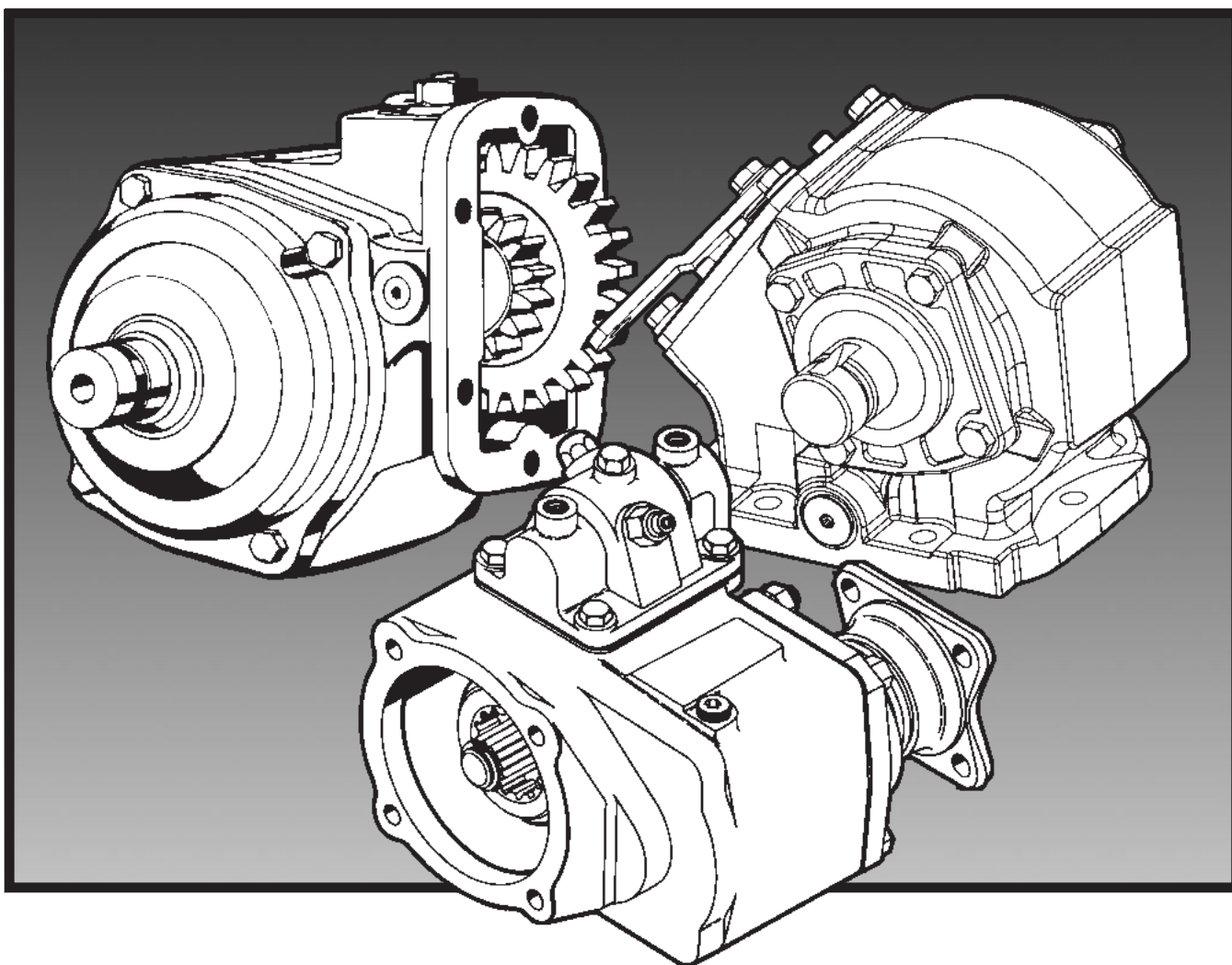


## Parts List 238 Series

Effective: December 15, 2009

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### **WARNING — User Responsibility**

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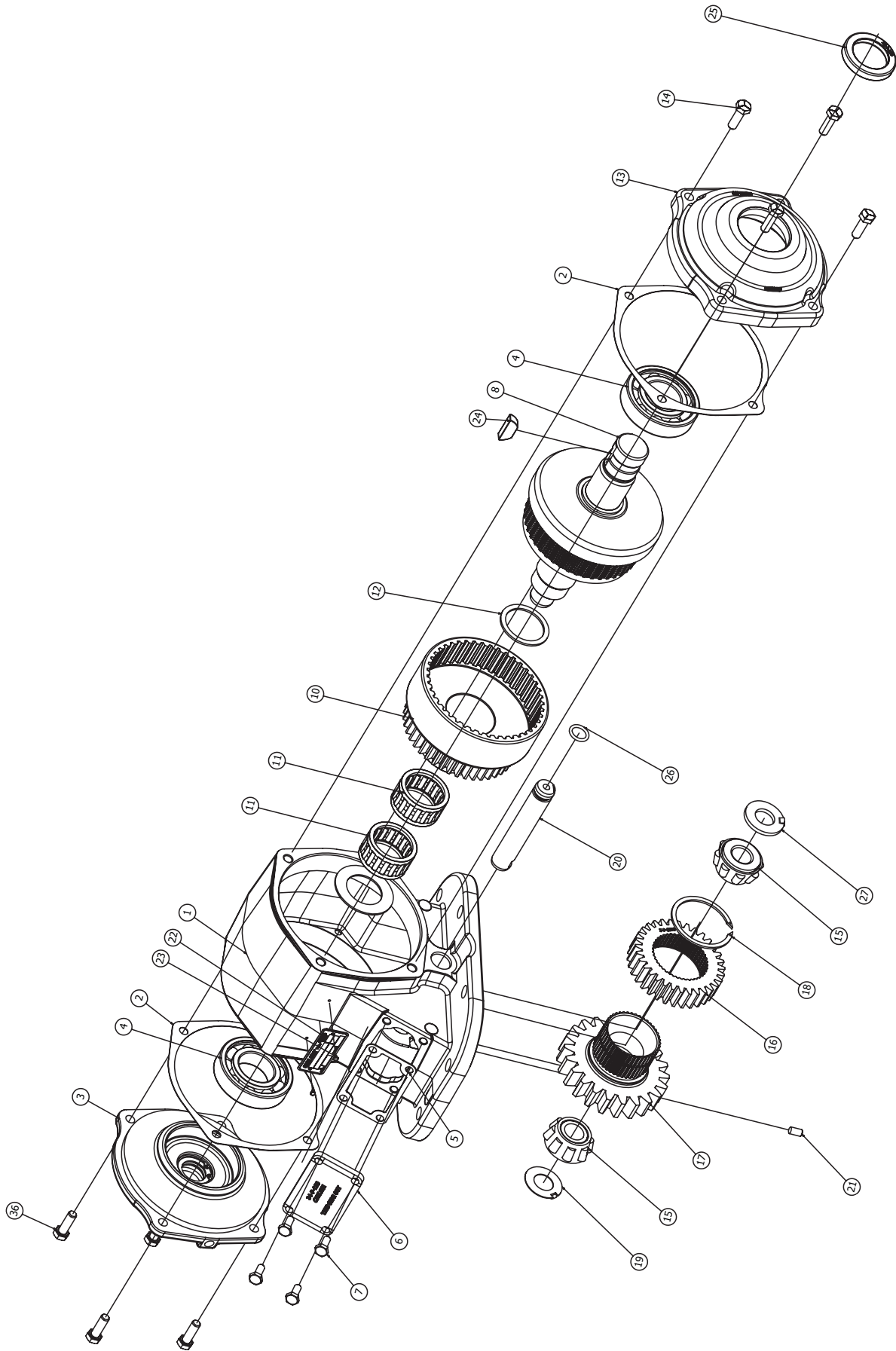
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Bill of Materials

