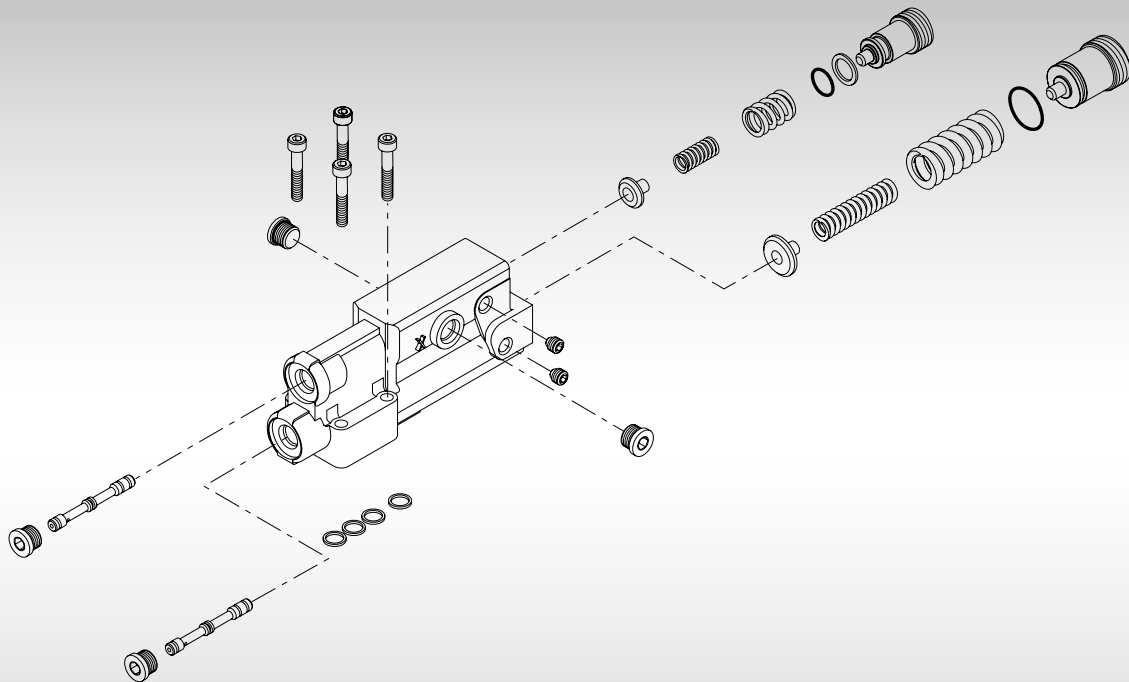




Parts Manual

# Open Circuit Pumps Series 45 Frame G 74 and 90cc





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## General information

### Service parts identification

The series 45 order code was changed in 2000 with the addition of the 90 cc displacement pump. Previously there were two groups of 74 cc pumps: the 45R074 and 45L074, which now are combined into the GRR and GRL (frame G), depending on rotation. The frame G includes both the 74 and 90 cc displacement pump.

Use this information and procedure to identify the module group, item number, manufacture date, part number, and part name

### Nameplate

The parts listed include all parts that may be used when performing either "Minor Repairs," "Major Repairs" or "Conversions" on the frame G open circuit pumps.

Each unit has a nameplate affixed to its housing. The nameplate includes this information.

#### Model Code

The Sauer-Danfoss model code completely defines the specific unit. Use it when ordering parts to service this product.

#### Model Number

The manufacturing factory uses the Sauer-Danfoss model numbers. On repeat orders, order a complete unit by the model number

#### Serial Number

The Sauer-Danfoss serial number identifies the manufacture date and the unit sequence in the build. The serial number also identifies 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.

The first number (2 digits) indicates the year of manufacture. ("94" would indicate the unit was manufactured in 1994).

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.





**General information**

**Date code**

The date code is 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 the service part number you need to order.

EXAMPLE: The service part desired is Item C090

Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
LB	C090	98-02		4570245	Spool	1
	C090	94-34	98-01	4570025	Spool (SB-1995-006)	1

All units using this order code with a date code of 94-34 and up to and including 98-01 must use part number "4570025".

All units with a date code of 98-02 and newer must use part number "4570245".

**Service bulletins**

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

**Procedure to identify a part**

**General**

The modular design of Series 45 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 K020 has the same item number on all pumps.)

A part number that has another number following it in parentheses makes this a world wide manual. The first number is sold in Germany. The number in parentheses is sold in the United States. (Example: 016014 (9006200-0206); customers would order 9006200-0206 if ordering the part in the United States.)

**Example of a Part Identification**

The nameplate on a Series 45 pump has an Order Code of GRL 074B PC 21 NN NN N 3 S1B2 A1N NNN NNN NNN. Do this to determine the part number of the drive shaft used on this pump.

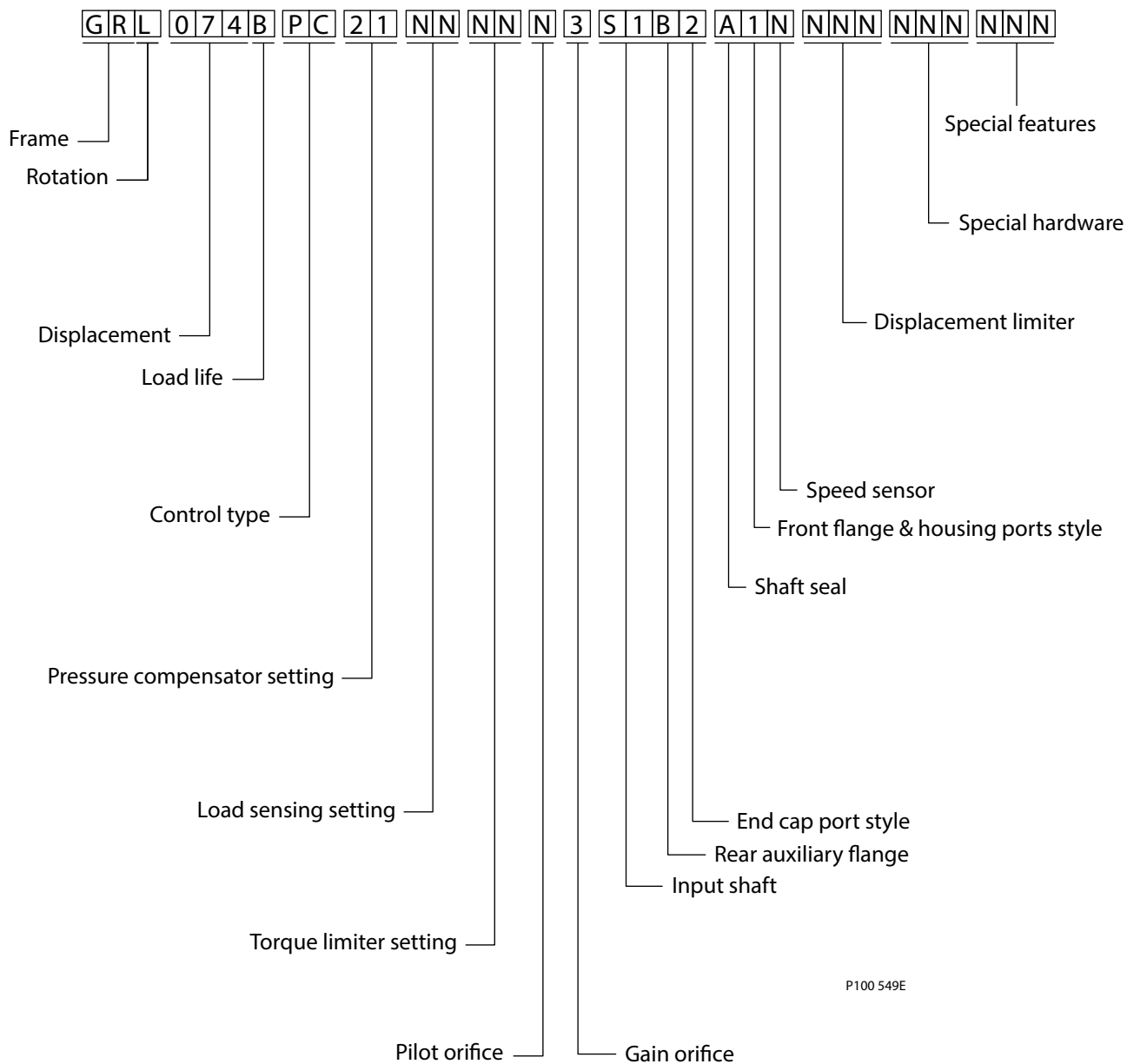
- 1) Referring to the input shaft module in the Order Code (see page 7), the input shaft option for this pump is identified by the code "S1B2". (GRL 074B PC 21 NN NN N 3 **S1B2** A1N NNN NNN NNN)
- 2) Referring to the Service Parts List, find the shaft group.
- 3) Next find the order code that relates to this unit, which is "S1B2". The shaft is found to be item J010 and part number 4740007.



**Notes**



Order code

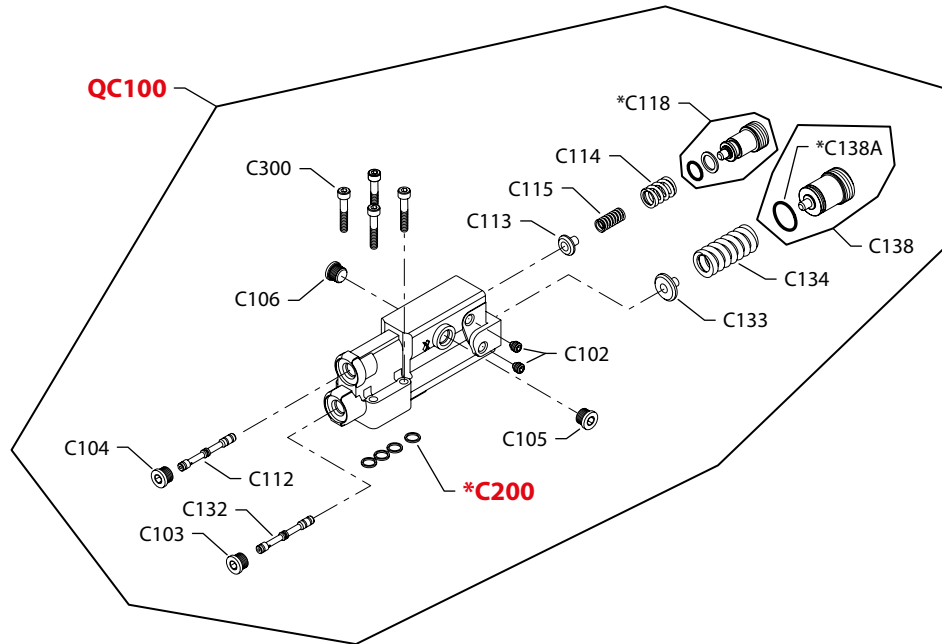


P100 549E



Control

(AB, AS, BB & BS)



E100 580E

\* = included in base motor seal kit Q210

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




**Control**
**Common load sensing control parts**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
	C102	02-35		4740064	Set screw	2
	C103	02-35		327007 (9005110-4400)	Plug assembly	1
	C104	02-35		327007 (9005110-4400)	Plug assembly	1
	C105	02-35		327007 (9005110-4400)	Plug assembly	1
	C106	02-35		327007 (9005110-4400)	Plug assembly	1
	C113	02-35		4740246	Spring guide (SB-2002-031)	1
	C114	02-35		4740061	Spring	1
	C115	02-35		4740062	Spring	1
	C118	02-35		11062214	Adjusting plug assembly (SB-2007-047, SB-2010-026)	1
	C132	02-35		1701124	Spool	1
	C133	02-35		4740247	Spring guide (SB-2002-034)	1
	C138	02-35		1700597	Adjusting plug assembly	1
	C138A	02-35		5000656	O-ring	1
	C200	02-35		4740154	Seal ring	4
	C300	02-35		5000164 (9007315-0507)	Screw	4

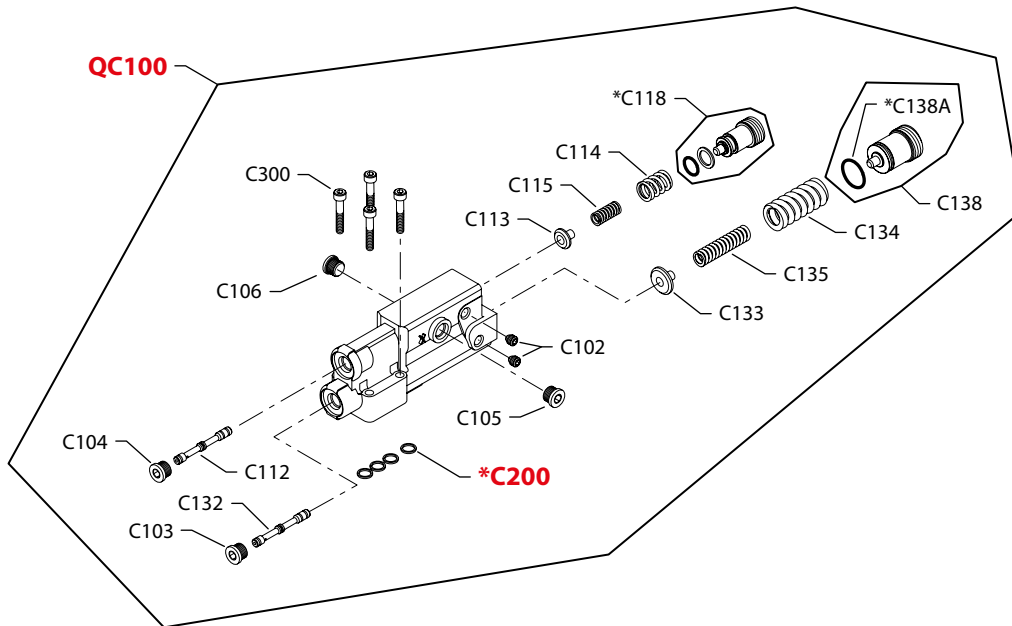
**Load sensing control**

AB	C112	02-35		4740309	Spool	1
	C134	02-35		4740318	Spring, PC light	1
	QC100	02-35		11112206	Control Kit, low pressure (SB-2012-011)	1
AS	C112	02-35		1701124	Spool	1
	C134	02-35		4740318	Spring, PC light	1
	QC100	02-35		11112210	Control Kit, low pressure (SB-2012-011)	1
BB	C112	02-36		4740309	Spool	1
	C134	02-36		4740324	Spring, PC heavy	1
	QC100	02-36		11112211	Control Kit, high pressure (SB-2012-011)	1
BS	C112	02-36		1701124	Spool	1
	C134	02-36		4740324	Spring, PC heavy	1
	QC100	02-36		11112207	Control Kit, high pressure (SB-2012-011)	1

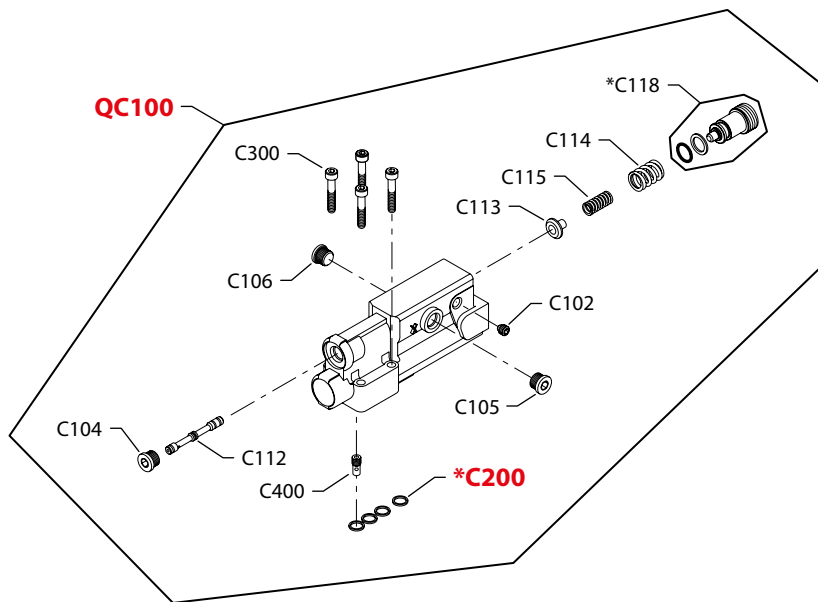


Control

(LB & LS)



(LE)



E100 581E

\* = included in base motor seal kit Q210

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


**Control**
**Common load sensing control parts**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
	C104	98-08		327007 (9005110-4400)	Plug assembly	1
	C105	98-08		327007 (9005110-4400)	Plug assembly	1
	C106	98-08		327007 (9005110-4400)	Plug assembly	1
	C113	98-08		4740246	Spring guide (SB-2002-031)	1
	C114	98-08		4740061	Spring	1
	C115	98-08		4740062	Spring	1
	C118	98-08		11062214	Adjusting plug assembly (SB-2007-047, SB-2010-026)	1
	C200	98-08		4740154	Seal ring	4
	C300	98-08		5000164 (9007315-0507)	Screw	4

