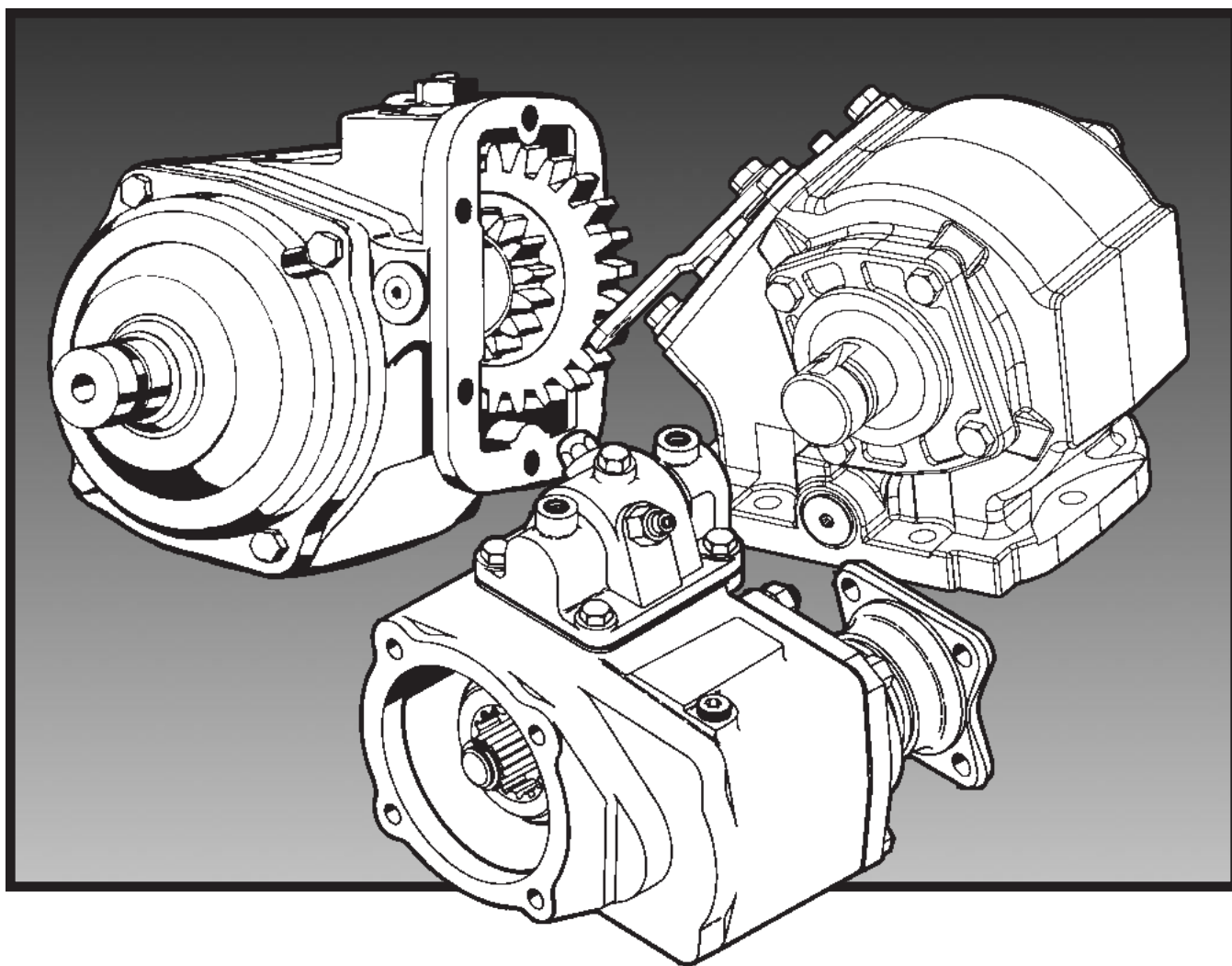


## Parts List 442, 447 & 489 Series

Effective: January 15, 2011

Supersedes: HY25-2442-M1/US Dated Nov. 2010

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### **WARNING — User Responsibility**

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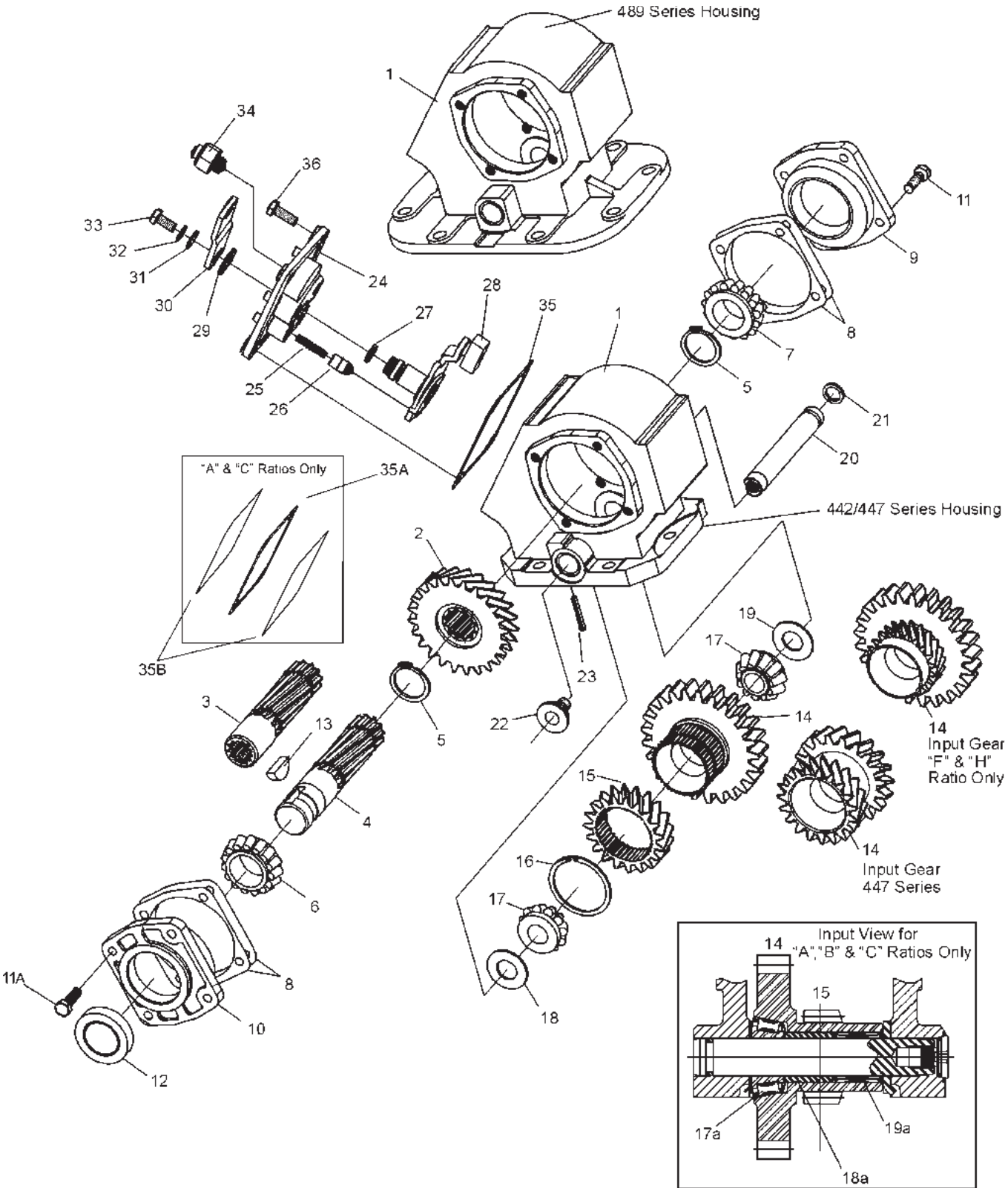
### **Offer of Sale**

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## Bill of Materials

## Power Take-Offs

## 442, 447 &amp; 489 Series

| 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 Charts, Pgs 9-12  | Gear, Output .....                                                     | 1        | 1    | 1    |
| 3    | See Charts, Pgs 15-18 | Shaft, Output Pump Mount .....                                         | 1        | 1    | 1    |
| 4    | 3-P-202               | Shaft, Output ("XD") Standard 1.250" Rd .313" KW .....                 | 1        | 1    | 1    |
|      | 3-P-978               | Shaft, Output ("XD" for "B" Ratio Only) Standard 1.250" Rd .313" KW .. | 1        | -    | -    |
| 5    | 378391                | Lockring (All other shifter types Except "M") .....                    | 2        | 2    | 2    |
| 6    | 550397                | Bearing Cone.....                                                      | 1        | 1    | 1    |
| 7    | 550532                | Bearing Cone.....                                                      | 1        | 1    | 1    |
| 8    | 22-P-127-1            | Gasket, Bearing Cap (.010").....                                       | A.R.     | A.R. | A.R. |
|      | 22-P-127-2            | Gasket, Bearing Cap (.020").....                                       | A.R.     | A.R. | A.R. |
|      | 22-P-127-3            | 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, Pgs 15-18 | Bearing Cap Assembly, Pump Mounts .....                                | 1        | 1    | 1    |
| 11   | 378447-6              | Capscrew, Hex Head (.312" - 18 x 1.00") (Closed Cap Side) .....        | 4        | 4    | 4    |
| 11A  | 378447-6              | Capscrew, Socket Head (.312" - 18 x 1.00") ("XD" Output) .....         | 4        | 4    | 4    |
| 12   | 28-P-216              | Oil Seal, "XD" Output .....                                            | 1        | 1    | 1    |
|      | See Charts, Pgs 15-18 | Oil Seal .....                                                         | 1        | 1    | 1    |
| 13   | 500007-29             | Key, Woodruff ("XD" Output) .....                                      | 1        | 1    | 1    |
| 14   | See Charts, Pgs 9-12  | Gear, Input .....                                                      | 1        | 1    | 1    |
| 15   | See Charts, Pgs 9-12  | Gear, Input Ratio.....                                                 | 1        | 1    | 1    |
| 16   | 379522                | Lock Ring .....                                                        | 1        | 1    | 1    |
| 17   | 550439                | Bearing Cone.....                                                      | 2        | 2    | 2    |
| 17A  | 561006                | Bearing Cone, Tapered ("A", "B" & "C" Only) .....                      | 1        | -    | 1    |
| 18A  | 14-P-75               | Spacer, Input Bearing ("A", "B" & "C" Only) .....                      | 1        | -    | 1    |
| 19A  | 550890                | Bearing, Needle Roller ("A", "B" & "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. |
| 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    |
|      |                       | <b>Cable Control Cover Assemblies</b>                                  |          |      |      |
|      |                       | Ratios "Q", "W" & "X"                                                  |          |      |      |
|      | 329119-1X             | Shifter Cover Ass'y, Wire Control (Ass'y 3 & 6).....                   | 1        | -    | 1    |
|      | 329119-2X             | Shifter Cover Ass'y, Wire Control (Ass'y 4 & 5).....                   | 1        | -    | 1    |
|      |                       | Ratios "F", "H", "L", "R", "S" & "U"                                   |          |      |      |
|      | 329121-1X             | Shifter Cover Ass'y, Wire Control (Ass'y 3 & 6).....                   | 1        | -    | 1    |
|      | 329121-2X             | Shifter Cover Ass'y, Wire Control (Ass'y 4 & 5).....                   | 1        | -    | 1    |
|      |                       | Ratios "A", "B" & "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

See [Pages 24-35](#) for Kit Bill of Materials

Continued on Next Page

**Bill of Materials****Power Take-Offs  
442, 447 & 489 Series**

| Item | Part Number        | Description                                                                | Quantity |     |     |
|------|--------------------|----------------------------------------------------------------------------|----------|-----|-----|
|      |                    |                                                                            | 442      | 447 | 489 |
|      | <b>329151-1X</b>   | Ratios "Q" & "W"                                                           |          |     |     |
|      | <b>329151-2X</b>   | Shifter Cover Assembly, Wire Control (Ass'y 3 & 6).....                    | -        | 1   | -   |
|      |                    | Shifter Cover Assembly, Wire Control (Ass'y 4 & 5).....                    | -        | 1   | -   |
|      | <b>329152-1X</b>   | Ratios "R", "S" & "U"                                                      |          |     |     |
|      | <b>329152-2X</b>   | Shifter Cover Assembly, Wire Control (Ass'y 3 & 6).....                    | -        | 1   | -   |
|      |                    | Shifter Cover Assembly, Wire Control (Ass'y 4 & 5).....                    | -        | 1   | -   |
|      |                    | All the above shift cover assemblies include items 24 thru 35              |          |     |     |
| 24   | <b>34-P-39</b>     | Cover Plate, Shifter - Constant Mesh.....                                  | 1        | 1   | 1   |
|      | <b>34-P-74</b>     | Cover Plate, Shifter .....                                                 | 1        | -   | 1   |
| 25   | <b>37-P-19</b>     | Spring.....                                                                | 1        | 1   | 1   |
| 26   | <b>63-P-16</b>     | Poppet Pin.....                                                            | 1        | 1   | 1   |
| 27   | <b>28-P-191</b>    | O-Ring.....                                                                | 1        | 1   | 1   |
|      |                    | Ratios "Q" & "W" & "X"                                                     |          |     |     |
| 28   | <b>329118-1X</b>   | Post and Plate Assembly, (Ass'y 3 & 6) .....                               | 1        | 1   | 1   |
| 28   | <b>329118-2X</b>   | Post and Plate Assembly, (Ass'y 4 & 5) .....                               | 1        | 1   | 1   |
|      |                    | Ratios "F", "H", "L", "R", "S" & "U"                                       |          |     |     |
| 28   | <b>329120-1X</b>   | Post and Plate Assembly, (Ass'y 3 & 6) .....                               | 1        | 1   | 1   |
| 28   | <b>329120-2X</b>   | Post and Plate Assembly, (Ass'y 4 & 5) .....                               | 1        | 1   | 1   |
|      |                    | Ratios "A", "B" & "C"                                                      |          |     |     |
| 28   | <b>329265-1X</b>   | Post and Plate Assembly, (Ass'y 3 & 6) .....                               | 1        | -   | 1   |
| 28   | <b>329265-2X</b>   | Post and Plate Assembly, (Ass'y 4 & 5) .....                               | 1        | -   | 1   |
| 29   | <b>378004</b>      | Flat Washer .....                                                          | 1        | 1   | 1   |
| 30   | <b>51-P-22</b>     | Shifter Lever.....                                                         | 1        | 1   | 1   |
| 31   | <b>500365-22</b>   | Flat Washer .....                                                          | 1        | 1   | 1   |
| 32   | <b>500356-10</b>   | Lockwasher .....                                                           | 1        | 1   | 1   |
| 33   | <b>500409-6</b>    | Capscrew, Hex Head (.312" - 24 x .625") .....                              | 1        | -   | 1   |
| 34   | <b>379639</b>      | Indicator Switch, Pin Style (Normally Off) .....                           | 1        | -   | 1   |
|      | <b>379652</b>      | Indicator Switch, Pin Style (Normally On) .....                            | -        | 1   | -   |
| 35   | <b>35-P-8</b>      | Gasket, Shifter Cover.....                                                 | 1        | 1   | 1   |
| 35A  | <b>5-A-188</b>     | Gasket, Shifter Cover ("A", "B" & "C" Ratio Only) .....                    | 1        | -   | 1   |
| 35B  | <b>35-P-8</b>      | Gasket, Shifter Cover ("A", "B" & "C" Ratio Only) .....                    | 2        | -   | 2   |
| 36   | <b>378430-9</b>    | Capscrew, Hex Head (.312" - 18 x .875") (Wire, Electric & Air Shift)....   | 4        | 4   | 4   |
|      | <b>378447-6</b>    | Capscrew, Hex Head (.312" - 18 x 1.000") (Wire Shift "A", "B" & "C" Ratio) | 4        | -   | 4   |
| N.S. | <b>68-P-2</b>      | Name Plate .....                                                           | 1        | 1   | 1   |
| N.S. | <b>378422</b>      | Drive Screw, Name Plate .....                                              | 2        | 2   | 2   |
|      |                    | <b>Loose Parts</b>                                                         |          |     |     |
|      |                    | P.T.O. Mounting Kit                                                        |          |     |     |
|      | <b>328170-76X</b>  | Mounting Kit ("X" Mounting Type).....                                      | 1        | 1   | -   |
|      | <b>328170-77X</b>  | Mounting Kit ("Z" Mounting Type).....                                      | 1        | 1   | -   |
|      | <b>7170-72X</b>    | Mounting Kit ("G" Metric Mounting Type) .....                              | 1        | 1   | -   |
|      | <b>328170-201X</b> | Mounting Kit ("G" Metric Mounting Type) .....                              | -        | -   | 1   |
|      | <b>328170-200X</b> | Mounting Kit ("X" & "Z" Mounting) .....                                    | -        | -   | 1   |
|      | <b>328346-10X</b>  | Cable, Wire Control ("W" Shifter) .....                                    | 1        | 1   | 1   |
|      | <b>328380X</b>     | Parts Bag, Wire Control ("W" Shifter).....                                 | 1        | 1   | 1   |
|      | <b>329245X</b>     | Bracket Kit, Wire Control ("C" Shifter) .....                              | 1        | -   | 1   |

N.S. — Not Shown      A.R.—As Required

See [Pages 24-35](#) for Kit Bill of Materials

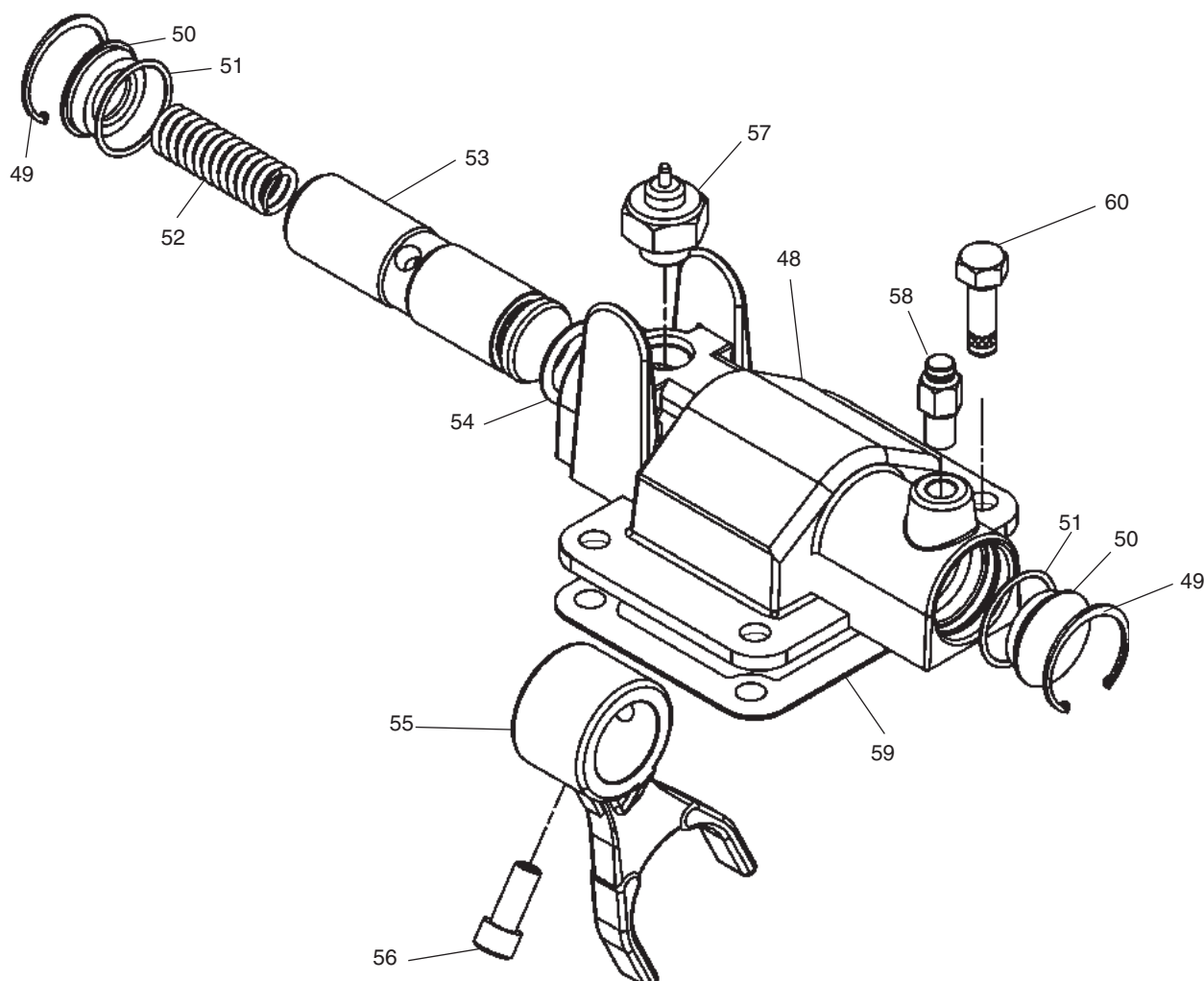
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## Bill of Materials

| Item | Part Number   | Description                                                       | Quantity |     |     |
|------|---------------|-------------------------------------------------------------------|----------|-----|-----|
|      |               |                                                                   | 442      | 447 | 489 |
|      |               | <b>Air Shift Installation Kit</b>                                 |          |     |     |
|      | 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   |
|      | 379319        | Indicator Switch Booth .....                                      | 1        | 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   |
|      | 379640        | Booted Connector ("V" Shifter Option) .....                       | 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   | -   |
|      |               | <b>Service Kits</b>                                               |          |     |     |
|      | 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   |
|      | See Pgs 13-14 | Pump Field Conversion Kit .....                                   | 1        | 1   | 1   |
|      | 328356-67X    | Gasket & Seal Kit .....                                           |          |     |     |
|      | 378391        | Lockring .....                                                    | 2        | -   | -   |
|      | 328356-13X    | Gasket & Seal Kit .....                                           | -        | 1   | -   |
|      | 328356-50X    | Gasket & Seal Kit .....                                           | -        | -   | 1   |
|      | 328356-15X    | Shifter Cover Seal Kit (Wire Control) .....                       | 1        | 1   | 1   |
|      | 328356-69X    | Shifter Cover Seal Kit (Wire Control "A", "B" & "C" Ratio) .....  | 1        | -   | 1   |
|      | 328356-71X    | Shifter Cover Seal Kit (Air Shift) .....                          | 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   |
|      | 328594-14X    | Bearing and Spacer Kit (Pressure Lube)                            |          |     |     |
|      | 328594-15X    | Bearing and Spacer Kit (Non-Pressure Lube "A", "B" & "C" Ratio)   |          |     |     |
|      | 328594-16X    | Bearing and Spacer Kit (Pressure Lube "A", "B" & "C" Ratio) ..... | 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   |

N.S. — Not Shown      A.R.—As Required  
See [Pages 24-35](#) for Kit Bill of Materials

