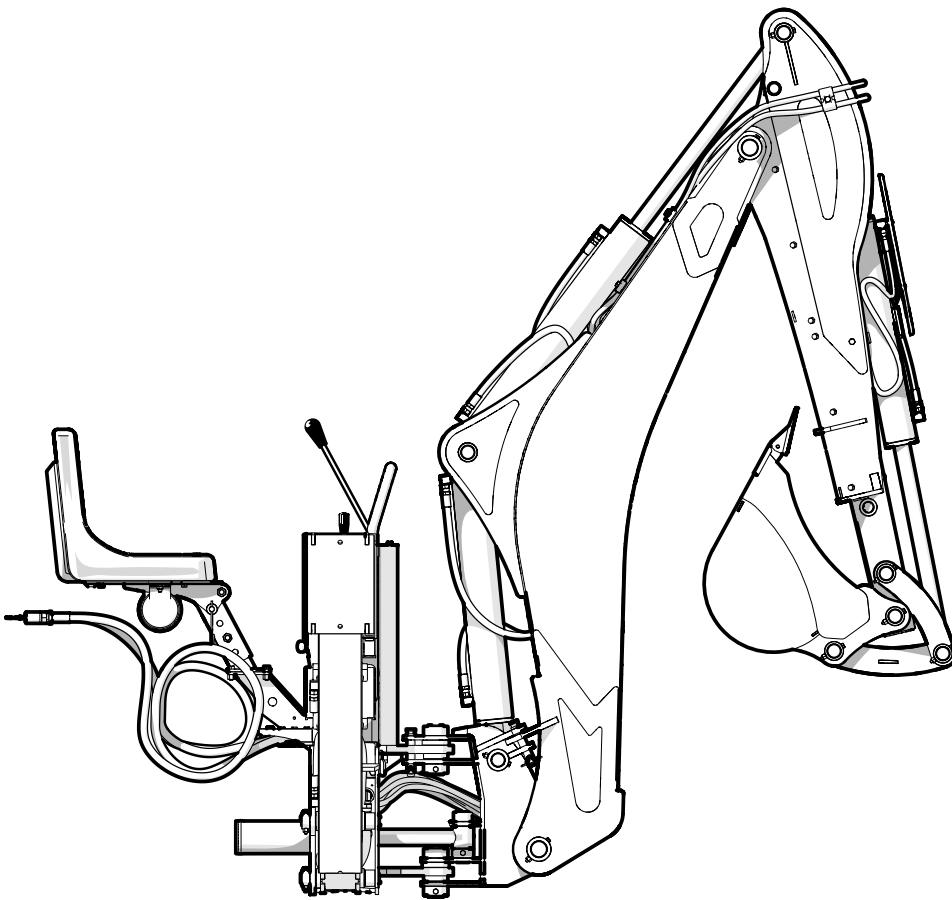


PARTS MANUAL

Serial Number 3920XT221 & up

GX920XT BACK HOE



Foreword

This Wallenstein parts manual is prepared to assist customers in ordering quality OEM replacement parts.

Regular maintenance combined with replacing old, worn or broken parts with the correct OEM parts is essential in prolonging the life of your Wallenstein product. Refer to this manual to identify replacement parts.

To order parts, contact your Wallenstein dealer or distributor. Have the product model and serial number handy.

If your dealer is no longer available, please go to our website: <http://wallensteinequipment.com> and click on the [Dealer Locator](#) to find the nearest dealer.

All information contained in this parts manual is current as per the revision date at the bottom of the page. Wallenstein reserves the right to change product specifications at any time without notice.

If your product specifications differ from those contained in this manual, contact Wallenstein for current information.

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WARNING!

Refer to the operators manual for safe operation and maintenance.

Maintenance should be performed by trained personnel only.

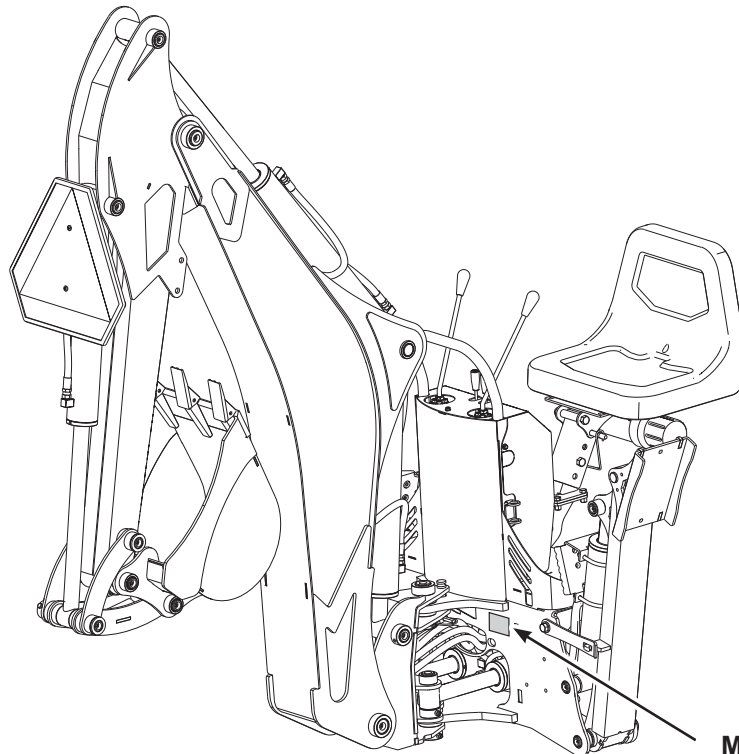
Serial Number Location

Always provide the model and serial number of your Wallenstein product when ordering parts or requesting service or other information. This information is found on the product information plate as shown below.

Record your product information here for future reference.

Model _____

Serial Number _____



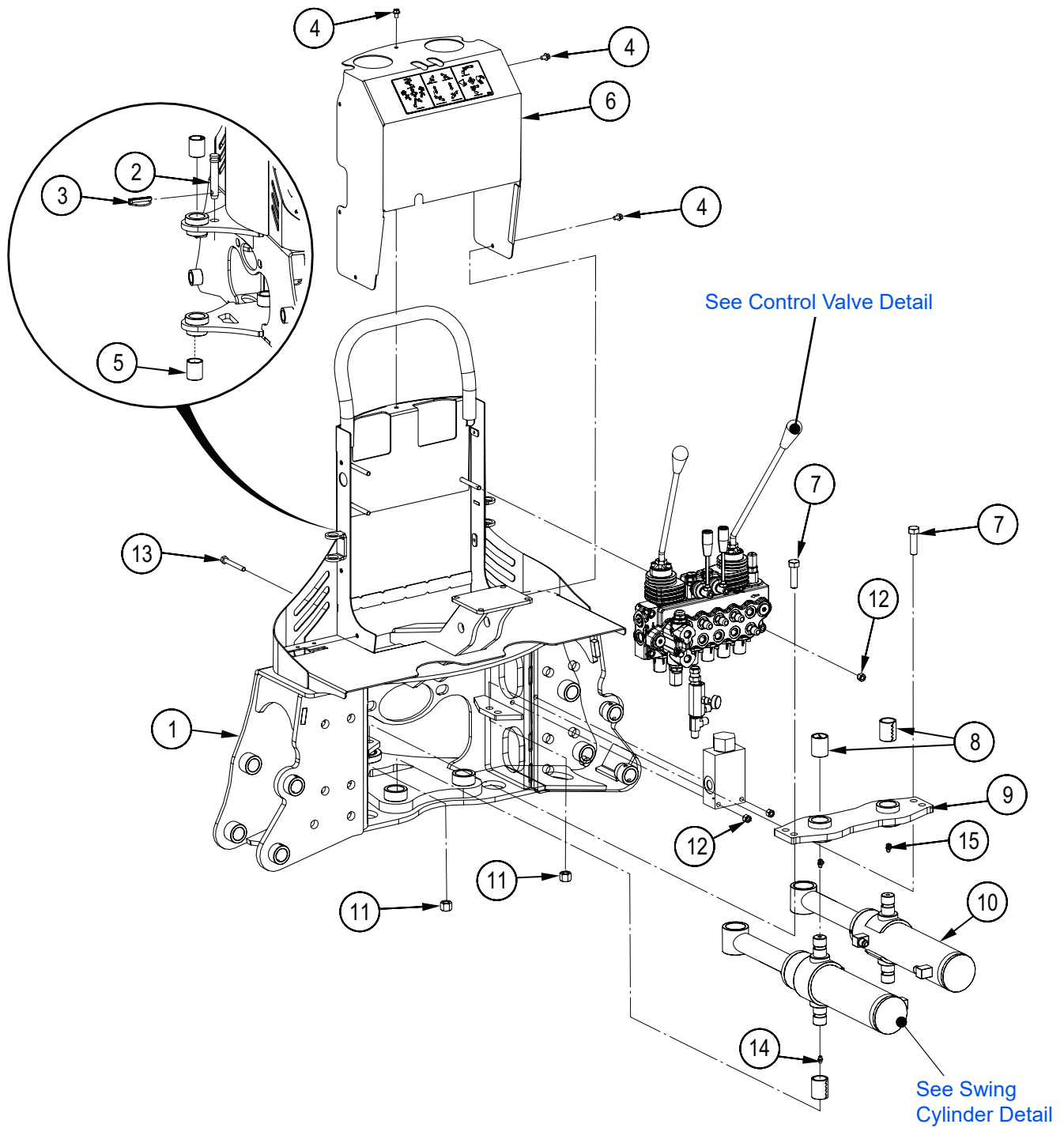
**Model and Serial
Number Location**

www.wallensteinequipment.com

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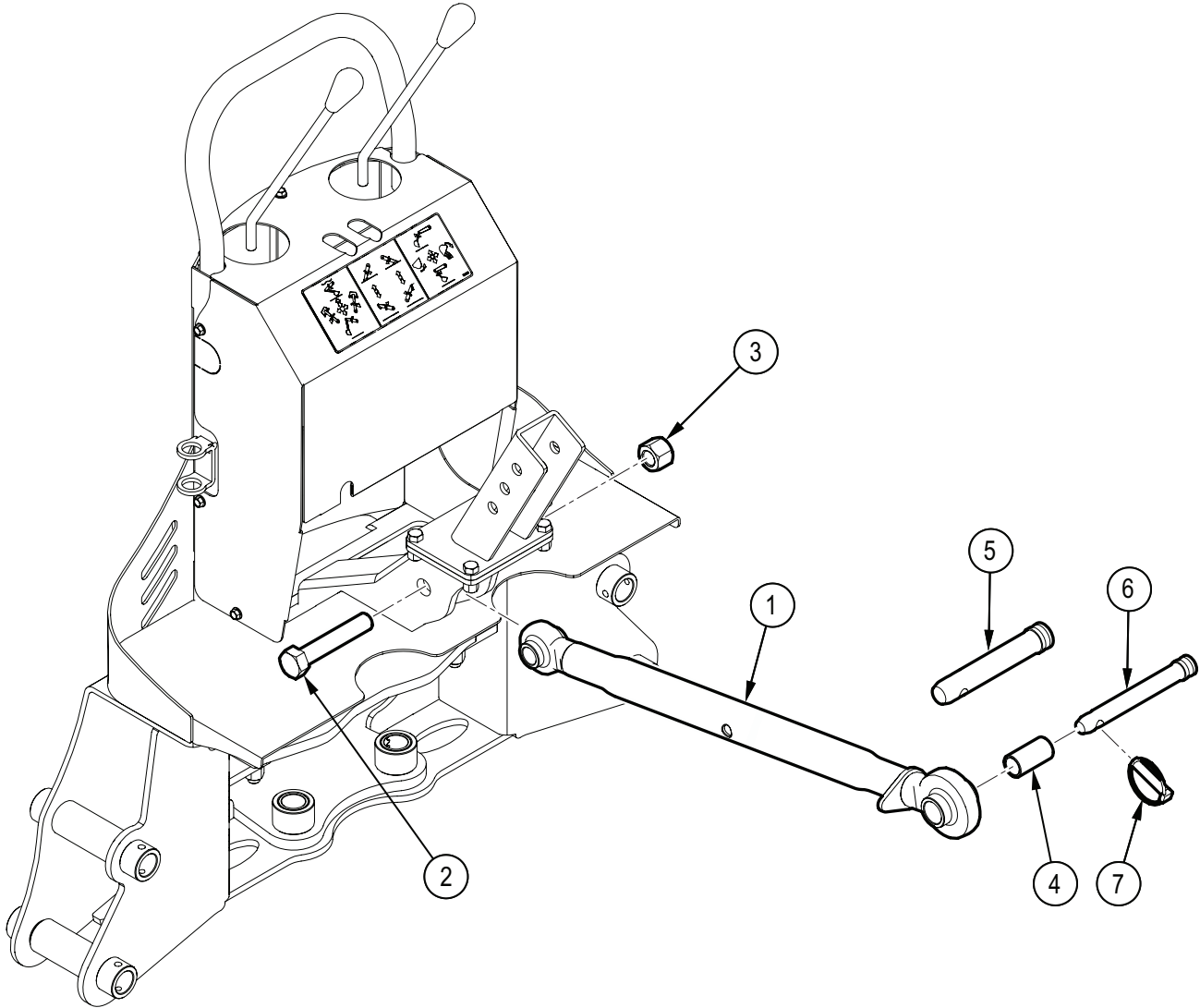
Main Parts



Item No.	Part No.	Description	Qty
1	3012W250	Base, Main Frame	1
2	Z11121	Toplink Pin, 3/4" x 2-3/4"	1
3	Z12140	Lynch Pin, 7/16"	1
4	Z76113	Flange Bolt, 1/4NC x 3/8"	7
5	Z27241	Bushing 1-1/2 x 1-3/4	2
6	3011L204	Shield, Control Valve	1
7	Z71517	Hex Bolt, 1/2NC x 1-3/4"	4
8	Z27221	Bushing 1 ID x 1-1/4 OD x 1-1/2 long x 1/8 wall	4

