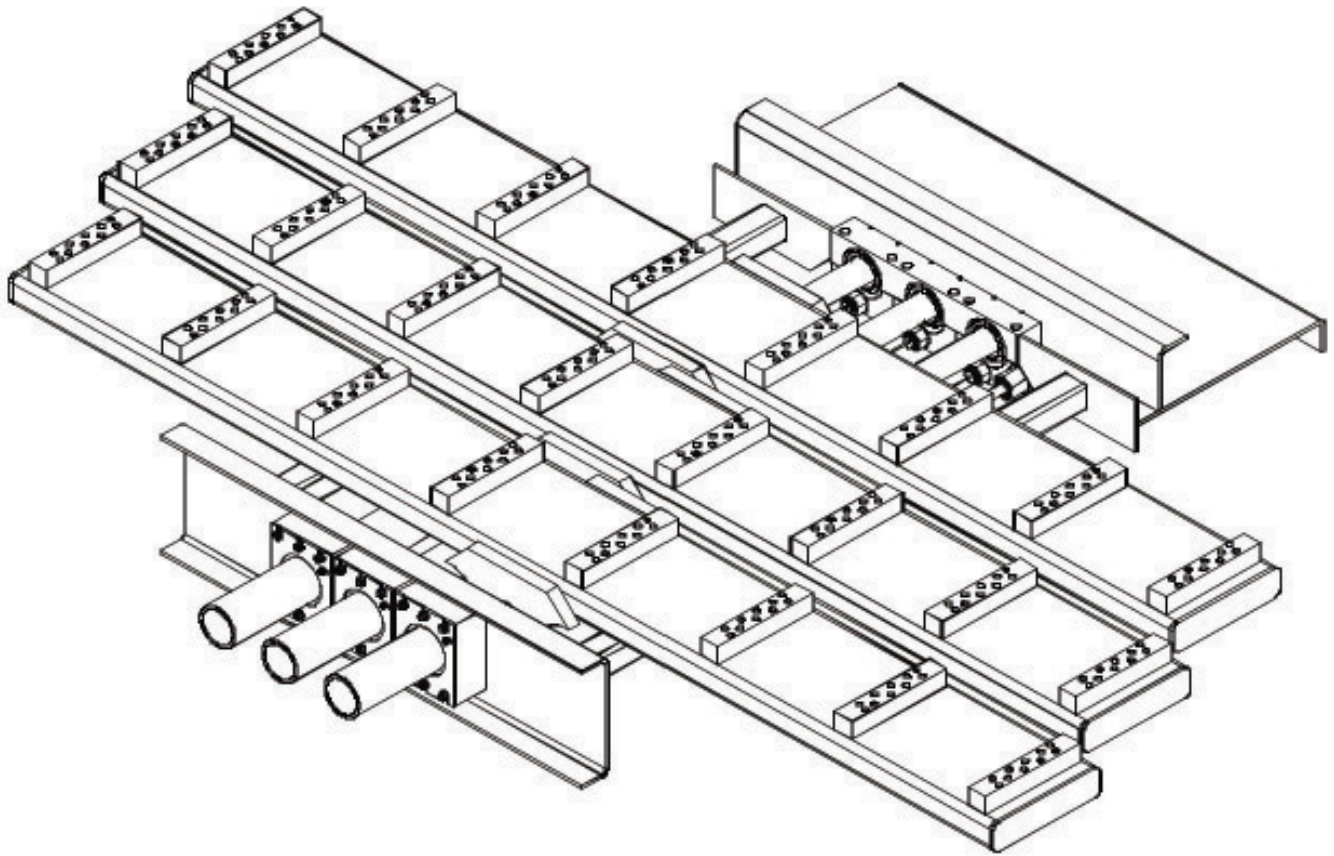


KEITH® COMPACT DRIVE UNLOADING SYSTEM



KEITH® CD100 Owners Manual Original Instructions

www.keithwalkingfloor.com

KEITH Mfg. Co.
World Headquarters
800-547-6161
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541-475-2169 fax

Section 2 (100mm)