Continued on Next Page



| Item | Part Number                      | Description                                              | Quantity |     |     |
|------|----------------------------------|----------------------------------------------------------|----------|-----|-----|
|      |                                  |                                                          | 442      | 447 | 489 |
|      | <b>329361X</b>                   | Shifter Cover Assembly, Air Shift (Includes Items 48-57) | 1        | -   | 1   |
|      | <b>329363X</b>                   | Shifter Cover Assembly, Air Shift                        | -        | 1   | -   |
| 48   | <b>34-P-130</b>                  | Shifter Cover                                            | 1        | 1   | 1   |
| 49   | <b>378316</b>                    | Snap Ring                                                | 2        | 2   | 2   |
| 50   | <b>378315</b>                    | Cover Plug                                               | 2        | 2   | 2   |
| 51   | <b>28-P-42</b>                   | O-Ring                                                   | 2        | 2   | 2   |
| 52   | <b>37-P-21</b>                   | Shifter Spring                                           | 1        | 1   | 1   |
| 53   | <b>11-P-75</b>                   | Shaft, Shifter                                           | 1        | 1   | 1   |
| 54   | <b>28-P-41</b>                   | O-Ring                                                   | 1        | 1   | 1   |
| 55   | <b>32-P-180</b>                  | Shifter Fork                                             | 1        | 1   | 1   |
| 56   | <b>378447-4</b>                  | Capscrew, Socket Head w/lockpatch (.312" - 18 x .750")   | 1        | 1   | 1   |
| 57   | <b>379639</b>                    | Indicator Switch (Normally OFF)                          | 1        | 1   | 1   |
| 58   | <b>379904</b>                    | Push Connect, for 1/4" tubing                            | 1        | 1   | 1   |
| 59   | <b>35-P-8</b>                    | Gasket, Shifter Cover                                    | 1        | 1   | 1   |
| 60   | <b>378430-8</b>                  | Capscrew, Hex Head (.312" - 18 x .875")                  | 4        | 4   | 4   |
|      | <b>Air Shift Conversion Kits</b> |                                                          |          |     |     |
|      | <b>328390-117X</b>               | Lever or Cable to Air                                    | 1        | -   | 1   |
|      | <b>328390-119X</b>               | Lever or Cable to Electric/Air, 12V                      | 1        | -   | 1   |
|      | <b>328390-120X</b>               | Lever or Cable to Electric/Air, 24V                      | 1        | -   | 1   |
|      | <b>328390-125X</b>               | Wire to Air                                              | -        | 1   | -   |
|      | <b>328390-127X</b>               | Wire to Electric/Air 12V                                 | -        | 1   | -   |
|      | <b>328390-129X</b>               | Wire to Electric/Air 24V                                 | -        | 1   | -   |

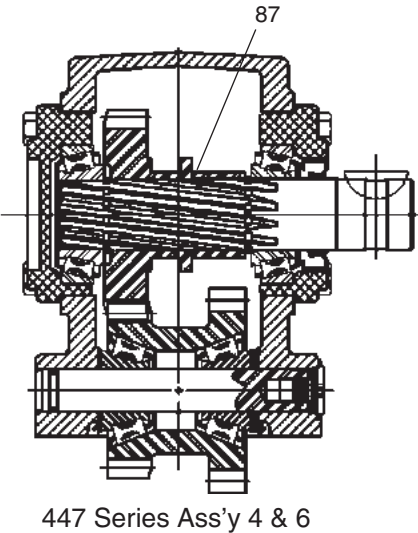
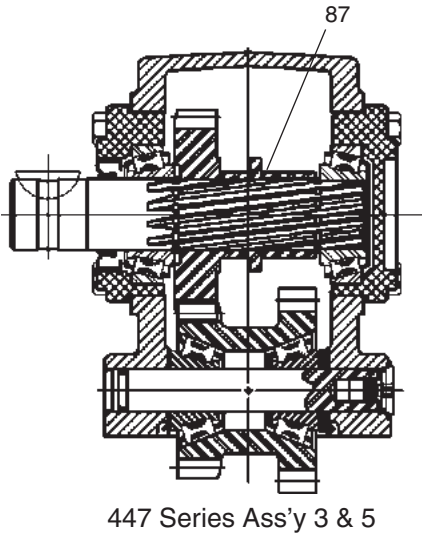
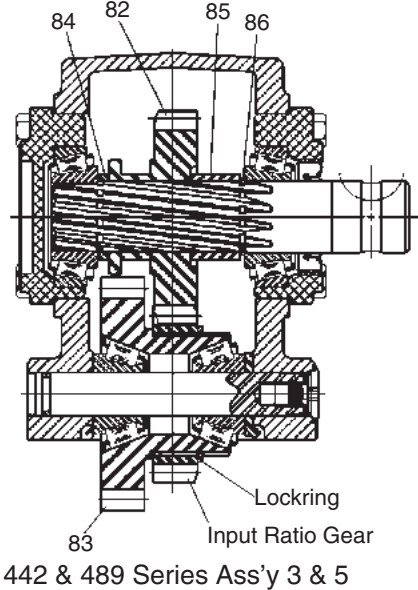
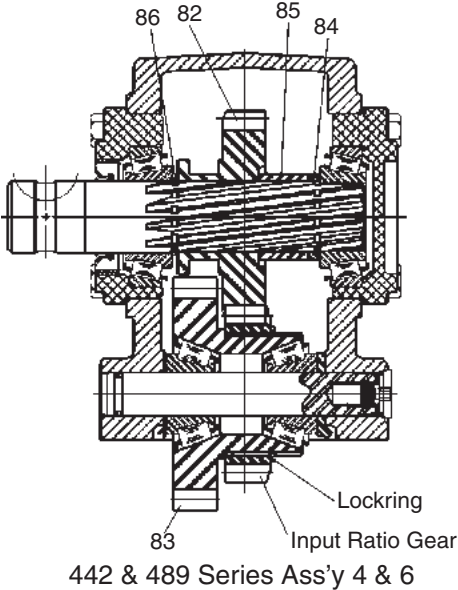
See [Pages 24-35](#) for Kit Bill of Materials



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   | -   |
| 329106-135X | Constant Mesh Kit .....                                                               | 1        | -   | 1   |
| 329106-143X | Shifter Kit (Wire Control 3 & 6, "A", "B" & "C" Ratio; "W" Shift Option) .....        | 1        | -   | 1   |
| 329106-144X | Shifter Kit (Wire Control 4 & 5, "A", "B" & "C" Ratio; "W" Shift Option) .....        | 1        | -   | 1   |
| 329106-145X | Shifter Kit (Wire Control 3 & 6, "A", "B" & "C" Ratio; "X" Shift Option) .....        | 1        | -   | 1   |
| 329106-146X | Shifter Kit (Wire Control 4 & 5, "A", "B" & "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   |

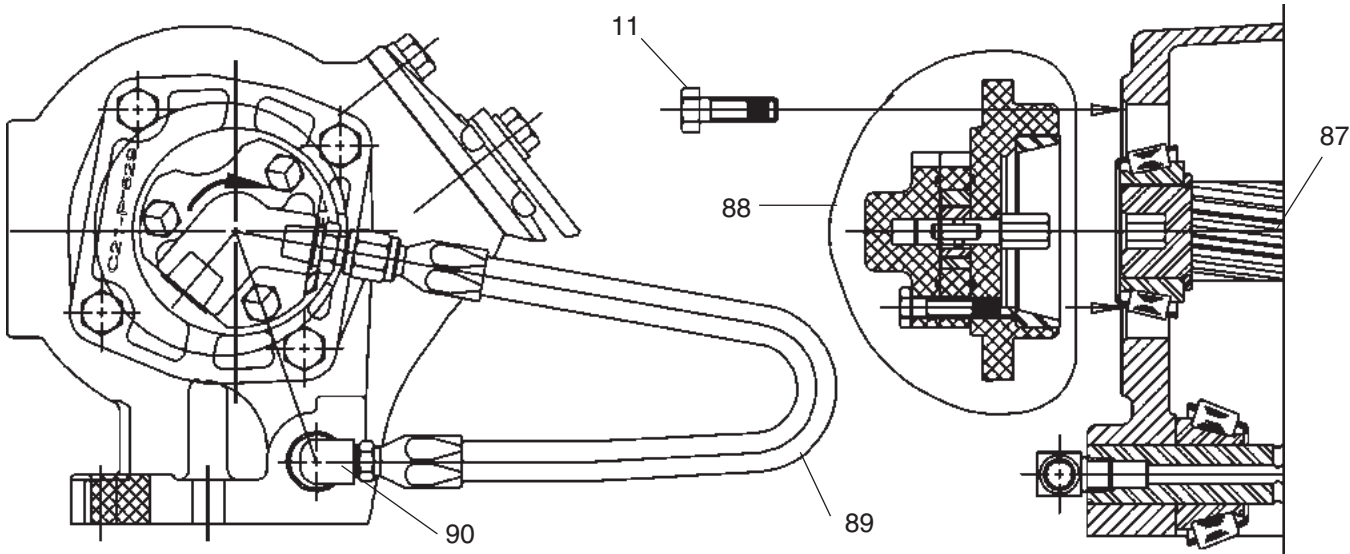
See [Pages 24-35](#) for Kit Bill of Materials



| Item | Part Number         | Description                                  | Quantity |     |     |
|------|---------------------|----------------------------------------------|----------|-----|-----|
|      |                     |                                              | 442      | 447 | 489 |
| 82   | See Charts, Pg 9-12 | Gear, Output.....                            | 1        | -   | 1   |
| 83   | See Charts, Pg 9-12 | 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   |

See [Pages 24-35](#) for Kit Bill of Materials

**Gear Chart — 442 Series****Power Take-Offs****442, 447 & 489 Series****Input Gear Chart — 442 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 |
|---------------|-------------|-------------|----------------------|----------------------|-----------------------------------|------------------------------|------------|----------------------|----------------------|
| 442**AB       | 5-P-1001    | SPUR        | 19                   |                      | 442**EW                           | 5-P-1061                     | Left Helix | 20                   |                      |
| 442**AC       | 5-P-1002    | SPUR        | 19                   |                      | 442**FB (OBS)                     | 5-P-1063                     | Left Helix | 25                   |                      |
| 442**AG       | 5-P-1003    | SPUR        | 22                   |                      | 442**FC                           | 5-P-1064                     | Left Helix | 26                   |                      |
| 442**AH       | 5-P-1004    | SPUR        | 22                   |                      | 442**FE                           | 5-P-1065                     | Left Helix | 29                   |                      |
| 442**AL (OBS) | 5-P-1005    | SPUR        | 22                   |                      | 442**FF (OBS)                     | 5-P-1066                     | Left Helix | 32                   |                      |
| 442**AP       | 5-P-1006    | Left Helix  | 21                   |                      | 442**FK                           | 5-P-1067                     | Left Helix | 21                   |                      |
| 442**AQ       | 5-P-1007    | Left Helix  | 21                   |                      | 442**FL                           | 5-P-1068                     | Left Helix | 25                   |                      |
| 442**AR       | 5-P-1008    | Left Helix  | 21                   |                      | 442**FM                           | 5-P-1069                     | SPUR       | 28                   |                      |
| 442**AW       | 5-P-1009    | Left Helix  | 22                   |                      | 442**FN                           | 5-P-1070                     | Left Helix | 26                   |                      |
| 442**AX       | 5-P-1010    | Left Helix  | 22                   |                      |                                   |                              |            |                      |                      |
| 442**BA       | 5-P-1011    | Left Helix  | 23                   |                      | 442**FP                           | 5-P-1071                     | Left Helix | 23                   |                      |
| 442**BC       | 5-P-1012    | Left Helix  | 18                   |                      | 442**FQ (OBS)                     | 5-P-1072                     | Left Helix | 21                   |                      |
| 442**BE (OBS) | 5-P-1013    | SPUR        | 27                   |                      | 442**FW                           | 5-P-1098                     | Left Helix | 28                   |                      |
|               |             |             |                      |                      | 442**GQ                           | 5-P-1150                     | Left Helix | 26                   |                      |
| 442**BG       | 5-P-1015    | Left Helix  | 23                   |                      | 442**GS                           | 5-P-1152                     | Left Helix | 29                   |                      |
| 442**BH       | 5-P-1016    | Right Helix | 25                   |                      | 442**GR (OBS)                     | 5-P-1157                     | SPUR       | 23                   |                      |
| 442**BJ       | 5-P-1017    | Left Helix  | 25                   |                      |                                   |                              |            |                      |                      |
| 442**BK       | 5-P-1018    | Left Helix  | 23                   |                      | 442**HW                           | 5-P-1235                     | SPUR       | 35                   |                      |
| 442**BL       | 5-P-1019    | Right Helix | 22                   |                      | 442**HX                           | 5-P-1236                     | SPUR       | 32                   |                      |
| 442**BM       | 5-P-1020    | Left Helix  | 22                   |                      | 442**HY                           | 5-P-1237                     | Left Helix | 26                   |                      |
| 442**BN       | 5-P-1021    | Left Helix  | 22                   |                      | 442**JA                           | 5-P-1243                     | Left Helix | 27                   |                      |
| 442**BP       | 5-P-1022    | Right Helix | 26                   |                      | 442**IT                           | Assembled Without Input Gear |            |                      |                      |
| 442**BQ       | 5-P-1023    | Left Helix  | 25                   |                      | 442**JD                           | 5-P-1248                     | Left Helix | 20                   |                      |
| 442**BR       | 5-P-1024    | Right Helix | 26                   |                      | 442**JG                           | 5-P-1256                     | Left Helix | 28                   |                      |
| 442**BS       | 5-P-1025    | Left Helix  | 26                   |                      | 442**JH                           | 5-P-1257                     | Left Helix | 29                   |                      |
| 442**BU (OBS) | 5-P-1026    | SPUR        | 33                   |                      | 442**JK                           | 5-P-1261                     | Left Helix | 24                   |                      |
| 442**BY       | 5-P-1027    | Right Helix | 26                   |                      | 442**JM                           | 5-P-1263                     | Left Helix | 22                   |                      |
| 442**BZ       | 5-P-1028    | Left Helix  | 26                   |                      | 442**JP                           | 5-P-1268                     | Left Helix | 33                   |                      |
| 442**CB       | 5-P-1029    | Left Helix  | 25                   |                      | 442**JS                           | 5-P-1310                     | Left Helix | 20                   |                      |
|               |             |             |                      |                      | 442**JT (OBS)                     | 5-P-1313                     | Left Helix | 19                   |                      |
| 442**CD       | 5-P-1031    | Left Helix  | 27                   |                      | 442**JU                           | 5-P-1316                     | Left Helix | 25                   |                      |
|               |             |             |                      |                      | 442**JW                           | 5-P-1319                     | Left Helix | 23                   |                      |
| 442**CM (OBS) | 5-P-1035    | SPUR        | 22                   |                      | 442**KC                           | 5-P-1341                     | Left Helix | 41                   |                      |
| 442**CR       | 5-P-1036    | Left Helix  | 17                   |                      | 442**KH                           | 5-P-1343                     | Left Helix | 32                   |                      |
|               |             |             |                      |                      | 442**KJ                           | 5-P-1405                     | Left Helix | 33                   | (C1)                 |
| 442**DA       | 5-P-1037    | SPUR        | 23                   |                      | 442**KL                           | 5-P-1407                     | Left Helix | 29                   | (C2)                 |
| 442**DB       | 5-P-1038    | SPUR        | 39                   |                      | 442**KN                           | 5-P-1383                     | Left Helix | 27                   | (D1)                 |
| 442**DC       | 5-P-1039    | SPUR        | 19                   |                      | 442**KX                           | 5-P-1411                     | Left Helix | 26                   |                      |
| 442**DD       | 5-P-1040    | SPUR        | 20                   |                      | <b>Input Gears "A" Ratio Only</b> |                              |            |                      |                      |
| 442**DH       | 5-P-1041    | Left Helix  | 21                   |                      | 442*AAB                           | 5-P-1279                     | SPUR       | 19                   | 14                   |
| 442**DJ       | 5-P-1042    | Left Helix  | 28                   |                      | 442*AAH                           | 5-P-1280                     | SPUR       | 22                   | 14                   |
| 442**DK       | 5-P-1043    | Left Helix  | 26                   |                      | 442*AAP                           | 5-P-1282                     | Left Helix | 21                   | 14                   |
|               |             |             |                      |                      | 442*AAR                           | 5-P-1283                     | Left Helix | 21                   | 14                   |
| 442**DM       | 5-P-1045    | Left Helix  | 17                   |                      | 442*ADA                           | 5-P-1284                     | SPUR       | 23                   | 14                   |
| 442**DN       | 5-P-1046    | Left Helix  | 19                   |                      | 442*AES                           | 5-P-1285                     | Left Helix | 22                   | 14                   |
| 442**DP       | 5-P-1047    | Left Helix  | 27                   |                      | 442*AJA                           | 5-P-1366                     | Left Helix | 27                   | 14                   |
| 442**DQ       | 5-P-1048    | Left Helix  | 20                   |                      | <b>Input Gears "B" Ratio Only</b> |                              |            |                      |                      |
|               |             |             |                      |                      | 442*BHV                           | 5-P-1358                     | SPUR       | 24                   | 14                   |
| 442**DU       | 5-P-1050    | Left Helix  | 28                   |                      | 442*BAH                           | 5-P-1418                     | SPUR       | 22                   | 14                   |
|               |             |             |                      |                      | <b>Input Gears "C" Ratio Only</b> |                              |            |                      |                      |
| 442**DX       | 5-P-1052    | Left Helix  | 26                   |                      | 442*CAB                           | 5-P-1286                     | SPUR       | 19                   | 17                   |
| 442**DY (OBS) | 5-P-1053    | Left Helix  | 16                   |                      | 442*CAH                           | 5-P-1287                     | SPUR       | 22                   | 17                   |
| 442**EA       | 5-P-1054    | Left Helix  | 26                   |                      | 442*CJA                           | 5-P-1368                     | Left Helix | 27                   | 17                   |
| 442**EC       | 5-P-1055    | Left Helix  | 36                   |                      | 442*CAP                           | 5-P-1289                     | Left Helix | 21                   | 17                   |
| 442**ED       | 5-P-1056    | Left Helix  | 34                   |                      | 442*CAR                           | 5-P-1290                     | Left Helix | 21                   | 17                   |
| 442**EL       | 5-P-1075    | Right Helix | 30                   |                      | 442*CDA                           | 5-P-1291                     | SPUR       | 23                   | 17                   |
| 442**EP       | 5-P-1057    | Right Helix | 35                   |                      | 442*CES                           | 5-P-1292                     | Left Helix | 22                   | 17                   |
| 442**EQ       | 5-P-1058    | Left Helix  | 30                   |                      | <b>Input Gears "F" Ratio Only</b> |                              |            |                      |                      |
| 442**ES       | 5-P-1059    | Left Helix  | 22                   |                      | 442*FAB                           | 5-P-1076                     | SPUR       | 19                   | 21                   |
| 442**EV       | 5-P-1060    | SPUR        | 40                   |                      | 442*FAH                           | 5-P-1077                     | SPUR       | 22                   | 21                   |
|               |             |             |                      |                      | 442*FAP                           | 5-P-1079                     | Left Helix | 21                   | 21                   |

Continued on Next Page

**Input Gear Chart — 442 Series (Continued)**

| 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 |
|--------------|-------------|-------------|----------------------|----------------------|-----------------------------------|-------------|------------|----------------------|----------------------|
| 442*FAR      | 5-P-1080    | Left Helix  | 21                   | 21                   | 442*FFE                           | 5-P-1096    | Left Helix | 29                   | 21                   |
| 442*FBC      | 5-P-1081    | Left Helix  | 18                   | 21                   | 442*FFN                           | 5-P-1097    | Left Helix | 26                   | 21                   |
| 442*FBG      | 5-P-1082    | Left Helix  | 23                   | 21                   | 442*FGQ                           | 5-P-1149    | Left Helix | 26                   | 21                   |
| 442*FBM      | 5-P-1083    | Left Helix  | 22                   | 21                   | 442*FGS                           | 5-P-1151    | Left Helix | 29                   | 21                   |
| 442*FBQ      | 5-P-1084    | Left Helix  | 25                   | 21                   | 442*FHV (H)                       | 5-P-1300    | SPUR       | 24                   | 21                   |
| 442*FDA      | 5-P-1085    | SPUR        | 23                   | 21                   | 442*FJS                           | 5-P-1311    | Left Helix | 20                   | 21                   |
| 442*FDJ      | 5-P-1086    | Left Helix  | 28                   | 21                   | 442*FJT                           | 5-P-1314    | Left Helix | 19                   | 21                   |
| 442*FDN      | 5-P-1087    | Left Helix  | 19                   | 21                   | 442*FJU                           | 5-P-1317    | Left Helix | 25                   | 21                   |
| 442*FDU      | 5-P-1088    | Left Helix  | 28                   | 21                   | 442*FJW                           | 5-P-1320    | Left Helix | 23                   | 21                   |
| 442*FEC      | 5-P-1089    | Left Helix  | 36                   | 21                   | 442*FJA                           | 5-P-1340    | Left Helix | 27                   | 21                   |
| 442*FED      | 5-P-1090    | Left Helix  | 34                   | 21                   | <b>Input Gears "H" Ratio Only</b> |             |            |                      |                      |
| 442*FEP      | 5-P-1091    | Right Helix | 35                   | 21                   | 442*HAH                           | 5-P-1364    | SPUR       | 22                   | 23                   |
| 442*FES      | 5-P-1092    | Left Helix  | 22                   | 21                   | 442*HDA                           | 5-P-1365    | SPUR       | 23                   | 23                   |
| 442*FET      | 5-P-1093    | Left Helix  | 19                   | 21                   | 442*HJA                           | 5-P-1342    | Left Helix | 27                   | 23                   |
| 442*FEV      | 5-P-1094    | SPUR        | 40                   | 21                   |                                   |             |            |                      |                      |
| 442*FEW      | 5-P-1095    | Left Helix  | 20                   | 21                   |                                   |             |            |                      |                      |

**Input Ratio Gear Chart — 442 Series**

| Ratio | Part Number | No. Teeth "B" |
|-------|-------------|---------------|
| 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 "C" |
|-------|-------------|---------------|
| 442*A | 2-P-791     | 39            |
| 442*B | 2-P-833     | 39            |
| 442*C | 2-P-792     | 37            |
| 442*F | 2-P-726     | 37            |
| 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            |

**Geared Adapter Gears — 442 Series**

| Model Number | Part Number | Gear Type   | No. Teeth | Adapter Input Gear | Part Number | Gear Type  | No. Teeth |
|--------------|-------------|-------------|-----------|--------------------|-------------|------------|-----------|
| 442**GX      | 5-P-1183    | Right Helix | 21        | AP                 | 5-P-1006    | Left Helix | 21        |
| 442**GY      | 5-P-1184    | Right Helix | 21        | AR                 | 5-P-1008    | Left Helix | 21        |
| 442**GZ      | 5-P-1185    | Right Helix | 22        | AW                 | 5-P-1009    | Left Helix | 22        |
| 442**HA      | 5-P-1186    | Left Helix  | 22        | AX                 | 5-P-1010    | Right Hand | 22        |
| 442**HB      | 5-P-1187    | Right Helix | 23        | BG                 | 5-P-1015    | Left Helix | 23        |
| 442**HC      | 5-P-1188    | Right Helix | 22        | BM                 | 5-P-1020    | Left Helix | 22        |
| 442**HD      | 5-P-1189    | Right Helix | 25        | CB                 | 5-P-1029    | Left Helix | 25        |
| 442**HE      | 5-P-1190    | Right Helix | 27        | CD                 | 5-P-1031    | Left Helix | 27        |
| 442**HF      | 5-P-1191    | Right Helix | 17        | DM                 | 5-P-1045    | Left Helix | 17        |
| 442**HG      | 5-P-1192    | Right Helix | 19        | DN                 | 5-P-1046    | Left Helix | 19        |
| 442**HH      | 5-P-1193    | Right Helix | 28        | DU                 | 5-P-1050    | Left Helix | 28        |
| 442**HJ      | 5-P-1194    | Right Helix | 36        | EC                 | 5-P-1055    | Left Helix | 36        |
| 442**HK      | 5-P-1195    | Right Helix | 34        | ED                 | 5-P-1056    | Left Helix | 34        |
| 442**HL      | 5-P-1196    | Right Helix | 22        | ES                 | 5-P-1059    | Left Helix | 22        |
| 442**HM      | 5-P-1197    | Right Helix | 20        | EW                 | 5-P-1061    | Left Helix | 20        |
| 442**HP      | 5-P-1199    | Right Helix | 26        | FC                 | 5-P-1064    | Left Helix | 26        |
| 442**HQ      | 5-P-1200    | Right Helix | 29        | FE                 | 5-P-1065    | Left Helix | 29        |
| 442**HR      | 5-P-1201    | Right Helix | 26        | FN                 | 5-P-1070    | Left Helix | 26        |
| 442**JB      | 5-P-1244    | Right Helix | 26        | HY                 | 5-P-1237    | Left Helix | 26        |
| 442**JC      | 5-P-1247    | Right Helix | 27        | DJA                | 5-P-1243    | Left Helix | 27        |
| 442**JE      | 5-P-1249    | Right Helix | 20        | JD                 | 5-P-1248    | Left Helix | 20        |
| 442**JL      | 5-P-1262    | Right Helix | 24        | JK                 | 5-P-1261    | Left Helix | 24        |
| 442**JN      | 5-P-1264    | Right Helix | 22        | JM                 | 5-P-1263    | Left Helix | 22        |
| 442**JQ      | 5-P-1269    | Right Helix | 33        | JP                 | 5-P-1268    | Left Helix | 33        |

