



Parts Manual

Model Push-Pull

Serial Number 45E-PHS-A011R0

cascade[®]
corporation

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Write: Cascade Corporation, P.O. Box 20187, Portland, OR 97220

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Publications



GA0006.eps

PART NO.	DESCRIPTION
	Parts Manual
686455	Service Manual
684945	Operators Guide
685531	Operators Pocket Guide
684944	Installation Instructions
680664	Servicing Cascade Cylinders-VHS
679929	Tool Catalog
673964	Literature Index Order Form

Decals



Optional Faceplate Extension



Part No. 679150
(1 Place & 1 optional)



Part No. 665595
(2 Place & 2 optional)



Part No. 656038
(6 Places)

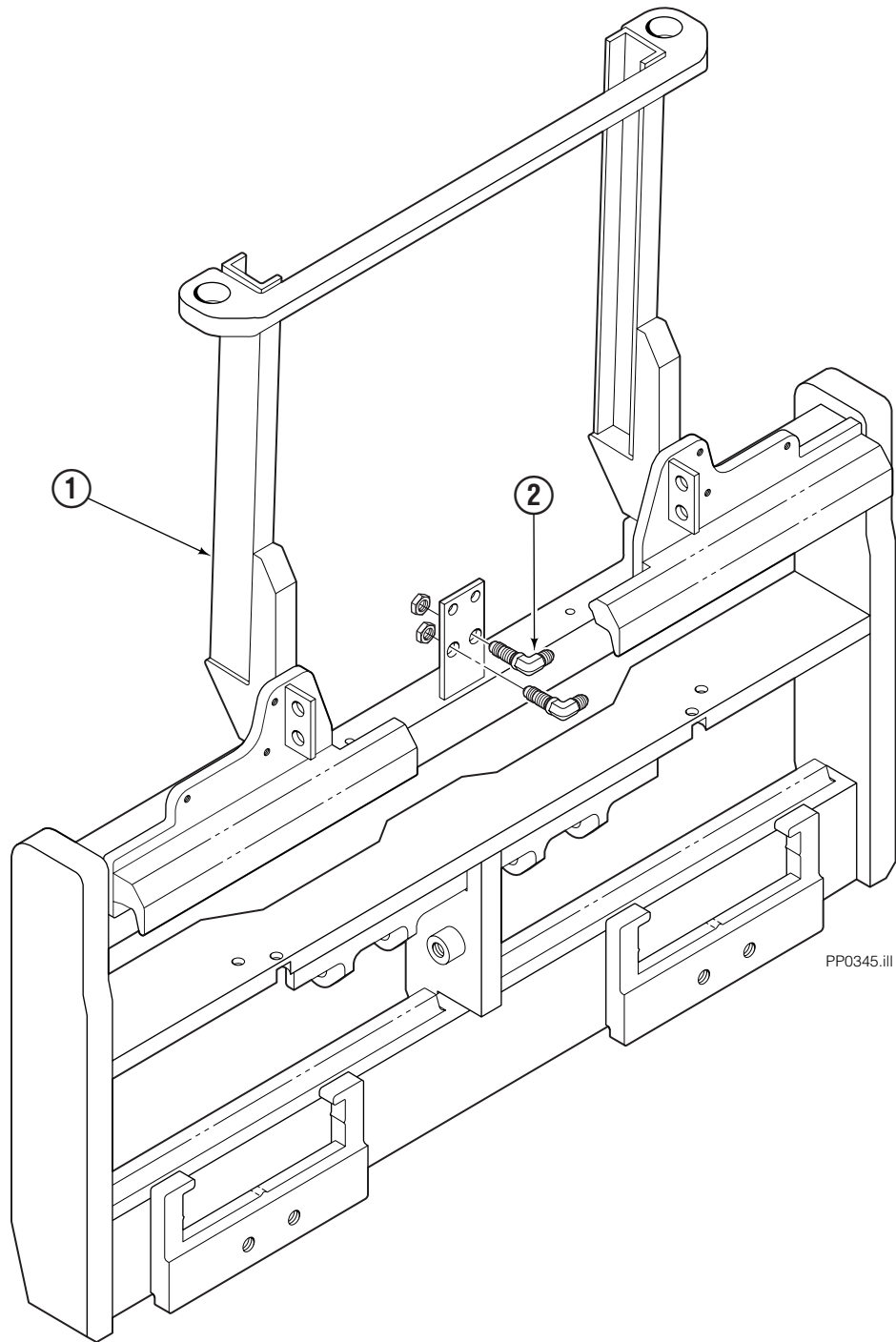


Part No. 679059
(1 Place if equipped with Quick Change Hooks)



PP0060.iii

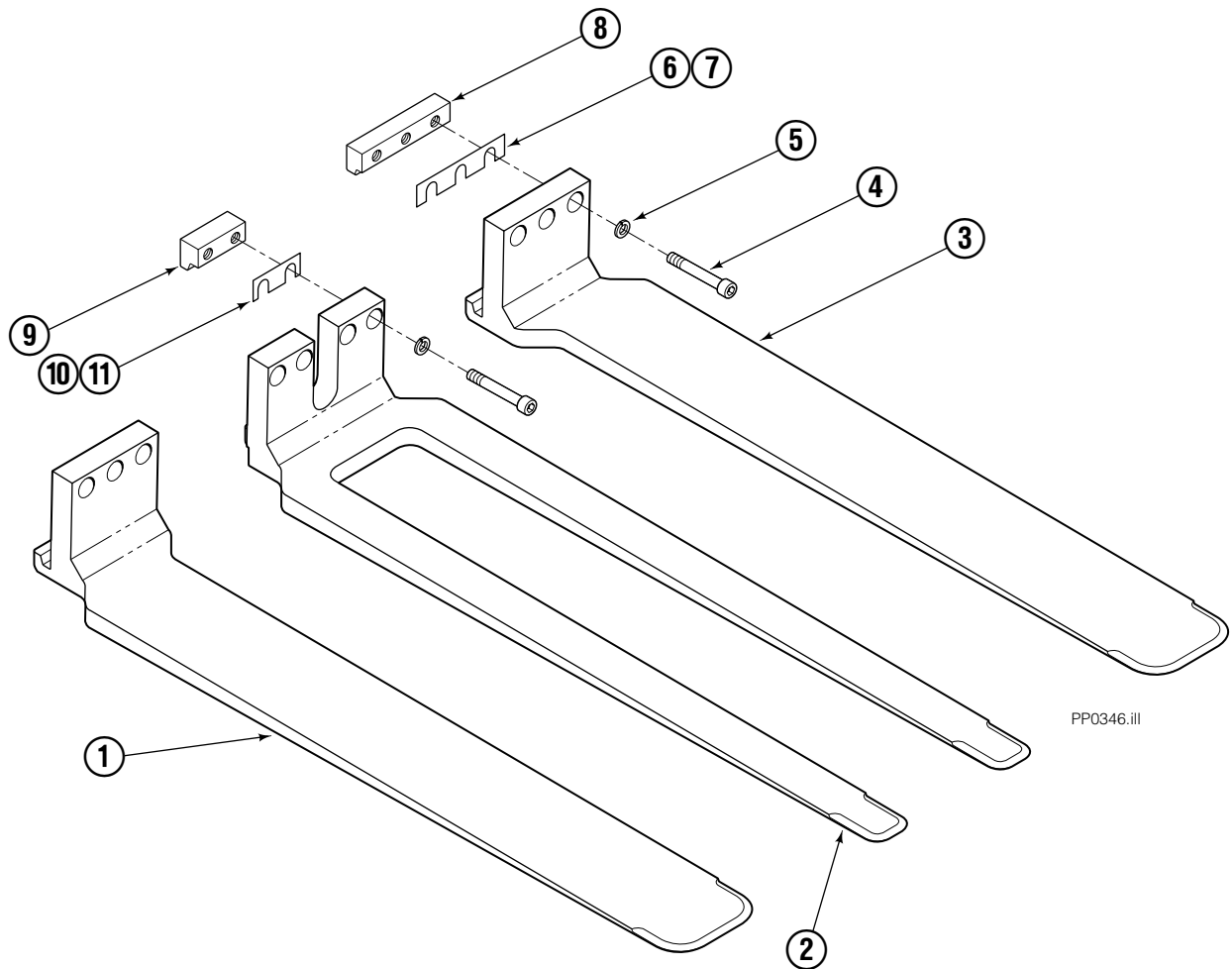
Frame Group



PP0345.ill

45E			
REF	QTY	PART NO.	DESCRIPTION
		3008459	Frame Group
1	1	3008480	Frame
2	2	2453	Fitting, 6-6

