



Parts Manual

90F Paper Roll Clamp

Serial Numbers 206689 through 681295

Manual Number 683184 R-1

cascade[®]

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How To Use This Manual

Introduction

This manual illustrates service replacement parts for standard production Cascade 90F Paper Roll Clamps.

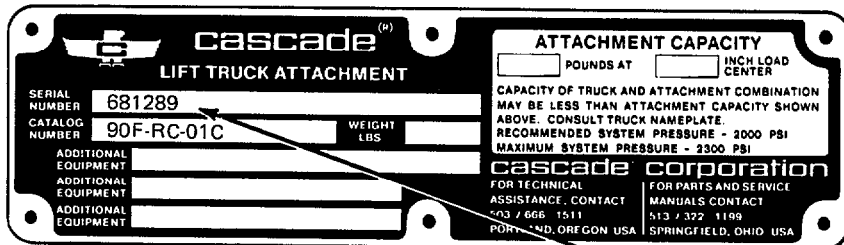
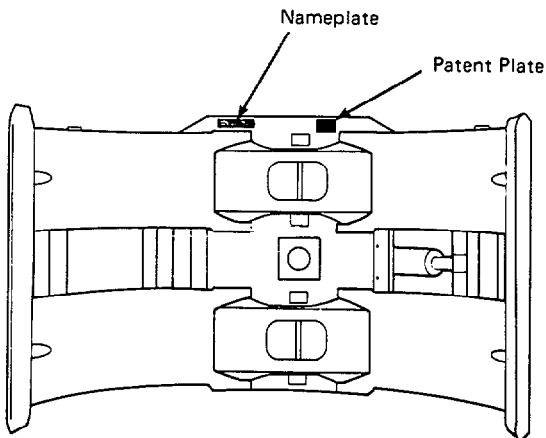
The parts manuals for attachments designed by the Application Engineering Department have an A.E.D. designation on the cover of the manual.

This standard attachment manual is not interchangeable with an A.E.D. manual since it does not reflect the special engineering of an A.E.D. attachment.

To locate a service replacement part for a standard attachment, follow these steps.

1. Locate the Nameplate

The nameplate is attached to the top of the arm frame. If the nameplate is missing, all necessary information is stamped into the baseplate at the same location.



2. Note the Serial Number

Record the six-digit Serial Number. See the example.

3. Refer to Serial Number Index

Locate your Serial Number in the Serial Number Index on the following page.

IMPORTANT: DO NOT USE THIS MANUAL TO ORDER PARTS FOR AN A.E.D. ATTACHMENT. Contact Cascade Corporation to obtain the correct parts manual. You must supply the serial number and all additional equipment numbers to order the correct manual.

4. Ordering

Retail Customers - Cascade Service Replacement Parts and Service Literature are sold through authorized lift truck dealers. To order, contact the lift truck dealer of your choice.

Lift Truck Dealers - To order Service Replacement Parts or Service Literature, contact:

Cascade Parts Depot
2501 Sheridan Avenue
Springfield, Ohio 45505
Telephone: 513-322-1199
Telex: 279563
FAX: 513-325-9270

5. Parts Log

We have supplied a parts ordering log located on the last page. Use this log as a permanent record of parts ordered from this manual.



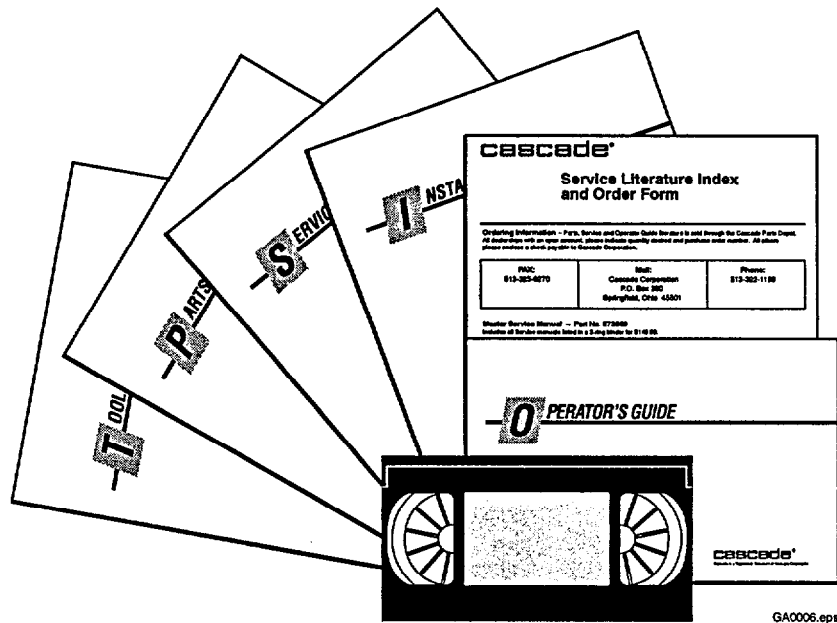
WARNING: For the safety of yourself and others, DO NOT install any parts, unless you have thoroughly reviewed the appropriate installation and service manuals. For additional information, call 1-800-CAS-CADE (227-2233)

S/N 681289

Serial Number Index

Serial Number	Maximum Handling Capacity	Frame Group Page	Common Components Page	Drive Group Page	Hosing Group Page	Cylinder Page	Arm Group Page	Mounting Group Page
681289	60"	1	3	5	8	11,12	14,15	18
681291	60"	1	3	5	7	12,13	14,15	18
681293	72"	1	3	5	8	11,12	14,15	18
681295	72"	1	3	5	7	12,13	14,15	18
206693	72"	2	4	5	8	11,12	16,17	18
206695	72"	2	4	5	7	12,13	16,17	18
206689	60"	2	4	5	8	11,12	16,17	18
206691	60"	2	4	5	7	12,13	16,17	18

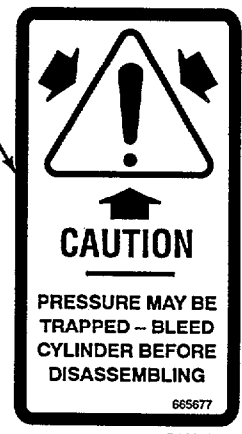
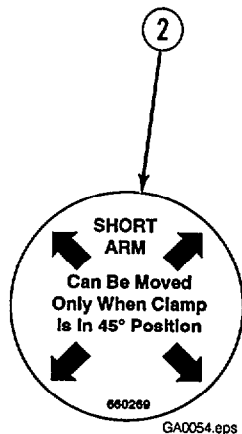
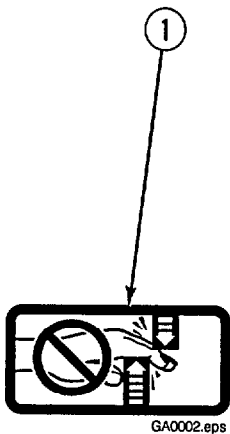
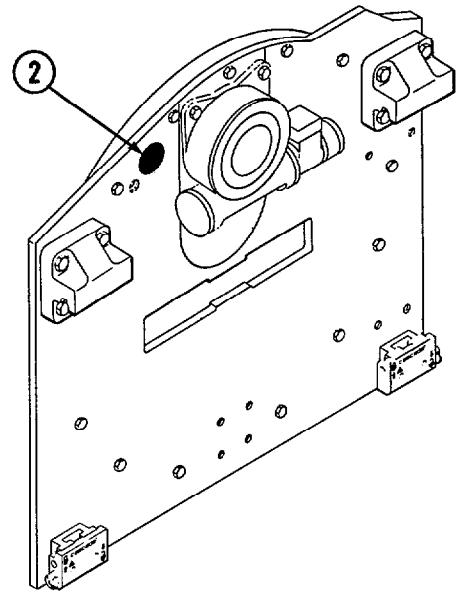
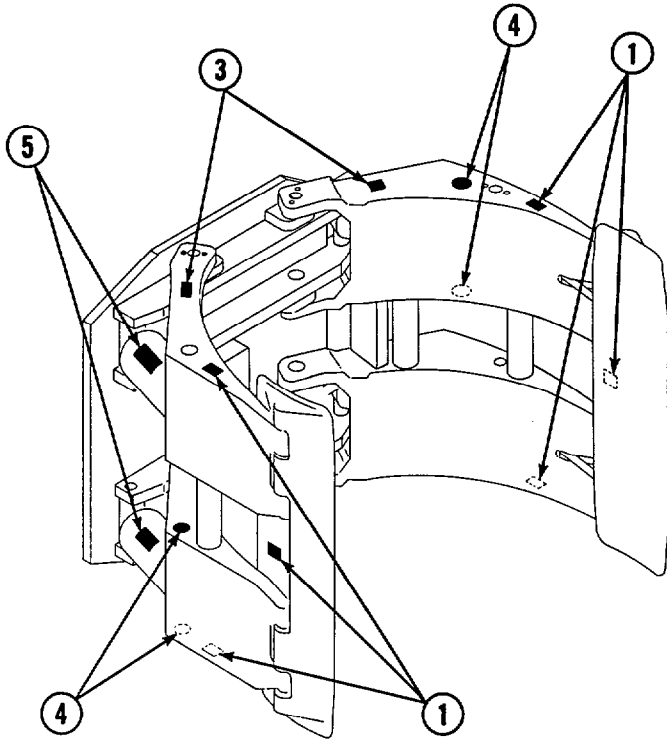
Publications



