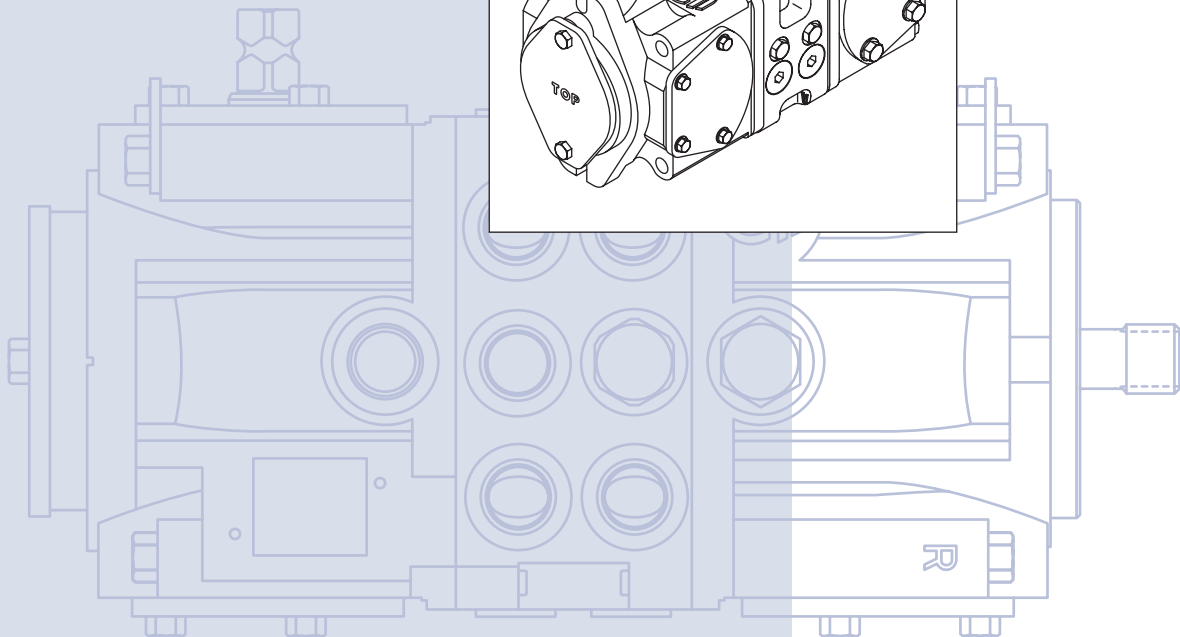
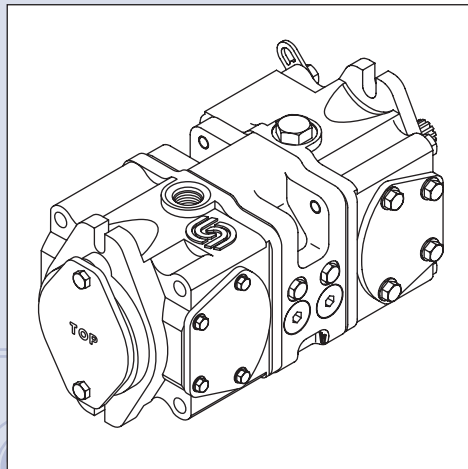
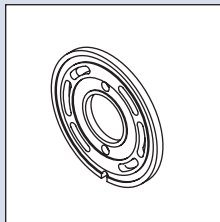
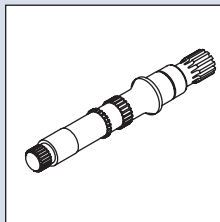
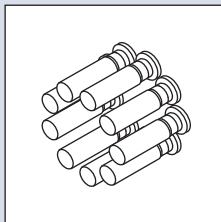




Series 40
M25 Axial Piston
Tandem Pump

Service Parts
Manual





Series 40 M25 Axial Piston Tandem Pump Service Parts Manual

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Front cover illustrations: P100 607, P100 609, P100 676, P100 677

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SERVICE PARTS IDENTIFICATION

The following information and procedure is used to identify the module group, item number, manufacture date, part number, and part name of the parts included in the Series 40, M25 variable displacement pumps.

The parts listed include all parts which may be used when performing either "Minor Repairs," "Major Repairs" or "Conversions" on the Series 40, M25 pump.

NAMEPLATE

Each unit will have a nameplate affixed to the housing. The nameplate will include the following information.

Model Code

The Sauer-Danfoss model code completely defines the specific unit and must be used when ordering parts to service this product.

Model Number

The Sauer-Danfoss model number is used by the factory in manufacturing. On repeat orders, a complete unit can be ordered by the model number.

Serial Number

The Sauer-Danfoss serial number is used to identify the manufacture date and the unit sequence in the build. The serial number is also used to identify the units warranty time period.

The letter code indicates the location of original manufacture (assembly). "K" indicates the unit was originally assembled in Lawrence, Kansas, USA.

The first number (2 digits) indicates the year of manufacture. ("01" would indicate the unit was manufactured in 2001)

The second number (2 digits) indicates the calendar week of manufacture.

The third number (5 digits) is a sequential number used to identify a specific unit.



DATE CODE

The date code is defined as the year and week of manufacture. The same item number may list more than one part number. This indicates that there is more than one configuration for that item number. You will see that there are different date codes for the different part numbers. Find the date code of your unit from the nameplate to determine which service part number you need to order.

EXAMPLE: The service part desired is Item C01

Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
B	C01	96-21		4250102	Swashplate	1
	"	91-07	96-20	4510126	Swashplate kit (SB-1996-010)	1

All units using this order code with a date code of 91-07 and up to and including 96-20, must use part number "4510126". All units with a date code of 96-21 and newer must use part number "4250102".

SERVICE BULLETINS

A Service Bulletin Number (SB-____ - ____) may follow the "Part Name" of the part you desire. You must read that Service Bulletin prior to ordering that part. The information contained in these Service Bulletins, as of the print date of this bulletin, are included at the end of this manual. Service Bulletins contain more detailed information such as interchangeability, what additional parts are involved, etc. It is suggested that you add additional Service Bulletins to this manual as you receive them.

PROCEDURE TO IDENTIFY A PART

General

The modular design of Series 40 units results in a simplified service parts list and part number identification procedure.

The same item numbers are used for same part names on all units within a product type. (Example: The lip seal - Item B02 has the same item number on all pumps.)

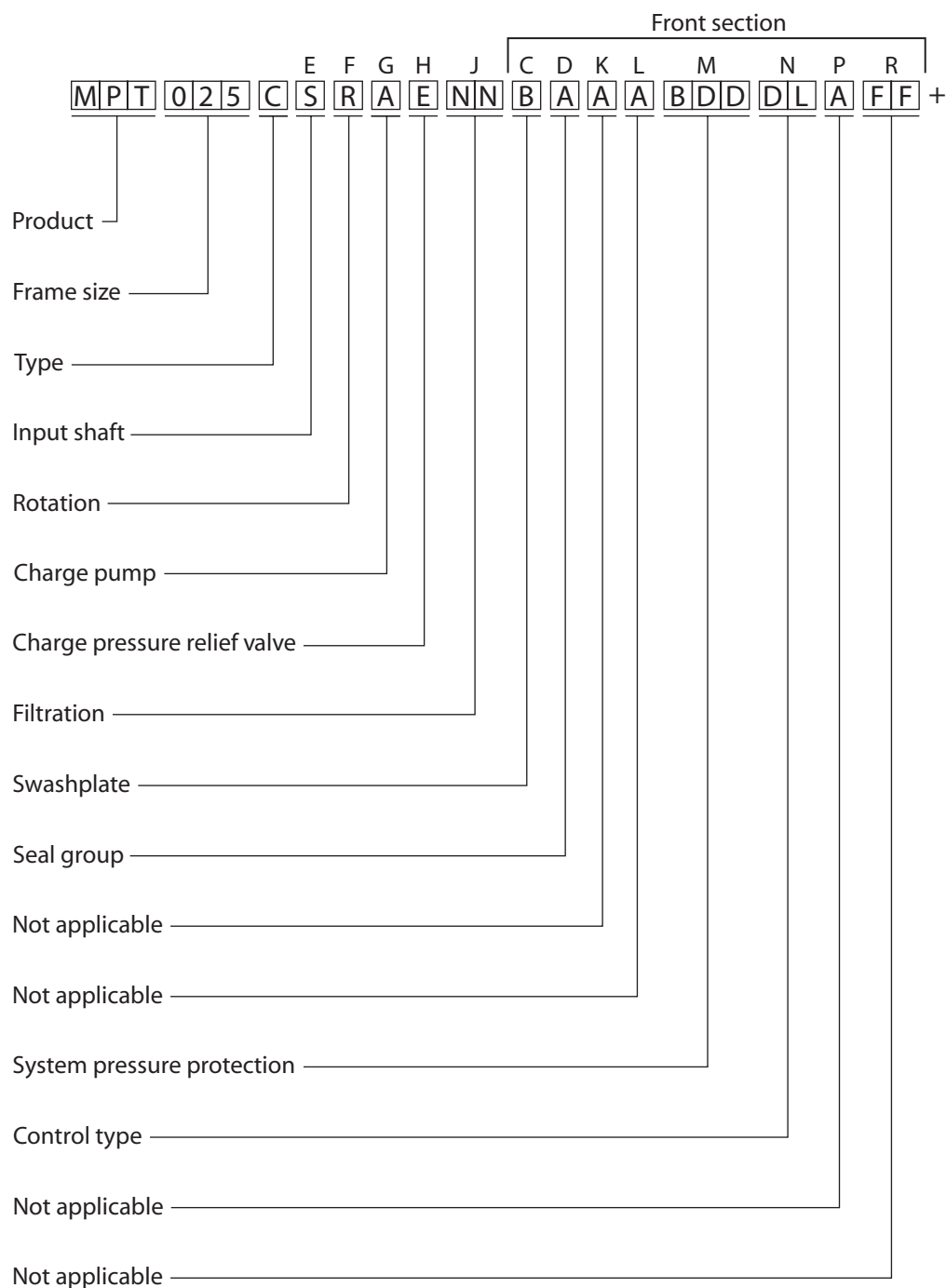
A part number that has another number following it in parentheses is done to make this a world wide manual. The first number is sold in Germany. The number in parentheses is sold in the United States. (Example: 5000093 (9008000-0132), customers would order 9008000-0132 if ordering the part in the United States.)

