



Parts Manual

Model Push-Pull

Serial Number 45E-PS-168

cascade®

For Technical Assistance and to Order Parts . . .

Call: 1-800-CASCADE or 503-669-6300

OR

Write: Cascade Corporation, P.O. Box 20187, Portland, OR 97294-0187

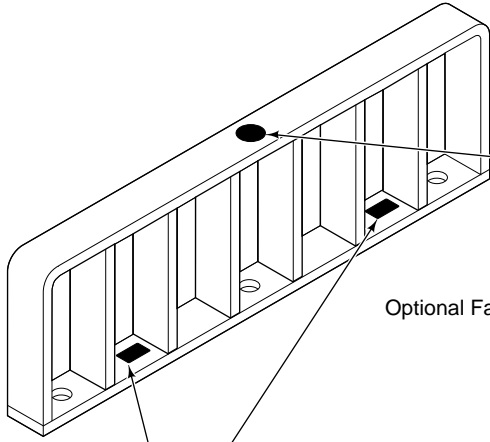
Publications



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



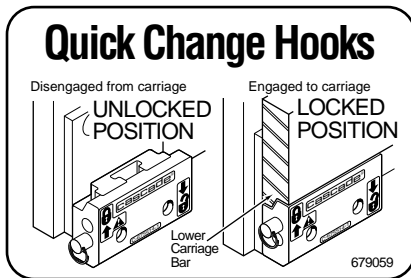
Part No. 679150
(1 Place & 1 optional)



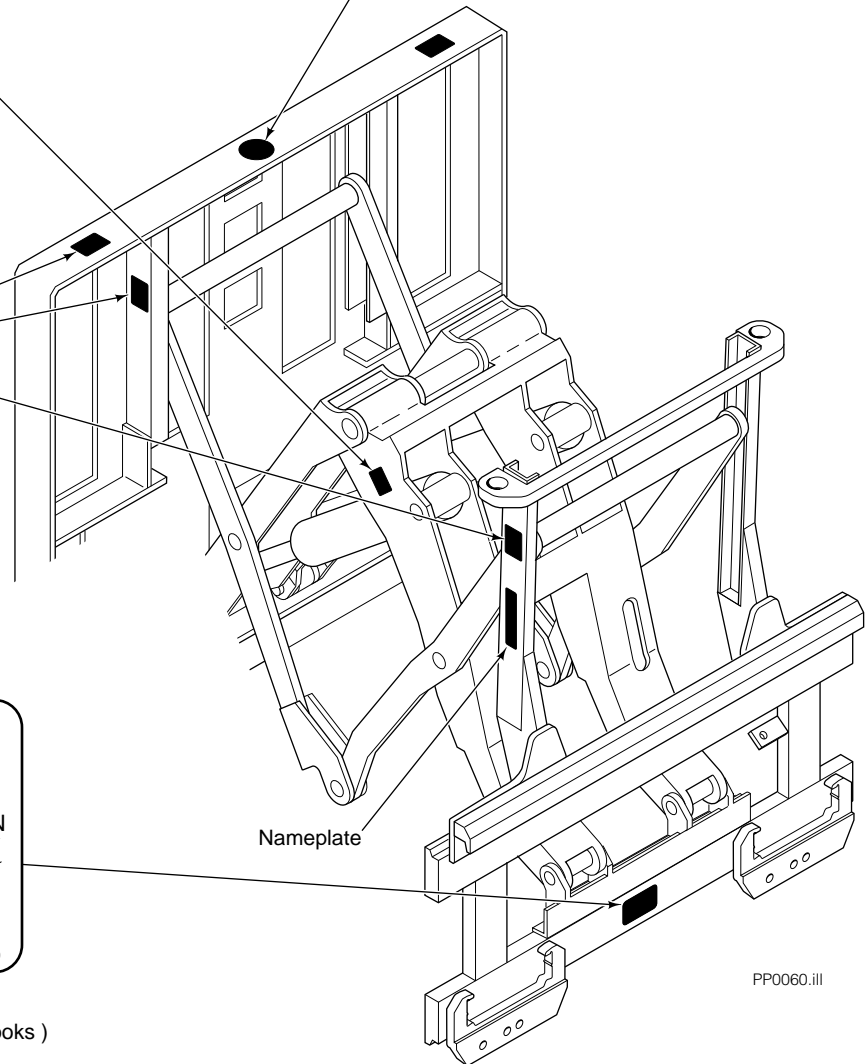
Part No. 665595
(2 Place & 2 optional)



Part No. 656038
(6 Places)



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



PP0060.iii

Platens



Note: Usable platen lengths are determined by measuring from the faceplate (fully retracted position) to the platen tip or total platen length minus 4 1/2".

REF	QTY	PART NO.	DESCRIPTION
		685751	Platen Group
1	1	685752	Platen L. H.
2	1	685753	Platen R. H.
3	2	622907	Pin
4	2	8007	Rivet
5	2	622908	Spring
6	2	622897	Handle
7	2	■ 685533	Upper Hook Assembly
8	4	685677	Capscrew
9	★	206969	Shim (.030)
10	2	682851	Lower Hook
11	4	667225	Washer
12	4	779009	Capscrew
13	●	688379	Shim (.060)

