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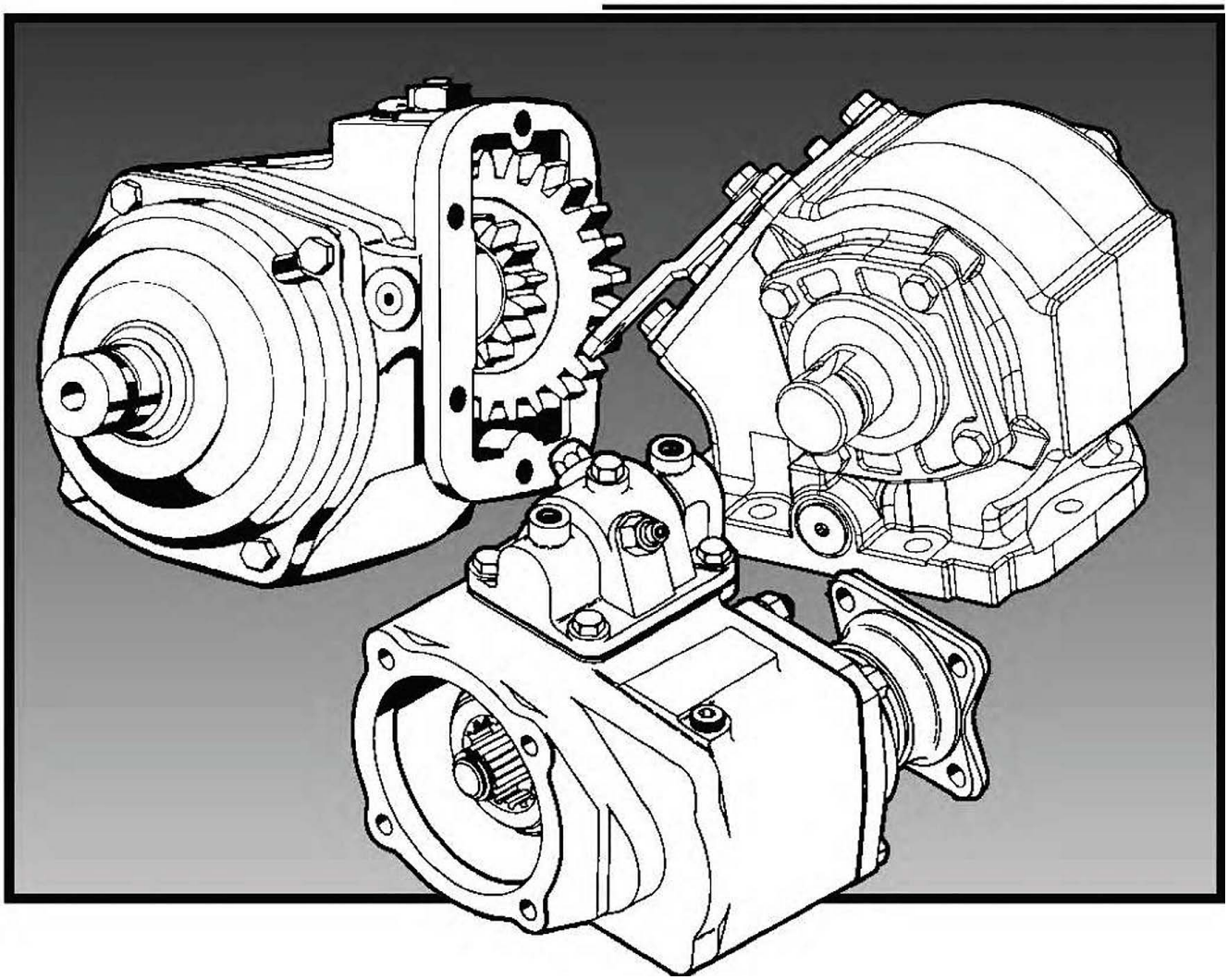
Bulletin HY25-2221-M1/US

CHELSEA®
Replacement Parts List
221 Series Manual

Effective: April 15, 2002
Supersedes: P410-221 Dated September 1995



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⚠ WARNING

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Chelsea Products Division
Olive Branch, MS 38654 USA

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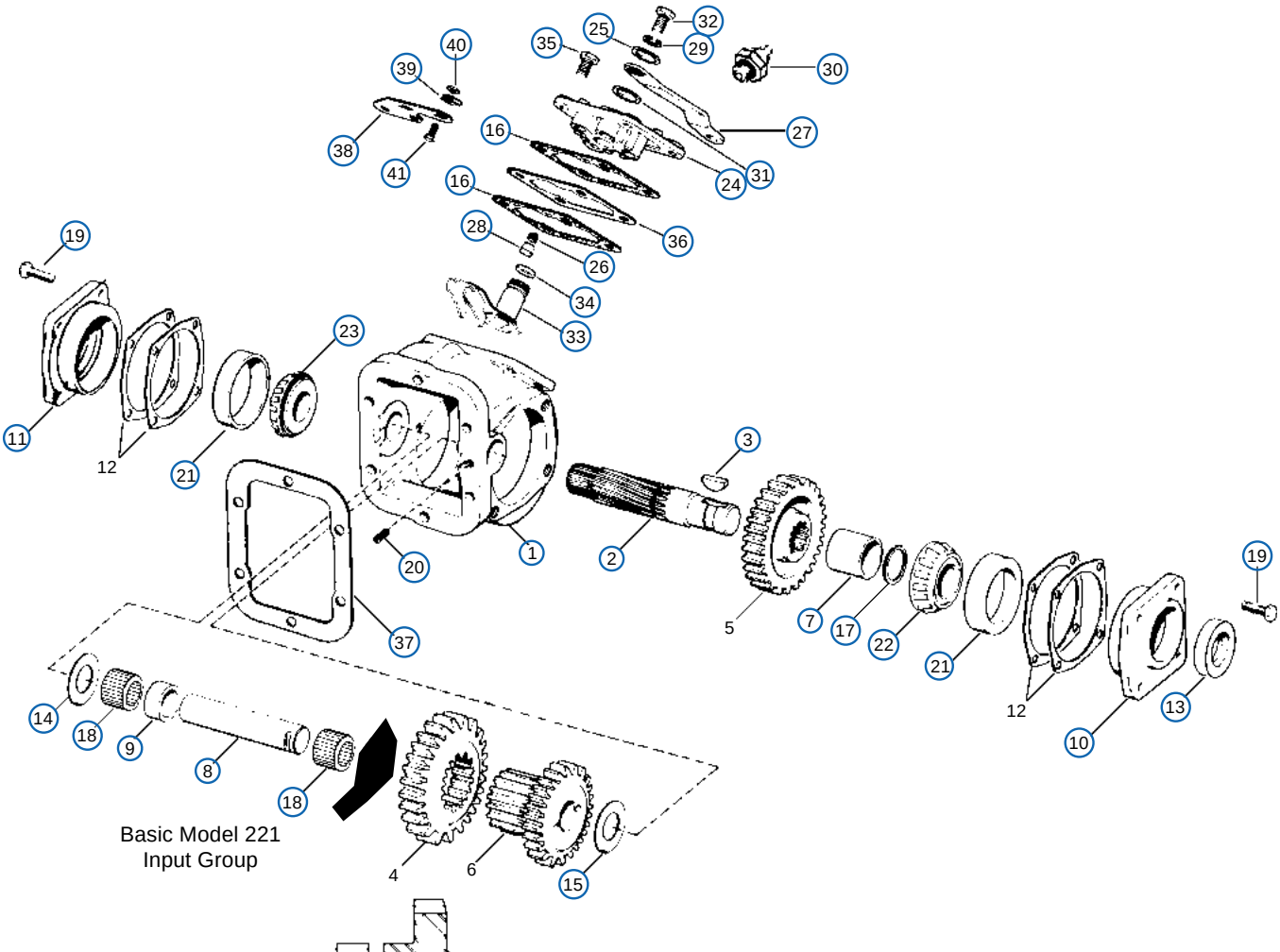

