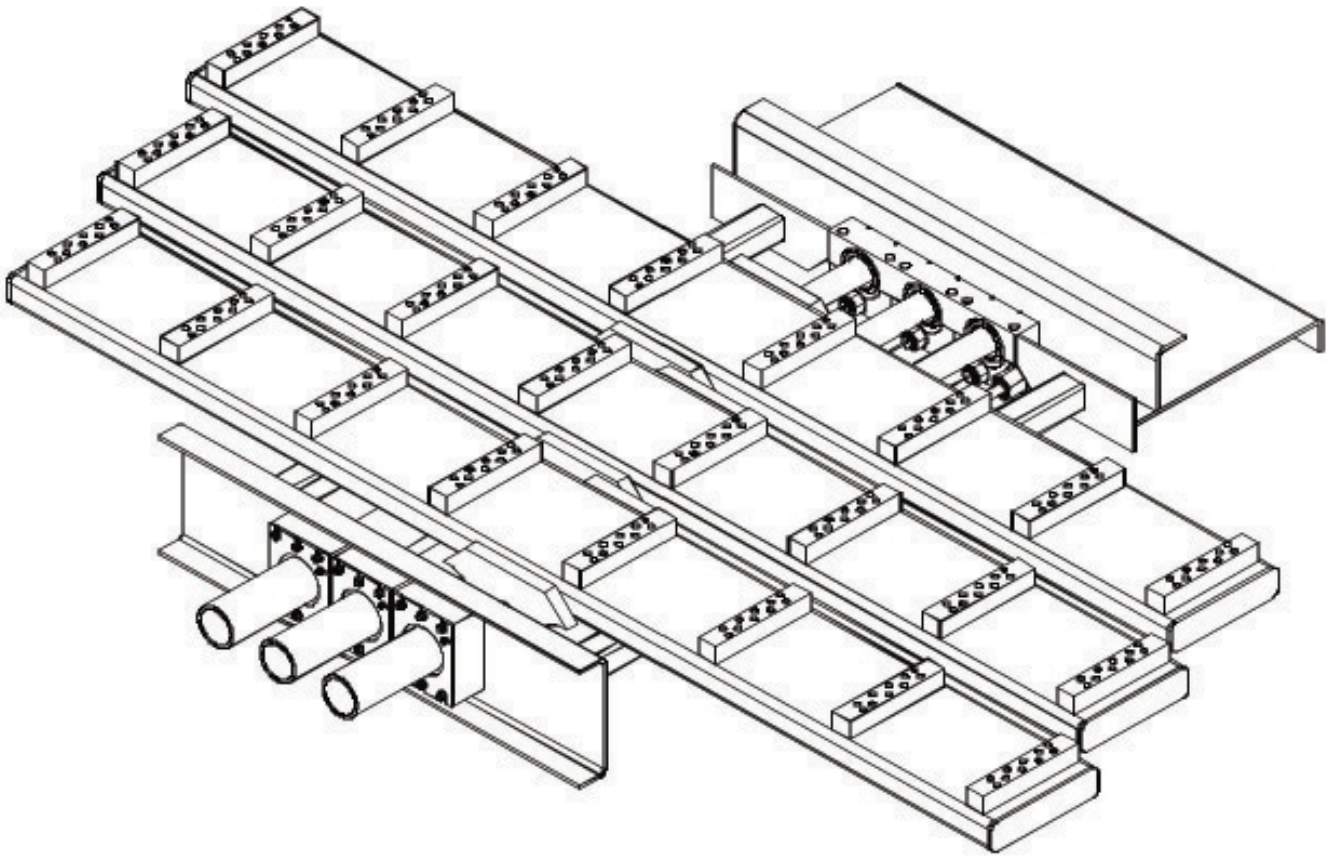


# KEITH® COMPACT DRIVE UNLOADING SYSTEM



## KEITH® CD100 Owners Manual Original Instructions

[www.keithwalkingfloor.com](http://www.keithwalkingfloor.com)

KEITH Mfg. Co.  
World Headquarters  
800-547-6161  
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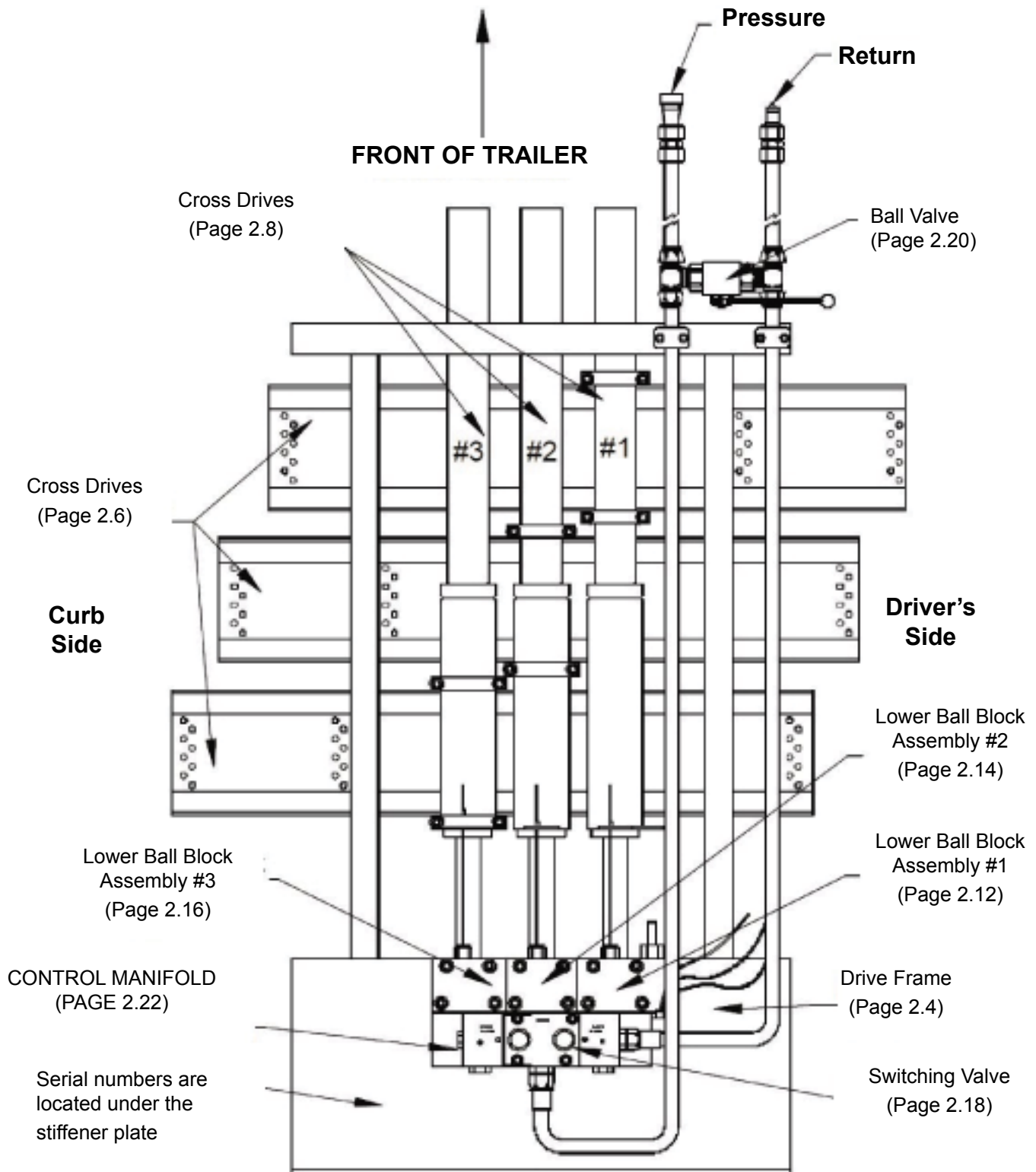
## Section 2 (100mm)

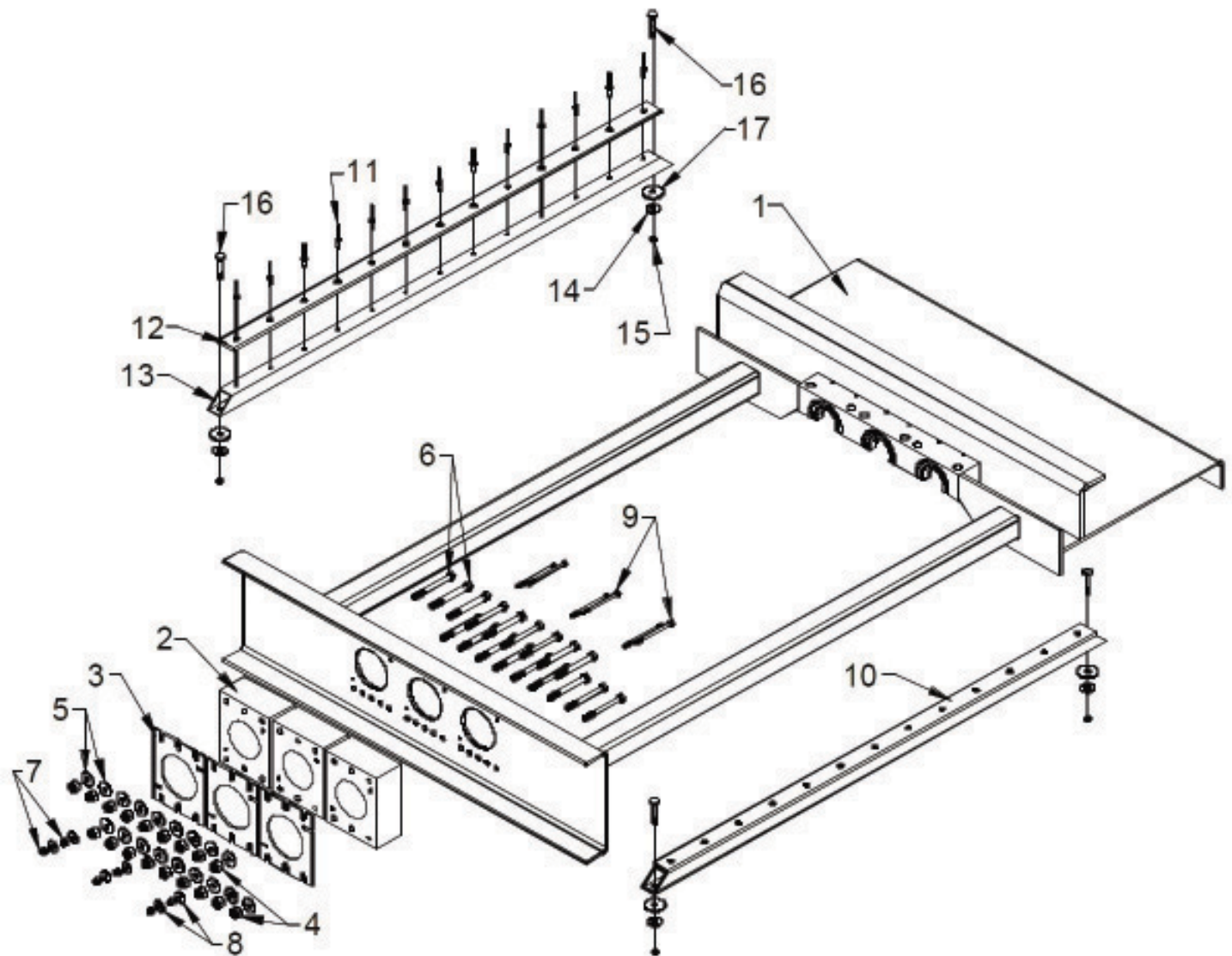
Revised: 10.12.17

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**Note:** The following parts guide is for KEITH® 100mm 24 slat Compact Drive systems. For all other systems please contact KEITH Mfg. Co. or KEITH *WALKING FLOOR* Europe.

