	Plastic Wire Tie	1

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

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Part Number	Description	Qty.	Part Number	Description	Qty.
HYDRAULIC INSTALLATION KITS (Continued)			AIR INSTALLATION KITS		
329443-24X	24V Installation Kit (KV Gear, D Shift) (280 Series)		328388-85X	Installation Kit Air Shift (S Shift) (280 Series)	
378881	Rocker Switch.....	1	SK-427	Installation	1
379005	Indicator Light.....	1	378416	Hex Nipple .25"-18.....	1
379252	Butt Connector.....	1	379042	Male Connector .250" Tubex .125"-27	1
379257	Splice Connector	1	379044-6	Nylon Tubing .253" x .179" x 30 ft.....	3
379265	Grommet.....	3	329214X	Assembly Air Supply.....	1
379306	Fork Connector	1	380009	Female Connector Tube	
379336	Switch Bracket.....	1	.125" NPT x .125" PTC.....	1	
379502	Pressure Switch.....	1	378414	Air Pressure Protection Valve	1
379928	Valve Connector	1	379252	Butt Connector.....	6
379900	Fuse Assembly	1	379257	Splice Connector	1
379061	Plastic Wire Tie	1	379265	Grommet.....	1
329444X	12V & 24V Installation Kit (KV Gear, EOC K, L Shift) (280 Series)		379502	Pressure Switch.....	1
379252	Butt Connector.....	1	379504	Valve Connector Wiring	1
379257	Splice Connector	1	379900	Fuse Holder Ass'y w/ 10 AMP Fuse	1
379265	Grommet.....	1	379665	PTO Label Operation.....	1
379502	Pressure Switch.....	1	379665-1	Decal S & T Options	1
379928	Valve Connector Wiring	1	379547X	Pressure Switch & Harness.....	1
379061	Plastic Wire Tie	1	379061	Plastic Wire Tie	6
329445-12X	12V Remote Valve Installation Kit (KV Gear, G Shift) (280 Series)		328388-86X	Installation Kit Air Shift (T Shift) (280 Series)	
329446-12X	Remote Mount Valve Ass'y 12V	1	SK-427	Installation	1
378881	Rocker Switch	1	378416	Hex Nipple .25"-18.....	1
378978	12V Indicator Light.....	1	379042	Male Connector .250" Tubex .125"-27	3
379252	Butt Connector	1	379044-6	Nylon Tubing .253" x .179" x 30 ft.....	1
379257	Connector	1	329316X	Valve Assembly	1
379265	Grommet.....	1	380009	Female Connector Tube	
379306	Electrical Fork Terminal	3	.125" NPT x .125" PTC.....	1	
379336	Switch Bracket.....	1	378414	Air Pressure Protection Valve	1
379502	Pressure Switch	1	379252	Butt Connector.....	1
379812	Male Connector .438"-20.....	3	379257	Splice Connector	1
379900	Fuse Holder Ass'y	1	379265	Grommet.....	1
379928	Valve Connector Wiring	1	379502	Pressure Switch.....	1
380010	Female Union SAE Swivel Nut .438"-20....	1	379504	Valve Connector Wiring	1
379700	Tee - Swivel Nut .438"-20	1	379900	Fuse Holder Ass'y w/ 10 AMP Fuse	1
379711	Tee .375"-24 x .438"-20 x .438"-20.....	1	379665	PTO Label Operation	1
329445-24X	24V Remote Valve Installation Kit (KV Gear, H Shift) (280 Series)		379665-1	Decal S & T Options	1
329446-24X	Remote Mount Valve Ass'y 24V	1	379547X	Pressure Switch & Harness.....	1
378881	Rocker Switch	1	379061	Plastic Wire Tie	6
379005	24V Indicator Light.....	1			
379252	Butt Connector	1			
379257	Splice Connector	1			
379265	Grommet.....	1			
379306	Electrical Fork Terminal	3			
379336	Switch Bracket.....	1			
379502	Pressure Switch	1			
379812	Male Connector .438"-20.....	3			
379900	Fuse Holder Ass'y w/ 10 AMP Fuse	1			
379928	Valve Connector Wiring	1			
380010	Union Female	1			
379700	Swivel Nut Run Tee .438"-20	1			
379711	Female Bracket.....	1			

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

Part Number	Description	Qty.	Part Number	Description	Qty.
SHIFTER CONVERSION KITS			SHIFTER CONVERSION KITS		
329175-12X	12V Conversion Kit EOC (FJ Gear) (280 Series)		329448-12X	12V Conversion Kit w/ EOC (KV Gear) (280 Series)	
28-P-171	O-Ring	1	28-P-171	O-Ring	1
329650X	Electronic Overspeed Controller.....	1	329650X	EOC Controller	1
329076X	Hydraulic Shift	1	329444X	EOC Wire Installation Kit	1
379243	Speed Sensor.....	1	379243	Speed Sensor.....	1
329175-24X	24V Conversion Kit EOC (FJ Gear) (280 Series)		329448-24X	24V Conversion Kit w/ EOC (KV Gear) (280 Series)	
28-P-171	O-Ring	1	28-P-171	O-Ring	1
329650X	Electronic Overspeed Controller.....	1	329650X	EOC Controller	1
329076X	Hydraulic Shift	1	329444X	EOC Wire Installation Kit	1
379243	Speed Sensor.....	1	379243	Speed Sensor.....	1
329354-12X	12V Conversion Kit Remote Valve (280 Series)		Continued on Next Page		
22-P-112	Gasket	1			
500457-6	Mounting Screw.....	2			
500357-7	Lock washer .194" x .337" x .047"	2			
379686-1	12V Hydraulic Solenoid Valve.....	1			
379449	Screen Adapter.....	1			
379258	Solenoid Valve Mounting Bracket	1			
379564-2	Cap Thread.....	2			
329231X	Valve Connector Wiring	1			
329230X	Electrical Wire & Butt Connector	1			
328075X	Hose Assembly.....	1			
379700	Tee Female.....	1			
380010	Union Female	1			
379486	90° Elbow .438"-20	1			
329403X	Cap Assembly	1			
379711	Female Bracket.....	1			
379131-1	Pipe Reducer Bushing.....	1			
SK-432	Installation	1			
329354-24X	24V Conversion Kit Remote Valve (All) (280 Series)				
500457-6	Mounting Screw.....	2			
500357-7	Lock washer .194" x .337" x .047"	2			
379686-2	24V Hydraulic Solenoid Valve.....	1			
379449	Screen Adapter.....	1			
379258	Solenoid Valve Mounting Bracket	1			
379564-2	Cap Thread.....	2			
329231X	Valve Connector Wiring	1			
329230X	Electrical Wire & Butt Connector	1			
328075X	Hose Assembly.....	1			
22-P-112	Gasket	1			
379700	Tee Female.....	1			
380010	Union Female	1			
379486	90° Elbow .438"-20	1			
329403X	Cap Assembly	1			
379711	Female Bracket.....	1			
379131-1	Pipe Reducer Bushing.....	1			
SK-432	Installation	1			

