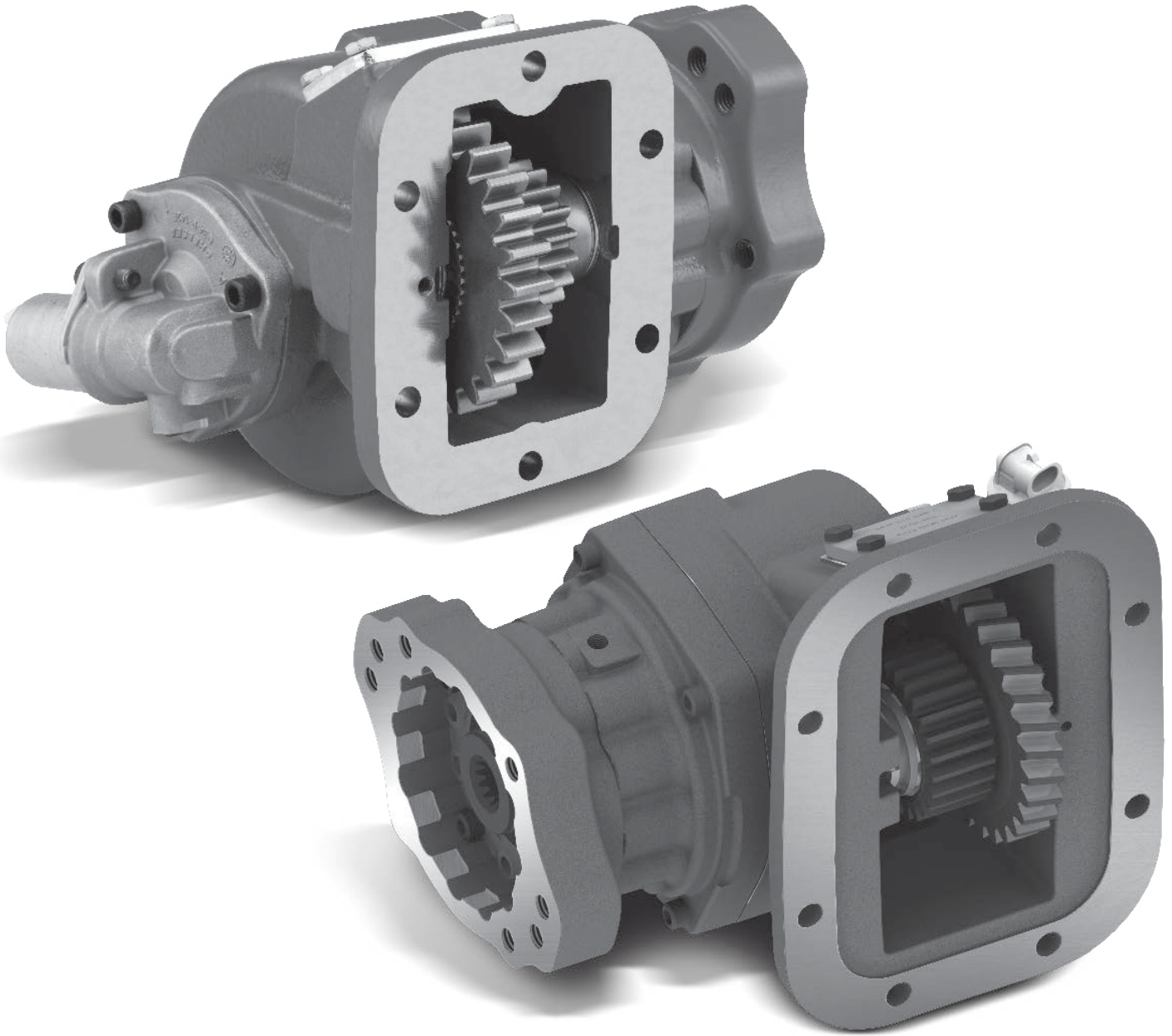


Effective: HY25-2272-M1/US January 15, 2024
Supersedes: HY25-2272-M1/US May 15, 2023



Power Take-Offs Parts List

272, 282 Series



WARNING – User Responsibility

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

This document and other information from Parker Hannifin Corporation, its subsidiaries and authorized distributors provide product or system options for further investigation by users having technical expertise.

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

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

Offer of Sale

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



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

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272 Series

Model Number Designator1

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282 Series

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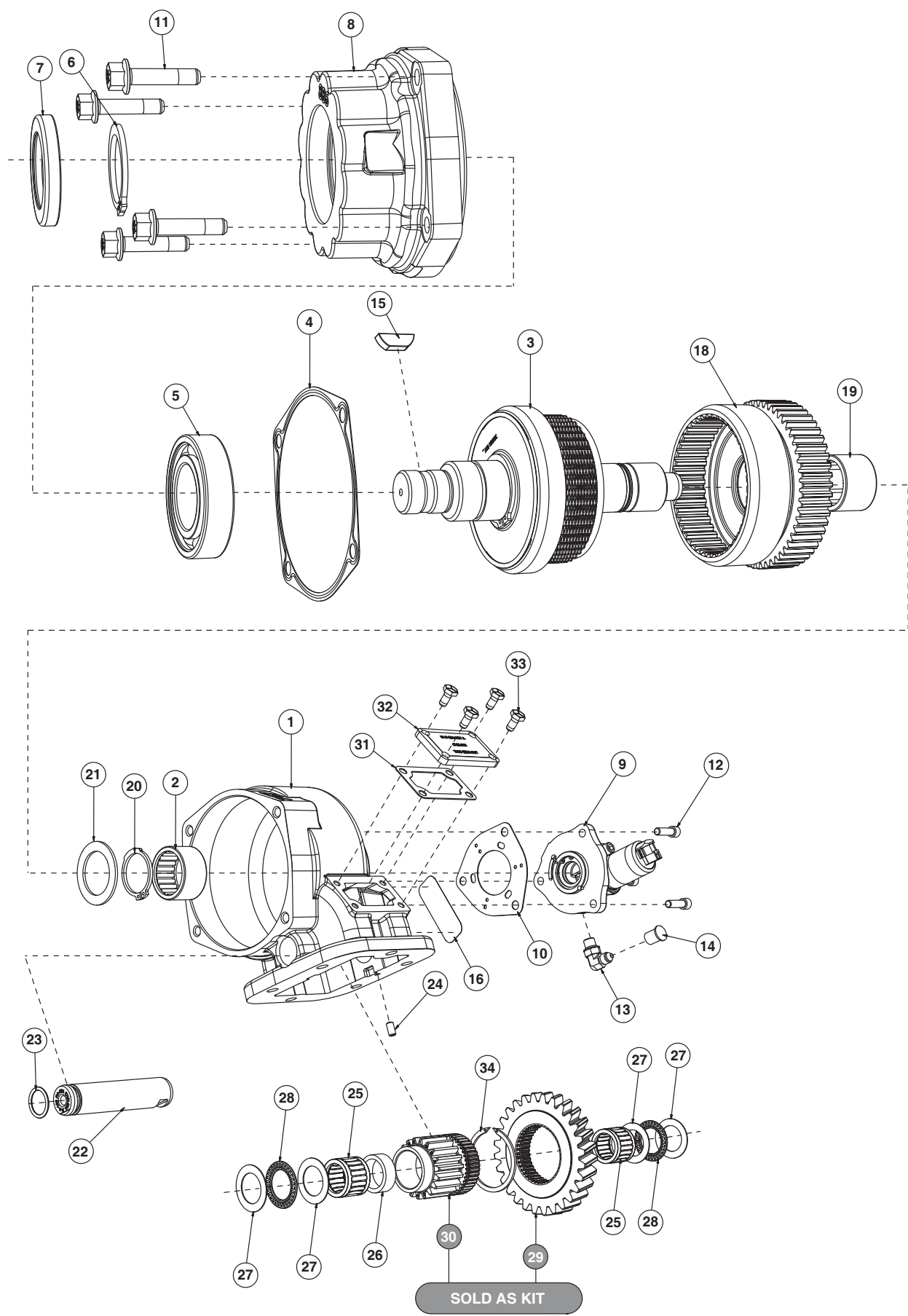
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Model Number Designator

272		N	D	HV	P	-	B	3	B	D
Basic Model										
272										
Mounting Option										
X = Standard Mount										
G = Standard Mount w/ Metric Studs										
Z = Deep Mount										
M = Low Profile										
L = Deep Mount w/o Stud Kit										
K = Standard Mount w/o Stud Kit										
N = Low Profile w/ Metric Studs										
A = Aisin										
♦ D = Aisin for Dodge Trucks										
R = Aisin for RAM Trucks										
Gear Ratio										
A = 19/53										
B = 22/50										
C = 25/47										
♦ D = 28/44										
G = 31/41										
K = 33/39										
M = 35/37										
P = 37/35										
S = 39/33										
Input Option										
Aisin										
Allison										
EATON Fuller										
Mack										
NOTE: For more details, see Application Catalog (Transmission model number required)										
Lube Option										
X = No Pressure Lube										
Pressure										
P = Pressure Lube										
R = Pressure Lube valve body rotated 120°										
S = Pressure Lube valve body rotated 240°										
Wet Spline										
^{5, 64} W = Wet Spline										
^{5, 64} V = Wet Spline valve body rotated 120°										
^{5, 64} Y = Wet Spline valve body rotated 240°										
⁵ Automatically pressure lubed										
⁶⁴ Hydraulic shift PTOs only HV										
⁶⁸ Check for Wet Spline availability										
Output Option										
Driveline Output										
AB = DIN 120 Flange										
AC = DIN 100 Flange										
BD = Shaft Brake - (1-1/4" Round w/ 5/16" Key)										
BV = Shaft Brake - 1410 Series Companion Flange										
⁶⁴ SD = SmartStart - Rd Standard Shaft (1-1/4" - 5/16" Key)										
SV = SmartStart - 1410 Series Companion Flange										
XD = Rd Standard Shaft (1-1/4" - 5/16" Key)										
XV = 1410 Series Companion Flange										
Pump Mount										
⁶⁸ RB = Rotatable SAE B 4-Bolt Flange, SAE B Shaft (7/8" - 13T)										
RD = Rotatable SAE A 4-Bolt Flange (3/4" - 11T)										
RE = Rotatable SAE A 2-Bolt Flange, SAE A Shaft (5/8" - 9T)										
⁶⁸ RF = Rotatable SAE B 2 or 4-Bolt Flange, SAE BB Shaft (1" - 15T)										
⁶⁸ RK = Rotatable SAE B 2 or 4-Bolt Flange, SAE B Shaft (7/8" - 13T)										
RP = Rotatable SAE A 4-Bolt Flange (7/8" - 13T)										
⁶⁸ RS = Rotatable SAE C 2 or 4-Bolt Flange, SAE C Shaft (1-1/4" - 14T)										
⁶⁸ RY = Rotatable ISO 7653 Flange, DIN 5462 Shaft										
⁶⁴ RZ = Rotatable SAE B 2 or 4-Bolt Flange, SAE C Shaft (1-1/4" - 14T)										
♦ UN = UNI 8953 3-Bolt Pump Flange - 6T										
XR = Chelsea Special (Cloverleaf), SAE B Shaft (7/8" - 13T)										
Assembly Arrangement										
3, 5										
Shift Option										
Hydraulic										
B = 12VDC Elec/Hyd										
D = 24VDC Elec/Hyd										
E = 12VDC Elec/Hyd w/o Installation Kit										
N = 24VDC Elec/Hyd w/o Installation Kit										
K = 12VDC Elec/Hyd w/ EOC										
L = 24VDC Elec/Hyd w/ EOC										
G = 12VDC Elec/Hyd Remote Valve w/o EOC										
H = 24VDC Elec/Hyd Remote Valve w/o EOC										
♦ 5 = 12VDC Elec/Hyd Hino (Allison Only)										
Air										
A = Manual Air Shift										
V = Manual Air Shift w/o Installation Kit										
1 = 12VDC Elec/Air										
2 = 24VDC Elec/Air										
J = 12VDC Elec/Air w/ EOC										
3 = 24VDC Elec/Air w/ EOC										
P = 12VDC Elec/Air Remote										
Q = 24VDC Elec/Air Remote										
R = 12VDC Elec/Air Remote w/ EOC										
4 = 24VDC Elec/Air Remote w/ EOC										

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



Bill of Materials**Parts List
272 Series**

Item	Part Number	Description	Qty.
1	1-P-766	Housing (3 Arrangement)	1 or
	1-P-767	Housing (5 Arrangement)	1 or
	1-P-769	Housing (3 Arrangement, Low Profile)	1 or
	1-P-771	Housing (5 Arrangement, Low Profile)	1 or
	1-P-722	Housing (3 Arrangement, Deep Mount)	1 or
	1-P-723	Housing (5 Arrangement, Deep Mount)	1
2	560972	Needle Roller Bearing Assembly (1.500" x 1.875" x 1.000")	1
3	329828-1X	Drive Shaft & Clutch Assembly XD (3-P-1133 Shaft) (HYD)	1 or
	329832-1X	Drive Shaft & Clutch Assembly XD (3-P-1133 Shaft) (AIR)	1 or
	See pages 17-18	Drive Shaft & Clutch Assembly (All Other Outputs)	1
4	22-P-151	Shim Gasket	1
5	550311	Ball Bearing (1.770" x 3.346" x .748")	1
6	379555	Lockring	1
7	28-P-267	Oil Seal (2.627" x 1.750" x .312") (XD Output)	1 or
	See pages 19-23	Oil Seal (All Other Outputs)	1
8	21-P-886	Bearing Cap	1
9	See pages 11-12	Valve and Shift Cap Assembly	1
10	22-P-112	Valve Cap Gasket	1
11	380563-14	9/16" Hex Flange Head Cap Screw (.375"-16 x 1.500") Grade 8 (Non-Drag Brake Option)	4 or
	380563-28	9/16" Hex Flange Head Cap Screw (.375"-16 x 3.500") Grade 8 (Drag Brake Option)	4
12	378447-6	1/4" Socket Head Cap Screw (.312"-18 x 1.000")	3
13	379486	90° Elbow (.438"-20) (Hydraulic Shift Options Only)	1
14	379564-2	Thread Cap (.438") (Hydraulic Shift Options Only)	1
15	500007-29	Woodruff Key (XD Output Only)	1
16	68-P-51-1	Adhesive Label	1
18	See pages 6-7	Output Gear	1
19	561088	Bearing Needle Roller Assembly (1.500" x 1.875" x 1.250")	1
20	379746	Lockring	1
21	31-P-70	Thrust Washer (1.507" x 2.167" x .094")	1
22	9-P-109	Idler Shaft (1.000")	1
23	28-P-198	O-ring (.798" x .103")	1
24	378452-7	1/8" Socket Head Set Screw (.250"-20 x .500")	1 or
	378452-4	1/8" Socket Head Set Screw (.250"-20 x .312") (L & Z Mount)	1
25	550886	Bearing Needle Roller Assembly (1.000" x 1.312" x 1.000")	2
26	14-P-54	Spacer (1.035" x 1.310" x .462")	1
27	31-P-61	Thrust Washer (1.007" x 1.542" x .031")	4
28	560920	Thrust Bearing (1.000" x .078")	2
29	See pages 6-7	Input Gear	1
30	See pages 6-7	Ratio Gear	1
31	35-P-118	Gasket Plate	1
32	34-P-315	Cover Plate	1 or
	34-P-316	Cover Plate EOC (w/ EOC or J, K, L, R, 3, 4 Shift Types Only)	1

Continued on Next Page

Bill of Materials**Parts List
272 Series**

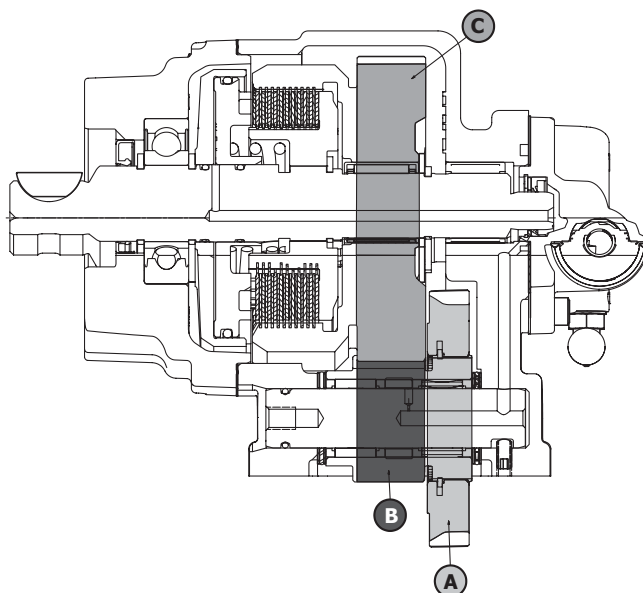
Item	Part Number	Description	Qty.
33	378429-4	7/16" Hex Head Cap Screw (.250"-20 x .500")	4
34	379522	Lockring	1
N.S.	380511	Tapered Plug (.302") (W, V & Y Lubrication Only)	1
N.S.	69-P-18	Wet Spline Tag (W, V & Y Lubrication Only)	1
N.S.	379231	Pipe Plug (.125"-27) (w/ EOC or J, K, L, R, 3, 4 Shift Types Only)	1
N.S.	379242	Straight Adapter (.125"-27 x .750"-16) (w/ EOC or J, K, L, R, 3, 4 Shift Types Only)	1
N.S.	69-P-30	Caution Tag	1
N.S.	379502X	Pressure Switch.....	1
		See pages 70-84 for Bill of Materials for the below loose parts.	
		GASKET KITS	
	328950-6X	Gasket & Installation Instructions Kit (All 272 Except M & N Mounting)	1 or
	328948-5X	Gasket & Installation Instructions Kit (All 272 M & N Mounting).....	1
	329071-62X	Gasket & Seal Kit (All Outputs Except BD, BV)	
	329071-63X	Bearing Kit (AB, AC, XD, XV, RF, RK, RS, RY, RZ) (All Outputs Except BV, BD)	
	329071-64X	Bearing Kit (BV & BD Outputs)	
	329678X	Gear & Clutch Plates Kit (All)	
		STUD KITS	
	7170-72X	Metric Stud Kit (272G HV Pitch) (Non-M Mounting).....	1 or
	7170-127X	Standard Stud Kit (272M)	1 or
	7170-128X	Metric Stud Kit (272G* KU).....	1 or
	7170-129X	Standard Stud Kit (272X, E)	1 or
	7170-130X	Metric Stud Kit (272N)	1 or
	7170-131X	Stud Kit (272Z)	1
		HYDRAULIC INSTALLATION KITS	
	329841-12X	12VDC Hyd Valve Installation Kit (B Shift, KU Gear, R Mount).....	1 or
	329842-12X	12VDC Remote Hyd Valve Installation Kit (G Shift, HV Gear)	1 or
	329842-24X	24VDC Remote Hyd Valve Installation Kit (H Shift, HV Gear)	1 or
	329882-12X	12VDC Hyd Valve Installation Kit (B Shift, HV Gear).....	1 or
	329882-24X	24VDC Hyd Valve Installation Kit (D Shift, HV Gear).....	1 or
	329884-12X	12VDC Hyd Valve Installation Kit (B Shift, KU Gear, D Mount)	1 or
	329885-12X	12VDC Remote Hyd Valve Installation Kit (G Shift, Except HV Gear)	1 or
	329885-24X	24VDC Remote Hyd Valve Installation Kit (H Shift, Except HV Gear).....	1 or
	329887-12X	12VDC Remote Hyd Valve Installation Kit (G Shift, KU Gear, R Mount)	1 or
	329888-12X	12VDC Remote Hyd Valve Installation Kit (G Shift, KU Gear, D Mount)	1 or
	329892-12X	12VDC Hyd Valve Installation Kit (B Shift, Except HV Gear).....	1 or
	329892-24X	24VDC Hyd Valve Installation Kit (D Shift, Except HV Gear).....	1 or
	329907-12X	12VDC Hyd Valve Installation Kit (B Shift, KU Gear, Except D, R Mount)	1 or
	329907-24X	24VDC Hyd Valve Installation Kit (D Shift, KU Gear, Except D, R Mount)	1 or
	329996-12X	12VDC Hyd Valve Installation Kit (HV Pitch, E-Shift)	1 or
	329998X	12VDC Hyd Valve Installation Kit (5 Shift, HV Gear) (Hino Allison)	1 or
	329908-12X	12VDC Remote Hyd Valve Installation Kit (G Shift, KU Gear, Except D, R Mount).....	1 or
	329908-24X	24VDC Remote Hyd Valve Installation Kit (H Shift, KU Gear, Except D, R Mount)	1
	329883X	12VDC & 24VDC Hyd Valve Installation Kit w/ EOC (K Shift & L Shift, HV Gear)	1 or
	329886X	12VDC & 24VDC Hyd Valve Installation Kit w/ EOC (K Shift & L Shift, KU Gear, D, R Mount).....	1 or
	329900X	12VDC & 24VDC Hyd Valve Installation Kit w/ EOC (K Shift & L Shift, Except HV, KU Gear)	1

N.S. – Not Shown

Continued on Next Page

Bill of Materials**Parts List
272 Series**

Item	Part Number	Description	Qty.
		AIR INSTALLATION KITS	
	328388-113X	Air Shift Installation Kit (A Shift)	1 or
	329889-12X	12VDC Remote Elec/Air Valve Installation Kit w/ EOC (R Shift, Except HV Gear)	1 or
	329889-24X	24VDC Remote Elec/Air Valve Installation Kit w/ EOC (4 Shift, Except HV Gear)	1 or
	329890-12X	12VDC Remote Elec/Air Valve Installation Kit w/ EOC (R Shift, HV Gear)	1 or
	329890-24X	24VDC Remote Elec/Air Valve Installation Kit w/ EOC (4 Shift, HV Gear)	1 or
	329891-12X	12VDC Remote Elec/Air Valve Installation Kit (P Shift, Except HV Gear)	1 or
	329891-24X	24VDC Remote Elec/Air Valve Installation Kit (Q Shift, Except HV Gear)	1 or
	329893-12X	12VDC Elec/Air Valve Installation Kit (1 Shift)	1 or
	329893-24X	24VDC Elec/Air Valve Installation Kit (2 Shift, Except HV Gear)	1 or
	329909-12X	12VDC Elec/Air Valve Installation Kit (1 Shift, HV Gear)	1 or
	329909-24X	24VDC Elec/Air Valve Installation Kit (2 Shift, HV Gear)	1 or
	329910-12X	12VDC Remote Elec/Air Valve Installation Kit (P Shift, HV Gear)	1 or
	329910-24X	24VDC Remote Elec/Air Valve Installation Kit (Q Shift, HV Gear)	1 or
	329894X	12VDC & 24VDC Elec/Air Valve Installation Kit w/ EOC (J Shift & 3 Shift, Except HV Gear)	1 or
	329911X	12VDC & 24VDC Elec/Air Valve Installation Kit w/ EOC (J Shift & 3 Shift, HV Gear)	1
		SERVICE CONVERSION KITS	
	329962X	12VDC Remote Valve Conversion Kit (Allison G-HV)	
	329964X	12VDC Remote Valve Conversion Kit (RAM G-HV)	
	329966X	EOC Conversion Kit (B and D Shift to K and L Shift)	
	329967X	EOC Conversion Kit (1 and J Shift)	
	329968X	EOC Conversion Kit (A and 3 Shift)	
	329969X	EOC Conversion Kit (A and J Shift)	
	329958-12X	12VDC Remote Valve Conversion Kit (G)	
	329958-24X	12VDC Remote Valve Conversion Kit (H)	
		OUTPUT CONVERSION KITS	
	See pages 81-84	Output Conversion Kits Bill of Materials	

Gear Ratio Options**Parts List
272 Series****Gear Chart**

GEAR DESIGNATOR	INPUT GEAR ASSEMBLY	SOLD AS KIT				OUTPUT GEAR (18)	NO. TEETH C
		INPUT GEAR (29)	NO. TEETH A	RATIO GEAR (30)	NO. TEETH B		
272*AFN	5-P-1509-1X	5-P-1509	28	5-P-1498	19	2-P-925	53
272*BFN	5-P-1509-2X	5-P-1509	28	5-P-1499	22	2-P-926	50
272*CFN	5-P-1509-3X	5-P-1509	28	5-P-1500	25	2-P-927	47
272*DFN	5-P-1509-4X	5-P-1509	28	5-P-1501	28	2-P-928	44
272*GFN	5-P-1509-5X	5-P-1509	28	5-P-1502	31	2-P-929	41
272*KFN	5-P-1509-6X	5-P-1509	28	5-P-1503	33	2-P-931	39
272*MFN	5-P-1509-7X	5-P-1509	28	5-P-1504	35	2-P-933	37
272*PFN	5-P-1509-8X	5-P-1509	28	5-P-1505	37	2-P-935	35
272*SFN	5-P-1509-9X	5-P-1509	28	5-P-1506	39	2-P-936	33
272*AAJ	5-P-1510-1X	5-P-1510	25	5-P-1498	19	2-P-925	53
272*BAJ	5-P-1510-2X	5-P-1510	25	5-P-1499	22	2-P-926	50
272*CAJ	5-P-1510-3X	5-P-1510	25	5-P-1500	25	2-P-927	47
272*DAJ	5-P-1510-4X	5-P-1510	25	5-P-1501	28	2-P-928	44
272*GAJ	5-P-1510-5X	5-P-1510	25	5-P-1502	31	2-P-929	41
272*KAJ	5-P-1510-6X	5-P-1510	25	5-P-1503	33	2-P-931	39
272*MAJ	5-P-1510-7X	5-P-1510	25	5-P-1504	35	2-P-933	37
272*PAJ	5-P-1510-8X	5-P-1510	25	5-P-1505	37	2-P-935	35
272*SAJ	5-P-1510-9X	5-P-1510	25	5-P-1506	39	2-P-936	33
272*ADA	5-P-1511-1X	5-P-1511	27	5-P-1498	19	2-P-925	53
272*BDA	5-P-1511-2X	5-P-1511	27	5-P-1499	22	2-P-926	50
272*CDA	5-P-1511-3X	5-P-1511	27	5-P-1500	25	2-P-927	47
272*DDA	5-P-1511-4X	5-P-1511	27	5-P-1501	28	2-P-928	44
272*GDA	5-P-1511-5X	5-P-1511	27	5-P-1502	31	2-P-929	41
272*KDA	5-P-1511-6X	5-P-1511	27	5-P-1503	33	2-P-931	39
272*MDA	5-P-1511-7X	5-P-1511	27	5-P-1504	35	2-P-933	37
272*PDA	5-P-1511-8X	5-P-1511	27	5-P-1505	37	2-P-935	35
272*SDA	5-P-1511-9X	5-P-1511	27	5-P-1506	39	2-P-936	33
272*AES	5-P-1512-1X	5-P-1512	22	5-P-1498	19	2-P-925	53
272*BES	5-P-1512-2X	5-P-1512	22	5-P-1499	22	2-P-926	50
272*CES	5-P-1512-3X	5-P-1512	22	5-P-1500	25	2-P-927	47
272*DES	5-P-1512-4X	5-P-1512	22	5-P-1501	28	2-P-928	44
272*GES	5-P-1512-5X	5-P-1512	22	5-P-1502	31	2-P-929	41
272*KES	5-P-1512-6X	5-P-1512	22	5-P-1503	33	2-P-931	39
272*MES	5-P-1512-7X	5-P-1512	22	5-P-1504	35	2-P-933	37
272*PES	5-P-1512-8X	5-P-1512	22	5-P-1505	37	2-P-935	35
272*SES	5-P-1512-9X	5-P-1512	22	5-P-1506	39	2-P-936	33

NOTE: Input Gear Assembly includes Input Gear, Ratio Gear and 379522 pre-assembled.

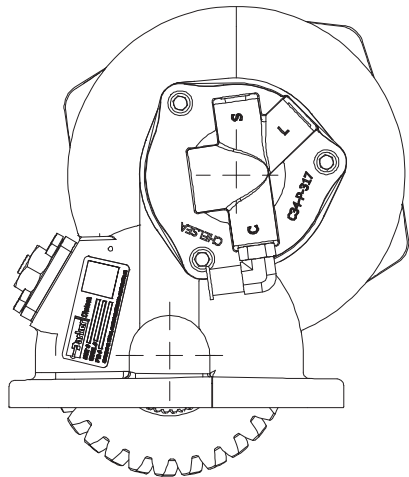
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Gear Chart (Continued)

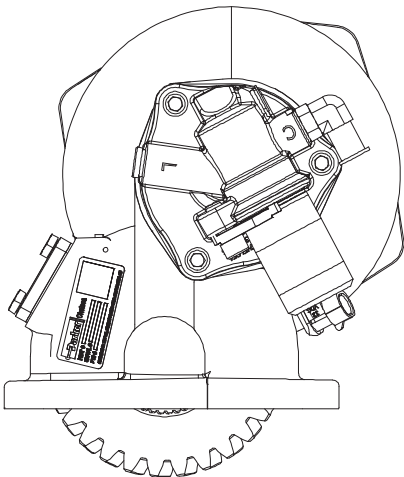
GEAR DESIGNATOR	INPUT GEAR ASSEMBLY	SOLD AS KIT				OUTPUT GEAR (18)	NO. TEETH C
		INPUT GEAR (29)	NO. TEETH A	RATIO GEAR (30)	NO. TEETH B		
272*AJK	5-P-1513-1X	5-P-1513	23	5-P-1498	19	2-P-925	53
272*BJK	5-P-1513-2X	5-P-1513	23	5-P-1499	22	2-P-926	50
272*CJK	5-P-1513-3X	5-P-1513	23	5-P-1500	25	2-P-927	47
272*DJK	5-P-1513-4X	5-P-1513	23	5-P-1501	28	2-P-928	44
272*GJK	5-P-1513-5X	5-P-1513	23	5-P-1502	31	2-P-929	41
272*KJK	5-P-1513-6X	5-P-1513	23	5-P-1503	33	2-P-931	39
272*MJK	5-P-1513-7X	5-P-1513	23	5-P-1504	35	2-P-933	37
272*PJK	5-P-1513-8X	5-P-1513	23	5-P-1505	37	2-P-935	35
272*SJK	5-P-1513-9X	5-P-1513	23	5-P-1506	39	2-P-936	33
272*AJW	5-P-1514-1X	5-P-1514	23	5-P-1498	19	2-P-925	53
272*BJW	5-P-1514-2X	5-P-1514	23	5-P-1499	22	2-P-926	50
272*CJW	5-P-1514-3X	5-P-1514	23	5-P-1500	25	2-P-927	47
272*DJW	5-P-1514-4X	5-P-1514	23	5-P-1501	28	2-P-928	44
272*GJW	5-P-1514-5X	5-P-1514	23	5-P-1502	31	2-P-929	41
272*KJW	5-P-1514-6X	5-P-1514	23	5-P-1503	33	2-P-931	39
272*MJW	5-P-1514-7X	5-P-1514	23	5-P-1504	35	2-P-933	37
272*PJW	5-P-1514-8X	5-P-1514	23	5-P-1505	37	2-P-935	35
272*SJW	5-P-1514-9X	5-P-1514	23	5-P-1506	39	2-P-936	33
272*AKU	5-P-1515-1X	5-P-1515	36	5-P-1498	19	2-P-925	53
272*BKU	5-P-1515-2X	5-P-1515	36	5-P-1499	22	2-P-926	50
272*CKU	5-P-1515-3X	5-P-1515	36	5-P-1500	25	2-P-927	47
272*DKU	5-P-1515-4X	5-P-1515	36	5-P-1501	28	2-P-928	44
272*GKU	5-P-1515-5X	5-P-1515	36	5-P-1502	31	2-P-929	41
272*KKU	5-P-1515-6X	5-P-1515	36	5-P-1503	33	2-P-931	39
272*MKU	5-P-1515-7X	5-P-1515	36	5-P-1504	35	2-P-933	37
272*PKU	5-P-1515-8X	5-P-1515	36	5-P-1505	37	2-P-935	35
272*SKU	5-P-1515-9X	5-P-1515	36	5-P-1506	39	2-P-936	33
272*AHV	5-P-1516-1X	5-P-1516	27	5-P-1498	19	2-P-925	53
272*BHV	5-P-1516-2X	5-P-1516	27	5-P-1499	22	2-P-926	50
272*CHV	5-P-1516-3X	5-P-1516	27	5-P-1500	25	2-P-927	47
272*DHV	5-P-1516-4X	5-P-1516	27	5-P-1501	28	2-P-928	44
272*GHV	5-P-1516-5X	5-P-1516	27	5-P-1502	31	2-P-929	41
272*KHV	5-P-1516-6X	5-P-1516	27	5-P-1503	33	2-P-931	39
272*MHV	5-P-1516-7X	5-P-1516	27	5-P-1504	35	2-P-933	37
272*PHV	5-P-1516-8X	5-P-1516	27	5-P-1505	37	2-P-935	35
272*SHV	5-P-1516-9X	5-P-1516	27	5-P-1506	39	2-P-936	33
272*AAK	5-P-1517-1X	5-P-1517	25	5-P-1498	19	2-P-925	53
272*BAK	5-P-1517-2X	5-P-1517	25	5-P-1499	22	2-P-926	50
272*CAK	5-P-1517-3X	5-P-1517	25	5-P-1500	25	2-P-927	47
272*DAK	5-P-1517-4X	5-P-1517	25	5-P-1501	28	2-P-928	44
272*GAK	5-P-1517-5X	5-P-1517	25	5-P-1502	31	2-P-929	41
272*KAK	5-P-1517-6X	5-P-1517	25	5-P-1503	33	2-P-931	39
272*MAK	5-P-1517-7X	5-P-1517	25	5-P-1504	35	2-P-933	37
272*PAK	5-P-1517-8X	5-P-1517	25	5-P-1505	37	2-P-935	35
272*SAK	5-P-1517-9X	5-P-1517	25	5-P-1506	39	2-P-936	33
272*AKN	5-P-1556-1X	5-P-1556	27	5-P-1498	19	2-P-925	53
272*BKN	5-P-1556-2X	5-P-1556	27	5-P-1499	22	2-P-926	50
272*CKN	5-P-1556-3X	5-P-1556	27	5-P-1500	25	2-P-927	47
272*DKN	5-P-1556-4X	5-P-1556	27	5-P-1501	28	2-P-928	44
272*GKN	5-P-1556-5X	5-P-1556	27	5-P-1502	31	2-P-929	41
272*KKN	5-P-1556-6X	5-P-1556	27	5-P-1503	33	2-P-931	39
272*MKN	5-P-1556-7X	5-P-1556	27	5-P-1504	35	2-P-933	37
272*PKN	5-P-1556-8X	5-P-1556	27	5-P-1505	37	2-P-935	35
272*SKN	5-P-1556-9X	5-P-1556	27	5-P-1506	39	2-P-936	33

NOTE: Input Gear Assembly includes Input Gear, Ratio Gear and 379522 pre-assembled.

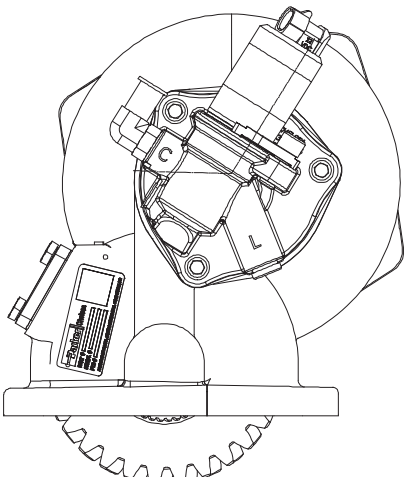
Pressure Lube



P = Pressure Lube

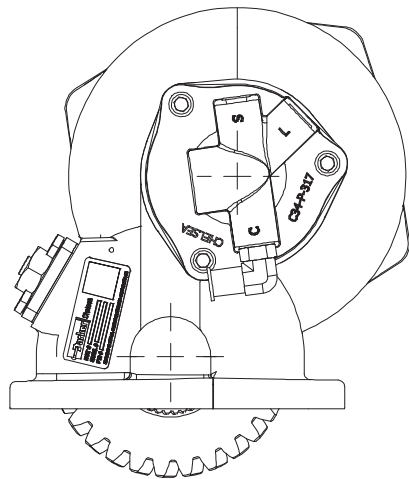


R = Valve Cap Rotated 120°

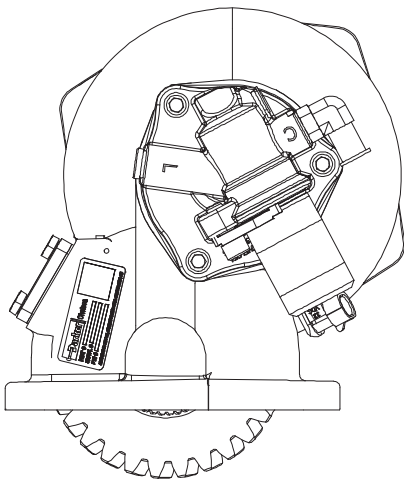


S = Valve Cap Rotated 240°

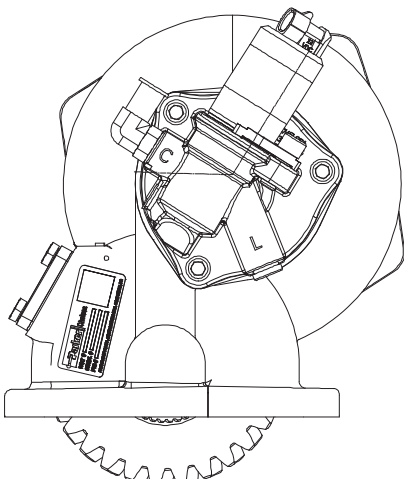
Wet Spline



W = Wet Spline

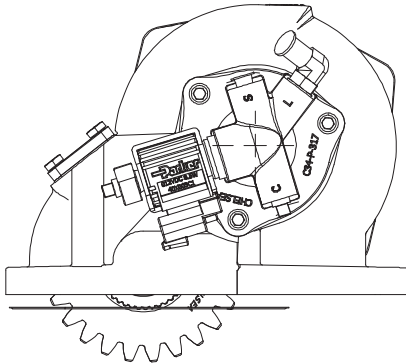


V = Valve Cap Rotated 120°
w/ Wet Spline

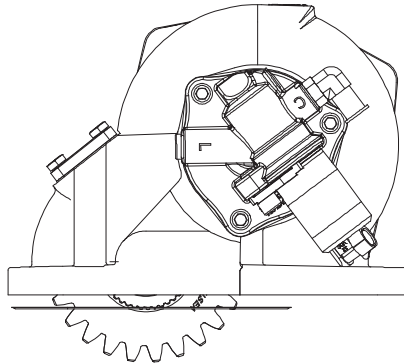


Y = Valve Cap Rotated 240°
w/ Wet Spline

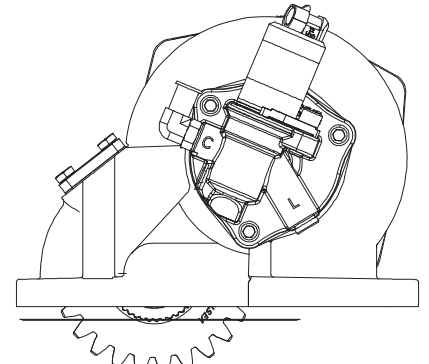
Pressure Lube – Low Profile



P = Pressure Lube

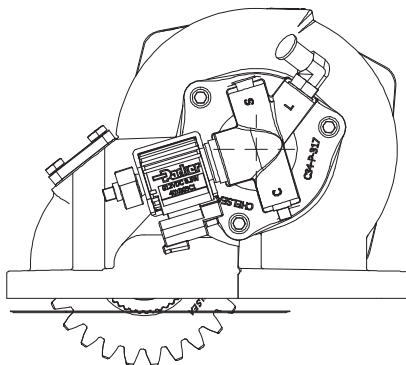


R = Valve Cap Rotated 120°

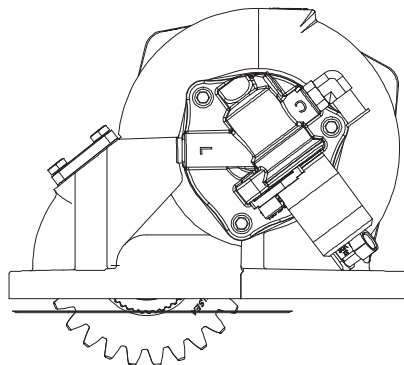


S = Valve Cap Rotated 240°

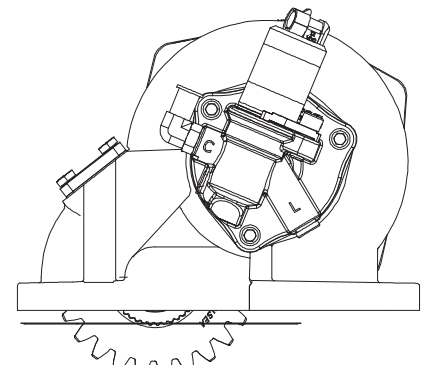
Wet Spline



W = Wet Spline



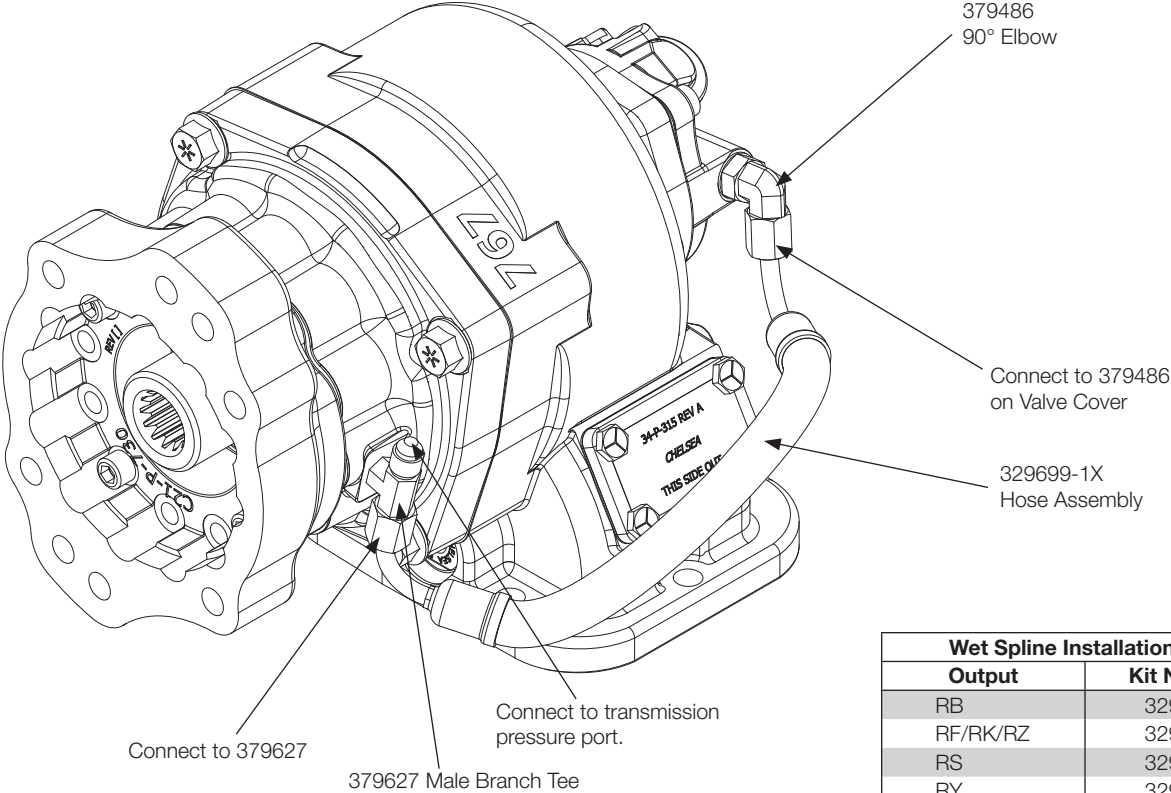
V = Valve Cap Rotated 120°
w/ Wet Spline