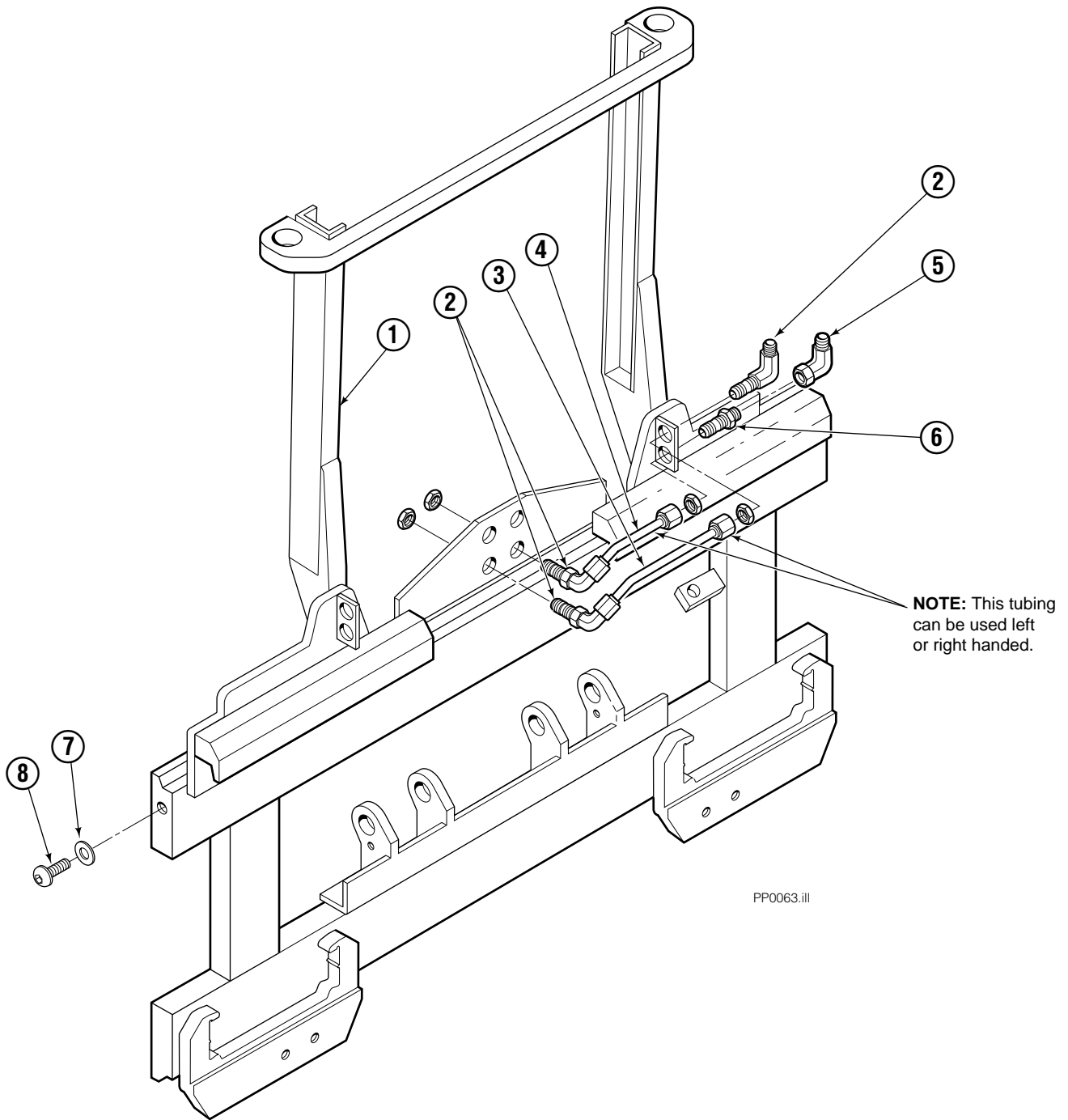
★ As required.

● As required (2 maximum)

■ Items 3 through 6 are included in Upper Hook Assembly 688386.

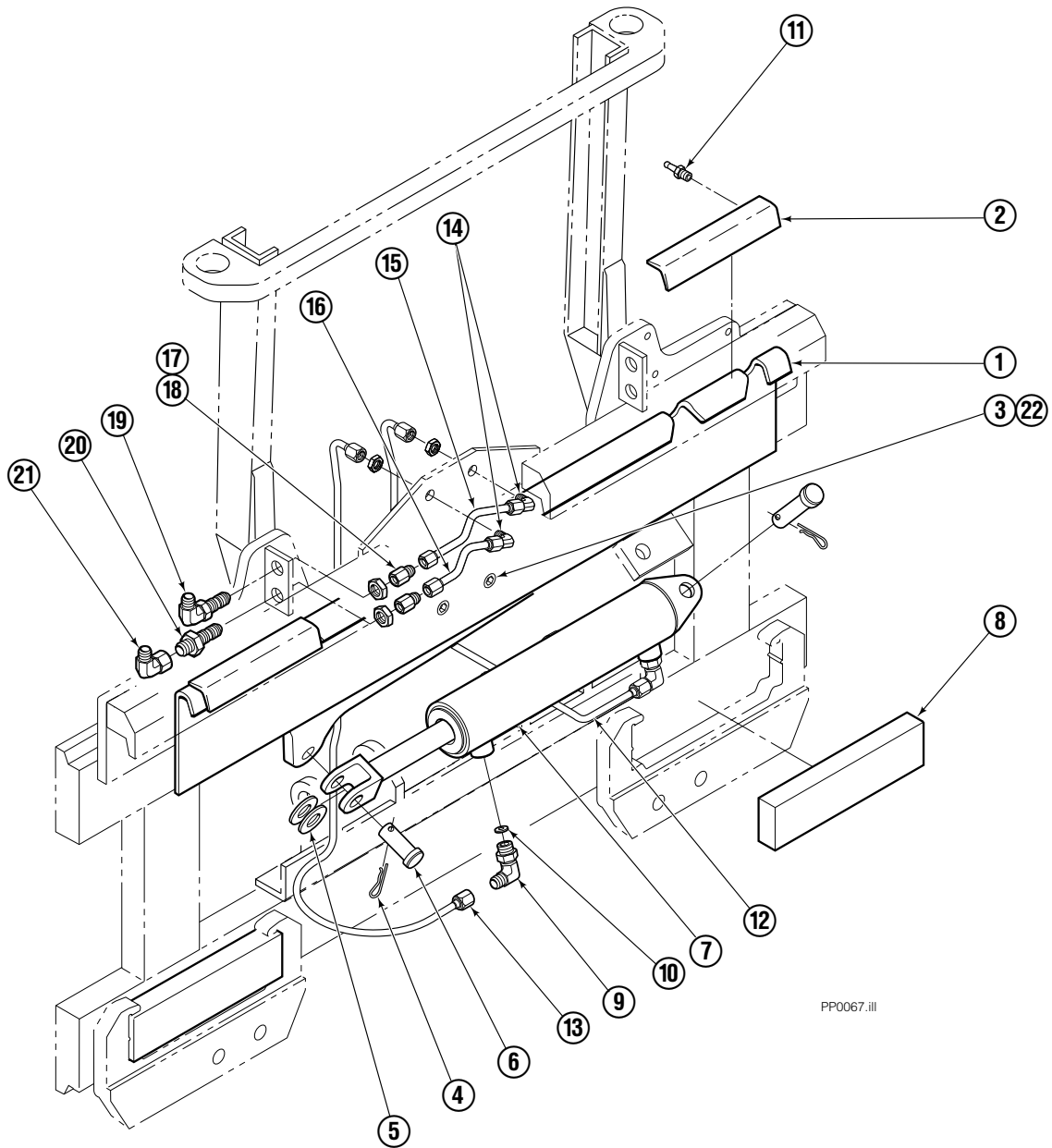
Ref: S-3408

Frame Group ITA II



35E/45E			
REF	QTY	PART NO.	DESCRIPTION
		682828	Frame Group ITA II
1	1	682604	Frame
2	3	2453	Fitting, 6-6
3	1	686509	Tube
4	1	686510	Tube
5	1	2680	Fitting, 6-6
6	1	2375	Fitting, 6-6
7	2	683001	Washer
8	2	683142	Capscrew