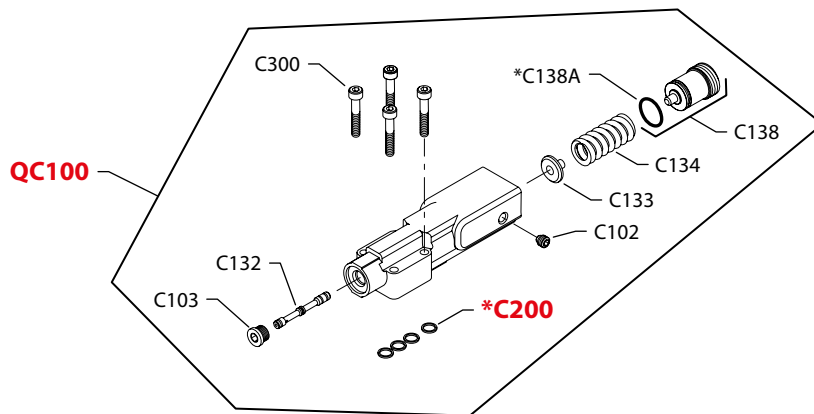
**Load sensing control**

LB	C102	98-08		4740064	Set screw	2
	C103	98-08		327007 (9005110-4400)	Plug assembly	1
	C112	98-08		4740309	Spool	1
	C132	98-08		1701124	Spool	1
	C133	98-08		4740247	Spring guide (SB-2002-034)	1
	C134	98-08		4740051	Spring, PC, outer	1
	C135	98-08		4740052	Spring, PC inner	1
	C138	98-08		11062379	Adjusting Plug assembly (SB-2010-026)	1
	C138A	98-08		5000656	O-ring	1
	C138A	98-08	02-18	633354 (9004104-0180)	O-ring (SB-2002-020)	1
QC100	98-08		11112205	Control kit (SB-2012-011)	1	
LE	C102	02-04		4740064	Set screw	1
	C112	02-04		1701124	Spool	1
	C400	02-04		4740313	Edge filter Plug assembly	1
	QC100	02-04		4510400	Control kit, load sensing only	1
LS	C102	98-08		4740064	Set screw	2
	C103	98-08		327007 (9005110-4400)	Plug assembly	1
	C112	98-08		1701124	Spool	1
	C132	98-08		1701124	Spool	1
	C133	98-08		4740247	Spring guide (SB-2002-034)	1
	C134	98-08		4740051	Spring, PC, outer	1
	C135	98-08		4740052	Spring, PC inner	1
	C138	98-08		11062379	Adjusting Plug assembly (SB-2010-026)	1
	C138A	98-08		5000656	O-ring	1
	C138A	98-08	02-18	633354 (9004104-0180)	O-ring (SB-2002-020)	1
	QC100	98-08		11112208	Control kit (SB-2001-019 & SB-2012-011)	1

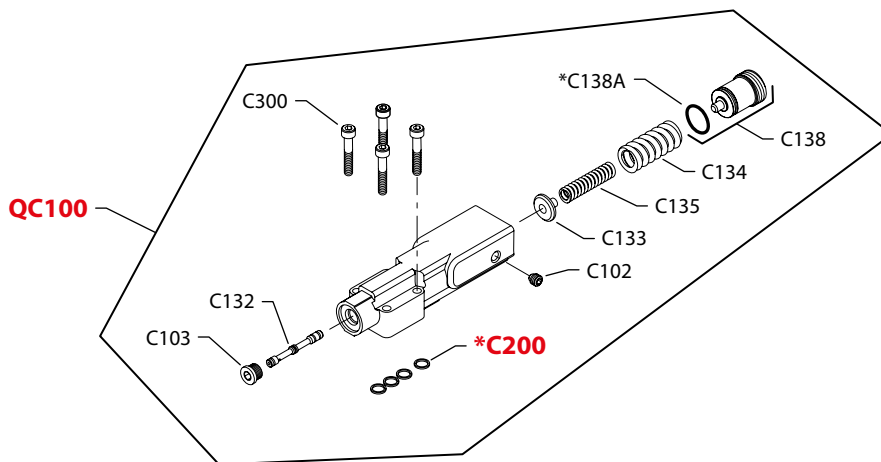


Control

(AC & BC)



(PC)



E100 517E

\* = included in base motor seal kit Q210

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

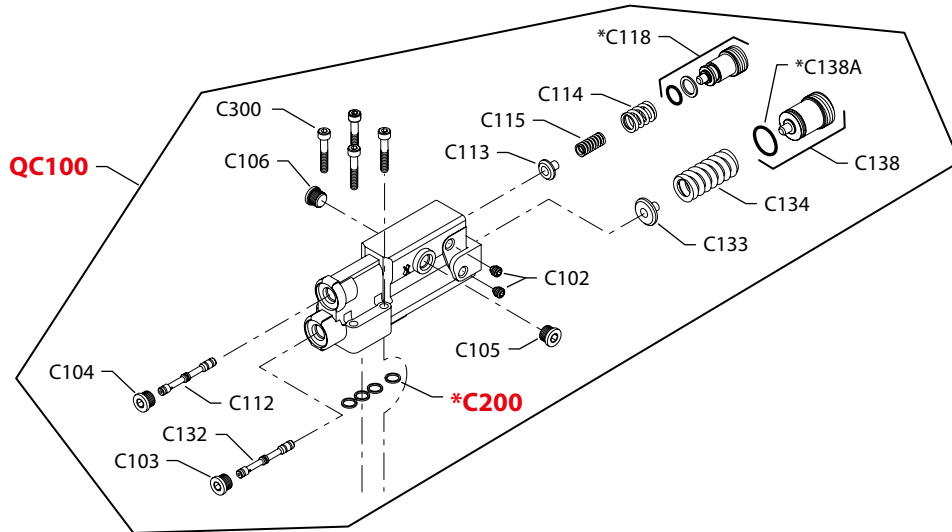

**Control**
**Pressure compensating control**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
AC	C102	03-08		4740064	Set screw	1
	C103	03-08		327007 (9005110-4400)	Plug assembly	1
	C132	03-08		1701124	Spool	1
	C133	03-08		4740247	Spring guide (SB-2002-034)	1
	C134	03-08		4740318	Spring, PC, light	1
	C138	03-08		1700597	Adjusting plug	1
	C138A	03-08		5000656	O-ring	1
	C200	03-08		4740154	Seal ring	4
	C300	03-08		5000164 (9007315-0507)	Screw	4
	QC100	03-08		4510420	Control Kit, PC, low pressure	1
BC	C102	03-08		4740064	Set screw	1
	C103	03-08		327007 (9005110-4400)	Plug assembly	1
	C132	03-08		1701124	Spool	1
	C133	03-08		4740247	Spring guide (SB-2002-034)	1
	C134	03-08		4740324	Spring, PC, heavy	1
	C138	03-08		1700597	Adjusting plug	1
	C138A	03-08		5000656	O-ring	1
	C200	03-08		4740154	Seal ring	4
	C300	03-08		5000164 (9007315-0507)	Screw	4
	QC100	03-08		4510421	Control Kit, PC, high pressure	1
PC	C102	03-08		4740064	Set screw	1
	C103	03-08		327007 (9005110-4400)	Plug assembly	1
	C132	03-08		1701124	Spool	1
	C133	03-08		4740247	Spring guide (SB-2002-034)	1
	C134	03-08		4740051	Spring, outer	1
	C135	03-08		4740052	Spring, inner	1
	C138	03-08		11062379	Adjusting plug assembly1	
	C138A	03-08		5000656	O-ring	1
	C200	03-08		4740154	Seal ring	4
	C300	03-08		5000164 (9007315-0507)	Screw	4
QC100	03-08		4510422	Control kit, PC	1	

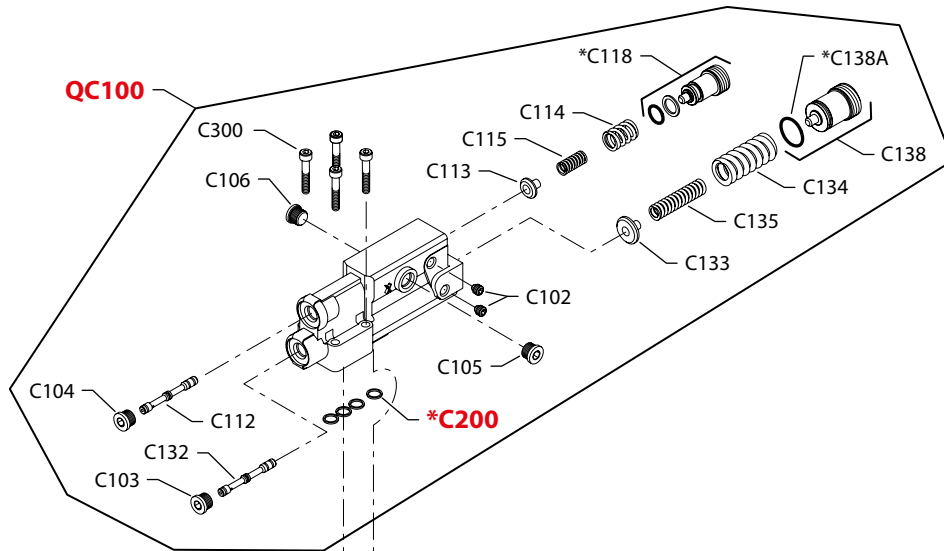


Control and orifice

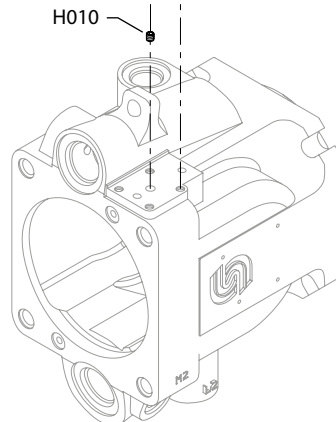
(AP & BP)



(RP)



(1, 3 & 5)



\* = included in base motor seal kit Q210

E100 364E  
Enlarged **bold** type item numbers are recommended part to stock for servicing.


**Control and orifice**
**Common pressure compensating control parts, remote**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
	C102	02-32		4740064	Set screw	2
	C103	02-32		327007 (9005110-4400)	Plug assembly	1
	C104	02-32		327007 (9005110-4400)	Plug assembly	1
	C105	02-32		327007 (9005110-4400)	Plug assembly	1
	C106	02-32		327007 (9005110-4400)	Plug assembly	1
	C112	02-32		4740300	Spool	1
	C113	02-32		4740301	Spring guide	1
	C114	02-32		4740061	Spring	1
	C115	02-32		4740062	Spring	1
	C118	02-32		11062214	Adjusting plug assembly (SB-2007-047, SB-2010-026)	1
	C132	02-32		1701124	Spool	1
	C133	02-32		4740247	Spring guide (SB-2002-034)	1
	C200	02-32		4740154	Seal ring	4
	C300	02-32		5000164 (9007315-0507)	Screw	4

**Pressure compensating control, remote**

AP	C134	02-35		4740318	Spring, PC light	1
	C138	02-35		1700597	Adjusting Plug assembly	1
	C138A	02-35		5000656	O-ring	1
	QC100	02-35		11112209	Control Kit, remote PC, low pressure (SB-2012-011)	1
BP	C134	02-36		4740324	Spring, PC heavy	1
	C138	02-36		1700597	Adjusting Plug assembly	1
	C138A	02-36		5000656	O-ring	1
	QC100	02-36		11112212	Control Kit, remote PC, high pressure (SB-2012-011)	1
RP	C134	02-32		4740051	Spring, PC outer	1
	C135	02-32		4740052	Spring, PC inner	1
	C138	02-32		11062379	Adjusting Plug assembly (SB-2010-026)	1
	C138A	02-32		5000656	O-ring	1
	QC100	01-34		11112213	Control Kit, remote PC	1

**Pilot orifice**

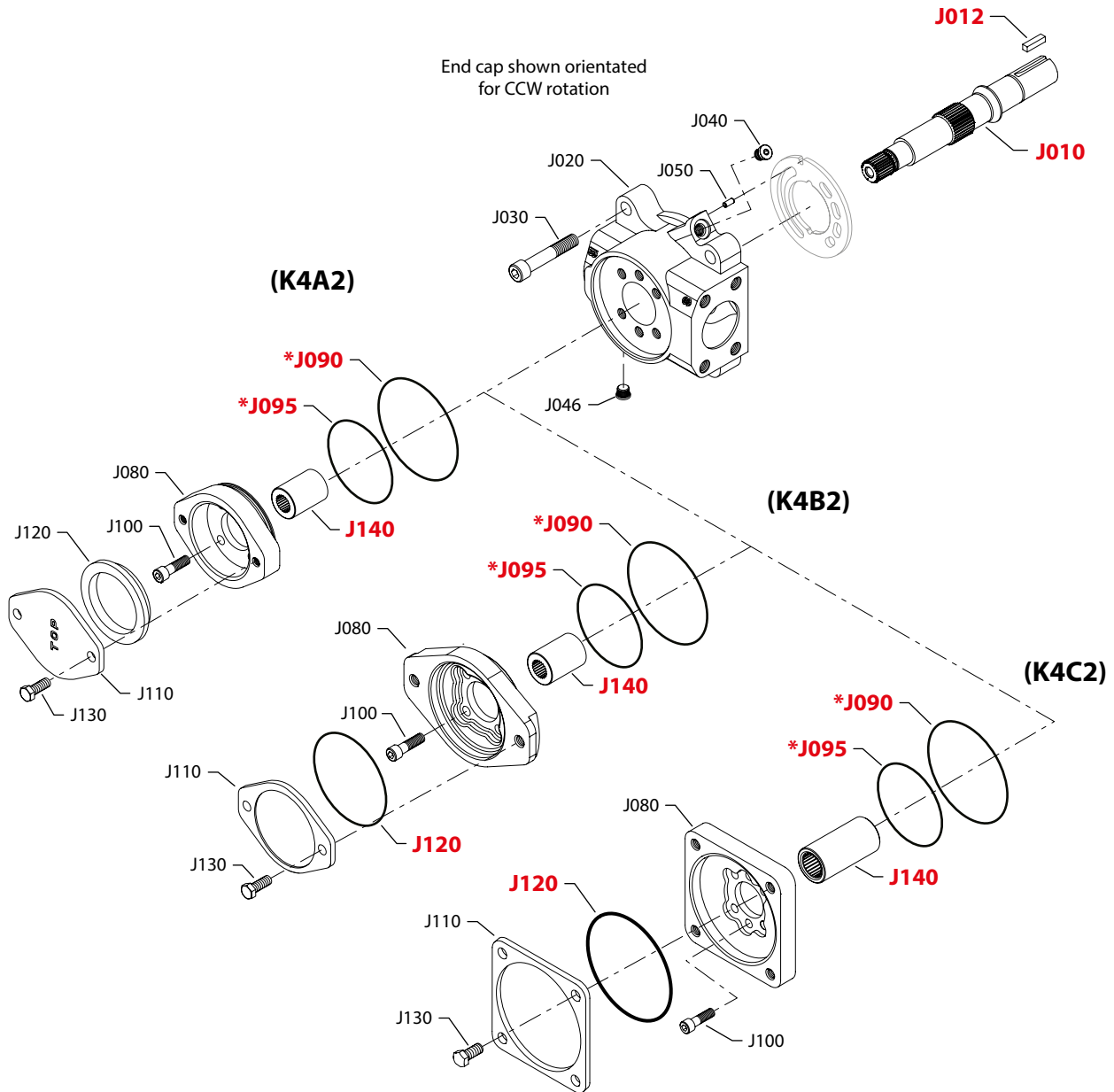
N	None				
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**Gain orifice**

1	H010	98-08	01-33	9007712-0504	Set screw (SB-2001-019)	1
3	H010	98-08	01-33	639104	Orifice plug, .7 mm (SB-2001-019)	1
5	H010	98-08	01-33	639120	Orifice plug, 1 mm (SB-2001-019)	1
N	none					



Shaft, auxiliary flange and end cap



\* = included in base motor seal kit Q210

E100 365E  
Enlarged **bold** type item numbers are recommended part to stock for servicing.

