



# Parts Manual

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Model Push Pull

Serial Number 35E-PS-302

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**cascade**<sup>®</sup>  
**corporation**

**For Technical Assistance call:** 800-227-2233, Fax: 888-329-8207

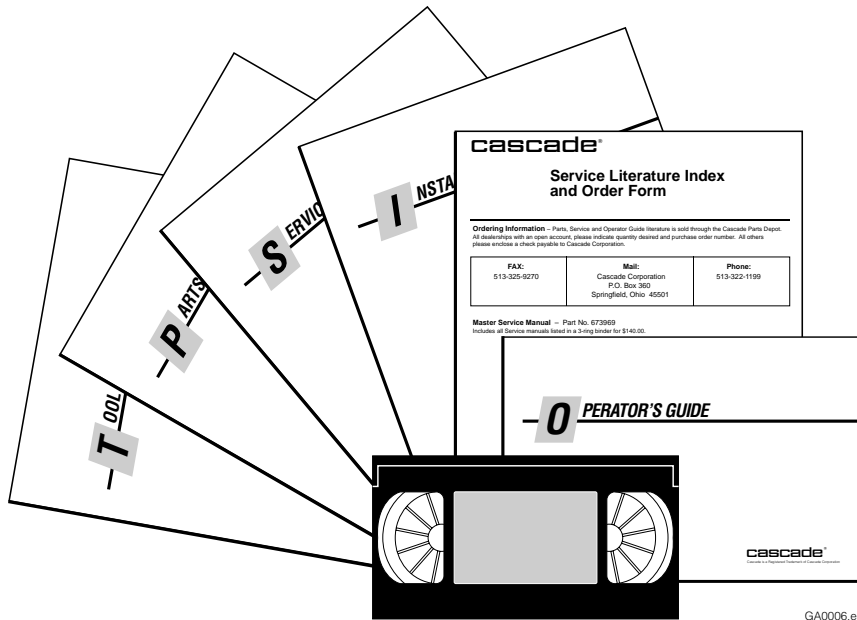
**To Order Parts call:** 888-227-2233, Fax: 888-329-0234

**OR**

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

**Internet:** [www.cascorp.com](http://www.cascorp.com)

# 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)



Nameplate

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)

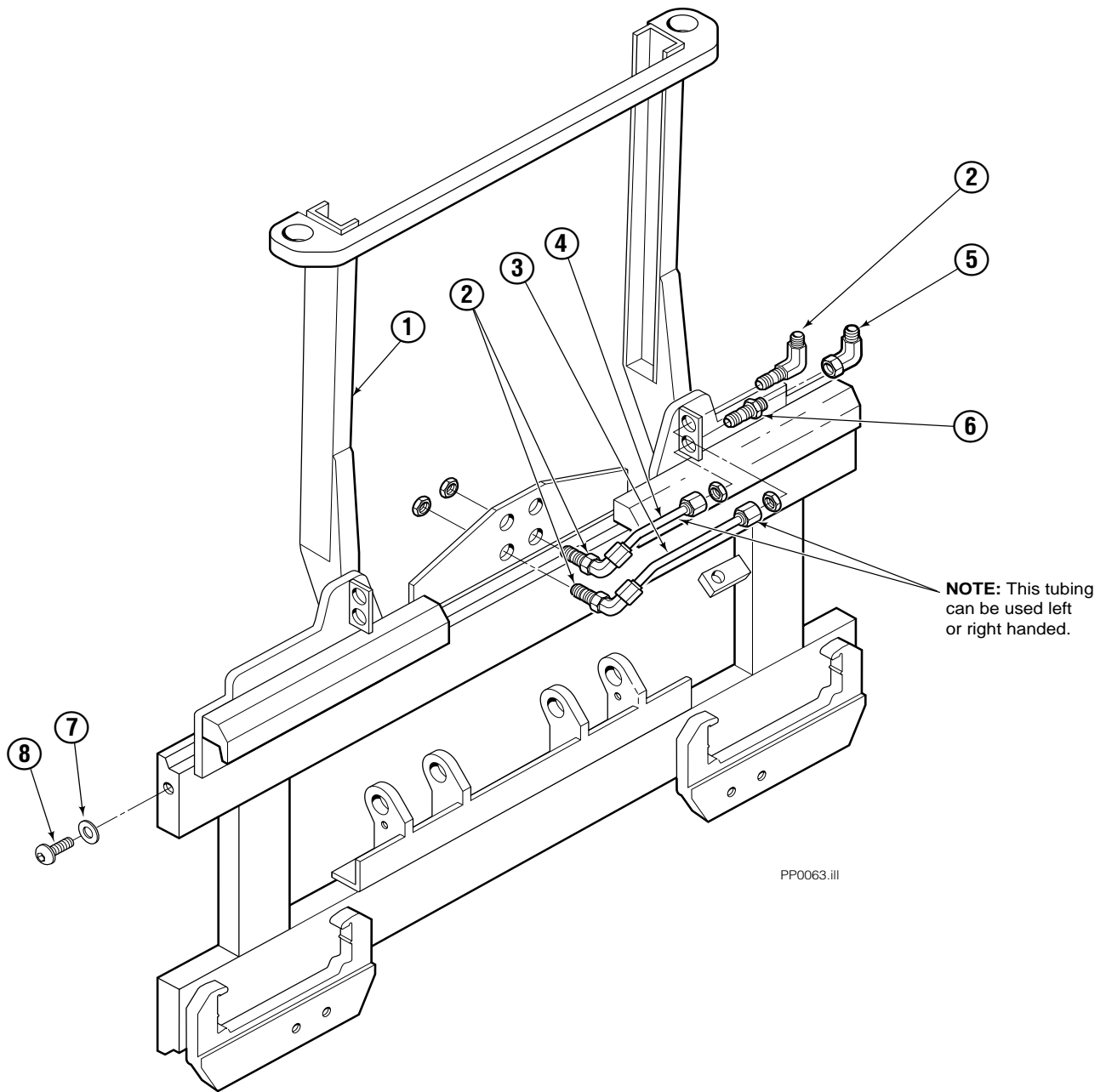
★ As required.

