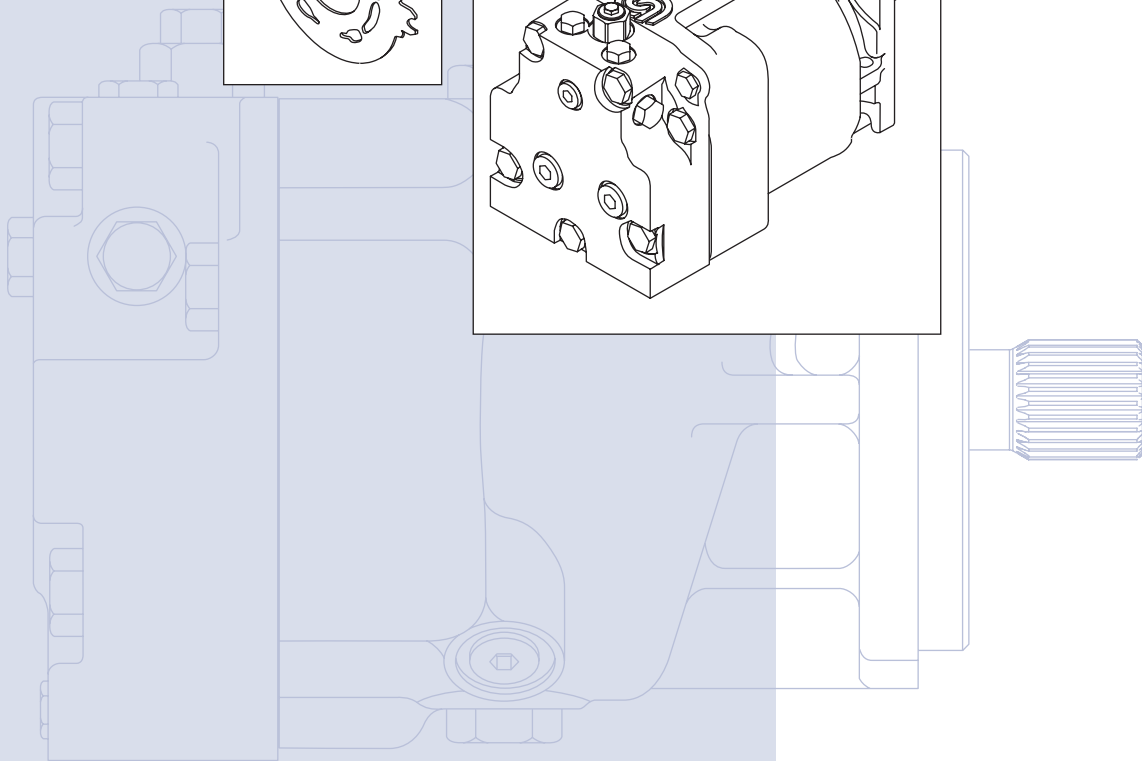
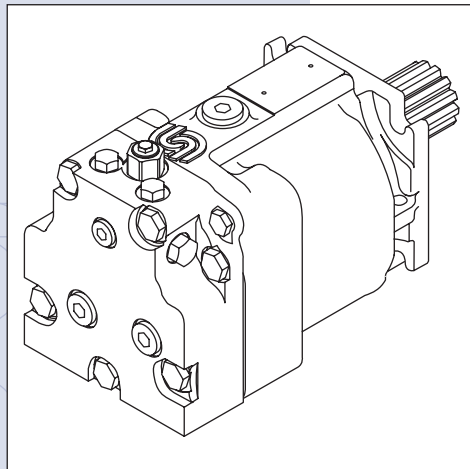
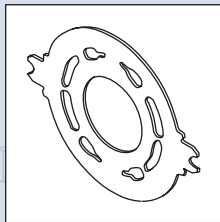
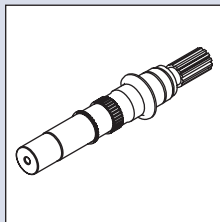
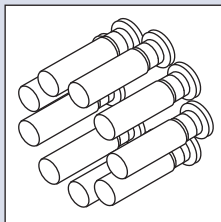


Series 90
75 cc Axial Piston
Motors

Parts Manual





GENERAL INFORMATION

Service parts identification.....	4
Nameplate	4
Date code.....	5
Service bulletins	5
Procedure to identify a part	5

FIXED DISPLACEMENT MOTOR

Order code.....	7
Common parts	8-9
Special hardware.....	8-11
End cap	12-15
Loop flushing.....	14-15
Charge pressure.....	16-17
Shaft.....	18-19
Overhaul seal kit.....	19

FIXED DISPLACEMENT CARTRIDGE MOTOR

Order code.....	21
Common parts	22-23
Special hardware.....	22-25
End cap	26-29
Loop flushing.....	28-29
Charge pressure.....	30-31
Shaft.....	32-33
Overhaul seal kit.....	33

VARIABLE DISPLACEMENT MOTOR

Order code.....	35
Common parts	36-37
Special hardware.....	38-41
Minimum displacement	42-43
End cap	44-45
Loop flushing.....	44-45
Charge pressure.....	46-47
Shaft.....	46-47
Control	48-49
Maximum displacement.....	50-51
Housing	50-51
Servo rate A	50-51
Servo rate B	50-51
Overhaul seal kit.....	52

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**VARIABLE
 DISPLACEMENT
 CARTRIDGE MOTOR**

Order code.....	53
Common parts	54-55
Special hardware.....	56-59
Minimum displacement	58-59
End cap	60-61
Loop flushing.....	60-61
Charge pressure.....	62-63
Shaft.....	62-63
Control	64-65
Maximum displacement.....	66-67
Housing	66-67
Servo rate A.....	66-67
Servo rate B	66-67
Overhaul seal kit.....	68

SERVICE BULLETIN

SB-1988-018 (housing).....	69
SB-1988-023 (piston improvement).....	70
SB-1989-020 (end cap, loop flushing, and adding adjustable cprv)	71-72
SB-1994-024 (swashplate hold down pin)	73
SB-1996-018 (shaft)	74
SB-1997-033 (swashplate bearing)	75
SB-1998-007 (end cap)	76-77
SB-1998-017 (displacement limiter adjustment screw)	78
SB-1998-041 (Piston hold down mechanism).....	79-80
SB-1998-080 (swashplate).....	81
SB-1998-084 (electrical control).....	82-83
SB-2000-046 (swashplate bearing pin)	84
SB-2000-047 (loop flushing spring and spring seat)	85
SB-2001-011 (end cap gasket material)	86
SB-2002-048 (valve plate).....	87
SB-2004-015 (housing).....	88
SB-2005-018 (cylinder block)	89
SB-2006-012 (shaft seal)	90



**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 90, 75 cc motors.

The parts listed include all parts which may be used when performing either "Minor Repairs," "Major Repairs" or "Conversions" on the Series 90, 75 cc motor.

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

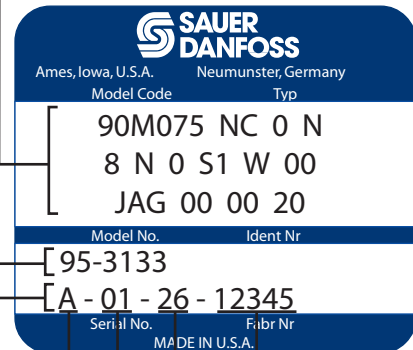
The Sauer-Danfoss serial number is used to identify the manufacture date and the unit sequence in the build. The serial number is also used to identify the units warranty time period.

The letter code indicates the location of original manufacture (assembly). "A" indicates the unit was originally assembled in Ames, Iowa, USA. "N" indicates the unit was originally assembled in Neumunster, Germany.

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 H10

Order Code	Item	Date Begin	Date End	Part Number	Part Name	Usage
N	H10	89-38		8800668	Loop flushing spool, defeated	1
	H10	87-02	89-37	8800021	Loop flushing spool, defeated (SB-1989-020)	1

All units using this order code with a date code of 87-02 and up to and including 89-37, must use part number "8800021". All units with a date code of 89-38 and newer must use part number "8800668".

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 90 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 L40 has the same item number on all motors.)

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: 314583 (9008000-0118), customers would order 9008000-0118 if ordering the part in the United States.)

Example of a Part Identification

The nameplate on a Series 90 motor has an Order Code of 90M075 NC 0 N 8 N 0 S1 W 00 JAG 00 00 20. Use the following procedures to determine the part number of the drive shaft used on this motor.

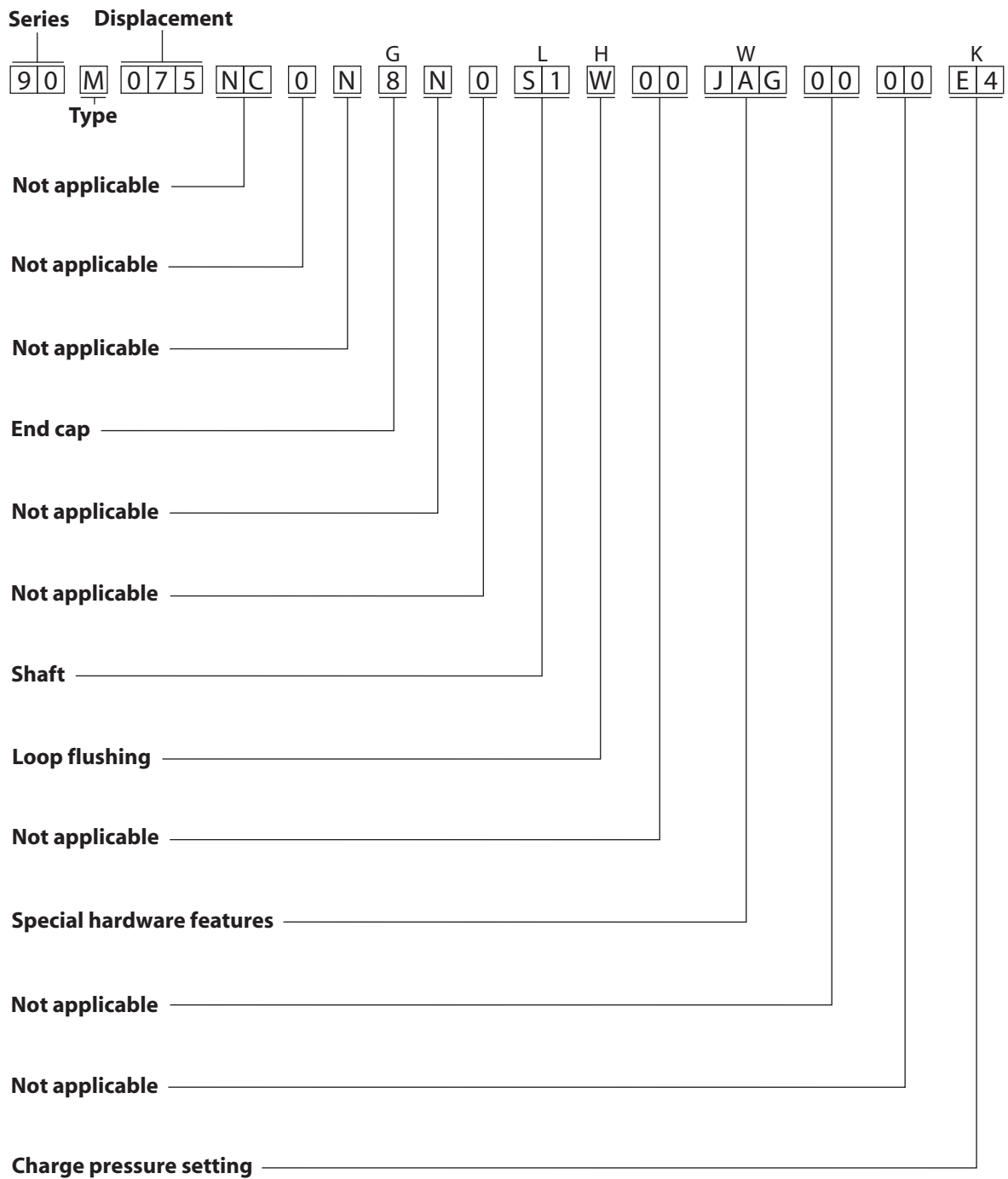
1) Referring to the output shaft module in the Order Code (see page 7), the output shaft option for this motor is identified by the code "S1": (90M075 NC 0 N 8 N 0 S1 W 00 JAG 00 00 20)

2) Referring to the Service Parts List, find the shaft group. Next find the order code that relates to this unit, which is "S1". The shaft is found to be item L100 and part number 8100598.

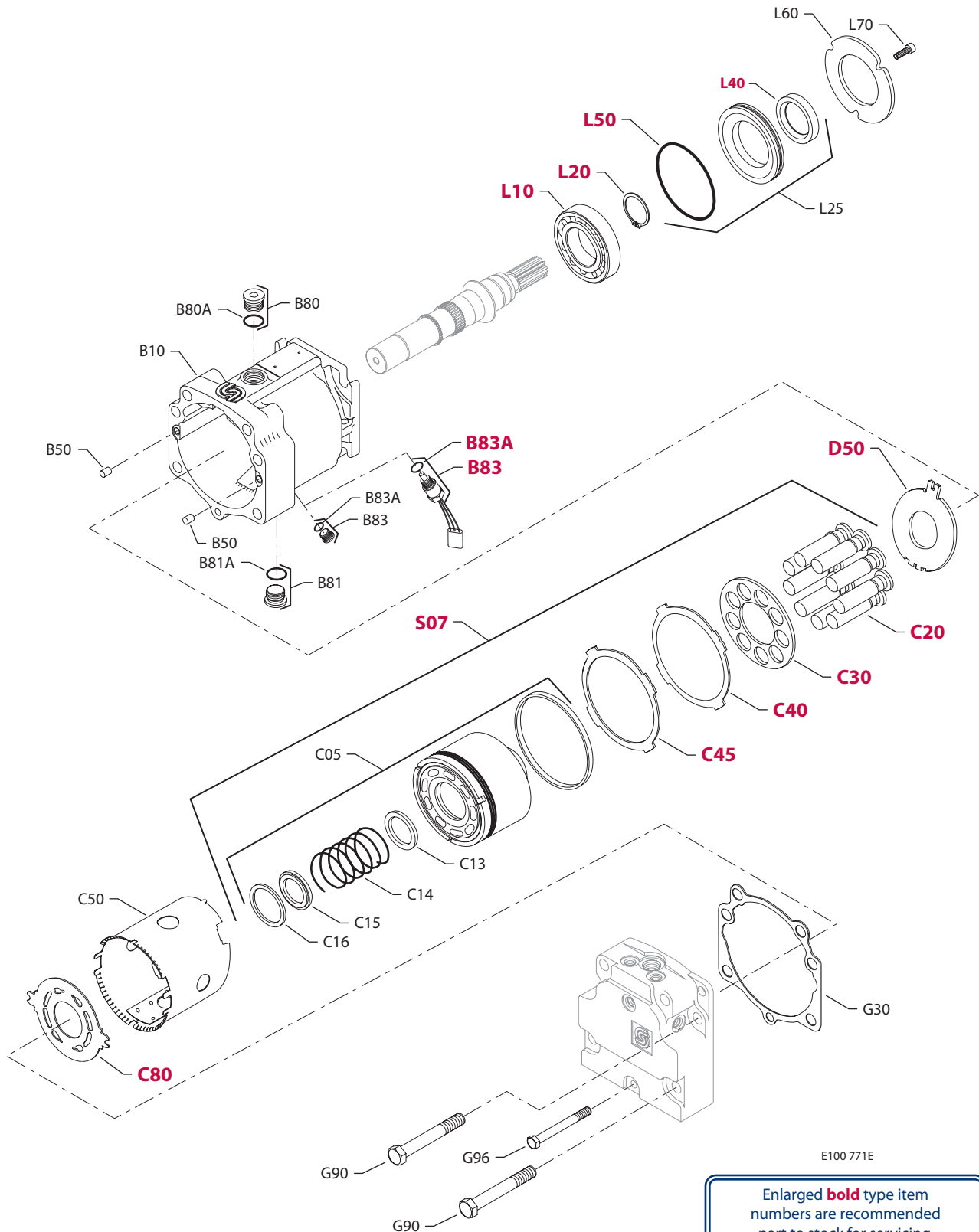


Series 90 75 cc Axial Piston Motors
Parts Manual
Notes





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E100 771E

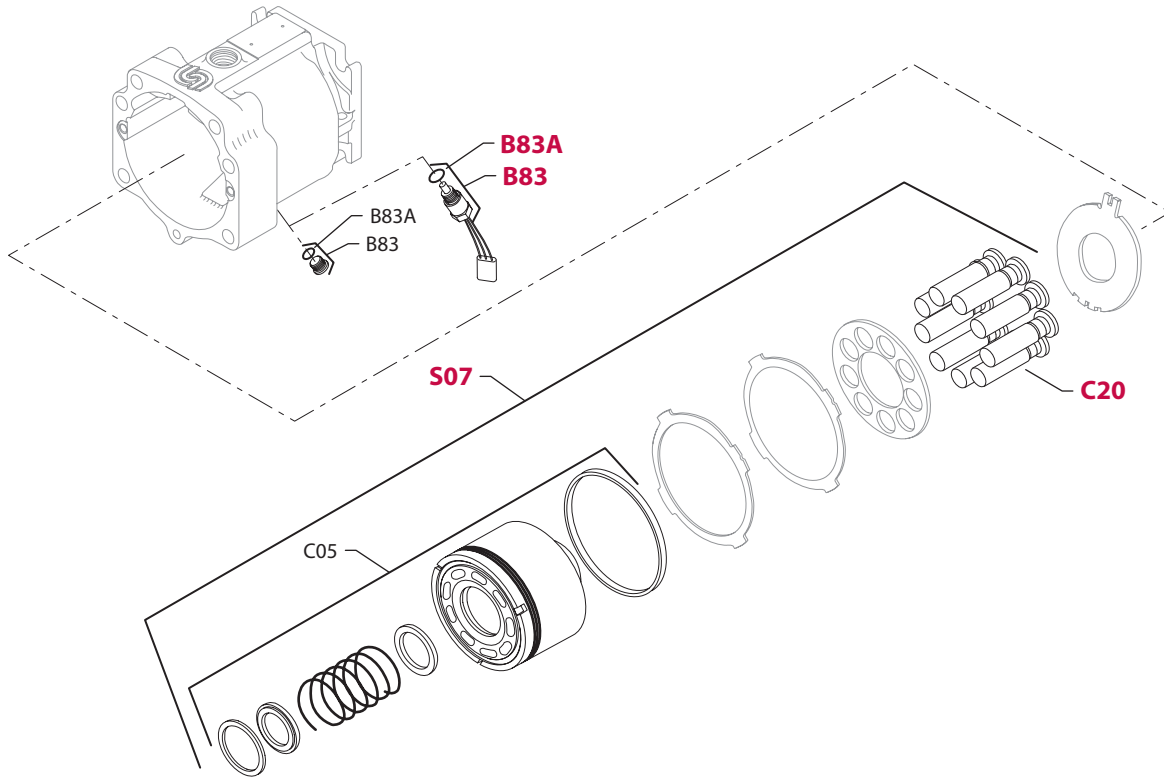
Enlarged **bold** type item numbers are recommended part to stock for servicing.

COMMON PARTS

Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
	B10	88-43		8100965	Housing (SB-1988-018 and SB-2004-015)	1
	B50	88-43		9004800-3708	Pin (SB-1988-018)	2
	B80	87-02		664524 (9005110-9000)	Plug assembly	1
	B80A	87-02		001156 (9004201-7500)	O-ring	1
	B81	87-02		664524 (9005110-9000)	Plug assembly	1
	B81A	87-02		001156 (9004201-7500)	O-ring	1
	C13	87-02		665067 (8100103)	Spring seat	1
	C14	87-02		665034 (8100074)	Cylinder block spring	1
	C15	87-02		665042 (8100127)	Spring retainer	1
	C16	87-02		9006275-0027	Retaining ring	1
	C20	87-02		708230	Piston assembly (SB-1988-023)	9
	C30	87-02		8000007	Slipper guide	1
	C40	87-02		681718	Slipper guide retainer	1
	C45	87-02		505367	Slipper guide retainer spacer	1
	C50	87-02		8100475	Hold down tube	1
	C80	87-02		323766	Valve plate	1
	D50	87-02		505358	Thrust plate	1
	G30	87-02		8100875	End cap gasket (SB-2001-011)	1
	G90	04-51		675918 (9007210-1216)	Screw (SB-2004-015)	6
	G90	87-02	04-50	675918 (9007210-1216)	Screw (SB-2004-015)	4
	G95	87-02	04-50	675900 (9007210-1209)	Screw (SB-2004-015)	2
	G96	87-02		701474 (9007210-1016)	Screw	1
	L10	87-02		5000505	Roller beraing	1
	L20	87-02		9006300-0156	Retaining ring	1
	L25	87-02		519671	Seal assembly (SB-2006-012)	1
	L40	87-02		519666	Lip seal (SB-2006-012)	1
	L50	87-02		684621 (9004104-1530)	O-ring	1
	L60	87-02		516767	Retainer plate	1
	L70	87-02		041160 (9007314-0605)	Screw	3

SPECIAL HARDWARE

EAA	C05	87-02		8100979	Cylinder block assembly. w/speed ring (SB-2005-018)	1
	B83	87-02		KPPG12508	Speed sensor	1
	B83A	87-02		085043 (9004201-3700)	O-ring	1
EAF	C05	87-02		8100979	Cylinder block assembly. w/speed ring (SB-2005-018)	1
	B83	87-02		KPPG13808	Speed sensor	1
	B83A	87-02		085043 (9004201-3700)	O-ring	1
EAG	C05	87-02		8100979	Cylinder block assembly. w/speed ring (SB-2005-018)	1
	B83	87-02		KPPG16511	Speed sensor	1
	B83A	87-02		085043 (9004201-3700)	O-ring	1
EAH	C05	87-02		8100979	Cylinder block assembly. w/speed ring (SB-2005-018)	1
	B83	87-02		KPPG13808	Speed sensor	1
	B83A	87-02		085043 (9004201-3700)	O-ring	1

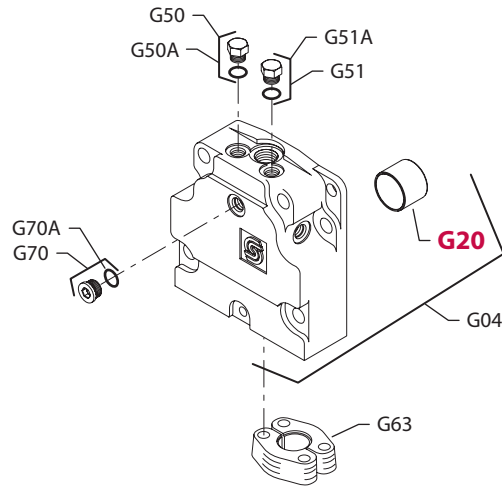


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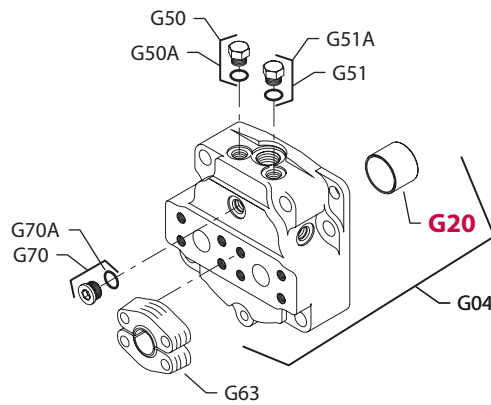
Enlarged **bold** type item numbers are recommended part to stock for servicing.

SPECIAL HARDWARE

Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
EBA	C05	87-02		8100979	Cylinder block assembly, w/speed ring (SB-2005-018)	1
	B83	87-02		KPPG13408	Speed sensor	1
	B83A	87-02		085043 (9004201-3700)	O-ring	1
ECA	C05	87-02		8000809	Cylinder block assembly, w/speed ring (SB-2005-018)	1
	B83	87-02		8800861	Special plug assembly	1
	B83A	87-02		085043 (9004201-3700)	O-ring	1
EEA	C05	87-02		8100979	Cylinder block assembly, w/speed ring (SB-2005-018)	1
	B83	87-02		515965 (9005110-5600)	Plug assembly	1
	B83A	87-02		085043 (9004201-3700)	O-ring	1
EEK	C05	87-02		8100979	Cylinder block assembly, w/speed ring (SB-2005-018)	1
	B83	87-02		515965 (9005110-5600)	Plug assembly	1
	B83A	87-02		085043 (9004201-3700)	O-ring	1
EFA	C05	87-02		8100979	Cylinder block assembly, w/speed ring (SB-2005-018)	1
	B83	87-02		KPPG136	Speed sensor	1
	B83A	87-02		085043 (9004201-3700)	O-ring	1
EGH	C05	87-02		8100979	Cylinder block assembly, w/speed ring (SB-2005-018)	1
	B83	87-02		KPPG13703	Speed sensor	1
	B83A	87-02		085043 (9004201-3700)	O-ring	1
EHD	C05	87-02		8100979	Cylinder block assembly, w/speed ring (SB-2005-018)	1
	B83	87-02		KPPG16408	Speed sensor	1
	B83A	87-02		085043 (9004201-3700)	O-ring	1
JAF, JAG,	S07	87-02		8510364	Cylinder block kit, w/o speed ring (SB-2005-018)	1
JAH & JAK	C05	87-02		8100974	Cylinder block assembly, w/o speed ring (SB-2005-018)	1
	B83	87-02		515965 (9005110-5600)	Plug assembly	1
	B83A	87-02		085043 (9004201-3700)	O-ring	1
NNN	S07	87-02		8510364	Cylinder block kit, w/o speed ring (SB-2005-018)	1
	C05	87-02		8100974	Cylinder block assembly, w/o speed ring (SB-2005-018)	1
	B83	87-02		515965 (9005110-5600)	Plug assembly	1
	B83A	87-02		085043 (9004201-3700)	O-ring	1



Twin port end cap



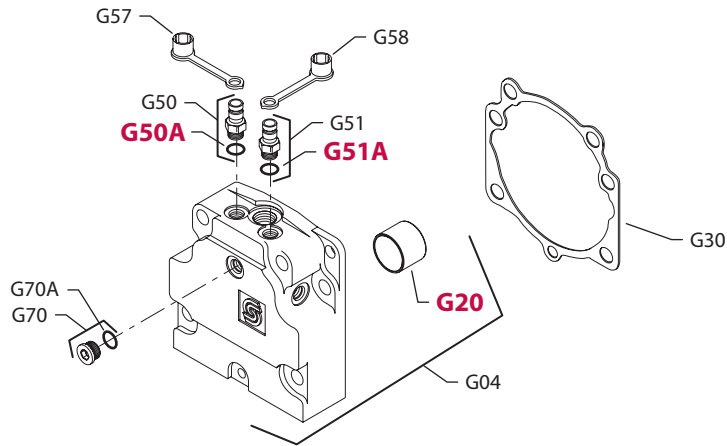
Axial port end cap

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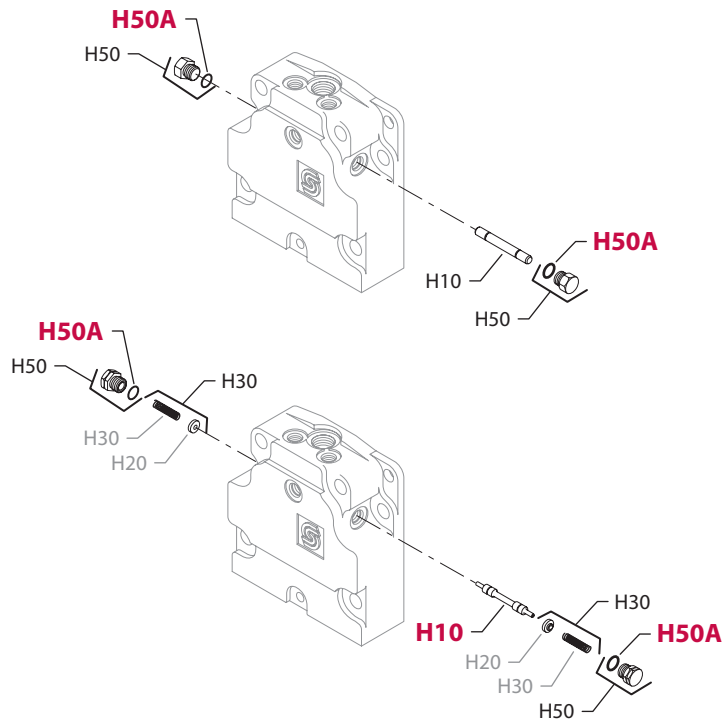
Enlarged **bold** type item numbers are recommended part to stock for servicing.