Y = Valve Cap Rotated 240°
w/ Wet Spline

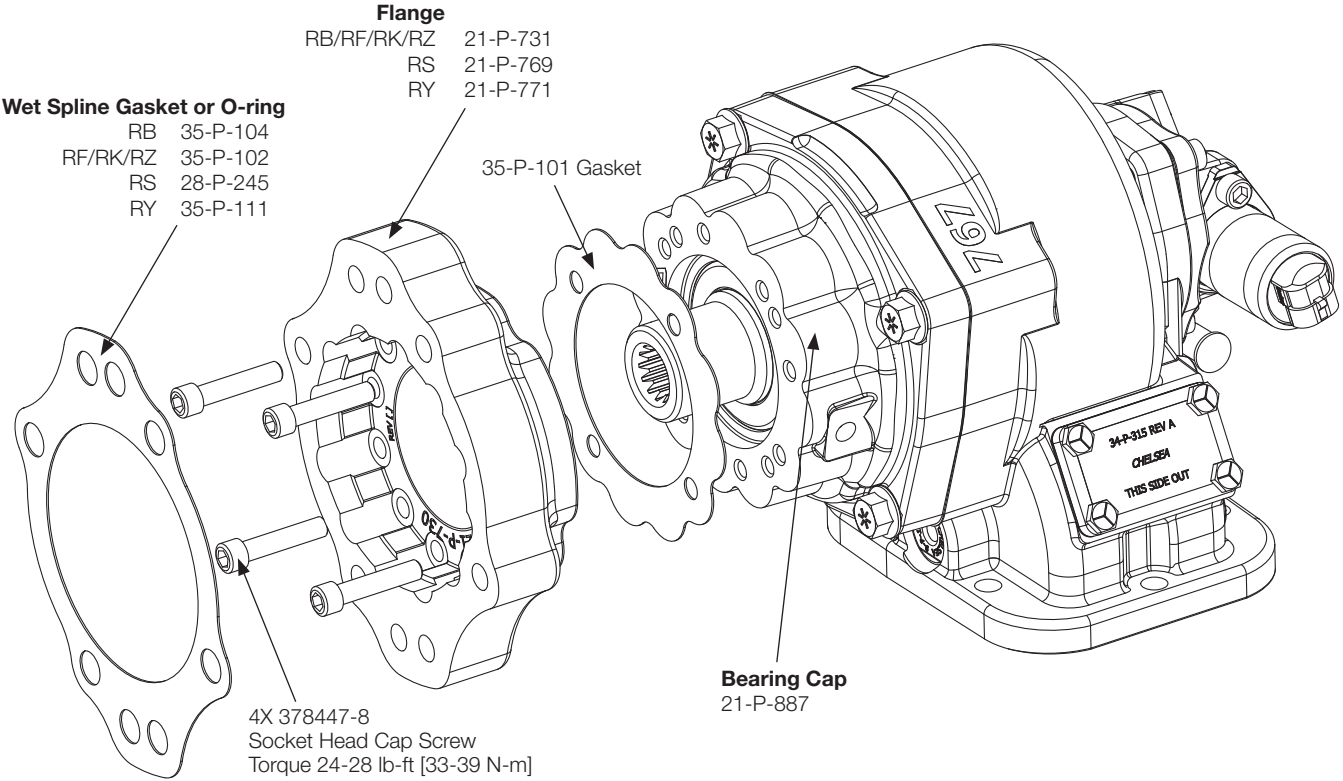
Wet Spline Installation
RB, RF, RK, RS, RY & RZ

(SK-508 Rev B)

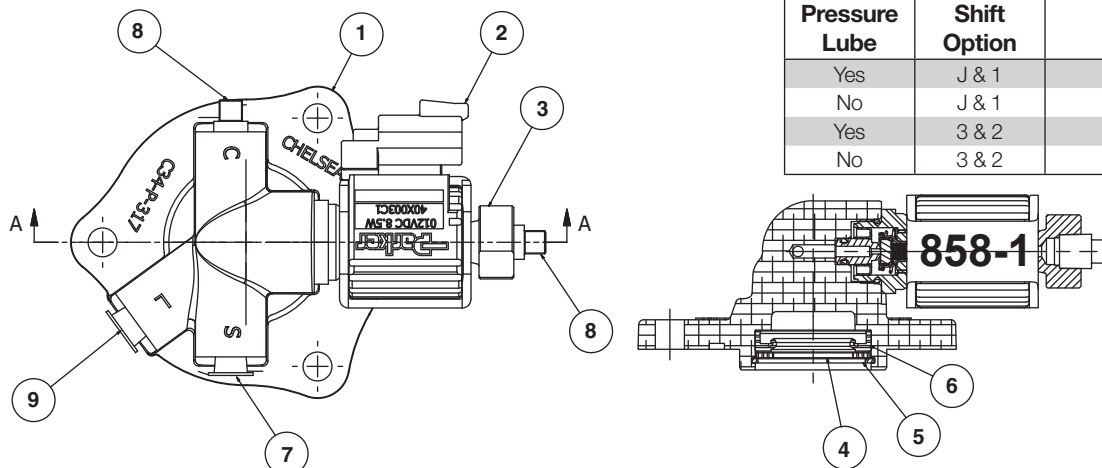


Wet Spline Installation Kits	
Output	Kit Number
RB	329959X
RF/RK/RZ	329700X
RS	329744X
RY	329742X

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

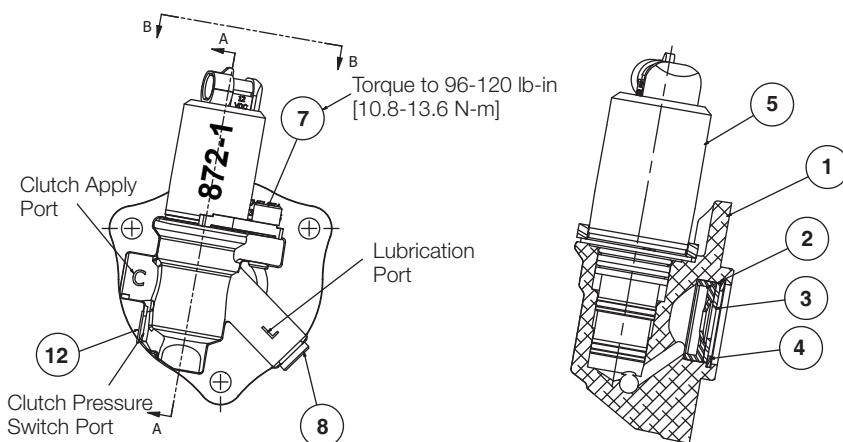


Valve Cap Assembly (Air) – 329858-♦X



Item	Part Number	Description	Qty.
1	34-P-318-1	Air Integral Cap w/o Lube (329858-2X & 329858-4X)	1 or
	34-P-318	Air Integral Cap w/ Lube (329858-1X & 329858-3X)	1
2	75-P-35-12	Air Valve Coil 12VDC (329858-1X & 329858-2X)	1 or
	75-P-35-24	Air Valve Coil 24VDC (329858-3X & 329858-4X)	1
3	380574	Pneumatic Plunger Valve Assembly	1
4	378811	Seal Plate Back-Up	1
5	378849	Lockring	1
6	28-P-179	Oil Seal (1.379" x .875" x .249")	1
7	500897-5	Shipping Plug	1
8	379755	Square Head Threaded Polyethylene Plug	2
9	500897-7	Shipping Plug (329858-1X & 329858-3X)	1

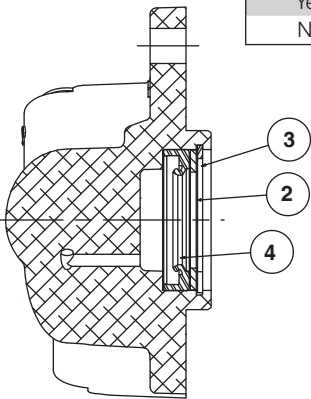
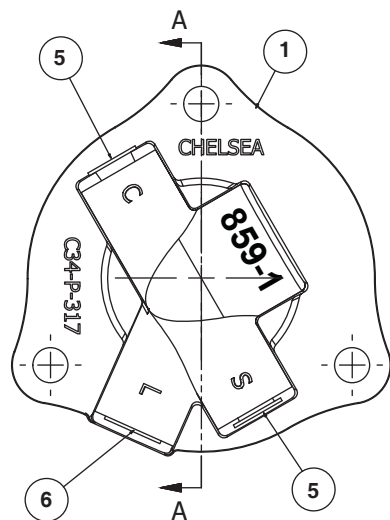
Valve Cap Assembly (Hydraulic) – 329872-♦X



Item	Part Number	Description	Qty.
1	34-P-327	High Pressure w/ Lube Valve Cap Solenoid Port (329872-1X & 329872-3X)	1 or
	34-P-326	High Pressure w/o Lube Valve Cap Solenoid Port (329872-2X♦ & 329872-4X♦)	1
2	28-P-119	Oil Seal (1.379" x .875" x .250")	1
3	378811	Seal Back-Up Plate	1
4	378849	Lockring	1
5	380123-12	Non-Regulating Cartridge Valve 12VDC (329872-1X & 329872-2X♦)	1 or
	380123-24	Non-Regulating Cartridge Valve 24VDC (329872-3X & 329872-4X♦)	1
6	500897-5	Shipping Plug	1
7	378447-4	Socket Head Cap Screw (.312"-18 x .750")	1
8	379484	O-ring Boss Plug (.438"-20)	1

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

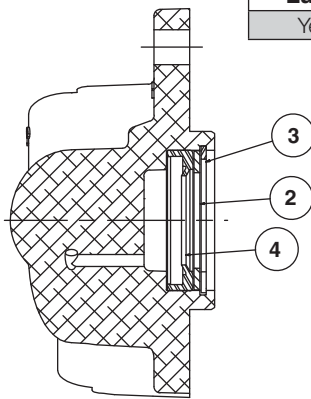
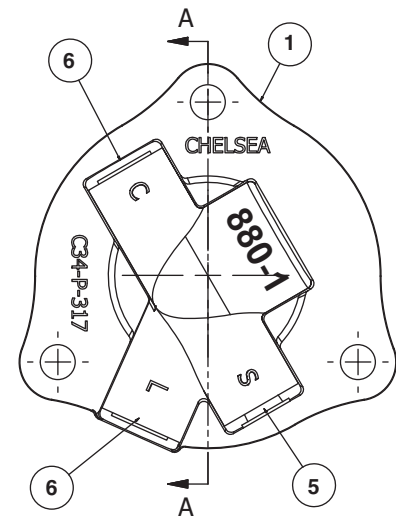
Remote Valve Cap Assembly (Air) – 329859X-✱X



Pressure Lube	Shift Option	Assembly
Yes	A, P, Q, R, V, & 4	329859-1X
No	A, P, Q, R, V, & 4	329859-2X

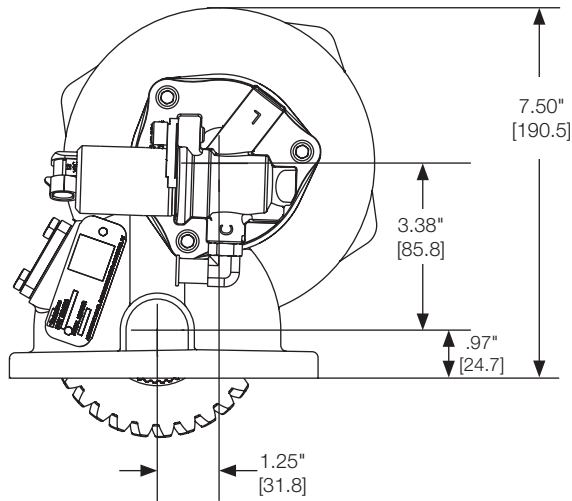
Item	Part Number	Description	Qty.
1	34-P-318-2	Remote Air Cap w/ Lube (329859-1X)	1 or
	34-P-318-3	Remote Air Cap w/o Lube (329859-2X)	1
2	378811	Back-Up Seal Plate	1
3	378849	Lockring	1
4	28-P-179	Oil Seal (1.379" x .875" x .249")	1
5	500897-5	Shipping Plug	2
6	500897-7	Shipping Plug	1

Remote Valve Cap Assembly (Hydraulic) – 329880X-✱X

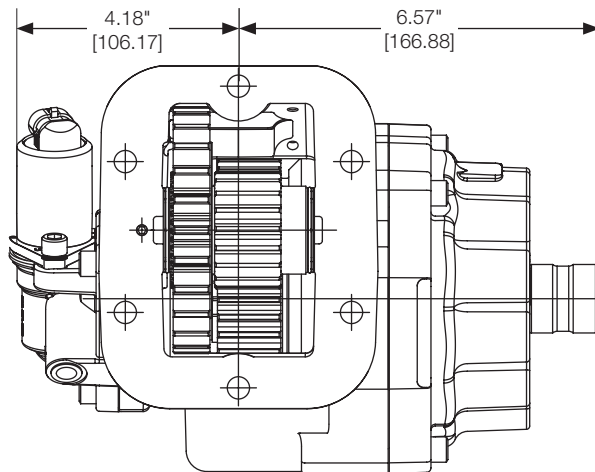
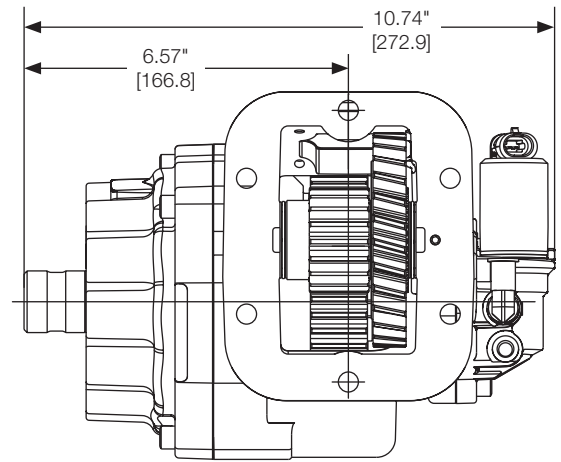


Pressure Lube	Shift Option	Assembly
Yes	G & H	329880-1X

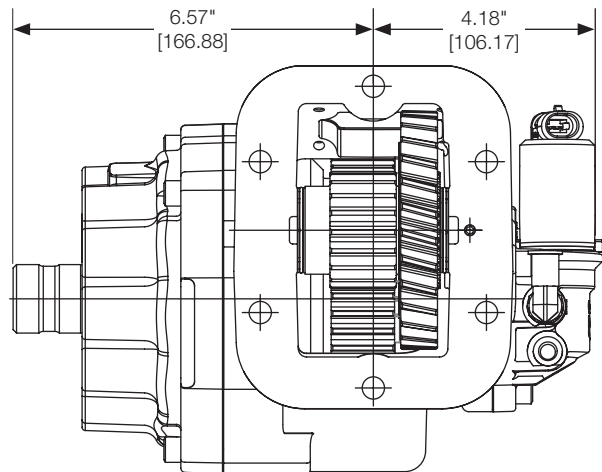
Item	Part Number	Description	Qty.
1	34-P-320	Hydraulic Remote Cap w/ Lube (329880-1X)	1
2	378811	Back-Up Seal Plate	1
3	378849	Lockring	1
4	28-P-119	Oil Seal (1.379" x .875" x .250")	1
5	500897-5	Shipping Plug	1
6	500897-7	Shipping Plug	2

Housing Dimensions**272 Series Standard Housing**

in. [mm]

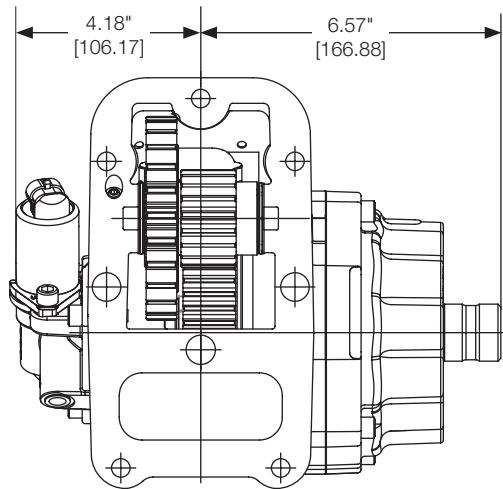
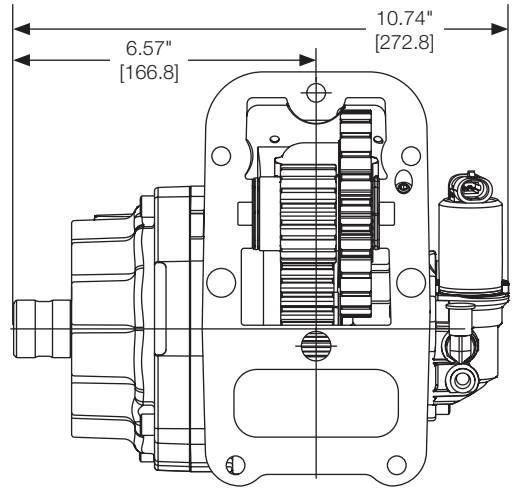
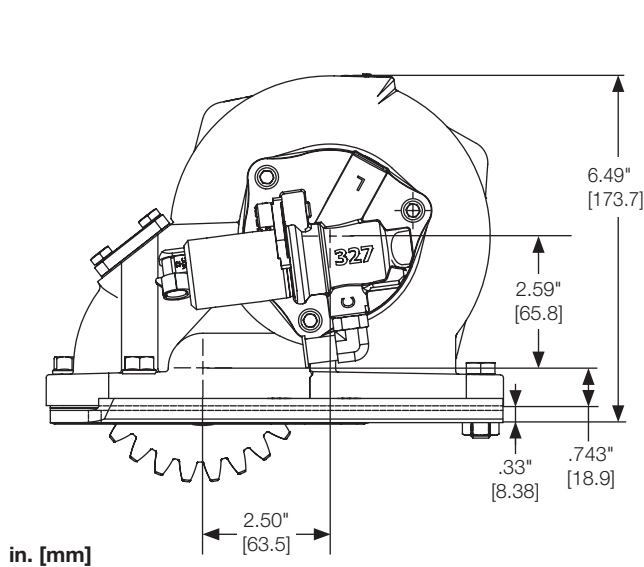
**3 Arrangement**

in. [mm]

**5 Arrangement**

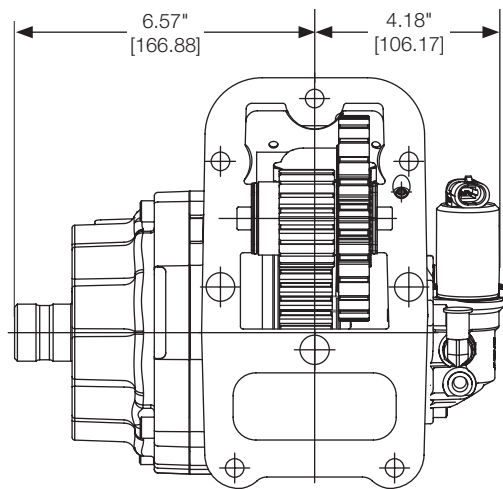
Housing Dimensions

272M Series Low Profile



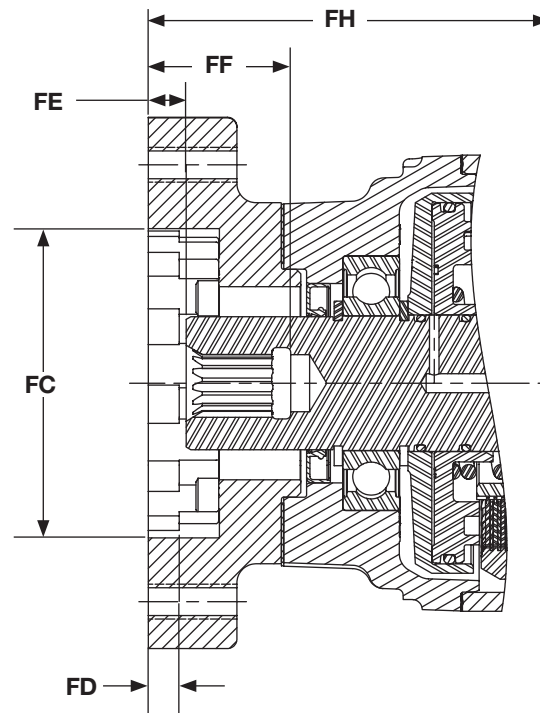
3 Arrangement

in. [mm]



5 Arrangement

Pump Flange & Shaft Dimensions



Pump Flange Suffix	Bolt Circle Dia.	Bolt Holes		FC	FD	FE	FF	FH	Output Shaft	
		Tapped Hole	No. Equally Spaced	Female Pilot Dia.	Pilot Depth	Face to End of Shaft	Face thru Hole	Face to Center of PTO	Nominal Shaft Size M = Male F = Female	Key-way Width
AB	3.996"	.404" ▶	8	2.952"	.093"	—	—	7.486"	M	—
AC	3.307"	.323" ▶	6	2.243"	.080"	—	—	7.455"	M	—
BD	—	—	—	—	—	—	—	8.830"	M	1-1/4"
BV	3.750"	.440" ▶	4	2.751"	.083"	—	—	8.734"	M	—
RB ●	5.000"	1/2"-13 UNC-2B	4	—	.406"	.497"	1.872"	6.861"	7/8" - 13T Spline - F	—
RE ●	4.188"	5/16"-18 UNC-2B	16	3.251"	.344"	.400"	1.502"	5.640"	5/8" - 9T Spline - F	—
RF ●	5.750"	1/2"-13 UNC-2B	2	4.000"	.406"	.592"	2.060"	6.861"	1" - 15T Spline - F	—
	5.000"	1/2"-13 UNC-2B	2 ■	4.000"	.406"	.592"	2.060"	6.861"	1" - 15T Spline - F	—
RK ●	5.750"	1/2"-13 UNC-2B	2	—	.406"	.497"	1.872"	6.861"	7/8" - 13T Spline - F	—
	5.000"	1/2"-13 UNC-2B	2 ■	—	.406"	.497"	1.872"	6.861"	7/8" - 13T Spline - F	—
RS ●	7.125"	5/8"-11 UNC-2B	2	5.003"	.531"	.730"	2.700"	6.861"	1-1/4" - 14T Spline - F	—
	6.375"	1/2"-13 UNC-2B	4	5.003"	.531"	.730"	2.700"	6.861"	1-1/4" - 14T Spline - F	—
RY ●	4.454"	M12-1.75	4	3.152"	.530"	.581"	2.281"	6.456"	DIN 5462-F	—
RZ ●	5.750"	1/2"-13 UNC-2B	2	4.000"	.406"	.730"	2.700"	6.861"	1-1/4" - 14T Spline - F	—
	5.000"	1/2"-13 UNC-2B	2 ■	4.000"	.406"	.730"	2.700"	6.861"	1-1/4" - 14T Spline - F	—
SD	—	—	—	—	—	—	—	6.570"	M	1-1/4"
SV	3.750"	.440" ▶	4	2.751"	.083"	—	—	7.486"	1-1/2" - 10T Spline - M	—
XR	3.712"	—	—	—	—	—	—	6.364"	F	—
XV	3.750"	.440" ▶	4	2.751"	.083"	—	—	7.486"	1-1/2" - 10T Spline - M	—

● Rotatable Flange Rotates in 30° Increments

■ Two Set of Holes Spaced 14° Apart

▶ Not Tapped

Output Conversion Kits

Output Option	Flange Type	Shaft Type	Conversion Kit	
AB	DIN 120	DIN 120 Series Companion Flange	XD to AB	329160-112X
AC	DIN 100	DIN 100 Series Companion Flange	XD to AC	329160-113X
BD	N/A	Rd Standard Shaft (1-1/4" - 5/16" Key) w/ Drag Brake	XD to BD (AIR) XD to BD (HYD)	329160-103X 329160-152X
BV	N/A	1410 Series Companion Flange w/ Drag Brake	XD to BV (AIR) XD to BV (HYD)	329160-102X 329160-151X
RB	SAE B 4-Bolt Flange	SAE B Shaft (7/8" - 13T)	XD to RB (DRY) XD to RB (WET)	329160-145X 329160-146X
RE	SAE A 2-Bolt Flange	SAE A Shaft (5/8" - 9T)	XD to RE (DRY)	329160-118X
RF	SAE B 2 or 4-Bolt Flange	SAE BB Shaft (1" - 15T)	XD to RF (DRY) XD to RF (WET)	329160-104X 329160-105X
RK	SAE B 2 or 4-Bolt Flange	SAE B Shaft (7/8" - 13T)	XD to RK (DRY) XD to RK (WET)	329160-100X 329160-101X
RS	SAE C 2 or 4-Bolt Flange	SAE C Shaft (1-1/4" - 14T)	XD to RS (DRY) XD to RS (WET)	329160-106X 329160-107X
RY	ISO 7653 (80 x 80 mm)	DIN 5462 Shaft (B8x32x36)	XD to RY (DRY) XD to RY (WET)	329160-108X 329160-109X
RZ	SAE B 2 or 4-Bolt Flange	SAE C Shaft (1-1/4" - 14T)	XD to RZ (DRY) XD to RZ (WET)	329160-110X 329160-111X
SD	N/A	SmartStart – Rd Standard Shaft (1-1/4" - 5/16" Key)	XD to SD	329160-142X
SV	N/A	SmartStart – 1410 Series Companion Flange	XD to SV	329160-144X
XV	N/A	1410 Series Companion Flange	XD to XV	329160-116X
XR	Chelsea Special (Cloverleaf)	SAE B Shaft (7/8" - 13T)	XD to XR	329160-143X
✦ UN	UNI 8953	3-Bolt Pump Flange	XD to UN (DRY) XD to UN (WET)	329160-114X 329160-115X

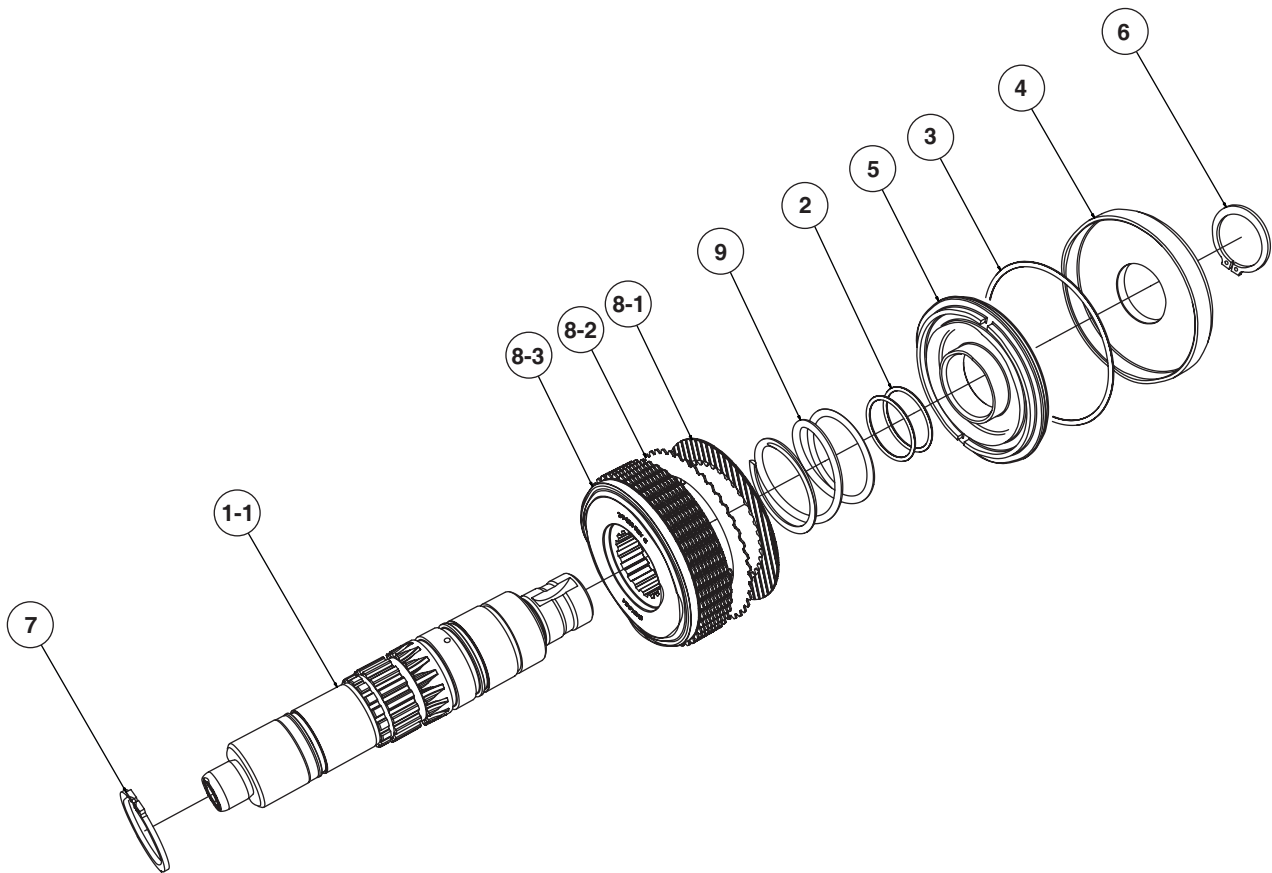
N/A = Not Applicable

NOTE: Check Current Price Sheet for Availability of Output Options

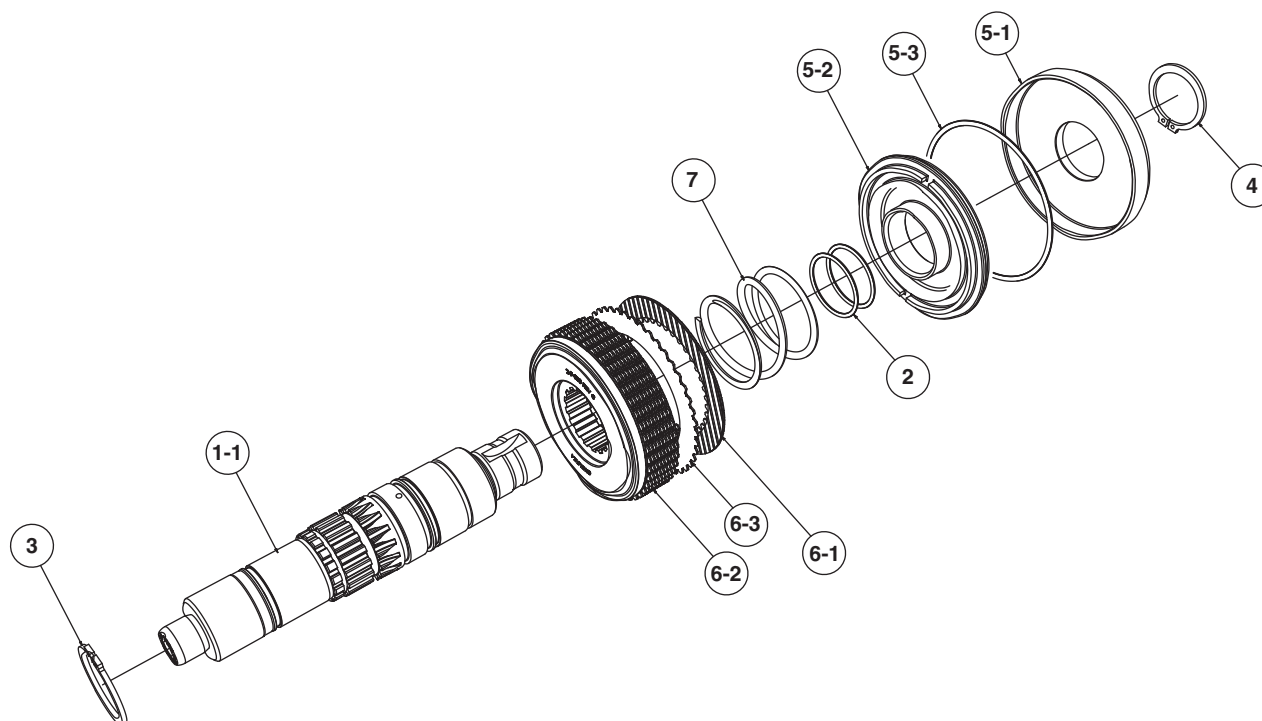
SAE Chart

SAE Standard	A	B	BB	C	D
Flange Pilot	3.250"	4.000"	4.000"	5.000"	6.000"
Shaft	.625"	.875"	1.000"	1.250"	1.750"
Spline Count	9T	13T	15T	14T	13T

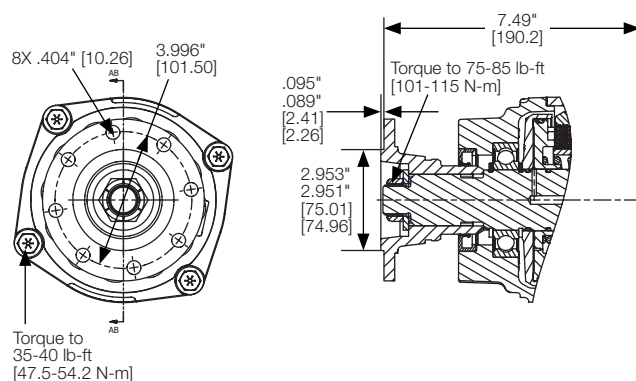
✦ No longer a current option per Chelsea Suggested List Price.

Drive Shaft & Clutch Assembly – (Hyd) 329828-*X & (Air) 329832-*X

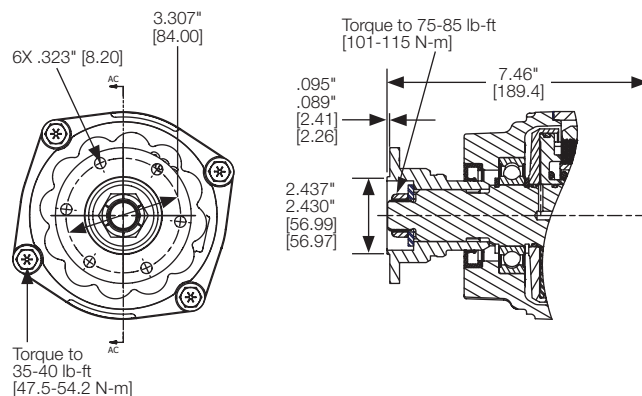
Item	Part Number	Description	Qty.
1-1	3-P-1133	XD Output Shaft (329828-1X & 329832-1X)	1 or
	3-P-1134	XV, AB, & AC Output Shaft 10T Straight (329828-2X & 329832-2X).....	1 or
	3-P-1135	RK & XR Output Shaft (7/8" - 13T) (329828-3X & 329832-3X)	1 or
	3-P-1136	RF Output Shaft (1" - 15T) (329828-4X & 329832-4X)	1 or
	3-P-1137	RS, RZ Output Shaft (1-1/4" - 14T) (329828-5X & 329832-5X)	1 or
	3-P-1138	RY Output Shaft (DIN 8T) (329828-6X & 329832-6X).....	1 or
	3-P-1143	DIN 6T (329828-7X & 329832-7X).....	1 or
	3-P-1168	SD SmartStart, Output Shaft (329828-8X & 329832-9X)	1 or
	3-P-1169	SV SmartStart, 10T Straight Output Shaft (329828-9X & 329832-10X).....	1 or
	3-P-1170	RE Output Shaft (5/8" - 9T) (329828-10X & 329832-8X).....	1
2	28-P-285	O-ring (1.597" x .103").....	2
3	28-P-178	O-ring (4.359" x .138").....	1
4	380051	Clutch Back-Up Cylinder	1
5	380110-1	Clutch Piston (Hydraulic Shift).....	1
	380110-2	Clutch Piston (Air Shift)	1
6	379555	Lockring	1
7	380069	Lockring	1
8	329678X	Gear & Clutch Plates Kit	1
8-1	379485	Friction Disc	11
8-3	2-P-858	Inner Hub Gear.....	1
8-2	380065	Clutch Plate.....	10
9	37-P-72	Spring (2.140" x 1.941")	1

**Drive Shaft & Clutch Assembly – (Hyd) 329829-*X & (Air) 329833-*X
w/ Drag Brake**

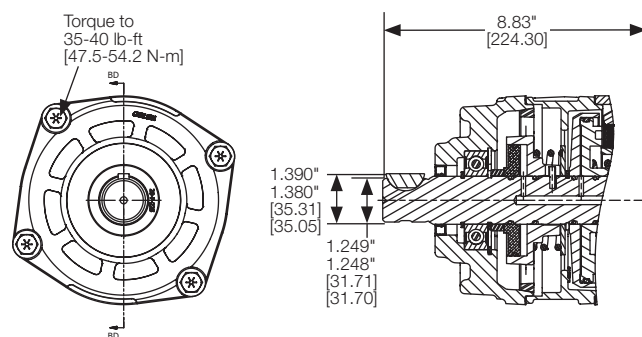
Item	Part Number	Description	Qty.
1-1	3-P-1139	BV Output Shaft (329829X & 329833X)	1 or
	3-P-1142	BD Output Shaft (329829-1X & 329833-1X)	1
2	28-P-244	O-ring (1.174" x .103").....	2
3	380069	Lockring	1
4	378576	Lockring	1
5	329179X	Piston & Back-Up Cylinder Assembly (Air Shift).....	1 or
	329179-1X	Piston & Back-Up Cylinder Assembly (Hydraulic Shift)	1
5-1	379323	Back-Up Clutch Cylinder (Air Shift)	1 or
	379323-1	Back-Up Clutch Cylinder (Hydraulic Shift)	1
5-2	380057	Clutch Piston (Air Shift)	1 or
	380057-1	Clutch Piston (Hydraulic Shift).....	1
5-3	28-P-178	O-ring (4.359" x .138").....	1
6	329678X	Gear & Clutch Plates Kit	1
6-1	379485	Friction Disc	11
6-2	2-P-858	Inner Hub Gear.....	1
6-3	380065	Clutch Plate.....	10
7	37-P-39	Spring (2.552" x 1.985")	1

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

AB Output Option DIN 120 Flange		
Part Number	Description	Qty.
329828-2X	Shaft & Clutch Assembly (3-P-1134 Shaft) (HYD).....	1 or
329832-2X	Shaft & Clutch Assembly (3-P-1134 Shaft) (AIR)	1
28-P-211	Oil Seal (3.001" x 2.000" x .375").....	1
21-P-886	Bearing Cap	1
380563-14	9/16" Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
380486	1-1/4" Thin Nylon Lock Nut (.875"-14)	1
380076-13	Hardened Flat Washer (.950" x 1.762" x .157")	1
379558	DIN 120.....	1
†329160-112X	Conversion Kit (XD to AB)	



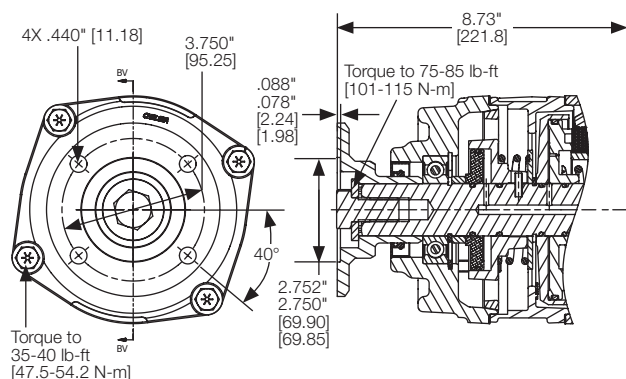
AC Output Option DIN 100 Flange		
Part Number	Description	Qty.
329828-2X	Shaft & Clutch Assembly (3-P-1134 Shaft) (HYD).....	1 or
329832-2X	Shaft & Clutch Assembly (3-P-1134 Shaft) (AIR)	1
28-P-211	Oil Seal (3.001" x 2.000" x .375").....	1
21-P-886	Bearing Cap	1
380563-14	9/16" Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
380486	1-1/4" Thin Nylon Lock Nut (.875"-14)	1
380076-13	Hardened Flat Washer (.950" x 1.762" x .157")	1
379742	DIN 100.....	1
†329160-113X	Conversion Kit (XD to AC)	



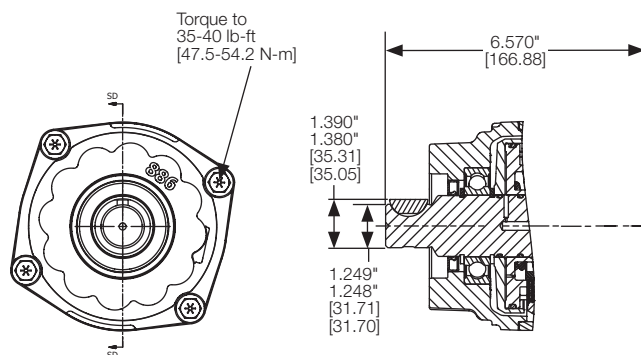
BD Output Option Rd Standard Shaft (1-1/4" - 5/16" Key) with Drag Brake		
Part Number	Description	Qty.
329829-1X	Shaft & Clutch Assembly (3-P-1142 Shaft) (HYD).....	1 or
329833-1X	Shaft & Clutch Assembly (3-P-1142 Shaft) (AIR)	1
22-P-151	Gasket.....	1
550010	Ball Bearing (1.378" x 2.834" x .669").....	1
28-P-225	Oil Seal (2.004" x 1.375" x .315").....	1
21-P-888	Drag Brake Bearing Cap.....	1
380563-28	9/16" Hex Flange Head Cap Screw (.375"-16 x 3.500")	4
378895	Lockring	1
500007-29	Woodruff Key.....	1
378576	Lockring	2
28-P-244	O-ring (1.174" x .103").....	2
23-P-73	Drag Brake Bearing Cap Spacer.....	1
31-P-113	Thrust Washer (1.385" x 3.125" x .125").....	1
329410X	Brake Assembly	1
379977	Spring Pin.....	1
4-P-186	Spacer (1.385" x 1.750" x .365")	1
37-P-24	Spring (2.531" x 2.130" x .207") (AIR)	1 or
37-P-60	Spring (2.531" x 2.130" x .172") (HYD)	1
†329160-103X	Conversion Kit (XD to BD) (AIR)	
†329160-152X	Conversion Kit (XD to BD) (HYD)	

†Conversion Kits do not include all parts shown above. See pages 81-84 for Conversion Kit BOMs.