Parker Hannifin Corporation
Chelsea Products Division
Olive Branch, MS 38654 USA

Item		Part Number	Description	Quantity
1	▶	1-P-467	Housing, Standard Mount (X)	1
		1-P-468	Housing, Extra Deep Mount (Q)	1
	▶	1-P-469	Housing, Deep Mount (Z)	1
	▶	1-P-470X	Housing, Low Profile (R)	1
2	▶	3-P-202	Driveshaft, Standard Output (1.25" Round)	1
		See Chart Pg. 10	Shaft, Pump	1
3	▶	500007-29	Woodruff Key (.3125" x 1.125")	1
4		See Chart Pg. 4	Gear, Input	1
5		See Chart Pg. 4	Gear, Output	1
6		See Chart Pg. 4	Gear, Ratio	1
7	▶	4-P-45	Spacer, Driveshaft (1.410" Wide)	1
8	▶	9-P-55	Shaft, Input Idler (4.812" Long)	1
N.S.		9-P-54	Shaft, Pressure Lube Input Idler (4.812" long)	1
N.S.		379231	Pipe Plug, Pressure Lube (.125"-27 NPTF)	1
N.S.		328075X	Hose Assembly, Pressure Lube (24" Long)	1
9	▶	14-P-50	Spacer, Caged Needle Bearing (.587")	1
10	▶	328273X	Bearing Cap, Open End, Standard Output (“XD”)	1
11	▶	328274X	Bearing Cap, Closed End, Standard Output	1
12		22-P-24-1	Gasket, Bearing Cover (.010")	A.R.
		22-P-24-2	Gasket, Bearing Cover (.020")	A.R.
		22-P-24-3	Gasket, Bearing Cover (.015")	A.R.
13	▶	28-P-216	Oil Seal, Output Shaft (“XD”)	1
14	▶	31-P-58	Thrust Washer	1
15	▶	31-P-47	Thrust Washer	1
16	▶	35-P-8	Gasket, Cover (.032") (use 2 for Wire Shift)	1
17	▶	378391	Retaining Ring, Driveshaft	1
18	▶	550886	Bearing, Caged Needle Roller	2
19	▶	378430-10	Capscrew, Bearing Cap Hex Head (.3125"-18 x 1")	8
20	▶	378452-7	Setscrew, Standard Mount Housing (.250"-20 X .500")	1
	▶	378452-4	Setscrew, Deep Mount Housing (.250"-20 X .312")	1
21	▶	550221	Bearing Cup	2
22	▶	550397	Bearing Cone, Output End	1
23	▶	550532	Bearing Cone, Closed End	1
	▶	328805-1X	Cable Shift Cover Assembly (Assemblies 3 & 6)	1
	▶	328805-2X	Cable Shift Cover Assembly (Assemblies 4 & 5)	1
			(Includes Items 24 thru 34)	
24	▶	34-P-74	Cover, Shifter	1
25	▶	500365-22	Flat Washer	1
26	▶	37-P-19	Poppet Spring, Shifter	1
27	▶	51-P-22	Shift Lever	1
28	▶	63-P-16	Shift Poppet	1
29	▶	500356-10	Lockwasher, Shift Lever	1
30		379639	Indicator Switch (Normally Off)	1
31	▶	378004	Flat Washer	1
32	▶	500409-6	Screw, Shift Lever Hex (.3125"-24 x .625")	1
33	▶	328803-1X	Post & Plate Assembly (Assemblies 3 & 6)	1
	▶	328803-2X	Post & Plate Assembly (Assemblies 4 & 5)	1
34	▶	28-P-191	O-Ring, Shifter Post	1
35	▶	378430-10	Capscrew, Hex Head (.3125" - 18 x 1")	4
36	▶	5-A-125	Spacer, Shifter Cover (Wire Shift Only)	1
N.S.		68-P-2	Name Plate	1

N.S. — Not Shown A.R.—As Required

Continued on next page

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Item		Part Number	Description	Quantity
			LOOSE PARTS	
37	▶	**328948-6X**	Gasket & Installation Instructions	1
		35-P-9-1	Gasket, Mounting (.010" thick)	2
		35-P-9-2	Gasket, Mounting (.020" thick)	2
N.S.		**328346-10X**	Cable Control Assembly (Includes 378441-10 10' Cable & 378502 Knob)	1
	▶	**328380X**	Mounting Parts Kit (Cable Control)	1
			(Includes items 38 thru 41)	
38	▶	**50-P-17**	Bracket, Cable Control	1
39	▶	**50-P-19**	Bracket, Swivel	1
N.S.		**378019**	Pin, Pivot	1
40	▶	**378326**	Nut, Hex (.25"-20)	1
N.S.		**500568-4**	Setscrew (.25"-20 X .50")	1
41	▶	**500396-8**	Capscrew, Hex Head (.25"-20 x .75")	1
N.S.		**328170-1X**	Stud Kit, Standard Mount	1
		379286-30	Capscrew (.375"-16 x 4")	1
		379286-42	Capscrew (.375"-16 x 7")	1
	▶	**379423-18**	Stud (.375"-16 & .375"-24 X 2.00")	2
	▶	**378018**	Copper Washer	6
	▶	**379744**	Nut, Flange (.375"-24)	2
	▶	**378774**	Washer, Tab Lock	4
		379286-13	Capscrew, Hex Head (.375"-16)	2
N.S.		**328170-26X**	Stud Kit, Deep Mount	1
		379286-29	Capscrew (.375"-16 x 3.75")	1
		379286-41	Capscrew (.375"-16 x 6.75")	1
		379423-14	Stud (.375"-16 & .375"-24 X 1.75")	2
	▶	**378018**	Copper Washer	6
	▶	**379744**	Nut, Flange (.375"-16 x 1")	2
		379286-11	Capscrew (.375"-16 x 1")	2
	▶	**378774**	Washer, Tab Lock	4
N.S.		**328170-155X**	Stud Kit, Low Profile	1
		379286-42	Capscrew (.375"-16 x 7")	1
		379286-14	Capscrew (.375"-16 x 1.5")	2
	▶	**379423-18**	Stud (.375"-16 & .375"-24 X 2.00")	2
	▶	**378018**	Copper Washer	5
	▶	**379744**	Nut, Flange (.375"-24)	2
	▶	**378774**	Washer, Tab Lock	5
	▶	**328751-1X**	Installation Kit, Cable or Lever Indicator Light	1
	▶	**328388-47X**	Installation Kit, 12-Volt Electric Over Air	1
	▶	**328388-48X**	Installation Kit, 24-Volt Electric Over Air	1
	▶	**328356-13X**	Gasket & Seal Kit	1
	▶	**328356-15X**	Seal Kit, Cable Shift	1
		328356-18X	Seal Kit, Lever Shift	1
	▶	**328356-19X**	Seal Kit, Air Shift	1