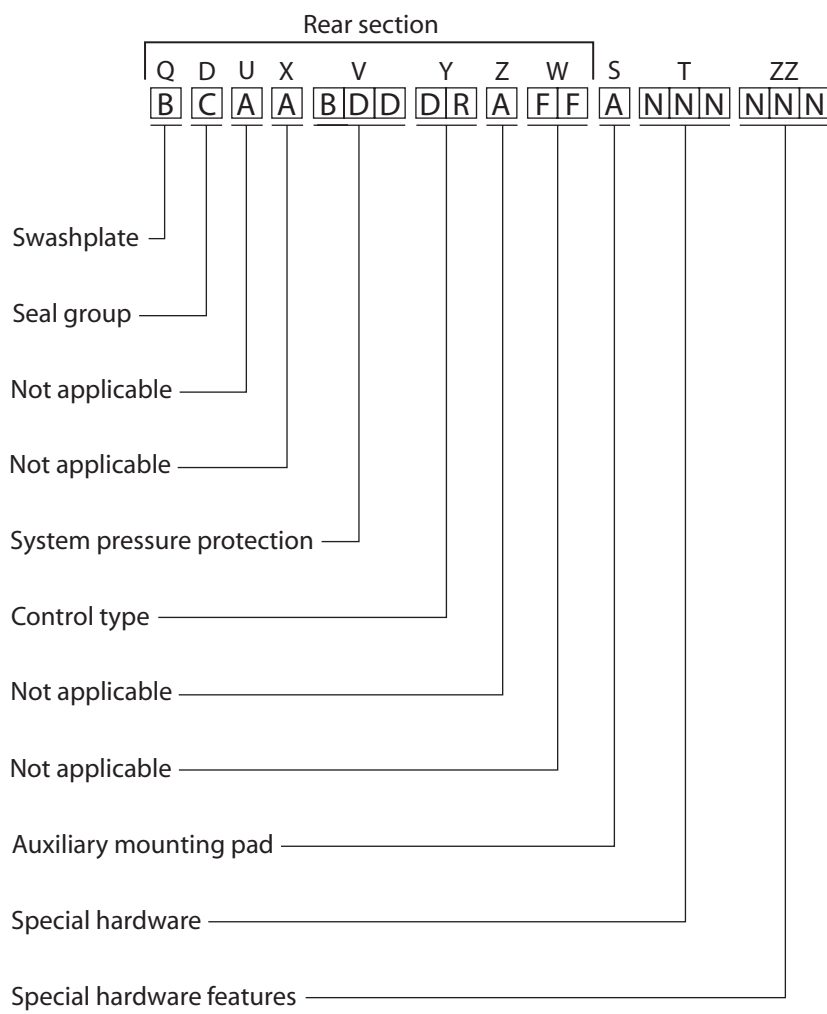
Example of a Part Identification

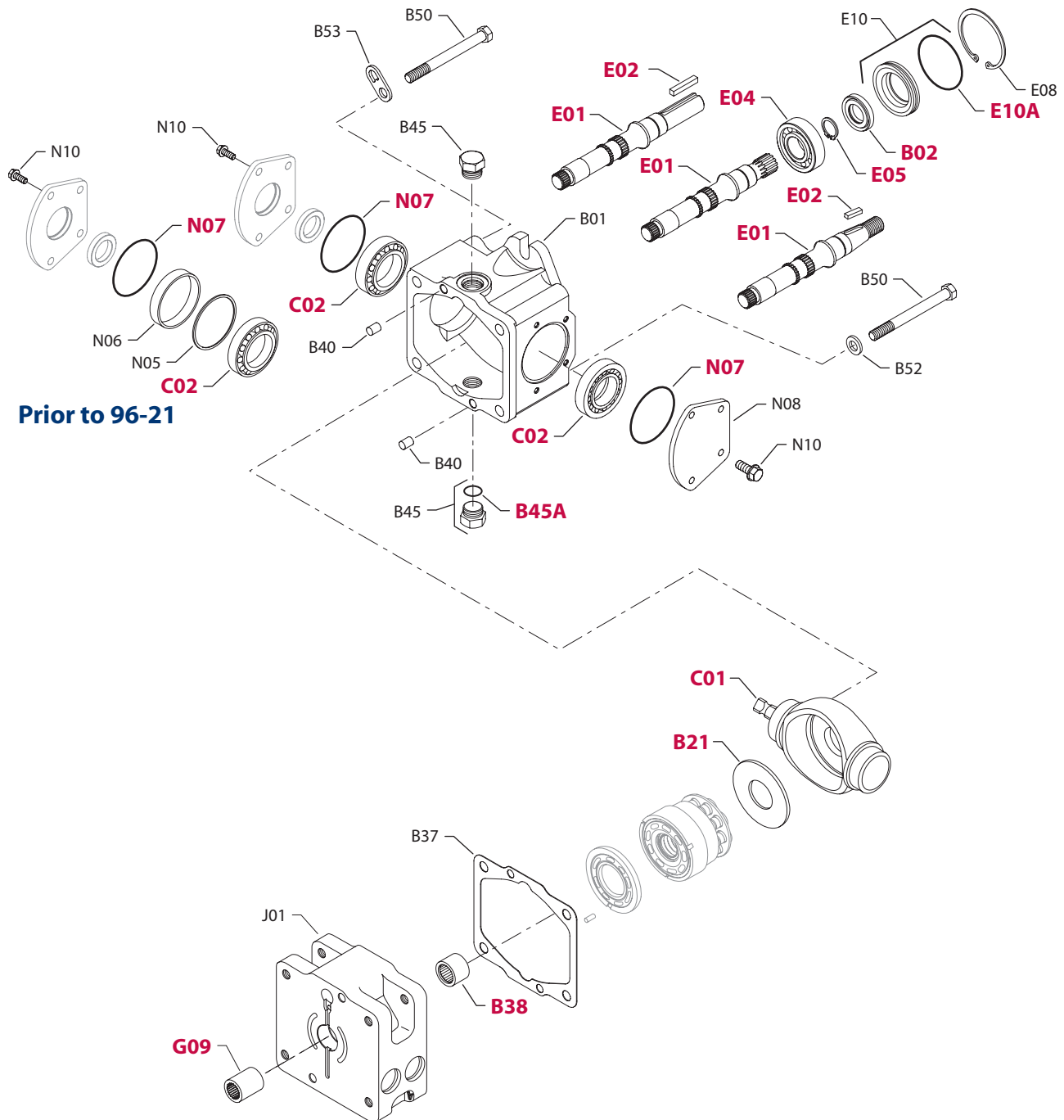
The nameplate on a Series 40 pump has an Order Code of MPT025C S R A E N N B A A A BDD DL A FF B C A A BDD DR A FF A NNN. Use the following procedures to determine the part number of the drive shaft used on this pump.

1) Referring to the input shaft module in the Order Code (see page 7), the input shaft option for this pump is identified by the code "S". (MPT025C S R A E N N B A A A BDD DL A FF B C A A BDD DR A FF A NNN)

2) Referring to the Service Parts List, find the shaft group. Next find the order code that relates to this unit, which is "S". The shaft is found to be item E01 and part number 4250001.







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Enlarged **bold** type item
numbers are recommended
part to stock for servicing.

COMMON PARTS

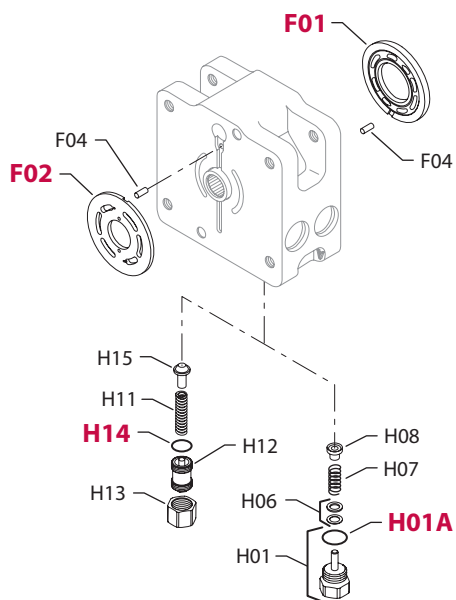
Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
	B01	91-07		4250152	Housing	1
	B02	91-07		500748 (9008000-0132)	Lip seal	1
	B21	91-07		3103218	Thrust plate	1
	B37	91-07		4250003	End cap gasket	1
	B38	91-07		5000046	Needle bearing	1
	B40	91-07		001289 (9004800-3708)	Pin	2
	B45	91-07		001537 (9005100-8700)	Plug	2
	B45A	91-07		001149 (9004201-6200)	O-ring	2
	B50	91-07		9007200-4448	Screw	4
	B52	91-07		002337 (9009611-4778)	Washer	3
	B53	91-07		006999 (9800999)	Lifting bracket	1
	E04	91-07		374447 (9001310-0008)	Ball bearing	1
	E05	91-07		5000660	Retaining ring	1
	E08	91-07		9006200-0256	Retaining ring	1
	E10	91-07		4250176	Seal carrier assembly	1
	E10A	91-07		505536 (9004100-0350)	O-ring	1
	G09	91-07		3102305	Coupling	1
	J01	91-07		4250158	Center section	1
	N07	91-07		9004300-1460	O-ring	2
	N08	91-07		4250027	Trunnion cover	1
	N10	97-41		001909 (9007200-3112)	Screw	8
	"	91-07	97-40	516517 (9007276-0135)	Screw	8

SWASHPLATE

B	C01	96-21		4250102	Swashplate	1
	"	91-07	96-20	4510126	Swashplate kit (SB-1996-010)	1
	C02	96-21		4800470	Tapered roller bearing	2
	"	91-07	96-20	508996 (9001415-0006)	Tapered roller bearing (SB-1996-010)	2
	N05	91-07	96-20	4510026	Trunnion shim kit (SB-1996-010)	2
	N06	91-07	96-20	4250043	Spacer (SB-1996-010)	2

INPUT SHAFT

C	E01	91-07		4250164	Shaft, tapered (SB-2002-021)	1
	E02	02-35		5000664	Key, square (SB-2002-021)	1
	"	91-07	02-34	532432 (9003310-2514)	Key, woodruff	1
K	E01	91-07		4250013	Shaft, straight key	1
	E02	91-07		509647 (9003261-2524)	Key	1
S	E01	91-07		4250001	Shaft, 13 tooth spline	1
U	E01	97-19		4250131	Shaft, 13 tooth spline, keel holddown	1



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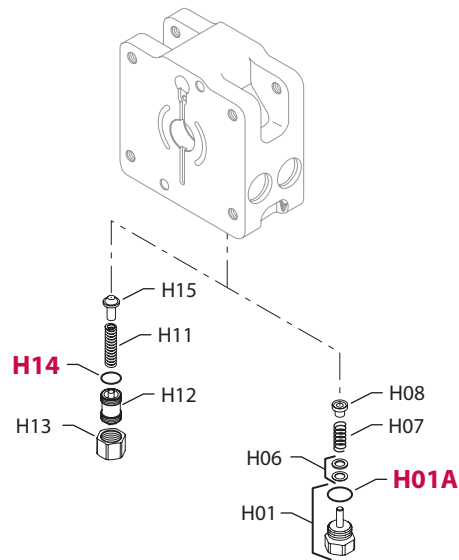
Enlarged **bold** type item
numbers are recommended
part to stock for servicing.