GA0006.eps

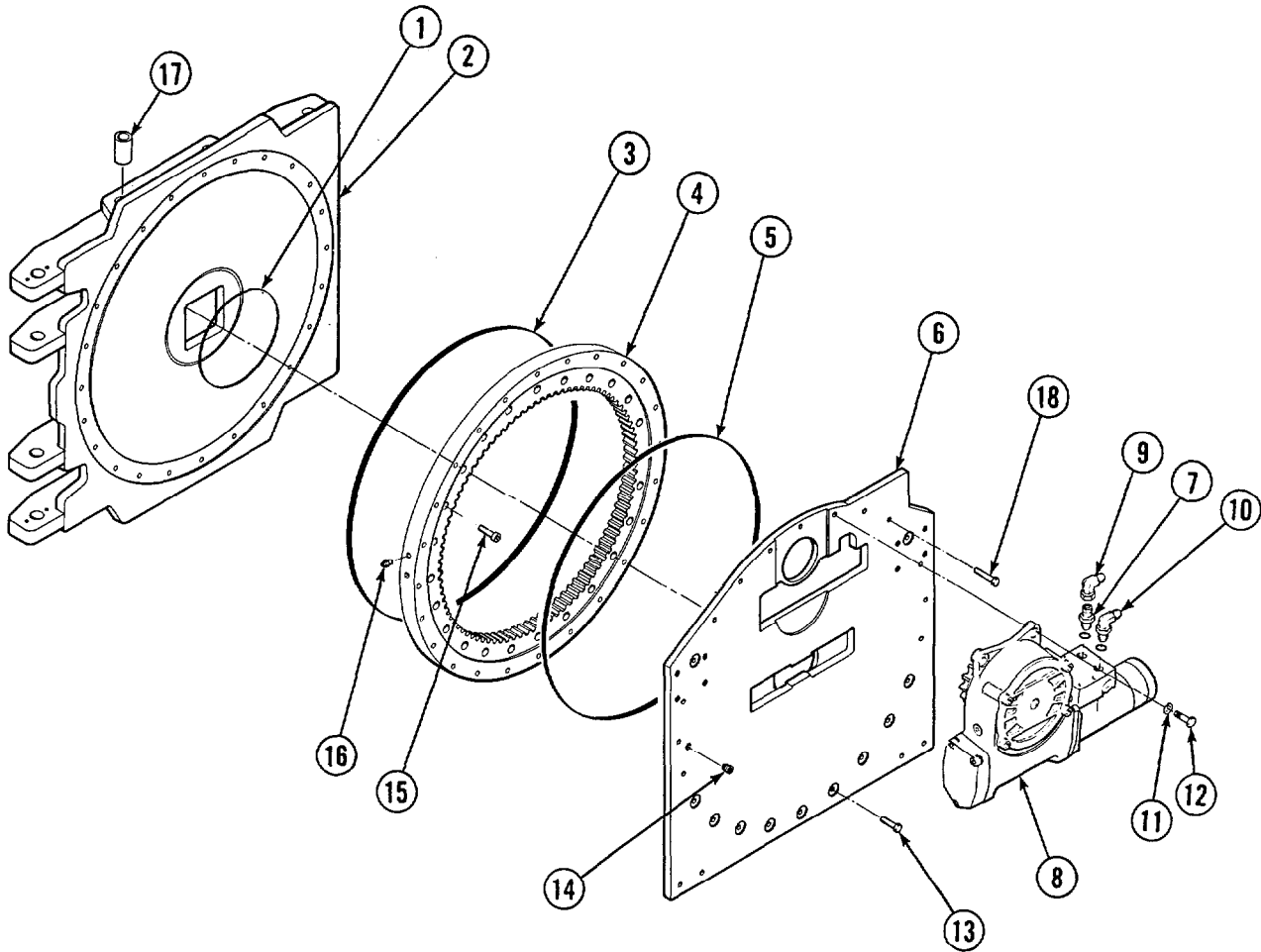
90F	
PART NO.	DESCRIPTION
683184	Parts Manual
674512	Service Manual
674509	Operators Guide
674510	Installation Instructions-Fixed Frame
677555	Driver Training Video-VHS
678363	Troubleshooting Video-VHS
680664	Servicing Cascade Cylinders-VHS
679929	Tool Catalog
673964	Literature Index Order Form

Safety Decals



90F			
REF	QTY	PART NO.	DESCRIPTION
1	6	665595	No Hand Hold Decal
2	3	660269	Short Arm Rotation Position Decal
3	4	656038	Caution Decal
4	4	679150	No Step Decal
5	4	665677	Trapped Pressure Decal

Frame Group

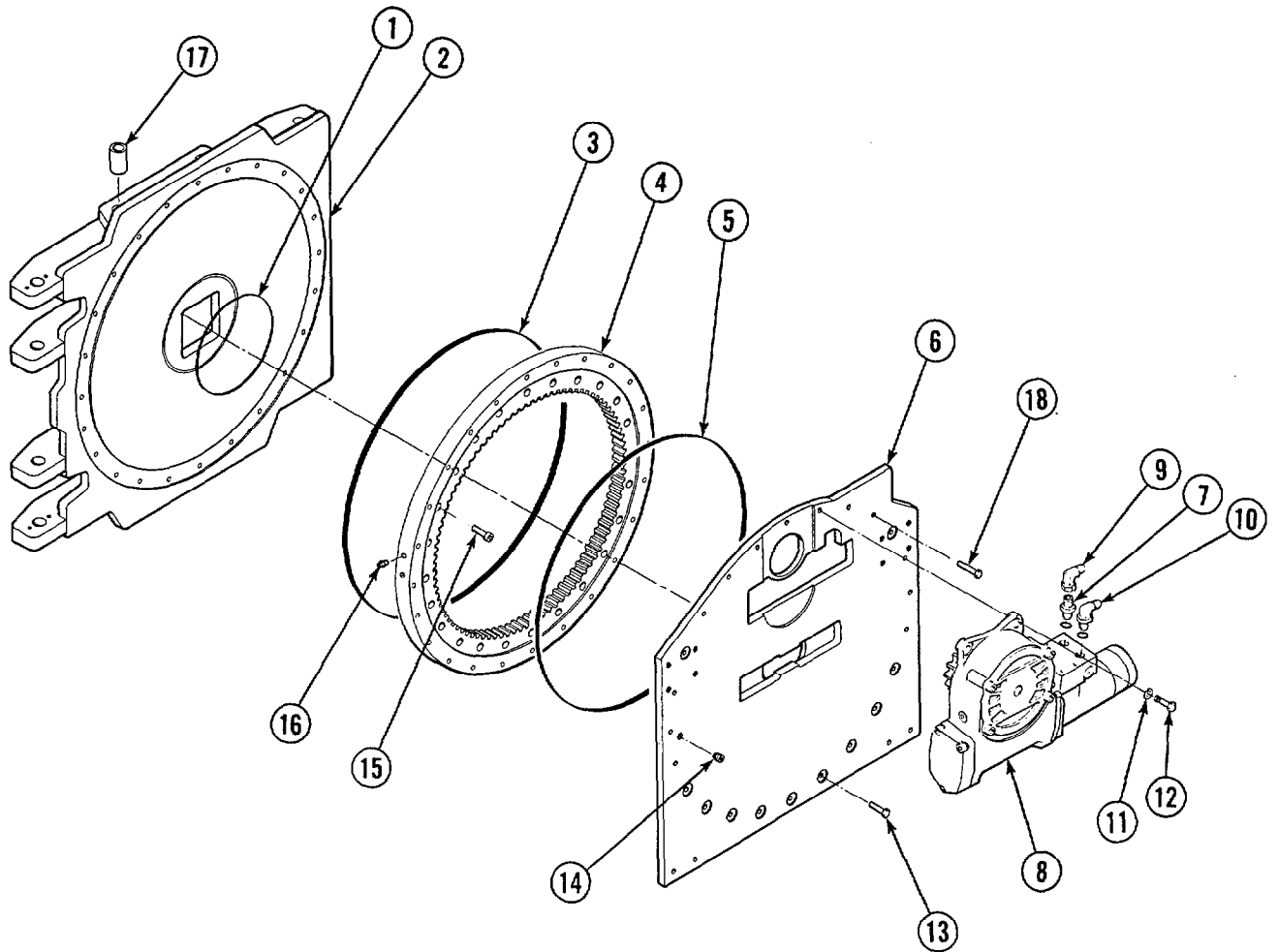


90F							
REF	QTY	PART NO.	DESCRIPTION	REF	QTY	PART NO.	DESCRIPTION
		681058	Frame Group	10	1	601250	Fitting, 8-8
1	1	670931	Seal	11	4	6290	Lockwasher, 1/2 ID
*2	1	681048	Faceplate	12	4	763021	Capscrew, M12 x 30-8.8
3	1	681015	Seal	13	11	206579	Capscrew
■ 4	1	681010	Bearing Assembly	14	1	6605	Plug
5	1	681016	Seal	15	24	682918	Capscrew
6	1	681004	Baseplate	16	1	7401	Grease Fitting
7	1	601377	Fitting, 8-8	17	8	675007	Bushing
● 8	1	675639	Drive Group	18	13	206578	Capscrew
9	1	605761	Fitting, 8-8				

3753nr-1

- Includes items 3 and 5.
- See page 5 for replacement parts breakdown.
- * Includes item 17 installed.

Frame Group

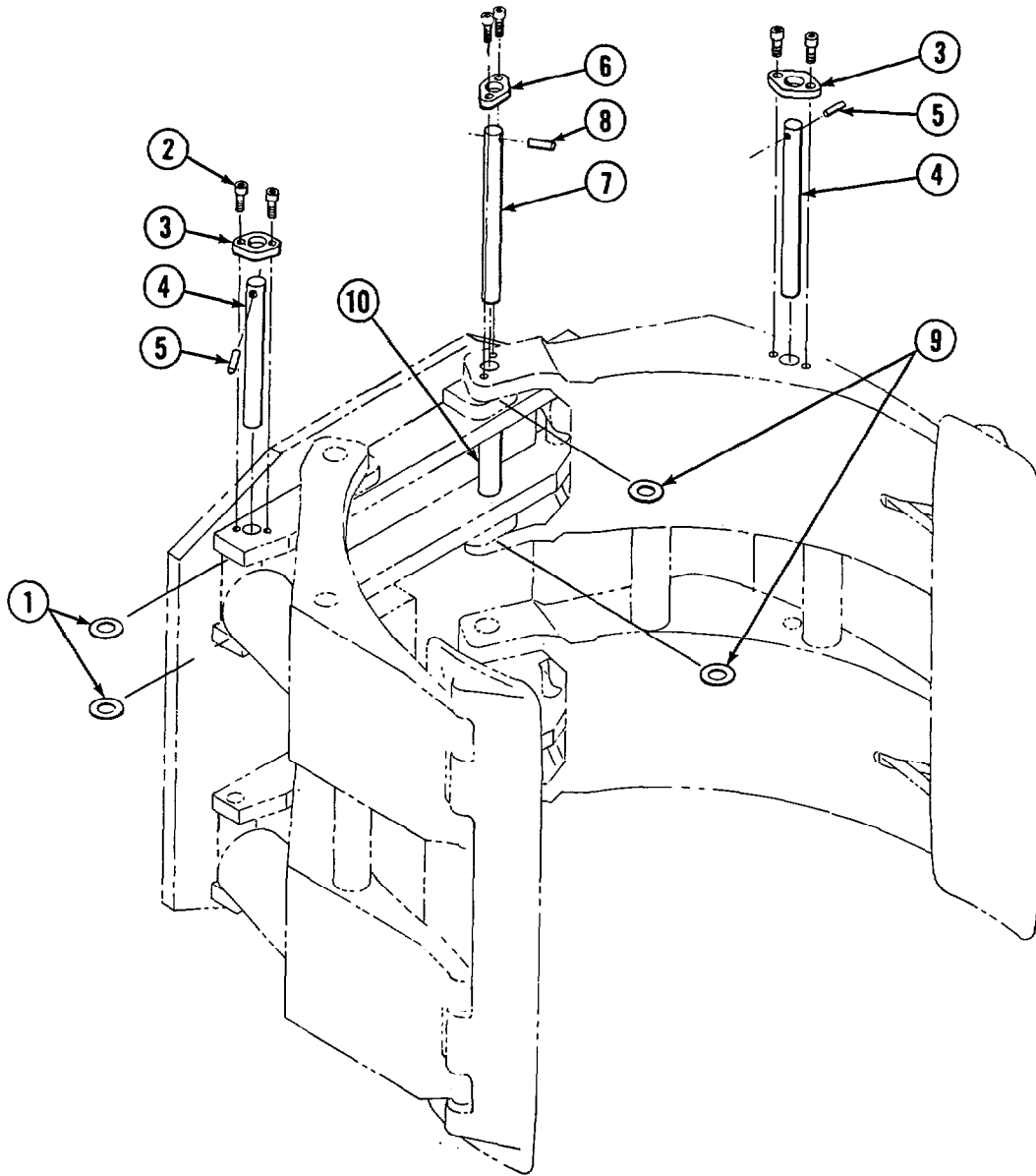


90F							
REF	QTY	PART NO.	DESCRIPTION	REF	QTY	PART NO.	DESCRIPTION
		206769	Frame Group	10	1	601250	Fitting, 8-8
1	1	670931	Seal	11	4	6290	Lockwasher, 1/2 ID
*2	1	206703	Faceplate	12	4	763021	Capscrew, M12 x 30-8.8
3	1	681015	Seal	13	11	206579	Capscrew
■4	1	681010	Bearing Assembly	14	1	6605	Plug
5	1	681016	Seal	15	24	682918	Capscrew
6	1	681004	Baseplate	16	1	7401	Grease Fitting
7	1	601377	Fitting, 8-8	17	8	675007	Bushing
●8	1	675639	Drive Group	18	13	206578	Capscrew
9	1	605761	Fitting, 8-8				

3753nr-1

- Includes items 3 and 5.
- See page 5 for replacement parts breakdown.
- * Includes item 17 installed.