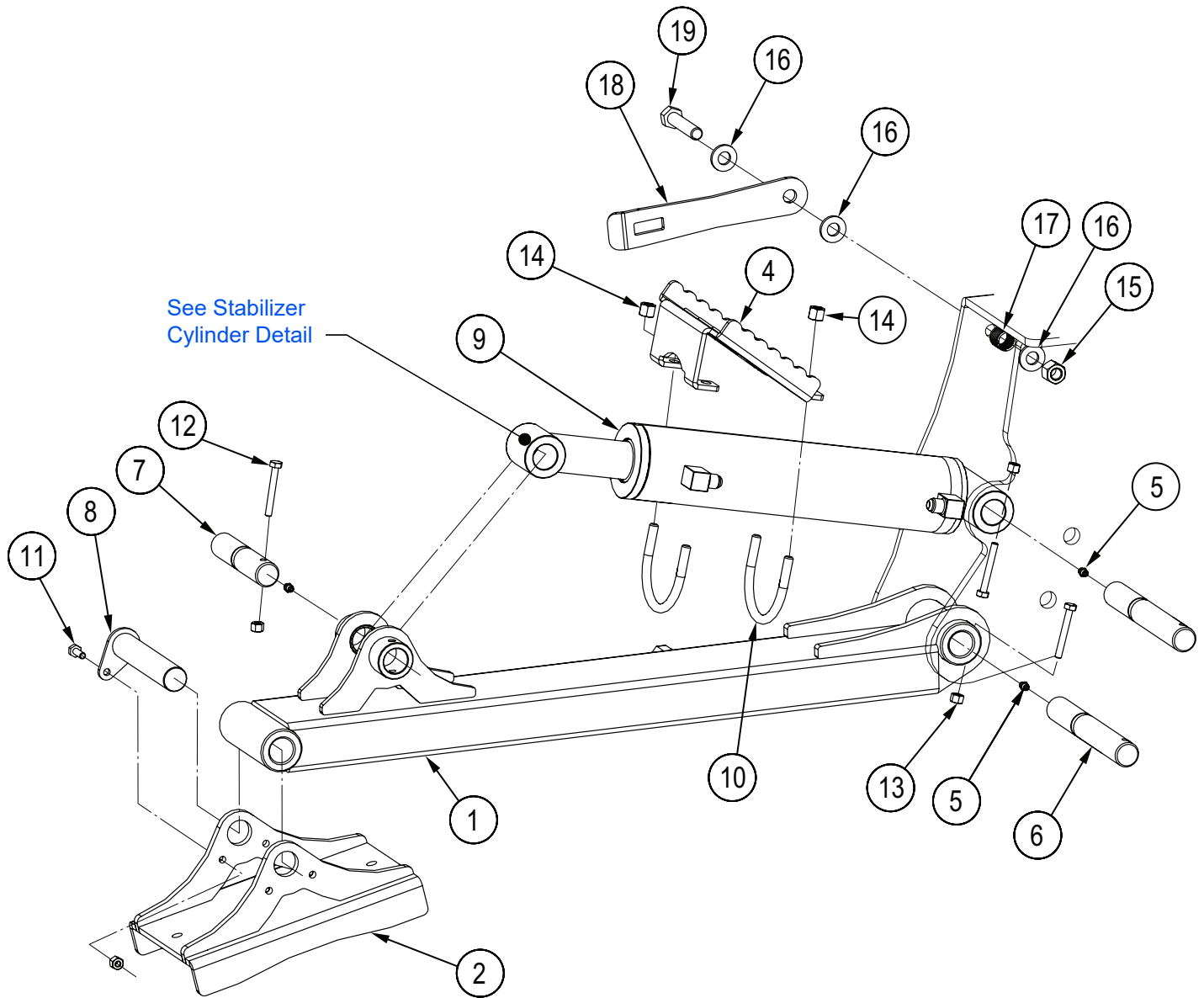
Item No.	Part No.	Description	Qty
9	3012W252	Bar, Swing Cylinder Retaining	1
10	3012C203	Cylinder, 2-1/2 x 7-3/4 Stroke	2
11	Z72251	Hex Lock Nut, 1/2NC	4
12	Z72221	Hex Lock Nut, 5/16NC	5
13	Z71225	Hex Bolt, 5/16NC x 2-1/2"	2
14	Z29202	Grease Zerk 1/4NF	2
15	Z29203	Grease Zerk 90, 1/4NF	2

Top Link Assembly Serial Number 3920XT287 and Up



Item No.	Part No.	Description	Qty
1	Z11507	Toplink, Cat 1 & 2 x 24" x 34"	1
2	Z71740	Hex Bolt, 3/4NC x 4"	1
3	Z72271	Hex Lock Nut, 3/4NC	1
4	3041M201	Bushing Drawbar Tab	1
5	Z11142	Toplink Pin, 1" x 4-5/16"	1
6	Z11123	Toplink Pin, 3/4" x 4-3/4"	1
7	Z12140	Lynch Pin, 7/16"	1

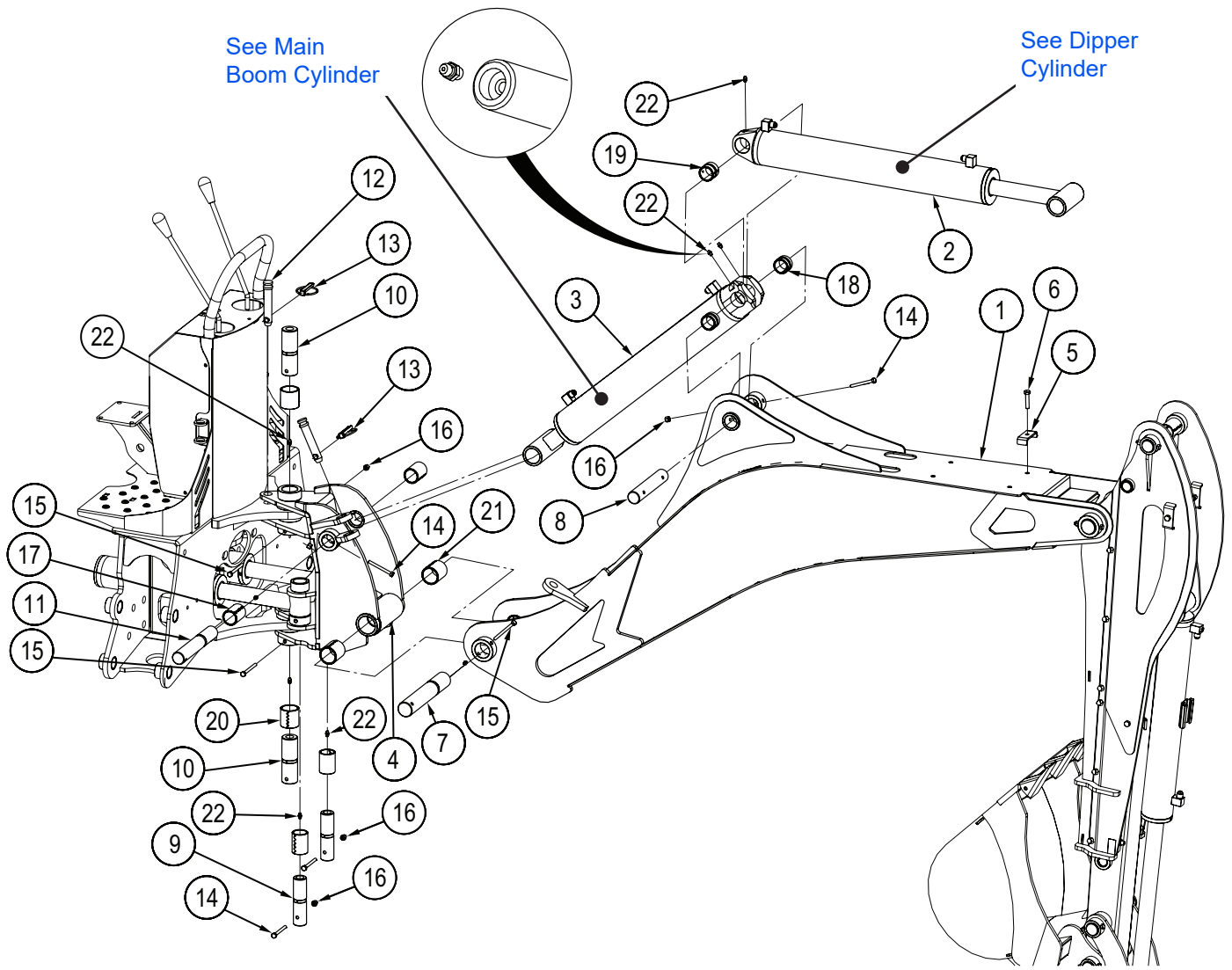
Stabilizer Leg Assembly



Left Stabilizer is shown, left and right assemblies are the same

Item No.	Part No.	Description	Qty	Item No.	Part No.	Description	Qty
1	3012W251	LH Stabilizer	1	11	Z71107	Hex Bolt, 1/4NC x 3/4"	2
2	3012W207	Foot Stabilizer	2	12	Z71120	Hex Bolt, 1/4NC x 2"	6
3	3012W251H	RH Stabilizer - Not Shown	1	13	Z72211	Hex Lock Nut, 1/4NC	8
4	3013L378	Step, Stabilizer	2	14	Z72231	Hex Lock Nut, 3/8NC	8
5	Z29202	Grease Zerk 1/4NF	6	15	Z72251	Hex Lock Nut, 1/2NC	2
6	3012M206	Pin, Linkage 1"	4	16	Z73151	SAE Washer, 1/2"	6
7	3012M214	Pin, Linkage 1"	2	17	Z32302	Comp Spring, 0.845" OD x 1-1/4" x 0.080"	2
8	3012W218	Pin Stabilizer	2	18	3012L279	Plate, Stabilizer Lock	2
9	3013C320	Cylinder, 3" x 1-3/4" x 9-1/2"	2	19	Z71525	Hex Bolt, 1/2NC x 2-1/2"	2
10	3013S301	U-Bolt, 3" Stab Step	4				

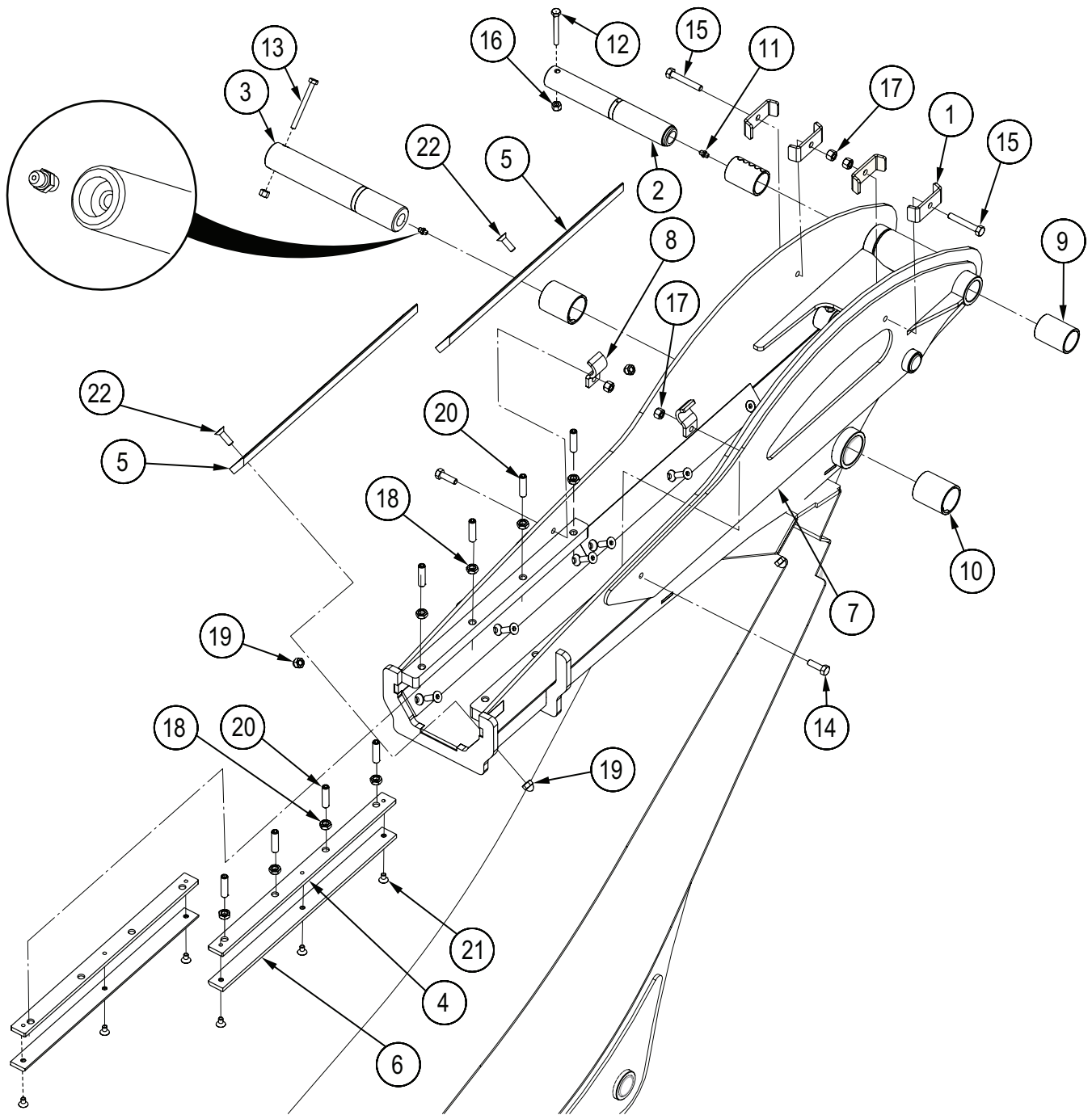
Main Boom Assembly



Item No.	Part No.	Description	Qty
1	3014W504	Main Boom	1
2	3013C305	Cylinder, 3 x 20.85 Stroke	1
3	3013C306	Cylinder, 3x19 Stroke	1
4	3012W205	Swing Tower	1
5	2054L412	Clamp, Two Hose	4
6	Z71215	Hex Bolt, 5/16NC x 1-1/2"	4
7	3012M213	Pin, Linkage 1-1/2	1
8	3012M215	Pin, Linkage 1-1/4	1
9	3012M220	Pin, Linkage 1-1/4	2
10	3012M233	Pin, Swing Cylinder	2
11	3012M236	Pin, Linkage 1-1/4	1
12	Z11121	Toplink Pin, 3/4" x 2-3/4"	2