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

Part Number	Description	Qty.	Part Number	Description	Qty.
OUTPUT CONVERSION KITS			OUTPUT CONVERSION KITS (Continued)		
329160-77X	5/16" Conversion Kit (XV to SD) (280 Series)		329160-80X	5/16" Conversion Kit (XD to RK DRY) (280 Series)	
3-P-1156	Output Shaft 1.25" Keyed	1	21-P-772	Bearing Cap	1
22-P-101	Gasket	1	28-P-267	Oil Seal 2.627" x 1.750" x .312"	1
28-P-119	Oil Seal 1.379" x .875" x .249"	1	21-P-731	Pump Flange	1
28-P-267	Oil Seal 2.627" x 1.750" x .312"	1	329699-1X	Overall Hose Ass'y	1
28-P-285	O-Ring 1.612" x .103"	2	329700X	Wet Spline Parts Kit	1
378447-8	Socket Head Capscrew .312"-16 x 1.500"	4	329658X	Lockring	1
379555	Lockring	2	3-P-1126	Output Shaft .875"-13T	1
379746	Lockring	1	28-P-285	O-Ring 1.597" x .103"	2
378849	Lockring	1	379555	Lockring	1
22-P-112	Gasket	1	380069	Lockring	1
380069	Lockring	1	22-P-101	Gasket	2
500007-29	Woodruff Key	1	378447-8	Socket Head Capscrew .312"-18 x 1.500"	3
329160-79X	5/16" Conversion Kit (XD to RK DRY) (280 Series)		28-P-119	Oil Seal 1.379" x .875" x .250"	1
21-P-767	Bearing Cap	1	22-P-112	Gasket	1
28-P-267	Oil Seal 2.627" x 1.750" x .312"	1	378849	Lockring	1
21-P-731	Pump Flange	1	379746	Lockring	1
3-P-1126	Output Shaft .875"-13T	1	378447-6	Socket Head Capscrew .312"-18 x 1.000"	3
28-P-285	O-Ring 1.597" x .103"	4	550311	Ball Bearing 1.77" x 3.346" x .748"	1
379555	Lockring	2	378263	Lockring	1
380069	Lockring	1	329160-81X	5/16" Conversion Kit (XD to BV) (280 Series)	
22-P-101	Gasket	1	378576	Lockring	2
378447-8	Socket Head Capscrew .312"-18 x 1.500"	3	378849	Lockring	1
28-P-119	Oil Seal 1.379" x .875" x .250"	1	378895	Lockring	1
22-P-112	Gasket	1	379746	Lockring	1
378849	Lockring	1	379977	Spring Pin .187" x .625"	1
379746	Lockring	1	380069	Lockring	1
379688	Spline Lubricant	1	380081	1410 Series Companion Flange	1
378447-6	Socket Head Capscrew .312"-18 x 1.000"	3	550010	Ball Bearing 1.378" x 2.8346" x .6693"	1
550311	Ball Bearing 1.77" x 3.346" x .748"	1	21-P-773	Bearing Cap	1
378263	Internal Lockring	1	22-P-101	Gasket	2
			22-P-112	Gasket	1
			23-P-68	Bearing Cap Spacer - Drag Brake	1
			28-P-119	Oil Seal 1.379" x .875" x .250"	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 Ass'y	1
			378435-7	Hex Head Capscrew .625"-11 x 1.250"	1
			378447-16	Socket Head Capscrew .312"-18 x 3.500"	4
			378447-8	Socket Head Capscrew .312"-18 x 1.500"	4
			37-P-60	Spring 2.531" x 2.13" 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
			378447-6	Socket Head Capscrew .312"-18 x 1.000"	3

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

Part Number	Description	Qty.	Part Number	Description	Qty.
OUTPUT CONVERSION KITS (Continued)			OUTPUT CONVERSION KITS (Continued)		
329160-82X	5/16" Conversion Kit (XD to RF DRY) (280 Series)		329160-84X	5/16" Conversion Kit (XD to RS DRY) (280 Series)	
3-P-1127	Output Shaft 1.02"-15T.....	1	3-P-1066	Output Shaft 1-1/4"-14T Lockring.....	1
22-P-101	Gasket	1	28-P-285	O-Ring 1.597" x .103" Lockring	2
28-P-119	Oil Seal 1.379" x .875" x .250".....	1	379555	Lockring	2
28-P-267	Oil Seal 2.627" x 1.750" x .312".....	1	380069	Lockring	1
28-P-285	O-Ring 1.597" x .103".....	2	21-P-767	Bearing Cap	1
378447-8	Socket Head Capscrew .312"-18 x 1.500"	4	28-P-267	Oil Seal 2.627" x 1.750" x .312".....	1
379555	Lockring.....	2	21-P-769	Pump Flange RS	1
379746	Lockring.....	1	22-P-101	Gasket	1
378849	Lockring.....	1	378447-8	Socket Head Capscrew .312"-18 x 1.500"	8
22-P-112	Gasket	1	28-P-119	Oil Seal 1.379" x .875" x .250".....	1
380069	Lockring	1	22-P-112	Gasket	1
21-P-767	Bearing Cap	1	378849	Lockring	1
21-P-731	Pump Flange	1	379746	Lockring	1
379688	Spline Lubricant.....	1	379688	Spline Lubricant.....	1
378447-6	Socket Head Capscrew .312"-18 x 1.000"	3	378447-6	Socket Head Capscrew .312"-18 x 1.000"	3
550311	Ball Bearing 1.77" x 3.346" x .748".....	1	550311	Ball Bearing 1.77" x 3.346" x .748".....	1
378263	Internal Lockring.....	1	378263	Internal Lockring.....	1
329160-83X	5/16" Conversion Kit (XD to RF WET) (280 Series)		329160-85X	5/16" Conversion Kit (XD to RS WET) (280 Series)	
378849	Lockring.....	1	3-P-1066	Output Shaft 1.25"-14T.....	1
379555	Lockring.....	2	28-P-285	O-Ring 1.597" x .103".....	2
379746	Lockring.....	1	379555	Lockring	2
380069	Lockring	1	380069	Lockring	1
21-P-772	Bearing Cap	1	21-P-772	Bearing Cap	1
22-P-101	Gasket	1	28-P-267	Oil Seal 2.627" x 1.750" x .312".....	1
22-P-112	Gasket	1	21-P-769	Pump Flange RS	1
28-P-119	Oil Seal 1.379" x .875" x .250".....	1	329699-1X	Overall Hose Ass'y	1
28-P-267	Oil Seal 2.627" x 1.750" x .312".....	1	329744X	Wet Spline Parts Kit.....	1
28-P-285	O-Ring 1.597" x .103".....	2	329654X	Cover Kit XS	1
21-P-731	Pump Flange	1	22-P-101	Gasket	1
329658X	Cover Kit XK	1	378447-8	Socket Head Capscrew .312"-18 x 1.500"	8
329699-1X	Overall Hose Ass'y	1	28-P-119	Oil Seal 1.379" x .875" x .250".....	1
329700X	Wet Spline Parts Kit.....	1	22-P-112	Gasket	1
378447-8	Socket Head Capscrew .312"-18 x 1.500"	8	378849	Lockring	1
3-P-1127	Output Shaft 1.02"-15T.....	1	379746	Lockring	1
378447-6	Socket Head Capscrew .312"-18 x 1.000"	3	378447-6	Socket Head Capscrew .312"-18 x 1.000"	3
550311	Ball Bearing 1.77" x 3.346" x .748".....	1	550311	Ball Bearing 1.77" x 3.346" x .748".....	1
378263	Internal Lockring.....	1	378263	Internal Lockring.....	1