ROTATION

Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
7	F01	99-14		4250086	Valve plate, CW, special	1
	F02	99-14		4250091	Valve plate, CCW, special	1
	F04	99-14		615260	Pin, slotted	1
L	F01	91-07		4250044	Valve plate, CCW	1
	F02	91-07		4250031	Valve plate, CW, special	1
	F04	91-07		016220 (9004800-1908)	Pin	1
R	F01	91-07		4250031	Valve plate, CW	1
	F02	91-07		4250044	Valve plate, CCW	1
	F04	91-07		016220 (9004800-1908)	Pin	1
W	F01	93-22		4250064	Valve plate, CW, quiet	1
	F02	93-22		4250076	Valve plate, CCW, quiet	1
	F04	93-22		016220 (9004800-1908)	Pin	1
Y	F01	93-22		4250076	Valve plate, CCW, quiet	1
	F02	93-22		4250064	Valve plate, CW, quiet	1
	F04	93-22		016220 (9004800-1908)	Pin	1

CHARGE PRESSURE RELIEF VALVE SETTING

3	H11	01-28		509152	Spring - 24 bar [350 psi]	1
	H12	01-28		502470	Adjuster	1
	H13	01-28		342709 (9003575-0101)	Nut	1
	H14	01-28		001149 (9004201-6200)	O-ring	1
	H15	01-28		342428 (8800449)	Poppet	1
5	H11	02-44		613182	Spring - 14 bar [200 psi]	1
	H12	02-44		502470	Adjuster	1
	H13	02-44		342709 (9003575-0101)	Nut	1
	H14	02-44		001149 (9004201-6200)	O-ring	1
	H15	02-44		342428 (8800449)	Poppet	1
6	H11	02-44		4250176	Spring - 24 bar [350 psi]	1
	H12	02-44		502470	Adjuster	1
	H13	02-44		342709 (9003575-0101)	Nut	1
	H14	02-44		001149 (9004201-6200)	O-ring	1
	H15	02-44		342428 (8800449)	Poppet	1
A	H01	02-23		4800308	Plug - 16 bar [230 psi]	1
	H01A	02-23		001149 (9004201-6200)	O-ring	1
	H06	02-23		4510027	Shim kit	1
	H07	02-23		4800176	Spring	1
	H08	02-23		4800134	Charge relief poppet	1
C	H01	94-15		4800308	Plug - 18 bar [260 psi]	1
	H01A	94-15		001149 (9004201-6200)	O-ring	1
	H06	94-15		4510027	Shim kit	1
	H07	94-15		4800176	Spring	1
	H08	94-15		4800134	Charge relief poppet	1

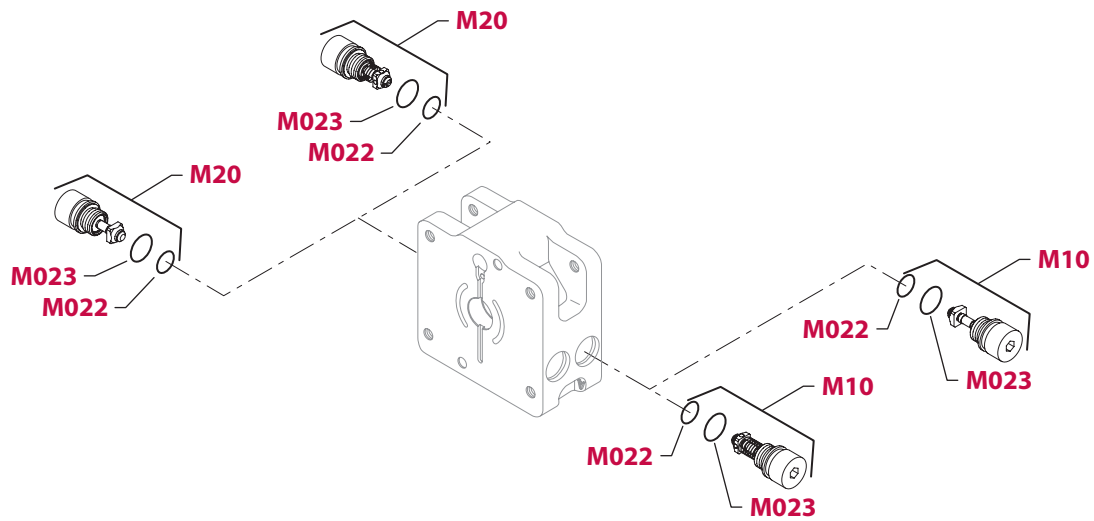


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Enlarged **bold** type item
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part to stock for servicing.

CHARGE PRESSURE RELIEF VALVE SETTING

Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
E	H01	91-07		4800308	Plug - 11 bar [160 psi]	1
	H01A	91-07		001149 (9004201-6200)	O-ring	1
	H06	91-07		4510027	Shim kit	1
	H07	91-07		4800176	Spring	1
	H08	91-07		4800134	Charge relief poppet	1
F	H01	91-07		4800308	Plug - 7.5 bar [110 psi]	1
	H01A	91-07		001149 (9004201-6200)	O-ring	1
	H06	91-07		4510027	Shim kit	1
	H07	91-07		4800149	Spring	1
	H08	91-07		4800134	Charge relief poppet	1
G	H01	91-07		4800308	Plug - 14 bar [200 psi]	1
	H01A	91-07		001149 (9004201-6200)	O-ring	1
	H06	91-07		4510027	Shim kit	1
	H07	91-07		4800176	Spring	1
	H08	91-07		4800134	Charge relief poppet	1
H	H01	95-06		4800308	Plug - 24 bar [350 psi]	1
	H01A	95-06		001149 (9004201-6200)	O-ring	1
	H06	95-06		4510027	Shim kit	1
	H07	95-06		4800496	Spring	1
	H08	95-06		4800134	Charge relief poppet	1
J	H01	93-29		4800308	Plug - 22 bar [320 psi]	1
	H01A	93-29		001149 (9004201-6200)	O-ring	1
	H06	93-29		4510027	Shim kit	1
	H07	93-29		4800496	Spring	1
	H08	93-29		4800134	Charge relief poppet	1
R	H01	92-11		4800308	Plug - 6.2 bar [90 psi]	1
	H01A	92-11		001149 (9004201-6200)	O-ring	1
	H06	92-11		4510027	Shim kit	1
	H07	92-11		4800714	Spring	1
	H08	92-11		4800134	Charge relief poppet	1
V	H11	97-10		613182	Spring - 14 bar [200 psi]	1
	H12	97-10		502470	Adjuster	1
	H13	97-10		342709 (9003575-0101)	Nut	1
	H14	97-10		001149 (9004201-6200)	O-ring	1
	H15	97-10		342428 (8800449)	Poppet	1



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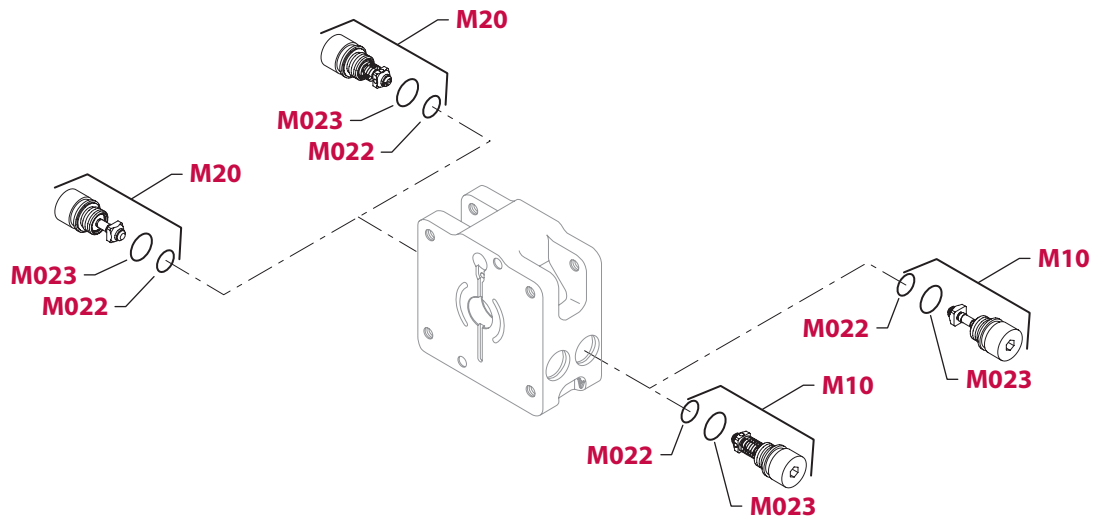
Enlarged **bold** type item numbers are recommended part to stock for servicing.

COMMON SYSTEM PRESSURE PROTECTION O-RINGS

Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
	M022	91-07		001131 (9004201-5000)	O-ring	2
	M023	91-07		504080 (9004100-2110)	O-ring	2

SYSTEM PRESSURE PROTECTION

AAA	M10	91-07		4350634	Check valve poppet assembly (SB-1996-014)	1
	M20	91-07		4350634	Check valve poppet assembly (SB-1996-014)	1
BBB	M10	91-07		4350643	SCR valve assembly, 175 bar [2528 psi] (SB-1996-014)	1
	M20	91-07		4350643	SCR valve assembly, 175 bar [2528 psi] (SB-1996-014)	1
BCC	M10	96-28		4350642	SCR valve assembly, 190 bar [2755 psi]	1
	M20	96-28		4350642	SCR valve assembly, 190 bar [2755 psi]	1
BDD	M10	91-07		4350641	SCR valve assembly, 210 bar [3045 psi] (SB-1996-014)	1
	M20	91-07		4350641	SCR valve assembly, 210 bar [3045 psi] (SB-1996-014)	1
BEE	M10	91-07		4350640	SCR valve assembly, 230 bar [3335 psi] (SB-1996-014)	1
	M20	91-07		4350640	SCR valve assembly, 230 bar [3335 psi] (SB-1996-014)	1
BFF	M10	91-07		4350639	SCR valve assembly, 250 bar [3625 psi] (SB-1996-014)	1
	M20	91-07		4350639	SCR valve assembly, 250 bar [3625 psi] (SB-1996-014)	1
BGF	M10	96-28		4350638	SCR valve assembly, 280 bar [4060 psi]	1
	M20	96-28		4350639	SCR valve assembly, 250 bar [3625 psi]	1
BGG	M10	91-07		4350638	SCR valve assembly, 280 bar [4060 psi] (SB-1996-014)	1
	M20	91-07		4350638	SCR valve assembly, 280 bar [4060 psi] (SB-1996-014)	1
BHH	M10	96-28		4350637	SCR valve assembly, 300 bar [4350 psi]	1
	M20	96-28		4350637	SCR valve assembly, 300 bar [4350 psi]	1
BJJ	M10	91-07		4350636	SCR valve assembly, 345 bar [5000 psi] (SB-1996-014)	1
	M20	91-07		4350636	SCR valve assembly, 345 bar [5000 psi] (SB-1996-014)	1
BMM	M10	91-07		4350635	SCR valve assembly, 140 bar [2030 psi] (SB-1996-014)	1
	M20	91-07		4350635	SCR valve assembly, 140 bar [2030 psi] (SB-1996-014)	1
CBA	M10	91-07		4350643	SCR valve assembly, 175 bar [2528 psi] (SB-1996-014)	1
	M20	91-07		4350634	Check valve poppet assembly (SB-1996-014)	1
CCA	M10	96-28		4350642	SCR valve assembly, 190 bar [2755 psi]	1
	M20	96-28		4350634	Check valve poppet assembly	1
CDA	M10	96-28		4350641	SCR valve assembly, 210 bar [3045 psi]	1
	M20	96-28		4350634	Check valve poppet assembly	1
CEA	M10	96-28		4350640	SCR valve assembly, 230 bar [3335 psi]	1
	M20	96-28		4350634	Check valve poppet assembly	1



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Enlarged **bold** type item numbers are recommended part to stock for servicing.