Revised: 6.24.15

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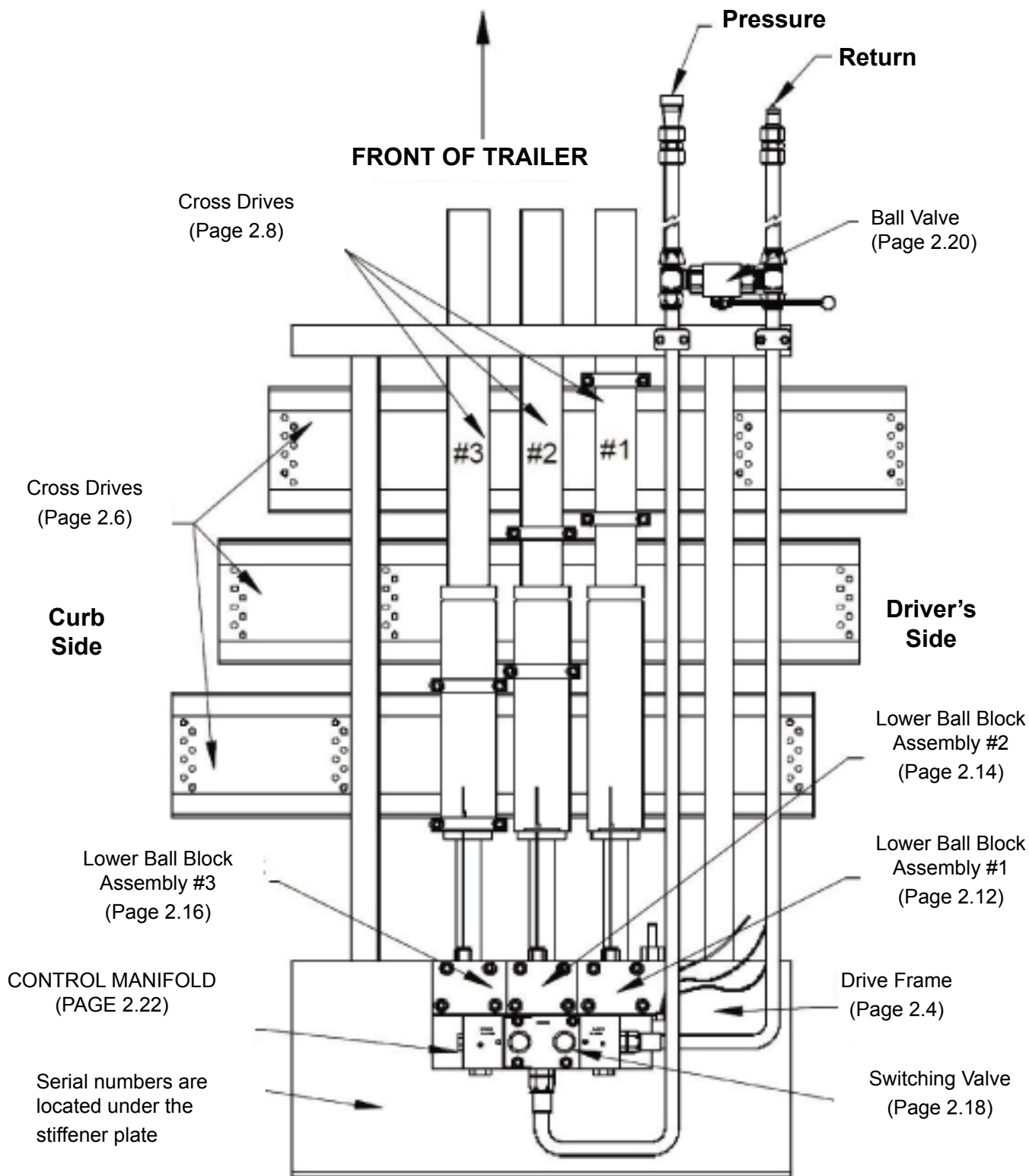
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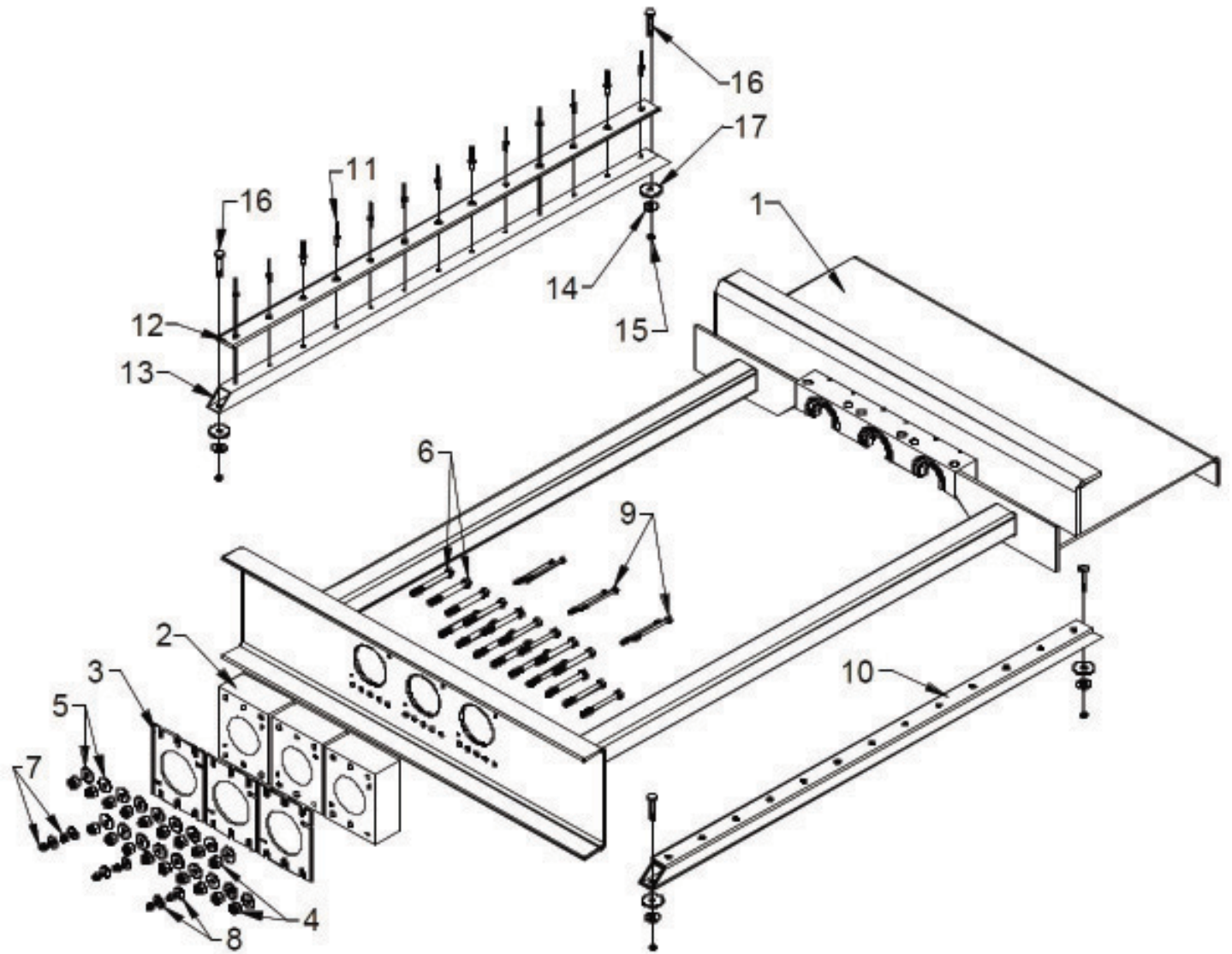
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Note: The following parts guide is for KEITH® 100mm 24 slat Compact Drive systems. For all other systems please contact KEITH Mfg. Co. or KEITH *WALKING FLOOR* Europe.

