



Chelsea PTO 221 Parts Manual

Pro Gear Chelsea 221 Series PTO parts manual to assist in identifying the parts for your Chelsea Power Take Off unit.

If you need any assistance identifying the correct Power Take Off unit for your truck and equipment, contact your Chelsea replacement part specialists at Pro Gear and Transmission.

Pro Gear stocks every part for your Parker Chelsea PTO including: PTO housings, mounts, driveshafts, gears, bearings, gaskets, cable shift cover assembly, post and plate assembly, brackets, stud kits, seal kits, lever control assembly, air shift cover assembly, direct mount pump conversion kits, stud kits including English and metric references, CAT D&H parts and much more.

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CHELSEA[®] **Parts List** **221 Series**

Effective: September 7, 2012
Supersedes: HY25-2221-M1/US
Dated January 2, 2012

Bulletin HY25-2221-M1/US





WARNING — User Responsibility

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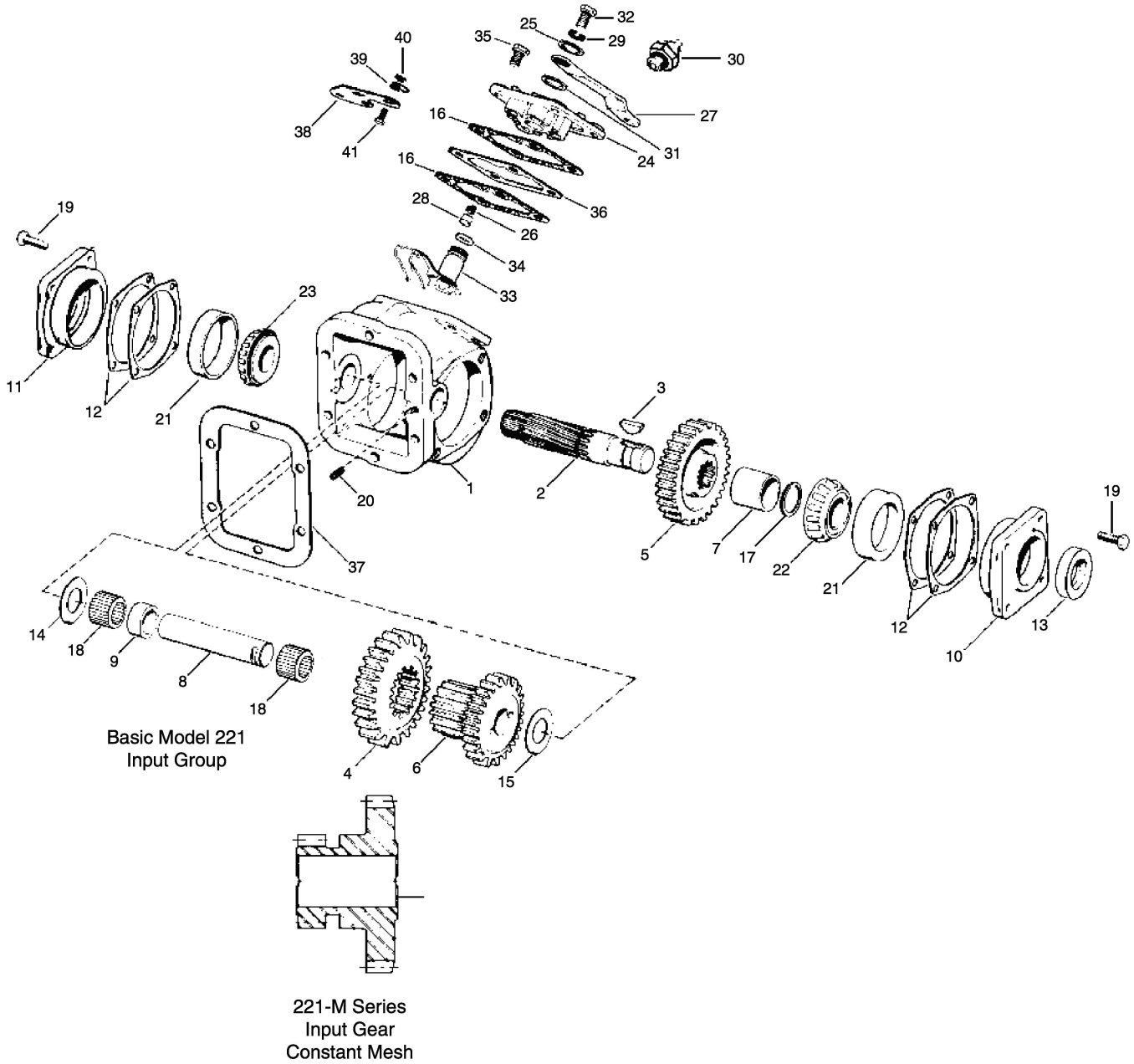
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Bill of Materials

Item	Part Number	Description	Qty.
1	1-P-467	Housing, Standard Mount ("X" Mounting)	1
	1-P-468	Housing, Extra Deep Mount ("Q" Mounting)	1
	1-P-469	Housing, Deep Mount ("Z" Mounting)	1
	1-P-470X	Housing, Low Profile ("R" Mounting).....	1
2	3-P-202	Driveshaft, Standard Output (1.25" Round) ("XD" Output)	1
	See Chart Pg. 10	Shaft, Pump (All other Outputs).....	1
3	500007-29	Woodruff Key (.3125" x 1.125") ("XD" Output Only).....	1
4	See Chart Pg. 5	Gear, Input.....	1
5	See Chart Pg. 5	Gear, Output	1
6	See Chart Pg. 5	Gear, Ratio.....	1
7	4-P-45	Spacer, Driveshaft (1.410" Wide).....	1
8	9-P-55	Shaft, Input Idler (4.812" Long) ("X" Lube Option)	1
N.S.	9-P-54	Shaft, Pressure Lube Input Idler (4.812" long) ("P" or "W" Lube Option)	1
N.S.	379231	Pipe Plug, Pressure Lube (.125" - 27 NPTF) ("P" or "W" Lube Only).....	1
N.S.	328075X	Hose Assembly, Pressure Lube (24" Long) ("P" Lube Option)	1
9	14-P-50	Spacer, Caged Needle Bearing (.587")	1
10	328273X	Bearing Cap, Open End, Standard Output ("XD" Output).....	1
11	328274X	Bearing Cap, Closed End, Standard Output (All other Outputs).....	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" Output).....	1
14	31-P-58	Thrust Washer 1.015" x 2.000" x .065"	1
15	31-P-47	Thrust Washer 1.016" x 1.5" x .064"	1
16	35-P-8	Gasket, Cover (.032") (use 2 for Wire Shift).....	1
17	378391	Retaining Ring, Driveshaft ("R" Mounting Not Shown)	1
18	550886	Bearing, Caged Needle Roller.....	2
19	378447-6	Capscrew, Bearing Cap Hex Head (.3125" - 18 x 1") (Wire Shift)	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) (Wire Control).....	1
	328805-2X	Cable Shift Cover Assembly (Assemblies 4 & 5) (Wire Control).....	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

N.S. — Not Shown A.R. — As Required

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Bill of Materials

Item	Part Number	Description	Qty.
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.	378422	Drive Screw, Name Plate.....	1
LOOSE PARTS			
37	328948-6X	Gasket & Installation Instructions	1
N.S.	328346-10X	Cable Control Assembly (Includes 378441-10 10' Cable & 378502 Knob) ("W" Shifter)	1
	328380X	Mounting Parts Kit (Cable Control) ("W" Shifter) (Includes items 38 thru 41).....	1
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
	329245X	Wire Control Bracket Kit ("C" Shifter)	1
	378414	Pressure Protection Valve ("V" Shift Only)	1
N.S.	328170-1X	Stud Kit, Standard Mount.....	1
N.S.	328170-26X	Stud Kit, Deep Mount.....	1
N.S.	328170-155X	Stud Kit, Low Profile	1
	328751-1X	Installation Kit, Cable or Lever Indicator Light ("C", "H", "W", "X", "Y").....	1
	328388-47X	Installation Kit, 12-Volt Electric Over Air ("P" Shifter).....	1
	328388-48X	Installation Kit, 24-Volt Electric Over Air ("Q" Shifter)	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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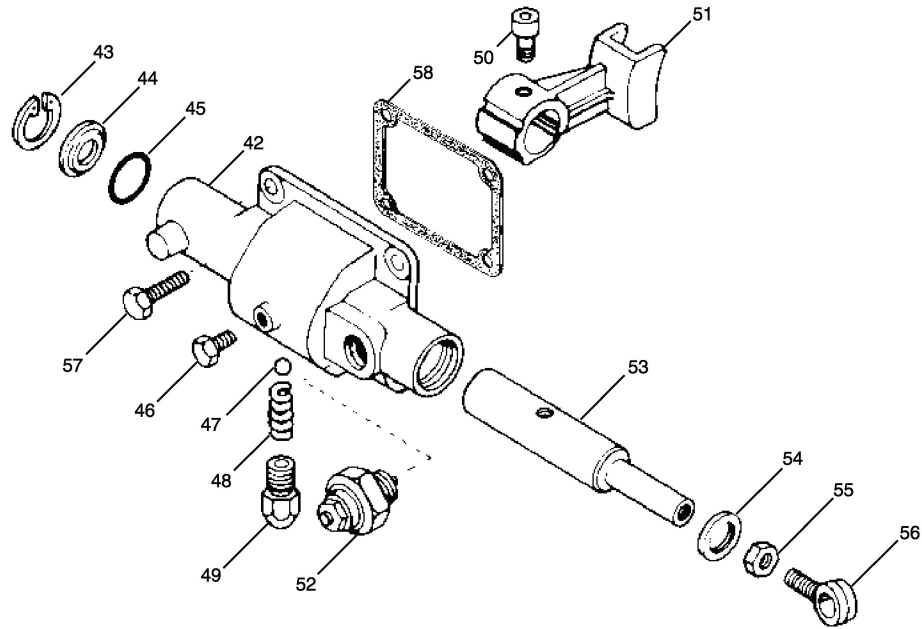
Bill of Materials