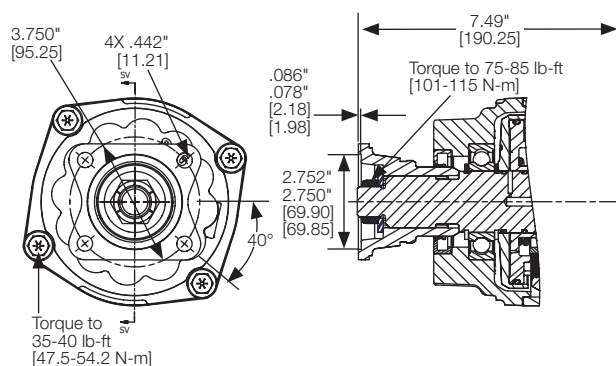
Bill of Materials - Driveline Output (Continued)



BV Output Option 1410 Companion Flange with Drag Brake		
Part Number	Description	Qty.
329829X	Shaft & Clutch Assembly (3-P-1139 Shaft) (HYD).....	1 or
329833X	Shaft & Clutch Assembly (3-P-1139 Shaft) (AIR)	1
22-P-151	Gasket.....	1
550010	Ball Bearing (1.378" x 2.834" x .669").....	1
28-P-212	Oil Seal (2.506" x 1.750" x .315").....	1
21-P-884	Bearing Cap	1
378435-7	3/8" Hex Head Cap Screw (.625"-11 x 1.250").....	1
380563-28	9/16" Hex Flange Head Cap Screw (.375"-16 x 3.500")	4
378895	Lockring	1
378576	Lockring	1
28-P-244	O-ring (1.174" x .103").....	2
23-P-73	Drag Brake Bearing Cap Spacer	1
31-P-113	Thrust Washer (1.385" x 3.125" x .125").....	1
329410X	Brake Assembly	1
379977	Spring Pin.....	1
4-P-186	Spacer (1.385" x 1.750" x .365")	1
37-P-60	Spring (2.531" x 2.130" x .172") (HYD)	1 or
37-P-24	Spring (2.531" x 2.130" x .207") (AIR)	1
4-P-130	Spacer (.640" x 1.620" x .188")	1
380081	1410 Series Companion Flange.....	1
†329160-102X	Conversion Kit (XD to BV) (AIR)	
†329160-151X	Conversion Kit (XD to BV) (HYD)	



SD Output Option Rd Standard Shaft (1-1/4" - 5/16" Key) - SmartStart		
Part Number	Description	Qty.
329828-8X	Shaft & Clutch Assembly XD SmartStart (3-P-1168)	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
21-P-886	Bearing Cap	1
380563-14	9/16" Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
500007-29	Woodruff Key.....	1
†329160-142X	Conversion Kit (XD to SD)	

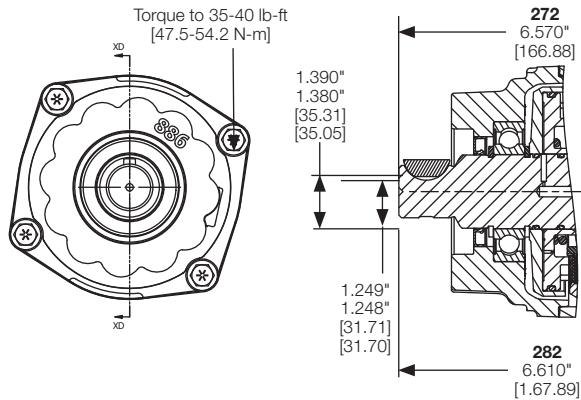


SV Output Option 1410 Series Companion Flange - SmartStart*		
Part Number	Description	Qty.
329828-9X	Shaft & Clutch Assembly SV SmartStart (3-P-1169)	1
21-P-886	Bearing Cap	1
28-P-211	Oil Seal (3.001" x 2.000" x .375").....	1
380563-14	9/16" Hex Flange Head Cap Screw (.875"-16 x 1.500")	4
380486	1-1/4" Thin Nylon Lock Nut (.875"-14).....	1
380076-13	Hardened Flat Washer (.950" x 1.762" x .157").....	1
380503	1410 Series Companion Flange.....	1
†329160-144X	Conversion Kit (XD to SV)	

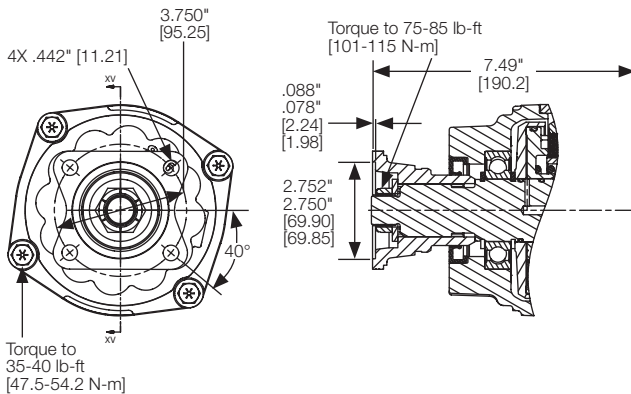
* 1-1/2" - 10T Spline Shaft

†Conversion Kits do not include all parts shown above. See pages 81-84 for Conversion Kit BOMs.

Bill of Materials - Driveline Output (Continued)



XD Output Option Chelsea Special (Cloverleaf), SAE B Shaft (7/8" - 13T)		
Part Number	Description	Qty.
329828-3X	Shaft & Clutch Assembly (3-P-1135 Shaft) (HYD).....	1 or
329832-3X	Shaft & Clutch Assembly (3-P-1135 Shaft) (AIR)	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
21-P-885	Bearing Cap (DRY)	1
380563-14	9/16" Hex Flange Head Cap Screw (.312"-16 x 1.500")	4
4-P-209	Spacer (Included in Kit).....	1
329906X	Pump Mounting Kit.....	1
†329160-143X	Conversion Kit (XD to XR)	



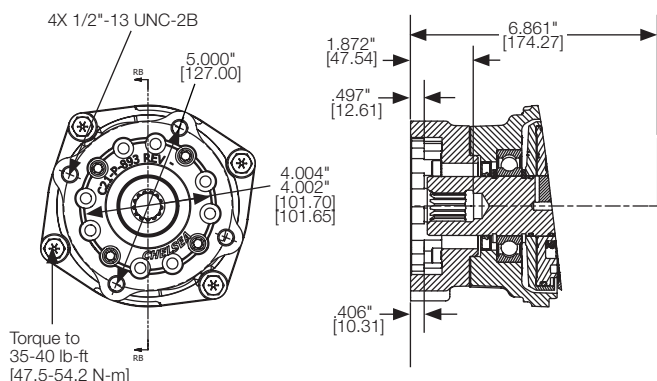
XV Output Option 1410 Series Companion Flange*		
Part Number	Description	Qty.
329828-2X	Shaft & Clutch Assembly (3-P-1134 Shaft) (HYD).....	1 or
329832-2X	Shaft & Clutch Assembly (3-P-1134 Shaft) (AIR)	1
28-P-211	Oil Seal (3.001" x 2.000" x .375").....	1
21-P-886	Bearing Cap	1
380563-14	9/16" Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
380486	1-1/4" Thin Nylon Lock Nut (.875"-14)	1
380076-13	Hardened Flat Washer (.950" x 1.762" x .157").....	1
380503	1410 Series Companion Flange.....	1
†329160-116X	Conversion Kit (XD to XV)	

* 1-1/2" - 10T Spline Shaft

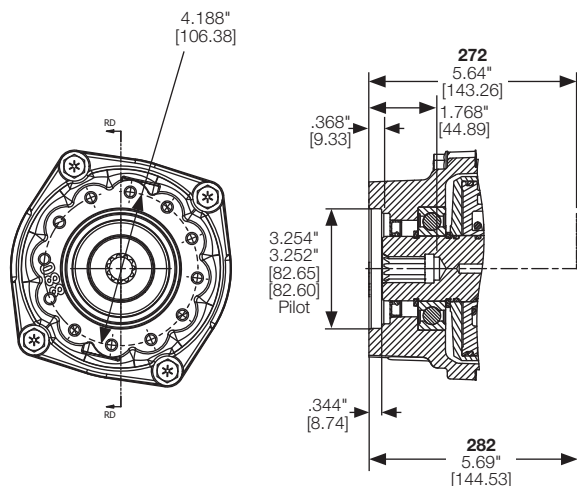
†Conversion Kits do not include all parts shown above. See pages 81-84 for Conversion Kit BOMs.

Output Options

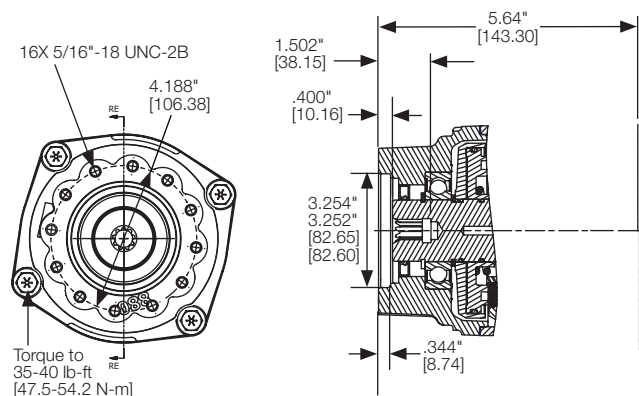
Parts List

272/282 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.
329828-3X	Shaft & Clutch Assembly (3-P-1135 Shaft) (HYD).....	1 or
329832-3X	Shaft & Clutch Assembly (3-P-1135 Shaft) (AIR)	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
21-P-885	Bearing Cap (DRY)	1 or
21-P-887	Bearing Cap (WET)	1
380563-14	9/16" Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
328170-216X	Cap Screw Kit	1
378447-8	1/4" Socket Head Cap Screw (.312"-18 x 1.500") ...	4
21-P-894	Pump Flange	1
35-P-101	Wet Spline Bearing Cap Gasket	1
WET SPLINE LOOSE PARTS		
329699-1X	Hose Assembly	1
329959X	Wet Spline Parts Kit.....	1
329658X	Cover Kit	1
†329160-145X	Conversion Kit (XD to RB DRY)	
†329160-146X	Conversion Kit (XD to RB WET)	



RD Output Option Rotatable SAE A (3.250") Pilot, Non Standard Shaft (3/4" - 11T)		
Part Number	Description	Qty.
329828-11X	Drive Assembly Shaft & Clutch (3-P-1235 Shaft).....	1 or
329832-11X	Drive Assembly Shaft & Clutch (3-P-1235 Shaft).....	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
21-P-880	Bearing Cap	1
380563-14	Hex Head Cap Screw (3/8"-16 x 1.500") Grade 8....	4



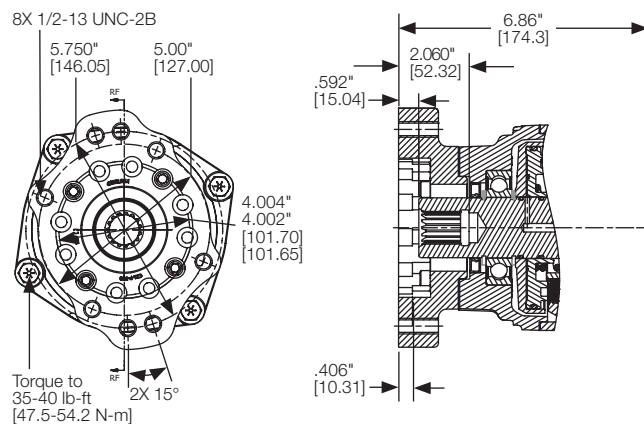
RE Output Option Rotatable SAE A 2-Bolt Flange, SAE A Shaft (5/8" - 9T)		
Part Number	Description	Qty.
329828-10X	Shaft & Clutch Assembly (3-P-1170 Shaft) (HYD).....	1 or
329832-8X	Shaft & Clutch Assembly (3-P-1170 Shaft) (AIR)	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
21-P-880	Bearing Cap (DRY)	1
380563-14	9/16" Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
†329160-118X	Conversion Kit (XD to RE DRY)	

†Conversion Kits do not include all parts shown above. See pages 81-84 for Conversion Kit BOMs.

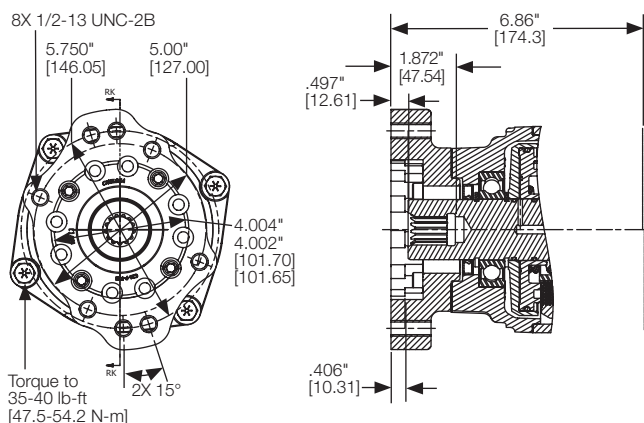
Output Options

Parts List
272 Series

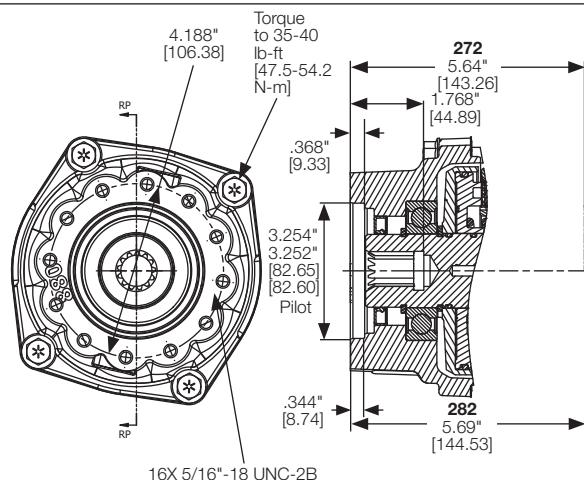
Bill of Materials - Pump Mount (Continued)



RF Output Option Rotatable SAE B 2 or 4-Bolt Flange, SAE BB Shaft (1" - 15T)		
Part Number	Description	Qty.
329828-4X	Shaft & Clutch Assembly (3-P-1136 Shaft) (HYD).....	1 or
329832-4X	Shaft & Clutch Assembly (3-P-1136 Shaft) (AIR)	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
21-P-885	Bearing Cap (DRY)	1 or
21-P-887	Bearing Cap (WET)	1
380563-14	9/16" Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
328170-216X	Cap Screw Kit	1
378447-8	1/4" Socket Head Cap Screw (.312"-18 x 1.500") ...	4
21-P-731	Pump Flange	1
35-P-101	Wet Spline Bearing Cap Gasket	1
WET SPLINE LOOSE PARTS		
329699-1X	Hose Assembly	1
329700X	Wet Spline Parts Kit.....	1
329658X	Cover Kit	1
†329160-104X	Conversion Kit (XD to RF DRY)	
†329160-105X	Conversion Kit (XD to RF WET)	



RK Output Option Rotatable SAE B 2 or 4-Bolt Flange, SAE B Shaft (7/8" - 13T)		
Part Number	Description	Qty.
329828-3X	Shaft & Clutch Assembly (3-P-1135 Shaft) (HYD).....	1 or
329832-3X	Shaft & Clutch Assembly (3-P-1135 Shaft) (AIR)	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
21-P-885	Bearing Cap (DRY)	1 or
21-P-887	Bearing Cap (WET)	1
380563-14	9/16" Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
328170-216X	Cap Screw Kit	1
378447-8	1/4" Socket Head Cap Screw (.312"-18 x 1.500") ...	4
21-P-731	Pump Flange	1
35-P-101	Wet Spline Bearing Cap Gasket	1
WET SPLINE LOOSE PARTS		
329699-1X	Hose Assembly	1
329700X	Wet Spline Parts Kit.....	1
329658X	Cover Kit	1
†329160-100X	Conversion Kit (XD to RK DRY)	
†329160-101X	Conversion Kit (XD to RK WET)	

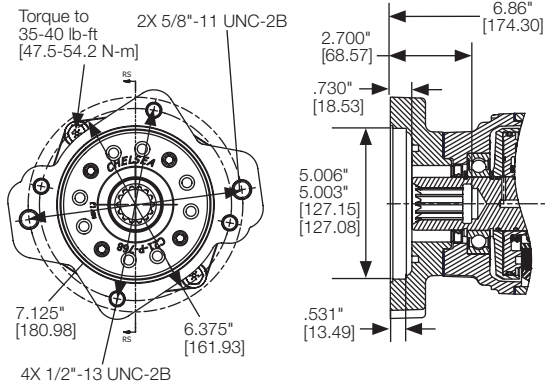


RP Output Option Rotatable SAE A 4-Bolt Flange, SAE B Shaft (7/8" - 13T)		
Part Number	Description	Qty.
329828-12X	Drive Assembly Shaft & Clutch (3-P-1236 Shaft).....	1 or
329832-12X	Drive Assembly Shaft & Clutch (3-P-1236 Shaft).....	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
21-P-880	Bearing Cap	1
380563-14	Hex Head Cap Screw (3/8"-16 X 1.500") Grade 8 ...	4

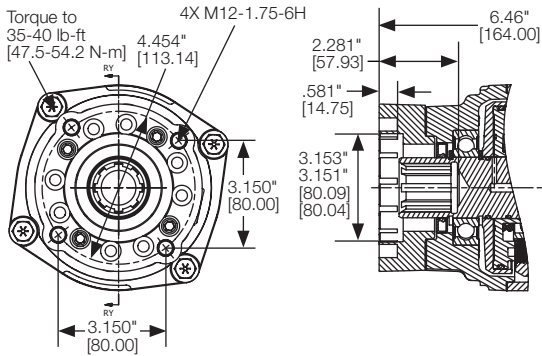
†Conversion Kits do not include all parts shown above. See pages 81-84 for Conversion Kit BOMs.

Output Options

Bill of Materials - Pump Mount (Continued)

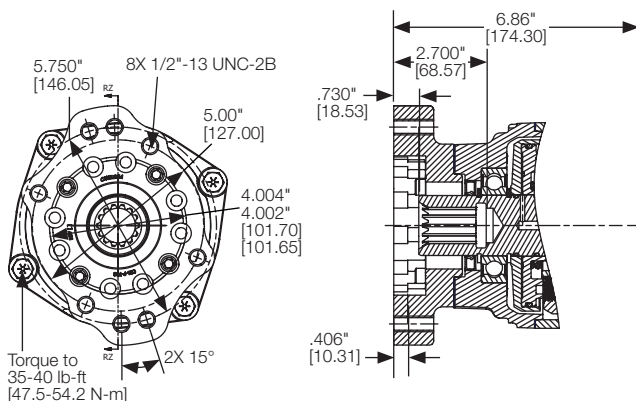


RS Output Option		
Rotatable SAE C 2 or 4-Bolt Flange, SAE C Shaft (1-1/4" - 14T)		
Part Number	Description	Qty.
329828-5X	Shaft & Clutch Assembly (3-P-1137 Shaft) (HYD).....	1 or
329832-5X	Shaft & Clutch Assembly (3-P-1137 Shaft) (AIR)	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
21-P-885	Bearing Cap (DRY)	1 or
21-P-887	Bearing Cap (WET)	1
380563-14	9/16" Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
328170-216X	Cap Screw Kit	1
378447-8	1/4" Socket Head Cap Screw (.312"-18 x 1.500") ...	4
21-P-769	Pump Flange	1
35-P-101	Wet Spline Bearing Cap Gasket	1
WET SPLINE LOOSE PARTS		
329699-1X	Hose Assembly	1
329744X	Wet Spline Loose Parts Kit	1
329654X	Cover Kit	1
†329160-106X	Conversion Kit (XD to RS DRY)	
†329160-107X	Conversion Kit (XD to RS WET)	

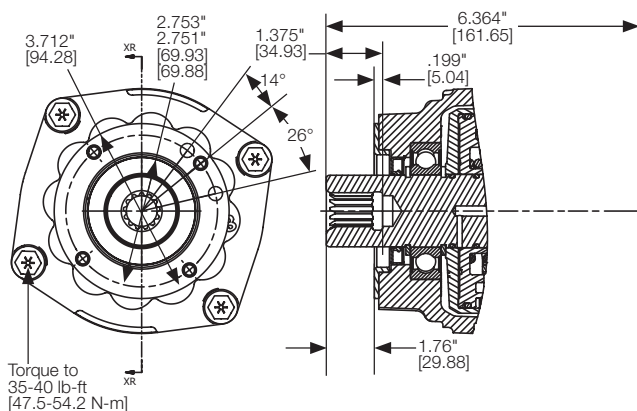


RY Output Option		
Rotatable ISO 7653 Pump Mount, DIN 5462 Shaft		
Part Number	Description	Qty.
329828-6X	Shaft & Clutch Assembly (3-P-1138 Shaft) (HYD).....	1 or
329832-6X	Shaft & Clutch Assembly (3-P-1138 Shaft) (AIR)	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
21-P-885	Bearing Cap (DRY)	1 or
21-P-887	Bearing Cap (WET)	1
380563-14	9/16" Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
328170-216X	Cap Screw Kit	1
378447-8	1/4" Socket Head Cap Screw (.312"-18 x 1.500") ...	4
21-P-771	Pump Flange	1
35-P-101	Wet Spline Bearing Cap Gasket.....	1
WET SPLINE LOOSE PARTS		
329699-1X	Hose Assembly	1
329742X	Wet Spline Loose Parts Kit	1
329659X	Cover Kit	1
†329160-108X	Conversion Kit (XD to RY DRY)	
†329160-109X	Conversion Kit (XD to RY WET)	

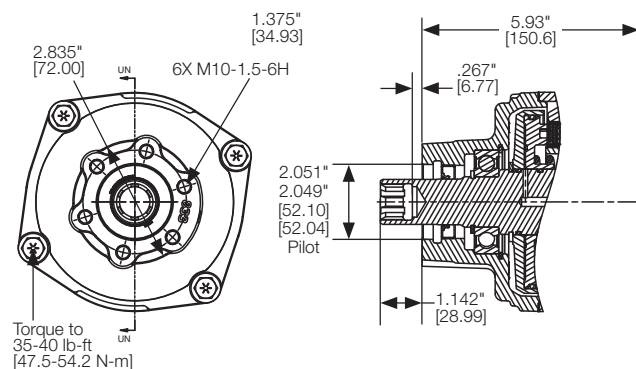
†Conversion Kits do not include all parts shown above. See pages 81-84 for Conversion Kit BOMs.

Output Options**Parts List
272 Series****Bill of Materials - Pump Mount (Continued)**

RZ Output Option		
Rotatable SAE B 2 or 4-Bolt Flange, SAE C Shaft (1-1/4" - 14T)		
Part Number	Description	Qty.
329828-5X	Shaft & Clutch Assembly (3-P-1137 Shaft) (HYD).....	1 or
329832-5X	Shaft & Clutch Assembly (3-P-1137 Shaft) (AIR)	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
21-P-885	Bearing Cap (DRY)	1 or
21-P-887	Bearing Cap (WET)	1
380563-14	9/16" Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
328170-216X	Cap Screw Kit	1
378447-8	1/4" Socket Head Cap Screw (.312"-18 x 1.500") ...	4
21-P-731	Pump Flange	1
35-P-101	Wet Spline Bearing Cap Gasket.....	1
WET SPLINE LOOSE PARTS		
329699-1X	Hose Assembly	1
329700X	Wet Spline Parts Kit.....	1
329658X	Cover Kit	1
†329160-110X	Conversion Kit (XD to RZ DRY)	
†329160-111X	Conversion Kit (XD to RZ WET)	



XR Output Option		
Chelsea Special (Cloverleaf), SAE B Shaft (7/8" - 13T)		
Part Number	Description	Qty.
329828-3X	Shaft & Clutch Assembly (3-P-1135 Shaft) (HYD).....	1 or
329832-3X	Shaft & Clutch Assembly (3-P-1135 Shaft) (AIR)	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
21-P-885	Bearing Cap (DRY)	1
380563-14	9/16" Hex Flange Head Cap Screw (.312" -16 x 1.500")	4
4-P-209	Spacer (Included in Kit).....	1
329906X	Pump Mounting Kit.....	1
†329160-143X	Conversion Kit (XD to XR)	



UN Output Option		
UNI 8953 3-Bolt Pump Flange - 6T		
Part Number	Description	Qty.
329828-7X	Shaft & Clutch Assembly (3-P-1143 Shaft) (HYD).....	1 or
329832-7X	Shaft & Clutch Assembly (3-P-1143 Shaft) (AIR)	1
550010	Ball Bearing (1.378" x .834" x .669").....	1
28-P-216	Oil Seal (2.004" x 1.250" x .374").....	1
21-P-832	Bearing Cap (DRY)	1 or
21-P-833	Bearing Cap (WET)	1
380563-14	9/16" Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
378895	Lockring	1
378576	Lockring	1
WET SPLINE LOOSE PARTS		
329699-1X	Hose Assembly	1
329821X	Wet Spline Loose Parts Kit	1
†329160-114X	Conversion Kit (XD to UN DRY)	
†329160-115X	Conversion Kit (XD to UN WET)	

✦ No longer a current option per Chelsea Suggested List Price.

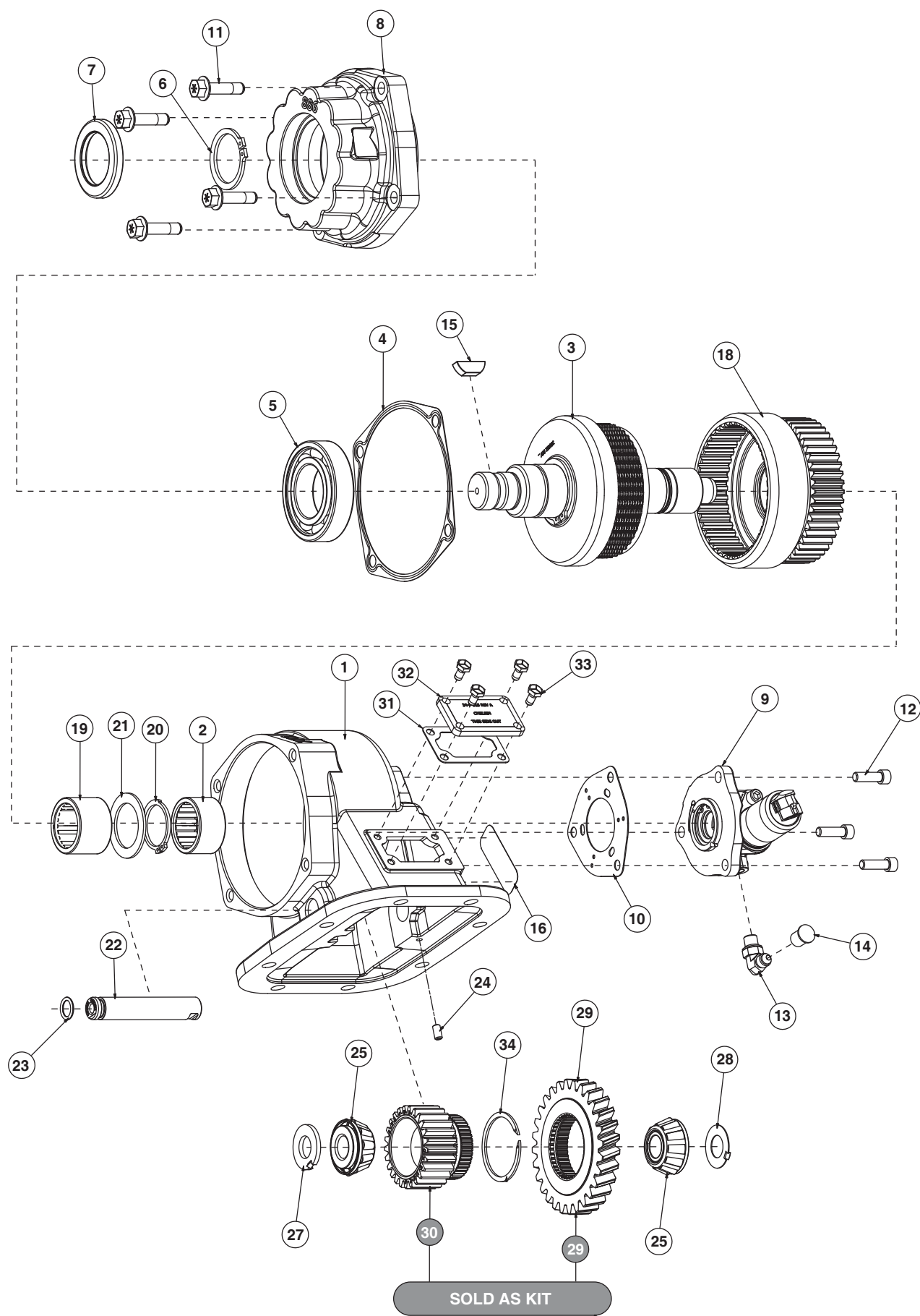
†Conversion Kits do not include all parts shown above. See [pages 81-84](#) for Conversion Kit BOMs.

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Model Number Designator**Parts List
282 Series**

	282	X	K	AJ	X	-	A	3	R	K
Basic Model										
282										
Mounting Option										
K		Standard Mount w/o Stud Kit								
X		Standard Mount								
G		Standard Mount w/ Metric Stud								
Z		Deep Mount								
Gear Ratio										
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								
Input Option										
Aisin										
Allison										
EATON Fuller										
Mack										
NOTE:		For more details, see Application Catalog (Transmission model number required)								
Lube Option										
X		No Pressure Lube								
Pressure										
P		Pressure Lube								
R		Pressure Lube valve body rotated 120°								
S		Pressure Lube valve body rotated 240°								
Wet Spline										
W		Wet Spline								
V		Wet Spline valve body rotated 120°								
Y		Wet Spline valve body rotated 240°								

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

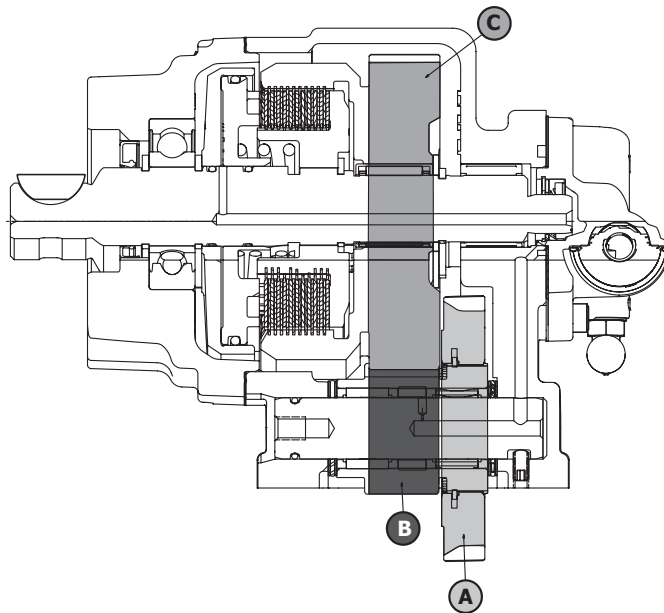


Bill of Materials**Parts List
282 Series**

Item	Part Number	Description	Qty.
1	1-P-770	Housing (3 Arrangement)	1 or
	1-P-772	Housing (5 Arrangement)	1
2	560972	Needle Roller Bearing Assembly (1.500" x 1.875" x 1.000")	1
3	329828-1X	Drive Shaft & Clutch Assembly XD (3-P-1133 Shaft) (HYD)	1 or
	329832-1X	Drive Shaft & Clutch Assembly XD (3-P-1133 Shaft) (AIR)	1 or
	See pages 39-40	Drive Shaft & Clutch Assembly (All Other Outputs)	1
4	22-P-151	Shim Gasket	1
5	550311	Ball Bearing (1.770" x 3.346" x .748")	1
6	379555	Lockring	1
7	28-P-267	Oil Seal (2.627" x 1.750" x .312") (XD Output)	1 or
	See pages 41-47	Oil Seal (2.627" x 1.750" x .312") (All Other Outputs)	1
8	21-P-886	Bearing Cap	1
9	See pages 34-35	Valve and Shift Cap Assembly	1
10	22-P-112	Valve Cap Gasket	1
11	380563-14	9/16" Hex Flange Head Cap Screw (.375"-16 x 1.500") Grade 8	4
12	378447-6	1/4" Socket Head Cap Screw (.312"-18 x 1.000")	3
13	379486	90° Elbow (.438"-20) (Hydraulic Shift Options Only)	1
14	379564-2	Thread Cap (.438") (Hydraulic Shift Options Only)	1
15	500007-29	Woodruff Key (XD Output Only)	1
16	68-P-51-1	Adhesive Label	1
18	See page 31	Output Gear	1
19	561088	Bearing-Needle Roller Assembly (1.500" x 1.875" x 1.250")	1
20	379746	Lockring	1
21	31-P-70	Thrust Washer (1.507" x 2.167" x .094")	1
22	9-P-106	Idle Shaft (.750")	1
23	28-P-191	O-ring (.549" x .103")	1
24	378452-7	1/8" Socket Head Set Screw (.250"-20 x .500")	1
25	550439	Tapered Bearing Cone (.750" x .859")	2 or
	561006	Tapered Bearing Cone (.750" x .655") (B Ratio Only)	2
27	14-P-73-1	Spacer (.762" x 1.500" x .150") (Thickness as Required)	1
	14-P-73-2	Spacer (.762" x 1.500" x .153")	1
	14-P-73-3	Spacer (.762" x 1.500" x .156")	1
28	31-P-102	Thrust Washer (.754" x .440" x .030")	1
29	See page 31	Input Gear	1
N.S.	See page 31	Ratio Gear	1
31	35-P-118	Gasket Plate	1
32	34-P-315	Cover Plate	1 or
	34-P-316	Cover Plate EOC (w/ EOC or J, K, L, R, 3, 4 Shift Types Only)	1
N.S. – Not Shown			Continued on Next Page

Bill of Materials**Parts List
282 Series**

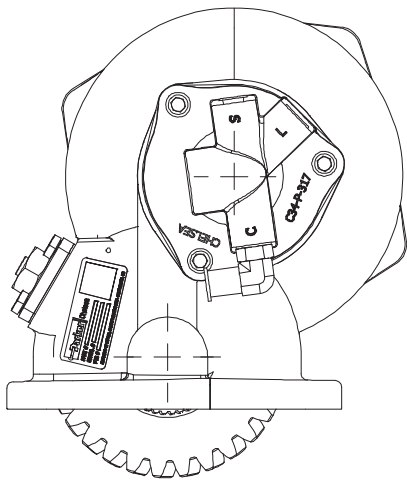
Item	Part Number	Description	Qty.
33	378429-4	7/16" Hex Head Cap Screw (.250"-20 x .500")	4
34	379522	Lockring	1
N.S.	380511	Tapered Plug (.302") (W, V & Y Lubrication Only)	1
N.S.	69-P-18	Wet Spline Tag (W, V & Y Lubrication Only)	1
N.S.	379231	Pipe Plug (.125"-27) (w/ EOC or J, K, L, R, 3, 4 Shift Types Only)	1
N.S.	379242	Straight Adapter (.125"-27 x .750"-16) (w/ EOC or J, K, L, R, 3, 4 Shift Types Only)	1
N.S.	69-P-30	Caution Tag	1
N.S.	379502X	Pressure Switch.....	1
		See pages 70-84 for Bill of Materials for the below loose parts.	
		GASKET KITS	
	328951-8X	Gasket & Installation Instructions Kit	1
	329071-62X	Gasket & Seal Kit (All Outputs Except BD, BV)	
	329071-63X	Bearing Kit (AB, AC, XD, XV, RF, RK, RS, RY, RZ) (All Outputs Except BV, BD)	
	329071-64X	Bearing Kit (BV & BD Outputs)	
	329678X	Gear & Clutch Plates Kit (All)	
		STUD KITS	
	328170-200X	Stud Kit (X & E Mounting).....	1 or
	328170-201X	Stud Kit (G Mounting)	1
		HYDRAULIC INSTALLATION KITS	
	329885-12X	12VDC Remote Hyd Valve Installation Kit (G Shift, Except HV Gear)	1 or
	329885-24X	24VDC Remote Hyd Valve Installation Kit (H Shift, Except HV Gear).....	1 or
	328892-12X	12VDC Hyd Valve Installation Kit (B Shift)	1 or
	328892-24X	24VDC Hyd Valve Installation Kit (D Shift)	1 or
	329900X	12VDC & 24VDC Hyd Valve Installation Kit w/ EOC (K Shift & L Shift, Except HV, KU Gear)	1
		AIR INSTALLATION KITS	
	328388-113X	Air Shift Installation Kit (A Shift)	1 or
	329889-12X	12VDC Remote Elec/Air Valve Installation Kit w/ EOC (R Shift, Except HV Gear)	1 or
	329889-24X	24VDC Remote Elec/Air Valve Installation Kit w/ EOC (4 Shift, Except HV Gear)	1 or
	329891-12X	12VDC Remote Elec/Air Valve Installation Kit (P Shift, Except HV Gear)	1 or
	329891-24X	24VDC Remote Elec/Air Valve Installation Kit (Q Shift, Except HV Gear)	1 or
	329893-12X	12VDC Elec/Air Valve Installation Kit (1 Shift).....	1 or
	329893-24X	24VDC Elec/Air Valve Installation Kit (2 Shift, Except HV Gear).....	1 or
	329894X	12VDC & 24VDC Elec/Air Valve Installation Kit w/ EOC (J Shift & 3 Shift, Except HV Gear)	1
		SERVICE CONVERSION KITS	
	329354-12X	12VDC Remote Valve Conversion Kit	
	329354-24X	24VDC Remote Valve Conversion Kit	
	329958-12X	12VDC Remote Valve Conversion Kit (G, Hyd)	
	329958-24X	24VDC Remote Valve Conversion Kit (H, Hyd)	
		OUTPUT CONVERSION KITS	
	See pages 80-84	Output Conversion Kits Bill of Materials	

Gear Ratio Options**Parts List
282 Series****Gear Chart**

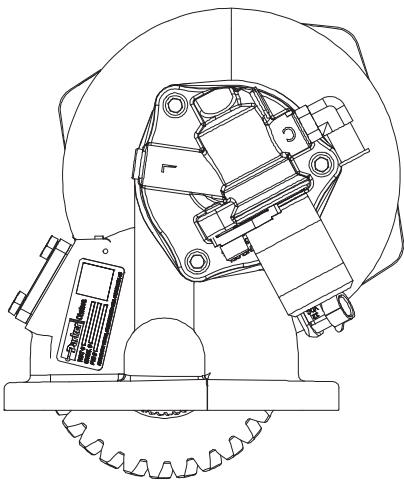
GEAR DESIGNATOR	INPUT GEAR ASSEMBLY	SOLD AS KIT				OUTPUT GEAR (18)	NO. TEETH C
		INPUT GEAR (29)	NO. TEETH A	RATIO GEAR (30)	NO. TEETH B		
282*BAJ	5-P-1510-11X	5-P-1510	25	5-P-1478	22	2-P-926	50
282*CAJ	5-P-1510-12X	5-P-1510	25	5-P-1495	25	2-P-927	47
282*DAJ	5-P-1510-13X	5-P-1510	25	5-P-1479	28	2-P-928	44
282*GAJ	5-P-1510-14X	5-P-1510	25	5-P-1480	31	2-P-929	41
282*KAJ	5-P-1510-15X	5-P-1510	25	5-P-1481	33	2-P-931	39
282*MAJ	5-P-1510-16X	5-P-1510	25	5-P-1482	35	2-P-933	37
282*PAJ	5-P-1510-17X	5-P-1510	25	5-P-1483	37	2-P-935	35
282*SAJ	5-P-1510-18X	5-P-1510	25	5-P-1484	39	2-P-936	33
282*TAJ	5-P-1510-19X	5-P-1510	25	5-P-1497	41	2-P-937	31
282*BAK	5-P-1517-11X	5-P-1517	25	5-P-1478	22	2-P-926	50
282*CAK	5-P-1517-12X	5-P-1517	25	5-P-1495	25	2-P-927	47
282*DAK	5-P-1517-13X	5-P-1517	25	5-P-1479	28	2-P-928	44
282*GAK	5-P-1517-14X	5-P-1517	25	5-P-1480	31	2-P-929	41
282*KAK	5-P-1517-15X	5-P-1517	25	5-P-1481	33	2-P-931	39
282*MAK	5-P-1517-16X	5-P-1517	25	5-P-1482	35	2-P-933	37
282*PAK	5-P-1517-17X	5-P-1517	25	5-P-1483	37	2-P-935	35
282*SAK	5-P-1517-18X	5-P-1517	25	5-P-1484	39	2-P-936	33
282*TAK	5-P-1517-19X	5-P-1517	25	5-P-1497	41	2-P-937	31
282*BDA	5-P-1511-11X	5-P-1511	27	5-P-1478	22	2-P-926	50
282*CDA	5-P-1511-12X	5-P-1511	27	5-P-1495	25	2-P-927	47
282*DDA	5-P-1511-13X	5-P-1511	27	5-P-1479	28	2-P-928	44
282*GDA	5-P-1511-14X	5-P-1511	27	5-P-1480	31	2-P-929	41
282*KDA	5-P-1511-15X	5-P-1511	27	5-P-1481	33	2-P-931	39
282*MDA	5-P-1511-16X	5-P-1511	27	5-P-1482	35	2-P-933	37
282*PDA	5-P-1511-17X	5-P-1511	27	5-P-1483	37	2-P-935	35
282*SDA	5-P-1511-18X	5-P-1511	27	5-P-1484	39	2-P-936	33
282*TDA	5-P-1511-19X	5-P-1511	27	5-P-1497	41	2-P-937	31

NOTE: Input Gear Assembly includes Input Gear, Ratio Gear and 379522 pre-assembled.