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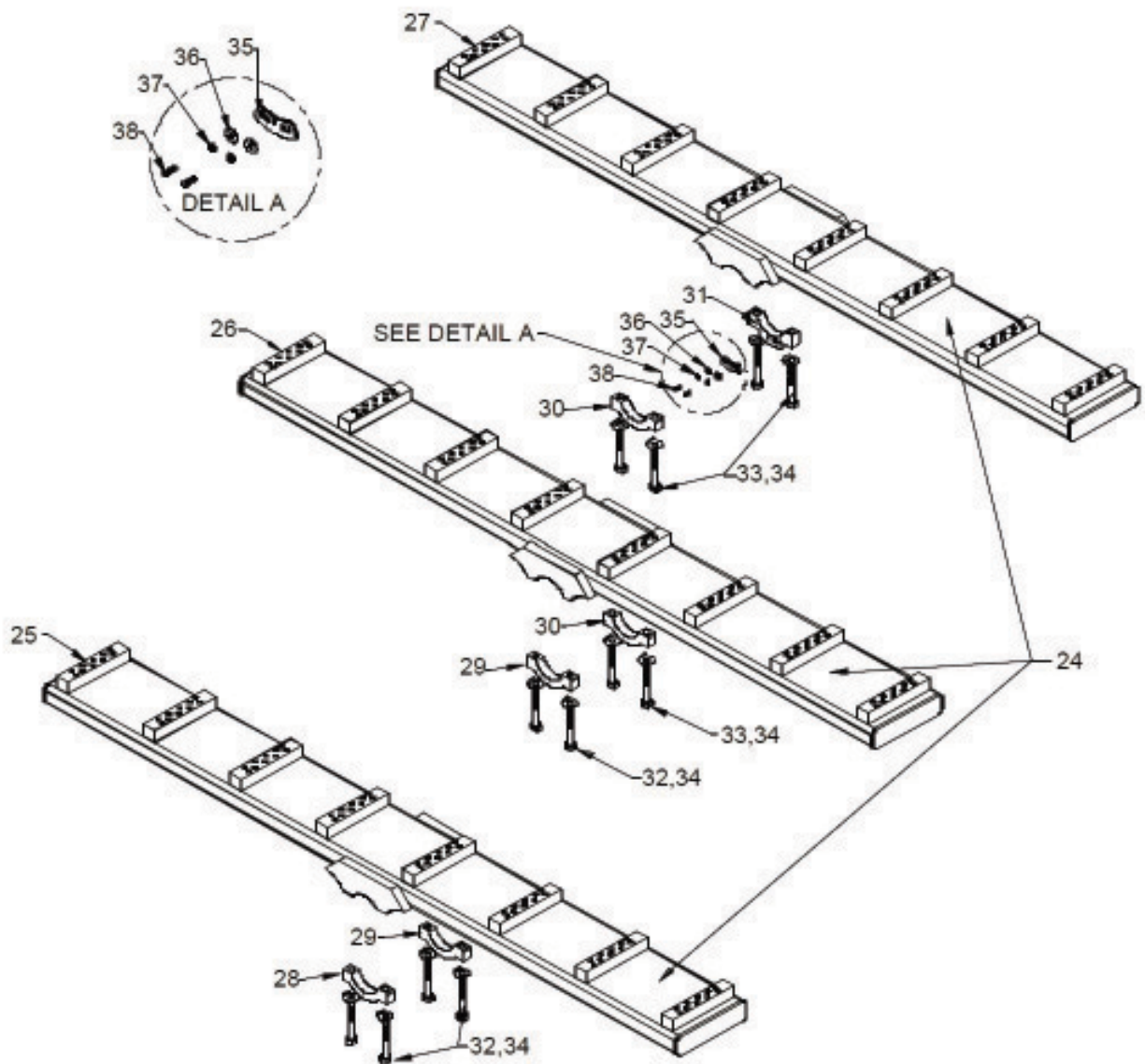




Parts List

ID#	QUANTITY	DESCRIPTION	PART NUMBER
-(1)	1	Drive Frame Assembly	-
-	-	Includes items 1-9	-
1 ⁽¹⁾	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
10⁽¹⁾	2	Bearing 3/8" Cross-Drive Support Assembly	03467802
-	-	Includes items 11-13	-
11	13	Rivet 3/16"x1/2"	86528000
12 ⁽¹⁾	1	Bearing Cross-Drive Support 3/8" UHMW	03453902
13 ⁽¹⁾	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

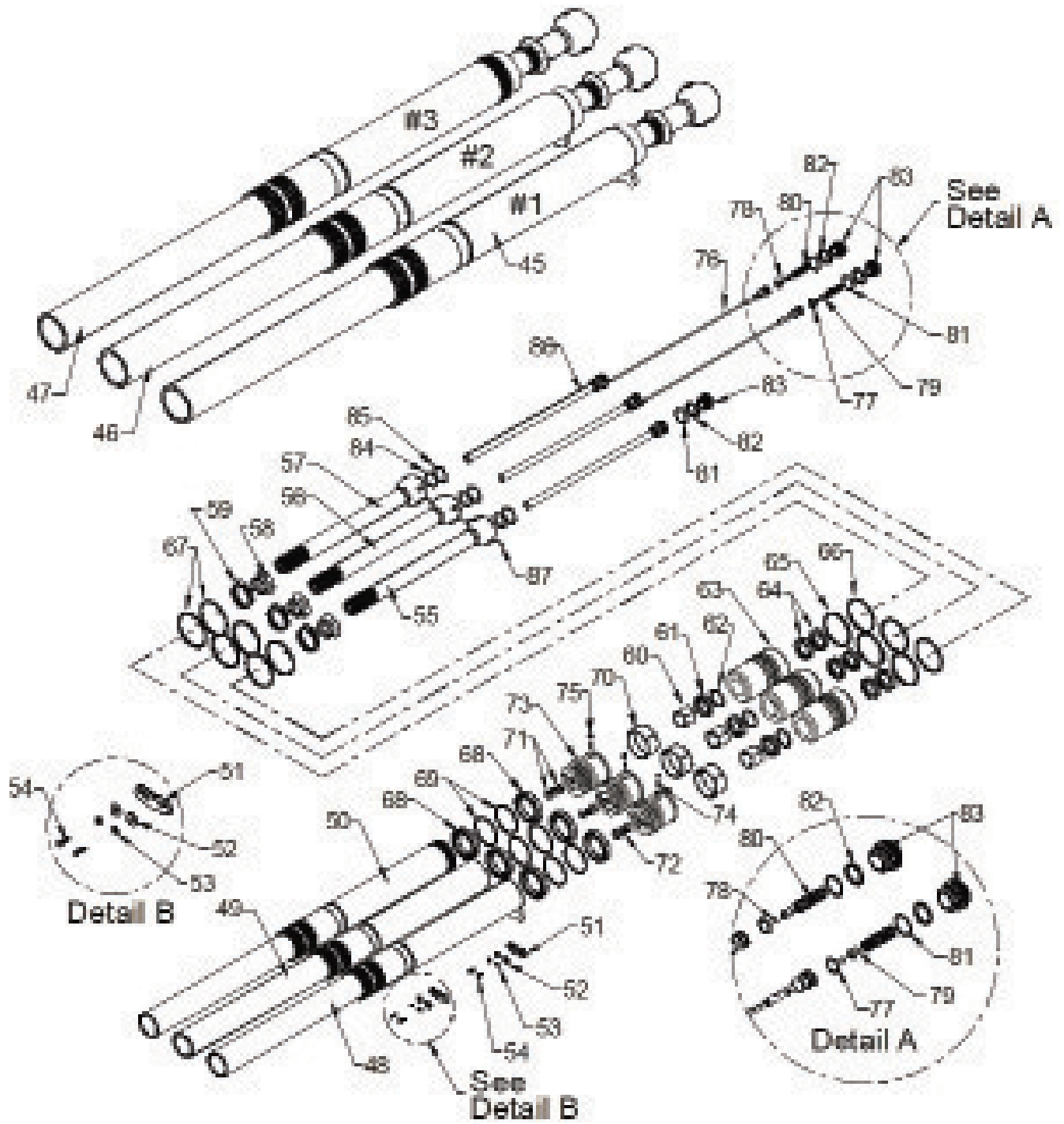
(1) Part numbers and descriptions vary based on drive configuration and application.