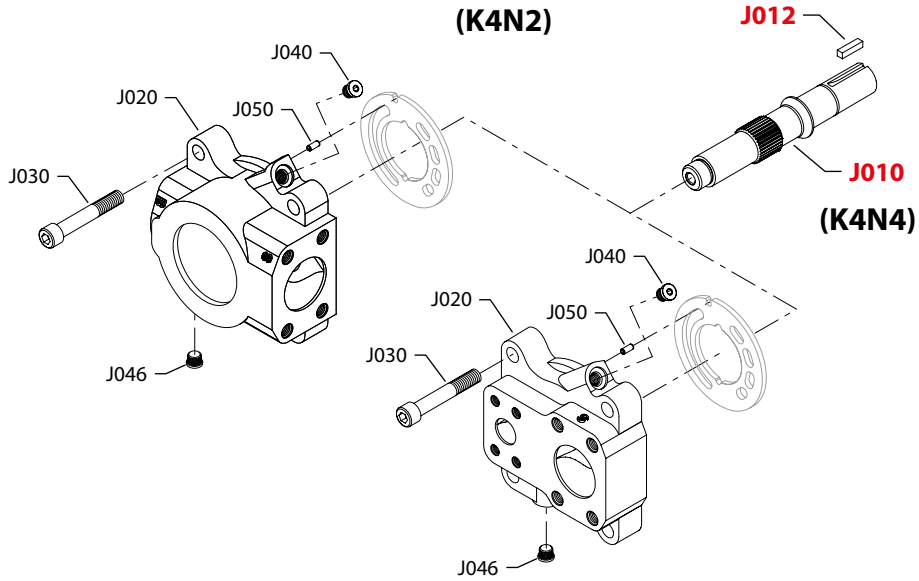



**Shaft, auxiliary flange and end cap**
**Shaft/auxiliary flange/end cap**

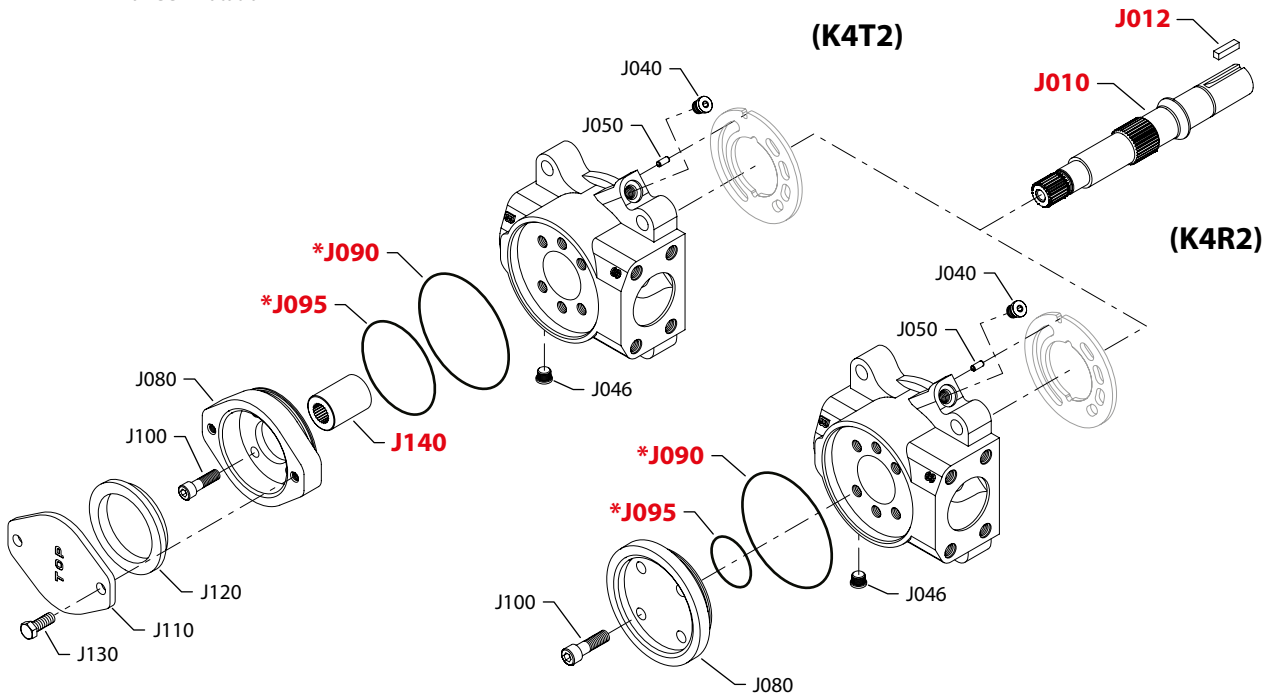
Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
K4A2	J010	98-04		4740109	Shaft, straight key	1
	J012	98-04		5000364	Key	1
	J020	98-04		4740152	End cap, radial ports	1
	J030	98-04		575910	Screw (SB-2001-030)	4
	J040	98-04		327007 (9005110-4400)	Plug assembly	1
	J046	98-04		327007 (9005110-4400)	Plug assembly	1
	J050	98-04		9004700-1907	Pin	1
	J080	98-04		4570289	Adapter flange, SAE A (SB-1999-006)	1
	J090	98-04		5000099 (9004100-1550)	O-ring	1
	J095	98-04		545434 (9004100-0420)	O-ring	1
	J100	98-04		5000489	Screw	4
	J110	98-04		4460586	Cover plate (SB-1999-006)	1
	J120	98-04		4800482	'A' pad seal (SB-1999-006)	1
	J130	98-04		9007200-3712	Screw	2
J140	98-04		1701185	Coupling, 9-tooth	1	
K4B2	J010	98-04		4740109	Shaft, straight key	1
	J012	98-04		5000364	Key	1
	J020	98-04		4740152	End cap, radial ports	1
	J030	98-04		575910	Screw (SB-2001-030)	4
	J040	98-04		327007 (9005110-4400)	Plug assembly	1
	J046	98-04		327007 (9005110-4400)	Plug assembly	1
	J050	98-04		9004700-1907	Pin	1
	J080	98-04		4570210	Adapter flange, SAE B	1
	J090	98-04		5000099 (9004100-1550)	O-ring	1
	J095	98-04		545434 (9004100-0420)	O-ring	1
	J100	98-04		5000489	Screw	4
	J110	98-04		4460370	Cover plate	1
	J120	98-04		9004104-0440	O-ring	1
	J130	98-04		9007200-5021	Screw	2
J140	98-04		1701187	Coupling, 13-tooth	1	
K4C2	J010	98-04		4740109	Shaft, straight key	1
	J012	98-04		5000364	Key	1
	J020	98-04		4740152	End cap, radial ports	1
	J030	98-04		575910	Screw (SB-2001-030)	4
	J040	98-04		327007 (9005110-4400)	Plug assembly	1
	J046	98-04		327007 (9005110-4400)	Plug assembly	1
	J050	98-04		9004700-1907	Pin	1
	J080	98-04		11039356	Adapter flange, SAE C (SB-2008-052)	1
	J090	98-04		5000099 (9004100-1550)	O-ring	1
	J095	98-04		545434 (9004100-0420)	O-ring	1
	J100	98-04		5000489	Screw	6
	J110	98-04		8800406	Cover plate	1
	J120	98-04		719179 (9004100-0480)	O-ring	1
	J130	98-04		647248 (9007200-5021)	Screw	4
J140	98-04		1701189	Coupling, 14-tooth	1	



Shaft, auxiliary flange and end cap



End caps shown orientated for CCW rotation



\* = included in base motor seal kit Q210

E100 366E

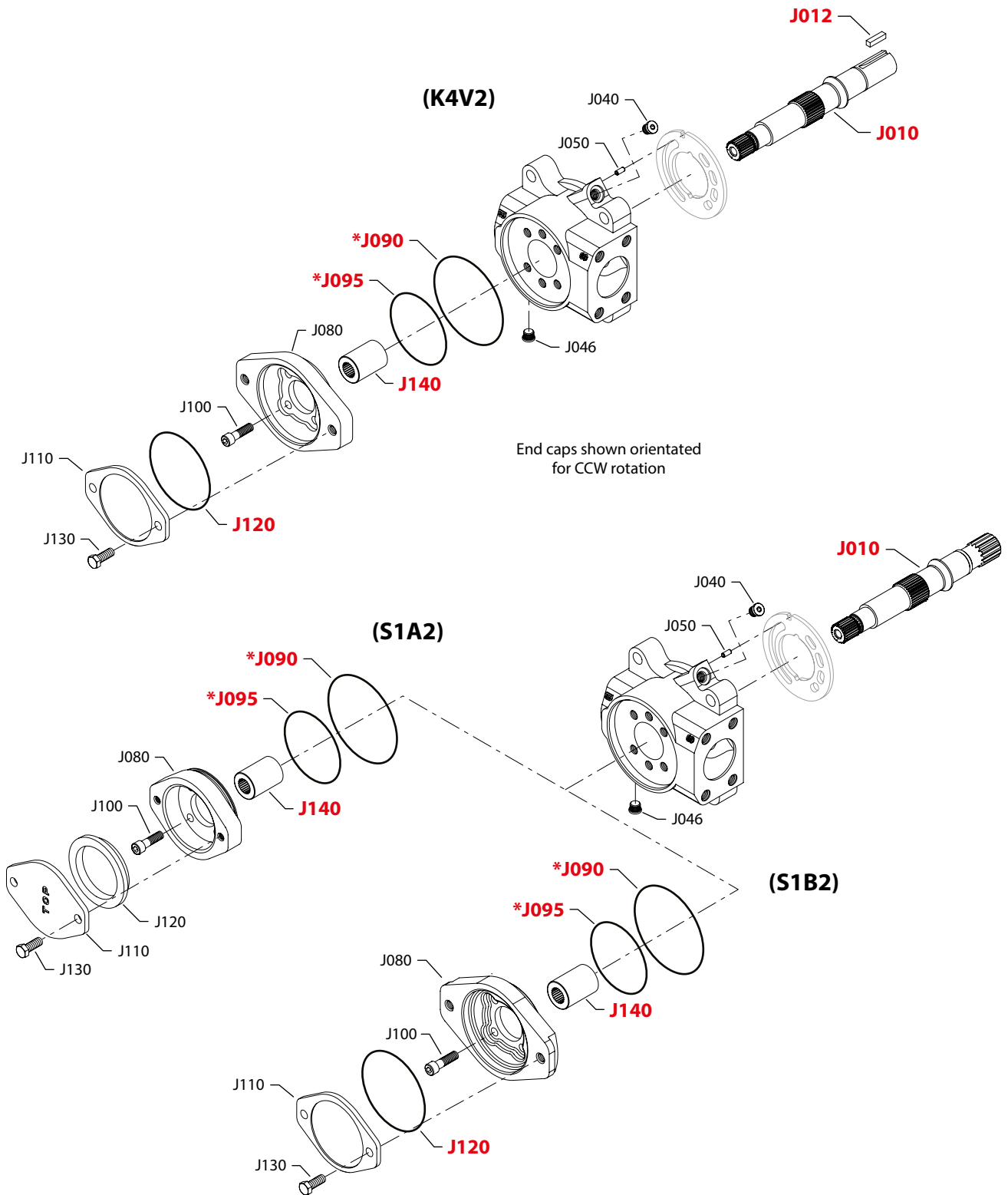
Enlarged **bold** type item numbers are recommended part to stock for servicing.


**Shaft, auxiliary flange and end cap**
**Shaft/auxiliary flange/end cap**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
K4N2	J010	98-04		11079201	Shaft, straight key	1
	J012	98-04		5000364	Key	1
	J020	98-04		4740151	End cap, radial ports	1
	J030	98-04		575910	Screw (SB-2001-030)	4
	J040	98-04		327007 (9005110-4400)	Plug assembly	1
	J046	98-04		327007 (9005110-4400)	Plug assembly	1
	J050	98-04		9004700-1907	Pin	1
	K4N4	J010	98-04		11079201	Shaft, straight key
J012		98-04		5000364	Key	1
J020		98-04		4740153	End cap, axial ports	1
J030		98-04		575910	Screw (SB-2001-030)	4
J040		98-04		327007 (9005110-4400)	Plug assembly	1
J046		98-04		327007 (9005110-4400)	Plug assembly	1
J050		98-04		9004700-1907	Pin	1
K4R2		J010	98-04		4740109	Shaft, straight key
	J012	98-04		5000364	Key	1
	J020	98-04		4740152	End cap, radial ports	1
	J030	98-04		575910	Screw (SB-2001-030)	4
	J040	98-04		327007 (9005110-4400)	Plug assembly	1
	J046	98-04		327007 (9005110-4400)	Plug assembly	1
	J050	98-04		9004700-1907	Pin	1
	J080	98-04		4570179	Running cover	1
	J090	98-04		5000099 (9004100-1550)	O-ring	1
	J095	98-04		314534 (9004104-0310)	O-ring	1
	J100	98-04		5000489	Screw	4
	K4T2	J010	98-04		4740109	Shaft, straight key
J012		98-04		5000364	Key	1
J020		98-04		4740152	End cap, radial ports	1
J030		98-04		575910	Screw (SB-2001-030)	4
J040		98-04		327007 (9005110-4400)	Plug assembly	1
J046		98-04		327007 (9005110-4400)	Plug assembly	1
J050		98-04		9004700-1907	Pin	1
J080		98-04		4570289	Adapter flange, SAE A (SB-1999-006)	1
J090		98-04		5000099 (9004100-1550)	O-ring	1
J095		98-04		545434 (9004100-0420)	O-ring	1
J100		98-04		5000489	Screw	4
J110		98-04		4460586	Cover plate (SB-1999-006)	1
J120		98-04		4800482	'A' pad seal (SB-1999-006)	1
J130		98-04		9007200-3712	Screw	2
J140		98-04		1701186	Coupling, 11-tooth	1



Shaft, auxiliary flange and end cap



\* = included in base motor seal kit Q210

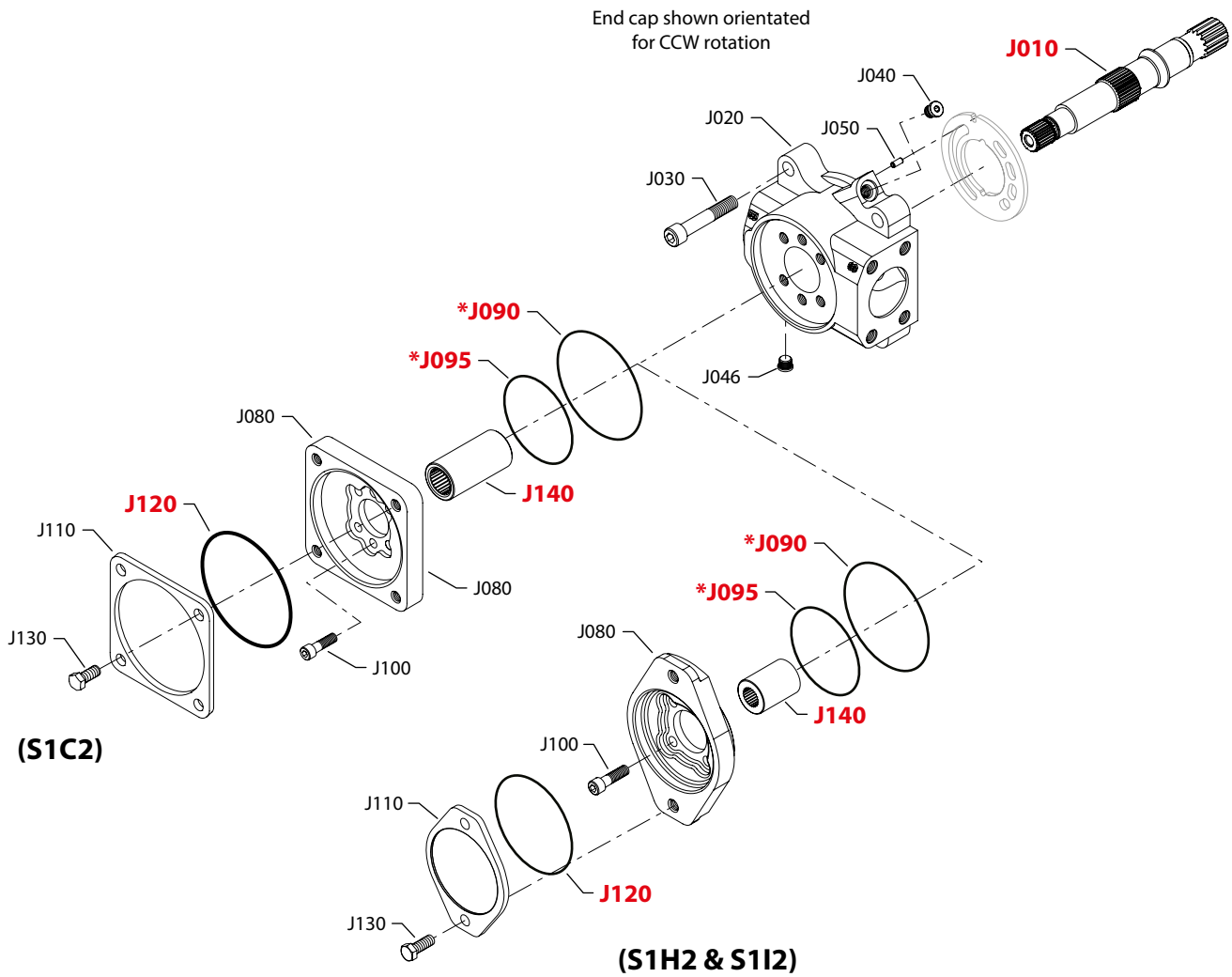
E100 367E  
 Enlarged **bold** type item numbers are recommended part to stock for servicing.


**Shaft, auxiliary flange and end cap**
**Shaft/auxiliary flange/end cap**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
K4V2	J010	98-04		4740109	Shaft, straight key	1
	J012	98-04		5000364	Key	1
	J020	98-04		4740152	End cap, radial ports	1
	J030	98-04		575910	Screw (SB-2001-030)	4
	J040	98-04		327007 (9005110-4400)	Plug assembly	1
	J046	98-04		327007 (9005110-4400)	Plug assembly	1
	J050	98-04		9004700-1907	Pin	1
	J080	98-04		4570210	Adapter flange, SAE B	1
	J090	98-04		5000099 (9004100-1550)	O-ring	1
	J095	98-04		545434 (9004100-0420)	O-ring	1
	J100	98-04		5000489	Screw	4
	J110	98-04		4460370	Cover plate	1
	J120	98-04		680892 (9004104-0440)	O-ring	1
	J130	98-04		647248 (9007200-5021)	Screw	2
J140	98-04		1701188	Coupling, 15-tooth	1	
S1A2	J010	98-04		4740007	Shaft, 14-tooth spline	1
	J020	98-04		4740152	End cap, radial ports	1
	J030	98-04		575910	Screw (SB-2001-030)	4
	J040	98-04		327007 (9005110-4400)	Plug assembly	1
	J046	98-04		327007 (9005110-4400)	Plug assembly	1
	J050	98-04		9004700-1907	Pin	1
	J080	98-04		4570289	Adapter flange, SAE A (SB-1999-006)	1
	J090	98-04		5000099 (9004100-1550)	O-ring	1
	J095	98-04		545434 (9004100-0420)	O-ring	1
	J100	98-04		5000489	Screw	4
	J110	98-04		4460586	Cover plate (SB-1999-006)	1
	J120	98-04		4800482	'A' pad seal (SB-1999-006)	1
	J130	98-04		9007200-3712	Screw	2
	J140	98-04		1701185	Coupling, 9-tooth	1
S1B2	J010	98-04		4740007	Shaft, 14-tooth spline	1
	J020	98-04		4740152	End cap, radial ports	1
	J030	98-04		575910	Screw (SB-2001-030)	4
	J040	98-04		327007 (9005110-4400)	Plug assembly	1
	J046	98-04		327007 (9005110-4400)	Plug assembly	1
	J050	98-04		9004700-1907	Pin	1
	J080	98-04		4570210	Adapter flange, SAE B	1
	J090	98-04		5000099 (9004100-1550)	O-ring	1
	J095	98-04		545434 (9004100-0420)	O-ring	1
	J100	98-04		5000489	Screw	4
	J110	98-04		4460370	Cover plate	1
	J120	98-04		680892 (9004104-0440)	O-ring	1
	J130	98-04		647248 (9007200-5021)	Screw	2
	J140	98-04		1701187	Coupling, 13-tooth	1