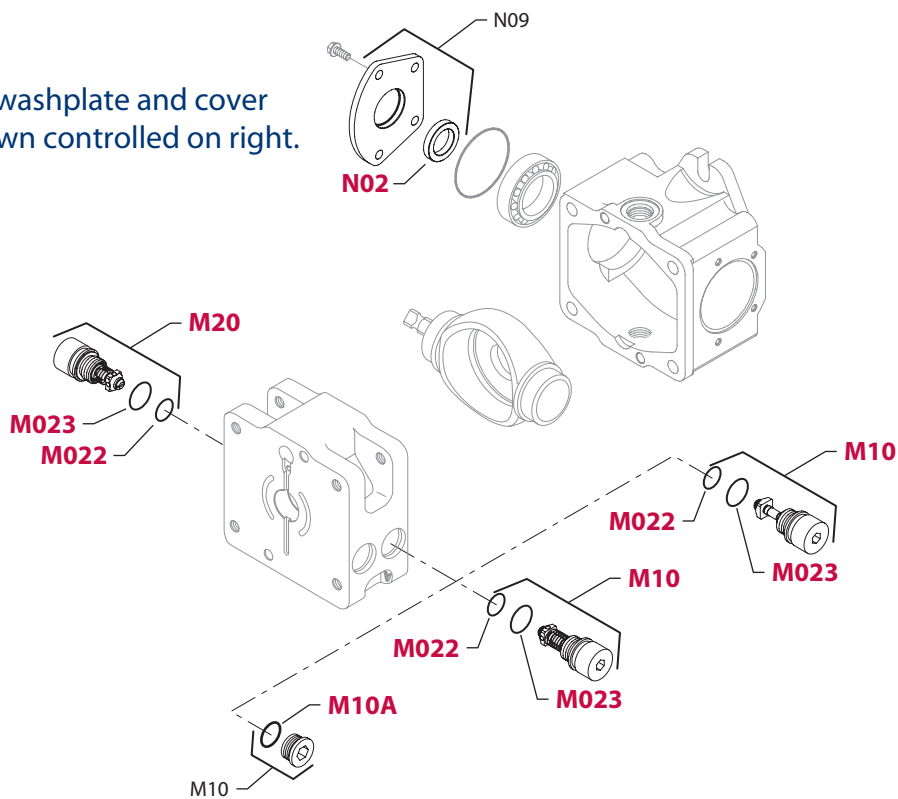
COMMON SYSTEM PRESSURE PROTECTION O-RINGS

Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
	M022	91-07		001131 (9004201-5000)	O-ring	2
	M023	91-07		504080 (9004100-2110)	O-ring	2

SYSTEM PRESSURE PROTECTION

CFA	M10	96-28		4350639	SCR valve assembly, 250 bar [3625 psi]	1
	M20	96-28		4350634	Check valve poppet assembly	1
CGA	M10	96-28		4350638	SCR valve assembly, 280 bar [4060 psi]	1
	M20	96-28		4350634	Check valve poppet assembly	1
CHA	M10	96-28		4350637	SCR valve assembly, 300 bar [4350 psi]	1
	M20	96-28		4350634	Check valve poppet assembly	1
CJA	M10	96-28		4350636	SCR valve assembly, 345 bar [5000 psi]	1
	M20	96-28		4350634	Check valve poppet assembly	1
CMA	M10	96-28		4350635	SCR valve assembly, 140 bar [2030 psi]	1
	M20	96-28		4350634	Check valve poppet assembly	1
DAB	M10	96-28		4350634	Check valve poppet assembly	1
	M20	96-28		4350643	SCR valve assembly, 175 bar [2528 psi]	1
DAC	M10	96-28		4350634	Check valve poppet assembly	1
	M20	96-28		4350642	SCR valve assembly, 190 bar [2755 psi]	1
DAD	M10	96-28		4350634	Check valve poppet assembly	1
	M20	96-28		4350641	SCR valve assembly, 210 bar [3045 psi]	1
DAE	M10	96-28		4350634	Check valve poppet assembly	1
	M20	96-28		4350640	SCR valve assembly, 230 bar [3335 psi]	1
DAF	M10	96-28		4350634	Check valve poppet assembly	1
	M20	96-28		4350639	SCR valve assembly, 250 bar [3625 psi]	1
DAG	M10	96-28		4350634	Check valve poppet assembly	1
	M20	96-28		4350638	SCR valve assembly, 280 bar [4060 psi]	1
DAH	M10	96-28		4350634	Check valve poppet assembly	1
	M20	96-28		4350637	SCR valve assembly, 300 bar [4350 psi]	1
DAJ	M10	96-28		4350634	Check valve poppet assembly	1
	M20	96-28		4350636	SCR valve assembly, 345 bar [5000 psi]	1
DAM	M10	96-28		4350634	Check valve poppet assembly	1
	M20	96-28		4350635	SCR valve assembly, 140 bar [2030 psi]	1
EDD	M10	99-23		4251266	SCR valve assy, 210 bar [3045 psi], high force spring	1
	M20	99-23		4251266	SCR valve assy, 210 bar [3045 psi], high force spring	1

Swashplate and cover
shown controlled on right.



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Enlarged **bold** type item
numbers are recommended
part to stock for servicing.

COMMON SYSTEM PRESSURE PROTECTION O-RINGS

Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
	M022	91-07		001131 (9004201-5000)	O-ring	2
	M023	91-07		504080 (9004100-2110)	O-ring	2

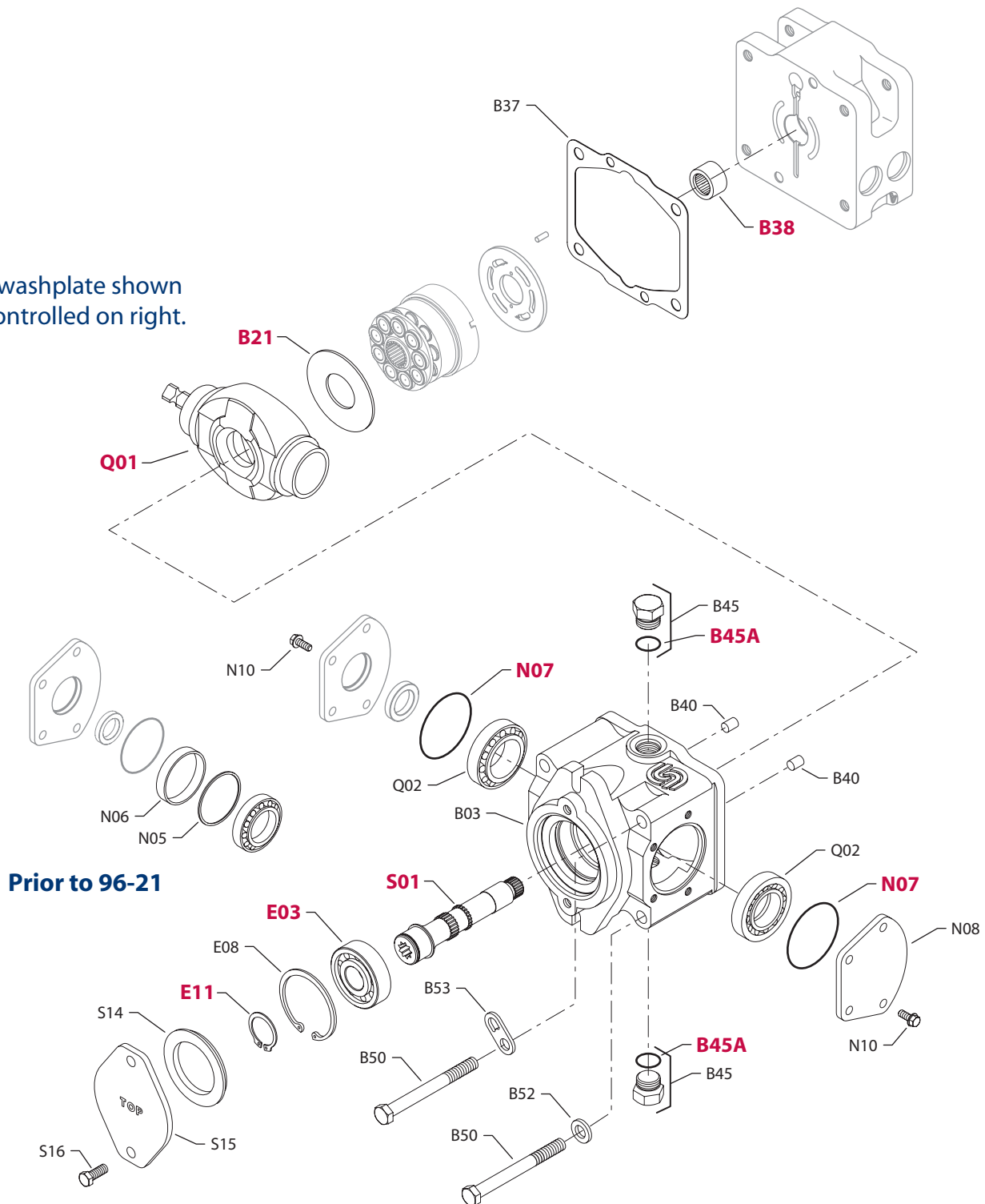
SYSTEM PRESSURE PROTECTION

EFF	M10	98-47		4250139	SCR valve assy, 250 bar [3625 psi], high force spring	1
	M20	98-47		4250139	SCR valve assy, 250 bar [3625 psi], high force spring	1
GUH	M10	03-41		9005110-7500	Plug assembly	1
	M10A	03-41		001131 (9004201-5000)	O-ring	1
	M20	03-41		4350637	SCR valve assembly, 300 bar [4350 psi]	1

CONTROL

DL	N02	91-07		5000604	Lip seal (SB-2000-026)	1
	N09	91-07		4350732	Trunnion cover assembly, controled on left side	1
DR	N02	91-07		5000604	Lip seal (SB-2000-026)	1
	N09	91-07		4350732	Trunnion cover assembly, controled on right side	1

Swashplate shown
controlled on right.



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Enlarged **bold** type item
numbers are recommended
part to stock for servicing.

