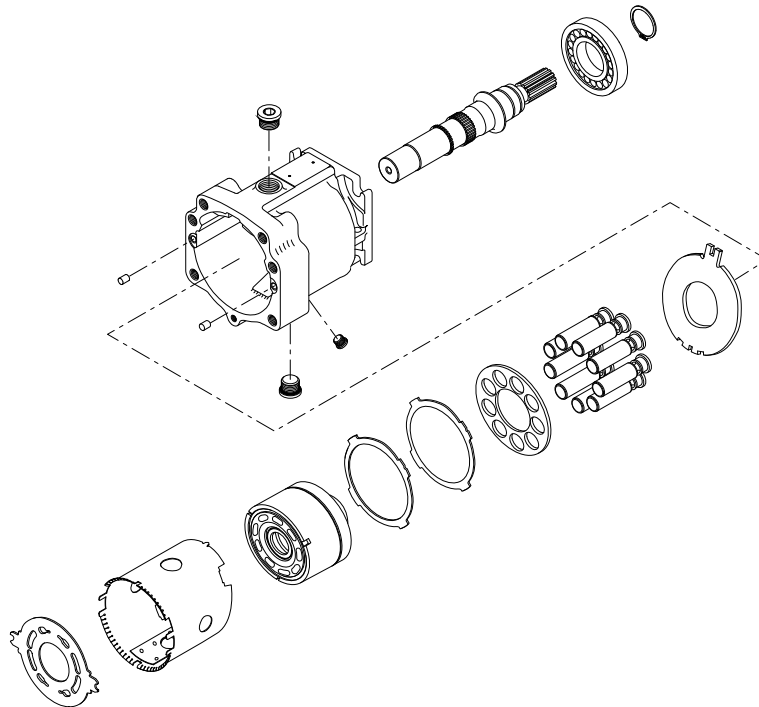


Parts Manual

Series 90 100cc Axial Piston Motor



Revision history

Table of revisions

Date	Changed	Rev
August 2025	Updated S100 endcap option V, other minor part number changes, orrected part number	0309
July 2024	Edited end cap ordering codes	0308
June 2022	Modified part numbers	0307
May 2020	Changed document number from 'AX00000094' to 'AX152886481571' and added SB-2008-058	0306
January 2020	Removed obsolete option	0204
September 2018	Corrected o-ring quantities in the seal kit	0203
January 2018	Updated to Engineering Tomorrow	0202

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General information

Service parts identification

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

The parts listed include all parts which may be used when performing either “Minor Repairs”, “Major Repairs” or “Conversions” on the .

Nameplate

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

Model code

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

Model/material number

The Danfoss model number (also known as material number) is used by the factory in manufacturing. On repeat orders, a complete unit can be ordered by the model number.

Serial number

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

The letter code indicates the location of original manufacture (assembly).

The first number (2 digits) indicates the year of manufacture. 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 defined as the year and week of manufacture. The same item number may list more than one part number. This indicates that there is more than one configuration for that item number. You will see that there are different date codes for the different part numbers. Find the date code of your unit from the nameplate to determine which service part number you need to order.

Example: The service part desired is item G30

Order Code	Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
80	G30	89-17		8000243	End cap gasket	1
	G30		89-16	8000151	End cap gasket (SB-1995-006)	1

All units using this order code with a date code prior to 89-17 must use part number "8000151." All units with a date code of 89-17 and newer must use part number "8000243."

About service bulletins

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

Procedure to identify a part

The modular design of this product 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. A part number that has another number following it in parentheses is done to make this a world wide manual.

Regional part numbers

Some part numbers are region specific and should be ordered accordingly.

As an example, the part number (example: 314583 (9008000-0118)) will be used. The first number is sold in Germany. The number in parentheses is sold in the United States. Customers would order 9008000-0118 if ordering the part in the United States.

Example of a part identification (S90 100cc motor)

The nameplate on a Series 90 motor has an Order Code of 90M100 NC 0 N 8 N 0 S1 W 00 EAA 00 00 N6. Use the following procedures to determine the part number of the drive shaft used on this motor.

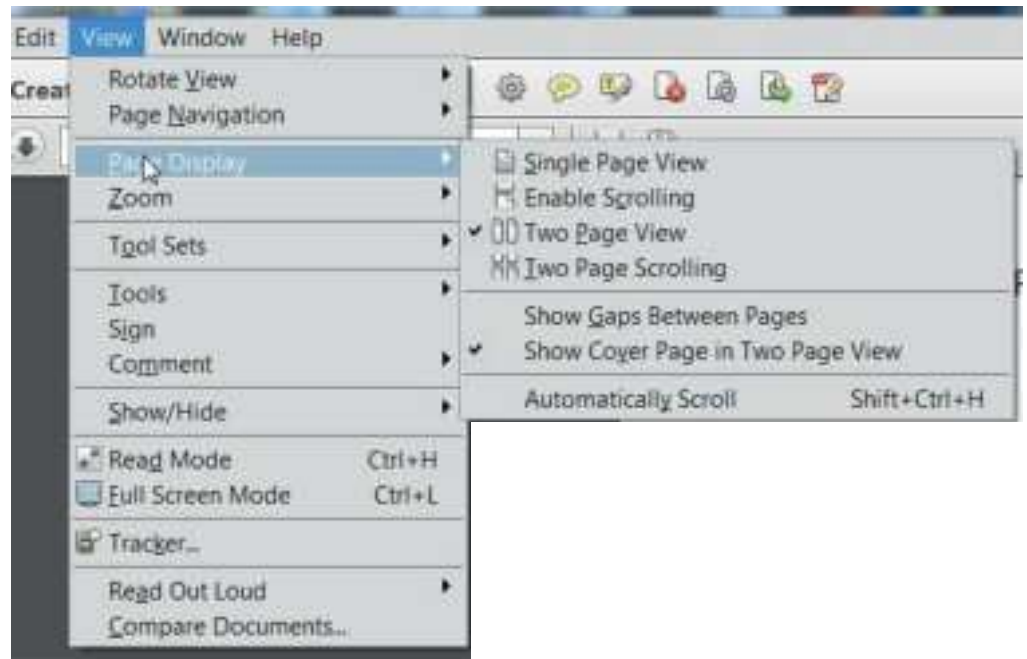
1. Referring to the shaft module in the [Order code](#) on page 7, the shaft option for this motor is identified by the code "S1". (90M100 NC 0 N 8 N 0 **S1**W 00 EAA 00 00 N6)
2. Referring to the Service Parts List, find the shaft group. Next find the order code that relates to this unit, which is "S1". The shaft is found to be item L100 and part number 11012429.

General information

Adobe Acrobat 2-page viewing

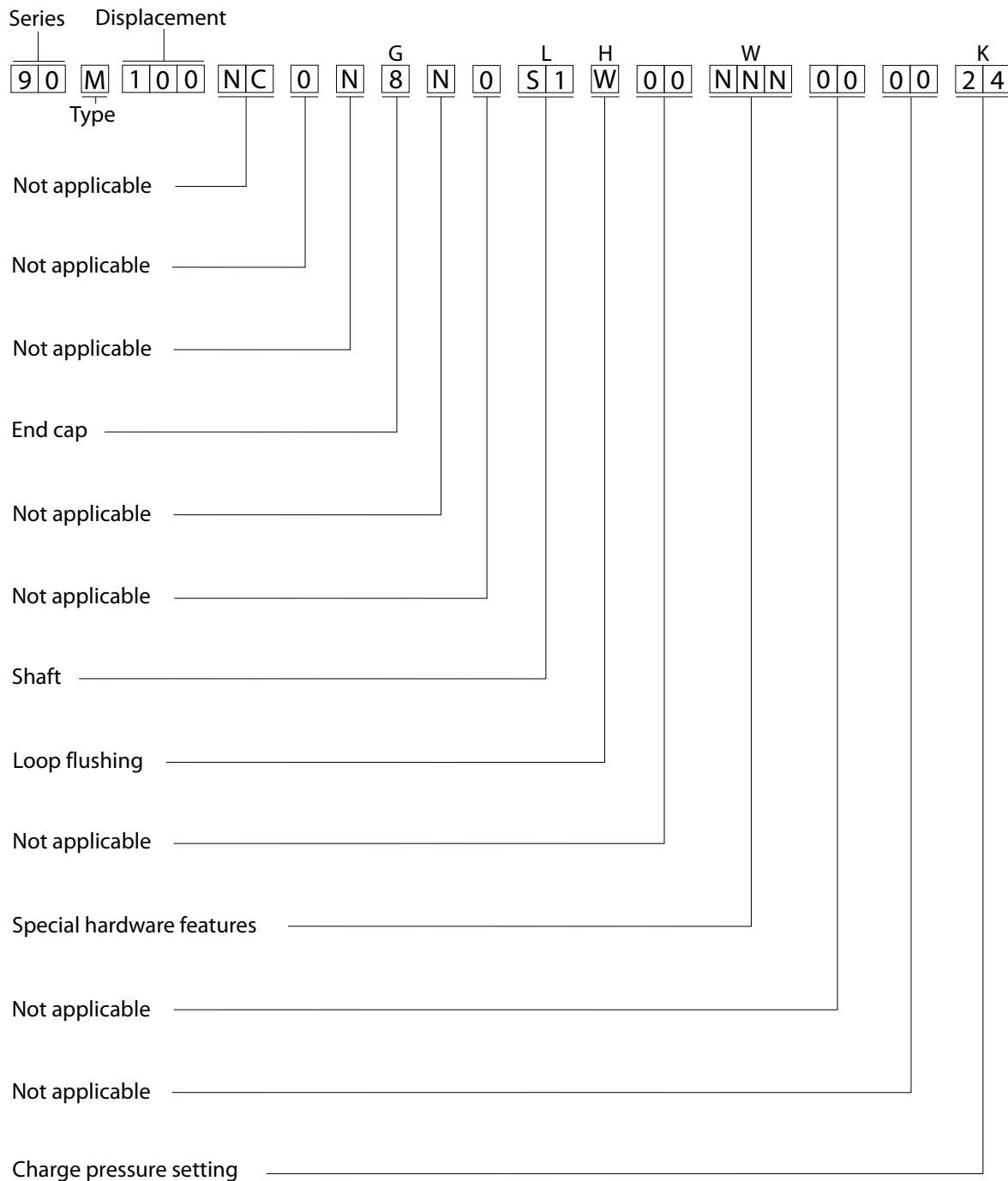
While viewing manual in Adobe Acrobat, the following settings need to be applied to ensure proper page display.

1. Select "View" → "Page Display" → "Two Page View"
2. Select "View" → "Page Display" → "Show Cover Page in Two Page View"