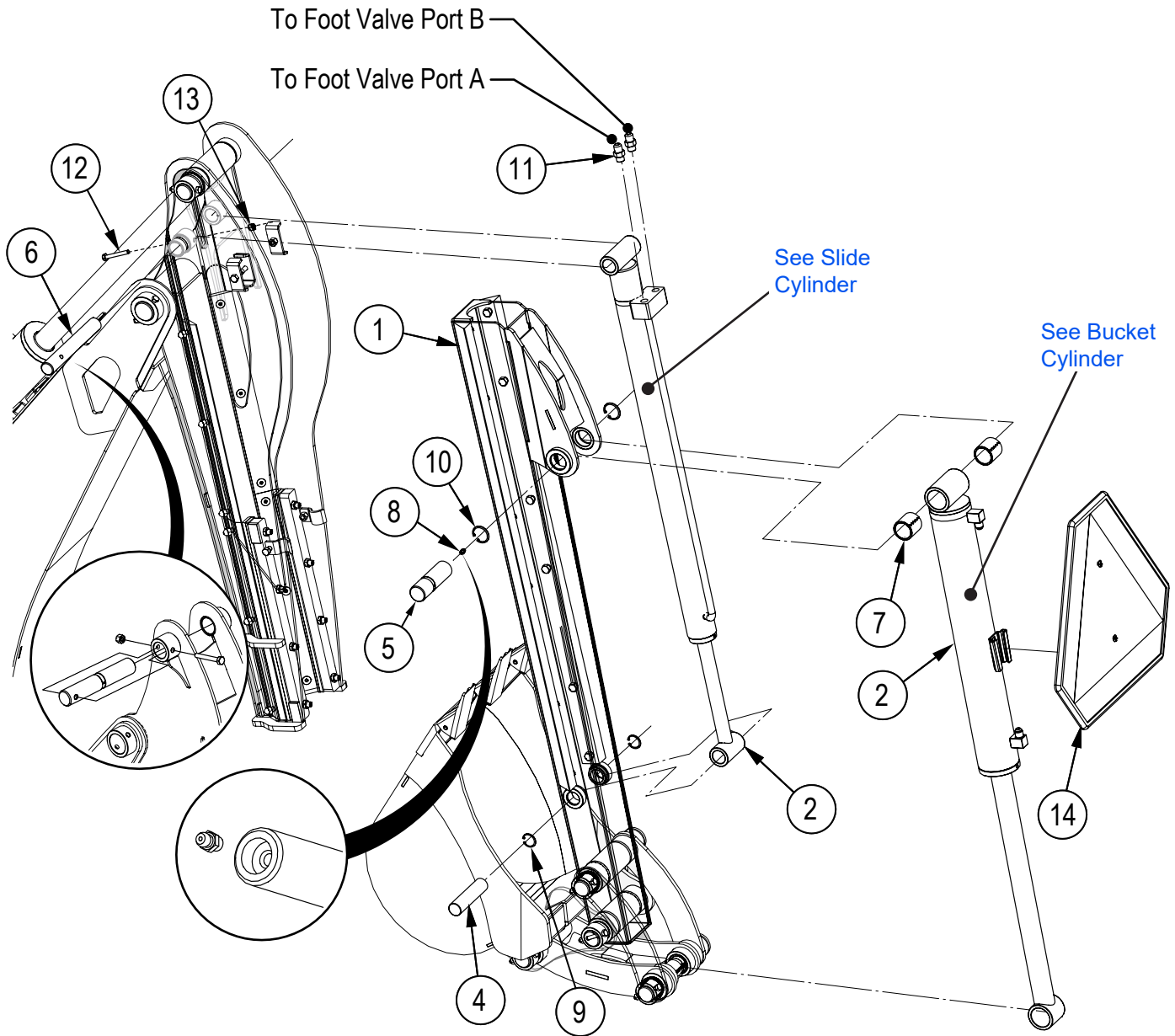
Item No.	Part No.	Description	Qty
13	Z12140	Lynch Pin, 7/16"	2
14	Z71125	Hex Bolt, 1/4NC x 2-1/2"	5
15	Z71127	Hex Bolt, 1/4NC x 2-3/4"	3
16	Z72211	Hex Lock Nut, 1/4NC	8
17	Z27232	Bushing 1-1/4 x 2	4
18	Z27233	Bushing 1-1/4 x 1 Grooved	2
19	Z27234	Bushing 1-1/4 x 1-1/4 Grooved	1
20	Z27241	Bushing 1-1/2 x 1-3/4	2
21	Z27242	Bushing 1-1/2 x 2	2
22	Z29202	Grease Zerk 1/4NF	9

Base Dipper Boom Assembly



Item No.	Part No.	Description	Qty	Item No.	Part No.	Description	Qty
1	2054L412	Clamp, Two Hose	4	12	Z71122	Hex Bolt, 1/4NC x 2-1/4"	1
2	3012M209	Pin, Linkage 1-1/4 x 8-3/8	1	13	Z71127	Hex Bolt, 1/4NC x 2-3/4"	1
3	3012M213	Pin, Linkage 1-1/2	1	14	Z71210	Hex Bolt, 5/16NC x 1"	2
4	3014M410	Backer, Upper Slide	2	15	Z71220	Hex Bolt, 5/16NC x 2"	2
5	3014S406	Dipper Slide, Lower	4	16	Z72211	Hex Lock Nut, 1/4NC	2
6	3014S409	Dipper Slide, Upper	2	17	Z72221	Hex Lock Nut, 5/16NC	4
7	3014W402	Weldment, Base Dipper Boom XT	1	18	Z72331	Jam Nut, 3/8NC	8
8	6011L128	Single Hose Clamp	2	19	Z72914	Acorn Nut, 5/16NC	12
9	Z27232	Connex Bushing 1-1/4 x 2	2	20	Z74134	Set Screw, 3/8NC x 1-1/2"	8
10	Z27242	Connex Bushing 1-1/2 x 2	2	21	Z75212	FHCS, 1/4NC x 7/16"	6
11	Z29202	Grease Zerk 1/4NF	2	22	Z75221	FHCS, 5/16NC x 1"	12

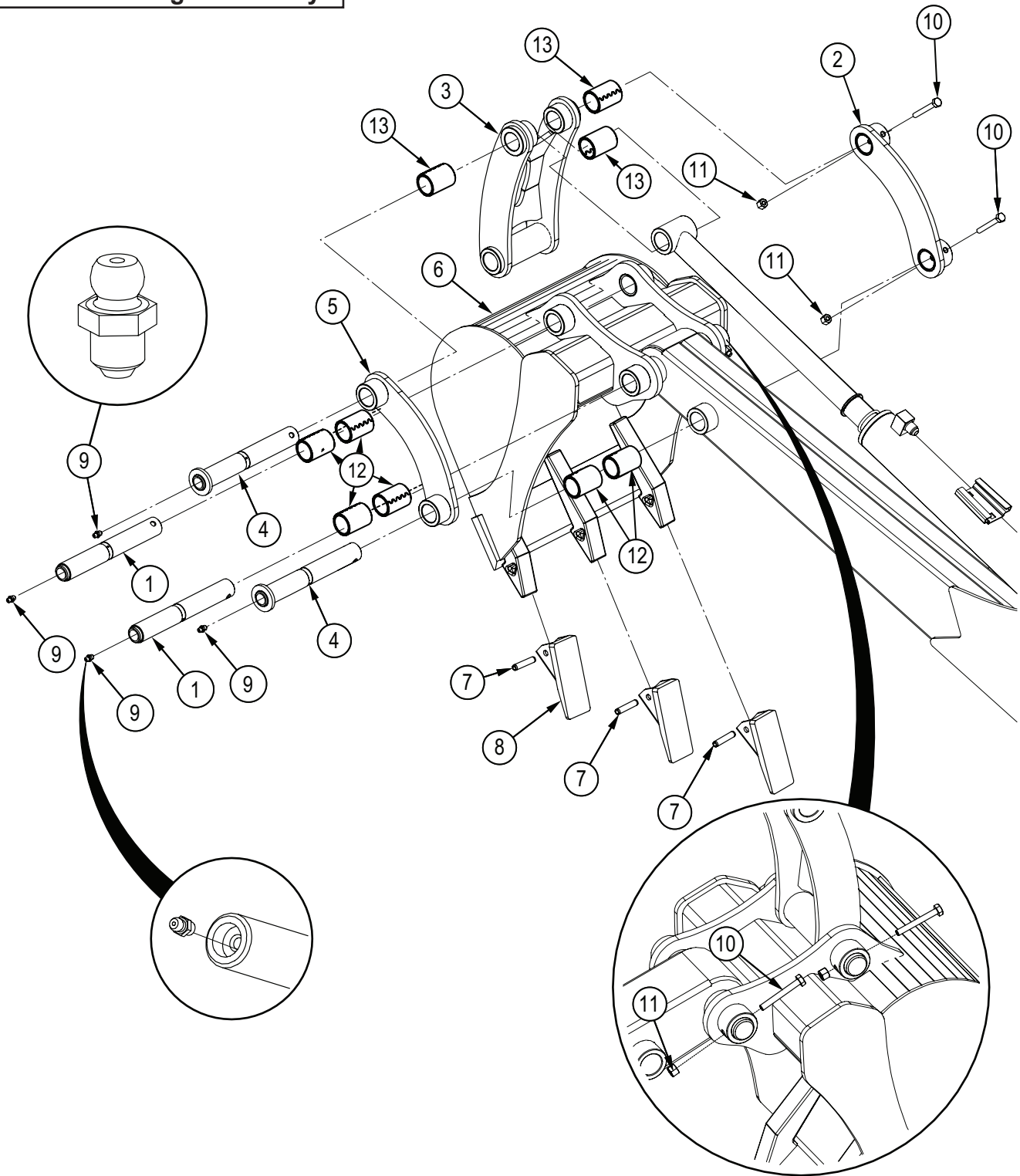
Slide Dipper Boom Assembly



Item No.	Part No.	Description	Qty
1	3014W403	Slide Dipper Boom XT	1
2	3014C402	Cylinder, 1-3/4" x 23-1/4" Stroke	1
3	3014C407	Cylinder, 2-1/2" x 16-1/2" Stroke	1
4	3014M403	Pin, XT Cylinder Rod	1
5	3014M407	Pin, Linkage 1-1/4	1
6	3014M409	Pin, XT Cylinder Butt	1
7	Z27235	Connex Bushing 1-1/4 x 1-1/2	2

Item No.	Part No.	Description	Qty
8	Z29202	Grease Zerk 1/4NF	1
9	Z46102	Retaining Ring, Internal 1	2
10	Z46103	Internal Retaining Ring, 1-1/4"	2
11	Z51641	Straight, MJIC x MORB 0606	2
12	Z71120	Hex Bolt, 1/4NC x 2"	1
13	Z72211	Hex Lock Nut, 1/4NC	1
14	Z96601	SMV Sign w/ Spade, Assembled	1

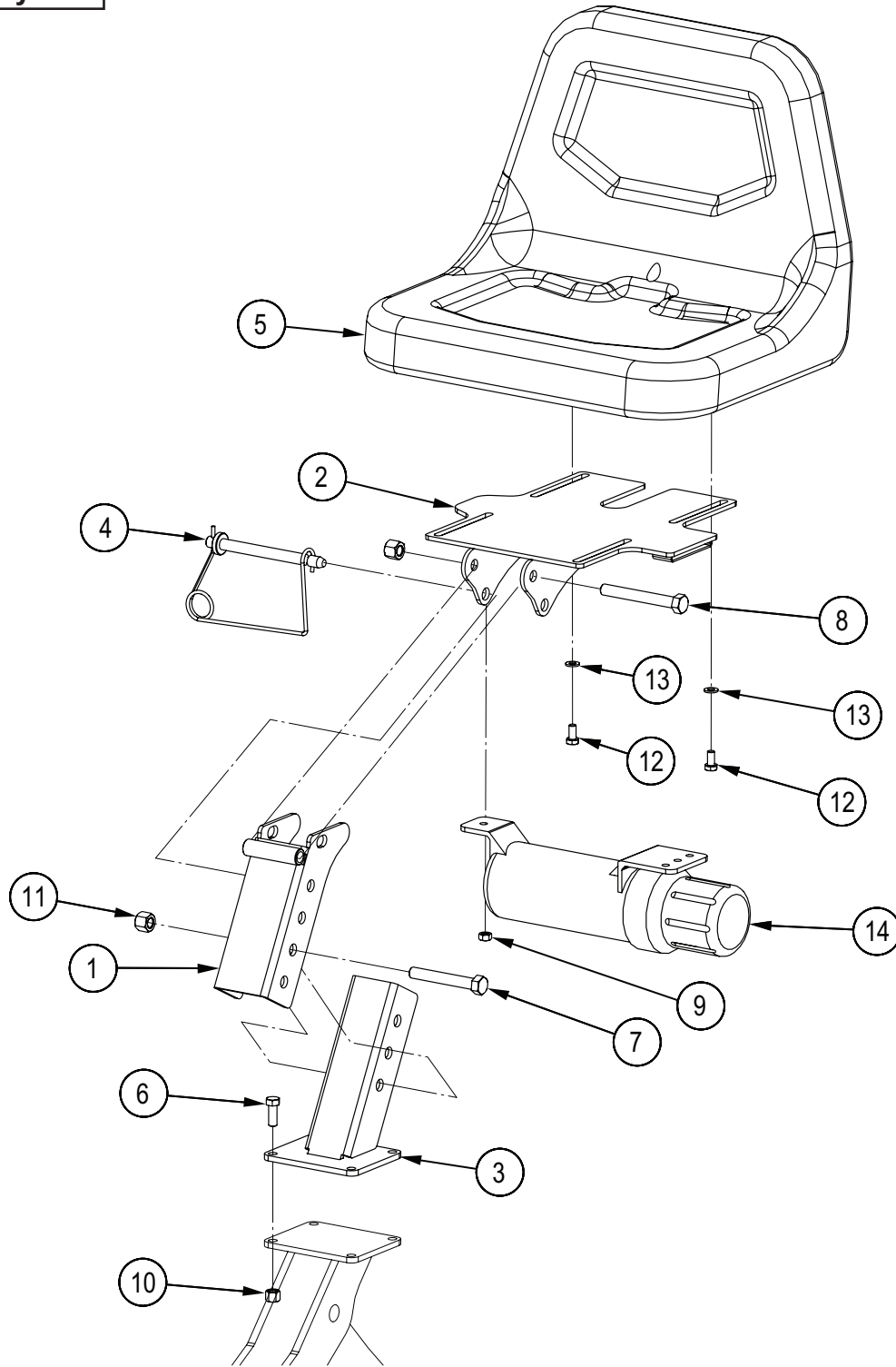
Bucket and Linkage Assembly



Item No.	Part No.	Description	Qty
1	3012M209	Pin, Linkage 1-1/4 x 8-3/8	2
2	3012W202	RH Bucket Linkage	1
3	3012W203	Middle Bucket Linkage	1
4	3012W217	Bucket Pin w/ Washer	2
5	3012W220	LH Bucket Linkage	1
6	3082W051	GX720 12" Backhoe Bucket	1
7	Z14181	Roll Pin, 5/16" x 1-1/2"	3

Item No.	Part No.	Description	Qty
8	Z19902	Tooth, Backhoe Pin-on	3
9	Z29202	Grease Zerk 1/4NF	4
10	Z71122	Hex Bolt, 1/4NC x 2-1/4"	4
11	Z72211	Hex Lock Nut, 1/4NC	4
12	Z27232	Connex Bushing 1-1/4 x 2	6
13	Z27231	Connex Bushing 1-1/4 x 1-3/4	3