Platen Group



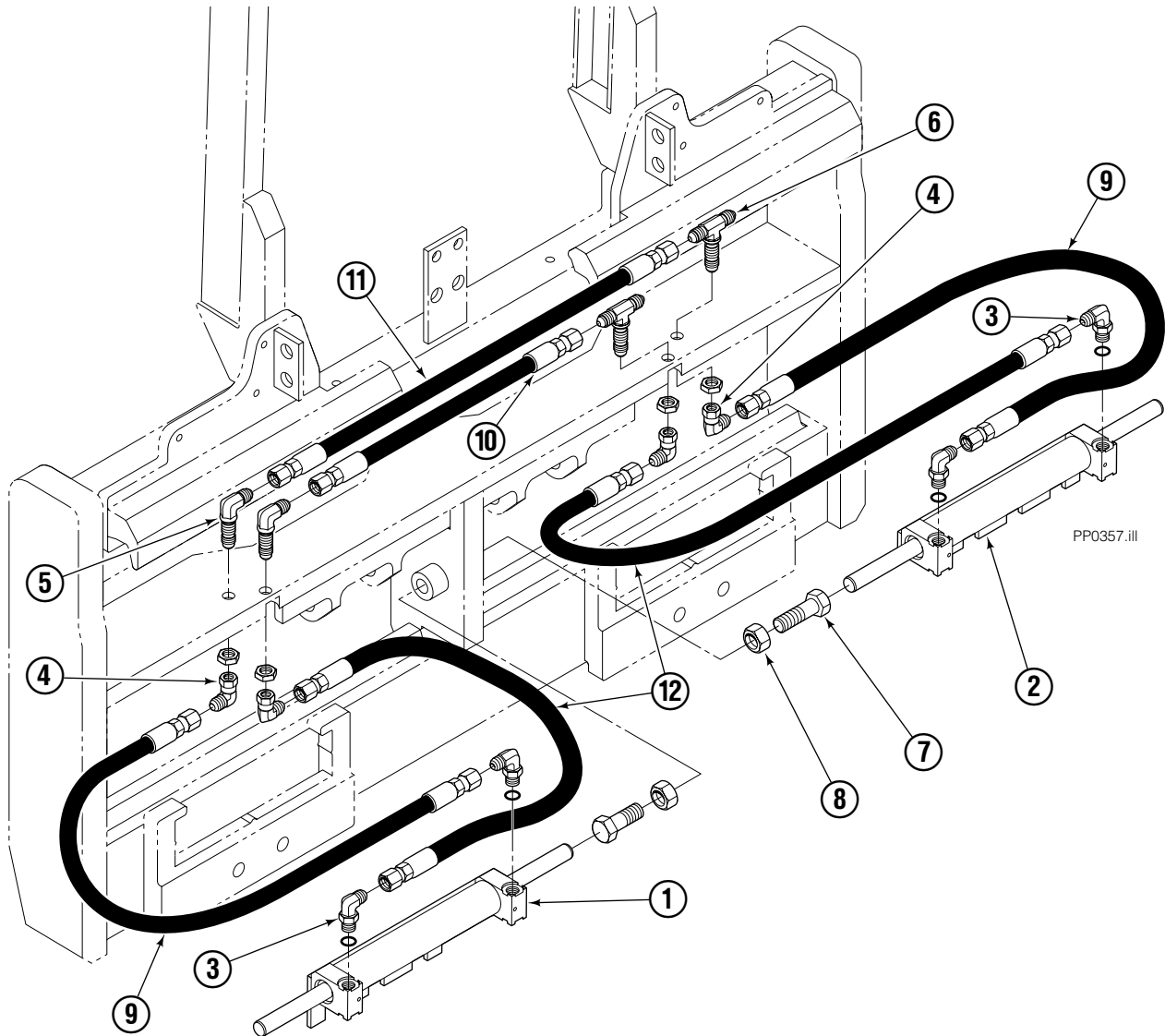
PP0346.iii

45E			
REF	QTY	PART NO.	DESCRIPTION
		3008460	Platen Group
1	1	3008498	Platen – R.H.
2	1	3008501	Platen – Center
3	1	3008495	Platen – L.H.
4	10	769583	Capscrew
5	10	681467	Lockwasher
6	◆	3008509	Shim – .030 in. (.762 mm)
7	◆	3008510	Shim – .021 in. (.533 mm)
8	2	3008508	Hook
9	2	3008504	Hook
10	◆	3008505	Shim – .030 in. (.762 mm)
11	◆	3008506	Shim – .021 in. (.533 mm)
12	1	3008465	Hydraulic Component Group ■

◆ Quantity as required.

■ See Hydraulic Components page for part breakdown.

Platen Hydraulic Group

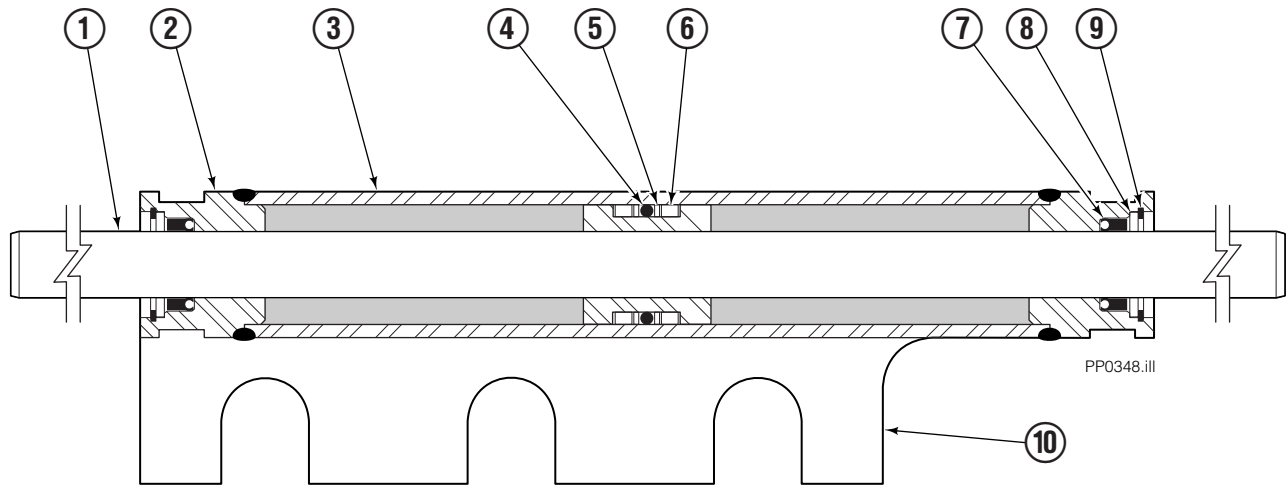


45E			
REF	QTY	PART NO.	DESCRIPTION
		3008465	Hydraulic Component Group
1	1	3008466	Cylinder – L.H. ◆
2	1	3008467	Cylinder – R.H. ◆
3	4	617917	Fitting, 4-4
4	4	617641	Fitting, 4-4
5	2	2451	Fitting, 4-4
6	2	222939	Fitting, 4-4
7	2	763024	Capscrew
8	2	679828	Nut
9	2	3008477	Hose ■
10	1	3008478	Hose ■
11	1	3008479	Hose ■
12	2	6002109	Hose ■

◆ See Cylinder page for parts breakdown.