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

Kits Bill of Materials**Parts List
280/287 Series**

Part Number	Description	Qty.	Part Number	Description	Qty.
OUTPUT CONVERSION KITS (Continued)			OUTPUT CONVERSION KITS (Continued)		
329160-86X	5/16" Conversion Kit (XD to RY DRY) (280 Series)		329160-88X	5/16" Conversion Kit (XD to AB) (280 Series)	
3-P-1067	Output Shaft DIN 8T	1	378849	Lockring	1
28-P-285	O-Ring 1.597" x .103"	2	379555	Lockring	1
379555	External Lockring	2	379558	DIN 120	1
380069	Lockring	1	379746	Lockring	1
21-P-767	Bearing Cap	1	380069	Lockring	1
28-P-267	Oil Seal 2.627" x 1.750" x .312"	1	380486	Lock Nut - Nylon, Thin .875"-14	1
21-P-771	Pump Flange RY	1	22-P-101	Gasket	1
22-P-101	Gasket	1	22-P-112	Gasket	1
378447-8	Socket Head Capscrew .312"-18 x 1.500"	8	28-P-119	Oil Seal 1.379" x .875" x .250"	1
28-P-119	Oil Seal 1.379" x .875" x .250"	11	28-P-211	Oil Seal 3.001" x 2.00" x .375"	1
2-P-112	Gasket	1	28-P-285	O-Ring 1.597" x .103"	2
378849	Lockring	1	378447-8	Socket Head Capscrew .312"-18 x 1.500"	4
379746	Lockring	1	380076-13	Flat Washer - Hardened .950" x 1.76"	1
379688	Spline Lubricant	1	3-P-1065	Output Shaft 10T Straight	1
378447-6	Socket Head Capscrew .312"-18 x 1.000"	3	378447-6	Socket Head Capscrew .312"-18 x 1.000"	3
550311	Ball Bearing 1.77" x 3.346" x .748"	1			
378263	Internal Lockring	1			
329160-87X	5/16" Conversion Kit (XD to RY WET) (280 Series)		329160-89X	5/16" Conversion Kit (XD to SB) (280 Series)	
3-P-1067	Output Shaft DIN 8T	1	3-P-1161	Output Shaft 10T Straight	1
21-P-772	Bearing Cap	1	28-P-285	O-Ring 1.597" x .103"	2
28-P-285	O-Ring 1.597" x .103"	2	379555	Lockring	1
379555	Lockring	2	380069	Lockring	1
380069	Lockring	1	28-P-211	Oil Seal 3.001" x 2.00" x .375"	1
28-P-267	Oil Seal 2.627" x 1.750" x .312"	1	379558	DIN 120	1
21-P-771	Pump Flange RY	1	380076-13	Flat Washer - Hardened .950" x 1.762" x .157"	1
329699-1X	Overall Hose Ass'y	1	380486	Lock Nut - Nylon, Thin .875"-14	1
329742X	Wet Spline Loose Parts Kit	1	22-P-101	Gasket	1
329659X	Cover Kit	1	378447-8	Socket Head Capscrew .312"-18 x 1.500"	4
22-P-101	Gasket	1	28-P-119	Oil Seal 1.379" x .875" x .250"	1
378447-8	Socket Head Capscrew .312"-18 x 1.500"	8	22-P-112	Gasket	1
28-P-119	Oil Seal 1.379" x .875" x .250"	1	378849	Lockring	1
22-P-112	Gasket	1	379746	Lockring	1
378849	Lockring	1	378447-6	Socket Head Capscrew .312"-18 x 1.000"	3
379746	Lockring	1			
378447-6	Socket Head Capscrew .312"-18 x 1.000"	3			
550311	Ball Bearing 1.77" x 3.346" x .748"	1			
378263	Internal Lockring	1			