● As required (2 maximum)

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

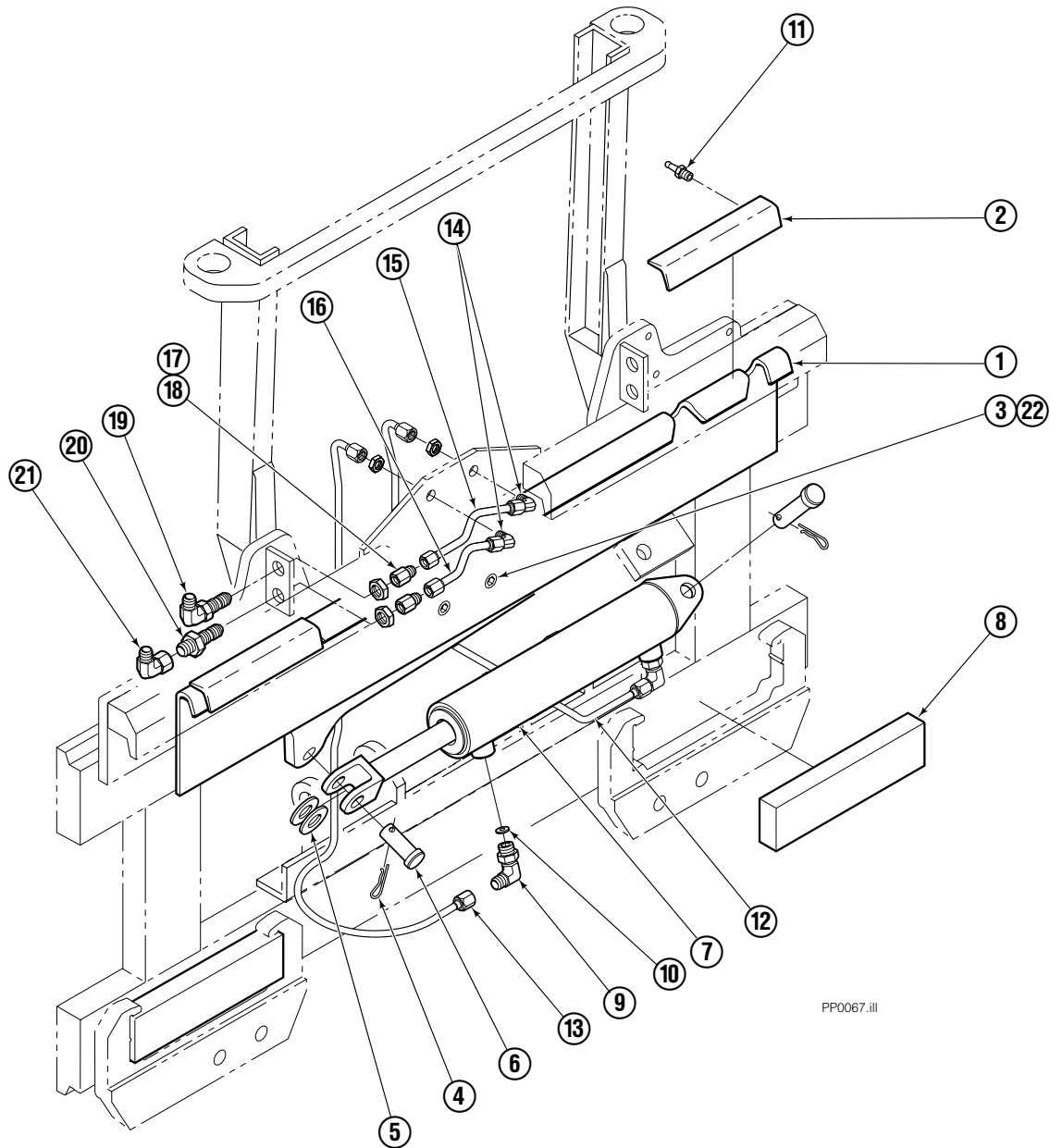
Ref: S-3408

# Frame Group ITA II



35E/45E			
REF	QTY	PART NO.	DESCRIPTION
		204649	Frame Group