S/S Mounting Group ITA II



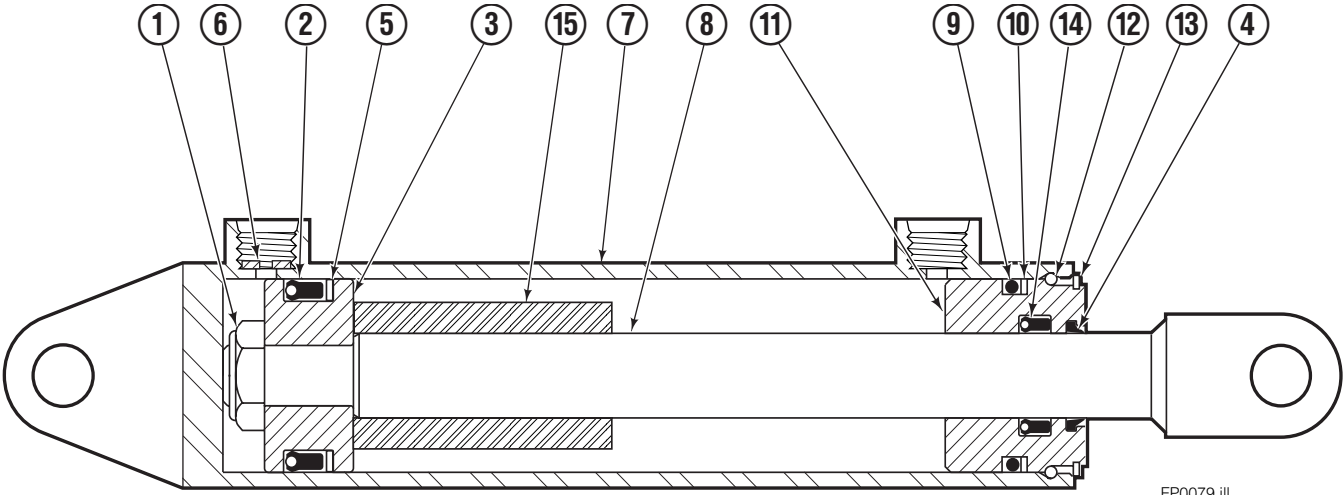
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35E/45E

REF	QTY	PART NO.	DESCRIPTION	REF	QTY	PART NO.	DESCRIPTION
		682833	Mounting Group	12	1	686511	Tube
1	1	682554	Anchor Bracket	13	1	686512	Tube
2	2	671165	■ Bearing Segment	14	2	2451	Fitting, 4-4
3	2	768759	Setscrew	15	1	686515	Tube
4	2	6517	Cotter Pin	16	1	686516	Tube
5	2	6234	Washer	17	2	2669	Fitting, 4-6
6	2	678525	Clevis Pin	18	2	2617	Fitting, 6-6
7	1	675548	●Cylinder	19	1	2453	Fitting, 6-6
8	2	682814	Bearing	20	1	2375	Fitting, 6-6
9	2	666984	Fitting, 4-6	21	1	2680	Fitting, 6-6
10	2	675550	Washer	22	2	688387	Jam Nut
11	4	7403	■ Grease Fitting				

- Included in Bearing Service Kit 671423.
- See Cylinder page for parts breakdown.