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

Part Number	Description	Qty.	Part Number	Description	Qty.
OUTPUT CONVERSION KITS (Continued)			OUTPUT CONVERSION KITS (Continued)		
329160-92X	5/16" Conversion Kit (XD to AC) (280 Series)		329160-94X	5/16" Conversion Kit (XD to BD) (280 Series)	
378849	Lockring.....	1	378576	Lockring.....	2
379555	Lockring.....	2	378849	Lockring.....	1
379742	DIN 100.....	1	378895	Lockring.....	1
379746	Lockring.....	1	379746	Lockring.....	1
380069	Lockring.....	1	379977	Spring Pin .187" x .625".....	1
380486	Lock Nut - Nylon, Thin .875"-14.....	1	380069	Lockring.....	1
22-P-101	Gasket.....	1	550010	Ball Bearing 1.378" x 2.8346" x .6693".....	1
22-P-112	Gasket.....	1	21-P-691	Bearing Cap - Drag Brake.....	1
28-P-119	Oil Seal 1.379" x .875" x .250".....	1	22-P-101	Gasket.....	2
28-P-211	Oil Seal 3.001" x 2.00" x .375".....	1	22-P-112	Gasket - Valve.....	1
28-P-285	O-Ring 1.597" x .103".....	2	23-P-68	Bearing Cap Spacer - Drag Brake.....	1
378447-8	Socket Head Capscrew .312"-18 x 1.500".....	4	28-P-119	Oil Seal 1.379" x .875" x .250".....	1
380076-13	Flat Washer - Hardened .950" x 1.76".....	1	28-P-225	Oil Seal 2.004" x 1.375" x .315".....	1
3-P-1065	Output Shaft 10T Straight.....	1	28-P-244	O-Ring 1.174" x .103".....	4
378447-6	Socket Head Capscrew .312"-18 x 1.000".....	3	31-P-113	Thrust Washer 1.385" x 3.125" x .125".....	1
550311	Ball Bearing 1.77" x 3.346" x .748".....	1	329410X	Brake Ass'y.....	1
378263	Internal Lockring.....	1	378447-16	Socket Head Capscrew .312"-18 x 3.500".....	4
			378447-8	Socket Head Capscrew .312"-18 x 1.500".....	4
329160-93X	5/16" Conversion Kit (XD to SC) (280 Series)		37-P-60	Spring 2.531" x 2.13" x .172".....	1
3-P-1161	Output Shaft 10T Straight.....	1	3-P-1141	Output Shaft 1.25 Keyed.....	1
28-P-285	O-Ring 1.597" x .103".....	2	4-P-186	Spacer 1.385" x 1.750" x .365".....	1
379555	Lockring.....	2	378447-6	Socket Head Capscrew .312"-18 x 1.000".....	3
380069	Lockring.....	1			
28-P-211	Oil Seal 3.001" x 2.00" x .375".....	1	329160-95X	5/16" Conversion Kit (XD to RZ DRY) (280 Series)	
379742	DIN 100.....	1	3-P-1066	Output Shaft 1.25"-14T.....	1
380076-13	Flat Washer - Hardened .950" x 1.762" x .157".....	1	28-P-285	O-Ring 1.597" x .103".....	2
380486	Lock Nut - Nylon, Thin .875"-14.....	1	379555	Lockring.....	2
22-P-101	Gasket.....	1	380069	Lockring.....	1
378447-8	Socket Head Capscrew .312"-18 x 1.500".....	4	21-P-767	Bearing Cap.....	1
28-P-119	Oil Seal 1.379" x .875" x .250".....	1	28-P-267	Oil Seal 2.627" x 1.750" x .312".....	1
22-P-112	Gasket - Valve.....	1	21-P-731	Pump Flange.....	1
378849	Lockring.....	1	22-P-101	Gasket.....	1
379746	Lockring.....	1	378447-8	Socket Head Capscrew .312"-18 x 1.500".....	8
378447-6	Socket Head Capscrew .312"-18 x 1.000".....	3	28-P-119	Oil Seal 1.379" x .875" x .250".....	1
550311	Ball Bearing 1.77" x 3.346" x .748".....	1	22-P-112	Gasket.....	1
378263	Lockring.....	1	378849	Lockring.....	1
			379746	Lockring.....	1
			379688	Spline Lubricant.....	1
			378447-6	Socket Head Capscrew .312"-18 x 1.000".....	3
			550311	Ball Bearing 1.77" x 3.346" x .748".....	1
			378263	Internal Lockring.....	1

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

Kits Bill of Materials**Parts List
280/287 Series**

Part Number	Description	Qty.	Part Number	Description	Qty.
OUTPUT CONVERSION KITS (Continued)			OUTPUT CONVERSION KITS (Continued)		
329160-96X	5/16" Conversion Kit (XD to RZ WET) (280 Series)		329160-117X	5/16" Conversion Kit (XD to SV) (280 Series)	
3-P-1066	Output Shaft 1.25"-14T.....	1	3-P-1161	Output Shaft	1
28-P-285	O-Ring 1.597" x .103".....	2	28-P-285	O-Ring 1.597" x .103".....	2
379555	Lockring.....	2	379555	Lockring.....	2
380069	Lockring.....	1	380069	Lockring.....	1
21-P-772	Bearing Cap	1	28-P-211	Oil Seal 3.001" x 2.00" x .375".....	1
28-P-267	Oil Seal 2.627" x 1.750" x .312".....	1	380076-13	Hardened Flat Washer .950" x 1.000"	1
21-P-731	Pump Flange	1	380486	Lock Nut - Nylon, Thin .875" x 14	1
329699-1X	Overall Hose Ass'y	1	22-P-101	Gasket	1
329700X	Wet Spline Parts Kit.....	1	378447-8	Socket Head Capscrew .312"-18 x 1.500"	4
329658X	Cover Kit XK	1	28-P-119	Oil Seal 1.379" x .875" x .250".....	1
22-P-101	Gasket	1	22-P-112	Gasket - Valve.....	1
378447-8	Socket Head Capscrew .312"-18 x 1.500"	8	378849	Lockring.....	1
28-P-119	Oil Seal 3.001" x 2.00" x .375".....	1	379746	Lockring.....	1
22-P-112	Gasket	1	378447-6	Socket Head Capscrew .312"-18 x 1.000"	3
378849	Lockring.....	1	550311	Ball Bearing 1.77" x 3.346" x .748".....	1
379746	Lockring.....	1	378263	Lockring.....	1
378447-6	Socket Head Capscrew .312"-18 x 1.000"	3			
550311	Ball Bearing 1.77" x 3.346" x .748".....	1	329160-119X	3/8" Conversion Kit (XD to SD) (280 Series)	
378263	Internal Lockring.....	1	3-P-1156	Output Shaft	1
			22-P-151	Gasket Shim.....	1
329160-97X	5/16" Conversion Kit (XD to XV) (280 Series)		28-P-267	Oil Seal 2.627" x 1.750" x .312".....	1
3-P-1065	Output Shaft 10T Straight.....	1	28-P-285	O-Ring 1.597" x .103".....	2
28-P-285	O-Ring 1.597" x .103".....	2	380563-14	Hex Flange Head Capscrew .375"-16 x 1.500"	4
379555	Lockring.....	2	379555	Lockring.....	2
380069	Lockring.....	1	379746	Lockring.....	1
28-P-211	Oil Seal 3.001" x 2.00" x .375".....	1	380069	Lockring.....	1
380076-13	Flat Washer - Hardened .950" x 1.762" x .157"	1	500007-29	Woodruff Key	1
380486	Lock Nut - Nylon, Thin .875"-14.....	1			
380503	1410 Series Companion Flange.....	1	329160-120X	3/8" Conversion Kit (XD to SV) (280 Series)	
22-P-101	Gasket	1	3-P-1161	Output Shaft 10T Straight.....	1
378447-8	Socket Head Capscrew .312"-18 x 1.500"	4	22-P-151	Gasket Shim	1
28-P-119	Oil Seal 1.379" x .875" x .250".....	1	28-P-211	Oil Seal 3.001" x 2.00" x .375".....	1
22-P-112	Gasket	1	28-P-285	O-Ring 1.597" x .103".....	2
378849	Lockring.....	1	380563-14	Hex Flange Head Capscrew .375"-16 x 1.500"	2
379746	Lockring.....	1	379555	Lockring.....	2
378447-6	Socket Head Capscrew .312"-18 x 1.000"	3	379746	Lockring.....	1
550311	Ball Bearing 1.77" x 3.346" x .748".....	1	380069	Lockring.....	1
378263	Lockring.....	1	380076-13	Hardened Flat Washer .950" x 1.762" x .157"	1

