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General information

Service parts identification

Use this information and procedure to identify the module group, item number, manufacture date, part number, and part name. The frame F includes the 74 and 90cc displacement pumps.

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

Nameplate

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. ("06" would indicate the unit was manufactured in 2006).

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.)

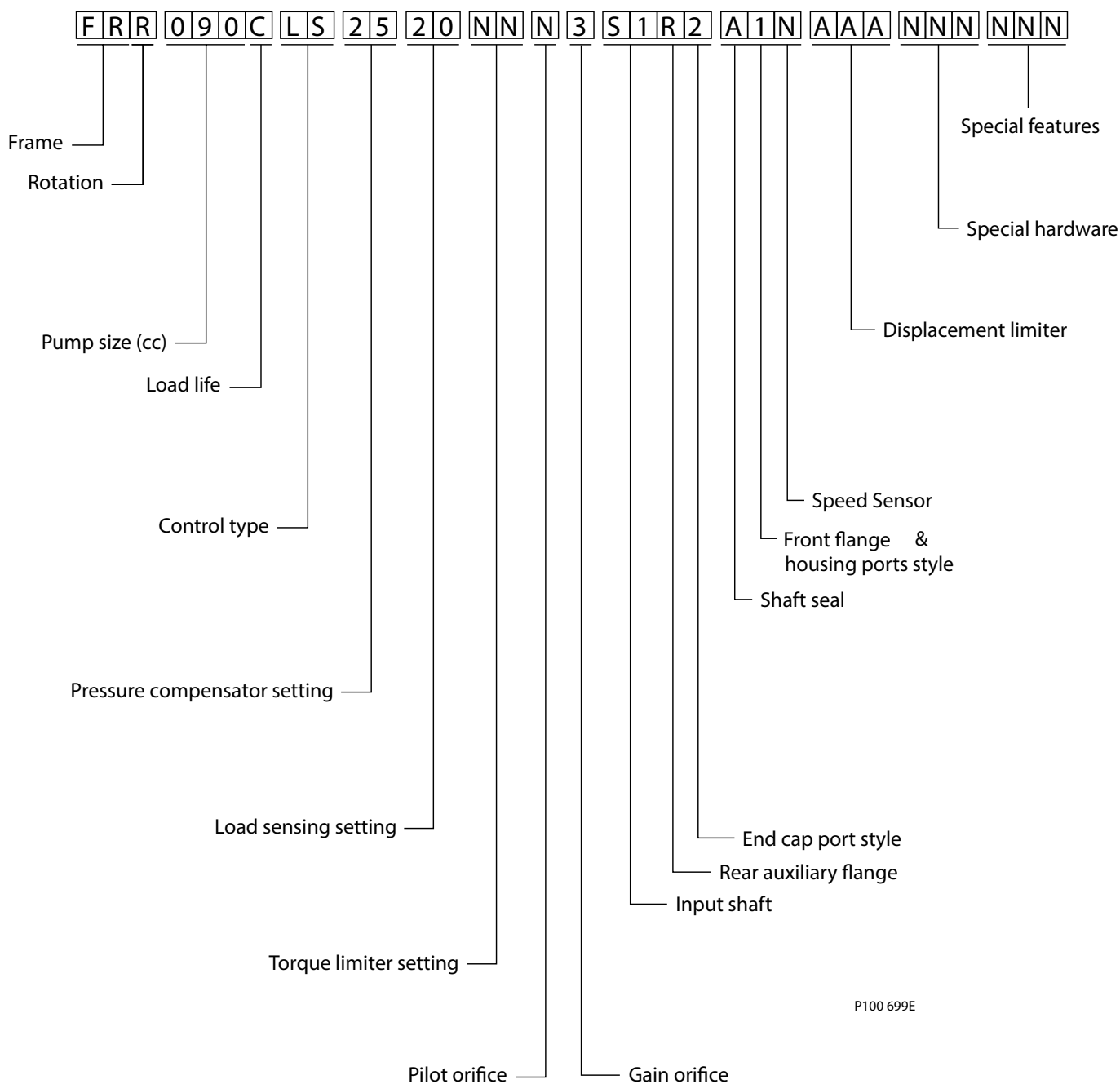
Example of a Part Identification

The nameplate on a Series 45 pump has an Order Code of FRR 090B LS 25 20 NN N 3 S1R2 A1N AAA 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 "S1R2". (FRR 090B LS 25 20 NN N 3 **S1R2** A1N AAA 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 "S1R2". The shaft is found to be item J010 and part number 4740459.

**Notes**

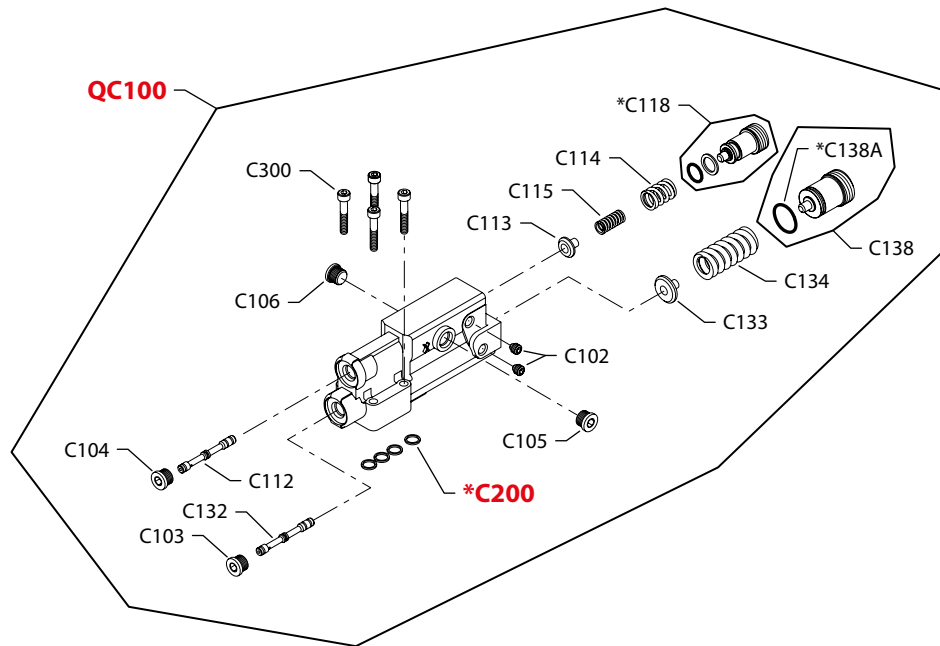
Order code





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	04-14		4740064	Set screw	2
	C103	04-14		327007 (9005110-4400)	Plug assembly	1
	C104	04-14		327007 (9005110-4400)	Plug assembly	1
	C105	04-14		327007 (9005110-4400)	Plug assembly	1
	C106	04-14		327007 (9005110-4400)	Plug assembly	1
	C113	04-14		4740246	Spring guide (SB-2002-031)	1
	C114	04-14		4740061	Spring	1
	C115	04-14		4740062	Spring	1
	C118	04-14		11062214	Adjusting plug assembly (SB-2007-047, SB-2010-026)	1
	C132	04-14		1701124	Spool	1
	C133	04-14		4740247	Spring guide (SB-2002-034)	1
	C138	04-14		1700597	Adjusting plug assembly	1
	C138A	04-14		5000656	O-ring	1
	C200	04-14		4740154	Seal ring	4
	C300	04-14		5000164 (9007315-0507)	Screw	4

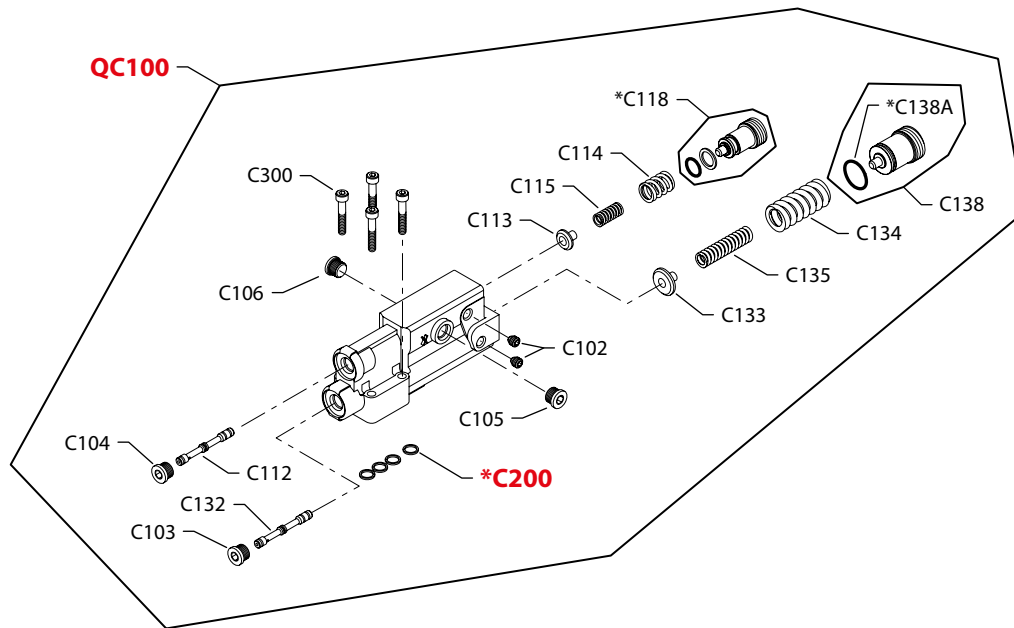
Load sensing Control

AB	C112	04-14		1701124	Spool	1
	C134	04-14		4740318	Spring, PC light	1
	QC100	04-14		11112206	Control Kit, low pressure (SB-2012-011)	1
AS	C112	04-14		1701124	Spool	1
	C134	04-14		4740318	Spring, PC light	1
	QC100	04-14		11112210	Control Kit, low pressure (SB-2012-011)	1
BB	C112	04-14		4740309	Spool	1
	C134	04-14		4740324	Spring, PC heavy	1
	QC100	04-14		11112211	Control Kit, high pressure (SB-2012-011)	1
BS	C112	04-14		1701124	Spool	1
	C134	04-14		4740324	Spring, PC heavy	1
	QC100	04-14		11112207	Control Kit, high pressure (SB-2012-011)	1

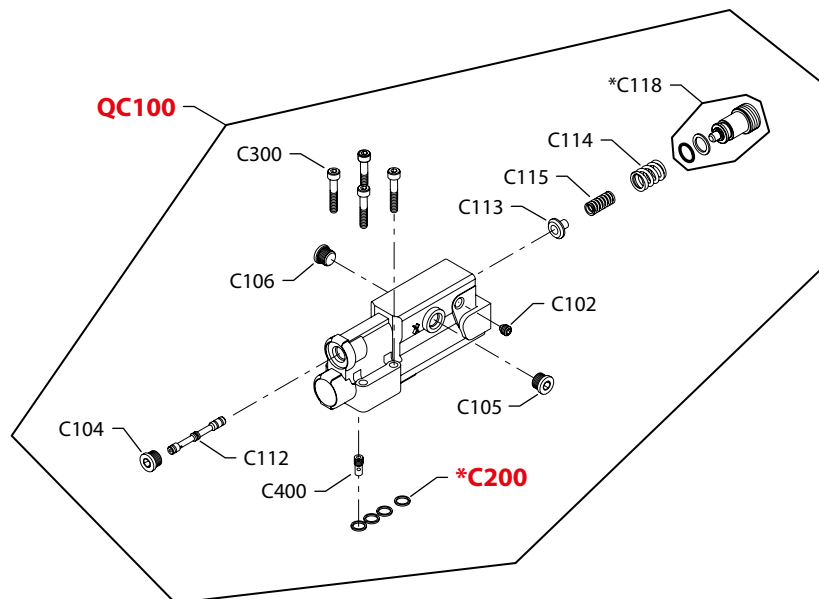


Control

(LB, LJ & LS)



(LE)



E100 581E

* = included in base motor seal kit Q210

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

Parts Manual

Series 45 Frame F 74-90cc O. C. Pumps

Control

Common load sensing Control Parts

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
	C104	04-14		327007 (9005110-4400)	Plug assembly	1
	C105	04-14		327007 (9005110-4400)	Plug assembly	1
	C106	04-14		327007 (9005110-4400)	Plug assembly	1
	C113	04-14		4740246	Spring guide (SB-2002-031)	1
	C114	04-14		4740061	Spring	1
	C115	04-14		4740062	Spring	1
	C118	04-14		11062214	Adjusting plug assembly (SB-2007-047, SB-2010-026)	1
	C200	04-14		4740154	Seal ring	4
	C300	04-14		5000164 (9007315-0507)	Screw	4

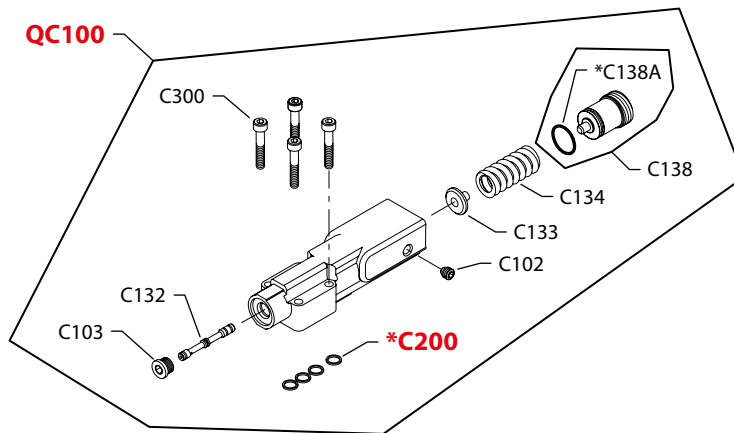
Load sensing Control

LB	C102	04-14		4740064	Set screw	2
	C103	04-14		327007 (9005110-4400)	Plug assembly	1
	C112	04-14		4740309	Spool	1
	C132	04-14		1701124	Spool	1
	C133	04-14		4740247	Spring guide (SB-2002-034)	1
	C134	04-14		4740051	Spring, PC, outer	1
	C135	04-14		4740052	Spring, PC inner	1
	C138	04-14		11062379	Adjusting Plug assembly (SB-2010-026)	1
	C138A	04-14		5000656	O-ring	1
	QC100	04-14		11112205	Control Kit (SB-2012-011)	1
LE	C102	06-30		4740064	Set screw	1
	C112	06-30		1701124	Spool	1
	C400	06-30		4740313	Edge filter Plug assembly	1
	QC100	06-30		4510400	Control Kit, load sensing only	1
LJ	C102	12-34		4740064	Set screw	2
	C103	12-34		327007 (9005110-4400)	Plug assembly	1
	C112	12-34		1701124	Spool	1
	C132	12-34		1701124	Spool	1
	C133	12-34		4740247	Spring guide (SB-2002-034)	1
	C134	12-34		4740051	Spring, PC, outer	1
	C135	12-34		4740052	Spring, PC inner	1
	C138	12-34		11062379	Adjusting Plug assembly (SB-2010-026)	1
	C138A	12-34		5000656	O-ring	1
	QC100	12-34		4510444	Control Kit	1
LS	C102	04-14		4740064	Set screw	2
	C103	04-14		327007 (9005110-4400)	Plug assembly	1
	C112	04-14		1701124	Spool	1
	C132	04-14		1701124	Spool	1
	C133	04-14		4740247	Spring guide (SB-2002-034)	1
	C134	04-14		4740051	Spring, PC, outer	1
	C135	04-14		4740052	Spring, PC inner	1
	C138	04-14		11062379	Adjusting Plug assembly (SB-2010-026)	1
	C138A	04-14		5000656	O-ring	1
	QC100	04-14		11112208	Control Kit (SB-2012-011)	1

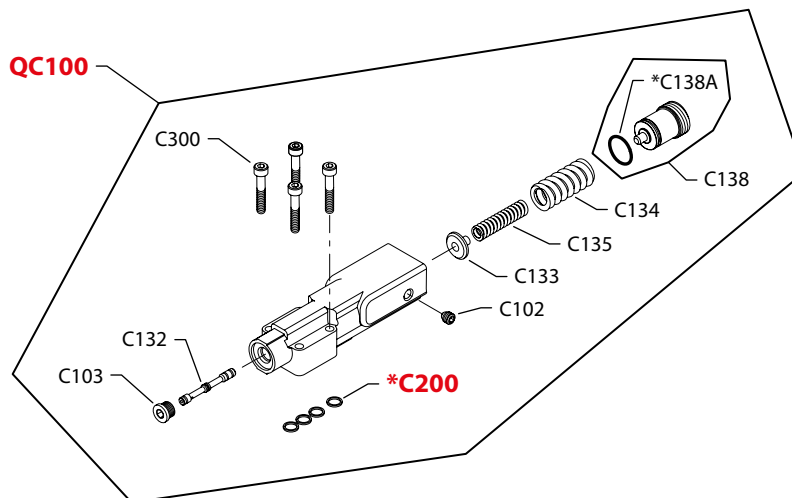


Control

(AC & BC)



(PC)



E100 517E

* = included in base motor seal kit Q210

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

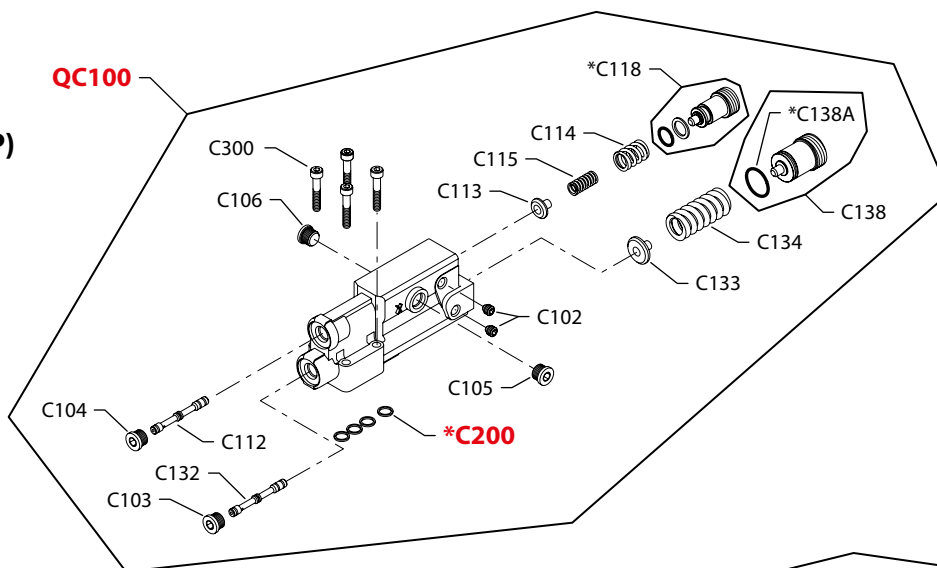
Control
Pressure compensating control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
AC	C102	04-14		4740064	Set screw	1
	C103	04-14		327007 (9005110-4400)	Plug assembly	1
	C132	04-14		1701124	Spool	1
	C133	04-14		4740247	Spring guide (SB-2002-034)	1
	C134	04-14		4740318	Spring, PC, light	1
	C138	04-14		1700597	Adjusting plug	1
	C138A	04-14		5000656	O-ring	1
	C200	04-14		4740154	Seal ring	4
	C300	04-14		5000164 (9007315-0507)	Screw	4
	QC100	04-14		4510420	Control Kit, PC, low pressure	1
BC	C102	04-14		4740064	Set screw	1
	C103	04-14		327007 (9005110-4400)	Plug assembly	1
	C132	04-14		1701124	Spool	1
	C133	04-14		4740247	Spring guide (SB-2002-034)	1
	C134	04-14		4740324	Spring, PC, heavy	1
	C138	04-14		1700597	Adjusting plug	1
	C138A	04-14		5000656	O-ring	1
	C200	04-14		4740154	Seal ring	4
	C300	04-14		5000164 (9007315-0507)	Screw	4
	QC100	04-14		4510421	Control Kit, PC, high pressure	1
PC	C102	04-14		4740064	Set screw	1
	C103	04-14		327007 (9005110-4400)	Plug assembly	1
	C132	04-14		1701124	Spool	1
	C133	04-14		4740247	Spring guide (SB-2002-034)	1
	C134	04-14		4740051	Spring, outer	1
	C135	04-14		4740052	Spring, inner	1
	C138	04-14		11062379	Adjusting plug assembly1	1
	C138A	04-14		5000656	O-ring	1
	C200	04-14		4740154	Seal ring	4
	C300	04-14		5000164 (9007315-0507)	Screw	4
	QC100	04-14		4510422	Control kit, PC	1

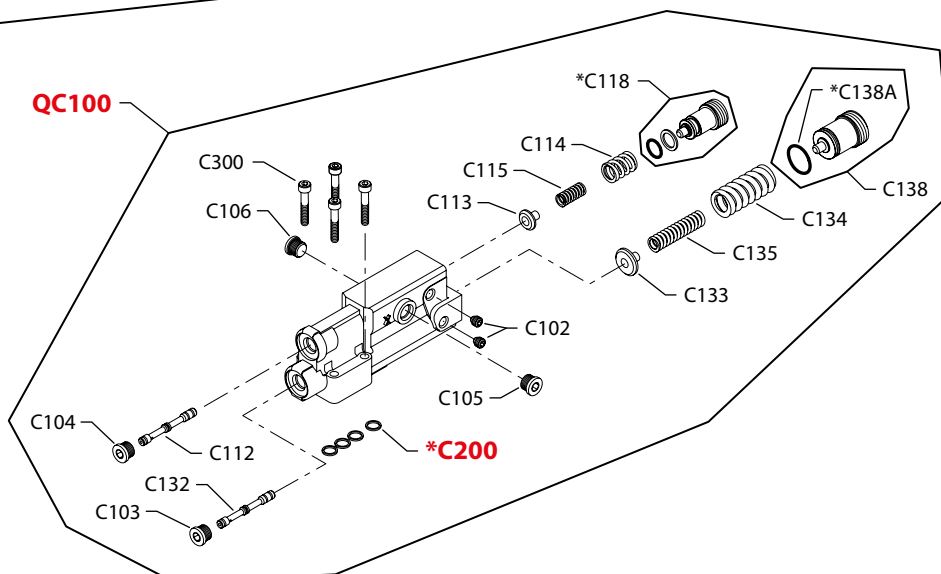


Control

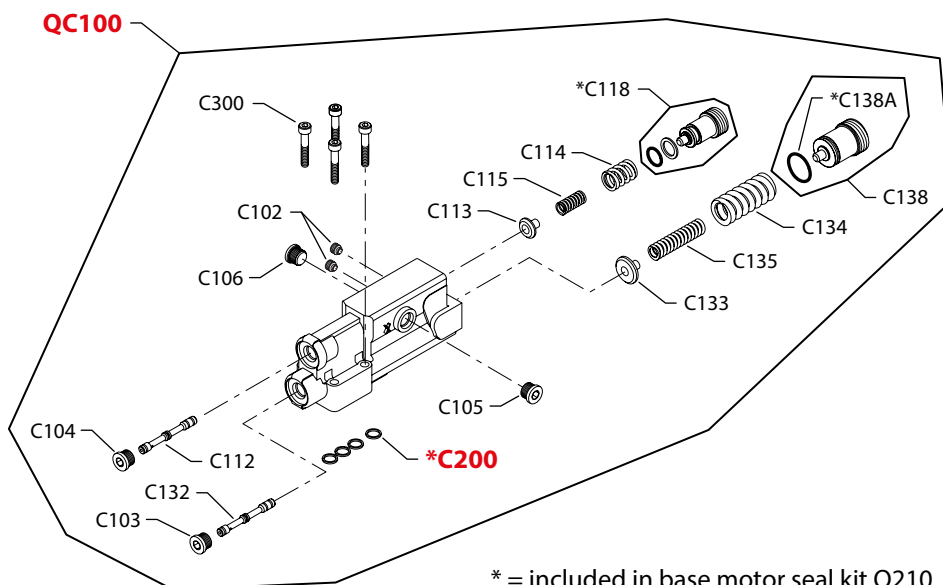
(AP & BP)



(RP)



(RY)



* = included in base motor seal kit Q210

E100 516E

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

Control
Common pressure compensating Control Parts, remote

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
	C102	04-14		4740064	Set screw	2
	C103	04-14		327007 (9005110-4400)	Plug assembly	1
	C104	04-14		327007 (9005110-4400)	Plug assembly	1
	C105	04-14		327007 (9005110-4400)	Plug assembly	1
	C106	04-14		327007 (9005110-4400)	Plug assembly	1
	C112	04-14		4740300	Spool	1
	C113	04-14		4740301	Spring guide	1
	C114	04-14		4740061	Spring	1
	C115	04-14		4740062	Spring	1
	C118	04-14		11062214	Adjusting plug assembly (SB-2007-047, SB-2010-026)	1
	C132	04-14		1701124	Spool	1
	C133	04-14		4740247	Spring guide (SB-2002-034)	1
	C200	04-14		4740154	Seal ring	4
	C300	04-14		5000164 (9007315-0507)	Screw	4

Pressure compensating Control, remote

AP	C134	04-14		4740318	Spring, PC light	1
	C138	04-14		1700597	Adjusting Plug assembly	1
	C138A	04-14		5000656	O-ring	1
	QC100	04-14		11112209	Control Kit, remote PC, low pressure (SB-2012-011)	1
BP	C134	04-14		4740324	Spring, PC heavy	1
	C138	04-14		1700597	Adjusting Plug assembly	1
	C138A	04-14		5000656	O-ring	1
	QC100	04-14		11112212	Control Kit, remote PC, high pressure (SB-2012-011)	1
RP	C134	04-14		4740051	Spring, PC outer	1
	C135	04-14		4740052	Spring, PC inner	1
	C138	04-14		11062379	Adjusting Plug assembly (SB-2010-026)	1
	C138A	04-14		5000656	O-ring	1
	QC100	04-14		11112213	Control Kit, remote PC (SB-2012-011)	1
RY	C134	14-39		4740051	Spring, PC outer	1
	C135	14-39		4740052	Spring, PC inner	1
	C138	14-39		11062379	Adjusting Plug assembly (SB-2010-026)	1
	C138A	14-39		5000656	O-ring	1
	QC100	14-39		11126785	Control Kit, remote PC (SB-2012-011)	1

(AF & AG)



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

Parts Manual

Series 45 Frame F 74-90cc O. C. Pumps

Control

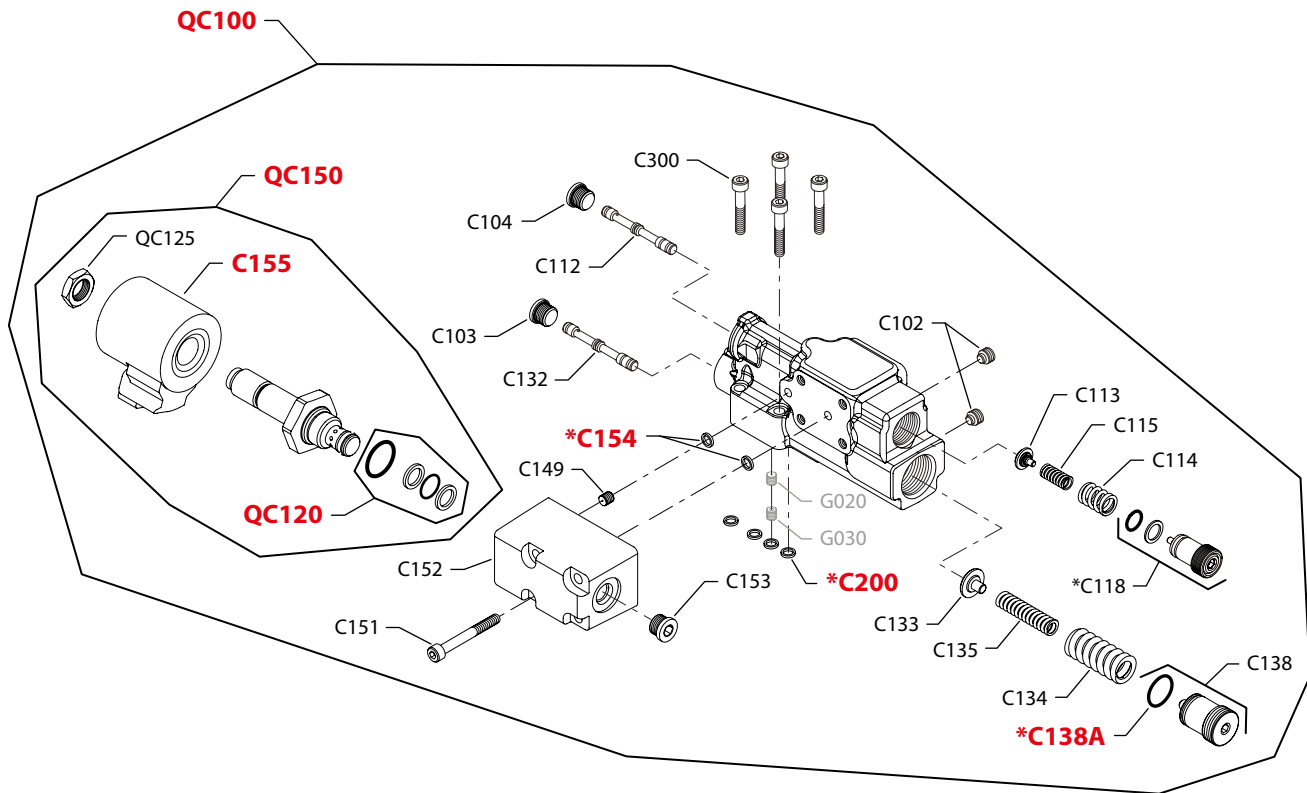
Electric on/off control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
AF	C102	10-14		4740064	Set screw	2
	C103	10-14		327007 (9005110-4400)	Plug assembly	1
	C104	10-14		327007 (9005110-4400)	Plug assembly	1
	C112	10-14		4740300	Spool	1
	C113	10-14		4740301	Spring guide	1
	C114	10-14		4740061	Spring	1
	C115	10-14		4740062	Spring	1
	C118	10-14		11062214	Adjusting plug assembly (SB-2010-026)	1
	C132	10-14		1701124	Spool	1
	C133	10-14		4740247	Spring guide	1
	C134	10-14		4740051	Spring, PC outer	1
	C135	10-14		4740052	Spring, PC inner	1
	C138	10-14		11062379	Adjusting plug assembly (SB-2010-026)	1
	C138A	10-14		5000656	O-ring	1
	C151	10-14		9007315-0510	Screw	4
	C152	10-14		1701029	Solenoid valve adapter	1
	C153	10-14		327007 (9005110-4400)	Plug assembly	1
	C154	10-14		4740154	Seal ring	2
	C155	10-14		1701291	Coil, 12 volt	1
	C200	10-14		4740154	Seal ring	4
	C300	10-14		5000164 (9007315-0507)	Screw	4
	QC100	10-14		11112296	Control Kit, electric on/off, 12v, NO (SB-2012-011)	1
	QC120	10-14		11103621	Solenoid valve seal kit	1
	QC125	10-14		11104457	Nut	1
	QC150	10-14		11104461	Solenoid valve kit, 12 volt	1
AG	C102	10-14		4740064	Set screw	2
	C103	10-14		327007 (9005110-4400)	Plug assembly	1
	C104	10-14		327007 (9005110-4400)	Plug assembly	1
	C112	10-14		4740300	Spool	1
	C113	10-14		4740301	Spring guide	1
	C114	10-14		4740061	Spring	1
	C115	10-14		4740062	Spring	1
	C118	10-14		11062214	Adjusting plug assembly (SB-2010-026)	1
	C132	10-14		1701124	Spool	1
	C133	10-14		4740247	Spring guide	1
	C134	10-14		4740051	Spring, PC outer	1
	C135	10-14		4740052	Spring, PC inner	1
	C138	10-14		11062379	Adjusting plug assembly (SB-2010-026)	1
	C138A	10-14		5000656	O-ring	1
	C151	10-14		9007315-0510	Screw	4
	C152	10-14		1701029	Solenoid valve adapter	1
	C153	10-14		327007 (9005110-4400)	Plug assembly	1
	C154	10-14		4740154	Seal ring	2
	C155	10-14		1701291	Coil, 12 volt	1
	C200	10-14		4740154	Seal ring	4
	C300	10-14		5000164 (9007315-0507)	Screw	4
	QC100	10-14		11112295	Control Kit, electric on/off, 12v, NC (SB-2012-011)	1
	QC120	10-14		11103621	Solenoid valve seal kit	1
	QC125	10-14		11104457	Nut	1
	QC150	10-14		11104463	Solenoid valve kit, 12 volt	1



Control

(AH)



E101 621E

* = included in base motor seal kit Q210

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Parts Manual

Series 45 Frame F 74-90cc O. C. Pumps

Control

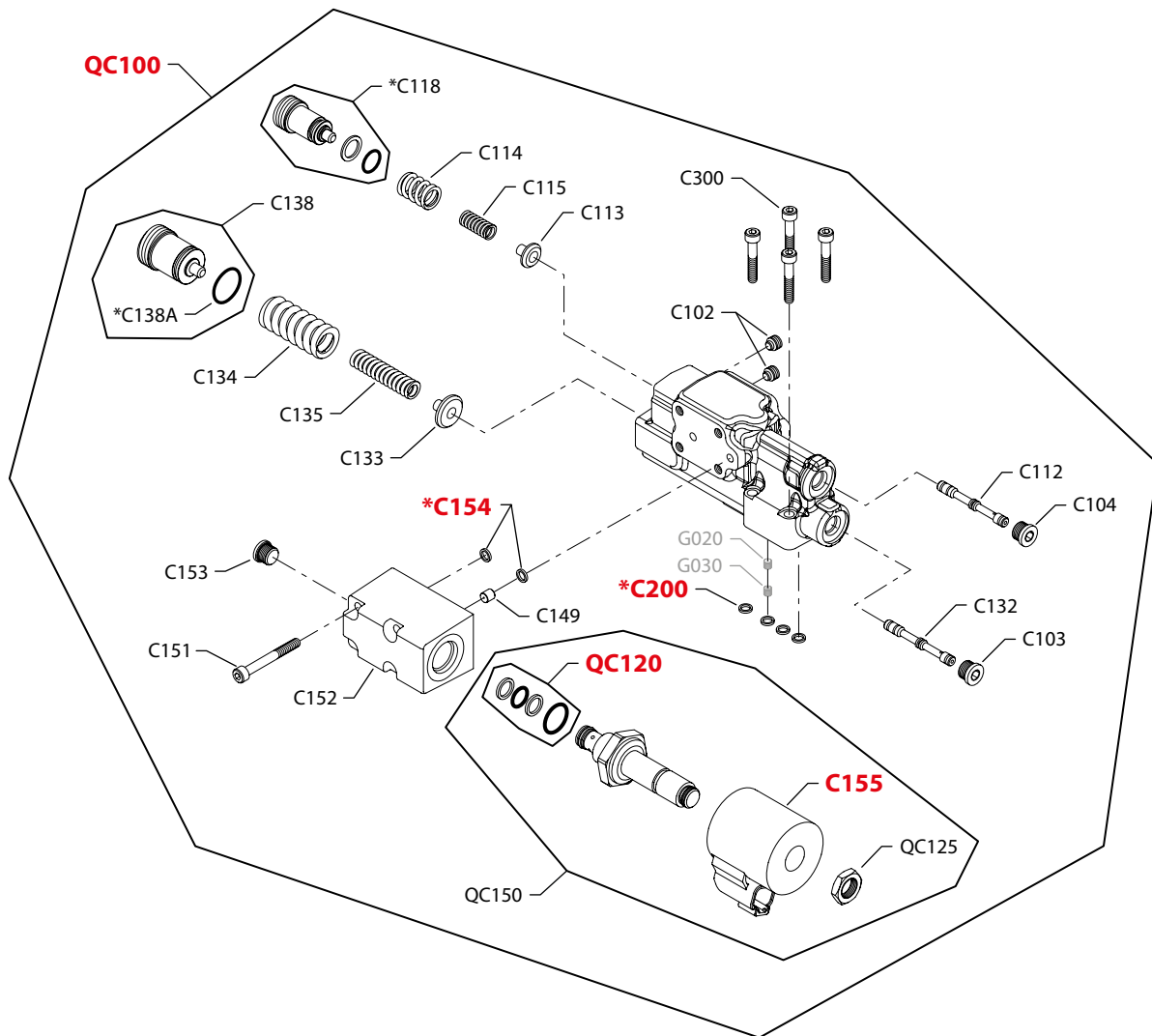
Electric proportional control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
AH	C102	09-08		4740064	Set screw	2
	C103	09-08		327007 (9005110-4400)	Plug assembly	1
	C104	09-08		327007 (9005110-4400)	Plug assembly	1
	C112	09-08		1701439	Spool	1
	C113	09-08		4740301	Spring guide	1
	C114	09-08		4740061	Spring	1
	C115	09-08		4740062	Spring	1
	C118	09-08		11062214	Adjusting plug assembly (SB-2010-026)	1
	C132	09-08		1701124	Spool	1
	C133	09-08		4740247	Spring guide	1
	C134	09-08		4740051	Spring, PC outer	1
	C135	09-08		4740052	Spring, PC inner	1
	C138	09-08		11062379	Adjusting plug assembly (SB-2010-026)	1
	C138A	09-08		5000656	O-ring	1
	C149	09-08		739144	Orifice plug, 0.8mm	1
	C151	09-08		9007315-0510	Screw	4
	C152	09-08		1701029	Solenoid valve adapter	1
	C153	09-08		327007 (9005110-4400)	Plug assembly	1
	C154	09-08		4740154	Seal ring	2
	C155	09-08		1701291	Coil, 12 volt	1
	C200	09-08		4740154	Seal ring	4
	C300	09-08		5000164 (9007315-0507)	Screw	4
	QC100	09-08		11112221	Control Kit, electric prop. 12v, NC (SB-2012-011)	1
	QC120	09-08		11103621	Solenoid valve seal kit	1
	QC125	09-08		11104460	Nut	1
	QC150	09-08		11104467	Solenoid valve kit, 12 volt	1



Control

(AK)



E101 833E

* = included in base motor seal kit Q210

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

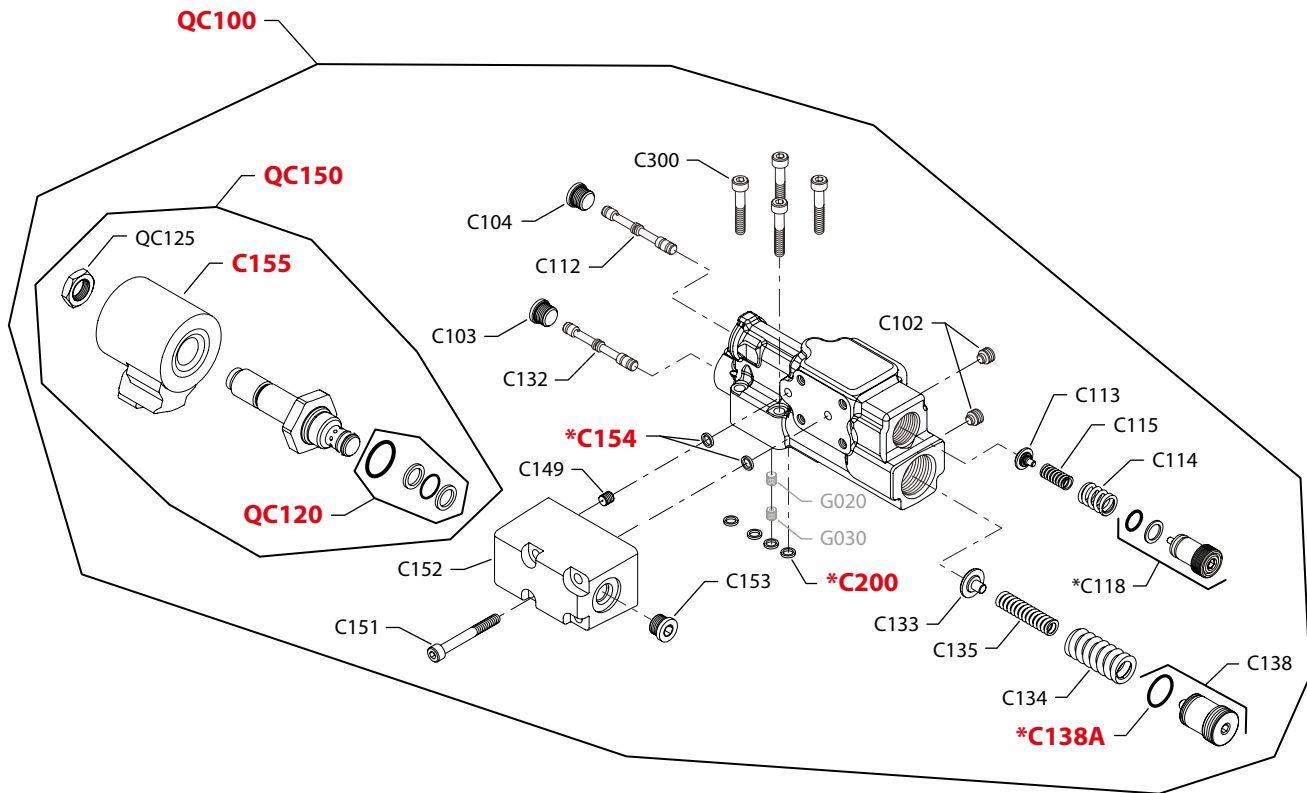
Control
Electric proportional control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
AK	C102	11-35		4740064	Set screw	2
	C103	11-35		327007 (9005110-4400)	Plug assembly	1
	C104	11-35		327007 (9005110-4400)	Plug assembly	1
	C112	11-35		1701439	Spool	1
	C113	11-35		4740301	Spring guide	1
	C114	11-35		4740061	Spring	1
	C115	11-35		4740062	Spring	1
	C118	11-35		11062214	Adjusting plug assembly (SB-2010-026)	1
	C132	11-35		1701124	Spool	1
	C133	11-35		4740247	Spring guide	1
	C134	11-35		4740051	Spring, PC outer	1
	C135	11-35		4740052	Spring, PC inner	1
	C138	11-35		11062379	Adjusting plug assembly (SB-2010-026)	1
	C138A	11-35		5000656	O-ring	1
	C149	11-35		739144	Orifice plug, 0.8mm	1
	C151	11-35		9007315-0510	Screw	4
	C152	11-35		1701029	Solenoid valve adapter	1
	C153	11-35		327007 (9005110-4400)	Plug assembly	1
	C154	11-35		4740154	Seal ring	2
	C155	11-35		1701563	Coil, 24 volt	1
	C200	11-35		4740154	Seal ring	4
	C300	11-35		5000164 (9007315-0507)	Screw	4
	QC100	11-35		11112291	Control Kit, electric prop., 24v, NC (SB-2012-011)	1
	QC120	11-35		11103621	Solenoid valve seal kit	1
	QC125	11-35		11104460	Nut	1
	QC150	11-35		11104468	Solenoid valve kit, 24 volt	1



Control

(AL)



E101 621E

* = included in base motor seal kit Q210

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

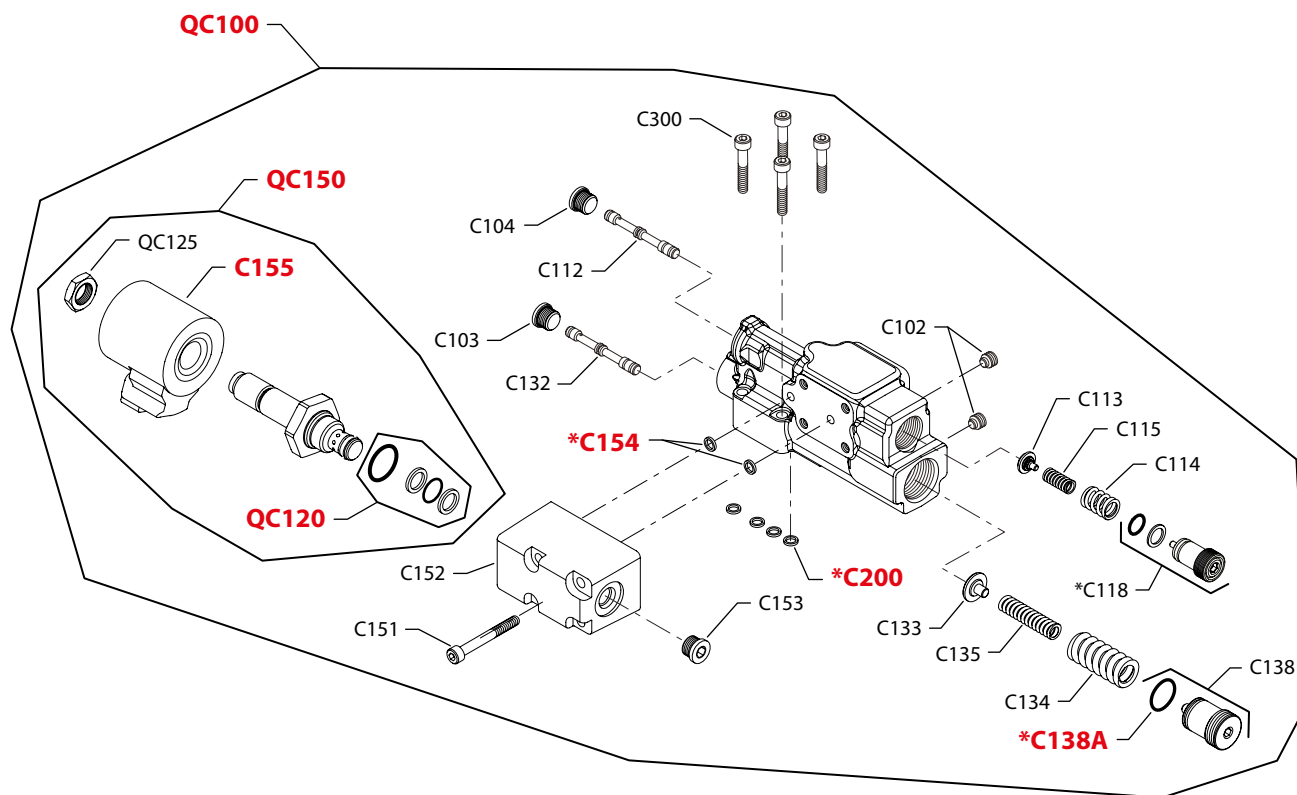
Control
Electric proportional control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
AL	C102	11-35		4740064	Set screw	2
	C103	11-35		327007 (9005110-4400)	Plug assembly	1
	C104	11-35		327007 (9005110-4400)	Plug assembly	1
	C112	11-35		1701439	Spool	1
	C113	11-35		4740301	Spring guide	1
	C114	11-35		4740061	Spring	1
	C115	11-35		4740062	Spring	1
	C118	11-35		11062214	Adjusting plug assembly (SB-2010-026)	1
	C132	11-35		1701124	Spool	1
	C133	11-35		4740247	Spring guide	1
	C134	11-35		4740051	Spring, PC outer	1
	C135	11-35		4740052	Spring, PC inner	1
	C138	11-35		11062379	Adjusting plug assembly (SB-2010-026)	1
	C138A	11-35		5000656	O-ring	1
	C149	11-35		739144	Orifice plug, 0.8mm	1
	C151	11-35		9007315-0510	Screw	4
	C152	11-35		1701029	Solenoid valve adapter	1
	C153	11-35		327007 (9005110-4400)	Plug assembly	1
	C154	11-35		4740154	Seal ring	2
	C155	11-35		1701563	Coil, 24 volt	1
	C200	11-35		4740154	Seal ring	4
	C300	11-35		5000164 (9007315-0507)	Screw	4
	QC100	11-35		11112218	Control Kit, electric prop., 24v, NC (SB-2012-011)	1
	QC120	11-35		11103621	Solenoid valve seal kit	1
	QC125	11-35		11104460	Nut	1
	QC150	11-35		11104468	Solenoid valve kit, 24 volt	1



Control

(AN)



