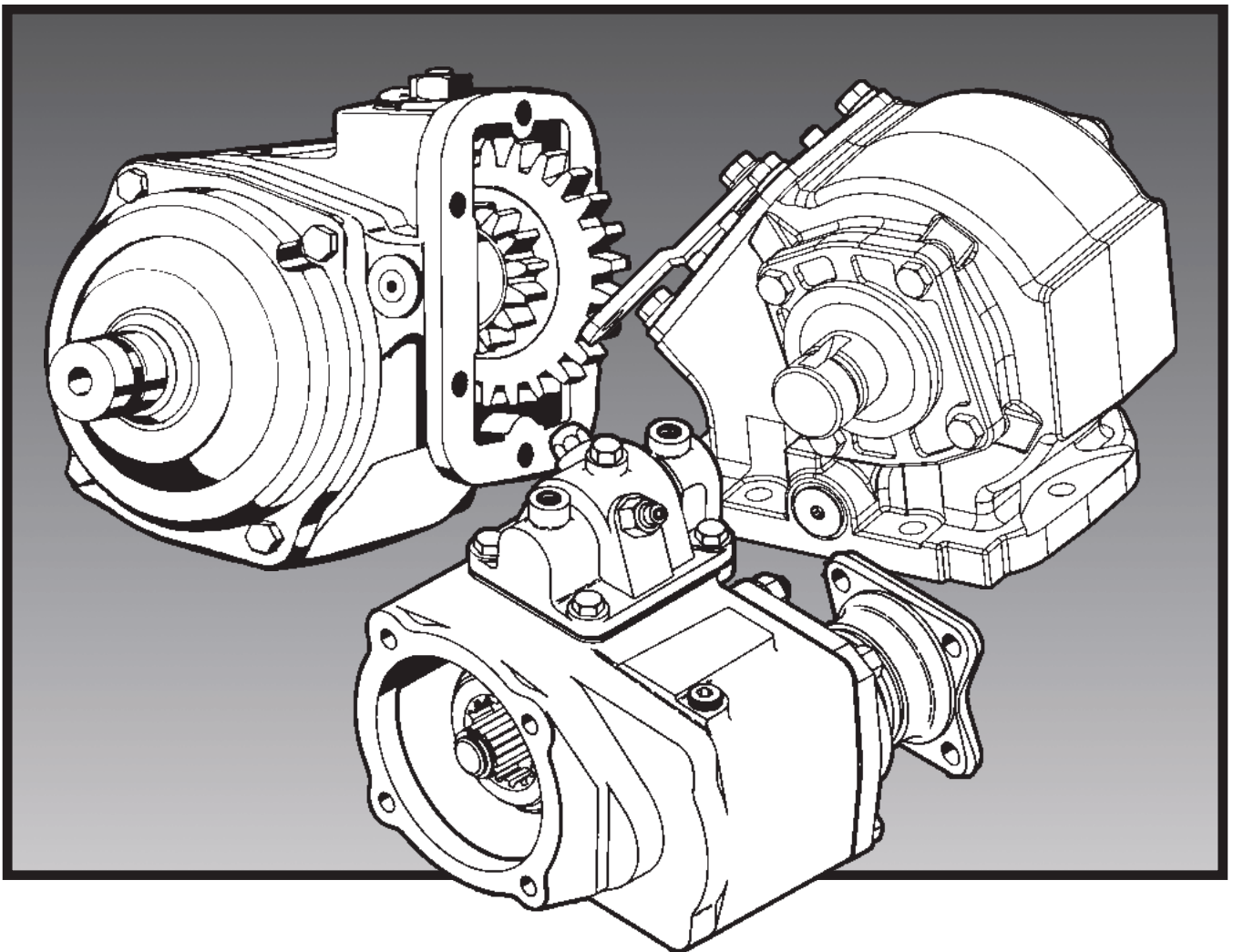


Parts List 442, 442GMT, 447 & 489 Series

Effective: April 30, 2004
Supersedes: HY25-2442-M1/US Dated Dec. 15, 2001



 **WARNING**

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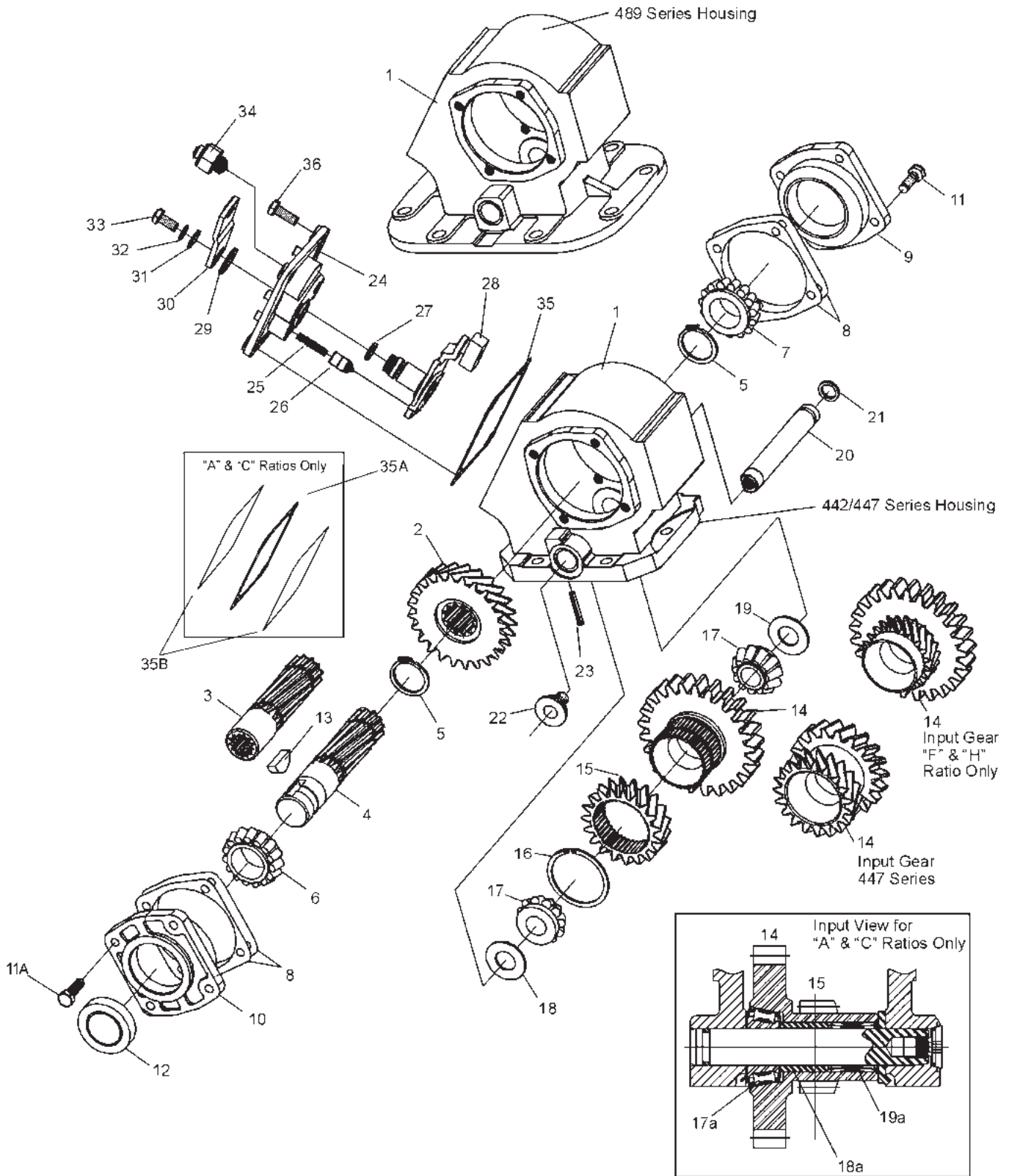
Offer of Sale

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Bill of Materials

| Item | Part Number | Description | Quantity | | |
|------|-----------------------|--|----------|------|------|
| | | | 442 | 447 | 489 |
| 1 | 1-P-557X | Housing, Standard Mount ("X","G" & "K") (Includes Item 23) | 1 | 1 | - |
| | 1-P-558X | Housing, Deep Mount ("Z" & "L") (Includes Item 23) | 1 | 1 | - |
| | 1-P-552X | Housing, Standard Mount (Includes Item 23) | - | - | 1 |
| | 1-P-562X | Housing, Deep Mount (Includes Item 23) | - | - | 1 |
| 2 | See Chart Page 13, 14 | Gear, Output | 1 | 1 | 1 |
| 3 | See Charts Pg 17-20 | Shaft, Output Pump Mount | 1 | 1 | 1 |
| 4 | 3-P-202 | Shaft, Output ("XD") Standard 1.250" Rd. .313" K.W. | 1 | 1 | 1 |
| 5 | 378391 | Lockring (All other shifter types) | 2 | 2 | 2 |
| 6 | 550397 | Bearing Cone | 1 | 1 | 1 |
| 7 | 550532 | Bearing Cone | 1 | 1 | 1 |
| 8 | 22-P-24-1 | Gasket, Bearing Cap (.010) | A.R. | A.R. | A.R. |
| | 22-P-24-2 | Gasket, Bearing Cap (.020) | A.R. | A.R. | A.R. |
| | 22-P-24-3 | Gasket, Bearing Cap (.015) | A.R. | A.R. | A.R. |
| 9 | 328274X | Bearing Cap Assembly, Close End | 1 | 1 | 1 |
| N.S. | 550221 | Bearing Race | 1 | 1 | 1 |
| 10 | 328273X | Bearing Cap Assembly, Open End ("XD" Output) | 1 | 1 | 1 |
| N.S. | 550221 | Bearing Race | 1 | 1 | 1 |
| | See Charts Pg 17-20 | Bearing Cap Assembly, Pump Mounts | 1 | 1 | 1 |
| 11 | 378430-10 | Capscrew, Hex Head (.312"-18 x 1.00") (Closed cap side) | 4 | 4 | 4 |
| 11A | 378430-10 | Capscrew, Hex Head (.312"-18 x 1.00") ("XD" Output) | 4 | 4 | 4 |
| 12 | 28-P-216 | Oil Seal, "XD" Output | 1 | 1 | 1 |
| | See Charts Pg 17-20 | Oil Seal | 1 | 1 | 1 |
| 13 | 500007-29 | Key, Woodruff ("XD" Output) | 1 | 1 | 1 |
| 14 | See Chart Page 13, 14 | Gear, Input | 1 | 1 | 1 |
| 15 | See Chart Page 13, 14 | Gear, Input Ratio | 1 | 1 | 1 |
| 16 | 379522 | Lock Ring | 1 | 1 | 1 |
| 17 | 550439 | Bearing Cone | 2 | 2 | 2 |
| 17A | 561006 | Bearing Cone ("A" & "C" only) | 1 | - | 1 |
| 18A | 14-P-75 | Spacer, Input Bearing ("A" & "C" only) | 1 | - | 1 |
| 19A | 550890 | Bearing, Needle Roller ("A" & "C" only) | 1 | - | 1 |
| 18 | 14-P-73-1 | Spacer, Idler Gear (.149-.151) | A.R. | A.R. | A.R. |
| | 14-P-73-2 | Spacer, Idler Gear (.152-.154) | A.R. | A.R. | A.R. |
| | 14-P-73-3 | Spacer, Idler Gear (.155-.157) | A.R. | A.R. | A.R. |
| | 14-P-73-4 | Spacer, Idler Gear (.158-.160) | A.R. | A.R. | A.R. |
| | 14-P-73-5 | Spacer, Idler Gear (.161-.163) | A.R. | A.R. | A.R. |
| 19 | 31-P-102 | Thrust Washer, Bearing | 1 | 1 | 1 |
| 20 | 9-P-88 | Shaft, Idler Standard | 1 | 1 | 1 |
| | 9-P-89 | Shaft, Idler Pressure Lube ("P") | 1 | 1 | 1 |
| 21 | 28-P-191 | O-ring | 1 | 1 | 1 |
| 22 | 379672 | Plug, O-Ring w/Socket Face (NWD Plug) | 1 | 1 | 1 |
| 23 | 500597-14 | Roll Pin, Deep Mount (1" long) | 1 | 1 | 1 |
| | 500597-16 | Roll Pin, Standard Mount (1.125" long) | 1 | 1 | 1 |
| | | CABLE CONTROL COVER ASSEMBLIES | | | |
| | | Ratios "Q", "W" & "X" | | | |
| | 329119-1X | Shifter Cover Ass'y, Wire Control (Assy 3 & 6) | 1 | - | 1 |
| | 329119-2X | Shifter Cover Ass'y, Wire Control (Assy 4 & 5) | 1 | - | 1 |
| | | Ratios "F", "L", "R", "S" & "U" | | | |
| | 329121-1X | Shifter Cover Ass'y, Wire Control (Assy 3 & 6) | 1 | - | 1 |
| | 329121-2X | Shifter Cover Ass'y, Wire Control (Assy 4 & 5) | 1 | - | 1 |
| | | Ratios "A" & "C" | | | |
| | 329271-1X | Shifter Cover Assembly, Wire Control (Ass'y 3 & 6) | 1 | - | 1 |
| | 329271-2X | Shifter Cover Assembly, Wire Control (Ass'y 4 & 5) | 1 | - | 1 |