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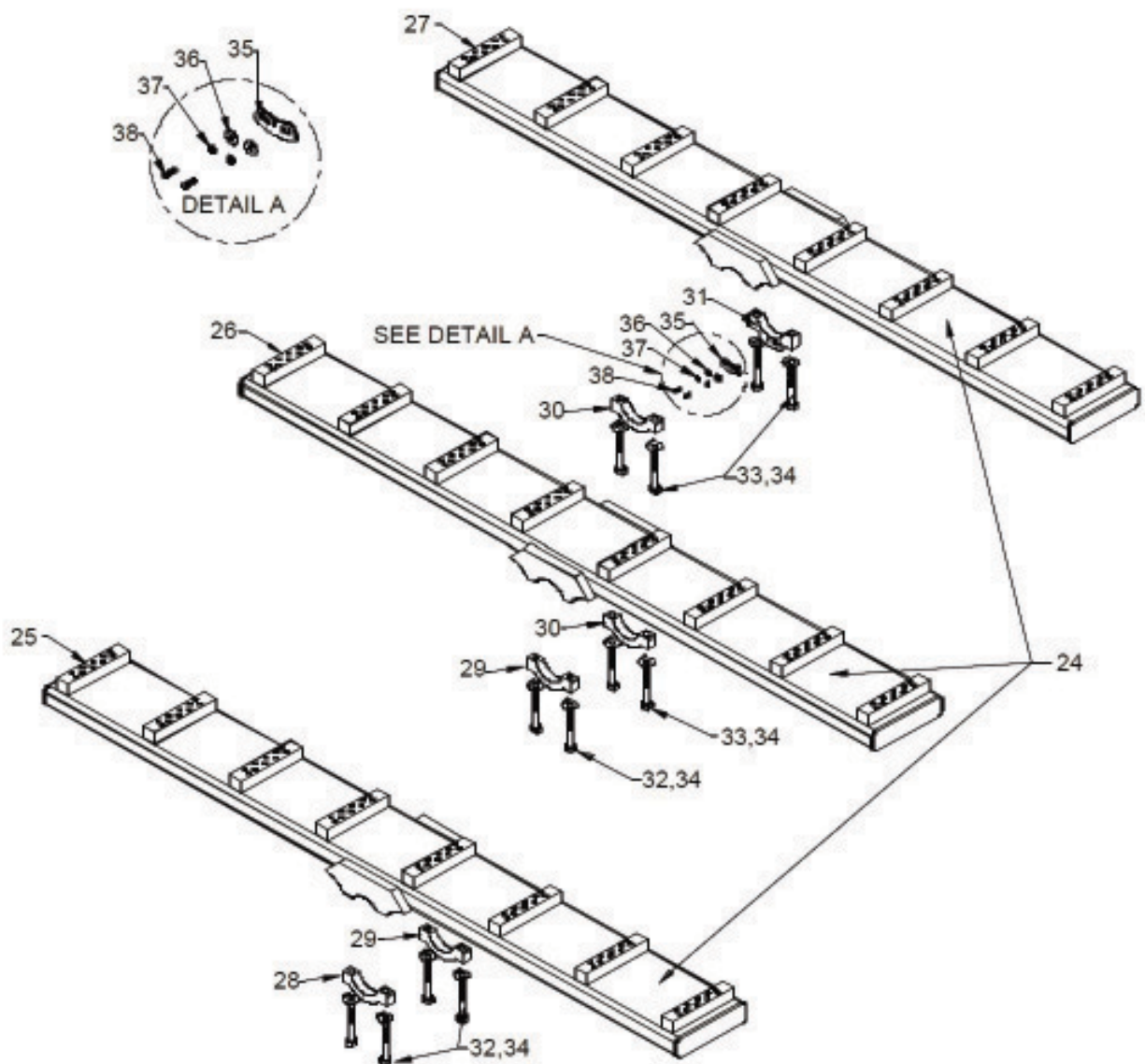




## Parts List

| ID#                     | QUANTITY | DESCRIPTION                                      | PART NUMBER     |
|-------------------------|----------|--------------------------------------------------|-----------------|
| 1 <sup>(1)</sup>        | 1        | <b>Drive Frame Assembly</b>                      | -               |
| -                       | -        | Includes items 1-9                               | -               |
| 1 <sup>(1)</sup>        | 1        |                                                  |                 |
| 2                       | 3        | Bearing Block Guide Tube                         | 04240501        |
| 3                       | 3        | Bearing Backing Plate Guide Tube                 | 04240601        |
| 4                       | 18       | Nut Hex Nylock 3/8"                              | 86628000        |
| 5                       | 18       | Washer Flat 3/8"                                 | 86554000        |
| 6                       | 18       | Bolt Hex GR5 3/8"x3 1/2"                         | 86443000        |
| 7                       | 6        | Nut Hex Nylock 1/4"                              | 86626000        |
| 8                       | 6        | Washer Flat 1/4"                                 | 86551000        |
| 9                       | 6        | Bolt Hex GR5 1/4"x3 1/2"                         | 86422000        |
| <b>10<sup>(1)</sup></b> | <b>2</b> | <b>Bearing 3/8" Cross-Drive Support Assembly</b> | <b>03467802</b> |
| -                       | -        | Includes items 11-13                             | -               |
| 11                      | 13       | Rivet 3/16"x1/2"                                 | 86528000        |
| 12 <sup>(1)</sup>       | 1        | Bearing Cross-Drive Support 3/8" UHMW            | 03453902        |
| 13 <sup>(1)</sup>       | 1        | Bearing Cross-Drive Support Tube                 | 03467701        |
| 14                      | 4        | Washer Flat 3/8"                                 | 86554000        |
| 15                      | 4        | Nut Hex Nylock 3/8"                              | 86628000        |
| 26                      | 4        | Bolt Hex GR5 3/8"x1"                             | 86437500        |
| 17                      | 4        | Washer Large OD 3/8"                             | 86553500        |

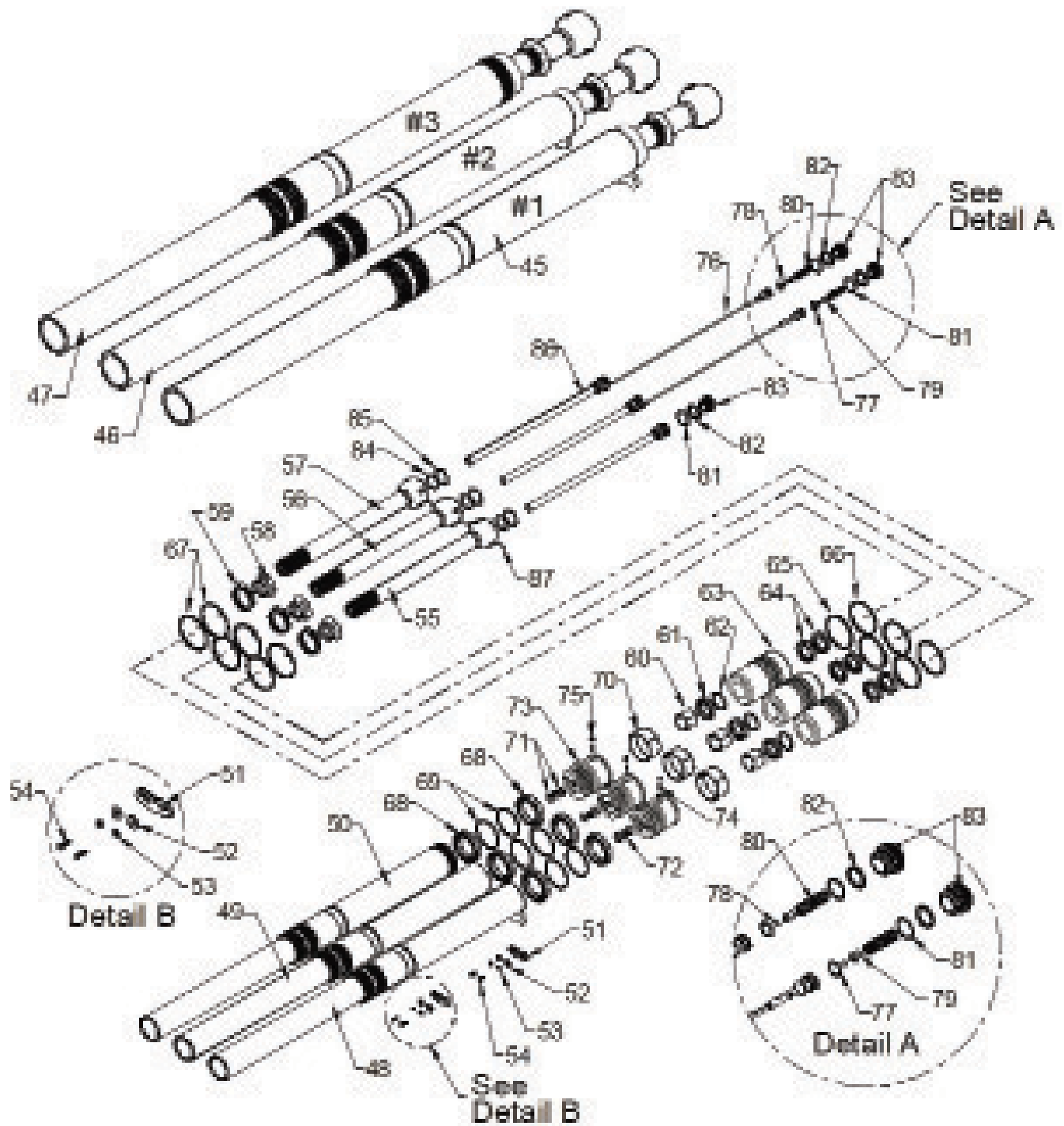
(1) Part numbers and descriptions vary based on drive configuration and application.