Shaft, auxiliary flange and end cap



\* = included in base motor seal kit Q210

E100 368E

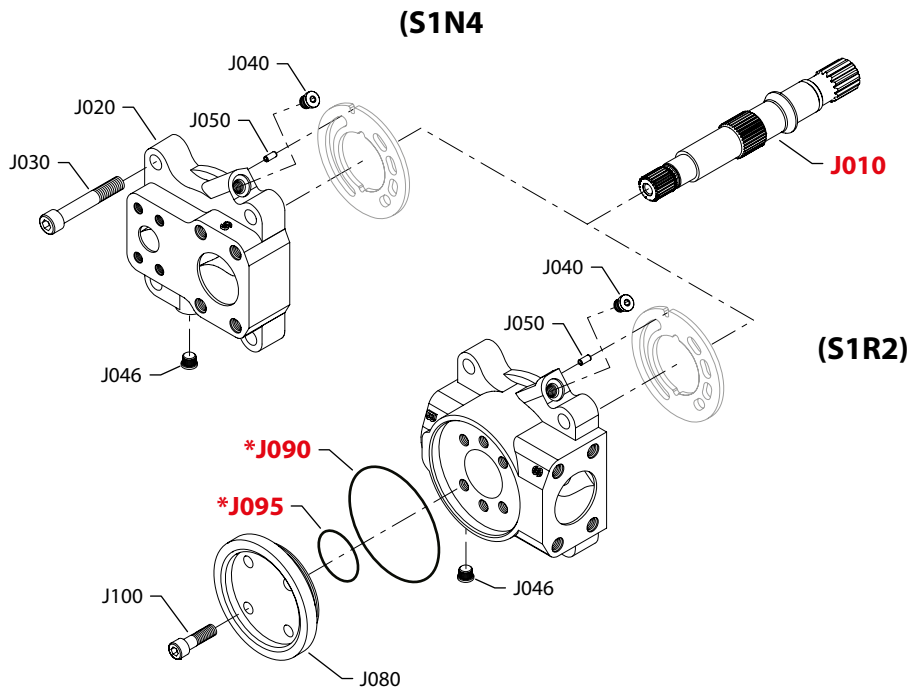
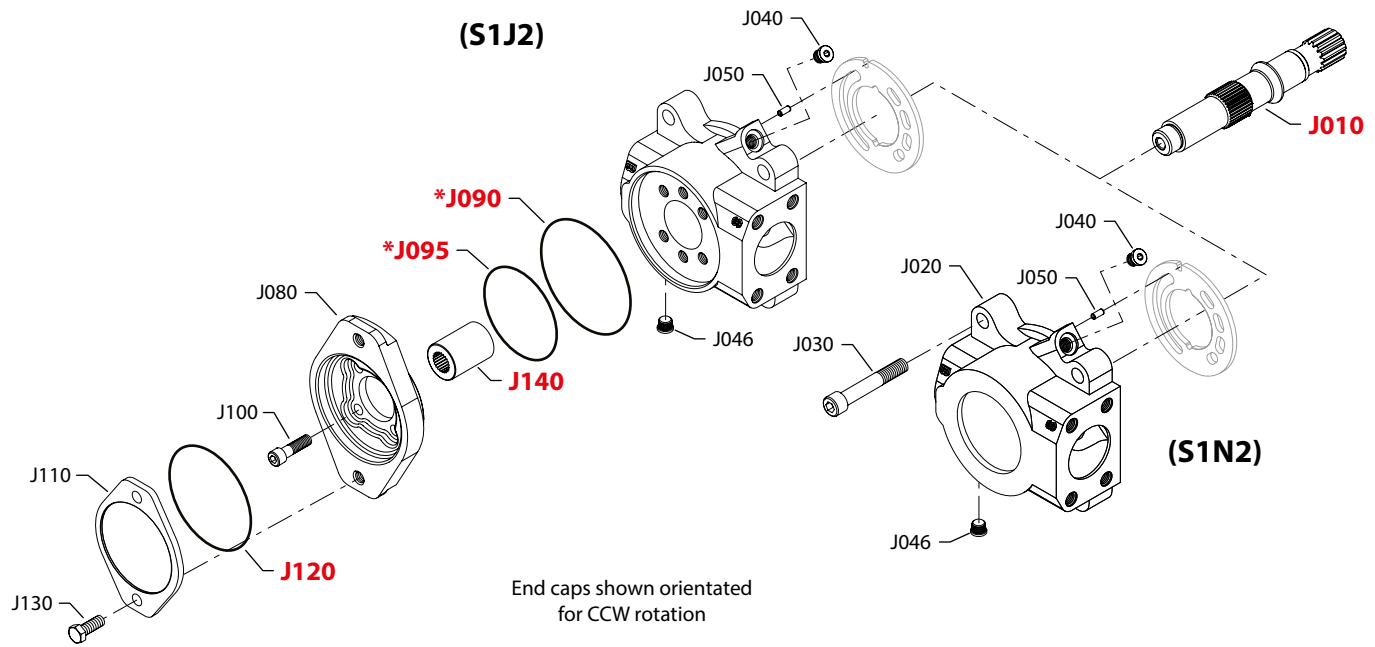
Enlarged **bold** type item numbers are recommended part to stock for servicing.


**Shaft, auxiliary flange and end cap**
**Shaft/auxiliary flange/end cap**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
S1C2	J010	98-04		4740007	Shaft, 14-tooth spline	1
	J020	98-04		4740152	End cap, radial ports	1
	J030	98-04		575910	Screw (SB-2001-030)	4
	J040	98-04		327007 (9005110-4400)	Plug assembly	1
	J046	98-04		327007 (9005110-4400)	Plug assembly	1
	J050	98-04		9004700-1907	Pin	1
	J080	98-04		11039356	Adapter flange, SAE C (SB-2008-052)	1
	J090	98-04		5000099 (9004100-1550)	O-ring	1
	J095	98-04		545434 (9004100-0420)	O-ring	1
	J100	98-04		5000489	Screw	6
	J110	98-04		8800406	Cover plate	1
	J120	98-04		719179 (9004100-0480)	O-ring	1
	J130	98-04		647248 (9007200-5021)	Screw	4
	J140	98-04		1701189	Coupling, 14-tooth	1
S1H2	J010	98-04		4740007	Shaft, 14-tooth spline	1
	J020	98-04		4740152	End cap, radial ports	1
	J030	98-04		575910	Screw (SB-2001-030)	4
	J040	98-04		327007 (9005110-4400)	Plug assembly	1
	J046	98-04		327007 (9005110-4400)	Plug assembly	1
	J050	98-04		9004700-1907	Pin	1
	J080	98-04		4570210	Adapter flange, SAE B	1
	J090	98-04		5000099 (9004100-1550)	O-ring	1
	J095	98-04		545434 (9004100-0420)	O-ring	1
	J100	98-04		5000489	Screw	4
	J110	98-04		4460370	Cover	1
	J120	98-04		680892 (9004104-0440)	O-ring	1
	J130	98-04		647248 (9007200-5021)	Screw	2
	J140	98-04		1701188	Coupling, 15-tooth	1
S1I2	J010	10-11		4740007	Shaft, 14-tooth spline	1
	J020	10-11		4740152	End cap, radial ports	1
	J030	10-11		575910	Screw (SB-2001-030)	4
	J040	10-11		327007 (9005110-4400)	Plug assembly	1
	J046	10-11		327007 (9005110-4400)	Plug assembly	1
	J050	10-11		9004700-1907	Pin	1
	J080	10-11		4570390	Adapter flange, SAE B, M12 thread	1
	J090	10-11		5000099 (9004100-1550)	O-ring	1
	J095	10-11		545434 (9004100-0420)	O-ring	1
	J100	10-11		5000489	Screw	4
	J110	10-11		4460370	Cover	1
	J120	10-11		680892 (9004104-0440)	O-ring	1
	J130	10-11		370320	Screw	2
	J140	10-11		1701188	Coupling, 15-tooth	1



Shaft, auxiliary flange and end cap



\* = included in base motor seal kit Q210

E100 370E

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



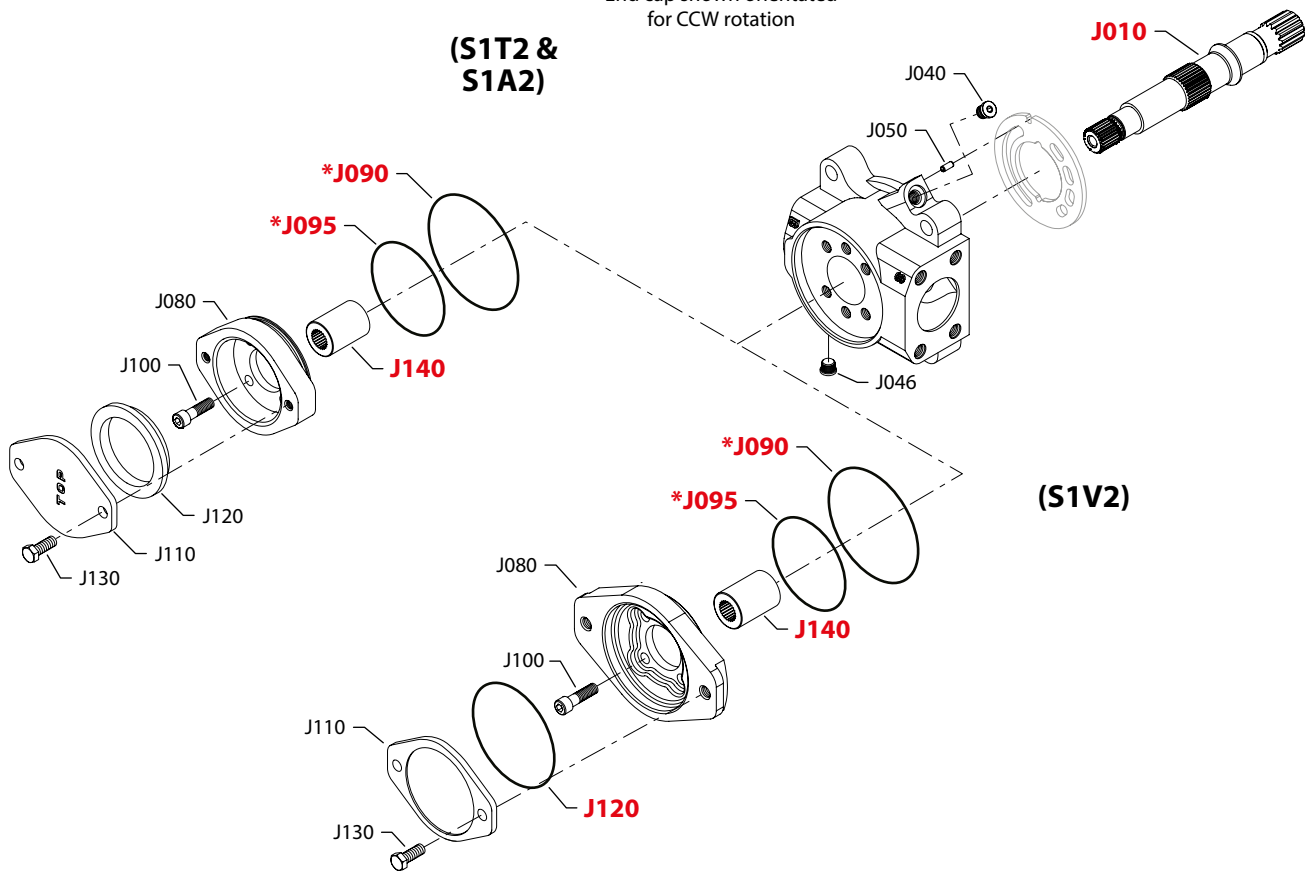

**Shaft, auxiliary flange and end cap**
**Shaft/auxiliary flange/end cap**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
S1J2	J010	09-37		4740007	Shaft, 14-tooth spline	1
	J020	09-37		4740152	End cap, radial ports	1
	J030	09-37		575910	Screw (SB-2001-030)	4
	J040	09-37		327007 (9005110-4400)	Plug assembly	1
	J046	09-37		327007 (9005110-4400)	Plug assembly	1
	J050	09-37		9004700-1907	Pin	1
	J080	09-37		4570210	Adapter flange, SAE B	1
	J090	09-37		5000099 (9004100-1550)	O-ring	1
	J095	09-37		545434 (9004100-0420)	O-ring	1
	J100	09-37		5000489	Screw	4
	J110	09-37		4460370	Cover	1
	J120	09-37		680892 (9004104-0440)	O-ring	1
	J130	09-37		647248 (9007200-5021)	Screw	2
	J140	09-37		1701187	Coupling, 13-tooth	1
S1N2	J010	98-04		4740012	Shaft, 14-tooth spline	1
	J020	98-04		4740151	End cap, radial ports	1
	J030	98-04		575910	Screw (SB-2001-030)	4
	J040	98-04		327007 (9005110-4400)	Plug assembly	1
	J046	98-04		327007 (9005110-4400)	Plug assembly	1
	J050	98-04		9004700-1907	Pin	1
S1N4	J010	98-04		4740012	Shaft, 14-tooth spline	1
	J020	98-04		4740153	End cap, axial ports	1
	J030	98-04		575910	Screw (SB-2001-030)	4
	J040	98-04		327007 (9005110-4400)	Plug assembly	1
	J046	98-04		327007 (9005110-4400)	Plug assembly	1
	J050	98-04		9004700-1907	Pin	1
S1R2	J010	98-04		4740007	Shaft, 14-tooth spline	1
	J020	98-04		4740152	End cap, radial ports	1
	J030	98-04		575910	Screw (SB-2001-030)	4
	J040	98-04		327007 (9005110-4400)	Plug assembly	1
	J046	98-04		327007 (9005110-4400)	Plug assembly	1
	J050	98-04		9004700-1907	Pin	1
	J080	98-04		4570179	Running cover	1
	J090	98-04		5000099 (9004100-1550)	O-ring	1
	J095	98-04		314534 (9004104-0310)	O-ring	1
	J100	98-04		5000489	Screw	4



Shaft, auxiliary flange and end cap

End cap shown orientated for CCW rotation



\* = included in base motor seal kit Q210

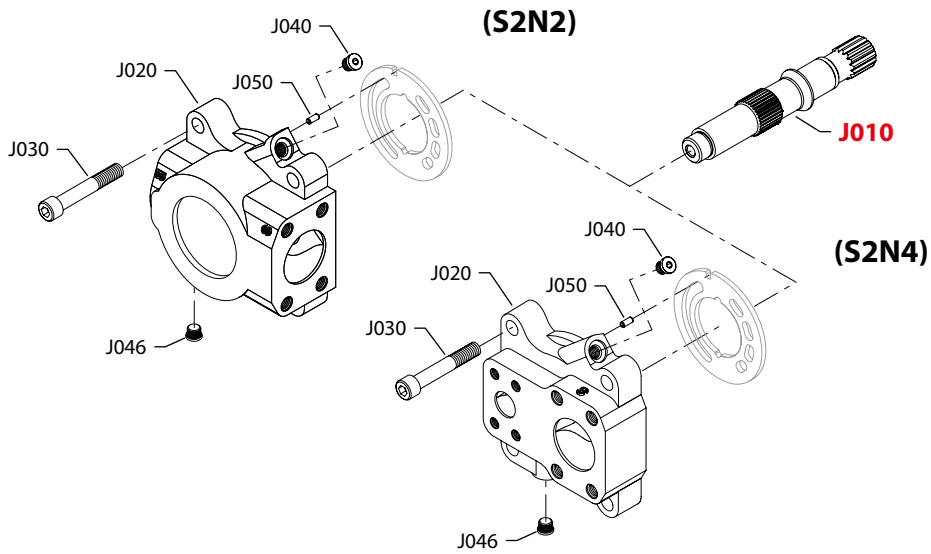
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Enlarged **bold** type item numbers are recommended part to stock for servicing.


**Shaft, auxiliary flange and end cap**
**Shaft/auxiliary flange/end cap**

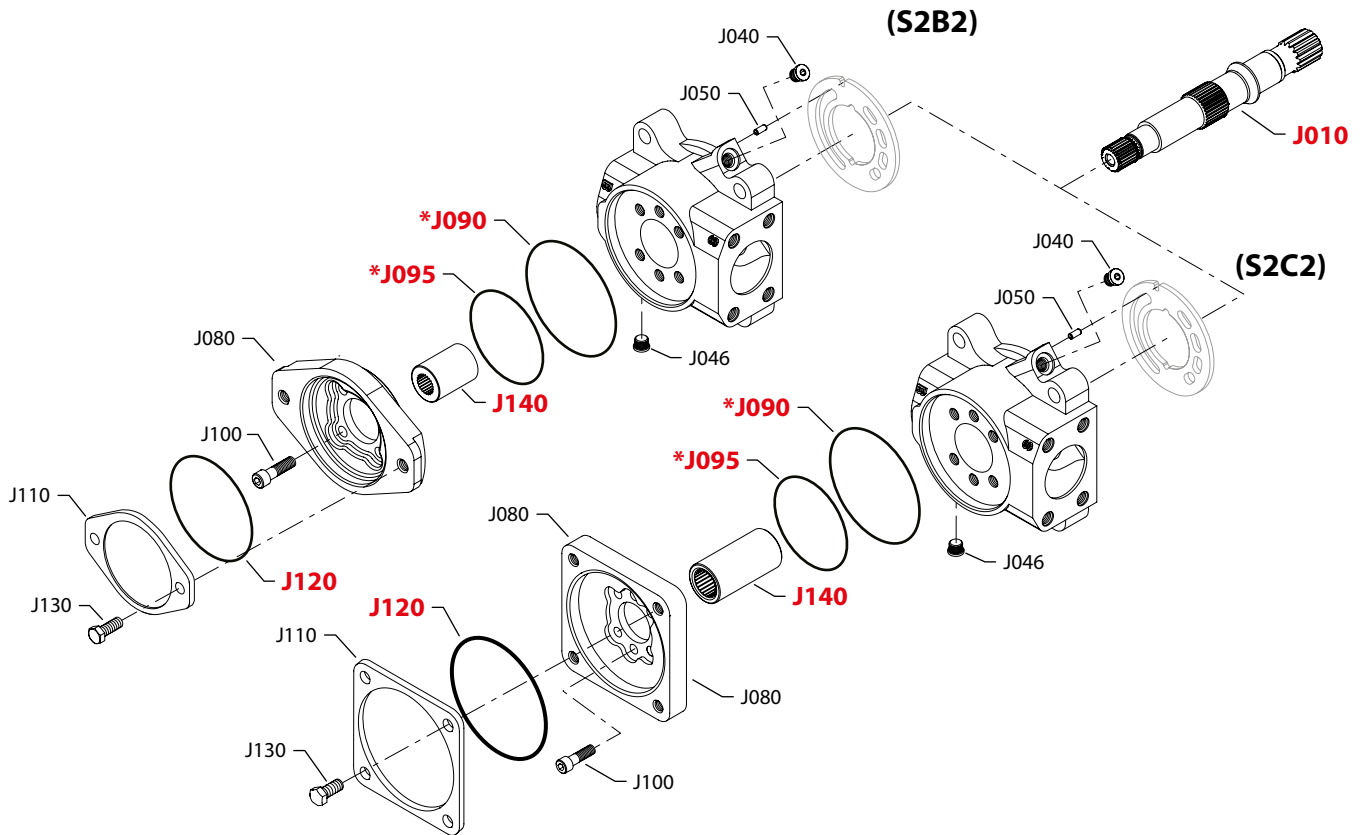
Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
S1T2	J010	98-04		4740007	Shaft, 14-tooth spline	1
	J020	98-04		4740152	End cap, radial ports	1
	J030	98-04		575910	Screw (SB-2001-030)	4
	J040	98-04		327007 (9005110-4400)	Plug assembly	1
	J046	98-04		327007 (9005110-4400)	Plug assembly	1
	J050	98-04		9004700-1907	Pin	1
	J080	98-04		4570289	Adapter flange, SAE A (SB-1999-006)	1
	J090	98-04		5000099 (9004100-1550)	O-ring	1
	J095	98-04		545434 (9004100-0420)	O-ring	1
	J100	98-04		5000489	Screw	4
	J110	98-04		4460586	Cover plate (SB-1999-006)	1
	J120	98-04		4800482	'A' pad seal (SB-1999-006)	1
	J130	98-04		9007200-3712	Screw	2
	J140	98-04		1701186	Coupling, 11-tooth	1
S1V2	J010	98-04		4740007	Shaft, 14-tooth spline	1
	J020	98-04		4740152	End cap, radial ports	1
	J030	98-04		575910	Screw (SB-2001-030)	4
	J040	98-04		327007 (9005110-4400)	Plug assembly	1
	J046	98-04		327007 (9005110-4400)	Plug assembly	1
	J050	98-04		9004700-1907	Pin	1
	J080	98-04		4570210	Adapter flange, SAE B	1
	J090	98-04		5000099 (9004100-1550)	O-ring	1
	J095	98-04		545434 (9004100-0420)	O-ring	1
	J100	98-04		5000489	Screw	4
	J110	98-04		4460370	Cover plate	1
	J120	98-04		680892 (9004104-0440)	O-ring	1
	J130	98-04		647248 (9007200-5021)	Screw	2
	J140	98-04		1701188	Coupling, 15-tooth	1
S2A2	J010	98-04		4740138	Shaft, 17-tooth spline	1
	J020	98-04		4740152	End cap, radial ports	1
	J030	98-04		575910	Screw (SB-2001-030)	4
	J040	98-04		327007 (9005110-4400)	Plug assembly	1
	J046	98-04		327007 (9005110-4400)	Plug assembly	1
	J050	98-04		9004700-1907	Pin	1
	J080	98-04		4570289	Adapter flange, SAE A (SB-1999-006)	1
	J090	98-04		5000099 (9004100-1550)	O-ring	1
	J095	98-04		545434 (9004100-0420)	O-ring	1
	J100	98-04		5000489	Screw	4
	J110	98-04		4460586	Cover plate (SB-1999-006)	1
	J120	98-04		4800482	'A' pad seal (SB-1999-006)	1
	J130	98-04		9007200-3712	Screw	2
	J140	98-04		1701185	Coupling, 9-tooth	1