1	1	204651	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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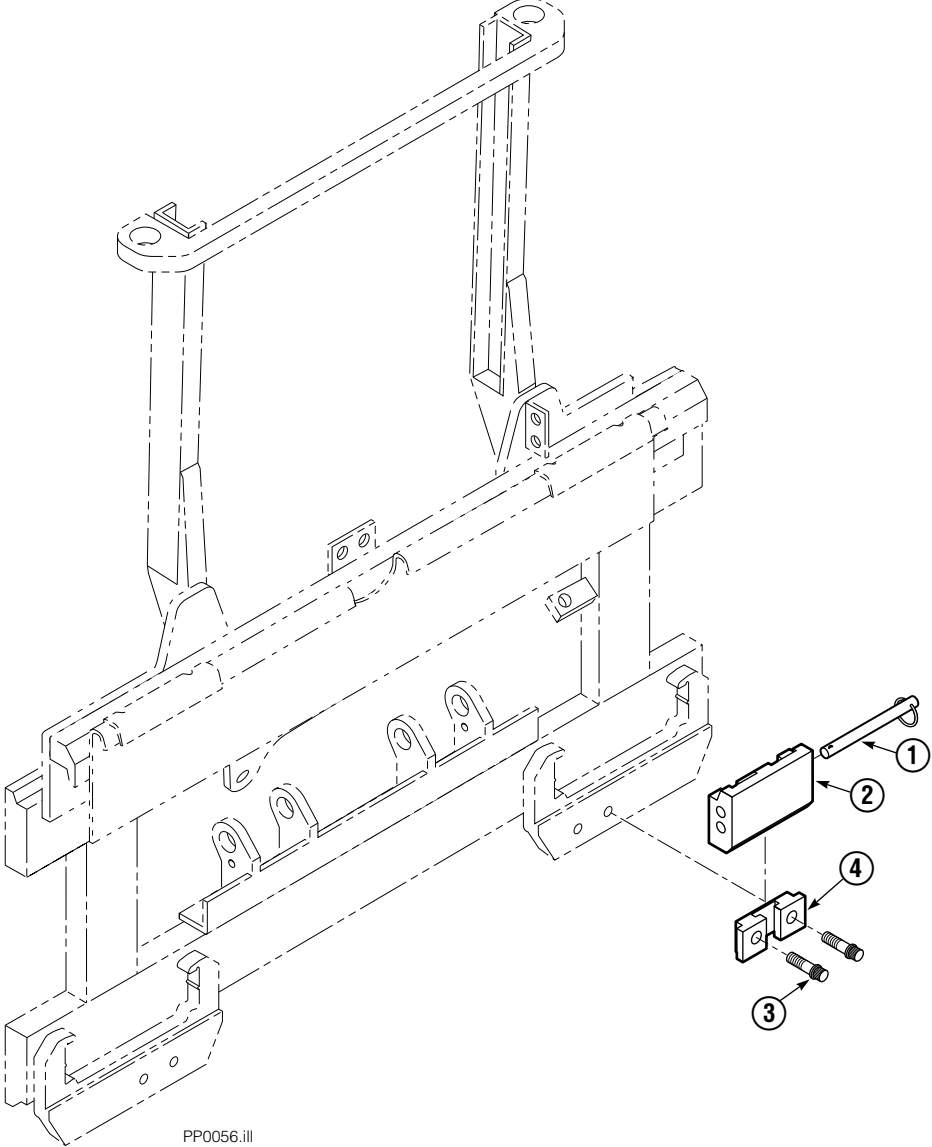
## 35E/45E

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.

