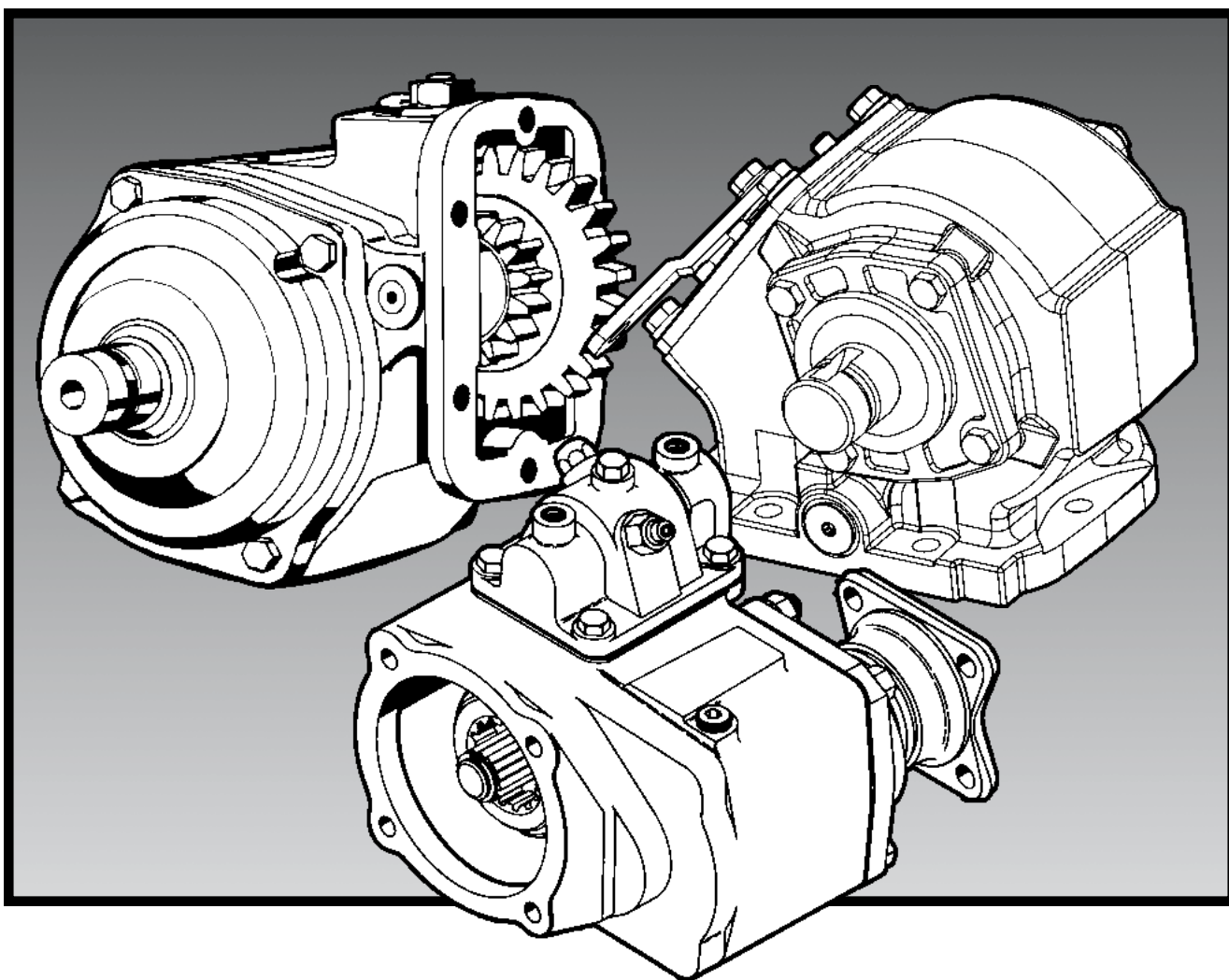


Parts List 438 Series

Effective: December 15, 2001
Supersedes: P410-438 Dated July 1994



 **WARNING**

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The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by Parker Hannifin Corporation and its subsidiaries at any time without notice.