Sideshift Cylinder

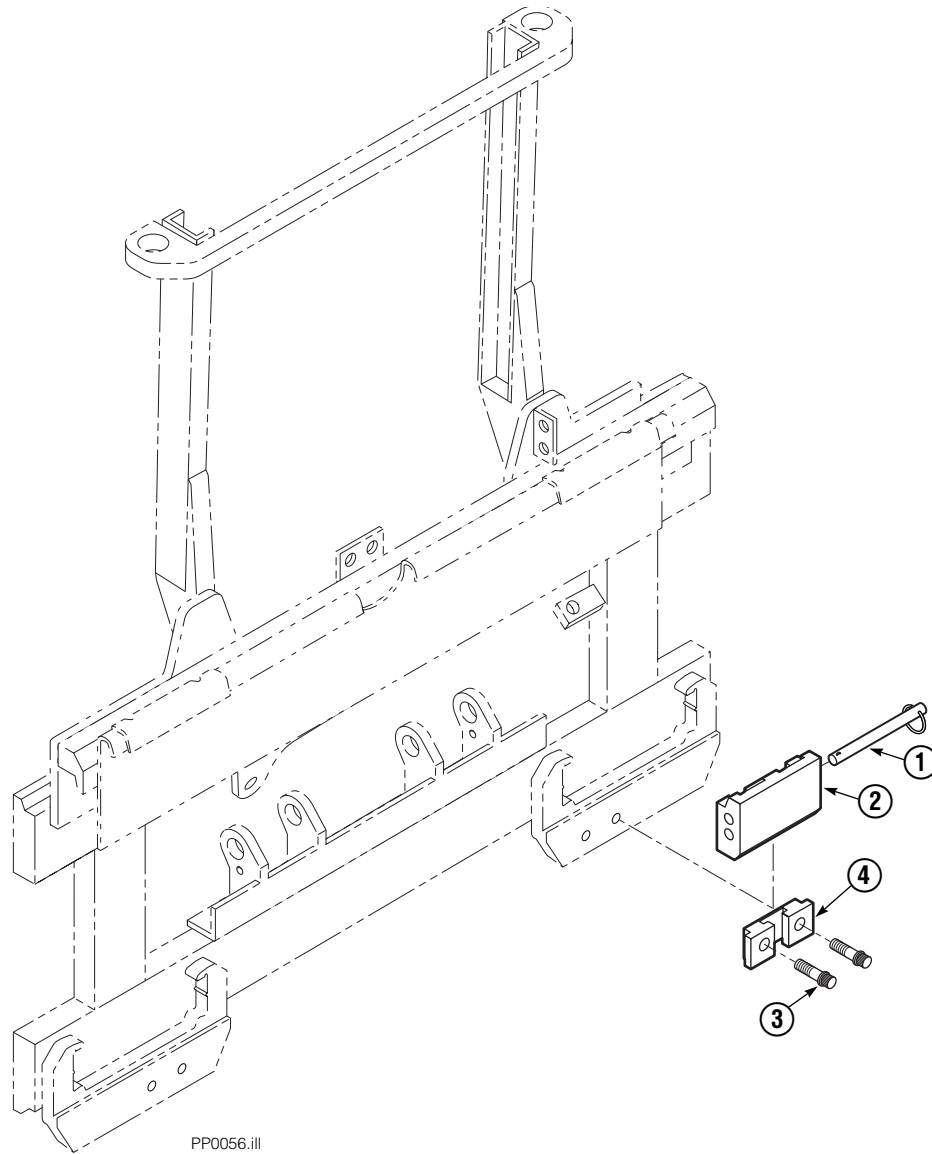


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REF	QTY	PART NO.	DESCRIPTION
		675548	Cylinder Assembly
1	1	553857	Nut
■ 2	1	662452	Seal
3	1	553501	Piston
■ 4	1	636851	Wiper
■ 5	1	638247	Back-up Ring
6	1	675550	Washer (orifice .085)
7	1	675549	Shell
8	1	553449	Rod
■ 9	1	2785	O-Ring
■ 10	1	615128	Back-up Ring
11	1	553500	Retainer
12	1	553856	Retaining Ring
13	1	7202	Snap Ring
■ 14	1	641835	Seal
15	1	---	Spacer
		553861	Service Kit

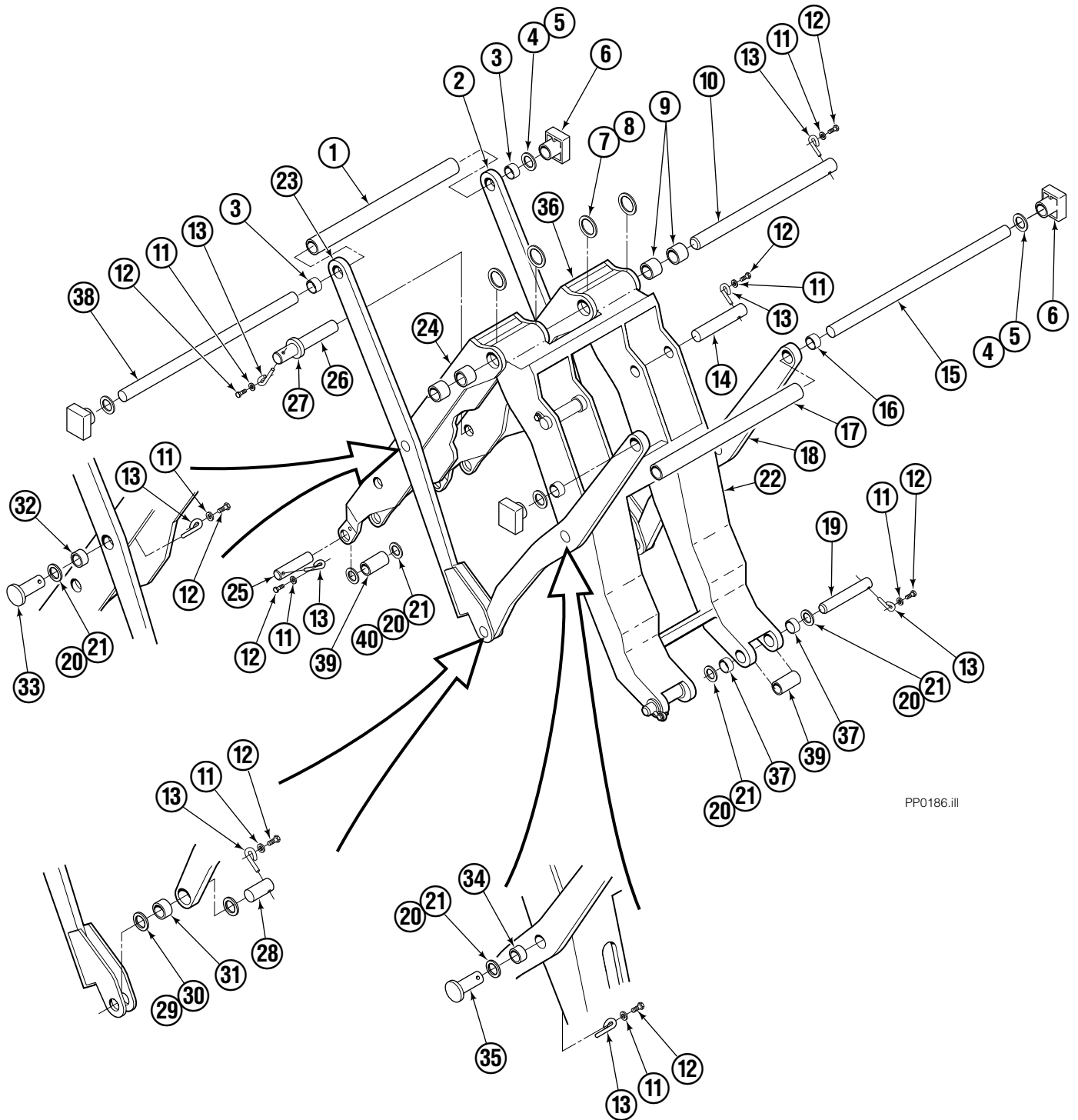
■ Included in Service Kit 553861.

Quick-Change Lower Hook Group ITA II



35E/45E			
REF	QTY	PART NO.	DESCRIPTION
		683179	Lower Hook Group ITA II
1	2	678832	Pin
2	2	675514	Hook
3	4	683182	Capscrew
4	2	675515	Guide