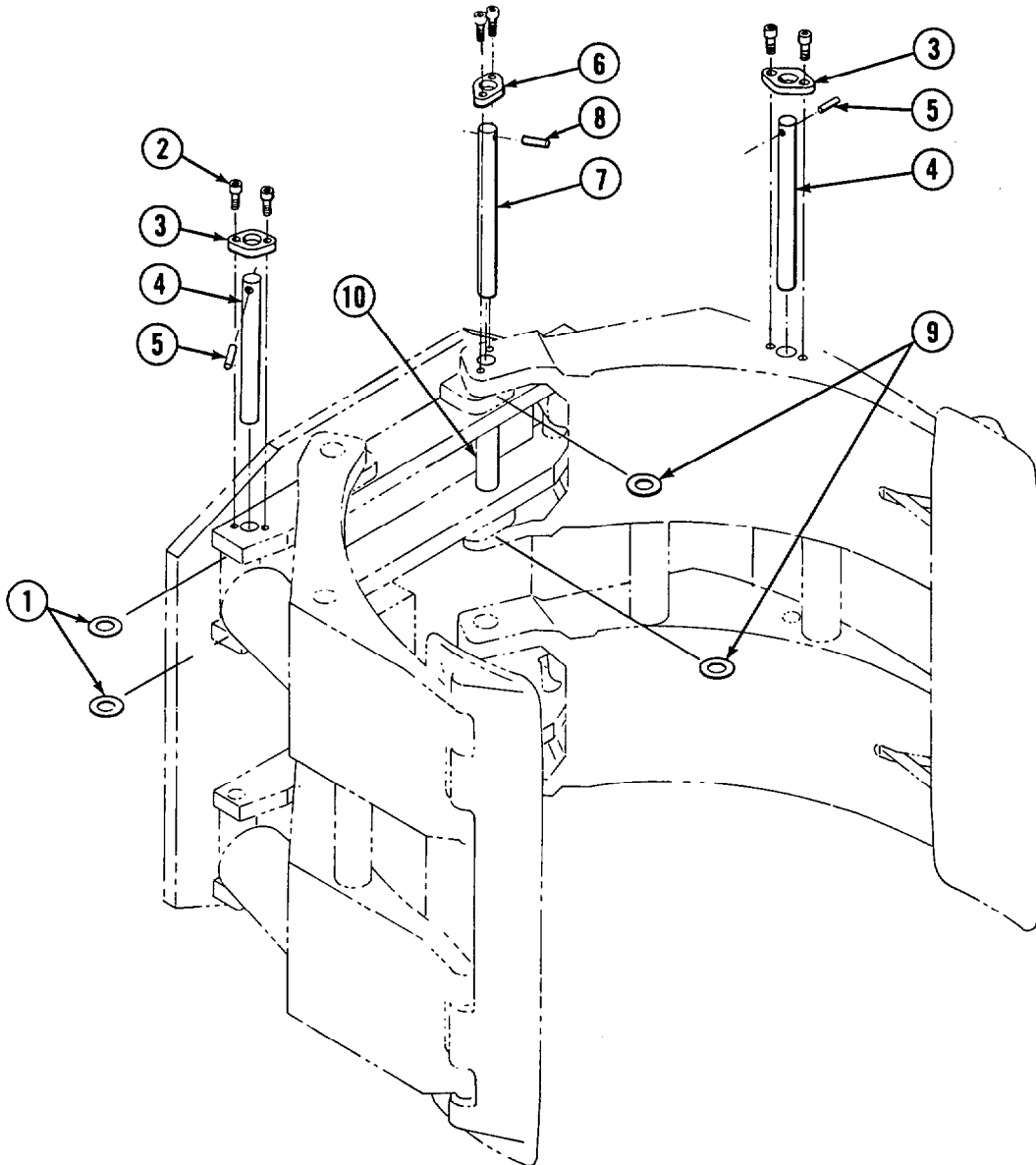
Common Components Group



90F			
REF	QTY	PART NO.	DESCRIPTION
		681288	Components Group
1	8	660200	Shim
2	24	768793	Capscrew, M8x16-8.8
3	8	674828	Retainer
4	8	676088	Pin
5	8	673385	Drive Pin
6	4	674830	Retainer
7	4	675022	Pin
8	4	675086	Drive Pin
9	16	673379	Shim
10	4	681673	Spacer

29001-260/8

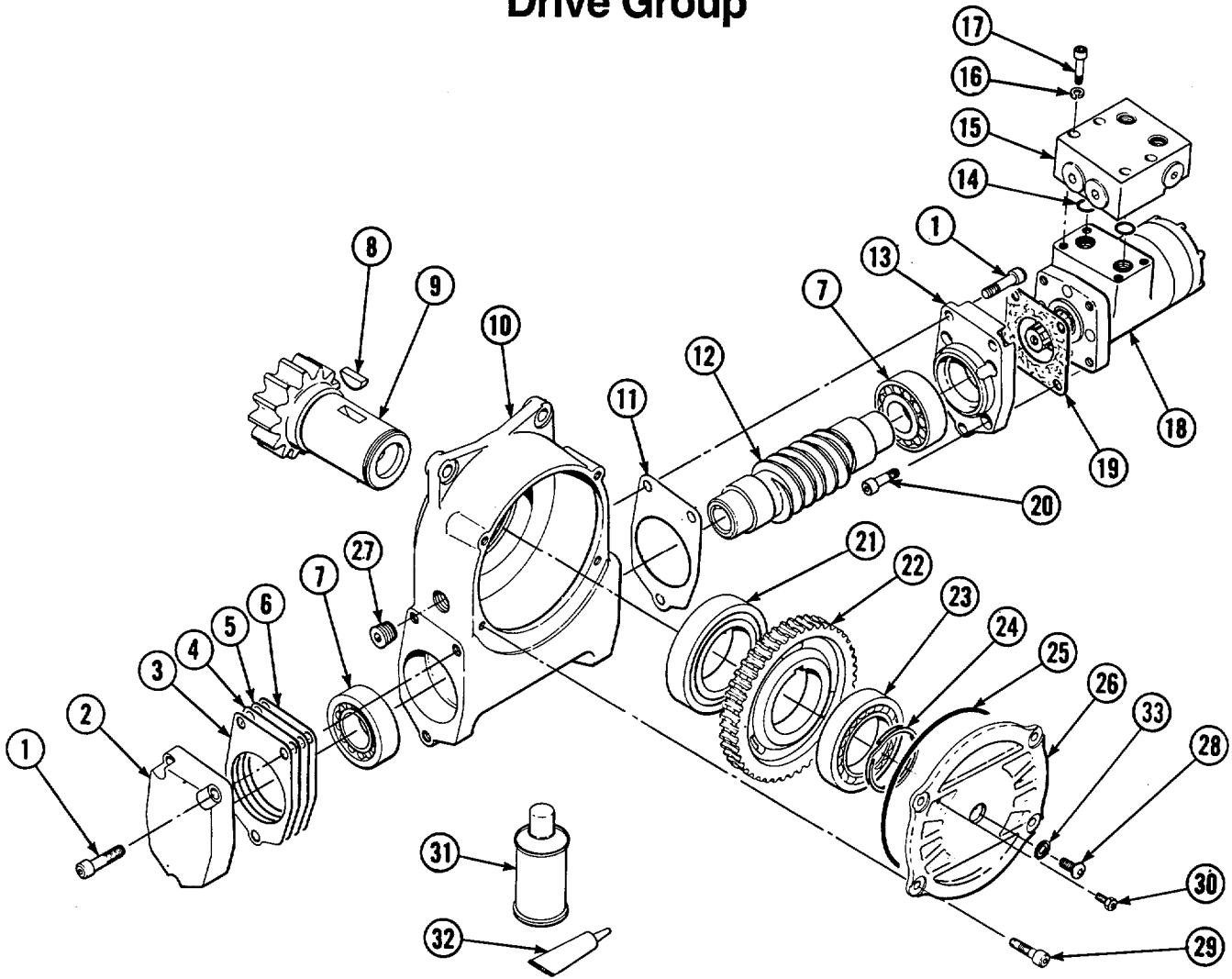
Common Components Group



90F			
REF	QTY	PART NO.	DESCRIPTION
		206686	Components Group
1	8	660200	Shim
2	24	768809	Capscrew, M8 x 16-8.8
3	8	206589	Retainer
4	8	676088	Pin
5	8	673385	Drive Pin
6	4	206591	Retainer
7	4	675022	Pin
8	4	675086	Drive Pin
9	16	673379	Shim
10	4	681673	Spacer