General information

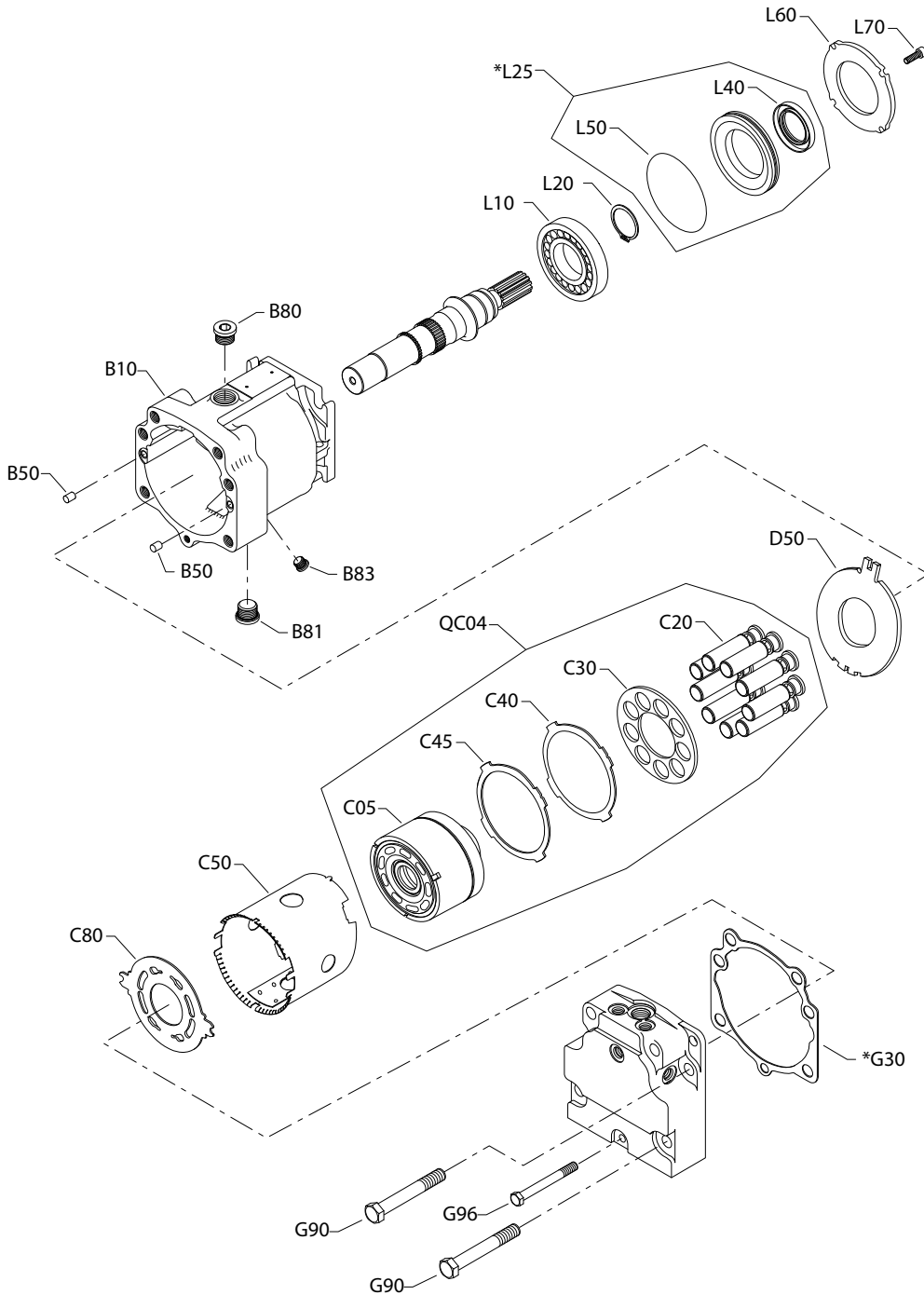
Order code



Common parts and special hardware

S90 100cc motor special hardware CAA, CBA

Parts configuration



Generic end cap used to show part location only

* Included in overhaul seal kit Q210

Common parts and special hardware

Common parts

Item	Date Begin	Date End	Part Number	Part Name	Quantity per Model/Kit
B10	88-23		8200561	Housing (SB-1988-018 on page 55, SB-1999-036 on page 64, and SB-2003-010 on page 69)	1
B50	88-23		9004800-3708	Pin (SB-1988-018 on page 55)	2
B50	87-07	88-22	9004800-3116	Pin	2
B80	87-07		664524 (9005110-9000)	Plug assembly	1
B81	87-07		664524 (9005110-9000)	Plug assembly	1
C30	87-07		11067351	Slipper guide	1
C40	87-07		11057798	Slipper guide retainer	1
C45	87-07		11063829	Slipper guide retainer spacer	1
C50	87-07		8200237	Hold down tube	1
C80	88-23		324137	Valve plate (SB-2002-048 on page 68)	1
C80	87-07	88-22	8200103	Valve plate (SB-1988-018 on page 55)	1
D50	88-23		11136453	Thrust plate (SB-1988-018 on page 55)	1
G30	87-07		8200511	End cap gasket (SB-2001-011 on page 67)	1
G90	04-15		674424 (9007210-1617)	Screw	6
G90	87-07	04-14	674424(9007210-1617)	Screw (SB-2003-010 on page 69)	4
G95	87-07	04-14	675900 (9007210-1609)	Screw (SB-2003-010 on page 69)	2
L10	87-07		5000506	Roller bearing	1
L20	87-07		9006300-0175	Retaining ring	1
L70	87-07		041160 (9007314-0605)	Screw	4

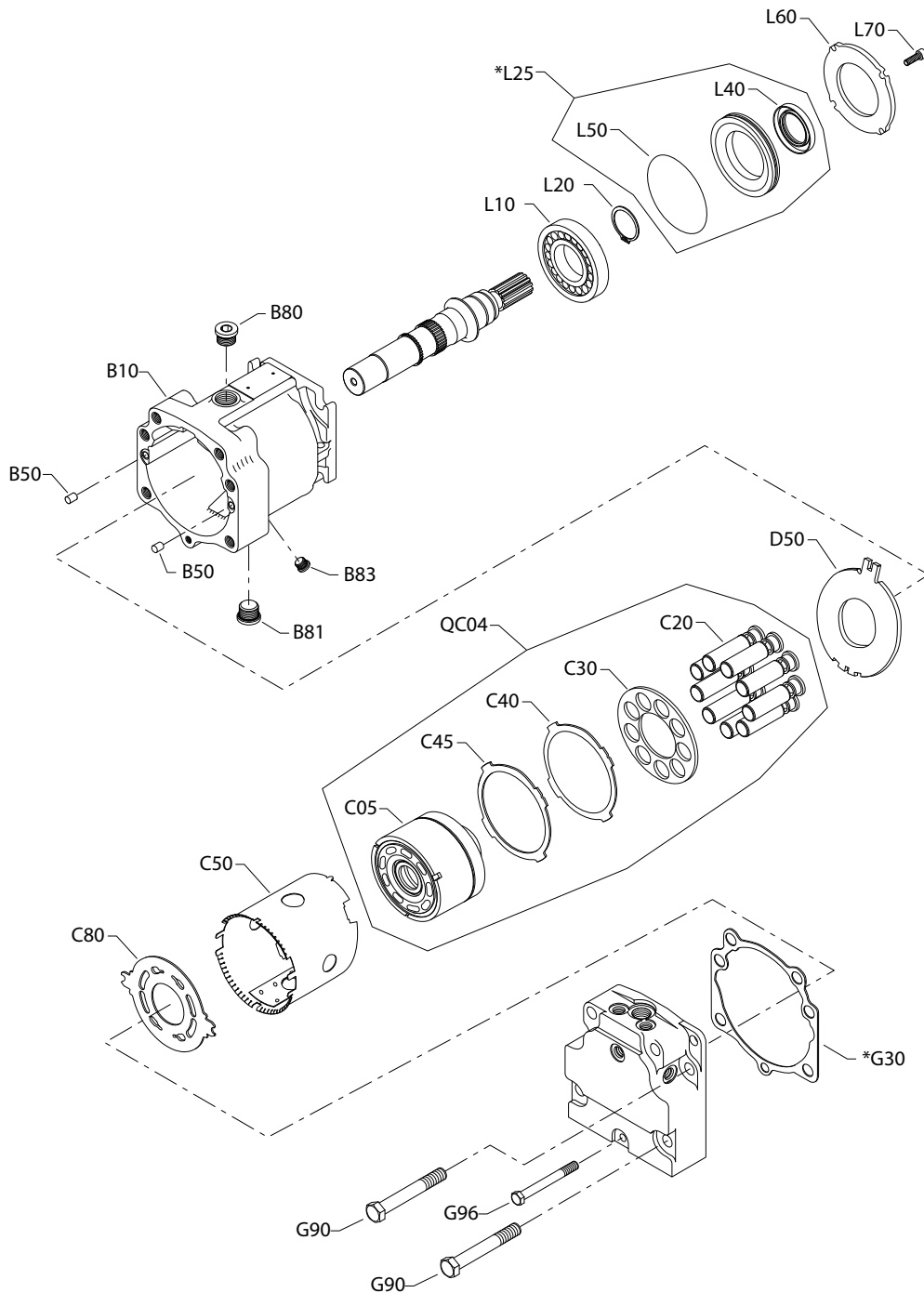
Order code: CAA

C05	94-14		11012434	Cylinder block assembly without speed ring	1
C20	94-14		8200031	Piston assembly, hollow (SB-1988-023 on page 57)	9
B83	94-14		140644	Plug assembly	1
G96	94-14		307686 (9007210-1017)	Screw, M10 x 80	1
L25	94-14		521722	Seal carrier assembly	1
L40	94-14		519021	Lip seal	1
L50	94-14		327627-S (9004104-1540)	O-ring	1
L60	94-14		516768	Retainer plate	1
QC04	94-14		8510369	Cylinder block kit, without speed ring	1
Q210	94-14		11134055	Overhaul seal kit, standard	1

[Parts continue to the next 2 pages.](#)

Common parts and special hardware

Parts configuration



Generic end cap used to show part location only

* Included in overhaul seal kit Q210

Common parts and special hardware

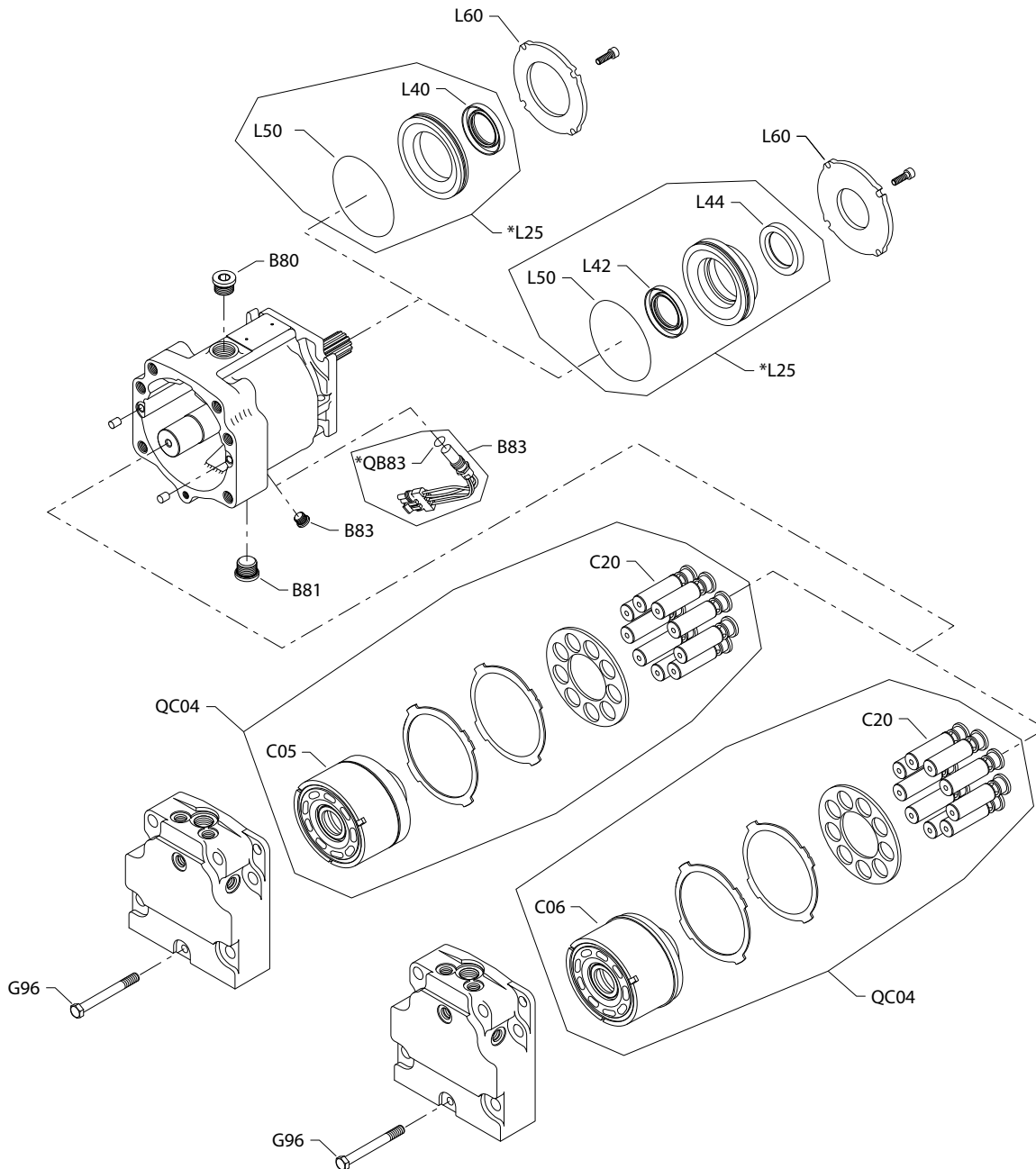
Order code: CBA

Item	Date Begin	Date End	Part Number	Part Name	Quantity per Model/Kit
C05	94-14		11012434	Cylinder block assembly without speed ring	1
C20	94-14		508080	Piston assembly	9
B83	94-14		140644	Plug assembly	1
G96	94-14		307686 (9007210-1017)	Screw, M10 x 80	1
L25	94-14		521722	Seal carrier assembly	1
L40	94-14		519021	Lip seal	1
L50	94-14		327627-S (9004104-1540)	O-ring	1
L60	94-14		516768	Retainer plate	1
QC04	94-14		11133858	Cylinder block kit, without speed ring	1
Q210	94-14		11134055	Overhaul seal kit, standard	1