END CAP

Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
1	G04	89-44		8100733	End cap assy., twin ports (SB-1989-020 & SB-1998-007)	1
	G20	87-02		8700013	Journal bearing	1
	G50	87-02		046151 (9005100-5600)	Plug assembly	1
	G50A	87-02		085043 (9004201-3700)	O-ring	1
	G51	87-02		046151 (9005100-5600)	Plug assembly	1
	G51A	87-02		085043 (9004201-3700)	O-ring	1
	G63	87-02		8700074	Split clamp (code 61 hose)	4
	G70	87-02		515965 (9005110-5600)	Plug assembly	1
	G70A	87-02		085043 (9004201-3700)	O-ring	1
3	G04	89-44		8000734	End cap assy., axial ports (SB-1989-020 & SB-1998-007)	1
	G20	87-02		8700013	Journal bearing	1
	G50	87-02		046151 (9005100-5600)	Plug assembly	1
	G50A	87-02		085043 (9004201-3700)	O-ring	1
	G51	87-02		046151 (9005100-5600)	Plug assembly	1
	G51A	87-02		085043 (9004201-3700)	O-ring	1
	G63	87-02		8700074	Split clamp (code 61 hose)	4
	G70	87-02		515965 (9005110-5600)	Plug assembly	1
	G70A	87-02		085043 (9004201-3700)	O-ring	1
7	G04	89-44		8000734	End cap assy., axial ports (SB-1989-020 & SB-1998-007)	1
	G20	87-02		8700013	Journal bearing	1
	G50	87-02		046151 (9005100-5600)	Plug assembly	1
	G50A	87-02		085043 (9004201-3700)	O-ring	1
	G51	87-02		046151 (9005100-5600)	Plug assembly	1
	G51A	87-02		085043 (9004201-3700)	O-ring	1
	G70	87-02		515965 (9005110-5600)	Plug assembly	1
	G70A	87-02		085043 (9004201-3700)	O-ring	1
	8	G04	89-44		8100733	End cap assy., twin ports (SB-1989-020 & SB-1998-007)
G20		87-02		8700013	Journal bearing	1
G50		87-02		046151 (9005100-5600)	Plug assembly	1
G50A		87-02		085043 (9004201-3700)	O-ring	1
G51		87-02		046151 (9005100-5600)	Plug assembly	1
G51A		87-02		085043 (9004201-3700)	O-ring	1
G70		87-02		515965 (9005110-5600)	Plug assembly	1
G70A		87-02		085043 (9004201-3700)	O-ring	1
D		G04	95-40		8100731	End cap assembly, twin metric ports (SB-1998-007)
	G20	95-40		8700013	Journal bearing	1
	G50	95-40		046151 (9005100-5600)	Plug assembly	1
	G50A	95-40		085043 (9004201-3700)	O-ring	1
	G51	95-40		046151 (9005100-5600)	Plug assembly	1
	G51A	95-40		085043 (9004201-3700)	O-ring	1
	G70	95-40		515965 (9005110-5600)	Plug assembly	1
	G70A	95-40		085043 (9004201-3700)	O-ring	1



Twin port end cap



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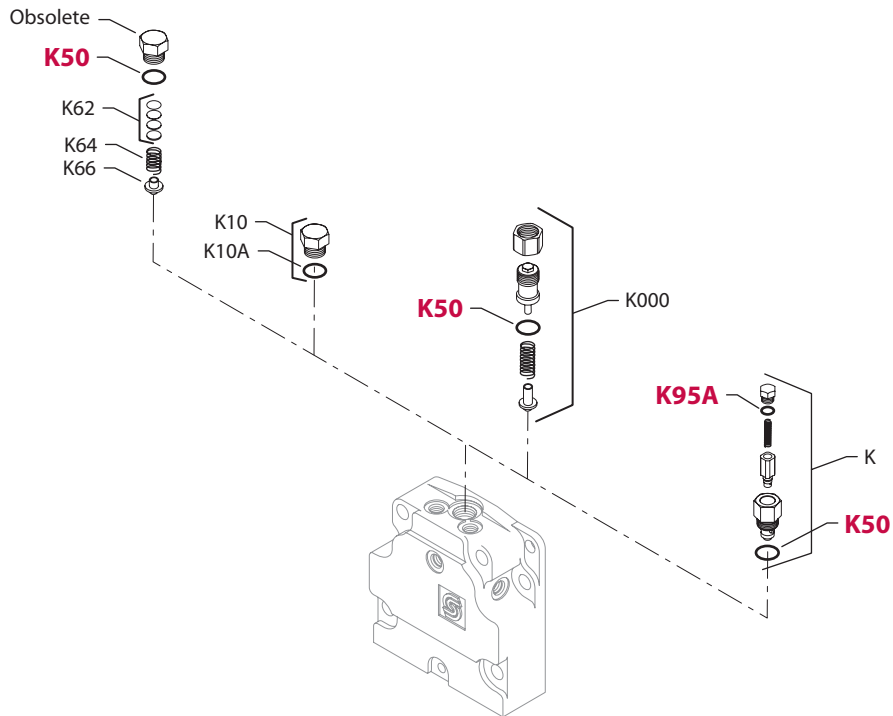
Enlarged **bold** type item numbers are recommended part to stock for servicing.

END CAP

Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
G	G04	96-41		8100731	End cap assembly, twin ports (SB-1998-007)	1
	G20	96-41		8700018	Journal bearing	1
	G50	96-41		8700127	Diagnostic receptacle	1
	G50A	96-41		085043 (9004201-3700)	O-ring	1
	G51	96-41		8700127	Diagnostic receptacle	1
	G51A	96-41		085043 (9004201-3700)	O-ring	1
	G57	96-41		8700128	Dust cover	1
	G58	96-41		8700128	Dust cover	1
	G70	96-41		515965 (9005110-5600)	Plug assembly	1
	G70A	96-41		085043 (9004201-3700)	O-ring	1

LOOP FLUSHING

N	H10	89-38		8800668	Loop flushing spool, defeated	1
	H10	87-02	89-37	308486 (8800021)	Loop flushing spool, defeated (SB-1989-020)	1
	H50	87-02		046151 (9005100-5600)	Plug assembly	2
	H50A	87-02		085043 (9004201-3700)	O-ring	2
W	H10	89-38		8800550	Shuttle spool	1
	H10	89-38	89-37	674473 (8800069)	Loop flushing spool (SB-1989-020)	1
	H20	87-02	89-37	674481 (8800265)	Spring guide (SB-1989-020)	2
	H30	89-38		513596	Spring guide assembly (SB-2000-047)	2
	H30	87-02	89-37	8800067	Spring (SB-1989-020)	2
	H50	89-38		518016	Plug assembly	2
	H50	87-02	89-37	674507 (9005475-0069)	Plug assembly (SB-1989-020)	2
	H50A	87-02		085043 (9004201-3700)	O-ring	2

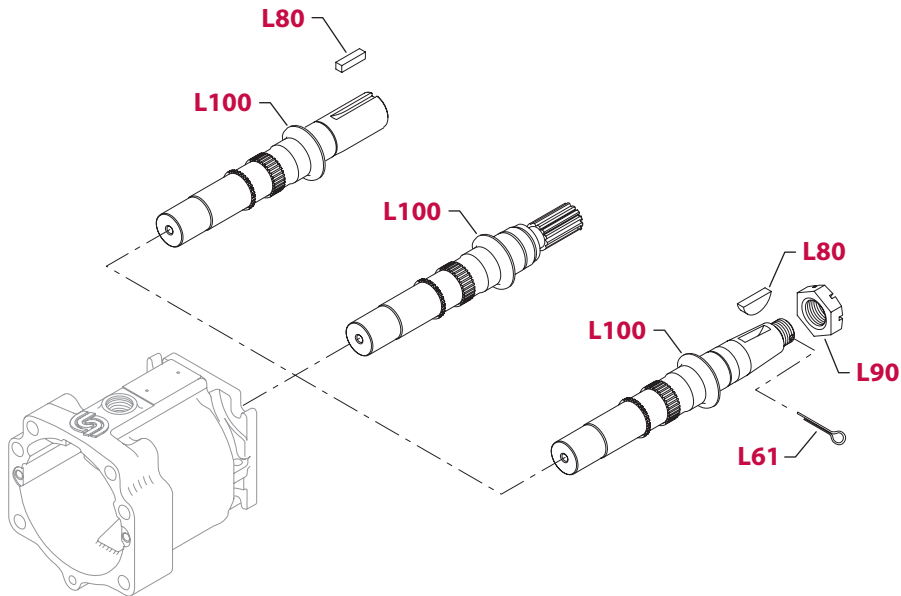


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Enlarged **bold** type item numbers are recommended part to stock for servicing.

CHARGE PRESSURE SETTING

Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
00	K10	89-44		001537 (9005100-8700)	Plug assembly	1
	K10	87-02	89-43	001529 (9005100-7500)	Plug assembly	1
	K10A	89-44		001149 (9004201-6200)	O-ring	1
	K10A	87-02	89-43	001131 (9004201-5000)	O-ring	1
20-24	K000	89-44		8510012	Adjustable charge relief valve kit	1
	K50	89-44		001149 (9004201-6200)	O-ring	1
	K50	87-02	89-43	001131 (9004201-5000)	O-ring	1
	K62	87-02	89-43	314716 (8800259-0001)	Shim, 010" (SB-1989-020)	1
	K62	87-02	89-43	314724 (8800259-0002)	Shim, 020" (SB-1989-020)	1
	K62	87-02	89-43	314732 (8800259-0003)	Shim, 030" (SB-1989-020)	1
	K62	87-02	89-43	314740 (8800259-0004)	Shim, 040" (SB-1989-020)	1
	K64	87-02	89-43	8800146	Spring (SB-1989-020)	1
	K66	87-02	89-43	674465 (8800238)	Poppet (SB-1989-020)	1
A0	K	89-44		8510253	Cartridge CPRV kit, 13 bar, 11 L/min	1
	K50	89-44		001149 (9004201-6200)	O-ring	1
	K95A	89-44		085043 (9004201-3700)	O-ring	2
A3	K	89-44		8510256	Cartridge CPRV kit, 13 bar, 16 L/min	1
	K50	89-44		001149 (9004201-6200)	O-ring	1
	K95A	89-44		085043 (9004201-3700)	O-ring	2
E4	K	89-44		8510261	Cartridge CPRV kit, 16 bar, 4 L/min	1
	K50	89-44		001149 (9004201-6200)	O-ring	1
	K95A	89-44		085043 (9004201-3700)	O-ring	2
E6	K	89-44		8510252	Cartridge CPRV kit, 16 bar, 7 L/min	1
	K50	89-44		001149 (9004201-6200)	O-ring	1
	K95A	89-44		085043 (9004201-3700)	O-ring	2
F0	K	89-44		8510259	Cartridge CPRV kit, 16 bar, 11 L/min	1
	K50	89-44		001149 (9004201-6200)	O-ring	1
	K95A	89-44		085043 (9004201-3700)	O-ring	2
F3	K	89-44		8510262	Cartridge CPRV kit, 16 bar, 16 L/min	1
	K50	89-44		001149 (9004201-6200)	O-ring	1
	K95A	89-44		085043 (9004201-3700)	O-ring	2
G0	K	89-44		8510260	Cartridge CPRV kit, 16 bar, 22 L/min	1
	K50	89-44		001149 (9004201-6200)	O-ring	1
	K95A	89-44		085043 (9004201-3700)	O-ring	2
N4	K	89-44		8510255	Cartridge CPRV kit, 13 bar, 4 L/min	1
	K50	89-44		001149 (9004201-6200)	O-ring	1
	K95A	89-44		085043 (9004201-3700)	O-ring	2
N6	K	89-44		8510251	Cartridge CPRV kit, 13 bar, 7 L/min	1
	K50	89-44		001149 (9004201-6200)	O-ring	1
	K95A	89-44		085043 (9004201-3700)	O-ring	2



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

SHAFT

Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
C6	L100	87-02		8100595	Shaft, 21 tooth spline, 16/32 (SB-1996-018)	1
C7	L100	87-02		8100596	Shaft, 23 tooth spline, 16/32 (SB-1996-018)	1
K2	L100	87-02		8100597	Shaft, straight key (SB-1996-018)	1
	L80	87-02		331868 (9003261-3724)	Key, .375 x 1.5	1
S1	L100	87-02		8100598	Shaft, 14 tooth spline, 12/24 (SB-1996-018)	1
T2	L100	87-02		8100600	Shaft, tapered (SB-1996-018)	1
	L61	87-02		9004600-1230	Cotter pin	1
	L80	87-02		047878 (9003310-3724)	Woodruff key, .3730 x 1.5	1
	L90	87-02		5000606	Slotted nut	1

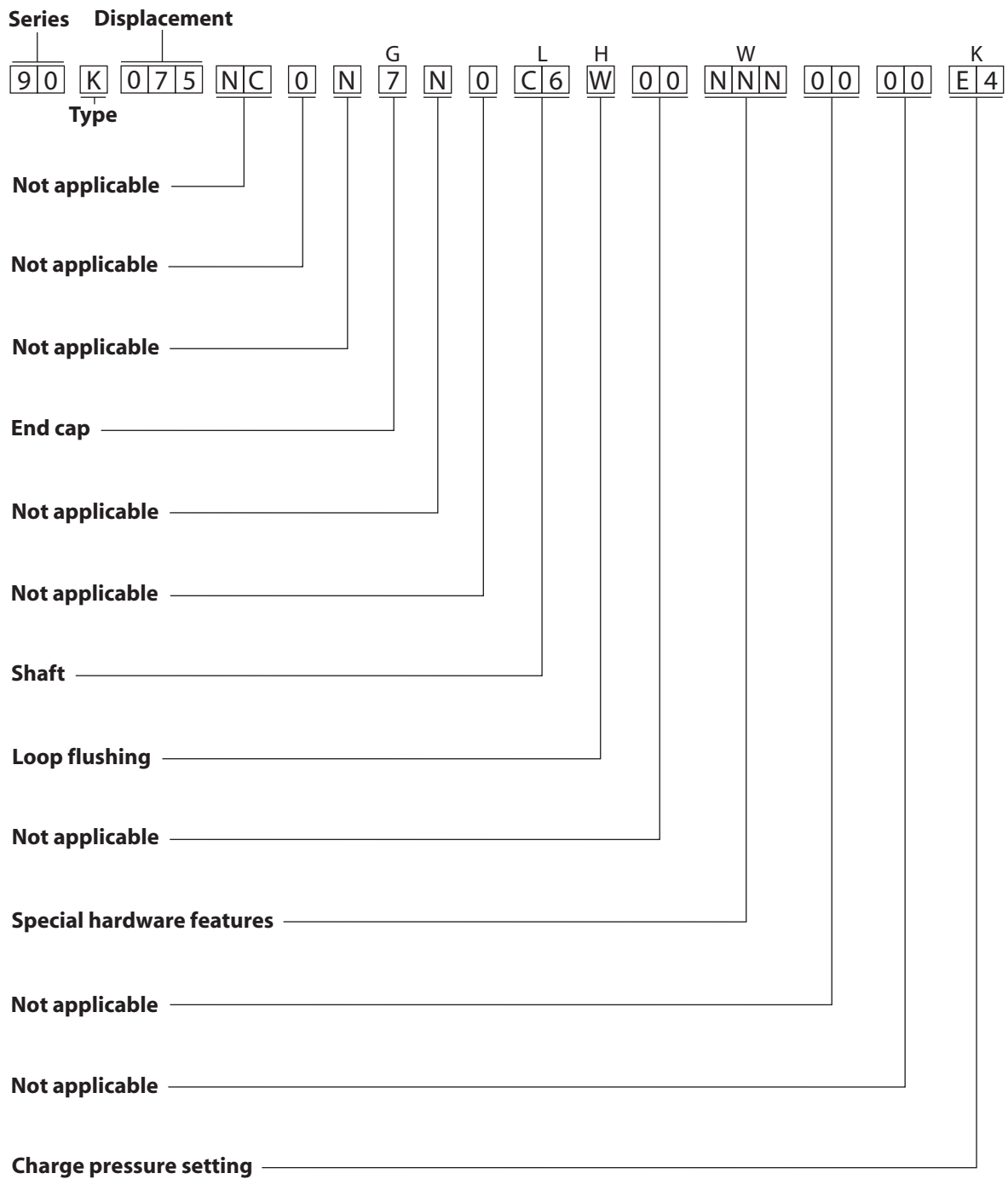
OVERHAUL SEAL KIT

		87-02		81030530	Overhaul seal kit, 90K/M075	
	B15	87-02		502205	O-ring	1
	G30	87-02		8100875	End cap gasket (SB-2001-011)	1
	G30	87-02		8100874	End cap gasket (SB-2001-011)	1
	H50A	87-02		085043 (9004201-3700)	O-ring	2
	K50	89-38		001149 (9004201-6200)	O-ring	1
	L40	87-02		519666	Lip seal (SB-2006-012)	1
	L50	87-02		684621 (9004104-1530)	O-ring	1
	L50	87-02		071845 (9004104-1520)	O-ring	1

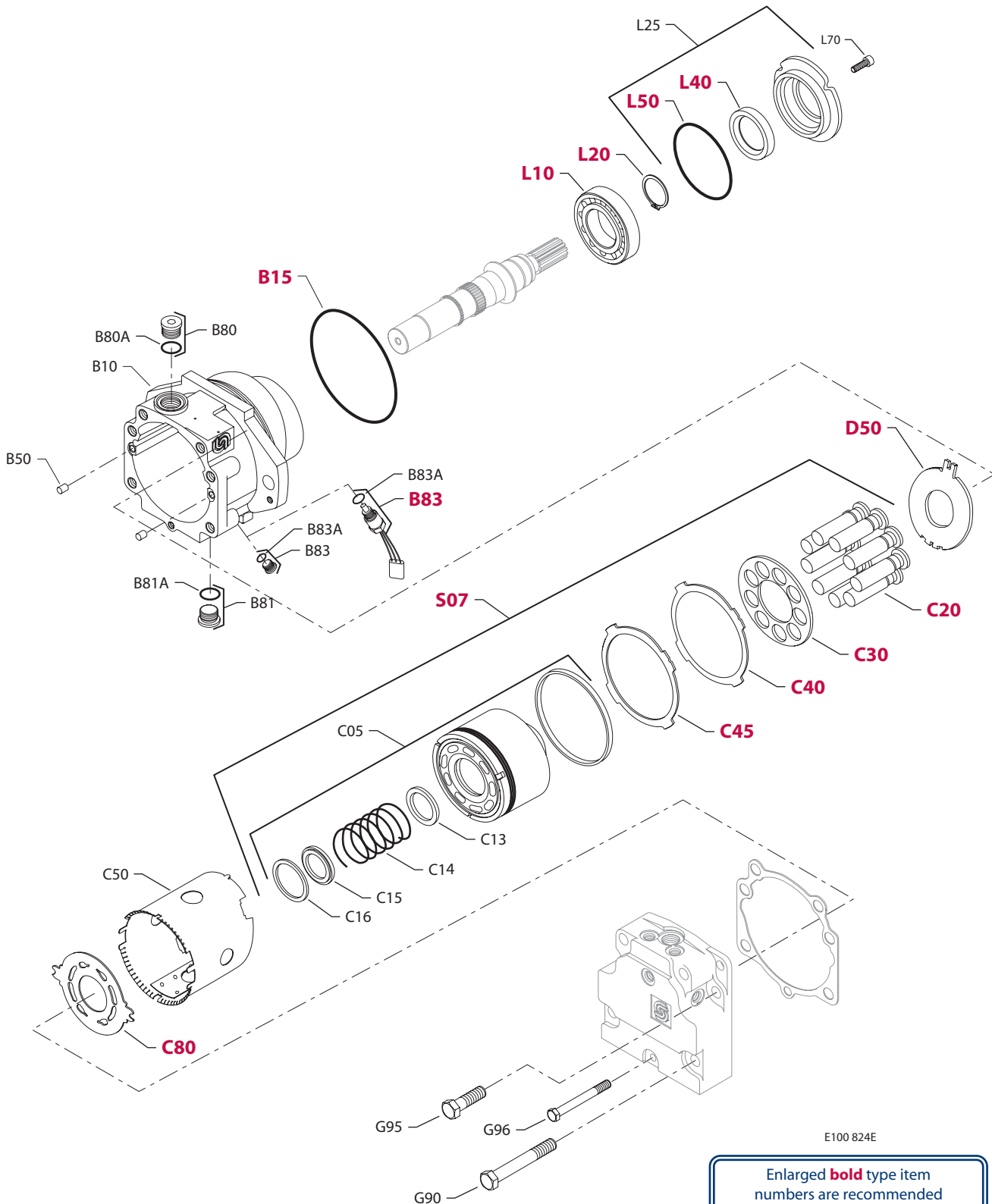


Series 90 75 cc Axial Piston Motors
Parts Manual
Notes





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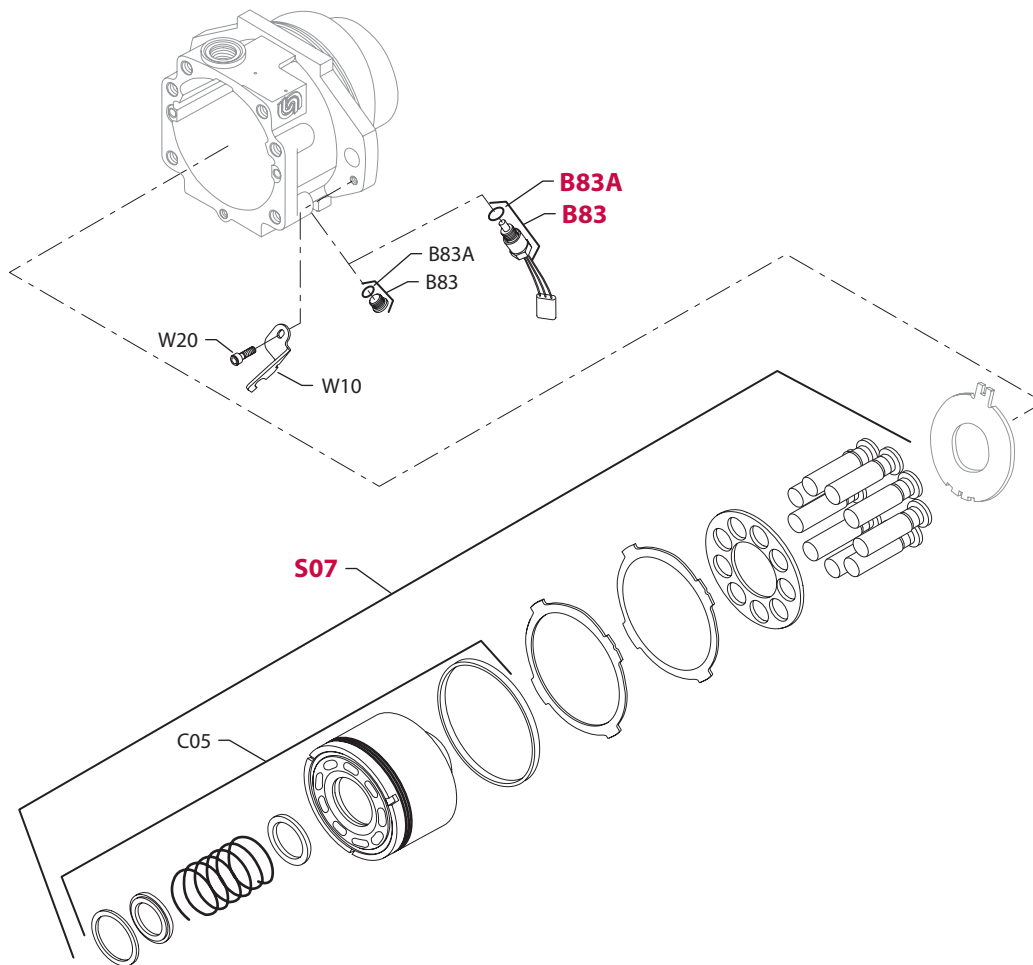
Enlarged **bold** type item numbers are recommended part to stock for servicing.