Item	Part Number	Description	Qty.
		SERVICE KITS	
	328390-88X	Air Shift Field Conversion Kit	
	328390-89X	Air Shift Field Conversion Kit	
	328390-109X	12-Volt Field Conversion Kit (Wire to Electric)	
	328390-110X	24-Volt Field Conversion Kit (Wire to Electric)	
	328390-111X	12-Volt Field Conversion Kit (Lever to Electric)	
	328390-112X	24-Volt Field Conversion Kit (Lever to Electric)	
	328356-13X	Gasket & Seal Field Replacement Kit	
	329068X	"X" to "R" Mounting Conversion Kit	

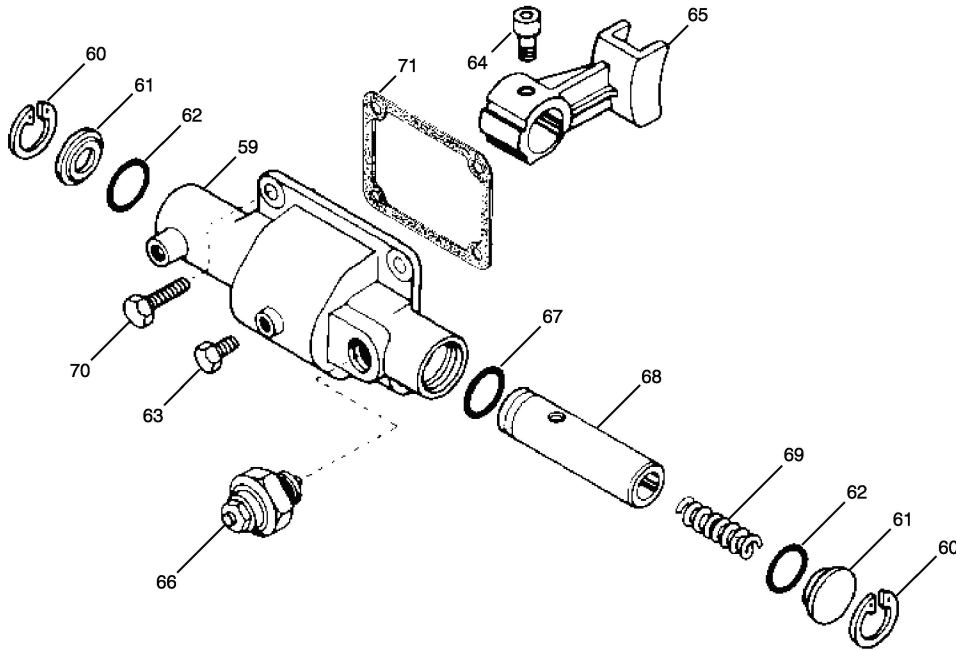
Gear Chart

Model Number	Part Number	Helix Angle	Input Gear No. Teeth	Part Number	Ratio Gear No. Teeth	Part Number	Output Gear No. Teeth
221*CAK	5-P-226	SPUR	25	5-P-903	14	2-P-283	29
221*CAK*-M	5-P-994	SPUR	25	5-P-994	14		
221*CAB	5-P-227	SPUR	21	5-P-903	14	2-P-283	29
221*CAH	5-P-319	SPUR	26	5-P-903	14	2-P-283	29
221*CAJ	5-P-569	SPUR	25	5-P-903	14	2-P-283	29
221*CDA	5-P-633	SPUR	27	5-P-903	14	2-P-283	29
221*CEV	5-P-978	SPUR	44	5-P-903	14	2-P-283	29
221*EAB	5-P-227	SPUR	21	5-P-905	15	2-P-179	28
221*EAD	5-P-504	Left Hand	20	5-P-907	15	2-P-479	27
221*EAH	5-P-202	SPUR	25	5-P-905	15	2-P-179	28
221*EAJ	5-P-569	SPUR	25	5-P-905	15	2-P-179	28
221*EAK*-M	5-P-910	SPUR	25	5-P-905	15	2-P-179	28
221*EAK	5-P-226	SPUR	25	5-P-905	15	2-P-179	28
221*EDA	5-P-633	SPUR	27	5-P-905	15	2-P-179	28
221*EDQ	5-P-811	Left Hand	22	5-P-907	15	2-P-479	27
221*FAH	5-P-202	SPUR	25	5-P-989	19	2-P-741	24
221*FDA	5-P-633	SPUR	27	5-P-989	19	2-P-741	24
221*LAB	5-P-227	SPUR	21	5-P-904	18	2-P-388	25
221*LDA	5-P-633	SPUR	27	5-P-904	18	2-P-388	25
221*LAH	5-P-202	SPUR	25	5-P-904	18	2-P-388	25
221*LAK	5-P-226	SPUR	25	5-P-904	18	2-P-388	25
221*PDA	5-P-633	SPUR	27	5-P-902	20	2-P-256	23
221*PAB	5-P-227	SPUR	21	5-P-902	20	2-P-256	23
221*PAH	5-P-202	SPUR	25	5-P-902	20	2-P-256	23
221*PAK	5-P-226	SPUR	25	5-P-902	20	2-P-256	23

NOTE: Check Current Price Sheet for Availability of input Options



Item	Part Number	Description	Qty.
	328724X	Lever Control Assembly (Includes items 42 thru 56)	
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 .750").....	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 .750").....	4
58	35-P-8	Gasket, Shift Cover.....	1



Item	Part Number	Description	Qty.
	328723X	Air Shift Cover Assembly (Includes items 59 thru 69)	
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 .750")	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 .750")	4
71	35-P-8	Gasket, Shift Cover.....	1
N.S.	328388-37X	Installation Kit, Air Shift.....	1

N.S. — Not Shown

Flange Suffix	Flange Type	Shaft Type	Conversion Kit	
AA	Special for England	.982" - 6T Spline	—	—
AF	S.A.E. "B" 2 or 4-Bolt	1.0" - 15T Spline	XD to AF	328591-30X
AK	S.A.E. "B" 2-Bolt	7/8" - 13T Spline ("B" Ratio Only)	XD to AK XD to AK	328591-28X 329436-7X
AW	S.A.E. "B" 2 or 4-Bolt	1/4" - 14T Spline	XD to AW AW to AW Wetspline	328591-30X 328591-140X
AZ	Non Standard	1-1/4" - 14T Spline	XD to AZ	328591-70X
FF	S.A.E. "B" 2 or 4-Bolt	7/8" Rd w/1/4" Key	XD to FF	328591-29X
GA	Rotatable S.A.E. "B" 2-Bolt	● 7/8" - 13T Spline	XD to GA XR to GA RA to GA	328591-72X 328591-73X 328591-106X
GB	Rotatable S.A.E. "B" 4-Bolt	● 7/8" - 13T Spline	XD to GB XR to GB RB to GB	328591-74X 328591-75X 328591-107X
GF	S.A.E. "BB" 2 or 4-Bolt	● 1.0" - 15T Spline	XD to GF AF to GF	328591-71X 328591-108X
GH	Rotatable S.A.E. "BB" 2-Bolt	● 1.0" - 15T Spline	XD to GH RF to GH	328591-116X 328591-114X
GJ	S.A.E. "B" 4-Bolt Rotatable	● 1.0" - 15T Spline	XD to GJ RE to GJ	328591-138X 328591-114X
GK	S.A.E. "B" 2 or 4-Bolt	● 7/8" - 13T Spline	XD to GK XK to GK	328591-89X 328591-86X
GP	S.A.E. "A" Pilot 2 or 4-Bolt	● 7/8" - 13T Spline	XD to GP XP to GP	328591-90X 328591-86X
■ GQ	S.A.E. "B" 2 or 4-Bolt	● 7/8" - 13T Spline	XD to GQ XQ to GQ	328591-91X 328591-86X
GR	CHELSEA SPECIAL 4-Bolt	● 7/8" - 13T Spline	XD to GR	328591-76X
GY	DIN 5462 Pump Mounting	● 7/8" - 13T Spline	XD to GY XY to GY	328591-92X 328591-89X
GZ	Non Standard 4-Bolt	● 1-1/4" - 14T Spline	XD to GZ AZ to GZ	328591-93X 328591-88X
▶▶ LB	S.A.E. "A" Pilot 2-Bolt	7/8" - 13T Spline	XP to LB	328591-45X
▶▶ LC	S.A.E. "B" 2 or 4-Bolt	7/8" - 13T Spline	XQ to LC	328591-46X
▶▶ LD	Similar to "XD"	1-1/4" Rd	XD to LD	
▶▶ LF	S.A.E. "B" 2 or 4-Bolt	7/8" - 13T Spline	XK to LF	328591-48X
PA	Parker P2-060 Pump Mounting	7/8" - 13T Spline	XD to PA	328591-143X
PF	Parker P2-060 Pump Mounting	1.0" - 15T Spline	XD to PF	328591-142X
RA	Rotatable S.A.E. "B" 2-Bolt	7/8" - 13T Spline	XD to RA XR to RA	328591-55X 328591-53X
RB	Rotatable S.A.E. "B" 4-Bolt	7/8" - 13T Spline	XD to RB XR to RB	328591-56X 328591-54X
RC	Rotatable S.A.E. "A" 2-Bolt	5/8" - 9T Spline	XD to RC	328591-112X
RD	Rotatable S.A.E. "A" 2-Bolt	7/8" - 13T Spline	XD to RD	328591-113X
RE	S.A.E. "B" 4-Bolt Rotatable	1.0" - 15T Spline	XD to RE	328591-134X
RF	Rotatable S.A.E. "B" 2-Bolt	1.0" - 15T Spline	XD to RF	328591-78X
RH	Rotatable S.A.E. "A" 2-Bolt	3/4" - 11T Spline	XD to RH	328591-151X
RJ	Rotatable S.A.E. "B" 2 or 4-Bolt	1.0" - 15T Spline	XD to RJ	329684X