N.S. — Not Shown A.R.—As Required

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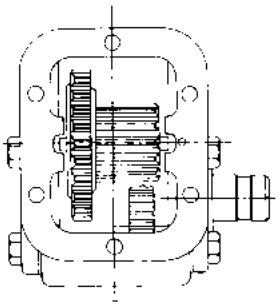
Pitch Model	Item No. 4 Sliding Input Gear		Application	Item No. 6 Ratio Gear		Item No. 5 Output Gear	
			LO-LO SPEED				
221*CAB	5-P-227	21T	General all 5 or 5/7	5-P-903	14T	2-P-283	29T
221*CAH	5-P-319	26T	General all 6 or 6/8	5-P-903	14T	2-P-283	29T
221*CAJ	5-P-569	25T	Allison	5-P-903	14T	2-P-283	29T
221*CAK	5-P-226	25T	Allsion/4700 A Series	5-P-903	14T	2-P-283	29T
221*CDA	5-P-633	27T	Mack T-2000 Series	5-P-903	14T	2-P-283	29T
			LOW SPEED				
221*EAB	5-P-227	21T	General all 5 or 5/7	5-P-248	15T	2-P-179	28T
221*EAH	5-P-202	25T	General all 6 or 6/8	5-P-248	15T	2-P-179	28T
221*EAJ	5-P-569	25T	Allison	5-P-248	15T	2-P-179	28T
221*EDA	5-P-633	27T	Mack T-2000 Series	5-P-248	15T	2-P-179	28T
221*EAD	5-P-504	20T	Spicer R8516	5-P-503	15T	2-P-479	27T
221*EAK	5-P-226	25T	Allsion/4700 A Series	5-P-248	15T	2-P-179	28T
221*EDQ	5-P-811	22T	Saab Scania	5-P-097	15T	2-P-479	27T
			MEDIUM HIGH SPEED				
221*LAB	5-P-227	21T	General all 5 or 5/7	5-P-394	18T	2-P-388	25T
221*LAH	5-P-202	25T	General all 6 or 6/8	5-P-394	18T	2-P-388	25T
221*LAK	5-P-226	25T	Allsion/4700A Series	5-P-394	18T	2-P-388	25T
221*LDA	5-P-633	27T	Mack T-2000 Series	5-P-394	18T	2-P-388	25T
			HIGH SPEED				
221*PAB	5-P-227	21T	General all 5 or 5/7	5-P-316	20T	2-P-256	23T
221*PAH	5-P-202	25T	General all 6 or 6/8	5-P-316	20T	2-P-256	23T
221*PAK	5-P-226	25T	Allison/4700 A Series	5-P-316	20T	2-P-256	23T
221*PDA	5-P-633	27T	Mack T-2000 Series	5-P-316	20T	2-P-256	23T
			CONSTANT MESH				
221*CAK-M	5-P-994	25T	Allison-Constant Mesh-Constant Mesh	—	14T	2-P-283	29T
221*EAK-M	5-P-910	25T	Allison-Constant Mesh-Constant Mesh	—	15T	2-P-179	28T
221*PAB-M	5-P-987	21T	General-Constant Mesh	—	20T	2-P-256	23T

Assembly Arrangements



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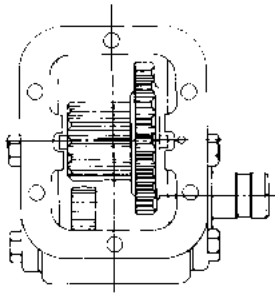

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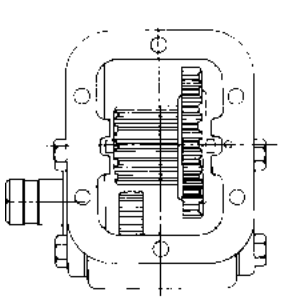

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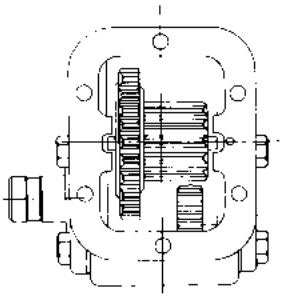