COMMON PARTS

Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
	B10	93-07		8100860	Housing	1
	B15	93-07		502205	O-ring	1
	B50	93-07		9004800-3708	Pin	2
	B80	93-07		664524 (9005110-9000)	Plug assembly	1
	B80A	93-07		001156 (9004201-7500)	O-ring	1
	B81	93-07		664524 (9005110-9000)	Plug assembly	1
	B81A	93-07		001156 (9004201-7500)	O-ring	1
	C13	93-07		665067 (8100103)	Spring seat	1
	C14	93-07		665034 (8100074)	Cylinder block spring	1
	C15	93-07		665042 (8100127)	Spring retainer	1
	C16	93-07		9006275-0027	Retaining ring	1
	C20	93-07		708230	Piston assembly (SB-1988-023)	9
	C30	93-07		8000007	Slipper guide	1
	C40	93-07		681718	Slipper guide retainer	1
	C45	93-07		505367	Slipper guide retainer spacer	1
	C50	93-07		8100475	Hold down tube	1
	C80	93-07		323766	Valve plate	1
	D50	93-07		505358	Thrust plate	1
	G90	93-07		675918 (9007210-1216)	Screw	4
	G95	93-07		675900 (9007210-1209)	Screw	2
	G96	93-07		701474 (9007210-1016)	Screw	1
	L10	93-07		5000505	Roller beraing	1
	L20	93-07		9006300-0156	Retaining ring	1
	L25	93-07		8100554	Seal assembly	1
	L40	93-07		9008000-0115	Lip seal	1
	L50	93-07		071845 (9004104-1520)	O-ring	1
	L70	93-07		041160 (9007314-0605)	Screw	3

SPECIAL HARDWARE

EAA	C05	93-07		8100979	Cylinder block assembly. w/speed ring (SB-2005-018)	1
	B83	93-07		KPPG12508	Speed sensor	1
	B83A	93-07		085043 (9004201-3700)	O-ring	1
EBA	C05	93-07		8100979	Cylinder block assembly. w/speed ring (SB-2005-018)	1
	B83	93-07		KPPG13408	Speed sensor	1
	B83A	93-07		085043 (9004201-3700)	O-ring	1
EEA	C05	93-07		8100979	Cylinder block assembly. w/speed ring (SB-2005-018)	1
	B83	93-07		515965 (9005110-5600)	Plug assembly	1
	B83A	93-07		085043 (9004201-3700)	O-ring	1
EEF	C05	93-07		8100975	Cylinder block assy., w/impulse sp. ring (SB-2005-018)	1
	B83	93-07		515965 (9005110-5600)	Plug assembly	1
	B83A	93-07		085043 (9004201-3700)	O-ring	1
EFA	C05	93-07		8100979	Cylinder block assembly. w/speed ring (SB-2005-018)	1
	B83	93-07		KPPG136	Speed sensor	1
	B83A	93-07		085043 (9004201-3700)	O-ring	1

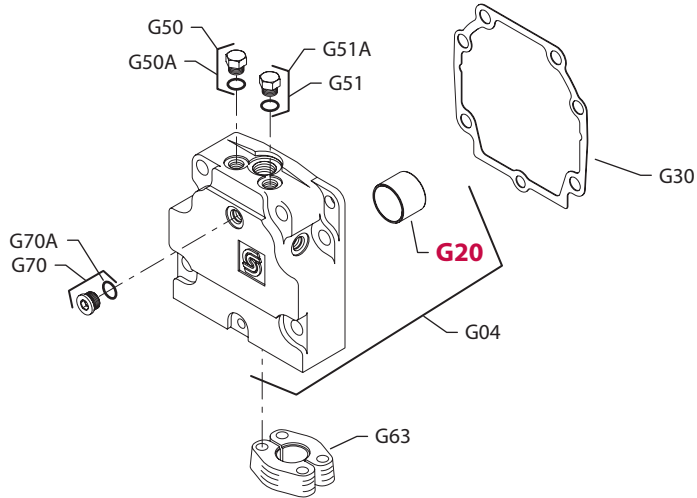


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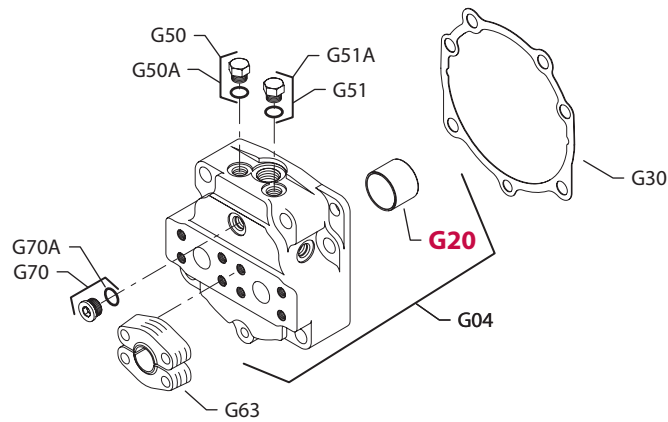
Enlarged **bold** type item numbers are recommended part to stock for servicing.

SPECIAL HARDWARE

Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
EFG	C05	00-30		8100979	Cylinder block assembly, w/speed ring (SB-2005-018)	1
	B83	00-30		KPPG13703	Speed sensor	1
	B83A	00-30		085043 (9004201-3700)	O-ring	1
	W10	00-30		8100861	Speed sensor bracket	1
	W20	00-30		067637	Screw	1
EGG	C05	01-11		8100979	Cylinder block assembly, w/speed ring (SB-2005-018)	1
	B83	01-11		KPPG17708	Speed sensor	1
	B83A	01-11		085043 (9004201-3700)	O-ring	1
	W10	01-11		8100861	Speed sensor bracket	1
	W20	01-11		067637	Screw	1
EGJ	C05	05-44		8100979	Cylinder block assembly, w/speed ring (SB-2005-018)	1
	B83	05-44		KPPG19708	Speed sensor	1
	B83A	05-44		085043 (9004201-3700)	O-ring	1
	W10	05-44		8100861	Speed sensor bracket	1
	W20	05-44		067637	Screw	1
EGK	C05	06-12		8100979	Cylinder block assembly, w/speed ring (SB-2005-018)	1
	B83	06-12		KPPG17708	Speed sensor	1
	B83A	06-12		085043 (9004201-3700)	O-ring	1
	W10	06-12		8100861	Speed sensor bracket	1
	W20	06-12		067637	Screw	1
JAD	S07	06-16		8510364	Cylinder block kit, w/o speed ring (SB-2005-018)	1
	C05	06-16		8100974	Cylinder block assembly, w/o speed ring (SB-2005-018)	1
	B83	06-16		515965 (9005110-5600)	Plug assembly	1
	B83A	06-16		085043 (9004201-3700)	O-ring	1
NNN	S07	93-07		8510364	Cylinder block kit, w/o speed ring (SB-2005-018)	1
	C05	93-07		8100974	Cylinder block assembly, w/o speed ring (SB-2005-018)	1
	B83	93-07		515965 (9005110-5600)	Plug assembly	1
	B83A	93-07		085043 (9004201-3700)	O-ring	1



Twin port end cap



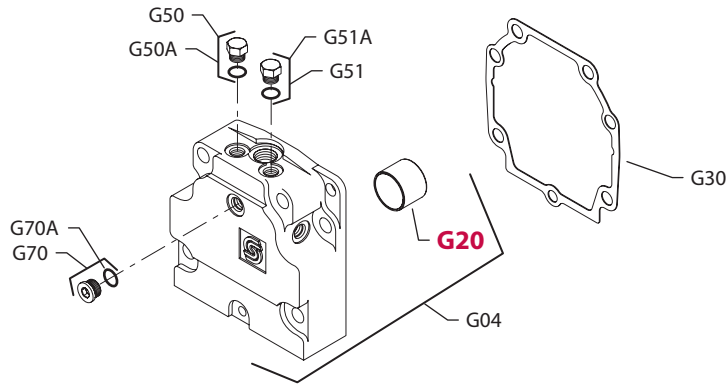
Axial port end cap

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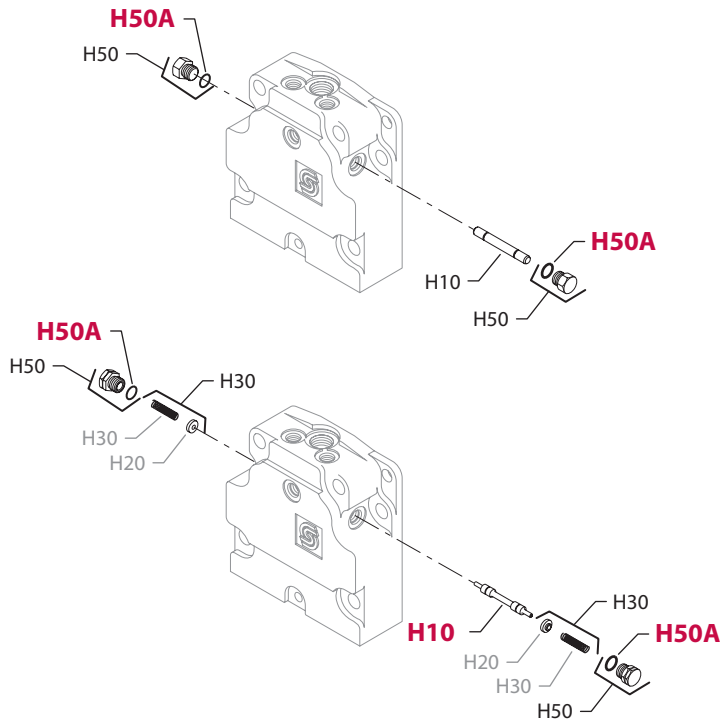
Enlarged **bold** type item numbers are recommended part to stock for servicing.

END CAP

Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
1	G04	89-44		8100733	End cap assy., twin ports (SB-1989-020 & SB-1998-007)	1
	G20	93-07		8700013	Journal bearing	1
	G30	93-07		8100874	End cap gasket (SB-2001-011)	1
	G50	93-07		046151 (9005100-5600)	Plug assembly	1
	G50A	93-07		085043 (9004201-3700)	O-ring	1
	G51	93-07		046151 (9005100-5600)	Plug assembly	1
	G51A	93-07		085043 (9004201-3700)	O-ring	1
	G63	93-07		8700074	Split clamp (code 61 hose)	4
	G70	93-07		515965 (9005110-5600)	Plug assembly	1
	G70A	93-07		085043 (9004201-3700)	O-ring	1
3	G04	89-44		8000734	End cap assy., axial ports (SB-1989-020 & SB-1998-007)	1
	G20	93-07		8700013	Journal bearing	1
	G30	93-07		8100875	End cap gasket (SB-2001-011)	1
	G50	93-07		046151 (9005100-5600)	Plug assembly	1
	G50A	93-07		085043 (9004201-3700)	O-ring	1
	G51	93-07		046151 (9005100-5600)	Plug assembly	1
	G51A	93-07		085043 (9004201-3700)	O-ring	1
	G63	93-07		8700074	Split clamp (code 61 hose)	4
	G70	93-07		515965 (9005110-5600)	Plug assembly	1
	G70A	93-07		085043 (9004201-3700)	O-ring	1
7	G04	89-44		8000734	End cap assy., axial ports (SB-1989-020 & SB-1998-007)	1
	G20	93-07		8700013	Journal bearing	1
	G30	93-07		8100875	End cap gasket (SB-2001-011)	1
	G50	93-07		046151 (9005100-5600)	Plug assembly	1
	G50A	93-07		085043 (9004201-3700)	O-ring	1
	G51	93-07		046151 (9005100-5600)	Plug assembly	1
	G51A	93-07		085043 (9004201-3700)	O-ring	1
	G70	93-07		515965 (9005110-5600)	Plug assembly	1
	G70A	93-07		085043 (9004201-3700)	O-ring	1
	8	G04	89-44		8100733	End cap assy., twin ports (SB-1989-020 & SB-1998-007)
G20		93-07		8700013	Journal bearing	1
G30		93-07		8100874	End cap gasket (SB-2001-011)	1
G50		93-07		046151 (9005100-5600)	Plug assembly	1
G50A		93-07		085043 (9004201-3700)	O-ring	1
G51		93-07		046151 (9005100-5600)	Plug assembly	1
G51A		93-07		085043 (9004201-3700)	O-ring	1
G70		93-07		515965 (9005110-5600)	Plug assembly	1
G70A		93-07		085043 (9004201-3700)	O-ring	1



Twin port end cap



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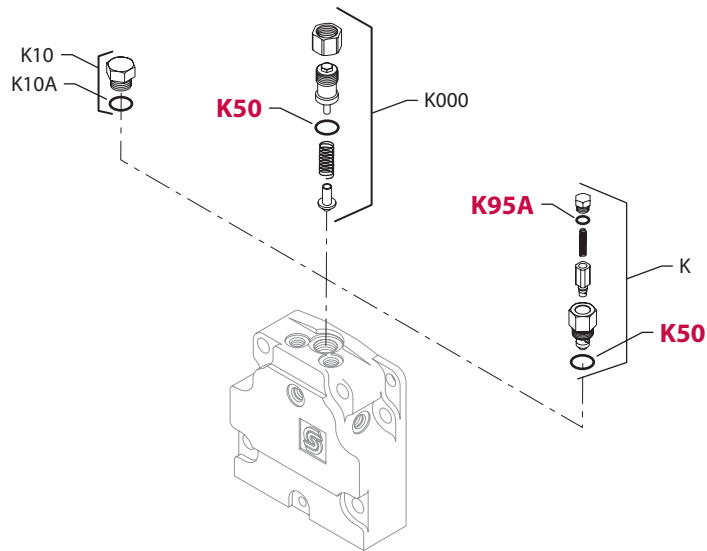
Enlarged **bold** type item numbers are recommended part to stock for servicing.

END CAP

Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
D	G04	95-40		8100731	End cap assembly, twin metric ports (SB-1998-007)	1
	G20	95-40		8700013	Journal bearing	1
	G30	95-40		8100874	End cap gasket (SB-2001-011)	1
	G50	95-40		046151 (9005100-5600)	Plug assembly	1
	G50A	95-40		085043 (9004201-3700)	O-ring	1
	G51	95-40		046151 (9005100-5600)	Plug assembly	1
	G51A	95-40		085043 (9004201-3700)	O-ring	1
	G70	95-40		515965 (9005110-5600)	Plug assembly	1
	G70A	95-40		085043 (9004201-3700)	O-ring	1

LOOP FLUSHING

N	H10	92-31		8800668	Loop flushing spool, defeated	1
	H50	92-31		046151 (9005100-5600)	Plug assembly	2
	H50A	92-31		085043 (9004201-3700)	O-ring	2
W	H10	92-31		365544 (8800550)	Shuttle spool	1
	H30	92-31		513596	Spring guide assembly (SB-2000-047)	2
	H50	92-31		518016	Plug assembly	2
	H50A	92-31		085043 (9004201-3700)	O-ring	2

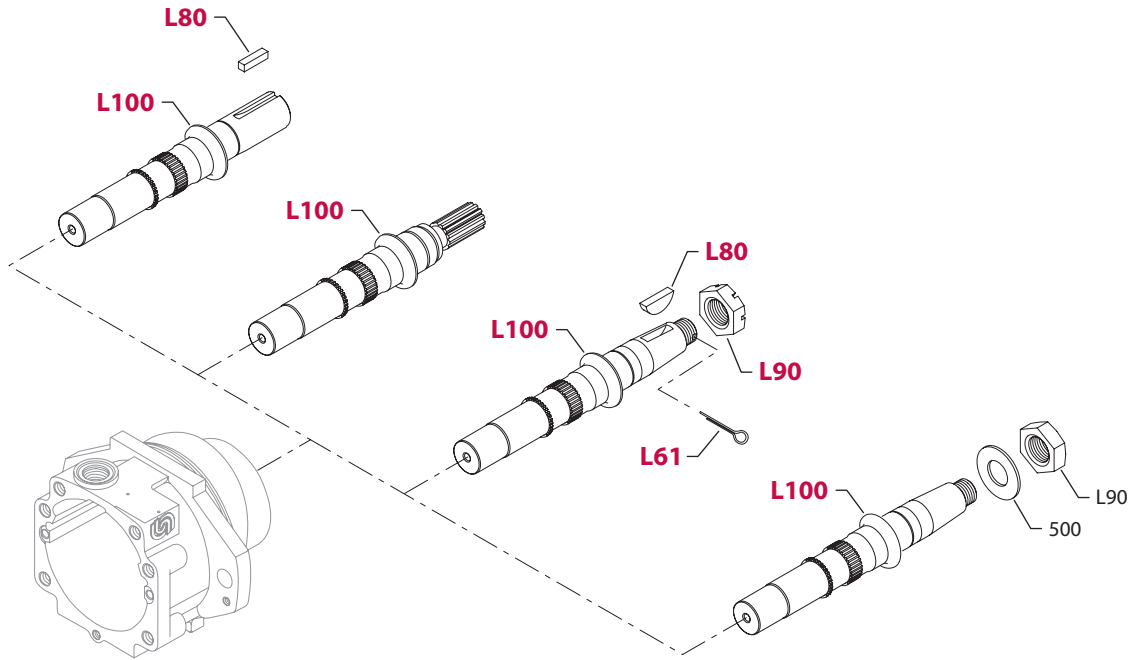


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Enlarged **bold** type item numbers are recommended part to stock for servicing.

CHARGE PRESSURE SETTING

Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
00	K10	93-07		001537 (9005100-8700)	Plug assembly	1
	K10A	93-07		001149 (9004201-6200)	O-ring	1
20-24	K000	93-07		8510012	Adjustable charge relief valve kit	1
	K50	93-07		001149 (9004201-6200)	O-ring	1
A0	K	93-07		8510253	Cartridge CPRV kit, 13 bar, 11 L/min	1
	K50	93-07		001149 (9004201-6200)	O-ring	1
	K95A	93-07		085043 (9004201-3700)	O-ring	2
A3	K	93-07		8510256	Cartridge CPRV kit, 13 bar, 16 L/min	1
	K50	93-07		001149 (9004201-6200)	O-ring	1
	K95A	93-07		085043 (9004201-3700)	O-ring	2
E4	K	93-07		8510261	Cartridge CPRV kit, 16 bar, 4 L/min	1
	K50	93-07		001149 (9004201-6200)	O-ring	1
	K95A	93-07		085043 (9004201-3700)	O-ring	2
E6	K	93-07		8510252	Cartridge CPRV kit, 16 bar, 7 L/min	1
	K50	93-07		001149 (9004201-6200)	O-ring	1
	K95A	93-07		085043 (9004201-3700)	O-ring	2
F0	K	93-07		8510259	Cartridge CPRV kit, 16 bar, 11 L/min	1
	K50	93-07		001149 (9004201-6200)	O-ring	1
	K95A	93-07		085043 (9004201-3700)	O-ring	2
F3	K	93-07		8510262	Cartridge CPRV kit, 16 bar, 16 L/min	1
	K50	93-07		001149 (9004201-6200)	O-ring	1
	K95A	93-07		085043 (9004201-3700)	O-ring	2
G0	K	93-07		8510260	Cartridge CPRV kit, 16 bar, 22 L/min	1
	K50	93-07		001149 (9004201-6200)	O-ring	1
	K95A	93-07		085043 (9004201-3700)	O-ring	2
N4	K	93-07		8510255	Cartridge CPRV kit, 13 bar, 4 L/min	1
	K50	93-07		001149 (9004201-6200)	O-ring	1
	K95A	93-07		085043 (9004201-3700)	O-ring	2
N6	K	93-07		8510251	Cartridge CPRV kit, 13 bar, 7 L/min	1
	K50	93-07		001149 (9004201-6200)	O-ring	1
	K95A	93-07		085043 (9004201-3700)	O-ring	2



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

SHAFT

Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
C6	L100	93-07		8100595	Shaft, 21 tooth spline, 16/32 (SB-1996-018)	1
C7	L100	93-07		8100596	Shaft, 23 tooth spline, 16/32 (SB-1996-018)	1
K2	L100	93-07		8100597	Shaft, straight key (SB-1996-018)	1
	L80	93-07		331868 (9003261-3724)	Key, .375 x 1.5	1
S1	L100	93-07		8100598	Shaft, 14 tooth spline, 12/24 (SB-1996-018)	1
T2	L100	93-07		8100600	Shaft, tapered (SB-1996-018)	1
	L61	93-07		9004600-1230	Cotter pin	1
	L80	93-07		047878 (9003310-3724)	Woodruff key, .3730 x 1.5	1
	L90	93-07		5000606	Slotted nut	1

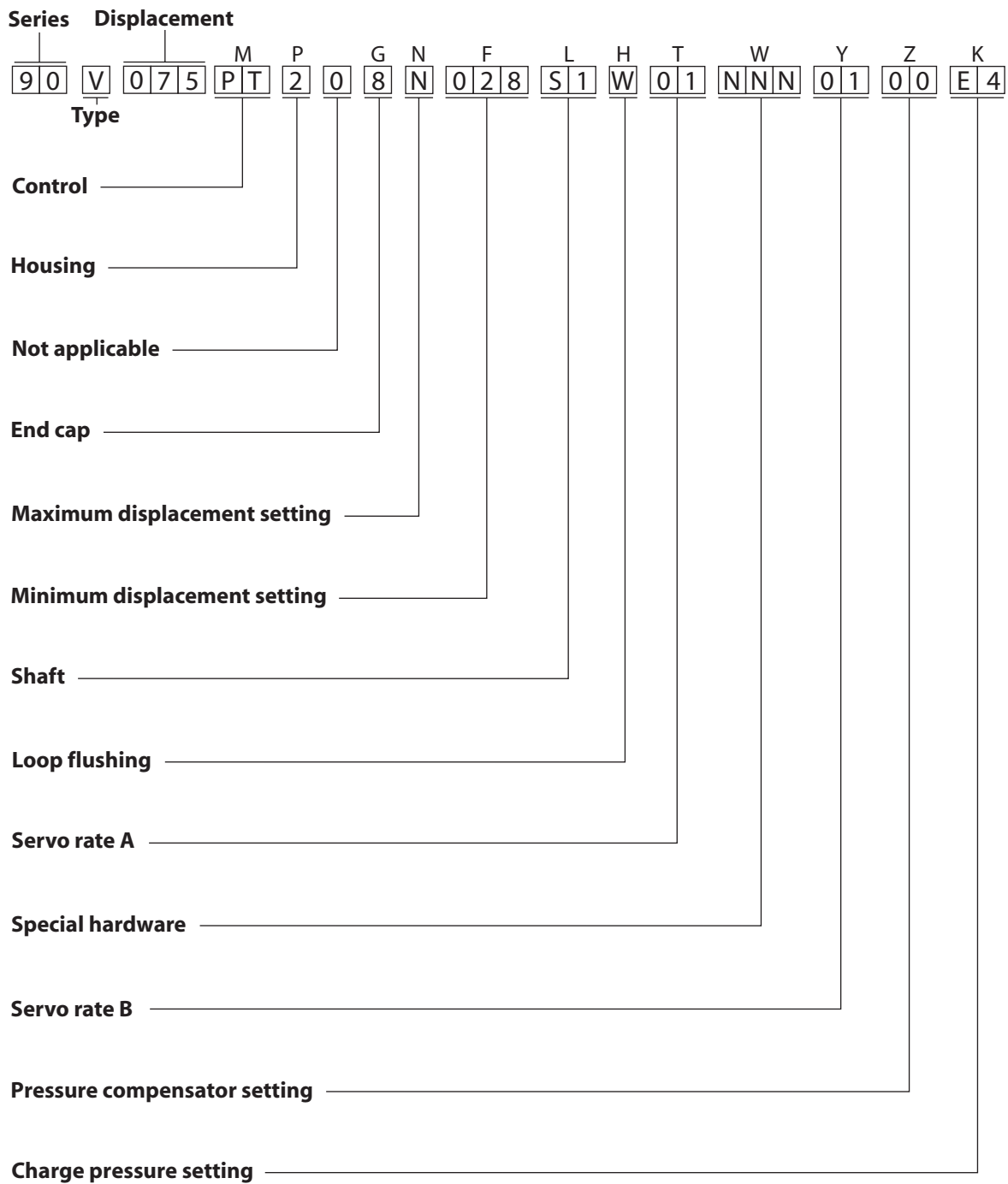
OVERHAUL SEAL KIT

		93-07		81030530	Overhaul seal kit, 90K/M075	
	B15	93-07		502205	O-ring	1
	G30	93-07		8100875	End cap gasket (SB-2001-011)	1
	G30	93-07		8100874	End cap gasket (SB-2001-011)	1
	H50A	93-07		085043 (9004201-3700)	O-ring	2
	K50	93-07		001149 (9004201-6200)	O-ring	1
	L40	93-07		519666	Lip seal (SB-2006-012)	1
	L50	93-07		684621 (9004104-1530)	O-ring	1
	L50	93-07		071845 (9004104-1520)	O-ring	1