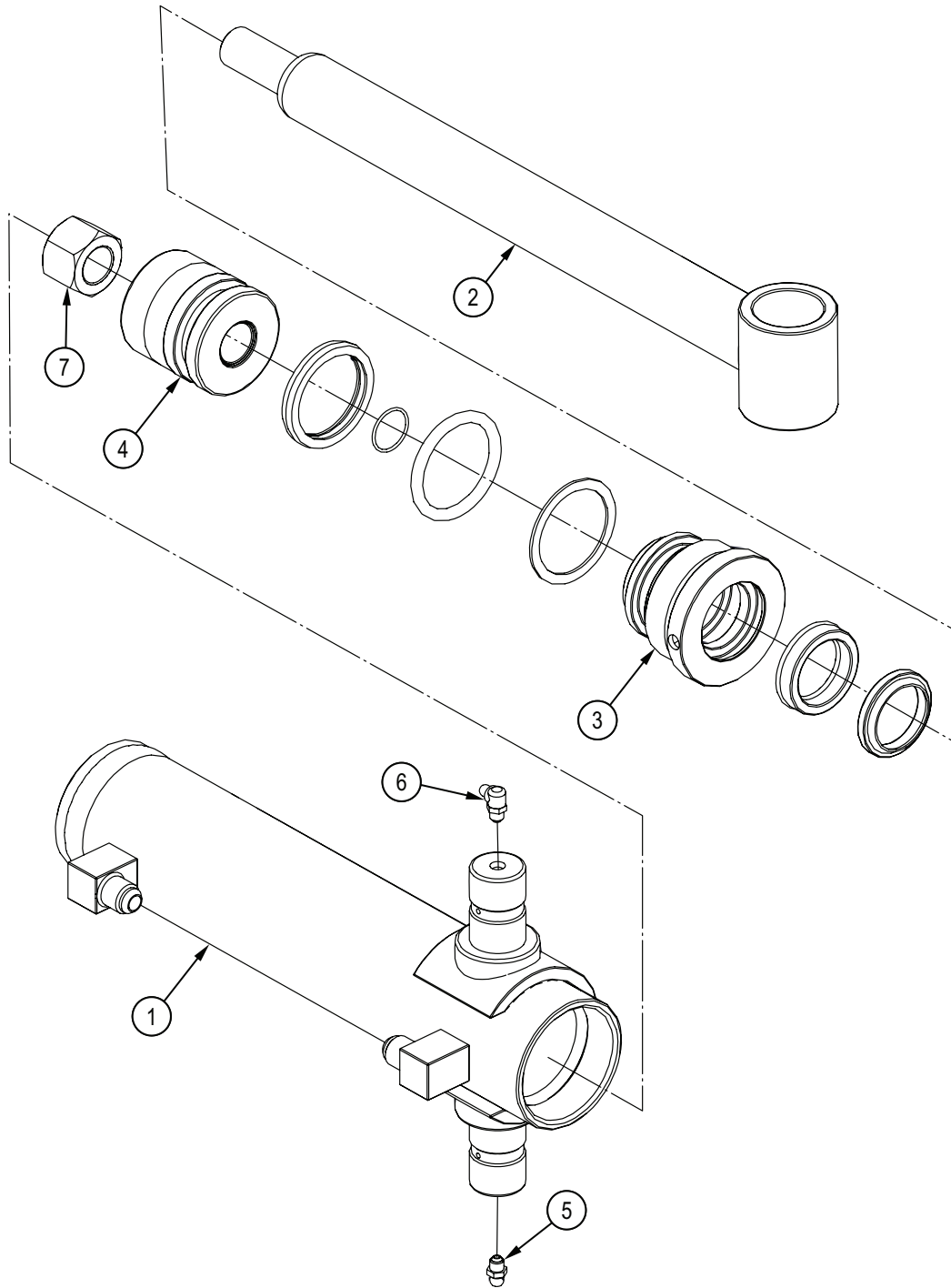
Seat Assembly



Item No.	Part No.	Description	Qty
1	3011W112	Mount, Seat	1
2	3011W113	Plate, Seat	1
3	3011W111	Base, Seat	1
4	Z12441	Snap Lock Pin, 1/2" x 4-1/2"	1
5	Z19201	High-Back Backhoe Seat	1
6	Z71310	Hex Bolt, 3/8NC x 1"	4
7	Z71535	Hex Bolt, 1/2NC x 3-1/2"	1

Item No.	Part No.	Description	Qty
8	Z71540	Hex Bolt, 1/2NC x 4"	1
9	Z72121	Hex Nut, 5/16NC	1
10	Z72231	Hex Lock Nut, 3/8NC	4
11	Z72251	Hex Lock Nut, 1/2NC	2
12	Z77152	Hex Bolt, M8x1.25 x 16mm	4
13	Z77352	DIN 125 Washer, M8	4
14	Z96503	Manual Tube, 3-1/2" Short	1

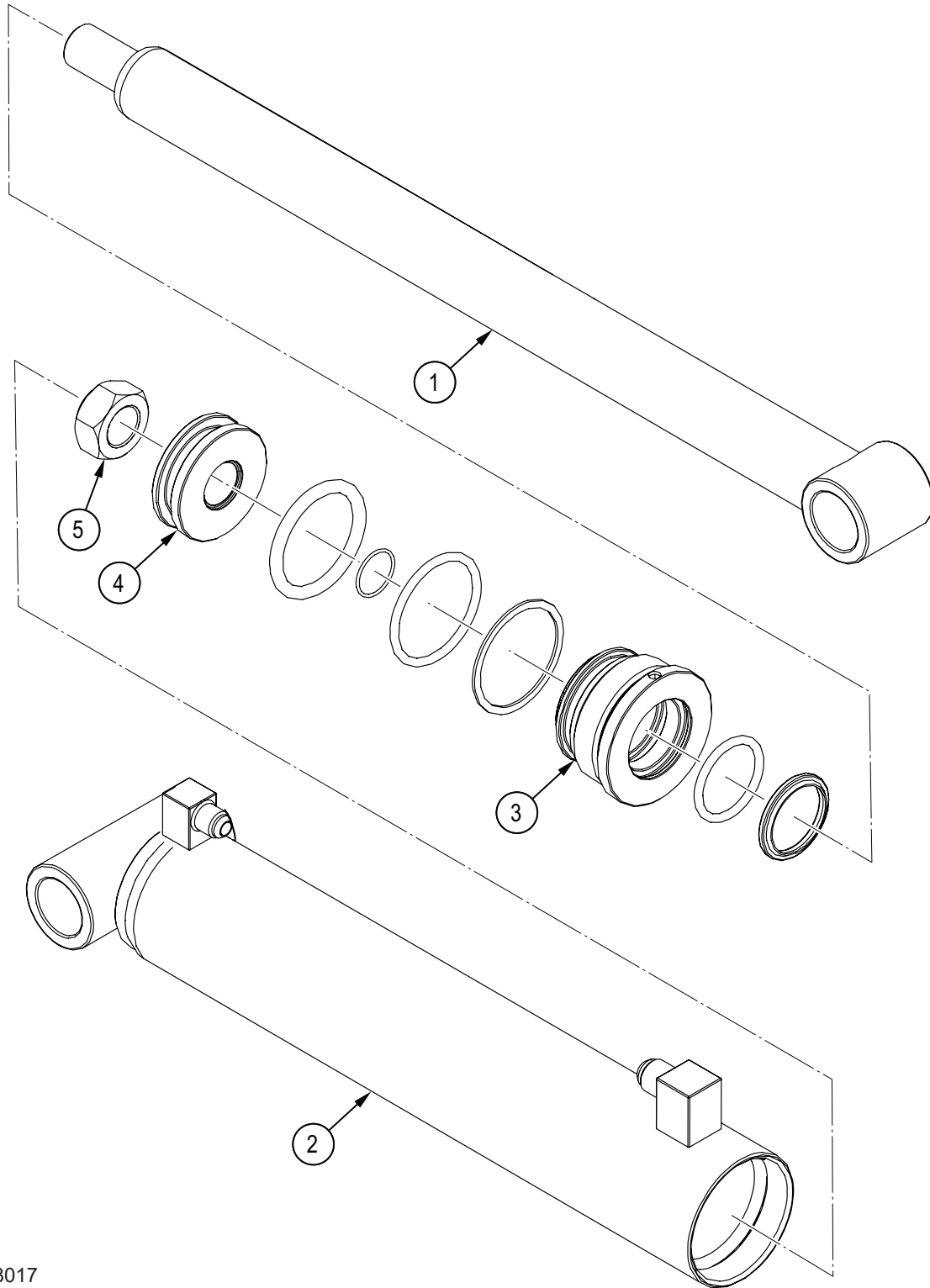
Swing Cylinder Detail



Seal Kit #SLK-2515

Item No.	Part No.	Description	Qty
1	3012C2034	Barrel, 2-1/2" Trunnion Mount	1
2	3012C2033	Rod, 1-1/2 x 1	1
3	G250-150S	Gland, 2-1/2" x 1-1/2"	1
4	P100-250CP	Piston, 2-1/2" Bore x Cushion	1
5	Z29202	Grease Zerk 1/4NF	1
6	Z29203	Grease Zerk 90, 1/4NF	1
7	Z72276	Hex Top-Lock Nut, 3/4NF	1

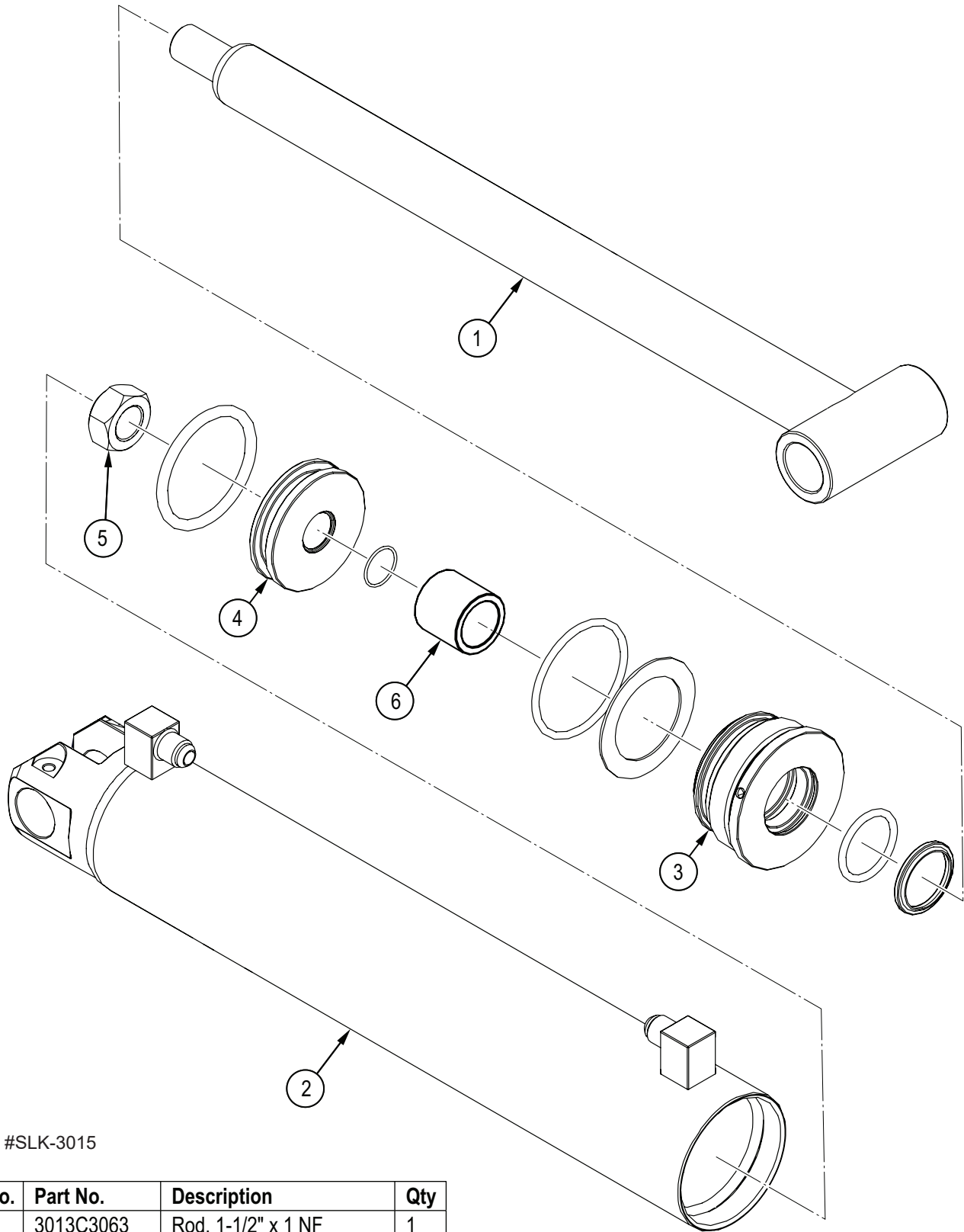
Stabilizer Cylinder Detail



Seal Kit #SLK-3017

Item No.	Part No.	Description	Qty
1	3013C3203	Rod, 1-1-3/4" x 1"	1
2	3013C3204	Barrel, 3" Bore	1
3	G300-175S	Gland, 3" x 1-3/4"	1
4	P100-300SA	Piston, 3" Bore	1
5	Z72292G8	Hex Lock Nut, 1-1/4NF	1

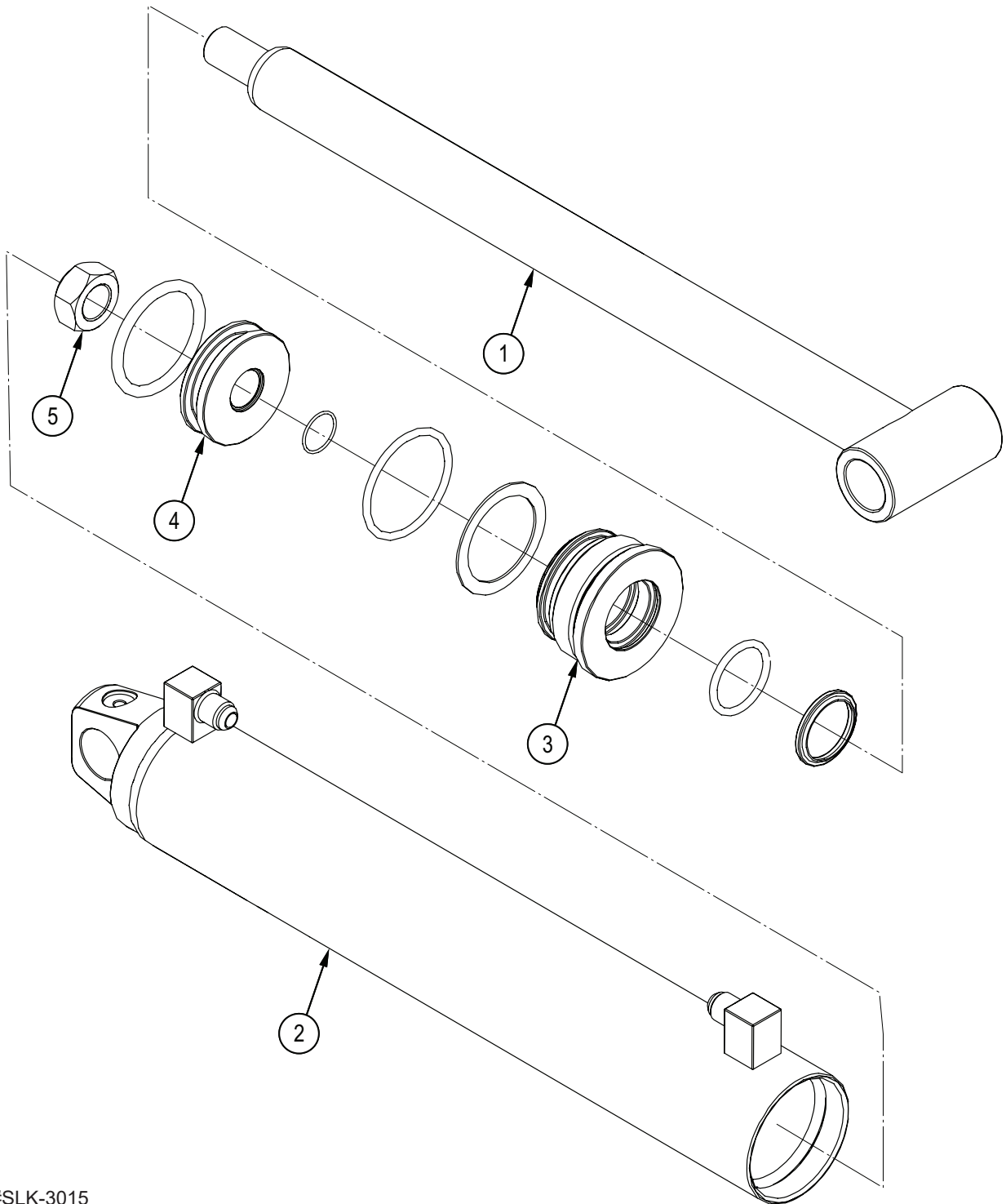
Main Boom Cylinder Detail



Seal Kit #SLK-3015

Item No.	Part No.	Description	Qty
1	3013C3063	Rod, 1-1/2" x 1 NF	1
2	3013C3064	Barrel, 3"	1
3	G300-150S	Gland, 3" x 1-1/2"	1
4	P100-300SP	Piston, 3" Bore	1
5	Z72276	Hex Top-lock Nut, 3/4NF	1
6	3013C3067	Internal Stroke Stop	1