N.S.— Not Shown

A.R.—As Required

Continued on following page

Bill of Materials

| Item | Part Number | Description | Quantity | | |
|------|-------------|---|----------|-----|-----|
| | | | 442 | 447 | 489 |
| | | Ratios "Q" & "W" | | | |
| | 329151-1X | Shifter Cover Assembly, Wire Control (Ass'y 3 & 6) | - | 1 | - |
| | 329151-2X | Shifter Cover Assembly, Wire Control (Ass'y 4 & 5) | - | 1 | - |
| | | Ratios "R", "S" & "U" | | | |
| | 329152-1X | Shifter Cover Assembly, Wire Control (Ass'y 3 & 6) | - | 1 | - |
| | 329152-2X | Shifter Cover Assembly, Wire Control (Ass'y 4 & 5) | - | 1 | - |
| | | All the above shift cover assemblies include items 24 thru 35 | | | |
| 24 | 34-P-39 | Cover Plate, Shifter - Constant Mesh | 1 | 1 | 1 |
| | 34-P-74 | Cover Plate, Shifter | 1 | - | 1 |
| 25 | 37-P-19 | Spring | 1 | 1 | 1 |
| 26 | 63-P-16 | Poppet Pin | 1 | 1 | 1 |
| 27 | 28-P-191 | O-Ring | 1 | 1 | 1 |
| | | Ratios "Q" & "W" & "X" | | | |
| 28 | 329118-1X | Post And Plate Assembly, (Ass'y 3 & 6) | 1 | 1 | 1 |
| 28 | 329118-2X | Post And Plate Assembly, (Ass'y 4 & 5) | 1 | 1 | 1 |
| | | Ratios "F", "L", "R", "S" & "U" | | | |
| 28 | 329120-1X | Post And Plate Assembly, (Ass'y 3 & 6) | 1 | 1 | 1 |
| 28 | 329120-2X | Post And Plate Assembly, (Ass'y 4 & 5) | 1 | 1 | 1 |
| | | Ratios "A" & "C" | | | |
| 28 | 329265-1X | Post And Plate Assembly, (Ass'y 3 & 6) | 1 | - | 1 |
| 28 | 329265-2X | Post And Plate Assembly, (Ass'y 4 & 5) | 1 | - | 1 |
| 29 | 378004 | Flat Washer | 1 | 1 | 1 |
| 30 | 51-P-22 | Shifter Lever | 1 | 1 | 1 |
| 31 | 500365-22 | Flat Washer | 1 | 1 | 1 |
| 32 | 500356-10 | Lockwasher | 1 | 1 | 1 |
| 33 | 500409-6 | Capscrew, Hex Head (.312"-24 x .625") | 1 | - | 1 |
| 34 | 379639 | Indicator Switch, Pin Style (Normally Off) | 1 | - | 1 |
| | 379652 | Indicator Switch, Pin Style (Normally On) | - | 1 | - |
| 35 | 35-P-8 | Gasket, Shifter Cover | 1 | 1 | 1 |
| 35A | 5-A-188 | Gasket, Shifter Cover ("A" & "C" Ratio Only) | 1 | - | 1 |
| 35B | 35-P-8 | Gasket, Shifter Cover ("A" & "C" Ratio Only) | 2 | - | 2 |
| 36 | 378430-9 | Capscrew, Hex Head (.312"-18 x .875") (Wire Shift) | 4 | 4 | 4 |
| | 378430-8 | Capscrew, Hex Head (.312"-18 x .750") (Electric, Lever, Air Shift) | 4 | 4 | 4 |
| | 378430-10 | Capscrew, Hex Head (.312"-18 x 1.000") (Wire Shift A & C Ratio) | 4 | - | 4 |
| N.S. | 68-P-2 | Name Plate | 1 | 1 | 1 |
| N.S. | 378422 | Drive Screw, Name Plate | 2 | 2 | 2 |
| | | Loose Parts | | | |
| | | P.T.O. Mounting Kit | | | |
| | 328170-76X | Mounting Kit ("X" Mounting Type) | 1 | 1 | - |
| | 328170-77X | Mounting Kit ("Z" Mounting Type) | 1 | 1 | - |
| | 7170-72X | Mounting Kit ("G" Metric Mounting Type) | 1 | 1 | - |
| | 7170-68X | Mounting Kit ("G" Metric Mounting Type) | - | - | 1 |
| | 328170-200X | Mounting Kit ("X" & "Z" Mounting) | - | - | 1 |
| | 328346-10X | Cable, Wire Control ("W" Shifter) | 1 | 1 | 1 |
| | 328380X | Parts Bag, Wire Control ("W" Shifter) | 1 | 1 | 1 |
| | 329245X | Bracket Kit, Wire Control ("C" Shifter) | 1 | - | 1 |

N.S.— Not Shown A.R.—As Required

Continued on following page

Bill of Materials

| Item | Part Number | Description | Quantity | | |
|------|-------------|--|----------|-----|-----|
| | | | 442 | 447 | 489 |
| | | Air Shift Installation Kit | | | |
| | 328388-37X | Air Shift Installation Kit ("A" Shifter) | 1 | 1 | 1 |
| | 328388-47X | Air Shift Installation Kit ("P" Shifter) | 1 | 1 | 1 |
| | 328388-48X | Air Shift Installation Kit ("Q" Shifter) | 1 | 1 | 1 |
| | 328388-65X | Air Shift Installation Kit ("S" Shifter) | 1 | 1 | 1 |
| | 328388-72X | Air Shift Installation Kit ("T" Shifter) | 1 | - | 1 |
| | 328751-1X | Installation Kit ("C", "H", "W", "X", "Y") | 1 | 1 | 1 |
| | 68-P-18 | Name Plate | 1 | 1 | 1 |
| | 378978 | Indicator Light, 12V | 1 | 1 | 1 |
| | 378884 | Fuse Holder, 9-Amp | 1 | 1 | 1 |
| | 379252 | Butt Connector | 2 | 2 | 2 |
| | 379254-16 | Ring Connector | 1 | 1 | 1 |
| | 379254-3 | Wire, Green | 1 | 1 | 1 |
| | 68-P-18 | Name Plate | 1 | 1 | 1 |
| | 379319 | Indicator Switch Booth | 1 | 1 | 1 |
| | 379640 | Booted Connector ("V" Shifter Option) | 1 | - | 1 |
| | 328948-6X | Gasket and Installation Instructions | 1 | 1 | - |
| | 328948-8X | Gasket and Installation Instructions | - | - | 1 |
| | 329166-12X | Electric Shift Installation Kit | 1 | 1 | 1 |
| | 378414 | Pressure Protection Valve ("V" Shifter Option) | 1 | 1 | 1 |
| | 328075X | Pressure Lube Hose ("HVP" Input Gear Only) | 1 | - | - |
| | 328711X | Pump Mounting Kit ("XR" Output) | - | 1 | - |
| | | Service Kits | | | |
| | 329202X | Indicator Switch Connector Service Kit | 1 | - | 1 |
| | 329218X | Indicator Switch Service Kit | 1 | - | 1 |
| | 329304X | Bearing Cap and Seal Assembly (Pressure Lube) | 1 | - | 1 |
| | | Pump Field Conversion Kit | 1 | 1 | 1 |
| | 328356-67X | Gasket & Seal Kit | | | |
| | 22-P-24-1 | Gasket, Bearing Cap | 4 | - | 4 |
| | 22-P-24-2 | Gasket, Bearing Cap | 4 | - | 4 |
| | 22-P-24-3 | Gasket, Bearing Cap | 4 | - | 4 |
| | 28-P-191 | O-Ring | 2 | - | 2 |
| | 28-P-216 | Oil Seal | 1 | - | 1 |
| | 35-P-8 | Gasket, Shifter Cover | 1 | - | 1 |
| | 35-P-9-1 | Gasket, Housing | 2 | - | 2 |
| | 35-P-9-2 | Gasket, Housing | 2 | - | 2 |
| | 378391 | Lockring | 2 | - | 2 |
| | 328356-13X | Gasket & Seal Kit | - | 1 | - |
| | 22-P-24-1 | Gasket, Bearing Cap | - | 4 | - |
| | 22-P-24-2 | Gasket, Bearing Cap | - | 4 | - |
| | 22-P-24-3 | 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 | - | 2 | - |
| | 35-P-9-2 | Gasket, Housing | - | 2 | - |
| | 378391 | Lockring | - | 2 | - |
| | 378774 | Lockwasher | - | 6 | - |

N.S.— Not Shown

A.R.—As Required

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Bill of Materials

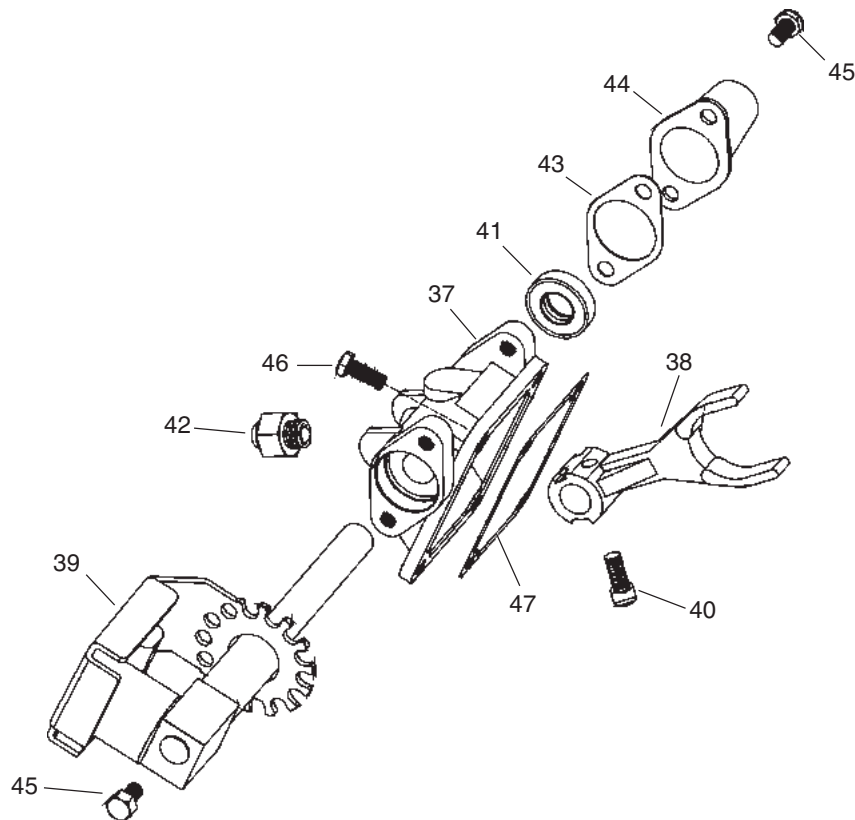
| Item | Part Number | Description | Quantity | | |
|------|-------------|---|----------|-----|-----|
| | | | 442 | 447 | 489 |
| | | Service Kits (Continued) | | | |
| | 328356-15X | Shifter Cover Seal Kit (Wire Control) | 1 | 1 | 1 |
| | 22-P-69 | Gasket | 1 | 1 | 1 |
| | 28-P-191 | O-Ring | 1 | 1 | 1 |
| | 28-P-226 | Oil Seal | 1 | 1 | 1 |
| | 35-P-8 | Gasket, Shifter Cover | 1 | 1 | 1 |
| | 35-P-9-1 | Gasket, Housing | 2 | 2 | 2 |
| | 35-P-9-2 | Gasket, Housing | 2 | 2 | 2 |
| | 328356-69X | Shifter Cover Seal Kit (Wire Control "A" & "C" ratio) | 1 | - | 1 |
| | 22-P-69 | Gasket | 1 | - | 1 |
| | 28-P-191 | O-Ring | 1 | - | 1 |
| | 28-P-226 | Oil Seal | 1 | - | 1 |
| | 5-A-188 | Spacer | 1 | - | 1 |
| | 35-P-9-1 | Gasket, Housing | 2 | - | 2 |
| | 35-P-9-2 | Gasket, Housing | 2 | - | 2 |
| | 328356-71X | Shifter Cover Seal Kit (Air Shift) | 1 | 1 | 1 |
| | 28-P-41 | O-Ring | 1 | 1 | 1 |
| | 28-P-42 | O-Ring | 2 | 2 | 2 |
| | 378316 | Retainer | 2 | 2 | 2 |
| | 35-P-8 | Gasket, Shifter Cover | 2 | 2 | 2 |
| | 35-P-9-1 | Gasket, Housing | 1 | 1 | 1 |
| | 35-P-9-2 | Gasket, Housing | 1 | 1 | 1 |
| | 329096-1X | Field Conversion Kit (Self Lube Replace 3-P-202) | - | 1 | - |
| | 329097-1X | Field Conversion Kit (Self Lube Replace 3-P-282) | - | 1 | - |
| | 328594-13X | Bearing and Spacer Kit (Non-Pressure Lube) | 1 | 1 | 1 |
| | 14-P-73-1 | Spacer, Idler Gear (.149 - .151) | 1 | 1 | 1 |
| | 14-P-73-2 | Spacer, Idler Gear (.152 - .154) | 1 | 1 | 1 |
| | 14-P-73-3 | Spacer, Idler Gear (.155 - .157) | 1 | 1 | 1 |
| | 14-P-73-4 | Spacer, Idler Gear (.158 - .160) | 1 | 1 | 1 |
| | 14-P-73-5 | Spacer, Idler Gear (.161 - .163) | 1 | 1 | 1 |
| | 28-P-191 | O-Ring | 1 | 1 | 1 |
| | 31-P-102 | Thrust Washer, Bearing | 1 | 1 | 1 |
| | 379672 | NWD Plug | 1 | 1 | 1 |
| | 550439 | Bearing | 2 | 2 | 2 |
| | 9-P-88 | Shaft, Idler | 1 | 1 | 1 |
| | 328594-14X | Bearing and Spacer Kit (Pressure Lube) | | | |
| | 14-P-73-1 | Spacer, Idler Gear (.149 - .151) | 1 | - | 1 |
| | 14-P-73-2 | Spacer, Idler Gear (.152 - .154) | 1 | - | 1 |
| | 14-P-73-3 | Spacer, Idler Gear (.155 - .157) | 1 | - | 1 |
| | 14-P-73-4 | Spacer, Idler Gear (.158 - .160) | 1 | - | 1 |
| | 14-P-73-5 | Spacer, Idler Gear (.161 - .163) | 1 | - | 1 |
| | 28-P-191 | O-Ring | 1 | - | 1 |
| | 31-P-102 | Thrust Washer | 1 | - | 1 |
| | 379672 | NWD Plug | 1 | - | 1 |
| | 500841-1 | Street Elbow 90° | 1 | - | 1 |
| | 500897-3 | Shipping Plug | 1 | - | 1 |
| | 550439 | Bearing | 2 | - | 2 |
| | 9-P-89 | Shaft, Idler | 1 | - | 1 |
| | | Service Kits (Continued) | | | |