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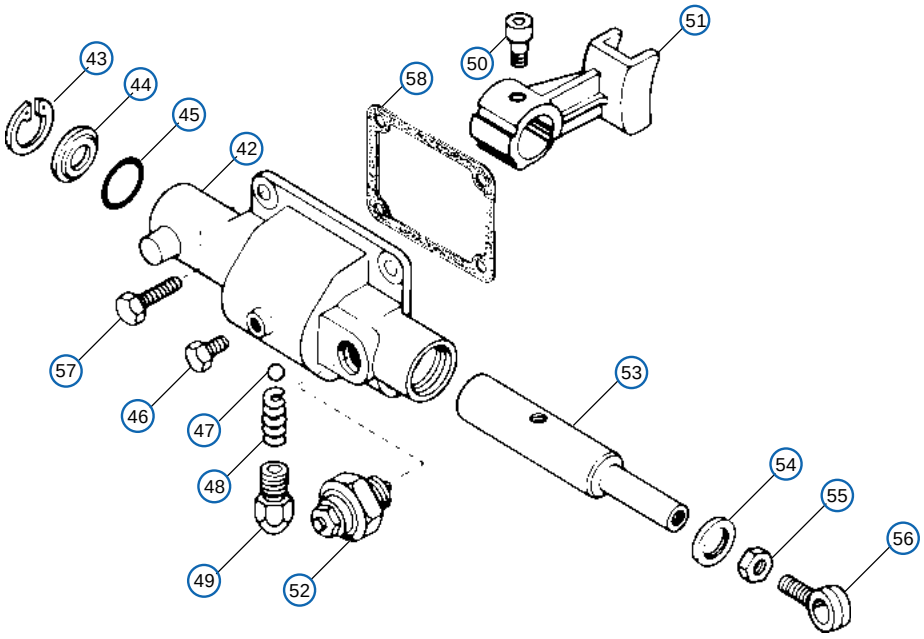
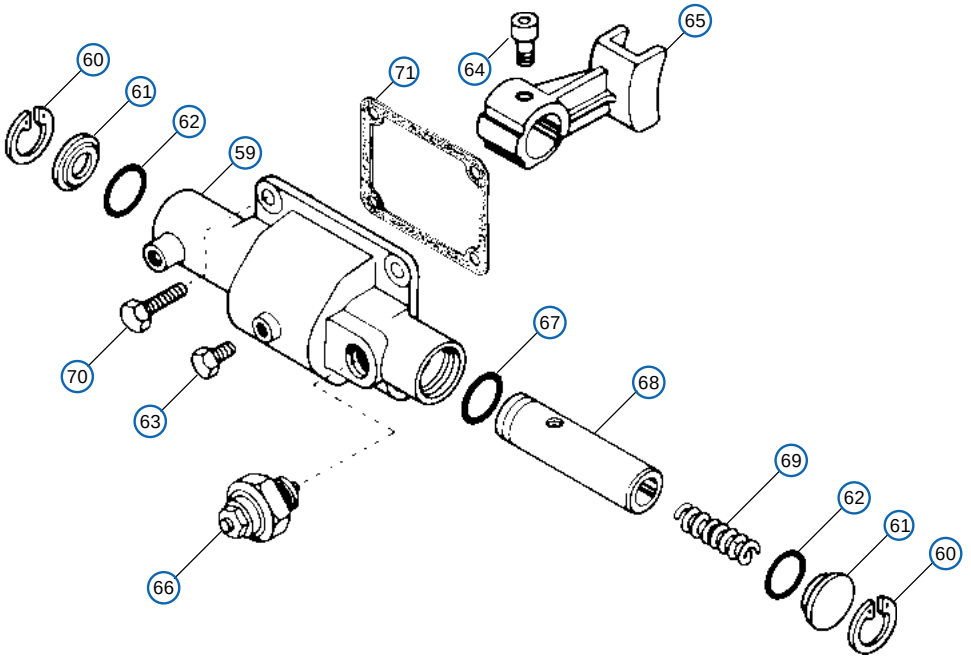


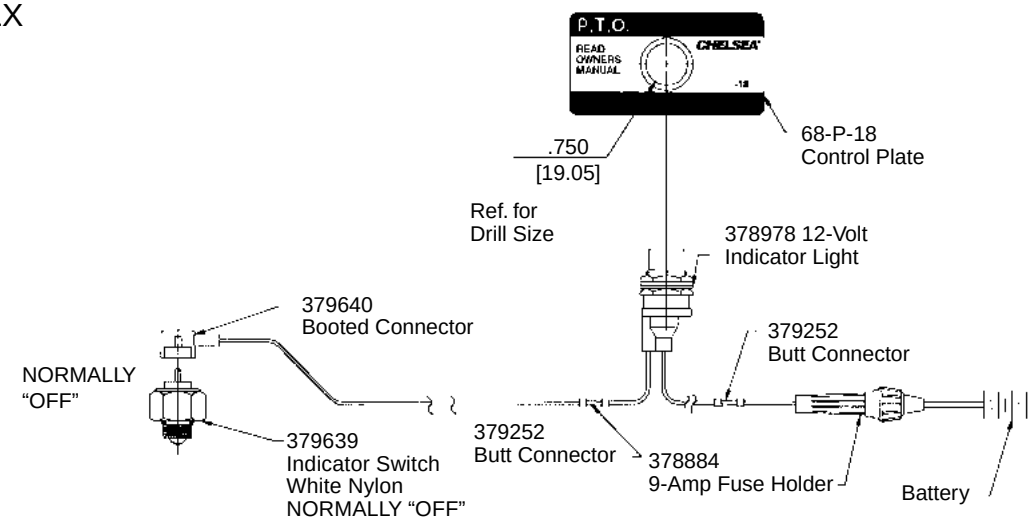
Item	Part Number	Description	Quantity
	328724X	LEVER CONTROL ASSEMBLY (Includes items 42 thru 56)	1
42 ▶	**34-P-60**	Cover, Lever Shift	1
43 ▶	**378316**	Snap Ring	1
44 ▶	**378315**	Plug	1
45 ▶	**28-P-42**	O-Ring	1
46 ▶	**378285-1**	Guide Screw	1
47 ▶	**378002**	Poppet Ball	1
48 ▶	**37-P-41**	Poppet Spring	1
49 ▶	**378554**	Poppet Cap	1
50 ▶	**378447-4**	Screw, Socket Head (.3125"-18 x .75")	1
51 ▶	**32-P-129**	Shift Fork	1
52	**379639**	Indicator Switch (Normally Off)	1
53 ▶	**11-P-117**	Shifter Shaft	1
54 ▶	**28-P-229**	Oil Seal	1
55 ▶	**500381-3**	Jam Nut	1
56 ▶	**36-P-1**	Eye Bolt	1
57 ▶	**378430-8**	Screw, Hex head (.3125"-18 x .75")	4
58 ▶	**35-P-8**	Gasket, Shift Cover	1



Item		Part Number	Description	Quantity
	▶	328723X	**AIR SHIFT COVER ASSEMBLY** (Includes items 59 thru 69)	1
59	▶	34-P-115	Cover, Air Shift	1
60	▶	378316	Snap Ring	2
61	▶	378315	Plug	2
62	▶	28-P-42	O-Ring	2
63	▶	378285-1	Guide Screw	1
64	▶	378447-4	Screw, Socket Head (.3125"-18 x .75")	1
65	▶	32-P-129	Shifter Fork	1
66		379639	Indicator Switch (Normally Off)	1
67	▶	28-P-41	O-Ring	1
68	▶	11-P-75	Piston Shaft	1
69	▶	37-P-21	Spring	1
70	▶	378430-8	Screw, Hex Head (.3125"-18 x .75")	4
71	▶	35-P-8	Gasket, Shift Cover	1
N.S.		328388-37X	Installation Kit, Air Shift	1