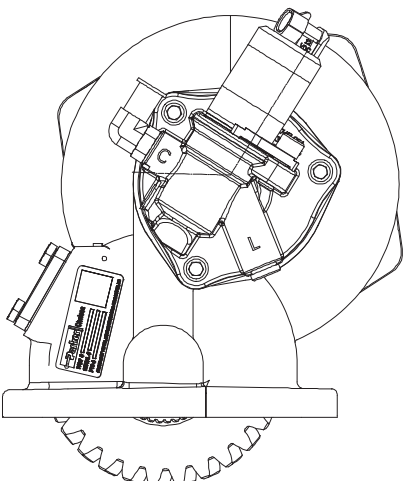
Pressure Lube



P = Pressure Lube

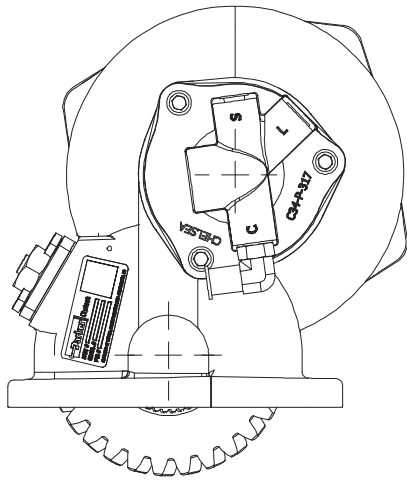


R = Valve Cap Rotated 120°

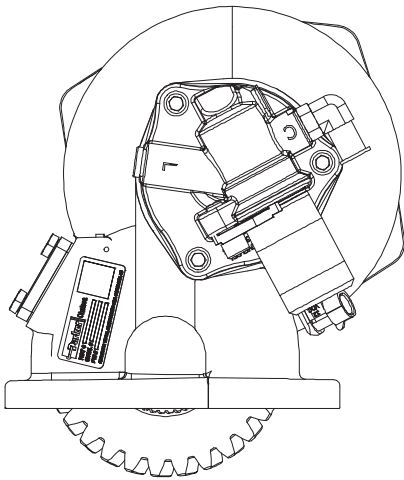


S = Valve Cap Rotated 240°

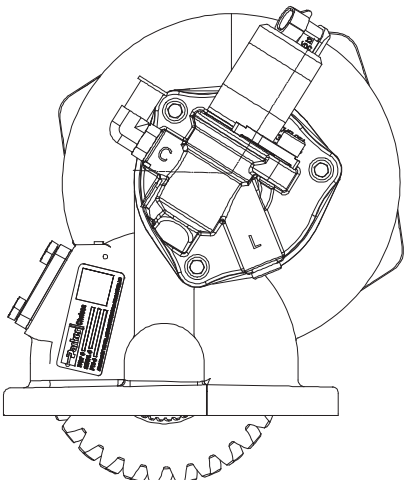
Wet Spline



W = Wet Spline



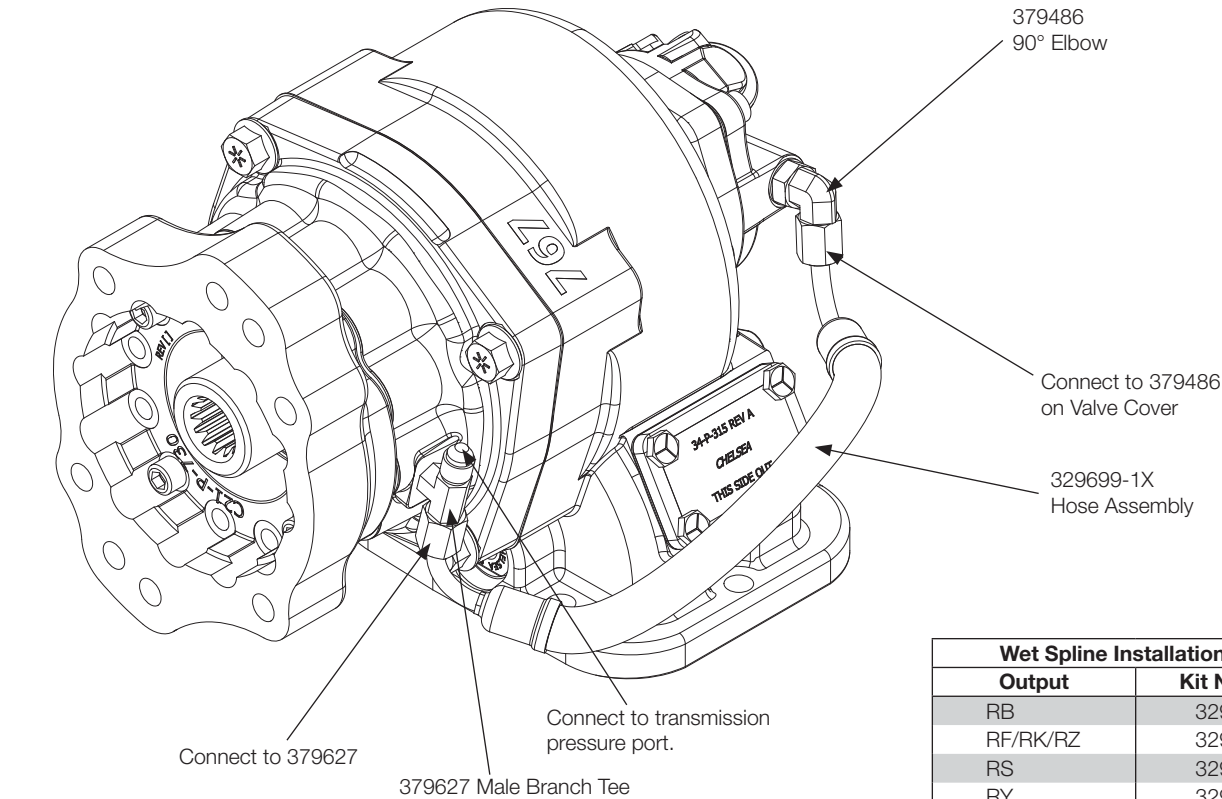
V = Valve Cap Rotated 120°
w/ Wet Spline



Y = Valve Cap Rotated 240°
w/ Wet Spline

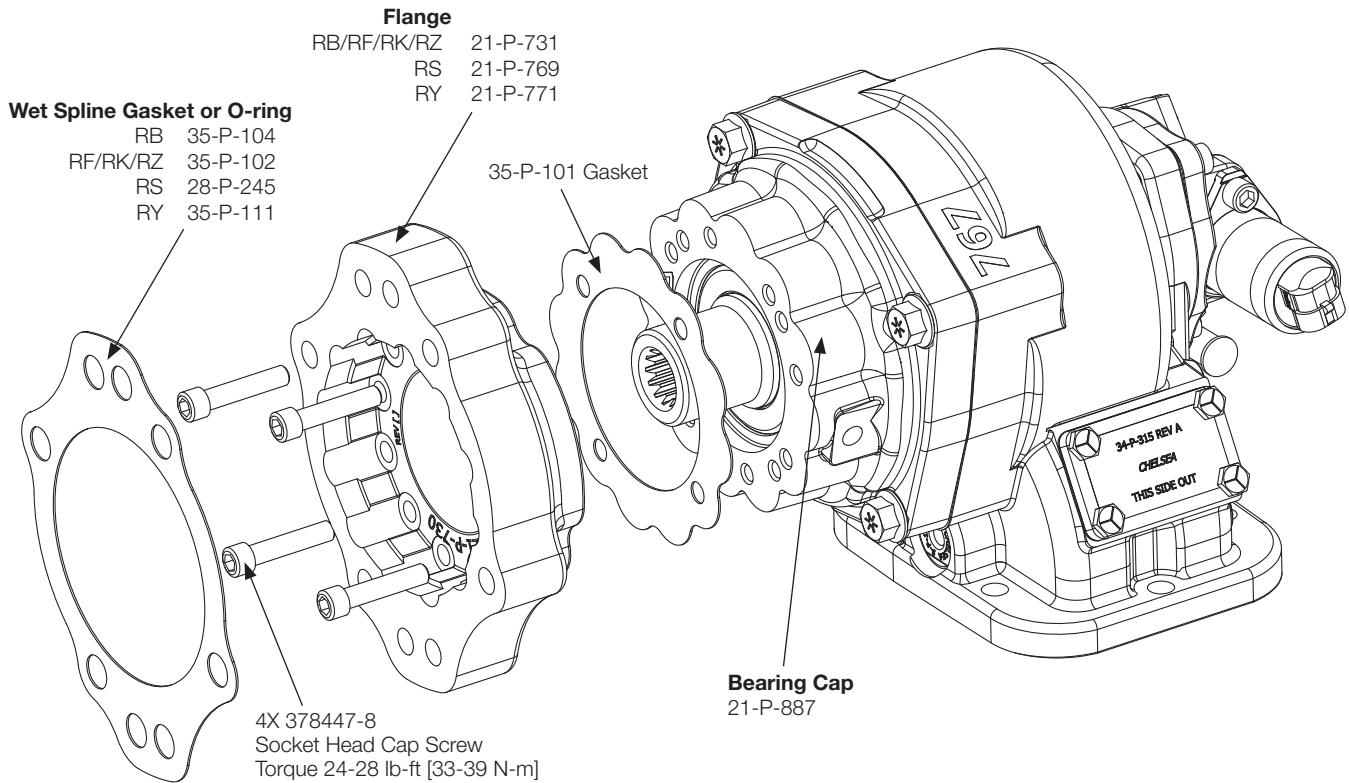
Wet Spline Installation
RB, RF, RK, RS, RY & RZ

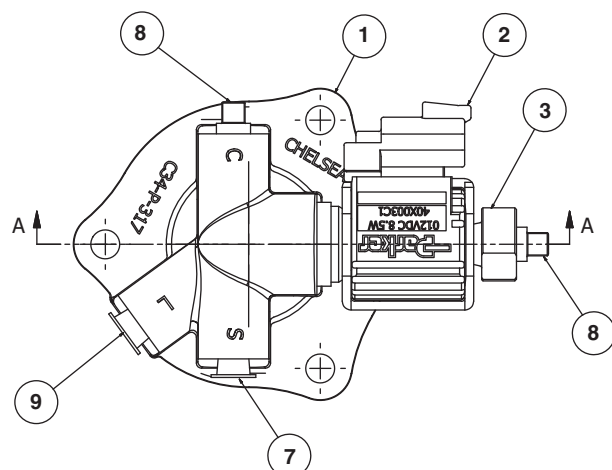
(SK-508 Rev B)



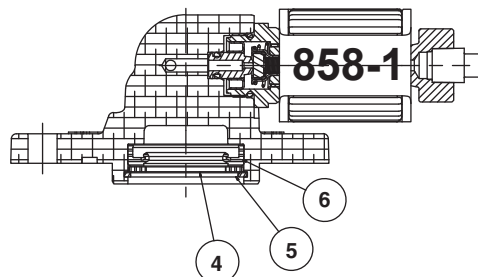
Wet Spline Installation Kits	
Output	Kit Number
RB	329959X
RF/RK/RZ	329700X
RS	329744X
RY	329742X

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

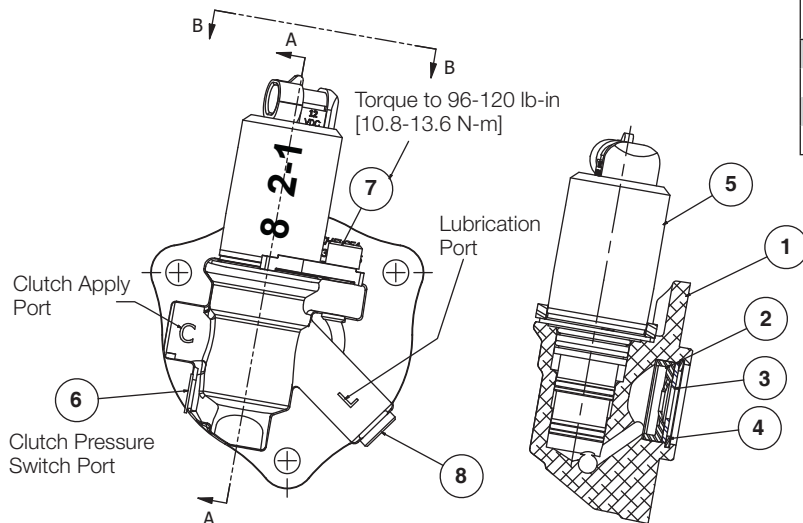


Valve Cap Assembly (Air) – 329858-**X**

Pressure Lube	Shift Option	Assembly
Yes	J & 1	329858-1X
No	J & 1	329858-2X
Yes	3 & 2	329858-3X
No	3 & 2	329858-4X



Item	Part Number	Description	Qty.
1	34-P-318-1 34-P-318	Air Integral Cap w/o Lube (329858-2X & 329858-4X) Air Integral Cap w/ Lube (329858-1X & 329858-3X)	1 or 1
2	75-P-35-12 75-P-35-24	Air Valve Coil 12VDC (329858-1X & 329858-2X)..... Air Valve Coil 24VDC (329858-3X & 329858-4X).....	1 or 1
3	380574	Pneumatic Plunger Valve Assembly	1
4	378811	Seal Plate Back-Up	1
5	378849	Lockring	1
6	28-P-179	Oil Seal (1.379" x .875" x .249").....	1
7	500897-5	Shipping Plug	1
8	379755	Square Head Threaded Polyethylene Plug	2
9	500897-7	Shipping Plug (329858-1X & 329858-3X)	1

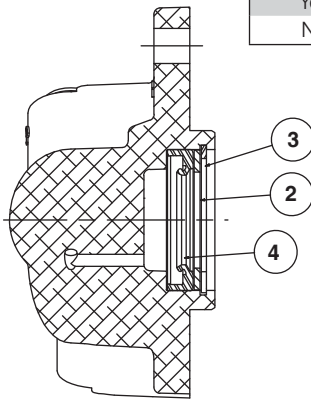
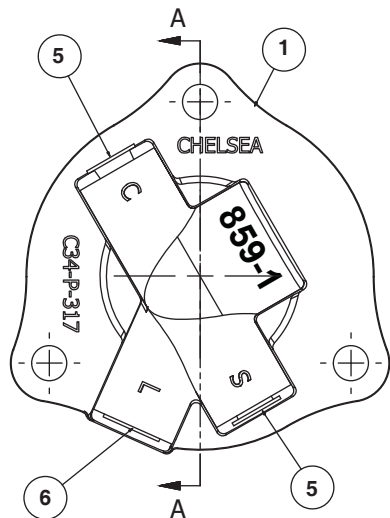
Valve Cap Assembly (Hydraulic) – 329872-**X**

Pressure Lube	Shift Option	Assembly
Yes	B, E, & K	329872-1X
No	B, E, & K	329872-2X*
Yes	D, L, & N	329872-3X
No	D, L, & N	329872-4X*

Item	Part Number	Description	Qty.
1	34-P-327 34-P-326	High Pressure w/ Lube Valve Cap Solenoid Port (329872-1X & 329872-3X)..... High Pressure w/o Lube Valve Cap Solenoid Port (329872-2X* & 329872-4X*)	1 or 1
2	28-P-119	Oil Seal (1.379" x .875" x .250").....	1
3	378811	Seal Back-Up Plate	1
4	378849	Lockring	1
5	380123-12 380123-24	Non-Regulating Cartridge Valve 12VDC (329872-1X & 329872-2X*)..... Non-Regulating Cartridge Valve 24VDC (329872-3X & 329872-4X*).....	1 or 1
6	500897-5	Shipping Plug	1
7	378447-4	Socket Head Cap Screw (.312"-18 x .750").....	1
8	500897-6	Shipping Plug	1

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

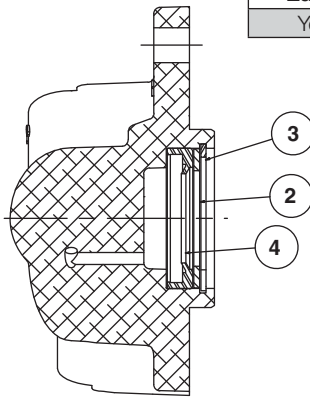
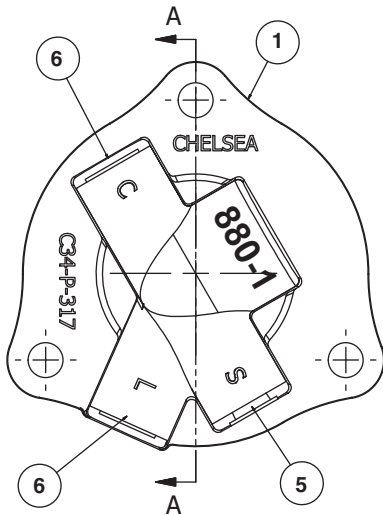
Remote Valve Cap Assembly (Air) – 329859X-♦X



Pressure Lube	Shift Option	Assembly
Yes	A, P, Q, R, V, & 4	329859-1X
No	A, P, Q, R, V, & 4	329859-2X

Item	Part Number	Description	Qty.
1	34-P-318-2	Remote Air Cap w/ Lube (329859-1X)	1 or
	34-P-318-3	Remote Air Cap w/o Lube (329859-2X)	1
2	378811	Back-Up Seal Plate	1
3	378849	Lockring	1
4	28-P-179	Oil Seal (1.379" x .875" x .249")	1
5	500897-5	Shipping Plug	2
6	500897-7	Shipping Plug	1

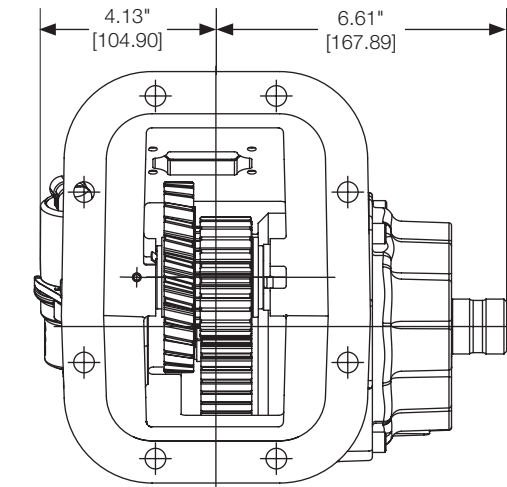
Remote Valve Cap Assembly (Hydraulic) – 329880X-♦X



Pressure Lube	Shift Option	Assembly
Yes	G & H	329880-1X

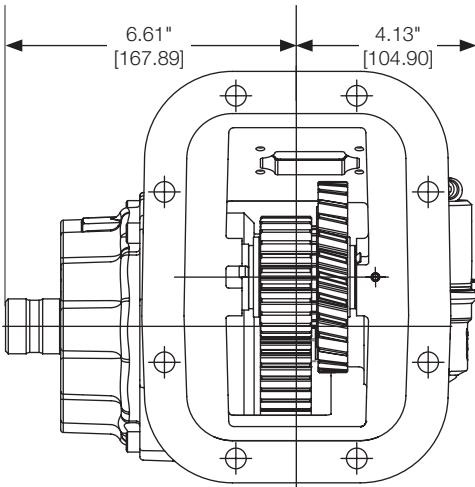
Item	Part Number	Description	Qty.
1	34-P-320	Hydraulic Remote Cap w/ Lube (329880-1X)	1
2	378811	Back-Up Seal Plate	1
3	378849	Lockring	1
4	28-P-119	Oil Seal (1.379" x .875" x .250")	1
5	500897-5	Shipping Plug	1
6	500897-7	Shipping Plug	2

Housing Dimensions

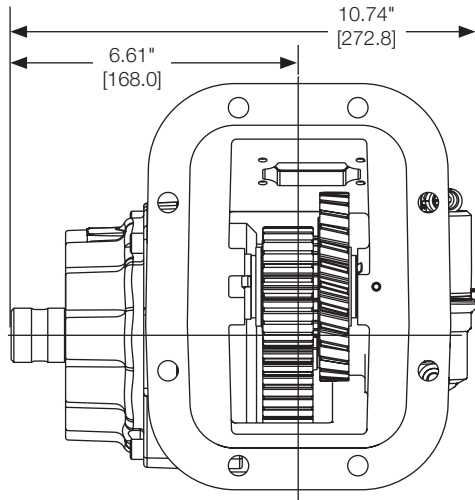
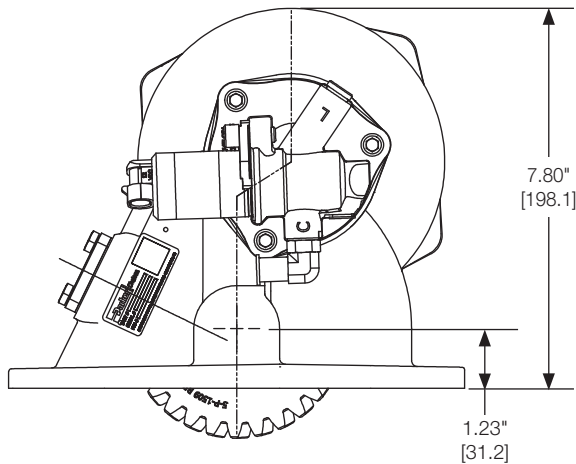


in. [mm]

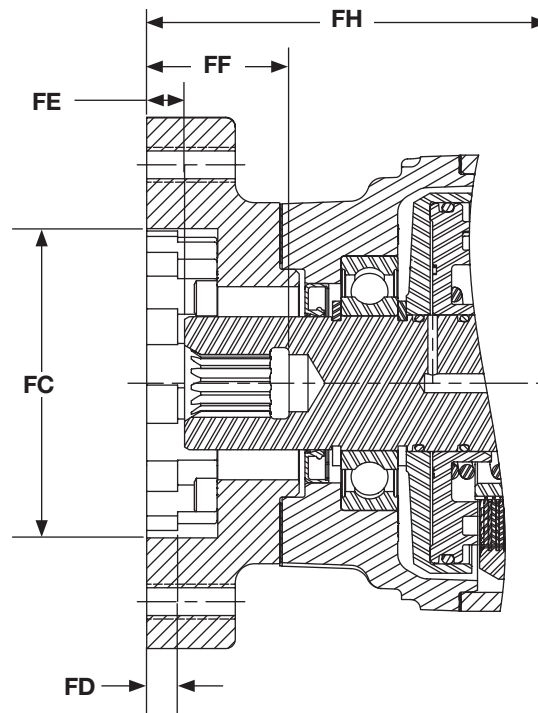
3 Arrangement



5 Arrangement



Pump Flange & Shaft Dimensions



Pump Flange Suffix	Bolt Circle Dia.	Bolt Holes		FC	FD	FE	FF	FH	Output Shaft	
		Tapped Hole	No. Equally Spaced	Female Pilot Dia.	Pilot Depth	Face to End of Shaft	Face thru Hole	Face to Center of PTO	Nominal Shaft Size M = Male F = Female	Key- way Width
AB	3.996"	.404" ▶	8	2.952"	.093"	—	—	7.540"	M	—
AC	3.307"	.323" ▶	6	2.243"	.080"	—	—	7.510"	M	—
BD	—	—	—	—	—	—	—	8.880"	M	1-1/4"
BV	3.750"	.440" ▶	4	2.751"	.083"	—	—	8.780"	M	—
RB ●	5.000"	1/2"-13 UNC-2B	4	—	.406"	.497"	1.872"	6.861"	7/8" - 13T Spline - F	—
RE ●	4.188"	5/16"-18 UNC-2B	16	3.251"	.344"	.400"	1.502"	5.690"	5/8" - 9T Spline - F	—
RF ●	5.750"	1/2"-13 UNC-2B	2	4.000"	.406"	.592"	2.060"	6.910"	1" - 15T Spline - F	—
	5.000"	1/2"-13 UNC-2B	2 ■	4.000"	.406"	.592"	2.060"	6.910"	1" - 15T Spline - F	—
RK ●	5.750"	1/2"-13 UNC-2B	2	—	.406"	.497"	1.872"	6.910"	7/8" - 13T Spline - F	—
	5.000"	1/2"-13 UNC-2B	2 ■	—	.406"	.497"	1.872"	6.910"	7/8" - 13T Spline - F	—
RS ●	7.125"	5/8"-11 UNC-2B	2	5.003"	.531"	.730"	2.700"	6.910"	1-1/4" - 14T Spline - F	—
	6.375"	1/2"-13 UNC-2B	4	5.003"	.531"	.730"	2.700"	6.910"	1-1/4" - 14T Spline - F	—
RY ●	4.454"	M12-1.75	4	3.152"	.530"	.581"	2.281"	6.510"	DIN 5462 - F	—
RZ ●	5.750"	1/2"-13 UNC-2B	2	4.000"	.406"	.730"	2.700"	6.910"	1-1/4" - 14T Spline - F	—
	5.000"	1/2"-13 UNC-2B	2 ■	4.000"	.406"	.730"	2.700"	6.910"	1-1/4" - 14T Spline - F	—
SD	—	—	—	—	—	—	—	6.610"	M	1-1/4"
SV	3.750"	.440" ▶	4	2.751"	.083"	—	—	7.536"	1-1/2" - 10T Spline - M	—
XR	3.712"	—	—	—	—	—	—	6.414"	F	—
XV	3.750"	.440" ▶	4	2.751"	.083"	—	—	7.540"	1-1/2" - 10T Spline - M	—
UN	—	—	—	—	—	—	—	6.414"	F	—

● Rotatable Flange Rotates in 30° Increments

■ Two Set of Holes Spaced 14° Apart

▶ Not Tapped

Output Options**Output Conversion Kits**

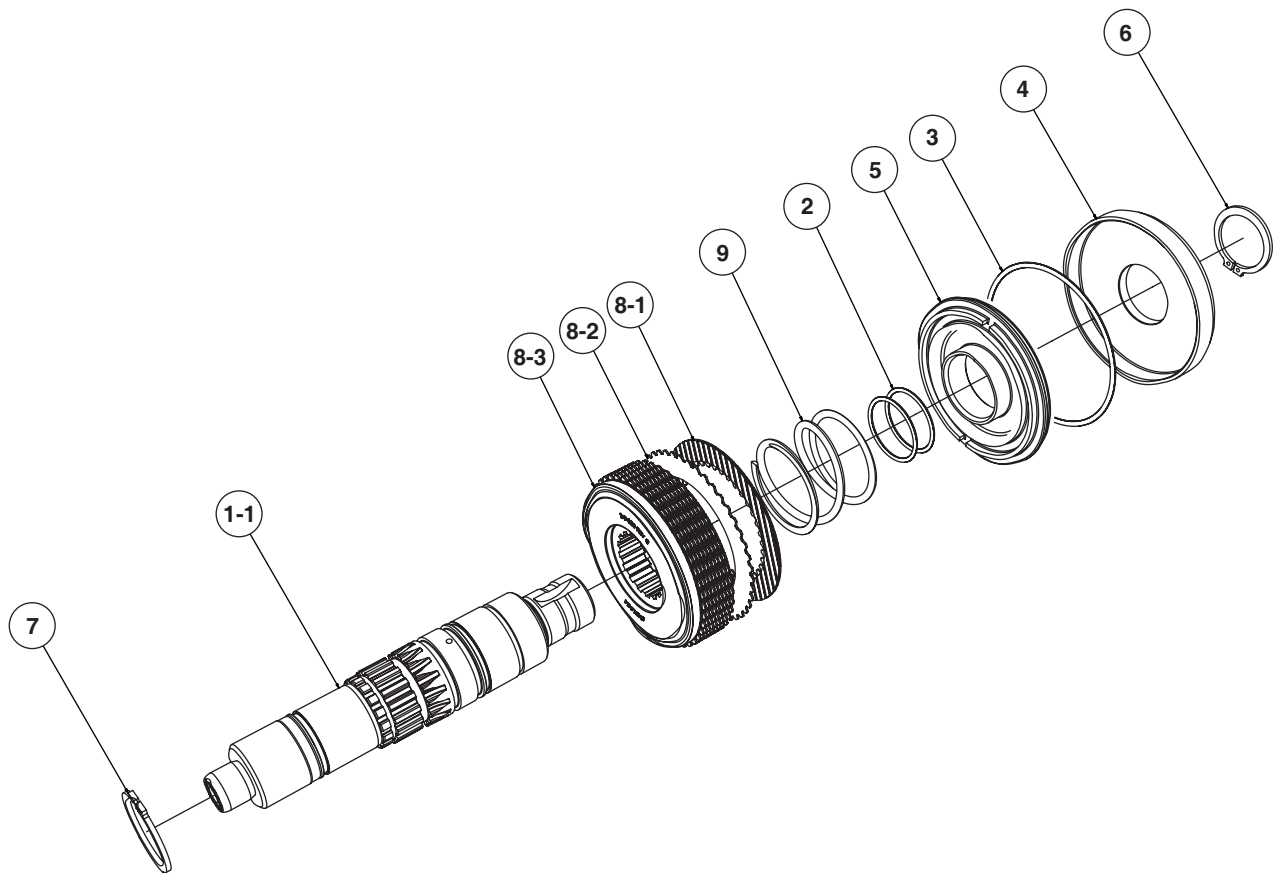
Output Option	Flange Type	Shaft Type	Conversion Kit	
AB	DIN 120	DIN 120 Series Companion Flange	XD to AB	329160-112X
AC	DIN 100	DIN 100 Series Companion Flange	XD to AC	329160-113X
BD	N/A	Rd Standard Shaft (1-1/4" - 5/16" Key) w/ Drag Brake	XD to BD (AIR) XD to BD (HYD)	329160-103X 329160-152X
BV	N/A	1410 Series Companion Flange w/ Drag Brake	XD to BV (AIR) XD to BV (HYD)	329160-102X 329160-151X
RB	SAE B 4-Bolt Flange	SAE B Shaft (7/8" - 13T)	XD to RB (DRY) XD to RB (WET)	329160-145X 329160-146X
RE	SAE A 2-Bolt Flange	SAE A Shaft (5/8" - 9T)	XD to RE (DRY)	329160-118X
RF	SAE B 2 or 4-Bolt Flange	SAE BB Shaft (1" - 15T)	XD to RF (DRY) XD to RF (WET)	329160-104X 329160-105X
RK	SAE B 2 or 4-Bolt Flange	SAE B Shaft (7/8" - 13T)	XD to RK (DRY) XD to RK (WET)	329160-100X 329160-101X
RS	SAE C 2 or 4-Bolt Flange	SAE C Shaft (1-1/4" - 14T)	XD to RS (DRY) XD to RS (WET)	329160-106X 329160-107X
RY	ISO 7653 (80 x 80 mm)	DIN 5462 Shaft (B8x32x36)	XD to RY (DRY) XD to RY (WET)	329160-108X 329160-109X
RZ	SAE B 2 or 4-Bolt Flange	SAE C Shaft (1-1/4" - 14T)	XD to RZ (DRY) XD to RZ (WET)	329160-110X 329160-111X
SD	N/A	SmartStart – Rd Standard Shaft (1-1/4" - 5/16" Key)	XD to SD	329160-142X
SV	N/A	SmartStart – 1410 Series Companion Flange	XD to SV	329160-144X
XV	N/A	1410 Series Companion Flange	XD to XV	329160-116X
XR	Chelsea Special (Cloverleaf)	SAE B Shaft (7/8" - 13T)	XD to XR	329160-143X
✦ UN	UNI 8953	3-Bolt Pump Flange	XD to UN (DRY) XD to UN (WET)	329160-114X 329160-115X

N/A = Not Applicable
NOTE: Check Current Price Sheet for Availability of Output Options

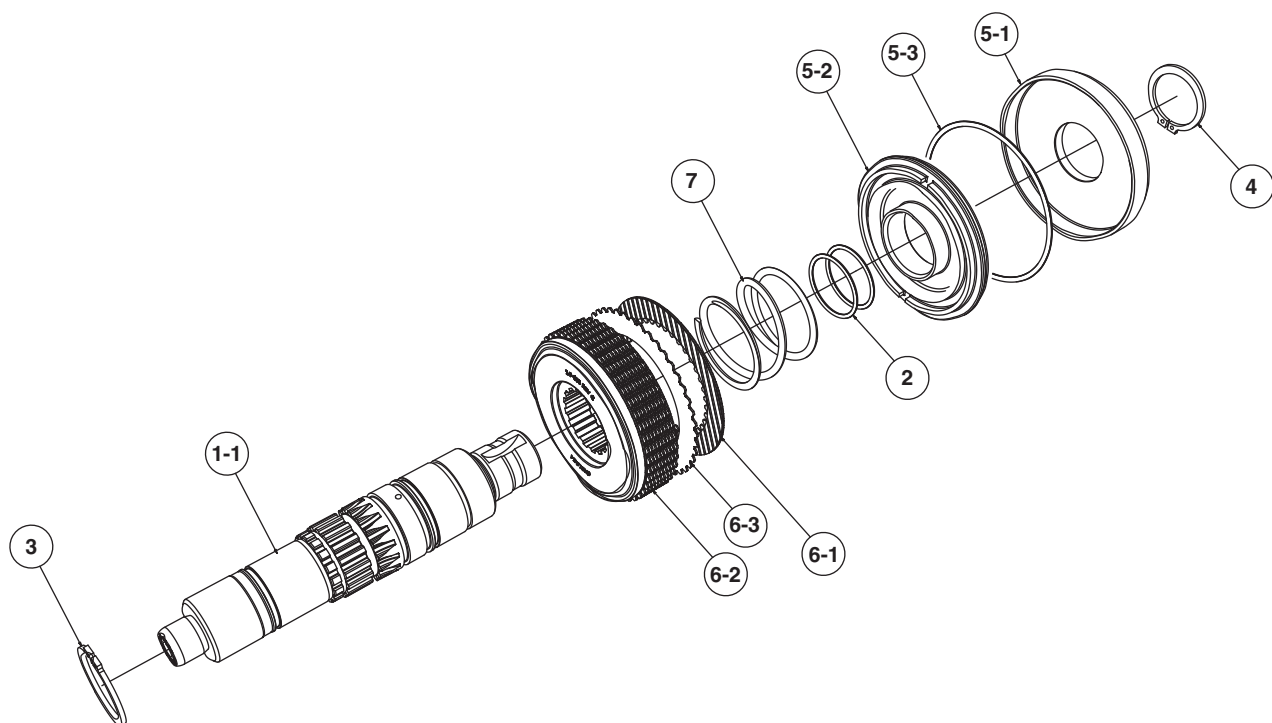
SAE Chart

SAE Standard	A	B	BB	C	D
Flange Pilot	3.250"	4.000"	4.000"	5.000"	6.000"
Shaft	.625"	.875"	1.000"	1.250"	1.750"
Spline Count	9T	13T	15T	14T	13T

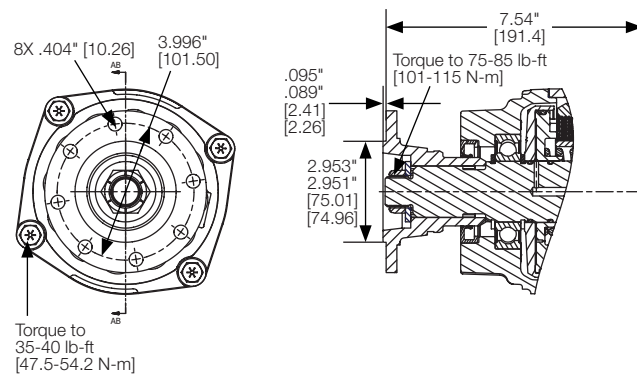
✦ No longer a current option per Chelsea Suggested List Price.

Drive Shaft & Clutch Assembly – (Hyd) 329828-*X & (Air) 329832-*X

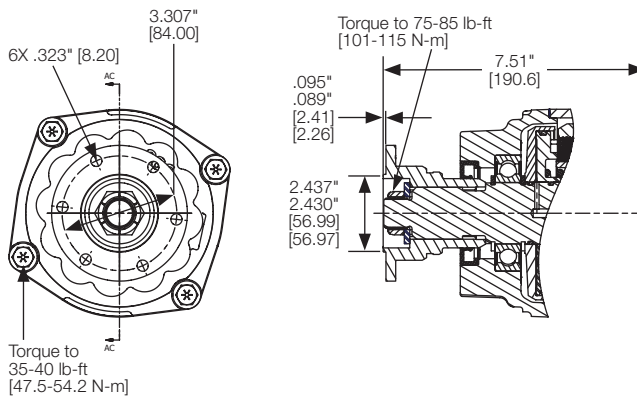
Item	Part Number	Description	Qty.
1-1	3-P-1133	XD Output Shaft (329828-1X & 329832-1X)	1 or
	3-P-1134	XV, AB, & AC Output Shaft 10T Straight (329828-2X & 329832-2X).....	1 or
	3-P-1135	RK & XR Output Shaft (7/8" - 13T) (329828-3X & 329832-3X)	1 or
	3-P-1136	RF Output Shaft (1" - 15T) (329828-4X & 329832-4X)	1 or
	3-P-1137	RS, RZ Output Shaft (1-1/4" - 14T) (329828-5X & 329832-5X).....	1 or
	3-P-1138	RY Output Shaft (DIN 8T) (329828-6X & 329832-6X).....	1 or
	3-P-1143	DIN 6T (329828-7X & 329832-7X).....	1 or
	3-P-1168	SD SmartStart, Output Shaft (329828-8X & 329832-9X)	1 or
	3-P-1169	SV SmartStart, 10T Straight Output Shaft (329828-9X & 329832-10X).....	1 or
	3-P-1170	RE Output Shaft (5/8" - 9T) (329828-10X & 329832-8X).....	1
2	28-P-285	O-ring (1.597" x .103").....	2
3	28-P-178	O-ring (4.359" x .138").....	1
4	380051	Clutch Back-Up Cylinder	1
5	380110-1	Clutch Piston (Hydraulic Shift).....	1
	380110-2	Clutch Piston (Air Shift)	1
6	379555	Lockring	1
7	380069	Lockring	1
8	329678X	Gear & Clutch Plates Kit	1
8-1	379485	Friction Disc	11
8-3	2-P-858	Inner Hub Gear.....	1
8-2	380065	Clutch Plate.....	10
9	37-P-72	Spring (2.140" x 1.941")	1

Output Options**Drive Shaft & Clutch Assembly – (Hyd) 329829-♦X & (Air) 329833-♦X
w/ Drag Brake**

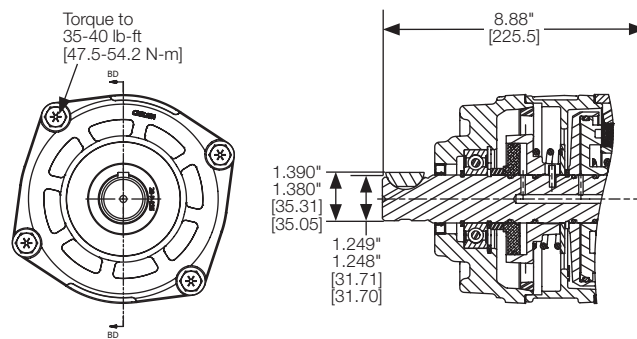
Item	Part Number	Description	Qty.
1-1	3-P-1139	BV Output Shaft (329829X & 329833X)	1 or
	3-P-1142	BD Output Shaft (329829-1X & 329833-1X)	1
2	28-P-244	O-ring (1.174" x .103").....	2
3	380069	Lockring	1
4	378576	Lockring	1
5	329179X	Piston & Back-Up Cylinder Assembly (Air Shift).....	1 or
	329179-1X	Piston & Back-Up Cylinder Assembly (Hydraulic Shift)	1
5-1	379323	Back-Up Clutch Cylinder (Air Shift)	1 or
	379323-1	Back-Up Clutch Cylinder (Hydraulic Shift)	1
5-2	380057	Clutch Piston (Air Shift)	1 or
	380057-1	Clutch Piston (Hydraulic Shift).....	1
5-3	28-P-178	O-ring (4.359" x .138").....	1
6	329678X	Gear & Clutch Plates Kit	1
6-1	379485	Friction Disc	11
6-2	2-P-858	Inner Hub Gear.....	1
6-3	380065	Clutch Plate.....	10
7	37-P-39	Spring (2.552" x 1.985")	1

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

AB Output Option DIN 120 Flange		
Part Number	Description	Qty.
329828-2X	Shaft & Clutch Assembly (3-P-1134 Shaft) (HYD).....	1 or
329832-2X	Shaft & Clutch Assembly (3-P-1134 Shaft) (AIR)	1
28-P-211	Oil Seal (3.001" x 2.000" x .375").....	1
21-P-886	Bearing Cap	1
380563-14	9/16" Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
380486	1-1/4" Thin Nylon Lock Nut (.875"-14).....	1
380076-13	Hardened Flat Washer (.950" x 1.762" x .157").....	1
379558	DIN 120	1
†329160-112X	Conversion Kit (XD to AB)	



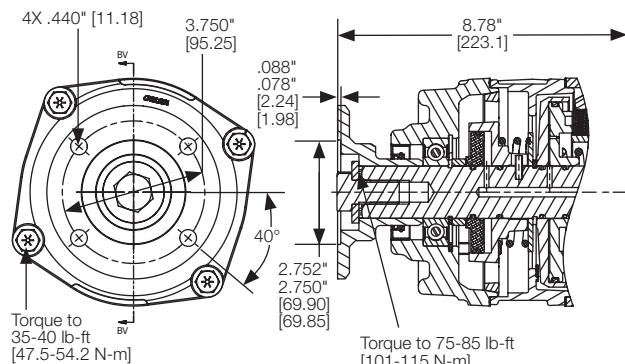
AC Output Option DIN 100 Flange		
Part Number	Description	Qty.
329828-2X	Shaft & Clutch Assembly (3-P-1134 Shaft) (HYD).....	1 or
329832-2X	Shaft & Clutch Assembly (3-P-1134 Shaft) (AIR)	1
28-P-211	Oil Seal (3.001" x 2.000" x .375").....	1
21-P-886	Bearing Cap	1
380563-14	9/16" Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
380486	1-1/4" Thin Nylon Lock Nut (.875"-14).....	1
380076-13	Hardened Flat Washer (.950" x 1.762" x .157").....	1
379742	DIN 100	1
†329160-113X	Conversion Kit (XD to AC)	



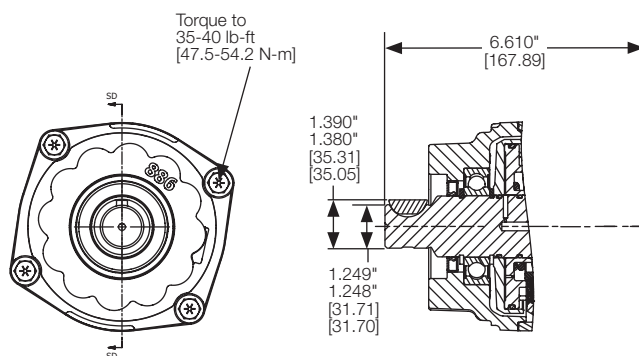
BD Output Option Rd Standard Shaft (1-1/4" - 5/16" Key) with Drag Brake		
Part Number	Description	Qty.
329829-1X	Shaft & Clutch Assembly (3-P-1142 Shaft) (HYD).....	1 or
329833-1X	Shaft & Clutch Assembly (3-P-1142 Shaft) (AIR)	1
22-P-151	Gasket.....	1
550010	Ball Bearing (1.378" x 2.834" x .669").....	1
28-P-225	Oil Seal (2.004" x 1.375" x .315").....	1
21-P-888	Drag Brake Bearing Cap.....	1
380563-28	9/16" Hex Flange Head Cap Screw (.375"-16 x 3.500")	4
378895	Lockring	1
500007-29	Woodruff Key.....	1
378576	Lockring	2
28-P-244	O-ring (1.174" x .103").....	2
23-P-73	Drag Brake Bearing Cap Spacer.....	1
31-P-113	Thrust Washer (1.385" x 3.125" x .125").....	1
329410X	Brake Assembly	1
379977	Spring Pin.....	1
4-P-186	Spacer (1.385" x 1.750" x .365")	1
37-P-24	Spring (2.531" x 2.130" x .207") (AIR)	1 or
37-P-60	Spring (2.531" x 2.130" x .172") (HYD)	1
†329160-103X	Conversion Kit (XD to BD) (AIR)	
†329160-152X	Conversion Kit (XD to BD) (HYD)	

†Conversion Kits do not include all parts shown above. See pages 81-84 for Conversion Kit BOMs.

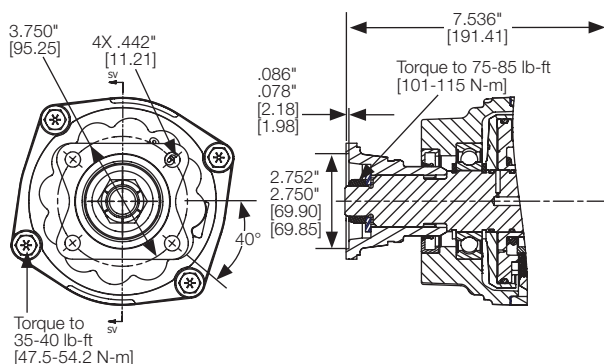
Bill of Materials - Driveline Output (Continued)



BV Output Option 1410 Companion Flange with Drag Brake		
Part Number	Description	Qty.
329829X	Shaft & Clutch Assembly (3-P-1139 Shaft) (HYD).....	1 or
329833X	Shaft & Clutch Assembly (3-P-1139 Shaft) (AIR)	1
22-P-151	Gasket.....	1
550010	Ball Bearing (1.378" x 2.834" x .669").....	1
28-P-212	Oil Seal (2.506" x 1.750" x .315").....	1
21-P-884	Bearing Cap	1
378435-7	3/8" Hex Head Cap Screw (.625"-11 x 1.250").....	1
380563-28	9/16" Hex Flange Head Cap Screw (.375"-16 x 3.500")	4
378895	Lockring	1
378576	Lockring	1
28-P-244	O-ring (1.174" x .103").....	2
23-P-73	Drag Brake Bearing Cap Spacer.....	1
31-P-113	Thrust Washer (1.385" x 3.125" x .125").....	1
329410X	Brake Assembly	1
379977	Spring Pin.....	1
4-P-186	Spacer (1.385" x 1.750" x .365")	1
37-P-60	Spring (2.531" x 2.130" x .172") (HYD)	1 or
37-P-24	Spring (2.531" x 2.130" x .207") (AIR)	1
4-P-130	Spacer (.640" x 1.620" x .188")	1
380081	1410 Series Companion Flange.....	1
†329160-102X	Conversion Kit (XD to BV) (AIR)	
†329160-151X	Conversion Kit (XD to BV) (HYD)	



SD Output Option Rd Standard Shaft (1-1/4" - 5/16" Key) – SmartStart		
Part Number	Description	Qty.
329828-8X	Shaft & Clutch Assembly XD SmartStart (3-P-1168)	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
21-P-886	Bearing Cap	1
380563-14	9/16" Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
500007-29	Woodruff Key.....	1
†329160-142X	Conversion Kit (XD to SD)	

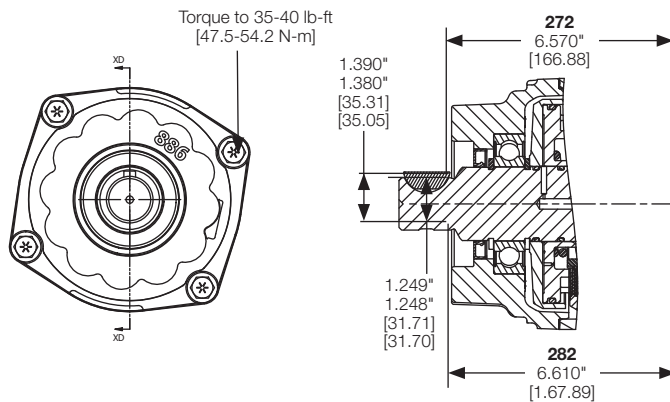


SV Output Option 1410 Series Companion Flange – SmartStart*		
Part Number	Description	Qty.
329828-9X	Shaft & Clutch Assembly SV SmartStart (3-P-1169)	1
21-P-886	Bearing Cap	1
28-P-211	Oil Seal (3.001" x 2.000" x .375").....	1
380563-14	9/16" Hex Flange Head Cap Screw (.875"-16 x 1.500")	4
380486	1-1/4" Thin Nylon Lock Nut (.875"-14).....	1
380076-13	Hardened Flat Washer (.950" x 1.762" x .157").....	1
380503	1410 Series Companion Flange.....	1
†329160-144X	Conversion Kit (XD to SV)	

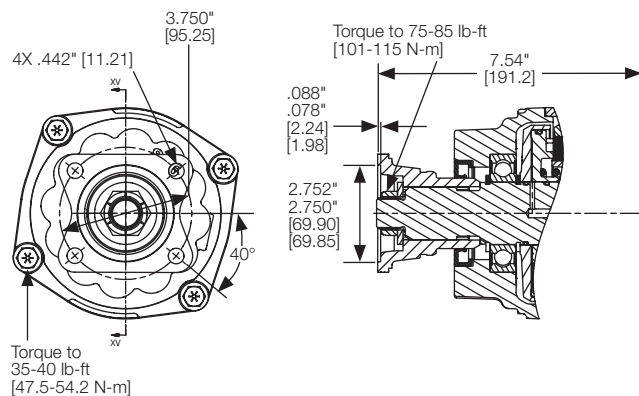
* 1-1/2" - 10T Spline Shaft

†Conversion Kits do not include all parts shown above. See pages 81-84 for Conversion Kit BOMs.