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

Part Number	Description	Qty.	Part Number	Description	Qty.
OUTPUT CONVERSION KITS (Continued)			OUTPUT CONVERSION KITS (Continued)		
329160-121X	3/8" Conversion Kit (XD to RK DRY) (280 Series)		329160-123X	3/8" Conversion Kit (XD to BV) (280 Series)	
21-P-882	Bearing Cap	1	378576	Lockring	2
28-P-267	Oil Seal 2.627" x 1.750" x .312"	1	378895	Lockring	1
21-P-731	Pump Flange	1	379746	Lockring	1
3-P-1126	Output Shaft .875"-13T	1	379977	Spring Pin .187" x .625"	1
28-P-285	O-Ring 1.597" x .103"	2	380069	Lockring	1
379555	Lockring	2	380081	1410 Series Companion Flange	1
380069	Lockring	1	550010	Ball Bearing 1.378" x 2.8346" x .6693"	1
22-P-151	Bearing Cap Gasket	1	21-P-884	Bearing Cap	1
328170-216X	Capscrew Kit	1	22-P-151	Bearing Cap Gasket	2
380563-14	Hex Flange Head Capscrew .375"-16 x 1.500"	4	23-P-73	Bearing Cap Spacer - Drag Brake	1
379746	Lockring	1	28-P-212	Oil Seal 2.506" x 1.750" x .315"	1
379688	Spline Lubricant	1	28-P-244	O-Ring 1.174" x .103"	4
550311	Ball Bearing 1.77" x 3.346" x .748"	1	31-P-113	Thrust Washer 1.385" x 3.125" x .125"	1
378263	Lockring	1	329410X	Brake Ass'y	1
			378435-7	Hex Head Capscrew .625"-11 x 1.250"	1
			380563-28	Hex Flange Head Capscrew .375"-16 x 3.500"	4
329160-122X	3/8" Conversion Kit (XD to RK Wet) (280 Series)		328170-216X	Capscrew Kit	1
21-P-883	Bearing Cap	1	37-P-60	Spring 2.531" x 2.13" x .172"	1
28-P-267	Oil Seal 2.627" x 1.750" x .312"	1	3-P-1072	Output Shaft 10T Straight	1
21-P-731	Pump Flange	1	4-P-130	Spacer .640" x 1.620" x .188"	1
329699-1X	Hose Ass'y	1	4-P-186	Spacer 1.385" x 1.750" x .365"	1
329700X	Wet Spline Parts Kit	1			
329658X	Cover Kit	1	329160-124X	3/8" Conversion Kit (XD to RF DRY) (280 Series)	
3-P-1126	Output Shaft .875"-13T	1	3-P-1127	Output Shaft 1.02"-15T	1
28-P-285	O-Ring 1.597" x .103"	2	22-P-151	Bearing Cap Gasket	1
379555	Lockring	2	28-P-267	Oil Seal 2.627" x 1.750" x .312"	1
380069	Lockring	1	28-P-285	O-Ring 1.597" x .103"	2
22-P-151	Bearing Cap Gasket	1	328170-216X	Capscrew Kit	1
328170-216X	Capscrew Kit	1	380563-14	Hex Flange Head Capscrew .375"-16 x 1.500"	4
380563-14	Hex Flange Head Capscrew .375"-16 x 1.500"	4	379555	Lockring	2
379746	Lockring	1	379746	Lockring	1
550311	Ball Bearing 1.77" x 3.346" x .748"	1	380069	Lockring	1
378263	Lockring	1	21-P-882	Bearing Cap	1
			21-P-731	Pump Flange	1
			379688	Spline Lubricant	1
			550311	Ball Bearing 1.77" x 3.346" x .748"	1
			378263	Internal Lockring	1

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

Part Number	Description	Qty.	Part Number	Description	Qty.
OUTPUT CONVERSION KITS (Continued)			OUTPUT CONVERSION KITS (Continued)		
329160-125X	3/8" Conversion Kit (XD to RF WET) (280 Series)		329160-128X	3/8" Conversion Kit (XD to RY DRY) (280 Series)	
379555	Lockring	2	3-P-1067	Output Shaft DIN-8T	1
379746	Lockring	1	28-P-285	O-Ring 1.597" x .103"	2
380069	Lockring	1	379555	Lockring	2
21-P-883	Bearing Cap	1	380069	Lockring	1
22-P-151	Bearing Cap Gasket	1	21-P-882	Bearing Cap	1
28-P-267	Oil Seal 2.627" x 1.750" x .312"	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-771	Pump Flange RY	1
21-P-731	Pump Flange	1	22-P-151	Bearing Cap Gasket	1
329658X	Cover Kit	1	328170-216X	Capscrew Kit	1
329699-1X	Overall Hose Ass'y	1	380563-14	Hex Flange Head Capscrew .375"-16 x 1.500"	4
329700X	Wet Spline Parts Kit	1	379746	Lockring	1
328170-216X	Capscrew Kit	1	379688	Spline Lubricant	1
380563-14	Hex Flange Head Capscrew .375"-16 x 1.500"	4	550311	Ball Bearing 1.77" x 3.346" x .748"	1
3-P-1127	Output Shaft 1.02"-15T	1	378263	Internal Lockring	1
550311	Ball Bearing 1.77" x 3.346" x .748"	1			
378263	Internal Lockring	1			
329160-126X	3/8" Conversion Kit (XD to RS DRY) (280 Series)		329160-129X	3/8" Conversion Kit (XD to RY WET) (280 Series)	
3-P-1166	Output Shaft 1.25"-14T	1	379746	Lockring	1
28-P-285	O-Ring 1.597" x .103"	2	550311	Ball Bearing 1.77" x 3.346" x .748"	1
379555	Lockring	1	378263	Internal Lockring	1
380069	Lockring	1	3-P-1067	Output Shaft DIN 8T	1
21-P-882	Bearing Cap	1	21-P-883	Bearing Cap	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	Capscrew Kit	1	379555	Lockring	2
21-P-769	Pump Flange RS	1	380069	Lockring	1
22-P-151	Bearing Cap Gasket	1	28-P-267	Oil Seal 2.627" x 1.750" x .312"	1
380563-14	Hex Flange Head Capscrew .375"-16 x 1.500"	4	21-P-771	Pump Flange RY	1
379746	Lockring	1	329699-1X	Overall Hose Ass'y	1
379688	Spline Lubricant	1	329742X	Wet Spline Loose Parts Kit	1
550311	Ball Bearing 1.77" x 3.346" x .748"	1	329659X	Cover Kit	1
378263	Internal Lockring	1	22-P-151	Bearing Cap Gasket	1
			328170-216X	Capscrew Kit	1
			380563-14	Hex Flange Head Capscrew .375"-16 x 1.500"	4
329160-127X	3/8" Conversion Kit (XD to RS WET) (280 Series)		329160-130X	3/8" Conversion Kit (XD to AB) (280 Series)	
3-P-1066	Output Shaft 1.25"-14T	1	379555	Lockring	2
28-P-285	O-Ring 1.597" x .103"	2	379558	DIN 120	1
379555	Lockring	1	379746	Lockring	1
380069	Lockring	1	380069	Lockring	1
21-P-883	Bearing Cap	1	380486	Lock Nut - Nylon, Thin .875"-14	1
28-P-267	Oil Seal 2.627" x 1.750" x .312"	1	22-P-151	Bearing Cap Gasket	1
328170-216X	Capscrew Kit	1	28-P-211	Oil Seal 3.001" x 2.00" x .375"	1
21-P-769	Pump Flange RS	1	28-P-285	O-Ring 1.597" x .103"	2
329699-1X	Overall Hose Ass'y	1	380563-14	Hex Flange Head Capscrew .375"-16 x 1.500"	4
329744X	Wet Spline Parts Kit	1	380076-13	Flat Washer - Hardened .950" x 1.762" x .157"	1
329654X	Cover Kit XS	1	3-P-1065	Output Shaft 10T Straight	1
22-P-151	Bearing Cap Gasket	1	550311	Ball Bearing 1.77" x 3.346" x .748"	1
380563-14	Hex Flange Head Capscrew .375"-16 x 1.500"	4	378263	Internal Lockring	1
379746	Lockring	1			
550311	Ball Bearing 1.77" x 3.346" x .748"	1			
378263	Internal Lockring	1			