Mechanism Group



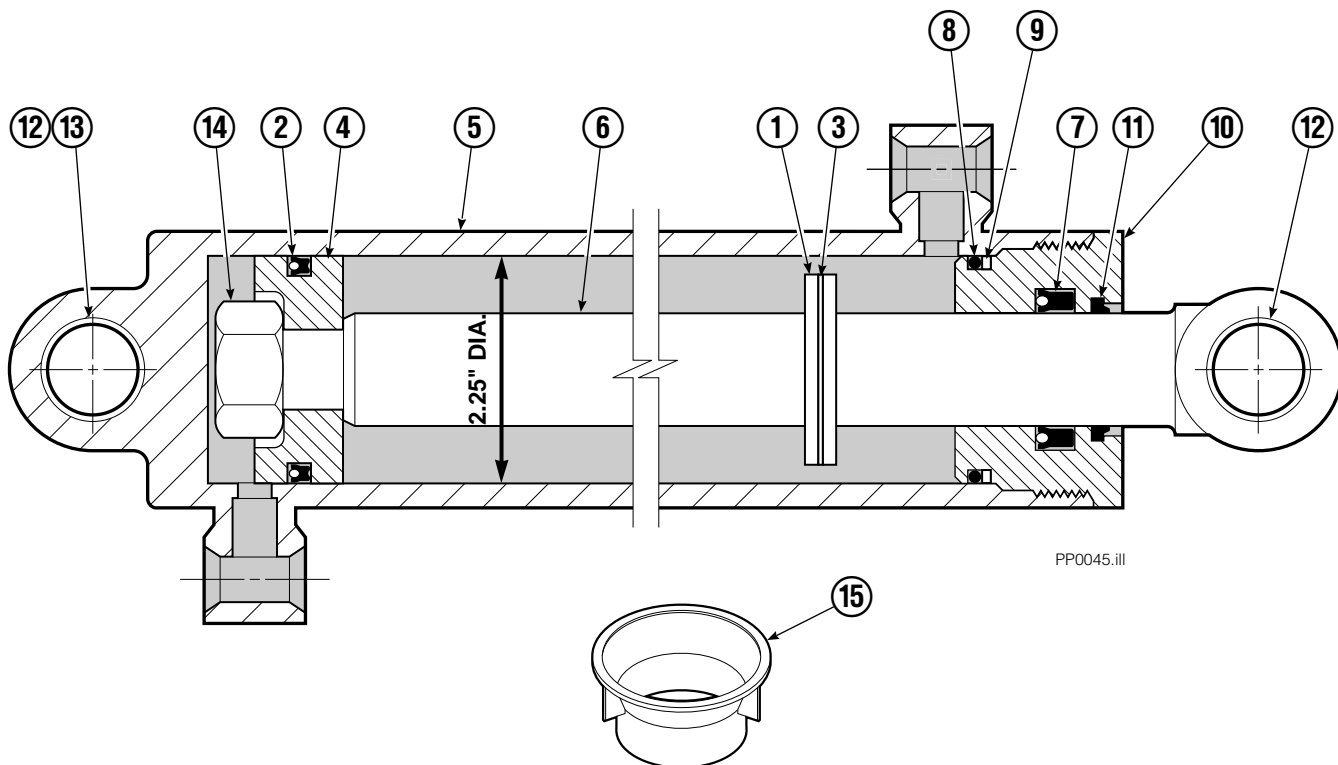
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Mechanism Group

35E/45E			
REF	QTY	PART NO.	DESCRIPTION
		682829	Mechanism Group
1	1	682818	Tube
2	1	683000	Arm-Secondary Outer R. H.
3	2	683154	Bushing
4	●	683161	Shim (.030)
5	●	683162	Shim (.060)
6	4	682866	Bearing
6	4	688396	Bearing - Heavy Duty
7	●	683163	Shim (.030)
8	●	683164	Shim (.060)
9	4	683155	Bushing
10	1	682821	Pin
11	15	6229	Washer
12	15	685661	Capscrew, M8x1.25x14-8.8
13	15	682999	Eye-Pin
14	2	682822	Pin-Head
15	1	682815	Pin
16	2	683153	Bushing
17	1	682817	Tube
18	2	682543	Arm-Outer Primary
19	2	682819	Pin-Frame
20	●	683159	Shim
21	●	683160	Shim
22	1	682598	Arm-Inner Primary
23	1	682540	Arm-Secondary Outer L. H.
24	1	682588	Arm-Inner Secondary L. H.
25	2	682820	Pin-Faceplate
26	2	682823	Pin-Rod
27	2	683165	Spacer
28	2	682824	Pin-Outer
29	●	683158	Shim
30	●	683157	Shim
31	2	683149	Bushing
32	2	683152	Bushing
33	2	682826	Pin-Secondary Outer
34	2	683151	Bushing
35	2	682825	Pin-Primary Outer
36	1	682589	Arm-Inner Secondary R.H.
37	4	683150	Bushing
38	1	682816	Pin
39	4	685127	Spacer
40	●	685838	Shim

● Quantity as required.