238 Series

Item	Part Number	Description	Quantity
1	1-P-638 1-P-639	Housing Standard Mount ("X", "G" Mounting).....1 or Housing Deep Mount ("Z" Mounting).....1	
2	22-P-53	Gasket.....2	
3	See Below 328806-1X 328807-1X 328807-3X	Ass'y Bearing Cap & Seal (Closed Side) .....1 or Ass'y Bearing Cap & Seal (3 & 5 Assembly) (All Except "BD") .....1 Ass'y Bearing Cap & Seal (4 & 6 Assembly) .....1 Ass'y Bearing Cap & Seal (3 & 5 Assembly "BD").....1	
4	550010	Bearing Ball 1.378" x 2.834" x .669".....2	
5	35-P-93	Gasket Cover Plate.....1	
6	34-P-133	Plate Cover.....1	
7	378429-6	Capscrew Hex .250"-20 X .625".....4	
8	See Below 328926-1X 328926-2X 328926-3X 328926-4X 328926-5X 328926-6X 328926-7X 328926-8X 328926-9X 328926-10X 328926-11X 328926-12X 328926-13X 328926-14X	Ass'y Shaft & Clutch.....1 or "XD" Ass'y Shaft & Clutch (4 & 6 Assembly) .....1 "XD" Ass'y Shaft & Clutch (3 & 5 Assembly) .....1 "XK", "XP" Ass'y Shaft & Clutch (4 & 6 Assembly) .....1 "XK", "XP" Ass'y Shaft & Clutch (3 & 5 Assembly) .....1 "XR", "RA", "RB" Ass'y Shaft & Clutch (3 & 5 Assembly).....1 "XX" Ass'y Shaft & Clutch (3 & 5 Assembly).....1 "XX" Ass'y Shaft & Clutch (4 & 6 Assembly).....1 "XY" Ass'y Shaft & Clutch (3 & 5 Assembly).....1 "AF" Ass'y Shaft & Clutch (3 & 5 Assembly).....1 "AF" Ass'y Shaft & Clutch (4 & 6 Assembly).....1 "RF" Ass'y Shaft & Clutch (3 & 5 Assembly).....1 "XE" Ass'y Shaft & Clutch (3 & 5 Assembly).....1 "BD" Ass'y Shaft & Clutch (3 & 5 Assembly) .....1 "BD" Ass'y Shaft & Clutch (4 & 6 Assembly) .....1	
9	31-P-57	Washer Thrust 1.380" x 2.250" x .064" (All Except "BD" Option).....1	
10	See Chart	Gear Output.....1	
11	560918	Bearing Needle Roller Ass'y 1.500" x 1.875" x 1.000" .....2	
12	14-P-49	Spacer 1.510" x 1.875" x .080".....1	
13	See Below 21-P-297 21-P-451 21-P-669 <a href="#">See Page 11</a>	Cap Bearing (Open Side).....1 or Cap Bearing (4 & 6 Assembly) ("XX", "XD" Outputs).....1 Cap Bearing (3 & 5 Assembly) ("XX", "XD", "BD" Outputs).....1 Cap Bearing (4 & 6 Assembly) ("BD" Output).....1 All Other Outputs.....1	
14	See Below 378430-10 378430-12	Hex Capscrew (Open Cover).....4 or Capscrew Hex .312"-18 x 1.000" (3 & 5 Assembly) ("XX", "XD" Outputs).....4 Capscrew Hex .312"-18 x 1.250" (4 & 6 Assembly) ("XX", "XD", "BD" Outputs).....4	
15	550439	Bearing Tapered Cone .750" x .859" .....2	
16	See Chart	Gear Input.....1	
17	See Chart	Gear Input Ratio .....1	
18	379522	Lockring.....1	
19	31-P-102	Washer Thrust .754" x .440" x .030" .....1	
20	See Below 9-P-102 9-P-103	Shaft Idler .750" ("X" Standard Lube Option).....1 Shaft Idler .750" ("P" Pressure Lube Option).....1	
21	See Below 378452-4 378452-7	Set Screw .....1 or Set Screw SH .250"-20 x .312" ("Z" Mounting) .....1 Set Screw SH .250"-20 x .500" ("X", "G" Mounting).....1	
22	68-P-2	Plate Name.....1	
23	378422	Screw Drive .....3	
24	500007-29	Key Woodruff.....1	