E101 622E

* = included in base motor seal kit Q210

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

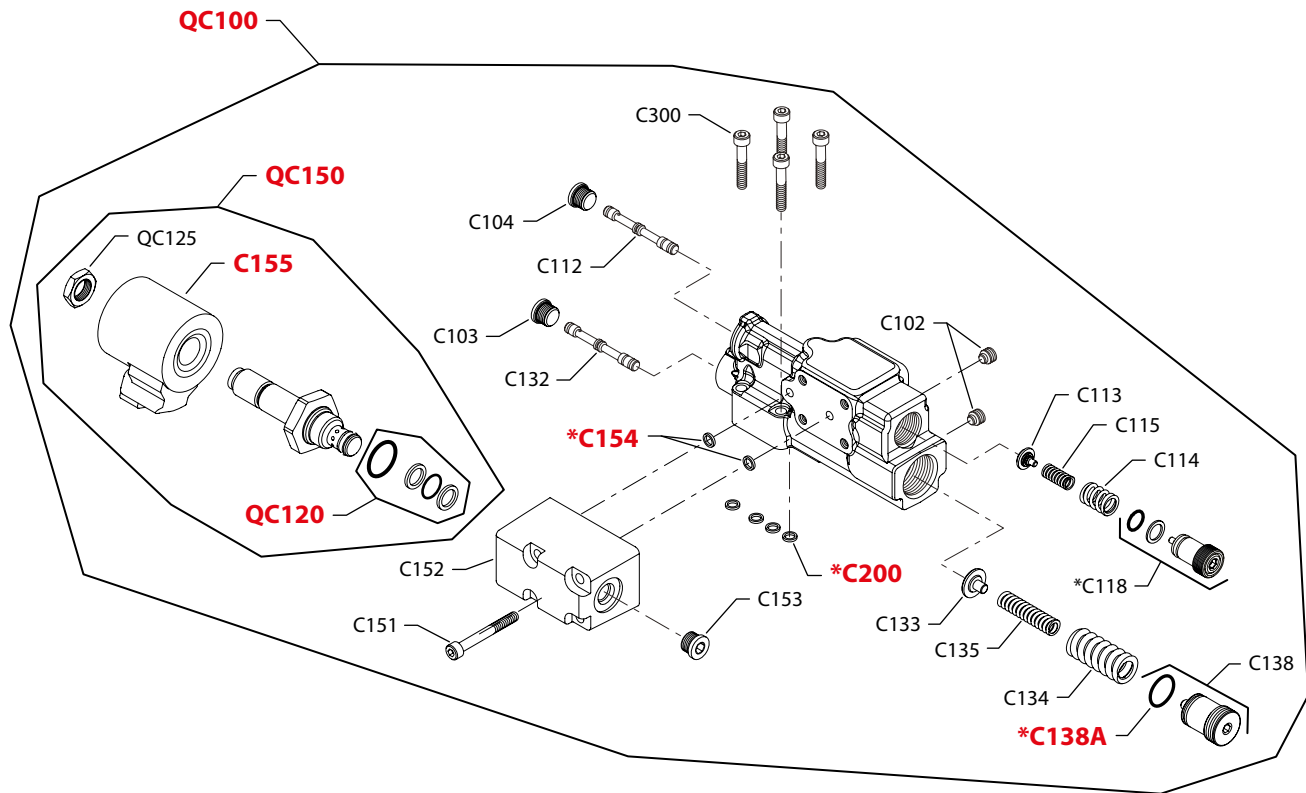
Control
Electric on/off control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
AN	C102	11-35		4740064	Set screw	2
	C103	11-35		327007 (9005110-4400)	Plug assembly	1
	C104	11-35		327007 (9005110-4400)	Plug assembly	1
	C112	11-35		4740300	Spool	1
	C113	11-35		4740301	Spring guide	1
	C114	11-35		4740061	Spring	1
	C115	11-35		4740062	Spring	1
	C118	11-35		11062214	Adjusting plug assembly (SB-2010-026)	1
	C132	11-35		1701124	Spool	1
	C133	11-35		4740247	Spring guide	1
	C134	11-35		4740051	Spring, PC outer	1
	C135	11-35		4740052	Spring, PC inner	1
	C138	11-35		11062379	Adjusting plug assembly (SB-2010-026)	1
	C138A	11-35		5000656	O-ring	1
	C151	11-35		9007315-0510	Screw	4
	C152	11-35		1701029	Solenoid valve adapter	1
	C153	11-35		327007 (9005110-4400)	Plug assembly	1
	C154	11-35		4740154	Seal ring	2
	C155	11-35		1701291	Coil, 12 volt	1
	C200	11-35		4740154	Seal ring	4
	C300	11-35		5000164 (9007315-0507)	Screw	4
	QC100	11-35		11112229	Control Kit, electric on/off 12 volt, NO (SB-2012-011)	1
	QC120	11-35		11103621	Solenoid valve seal kit	1
	QC125	11-35		11104457	Nut	1
	QC150	11-35		11104461	Solenoid valve kit, 12 volt	1



Control

(AR)



E101 622E

* = included in base motor seal kit Q210

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

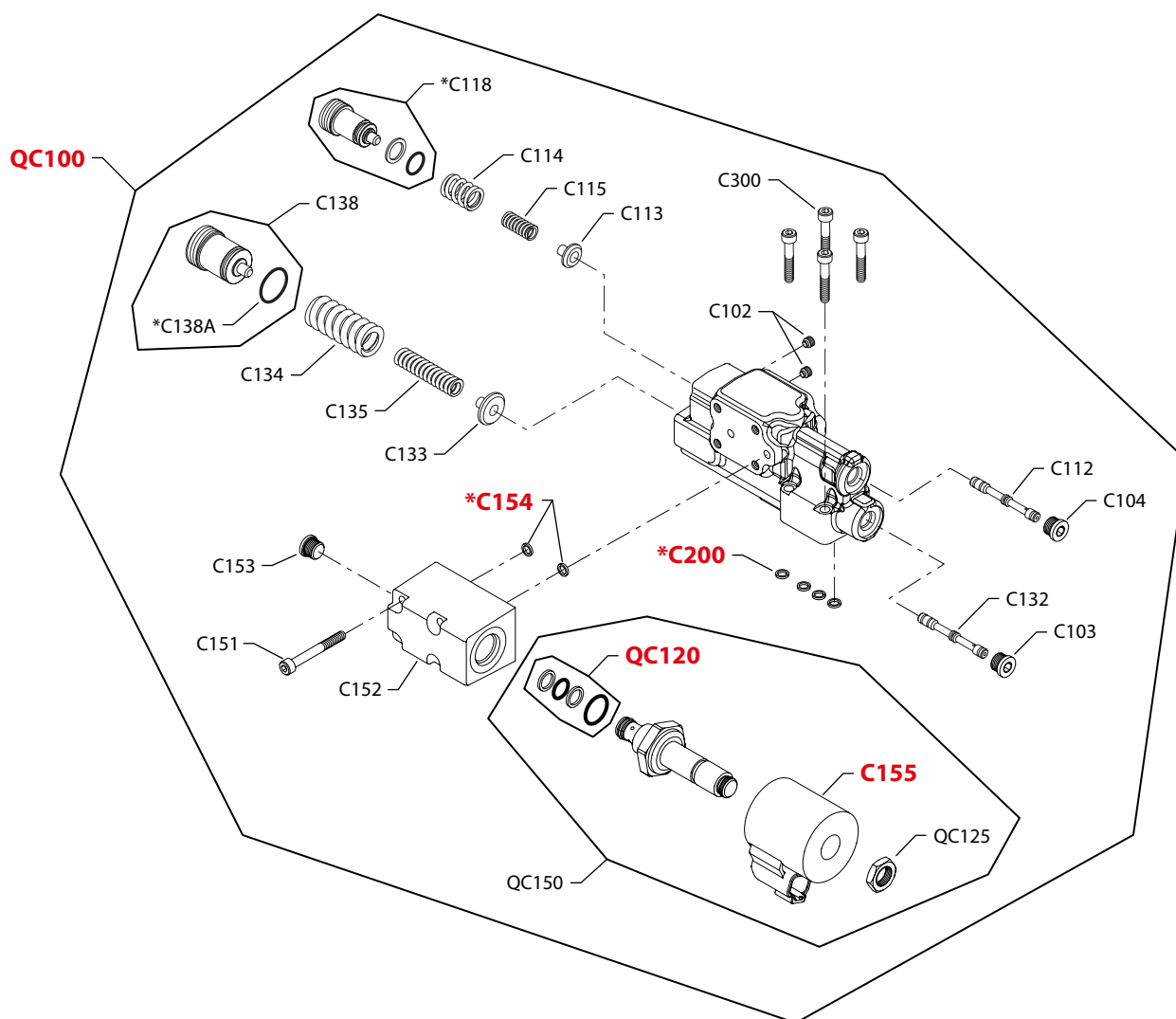
Control
Electric on/off control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
AR	C102	04-14		4740064	Set screw	2
	C103	04-14		327007 (9005110-4400)	Plug assembly	1
	C104	04-14		327007 (9005110-4400)	Plug assembly	1
	C112	04-14		4740300	Spool	1
	C113	04-14		4740301	Spring guide	1
	C114	04-14		4740061	Spring	1
	C115	04-14		4740062	Spring	1
	C118	04-14		11062214	Adjusting plug assembly (SB-2010-026)	1
	C132	04-14		1701124	Spool	1
	C133	04-14		4740247	Spring guide	1
	C134	04-14		4740051	Spring, PC outer	1
	C135	04-14		4740052	Spring, PC inner	1
	C138	04-14		11062379	Adjusting plug assembly (SB-2010-026)	1
	C138A	04-14		5000656	O-ring	1
	C151	04-14		9007315-0510	Screw	4
	C152	04-14		1701029	Solenoid valve adapter	1
	C153	04-14		327007 (9005110-4400)	Plug assembly	1
	C154	04-14		4740154	Seal ring	2
	C155	04-14		1701291	Coil, 12 volt	1
	C200	04-14		4740154	Seal ring	4
	C300	04-14		5000164 (9007315-0507)	Screw	4
	QC100	04-14		11112220	Control Kit, electric on/off 12v,olt NC (SB-2012-011)	1
	QC120	04-14		11103621	Solenoid valve seal kit	1
	QC125	04-14		11104457	Nut	1
	QC150	04-14		11104463	Solenoid valve kit, 12 volt	1



Control

(AT)



E101 700E

* = included in base motor seal kit Q210

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

Parts Manual

Series 45 Frame F 74-90cc O. C. Pumps

Control

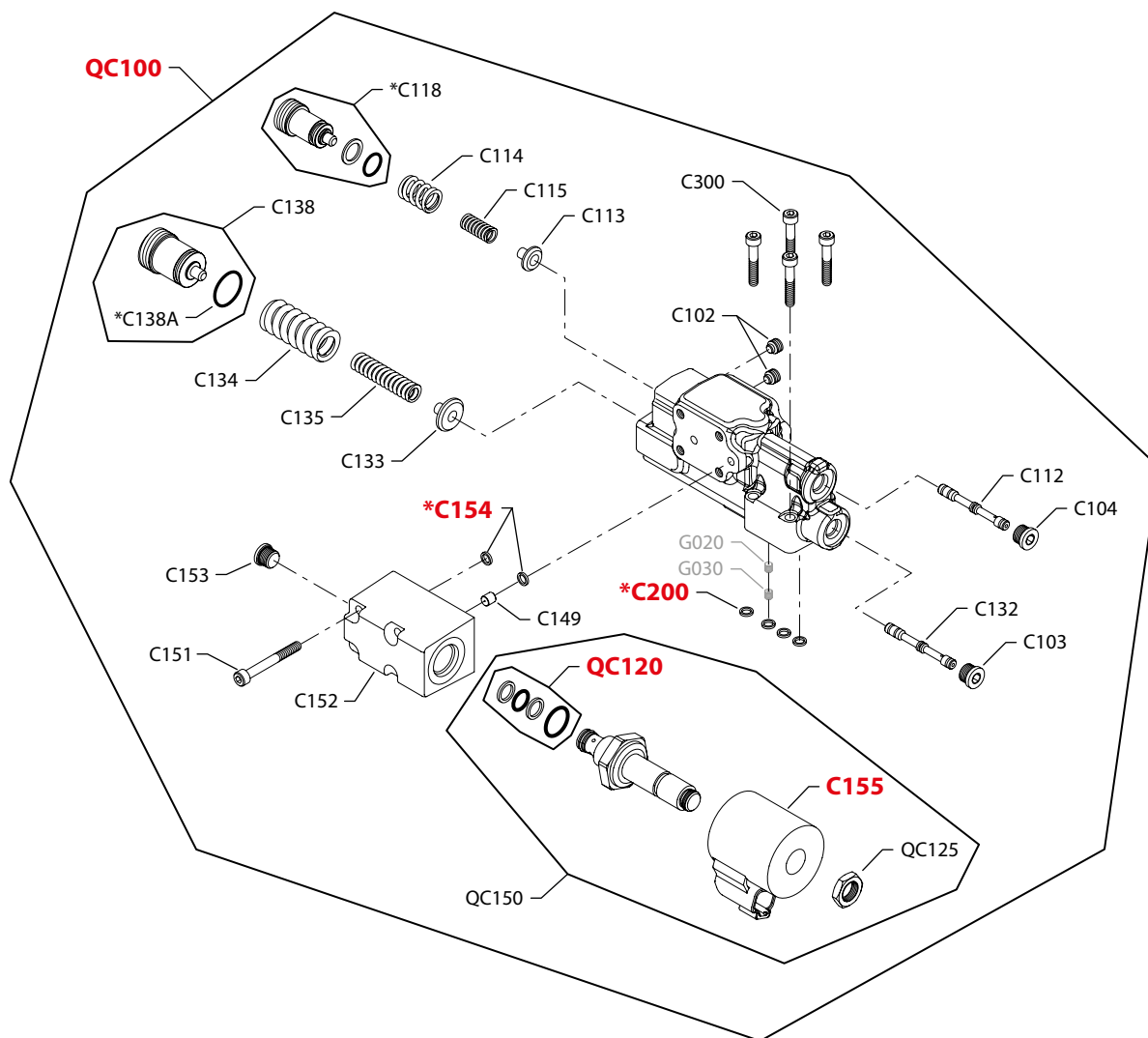
Electric on/off control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
AT	C102	11-35		4740064	Set screw	2
	C103	11-35		327007 (9005110-4400)	Plug assembly	1
	C104	11-35		327007 (9005110-4400)	Plug assembly	1
	C112	11-35		4740300	Spool	1
	C113	11-35		4740301	Spring guide	1
	C114	11-35		4740061	Spring	1
	C115	11-35		4740062	Spring	1
	C118	11-35		11062214	Adjusting plug assembly (SB-2010-026)	1
	C132	11-35		1701124	Spool	1
	C133	11-35		4740247	Spring guide	1
	C134	11-35		4740051	Spring, PC outer	1
	C135	11-35		4740052	Spring, PC inner	1
	C138	11-35		11062379	Adjusting plug assembly (SB-2010-026)	1
	C138A	11-35		5000656	O-ring	1
	C151	11-35		9007315-0510	Screw	4
	C152	11-35		1701029	Solenoid valve adapter	1
	C153	11-35		327007 (9005110-4400)	Plug assembly	1
	C154	11-35		4740154	Seal ring	2
	C155	11-35		1701563	Coil, 24volt	1
	C200	11-35		4740154	Seal ring	4
	C300	11-35		5000164 (9007315-0507)	Screw	4
	QC100	11-35		11112292	Control Kit, electric on/off, 24 volt, NO (SB-2012-011)	1
	QC120	11-35		11103621	Solenoid valve seal kit	1
	QC125	11-35		11104457	Nut	1
	QC150	11-35		11104462	Solenoid valve kit, 24 volt	1



Control

(AV)



E101 833E

* = included in base motor seal kit Q210

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

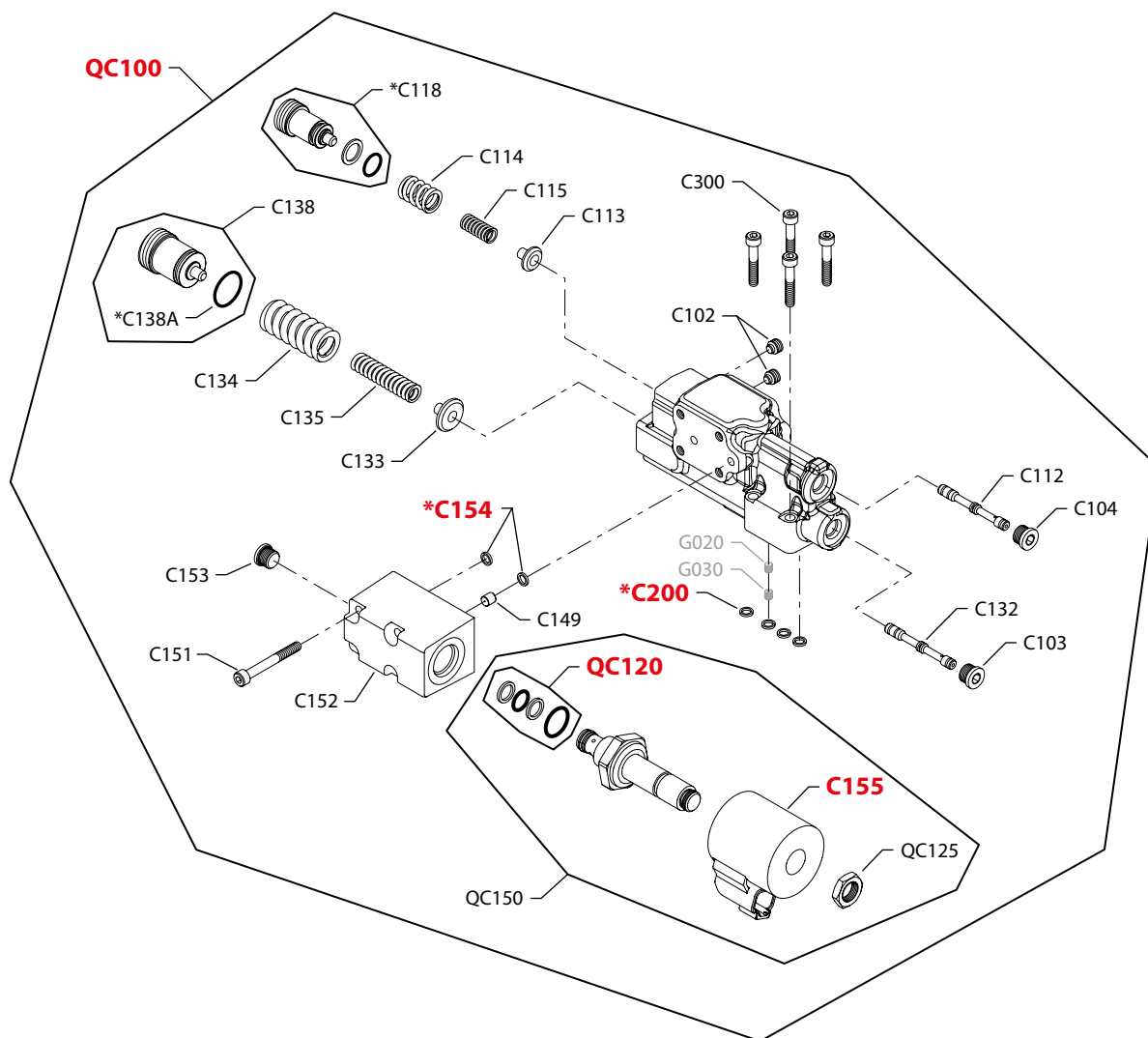
Control
Electric proportional control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
AV	C102	09-08		4740064	Set screw	2
	C103	09-08		327007 (9005110-4400)	Plug assembly	1
	C104	09-08		327007 (9005110-4400)	Plug assembly	1
	C112	09-08		1701439	Spool	1
	C113	09-08		4740301	Spring guide	1
	C114	09-08		4740061	Spring	1
	C115	09-08		4740062	Spring	1
	C118	09-08		11062214	Adjusting plug assembly (SB-2010-026)	1
	C132	09-08		1701124	Spool	1
	C133	09-08		4740247	Spring guide	1
	C134	09-08		4740051	Spring, PC outer	1
	C135	09-08		4740052	Spring, PC inner	1
	C138	09-08		11062379	Adjusting plug assembly (SB-2010-026)	1
	C138A	09-08		5000656	O-ring	1
	C149	09-08		739144	Orifice plug, 0.8mm	1
	C151	09-08		9007315-0510	Screw	4
	C152	09-08		1701029	Solenoid valve adapter	1
	C153	09-08		327007 (9005110-4400)	Plug assembly	1
	C154	09-08		4740154	Seal ring	2
	C155	09-08		1701291	Coil, 12 volt	1
	C200	09-08		4740154	Seal ring	4
	C300	09-08		5000164 (9007315-0507)	Screw	4
	QC100	09-08		11112301	Control Kit, electric prop., 12 volt, NC (SB-2012-011)	1
	QC120	09-08		11103621	Solenoid valve seal kit	1
	QC125	09-08		11104460	Nut	1
	QC150	09-08		11104467	Solenoid valve kit, 12 volt	1



Control

(AW)



E101 833E

* = included in base motor seal kit Q210

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

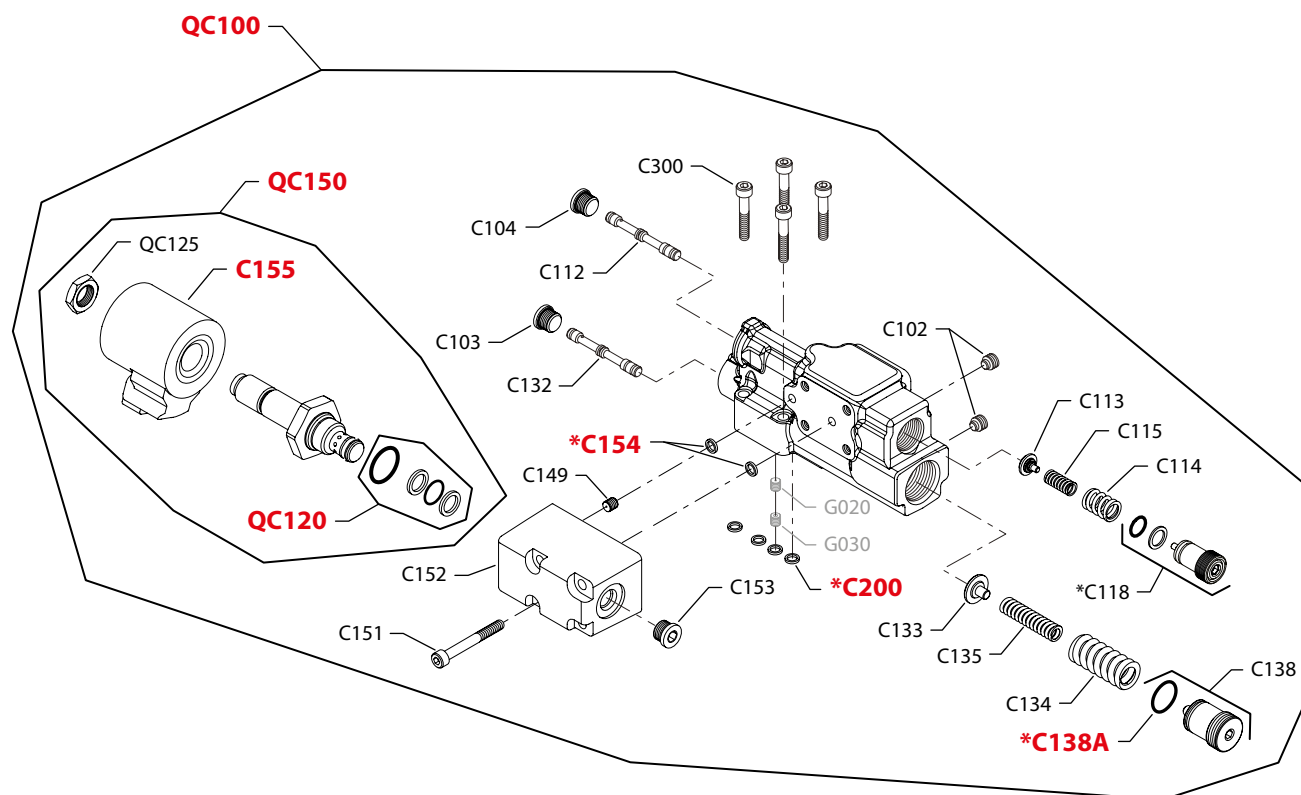
Control
Electric proportional control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
AW	C102	11-35		4740064	Set screw	2
	C103	11-35		327007 (9005110-4400)	Plug assembly	1
	C104	11-35		327007 (9005110-4400)	Plug assembly	1
	C112	11-35		1701439	Spool	1
	C113	11-35		4740301	Spring guide	1
	C114	11-35		4740061	Spring	1
	C115	11-35		4740062	Spring	1
	C118	11-35		11062214	Adjusting plug assembly (SB-2010-026)	1
	C132	11-35		1701124	Spool	1
	C133	11-35		4740247	Spring guide	1
	C134	11-35		4740051	Spring, PC outer	1
	C135	11-35		4740052	Spring, PC inner	1
	C138	11-35		11062379	Adjusting plug assembly (SB-2010-026)	1
	C138A	11-35		5000656	O-ring	1
	C149	11-35		739144	Orifice plug, 0.8mm	1
	C151	11-35		9007315-0510	Screw	4
	C152	11-35		1701029	Solenoid valve adapter	1
	C153	11-35		327007 (9005110-4400)	Plug assembly	1
	C154	11-35		4740154	Seal ring	2
	C155	11-35		1701291	Coil, 12 volt	1
	C200	11-35		4740154	Seal ring	4
	C300	11-35		5000164 (9007315-0507)	Screw	4
	QC100	11-35		11112294	Control Kit, electric prop., 12 volt, NO (SB-2012-011)	1
	QC120	11-35		11103621	Solenoid valve seal kit	1
	QC125	11-35		11104459	Nut	1
	QC150	11-35		11104465	Solenoid valve kit, 12 volt	1



Control

(AX)



E101 621E

* = included in base motor seal kit Q210

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

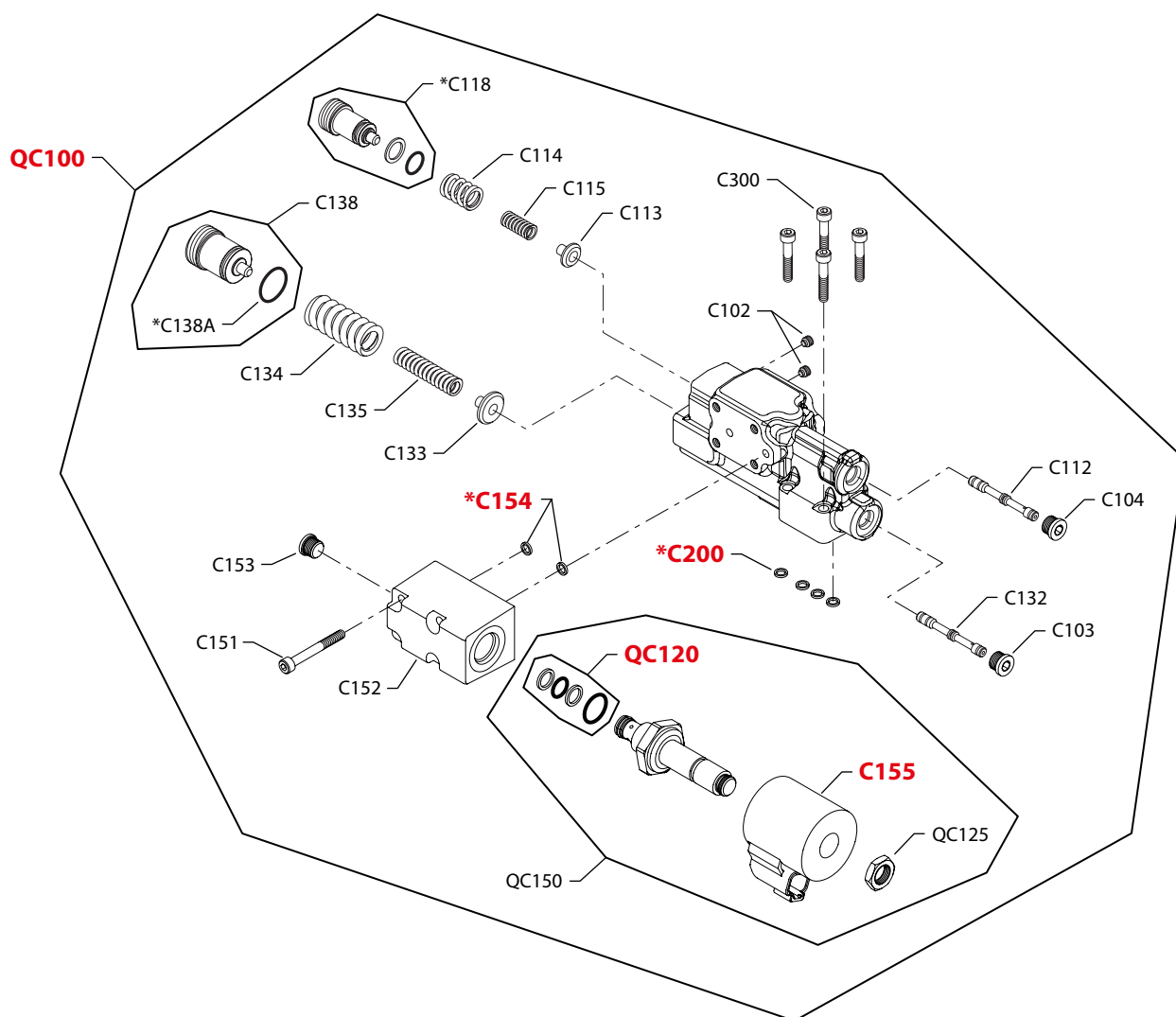
Control
Electric proportional control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
AX	C102	11-35		4740064	Set screw	2
	C103	11-35		327007 (9005110-4400)	Plug assembly	1
	C104	11-35		327007 (9005110-4400)	Plug assembly	1
	C112	11-35		1701439	Spool	1
	C113	11-35		4740301	Spring guide	1
	C114	11-35		4740061	Spring	1
	C115	11-35		4740062	Spring	1
	C118	11-35		11062214	Adjusting plug assembly (SB-2010-026)	1
	C132	11-35		1701124	Spool	1
	C133	11-35		4740247	Spring guide	1
	C134	11-35		4740051	Spring, PC outer	1
	C135	11-35		4740052	Spring, PC inner	1
	C138	11-35		11062379	Adjusting plug assembly (SB-2010-026)	1
	C138A	11-35		5000656	O-ring	1
	C149	11-35		739144	Orifice plug, 0.8mm	1
	C151	11-35		9007315-0510	Screw	4
	C152	11-35		1701029	Solenoid valve adapter	1
	C153	11-35		327007 (9005110-4400)	Plug assembly	1
	C154	11-35		4740154	Seal ring	2
	C155	11-35		1701291	Coil, 12 volt	1
	C200	11-35		4740154	Seal ring	4
	C300	11-35		5000164 (9007315-0507)	Screw	4
	QC100	11-35		11112230	Control Kit, electric proportional 12 volt, NO	1
	QC120	11-35		11103621	Solenoid valve seal kit	1
	QC125	11-35		11104459	Nut	1
	QC150	11-35		11104465	Solenoid valve kit, 12 volt	1



Control

(AY)



E101 700E

* = included in base motor seal kit Q210

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

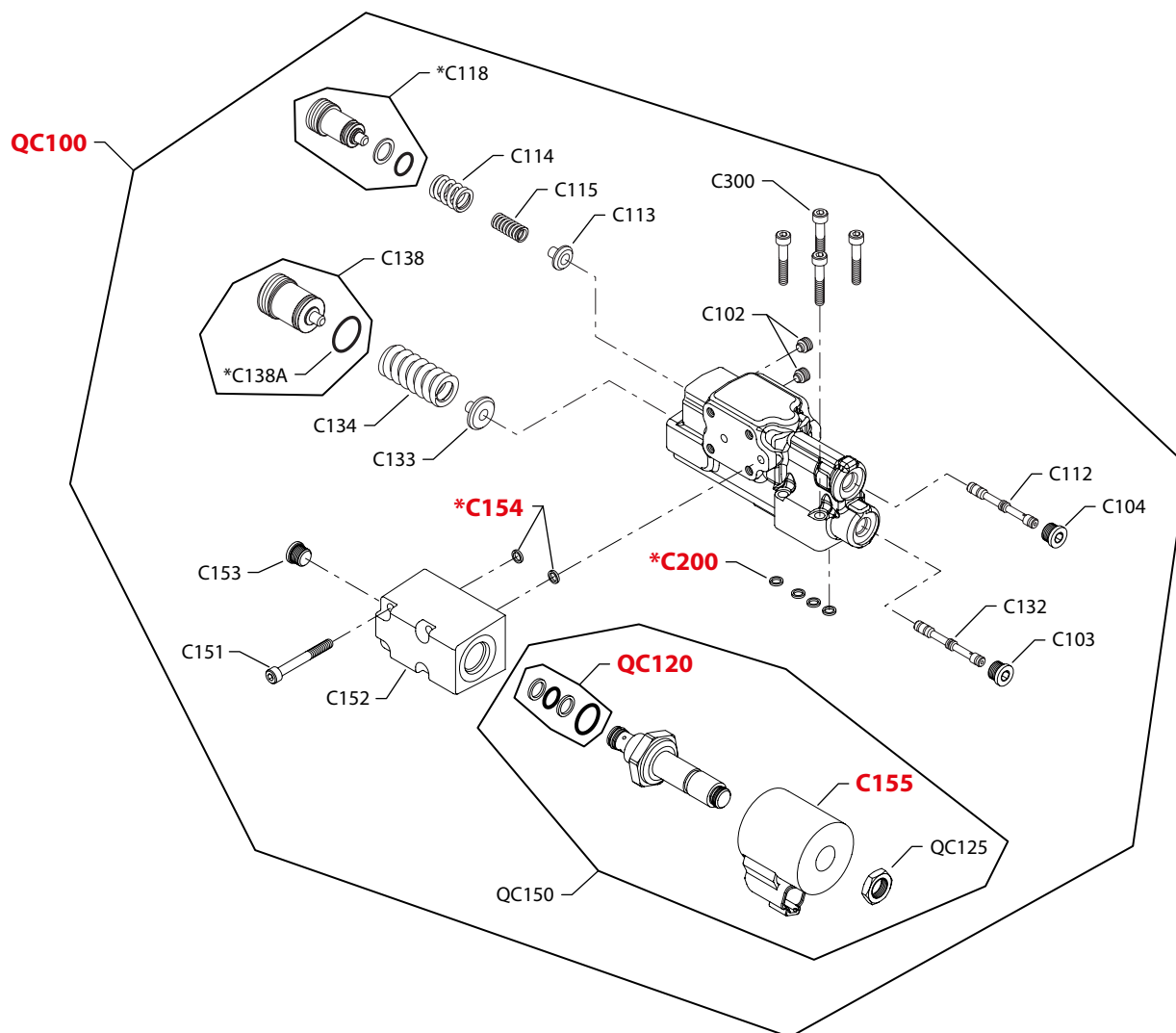
Control
Electric on/off control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
AY	C102	11-35		4740064	Set screw	2
	C103	11-35		327007 (9005110-4400)	Plug assembly	1
	C104	11-35		327007 (9005110-4400)	Plug assembly	1
	C112	11-35		4740300	Spool	1
	C113	11-35		4740301	Spring guide	1
	C114	11-35		4740061	Spring	1
	C115	11-35		4740062	Spring	1
	C118	11-35		11062214	Adjusting plug assembly (SB-2010-026)	1
	C132	11-35		1701124	Spool	1
	C133	11-35		4740247	Spring guide	1
	C134	11-35		4740051	Spring, PC outer	1
	C135	11-35		4740052	Spring, PC inner	1
	C138	11-35		11062379	Adjusting plug assembly (SB-2010-026)	1
	C138A	11-35		5000656	O-ring	1
	C151	11-35		9007315-0510	Screw	4
	C152	11-35		1701029	Solenoid valve adapter	1
	C153	11-35		327007 (9005110-4400)	Plug assembly	1
	C154	11-35		4740154	Seal ring	2
	C155	11-35		1701563	Coil, 24 volt	1
	C200	11-35		4740154	Seal ring	4
	C300	11-35		5000164 (9007315-0507)	Screw	4
	QC100	11-35		11112303	Control Kit, electric on/off, 24 volt, NC (SB-2012-011)	1
	QC120	11-35		11103621	Solenoid valve seal kit	1
	QC125	11-35		11104457	Nut	1
	QC150	11-35		11104464	Solenoid valve kit, 24 volt	1



Control

(BE)



E101 624E

* = included in base motor seal kit Q210

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

Parts Manual

Series 45 Frame F 74-90cc O. C. Pumps

Control

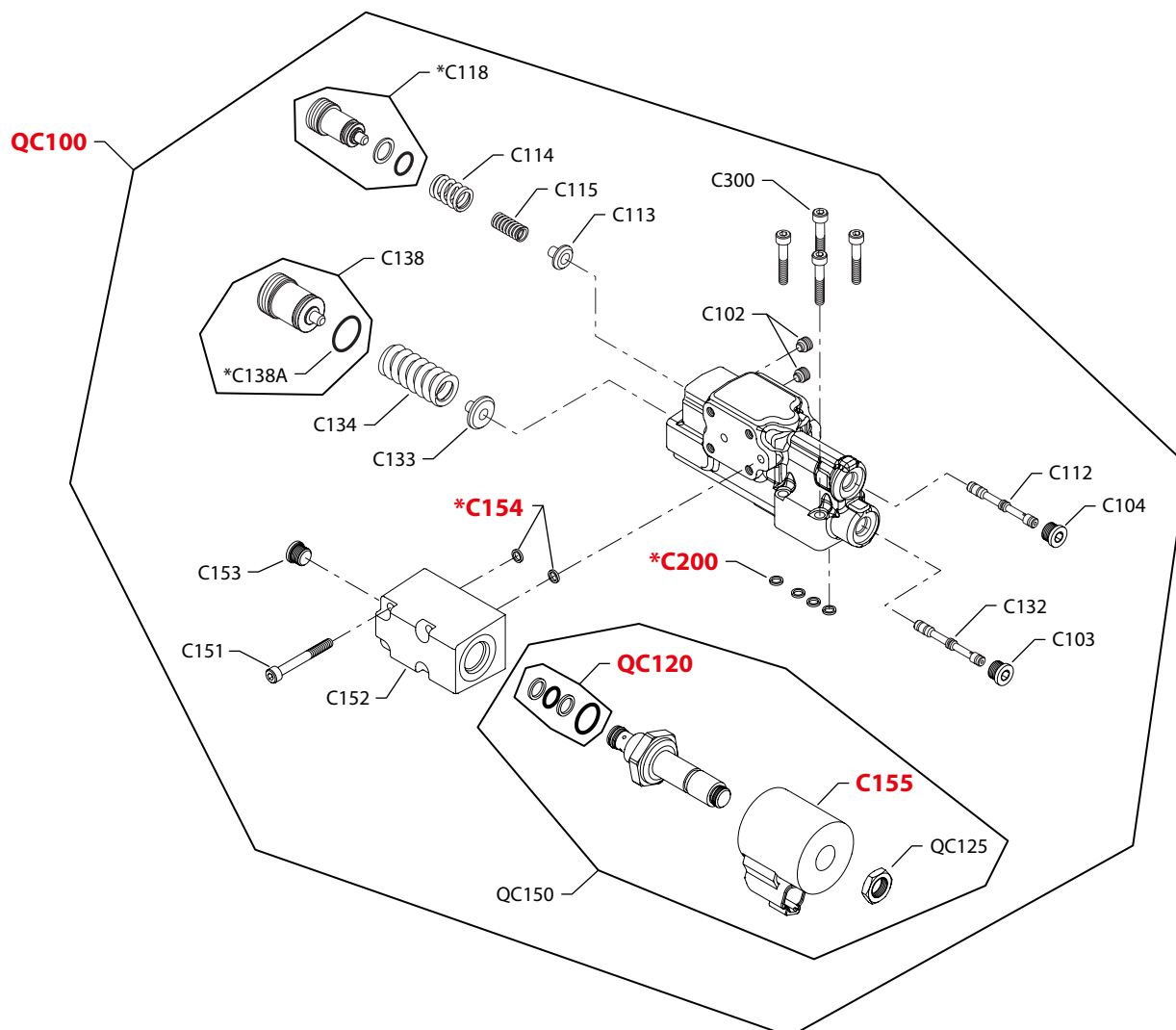
Electric on/off control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
BE	C102	08-08		4740064	Set screw	2
	C103	08-08		327007 (9005110-4400)	Plug assembly	1
	C104	08-08		327007 (9005110-4400)	Plug assembly	1
	C112	08-08		4740300	Spool	1
	C113	08-08		4740301	Spring guide	1
	C114	08-08		4740061	Spring	1
	C115	08-08		4740062	Spring	1
	C118	08-08		11062214	Adjusting plug assembly (SB-2010-026)	1
	C132	08-08		1701124	Spool	1
	C133	08-08		4740247	Spring guide	1
	C134	08-08		4740324	Spring, heavy	1
	C138	08-08		1700597	Adjusting plug assembly	1
	C138A	08-08		5000656	O-ring	1
	C151	08-08		9007315-0510	Screw	4
	C152	08-08		1701029	Solenoid valve adapter	1
	C153	08-08		327007 (9005110-4400)	Plug assembly	1
	C154	08-08		4740154	Seal ring	2
	C155	08-08		1701291	Coil, 12 volt	1
	C200	08-08		4740154	Seal ring	4
	C300	08-08		5000164 (9007315-0507)	Screw	4
	QC100	08-08		11112299	Control Kit, electric on/off, 12v, high, NC (SB-2012-011)	1
	QC120	08-08		11103621	Solenoid valve seal kit	1
	QC125	08-08		11104457	Nut	1
	QC150	08-08		11104463	Solenoid valve kit, 12 volt	1



Control

(BF)



E101 624E

* = included in base motor seal kit Q210

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

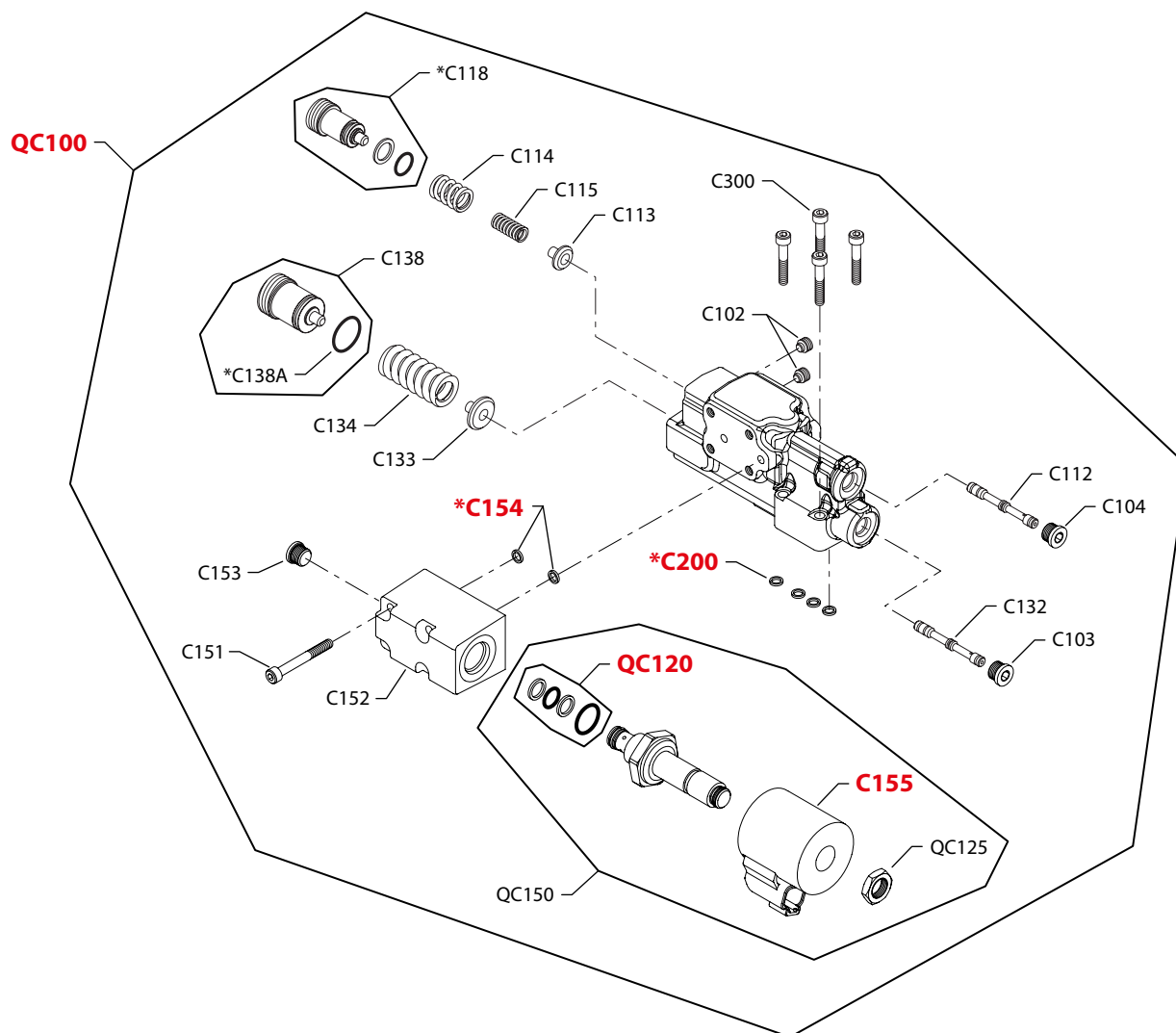
Control
Electric on/off control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
BF	C102	08-08		4740064	Set screw	2
	C103	08-08		327007 (9005110-4400)	Plug assembly	1
	C104	08-08		327007 (9005110-4400)	Plug assembly	1
	C112	08-08		4740300	Spool	1
	C113	08-08		4740301	Spring guide	1
	C114	08-08		4740061	Spring	1
	C115	08-08		4740062	Spring	1
	C118	08-08		11062214	Adjusting plug assembly (SB-2010-026)	1
	C132	08-08		1701124	Spool	1
	C133	08-08		4740247	Spring guide	1
	C134	08-08		4740324	Spring, heavy	1
	C138	08-08		1700597	Adjusting plug assembly	1
	C138A	08-08		5000656	O-ring	1
	C151	08-08		9007315-0510	Screw	4
	C152	08-08		1701029	Solenoid valve adapter	1
	C153	08-08		327007 (9005110-4400)	Plug assembly	1
	C154	08-08		4740154	Seal ring	2
	C155	08-08		1701291	Coil, 12 volt	1
	C200	08-08		4740154	Seal ring	4
	C300	08-08		5000164 (9007315-0507)	Screw	4
	QC100	08-08		11112300	Control Kit, electric on/off, 12v, high, NO (SB-2012-011)	1
	QC120	08-08		11103621	Solenoid valve seal kit	1
	QC125	08-08		11104457	Nut	1
	QC150	08-08		11104461	Solenoid valve kit, 12 volt	1



Control

(BG)



E101 624E

* = included in base motor seal kit Q210

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

Parts Manual

Series 45 Frame F 74-90cc O. C. Pumps

Control

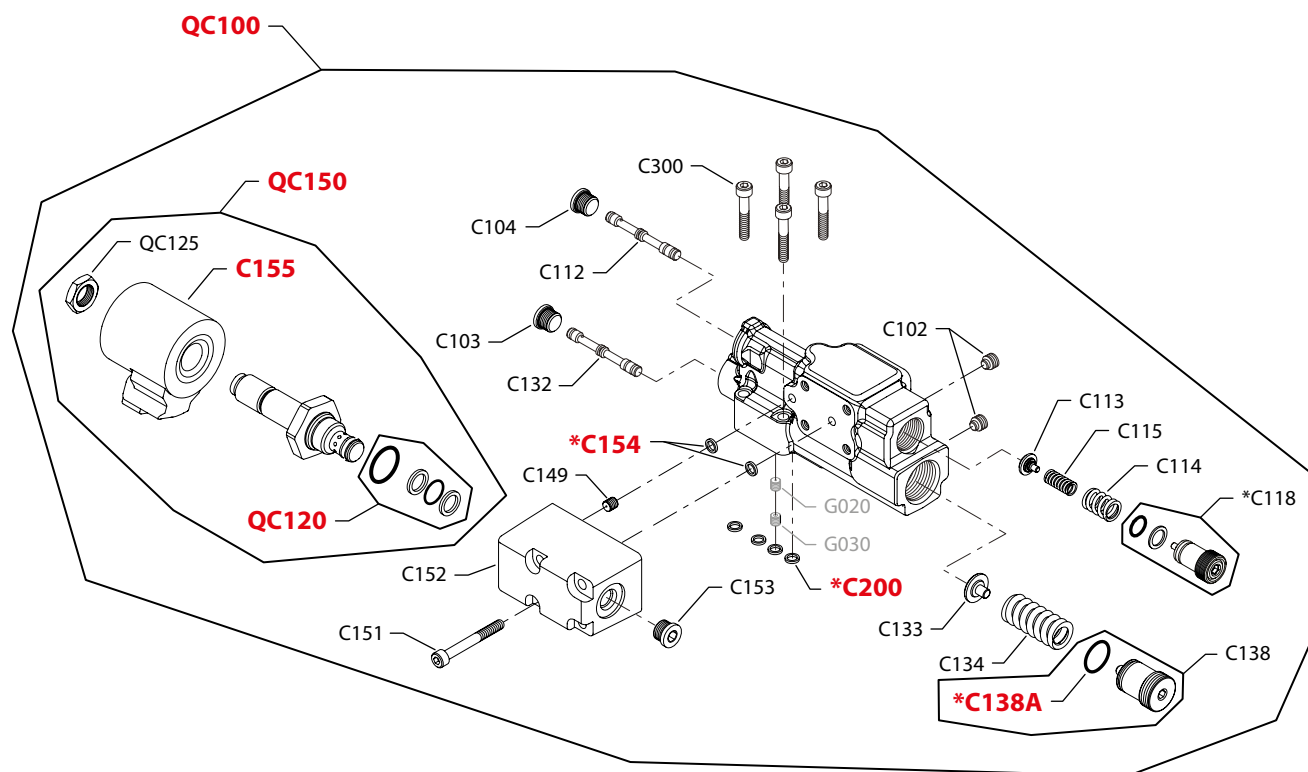
Electric on/off control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
BG	C102	11-35		4740064	Set screw	2
	C103	11-35		327007 (9005110-4400)	Plug assembly	1
	C104	11-35		327007 (9005110-4400)	Plug assembly	1
	C112	11-35		4740300	Spool	1
	C113	11-35		4740301	Spring guide	1
	C114	11-35		4740061	Spring	1
	C115	11-35		4740062	Spring	1
	C118	11-35		11062214	Adjusting plug assembly (SB-2010-026)	1
	C132	11-35		1701124	Spool	1
	C133	11-35		4740247	Spring guide	1
	C134	11-35		4740324	Spring, heavy	1
	C138	11-35		1700597	Adjusting plug assembly	1
	C138A	11-35		5000656	O-ring	1
	C151	11-35		9007315-0510	Screw	4
	C152	11-35		1701029	Solenoid valve adapter	1
	C153	11-35		327007 (9005110-4400)	Plug assembly	1
	C154	11-35		4740154	Seal ring	2
	C155	11-35		1701563	Coil, 24 volt	1
	C200	11-35		4740154	Seal ring	4
	C300	11-35		5000164 (9007315-0507)	Screw	4
	QC100	11-35		11112289	Control Kit, electric on/off, 24v, high, NC (SB-2012-011)	1
	QC120	11-35		11103621	Solenoid valve seal kit	1
	QC125	11-35		11104457	Nut	1
	QC150	11-35		11104464	Solenoid valve kit, 24 volt	1