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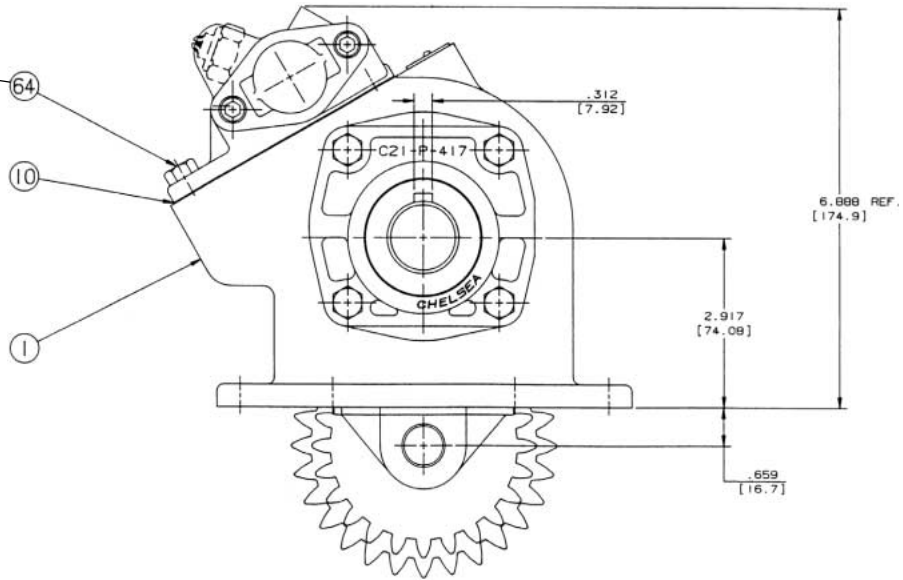
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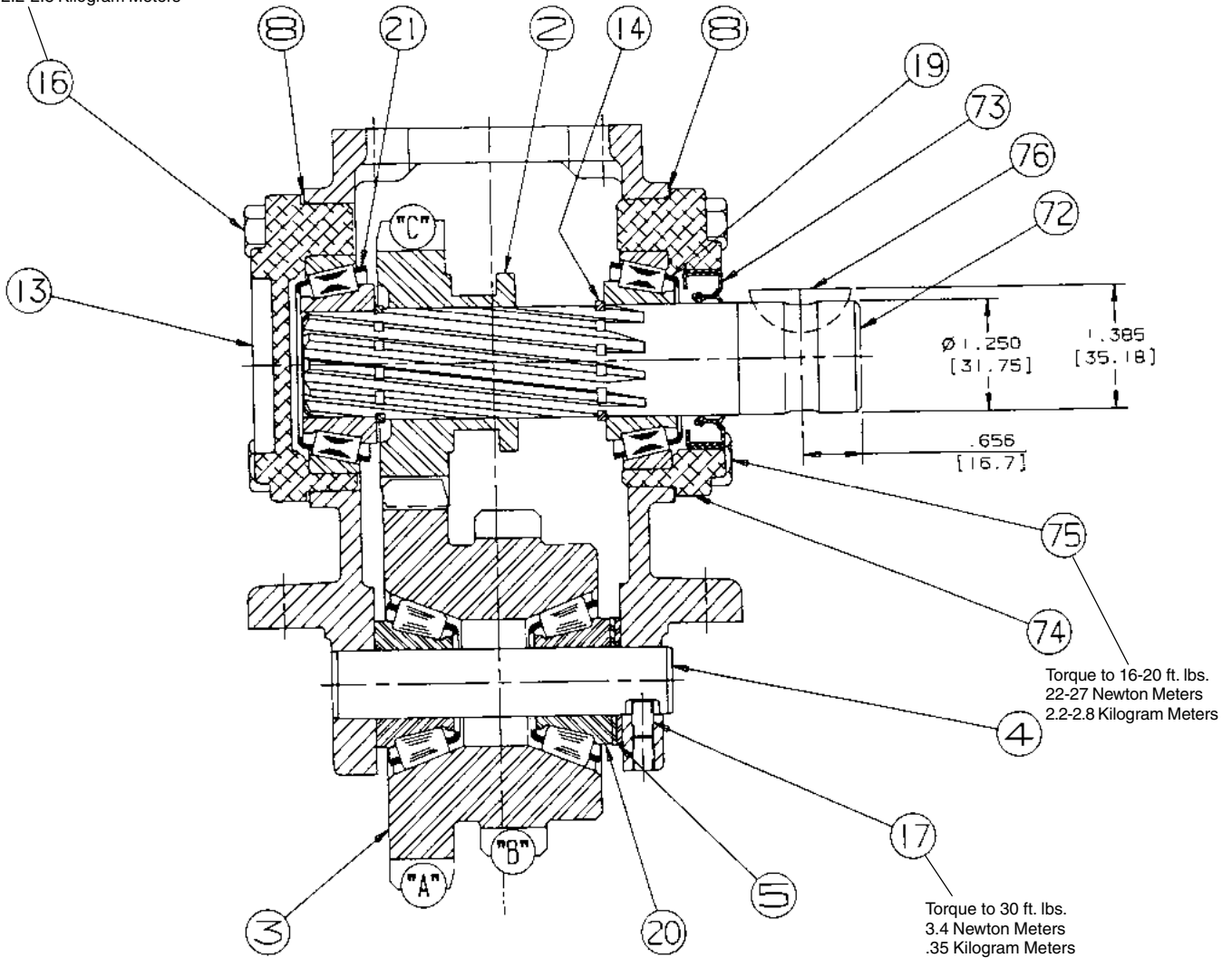
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Torque to 16-20 ft. lbs.
 22-27 Newton Meters
 2.2-2.8 Kilogram Meters