■ Included in Hose Group 3009543.

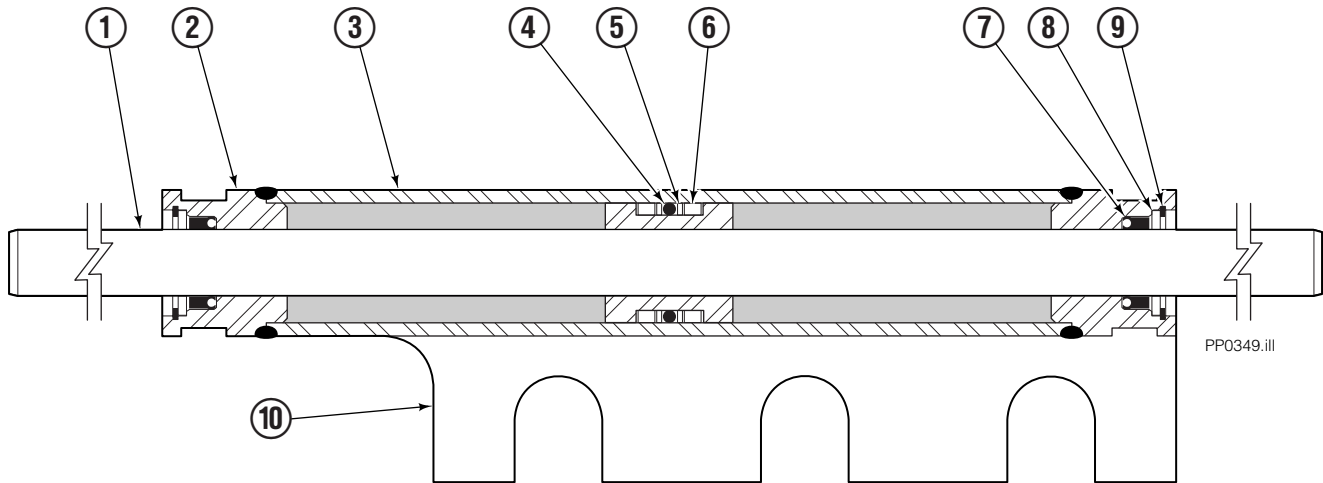
Left-Hand Cylinder



45E			
REF	QTY	PART NO.	DESCRIPTION
		3008466	Cylinder - L.H.
1	1	3008471	Piston Rod ♦
2	2	3008470	Retainer ♦
3	1	3008469	Tube ♦
4	1	2712	O-Ring ♦
5	2	615116	Back-up Ring ♦
6	2	3008474	Nylon Ring ♦
7	2	641332	Seal
8	2	3008476	Washer
9	2	3017	Snap Ring
10	1	3008475	Plate ♦

♦ Parts cannot be serviced.
Order complete Cylinder if replacement needed.

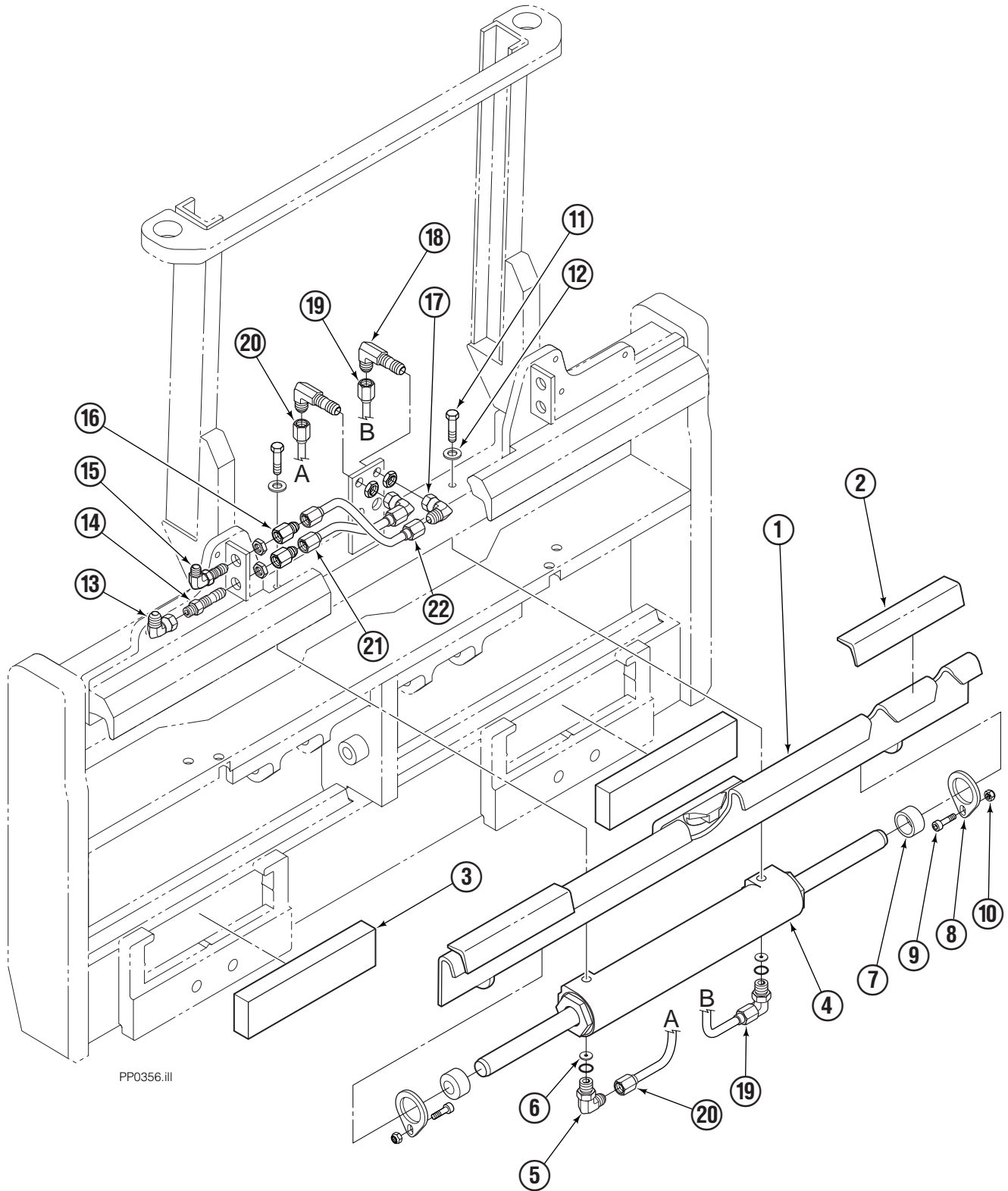
Right-Hand Cylinder



45E			
REF	QTY	PART NO.	DESCRIPTION
		3008467	Cylinder - R.H.
1	1	3008471	Piston Rod ♦
2	2	3008470	Retainer ♦
3	1	3008469	Tube ♦
4	1	2712	O-Ring ♦
5	2	615116	Back-up Ring ♦
6	2	3008474	Nylon Ring ♦
7	2	641332	Seal
8	2	3008476	Washer
9	2	3017	Snap Ring
10	1	3008475	Plate ♦

♦ Parts cannot be serviced.
Order complete Cylinder if replacement needed.