A.R.—As Required

Continued on Next Page

Bill of Materials

Item	Part Number	Description	Quantity
25	See Below <b>28-P-225</b> See Page 11	Oil Seal .....1 or Oil Seal 2.004" x 1.375" x .315" ("XD", "BD" Outputs) .....1 Oil Seal (All Other Outputs) .....1	
26	<b>28-P-191</b>	O-Ring .549" x .103" .....1	
27	<b>14-P-73-1</b> <b>14-P-73-2</b> <b>14-P-73-3</b>	Spacer .762" x 1.500" (.149" - .151") .....1 Spacer .762" x 1.500" (.152" - .154") .....1 Spacer .762" x 1.500" (.155" - .157") .....1	
29	<b>329410X</b>	Ass'y Brake ("BD" Output Only) .....1 Ass'y Shaft & Clutch	
32	<b>31-P-113</b>	Washer Thrust 1.385" x 3.125" x .125" ("BD" Output Only) .....1	
33	<b>379977</b>	Pin Spring ("BD" Output Only) .....1	
34	<b>37-P-24</b>	Spring 2.531" x 2.130" ("BD" Output Only) .....1	
35	<b>378576</b>	Lockring ("BD" Output Only) .....1	
37	<b>28-P-244</b>	O-Ring 1.174" x .103" ("BD" Output Only) .....2	
36	See Below <b>378430-10</b> <b>378430-12</b>	Capscrew Hex (Closed Cover) .....4 or Capscrew Hex .312"-18 x 1.000" (3 & 5 Assembly) (Except "BD") .....4 Capscrew Hex .312"-18 x 1.250" (4 & 6 Assembly) ("BD", 3 & 5) .....4	
38	<b>328075X</b>	Pressure Lube Hose ("P" Lube Only) .....1	
		<b>Loose Parts</b>	
	<b>328170-200X</b> <b>328170-201X</b>	Kit Stud ("X", "Z" Mount) .....1 or Kit Stud ("G" Mount) .....1 or	
	<b>328388-50X</b> <b>328388-51X</b>	Kit Air Shifter (12V Without E.O.C.) .....1 or Kit Air Shifter (24V With E.O.C.) .....1 or	
	<b>328388-99X</b>	Kit Air Shifter (12V With Pilot Valve) .....1 or	
	<b>328388-89X</b> <b>328388-90X</b>	Kit Air Shifter ("S" Shifter) .....1 or Kit Air Shifter ("T" Shifter) .....1	
	<b>328748X</b>	Kit Pump Mounting ("XR" Output Only) .....1	
	<b>328948-17X</b>	Kit Gasket & Installation .....1	
		<b>Service Kits</b>	
	<b>329043-27X</b> <b>329043-28X</b> <b>329043-3X</b>	Kit Service Bearing Seal Gasket & Clutch Pack .....1 Kit Service Bearing Seal Gasket Piston & Clutch Pack .....1 Kit Clutch Repair .....1	
	<b>329043-9X</b> <b>329043-10X</b> <b>329043-11X</b> <b>329043-12X</b> <b>329043-13X</b>	Kit Conversion, "XD" To "BD", 3 & 5 Assembly .....1 Kit Conversion, "XD" To "BD", 4 & 6 Assembly .....1 Kit Service, "BD", 3 & 5 Assembly, Brake Section Only .....1 Kit Service, "BD", 4 & 6 Assembly, Brake Section Only .....1 Kit Gasket & Seal ("BD" Option) .....1	
	<b>328594-26X</b> <b>328594-27X</b> <b>328594-28X</b> <b>328594-29X</b>	Kit Bearing & Spacer ("X", "D", "G", "K" Housing) ("X" Lube) .....1 Kit Bearing & Spacer ("X", "D", "G", "K" Housing) ("P" Lube) .....1 Kit Bearing & Spacer ("Z", "L" Housing) ("X" Lube) .....1 Kit Bearing & Spacer ("Z", "L" Housing) ("P" Lube) .....1	

## Assembly and Installation Kits

## 238 Series

**328170-200X - Kit Stud "X", "Z" Mount**

Item	Part Number	Description	Quantity
1	379224	Tab Lockwasher.....	6
2	378432-12	Capscrew.....	6
3	379424-18	Stud.....	2
4	379745	Flange Nut.....	2

**328170-201X - Kit Stud "G" Mount (Metric)**

Item	Part Number	Description	Quantity
1	379745	Flange Nut.....	8
2	379429-19	Stud Metric.....	8

**328388-50X - Kit Air Shifter (12V Without E.O.C.)**

Item	Part Number	Description	Quantity
1	328388-49X	Air Shift.....	1
2	378414	Pressure Protection Valve.....	1
3	378881	Rocker Switch.....	1
4	378978	Indicator Light (12 Volt).....	1
5	379044-7	Nylon Tubing.....	1
6	379253	Ring Connector.....	1
7	379254-13	Wire, Blue.....	1
8	379254-15	Ring Wire.....	1
9	379254-8	Wire / Fork.....	1
10	379303-1	Valve 12V.....	1
11	379305	Pressure Switch.....	1
12	379306	Fork Connector.....	4
13	379336	Switch Bracket.....	1
14	379640	Booted Connector.....	1
15	379900	Ass'y Fuse.....	1

**328388-51X - Kit Air Shifter (24V With E.O.C.)**

Item	Part Number	Description	Quantity
1	379900	Ass'y Fuse.....	1
2	328388-49X	Air Shift.....	1
3	378414	Pressure Protection Valve.....	1
4	378881	Rocker Switch.....	1
5	379005	Indicator.....	1
6	379044-7	Nylon Tubing.....	1
7	379253	Ring Connector.....	1
8	379254-13	Wire, Blue.....	1
9	379254-15	Ring Wire.....	1
10	379254-8	Wire / Fork.....	1
11	379303-2	Valve 24V.....	1
12	379305	Pressure Switch.....	1
13	379306	Fork Connector.....	4
14	379336	Switch Bracket.....	1
15	379640	Booted Connector.....	1

**Assembly & Installation Kits**

**328388-99X - Kit Air Shifter (12V With Pilot Valve)**

Item	Part Number	Description	Quantity
1	328931X	Kit Valve .....	1
2	500357-7	Lockwasher .....	4
3	500376-6	Nut 10-24 .....	4
4	500448-9	Screw Slot .....	4
5	329090-6X	Kit Valve .....	1
6	378416	Hex Nipple .....	1
7	379042	Male Connector .....	5
8	379044-7	Nylon Tubing .....	1
9	379130	Support Bracket .....	2
10	379131-1	Reducer Bushing .....	3
11	379253	Ring Connector .....	1
12	379254-15	Ring Wire .....	2
13	379257	Splice Connector .....	1
14	379497	Pilot Valve .....	1
15	379547	Pressure Switch .....	1
16	379900	Ass'y Fuse .....	1
17	380097	Tee Union .....	1
18	500750-1	Tee Street .....	1
19	75-P-13	Light Indicator .....	1

**328388-89X - Kit Air Shifter ("S" Shifter)**

Item	Part Number	Description	Quantity
1	328931X	Kit Valve .....	1
2	500357-7	Lockwasher .....	4
3	500376-6	Nut 10-24 .....	4
4	500448-9	Screw Slot .....	4
5	329090-6X	Kit Valve .....	1
6	378416	Hex Nipple .....	1
7	379042	Male Connector .....	5
8	379044-7	Nylon Tubing .....	1
9	379130	Support Bracket .....	2
10	379131-1	Reducer Bushing .....	3
11	379253	Ring Connector .....	1
12	379254-15	Ring Wire .....	2
13	379257	Splice Connector .....	1
14	379497	Pilot Valve .....	1
15	379547	Pressure Switch .....	1
16	379900	Ass'y Fuse .....	1
17	380097	Tee Union .....	1
18	500750-1	Tee Street .....	1
19	75-P-13	Light Indicator .....	1