Control

(BH)



E101 831E

* = included in base motor seal kit Q210

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

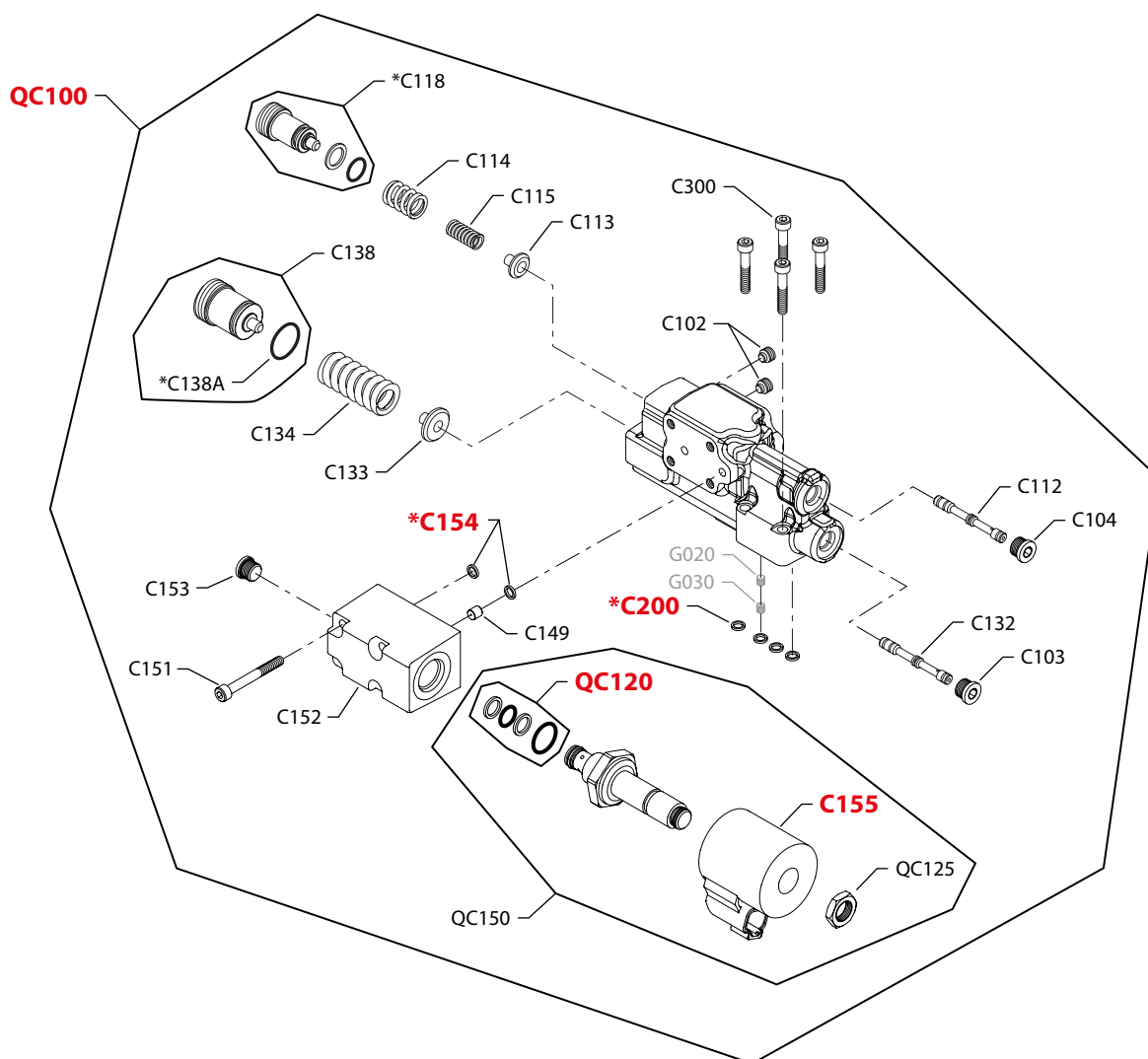
Control
Electric proportional control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
BH	C102	11-51		4740064	Set screw	2
	C103	11-51		327007 (9005110-4400)	Plug assembly	1
	C104	11-51		327007 (9005110-4400)	Plug assembly	1
	C112	11-51		1701439	Spool	1
	C113	11-51		4740301	Spring guide	1
	C114	11-51		4740061	Spring	1
	C115	11-51		4740062	Spring	1
	C118	11-51		11062214	Adjusting plug assembly (SB-2010-026)	1
	C132	11-51		1701124	Spool	1
	C133	11-51		4740247	Spring guide	1
	C134	11-51		4740324	Spring, PC heavy	1
	C138	11-51		1700597	Adjusting plug assembly	1
	C138A	11-51		5000656	O-ring	1
	C149	11-51		739144	Orifice plug, 0.8mm	1
	C151	11-51		9007315-0510	Screw	4
	C152	11-51		1701029	Solenoid valve adapter	1
	C153	11-51		327007 (9005110-4400)	Plug assembly	1
	C154	11-51		4740154	Seal ring	2
	C155	11-51		1701291	Coil, 12 volt	1
	C200	11-51		4740154	Seal ring	4
	C300	11-51		5000164 (9007315-0507)	Screw	4
	QC100	11-51		11112216	Control Kit, electric prop., 12v, high, NC (SB-2012-011)	1
	QC120	11-51		11103621	Solenoid valve seal kit	1
	QC125	11-51		11104460	Nut	1
	QC150	11-51		11104467	Solenoid valve kit, 12 volt	1



Control

(BK)



E101 834E

* = included in base motor seal kit Q210

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

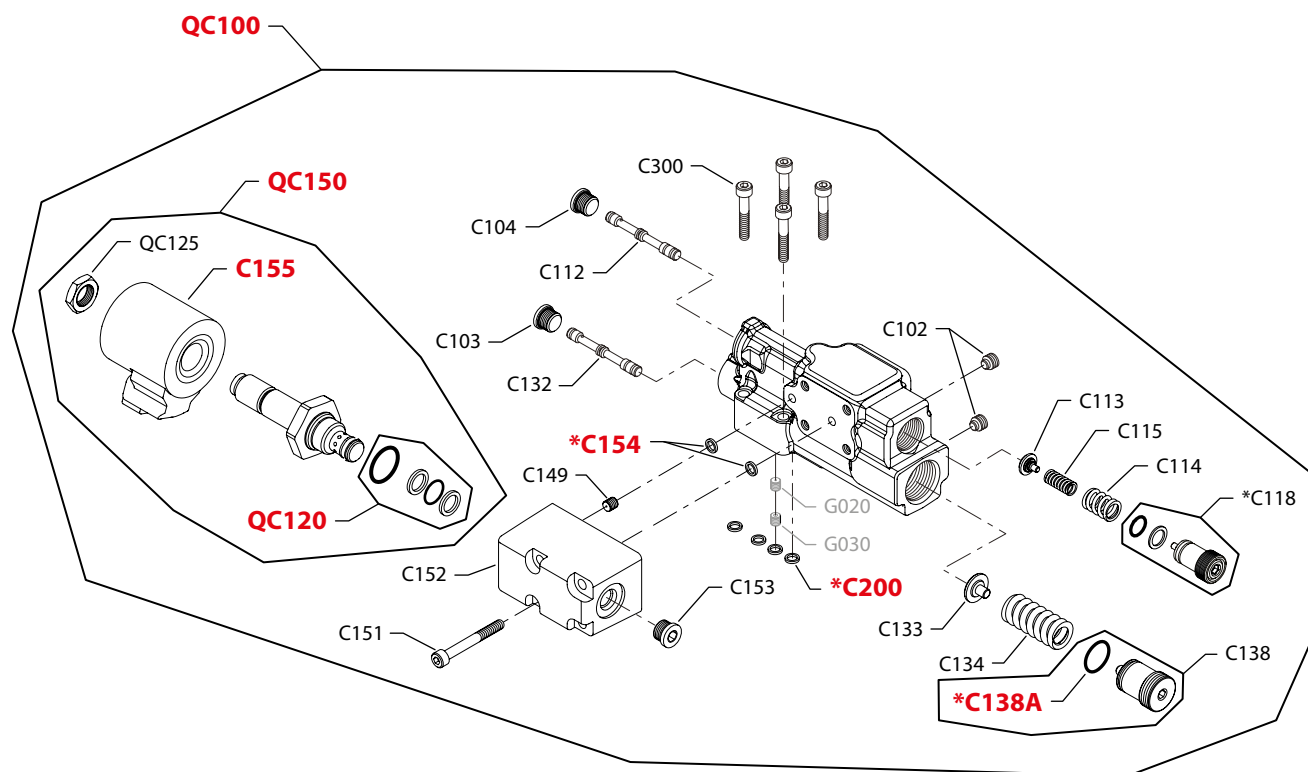
Control
Electric proportional control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
BK	C102	08-08		4740064	Set screw	2
	C103	08-08		327007 (9005110-4400)	Plug assembly	1
	C104	08-08		327007 (9005110-4400)	Plug assembly	1
	C112	08-08		1701439	Spool	1
	C113	08-08		4740301	Spring guide	1
	C114	08-08		4740061	Spring	1
	C115	08-08		4740062	Spring	1
	C118	08-08		11062214	Adjusting plug assembly (SB-2010-026)	1
	C132	08-08		1701124	Spool	1
	C133	08-08		4740247	Spring guide	1
	C134	08-08		4740324	Spring, heavy	1
	C138	08-08		1700597	Adjusting plug assembly	1
	C138A	08-08		5000656	O-ring	1
	C149	08-08		739144	Orifice plug, 0.8mm	1
	C151	08-08		9007315-0510	Screw	4
	C152	08-08		1701029	Solenoid valve adapter	1
	C153	08-08		327007 (9005110-4400)	Plug assembly	1
	C154	08-08		4740154	Seal ring	2
	C155	08-08		1701563	Coil, 24 volt	1
	C200	08-08		4740154	Seal ring	4
	C300	08-08		5000164 (9007315-0507)	Screw	4
	QC100	08-08		11112302	Control Kit, electric prop., 24v, high, NC (SB-2012-011)	1
	QC120	08-08		11103621	Solenoid valve seal kit	1
	QC125	08-08		11104460	Nut	1
	QC150	08-08		11104468	Solenoid valve kit, 24 volt	1



Control

(BL)



E101 831E

* = included in base motor seal kit Q210

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

Parts Manual

Series 45 Frame F 74-90cc O. C. Pumps

Control

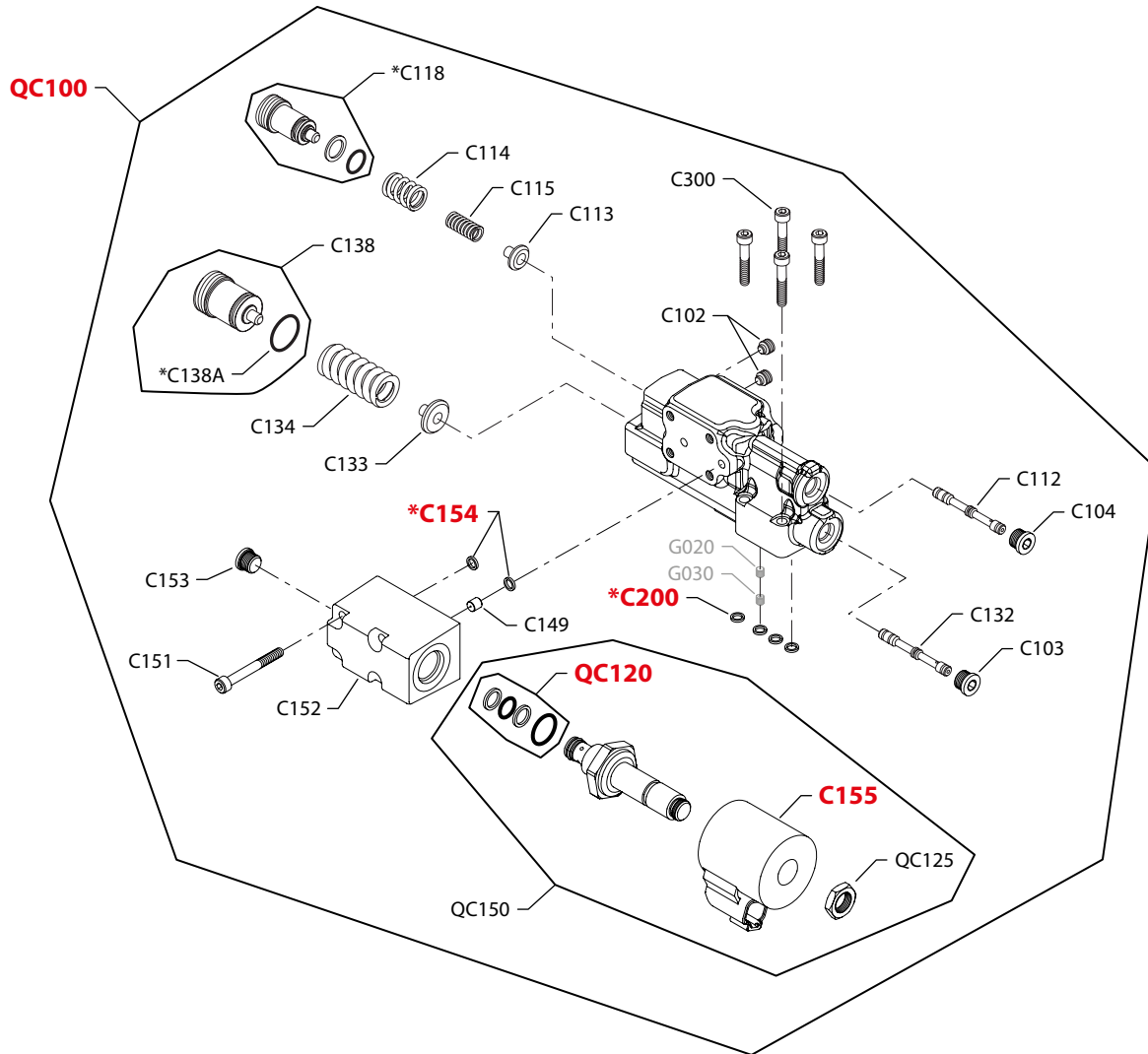
Electric proportional control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
BL	C102	11-35		4740064	Set screw	2
	C103	11-35		327007 (9005110-4400)	Plug assembly	1
	C104	11-35		327007 (9005110-4400)	Plug assembly	1
	C112	11-35		1701439	Spool	1
	C113	11-35		4740301	Spring guide	1
	C114	11-35		4740061	Spring	1
	C115	11-35		4740062	Spring	1
	C118	11-35		11062214	Adjusting plug assembly (SB-2010-026)	1
	C132	11-35		1701124	Spool	1
	C133	11-35		4740247	Spring guide	1
	C134	11-35		4740324	Spring, PC heavy	1
	C138	11-35		1700597	Adjusting plug assembly	1
	C138A	11-35		5000656	O-ring	1
	C149	11-35		739144	Orifice plug, 0.8mm	1
	C151	11-35		9007315-0510	Screw	4
	C152	11-35		1701029	Solenoid valve adapter	1
	C153	11-35		327007 (9005110-4400)	Plug assembly	1
	C154	11-35		4740154	Seal ring	2
	C155	11-35		1701563	Coil, 24 volt	1
	C200	11-35		4740154	Seal ring	4
	C300	11-35		5000164 (9007315-0507)	Screw	4
	QC100	11-35		11112224	Control Kit, electric prop., 24v, high, NC (SB-2012-011)	1
	QC120	11-35		11103621	Solenoid valve seal kit	1
	QC125	11-35		11104460	Nut	1
	QC150	11-35		11104468	Solenoid valve kit, 24 volt	1



Control

(BM)



E101 834E

* = included in base motor seal kit Q210

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

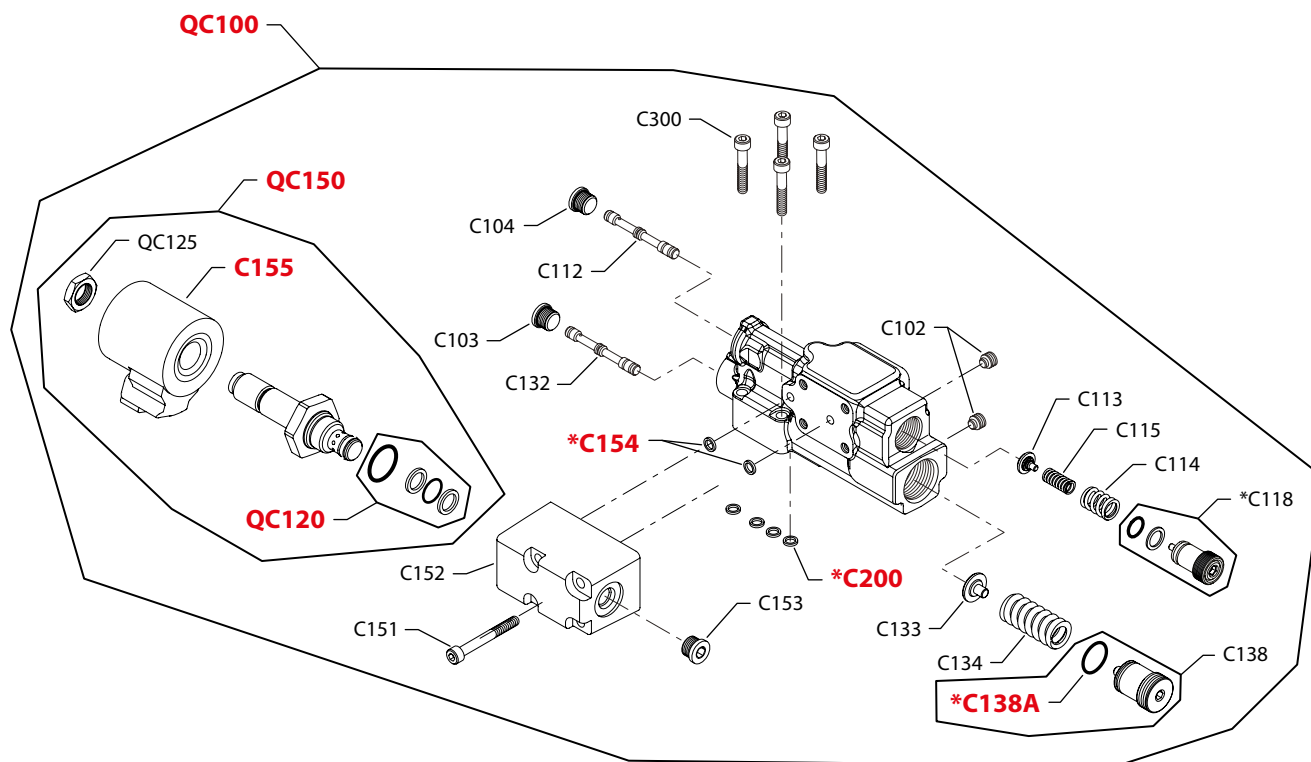
Control
Electric proportional control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
BM	C102	11-51		4740064	Set screw	2
	C103	11-51		327007 (9005110-4400)	Plug assembly	1
	C104	11-51		327007 (9005110-4400)	Plug assembly	1
	C112	11-51		1701439	Spool	1
	C113	11-51		4740301	Spring guide	1
	C114	11-51		4740061	Spring	1
	C115	11-51		4740062	Spring	1
	C118	11-51		11062214	Adjusting plug assembly (SB-2010-026)	1
	C132	11-51		1701124	Spool	1
	C133	11-51		4740247	Spring guide	1
	C134	11-51		4740324	Spring, heavy	1
	C138	11-51		1700597	Adjusting plug assembly	1
	C138A	11-51		5000656	O-ring	1
	C149	11-51		739144	Orifice plug, 0.8mm	1
	C151	11-51		9007315-0510	Screw	4
	C152	11-51		1701029	Solenoid valve adapter	1
	C153	11-51		327007 (9005110-4400)	Plug assembly	1
	C154	11-51		4740154	Seal ring	2
	C155	11-51		1701291	Coil, 12 volt	1
	C200	11-51		4740154	Seal ring	4
	C300	11-51		5000164 (9007315-0507)	Screw	4
	QC100	11-51		11112298	Control Kit, electric prop., 12v, high, NC (SB-2012-011)	1
	QC120	11-51		11103621	Solenoid valve seal kit	1
	QC125	11-51		11104460	Nut	1
	QC150	11-51		11104467	Solenoid valve kit, 12 volt	1



Control

(BN & BR)



E101 831E

* = included in base motor seal kit Q210

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

Parts Manual

Series 45 Frame F 74-90cc O. C. Pumps

Control

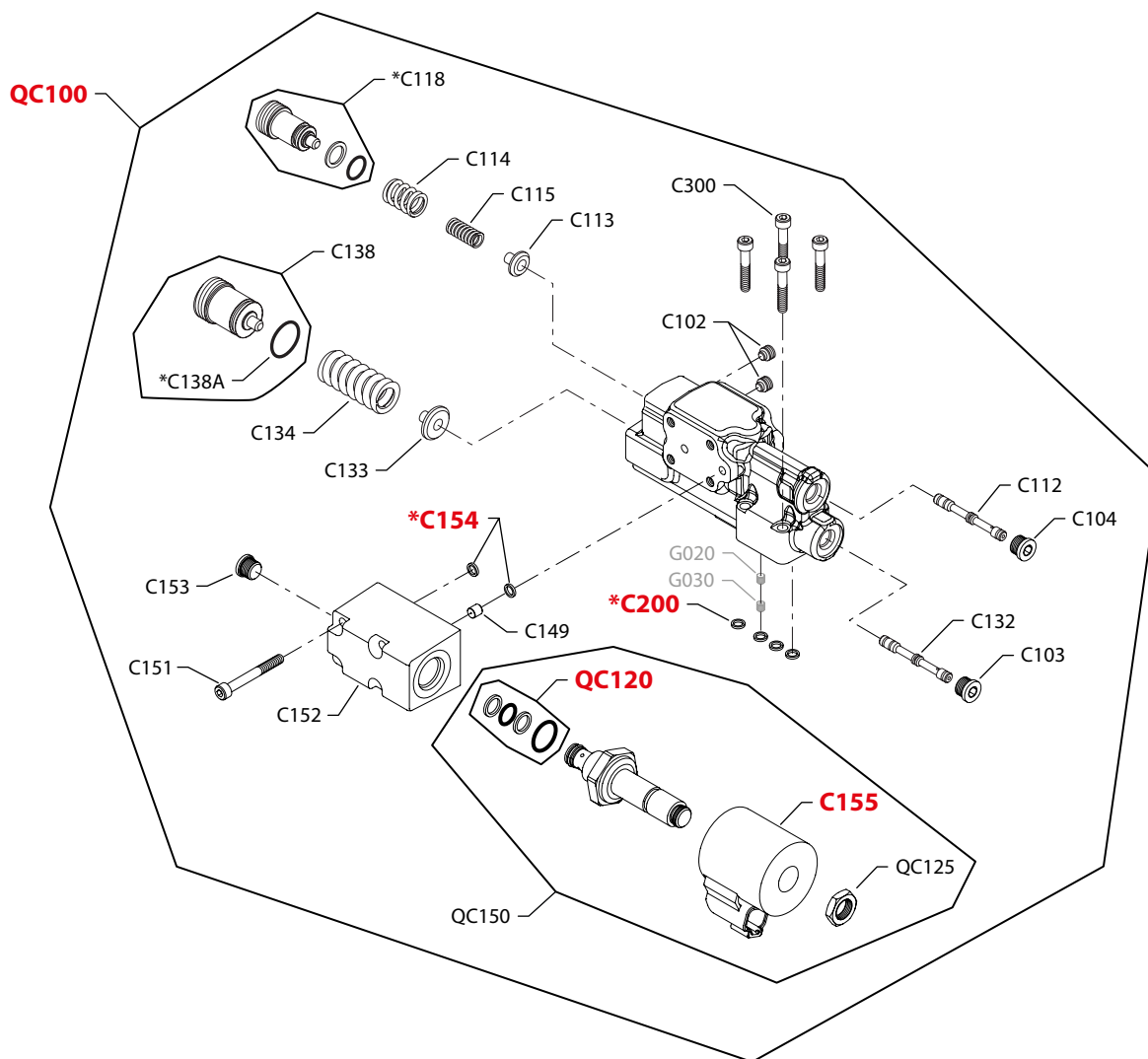
Electric on/off control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
BN	C102	08-08		4740064	Set screw	2
	C103	08-08		327007 (9005110-4400)	Plug assembly	1
	C104	08-08		327007 (9005110-4400)	Plug assembly	1
	C112	08-08		4740300	Spool	1
	C113	08-08		4740301	Spring guide	1
	C114	08-08		4740061	Spring	1
	C115	08-08		4740062	Spring	1
	C118	08-08		11062214	Adjusting plug assembly (SB-2010-026)	1
	C132	08-08		1701124	Spool	1
	C133	08-08		4740247	Spring guide	1
	C134	08-08		4740324	Spring, PC heavy	1
	C138	08-08		1700597	Adjusting plug assembly	1
	C138A	08-08		5000656	O-ring	1
	C151	08-08		9007315-0510	Screw	4
	C152	08-08		1701029	Solenoid valve adapter	1
	C153	08-08		327007 (9005110-4400)	Plug assembly	1
	C154	08-08		4740154	Seal ring	2
	C155	08-08		1701291	Coil, 12 volt	1
	C200	08-08		4740154	Seal ring	4
	C300	08-08		5000164 (9007315-0507)	Screw	4
	QC100	08-08		11112222	Control Kit, electric on/off, 12v, high, NO (SB-2012-011)	1
	QC120	08-08		11103621	Solenoid valve seal kit	1
	QC125	08-08		11104457	Nut	1
	QC150	08-08		11104461	Solenoid valve kit, 12 volt	1
BR	C102	08-08		4740064	Set screw	2
	C103	08-08		327007 (9005110-4400)	Plug assembly	1
	C104	08-08		327007 (9005110-4400)	Plug assembly	1
	C112	08-08		4740300	Spool	1
	C113	08-08		4740301	Spring guide	1
	C114	08-08		4740061	Spring	1
	C115	08-08		4740062	Spring	1
	C118	08-08		11062214	Adjusting plug assembly (SB-2010-026)	1
	C132	08-08		1701124	Spool	1
	C133	08-08		4740247	Spring guide	1
	C134	08-08		4740324	Spring, PC heavy	1
	C138	08-08		1700597	Adjusting plug assembly	1
	C138A	08-08		5000656	O-ring	1
	C151	08-08		9007315-0510	Screw	4
	C152	08-08		1701029	Solenoid valve adapter	1
	C153	08-08		327007 (9005110-4400)	Plug assembly	1
	C154	08-08		4740154	Seal ring	2
	C155	08-08		1701291	Coil, 12 volt	1
	C200	08-08		4740154	Seal ring	4
	C300	08-08		5000164 (9007315-0507)	Screw	4
	QC100	08-08		11112219	Control Kit, electric on/off, 12v, high, NC (SB-2012-011)	1
	QC120	08-08		11103621	Solenoid valve seal kit	1
	QC125	08-08		11104457	Nut	1
	QC150	08-08		11104463	Solenoid valve kit, 12 volt	1



Control

(BW)



E101 834E

* = included in base motor seal kit Q210

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

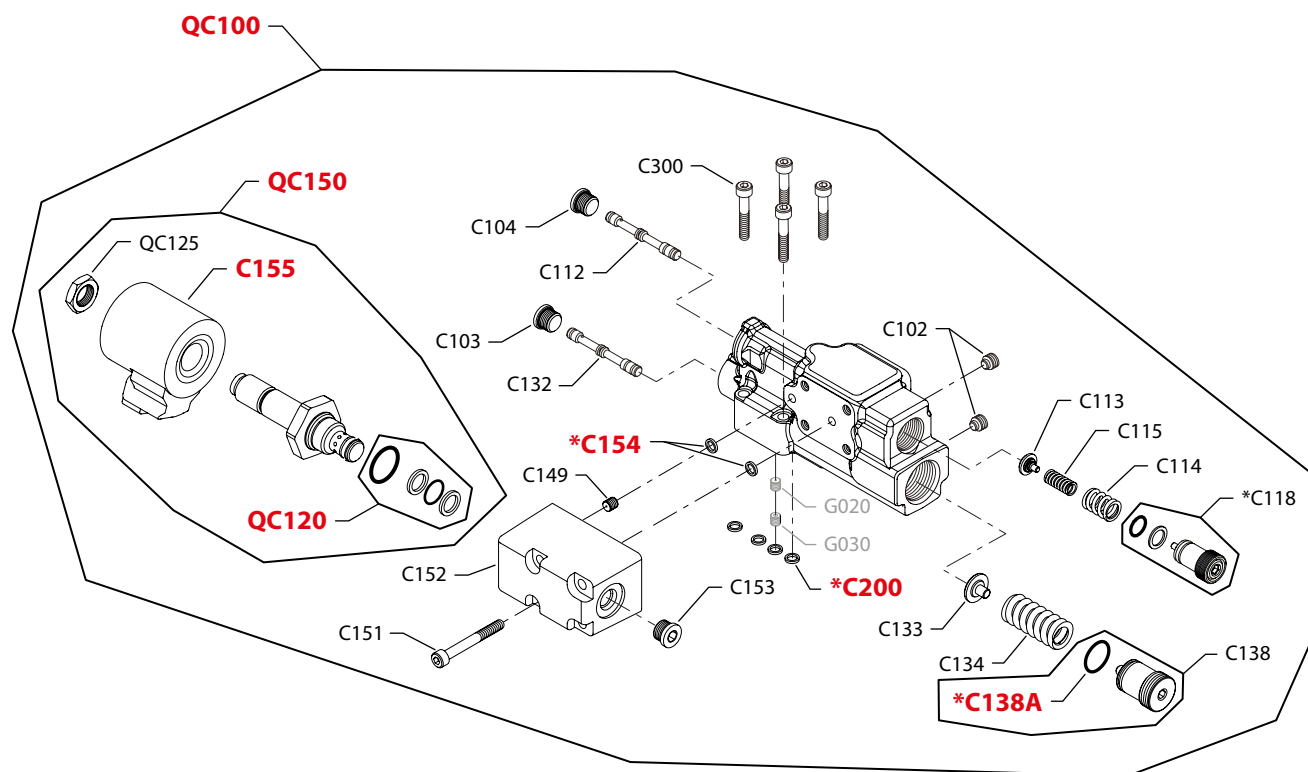

Control
Electric proportional control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
BW	C102	11-51		4740064	Set screw	2
	C103	11-51		327007 (9005110-4400)	Plug assembly	1
	C104	11-51		327007 (9005110-4400)	Plug assembly	1
	C112	11-51		1701439	Spool	1
	C113	11-51		4740301	Spring guide	1
	C114	11-51		4740061	Spring	1
	C115	11-51		4740062	Spring	1
	C118	11-51		11062214	Adjusting plug assembly	1
	C132	11-51		1701124	Spool	1
	C133	11-51		4740247	Spring guide	1
	C134	11-51		4740324	Spring, heavy	1
	C138	11-51		1700597	Adjusting plug assembly	1
	C138A	11-51		5000656	O-ring	1
	C149	11-51		739144	Orifice plug, 0.8mm	1
	C151	11-51		9007315-0510	Screw	4
	C152	11-51		1701029	Solenoid valve adapter	1
	C153	11-51		327007 (9005110-4400)	Plug assembly	1
	C154	11-51		4740154	Seal ring	2
	C155	11-51		1701291	Coil, 12 volt	1
	C200	11-51		4740154	Seal ring	4
	C300	11-51		5000164 (9007315-0507)	Screw	4
	QC100	11-51		11112293	Control Kit, electric prop., 12v, high, NO (SB-2012-011)	1
	QC120	11-51		11103621	Solenoid valve seal kit	1
	QC125	11-51		11104459	Nut	1
	QC150	11-51		11104465	Solenoid valve kit, 12 volt	1



Control

(BX)



E101 831E

* = included in base motor seal kit Q210

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

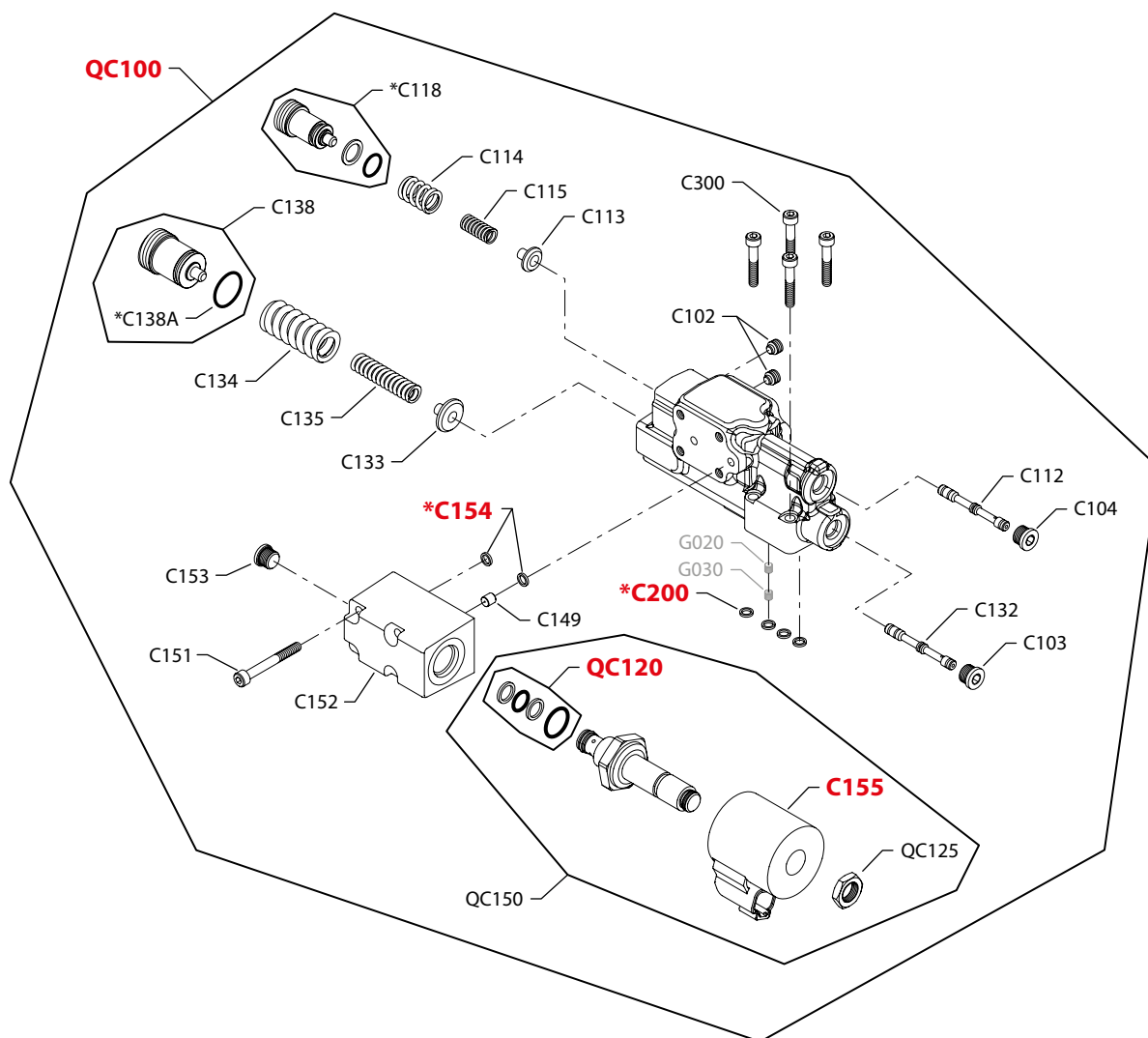
Control
Electric proportional control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
BX	C102	11-51		4740064	Set screw	2
	C103	11-51		327007 (9005110-4400)	Plug assembly	1
	C104	11-51		327007 (9005110-4400)	Plug assembly	1
	C112	11-51		1701439	Spool	1
	C113	11-51		4740301	Spring guide	1
	C114	11-51		4740061	Spring	1
	C115	11-51		4740062	Spring	1
	C118	11-51		11062214	Adjusting plug assembly (SB-2010-026)	1
	C132	11-51		1701124	Spool	1
	C133	11-51		4740247	Spring guide	1
	C134	11-51		4740324	Spring, PC heavy	1
	C138	11-51		1700597	Adjusting plug assembly	1
	C138A	11-51		5000656	O-ring	1
	C149	11-51		739144	Orifice plug, 0.8mm	1
	C151	11-51		9007315-0510	Screw	4
	C152	11-51		1701029	Solenoid valve adapter	1
	C153	11-51		327007 (9005110-4400)	Plug assembly	1
	C154	11-51		4740154	Seal ring	2
	C155	11-51		1701291	Coil, 12 volt	1
	C200	11-51		4740154	Seal ring	4
	C300	11-51		5000164 (9007315-0507)	Screw	4
	QC100	11-51		11112214	Control Kit, electric prop., 12v, high, NO (SB-2012-011)	1
	QC120	11-51		11103621	Solenoid valve seal kit	1
	QC125	11-51		11104459	Nut	1
	QC150	11-51		11104465	Solenoid valve kit, 12 volt	1



Control

(CK)



E101 833E

* = included in base motor seal kit Q210

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

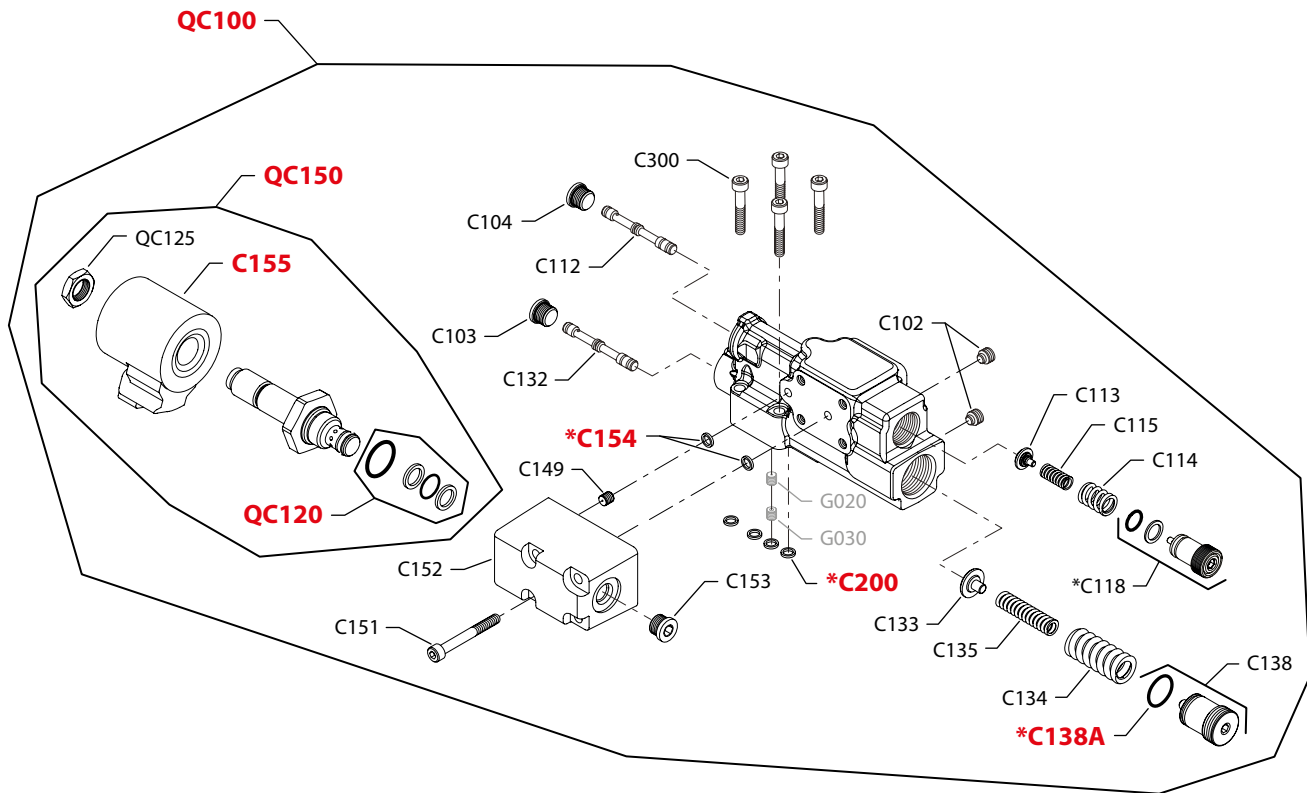

Control
Electric proportional control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
CK	C102	11-42		4740064	Set screw	2
	C103	11-42		327007 (9005110-4400)	Plug assembly	1
	C104	11-42		327007 (9005110-4400)	Plug assembly	1
	C112	11-42		1701439	Spool	1
	C113	11-42		4740301	Spring guide	1
	C114	11-42		4740061	Spring	1
	C115	11-42		4740062	Spring	1
	C118	11-42		11062214	Adjusting plug assembly (SB-2010-026)	1
	C132	11-42		1701124	Spool	1
	C133	11-42		4740247	Spring guide	1
	C134	11-42		4740051	Spring, PC outer	1
	C135	11-42		4740052	Spring, PC inner	1
	C138	11-42		11062379	Adjusting plug assembly	1
	C138A	11-42		5000656	O-ring	1
	C149	11-42		739144	Orifice plug, 0.8mm	1
	C151	11-42		9007315-0510	Screw	4
	C152	11-42		1701029	Solenoid valve adapter	1
	C153	11-42		327007 (9005110-4400)	Plug assembly	1
	C154	11-42		4740154	Seal ring	2
	C155	11-42		1701563	Coil, 24 volt	1
	C200	11-42		4740154	Seal ring	4
	C300	11-42		5000164 (9007315-0507)	Screw	4
	QC100	11-42		11112305	Control Kit, electric prop., 24 volt, NO (SB-2012-011)	1
	QC120	11-42		11103621	Solenoid valve seal kit	1
	QC125	11-42		11104459	Nut	1
	QC150	11-42		11104466	Solenoid valve kit, 24 volt	1



Control

(CL)



E101 621E

* = included in base motor seal kit Q210

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

Parts Manual

Series 45 Frame F 74-90cc O. C. Pumps

Control

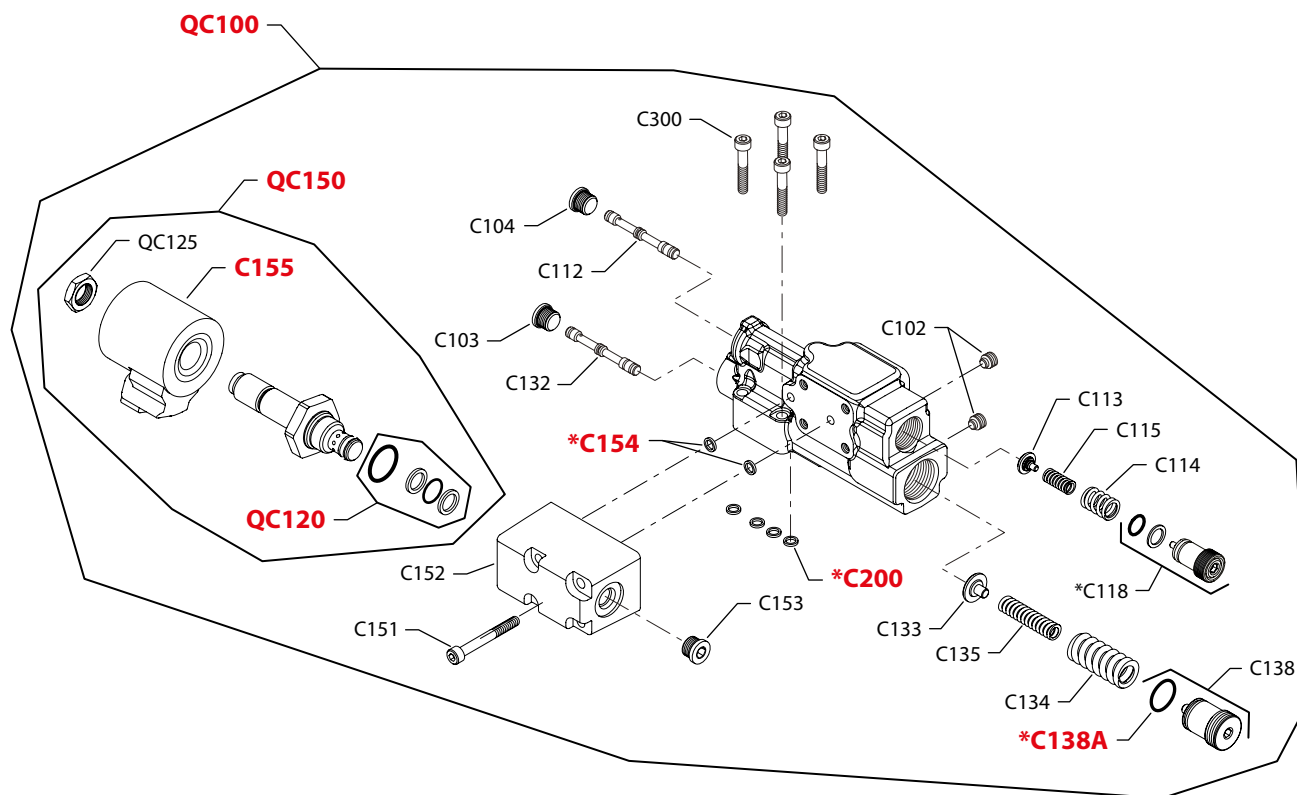
Electric proportional control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
CL	C102	11-35		4740064	Set screw	2
	C103	11-35		327007 (9005110-4400)	Plug assembly	1
	C104	11-35		327007 (9005110-4400)	Plug assembly	1
	C112	11-35		1701439	Spool	1
	C113	11-35		4740301	Spring guide	1
	C114	11-35		4740061	Spring	1
	C115	11-35		4740062	Spring	1
	C118	11-35		11062214	Adjusting plug assembly (SB-2010-026)	1
	C132	11-35		1701124	Spool	1
	C133	11-35		4740247	Spring guide	1
	C134	11-35		4740051	Spring, PC outer	1
	C135	11-35		4740052	Spring, PC inner	1
	C138	11-35		11062379	Adjusting plug assembly (SB-2010-026)	1
	C138A	11-35		5000656	O-ring	1
	C149	11-35		739144	Orifice plug, 0.8mm	1
	C151	11-35		9007315-0510	Screw	4
	C152	11-35		1701029	Solenoid valve adapter	1
	C153	11-35		327007 (9005110-4400)	Plug assembly	1
	C154	11-35		4740154	Seal ring	2
	C155	11-35		1701563	Coil, 24 volt	1
	C200	11-35		4740154	Seal ring	4
	C300	11-35		5000164 (9007315-0507)	Screw	4
	QC100	11-35		11112231	Control Kit, electric proportional 24 volt, NO	1
	QC120	11-35		11103621	Solenoid valve seal kit	1
	QC125	11-35		11104459	Nut	1
	QC150	11-35		11104466	Solenoid valve kit, 24 volt	1



Control

(CN & CR)