Cable Lever Control Indicator Light Installation Sketch

328751-1X



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Flange Suffix	Flange Type	Shaft Type	Conversion Kit*
AA	Special for England	.982"-6 Spline	
AF	S.A.E. “BB” 2 or 4 Bolt	1.0"-15 Spline	328591-30X
AK	S.A.E. “B” 2 Bolt	7/8"-13 Spline	328591-28X
FF	S.A.E. “B” 2 or 4 Bolt	7/8" Round	328591-29X
GA	Rotatable S.A.E. “B” 2 Bolt	7/8"-13 Spline	● 328591-72X
GB	Rotatable S.A.E. “B” 4 Bolt	7/8"-13 Spline	● 328591-74X
GK	S.A.E. “B” 2 or 4 Bolt	7/8"-13 Spline	● 328591-89X
GP	S.A.E. “A” Pilot 2 or 4 Bolt	7/8"-13 Spline	● 328591-90X
GQ	S.A.E. “B” 2 or 4 Bolt	7/8"-13 Spline	● 328591-91X
GY	DIN 5462 Pump Mounting	7/8"-13 Spline	● 328591-92X
GZ	Non-standard 4 Bolt	1-1/4"-14 Spline	● 328591-93X
■ LA	S.A.E. “B” 2 Bolt	7/8"-13 Spline	328591-44X
■ LB	S.A.E. “A” Pilot 2 Bolt	7/8"-13 Spline	328591-45X
■ LC	S.A.E. “B” 2 Or 4 Bolt	7/8"-13 Spline	328591-46X
■ LD	Similar to “XD”	1-1/4" Round	
■ LF	S.A.E. “B” 2 or 4 Bolt	7/8"-13 Spline	328591-48X
RA	Rotatable S.A.E. “B” 2 Bolt	7/8"-13 Spline	328591-55X
RB	Rotatable S.A.E. “B” 4 Bolt	7/8"-13 Spline	328591-56X
RC	Rotatable S.A.E. “A” 2 Bolt	5/8"-9 Spline	328591-112X
RF	Rotatable S.A.E. “BB” 2 Bolt	1.0"-15 Spline	328591-78X
XE	S.A.E. “A” 2 or 4 Bolt	5/8"-9 Spline	328591-27X
XG	Non-standard 4 Bolt	3/4" Round	328591-10X
XJ	Non-standard 4 Bolt	3/4" Round	328591-11X
XK	S.A.E. “B” 2 or 4 Bolt	7/8"-13 Spline	328591-16X
XL	Non-standard 4 Bolt	7/8"-13 Spline	328591-18X
XO	S.A.E. “A” Pilot 2 Bolt	3/4" Round	328591-26X
XP	S.A.E. “A” Pilot 2 or 4 Bolt	7/8"-13 Spline	328591-23X
▸ XQ	S.A.E. “B” 2 or 4 Bolt	7/8"-13 Spline	328591-17X
XR	CHELSEA Special 4 Bolt	7/8"-13 Spline	328591-52X
XY	DIN 5462 Pump Mounting	7/8"-13 Spline	328591-121X

XR to “XK” Conversion Flange 21-P-525

● Shaft with Grease Fitting

▸ Similar to Ass’y “XK” Flange Rotated 90°

■ Lube Pump Option

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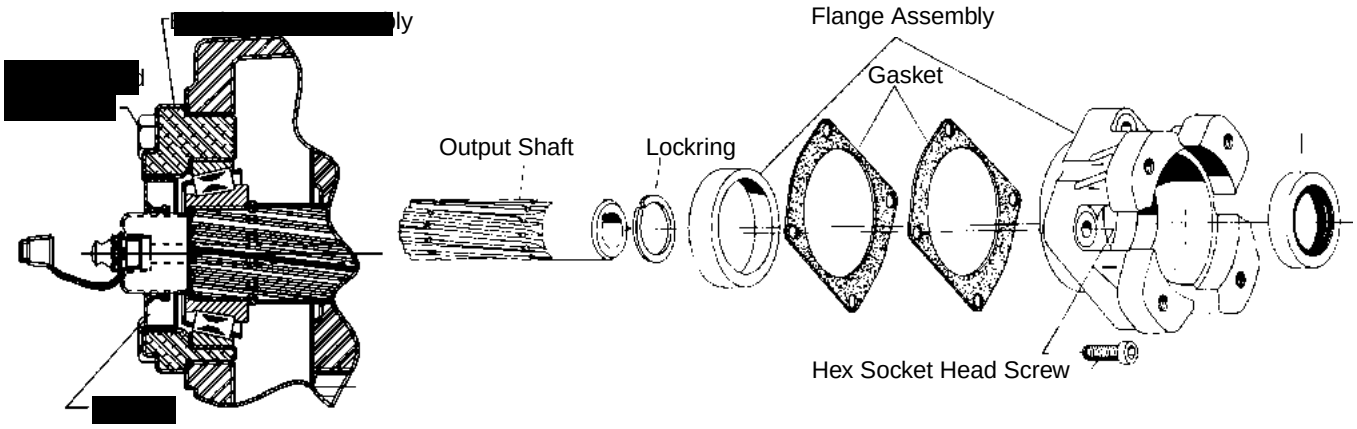

Front						Rear Cap Greaseable Option		
Flange Suffix	**Conversion Kit***	**Flange Assembly**	**Output Shaft**	**Socket Head (4 Req'd)**	**Oil Seal**	**Brg. Cap Assembly**	**Socket Head (4 Req'd)**	**Oil Seal**
AA		329102X	3-P-862	378447-8	28-P-216			
AF	328591-30X	329088X	3-P-854	378447-10	28-P-219			
AK	328591-28X	328989X	3-P-282	378447-8	28-P-216			
FF	328591-29X	329088X	3-P-851	378447-10	28-P-219			
GA	328591-72X	329195X	3-P-923X	● 378447-6	28-P-216	328273X	378430-10	28-P-268
GB	328591-74X	329195X	3-P-923X	● 378447-6	28-P-216	328273X	378430-10	28-P-268
GK	328591-89X	328333X	3-P-933X	378447-8	28-P-216	328273X	378430-10	28-P-268
GP	328591-90X	328328X	3-P-933X	378447-8	28-P-216	328273X	378430-10	28-P-268
▸ GQ	328591-91X	328589X	3-P-933X	378442-8	28-P-216	328273X	378430-10	28-P-268
GY	328591-92X	329234X	3-P-938X	378430-10	28-P-216	328273X	378430-10	28-P-268
GZ	328591-93X	329052X	3-P-939X	378447-11	28-P-230	328273X	378430-10	28-P-268
■ LA	328591-44X	328989X	3-P-858	378447-8	28-P-216			
■ LB	328591-45X	328328X	3-P-858	378447-8	28-P-216			
■ LC	328591-46X	328589X	3-P-858	378447-8	28-P-216			
■ LD		328273X	3-P-857	378430-10	28-P-216			
■ LF	328591-48X	328333X	3-P-858	378447-8	28-P-216			
RA	328591-55X	329195X 21-P-628	3-P-283	● 378447-6	28-P-216			
RB	328591-56X	329195X 21-P-572	3-P-283	● 348447-6	28-P-216			
RC	328591-112X	329322X & 21-P-638	3-P-800	328170-210X	28-P-216			
RF	328591-78X	329264X & 21-P-626	3-P-924	● 378447-6 (7)	28-P-219			
XE	328591-27X	329328X	3-P-800	348447-8	28-P-216			
XG	328591-10X	329580X	3-P-281	348447-8	28-P-216			
XJ	328591-11X	329580X	3-P-284	348447-8	28-P-216			
XK	328591-16X	329333X	3-P-282	348447-8	28-P-216			
XL	328591-18X	329580X	3-P-283	348447-8	28-P-216			
XM	328591-20X	328583X	3-P-284	348447-8	28-P-216			
XN	328591-21X	328584X	3-P-282	348447-8	28-P-216			
XO	328591-26X	329328X	3-P-284	348447-8	28-P-216			
XP	328591-23X	329328X	3-P-282	348447-8	28-P-216			
▸ XQ	328591-17X	329589X	3-P-282	348447-8	28-P-216			
XR	328591-52X	329194X	3-P-283	▸▸ 379673	28-P-216			
XY	328591-121X	329234X	3-P-768	378430-10	28-P-230			