COMMON PARTS

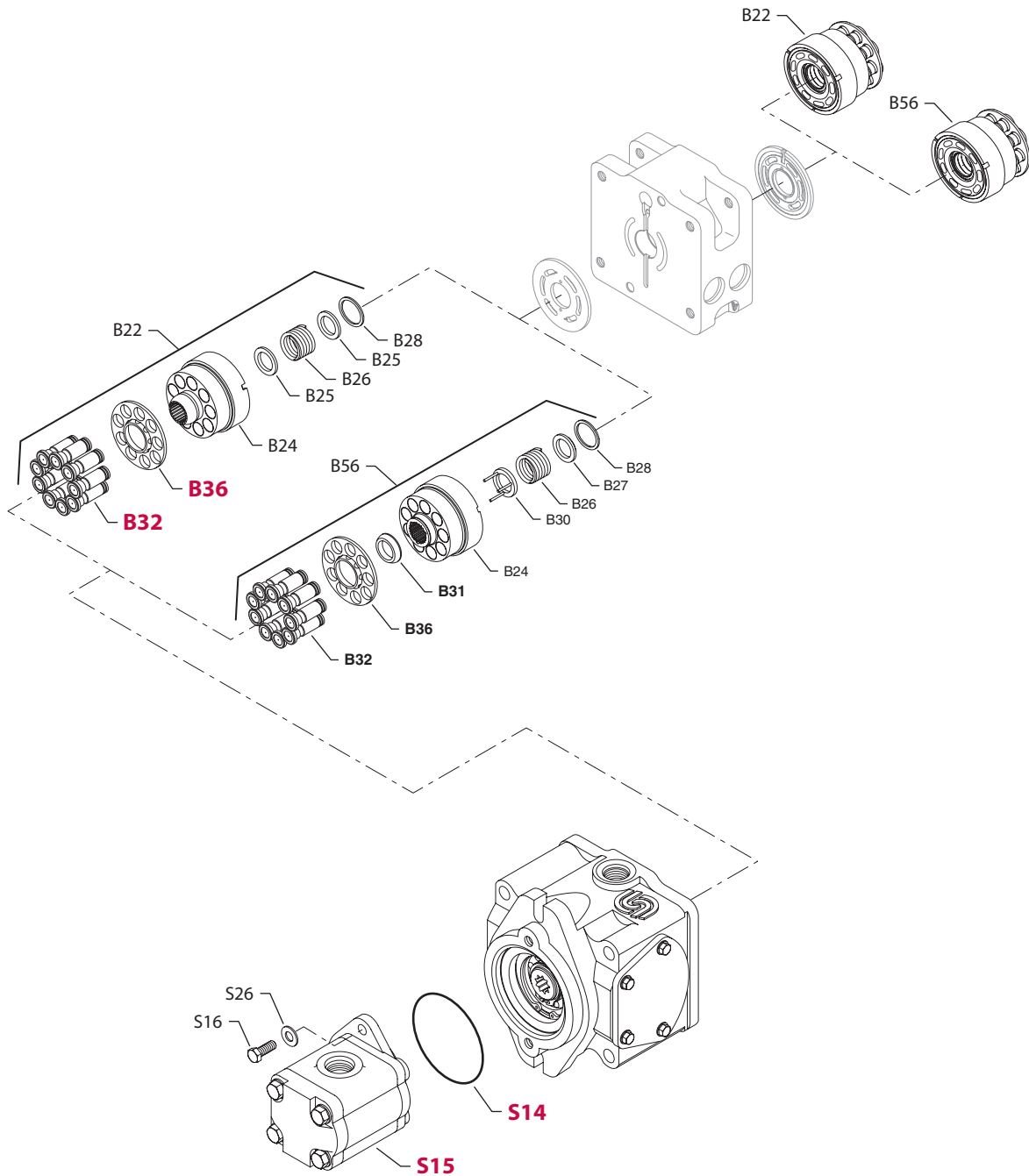
Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
	B03	91-07		4250144	Housing	1
	B21	91-07		3103218	Thrust plate	1
	B37	91-07		4250003	End cap gasket	1
	B38	91-07		5000046	Needle bearing	1
	B40	91-07		001289 (9004800-3708)	Pin	2
	B45	91-07		001537 (9005100-8700)	Plug	2
	B45A	91-07		001149 (9004201-6200)	O-ring	2
	B50	91-07		9007200-4448	Screw	4
	B52	91-07		002337 (9009611-4778)	Washer	3
	B53	91-07		006999 (9800999)	Lifting bracket	1
	E03	91-07		9001310-0013	Ball bearing	1
	E08	91-07		9006200-0256	Retaining ring	1
	E11	91-07		9006300-0119	Retaining ring	1
	N07	91-07		9004300-1460	O-ring	2
	N08	91-07		4250027	Trunnion cover	1
	N10	97-41		001909 (9007200-3112)	Screw	8
	"	91-07	97-40	516517 (9007276-0135)	Screw	8

SWASHPLATE

B	Q01	96-21		4250102	Swashplate	1
	"	91-07	96-20	4510126	Swashplate kit (SB-1996-010)	1
	Q02	96-21		4800470	Tapered roller bearing	2
	"	91-07	96-20	508996 (9001415-0006)	Tapered roller bearing (SB-1996-010)	2
	N05	91-07	96-20	4510026	Trunnion shim kit (SB-1996-010)	2
	N06	91-07	96-20	4250043	Spacer (SB-1996-010)	2

AUXILIARY MOUNTING

A	S01	91-07		4250004	Shaft	1
	S14	91-07		4800482	A pad seal	1
	S15	91-07		4460586	Cover plate	1
	S16	91-07		049874 (9007200-3716)	Screw	2
D	S01	91-07		4250010	Shaft	1
	S14	91-07		4800482	A pad seal	1
	S15	91-07		4460586	Cover plate	1
	S16	91-07		049874 (9007200-3716)	Screw	2
H	S01	95-30		4250004	Shaft	1
R	S01	97-19		4250132	Shaft, keel hold down	1



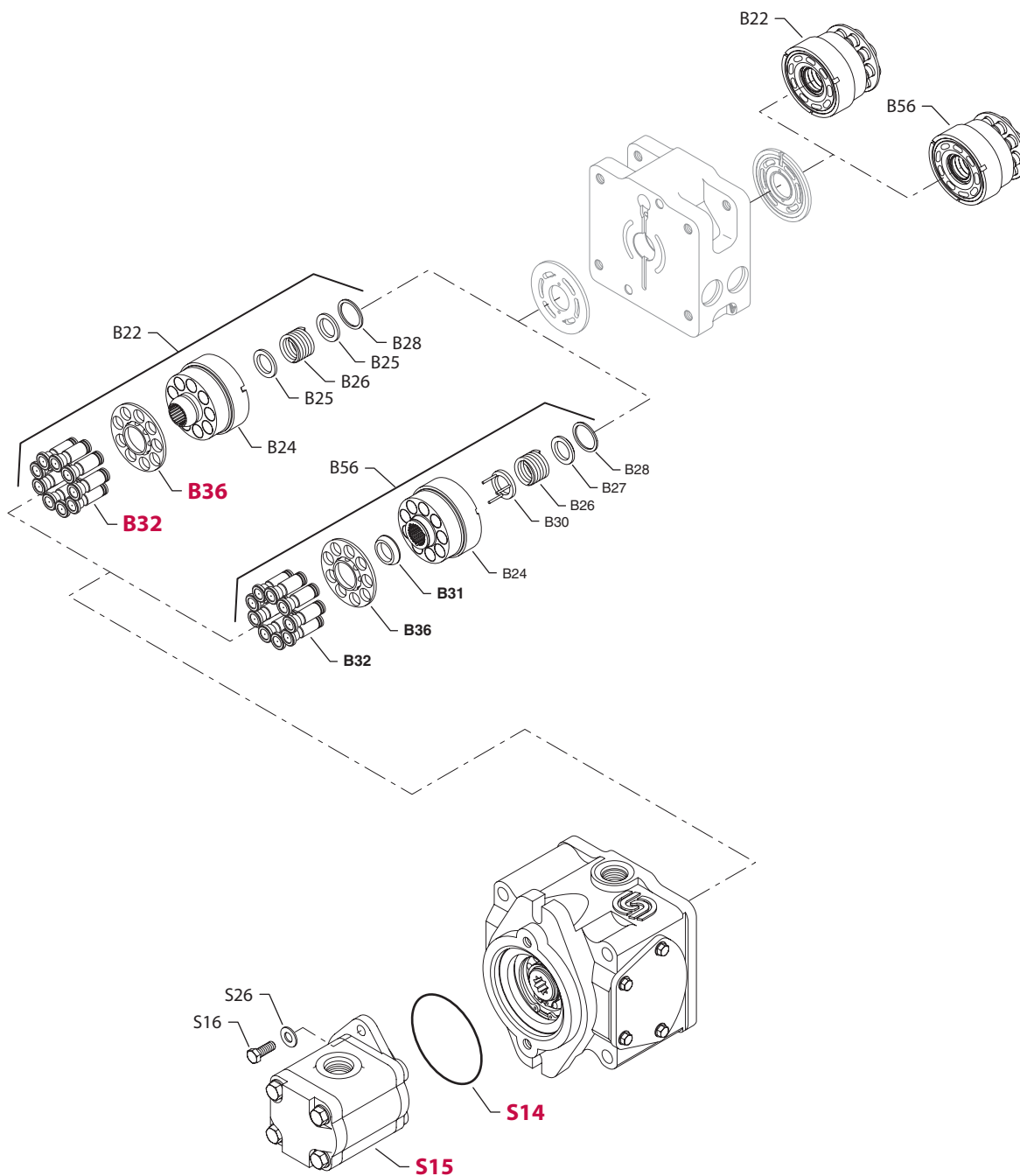
**This drawing
shows a generic
gear pump**

E100 680E

Enlarged **bold** type item
numbers are recommended
part to stock for servicing.