Shaft, auxiliary flange and end cap



End caps shown orientated for CCW rotation



\* = included in base motor seal kit Q210

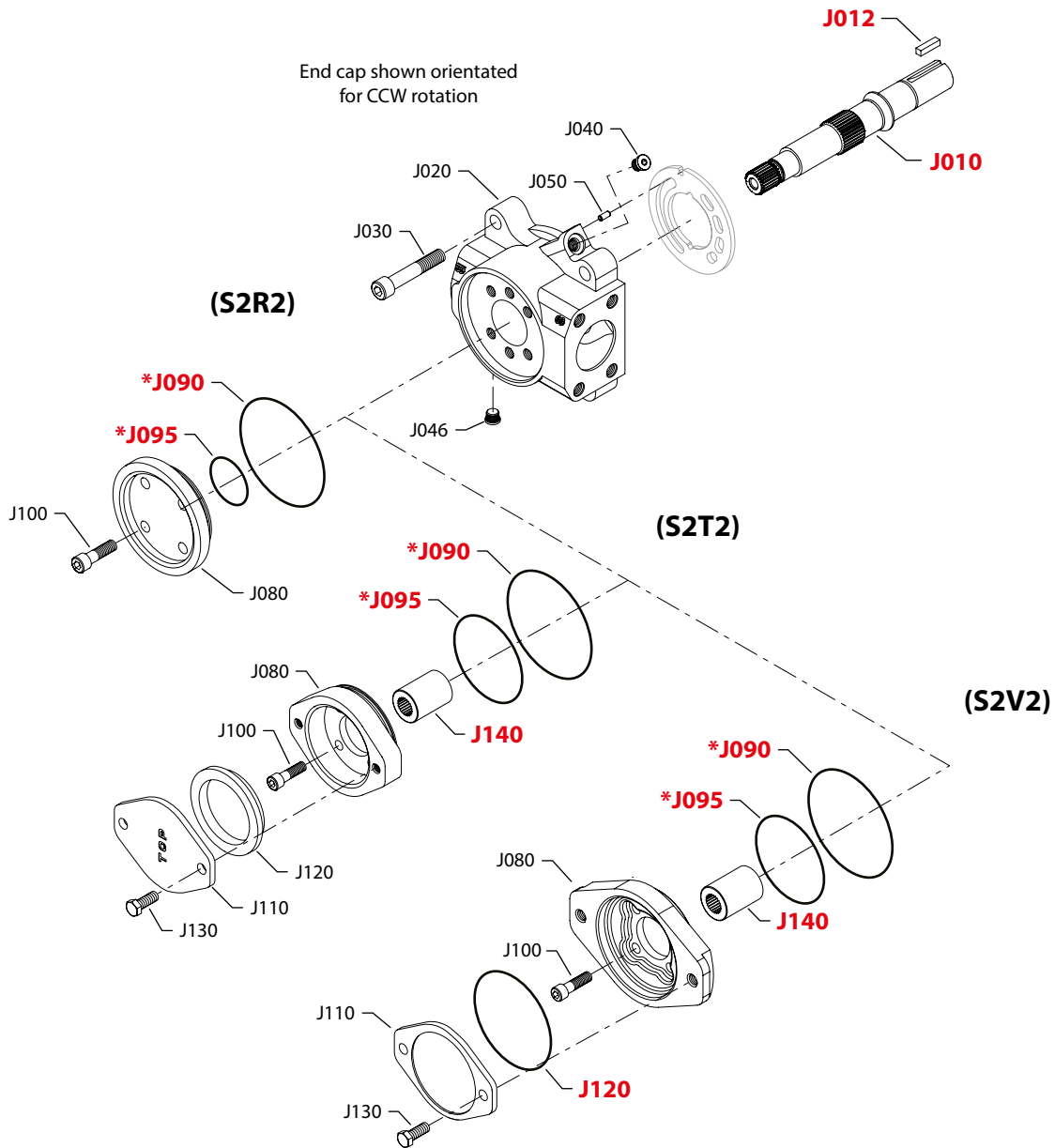
E100 371E  
 Enlarged **bold** type item numbers are recommended part to stock for servicing.


**Shaft, auxiliary flange and end cap**
**Shaft/auxiliary flange/end cap**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
S2B2	J010	98-20		4740138	Shaft, 17-tooth spline	1
	J020	98-20		4740152	End cap, radial ports	1
	J030	98-20		575910	Screw (SB-2001-030)	4
	J040	98-20		327007 (9005110-4400)	Plug assembly	1
	J046	98-20		327007 (9005110-4400)	Plug assembly	1
	J050	98-20		9004700-1907	Pin	1
	J080	98-20		4570210	Adapter flange, SAE B	1
	J090	98-20		5000099 (9004100-1550)	O-ring	1
	J095	98-20		545434 (9004100-0420)	O-ring	1
	J100	98-20		5000489	Screw	4
	J110	98-20		4460370	Cover plate	1
	J120	98-20		680892 (9004104-0440)	O-ring	1
	J130	98-20		647248 (9007200-5021)	Screw	2
	J140	98-20		1701187	Coupling, 13-tooth	1
S2C2	J010	98-20		4740138	Shaft, 17-tooth spline	1
	J020	98-20		4740152	End cap, radial ports	1
	J030	98-20		575910	Screw (SB-2001-030)	4
	J040	98-20		327007 (9005110-4400)	Plug assembly	1
	J046	98-20		327007 (9005110-4400)	Plug assembly	1
	J050	98-20		9004700-1907	Pin	1
	J080	98-20		11039356	Adapter flange, SAE C	1
	J090	98-20		5000099 (9004100-1550)	O-ring	1
	J095	98-20		545434 (9004100-0420)	O-ring	1
	J100	98-20		5000489	Screw	6
	J110	98-20		8800406	Cover plate	1
	J120	98-20		719179 (9004100-0480)	O-ring	1
	J130	98-20		647248 (9007200-5021)	Screw	4
	J140	98-20		1701189	Coupling, 14-tooth	1
S2N2	J010	98-04		4740145	Shaft, 17-tooth spline	1
	J020	98-04		4740151	End cap, radial ports	1
	J030	98-04		575910	Screw (SB-2001-030)	4
	J040	98-04		327007 (9005110-4400)	Plug assembly	1
	J046	98-04		327007 (9005110-4400)	Plug assembly	1
	J050	98-04		9004700-1907	Pin	1
S2N4	J010	98-04		4740145	Shaft, 17-tooth spline	1
	J020	98-04		4740153	End cap, axial ports	1
	J030	98-04		575910	Screw (SB-2001-030)	4
	J040	98-04		327007 (9005110-4400)	Plug assembly	1
	J046	98-04		327007 (9005110-4400)	Plug assembly	1
	J050	98-04		9004700-1907	Pin	1



Shaft, auxiliary flange and end cap



\* = included in base motor seal kit Q210

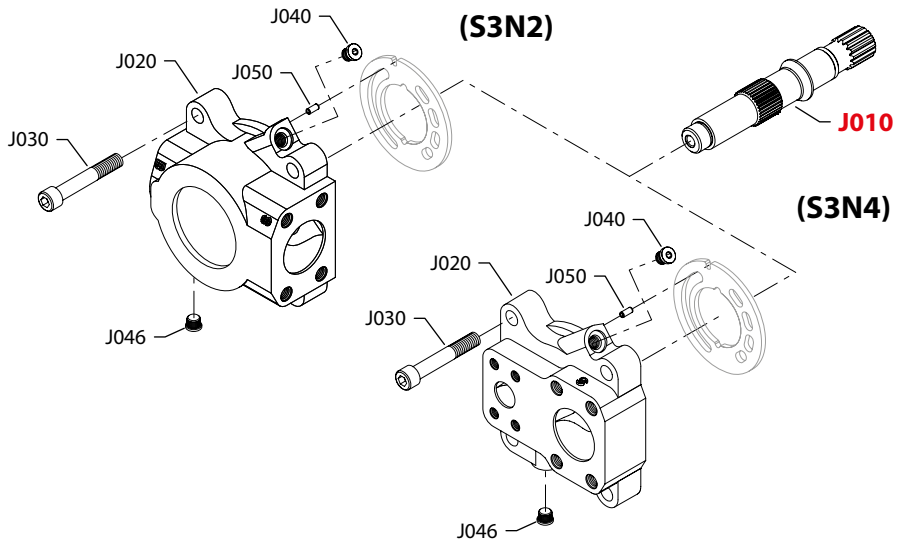
E100 363E  
Enlarged **bold** type item numbers are recommended part to stock for servicing.


**Shaft, auxiliary flange and end cap**
**Shaft/auxiliary flange/end cap**

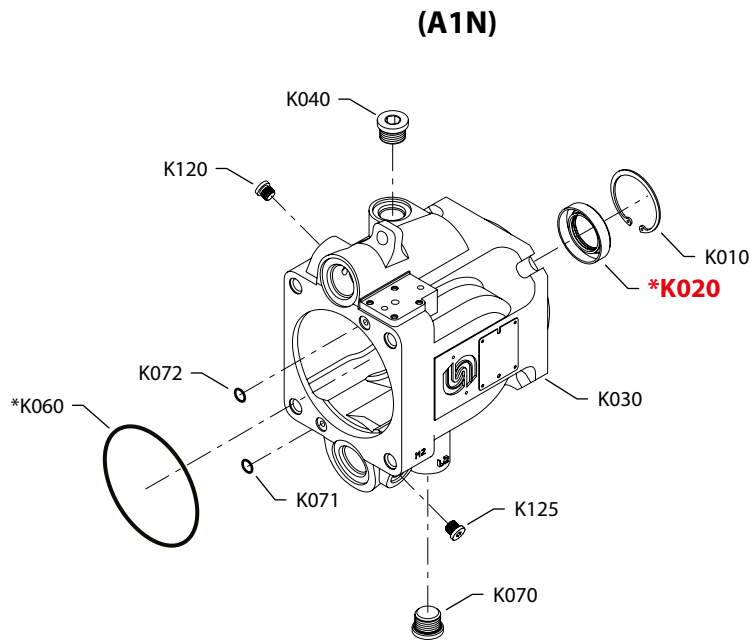
Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
S2R2	J010	98-20		4740138	Shaft, 17-tooth spline	1
	J020	98-20		4740152	End cap, radial ports	1
	J030	98-20		575910	Screw (SB-2001-030)	4
	J040	98-20		327007 (9005110-4400)	Plug assembly	1
	J046	98-20		327007 (9005110-4400)	Plug assembly	1
	J050	98-20		9004700-1907	Pin	1
	J080	98-20		4570179	Running cover	1
	J090	98-20		5000099 (9004100-1550)	O-ring	1
	J095	98-20		314534 (9004104-0310)	O-ring	1
	J100	98-20		5000489	Screw	4
S2T2	J010	98-20		4740138	Shaft, 17-tooth spline	1
	J020	98-20		4740152	End cap, radial ports	1
	J030	98-20		575910	Screw (SB-2001-030)	4
	J040	98-20		327007 (9005110-4400)	Plug assembly	1
	J046	98-20		327007 (9005110-4400)	Plug assembly	1
	J050	98-20		9004700-1907	Pin	1
	J080	98-20		4570289	Adapter flange, SAE A (SB-1999-006)	1
	J090	98-20		5000099 (9004100-1550)	O-ring	1
	J095	98-20		545434 (9004100-0420)	O-ring	1
	J100	98-20		5000489	Screw	4
	J110	98-20		4460586	Cover plate (SB-1999-006)	1
	J120	98-20		4800482	'A' pad seal (SB-1999-006)	1
	J130	98-20		9007200-3712	Screw	2
	J140	98-20		1701186	Coupling, 11-tooth	1
S2V2	J010	98-20		4740138	Shaft, 17-tooth spline	1
	J020	98-44		4740152	End cap, radial ports	1
	J030	98-04		575910	Screw (SB-2001-030)	4
	J040	98-20		327007 (9005110-4400)	Plug assembly	1
	J046	98-20		327007 (9005110-4400)	Plug assembly	1
	J050	98-20		9004700-1907	Pin	1
	J080	98-20		4570210	Adapter flange, SAE B	1
	J090	98-20		5000099 (9004100-1550)	O-ring	1
	J095	98-20		545434 (9004100-0420)	O-ring	1
	J100	98-20		5000489	Screw	4
	J110	98-20		4460370	Cover plate	1
	J120	98-20		680892 (9004104-0440)	O-ring	1
	J130	98-20		647248 (9007200-5021)	Screw	2
	J140	98-20		1701188	Coupling, 15-tooth	1



Shaft, auxiliary flange, end cap and housing



End caps shown orientated for CCW rotation



\* = included in base motor seal kit Q210

E100 527E  
Enlarged **bold** type item numbers are recommended part to stock for servicing.




**Shaft, auxiliary flange, end cap and housing**
**Shaft/auxiliary flange/end cap**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
S3N2	J010	02-05		4740208	Shaft, 14-tooth spline	1
	J020	02-05		4740151	End cap, radial ports	1
	J030	02-05		575910	Screw	4
	J040	02-05		327007 (9005110-4400)	Plug assembly	1
	J046	02-05		327007 (9005110-4400)	Plug assembly	1
	J050	02-05		9004700-1907	Pin	1
	S3N4	J010	02-05		4740208	Shaft, 14-tooth spline
J020		02-05		4740153	End cap, axial ports	1
J030		02-05		575910	Screw	4
J040		02-05		327007 (9005110-4400)	Plug assembly	1
J046		02-05		327007 (9005110-4400)	Plug assembly	1
J050		02-05		9004700-1907	Pin	1

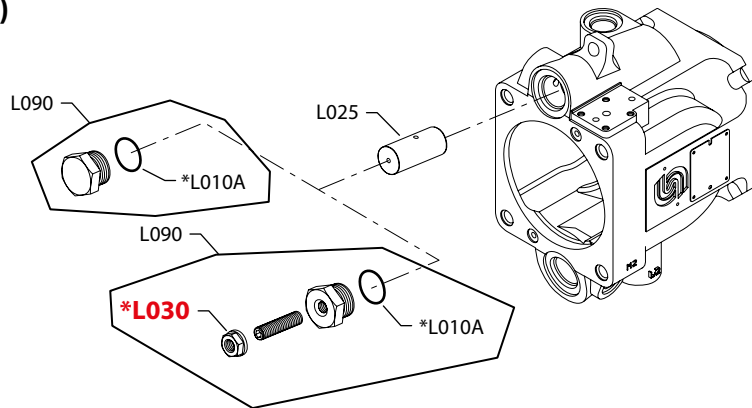
**Housing/shaft seal**

A1N	K010	98-04		016014 (9006200-0206)	Retaining ring	1
	K020	98-04		5000484	Lip seal	1
	K030	98-50		4740227	Housing assembly (SB-2001-019)	1
	K040	98-04		315325 (9005110-8700)	Plug assembly	1
	K060	98-04		056739 (9004104-1580)	O-ring	1
	K070	98-04		315325 (9005110-8700)	Plug assembly	1
	K071	98-04		4740155	Seal ring (SB-1999-032)	1
	K072	98-04		4740155	Seal ring (SB-1999-032)	1
	K120	98-04		327007 (9005110-4400)	Plug assembly	1
	K125	98-04		327007 (9005110-4400)	Plug assembly	1



Displacement limiter

(CNN, F82, F91  
& NNN)



(A70-A95, AAA  
& CAA)