Common parts and special hardware

S90 100cc motor special hardware CBC, CBE

Parts configuration



Generic end cap used to show part location only

* Included in overhaul seal kit Q210

Common parts and special hardware

Order code: CBC

Item	Date Begin	Date End	Part Number	Part Name	Quantity per Model/Kit
C05	94-14		11012434	Cylinder block assembly without speed ring	1
C20	94-14		508080	Piston assembly	9
B83	94-14		140644	Plug assembly	1
G96	94-14		509487	Screw, M10 x 100	1
L25	94-14		521722	Seal carrier assembly	1
L40	94-14		519021	Lip seal	1
L50	94-14		327627-S (9004104-1540)	O-ring	1
L60	94-14		516768	Retainer plate	1
QC04	94-14		11133858	Cylinder block kit, without speed ring	1
Q210	94-14		11134055	Overhaul seal kit, standard	1

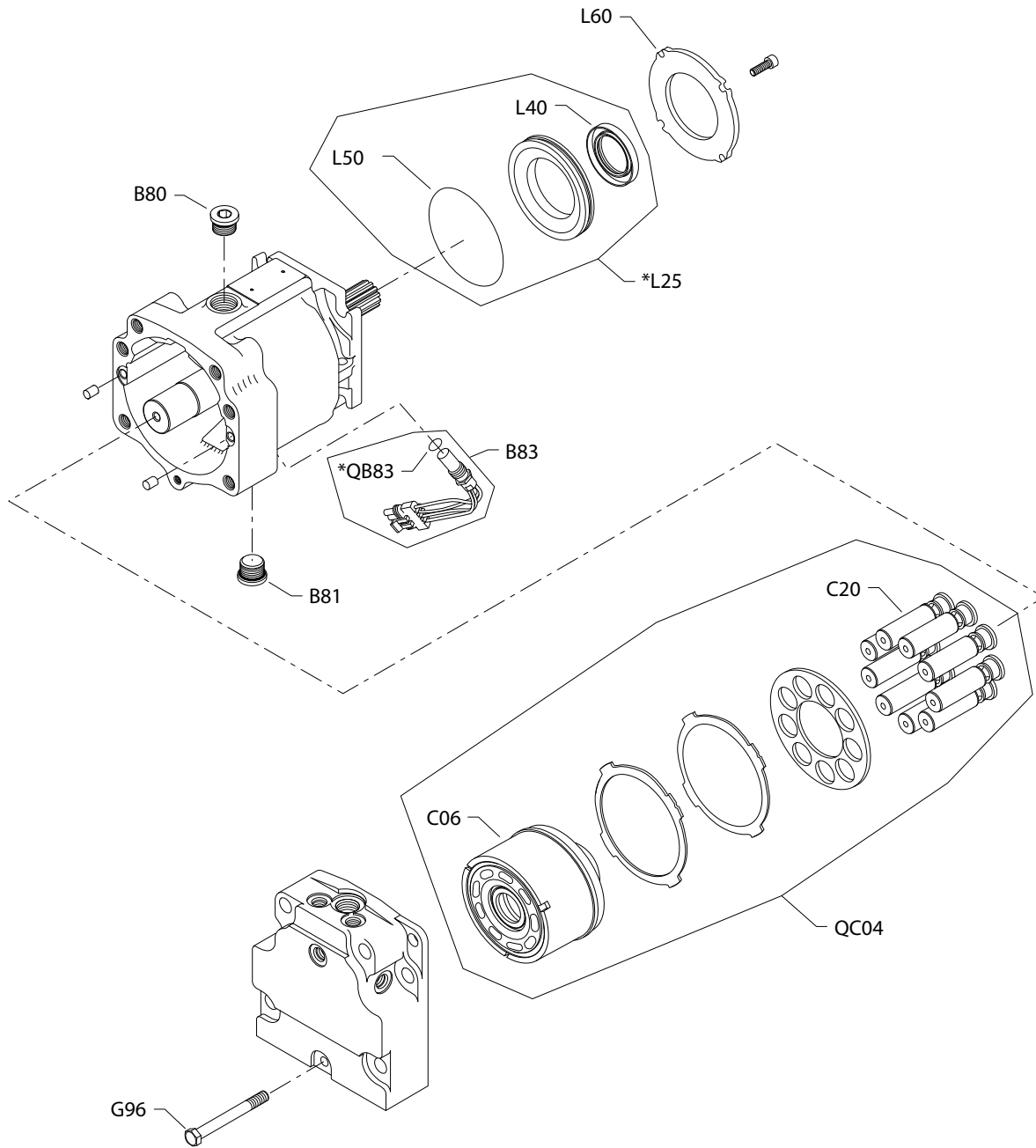
Order code: CBE

C05	94-14		11012434	Cylinder block assembly without speed ring	1
C20	94-14		508080	Piston assembly	9
B83	94-14		140644	Plug assembly	1
G96	94-14		509487	Screw, M10 x 100	1
L25	94-14		521722	Seal carrier assembly	1
L40	94-14		519021	Lip seal	1
L50	94-14		327627-S (9004104-1540)	O-ring	1
L60	94-14		516768	Retainer plate	1
QC04	94-14		11133858	Cylinder block kit, without speed ring	1
Q210	94-14		11134055	Overhaul seal kit, standard	1

Common parts and special hardware

S90 100cc motor special hardware EAA, EBA, EFT

Parts configuration



Generic end cap used to show part location only

* Included in overhaul seal kit Q210

Common parts and special hardware

Order code: EAA

Item	Date Begin	Date End	Part Number	Part Name	Quantity per Model/Kit
C06	94-14		11093925 (11012435)	Cylinder block assembly with speed ring	1
C20	94-14		364000	Piston assembly	9
B83	94-14		KPPG12508	Speed sensor assembly	1
G96	94-14		307686 (9007210-1017)	Screw, M10 x 80	1
L25	94-14		521722	Seal carrier assembly	1
L40	94-14		519021	Lip seal	1
L50	94-14		327627-S (9004104-1540)	O-ring	1
L60	94-14		516768	Retainer plate	1
QB83	94-14		085043 (9004201-3700)	O-ring	1
QC04	94-14		8510395	Cylinder block kit, with speed ring	1
Q210	94-14		11134055	Overhaul seal kit, standard	1

Order code: EBA

C06	94-14		11093925 (11012435)	Cylinder block assembly with speed ring	1
C20	94-14		364000	Piston assembly	9
B83	94-14		KPPG13408	Speed sensor assembly	1
G96	94-14		307686 (9007210-1017)	Screw, M10 x 80	1
L25	94-14		521722	Seal carrier assembly	1
L40	94-14		519021	Lip seal	1
L50	94-14		327627-S (9004104-1540)	O-ring	1
L60	94-14		516768	Retainer plate	1
QB83	94-14		085043 (9004201-3700)	O-ring	1
QC04	94-14		8510395	Cylinder block kit with speed ring	1
Q210	94-14		11134055	Overhaul seal kit, standard	1

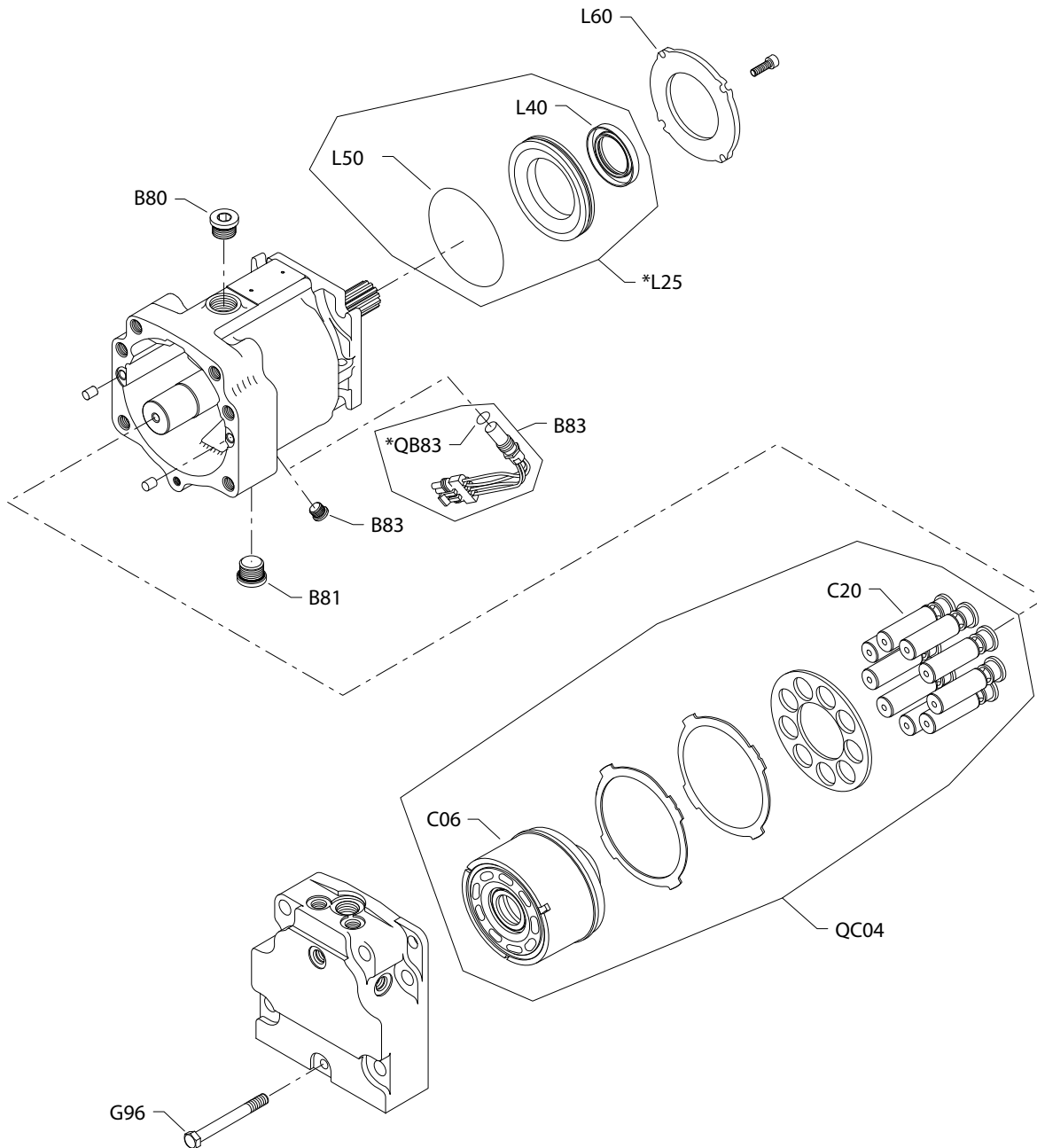
Order code: EFT

C06	17-33		11093925 (11012435)	Cylinder block assembly with speed ring	1
C20	17-33		364000	Piston assembly	9
B83	17-33		KPPG16708	Speed sensor assembly	1
G96	17-33		307686 (9007210-1017)	Screw, M10 x 80	1
L25	17-33		521722	Seal carrier assembly	1
L40	17-33		519021	Lip seal	1
L50	17-33		327627-S (9004104-1540)	O-ring	1
L60	17-33		516768	Retainer plate	1
QB83	17-33		085043 (9004201-3700)	O-ring	1
QC04	17-33		8510395	Cylinder block kit with speed ring	1
Q210	17-33		11134055	Overhaul seal kit, standard	1

Common parts and special hardware

S90 100cc motor special hardware EBB-EEH

Parts configuration



[Generic end cap used to show part location only](#)

* Included in overhaul seal kit Q210

Common parts and special hardware

Order code: EBB

Item	Date Begin	Date End	Part Number	Part Name	Quantity per Model/Kit
C06	94-14		11093925 (11012435)	Cylinder block assembly with speed ring	1
C20	94-14		364000	Piston assembly	9
B83	94-14		KPPG14408	Speed sensor assembly	1
G96	94-14		307686 (9007210-1017)	Screw, M10 x 80	1
L25	94-14		521722	Seal carrier assembly	1
L40	94-14		519021	Lip seal	1
L50	94-14		327627-S (9004104-1540)	O-ring	1
L60	94-14		516768	Retainer plate	1
QB83	94-14		085043 (9004201-3700)	O-ring	1
QC04	94-14		8510395	Cylinder block kit with speed ring	1
Q210	94-14		11134055	Overhaul seal kit, standard	1

Order code: EBF

C06	15-30		11093925 (11012435)	Cylinder block assembly with speed ring	1
C20	15-30		364000	Piston assembly	9
B83	15-30		KPPG1A408	Speed sensor assembly	1
G96	15-30		307686 (9007210-1017)	Screw, M10 x 80	1
L25	15-30		521722	Seal carrier assembly	1
L40	15-30		519021	Lip seal	1
L50	15-30		327627-S (9004104-1540)	O-ring	1
L60	15-30		516768	Retainer plate	1
QB83	15-30		085043 (9004201-3700)	O-ring	1
QC04	15-30		8510395	Cylinder block kit with speed ring	1
Q210	15-30		11134055	Overhaul seal kit, standard	1