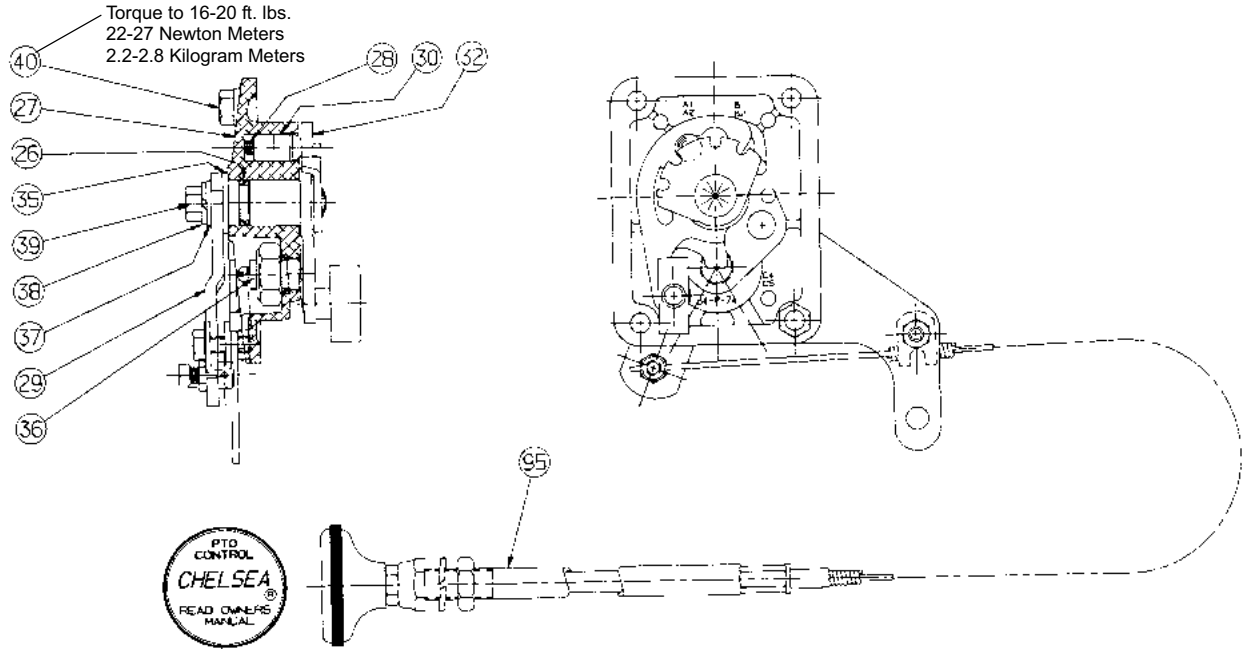
Torque to 16-20 ft. lbs.
 22-27 Newton Meters
 2.2-2.8 Kilogram Meters