Parts List

ID#	QUANTITY	DESCRIPTION	PART NUMBER
24 ⁽¹⁾	1	Cross-Drive 24 Slat 100mm Set	03465109
-	-	Includes items 25-27	-
25 ⁽¹⁾	1	Cross-Drive 24 Slat 100mm #1	03465110
26 ⁽¹⁾	1	Cross-Drive 24 Slat 100mm #2	03465111
27 ⁽¹⁾	1	Cross-Drive 24 Slat 100mm #3	03465112
28 ⁽¹⁾	1	Clamp Lower Guide Tube	03101601
29 ⁽¹⁾	2	Clamp 3.0" Lower Cross-Drive	03910501
30 ⁽¹⁾	2	Clamp Lower 100mm Barrel Smooth	03330903
31 ⁽¹⁾	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.

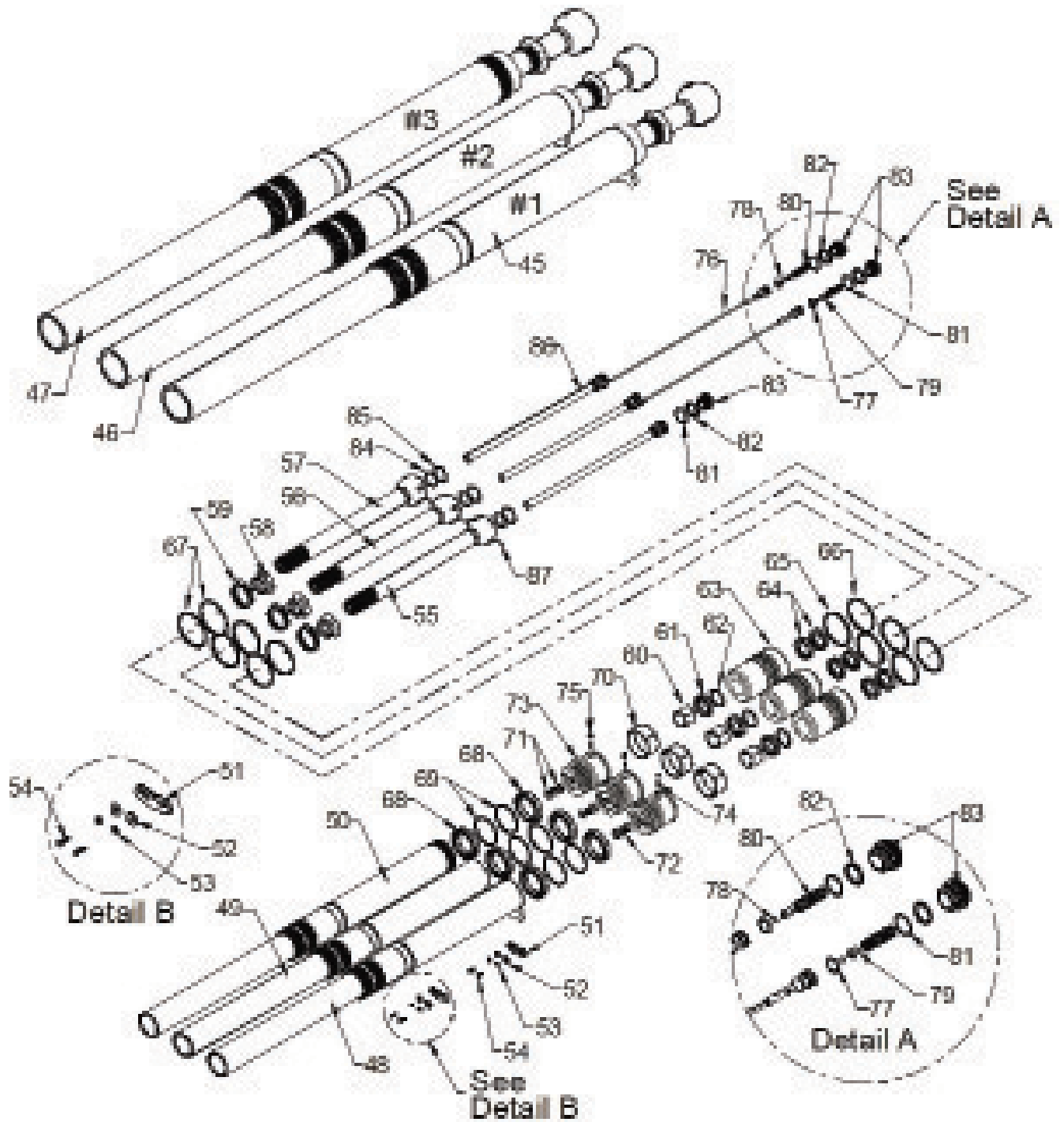


Parts List

ID#	QUANTITY	DESCRIPTION	PART NUMBER
45 ⁽¹⁾	1	Cylinder 100mm Assembly #1	04095301
46 ⁽¹⁾	1	Cylinder 100mm Assembly #2	04095901
47 ⁽¹⁾	1	Cylinder 100mm Assembly #3	04096501
-	-	Includes items 48-87	-
48 ⁽¹⁾	1	Barrel 100mm Smooth #1	04095601
49 ⁽¹⁾	1	Barrel 100mm Smooth #2	04096201
50 ⁽¹⁾	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
-(¹)	1	Rod W/Piston & Head 100mm Assembly #1	04097101
-(¹)	1	Rod W/Piston & Head 100mm Assembly #2	04097201
-(¹)	1	Rod W/Piston & Head 100mm Assembly #3	04097301
-	-	Includes items 55-87	-
55 ⁽¹⁾	1	Rod & Ball 90/100mm Assembly #1	03103801
56 ⁽¹⁾	1	Rod & Ball 90/100mm Assembly #2	03103901
57 ⁽¹⁾	1	Rod & Ball 90/100mm Assembly #3	03104001
58	3	Dust Seal Cylinder Rod	84801300
59	3	Clamp Hose 2"	84751000
-(¹)	3	Head 100mm Assembly Cylinder Lockwire	04154101
-	-	Includes items 60-67	-
60	1	Wear Ring Rod Cylinder 45mm	84401200
61	1	Seal Rod Cylinder 45mm	84354200
62 ⁽¹⁾⁽²⁾	1	Seal Backup Rod Cylinder 45mm	w/seal
63	1	Head W/ Lockwire 100mm	03673801
64	2	Wiper Rod 45mm Canned	84426600
65 ⁽¹⁾	1	O-Ring 239	84384800
66 ⁽¹⁾	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)	3	Piston 100mm Assembly Aluminum Ported	04154501
-	-	Includes items 68-75	-
68 ⁽¹⁾	2	Seal Cylinder Piston 100mm	84355000
69 ⁽¹⁾⁽²⁾	2	Seal Backup Piston Cylinder 100mm	w/seal
70 ⁽¹⁾	1	Wear Ring Cylinder Piston 100mm	84400800
71	2	O-Ring Backup 8-210	84390600
72	1	O-Ring 210	84380200
73 ⁽¹⁾	1	Piston 100mm Aluminum Ported	03672001
74 ⁽¹⁾	1	Pin Drive Lock 3/16"x7/8"	86650250
75	1	6409-02 M O-Ring Socket Plug	84687200
-(3)	2	Check Valve Assembly Internal Push	03932201
-	-	Includes items 76-83	-
76 ⁽⁴⁾	1	Check Valve Internal Push	03376301
77 ⁽⁴⁾	1	O-Ring 209 70 Durometer Urethane	84380100
78 ⁽⁴⁾	1	Ball 5/16" Chrome Steel	84800500
79 ⁽⁴⁾	1	Spring Follower Internal Check Valve	03785801
80 ⁽⁴⁾	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)	1	Seal Kit 100mm Cylinder	04180901
-	-	Includes items 60-62, 64-66, 68-72, 77, 81, 82, 84 & 85	-