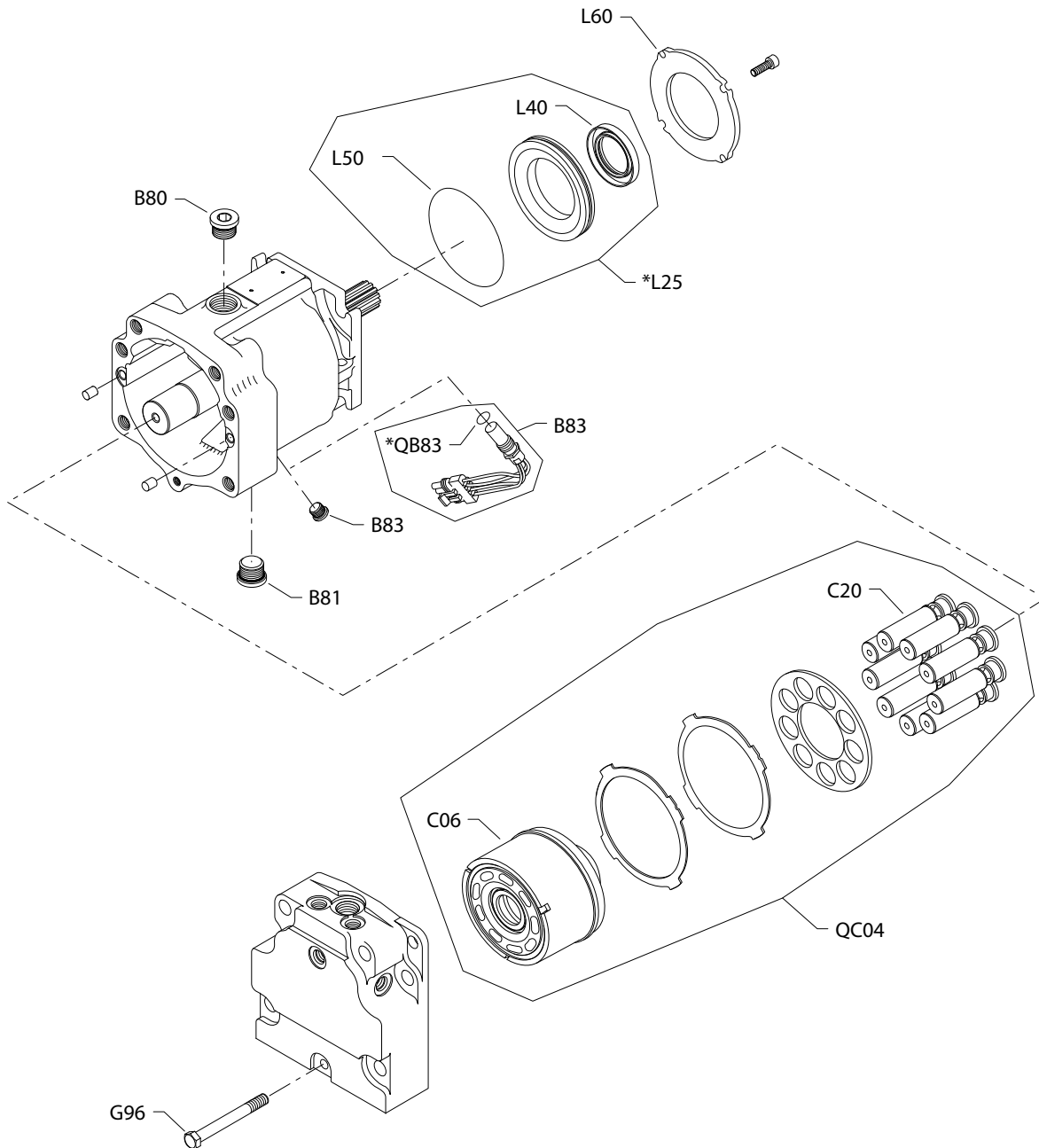
Order code: EEA

C06	94-14		11093925 (11012435)	Cylinder block assembly with speed ring	1
C20	94-14		364000	Piston assembly	9
B83	94-14		140644	Plug assembly	1
G96	94-14		307686 (9007210-1017)	Screw, M10 x 80	1
L25	94-14		521722	Seal carrier assembly	1
L40	94-14		519021	Lip seal	1
L50	94-14		327627-S (9004104-1540)	O-ring	1
L60	94-14		516768	Retainer plate	1
QC04	94-14		8510395	Cylinder block kit with speed ring	1
Q210	94-14		11134055	Overhaul seal kit, standard	1

[Parts continue to the next 2 pages.](#)

Common parts and special hardware

Parts configuration



Generic end cap used to show part location only

* Included in overhaul seal kit Q210

Common parts and special hardware

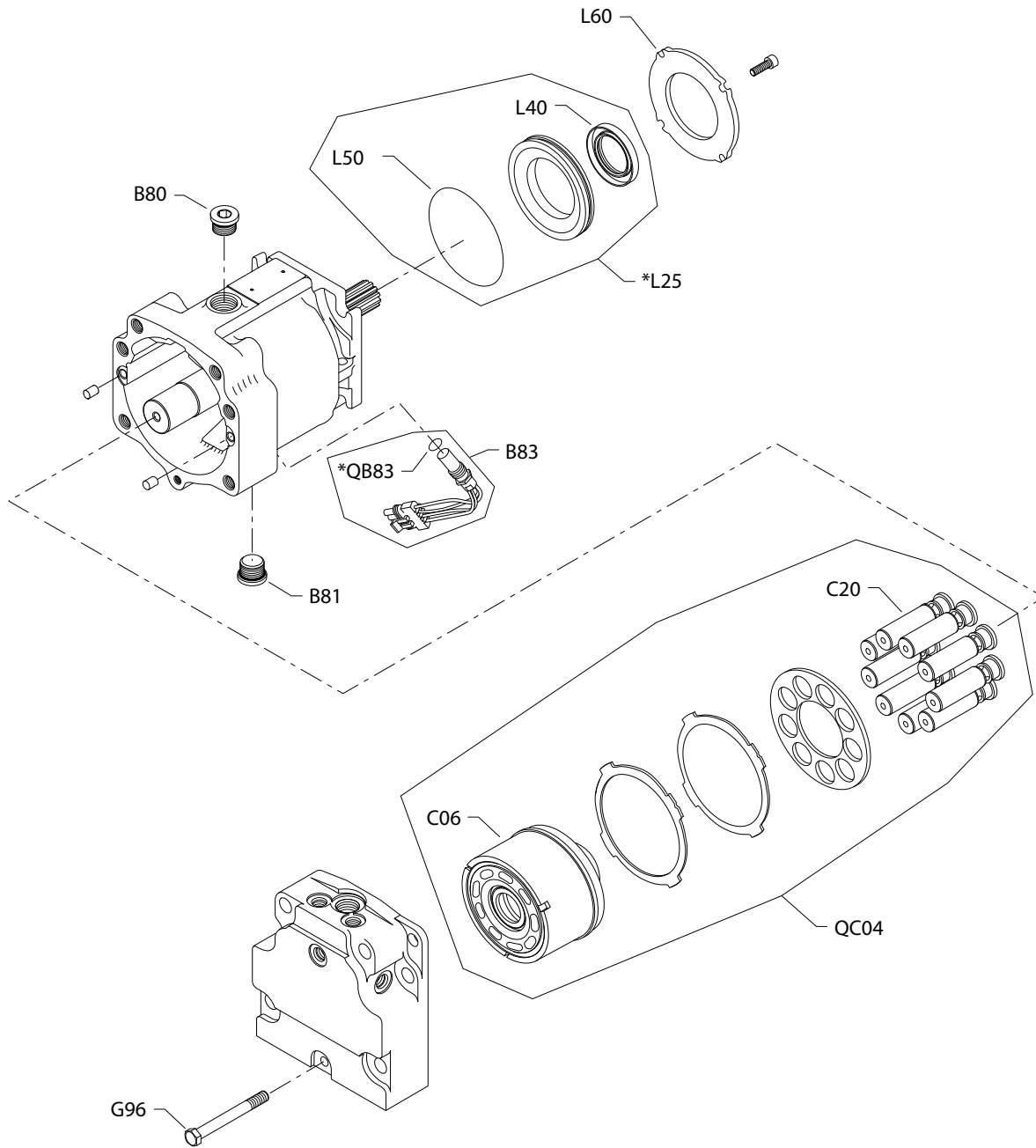
Order code: EEH

Item	Date Begin	Date End	Part Number	Part Name	Quantity per Model/Kit
C06	14-15		11093925 (11012435)	Cylinder block assembly with speed ring	1
C20	14-15		364000	Piston assembly	9
B83	14-15		140644	Plug assembly	1
G96	14-15		307686 (9007210-1017)	Screw, M10 x 80	1
L25	14-15		521722	Seal carrier assembly	1
L40	14-15		519021	Lip seal	1
L50	14-15		327627-S (9004104-1540)	O-ring	1
L60	14-15		516768	Retainer plate	1
QC04	14-15		8510395	Cylinder block kit with speed ring	1
Q210	14-15		11134055	Overhaul seal kit, standard	1

Common parts and special hardware

S90 100cc motor special hardware EFA-EFM

Parts configuration



[Generic end cap used to show part location only](#)

* Included in overhaul seal kit Q210

Common parts and special hardware

Order code: EFA

Item	Date Begin	Date End	Part Number	Part Name	Quantity per Model/Kit
C06	94-14		11093925 (11012435)	Cylinder block assembly with speed ring	1
C20	94-14		364000	Piston assembly	9
B83	94-14		KPPG136	Speed sensor assembly	1
G96	94-14		307686 (9007210-1017)	Screw, M10 x 80	1
L25	94-14		521722	Seal carrier assembly	1
L40	94-14		519021	Lip seal	1
L50	94-14		327627-S (9004104-1540)	O-ring	1
L60	94-14		516768	Retainer plate	1
QB83	94-14		085043 (9004201-3700)	O-ring	1
QC04	94-14		8510395	Cylinder block kit with speed ring	1
Q210	94-14		11134055	Overhaul seal kit, standard	1

Order code: EFB

C06	94-14		11093925 (11012435)	Cylinder block assembly with speed ring	1
C20	94-14		364000	Piston assembly	9
B83	94-14		KPPG136	Speed sensor assembly	1
G96	94-14		307686 (9007210-1017)	Screw, M10 x 80	1
L25	94-14		521722	Seal carrier assembly	1
L40	94-14		519021	Lip seal	1
L50	94-14		327627-S (9004104-1540)	O-ring	1
L60	94-14		516768	Retainer plate	1
QB83	94-14		085043 (9004201-3700)	O-ring	1
QC04	94-14		8510395	Cylinder block kit with speed ring	1
Q210	94-14		11134055	Overhaul seal kit, standard	1