See Page 9 for Lube Pump Information

* Consists of all the items shown in the illustration, plus Lock Ring (Item 5) and Bearing Cap Gasket (Item 8)
● Seven required; four to fasten the Flange Assembly 328195X to the housing and three to fasten the rotatable flange to the flange assembly.
▸ Similar to "XK" Assembly, only rotated 90°
▸▸ Special shoulder stud
■ Lube pump Option

NOTE: To convert PTO's with AK, XP, XQ, XN, or XK output to the lube pump option, use 329097-1X. To convert P.T.O.'s with XD output to the lube pump option, use 329096-1X
NOTE: The 489 "A" & "C" ratio units cannot be used with an "XK" or "AK" output flange due to interference

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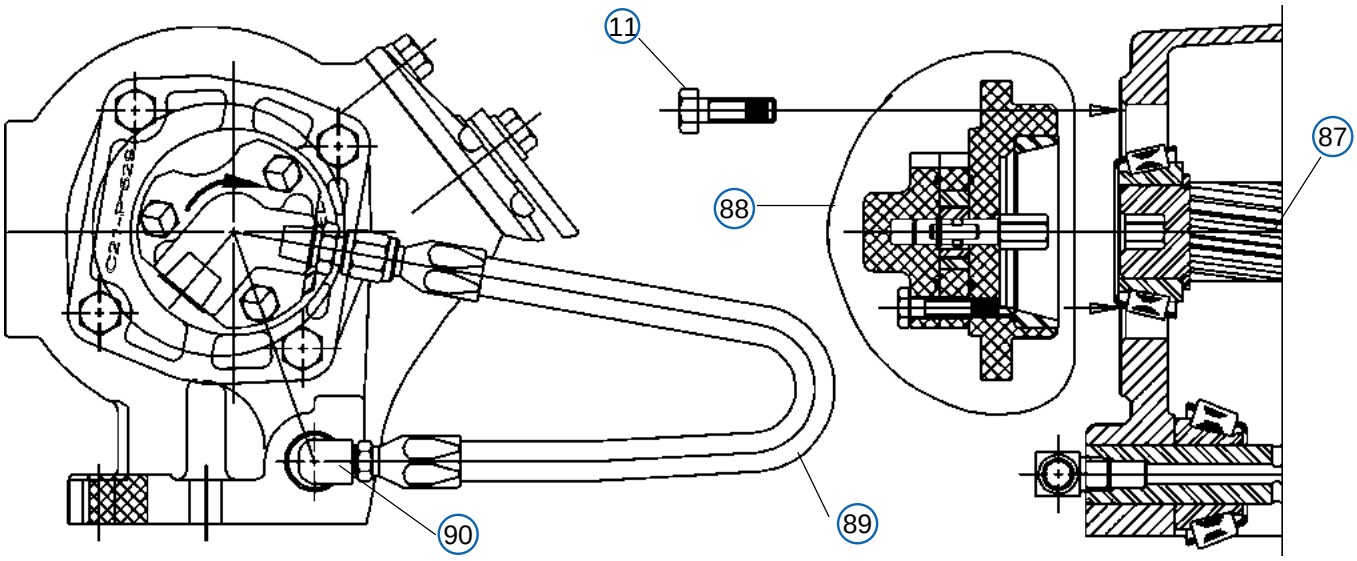
NOTE: Pump must rotate in direction of arrow



NOTE: Install Street Elbow into idler shaft before installing idler shaft

Pump assembly as shown is for “Q”, “W” and “X” ratios.
Rotate as needed for “C”, “E”, “L”, and “P” ratios.

Item	Part Number	Description	Quantity
11 ▶	**378430-10**	Capscrew, Hex Head (.312"-18 x 1.00")	4
87 ▶	**3-P-857**	Shaft, Output (“LD” Output)	1
	3-P-858	Shaft, Output (“LA”, “LB”, “LC”, “LE”, “LF” Output)	1
88	**329091X**	Lube Pump & Bearing Cap Assembly	1
89 ▶	**329092X**	Pressure Lube Hose Assembly	1
90 ▶	**500841-1**	Street Elbow, 90°	1

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Part Number	Description	Quantity
▶ 328390-88X	CONVERSION KIT, Cable to Air all Assemblies	1
328390-89X	CONVERSION KIT, Lever to Air all Assemblies	1
▶ 328390-109X	CONVERSION KIT, Wire to 12V. Electric over Air	1
328390-110X	CONVERSION KIT, Wire to 24V. Electric over Air	1
328390-111X	CONVERSION KIT, Lever to 12V. Electric over Air	1
328390-112X	CONVERSION KIT, Lever to 24V. Electric over Air	1

Model Number Designation

221 Series

221 X C AJ P – Y 3 XD

Basic Model
221

Mounting Type
R = Special Clearance Housing
X = Standard Mounting
Z = Deep Mount
Q = Extra Deep Mount

Gear Ratio
C = .445:1
E = .514:1
L = .691:1
P = .835:1

Input Gear Designator
(See Chart on Page 4)

Lubrication
X = No Lubrication
P = Pressure Lube

Output Type
AF = S.A.E. "BB" 2 or 4 Bolt
AK = S.A.E. "B" 2 Bolt
FF = S.A.E. "B" 2 or 4 Bolt
LA = S.A.E. "B" w/Self Lube
LB = S.A.E. "A" w/Self Lube
LC = S.A.E. "B" w/Self Lube
LD = 1.250" Rd. w/Self Lube
LE = 6 Bolt w/Self Lube
LF = S.A.E. "B" w/Self Lube
RA = Rotatable "B" 2 Bolt
RB = Rotatable "B" 4 Bolt
XD = 1.250" Rd.
XE = S.A.E. "A" 2 or 4 Bolt
XF = S.A.E. "B" 2 or 4 Bolt
XG = S.A.E. "A" 2 Bolt
XJ = S.A.E. "A" 2 Bolt
XK = S.A.E. "B" 2 or 4 Bolt
XL = S.A.E. "A" 2 Bolt
XM = 6 Bolt
XN = 6 Bolt
XO = S.A.E. "A" 2 Bolt
XP = S.A.E. "A" 2 Bolt
XQ = S.A.E. "B" 2 or 4 Bolt
XR = CHELSEA Special