NOTE: Check Current Price Sheet for Availability of Output Options

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XR to "XK" Conversion Flange 21-P-525

● Shaft with Grease Fitting

■ Similar to Ass'y "XK" Flange Rotated 90°

▶▶ Lube Pump Option

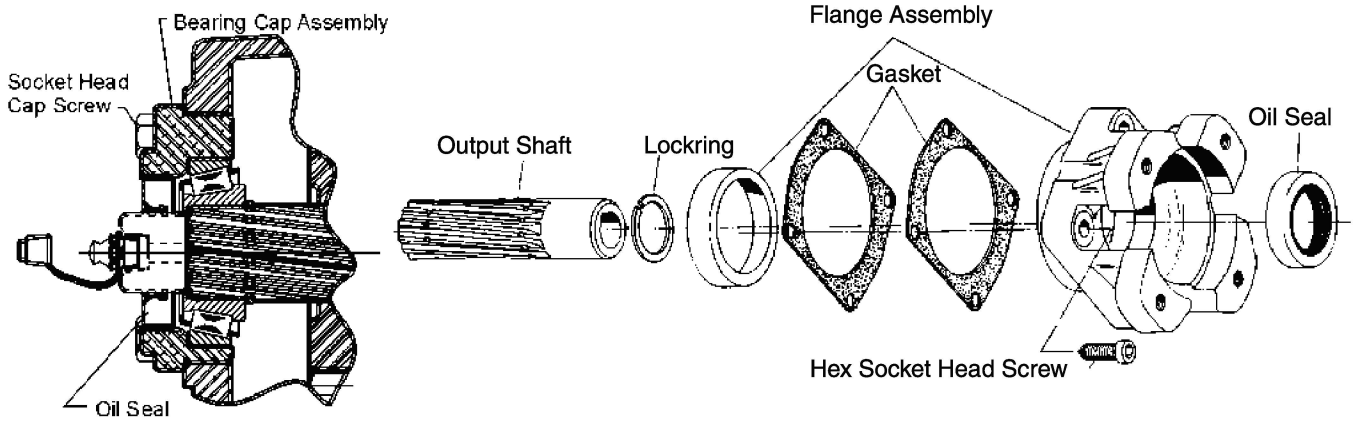
Direct Mount Pump Conversion Kits

Flange Suffix	Flange Type	Shaft Type	Conversion Kit	
RY	Rotatable DIN 5462	DIN 5462	XD to RY	328591-131X
SQ	S.A.E. "B" 4-Bolt	7/8" - 13T Spline (“B” Ratio Only)	XD to XQ XD to SQ	328591-149X 328591-9X
XE	S.A.E. "A" 2 or 4-Bolt	5/8" - 9T Spline	XD to XE	328591-27X
XG	Non Standard S.A.E. "A" 2-Bolt	3/4" Rd w/3/16" Key	XD to XG	328591-10X
XJ	Non Standard 2-Bolt	3/4" Rd w/3/16" Key	XD to XJ	328591-11X
XK	S.A.E. "B" 2 or 4-Bolt	7/8" - 13T Spline	XD to XK	328591-16X
XL	Non Standard 2-Bolt	7/8" - 13T Spline	XD to XL	328591-18X
XM	Non Standard 6-Bolt	3/4" Rd w/3/16" Key	XD to XM	328591-20X
XN	Non Standard 6-Bolt	7/8" - 13T Spline	XD to XN	328591-21X
XO	S.A.E. "A" Pilot 2-Bolt	3/4" Rd w/3/16" Key	XD to XO	328591-26X
XP	S.A.E. "A" Pilot 2-Bolt	7/8" - 13T Spline	XD to XP	328591-23X
■ XQ	S.A.E. "B" 2 or 4-Bolt	7/8" - 13T Spline	XD to XQ	328591-17X
XR	CHELSEA SPECIAL 4-Bolt	7/8" - 13T Spline	XD to XR	328591-52X
XV	Rd Shaft	1-1/4" w/Set Screw	XD to XV	328591-130X
XX	S.A.E. Tapered Shaft	1-1/4" w/5/16" Key	XD to XX	328591-122X
XY	DIN 5462 Pump Mounting	DIN 5462	XD to XY	328591-121X

NOTE: Check Current Price Sheet for Availability of Output Options

XR to "XK" Conversion Flange 21-P-525

- Shaft with Grease Fitting
- Similar to Ass'y "XK" Flange Rotated 90°
- ▶▶ Lube Pump Option



Output Flange	Part Number	Description	Qty.
AA	3-P-862	Output Shaft.....	1
	28-P-216	Oil Seal	1
	239102X	Bearing Cap Ass'y (21-P-532).....	1
	378447-8	Socket Head Capscrew (.312" - 18 x 1.5")	4
AF	3-P-854	Output Shaft.....	1
	28-P-219	Oil Seal	1
	329088X	Bearing Cap Ass'y (21-P-522).....	1
	378447-10	Socket Head Capscrew (.312" - 18 x 2.0")	4
AK	3-P-282	Output Shaft.....	1
	3-P-979	Output Shaft ("B" Ratio Only).....	1
	28-P-216	Oil Seal	1
	328989X	Bearing Cap Ass'y (21-P-472).....	1
	378447-8	Socket Head Capscrew (.312" - 18 x 1.5")	4
AW	3-P-844	Output Shaft (14-Tooth INT. Spline)	1
	379231	Plug Pipe .125" - 27 (For "AW" Output Only)	1
	35-P-92	Gasket (Ref. Pack Bench Item) ("AW" Only)	1
	329088X	Bearing Cap Ass'y (21-P-522).....	1 or
	329350X	Bearing Cap Ass'y (221 Wet Spline)	
	378447-10	Socket Head Capscrew (.312" - 18 x 2.0")	4
AZ	3-P-844	Output Shaft.....	1
	28-P-275	Oil Seal	1
	329052X	Bearing Cap Ass'y (21-P-508).....	1
	378447-11	Socket Head Capscrew (.312" - 18 x 2.5")	4
FF	3-P-851	Output Shaft.....	1
	28-P-219	Oil Seal	1
	329088X	Bearing Cap Ass'y (21-P-522).....	1
	378447-10	Socket Head Capscrew (.312" - 18 x 2.0")	4

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Output Options Bill of Materials