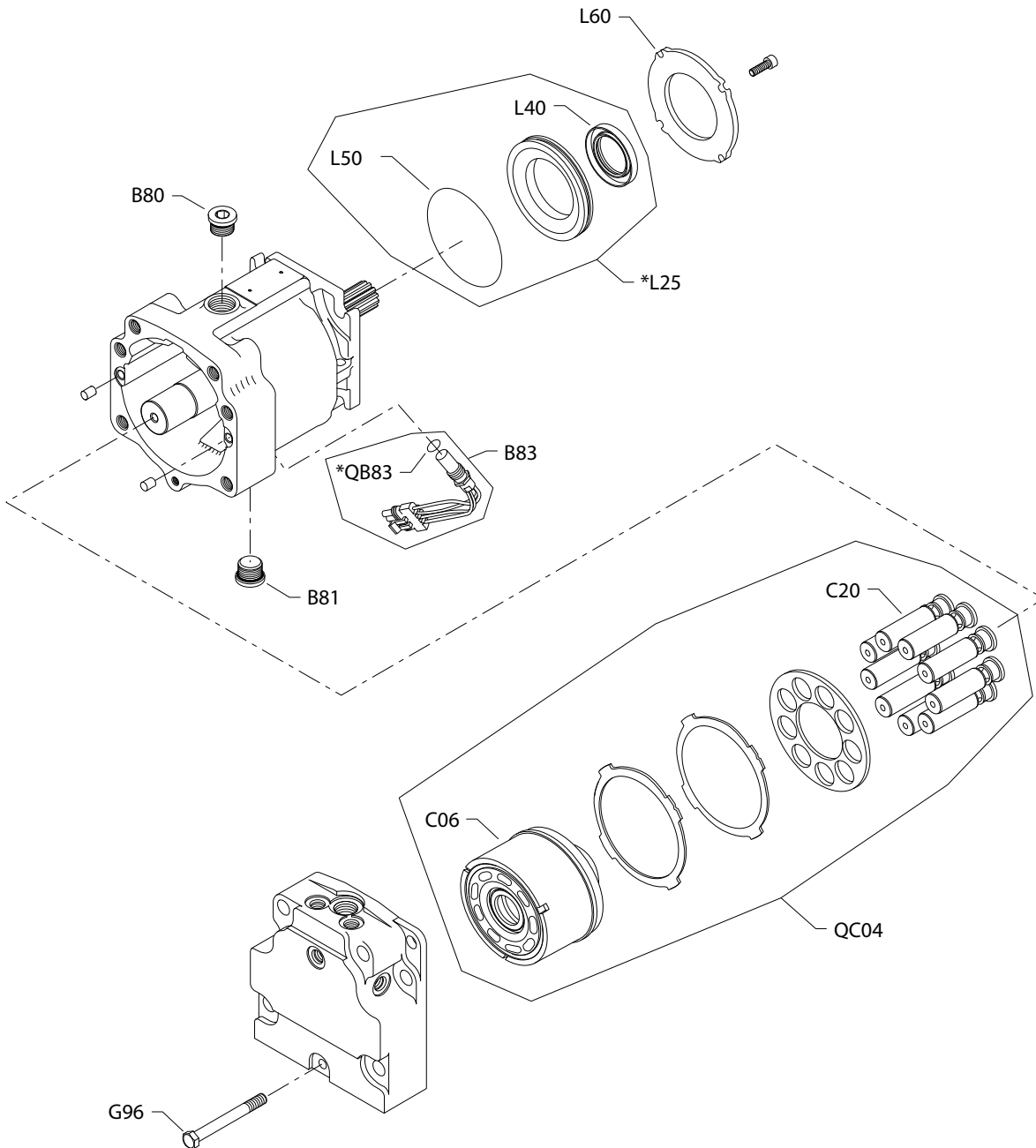
Order code: EFJ

C06	94-14		11093925 (11012435)	Cylinder block assembly with speed ring	1
C20	94-14		364000	Piston assembly	9
B83	94-14		KPPG176	Speed sensor assembly	1
G96	94-14		307686 (9007210-1017)	Screw, M10 x 80	1
L25	94-14		521722	Seal carrier assembly	1
L40	94-14		519021	Lip seal	1
L50	94-14		327627-S (9004104-1540)	O-ring	1
L60	94-14		516768	Retainer plate	1
QB83	94-14		085043 (9004201-3700)	O-ring	1
QC04	94-14		8510395	Cylinder block kit with speed ring	1
Q210	94-14		11134055	Overhaul seal kit, standard	1

[Parts continue to the next 2 pages.](#)

Common parts and special hardware

Parts configuration



Generic end cap used to show part location only

* Included in overhaul seal kit Q210

Common parts and special hardware

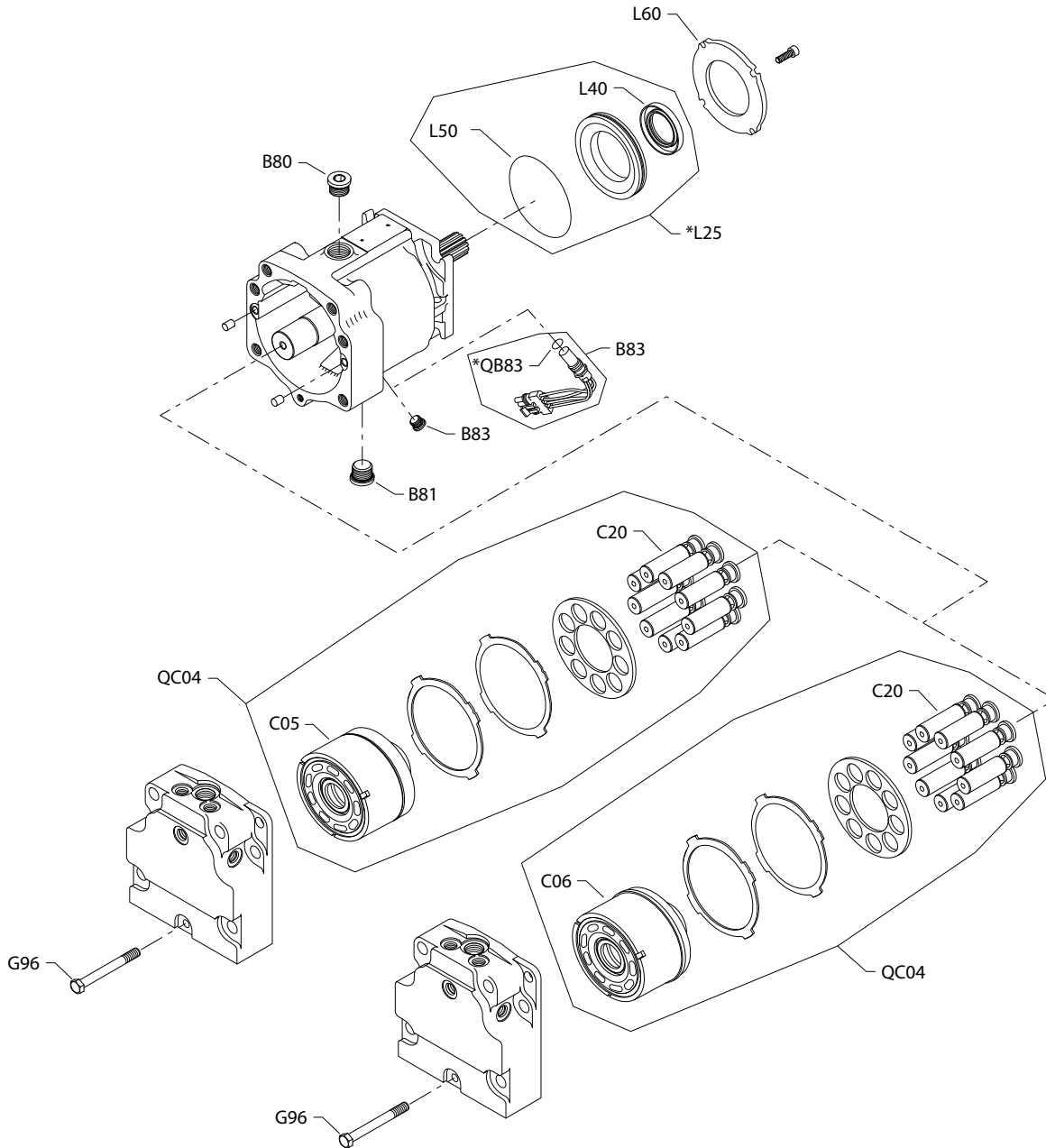
Order code: EFM

Item	Date Begin	Date End	Part Number	Part Name	Quantity per Model/Kit
C06	14-36		11093925 (11012435)	Cylinder block assembly with speed ring	1
C20	14-36		364000	Piston assembly	9
B83	14-36		KPPG12730A	Speed sensor assembly	1
G96	14-36		307686 (9007210-1017)	Screw, M10 x 80	1
L25	14-36		521722	Seal carrier assembly	1
L40	14-36		519021	Lip seal	1
L50	14-36		327627-S (9004104-1540)	O-ring	1
L60	14-36		516768	Retainer plate	1
QB83	14-36		085043 (9004201-3700)	O-ring	1
QC04	14-36		8510395	Cylinder block kit with speed ring	1
Q210	14-36		11134055	Overhaul seal kit, standard	1

Common parts and special hardware

S90 100cc motor special hardware EGL-JAB

Parts configuration



Generic end cap used to show part location only

* Included in overhaul seal kit Q210

Common parts and special hardware

Order code: EGL

Item	Date Begin	Date End	Part Number	Part Name	Quantity per Model/Kit
C06	10-34		11093925 (11012435)	Cylinder block assembly with speed ring	1
C20	10-34		364000	Piston assembly	9
B83	10-34		KPPG16719	Speed sensor assembly	1
G96	10-34		307686 (9007210-1017)	Screw, M10 x 80	1
L25	10-34		521722	Seal carrier assembly	1
L40	10-34		519021	Lip seal	1
L50	10-34		327627-S (9004104-1540)	O-ring	1
L60	10-34		516768	Retainer plate	1
QB83	10-34		085043 (9004201-3700)	O-ring	1
QC04	10-34		8510395	Cylinder block kit with speed ring	1
Q210	10-34		11134055	Overhaul seal kit, standard	1

Order code: EHD

C06	94-14		11093925 (11012435)	Cylinder block assembly with speed ring	1
C20	94-14		364000	Piston assembly	9
B83	94-14		KPPG16408	Speed sensor assembly	1
G96	94-14		307686 (9007210-1017)	Screw, M10 x 80	1
L25	94-14		521722	Seal carrier assembly	1
L40	94-14		519021	Lip seal	1
L50	94-14		327627-S (9004104-1540)	O-ring	1
L60	94-14		516768	Retainer plate	1
QB83	94-14		085043 (9004201-3700)	O-ring	1
QC04	94-14		8510395	Cylinder block kit with speed ring	1
Q210	94-14		11134055	Overhaul seal kit, standard	1

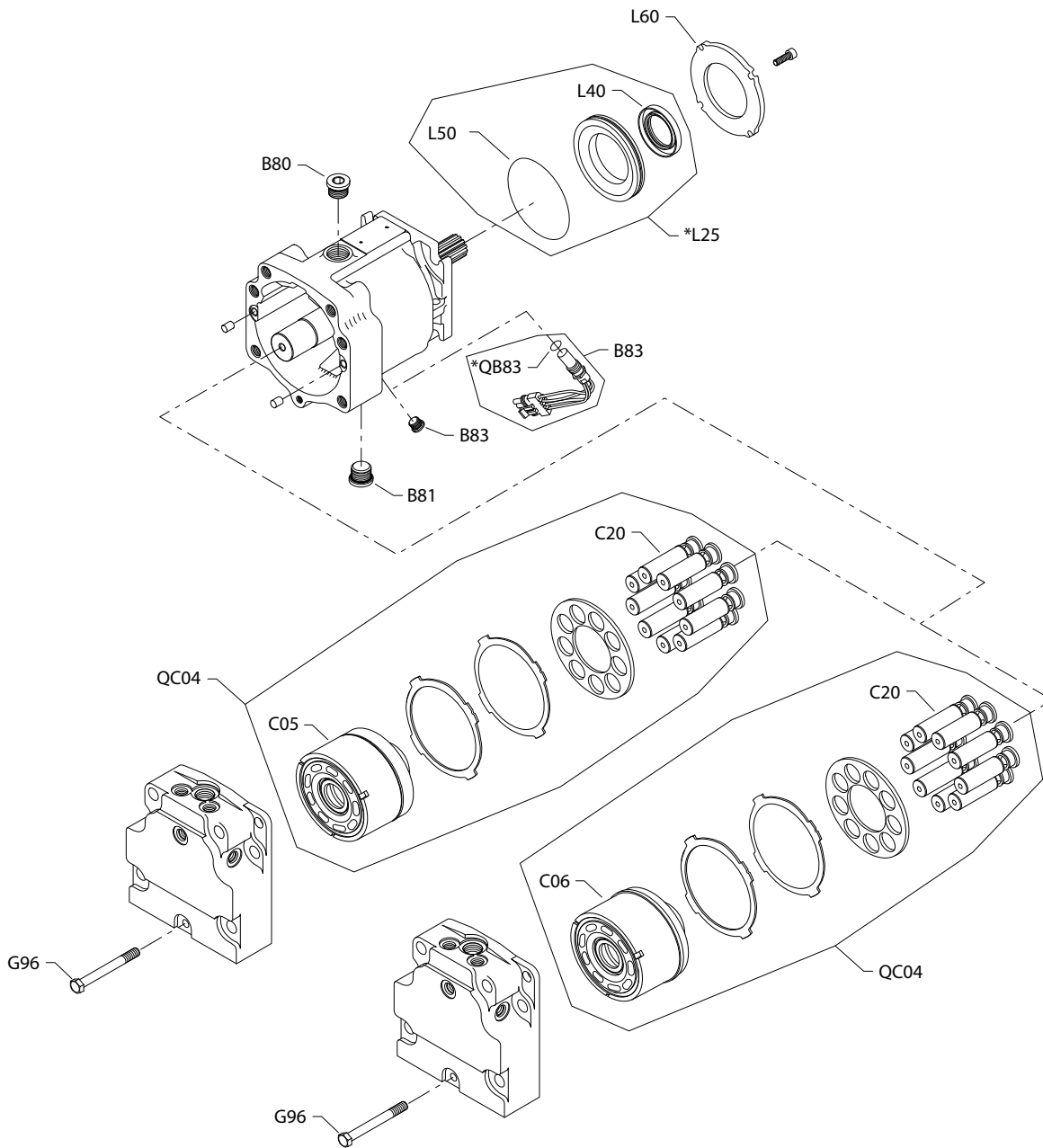
Order code: GTA

C05	14-26		11012434	Cylinder block assembly	1
C20	14-26		364000	Piston assembly	9
B83	14-26		140644	Plug assembly	1
G96	14-26		307686 (9007210-1017)	Screw, M10 x 80	1
L25	14-26		521722	Seal carrier assembly	1
L40	14-26		519021	Lip seal	1
L50	14-26		327627-S (9004104-1540)	O-ring	1
L60	14-26		516768	Retainer plate	1
QC04	14-26		8510370	Cylinder block kit	1
Q210	14-26		11134055	Overhaul seal kit, standard	1