Bill of Materials - Driveline Output (Continued)



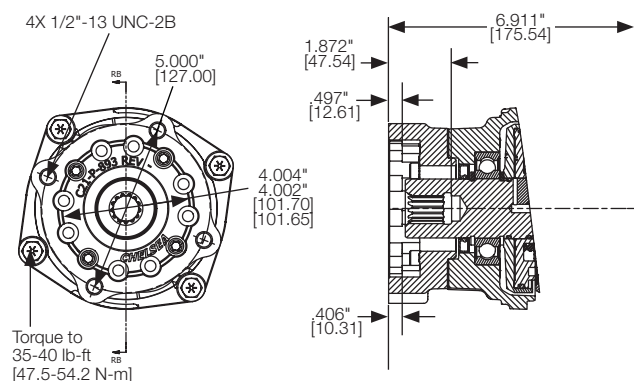
XD Output Option Chelsea Special (Cloverleaf), SAE B Shaft (7/8" - 13T)		
Part Number	Description	Qty.
329828-3X	Shaft & Clutch Assembly (3-P-1135 Shaft) (HYD).....	1 or
329832-3X	Shaft & Clutch Assembly (3-P-1135 Shaft) (AIR)	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
21-P-885	Bearing Cap (DRY)	1
380563-14	9/16" Hex Flange Head Cap Screw (.312"-16 x 1.500")	4
4-P-209	Spacer (Included in Kit).....	1
329906X	Pump Mounting Kit.....	1
†329160-143X	Conversion Kit (XD to XR)	



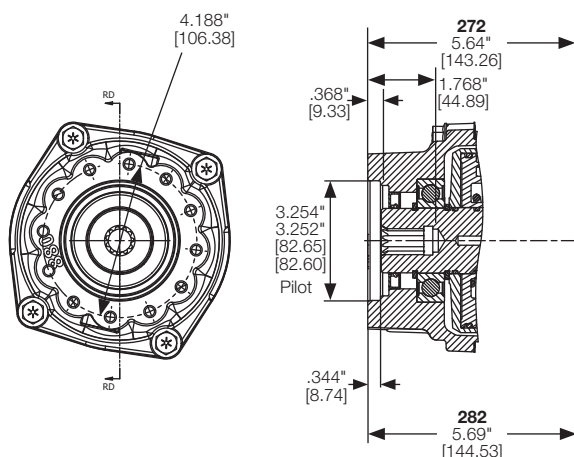
XV Output Option 1410 Series Companion Flange*		
Part Number	Description	Qty.
329828-2X	Shaft & Clutch Assembly (3-P-1134 Shaft) (HYD).....	1 or
329832-2X	Shaft & Clutch Assembly (3-P-1134 Shaft) (AIR)	1
28-P-211	Oil Seal (3.001" x 2.000" x .375").....	1
21-P-886	Bearing Cap	1
380563-14	9/16" Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
380486	1-1/4" Thin Nylon Lock Nut (.875"-14).....	1
380076-13	Hardened Flat Washer (.950" x 1.762" x .157").....	1
380503	1410 Series Companion Flange.....	1
†329160-116X	Conversion Kit (XD to XV)	

* 1-1/2" - 10T Spline Shaft

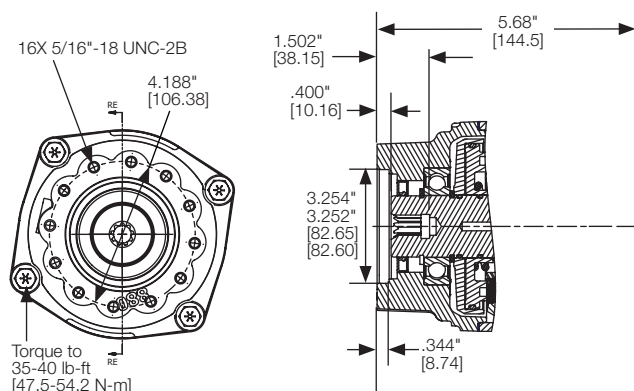
†Conversion Kits do not include all parts shown above. See pages 81-84 for Conversion Kit BOMs.

Output Options**Parts List**
282 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.
329828-3X	Shaft & Clutch Assembly (3-P-1135 Shaft) (HYD).....	1 or
329832-3X	Shaft & Clutch Assembly (3-P-1135 Shaft) (AIR)	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
21-P-885	Bearing Cap (DRY)	1 or
21-P-887	Bearing Cap (WET)	1
380563-14	9/16" Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
328170-216X	Cap Screw Kit	1
378447-8	1/4" Socket Head Cap Screw (.312"-18 x 1.500") ...	4
21-P-894	Pump Flange	1
35-P-101	Wet Spline Bearing Cap Gasket	1
WET SPLINE LOOSE PARTS		
329699-1X	Hose Assembly	1
329959X	Wet Spline Parts Kit.....	1
329658X	Cover Kit	1
†329160-145X	Conversion Kit (XD to RB DRY)	
†329160-146X	Conversion Kit (XD to RB WET)	

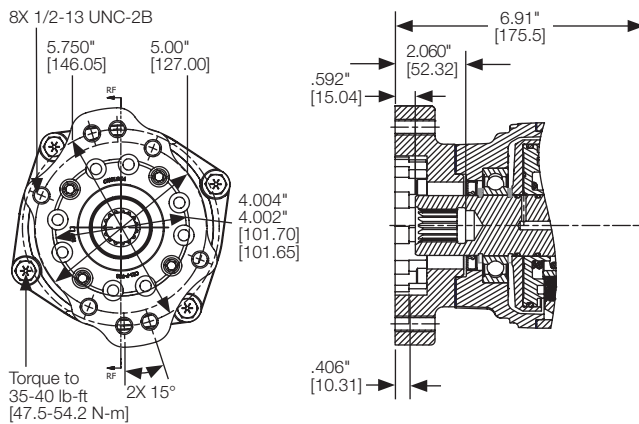


RD Output Option Rotatable SAE A (3.250") Pilot, Non Standard Shaft (3/4" - 11T)		
Part Number	Description	Qty.
329828-11X	Drive Assembly Shaft & Clutch (3-P-1235 Shaft).....	1 or
329832-11X	Drive Assembly Shaft & Clutch (3-P-1235 Shaft).....	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
21-P-880	Bearing Cap	1
380563-14	Hex Head Cap Screw (3/8"-16 x 1.500") Grade 8....	4

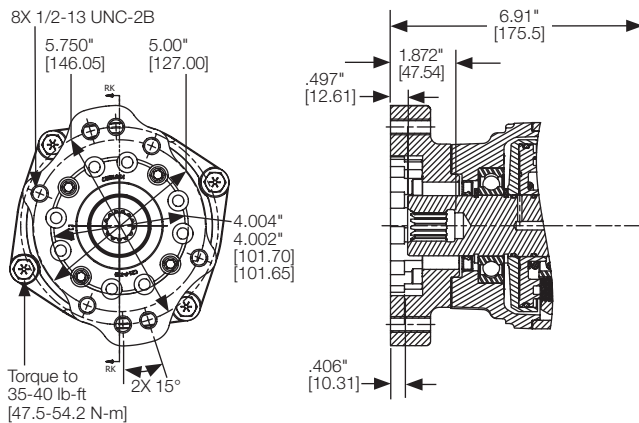


RE Output Option Rotatable SAE A 2-Bolt Flange, SAE A Shaft (5/8" - 9T)		
Part Number	Description	Qty.
329828-10X	Shaft & Clutch Assembly (3-P-1170 Shaft) (HYD).....	1 or
329832-8X	Shaft & Clutch Assembly (3-P-1170 Shaft) (AIR)	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
21-P-880	Bearing Cap (DRY)	1
380563-14	9/16" Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
†329160-118X	Conversion Kit (XD to RE DRY)	

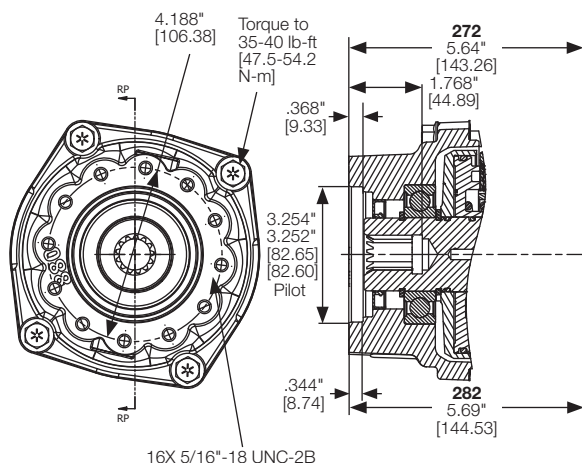
†Conversion Kits do not include all parts shown above. See pages 81-84 for Conversion Kit BOMs.

Output Options**Parts List
282 Series****Bill 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.
329828-4X	Shaft & Clutch Assembly (3-P-1136 Shaft) (HYD).....	1 or
329832-4X	Shaft & Clutch Assembly (3-P-1136 Shaft) (AIR)	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
21-P-885	Bearing Cap (DRY)	1 or
21-P-887	Bearing Cap (WET)	1
380563-14	9/16" Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
328170-216X	Cap Screw Kit	1
378447-8	1/4" Socket Head Cap Screw (.312"-18 x 1.500") ...	4
21-P-731	Pump Flange	1
35-P-101	Wet Spline Bearing Cap Gasket	1
WET SPLINE LOOSE PARTS		
329699-1X	Hose Assembly	1
329700X	Wet Spline Parts Kit.....	1
329658X	Cover Kit	1
†329160-104X	Conversion Kit (XD to RF DRY)	
†329160-105X	Conversion Kit (XD to RF WET)	



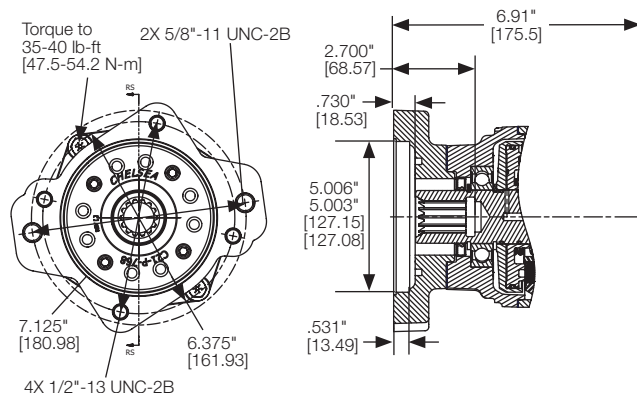
RK Output Option		
Rotatable SAE B 2 or 4-Bolt Flange, SAE B Shaft (7/8" - 13T)		
Part Number	Description	Qty.
329828-3X	Shaft & Clutch Assembly (3-P-1135 Shaft) (HYD).....	1 or
329832-3X	Shaft & Clutch Assembly (3-P-1135 Shaft) (AIR)	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
21-P-885	Bearing Cap (DRY)	1 or
21-P-887	Bearing Cap (WET)	1
380563-14	9/16" Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
328170-216X	Cap Screw Kit	1
V378447-8	1/4" Socket Head Cap Screw (.312"-18 x 1.500") ...	4
21-P-731	Pump Flange	1
35-P-101	Wet Spline Bearing Cap Gasket	1
WET SPLINE LOOSE PARTS		
329699-1X	Hose Assembly	1
329700X	Wet Spline Parts Kit.....	1
329658X	Cover Kit	1
†329160-100X	Conversion Kit (XD to RK DRY)	
†329160-101X	Conversion Kit (XD to RK WET)	



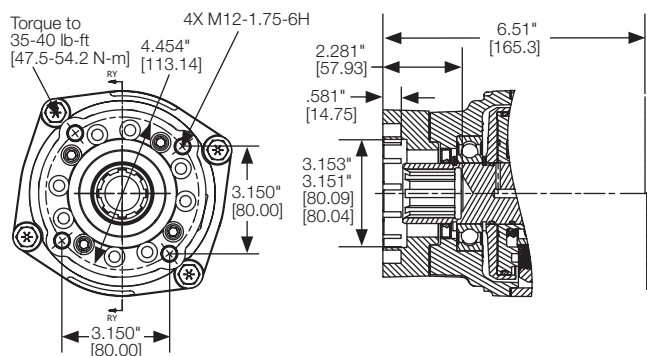
RP Output Option		
Rotatable SAE A 4-Bolt Flange, SAE B Shaft (7/8" - 13T)		
Part Number	Description	Qty.
329828-12X	Drive Assembly Shaft & Clutch (3-P-1236 Shaft).....	1 or
329832-12X	Drive Assembly Shaft & Clutch (3-P-1236 Shaft).....	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
21-P-880	Bearing Cap	1
380563-14	Hex Head Cap Screw (3/8"-16 x 1.500") Grade 8....	4

†Conversion Kits do not include all parts shown above. See pages 81-84 for Conversion Kit BOMs.

Bill of Materials - Pump Mount (Continued)



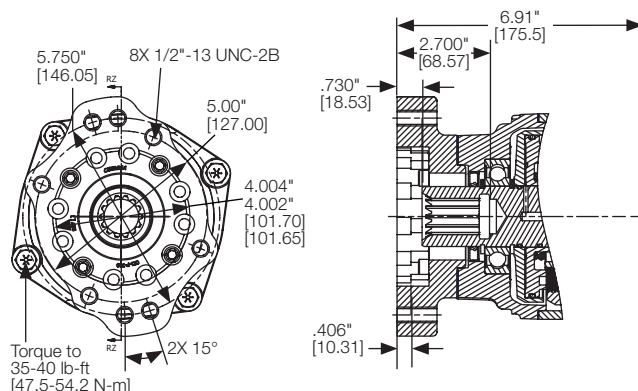
RS Output Option		
Rotatable SAE C 2 or 4-Bolt Flange, SAE C Shaft (1-1/4" - 14T)		
Part Number	Description	Qty.
329828-5X	Shaft & Clutch Assembly (3-P-1137 Shaft) (HYD).....	1 or
329832-5X	Shaft & Clutch Assembly (3-P-1137 Shaft) (AIR)	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
21-P-885	Bearing Cap (DRY)	1 or
21-P-887	Bearing Cap (WET)	1
380563-14	9/16" Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
328170-216X	Cap Screw Kit	1
378447-8	1/4" Socket Head Cap Screw (.312"-18 x 1.500") ...	4
21-P-769	Pump Flange	1
35-P-101	Wet Spline Bearing Cap Gasket	1
WET SPLINE LOOSE PARTS		
329699-1X	Hose Assembly	1
329744X	Wet Spline Loose Parts Kit	1
329654X	Cover Kit	1
†329160-106X	Conversion Kit (XD to RS DRY)	
†329160-107X	Conversion Kit (XD to RS WET)	



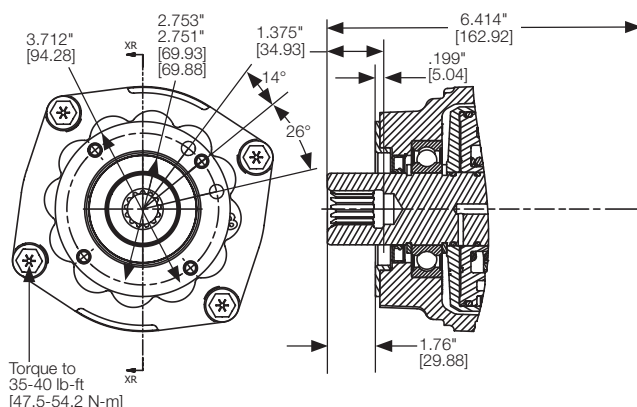
RY Output Option		
Rotatable ISO 7653 Pump Mount, DIN 5462 Shaft		
Part Number	Description	Qty.
329828-6X	Shaft & Clutch Assembly (3-P-1138 Shaft) (HYD).....	1 or
329832-6X	Shaft & Clutch Assembly (3-P-1138 Shaft) (AIR)	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
21-P-885	Bearing Cap (DRY)	1 or
21-P-887	Bearing Cap (WET)	1
380563-14	9/16" Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
328170-216X	Cap Screw Kit	1
378447-8	1/4" Socket Head Cap Screw (.312"-18 x 1.500") ...	4
21-P-771	Pump Flange	1
35-P-101	Wet Spline Bearing Cap Gasket	1
WET SPLINE LOOSE PARTS		
329699-1X	Hose Assembly	1
329742X	Wet Spline Loose Parts Kit	1
329659X	Cover Kit	1
†329160-108X	Conversion Kit (XD to RY DRY)	
†329160-109X	Conversion Kit (XD to RY WET)	

†Conversion Kits do not include all parts shown above. See pages 81-84 for Conversion Kit BOMs.

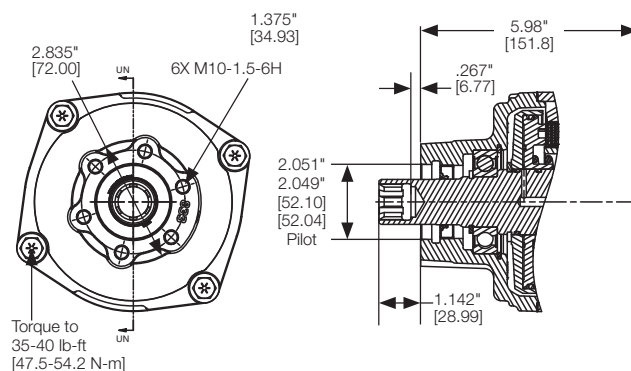
Bill of Materials - Pump Mount (Continued)



RZ Output Option		
Rotatable SAE B 2 or 4-Bolt Flange, SAE C Shaft (1-1/4" - 14T)		
Part Number	Description	Qty.
329828-5X	Shaft & Clutch Assembly (3-P-1137 Shaft) (HYD).....	1 or
329832-5X	Shaft & Clutch Assembly (3-P-1137 Shaft) (AIR)	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
21-P-885	Bearing Cap (DRY)	1 or
21-P-887	Bearing Cap (WET)	1
380563-14	9/16" Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
328170-216X	Cap Screw Kit	1
378447-8	1/4" Socket Head Cap Screw (.312"-18 x 1.500") ...	4
21-P-731	Pump Flange	1
35-P-101	Wet Spline Bearing Cap Gasket.....	1
WET SPLINE LOOSE PARTS		
329699-1X	Hose Assembly	1
329700X	Wet Spline Parts Kit	1
329658X	Cover Kit	1
†329160-110X	Conversion Kit (XD to RZ DRY)	
†329160-111X	Conversion Kit (XD to RZ WET)	



XR Output Option		
Chelsea Special (Cloverleaf), SAE B Shaft (7/8" - 13T)		
Part Number	Description	Qty.
329828-3X	Shaft & Clutch Assembly (3-P-1135 Shaft) (HYD).....	1 or
329832-3X	Shaft & Clutch Assembly (3-P-1135 Shaft) (AIR)	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
21-P-885	Bearing Cap (DRY)	1
380563-14	9/16" Hex Flange Head Cap Screw (.312" -16 x 1.500")	4
4-P-209	Spacer (Included in Kit).....	1
329906X	XR Pump Mounting Kit	1
†329160-143X	Conversion Kit (XD to XR)	



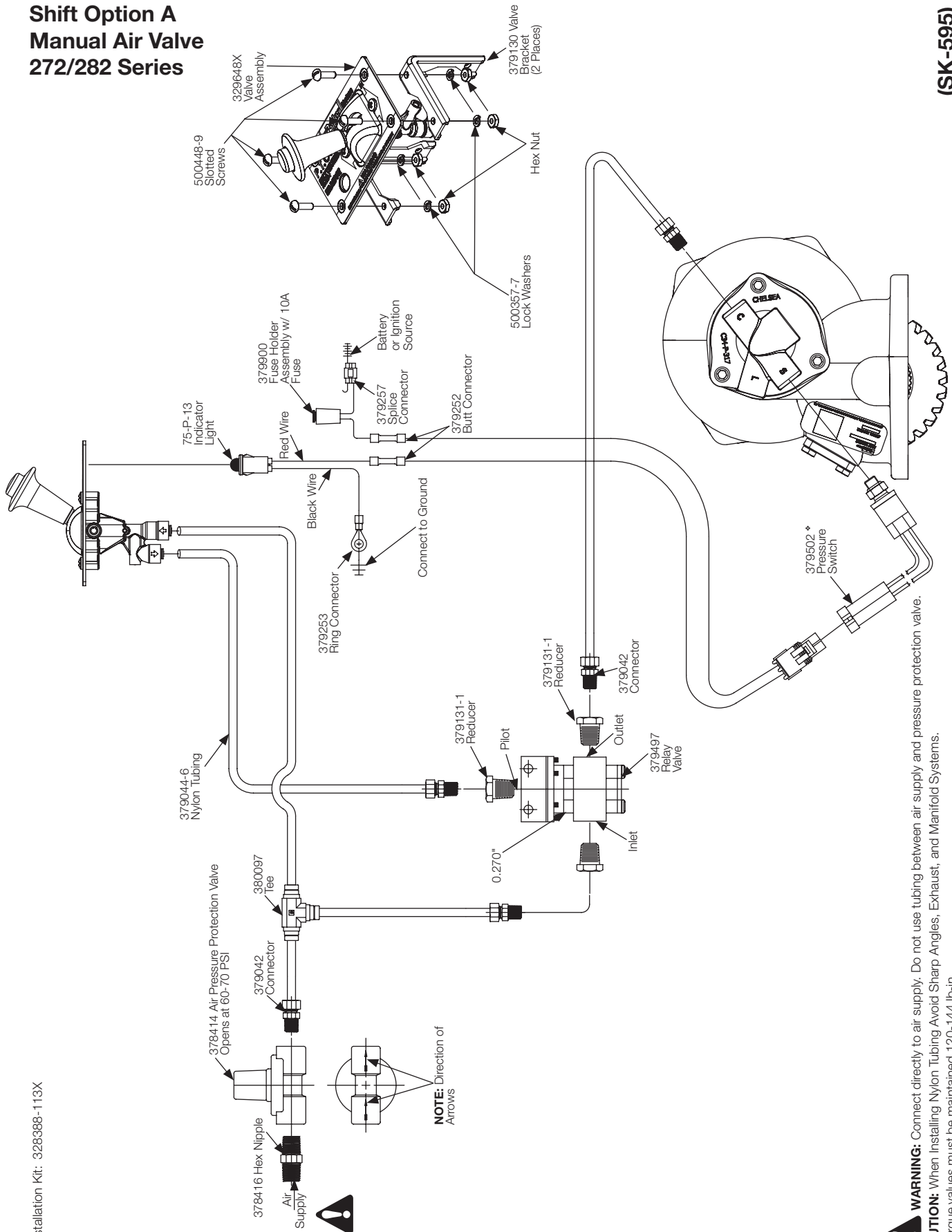
♦UN Output Option		
UNI 8953 3-Bolt Pump Flange - 6T		
Part Number	Description	Qty.
329828-7X	Shaft & Clutch Assembly (3-P-1143 Shaft) (HYD).....	1 or
329832-7X	Shaft & Clutch Assembly (3-P-1143 Shaft) (AIR)	1
550010	Ball Bearing (1.378" x .834" x .669").....	1
28-P-216	Oil Seal (2.004" x 1.250" x .374").....	1
21-P-832	Bearing Cap (DRY)	1 or
21-P-833	Bearing Cap (WET)	1
380563-14	9/16" Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
378895	Lockring	1
378576	Lockring	1
WET SPLINE LOOSE PARTS		
329699-1X	Hose Assembly	1
329821X	Wet Spline Loose Parts Kit	1
†329160-114X	Conversion Kit (XD to UN DRY)	
†329160-115X	Conversion Kit (XD to UN WET)	

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

†Conversion Kits do not include all parts shown above. See pages 81-84 for Conversion Kit BOMs.

**Shift Option A
 Manual Air Valve
 272/282 Series**

(SK-595)

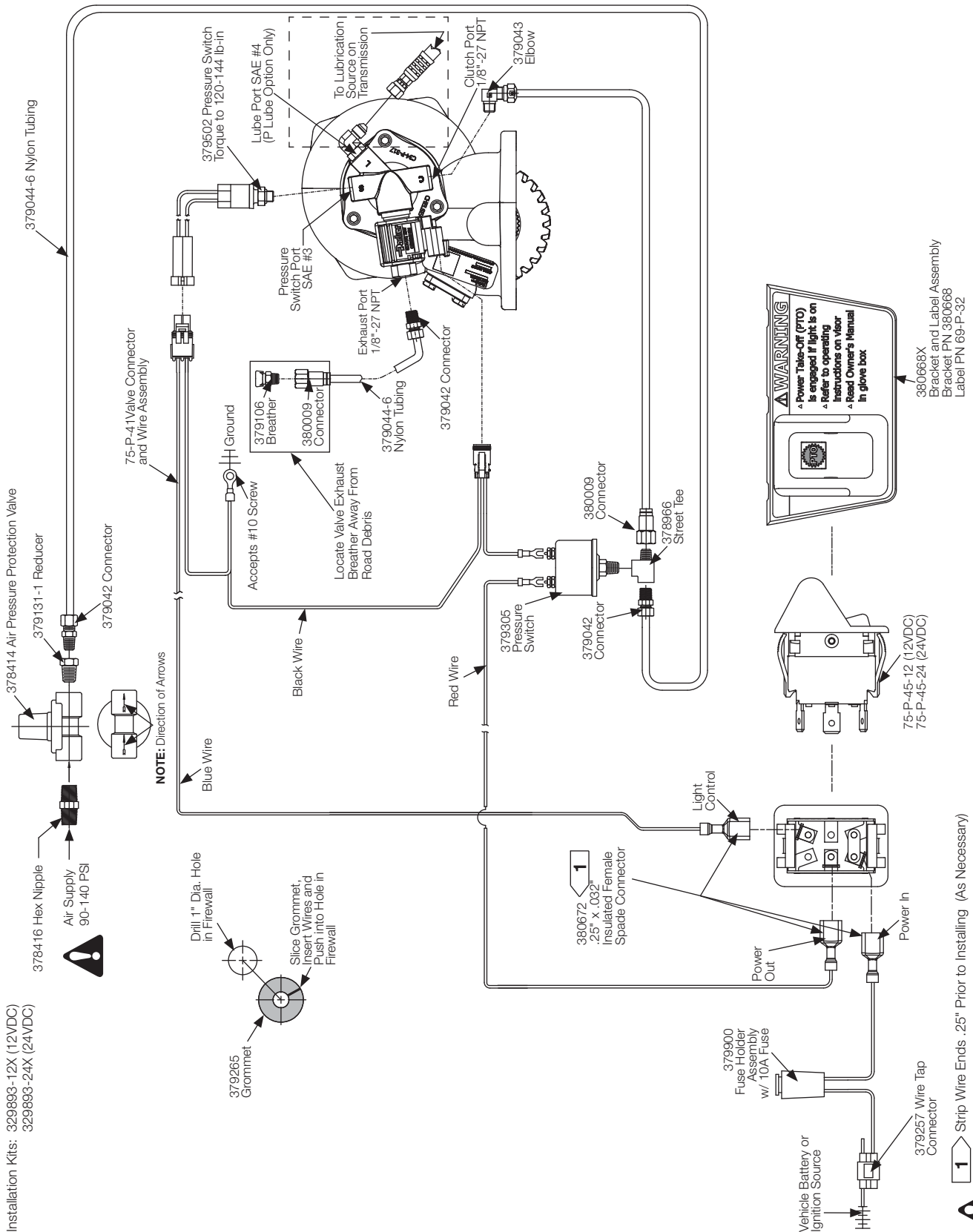


WARNING: Connect directly to air supply. Do not use tubing between air supply and pressure protection valve.
CAUTION: When installing Nylon Tubing Avoid Sharp Angles, Exhaust, and Manifold Systems.
 * Torque values must be maintained 120-144 lb-in.

Installation Kit: 328388-113X

**Shift Option 1 (12VDC) & 2 (24VDC)
Elec/Air w/o EOC (Integral Air Valve)
272/282 Series**

(SK-589 Rev C)

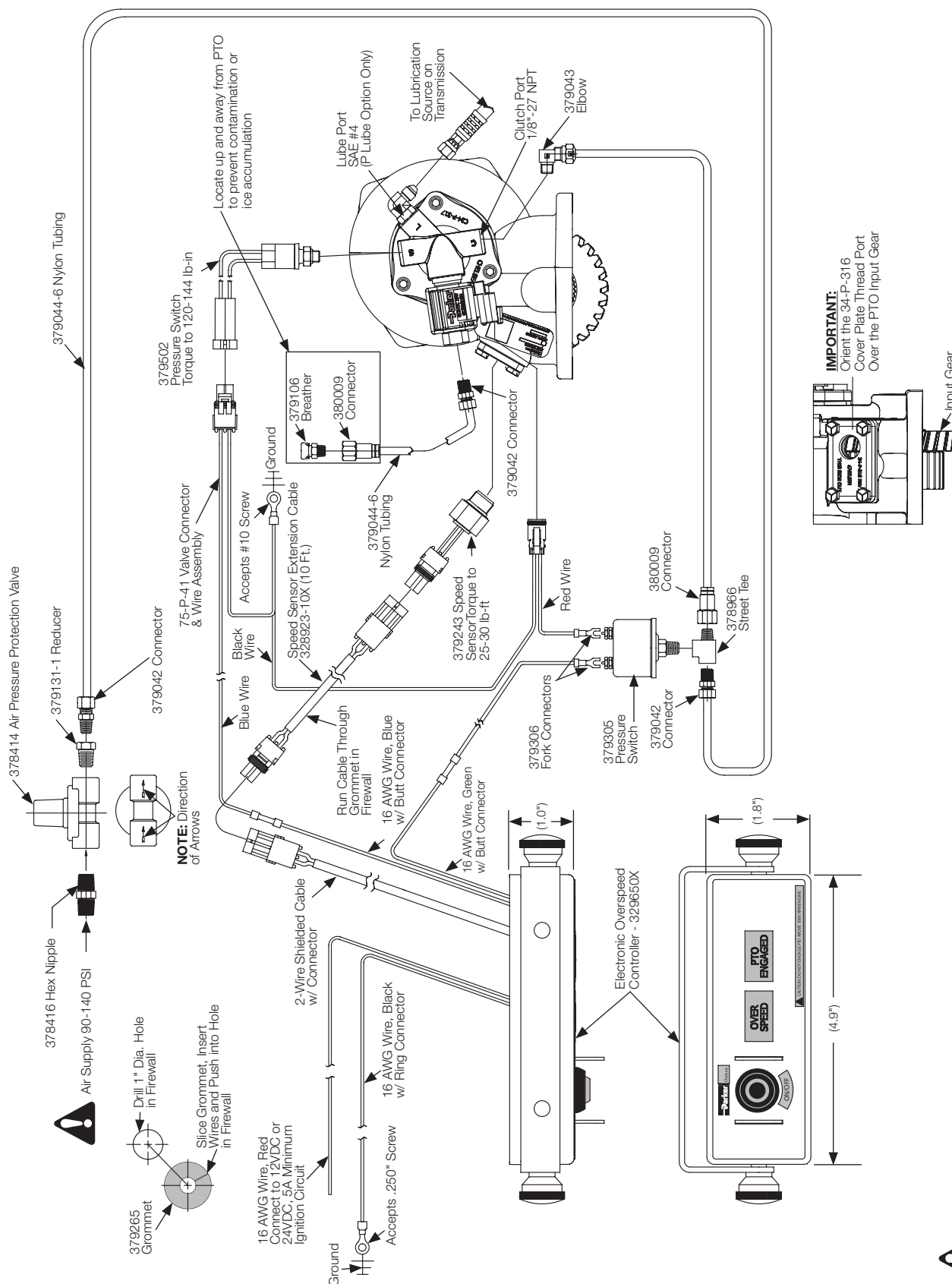


Shift Option J (12VDC) & 3 (24VDC)

Elec/Air w/ EOC (Integral Air Valve)

272/282 Series

(SK-590 Rev A)



IMPORTANT:

**Orient the 34-P-316
Cover Plate Thread Port
Over the PTO Input Gear**

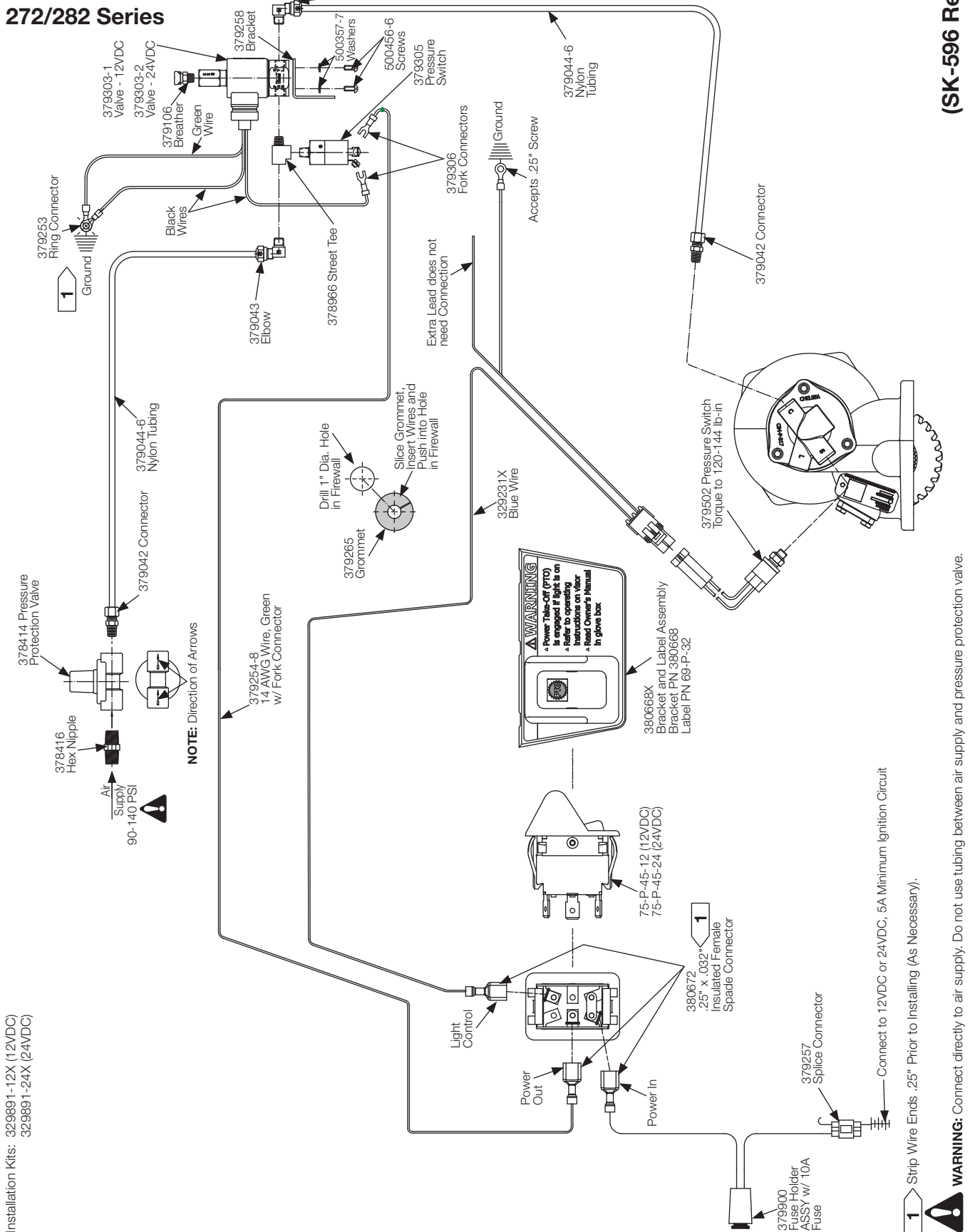
WARNING: Connect directly to air supply. Do not use tubing between air supply and pressure protection valve.