E101 622E

* = included in base motor seal kit Q210

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

Parts Manual

Series 45 Frame F 74-90cc O. C. Pumps

Control

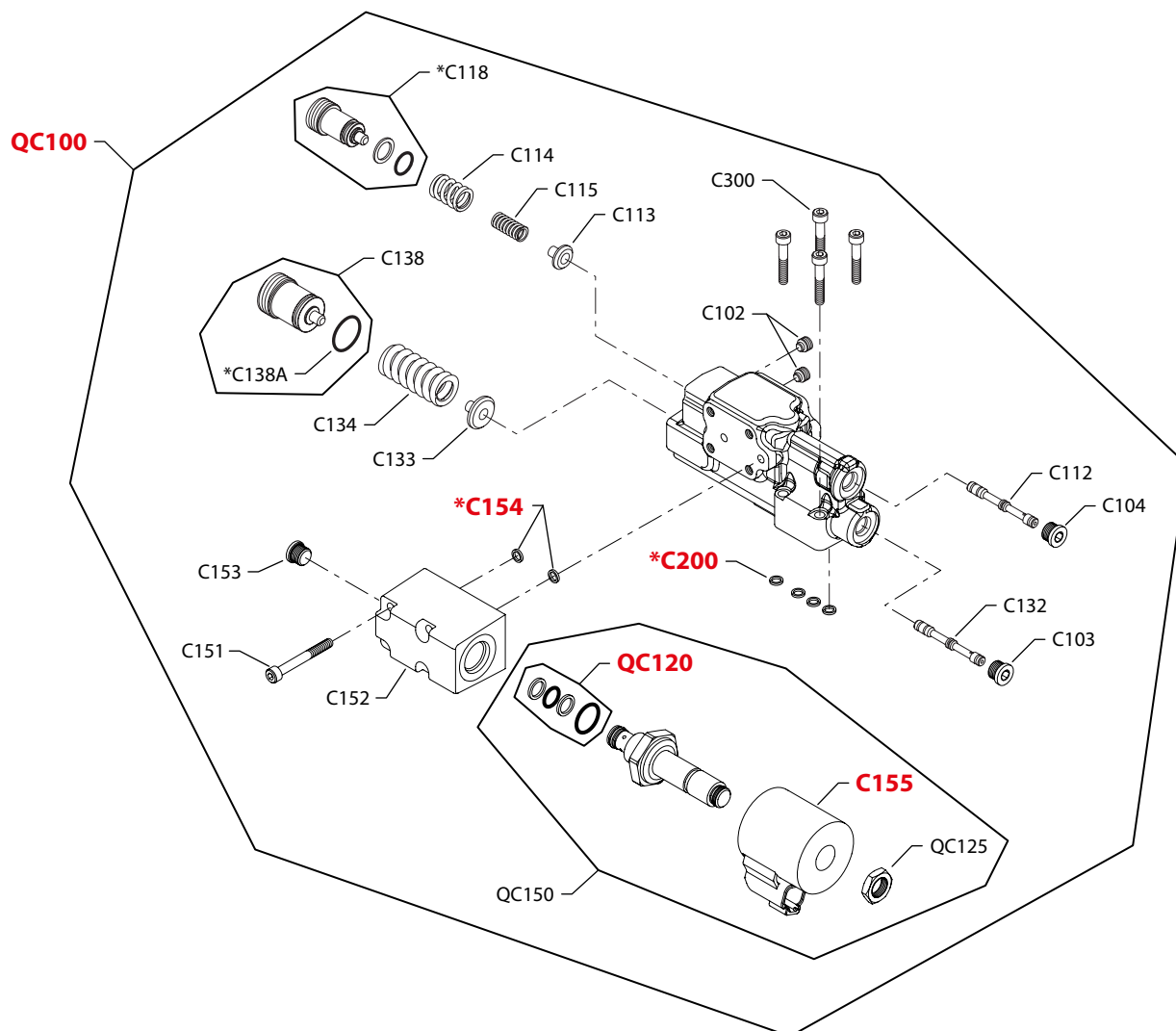
Electric on/off control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
CN	C102	11-51		4740064	Set screw	2
	C103	11-51		327007 (9005110-4400)	Plug assembly	1
	C104	11-51		327007 (9005110-4400)	Plug assembly	1
	C112	11-51		4740300	Spool	1
	C113	11-51		4740301	Spring guide	1
	C114	11-51		4740061	Spring	1
	C115	11-51		4740062	Spring	1
	C118	11-51		11062214	Adjusting plug assembly (SB-2010-026)	1
	C132	11-51		1701124	Spool	1
	C133	11-51		4740247	Spring guide	1
	C134	11-51		4740051	Spring, PC outer	1
	C135	11-51		4740052	Spring, PC inner	1
	C138	11-51		11062379	Adjusting plug assembly (SB-2010-026)	1
	C138A	11-51		5000656	O-ring	1
	C151	11-51		9007315-0510	Screw	4
	C152	11-51		1701029	Solenoid valve adapter	1
	C153	11-51		327007 (9005110-4400)	Plug assembly	1
	C154	11-51		4740154	Seal ring	2
	C155	11-51		1701563	Coil, 24 volt	1
	C200	11-51		4740154	Seal ring	4
	C300	11-51		5000164 (9007315-0507)	Screw	4
	QC100	11-51		11112226	Control Kit, electric on/off 24v, NO (SB-2012-011)	1
	QC120	11-51		11103621	Solenoid valve seal kit	1
	QC125	11-51		11104457	Nut	1
	QC150	11-51		11104462	Solenoid valve kit, 24 volt	1
\	CR	09-05		4740064	Set screw	2
	C103	09-05		327007 (9005110-4400)	Plug assembly	1
	C104	09-05		327007 (9005110-4400)	Plug assembly	1
	C112	09-05		4740300	Spool	1
	C113	09-05		4740301	Spring guide	1
	C114	09-05		4740061	Spring	1
	C115	09-05		4740062	Spring	1
	C118	09-05		11062214	Adjusting plug assembly (SB-2010-026)	1
	C132	09-05		1701124	Spool	1
	C133	09-05		4740247	Spring guide	1
	C134	09-05		4740051	Spring, PC outer	1
	C135	09-05		4740052	Spring, PC inner	1
	C138	09-05		11062379	Adjusting plug assembly (SB-2010-026)	1
	C138A	09-05		5000656	O-ring	1
	C151	09-05		9007315-0510	Screw	4
	C152	09-05		1701029	Solenoid valve adapter	1
	C153	09-05		327007 (9005110-4400)	Plug assembly	1
	C154	09-05		4740154	Seal ring	2
	C155	09-05		1701563	Coil, 24 volt	1
	C200	09-05		4740154	Seal ring	4
	C300	09-05		5000164 (9007315-0507)	Screw	4
	QC100	09-05		11112217	Control Kit, electric on/off 24 volt, NC (SB-2012-011)	1
	QC120	09-05		11103621	Solenoid valve seal kit	1
	QC125	09-05		11104457	Nut	1
	QC150	09-05		11104464	Solenoid valve kit, 24 volt	1



Control

(DF & DF)



E101 624E

* = included in base motor seal kit Q210

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

Parts Manual

Series 45 Frame F 74-90cc O. C. Pumps

Control

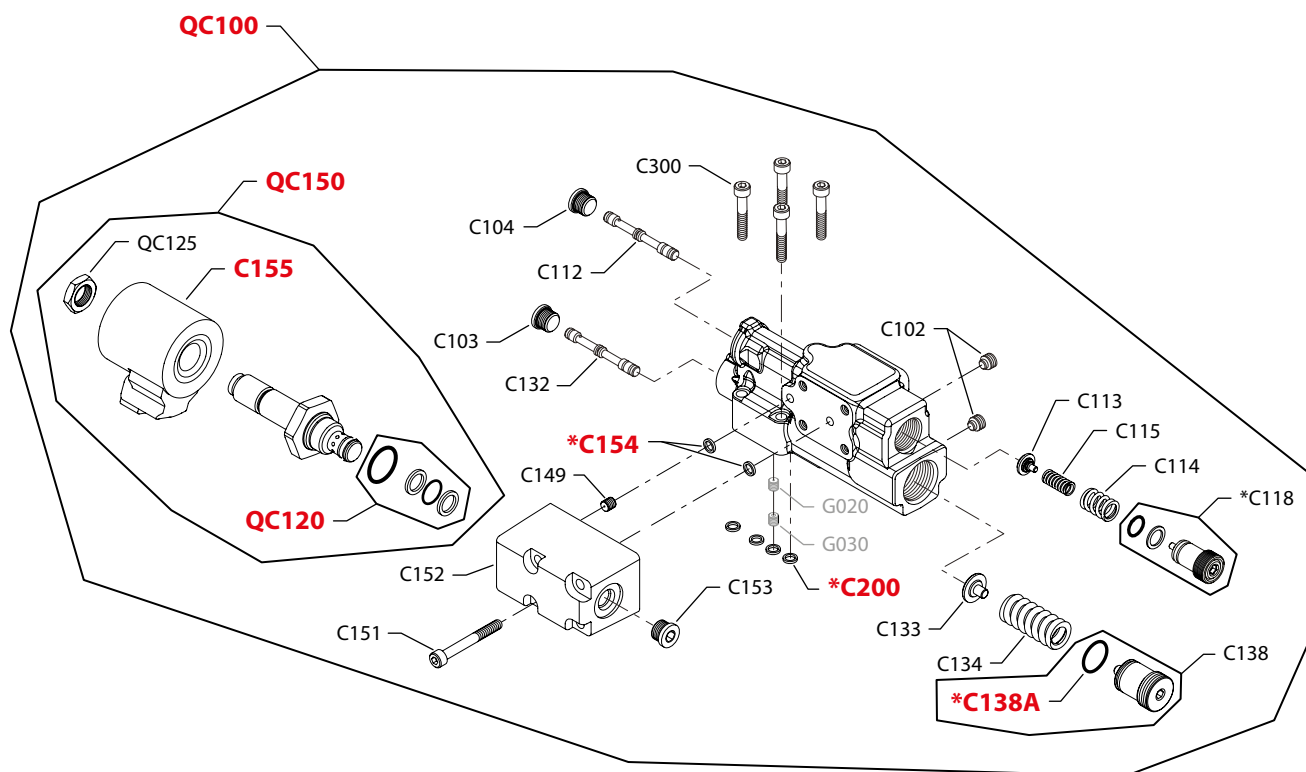
Electric on/off control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
DF	C102	08-08		4740064	Set screw	2
	C103	08-08		327007 (9005110-4400)	Plug assembly	1
	C104	08-08		327007 (9005110-4400)	Plug assembly	1
	C112	08-08		4740300	Spool	1
	C113	08-08		4740301	Spring guide	1
	C114	08-08		4740061	Spring	1
	C115	08-08		4740062	Spring	1
	C118	08-08		11062214	Adjusting plug assembly (SB-2010-026)	1
	C132	08-08		1701124	Spool	1
	C133	08-08		4740247	Spring guide	1
	C134	08-08		4740324	Spring, heavy	1
	C138	08-08		1700597	Adjusting plug assembly	1
	C138A	08-08		5000656	O-ring	1
	C151	08-08		9007315-0510	Screw	4
	C152	08-08		1701029	Solenoid valve adapter	1
	C153	08-08		327007 (9005110-4400)	Plug assembly	1
	C154	08-08		4740154	Seal ring	2
	C155	08-08		1701563	Coil, 24 volt	1
	C200	08-08		4740154	Seal ring	4
	C300	08-08		5000164 (9007315-0507)	Screw	4
	QC100	08-08		11112304	Control Kit, electric on/off, 24v, high, NO (SB-2012-011)	1
	QC120	08-08		11103621	Solenoid valve seal kit	1
	QC125	08-08		11104457	Nut	1
	QC150	08-08		11104462	Solenoid valve kit, 24 volt	1
DK	C102	11-51		4740064	Set screw	2
	C103	11-51		327007 (9005110-4400)	Plug assembly	1
	C104	11-51		327007 (9005110-4400)	Plug assembly	1
	C112	11-51		1701439	Spool	1
	C113	11-51		4740301	Spring guide	1
	C114	11-51		4740061	Spring	1
	C115	11-51		4740062	Spring	1
	C118	11-51		11062214	Adjusting plug assembly	1
	C132	11-51		1701124	Spool	1
	C133	11-51		4740247	Spring guide	1
	C134	11-51		4740324	Spring, heavy	1
	C138	11-51		1700597	Adjusting plug assembly	1
	C138A	11-51		5000656	O-ring	1
	C149	11-51		739144	Orifice plug, 0.8mm	1
	C151	11-51		9007315-0510	Screw	4
	C152	11-51		1701029	Solenoid valve adapter	1
	C153	11-51		327007 (9005110-4400)	Plug assembly	1
	C154	11-51		4740154	Seal ring	2
	C155	11-51		1701563	Coil, 24 volt	1
	C200	11-51		4740154	Seal ring	4
	C300	11-51		5000164 (9007315-0507)	Screw	4
	QC100	11-51		11112290	Control Kit, electric prop., 24v, high, NO (SB-2012-011)	1
	QC120	11-51		11103621	Solenoid valve seal kit	1
	QC125	11-51		11104459	Nut	1
	QC150	11-51		11104466	Solenoid valve kit, 24 volt	1



Control

(DL)



E101 831E

* = included in base motor seal kit Q210

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

Parts Manual

Series 45 Frame F 74-90cc O. C. Pumps

Control

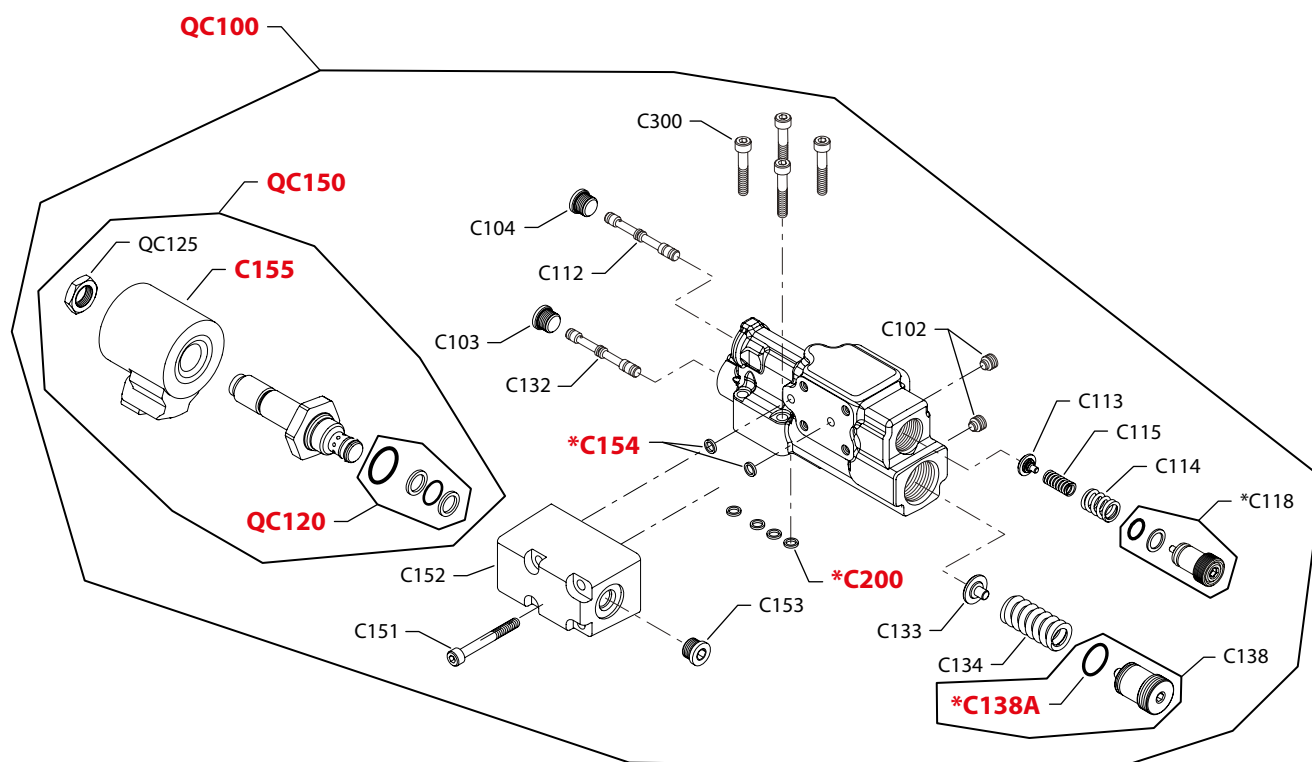
Electric proportional control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
DL	C102	11-51		4740064	Set screw	2
	C103	11-51		327007 (9005110-4400)	Plug assembly	1
	C104	11-51		327007 (9005110-4400)	Plug assembly	1
	C112	11-51		1701439	Spool	1
	C113	11-51		4740301	Spring guide	1
	C114	11-51		4740061	Spring	1
	C115	11-51		4740062	Spring	1
	C118	11-51		11062214	Adjusting plug assembly (SB-2010-026)	1
	C132	11-51		1701124	Spool	1
	C133	11-51		4740247	Spring guide	1
	C134	11-51		4740324	Spring, PC heavy	1
	C138	11-51		1700597	Adjusting plug assembly	1
	C138A	11-51		5000656	O-ring	1
	C149	11-51		739144	Orifice plug, 0.8mm	1
	C151	11-51		9007315-0510	Screw	4
	C152	11-51		1701029	Solenoid valve adapter	1
	C153	11-51		327007 (9005110-4400)	Plug assembly	1
	C154	11-51		4740154	Seal ring	2
	C155	11-51		1701563	Coil, 24 volt	1
	C200	11-51		4740154	Seal ring	4
	C300	11-51		5000164 (9007315-0507)	Screw	4
	QC100	11-51		11112225	Control Kit, electric prop. 24v, high, NO (SB-2012-011)	1
	QC120	11-51		11103621	Solenoid valve seal kit	1
	QC125	11-51		11104459	Nut	1
	QC150	11-51		11104466	Solenoid valve kit, 24 volt	1



Control

(DN & DR)



E101 831E

* = included in base motor seal kit Q210

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

Parts Manual

Series 45 Frame F 74-90cc O. C. Pumps

Control

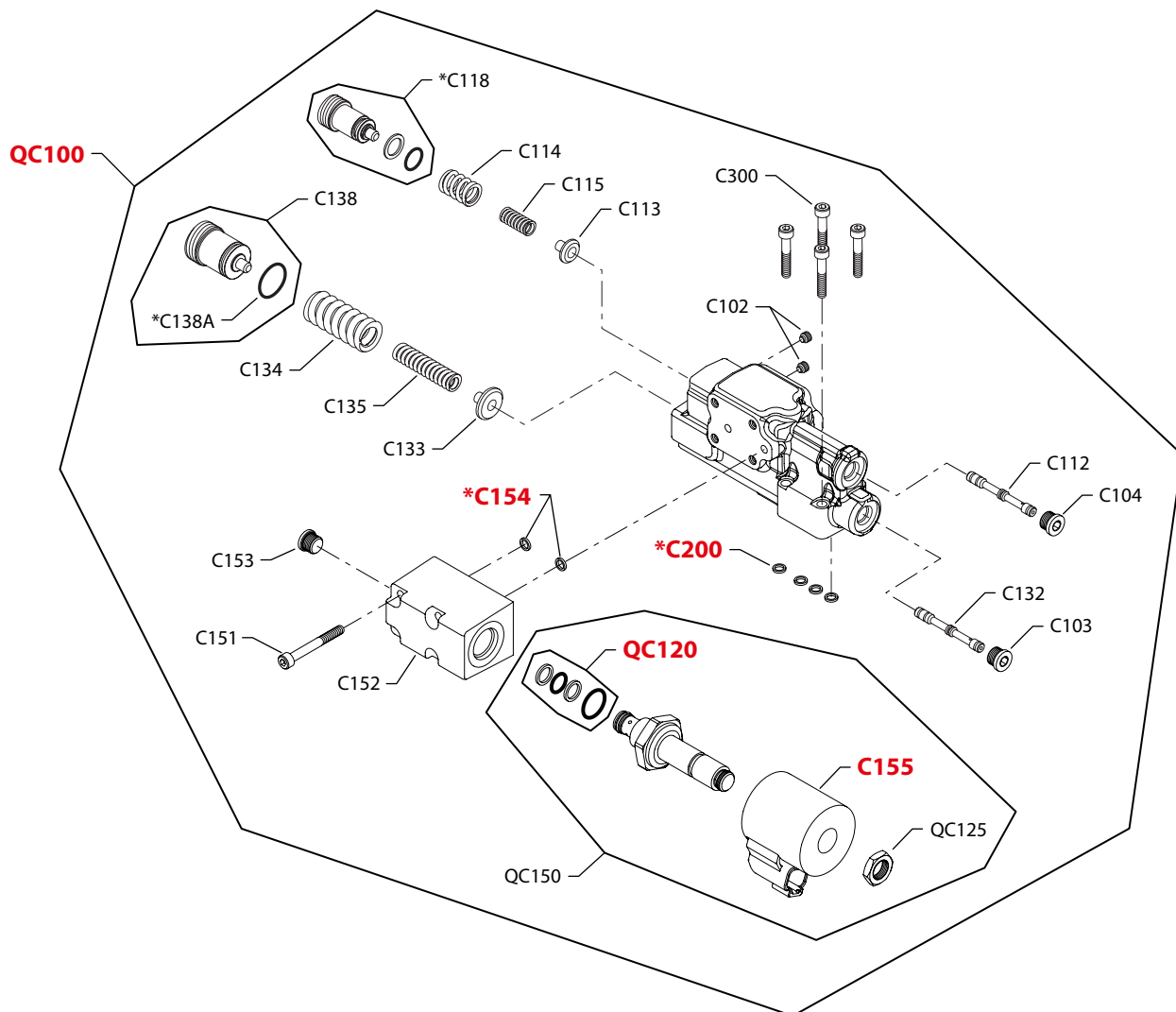
Electric on/off control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
DN	C102	08-08		4740064	Set screw	2
	C103	08-08		327007 (9005110-4400)	Plug assembly	1
	C104	08-08		327007 (9005110-4400)	Plug assembly	1
	C112	08-08		4740300	Spool	1
	C113	08-08		4740301	Spring guide	1
	C114	08-08		4740061	Spring	1
	C115	08-08		4740062	Spring	1
	C118	08-08		11062214	Adjusting plug assembly (SB-2010-026)	1
	C132	08-08		1701124	Spool	1
	C133	08-08		4740247	Spring guide	1
	C134	08-08		4740324	Spring, PC heavy	1
	C138	08-08		1700597	Adjusting plug assembly	1
	C138A	08-08		5000656	O-ring	1
	C151	08-08		9007315-0510	Screw	4
	C152	08-08		1701029	Solenoid valve adapter	1
	C153	08-08		327007 (9005110-4400)	Plug assembly	1
	C154	08-08		4740154	Seal ring	2
	C155	08-08		1701563	Coil, 24 volt	1
	C200	08-08		4740154	Seal ring	4
	C300	08-08		5000164 (9007315-0507)	Screw	4
	QC100	08-08		11112227	Control Kit, electric on/off, 24v, high, NO (SB-2012-011)	1
	QC120	08-08		11103621	Solenoid valve seal kit	1
	QC125	08-08		11104457	Nut	1
	QC150	08-08		11104462	Solenoid valve kit, 24 volt	1
DR	C102	08-08		4740064	Set screw	2
	C103	08-08		327007 (9005110-4400)	Plug assembly	1
	C104	08-08		327007 (9005110-4400)	Plug assembly	1
	C112	08-08		4740300	Spool	1
	C113	08-08		4740301	Spring guide	1
	C114	08-08		4740061	Spring	1
	C115	08-08		4740062	Spring	1
	C118	08-08		11062214	Adjusting plug assembly (SB-2010-026)	1
	C132	08-08		1701124	Spool	1
	C133	08-08		4740247	Spring guide	1
	C134	08-08		4740324	Spring, PC heavy	1
	C138	08-08		1700597	Adjusting plug assembly	1
	C138A	08-08		5000656	O-ring	1
	C151	08-08		9007315-0510	Screw	4
	C152	08-08		1701029	Solenoid valve adapter	1
	C153	08-08		327007 (9005110-4400)	Plug assembly	1
	C154	08-08		4740154	Seal ring	2
	C155	08-08		1701563	Coil, 24 volt	1
	C200	08-08		4740154	Seal ring	4
	C300	08-08		5000164 (9007315-0507)	Screw	4
	QC100	08-08		11112228	Control Kit, electric on/off, 24v, high, NC (SB-2012-011)	1
	QC120	08-08		11103621	Solenoid valve seal kit	1
	QC125	08-08		11104457	Nut	1
	QC150	08-08		11104464	Solenoid valve kit, 24 volt	1



Control

(FA)



E101 700E

* = included in base motor seal kit Q210

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

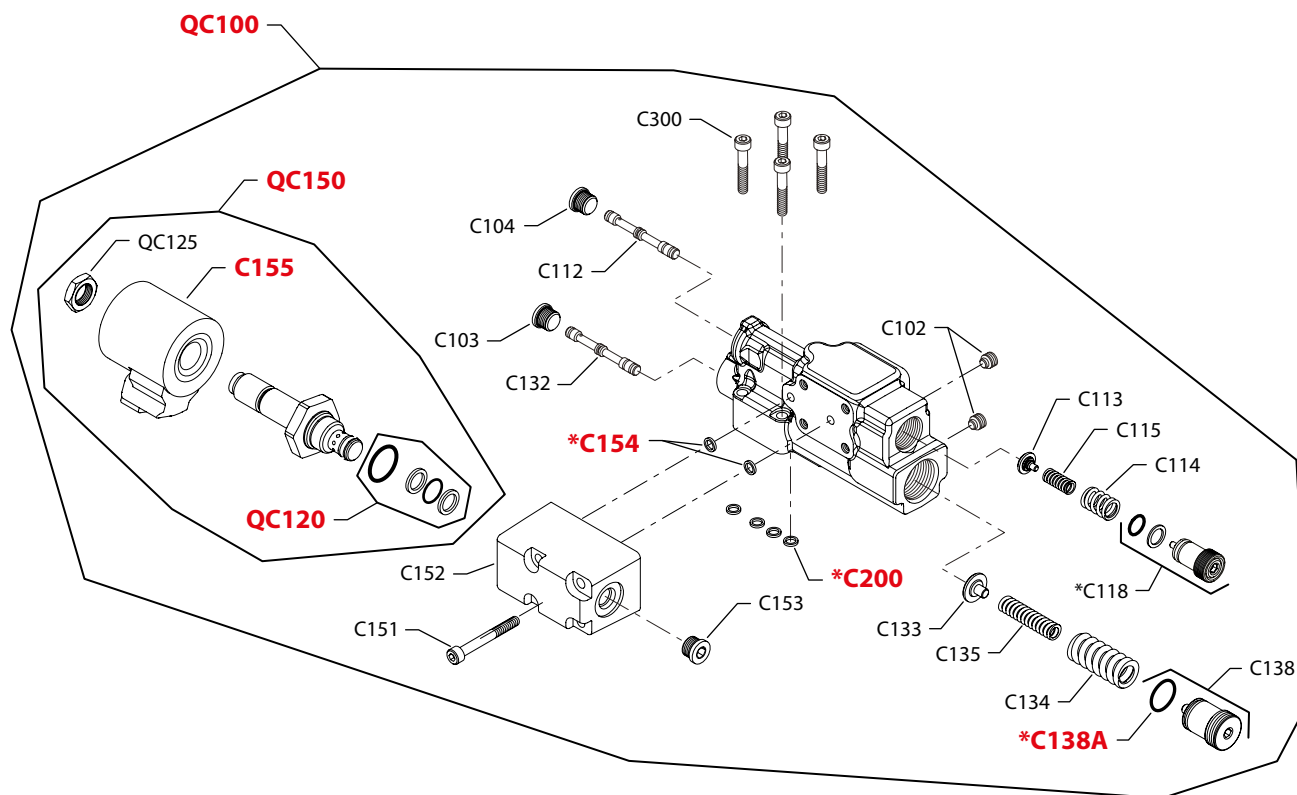
Control
Electric dump control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
FA	C102	11-35		4740064	Set screw	2
	C103	11-35		327007 (9005110-4400)	Plug assembly	1
	C104	11-35		327007 (9005110-4400)	Plug assembly	1
	C112	11-35		1701124	Spool	1
	C113	11-35		4740246	Spring guide	1
	C114	11-35		4740061	Spring	1
	C115	11-35		4740062	Spring	1
	C118	11-35		11062214	Adjusting plug assembly (SB-2007-047, SB-2010-026)	1
	C132	11-35		1701124	Spool	1
	C133	11-35		4740247	Spring guide	1
	C134	11-35		4740051	Spring, PC outer	1
	C135	11-35		4740052	Spring, PC inner	1
	C138	11-35		11062379	Adjusting plug assembly (SB-2010-026)	1
	C138A	11-35		5000656	O-ring	1
	C151	11-35		9007315-0510	Screw	4
	C152	11-35		1701029	Solenoid valve adapter	1
	C153	11-35		327007 (9005110-4400)	Plug assembly	1
	C154	11-35		4740154	Seal ring	2
	C155	11-35		1701291	Coil, 12 volt	1
	C200	11-35		4740154	Seal ring	4
	C300	11-35		5000164 (9007315-0507)	Screw	4
	QC100	11-35		11112297	Control Kit, electric dump, 12 volt, NC (SB-2012-011)	1
	QC120	11-35		11103621	Solenoid valve seal kit	1
	QC125	11-35		11104457	Nut	1
	QC150	11-35		11104463	Solenoid valve kit, 12 volt	1



Control

(FB)



E101 622E

* = included in base motor seal kit Q210

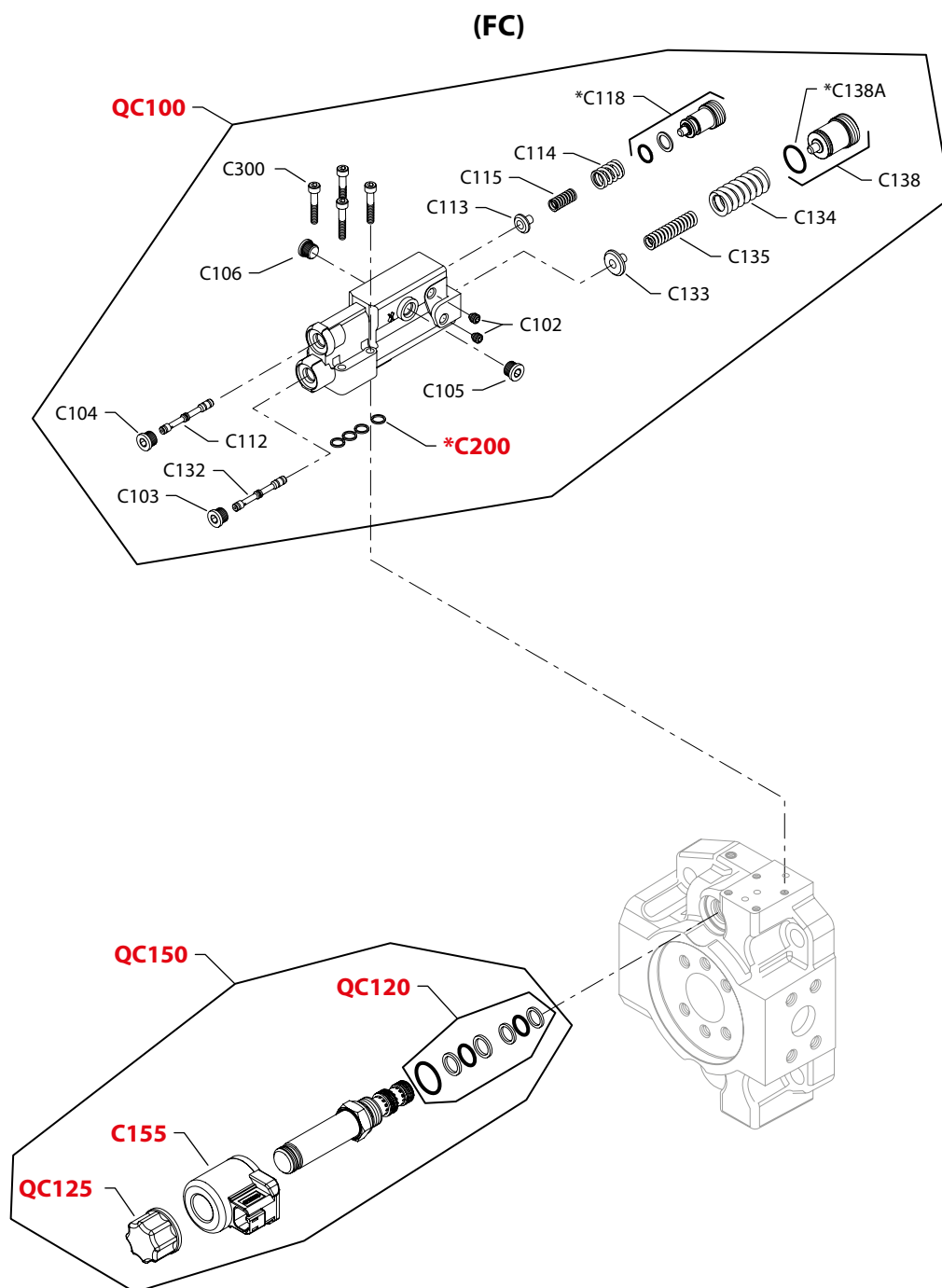
Enlarged **bold** type item numbers are recommended part to stock for servicing.


Control
Electric dump control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
FB	C102	11-35		4740064	Set screw	2
	C103	11-35		327007 (9005110-4400)	Plug assembly	1
	C104	11-35		327007 (9005110-4400)	Plug assembly	1
	C112	11-35		1701124	Spool	1
	C113	11-35		4740246	Spring guide	1
	C114	11-35		4740061	Spring	1
	C115	11-35		4740062	Spring	1
	C118	11-35		11062214	Adjusting plug assembly (SB-2010-026)	1
	C132	11-35		1701124	Spool	1
	C133	11-35		4740247	Spring guide	1
	C134	11-35		4740051	Spring, PC outer	1
	C135	11-35		4740052	Spring, PC inner	1
	C138	11-35		11062379	Adjusting plug assembly (SB-2010-026)	1
	C138A	11-35		5000656	O-ring	1
	C151	11-35		9007315-0510	Screw	4
	C152	11-35		1701029	Solenoid valve adapter	1
	C153	11-35		327007 (9005110-4400)	Plug assembly	1
	C154	11-35		4740154	Seal ring	2
	C155	11-35		1701291	Coil, 24 volt	1
	C200	11-35		4740154	Seal ring	4
	C300	11-35		5000164 (9007315-0507)	Screw	4
	QC100	11-35		11112223	Control Kit, electric dump 12v, NC (SB-2012-011)	1
	QC120	11-35		11103621	Solenoid valve seal kit	1
	QC125	11-35		11104457	Nut	1
	QC150	11-35		11104463	Solenoid valve kit, 12 volt	1



Control



E101 953E

* = included in base motor seal kit Q210

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

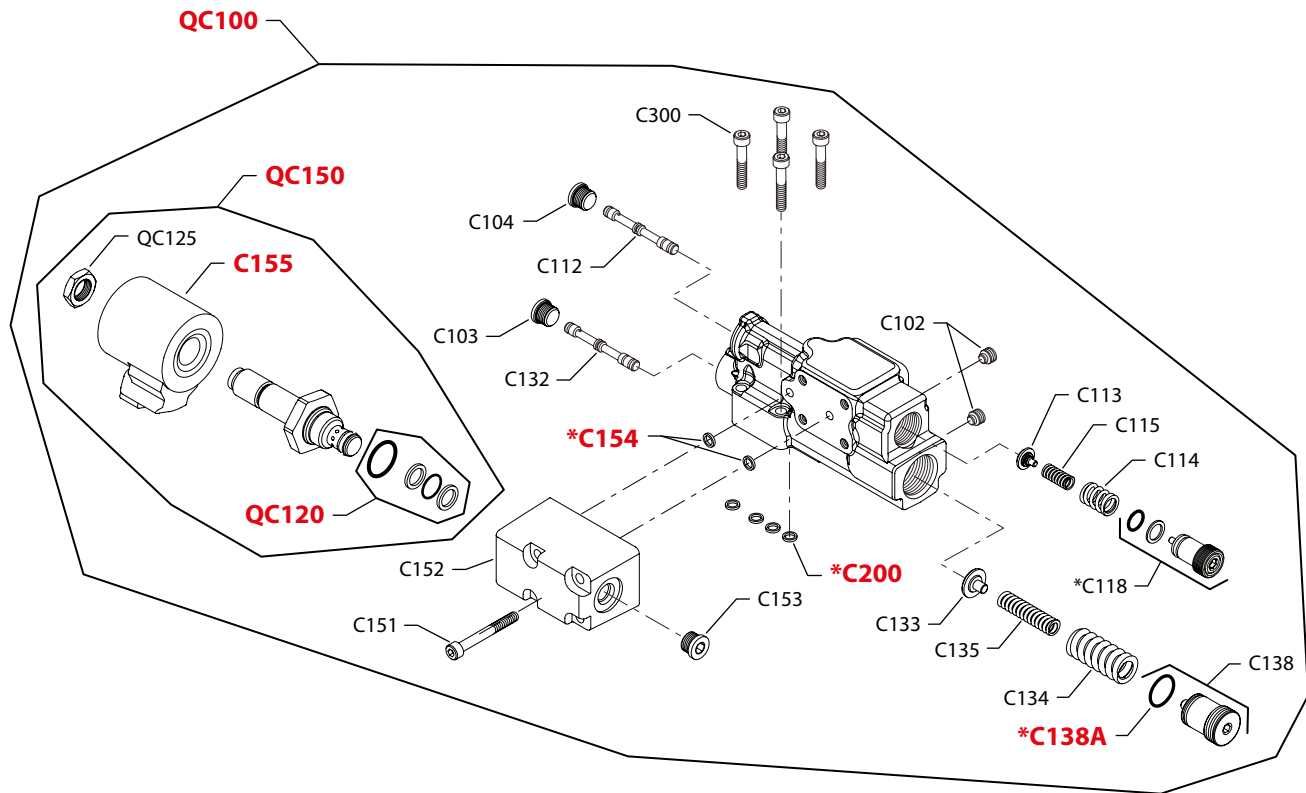

Control
Load sensing Control with override

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
FC	C102	10-35		4740064	Set screw	2
	C103	10-35		327007 (9005110-4400)	Plug assembly	1
	C104	10-35		327007 (9005110-4400)	Plug assembly	1
	C105	10-35		327007 (9005110-4400)	Plug assembly	1
	C106	10-35		327007 (9005110-4400)	Plug assembly	1
	C112	10-35		1701124	Spool	1
	C113	10-35		4740246	Spring guide	1
	C114	10-35		4740061	Spring	1
	C115	10-35		4740062	Spring	1
	C118	10-35		11062214	Adjusting plug assembly (SB-2010-026)	1
	C132	10-35		1701124	Spool	1
	C133	10-35		4740247	Spring guide	1
	C134	10-35		4740051	Spring, PC, outer	1
	C135	10-35		4740052	Spring, PC inner	1
	C138	10-35		11062379	Adjusting Plug assembly (SB-2010-026)	1
	C138A	10-35		5000656	O-ring	1
	C155	10-35		11104541	Coil, 24 volt	1
	C200	10-35		4740154	Seal ring	4
	C300	10-35		5000164 (9007315-0507)	Screw	4
	QC100	10-35		11112208	Control Kit, LS (SB-2012-011)	1
	QC120	10-35		11104525	Solenoid valve seal kit	1
	QC125	10-35		11104531	Nut	1
	QC150	10-35		11104539	Solenoid valve kit, 24 volt	1



Control

(FE)



E101 622E

* = included in base motor seal kit Q210

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Parts Manual

Series 45 Frame F 74-90cc O. C. Pumps

Control

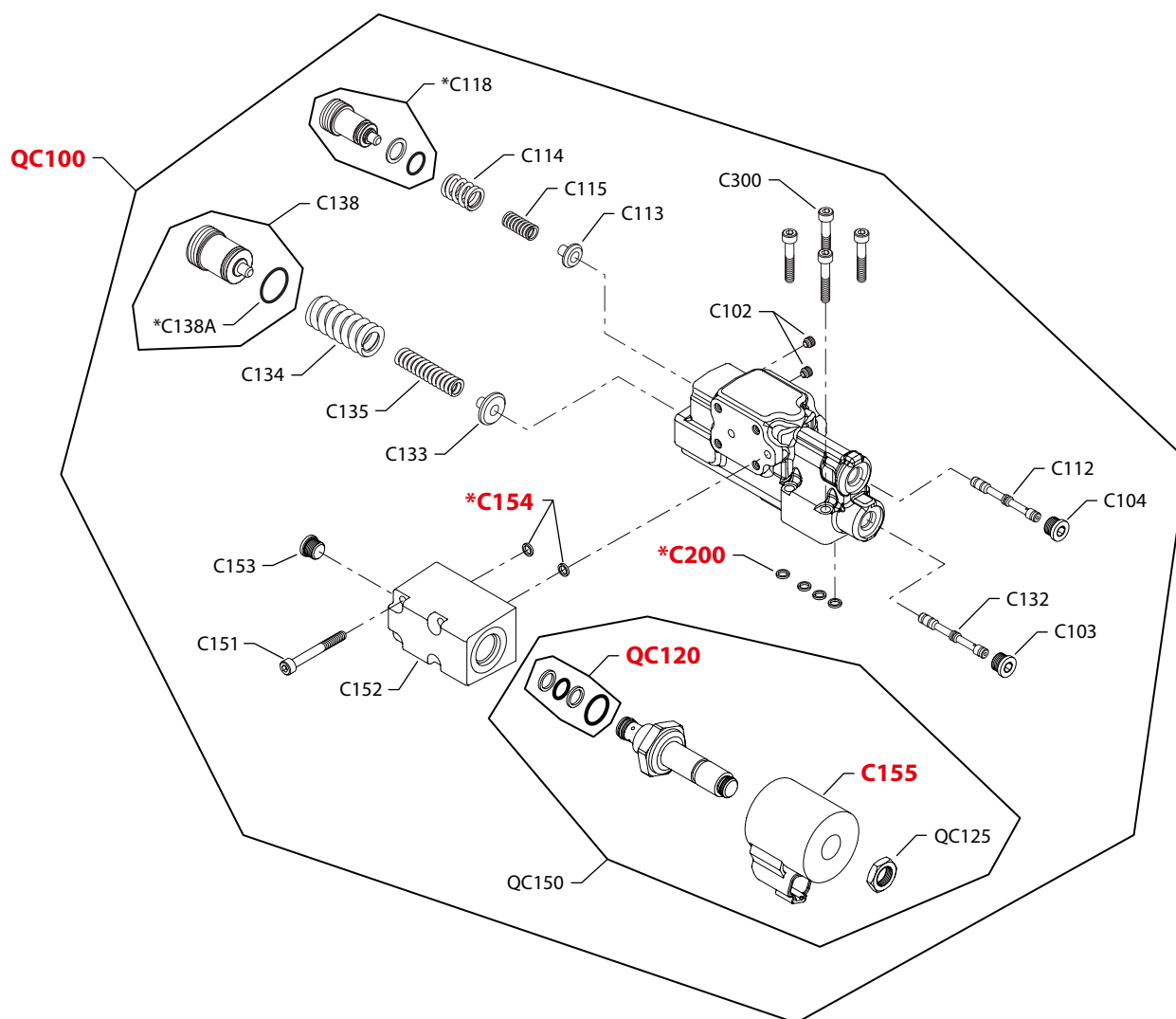
Electric dump control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
FE	C102	11-35		4740064	Set screw	2
	C103	11-35		327007 (9005110-4400)	Plug assembly	1
	C104	11-35		327007 (9005110-4400)	Plug assembly	1
	C112	11-35		1701124	Spool	1
	C113	11-35		4740246	Spring guide	1
	C114	11-35		4740061	Spring	1
	C115	11-35		4740062	Spring	1
	C118	11-35		11062214	Adjusting plug assembly (SB-2010-026)	1
	C132	11-35		1701124	Spool	1
	C133	11-35		4740247	Spring guide	1
	C134	11-35		4740051	Spring, PC outer	1
	C135	11-35		4740052	Spring, PC inner	1
	C138	11-35		11062379	Adjusting plug assembly (SB-2010-026)	1
	C138A	11-35		5000656	O-ring	1
	C151	11-35		9007315-0510	Screw	4
	C152	11-35		1701029	Solenoid valve adapter	1
	C153	11-35		327007 (9005110-4400)	Plug assembly	1
	C154	11-35		4740154	Seal ring	2
	C155	11-35		1701563	Coil, 24 volt	1
	C200	11-35		4740154	Seal ring	4
	C300	11-35		5000164 (9007315-0507)	Screw	4
	QC100	11-35		11116538	Control Kit, electric dump 24v, NC (SB-2012-011)	1
	QC120	11-35		11103621	Solenoid valve seal kit	1
	QC125	11-35		11104457	Nut	1
	QC150	11-35		11104464	Solenoid valve kit, 24 volt	1



Control

(FF)



E101 700E

* = included in base motor seal kit Q210

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

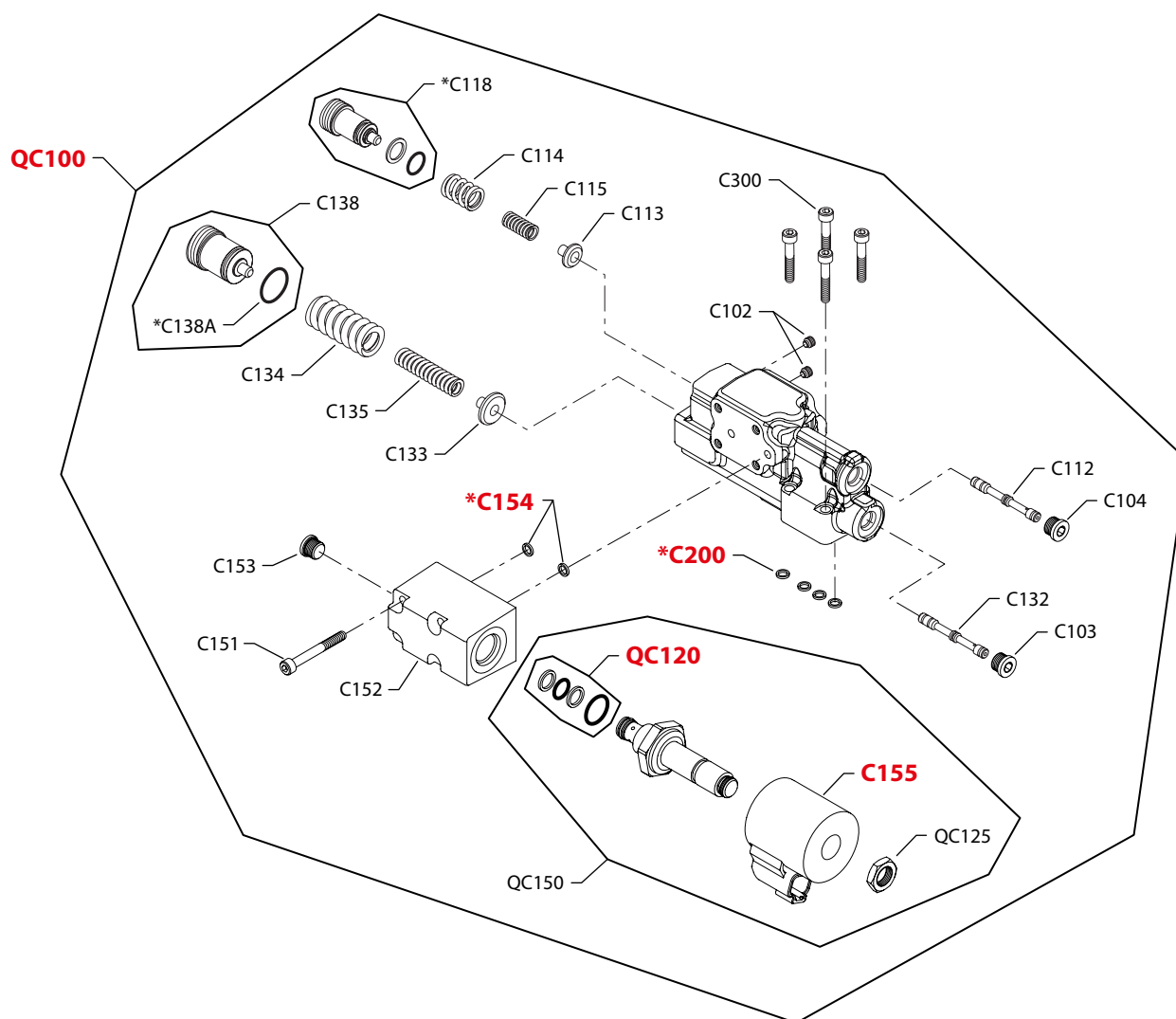
Control
Electric dump control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
FF	C102	13-08		4740064	Set screw	2
	C103	13-08		327007 (9005110-4400)	Plug assembly	1
	C104	13-08		327007 (9005110-4400)	Plug assembly	1
	C112	13-08		1701124	Spool	1
	C113	13-08		4740246	Spring guide	1
	C114	13-08		4740061	Spring	1
	C115	13-08		4740062	Spring	1
	C118	13-08		11062214	Adjusting plug assembly	1
	C132	13-08		1701124	Spool	1
	C133	13-08		4740247	Spring guide	1
	C134	13-08		4740051	Spring, PC outer	1
	C135	13-08		4740052	Spring, PC inner	1
	C138	13-08		11062379	Adjusting plug assembly	1
	C138A	13-08		5000656	O-ring	1
	C151	13-08		9007315-0510	Screw	4
	C152	13-08		1701029	Solenoid valve adapter	1
	C153	13-08		327007 (9005110-4400)	Plug assembly	1
	C154	13-08		4740154	Seal ring	2
	C155	13-08		1701563	Coil, 24 volt	1
	C200	13-08		4740154	Seal ring	4
	C300	13-08		5000164 (9007315-0507)	Screw	4
	QC100	13-08		11130227	Control Kit, electric dump, 24 volt, NC	1
	QC120	13-08		11103621	Solenoid valve seal kit	1
	QC125	13-08		11104457	Nut	1
	QC150	13-08		11104464	Solenoid valve kit, 24 volt	1