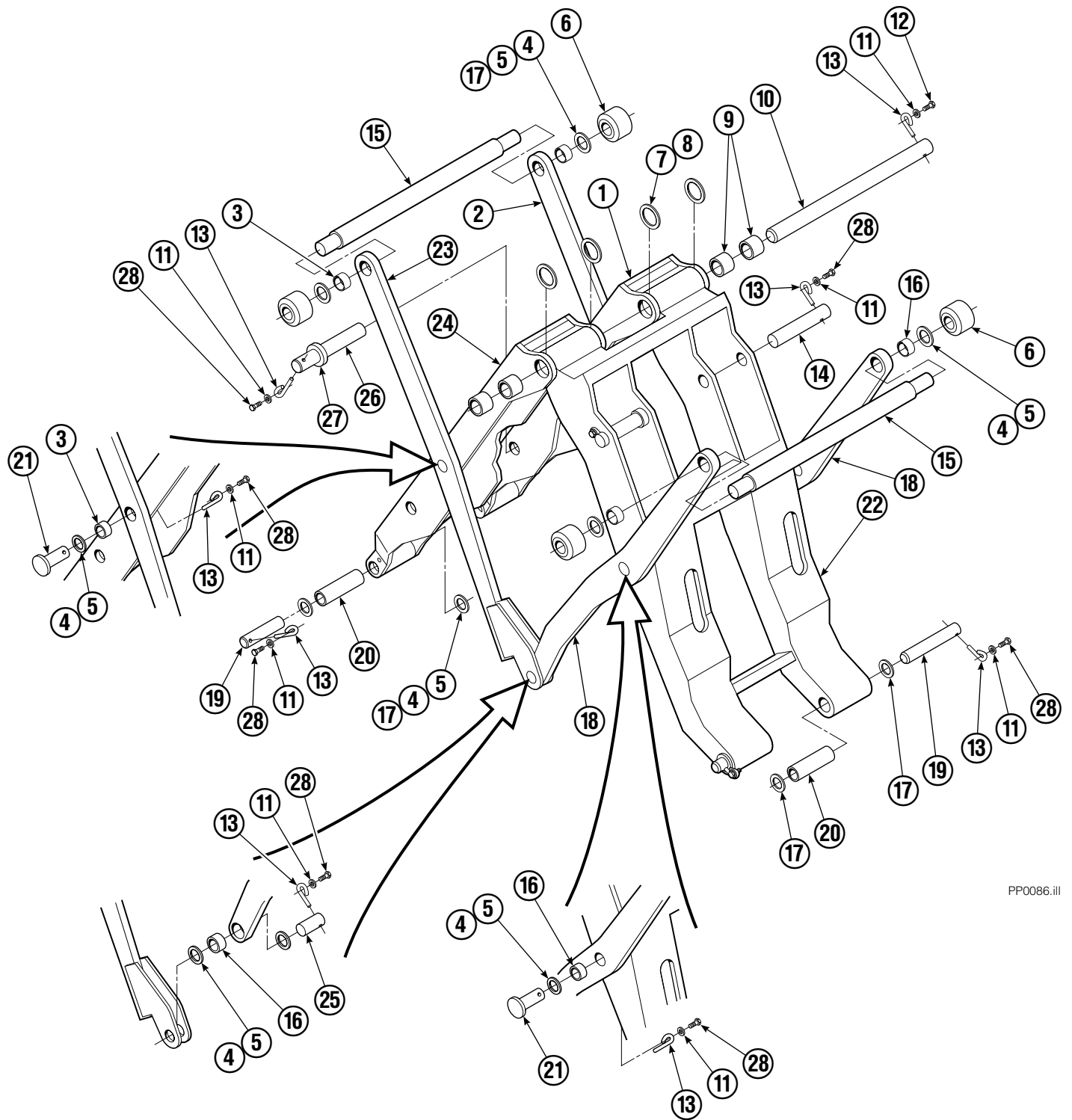
● See Cylinder page for parts breakdown.

# 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

<b>35E/45E</b>			
<b>REF</b>	<b>QTY</b>	<b>PART NO.</b>	<b>DESCRIPTION</b>
		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