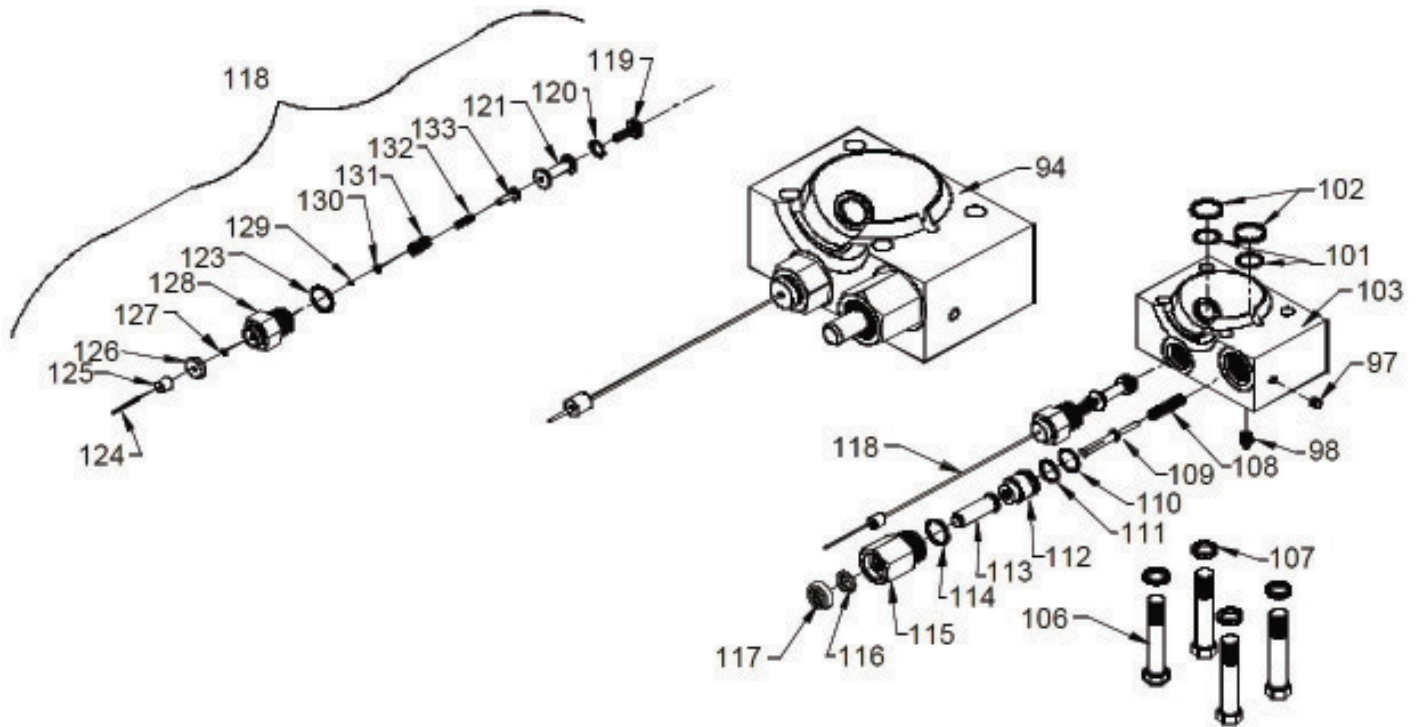
(1) Part numbers and descriptions vary based on drive configuration and application.

(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	Ball Block Assembly #1 Lower	04167401
-	-	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	Check Valve Pilot Signal Push SWV Short	03421101
-	-	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 ⁽¹⁾⁽²⁾	1	Check Valve Pull Assembly Ball Block	03569408
-	-	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	84801200
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	Seal Kit Ball Block Lower #1	04441201
-	-	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).