Control

(FG)



E101 700E

* = included in base motor seal kit Q210

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

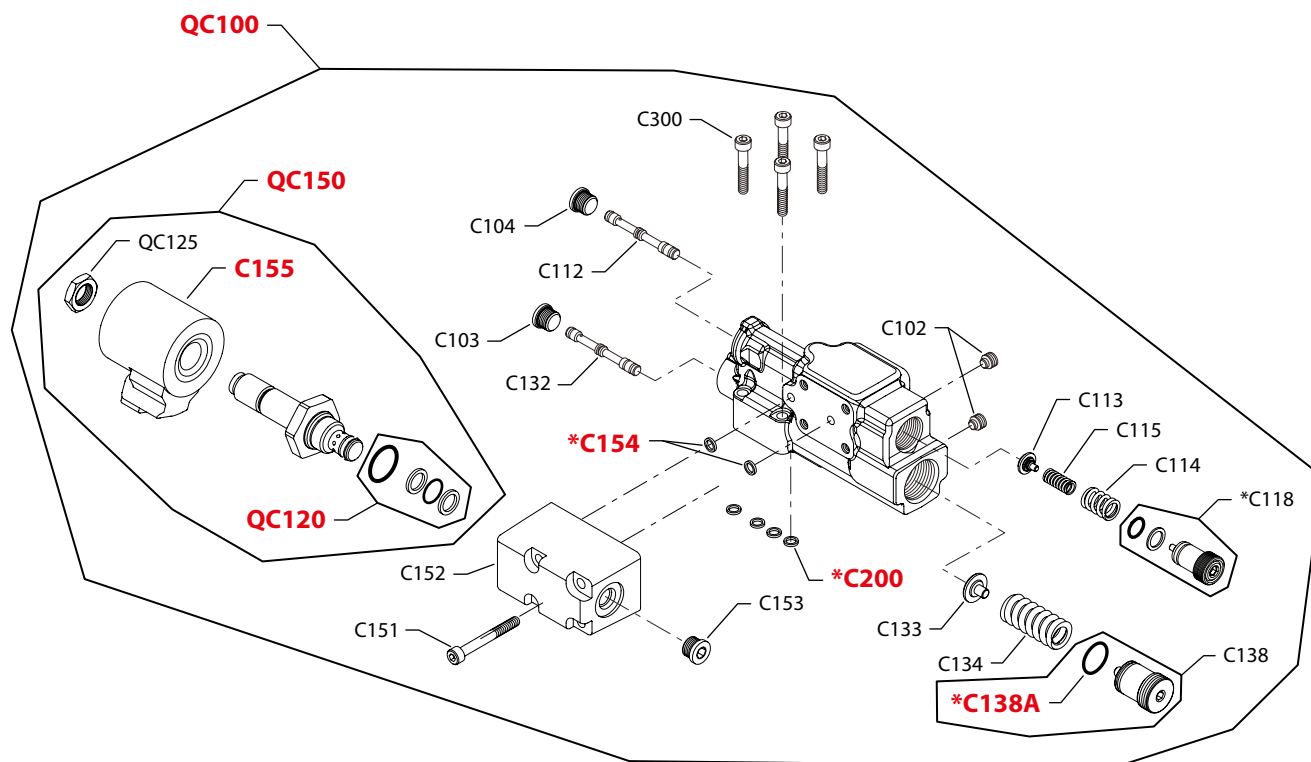
Control
Electric dump control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
FG	C102	13-08		4740064	Set screw	2
	C103	13-08		327007 (9005110-4400)	Plug assembly	1
	C104	13-08		327007 (9005110-4400)	Plug assembly	1
	C112	13-08		1701124	Spool	1
	C113	13-08		4740246	Spring guide	1
	C114	13-08		4740061	Spring	1
	C115	13-08		4740062	Spring	1
	C118	13-08		11062214	Adjusting plug assembly	1
	C132	13-08		1701124	Spool	1
	C133	13-08		4740247	Spring guide	1
	C134	13-08		4740051	Spring, PC outer	1
	C135	13-08		4740052	Spring, PC inner	1
	C138	13-08		11062379	Adjusting plug assembly	1
	C138A	13-08		5000656	O-ring	1
	C151	13-08		9007315-0510	Screw	4
	C152	13-08		1701029	Solenoid valve adapter	1
	C153	13-08		327007 (9005110-4400)	Plug assembly	1
	C154	13-08		4740154	Seal ring	2
	C155	13-08		1701291	Coil, 12 volt	1
	C200	13-08		4740154	Seal ring	4
	C300	13-08		5000164 (9007315-0507)	Screw	4
	QC100	13-08		11133856	Control Kit, electric dump, 12 volt, NO	1
	QC120	13-08		11103621	Solenoid valve seal kit	1
	QC125	13-08		11104457	Nut	1
	QC150	13-08		11104464	Solenoid valve kit, 24 volt	1



Control

(FH)



E101 831E

* = included in base motor seal kit Q210

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

Parts Manual

Series 45 Frame F 74-90cc O. C. Pumps

Control

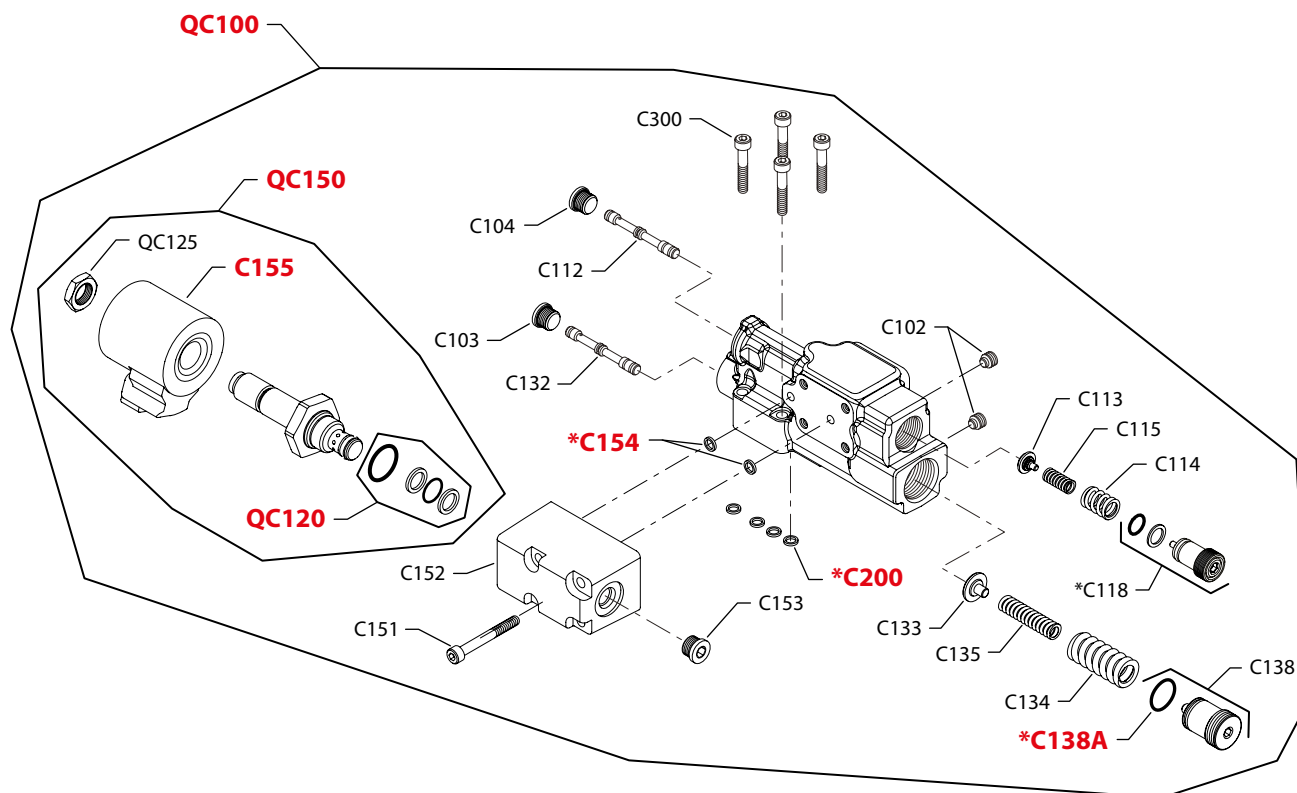
Electric dump control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
FH	C102	14-11		4740064	Set screw	2
	C103	14-11		327007 (9005110-4400)	Plug assembly	1
	C104	14-11		327007 (9005110-4400)	Plug assembly	1
	C112	14-11		1701124	Spool	1
	C113	14-11		4740246	Spring guide	1
	C114	14-11		4740061	Spring	1
	C115	14-11		4740062	Spring	1
	C118	14-11		11062214	Adjusting plug assembly	1
	C132	14-11		1701124	Spool	1
	C133	14-11		4740247	Spring guide	1
	C134	14-11		4740324	Spring, PC heavy	1
	C138	14-11		1700597	Adjusting plug assembly	1
	C138A	14-11		5000656	O-ring	1
	C151	14-11		9007315-0510	Screw	4
	C152	14-11		1701029	Solenoid valve adapter	1
	C153	14-11		327007 (9005110-4400)	Plug assembly	1
	C154	14-11		4740154	Seal ring	2
	C155	14-11		1701563	Coil, 24 volt	1
	C200	14-11		4740154	Seal ring	4
	C300	14-11		5000164 (9007315-0507)	Screw	4
	QC100	14-11		11135469	Control Kit, electric dump, 24v, high, NC	1
	QC120	14-11		11103621	Solenoid valve seal kit	1
	QC125	14-11		11104457	Nut	1
	QC150	14-11		11104464	Solenoid valve kit, 24 volt	1
FJ	C102	08-08		4740064	Set screw	2
	C103	08-08		327007 (9005110-4400)	Plug assembly	1
	C104	08-08		327007 (9005110-4400)	Plug assembly	1
	C112	08-08		1701124	Spool	1
	C113	08-08		4740246	Spring guide	1
	C114	08-08		4740061	Spring	1
	C115	08-08		4740062	Spring	1
	C118	08-08		11062214	Adjusting plug assembly	1
	C132	08-08		1701124	Spool	1
	C133	08-08		4740247	Spring guide	1
	C134	08-08		4740051	Spring, PC outer	1
	C135	08-08		4740052	Spring, PC inner	1
	C138	08-08		11062379	Adjusting plug assembly	1
	C138A	08-08		5000656	O-ring	1
	C151	08-08		9007315-0510	Screw	4
	C152	08-08		1701029	Solenoid valve adapter	1
	C153	08-08		327007 (9005110-4400)	Plug assembly	1
	C154	08-08		4740154	Seal ring	2
	C155	08-08		1701291	Coil, 12 volt	1
	C200	08-08		4740154	Seal ring	4
	C300	08-08		5000164 (9007315-0507)	Screw	4
	QC100	08-08		11140029	Control Kit, electric dump, 12v, high, NC	1
	QC120	08-08		11103621	Solenoid valve seal kit	1
	QC125	08-08		11104457	Nut	1
	QC150	08-08		11104463	Solenoid valve kit, 12 volt	1



Control

(FJ)



E101 622E

* = included in base motor seal kit Q210

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

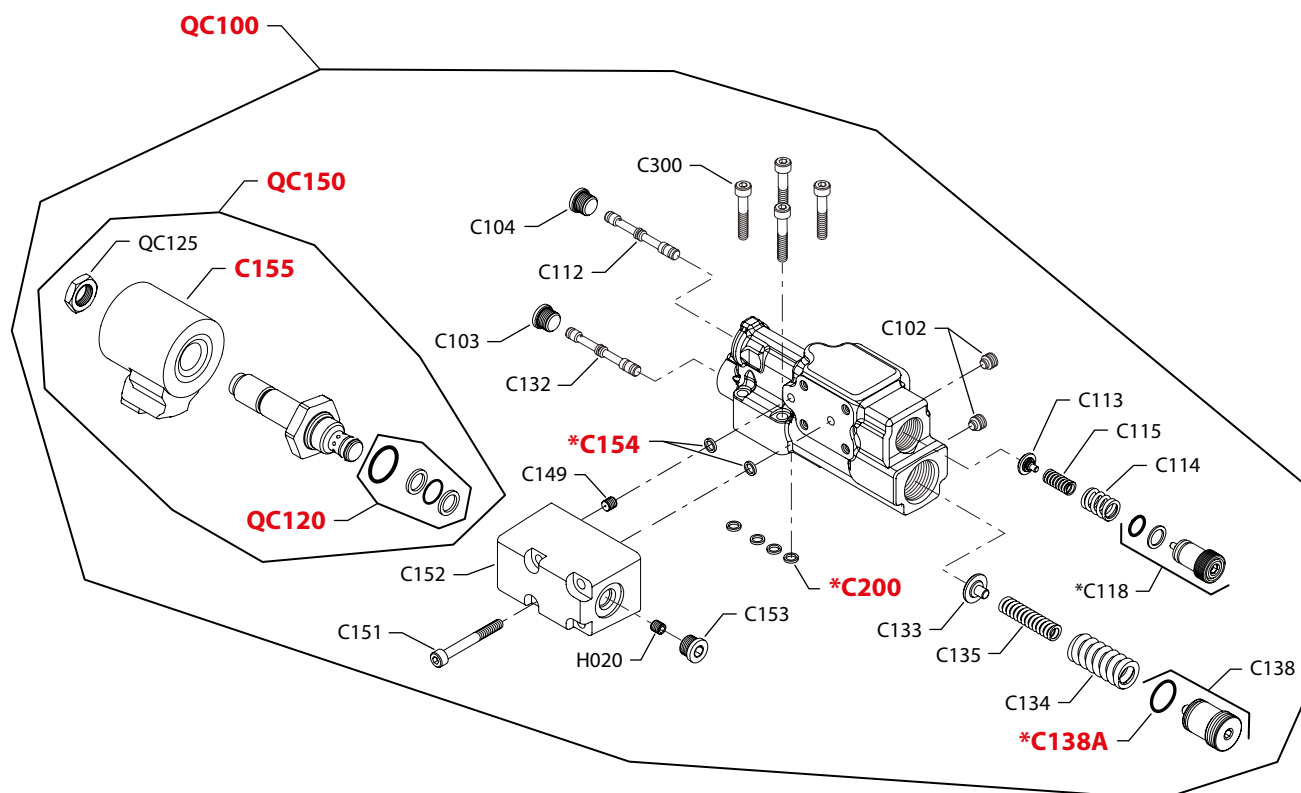
Control
Electric dump control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
FJ	C102	12-34		4740064	Set screw	2
	C103	12-34		327007 (9005110-4400)	Plug assembly	1
	C104	12-34		327007 (9005110-4400)	Plug assembly	1
	C112	12-34		1701124	Spool	1
	C113	12-34		4740246	Spring guide	1
	C114	12-34		4740061	Spring	1
	C115	12-34		4740062	Spring	1
	C118	12-34		11062214	Adjusting plug assembly	1
	C132	12-34		1701124	Spool	1
	C133	12-34		4740247	Spring guide	1
	C134	12-34		4740051	Spring, PC outer	1
	C135	12-34		4740052	Spring, PC inner	1
	C138	12-34		11062379	Adjusting plug assembly	1
	C138A	12-34		5000656	O-ring	1
	C151	12-34		9007315-0510	Screw	4
	C152	12-34		1701029	Solenoid valve adapter	1
	C153	12-34		327007 (9005110-4400)	Plug assembly	1
	C154	12-34		4740154	Seal ring	2
	C155	12-34		1701291	Coil, 12 volt	1
	C200	12-34		4740154	Seal ring	4
	C300	12-34		5000164 (9007315-0507)	Screw	4
	QC100	12-34		11140029	Control Kit, electric dump, 12v, high, NC	1
	QC120	12-34		11103621	Solenoid valve seal kit	1
	QC125	12-34		11104457	Nut	1
	QC150	12-34		11104463	Solenoid valve kit, 12 volt	1



Control

(TA)



E101 217E

* = included in base motor seal kit Q210

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

Parts Manual

Series 45 Frame F 74-90cc O. C. Pumps

Control

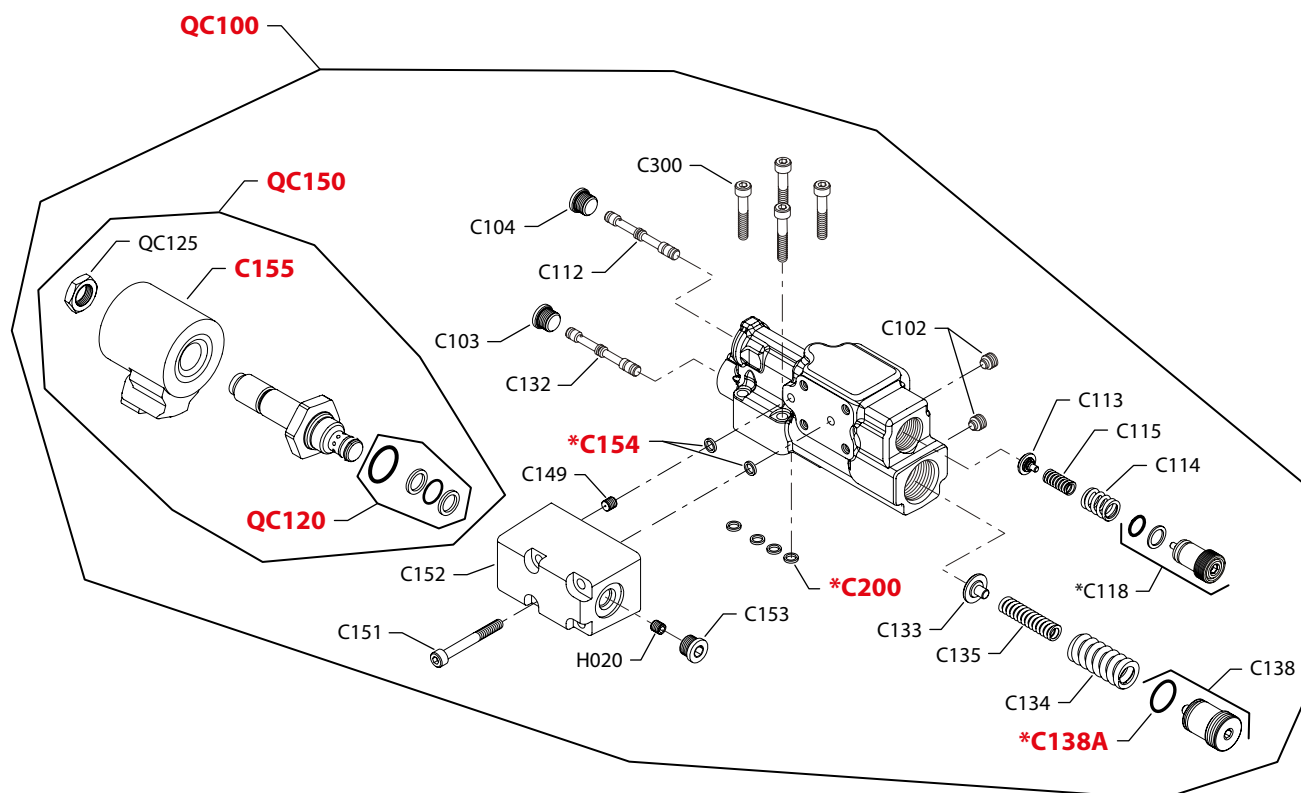
Electric control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
TA	C102	14-35		4740064	Set screw	2
	C103	14-35		327007 (9005110-4400)	Plug assembly	1
	C104	14-35		327007 (9005110-4400)	Plug assembly	1
	C112	14-35		1701124	Spool	1
	C113	14-35		4740246	Spring guide	1
	C114	14-35		4740061	Spring	1
	C115	14-35		4740062	Spring	1
	C118	14-35		11062214	Adjusting plug assembly	1
	C132	14-35		1701124	Spool	1
	C133	14-35		4740247	Spring guide	1
	C134	14-35		4740051	Spring, PC outer	1
	C135	14-35		4740052	Spring, PC inner	1
	C138	14-35		11062379	Adjusting plug assembly	1
	C138A	14-35		5000656	O-ring	1
	C149	14-35		739144	Orifice plug, 0.8mm	1
	C151	14-35		9007315-0510	Screw	4
	C152	14-35		11150082	Solenoid valve adapter	1
	C153	14-35		327007 (9005110-4400)	Plug assembly	1
	C154	14-35		4740154	Seal ring	2
	C155	14-35		1701291	Coil, 12 volt	1
	C200	14-35		4740154	Seal ring	4
	C300	14-35		5000164 (9007315-0507)	Screw	4
	QC100	14-35		11150230	Control Kit, electric proportional, 12v, NC	1
	QC120	14-35		11103621	Solenoid valve seal kit	1
	QC125	14-35		11104460	Nut	1
	QC150	14-35		11104467	Solenoid valve kit, 12 volt, NC	1



Control

(TB)



E101 217E

* = included in base motor seal kit Q210

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

Parts Manual

Series 45 Frame F 74-90cc O. C. Pumps

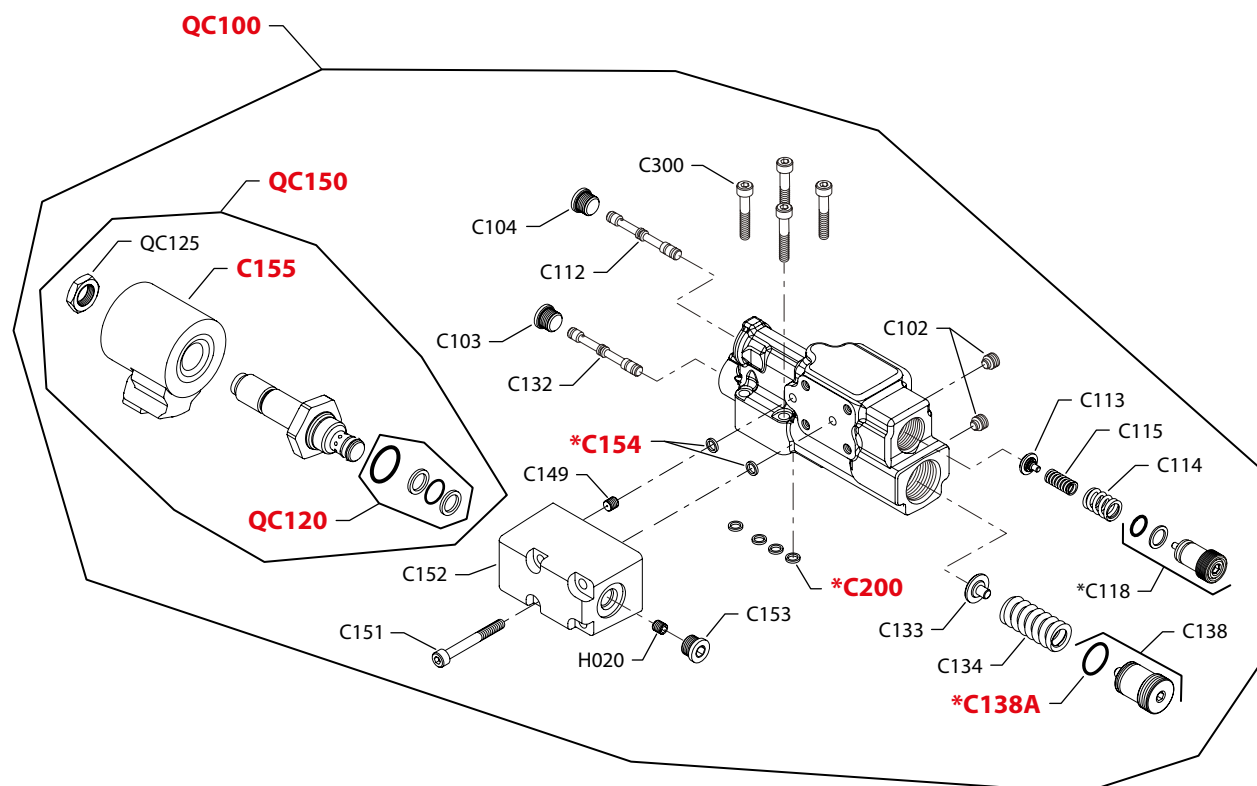
Control

Electric control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
TB	C102	14-35		4740064	Set screw	2
	C103	14-35		327007 (9005110-4400)	Plug assembly	1
	C104	14-35		327007 (9005110-4400)	Plug assembly	1
	C112	14-35		1701124	Spool	1
	C113	14-35		4740246	Spring guide	1
	C114	14-35		4740061	Spring	1
	C115	14-35		4740062	Spring	1
	C118	14-35		11062214	Adjusting plug assembly	1
	C132	14-35		1701124	Spool	1
	C133	14-35		4740247	Spring guide	1
	C134	14-35		4740051	Spring, PC outer	1
	C135	14-35		4740052	Spring, PC inner	1
	C138	14-35		11062379	Adjusting plug assembly	1
	C138A	14-35		5000656	O-ring	1
	C149	14-35		739144	Orifice plug, 0.8mm	1
	C151	14-35		9007315-0510	Screw	4
	C152	14-35		11150082	Solenoid valve adapter	1
	C153	14-35		327007 (9005110-4400)	Plug assembly	1
	C154	14-35		4740154	Seal ring	2
	C155	14-35		1701563	Coil, 24 volt	1
	C200	14-35		4740154	Seal ring	4
	C300	14-35		5000164 (9007315-0507)	Screw	4
	QC100	14-35		11150231	Control Kit, electric proportional, 24v, NC	1
	QC120	14-35		11103621	Solenoid valve seal kit	1
	QC125	14-35		11104460	Nut	1
	QC150	14-35		11104468	Solenoid valve kit, 24 volt, NC	1

Control

(TC & TD)



E101 218E

* = included in base motor seal kit Q210

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

Parts Manual

Series 45 Frame F 74-90cc O. C. Pumps

Control

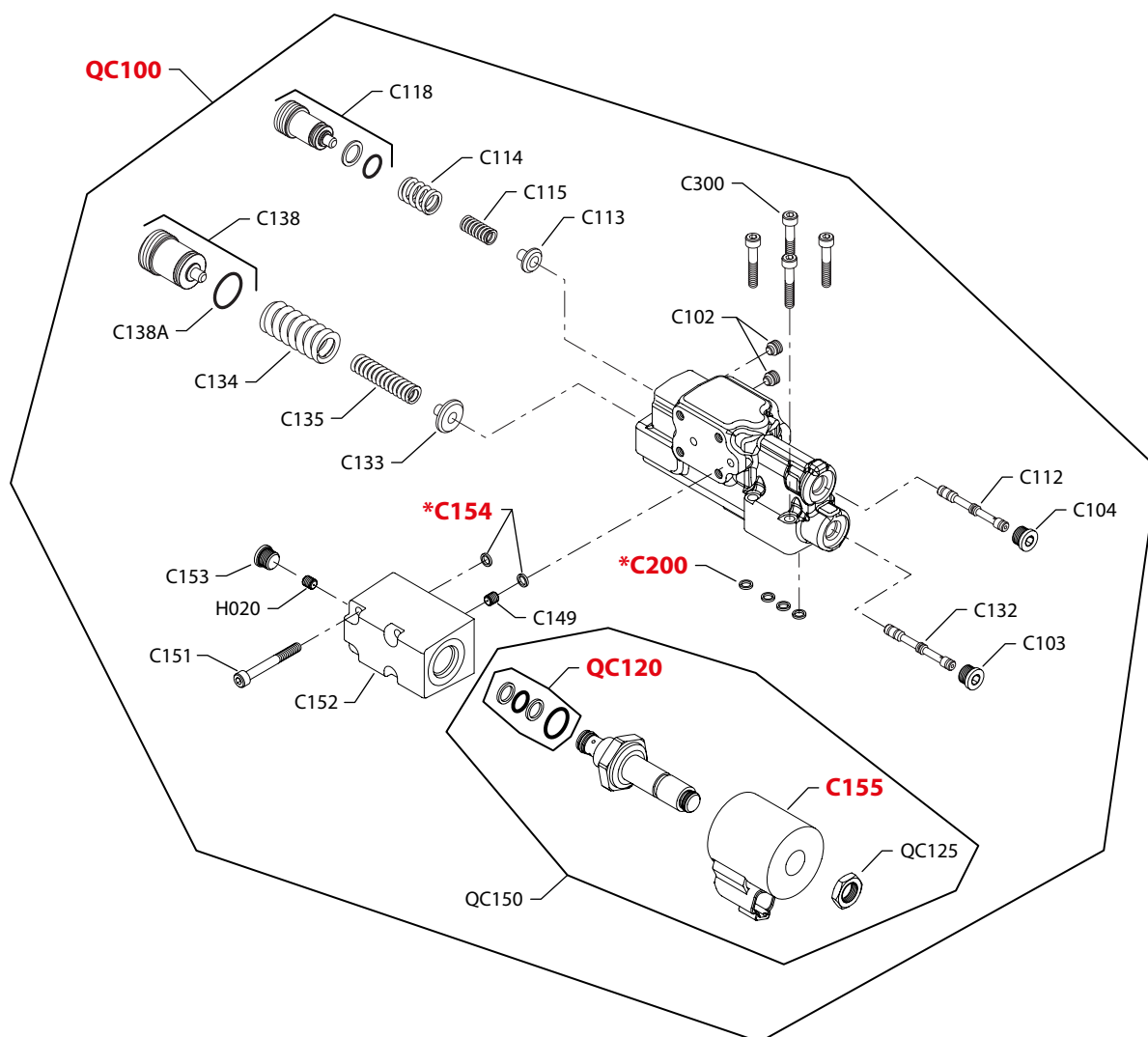
Electric control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
TC	C102	14-35		4740064	Set screw	2
	C103	14-35		327007 (9005110-4400)	Plug assembly	1
	C104	14-35		327007 (9005110-4400)	Plug assembly	1
	C112	14-35		1701124	Spool	1
	C113	14-35		4740246	Spring guide	1
	C114	14-35		4740061	Spring	1
	C115	14-35		4740062	Spring	1
	C118	14-35		11062214	Adjusting plug assembly	1
	C132	14-35		1701124	Spool	1
	C133	14-35		4740247	Spring guide	1
	C134	14-35		4740324	Spring, PC heavy	1
	C138	14-35		1700597	Adjusting plug assembly	1
	C138A	14-35		5000656	O-ring	1
	C149	14-35		739144	Orifice plug, 0.8mm	1
	C151	14-35		9007315-0510	Screw	4
	C152	14-35		1701029	Solenoid valve adapter	1
	C153	14-35		327007 (9005110-4400)	Plug assembly	1
	C154	14-35		4740154	Seal ring	2
	C155	14-35		1701291	Coil, 12 volt	1
	C200	14-35		4740154	Seal ring	4
	C300	14-35		5000164 (9007315-0507)	Screw	4
	QC100	14-35		11150234	Control Kit, electric proportional, 12 volt, NC	1
	QC120	14-35		11103621	Solenoid valve seal kit	1
	QC125	14-35		11104460	Nut	1
	QC150	14-35		11104467	Solenoid valve kit, 12 volt, NC	1
TD	C102	14-35		4740064	Set screw	2
	C103	14-35		327007 (9005110-4400)	Plug assembly	1
	C104	14-35		327007 (9005110-4400)	Plug assembly	1
	C112	14-35		1701124	Spool	1
	C113	14-35		4740246	Spring guide	1
	C114	14-35		4740061	Spring	1
	C115	14-35		4740062	Spring	1
	C118	14-35		11062214	Adjusting plug assembly	1
	C132	14-35		1701124	Spool	1
	C133	14-35		4740247	Spring guide	1
	C134	14-35		4740324	Spring, PC heavy	1
	C138	14-35		1700597	Adjusting plug assembly	1
	C138A	14-35		5000656	O-ring	1
	C149	14-35		739144	Orifice plug, 0.8mm	1
	C151	14-35		9007315-0510	Screw	4
	C152	14-35		11150082	Solenoid valve adapter	1
	C153	14-35		327007 (9005110-4400)	Plug assembly	1
	C154	14-35		4740154	Seal ring	2
	C155	14-35		1701563	Coil, 24 volt	1
	C200	14-35		4740154	Seal ring	4
	C300	14-35		5000164 (9007315-0507)	Screw	4
	QC100	14-35		11150235	Control Kit, electric proportional, 24 volt, NC	1
	QC120	14-35		11103621	Solenoid valve seal kit	1
	QC125	14-35		11104460	Nut	1
	QC150	14-35		11104468	Solenoid valve kit, 24 volt, NC	1



Control

(TE)



E103 219E

* = included in base motor seal kit Q210

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

Parts Manual

Series 45 Frame F 74-90cc O. C. Pumps

Control

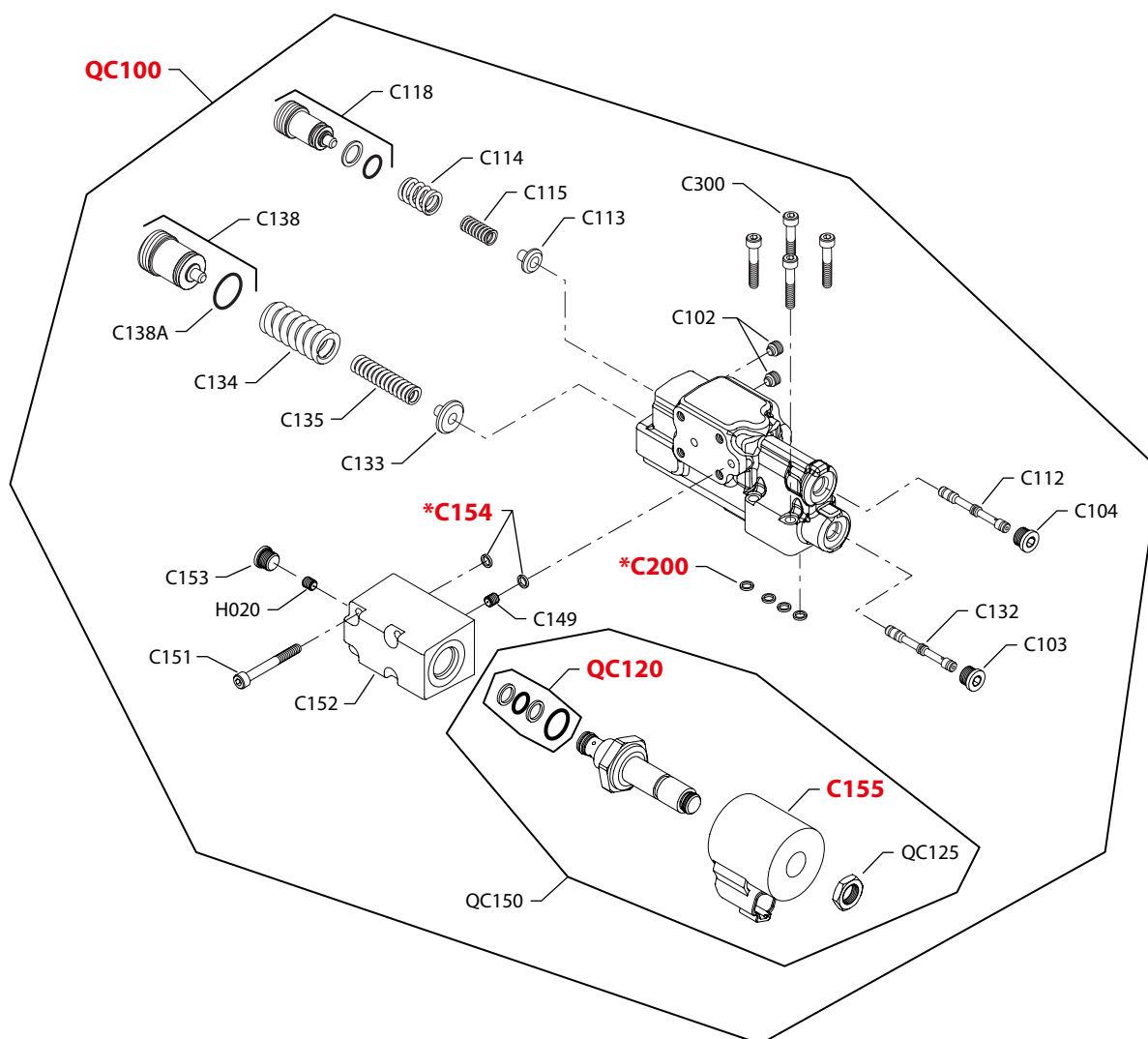
Electric control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
TE	C102	14-35		4740064	Set screw	2
	C103	14-35		327007 (9005110-4400)	Plug assembly	1
	C104	14-35		327007 (9005110-4400)	Plug assembly	1
	C112	14-35		1701124	Spool	1
	C113	14-35		4740246	Spring guide	1
	C114	14-35		4740061	Spring	1
	C115	14-35		4740062	Spring	1
	C118	14-35		11062214	Adjusting plug assembly	1
	C132	14-35		1701124	Spool	1
	C133	14-35		4740247	Spring guide	1
	C134	14-35		4740051	Spring, PC outer	1
	C135	14-35		4740052	Spring, PC inner	1
	C138	14-35		11062379	Adjusting plug assembly	1
	C138A	14-35		5000656	O-ring	1
	C149	14-35		739144	Orifice plug, 0.8mm	1
	C151	14-35		9007315-0510	Screw	4
	C152	14-35		11150082	Solenoid valve adapter	1
	C153	14-35		327007 (9005110-4400)	Plug assembly	1
	C154	14-35		4740154	Seal ring	2
	C155	14-35		1701291	Coil, 12 volt	1
	C200	14-35		4740154	Seal ring	4
	C300	14-35		5000164 (9007315-0507)	Screw	4
	QC100	14-35		11150237	Control Kit, electric proportional, 12v, NC	1
	QC120	14-35		11103621	Solenoid valve seal kit	1
	QC125	14-35		11104460	Nut	1
	QC150	14-35		11104467	Solenoid valve kit, 12 volt, NC	1



Control

(TF)



E103 219E

* = included in base motor seal kit Q210

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

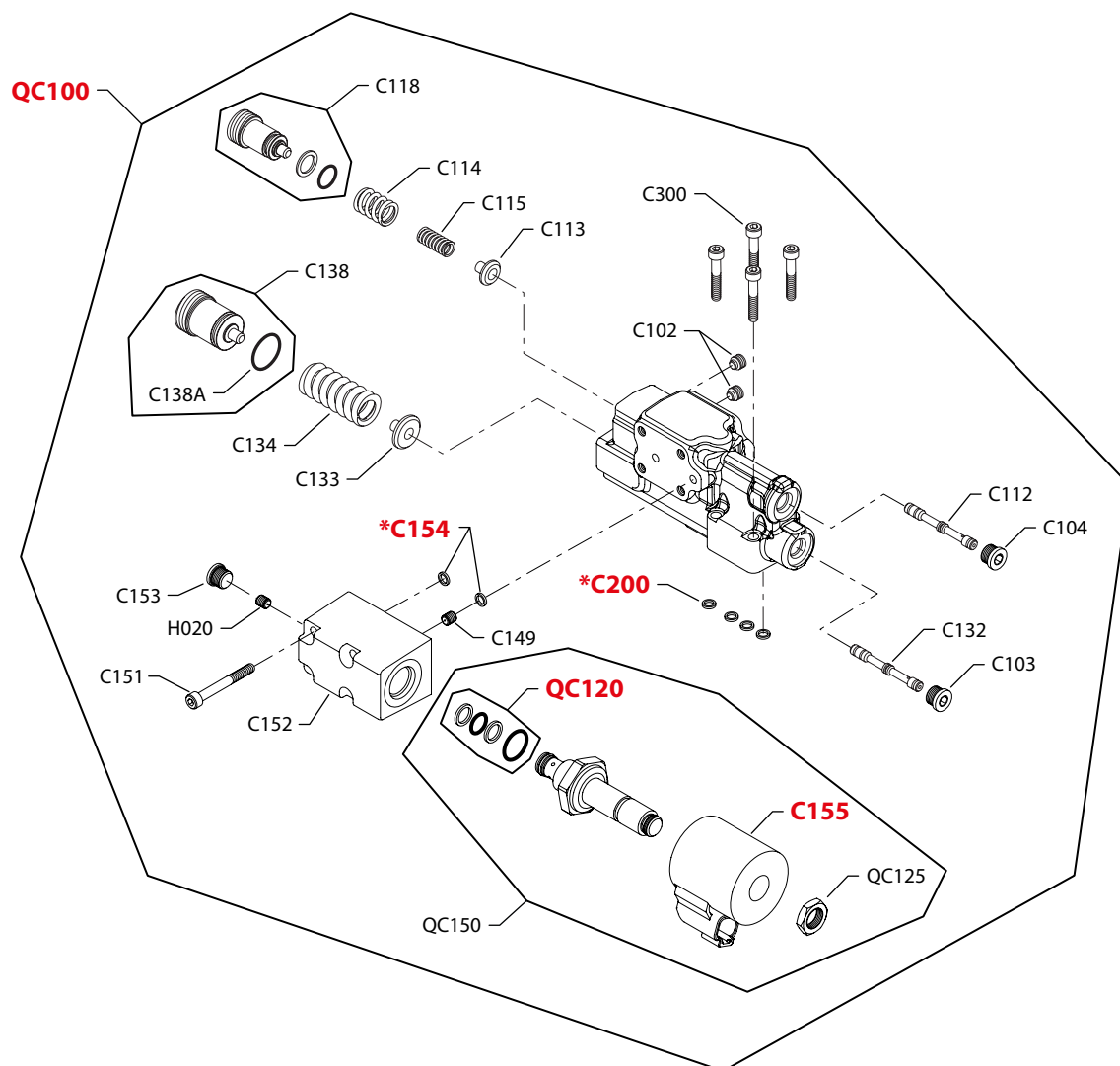
Control
Electric control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
TF	C102	14-35		4740064	Set screw	2
	C103	14-35		327007 (9005110-4400)	Plug assembly	1
	C104	14-35		327007 (9005110-4400)	Plug assembly	1
	C112	14-35		1701124	Spool	1
	C113	14-35		4740246	Spring guide	1
	C114	14-35		4740061	Spring	1
	C115	14-35		4740062	Spring	1
	C118	14-35		11062214	Adjusting plug assembly	1
	C132	14-35		1701124	Spool	1
	C133	14-35		4740247	Spring guide	1
	C134	14-35		4740051	Spring, PC outer	1
	C135	14-35		4740052	Spring, PC inner	1
	C138	14-35		11062379	Adjusting plug assembly	1
	C138A	14-35		5000656	O-ring	1
	C149	14-35		739144	Orifice plug, 0.8mm	1
	C151	14-35		9007315-0510	Screw	4
	C152	14-35		11150082	Solenoid valve adapter	1
	C153	14-35		327007 (9005110-4400)	Plug assembly	1
	C154	14-35		4740154	Seal ring	2
	C155	14-35		1701563	Coil, 24 volt	1
	C200	14-35		4740154	Seal ring	4
	C300	14-35		5000164 (9007315-0507)	Screw	4
	H020	14-35		11062004	Orifice plug, 0.8mm	1
	H020	14-35		11066593	Orifice plug, 1.0mm	1
	QC100	14-35		11150238	Control Kit, electric 24v, NC	1
	QC120	14-35		11103621	Solenoid valve seal kit	1
	QC125	14-35		11104460	Nut	1
	QC150	14-35		11104468	Solenoid valve kit, 24 volt	1



Control

(TG)



E103 243E

* = included in base motor seal kit Q210

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

Parts Manual

Series 45 Frame F 74-90cc O. C. Pumps

Control

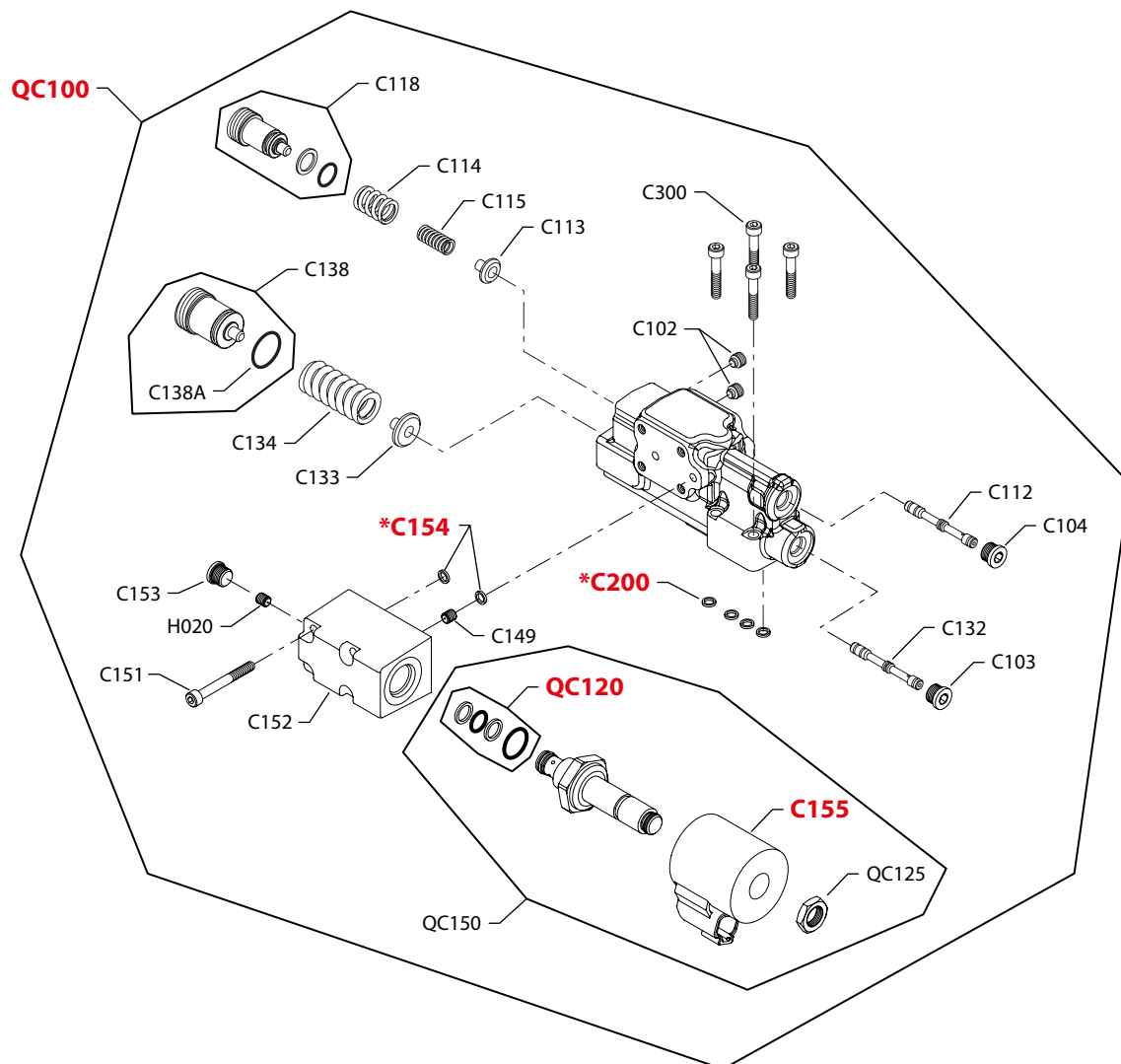
Electric control

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
TG	C102	14-35		4740064	Set screw	2
	C103	14-35		327007 (9005110-4400)	Plug assembly	1
	C104	14-35		327007 (9005110-4400)	Plug assembly	1
	C112	14-35		1701124	Spool	1
	C113	14-35		4740246	Spring guide	1
	C114	14-35		4740061	Spring	1
	C115	14-35		4740062	Spring	1
	C118	14-35		11062214	Adjusting plug assembly	1
	C132	14-35		1701124	Spool	1
	C133	14-35		4740247	Spring guide	1
	C134	14-35		4740324	Spring, PC heavy	1
	C138	14-35		1700597	Adjusting plug assembly	1
	C138A	14-35		5000656	O-ring	1
	C149	14-35		739144	Orifice plug, 0.8mm	1
	C151	14-35		9007315-0510	Screw	4
	C152	14-35		11150082	Solenoid valve adapter	1
	C153	14-35		327007 (9005110-4400)	Plug assembly	1
	C154	14-35		4740154	Seal ring	2
	C155	14-35		1701291	Coil, 12 volt	1
	C200	14-35		4740154	Seal ring	4
	C300	14-35		5000164 (9007315-0507)	Screw	4
	H020	14-35		11062004	Orifice plug, 0.8mm	1
	H020	14-35		11066593	Orifice plug, 1.0mm	1
	QC100	14-35		11150239	Control Kit, electric 12v, NC	1
	QC120	14-35		11103621	Solenoid valve seal kit	1
	QC125	14-35		11104460	Nut	1
	QC150	14-35		11104467	Solenoid valve kit, 12 volt	1



Control

(TH)



E103 243E

* = included in base motor seal kit Q210

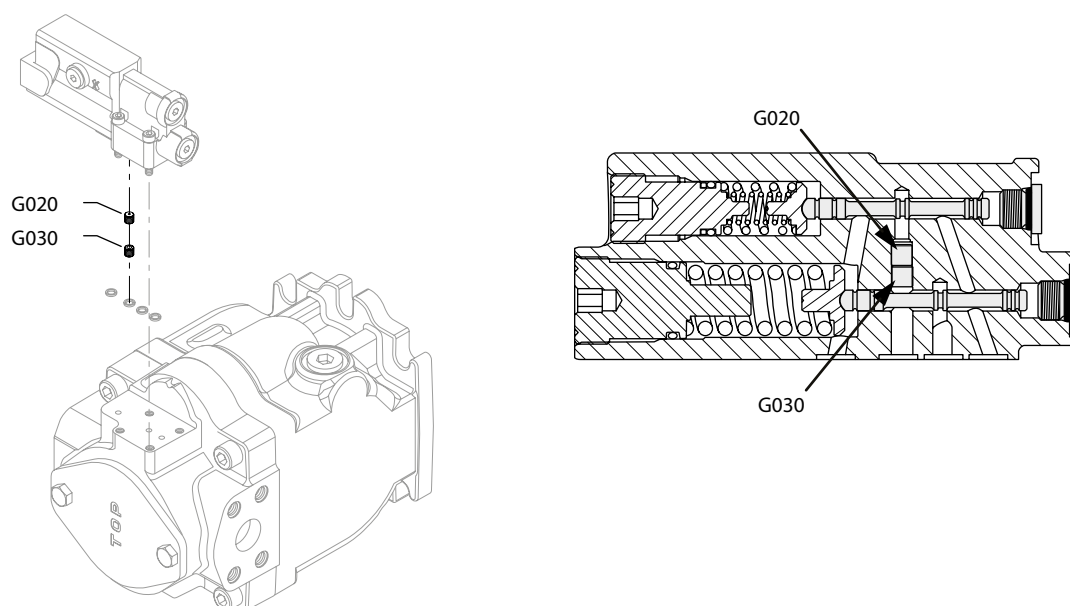
Enlarged **bold** type item numbers are recommended part to stock for servicing.