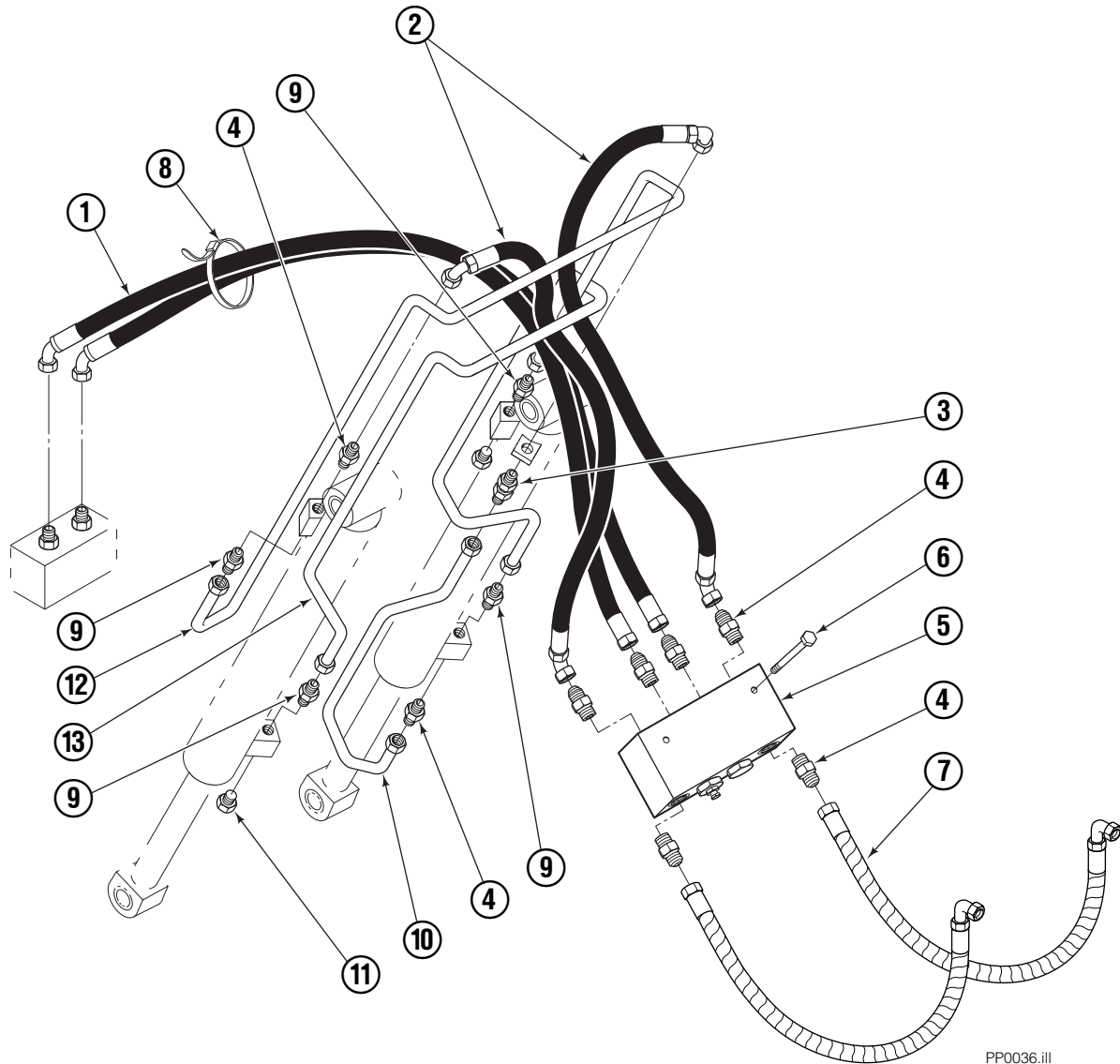


REF	QTY	PART NO.	DESCRIPTION
		582635	Cylinder Assembly
1	1	—	Spacer
2	1	562552	Seal ■
3	1	7348	Snap Ring
4	1	562334	Piston
5	1	562716	Shell
6	1	558626	Rod
7	1	559705	Seal ■
8	1	2785	O-Ring ■
9	1	615128	Back-Up Ring ■
10	1	559696	Retainer
11	1	636853	Wiper ■
12	4	559697	Bearing
13	1	559698	Spacer
14	1	678019	Nut
15	1	671047	Seal Loader Kit ■

■ Included in Service Kit 562338.

Reference: S-3424.

# Hydraulic Group



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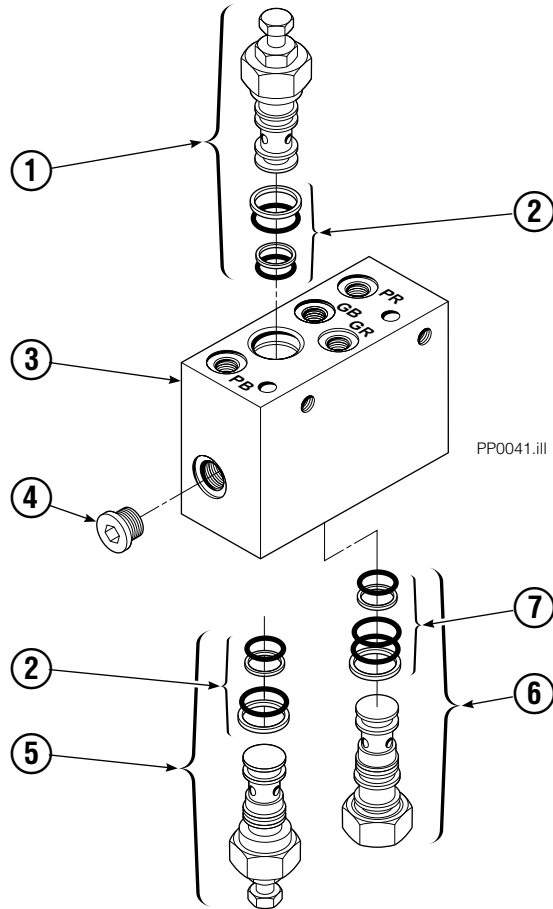
## 35E/45E

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.