## Parts List

| ID#                     | QUANTITY | DESCRIPTION                                    | PART NUMBER     |
|-------------------------|----------|------------------------------------------------|-----------------|
| <b>24<sup>(1)</sup></b> | <b>1</b> | <b>Cross-Drive 24 Slat 100mm Set</b>           | <b>03465109</b> |
| -                       | -        | Includes items 25-27                           | -               |
| 25 <sup>(1)</sup>       | 1        | Cross-Drive 24 Slat 100mm #1                   | 03465110        |
| 26 <sup>(1)</sup>       | 1        | Cross-Drive 24 Slat 100mm #2                   | 03465111        |
| 27 <sup>(1)</sup>       | 1        | Cross-Drive 24 Slat 100mm #3                   | 03465112        |
| 28 <sup>(1)</sup>       | 1        | Clamp Lower Guide Tube                         | 03101601        |
| 29 <sup>(1)</sup>       | 2        | Clamp 3.0" Lower Cross-Drive                   | 03910501        |
| 30 <sup>(1)</sup>       | 2        | Clamp Lower 100mm Barrel Smooth                | 03330903        |
| 31 <sup>(1)</sup>       | 1        | Clamp Lower 100mm Barrel Smooth For Pull Check | 03330901        |
| 32                      | 6        | Bolt Hex Patchloc GR8 5/8"x3"                  | 86467010        |
| 33                      | 6        | Bolt Hex Patchloc GR8 5/8"x3 1/2"              | 86468010        |
| 34                      | 12       | Washer Tab Lock 5/8"                           | 04430601        |
| 35                      | 1        | Collar Pull Check Valve                        | 03500201        |
| 36                      | 2        | Washer Flat 1/4"                               | 86551000        |
| 37                      | 2        | Washer Lock 1/4"                               | 86551500        |
| 38                      | 2        | Bolt Hex GR5 1/4"x3/4"                         | 86413000        |

(1) Part numbers and descriptions vary based on drive configuration and application.

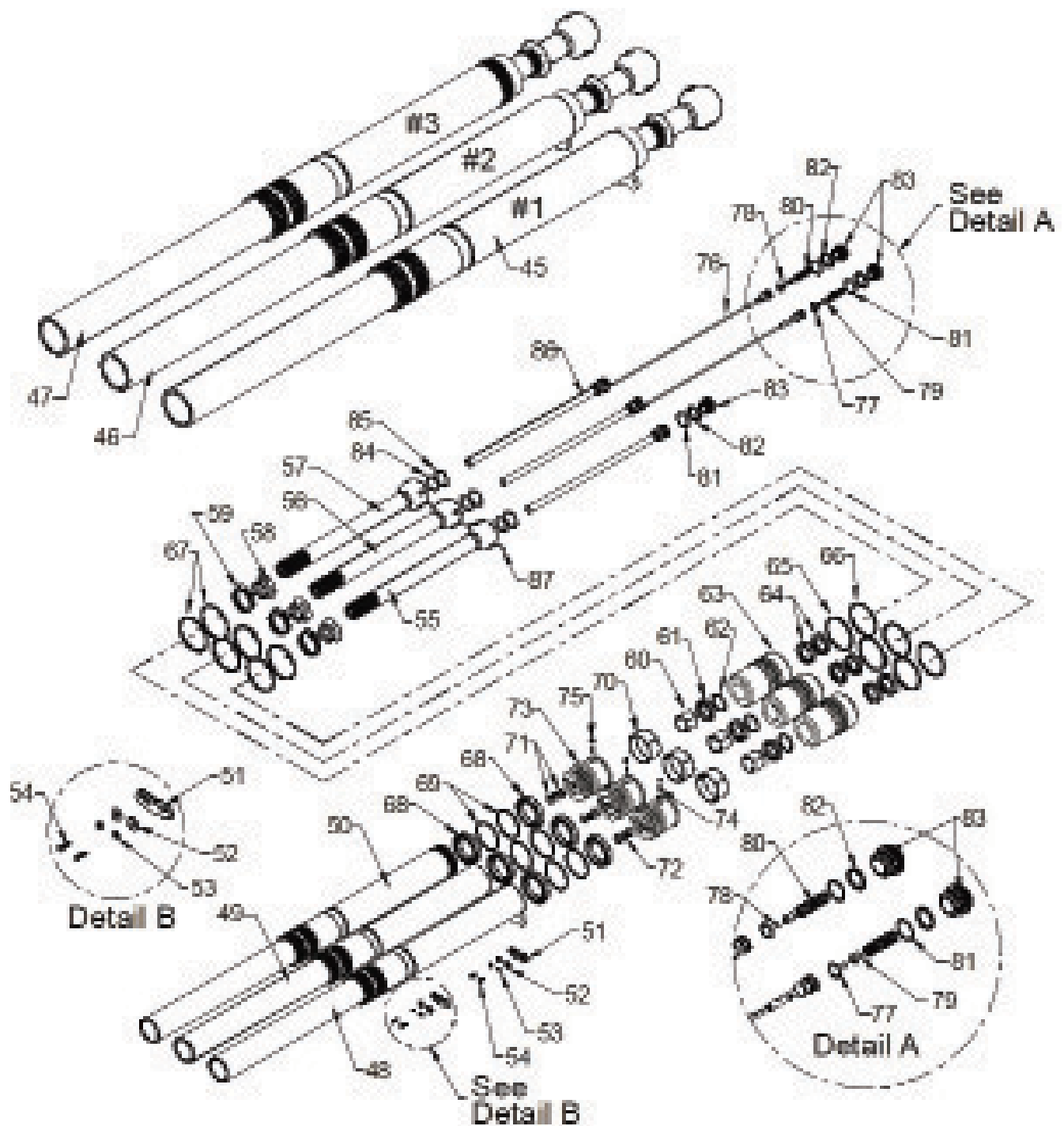


## Parts List

| ID#                     | QUANTITY | DESCRIPTION                                      | PART NUMBER     |
|-------------------------|----------|--------------------------------------------------|-----------------|
| <b>45<sup>(1)</sup></b> | <b>1</b> | <b>Cylinder 100mm Assembly #1</b>                | <b>04095301</b> |
| 46 <sup>(1)</sup>       | 1        | Cylinder 100mm Assembly #2                       | 04095901        |
| 47 <sup>(1)</sup>       | 1        | Cylinder 100mm Assembly #3                       | 04096501        |
| -                       | -        | Includes items 48-87                             | -               |
| 48 <sup>(1)</sup>       | 1        | Barrel 100mm Smooth #1                           | 04095601        |
| 49 <sup>(1)</sup>       | 1        | Barrel 100mm Smooth #2                           | 04096201        |
| 50 <sup>(1)</sup>       | 1        | Barrel 100mm Grooved #3                          | 04096801        |
| 51                      | 2        | Collar Pull Check Valve                          | 03500201        |
| 52                      | 4        | Washer Flat 1/4"                                 | 86551000        |
| 53                      | 4        | Washer Lock 1/4"                                 | 86551500        |
| 54                      | 4        | Bolt Hex GR5 1/4"x3/4"                           | 86413000        |
| .. <sup>(1)</sup>       | <b>1</b> | <b>Rod W/Piston &amp; Head 100mm Assembly #1</b> | <b>04097101</b> |
| .. <sup>(1)</sup>       | <b>1</b> | <b>Rod W/Piston &amp; Head 100mm Assembly #2</b> | <b>04097201</b> |
| .. <sup>(1)</sup>       | <b>1</b> | <b>Rod W/Piston &amp; Head 100mm Assembly #3</b> | <b>04097301</b> |
| -                       | -        | Includes items 55-87                             | -               |
| 55 <sup>(1)</sup>       | 1        | Rod & Ball 90/100mm Assembly #1                  | 03103801        |
| 56 <sup>(1)</sup>       | 1        | Rod & Ball 90/100mm Assembly #2                  | 03103901        |
| 57 <sup>(1)</sup>       | 1        | Rod & Ball 90/100mm Assembly #3                  | 03104001        |
| 58                      | 3        | Dust Seal Cylinder Rod                           | 84801300        |
| 59                      | 3        | Clamp Hose 2"                                    | 84751000        |
| .. <sup>(1)</sup>       | <b>3</b> | <b>Head 100mm Assembly Cylinder Lockwire</b>     | <b>04154101</b> |
| -                       | -        | Includes items 60-67                             | -               |
| 60                      | 1        | Wear Ring Rod Cylinder 45mm                      | 84401200        |
| 61                      | 1        | Seal Rod Cylinder 45mm                           | 84354200        |
| 62 <sup>(1)(2)</sup>    | 1        | Seal Backup Rod Cylinder 45mm                    | w/seal          |
| 63                      | 1        | Head AL 100M CD Round Wire                       | 06719501        |
| 64                      | 2        | Wiper Rod 45mm Canned                            | 84426600        |
| 65 <sup>(1)</sup>       | 1        | O-Ring 239                                       | 84384800        |
| 66 <sup>(1)</sup>       | 1        | O-Ring Backup 8-239                              | 84393000        |
| 67                      | 2        | Lock Wire 100mm Head Cylinder                    | 03812107        |

(1) Part numbers and descriptions vary based on drive configuration and application.

(2) Backup included w/seal



NOTE: This is the same image as page 2.8

**Parts List** (Contd.)

| ID#                  | QUANTITY | DESCRIPTION                                             | PART NUMBER     |
|----------------------|----------|---------------------------------------------------------|-----------------|
| -(1)                 | <b>3</b> | <b>Piston 100mm Assembly Aluminum Ported</b>            | <b>04154501</b> |
| -                    | -        | Includes items 68-75                                    | -               |
| 68 <sup>(1)</sup>    | 2        | Seal Cylinder Piston 100mm                              | 84355000        |
| 69 <sup>(1)(2)</sup> | 2        | Seal Backup Piston Cylinder 100mm                       | w/seal          |
| 70 <sup>(1)</sup>    | 1        | Wear Ring Cylinder Piston 100mm                         | 84400800        |
| 71                   | 2        | O-Ring Backup 8-210                                     | 84390600        |
| 72                   | 1        | O-Ring 210                                              | 84380200        |
| 73 <sup>(1)</sup>    | 1        | Piston 100mm Aluminum Ported                            | 03672001        |
| 74 <sup>(1)</sup>    | 1        | Pin Drive Lock 3/16" x 1/2"                             | 86650400        |
| 75                   | 1        | 6409-02 M O-Ring Socket Plug                            | 84687200        |
| -(3)                 | <b>2</b> | <b>Check Valve Assembly Internal Push</b>               | <b>03932201</b> |
| -                    | -        | Includes items 76-83                                    | -               |
| 76 <sup>(4)</sup>    | 1        | Check Valve Internal Push                               | 03376301        |
| 77 <sup>(4)</sup>    | 1        | O-Ring 209 70 Durometer Urethane                        | 84380100        |
| 78 <sup>(4)</sup>    | 1        | Ball 5/16" Chrome Steel                                 | 84800500        |
| 79 <sup>(4)</sup>    | 1        | Spring Follower Internal Check Valve                    | 03785801        |
| 80 <sup>(4)</sup>    | 1        | Spring #4161                                            | 84454250        |
| 81                   | 1        | O-Ring 218                                              | 84382800        |
| 82                   | 1        | O-Ring Backup 8-218                                     | 84392000        |
| 83                   | 1        | End Cap Rod Ball                                        | 03784701        |
| 84                   | 3        | O-Ring 218                                              | 84382800        |
| 85                   | 3        | O-Ring 220                                              | 84383400        |
| 86                   | 3        | Inner Tube Assembly                                     | 03671901        |
| 87                   | 3        | Dowel Pin Cylinder Ball 1/4"x1 1/8"                     | 04228802        |
| -(5)                 | <b>1</b> | <b>Seal Kit 100mm Cylinder</b>                          | <b>04180901</b> |
| -                    | -        | Includes items 60-62, 64-66, 68-72, 77, 81, 82, 84 & 85 | -               |