Control
Electric control

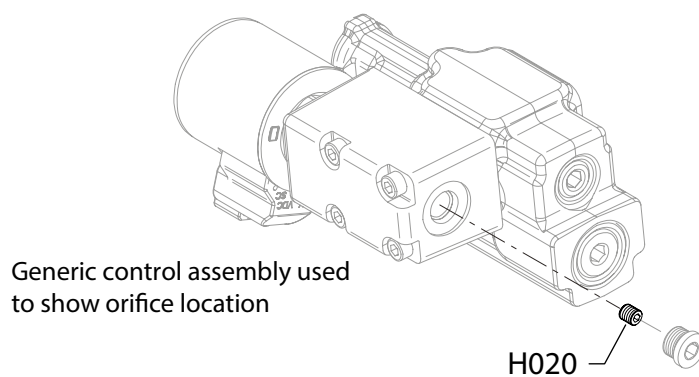
Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
TH	C102	14-35		4740064	Set screw	2
	C103	14-35		327007 (9005110-4400)	Plug assembly	1
	C104	14-35		327007 (9005110-4400)	Plug assembly	1
	C112	14-35		1701124	Spool	1
	C113	14-35		4740246	Spring guide	1
	C114	14-35		4740061	Spring	1
	C115	14-35		4740062	Spring	1
	C118	14-35		11062214	Adjusting plug assembly	1
	C132	14-35		1701124	Spool	1
	C133	14-35		4740247	Spring guide	1
	C134	14-35		4740324	Spring, PC heavy	1
	C138	14-35		1700597	Adjusting plug assembly	1
	C138A	14-35		5000656	O-ring	1
	C149	14-35		739144	Orifice plug, 0.8mm	1
	C151	14-35		9007315-0510	Screw	4
	C152	14-35		11150082	Solenoid valve adapter	1
	C153	14-35		327007 (9005110-4400)	Plug assembly	1
	C154	14-35		4740154	Seal ring	2
	C155	14-35		1701563	Coil, 24 volt	1
	C200	14-35		4740154	Seal ring	4
	C300	14-35		5000164 (9007315-0507)	Screw	4
	H020	14-35		11062004	Orifice plug, 0.8mm	1
	H020	14-35		11066593	Orifice plug, 1.0mm	1
	QC100	14-35		11150240	Control Kit, electric 24v, NC	1
	QC120	14-35		11103621	Solenoid valve seal kit	1
	QC125	14-35		11104460	Nut	1
	QC150	14-35		11104468	Solenoid valve kit, 24 volt	1

Control orifice

(E & F)



(C & D)



Generic control assembly used
to show orifice location


Control orifice
Choke orifice (servo control orifice)

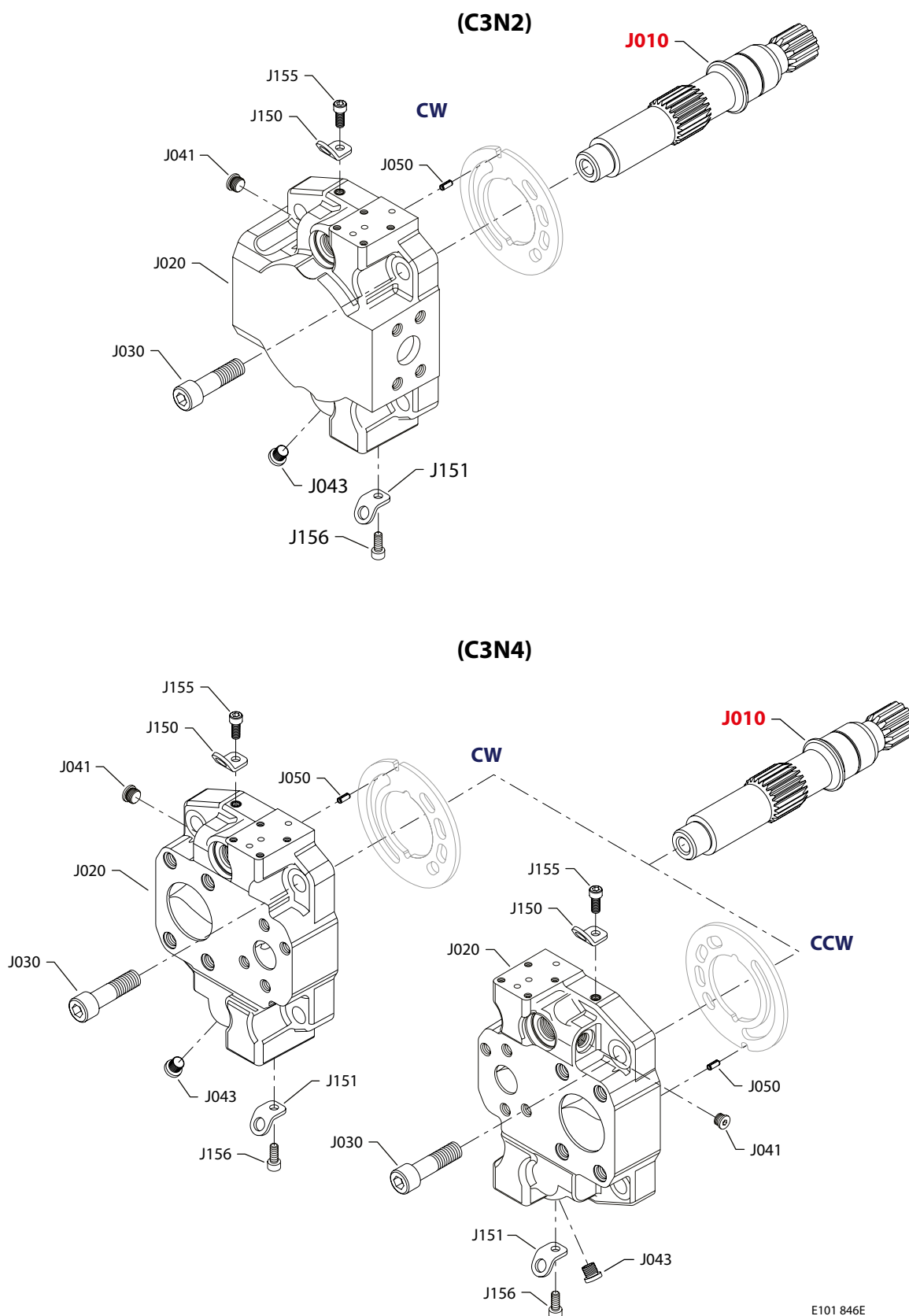
Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
E	G020	12-40		739144	Orifice plug, 0.8 mm (SB-2012-011)	1
	G030	12-40		518215	Orifice plug, 2.2 mm	1
F	G020	12-40		519659	Orifice plug, 1.0 mm (SB-2012-011)	1
	G030	12-40		518215	Orifice plug, 2.2 mm	1
N				None		

Gain orifice

C	H020	14-35		11062004	Orifice plug, 0.8mm	1
D	H020	14-35		11066593	Orifice plug, 1.0mm	1



Shaft, auxiliary flange, and end cap



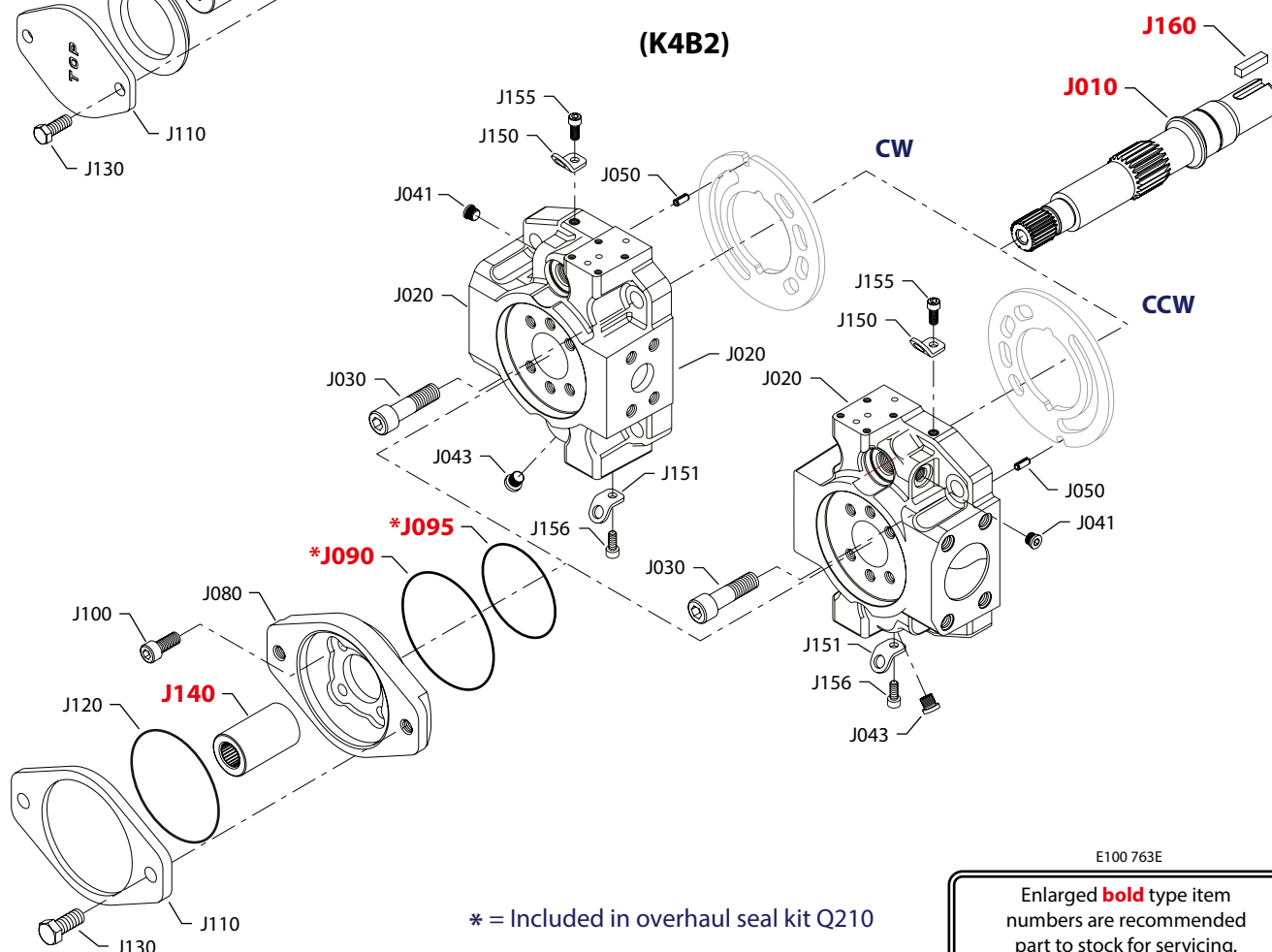
E101 846E

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
C3N2	J010	08-52		11032657	Shaft, 15 tooth, no aux. spline	1
	J020	08-52		11102264	End cap, cw, radial ports, FRR (SB-2011-036)	1
	J030	08-52		575910	Screw	4
	J041	08-52		327007 (9005110-4400)	Plug assembly	1
	J043	08-52		327007 (9005110-4400)	Plug assembly	1
	J050	08-52		9004700-1907	Pin	1
	J150	08-52		4800754	Lifting bracket	1
	J151	08-52		4800754	Lifting bracket	1
	J155	08-52		9007315-0604	Screw	1
	J156	08-52		9007315-0604	Screw	1
C3N4	J010	10-26		11032657	Shaft, 15 tooth, no aux. spline	1
	J020	10-26		11102261	End cap, cw, axial ports, FRR (SB-2011-036)	1
	J020	10-26		11102262	End cap, ccw, axial ports, FRL (SB-2011-036)	1
	J030	10-26		575910	Screw	4
	J041	10-26		327007 (9005110-4400)	Plug assembly	1
	J043	10-26		327007 (9005110-4400)	Plug assembly	1
	J050	10-26		9004700-1907	Pin	1
	J150	10-26		4800754	Lifting bracket	1
	J151	10-26		4800754	Lifting bracket	1
	J155	10-26		9007315-0604	Screw	1
	J156	10-26		9007315-0604	Screw	1

(K4A2)



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	06-05		4740460	Shaft, straight key w/aux. spline	1
	J012	06-05		5000364	Key	1
	J020	06-05		11102265	End cap, cw, radial ports, FRR (SB-2011-036)	1
	J020	06-05		11102267	End cap, ccw, radial ports, FRL (SB-2011-036)	1
	J030	06-05		575910	Screw	4
	J041	06-05		327007 (9005110-4400)	Plug assembly	1
	J043	06-05		327007 (9005110-4400)	Plug assembly	1
	J050	06-05		9004700-1907	Pin	1
	J080	06-05		4570289	Flange adapter, A	1
	J090	06-05		5000099 (9004100-1550)	O-ring	1
	J095	06-05		545434 (9004100-0420)	O-ring	1
	J100	06-05		5000489	Screw	4
	J110	06-05		4460586	Cover plate	1
	J120	06-05		4800482	A pad seal	1
	J130	06-05		9007200-3712	Screw	2
	J140	06-05		1701185	Coupling, 9 tooth	1
	J150	06-05		4800754	Lifting bracket	1
	J151	06-05		4800754	Lifting bracket	1
	J155	06-05		9007315-0604	Screw	1
	J156	06-05		9007315-0604	Screw	1
K4B2	J010	06-05		4740460	Shaft, straight key w/aux. spline	1
	J012	06-05		5000364	Key	1
	J020	06-05		11102265	End cap, cw, radial ports, FRR (SB-2011-036)	1
	J020	06-05		11102267	End cap, ccw, radial ports, FRL (SB-2011-036)	1
	J030	06-05		575910	Screw	4
	J041	06-05		327007 (9005110-4400)	Plug assembly	1
	J043	06-05		327007 (9005110-4400)	Plug assembly	1
	J050	06-05		9004700-1907	Pin	1
	J080	06-05		4570210	Flange adapter, B	1
	J090	06-05		5000099 (9004100-1550)	O-ring	1
	J095	06-05		545434 (9004100-0420)	O-ring	1
	J100	06-05		5000489	Screw	4
	J110	06-05		4460370	Cover plate	1
	J120	06-05		680892 (9004104-0440)	O-ring	1
	J130	06-05		9007200-5021	Screw	2
	J140	06-05		1701187	Coupling, 13 tooth	1
	J150	06-05		4800754	Lifting bracket	1
	J151	06-05		4800754	Lifting bracket	1
	J155	06-05		9007315-0604	Screw	1
	J156	06-05		9007315-0604	Screw	1

(K4C2)



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

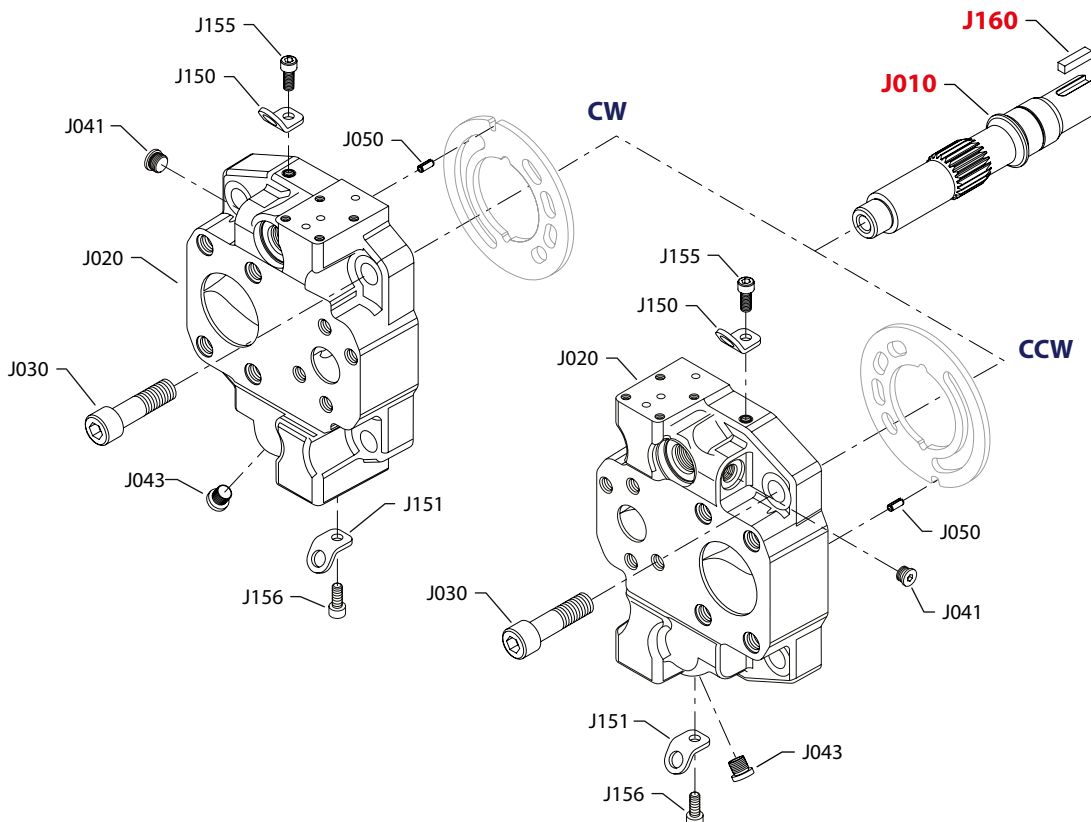
Shaft, auxiliary flange, and end cap
Shaft/auxiliary flange/end cap

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
K4C2	J010	06-05		4740460	Shaft, straight key w/aux. spline	1
	J012	06-05		5000364	Key	1
	J020	06-05		11102265	End cap, cw, radial ports, FRR (SB-2011-036)	1
	J020	06-05		11102267	End cap, ccw, radial ports, FRL (SB-2011-036)	1
	J030	06-05		575910	Screw	4
	J041	06-05		327007 (9005110-4400)	Plug assembly	1
	J043	06-05		327007 (9005110-4400)	Plug assembly	1
	J050	06-05		9004700-1907	Pin	1
	J080	06-05		11039356	Flange adapter, C	1
	J090	06-05		5000099 (9004100-1550)	O-ring	1
	J095	06-05		545434 (9004100-0420)	O-ring	1
	J100	06-05		5000489	Screw	6
	J110	06-05		8800406	Cover plate	1
	J120	06-05		9004100-0480	O-ring	1
	J130	06-05		9007200-5021	Screw	4
	J140	06-05		1701189	Coupling, 14 tooth	1
	J150	06-05		4800754	Lifting bracket	1
	J151	06-05		4800754	Lifting bracket	1
	J155	06-05		9007315-0604	Screw	1
	J156	06-05		9007315-0604	Screw	1
K4N2	J010	06-05		11079201	Shaft, straight key no aux. spline (SB-2010-009)	1
	J012	06-05		5000364	Key	1
	J020	06-05		11102264	End cap, cw, radial ports, FRR (SB-2011-036)	1
	J020	06-05		11102266	End cap, ccw, radial ports, FRL (SB-2011-036)	1
	J030	06-05		575910	Screw	4
	J041	06-05		327007 (9005110-4400)	Plug assembly	1
	J043	06-05		327007 (9005110-4400)	Plug assembly	1
	J050	06-05		9004700-1907	Pin	1
	J150	06-05		4800754	Lifting bracket	1
	J151	06-05		4800754	Lifting bracket	1
	J155	06-05		9007315-0604	Screw	1
	J156	06-05		9007315-0604	Screw	1

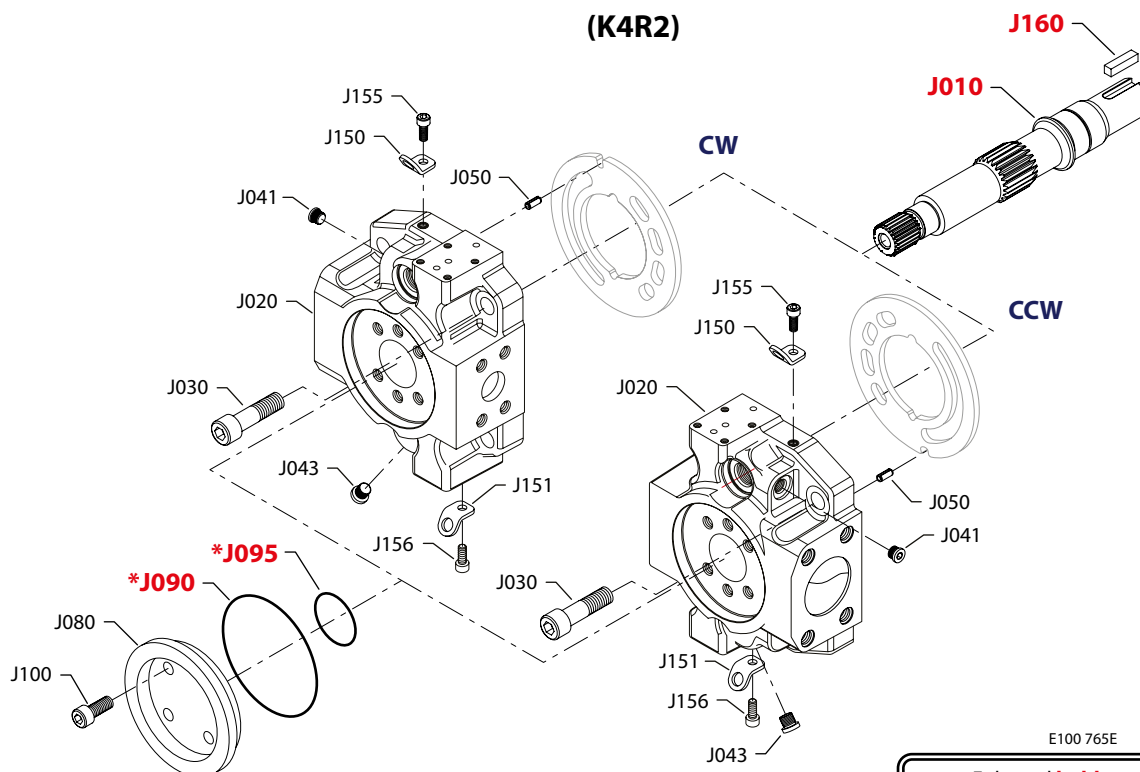


Shaft, auxiliary flange, and end cap

(K4N4)



(K4R2)



* = Included in overhaul seal kit Q210

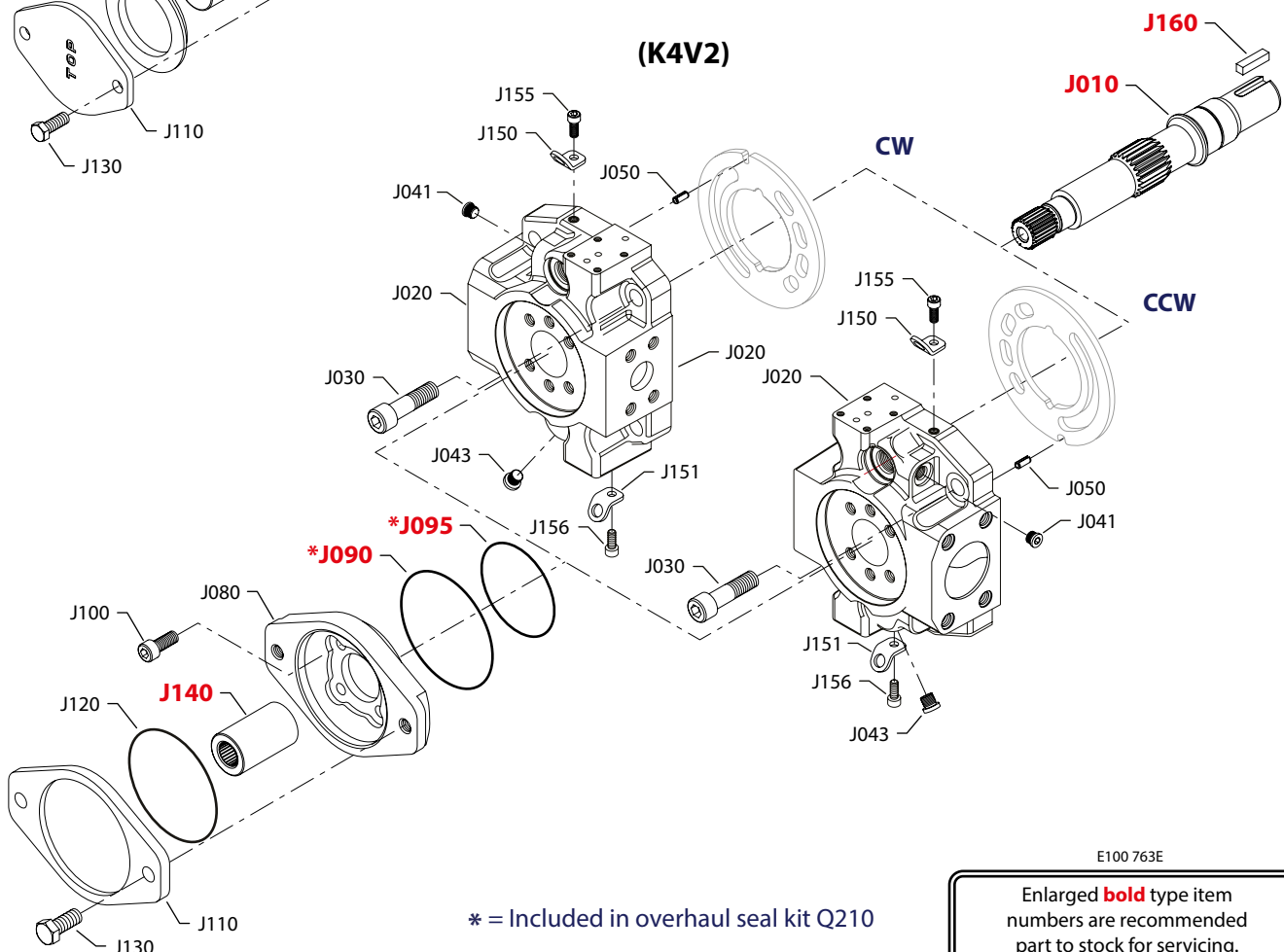
E100 765E

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
K4N4	J010	06-05		11079201	Shaft, straight key no aux. spline (SB-2010-009)	1
	J012	06-05		5000364	Key	1
	J020	06-05		11102261	End cap, cw, axial ports, FRR (SB-2011-036)	1
	J020	06-05		11102262	End cap, ccw, axial ports, FRL (SB-2011-036)	1
	J030	06-05		575910	Screw	4
	J041	06-05		327007 (9005110-4400)	Plug assembly	1
	J043	06-05		327007 (9005110-4400)	Plug assembly	1
	J050	06-05		9004700-1907	Pin	1
	J150	06-05		4800754	Lifting bracket	1
	J151	06-05		4800754	Lifting bracket	1
	J155	06-05		9007315-0604	Screw	1
	J156	06-05		9007315-0604	Screw	1
K4R2	J010	06-05		4740460	Shaft, straight key w/aux. spline	1
	J012	06-05		5000364	Key	1
	J020	06-05		11102265	End cap, cw, radial ports, FRR (SB-2011-036)	1
	J020	06-05		11102267	End cap, ccw, radial ports, FRL (SB-2011-036)	1
	J030	06-05		575910	Screw	4
	J041	06-05		327007 (9005110-4400)	Plug assembly	1
	J043	06-05		327007 (9005110-4400)	Plug assembly	1
	J050	06-05		9004700-1907	Pin	1
	J080	06-05		4570179	Running cover	1
	J090	06-05		5000099 (9004100-1550)	O-ring	1
	J095	06-05		9004104-0310	O-ring	1
	J100	06-05		5000489	Screw	6
	J150	06-05		4800754	Lifting bracket	1
	J151	06-05		4800754	Lifting bracket	1
	J155	06-05		9007315-0604	Screw	1
	J156	06-05		9007315-0604	Screw	1

(K4T2)



* = Included in overhaul seal kit Q210

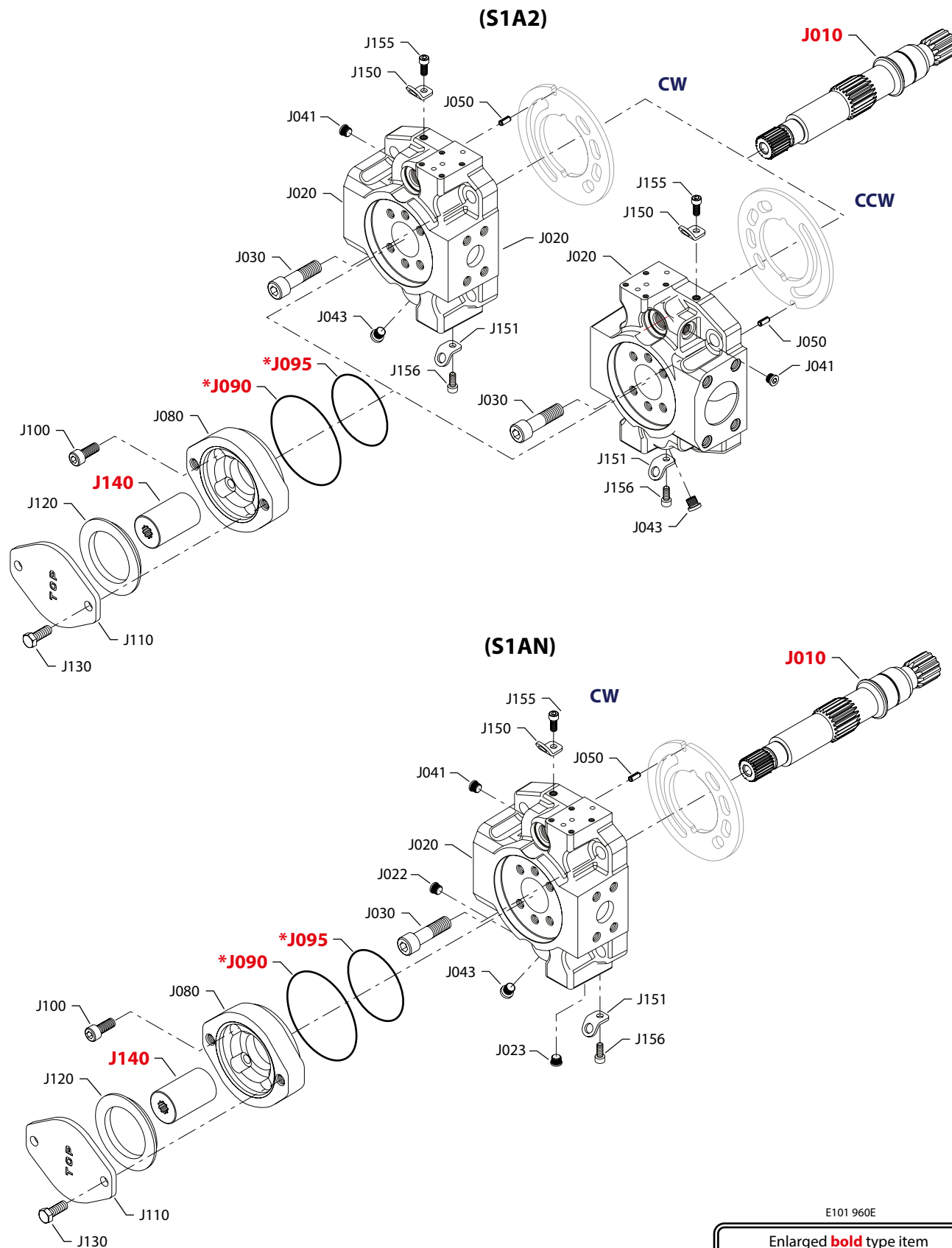
Enlarged **bold** type item numbers are recommended part to stock for servicing.

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
K4T2	J010	06-05		4740460	Shaft, straight key w/aux. spline	1
	J012	06-05		5000364	Key	1
	J020	06-05		11102265	End cap, cw, radial ports, FRR (SB-2011-036)	1
	J020	06-05		11102267	End cap, ccw, radial ports, FRL (SB-2011-036)	1
	J030	06-05		575910	Screw	4
	J041	06-05		327007 (9005110-4400)	Plug assembly	1
	J043	06-05		327007 (9005110-4400)	Plug assembly	1
	J050	06-05		9004700-1907	Pin	1
	J080	06-05		4570289	Flange adapter, A	1
	J090	06-05		5000099 (9004100-1550)	O-ring	1
	J095	06-05		545434 (9004100-0420)	O-ring	1
	J100	06-05		5000489	Screw	4
	J110	06-05		4460586	Cover plate	1
	J120	06-05		4800482	A pad seal	1
	J130	06-05		9007200-3712	Screw	2
	J140	06-05		1701186	Coupling, 11 tooth	1
	J150	06-05		4800754	Lifting bracket	1
	J151	06-05		4800754	Lifting bracket	1
K4V2	J155	06-05		9007315-0604	Screw	1
	J156	06-05		9007315-0604	Screw	1
	J010	06-05		4740460	Shaft, straight key w/aux. spline	1
	J012	06-05		5000364	Key	1
	J020	06-05		11102265	End cap, cw, radial ports, FRR (SB-2011-036)	1
	J020	06-05		11102267	End cap, ccw, radial ports, FRL (SB-2011-036)	1
	J030	06-05		575910	Screw	4
	J041	06-05		327007 (9005110-4400)	Plug assembly	1
	J043	06-05		327007 (9005110-4400)	Plug assembly	1
	J050	06-05		9004700-1907	Pin	1
	J080	06-05		4570210	Flange adapter, B	1
	J090	06-05		5000099 (9004100-1550)	O-ring	1
	J095	06-05		545434 (9004100-0420)	O-ring	1
	J100	06-05		5000489	Screw	4
	J110	06-05		4460370	Cover plate	1
	J120	06-05		680892 (9004104-0440)	O-ring	1
	J130	06-05		9007200-5021	Screw	2
	J140	06-05		1701188	Coupling, 15 tooth	1
	J150	06-05		4800754	Lifting bracket	1
	J151	06-05		4800754	Lifting bracket	1
	J155	06-05		9007315-0604	Screw	1
	J156	06-05		9007315-0604	Screw	1



Shaft, auxiliary flange, and end cap



* = Included in overhaul seal kit Q210

E101 960E

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

Parts Manual

Series 45 Frame F 74-90cc O. C. Pumps

Shaft, auxiliary flange, and end cap

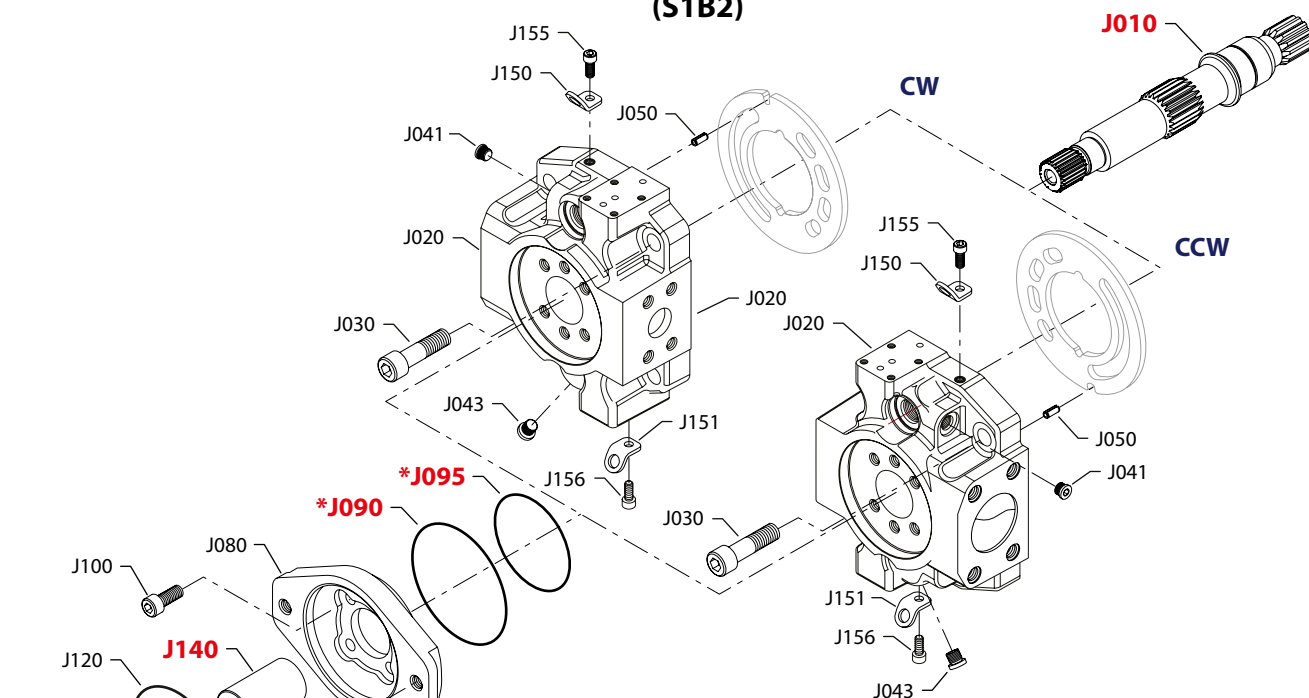
Shaft/auxiliary flange/end cap

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
S1A2	J010	06-05		4740459	Shaft, 14 tooth w/aux. spline	1
	J020	06-05		11102265	End cap, cw, radial ports, FRR (SB-2011-036)	1
	J020	06-05		11102267	End cap, ccw, radial ports, FRL (SB-2011-036)	1
	J030	06-05		575910	Screw	4
	J041	06-05		327007 (9005110-4400)	Plug assembly	1
	J043	06-05		327007 (9005110-4400)	Plug assembly	1
	J050	06-05		9004700-1907	Pin	1
	J080	06-05		4570289	Flange adapter, A	1
	J090	06-05		5000099 (9004100-1550)	O-ring	1
	J095	06-05		545434 (9004100-0420)	O-ring	1
	J100	06-05		5000489	Screw	4
	J110	06-05		4460586	Cover plate	1
	J120	06-05		4800482	A pad seal	1
	J130	06-05		9007200-3712	Screw	2
	J140	06-05		1701185	Coupling, 9 tooth	1
	J150	06-05		4800754	Lifting bracket	1
	J151	06-05		4800754	Lifting bracket	1
	J155	06-05		9007315-0604	Screw	1
	J156	06-05		9007315-0604	Screw	1
S1AN	J010	12-50		4740459	Shaft, 14 tooth w/aux. spline	1
	J020	12-50		11104455	End cap, cw, radial ports, FRR	1
	J022	12-50		327007 (9005110-4400)	Plug assembly	1
	J023	12-50		327007 (9005110-4400)	Plug assembly	1
	J030	12-50		575910	Screw	4
	J041	12-50		327007 (9005110-4400)	Plug assembly	1
	J043	12-50		327007 (9005110-4400)	Plug assembly	1
	J050	12-50		9004700-1907	Pin	1
	J080	12-50		4570289	Flange adapter, A	1
	J090	12-50		5000099 (9004100-1550)	O-ring	1
	J095	12-50		545434 (9004100-0420)	O-ring	1
	J100	12-50		5000489	Screw	4
	J110	12-50		4460586	Cover plate	1
	J120	12-50		4800482	A pad seal	1
	J130	12-50		9007200-3712	Screw	2
	J140	12-50		1701185	Coupling, 9 tooth	1
	J150	12-50		4800754	Lifting bracket	1
	J151	12-50		4800754	Lifting bracket	1
	J155	12-50		9007315-0604	Screw	1
	J156	12-50		9007315-0604	Screw	1

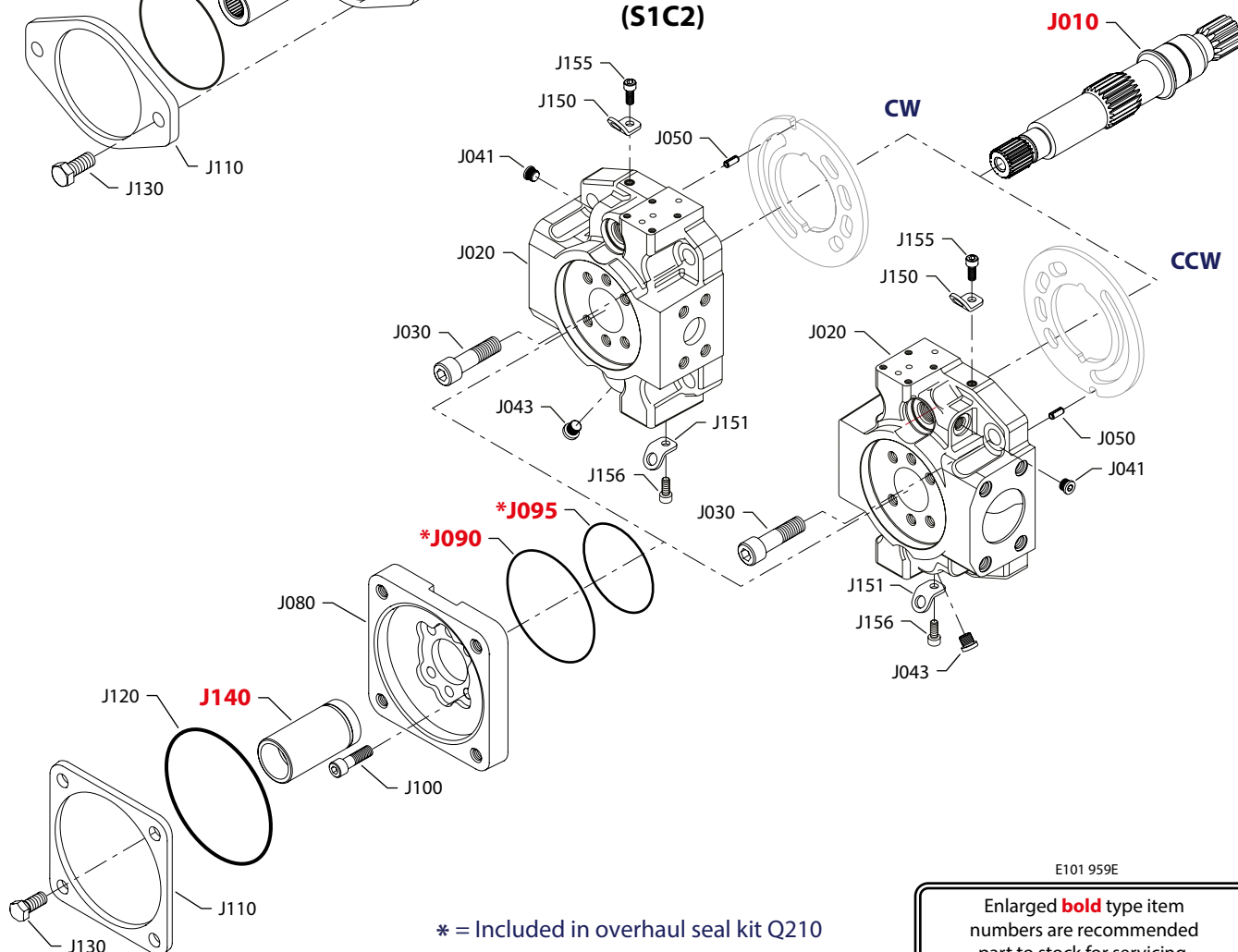


Shaft, auxiliary flange, and end cap

(S1B2)



(S1C2)



E101 959E

* = Included in overhaul seal kit Q210

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

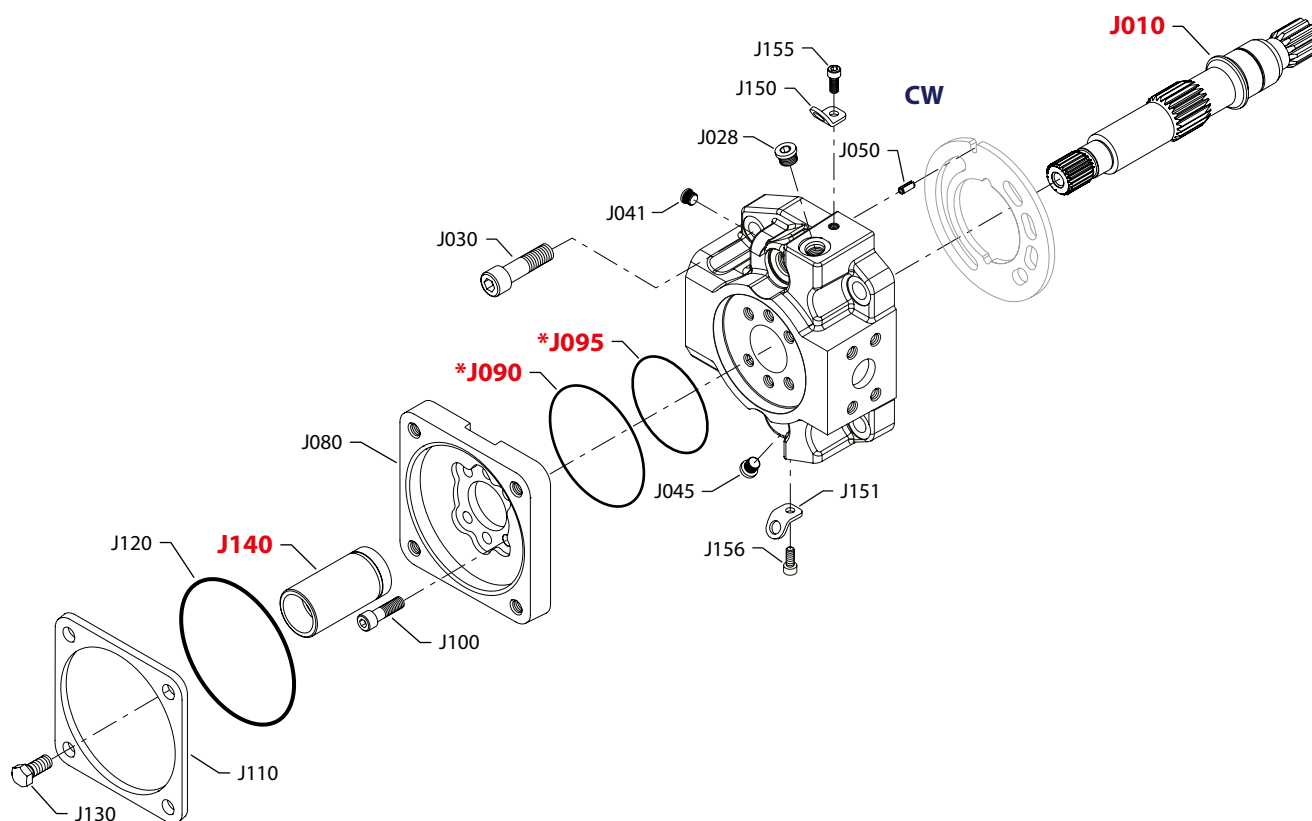
Shaft, auxiliary flange, and end cap
Shaft/auxiliary flange/end cap