**328388-90X - Kit Air Shifter ("T" Shifter)**

Item	Part Number	Description	Quantity
1	SK-429	Installation Sketch .....	1
2	379044-7	Nylon Tubing .....	1
3	379253	Ring Connector .....	1
4	379254-15	Ring Wire .....	1
5	379900	Ass'y Fuse .....	1
6	379254-17	Fork Termi .....	1
7	329316X	Valve Asse .....	1
8	378416	Hex Nipple .....	1
9	378966	Street Tee .....	1
10	379042	Male Connector .....	7
11	379257	Splice Connector .....	1
12	379547	Pressure Switch .....	1
13	378414	Pressure Protection Valve .....	1
14	500750-1	Tee Street .....	1
15	379131-1	Reducer Bushing .....	3
16	379497	Pilot Valve .....	1
17	379254-13	Wire, Blue .....	1
18	379665-1	Decals .....	1



**328748X - Kit Pump Mounting (“XR” Output Only)**

Item	Part Number	Description	Quantity
1	378430-11	Hex Capscrew .....	4
2	378919	Washer .....	4
3	45-P-11	Steel Guide.....	4

**328948-17X - Kit Gasket & Installation**

Item	Part Number	Description	Quantity
1	328946X	Caution Label Kit .....	1
2	35-P-15-1	Gasket, Housing .010 .....	1
3	35-P-15-2	Gasket, Housing .020 .....	1
4	379085-2	Instructions Label .....	1
5	379624	Product Warranty Card .....	1
6	HY25-1240-M1/US	Owners Manual .....	1

**329043-27X - Kit Service Bearing Seal Gasket & Clutch Pack**

Item	Part Number	Description	Quantity
1	379595	Clutch Plate .....	7
2	560918	Roller Bearing.....	2
3	550439	Bearing Taper .....	2
4	550010	Ball Bearing .....	2
5	379746	Lock Ring .....	1
6	379485	Friction Disc.....	8
7	14-P-73-1	Spacer Idler .....	1
8	14-P-73-2	Spacer Idler .....	1
9	14-P-73-3	Spacer Idler .....	1
10	31-P-102	Thrust Washer .....	1

**329043-28X - Kit Service Bearing Seal Gasket Piston & Clutch Pack**

Item	Part Number	Description	Quantity
1	329043-27X	Kit Service .....	1
2	379595	Clutch Plate .....	7
3	560918	Roller Bearing.....	2
4	550439	Bearing Taper .....	2
5	550010	Ball Bearing .....	2
6	379746	Lock Ring .....	1
7	379485	Friction Disc.....	8
8	14-P-73-1	Spacer Idler .....	1
9	14-P-73-2	Spacer Idler .....	1
10	14-P-73-3	Spacer Idler .....	1
11	31-P-102	Thrust Washer .....	1
12	380057	Clutch Piston .....	1
13	379323	Clutch Back Up Cylinder.....	1

**329043-3X - Kit Clutch Repair**

Item	Part Number	Description	Quantity
1	22-P-53	Gasket .....	2
2	28-P-178	O-Ring 230 .....	1
3	28-P-179	Oil Seal 2.....	1
4	28-P-225	Oil Seal .....	1
5	28-P-244	O-Ring .....	2
6	35-P-9-1	Gasket, Mounting .....	2
7	35-P-9-2	Gasket, Mounting .....	2
8	378576	Snap/Retaining .....	1
9	379746	Lock Ring .....	1
10	379595	Clutch Plate .....	7
11	378811	Back Up Plate.....	1
12	378849	Retainer Ring.....	1
13	379323	Clutch Back Up.....	1
14	380057	Clutch Piston .....	1
15	379485	Friction Disc.....	8

**Assembly & Installation Kits****329043-9X - Kit Conversion, "XD" to "BD", 3 & 5 Assembly**

Item	Part Number	Description	Quantity
1	22-P-53	Gasket .....	2
2	28-P-225	Oil Seal .....	1
3	31-P-113	Washer Spring .....	1
4	328807-3X	Brg Cap Assembly .....	1
5	329410X	Brake Assembly .....	1
6	500007-29	Woodruff Key .....	1
7	550010	Ball Bearing .....	2
8	379977	Pin Spring .....	1
9	37-P-24	Spring .....	1
10	378576	Snap/Retaining .....	2
11	28-P-244	O-Ring .....	4
12	3-P-970	Shaft Output .....	1
13	379746	Lock Ring .....	1
14	35-P-9-1	Gasket, Mounting .....	2
15	35-P-9-2	Gasket, Mounting .....	2
16	379987	Instruction .....	1

**329043-10X - Kit Conversion, "XD" to "BD", 4 & 6 Assembly**

Item	Part Number	Description	Quantity
1	22-P-53	Gasket .....	2
2	28-P-225	Oil Seal .....	1
3	31-P-113	Washer Spring .....	1
4	21-P-669	Bearing Cap .....	1
5	329410X	Brake Assembly .....	1
6	500007-29	Woodruff Key .....	1
7	550010	Ball Bearing .....	2
8	379977	Pin Spring .....	1
9	37-P-24	Spring .....	1
10	378576	Snap/Retaining .....	2
11	28-P-244	O-Ring .....	4
12	3-P-969	Shaft Output .....	1
13	379746	Lock Ring .....	1
14	35-P-9-1	Gasket, Mounting .....	2
15	35-P-9-2	Gasket, Mounting .....	2
16	379987	Instruction .....	1

**329043-11X - Kit Service, "BD", 3 & 5 Assembly, Brake Section Only**

Item	Part Number	Description	Quantity
1	22-P-53	Gasket .....	2
2	28-P-225	Oil Seal .....	1
3	31-P-113	Washer Spring .....	1
4	328807-3X	Brg Cap Assembly .....	1
5	329410X	Brake Assembly .....	1
6	550010	Ball Bearing .....	2
7	379977	Pin Spring .....	1
8	37-P-24	Spring .....	1
9	378576	Snap/Retaining .....	1
10	28-P-244	O-Ring .....	2
11	35-P-9-1	Gasket, Mounting .....	2
12	35-P-9-2	Gasket, Mounting .....	2