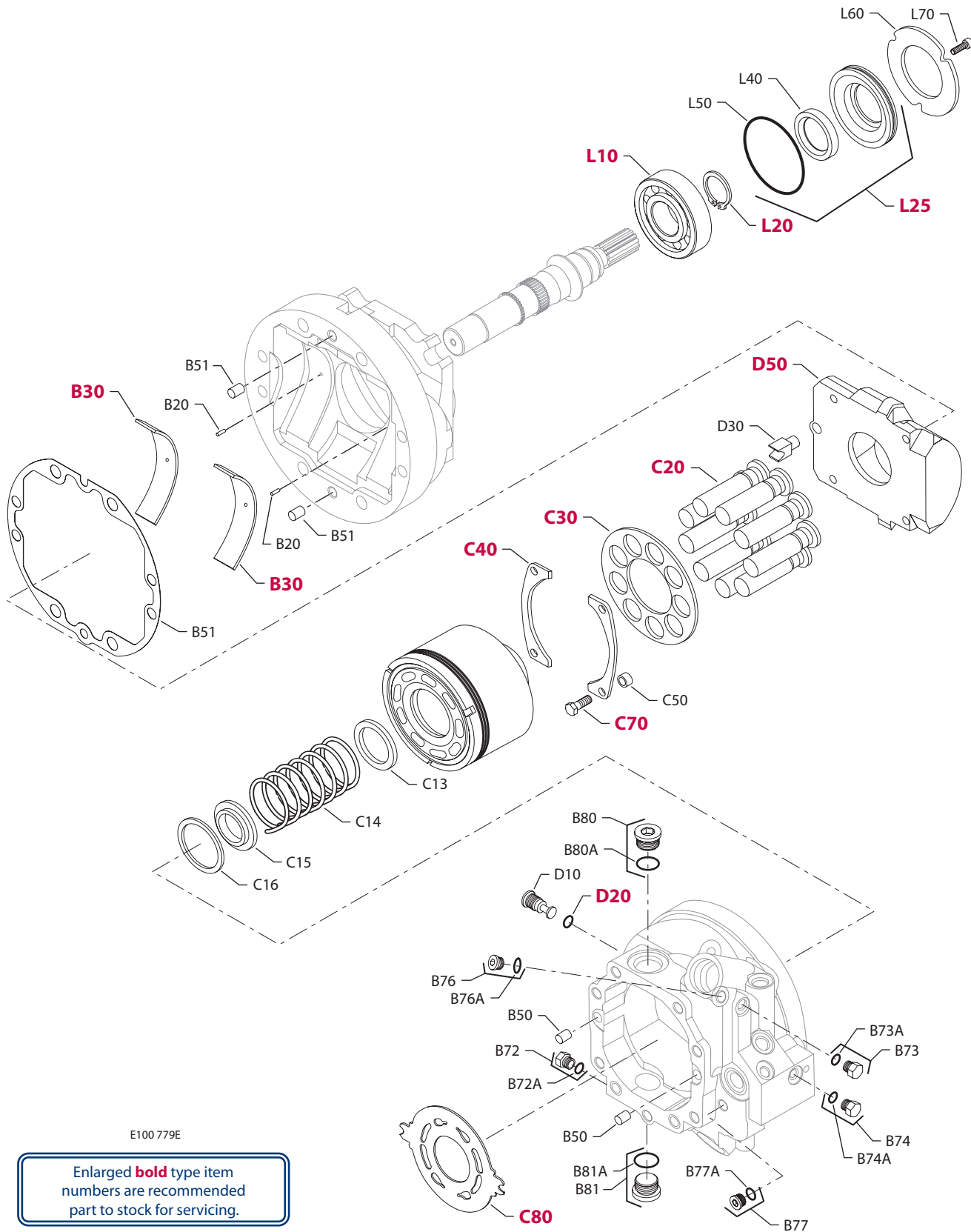


Series 90 75 cc Axial Piston Motors
Parts Manual
Notes





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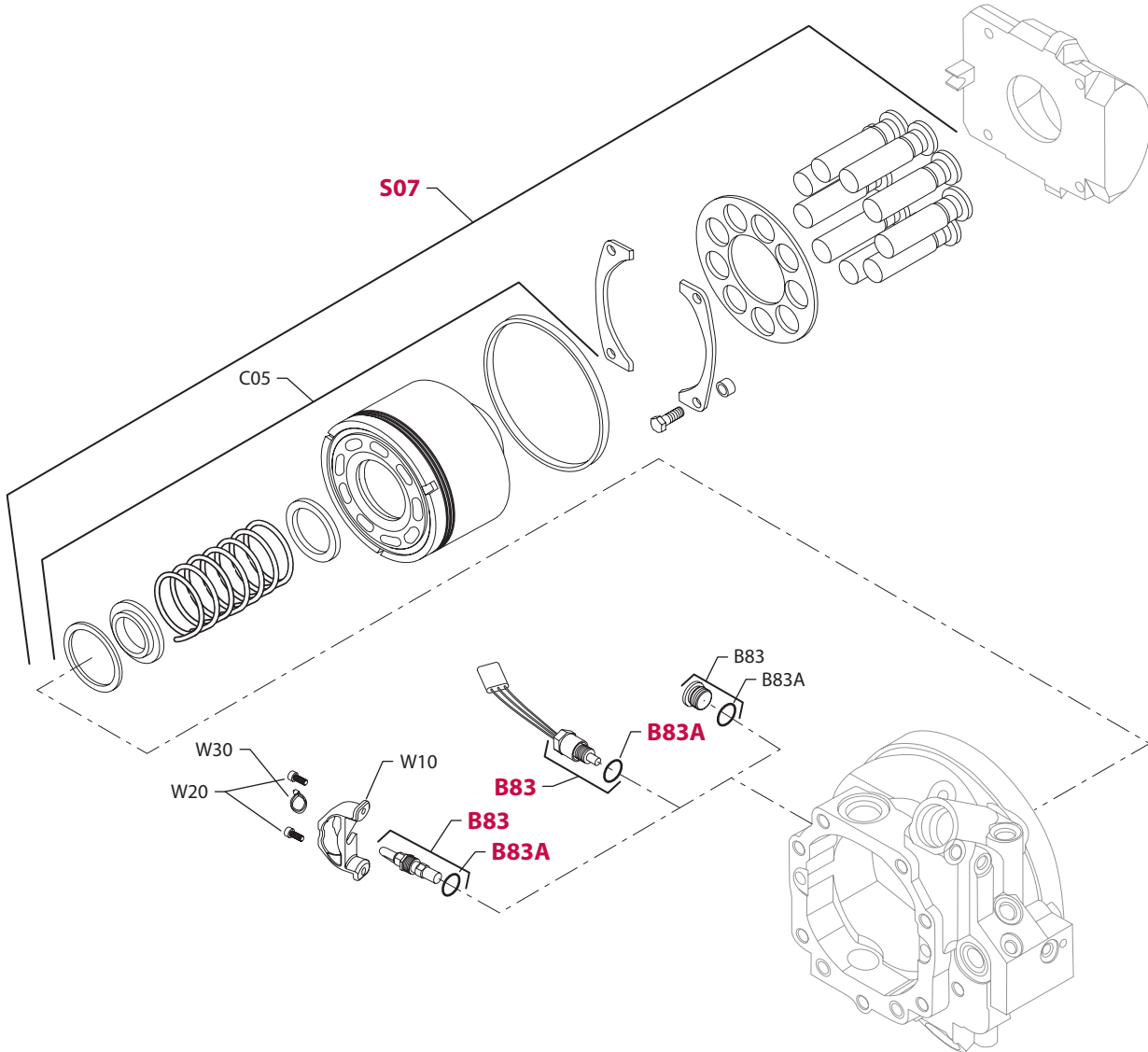


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Enlarged **bold** type item numbers are recommended part to stock for servicing.

COMMON PARTS

Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
	B20	93-07		5000621	Grooved pin (SB-2000-046)	2
	B30	93-07		8100684	Cradle bearing (SB-1997-033)	2
	B50	93-07		9004800-3708	Pin	2
	B51	93-07		9004800-3708	Pin	2
	B72	93-07		001511 (9005100-4400)	Plug assembly	1
	B72A	93-07		001123 (9004201-2500)	O-ring	1
	B73	93-07		001511 (9005100-4400)	Plug assembly	1
	B73A	93-07		001123 (9004201-2500)	O-ring	1
	B74	93-07		001511 (9005100-4400)	Plug assembly	1
	B74A	93-07		001123 (9004201-2500)	O-ring	1
	B76	93-07		327007 (9005110-4400)	Plug assembly	1
	B76A	93-07		001123 (9004201-2500)	O-ring	1
	B77	93-07		327007 (9005110-4400)	Plug assembly	1
	B77A	93-07		001123 (9004201-2500)	O-ring	1
	B80	93-07		664524 (9005110-9000)	Plug assembly	1
	B80A	93-07		001156 (9004201-7500)	O-ring	1
	B81	93-07		664524 (9005110-9000)	Plug assembly	1
	B81A	93-07		001156 (9004201-7500)	O-ring	1
	C13	93-07		665067 (8100103)	Spring seat	1
	C14	93-07		665034 (8100074)	Cylinder block spring	1
	C15	93-07		665042 (8100127)	Spring retainer	1
	C16	93-07		9006275-0027	Retaining ring	1
	C20	93-07		708230	Piston assembly (SB-1988-023)	9
	C30	93-07		8000007	Slipper guide	1
	C40	93-07		8100294	Slipper guide bearing	2
	C50	93-07		8100777	Slipper holddown spacer (SB-1998-041)	4
	C65	93-07	98-47	Obsolete	Washer (SB-1998-041)	4
	C70	93-07		9007276-0114	Screw (SB-1998-041)	4
	C80	93-07		323766	Valve plate (SB-2002-048)	1
	D10	93-07		8800758	Hold down pin (SB-1994-024)	1
	D20	93-07		085043 (9004201-3700)	O-ring	1
	D30	93-07		8100406	Hold down arm	1
	D50	93-07		8100928	Swashplate (SB-1998-080)	1
	L10	93-07		5000505	Roller bearing	1
	L20	93-07		9006300-0156	Retaining ring	1
	L25	93-07		519671	Seal assembly (SB-2006-012)	1
	L40	93-07		519666	Lip seal (SB-2006-012)	1
	L50	93-07		684621 (9004104-1530)	O-ring	1
	L60	93-07		516767	Retainer plate	1
	L70	93-07		041160 (9007314-0605)	Screw	3
	L85	93-07		8100423	Front cover gasket	1
	L95	93-07		9004104-1710	O-ring	1

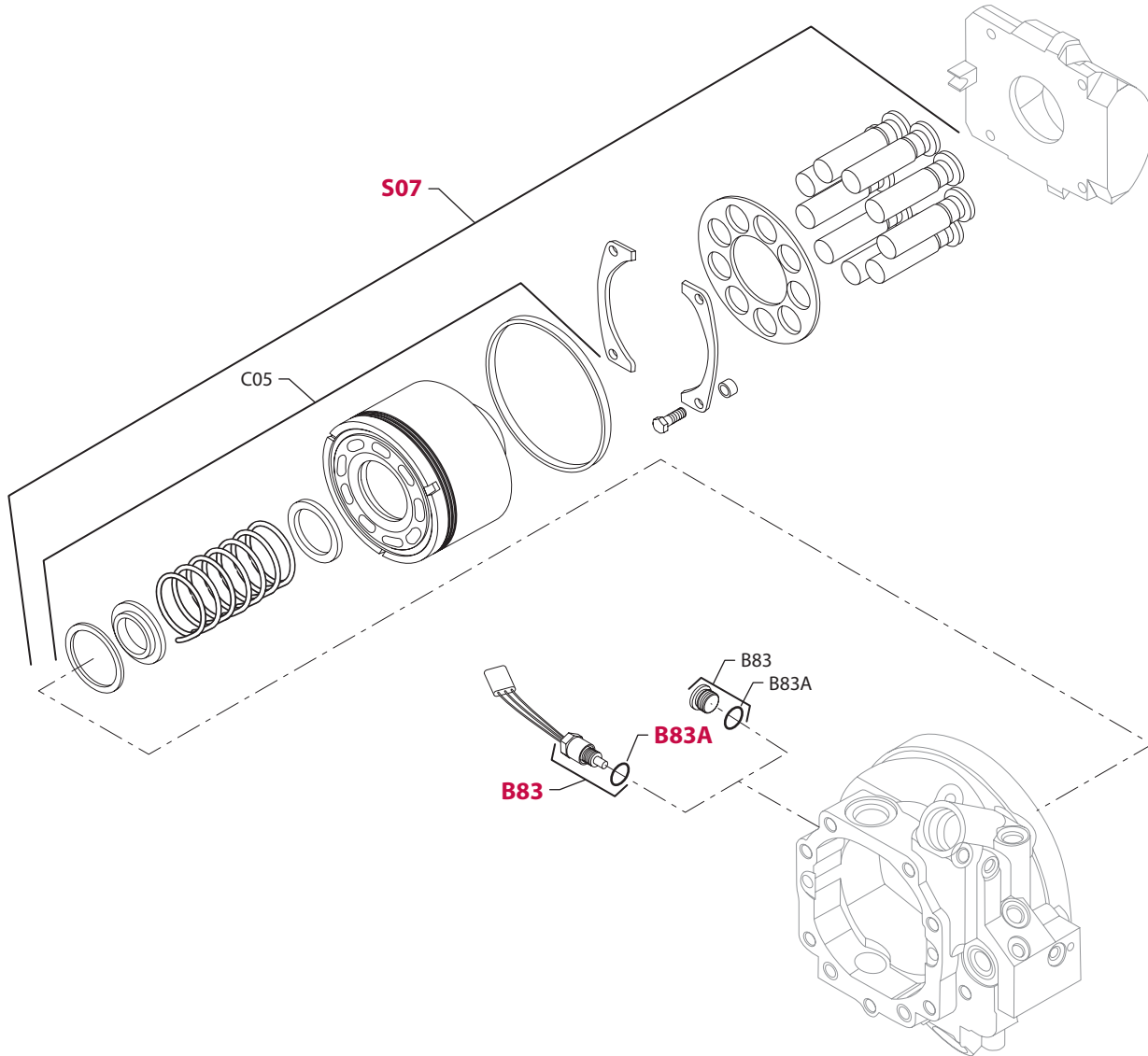


E100 827E

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
EAG	S07	98-17		8510366	Cylinder block kit, w/speed ring (SB-2005-018)	1
	C05	98-17		8100979	Cylinder block assembly, w/speed ring (SB-2005-018)	1
	B83	98-17		KPPG15824	Speed sensor	1
	B83A	98-17		085043 (9004201-3700)	O-ring	1
	W10	98-17		8801261	Speed sensor cover	1
	W20	98-17		067637	Screw	2
	W30	98-17		5000509	Cable tie	1
EAH	S07	06-12		8510366	Cylinder block kit, w/speed ring (SB-2005-018)	1
	C05	06-12		8100979	Cylinder block assembly, w/speed ring (SB-2005-018)	1
	B83	06-12		KPPG15824	Speed sensor	1
	B83A	06-12		085043 (9004201-3700)	O-ring	1
	W10	06-12		8801261	Speed sensor cover	1
	W20	06-12		067637	Screw	2
	W30	06-12		5000509	Cable tie	1
EBA	S07	94-44		8510366	Cylinder block kit, w/speed ring (SB-2005-018)	1
	C05	94-44		8100979	Cylinder block assembly, w/speed ring (SB-2005-018)	1
	B83	94-44		KPPG13408	Speed sensor	1
	B83A	94-44		085043 (9004201-3700)	O-ring	1
EEA	S07	94-36		8510366	Cylinder block kit, w/speed ring (SB-2005-018)	1
	C05	94-36		8100979	Cylinder block assembly, w/speed ring (SB-2005-018)	1
	B83	94-36		515965 (9005110-5600)	Plug assembly	1
	B83A	94-36		085043 (9004201-3700)	O-ring	1
EEK	S07	06-12		8510366	Cylinder block kit, w/speed ring (SB-2005-018)	1
	C05	06-12		8100979	Cylinder block assembly, w/speed ring (SB-2005-018)	1
	B83	06-12		515965 (9005110-5600)	Plug assembly	1
	B83A	06-12		085043 (9004201-3700)	O-ring	1
EFA	S07	94-36		8510366	Cylinder block kit, w/speed ring (SB-2005-018)	1
	C05	94-36		8100979	Cylinder block assembly, w/speed ring (SB-2005-018)	1
	B83	94-36		KPPG136	Speed sensor	1
	B83A	94-36		085043 (9004201-3700)	O-ring	1
EFJ	S07	99-40		8510366	Cylinder block kit, w/speed ring (SB-2005-018)	1
	C05	99-40		8100979	Cylinder block assembly, w/speed ring	1
	B83	99-40		KPPG176	Speed sensor	1
	B83A	99-40		085043 (9004201-3700)	O-ring	1
EGF	S07	01-40		8510366	Cylinder block kit, w/speed ring (SB-2005-018)	1
	C05	01-40		8100979	Cylinder block assembly, w/speed ring	1
	B83	01-40		KPPG13703	Speed sensor	1
	B83A	01-40		085043 (9004201-3700)	O-ring	1

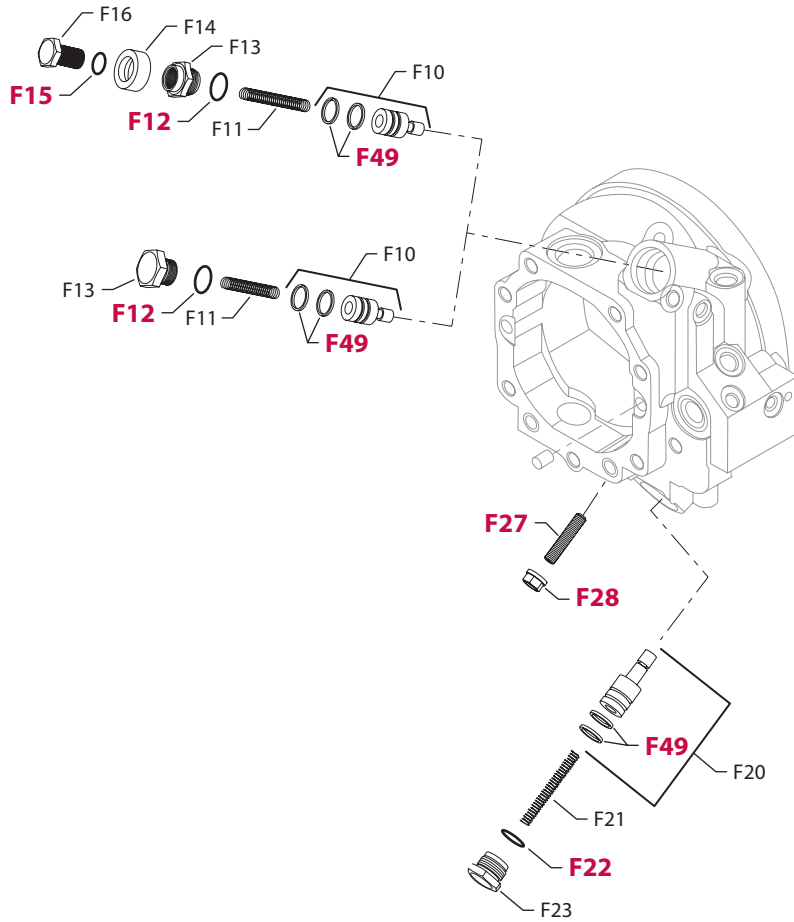


E100 828E

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
EGJ	S07	06-16		8510366	Cylinder block kit, w/speed ring (SB-2005-018)	1
	C05	06-16		8100979	Cylinder block assembly, w/speed ring (SB-2005-018)	1
	B83	06-16		KPPG13703	Speed sensor	1
	B83A	06-16		085043 (9004201-3700)	O-ring	1
EHD	S07	96-43		8510366	Cylinder block kit, w/speed ring (SB-2005-018)	1
	C05	96-43		8100979	Cylinder block assembly, w/speed ring (SB-2005-018)	1
	B83	96-43		KPPG16408	Speed sensor	1
	B83A	96-43		085043 (9004201-3700)	O-ring	1
EHG	S07	06-12		8510366	Cylinder block kit, w/speed ring (SB-2005-018)	1
	C05	06-12		8100979	Cylinder block assembly, w/speed ring (SB-2005-018)	1
	B83	06-12		KPPG16408	Speed sensor	1
	B83A	06-12		085043 (9004201-3700)	O-ring	1
EHJ	S07	06-12		8510366	Cylinder block kit, w/speed ring (SB-2005-018)	1
	C05	06-12		8100979	Cylinder block assembly, w/speed ring (SB-2005-018)	1
	B83	06-12		KPPG16408	Speed sensor	1
	B83A	06-12		085043 (9004201-3700)	O-ring	1
JAF	S07	06-12		8510365	Cylinder block kit, w/o speed ring (SB-2005-018)	1
	C05	06-12		8100974	Cylinder block assembly, w/o speed ring (SB-2005-018)	1
	B83	06-12		515965 (9005110-5600)	Plug assembly	1
	B83A	96-12		085043 (9004201-3700)	O-ring	1
JAG	S07	06-12		8510365	Cylinder block kit, w/o speed ring (SB-2005-018)	1
	C05	06-12		8100974	Cylinder block assembly, w/o speed ring (SB-2005-018)	1
	B83	06-12		515965 (9005110-5600)	Plug assembly	1
	B83A	96-12		085043 (9004201-3700)	O-ring	1
JAK	S07	06-12		8510365	Cylinder block kit, w/o speed ring (SB-2005-018)	1
	C05	06-12		8100974	Cylinder block assembly, w/o speed ring (SB-2005-018)	1
	B83	06-12		515965 (9005110-5600)	Plug assembly	1
	B83A	96-12		085043 (9004201-3700)	O-ring	1
NNN	S07	93-07		8510365	Cylinder block kit, w/o speed ring (SB-2005-018)	1
	C05	93-07		8100974	Cylinder block assembly, w/o speed ring (SB-2005-018)	1
	B83	93-07		515965 (9005110-5600)	Plug assembly	1
	B83A	93-07		085043 (9004201-3700)	O-ring	1

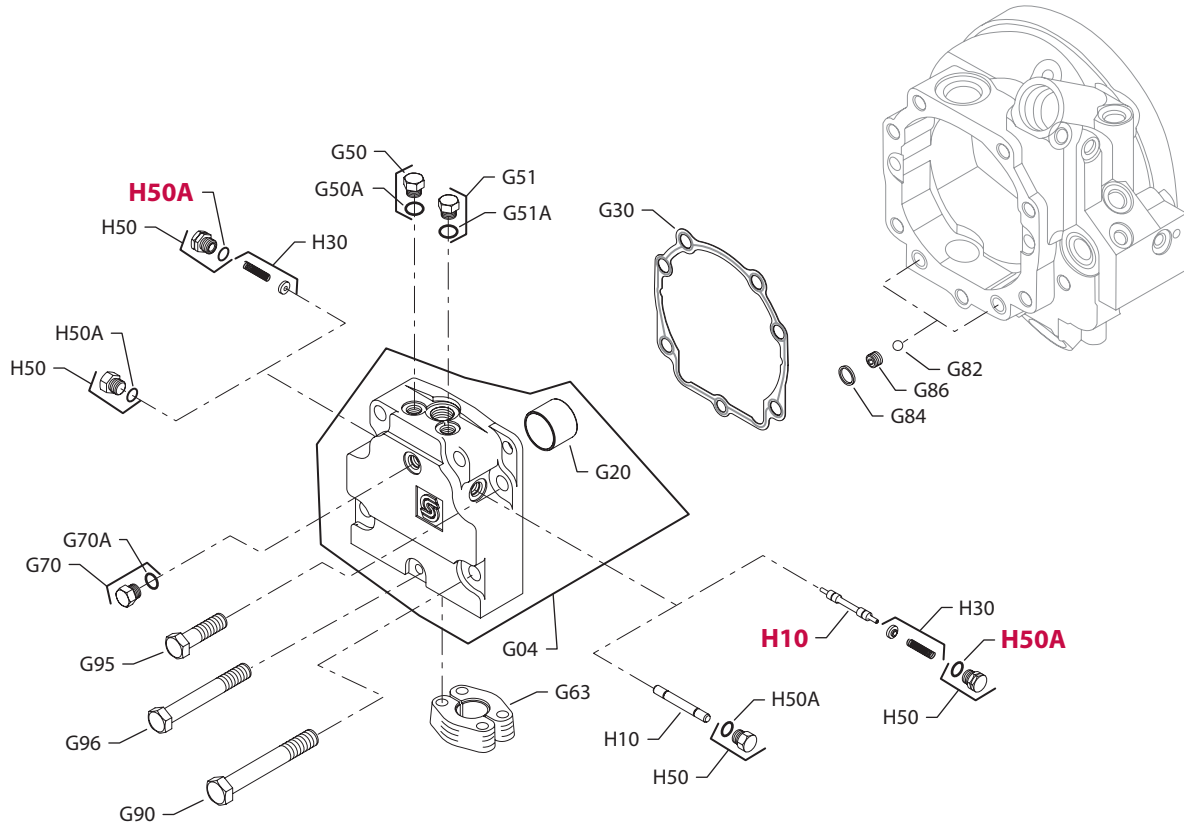


E100 781E

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

MINIMUM DISPLACEMENT

Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit	
026 - 054	F10	93-07		8100441	Servo piston assembly	1	
	F11	93-07		8800619	Spring	1	
	F12	93-07		038281	O-ring	1	
	F13	93-07		9005475-0099	Plug. special	1	
	F20	93-07		8100441	Servo piston assembly	1	
	F21	93-07		8100435	Spring	1	
	F22	93-07		038281	O-ring	1	
	F23	93-07		9005475-0099	Plug. special	1	
	F27	93-07		330415	Set screw (SB-1998-017)	1	
	F28	93-07		076042 (9003509-0012)	Seal nut	1	
	F49	93-07		8700089	Piston seal ring	4	
	M32	F10	99-24		8801165	Servo piston assembly	1
		F11	99-24		8801161	Spring	1
F12		99-24		038281	O-ring	1	
F13		99-24		8801212	Fitting	1	
F14		99-24		8801214	Servo shield	1	
F15		99-24		012559 (9004202-6200)	O-ring	1	
F16		99-24		8801213	Servo plug	1	
F20		99-24		8801165	Servo piston assembly	1	
F21		99-24		8801160	Spring	1	
F22		99-24		038281	O-ring	1	
F23		99-24		8801162	Plug. special	1	
F27		99-24		330415	Set screw	1	
F28		99-24		076042 (9003509-0012)	Seal nut	1	
F49	99-24		8700089	Piston seal ring	4		



E100 829E

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

COMMON END CAP PARTS

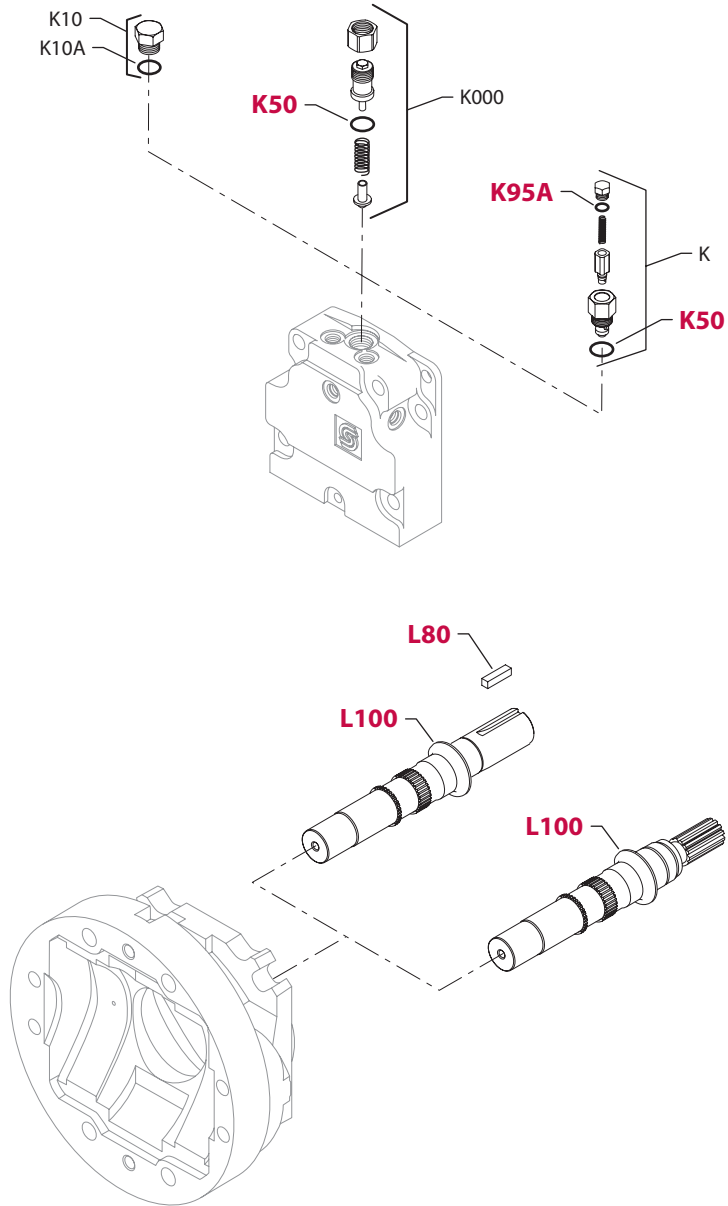
Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
	G30	93-07		8100430	End cap gasket	1
	G50	93-07		046151 (9005100-5600)	Plug assembly	1
	G50A	93-07		085043 (9004201-3700)	O-ring	1
	G51	93-07		046151 (9005100-5600)	Plug assembly	1
	G51A	93-07		085043 (9004201-3700)	O-ring	1
	G70	93-07		515965 (9005110-5600)	Plug assembly	1
	G70A	93-07		085043 (9004201-3700)	O-ring	1
	G82	93-07		9001214-2800	Ball	2
	G84	93-07		8800865	Crush ring	2
	G86	93-07		8100392	Pipe plug orifice	2
	G90	93-07		9007210-1216	Screw	4
	G95	93-07		9007210-1208	Screw	2
	G96	93-07		9007210-1016	Screw	1

END CAP

1	G04	93-07		8100737	End cap assembly, twin ports	1
	G20	93-07		8700013	Journal bearing	1
	G63	93-07		314179 (8700074)	Split clamp (code 61 hose)	4
8	G04	93-07		8100737	End cap assembly, twin ports	1
	G20	93-07		8700013	Journal bearing	1

LOOP FLUSHING

N	H10	93-07		740944 (8800668)	Loop flushing spool, defeated	1
	H50	93-07		046151 (9005100-5600)	Plug assembly	2
	H50A	93-07		085043 (9004201-3700)	O-ring	2
W	H10	93-07		365544 (8800550)	Shuttle spool	1
	H30	93-07		513596	Spring guide assembly (SB-2000-047)	2
	H50	93-07		518016	Plug assembly	2
	H50A	93-07		085043 (9004201-3700)	O-ring	2



E100 830E

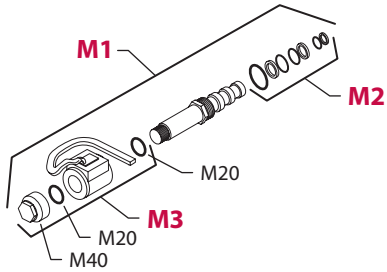
Enlarged **bold** type item numbers are recommended part to stock for servicing.