Item	Part Number	Description	Quantity
1	1-P-483	Housing	1
2	2-P-699	Gear, Output	1
3	5-P-951	Gear, Input	1
4	9-P-72	Shaft, Idler	1
5	14-P-15	Spacers, Input Gear	A/R
8	22-P-24-1	Gasket, Bearing Cap (.010)	A/R
	22-P-24-2	Gasket, Bearing Cap (.020)	A/R
	22-P-24-3	Gasket, Bearing Cap (.015)	A/R
10	35-P-8	Gasket, Shifter Cover	1
11	68-P-2	Name Plate (U.S.A.)	1
13	328274X	Bearing Cap Assembly (Closed)	1
14	378391	Lockring	2
15	378422	Drive Screw	2
16	378430-10	Capscrew, Hex Head (.312-18 x 1.000)	4
17	378452-7	Set Screw (.250-20 x .500)	1
19	550397	Bearing Cone	1
20	550439	Bearing Cone	2
21	550532	Bearing Cone	1
64	378430-8	Capscrew, Hex Head (.312-18 x .750)	4
		“XR” OUTPUT	
66	3-P-283	Shaft, Output	1
67	28-P-216	Oil Seal	1
68	329194X	Pump Flange Assembly (21-P-574)	1
69	379673	Shoulder Stud (.312-24)	4
70	379063	Flat Washer	4
		“XD” OUTPUT	
72	3-P-202	Shaft, Output	1
73	28-P-216	Oil Seal	1
74	328273X	Bearing Cap Assembly (Open)	1
75	378430-10	Capscrew, Hex Head (.312-18 x 1.000)	4
76	500007-29	Woodruff Key	1
		“XQ” OUTPUT	
79	3-P-282	Shaft, Output (Pump)	1
80	28-P-216	Oil Seal	1
81	328589X	Bearing Cap Assembly (21-P-269)	1
82	378447-8	Capscrew, Socket Head (.312-18 x 1.500)	4
		“RA” OUTPUT	
83	3-P-283	Output Shaft	1
84	28-P-216	Oil Seal	1
85	329195X	Pump Flange Assembly (21-P-574)	1
86	21-P-628	Pump Flange 2-Bolt Rotating	1
87	378447-6	Socket Head Capscrew .312-18 X 1.000)	4
	328591-53X	Pump Field Conversion Kit (“XR” TO “RA”)	
	328591-55X	Pump Field Conversion Kit (“XD” TO “RA”)	
		“RA” OUTPUT	
88	3-P-283	Output Shaft	1
89	28-P-216	Oil Seal	1
90	329195X	Pump Flange Assembly (21-P-574)	1
91	21-P-572	Pump Flange 4-bolt Rotating	1
92	378447-6	Socket Head Capscrew .312-18 X 1.000	4
	328591-54X	Pump Field Conversion Kit (“XR” TO “RA”)	
	328591-56X	Pump Field Conversion Kit (“XD” TO “RA”)	
		LOOSE PARTS	
	7170-72X	Stud Kit	1
	35-P-72	Gasket, Mounting	2
	328961-6X	Gasket & Installation Instructions	1
95	328346-15X	Cable Control Assembly	1
	328380X	Cable Control Parts Bag	1
	328751X	Installation Kit	1
	328388-37X	Installation Kit, Air Shift	1
	328711X	Installation Kit, “XR” Pump	1
	329166-12X	Installation Kit, E-Z Shift	1