Output Flange	Part Number	Description	Qty.
(1) G*	3-P-923X	"GA", "GB", "GR", Shaft Assemblies	1 or
	3-P-981X	"GE" Shaft Assembly	1 or
	3-P-921X	"GF" Shaft Assemblies.....	1 or
	3-P-933X	"GQ", "GK", "GP" Shaft Assemblies	1 or
	3-P-938X	"GY" Shaft Assemblies.....	1 or
	3-P-939X	"GZ" Shaft Assemblies.....	1 or
	3-P-941X	"GH", "GJ" Shaft Assemblies	1
	500168-2	Lube Fitting (Zerk).....	1
	379819	Grease Fitting Cap	1
	379688	Coupling Lube Pack (5/8 fl.oz)	1
	28-P-268	Rear Bearing Cap Shaft Oil Seal.....	1
	328273X	Rear Bearing Cap Assembl	1
	378447-6	Rear Bearing Cap Hex Head Capscrew (.312" - 18" x 1.0").....	4
	L*	3-P-857	Output Shaft ("LD")
3-P-858		Output Shaft ("LA", "LB", "LC", "LE", "LF").....	1
329091X		Lube Pump & Bearing Cap Ass'y	1
329092X		Pressure Lube Hose Ass'y	1
500841-1		Elbow 90° Street	1
378447-6		Hex Capscrew (.312" - 18 x 1.0").....	4
PA	3-P-283	Output Shaft.....	1
	28-P-216	Oil Seal	1
	329195X	Bearing Cap Ass'y (21-P-574)	1
	21-P-661	Pump Flange	1
	378447-6	Socket Head Capscrew (.312" - 18 x 1.0")	4
	328170-207X	Capscrew Bag Kit	1
	378447-6	Socket Head Capscrew (.312" - 18 x 1.0")	3
PF	3-P-924	Output Shaft.....	1
	28-P-219	Oil Seal	1
	329264X	Bearing Cap Ass'y (21-P-629)	1
	21-P-661	Pump Flange	1
	378447-6	Socket Head Capscrew (.312" - 18 x 1.0")	4
	28-P-271	O-Ring	1
RA	3-P-283	Output Shaft.....	1
	3-P-980	Output Shaft ("B" Ratio Only).....	1
	28-P-216	Oil Seal	1
	329195X	Bearing Cap Ass'y (21-P-574)	1
	21-P-628	Pump Flange (Ship Loose w/Unit)	1
	378447-6	Socket Head Capscrew	4
	328170-207X	Capscrew Bag Kit	1
	378170-6	Socket Head Capscrew	3

Continued on Next Page

(1) NOTE: For Output Flange Information see the related flange Bills of Material:
GA=RA, GB=RB, GF=AF, GR=XR, GK=XK, GP=XP, GQ=XQ, GY=XY, GZ=AZ, GH=RF, GJ=RE & GE=XE

Output Options Bill of Materials

Output Flange	Part Number	Description	Qty.
RB	3-P-283	Output Shaft.....	1
	3-P-980	Output Shaft ("B" Ratio Only).....	1
	28-P-216	Oil Seal	1
	329195X	Bearing Cap Ass'y (21-P-574).....	1
	21-P-572	Pump Flange (Ship Loose w/Unit).....	1
	378447-6	Socket Head Capscrew	4
	328170-207X	Capscrew Bag Kit	1
	378170-6	Socket Head Capscrew	3
RC	3-P-800	Output Shaft.....	1
	28-P-216	Oil Seal	1
	329322X	Bearing Cap Ass'y (21-P-640).....	1
	21-P-638	Pump Flange	1
	378447-6	Socket Head Capscrew (.312" - 18 x 1.0")	4
	328170-210X	Capscrew Bag Kit	1
	378447-4	Socket Head Capscrew (.312" - 18 x .75")	6
RE	3-P-924	Output Shaft.....	1
	28-P-219	Oil Seal	1
	329264X	Bearing Cap Ass'y (21-P-629).....	1
	21-P-654	Pump Flange	1
	378447-6	Socket Head Capscrew (.312" - 18 x 1.0")	4
	28-P-271	O-Ring	1
RF	3-P-924	Output Shaft.....	1
	28-P-219	Oil Seal	1
	329264X	Bearing Cap Ass'y (21-P-629).....	1
	21-P-626	Pump Flange	1
	378447-6	Socket Head Capscrew (.312" - 18 x 1.0")	7
	28-P-271	O-Ring	1
RH	3-P-1010	Output Shaft.....	1
	28-P-216	Oil Seal	1
	329322X	Bearing Cap Ass'y (21-P-640).....	1
	21-P-638	Pump Flange	1
	378447-6	Socket Head Capscrew (.312" - 18 x 1.0")	4
	378447-4	Socket Head Capscrew (.312" - 18 x .75")	6
	328170-210X	Capscrew Bag Kit	1
RJ	3-P-854	Output Shaft.....	1
	329656X	Bearing Cap Ass'y (21-P-732).....	1
	21-P-734	Pump Flange	1
	379231	Plug Pipe Thread (.125" - 27)	1
	37940-6	Socket Head Capscrew (M10 - 1.5" x .984")	6
	22-P-126	Gasket	1
	378447-8	Socket Head Capscrew (.312" - 18 x 1.5")	4

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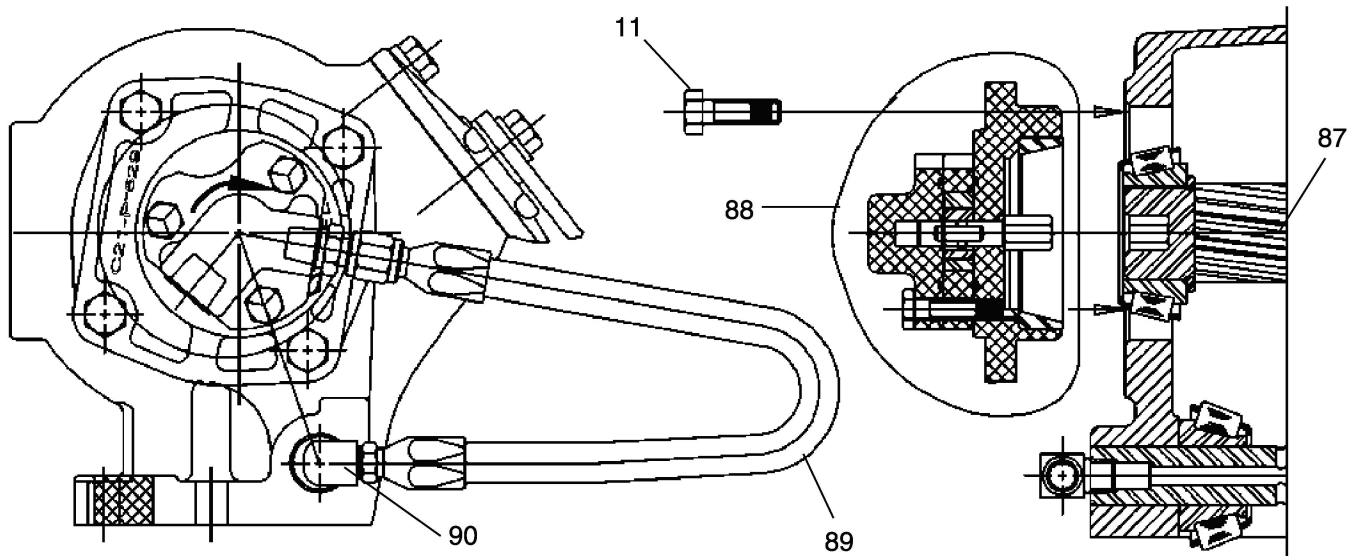
Output Options Bill of Materials

Output Flange	Part Number	Description	Qty.
RY	3-P-768	Output Shaft.....	1
	21-P-625	Pump Flange	1
	329356X	Bearing Cap Ass'y (21-P-532).....	1
	378447-8	Socket Head Capscrew (.312" - 18 x 1.5")	4
	329355-1X	Standard Loose Parts Kit.....	1
	379740-6	Socket Head Capscrew (M10 1.5" x .984")	3
	22-P-100	Gasket.....	1
SQ	3-P-282	Output Shaft.....	1
	3-P-979	Output Shaft ("B" Ratio Only).....	1
	28-P-216	Oil Seal	1
	329449X	Bearing Cap Ass'y (21-P-692).....	1
	378447-8	Socket Head Capscrew (.312" - 18 x 1.5")	4
XE	3-P-800	Output Shaft.....	1
	28-P-216	Oil Seal	1
	328328X	Bearing Cap Ass'y (21-P-161).....	1
	378447-8	Socket Head Capscrew (.312" - 18 x 1.5")	4
XG	3-P-281	Output Shaft.....	1
	28-P-216	Oil Seal	1
	328580X	Bearing Cap Ass'y (21-P-259).....	1
	378447-8	Socket Head Capscrew (.312" - 18 x 1.5")	4
XJ	3-P-284	Output Shaft.....	1
	28-P-216	Oil Seal	1
	328580X	Bearing Cap Ass'y (21-P-259).....	1
	378447-8	Socket Head Capscrew (.312" - 18 x 1.5")	4
XK	3-P-282	Output Shaft.....	1
	3-P-979	Output Shaft ("B" Ratio Only).....	1
	28-P-216	Oil Seal	1
	328333X	Bearing Cap Ass'y (21-P-424) & (28-P-216)	1
	378447-8	Socket Head Capscrew (.312" - 18 x 1.5")	4
XL	3-P-283	Output Shaft.....	1
	3-P-980	Output Shaft ("B" Ratio Only).....	1
	28-P-216	Oil Seal	1
	328580X	Bearing Cap Ass'y (21-P-259).....	1
	378447-8	Socket Head Capscrew (.312" - 18 x 1.5")	4
XM	3-P-284	Output Shaft.....	1
	28-P-216	Oil Seal	1
	328583X	Bearing Cap Ass'y (21-P-264).....	1
	378447-8	Socket Head Capscrew (.312" - 18 x 1.5")	4