CHARGE PRESSURE SETTING

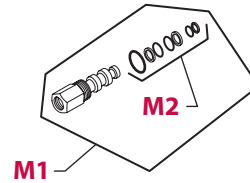
Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
00	K10	93-07		001537 (9005100-8700)	Plug assembly	1
	K10A	93-07		001149 (9004201-6200)	O-ring	1
20-24	K000	93-07		8510012	Adjustable charge relief valve kit	1
	K50	93-07		001149 (9004201-6200)	O-ring	1
A3	K	93-07		8510256	Cartridge CPRV kit, 13 bar, 16 L/min	1
	K50	93-07		001149 (9004201-6200)	O-ring	1
	K95A	93-07		085043 (9004201-3700)	O-ring	2
E4	K	93-07		8510261	Cartridge CPRV kit, 16 bar, 4 L/min	1
	K50	93-07		001149 (9004201-6200)	O-ring	1
	K95A	93-07		085043 (9004201-3700)	O-ring	2
E6	K	93-07		8510252	Cartridge CPRV kit, 16 bar, 7 L/min	1
	K50	93-07		001149 (9004201-6200)	O-ring	1
	K95A	93-07		085043 (9004201-3700)	O-ring	2
F0	K	93-07		8510259	Cartridge CPRV kit, 16 bar, 11 L/min	1
	K50	93-07		001149 (9004201-6200)	O-ring	1
	K95A	93-07		085043 (9004201-3700)	O-ring	2
F3	K	93-07		8510262	Cartridge CPRV kit, 16 bar, 16 L/min	1
	K50	93-07		001149 (9004201-6200)	O-ring	1
	K95A	93-07		085043 (9004201-3700)	O-ring	2
N4	K	93-07		8510255	Cartridge CPRV kit, 13 bar, 4 L/min	1
	K50	93-07		001149 (9004201-6200)	O-ring	1
	K95A	93-07		085043 (9004201-3700)	O-ring	2
N6	K	93-07		8510251	Cartridge CPRV kit, 13 bar, 7 L/min	1
	K50	93-07		001149 (9004201-6200)	O-ring	1
	K95A	93-07		085043 (9004201-3700)	O-ring	2

SHAFT

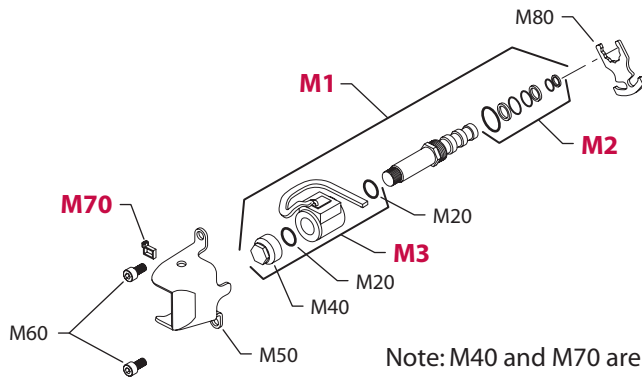
C9	L100	98-17		8100739	Shaft, 21 tooth spline, 16/32 (SB-1996-018)	1
K2	L100	96-13		8100601	Shaft, straight key, 1.5" (SB-1996-018)	1
	L80	96-13		9003261-3724	Key, .375 x 1.5	1
S1	L100	93-07		8100604	Shaft, 14 tooth spline, 12/24 (SB-1996-018)	1



NA, NB, NC, & ND



PT & PX



Note: M40 and M70 are included in M1, M2 and M3

JB

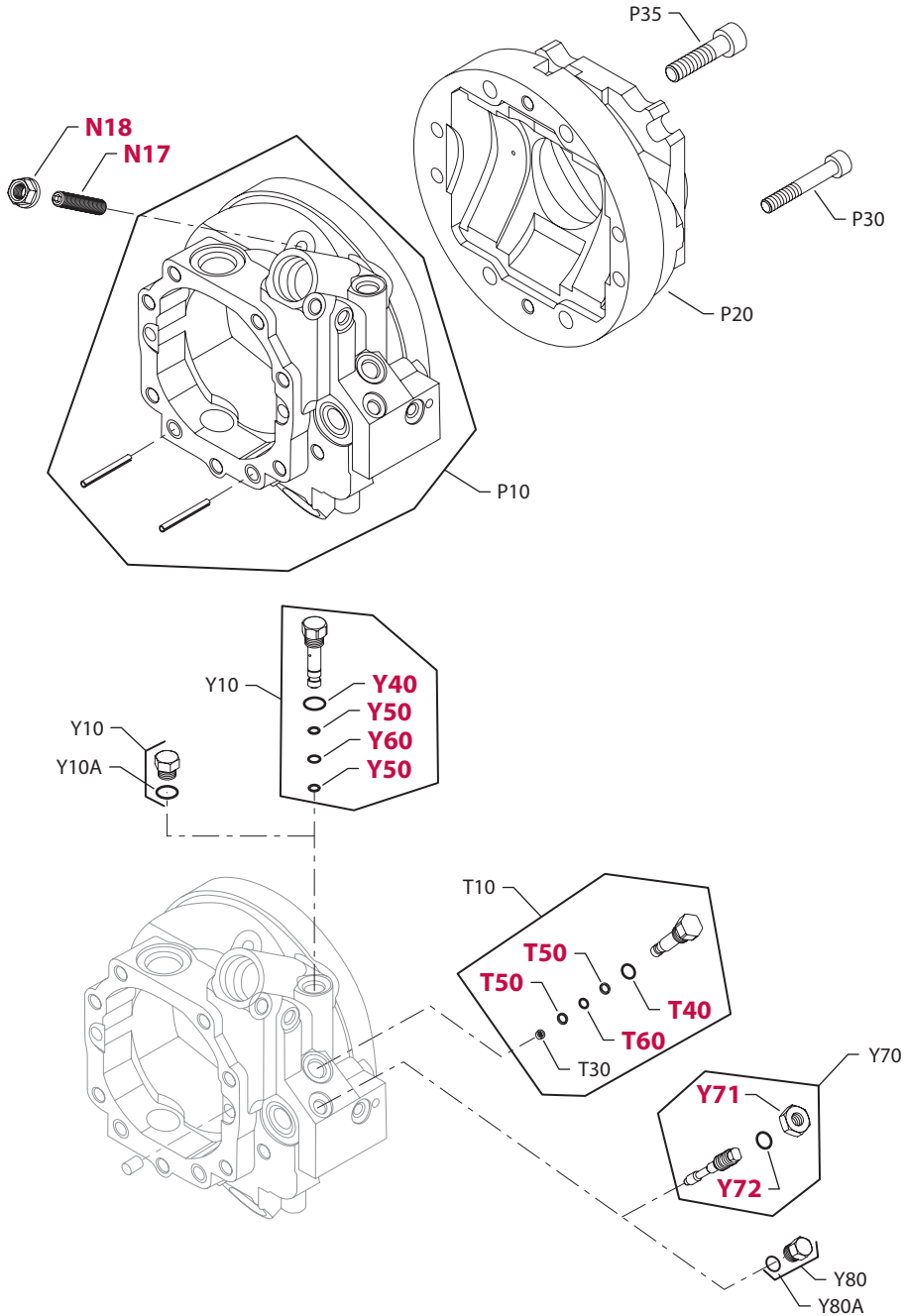
Note: This drawing shows generic coils

E100 831E

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

CONTROL

Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
JB	M1	98-17		8510205	Solenoid control valve kit, 12V, M-Pack conn., special	1
	M2	98-17		8700133	Seal kit	1
	M3	98-17		8510207	Coil kit, 24V, Packard connector	1
	M20	98-17		5000512	O-ring	2
	M40	98-17		5000511	Coil nut, special	1
	M50	98-17		8100714	Solenoid cover	1
	M60	98-17		5000514	Screw	2
	M70	98-17		5000509	Cable tie	1
	M80	98-17		8100781	Solenoid locking plate	1
NA	M1	93-07		8510218	Solenoid control valve kit, (SB-1998-084)	1
	M2	93-07		8700133	Seal kit	1
	M3	93-07		8510214	Coil kit, 12V, MS connector	1
	M20	93-07		5000512	O-ring	2
		M40	93-07		5000511	Coil nut, special
NB	M1	93-07		8510216	Solenoid control valve kit, (SB-1998-084)	1
	M2	93-07		8700133	Seal kit	1
	M3	93-07		8510212	Coil kit, 12V, Packard connector	1
	M20	93-07		5000512	O-ring	2
		M40	93-07		5000511	Coil nut, special
NC	M1	93-07		8510219	Solenoid control valve kit, (SB-1998-084)	1
	M2	93-07		8700133	Seal kit	1
	M3	93-07		8510215	Coil kit, 24V, MS connector	1
	M20	93-07		5000512	O-ring	2
		M40	93-07		5000511	Coil nut, special
ND	M1	93-07		8510217	Solenoid control valve kit, (SB-1998-084)	1
	M2	93-07		8700133	Seal kit	1
	M3	93-07		8510213	Coil kit, 24V, Packard connector	1
	M20	93-07		5000512	O-ring	2
		M40	93-07		5000511	Coil nut, special
PT	M1	93-07		8700088	Control valve	1
	M2	93-07		8510178	Seal kit	1
PX	M1	93-07		8700118	Control valve	1
	M2	93-07		8510178	Seal kit	1



E100 832E

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

MAXIMUM DISPLACEMENT

Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
A - N	N17	93-07		330415	Set screw M12 x 60 (SB-1998-017)	1
	N18	93-07		076042 (9003509-0012)	Seal nut	1

HOUSING

2	P10	93-07		8510059	Housing assembly	1
	P20	93-07		8100793	Front cover	1
	P30	93-07		9007314-1014	Screw	4
	P35	93-07		283325 (9007314-1211)	Screw	4

SERVO RATE, A

1	T10	93-07		8510077	Orifice valve assembly, .021	1
	T30	93-07		8800532	Filter screen	1
	T40	93-07		085043 (9004201-3700)	O-ring	1
	T50	93-07		512036 (9006150-0100)	Back up ring	2
	T60	93-07		732479 (9004105-0100)	O-ring	1

2	T10	93-07		8510228	Orifice valve assembly, .028"	1
	T30	93-07		8800532	Filter screen	1
	T40	93-07		085043 (9004201-3700)	O-ring	1
	T50	93-07		512036 (9006150-0100)	Back up ring	2
	T60	93-07		732479 (9004105-0100)	O-ring	1

SERVO RATE, B

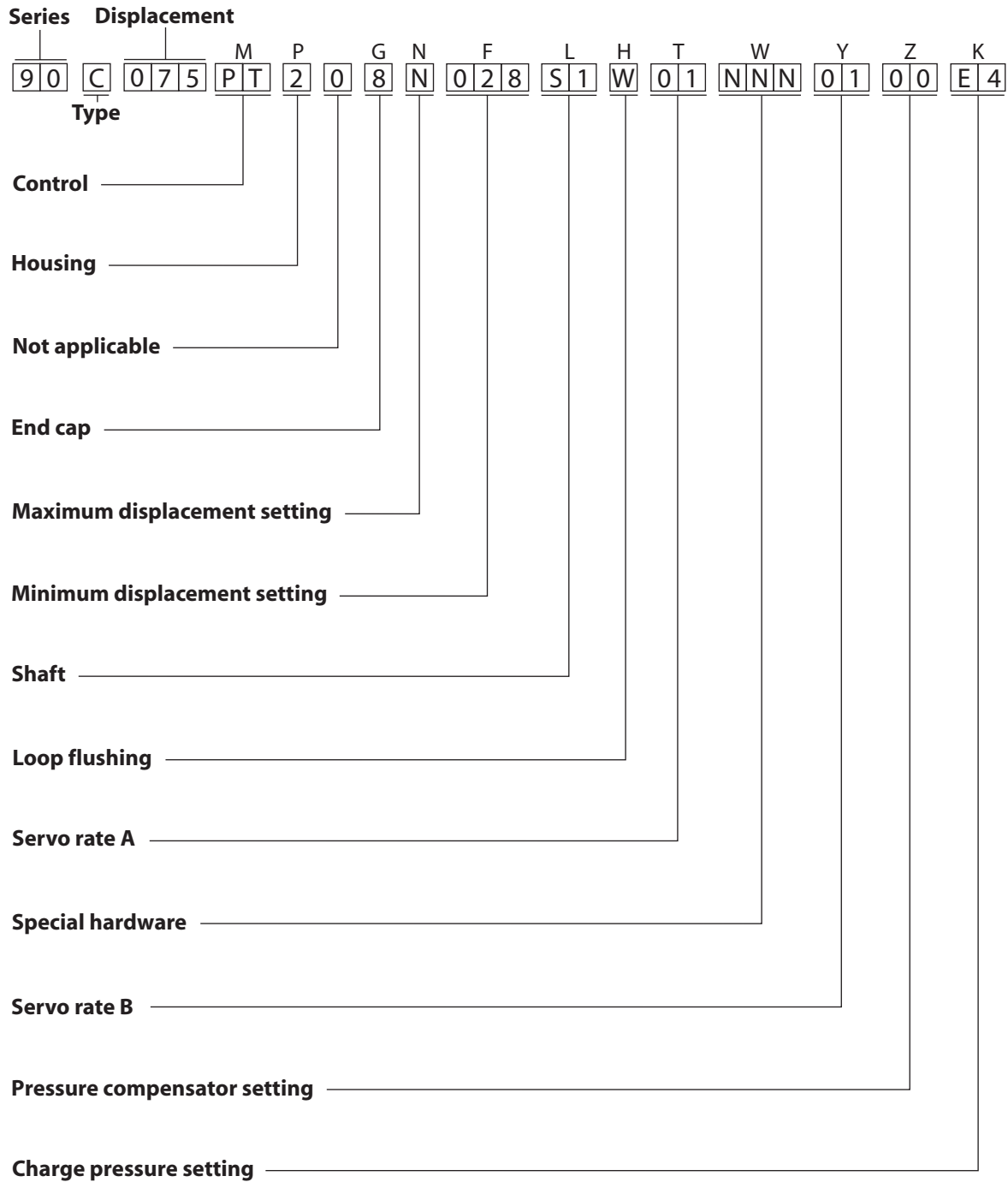
0	Y10	93-07		046151 (9005100-5600)	Plug assembly	1
	Y10A	93-07		085043 (9004201-3700)	O-ring	1
	Y80	93-07		001511 (9005100-4400)	Plug assembly	1
	Y80A	93-07		001123 (9004201-2500)	O-ring	1

1	Y10	93-07		8510074	Servo orifice assembly, fast	1
	Y40	93-07		085043 (9004201-3700)	O-ring	1
	Y50	93-07		512036 (9006150-0100)	Back up ring	2
	Y60	93-07		732479 (9004105-0100)	O-ring	1
	Y80	93-07		001511 (9005100-4400)	Plug assembly	1
	Y80A	93-07		001123 (9004201-2500)	O-ring	1

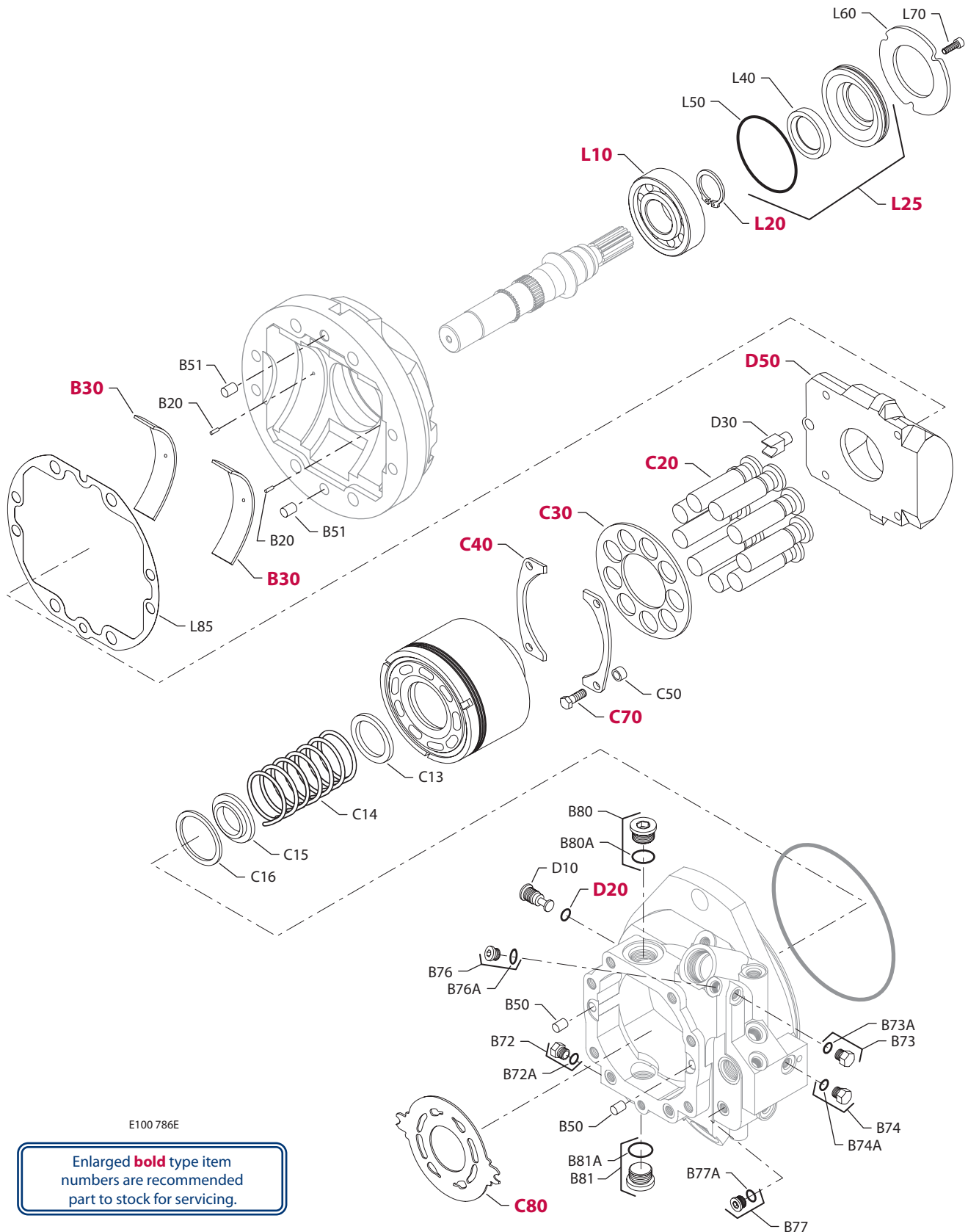
2	Y10	93-07		8510075	Orifice valve assembly, slow	1
	Y40	93-07		085043 (9004201-3700)	O-ring	1
	Y50	93-07		512036 (9006150-0100)	Back up ring	2
	Y60	93-07		732479 (9004105-0100)	O-ring	1
	Y70	93-07		8510076	Orifice valve assembly, slow	1
	Y71	93-07		5000120	Seal nut	1
	Y72	93-07		001123 (9004201-2500)	O-ring	1

OVERHAUL SEAL KIT

Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
		93-07		81040530	Overhaul seal kit	1
	C70	93-07		9007276-0114	Screw	4
	D20	93-07		085043 (9004201-3700)	O-ring	1
	F12	93-07		038281	O-ring	1
	F22	93-07		038281	O-ring	1
	F28	93-07		076042 (9003509-0012)	Seal nut	1
	G30	93-07		8100430	End cap gasket	1
	G84	93-07		8800865	Crush ring	2
	L40	93-07		519666	Lip seal (SB-2006-012)	1
	L50	93-07		684621 (9004104-1530)	O-ring	1
	L85	93-07		8100423	Front cover gasket	1
	L95	93-07		9004104-1710	O-ring	1
	N18	93-07		076042 (9003509-0012)	Seal nut	1
	T40	93-07		085043 (9004201-3700)	O-ring	1
	T50	93-07		512036 (9006150-0100)	Back up ring	2
	T60	93-07		732479 (9004105-0100)	O-ring	1
	Y40	93-07		085043 (9004201-3700)	O-ring	1
	Y50	93-07		512036 (9006150-0100)	Back up ring	2
	Y60	93-07		732479 (9004105-0100)	O-ring	1



P100 706E

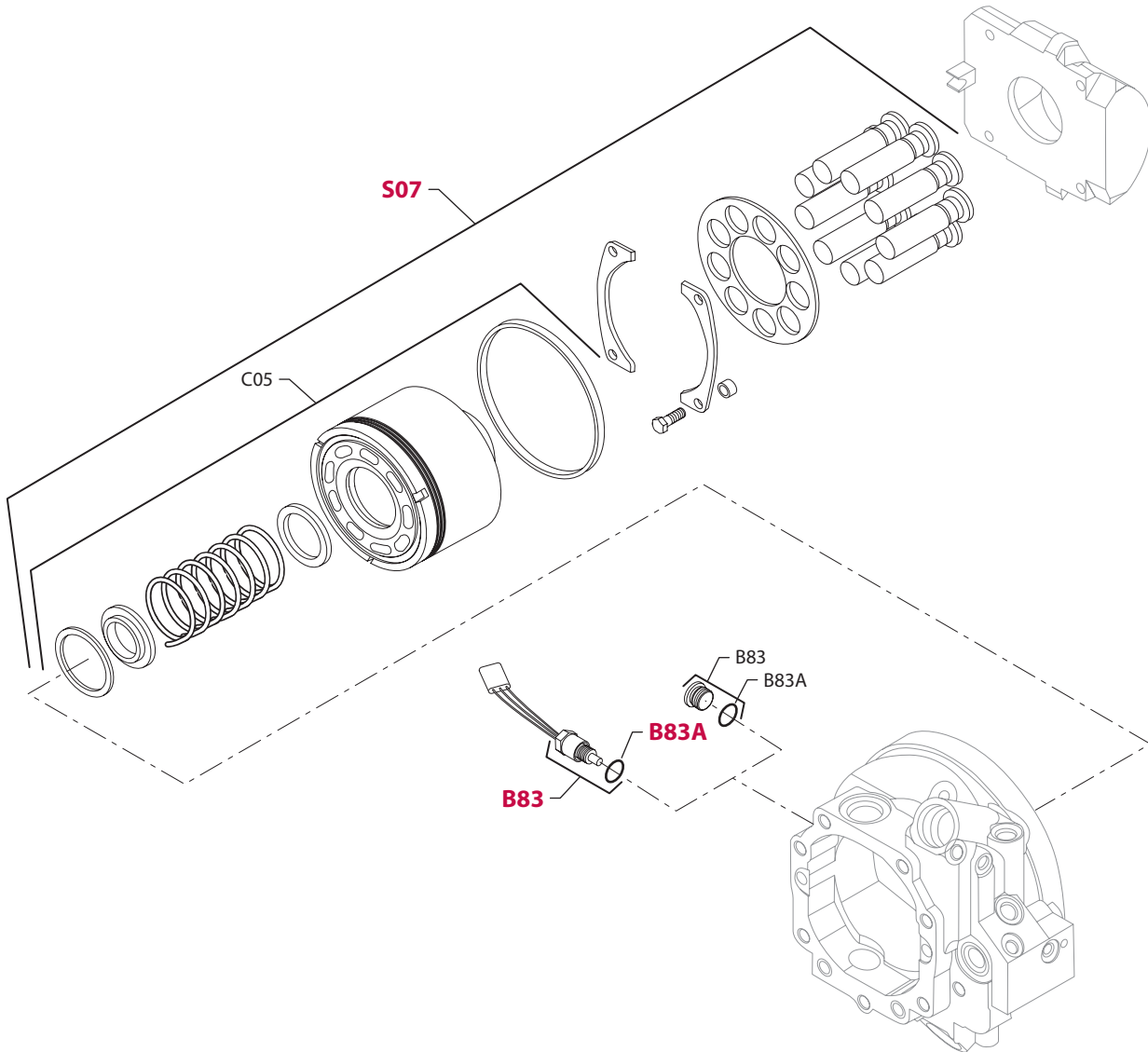


E100 786E

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
	B20	90-22		5000621	Grooved pin (SB-2000-046)	1
	B30	90-22		8100684	Cradle bearing (SB-1997-033)	2
	B50	90-22		9004800-3708	Pin	2
	B51	90-22		9004800-3708	Pin	2
	B72	90-22		001511 (9005100-4400)	Plug assembly	1
	B72A	90-22		001123 (9004201-2500)	O-ring	1
	B73	90-22		001511 (9005100-4400)	Plug assembly	1
	B73A	90-22		001123 (9004201-2500)	O-ring	1
	B74	90-22		001511 (9005100-4400)	Plug assembly	1
	B74A	90-22		001123 (9004201-2500)	O-ring	1
	B76	90-22		327007 (9005110-4400)	Plug assembly	1
	B76A	90-22		001123 (9004201-2500)	O-ring	1
	B77	90-22		327007 (9005110-4400)	Plug assembly	1
	B77A	90-22		001123 (9004201-2500)	O-ring	1
	B80	90-22		664524 (9005110-9000)	Plug assembly	1
	B80A	90-22		001156 (9004201-7500)	O-ring	1
	B81	90-22		664524 (9005110-9000)	Plug assembly	1
	B81A	90-22		001156 (9004201-7500)	O-ring	1
	C13	90-22		665067 (8100103)	Spring seat	1
	C14	90-22		665034 (8100074)	Cylinder block spring	1
	C15	90-22		665042 (8100127)	Spring retainer	1
	C16	90-22		9006275-0027	Retaining ring	1
	C20	90-22		708230	Piston assembly (SB-1988-023)	9
	C30	90-22		8000007	Slipper guide	1
	C40	90-22		8100294	Slipper guide bearing	2
	C50	90-22		8100777	Slipper holddown spacer (SB-1998-041)	4
	C65	90-22	98-47	Obsolete	Washer (SB-1998-041)	4
	C70	90-22		9007276-0114	Screw (SB-1998-041)	4
	C80	90-22		323766	Valve plate (SB-2002-048)	1
	D10	90-22		8800758	Hold down pin (SB-1994-024)	1
	D20	90-22		085043 (9004201-3700)	O-ring	1
	D30	90-22		8100406	Hold down arm (SB-1994-015)	1
	D50	90-22		8100928	Swashplate (SB-1994-015 & SB-1998-080)	1
	L10	90-22		5000505	Roller bearing	1
	L20	90-22		9006300-0156	Retaining ring	1
	L25	90-22		519671	Seal assembly (SB-2006-012)	1
	L40	90-22		519666	Lip seal (SB-2006-012)	1
	L50	90-22		684621 (9004104-1530)	O-ring	1
	L60	90-22		516767	Retainer plate	1
	L70	90-22		041160 (9007314-0605)	Screw	3
	L85	90-22		8100423	Front cover gasket	1
	L95	90-22		9004104-1710	O-ring	1