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**Gear Chart — 442 Sereis & 447Series****442, 447 & 489 Series****Geared Adapter Gears — 442 Series**

| Model Number | Part Number | Gear Type   | No. Teeth | Adapter Input Gear | Part Number | Gear Type  | No. Teeth |
|--------------|-------------|-------------|-----------|--------------------|-------------|------------|-----------|
| 442**JY      | 5-P-1312    | Right Helix | 20        | JS                 | 5-P-1310    | Left Helix | 20        |
| 442**KA      | 5-P-1318    | Right Helix | 25        | JU                 | 5-P-1316    | Left Helix | 25        |
| 442**KB      | 5-P-1321    | Right Helix | 23        | JW                 | 5-P-1319    | Left Helix | 23        |
| 442**KK      | 5-P-1406    | Right Helix | 33        | KJ                 | 5-P-1405    | Left Helix | 33        |
| 442**KM      | 5-P-1408    | Right Helix | 29        | KL                 | 5-P-1407    | Left Helix | 29        |
| 442**KP      | 5-P-1384    | Right Helix | 27        | KN                 | 5-P-1383    | Left Helix | 27        |

**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*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                    |
| 447GWFH      | 5-P-900             | Right Helix | 20                    | 26                     | 2-P-700              | 17                    |
| 447GWFG      | 5-P-901             | Right Helix | 18                    | 26                     | 2-P-700              | 17                    |
| 447*WFY      | 5-P-976             | Spur        | 38                    | 14                     | 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*WJX      | 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*H | See Chart Above |           |
| 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        |
| 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        |

**Direct Mount Pump Conversion Kits****Power Take-Offs  
442, 447 & 489 Series**

| 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<br>("B" Ratio Only) | XD to AK 328591-28X<br>XD to AK 329436-7X                          |
| AZ            | Non-Standard                 | 1-1/4" - 14 Spline                   | XD to AZ 328591-70X                                                |
| FF            | S.A.E. "B" 2 or 4-Bolt       | 7/8" Rd w/1/4" Key                   | XD to FF 328591-29X                                                |
| GA            | Rotatable S.A.E. "B" 2-Bolt  | ● 7/8" - 13 Spline                   | XD to GA 328591-72X<br>XR to GA 328591-73X<br>RA to GA 328591-106X |
| GB            | Rotatable S.A.E. "B" 4-Bolt  | ● 7/8" - 13 Spline                   | XD to GB 328591-74X<br>XR to GB 328591-75X<br>RB to GB 328591-107X |
| GF            | S.A.E. "BB" 2 or 4-Bolt      | ● 1.0" - 15 Spline                   | XD to GF 328591-71X<br>AF to GF 328591-108X                        |
| GH            | Rotatable S.A.E. "BB" 2-Bolt | ● 1.0" - 15 Spline                   | XD to GH 328591-116X<br>RF to GH 328591-114X                       |
| GJ            | S.A.E. "B" 4-Bolt Rotatable  | ● 1.0" - 15 Spline                   | XD to GJ 328591-138X<br>RE to GJ 328591-114X                       |
| GK            | S.A.E. "B" 2 or 4-Bolt       | ● 7/8" - 13 Spline                   | XD to GK 328591-89X<br>XK to GK 328591-86X                         |
| GP            | S.A.E. "A" Pilot 2 or 4-Bolt | ● 7/8" - 13 Spline                   | XD to GP 328591-90X<br>XP to GP 328591-86X                         |
| ■ GQ          | S.A.E. "B" 2 or 4-Bolt       | ● 7/8" - 13 Spline                   | XD to GQ 328591-91X<br>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<br>XY to GY 328591-89X                         |
| GZ            | Non-Standard 4-Bolt          | ● 1-1/4" - 14 Spline                 | XD to GZ 328591-93X<br>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" Rd                            | XD to LD                                                           |
| » LE          | 6-Bolt Rd                    | 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                                                |

**NOTE:** Check Current Price Sheet for Availability of Output Options

Continued on Next Page

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

● Shaft with Grease Fitting

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

» Lube Pump Option



**Direct Mount Pump Conversion Kits (Cont'd) 442, 447 & 489 Series**

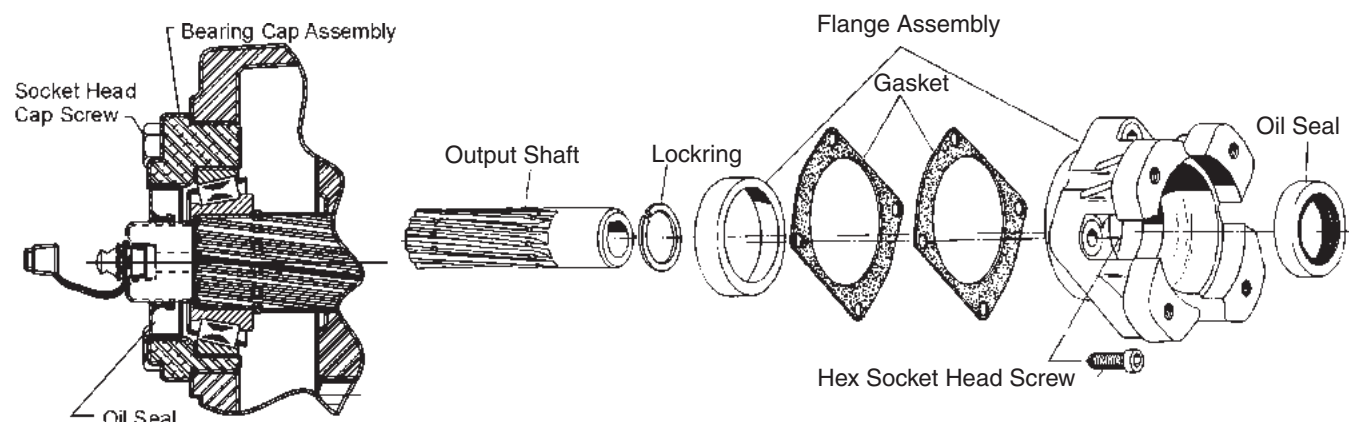
| Flange Suffix | Flange Type                    | Shaft Type          | Conversion Kit       |
|---------------|--------------------------------|---------------------|----------------------|
| PA            | Parker P2-060 Pump Mounting    | 7/8" - 13 Spline    | XD to PA 328591-143X |
| PF            | 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  |
|               |                                | ("B" Ratio Only)    | XR to RA 328591-53X  |
|               |                                |                     | XD to RA 329436-1X   |
| RB            | Rotatable S.A.E. "B" 4-Bolt    | 7/8" - 13 Spline    | XD to RB 328591-56X  |
|               |                                | ("B" Ratio Only)    | XR to RB 328591-54X  |
|               |                                |                     | XR to RB 329436-2X   |
| 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 |
|               |                                | ("B" Ratio Only)    | XD to RD 329436-8X   |
| 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 |
| SQ            | S.A.E. "B" 4-Bolt              | 7/8" - 13 Spline    | XD to SQ 328591-149X |
|               |                                | ("B" Ratio Only)    | XD to SQ 329436-9X   |
| 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" Rd w/3/16" Key | XD to XG 328591-10X  |
| XJ            | Non-Standard 2-Bolt            | 3/4" Rd             | XD to XJ 328591-11X  |
| XK            | S.A.E. "B" 2 or 4-Bolt         | 7/8" - 13 Spline    | XD to XK 328591-16X  |
|               |                                | ("B" Ratio Only)    | XD to XK 329436-3X   |
| XL            | Non-Standard 2-Bolt            | 7/8" - 13 Spline    | XD to XL 328591-18X  |
|               |                                | ("B" Ratio Only)    | XD to XL 329436-4X   |
| XO            | S.A.E. "A" Pilot 2-Bolt        | 3/4" Rd w/3/16" Key | XD to XO 328591-26X  |
| XP            | S.A.E. "A" Pilot 2-Bolt        | 7/8" - 13 Spline    | XD to XP 328591-23X  |
|               |                                | ("B" Ratio Only)    | XD to XP 329436-5X   |
| ■ XQ          | S.A.E. "B" 2 or 4-Bolt         | 7/8" - 13 Spline    | XD to XQ 328591-17X  |
|               |                                | ("B" Ratio Only)    | XD to XQ 329436-6X   |
| XR            | CHELSEA SPECIAL 4-Bolt         | 7/8" - 13 Spline    | XD to XR 328591-52X  |
| XV            | Rd Shaft                       | 1-1/4" w/Set Screw  | XD to XV 328591-130X |
| XX            | S.A.E Tapered Shaft            | 1-1/4" w/5/16" Key  | XD to XX 328591-122X |
| XY            | DIN 5462 Pump Mounting         | DIN 5462            | XD to XY 328591-121X |

**NOTE:** Check Current Price Sheet for Availability of Output Options

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

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

## Output Options Bill of Materials

Power Take-Offs  
442, 447 & 489 Series

| Output Flange | Part Number | Description                                                   | Qty  |
|---------------|-------------|---------------------------------------------------------------|------|
| AA            | 3-P-862     | Output Shaft .....                                            | 1    |
|               | 28-P-216    | Oil Seal .....                                                | 1    |
|               | 239102X     | Bearing Cap Ass'y (21-P-532) .....                            | 1    |
|               | 378447-8    | Socket Head Capscrew (.312" - 18 x 1.5") .....                | 4    |
| AF            | 3-P-854     | Output Shaft .....                                            | 1    |
|               | 28-P-219    | Oil Seal .....                                                | 1    |
|               | 329088X     | Bearing Cap Ass'y (21-P-522) .....                            | 1    |
|               | 378447-10   | Socket Head Capscrew (.312" - 18 x 2.0") .....                | 4    |
| AK            | 3-P-282     | Output Shaft .....                                            | 1    |
|               | 3-P-979     | Output Shaft ("B" Ratio Only) .....                           | 1    |
|               | 28-P-216    | Oil Seal .....                                                | 1    |
|               | 328989X     | Bearing Cap Ass'y (21-P-472) .....                            | 1    |
| AZ            | 3-P-844     | Output Shaft .....                                            | 1    |
|               | 28-P-275    | Oil Seal .....                                                | 1    |
|               | 329052X     | Bearing Cap Ass'y (21-P-508) .....                            | 1    |
|               | 378447-11   | Socket Head Capscrew (.312" - 18 x 2.5") .....                | 4    |
| FF            | 3-P-851     | Output Shaft .....                                            | 1    |
|               | 28-P-219    | Oil Seal .....                                                | 1    |
|               | 329088X     | Bearing Cap Ass'y (21-P-522) .....                            | 1    |
|               | 378447-10   | Socket Head Capscrew (.312" - 18 x 2.0") .....                | 4    |
| (1) G*        | 3-P-923X    | "GA", "GB", "GR", Shaft Assemblies .....                      | 1 or |
|               | 3-P-981X    | "GE" Shaft Assembly .....                                     | 1 or |
|               | 3-P-921X    | "GF" Shaft Assemblies .....                                   | 1 or |
|               | 3-P-933X    | "GQ", "GK", "GP" Shaft Assemblies .....                       | 1 or |
|               | 3-P-938X    | "GY" Shaft Assemblies .....                                   | 1 or |
|               | 3-P-939X    | "GZ" Shaft Assemblies .....                                   | 1 or |
|               | 3-P-941X    | "GH", "GJ" Shaft Assemblies .....                             | 1    |
|               | 500168-2    | Lube Fitting (Zerk) .....                                     | 1    |
|               | 379819      | Grease Fitting Cap .....                                      | 1    |
|               | 379688      | Coupling Lube Pack (5/8 fl.oz.) .....                         | 1    |
|               | 28-P-268    | Rear Bearing Cap Shaft Oil Seal .....                         | 1    |
|               | 328273X     | Rear Bearing Cap Assembly .....                               | 1    |
|               | 378447-6    | Rear Bearing Cap Hex Head Capscrew (.312" - 18" x 1.0") ..... | 4    |
| L*            | 3-P-857     | Output Shaft ("LD") .....                                     | 1    |
|               | 3-P-858     | Output Shaft ("LA", "LB", "LC", "LF") .....                   | 1    |
|               | 329091X     | Lube Pump & Bearing Cap Ass'y .....                           | 1    |
|               | 329092X     | Pressure Lube Hose Ass'y .....                                | 1    |
|               | 500841-1    | Elbow 90° Street .....                                        | 1    |
|               | 378447-6    | Hex Capscrew (.312" - 18 x 1.0") .....                        | 4    |

(1) NOTE: For Output Flange Information see the related flange Bills of Material:

GA=RA, GB=RB, GF=AF, GR=XR, GK=XK, GP=XP, GQ=XQ, GY=XY, GZ=AZ, GH=RF, GJ=RE &amp; GE=XE

Continued on following page

## Output Options Bill of Materials

## Power Take-Offs

## 442, 447 &amp; 489 Series

| Output Flange | Part Number | Description                                    | Qty |
|---------------|-------------|------------------------------------------------|-----|
| PA            | 3-P-283     | Output Shaft .....                             | 1   |
|               | 28-P-216    | Oil Seal .....                                 | 1   |
|               | 329195X     | Bearing Cap Ass'y (21-P-574) .....             | 1   |
|               | 21-P-661    | Pump Flange .....                              | 1   |
|               | 378447-6    | Socket Head Capscrew (.312" - 18 x 1.0") ..... | 4   |
|               | 328170-207X | Capscrew Bag Kit .....                         | 1   |
|               | 378447-6    | Socket Head Capscrew (.312" - 18 x 1.0") ..... | 3   |
| PF            | 3-P-924     | Output Shaft .....                             | 1   |
|               | 28-P-219    | Oil Seal .....                                 | 1   |
|               | 329264X     | Bearing Cap Ass'y (21-P-629) .....             | 1   |
|               | 21-P-661    | Pump Flange .....                              | 1   |
|               | 378447-6    | Socket Head Capscrew (.312" - 18 x 1.0") ..... | 4   |
|               | 28-P-271    | O-Ring .....                                   | 1   |
| RA            | 3-P-283     | Output Shaft .....                             | 1   |
|               | 3-P-980     | Output Shaft ("B" Ratio Only) .....            | 1   |
|               | 28-P-216    | Oil Seal .....                                 | 1   |
|               | 329195X     | Bearing Cap Ass'y (21-P-574) .....             | 1   |
|               | 21-P-628    | Pump Flange (Ship Loose w/Unit) .....          | 1   |
|               | 378447-6    | Socket Head Capscrew .....                     | 4   |
|               | 328170-207X | Capscrew Bag Kit .....                         | 1   |
|               | 378170-6    | Socket Head Capscrew .....                     | 3   |
| RB            | 3-P-283     | Output Shaft .....                             | 1   |
|               | 3-P-980     | Output Shaft ("B" Ratio Only) .....            | 1   |
|               | 28-P-216    | Oil Seal .....                                 | 1   |
|               | 329195X     | Bearing Cap Ass'y (21-P-574) .....             | 1   |
|               | 21-P-572    | Pump Flange (Ship Loose w/Unit) .....          | 1   |
|               | 378447-6    | Socket Head Capscrew .....                     | 4   |
|               | 328170-207X | Capscrew Bag Kit .....                         | 1   |
|               | 378170-6    | Socket Head Capscrew .....                     | 3   |
| RC            | 3-P-800     | Output Shaft .....                             | 1   |
|               | 28-P-216    | Oil Seal .....                                 | 1   |
|               | 329322X     | Bearing Cap Ass'y (21-P-640) .....             | 1   |
|               | 21-P-638    | Pump Flange .....                              | 1   |
|               | 378447-6    | Socket Head Capscrew (.312" - 18 x 1.0") ..... | 4   |
|               | 328170-210X | Capscrew Bag Kit .....                         | 1   |
|               | 378447-4    | Socket Head Capscrew (.312" - 18 x .75") ..... | 6   |
| RE            | 3-P-924     | Output Shaft .....                             | 1   |
|               | 28-P-219    | Oil Seal .....                                 | 1   |
|               | 329264X     | Bearing Cap Ass'y (21-P-629) .....             | 1   |
|               | 21-P-654    | Pump Flange .....                              | 1   |
|               | 378447-6    | Socket Head Capscrew (.312" - 18 x 1.0") ..... | 4   |
|               | 28-P-271    | O-Ring .....                                   | 1   |
| RF            | 3-P-924     | Output Shaft .....                             | 1   |
|               | 28-P-219    | Oil Seal .....                                 | 1   |
|               | 329264X     | Bearing Cap Ass'y (21-P-629) .....             | 1   |
|               | 21-P-626    | Pump Flange .....                              | 1   |
|               | 378447-6    | Socket Head Capscrew (.312" - 18 x 1.0") ..... | 7   |
|               | 28-P-271    | O-Ring .....                                   | 1   |
| RY            | 3-P-768     | Output Shaft .....                             | 1   |
|               | 21-P-625    | Pump Flange .....                              | 1   |
|               | 329356X     | Bearing Cap Ass'y (21-P-532) .....             | 1   |
|               | 378447-8    | Socket Head Capscrew (.312" - 18 x 1.5") ..... | 4   |
|               | 329355-1X   | Standard Loose Parts Kit .....                 | 1   |
|               | 379740-6    | Socket Head Capscrew (M10 1.5" x .984") .....  | 3   |
|               | 22-P-100    | Gasket .....                                   | 1   |
|               | 22-P-84     | Gasket .....                                   | 1   |
|               | 379231      | Pipe Plug .....                                | 2   |

Continued on following page

## Output Options Bill of Materials

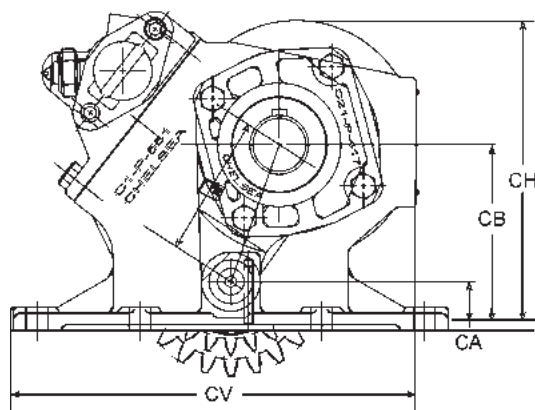
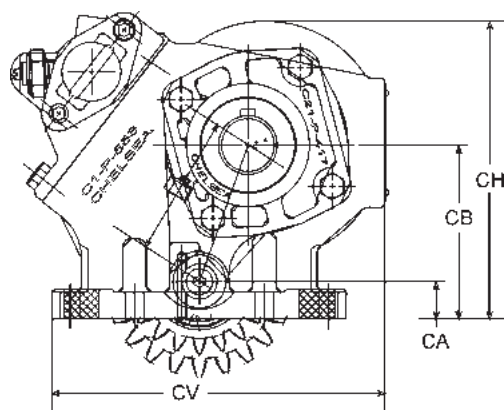
Power Take-Offs  
442, 447 & 489 Series

| Output Flange | Part Number | Description                                     | Qty |
|---------------|-------------|-------------------------------------------------|-----|
| XE            | 3-P-800     | Output Shaft .....                              | 1   |
|               | 28-P-216    | Oil Seal .....                                  | 1   |
|               | 328328X     | Bearing Cap Ass'y (21-P-161) .....              | 1   |
|               | 378447-8    | Socket Head Capscrew (.312" - 18 x 1.5") .....  | 4   |
| XG            | 3-P-281     | Output Shaft .....                              | 1   |
|               | 28-P-216    | Oil Seal .....                                  | 1   |
|               | 328580X     | Bearing Cap Ass'y (21-P-259) .....              | 1   |
|               | 378447-8    | Socket Head Capscrew (.312" - 18 x 1.5") .....  | 4   |
| XJ            | 3-P-284     | Output Shaft .....                              | 1   |
|               | 28-P-216    | Oil Seal .....                                  | 1   |
|               | 328580X     | Bearing Cap Ass'y (21-P-259) .....              | 1   |
|               | 378447-8    | Socket Head Capscrew (.312" - 18 x 1.5") .....  | 4   |
| XK            | 3-P-282     | Output Shaft .....                              | 1   |
|               | 3-P-979     | Output Shaft ("B" Ratio Only) .....             | 1   |
|               | 28-P-216    | Oil Seal .....                                  | 1   |
|               | 328333X     | Bearing Cap Ass'y (21-P-424) & (28-P-216) ..... | 1   |
|               | 378447-8    | Socket Head Capscrew (.312" - 18 x 1.5") .....  | 4   |
| XL            | 3-P-283     | Output Shaft .....                              | 1   |
|               | 3-P-980     | Output Shaft ("B" Ratio Only) .....             | 1   |
|               | 28-P-216    | Oil Seal .....                                  | 1   |
|               | 328580X     | Bearing Cap Ass'y (21-P-259) .....              | 1   |
|               | 378447-8    | Socket Head Capscrew (.312" - 18 x 1.5") .....  | 4   |
| XO            | 3-P-284     | Output Shaft .....                              | 1   |
|               | 28-P-216    | Oil Seal .....                                  | 1   |
|               | 328328X     | Bearing Cap Ass'y (21-P-161) .....              | 1   |
|               | 378447-8    | Socket Head Capscrew (.312" - 18 x 1.5") .....  | 4   |
| XP            | 3-P-282     | Output Shaft .....                              | 1   |
|               | 3-P-979     | Output Shaft ("B" Ratio Only) .....             | 1   |
|               | 28-P-216    | Oil Seal .....                                  | 1   |
|               | 328328X     | Bearing Cap Ass'y (21-P-161) .....              | 1   |
|               | 378447-8    | Socket Head Capscrew (.312" - 18 x 1.5") .....  | 4   |
| XQ            | 3-P-282     | Output Shaft .....                              | 1   |
|               | 3-P-979     | Output Shaft ("B" Ratio Only) .....             | 1   |
|               | 28-P-216    | Oil Seal .....                                  | 1   |
|               | 328589X     | Bearing Cap Ass'y (21-P-269) .....              | 1   |
|               | 378447-8    | Socket Head Capscrew (.312" - 18 x 1.5") .....  | 4   |
| XR            | 3-P-283     | Output Shaft .....                              | 1   |
|               | 28-P-216    | Oil Seal .....                                  | 1   |
|               | 329194X     | Bearing Cap Assembly (21-P-574) .....           | 1   |
|               | 379673      | Hex Shoulder Screw (.312" - 24) .....           | 4   |
|               | 379063      | Flat Washer .....                               | 4   |
|               | 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   |
|               | 3-P-978     | Output Shaft ("B" Ratio Only) .....             | 1   |
|               | 328273X     | Bearing Cap Ass'y (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   |