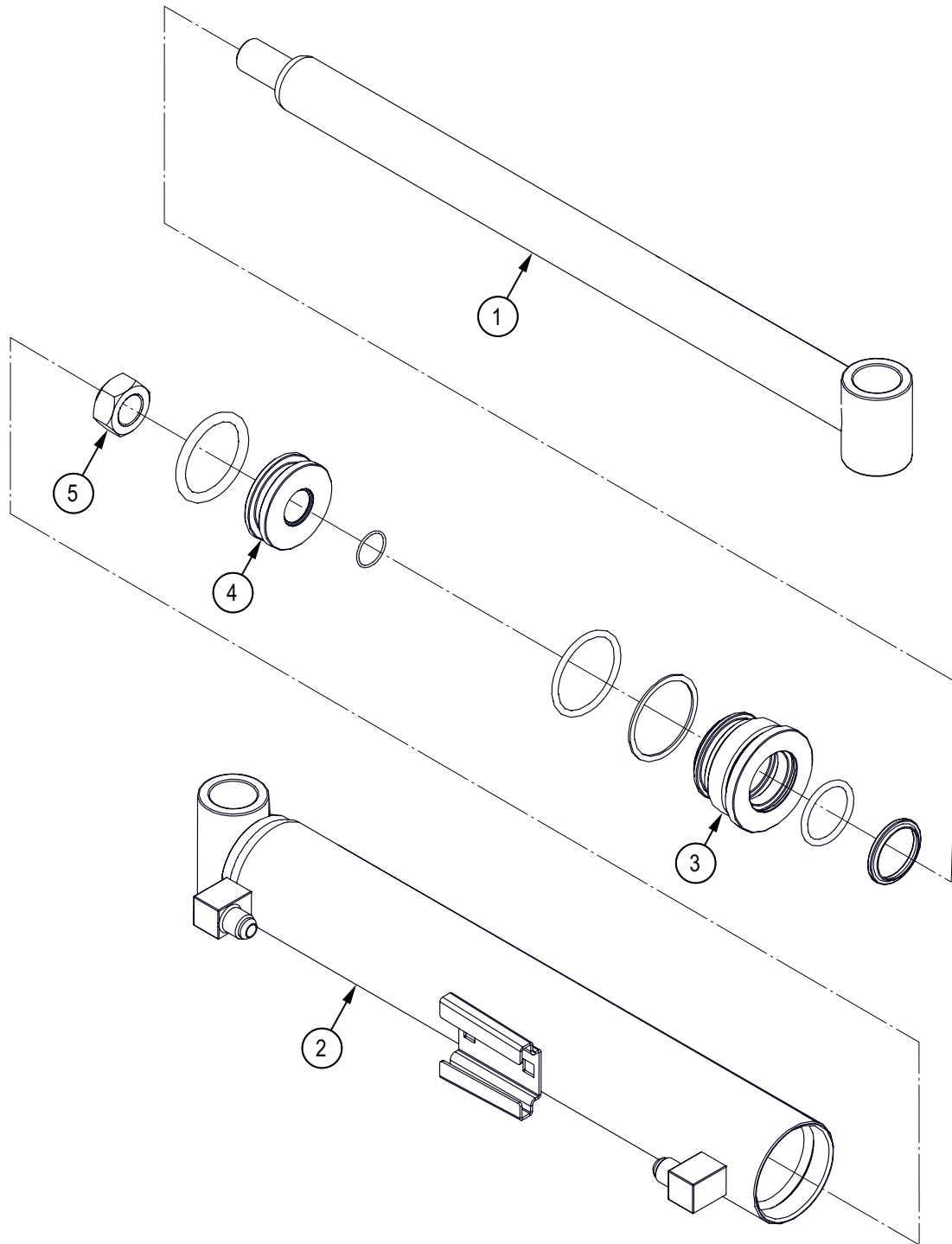
Dipper Boom Cylinder Detail



Seal Kit #SLK-3015

Item No.	Part No.	Description	Qty
1	3013C3053	Rod, 1-1/2" x 1NF	1
2	3013C3054	Barrel, 3"	1
3	G300-150S	Gland, 3" x 1-1/2"	1
4	P100-300SP	Piston, 3" Bore	1
5	Z72276	Hex Top-lock Nut, 3/4NF	1

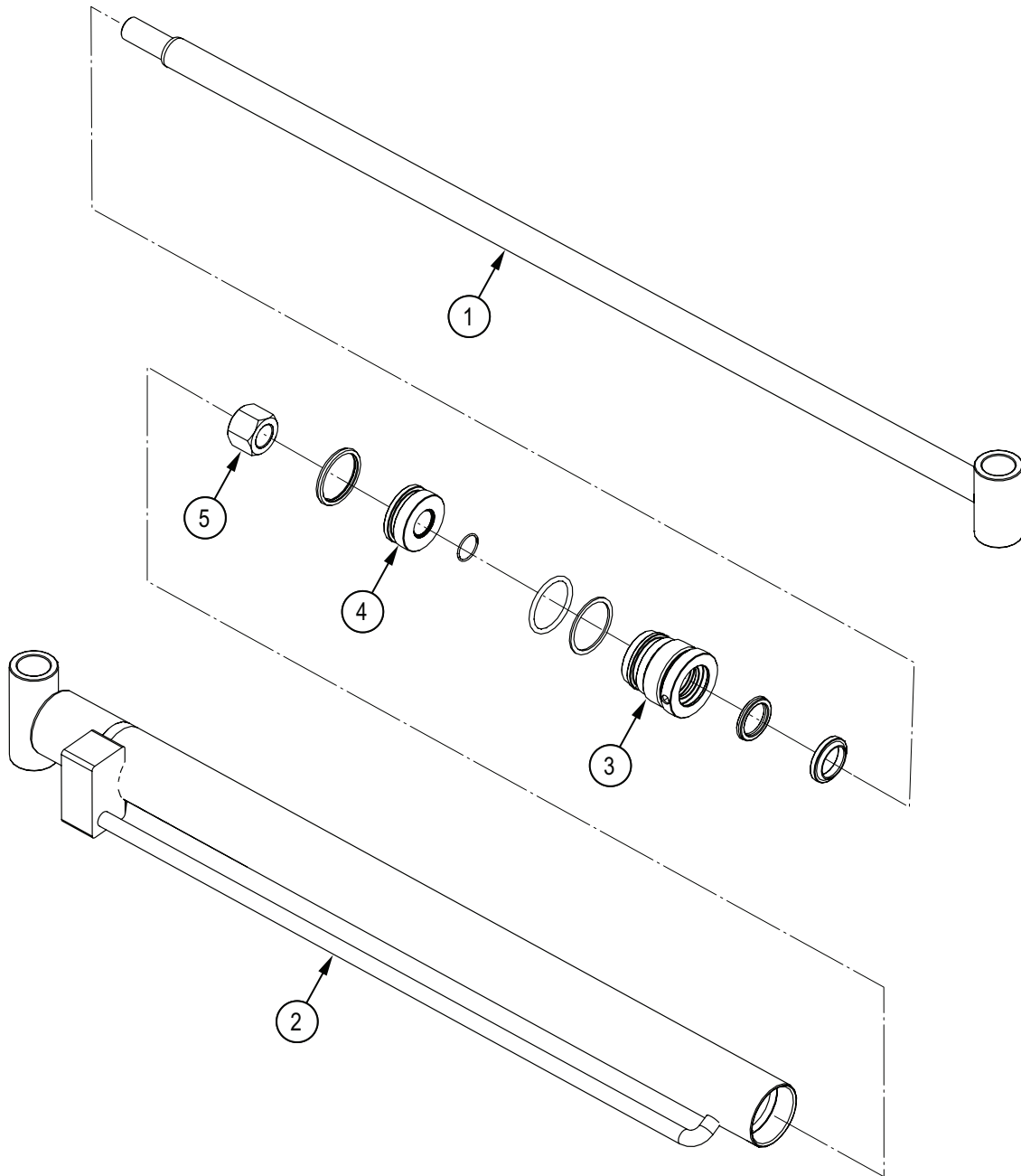
Bucket Cylinder Assembly



Seal Kit #SLK-2515

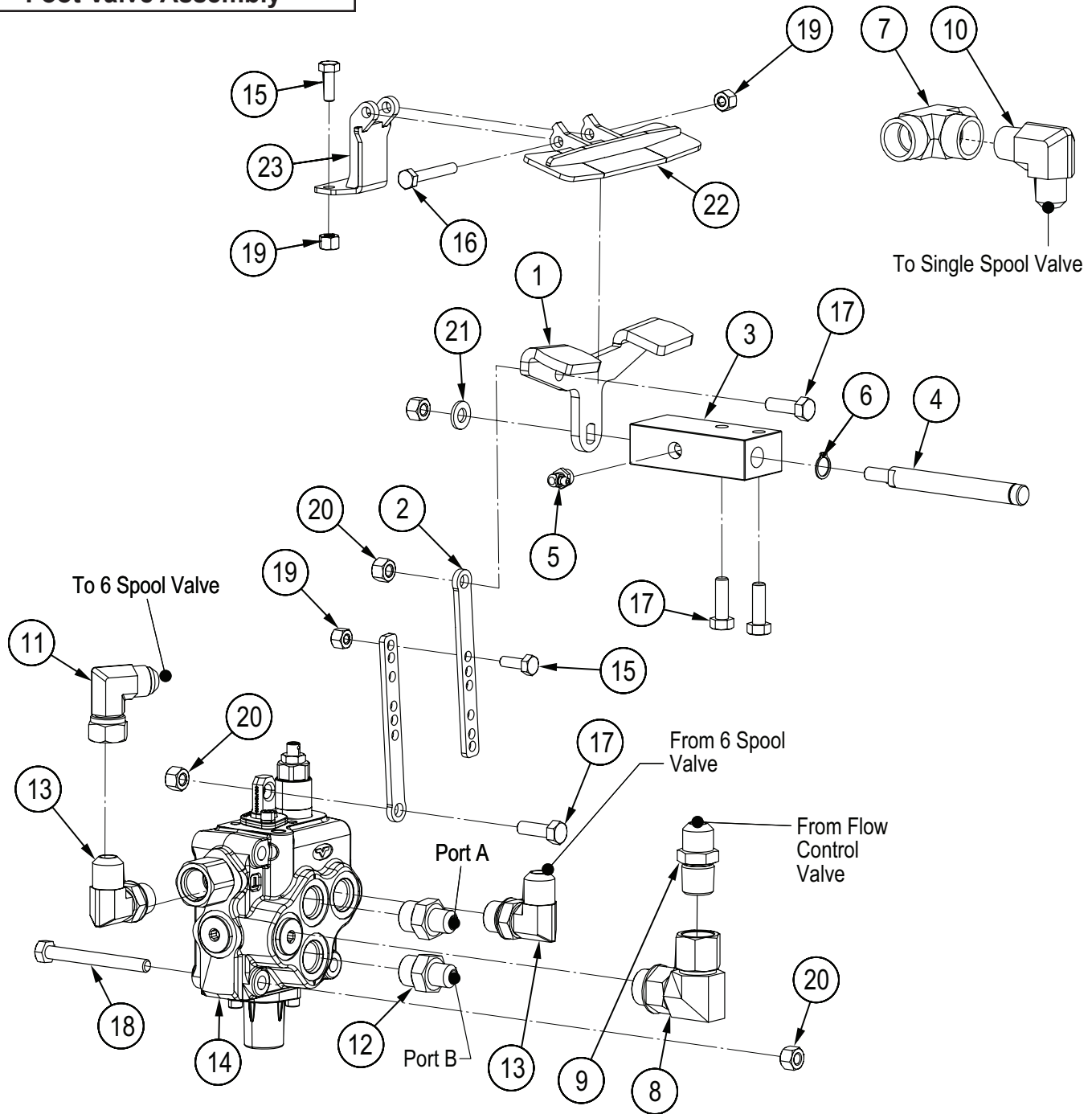
Item No.	Part No.	Description	Qty
1	3014C4073	Rod, 1-1/2" x 1NF	1
2	3014C4074	Barrel, 2-1/2"	1
3	G250-150S	Gland, 2-1/2" x 1-1/2"	1
4	P100-250SP	Piston, 2-1/2" Bore	1
5	Z72272	Hex Lock Nut, 3/4NF G8	1

Slide Cylinder Assembly



Item No.	Part No.	Description	Qty
1	3014C4023	Rod, 1-3/4" x 1NF	1
2	3014C4024	Barrel, 1-3/4" Bore	1
3	G175-100S	Gland, 1-3/4" x 1"	1
4	P150-175SP	Piston, 1-3/4" Bore	1
5	Z72272	Hex Lock Nut, 3/4NF G8	1