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

Part Number	Description	Qty.	Part Number	Description	Qty.
OUTPUT CONVERSION KITS (Continued)			OUTPUT CONVERSION KITS (Continued)		
329160-131X	3/8" Conversion Kit (XD to AB) (280 Series)		329160-134X	3/8" Conversion Kit (XD to AC) (280 Series)	
3-P-1161	Output Shaft 10T Straight.....	1	379555	Lockring.....	2
28-P-285	O-Ring 1.597" x .103".....	2	379742	DIN 100.....	1
379555	Lockring.....	1	379746	Lockring.....	1
380069	Lockring.....	1	380069	Lockring.....	1
28-P-211	Oil Seal 3.001" x 2.00" x .375".....	1	380486	Lock Nut - Nylon, Thin .875"-14.....	1
379558	DIN 120.....	1	22-P-151	Bearing Cap Gasket.....	1
380076-13	Flat Washer - Hardened .950" x 1.762" x .157".....	1	28-P-211	Oil Seal 3.001" x 2.00" x .375".....	1
380486	Lock Nut - Nylon, Thin .875"-14.....	1	28-P-285	O-Ring 1.597" x .103".....	2
22-P-151	Bearing Cap Gasket.....	1	380563-14	Hex Flange Head Capscrew .375"-16 x 1.500".....	4
380563-14	Hex Flange Head Capscrew .375"-16 x 1.500".....	4	380076-13	Flat Washer - Hardened .950" x 1.762" x .157".....	1
379746	Lockring.....	1	3-P-1065	Output Shaft 10T Straight.....	1
			550311	Ball Bearing 1.77" x 3.346" x .748".....	1
			378263	Internal Lockring.....	1
329160-132X	3/8" Conversion Kit (XD to UN DRY) (280 Series)		329160-135X	3/8" Conversion Kit (XD to SC) (280 Series)	
3-P-1129	Output Shaft DIN 6T.....	1	3-P-1161	Output Shaft 10T Straight.....	1
28-P-285	O-Ring 1.597" x .103".....	2	28-P-285	O-Ring 1.597" x .103".....	2
380069	Lockring.....	1	379555	Lockring.....	2
21-P-832	Bearing Cap.....	1	380069	Lockring.....	1
550010	Ball Bearing 1.378" x 2.8346" x .6693".....	1	28-P-211	Oil Seal 3.001" x 2.00" x .375".....	1
378895	Lockring.....	1	379742	DIN 100.....	1
378576	Lockring.....	1	380076-13	Flat Washer - Hardened .950" x 1.762" x .157".....	1
28-P-216	Oil Seal 2.004" x 1.250" x .374".....	1	380486	Lock Nut - Nylon, Thin .875"-14.....	1
22-P-151	Shim Gasket.....	1	22-P-151	Bearing Cap Gasket.....	1
380563-14	Hex Flange Head Capscrew .375"-16 x 1.500".....	4	380563-14	Hex Flange Head Capscrew .375"-16 x 1.500".....	4
379746	Lockring.....	1	379746	Lockring.....	1
379688	Spline Lubricant.....	1	550311	Ball Bearing 1.77" x 3.346" x .748".....	1
			378263	Lockring.....	1
329160-133X	3/8" Conversion Kit (XD to UN WET) (280 Series)		329160-136X	3/8" Conversion Kit (XD to BD) (280 Series)	
3-P-1129	Output Shaft DIN 6T.....	1	378576	Lockring.....	2
28-P-285	O-Ring 1.597" x .103".....	2	378895	Lockring.....	1
380069	Lockring.....	1	379746	Lockring.....	1
21-P-833	Bearing Cap.....	1	379977	Spring Pin .187" x .625".....	1
550010	Ball Bearing 1.378" x 2.8346" x .6693".....	1	380069	Lockring.....	1
378895	Lockring.....	1	550010	Ball Bearing 1.378" x 2.8346" x .6693".....	1
378576	Lockring.....	1	21-P-888	Bearing Cap - Drag Brake.....	1
28-P-216	Oil Seal 2.004" x 1.250" x .374".....	1	22-P-151	Bearing Cap Gasket.....	2
329699-1X	Hose Ass'y.....	1	23-P-73	Bearing Cap Spacer - Drag Brake.....	1
329821X	Wet Spline Parts Kit.....	1	28-P-225	Oil Seal 2.004" x 1.375" x .315".....	1
22-P-151	Shim Gasket.....	1	28-P-244	O-Ring 1.174" x .103".....	4
380563-14	Hex Flange Head Capscrew .375"-16 x 1.500".....	4	31-P-113	Thrust Washer 1.385" x 3.125" x .125".....	1
379746	Lockring.....	1	329410X	Brake Ass'y.....	1
			380563-28	Hex Flange Head Capscrew .375"-16 x 3.500".....	4
			328170-216X	Capscrew Kit.....	1
			37-P-60	Spring 2.531" x 2.13" x .172".....	1
			3-P-1141	Output Shaft 1.25" Keyed.....	1
			4-P-186	Spacer 1.385" x 1.750" x .365".....	1