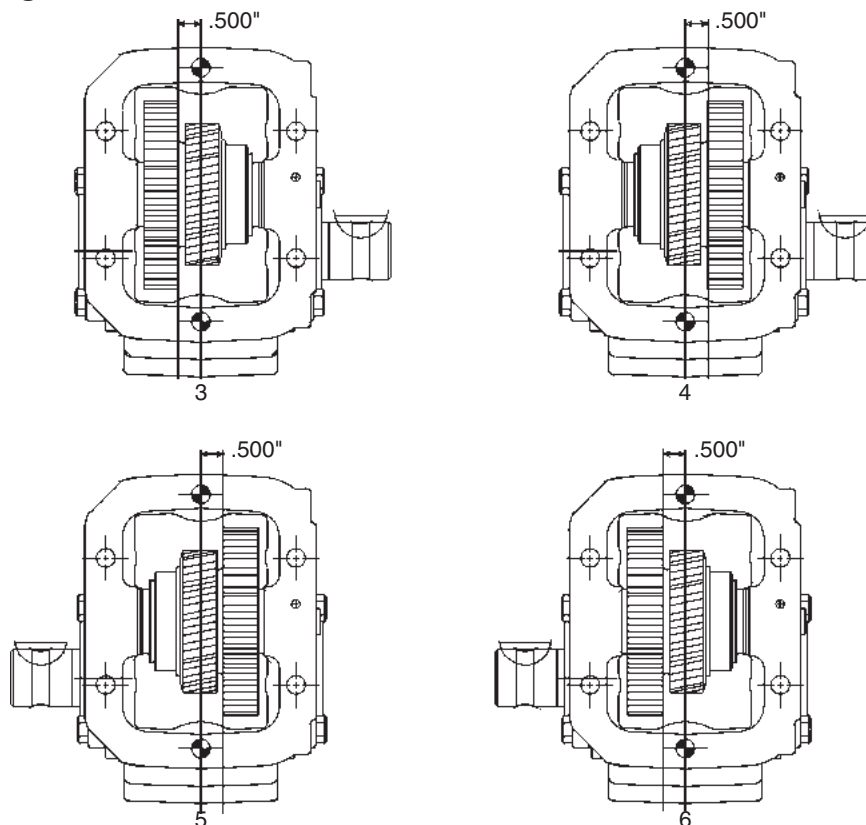
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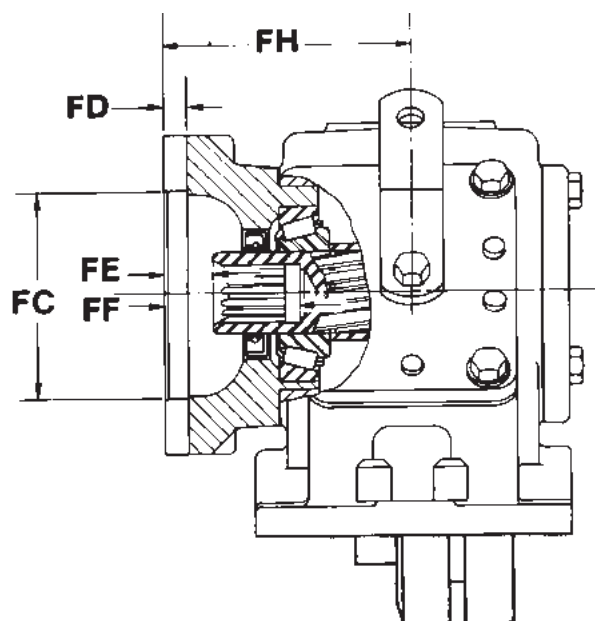
**Output Options Bill of Materials****Power Take-Offs****442, 447 & 489 Series**

| <b>Output Flange</b> | <b>Part Number</b> | <b>Description</b>                             | <b>Qty</b> |
|----------------------|--------------------|------------------------------------------------|------------|
| <b>XX</b>            | <b>3-P-766</b>     | Output Shaft .....                             | 1          |
|                      | <b>28-P-216</b>    | Oil Seal .....                                 | 1          |
|                      | <b>378430-10</b>   | Hex Capscrew (.312" - 18 x 1.0") .....         | 4          |
|                      | <b>379111</b>      | Square Key .....                               | 1          |
|                      | <b>501181</b>      | Hex Locknut (1.0" - 20) .....                  | 1          |
| <b>XY</b>            | <b>3-P-768</b>     | Output Shaft .....                             | 1          |
|                      | <b>28-P-275</b>    | Oil Seal .....                                 | 1          |
|                      | <b>328234X</b>     | Bearing Cap Ass'y (21-P-614) .....             | 1          |
|                      | <b>378447-6</b>    | Socket Head Capscrew (.312" - 18 x 1.0") ..... | 4          |
| <b>SQ</b>            | <b>3-P-282</b>     | Output Shaft .....                             | 1          |
|                      | <b>3-P-979</b>     | Output Shaft ("B" Ratio Only) .....            | 1          |
|                      | <b>28-P-216</b>    | Oil Seal .....                                 | 1          |
|                      | <b>329449X</b>     | Bearing Cap Ass'y (21-P-692) .....             | 1          |
|                      | <b>378447-8</b>    | Socket Head Capscrew (.312" - 18 x 1.5") ..... | 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")<br>3.701" ("Q", "W", "X")<br>3.568" ("A", "C") | 3.317" ("F", "H", "L", "R", "S", "U")<br>3.087" ("Q", "W", "X")<br>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")<br>3.481" ("Q", "W", "X")<br>3.348" ("A", "C") | 3.317" ("F", "H", "L", "R", "S", "U")<br>3.087" ("Q", "W", "X")<br>3.050" ("A", "C") | 6.207" | 7.000" |
| 489 Standard       | 1-P-552X    | 1.072" | 4.079" ("F", "H", "L", "R", "S", "U")<br>3.980" ("Q", "W", "X")<br>3.847" ("A", "C") | 3.317" ("F", "H", "L", "R", "S", "U")<br>3.087" ("Q", "W", "X")<br>3.050" ("A", "C") | 6.708" | 8.500" |
| 489 Deep Mount     | 1-P-562X    | 0.930" | 3.937" ("F", "H", "L", "R", "S", "U")<br>3.838" ("Q", "W", "X")<br>3.705" ("A", "C") | 3.317" ("F", "H", "L", "R", "S", "U")<br>3.087" ("Q", "W", "X")<br>3.050" ("A", "C") | 6.566" | 8.500" |

**Assembly Arrangements**

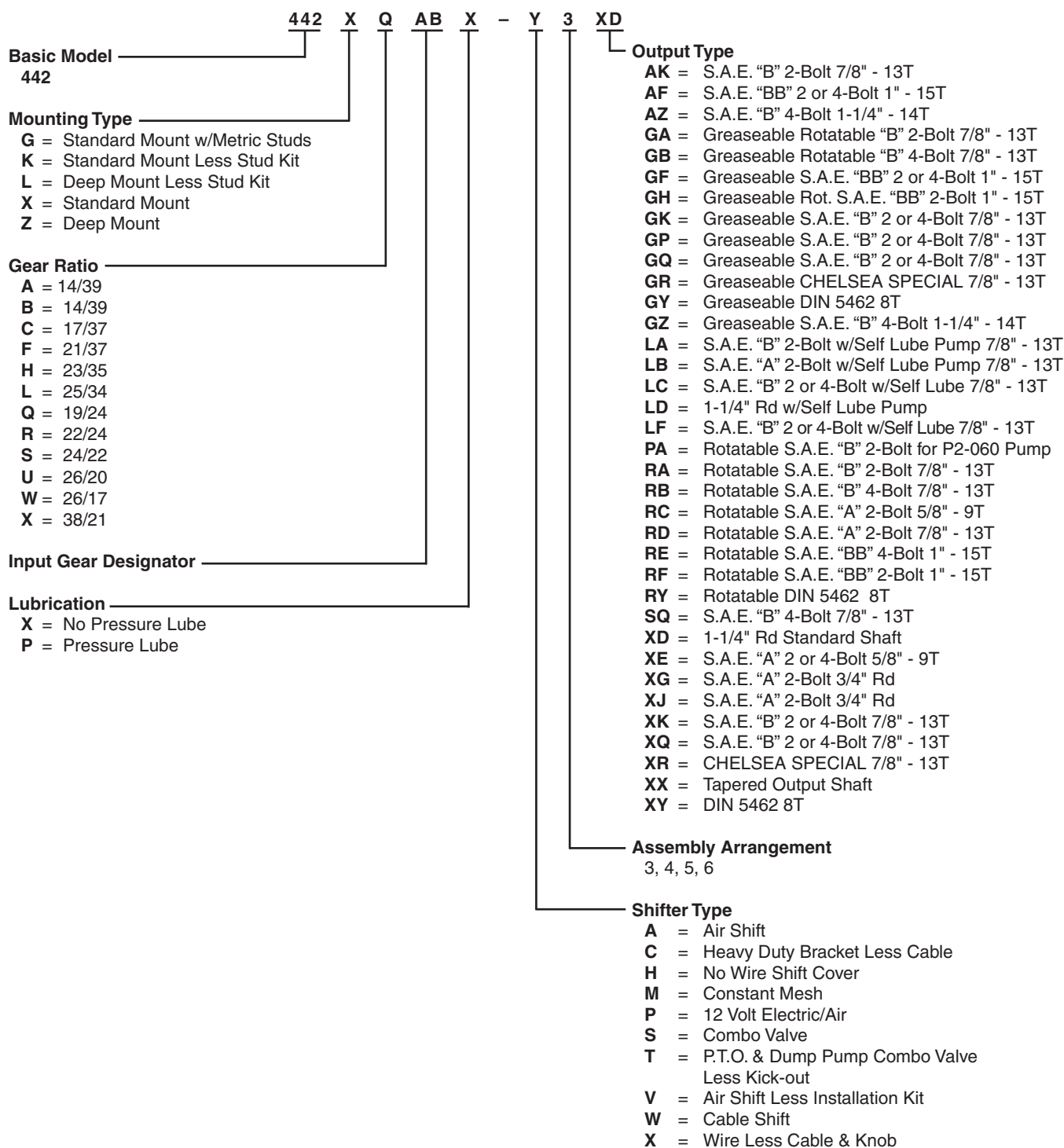


| Pump<br>Flange<br>Suffix | Bolt<br>Circle<br>Dia. | Bolt Holes        |                          | FC                      | FD             | FE                         | FF                   | FH                             | Output Shaft         | Keyway<br>Width |
|--------------------------|------------------------|-------------------|--------------------------|-------------------------|----------------|----------------------------|----------------------|--------------------------------|----------------------|-----------------|
|                          |                        | Tapped<br>Hole    | No.<br>Equally<br>Spaced | Female<br>Pilot<br>Dia. | Pilot<br>Depth | Face to<br>End of<br>Shaft | Face<br>thru<br>Hole | Face to<br>Center<br>of P.T.O. | Hole<br>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" Rd              | 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                 | 3.53 x 3.53            | .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          | 0.593                      | 2.218                | 4.562                          | 3/4" Rd              | 3/16"           |
| XJ                       | 4.188                  | .375" - 16        | 4                        | 3.253                   | 0.562          | 1.406                      | 2.906                | 4.562                          | 3/4" Rd              | 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" Rd              | 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, SQ               | 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

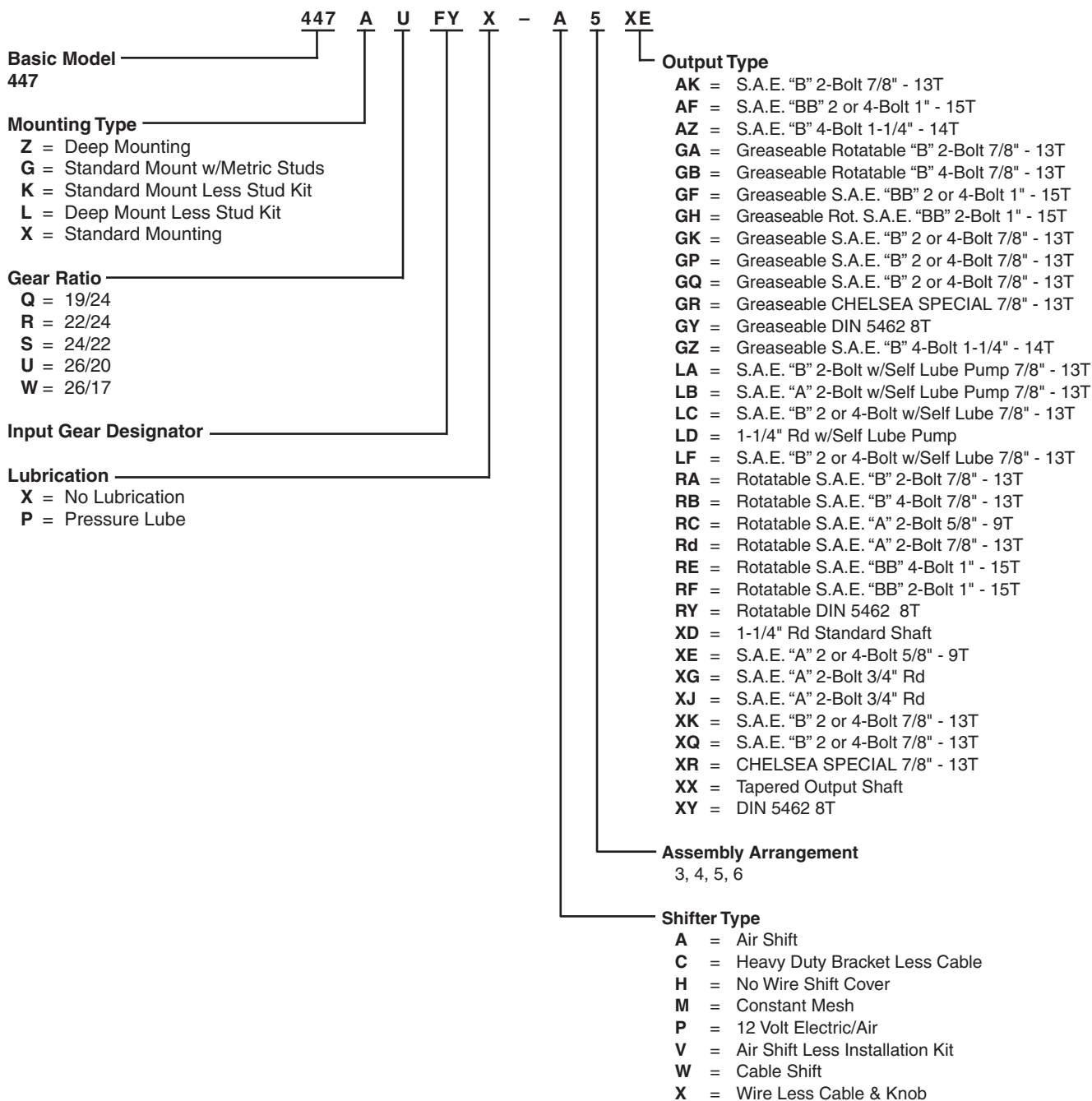
**NOTE:** To convert an "XR" to an "XK", use conversion flange number 21-P-525



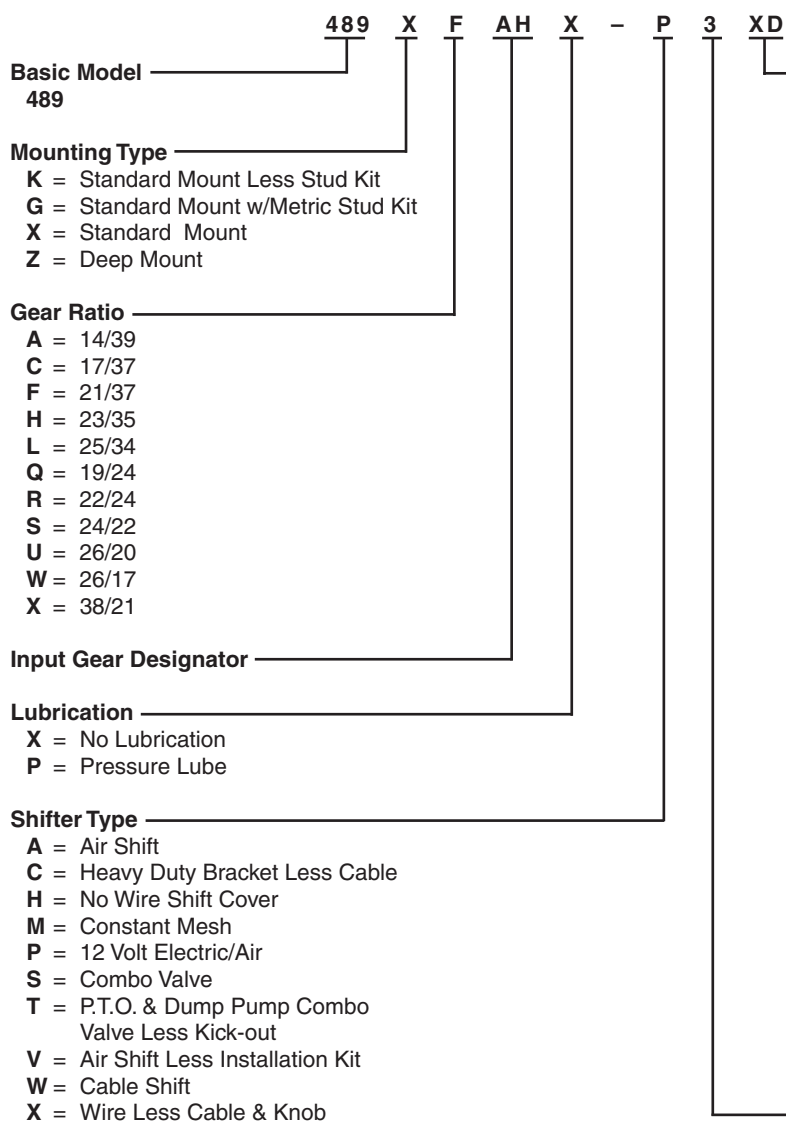
**Model Number Designation**

## Model Number Designation

## 442, 447 &amp; 489 Series



## Model Number Designation



## Output Type

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

## Assembly Arrangement

3, 4, 5, 6

**Kits Bill of Materials****Power Take-Offs****442, 447 & 489 Series**

|                                                                     |                        |                                                                           |                             |
|---------------------------------------------------------------------|------------------------|---------------------------------------------------------------------------|-----------------------------|
| <b>329091X</b> Lube Pump & Bearing Cap Assembly(442/447/489 Series) |                        | <b>329106-45X</b> Electric/Air 24V (442/489 Series)                       |                             |
| 28-P-249                                                            | O-Ring .....           | 328388-48X                                                                | 24V Electric Over Air ..... |
| 3-P-881                                                             | Gerotor Shaft .....    | 329361X                                                                   | Shifter Cover .....         |
| 329093X                                                             | Pump Adapter .....     | 378430-9                                                                  | Hex Capscrew .....          |
| 21-P-530                                                            | Pump Adapter .....     | 35-P-8                                                                    | Shifter Cover .....         |
| 550221                                                              | Bearing Tab .....      |                                                                           |                             |
| 378429-11                                                           | Hex Capscrew .....     | <b>329106-71X</b> Air Shift (447 Series)                                  |                             |
| 379173                                                              | Plate-Plump .....      | 329363X                                                                   | Shifter Cover .....         |
| 379175                                                              | Retaining .....        | 378430-9                                                                  | Hex Capscrew .....          |
| 379176                                                              | Pump-Gerotor .....     | 35-P-8                                                                    | Shifter Cover .....         |
| 379525                                                              | Pump Cap .....         | 328388-98X                                                                | Kit Installation .....      |
| 500037-7                                                            | Dowel Pin .....        |                                                                           |                             |
| 500566-3                                                            | Ball .....             | <b>329106-75X</b> Electric/Air 12V (447 Series)                           |                             |
| 500897-11                                                           | Cap Plug .....         | 328388-47X                                                                | 12V Electric .....          |
| 500897-8                                                            | Shipping Plug .....    | 329363X                                                                   | Shifter Cover .....         |
|                                                                     |                        | 378430-9                                                                  | Hex Capscrew .....          |
|                                                                     |                        | 35-P-8                                                                    | Shifter Cover .....         |
| <b>329092X</b> Pressure Lube Hose Assembly (442/447/489 Series)     |                        |                                                                           |                             |
| 379280                                                              | Fitting Swivel .....   | <b>329106-77X</b> Electric/Air 24V (447 Series)                           |                             |
| 385004                                                              | Female JIC .....       | 328388-48X                                                                | 24V Electric Over Air ..... |
| 385003                                                              | Male NPTF .....        | 329363X                                                                   | Shifter Cover .....         |
| 385006                                                              | Hose Bulk .....        | 378430-9                                                                  | Hex Capscrew .....          |
|                                                                     |                        | 35-P-8                                                                    | Shifter Cover .....         |
| <b>329096-1X</b> Field Conversion Kit (Self Lube Replace 3-P-202)   |                        |                                                                           |                             |
| 28-P-216                                                            | Oil Seal .....         | <b>329106-105X</b> Cable Shift ("Q", "W", & "X") (442/489 Series)         |                             |
| 3-P-857                                                             | Output Shaft .....     | 328380X                                                                   | Mounting Parts Kit .....    |
| 329091X                                                             | Lube Pump .....        | 329119-1X                                                                 | Cable Control Cover .....   |
| 329092X                                                             | Pressure Lever .....   | 35-P-8                                                                    | Shifter Cover .....         |
| 378391                                                              | Lock/Retaining .....   | 378430-9                                                                  | Hex Capscrew .....          |
| 379534                                                              | Inst Instruction ..... | 378441-10                                                                 | 10 Ft. Wire .....           |
| 500841-1                                                            | Elbow 90° .....        | 378502                                                                    | Knob .....                  |
| 28-P-190                                                            | O-Ring .73 .....       | 328751-1X                                                                 | Install Kit .....           |
| 28-P-191                                                            | O-Ring .54 .....       |                                                                           |                             |
| 9-P-76                                                              | Idler Shaft .....      | <b>329106-106X</b> Cable Shift ("Q", "W", & "X") (442/489 Series)         |                             |
| 378422                                                              | Drive Screw .....      | 328751-1X                                                                 | Install Kit .....           |
| 379646                                                              | Installation .....     | 328380X                                                                   | Mounting Parts Kit .....    |
| 22-P-127-1                                                          | Bearing Cone .....     | 329119-2X                                                                 | Cable Control Cover .....   |
| 22-P-127-2                                                          | Bearing Cone .....     | 35-P-8                                                                    | Shifter Cover .....         |
| 22-P-127-3                                                          | Bearing Cone .....     | 378430-9                                                                  | Hex Capscrew .....          |
| 68-P-2                                                              | Name Plate .....       | 378441-10                                                                 | Wire .....                  |
|                                                                     |                        | 378502                                                                    | Knob .....                  |
| <b>329097-1X</b> Field Conversion Kit (Self Lube Replace 3-P-282)   |                        |                                                                           |                             |
| 378391                                                              | Lock/Retaining .....   | <b>329106-107X</b> Wire Shift Kit Less (442/489 Series)                   |                             |
| 500841-1                                                            | Elbow 90° .....        | 328751-1X                                                                 | Install Kit .....           |
| 379534                                                              | Inst Instruction ..... | 329119-1X                                                                 | Cable Control Cover .....   |
| 379646                                                              | Installation .....     | 35-P-8                                                                    | Shifter Cover .....         |
| 378422                                                              | Drive Screw .....      | 378430-9                                                                  | Hex Capscrew .....          |
| 329092X                                                             | Pressure Lever .....   |                                                                           |                             |
| 329091X                                                             | Lube Pump .....        | <b>329106-108X</b> Wire Shift Kit Less                                    |                             |
| 28-P-191                                                            | O-Ring .54 .....       | 328751-1X                                                                 | Install Kit .....           |
| 28-P-190                                                            | O-Ring .73 .....       | 329119-2X                                                                 | Cable Control Cover .....   |
| 28-P-216                                                            | Oil Seal .....         | 35-P-8                                                                    | Shifter Cover .....         |
| 9-P-76                                                              | Idler Shaft .....      | 378430-9                                                                  | Hex Capscrew .....          |
| 3-P-858                                                             | Pump Shaft .....       |                                                                           |                             |
| 22-P-127-1                                                          | Bearing Cone .....     | <b>329106-109X</b> Shifter Kit ("F", "L", "R" "S" & "U") (442/489 Series) |                             |
| 22-P-127-2                                                          | Bearing Cone .....     | 328751-1X                                                                 | Install Kit .....           |
| 22-P-127-3                                                          | Bearing Cone .....     | 328380X                                                                   | Mounting Parts Kit .....    |
| 68-P-2                                                              | Name Plate .....       | 329121-1X                                                                 | Cable Control Cover .....   |
|                                                                     |                        | 35-P-8                                                                    | Shifter Cover .....         |
| <b>329106-39X</b> Air Shift (Ass'y 3&6) (442/489 Series)            |                        | 378430-9                                                                  | Hex Capscrew .....          |
| 329361X                                                             | Shifter Cover .....    | 378441-10                                                                 | 10 Ft. Wire .....           |
| 378430-9                                                            | Hex Capscrew .....     | 378502                                                                    | Knob .....                  |
| 35-P-8                                                              | Shifter Cover .....    |                                                                           |                             |
| 328388-98X                                                          | Kit Installation ..... |                                                                           |                             |
|                                                                     |                        |                                                                           |                             |
| <b>329106-43X</b> Electric/Air 12V (442/489 Series)                 |                        |                                                                           |                             |
| 328388-47X                                                          | 12V Electric .....     |                                                                           |                             |
| 329361X                                                             | Shifter Cover .....    |                                                                           |                             |
| 378430-9                                                            | Hex Capscrew .....     |                                                                           |                             |
| 35-P-8                                                              | Shifter Cover .....    |                                                                           |                             |