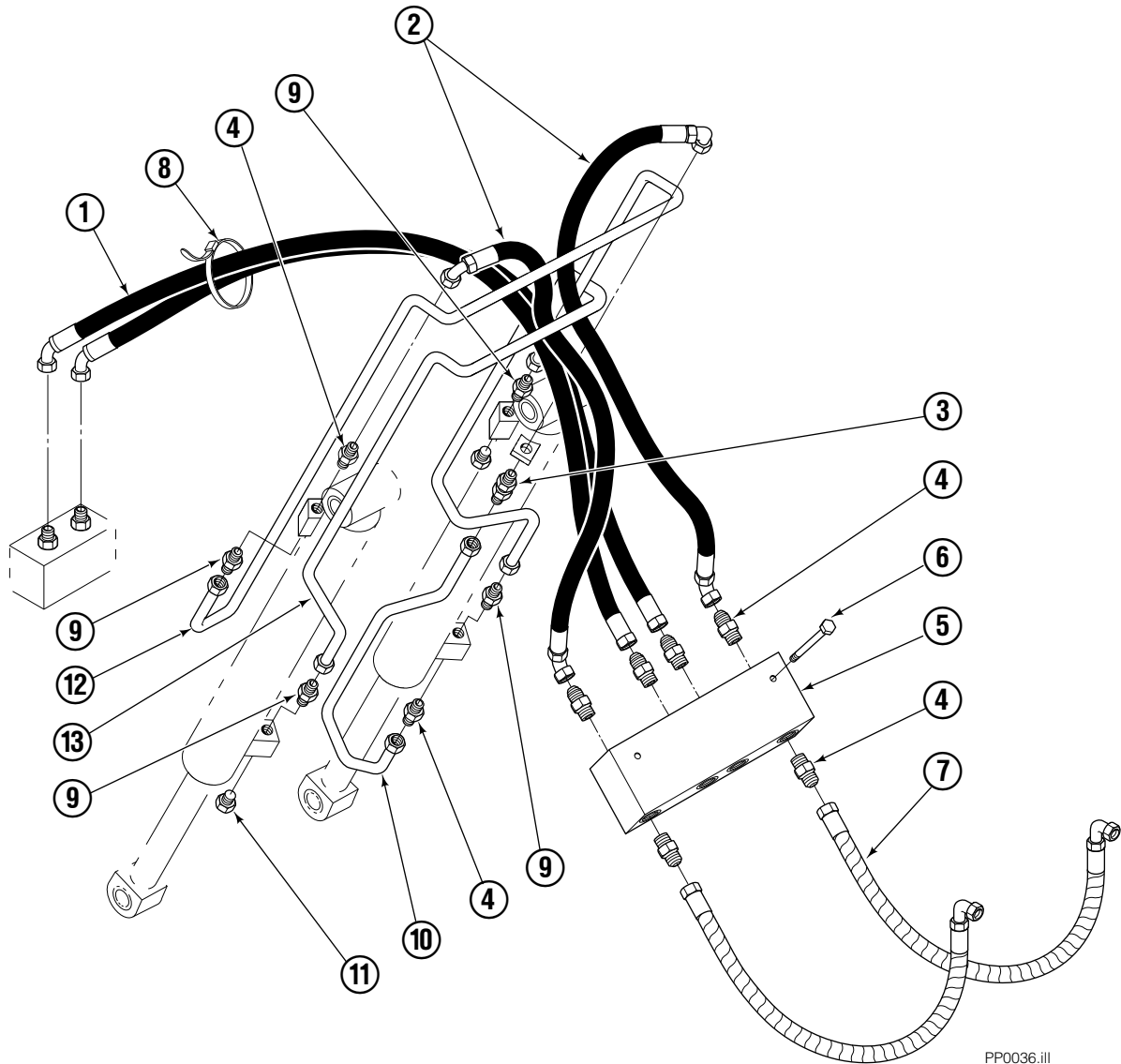
Cylinder



REF	QTY	PART NO.	DESCRIPTION
		580240	Cylinder Assembly
1	1	---	Spacer
2	1	661649	Seal ■
3	1	7348	Snap Ring
4	1	558623	Piston
5	1	558624	Shell
6	1	558626	Rod
7	1	559705	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	553717	Nut
15	1	672905	Seal Loader Kit ■

■ Included in Service Kit 559521.

Hydraulic Group



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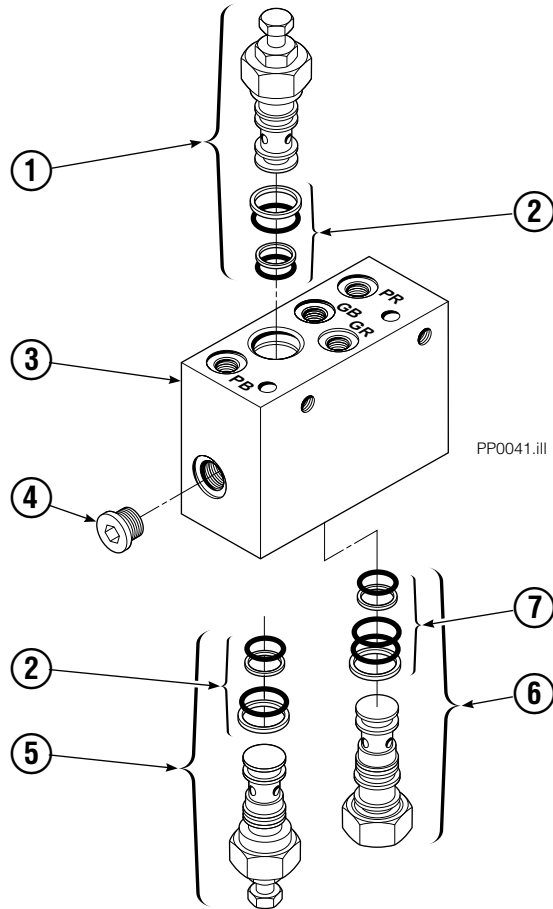
35E/45E

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.