N.S.— Not Shown A.R.—As Required

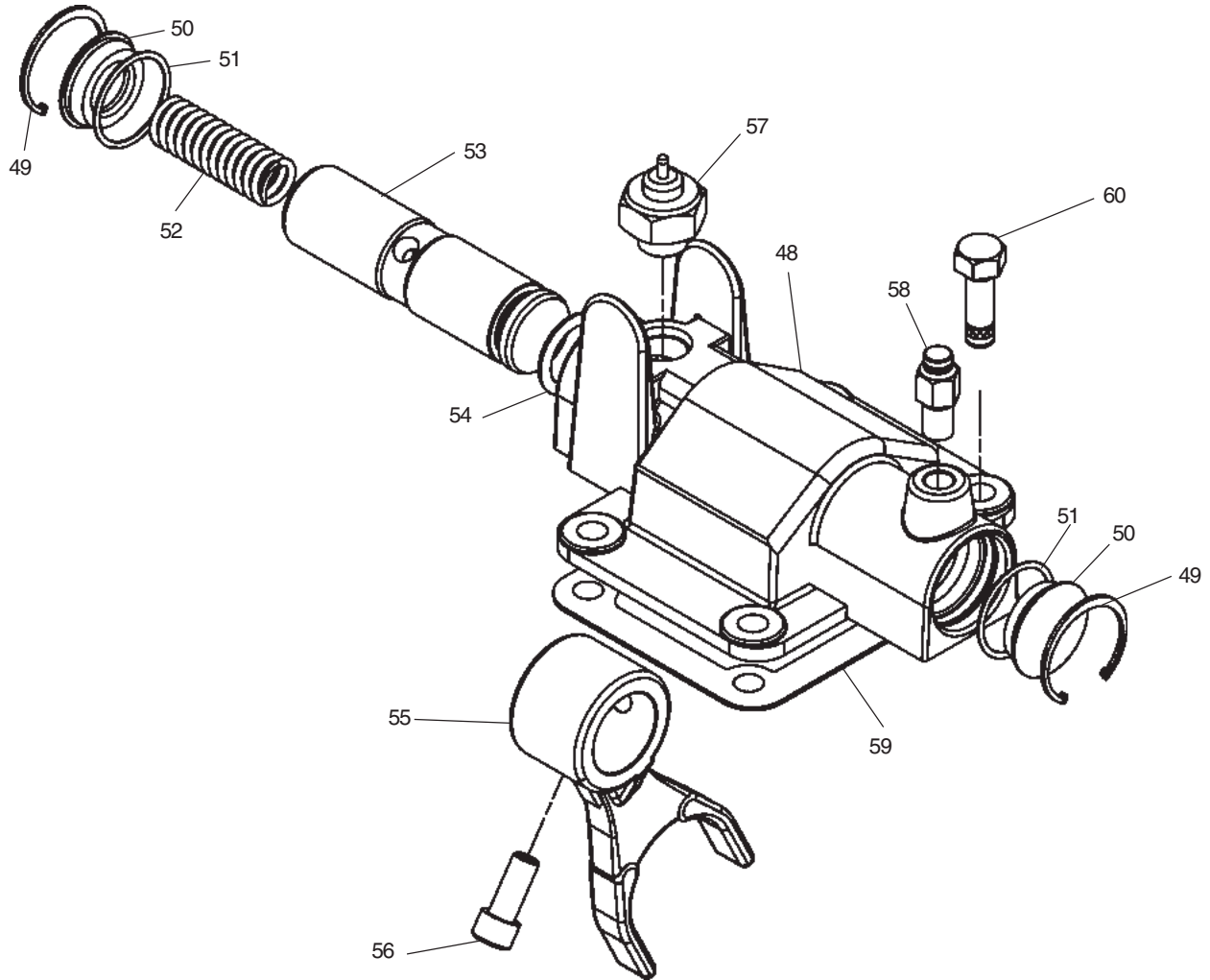
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Bill of Materials

| Item | Part Number | Description | Quantity | | |
|------|-------------------|--|----------|-----|-----|
| | | | 442 | 447 | 489 |
| | 328594-15X | Bearing and Spacer Kit (Non-Pressure Lube "A" & "C" ratio) | | | |
| | 14-P-73-1 | Spacer, Idler Gear (.149 - .151) | 1 | - | 1 |
| | 14-P-73-2 | Spacer, Idler Gear (.152 - .154) | 1 | - | 1 |
| | 14-P-73-3 | Spacer, Idler Gear (.155 - .157) | 1 | - | 1 |
| | 14-P-73-4 | Spacer, Idler Gear (.158 - .160) | 1 | - | 1 |
| | 14-P-73-5 | Spacer, Idler Gear (.161 - .163) | 1 | - | 1 |
| | 14-P-75 | Spacer, Input Bearing | 1 | - | 1 |
| | 28-P-191 | O-Ring | 1 | - | 1 |
| | 31-P-102 | Thrust Washer | 1 | - | 1 |
| | 379672 | Plug, NWD | 1 | - | 1 |
| | 550890 | Needle Bearing | 1 | - | 1 |
| | 561006 | Bearing | 1 | - | 1 |
| | 9-P-88 | Shaft, Idler | 1 | - | 1 |
| | 328594-16X | Bearing and Spacer Kit (Pressure Lube "A" & "C" Ratio) | 1 | - | 1 |
| | 14-P-73-1 | Spacer, Idler Gear (.149 - .151) | 1 | - | 1 |
| | 14-P-73-2 | Spacer, Idler Gear (.152 - .154) | 1 | - | 1 |
| | 14-P-73-3 | Spacer, Idler Gear (.155 - .157) | 1 | - | 1 |
| | 14-P-73-4 | Spacer, Idler Gear (.158 - .160) | 1 | - | 1 |
| | 14-P-73-5 | Spacer, Idler Gear (.161 - .163) | 1 | - | 1 |
| | 14-P-75 | Spacer, Input Bearing | 1 | - | 1 |
| | 28-P-191 | O-Ring | 1 | - | 1 |
| | 31-P-102 | Thrust Washer | 1 | - | 1 |
| | 379672 | Plug, NWD | 1 | - | 1 |
| | 500841-1 | Street Elbow 90° | 1 | - | 1 |
| | 500897-3 | Plug, Shipping | 1 | - | 1 |
| | 550890 | Needle Bearing | 1 | - | 1 |
| | 561006 | Bearing | 1 | - | 1 |
| | 9-P-89 | Shaft, Idler | 1 | - | 1 |
| | 329260X | Conversion Kit, 440 to 442 series | 1 | - | - |
| | 329261X | Conversion Kit, 440 deep mount to 442 deep mount | 1 | - | - |
| | 329262X | Conversion Kit, 488 to 489 Series | - | - | 1 |
| | 329263X | Conversion Kit, 488 deep mount to 489 deep mount | - | - | 1 |



| Item | Part Number | Description | Quantity | | |
|------|--------------------|--|----------|-----|-----|
| | | | 442 | 447 | 489 |
| | 329165-1X | Shifter Cover Assembly, 12V (Ass'y 3 & 6) | 1 | - | 1 |
| | 329165-2X | Shifter Cover Assembly, 12V (Ass'y 4 & 5) | 1 | - | 1 |
| | 329169-1X | Shifter Cover Assembly, 12V (Ass'y 3 & 6) | - | 1 | - |
| | 329169-2X | Shifter Cover Assembly, 12V (Ass'y 4 & 5) | - | 1 | - |
| | | (All assemblies shown above include items 37 thru 45) | | | |
| 37 | 34-P-76 | Shifter Cover | 1 | 1 | 1 |
| 38 | 32-P-166 | Shifter Fork | 1 | 1 | 1 |
| 39 | 329225-12X | Electric Shift Assembly | 1 | 1 | 1 |
| 40 | 378447-4 | Capscrew, Socket Head (.312"-18 x .750") | 1 | 1 | 1 |
| 41 | 28-P-207 | Oil Seal | 1 | 1 | 1 |
| 42 | 379639 | Indicator Switch | 1 | - | 1 |
| 42 | 379652 | Indicator Switch | - | 1 | - |
| 43 | 35-P-14 | Gasket, Shifter Shaft Cover | 1 | 1 | 1 |
| 44 | 65-P-23 | Shifter Shaft Cover | 1 | 1 | 1 |
| 45 | 378430-4 | Capscrew, Hex Head (.312"-18 x .500") | 4 | 4 | 4 |
| 46 | 378430-8 | Capscrew, Hex Head (.312"-18 x .750") | 4 | 4 | 4 |
| 47 | 35-P-8 | Gasket, Shifter Cover | 1 | 1 | 1 |
| | | E-Z SHIFT CONVERSION KITS | | | |
| | 328390-138X | Cable to E-Z Shift (Ass'y 3 & 6) | 1 | - | 1 |
| | 328390-139X | Cable to E-Z Shift (Ass'y 4 & 5) | 1 | - | 1 |
| | 328390-141X | Cable to E-Z Shift, "Q" & "W" Ratios Only (Ass'y 3 & 6) | - | 1 | - |
| | 328390-142X | Cable to E-Z Shift, "Q" & "W" Ratios Only (Ass'y 4 & 5) | - | 1 | - |
| | 328390-143X | Cable to E-Z Shift, "R", "S" & "U" Ratios Only (Ass'y 3 & 6) | - | 1 | - |
| | 328390-144X | Cable to E-Z Shift, "R", "S" & "U" Ratios Only (Ass'y 4 & 5) | - | 1 | - |
| | 328390-140X | Lever to E-Z Shift | 1 | 1 | 1 |

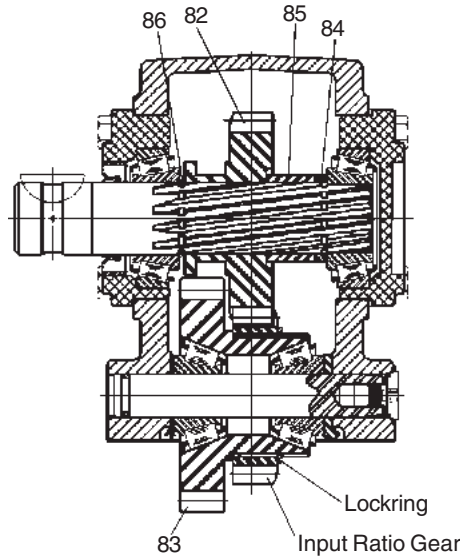


| Item | Part Number | Description | Quantity | | |
|------|--------------------|---|----------|-----|-----|
| | | | 442 | 447 | 489 |
| | 329361X | Shifter Cover Assembly, Air Shift (Includes Items 48-57) | 1 | 1 | 1 |
| 48 | 34-P-130 | Shifter Cover | 1 | 1 | 1 |
| 49 | 378316 | Snap Ring | 2 | 2 | 2 |
| 50 | 378315 | Cover Plug | 2 | 2 | 2 |
| 51 | 28-P-42 | O-Ring | 2 | 2 | 2 |
| 52 | 37-P-21 | Shifter Spring | 1 | 1 | 1 |
| 53 | 11-P-75 | Shaft, Shifter | 1 | 1 | 1 |
| 54 | 28-P-41 | O-Ring | 1 | 1 | 1 |
| 55 | 32-P-180 | Shifter Fork | 1 | 1 | 1 |
| 56 | 378447-4 | Capscrew, Socket Head w/ lockpatch (.312"-18 x .750") | 1 | 1 | 1 |
| 57 | 379639 | Indicator Switch (Normally OFF) | 1 | 1 | 1 |
| 58 | 379904 | Push Connect, for 1/4" tubing | 1 | 1 | 1 |
| 59 | 35-P-8 | Gasket, Shifter Cover | 1 | 1 | 1 |
| 60 | 378430-8 | Capscrew, Hex Head (.312"-18 x .750") | 4 | 4 | 4 |
| | | Air Shift Conversion Kits | | | |
| | 328390-105X | Lever to Air 12V | 1 | - | - |
| | 328390-106X | Lever to Air 24V | 1 | - | - |
| | 328390-117X | Lever or Cable to Air | 1 | 1 | 1 |
| | 328390-119X | Lever or Cable to Electric/Air, 12V | 1 | 1 | 1 |
| | 328390-120X | Lever or Cable to Electric/Air, 24V | 1 | 1 | 1 |

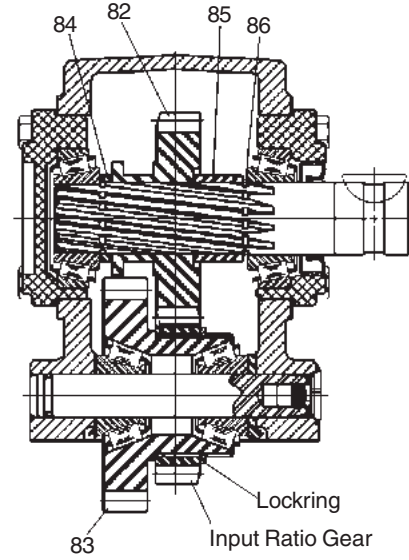
Shifter Kits

For P.T.O.'s ordered without the shifter (Shifter Type "H"), the kits shown below will provide all the components required to complete the assembly.