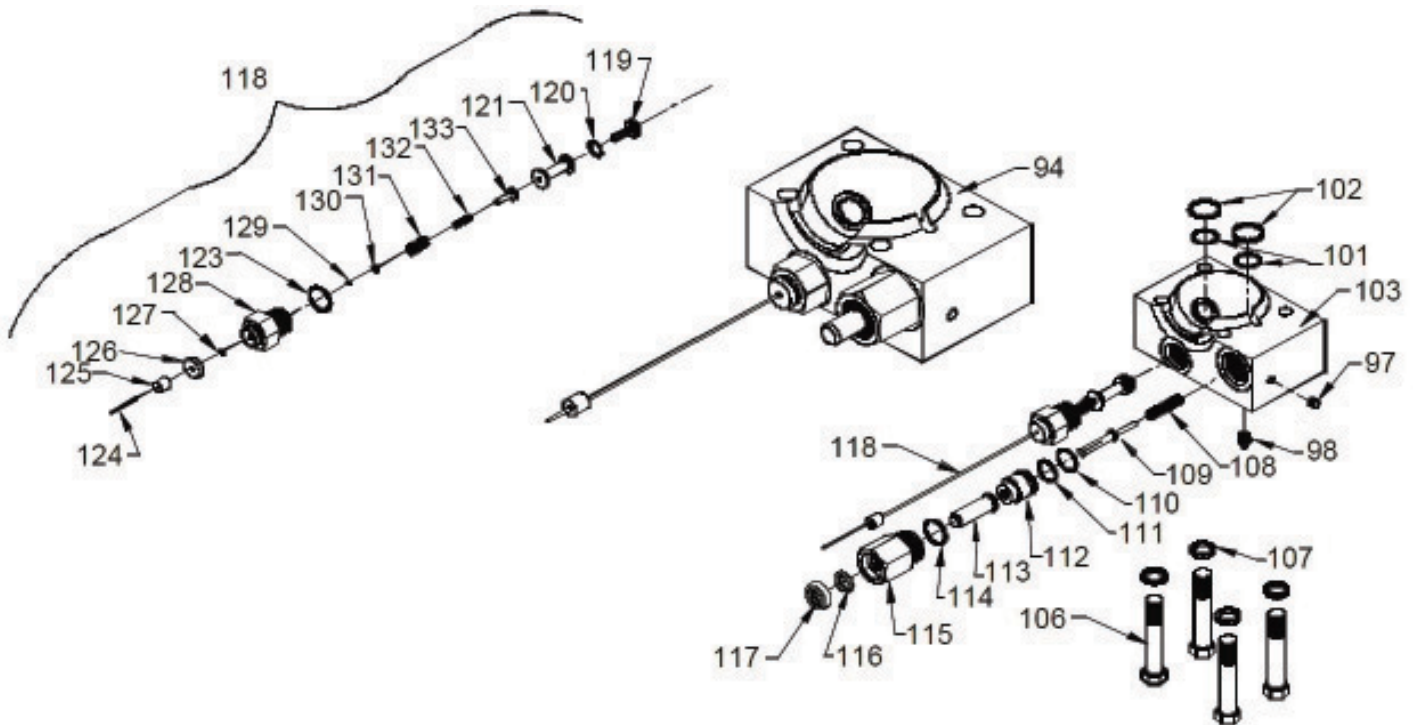
(1) Part numbers and descriptions vary based on drive configuration and application.

(2) Backup included w/seal.

(3) Not sold separately. Included only with internal push check valve assembly.

(4) Parts 76-80 are not used in the #1 cylinder

(5) The seal kit includes all necessary items required to rebuild the entire cylinder. It does not include items such as the rod or piston.



## Parts List

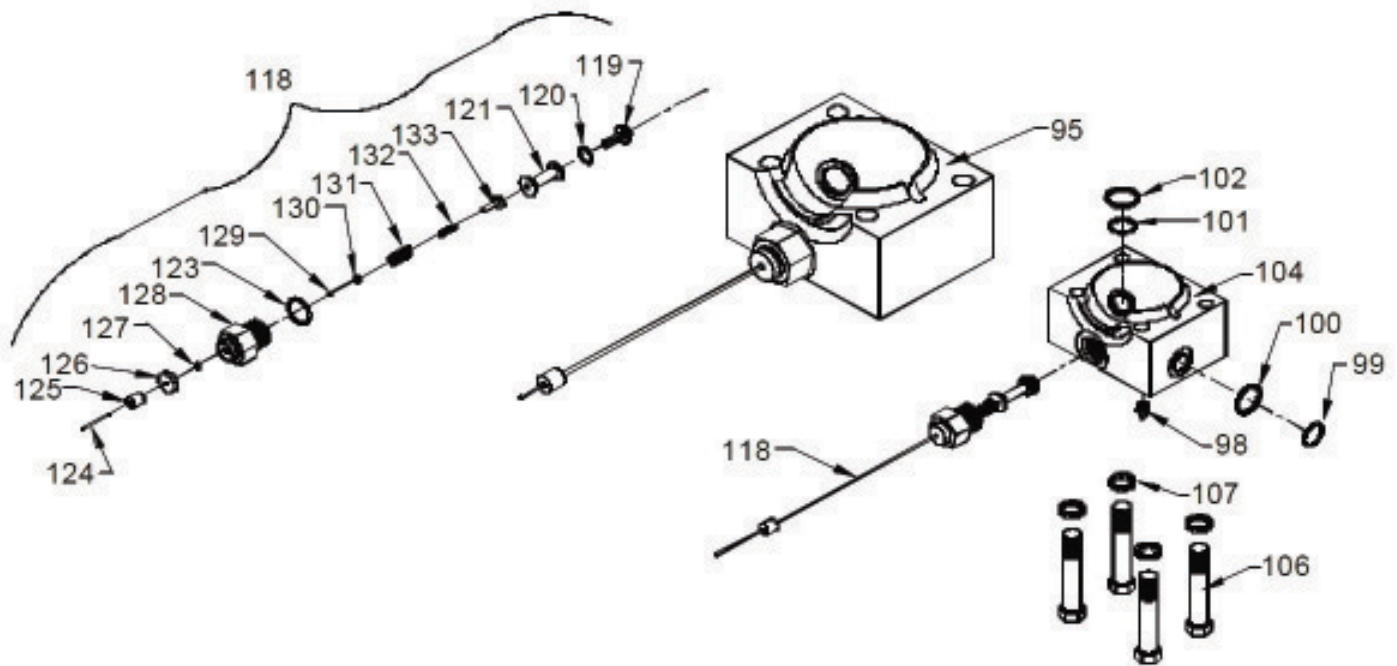
| ID# | QUANTITY | DESCRIPTION                                       | PART NUMBER     |
|-----|----------|---------------------------------------------------|-----------------|
| 94  | 1        | <b>Ball Block Assembly #1 Lower</b>               | <b>04167401</b> |
| -   | -        | Includes items 97, 98, 101-103, 106-121 & 123-133 | -               |
| 97  | 1        | 1/16" Pipe Plug Socket 7/8" Taper                 | 84680770        |
| 98  | 1        | Fitting Grease 1/8" Pipe 1610B                    | 84704300        |
| 101 | 2        | O-Ring 214 Urethane                               | 84382000        |
| 102 | 2        | O-Ring Backup 8-214 Ball Block                    | 02100301        |
| 103 | 1        | Ball Block Lower #1                               | 03349401        |
| 106 | 4        | Bolt Hex GR8 1/2"x4"                              | 86457500        |
| 107 | 4        | Washer Lock 1/2"                                  | 86557000        |

## Parts List (Contd.)

| ID#                   | QUANTITY | DESCRIPTION                                    | PART NUMBER     |
|-----------------------|----------|------------------------------------------------|-----------------|
| -                     | 1        | <b>Check Valve Pilot Signal Push SWV Short</b> | <b>03421101</b> |
| -                     | -        | Includes items 108-117                         | -               |
| 108                   | 1        | Spring 9-0808-36                               | 84455000        |
| 109                   | 1        | Check Valve Pilot                              | 03126101        |
| 110                   | 1        | O-Ring 211                                     | 84380600        |
| 111                   | 1        | O-Ring Backup 8-211                            | 84390800        |
| 112                   | 1        | Seat Check Valve Pilot                         | 03126201        |
| 113                   | 1        | Plunger Short Check Valve                      | 03294001        |
| 114                   | 1        | O-Ring 916                                     | 84387800        |
| 115                   | 1        | Nose Cap Push Check Valve                      | 03312501        |
| 116                   | 1        | Seal Rod 5/8"                                  | 84352200        |
| 117                   | 1        | Wiper Canned 5/8" Rod                          | 84427200        |
| 118 <sup>(1)(2)</sup> | 1        | <b>Check Valve Pull Assembly Ball Block</b>    | <b>03569408</b> |
| -                     | -        | Includes items 119-121 & 123-133               | -               |
| 119                   | 1        | Check Valve Pull                               | 03567501        |
| 120                   | 1        | O-Ring 206 Urethane                            | 84379000        |
| 121                   | 1        | Check Valve End Poppet Pull                    | 03567601        |
| 123                   | 1        | O-Ring 912                                     | 84387400        |
| 124                   | 1        | Check Valve Pull Wire                          | 03544508        |
| 125                   | 1        | Check Valve Pull Stop                          | 03531801        |
| 126                   | 1        | Dust Seal Check Valve Pull                     | 02522201        |
| 127                   | 1        | O-Ring Backup 8-004                            | 84388400        |
| 128                   | 1        | Cap Check Valve Pull                           | 02102501        |
| 129                   | 1        | Seal Check Valve Pull 3/32" Rod                | 84351200        |
| 130                   | 1        | Washer Check Valve Pull                        | 02103301        |
| 131                   | 1        | Spring Check Valve External Large #B-18273     | 84453400        |
| 132                   | 1        | Spring Check Valve External Small #B-18272     | 84453200        |
| 133                   | 1        | Poppet Pilot Pull Check Valve                  | 02101801        |
| -                     | 1        | <b>Seal Kit Ball Block Lower #1</b>            | <b>04441201</b> |
| -                     | -        | Includes items 101 & 102                       | -               |

(1) The last digit in the pull check valve assemblies indicates cylinder stroke length (Example: 03569408 has a 8" cylinder stroke).