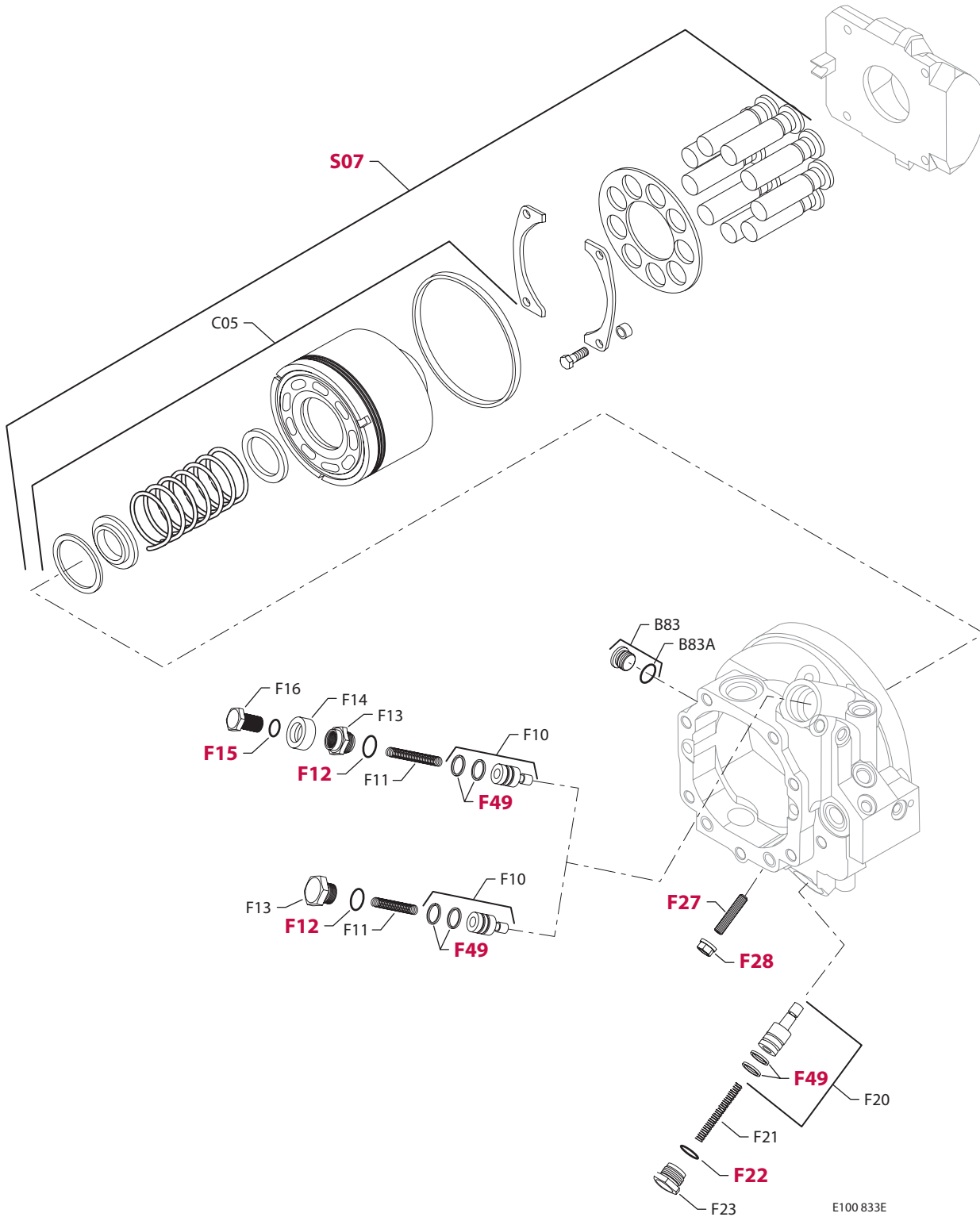


E100 780E

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
EBA	S07	90-22		8510362	Cylinder block kit, w/speed ring (SB-2005-018)	1
	C05	90-22		8000808	Cylinder block assembly, w/speed ring (SB-2005-018)	1
	B83	90-22		KPPG13408	Speed sensor	1
	B83A	90-22		085043 (9004201-3700)	O-ring	1
EEA	S07	90-22		8510362	Cylinder block kit, w/speed ring (SB-2005-018)	1
	C05	90-22		8000808	Cylinder block assembly, w/speed ring (SB-2005-018)	1
	B83	90-22		515965 (9005110-5600)	Plug assembly	1
	B83A	90-22		085043 (9004201-3700)	O-ring	1
EEK	S07	90-22		8510362	Cylinder block kit, w/speed ring (SB-2005-018)	1
	C05	90-22		8000808	Cylinder block assembly, w/speed ring (SB-2005-018)	1
	B83	90-22		515965 (9005110-5600)	Plug assembly	1
	B83A	90-22		085043 (9004201-3700)	O-ring	1
EFA	S07	90-22		8510362	Cylinder block kit, w/speed ring (SB-2005-018)	1
	C05	90-22		8000808	Cylinder block assembly, w/speed ring (SB-2005-018)	1
	B83	90-22		KPPG136	Speed sensor	1
	B83A	90-22		085043 (9004201-3700)	O-ring	1
EGF	S07	90-22		8510362	Cylinder block kit, w/speed ring	1
	C05	90-22		8000808	Cylinder block assembly, w/speed ring	1
	B83	90-22		KPPG13703	Speed sensor	1
	B83A	90-22		085043 (9004201-3700)	O-ring	1
EHG	S07	90-22		8510362	Cylinder block kit, w/speed ring (SB-2005-018)	1
	C05	90-22		8000808	Cylinder block assembly, w/speed ring (SB-2005-018)	1
	B83	90-22		KPPG16408	Speed sensor	1
	B83A	90-22		085043 (9004201-3700)	O-ring	1
EHD	S07	90-22		8510362	Cylinder block kit, w/speed ring (SB-2005-018)	1
	C05	90-22		8000808	Cylinder block assembly, w/speed ring (SB-2005-018)	1
	B83	90-22		KPPG16408	Speed sensor	1
	B83A	90-22		085043 (9004201-3700)	O-ring	1
EHE	S07	90-22		8510362	Cylinder block kit, w/speed ring (SB-2005-018)	1
	C05	90-22		8000808	Cylinder block assembly, w/speed ring (SB-2005-018)	1
	B83	90-22		KPPG16008	Speed sensor	1
	B83A	90-22		085043 (9004201-3700)	O-ring	1
JAF	S07	06-12		8510365	Cylinder block kit, w/o speed ring (SB-2005-018)	1
	C05	06-12		8100974	Cylinder block assembly, w/o speed ring (SB-2005-018)	1
	B83	06-12		515965 (9005110-5600)	Plug assembly	1
	B83A	06-12		085043 (9004201-3700)	O-ring	1
JAG	S07	06-12		8510365	Cylinder block kit, w/o speed ring (SB-2005-018)	1
	C05	06-12		8100974	Cylinder block assembly, w/o speed ring (SB-2005-018)	1
	B83	06-12		515965 (9005110-5600)	Plug assembly	1
	B83A	06-12		085043 (9004201-3700)	O-ring	1



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

SPECIAL HARDWARE

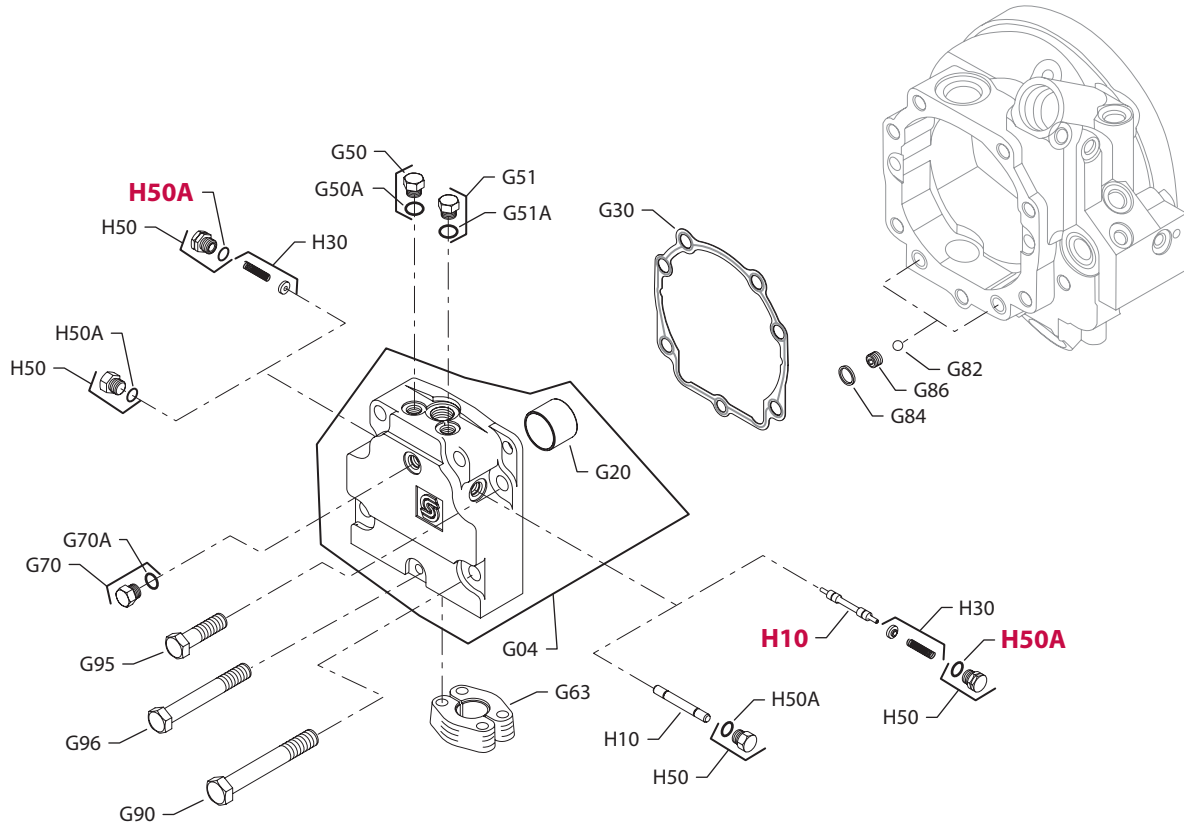
Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
JAK	S07	06-12		8510365	Cylinder block kit, w/o speed ring (SB-2005-018)	1
	C05	06-12		8100974	Cylinder block assembly, w/o speed ring (SB-2005-018)	1
	B83	06-12		515965 (9005110-5600)	Plug assembly	1
	B83A	96-12		085043 (9004201-3700)	O-ring	1

NNN	S07	90-22		8510365	Cylinder block kit, w/o speed ring (SB-2005-018)	1
	C05	90-22		8100974	Cylinder block assembly, w/o speed ring (SB-2005-018)	1
	B83	90-22		515965 (9005110-5600)	Plug assembly	1
	B83A	90-22		085043 (9004201-3700)	O-ring	1

MINIMUM DISPLACEMENT

026 - 054	F10	90-22		8100441	Servo piston assembly	1
	F11	90-22		8800619	Spring	1
	F12	90-22		038281	O-ring	1
	F13	90-22		9005475-0099	Plug, special	1
	F20	90-22		8100441	Servo piston assembly	1
	F21	90-22		8100435	Spring	1
	F22	90-22		038281	O-ring	1
	F23	90-22		9005475-0099	Plug, special	1
	F27	90-22		330415	Set screw (SB-1998-017)	1
	F28	90-22		076042 (9003509-0012)	Seal nut	1
	F49	90-22		8700089	Piston seal ring	4

M32	F10	99-24		8801165	Servo piston assembly	1
	F11	99-24		8801161	Spring	1
	F12	99-24		038281	O-ring	1
	F13	99-24		8801212	Fitting	1
	F14	99-24		8801214	Servo shield	1
	F15	99-24		012559 (9004202-6200)	O-ring	1
	F16	99-24		8801213	Servo plug	1
	F20	99-24		8801165	Servo piston assembly	1
	F21	99-24		8801160	Spring	1
	F22	99-24		038281	O-ring	1
	F23	99-24		8801162	Plug, special	1
	F27	99-24		330415	Set screw	1
	F28	99-24		076042 (9003509-0012)	Seal nut	1
	F49	99-24		8700089	Piston seal ring	4



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

COMMON END CAP PARTS

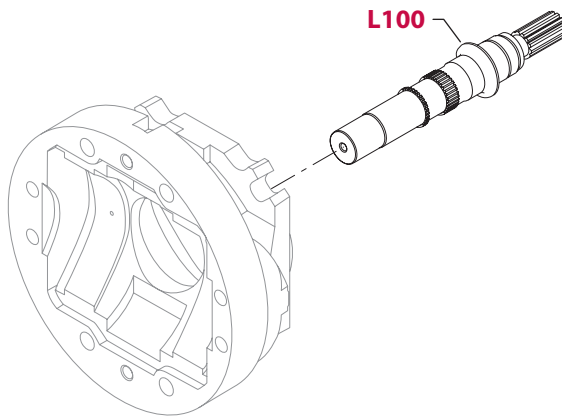
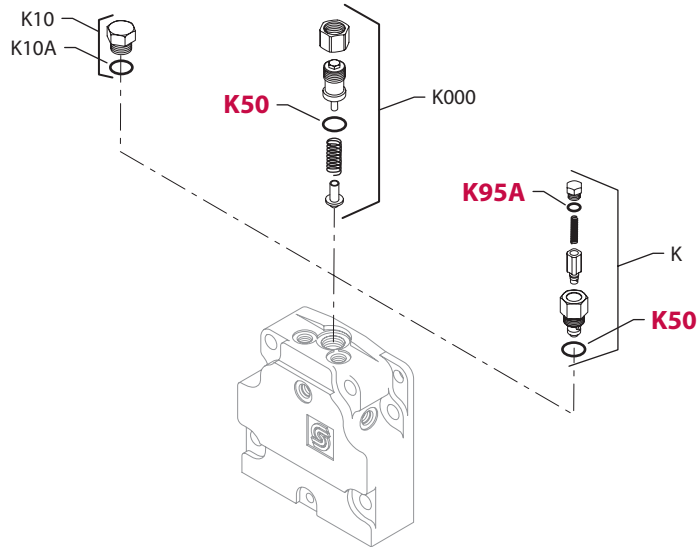
Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
	G30	90-22		8100430	End cap gasket	1
	G50	90-22		046151 (9005100-5600)	Plug assembly	1
	G50A	90-22		085043 (9004201-3700)	O-ring	1
	G51	90-22		046151 (9005100-5600)	Plug assembly	1
	G51A	90-22		085043 (9004201-3700)	O-ring	1
	G70	90-22		515965 (9005110-5600)	Plug assembly	1
	G70A	90-22		085043 (9004201-3700)	O-ring	1
	G82	90-22		9001214-2800	Ball	2
	G84	90-22		8800865	Crush ring	2
	G86	90-22		8100392	Pipe plug orifice	2
	G90	90-22		9007210-1216	Screw	4
	G95	90-22		9007210-1208	Screw	2
	G96	90-22		9007210-1016	Screw	1

END CAP

1	G04	90-22		8100737	End cap assembly, twin ports	1
	G20	90-22		8700013	Journal bearing	1
	G63	90-22		314179 (8700074)	Split clamp (code 61 hose)	4
8	G04	90-22		8100737	End cap assembly, twin ports	1
	G20	90-22		8700013	Journal bearing	1

LOOP FLUSHING

N	H10	90-22		740944 (8800668)	Loop flushing spool, defeated	1
	H50	90-22		046151 (9005100-5600)	Plug assembly	2
	H50A	90-22		085043 (9004201-3700)	O-ring	2
W	H10	90-22		365544 (8800550)	Shuttle spool	1
	H30	90-22		513596	Spring guide assembly (SB-2000-047)	2
	H50	90-22		518016	Plug assembly	2
	H50A	90-22		085043 (9004201-3700)	O-ring	2



E100 840E

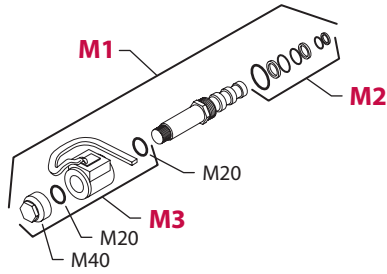
Enlarged **bold** type item numbers are recommended part to stock for servicing.

CHARGE PRESSURE SETTING

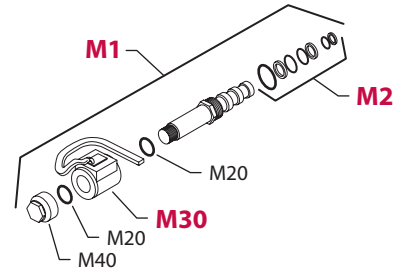
Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
00	K10	90-22		001537 (9005100-8700)	Plug assembly	1
	K10A	90-22		001149 (9004201-6200)	O-ring	1
20-24	K000	90-22		8510012	Adjustable charge relief valve kit	1
	K50	90-22		001149 (9004201-6200)	O-ring	1
A3	K	90-22		8510256	Cartridge CPRV kit, 13 bar, 16 L/min	1
	K50	90-22		001149 (9004201-6200)	O-ring	1
	K95A	90-22		085043 (9004201-3700)	O-ring	2
E4	K	90-22		8510261	Cartridge CPRV kit, 16 bar, 4 L/min	1
	K50	90-22		001149 (9004201-6200)	O-ring	1
	K95A	90-22		085043 (9004201-3700)	O-ring	2
E6	K	90-22		8510252	Cartridge CPRV kit, 16 bar, 7 L/min	1
	K50	90-22		001149 (9004201-6200)	O-ring	1
	K95A	90-22		085043 (9004201-3700)	O-ring	2
F0	K	90-22		8510259	Cartridge CPRV kit, 16 bar, 11 L/min	1
	K50	90-22		001149 (9004201-6200)	O-ring	1
	K95A	90-22		085043 (9004201-3700)	O-ring	2
F3	K	90-22		8510262	Cartridge CPRV kit, 16 bar, 16 L/min	1
	K50	90-22		001149 (9004201-6200)	O-ring	1
	K95A	90-22		085043 (9004201-3700)	O-ring	2
N4	K	90-22		8510255	Cartridge CPRV kit, 13 bar, 4 L/min	1
	K50	90-22		001149 (9004201-6200)	O-ring	1
	K95A	90-22		085043 (9004201-3700)	O-ring	2
N6	K	90-22		8510251	Cartridge CPRV kit, 13 bar, 7 L/min	1
	K50	90-22		001149 (9004201-6200)	O-ring	1
	K95A	90-22		085043 (9004201-3700)	O-ring	2

SHAFT

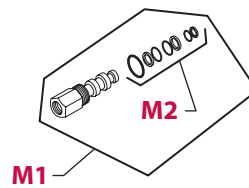
S7	L100	90-22		8100602	Shaft, 14 tooth spline, 12/24 (SB-1996-018)	1
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NA, NB, NC, & ND



NE



PT

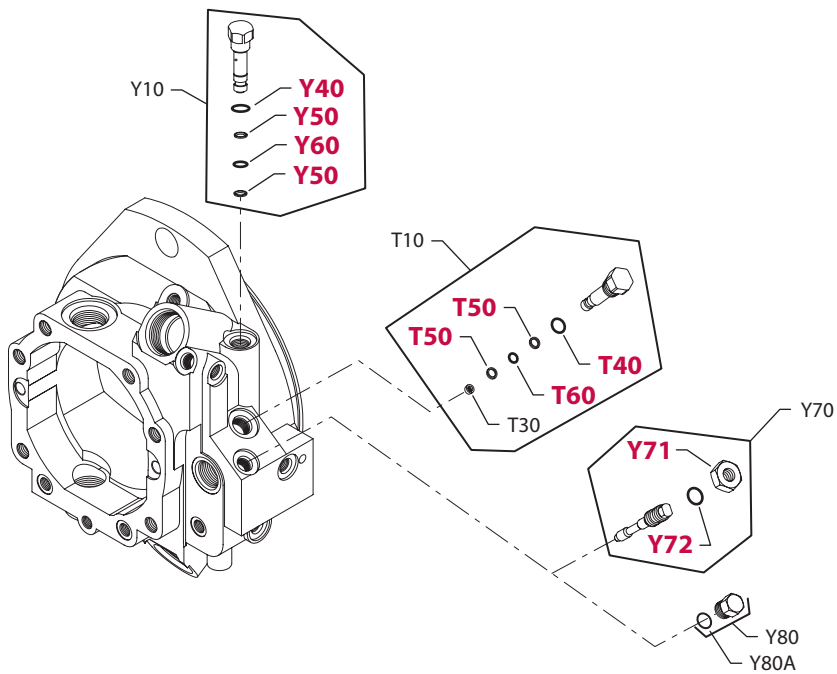
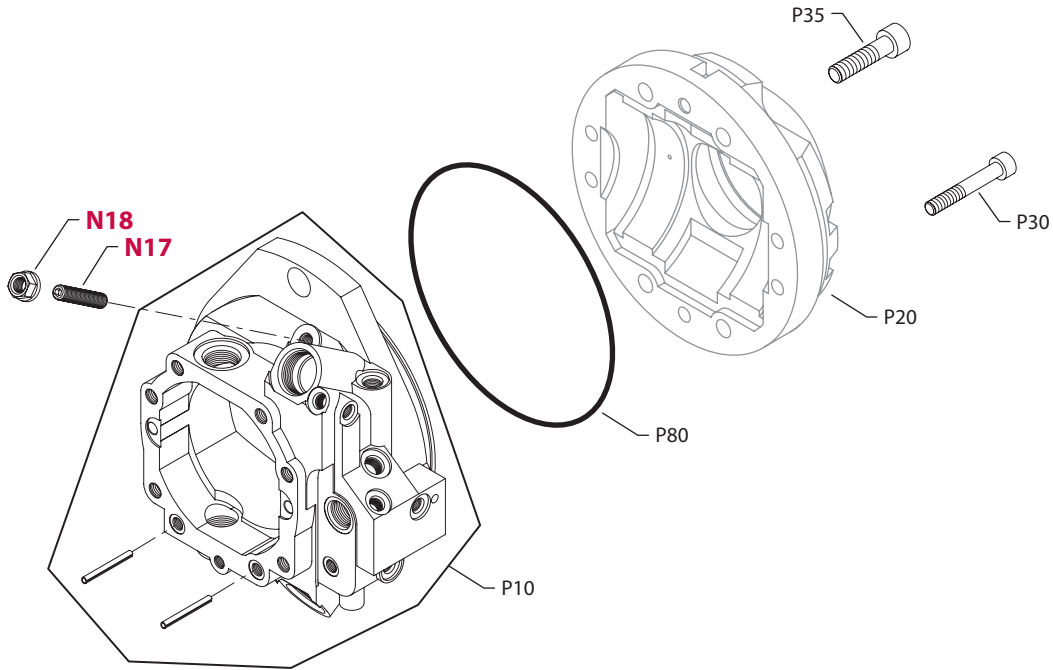
Note: This drawing shows generic coils