E100 372E

\* = included in base motor seal kit Q210

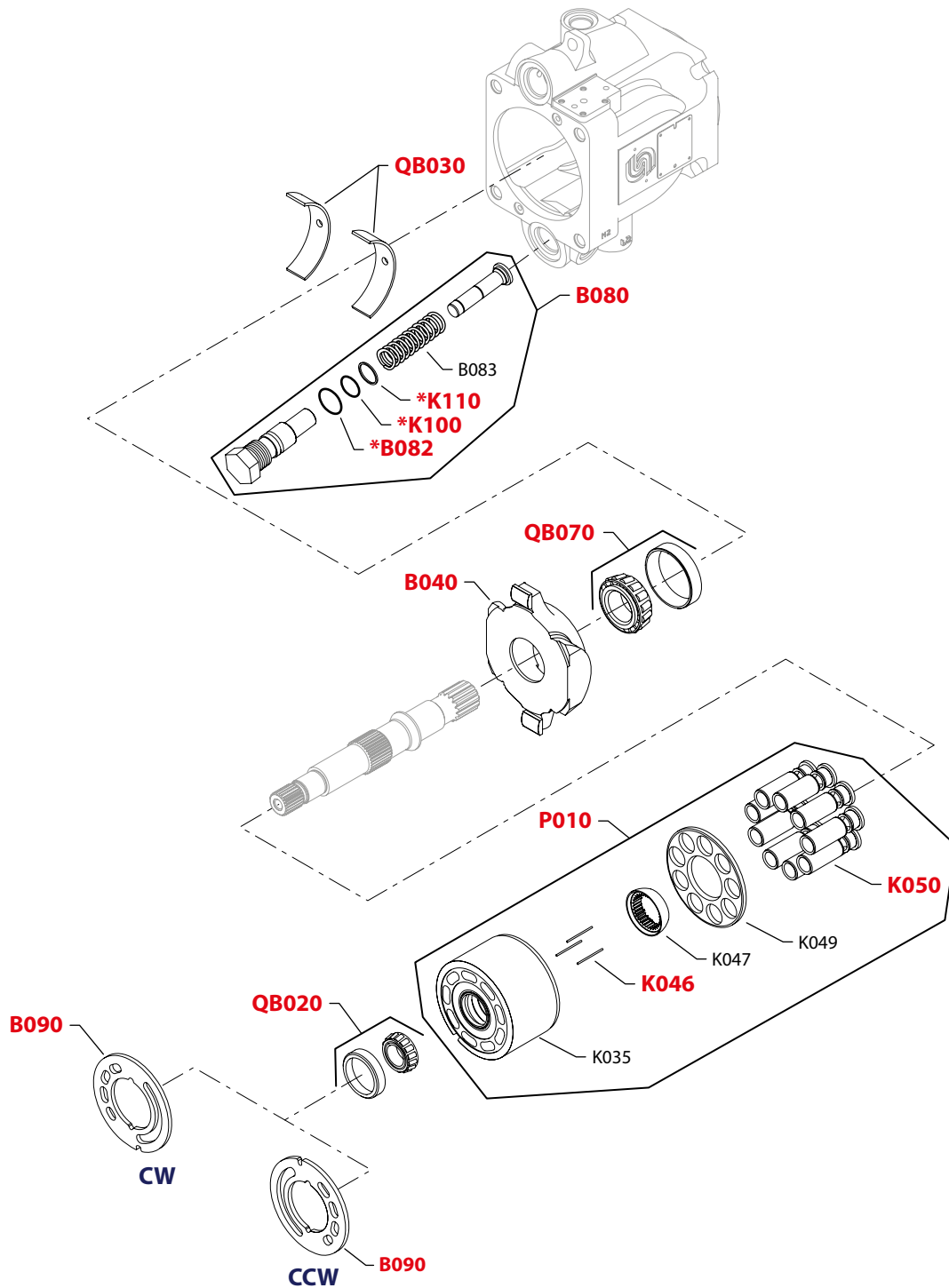
Enlarged **bold** type item numbers are recommended part to stock for servicing.


**Displacement limiter**
**Displacement limiter**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
A70-A95	L010A	98-04		9004201-8700	O-ring	1
	L025	98-04		4740029	Servo piston	1
	L030	98-04		076042 (9003509-0012)	Seal nut	1
	L090	98-04		11099074	Displacement limiter kit (SB-2012-020)	1
AAA	L010A	98-04		9004201-8700	O-ring	1
	L025	98-04		4740029	Servo piston	1
	L030	98-04		076042 (9003509-0012)	Seal nut	1
	L090	98-04		11099074	Displacement limiter kit (SB-2012-020)	1
CAA	L010A	98-04		9004201-8700	O-ring	1
	L025	98-04		4740029	Servo piston	1
	L030	98-04		076042 (9003509-0012)	Seal nut	1
	L090	98-04		11099075	Displacement limiter kit (SB-2012-020)	1
CNN	L010A	00-38		9004201-8700	O-ring	1
	L025	00-38		4740029	Servo piston	1
	L090	00-38		4740169	Plug assembly	1
F82	L010A	00-16		9004201-8700	O-ring	1
	L025	00-16		4740029	Servo piston	1
	L090	00-16		4740180	Plug assembly	1
F91	L010A	02-36		9004201-8700	O-ring	1
	L025	02-36		4740029	Servo piston	1
	L090	02-36		5000400 (9005100-9100)	Plug assembly	1
NNN	L010A	98-04		9004201-8700	O-ring	1
	L025	98-04		4740029	Servo piston	1
	L090	98-04		5000400 (9005100-9100)	Plug assembly	1



Special hardware and displacement



\* = included in base motor seal kit Q210

E100 373E  
 Enlarged **bold** type item numbers are recommended part to stock for servicing.


**Special hardware and displacement**
**Special hardware**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
NNN	B040	98-04		4740235	Swashplate assy. (SB-2000-021 & -050, SB-2001-025)	1
	B080	98-04		4740311	Bias piston assembly (SB-2002-027)	1
	B082	98-04		001164 (9004201-8700)	O-ring	1
	B083	98-04		4740043	Spring	1
	B090	98-04		4740206	Valve plate, CCW	1
	B090	98-04		4740198	Valve plate, CW	1
	K100	98-04		5000491	O-ring	1
	K110	98-04		5000492	Backup ring	1
	QB020	98-04		4510286	Rear bearing kit	1
	QB030	98-04		11079512	Swashplate bearing (SB-1999-060)	2
	QB070	98-04		4510287	Front bearing kit	1
PBS	B040	98-04		4740315	Swashplate assy. (SB-2000-021 & -050, SB-2001-025)	1
	B080	98-04		4740311	Bias piston kit (SB-2002-027)	1
	B082	98-04		001164 (9004201-8700)	O-ring	1
	B083	98-04		4740043	Spring	1
	B090	98-04		4740206	Valve plate, CCW	1
	B090	98-04		4740198	Valve plate, CW	1
	K100	98-04		5000491	O-ring	1
	K110	98-04		5000492	Backup ring	1
	QB020	98-04		4510286	Rear bearing kit	1
	QB030	98-04		11079512	Swashplate bearing (SB-1999-060)	2
	QB070	98-04		4510287	Front bearing kit	1
QB030	98-04		11079512	Swashplate bearing (SB-1999-060)	2	

**Displacement**

074B	P010	98-04		4740289	Cylinder block kit, 74 cc (SB-2000-052, SB-2001-035)	1
	K035	98-04		11089527	Cylinder block, 74 cc	1
	K046	98-04		4700091	Holddown pin	3
	K047	98-04		4740022	Slipper retainer guide	1
	K049	00-50		4740161	Slipper retainer (SB-2000-052)	1
	K050	00-50		4740280	Piston assembly, 74 cc (SB-2000-052, SB-2001-035)	9
	090C	P010	00-38		4740321	Cylinder block kit, 90 cc (SB-2001-035, SB-2002-025)
K035		00-38		11089526	Cylinder block assembly, 90 cc	1
K046		00-38		4700091	Holddown pin	3
K047		00-38		4740022	Slipper retainer guide	1
K049		00-38		4740161	Slipper retainer	1
K050		00-38		4740320	Piston assembly, 90 cc (SB-2001-035, SB-2002-025)	9


**Seal kit**
**Overhaul seal kit**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
	Q210			11106336	Overhaul seal kit, S45 G (SB-2011-031 & SB-2012-029)	1
	B082	98-04		001164 (9004201-8700)	O-ring	1
	C118	02-08		11062214	LS adjusting plug assembly (SB-2007-047)	1
	C138A	02-19		5000656	O-ring	1
	C138A	98-04	02-18	633354 (9004104-0180)	O-ring (SB-2002-020)	1
	C200	98-04		4740154	Seal ring	4
	J090	98-04		5000099 (9004100-1550)	O-ring	1
	J095	98-04		314534 (9004104-0310)	O-ring	1
	J095	98-04		545434 (9004100-0420)	O-ring	1
	K020	98-04		5000484	Lip seal	1
	K060	98-04		056739 (9004104-1580)	O-ring	1
	K071	98-04		4740155	Seal ring	1
	K072	98-04		4740155	Seal ring	1
	K100	98-04		5000491	O-ring	1
	K110	98-04		5000492	Backup ring	1
	L010A	98-04		001164 (9004201-8700)	O-ring	1
	L030	98-04		076042 (9003509-0012)	Seal nut	1



**Service Bulletin: SB-1999-006**

**Products affected** Series 45 G frame 57 & 74cc open circuit pump

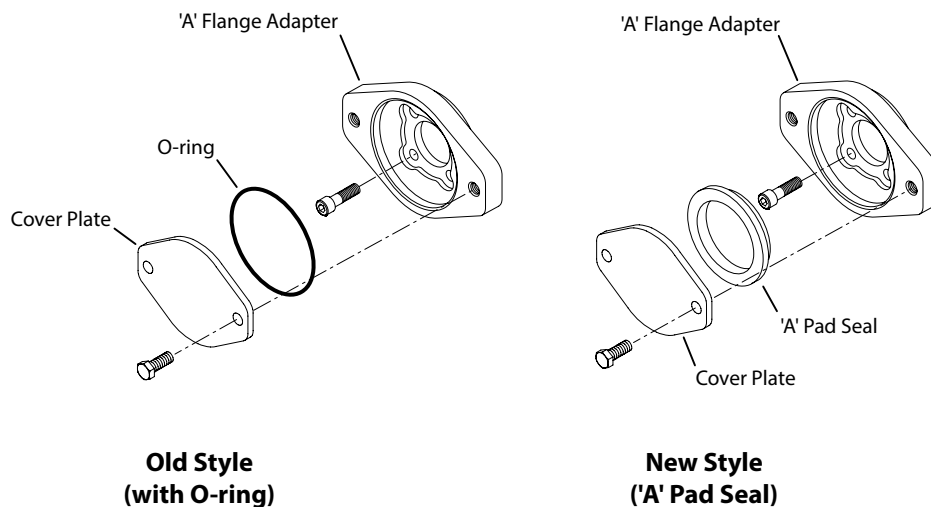
**Subject** 'A' pad auxiliary flange change

**Description** As a product improvement, Sauer-Danfoss has made a change to the 'A' pad adaptor flange of the Series 45 G frame 57 and 74cc open circuit pump. This change improves the sealing capabilities of the flange area.

The current seal for the 'A' pad adapter cover plate is an O-ring. The new style is an 'A' pad seal. See the drawing below for visual differences between old and new.

This change effects three components of the 'A' pad option to be able to fit with the new configuration. These parts are the cover plate, the 'A' flange adapter, and the 'A' pad seal (which was an O-ring style originally). The cover plate and 'A' flange adapter have new part numbers and are not interchangeable with the old style.

This is an interchangeable change only if all three new components are used together. The old adapter flange is obsolete.



**Models affected** All 4577xxx and 4747xxx open circuit pumps

**Serial numbers** This change became effective at serial number A-98-21-xxxxx and beyond

Part description	Old part number	New part number
Cover Plate	9802336	4460586
'A' Flange Adapter	4570209	4570289
O-ring	673533	n/a
'A' Pad Seal	-	4800482

**Parts disposition** ■ Interchangeable



**Service Bulletin: SB-1999-032**

**Products affected** Series 45 G frame 74cc open circuit pump

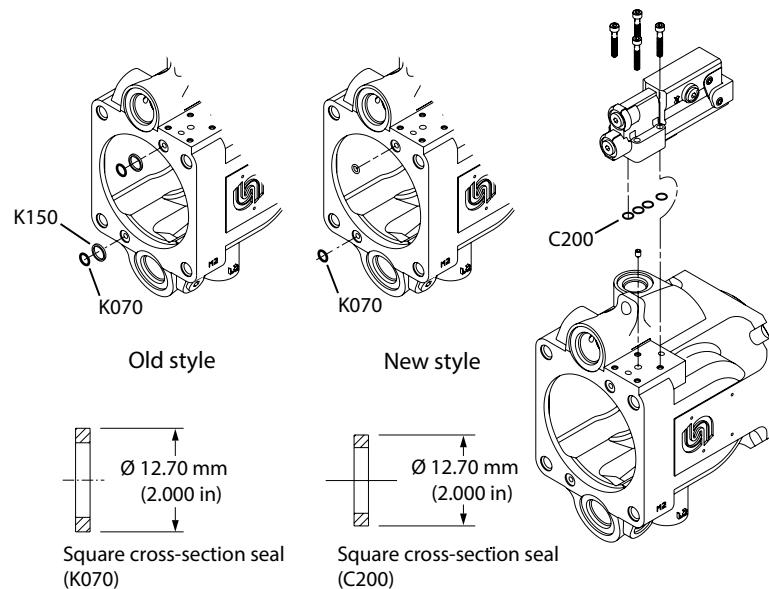
**Subject** New seal rings

**Description** As a product improvement, Sauer-Danfoss made a change to the control and end cap interface seal rings of the Series 45 G frame 74cc open circuit pump. This change improves the wear resistant of the seal area and eliminates the backup ring on the end cap/housing interface.

The current ring seals for the end cap/housing interface is an O-ring style seal (K070) with a backup ring (K150). The new style is a square cross-sectional seal (K070) without a backup ring, which is eliminated.

The current seal rings for the control manifold/housing interface are O-ring seals (C200). The new style is a square cross-sectional seal.

This is an interchangeable change. The overhaul seal kit is updated with the new square cross-sectional seals. The kit part number does not change.



**Models affected** All Series 45 G frame 74 cc pumps, 4747xxx

**Serial numbers** This change became effective at serial number A-99-38-xxxxx.

**Part numbers affected**

Part description	Old part number	New part number
Seal ring	144725 (9004105-0110)	4740154
Seal ring	732479 (9004105-0100)	4740155
BackUp ring	071472 (9006110-0120)	Removed
Overhaul seal kit, 74cc	4510289	4510289

**Parts disposition** ■ Interchangeable





**Service Bulletin: SB-1999-053**

**Products affected** Series 45 G frame 74cc open circuit pump

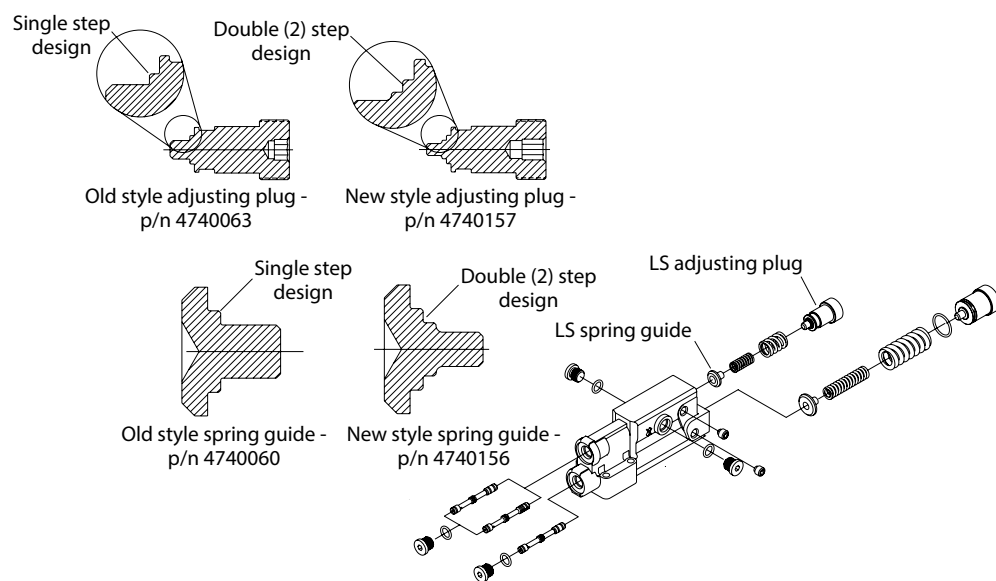
**Subject** LS & LB control options new adjusting plug and spring guide.

**Description** As a product improvement, Sauer-Danfoss has made a change to the adjusting plug and spring guide of the Series 45 74cc open circuit pump. This is for LS or LB control options only.

The new design incorporates an added step in both the adjusting plug and spring guide. This change can be noted in the drawings below. Both were originally a single step design and have been changed to a (2) step design. This change reduces the failure sensitivity of the adjusting plug and spring guide against the internal spring.

New part numbers for the adjusting plug and spring guide identify this change. The new adjusting plug and spring guide are interchangeable with the old style, as long as both parts are changed. The old style adjusting plug and spring are no longer required in servicing the Series 45 G frame 74cc pump.

The LS and LB control kits will be updated to include the new style adjusting plug and spring guide.



**Models affected** Series 45 G frame 74cc pumps with LS (load sense) or LB (load sense w/bleed orifice) control options.

**Serial numbers** This change became effective at serial number A-99-45-xxxxx.

**Part numbers affected**

Part description	Old part number	New part number
Adjusting plug	4740063	4740157
Spring guide	4740060	4740156
LS control kit	4510291	4510291
LB control kit	4510290	4510290

**Parts disposition** ■ Interchangeable



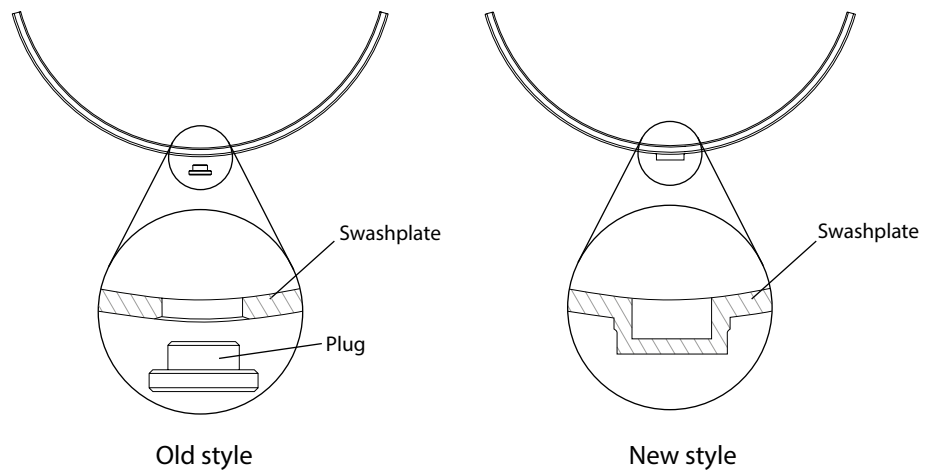
**Service Bulletin: SB-1999-060**

**Products affected** Series 45, 74cc pumps

**Subject** New swashplate bearing

**Description** Sauer-Sundstrand has changed the design of the S45 74cc swashplate bearing from a machined two piece bearing to a stamped one piece bearing. The new design will make assembly easier.