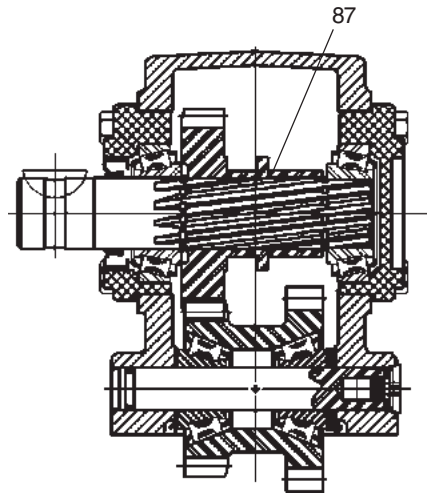
| Part Number | Description | Quantity | | |
|-------------|---|----------|-----|-----|
| | | 442 | 447 | 489 |
| 329106-39X | Shifter Kit (Air Shift, "A" shift option) | 1 | - | 1 |
| 329106-43X | Shifter Kit (Air Shift, "P" shift option) | 1 | - | 1 |
| 329106-45X | Shifter Kit (Air Shift, "Q" shift option) | 1 | - | 1 |
| 329106-71X | Shifter Kit (Air Shift, "A" shift option) | - | 1 | - |
| 329106-75X | Shifter Kit (Air Shift, "P" shift option) | - | 1 | - |
| 329106-77X | Shifter Kit (Air Shift, "Q" shift option) | - | 1 | - |
| 329106-105X | Shifter Kit (Wire Control 3 & 6, Q,W,X ratio; "W" shift option) | 1 | - | 1 |
| 329106-106X | Shifter Kit (Wire Control 4 & 5, Q,W,X ratio; "W" shift option) | 1 | - | 1 |
| 329106-107X | Shifter Kit (Wire Control 3 & 6, Q,W,X ratio; "X" shift option) | 1 | - | 1 |
| 329106-108X | Shifter Kit (Wire Control 4 & 5, Q,W,X ratio; "X" shift option) | 1 | - | 1 |
| 329106-109X | Shifter Kit (Wire Control 3 & 6, F,L,R,S,U ratio; "W" shift option) | 1 | - | 1 |
| 329106-110X | Shifter Kit (Wire Control 4 & 5, F,L,R,S,U ratio; "W" shift option) | 1 | - | 1 |
| 329106-111X | Shifter Kit (Wire Control 3 & 6, F,L,R,S,U ratio; "X" shift option) | 1 | - | 1 |
| 329106-112X | Shifter Kit (Wire Control 4 & 5, F,L,R,S,U ratio; "X" shift option) | 1 | - | 1 |
| 329106-113X | Shifter Kit (Wire Control 3 & 6, Q & W ratio; "W" shift option) | - | 1 | - |
| 329106-114X | Shifter Kit (Wire Control 4 & 5, Q & W ratio; "W" shift option) | - | 1 | - |
| 329106-117X | Shifter Kit (Wire Control 3 & 6, Q & W ratio; "X" shift option) | - | 1 | - |
| 329106-118X | Shifter Kit (Wire Control 4 & 5, Q & W ratio; "X" shift option) | - | 1 | - |
| 329106-125X | Shifter Kit (Easy Shift 12V, 3 & 6) | 1 | - | 1 |
| 329106-126X | Shifter Kit (Easy Shift 12V, 4 & 5) | 1 | - | 1 |
| 329106-143X | Shifter Kit (Wire Control 3 & 6, A & C ratio; "W" shift option) | 1 | - | 1 |
| 329106-144X | Shifter Kit (Wire Control 4 & 5, A & C ratio; "W" shift option) | 1 | - | 1 |
| 329106-145X | Shifter Kit (Wire Control 3 & 6, A & C ratio; "X" shift option) | 1 | - | 1 |
| 329106-146X | Shifter Kit (Wire Control 4 & 5, A & C ratio; "X" shift option) | 1 | - | 1 |
| 329106-151X | Shifter Kit ("V" shift option) | - | 1 | - |
| 329106-153X | Shifter Kit ("V" shift option) | 1 | - | 1 |
| 329143X | Field Conversion Kit (Shifter Shaft) | 1 | 1 | 1 |



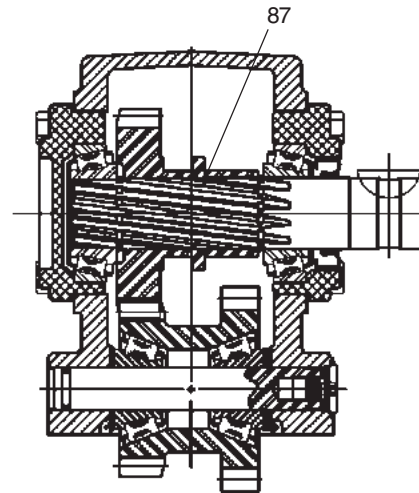
442 & 489 Series Ass'y 4 & 6



442 & 489 Series Ass'y 3 & 5



447 Series Ass'y 3 & 5

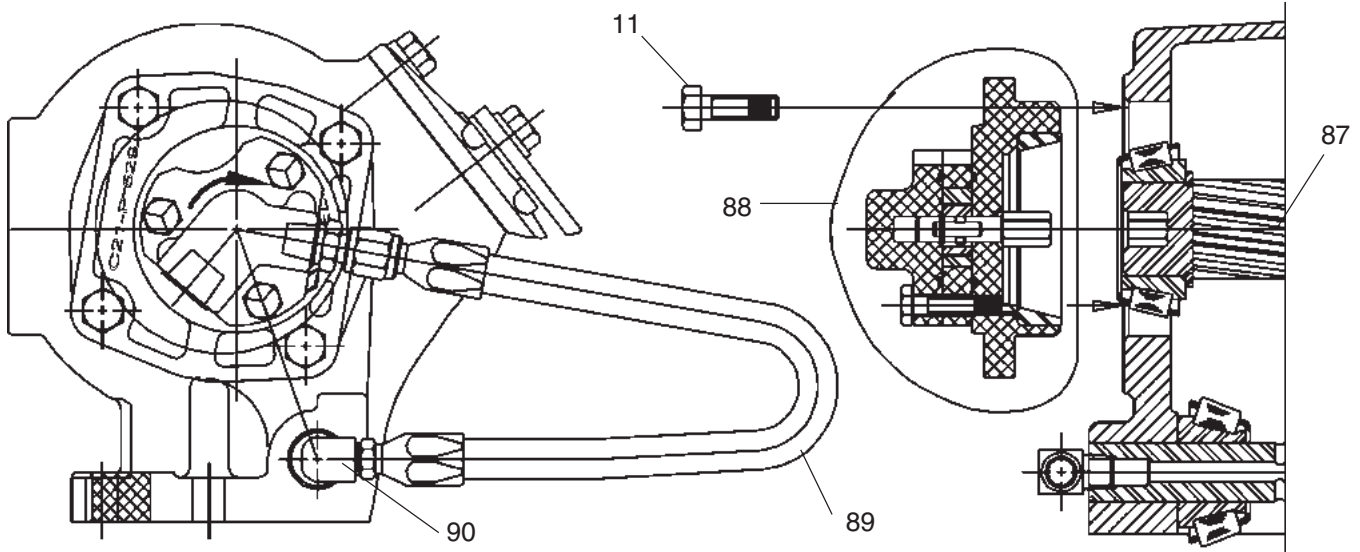


447 Series Ass'y 4 & 6

| Item | Part Number | Description | Quantity | | |
|------|-----------------------|---|----------|-----|-----|
| | | | 442 | 447 | 489 |
| 82 | See Charts, Pgs 12-14 | Gear, Output | 1 | - | 1 |
| 83 | See Charts, Pgs 12-14 | Gear, Input | 1 | - | 1 |
| 84 | 4-P-177 | Spacer, Drive Shaft | 1 | - | 1 |
| 85 | 4-P-178 | Spacer, Drive Shaft | 1 | - | 1 |
| 86 | 378391 | Lockring (Shifter Type "M") | 1 | - | 1 |
| 87 | 4-P-165 | Spacer, Drive Shaft | - | 1 | - |
| N.S. | 34-P-39 | Cover Plate, Shifter | 1 | 1 | 1 |
| N.S. | 35-P-8 | Gasket, Shifter Cover | 1 | 1 | 1 |
| N.S. | 378430-6 | Capscrew, Hex Head (.312-18 X .625) | 4 | 4 | 4 |

N.S.— Not Shown

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 "A", "C", "F", "H", "L", "R", "S" and "U" ratios.

| Item | Part Number | Description | Quantity | | |
|------|-------------|---|----------|-----|-----|
| | | | 442 | 447 | 489 |
| 11 | 378430-10 | Capscrew, Hex Head (.312"-18 x 1.00") | 4 | 4 | 4 |
| 87 | 3-P-857 | Shaft, Output ("LD" Output) | 1 | 1 | 1 |
| | 3-P-858 | Shaft, Output ("LA", "LB", "LC", "LE", "LF" Output) | 1 | 1 | 1 |
| 88 | 329091X | Lube Pump & Bearing Cap Assembly | 1 | 1 | 1 |
| 89 | 329092X | Pressure Lube Hose Assembly | 1 | 1 | 1 |
| 90 | 500841-1 | Street Elbow, 90° | 1 | 1 | 1 |

| Model Number | Part Number | Gear Type | No.Teeth Input Gear | No.Teeth Ratio Gear | Model Number | Part Number | Gear Type | No.Teeth Input Gear | No.Teeth Ratio Gear |
|--|-------------|-------------|---------------------|---------------------|-----------------------------------|-------------|-------------|---------------------|---------------------|
| Input Gears for L, Q, R, S, U, W & X Ratios | | | | | 442**GQ | 5-P-1150 | Left Helix | 26 | |
| 442**AB | 5-P-1001 | Spur | 19 | | 442**GS | 5-P-1152 | Left Helix | 29 | |
| 442**AC | 5-P-1002 | Spur | 19 | | 442**GR | 5-P-1157 | Spur | 23 | |
| 442**AG | 5-P-1003 | Spur | 22 | | 442**HW | 5-P-1235 | Spur | 35 | |
| 442**AH | 5-P-1004 | Spur | 22 | | 442**HX | 5-P-1236 | Spur | 32 | |
| 442**AP | 5-P-1006 | Left Helix | 21 | | 442**HY | 5-P-1237 | Left Helix | 26 | |
| 442**AQ | 5-P-1007 | Left Helix | 21 | | | | | | |
| 442**AR | 5-P-1008 | Left Helix | 21 | | 442**JA | 5-P-1243 | Left Helix | 27 | |
| 442**AW | 5-P-1009 | Left Helix | 22 | | 442**JD | 5-P-1248 | Left Helix | 20 | |
| 442**AX | 5-P-1010 | Left Helix | 22 | | 442**JG | 5-P-1256 | Left Helix | 28 | |
| | | | | | 442**JH | 5-P-1257 | Left Helix | 29 | |
| 442**BA | 5-P-1011 | Left Helix | 23 | | 442**JK | 5-P-1261 | Left Helix | 24 | |
| 442**BC | 5-P-1012 | Left Helix | 18 | | 442**JM | 5-P-1263 | Left Helix | 22 | |
| 442**BG | 5-P-1015 | Left Helix | 23 | | 442**JP | 5-P-1268 | Left Helix | 33 | |
| 442**BH | 5-P-1016 | Right Helix | 25 | | 442**JS | 5-P-1310 | Left Helix | 20 | |
| 442**BJ | 5-P-1017 | Left Helix | 25 | | 442**JU | 5-P-1316 | Left Helix | 25 | |
| 442**BK | 5-P-1018 | Left Helix | 23 | | 442**JW | 5-P-1319 | Left Helix | 23 | |
| 442**BL | 5-P-1019 | Right Helix | 22 | | Input Gears "A" Ratio Only | | | | |
| 442**BM | 5-P-1020 | Left Helix | 22 | | 442*AAB | 5-P-1279 | Spur | 19 | 14 |
| 442**BN | 5-P-1021 | Left Helix | 22 | | 442*AAH | 5-P-1280 | Spur | 22 | 14 |
| 442**BP | 5-P-1022 | Right Helix | 26 | | 442*AAP | 5-P-1282 | Left Helix | 21 | 14 |
| 442**BQ | 5-P-1023 | Left Helix | 25 | | 442*AAR | 5-P-1283 | Left Helix | 21 | 14 |
| 442**BR | 5-P-1024 | Right Helix | 26 | | 442*ADA | 5-P-1284 | Spur | 23 | 14 |
| 442**BS | 5-P-1025 | Left Helix | 26 | | 442*AES | 5-P-1285 | Left Helix | 22 | 14 |
| 442**BU | 5-P-1026 | Spur | 33 | | Input Gears "C" Ratio Only | | | | |
| 442**BY | 5-P-1027 | Right Helix | 26 | | 442*CAB | 5-P-1286 | Spur | 19 | 17 |
| 442**BZ | 5-P-1028 | Left Helix | 26 | | 442*CAH | 5-P-1287 | Spur | 22 | 17 |
| | | | | | 442*CAP | 5-P-1289 | Left Helix | 21 | 17 |
| 442**CB | 5-P-1029 | Left Helix | 25 | | 442*CAR | 5-P-1290 | Left Helix | 21 | 17 |
| 442**CD | 5-P-1031 | Left Helix | 27 | | 442*CDA | 5-P-1291 | Spur | 23 | 17 |
| 442**CR | 5-P-1036 | Left Helix | 17 | | 442*CES | 5-P-1292 | Left Helix | 22 | 17 |
| | | | | | Input Gears "F" Ratio Only | | | | |
| 442**DA | 5-P-1037 | Spur | 23 | | 442*FAB | 5-P-1076 | Spur | 19 | 21 |
| 442**DB | 5-P-1038 | Spur | 39 | | 442*FAH | 5-P-1077 | Spur | 22 | 21 |
| 442**DC | 5-P-1039 | Spur | 19 | | 442*FAP | 5-P-1079 | Left Helix | 21 | 21 |
| 442**DD | 5-P-1040 | Spur | 20 | | 442*FAR | 5-P-1080 | Left Helix | 21 | 21 |
| 442**DH | 5-P-1041 | Left Helix | 21 | | 442*FBC | 5-P-1081 | Left Helix | 18 | 21 |
| 442**DJ | 5-P-1042 | Left Helix | 28 | | 442*FBG | 5-P-1082 | Left Helix | 23 | 21 |
| 442**DK | 5-P-1043 | Left Helix | 26 | | 442*FBM | 5-P-1083 | Left Helix | 22 | 21 |
| 442**DM | 5-P-1045 | Left Helix | 17 | | 442*FBQ | 5-P-1084 | Left Helix | 25 | 21 |
| 442**DN | 5-P-1046 | Left Helix | 19 | | 442*FDA | 5-P-1085 | Spur | 23 | 21 |
| 442**DP | 5-P-1047 | Left Helix | 27 | | 442*FDJ | 5-P-1086 | Left Helix | 28 | 21 |
| 442**DQ | 5-P-1048 | Left Helix | 20 | | 442*FDN | 5-P-1087 | Left Helix | 19 | 21 |
| 442**DU | 5-P-1050 | Left Helix | 28 | | 442*FDU | 5-P-1088 | Left Helix | 28 | 21 |
| 442**DX | 5-P-1052 | Left Helix | 26 | | 442*FEC | 5-P-1089 | Left Helix | 36 | 21 |
| | | | | | 442*FED | 5-P-1090 | Left Helix | 34 | 21 |
| 442**EA | 5-P-1054 | Left Helix | 26 | | 442*FEP | 5-P-1091 | Right Helix | 35 | 21 |
| 442**EC | 5-P-1055 | Left Helix | 36 | | 442*FES | 5-P-1092 | Left Helix | 22 | 21 |
| 442**ED | 5-P-1056 | Left Helix | 34 | | 442*FET | 5-P-1093 | Left Helix | 19 | 21 |
| 442**EL | 5-P-1075 | Right Helix | 30 | | 442*FEV | 5-P-1094 | Spur | 40 | 21 |
| 442**EP | 5-P-1057 | Right Helix | 35 | | 442*FEW | 5-P-1095 | Left Helix | 20 | 21 |
| 442**EQ | 5-P-1058 | Left Helix | 30 | | 442*FFE | 5-P-1096 | Left Helix | 29 | 21 |
| 442**ES | 5-P-1059 | Left Helix | 22 | | 442*FFN | 5-P-1097 | Left Helix | 26 | 21 |
| 442**EV | 5-P-1060 | Spur | 40 | | 442*FGQ | 5-P-1149 | Left Helix | 26 | 21 |
| 442**EW | 5-P-1061 | Left Helix | 20 | | 442*FGS | 5-P-1151 | Left Helix | 29 | 21 |
| | | | | | 442*FHV | 5-P-1300 | Spur | 24 | 21 |
| 442**FC | 5-P-1064 | Left Helix | 26 | | 442*FJS | 5-P-1311 | Left Helix | 20 | 21 |
| 442**FE | 5-P-1065 | Left Helix | 29 | | 442*FJT | 5-P-1314 | Left Helix | 19 | 21 |
| 442**FK | 5-P-1067 | Left Helix | 21 | | 442*FJU | 5-P-1317 | Left Helix | 25 | 21 |
| 442**FL | 5-P-1068 | Left Helix | 25 | | 442*FJW | 5-P-1320 | Left Helix | 23 | 21 |
| 442**FM | 5-P-1069 | Spur | 28 | | Input Gears "H" Ratio Only | | | | |
| 442**FN | 5-P-1070 | Left Helix | 26 | | 442*HAH | 5-P-1364 | Spur | 22 | 23 |
| 442**FP | 5-P-1071 | Left Helix | 23 | | 442*HAD | 5-P-1365 | Spur | 23 | 23 |
| 442**FW | 5-P-1098 | Left Helix | 28 | | | | | | |