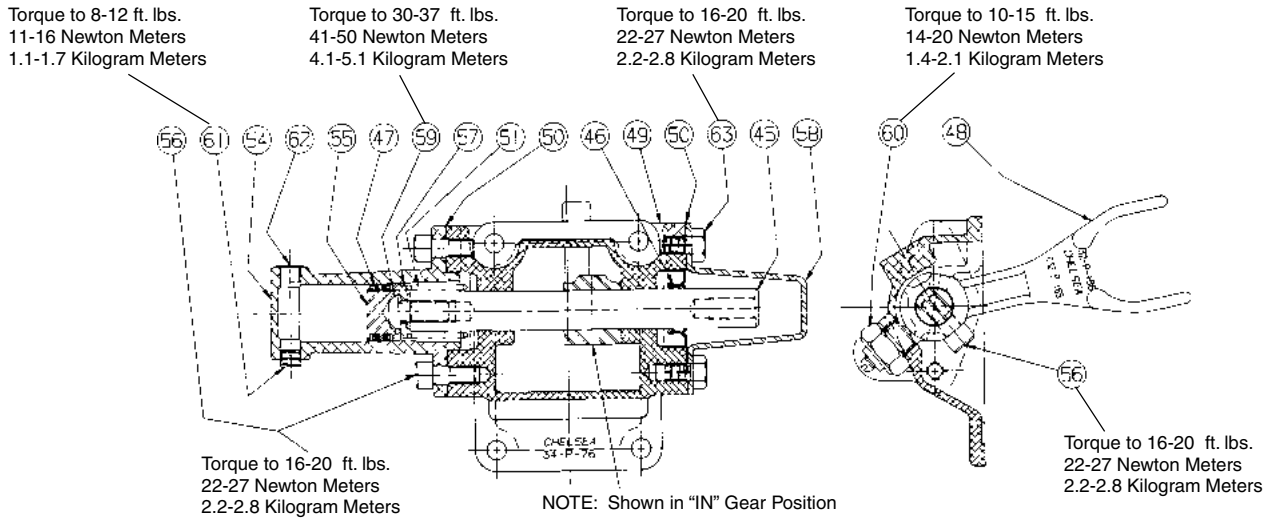
A.R. — As Required

Assembly 4 & 6

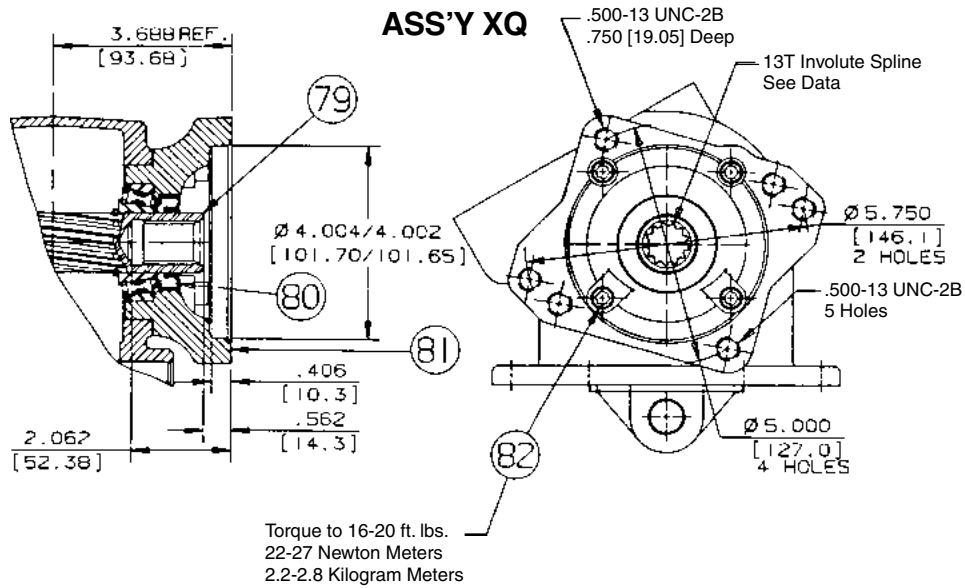
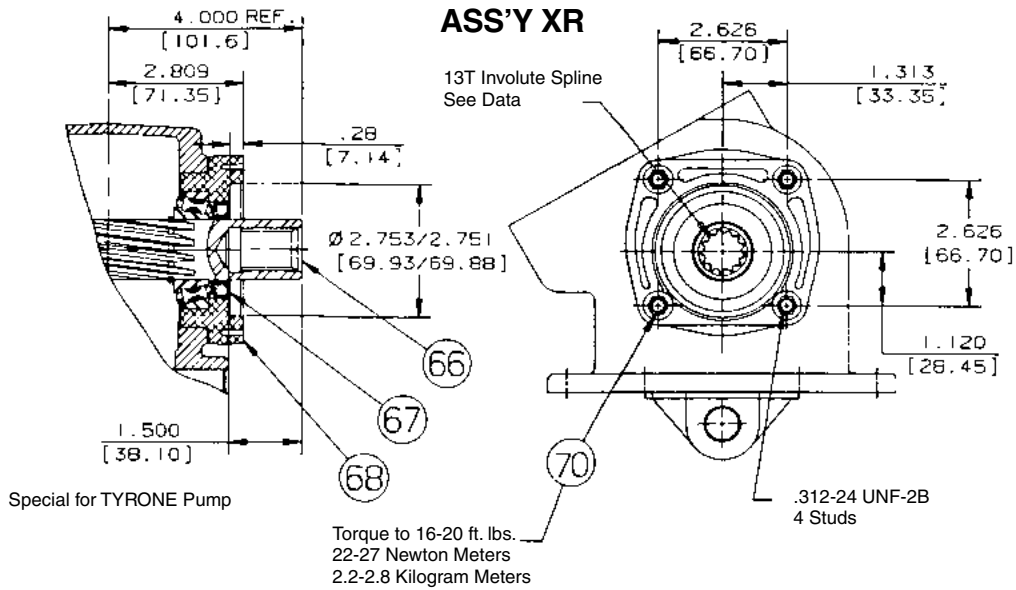