Continued on Next Page

|                    |                                                        |   |
|--------------------|--------------------------------------------------------|---|
| <b>329106-110X</b> | Cable Shift ("F", "L", "R" "S" & "U") (442/489 Series) |   |
| 328380X            | Mounting Parts Kit.....                                | 1 |
| 329121-2X          | Cable Control Cover.....                               | 1 |
| 35-P-8             | Shifter Cover.....                                     | 1 |
| 378430-9           | Hex Capscrew.....                                      | 4 |
| 378441-10          | 10 Ft. Wire.....                                       | 1 |
| 378502             | Knob.....                                              | 1 |
| 328751-1X          | Install Kit.....                                       | 1 |
| <b>329106-111X</b> | Cable Shift, Less Cab (442/489 Series)                 |   |
| 328751-1X          | Install Kit.....                                       | 1 |
| 329121-1X          | Cable Control Cover.....                               | 1 |
| 35-P-8             | Shifter Cover.....                                     | 1 |
| 378430-9           | Hex Capscrew.....                                      | 4 |
| <b>329106-112X</b> | Cable Shift, Less Cab (442/489 Series)                 |   |
| 328751-1X          | Install Kit.....                                       | 1 |
| 329121-2X          | Cable Control Cover.....                               | 1 |
| 35-P-8             | Shifter Cover.....                                     | 1 |
| 378430-9           | Hex Capscrew.....                                      | 4 |
| <b>329106-113X</b> | Cable Shift ("Q" & "W") (447 Series)                   |   |
| 328751-1X          | Install Kit.....                                       | 1 |
| 328380X            | Mounting Parts Kit.....                                | 1 |
| 329151-1X          | Cable Control Cover.....                               | 1 |
| 35-P-8             | Shifter Cover.....                                     | 1 |
| 378430-9           | Hex Capscrew.....                                      | 4 |
| 378441-10          | 10 Ft. Wire.....                                       | 1 |
| 378502             | Knob.....                                              | 1 |
| <b>329106-114X</b> | Cable Shift ("Q" & "W") (447 Series)                   |   |
| 328380X            | Mounting Parts Kit.....                                | 1 |
| 329151-2X          | Cable Control Cover.....                               | 1 |
| 35-P-8             | Shifter Cover.....                                     | 1 |
| 378430-9           | Hex Capscrew.....                                      | 4 |
| 378441-10          | 10 Ft. Wire.....                                       | 1 |
| 378502             | Knob.....                                              | 1 |
| 328751-1X          | Install Kit.....                                       | 1 |
| <b>329106-117X</b> | Cable Shift ("S" & "U") (447 Series)                   |   |
| 328380X            | Mounting Parts Kit.....                                | 1 |
| 329152-1X          | Cable Control Cover.....                               | 1 |
| 35-P-8             | Shifter Cover.....                                     | 1 |
| 378430-9           | Hex Capscrew.....                                      | 4 |
| 378441-10          | 10 Ft. Wire.....                                       | 1 |
| 378502             | Knob.....                                              | 1 |
| 328751-1X          | Install Kit.....                                       | 1 |
| <b>329106-118X</b> | Cable Shift ("S" & "U") (447 Series)                   |   |
| 328751-1X          | Install Kit.....                                       | 1 |
| 328380X            | Mounting Parts Kit.....                                | 1 |
| 329152-2X          | Cable Control Cover.....                               | 1 |
| 35-P-8             | Shifter Cover.....                                     | 1 |
| 378430-9           | Hex Capscrew.....                                      | 4 |
| 378441-10          | 10 Ft. Wire.....                                       | 1 |
| 378502             | Knob.....                                              | 1 |
| <b>329106-135X</b> | Constant Mesh Kit (442/489 Series)                     |   |
| 34-P-39            | Cover Plate.....                                       | 1 |
| 35-P-8             | Shifter Cover.....                                     | 1 |
| 378430-6           | Hex Capscrew.....                                      | 4 |
| 4-P-178            | Spacer Drive Shaft.....                                | 1 |
| 4-P-177            | Spacer Drive Shaft.....                                | 1 |

|                        |                                         |   |
|------------------------|-----------------------------------------|---|
| <b>329106-143X</b>     | Shifter Kit (442/489 Series)            |   |
| 378430-10              | Hex Capscrew.....                       | 4 |
| 378441-10              | 10 Ft. Wire.....                        | 1 |
| 5-A-188                | Use 5-A-18.....                         | 1 |
| 329271-1X              | Cover Ass'y.....                        | 1 |
| 328380X                | Mounting Parts Kit.....                 | 1 |
| 378502                 | Knob.....                               | 1 |
| 328751-1X              | Install Kit.....                        | 1 |
| 35-P-8                 | Shifter Cover.....                      | 2 |
| <b>329106-144X</b>     | Shifter Kit (442/489 Series)            |   |
| 35-P-8                 | Shifter Cover.....                      | 2 |
| 328751-1X              | Install Kit.....                        | 1 |
| 329271-2X              | Cover Ass'y.....                        | 1 |
| 378430-10              | Hex Capscrew.....                       | 4 |
| 5-A-188                | Use 5-A-18.....                         | 1 |
| 378441-10              | 10 Ft. Wire.....                        | 1 |
| 378502                 | Knob.....                               | 1 |
| 328380X                | Mounting Parts Kit.....                 | 1 |
| <b>329106-145X</b>     | (442/489 Series)                        |   |
| 378430-10              | Hex Capscrew.....                       | 1 |
| 5-A-188                | Use 5-A-18.....                         | 1 |
| 329271-1X              | Cover Ass'y.....                        | 1 |
| 328751-1X              | Install Kit.....                        | 1 |
| 35-P-8                 | Shifter Cover.....                      | 2 |
| <b>329106-146X</b>     | (442/489 Series)                        |   |
| 35-P-8                 | Shifter Cover.....                      | 2 |
| 329271-2X              | Cover Ass'y.....                        | 1 |
| 5-A-188                | Use 5-A-18.....                         | 1 |
| 378430-10              | Hex Capscrew.....                       | 4 |
| 328751-1X              | Install Kit.....                        | 1 |
| <b>329106-151X</b>     | Shifter Kit "V" Option (447 Series)     |   |
| 378414                 | Pressure Protection Valve.....          | 1 |
| 35-P-8                 | Shifter Cover.....                      | 1 |
| 379640                 | Booted Con.....                         | 1 |
| 329363X                | Shifter Cover.....                      | 1 |
| 378430-9               | Hex Capscrew.....                       | 4 |
| Owners Manual          | HY25-1135-M1/US.....                    | 1 |
| <b>329106-153X</b>     | Shifter Kit "V" Option (442/489 Series) |   |
| 379640                 | Booted Connector.....                   | 1 |
| 378414                 | Pressure Protection Valve.....          | 1 |
| 35-P-8                 | Shifter Cover.....                      | 1 |
| 329361X                | Shifter Cover.....                      | 1 |
| 378430-9               | Hex Capscrew.....                       | 4 |
| Owners Manual          | HY25-1135-M1/US.....                    | 1 |
| Ratios "Q" & "W" & "X" |                                         |   |
| <b>329118-1X</b>       | Post and Plate Assembly, (Ass'y 3 & 6)  |   |
| 62-P-45                | Shifter Plate.....                      | 1 |
| 63-P-20                | Shifter Pin.....                        | 1 |
| 64-P-1                 | Shifter Shoe.....                       | 1 |
| 378244                 | Shifter Post.....                       | 1 |
| 378246                 | Lockring.....                           | 1 |
| 378313                 | Lifter Plate.....                       | 1 |
| <b>329118-2X</b>       | Post and Plate Assembly, (Ass'y 4 & 5)  |   |
| 62-P-46                | Shifter Plate.....                      | 1 |
| 63-P-20                | Shifter Pin.....                        | 1 |
| 64-P-1                 | Shifter Shoe.....                       | 1 |
| 378244                 | Shifter Post.....                       | 1 |
| 378246                 | Lockring.....                           | 1 |
| 378313                 | Lifter Plate.....                       | 1 |

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**Kits Bill of Materials****Power Take-Offs****442, 447 & 489 Series**

Ratios "Q", "W" &amp; "X"

|                  |                                                 |   |
|------------------|-------------------------------------------------|---|
| <b>329119-1X</b> | Shifter Cover Ass'y, Wire Control (Ass'y 3 & 6) |   |
| 28-P-191         | O-Ring .....                                    | 1 |
| 34-P-74          | Shifter Cover .....                             | 1 |
| 37-P-19          | Spring .....                                    | 1 |
| 51-P-22          | Shifter Lever .....                             | 1 |
| 63-P-16          | Poppet Pin .....                                | 1 |
| 329118-1X        | Shifter Plate Ass'y .....                       | 1 |
| 378004           | Flat Washer .....                               | 1 |
| 379639           | Indicator Switch .....                          | 1 |
| 500356-10        | Lock Washer .....                               | 1 |
| 500365-22        | Flat Washer .....                               | 1 |
| 500409-6         | Hex. HD. Capscrew .312" - 24 x .625" .....      | 1 |

**329119-2X** Shifter Cover Ass'y, Wire Control (Ass'y 4 & 5)

|           |                                            |   |
|-----------|--------------------------------------------|---|
| 28-P-191  | O-Ring .....                               | 1 |
| 34-P-74   | Shifter Cover .....                        | 1 |
| 37-P-19   | Spring .....                               | 1 |
| 51-P-22   | Shifter Lever .....                        | 1 |
| 63-P-16   | Poppet Pin .....                           | 1 |
| 329118-2X | Shifter Plate Ass'y .....                  | 1 |
| 378004    | Flat Washer .....                          | 1 |
| 379639    | Indicator Switch .....                     | 1 |
| 500356-10 | Lock Washer .....                          | 1 |
| 500365-22 | Flat Washer .....                          | 1 |
| 500409-6  | Hex. HD. Capscrew .312" - 24 x .625" ..... | 1 |

Ratios "F", "H", "L", "R", "S" &amp; "U"

|                  |                                        |   |
|------------------|----------------------------------------|---|
| <b>329120-1X</b> | Post and Plate Assembly, (Ass'y 3 & 6) |   |
| 62-P-45          | Shifter Plate .....                    | 1 |
| 63-P-21          | Shifter Pin .....                      | 1 |
| 64-P-1           | Shifter Shoe .....                     | 1 |
| 378244           | Shifter Post .....                     | 1 |
| 378246           | Lockring .....                         | 1 |
| 378313           | Lifter Plate .....                     | 1 |

**329120-2X** Post and Plate Assembly, (Ass'y 4 & 5)

|         |                     |   |
|---------|---------------------|---|
| 62-P-46 | Shifter Plate ..... | 1 |
| 63-P-21 | Shifter Pin .....   | 1 |
| 64-P-1  | Shifter Shoe .....  | 1 |
| 378244  | Shifter Post .....  | 1 |
| 378246  | Lockring .....      | 1 |
| 378313  | Lifter Plate .....  | 1 |

Ratios "F", "H", "L", "R", "S" &amp; "U"

|                  |                                                 |   |
|------------------|-------------------------------------------------|---|
| <b>329121-1X</b> | Shifter Cover Ass'y, Wire Control (Ass'y 3 & 6) |   |
| 28-P-191         | O-Ring .....                                    | 1 |
| 34-P-74          | Shifter Cover .....                             | 1 |
| 37-P-19          | Spring .....                                    | 1 |
| 51-P-22          | Shifter Lever .....                             | 1 |
| 63-P-16          | Poppet Pin .....                                | 1 |
| 329120-1X        | Shifter Plate Ass'y .....                       | 1 |
| 378004           | Flat Washer .....                               | 1 |
| 379639           | Indicator Switch .....                          | 1 |
| 500356-10        | Lock Washer .....                               | 1 |
| 500365-22        | Flat Washer .....                               | 1 |
| 500409-6         | Hex. HD. Capscrew .312" - 24 x .625" .....      | 1 |

**329121-2X** Shifter Cover Ass'y, Wire Control (Ass'y 4 & 5)

|           |                                            |   |
|-----------|--------------------------------------------|---|
| 28-P-191  | O-Ring .....                               | 1 |
| 34-P-74   | Shifter Cover .....                        | 1 |
| 37-P-19   | Spring .....                               | 1 |
| 51-P-22   | Shifter Lever .....                        | 1 |
| 63-P-16   | Poppet Pin .....                           | 1 |
| 329120-2X | Shifter Plate Ass'y .....                  | 1 |
| 378004    | Flat Washer .....                          | 1 |
| 379639    | Indicator Switch .....                     | 1 |
| 500356-10 | Lock Washer .....                          | 1 |
| 500365-22 | Flat Washer .....                          | 1 |
| 500409-6  | Hex. HD. Capscrew .312" - 24 x .625" ..... | 1 |

**329143X** Dust Cover Kit For (442/447/489 Series)

|          |                         |   |
|----------|-------------------------|---|
| 35-P-14  | Gasket .....            | 1 |
| 378430-4 | Capscrew Hex Head ..... | 2 |
| 65-P-23  | Cover Shift .....       | 1 |

Ratios "Q" &amp; "W"

|                  |                                                    |   |
|------------------|----------------------------------------------------|---|
| <b>329151-1X</b> | Shifter Cover Assembly, Wire Control (Ass'y 3 & 6) |   |
| 28-P-191         | O-Ring .....                                       | 1 |
| 34-P-74          | Shifter Cover .....                                | 1 |
| 37-P-19          | Spring .....                                       | 1 |
| 51-P-22          | Shifter Lever .....                                | 1 |
| 63-P-16          | Poppet Pin .....                                   | 1 |
| 329118-1X        | Shifter Plate Ass'y .....                          | 1 |
| 378004           | Flat Washer .....                                  | 1 |
| 379652           | Indicator Switch Norm. "On" .....                  | 1 |
| 500356-10        | Lock Washer .....                                  | 1 |
| 500365-22        | Flat Washer .....                                  | 1 |
| 500409-6         | Hex. HD. Capscrew .312" - 24 x .625" .....         | 1 |

**329151-2X** Shifter Cover Assembly, Wire Control (Ass'y 4 & 5)

|           |                                            |   |
|-----------|--------------------------------------------|---|
| 28-P-191  | O-Ring .....                               | 1 |
| 34-P-74   | Shifter Cover .....                        | 1 |
| 37-P-19   | Spring .....                               | 1 |
| 51-P-22   | Shifter Lever .....                        | 1 |
| 63-P-16   | Poppet Pin .....                           | 1 |
| 329118-2X | Shifter Plate Ass'y .....                  | 1 |
| 378004    | Flat Washer .....                          | 1 |
| 379652    | Indicator Switch Norm. "On" .....          | 1 |
| 500356-10 | Lock Washer .....                          | 1 |
| 500365-22 | Flat Washer .....                          | 1 |
| 500409-6  | Hex. HD. Capscrew .312" - 24 x .625" ..... | 1 |

Ratios "R", "S" &amp; "U"

|                  |                                                    |   |
|------------------|----------------------------------------------------|---|
| <b>329152-1X</b> | Shifter Cover Assembly, Wire Control (Ass'y 3 & 6) |   |
| 28-P-191         | O-Ring .....                                       | 1 |
| 34-P-74          | Shifter Cover .....                                | 1 |
| 37-P-19          | Spring .....                                       | 1 |
| 51-P-22          | Shifter Lever .....                                | 1 |
| 63-P-16          | Poppet Pin .....                                   | 1 |
| 329120-1X        | Shifter Plate Ass'y .....                          | 1 |
| 378004           | Flat Washer .....                                  | 1 |
| 379652           | Indicator Switch Norm. "On" .....                  | 1 |
| 500356-10        | Lock Washer .....                                  | 1 |
| 500365-22        | Flat Washer .....                                  | 1 |
| 500409-6         | Hex. HD. Capscrew .312" - 24 x .625" .....         | 1 |

**329152-2X** Shifter Cover Assembly, Wire Control (Ass'y 4 & 5)

|           |                                            |   |
|-----------|--------------------------------------------|---|
| 28-P-191  | O-Ring .....                               | 1 |
| 34-P-74   | Shifter Cover .....                        | 1 |
| 37-P-19   | Spring .....                               | 1 |
| 51-P-22   | Shifter Lever .....                        | 1 |
| 63-P-16   | Poppet Pin .....                           | 1 |
| 329120-2X | Shifter Plate Ass'y .....                  | 1 |
| 378004    | Flat Washer .....                          | 1 |
| 379652    | Indicator Switch Norm. "On" .....          | 1 |
| 500356-10 | Lock Washer .....                          | 1 |
| 500365-22 | Flat Washer .....                          | 1 |
| 500409-6  | Hex. HD. Capscrew .312" - 24 x .625" ..... | 1 |

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|                   |                                                      |   |
|-------------------|------------------------------------------------------|---|
| <b>329166-12X</b> | Electric Shift Installation Kit (442/447/489 Series) |   |
| 329158-12X        | Electric Shift.....                                  | 1 |
| 329163-10X        | Electric Shift.....                                  | 1 |
| 379247            | Fuse Holder.....                                     | 1 |
| 379252            | Butt Connector.....                                  | 2 |
| 379253            | Ring Connector.....                                  | 1 |
| 379257            | Splice Connector.....                                | 1 |
| 379265            | Grommet.....                                         | 1 |
| 379689            | Self Taping Screw.....                               | 4 |
| 500357-7          | Lockwasher.....                                      | 4 |
| 500376-6          | Nut 10-24.....                                       | 4 |
| 500457-6          | Slotted Screw.....                                   | 4 |
| 379640            | Booted Connector.....                                | 1 |
| 379061X           | Tie Wire.....                                        | 1 |
| Owners Manual     | HY25-1667-M1/US.....                                 | 1 |

|                |                                                             |   |
|----------------|-------------------------------------------------------------|---|
| <b>329202X</b> | Indicator Switch Connector Service Kit (442/447/489 Series) |   |
| 379252         | Butt Connector.....                                         | 1 |
| 379639         | Switch Indicator.....                                       | 1 |
| 379640         | Booted Connector.....                                       | 1 |

|                |                                             |   |
|----------------|---------------------------------------------|---|
| <b>329260X</b> | Conversion Kit, 440 to 442 Series           |   |
| 1-P-557X       | Housing, Standard Mount.....                | 1 |
| 1-P-557        | P.T.O. Housing.....                         | 1 |
| 500597-16      | Roll Pin, Standard Mount (1.125" Long)..... | 1 |
| 328594-13X     | Bearing Spacer Kit.....                     | 1 |

|                |                                                  |   |
|----------------|--------------------------------------------------|---|
| <b>329261X</b> | Conversion Kit, 440 Deep Mount to 442 Deep Mount |   |
| 1-P-558X       | Deep Mount w/Roll Pin.....                       | 1 |
| 1-P-558        | Housing Deep Mount.....                          | 1 |
| 500597-14      | Roll Pin, Deep Mount (1" Long).....              | 1 |
| 328594-13X     | Bearing Spacer Kit.....                          | 1 |

|                |                                             |   |
|----------------|---------------------------------------------|---|
| <b>329262X</b> | Conversion Kit, 488 to 489 Series           |   |
| 1-P-552X       | Housing Stanard w/Roll Pin.....             | 1 |
| 1-P-552        | Housing.....                                | 1 |
| 500597-16      | Pin Roll.....                               | 1 |
| 328594-13X     | Bearing Spacer Kit (Non Pressure Lube)..... | 1 |

|                |                                                  |   |
|----------------|--------------------------------------------------|---|
| <b>329263X</b> | Conversion Kit, 488 Deep Mount to 489 Deep Mount |   |
| 1-P-562X       | Deep Mount.....                                  | 1 |
| 1-P-562        | Housing.....                                     | 1 |
| 500597-16      | Pin Roller.....                                  | 1 |
| 328594-13X     | Bearing Spacer Kit.....                          | 1 |
| 31-P-102       | Thrust Washer.....                               | 1 |
| 379672         | Plug O-Ring.....                                 | 1 |
| 9-P-88         | Idler Shaft.....                                 | 1 |
| 550439         | Bearing Cone.....                                | 1 |
| 28-P-191       | O-Ring.....                                      | 1 |
| 14-P-73-1      | Spacer Idler Gear (.149"-.151").....             | 1 |
| 14-P-73-2      | Spacer Idler Gear (.152"-.154").....             | 1 |
| 14-P-73-3      | Spacer Idler Gear (.155"-.157").....             | 1 |

|                                        |                                             |   |
|----------------------------------------|---------------------------------------------|---|
| Ratios "A", "B" & "C" (442/489 Series) |                                             |   |
| <b>329265-1X</b>                       | Post and Plate Assembly, (Ass'y 3 & 6)..... | 1 |
| 62-P-45                                | Shifter Plate.....                          | 1 |
| 63-P-23                                | Shifter Pin.....                            | 1 |
| 64-P-1                                 | Shifter Shoe.....                           | 1 |
| 378244                                 | Shifter Post.....                           | 1 |
| 378246                                 | Lockring.....                               | 1 |
| 378313                                 | Lifter Plate.....                           | 1 |

|                  |                                        |   |
|------------------|----------------------------------------|---|
| <b>329265-2X</b> | Post and Plate Assembly, (Ass'y 4 & 5) |   |
| 62-P-46          | Shifter Plate.....                     | 1 |
| 63-P-23          | Shifter Pin.....                       | 1 |
| 64-P-1           | Shifter Shoe.....                      | 1 |
| 378244           | Shifter Post.....                      | 1 |
| 378246           | Lockring.....                          | 1 |
| 378313           | Lifter Plate.....                      | 1 |