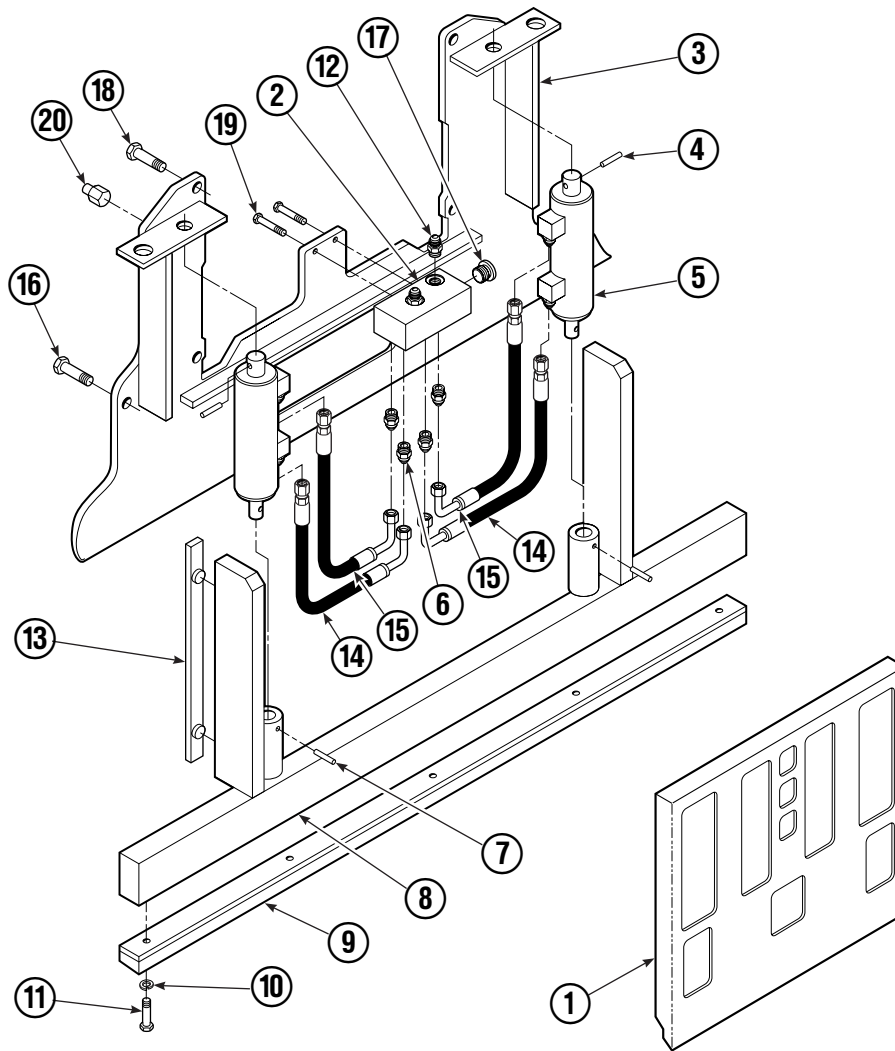
# Valve

## 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

# Faceplate Group

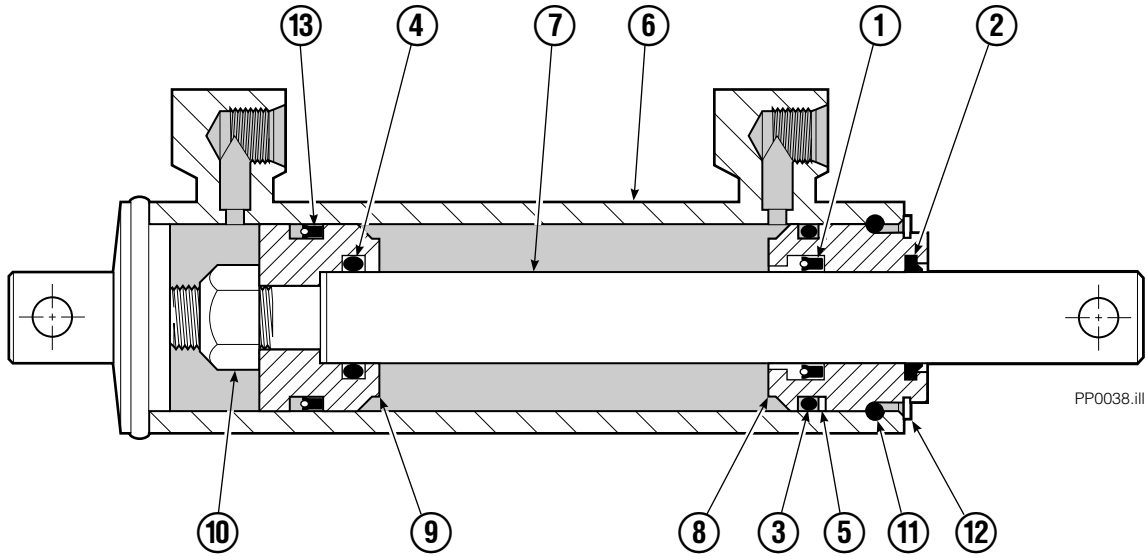


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35E/45E							
REF	QTY	PART NO.	DESCRIPTION	REF	QTY	PART NO.	DESCRIPTION
		205966	Faceplate Group 40" x 40" ■	10	5	6444	Lockwasher
		205961	Gripper Jaw Assembly ●	11	5	768794	Capscrew, M8x1,25x20-8.8
1	1	204634	Faceplate 40" x 40" ■	12	2	604511	Fitting, 6-6
2	1	205959	Junction Block	13	2	686573	Bearing
3	1	206396	Gripper Jaw	14	2	205957	Hose
4	2	673385	Drive Pin	15	2	205958	Hose
5	2	682844	Gripper Cylinder ▼	16	2	768710	Capscrew
6	8	617915	Fitting, 4-4	17	2	609234	Plug, 4
7	2	200877	Drive Pin	18	4	779010	Capscrew
8	1	206403	Gripper Bar	19	2	763166	Capscrew, M8x1,25x25-8.8
9	1	672712	Gripper Pad	20	4	682850	Stop