(2) Not sold separately. Included only w/check valve pull assembly.

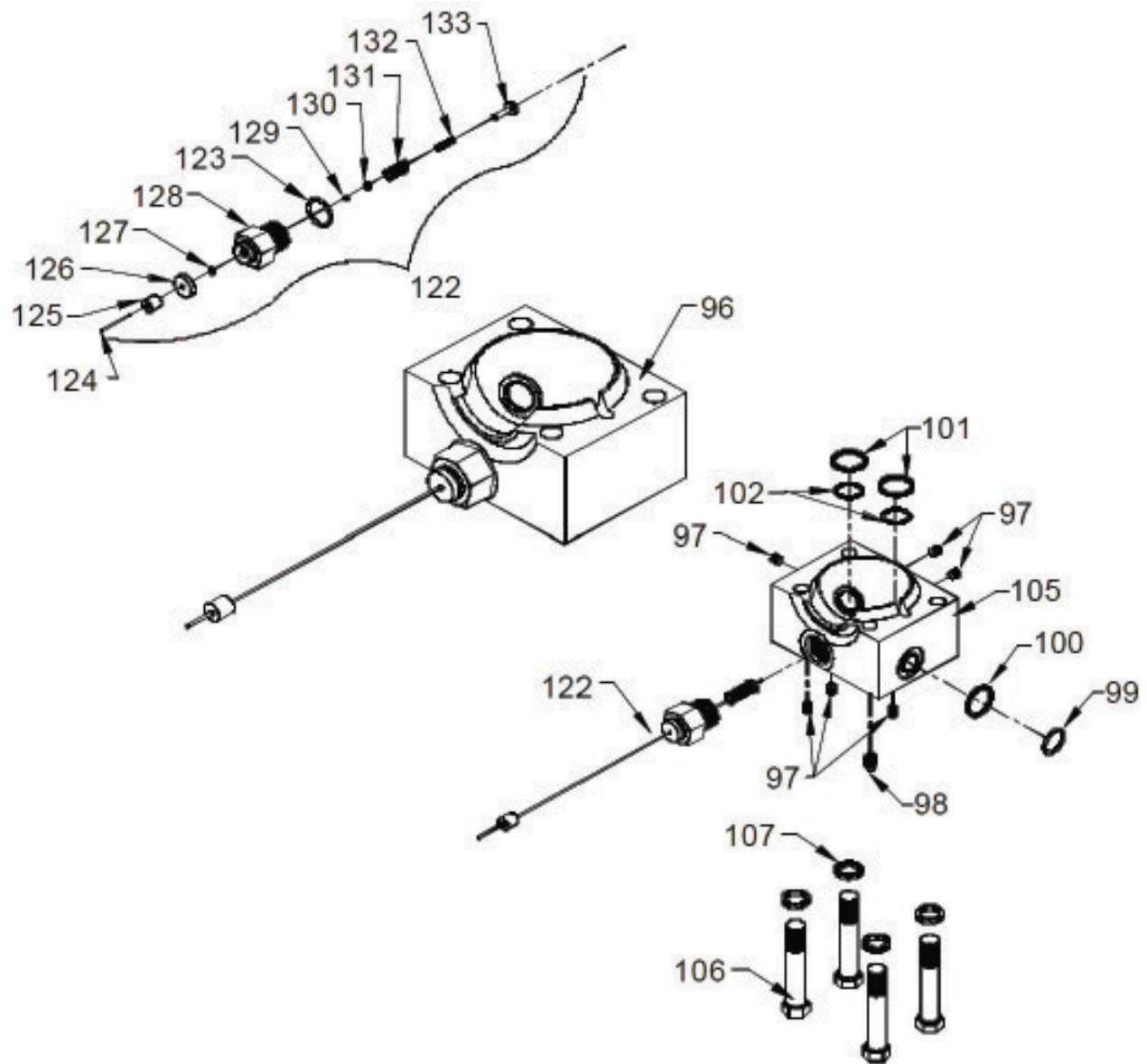


## Parts List

|                             |          |                                                         |                 |
|-----------------------------|----------|---------------------------------------------------------|-----------------|
| <b>95</b>                   | <b>1</b> | <b>Ball Block Assembly #2 Lower</b>                     | <b>04167501</b> |
| -                           | -        | Includes items 98-102, 104, 106, 107, 118-121 & 123-133 | -               |
| 98                          | 1        | Fitting Grease 1/8" Pipe 1610B                          | 84704300        |
| 99                          | 1        | O-Ring 212 Urethane                                     | 84381000        |
| 100                         | 1        | O-Ring Backup 8-212                                     | 02100801        |
| 101                         | 1        | O-Ring 214 Urethane                                     | 84382000        |
| 102                         | 1        | O-Ring Backup 8-214 Ball Block                          | 02100301        |
| 104                         | 1        | Ball Block Lower #2                                     | 03349501        |
| 106                         | 4        | Bolt Hex GR8 1/2"x4"                                    | 86457500        |
| 107                         | 4        | Washer Lock 1/2"                                        | 86557000        |
| <b>118<sup>(1)(2)</sup></b> | <b>1</b> | <b>Check Valve Pull Assembly Ball Block</b>             | <b>03569408</b> |
| -                           | -        | Includes items 119-121 & 123-133                        | -               |
| 119                         | 1        | Check Valve Pull                                        | 84387400        |
| 120                         | 1        | O-Ring 206 Urethane                                     | 03544508        |
| 121                         | 1        | Check Valve End Poppet Pull                             | 03531801        |
| 123                         | 1        | O-Ring 912                                              | 84387400        |
| 124                         | 1        | Check Valve Pull Wire                                   | 84388800        |
| 125                         | 1        | Check Valve Pull Stop                                   | 02102501        |
| 126                         | 1        | Dust Seal Check Valve Pull                              | 02522201        |
| 127                         | 1        | O-Ring Backup 8-004                                     | 84388400        |
| 128                         | 1        | Cap Check Valve Pull                                    | 02102501        |
| 129                         | 1        | Seal Check Valve Pull 3/32" Rod                         | 84351200        |
| 130                         | 1        | Washer Check Valve Pull                                 | 02103301        |
| 131                         | 1        | Spring Check Valve External Large #B-18273              | 84453400        |
| 132                         | 1        | Spring Check Valve External Small #B-18272              | 84453200        |
| 133                         | 1        | Poppet Pilot Pull Check Valve                           | 02101801        |
| -                           | <b>1</b> | <b>Seal Kit Ball Block Lower #2</b>                     | <b>04441301</b> |
| -                           | -        | Includes items 99-102                                   | -               |

(1) The last digit in the pull check valve assemblies indicates cylinder stroke length (Example: 03569408 has a 8" cylinder stroke).

(2) Not sold separately. Included only w/check valve pull assembly.