SPECIAL HARDWARE

Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
GNM	B22	95-27	99-29	4250062	Cylinder block kit	2
	B24	95-27	99-29	4250095	Cylinder block	2
	B25	95-27	99-29	9009625-0106	Washer	4
	B26	95-27	99-29	3103199	Spring	2
	B28	95-27	99-29	5000462 (9006250-0131)	Retaining ring	2
	B32	95-27	99-29	4250127	Piston assembly	18
	B36	95-27	99-29	3103197	Slipper retainer	2
	S14	95-27	99-29	5000373	O-ring	1
	S15	95-27	99-29	4700066 (00111.20.134.00)	Gear pump	1
	S16	95-27	99-29	019448 (9007300-3722)	Screw	2
GPG	B22	96-28		4250062	Cylinder block kit	2
	B24	96-28		4250095	Cylinder block	2
	B25	96-28		9009625-0106	Washer	4
	B26	96-28		3103199	Spring	2
	B28	96-28		5000462 (9006250-0131)	Retaining ring	2
	B32	96-28		4250127	Piston assembly	18
	B36	96-28		3103197	Slipper retainer	2
	S14	96-28		5000373	O-ring	1
	S15	96-28		4700053 (00111.20.130.00)	Gear pump	1
	S16	96-28		019448 (9007300-3722)	Screw	2
GPR	B56	97-19		4250119	Cylinder block kit with keel holddown	2
	B24	97-19		4250115	Cylinder block	2
	B26	97-19		3103199	Spring	2
	B27	97-19		5000455	Washer	2
	B28	97-19		5000462 (9006250-0131)	Retaining ring	2
	B30	97-19		4250121	Slipper holddown washer assembly	2
	B31	97-19		4250140	Slipper retainer guide	2
	B32	97-19		4250127	Piston assembly	18
	B36	97-19		4250117	Slipper retainer	2
	S14	97-19		5000373	O-ring	1
GRA	B22	98-23		4250062	Cylinder block kit	2
	B24	98-23		4250095	Cylinder block	2
	B25	98-23		9009625-0106	Washer	4
	B26	98-23		3103199	Spring	2
	B28	98-23		5000462 (9006250-0131)	Retaining ring	2
	B32	98-23		4250127	Piston assembly	18
	B36	98-23		3103197	Slipper retainer	2
	S14	98-23		5000373	O-ring	1
	S15	98-23		4700121 (B5501-30905)	Gear pump	1
	S16	98-23		019448 (9007300-3722)	Screw	2
GRA	B22	98-23		4250062	Cylinder block kit	2
	B24	98-23		4250095	Cylinder block	2
	B25	98-23		9009625-0106	Washer	4
	B26	98-23		3103199	Spring	2
	B28	98-23		5000462 (9006250-0131)	Retaining ring	2
	B32	98-23		4250127	Piston assembly	18
	B36	98-23		3103197	Slipper retainer	2
	S14	98-23		5000373	O-ring	1
	S15	98-23		4700121 (B5501-30905)	Gear pump	1
	S16	98-23		019448 (9007300-3722)	Screw	2
GRA	B22	98-23		4250062	Cylinder block kit	2
	B24	98-23		4250095	Cylinder block	2
	B25	98-23		9009625-0106	Washer	4
	B26	98-23		3103199	Spring	2
	B28	98-23		5000462 (9006250-0131)	Retaining ring	2
	B32	98-23		4250127	Piston assembly	18
	B36	98-23		3103197	Slipper retainer	2
	S14	98-23		5000373	O-ring	1
	S15	98-23		4700121 (B5501-30905)	Gear pump	1
	S16	98-23		019448 (9007300-3722)	Screw	2
GRA	B22	98-23		4250062	Cylinder block kit	2
	B24	98-23		4250095	Cylinder block	2
	B25	98-23		9009625-0106	Washer	4
	B26	98-23		3103199	Spring	2
	B28	98-23		5000462 (9006250-0131)	Retaining ring	2
	B32	98-23		4250127	Piston assembly	18
	B36	98-23		3103197	Slipper retainer	2
	S14	98-23		5000373	O-ring	1
	S15	98-23		4700121 (B5501-30905)	Gear pump	1
	S16	98-23		019448 (9007300-3722)	Screw	2
GRA	B22	98-23		4250062	Cylinder block kit	2
	B24	98-23		4250095	Cylinder block	2
	B25	98-23		9009625-0106	Washer	4
	B26	98-23		3103199	Spring	2
	B28	98-23		5000462 (9006250-0131)	Retaining ring	2
	B32	98-23		4250127	Piston assembly	18
	B36	98-23		3103197	Slipper retainer	2
	S14	98-23		5000373	O-ring	1
	S15	98-23		4700121 (B5501-30905)	Gear pump	1
	S16	98-23		019448 (9007300-3722)	Screw	2
GRA	B22	98-23		4250062	Cylinder block kit	2
	B24	98-23		4250095	Cylinder block	2
	B25	98-23		9009625-0106	Washer	4
	B26	98-23		3103199	Spring	2
	B28	98-23		5000462 (9006250-0131)	Retaining ring	2
	B32	98-23		4250127	Piston assembly	18
	B36	98-23		3103197	Slipper retainer	2
	S14	98-23		5000373	O-ring	1
	S15	98-23		4700121 (B5501-30905)	Gear pump	1
	S16	98-23		019448 (9007300-3722)	Screw	2



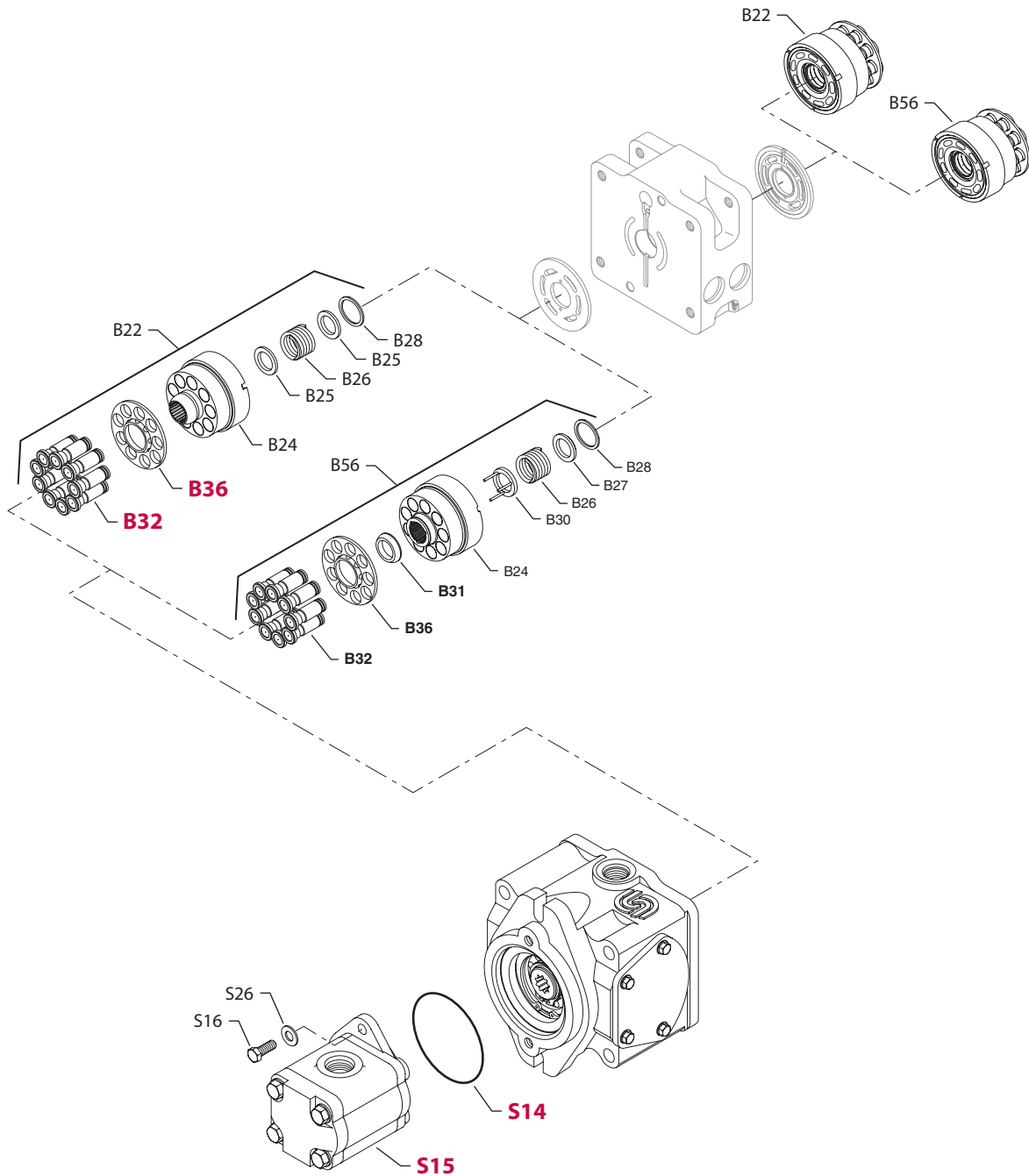
**This drawing
shows a generic
gear pump**

E100 680E

Enlarged **bold** type item
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SPECIAL HARDWARE

Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
GRB	B22	98-23		4250062	Cylinder block kit	2
	B24	98-23		4250095	Cylinder block	2
	B25	98-23		9009625-0106	Washer	4
	B26	98-23		3103199	Spring	2
	B28	98-23		5000462 (9006250-0131)	Retaining ring	2
	B32	98-23		4250127	Piston assembly	18
	B36	98-23		3103197	Slipper retainer	2
	S14	98-23		5000373	O-ring	1
	S15	98-23		4700122 (B5501-33155)	Gear pump	1
	S16	98-23		019448 (9007300-3722)	Screw	2
	S26	98-23		002329 (9009610-4069)	Washer	2
GRC	B22	98-23		4250062	Cylinder block kit	2
	B24	98-23		4250095	Cylinder block	2
	B25	98-23		9009625-0106	Washer	4
	B26	98-23		3103199	Spring	2
	B28	98-23		5000462 (9006250-0131)	Retaining ring	2
	B32	98-23		4250127	Piston assembly	18
	B36	98-23		3103197	Slipper retainer	2
	S14	98-23		5000373	O-ring	1
	S15	98-23		4700130 (00111.20.348.00)	Gear pump	1
	S16	98-23		019448 (9007300-3722)	Screw	2
	S26	98-23		002329 (9009610-4069)	Washer	2
GRV	B56	99-21		4250119	Cylinder block kit with keel holddown	2
	B24	99-21		4250115	Cylinder block	2
	B26	99-21		3103199	Spring	2
	B27	99-21		5000455	Washer	2
	B28	99-21		5000462 (9006250-0131)	Retaining ring	2
	B30	99-21		4250121	Slipper holddown washer assembly	2
	B31	99-21		4250140	Slipper retainer guide	2
	B32	99-21		4250127	Piston assembly	18
	B36	99-21		4250117	Slipper retainer	2
	S14	99-21		5000373	O-ring	1
	S15	99-21		4700054 (00111.20.132.00)	Gear pump	1
	S16	99-21		019448 (9007300-3722)	Screw	2
	S26	99-21		002329 (9009610-4069)	Washer	2
GSW	B22	00-30		4250062	Cylinder block kit	2
	B24	00-30		4250095	Cylinder block	2
	B25	00-30		9009625-0106	Washer	4
	B26	00-30		3103199	Spring	2
	B28	00-30		5000462 (9006250-0131)	Retaining ring	2
	B32	00-30		4250127	Piston assembly	18
	B36	00-30		3103197	Slipper retainer	2
	S14	00-30		5000373	O-ring	1
	S15	00-30		550138299	Gear pump	1
	S16	00-30		019448 (9007300-3722)	Screw	2
	S26	00-30		002329 (9009610-4069)	Washer	2