[Parts continue to the next 2 pages.](#)

Common parts and special hardware

Parts configuration



Generic end cap used to show part location only

* Included in overhaul seal kit Q210

Common parts and special hardware

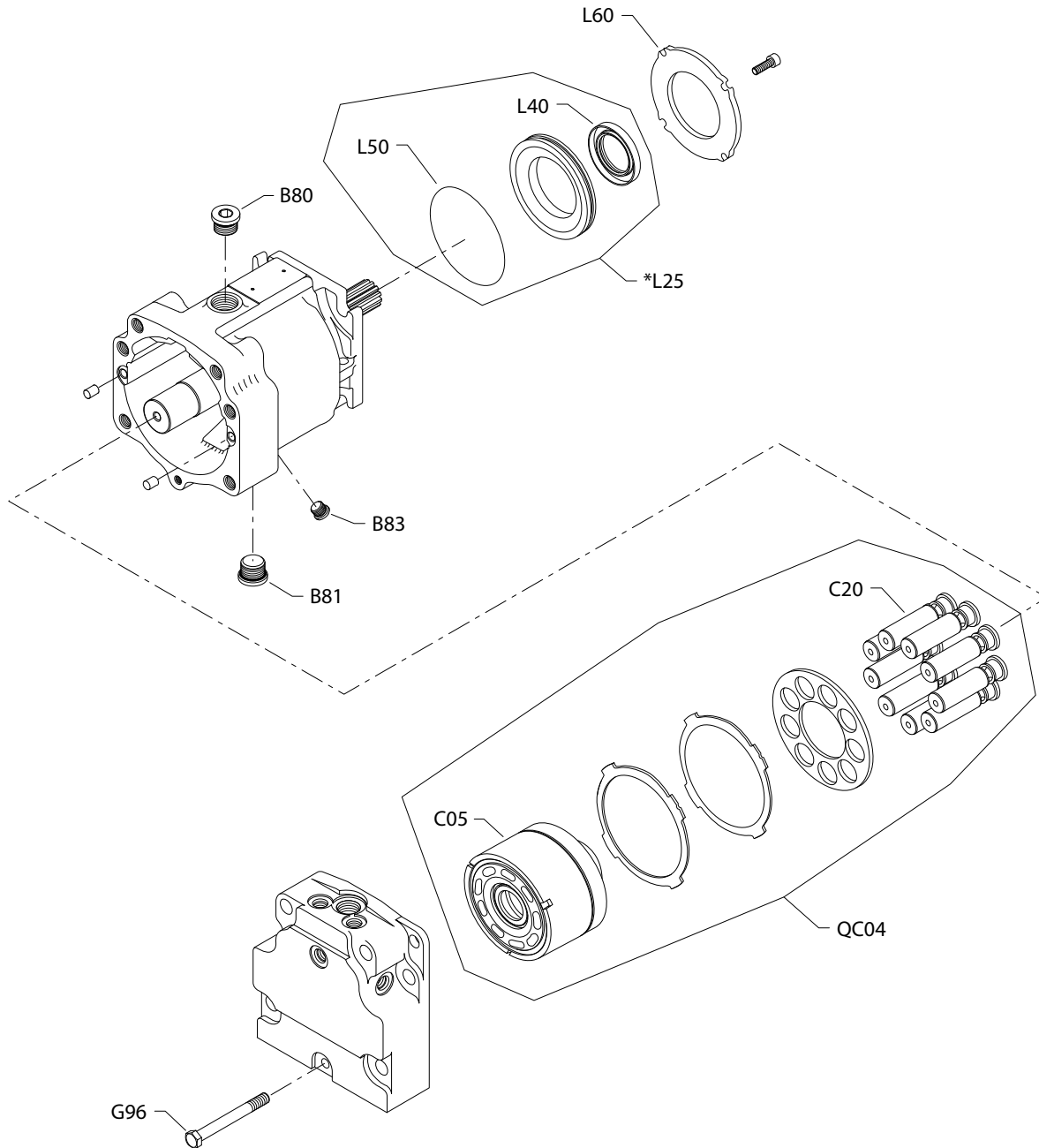
Order code: JAB

Item	Date Begin	Date End	Part Number	Part Name	Quantity per Model/Kit
C05	94-14		11012434	Cylinder block assembly	1
C20	94-14		364000	Piston assembly	9
B83	94-14		140644	Plug assembly	1
G96	94-14		307686 (9007210-1017)	Screw, M10 x 80	1
L25	94-14		521722	Seal carrier assembly	1
L40	94-14		519021	Lip seal	1
L50	94-14		327627-S (9004104-1540)	O-ring	1
L60	94-14		516768	Retainer plate	1
QC04	94-14		8510370	Cylinder block kit	1
Q210	94-14		11134055	Overhaul seal kit, standard	1

Common parts and special hardware

S90 100cc motor special hardware JAE-JCB

Parts configuration



[Generic end cap used to show part location only](#)

* Included in overhaul seal kit Q210

Common parts and special hardware

Order code: JAE

Item	Date Begin	Date End	Part Number	Part Name	Quantity per Model/Kit
C05	15-44		11012434	Cylinder block assembly	1
C20	15-44		364000	Piston assembly	9
B83	15-44		140644	Plug assembly	1
G96	15-44		307686 (9007210-1017)	Screw, M10 x 80	1
L25	15-44		521722	Seal carrier assembly	1
L40	15-44		519021	Lip seal	1
L50	15-44		327627-S (9004104-1540)	O-ring	1
L60	15-44		516768	Retainer plate	1
QC04	15-44		8510370	Cylinder block kit	1
Q210	15-44		11134055	Overhaul seal kit, standard	1

Order code: JAF

C05	94-14		11012434	Cylinder block assembly	1
C20	94-14		364000	Piston assembly	9
B83	94-14		140644	Plug assembly	1
G96	94-14		307686 (9007210-1017)	Screw, M10 x 80	1
L25	94-14		521722	Seal carrier assembly	1
L40	94-14		519021	Lip seal	1
L50	94-14		327627-S (9004104-1540)	O-ring	1
L60	94-14		516768	Retainer plate	1
QC04	94-14		8510370	Cylinder block kit	1
Q210	94-14		11134055	Overhaul seal kit, standard	1

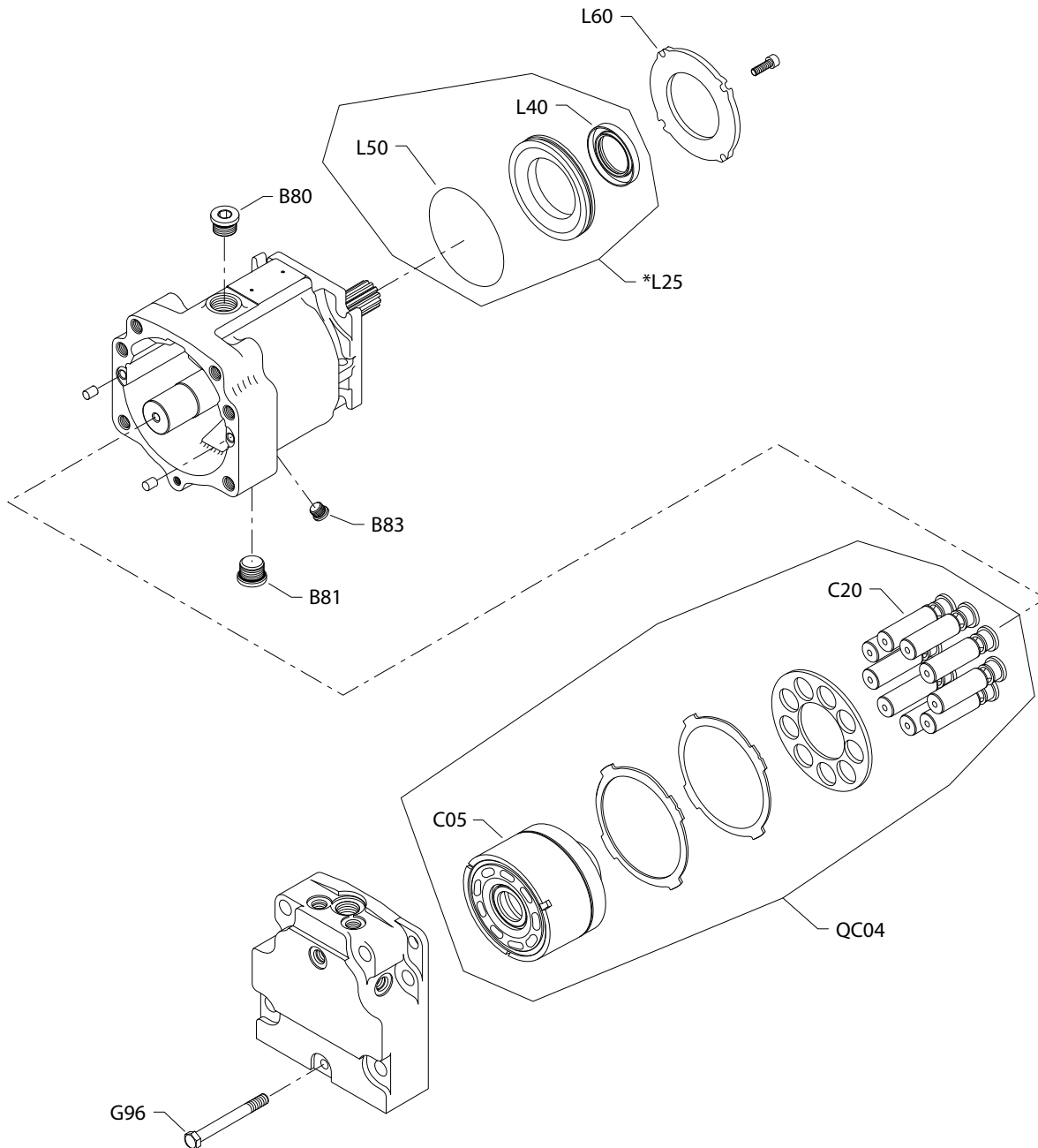
Order code: JAH

C05	94-14		11012434	Cylinder block assembly	1
C20	94-14		364000	Piston assembly	9
B83	94-14		140644	Plug assembly	1
G96	94-14		307686 (9007210-1017)	Screw, M10 x 80	1
L25	94-14		521722	Seal carrier assembly	1
L40	94-14		519021	Lip seal	1
L50	94-14		327627-S (9004104-1540)	O-ring	1
L60	94-14		516768	Retainer plate	1
QC04	94-14		8510370	Cylinder block kit	1
Q210	94-14		11134055	Overhaul seal kit, standard	1

[Parts continue to the next 2 pages.](#)