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Drive Group

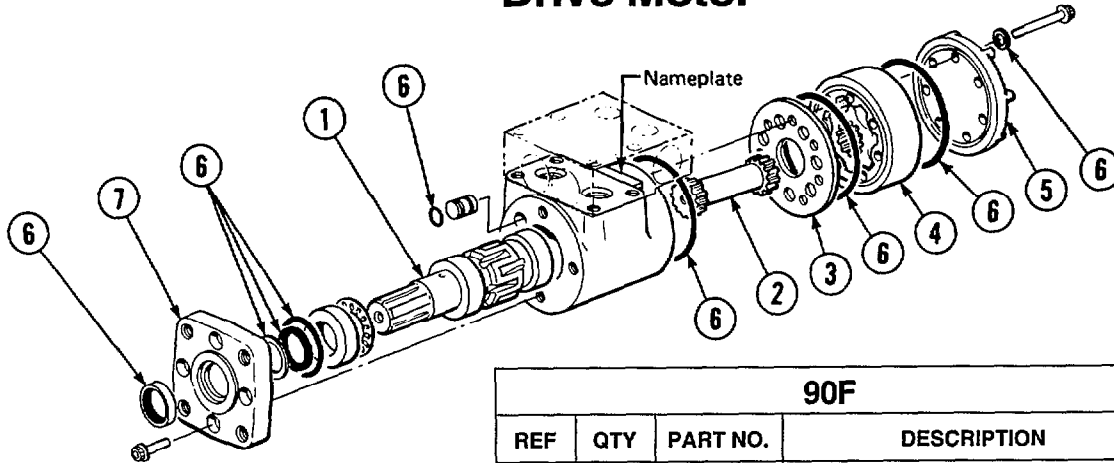


90F							
REF	QTY	PART NO.	DESCRIPTION	REF	QTY	PART NO.	DESCRIPTION
		675639	Drive Group with Motor	19	1	670575	Gasket
	■	675633	Drive Group without Motor	20	4	4468	Capsscrew, 3/8 NC x .75 GR8
1	6	607071	Capsscrew, 7/16 NC x 1.0 GR8	21	1	670580	Bearing
2	1	676855	Cover	22	1	675609	Worm Gear
3	●	674513	Shim - .005" (Blue)	23	1	670581	Bearing
4	●	670574	Shim - .010" (Brown)	24	1	7214	Snap Ring
5	●	671757	Shim - .015" (Pink)	25	1	643423	O-Ring
6	●	671758	Shim - .020" (Yellow)	26	1	670567	Cover
7	2	670579	Bearing	27	1	6609	Plug
8	1	670582	Key	28	1	4874	Capsscrew, 3/8 NC x .50 GR8
9	1	670556	Pinion	29	4	671535	Capsscrew, 5/16 NC x .75
10	1	670565	Housing	30	1	644010	Relief Fitting
11	1	686465	Fiber Gasket	31	1	656300	Gear Box Lube - 48 oz.
12	1	675608	Worm	32	1	668184	Sealant
13	1	670570	Adapter	33	1	603680	Seal
14	2	2705	Seal			670578	Shim Service Kit (items 3-6, 11, 25 & 32)
*15	1	670549	Check Valve			675637	Bearing Service Kit (items 21 & 32)
16	4	6444	Lockwasher			675638	Service Kit (items 3-7, 11 & 25)
17	4	607059	Capsscrew, 5/16 NC x 1.75 GR8			206394	Drive Motor Kit (items 11, 14, 18, 19, 32)
*18	1	206392	Drive Motor				

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- Includes all items except 15, 17, and 18.
- Quantity as required.
- * See page 6 for replacement parts breakdown.

Drive Motor



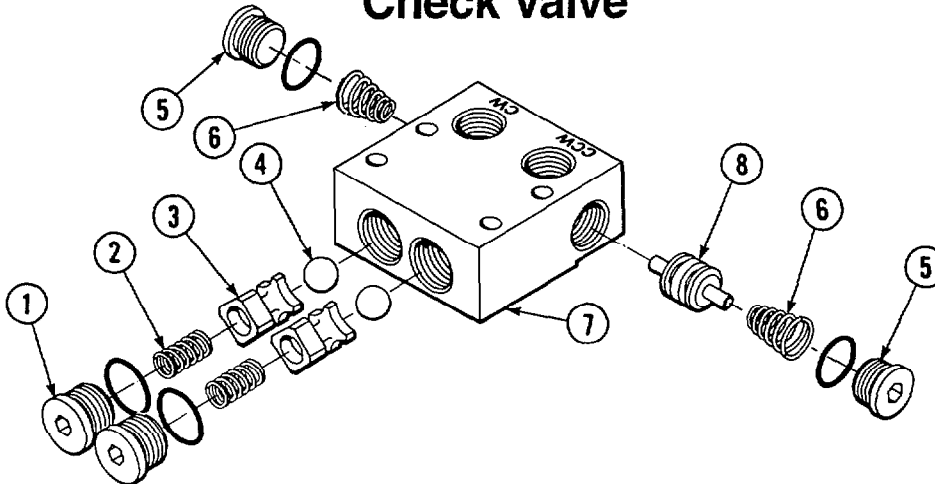
90F			
REF	QTY	PART NO.	DESCRIPTION
		206392	Drive Motor
1	1	675478	Shaft
2	1	675477	Drive
3	1	675479	Spacer Plate
■ 4	1	675480	Geroter Set (101-1768-007)
	1	685075	Geroter Set (101-1768-009)
5	1	675482	End Cap
● 6	1	206405	Service Kit
■ 7	1	685089	Flange (101-1768-007)
	1	685090	Flange (101-1768-009)

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Cascade provides service replacement parts for the listed parts only. Due to cost, if other parts need replacement, the complete drive motor should be replaced.

- See Nameplate under valve for correct part number of Geroter Set and Flange.
- Compatible with water glycol based hydraulic fluids.

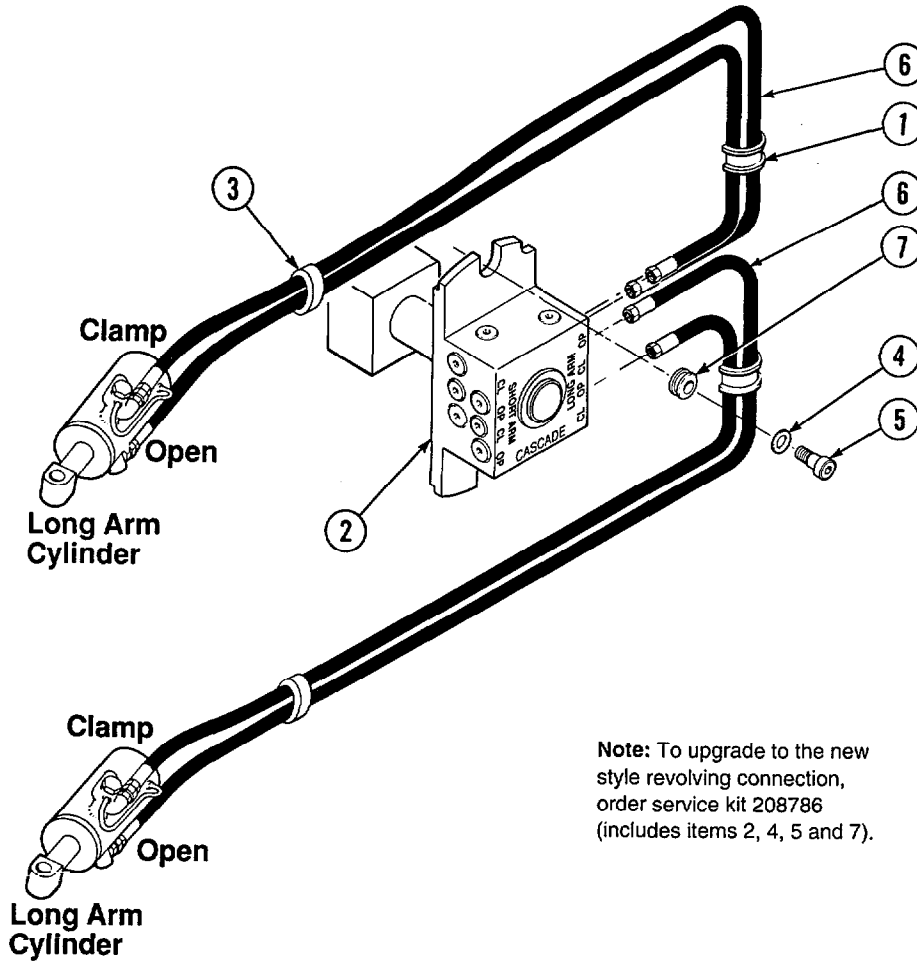
Check Valve



90F			
REF	QTY	PART NO.	DESCRIPTION
		670549	Check Valve Assembly
1	2	609543	Plug
2	2	670552	Spring
3	2	670551	Guide
4	2	7020	Ball
5	2	602580	Plug
6	2	673989	Spring
7	1	670550	Body
8	1	670553	Spool

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Hosing Group Fixed Short Arm



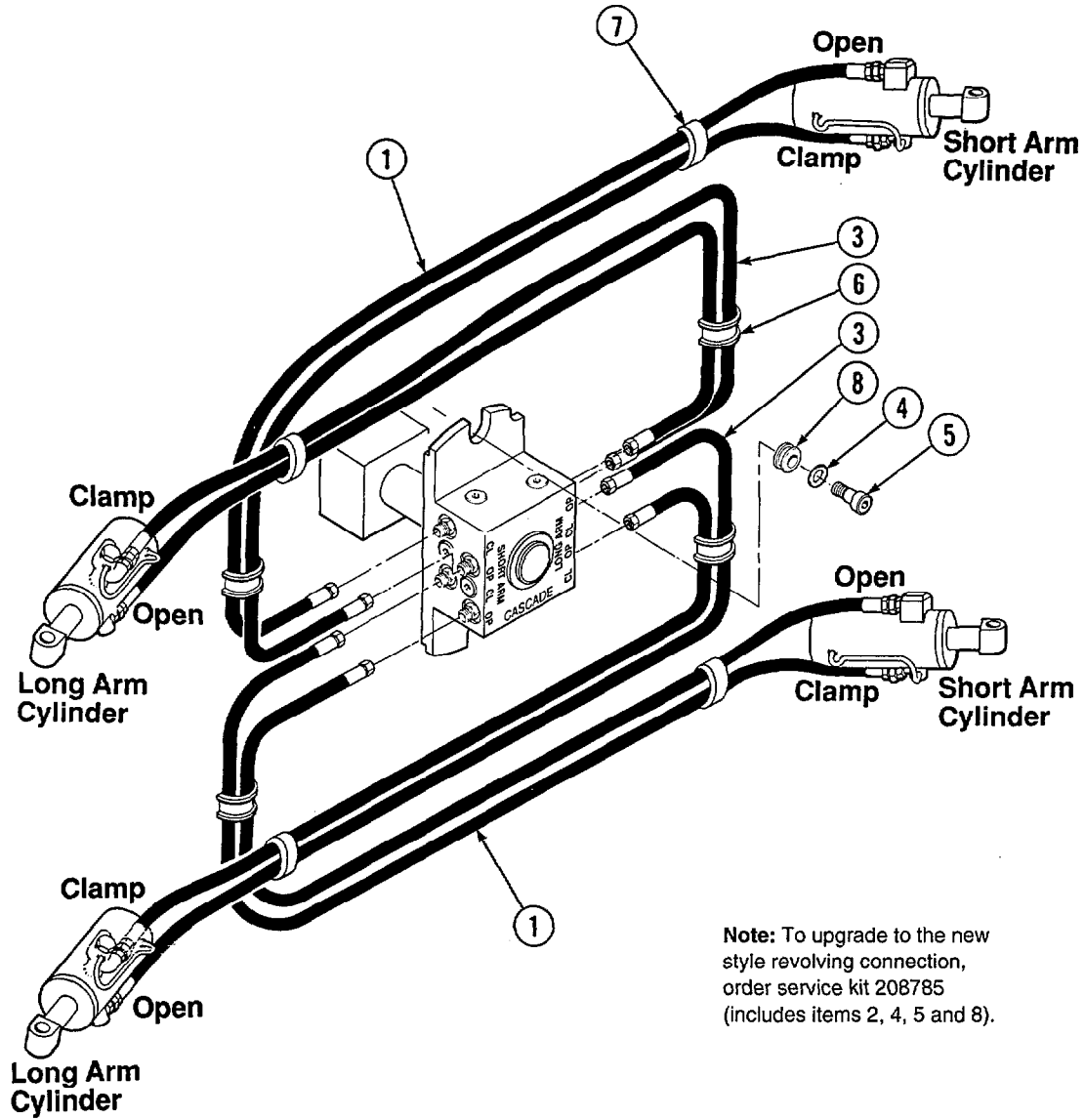
Note: To upgrade to the new style revolving connection, order service kit 208786 (includes items 2, 4, 5 and 7).