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

Part Number	Description	Qty.	Part Number	Description	Qty.
OUTPUT CONVERSION KITS (Continued)			OUTPUT CONVERSION KITS (Continued)		
329160-137X	3/8" Conversion Kit (XD to RZ DRY) (280 Series)		329160-149X	3/8" Conversion Kit (XD to RB DRY) (280 Series)	
3-P-1066	Output Shaft 1.25"-14T.....	1	21-P-882	Bearing Cap	1
28-P-285	O-Ring 1.597" x .103"	2	28-P-267	Oil Seal 2.627" x 1.750" x .312"	1
379555	Lockring	2	21-P-894	Pump Flange	1
380069	Lockring	1	3-P-1126	Output Shaft .875"-13T	1
21-P-882	Bearing Cap	1	28-P-285	O-Ring 1.597" x .103"	2
28-P-267	Oil Seal 2.627" x 1.750" x .312"	1	379555	Lockring	2
21-P-731	Pump Flange	1	380069	Lockring	1
22-P-151	Bearing Cap Gasket	1	22-P-151	Shim Gasket	1
328170-216X	Capscrew Kit	1	328170-216X	Bag Kit	1
380563-14	Hex Flange Head Capscrew .375"-16 x 1.500"	4	380563-14	Hex Flange Head Capscrew .375"-16 x 1.500"	4
379746	Lockring	1	379746	Lockring	1
379688	Spline Lubricant	1	379688	Spline Lubricant	1
550311	Ball Bearing 1.77" x 3.346" x .748"	1	550311	Ball Bearing 1.77" x 3.346" x .748"	1
378263	Internal Lockring	1	378263	Lockring	1
329160-138X	3/8" Conversion Kit (XD to RZ WET) (280 Series)		329160-150X	3/8" Conversion Kit (XD to RB WET) (280 Series)	
3-P-1066	Output Shaft 1.25"-14T.....	1	21-P-894	Pump Flange	1
28-P-285	O-Ring 1.597" x .103"	2	21-P-883	Bearing Cap (Wet Spline)	1
379555	Lockring	2	22-P-151	Shim Gasket	1
380069	Lockring	1	28-P-267	Oil Seal 2.627" x 1.750" x .312"	1
21-P-883	Bearing Cap	1	28-P-285	O-Ring 1.597" x .103"	2
28-P-267	Oil Seal 2.627" x 1.750" x .312"	1	328170-216X	Bag Kit	1
21-P-731	Pump Flange	1	329658X	Cover Kit	1
329699-1X	Overall Hose Ass'y	1	378263	Lockring	1
329700X	Wet Spline Parts Kit	1	379555	Lockring	2
329658X	Cover Kit	1	379746	Lockring	1
22-P-151	Bearing Cap Gasket	1	380069	Lockring	1
328170-216X	Capscrew Kit	1	380563-14	Hex Flange Head Capscrew .375"-16 x 1.500"	4
380563-14	Hex Flange Head Capscrew .375"-16 x 1.500"	4	3-P-1126	Output Shaft .875"-13T	1
379746	Lockring	1	550311	Ball Bearing 1.77" x 3.346" x .748"	1
550311	Ball Bearing 1.77" x 3.346" x .748"	1	329959X	Wet Spline Parts Kit	1
378263	Internal Lockring	1	329699-1X	Hose Ass'y	1
329160-139X	3/8" Conversion Kit (XD to XV) (280 Series)				
3-P-1065	Output Shaft 10T Straight	1			
28-P-285	O-Ring 1.597" x .103"	2			
379555	Lockring	2			
380069	Lockring	1			
28-P-211	Oil Seal 3.001" x 2.00" x .375"	1			
380076-13	Flat Washer - Hardened .950" x 1.762" x .157"	1			
380486	Lock Nut - Nylon, Thin .875"-14	1			
380503	1410 Series Companion Flange	1			
22-P-151	Bearing Cap Gasket	1			
380563-14	Hex Flange Head Capscrew .375"-16 x 1.500"	4			
379746	Lockring	1			
550311	Ball Bearing 1.77" x 3.346" x .748"	1			
378263	Lockring	1			

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

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Parker Hannifin Corporation – Chelsea Division

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2. Price Adjustments; Payments. Prices stated on Seller's quote or other documentation offered by Seller are valid for 30 days, and do not include any sales, use, or other taxes unless specifically stated. Unless otherwise specified by Seller, all prices are F.C.A. Seller's facility (INCOTERMS 2010). Payment is subject to credit approval and is due 30 days from the date of invoice or such other term as required by Seller's Credit Department, after which Buyer shall pay interest on any unpaid invoices at the rate of 1.5% per month or the maximum allowable rate under applicable law.

3. Delivery Dates; Title and Risk; Shipment. All delivery dates are approximate and Seller shall not be responsible for any damages resulting from any delay. Regardless of the manner of shipment, title to any products and risk of loss or damage shall pass to Buyer upon placement of the products with the shipment carrier at Seller's facility. Unless otherwise stated, Seller may exercise its judgment in choosing the carrier and means of delivery. No deferment of shipment at Buyer's request beyond the respective dates indicated will be made except on terms that will indemnify, defend and hold Seller harmless against all loss and additional expense. Buyer shall be responsible for any additional shipping charges incurred by Seller due to Buyer's acts or omissions.

4. Warranty. Seller warrants that all products sold, other than the 590 Series, 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). Seller warrants that the 590 Series will conform to the applicable Seller standard specification for the lesser period of 2 years (24 Months) from date of service or 2000 hours of usage. The prices charged for Seller's products are based upon the exclusive limited warranty stated above, and upon the following disclaimer: **DISCLAIMER OF WARRANTY: THIS WARRANTY COMPRISESTHE SOLE AND ENTIRE WARRANTY PERTAINING TO PRODUCTS PROVIDED HEREUNDER. SELLER DISCLAIMS ALL OTHER WARRANTIES, EXPRESS AND IMPLIED, INCLUDING DESIGN, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

5. Claims; Commencement of Actions. Buyer shall promptly inspect all Products upon delivery. No claims for shortages will be allowed unless reported to the Seller within 10 days of delivery. No other claims against Seller will be allowed unless asserted in writing within 30 days after delivery. Buyer shall notify Seller of any alleged breach of warranty within 30 days after the date the defect is or should have been discovered by Buyer. Any action based upon breach of this agreement or upon any other claim arising out of this sale (other than an action by Seller for an amount due on any invoice) must be commenced within 12 months from the date of the breach without regard to the date breach is discovered.