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

# Gripper Cylinder

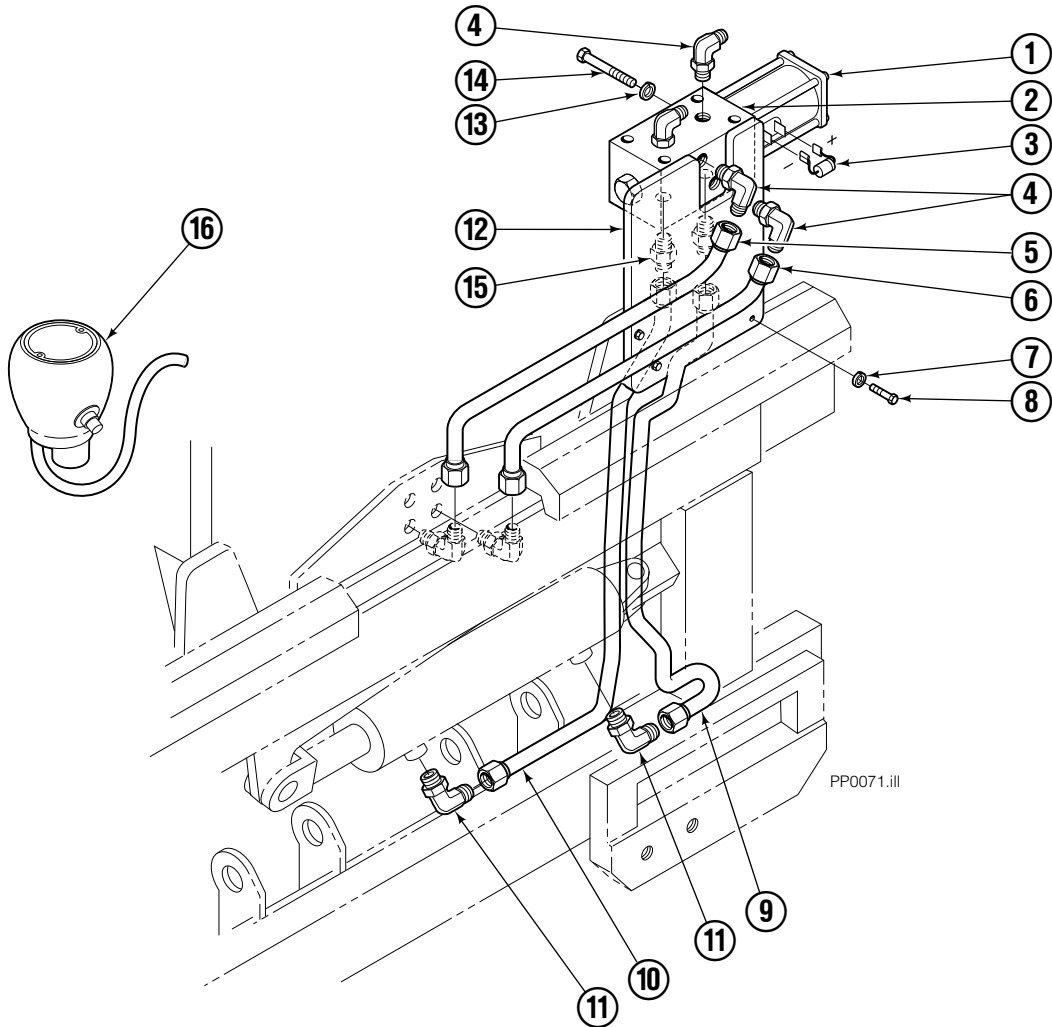


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35E/45E			
REF	QTY	PART NO.	DESCRIPTION
		682844	Gripper Cylinder
▼ 1	1	646540	Seal
▼ 2	1	636850	Wiper
▼ 3	1	2718	O-Ring
▼ 4	1	2710	O-Ring
▼ 5	1	615122	Back-Up Ring
6	1	685662	Shell
7	1	685663	Rod
8	1	685664	Retainer
9	1	685665	Piston
10	1	563462	Nut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

▼ Included in Service Kit 684827.