Assembly Arrangement
3, 4, 5, 6

Shifter Type
A = Air Shift
H = No Shift Cover
M = Constant Mesh (No Shifter)
(CAK, EAH, EAK & PAB only)
P = 12 Volt Electric/Air
Q = 24 Volt Electric/Air
S = Combo Valve
W = Wire Shift
X = Wire Less Cable & Knob
Y = Lever Shift

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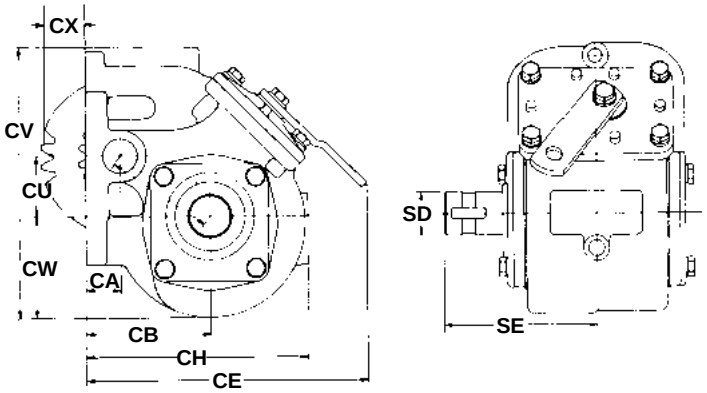
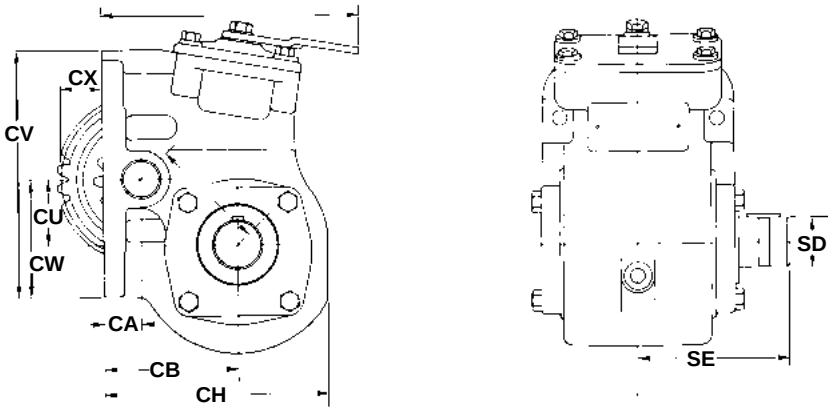
Dimension Symbol	Description	Case Part Number and Dimensions		
		1-P-467 221X	1-P-469 221Z	1-P-470 221R
CA	Face of Case to Center Line of Input Hole	0.972"	0.752"	0.500"
CB	Face of Case to Center Line of Output Shaft Hole	3.516"	3.296"	2.543"
CD	Center Distance Between Input Gear & Output Shaft	3.087"	3.087"	3.087"
CE	Face of Case to End of Shift Lever	8.000"	7.781"	8.000"
CH	Face of Case to extreme Horizontal Edge of Case (d)	6.281"	6.062"	6.190"
CU	Output Shaft BELOW Center Line of Input Gear	1.750"	1.750"	1.941"
CV	Top to Bottom of Case—Clearance (d)	7.750"	7.750"	7.906"
CW	Center Line of Output Shaft to Bottom of Case (d)	2.875"	2.875"	2.875"
CX	Face of Case to Pitch Line of Gear	1.110"	1.330"	1.110"
	P.T.O. Output Shaft Dimensions			
SD	Outside Diameter of Standard Shaft— For U-Joint	1.25" Rd .3125" Key	1.25" Rd .3125" Key	1.25" Rd .3125" Key
SE	Center Line of P.T.O. to End of Output Shaft	4.25"	4.25"	4.25"

(d) — Approximate dimension for estimating clearance in installations.



221X & 221Z



221R

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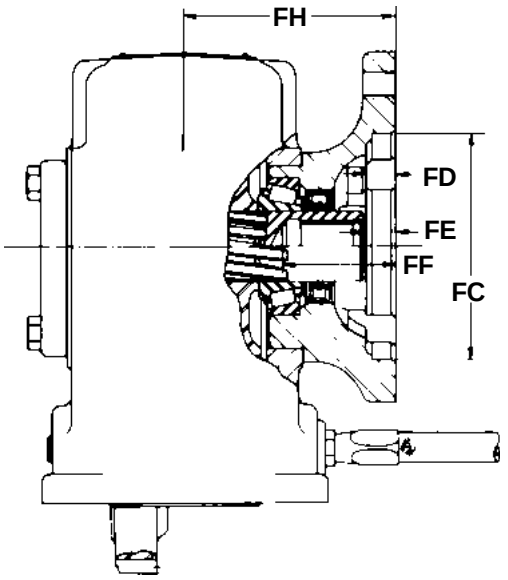
P.T.O. Case Pump Flange & Shaft Dimensions