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
S1B2	J010	06-05		4740459	Shaft, 14 tooth w/aux. spline	1
	J020	06-05		11102265	End cap, cw, radial ports, FRR (SB-2011-036)	1
	J020	06-05		11102267	End cap, ccw, radial ports, FRL (SB-2011-036)	1
	J030	06-05		575910	Screw	4
	J041	06-05		327007 (9005110-4400)	Plug assembly	1
	J043	06-05		327007 (9005110-4400)	Plug assembly	1
	J050	06-05		9004700-1907	Pin	1
	J080	06-05		4570210	Flange adapter, B	1
	J090	06-05		5000099 (9004100-1550)	O-ring	1
	J095	06-05		545434 (9004100-0420)	O-ring	1
	J100	06-05		5000489	Screw	4
	J110	06-05		4460370	Cover plate	1
	J120	06-05		680892 (9004104-0440)	O-ring	1
	J130	06-05		9007200-5021	Screw	2
	J140	06-05		1701187	Coupling, 13 tooth	1
	J150	06-05		4800754	Lifting bracket	1
	J151	06-05		4800754	Lifting bracket	1
	J155	06-05		9007315-0604	Screw	1
	J156	06-05		9007315-0604	Screw	1
S1C2	J010	06-05		4740459	Shaft, 14 tooth w/aux. spline	1
	J020	06-05		11102265	End cap, cw, radial ports, FRR (SB-2011-036)	1
	J020	06-05		11102267	End cap, ccw, radial ports, FRL (SB-2011-036)	1
	J030	06-05		575910	Screw	4
	J041	06-05		327007 (9005110-4400)	Plug assembly	1
	J043	06-05		327007 (9005110-4400)	Plug assembly	1
	J050	06-05		9004700-1907	Pin	1
	J080	06-05		11039356	Flange adapter, C	1
	J090	06-05		5000099 (9004100-1550)	O-ring	1
	J095	06-05		545434 (9004100-0420)	O-ring	1
	J100	06-05		5000489	Screw	6
	J110	06-05		8800406	Cover plate	1
	J120	06-05		719179 (9004100-0480)	O-ring	1
	J130	06-05		9007200-5021	Screw	4
	J140	06-05		1701189	Coupling, 14 tooth	1
	J150	06-05		4800754	Lifting bracket	1
	J151	06-05		4800754	Lifting bracket	1
	J155	06-05		9007315-0604	Screw	1
	J156	06-05		9007315-0604	Screw	1



Shaft, auxiliary flange, and end cap

(S1E5 & S1E6)



E101 955E

* = Included in overhaul seal kit Q210

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
S1E5	J010	14-27		4740459	Shaft, 14 tooth w/aux. spline	1
	J020	14-27		11129058	End cap, cw, radial ports, FRR, control on opposite side	1
	J028	14-27		515965 (9005110-5600)	Plug assembly	1
	J030	14-27		575910	Screw	4
	J041	14-27		327007 (9005110-4400)	Plug assembly	1
	J045	14-27		515965 (9005110-5600)	Plug assembly	1
	J050	14-27		9004700-1907	Pin	1
	J080	14-27		11114448	Flange adapter, C, metric	1
	J090	14-27		5000099 (9004100-1550)	O-ring	1
	J095	14-27		545434 (9004100-0420)	O-ring	1
	J100	14-27		5000489	Screw	6
	J110	14-27		8800406	Cover plate	1
	J120	14-27		719179 (9004100-0480)	O-ring	1
	J130	14-27		370320	Screw	4
	J140	14-27		1701189	Coupling, 14 tooth	1
	J150	14-27		4800754	Lifting bracket	1
	J151	14-27		4800754	Lifting bracket	1
	J155	14-27		9007315-0604	Screw	1
	J156	14-27		9007315-0604	Screw	1
S1E6	J010	12-34		4740459	Shaft, 14 tooth w/aux. spline	1
	J020	12-34		11112963	End cap, cw, radial ports, FRR, control on opposite side	1
	J028	12-34		5000438	Plug assembly	1
	J030	12-34		575910	Screw	4
	J041	12-34		327007 (9005110-4400)	Plug assembly	1
	J045	12-34		5000438	Plug assembly	1
	J050	12-34		9004700-1907	Pin	1
	J080	12-34		11114448	Flange adapter, C, metric	1
	J090	12-34		5000099 (9004100-1550)	O-ring	1
	J095	12-34		545434 (9004100-0420)	O-ring	1
	J100	12-34		5000489	Screw	6
	J110	12-34		8800406	Cover plate	1
	J120	12-34		719179 (9004100-0480)	O-ring	1
	J130	12-34		370320	Screw	4
	J140	12-34		1701189	Coupling, 14 tooth	1
	J150	12-34		4800754	Lifting bracket	1
	J151	12-34		4800754	Lifting bracket	1
	J155	12-34		9007315-0604	Screw	1
	J156	12-34		9007315-0604	Screw	1

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
S1E7	J010	13-43		4740459	Shaft, 14 tooth w/aux. spline	1
	J020	13-43		11129058	End cap, cw, radial ports, FRR, control on opposite side	1
	J028	13-43		515965 (9005110-5600)	Plug assembly	1
	J030	13-43		575910	Screw	4
	J041	13-43		327007 (9005110-4400)	Plug assembly	1
	J045	13-43		515965 (9005110-5600)	Plug assembly	1
	J050	13-43		9004700-1907	Pin	1
	J080	13-43		4570390	Flange adapter, B, metric	1
	J090	13-43		5000099 (9004100-1550)	O-ring	1
	J095	13-43		545434 (9004100-0420)	O-ring	1
	J100	13-43		5000489	Screw	6
	J110	13-43		4460370	Cover plate	1
	J120	13-43		680892 (9004100-0440)	O-ring	1
	J130	13-43		370320	Screw	2
	J140	13-43		1701188	Coupling, 15 tooth	1
	J150	13-43		4800754	Lifting bracket	1
	J151	13-43		4800754	Lifting bracket	1
	J155	13-43		9007315-0604	Screw	1
	J156	13-43		9007315-0604	Screw	1
S1E8	J010	13-43		4740459	Shaft, 14 tooth w/aux. spline	1
	J020	13-43		11112963	End cap, cw, radial ports, FRR, control on opposite side	1
	J028	13-43		5000438	Plug assembly	1
	J030	13-43		575910	Screw	4
	J041	13-43		327007 (9005110-4400)	Plug assembly	1
	J045	13-43		5000438	Plug assembly	1
	J050	13-43		9004700-1907	Pin	1
	J080	13-43		4570430	Flange adapter, A, metric	1
	J090	13-43		5000099 (9004100-1550)	O-ring	1
	J095	13-43		545434 (9004100-0420)	O-ring	1
	J100	13-43		5000489	Screw	6
	J110	13-43		4460586	Cover plate	1
	J120	13-43		4800482	A pad seal	1
	J130	13-43		5000622	Screw	2
	J140	13-43		1701185	Coupling, 9 tooth	1
	J150	13-43		4800754	Lifting bracket	1
	J151	13-43		4800754	Lifting bracket	1
	J155	13-43		9007315-0604	Screw	1
	J156	13-43		9007315-0604	Screw	1

(S1I2)



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

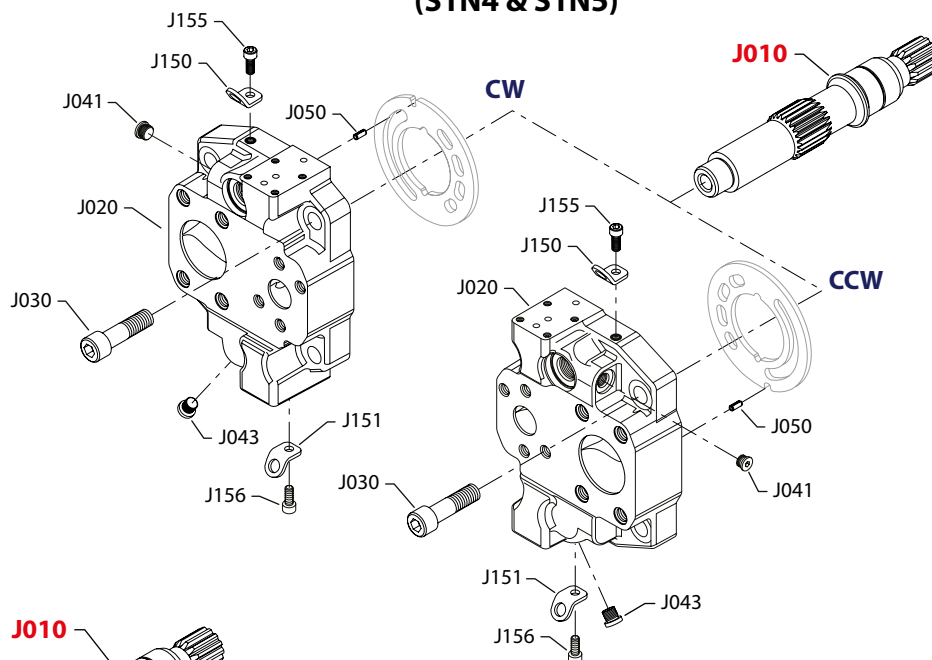
Shaft, auxiliary flange, and end cap
Shaft/auxiliary flange/end cap

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
S1I2	J010	12-24		4740459	Shaft, 14 tooth w/aux. spline	1
	J020	12.24		11102265	End cap, cw, radial ports, FRR	1
	J030	12.24		575910	Screw	4
	J041	12.24		327007 (9005110-4400)	Plug assembly	1
	J043	12.24		327007 (9005110-4400)	Plug assembly	1
	J050	12.24		9004700-1907	Pin	1
	J080	12.24		4570390	Flange adapter, B	1
	J090	12.24		5000099 (9004100-1550)	O-ring	1
	J095	12.24		545434 (9004100-0420)	O-ring	1
	J100	12.24		5000489	Screw	4
	J110	12.24		4460370	Cover plate	1
	J120	12.24		680892 (9004104-0440)	O-ring	1
	J130	12.24		370320	Screw	2
	J140	12.24		1701188	Coupling, 15 tooth	1
	J150	12.24		4800754	Lifting bracket	1
	J151	12.24		4800754	Lifting bracket	1
	J155	12.24		9007315-0604	Screw	1
	J156	12.24		9007315-0604	Screw	1
S1N2	J010	06-05		4740012	Shaft, 14 tooth, no aux. spline	1
	J020	06-05		11102264	End cap, cw, radial ports, FRR (SB-2011-036)	1
	J020	06-05		11102266	End cap, ccw, radial ports, FRL (SB-2011-036)	1
	J030	06-05		575910	Screw	4
	J041	06-05		327007 (9005110-4400)	Plug assembly	1
	J043	06-05		327007 (9005110-4400)	Plug assembly	1
	J050	06-05		9004700-1907	Pin	1
	J150	06-05		4800754	Lifting bracket	1
	J151	06-05		4800754	Lifting bracket	1
	J155	06-05		9007315-0604	Screw	1
	J156	06-05		9007315-0604	Screw	1

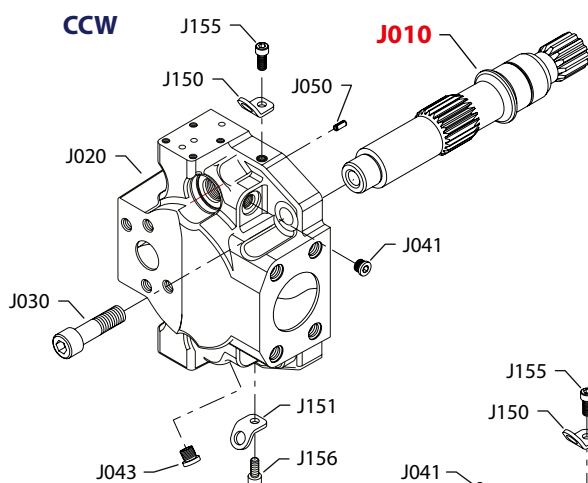


Shaft, auxiliary flange, and end cap

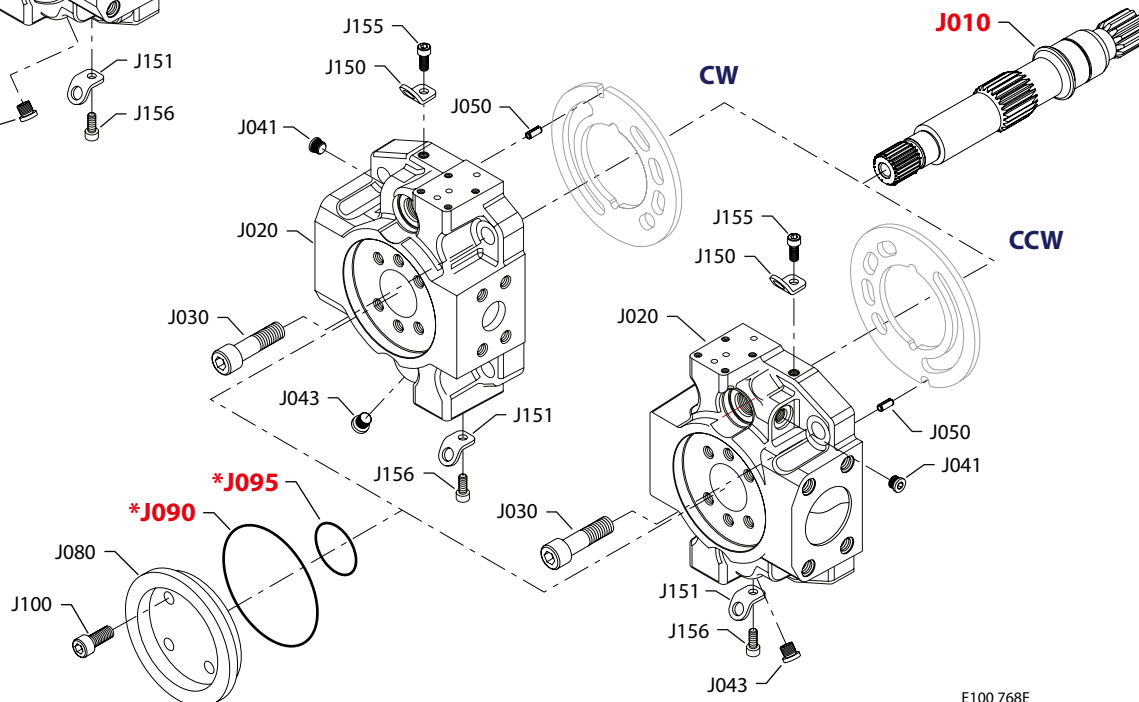
(S1N4 & S1N5)



(S1N5)



(S1R2)



* = Included in overhaul seal kit Q210

E100 768E

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

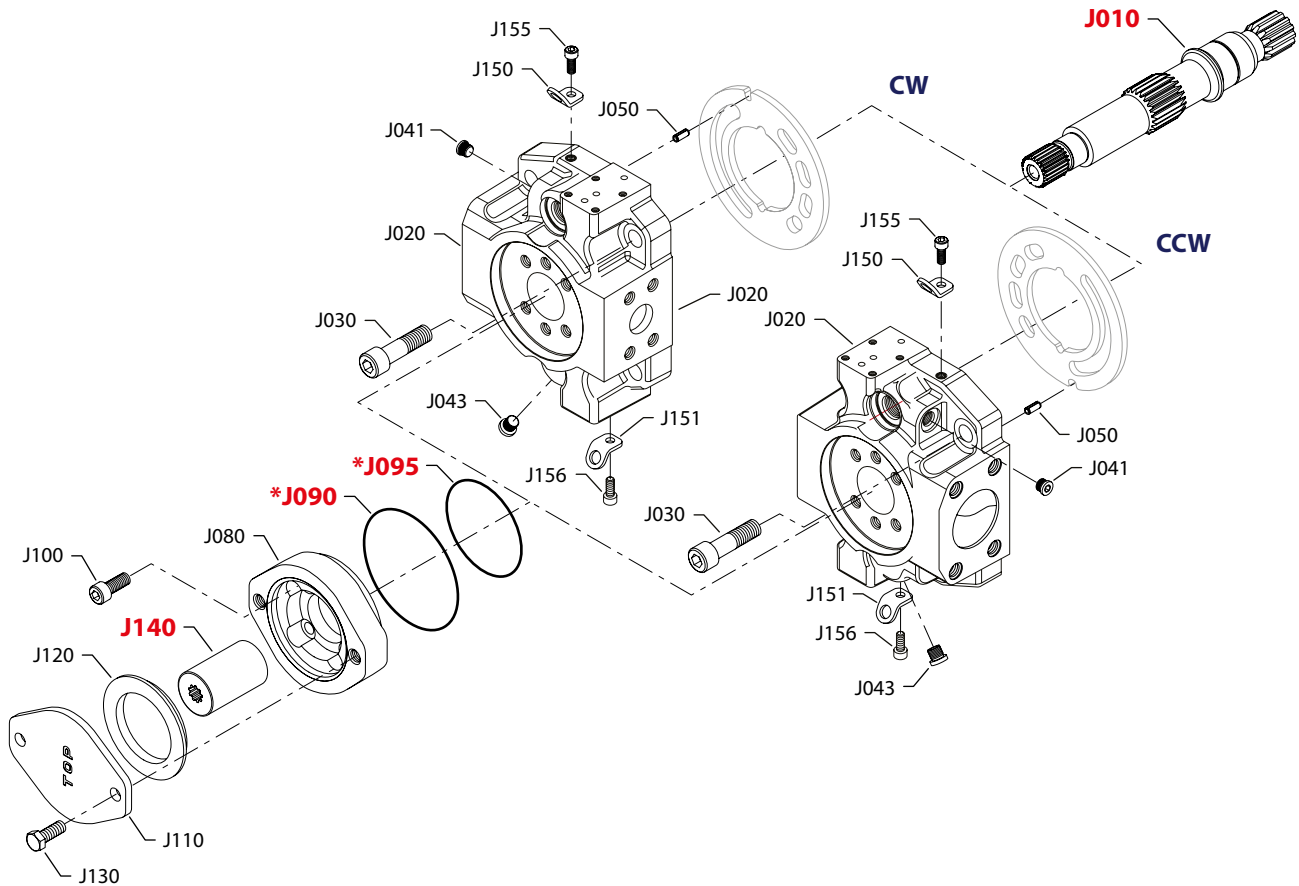
Shaft, auxiliary flange, and end cap
Shaft/auxiliary flange/end cap

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
S1N4	J010	06-05		4740012	Shaft, 14 tooth, no aux. spline	1
	J020	06-05		11102261	End cap, cw, axial ports, FRR (SB-2011-036)	1
	J020	06-05		11102262	End cap, ccw, axial ports, FRL (SB-2011-036)	1
	J030	06-05		575910	Screw	4
	J041	06-05		327007 (9005110-4400)	Plug assembly	1
	J043	06-05		327007 (9005110-4400)	Plug assembly	1
	J050	06-05		9004700-1907	Pin	1
	J150	06-05		4800754	Lifting bracket	1
	J151	06-05		4800754	Lifting bracket	1
	J155	06-05		9007315-0604	Screw	1
	J156	06-05		9007315-0604	Screw	1
S1N5	J010	10-07		4740012	Shaft, 14 tooth, no aux. spline	1
	J020	10-07		11102263	End cap, ccw, axial ports, FRL (SB-2011-036)	1
	J030	10-07		575910	Screw	4
	J041	10-07		327007 (9005110-4400)	Plug assembly	1
	J043	10-07		327007 (9005110-4400)	Plug assembly	1
	J050	10-07		9004700-1907	Pin	1
	J150	10-07		4800754	Lifting bracket	1
	J151	10-07		4800754	Lifting bracket	1
	J155	10-07		9007315-0604	Screw	1
	J156	10-07		9007315-0604	Screw	1
S1NS	J010	06-05		4740012	Shaft, 14 tooth, no aux. spline	1
	J020	06-05		11095104	End cap, ccw, axial ports, FRL (SB-2011-036)	1
	J030	06-05		575910	Screw	4
	J041	06-05		327007 (9005110-4400)	Plug assembly	1
	J043	06-05		327007 (9005110-4400)	Plug assembly	1
	J050	06-05		9004700-1907	Pin	1
	J150	06-05		4800754	Lifting bracket	1
	J151	06-05		4800754	Lifting bracket	1
	J155	06-05		9007315-0604	Screw	1
	J156	06-05		9007315-0604	Screw	1
S1R2	J010	06-05		4740459	Shaft, 14 tooth w/aux. spline	1
	J020	06-05		11102265	End cap, cw, radial ports, FRR (SB-2011-036)	1
	J020	06-05		11102267	End cap, ccw, radial ports, FRL (SB-2011-036)	1
	J030	06-05		575910	Screw	4
	J041	06-05		327007 (9005110-4400)	Plug assembly	1
	J043	06-05		327007 (9005110-4400)	Plug assembly	1
	J050	06-05		9004700-1907	Pin	1
	J080	06-05		4570179	Running cover	1
	J090	06-05		5000099 (9004100-1550)	O-ring	1
	J095	06-05		9004104-0310	O-ring	1
	J100	06-05		5000489	Screw	6
	J150	06-05		4800754	Lifting bracket	1
	J151	06-05		4800754	Lifting bracket	1
	J155	06-05		9007315-0604	Screw	1
	J156	06-05		9007315-0604	Screw	1



Shaft, auxiliary flange, and end cap

(S1T2 & S1T3)



E100 766E

* = Included in overhaul seal kit Q210

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

Parts Manual

Series 45 Frame F 74-90cc O. C. Pumps

Shaft, auxiliary flange, and end cap

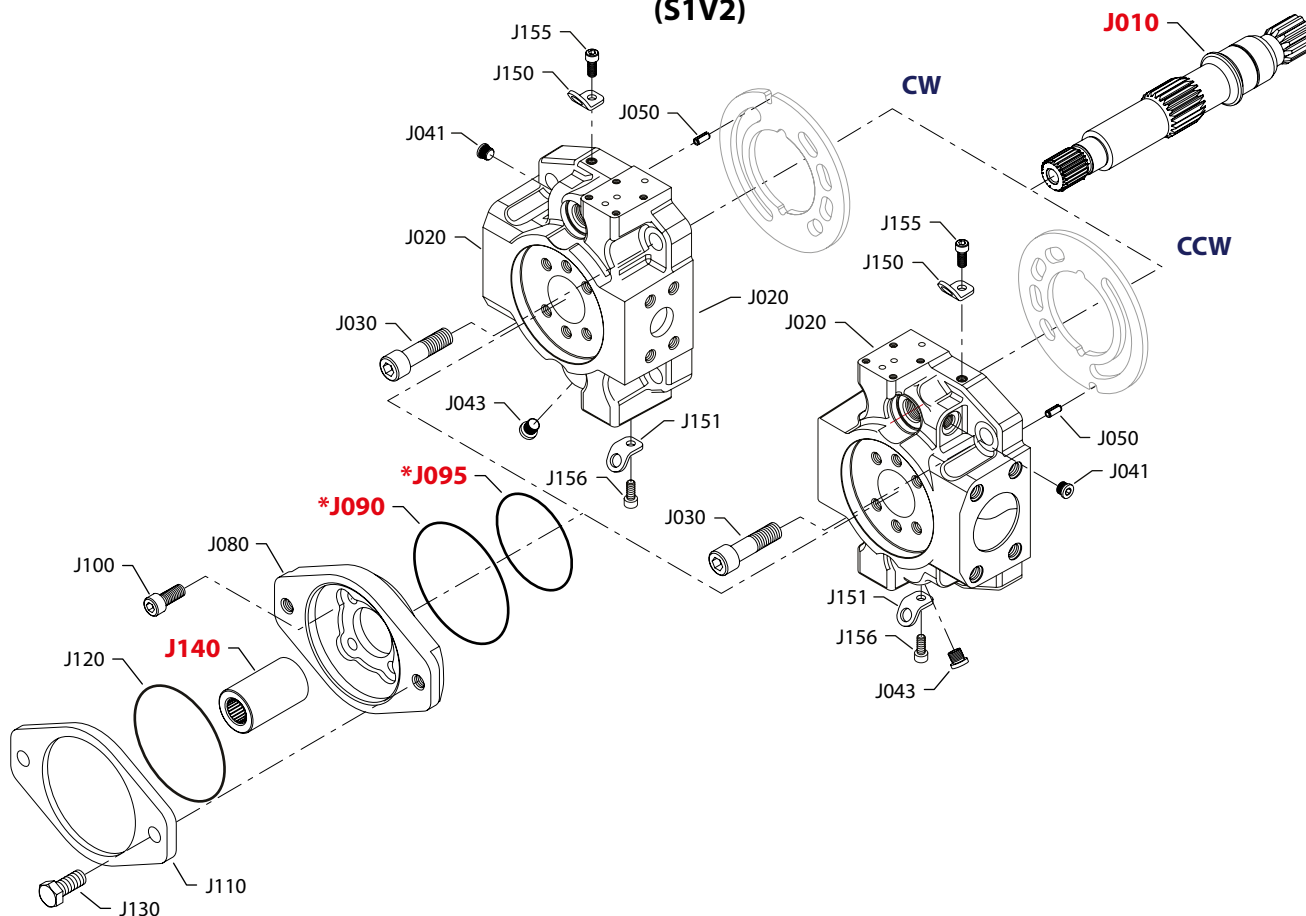
Shaft/auxiliary flange/end cap

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
S1T2	J010	13-13		4740459	Shaft, 14 tooth w/aux. spline	1
	J020	13-13		11102265	End cap, cw, radial ports, FRR (SB-2011-036)	1
	J020	13-13		11102267	End cap, ccw, radial ports, FRL (SB-2011-036)	1
	J030	13-13		575910	Screw	4
	J041	13-13		327007 (9005110-4400)	Plug assembly	1
	J043	13-13		327007 (9005110-4400)	Plug assembly	1
	J050	13-13		688622 (9004700-1907)	Pin	1
	J080	13-13		4570289	Flange adapter, A	1
	J090	13-13		5000099 (9004100-1550)	O-ring	1
	J095	13-13		545434 (9004100-0420)	O-ring	1
	J100	13-13		5000489	Screw	4
	J110	13-13		4460586	Cover plate	1
	J120	13-13		4800482	A pad seal	1
	J130	13-13		9007200-3712	Screw	2
	J140	13-13		1701186	Coupling, 11 tooth	1
	J150	13-13		4800754	Lifting bracket	1
	J151	13-13		4800754	Lifting bracket	1
	J155	13-13		9007315-0604	Screw	1
	J156	13-13		9007315-0604	Screw	1
S1T3	J010	13-13		4740459	Shaft, 14 tooth w/aux. spline	1
	J020	13-13		11132016	End cap, cw, radial ports, FRR (SB-2011-036)	1
	J030	13-13		575910	Screw	4
	J041	13-13		327007 (9005110-4400)	Plug assembly	1
	J043	13-13		327007 (9005110-4400)	Plug assembly	1
	J050	13-13		688622 (9004700-1907)	Pin	1
	J080	13-13		4570430	Flange adapter, A, metric	1
	J090	13-13		5000099 (9004100-1550)	O-ring	1
	J095	13-13		545434 (9004100-0420)	O-ring	1
	J100	13-13		5000489	Screw	4
	J110	13-13		4460586	Cover plate	1
	J120	13-13		4800482	A pad seal	1
	J130	13-13		5000622	Screw	2
	J140	13-13		1701186	Coupling, 11 tooth	1
	J150	13-13		4800754	Lifting bracket	1
	J151	13-13		4800754	Lifting bracket	1
	J155	13-13		9007315-0604	Screw	1
	J156	13-13		9007315-0604	Screw	1

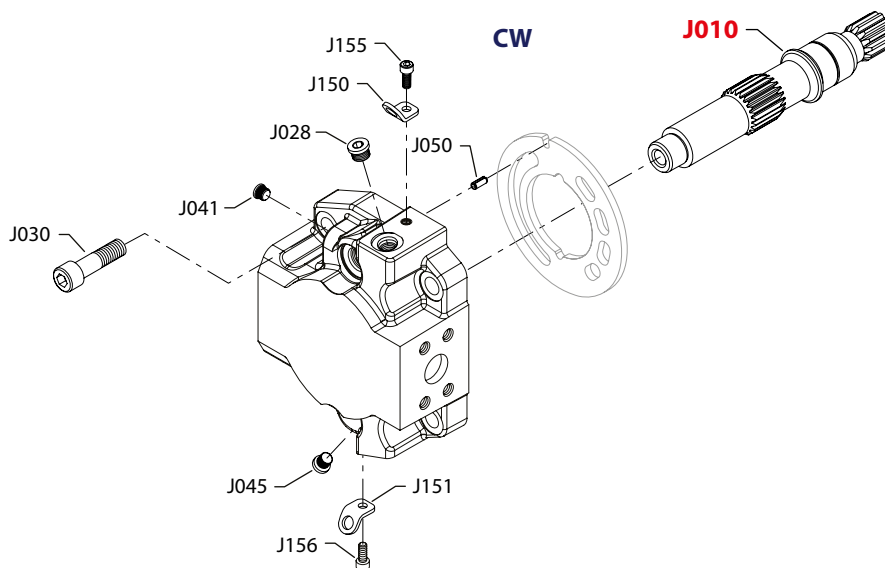


Shaft, auxiliary flange, and end cap

(S1V2)



(S1X6 & S1X8)



E101 956E

* = Included in overhaul seal kit Q210

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

Parts Manual

Series 45 Frame F 74-90cc O. C. Pumps

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
S1V2	J010	06-05		4740459	Shaft, 14 tooth w/aux. spline	1
	J020	06-05		11102265	End cap, cw, radial ports, FRR (SB-2011-036)	1
	J020	06-05		11102267	End cap, ccw, radial ports, FRL (SB-2011-036)	1
	J030	06-05		575910	Screw	4
	J041	06-05		327007 (9005110-4400)	Plug assembly	1
	J043	06-05		327007 (9005110-4400)	Plug assembly	1
	J050	06-05		688622 (9004700-1907)	Pin	1
	J080	06-05		4570210	Flange adapter, B	1
	J090	06-05		5000099 (9004100-1550)	O-ring	1
	J095	06-05		545434 (9004100-0420)	O-ring	1
	J100	06-05		5000489	Screw	4
	J110	06-05		4460370	Cover plate	1
	J120	06-05		680892 (9004104-0440)	O-ring	1
	J130	06-05		9007200-5021	Screw	2
	J140	06-05		1701188	Coupling, 15 tooth	1
	J150	06-05		4800754	Lifting bracket	1
	J151	06-05		4800754	Lifting bracket	1
	J155	06-05		9007315-0604	Screw	1
	J156	06-05		9007315-0604	Screw	1
S1X6	J010	12-34		4740012	Shaft, 14 tooth, no aux. spline	1
	J020	12.34		11113849	End cap, cw, radial ports, FRR, control on opposite side	1
	J028	12.34		5000438	Plug assembly	1
	J030	12.34		575910	Screw	4
	J041	12.34		327007 (9005110-4400)	Plug assembly	1
	J045	12.34		5000438	Plug assembly	1
	J050	12.34		9004700-1907	Pin	1
	J150	12.34		4800754	Lifting bracket	1
	J151	12.34		4800754	Lifting bracket	1
	J155	12.34		9007315-0604	Screw	1
	J156	12.34		9007315-0604	Screw	1
S1X8	J010	12-34		4740012	Shaft, 14 tooth, no aux. spline	1
	J020	12.34		11129072	End cap, cw, radial ports, FRR, control on opposite side	1
	J028	12.34		515965 (9005110-5600)	Plug assembly	1
	J030	12.34		575910	Screw	4
	J041	12.34		327007 (9005110-4400)	Plug assembly	1
	J045	12.34		515965 (9005110-5600)	Plug assembly	1
	J050	12.34		9004700-1907	Pin	1
	J150	12.34		4800754	Lifting bracket	1
	J151	12.34		4800754	Lifting bracket	1
	J155	12.34		9007315-0604	Screw	1
	J156	12.34		9007315-0604	Screw	1

(S2A2)



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

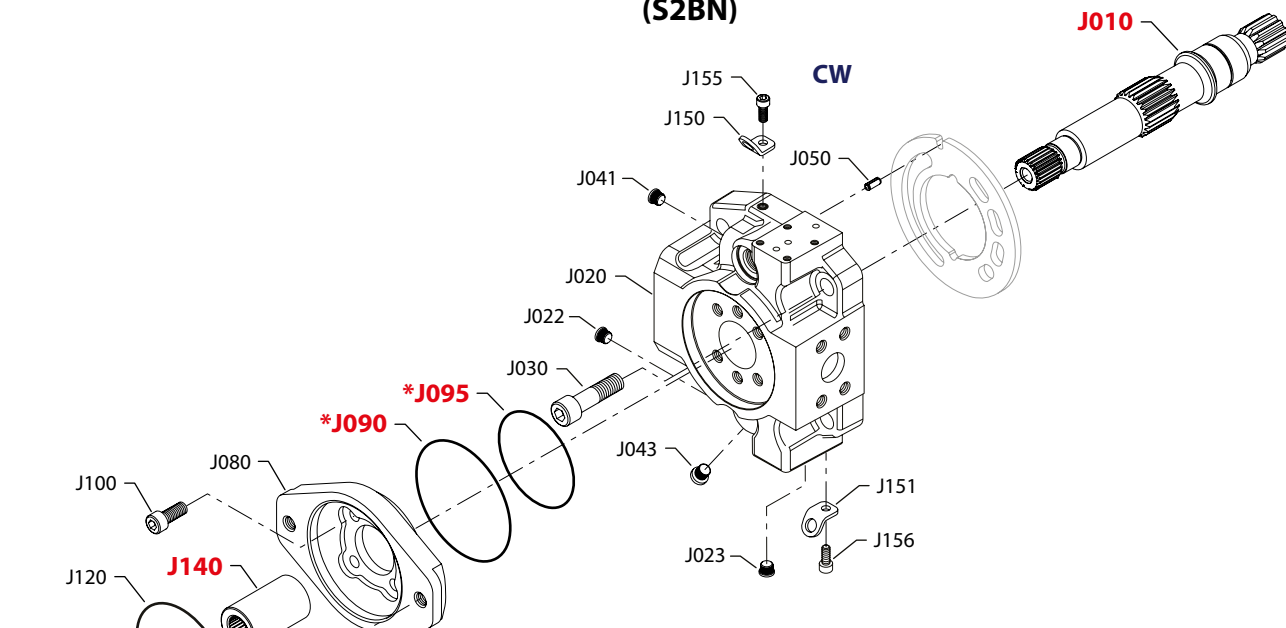
Shaft, auxiliary flange, and end cap
Shaft/auxiliary flange/end cap

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
S2A2	J010	06-05		4740461	Shaft, 17 tooth w/aux. spline	1
	J020	06-05		11102265	End cap, cw, radial ports, FRR (SB-2011-036)	1
	J020	06-05		11102267	End cap, ccw, radial ports, FRL (SB-2011-036)	1
	J030	06-05		575910	Screw	4
	J041	06-05		327007 (9005110-4400)	Plug assembly	1
	J043	06-05		327007 (9005110-4400)	Plug assembly	1
	J050	06-05		688622 (9004700-1907)	Pin	1
	J080	06-05		4570289	Flange adapter, A	1
	J090	06-05		5000099 (9004100-1550)	O-ring	1
	J095	06-05		545434 (9004100-0420)	O-ring	1
	J100	06-05		5000489	Screw	4
	J110	06-05		4460586	Cover plate	1
	J120	06-05		4800482	A pad seal	1
	J130	06-05		9007200-3712	Screw	2
	J140	06-05		1701185	Coupling, 9 tooth	1
	J150	06-05		4800754	Lifting bracket	1
	J151	06-05		4800754	Lifting bracket	1
	J155	06-05		9007315-0604	Screw	1
	J156	06-05		9007315-0604	Screw	1
S2B2	J010	06-05		4740461	Shaft, 17 tooth w/aux. spline	1
	J020	06-05		11102265	End cap, cw, radial ports, FRR (SB-2011-036)	1
	J020	06-05		11102267	End cap, ccw, radial ports, FRL (SB-2011-036)	1
	J030	06-05		575910	Screw	4
	J041	06-05		327007 (9005110-4400)	Plug assembly	1
	J043	06-05		327007 (9005110-4400)	Plug assembly	1
	J050	06-05		688622 (9004700-1907)	Pin	1
	J080	06-05		4570210	Flange adapter, B	1
	J090	06-05		5000099 (9004100-1550)	O-ring	1
	J095	06-05		545434 (9004100-0420)	O-ring	1
	J100	06-05		5000489	Screw	4
	J110	06-05		4460370	Cover plate	1
	J120	06-05		680892 (9004104-0440)	O-ring	1
	J130	06-05		9007200-5021	Screw	2
	J140	06-05		1701187	Coupling, 13 tooth	1
	J150	06-05		4800754	Lifting bracket	1
	J151	06-05		4800754	Lifting bracket	1
	J155	06-05		9007315-0604	Screw	1
	J156	06-05		9007315-0604	Screw	1

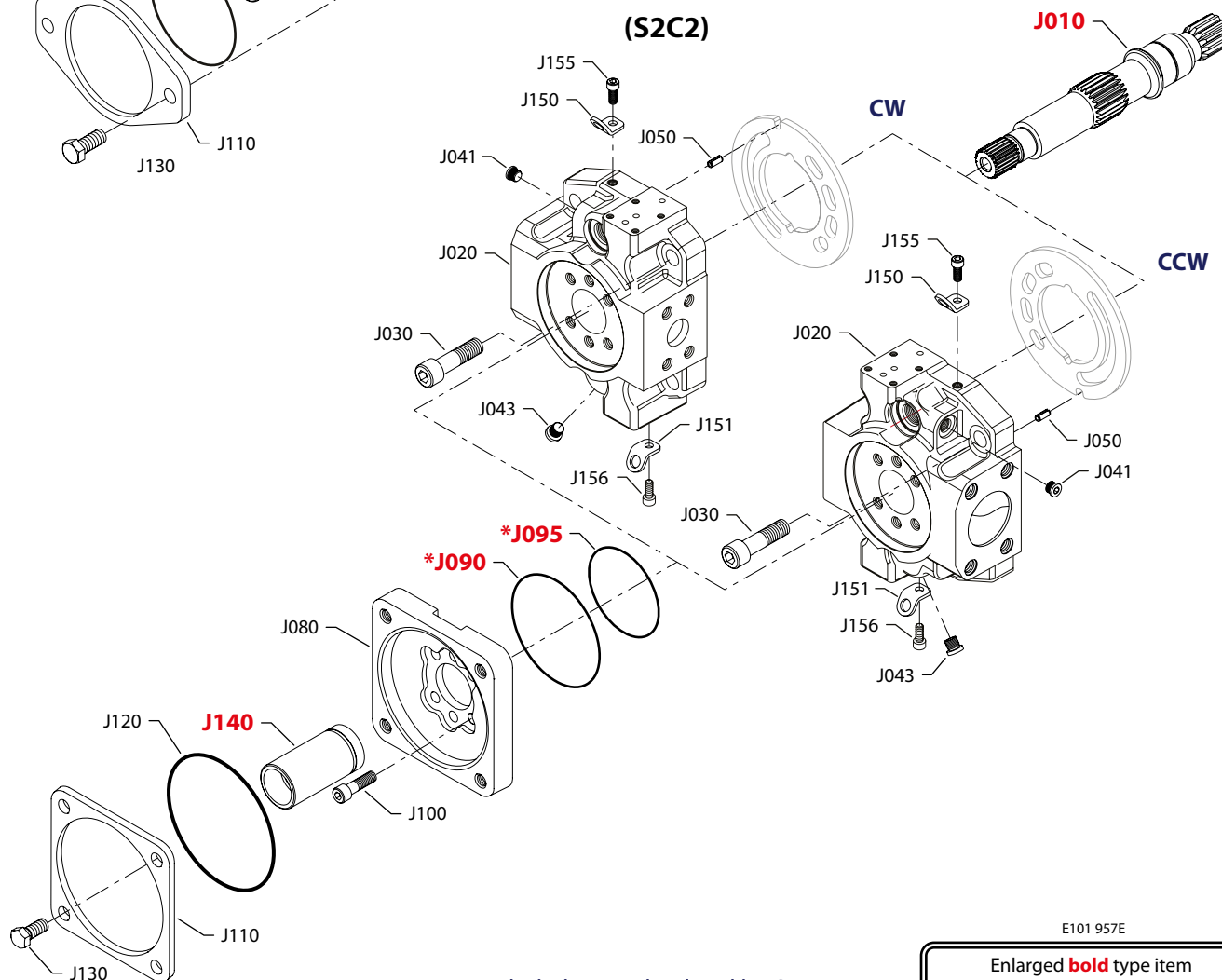


Shaft, auxiliary flange, and end cap

(S2BN)



(S2C2)



E101 957E

* = Included in overhaul seal kit Q210

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

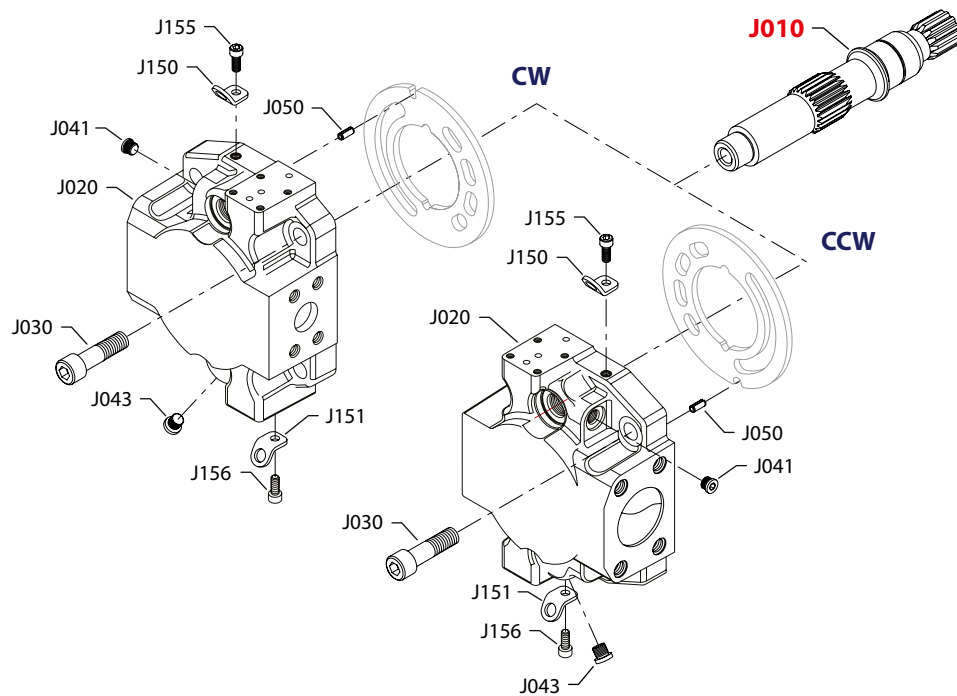
Shaft, auxiliary flange, and end cap
Shaft/auxiliary flange/end cap

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
S2BN	J010	12-05		4740461	Shaft, 17 tooth w/aux. spline	1
	J020	12-05		11104455	End cap assembly, cw, radial ports, FRR	1
	J022	12-05		327007 (9005110-4400)	Plug assembly	1
	J023	12-05		327007 (9005110-4400)	Plug assembly	1
	J030	12-05		575910	Screw	4
	J041	12-05		327007 (9005110-4400)	Plug assembly	1
	J043	12-05		327007 (9005110-4400)	Plug assembly	1
	J050	12-05		688622 (9004700-1907)	Pin	1
	J080	12-05		4570210	Flange adapter, B	1
	J090	12-05		5000099 (9004100-1550)	O-ring	1
	J095	12-05		545434 (9004100-0420)	O-ring	1
	J100	12-05		5000489	Screw	4
	J110	12-05		4460370	Cover plate	1
	J120	12-05		680892 (9004104-0440)	O-ring	1
	J130	12-05		9007200-5021	Screw	2
	J140	12-05		1701187	Coupling, 13 tooth	1
	J150	12-05		4800754	Lifting bracket	1
	J151	12-05		4800754	Lifting bracket	1
	J155	12-05		9007315-0604	Screw	1
	J156	12-05		9007315-0604	Screw	1
S2C2	J010	06-05		4740461	Shaft, 17 tooth w/aux. spline	1
	J020	06-05		11102265	End cap, cw, radial ports, FRR (SB-2011-036)	1
	J020	06-05		11102267	End cap, ccw, radial ports, FRL (SB-2011-036)	1
	J030	06-05		575910	Screw	4
	J041	06-05		327007 (9005110-4400)	Plug assembly	1
	J043	06-05		327007 (9005110-4400)	Plug assembly	1
	J050	06-05		688622 (9004700-1907)	Pin	1
	J080	06-05		11039356	Flange adapter, C	1
	J090	06-05		5000099 (9004100-1550)	O-ring	1
	J095	06-05		545434 (9004100-0420)	O-ring	1
	J100	06-05		5000489	Screw	6
	J110	06-05		8800406	Cover plate	1
	J120	06-05		719179 (9004100-0480)	O-ring	1
	J130	06-05		9007200-5021	Screw	4
	J140	06-05		1701189	Coupling, 14 tooth	1
	J150	06-05		4800754	Lifting bracket	1
	J151	06-05		4800754	Lifting bracket	1
	J155	06-05		9007315-0604	Screw	1
	J156	06-05		9007315-0604	Screw	1

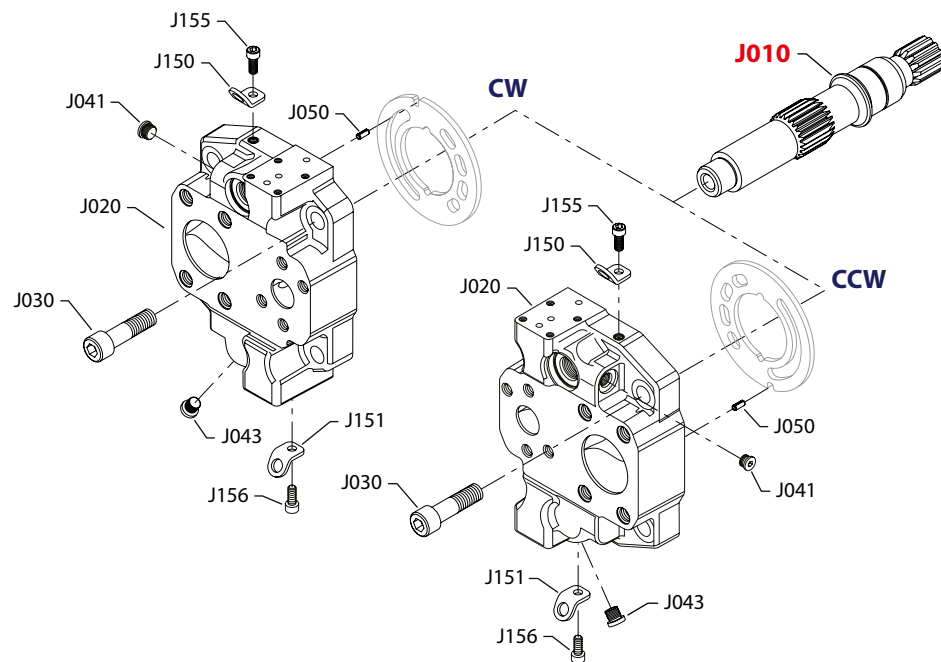


Shaft, auxiliary flange, and end cap

(S2N2)



(S2N4)