The new swashplate bearing (4740038) is interchangeable with the old bearing assembly and the old part numbers (4740056 bearing, 4570067 swashplate plug, 4740057 bearing assembly) are obsolete and no longer available as a service part.



**Models affected** All Series 45 G frame 74 cc open circuit pumps

**Serial numbers** This change became effective at serial number A-99-44-xxxxx.

**Part numbers affected**

Part description	Old part number	New part number
Swashplate bearing	4740057	4740038

**Parts disposition** ■ Interchangeable


**Service Bulletin: SB-2000-021**

**Products affected**                      Series 45 G frame 74cc open circuit pumps

**Subject**                                      Swashplate assembly change

**Description**                                Sauer-Danfoss has a new swashplate assembly for the 74cc pumps. This change effects the servo pads on the swashplate assembly from a wider servo pad to a more narrow servo pad. This change allows for the future development of additional displacement pumps in the Series 45 family.

The new swashplate assembly is interchangeable with the old swashplate assembly. The old swashplate assembly is obsolete and no longer available as a service part.

**Models affected**                          All Series 45 G frame 74cc open circuit pumps

**Serial numbers**                          This change became effective at serial number A-00-38-xxxxx.

**Part numbers affected**

<b>Part description</b>	<b>Old part number</b>	<b>New part number</b>
Swashplate Bearing	4740057	4740038

**Parts disposition**                      ■ Interchangeable


**Service Bulletin: SB-2000-050**

**Products affected** Series 45 G frame 74cc and 90cc open circuit pumps

**Subject** Swashplate assembly change

**Description** As a product improvement, Sauer-Danfoss has made a change to the swashplate assembly for the Series 45 G frame 74cc and 90cc open circuit pumps.

The change increases the life of the swashplate. It provides longer life to the pump.

This change is interchangeable with the old swashplate assembly. The old swashplate assembly is obsolete. It is no longer be available as a service part.

**Models affected** All Series 45 G frame 74cc and 90cc open circuit pumps, model numbers 4747xxx.

**Serial numbers** This change became effective at serial number A-00-47-xxxxx.

**Part numbers affected**

<b>Old swashplate assembly</b>	<b>New swashplate assembly</b>
4740175	4740200

**Parts disposition**

- Interchangeable
- Use parts in stock
- Revise existing parts orders



**Service Bulletin: SB-2000-052**

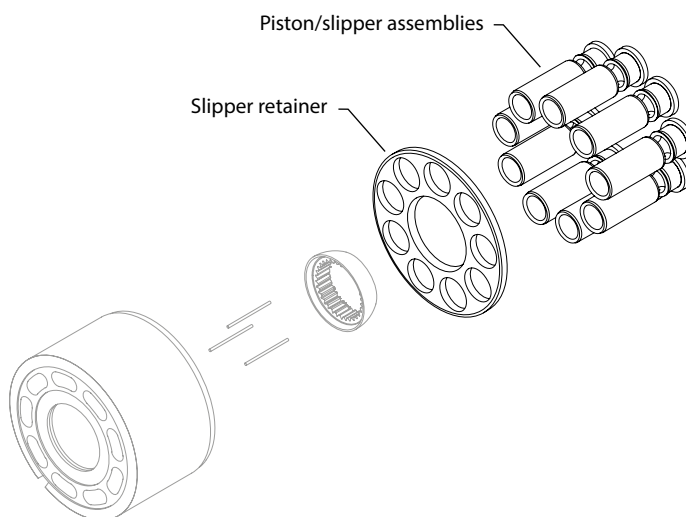
**Products affected** Series 45 G frame 74cc open circuit pumps

**Subject** Change to cylinder block kits

**Description** As a product improvement, Sauer-Danfoss made some changes to the cylinder block kit for the Series 45 74cc open circuit pump.

These changes include the piston/slipper assembly, the slipper retainer, and the cylinder block kit. The new piston/slipper assembly (4740193) is interchangeable with the old slipper retainer (4740024), however, the old piston/slipper assembly (4740025) cannot be used with the new slipper retainer (4740161). There is a potential for the old piston/slipper assembly (4740025) to pull through the holes in the new slipper retainer (4740161).

The cylinder block kit part number has changed, due to the new piston/slipper assembly and the new slipper retainer. The old cylinder block kit, slipper retainer, and piston/slipper assembly are obsolete. They are no longer available for service parts.



**Models affected** Series 45 G frame 74cc open circuit pumps, model numbers 4747xxx.

**Serial numbers** This change became effective at serial number A-00-50-xxxxx.

**Part numbers affected**

Part description	Old part number	New part number
Cylinder block kit	4740019	4740196
Piston/slipper assembly	4740025	4740193
Slipper retainer	4740024	4740161
Piston/slipper retainer kit	-	4510354

**Parts disposition** ■ Non-interchangeable



**Service Bulletin: SB-2001-019**

**Products affected** Series 45 G frame 74cc and 90cc open circuit pumps

**Subject** Improved control performance

**Description** Sauer-Danfoss made performance improvements to LB, LS, and PC controls used on the Series 45 G frame 74cc and 90cc open circuit pumps. The improvements address a “hydraulic lock” problem seen on some applications. The hydraulic lock does not allow the pump to go from “high pressure standby” to “low pressure standby”.

The change was made to the load sense and pressure compensator spools. The change made to the spools provides a leak path from servo to case, which serves the same purpose as the gain orifice. The gain orifice size option is no longer available for the 74cc and 90cc open circuit pumps. All control spools have the 0.7mm equivalent gain orifice machined into them.

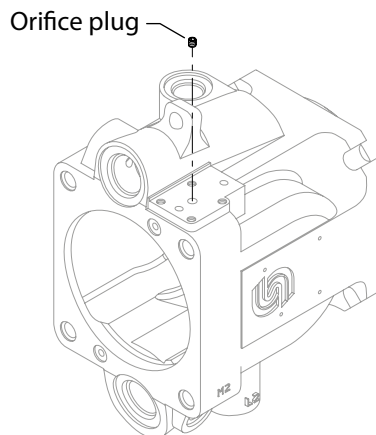
Update units built before manufacture date A-01-34, by replacing the spools and gain orifice with an orifice plug in the pump housing. Units built after manufacture date code A-01-34, will not have the hole threaded for the gain orifice in the pump housing.

Use the new control assemblies with the old style pump housing by replacing the gain orifice and replacing it with an orifice plug.

The old control assemblies/kits cannot be used with the new pump housing because there would be no gain orifice in the system. The gain orifice is needed to provide stability to the pump’s control system. Convert the old control assemblies/kits to the new control assemblies by replacing the appropriate spools.

Use the new control kits with the old housing, by replacing the gain orifice and replacing it with an orifice plug.

The old spools, control kits and housing are obsoleted. They are no longer available as a service part.




**Service Bulletin: SB-2001-019**
**Models affected**

Series 45 G frame 74cc and 90cc pumps with PC, PC & LS, and PC & LB controls

**Serial numbers**

This change became effective at serial number A-01-34-xxxxx.

**Part numbers affected**

<b>Part description</b>	<b>Prior to A-01-33</b>	<b>A-01-34 or later</b>
LB control spool	4740108	4740228
LS control spool	4740050	4740226
PC control spool	4740050	4740226
Control kit PC, LB	4510290	4510388
Control kit PC,LS	4510291	4510389
Control kit PC	4510292	4510390
Pump housing	4740150	4740227
Orifice/orifice plug	639104 Orifice	9007712-0504 Plug

**Parts disposition**

- Interchangeable - Refer to text on page 1 concerning gain orifice
- Rework Parts in Stock



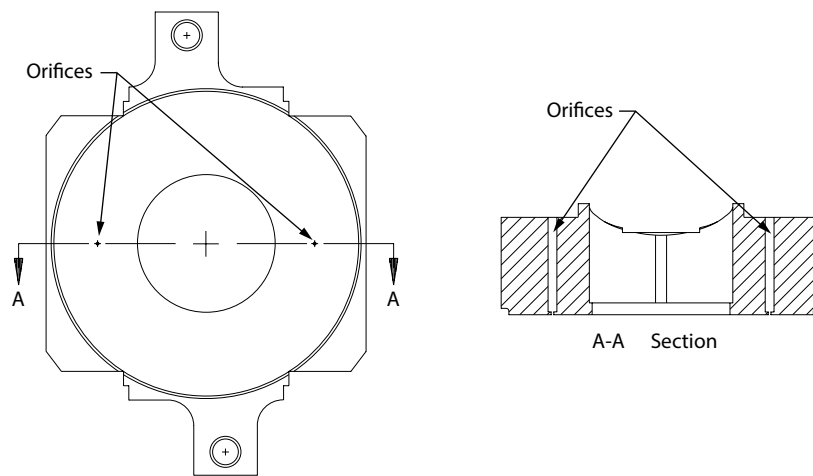
**Service Bulletin: SB-2001-025**

**Products affected** Series 45 G frame open circuit pumps

**Subject** Pressure lubricated swashplate

**Description** Sauer-Danfoss has made a product improvement to the series 45 G frame open circuit pumps swashplate. This change incorporates two orifices on the running surface of the swashplate to lubricate the rear of the swashplate reduces friction and bearing wear.

This change is interchangeable. The old swashplate is obsolete and no longer available as a service part.



**Models affected** All Series 45, G frame open circuit pumps.

**Serial numbers** This change became effective at serial number A-01-45-xxxxx.

**Part numbers affected**

Old swashplate number	New swashplate number
4740200	4740235

- Parts disposition**
- Interchangeable
  - Use parts in stock
  - Revise existing orders



**Service Bulletin: SB-2001-030**

**Products affected** Series 45 G frame open circuit pumps

**Subject** End cap screw change

**Description** Sauer-Danfoss has made a change to the hardness requirement for the Series 45 G frame open-circuit pump end cap screw. The new end cap screws are interchangeable with the old end cap screws. The old end cap screws are obsolete. They are no longer available as a service part.

**Models affected** All Series 45, G frame open-circuit pumps.

**Serial numbers** This change became effective at serial number A-02-01-xxxxx.

**Part numbers affected**

<b>Part description</b>	<b>Old part number</b>	<b>New part number</b>
End cap screw	5000486	575910

- Parts disposition**
- Interchangeable
  - Revise existing orders



**Service Bulletin: SB-2001-035**

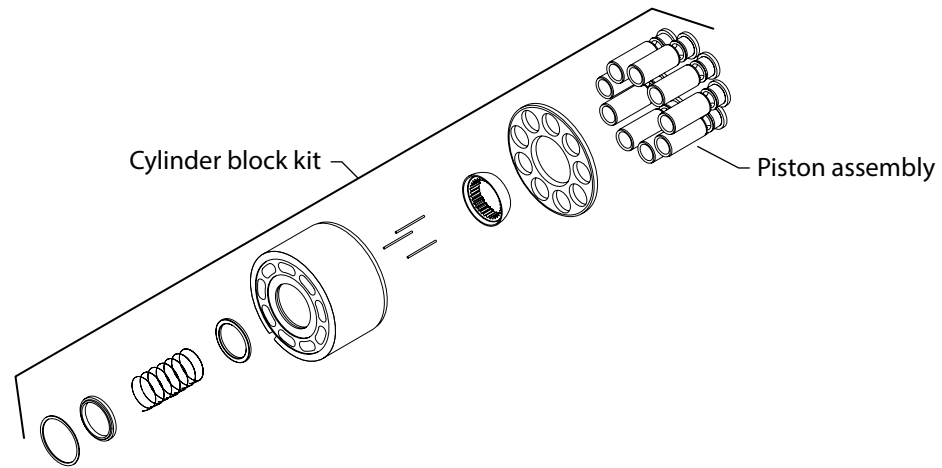
**Products affected** Series 45 G frame, 74cc and 90cc open circuit pumps

**Subject** Piston assembly change

**Description** Sauer-Danfoss has made a change to the piston assembly in the G frame 74cc and 90cc cylinder block kit. The change to the 74cc piston assembly reduces the diameter of the piston to 21.519 mm [0.8472 inches].

The change to the 90cc piston assembly reduces the diameter of the piston to 22.686mm [0.8932 inches]. This change decreases the volumetric efficiency of the new cylinder block kit approximately 1% at rated input speed. Mechanical changes are negligible.

New piston assemblies can be used in old cylinder blocks. Old piston assemblies and old cylinder block kits are obsolete. They are no longer available for service.



**Models affected** All Series 45, G frame open circuit pumps.

**Serial numbers** The 90cc piston assembly change became effective at serial number A-02-04-xxxxx. The 74cc piston assembly change became effective at serial number A-02-06-xxxxx.

**Part numbers affected**

Part description	Old part number	New part number
Piston assembly, 74cc	4740193	4740280
Cylinder block assembly, 74cc	4740196	4740289
Piston assembly, 90cc	4740162	4740287
Cylinder block assembly, 90cc	4740163	4740288

**Parts disposition**

- Interchangeable
- Scrap used parts
- Return new parts for credit
- Order replacement parts
- Revise Existing Orders



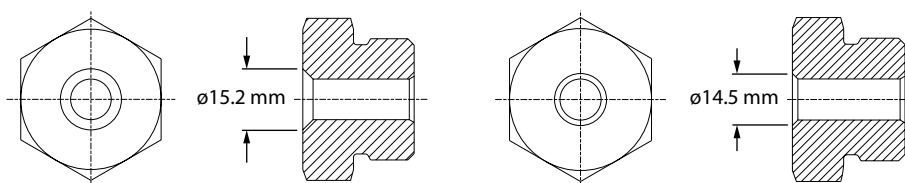
**Service Bulletin: SB-2002-004**

**Products affected** Series 45 G frame open circuit pumps

**Subject** Adjustable displacement limiter plug

**Description** Sauer-Danfoss has made a change to the adjustable displacement limiter plug for the Series 45, G frame open circuit pumps. The change is to the chamfer below the seal nut. It is smaller for better sealing between the seal nut and plug. The part number for the G frame 90cc displacement limiter plug did not change.

The new displacement limiter plug is interchangeable with the old displacement limiter plug. The old displacement limiter plug is obsolete. It is no longer available for service.



Old design

New design

**Models affected** All Series 45, G frame open circuit pumps with adjustable displacement limiters.

**Serial numbers** This change became effective at serial number A-02-14-xxxxx.

**Part numbers affected**

Part description	Old part number	New part number
Displacement limiter plug, 74cc	4740105	4740270
Displacement limiter plug, 90cc	4740167	4740167

**Parts disposition** ■ Interchangeable



**Service Bulletin: SB-2002-050**

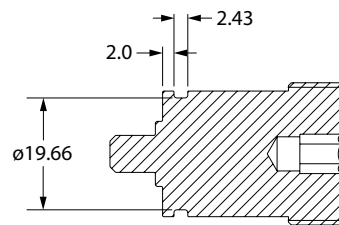
**Products affected** Series 45 G , K, and L frame open circuit pumps

**Subject** Pressure compensator adjusting plug

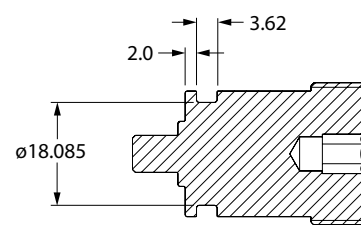
**Description** As a product improvement, Sauer-Danfoss changed the width and depth of the O-ring groove on the pressure compensator adjusting plug used in the LS, LB and PC control options. This change reduces the possibility of external leaks.

The new pressure compensator adjusting plug comes with the O-ring installed. The new pressure compensator adjusting plug is interchangeable only when using the new O-ring.

The old pressure compensator adjusting plug is obsolete. It is no longer available as a service part. The O-ring used on the old pressure compensator adjusting plug is still available for service.



Old design



New design

**Models affected** All Series 45, G , K, and L frame open circuit pumps with the LS, LB, and PC control option.

**Serial numbers** This change became effective at serial number A-02-19-xxxxx.

**Part numbers affected**

Part description	Old part number	New part number
O-ring	9004104-0180	5000656
PC adjusting plug	4740054	1700581*

\* Adjusting plug comes with O-ring installed

■ Interchangeable - Only when using the new plug, O-ring, and backup rings.

**Parts disposition**


**Service Bulletin: SB-2002-025**

**Products affected**                      Series 45 G frame, 90cc displacement

**Subject**                                      Incorporation of superfinish on pistons

**Description**                                Sauer-Danfoss has incorporated a superfinish process to the pistons in the rotating group. This process replaces the previous lapping process. The superfinish improves piston quality by improving surface finish and roundness.

This is an interchangeable change. The old cylinder block assembly and piston/slipper assembly are obsolete. It is no longer available for service.

**Models affected**                          All Series 45, G frame, 90cc displacement open circuit pumps.

**Serial numbers**                          This change became effective at serial number A-02-33-xxxxx.

**Part numbers affected**

<b>Part description</b>	<b>Old part number</b>	<b>New part number</b>
Piston assembly	4740287	4740320
Cylinder block assembly	4740288	4740321

**Parts disposition**

- Interchangeable
- Use parts in stock
- Revise existing part orders



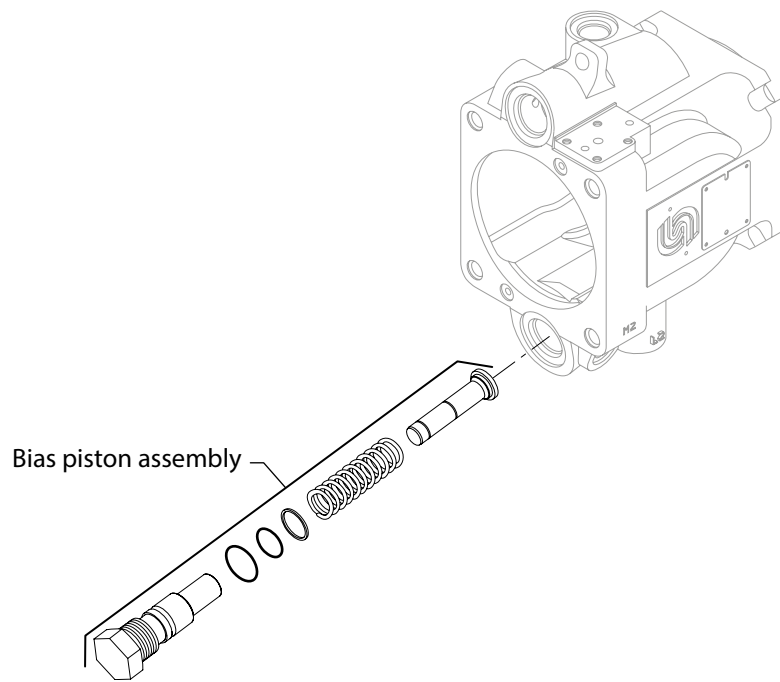
**Service Bulletin: SB-2002-027**

**Products affected** Series 45 G frame open circuit pumps

**Subject** Supplier change of bias piston assembly

**Description** Sauer-Danfoss changed the source of manufacturing of the bias piston assembly for the G frame open circuit pumps. Due to the change in manufacturing source, the part number changed for tracking purposes.