Foot Valve Assembly

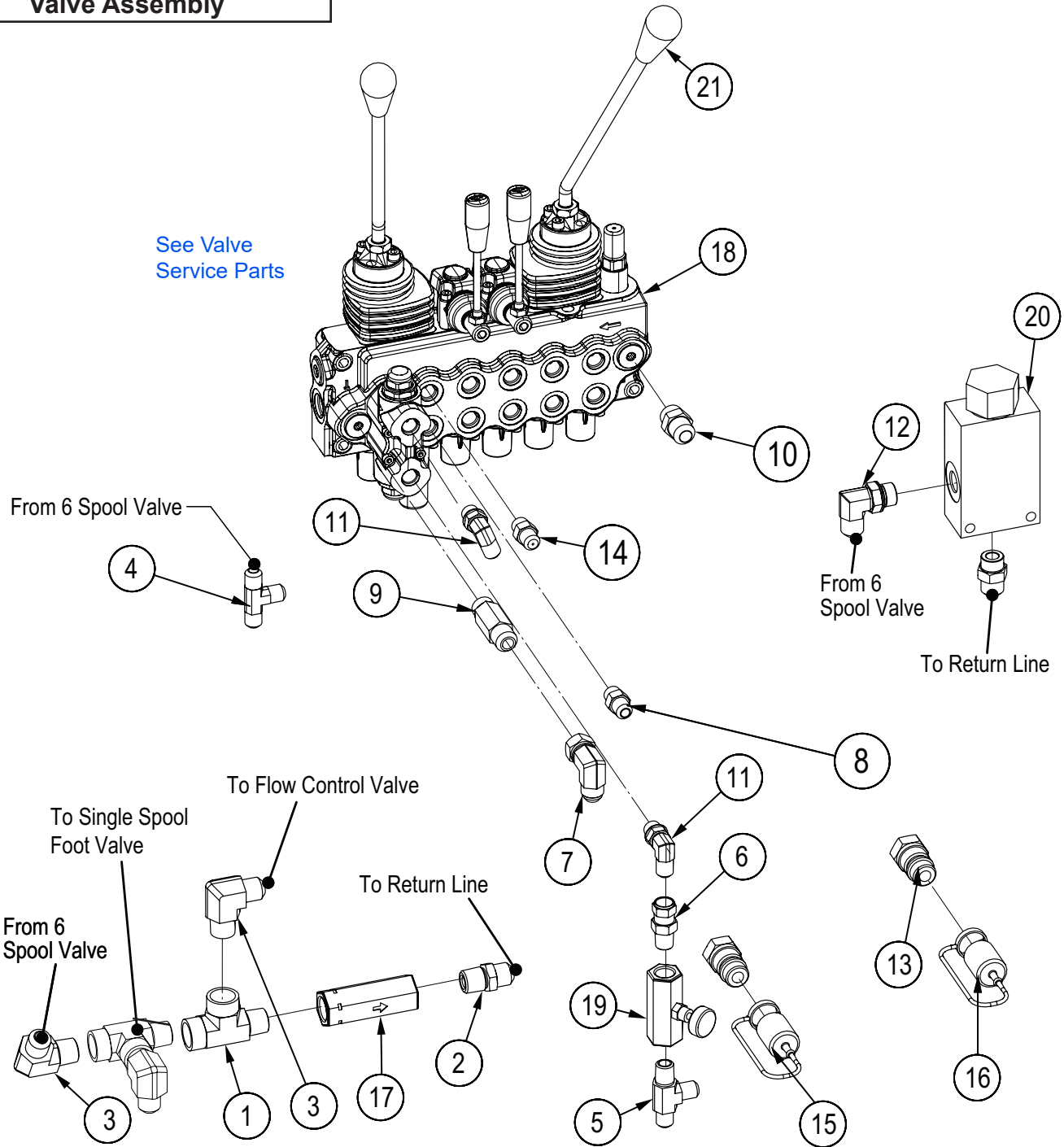


Item No.	Part No.	Description	Qty
1	3014L001	Pedal, Foot Rocker	1
2	3014L002	Link, Adjustable Valve	2
3	3014M001	Block, Pedal Rocker	1
4	3083M082	Shaft, Rocker	1
5	Z29207	Grease Zerk, MP02 x 90	1
6	Z46201	External Retaining Ring, 1/2"	1
7	Z51172	Tee, MP x FP x FP 080808	1
8	Z51383	Elbow 90, MORB x FPX 0808	1
9	Z51442	Straight, MJIC x MP 0808	1
10	Z51451	Elbow 90, MJIC x MP 0808	1
11	Z51562	Elbow 90, MJIC x FJICX 0808	1
12	Z51644	Straight, MJIC x MORB 0608	2

Item No.	Part No.	Description	Qty
13	Z51653	Elbow 90, MJIC x MORB 0808	2
14	Z56220	Single Spool Valve, VC Tandem SC x 12GPM	1
15	Z71107	Hex Bolt, 1/4NC x 3/4"	4
16	Z71117	Hex Bolt, 1/4NC x 1-3/4"	1
17	Z71210	Hex Bolt, 5/16NC x 1"	4
18	Z71230	Hex Bolt, 5/16NC x 3"	3
19	Z72211	Hex Lock Nut, 1/4NC	5
20	Z72221	Hex Lock Nut, 5/16NC	6
21	Z73122	SAE Washer, 5/16"	1
22	3014W001	Weldment, Pedal Cover	1
23	3014W002	Weldment, Cover Mount	1

Valve Assembly

See Valve
Service Parts

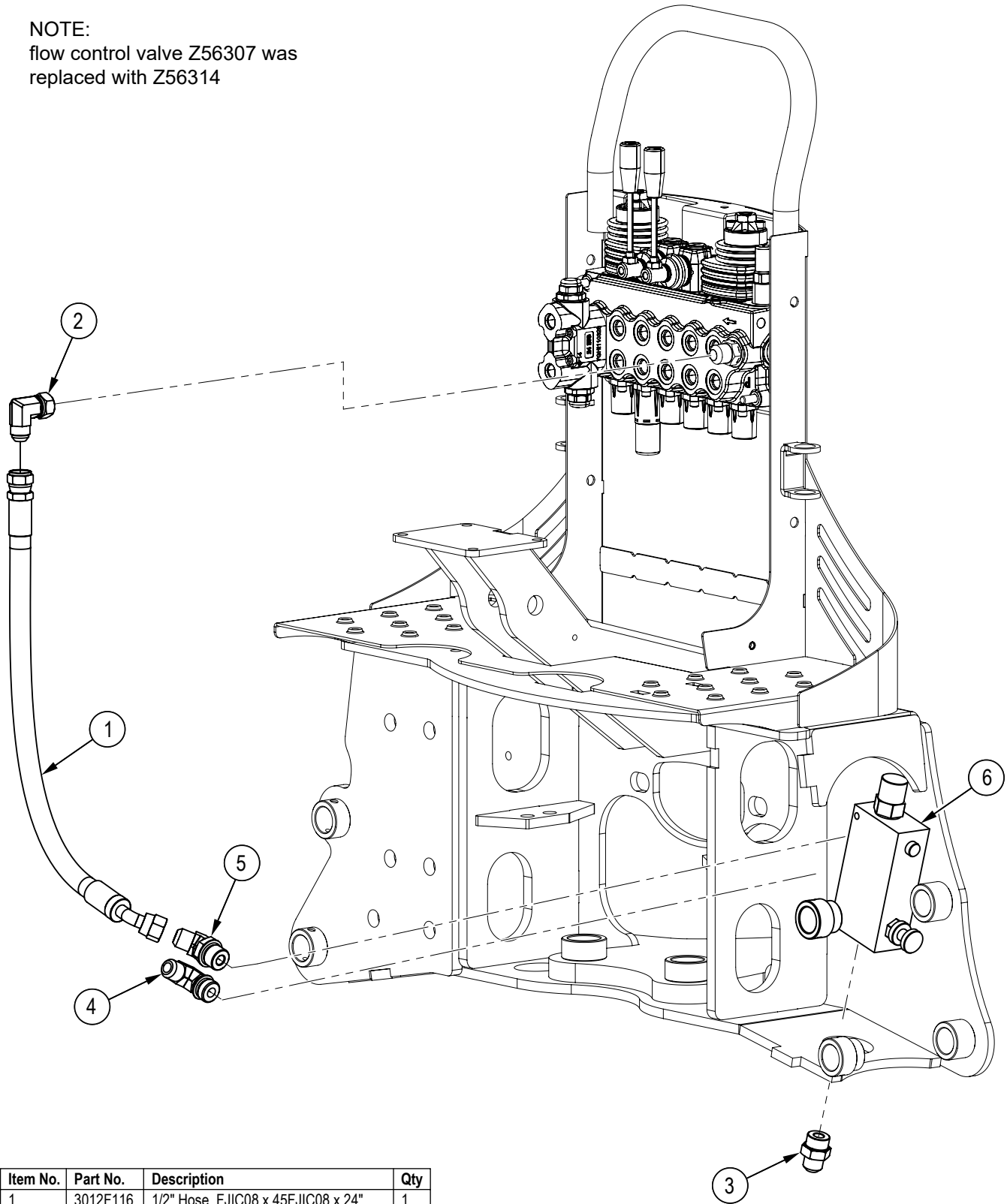


Item No.	Part No.	Description	Qty	Item No.	Part No.	Description	Qty
1	Z51172	Tee, MP x FP x FP 080808	1	12	Z51653	Elbow 90, MJIC x MORB 0808	2
2	Z51442	Straight, MJIC x MP 0808	1	13	Z51926	Quick Coupler, FP08 x M ISO 7241-1	2
3	Z51451	Elbow 90, MJIC x MP 0808	2	14	Z51928	Straight, MJIC x MORB 0606 x 0.062" Orifice	1
4	Z51483	Tee, MJIC x MJIC x MJIC 060606	1	15	Z52831	Nipple Cap, ISO 7241-1 x Red	1
5	Z51486	Tee, MJIC x MP x MJIC 060606	1	16	Z52832	Nipple Cap, ISO 7241-1 x Black	1
6	Z51511	Straight, MP x FJICX 0606	1	17	Z56102	Check Valve, FP08 x 0PSI	1
7	Z51562	Elbow 90, MJIC x FJICX 0808	1	18	Z56202	Six Spool Valve, VC x 12GPM	1
8	Z51641	Straight, MJIC x MORB 0606	9	19	Z56301	Flow Control, Needle x 0-9GPM	1
9	Z51642	Straight, MJIC x MORB 0808 Long Custom	1	20	Z56307	Flow Control, 3 Port x 7GPM	1
10	Z51643	Straight, MJIC x MORB 0808	2	21	Z56910	Backhoe Lever Bent - 12"	2
11	Z51651	Elbow 90, MJIC x MORB 0606	2				

Flow Control Valve Serial Number 3920XT310 and Up

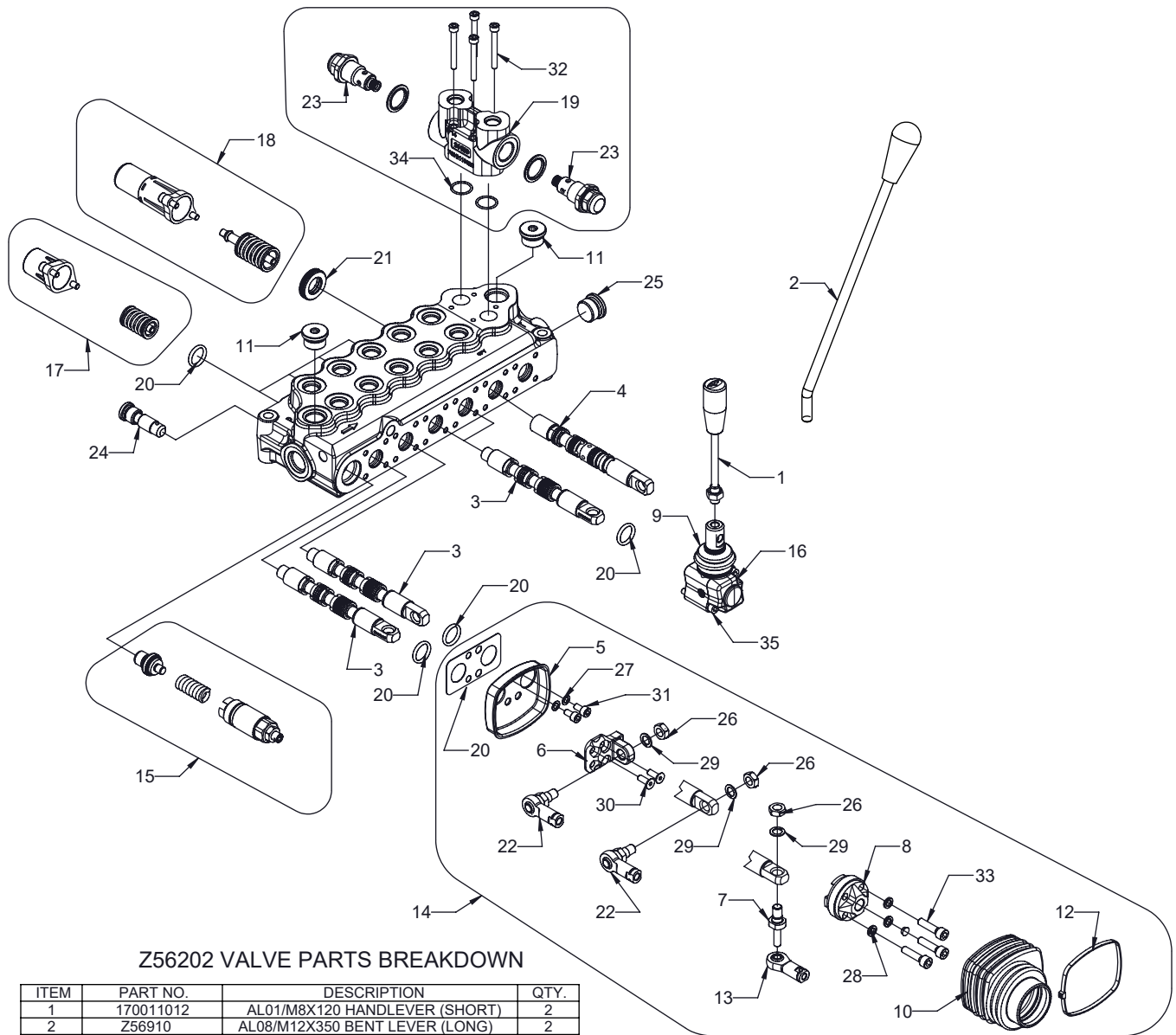
NOTE:

flow control valve Z56307 was
replaced with Z56314



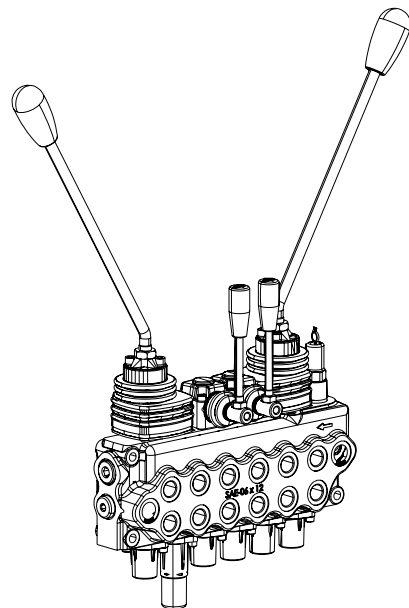
Item No.	Part No.	Description	Qty
1	3012F116	1/2" Hose, FJIC08 x 45FJIC08 x 24"	1
2	Z51562	Elbow 90, MJIC x FJICX 0808	1
3	Z51647	Straight, MJIC x MORB 0810	1
4	Z51658	Elbow 90, MJIC x MORB 0810	1
5	Z51663	Elbow 45, MJIC x MORB 0810	1
6	Z56314	Flow Control, 3 Port x 7GPM	1