**329043-12X - Kit Service, "BD", 4 & 6 Assembly, Brake Section Only**

Item	Part Number	Description	Quantity
1	22-P-53	Gasket .....	2
2	28-P-225	Oil Seal .....	1
3	31-P-113	Washer Spring .....	1
4	21-P-669	Bearing Cap .....	1
5	329410X	Brake Assembly .....	1
6	550010	Ball Bearing .....	2
7	379977	Pin Spring .....	1
8	37-P-24	Spring .....	1
9	378576	Snap/Retaining .....	1
10	28-P-244	O-Ring .....	2
11	35-P-9-1	Gasket, Mounting .....	2
12	35-P-9-2	Gasket, Mounting .....	2

**329043-13X - Kit Gasket & Seal ("BD" Option)**

Item	Part Number	Description	Quantity
1	28-P-244	O-Ring .....	4
2	378576	Snap/Retaining .....	2
3	379746	Lock Ring .....	1
4	28-P-225	Oil Seal .....	1
5	22-P-53	Gasket .....	2
6	35-P-9-1	Gasket, Mounting .....	2
7	35-P-9-2	Gasket, Mounting .....	2
8	35-P-93	Gasket Cover .....	1
9	28-P-179	Oil Seal .....	1
10	28-P-252	O-Ring .....	1
11	28-P-178	O-Ring .....	1
12	378849	Retainer Ring .....	1

**328594-26X - Kit Bearing & Spacer ("X", "D", "G", "K" Housing) ("X" Lube)**

Item	Part Number	Description	Quantity
1	9-P-102	Shaft Idle .....	1
2	550439	Bearing Taper .....	2
3	378452-7	Set Screw .....	1
4	14-P-73-1	Spacer Idler .....	1
5	14-P-73-2	Spacer Idler .....	1
6	14-P-73-3	Spacer Idler .....	1
7	31-P-102	Thrust Washer .....	1

**328594-27X - Kit Bearing & Spacer ("X", "D", "G", "K" Housing) ("P" Lube)**

Item	Part Number	Description	Quantity
1	378452-7	Set Screw .....	1
2	9-P-103	Shaft Idle .....	1
3	500897-5	Shipping Plug .....	1
4	550439	Bearing Taper .....	2
5	14-P-73-1	Spacer Idler .....	1
6	14-P-73-2	Spacer Idler .....	1
7	14-P-73-3	Spacer Idler .....	1
8	31-P-102	Thrust Washer .....	1

**Assembly & Installation Kits**

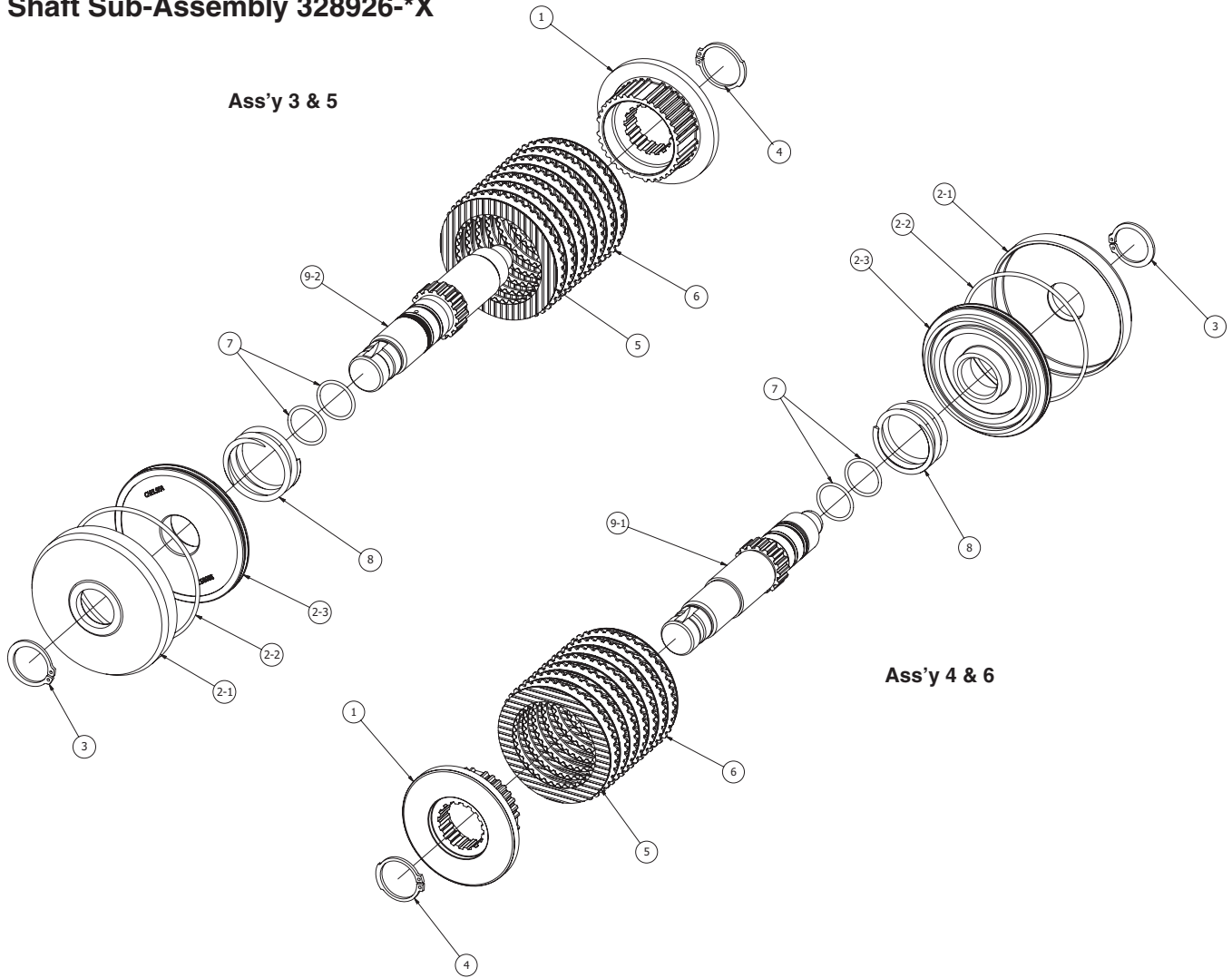
**328594-28X - Kit Bearing & Spacer (“Z”, “L” Housing) (“X” Lube)**

Item	Part Number	Description	Quantity
1	550439	Bearing Taper .....	2
2	378452-4	Set Screw .....	1
3	14-P-73-1	Spacer Idler .....	1
4	14-P-73-2	Spacer Idler .....	1
5	14-P-73-3	Spacer Idler .....	1
6	31-P-102	Thrust Washer .....	1
7	9-P-102	Shaft Idle .....	1