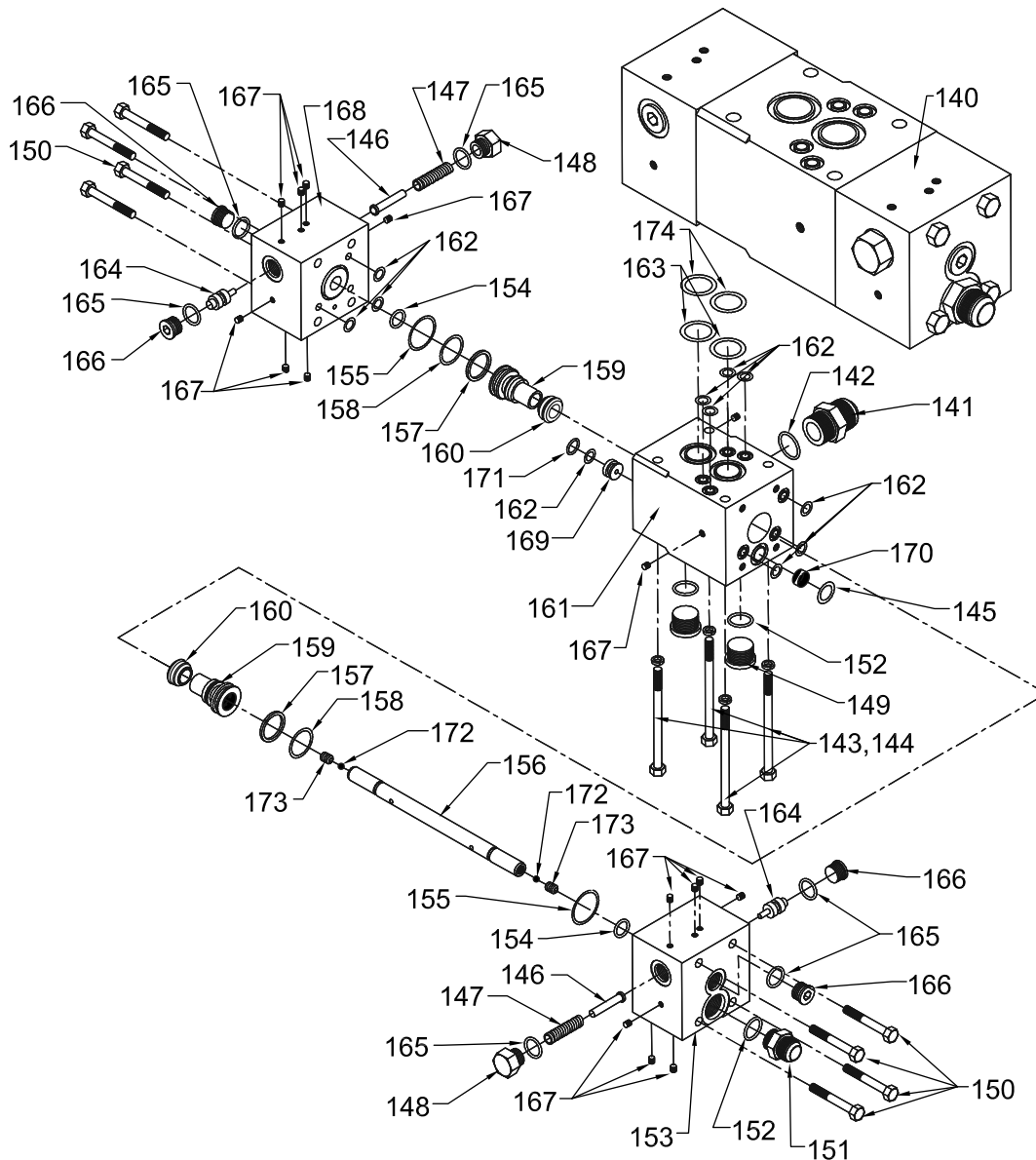


## Parts List

|                             |          |                                            |                 |
|-----------------------------|----------|--------------------------------------------|-----------------|
| <b>96</b>                   | <b>1</b> | <b>Ball Block Assembly #3 Lower</b>        | <b>04167601</b> |
| -                           | -        | Includes items 97-102, 105-107 & 122-133   | -               |
| 97                          | 6        | 1/16" Pipe Plug Socket 7/8" Taper          | 84680770        |
| 98                          | 1        | Fitting Grease 1/8" Pipe 1610B             | 84704300        |
| 99                          | 1        | O-Ring 212 Urethane                        | 84381000        |
| 100                         | 1        | O-Ring Backup 8-212                        | 02100801        |
| 101                         | 2        | O-Ring 214 Urethane                        | 84382000        |
| 102                         | 2        | O-Ring Backup 8-214 Ball Block             | 02100301        |
| 105                         | 1        | Ball Block Lower #3                        | 03349501        |
| 106                         | 4        | Bolt Hex GR8 1/2"x4"                       | 86457500        |
| 107                         | 4        | Washer Lock 1/2"                           | 86557000        |
| <b>122<sup>(1)(2)</sup></b> | <b>1</b> | <b>Check Valve Assembly Pilot Pull</b>     | <b>03543508</b> |
| -                           | -        | Includes items 123-133                     | -               |
| 123                         | 1        | O-Ring 912                                 | 84387400        |
| 124                         | 1        | Check Valve Pull Wire                      | 03544508        |
| 125                         | 1        | Check Valve Pull Stop                      | 03531801        |
| 126                         | 1        | Dust Seal Check Valve Pull                 | 02522201        |
| 127                         | 1        | O-Ring Backup 8-004                        | 84388400        |
| 128                         | 1        | Cap Check Valve Pull                       | 02102501        |
| 129                         | 1        | Seal Check Valve Pull 3/32" Rod            | 84351200        |
| 130                         | 1        | Washer Check Valve Pull                    | 02103301        |
| 131                         | 1        | Spring Check Valve External Large #B-18273 | 84453400        |
| 132                         | 1        | Spring Check Valve External Small #B-18272 | 84453200        |
| 133                         | 1        | Poppet Pilot Pull Check Valve              | 02101801        |
| -                           | <b>1</b> | <b>Seal Kit Ball Block Lower #3</b>        | <b>04441401</b> |
| -                           | -        | Includes items 99-102                      | -               |

(1) The last digit in the pull check valve assemblies indicates cylinder stroke length (Example: 03341308 has a 8" cylinder stroke).

(2) Not sold separately. Included only w/check valve pull assembly.



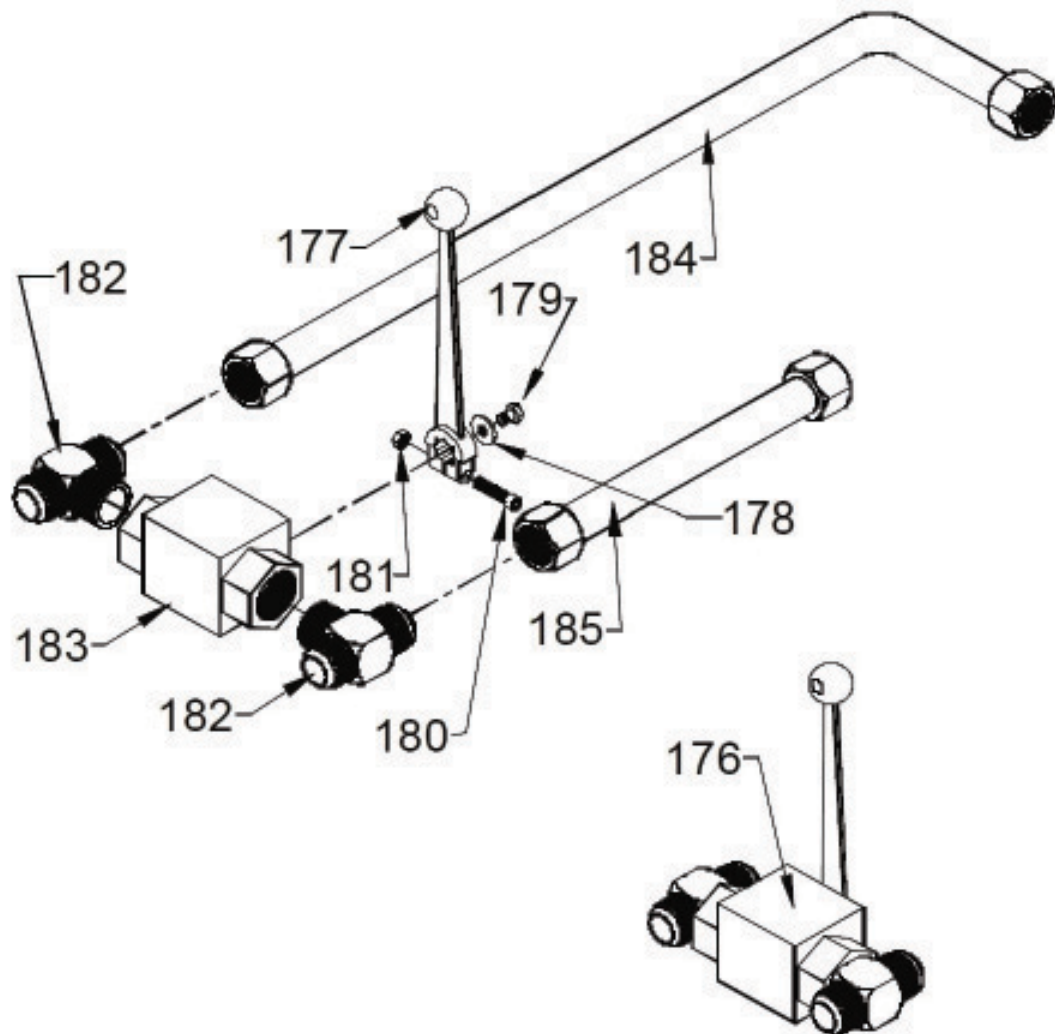
## Parts List

| ID# | QUANTITY | DESCRIPTION                             | PART NUMBER |
|-----|----------|-----------------------------------------|-------------|
| 140 | 1        | Switching Valve Assembly Pilot Operated | 03341101    |
| -   | -        | Includes items 141-173                  | -           |
| 141 | 1        | 6400-16-16 Straight                     | 84685400    |
| 142 | 1        | O-Ring 916                              | 84387800    |
| 143 | 4        | Bolt Hex GR8 1/2"x5"                    | 86459000    |
| 144 | 4        | Washer Lock 1/2"                        | 86557000    |

**Parts List** (Contd.)

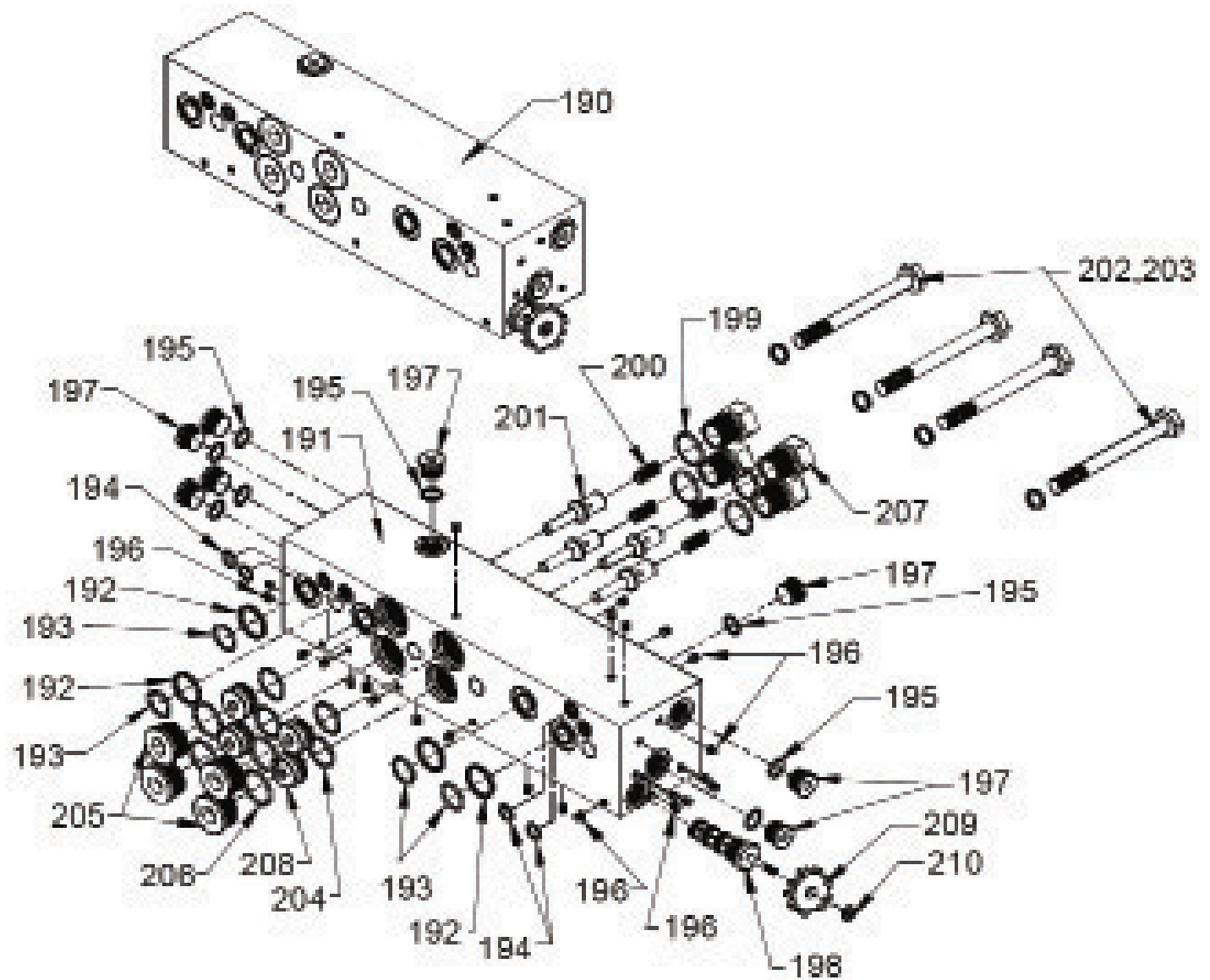
| ID#         | QUANTITY | DESCRIPTION                                                           | PART NUMBER     |
|-------------|----------|-----------------------------------------------------------------------|-----------------|
| <b>145</b>  | <b>1</b> | <b>O-Ring 210</b>                                                     | <b>84380200</b> |
| 146         | 2        | Pilot Check Valve Pilot Operated Switching Valve                      | 03319801        |
| 147         | 2        | Spring Check Valve External Large #B-18273                            | 84453400        |
| 148         | 2        | -8 End Cap Pilot Operated Switching Valve                             | 03321601        |
| 149         | 2        | 6409-12 M O-Ring Socket Plug                                          | 84687700        |
| 150         | 8        | Bolt Hex GR5 3/8"x3 3/4"                                              | 86443500        |
| 151         | 1        | 6400-16-12 Modified                                                   | 03341001        |
| 152         | 3        | O-Ring 912                                                            | 84387400        |
| 153         | 1        | End Cap Left Pilot Operated Switching Valve                           | 03147501        |
| 154         | 2        | O-Ring 208 Urethane                                                   | 84379800        |
| 155         | 2        | O-Ring 126                                                            | 84378200        |
| 156         | 1        | Rod Control Switching Valve                                           | 01335501        |
| 157         | 2        | O-Ring Backup 8-216                                                   | 01903101        |
| 158         | 2        | O-Ring 216                                                            | 84382200        |
| 159         | 2        | Poppet Switching Valve                                                | 03718901        |
| 160         | 2        | Ring Poppet Switching Valve                                           | 03718801        |
| 161         | 1        | Body Pilot Operated Switching Valve                                   | 03147601        |
| 162         | 11       | O-Ring 111                                                            | 84376200        |
| 163         | 2        | O-Ring 216 Urethane                                                   | 84382400        |
| 164         | 2        | Plunger Pilot Operated Switching Valve                                | 03147901        |
| 165         | 6        | O-Ring 908                                                            | 84387000        |
| 166         | 4        | 6409-08 M O-Ring Socket Plug                                          | 84687500        |
| 167         | 16       | 1/16" Pipe Plug Socket 7/8" Taper                                     | 84680770        |
| 168         | 1        | End Cap Right Pilot Operated Switching Valve                          | 03147401        |
| 169         | 1        | Bushing O-Ring Tank Line                                              | 03303101        |
| 170         | 1        | Bushing Tank                                                          | 03312401        |
| 171         | 1        | O-Ring 206                                                            | 84378800        |
| 172         | 2        | Ball 5/16" Chrome Steel                                               | 84800500        |
| 173         | 2        | Set Screw 3/8"x3/8" Half Dog                                          | 86435500        |
| 174         | 2        | O-Ring 216 Back-Up Nylatron                                           | 01903101        |
| <b>-(1)</b> | <b>1</b> | <b>Seal Kit Pilot Operated Switching Valve</b>                        | <b>04181001</b> |
| -           | -        | Includes items 142, 145, 152, 154, 155, 157, 158, 162, 163, 165 & 171 | -               |