6. LIMITATION OF LIABILITY. UPON NOTIFICATION, SELLER WILL, AT ITS OPTION, REPAIR OR REPLACE A DEFECTIVE PRODUCT, OR REFUND THE PURCHASE PRICE. IN NO EVENT SHALL SELLER BE LIABLE TO BUYER FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF, OR AS THE RESULT OF, THE SALE, DELIVERY, NON-DELIVERY, SERVICING, USE OR LOSS OF USE OF THE PRODUCTS OR ANY PART THEREOF, OR FOR ANY CHARGES OR EXPENSES OF ANY NATURE INCURRED WITHOUT SELLER'S WRITTEN CONSENT, EVEN IF SELLER HAS BEEN NEGLIGENT, WHETHER IN CONTRACT, TORT OR OTHER LEGAL THEORY. IN NO EVENT SHALL SELLER'S LIABILITY UNDER ANY CLAIM MADE BY BUYER EXCEED THE PURCHASE PRICE OF THE PRODUCTS.

7. User Responsibility. The user, through its own analysis and testing, is solely responsible for making the final selection of the system and Product 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 and follow applicable industry standards and Product information. If Seller provides Product or system options, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the Products or systems.

8. Loss to Buyer's Property. Any designs, tools, patterns, materials, drawings, confidential information or equipment furnished by Buyer or any other items which become Buyer's property, will be considered obsolete and may be destroyed by Seller after two consecutive years have elapsed without Buyer ordering the items manufactured using such property. Seller shall not be responsible for any loss or damage to such property while it is in Seller's possession or control.

9. Special Tooling. A tooling charge may be imposed for any special tooling, including without limitation, dies, fixtures, molds and patterns, acquired to manufacture Products. Such special tooling shall be and remain Seller's property notwithstanding payment of any charges by Buyer. In no event will Buyer acquire any interest in apparatus belonging to Seller which is utilized in the manufacture of the Products, even if such apparatus has been specially converted or adapted for such manufacture and notwithstanding any charges paid by Buyer. Unless otherwise agreed, Seller shall have the right to alter, discard or otherwise dispose of any special tooling or other property in its sole discretion at any time.

10. Buyer's Obligation; Rights of Seller. To secure payment of all sums due or otherwise, Seller shall retain a security interest in the goods delivered and this agreement shall be deemed 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 its security interest.

11. Improper use and Indemnity. Buyer shall indemnify, defend, and hold Seller harmless from any claim, liability, damages, lawsuits, and costs (including attorney fees), whether for personal injury, property damage, patent, trademark or copyright infringement or any other claim, brought by or incurred by Buyer, Buyer's employees, or any other person, arising out of: (a) improper selection, improper application or other misuse of Products purchased by Buyer from Seller; (b) any act or omission, negligent or otherwise, of Buyer; (c) Seller's use of patterns, plans, drawings, or specifications furnished by Buyer to manufacture Product; or (d) Buyer's failure to comply with these terms and conditions. Seller shall not indemnify Buyer under any circumstance except as otherwise provided.

12. Cancellations and Changes. Orders shall not be subject to cancellation or change by Buyer 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. Seller may change product features, specifications, designs and availability with notice to Buyer.

13. Limitation on Assignment. Buyer may not assign its rights or obligations under this agreement without the prior written consent of Seller.

14. Force Majeure. Seller does not assume the risk and shall not be liable for delay or failure to perform any of Seller's obligations by reason of circumstances beyond the reasonable control of Seller (hereinafter "Events of Force Majeure"). Events of Force Majeure shall include without limitation: accidents, strikes or labor disputes, acts of any government or government agency, acts of nature, delays or failures in delivery from carriers or suppliers, shortages of materials, or any other cause beyond Seller's reasonable control.

15. Waiver and Severability. Failure to enforce any provision of this agreement will not waive that provision nor will any such failure prejudice Seller's right to enforce that provision in the future. Invalidation of any provision of this agreement by legislation or other rule of law shall not invalidate any other provision herein. The remaining provisions of this agreement will remain in full force and effect.

16. Termination. Seller may terminate this agreement for any reason and at any time by giving Buyer thirty (30) days written notice of termination. Seller may immediately terminate this agreement, in writing, if Buyer: (a) commits a breach of any provision of this agreement (b) appoints a trustee, receiver or custodian for all or any part of Buyer's property (c) files a petition for relief in bankruptcy on its own behalf, or by a third party (d) makes an assignment for the benefit of creditors, or (e) dissolves or liquidates all or a majority of its assets.

17. Governing Law. This agreement and the sale and delivery of all Products hereunder shall be 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 this agreement.

18. Indemnity for Infringement of Intellectual Property Rights. Seller shall have no liability for infringement of any patents, trademarks, copyrights, trade dress, trade secrets or similar rights except as provided in this Section. Seller will defend and indemnify Buyer against allegations of infringement of U.S. patents, U.S. trademarks, copyrights, trade dress and trade secrets ("Intellectual Property Rights"). 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 an allegation that a Product sold pursuant to this Agreement infringes the Intellectual Property Rights of a third party. Seller's obligation to defend and indemnify Buyer is contingent on Buyer notifying Seller within ten (10) days after Buyer becomes aware of such allegations of infringement, and Seller having sole control over the defense of any allegations or actions including all negotiations for settlement or compromise. If a Product is subject to a claim that it infringes the Intellectual Property Rights of a third party, Seller may, at its sole expense and option, procure for Buyer the right to continue using the Product, replace or modify the Product so as to make it noninfringing, or offer to accept return of the Product and return the purchase price less a reasonable allowance for depreciation. Notwithstanding the foregoing, Seller shall have no liability for claims of infringement based on information provided by Buyer, or directed to Products delivered hereunder for which the designs are specified in whole or part by Buyer, or infringements resulting from the modification, combination or use in a system of any Product sold hereunder. The foregoing provisions of this Section shall constitute Seller's sole and exclusive liability and Buyer's sole and exclusive remedy for infringement of Intellectual Property Rights.

19. Entire Agreement. This agreement contains the entire agreement between the Buyer and Seller and constitutes the final, complete and exclusive expression of the terms of sale. All prior or contemporaneous written or oral agreements or negotiations with respect to the subject matter are herein merged.

20. Compliance with Law, U. K. Bribery Act and U. S. Foreign Corrupt Practices Act. Buyer agrees to comply with all applicable laws and regulations, including both those of the United Kingdom and the United States of America, and of the country or countries of the Territory in which Buyer may operate, including without limitation the U. K. Bribery Act, the U. S. Foreign Corrupt Practices Act ("FCPA") and the U.S. Anti-Kickback Act (the "Anti-Kickback Act"), and agrees to indemnify and hold harmless Seller from the consequences of any violation of such provisions by Buyer, its employees or agents. Buyer acknowledges that they are familiar with the provisions of the U. K. Bribery Act, the FCPA and the Anti-Kickback Act, and certifies that Buyer will adhere to the requirements thereof. In particular, Buyer represents and agrees that Buyer shall not make any payment or give anything of value, directly or indirectly to any governmental official, any foreign political party or official thereof, any candidate for foreign political office, or any commercial entity or person, for the purpose of influencing such person to purchase products or otherwise benefit the business of Seller.

07/14



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