**328594-29X - Kit Bearing & Spacer (“Z”, “L” Housing) (“P” Lube)**

Item	Part Number	Description	Quantity
1	550439	Bearing Taper .....	2
2	500897-5	Shipping Plug .....	1
3	9-P-103	Shaft Idle .....	1
4	378452-4	Set Screw .....	1
5	14-P-73-1	Spacer Idler .....	1
6	14-P-73-2	Spacer Idler .....	1
7	14-P-73-3	Spacer Idler .....	1
8	31-P-102	Thrust Washer .....	1

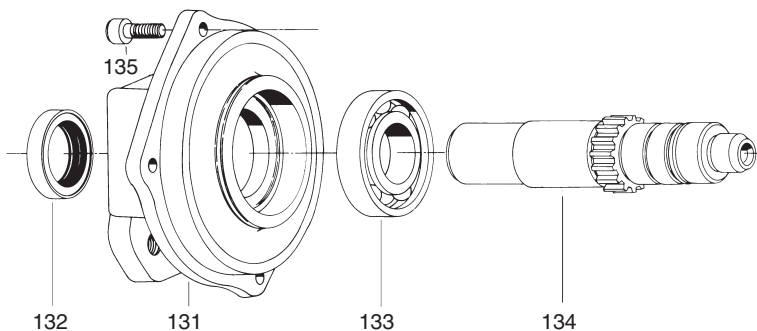
Shaft Sub-Assembly 328926-\*X



Item	Part Number	Description	Quantity
	<b>328926-*X</b>	Shaft Sub-Assembly	
1	<b>2-P-458</b>	Gear Inner Clutch (All).....	1
2	<b>329179X</b>	Ass'y Piston & Back Up Cylinder (All) .....	1
2-1	<b>379323</b>	Cylinder Clutch Back Up.....	1
2-2	<b>28-P-178</b>	O-Ring 4.484" x .138".....	1
2-3	<b>380057</b>	Piston Clutch Air.....	1
3	<b>378576</b>	Lockring (All) .....	1
4	<b>379746</b>	Lockring (All) .....	1
5	<b>379485</b>	Disc Friction (All) .....	8
6	<b>379595</b>	Plate Clutch (All).....	7
7	<b>28-P-244</b>	O-Ring 1.174" x .103" (All) .....	2
8	<b>37-P-39</b>	Spring 2.552" x 1.985" (All) .....	1
9-1	<b>3-P-677</b>	Shaft Output "XD" Ass'y 4 & 6 (328926-1X) .....	1 or
9-2	<b>3-P-679</b>	Shaft Output "XD" Ass'y 3 & 5 (328926-2X) .....	1 or
9-3	<b>3-P-678</b>	Shaft Output "XK" & "XP" Ass'y 4 & 6 (328926-3X) .....	1 or
9-4	<b>3-P-686</b>	Shaft Output "XK" & "XP" Ass'y 3 & 5 (328926-4X) .....	1 or
9-5	<b>3-P-703</b>	Shaft Output "XR", "RA", & "RB" Ass'y 3 & 5 (328926-5X) .....	1 or
9-6	<b>3-P-787</b>	Shaft Output "XX" Ass'y 3 & 5 (328926-6X) .....	1 or
9-7	<b>3-P-788</b>	Shaft Output "XX" Ass'y 4 & 6 (328926-7X) .....	1 or
9-8	<b>3-P-825</b>	Shaft Output "XY" Ass'y 3 & 5 (328926-8X) .....	1 or
9-9	<b>3-P-896</b>	Shaft Output "AF" Ass'y 3 & 5 (328926-9X).....	1 or
9-10	<b>3-P-895</b>	Shaft Output "AF" Ass'y 4 & 6 (328926-10X).....	1 or
9-11	<b>3-P-957</b>	Shaft Output "RF" Ass'y 3 & 5 (328926-11X) .....	1 or
9-12	<b>3-P-964</b>	Shaft Output "XE" Ass'y 3 & 5 (328926-12X) .....	1 or
9-13	<b>3-P-970</b>	Shaft Output "BD" & "BA" Ass'y 3 & 5 (328926-13X).....	1 or
9-14	<b>3-P-969</b>	Shaft Output "BD" & "BA" Ass'y 4 & 6 (328926-14X).....	1

Flanges

Pump Shafts & Flanges



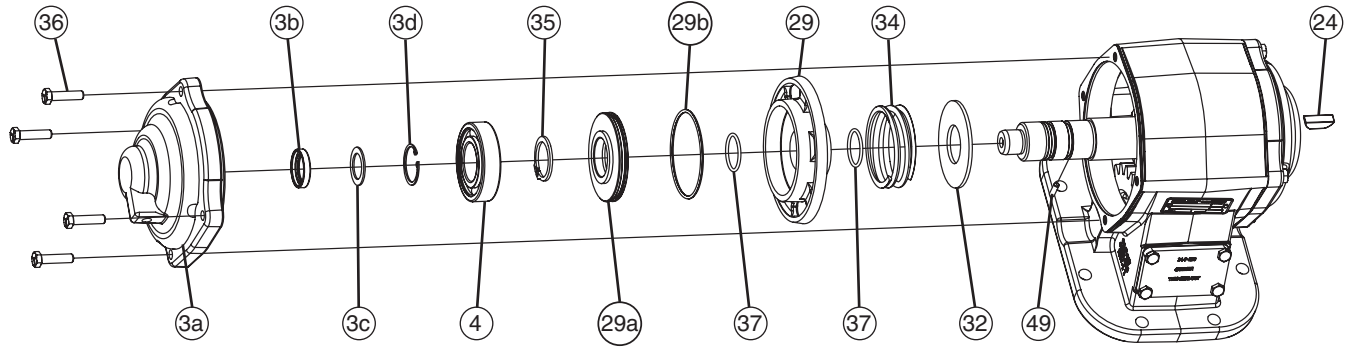
Pump Mounting Suffix (See Note)	Flange Item 131	Bearing Cap Gasket	Seal Item 132	Bearing Item 133	Driveshaft & Clutch		Output Shaft Spacer	Hex Socket Head Screw Item 135
					Assembly Number *	Output Shaft Item 134		
BD Assembly 3 & 5	21-P-451	22-P-53 (2)	28-P-225	550010	328926-13X	3-P-970		378430-12
XE Assembly 3 & 5	21-P-568	22-P-53 (2)	28-P-225	550010	328926-12X	3-P-964	4-P-183	378447-7
XK Assembly 3 & 5 Assembly 4 & 6	21-P-445	22-P-53 (2)	28-P-225	550010	328926-4X	3-P-686		378447-7
	21-P-303	22-P-53 (2)	28-P-225	550010	328926-3X	3-P-678		378447-6
XP Assembly 3 & 5 Assembly 4 & 6	21-P-443	22-P-53 (2)	28-P-225	550010	328926-4X	3-P-686		378447-7
	21-P-301	22-P-53 (2)	28-P-225	550010	328926-3X	3-P-678		378447-6
XR Assembly 3 & 5 (Only)	21-P-447	22-P-53 (2)	28-P-225	550010	328926-5X	3-P-703		378447-6
XX Assembly 3 & 5 Assembly 4 & 6	21-P-297	22-P-53 (2)	28-P-225	550010	328926-6X	3-P-787		378430-12
	21-P-297	22-P-53 (2)	28-P-225	550010	328926-7X	3-P-788		378430-10
XY Assembly 3 & 5	21-P-468	22-P-53 (2)	28-P-230	550010	328926-8X	3-P-825		378447-7
AF Assembly 3 & 5 Assembly 4 & 6	21-P-445	22-P-53 (2)	28-P-225	550010	328926-9X	3-P-896		378447-7
	21-P-303	22-P-53 (2)	28-P-225	550010	328926-10X	3-P-895		378447-6
RA Assembly 3 & 5•	21-P-570	22-P-53 (2)	28-P-225	550010	328926-5X	3-P-703		378447-6
RB Assembly 3 & 5•	21-P-572	22-P-53 (2)	28-P-225	550010	328926-5X	3-P-703		378447-6
RF Assembly 3 & 5•	21-P-628	22-P-53 (2)	28-P-225	550010	328926-11X	3-P-957		378447-7