(1) The Switching Valve Seal Kit contains all necessary components to rebuild entire Switching Valve.



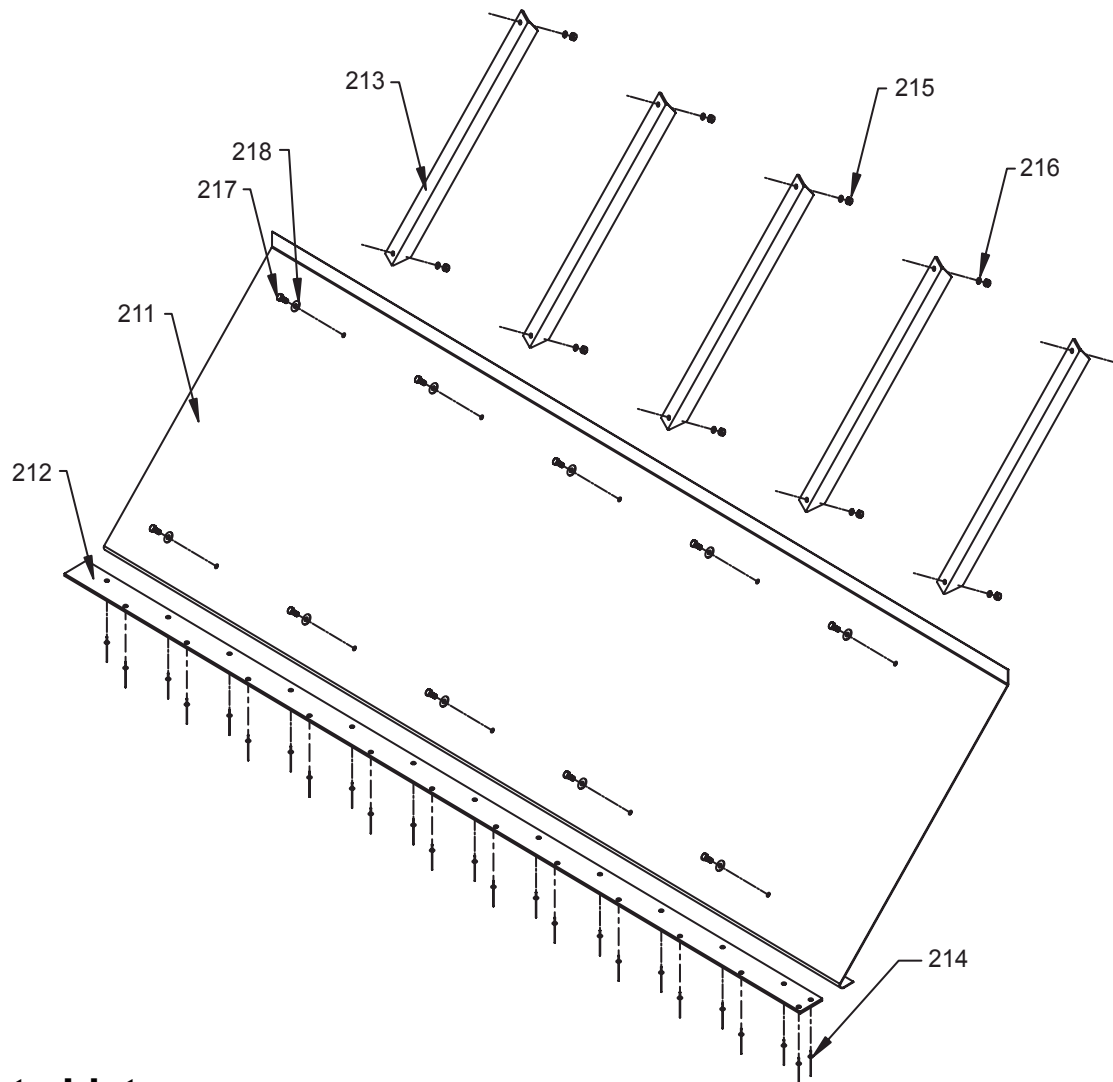
## Parts List

| ID# | QUANTITY | DESCRIPTION                                  | PART NUMBER  |
|-----|----------|----------------------------------------------|--------------|
| 176 | 1        | Ball Valve 1" W/ Tees & Handle               | 84802600     |
| -   | -        | Includes items 177-183                       | -            |
| 177 | 1        | Handle Ball Valve                            | 84802900     |
| 178 | 1        | Washer Flat 6mm                              | w/ball valve |
| 179 | 1        | Bolt Hex GR8 6mmx1mmx10mm                    | w/ball valve |
| 180 | 1        | Bolt Socket Head GR8 6mmx1mmx30mm            | w/handle     |
| 181 | 1        | Nut Hex 6mmx1mm                              | w/handle     |
| 182 | 2        | 2601-16-16-16 Tee                            | 84677880     |
| 183 | 1        | Ball Valve Assembly 1"                       | 84802800     |
| 184 | 1        | Tube Pressure Pilot Operated Switching Valve | 04177301     |
| 185 | 1        | Tube Return Pilot Operated Switching Valve   | 04177401     |



## Parts List

| ID#        | QUANTITY | DESCRIPTION                                             | PART NUMBER     |
|------------|----------|---------------------------------------------------------|-----------------|
| <b>190</b> | <b>1</b> | <b>Manifold Assembly Pilot Operated Switching Valve</b> | <b>03339101</b> |
| -          | -        | Includes items 191-210                                  | -               |
| 191        | 1        | Body Manifold                                           | 03349601        |
| 192        | 4        | O-Ring Backup 8-212                                     | 02100801        |
| 193        | 4        | O-Ring 212 Urethane                                     | 84381000        |
| 194        | 4        | O-Ring 111                                              | 84376200        |
| 195        | 8        | O-Ring 908                                              | 84387000        |
| 196        | 25       | 1/16" Pipe Plug Socket 7/8" Taper                       | 84680770        |
| 197        | 8        | 6409-08 M O-Ring Socket Plug                            | 84687500        |
| 198-1      | 1        | Control Valve Manual MRV4-10-K-0                        | 85105200        |
| 198-2      | 1        | Control Valve Electric SV10-40M-O-N-O                   | 85108800        |
| 199        | 4        | O-Ring 912                                              | 84387400        |
| 200        | 4        | Spring Check Valve External Large #B-18273              | 84453400        |
| 201        | 4        | Poppet Pilot Check Valve                                | 03502001        |
| 202-1      | 4        | Bolt Hex GR8 5/8"x5 1/2"                                | 86471500        |
| 202-2      | 4        | Bolt Hex 10.9 M16x140mm                                 | 87019000        |
| 203-1      | 4        | Washer Lock 5/8"                                        | 86559000        |
| 203-2      | 4        | Washer Lock 16mm                                        | 87078000        |
| 204        | 4        | O-Ring 210 Urethane                                     | 84380400        |
| 205        | 4        | 6408-14 Hollow Hex Plug                                 | 84687800        |
| 206        | 4        | O-Ring 914                                              | 84387600        |
| 207        | 4        | End Cap -12 Spring Pilot Operated                       | 02702301        |
| 208        | 4        | Piston Pilot Check Valve Block                          | 03502101        |
| 209        | 1        | Knob Cartridge Valve Manual                             | 84801600        |
| 210        | 1        | Nut Knob Valve Manual Cartridge                         | 86625500        |
| -          | <b>1</b> | <b>Seal Kit Manifold Pilot Operated Switching Valve</b> | <b>04189201</b> |
| -          |          | Includes items 192-195, 199, 204 & 206                  | -               |