Continued on Next Page

Output Options Bill of Materials

Output Flange	Part Number	Description	Qty.
XN	3-P-282	Output Shaft.....	1
	28-P-216	Oil Seal	1
	328584X	Bearing Cap Ass'y (21-P-266).....	1
	378447-8	Socket Head Capscrew (.312" - 18 x 1.5")	4
XO	3-P-284	Output Shaft.....	1
	28-P-216	Oil Seal	1
	328328X	Bearing Cap Ass'y (21-P-161).....	1
	378447-8	Socket Head Capscrew (.312" - 18 x 1.5")	4
XP	3-P-282	Output Shaft.....	1
	3-P-979	Output Shaft ("B" Ratio Only).....	1
	28-P-216	Oil Seal	1
	328328X	Bearing Cap Ass'y (21-P-161).....	1
	378447-8	Socket Head Capscrew (.312" - 18 x 1.5")	4
XQ	3-P-282	Output Shaft.....	1
	3-P-979	Output Shaft ("B" Ratio Only).....	1
	28-P-216	Oil Seal	1
	328589X	Bearing Cap Ass'y (21-P-269).....	1
	378447-8	Socket Head Capscrew (.312" - 18 x 1.5")	4
XR	3-P-283	Output Shaft.....	1
	28-P-216	Oil Seal	1
	329194X	Bearing Cap Assembly (21-P-574).....	1
	379673	Hex Shoulder Screw (.312" - 24).....	4
	379063	Flat Washer	4
XV	3-P-202	Output Shaft.....	1
	3-P-978	Output Shaft ("B" Ratio Only).....	1
	28-P-216	Oil Seal	1
	328273X	Bearing Cap Ass'y (21-P-418).....	1
	378447-6	Socket Head Capscrew (.312" - 18 x 1.0")	4
	500007-29	Woodruff Key	1
	379828	Companion Flange	1
	378454-7	Set Screw	1
XX	3-P-766	Output Shaft.....	1
	28-P-216	Oil Seal	1
	328273X	Bearing Cap Ass'y (21-P-418).....	1
	378447-6	Socket Head Capscrew (.312" - 18 x 1.0")	4
	379111	Square Key	1
	501181	Hex Locknut (1.0" - 20).....	1
XY	3-P-768	Output Shaft.....	1
	28-P-275	Oil Seal	1
	328234X	Bearing Cap Ass'y (21-P-614).....	1
	378447-6	Socket Head Capscrew (.312" - 18 x 1.0")	4



NOTE: Pump must rotate in direction of arrow
NOTE: Install Street Elbow into idler shaft before installing idler shaft

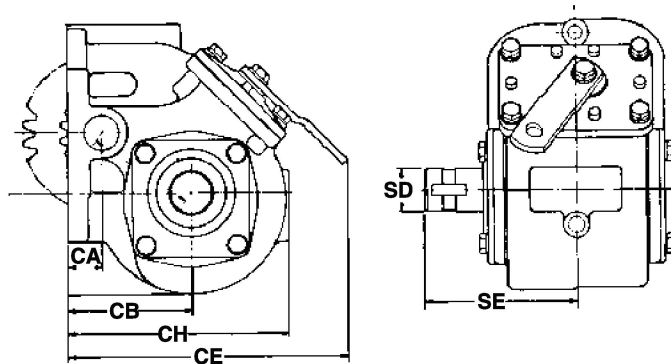
Pump assembly as shown is for "Q", "W" and "X" ratios.
 Rotate as needed for "C", "E", "L", and "P" ratios.

Item	Part Number	Description	Qty.
11	378447-6	Capscrew, Hex Head (.312" - 18 x 1.000")	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

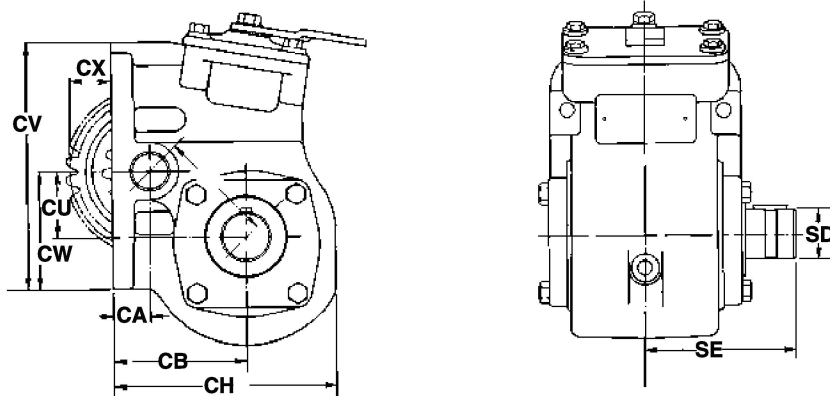
Case Dimensions

Dimension Symbol	Description	Case Part Number and Dimensions			
		1-P-467 221X	1-P-469 221Z	1-P-470 221R	1-P-468 221Q
CA	Face of Case to Center Line of Input Hole	0.972"	0.752"	0.500"	0.667"
CB	Face of Case to Center Line of Output Shaft Hole	3.516"	3.296"	2.543"	3.211"
CE	Face of Case to End of Shift Lever	8.000"	7.781"	8.000"	7.695"
CH	Face of Case to extreme Horizontal Edge of Case	(d) 6.281"	6.062"	6.190"	5.982"
CU	Output Shaft BELOW Center Line of Input Gear	1.750"	1.750"	1.941"	2.544"
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	1.25" Rd .3125" Key
SE	Center Line of P.T.O. to End of Output Shaft	4.123"	4.123"	4.123"	4.123"