S/S Mounting Group ITA II



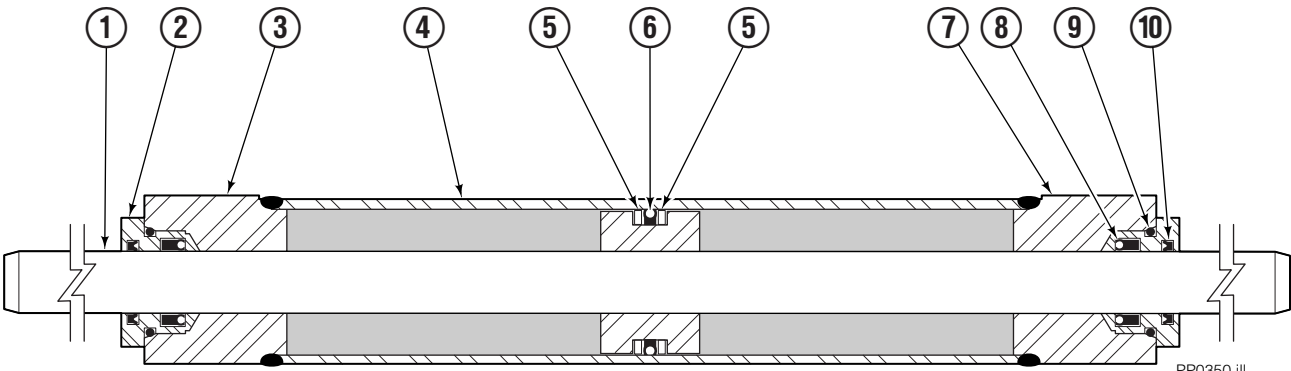
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S/S Mounting Group ITA II

45E			
REF	QTY	PART NO.	DESCRIPTION
		3008458	Mounting Group
1	1	3008621	Anchor Bracket
2	2	671165	Upper Bearing
3	2	682814	Lower Bearing
4	1	3008624	Sideshift Cylinder ■
5	2	666984	Fitting, 4-6
6	2	675550	Restrictor
7	2	208378	Rod End Cap
8	2	208355	Retainer
9	2	761170	Capscrew
10	2	685906	Nut
11	2	768529	Capscrew
12	2	787398	Washer
13	1	2680	Fitting, 6-6
14	1	2375	Fitting, 6-6
15	1	2453	Fitting, 6-6
16	2	2669	Fitting, 6-4
17	2	617641	Fitting, 4-4
18	2	2451	Fitting, 4-4
19	1	3008659	Tube
20	1	3008660	Tube
21	1	3008662	Tube
22	1	3008661	Tube

■ See Sideshift Cylinder page for parts breakdown.

Sideshift Cylinder

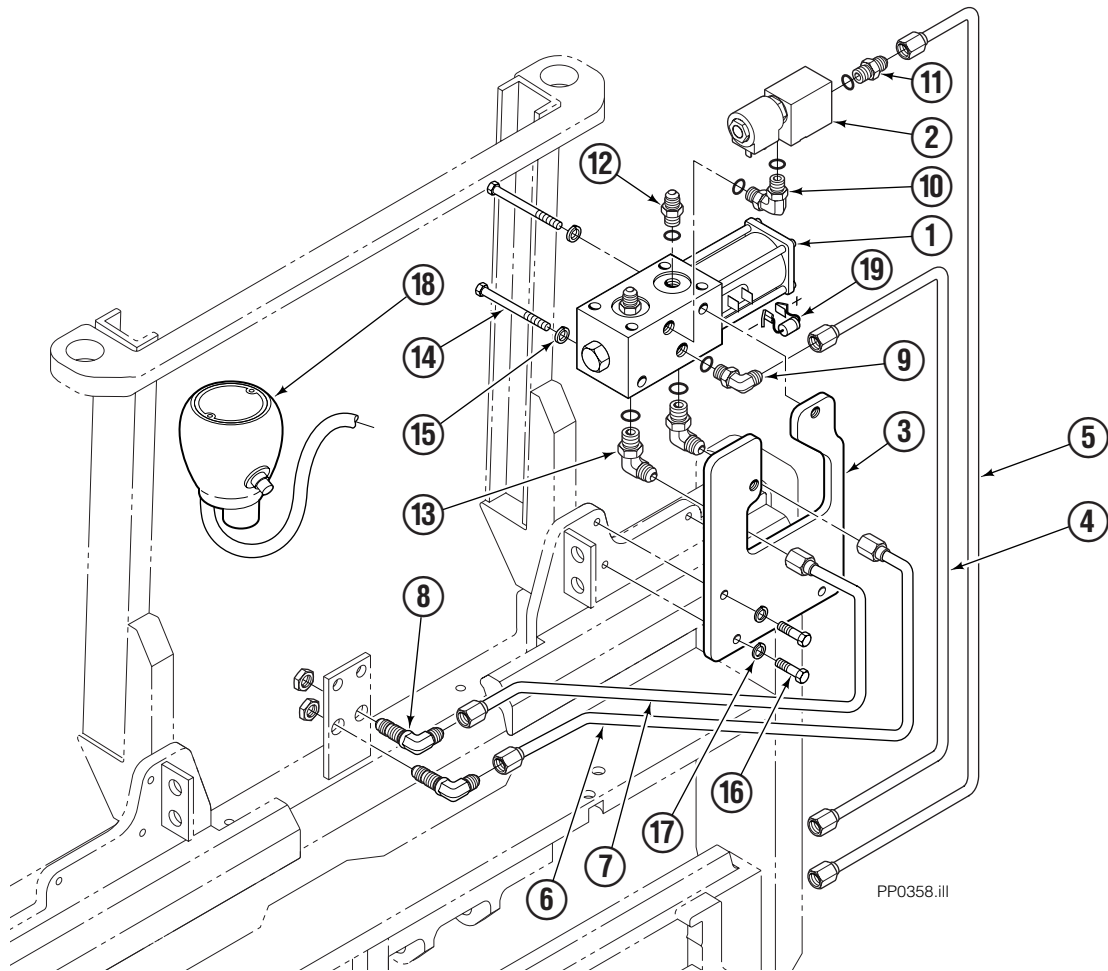


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45E			
REF	QTY	PART NO.	DESCRIPTION
		3008624	Sideshift Cylinder
1	1	10042-615	Piston Rod ♦
2	2	218324	Threaded Retainer
3	1	218323	Retainer ♦
4	1	10041-245	Tube ♦
5	2	218326	Back-up Ring ♦
6	1	218325	Piston Seal ♦
7	1	218322	Retainer ♦
8	2	562132	Rod Seal
9	2	415866	O-Ring
10	2	562131	Wiper

♦ Parts cannot be serviced.
 Order complete Cylinder if replacement needed.

Solenoid Adaption Group



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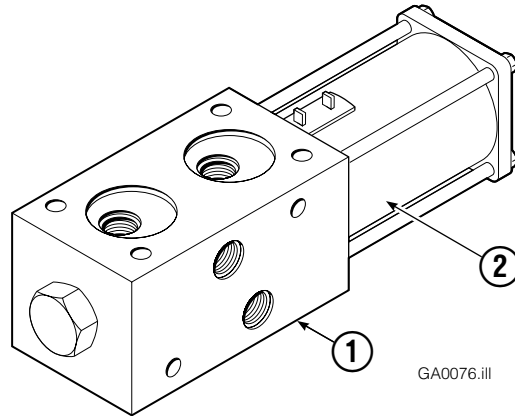
45E			
REF	QTY	PART NO.	DESCRIPTION
		3008462	Solenoid Adaption Group
1	1	■	Solenoid Valve
2	1	●	Solenoid Valve
3	1	3008565	Plate
4	1	3008566	Tube
5	1	3008567	Tube
6	1	3008657	Tube
7	1	3008658	Tube
8	2	2453	Fitting, 6-6
9	1	666984	Fitting, 4-6
10	1	619235	Fitting, 6-6
11	1	617915	Fitting, 4-4
12	2	604511	Fitting, 6-6
13	2	601676	Fitting, 6-6
14	2	768520	Capscrew
15	2	6201	Washer
16	3	765329	Capscrew
17	3	6287	Lockwasher
18	1	355058	▲ Knob Assembly
19	1	669432	Diode Assembly

■ See Solenoid Valve page for parts breakdown.