Item	Part Number	Description	Quantity
		CABLE SHIFT	
	329038-1X	CABLE SHIFTER ASSEMBLY (3 & 6)	1 or
	329038-2X	CABLE SHIFTER ASSEMBLY (4 & 5)	1
26	28-P-191	O-Ring	1
27	34-P-74	Shifter Cover Gasket	1
28	37-P-19	Shifter Spring	1
29	51-P-22	Shifter Lever	1
30	63-P-16	Poppet Pin	1
32	328813-1X	Shifter Plate Ass'y (3 & 6)	1
	328813-2X	Shifter Plate Ass'y (4 & 5)	1 or
35	378004	Flat Washer	1
36	379110	Indicator Switch (Norm On)	1
37	500365-22	Flat Washer	1
38	500356-10	Lockwasher	1
39	500409-6	Capscrew, Hex Head	1
40	378430-9	Capscrew, Hex Head (.312-18 x .875)	4

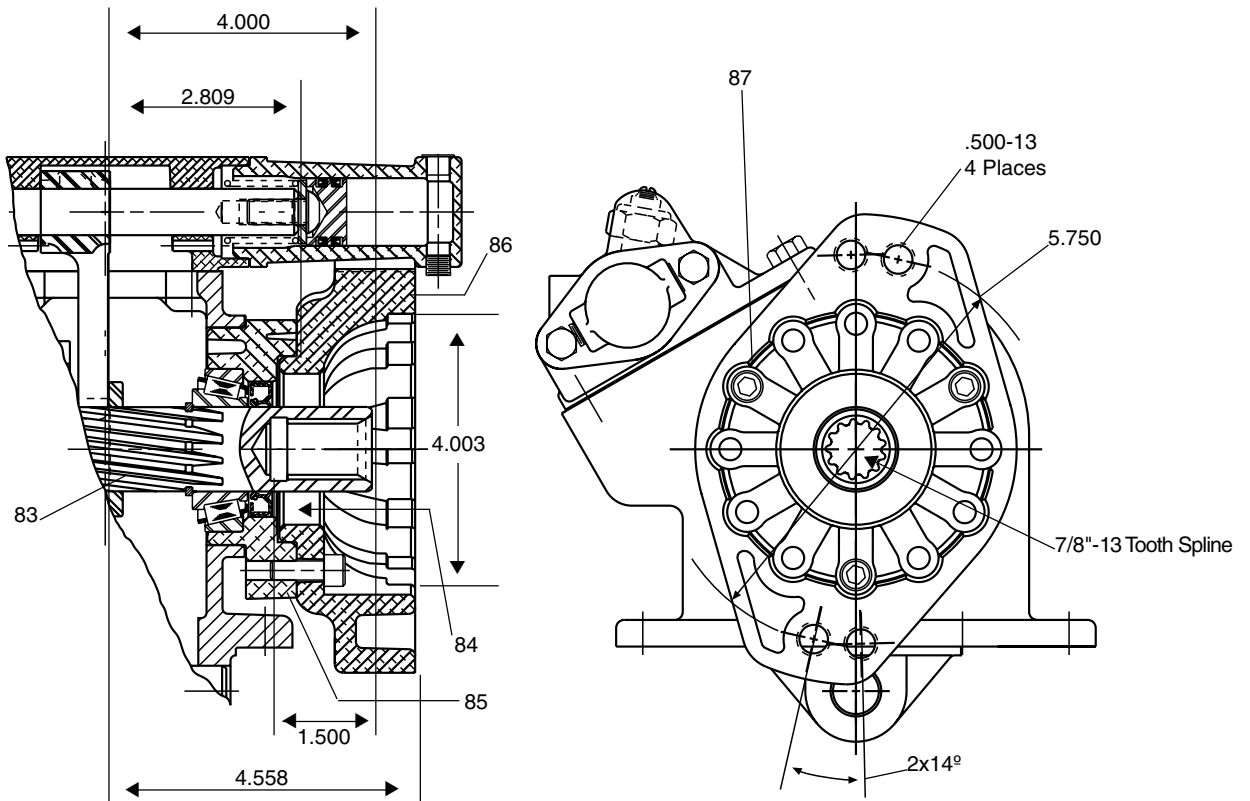
Assembly 4 & 6



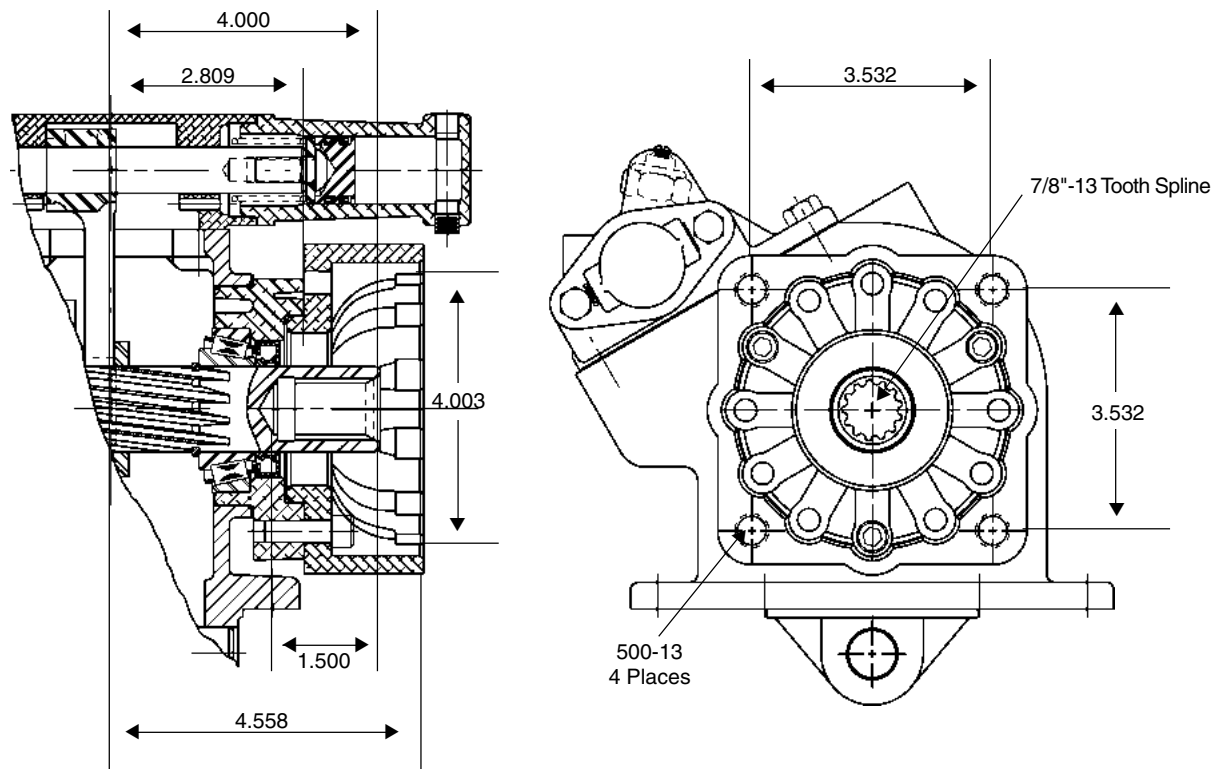
Item	Part Number	Description	Quantity
		AIR SHIFT	
	329042-1X	AIR SHIFT COVER ASSEMBLY (3 & 6)	1 or
	329042-2X	AIR SHIFT COVER ASSEMBLY (4 & 5)	1
45	11-P-112	Shaft, Shifter	1
46	28-P-207	Oil Seal	1
47	28-P-256	Block Vee Ring	2
48	32-P-166	Shifter Fork	1
		E-Z SHIFT™	
	329168-1X	E-Z SHIFT COVER ASSEMBLY (3 & 6)	1
	329168-2X	E-Z SHIFT COVER ASSEMBLY (4 & 5)	1
49	34-P-76	Shifter Cover	1
50	35-P-14	Gasket	2
51	37-P-25	Shifter Spring	1
54	65-P-14	Cylinder Cap	1
55	66-P-4	Piston, Floating	1
56	378447-4	Capscrew, Allen Head	3
57	378462	Washer, Spring Retainer	1
58	65-p-23	Shifter Shaft Cover	1
59	378908	Capscrew, Button Head	1
60	370110	Indicator Switch (Norm On)	1
61	379231	Pipe Plug .125-27 NPTF TH'D	1
62	500897-3	Shipping Plug	1
63	378430-4	Capscrew, Hex Head (.312-18 x .500)	2