NOTE: Strip Wire Ends .25" Prior to Installing in Spade Terminal or Butt Connector (As Necessary)

Installation Kit: 329894X

**Shift Option P (12VDC) & Q (24VDC)
 Remote Elec/Air w/o EOC
 272/282 Series**

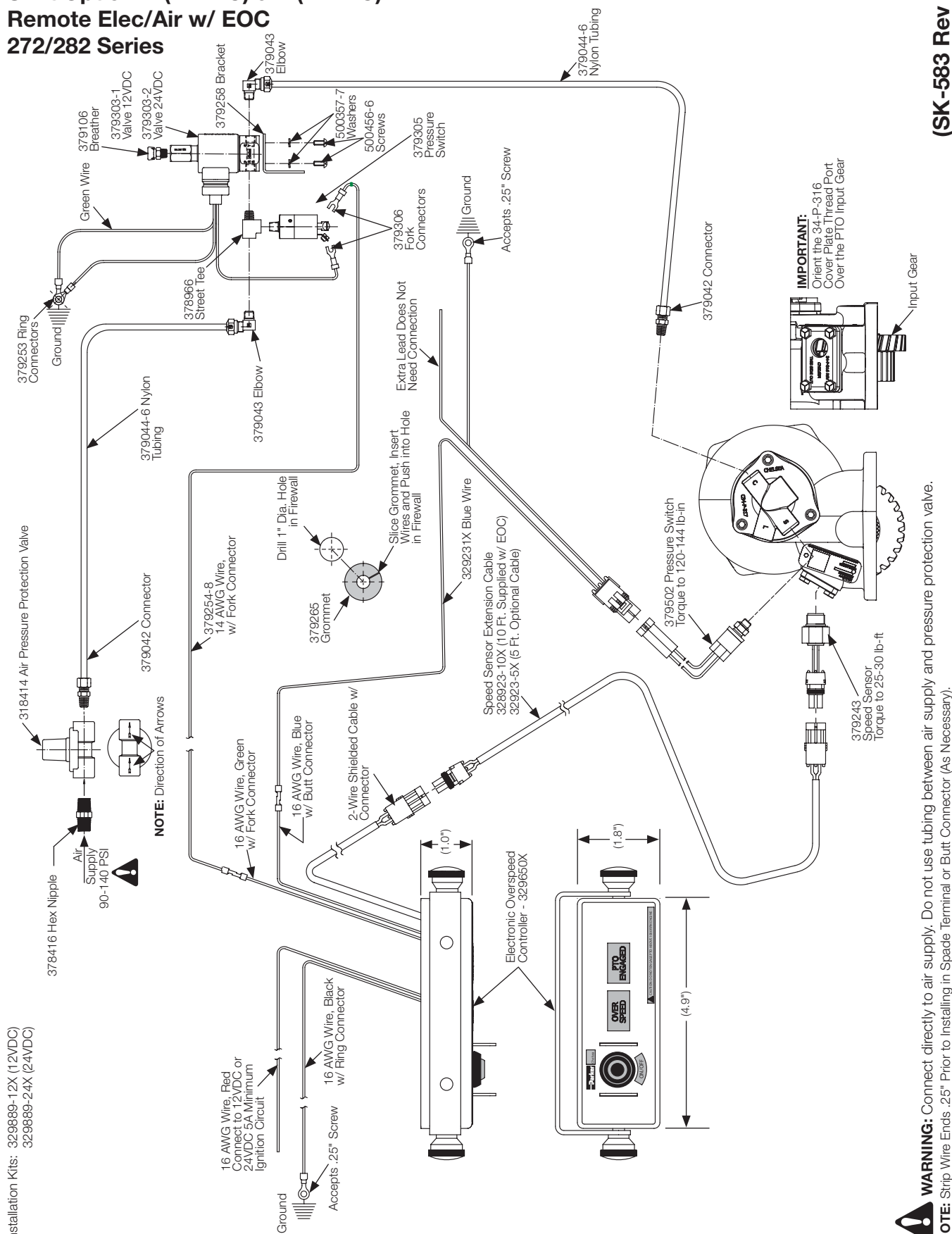
(SK-596 Rev C)



Installation Kits: 329891-12X (12VDC)
 329891-24X (24VDC)

Shift Option R (12VDC) & 4 (24VDC)
Remote Elec/Air w/ EOC
272/282 Series

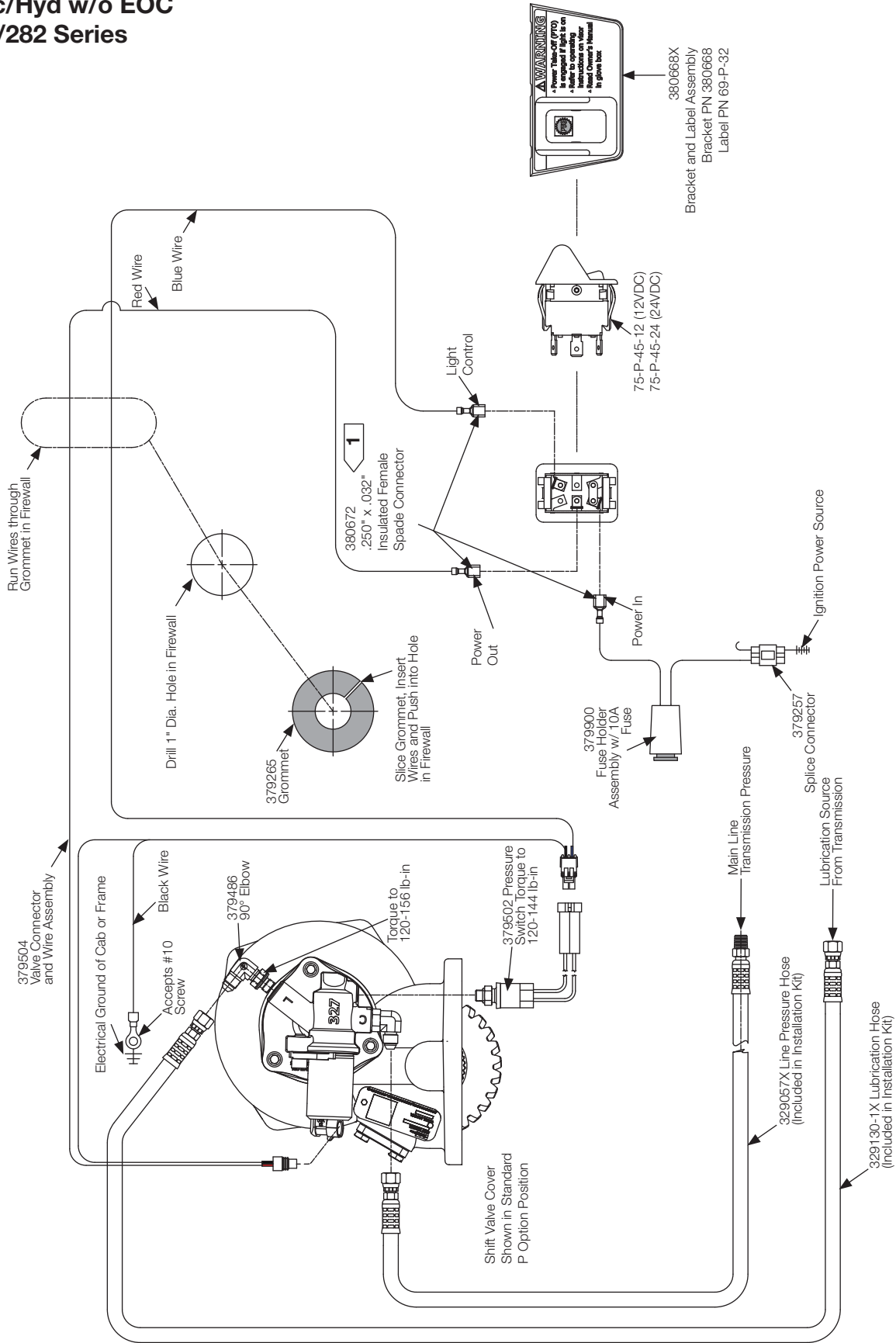
(SK-583 Rev B)



NOTE:

Shift Option B (12VDC) & D (24VDC)
Elec/Hyd w/o EOC
272/282 Series

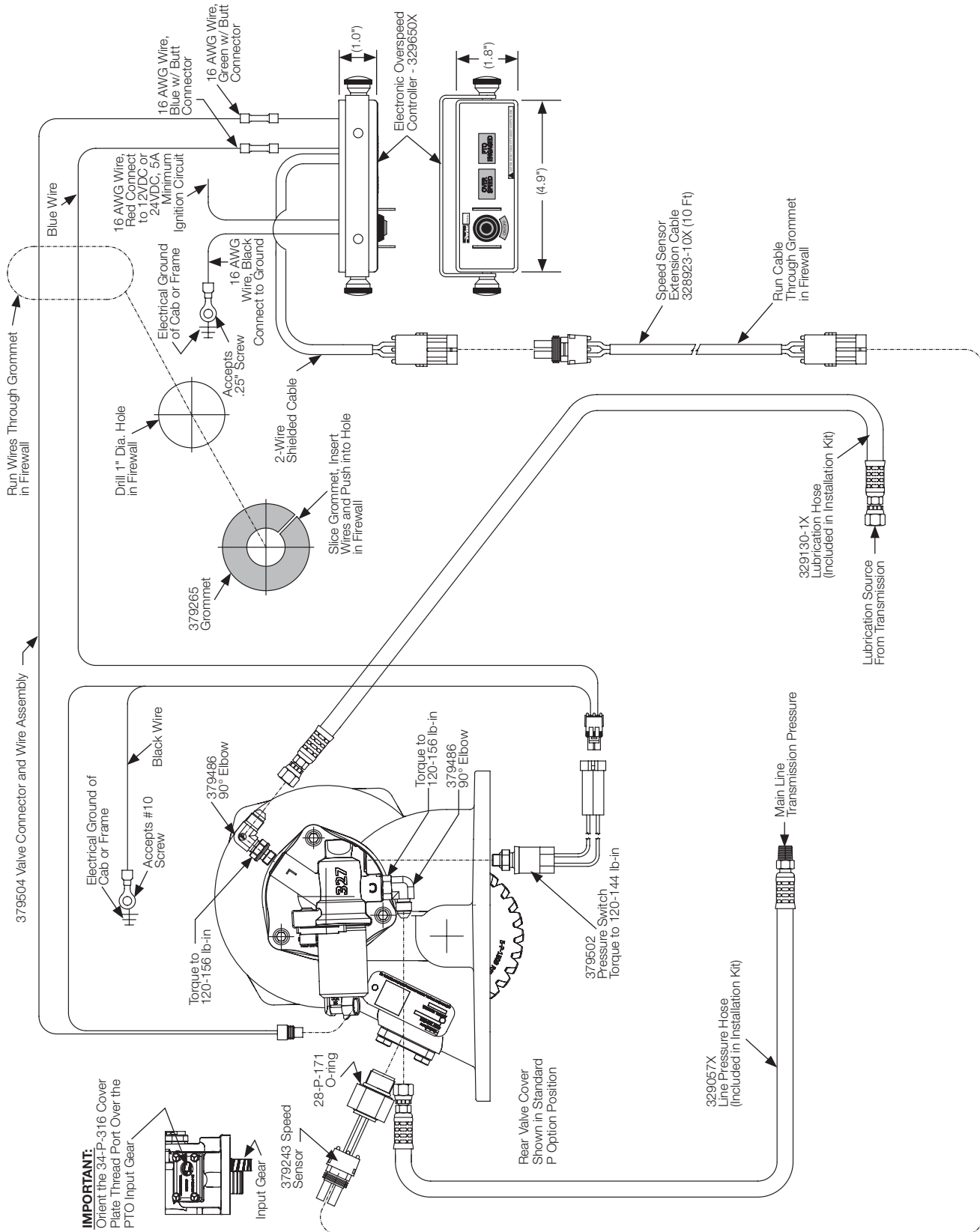
Installation Kits: 329024-12X (12VDC)
 329024-24X (24VDC)



1 Strip Wire Ends .25" Prior to Installing in Spade Terminal (As Necessary).

**Shift Option K (12VDC) & L (24VDC)
Elec/Hyd w/ EOC
272/282 Series**

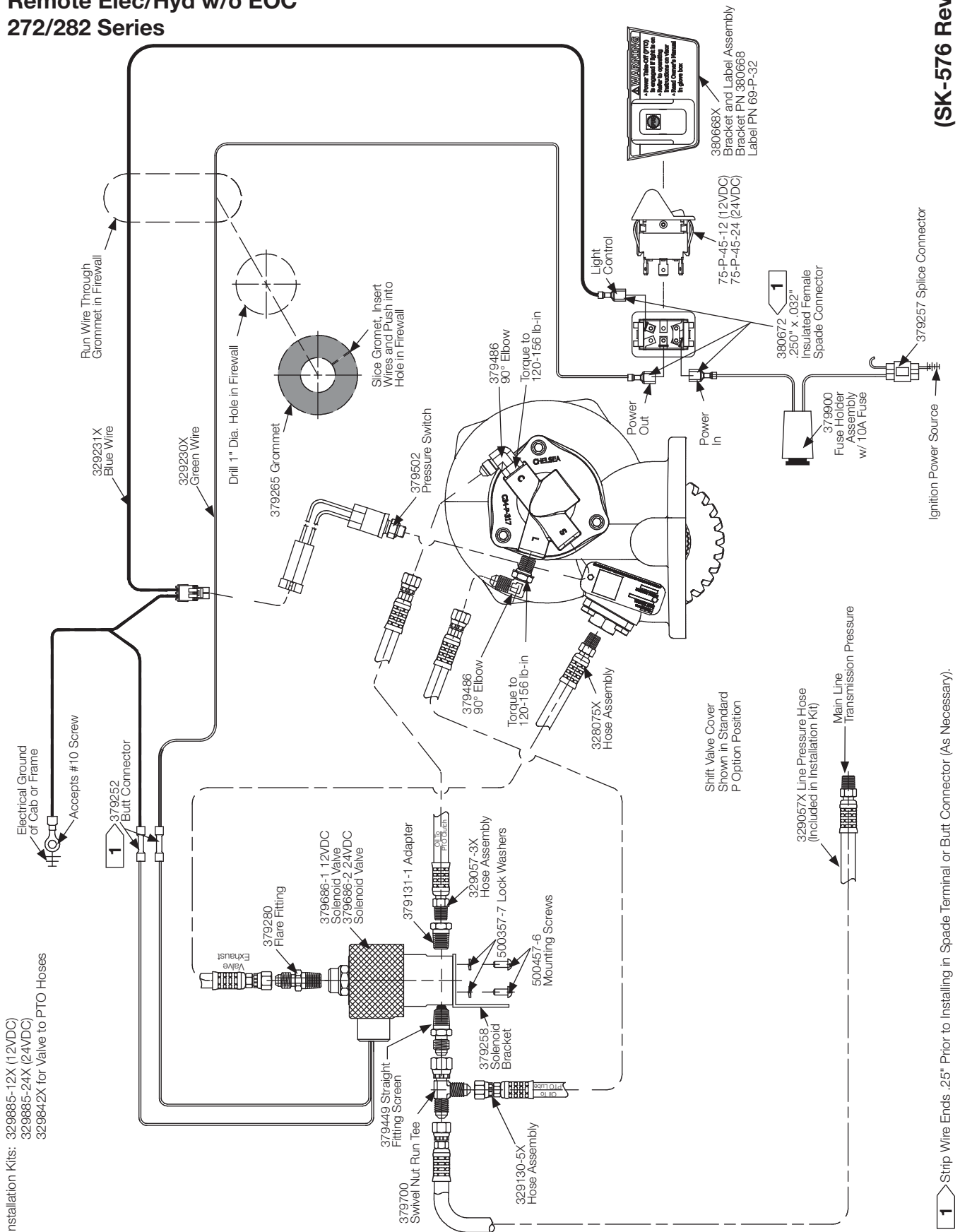
(SK-598)



NOTE: Strip Wire Ends .25" Prior to Installing in Spade Terminal or Butt Connector (As Necessary).

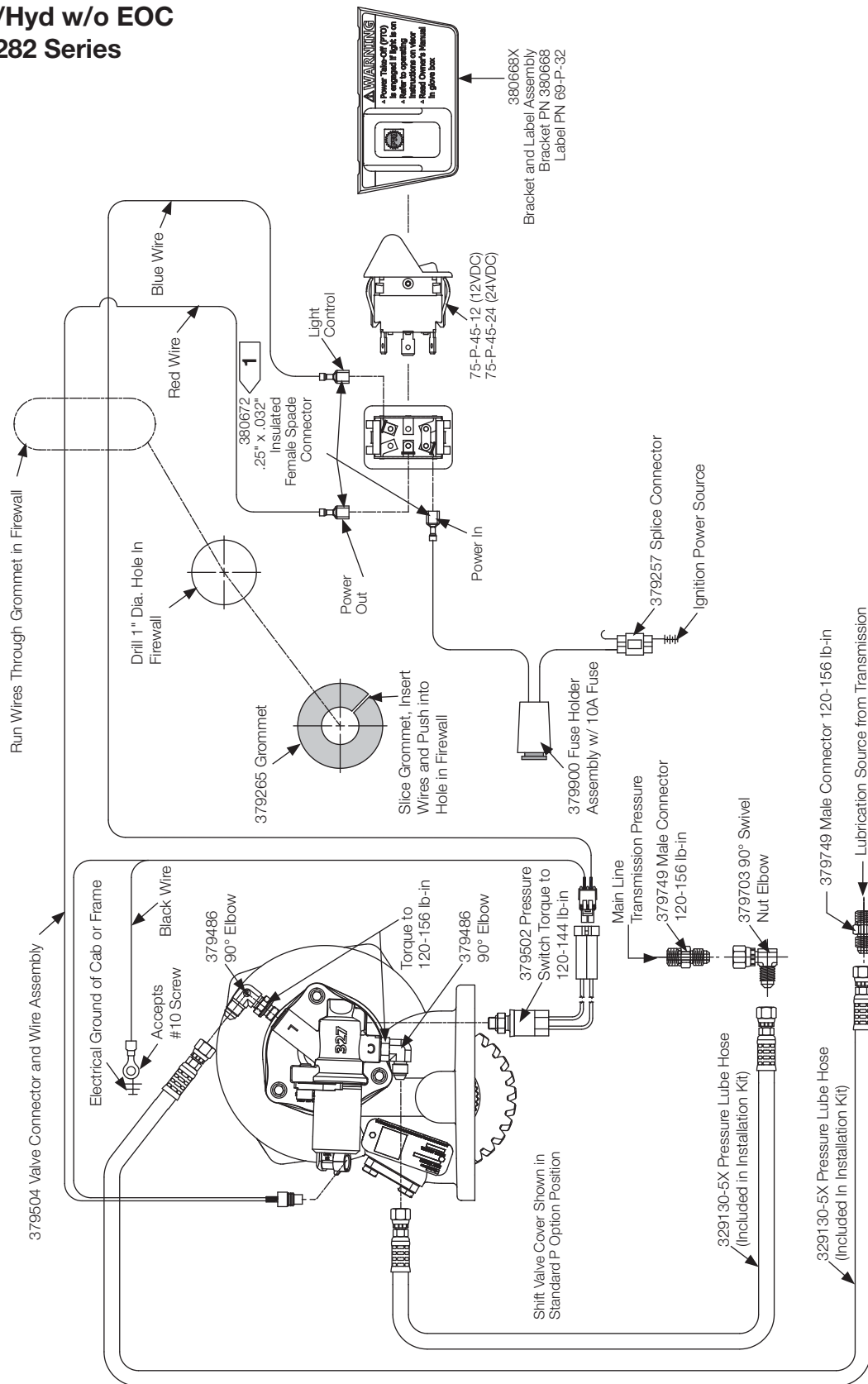
Shift Option G (12VDC) & H (24VDC) NOTE: Do not use for Allison Transmissions
Remote Elec/Hyd w/o EOC
272/282 Series

(SK-576 Rev D)



**AISIN Transmission Models MY400, MY600, A445, A443E MO35A4
Non Dodge/RAM
Shift Option B (12VDC) & D (24VDC)
Elec/Hyd w/o EOC
272/282 Series**

(SK-603 Rev A)

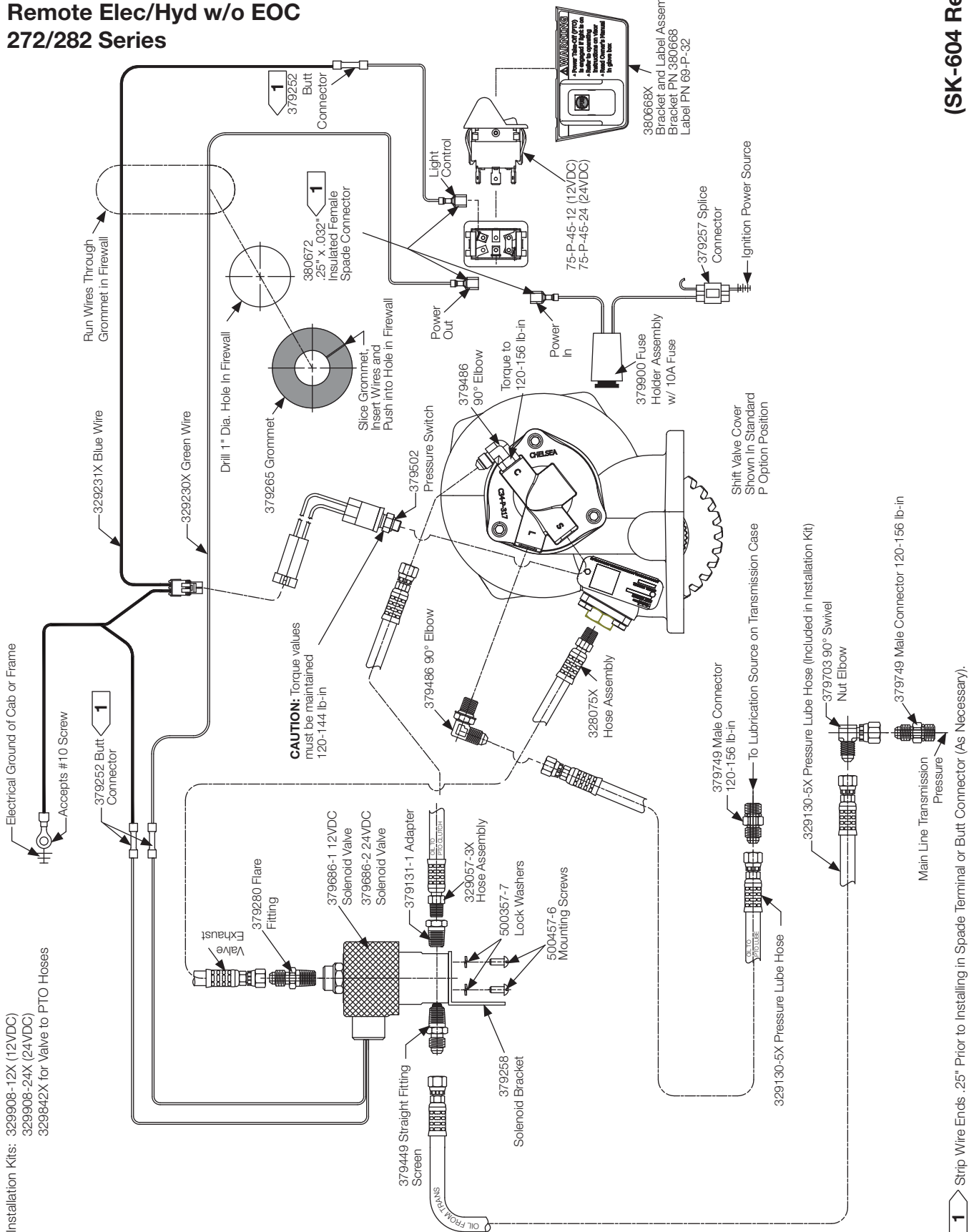


Installation Kits: 329907-12X (12VDC)
329907-24X (24VDC)

1 Strip Wire Ends .25" Prior to Installing in Spade Terminal (As Necessary).

AlSIN Transmission Models MY400, MY600, A445, A443E MO35A4
Non-Dodge/RAM Shift Option G (12VDC) & H (24VDC)
Remote Elec/Hyd w/o EOC
272/282 Series

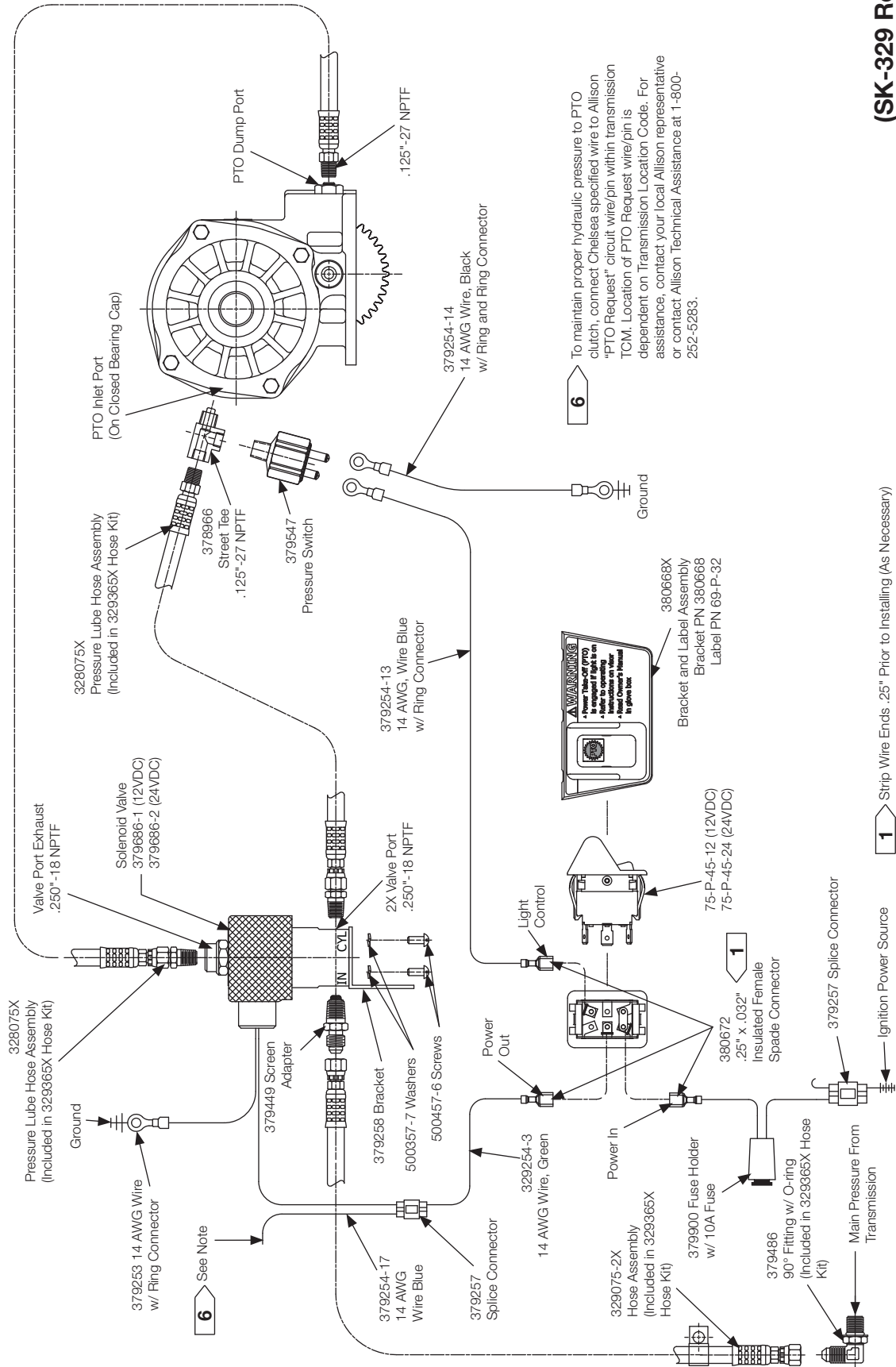
(SK-604 Rev B)



Allison Transmission Models 1000/2000/2500
Shift Option B (12VDC) & D (24VDC)
Elec/Hyd w/o EOC
272 Series

(SK-329 Rev M)

Installation Kits:
 328715X (12VDC) - Electric Shift (12VDC w/o EOC)
 328749X (24VDC) - Electric Shift (24VDC w/o EOC)
 Hose Kit:
 329365X
 J1-6 Feed Back Kit: 329336-1X

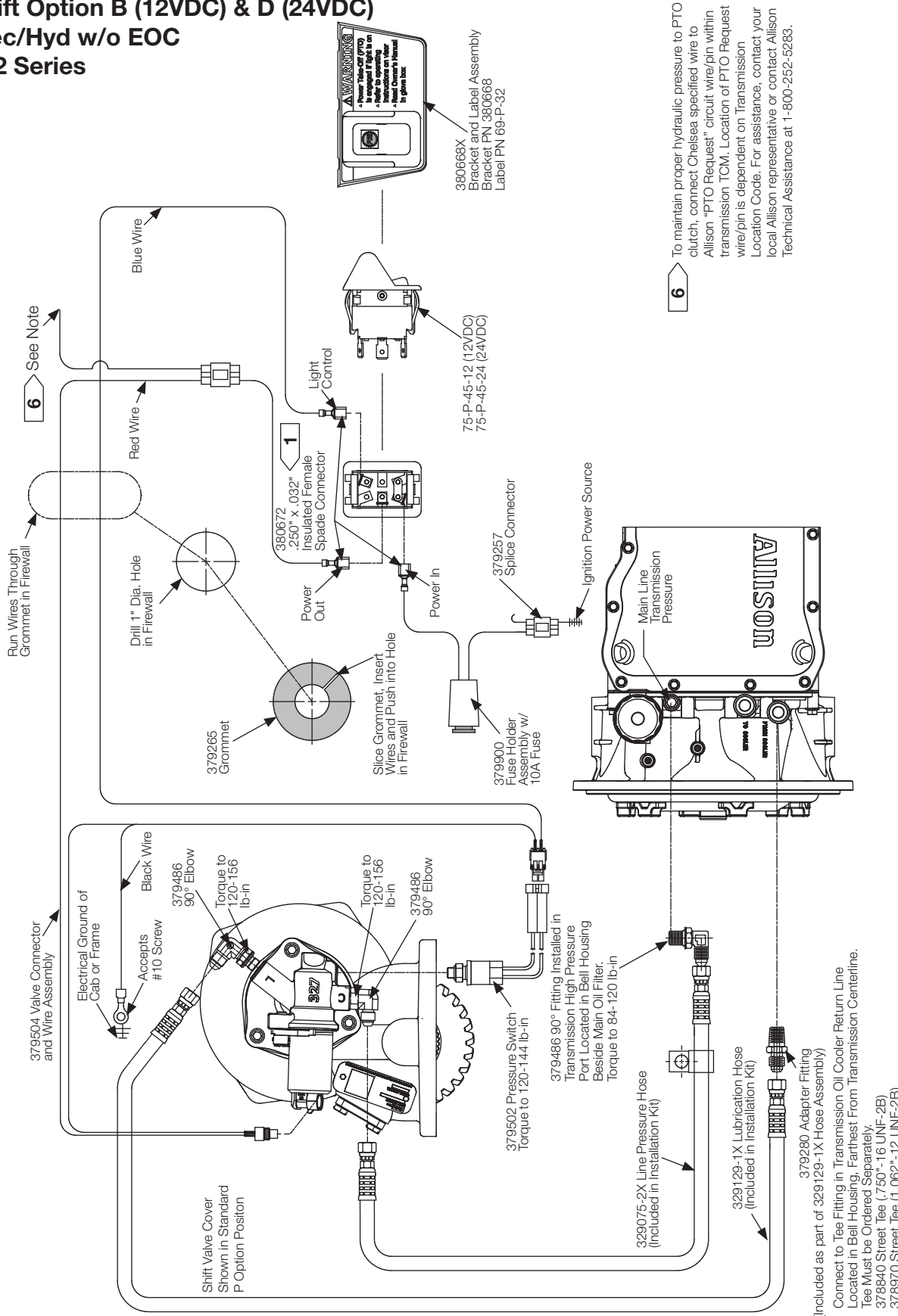


1 Strip Wire Ends .25" Prior to Installing (As Necessary)

**Allison Transmission
Shift Option B (12VDC) & D (24VDC)
Elec/Hyd w/o EOC
272 Series**

(SK-574 Rev A)

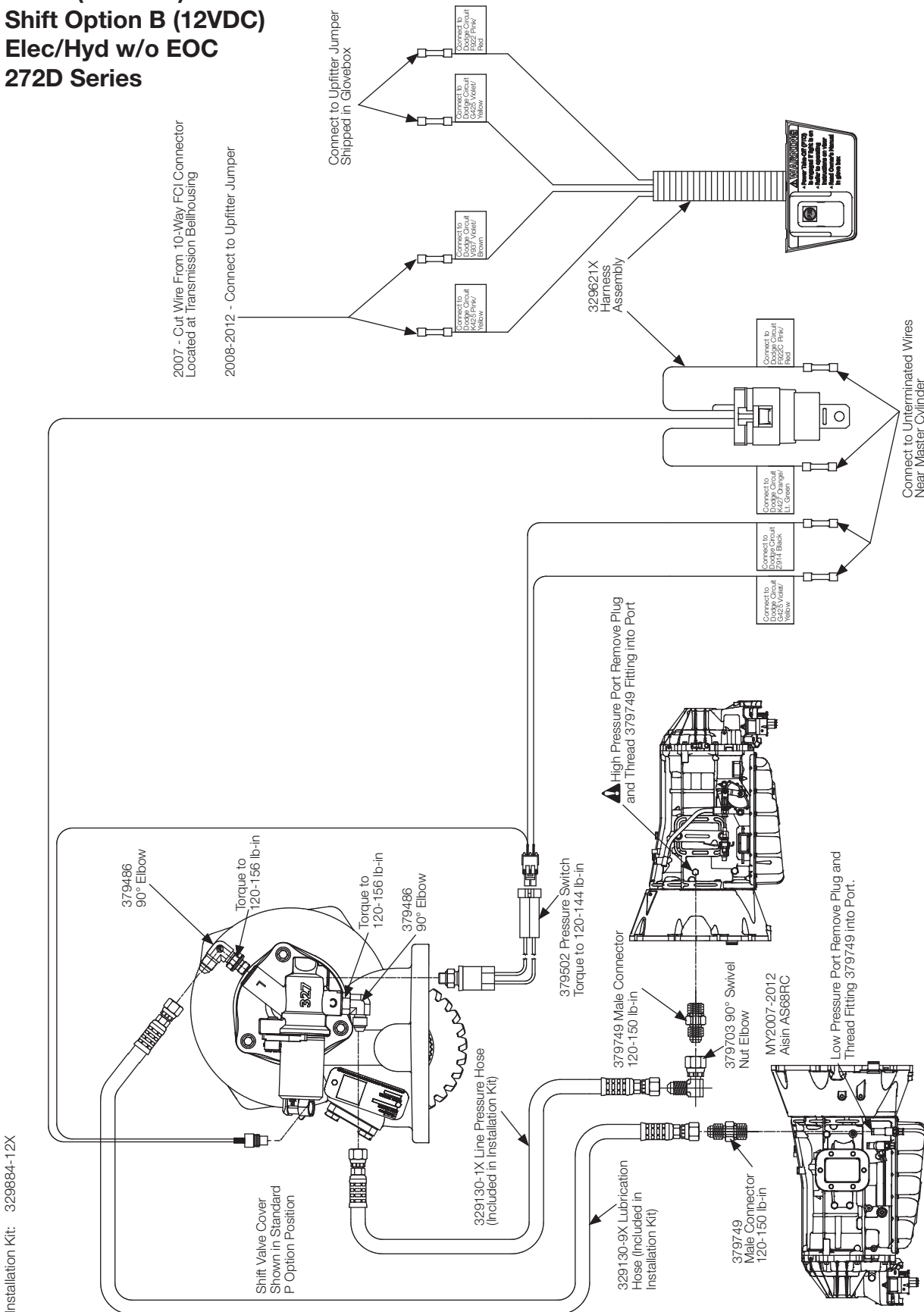
Installation Kits: 329882-12X (12VDC)
329882-24X (24VDC)



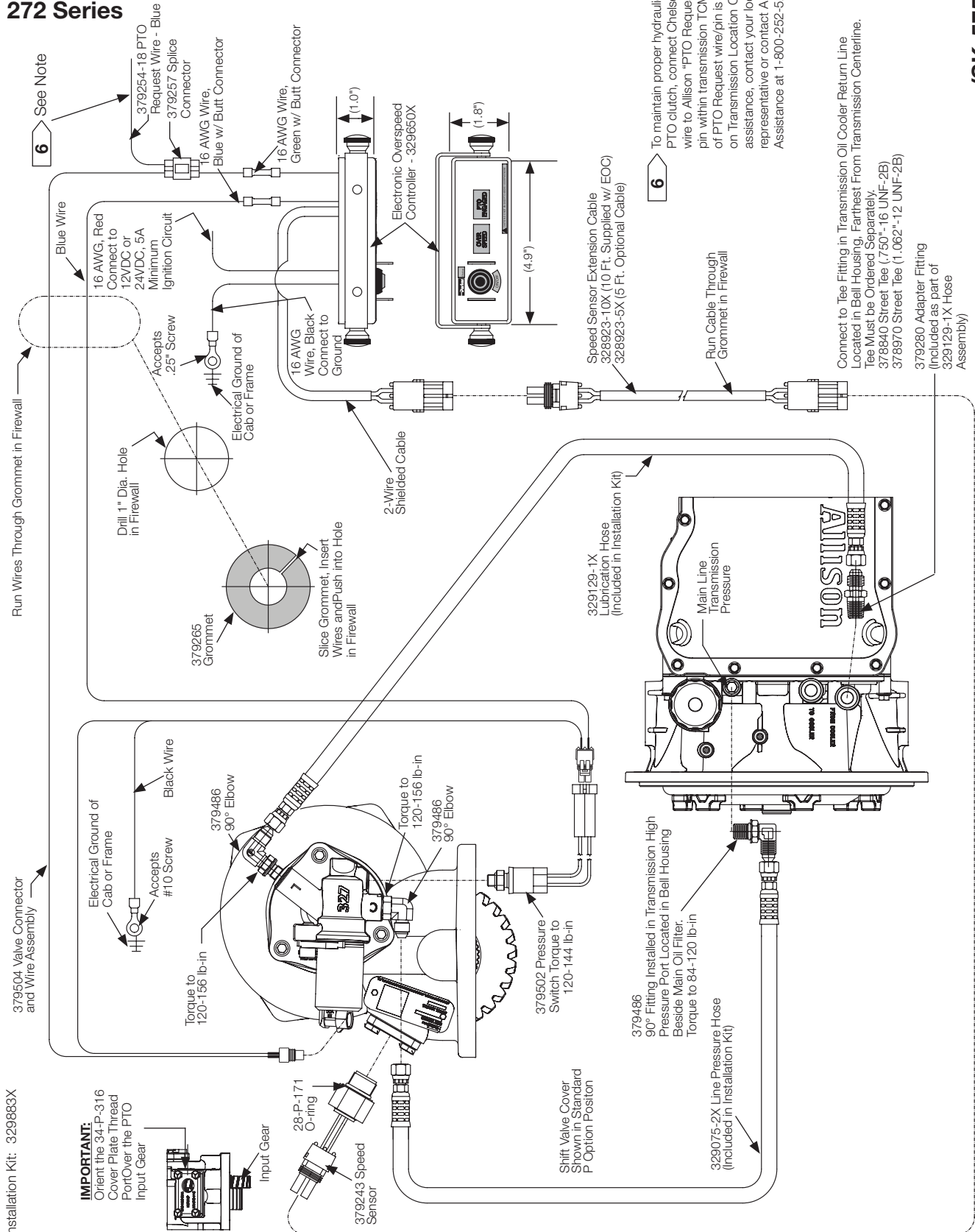
1 Strip Wire Ends .25" Prior to Installing in Butt Connector (As Necessary)

Dodge Cab/Chassis MY2007-2012
AISIN (AS68RC) Transmission
Shift Option B (12VDC)
Elec/Hyd w/o EOC
272D Series

(SK-577 Rev A)



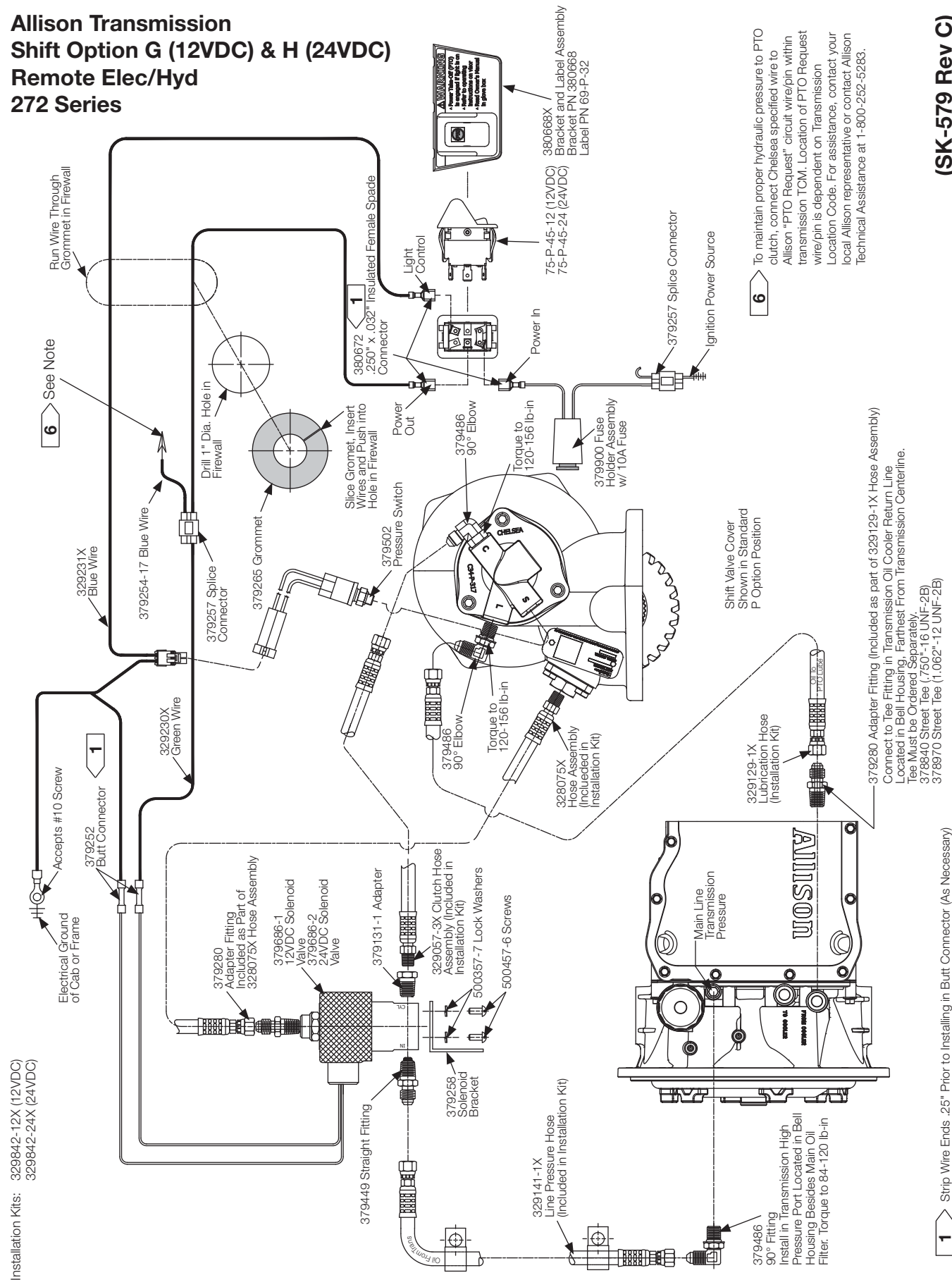
**Allison Transmission Models 1000/2000/2500
Shift Option K (12VDC) & L (24VDC)
Elec/Hyd w/ EOC
272 Series**



NOTE: Strip Wire Ends .25" Prior to Installing in Spade Terminal or Butt Connector (As Necessary).