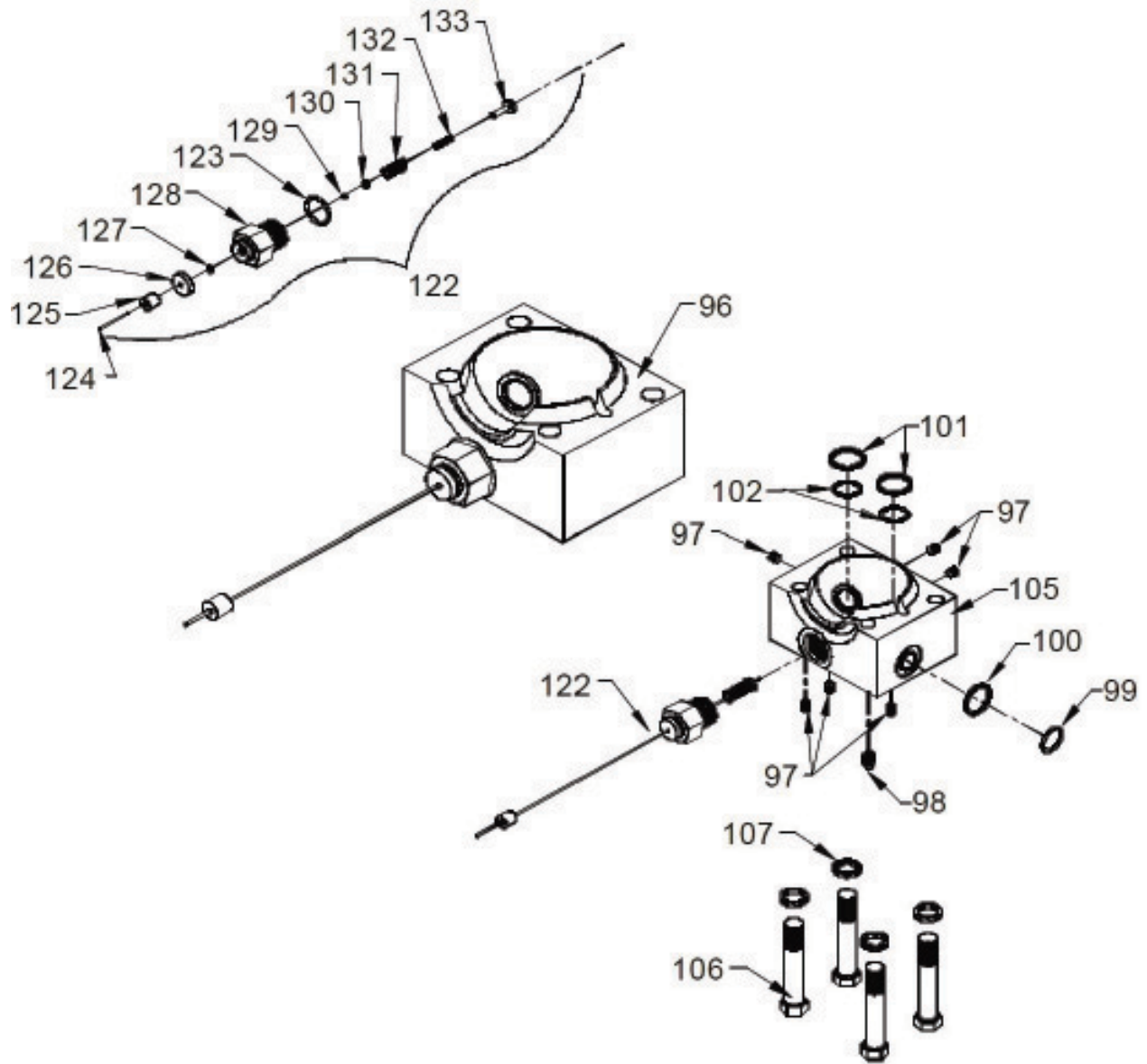
(2) Not sold separately. Included only w/check valve pull assembly.

Parts List

95	1	Ball Block Assembly #2 Lower	04167501
-	-	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
118⁽¹⁾⁽²⁾	1	Check Valve Pull Assembly Ball Block	03569408
-	-	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	84801200
124	1	Check Valve Pull Wire	84388800
125	1	Check Valve Pull Stop	02102501
126	1	Dust Seal Check Valve Pull	84801200
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	Seal Kit Ball Block Lower #2	04441301
-	-	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.

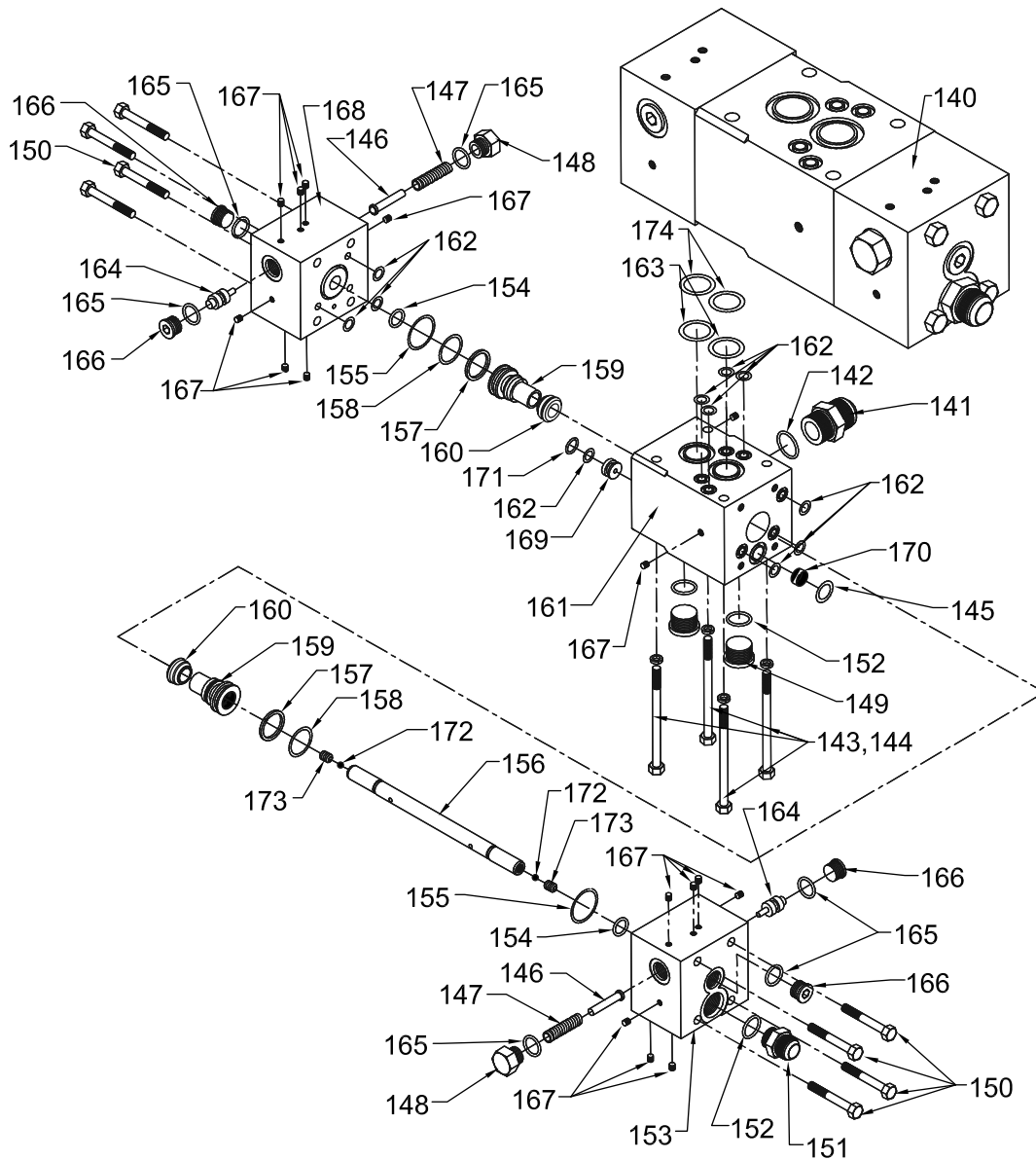


Parts List

96	1	Ball Block Assembly #3 Lower	04167601
-	-	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
122⁽¹⁾⁽²⁾	1	Check Valve Assembly Pilot Pull	03543508
-	-	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	84801200
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	Seal Kit Ball Block Lower #3	04441401
-	-	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.