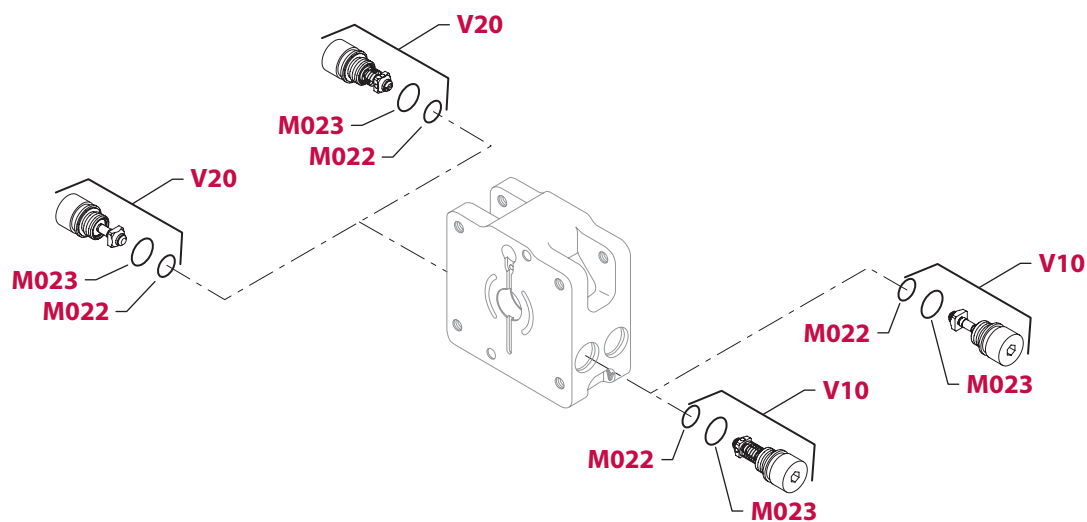
**This drawing
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E100 680E

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SPECIAL HARDWARE

Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
GTN	B22	02-30		4250062	Cylinder block kit	2
	B24	02-30		4250095	Cylinder block	2
	B25	02-30		9009625-0106	Washer	4
	B26	02-30		3103199	Spring	2
	B28	02-30		5000462 (9006250-0131)	Retaining ring	2
	B32	02-30		4250127	Piston assembly	18
	B36	02-30		3103197	Slipper retainer	2
	S14	02-30		5000373	O-ring	1
	S15	02-30		181.20.431.00	Gear pump	1
	S16	02-30		019448 (9007300-3722)	Screw	2
	S26	02-30		002329 (9009610-4069)	Washer	2
GUR	B22	03-41		4250062	Cylinder block kit	2
	B24	03-41		4250095	Cylinder block	2
	B25	03-41		9009625-0106	Washer	4
	B26	03-41		3103199	Spring	2
	B28	03-41		5000462 (9006250-0131)	Retaining ring	2
	B32	03-41		4250127	Piston assembly	18
	B36	03-41		3103197	Slipper retainer	2
	S14	03-41		5000373	O-ring	1
	S15	03-41		163D1228	Gear pump	1
	S16	03-41		019448 (9007300-3722)	Screw	2
	S26	03-41		002329 (9009610-4069)	Washer	2
NNN	B22	91-07		4250062	Cylinder block kit	2
	B24	91-07		4250095	Cylinder block	2
	B25	91-07		9009625-0106	Washer	4
	B26	91-07		3103199	Spring	2
	B28	91-07		5000462 (9006250-0131)	Retaining ring	2
	B32	91-07		4250127	Piston assembly	18
	B36	91-07		3103197	Slipper retainer	2



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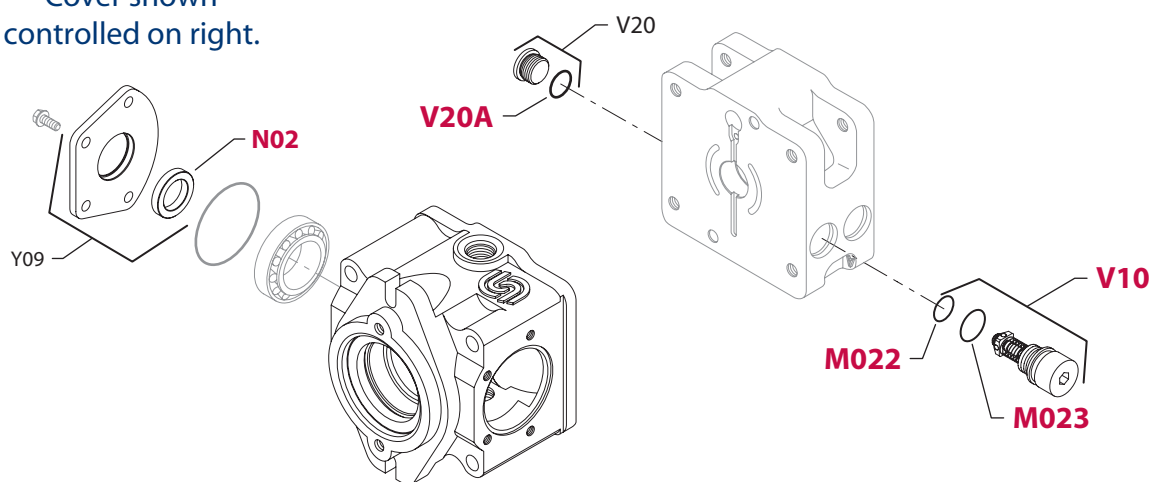
COMMON SYSTEM PRESSURE PROTECTION O-RINGS

Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
	M022	91-07		001131 (9004201-5000)	O-ring	2
	M023	91-07		504080 (9004100-2110)	O-ring	2

SYSTEM PRESSURE PROTECTION

AAA	V10	91-07		4350634	Check valve poppet assembly (SB-1996-014)	1
	V20	91-07		4350634	Check valve poppet assembly (SB-1996-014)	1
BBB	V10	91-07		4350643	SCR valve assembly, 175 bar [2528 psi] (SB-1996-014)	1
	V20	91-07		4350643	SCR valve assembly, 175 bar [2528 psi] (SB-1996-014)	1
BCC	V10	96-28		4350642	SCR valve assembly, 190 bar [2755 psi]	1
	V20	96-28		4350642	SCR valve assembly, 190 bar [2755 psi]	1
BDD	V10	91-07		4350641	SCR valve assembly, 210 bar [3045 psi] (SB-1996-014)	1
	V20	91-07		4350641	SCR valve assembly, 210 bar [3045 psi] (SB-1996-014)	1
BEE	V10	91-07		4350640	SCR valve assembly, 230 bar [3335 psi] (SB-1996-014)	1
	V20	91-07		4350640	SCR valve assembly, 230 bar [3335 psi] (SB-1996-014)	1
BFF	V10	91-07		4350639	SCR valve assembly, 250 bar [3625 psi] (SB-1996-014)	1
	V20	91-07		4350639	SCR valve assembly, 250 bar [3625 psi] (SB-1996-014)	1
BGG	V10	91-07		4350638	SCR valve assembly, 280 bar [4060 psi] (SB-1996-014)	1
	V20	91-07		4350638	SCR valve assembly, 280 bar [4060 psi] (SB-1996-014)	1
BHH	V10	96-28		4350637	SCR valve assembly, 300 bar [4350 psi]	1
	V20	96-28		4350637	SCR valve assembly, 300 bar [4350 psi]	1
BJJ	V10	91-07		4350636	SCR valve assembly, 345 bar [5000 psi] (SB-1996-014)	1
	V20	91-07		4350636	SCR valve assembly, 345 bar [5000 psi] (SB-1996-014)	1
BMM	V10	91-07		4350635	SCR valve assembly, 140 bar [2030 psi] (SB-1996-014)	1
	V20	91-07		4350635	SCR valve assembly, 140 bar [2030 psi] (SB-1996-014)	1
CBA	V10	91-07		4350643	SCR valve assembly, 175 bar [2528 psi] (SB-1996-014)	1
	V20	91-07		4350634	Check valve poppet assembly (SB-1996-014)	1
CCA	V10	96-28		4350642	SCR valve assembly, 190 bar [2755 psi]	1
	V20	96-28		4350634	Check valve poppet assembly	1
DAJ	V10	96-28		4350634	Check valve poppet assembly	1
	V20	96-28		4350636	SCR valve assembly, 345 bar [5000 psi]	1
EDD	V10	99-23		4251266	SCR valve assy, 210 bar [3045 psi], high force spring	1
	V20	99-23		4251266	SCR valve assy, 210 bar [3045 psi], high force spring	1
EFF	V10	98-47		4250139	SCR valve assy, 250 bar [3625 psi], high force spring	1
	V20	98-47		4250139	SCR valve assy, 250 bar [3625 psi], high force spring	1

Cover shown
controlled on right.



E100 685E

Enlarged **bold** type item
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SYSTEM PRESSURE PROTECTION

Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
FHU	M022	03-41		001131 (9004201-5000)	O-ring	1
	M023	03-41		504080 (9004100-2110)	O-ring	1
	V10	03-41		4350637	SCR valve assembly, 300 bar [4350 psi]	1
	V20	03-41		9005110-7500	Plug assembly	1
	V20A	03-41		001131 (9004201-5000)	O-ring	1

CONTROL

DL	N02	91-07		5000604	Lip seal (SB-2000-026)	1
	Y09	91-07		4350732	Trunnion cover assembly, controlled on left side	1

DR	N02	91-07		5000604	Lip seal (SB-2000-026)	1
	Y09	91-07		4350732	Trunnion cover assembly, controlled on right side	1

OVERHAUL SEAL KIT

	B02	91-07		500748 (9008000-0132)	Lip seal	1
	B37	91-07		4250003	End cap gasket	1
	E10A	91-07		505536 (9004100-0350)	O-ring	1
	H01A	91-07		001149 (9004201-6200)	O-ring	2
	M022	91-07		001131 (9004201-5000)	O-ring	2
	M023	91-07		504080 (9004100-2110)	O-ring	2
	N02	91-07		5000604	Lip seal (SB-2000-026)	1
	N07	91-07		9004300-1460	O-ring	2
	S14	91-07		4800482	A pad seal	1
	S14	91-07		5000373	O-ring	1