Pump Flange Suffix	Bolt Circle Dia.	Bolt Holes: Tapped Hole	Bolt Holes: No. Equally Spaced	FC: Female Pilot Diameter	FD: Pilot Depth	FE: Face to end of Shaft	FF: Face thru Hole	FH: Face to Center of P.T.O.	Output Shaft: Hole Diameter	Output Shaft: Keyway Width
AA	2.834	M10-1.5	6	2.050	N/A	N/A	N/A	3.447	.982/.816 - 6 Spline	—
AF	5.750	.500"-13	2	4.003	0.406	0.516	1.984	4.322	1"-15 Spline	—
	5.000	.500"-13	4	4.003	0.406	0.516	1.984	4.322	—	—
AK	5.750	.500"-13	2	4.003	0.406	0.562	2.062	3.688	7/8" - 13 Spline	—
FF	5.750	.500"-13	2	4.003	0.406	0.516	1.984	4.322	7/8" Round	1/4"
	5.000	.500"-13	4	4.003	0.406	0.516	1.984	4.322	—	—
RA● GA	5.750	.500"-13	2 **	4.003	0.406	0.558	2.058	4.588	7/8"-13 Spline	—
RB● GB	5.000	.500"-13	4	4.003	0.406	0.558	2.058	4.588	7/8"-13 Spline	—
RC●	4.188	.375"-16	2 **	3.253	0.270	0.525	1.462	3.694	5/8"-9 Spline	—
RD●	4.188	.375"-16	2 **	3.253	0.270	0.525	1.462	3.694	7/8"-13 Spline	—
RF●, GH	5.750	.500"-13	2 **	4.003	0.406	0.501	1.969	4.569	1"-15 Spline	—
XE	5.000	.500"-13	4	3.253	0.344	0.562	1.500	3.688	5/8"-9 Spline	—
XG	4.188	.375"-16	4	3.253	0.562	0.593	2.218	4.562	3/4" Round	3/16"
XJ	4.188	.375"-16	4	3.253	0.562	1.406	2.906	4.562	3/4" Round	3/16"
XK, GK	5.750	.531"-13 ◆	2	4.003	0.406	0.562	2.062	3.688	7/8"-13 Spline	—
	5.000	.531"-13 ◆	4	4.003	0.406	0.562	2.062	3.688	—	—
XL	4.188	.375"-16	4	3.253	0.562	0.562	2.062	4.562	7/8"-13 Spline	—
XO	5.000	.500"-13	4	3.253	0.344	0.562	2.062	3.688	3/4" Round	3/16"
	4.188	.375-16	2	3.253	0.344	0.562	2.062	3.688	—	—
XP, GP	5.000	.500"-13	4	3.253	0.344	0.562	2.062	3.688	7/8"-13 Spline	—
	4.188	.375"-16	2	3.253	0.344	0.562	2.062	3.688	—	—
XY, GY	4.454	M12-1.75	4	3.152	0.393	0.594	2.508	4.697	DIN 5462	—
XQ, GQ	5.750	.500"-13	2	4.003	0.406	0.562	2.062	3.688	7/8"-13 Spline	—
	5.000	.500"-13	4	4.003	0.406	0.562	2.062	3.688	—	—
XR	3.710	.312"-24(Studs)	4	2.752	0.281	N/A	N/A	2.809	7/8"-13 Spline	—

● Rotatable Flange Rotates in 30° Increments
** Two Set of Holes Spaced 14° Apart
◆ Not Tapped

NOTE: To convert an “XR” to an “XK”, use conversion flange number 21-P-525

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Notes

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2. Payment: Payment shall be made by Buyer net 30 days from the date of delivery of the items purchased hereunder. Amounts not timely paid shall bear interest at the maximum rate permitted by law for each month or portion thereof that the Buyer is late in making payment. Any claims by Buyer for omissions or shortages in a shipment shall be waived unless Seller receives notice thereof within 30 days after Buyer's receipt of the shipment.

3. Delivery: Unless otherwise provided on the face hereof, delivery shall be made F.O.B. Seller's plant. Regardless of the method of delivery, however, risk of loss shall pass to Buyer upon Seller's delivery to a carrier. Any delivery dates shown are approximate only and Seller shall have no liability for any delays in delivery.

4. Warranty: Seller warrants that the items sold hereunder shall be free from defects in material or workmanship for a period of:
(A) All Power Take-Off units one (1) year from date of installation.
(B) Except 267, 277, 278, 242, 244, 250, 251 and 859 series two (2) years from date of installation. **THIS WARRANTY COMPRISES THE SOLE AND ENTIRE WARRANTY PERTAINING TO ITEMS PROVIDED HEREUNDER. SELLER MAKES NO OTHER WARRANTY, GUARANTEE, OR REPRESENTATION OF ANY KIND WHATSOEVER. ALL OTHER WARRANTIES, INCLUDING BUT NOT LIMITED TO, MERCHANTABILITY AND FITNESS FOR PURPOSE, WHETHER EXPRESS, IMPLIED, OR ARISING BY OPERATION OF LAW, TRADE USAGE, OR COURSE OF DEALING ARE HEREBY DISCLAIMED. NOTWITHSTANDING THE FOREGOING, THERE ARE NO WARRANTIES WHATSOEVER ON ITEMS BUILT OR ACQUIRED WHOLLY OR PARTIALLY, TO BUYER'S DESIGNS OR SPECIFICATIONS.**

5. Limitation Of Remedy: SELLER'S LIABILITY ARISING FROM OR IN ANY WAY CONNECTED WITH THE ITEMS SOLD OR THIS CONTRACT SHALL BE LIMITED EXCLUSIVELY TO REPAIR OR REPLACEMENT OF THE ITEMS SOLD OR REFUND OF THE PURCHASE PRICE PAID BY BUYER, AT SELLER'S SOLE OPTION. IN NO EVENT SHALL SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY KIND OR NATURE WHATSOEVER, INCLUDING BUT NOT LIMITED TO LOST PROFITS ARISING FROM OR IN ANY WAY CONNECTED WITH THIS AGREEMENT OR ITEMS SOLD HEREUNDER, WHETHER ALLEGED TO ARISE FROM BREACH OF CONTRACT, EXPRESS OR IMPLIED WARRANTY, OR IN TORT, INCLUDING WITHOUT LIMITATION, NEGLIGENCE, FAILURE TO WARN OR STRICT LIABILITY.

6. Changes, Reschedules and Cancellations: Buyer may request to modify the designs or specifications for the items sold hereunder as well as the quantities and delivery dates thereof, or may request to cancel all or part of this order, however, no such requested modification or cancellation shall become part of the contract between Buyer and Seller unless accepted by Seller in a written amendment to this Agreement. Acceptance of any such requested modification or cancellation shall be at Seller's discretion, and shall be upon such terms and conditions as Seller may require.

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

8. Buyer's Property: Any designs, tools, patterns, materials, drawings, confidential information or equipment furnished by Buyer or any other items which become Buyer's property, may be considered obsolete and may be destroyed by Seller after two (2) consecutive years have elapsed without Buyer placing an order for the items which are manufactured using such property, Seller shall not be responsible for any loss or damage to such property while it is in Seller's possession or control.

9. Taxes: Unless otherwise indicated on the face hereof, all prices and charges are exclusive of excise, sales, use, property, occupational or like taxes which may be imposed by any taxing authority upon the manufacture, sale or delivery of the items sold hereunder. If any such taxes must be paid by Seller or if Seller is liable for the collection of such tax, the amount thereof shall be in addition to the amounts for the items sold. Buyer agrees to pay all such taxes or to reimburse Seller therefore upon receipt of its invoice. If Buyer claims exemption from any sales, use or other tax imposed by any taxing authority, Buyer shall save Seller harmless from and against any such tax, together with any interest or penalties thereon which may be assessed if the items are held to be taxable.

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

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

12. Entire Agreement/Governing Law: The terms and conditions set forth herein, together with any amendments, modifications and any different terms or conditions expressly accepted by Seller in writing, shall constitute the entire Agreement concerning the items sold, and there are no oral or other representations or agreements which pertain there/to. This Agreement shall be governed in all respects by the law of the State of Ohio. No actions arising out of the sale of the items sold hereunder or this Agreement may be brought by either party more than two (2) years after the cause of action accrues.

9/01-P

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