|                                        |                                                    |   |
|----------------------------------------|----------------------------------------------------|---|
| Ratios "A", "B" & "C" (442/489 Series) |                                                    |   |
| <b>329271-1X</b>                       | Shifter Cover Assembly, Wire Control (Ass'y 3 & 6) |   |
| 28-P-191                               | O-Ring.....                                        | 1 |
| 34-P-74                                | Shifter Cover.....                                 | 1 |
| 37-P-19                                | Spring.....                                        | 1 |
| 51-P-22                                | Shifter Lever.....                                 | 1 |
| 63-P-16                                | Poppet Pin.....                                    | 1 |
| 329265-1X                              | Shifter Plate Ass'y.....                           | 1 |
| 378004                                 | Flat Washer.....                                   | 1 |
| 379639                                 | Indicator Switch Norm. "On".....                   | 1 |
| 500356-10                              | Lock Washer.....                                   | 1 |
| 500365-22                              | Flat Washer.....                                   | 1 |
| 500409-6                               | Hex. HD. Capscrew .312" - 24 x .625".....          | 1 |

|                  |                                                    |   |
|------------------|----------------------------------------------------|---|
| <b>329271-2X</b> | Shifter Cover Assembly, Wire Control (Ass'y 4 & 5) |   |
| 28-P-191         | O-Ring.....                                        | 1 |
| 34-P-74          | Shifter Cover.....                                 | 1 |
| 37-P-19          | Spring.....                                        | 1 |
| 51-P-22          | Shifter Lever.....                                 | 1 |
| 63-P-16          | Poppet Pin.....                                    | 1 |
| 329265-2X        | Shifter Plate Ass'y.....                           | 1 |
| 378004           | Flat Washer.....                                   | 1 |
| 379639           | Indicator Switch Norm. "On".....                   | 1 |
| 500356-10        | Lock Washer.....                                   | 1 |
| 500365-22        | Flat Washer.....                                   | 1 |
| 500409-6         | Hex. HD. Capscrew .312" - 24 x .625".....          | 1 |

|                |                                     |   |
|----------------|-------------------------------------|---|
| <b>329304X</b> | Bearing Cap & Seal (442/489 Series) |   |
| 21-P-641       | Bearing Cap.....                    | 1 |
| 28-P-224       | Oil Seal.....                       | 1 |

|                |                                                    |   |
|----------------|----------------------------------------------------|---|
| <b>329361X</b> | Shifter Cover Assembly, Air Shift (442/489 Series) |   |
| 34-P-130       | Shifter Cover.....                                 | 1 |
| 379639         | Indicator Switch (Normally OFF).....               | 1 |
| 21-P-572       | Flange Pump.....                                   | 1 |
| 28-P-216       | Oil Seal.....                                      | 1 |
| 3-P-980        | Output Shaft.....                                  | 1 |
| 329195X        | Bearing Cap Ass'y.....                             | 1 |
| 378391         | Lock/Retaining.....                                | 2 |
| 378447-6       | Socket Head.....                                   | 7 |
| 379638         | P.T.O. Tag.....                                    | 1 |
| 379688         | Lubricant Spline.....                              | 1 |
| 22-P-127-1     | Bearing Cone.....                                  | 2 |
| 22-P-127-2     | Bearing Cone.....                                  | 2 |
| 22-P-127-3     | Bearing Cone.....                                  | 1 |

|                  |                                   |   |
|------------------|-----------------------------------|---|
| <b>329436-1X</b> | Pump Conv Kit "RA" "B" Ratio Only |   |
| 21-P-628         | Pump Flange.....                  | 1 |
| 28-P-216         | Oil Seal.....                     | 1 |
| 3-P-980          | Output Shaft.....                 | 1 |
| 329195X          | Bearing Cap Ass'y.....            | 1 |
| 378391           | Lock/Retaining.....               | 2 |
| 378447-6         | Socket Head.....                  | 7 |
| 379638           | P.T.O. Tag.....                   | 1 |
| 379688           | Lubricant Spline.....             | 1 |
| 22-P-127-1       | Bearing Cone.....                 | 2 |
| 22-P-127-2       | Bearing Cone.....                 | 2 |
| 22-P-127-3       | Bearing Cone.....                 | 1 |

|                  |                                   |   |
|------------------|-----------------------------------|---|
| <b>329436-3X</b> | Pump Conv Kit "XK" "B" Ratio Only |   |
| 3-P-979          | Output Shaft.....                 | 1 |
| 328333X          | Flange Assembly.....              | 1 |
| 378391           | Lock/Retaining.....               | 2 |
| 378447-8         | Socket Head.....                  | 4 |
| 379688           | Lubricant Spline.....             | 1 |
| 22-P-127-1       | Bearing Cone.....                 | 2 |
| 22-P-127-2       | Bearing Cone.....                 | 2 |
| 22-P-127-3       | Bearing Cone.....                 | 1 |

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**Kits Bill of Materials****Power Take-Offs****442, 447 & 489 Series**

|                    |                                              |   |                   |                                                            |   |
|--------------------|----------------------------------------------|---|-------------------|------------------------------------------------------------|---|
| <b>329436-6X</b>   | Pump Conv Kit "XQ" "B" Ratio Only            |   | <b>328356-13X</b> | Gasket & Seal Kit                                          |   |
| 28-P-216           | Oil Seal.....                                | 1 | 22-P-127-1        | Gasket, Bearing Cap.....                                   | 4 |
| 3-P-979            | Output Shaft.....                            | 1 | 22-P-127-2        | Gasket, Bearing Cap.....                                   | 4 |
| 328589X            | Bearing Cap.....                             | 1 | 22-P-127-3        | Gasket, Bearing Cap.....                                   | 2 |
| 378391             | Lock/Retaining.....                          | 2 | 28-P-190          | O-Ring.....                                                | 1 |
| 378447-8           | Socket Head.....                             | 4 | 28-P-191          | O-Ring.....                                                | 2 |
| 379688             | Lubricant Spline.....                        | 1 | 28-P-216          | Oil Seal.....                                              | 1 |
| 22-P-127-1         | Bearing Cone.....                            | 2 | 35-P-8            | Gasket, Shifter Cover.....                                 | 2 |
| 22-P-127-2         | Bearing Cone.....                            | 2 | 35-P-9-1          | Gasket, Housing (.010").....                               | 2 |
| 22-P-127-3         | Bearing Cone.....                            | 1 | 35-P-9-2          | Gasket, Housing (.020").....                               | 2 |
|                    |                                              |   | 378391            | Lockring.....                                              | 2 |
|                    |                                              |   | 378774            | Lockwasher.....                                            | 6 |
| <b>329436-7X</b>   | Pump Conv Kit "AK" "B" Ratio Only            |   | <b>328356-15X</b> | Shifter Cover Seal Kit (Wire Control)                      |   |
| 28-P-216           | Oil Seal.....                                | 1 | 22-P-69           | Gasket.....                                                | 1 |
| 328989X            | Flange Assembly.....                         | 1 | 28-P-191          | O-Ring.....                                                | 1 |
| 378391             | Lock/Retaining.....                          | 2 | 28-P-226          | Oil Seal.....                                              | 1 |
| 378447-8           | Socket Head.....                             | 4 | 35-P-8            | Gasket, Shifter Cover.....                                 | 1 |
| 379688             | Lubricant Spline.....                        | 1 | 35-P-9-1          | Gasket, Housing.....                                       | 2 |
| 3-P-979            | Output Shaft.....                            | 1 | 35-P-9-2          | Gasket, Housing.....                                       | 2 |
| 22-P-127-1         | Bearing Cone.....                            | 2 |                   |                                                            |   |
| 22-P-127-2         | Bearing Cone.....                            | 2 |                   |                                                            |   |
| 22-P-127-3         | Bearing Cone.....                            | 1 |                   |                                                            |   |
| <b>329436-8X</b>   | Pump Conv Kit "RD" "B" Ratio Only            |   | <b>328356-50X</b> | Gasket & Seal Kit                                          |   |
| 21-P-638           | Pump Flange.....                             | 1 | 22-P-127-1        | Gasket, Bearing Cap.....                                   | 4 |
| 329322X            | Bearing Cap.....                             | 1 | 22-P-127-2        | Gasket, Bearing Cap.....                                   | 4 |
| 378391             | Lock/Retaining.....                          | 2 | 22-P-127-3        | Gasket, Bearing Cap.....                                   | 4 |
| 378447-6           | Socket Head.....                             | 4 | 28-P-190          | O-Ring.....                                                | 1 |
| 379638             | P.T.O. Tag.....                              | 1 | 28-P-191          | O-Ring.....                                                | 1 |
| 379688             | Lubricant Spline.....                        | 1 | 28-P-216          | Oil Seal.....                                              | 1 |
| 378446-4           | Screw, Socket.....                           | 6 | 35-P-8            | Gasket, Shifter Cover.....                                 | 1 |
| 28-P-216           | Oil Seal.....                                | 1 | 35-P-15-1         | Gasket, Housing.....                                       | 1 |
| 3-P-979            | Output Shaft.....                            | 1 | 35-P-15-2         | Gasket, Housing.....                                       | 1 |
| 22-P-127-1         | Bearing Cone.....                            | 2 | 378391            | Lockring.....                                              | 2 |
| 22-P-127-2         | Bearing Cone.....                            | 2 |                   |                                                            |   |
| 22-P-127-3         | Bearing Cone.....                            | 1 |                   |                                                            |   |
| <b>329436-9X</b>   | Pump Conv Kit "SQ" "B" Ratio Only            |   | <b>328356-67X</b> | Gasket & Seal Kit                                          |   |
| 28-P-216           | Oil Seal.....                                | 1 | 22-P-127-1        | Gasket, Bearing Cap.....                                   | 4 |
| 3-P-979            | Output Shaft.....                            | 1 | 22-P-127-2        | Gasket, Bearing Cap.....                                   | 4 |
| 329449X            | Bearing Cap.....                             | 1 | 22-P-127-3        | Gasket, Bearing Cap.....                                   | 4 |
| 378391             | Lock/Retaining.....                          | 2 | 28-P-191          | O-Ring.....                                                | 2 |
| 378447-8           | Socket Head.....                             | 4 | 28-P-216          | Oil Seal.....                                              | 1 |
| 379688             | Lubricant Spline.....                        | 1 | 35-P-8            | Gasket, Shifter Cover.....                                 | 1 |
| 22-P-127-1         | Bearing Cone.....                            | 2 | 35-P-9-1          | Gasket, Housing.....                                       | 2 |
| 22-P-127-2         | Bearing Cone.....                            | 2 | 35-P-9-2          | Gasket, Housing.....                                       | 2 |
| 22-P-127-3         | Bearing Cone.....                            | 1 |                   |                                                            |   |
| <b>328170-76X</b>  | Stud Kit, Standard (442/447 Series)          |   | <b>328356-69X</b> | Shifter Cover Seal Kit (Wire Control "A", "B" & "C" Ratio) |   |
| 379423-15          | Stud .375".....                              | 6 | 22-P-69           | Gasket.....                                                | 1 |
| 379744             | Flange Nut.....                              | 6 | 28-P-191          | O-Ring.....                                                | 1 |
|                    |                                              |   | 28-P-226          | Oil Seal.....                                              | 1 |
|                    |                                              |   | 5-A-188           | Spacer.....                                                | 1 |
|                    |                                              |   | 35-P-9-1          | Gasket, Housing.....                                       | 2 |
|                    |                                              |   | 35-P-9-2          | Gasket, Housing.....                                       | 2 |
| <b>328170-77X</b>  | Stud Kit, Deep Mount (442/447 Series)        |   | <b>328356-71X</b> | Shifter Cover Seal Kit (Air Shift)                         |   |
| 379744             | Flange Nut.....                              | 3 | 28-P-41           | O-Ring.....                                                | 1 |
| 378431-11          | Hex Capscrew.....                            | 3 | 28-P-42           | O-Ring.....                                                | 2 |
| 379423-12          | Stud .375".....                              | 3 | 378316            | Retainer.....                                              | 2 |
| 378774             | Tablock Washer.....                          | 3 | 35-P-8            | Gasket, Shifter Cover.....                                 | 2 |
|                    |                                              |   | 35-P-9-1          | Gasket, Housing.....                                       | 1 |
|                    |                                              |   | 35-P-9-2          | Gasket, Housing.....                                       | 1 |
| <b>328170-200X</b> | Stud Kit, Standard & Deep Mount (489 Series) |   | <b>328380X</b>    | Mounting Parts Kit (442/447/489 Series)                    |   |
| 379224             | Tab Lockwasher.....                          | 6 | 378326            | Nut, Hex.....                                              | 1 |
| 378432-12          | Capscrew.....                                | 6 | 50-P-17           | Bracket, Wire Control.....                                 | 1 |
| 379424-18          | Stud.....                                    | 2 | 50-P-19           | Swivel Bracket.....                                        | 1 |
| 379745             | Flange Nut.....                              | 2 | 500396-8          | Screw, Hex.....                                            | 1 |
|                    |                                              |   | 500568-4          | Set Screw.....                                             | 1 |
|                    |                                              |   | 378019            | Pivot Pin.....                                             | 1 |
| <b>328170-201X</b> | Stud Kit, Metric (489 Series)                |   |                   |                                                            |   |
| 379745             | Flange Nut.....                              | 8 |                   |                                                            |   |
| 379429-19          | Stud Metric.....                             | 8 |                   |                                                            |   |
| <b>328346-10X</b>  | Cable Control (442/447/489 Series)           |   |                   |                                                            |   |
| 378441-10          | 10 Ft. Wire.....                             | 1 |                   |                                                            |   |
| 378502             | Knob.....                                    | 1 |                   |                                                            |   |

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|-------------------|--------------------------------------------|---|
| <b>328388-37X</b> | Air Shift Installation Kit ("A" Shifter)   |   |
| 328388-44X        | Air Shift.....                             | 1 |
| 329090-1X         | Valve Kit.....                             | 1 |
| 379044-7          | Nylon Tubing.....                          | 1 |
| 379130            | Support Bracket.....                       | 2 |
| 68-P-27           | Control Plate.....                         | 1 |
| 379640            | Booted Connector.....                      | 1 |
| <b>328388-44X</b> | Air Shift Kit                              |   |
| 378416            | Hex Nipple.....                            | 1 |
| 378978            | Indicator.....                             | 1 |
| 379042            | Male Connector.....                        | 2 |
| 379043            | Male Elbow.....                            | 1 |
| 379252            | Butt Connector.....                        | 2 |
| 500357-7          | Lockwasher.....                            | 8 |
| 500376-6          | Nut 10-24.....                             | 4 |
| 500448-9          | Screw Slot.....                            | 4 |
| 379900            | Ass'y Fuse.....                            | 1 |
| 379904            | Push Connect.....                          | 1 |
| <b>328388-46X</b> | Inst Kit Parts Bag                         |   |
| 379900            | Ass'y Fuse.....                            | 1 |
| 378416            | Hex Nipple.....                            | 1 |
| 379042            | Male Connector.....                        | 2 |
| 379043            | Male Elbow.....                            | 1 |
| 379253            | Ring Connector.....                        | 1 |
| 379257            | Splice Connect.....                        | 1 |
| 379306            | Fork Connector.....                        | 4 |
| 500357-7          | Lockwasher.....                            | 2 |
| 500457-6          | Slotted Screw.....                         | 2 |
| 379904            | Push Connect.....                          | 1 |
| <b>328388-47X</b> | 12V Electric Over Air (442/447/489 Series) |   |
| 328388-46X        | Inst Kit P Shift Option.....               | 1 |
| 378414            | Pressure Protection Valve.....             | 1 |
| 378881            | Rocker Swivel.....                         | 1 |
| 378978            | Indicator.....                             | 1 |
| 379044-7          | Nylon Tubing.....                          | 1 |
| 379252            | Butt Connector.....                        | 2 |
| 379258            | Bracket.....                               | 1 |
| 379303-1          | Valve 12V.....                             | 1 |
| 379336            | Switch Bracket.....                        | 1 |
| 379254-3          | Wire, Green.....                           | 1 |
| 379106            | Breather Cap.....                          | 1 |
| 379640            | Booted Connector.....                      | 1 |
| <b>328388-48X</b> | 24V Electric Over Air (442/447/489 Series) |   |
| 379640            | Booted Connector.....                      | 1 |
| 328388-46X        | Inst Kit P Shift Option.....               | 1 |
| 378414            | Pressure Protection Valve.....             | 1 |
| 378881            | Rocker Swivel.....                         | 1 |
| 379005            | Indicator.....                             | 1 |
| 379044-7          | Nylon Tubing.....                          | 1 |
| 379252            | Butt Connector.....                        | 1 |
| 379258            | Bracket.....                               | 1 |
| 379303-2          | Valve 24V.....                             | 1 |
| 379336            | Switch Bracket.....                        | 1 |
| 379106            | Breather Cap.....                          | 1 |
| 379254-3          | Wire, Green.....                           | 1 |
| <b>328388-65X</b> | Air-O-Matic Shift (442/447/489 Series)     |   |
| 329214X           | Apsco Valve.....                           | 1 |
| 378414            | Pressure Protection Valve.....             | 1 |
| 328388-64X        | Airshift Kit.....                          | 1 |
| <b>328388-72X</b> | Air Shift (442/489 Series)                 |   |
| 378414            | Pressure Protection Valve.....             | 1 |
| 329316X           | Valve Assembly.....                        | 1 |
| 328388-64X        | Airshift Kit.....                          | 1 |

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|--------------------|----------------------------------------|---|
| <b>328388-97X</b>  | Airshift                               |   |
| 328931X            | Kit Valve.....                         | 1 |
| 500357-7           | Lockwasher.....                        | 4 |
| 500376-6           | Nut 10-24.....                         | 4 |
| 500448-9           | Screw Slot.....                        | 4 |
| 378416             | Hex Nipple.....                        | 1 |
| 379042             | Male Connector.....                    | 1 |
| 379252             | Butt Connector.....                    | 2 |
| 379900             | Ass'y Fuse.....                        | 1 |
| 379904             | Push Connect.....                      | 1 |
| 75-P-13            | Light Indicator.....                   | 1 |
| <b>328388-98X</b>  | Kit Installation Air Shift             |   |
| 328388-97X         | Air Shift.....                         | 1 |
| 329090-6X          | Kit Valve.....                         | 1 |
| 379044-7           | Nylon Tubing.....                      | 1 |
| 379130             | Support Bracket.....                   | 2 |
| 379640             | Booted Connector.....                  | 1 |
| <b>328390-117X</b> | Cable to Air (442/489 Series)          |   |
| 35-P-8             | Shifter Cover.....                     | 1 |
| 329361X            | Shifter Cover.....                     | 1 |
| 378430-9           | Hex Capscrew.....                      | 4 |
| 328388-98X         | Kit Installation.....                  | 1 |
| Owners Manual      | HY25-1135-M1/US.....                   | 1 |
| <b>328390-119X</b> | Cable to Electric/Air (442/489 Series) |   |
| 328388-47X         | 12V Electric.....                      | 1 |
| 329361X            | Shifter Cover.....                     | 1 |
| 35-P-8             | Shifter Cover.....                     | 1 |
| 378430-11          | Hex Capscrew.....                      | 4 |
| Owners Manual      | HY25-1135-M1/US.....                   | 1 |
| <b>328390-120X</b> | Cable to Electric/Air (442/489 Series) |   |
| 328388-48X         | 24V Electric Over Air.....             | 1 |
| 329361X            | Shifter Cover.....                     | 1 |
| 35-P-8             | Shifter Cover.....                     | 1 |
| 378430-11          | Hex Capscrew.....                      | 4 |
| Owners Manual      | HY25-1135-M1/US.....                   | 1 |
| <b>328390-125X</b> | Cable to Air (447 Series)              |   |
| 329363X            | Shifter Cover.....                     | 1 |
| 378430-9           | Hex Capscrew.....                      | 4 |
| 35-P-8             | Shifter Cover.....                     | 1 |
| 328388-98X         | Kit Installation.....                  | 1 |
| Owners Manual      | HY25-1135-M1/US.....                   | 1 |
| <b>328390-127X</b> | Wire to 12V Kit (447 Series)           |   |
| 328388-47X         | 12V Electric.....                      | 1 |
| 329363X            | Shifter Cover.....                     | 1 |
| 378430-9           | Hex Capscrew.....                      | 4 |
| 35-P-8             | Shifter Cover.....                     | 1 |
| Owners Manual      | HY25-1135-M1/US.....                   | 1 |
| <b>328390-129X</b> | W/C to 24V Conv Kit (447 Series)       |   |
| 328388-48X         | 24V Electric Over Air.....             | 1 |
| 329363X            | Shifter Cover.....                     | 1 |
| 378430-9           | Hex Capscrew.....                      | 4 |
| 35-P-8             | Shifter Cover.....                     | 1 |
| Owners Manual      | HY25-1135-M1/US.....                   | 1 |