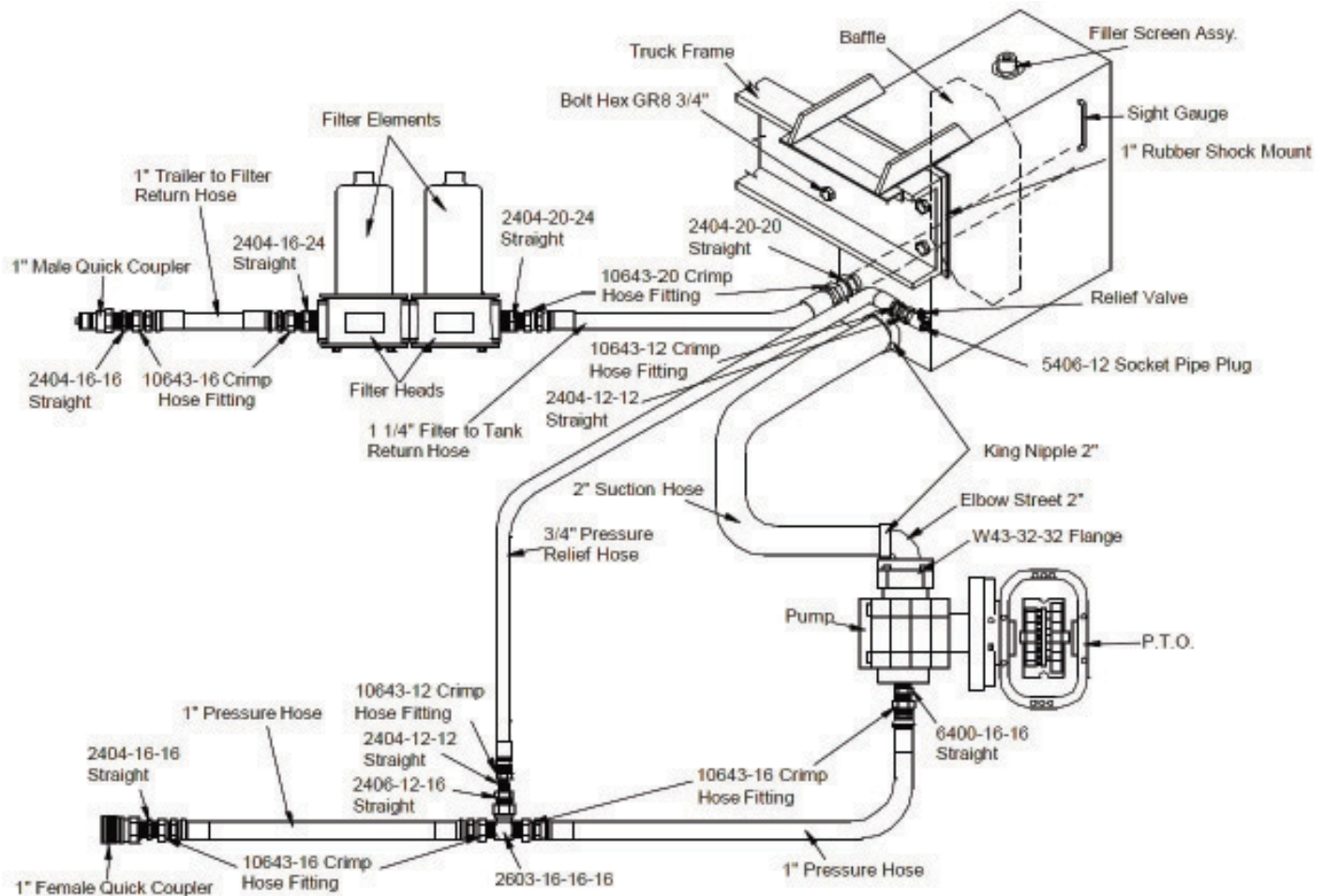
## Parts List

| ID #             | QUANTITY | DESCRIPTION                                          | PART NUMBER     |
|------------------|----------|------------------------------------------------------|-----------------|
| 1 <sup>(1)</sup> | 1        | <b>Front Shield 96" Wide Assembly</b>                | <b>03539550</b> |
| -                | -        | Includes items 182-189                               | -               |
| 211              | 1        | Front Shield 96" Wide 14 Gauge                       | 03539750        |
| 212              | 1        | Bearing Strip Front Shield 1/4" x 2 7/8"             | 03540150        |
| 213              | 5        | Stiffener Angle Front Shield 1 1/2" x 1 1/2" x 3/16" | 03539901        |
| 214              | 25       | Rivet 3/16" x 1/2"                                   | 86528000        |
| 215              | 10       | Nut Hex 3/8"                                         | 86628500        |
| 216              | 10       | Washer Lock 3/8"                                     | 86555000        |
| 217              | 10       | Bolt Hex GR5 3/8" x 3/4"                             | 86437000        |
| 218              | 10       | Washer Large OD 3/8"                                 | 86553500        |

1) Part numbers and descriptions vary based on trailer width and application.

2) Quantity varies based on trailer width and application.

## WET KIT DIAGRAM



## SPEED OF FLOOR IN RELATION TO UNLOAD RPM

With a Fuller 13 or 15 speed transmission, a bottom mount 118% series 442/489 Chelsea power take off and a Commercial P-51 pump with a 2 1/2" gear, the floor movement in relation to pump output is as follows:

| TRUCK<br>RPM | PUMP OUTPUT | 80MM<br>FLOOR<br>MOVEMENT | 90MM<br>*FLOOR<br>MOVEMENT | 100MM<br>*FLOOR<br>MOVEMENT |
|--------------|-------------|---------------------------|----------------------------|-----------------------------|
| *500         | 10 gallon   | 4.9 ft./minute            | 3.7 ft./minute             | 2.9 ft./minute              |
| 550          | 15 gallon   | 7.4 ft./minute            | 5.6 ft./minute             | 4.4 ft./minute              |
| 725          | 20 gallon   | 9.8 ft./minute            | 7.5 ft./minute             | 5.8 ft./minute              |
| 1050         | 30 gallon   | 14.7 ft./minute           | 11.2 ft./minute            | 8.7 ft./minute              |

\*Above specifications are for a KEITH® Compact Drive unit. These are approximate feet per minute only and should be used strictly as a guide.

**Note: Drive Unit is not designed to exceed 30 GPM.**

- Transmission:** This wet kit is designed for a Fuller 13 or 15 speed transmission. All of the following information applies to this transmission. (P.T.O. specifications may vary with other transmissions. Please check with KEITH Mfg. Co. for specifications.)
- Oil:** Chevron AW46 hydraulic oil or equivalent.
- PTO:** Chelsea series 442/489 bottom mount (6 or 8 bolt) 118% power take off (electric over speed is highly recommended), or Muncie P.C. 65 with electric over speed.
- Pump:** Commercial P-51 A297BE (Spl.) 25-25 (2" four bolt suction) with Anchor W43-32-32 flange.
- Filter:** Filter should be 10 to 30 micron on the return line.  
Filter should be a double element Zinga (or equivalent).  
Filter head #DF-15-25. MF 2215-25-0-2-0  
Filter element #LE-10 or LE-30  
(The filter element should be changed after 6 hours initially, and then every 6 months thereafter. This may vary with the operating environment.)
- Hydraulic Reservoir:** Should hold approximately 1 gallon for every gallon per minute you plan to pump, i.e. 30 GPM = 30 gallon reservoir. Reservoir should hold a minimum of 30 gallons of oil.
- Suction Line:** Suction line from the tank to the pump should be no more than 5' in length and a minimum of 2" inside diameter. Example: SAE-100R4 (This type of line has a spiral wire to keep the hose from collapsing under suction.)
- Pressure line:** Hose from truck to trailer should be 1"16 SAE-100R2.
- Return Line:** Hose from trailer to filter should be 1"16 SAE-100R1.  
Hose from filter to tank should be 1-1/4" 20 SAE-100R1.
- Pressure Relief Valve:** Example: Cross #RD12D

**Note:** It is critical that this relief valve is set at no less than 2800 PSI and no more than 3000 PSI

## Unloading

**Problem:** Floor does not run at all.

**Check:** All items on START-UP check list:

1. Is your entire system plumbed to the plumbing diagram?
2. Pump: Will it pump 25-30 GPM at pressure?
3. Relief Valve: Is it set at 2800-3000 PSI?
4. Oil: Have you filled the reservoir?
5. P.T.O.: Is it engaged?
6. Quick Disconnects: Are they completely engaged?
7. Ball Valve: Is the ball valve on the drive unit closed?
8. Is the pressure line on the trailer attached to the pressure line on the tractor and the return line attached to the return line?

***The pressure and return lines must attach to their proper ports on the switching valve.***

**Problem:** Cycle starts then floor stops.

1. **Specific trouble:** Drivers side cylinder (#1) moves toward the front of the trailer, center cylinder (#2) moves toward the front of the trailer, passenger side cylinder (#3) moves toward the front of trailer, then the system stops.

**Solution:** Pilot push check valve is malfunctioning. Replace pilot push check valve.

2. **Specific trouble:** All three cylinders move **toward the rear** of the trailer, then the system stops.

**Solution:** Pilot pull check valve is malfunctioning. Check settings.  
Replace pilot pull check valve.

**Note:** If floor stops in the full rear position and the switching valve has switched, you may not have enough oil pressure. Less pressure is required to move the load than to pull the slats 1/3 at a time under the load.

## Unloading

**Problem:** Does not cycle correctly.

1. **Specific trouble:** Cylinders (#1) and (#2) extend together toward the front of the trailer while unloading.

**Solution:** Pull check valve (#1) has malfunctioned. Replace the pull check valve.

2. **Specific trouble:** Cylinders (#2) and (#3) extend together toward the front while unloading.

**Solution:** Pull check valve (#2) has malfunctioned. Replace the pull check valve.

3. **Specific trouble:** All cylinders extend together toward the front while unloading.

**Solution:** Pull check valves (#1) and (#2) have malfunctioned. Replace the pull check valves.

## Loading

**Problem:** Does not cycle correctly.

1. **Specific trouble:**  
Cylinders (#2) and (#3) extend together toward the rear of the trailer while loading.

**Solution:** Internal check valve (#3) has malfunctioned. Replace the pull check valve.

2. **Specific trouble:**  
Cylinders (#1) and (#2) extend together toward the rear of the trailer while loading.

**Solution:** Internal check valve (#3) has malfunctioned. Replace the pull check valve.

3. **Specific trouble:** All cylinders extend together toward the rear while loading.

**Solution:** Internal check valves (#1) and (#2) have malfunctioned. Replace the pull check valves.

**Note:** When empty, some trailers will cycle in sequence forward 1-2-3, then back 3-2-1, (instead of all slats moving back together.) This is not a malfunction; no repairs are needed. When a load is put on a trailer, the drag will cause the floor to sequence properly.

## Unloading

### **Problem: Does not cycle correctly.**

1. **Specific trouble:** Cylinder (#1) extends **toward the front** of the trailer. When it finishes, cylinder (#2) extends toward the front of the trailer at a slower rate and the pump works harder.

**Solution:** Pull check valve (#1) is out of adjustment. Break the Allen screws loose on the adjustment nut and move it toward the rear of the trailer, no more than 1/8" at a time.

**Precaution:** Don't move the adjustment nut more than 1/8" toward the rear of the trailer at any one time. If you over-adjust the pull check valve, you could damage the valve.

2. **Specific trouble:** Cylinder (#2) extends **toward the front** of the trailer. When it finishes, cylinder (#3) extends toward the front of the trailer at a slower rate and the pump works harder.

**Solution:** Pull check valve (#2) is out of adjustment. Break the Allen screws loose on the adjustment nut and move it toward the rear of the trailer, no more than 1/8" at a time.  
(See precaution above)

3. **Specific trouble:** Cylinder (#1) extends **toward the front** of the trailer. Before it finishes its stroke, cylinder (#2) starts to extend toward the front of the trailer.

**Solution:** Pull check valve (#2) is leaking. Remove the check valve and look for damage or foreign material on valve seat or in seat area in block.

4. **Specific trouble:** Cylinder (#2) extends **toward the front** of the trailer. Before it finishes its stroke, cylinder (#3) starts to extend toward the front of the trailer.

**Solution:** Pull check valve (#1) is leaking. Remove the check valve and look for damage or foreign material on valve seat or in seat area in block.