Ratio Gear Chart — 442 Series

| Ratio | Part Number | No. Teeth |
|---------|-------------------|-----------|
| 442*A | See Chart Page 13 | |
| 442*C | See Chart Page 13 | |
| 442*F | See Chart Page 13 | |
| 442*HAH | See Chart Page 13 | |
| 442*HDA | See Chart Page 13 | |
| 442*L | 5-P-964 | 25 |
| 442*Q | 5-P-965 | 19 |
| 442*R | 5-P-1214 | 22 |
| 442*S | 5-P-966 | 24 |
| 442*U | 5-P-967 | 26 |
| 442*W | 5-P-968 | 26 |
| 442*X | 5-P-969 | 38 |

Output Gear Chart — 442 Series

| Ratio | Part Number | No. Teeth |
|-------|-------------|-----------|
| 442*A | 2-P-791 | 39 |
| 442*C | 2-P-792 | 37 |
| 442*F | 2-P-726 | 37 |
| 442*H | 2-P-802 | 35 |
| 442*H | 2-P-802 | 35 |
| 442*L | 2-P-727 | 34 |
| 442*Q | 2-P-559 | 24 |
| 442*R | 2-P-559 | 24 |
| 442*S | 2-P-637 | 22 |
| 442*U | 2-P-560 | 20 |
| 442*W | 2-P-561 | 17 |
| 442*X | 2-P-728 | 21 |

Gear Chart — 447 Series

| Model Number | Part No. Input Gear | Helix Angle | No. Teeth* Input Gear | No. Teeth** Ratio Gear | Part No. Output Gear | No. Teeth Output Gear |
|--------------|---------------------|-------------|-----------------------|------------------------|----------------------|-----------------------|
| 447*QET | 5-P-865 | Left Helix | 19 | 19 | 2-P-697 | 24 |
| 447*QES | 5-P-869 | Left Helix | 22 | 19 | 2-P-697 | 24 |
| 447*QFX | 5-P-979 | Left Helix | 24 | 19 | 2-P-697 | 24 |
| 447*QGP | 5-P-1145 | Spur | 23 | 19 | 2-P-697 | 24 |
| 447*QCD | 5-P-1178 | Left Helix | 27 | 19 | 2-P-697 | 24 |
| 447*QEV | 5-P-1205 | Spur | 40 | 19 | 2-P-697 | 24 |
| 447*SET | 5-P-866 | Left Helix | 19 | 24 | 2-P-698 | 22 |
| 447*SES | 5-P-870 | Left Helix | 22 | 24 | 2-P-698 | 22 |
| 447*SFF | 5-P-891 | Left Helix | 32 | 24 | 2-P-698 | 22 |
| 447*SEQ | 5-P-892 | Left Helix | 30 | 24 | 2-P-698 | 22 |
| 447*SGP | 5-P-1146 | Spur | 23 | 24 | 2-P-698 | 22 |
| 447*SCD | 5-P-1179 | Left Helix | 27 | 24 | 2-P-698 | 22 |
| 447*SEV | 5-P-1206 | Spur | 40 | 24 | 2-P-698 | 22 |
| 447*SJX | 5-P-1270 | Spur | 40 | 24 | 2-P-698 | 22 |
| 447*RET | 5-P-1215 | Left Helix | 19 | 22 | 2-P-697 | 24 |
| 447*RES | 5-P-1216 | Left Helix | 22 | 22 | 2-P-697 | 24 |
| 447*RGP | 5-P-1217 | Spur | 23 | 22 | 2-P-697 | 24 |
| 447*RCD | 5-P-1218 | Left Helix | 27 | 22 | 2-P-697 | 24 |
| 447*REV | 5-P-1219 | Spur | 40 | 22 | 2-P-697 | 24 |
| 447*UET | 5-P-867 | Left Helix | 19 | 26 | 2-P-699 | 20 |
| 447*UES | 5-P-871 | Left Helix | 22 | 26 | 2-P-699 | 20 |
| 447*UFE | 5-P-889 | Left Helix | 29 | 26 | 2-P-699 | 20 |
| 447*UGP | 5-P-1147 | Spur | 23 | 26 | 2-P-699 | 20 |
| 447*UCD | 5-P-1180 | Left Helix | 27 | 26 | 2-P-699 | 20 |
| 447*UEV | 5-P-1207 | Spur | 40 | 26 | 2-P-699 | 20 |
| 447*UJX | 5-P-1271 | Spur | 40 | 26 | 2-P-699 | 20 |
| 447*WET | 5-P-868 | Left Helix | 19 | 26 | 2-P-700 | 17 |
| 447*WES | 5-P-872 | Left Helix | 22 | 26 | 2-P-700 | 17 |
| 447*WFE | 5-P-890 | Left Helix | 29 | 26 | 2-P-700 | 17 |
| 447*GWFH | 5-P-900 | Right Helix | 20 | 26 | 2-P-700 | 17 |
| 447*GWFG | 5-P-901 | Right Helix | 18 | 26 | 2-P-700 | 17 |
| 447*WGD | 5-P-988 | Right Helix | 19 | 26 | 2-P-700 | 17 |
| 447*WGP | 5-P-1148 | Spur | 23 | 26 | 2-P-700 | 17 |
| 447*WCD | 5-P-1181 | Left Helix | 27 | 26 | 2-P-700 | 17 |
| 447*WEV | 5-P-1208 | Spur | 40 | 26 | 2-P-700 | 17 |
| 447*WJK | 5-P-1272 | Spur | 40 | 26 | 2-P-700 | 17 |

* Input gear meshes with the transmission

** Ratio gear meshes with the P.T.O. Output Gear

NOTE: The unique design of the 447 Series input gear requires that the spacers used to shim the input bearings be placed opposite of the normal position found on the 442 and 489 series. For the 447 Series install the Input gear spacers (item # 18 on pg. 2) on the idler shaft between the Input Gear and P.T.O. housing.

Input Gear Chart — 489 Series

| Model Number | Part Number | Gear Type | No.Teeth Input Gear | No.Teeth Ratio Gear | Model Number | Part Number | Gear Type | No.Teeth Input Gear | No.Teeth Ratio Gear |
|--------------|-------------|------------|---------------------|---------------------|--------------|-------------|------------|---------------------|---------------------|
| 489**AB | 5-P-1001 | Spur | 19 | | 489*CAB | 5-P-1286 | Spur | 19 | 17 |
| 489**AH | 5-P-1004 | Spur | 22 | | 489*CAH | 5-P-1287 | Spur | 22 | 17 |
| 489**AR | 5-P-1008 | Left Helix | 21 | | 489*CAR | 5-P-1290 | Left Helix | 21 | 17 |
| 489**BG | 5-P-1015 | Left Helix | 23 | | 489*CDA | 5-P-1291 | Spur | 23 | 17 |
| 489**DA | 5-P-1037 | Spur | 23 | | | | | | |
| 489**DU | 5-P-1050 | Left Helix | 28 | | 489*FAB | 5-P-1076 | Spur | 19 | 21 |
| 489**EV | 5-P-1060 | Spur | 40 | | 489*FAH | 5-P-1077 | Spur | 22 | 21 |
| 489**DB | 5-P-1038 | Spur | 39 | | 489*FAR | 5-P-1080 | Left Helix | 21 | 21 |
| 489**CR | 5-P-1036 | Left Helix | 17 | | 489*FBG | 5-P-1082 | Left Helix | 23 | 21 |
| 489**HW | 5-P-1235 | Spur | 35 | | 489*FDA | 5-P-1085 | Spur | 23 | 21 |
| 489**HX | 5-P-1236 | Spur | 32 | | 489*FDU | 5-P-1088 | Left Helix | 28 | 21 |
| | | | | | 489*FEV | 5-P-1094 | Spur | 40 | 21 |
| 489*AAB | 5-P-1279 | Spur | 19 | 14 | 489*HAH | 5-P-1364 | Spur | 22 | 23 |
| 489*AAH | 5-P-1280 | Spur | 22 | 14 | 489*HDA | 5-P-1365 | Spur | 23 | 23 |
| 489*AAR | 5-P-1283 | Left Helix | 21 | 14 | | | | | |
| 489*ADA | 5-P-1284 | Spur | 23 | 14 | | | | | |

Ratio Gear Chart — 489 Series

Input Ratio Gear Chart — 489 Series

| Ratio | Part Number | No. Teeth |
|---------|-----------------|-----------|
| 489*A | See Chart Above | |
| 489*C | See Chart Above | |
| 489*F | See Chart Above | |
| 449*HAH | 5-P-1364 | 22-23 |
| 449*HDA | 5-P-1365 | 23-23 |
| 489*L | 5-P-964 | 25 |
| 489*Q | 5-P-965 | 19 |
| 489*R | 5-P-1214 | 22 |
| 489*S | 5-P-966 | 24 |
| 489*U | 5-P-967 | 26 |
| 489*W | 5-P-968 | 26 |
| 489*X | 5-P-969 | 38 |

Output Gear Chart — 489 Series

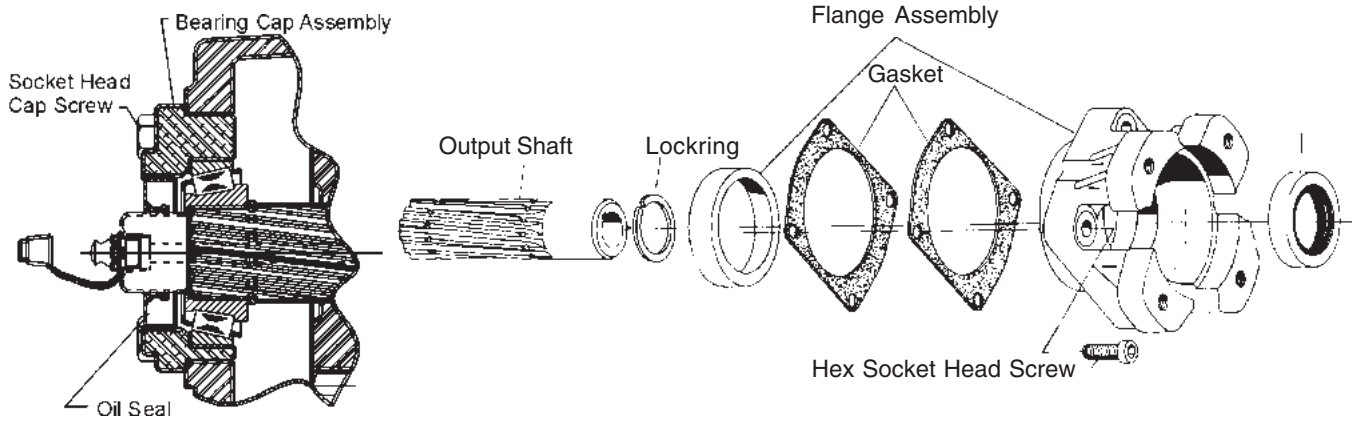
| Ratio | Part Number | No. Teeth |
|-------|-------------|-----------|
| 489*A | 2-P-791 | 39 |
| 489*C | 2-P-792 | 37 |
| 489*F | 2-P-726 | 37 |
| 449*H | 2-P-802 | 35 |
| 449*H | 2-P-802 | 35 |
| 489*L | 2-P-727 | 34 |
| 489*Q | 2-P-559 | 24 |
| 489*R | 2-P-559 | 24 |
| 489*S | 2-P-637 | 22 |
| 489*U | 2-P-560 | 20 |
| 489*W | 2-P-561 | 17 |
| 489*X | 2-P-728 | 21 |