● See Solenoid Valve page for parts breakdown.

▲ See Control Knob page for parts breakdown.

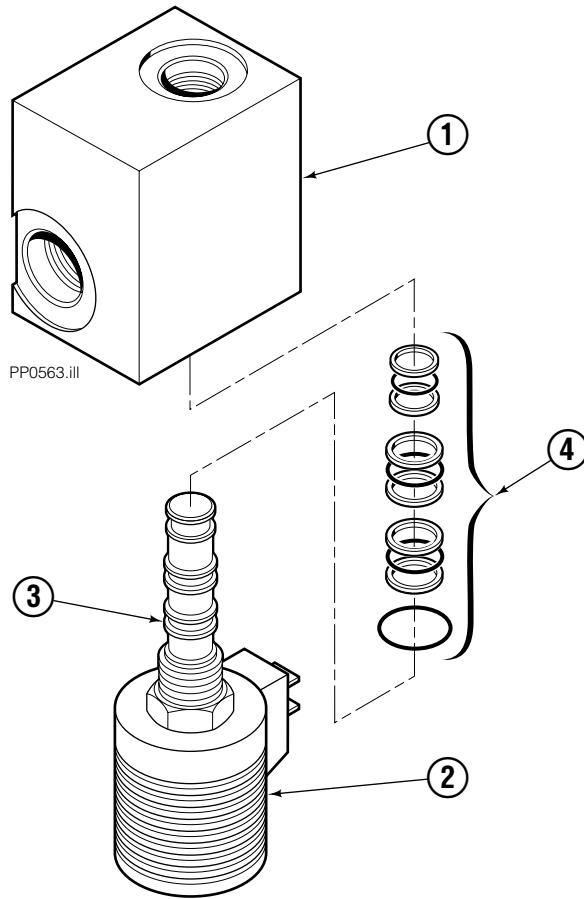
Solenoid Valves



Racine

REF	QTY	PART NO.	DESCRIPTION
1	1	614089	Solenoid Valve - 12V
2	1	665044	Coil - 12V
		685012	Service Kit

Solenoid Valves

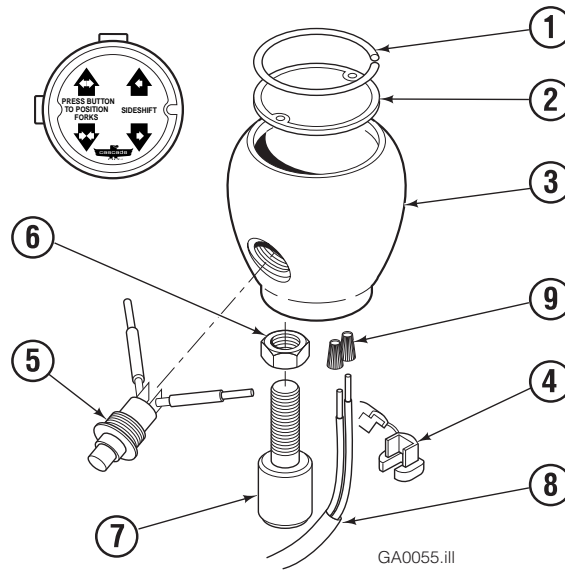


REF	QTY	PART NO.	DESCRIPTION
		6009146	Solenoid Valve Assembly
1	1	204978	Valve Body
2	1	221193	Coil - 12V
3	1	6002084	Valve Cartridge
4	1	6009164	Service Kit

Reference: S-21076

Control Knob

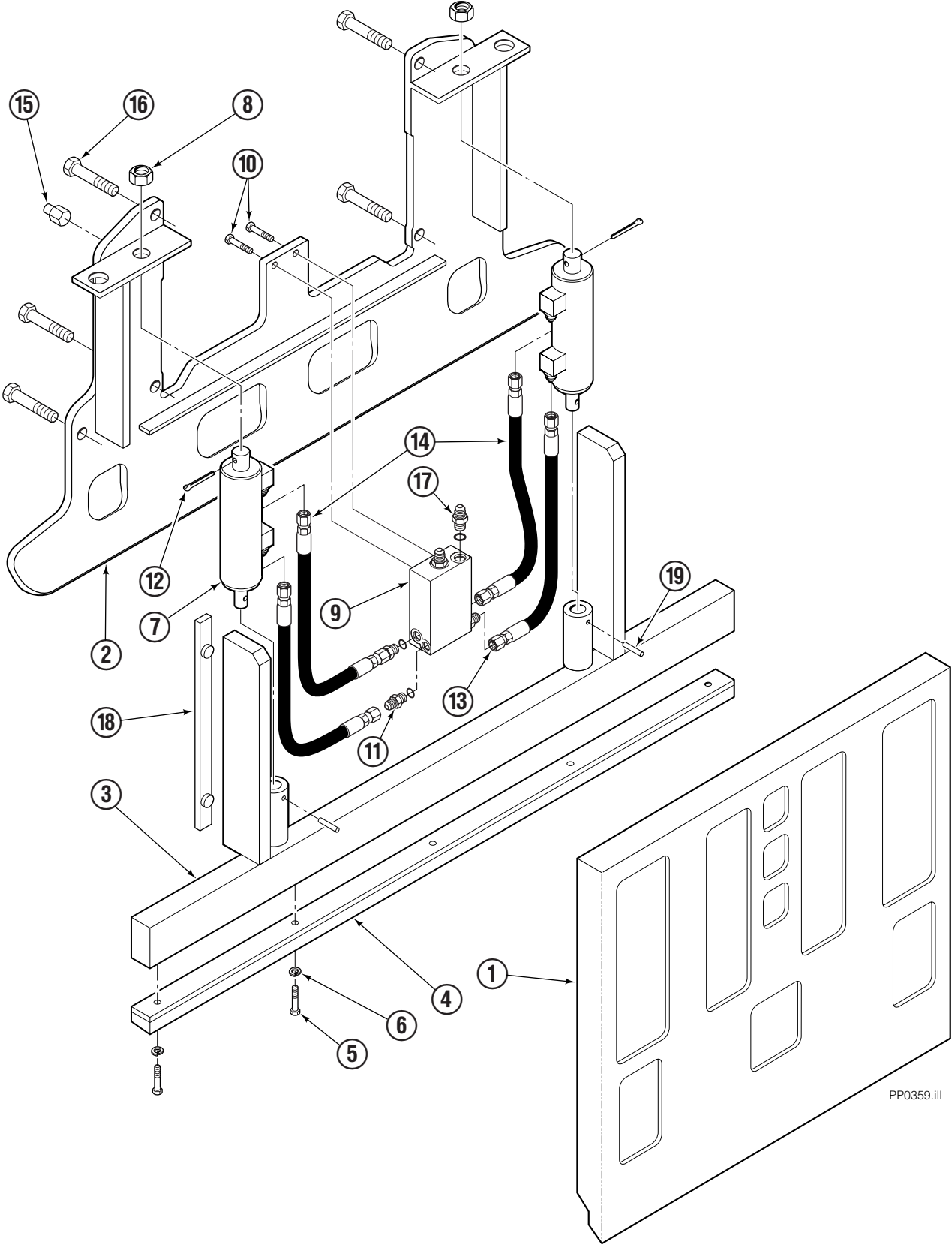
Two Function – Sideshift Only



35E/45E			
REF	QTY	PART NO.	DESCRIPTION
		355058	Knob Group
1	1	665250	Snap Ring
2	1	355059	Cover
3	1	665012	Knob
4	1	665076	Strain Relief
5	1	677112	■ Switch
6	1	5902	Nut, 3/8 NC
7	1	665081	Adapter
8	1	667718	Cable Assembly
9	2	667752	Connector-Gray

■ This switch may be purchased without wires. Order part number 665004. Soldering is required.