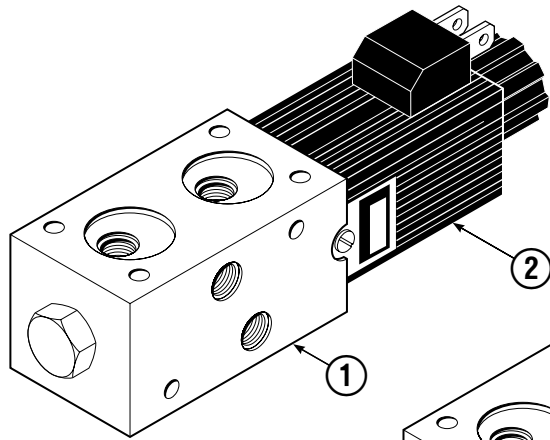
# Solenoid Adaption



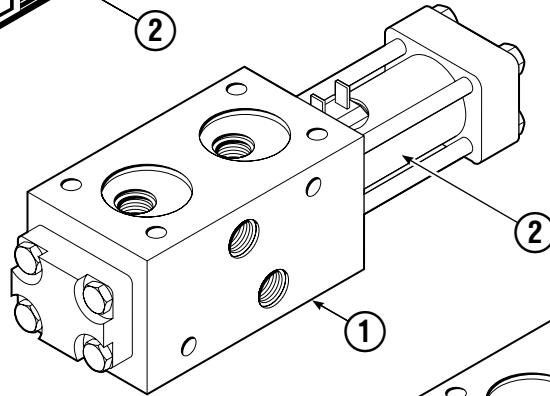
REF	QTY	PART NO.	DESCRIPTION
		683221	Solenoid Adaption Group-ITA II
1	1	●	Coil
2	1	●	Solenoid Valve
3	1	669432	Diode
4	4	601676	Fitting, 6-6
5	1	686518	Tube-ITA II
6	1	686517	Tube-ITA II
7	3	6287	Lockwasher, M8
8	3	765329	Cap screw, M8x1,25x20
9	1	683225	Tube
10	1	683226	Tube
11	2	666984	Fitting, 4-6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

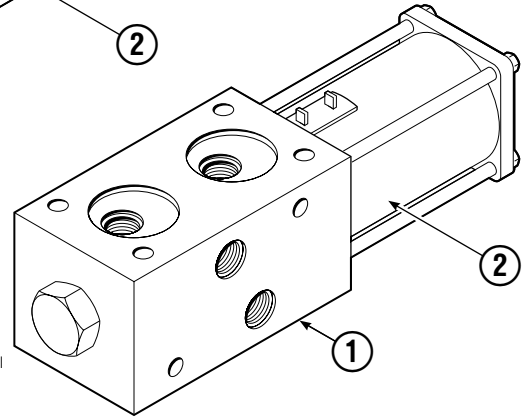
# Solenoid Valves



**New Style  
Waterman**



**Old  
Waterman**



**Racine**

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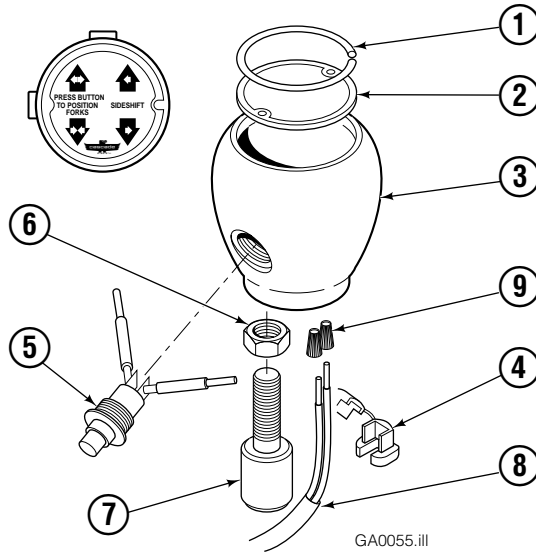
**NOTE:** The Waterman new style solenoid with black coil, Waterman old style solenoid and Racine solenoid valve assemblies are interchangeable as a unit. Replacement coils **must** match the valves. If one brand is preferred over another you **must** specify both the part number and brand name.

REF	QTY	New Style Waterman		Old Style Waterman	Racine	DESCRIPTION
		No. 6 SAE	No. 8 SAE			
		PART NO.	PART NO.	PART NO.	PART NO.	
1	1	200585	200548	614089	614089	Solenoid Valve-12V
1	1	200586	200549	614091	614091	Solenoid Valve-24V
1	1	200587	200550	<b>614092</b>	<b>614092</b>	<b>Solenoid Valve-36V</b>
1	1	200588	200254	614093	614093	Solenoid Valve-48V
1	1	—	—	614094	—	Solenoid Valve-72V
2	1	200255	200255	611458	665044	Coil-12V
2	1	200256	200256	611460	665045	Coil-24V
2	1	200257	200257	611461	665046	Coil-36V
2	1	200258	200258	614097	665047	Coil-48V
2	1	—	—	614098	—	Coil-72V
		—	—	685072	685012	Service Kit

Reference: S-962.

# Control Knob

## Two Function – Sideshift Only



<b>35E/45E</b>			
REF	QTY	PART NO.	DESCRIPTION
		673130	Knob Group
1	1	665250	Snap Ring
2	1	673131	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.

**Do you have questions you need answered right now?** Call your nearest Cascade Parts Department.

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