E100 769E

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

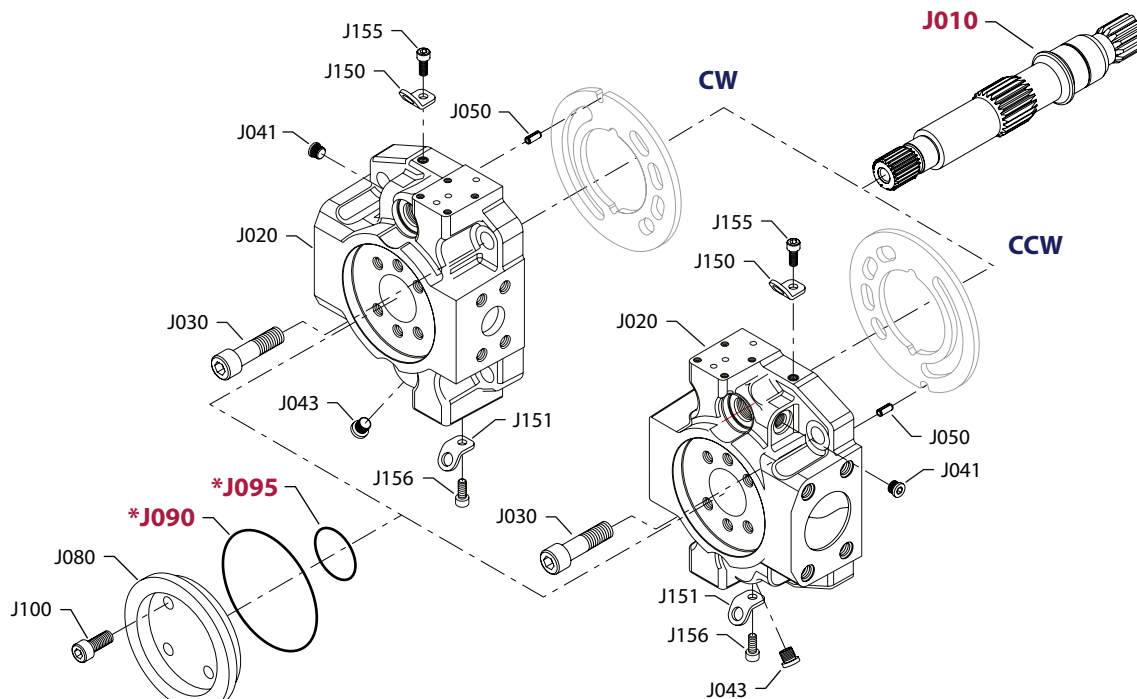
Shaft, auxiliary flange, and end cap
shaft/auxiliary flange/end cap

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
S2N2	J010	06-05		4740145	Shaft, 17 tooth, no aux. spline	1
	J020	06-05		11102264	End cap, cw, radial ports, FRR (SB-2011-036)	1
	J020	06-05		11102266	End cap, ccw, radial ports, FRL (SB-2011-036)	1
	J030	06-05		575910	Screw	4
	J041	06-05		327007 (9005110-4400)	Plug assembly	1
	J043	06-05		327007 (9005110-4400)	Plug assembly	1
	J050	06-05		688622 (9004700-1907)	Pin	1
	J150	06-05		4800754	Lifting bracket	1
	J151	06-05		4800754	Lifting bracket	1
	J155	06-05		9007315-0604	Screw	1
	J156	06-05		9007315-0604	Screw	1
S2N4	J010	06-05		4740145	Shaft, 17 tooth, no aux. spline	1
	J020	06-05		11102261	End cap, cw, axial ports, FRR (SB-2011-036)	1
	J020	06-05		11102262	End cap, ccw, axial ports, FRL (SB-2011-036)	1
	J030	06-05		575910	Screw	4
	J041	06-05		327007 (9005110-4400)	Plug assembly	1
	J043	06-05		327007 (9005110-4400)	Plug assembly	1
	J050	06-05		688622 (9004700-1907)	Pin	1
	J150	06-05		4800754	Lifting bracket	1
	J151	06-05		4800754	Lifting bracket	1
	J155	06-05		9007315-0604	Screw	1
	J156	06-05		9007315-0604	Screw	1

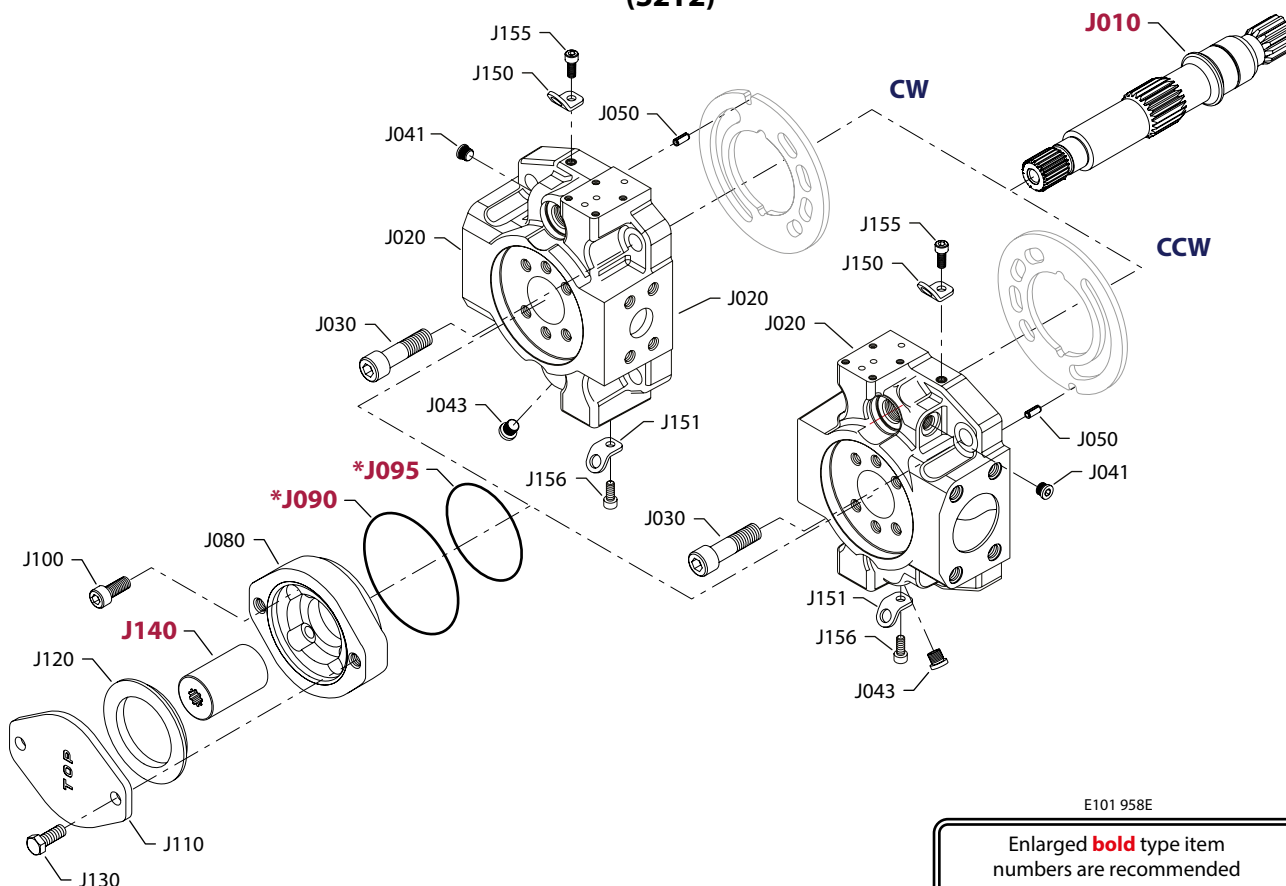


Shaft, auxiliary flange, and end cap

(S2R2)



(S2T2)



E101 958E

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

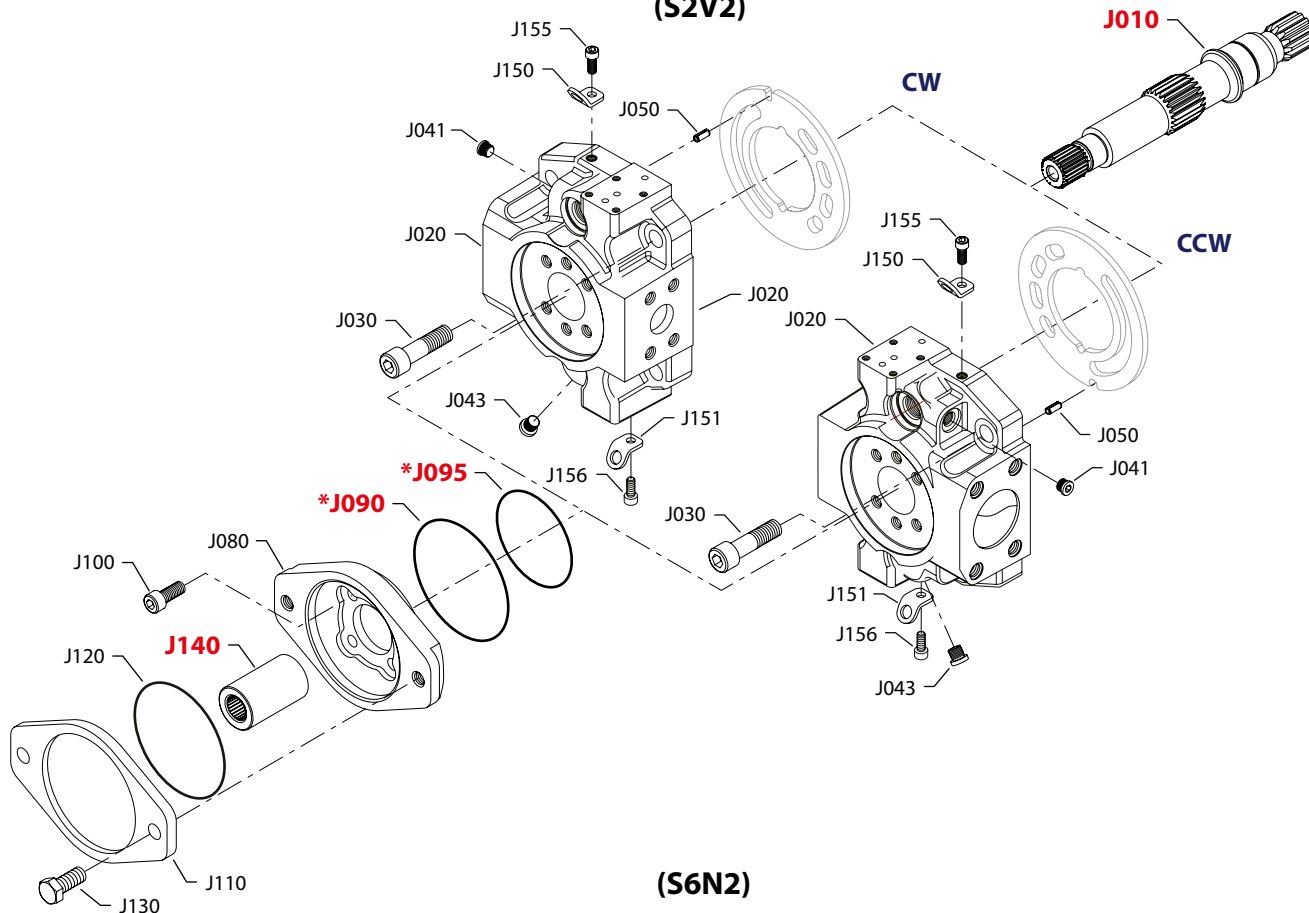
Shaft, auxiliary flange, and end cap
Shaft/auxiliary flange/end cap

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
S2R2	J010	06-05		4740461	Shaft, 17 tooth w/aux. spline	1
	J020	06-05		11102265	End cap, cw, radial ports, FRR (SB-2011-036)	1
	J020	06-05		11102267	End cap, ccw, radial ports, FRL (SB-2011-036)	1
	J030	06-05		575910	Screw	4
	J041	06-05		327007 (9005110-4400)	Plug assembly	1
	J043	06-05		327007 (9005110-4400)	Plug assembly	1
	J050	06-05		688622 (9004700-1907)	Pin	1
	J080	06-05		4570179	Running cover	1
	J090	06-05		5000099 (9004100-1550)	O-ring	1
	J095	06-05		9004104-0310	O-ring	1
	J100	06-05		5000489	Screw	6
	J150	06-05		4800754	Lifting bracket	1
	J151	06-05		4800754	Lifting bracket	1
	J155	06-05		9007315-0604	Screw	1
	J156	06-05		9007315-0604	Screw	1
S2T2	J010	06-05		4740461	Shaft, 17 tooth w/aux. spline	1
	J020	06-05		11102265	End cap, cw, radial ports, FRR (SB-2011-036)	1
	J020	06-05		11102267	End cap, ccw, radial ports, FRL (SB-2011-036)	1
	J030	06-05		575910	Screw	4
	J041	06-05		327007 (9005110-4400)	Plug assembly	1
	J043	06-05		327007 (9005110-4400)	Plug assembly	1
	J050	06-05		688622 (9004700-1907)	Pin	1
	J080	06-05		4570289	Flange adapter, A	1
	J090	06-05		5000099 (9004100-1550)	O-ring	1
	J095	06-05		545434 (9004100-0420)	O-ring	1
	J100	06-05		5000489	Screw	4
	J110	06-05		4460586	Cover plate	1
	J120	06-05		4800482	A pad seal	1
	J130	06-05		9007200-3712	Screw	2
	J140	06-05		1701186	Coupling, 11 tooth	1
	J150	06-05		4800754	Lifting bracket	1
	J151	06-05		4800754	Lifting bracket	1
	J155	06-05		9007315-0604	Screw	1
	J156	06-05		9007315-0604	Screw	1

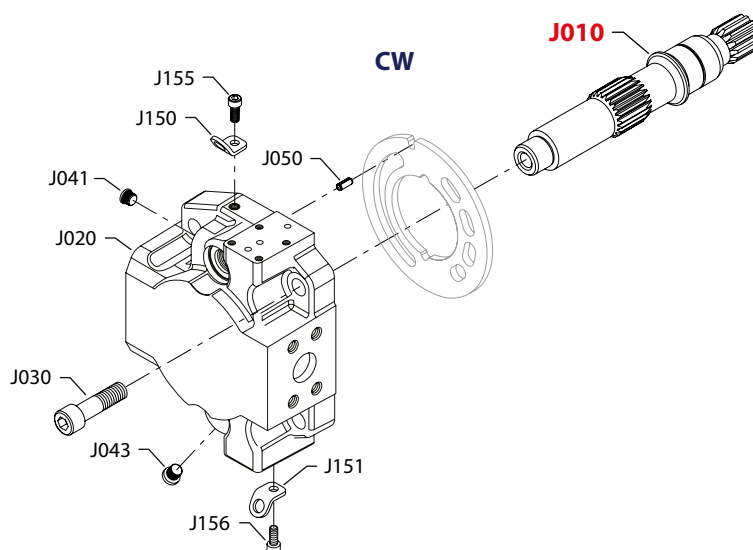


Shaft, auxiliary flange, and end cap

(S2V2)



(S6N2)



E103 246E

* = Included in overhaul seal kit Q210

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

Parts Manual

Series 45 Frame F 74-90cc O. C. Pumps

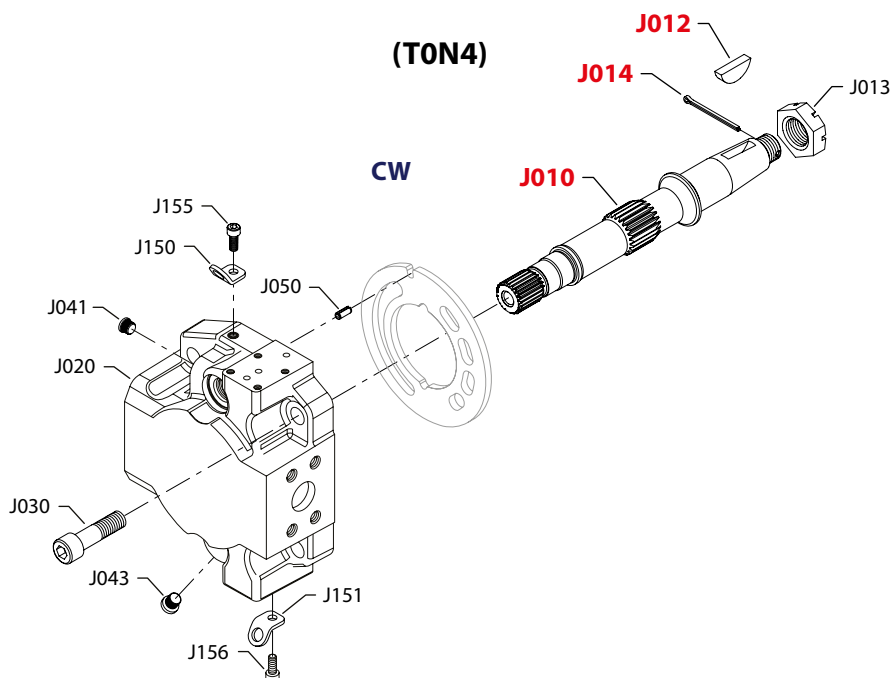
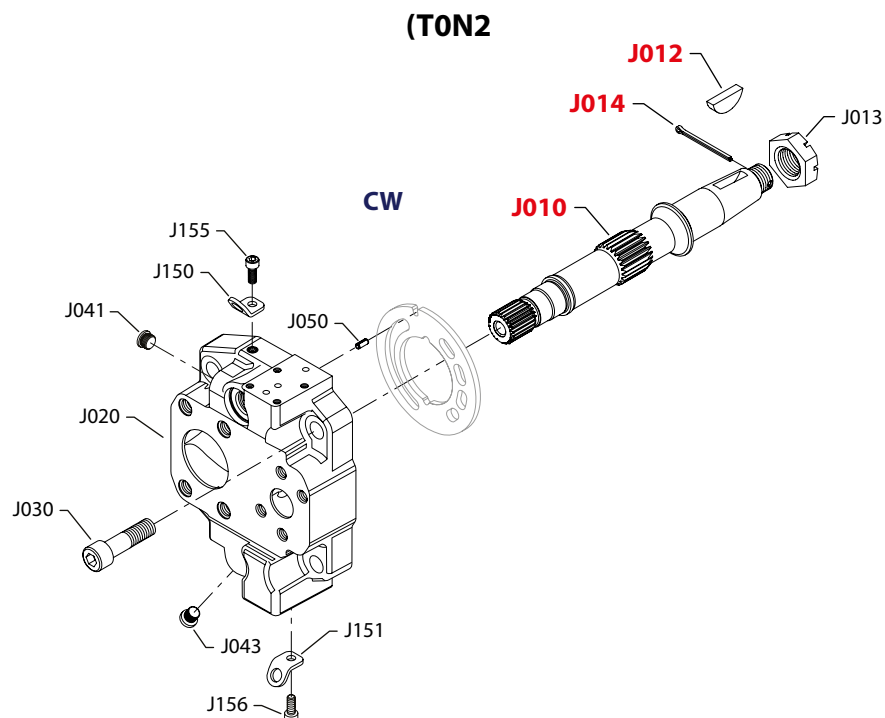
Shaft, auxiliary flange, and end cap

Shaft/auxiliary flange/end cap

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
S2V2	J010	06-05		4740461	Shaft, 17 tooth w/aux. spline	1
	J020	06-05		11102265	End cap, cw, radial ports, FRR (SB-2011-036)	1
	J020	06-05		11102267	End cap, ccw, radial ports, FRL (SB-2011-036)	1
	J030	06-05		575910	Screw	4
	J041	06-05		327007 (9005110-4400)	Plug assembly	1
	J043	06-05		327007 (9005110-4400)	Plug assembly	1
	J050	06-05		688622 (9004700-1907)	Pin	1
	J080	06-05		4570210	Flange adapter, B	1
	J090	06-05		5000099 (9004100-1550)	O-ring	1
	J095	06-05		545434 (9004100-0420)	O-ring	1
	J100	06-05		5000489	Screw	4
	J110	06-05		4460370	Cover plate	1
	J120	06-05		680892 (9004104-0440)	O-ring	1
	J130	06-05		9007200-5021	Screw	2
	J140	06-05		1701188	Coupling, 15 tooth	1
	J150	06-05		4800754	Lifting bracket	1
	J151	06-05		4800754	Lifting bracket	1
	J155	06-05		9007315-0604	Screw	1
	J156	06-05		9007315-0604	Screw	1
S6N2	J010	14-28		11141829	Shaft, 14 tooth, no aux., tapped	1
	J020	14-28		11102264	End cap, cw, radial ports, FRR (SB-2011-036)	1
	J030	14-28		575910	Screw	4
	J041	14-28		327007 (9005110-4400)	Plug assembly	1
	J043	14-28		327007 (9005110-4400)	Plug assembly	1
	J050	14-28		688622 (9004700-1907)	Pin	1
	J150	14-28		4800754	Lifting bracket	1
	J151	14-28		4800754	Lifting bracket	1
	J155	14-28		9007315-0604	Screw	1
	J156	14-28		9007315-0604	Screw	1



Shaft, auxiliary flange, and end cap



E103 247E

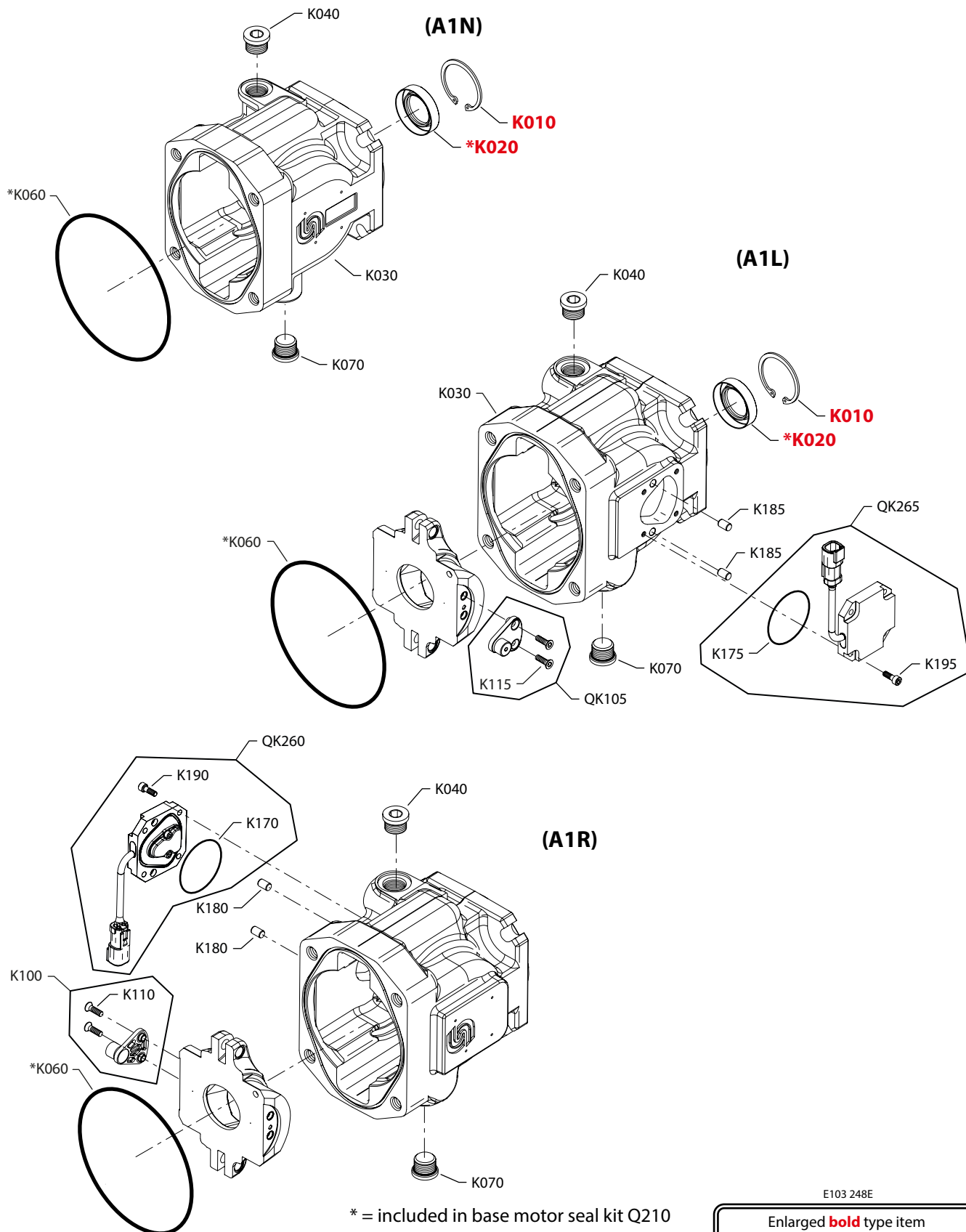
Enlarged **bold** type item numbers are recommended part to stock for servicing.

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
TON2	J010	14-28		11151165	Shaft, tapered, no aux.	1
	J012	14-28		5000362	Key	1
	J013	14-28		5000606	Slotted nut	1
	J014	14-28		9004600-1230	Cotter pin	1
	J020	14-28		11102261	End cap, cw, axial ports, FRR	1
	J030	14-28		575910	Screw	4
	J041	14-28		327007 (9005110-4400)	Plug assembly	1
	J043	14-28		327007 (9005110-4400)	Plug assembly	1
	J050	14-28		688622 (9004700-1907)	Pin	1
	J150	14-28		4800754	Lifting bracket	1
	J151	14-28		4800754	Lifting bracket	1
	J155	14-28		9007315-0604	Screw	1
	J156	14-28		9007315-0604	Screw	1
TON4	J010	14-28		11151165	Shaft, tapered, no aux.	1
	J012	14-28		5000362	Key	1
	J013	14-28		5000606	Slotted nut	1
	J014	14-28		9004600-1230	Cotter pin	1
	J020	14-28		11102264	End cap, cw, radial ports, FRR	1
	J030	14-28		575910	Screw	4
	J041	14-28		327007 (9005110-4400)	Plug assembly	1
	J043	14-28		327007 (9005110-4400)	Plug assembly	1
	J050	14-28		688622 (9004700-1907)	Pin	1
	J150	14-28		4800754	Lifting bracket	1
	J151	14-28		4800754	Lifting bracket	1
	J155	14-28		9007315-0604	Screw	1
	J156	14-28		9007315-0604	Screw	1



Housing/ shaft seal



E103 248E

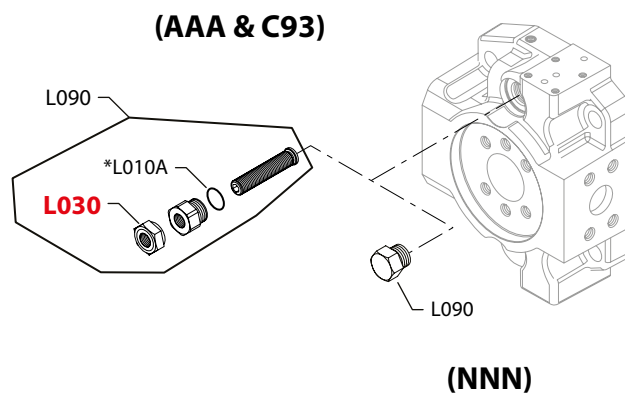
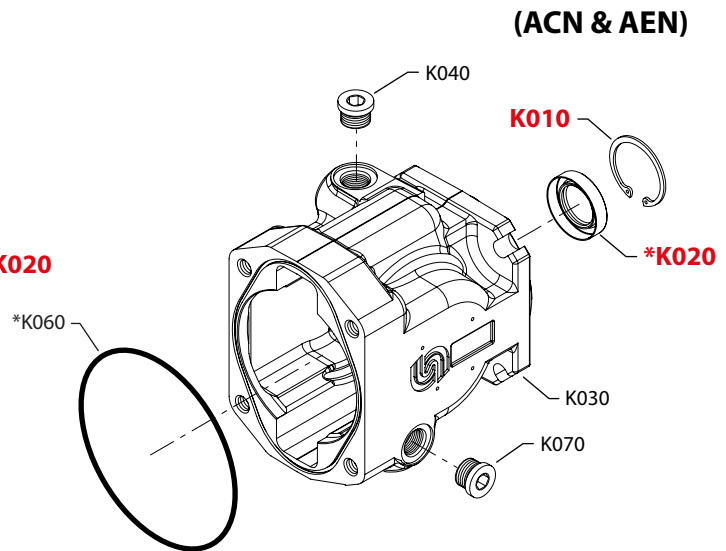
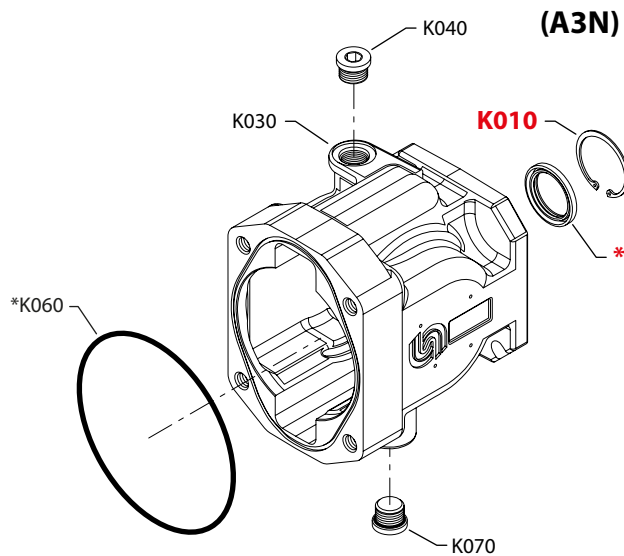
Enlarged **bold** type item numbers are recommended part to stock for servicing.

Housing/ shaft seal
Housing/shaft seal

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
A1L	K010	14-32		016014 (9006200-0206)	Retaining ring	1
	K020	14-32		5000484	Lip seal	1
	K030	14-32		11135440	Housing, SAE C, 4-bolt, angle sensor, left	1
	K040	14-32		315325 (9005110-8700)	Plug assembly	1
	K060	14-32		4740387	End cap seal	1
	K070	14-32		315325 (9005110-8700)	Plug assembly	1
	K115	14-32		11137909	Countersunk screw	2
	K175	14-32		9004104-0350	O-ring	1
	K185	14-32		11137294	Bushing	2
	K195	14-32		9007315-0504	Screw	4
	QK105	14-32		11153285	Magnet carrier kit	1
	QK265	14-32		11153284	Angle sensor kit	1
A1N	K010	06-05		016014 (9006200-0206)	Retaining ring	1
	K020	06-05		5000484	Lip seal	1
	K030	06-05		11090634	Housing, SAE C, 4-bolt	1
	K040	06-05		315325 (9005110-8700)	Plug assembly	1
	K060	06-05		4740387	End cap seal	1
	K070	06-05		315325 (9005110-8700)	Plug assembly	1
A1R	K010	14-32		016014 (9006200-0206)	Retaining ring	1
	K020	14-32		5000484	Lip seal	1
	K030	14-32		11135441	Housing, SAE C, 4-bolt, angle sensor, right	1
	K040	14-32		315325 (9005110-8700)	Plug assembly	1
	K060	14-32		4740387	End cap seal	1
	K070	14-32		315325 (9005110-8700)	Plug assembly	1
	K110	14-32		11137909	Countersunk screw	2
	K170	14-32		9004104-0350	O-ring	1
	K180	14-32		11137294	Bushing	2
	K190	14-32		9007315-0504	Screw	4
	QK100	14-32		11153285	Magnet carrier kit	1
	QK260	14-32		11153284	Angle sensor kit	1



Housing/shaft seal/displacement limiter



* = included in base motor seal kit Q210

E103 248E

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

Parts Manual

Series 45 Frame F 74-90cc O. C. Pumps

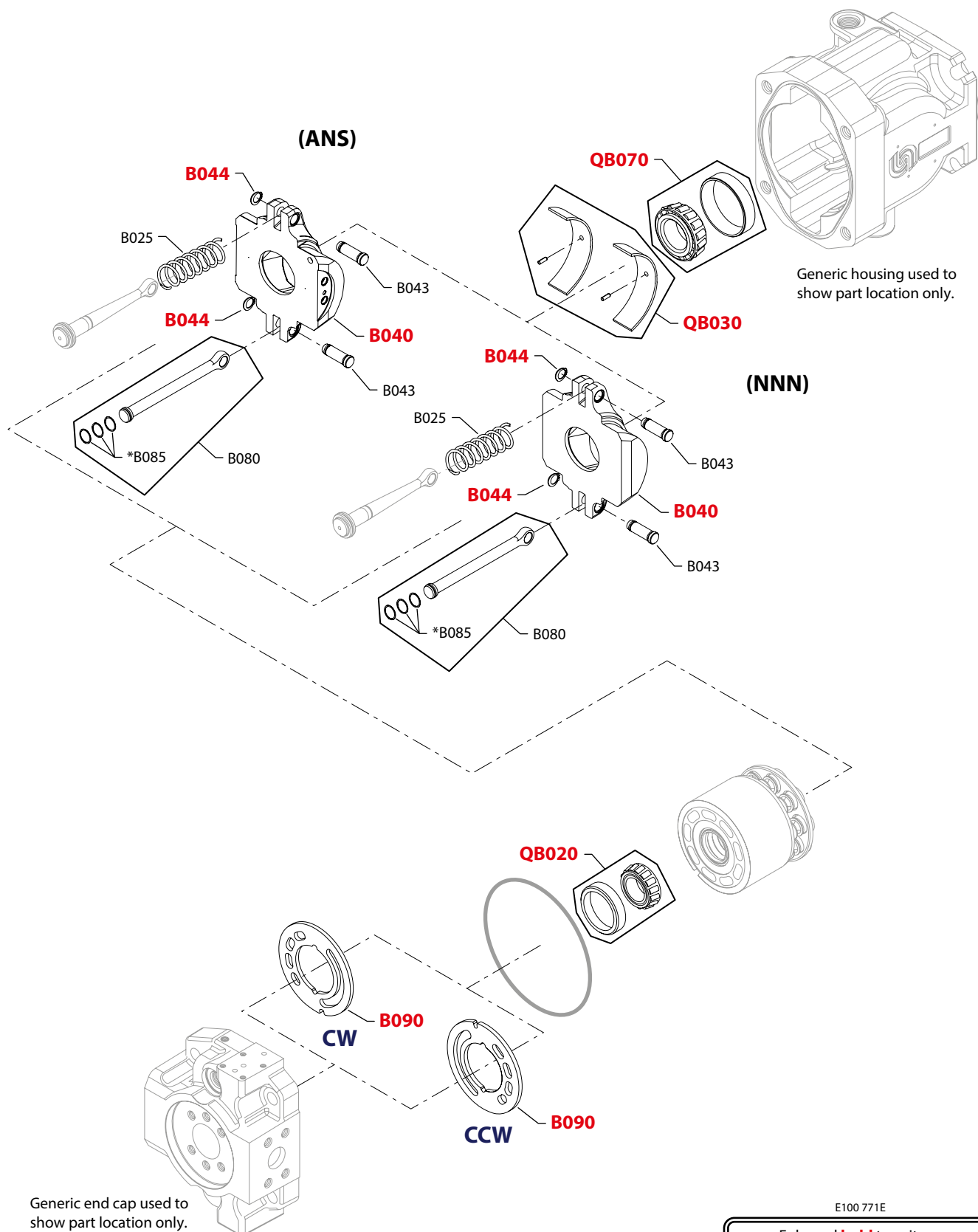
Housing/shaft seal/displacement limiter

Housing/shaft seal

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
A3N	K010	06-05		016014 (9006200-0206)	Retaining ring	1
	K020	06-05		5000484	Lip seal	1
	K030	06-05		11090633	Housing, SAE B, 2-bolt	1
	K040	06-05		315325 (9005110-8700)	Plug assembly	1
	K060	06-05		4740387	End cap seal	1
	K070	06-05		315325 (9005110-8700)	Plug assembly	1
ACN	K010	13-07		016014 (9006200-0206)	Retaining ring	1
	K020	13-07		5000484	Lip seal	1
	K030	13-07		11113573	Housing, SAE C, 4-bolt, metric	1
	K040	13-07		5000439	Plug assembly	1
	K060	13-07		4740387	End cap seal	1
	K070	13-07		5000439	Plug assembly	1
AEN	K010	13-07		016014 (9006200-0206)	Retaining ring	1
	K020	13-07		5000484	Lip seal	1
	K030	13-07		11128865	Housing, SAE C, 4-bolt, special	1
	K040	13-07		315325 (9005110-8700)	Plug assembly	1
	K060	13-07		4740387	End cap seal	1
	K070	13-07		315325 (9005110-8700)	Plug assembly	1

Displacement limiter

AAA	L010A	06-05		9004201-5000	O-ring	1
	L030	06-25		076042 (9003509-0012)	Special seal nut, M12	1
	L030	06-05	06-24	5000661	Seal nut, .500 - 20 UNF	1
	L090	06-05		11099076	Displacement limiter kit (SB-2012-020)	1
C93	L010A	06-05		9004201-5000	O-ring	1
	L030	06-25		076042 (9003509-0012)	Special seal nut, M12	1
	L030	06-05	06-24	5000661	Seal nut, .500 - 20 UNF	1
	L090	06-05		11099076	Displacement limiter kit (SB-2012-020)	1
NNN	L090	06-05		681296 (9005110-7500)	Plug assembly	1



* = included in base motor seal kit Q210

E100 771E

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

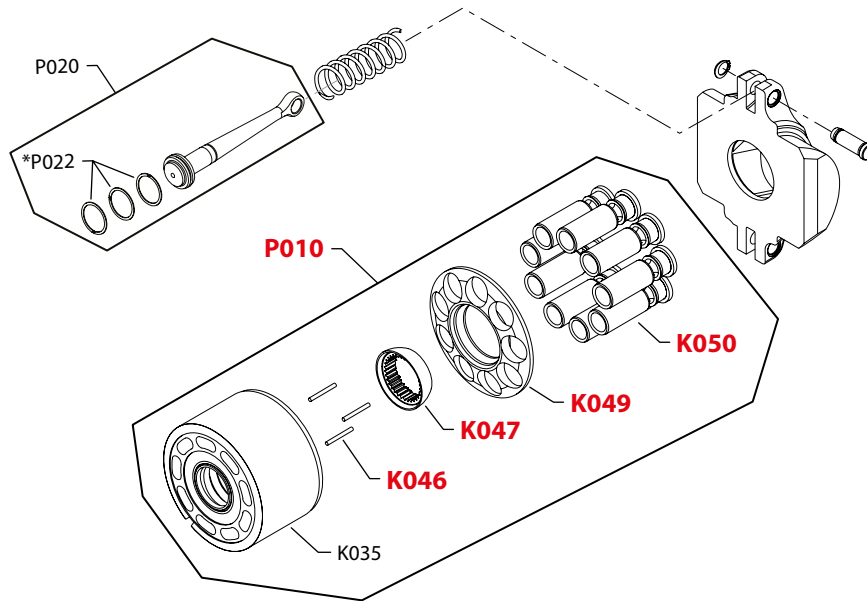

Special hardware
Special hardware

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
ANS	B025	14-20		4740043	Bias spring	1
	B040	14-20		11135209	Swashplate	1
	B043	14-20		4740372	Pin, headed	2
	B044	14-20		5000699	Retaining ring	2
	B080	14-20		4740385	Bias piston assembly	1
	B085	14-20		4740380	Bias piston ring	3
	B090	14-20		4740198	Valve plate, cw, FRR	1
	B090	14-20		4740206	Valve plate, ccw, FRL	1
	QB020	14-20		4510286	Rear bearing kit	1
	QB030	14-20		4510458	Swashplate bearing kit	1
	QB070	14-20		4510287	Front bearing kit	1
NNN	B025	04-14		4740043	Bias spring	1
	B040	04-14		4740375	Swashplate	1
	B043	04-14		4740372	Pin, headed	2
	B044	04-14		5000699	Retaining ring	2
	B080	04-14		4740385	Bias piston assembly	1
	B085	04-14		4740380	Bias piston ring	3
	B090	04-14		4740198	Valve plate, cw, FRR	1
	B090	04-14		4740206	Valve plate, ccw, FRL	1
	QB020	04-14		4510286	Rear bearing kit	1
	QB030	04-14		4510458	Swashplate bearing kit	1
	QB070	04-14		4510287	Front bearing kit	1



Displacement

(074B, 090C & F60B)



E103 249E

* = included in base motor seal kit Q210

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

Parts Manual

Series 45 Frame F 74-90cc O. C. Pumps

Displacement

Displacement

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
074B	P010	06-05		4740289	Cylinder block kit	1
	P020	06-05		4740425	Servo piston assembly, 74 cc	1
	P022	06-05		4740376	Servo piston ring	3
	K035	06-05		11089527	Cylinder block assembly	1
	K046	06-05		4700091	Holddown pin	3
	K047	06-05		4740022	Slipper retainer guide	1
	K049	06-05		4740161	Slipper retainer	1
	K050	06-05		4740280	Piston assembly	9
090C	P010	06-05		4740321	Cylinder block kit	1
	P020	06-05		4740384	Servo piston assembly, 90 cc	1
	P022	06-05		4740376	Servo piston ring	3
	K035	06-05		11089526	Cylinder block assembly	1
	K046	06-05		4700091	Holddown pin	3
	K047	06-05		4740022	Slipper retainer guide	1
	K049	06-05		4740161	Slipper retainer	1
	K050	06-05		4740320	Piston assembly	9
F60B	P010	06-05		4740289	Cylinder block kit, 74 cc	1
	P020	06-05		11142513	Servo piston assembly, 60cc	1
	P022	06-05		4740376	Servo piston ring	3
	K035	06-05		11089527	Cylinder block assembly	1
	K046	06-05		4700091	Holddown pin	3
	K047	06-05		4740022	Slipper retainer guide	1
	K049	06-05		4740161	Slipper retainer	1
	K050	06-05		4740280	Piston assembly	9

Overhaul seal kit

	Q210	06-05		11106335	Overhaul seal kit, FR* (SB-2012-029)	1
	B085	06-05		4740380	Bias piston ring	3
	C118	06-05		11062214	Adjusting plug assembly (SB-2007-047)	1
	C138A	06-05		5000656	O-ring, .674 x .103, viton, 75D	1
	C154	06-05		4740154	Seal ring	2
	C200	06-05		4740154	Seal ring	4
	J090	06-05		5000099 (9004100-1550)	O-ring, 3.987 x .103, nitrile, 70D	1
	J095	06-05		545434 (9004100-0420)	O-ring, 3.239 x .070, nitrile, 70D	1
	J095	06-05		9004104-0310	O-ring, 1.739 x 070, viton, 75D	1
	K020	06-05		5000484	Lip seal	1
	K060	06-05		4740387	End cap seal	1
	L010A	06-05		001131 (9004201-5000)	O-ring, .644 x .087, nitrile, 90D	1
	L030	06-25		076042 (9003509-0012)	Seal nut, M12	1
	L030	06-05	06-24	5000661	Special seal nut, .500-20 UNF-2B	1
	P022	06-05		4740376	Servo piston ring	3



Service Bulletin: SB-2007-047

Products affected

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

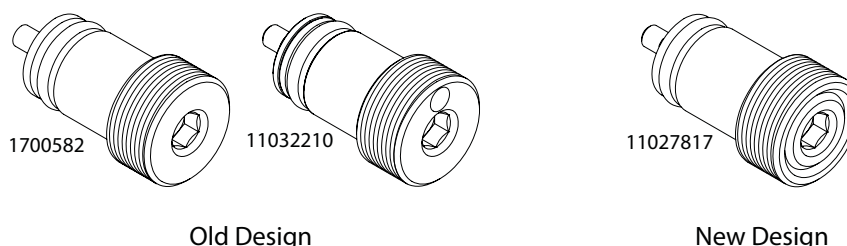
Subject

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

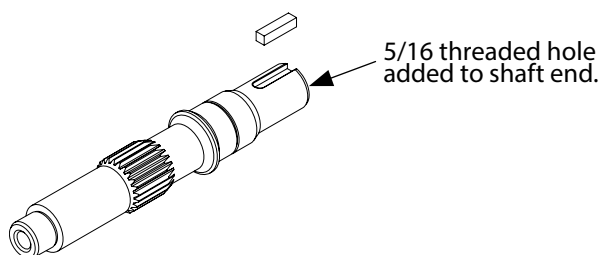
Service Bulletin: SB-2010-009

Products affected Series 45 frame F and G open circuit pumps

Subject 1.25 inch straight keyed shaft

Description As a product improvement, Sauer-Danfoss has add a new feature on the 1.25 inch straight keyed shaft for non-through drives on Series 45 frame F and G open circuit pumps. The end of this shaft will be drilled and tapped allowing for securing a gear, drive pulley, etc. The thread size of this hole is 5/16-18 UNC-2B thread.

This shaft is interchangeable with the old shaft. The old shaft is obsolete and no longer available as a service part.



Models affected All series 45 frame F and G pumps using a straight key non-through drive shaft.

Serial numbers This change became effective at serial number A-10-12-xxxxx. (17 May 2010)

Part numbers affected

Description	Old part number	New part number
1.25 inch straight key shaft	4740002	11079201

Parts disposition ■ Interchangeable



Service Bulletin: SB-2010-026

Products affected

Series 45 open circuit piston pumps

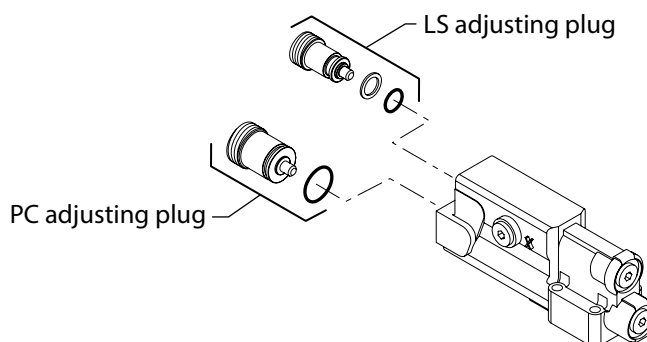
Subject

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-2011-036

Products affected

Series 45 frame F open circuit pumps

Subject

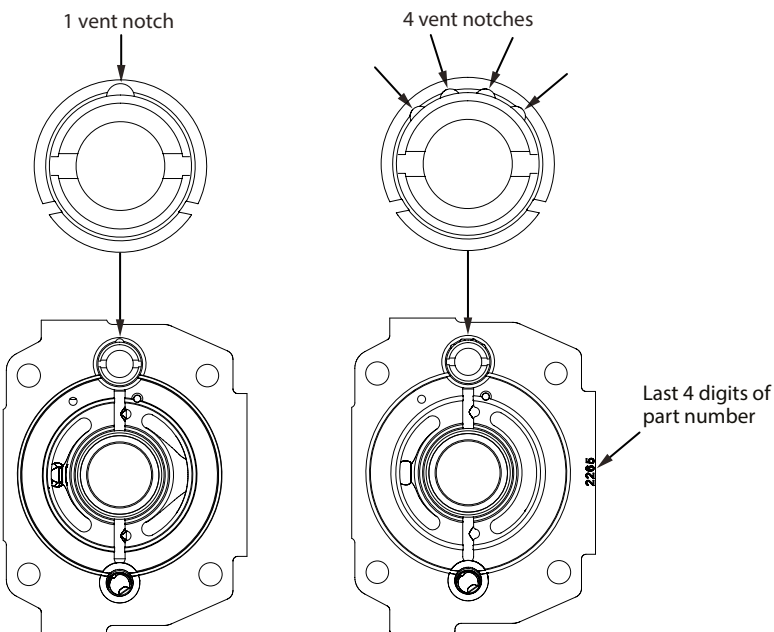
4 vent notch servo bore nitrided end cap

Description

As a product improvement to reduce servo bore and bias piston bore wear in the Series 45 frame F end caps, Sauer-Danfoss has added four vent notches to the servo bore and added a nitride coating to the complete end cap. The four vent notches will have a more subtle transition when venting opposed to the current abrupt transition.

The nitride coating changes the color of the end cap from gray to black. The last four digits of the end cap part number will be stamped on the end cap for easy identification.

The new end cap can replace the old end cap. The old end cap should not be used to replace the new end cap. The old end caps are obsolete and no longer available for service.



Models affected

Series 45, frame F open circuit pumps

Serial numbers

This change became effective at serial number see table below.


Service Bulletin: SB-2011-036
Part numbers affected

Description	Old part number	New part number	Effective date
End cap- Raxial, CCW	4740360	11095104	A-13-04-XXXXX (23-Jan-2013)
End cap- Axial, CW	4740362	11102261	A-13-06-XXXXX (04-Feb-2013)
End cap- Axial, CCW	4740361	11102262	A-13-14-XXXXX (28-Mar-2013)
End cap- Axial, CCW, Metric	11078383	11102263	A-13-08-XXXXX (18-Feb-2013)
End cap- Radial, CW	4740366	11102264	A-13-14-XXXXX (01-Apr-2013)
End cap- Radial, W/Auxiliary, CW	4740364	11102265	A-12-18-XXXXX (27-Apr-2012)
End cap- Radial, CCW	4740365	11102266	A-13-10-XXXXX (07-Mar-2013)
End cap- Radial, W/Auxiliary, CCW	4740363	11102267	A-13-14-XXXXX (01-Apr-2013)
End cap-Radial, CW	N/A	11104455	N/A

Parts disposition

- Interchangeable; only when replacing an old end cap with a new end cap.
- Revise existing part orders

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.

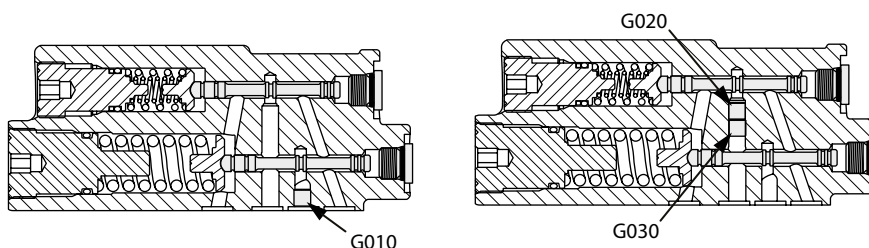
This change does not include the PC only and LS only controls.

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-XXXX. (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**

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