Common parts and special hardware

Parts configuration



Generic end cap used to show part location only

* Included in overhaul seal kit Q210

Common parts and special hardware

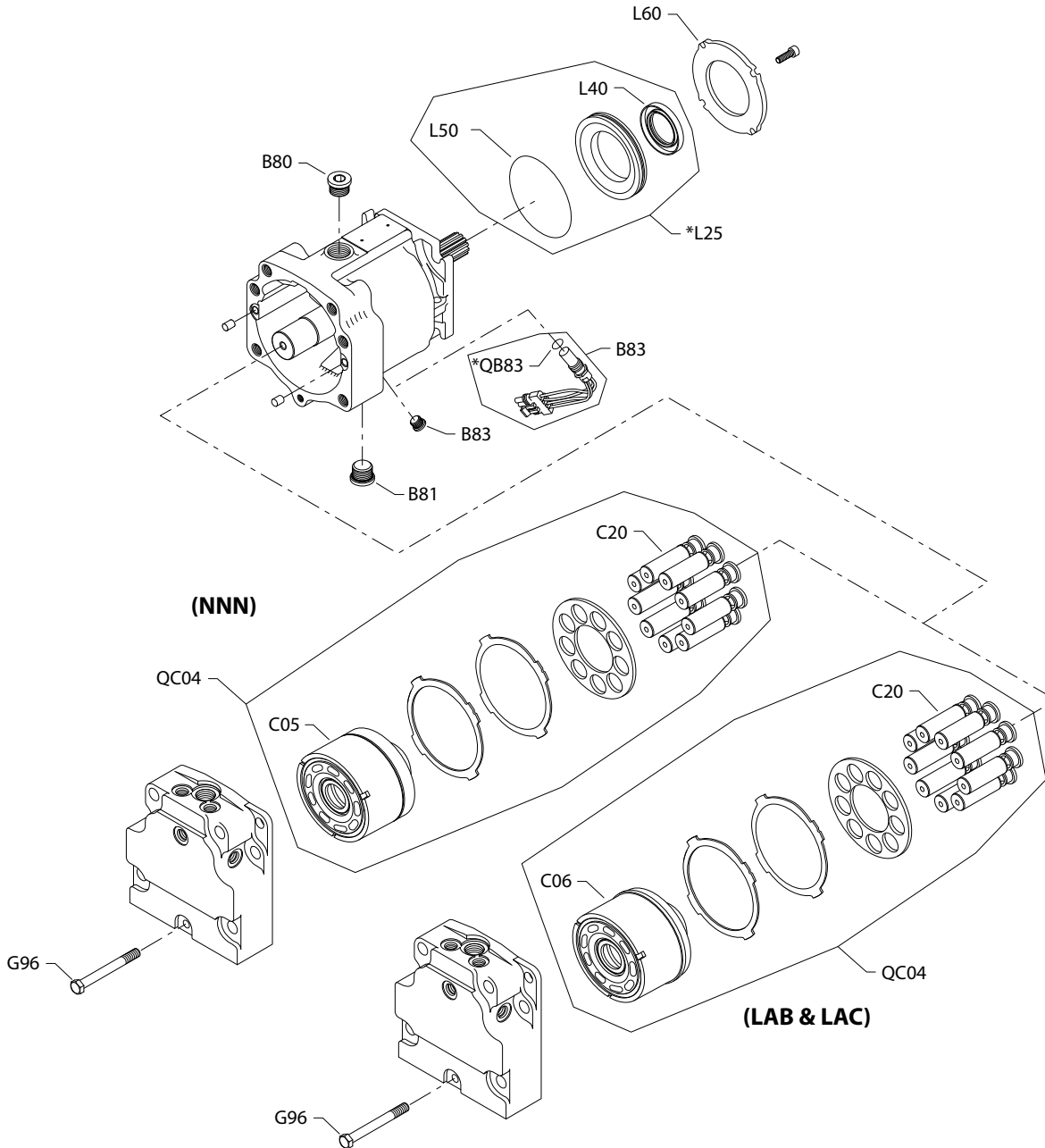
Order code: JCB

Item	Date Begin	Date End	Part Number	Part Name	Quantity per Model/Kit
C05	94-14		11012434	Cylinder block assembly	1
C20	94-14		364000	Piston assembly	9
B83	94-14		140644	Plug assembly	1
G96	94-14		307686 (9007210-1017)	Screw, M10 x 80	1
L25	94-14		521722	Seal carrier assembly	1
L40	94-14		519021	Lip seal	1
L50	94-14		327627-S (9004104-1540)	O-ring	1
L60	94-14		516768	Retainer plate	1
QC04	94-14		8510370	Cylinder block kit	1
Q210	94-14		11134055	Overhaul seal kit, standard	1

Common parts and special hardware

S90 100cc motor special hardware LAB-NNN

Parts configuration



[Generic end cap used to show part location only](#)

* Included in overhaul seal kit Q210

Common parts and special hardware

Order code: LAB

Item	Date Begin	Date End	Part Number	Part Name	Qty. per Model/Kit
C06	94-14		11012436	Cylinder block assembly with speed ring	1
C20	94-14		364000	Piston assembly	9
B83	94-14		KPPG14408	Speed sensor assembly	1
G96	94-14		307686 (9007219-1017)	Screw, M10 x 80	1
L25	94-14		521722	Seal carrier assembly	1
L40	94-14		519021	Lip seal	1
L50	94-14		327627-S (9004104-1540)	O-ring	1
L60	94-14		516768	Retainer plate	1
QB83	94-14		085043 (9004201-3700)	O-ring	1
QC04	94-14		11135418	Cylinder block kit with speed ring	1
Q210	94-14		11134055	Overhaul seal kit, standard	1

Order code: LAC

C06	94-14		11012436	Cylinder block assembly with speed ring	1
C20	94-14		364000	Piston assembly	9
B83	94-14		140644	Plug assembly	1
G96	94-14		307686 (9007219-1017)	Screw, M10 x 80	1
L25	09-14		521722	Seal carrier assembly	1
L40	09-14		519021	Lip seal	1
L50	94-14		327627-S (9004104-1540)	O-ring	1
L60	94-14		516768	Retainer plate	1
QC04	94-14		11135418	Cylinder block kit with speed ring	1
Q210	94-14		11134055	Overhaul seal kit, standard	1

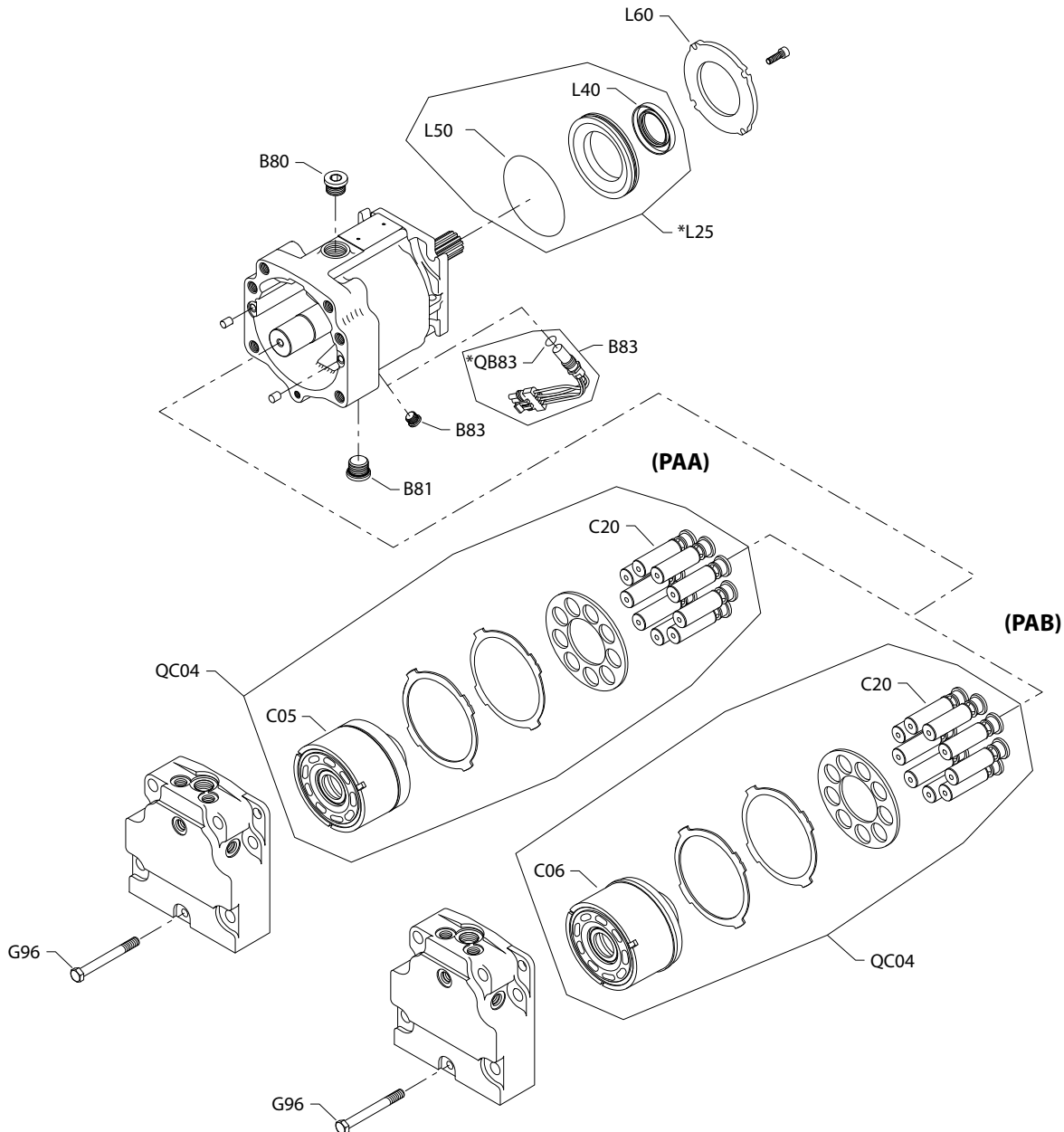
Order code: NNN

C05	94-14		11012434	Cylinder block assembly	1
C20	94-14		364000	Piston assembly	9
B83	94-14		140644	Plug assembly	1
G96	94-14		307686 (9007219-1017)	Screw, M10 x 80	1
L25	09-02		521722	Seal carrier assembly (SB-2008-058 on page 70)	1
L40	09-02		519021	Lip seal	1
L40	94-14		9008000-0114	Lip seal (SB-2008-058 on page 70)	1
L50	94-14		327627-S (9004104-1540)	O-ring	1
L60	94-14		516768	Retainer plate	1
QC04	94-14		8510370	Cylinder block kit	1
Q210	94-14		11134055	Overhaul seal kit, standard	1

Common parts and special hardware

S90 100cc motor special hardware PAA, PAB

Parts configuration



Generic end cap used to show part location only

* Included in overhaul seal kit Q210

Common parts and special hardware

Order code: PAA

Item	Date Begin	Date End	Part Number	Part Name	Quantity per Model/Kit
C05	94-14		11012434	Cylinder block assembly	1
C20	94-14		364000	Piston assembly	9
B83	94-14		140644	Plug assembly	1
G96	94-14		307686 (9007210-1017)	Screw, M10 x 80	1
L25	94-14		521722	Seal carrier assembly	1
L40	94-14		519021	Lip seal	1
L50	94-14		327627-S (9004104-1540)	O-ring	1
L60	94-14		516768	Retainer plate	1
QC04	94-14		8510370	Cylinder block kit	1
Q210	94-14		11134055	Overhaul seal kit, standard	1

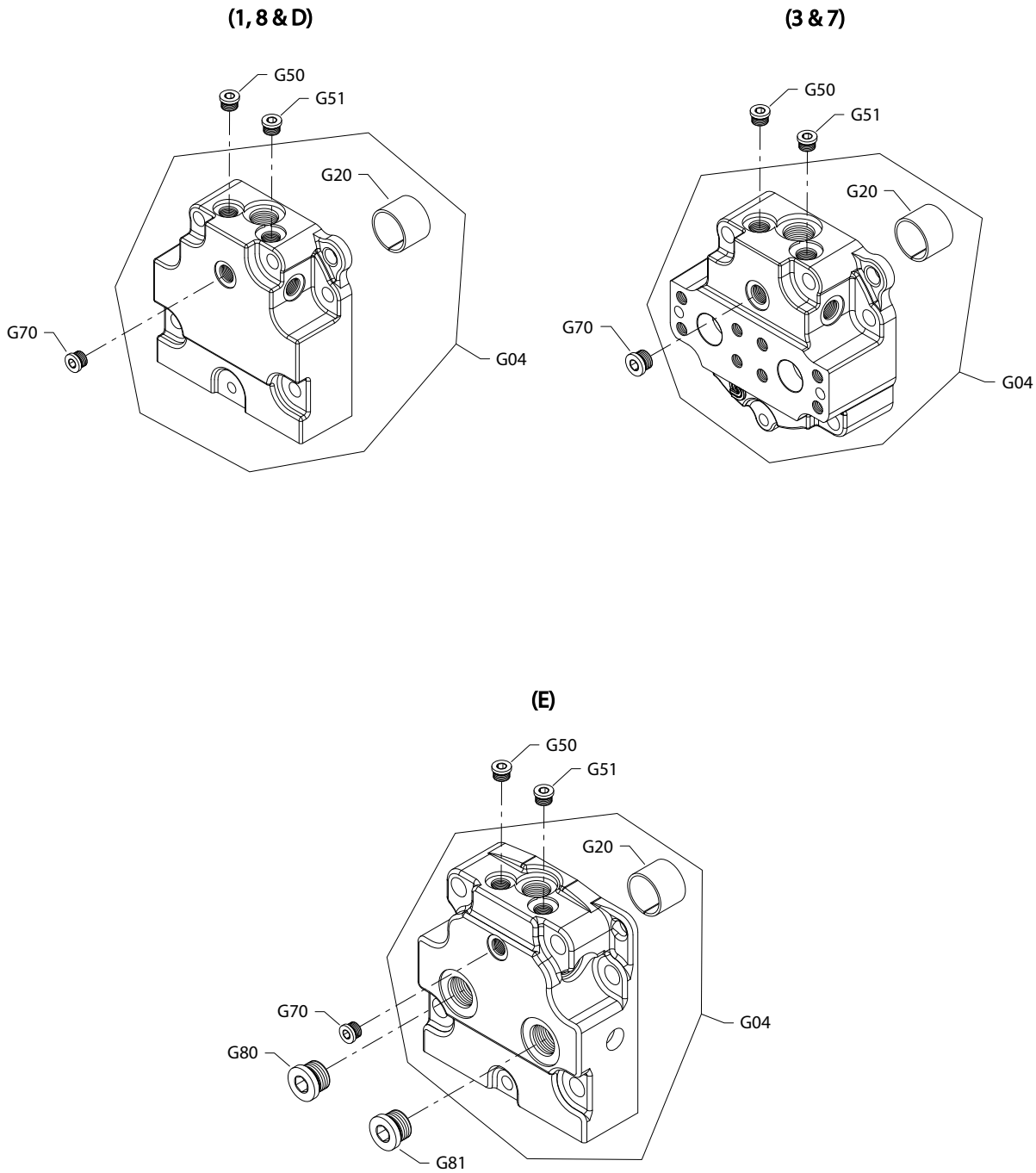
Order code: PAB

C06	10-16		11093925 (11012435)	Cylinder block assembly with speed ring	1
C20	10-16		364000	Piston assembly	9
B83	10-16		KPPG16719	Speed sensor assembly	1
G96	10-16		509487	Screw, M10 x 100	1
L25	10-16		521722	Seal carrier assembly	1
L40	10-16		519021	Lip seal	1
L50	10-16		327627-S (9004104-1540)	O-ring	1
L60	10-16		516768	Retainer plate	1
QB83	10-16		085043 (9004201-3700)	O-ring	1
QC04	10-16		8510395	Cylinder block kit with speed ring	1
Q210	10-16		11134055	Overhaul seal kit, standard	1