(SK-575 Rev A)

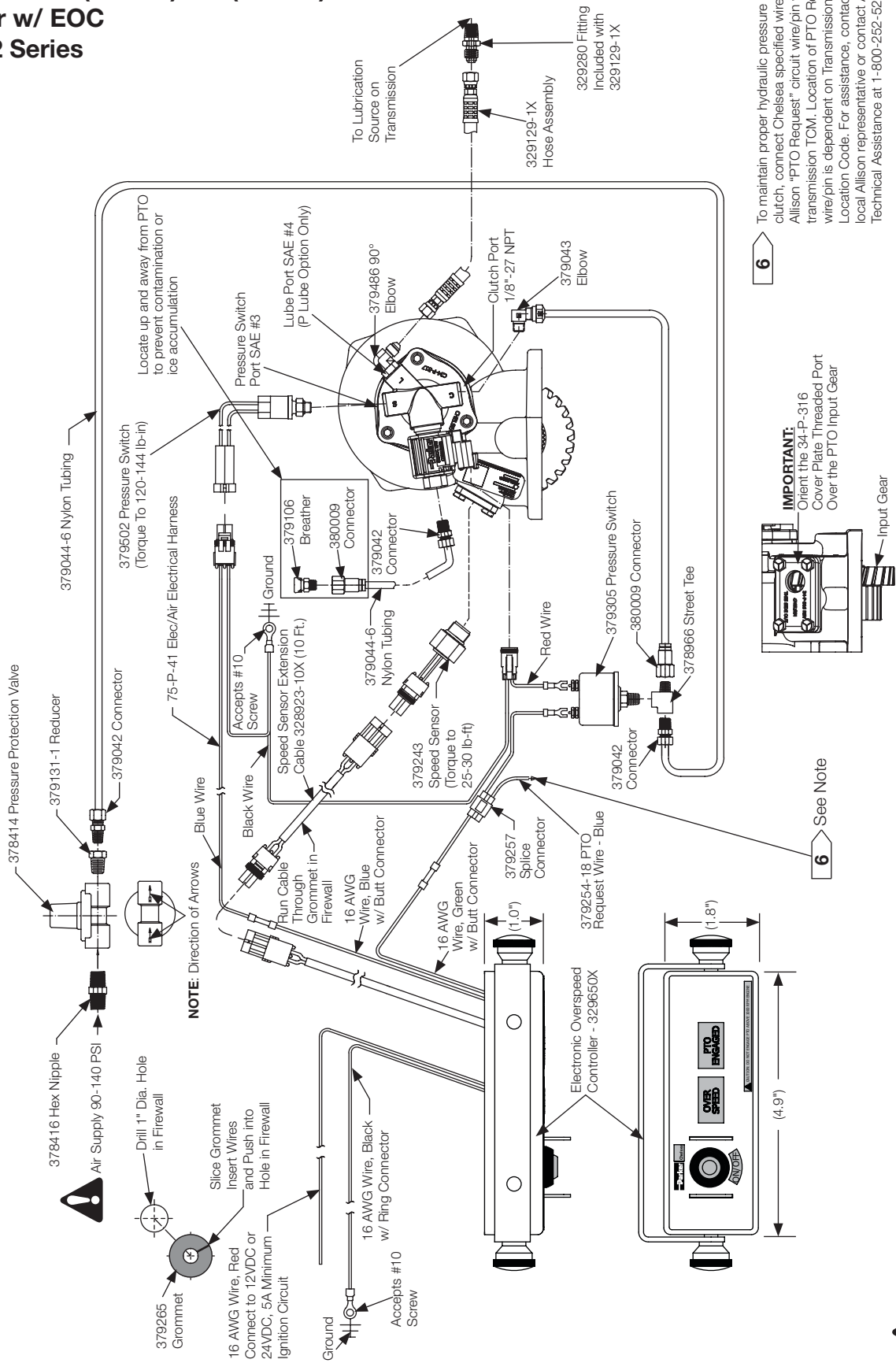
Allison Transmission Shift Option G (12VDC) & H (24VDC) Remote Elec/Hyd 272 Series



**Allison Transmission Models 1000/2000/2500
Shift Option J (12VDC) & 3 (24VDC)
Elec/Air w/ EOC
272/282 Series**

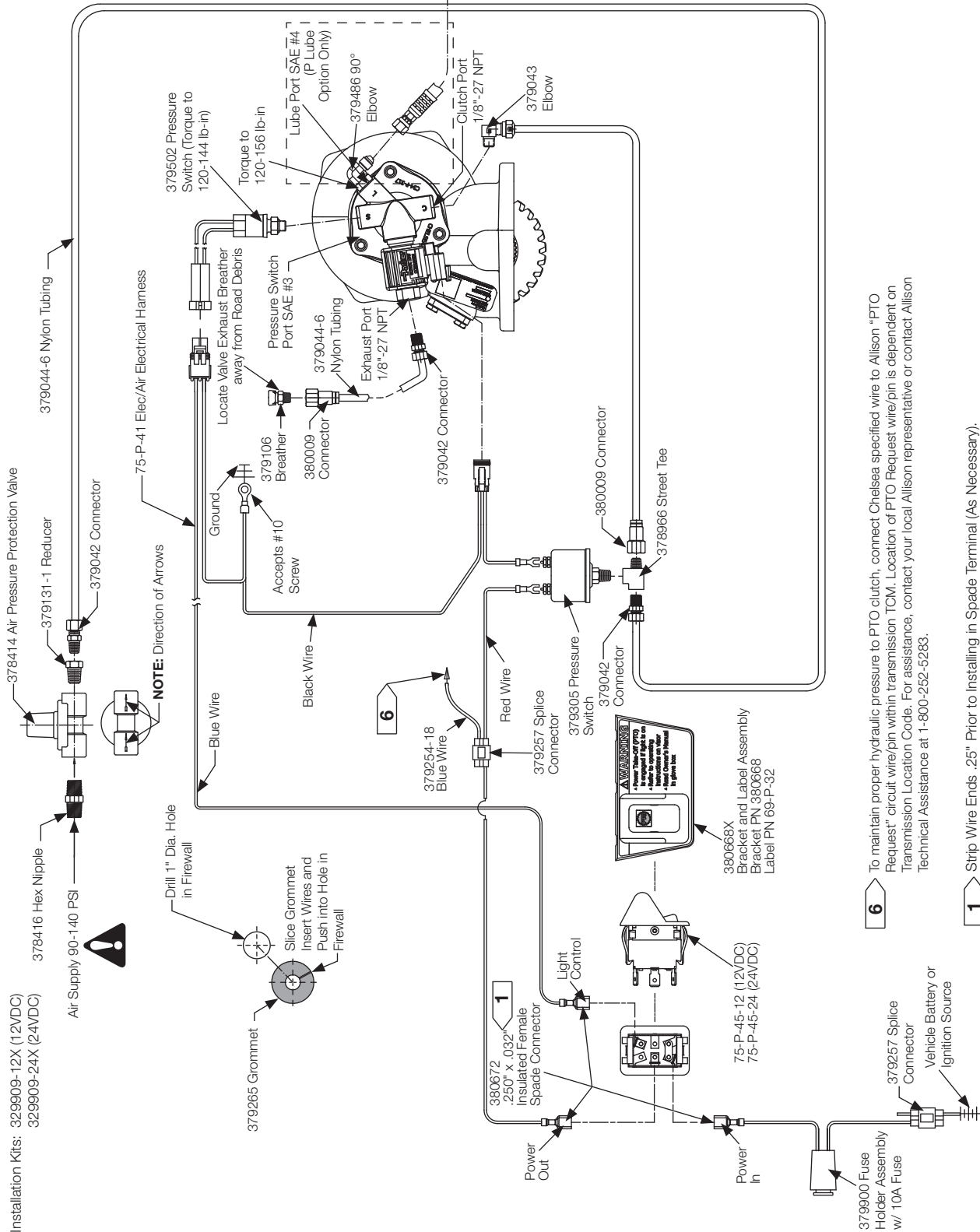
(SK-606 Rev A)

Installation Kits: 329911X (12VDC/24VDC)

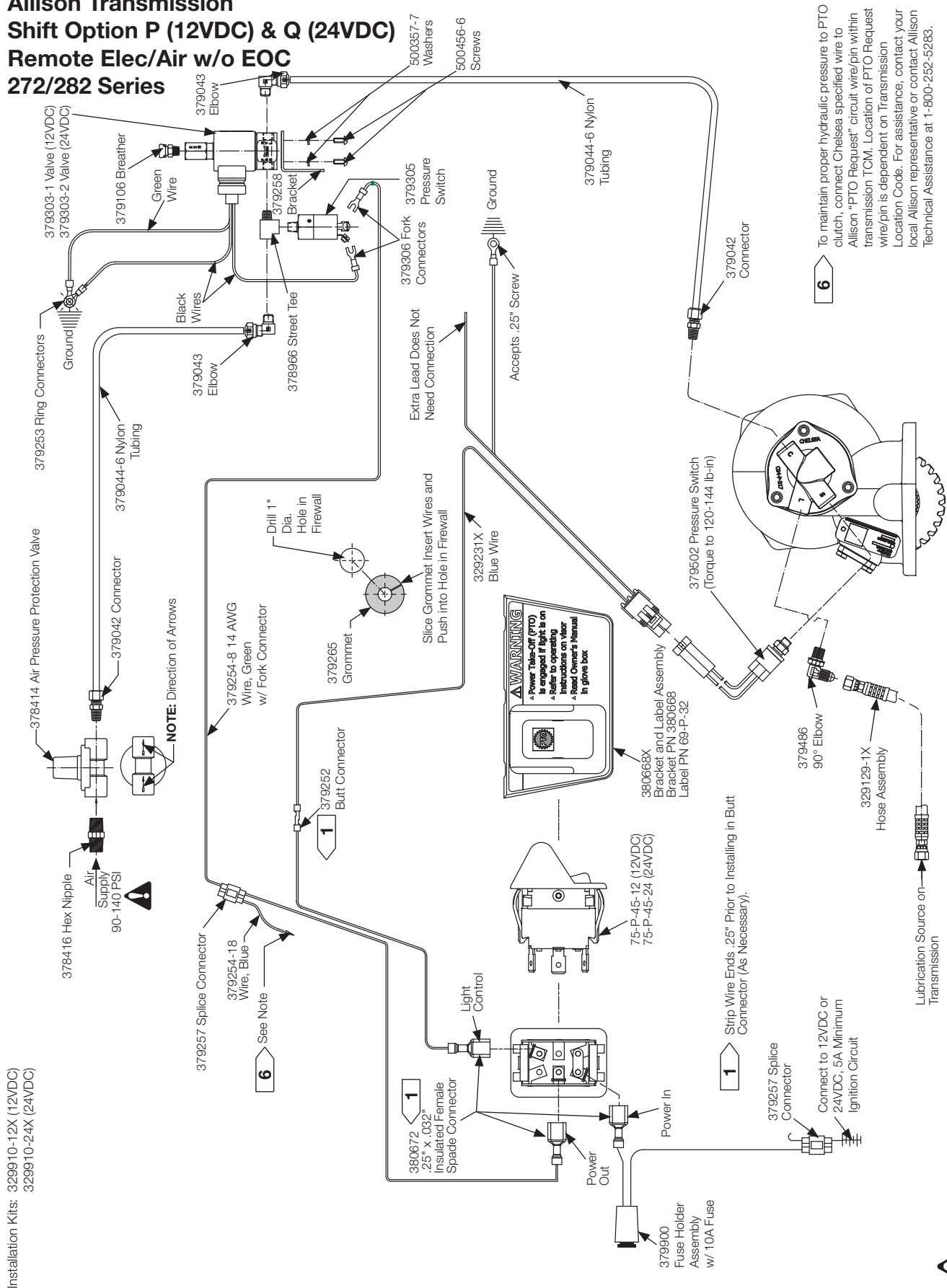


**Allison Transmission Models 1000/2000/2500
 Shift Option 1 (12VDC) & 2 (24VDC)
 Elec/Air w/o EOC
 272/282 Series**

(SK-605 Rev A)



Allison Transmission Shift Option P (12VDC) & Q (24VDC) Remote Elec/Air w/o EOC 272/282 Series

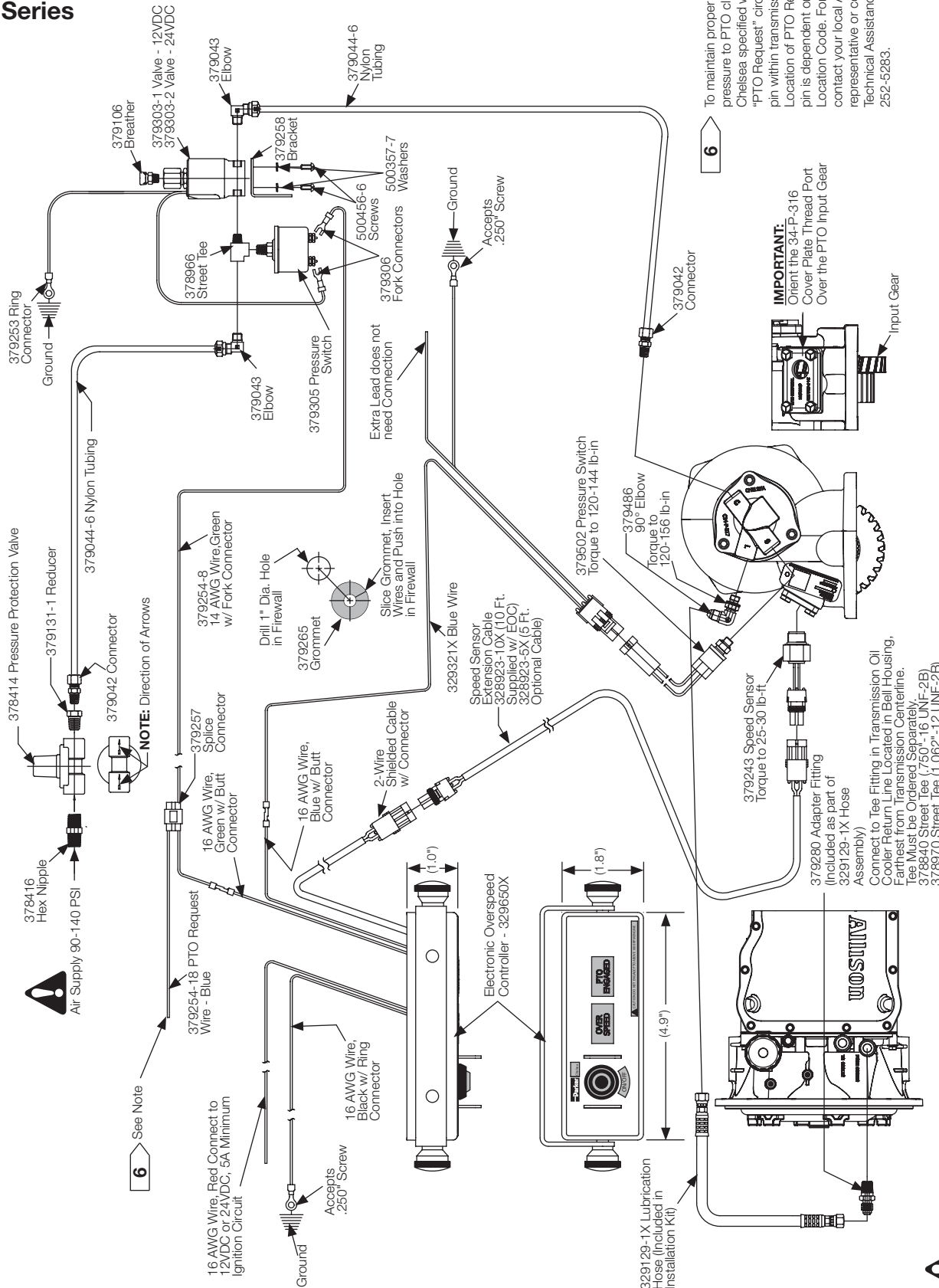


WARNING: Connect directly to air supply. Do not use tubing between air supply and pressure protection valve.

(SK-607 Rev B)

**Allison Transmission Models 1000/2000/2500
 Shift Option R (12VDC) & 4 (24VDC)
 Remote Elec/Air w/ EOC
 272 Series**

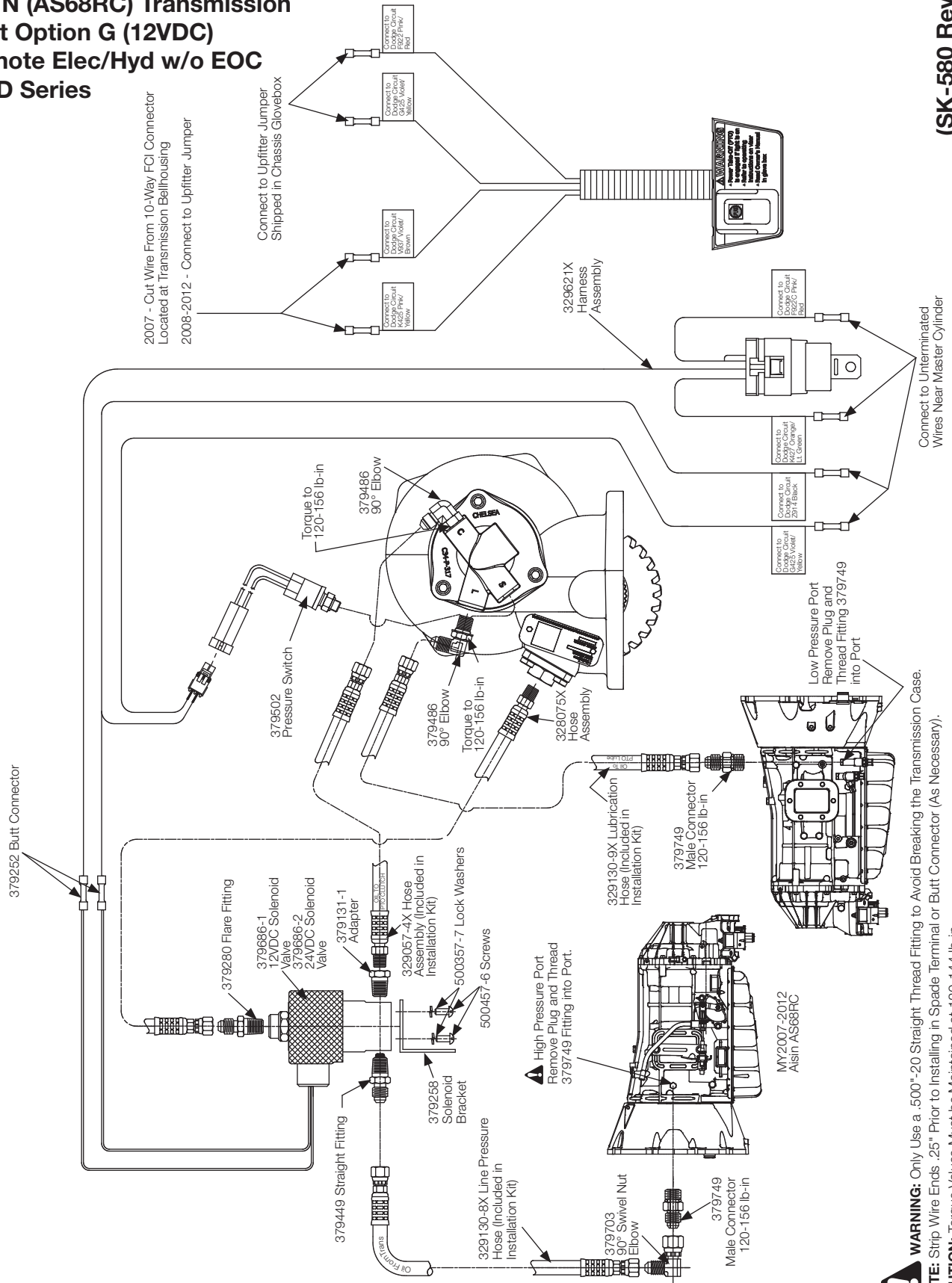
Installation Kits: 329890-12X (12VDC)
 329890-24X (24VDC)



(SK-584 Rev A)

Dodge Cab/Chassis MY2007 - MY2012
AISIN (AS68RC) Transmission
Shift Option G (12VDC)
Remote Elec/Hyd w/o EOC
272D Series

(SK-580 Rev B)



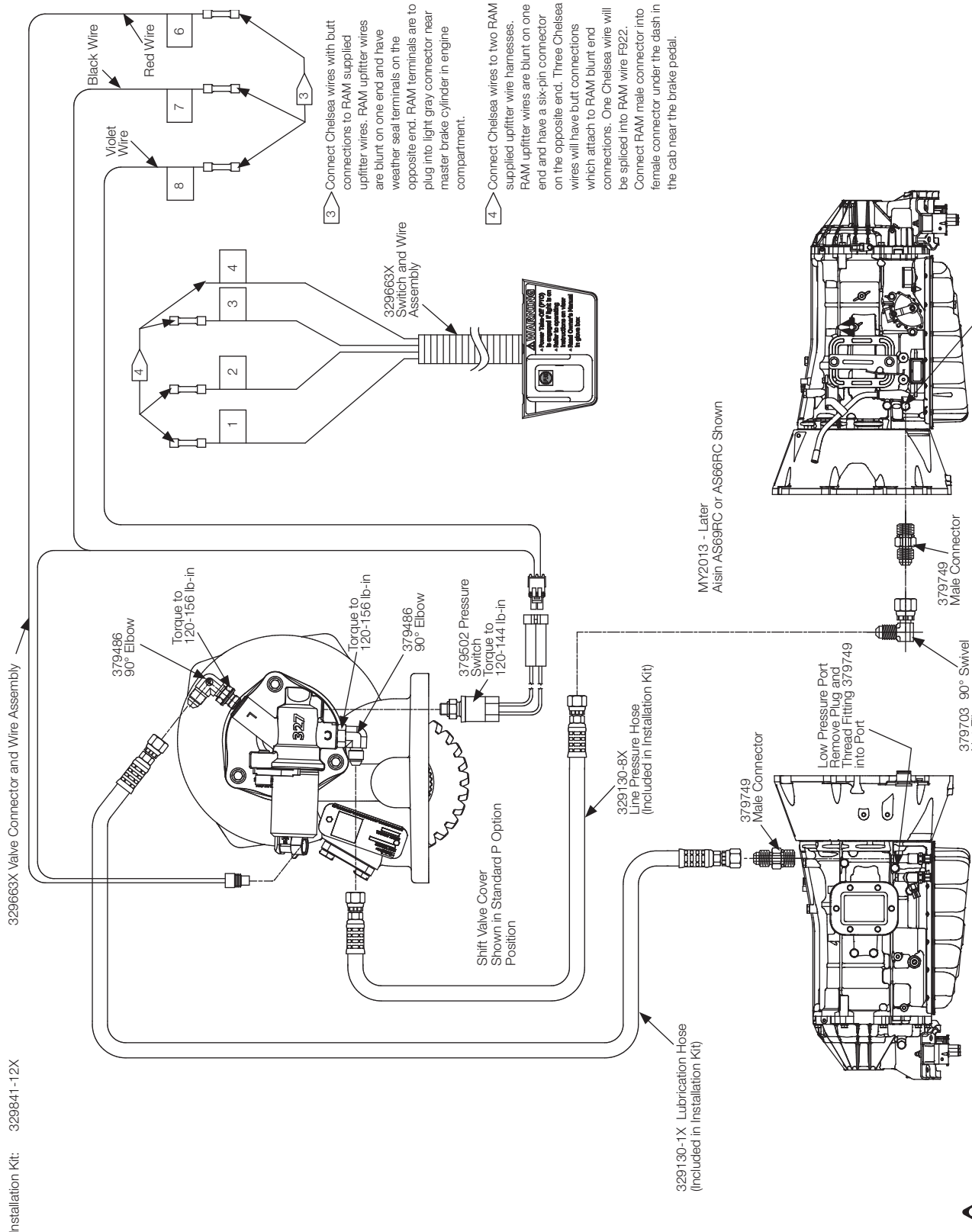
NOTE: CAUTION

WARNING: Only Use a .500"-20 Straight Thread Fitting to Avoid Breaking the Transmission Case.

NOTE: Strip Wire Ends .25" Prior to Installing in Spade Terminal or Butt Connector (As Necessary).

CAUTION: Torque Values Must be Maintained at 120-144 lb-in.

**RAM Cab/Chassis MY2013-Later
 AISIN (AS69RC/AS66RC) Transmission
 Shift Option B (12VDC)
 Remote Elec/Hyd w/o EOC
 272R Series**



(SK-581 Rev C)

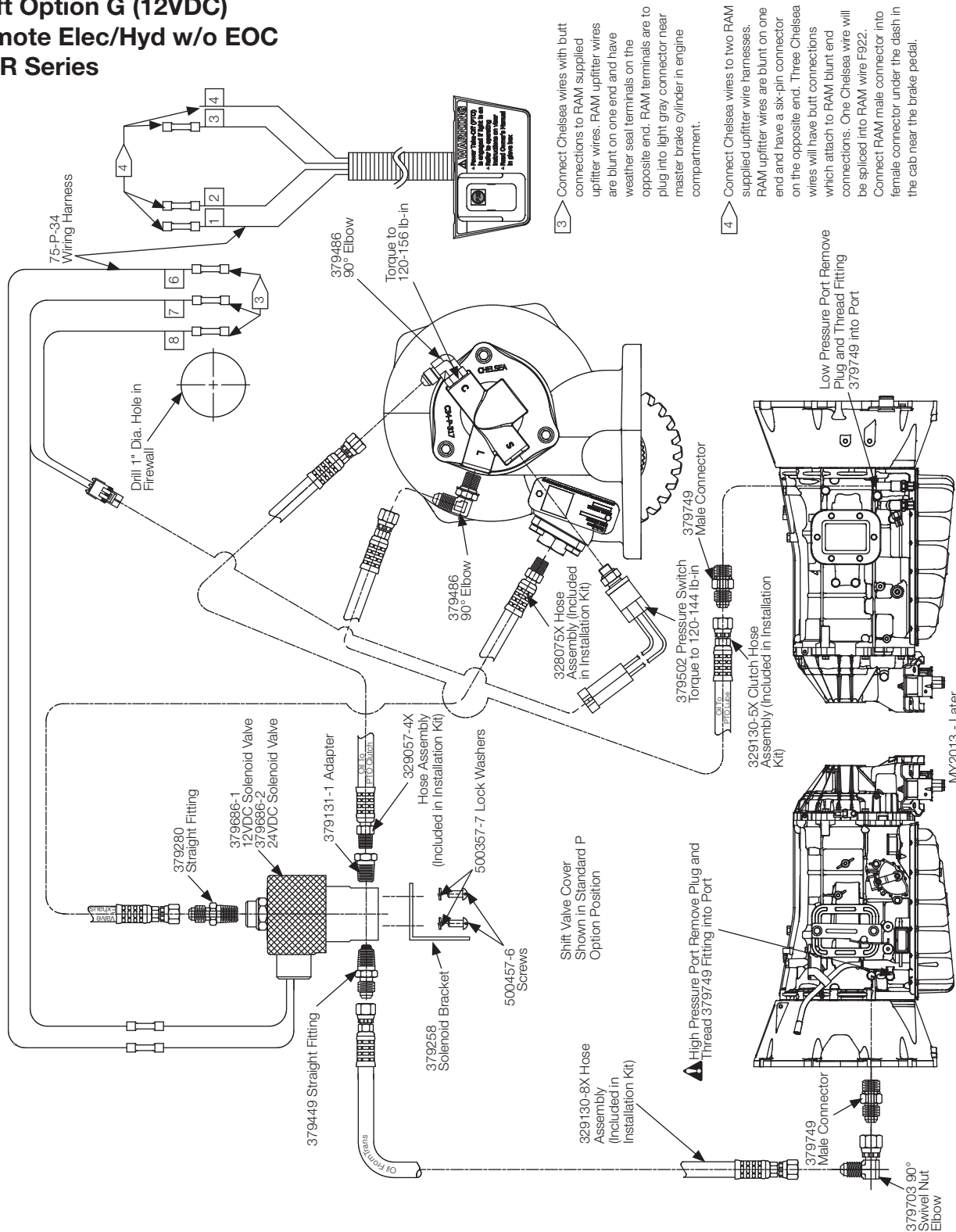
▲ High Pressure Port Remove Plug and Thread 379749 Fitting Into Port.

WARNING: Only Use a .500"-20 Straight Thread Fitting to Avoid Breaking the Transmission Case.
NOTE: Transmission Shown, Used as Representation of Aisin AS69RC, May Vary Slightly.

Installation Kit: 329841-12X

**RAM Cab/Chassis MY2013 & Later
AISIN (AS69RC/AS66RC) Transmission
Shift Option G (12VDC)
Remote Elec/Hyd w/o EOC
272R Series**

(SK-582 Rev D)



WARNING: Only Use a .500" -20 Straight Thread Fitting to Avoid Breaking the Transmission Case.

Part Number	Description	Qty.
GASKET KITS		
328948-5X	Gasket & Installation Instructions- Kit (All 272 M & N Mounting)	
35-P-69	Mounting Gasket	1
35-P-84	Mounting Gasket (Long)	1
328946X	Caution Label Kit	1
379085-2	Instructions Label	1
379624	Product Warranty Card	1
Owner's Manual	HY25-1240-M1/US	1
Safety Guide	HY25-1002-M1/US	1
328950-6X	Gasket & Installation Instructions Kit (All 272 Except M & N Mounting)	
35-P-9-1	Mounting Gasket (.010")	2
35-P-9-2	Mounting Gasket (.020")	2
35-P-41	Mounting Gasket (.030")	1
328946X	Caution Label Kit	1
379085-2	Instructions Label	1
379624	Product Warranty Card	1
Owner's Manual	HY25-1240-M1/US	1
Safety Guide	HY25-1002-M1/US	1
328951-8X	Gasket & Installation Instructions Kit (All 282)	
35-P-15-1	Mounting Gasket (.010")	2
35-P-15-2	Mounting Gasket (.020")	2
328946X	Caution Label Kit	1
379085-2	Instructions Label	1
379624	Product Warranty Card	1
Owner's Manual	HY25-1240-M1/US	1
Safety Guide	HY25-1002-M1/US	1
329071-62X	Gasket & Seal Kit	
22-P-112	Valve Cap Gasket	1
22-P-151	Shim Gasket.....	1
28-P-191	O-ring (.549" x .103").....	1
28-P-119	Oil Seal (1.379" x .875" x .250").....	1
28-P-211	Oil Seal (3.001" x 2.000" x .375").....	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
28-P-285	O-ring (1.597" x .103").....	2
28-P-178	O-ring (4.359" x .138").....	1
28-P-198	O-ring (.798" x .103").....	1
35-P-101	Wet Spline Bearing Cap Gasket.....	1
35-P-9-1	Mounting Gasket 6-Bolt (.010")	2
35-P-9-2	Mounting Gasket 6-Bolt (.020").....	2
35-P-15-1	Mounting Gasket 8-Bolt & 10-Bolt.....	2
35-P-15-2	Mounting Gasket 8-Bolt & 10-Bolt.....	2
35-P-41	Mounting Gasket 6-Bolt.....	1
35-P-69	Shim Gasket.....	1
35-P-84	Mounting Gasket	1
35-P-118	Gasket Plate.....	1
28-P-179	Oil Seal (1.379" x .875" x .249").....	1

Part Number	Description	Qty.
GASKET KITS		
329071-63X	Bearing Kit AB, AC, XD, XV, RF, RK, RS, RY, RZ, XR (All Outputs Except BV, BD)	
379746	Lockring	1
378263	Internal Lockring	1
379555	Lockring	1
560972	Needle Roller Bearing Assembly (1.500" x 1.875" x 1.000")	2
550311	Ball Bearing (1.770" x 3.346" x .748").....	1
550439	Tapered Cone Bearing (.750" x .859").....	2
31-P-102	Thrust Washer (.754" x .440" x .030").....	1
14-P-73-1	Spacer (.762" x 1.500" x .150")	1
14-P-73-2	Spacer (.762" x 1.500" x .153")	1
14-P-73-3	Spacer (.762" x 1.500" x .156")	1
561088	Needle Roller Bearing Assembly (1.500" x 1.875" x 1.250")	1
329071-64X	Bearing Kit (BV & BD Outputs)	
379746	Lockring	1
378263	Lockring	1
379555	Lockring	1
378895	Lockring	1
378576	Lockring	1
550010	Ball Bearing (1.378" x 2.834" x .669").....	1
560972	Needle Roller Bearing Assembly (1.500" x 1.875" x 1.000")	2
550439	Tapered Cone Bearing (.750" x .859").....	2
31-P-102	Thrust Washer (.754" x .440" x .030").....	1
14-P-73-1	Spacer (.762" x 1.500" x .150")	1
14-P-73-2	Spacer (.762" x 1.500" x .153")	1
14-P-73-3	Spacer (.762" x 1.500" x .156")	1
329071-83X	Hydraulic Solenoid Valve O-ring Kit	
2016V-7	O-ring (.614" x .070").....	1
2017V-7	O-ring (.676" x .070").....	1
2020V-7	O-ring (.864" x .070").....	2
329678X	Gear & Clutch Plates Kit (All)	
2-P-858	Output Gear - 36T.....	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.

Kits Bill of Materials**Parts List****272/282 Series**

Part Number	Description	Qty.	Part Number	Description	Qty.
STUD KITS			HYDRAULIC INSTALLATION KITS		
7170-72X	Metric Stud Kit (272G Except KU Gear)		329841-12X	12VDC Hyd Valve Installation Kit (B Shift, KU Gear, R Mount)	
379428-14	Stud (M10-1.5 x .375"-24 x 1.750").....	6	329663X	Wiring Harness Assembly	1
379744	9/16" Hex Head Flange Nut (.375"-24)	6	379502	Pressure Switch.....	1
7170-127X	Standard Stud Kit (272M)		379703	90° Elbow Swivel Nut (.438"-20).....	1
378431-12	9/16" Hex Head Cap Screw (.375"-16 x 1.250")	2	379749	Connector (.438"-20 x .500"-20)	2
378431-15	9/16" Hex Head Cap Screw (.375"-16 x 1.625")	3	379486	90° Elbow (.438"-20)	1
379433-6	5/16" Socket Head Cap Screw (.375"-16 x 1.000")	3	329130-8X	Transmission Main Line Pressure Hose Assembly	1
7170-128X	Metric Stud Kit (272G*KU)		329130-1X	Hose Assembly Lubrication	1
379744	11/16" Hex Head Flange Nut (.375"-24)	6	329842-12X	12VDC Remote Hyd Valve Installation Kit (G Shift, HV Gear)	
379908	Stud (M10-1.25 x 1.750")	4	329231X	Valve Connector Wire Assembly	1
379908-1	Stud (M10-1.25 x 1.625")	2	379131-1	Pipe Reducer Bushing (.125"-27 x .250"-18) ..	1
7170-129X	Standard Stud Kit (272X, E)		379252	Electrical Butt Connector	1
379423-13	Stud (.375"-16 x .375"-24 x 1.625")	2	379254-17	Electrical Fork Wire, 14G	1
379423-15	Stud (.375"-16 x .375"-24 x 1.875")	4	379257	Electrical Speed Limiter Connector.....	1
379744	9/16" Hex Head Flange Nut (.375"-24)	6	379258	Mounting Bracket	1
7170-130X	Metric Stud Kit (272N)		379265	Grommet with Speed Contol	1
378431-12	9/16" Hex Head Cap Screw (.375"-16 x 1.250")	2	379449	Male Connector (.438"-20 x .250"-18)	1
379428-22	Stud (M10-1.5 x .375"-24 x 2.250").....	3	379502	Pressure Switch.....	1
379744	9/16" Hex Head Flange Nut (.375"-24)	3	379686-1	12VDC Hydraulic Solenoid Valve.....	1
379811	7 mm Socket Head Cap Screw (M10-1.5 x .984")	3	379900	Fuse Holder Assembly w/ 10A Fuse	1
7170-131X	Standard Stud Kit (272Z)		500357-7	Lock Washer (.194" x .337" x .047")	2
379744	9/16" Hex Head Flange Nut (.375"-24)	6	500457-6	Round Head Slotted Screw (.190"-32 x .438")..	2
379423-9	Stud	6	379486	90° Elbow (.438"-20)	1
328170-200X	Standard Stud Kit (282X)		329057-3X	Clutch Hose Assembly	1
379224	Tab Lock Washer.....	6	329129-1X	Hose Assembly Lubrication	1
379287-12	Hex Head Cap Screw (.438"-14 x 1.250")	6	329141-1X	Transmission Main Line Pressure Hose Assembly	1
379424-18	Stud (.438"-14 x .438"-20 x 2.000")	2	75-P-45-12	12VDC Electrical Rocker Switch	1
379745	Flange Nut (.438"-20).....	2	380672	Female Spade Connector (.250").....	3
328170-201X	Metric Stud Kit (282G)		380668X	Bracket & Label Assembly	1
379745	Flange Nut (.438"-20).....	8	328075X	Valve Exhaust Hose Assembly	1
379429-19	Stud (M12-1.75 x 2.000")	8	75-P-46X	Wire & Connectors Kit	1

Continued on Next Page

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

Part Number	Description	Qty.
HYDRAULIC INSTALLATION KITS (Continued)		
329842-24X	24VDC Remote Hyd Valve Installation Kit (H Shift, HV Gear)	
329231X	Valve Connector Wire Assembly	1
379131-1	Pipe Reducer Bushing (.125"-27 x .250"-18) ..	1
379252	Electrical Butt Connector	1
379254-17	Electrical Fork Wire, 14G	1
379257	Electrical Speed Limiter Connector	1
379258	Mounting Bracket	1
379265	Grommet with Speed Control	1
379449	Male Connector (.438"-20 x .250"-18)	1
379502	Pressure Switch.....	1
379686-1	12VDC Hydraulic Solenoid Valve.....	1
379900	Fuse Holder Assembly w/ 10A Fuse	1
500357-7	Lock Washer (.194" x .337" x .047")	2
500457-6	Round Head Slotted Screw (.190"-32 x .438")..	2
379486	90° Elbow (.438"-20)	2
329057-3X	Clutch Hose Assembly	1
329129-1X	Hose Assembly Lubrication	1
329141-1X	Transmission Main Line Pressure Hose Assembly	1
75-P-45-24	24VDC Electrical Rocker Switch	1
380672	Female Spade Connector (.250")	3
380668X	Bracket & Label Assembly	1
328075X	Valve Exhaust Hose Assembly	1
75-P-46X	Wire & Connectors Kit	1
329882-12X	12VDC Hyd Valve Installation Kit (B Shift, HV Gear)	
329024-12X	12VDC Installation Kit	1
379486	90° Elbow (.438"-20)	1
329075-2X	Transmission Main Line Pressure Hose Assembly	1
329129-1X	Hose Assembly, Lubrication.....	1
329882-24X	24VDC Hyd Valve Installation Kit (D Shift, HV Gear)	
329024-24X	24VDC Installation Kit	1
379486	90° Elbow (.438"-20)	1
329075-2X	Transmission Main Line Pressure Hose Assembly	1
329129-1X	Hose Assembly, Lubrication.....	1
329883X	12VDC & 24VDC Hyd w/ EOC Installation Kit (K Shift & L Shift, HV Gear)	
329076X	12 & 24VDC Installation Kit.....	1
379486	90° Elbow (.438"-20)	1
329075-2X	Transmission Main Line Pressure Hose Assembly	1
329129-1X	Hose Assembly, Lubrication.....	1
329650X	Electronic Speed Controller	1

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

Part Number	Description	Qty.
HYDRAULIC INSTALLATION KITS (Continued)		
329884-12X	12VDC Hyd Valve Installation Kit (B Shift, KU Gear, D Mount)	
329621X	Non EOC Dodge Wiring Harness Assembly....	1
379502	Pressure Switch.....	1
379703	90° Elbow Swivel Nut (.438"-20)	1
379749	Connector (.438"-20 x .500"-20)	2
379486	90° Elbow (.438"-20)	1
329130-1X	Transmission Main Line Pressure Hose Assembly	1
329130-9X	Lubrication Hose Assembly	1
329885-12X	12VDC Remote Hyd Valve Installation Kit (G Shift, Except HV Gear)	
75-P-46X	Wire Assembly Kit.....	1
329231X	Valve Connector Wire Assembly	1
75-P-45-12	Rocker Switch	1
379486	90° Elbow (.438"-20)	1
379131-1	Pipe Reducer Bushing	1
379252	Electrical Butt Speed Limiter Connector.....	2
379257	Electrical Connector	1
379258	Solenoid Valve Mounting Bracket.....	1
379265	Grommet	1
380672	Electrical Fork Terminal	3
380668X	Bracket & Label Assembly.....	1
379502	Pressure Switch.....	1
379686-1	12VDC Hydraulic Solenoid Valve.....	1
379700	Swivel Nut Tee (.438"-20)	1
379900	Fuse Holder Assembly w/ 10A Fuse	1
500357-7	Lock Washer (.194" x .337" x .047")	2
500457-6	Round Head Slotted Screw (.191"-32 x .438")..	2
329057-3X	Clutch Pressure & Exhaust Hose Assembly	1
329130-5X	Valve Lubrication Hose Assembly	1
329057X	Transmission Main Line Pressure Hose Assembly	1
SK-576	Remote Hyd Valve Installation Sketch	1
328075X	Valve Exhaust Hose Assembly	1

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Kits Bill of Materials**Parts List****272/282 Series**

Part Number	Description	Qty.	Part Number	Description	Qty.
HYDRAULIC INSTALLATION KITS (Continued)			HYDRAULIC INSTALLATION KITS (Continued)		
329885-24X	24VDC Remote Hyd Valve Installation Kit (H Shift, Except HV Gear)		329888-12X	12VDC Remote Valve Installation Kit (G Shift, KU Gear, D Mount)	
75-P-46X	Wire Assembly Kit.....	1	329621X	Non EOC Dodge Wiring Harness Assembly....	1
329231X	Valve Connector Wire Assembly	1	379131-1	Pipe Reducer Bushing.....	1
75-P-45-24	Rocker Switch	1	379252	Electrical Butt Connector	2
379486	90° Elbow (.438"-20)	1	379258	Solenoid Valve Mounting Bracket.....	1
379131-1	Pipe Reducer Bushing	1	379265	Grommet.....	1
379252	Electrical Butt Speed Limiter Connector.....	2	379449	Male Connector (.438"-20 x .250"-18)	1
379257	Electrical Connector	1	379502	Pressure Switch.....	1
379258	Solenoid Valve Mounting Bracket.....	1	379686-1	12VDC Hydraulic Solenoid Valve.....	1
379265	Grommet.....	1	379703	90° Elbow Swivel Nut (.438"-20).....	1
380672	Electrical Fork Terminal	3	379749	Connector (.438"-20 x .500"-20)	2
380668X	Bracket & Label Assembly	1	500357-7	Lock Washer (.194" x .337" x .047")	2
379449	Male Connector (.438"-20 x .250"-18)	1	500457-6	Round Head Slotted Screw (.191"-32 x .438") ..	2
379502	Pressure Switch.....	1	328057-4X	Clutch Hose Assembly	1
379686-2	24VDC Hydraulic Solenoid Valve.....	1	329130-9X	Hose Assembly Lubrication	1
379700	Swivel Nut Tee (.438"-20)	1	328075X	Valve Exhaust Hose Assembly	1
379900	Fuse Holder Assembly w/ 10A Fuse	1	329130-8X	Transmission Main Line Pressure Hose Assembly	1
500357-7	Lock Washer (.194" x .337" x .047")	2	379486	90° Elbow (.438"-20)	1
500457-6	Round Head Slotted Screw (.191"-32 x .438")..	2			
329057-3X	Clutch Pressure & Exhaust Hose Assembly	1	329892-12X	12VDC Hyd Valve Installation Kit (B Shift, Except HV Gear)	
329130-5X	Valve Lubrication Hose Assembly	1	329024-12X	12VDC Installation Kit	1
329057X	Transmission Main Line Assembly	1	379486	90° Elbow (.438"-20)	1
SK-576	Remote Hyd Valve Installation Sketch	1	329057X	Lube Hose Pressure	1
328075X	Valve Exhaust Hose Assembly	1	329130-1X	Lube Hose Pressure	1
329886X	12VDC & 24VDC Hyd w/ EOC Installation Kit (K Shift & L Shift, KU Gear, R & D Mount)		329892-24X	24VDC Hyd Valve Installation Kit (D Shift, Except HV Gear)	
329076X	12VDC & 24VDC w/ EOC Installation Kit.....	1	329024-24X	24VDC Installation Kit	1
379703	90° Elbow Swivel Nut (.438"-20).....	1	379486	90° Elbow (.438"-20)	1
379749	Connector (.438"-20 x .500"-20)	2	328057X	Lube Hose Pressure	1
329130-5X	Transmission Main Line Pressure Hose Assembly	2	329130-1X	Lube Hose Pressure	1
329650X	Electronic Overspeed Controls	1			
329887-12X	12VDC Remote Valve Installation Kit (G Shift, KU Gear, R Mount)		329900X	12VDC & 24VDC Hyd w/ EOC Installation Kit (K Shift & L Shift Except HV, KU Gear)	
75-P-34	Electrical Harness.....	1	329076X	12VDC & 24VDC w/ EOC Installation Kit.....	1
379131-1	Pipe Reducer Bushing	1	379486	90° Elbow (.438"-20)	1
379258	Solenoid Valve Mounting Bracket.....	1	329057X	Transmission Main Line Pressure Hose Assembly	1
379265	Grommet.....	1	329130-1X	Lubrication Hose Assembly	1
379449	Male Connector (.438"-20 x .250"-18)	1	329650X	Electronic Speed Controller	1
379502	Pressure Switch.....	1			
379686-1	12VDC Hydraulic Solenoid Valve.....	1			
379703	90° Elbow Swivel Nut (.438"-20).....	1			
379749	Connector (.438"-20 x .500"-20)	2			
500357-7	Lock Washer (.194" x .337" x .047")	2			
500457-6	Round Head Slotted Screw (.191"-32 x .438") ..	2			
329057-4X	Clutch Hose Assembly	1			
329130-5X	Hose Assembly, Lubrication.....	1			
329075X	Valve Exhaust Hose Assembly	1			
329130-8X	Transmission Main Line Pressure Hose Assembly	1			
379486	90° Elbow (.438"-20)	1			

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

Part Number	Description	Qty.
HYDRAULIC INSTALLATION KITS (Continued)		
329907-12X	12VDC Hyd Valve Installation Kit (B Shift, KU Gear, Except D, R Mount)	
329504	Electrical Wiring Harness	1
379502	Pressure Switch.....	1
379703	90° Elbow Swivel Nut	1
379749	O-ring Connector	2
379486	90° Elbow (.438"-20)	1
329130-5X	Pressure Lube Hose	2
379265	Grommet.....	1
75-P-45-12	Rocker Switch	1
379257	Electrical Speed Limiter Connector	1
379900	Fuse Holder Assembly w/ 10A Fuse	1
SK-603	Hyd Shift Installation Kit Sketch	1
380672	Female Spade Connector (.250").....	1
380668X	Bracket & Label Assembly	1
329907-24X	24VDC Hyd Valve Installation Kit (D Shift, KU Gear, Except D, R Mount)	
329504	Electrical Wiring Harness	1
379502	Pressure Switch.....	1
379703	90° Elbow Swivel Nut	1
379749	O-ring Connector	2
379486	90° Elbow (.438"-20)	1
329130-5X	Pressure Lube Hose	1
379252	Electrical Butt Connector	1
379265	Grommet.....	1
378881	Rocker Switch	1
379005	24VDC Indicator Light	1
379257	Splice Connector.....	1
379306	Electrical Fork Terminal	4
379336	Switch Bracket	1
379900	Fuse Holder Assembly w/ 10A Fuse	1
SK-603	Hyd Shift Installation Kit Sketch	1