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

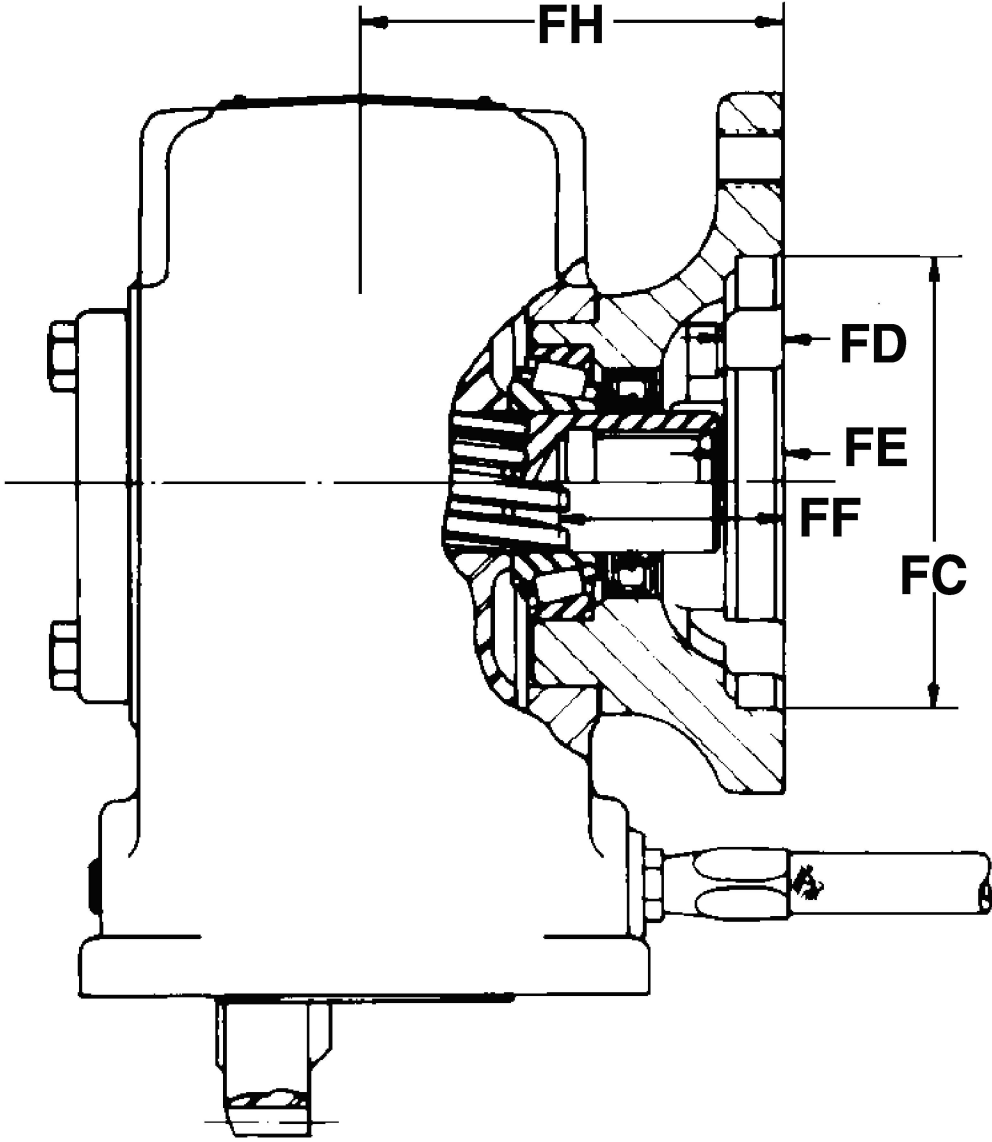


221X, 221Z & 221Q



221R

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



Dimensions

Pump Flange Suffix	Bolt Circle Dia.	Bolt Holes		FC	FD	FE	FF	FH	Output Shaft	
		Tapped Hole	No. Equally Spaced	Female Pilot Diameter	Pilot Depth	Face to end of Shaft	Face thru Hole	Face to Center of P.T.O.	Hole Diameter	Keyway Width
AA	2.834"	M10 - 1.5"	6	2.050"	N/A	N/A	N/A	3.447"	.982"/.816" - 6T Spline	—
AF	5.750"	.500" - 13T	2	4.003"	0.406"	0.516"	1.984"	4.322"	1" - 15T Spline	—
	5.000"	.500" - 13T	4	4.003"	0.406"	0.516"	1.984"	4.322"	—	—
AK	5.750"	.500" - 13T	2	4.003"	0.406"	0.562"	2.062"	3.688"	7/8" - 13T Spline	—
AW	5.750"	.500" - 13T	2	4.003"	0.406"	N/A	1.984"	4.322"	1-1/4" - 14T Spline	—
	5.000"	.500" - 13T	4	4.003"	0.406"	N/A	1.984"	4.322"	1-1/4" - 14T Spline	—
AZ	5.000"	.500" - 13T	4	4.003"	0.406"	0.695"	2.392"	4.985"	1-1/4" - 14T Spline	—
FF	5.750"	.500" - 13T	2	4.003"	0.406"	0.516"	1.984"	4.322"	7/8" Rd	1/4"
	5.000"	.500" - 13T	4	4.003"	0.406"	0.516"	1.984"	4.322"	—	—
PA●	5.750"	.563"	2	4.003"	0.406"	0.558"	2.058"	4.558"	7/8" - 13T Spline	—
PF●	5.750"	.563"	2	4.003"	.0406"	0.501"	1.969"	4.569"	1" - 15T Spline	—
RA● GA	5.750"	.500" - 13T	2■	4.003"	0.406"	0.558"	2.058"	4.588"	7/8" - 13T Spline	—
RB● GB	5.000"	.500" - 13T	4	4.003"	0.406"	0.558"	2.058"	4.588"	7/8" - 13T Spline	—
RC●	4.188"	.375" - 16T	2■	3.253"	0.270"	0.525"	1.462"	3.694"	5/8" - 9T Spline	—
RD●	4.188"	.375" - 16T	2■	3.253"	0.270"	0.525"	1.462"	3.694"	7/8" - 13T Spline	—
RE, GJ	3.530"	.500" - 13T	4	4.003"	0.406"	0.501"	1.969"	4.569"	1" - 15T Spline	—
RF●, GH	5.750"	.500" - 13T	2■	4.003"	0.406"	0.501"	1.969"	4.569"	1" - 15T Spline	—
RH●	4.188"	.375" - 16T	2■	3.252"	0.270"	0.525"	1.924"	3.694"	3/4" - 11T Spline	—
RJ	2.834"	.500" - 13T	2	4.003"	0.406"	0.516"	1.984"	4.322"	1" - 15T Spline	—
	2.834"	.500" - 13T	4	4.003"	0.406"	0.516"	1.984"	4.322"	1" - 15T Spline	—
RY	3.150"	M12 - 1.75"	4	3.152"	0.394"	0.360"	2.274"	4.790"	DIN5462	1/4"
SQ	5.000"	.500" - 13T	4	4.003"	0.406"	0.562"	2.062"	3.688"	7/8" - 13T Spline	—
XE	5.000"	.500" - 13T	4	3.253"	0.344"	0.562"	1.500"	3.688"	5/8" - 9T Spline	—
XG	4.188"	.375" - 16T	4	3.253"	0.562"	0.593"	2.218"	4.562"	3/4" Rd	3/16"
XJ	4.188"	.375" - 16T	4	3.253"	0.562"	1.406"	2.906"	4.562"	3/4" Rd	3/16"
XK, GK	5.750"	.531" - 13 T◆	2	4.003"	0.406"	0.562"	2.062"	3.688"	7/8" - 13T Spline	—
	5.000"	.531" - 13 T◆	4	4.003"	0.406"	0.562"	2.062"	3.688"	—	—
XL	4.188"	.375" - 16T	4	3.253"	0.562"	0.562"	2.062"	4.562"	7/8" - 13T Spline	—
XM	3.250"	.375" - 16T	6	2.628"	0.688"	0.312"	1.812"	3.447"	3/4" Rd	3/16"
XN	4.750"	—	6	3.253"	0.375"	0.750"	2.250"	3.884"	7/8" - 13T Spline	—
XO	5.000"	.500" - 13T	4	3.253"	0.344"	0.562"	2.062"	3.688"	3/4" Rd	3/16"
	4.188"	.375" - 16T	2	3.253"	0.344"	0.562"	2.062"	3.688"	—	—
XP, GP	5.000"	.500" - 13T	4	3.253"	0.344"	0.562"	2.062"	3.688"	7/8" - 13T Spline	—
	4.188"	.375" - 16T	2	3.253"	0.344"	0.562"	2.062"	3.688"	—	—
XQ, GQ	5.750"	.500" - 13T	2	4.003"	0.406"	0.562"	2.062"	3.688"	7/8" - 13T Spline	—
	5.000"	.500" - 13T	4	4.003"	0.406"	0.562"	2.062"	3.688"	—	—
XR	3.710"	.312" - 24T (Studs)	4	2.752"	0.281"	N/A	N/A	2.809"	7/8" - 13T Spline	—
XV	3.750"	N/A	4	2.752"	.0880"	N/A	N/A	5.030"	1-1/4" Rd.	—
XY, GY	4.454"	M12 - 1.75"	4	3.152"	0.393"	0.594"	2.508"	4.697"	DIN 5462	—

● 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

Air Shift Conversion Kit

Part Number	Description	Qty.
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 X Q AH P - A 3 XD

Basic Model
221

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

Gear Ratio
C = 14/29
E = 15/28
L = 18/25
P = 20/23

Input Gear
(See Chart on [Page 5](#))

Lube Option
P = Pressure Lube
X = No Lubrication
W = Wet Spline (England Only)

Shift Option
A = Air Shift
C = Heavy Duty Bracket Less Cable
H = Less Wire Shift Cover
M = Constant Mesh
P = 12 Volt Electric Over Air
Q = 24 Volt Electric Over Air
V = Air Shift Less Shift Installation Kit
S = P.T.O. & Pump Combo Valve
T = Combo Valve Less Kick Out & Neutral Spring Return
W = Wire Control
X = Less Cable and Knob