| Flange Suffix | Flange Type | Shaft Type | Conversion Kit |
|---------------|--------------------------------|------------------------|--|
| AA | Special for England | .982"-6 Spline | |
| AF | S.A.E. "B" 2 or 4 Bolt | 1.0"-15 Spline | XD to AF 328591-30X |
| AK | S.A.E. "B" 2 Bolt | 7/8"-13 Spline | XD to AK 328591-28X |
| AZ | S.A.E. 4 Bolt | 1-1/4"-14 Spline | XD to AZ 328591-70X |
| FF | S.A.E. "B" 2 or 4 Bolt | 7/8" Round | XD to FF 328591-29X |
| GA | Rotatable S.A.E. "B" 2 Bolt | ● 7/8"-13 Spline | XD to GA 328591-72X XR to GA 328591-73X RA to GA 328591-106X |
| GB | Rotatable S.A.E. "B" 4 Bolt | ● 7/8"-13 Spline | XD to GB 328591-74X XR to GB 328591-75X RB to GB 328591-107X |
| GF | S.A.E. "BB" 2 or 4 Bolt | ● 1.0"-15 Spline | XD to GF 328591-71X AF to GF 328591-108X |
| GH | Rotatable S.A.E. "BB" 2 Bolt | ● 1.0"-15 Spline | XD to GH 328591-116X RF to GH 328591-114X |
| GJ | S.A.E. "B" 4 Bolt Rotatable | ● 1.0"-15 Spline | XD to GJ 328591-138X RE to GJ 328591-114X |
| GK | S.A.E. "B" 2 or 4 Bolt | ● 7/8"-13 Spline | XD to GK 328591-89X XK to GK 328591-86X |
| GM | Din 5462 Pump Mounting | ● DIN 5462 | XD to GM 328591-148X |
| GP | S.A.E. "A" Pilot 2 or 4 Bolt | ● 7/8"-13 Spline | XD to GP 328591-90X XP to GP 328591-86X |
| ■ GQ | S.A.E. "B" 2 or 4 Bolt | ● 7/8"-13 Spline | XD to GQ 328591-91X XQ to GQ 328591-86X |
| GR | Chelsea Special 4 Bolt | ● 7/8"-13 Spline | XD to GR 328591-76X |
| GY | Din 5462 Pump Mounting | ● 7/8"-13 Spline | XD to GY 328591-92X XY to GY 328591-87X |
| GZ | Non-standard 4 Bolt | ● 1-1/4"-14 Spline | XD to GZ 328591-93X AZ to GZ 328591-88X |
| ▶▶ LA | S.A.E. "B" 2 Bolt | 7/8"-13 Spline | AK to LA 328591-44X |
| ▶▶ LB | S.A.E. "A" Pilot 2 Bolt | 7/8"-13 Spline | XP to LB 328591-45X |
| ▶▶ LC | S.A.E. "B" 2 Or 4 Bolt | 7/8"-13 Spline | XQ to LC 328591-46X |
| ▶▶ LD | Similar to "XD" | 1-1/4" Round | XD to LD |
| ▶▶ LE | 6 Bolt Round | 7/8"-13 Spline | XN to LE 328591-47X |
| ▶▶ LF | S.A.E. "B" 2 or 4 Bolt | 7/8"-13 Spline | XK to LF 328591-48X |
| MY | Din 5462 Pump Mounting | DIN 5462 | XD to MY 328591-146X |
| PA | Parker P2-060 Pump Mounting | 7/8"-13 Spline | XD to PA 328591-143X |
| PF | Parker P2-060 Pump Mounting | 1.0"-15 Spline | XD to PF 328591-142X |
| RA | Rotatable S.A.E. "B" 2 Bolt | 7/8"-13 Spline | XD to RA 328591-55X XR to RA 328591-53X |
| RB | Rotatable S.A.E. "B" 4 Bolt | 7/8"-13 Spline | XD to RB 328591-56X XR to RB 328591-54X |
| RC | Rotatable S.A.E. "A" 2 Bolt | 5/8"-9 Spline | XD to RC 328591-112X |
| RD | Rotatable S.A.E. "A" 2 Bolt | 7/8"-13 Spline | XD to RD 328591-113X |
| RE | S.A.E. "B" 4 Bolt Rotatable | 1.0"-15 Spline | XD to RE 328591-134X |
| RF | Rotatable S.A.E. "B" 2 Bolt | 1.0"-15 Spline | XD to RF 328591-78X |
| RY | Rotatable DIN 5462 | DIN 5462 | XD to RY 328591-131X |
| XE | S.A.E. "A" 2 or 4 Bolt | 5/8"-9 Spline | XD to XE 328591-27X |
| XG | Non-standard-S.A.E. "A" 2 Bolt | 3/4" Round w/ 3/16 key | XD to XG 328591-10X |
| XJ | Non-standard 2 Bolt | 3/4" Round | XD to XJ 328591-11X |
| XK | S.A.E. "B" 2 or 4 Bolt | 7/8"-13 Spline | XD to XK 328591-16X |
| XL | Non-standard 2 Bolt | 7/8"-13 Spline | XD to XL 328591-18X |
| XO | S.A.E. "A" Pilot 2 Bolt | 3/4" Round w/ 3/16 key | XD to XO 328591-26X |
| XP | S.A.E. "A" Pilot 2 Bolt | 7/8"-13 Spline | XD to XP 328591-23X |
| ■ XQ | S.A.E. "B" 2 or 4 Bolt | 7/8"-13 Spline | XD to XQ 328591-17X |
| XR | Chelsea Special 4 Bolt | 7/8"-13 Spline | XD to XR 328591-52X |
| XV | Round 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 | Part Number | Description | Qty |
|-----------|--|--|------|
| AA | 3-P-862 | Output Shaft | 1 |
| | 28-P-216 | Oil Seal | 1 |
| | 239102X | Bearing Cap Assy.(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 Assy.(21-P-522) | 1 |
| | 378447-10 | Socket Head Capscrew (.312" - 18 x 1.5") | 4 |
| AK | 3-P-282 | Output Shaft | 1 |
| | 28-P-216 | Oil Seal | 1 |
| | 328989X | Bearing Cap Assy.(21-P-472) | 1 |
| | 378447-8 | Socket Head Capscrew (.312" - 18 x 1.5") | 4 |
| AZ | 3-P-844 | Output Shaft | 1 |
| | 28-P-230 | Oil Seal | 1 |
| | 329052X | Bearing Cap Assy.(21-P-508) | 1 |
| | 379982 | Hex Washer Flange Bolt (.312" - 18 x 2.5") | 4 |
| FF | 3-P-851 | Output Shaft | 1 |
| | 28-P-219 | Oil Seal | 1 |
| | 329088X | Bearing Cap Assy. (21-P-522) | 1 |
| | 378447-10 | Socket Head Capscrew (.312" - 18 x 2.0") | 4 |
| G* | 3-P-923X | "GA", "GB", "GR", Shaft Assemblies | 1 or |
| | 3-P-921X | "GF" Shaft Assemblies | 1 or |
| | 3-P-933X | "GQ", "GK", "GP" Shaft Assemblies | 1 or |
| | 3-P-938X | "GM", "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 Assembly | 1 |
| 378430-10 | Rear Bearing Cap Hex Head Capscrew | 4 | |
| L* | 3-P-857 | Output Shaft ("LD") | 1 |
| | 3-P-858 | Output Shaft ("LA", "LB", "LC", "LF") | 1 |
| | 329091X | Lube Pump & Bearing Cap Assy. | 1 |
| | 329092X | Pressure Lube Hose Assy. | 1 |
| | 500841-1 | Elbow 90° Street | 1 |
| 378430-10 | Hex Capscrew (.312" - 18 x 1.0") | 4 | |
| MY | 3-P-768 | Output Shaft | 1 |
| | 28-P-275 | Oil Seal | 1 |
| | 329412X | Bearing Cap Assy. (21-P-675) | 1 |
| | 378447-6 | Socket Head Capscrew (.312" - 18 x 1.0") | 4 |

Continued on following page

Output Options Bills of Material

| Output | Part Number | Description |
|----------|--|---|
| PA | 3-P-283 | Output Shaft 1 |
| | 28-P-216 | Oil Seal 1 |
| | 329195X | Bearing Cap Assy. (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 Assy. (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 |
| | 28-P-216 | Oil Seal 1 |
| | 329195X | Bearing Cap Assy. (21-P-574) 1 |
| | 21-P-628 | Pump Flange (Ship Loose with unit) 1 |
| | 378447-6 | Socket Head Capscrew 4 |
| | 328170-207X | Capscrew Bag Kit 1 |
| | 378170-6 | Socket Head Capscrew 3 |
| RB | 3-P-283 | Output Shaft 1 |
| | 28-P-216 | Oil Seal 1 |
| | 329195X | Bearing Cap Assy. (21-P-574) 1 |
| | 21-P-572 | Pump Flange (Ship Loose with 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 Assy (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 Assy. (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 Assy. (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 |
| RY | 3-P-768 | Output Shaft 1 |
| | 21-P-625 | Pump Flange 1 |
| | 329356X | Bearing Cap Assy (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 |
| | 22-P-84 | Gasket 1 |
| | 379231 | Pipe Plug 2 |

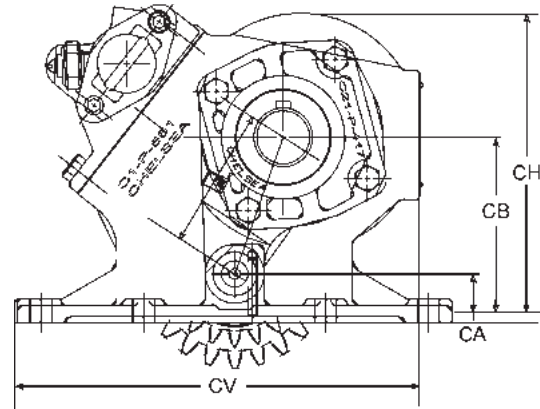
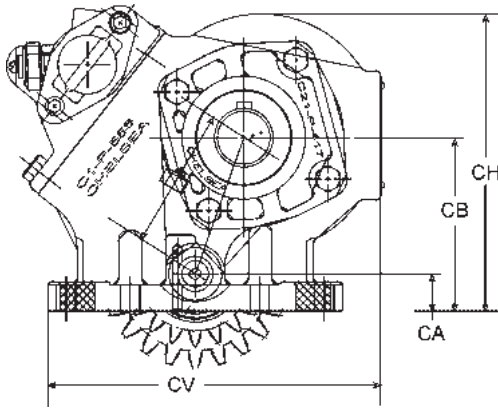
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| Output | Part Number | Description | Qty |
|----------|---------------------------------|--|------|
| XE | 3-P-800 | Output Shaft | 1 |
| | 28-P-216 | Oil Seal | 1 |
| | 328328X | Bearing Cap Assy. (21-P-161) | 1 |
| | 378447-8 | Socket Head Capscrew (.312" - 18 x 1.5") | 4 |
| XG | 3-P-281 | Output Shaft | 1 |
| | 28-P-216 | Oil Seal | 1 |
| | 328580X | Bearing Cap Assy. (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 Assy.(21-P-259) | 1 |
| | 378447-8 | Socket Head Capscrew (.312" - 18 x 1.5") | 4 |
| XK | 3-P-282 | Output Shaft | 1 |
| | 28-P-216 | Oil Seal | 1 |
| | 328333X | Bearing Cap Assy.(21-P-424) | 1 |
| | 378447-8 | Socket Head Capscrew (.312" - 18 x 1.5") | 4 |
| XL | 3-P-283 | Output Shaft | 1 |
| | 28-P-216 | Oil Seal | 1 |
| | 328580X | Bearing Cap Assy.(21-P-259) | 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 Assy.(21-P-161) | 1 |
| | 378447-8 | Socket Head Capscrew (.312" - 18 x 1.5") | 4 |
| XP | 3-P-282 | Output Shaft | 1 |
| | 28-P-216 | Oil Seal | 1 |
| | 328328X | Bearing Cap Assy.(21-P-161) | 1 |
| | 378447-8 | Socket Head Capscrew (.312" - 18 x 1.5") | 4 |
| XQ | 3-P-282 | Output Shaft | 1 |
| | 28-P-216 | Oil Seal | 1 |
| | 328589X | Bearing Cap Assy.(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 |
| | 328711X | Pump Mounting Kit | 1 |
| | 378919 | Washer | 4 |
| 500963-1 | Hex Lock Nut (.312" - 24) | 4 | |
| XV | 3-P-202 | Output Shaft | 1 |
| | 28-P-216 | Oil Seal | 1 |
| | 329273X | Bearing Cap Assy. for 660 & 680 Series | 1 or |
| | 328273X | Bearing Cap Assy. (21-P-418) | 1 |
| | 378430-10 | Hex Capscrew (.312" - 18 x 1.0") | 4 |
| | 500007-29 | Woodruff Key | 1 |
| | 379828 | Companion Flange | 1 |
| 378431-8 | Set Screw | 1 | |