Series 40 M25 Axial Piston Pump
Service Parts Manual
Notes

PRODUCTS AFFECTED

Series40 M25 PV's and PT's

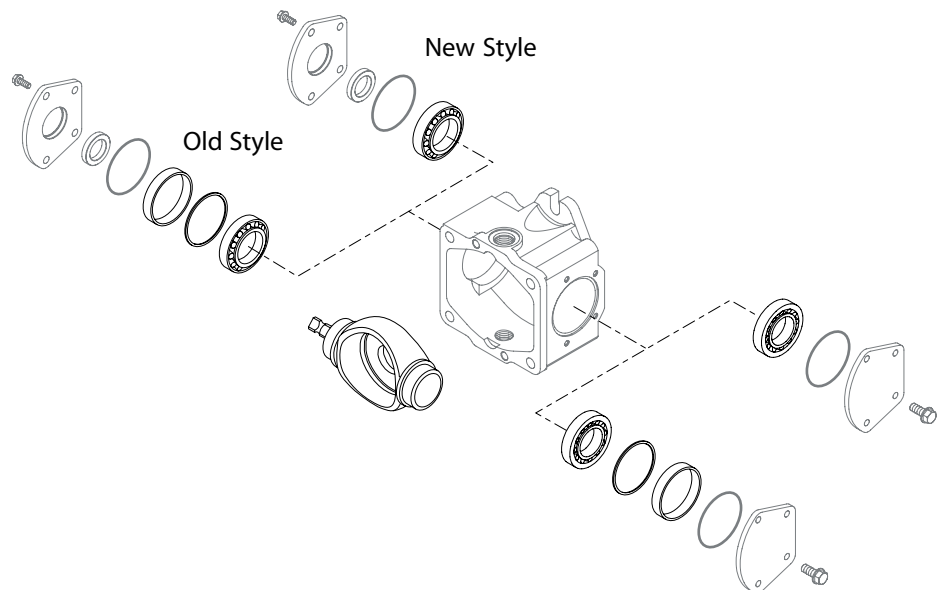
SUBJECT

Change in swashplate shimming

DESCRIPTION

As a product improvement, Sauer-Danfoss is eliminating the need to use spacers and shims to get the proper torque to turn on the variable swashplate. Due to a change in manufacturing tolerances, the stack-up of parts alone will provide the proper preload on the swashplate bearings. The items that changed to allow this to happen are the swashplate and trunnion bearings.

The old swashplate will become obsolete and serviced by a swashplate kit.



MODELS AFFECTED

All M91-25xxx tandem pumps and all M25-2xxx single pumps.

SERIAL NUMBERS

This change became effective at serial number A-95-05-xxxxx.

PART NUMBERS AFFECTED

Description	Old p/n	New p/n	Interchangeable	Old p/n status
Trunnion bearing	9001415-0006	4800470	No	Serviceable
Swashplate	4250040	4250102	Yes, in kit form only 4510126	Obsolete
Trunnion shim	4510026	N/A	N/A	Serviceable
Spacer	4250043	N/A	N/A	Serviceable

PARTS DISPOSITION

■ Interchangeable in kit form only

PRODUCTS AFFECTED

Series 40 M25, M35, and M44 PV's and PT's

SUBJECT

Redesign of the retention method in the check valve and SCR assemblies

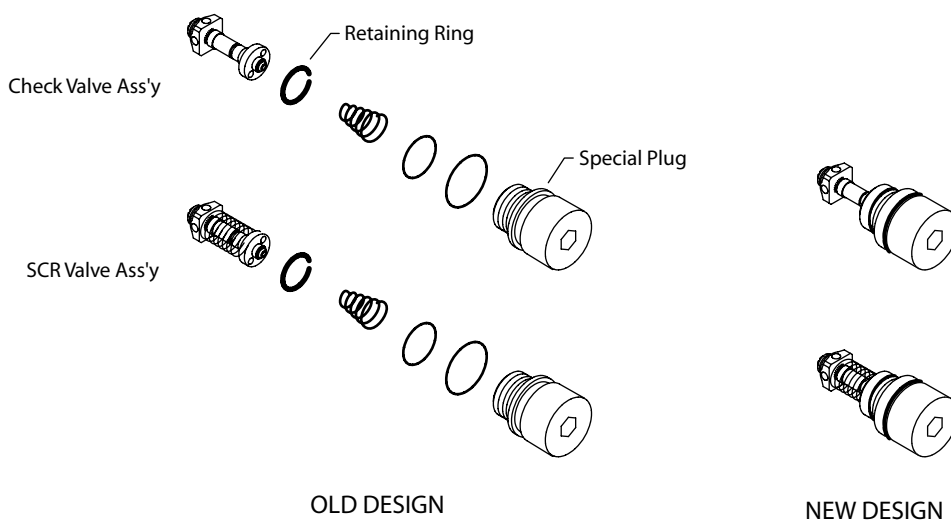
DESCRIPTION

As a product improvement Sauer-Danfoss is changing the retention method in the check valve assembly and SCR valve assembly. The old design allowed the check valve and SCR valve assemblies to be disassembled. However that retention method had the potential to hang up the valves on the retaining ring. The new design uses a different style retaining ring that will not hang up on the valve; however, it does not allow the assembly to be taken apart.

All new repairs, conversions, or purchases involving a check valve or SCR valve requires that the entire assembly be exchanged.

The new and old assemblies are totally interchangeable.

The special plug part number 4350182 and the internal retaining ring part number 4350183 will be obsoleted and no longer available as spare parts. See "PART NUMBERS AFFECTED" for detailed part number information.



MODELS AFFECTED

All series 40 M25, M35, and M44 single and tandem pumps

SERIAL NUMBERS

The change will take place at serial number 96-40-xxxxx and later.

**PART NUMBERS
AFFECTED**

Description	Old part number	New part number	Relief valve set point
Poppet-check valve assy	3103348	4350634	N/A
SCR valve assembly	3103375-0140	4350635	140 bar [2030 psi]
SCR valve assembly	3103375-0175	4350643	175 bar [2528 psi]
SCR valve assembly	3103375-0190	4350642	190 bar [2755 psi]
SCR valve assembly	3103375-0210	4350641	210 bar [3045 psi]
SCR valve assembly	3103375-0230	4350640	230 bar [3335 psi]
SCR valve assembly	3103375-0250	4350639	250 bar [3625 psi]
SCR valve assembly	3103375-0260	4350644	260 bar [3770 psi]
SCR valve assembly	3103375-0280	4350638	280 bar [4060 psi]
SCR valve assembly	3103375-0300	4350637	300 bar [4350 psi]
SCR valve assembly	3103375-0325	4350645	325 bar [4712 psi]
SCR valve assembly	3103375-0345	4350636	345 bar [5000 psi]
SCR valve assembly	3103375-0415	4350646	415 bar [6020 psi]

PARTS DISPOSITION

■ Interchangeable

PRODUCTS AFFECTED

M25, M35, and M44 pumps and variable motors

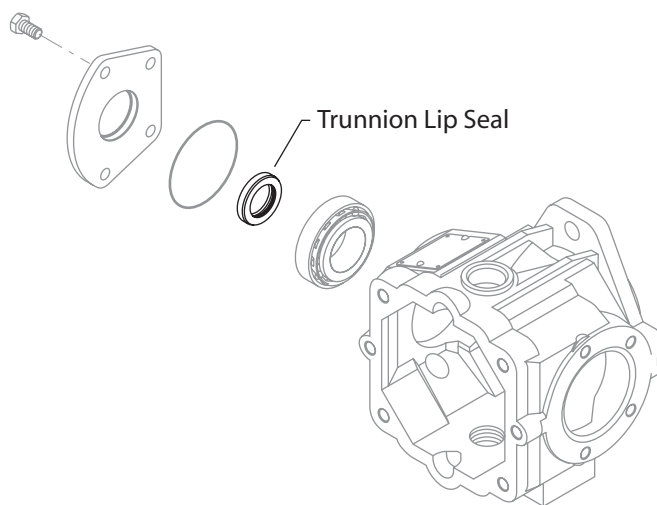
SUBJECT

Trunnion seal change

DESCRIPTION

As a product improvement, Sauer-Danfoss has made a design change to the trunnion seal on M25, M35, and M44 pumps and variable motors. The dust lip has been extended allowing more installation concentricity tolerance and hence is more forgiving during installation. As a result of this change, there will be fewer low hour trunnion seal failures caused by improper installation.

The new seal is interchangeable with the old seal. Sauer-Danfoss recommends that the seal be replaced when serving these units. The old seal (5000465) will remain available because it is used in other product lines.



MODELS AFFECTED

M25, M35, and M44 pumps and variable motors

SERIAL NUMBERS

N/A

PART NUMBERS AFFECTED

Description	Old part number	New part number
Trunnion seal	5000465	5000604

PARTS DISPOSITION

■ Interchangeable

PRODUCTS AFFECTED

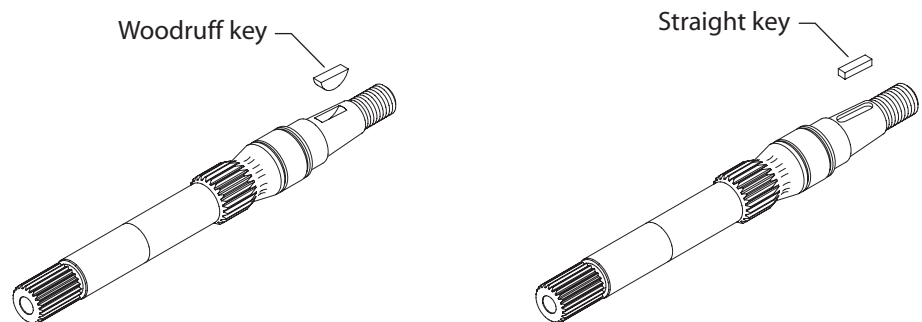
M25, M35, M44, M46, and LV pumps and motors

SUBJECT

Change from woodruff key to straight key on tapered shaft

DESCRIPTION

Sauer-Danfoss will use a straight key rather than a woodruff key in tapered shafts on all Series 40 pumps and motors. Tapered shafts requiring a woodruff key are obsolete. The woodruff key, however, will remain available for service requirements. Customers requiring a replacement shaft need the straight key also.



MODELS AFFECTED

Series 40: M25, M35, M44, M46, and LV models using tapered shafts.

SERIAL NUMBERS

This change became effective during the 2002 build year.

PART NUMBERS AFFECTED

Old part number	New part number	Description
9003310-2514	-	Key-woodruff, .2480 x .875
-	5000664	Key-square, .250 x .750
4250012	4250164	Shaft-pump
4254500	4254568	Shaft-tapered, LV
4350390	4350805	Shaft-motor, fixed w/taper
4350432	4350791	Shaft-tandem, tapered
4460309	4461308	Shaft-pump, tapered/9T aux.
4461290	4461302	Shaft-pump, tapered/13T aux.
4460577	4461309	Shaft-motor, tapered
4460804	4461306	Shaft-MV, 13T/1" dia. 1.5" tapered
4460772	4461307	Shaft-tandem, tapered

PARTS DISPOSITION

■ Interchangeable (if shaft and key are both replaced)



Series 40 M25 Axial Piston Tandem Pump
Service Parts Manual
Notes



Series 40 M25 Axial Piston Tandem Pump
Service Parts Manual
Notes

OUR PRODUCTS

Hydrostatic transmissions
Hydraulic power steering
Electric power steering
Electrohydraulic power steering
Closed and open circuit axial piston pumps and motors
Gear pumps and motors
Bent axis motors
Orbital motors
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Planetary compact gears
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Cartridge valves
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Sensors

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