Faceplate Group



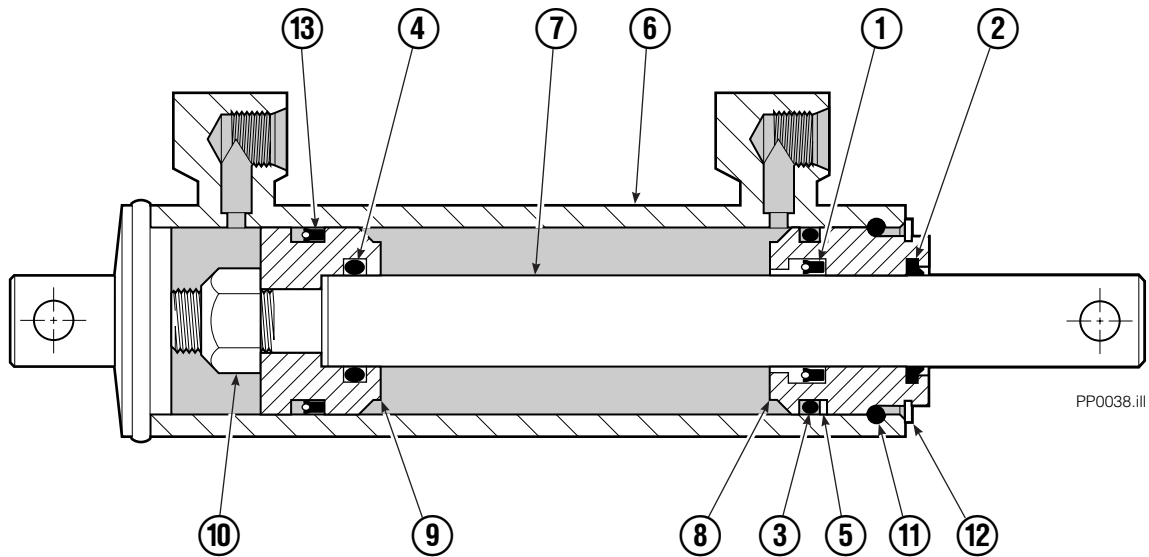
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Faceplate Group

45E			
REF	QTY	PART NO.	DESCRIPTION
		3008461	Faceplate Group
		3008552	Gripper Jaw Assembly
1	1	3008549	Faceplate
2	1	3008553	Gripper Jaw
3	1	206403	Gripper Bar
4	1	672712	Gripper Pad
5	5	787375	Capscrew
6	5	6444	Lockwasher
7	2	3008558	Gripper Cylinder ▲
8	2	220628	Nut
9	1	3008561	Manifold Valve
10	2	787373	Capscrew
11	8	617915	Fitting, 4-4
12	2	6525	Cotter Pin
13	2	3008562	Hose
14	2	3008563	Hose
15	2	3008564	Stop
16	6	779010	Capscrew
17	2	604511	Fitting, 6-6
18	2	686573	Bearing
19	2	200877	Drive Pin

▲ See Gripper Cylinder page for parts breakdown.

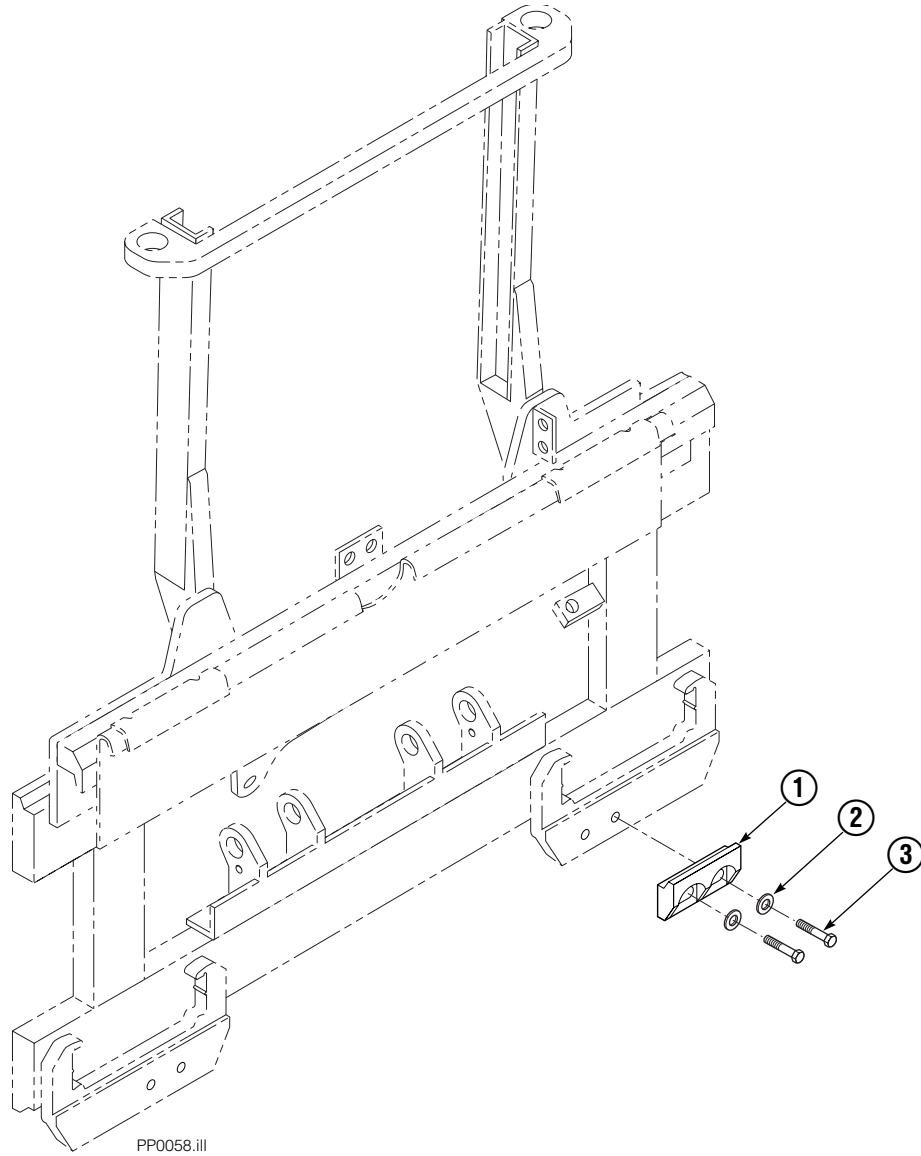
Gripper Cylinder



45E			
REF	QTY	PART NO.	DESCRIPTION
		3008558	Gripper Cylinder
1	1	646540	▼ Seal
2	1	636850	▼ Wiper
3	1	2718	▼ O-Ring
4	1	2710	▼ O-Ring
5	1	615122	▼ Back-Up Ring
6	1	3008559	Shell
7	1	685663	Rod
8	1	685664	Retainer
9	1	685665	Piston
10	1	563462	Nut
11	1	563916	Ring
12	1	3137	Snap Ring
13	1	663728	▼ Piston Seal