“RA” Output

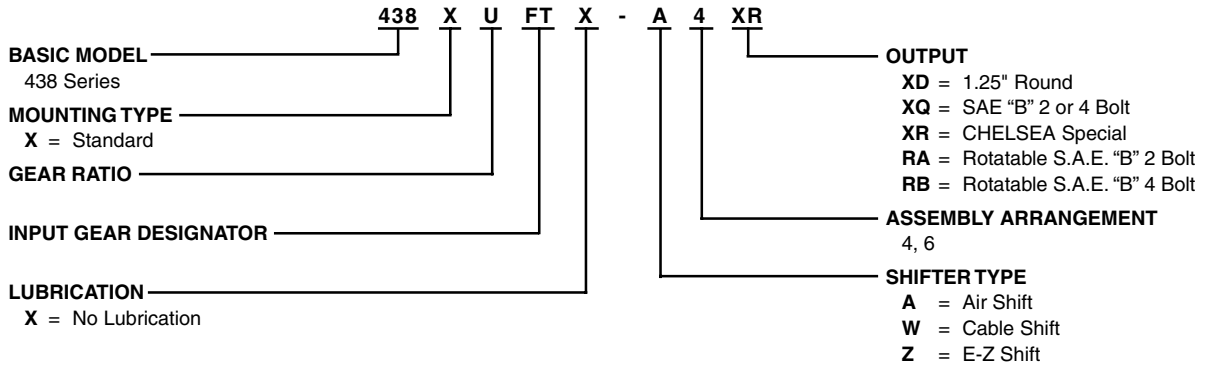


“RB” Output

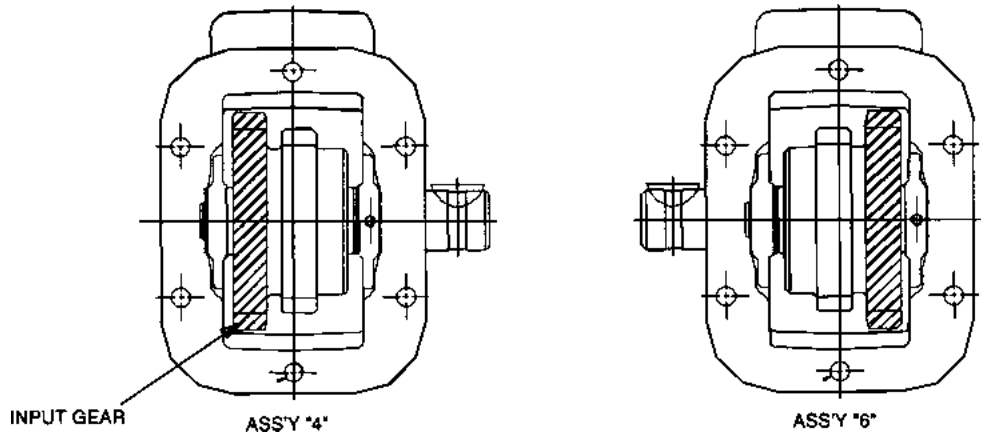


Note: “RA” and “RB” Flanges Rotate in 30° Increments

Model Number Designation



Assembly Arrangements



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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, 245, 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.**

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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.

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9/01-P



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