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**Kits Bill of Materials****Power Take-Offs****442, 447 & 489 Series**

|                                        |                        |                                        |                        |
|----------------------------------------|------------------------|----------------------------------------|------------------------|
| <b>328591-10X</b> "XG" Pump Conversion |                        | <b>328591-26X</b> "XO" Pump Conversion |                        |
| 28-P-216                               | Oil Seal.....1         | 28-P-216                               | Oil Seal.....1         |
| 3-P-281                                | Pump Shaft.....1       | 3-P-284                                | Pump Shaft.....1       |
| 328580X                                | Flange Assembly.....1  | 328328X                                | Flange Assembly.....1  |
| 378391                                 | Lock/Retaining.....2   | 378391                                 | Lock/Retaining.....2   |
| 378447-8                               | Socket Head.....4      | 378447-8                               | Socket Head.....4      |
| 22-P-127-1                             | Bearing Cone.....2     | 22-P-127-1                             | Bearing Cone.....2     |
| 22-P-127-2                             | Bearing Cone.....2     | 22-P-127-2                             | Bearing Cone.....2     |
| 22-P-127-3                             | Bearing Cone.....1     | 22-P-127-3                             | Bearing Cone.....1     |
| <b>328591-11X</b> "XJ" Pump Conversion |                        | <b>328591-27X</b> "XE" Pump Conversion |                        |
| 28-P-216                               | Oil Seal.....1         | 28-P-216                               | Oil Seal.....1         |
| 3-P-284                                | Pump Shaft.....1       | 3-P-800                                | Pump Shaft.....1       |
| 328580X                                | Flange Assembly.....1  | 328328X                                | Flange Assembly.....1  |
| 378391                                 | Lock/Retaining.....2   | 378391                                 | Lock/Retaining.....2   |
| 378447-8                               | Socket Head.....4      | 378447-8                               | Socket Head.....4      |
| 22-P-127-1                             | Bearing Cone.....2     | 379688                                 | Lubricant Spline.....1 |
| 22-P-127-2                             | Bearing Cone.....2     | 22-P-127-1                             | Bearing Cone.....2     |
| 22-P-127-3                             | Bearing Cone.....1     | 22-P-127-2                             | Bearing Cone.....2     |
| <b>328591-16X</b> "XK" Pump Conversion |                        | 22-P-127-3                             | Bearing Cone.....1     |
| 3-P-282                                | Pump Shaft.....1       | <b>328591-28X</b> "AK" Pump Conversion |                        |
| 328333X                                | Flange Assembly.....1  | 28-P-216                               | Oil Seal.....1         |
| 378391                                 | Lock/Retaining.....2   | 3-P-282                                | Pump Shaft.....1       |
| 378447-8                               | Socket Head.....4      | 328989X                                | Flange Assembly.....1  |
| 379688                                 | Lubricant Spline.....1 | 378391                                 | Lock/Retaining.....2   |
| 22-P-127-1                             | Bearing Cone.....2     | 378447-8                               | Socket Head.....4      |
| 22-P-127-2                             | Bearing Cone.....2     | 379688                                 | Lubricant Spline.....1 |
| 22-P-127-3                             | Bearing Cone.....1     | 22-P-127-1                             | Bearing Cone.....2     |
| <b>328591-17X</b> "XQ" Pump Conversion |                        | 22-P-127-2                             | Bearing Cone.....2     |
| 28-P-216                               | Oil Seal.....1         | 22-P-127-3                             | Bearing Cone.....1     |
| 3-P-282                                | Pump Shaft.....1       | <b>328591-29X</b> "FF" Pump Conversion |                        |
| 328589X                                | Bearing Cap.....1      | 28-P-219                               | Oil Seal.....1         |
| 378391                                 | Lock/Retaining.....2   | 3-P-851                                | Pump Shaft.....1       |
| 378447-8                               | Socket Head.....4      | 329088X                                | Flange Assembly.....1  |
| 379688                                 | Lubricant Spline.....1 | 378391                                 | Lock/Retaining.....2   |
| 22-P-127-1                             | Bearing Cone.....2     | 378447-10                              | Capscrew.....4         |
| 22-P-127-2                             | Bearing Cone.....2     | 379688                                 | Lubricant Spline.....1 |
| 22-P-127-3                             | Bearing Cone.....1     | 22-P-127-1                             | Bearing Cone.....2     |
| <b>328591-18X</b> "XL" Pump Conversion |                        | 22-P-127-2                             | Bearing Cone.....2     |
| 28-P-216                               | Oil Seal.....1         | 22-P-127-3                             | Bearing Cone.....1     |
| 3-P-283                                | Pump Shaft.....1       | <b>328591-30X</b> "AF" Pump Conversion |                        |
| 328580X                                | Flange Assembly.....1  | 28-P-219                               | Oil Seal.....1         |
| 378391                                 | Lock/Retaining.....2   | 3-P-854                                | Pump Shaft.....1       |
| 378447-8                               | Socket Head.....4      | 329088X                                | Flange Assembly.....1  |
| 379688                                 | Lubricant Spline.....1 | 378391                                 | Lock/Retaining.....2   |
| 22-P-127-1                             | Bearing Cone.....2     | 378447-10                              | Capscrew.....4         |
| 22-P-127-2                             | Bearing Cone.....2     | 379688                                 | Lubricant Spline.....1 |
| 22-P-127-3                             | Bearing Cone.....1     | 22-P-127-1                             | Bearing Cone.....2     |
| <b>328591-23X</b> "XP" Pump Conversion |                        | 22-P-127-2                             | Bearing Cone.....2     |
| 28-P-216                               | Oil Seal.....1         | 22-P-127-3                             | Bearing Cone.....1     |
| 3-P-282                                | Pump Shaft.....1       | <b>328591-44X</b> "LA" Pump Conversion |                        |
| 328328X                                | Flange Assembly.....1  | 28-P-216                               | Oil Seal.....1         |
| 378391                                 | Lock/Retaining.....2   | 3-P-858                                | Pump Shaft.....1       |
| 378447-8                               | Socket Head.....4      | 328989X                                | Flange Assembly.....1  |
| 379688                                 | Lubricant Spline.....1 | 329091X                                | Lube Pump.....1        |
| 22-P-127-1                             | Bearing Cone.....2     | 329092X                                | Pressure Lube.....1    |
| 22-P-127-2                             | Bearing Cone.....2     | 378391                                 | Lock/Retaining.....2   |
| 22-P-127-3                             | Bearing Cone.....1     | 378447-8                               | Socket Head.....4      |
|                                        |                        | 379533                                 | Installation.....1     |
|                                        |                        | 379534                                 | Inst Instruction.....1 |
|                                        |                        | 500841-1                               | Elbow 90°.....1        |
|                                        |                        | 500897-5                               | Plug Shipping.....1    |
|                                        |                        | 9-P-76                                 | Idler Shaft.....1      |
|                                        |                        | 22-P-127-1                             | Bearing Cone.....2     |
|                                        |                        | 22-P-127-2                             | Bearing Cone.....2     |
|                                        |                        | 22-P-127-3                             | Bearing Cone.....2     |

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| <b>328591-45X</b> | "LB" Pump Conversion  |   |
| 28-P-216          | Oil Seal.....         | 1 |
| 3-P-858           | Pump Shaft.....       | 1 |
| 328328X           | Flange Assembly.....  | 1 |
| 329091X           | Lube Pump.....        | 1 |
| 329092X           | Pressure Lube.....    | 1 |
| 378391            | Lock/Retaining.....   | 2 |
| 378447-8          | Socket Head.....      | 4 |
| 379533            | Installation.....     | 1 |
| 379534            | Inst Instruction..... | 1 |
| 500841-1          | Elbow 90°.....        | 1 |
| 500897-5          | Plug Shipping.....    | 1 |
| 9-P-76            | Idler Shaft.....      | 1 |
| 22-P-127-1        | Bearing Cone.....     | 2 |
| 22-P-127-2        | Bearing Cone.....     | 2 |
| 22-P-127-3        | Bearing Cone.....     | 2 |

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|-------------------|----------------------|---|
| <b>328591-46X</b> | "LC" Pump Conversion |   |
| 28-P-216          | Oil Seal.....        | 1 |
| 3-P-858           | Pump Shaft.....      | 1 |
| 328589X           | Bearing Cap.....     | 1 |
| 329091X           | Lube Pump.....       | 1 |
| 329092X           | Pressure Lube.....   | 1 |
| 378391            | Lock/Retaining.....  | 1 |
| 378447-8          | Socket Head.....     | 4 |
| 379533            | Installation.....    | 1 |
| 379534            | Inst Instr.....      | 1 |
| 500841-1          | Elbow 90°.....       | 1 |
| 500897-5          | Plug Shipping.....   | 1 |
| 9-P-76            | Idler Shaft.....     | 1 |
| 22-P-127-1        | Bearing Cone.....    | 2 |
| 22-P-127-2        | Bearing Cone.....    | 2 |
| 22-P-127-3        | Bearing Cone.....    | 2 |

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|-------------------|-----------------------|---|
| <b>328591-47X</b> | "LE" Pump Conversion  |   |
| 28-P-216          | Oil Seal.....         | 1 |
| 3-P-858           | Pump Shaft.....       | 1 |
| 328584X           | Flange Assembly.....  | 1 |
| 329091X           | Lube Pump.....        | 1 |
| 329092X           | Pressure Lube.....    | 1 |
| 378391            | Lock/Retaining.....   | 2 |
| 378447-8          | Socket Head.....      | 4 |
| 379533            | Installation.....     | 1 |
| 379534            | Inst Instruction..... | 1 |
| 500841-1          | Elbow 90°.....        | 1 |
| 500897-5          | Plug-Shipping.....    | 1 |
| 9-P-76            | Idler Shaft.....      | 1 |
| 22-P-127-1        | Bearing Cone.....     | 2 |
| 22-P-127-2        | Bearing Cone.....     | 2 |
| 22-P-127-3        | Bearing Cone.....     | 2 |

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|-------------------|-----------------------|---|
| <b>328591-48X</b> | "LF" Pump Conversion  |   |
| 3-P-858           | Pump Shaft.....       | 1 |
| 328333X           | Flange Assembly.....  | 1 |
| 329091X           | Lube Pump.....        | 1 |
| 329092X           | Pressure Lube.....    | 1 |
| 378391            | Lock/Retaining.....   | 2 |
| 378447-8          | Socket Head.....      | 4 |
| 379533            | Installation.....     | 1 |
| 379534            | Inst Instruction..... | 1 |
| 500841-1          | Elbow 90°.....        | 1 |
| 500897-5          | Plug Shipping.....    | 1 |
| 9-P-76            | Idler Shaft.....      | 1 |
| 22-P-127-1        | Bearing Cone.....     | 2 |
| 22-P-127-2        | Bearing Cone.....     | 2 |
| 22-P-127-3        | Bearing Cone.....     | 2 |

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| <b>328591-52X</b> | Pump Conv. Kit "XD"    |   |
| 28-P-216          | Oil Seal.....          | 1 |
| 3-P-283           | Pump Shaft.....        | 1 |
| 328711X           | Pump Mount.....        | 1 |
| 329194X           | Bearing Cap Ass'y..... | 1 |
| 378391            | Lock/Retaining.....    | 2 |
| 379063            | Flat Washer.....       | 4 |
| 379673            | Stud.....              | 4 |
| 379688            | Lubricant Spline.....  | 1 |
| 22-P-127-1        | Bearing Cone.....      | 2 |
| 22-P-127-2        | Bearing Cone.....      | 2 |
| 22-P-127-3        | Bearing Cone.....      | 1 |

|                   |                    |   |
|-------------------|--------------------|---|
| <b>328591-53X</b> | Pump Conv. Kit "R" |   |
| 378447-6          | Socket Head.....   | 7 |
| 379638            | P.T.O. Tag.....    | 1 |
| 21-P-628          | Pump Flange.....   | 1 |

|                   |                    |   |
|-------------------|--------------------|---|
| <b>328591-54X</b> | Pump Conv. Kit "R" |   |
| 21-P-572          | Flange Pump.....   | 1 |
| 378447-6          | Socket Head.....   | 7 |
| 379638            | P.T.O. Tag.....    | 1 |

|                   |                        |   |
|-------------------|------------------------|---|
| <b>328591-55X</b> | Pump Conv. Kit "XD"    |   |
| 21-P-628          | Pump Flange.....       | 1 |
| 28-P-216          | Oil Seal.....          | 1 |
| 3-P-283           | Pump Shaft.....        | 1 |
| 329195X           | Bearing Cap Ass'y..... | 1 |
| 378391            | Lock/Retaining.....    | 2 |
| 378447-6          | Socket Head.....       | 7 |
| 379638            | P.T.O. Tag.....        | 1 |
| 379688            | Lubricant Spline.....  | 1 |
| 22-P-127-1        | Bearing Cone.....      | 2 |
| 22-P-127-2        | Bearing Cone.....      | 2 |
| 22-P-127-3        | Bearing Cone.....      | 1 |

|                   |                        |   |
|-------------------|------------------------|---|
| <b>328591-56X</b> | Pump Conv. Kit "XD"    |   |
| 21-P-572          | Flange Pump.....       | 1 |
| 28-P-216          | Oil Seal.....          | 1 |
| 3-P-283           | Pump Shaft.....        | 1 |
| 329195X           | Bearing Cap Ass'y..... | 1 |
| 378391            | Lock/Retaining.....    | 2 |
| 378447-6          | Socket Head.....       | 7 |
| 379638            | P.T.O. Tag.....        | 1 |
| 379688            | Lubricant Spline.....  | 1 |
| 22-P-127-1        | Bearing Cone.....      | 2 |
| 22-P-127-2        | Bearing Cone.....      | 2 |
| 22-P-127-3        | Bearing Cone.....      | 1 |

|                   |                       |   |
|-------------------|-----------------------|---|
| <b>328591-70X</b> | "AZ" Pump Conversion  |   |
| 379688            | Lubricant Spline..... | 1 |
| 378447-11         | Capscrew.....         | 4 |
| 3-P-844           | Output Shaft.....     | 1 |
| 378391            | Lock/Retaining.....   | 2 |
| 329052X           | Bearing Cap.....      | 1 |
| 28-P-275          | Oil Seal.....         | 1 |
| 22-P-127-1        | Bearing Cone.....     | 2 |
| 22-P-127-2        | Bearing Cone.....     | 2 |
| 22-P-127-3        | Bearing Cone.....     | 1 |

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**Kits Bill of Materials****Power Take-Offs****442, 447 & 489 Series**

|                   |                        |   |                   |                        |   |
|-------------------|------------------------|---|-------------------|------------------------|---|
| <b>328591-71X</b> | Pump Conversion Kit    |   | <b>328591-75X</b> | Pump Conversion Kit    |   |
| 28-P-219          | Oil Seal.....          | 1 | 21-P-572          | Flange Pump.....       | 1 |
| 329088X           | Flange Assembly.....   | 1 | 378447-6          | Socket Head.....       | 7 |
| 378391            | Lock/Retaining.....    | 2 | 379638            | P.T.O. Tag.....        | 1 |
| 378447-10         | Capscrew.....          | 4 | 3-P-923X          | Drive Shaft Ass'y..... | 1 |
| 28-P-268          | Oil Seal.....          | 1 | 3-P-923           | Drive Shaft.....       | 1 |
| 328273X           | Bearing Cap.....       | 1 | 379688            | Lubricant Spline.....  | 1 |
| 3-P-921X          | Drive Shaft Ass'y..... | 1 | 500168-2          | Fitting.....           | 1 |
| 379688            | Lubricant Spline.....  | 1 | 379819            | Grease Fit.....        | 1 |
| 3-P-921           | Drive Shaft.....       | 1 | 328273X           | Bearing Cap.....       | 1 |
| 500168-2          | Fitting.....           | 1 | 28-P-268          | Oil Seal.....          | 1 |
| 379819            | Grease Fit.....        | 1 | 378391            | Lock/Retaining.....    | 2 |
| 22-P-127-1        | Bearing Cone.....      | 2 | 22-P-127-1        | Bearing Cone.....      | 2 |
| 22-P-127-2        | Bearing Cone.....      | 2 | 22-P-127-2        | Bearing Cone.....      | 2 |
| 22-P-127-3        | Bearing Cone.....      | 1 | 22-P-127-3        | Bearing Cone.....      | 1 |
| <b>328591-72X</b> | Pump Conversion Kit    |   | <b>328591-76X</b> | Pump Conversion Kit    |   |
| 378447-6          | Socket Head.....       | 7 | 3-P-923X          | Drive Shaft Ass'y..... | 1 |
| 329195X           | Bearing Cap Ass'y..... | 1 | 3-P-923           | Drive Shaft.....       | 1 |
| 379638            | P.T.O. Tag.....        | 1 | 379688            | Lubricant Spline.....  | 1 |
| 328273X           | Bearing Cap.....       | 1 | 500168-2          | Fitting.....           | 1 |
| 28-P-268          | Oil Seal.....          | 1 | 379819            | Grease Fit.....        | 1 |
| 3-P-923X          | Drive Shaft Ass'y..... | 1 | 328273X           | Bearing Cap.....       | 1 |
| 3-P-923           | Drive Shaft.....       | 1 | 28-P-268          | Oil Seal.....          | 1 |
| 379688            | Lubricant Spline.....  | 1 | 28-P-216          | Oil Seal.....          | 1 |
| 500168-2          | Fitting.....           | 1 | 328711X           | Pump Mount.....        | 1 |
| 379819            | Grease Fit.....        | 1 | 329194X           | Bearing Cap Ass'y..... | 1 |
| 28-P-216          | Oil Seal.....          | 1 | 378391            | Lock/Retaining.....    | 2 |
| 378391            | Lock/Retaining.....    | 2 | 379063            | Flat Washer.....       | 4 |
| 21-P-628          | Pump Flange.....       | 1 | 379673            | Stud.....              | 4 |
| 22-P-127-1        | Bearing Cone.....      | 2 | 22-P-127-1        | Bearing Cone.....      | 2 |
| 22-P-127-2        | Bearing Cone.....      | 2 | 22-P-127-2        | Bearing Cone.....      | 2 |
| 22-P-127-3        | Bearing Cone.....      | 1 | 22-P-127-3        | Bearing Cone.....      | 1 |
| <b>328591-73X</b> | Pump Conversion Kit    |   | <b>328591-78X</b> | Pump Conversion Kit    |   |
| 378391            | Lock/Retaining.....    | 2 | 21-P-626          | Pump Flange.....       | 1 |
| 379638            | P.T.O. Tag.....        | 1 | 28-P-219          | Oil Seal.....          | 1 |
| 3-P-923X          | Drive Shaft Ass'y..... | 1 | 3-P-924           | Output Shaft.....      | 1 |
| 3-P-923           | Drive Shaft.....       | 1 | 329264X           | Bearing Cap Ass'y..... | 1 |
| 379688            | Lubricant Spline.....  | 1 | 378391            | Lock/Retaining.....    | 2 |
| 500168-2          | Fitting.....           | 1 | 378447-6          | Socket Head.....       | 7 |
| 379819            | Grease Fit.....        | 1 | 379688            | Lubricant Spline.....  | 1 |
| 328273X           | Bearing Cap.....       | 1 | 379638            | P.T.O. Tag.....        | 1 |
| 28-P-268          | Oil Seal.....          | 1 | 28-P-271          | O-Ring.....            | 1 |
| 21-P-628          | Pump Flange.....       | 1 | 22-P-127-1        | Bearing Cone.....      | 2 |
| 378447-6          | Socket Head.....       | 7 | 22-P-127-2        | Bearing Cone.....      | 2 |
| 22-P-127-1        | Bearing Cone.....      | 2 | 22-P-127-3        | Bearing Cone.....      | 1 |
| 22-P-127-2        | Bearing Cone.....      | 2 |                   |                        |   |
| 22-P-127-3        | Bearing Cone.....      | 1 |                   |                        |   |
| <b>328591-74X</b> | Pump Conversion Kit    |   | <b>328591-86X</b> | Conversion Kit To "GK" |   |
| 3-P-923X          | Drive Shaft Ass'y..... | 1 | 378447-8          | Socket Head.....       | 4 |
| 3-P-923           | Drive Shaft.....       | 1 | 28-P-216          | Oil Seal.....          | 1 |
| 379688            | Lubricant Spline.....  | 1 | 378391            | Lock/Retaining.....    | 2 |
| 500168-2          | Fitting.....           | 1 | 328273X           | Bearing Cap.....       | 1 |
| 379819            | Grease Fit.....        | 1 | 28-P-268          | Oil Seal.....          | 1 |
| 328273X           | Bearing Cap.....       | 1 | 3-P-933X          | Output Shaft.....      | 1 |
| 28-P-268          | Oil Seal.....          | 1 | 379819            | Grease Fit.....        | 1 |
| 28-P-216          | Oil Seal.....          | 1 | 500168-2          | Fitting.....           | 1 |
| 329195X           | Bearing Cap Ass'y..... | 1 | 3-P-933           | Output Shaft.....      | 1 |
| 378391            | Lock/Retaining.....    | 2 | 379688            | Lubricant Spline.....  | 1 |
| 378447-6          | Socket Head.....       | 7 | 22-P-127-1        | Bearing Cone.....      | 2 |
| 379638            | P.T.O. Tag.....        | 1 | 22-P-127-2        | Bearing Cone.....      | 2 |
| 21-P-572          | Flange Pump.....       | 1 | 22-P-127-3        | Bearing Cone.....      | 1 |
| 22-P-127-1        | Bearing Cone.....      | 2 |                   |                        |   |
| 22-P-127-2        | Bearing Cone.....      | 2 |                   |                        |   |
| 22-P-127-3        | Bearing Cone.....      | 1 |                   |                        |   |

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|                   |                             |   |
|-------------------|-----------------------------|---|
| <b>328591-88X</b> | Conversion Kit "AZ" To "GZ" |   |
| 378391            | Lock/Retaining .....        | 2 |
| 328273X           | Bearing Cap .....           | 1 |
| 28-P-268          | Oil Seal .....              | 1 |
| 378447-8          | Socket Head .....           | 4 |
| 3-P-939X          | Output Shaft .....          | 1 |
| 379688            | Lubricant Spline .....      | 1 |
| 3-P-939           | Output Shaft .....          | 1 |
| 379819            | Grease Fit .....            | 1 |
| 500168-2          | Fitting .....               | 1 |
| 28-P-275          | Oil Seal .....              | 1 |
| 22-P-127-1        | Bearing Cone .....          | 2 |
| 22-P-127-2        | Bearing Cone .....          | 2 |
| 22-P-127-3        | Bearing Cone .....          | 1 |

|                   |                             |   |
|-------------------|-----------------------------|---|
| <b>328591-89X</b> | Conversion Kit "XD" To "GK" |   |
| 328273X           | Bearing Cap .....           | 1 |
| 3-P-933X          | Output Shaft .....          | 1 |
| 379819            | Grease Fit .....            | 1 |
| 500168-2          | Fitting .....               | 1 |
| 3-P-933           | Output Shaft .....          | 1 |
| 379688            | Lubricant Spline .....      | 1 |
| 28-P-268          | Oil Seal .....              | 1 |
| 378391            | Lock/Retaining .....        | 2 |
| 328333X           | Flange Assembly .....       | 1 |
| 378447-8          | Socket Head .....           | 4 |
| 22-P-127-1        | Bearing Cone .....          | 2 |
| 22-P-127-2        | Bearing Cone .....          | 2 |
| 22-P-127-3        | Bearing Cone .....          | 1 |

|                   |                             |   |
|-------------------|-----------------------------|---|
| <b>328591-90X</b> | Conversion Kit "XD" To "GP" |   |
| 378447-8          | Socket Head .....           | 4 |
| 28-P-268          | Oil Seal .....              | 1 |
| 28-P-216          | Oil Seal .....              | 1 |
| 378391            | Lock/Retaining .....        | 2 |
| 328328X           | Flange Assembly .....       | 1 |
| 328273X           | Bearing Cap .....           | 1 |
| 3-P-933X          | Output Shaft .....          | 1 |
| 379819            | Grease Fit .....            | 1 |
| 500168-2          | Fitting .....               | 1 |
| 3-P-933           | Output Shaft .....          | 1 |
| 379688            | Lubricant Spline .....      | 1 |
| 22-P-127-1        | Bearing Cone .....          | 2 |
| 22-P-127-2        | Bearing Cone .....          | 2 |
| 22-P-127-3        | Bearing Cone .....          | 1 |

|                   |                             |   |
|-------------------|-----------------------------|---|
| <b>328591-91X</b> | Conversion Kit "XD" To "GQ" |   |
| 378391            | Lock/Retaining .....        | 2 |
| 328589X           | Bearing Cap .....           | 1 |
| 28-P-216          | Oil Seal .....              | 1 |
| 28-P-268          | Oil Seal .....              | 1 |
| 328273X           | Bearing Cap .....           | 1 |
| 378447-8          | Socket Head .....           | 4 |
| 3-P-933X          | Output Shaft .....          | 1 |
| 379819            | Grease Fit .....            | 1 |
| 500168-2          | Fitting .....               | 1 |
| 3-P-933           | Output Shaft .....          | 1 |
| 379688            | Lubricant Spline .....      | 1 |
| 22-P-127-1        | Bearing Cone .....          | 2 |
| 22-P-127-2        | Bearing Cone .....          | 2 |
| 22-P-127-3        | Bearing Cone .....          | 1 |

|                   |                             |   |
|-------------------|-----------------------------|---|
| <b>328591-92X</b> | Conversion Kit "XD" To "GY" |   |
| 28-P-275          | Oil Seal .....              | 1 |
| 378391            | Lock/Retaining .....        | 2 |
| 329234X           | Bearing Cap .....           | 1 |
| 378447-6          | Socket Head .....           | 4 |
| 328273X           | Bearing Cap .....           | 1 |
| 28-P-268          | Oil Seal .....              | 1 |
| 3-P-938X          | Output Shaft .....          | 1 |
| 500168-2          | Fitting .....               | 1 |
| 379688            | Lubricant Spline .....      | 1 |
| 3-P-938           | Output Shaft .....          | 1 |
| 379819            | Grease Fit .....            | 1 |
| 22-P-127-1        | Bearing Cone .....          | 2 |
| 22-P-127-2        | Bearing Cone .....          | 2 |
| 22-P-127-3        | Bearing Cone .....          | 1 |

|                   |                             |   |
|-------------------|-----------------------------|---|
| <b>328591-93X</b> | Conversion Kit "XD" To "GZ" |   |
| 378391            | Lock/Retaining .....        | 2 |
| 329052X           | Bearing Cap .....           | 1 |
| 328273X           | Bearing Cap .....           | 1 |
| 28-P-268          | Oil Seal .....              | 1 |
| 378447-11         | Capscrew .....              | 4 |
| 3-P-939X          | Output Shaft .....          | 1 |
| 379688            | Lubricant Spline .....      | 1 |
| 3-P-939           | Output Shaft .....          | 1 |
| 379819            | Grease Fit .....            | 1 |
| 500168-2          | Fitting .....               | 1 |
| 28-P-275          | Oil Seal .....              | 1 |
| 22-P-127-1        | Bearing Cone .....          | 2 |
| 22-P-127-2        | Bearing Cone .....          | 2 |
| 22-P-127-3        | Bearing Cone .....          | 1 |

|                    |                             |   |
|--------------------|-----------------------------|---|
| <b>328591-106X</b> | Conversion Kit "RA" To "GA" |   |
| 28-P-268           | Oil Seal .....              | 1 |
| 328273X            | Bearing Cap .....           | 1 |
| 378391             | Lock/Retaining .....        | 2 |
| 28-P-216           | Oil Seal-2 .....            | 1 |
| 3-P-923X           | Drive Shaft Ass'y .....     | 1 |
| 3-P-923            | Drive Shaft .....           | 1 |
| 379688             | Lubricant Spline .....      | 1 |
| 500168-2           | Fitting .....               | 1 |
| 379819             | Grease Fit .....            | 1 |
| 378447-6           | Socket Head .....           | 7 |
| 22-P-127-1         | Bearing Cone .....          | 2 |
| 22-P-127-2         | Bearing Cone .....          | 2 |
| 22-P-127-3         | Bearing Cone .....          | 1 |

|                    |                             |   |
|--------------------|-----------------------------|---|
| <b>328591-107X</b> | Conversion Kit "RB" To "GB" |   |
| 3-P-923X           | Drive Shaft Ass'y .....     | 1 |
| 3-P-923            | Drive Shaft .....           | 1 |
| 379688             | Lubricant Spline .....      | 1 |
| 500168-2           | Fitting .....               | 1 |
| 379819             | Grease Fit .....            | 1 |
| 378447-6           | Socket Head .....           | 7 |
| 28-P-268           | Oil Seal .....              | 1 |
| 28-P-216           | Oil Seal .....              | 1 |
| 328273X            | Bearing Cap .....           | 1 |
| 378391             | Lock/Retaining .....        | 2 |
| 22-P-127-1         | Bearing Cone .....          | 2 |
| 22-P-127-2         | Bearing Cone .....          | 2 |
| 22-P-127-3         | Bearing Cone .....          | 1 |