Part Number	Description	Qty.
HYDRAULIC INSTALLATION KITS (Continued)		
329908-12X	12VDC Remote Hyd Valve Installation Kit (G Shift, KU Gear Except D, R Mount)	
329231X	Electrical Wiring Harness	1
379502	Pressure Switch.....	1
379703	90° Elbow Swivel Nut	1
379749	O-ring Connector	2
379486	90° Elbow (.438"-20)	1
329130-5X	Pressure Lube Hose	1
379131-1	Reducer Bushing.....	1
379252	Electrical Butt Connector	3
379258	Bracket.....	1
379265	Grommet.....	1
379449	Screen Adapter	1
329057-3X	Valve to PTO Hose Assembly	1
328075X	Exhaust Hose Assembly.....	1
329130-5X	Tran to Valve Hose Assembly.....	1
379686-1	12VDC Hydraulic Solenoid Valve.....	1
500357-7	Lock Washer (.194" x .337" x .047").....	2
500457-6	Slotted Screw	2
75-P-45-12	Rocker Switch	1
379257	Splice Connector.....	1
380672	Female Spade Connector (.250" x .032").....	3
380668X	Bracket & Label Assembly	1
379900	Fuse Holder Assembly w/ 10A Fuse	1
75-P-46X	Wire and Connectors Kit.....	1
SK-604	Remote Hyd Valve Installation Kit Sketch	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.
HYDRAULIC INSTALLATION KITS (Continued)			AIR INSTALLATION KITS		
329908-24X	24VDC Remote Hyd Valve Installation Kit (H Shift, KU Gear, Except D, R Mount)		328388-113X	Air Shift Installation Kit (A Shift)	
329231X	Electrical Wiring Harness	1	328931X	Valve Mounting Kit	1
379502	Pressure Switch.....	1	329090-6X	Valve Kit	1
379703	90° Swivel Nut.....	1	378416	Hex Nipple (.250"-18)	1
379749	O-ring Connector	2	379042	Male Connector (.250" Tube x .125"-27).....	5
379486	90° Elbow (.438"-20).....	1	379044-7	Tubing (.253" x .179" x 30 ft)	1
329130-5X	Pressure Lube Hose	1	379130	Air Shifter Support Bracket	2
379131-1	Reducer Bushing.....	1	379131-1	Pipe Reducer Bushing (.125"-27 x .250"-18) ..	3
379252	Electrical Butt Connector	3	379253	Electrical Ring Connector	1
379258	Bracket.....	1	75-P-40	Press Switch Electrical Wiring Harness	1
379265	Grommet	1	379257	Instant Electrical Connector	1
379449	Screen Adapter	1	379497	Relay Valve	1
329057-3X	Valve to PTO Hose Assembly	1	379502	Pressure Switch.....	1
328075X	Exhaust Hose Assembly	1	379900	Fuse Holder Assembly w/ 10A Fuse	1
329130-5X	Tran to Valve Hose Assembly.....	1	380097	Union Tee (.250") Tube.....	1
379686-2	24VDC Solenoid Valve.....	1	379252	Butt Electrical Connector	2
500357-7	Lock Washer (.194" x .337" x .047")	2	75-P-13	LED Indicator Light.....	1
500457-6	Slotted Screw	2			
75-P-45-24	Rocker Switch	1	329889-12X	12VDC Remote Elec/Air w/ EOC Installation Kit (R Shift, Except HV Gear)	
379257	Splice Connector.....	1	378414	Air Shifter Pressure Protection Valve	1
380672	Female Spade Connector (.250" x .032").....	3	378416	Nipple (.250"-18)	1
380668X	Bracket & Label Assembly	1	378966	Tee (.125"-27).....	1
379900	Fuse Holder Assembly w/ 10A Fuse	1	379042	Male Connector (.250" Tube x .125"-27).....	2
75-P-46X	Wire and Connectors Kit.....	1	379043	90° Male Elbow (.250" Tube x .125"-27)	2
SK-604	Remote Hyd Valve Installation Kit Sketch	1	379106	Breather (.125"-27).....	1
			379253	Electrical Ring Connector	1
329996-12X	12VDC HV Pitch Installation Kit (E Shift)		379258	Solenoid Valve Mounting Bracket.....	1
379502	Pressure Switch.....	1	379265	Grommet	1
379504	Electrical Connector Valve	1	379305	Pressure Switch.....	1
379486	90° Elbow.....	1	379306	Electrical Terminal Fork	1
378978	12VDC Light.....	1	379502	Pressure Switch.....	1
329075-2X	Hose Assembly	1	329231X	Valve Connector Wire Assembly	1
329129-1X	Pressure Lube Hose	1	329650X	Electronic Overspeed Controllor.....	1
			379044-6	Tubing (.253" x .179" x 30 ft)	1
329998X	12VDC Hyd Hino Allison Installation Kit		379131-1	Pipe Reducer Bushing.....	1
329978X	Hino Harness Installation Kit	1	75-P-46X	Wire and Connector Kit	1
379486	90° Elbow (.438"-20)	2	379303-1	12VDC Solenoid Valve.....	1
329075-2X	Transmission Main Line Pressure Hose Assembly	1	500357-7	Lock Washer (.194" x .337" x .047")	2
329129-1X	Hose Assembly, Lubrication.....	1	500457-6	Round Head Slotted Screw (.191"-32 x .438") ..	2
379502	Pressure Switch.....	1			

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

Part Number	Description	Qty.
AIR INSTALLATION KITS (Continued)		
329889-24X	24VDC Remote Elec/Air w/ EOC Installation Kit (4 Shift, Except HV Gear)	
378414	Air Shifter Pressure Protection Valve	1
378416	Nipple (.250"-18)	1
378966	Tee (.125"-27)	1
379042	Male Connector (.250" Tube x .125"-27)	2
379043	90° Male Elbow (.250" Tube x .125"-27)	2
379106	Breather (.125"-27)	1
379253	Electrical Ring Connector	1
379258	Solenoid Valve Mounting Bracket	1
379265	Grommet	1
379305	Pressure Switch	1
379306	Electrical Terminal Fork	1
379502	Pressure Switch	1
329231X	Valve Connector Wire Assembly	1
329650X	Electronic Overspeed Controller	1
379044-6	Tubing (.253" x .179" x 30 ft)	1
379131-1	Pipe Reducer Bushing	1
75-P-46X	Wire and Connector Kit	1
379303-2	24VDC Solenoid Valve	1
500357-7	Lock Washer (.194" x .337" x .047")	2
500457-6	Round Head Slotted Screw (.191"-32 x .438")	2
329890-12X	12VDC Remote Elec/Air w/ EOC Installation Kit (R Shift, HV Gear)	
378414	Air Shifter Pressure Protection Valve	1
378416	Nipple (.250"-18)	1
378966	Tee (.125"-27)	1
379042	Male Connector (.250" Tube x .125"-27)	2
379043	90° Elbow (.250" Tube x .125"-27)	2
379106	Breather (.125"-27)	1
379253	Electrical Ring Connector	1
379257	Electrical Connector	1
379258	Solenoid Valve Mounting Bracket	1
379265	Grommet	1
379305	Pressure Switch	1
379306	Electrical Fork Terminal	1
379486	90° Elbow (.438"-20)	1
379502	Pressure Switch	1
329231X	Valve Connector Wire Assembly	1
329650X	Electronic Overspeed Controller	1
379044-7	Tubing (.253" x .179" x 30 ft)	1
379131-1	Pipe Reducer Bushing	1
379254-8	14G Electrical Wire with Fork Connector	1
379254-18	14G Electrical Wire	1
379303-2	12VDC Solenoid Valve	1
500357-7	Lock Washer (.194" x .337" x .047")	2
500457-6	Round Head Slotted Screw (.191"-32 x .438")	2
329129-1X	Lubrication Hose Assembly	1

Part Number	Description	Qty.
AIR INSTALLATION KITS (Continued)		
329890-24X	24VDC Remote Elec/Air w/ EOC Installation Kit (4 Shift, HV Gear)	
378414	Air Shifter Pressure Protection Valve	1
378416	Nipple (.250"-18)	1
378966	Tee (.125"-27)	1
379042	Male Connector (.250" Tube x .125"-27)	2
379043	90° Elbow (.250" Tube x .125"-27)	2
379106	Breather (.125"-27)	1
379253	Electrical Ring Connector	1
379257	Electrical Connector	1
379258	Solenoid Valve Mounting Bracket	1
379265	Grommet	1
379305	Pressure Switch	1
379306	Electrical Fork Terminal	1
379486	90° Elbow (.438"-20)	1
379502	Pressure Switch	1
329231X	Valve Connector Wire Assembly	1
329650X	Electric Overspeed Controller	1
379044-7	Tubing (.253" x .179" x 30 ft)	1
379131-1	Pipe Reducer Bushing	1
379254-8	14G Electrical Wire with Fork Connector	1
379254-18	14G Electrical Wire	1
379303-2	24VDC Solenoid Valve	1
500357-7	Lock Washer (.194" x .337" x .047")	2
500457-6	Round Head Slotted Screw (.191"-32 x .438")	2
329129-1X	Lubrication Hose Assembly	1
329891-12X	12VDC Remote Elec/Air Installation Kit (P Shift, Except HV Gear)	
378414	Air Shifter Pressure Protection Valve	1
378416	Nipple (.250"-18)	1
75-P-45-12	Rocker Switch	1
378966	Tee (.125"-27)	1
379042	Male Connector (.250" Tube x .125"-27)	2
379043	90° Male Elbow (.250" Tube x .125"-27)	2
379106	Breather (.125"-27)	1
379253	Ring Connector	1
379257	Electrified Connector	1
379258	Solenoid Valve Mounting Bracket	1
379265	Grommet	1
379305	Pressure Switch	1
379306	Electrical Fork Terminal	1
380668X	Bracket & Label Assembly	1
379502	Pressure Switch	1
379900	Fuse Holder Assembly w/ 10A Fuse	1
329231X	Electrical Wiring Harness	1
379044-6	Tubing (.253" x .179" x 30 ft)	1
379131-1	Pipe Reducer Bushing	1
75-P-46X	Wire and Connectors Kit	1
379303-1	12VDC Solenoid Valve	1
500357-7	Lock Washer (.194" x .337" x .047")	2
500457-6	Round Head Slotted Screw (.191"-32 x .438")	2
380672	Female Spade Connector (.250" x .032")	3

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

Kits Bill of Materials**Parts List****272/282 Series**

Part Number	Description	Qty.	Part Number	Description	Qty.
AIR INSTALLATION KITS (Continued)			AIR INSTALLATION KITS (Continued)		
329891-24X	24VDC Remote Elec/Air Installation Kit (Q Shift Except HV Gear)		329893-24X	24VDC Elec/Air w/o EOC Installation Kit (2 Shift, Except HV Gear)	
378414	Air Shifter Pressure Protection Valve	1	378414	Air Pressure Protection Valve	1
378416	Nipple (.250"-18)	1	378416	Hex Nipple (.250"-18)	1
75-P-45-24	Rocker Switch	1	378881	Rocker Switch	1
378966	Tee (.125"-27)	1	378966	Street Tee (.125"-27)	1
379042	Male Connector (.250" Tube x .125"-27)	2	379005	24VDC Indicator Light	1
379043	90° Male Elbow (.250" Tube x .125"-27)	2	379042	Male Connector (.250" Tube x .125"-27)	3
379106	Breather (.125"-27)	1	379043	90° Elbow (.250" Tube x .125"-27)	1
379253	Ring Connector	1	379106	Breather (.125"-27)	1
379257	Electrical Connector	1	379252	Butt Connector	1
379258	Solenoid Valve Mounting Bracket	1	379257	Splice Connector	1
379265	Grommet	1	379265	Grommet	1
379305	Pressure Switch	1	379305	Pressure Switch	1
379306	Electrical Fork Terminal	4	379306	Electrical Fork Terminal	3
380668X	Bracket & Label Assembly	1	379336	Switch Bracket	1
379502	Pressure Switch	1	379502	Pressure Switch	1
379900	Fuse Holder Assembly w/ 10A Fuse	1	379900	Fuse Holder Assembly w/ 10A Fuse	1
329231X	Electrical Wiring Harness	1	75-P-41	Elec/Air Electrical Harness	1
379044-6	Tubing (.253" x .179" x 30 ft)	1	379044-7	Nylon Tubing (.253" x .179" x 30 ft)	1
379131-1	Pipe Reducer Bushing	1	379131-1	Pipe Reducer Bushing	1
75-P-46X	Wire and Connectors Kit	1	380009	Female Connector (.125" NPT x .125" Tube) PTC	2
379303-2	24VDC Solenoid Valve	1			
500357-7	Lock Washer (.194" x .337" x .047")	2			
500457-6	Round Head Slotted Screw (.191"-32 x .438")	2			
380672	Female Spade Connector (.250" x .032")	3			
329893-12X	12VDC Elec/Air Installation Kit (1 Shift, Except HV Gear)		329894X	12VDC & 24VDC Elec/Air w/ EOC Installation Kit (J Shift & 3 Shift, Except HV Gear)	
378414	Air Pressure Protection Valve	1	378414	Air Shifter Pressure Protection Valve	1
378416	Hex Nipple (.250"-18)	1	378416	Nipple (.250"-18)	1
378881	Rocker Switch	1	378966	Tee (.125"-27)	1
378966	Street Tee (.125"-27)	1	379042	Male Connector (.250" Tube x .125"-27)	3
378978	12VDC Indicator Light	1	379043	90° Elbow (.250" Tube x .125"-27)	1
379042	Male Connector (.250" Tube x .125"-27)	3	379106	Breather (.125"-27)	1
379043	90° Male Elbow (.250" Tube x .125"-27)	1	379265	Grommet	1
379106	Breather (.125"-27)	1	379305	Pressure Switch	1
379252	Butt Connector	1	379502	Pressure Switch	1
379257	Splice Connector	1	380009	Female Connector (.125" NPT x .125" Tube)	1
379265	Grommet	1	75-P-41	Elec/Air Electrical Harness w/o EOC	1
379305	Pressure Switch	1	329650X	Electronic Overspeed Controller	1
379306	Electrical Terminal Fork	3	379044-6	Tubing (.253" x .179" x 30 ft)	1
379336	Switch Bracket	1	379131-1	Pipe Reducer Bushing	1
379502	Pressure Switch	1			
379900	Fuse Holder Assembly w/ 10A Fuse	1			
75-P-41	Elec/Air Electrical Harness	1			
379044-7	Nylon Tubing (.253" x .179" x 30 ft)	1			
379131-1	Pipe Reducer Bushing	1			
380009	Female Connector (.125" NPT x .125" Tube) PTC	2			

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

Part Number	Description	Qty.
AIR INSTALLATION KITS (Continued)		
329909-12X	12VDC Elec/Air Valve Installation Kit (1 Shift, HV Gear)	
75-P-41	Elec/Air Electrical Harness w/o EOC.....	1
379502	Pressure Switch.....	1
379486	90° Elbow (.438"-20)	1
379131-1	Pipe Reducer Bushing	1
75-P-45-12	12VDC Electrical Rocker Switch	1
379265	Grommet with Speed Control	1
378414	Air Shifter Pressure Protection Valve	1
378416	Nipple (.250"-18)	1
380672	Female Spade Connector (.250").....	3
378966	Tee (.125"-27).....	1
379042	Male Connector (.250" Tube x .125"-27).....	3
379043	90° Elbow (.250" Tube x .125"-27).....	1
379106	Breather (.125"-27)	1
379257	Electrical Speed Limiter Connector	2
379305	Pressure Switch.....	1
380668X	Bracket and Label Assembly	1
379900	Fuse Holder.....	1
379044-6	Nylon Tubing (Black)	1
380009	Female Connector	2
329129-1X	Hose Assembly with Fitting	1
75-P-46X	Wire and Connectors Kit.....	1
SK-605	Elec/Air Shift w/o EOC Installation Sketch.....	1
329909-24X	24VDC Elec/Air Valve Installation Kit (2 Shift, HV Gear)	
75-P-41	Elec/Air Electrical Harness w/o EOC.....	1
379502	Pressure Switch.....	1
379486	90° Elbow (.438"-20)	1
379131-1	Pipe Reducer Bushing	1
75-P-45-24	24VDC Electrical Rocker Switch	1
379265	Grommet with Speed Control	1
378414	Air Shifter Pressure Protection Valve	1
378416	Nipple (.250"-18)	1
380672	Female Spade Connector (.250").....	3
378966	Tee (.125"-27).....	1
379042	Male Connector (.250" Tube x .125"-27).....	3
379043	90° Elbow (.250" Tube x .125"-27).....	1
379106	Breather (.125"-27)	1
379257	Electrical Speed Limiter Connector	2
379305	Pressure Switch.....	1
380668X	Bracket and Label Assembly	1
379900	Fuse Holder.....	1
379044-6	Nylon Tubing (Black)	1
380009	Female Connector	2
329129-1X	Hose Assembly with Fitting.....	1
75-P-46X	Wire and Connectors Kit.....	1
SK-605	Elec/Air Shift w/o EOC Installation Sketch.....	1

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

Part Number	Description	Qty.
AIR INSTALLATION KITS (Continued)		
329910-12X	12VDC Remote Elec/Air Valve Installation Kit (P Shift, HV Gear)	
329231X	Valve Connector and Wire	1
379502	Pressure Switch.....	1
379486	90° Elbow (.438"-20)	1
379131-1	Pipe Reducer Bushing	1
379252	Electrical Butt Connector	2
379258	Mounting Bracket	1
379265	Grommet with Speed Control	1
379303-1	12VDC Solenoid Valve.....	1
500357-7	Lock Washer (.194" x .337" x .047")	2
500457-6	Round Head Slotted Screw (.190"-32 x .438")	2
378414	Air Shifter Pressure Protection Valve	1
378416	Nipple (.250"-18)	1
75-P-45-12	12VDC Electrical Rocker Switch	1
378966	Tee (.125"-27).....	1
380672	Female Spade Connector (.250").....	3
380668X	Bracket and Label Assembly	1
379042	Male Connector (.250" Tube x .125"-27).....	2
379043	90° Elbow (.250" Tube x .125"-27).....	2
379106	Breather (.125"-27)	1
379257	Electrical Speed Limiter Connector.....	2
379305	Pressure Switch.....	1
379306	Electrical Fork Connector.....	1
379900	Fuse Holder.....	1
379044-6	Nylon Tubing (Black)	1
329129-1X	Hose Assembly with Fitting.....	1
75-P-46X	Wire and Connectors Kit.....	1
379253	Electrical Ring Connector (.250")	1
SK-607	Elec/Air Shift w/o EOC Installation Sketch.....	1

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Kits Bill of Materials**Parts List****272/282 Series**

Part Number	Description	Qty.	Part Number	Description	Qty.
AIR INSTALLATION KITS (Continued)			SERVICE CONVERSION KITS		
329910-24X	24VDC Remote Elec/Air Valve Installation Kit (Q Shift, HV Gear)		329354-12X	12VDC Remote Hyd Valve Conversion Kit (All)	
329231X	Valve Connector and Wire	1	22-P-112	Valve Cap Gasket	1
379502	Pressure Switch.....	1	500457-6	Round Head Slotted Screw (.190"-32 x .438")..	2
379486	90° Elbow (.438"-20)	1	500357-7	Lock Washer (.337" x .190" x .047")	2
379131-1	Pipe Reducer Bushing	1	379686-1	12VDC Hydraulic Solenoid Valve.....	1
379252	Electrical Butt Connector	2	379449	Male Connector (.438"-20 x .250"-18).....	1
379258	Mounting Bracket.....	1	379258	Solenoid Valve Mounting Bracket.....	1
379265	Grommet with Speed Control	1	379564-2	Shipping Cap	2
379303-2	24VDC Solenoid Valve	1	329231X	Electrical Wiring Harness	1
500357-7	Lock Washer (.194" x .337" x .047").....	2	329230X	Electrical Wire and Butt Connector	1
500457-6	Round Head Slotted Screw (.190"-32 x .438")	2	328075X	Hose Assembly	1
378414	Air Shifter Pressure Protection Valve	1	379700	Swivel Nut Tee (.438"-20)	1
378416	Nipple (.250"-18)	1	380010	Female SAE Swivel Nut (.438"-20) Union	1
75-P-45-24	24VDC Electrical Rocker Switch	1	379486	90° Elbow (.438"-20)	1
378966	Tee (.125"-27)	1	329403X	Assembly Seal	1
380672	Female Spade Connector (.250").....	3	379711	Tee (.375"-24 x .438"-20 x .438"-20)	1
380668X	Bracket and Label Assembly	1	379131-1	Pipe Reducer Bushing	1
379042	Male Connector (.250" Tube x .125"-27).....	2	SK-432	Installation Sketch	1
379043	90° Elbow (.250" Tube x .125"-27).....	2			
379106	Breather (.125"-27)	1	329354-24X	24VDC Remote Hyd Valve Conversion Kit (All)	
379257	Electrical Speed Limiter Connector	2	500457-6	Round Head Slotted Screw (.190"-32 x .438")..	2
379305	Pressure Switch.....	1	500357-7	Lock Washer (.337" x .190" x .047")	2
379306	Electrical Fork Connector (.164")	1	379686-2	24VDC Hydraulic Solenoid Valve.....	1
379900	Fuse Holder	1	379449	Male Connector (.438"-20 x .250"-18).....	1
379044-6	Nylon Tubing (Black)	1	379258	Solenoid Valve Mounting Bracket.....	1
329129-1X	Hose Assembly with Fitting.....	1	379564-2	Cap Thread	2
75-P-46X	Wire and Connectors Kit.....	1	329231X	Electrical Wiring Harness	1
379253	Electrical Ring Connector (.250")	1	329230X	Electrical Wire and Butt Connector	1
SK-607	Elec/Air Shift w/o EOC Installation Sketch.....	1	328075X	Hose Assembly	1
379042	Male Connector (.250" Tube x .125"-27).....	1	22-P-112	Gasket.....	1
			379700	Swivel Nut Tee (.438"-20)	1
329911X	12VDC/24VDC Elec/Air Valve w/ EOC Installation Kit (J Shift & 3 Shift, HV Gear)		380010	Union Female SAE Swival Nut (.438"-20)	1
75-P-41X	Elec/Air Electrical Harness w/o EOC.....	1	379486	90° Elbow (.438"-20)	1
379502	Pressure Switch.....	1	329403X	Assembly Seal	1
379486	90° Elbow (.438"-20)	1	379711	Tee (.375"-24 x .438"-20 x .438"-20)	1
379131-1	Reducer Bushing	1	379131-1	Pipe Reducer Bushing	1
379265	Grommet	1	SK-432	Installation Sketch	1
378414	Pressure Protection	1	329057-4X	Hose Assembly (16.75")	2
378416	Hex Nipple.....	1			
378966	Street Tee	1			
379042	Male Connector.....	3			
379043	Male Elbow.....	1			
379106	Breather (.125"-27)	1			
379257	Splice Connector	2			
379305	Pressure Switch.....	1			
379306	Electrical Fork Terminal	1			
379044-6	Nylon Tubing	1			
380009	Female Connector	2			
329129-1X	Hose Assembly with Fitting.....	1			
379254-18	PTO Request Wire.....	1			
329650X	EOC Controller	1			
SK-606	Elec/Air Shift w/ EOC Installation Sketch.....	1			

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

Part Number	Description	Qty.
SERVICE CONVERSION KITS (Continued)		
329958-12X	12VDC Remote Valve Conversion Kit (G)	
329880-1X	Hyd Remote Valve Cap.....	1
22-P-112	Valve Cap Gasket	1
35-P-118	Plate Gasket.....	1
379242	Straight Adapter (.125"-27 x .750"-16)	1
379231	Pipe Plug (.125"-27)	1
34-P-316	EOC Cover Plate	1
329885-12X	12VDC Hyd Remote Valve Installation Kit.....	1
SK-576	Remote Hyd Valve Installation Sketch.....	1
329958-24X	24VDC Remote Valve Conversion Kit (H)	
329880-1X	Hyd Remote Valve Cap.....	1
22-P-112	Valve Cap Gasket	1
35-P-118	Plate Gasket.....	1
379242	Straight Adapter (.125"-27 x .750"-16)	1
379231	Pipe Plug (.125"-27)	1
34-P-316	EOC Cover Plate	1
329885-24X	24VDC Hyd Remote Valve Installation Kit.....	1
SK-576	Remote Hyd Valve Installation Sketch.....	1
329962X	12VDC Remote Valve Conversion Kit (Allison G-HV)	
329880-1X	Hyd Remote Valve Cap.....	1
22-P-112	Valve Cap Gasket	1
35-P-118	Plate Gasket.....	1
379242	Straight Adapter (.125"-27 x .750"-16)	1
379231	Pipe Plug (.125"-27)	1
34-P-316	EOC Cover Plate	1
329842-12X	12VDC Hyd Remote Valve Installation Kit.....	1
SK-579	Remote Hyd Valve Installation Sketch.....	1
329964X	12VDC Remote Valve Conversion Kit (RAM G-HV)	
329880-1X	Hyd Remote Valve Cap.....	1
22-P-112	Valve Cap Gasket	1
35-P-118	Plate Gasket.....	1
379242	Straight Adapter (.125"-27 x .750"-16)	1
379231	Pipe Plug (.125"-27)	1
34-P-316	EOC Cover Plate	1
329887-12X	12VDC Hyd Remote Valve Installation Kit.....	1
329966X	EOC Conversion Kit (B & D Shift to K & L Shift)	
329900X	12VDC & 24VDC w/ EOC Installation Kit.....	1
35-P-118	Plate Gasket.....	1
379243	Speed Sensor	1
28-P-171	O-ring (.644" x .087").....	1
379242	Straight Adapter (.125"-27 x .750"-16)	1
379231	Pipe Plug (.125"-27)	1
34-P-316	EOC Cover Plate	1

Part Number	Description	Qty.
SERVICE CONVERSION KITS (Continued)		
329967X	EOC Conversion Kit (1 to J Shift)	
329894X	12VDC Remote Air Valve w/ EOC Installation Kit	1
35-P-118	Plate Gasket.....	1
379243	Speed Sensor	1
28-P-171	O-ring (.644" x .087").....	1
379242	Straight Adapter (.125"-27 x .750"-16)	1
379231	Pipe Plug (.125"-27)	1
34-P-316	EOC Cover Plate	1
329968X	EOC Conversion Kit (A to 3 Shift)	
329858-3X	24VDC Air Valve Cap w/ & w/o Lube Assembly.....	1
329894X	24VDC Remote Air Valve w/ EOC Installation Kit	1
35-P-118	Plate Gasket.....	1
379243	Speed Sensor	1
28-P-171	O-ring (.644" x .087").....	1
379242	Straight Adapter (.125"-27 x .750"-16)	1
379231	Pipe Plug (.125"-27)	1
34-P-316	EOC Cover Plate	1
329969X	EOC Conversion Kit (A to J Shift)	
329858-1X	12VDC Air Valve Cap w/ & w/o Lube Assembly.....	1
329894X	12VDC Remote Air Valve w/ EOC Installation Kit	1
35-P-118	Plate Gasket.....	1
379243	Speed Sensor	1
28-P-171	O-ring (.644" x .087").....	1
379242	Straight Adapter (.125"-27 x .750"-16)	1
379231	Pipe Plug (.125"-27)	1
34-P-316	EOC Cover Plate	1

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

Kits Bill of Materials**Parts List****272/282 Series**

Part Number	Description	Qty.	Part Number	Description	Qty.
OUTPUT CONVERSION KITS			OUTPUT CONVERSION KITS (Continued)		
329160-100X	Conversion Kit (XD to RK DRY)		329160-103X	Conversion Kit (XD to BD) (Air Shift Only)	
379555	Lockring	1	378576	Lockring	2
379688	Spline Lubricant.....	1	378895	Lockring	1
379746	Lockring	1	379746	Lockring	1
380069	Lockring	1	379977	Spring Pin (.187" x .625")	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1	550010	Ball Bearing (1.378" x 2.834" x .669").....	1
21-P-731	Pump Flange	1	21-P-888	Drag Brake Bearing Cap.....	1
21-P-885	Bearing Cap (DRY)	1	22-P-151	Shim Gasket.....	2
22-P-151	Shim Gasket.....	1	23-P-73	Drag Brake Bearing Cap Spacer.....	1
28-P-285	O-ring (1.597" x .103").....	2	28-P-225	Oil Seal (2.004" x 1.375" x .315").....	1
328170-216X	Cap Screw Kit	1	28-P-244	O-ring (1.174" x .103").....	2
380563-14	Hex Flange Head Cap Screw (.375"-16 x 1.500")	4	31-P-113	Thrust Washer (1.385" x 3.125" x .125").....	1
3-P-1135	Output Shaft.....	1	329410X	Brake Assembly	1
			37-P-24	Spring for Brake Assembly	1
			380563-28	Hex Flange Head Cap Screw (.375"-16 x 3.500")	4
329160-101X	Conversion Kit (XD to RK WET)		4-P-186	Spacer (1.385" x 1.750" x .365")	1
379555	Lockring	1	329833-1X-A	Drive Shaft & Clutch Assembly.....	1
379746	Lockring	1	500007-29	Woodruff Key.....	1
380069	Lockring	1			
21-P-731	Pump Flange	1	329160-104X	Conversion Kit (XD to RF DRY)	
21-P-887	Bearing Cap (WET)	1	379555	Lockring	1
22-P-151	Shim Gasket.....	1	379688	Spline Lubricant.....	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1	379746	Lockring	1
28-P-285	O-ring (1.597" x .103").....	2	380069	Lockring	1
328170-216X	Cap Screw Kit	1	21-P-731	Pump Flange	1
329658X	Cover Kit	1	21-P-885	Bearing Cap (DRY)	1
329699-1X	Overall Hose Assembly	1	22-P-151	Shim Gasket.....	1
329700X	Wet Spline Parts Kit.....	1	28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
380563-14	Hex Flange Head Cap Screw (.375"-16 x 1.500")	4	28-P-285	O-ring (1.597" x .103").....	2
3-P-1135	Output Shaft.....	1	328170-216X	Bag Kit	1
			380563-14	Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
329160-102X	Conversion Kit (XD to BV) (AIR)		3-P-1136	Output Shaft.....	1
378576	Lockring	2			
378895	Lockring	1	329160-105X	Conversion Kit (XD to RF WET)	
379746	Lockring	1	379555	Lockring	1
379977	Spring Pin (.187" x .625")	1	379746	Lockring	1
380081	1410 Series Companion Flange.....	1	380069	Lockring	1
550010	Ball Bearing (1.378" x 2.834" x .669").....	1	21-P-731	Pump Flange	1
21-P-884	Bearing Cap	1	21-P-887	Bearing Cap (WET)	1
22-P-151	Shim Gasket.....	2	22-P-151	Shim Gasket.....	1
23-P-73	Drag Brake Bearing Cap Spacer.....	1	28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
28-P-212	Oil Seal (2.506" x 1.750" x .315").....	1	28-P-285	O-ring (1.597" x .103").....	2
28-P-244	O-ring (1.174" x .103").....	2	328170-216X	Bag Kit	1
31-P-113	Thrust Washer (1.385" x 3.125" x .125").....	1	329658X	Cover Kit	1
329410X	Brake Assembly	1	329699-1X	Overall Hose Assembly	1
378435-7	Hex Head Cap Screw (.625"-11 x 1.250")	1	329700X	Wet Spline Parts Kit.....	1
37-P-24	Spring for Brake Assembly	1	380563-14	Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
380563-28	Hex Flange Head Cap Screw (.375"-16 x 3.500")	4	3-P-1136	Output Shaft.....	1
329833X-A	Drive Shaft & Clutch Assembly.....	1			
4-P-130	Spacer (.640" x 1.620" x .188")	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.
OUTPUT CONVERSION KITS (Continued)		
329160-106X	Conversion Kit (XD to RS DRY)	
379555	Lockring	1
379688	Spline Lubricant.....	1
379746	Lockring	1
380069	Lockring	1
21-P-769	Pump Flange	1
21-P-885	Bearing Cap (DRY)	1
22-P-151	Shim Gasket.....	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
28-P-285	O-ring (1.597" x .103").....	2
328170-216X	Bag Kit	1
380563-14	Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
3-P-1137	Output Shaft.....	1
329160-107X	Conversion Kit (XD to RS WET)	
379555	Lockring	1
379746	Lockring	1
380069	Lockring	1
21-P-769	Pump Flange	1
21-P-887	Bearing Cap (WET)	1
22-P-151	Shim Gasket.....	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
28-P-285	O-ring (1.597" x .103").....	2
328170-216X	Bag Kit	1
329654X	Cover Kit	1
329699-1X	Overall Hose Assembly.....	1
329744X	Wet Spline Parts Kit.....	1
380563-14	Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
3-P-1137	Output Shaft.....	1
329160-108X	Conversion Kit (XD to RY DRY)	
379555	Lockring	1
379688	Spline Lubricant.....	1
379746	Lockring	1
380069	Lockring	1
21-P-771	Pump Flange	1
21-P-885	Bearing Cap (DRY)	1
22-P-151	Shim Gasket.....	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
28-P-285	O-ring (1.597" x .103").....	2
328170-216X	Bag Kit	1
380563-14	Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
3-P-1138	Output Shaft.....	1

Part Number	Description	Qty.
OUTPUT CONVERSION KITS (Continued)		
329160-109X	Conversion Kit (XD to RY WET)	
379555	Lockring	1
379746	Lockring	1
380069	Lockring	1
21-P-771	Pump Flange.....	1
21-P-887	Bearing Cap	1
22-P-151	Gasket.....	1
28-P-267	Oil Seal.....	1
28-P-285	O-ring.....	2
328170-216X	Cap Screw Kit	1
329659X	Cover Kit	1
329699-1X	Hose Assembly	1
329742X	Wet Spline Loose Parts Kit	1
380563-14	Cap Screw	4
3-P-1138	Output Shaft.....	1
329160-110X	Conversion Kit (XD to RZ DRY)	
379555	Lockring	1
379688	Spline Lubricant.....	1
379746	Lockring	1
380069	Lockring	1
21-P-731	Pump Flange.....	1
21-P-885	Bearing Cap (DRY)	1
22-P-151	Shim Gasket.....	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
28-P-285	O-ring (1.597" x .103").....	2
328170-216X	Bag Kit	1
380563-14	Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
3-P-1137	Output Shaft.....	1
329160-111X	Conversion Kit (XD to RZ WET)	
379555	Lockring	1
379746	Lockring	1
380069	Lockring	1
21-P-731	Pump Flange.....	1
21-P-887	Bearing Cap (WET)	1
22-P-151	Shim Gasket.....	1
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
28-P-285	O-ring (1.597" x .103").....	2
328170-216X	Bag Kit	1
329658X	Cover Kit	1
329699-1X	Overall Hose Assembly.....	1
329700X	Wet Spline Parts Kit.....	1
380563-14	Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
3-P-1137	Output Shaft.....	1

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

Kits Bill of Materials**Parts List****272/282 Series**

Part Number	Description	Qty.	Part Number	Description	Qty.
OUTPUT CONVERSION KITS (Continued)			OUTPUT CONVERSION KITS (Continued)		
329160-112X	Conversion Kit (XD to AB)		329160-116X	Conversion Kit (XD to XV)	
379555	Lockring	1	379555	Lockring	1
379558	Companion Flange DIN 120	1	379746	Lockring	1
379746	Lockring	1	380069	Lockring	1
380069	Lockring	1	380486	Thin Nylon Lock Nut (.875"-14).....	1
380486	Thin Nylon Lock Nut (.875"-14).....	1	380503	1410 Series Companion Flange.....	1
22-P-151	Shim Gasket.....	1	22-P-151	Gasket.....	1
28-P-211	Oil Seal (3.001" x 2.000" x .375").....	1	28-P-211	Oil Seal (3.001" x 2.000" x .375").....	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 Cap Screw (.375"-16 x 1.500")	4	380563-14	Hex Flange Head Cap Screw (.375"-16 x 1.500").....	4
380076-13	Hardened Flat Washer (.950" x 1.760")	1	380076-13	Hardened Flat Washer (.950" x 1.762" x .157")	1
3-P-1134	Output Shaft.....	1	3-P-1134	Output Shaft.....	1
329160-113X	Conversion Kit (XD to AC)		329160-118X	Conversion Kit (XD to RE DRY)	
379555	Lockring	1	379555	Lockring	1
379742	Companion Flange DIN 100	1	379688	Spline Lubricant.....	1
379746	Lockring	1	379746	Lockring	1
380069	Lockring	1	380069	Lockring	1
380486	Thin Nylon Lock Nut (.875"-14).....	1	21-P-880	Bearing Cap	1
22-P-151	Shim Gasket.....	1	22-P-151	Shim Gasket.....	1
28-P-211	Oil Seal (3.001" x 2.000" x .375").....	1	28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
28-P-285	O-ring (1.597" x .103").....	2	28-P-285	O-ring (1.597" x .103").....	2
380563-14	Hex Flange Head Cap Screw (.375"-16 x 1.500")	4	380563-14	Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
380076-13	Hardened Flat Washer (.950" x 1.760")	1	3-P-1170	Output Shaft.....	1
3-P-1134	Output Shaft.....	1	329160-142X	Conversion Kit (XD to SD)	
329160-114X	Conversion Kit (XD to UN DRY)		379555	Lockring	1
378576	Lockring	1	379746	Lockring	1
378895	Lockring	1	380069	Lockring	1
379688	Spline Lubricant.....	1	22-P-151	Shim Gasket.....	1
379746	Lockring	1	28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
380069	Lockring	1	21-P-285	O-ring (1.597" x .103").....	2
550010	Ball Bearing (1.378" x 2.834" x .669").....	1	5000007-29	Woodruff Key.....	1
21-P-832	Bearing Cap	1	380563-14	Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
21-P-151	Shim Gasket.....	1	3-P-1168	Output Shaft.....	1
28-P-216	Oil Seal (2.004" x 1.250" x .374").....	1	329160-143X	Conversion Kit (XD to XR)	
28-P-285	O-ring (1.597" x .103").....	2	379555	Lockring	1
380563-14	Hex Flange Head Cap Screw (.375"-16 x 1.500")	4	379688	Spline Lubricant.....	1
3-P-1143	Output Shaft DIN 6T	1	379746	Lockring	1
329160-115X	Conversion Kit (XD to UN WET)		380069	Lockring	1
378576	Lockring	1	28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1
378895	Lockring	1	329906X	Pump Kit	1
379746	Lockring	1	21-P-885	Bearing Cap (DRY)	1
380069	Lockring	1	22-P-151	Shim Gasket.....	1
550010	Ball Bearing (1.378" x 2.834" x .669").....	1	28-P-285	O-ring (1.597" x .103").....	2
21-P-833	Bearing Cap	1	380563-14	Hex Flange Head Cap Screw (.375"-16 x 1.500")	4
21-P-151	Shim Gasket.....	1	3-P-1135	Output Shaft.....	1
28-P-216	Oil Seal (2.004" x 1.250" x .374").....	1			
329699-1X	Hose Assembly Overall	1			
329821X	O-ring (1.597" x .103").....	2			
329821X	Wet Spline Parts Kit.....	1			
380563-14	Hex Flange Head Cap Screw (.375"-16 x 1.500")	4			
3-P-1143	Output Shaft DIN 6T	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)		
329160-144X	Conversion Kit (XD to SV)		329160-151X	Conversion Kit (XD to BV) (HYD Shift)	
379555	Lockring	1	378576	Lockring	2
379746	Lockring	1	378895	Lockring	1
380069	Lockring	1	379746	Lockring	1
380486	Thin Nylon Lock Nut (.875"-14).....	1	379977	Spring Pin (.187" x .625")	1
380503	1410 Companion Flange	1	380081	1410 Companion Flange	1
22-P-151	Shim Gasket.....	1	550010	Ball Bearing (1.378" x 1.834" x .669").....	1
28-P-211	Oil Seal (3.001" x 2.000" x .375").....	1	21-P-884	Bearing Cap	1
28-P-285	O-ring (1.597" x .103").....	2	21-P-151	Shim Gasket.....	2
380563-14	Hex Flange Head Cap Screw (.375"-16 x 1.500")	4	23-P-73	Drag Brake Bearing Cap Spacer.....	1
380076-13	Hardened Flat Washer (.950" x 1.760").....	1	28-P-212	Oil Seal (2.506" x 1.750" x .315").....	1
3-P-1169	Output Shaft.....	1	28-P-244	O-ring (1.174" x .103").....	2
329160-145X	Conversion Kit (XD to RB DRY)		31-P-113	Thrust Washer (1.385" x 3.125" x 1.250").....	1
379555	Lockring	1	329410X	Brake Assembly	1
379688	Spline Lubricant.....	1	378435-7	Hex Head Cap Screw (.625"-11 x 1.250")	1
379746	Lockring	1	380563-28	Hex Flange Head Cap Screw (.375"-16 x 3.500")	4
380069	Lockring	1	4-P-130	Spacer (.640" x 1.620" x .188")	1
21-P-894	Pump Flange	1	4-P-186	Spacer (1.385" x 1.750" x .365")	1
21-P-885	Bearing Cap (DRY)	1	37-P-60	Brake Assembly Spring	1
22-P-151	Shim Gasket.....	1	329829X-A	Drive Shaft & Clutch Assembly.....	1
28-P-285	O-ring (1.597" x .103").....	2	329160-152X	Conversion Kit (XD to BV) (HYD Shift)	
328170-216X	Bag Kit	1	378576	Lockring	2
380563-14	Hex Flange Head Cap Screw (.375"-16 x 1.500")	4	378895	Lockring	1
3-P-1135	Output Shaft.....	1	379746	Lockring	1
329160-146X	Conversion Kit (XD to RB WET)		379977	Spring Pin (.187" x .625")	1
379555	Lockring	1	550010	Ball Bearing (1.378" x 2.834" x .669").....	1
379746	Lockring	1	21-P-888	Drag Brake Bearing Cap	1
380069	Lockring	1	21-P-151	Shim Gasket.....	2
21-P-894	Pump Flange	1	23-P-73	Drag Brake Bearing Cap Spacer.....	1
21-P-887	Bearing Cap (WET)	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").....	2
28-P-267	Oil Seal (2.627" x 1.750" x .312").....	1	31-P-113	Thrust Washer (1.385" x 3.125" x .125").....	1
28-P-285	O-ring (1.597" x .103").....	2	329410X	Brake Assembly	1
328170-216X	Bag Kit	1	380563-28	Hex Flange Head Cap Screw (.375"-16 x 3.500")	4
329658X	Cover Kit	1	4-P-186	Spacer (1.385" x 1.750" x .365")	1
329699-1X	Overall Hose Assembly.....	1	37-P-60	Brake Assembly Spring	1
329700X	Wet Spline Parts Kit.....	1	329829-1X-A	Drive Shaft & Clutch Assembly.....	1
380563-14	Hex Flange Head Cap Screw (.375"-16 x 1.500")	4	5000007-29	Woodruff Key.....	1
3-P-1135	Output Shaft.....	1			

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

Offer of Sale

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

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

Buyer: means any customer receiving a Quote for Products.

Buyer's Property:

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

Confidential Information:

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

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

Intellectual Property Rights:

means any patents, trademarks, copyrights, trade dress, trade secrets or similar rights.

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

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

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

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

Services: means any services to be provided by Seller.

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

Special Tooling:

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

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

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

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

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

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

5. Warranty. The warranty for the Products is as follows:

- (i) Seller warrants that all products sold conform to the applicable Parker Chelsea standard specification for the lesser period of 2 years (24 Months) from date of service or 2-1/2 years (30 Months) from date of build (as marked on the product name plate);
- (ii) Services shall be performed in accordance with generally accepted practices and using the degree of care and skill that is ordinarily exercised and customary in the field to which the Services pertain and are warranted for a period of six (6) months from the date of completion of the Services; and
- (iii) Software is only warranted to perform in accordance with applicable specifications provided by Seller to Buyer for ninety (90) days from the date of delivery or, when downloaded by a Buyer or end-user, from the date of the initial download.

All prices are based upon the exclusive limited warranty stated above, and upon the following disclaimer: **EXEMPTION CLAUSE; DISCLAIMER OF WARRANTY, CONDITIONS, REPRESENTATIONS: THIS WARRANTY IS THE SOLE AND ENTIRE WARRANTY, CONDITION, AND**

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Offer of Sale (Continued)

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

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

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

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

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

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

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

12. User Responsibility. Buyer, through its own analysis and testing, is solely responsible for making the final selection of the Products and assuring that all performance, endurance, maintenance, safety and warning requirements of the application of the Products are met. Buyer must analyze all aspects of

the application and follow applicable industry standards, specifications, and any technical information provided with the Quote or the Products, such as Seller's instructions, guides and specifications. If Seller provides options of or for Products based upon data or specifications provided by Buyer, Buyer is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the Products. In the event Buyer is not the end-user of the Products, Buyer will ensure such end-user complies with this paragraph.

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

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

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

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

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Offer of Sale (Continued)

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

these Terms means any circumstances beyond Seller's control that permanently or temporarily hinders performance, even where that circumstance was already foreseen. Buyer shall not be entitled to cancel any orders following its claim of an event of force majeure.

17. Waiver and Severability. Failure to enforce any provision of these Terms will not invalidate that provision; nor will any such failure prejudice either party's right to enforce that provision in the future. Invalidation of any provision of these Terms shall not invalidate any other provision herein and, the remaining provisions will remain in full force and effect.

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

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

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

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

22. Governing Law. These Terms, the terms of any Quote, and the sale and delivery of all Products are deemed to have taken

place in, and shall be governed and construed in accordance with, the laws of the State of Ohio, as applicable to contracts executed and wholly performed therein and without regard to conflicts of laws principles. Buyer irrevocably agrees and consents to the exclusive jurisdiction and venue of the courts of Cuyahoga County, Ohio with respect to any dispute, controversy or claim arising out of or relating to the sale and delivery of the Products.

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

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

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

09/22



Parker-Hannifin Corporation

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

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

www.Parker.com/Chelsea

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