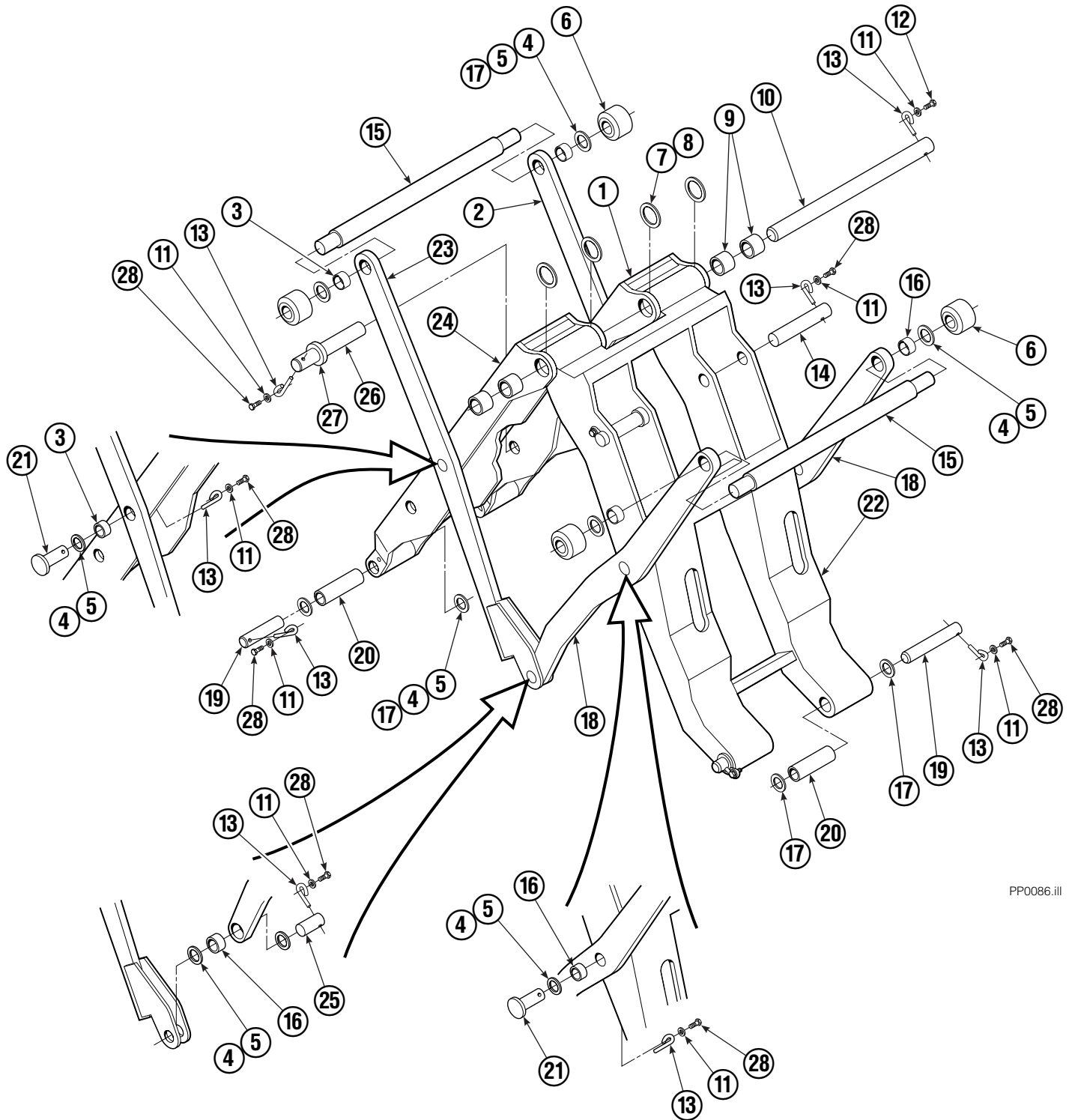
▼ Included in Service Kit 684827.

Bolt-On Lower Hook Group – ITA II



35E/45E			
REF	QTY	PART NO.	DESCRIPTION
		683178	Lower Hook Group ITA II
1	2	679360	Hook
2	4	667225	Washer
3	4	779010	Capscrew

Mechanism Group



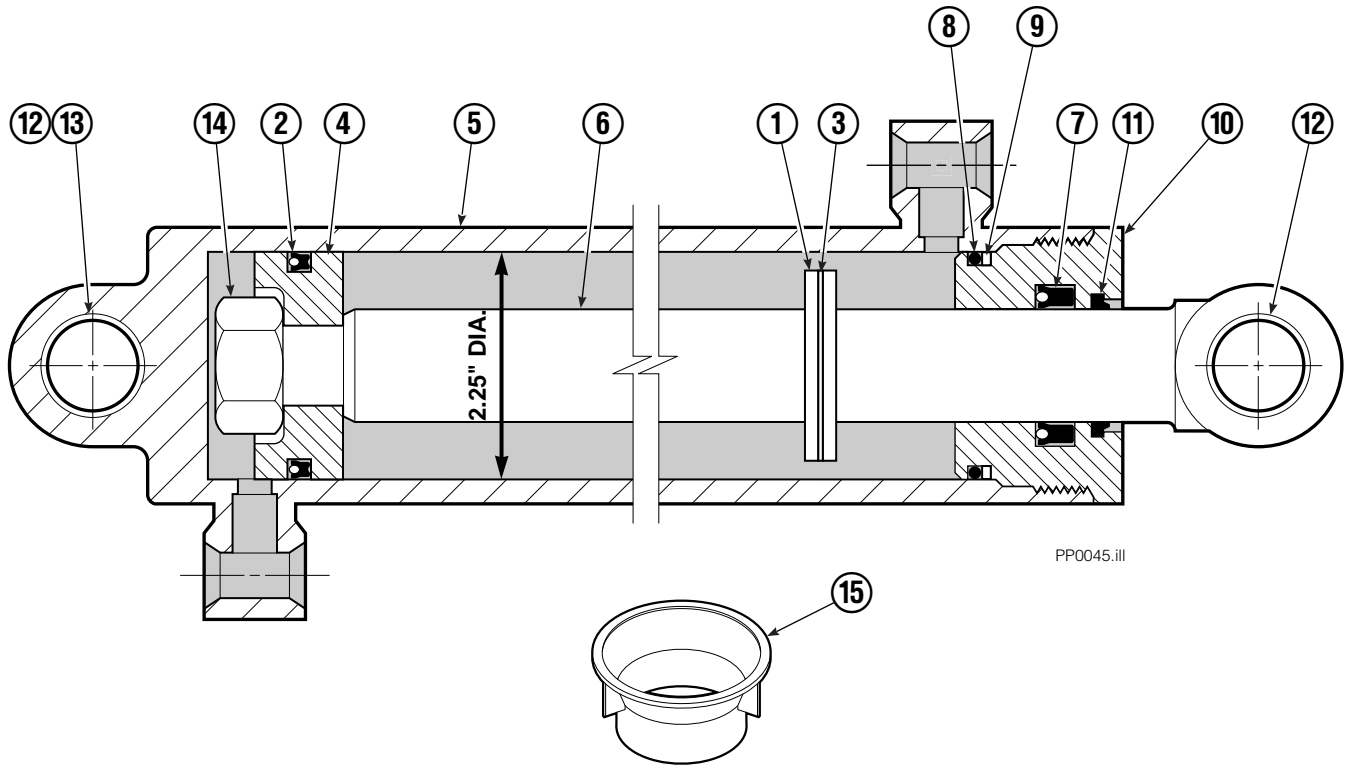
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Mechanism Group

35E/45E			
REF	QTY	PART NO.	DESCRIPTION
		204644	Mechanism Group
1	1	204691	Arm-Inner Secondary R. H.
2	1	204692	Arm-Secondary Outer R. H.
3	4	683154	■ Bushing
4	●	683161	Shim (.030)
5	●	683162	Shim (.060)
6	4	205070	Roller
7	●	683163	Shim (.030)
8	●	683164	Shim (.060)
9	4	683155	■ Bushing
10	1	682821	Pin
11	15	6229	Washer
12	2	685661	Capscrew
13	15	682999	Eye-Pin
14	2	682822	Pin-Head
15	2	205065	Pin
16	6	683153	■ Bushing
17	●	204532	Shim (.12)
18	2	204694	Arm-Outer Primary
19	4	204533	Pin-Frame
20	4	204535	■ Bushing
21	4	204695	Pin
22	1	204604	Arm-Inner Primary
23	1	204693	Arm-Secondary Outer L. H.
24	1	204690	Arm-Inner Secondary L. H.
25	2	204696	Pin-Outer
26	2	682823	Pin-Rod
27	2	683165	Spacer
28	13	767961	Capscrew

- Quantity as required.
- Included in Bushing Service Kit 205075.