Valve Service Parts

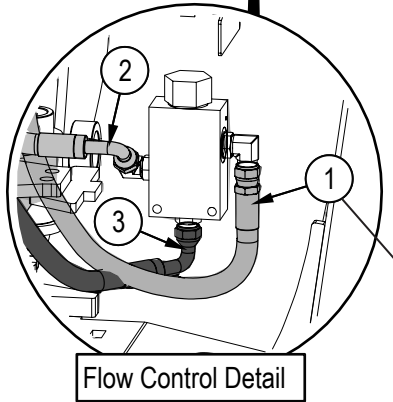
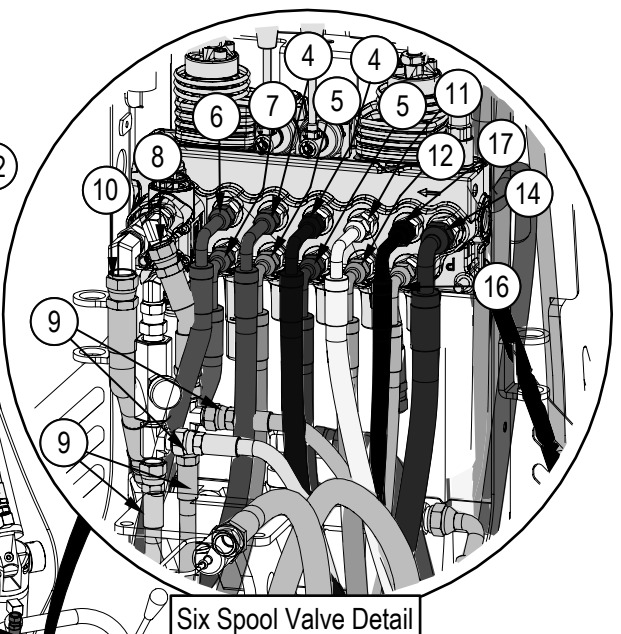
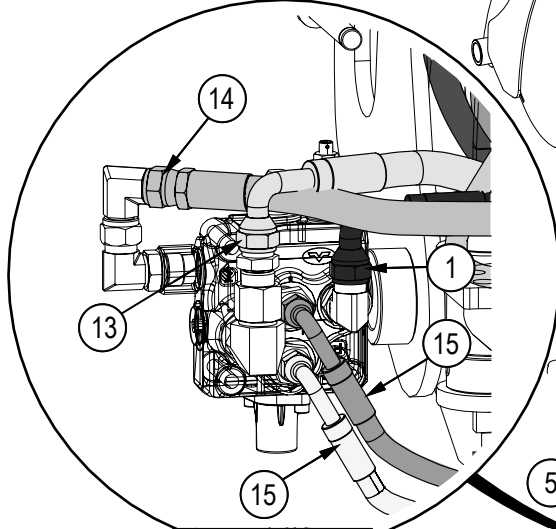
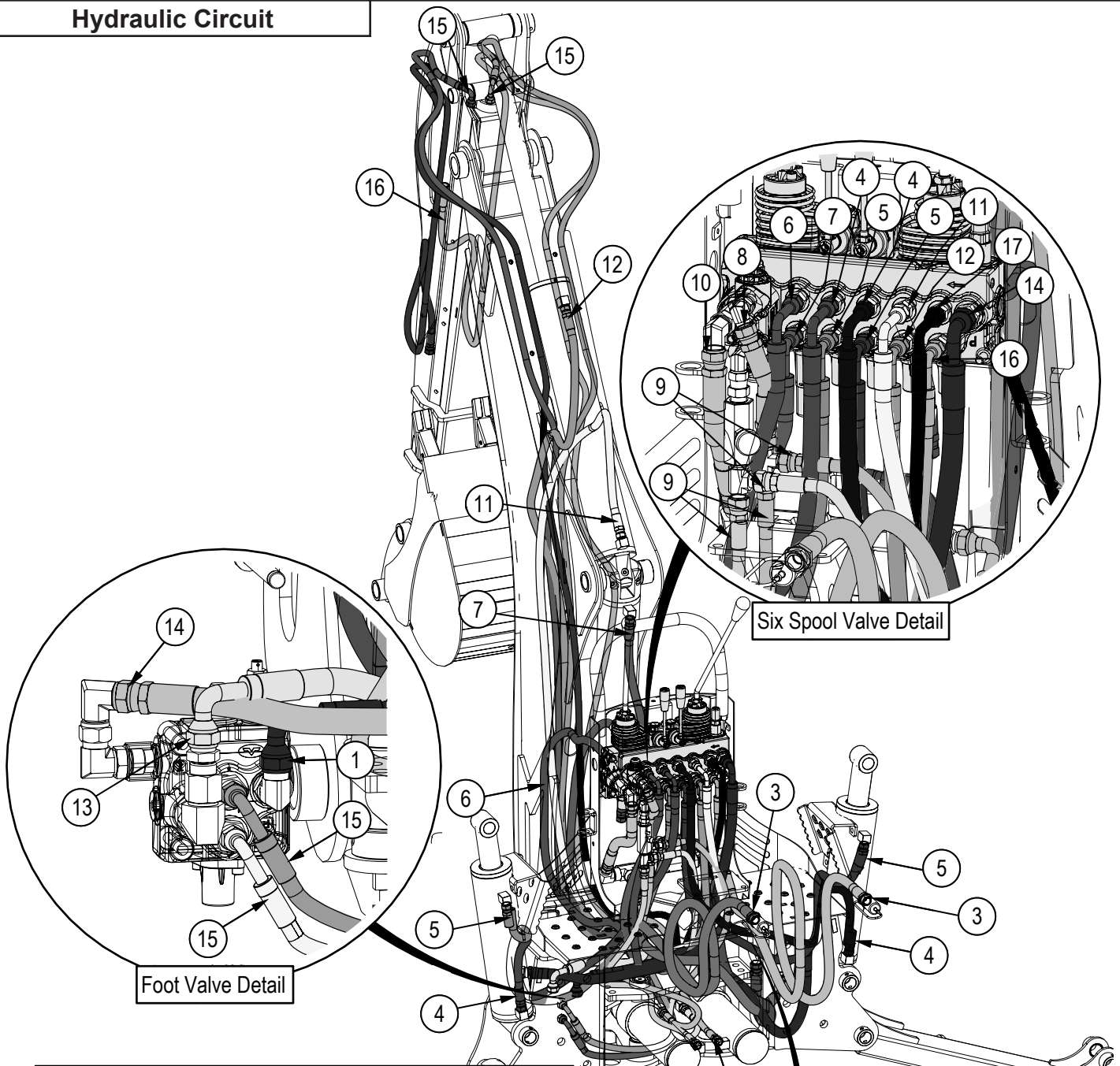


Z56202 VALVE PARTS BREAKDOWN

ITEM	PART NO.	DESCRIPTION	QTY.
1	170011012	AL01/M8X120 HANDLEVER (SHORT)	2
2	Z56910	AL08/M12X350 BENT LEVER (LONG)	2
3	3CU1210133	TIGHT FIT SPOOL	4
4	3CU1245620	FLOAT SPOOL	1
5	3FLA125130	LCB5 FLANGE	2
6	3FUL220101	LCB5 FULCRUM	2
7	3PER515415	LCB5 SPOOL PIN	2
8	3POR340241	LCB5 ADAPTER HANDLE	2
9	3SOF136240	L5 RUBBER BOOT ONLY	2
10	3SOF200701	LCB5 RUBBER BOOT	2
11	3XTAP822150	PLUG SAE8	2
12	4ACC210	TIE STRAP	2
13	4ART706020	LCB6 TUTHILL	2
14	5CLO206100	LCB6 COMPLETE JOYSTICK KIT	2
15	5KIT105413	RELIEF VALVE	1
16	5LEV105000	L5 LEVER BOX	2
17	5V08105000	SPRING CENTER KIT	4
18	5V13405020	FLOAT KIT	1
19	602001101	PORT RELIEF BLOCK	1
20	SK SD5/6	VALVE SEAL KIT (12 O-RINGS, 2 GASKETS)	1
21	XANE228061	RING	1
22	XART706020	LCB6 TUTHILL WITH BOLT	4
23	XCAR211113	PORT RELIEF CARTRIDGE	2
24	XKIT005000	LOAD CHECK	1
25	XTAP623170	OPEN CENTER PLUG	1
	AEK SD5	CLOSED CENTER PLUG	OPTION
26	Z77252	JAM NUT M8x1.25	10
27	Z77321	LOCK WASHER M5	8
28	Z77331	LOCK WASHER M6	6
29	Z77354	LOCK WASHER M8	6
30	Z77521	FHCS M5x0.8x14mm	8
31	Z77522	SHCS M5x0.8x10mm	8
32	Z77523	SHCS M5x0.8x45mm	4
33	Z77531	SHCS M6x1.0x25mm	6
34	OR 17.18X1.78	PORT RELIEF O-RING	2
35	Z77524	SHCS M5x0.8x35mm	8



Hydraulic Circuit

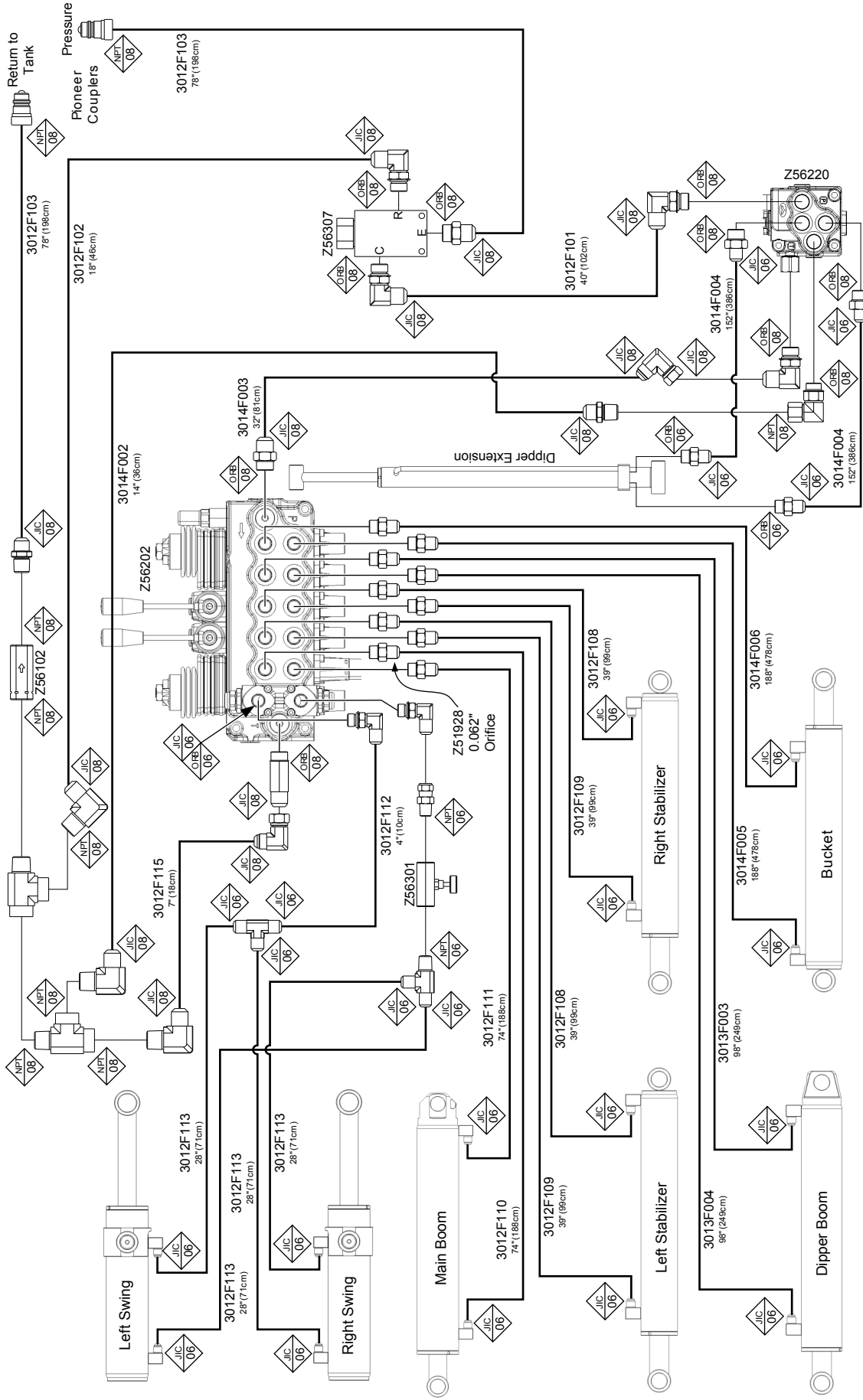


Note:
See Flow Control
Valve for Serial Number
3920XT310 and Up

Item No.	Part No.	Description	Qty
1	3012F101	1/2" Hose, FJIC08 x 90FJIC08 x 34"	1
2	3012F102	1/2" Hose, FJIC08 x FJIC08 x 32"	1
3	3012F103	1/2" Hose, Long 90 FJIC08 x MP08 x 78"	2
4	3012F108	3/8" Hose, FJIC06 x Long 90 FJIC06 x 39"	2
5	3012F109	3/8" Hose, FJIC06 x 90FJIC06 x 39"	2
6	3012F110	3/8" Hose, FJIC06 x Long 90 FJIC06 x 74"	1
7	3012F111	3/8" Hose, FJIC06 x 90FJIC06 x 74"	1
8	3012F112	3/8" Hose, FJIC06 x FJIC06 x 4"	1
9	3012F113	1/4" Hose, FJIC06 x FJIC06 x 28"	4
10	3012F115	1/2" Hose, FJIC08 x FJIC08 x 7"	1
11	3013F003	3/8" Hose, FJIC06 x Long 90 FJIC06 x 98"	1
12	3013F004	3/8" Hose, FJIC06 x 90FJIC06 x 98"	1
13	3014F002	1/2" Hose, FJIC08 x 90FJIC08 x 14"	1
14	3014F003	1/2" Hose, FJIC08 x 90FJIC08 x 32"	1
15	3014F004	1/4" Hose, 90FJIC06 x 90FJIC06 x 152"	2
16	3014F005	1/4" Hose, FJIC06 x 90FJIC06 x 188"	1
17	3014F006	1/4" Hose, FJIC06 x Long 90 FJIC06 x 188"	1

Hydraulic Plumbing Diagram

Open Center Hydraulic Circuit

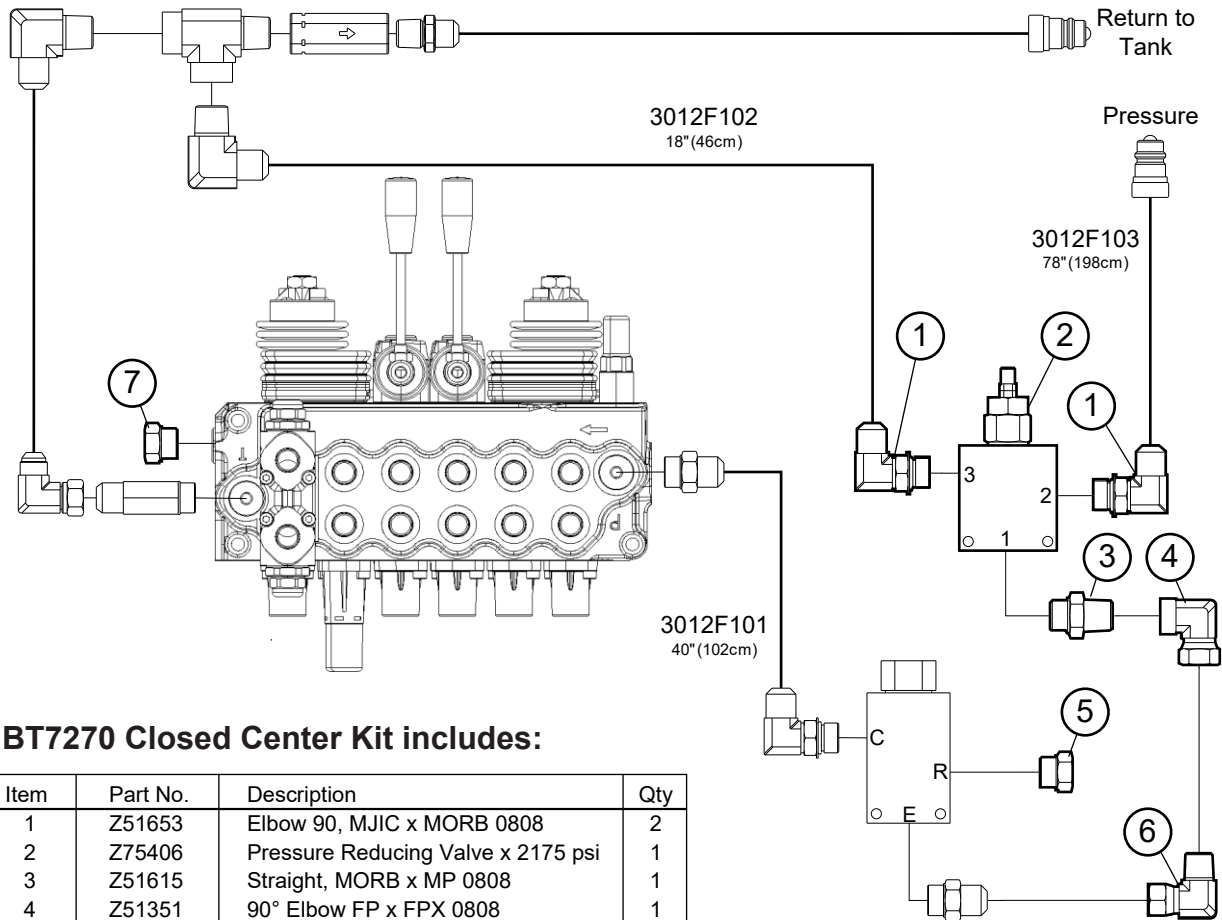


Hydraulic Fitting Identification

- Connection Type
- NPT – National Pipe Thread
- JIC – Tube Flare
- ORB – O-ring Boss
- HB – Hose Barb
- Connection Size

BT7270 Closed Center Kit – Option

To connect this back hoe to a tractor with a closed-center circuit, kit P/N BT7270 will be required.