The Rotatable Flanges attach to the 21-P-447 Flange

- 328748X Pump to Flange Mounting Kit Must Be Used with "R" Suffix  
Kit Contains: (4) 378430-11 Hex Head Capscrews (.3125" - 18 x 1.125")  
(4) 378919 Washers (Special)  
(4) 45-P-11 Bushing Guide

\* - Assembly Includes the Pump Shaft Shown also see Bill of Materials on [Page 10](#).

**Shaft Brake Exploded View**



Item	Part Number	Description	Quantity
	<b>329410X</b>	Brake Assembly ("BD" Output) .....	1
3	<b>328807-3X</b>	Bearing Cap Sub Assembly (Closed End 3 & 5, "BD")	
3a	<b>21-P-670</b>	Bearing Cap .....	1
3b	<b>28-P-179</b>	Oil Seal .....	1
3c	<b>378811</b>	Back-up Plate .....	1
3d	<b>278849</b>	Retainer Ring.....	1
4	<b>550010</b>	Ball Bearing .....	1
29	<b>379976</b>	Brake Disc .....	1
29a	<b>66-P-49</b>	Piston.....	1
29b	<b>28-P-252</b>	O-Ring .....	1
32	<b>31-P-113</b>	Thrust Washer ( "BD" Output Shaft) .....	1
34	<b>37-P-24</b>	Spring .....	1
35	<b>378576</b>	Retaining Ring .....	1
36	<b>378430-12</b>	Capscrew Hex .312"-18 x 1.250" ("BD" 3 & 5) .....	1
37	<b>28-P-244</b>	O-Ring .....	2
39	<b>500007-29</b>	Woodruff Key ("XD" & "BD" Outputs Only).....	1
49	<b>379977</b>	Pin (.187" x .625").....	1

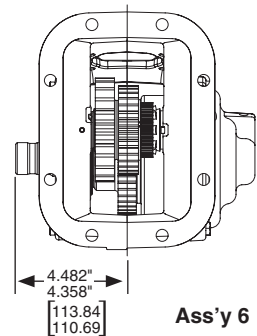
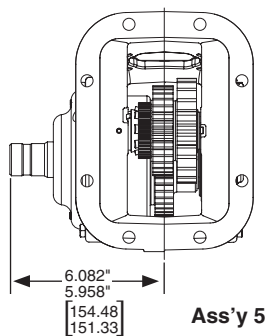
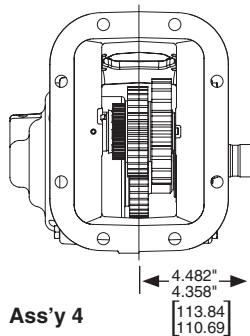
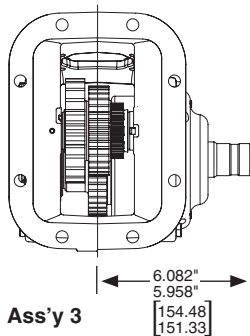
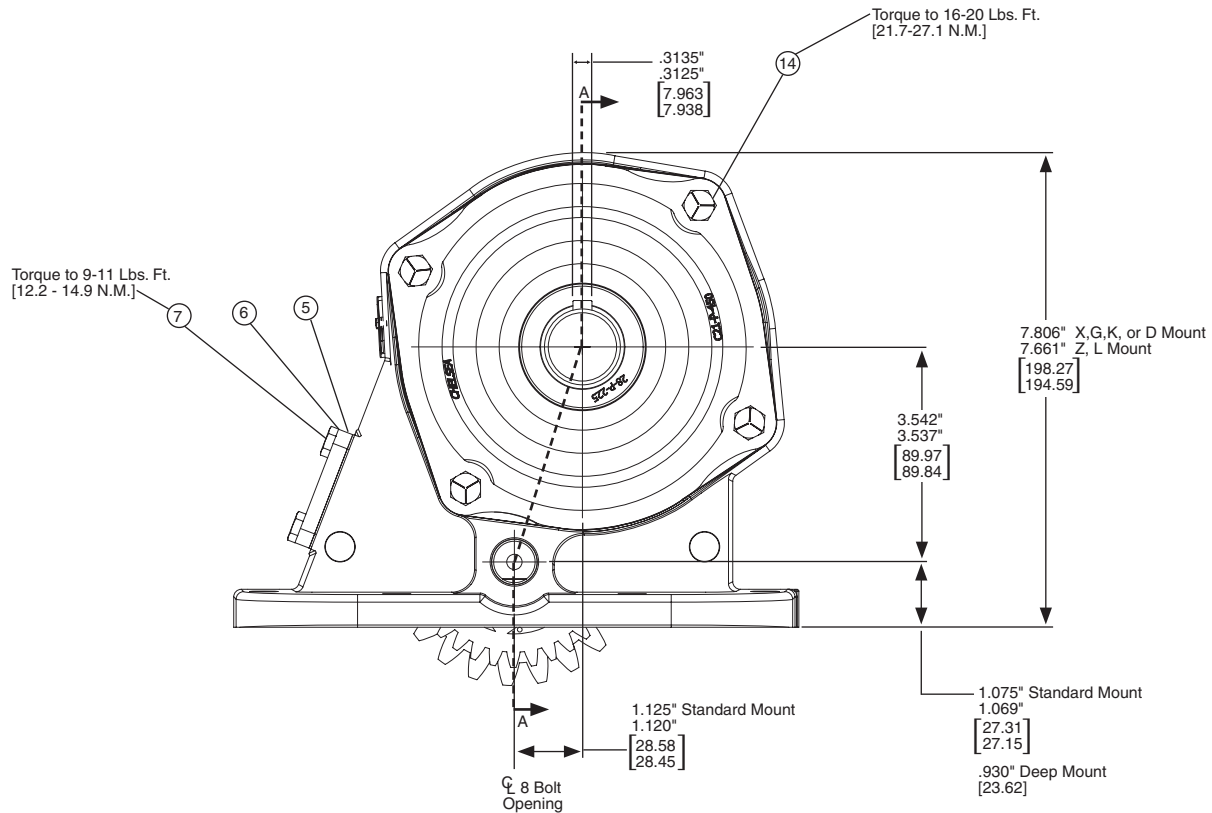
**Gear Charts & Housing Dimensions**