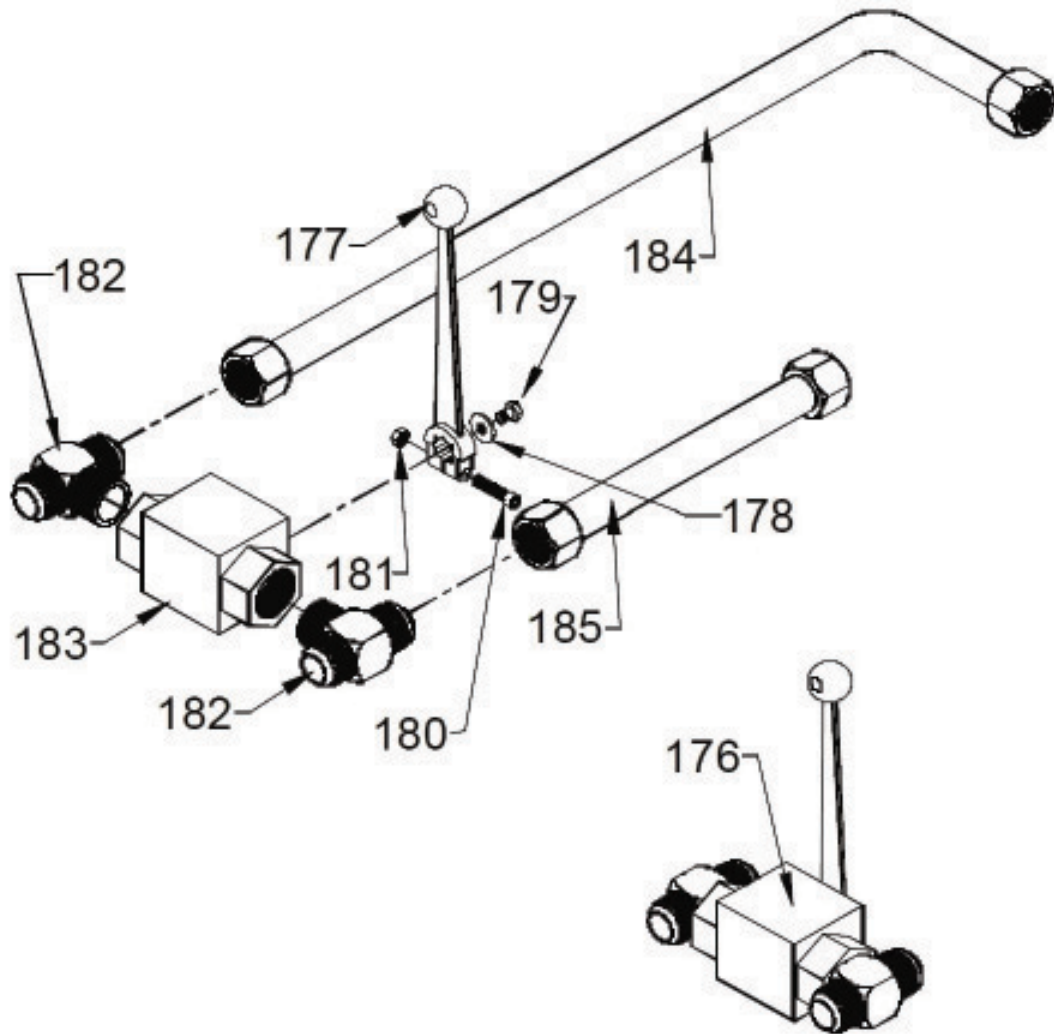
Parts List

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.)

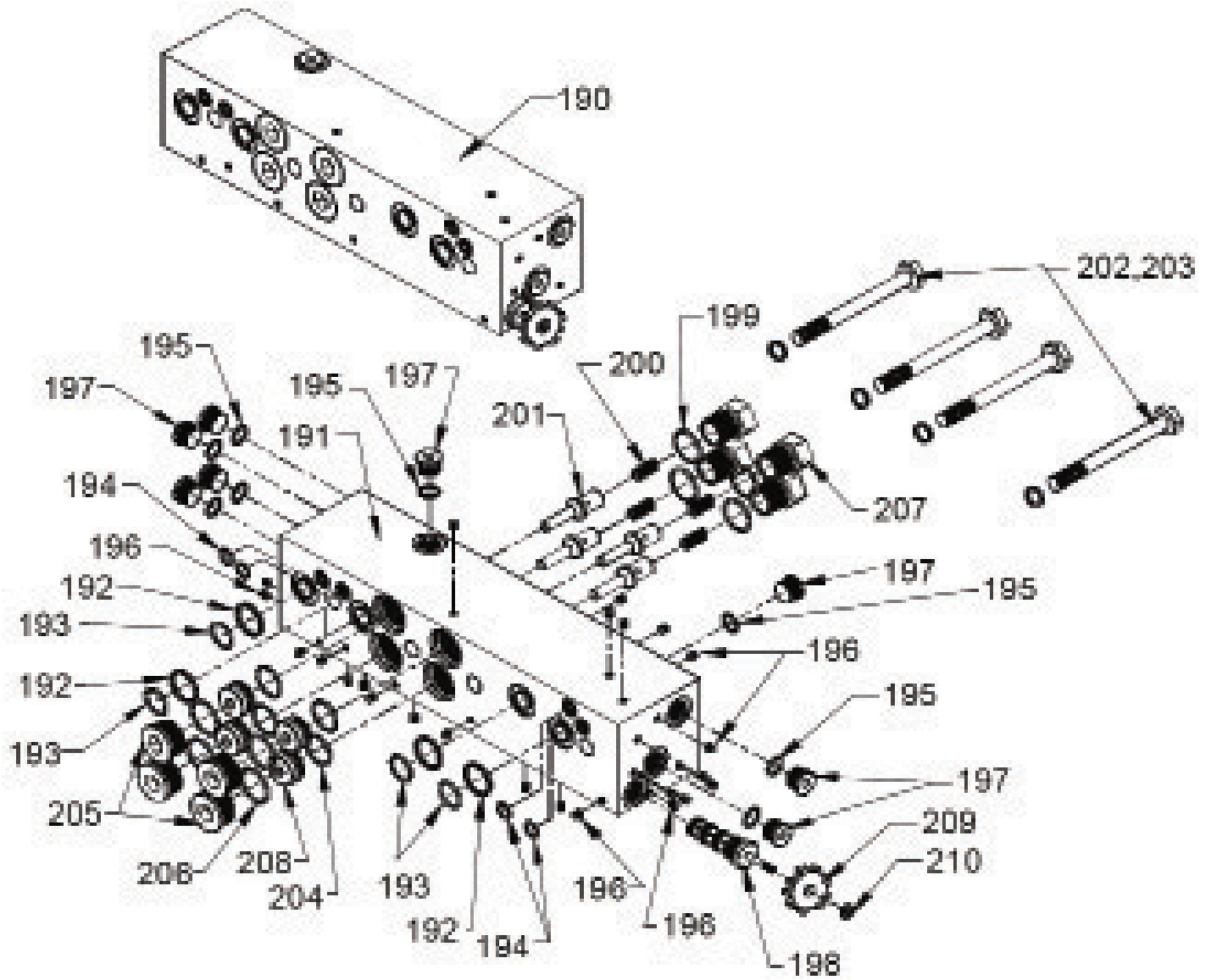
ID#	QUANTITY	DESCRIPTION	PART NUMBER
145	1	O-Ring 210	84380200
146	2	Pilot Check Valve Pilot Operated Switching Valve	03319801
147	2	Spring Check Valve External Large #B-18273	84453400
148	2	-8 End Cap Pilot Operated Switching Valve	03321601
149	2	6409-12 M O-Ring Socket Plug	84687700
150	8	Bolt Hex 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
-(1)	1	Seal Kit Pilot Operated Switching Valve	04181001
-	-	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.