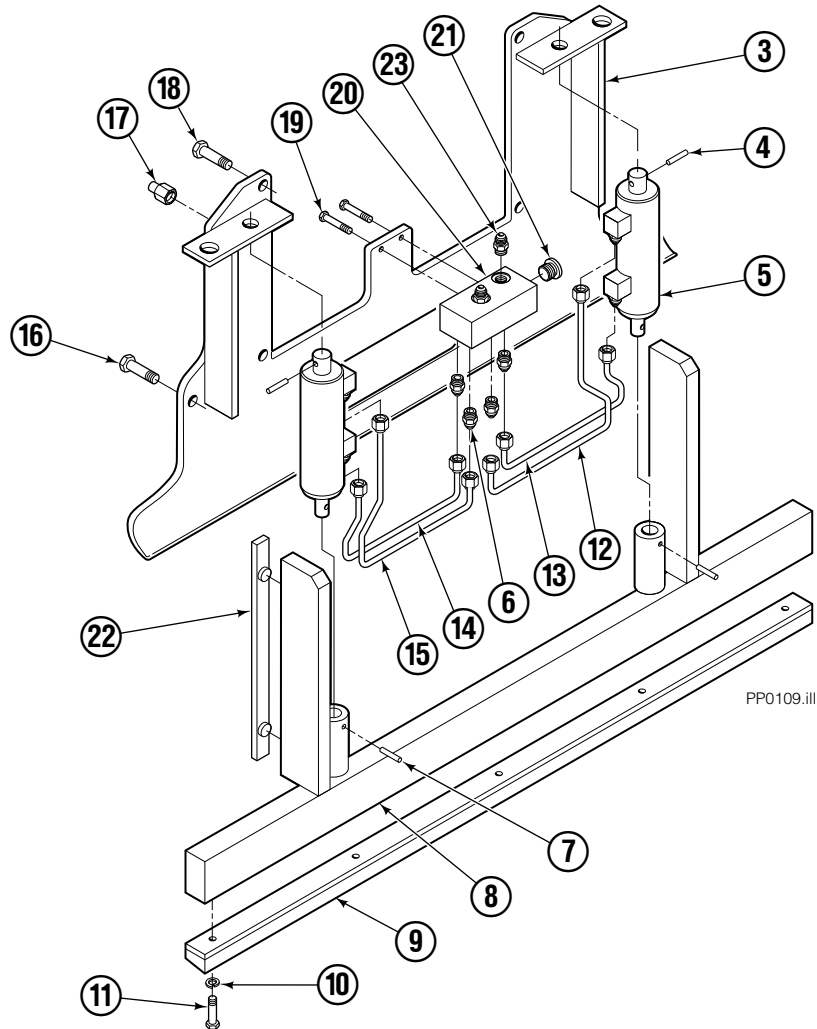
Valve

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

Faceplate Group

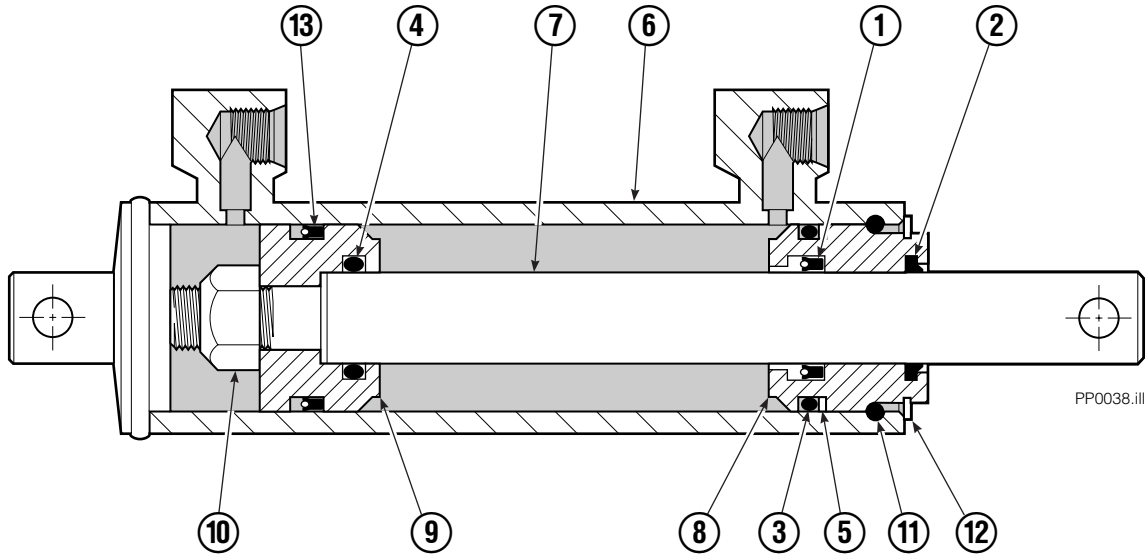


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35E/45E							
REF	QTY	PART NO.	DESCRIPTION	REF	QTY	PART NO.	DESCRIPTION
		685667	Faceplate Group 40" x 40" ■	12	1	682847	Tube
		686570	Gripper Jaw Assembly ●	13	1	682846	Tube
1	1	682591	Faceplate 40" x 40" ■	14	1	682848	Tube
2	4	683150	Bushing	15	1	682849	Tube
3	1	682583	Gripper Jaw	16	2	768710	Capscrew
4	2	673385	Drive Pin	17	4	682850	Stop
5	2	682844	Gripper Cylinder ▼	18	4	779010	Capscrew
6	8	617915	Fitting, 4-4	19	2	763166	Capscrew, M8x1,25x25-8.8
7	2	200877	Drive Pin	20	1	685832	Junction Block
8	1	686571	Gripper Bar	21	2	609234	Plug, 4
9	1	672712	Gripper Pad	22	2	686573	Bearing
10	5	6444	Lockwasher	23	2	604511	Fitting, 6-6
11	5	768794	Capscrew, M8x1,25x20-8.8				

- Width x height.
- Includes items 2 through 20.
- ▼ See Gripper Cylinder page for parts breakdown.

Gripper Cylinder

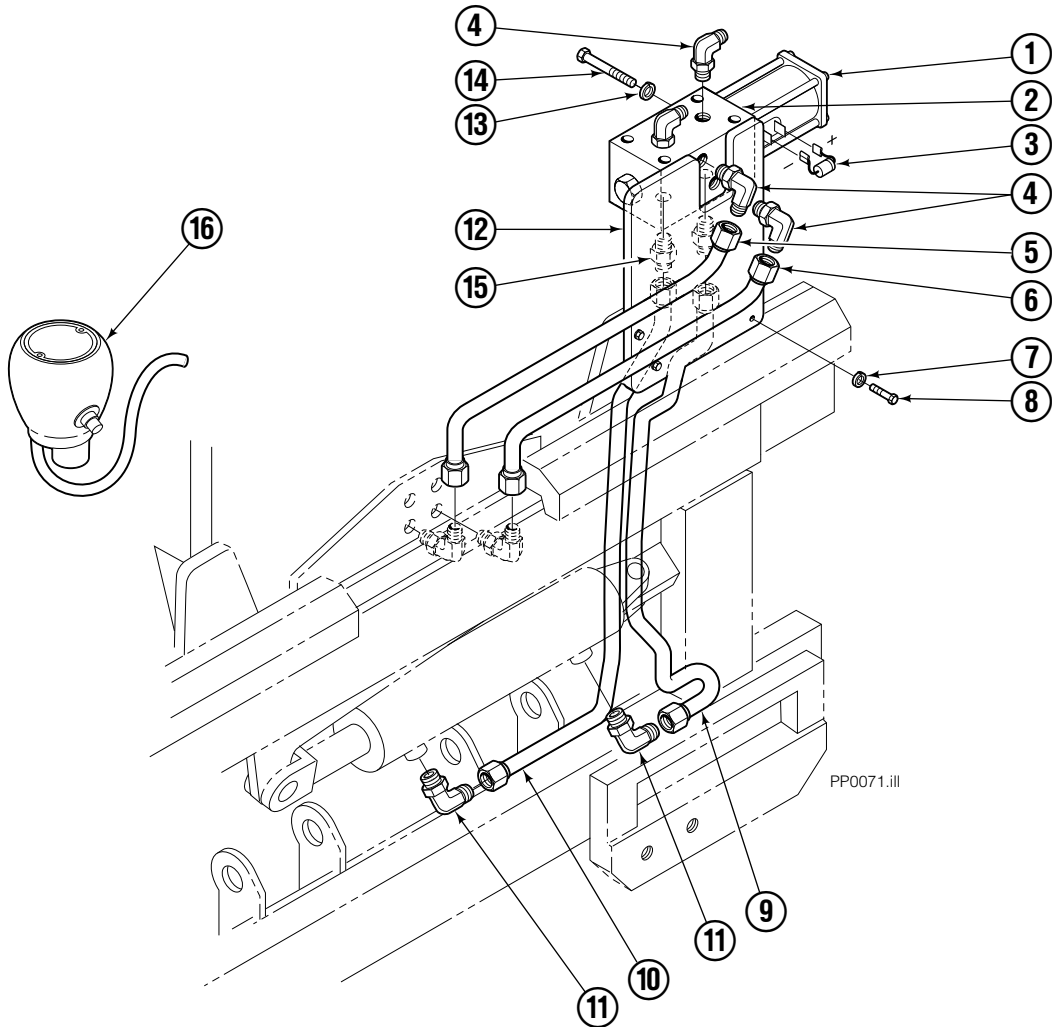


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35E/45E			
REF	QTY	PART NO.	DESCRIPTION
		682844	Gripper Cylinder
▼ 1	1	646540	Seal
▼ 2	1	636850	Wiper
▼ 3	1	2718	O-Ring
▼ 4	1	2710	O-Ring
▼ 5	1	615122	Back-Up Ring
6	1	685662	Shell
7	1	685663	Rod
8	1	685664	Retainer
9	1	685665	Piston
10	1	563462	Nut
11	1	563916	Ring
12	1	684284	Snap Ring
▼ 13	1	663728	Piston Seal

▼ Included in Service Kit 684827.