The new bias piston assembly is interchangeable with the old bias piston assembly. The old bias piston assembly is obsolete. It is no longer available for service.



**Models affected** All Series 45, G frame open circuit pumps.

**Serial numbers** This change became effective at serial number A-02-33-xxxxx.

**Part numbers affected**

Item description	Old part number	New part number
Bias piston assembly	4510288	4740311

- Parts disposition**
- Interchangeable
  - Use parts in stock
  - Revise existing part orders



**Service Bulletin: SB-2002-031**

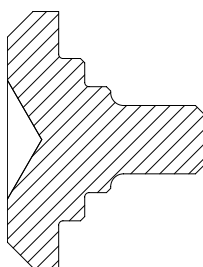
**Products affected** Series 45 frame E, G, J, K, and L open circuit pumps

**Subject** Load sense spool spring guide change

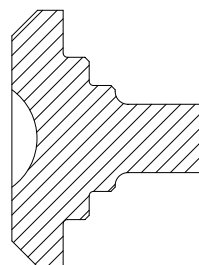
**Description** As a product improvement, Sauer-Danfoss is changing the load sense spool spring guide used in the 2 spool controls.

The spring guide changes from a conical interface with the spool to a spherical interface.

The new spring guide is interchangeable with the old one. The old spring guide is obsolete and no longer available as a service part.



Old style



New style

**Models affected** Series 45 frame E, G, J, K, and L open circuit pumps using the 2 spool style control.

**Serial numbers** This change became effective at serial number A-02-38-xxxxx.

**Part numbers affected**

Old part number	New part number
4740156	4740246

**Parts disposition** ■ Interchangeable



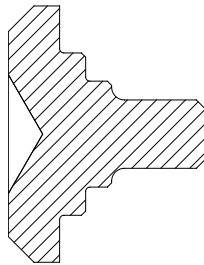
**Service Bulletin: SB-2002-034**

**Products affected** Series 45 frame E, G, J, K, and L open circuit pumps

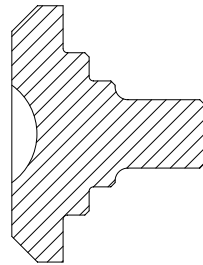
**Subject** Pressure compensator spool spring guide change

**Description** As a product improvement, Sauer-Danfoss is changing the pressure compensator spool spring guide used in series 45 control assemblies. The spring guide changes from a conical interface with the spool to a spherical interface.

The new spring guide is interchangeable with the old one. The old spring guide is obsolete. It is no longer available as a service part.



Old style



New style

**Models affected** Series 45 frame E, G, J, K, and L open circuit pump control assemblies.

**Serial numbers** This change became effective at serial number A-03-02-xxxxx.

**Part numbers affected**

Old part number	New part number
4740053	4740247

**Parts disposition** ■ Interchangeable



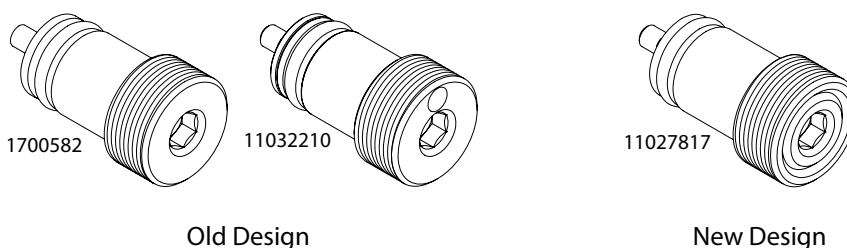
**Service Bulletin: SB-2007-047**

**Products affected** Series 45 frame E, F, G, and J open circuit pumps

**Subject** Load sense plug change

**Description** As a product improvement, Sauer-Danfoss has changed the LS adjustment plug. The new LS plug assembly has better sealing capabilities than both styles of old plug assemblies. The new plug assembly is interchangeable with both styles of old plugs. It is recommended that the old plugs be replaced with the new plug at first service. The old plugs are no longer available for service.

The overhaul seal kit part numbers have also changed. They will now include the new LS plug assembly instead of the individual seals for the LS plug. The old seal kits are obsolete and no longer available for service.



**Models affected** All series 45 frame E, F, G, and J frame pumps with LS..

**Serial numbers** This change became effective at serial number A-07-39-23181.

**Part numbers affected**

Description	Old part number	New part number
LS adjustment Plug	1700582 & 11032210	11027817
Overhaul seal kit, S45 E	4510433	11034352
Overhaul seal kit, S45 F	4510455	11034341
Overhaul seal kit, S45 G	4510289	11034340
Overhaul seal kit, S45 J	4510438	11032927
Control kit, high press. LS	11032452	4510416
Control kit, elec. on/off	11032453	4510462

**Parts disposition** ■ Interchangeable



**Service Bulletin: SB-2008-052**

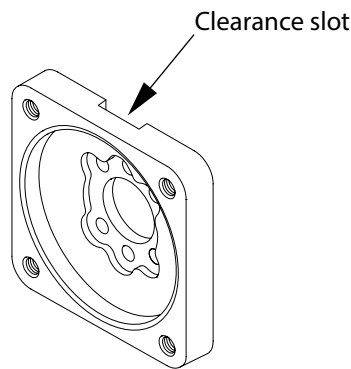
**Products affected** Series 45 G, H and J frame open circuit pumps

**Subject** C auxiliary mounting flange

**Description** As a product improvement, Sauer-Danfoss has changed the “C” auxiliary mounting flange to add clearance for adjusting the displacement limiter when used.

The new auxiliary mounting flange is interchangeable with the old auxiliary mounting flange.

The old “C” auxiliary mounting flange is obsolete and no longer available for service.



**Models affected** All Series 45 open circuit pumps with “C” auxiliary mounting flange.

**Serial numbers** This change became effective at serial number A-08-39-xxxxx.

**Part numbers affected**

Item description	Old part number	New part number
Auziliary mounting flange	4570211	11039356

**Parts disposition** ■ Interchangeable



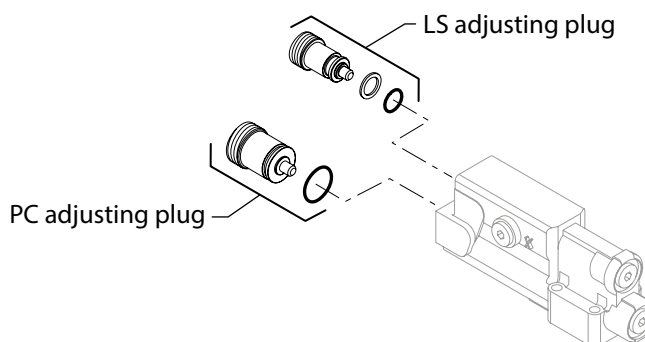
**Service Bulletin: SB-2010-026**

**Products affected** Series 45 open circuit piston pumps

**Subject** Pressure compensator and load sense adjusting plugs

**Description** The supplier has changed for the pressure compensator and load sense adjusting plugs used in all series 45, frame E, F, G, J, K, and L open circuit controls. The new adjusting plugs are interchangeable with the old adjusting plugs. The part numbers have changed for tracking purposes.

The old adjusting plugs are obsolete and no longer available for service.



**Models affected** Series 45, frame E, F, G, J, K, and L open circuit controls.

**Serial numbers** This change became effective at serial number A-11-08-xxxxx (22-Feb-2011)

**Part numbers affected**

Description	Old part number	New part number
LS adjustment plug assembly	11027817	11062214
PC adjustment plug assembly	1700581	11062379

**Parts disposition** ■ Interchangeable


**Service Bulletin: SB-2011-031**

**Products affected** Series 45 frame E, F, G, H, J, K and L open circuit pumps

**Subject** Component changes to the overhaul seal kit

**Description** Sauer-Danfoss is making a change to the overhaul seal kits for the Series 45 open circuit pumps. This change is removing standard plug O-rings and auxiliary pump mounting seals.

The part number has changed for tracking purposes. The old seal kits are obsolete and no longer available for service.

**Models affected** All Series 45, frame E, F, G, H, K and L open circuit pumps

**Serial numbers** This change became effective at serial number A-12-01-XXXXX. (1-Jan-2012)

**Part numbers affected**

Description	Old part number	New part number
Overhaul seal kit, S45 E	11034352	11106334
Overhaul seal kit, S45 F	11034341	11106335
Overhaul seal kit, S45 G	11034340	11106336
Overhaul seal kit, S45 H	4510094	11106337
Overhaul seal kit, S45 J	11032927	11103473
Overhaul seal kit, S45 K/L	11034353	11106339

**Parts disposition** ■ Interchangeable



**Service Bulletin: SB-2012-011**

**Products affected**

Series 45 E, F, G, and J frame open circuit pumps

**Subject**

Servo control (choke) orifice design improvement

**Description**

Sauer-Danfoss is implementing a change to the servo control (choke) orifice design for the Series 45 E, F, G, and J frame pumps.

The current servo control (choke) orifice design dampens all servo activity, increasing high pressure overshoots and response time to de-stroke the pump. This is done with an orifice in the servo piston port in the control housing.

The new servo control (choke) orifice design does not dampen PC response, reducing the high pressure overshoots, and dampens all other servo activity. This is done with an orifice and a locking plug located between the pressure compensator spool and the load sense spool. The locking plug has been added to ensure that the orifice is held securely in place.

Installing the orifice in its new location requires the removal of the control from the pump and the pressure compensator spool via spool plug hole, opposite of the spring adjustment plug hole. The torque to tighten the orifice is 18-30 in-lbs. and the orifice plug torque is 18-30 in-lbs. Re-install the pressure compensator spool correctly.

This change affects the PC/LS, Remote PC/LS, Electric PC/LS, and Electric proportional PC/LS controls.

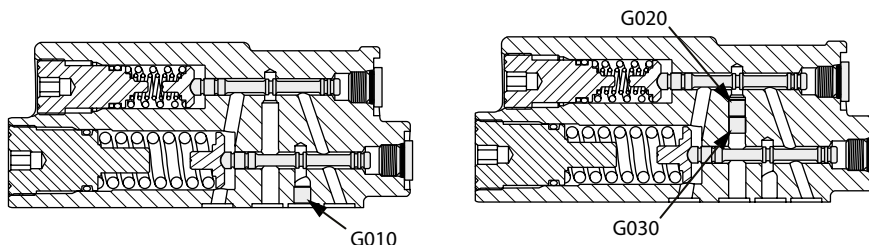
This change does not include the PC only and LS only controls.

There will be new control kit part numbers assigned to replace the old control kit part numbers.

The new control kits for the electric proportional controls will have a 0.8mm orifice and orifice plug installed in the control assembly, and a 1.0mm orifice included in the package.

The old control kits will be obsolete and no longer available for service.

The servo control (choke) orifice can be found in the G module of the order code.



**Models affected**

Series 45, E, F, G and J frame open circuit pumps as described.

**Serial numbers**

This change became effective at serial number A-12-40-XXXXX. (01-Oct-2012)


**Service Bulletin: SB-2012-011**
**Part numbers affected**

Code	Description	Old p/n	New p/n
AB	Low pressure LB	4510413	11112206
AF	Electric ON/OFF solenoid, 12VDC, NO	11020464	11112296
AG	Electric ON/OFF solenoid, 12VDC, NC	4510462	11112295
AH	Electric proportional solenoid, 12VDC, NC	11022601	11112221
AK	Electric proportional solenoid,24VDC, NC	11050837	11112291
AL	Electric proportional solenoid,12VDC, NC	11048818	11112218
AN	Electric ON/OFF solenoid, NO, 12VDC	11022612	11112229
AP	Remote PC, Low pressure	4510417	11112209
AR	Electric ON/OFF solenoid, NC, 12VDC	4510490	11112220
AS	Low pressure LS	4510414	11112210
AT	Electric ON/OFF solenoid, NO, 24VDC	11059898	11112292
AV	Electric proportional solenoid,12VDC, NC	11022613	11112301
AW	Electric proportional solenoid,12VDC,NO	11106466	11112294
AX	Electric proportional solenoid,12VDC,NO	11106462	11112230
AY	Electric ON/OFF solenoid NC, 24VDC	11047274	11112303
BB	High pressure LB	4510415	11112211
BE	Electric ON/OFF solenoid, NC, 12VDC	11082406	11112299
BF	Electric ON/OFF solenoid, NO, 12VDC	11082407	11112300
BG	Electric ON/OFF solenoid, 24VDC, NC	11043397	11112289
BH	Electric proportional solenoid,12VDC, NC	11106967	11112216
BK	Electric proportional solenoid,24VDC,NC	11082408	11112302
BL	Electric proportional solenoid, 24VDC, NC	11082409	11112224
BM	Electric proportional solenoid,12VDC, NC	11106966	11112298
BN	Electric ON/OFF solenoid,12VDC, NO	11082410	11112222
BP	Remote PC, high pressure	4510418	11112212
BR	Electric ON/OFF solenoid,12VDC, NC	11082411	11112219
BS	High pressure LS	4510416	11112207
BW	Electric proportional solenoid,12VDC, NO	11106968	11112293
BX	Electric proportional solenoid,12VDC, NO	11106965	11112214
CK	Electric proportional solenoid, 24VDC, NO	11106463	11112305
CL	Electric proportional solenoid, 24VDC, NO	11106464	11112231
CN	Electric ON/OFF solenoid, 24VDC, NO	11106964	11112226
CR	Electric ON/OFF solenoid, 24VDC, NC	11066415	11112217
DF	Electric ON/OFF solenoid, 24VDC, NO	11082432	11112304
DK	Electric proportional solenoid, 24VDC, NO	11106969	11112290
DL	Electric proportional solenoid,24VDC, NO	11106970	11112225
DN	Electric ON/OFF solenoid, 24VDC, NO	11082433	11112227
DR	Electric ON/OFF solenoid, 24VDC, NC	11082434	11112228
FA	Electric dump valve, solenoid, 12VDC, NC	11082435	11112297
FB	Electric dump valve, solenoid, 12VDC, NC	11082436	11112223
LB	LB control	4510388	11112205
LS	LS control	4510412	11112208
RP	Remote PC	4510419	11112213

**Parts disposition**

- Interchangeable
- Use parts in stock


**Service Bulletin: SB-2012-020**

**Products affected** Series 45 E, F, G, H and J frame open circuit pumps

**Subject** Displacement limiter kits

**Description** In an effort to reduce duplication of displacement limiter kits used for service and production, Sauer-Danfoss has obsoleted the service displacement limiter kit part numbers and will use the production displacement limiter kits for service.

The production displacement limiter kits are completely interchangeable with the old service displacement limiter kits.

The service displacement limiter kits are obsolete and no longer available for service.

**Models affected** Series 45 E, F, G, H, and J frame open circuit pumps with displacement limiters.

**Serial numbers** This change became effective at serial number A-12-24-XXXXX. (12-Jun-2012)

**Part numbers affected**

Description	Old part number	New part number
H frame, 57cc	4510168	11099072
H frame, 90cc	4510372	11099073
G frame, 74cc	4510373	11099074
G frame, 90cc	4510374	11099075
E frame	4510439	11099077
F frame	4510488	11099076
J frame	4510488	11099076

**Parts disposition** ■ Interchangeable


**Service Bulletin: SB-2012-029**

**Products affected** Series 45, E, F, G, and H frame open circuit pumps

**Subject** Component changes to the overhaul seal kits

**Description** Sauer-Danfoss has made a change to the overhaul seal kits for the Series 45 E, F, G and H frame open circuit pumps. This change removes the standard plug O-rings.

The new seal kits are interchangeable with the old seal kits.

The overhaul seal kit part numbers have changed for tracking purposes. The old seal kits are obsolete and no longer available for service.

**Models affected** All Series 45 E, F, G, and H frame open circuit pumps

**Serial numbers** This change became effective at serial number A-13-10-XXXXX. (05-Mar-2013)

**Part numbers affected**

Description	Old part number	New part number
E frame overhaul seal kit	11034352	11106334
F frame overhaul seal kit	11034341	11106335
G frame overhaul seal kit	11034340	11106336
H frame overhaul seal kit	4510094	11106337

**Parts disposition** ■ Interchangeable





**Notes**



**Notes**



**Notes**



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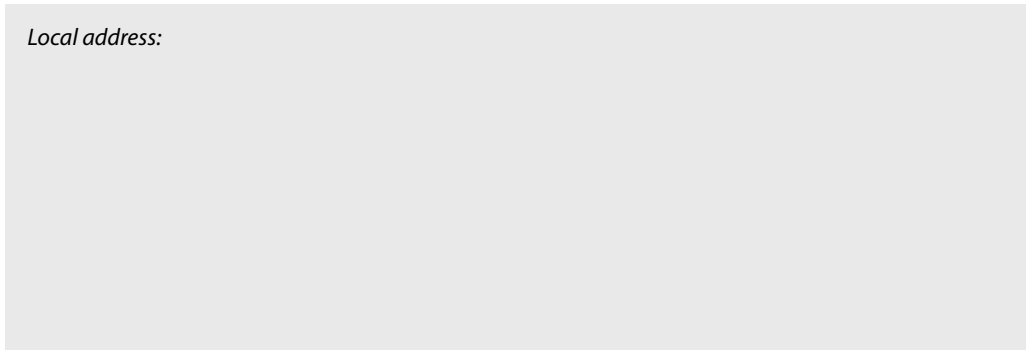
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