**Gear Chart**

Input Gears Item				Input Gears Item			
Model Number	Input Gear Part Number	Gear Type	No. Teeth	Model Number	Input Gear Part Number	Gear Type	No. Teeth
238**AB	5-P-1001	SPUR	19	238**DA	5-P-1037	SPUR	23
238**AH	5-P-1004	SPUR	22	238**DU	5-P-1050	Left Hand	28
238**AR	5-P-1008	Left Hand	21	238**EV	5-P-1060	SPUR	40
238**BG	5-P-1015	Left Hand	23				

**Ratio Gear Chart**

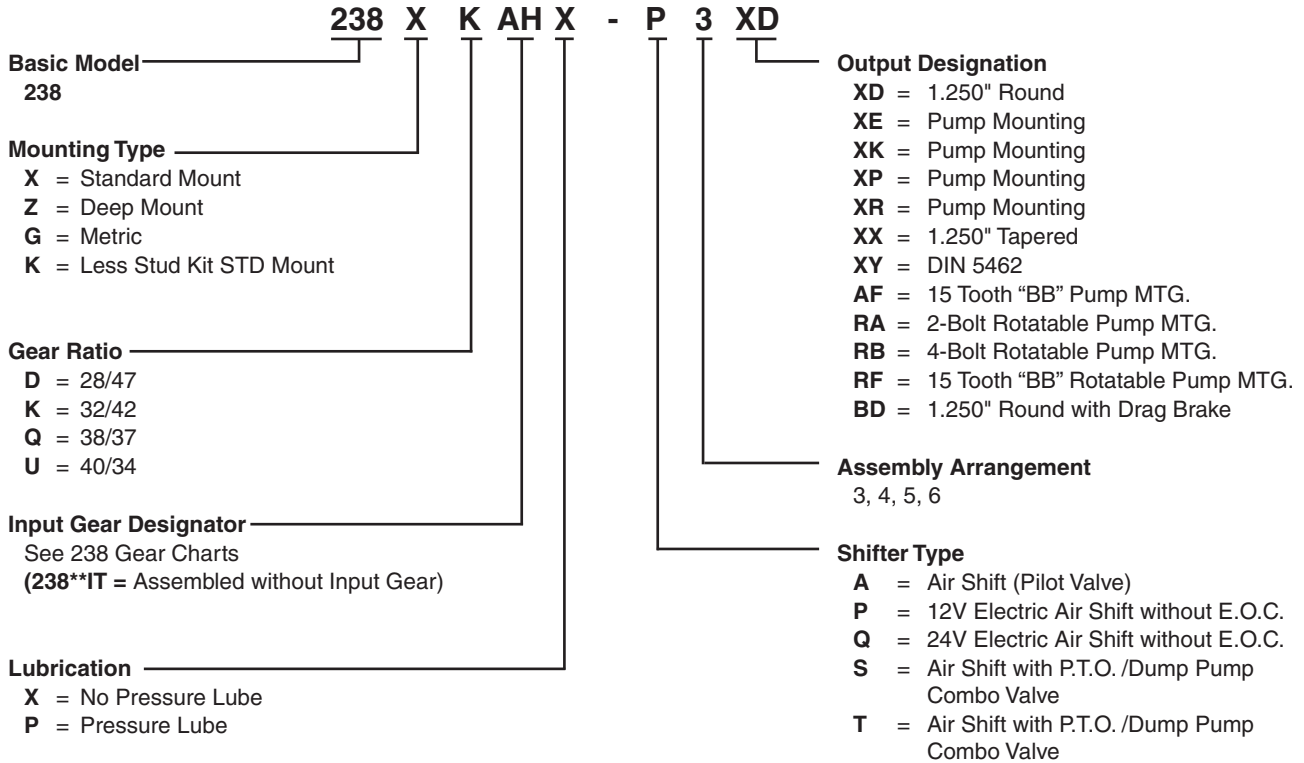
Input Ratio Gears			Output Ratio Gears Item 11		
Ratio	Part Number	No. Teeth	Ratio	Part Number	No. Teeth
238*D	5-P-1378	28	238*D	2-P-606	47
238*K	5-P-1379	32	238*K	2-P-638	42
238*Q	5-P-1380	38	238*Q	2-P-639	37
238*U	5-P-1381	40	238*U	2-P-810	34





**Model Number Designation**

**238 Series**





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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 certain Products, namely PTOs, SEMs, and Wet Line Kits sold hereunder shall be free from defects in material or workmanship for a period of twenty four months from the date of delivery to Buyer. Seller warrants that certain Products namely Pumps, and Hydraulic Accessories shall be free from defects in material or workmanship for a period of eighteen months from the date of delivery to the Buyer. The prices charged for Seller's products are based upon the exclusive limited warranty stated above, and upon the following disclaimer: **DISCLAIMER OF WARRANTY: THIS WARRANTY COMPRISES THE SOLE AND ENTIRE WARRANTY PERTAINING TO PRODUCTS PROVIDED HEREUNDER. SELLER DISCLAIMS ALL OTHER WARRANTIES, EXPRESS AND IMPLIED, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

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**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 thereto. 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.

10/09-P



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