E100 834E

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

CONTROL

Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
NA	M1	90-22		8510218	Solenoid control valve kit, (SB-1998-084)	1
	M2	90-22		8700133	Seal kit	1
	M3	90-22		8510214	Coil kit, 12V, MS connector	1
	M20	90-22		5000512	O-ring	2
	M40	90-22		5000511	Coil nut, special	1
NB	M1	90-22		8510216	Solenoid control valve kit, (SB-1998-084)	1
	M2	90-22		8700133	Seal kit	1
	M3	90-22		8510212	Coil kit, 12V, Packard connector	1
	M20	90-22		5000512	O-ring	2
	M40	90-22		5000511	Coil nut, special	1
NC	M1	90-22		8510219	Solenoid control valve kit, (SB-1998-084)	1
	M2	90-22		8700133	Seal kit	1
	M3	90-22		8510215	Coil kit, 24V, MS connector	1
	M20	90-22		5000512	O-ring	2
	M40	90-22		5000511	Coil nut, special	1
ND	M1	90-22		8510217	Solenoid control valve kit, (SB-1998-084)	1
	M2	90-22		8700133	Seal kit	1
	M3	90-22		8510213	Coil kit, 24V, Packard connector	1
	M20	90-22		5000512	O-ring	2
	M40	90-22		5000511	Coil nut, special	1
NE	M1	90-22		8510250	Solenoid control valve kit, 12V, M-Pack 150.2 connector	1
	M2	90-22		8700133	Seal kit	1
	M20	90-22		5000512	O-ring	2
	M30	90-22		8700135	Coil, 12V, M-Pack 150.2 connector	1
	M40	90-22		5000511	Coil nut, special	1
PT	M1	90-22		8700088	Control valve	1
	M2	90-22		8510178	Seal kit	1



E100 789E

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

MAXIMUM DISPLACEMENT

Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
A - N	N17	90-22		330415	Set screw M12 x 60 (SB-1998-017)	1
	N18	90-22		076042 (9003509-0012)	Seal nut	1

HOUSING

0	P10	90-22		8510058	Housing assembly	1
	P20	90-22		8100424	Front cover	1
	P30	90-22		672303 (9007314-1013)	Screw	4
	P35	90-22		283325 (9007314-1211)	Screw	4
	P80	90-22		9004100-1720	O-ring	1

SERVO RATE, A

1	T10	90-22		8510077	Orifice valve assembly, .021	1
	T30	90-22		8800532	Filter screen	1
	T40	90-22		085043 (9004201-3700)	O-ring	1
	T50	90-22		512036 (9006150-0100)	Back up ring	2
	T60	90-22		732479 (9004105-0100)	O-ring	1

SERVO RATE, B

1	Y10	90-22		8510074	Servo orifice assembly, fast	1
	Y40	90-22		085043 (9004201-3700)	O-ring	1
	Y50	90-22		512036 (9006150-0100)	Back up ring	2
	Y60	90-22		732479 (9004105-0100)	O-ring	1
	Y80	90-22		001511 (9005100-4400)	Plug assembly	1
	Y80A	90-22		001123 (9004201-2500)	O-ring	1
2	Y10	90-22		8510075	Orifice valve assembly, slow	1
	Y40	90-22		085043 (9004201-3700)	O-ring	1
	Y50	90-22		512036 (9006150-0100)	Back up ring	2
	Y60	90-22		732479 (9004105-0100)	O-ring	1
	Y70	90-22		8510076	Orifice valve assembly, slow	1
	Y71	90-22		5000120	Seal nut	1
	Y72	90-22		001123 (9004201-2500)	O-ring	1

OVERHAUL SEAL KIT

Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
		93-07		81040530	Overhaul seal kit	1
	C70	93-07		9007276-0114	Screw	4
	D20	93-07		085043 (9004201-3700)	O-ring	1
	F12	93-07		038281	O-ring	1
	F22	93-07		038281	O-ring	1
	F28	93-07		076042 (9003509-0012)	Seal nut	1
	G30	93-07		8100430	End cap gasket	1
	G84	93-07		8800865	Crush ring	2
	L40	93-07		519666	Lip seal (SB-2006-012)	1
	L50	93-07		684621 (9004104-1530)	O-ring	1
	L85	93-07		8100423	Front cover gasket	1
	L95	93-07		9004104-1710	O-ring	1
	N18	93-07		076042 (9003509-0012)	Seal nut	1
	P80	90-22		9004100-1720	O-ring	1
	T40	93-07		085043 (9004201-3700)	O-ring	1
	T50	93-07		512036 (9006150-0100)	Back up ring	2
	T60	93-07		732479 (9004105-0100)	O-ring	1
	Y40	93-07		085043 (9004201-3700)	O-ring	1
	Y50	93-07		512036 (9006150-0100)	Back up ring	2
	Y60	93-07		732479 (9004105-0100)	O-ring	1

PRODUCTS AFFECTED

Series 90 fixed motors

SUBJECT

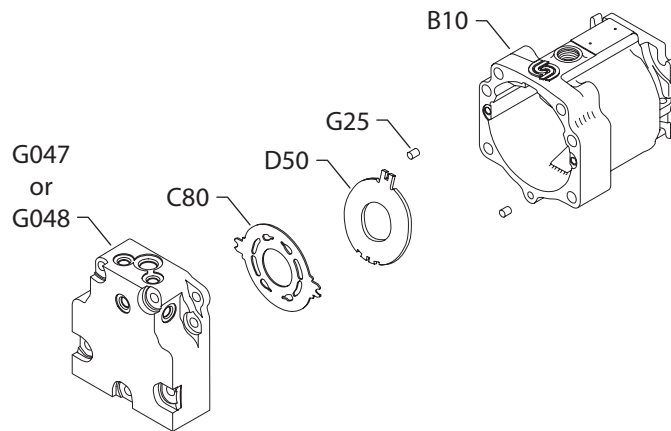
Dowel pin change

DESCRIPTION

A product change has occurred on Series 90 75 cc and 100 cc fixed displacement motors.

The dowel pins (item G25) have increased in diameter from 1/4" to 3/8". With this change, the dowel pin hole diameters in the end cap (item G047 or G048), housing (item B10), and the valve plate (item C80) have also changed. In addition, the thrust plate (item D50) in the 100 cc fixed displacement motor has also changed to fit the new housing.

This change creates spare parts non-interchangeability among all of the above mentioned parts. All of the affected parts remain available for the repair of any vintage Series 90 fixed motor. Refer to the date code portion of the serial number on the name plate of the motor being repaired when ordering parts.



MODELS AFFECTED

All 95-3xxx (75 cc) and 96-3xxx (100cc) series 90 fixed displacement motors

SERIAL NUMBERS

Series 90 75 cc fixed motors, 95-3xxx, changed at serial number A-88-43-xxxxx.
 Series 90 100 cc fixed motors, 96-3xxx, changed at serial number A-88-23-xxxxx.

PART NUMBERS AFFECTED

Item*	Qty/ Motor	75 cc		100 cc	
		Prior to 88-43	From 88-43	Prior to 88-23	From 88-23
G047	1	8100233	8100306	8200123	8200152
G048	1	8100232	8100279	8200122	8200151
C80	1	8100095	8100278	8200103	8200134
D50	1	No Change	No Change	8200014	8200167
G25	2	9004800-2512	9004800-3708	9004800-3116	9004800-3708
B10	1	8100252	8100465	8200099	333641

PARTS DISPOSITION

■ Non-interchangeable

PRODUCTS AFFECTED

Series 90 pumps and motors

SUBJECT

Piston improvement

DESCRIPTION

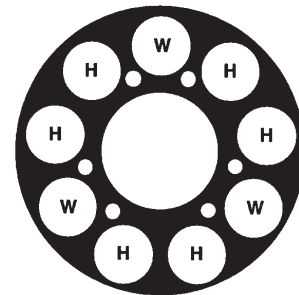
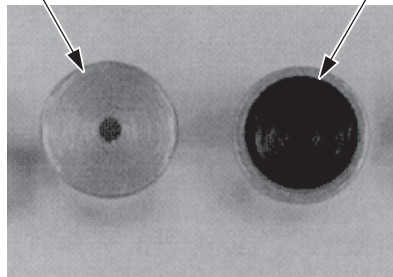
Product Information Bulletin PIB-8801 (March, 1988) announced the incorporation of fabricated (welded) piston assemblies, replacing non-fabricated (hollow) piston assemblies, in the cylinder blocks of all Series 90 pumps and motors. This change increases the overall efficiency of the Series 90 product line.

To simplify service parts inventory for all Series 90 units, only individual welded piston assemblies will be available as spare parts. The hollow pistons will be obsolete. Part numbers for individual welded piston assemblies are listed in this bulletin.

Since all Series 90 pumps and motors have nine (9) pistons, welded pistons being used to replace hollow pistons during repair **MUST** be install in the cylinder block symmetrically, in multiples of three (3).

Welded Piston Assembly

Hollow Piston Assembly



When replacing hollow pistons with welded pistons, it is mandatory that the welded pistons be incorporated symmetrically in multiples of three.

MODELS AFFECTED

All series 90 pumps and motors: 93-xxxx, 94-xxxx, 95-xxxx, and 96-xxxx pumps

SERIAL NUMBERS

Welded pistons will be incorporated into all series 90 pumps and motors by the end of the first quarter of 1998.

PART NUMBERS AFFECTED

Part number	Description
706101	Piston assembly, welded - 42 cc
367672	Piston assembly, welded - 55 cc
708230	Piston assembly, welded - 75 cc
364000	Piston assembly, welded - 100 cc

PARTS DISPOSITION

■ Interchangeable

PRODUCTS AFFECTED

Series 90 fixed displacement motors

SUBJECT

Incorporation of adjustable charge relief valve

DESCRIPTION

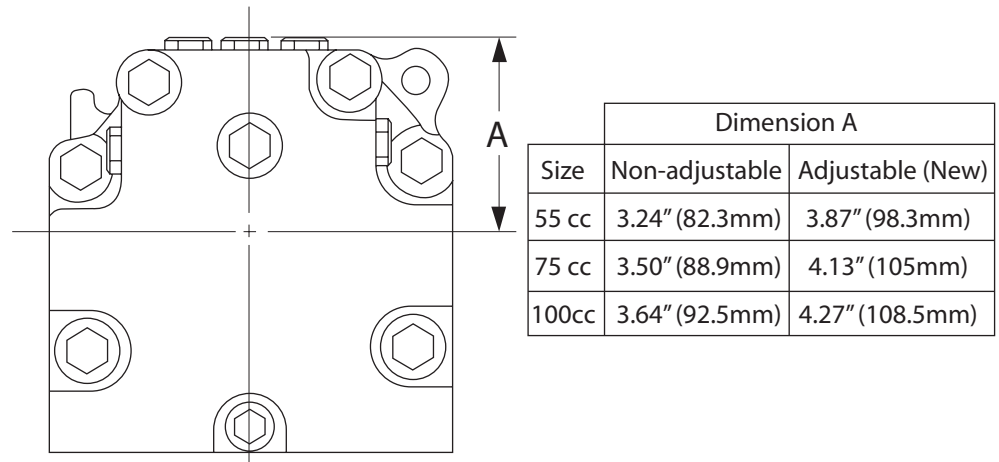
As a product improvement, Sauer-Danfoss is incorporating an externally adjustable charge relief valve on all series 90 fixed displacement motors. This design replaces the previous shimmed relief valve. The new design valve provides a range of pressure adjustment from 10 to 32 bar.

The diameter of the loop flushing shuttle spool increases from .25" (6.35mm) to .375" (9.53mm) at the same incorporation date as the charge relief valve change.

This is a non-interchangeable change. Adjustable style charge relief valves can not be added to motors manufactured before this incorporation date. Old style end caps, which house the charge relief and loop flushing valves, will not be available as service parts. If new end caps are required, new style charge relief and loop flushing parts must also be installed.

Charge relief valve adjustment procedures can be found in the Series 90 Service Manual (BLN-9947 Rev. B). Charge pressure increases/decreases at the rate of 78 psi (5.4 bar) per turn clockwise/counterclockwise.

The new style charge relief plug protrudes from the motor end cap approximately .63" (16mm) farther than the shimmed design. New dimensions from the center line to the top of the charge relief valve plug are shown below.



MODELS AFFECTED

All 94-3xxx, 95-3xxx, and 96-3xxx fixed displacement motors

SERIAL NUMBERS AFFECTED

All 55 cc motors (94-3xxx) will change at s/n A-89-38-xxxxx

All 75 cc motors (95-3xxx) will change at s/n A-89-44-xxxxx

PART NUMBERS AFFECTED

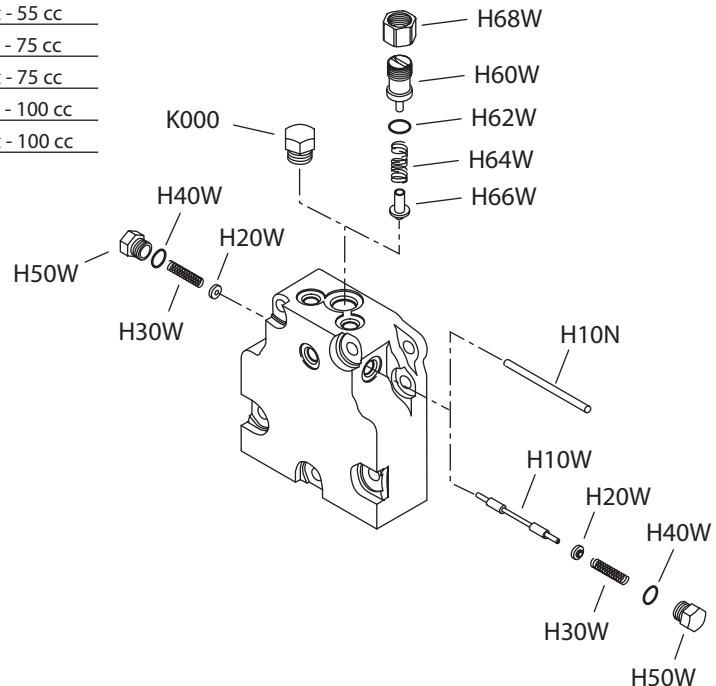
All 100 cc motors (96-3xxx) will change at s/n A-90-20-xxxxx
Charge relief and loop flushing hardware for old vintage motors can be found in the Series 90 Parts Manual (520L0890). The new part numbers are as follows:

New charge relief and loop flushing hardware

Item	Part number	Description	Qty
K90	9003575-0101	Nut	1
K10	8800488-1000	Plug assembly	1
K50	9004201-6200	O-ring	1
K70	8800476	Spring	1
K80	8800449	Poppet	1
K000	9005100-8700	Plug assembly	1
H10W	8800550	Shuttle valve spool	1
H20W	8800551	Washer	2
H30W	364950	Spring	2
H40W	9004201-3700	O-ring	2
H50W	9005475-0097	Plug assembly	2
H10N	8800552	Loop flushing spool, defeated	1

New end caps

Part number	Description
8000196	Twin port - 55 cc
8000197	Axial port - 55 cc
8100373	Twin port - 75 cc
8100374	Axial port - 75 cc
8200188	Twin port - 100 cc
8200189	Axial port - 100 cc



PARTS DISPOSITION

■ Non-interchangeable

PRODUCTS AFFECTED

Series 90 55 and 75 cc variable motors

SUBJECT

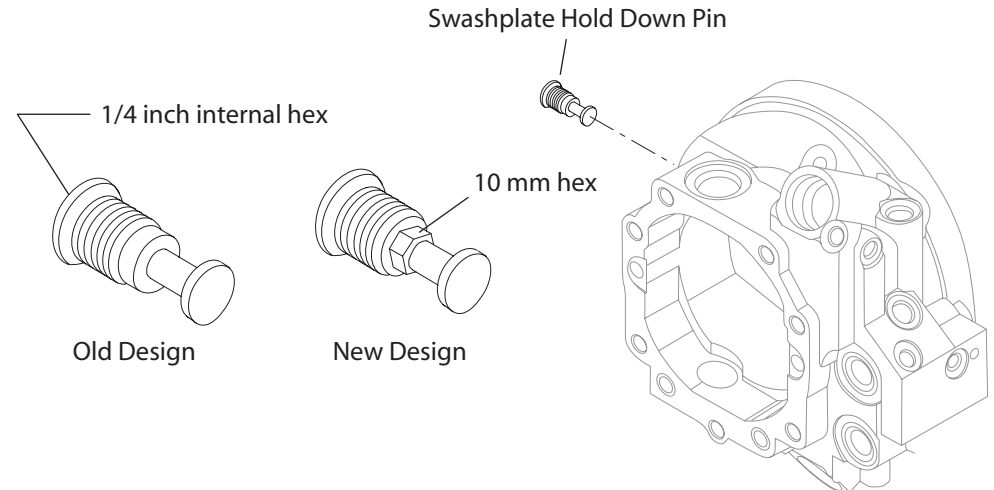
Swashplate hold down pin

DESCRIPTION

As a product improvement, Sauer-Danfoss is changing the design of the swashplate hold down pin used on 55 and 75 cc variable motors.

The previous design used a 1/4 inch internal socket head drive, whereas the new design incorporates a 10 mm drive hex that is not externally accessible. The part number of the hold down pin does not change and is totally interchangeable with the previous design.

Any unit at first repair should be changed to the style hold down pin. Torque the hold down pin to 27 N•m [20 lbf•ft].

**MODELS AFFECTED**

All 94-4xxx, 944xxxx, 95-4xxx, and 954xxxx variable motors

SERIAL NUMBERS

A-94-10-xxxxx and beyond

PART NUMBERS AFFECTED

8800758

PARTS DISPOSITION

■ Interchangeable



PRODUCTS AFFECTED Series 90 55 - 100 cc fixed and variable motors

SUBJECT Motor shaft change

DESCRIPTION As a product improvement, Sauer-Danfoss is changing the design of the output shaft used in 55 thru 100 cc fixed and variable motors.

The surface finish for the rear shaft bearing has been improved.

The new style shaft can be used in place of the old style shaft. The old style shafts are obsolete and no longer available as a service part.

MODELS AFFECTED All 943xxx, 944xxxx, 953xxxx, 954xxxx, and 963xxxx motors

SERIAL NUMBERS This change became effective at serial number A-97-02-xxxxx and beyond

PART NUMBERS AFFECTED

55 cc Motors			75 cc Motors		
Shaft code/type	Old p/n	New p/n	Shaft code/type	Old p/n	New p/n
'C6"/mf	8000122	8000501	'C6"/mf	8100304	8100595
"K1"/mf	8000176	8000502	"C7"/mf	8100257	8100596
"S1"/mf	8000113	8000503	"K2"/mf	8100309	8100597
"S1"/mv	8000226	8000505	"K2"/mv	8100584	8100601
"S7"/mv	8000238	8000506	"S1"/mf	8100256	8100598
"T1"/mf	8000209	8000504	"S1"/mv	8100396	8100604
			"S3"/mf	8100239	8100599
100 cc Motors			"S7"/mv	8100445	8100602
Shaft code/type	Old p/n	New p/n	"T2"/mf	8100415	8100600
'C7"/mf	8200111	8200351			
"F1"/mf	8200109	8200352			
"F2"/mf	8200204	8200353			
"K3"/mf	8200165	8200354			
"S1"/mf	8200206	8200358			
"S3"/mf	8200110	8200355			
"S5"/mf	8200311	8200356			
"T2"/mf	8200201	8200357			

PARTS DISPOSITION ■ Interchangeable

PRODUCTS AFFECTED

Series 90 55 and 75 cc variable motors

SUBJECT

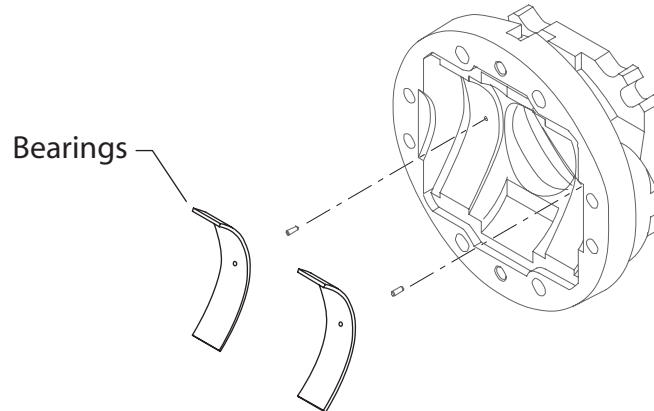
Swashplate bearing

DESCRIPTION

Sauer-Danfoss is changing the design of the swashplate bearings used for series 90 55 and 75 cc variable motors.

The new design improves the assembly fit between the bearing and cradle location machined in the front cover of the motor assembly. This change improves the serviceability of the assembly by improving the retention of the cradle location.

New bearing part numbers have been released to aid in identifying this change. The new bearings are completely interchangeable with the previous bearing part number. The previous bearing will be obsoleted.



MODELS AFFECTED

All 94-4xxxx, 944xxxx, 95-4xxx, and 954xxxx variable motors

SERIAL NUMBERS

This change became effective at serial number A-98-12-xxxxx and beyond

PART NUMBERS AFFECTED

Motor size	Old bearing part number	New bearing part number
75 cc	8000224	8000539
75 cc	8100433-0001	8100684

PARTS DISPOSITION

■ Interchangeable

PRODUCTS AFFECTED

Series 90 55cc, 75cc, and 100cc fixed displacement motors, and 55cc and 75cc variable displacement motors

SUBJECT

Charge relief seat

DESCRIPTION

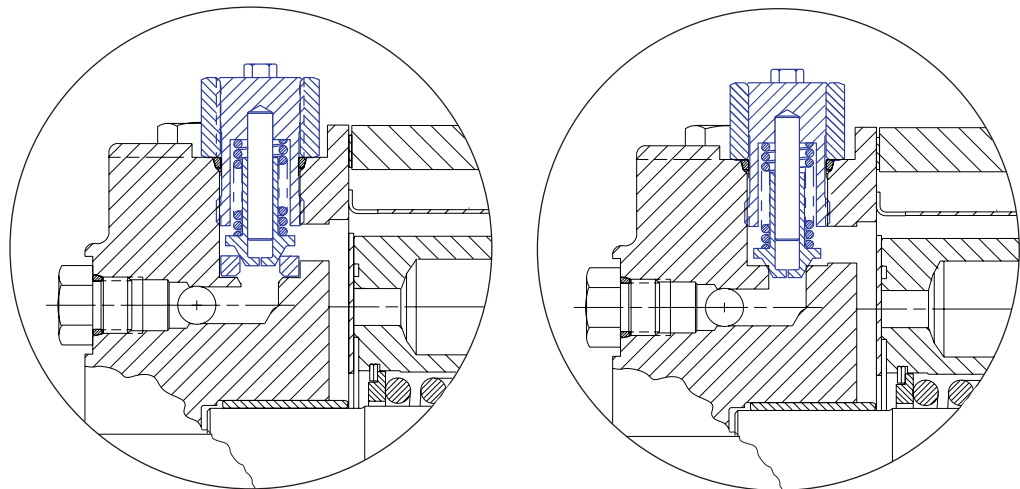
Sauer-Danfoss has initiated a change to the end caps used on series 90 55cc, 75cc, and 100cc fixed displacement motors, and the series 90 55cc and 75cc variable displacement motors.

Currently, the end caps used on these motors contain a pressed in insert, which serves as a seat for the charge pressure relief valve assembly. The insert was originally introduced to provide a suitable wear surface for the charge pressure relief valve poppet.

Since the original design, a number of changes to the charge pressure relief valve design have reduced the severity of the wear characteristics between the poppet and relief seat. These changes have now made it possible to remove the insert from the end cap assembly. The design of the motor end cap has been modified in a manner that allows the charge relief poppet to seat directly against the casting machined surface.

The removal of the insert was initially introduced with the series 90 130cc motors in 1995, and with this change a more uniform product family is achieved.

To aid in identifying and tracking this change, Sauer-Danfoss has released new end cap part numbers. The new end cap is directly interchangeable with the previous end cap and with adjustable charge pressure relief valve components. The previous end cap part numbers will no longer be available as service parts. Page 2 of this bulletin provides part number cross-reference information.



MODELS AFFECTED

All 94-3xxx, 943xxxx, 95-3xxx, 953xxxx, 96-3xxx, and 963xxxx fixed displacement motors
 All 94-4xxx, 944xxxx, 95-4xxx, 954xxxx variable displacement motors

SERIAL NUMBERS AFFECTED

Change became effective with s/n A-98-34-xxxxx and beyond

PART NUMBERS AFFECTED

Motor type	Displacement	Order code	Porting	Split flange thread	Prior to 98-34	Current
Fixed	55 cc	D	Twin	Metric	8000417	8000593
Fixed	55 cc	1 & 8	Twin	English	8000196	8000594
Fixed	55 cc	3 & 7	Axial	English	8000197	8000596
Variable	55 cc	R	Twin	Metric	8000356	8000598
Variable	55 cc	1 & 8	Twin	English	8000335	8000599
Fixed	75 cc	D	Twin	Metric	8100576	8100731
Fixed	75 cc	1 & 8	Twin	English	8100373	8100733
Fixed	75 cc	3 & 7	Axial	English	8100374	8100734
Variable	75 cc	1 & 8	Twin	English	8100442	8100737
Fixed	100 cc	E	Twin	English	8200319	8200407
Fixed	100 cc	1 & 8	Twin	English	8200188	8200408
Fixed	100 cc	3 & 7	Axial	English	8200189	8200409

PARTS DISPOSITION

■ Interchangeable

PRODUCTS AFFECTED

Series 90 55 and 75 cc variable motors

SUBJECT

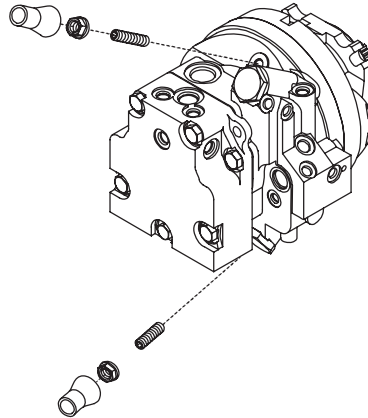
Maximum and minimum displacement limiter adjustment screw

DESCRIPTION

Sauer-Danfoss is changing the design of the displacement adjustment screw used on series 90 55 and 75 cc variable motors. Identical screws two (2) per assembly, are used to adjust and control the maximum and minimum displacement limitation of the motor.

The new design incorporates a material change which improves the strength characteristics of the screw. This change reduces the failure sensitivity of the screw due to over torque. The torque specification for the screw lock nut remains unchanged.

A new screw part number has been released to aid in identifying this change. The new screw is completely interchangeable with the previous screw part number. The previous screw has been obsoleted.