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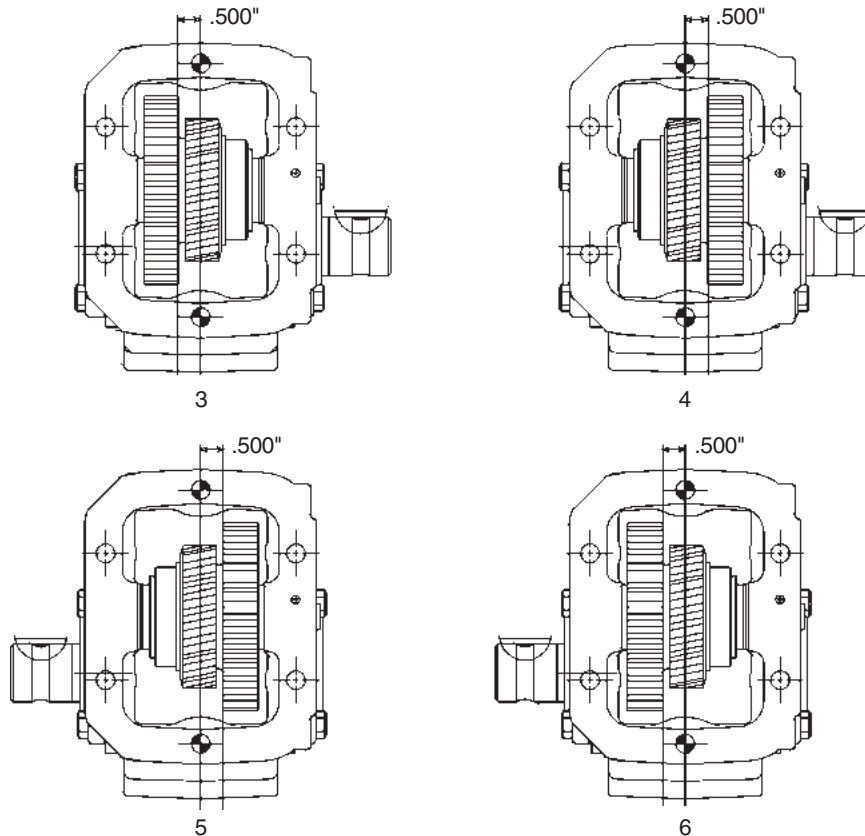
Output Options Bills of Material

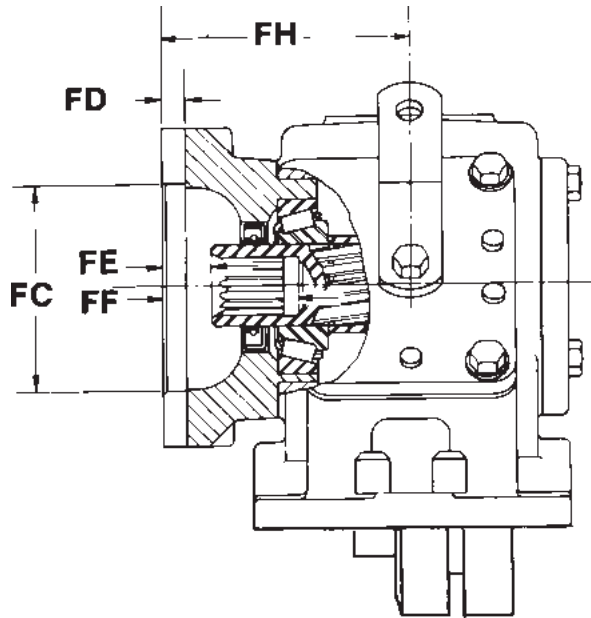
| Output | Part Number | Description | Qty |
|--------|-------------|--|------|
| XX | 3-P-766 | Output Shaft | 1 |
| | 28-P-216 | Oil Seal | 1 |
| | 329273X | Bearing Cap Assy. for 660 & 680 Series | 1 or |
| | 328273X | Bearing Cap Assy. (21-P-418) | 1 |
| | 378430-10 | Hex Capscrew (.312" - 18 x 1.0") | 4 |
| | 379111 | Square Key | 1 |
| XY | 501181 | Hex Locknut (1.0" - 20) | 1 |
| | 3-P-768 | Output Shaft | 1 |
| | 28-P-275 | Oil Seal | 1 |
| | 328234X | Bearing Cap Assy. (21-P-614) | 1 |
| | 378447-6 | Socket Head Capscrew (.312" - 18 x 1.0") | 4 |



| P.T.O. Series | Part Number | CA | CB | CD | CH | CV |
|--------------------|-------------|-------|---|---|-------|-------|
| 442/447 Standard | 1-P-557X | 0.793 | 3.800 (F,H,L,R,S,U) 3.701 (Q,W,X) 3.568 (A,C) | 3.317 (F,H,L,R,S,U) 3.087 (Q,W,X) 3.050 (A,C) | 6.428 | 7.000 |
| 442/447 Deep Mount | 1-P-558X | 0.573 | 3.580 (F,H,L,R,S,U) 3.481 (Q,W,X) 3.348 (A,C) | 3.317 (F,H,L,R,S,U) 3.087 (Q,W,X) 3.050 (A,C) | 6.207 | 7.000 |
| 489 Standard | 1-P-552X | 1.072 | 4.079 (F,H,L,R,S,U) 3.980 (Q,W,X) 3.847 (A,C) | 3.317 (F,H,L,R,S,U) 3.087 (Q,W,X) 3.050 (A,C) | 6.708 | 8.500 |
| 489 Deep Mount | 1-P-562X | 0.930 | 3.937 (F,H,L,R,S,U) 3.838 (Q,W,X) 3.705 (A,C) | 3.317 (F,H,L,R,S,U) 3.087 (Q,W,X) 3.050 (A,C) | 6.566 | 8.500 |

Assembly Arrangements

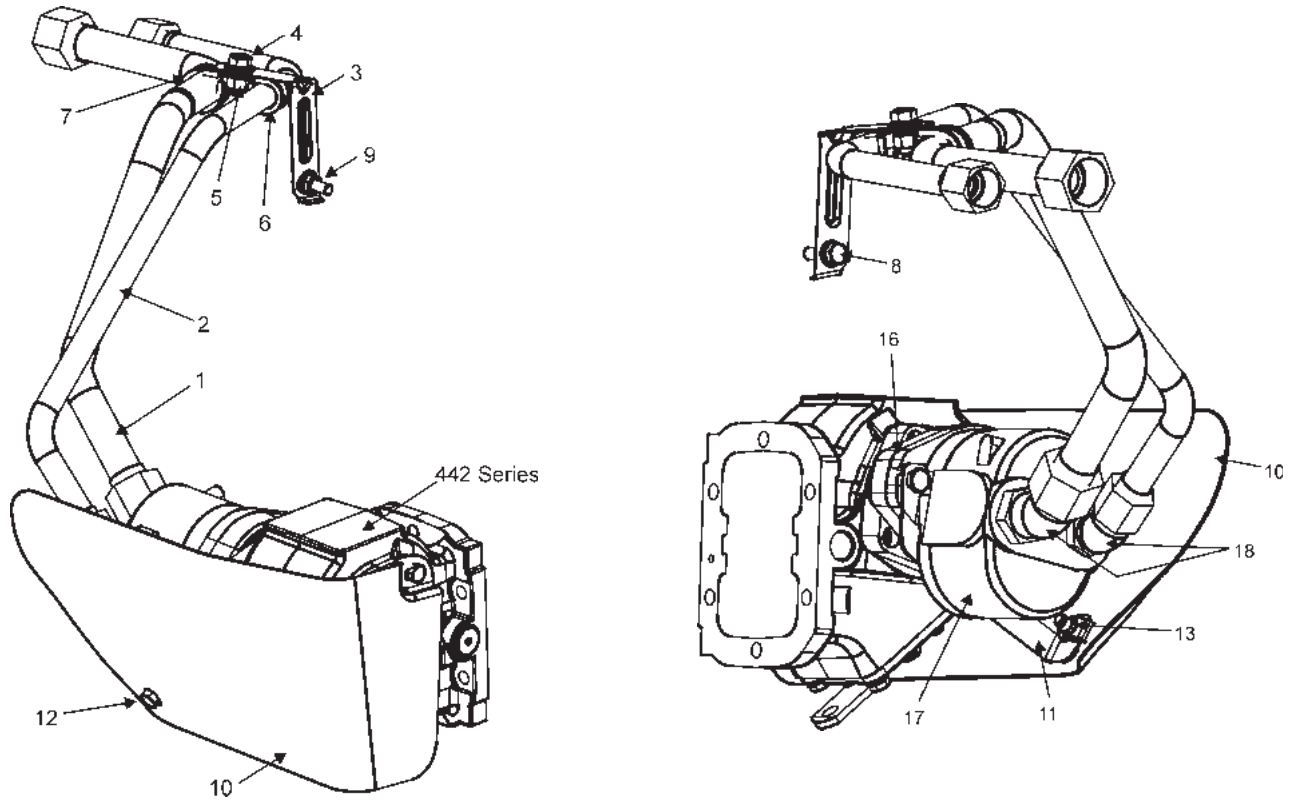




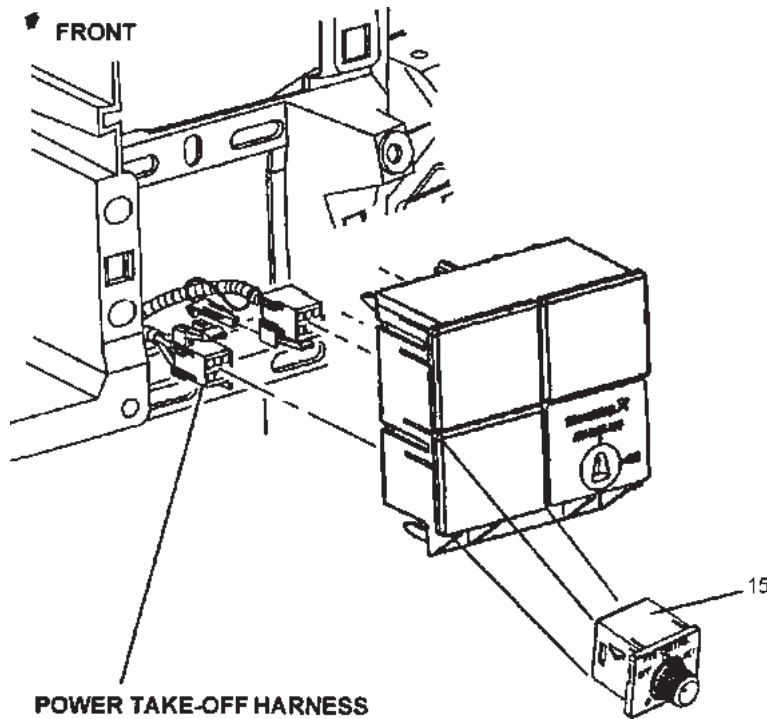
| Pump Flange Suffix | Bolt Circle Dia. | Bolt Holes | | FC | FD | FE | FF | FH | Output Shaft | Keyway Width |
|--------------------|------------------|-----------------|--------------------|-------------------|-------------|----------------------|----------------|--------------------------|----------------------|--------------|
| | | Tapped Hole | No. Equally Spaced | Female Pilot Dia. | Pilot Depth | Face to end of Shaft | Face thru Hole | Face to Center of P.T.O. | Hole Diameter | |
| AA | 2.834 | M10-1.5 | 6 | 2.05 | N/A | N/A | N/A | 3.447 | .982/.816 - 6 Spline | — |
| AF, GF | 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 | — |
| AZ, GZ | 5.000 | .500"-13 | 4 | 4.003 | 0.406 | 0.695 | 2.392 | 4.985 | 1 1/4" - 14 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 | — | — |
| MY, GM | 3.15 x 3.15 | M12-1.75 | 12 | 3.152 | 0.393 | 0.594 | 2.508 | 4.697 | DIN 5462 | — |
| ● PA | 5.750 | 0.536 | 2 | 4.003 | 0.406 | 0.558 | 2.058 | 4.588 | 7/8"-13 Spline | — |
| ● PF | 5.750 | 0.536 | 2 | 4.003 | 0.406 | 0.501 | 1.969 | 4.569 | 1"-15 Spline | — |
| ● 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 | — |
| ● RE, GJ | 3.532x3.532 | .500"13 | 4 | 4.003 | 0.406 | 0.501 | 1.969 | 4.569 | 1.0"-15 Spline | — |
| ● RF, GH | 5.750 | .500"-13 | 2 ■ | 4.003 | 0.406 | 0.501 | 1.969 | 4.569 | 1"-15 Spline | — |
| ● RY | 3.150 | M12-1.75 | 4 | 3.152 | 0.394 | 0.360 | 2.274 | 4.790 | DIN 5462 | — |
| 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 | 1.593 | 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"-134 | 2 | 4.003 | 0.406 | 0.562 | 2.062 | 3.688 | 7/8"-13 Spline | — |
| | 5.000 | .531"-134 | 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, GR | 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

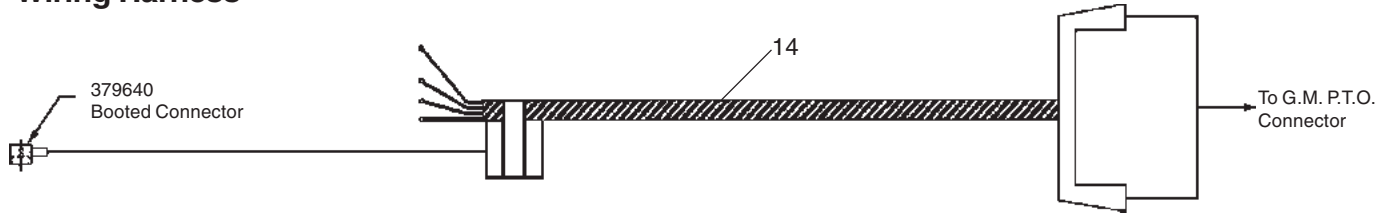
NOTE: To convert an "XR" to an "XK", use conversion flange number 21-P-525