90F			
REF	QTY	PART NO.	DESCRIPTION
		681287	Hosing Group
1	2	680114	Insert
• 2	1	208767	Revolving Connection
3	2	673417	Segment
4	2	209019	Washer
5	2	209210	Capscrew
6	4	681286	Hose
7	2	208764	Grommet

• See page 9 for replacement parts breakdown.

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Hosing Group Positioned Short Arm



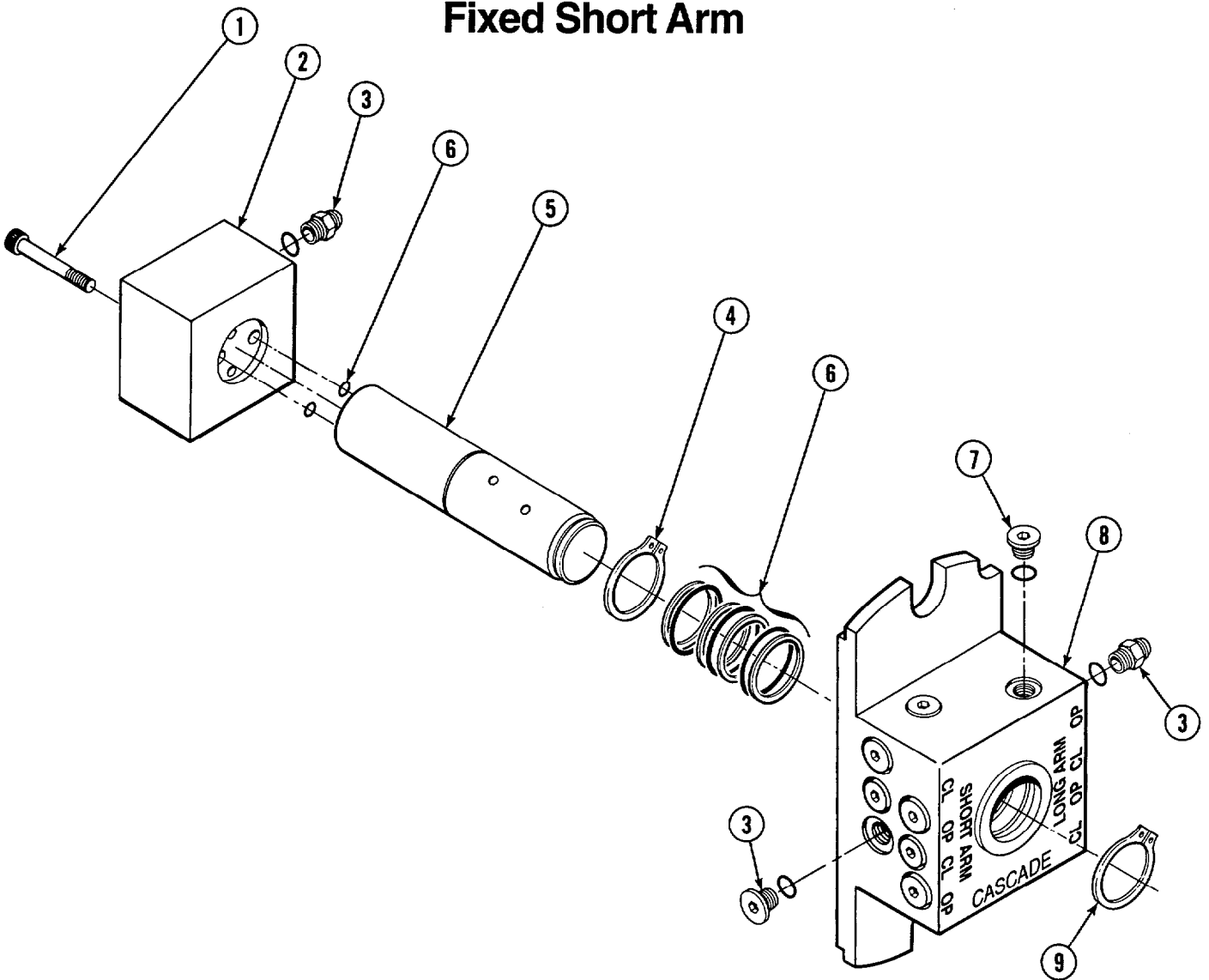
Note: To upgrade to the new style revolving connection, order service kit 208785 (includes items 2, 4, 5 and 8).

90F			
REF	QTY	PART NO.	DESCRIPTION
		681280	Hosing Group
1	4	680238	Hose
• 2	1	208766	Revolving Connection
3	4	681286	Hose
4	2	209019	Washer
5	2	209210	Cap screw
6	4	680114	Insert
7	4	673417	Segment
8	2	208764	Grommet

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• See page 10 for replacement parts breakdown.

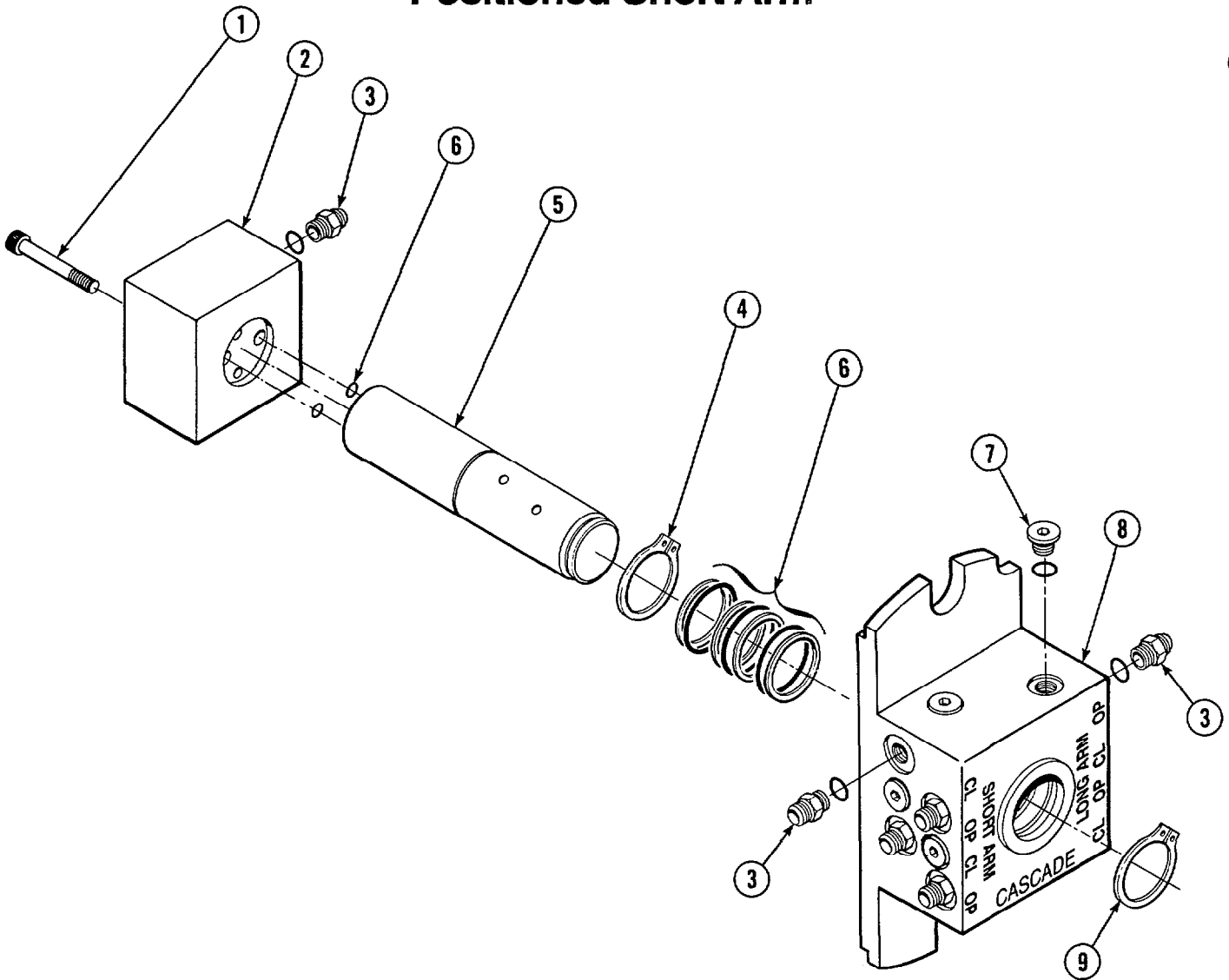
Revolving Connection Fixed Short Arm



90F			
REF	QTY	PART NO.	DESCRIPTION
		208767	Revolving Connection
1	2	768798	Capscrew, M8 x 45-8.8
2	1	687300	End Block
3	4	604510	Plug, 6
4	1	7341	Snap Ring
5	1	687288	Shaft
6	1	681585	Service Kit
7	6	663694	Plug
8	1	208942	Body
9	1	3138	Snap Ring
10	6	604511	Fitting, 6-6