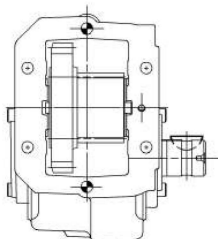
Assembly Arrangement
3, 4, 5, 6

Output Option

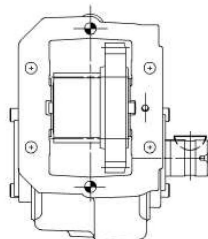
- AA** = Non Standard
- AF** = S.A.E. "BB" 2 or 4-Bolt 1" - 15T
- AK** = S.A.E. "B" 2-Bolt 7/8" - 13T
- AZ** = S.A.E. "B" 4-Bolt 1-1/4" - 14T
- FF** = S.A.E. "B" 2 or 4-Bolt
- GA** = Greaseable Rot. "B" 2-Bolt 7/8" - 13T
- GB** = Greaseable Rot. "B" 4-Bolt 7/8" - 13T
- GF** = Greaseable S.A.E. "BB" 2 or 4-Bolt 1" - 15T
- GH** = Greaseable Rot. S.A.E. "BB" 2-Bolt 1" - 15T
- GJ** = S.A.E. "B" 4-Bolt Rotatable
- GK** = Greaseable S.A.E. "B" 2 or 4-Bolt 7/8" - 13T
- GP** = Greaseable S.A.E. "B" 2 or 4-Bolt 7/8" - 13T
- GQ** = Greaseable S.A.E. "B" 2 or 4-Bolt 7/8" - 13T
- GR** = Greaseable CHELSEA Special 7/8" - 13T
- GY** = Greaseable DIN 5462 8T
- GZ** = Greaseable S.A.E. "B" 4-Bolt 1-1/4" - 14T
- LB** = S.A.E. "A" 2-Bolt w/Self Lube Pump 7/8" - 13T
- LC** = S.A.E. "B" 2 or 4-Bolt w/Self Lube 7/8" - 13T
- LD** = 1-1/4" Rd w/Self Lube Pump
- LF** = S.A.E. "B" 2 or 4-Bolt w/Self Lube 7/8" - 13T
- RA** = Rotatable S.A.E. "B" 2-Bolt 7/8" - 13T
- RB** = Rotatable S.A.E. "B" 4-Bolt 7/8" - 13T
- RC** = Rotatable S.A.E. "A" 2-Bolt 5/8" - 9T
- RE** = Rotatable S.A.E. "BB" 4-Bolt 1" - 15T
- RF** = Rotatable S.A.E. "BB" 2-Bolt 1" - 15T
- RY** = Rotatable DIN 5462 8T
- RD** = Rotatable S.A.E. "A" 2-Bolt 7/8" - 13T
- XD** = 1-1/4" Rd Standard Shaft
- XE** = S.A.E. "A" 2 or 4-Bolt 5/8" - 9T
- XG** = S.A.E. "A" 2-Bolt 3/4" Rd
- XJ** = S.A.E. "A" 2-Bolt 3/4" Rd
- XK** = S.A.E. "B" 2 or 4-Bolt 7/8" - 13T
- XL** = Non Standard 2-Bolt
- XO** = S.A.E. "A" Pilot 2-Bolt
- XP** = S.A.E. "A" Pilot 2-Bolt
- XQ** = S.A.E. "B" 2 or 4-Bolt 7/8" - 13T
- XR** = CHELSEA Special 7/8" - 13T
- XX** = Tapered Output Shaft
- XY** = DIN 5462 8T
- *XQ** = S.A.E. "B" 2 or 4-Bolt 7/8" - 13T

Assembly Arrangements

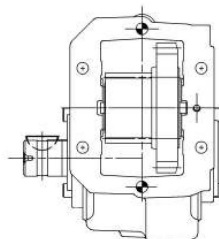
*Similar to "XK" flange rotated 90°



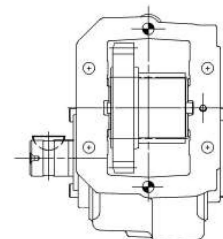
Ass'y 3



Ass'y 4

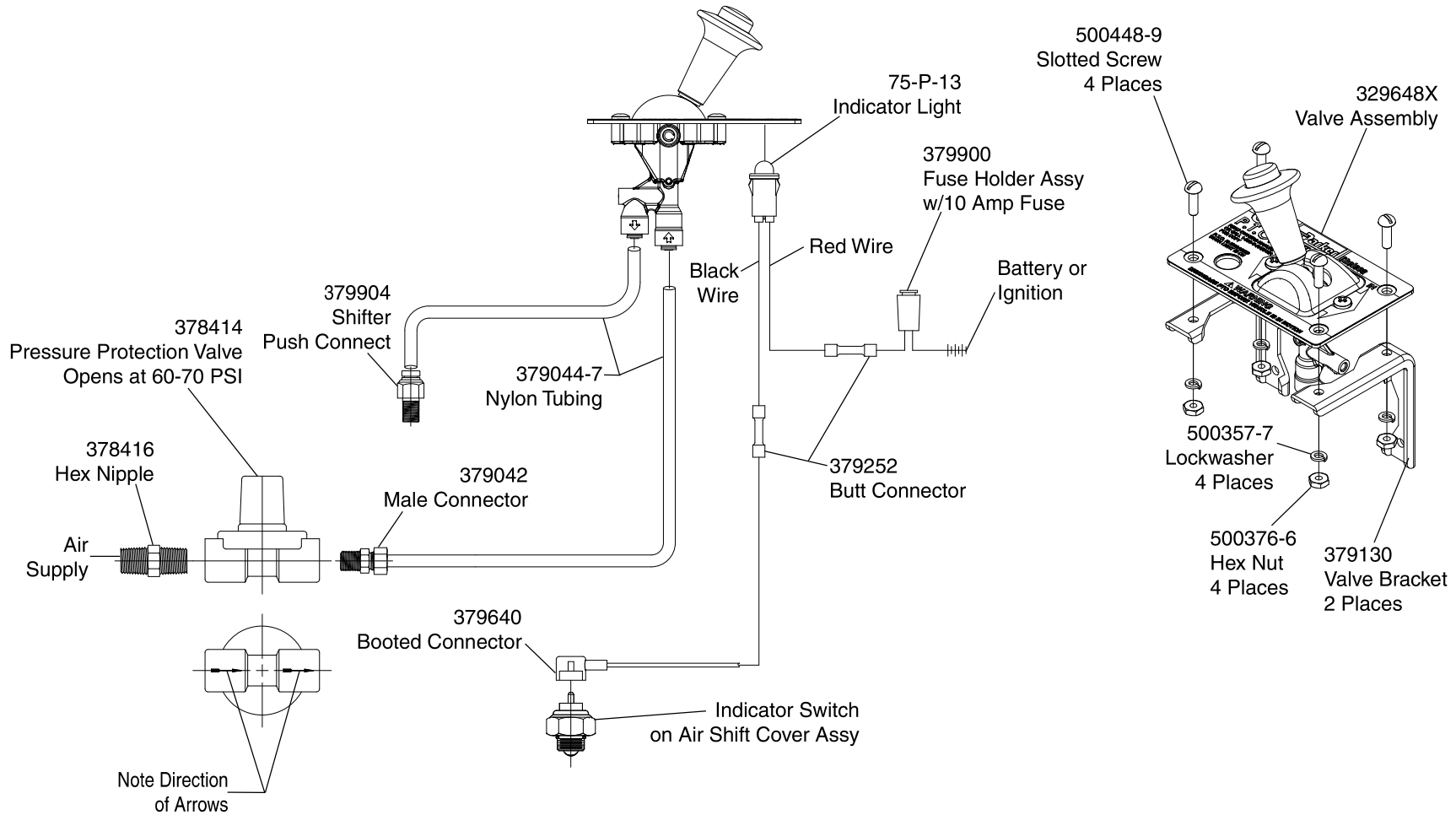


Ass'y 5



Ass'y 6

328388-98X Installation Kit
 See SK-204 Drilling Template for Control Plate



NOTE: When this installation is used on vehicles with automatic transmissions the P.T.O .drive must be stopped before shifting.
CAUTION: When installing nylon tubing avoid sharp angles, exhaust and manifold systems.

Bulletin HY25-2221-M1/U/S
Installation Sketch
Air Shift Installation Sketch for 221 Series Using: Williams Valve (SK-462 Rev A)
Parts List
221 Series

329068X	"X" to "R" Mounting Conversion Kit	
1-P-470	HSG.....	1
328170-155X	Stud Kit,.....	1
378766	Capscrew.....	1
378767	Retaining.....	1
329337X	E.O.C. Installation Kit	
379964	Pipe Adapter with Restriction.....	1
500841-1	90° Elbow.....	1
379627	Tee.....	1
35-P-92	Gasket.....	1
SK-371	Installation Sketch.....	1
328170-1X	P.T.O. Mounting Stud Kit (Standard Mount)	
378018	Washer, Copper.....	6
378431-13	Capscrew.....	2
378431-30	Hex Capscrew.....	1
378431-42	Capscrew.....	1
379423-18	Stud (2.0").....	2
378774	Tablock Washer.....	4
379744	Flange Nut.....	2
328170-26X	P.T.O. Mounting Stud Kit (Deep Mount)	
379744	Flange Nut.....	2
378018	Washer, Copper.....	6
378431-11	Hex Capscrew.....	2
378431-29	Capscrew.....	1
378431-41	Capscrew.....	1
379423-13	Stud .375".....	2
378774	Tablock Washer.....	4
328170-155X	P.T.O. Mounting Stud Kit (Mounting Type "R" Only)	
378018	Washer, Copper.....	5
378431-42	Capscrew.....	1
379423-18	Stud (2.0").....	2
378774	Tablock Washer.....	3
379744	Flange Nut.....	2
378431-14	Capscrew.....	2
328346-10X	Wire Control Cable ("W" Shifter)	
378441-10	10 Ft. Wire.....	1
378502	Knob.....	1
328356-13X	Gasket & Seal Field Replacement Kit	
22-P-127-1	Gasket, Bearing Cap.....	4
22-P-127-2	Gasket, Bearing Cap.....	4
22-P-127-3	Gasket, Bearing Cap.....	2
28-P-190	O-Ring.....	1
28-P-191	O-Ring.....	2
28-P-216	Oil Seal.....	1
35-P-8	Gasket, Shifter Cover.....	2
35-P-9-1	Gasket, Housing (.010").....	2
35-P-9-2	Gasket, Housing (.020").....	2
378391	Lockring.....	2
378774	Lockwasher.....	6