Cylinder

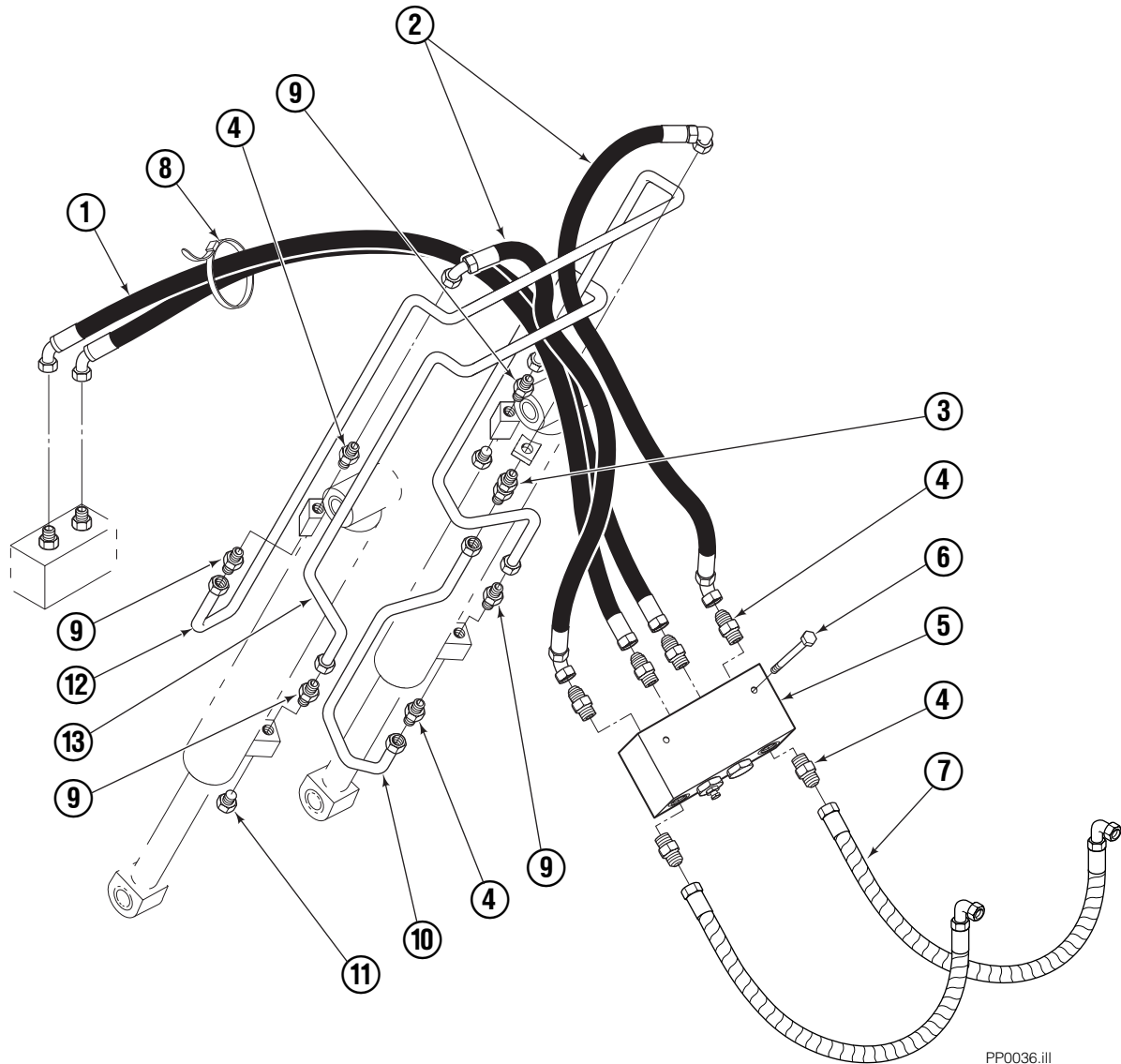


REF	QTY	PART NO.	DESCRIPTION
		582636	Cylinder Assembly
1	1	-	Spacer
2	1	564159	Seal ■
3	1	7348	Snap Ring
4	1	564161	Piston
5	1	562717	Shell
6	1	558626	Rod
7	1	662448	Seal ■
8	1	2787	O-Ring ■
9	1	615130	Back-Up Ring ■
10	1	558628	Retainer
11	1	636853	Wiper ■
12	4	559697	Bearing
13	1	559698	Spacer
14	1	678019	Nut
15	1	671048	Seal Loader Kit ■

■ Included in Service Kit 562339.

Ref: S-3424

Hydraulic Group



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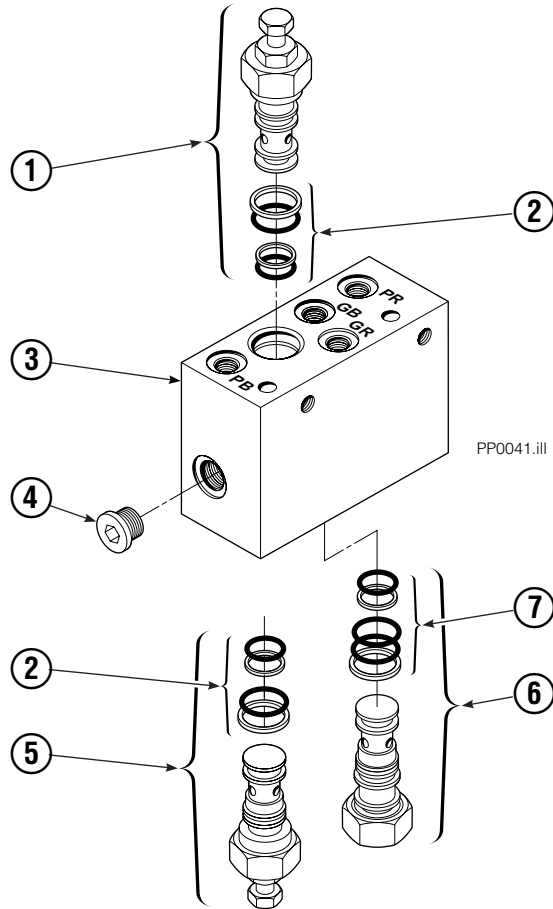
35E/45E

REF	QTY	PART NO.	DESCRIPTION
		685828	Hydraulic Group ITA II
1	1	685831	Hose
2	2	683173	Hose
3	1	2375	Fitting, 6-6
4	8	604511	Fitting, 6-6
5	1	682812	■ Valve
6	2	765329	Capscrew, M8x1.25x20-8.8
7	2	685978	Hose ITA II
8	2	684956	Cable tie
9	4	605235	Fitting 5-6
10	1	200647	Tube
11	2	604510	Plug, 6
12	1	200649	Tube
13	1	200648	Tube

■ See Valve page for parts breakdown.

Valve

Load Push/Pull



35E/45E			
REF	QTY	PART NO.	DESCRIPTION
		682812	Valve Assembly
1	1	677125	Sequence Valve (Retract)
2	2	669597	Service Kit
3	1	682813	Body
4	5	663694	Fitting, 3
5	1	677124	Sequence Valve (Extend)
6	1	659058	Gripper Check Valve
7	1	667516	Service Kit

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