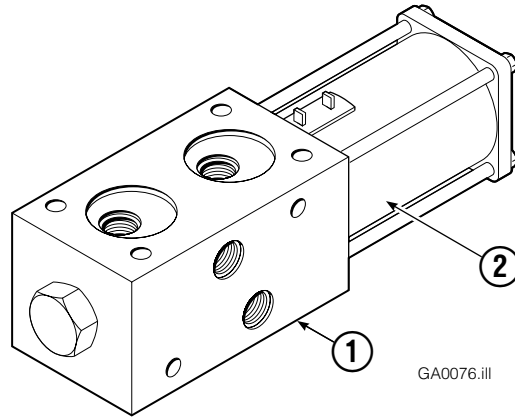
Solenoid Adaption



REF	QTY	PART NO.	DESCRIPTION
		683221	Solenoid Adaption Group-ITA II
1	1	●	Coil
2	1	●	Solenoid Valve
3	1	669432	Diode
4	4	601676	Fitting, 6-6
5	1	686518	Tube-ITA II
6	1	686517	Tube-ITA II
7	3	6287	Lockwasher, M8
8	3	765329	Capscrew, M8x1,25x20
9	1	683225	Tube
10	1	683226	Tube
11	2	666984	Fitting, 4-6
12	1	683222	Plate-ITA II
13	2	6201	Lockwasher, M6
14	2	768521	Capscrew, M6x1,0x80
15	2	627850	Fitting, 4-6
16	1	673130	■ Knob

- See Coil and Solenoid Valve page for parts breakdown.
- See Knob page for parts breakdown.

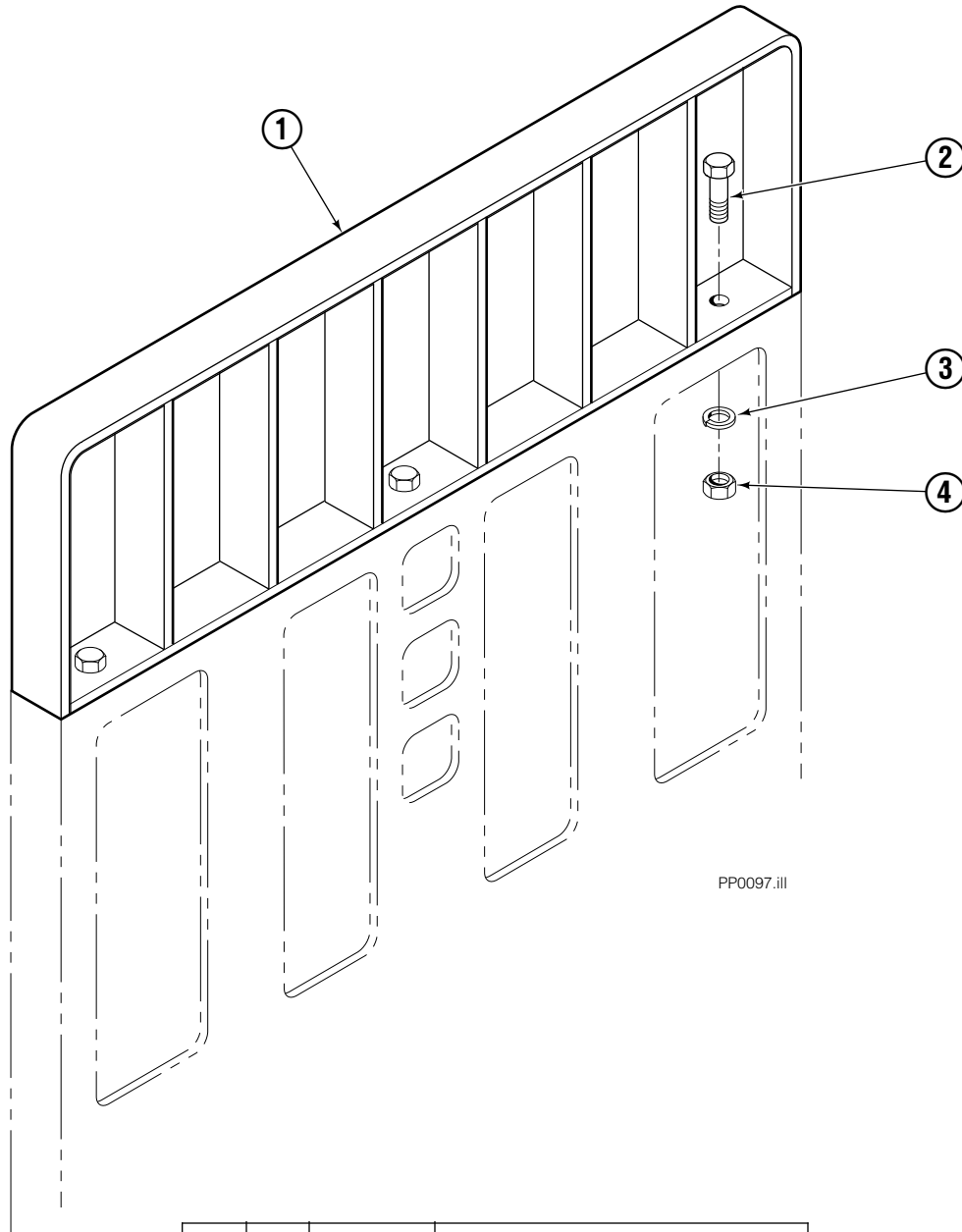
Solenoid Valves



Racine

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

Faceplate Extension



PP0097.iii

REF	QTY	PART NO.	DESCRIPTION
		345441	12" Faceplate Extension Group
1	1	345050	12" Faceplate Extension
2	3	601854	Capscrew, 1/2 NC x 1.0 Gr5
3	3	6290	Lockwasher, 1/2 ID
4	3	5904	Nut, 1/2 NC

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