328356-15X	Seal Kit, Cable Shift	
22-P-69	Gasket.....	1
28-P-191	O-Ring .54".....	1
28-P-226	Thrust Bearing.....	1
35-P-8	Shifter Cover.....	1
35-P-9-1	Gasket, Mounting.....	2
35-P-9-2	Gasket, Mounting.....	2
328356-18X	Seal Kit, Lever Shift	
28-P-229	Oil Seal.....	1
28-P-42	O-Ring 1.0".....	1
35-P-8	Shifter Cover.....	1
328356-19X	Seal Kit, Air Shift	
28-P-41	O-Ring .73".....	1
28-P-42	O-Ring 1.0".....	2
35-P-8	Shifter Cover.....	1
328380X	Wire Control Mounting Parts Bag ("W" Shifter)	
378326	Nut, Hex.....	1
50-P-17	Bracket, Wire Control.....	1
50-P-19	Swivel Bracket.....	1
500396-8	Screw, Hex.....	1
500568-4	Set Screw.....	1
378019	Pivot Pin.....	1
328383-37X	Air Shift	
328388-44X	Air Shift.....	1
329090-1X	Valve Kit.....	1
379044-6	Nylon Tubing.....	1
379130	Support Bracket.....	2
68-P-27	Control Plate.....	1
379640	Booted Connector.....	1
328388-44X	Air Shift Kit	
378416	Hex Nipple.....	1
378978	Indicator.....	1
379042	Male Connector.....	2
379043	Male Elbow.....	1
379252	Butt Connector.....	2
500357-7	Lockwasher.....	8
500376-6	Nut 10-24.....	4
500448-9	Screw Slot.....	4
379900	Ass'y Fuse.....	1
379904	Push Connect.....	1

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328388-47X	12V Electric Over Air	328390-110X	24 Volt Field Conversion Kit (Wire to Electric)
328388-46X	Inst Kit "P Shift Option 1	328388-48X	24V Electric 1
378414	Pressure Protection Valve..... 1	328723X	Air Shift..... 1
378881	Rocker Swivel 1	35-P-8	Shifter Cover..... 1
378978	Indicator..... 1	378430-8	Capscrew Hex Head (.312" - 18 x .875")..... 4
379044-7	Nylon Tubing..... 1	Owners Manual	HY25-1135-M1/US 1
379252	Butt Connector..... 2	328390-111X	12 Volt Field Conversion Kit (Lever to Electric)
379258	Bracket..... 1	11-P-75	Piston Shaft 1
379303-1	Valve 12V..... 1	28-P-41	O-Ring 1
379336	Switch Bracket..... 1	28-P-42	O-Ring 2
379254-3	Wire, Green 1	328388-47X	12V Electric 1
379106	Breather Cap 1	35-P-8	Shifter Cover..... 1
379640	Booted Connector..... 1	37-P-21	Shifter Spring..... 1
328388-48X	24V Electric Over Air	378315	Cover Plug..... 1
379640	Booted Connector..... 1	378316	Retainer/Snap Ring 1
328388-46X	Inst Kit "P" Shift Option 1	Owners Manual	HY25-1135-M1/US 1
378414	Pressure Protection Valve..... 1	328390-112X	24 Volt Field Conversion Kit (Lever to Electric)
378881	Rocker Swivel 1	11-P-75	Piston Shaft 1
379005	Indicator..... 1	28-P-41	O-Ring 1
379044-7	Nylon Tubing..... 1	28-P-42	O-Ring 2
379252	Butt Connector..... 1	328388-48X	24V Electric 1
379258	Bracket..... 1	35-P-8	Shifter Cover..... 1
379303-2	Valve 24V..... 1	37-P-21	Shifter Spring..... 1
379336	Switch Bracket..... 1	378315	Cover Plug..... 1
379106	Breather Cap 1	378316	Retainer/Snap Ring 1
379254-3	Wire, Green 1	Owners Manual	HY25-1135-M1/US 1
328388-65X	Air-O-Matic Shift	328723X	Shifter Cover Ass'y, Air Shift
329214X	Apsco Valve 1	11-P-75	Piston Shaft 1
378414	Pressure Protection Valve..... 1	28-P-41	O-Ring 1
328388-64X	Airshift Kit 1	28-P-42	O-Ring 2
328388-98X	Air Shift Installation Kit ("A" Shifter)	32-P-129	Shifter Fork 1
328388-97X	Air Shift 1	34-P-115	Cover A/S 1
329090-6X	Kit Valve 1	37-P-21	Shifter Spring..... 1
379044-7	Nylon Tubing..... 1	378285-1	Guide Screen..... 1
379130	Support Bracket..... 2	378315	Cover Plug..... 2
379640	Booted Connector..... 1	378316	Retainer/Snap Ring 2
328390-88X	Air Shift Field Conversion Kit	378447-4	Capscrew, Socket Head w/lockpatch 1
328723X	Air Shift..... 1	379639	Indicator Switch 1
35-P-8	Shifter Cover..... 1	500897-5	Plug Shipping 1
378430-8	Capscrew Hex Head (.312" - 18 x .875")..... 4		
328388-98X	Kit Installation 1		
Owners Manual	HY25-1135-M1/US 1		
328390-109X	12 Volt Field Conversion Kit (Wire to Electric)		
328388-47X	12V Electric 1		
328723X	Air Shift..... 1		
35-P-8	Shifter Cover..... 1		
378430-8	Capscrew Hex Head (.312" - 18 x .875")..... 4		
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328724X	Lever Shift Cover	
28-P-229	Oil Seal	1
28-P-42	O-Ring 1.0"	1
32-P-129	Shifter Fork	1
34-P-60	Cover, Lever.....	1
36-P-1	Eye Bolt	1
37-P-41	Spring .40"	1
378002	Ball Shift	1
378285-1	Guide Screw	1
378315	Cover Plug.....	1
378316	Retainer/Snap Ring	1
378447-4	Capscrew Screw.....	1
378554	Cap Poppet.....	1
379639	Switch Indicator	1
500381-3	Hex Lock Nut	1
11-P-117	Shifter Shaft.....	1
328751-1X	Installation Kit ("C", "H", "W", "X", "Y")	
68-P-18	Name Plate.....	1
378978	Indicator Light, 12V.....	1
379900	Fuse Holder, 10-Amp.....	1
379252	Butt Connector.....	2
379640	Booted Connector ("V" Shifter Option).....	1
328803-1X	Post & Assembly (3 &6)	
62-P-31	Shifter Plate	1
63-P-5	Shifter Pin	1
64-P-3	Shifter Shoe.....	1
378244	Shifter Post	1
378246	Snap Ring.....	1
378325	Rivet.....	1
378313	Lifter Plate	1
328805-1X	Shifter Cover Ass'y, Wire Control (Ass'y 3 & 6)	
28-P-191	O-Ring	1
328803-1X	Post & Plate	1
34-P-74	Shifter Cover.....	1
37-P-19	Spring	1
378004	Flat Washer.....	1
379639	Indicator Switch	1
500356-10	Lock Washer	1
500365-22	Flat Washer.....	1
500409-6	Capscrew Hex Head (.312" - 18 x .875").....	1
51-P-22	Shifter Lever	1
63-P-16	Poppet Shift	1
328805-2X	Shifter Cover Ass'y, Wire Control (Ass'y 4 & 5)	
28-P-191	O-Ring	1
328803-2X	Post & Plate	1
34-P-74	Shifter Cover.....	1
37-P-19	Spring	1
378004	Flat Washer.....	1
379639	Indicator Switch	1
500356-10	Lock Washer	1
500365-22	Flat Washer.....	1
500409-6	Capscrew Hex Head (.312" - 18 x .875").....	1
51-P-22	Shifter Lever	1
63-P-16	Poppet Shift	1

328948-6X	6-Bolt Gasket & Installation Instructions	
35-P-9-1	Mounting Gasket .010"	2
35-P-9-2	Mounting Gasket .020"	2
379085-1	P.T.O. Instruction Decal.....	1
328946X	Caution Label Kit	1
379624	Product Warranty Card	1
Owners Manual	HY25-1135-M1/US	1
Safety Guide	HY25-1002-M1/US	1
328949-6X	Gasket Installation Instructions 221CAJ, EAJ	
379624	Product Warranty Card	1
328946X	Caution Label Kit	1
35-P-41	Gasket, Housing	1
379085-1	P.T.O. Instructions Decal.....	1
Owners Manual	HY25-1135-M1/US	1
Safety Guide	HY25-1002-M1/US	1

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10. Buyer's Obligation; Rights of Seller. To secure payment of all sums due or otherwise, Seller shall retain a security interest in the goods delivered and this agreement shall be deemed a Security Agreement under the Uniform Commercial Code. Buyer authorizes Seller as its attorney to execute and file on Buyer's behalf all documents Seller deems necessary to perfect its security interest.

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

12. Cancellations and Changes. Orders shall not be subject to cancellation or change by Buyer for any reason, except with Seller's written consent and upon terms that will indemnify, defend and hold Seller harmless against all direct, incidental and consequential loss or damage. Seller may change product features, specifications, designs and availability with notice to Buyer.

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

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

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

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

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

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

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

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

02/12



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