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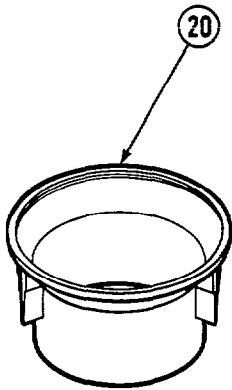
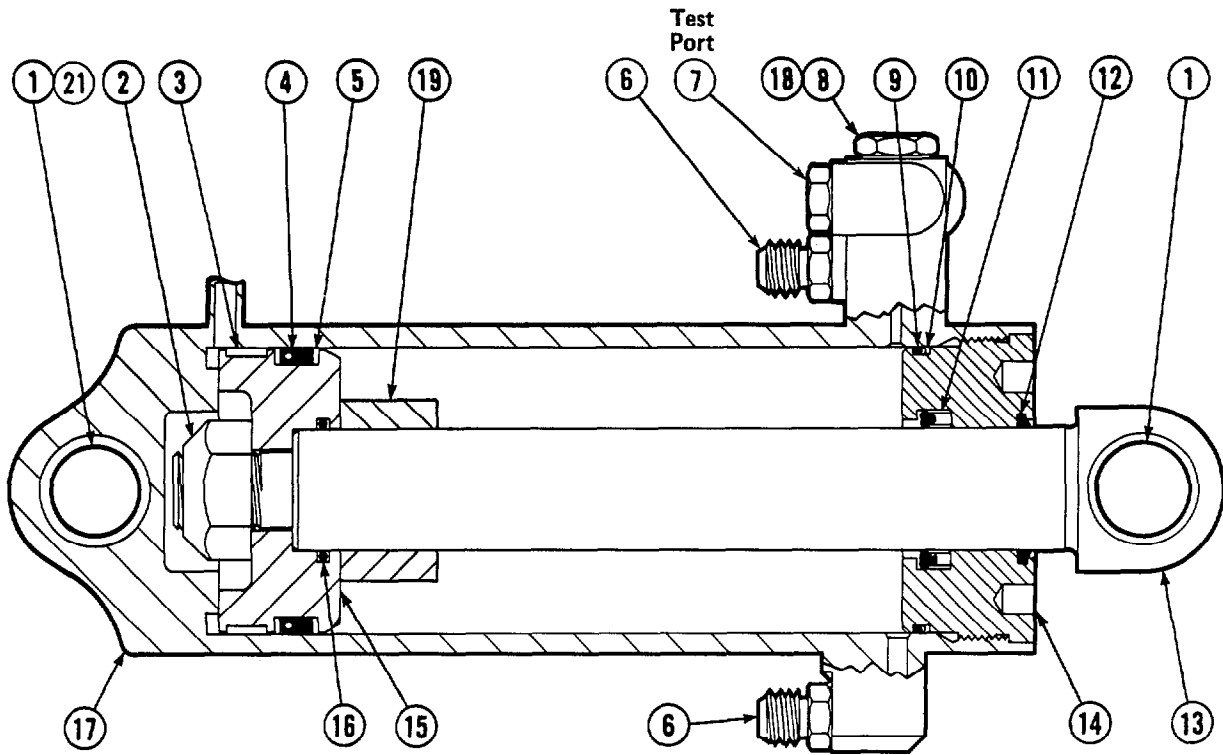
Revolving Connection Positioned Short Arm



90F			
REF	QTY	PART NO.	DESCRIPTION
		208766	Revolving Connection
1	2	768798	Capscrew, M8 x 45-8.8
2	1	687300	End Block
3	10	604511	Fitting, 6-6
4	1	7341	Snap Ring
5	1	687288	Shaft
6	1	681585	Service Kit
7	6	663694	Plug
8	1	208942	Body
9	1	3138	Snap Ring

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Short Arm Cylinder Positioned Short Arm

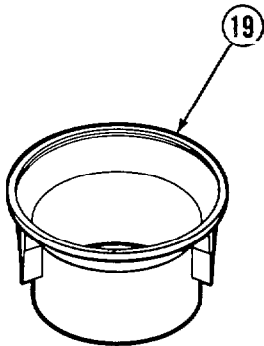
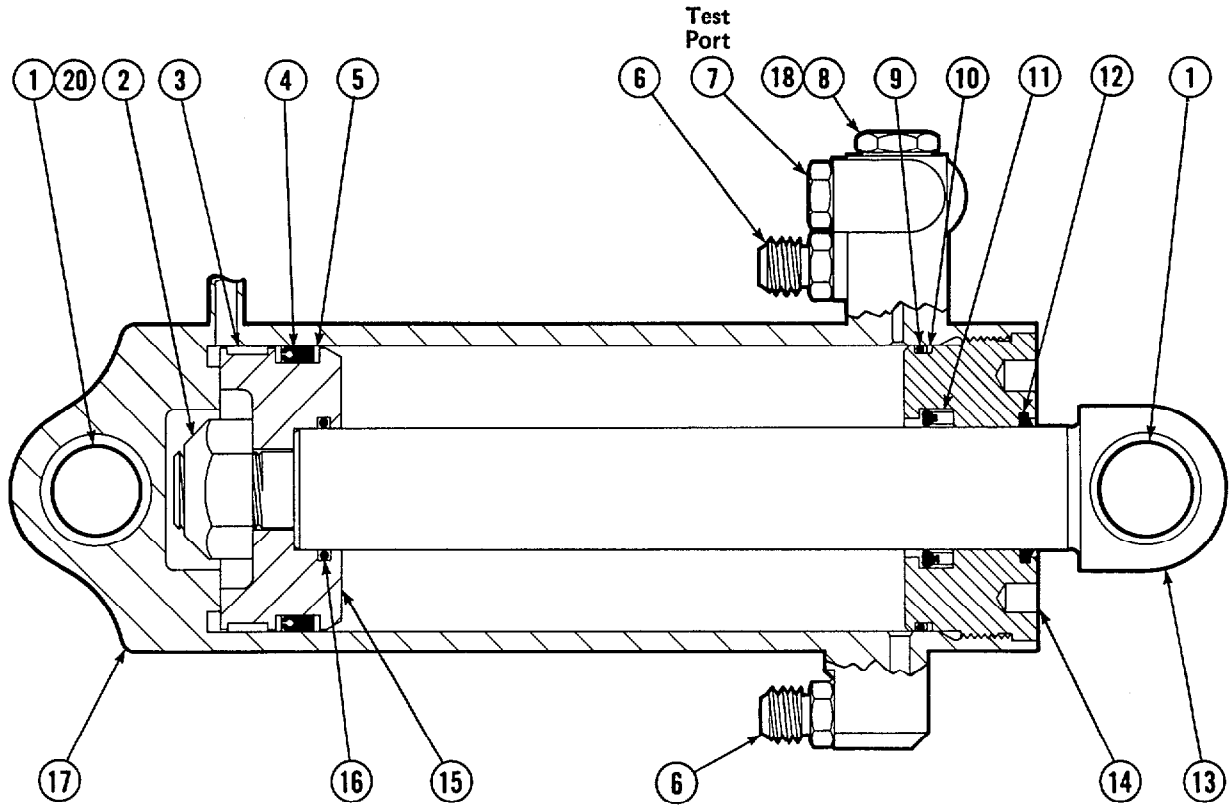


90F			
REF	QTY	60"/72" Roll	DESCRIPTION
		PART NO.	
		557363	Cylinder Assembly
1	3	674843	Bearing
2	1	560997	Nut
● 3	1	660769	Bearing
● 4	1	662462	Seal
● 5	2	638295	Ring - Nylon
6	2	604511	Fitting, 6-6
7	1	556852	Fitting, 6
8	1	557212	Check Valve
● 9	1	2801	O-Ring
● 10	1	562731	Back-up Ring
● 11	1	554598	Seal
● 12	1	628047	Wiper
13	1	557393	Rod
14	1	555724	Retainer
15	1	557389	Piston
● 16	1	2722	O-Ring
17	1	555741	Shell
18	1	667516	Check Valve Service Kit
19	1	-	Spacer
● 20	1	672910	Seal Loader Kit
21	1	558835	Spacer
		555725	Service Kit

- Included in Service Kit 555725.
- Maximum Clamp handling capacity.

3753nr-4

Long Arm Cylinder

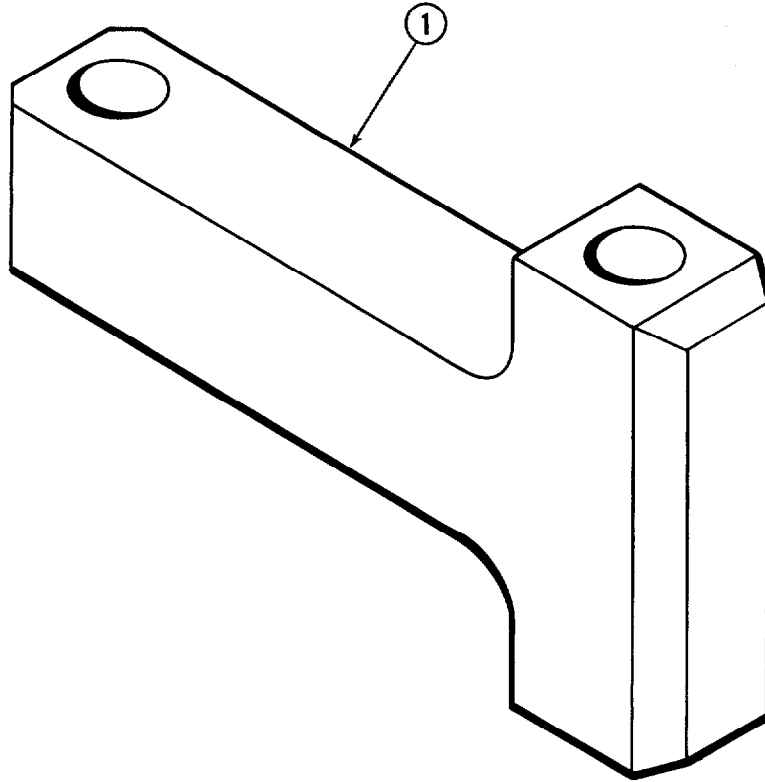


90F			
REF	QTY	60"/72" Roll	DESCRIPTION
		PART NO.	
		580171	Cylinder Assembly
1	3	674843	Bearing
2	1	560997	Nut
● 3	1	660769	Bearing
● 4	1	662462	Seal
● 5	2	638295	Ring – Nylon
6	2	604511	Fitting, 6-6
7	1	556852	Fitting, 6
8	1	557212	Valve
● 9	1	2801	O-Ring
● 10	1	562731	Back-up Ring
● 11	1	554598	Seal
● 12	1	628047	Wiper
13	1	557405	Rod
14	1	555724	Retainer
15	1	557389	Piston
● 16	1	2722	O-Ring
17	1	558353	Shell
18	1	667516	Check Valve Service Kit
● 19	1	672910	Seal Loader Kit
20	1	558835	Spacer
		555725	Service Kit

- Included in Service Kit 555725.
- Maximum Clamp handling capacity.