MODELS AFFECTED

All 94-4xxxx, 944xxxx, 95-4xxx, and 954xxxx variable motors

SERIAL NUMBERS

This change became effective at serial number A-98-09-xxxxx and beyond

PART NUMBERS AFFECTED

Motor size	Old screw part number	New screw part number
55 & 75 cc	9007712-1216	330415

PARTS DISPOSITION

■ Interchangeable

PARTS DISPOSITION

■ Non-interchangeable

PRODUCTS AFFECTED

Series 90 55, 75, and 100 cc variable pumps
 Series 90 55 and 75 cc variable motors

SUBJECT

Piston hold down mechanism design change

DESCRIPTION

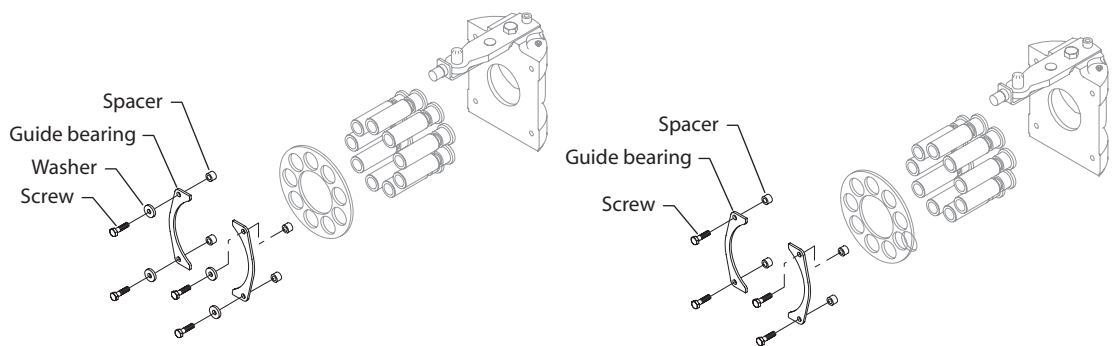
Sauer-Danfoss has initiated a change to the piston hold down mechanism used on series 90 55, 75, and 100 cc variable displacement pump and the series 90 55 and 75 cc variable displacement motors.

Previously, the hold down assembly consisted of a spacer, slipper guide bearing, washer, and screw. The spacer provides a fixed amount of operational clearance for the slipper and slipper retainer. The guide bearing provides a wear surface for the slipper retainer, while the hold down screws and washers retain the assembly.

The change involved with the current design update is the removal of the washer from the assembly. This design was initially introduced on the series 90 42 and 130 cc pumps in 1994, and with this change a uniform product family is achieved.

With the removal of the washer, the required length of the assembly screw is reduced. The change in the assembly screw also affects the dimensions of the spacer. Therefore, with this change, the part numbers associated with the assembly screw and spacer have been changed. Some of the assembly screws are parts already maintained in the parts system.

Although the new spacer and assembly screw are directly interchangeable with the previous swashplate assembly components, we recommend that the components be serviced in combination. Since the new spacer may be serviced as a stand alone item, the previous spacer has been obsoleted and will no longer be available as a service part.



Previous hold down design

New hold down design



MODELS AFFECTED

94-2xxx, 942xxxx, 95-2xxx, 952xxxx, 96-2xxx, and 962xxxx variable pumps
94-2xxx, 942xxxx, 95-2xxx, and 952xxxx variable motors

SERIAL NUMBERS

Sauer-Danfoss Ames production - effective at serial number A-98-48-xxxxx

PART NUMBERS AFFECTED

Component	Displacement	Prior to 98-48	Current
Hold down screw	75 cc	9007276-0114	648477
Spacer	75 cc	8000266	8000619
Washer - pumps	75 cc	9009625-0159	N/A
Washer - motors	75 cc	9009625-0129	N/A
Hold down screw	75 cc	9007276-0099	9007276-0114
Spacer	75 cc	8100450	8100777
Washer - pumps	75 cc	9009625-0159	N/A
Washer - motors	75 cc	9009625-0129	N/A
Hold down screw	100 cc	9007276-0099	9007276-0114
Spacer	100 cc	8200216	8200422
Washer - pumps	100 cc	9009625-0159	N/A

PARTS DISPOSITION

■ Interchangeable

PRODUCTS AFFECTED

Series 90 55 and 75 cc variable motors

SUBJECT

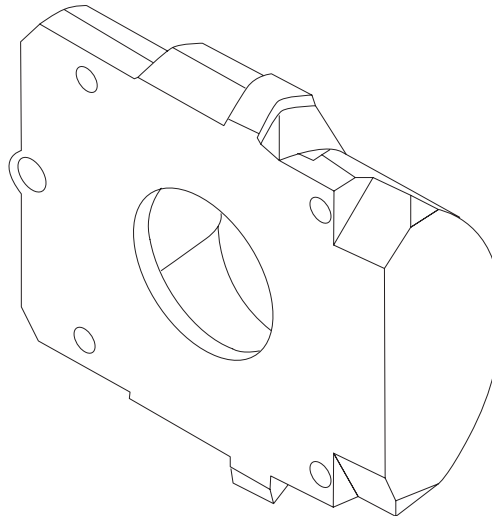
Motor swashplate change

DESCRIPTION

Sauer-Danfoss has initiated a changing to the swashplate used on series 90 55 and 75 cc variable motors.

The process used to develop the required surface hardness of the swashplate has been changed. Due to this change, a slight change in material color may be observed.

In association with this change, Sauer-Danfoss has released new part numbers for the swashplate used in the series 90 55 and 75 cc variable motors. The new swashplate is completely interchangeable with the previous swashplate. The previous swashplate is no longer available as a service part.



MODELS AFFECTED

All 94-4xxxx, 944xxxx, 95-4xxx, and 954xxxx variable displacement motors

SERIAL NUMBERS

This change became effective at serial number A-98-49-xxxxx.

PART NUMBERS AFFECTED

Motor size	Old swashplate part number	New swashplate part number
75 cc	8000348	8000618
75 cc	8100431	8100773

PARTS DISPOSITION

■ Interchangeable

PRODUCTS AFFECTED

Series 90 55 and 75 cc variable motors

SUBJECT

Electronic motor displace control valve change

DESCRIPTION

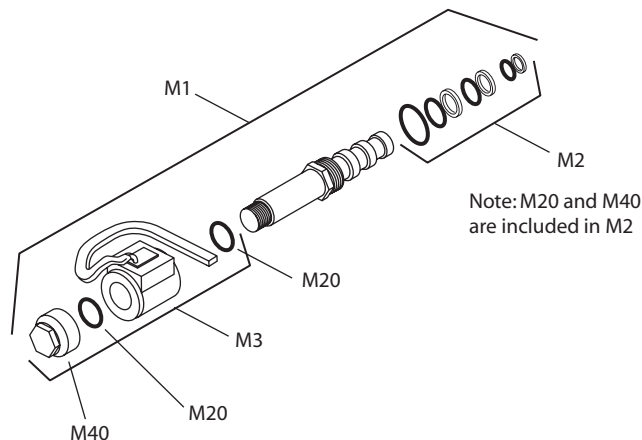
Sauer-Danfoss has introduced several design and serviceability improvements for the electronic motor shift control valve on series 90 55 and 75 cc variable displacement motors. This change affects motors with NA, NB, NC, and ND style controls.

The electronic solenoid coil has been revised to increase the maximum shift force generated by the coil. The cartridge valve assembly has also been revised to improve the resistance to deflections caused by pressure loading.

The cartridge valve may be installed in the motor housing following the procedures outlined in the series 90 pump and motor service manual. The only differences are that a 1-1/8" hex wrench should be used to install the cartridge valve to a torque level of 47 N•m [35 lbf•ft]. An O-ring is placed on the cartridge valve stem, prior to installing the solenoid coil, and then a second O-ring is placed between the coil and new fastening nut. Torque the fastening nut to 9 N•m [7 lbf•ft], using a 3/4" hex wrench.

In conjunction with these design improvements, Sauer-Danfoss will offer three separate service kits. The first is the control assembly kit (M1), which includes the cartridge valve assembly, the solenoid coil, and associated installation hardware. The second is a coil kit (M3), which includes only the solenoid coil and associated installation hardware. The third is an overhaul seal kit (M2) for the cartridge valve assembly. Assembly instructions are also included in all three kits.

The control assembly kit is completely interchangeable with the previous control kit, which has been obsoleted and no longer available as a service part. The new solenoid coil kit is not compatible with controls in motors produced prior to the incorporation date (A-98-46-xxxx) and should only be used in servicing motors after that date.





MODELS AFFECTED

All 94-4xxx, 944xxxx, 95-4xxx, and 954xxxx variable displacement motors equipped with electrical displacement control valves.

SERIAL NUMBERS AFFECTED

This change became effective at serial number A-98-46-xxxxx.

PART NUMBERS AFFECTED

Cartridge valve overhaul seal kit (M2) is 8510206.

Code	Voltage	Connector	Control assembly kit		Coil kit (M3)
			Previous	Current (M1)	
NA	12V	MS	8700103-0003	8510218	8510214
NB	12V	Packard	8700103-0001	8510516	8510212
NC	24V	MS	8700103-0004	8510219	8510215
ND	24V	Packard	8700103-0002	8510217	8510213

PARTS DISPOSITION

- Non-interchangeable

PRODUCTS AFFECTED

Series 90 55 and 75 cc variable motors

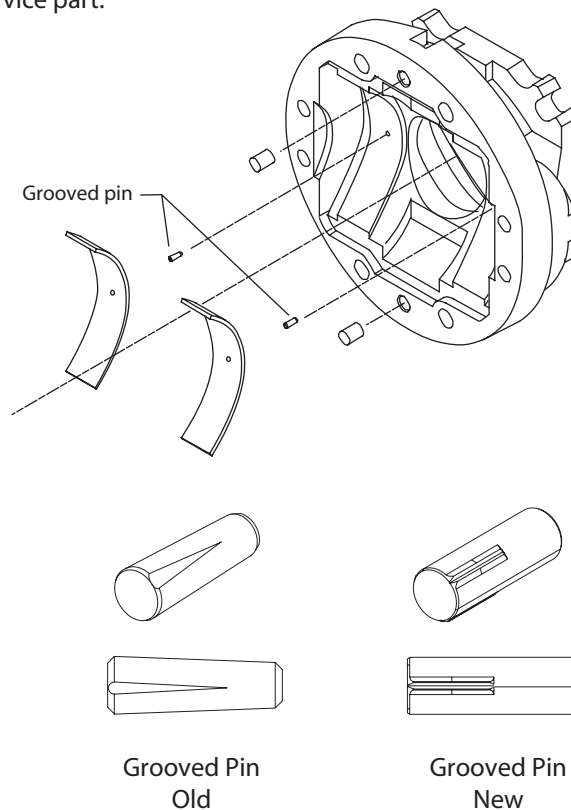
SUBJECT

Swashplate bearing pin change

DESCRIPTION

As a product improvement, Sauer-Danfoss has changed the design of the swashplate bearing pin for the series 90 55 and 75 cc variable displacement motors. The old pin was tapered, making it difficult to press into the front cover. It required grease before the swashplate bearings were pressed over them. The new pin is stepped, making it easier to install into the front cover. The swashplate bearings are now a slip fit over the pins, which eliminates the need to grease the pins before the bearings are installed.

This is an interchangeable change. In order to track this change, Sauer-Danfoss has issued a new part number for the pin. The old pin part number is obsolete and no longer available as a service part.



MODELS AFFECTED

All 94-4xxx, 944xxxx, 95-4xxx, and 954xxxx variable displacement motors

SERIAL NUMBERS

Change effective at serial number A-01-12-xxxxx.

PART NUMBERS AFFECTED

Old pin part number	New pin part number
9004875-0126	5000621

PARTS DISPOSITION

■ Interchangeable

PRODUCTS AFFECTED

Series 90 42cc, 55cc, 75cc, and 100cc fixed displacement motors, and 55cc and 75cc variable displacement motors

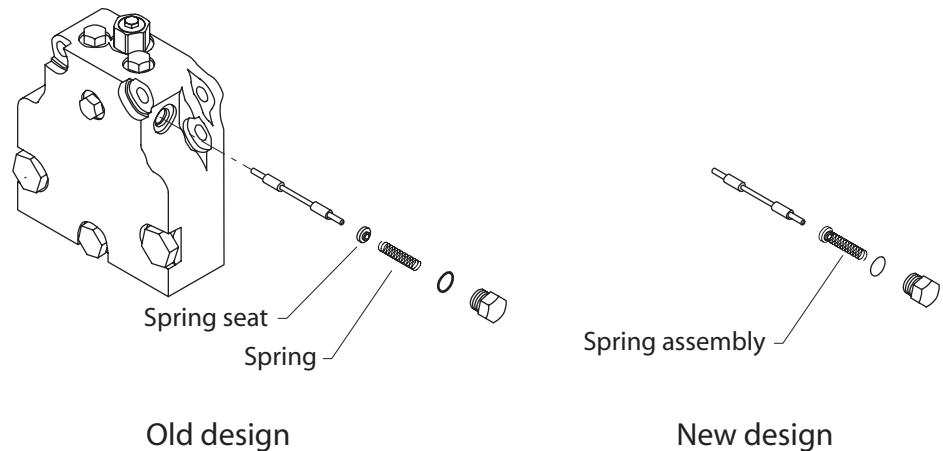
SUBJECT

Loop flushing spring and spring seat change

DESCRIPTION

As a product improvement, Sauer-Danfoss has changed the design of the spring and spring seat for the series 90 42cc, 55cc, 75cc, and 100cc fixed and variable displacement motors. The old design used a separate spring and spring seat. The new design incorporates the two parts into a one piece assembly. This makes the assembly of the spring and spring seat onto the spool much easier than the previous design.

Since the new spring assembly has a high spring rate than the previous spring, this is an interchangeable change only if both springs and spring seats are replaced at the same time. Sauer-Danfoss has issued a new part number for the spring assembly. The previous spring seat and spring remain valid service parts since they are used on other Sauer-Danfoss products.



MODELS AFFECTED

All 93-3xxx, 933xxxx, 94-3xxx, 943xxxx, 95-3xxx, 953xxxx, 96-3xxx, and 963xxxx fixed displacement motors with loop flushing options of A, B, or C.
 All 94-4xxx, 944xxxx, 95-4xxx, and 954xxxx variable displacement motors with loop flushing options of A, B, or C.

SERIAL NUMBERS

Sauer-Danfoss Ames, Ia production - Change effective at s/n A-02-03-xxxxx.
 Sauer-Danfoss Neumunster, Germany production - Change effective at s/n N-01-08-xxxxx..

PART NUMBERS AFFECTED

Previous spring seat	Previous spring	New spring assembly
8800551	4350286	513596

PARTS DISPOSITION

■ Interchangeable

PRODUCTS AFFECTED

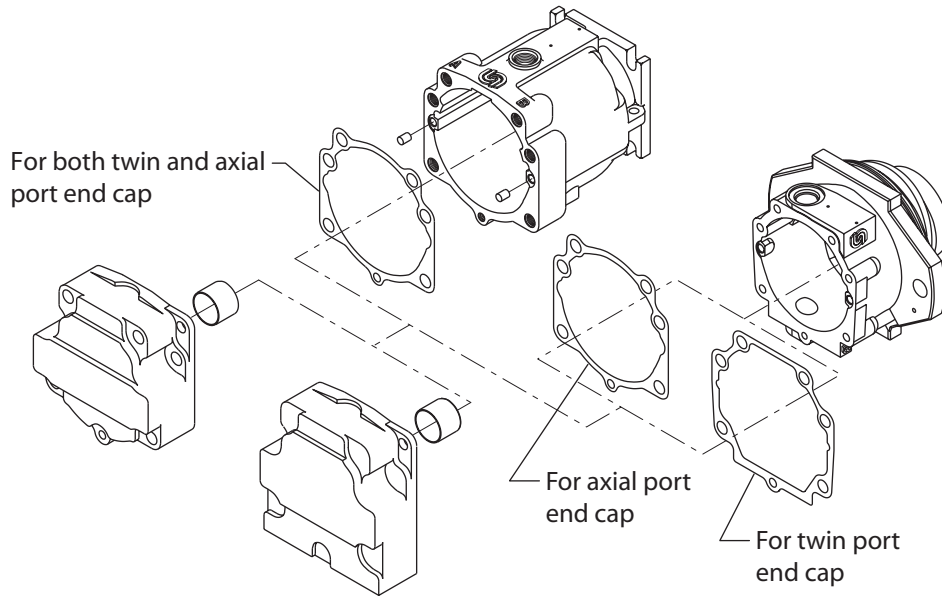
Series 90 55cc, 75cc, and 100cc fixed displacement motors

SUBJECT

Change to end cap gasket material

DESCRIPTION

The end cap gasket material has changed. Sauer-Danfoss has issued new end cap gasket part numbers. The previous part numbers are obsolete. They are no longer available for service.



MODELS AFFECTED

All 94-3xxx, 943xxxx, 95-3xxx, 953xxxx, 96-3xxx, and 963xxxx fixed displacement motors.

SERIAL NUMBERS

Sauer-Danfoss Ames, Ia production - Change effective at s/n A-01-19-xxxxx.

Sauer-Danfoss Neumunster, Germany production - Change effective at s/n N-01-19-xxxxx..

PART NUMBERS AFFECTED

Frame size	Mounting flange (end cap porting)	Previous end cap gasket	New end cap gasket
55 cc	SAE (all), cartridge (axial)	8000167	8000721
55 cc	Cartridge (twin)	8000603	8000720
75 cc	SAE (all), cartridge (axial)	8100311	8100875
75 cc	Cartridge (twin)	8100749	8100874
100 cc	Sae (all)	8200102	8200511

This change also affects these service kits: 80030S030, 81030S30, and 82030S30

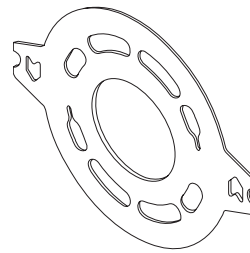
PARTS DISPOSITION

■ Interchangeable

PRODUCTS AFFECTED Series 90 55cc pumps and motors, and 75 - 100 cc motors

SUBJECT Consolidation of valve plate part numbers

DESCRIPTION Sauer-Danfoss has consolidated the part numbers for some of the series 90 pump and motor valve plates. Our plant in Germany has been producing the valve plates for series 90 pumps and motors since August 7, 2001. The U.S. plant has its part number for these valve plates as the German plant has its part number. The U.S. plant will now use the German part number. This obsoletes the U.S. part numbers. Since the parts are the same, the part number are interchangeable.



MODELS AFFECTED All series 90 75 cc pumps and motors, 75 cc motors, and 100 cc motors.

SERIAL NUMBERS This change became effective at s/n A-02-46-xxxxx.

PART NUMBERS AFFECTED

Description	Old part number	New part number
Valve plate, 55 cc pump	8000071	314427
Valve plate, 55 cc motor	8000132	329748
Valve plate, 75 cc motor	8100278	323766
Valve plate, 100 cc motor	8200134	324137

PARTS DISPOSITION ■ Non-interchangeable

PRODUCTS AFFECTED

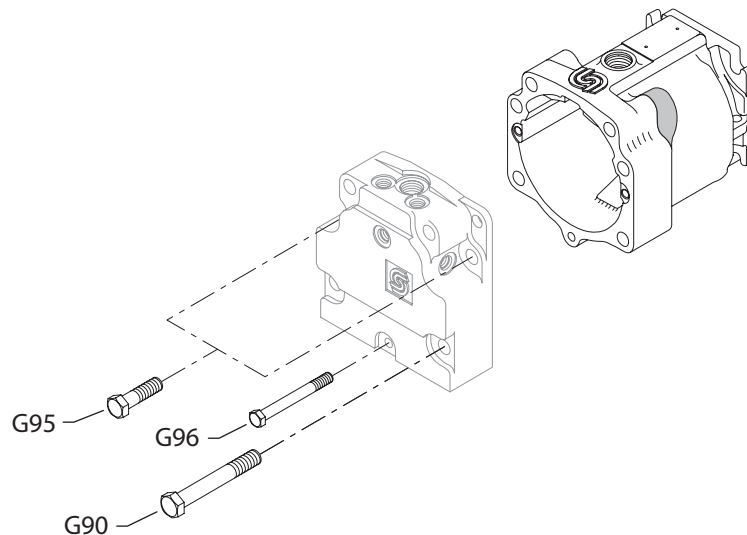
Series 90 55cc and 75cc fixed displacement motors

SUBJECT

Housing change to accept long screws

DESCRIPTION

Sauer-Danfoss has changed the housing used in series 90 55cc and 75cc fixed displacement motors. Material was added at the area of the two shorter end cap mounting screws (G95). The hole for these screws is now deeper to accept the longer screw (G90) that is used for the other four large end cap mounting screws. The six larger screws will have the same stretch and therefore the same clamping force for the gasket sealing area. The small end cap mounting screw (G96) remains the same. The old housing will become obsolete and no longer available for service.



MODELS AFFECTED

All 94-3xxx, 943xxxx, 95-3xxx, and 953xxxx fixed displacement motors.

SERIAL NUMBERS

Sauer-Danfoss Ames, Ia production - Change effective on 55cc at s/n A-05-22-xxxxx. and 75cc at s/n A-04-51-xxxxx

Sauer-Danfoss Neumunster, Germany production - Change effective on 55cc at s/n N-04-47-xxxx and 75cc at s/n N-04-43-xxxxx

PART NUMBERS AFFECTED

Description	Old part number	New part number
55 cc housing	8000436	8000782
75 cc housing	8100465	8100965
Screw	9007210-1209	9007210-1216

PARTS DISPOSITION

■ Non-interchangeable

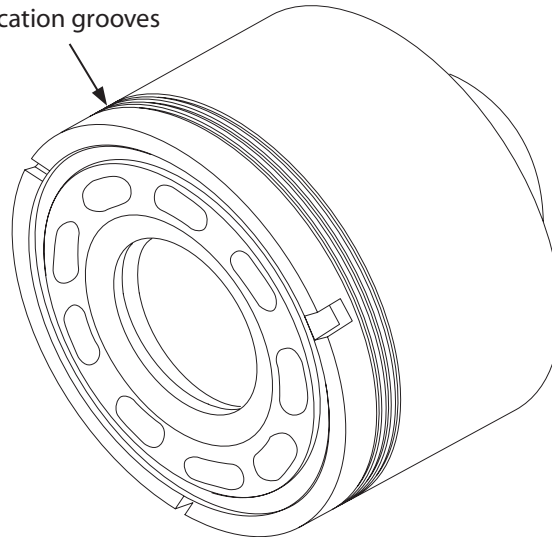
PRODUCTS AFFECTED Series 90 75 cc fixed and variable displacement motors

SUBJECT Cylinder block change

DESCRIPTION As a product improvement, Sauer-Danfoss has added a special process to the spline area of the cylinder block used in series 90 - 75 cc fixed and variable displacement motors. Three identification grooves will be added to these blocks to indicate this change. All other dimensions of the cylinder block remain the same.

Production built variable pumps will still use the standard cylinder blocks, however cylinder block assembly service kits will contain the "special process" cylinder block, whether they will be used in pumps or motors.

Identification grooves



MODELS AFFECTED All Series 90 75 cc fixed and variable displacement motors.

SERIAL NUMBERS This change became effective at serial number A-06-17-xxxxx.

PART NUMBERS AFFECTED	Old p/n	New p/n
	8100798	8100974
	81030S07	8510364
	81020S07	8510365
	8510237	8510366
	8100804	8100979
	8510236	8510367

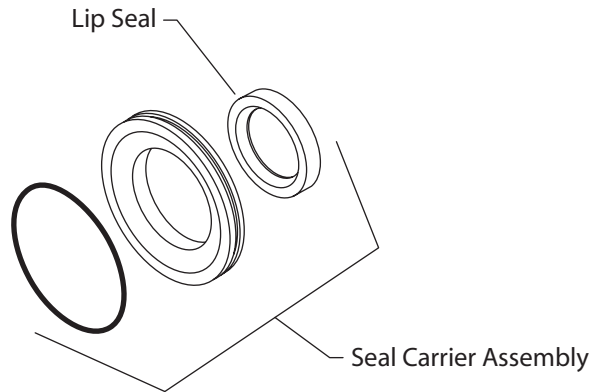
PARTS DISPOSITION ■ Interchangeable

PRODUCTS AFFECTED Series 90 75cc fixed and variable displacement motors

SUBJECT Shaft seal change

DESCRIPTION For commonality of parts, Sauer-Danfoss has changed the lip seal and shaft seal assembly for series 90 75 cc motors.

The new lip seal and shaft seal assembly are interchangeable with the old parts. The shaft seal assembly is obsolete and no longer available as a service part..



MODELS AFFECTED Series 90 75 cc fixed (MF) and variable (MV) motors.

SERIAL NUMBERS This change became effective at serial number A-06-18-xxxxx.

PART NUMBERS AFFECTED

Description	Old part number	New part number
Lip seal	9008000-0115	519666
Shaft seal assembly	8100553	519671

PARTS DISPOSITION ■ Interchangeable



Series 90 75 cc Axial Piston Motors
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
Transit mixer drives
Planetary compact gears
Proportional valves
Directional spool valves
Cartridge valves
Hydraulic integrated circuits
Hydrostatic transaxles
Integrated systems
Fan drive systems
Electrohydraulics
Microcontrollers and software
Electric motors and inverters
Joysticks and control handles
Displays
Sensors

Sauer-Danfoss Mobile Power and Control Systems – Market Leaders Worldwide

Sauer-Danfoss is a comprehensive supplier providing complete systems to the global mobile market.

Sauer-Danfoss serves markets such as agriculture, construction, road building, material handling, municipal, forestry, turf care, and many others.

We offer our customers optimum solutions for their needs and develop new products and systems in close cooperation and partnership with them.

Sauer-Danfoss specializes in integrating a full range of system components to provide vehicle designers with the most advanced total system design.

Sauer-Danfoss provides comprehensive worldwide service for its products through an extensive network of Global Service Partners strategically located in all parts of the world.

Local address:

Sauer-Danfoss (US) Company
2800 East 13th Street
Ames, IA 50010, USA
Phone: +1 515 239-6000
Fax: +1 515 239 6618

Sauer-Danfoss ApS
DK-6430 Nordborg, Denmark
Phone: +45 7488 4444
Fax: +45 7488 4400

Sauer-Danfoss GmbH & Co. OHG
Postfach 2460, D-24531 Neumünster
Krokamp 35, D-24539 Neumünster, Germany
Phone: +49 4321 871-0
Fax: +49 4321 871 122

Sauer-Danfoss-Daikin LTD
Sannomiya Grand Bldg. 8F
2-2-21 Isogami-dori, Chuo-ku
Kobe, Hyogo 651-0086, Japan
Phone: +81 78 231 5001
Fax: +81 78 231 5004