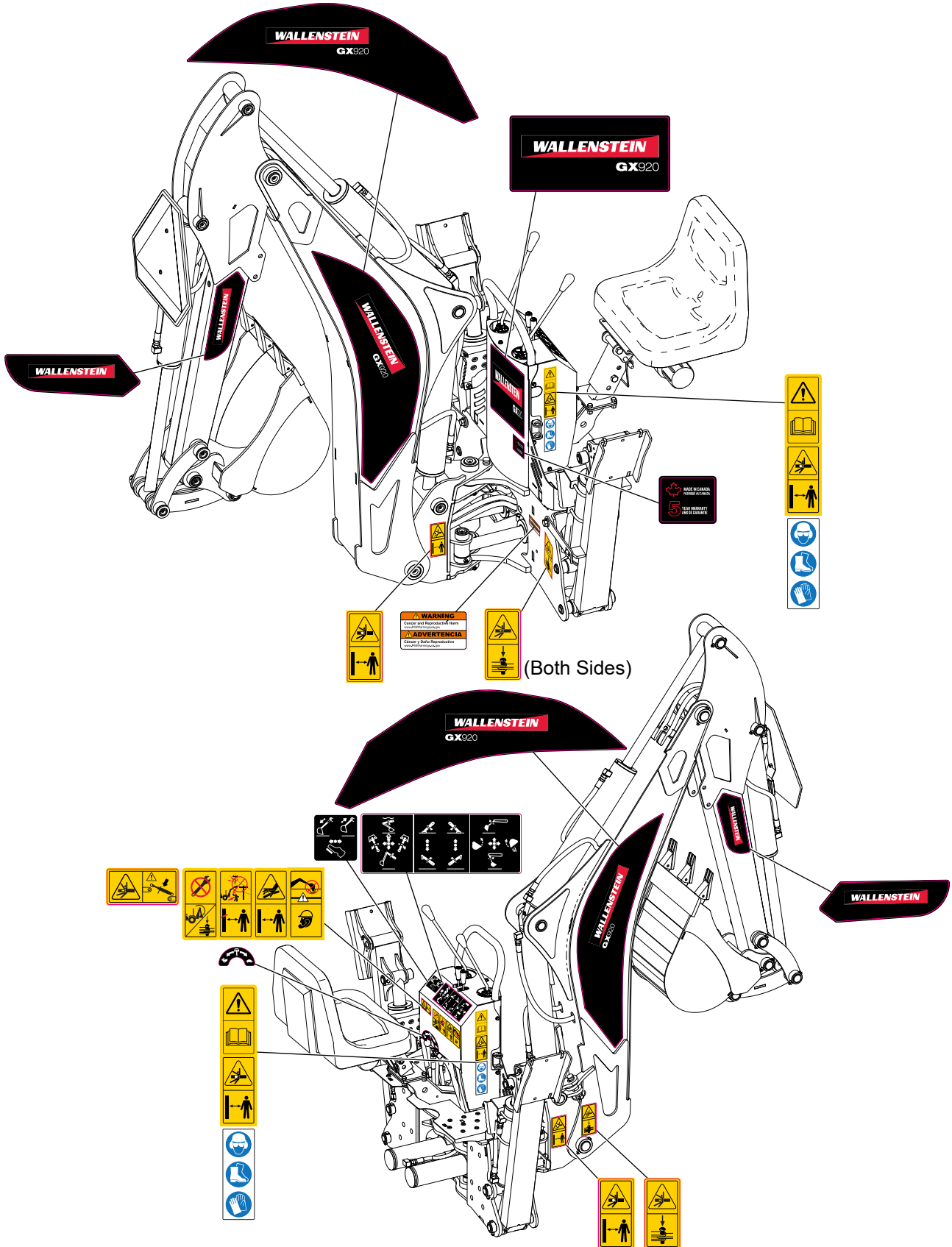
BT7270 Closed Center Kit includes:

Item	Part No.	Description	Qty
1	Z51653	Elbow 90, MJIC x MORB 0808	2
2	Z75406	Pressure Reducing Valve x 2175 psi	1
3	Z51615	Straight, MORB x MP 0808	1
4	Z51351	90° Elbow FP x FPX 0808	1
5	Z51693	Hex PLug, MORB 0808	1
6	Z51521	90° Elbow MP x FJIC x 0808	1
7	Z56916	Closed Center Plug	1

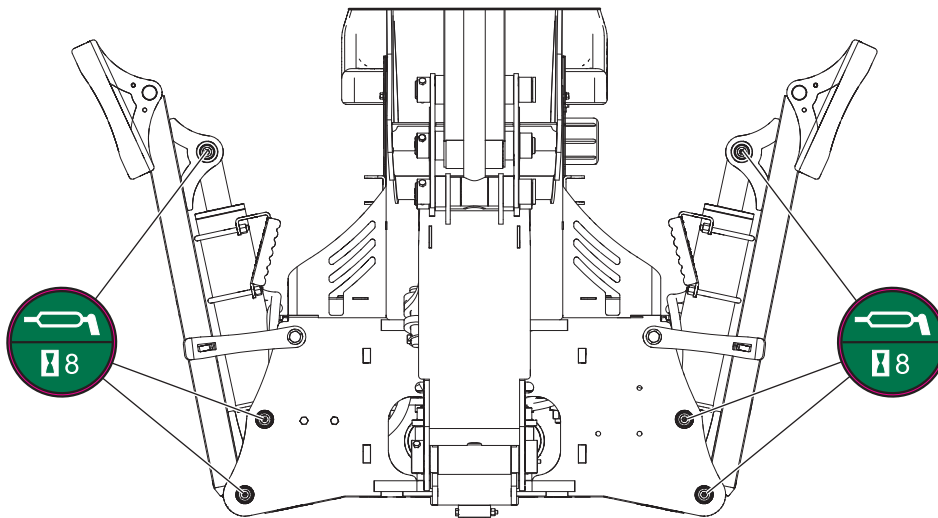
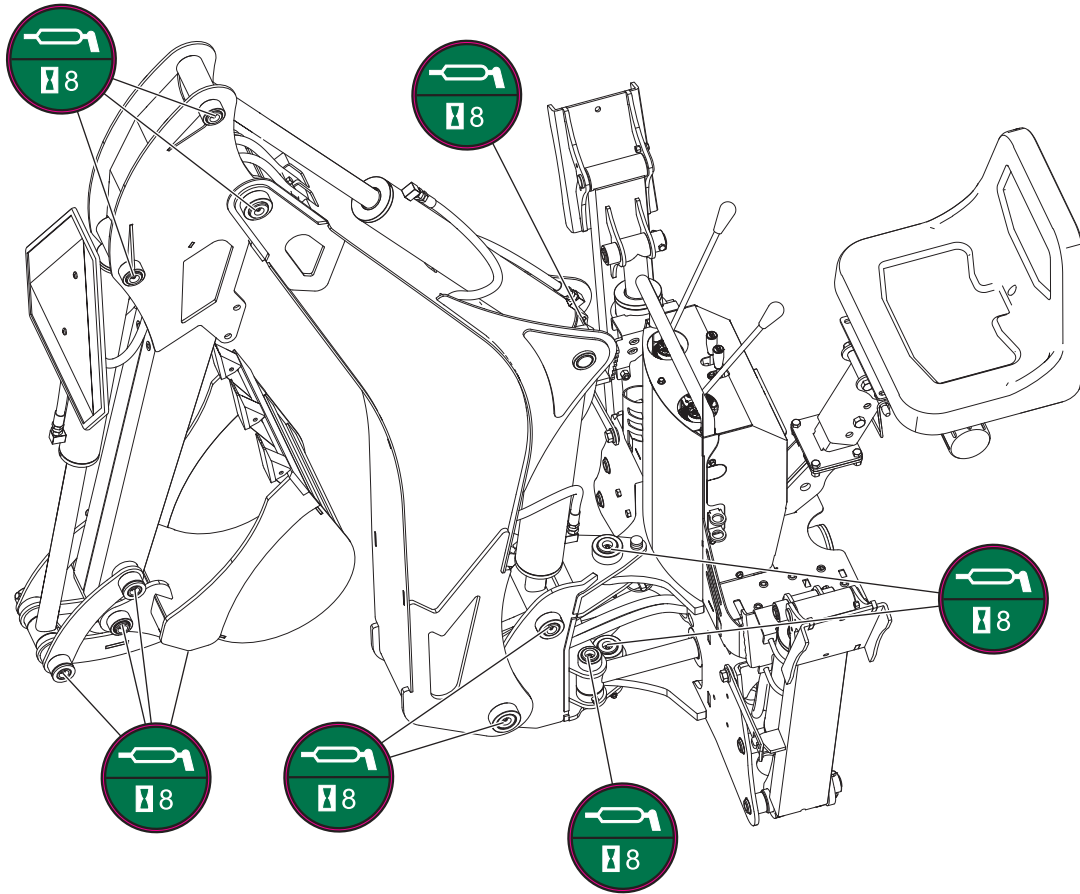
Decal Layout

IMPORTANT! If parts are replaced that have safety signs on them, new signs must be applied. Safety signs must always be replaced if they become damaged, are removed, or become illegible.

Safety signs are included in the product decal kit available from your authorized dealer. Decals are not available separately.



Grease Point Decals



Accessories**PT300 3 Point Hitch**

- Category I

BK2900 9" Bucket

- 3 teeth
- Bucket Volume: 0.8 ft³

BK2120 12" Bucket

- 3 teeth
- Bucket Volume: 1.2 ft³

BK2150 15" Bucket

- 4 teeth
- Bucket Volume: 1.5 ft³

BK2180 18" Bucket

- 4 teeth
- Bucket Volume: 1.8 ft³ cubic ft

BK2240 24" Bucket

- 5 teeth
- Bucket Volume: 2.4 ft³

BK2240D 24" Ditching Bucket

- No teeth
- Bucket Volume: 2.4 ft³

BT7220 Quick Change Bucket Adapter

Switches attachments quickly and easily with only one bolt and no hammering of pins.

BT7240 Vertical Stabilizer Kit

Allows digging closer to objects such as buildings and foundations while maintaining stability.

BT7270 Closed Center Kit

Provides for backhoe conversion from open center to closed center operation for tractors equipped with closed centre hydraulics.


Common Bolt Torque Values

Checking Bolt Torque

The tables shown give correct torque values for various bolts and capscrews. Tighten all bolts to the torque values specified in the table, unless indicated otherwise. Check tightness of bolts periodically.

IMPORTANT! If replacing hardware, use fasteners of the same grade.

IMPORTANT! Torque figures indicated in the table are for non-greased or non-oiled threads. Do not grease or oil threads unless indicated otherwise. When using a thread locker, increase torque values by 5%.

 **NOTE:** Bolt grades are identified by their head markings.

Imperial Bolt Torque Specifications

Bolt Diameter	Torque Value					
	SAE Gr. 2		SAE Gr. 5		SAE Gr. 8	
	lbf•ft	N•m	lbf•ft	N•m	lbf•ft	N•m
1/4"	6	8	9	12	12	17
5/16"	10	13	19	25	27	36
3/8"	20	27	33	45	45	63
7/16"	30	41	53	72	75	100
1/2"	45	61	80	110	115	155
9/16"	60	95	115	155	165	220
5/8"	95	128	160	215	220	305
3/4"	165	225	290	390	400	540
7/8"	170	230	420	570	650	880
1"	225	345	630	850	970	1320



SAE Gr. 2



SAE Gr. 5



SAE Gr. 8

Metric Bolt Torque Specifications

Bolt Diameter	Torque Value			
	Gr. 8.8		Gr. 10.9	
	lbf•ft	N•m	lbf•ft	N•m
M3	0.4	0.5	1.3	1.8
M4	2.2	3	3.3	4.5
M6	7	10	11	15
M8	18	25	26	35
M10	37	50	52	70
M12	66	90	92	125
M14	83	112	116	158
M16	166	225	229	310
M20	321	435	450	610
M30	1,103	1 495	1,550	2 100



8.8



10.9

Hydraulic Fitting Torque Values

Tightening Flare Type Tube Fittings

1. Check flare and flare seat for defects that might cause leakage.
2. Align tube with fitting before tightening.
3. Hand-tighten swivel nut until snug.
4. To prevent twisting the tube, use two wrenches. Place one wrench on the connector body and tighten the swivel nut with the second. Torque to values shown.

If a torque wrench is not available, use the FFFT (Flats From Finger Tight) method.

Hydraulic Fitting Torque					
Tube Size OD	Hex Size Across Flats	Torque value		Flats From Finger Tight	
		lbf•ft	N•m	Flats	Turns
3/16	7/16	6	8	2	1/6
1/4	9/16	11–12	15–17	2	1/6
5/16	5/8	14–16	19–22	2	1/6
3/8	11/16	20–22	27–30	1-1/4	1/6
1/2	7/8	44–48	59–65	1	1/6
5/8	1	50–58	68–79	1	1/6
3/4	1-1/4	79–88	107–119	1	1/8
1	1-5/8	117–125	158–170	1	1/8

Values shown are for non-lubricated connections.