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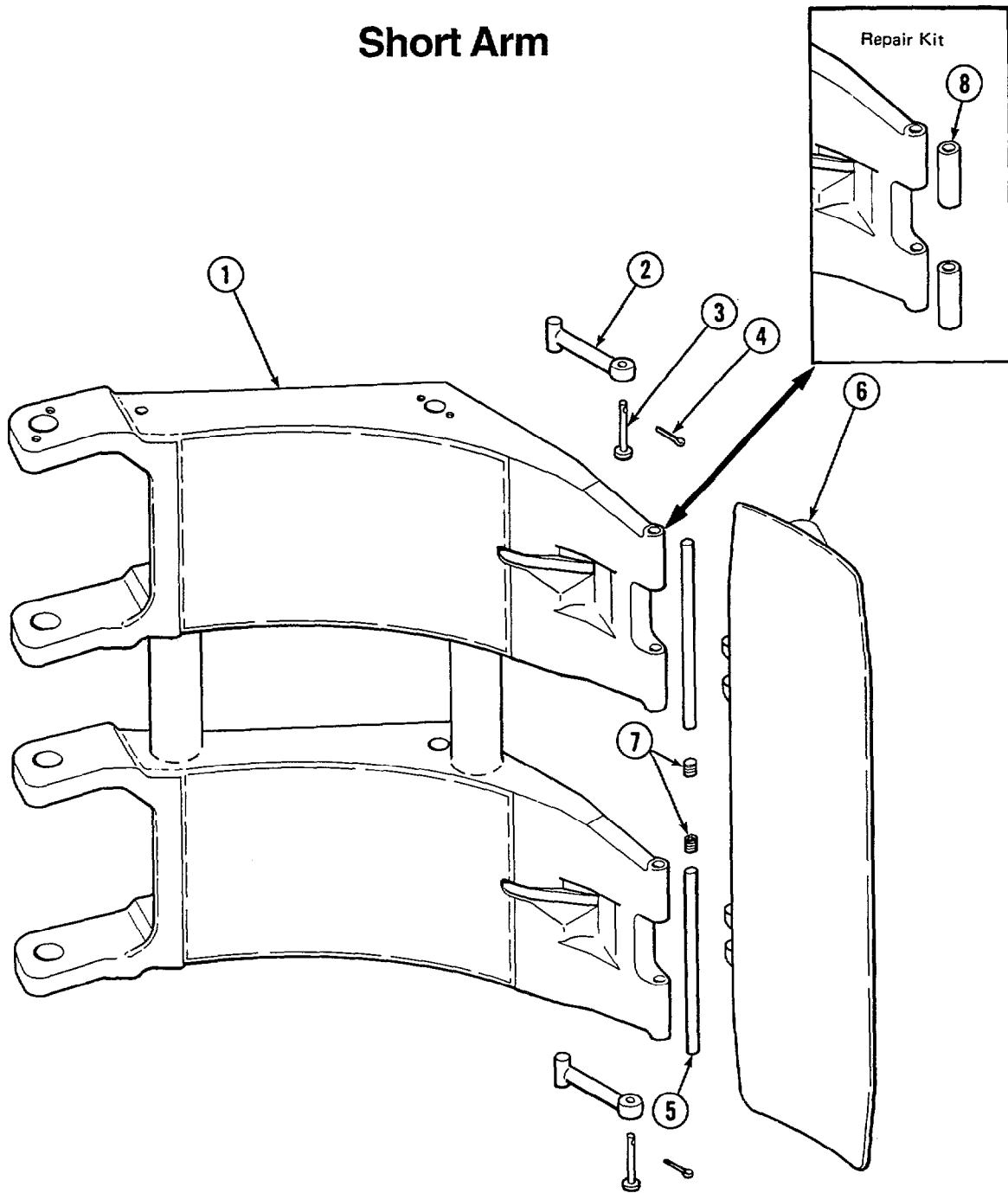
Rod Assembly Fixed Short Arm



90F			
REF	QTY	PART NO.	DESCRIPTION
1	1	675098	Rod

2900k-262/8

Short Arm

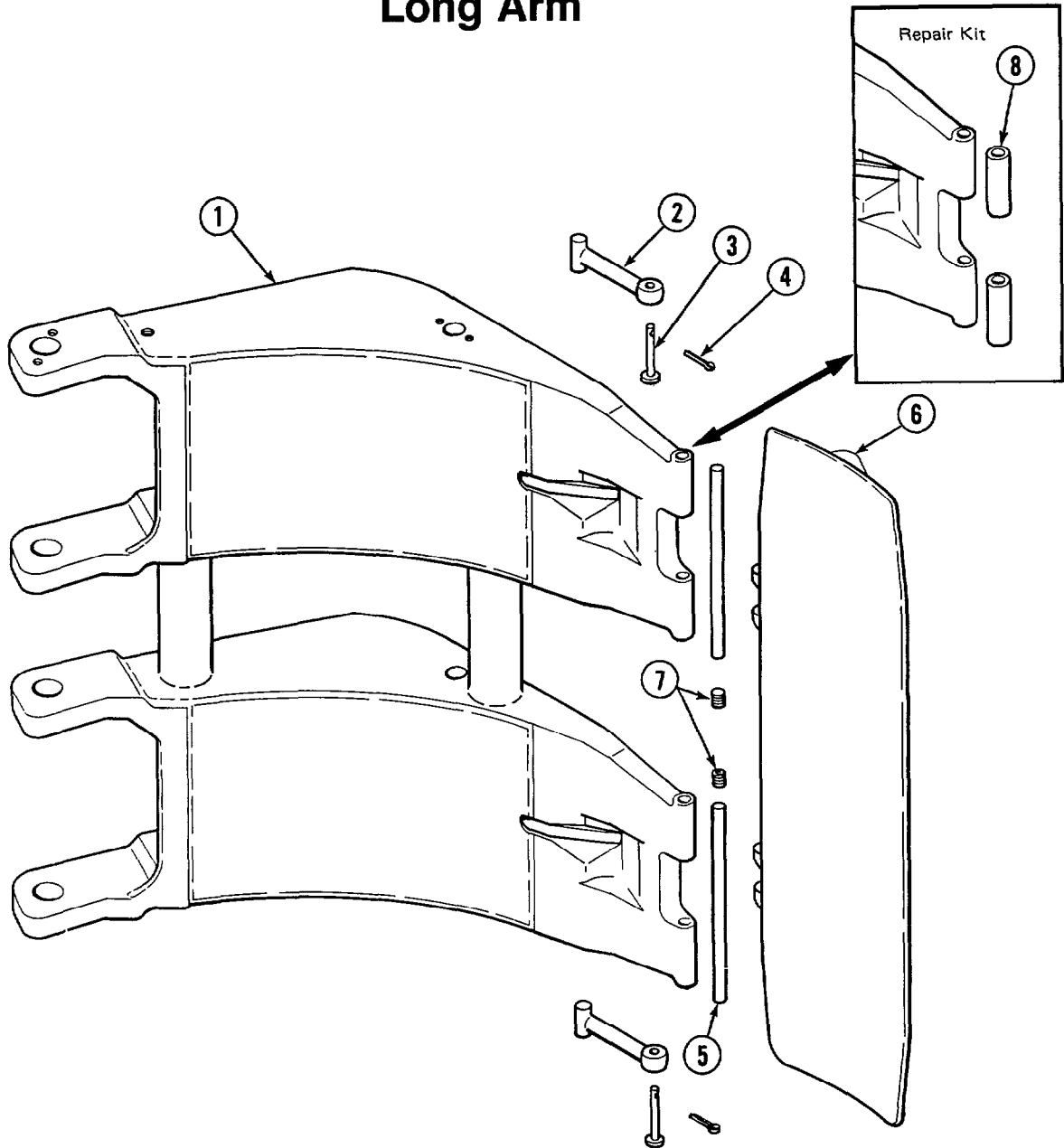


90F				
REF	QTY	60" Roll	72" Roll	DESCRIPTION
		PART NO.	PART NO.	
		681250	681257	Arm Assembly
1	1	681251	681258	Arm
2	2	674994	674994	Link
3	2	682978	682978	Clevis Pin
4	2	6525	6525	Cotter Pin
5	2	674993	674993	Pin
6	1	674962	674962	Contact Pad
7	2	689900	689900	Plug
8	1	676810	676810	Arm Tip Repair Kit

■ Maximum Clamp handling capacity.

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Long Arm

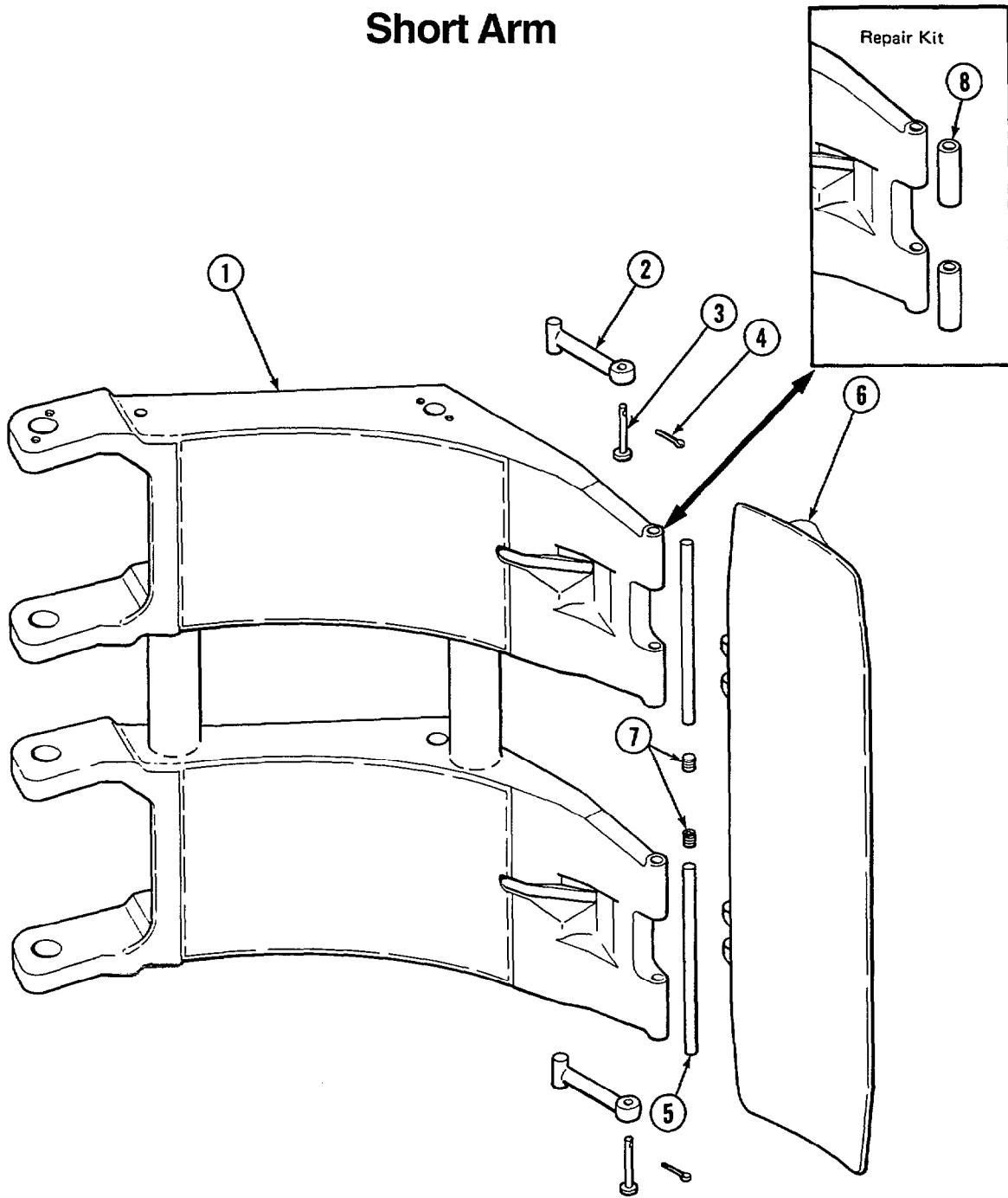


90F				
REF	QTY	60" Roll■	72" Roll■	DESCRIPTION
		PART NO.	PART NO.	
		681264	681272	Arm Assembly
1	1	681265	681273	Arm
2	2	674994	674994	Link
3	2	682978	682978	Clevis Pin
4	2	6525	6525	Cotter Pin
5	2	674993	674993	Pin
6	1	674962	674962	Contact Pad
7	2	689900	689900	Plug
8	1	676810	676810	Arm Tip Repair Kit

■ Maximum Clamp handling capacity.