P.T.O. Switch



Wiring Harness



| Item | Part Number | Description | Quantity |
|------|--------------------|---|----------|
| | 329333X | Installation Kit 442 P.T.O. (Includes 329333-1X, 329333-2X, 1 or 329333-3X & 329333-4X) | 1 |
| | 329333-1X | Pump Tube Kit (Includes 329333-2X) | |
| 1 | 379846 | Tube Assembly Pump, Suction | 1 |
| 2 | 379845 | Tube Assembly Pump, Discharge | 1 |
| | 329333-2X | Pump Tube Support Kit | |
| 3 | 379848 | Bracket, Hydraulic Tube Support | 1 |
| 4 | 379706 | Bolt, 13mm Clamp Tube (M10 x 1.5) | |
| 5 | 379141-9 | Nut, 13mm Clamp Tube (M10 x 1.5) | 1 |
| 6 | 501211-8 | Clamp, Discharge 3/4" | 1 |
| 7 | 501211-12 | Clamp, Suction 1" | 1 |
| 8 | 379892 | Bolt, Hex Flange Head (M8 X 1.25) | 1 |
| 9 | 379893 | Nut, Hex Flange Head (M8 X 1.25) | 1 |
| | 329333-3X | Heat Shield Kit | |
| 10 | 379847 | Heat Shield | 1 |
| | 329333-5X | Heat Shield Installation Kit | 1 |
| 11 | 379862 | Heat Shield Bracket | N.S.S. |
| 12 | 378430-8 | Hex Head Capscrew (.3125"-18 x .750") | N.S.S. |
| 13 | 379872 | U-Nut | N.S.S. |
| | 329333-4X | Wiring Harness | |
| 14 | 379895 | Wiring Harness Assembly w/379640 Booted Connector | N.S.S. |
| 15 | 379857 | P.T.O. Switch | N.S.S. |
| 16 | 328591-112X | Pump Field Conversion Kit (Converts "XD" to "RC") | 1 |

N.S.S. - Not Sold Separately

442GMT Pumps

| Pump Model Number (Item 17) | Cubic Inch Displacement | Gals/Min @ 1000 R.P.M. | Maximum Pressure (PSI) | Maximum Speed (R.P.M.) |
|-----------------------------|-------------------------|------------------------|------------------------|------------------------|
| CGP-P5A008-1AA | 0.18 | 0.80 | 4400 | 4000 |
| CGP-P5A010-1AA | 0.23 | 1.00 | 4400 | 4000 |
| CGP-P5A013-1AA | 0.31 | 1.34 | 4400 | 4000 |
| CGP-P5A019-1AA | 0.44 | 1.90 | 4400 | 3300 |
| CGP-P11A016-1AC | 0.37 | 1.60 | 4400 | 4000 |
| CGP-P11A021-1AC | 0.49 | 2.10 | 4400 | 4000 |
| CGP-P11A026-1AC | 0.60 | 2.60 | 4400 | 3600 |
| CGP-P11A029-1AC | 0.67 | 2.90 | 4400 | 3600 |
| CGP-P11A037-1AC | 0.85 | 3.70 | 4400 | 3300 |
| CGP-P14A049-1AE | 1.13 | 4.90 | 3000 | 3600 |
| CGP-P14A062-1AE | 1.43 | 6.20 | 3000 | 3400 |

442GMT Pumps & Fittings

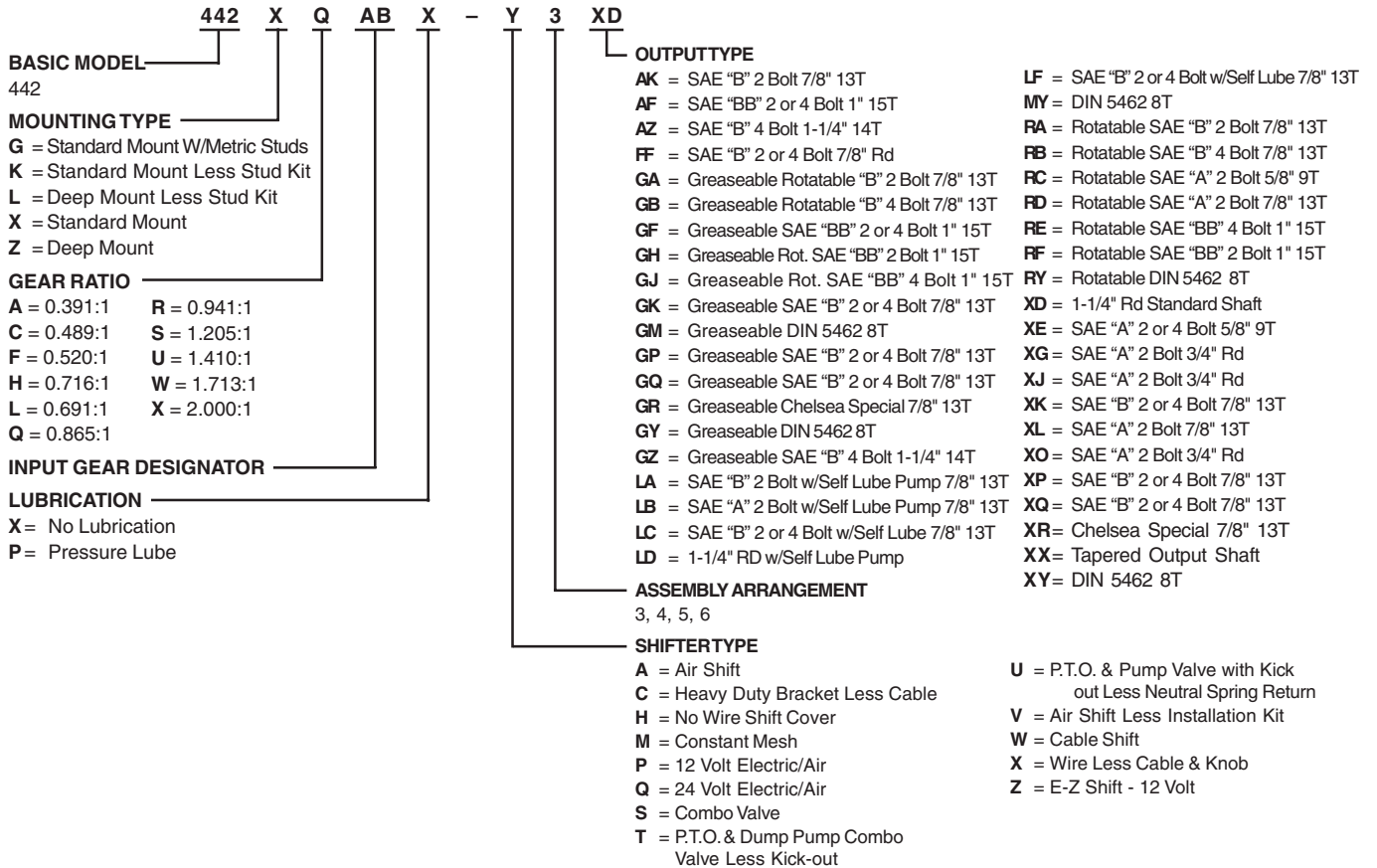
| Pump Series | Fitting Kit (Item 18) | Swivel Nut Suction | Std Th'd O-Ring Suction | Swivel Nut Discharge | Std Th'd O-Ring Discharge |
|-------------|-----------------------|--------------------|-------------------------|----------------------|---------------------------|
| CGP-P5 | 329335-1X | 379866* | 379870 | 379868* | 379869 |
| CGP-P11 | 329335-2X | 379866* | 379867 | - | 379850* |
| CGP-P14 | 329335-3X | - | 379849* | - | 379850* |

* 45° Elbow Fitting

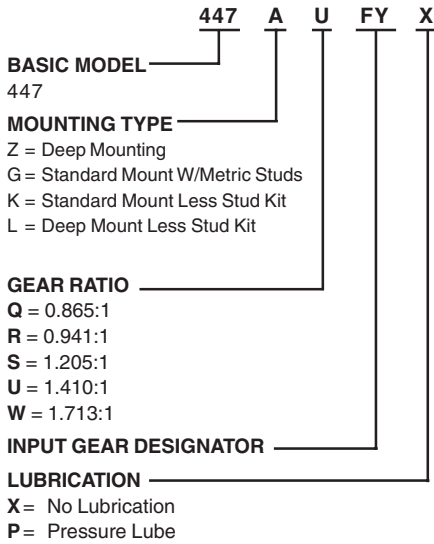
Model Number Designation

Power Take-Offs

442, 442GMT, 447 & 489 Series

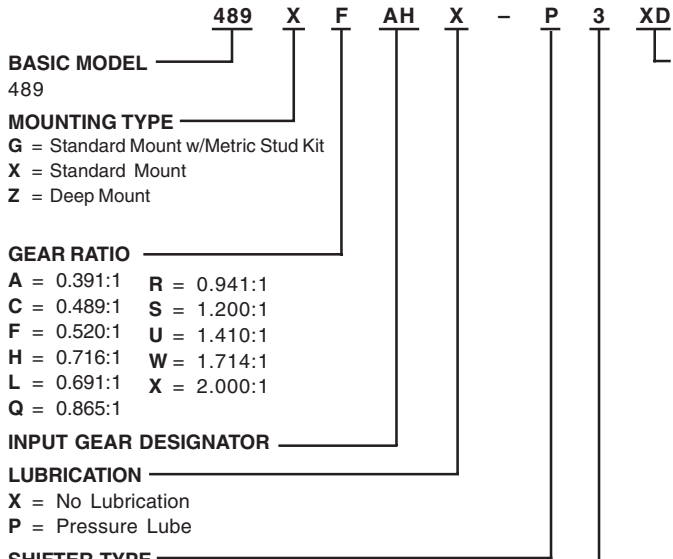


Model Number Designation



- OUTPUT TYPE**
- AK = SAE "B" 2 Bolt 7/8" 13T
 - AF = SAE "BB" 2 or 4 Bolt 1" 15T
 - AZ = SAE "B" 4 Bolt 1-1/4" 14T
 - FF = SAE "B" 2 or 4 Bolt 7/8" Rd
 - GA = Greaseable Rotatable "B" 2 Bolt 7/8" 13T
 - GB = Greaseable Rotatable "B" 4 Bolt 7/8" 13T
 - GF = Greaseable SAE "BB" 2 or 4 Bolt 1" 15T
 - GH = Greaseable Rot. SAE "BB" 2 Bolt 1" 15T
 - GJ = Greaseable Rot. SAE "BB" 4 Bolt 1" 15T
 - GK = Greaseable SAE "B" 2 or 4 Bolt 7/8" 13T
 - GM = Greaseable DIN 5462 8T
 - GP = Greaseable SAE "B" 2 or 4 Bolt 7/8" 13T
 - GQ = Greaseable SAE "B" 2 or 4 Bolt 7/8" 13T
 - GR = Greaseable Chelsea Special 7/8" 13T
 - GY = Greaseable DIN 5462 8T
 - GZ = Greaseable SAE "B" 4 Bolt 1-1/4" 14T
 - LA = SAE "B" 2 Bolt W/Self Lube Pump 7/8" 13T
 - LB = SAE "A" 2 Bolt W/Self Lube Pump 7/8" 13T
 - LC = SAE "B" 2 or 4 Bolt W/Self Lube 7/8" 13T
 - LD = 1-1/4" RD W/Self Lube Pump
- ASSEMBLY ARRANGEMENT**
3, 4, 5, 6
- SHIFTER TYPE**
- A = Air Shift
 - C = Heavy Duty Bracket Less Cable
 - H = No Wire Shift Cover
 - M = Constant Mesh
 - P = 12 Volt Electric/Air
 - Q = 24 Volt Electric/Air
 - S = Combo Valve
- LF = SAE "B" 2 or 4 Bolt w/Self Lube 7/8" 13T
 - MY = DIN 5462 8T
 - RA = Rotatable SAE "B" 2 Bolt 7/8" 13T
 - RB = Rotatable SAE "B" 4 Bolt 7/8" 13T
 - RC = Rotatable SAE "A" 2 Bolt 5/8" 9T
 - RD = Rotatable SAE "A" 2 Bolt 7/8" 13T
 - RE = Rotatable SAE "BB" 4 Bolt 1" 15T
 - RF = Rotatable SAE "BB" 2 Bolt 1" 15T
 - RY = Rotatable DIN 5462 8T
 - XD = 1-1/4" Rd Standard Shaft
 - XE = SAE "A" 2 or 4 Bolt 5/8" 9T
 - XG = SAE "A" 2 Bolt 3/4" Rd
 - XJ = SAE "A" 2 Bolt 3/4" Rd
 - XK = SAE "B" 2 or 4 Bolt 7/8" 13T
 - XL = SAE "A" 2 Bolt 7/8" 13T
 - XO = SAE "A" 2 Bolt 3/4" Rd
 - XP = SAE "B" 2 or 4 Bolt 7/8" 13T
 - XQ = SAE "B" 2 or 4 Bolt 7/8" 13T
 - XR = Chelsea Special 7/8" 13T
 - XX = Tapered Output Shaft
 - XY = DIN 5462 8T
- T = P.T.O. & Dump Pump Combo Valve Less Kick-out
 - U = P.T.O. & Pump Valve with Kick Out Less Neutral Spring Return
 - V = Air Shift Less Installation Kit
 - W = Cable Shift
 - X = Wire Less Cable & Knob
 - Z = E-Z Shift

Model Number Designation



OUTPUT TYPE

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

ASSEMBLY ARRANGEMENT

3, 4, 5, 6

Offer of Sale

The items described in this document and other documents or descriptions provided by Parker Hannifin Corporation, its subsidiaries and its authorized distributors are hereby offered for sale at prices to be established by Parker Hannifin Corporation, its subsidiaries and its authorized distributors. This offer and its acceptance by any customer ("Buyer") shall be governed by all of the following Terms and Conditions. Buyer's order for any such items, when communicated to Parker Hannifin Corporation, its subsidiary or an authorized distributor ("Seller") verbally or in writing, shall constitute acceptance of this offer.

1. Terms and Conditions of Sale: All descriptions, quotations, proposals, offers, acknowledgments, acceptances and sales of Seller's products are subject to and shall be governed exclusively by the terms and conditions stated herein. Buyer's acceptance of any offer to sell is limited to these terms and conditions. Any terms or conditions in addition to, or inconsistent with those stated herein, proposed by Buyer in any acceptance of an offer by Seller, are hereby objected to. No such additional, different or inconsistent terms and conditions shall become part of the contract between Buyer and Seller unless expressly accepted in writing by Seller. Seller's acceptance of any offer to purchase by Buyer is expressly conditional upon Buyer's assent to all the terms and conditions stated herein, including any terms in addition to, or inconsistent with those contained in Buyer's offer. Acceptance of Seller's products shall in all events constitute such assent.

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.**

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 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.

9/01-P



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