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**Kits Bill of Materials****Power Take-Offs****442, 447 & 489 Series****328591-108X** Conversion Kit "AF" To "GF"

|            |                        |   |
|------------|------------------------|---|
| 28-P-268   | Oil Seal.....          | 1 |
| 28-P-219   | Oil Seal.....          | 1 |
| 328273X    | Bearing Cap.....       | 1 |
| 378391     | Lock/Retaining.....    | 2 |
| 378447-10  | Capscrew.....          | 4 |
| 3-P-921X   | Drive Shaft Ass'y..... | 1 |
| 379688     | Lubricant Spline.....  | 1 |
| 3-P-921    | Drive Shaft.....       | 1 |
| 500168-2   | Fitting.....           | 1 |
| 379819     | Grease Fit.....        | 1 |
| 22-P-127-1 | Bearing Cone.....      | 2 |
| 22-P-127-2 | Bearing Cone.....      | 2 |
| 22-P-127-3 | Bearing Cone.....      | 1 |

**328591-112X** Conversion Kit "XD" To "RC"

|            |                       |   |
|------------|-----------------------|---|
| 329322X    | Bearing Cap.....      | 1 |
| 28-P-216   | Oil Seal.....         | 1 |
| 3-P-800    | Pump Shaft.....       | 1 |
| 378391     | Lock/Retaining.....   | 2 |
| 379638     | P.T.O. Tag.....       | 1 |
| 378447-6   | Socket Head.....      | 4 |
| 379688     | Lubricant Spline..... | 1 |
| 378446-4   | Screw, Socket.....    | 6 |
| 21-P-638   | Pump Flange.....      | 1 |
| 22-P-127-1 | Bearing Cone.....     | 2 |
| 22-P-127-2 | Bearing Cone.....     | 2 |
| 22-P-127-3 | Bearing Cone.....     | 1 |

**328591-113X** Conversion Kit "XD" To "RD"

|            |                       |   |
|------------|-----------------------|---|
| 21-P-638   | Pump Flange.....      | 1 |
| 329322X    | Bearing Cap.....      | 1 |
| 378391     | Lock/Retaining.....   | 2 |
| 378447-6   | Socket Head.....      | 4 |
| 379638     | P.T.O. Tag.....       | 1 |
| 379688     | Lubricant Spline..... | 1 |
| 378446-4   | Screw, Socket.....    | 6 |
| 28-P-216   | Oil Seal.....         | 1 |
| 3-P-282    | Pump Shaft.....       | 1 |
| 22-P-127-1 | Bearing Cone.....     | 2 |
| 22-P-127-2 | Bearing Cone.....     | 2 |
| 22-P-127-3 | Bearing Cone.....     | 1 |

**328591-114X** Conversion Kit "RF" To "GH"

|            |                       |   |
|------------|-----------------------|---|
| 378447-6   | Socket Head.....      | 7 |
| 378391     | Lock/Retaining.....   | 2 |
| 28-P-219   | Oil Seal.....         | 1 |
| 28-P-268   | Oil Seal.....         | 1 |
| 328273X    | Bearing Cap.....      | 1 |
| 3-P-941X   | Drive Shaft.....      | 1 |
| 3-P-941    | Drive Shaft.....      | 1 |
| 379688     | Lubricant Spline..... | 1 |
| 379819     | Grease Fit.....       | 1 |
| 500168-2   | Fitting.....          | 1 |
| 22-P-127-1 | Bearing Cone.....     | 2 |
| 22-P-127-2 | Bearing Cone.....     | 2 |
| 22-P-127-3 | Bearing Cone.....     | 1 |

**328591-116X** Conversion Kit "XD" To "GH"

|            |                        |   |
|------------|------------------------|---|
| 28-P-219   | Oil Seal.....          | 1 |
| 378447-6   | Socket Head.....       | 7 |
| 378391     | Lock/Retaining.....    | 2 |
| 21-P-626   | Pump Flange.....       | 1 |
| 329264X    | Bearing Cap Ass'y..... | 1 |
| 328273X    | Bearing Cap.....       | 1 |
| 28-P-268   | Oil Seal.....          | 1 |
| 28-P-271   | O-Ring.....            | 1 |
| 3-P-941X   | Drive Shaft.....       | 1 |
| 3-P-941    | Drive Shaft.....       | 1 |
| 379688     | Lubricant Spline.....  | 1 |
| 379819     | Grease Fit.....        | 1 |
| 500168-2   | Fitting.....           | 1 |
| 22-P-127-1 | Bearing Cone.....      | 2 |
| 22-P-127-2 | Bearing Cone.....      | 2 |
| 22-P-127-3 | Bearing Cone.....      | 1 |

**328591-121X** Conversion Kit "XD" To "XY"

|            |                          |   |
|------------|--------------------------|---|
| 28-P-275   | Oil Seal.....            | 1 |
| 3-P-768    | Shaft Output ("XY")..... | 1 |
| 329234X    | Bearing Cap.....         | 1 |
| 378447-6   | Socket Head.....         | 4 |
| 378391     | Lock/Retaining.....      | 2 |
| 22-P-127-1 | Bearing Cone.....        | 2 |
| 22-P-127-2 | Bearing Cone.....        | 2 |
| 22-P-127-3 | Bearing Cone.....        | 1 |

**328591-122X** Conversion Kit "XD" To "XX"

|          |                  |   |
|----------|------------------|---|
| 501181   | Hex Nut.....     | 1 |
| 3-P-766  | Shaft Earby..... | 1 |
| 28-P-216 | Oil Seal.....    | 1 |
| 379111   | SQ. Key 50.....  | 1 |
| 378447-6 | Socket Head..... | 4 |

**328591-130X** Conversion Kit "XD" To "XV"

|          |                |   |
|----------|----------------|---|
| 379828   | Companion..... | 1 |
| 378454-7 | Setscrew.....  | 1 |

**328591-131X** Conversion Kit "XD" To "RY"

|            |                          |   |
|------------|--------------------------|---|
| 378447-8   | Socket Head.....         | 4 |
| 21-P-625   | Output Cover.....        | 1 |
| 3-P-768    | Shaft Output ("XY")..... | 1 |
| 378391     | Lock/Retaining.....      | 1 |
| 329356X    | Bearing Cap Ass'y.....   | 1 |
| 329355-1X  | Loose Part.....          | 1 |
| 22-P-127-1 | Bearing Cone.....        | 2 |
| 22-P-127-2 | Bearing Cone.....        | 2 |
| 22-P-127-3 | Bearing Cone.....        | 1 |

**328591-134X** Pump Conv Kit "XD" To "RE"

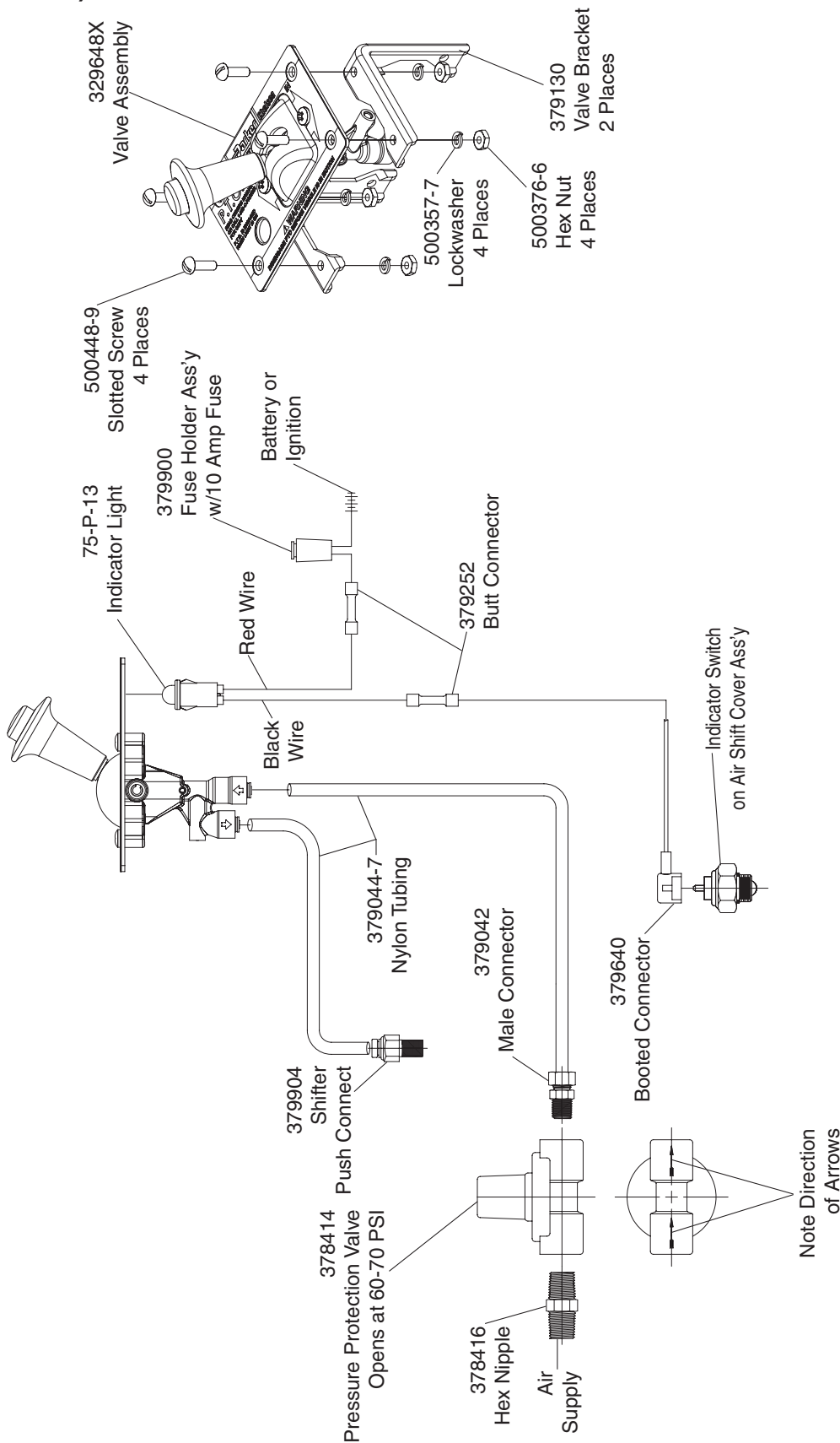
|            |                        |   |
|------------|------------------------|---|
| 21-P-654   | Pump Flange.....       | 1 |
| 329264X    | Bearing Cap Ass'y..... | 1 |
| 378391     | Lock/Retaining.....    | 1 |
| 378447-6   | Socket Head.....       | 7 |
| 379638     | P.T.O. Tag.....        | 1 |
| 379688     | Lubricant Spline.....  | 1 |
| 22-P-127-2 | Bearing Cone.....      | 2 |
| 28-P-219   | Oil Seal.....          | 1 |
| 28-P-271   | O-Ring.....            | 1 |
| 3-P-924    | Output Shaft.....      | 1 |
| 22-P-127-1 | Bearing Cone.....      | 2 |
| 22-P-127-2 | Bearing Cone.....      | 2 |
| 22-P-127-3 | Bearing Cone.....      | 1 |

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|                                                              |                                          |                                                                                   |                                             |
|--------------------------------------------------------------|------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------|
| <b>328591-138X</b> Conversion Kit "XD" To "GJ"               |                                          | <b>328594-14X</b> Bearing and Spacer Kit (Pressure Lube)                          |                                             |
| 28-P-271                                                     | O-Ring .....                             | 14-P-73-1                                                                         | Spacer, Idler Gear (.149" - .151") .....    |
| 328273X                                                      | Bearing Cap.....                         | 14-P-73-2                                                                         | Spacer, Idler Gear (.152" - .154") .....    |
| 378447-6                                                     | Socket Head.....                         | 14-P-73-3                                                                         | Spacer, Idler Gear (.155" - .157") .....    |
| 378391                                                       | Lock/Retaining.....                      | 28-P-191                                                                          | O-Ring .....                                |
| 329264X                                                      | Bearing Cap Ass'y .....                  | 31-P-102                                                                          | Thrust Washer .....                         |
| 28-P-219                                                     | Oil Seal.....                            | 379672                                                                            | NWD Plug .....                              |
| 21-P-654                                                     | Pump Flange.....                         | 500841-1                                                                          | Street Elbow 90° .....                      |
| 28-P-268                                                     | Oil Seal.....                            | 500897-5                                                                          | Shipping Plug .....                         |
| 3-P-941X                                                     | Drive Shaft.....                         | 550439                                                                            | Bearing.....                                |
| 3-P-941                                                      | Drive Shaft.....                         | 9-P-89                                                                            | Shaft, Idler .....                          |
| 379688                                                       | Lubricant Spline .....                   |                                                                                   |                                             |
| 379819                                                       | Grease Fit .....                         |                                                                                   |                                             |
| 500168-2                                                     | Fitting.....                             |                                                                                   |                                             |
| <b>328591-142X</b> Pump Conversion Kit "XD" To "PF"          |                                          | <b>328594-15X</b> Bearing and Spacer Kit (Non-Pressure Lube "A", "B" & "C" Ratio) |                                             |
| 28-P-219                                                     | Oil Seal.....                            | 14-P-73-1                                                                         | Spacer, Idler Gear (.149" - .151") .....    |
| 3-P-924                                                      | Output Shaft.....                        | 14-P-73-2                                                                         | Spacer, Idler Gear (.152" - .154") .....    |
| 329264X                                                      | Bearing Cap Ass'y .....                  | 14-P-73-3                                                                         | Spacer, Idler Gear (.155" - .157") .....    |
| 378391                                                       | Lock/Retaining.....                      | 14-P-75                                                                           | Spacer, Input Bearing .....                 |
| 378447-6                                                     | Socket Head.....                         | 28-P-191                                                                          | O-Ring .....                                |
| 379688                                                       | Lubricant Spline .....                   | 31-P-102                                                                          | Thrust Washer .....                         |
| 379638                                                       | P.T.O. Tag .....                         | 379672                                                                            | Plug, NWD .....                             |
| 28-P-271                                                     | O-Ring .....                             | 550890                                                                            | Needle Bearing.....                         |
| 21-P-661                                                     | Pump Flange.....                         | 561006                                                                            | Bearing.....                                |
| 22-P-127-1                                                   | Bearing Cone.....                        | 9-P-88                                                                            | Shaft, Idler .....                          |
| 22-P-127-2                                                   | Bearing Cone.....                        |                                                                                   |                                             |
| 22-P-127-3                                                   | Bearing Cone.....                        |                                                                                   |                                             |
| <b>328591-143X</b> Pump Conversion Kit "XD" To "PA"          |                                          | <b>328594-16X</b> Bearing and Spacer Kit (Pressure Lube "A", "B" & "C" Ratio)     |                                             |
| 378447-6                                                     | Socket Head.....                         | 14-P-73-1                                                                         | Spacer, Idler Gear (.149" - .151") .....    |
| 378391                                                       | Lock/Retaining.....                      | 14-P-73-2                                                                         | Spacer, Idler Gear (.152" - .154") .....    |
| 21-P-661                                                     | Pump Flange.....                         | 14-P-73-3                                                                         | Spacer, Idler Gear (.155" - .157") .....    |
| 28-P-216                                                     | Oil Seal.....                            | 14-P-75                                                                           | Spacer, Input Bearing .....                 |
| 329195X                                                      | Bearing Cap Ass'y .....                  | 28-P-191                                                                          | O-Ring .....                                |
| 3-P-283                                                      | Pump Shaft.....                          | 31-P-102                                                                          | Thrust Washer .....                         |
| 379638                                                       | P.T.O. Tag .....                         | 379672                                                                            | Plug, NWD .....                             |
| 379688                                                       | Lubricant Spline .....                   | 500841-1                                                                          | Street Elbow 90° .....                      |
| 22-P-127-1                                                   | Bearing Cone.....                        | 500897-5                                                                          | Plug, Shipping .....                        |
| 22-P-127-2                                                   | Bearing Cone.....                        | 550890                                                                            | Needle Bearing.....                         |
| 22-P-127-3                                                   | Bearing Cone.....                        | 561006                                                                            | Bearing.....                                |
|                                                              |                                          | 9-P-89                                                                            | Shaft, Idler .....                          |
| <b>328591-149X</b> "SQ" Pump Conversion                      |                                          | <b>328711X</b> Pump Mounting Kit (447 Series)                                     |                                             |
| 28-P-216                                                     | Oil Seal.....                            | 378919                                                                            | Washer.....                                 |
| 3-P-282                                                      | Pump Shaft.....                          | 500963-1                                                                          | Hex Lock Nut .....                          |
| 329449X                                                      | Bearing Cap.....                         |                                                                                   |                                             |
| 378391                                                       | Lock/Retaining.....                      |                                                                                   |                                             |
| 378447-8                                                     | Socket Head.....                         |                                                                                   |                                             |
| 379688                                                       | Lubricant Spline.....                    |                                                                                   |                                             |
| 22-P-127-1                                                   | Bearing Cone.....                        |                                                                                   |                                             |
| 22-P-127-2                                                   | Bearing Cone.....                        |                                                                                   |                                             |
| 22-P-127-3                                                   | Bearing Cone.....                        |                                                                                   |                                             |
| <b>328594-13X</b> Bearing and Spacer Kit (Non-Pressure Lube) |                                          | <b>328751-1X</b> Installation Kit ("C", "H", "W", "X", "Y")                       |                                             |
| 14-P-73-1                                                    | Spacer, Idler Gear (.149" - .151") ..... | 68-P-18                                                                           | Name Plate.....                             |
| 14-P-73-2                                                    | Spacer, Idler Gear (.152" - .154") ..... | 378978                                                                            | Indicator Light, 12V .....                  |
| 14-P-73-3                                                    | Spacer, Idler Gear (.155" - .157") ..... | 379900                                                                            | Fuse Holder, 10-Amp .....                   |
| 28-P-191                                                     | O-Ring .....                             | 379252                                                                            | Butt Connector.....                         |
| 31-P-102                                                     | Thrust Washer, Bearing .....             | 379640                                                                            | Booted Connector ("V" Shifter Option) ..... |
| 379672                                                       | NWD Plug .....                           |                                                                                   |                                             |
| 550439                                                       | Bearing.....                             |                                                                                   |                                             |
| 9-P-88                                                       | Shaft, Idler .....                       |                                                                                   |                                             |
|                                                              |                                          | <b>328948-6X</b> (442/447 Series)                                                 |                                             |
|                                                              |                                          | 35-P-9-1                                                                          | Mounting Gasket .010".....                  |
|                                                              |                                          | 35-P-9-2                                                                          | Mounting Gasket .020".....                  |
|                                                              |                                          | 379085-1                                                                          | P.T.O. Instruction Decal .....              |
|                                                              |                                          | 328946X                                                                           | Caution Label Kit.....                      |
|                                                              |                                          | 379624                                                                            | Product Warranty Card .....                 |
|                                                              |                                          | Owners Manual                                                                     | HY25-1135-M1/US .....                       |
|                                                              |                                          | Safety Guide                                                                      | HY25-1002-M1/US .....                       |
|                                                              |                                          | <b>328948-8X</b> (489 Series)                                                     |                                             |
|                                                              |                                          | 328946X                                                                           | Caution Label Kit.....                      |
|                                                              |                                          | 35-P-15-1                                                                         | Gasket, Housing .010".....                  |
|                                                              |                                          | 35-P-15-2                                                                         | Gasket, Housing .020".....                  |
|                                                              |                                          | 379085-1                                                                          | P.T.O. Instructions Decal .....             |
|                                                              |                                          | 379624                                                                            | Product Warranty Card .....                 |
|                                                              |                                          | Owners Manual                                                                     | HY25-1135-M1/US .....                       |
|                                                              |                                          | Safety Guide                                                                      | HY25-1002-M1/US .....                       |
|                                                              |                                          | <b>7170-72X</b> Stud Kit, Metric (442/447 Series)                                 |                                             |
|                                                              |                                          | 379428-14                                                                         | Stud M10 .....                              |
|                                                              |                                          | 379744                                                                            | Flange Nut.....                             |

**Air Shift Installation Sketch for 442, 447 & 489 Series Using: Williams Valve (SK-462 Rev A)**



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

**NOTE:** When this installation is used on vehicles with automatic transmissions the P.T.O. drive must be stopped before shifting.

**CAUTION:** When installing nylon tubing avoid sharp angles, exhaust and manifold systems.

## This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There is no text or other markings on the paper.

## This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There is no text or other markings on the paper.

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**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.

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10/09-P



**Parker Hannifin Corporation**  
Chelsea Products Division  
8225 Hacks Cross Road  
Olive Branch, Mississippi 38654 USA  
Tel: (662) 895-1011  
Fax: (662) 890-5379  
[www.parker.com/chelsea](http://www.parker.com/chelsea)

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