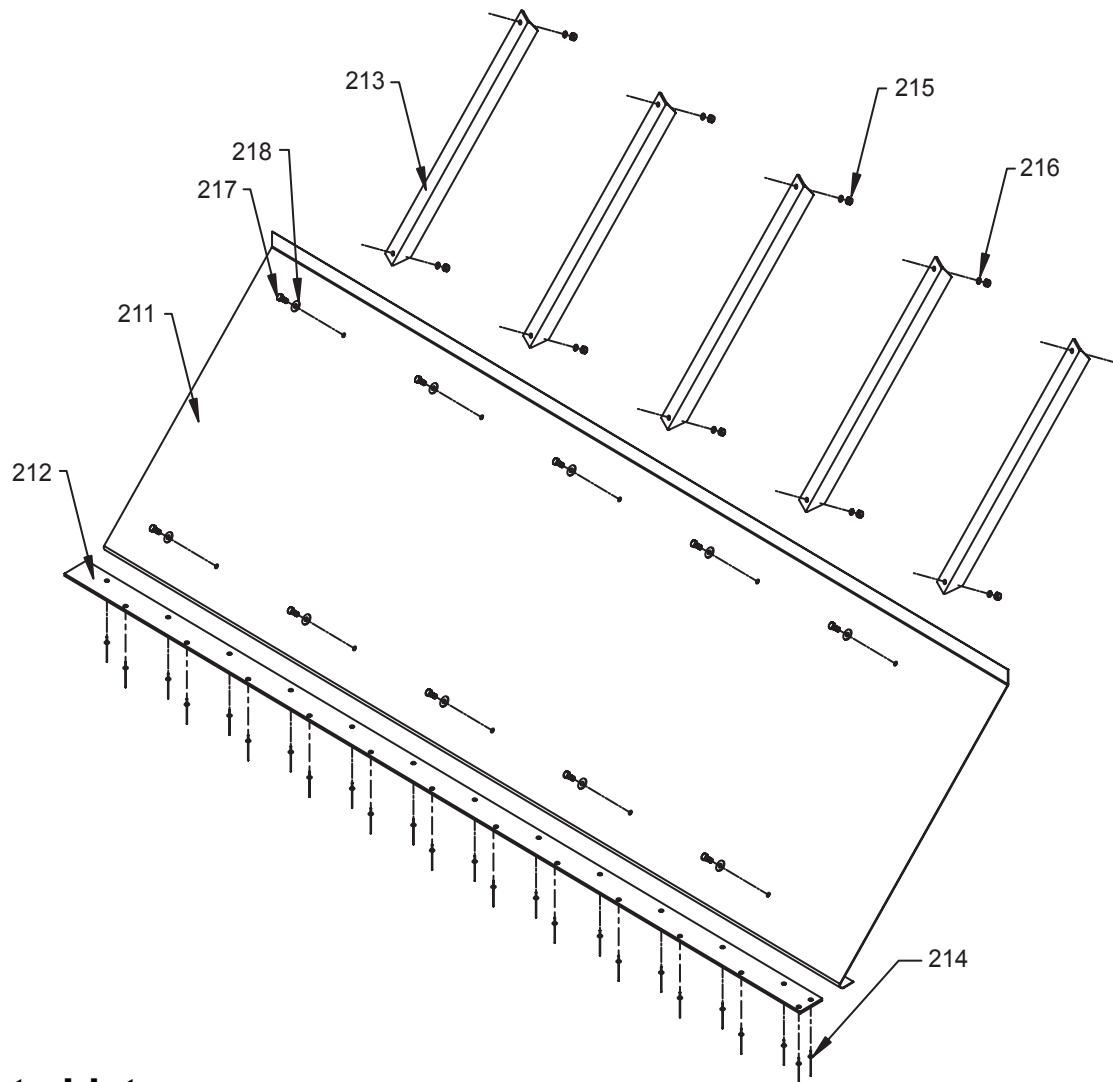
Parts List

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
190	1	Manifold Assembly Pilot Operated Switching Valve	03339101
-	-	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
195-1	8	O-Ring 908	84387000
195-2	1	O-Ring 910	84387200
196	24	1/16" Pipe Plug Socket 7/8" Taper	84680770
197	8	6409-08 M O-Ring Socket Plug	84687500
198	1	Control Valve Manual MRV4-10-K-0	85105200
199	4	O-Ring 912	84387400
200	4	Spring Check Valve External Large #B-18273	84453400
201	4	Poppet Pilot Check Valve Manifold	03502001
202	4	Bolt Hex GR8 5/8"x5 1/2"	86471500
203	4	Washer Lock 5/8"	86559000
204	4	O-Ring 210 Urethane	84380400
205	4	6409-16 M O-Ring Socket Plug	84687000
206	4	O-Ring 916	84387800
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
-	1	Seal Kit Manifold Pilot Operated Switching Valve	04189201
-		Includes items 192-195, 199, 204 & 206	-



Parts List

ID #	QUANTITY	DESCRIPTION	PART NUMBER
-(1)	1	Front Shield 96" Wide Assembly	03539550
-	-	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.

- 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.