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Short Arm

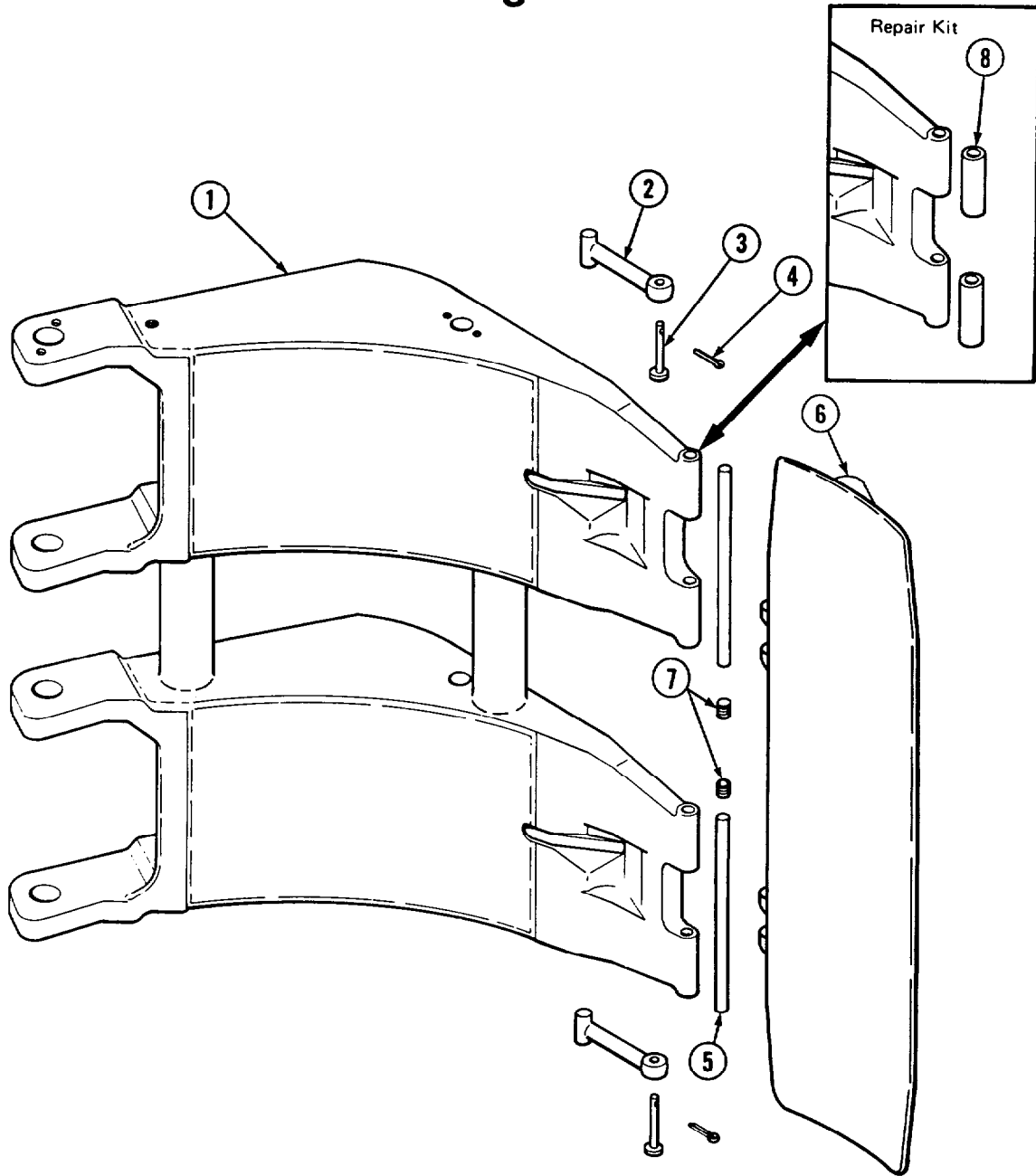


90F				
REF	QTY	60" Roll■	72" Roll■	DESCRIPTION
		PART NO.	PART NO.	
		206682	206684	Arm Assembly
1	1	206672	206675	Arm
2	2	674994	674994	Link
3	2	682978	682978	Clevis Pin
4	2	6525	6525	Cotter Pin
5	2	674993	674993	Pin
6	1	674962	674962	Contact Pad
7	2	689900	689900	Plug
8	1	676810	676810	Arm Tip Repair Kit

■ Maximum Clamp handling capacity.

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Long Arm

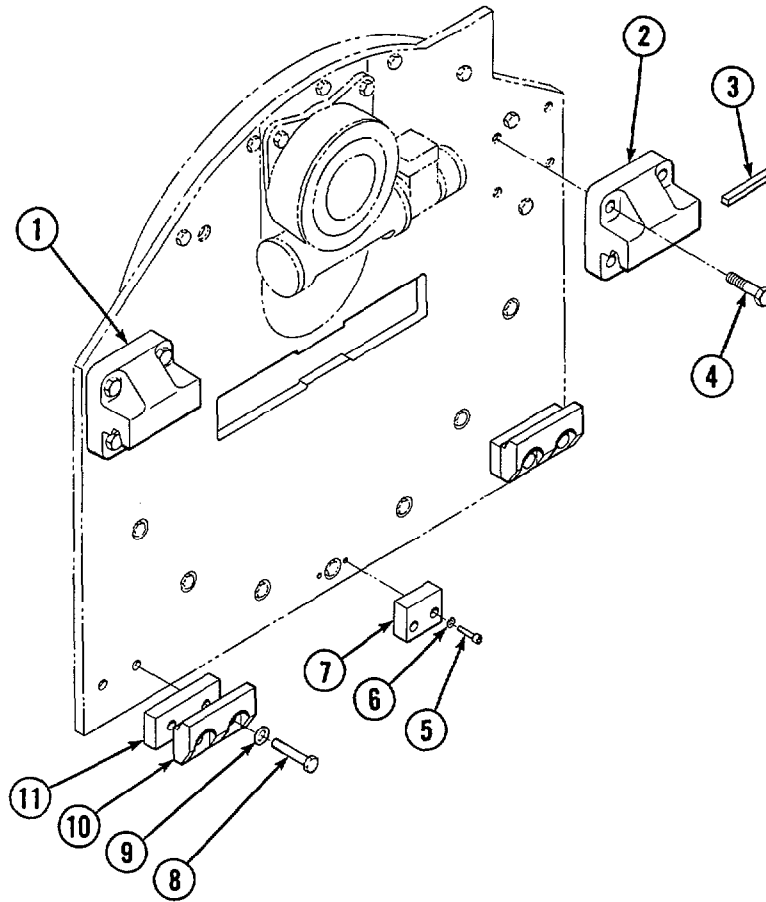


90F				
REF	QTY	60" Roll■	72" Roll■	DESCRIPTION
		PART NO.	PART NO.	
		206683	206685	Arm Assembly
1	1	206673	206674	Arm
2	2	674994	674994	Link
3	2	682978	682978	Clevis Pin
4	2	6525	6525	Cotter Pin
5	2	674993	674993	Pin
6	1	674962	674962	Contact Pad
7	2	689900	689900	Plug
8	1	676810	676810	Arm Tip Repair Kit

■ Maximum Clamp handling capacity.

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Mounting Group ITA IV- 1.8°



90F			
REF	QTY	PART NO.	DESCRIPTION
		684880	Mounting Group
1	1	684877	Upper Hook-L.H.
2	1	675061	Upper Hook-R.H.
3	1	670704	Stop Kit
4	8	679082	Cap screw
5	2	768810	Cap screw, M10 x 30-8.8
6	2	680030	Lockwasher
7	2	681057	Spacer
8	4	676854	Cap screw
9	4	670692	Washer
10	2	679832	Hook
11	2	681056	Spacer

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Recommended Spare Parts List

90F Paper Roll Clamps				
PART NO.	DESCRIPTION	ATTACHMENTS SERVICED		
		1-5	6-15	16-25
675007	FRAME GROUP Bushing	8	16	16
	COMMON COMPONENTS			
660200	Shim	8	16	16
676088	Pin	1	2	2
673385	Drive Pin	4	8	8
675022	Pin	1	2	2
● 673379	Retainer	2	4	4
●	Shim	16	32	32
●	Capscrew	4	8	8
	DRIVE GROUP			
675608	Worm	0	1	2
670556	Pinion	0	1	2
670581	Bearing	0	1	2
7214	Snap Ring	2	4	4
643423	O-Ring	1	2	2
206392	Drive Motor	0	1	1
206405	Drive Motor Service Kit	1	2	2
668184	Sealant	1	2	2
675638	Bearing Service Kit	1	2	2
675637	Bearing Service Kit	1	2	2
656300	Gear Box Lube	1	2	2
	HOSING GROUP			
681286	Hose – Long Arm	2	4	4
680238	Hose – Short arm (if necessary)	2	4	4
673417	Segment	4	8	8
	REVOLVING CONNECTION			
681585	Shaft Service Kit	1	2	2
	SHORT AND LONG ARM CYLINDER			
555725	Cylinder Service Kit	2	4	4
557212	Check Valve	2	4	4
	SHORT AND LONG ARM			
674993	Pin	2	4	4
674962	Contact Pad	0	1	2
	PAINT			
668209	12 oz. Aerosol Can – Cascade Yellow	1	2	2
685660	12 oz. Aerosol Can – Heritage White	1	2	2
	PUBLICATIONS			
683184	Parts Manual	1	1	1
674512	Service Manual	1	1	1
674509	Operator's Guide	1	1	1
679929	Tool Catalog	1	1	1
673964	Literature Index Order Form	1	1	1
	VIDEOS			
677555	Driver Training – VHS	1	1	1
678363	Troubleshooting – VHS	1	1	1
680664	Servicing Cylinders – VHS	1	1	1

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● See specific parts page.

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

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