End cap

S90 100cc motor end cap 1-8, D, E

Parts configuration



* Included in overhaul seal kit Q210

End cap

Order code: 1

Item	Date Begin	Date End	Part Number	Part Name	Quantity per Model/Kit
G04	90-20		8200581	End cap assembly, twin (SB-1988-018 on page 55, SB-1989-020 on page 59, SB-1998-007 on page 62)	1
G20	87-02		11017304 (8700030)	Journal bearing	1
G50	87-02		140644	Plug assembly	1
G51	87-02		140644	Plug assembly	1
G70	87-02		140644	Plug assembly	1

Order code: 3

G04	90-20		8200582	End cap assembly, axial (SB-1988-018 on page 55, SB-1989-020 on page 59, SB-1998-007 on page 62)	1
G20	87-02		11017304 (8700030)	Journal bearing	1
G50	87-02		140644	Plug assembly	1
G51	87-02		140644	Plug assembly	1
G70	87-02		140644	Plug assembly	1

Order code: 7

G04	90-20		8200582	End cap assembly, axial (SB-1988-018 on page 55, SB-1989-020 on page 59, SB-1998-007 on page 62)	1
G20	87-02		11017304 (8700030)	Journal bearing	1
G50	87-02		140644	Plug assembly	1
G51	87-02		140644	Plug assembly	1
G70	87-02		140644	Plug assembly	1

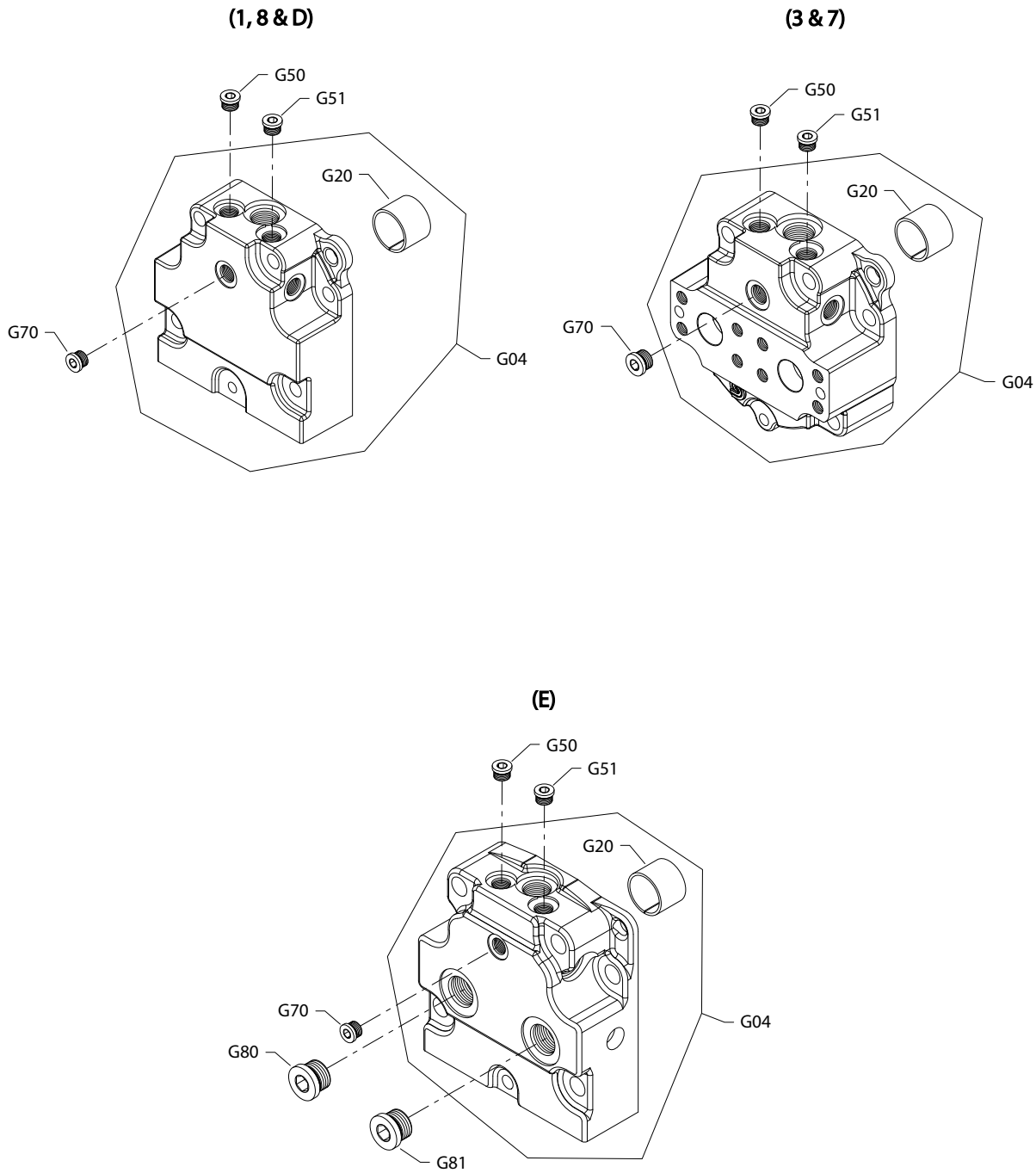
Order code: 8

G04	90-20		8200581	End cap assembly, twin (SB-1988-018 on page 55, SB-1989-020 on page 59, SB-1998-007 on page 62)	1
G20	87-02		11017304 (8700030)	Journal bearing	1
G50	87-02		140644	Plug assembly	1
G51	87-02		140644	Plug assembly	1
G70	87-02		140644	Plug assembly	1

[Parts continue to the next 2 pages.](#)

End cap

Parts configuration



* Included in overhaul seal kit Q210

End cap

Order code: D

Item	Date Begin	Date End	Part Number	Part Name	Quantity per Model/Kit
G04	99-09		11064118	End cap assembly, twin	1
G20	99-09		11017304 (8700030)	Journal bearing	1
G50	99-09		140644	Plug assembly	1
G51	99-09		140644	Plug assembly	1
G70	99-09		140644	Plug assembly	1

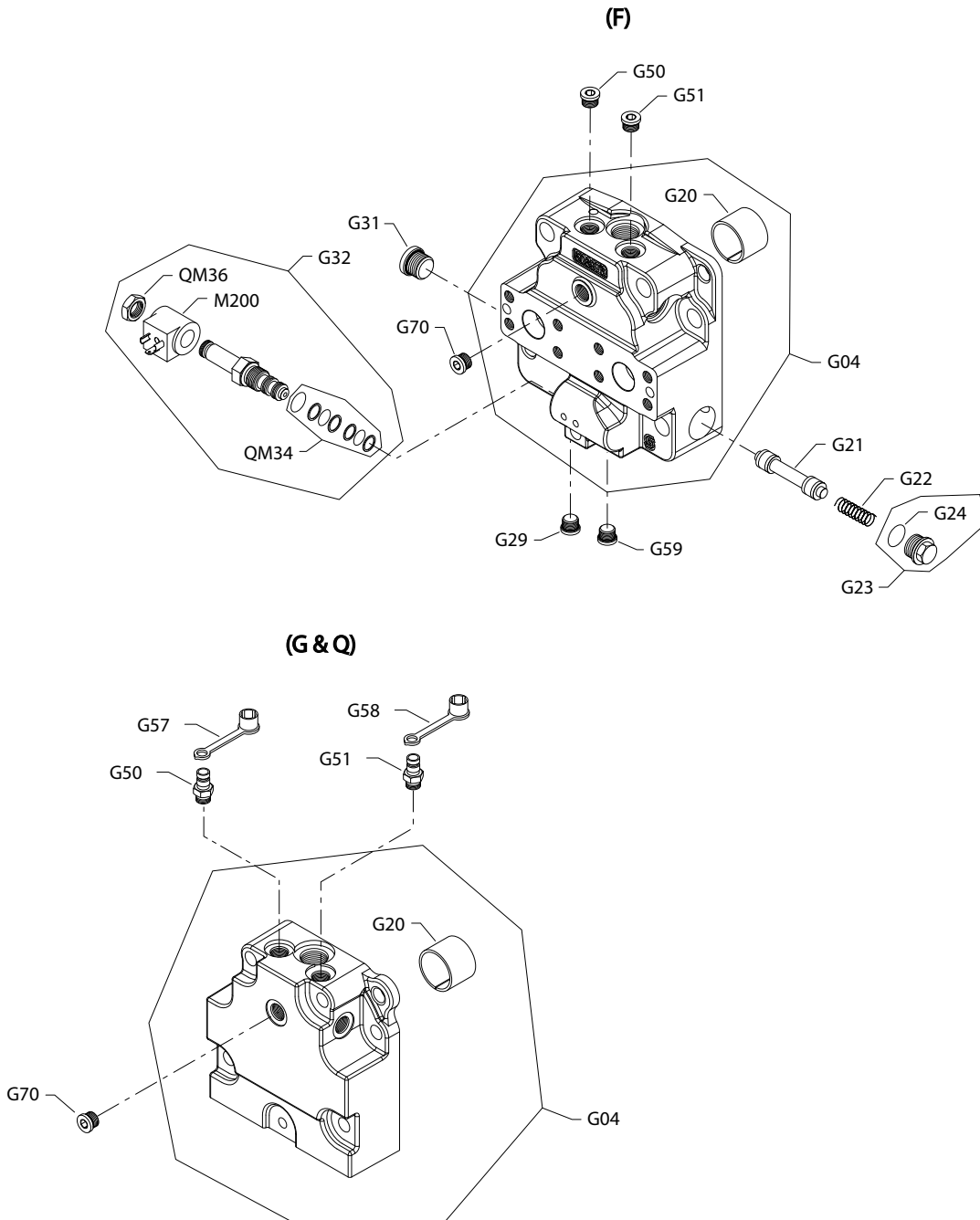
Order code: E

G04	95-17		8200562	End cap assembly, twin (SB-1998-007 on page 62)	1
G20	95-17		11017304 (8700030)	Journal bearing	1
G50	95-17		140644	Plug assembly	1
G51	95-17		140644	Plug assembly	1
G70	95-17		140644	Plug assembly	1
G80	95-17		664524 (9005110-9000)	Plug assembly	1
G81	95-17		664524 (9005110-9000)	Plug assembly	1

End cap

S90 100cc motor end cap F-Q

Parts configuration



Generic coils shown.

End cap

Order code: F

Item	Date Begin	Date End	Part Number	Part Name	Quantity per Model/Kit
G04	99-09		507659/P	End cap assembly, axial ports	1
G20	99-09		11017304 (8700030)	Journal bearing	1
G21	99-09		507587	Spool	1
G22	99-09		507534	Spring	1
G23	99-09		511926	Plug assembly	1
G24	99-09		012559	O-ring	1
G29	99-09		140644	Plug assembly	1
G31	99-09		315325	Plug assembly	1
G32	99-09		784942/P	Solenoid valve. 12v	1
G50	99-09		140644	Plug assembly	1
G51	99-09		140644	Plug assembly	1
G59	99-09		140644	Plug assembly	1
G70	99-09		140644	Plug assembly	1
M200	99-09		785196	Coil, 12v, DIN connector	1
QM34	99-09		11144220	Solenoid seal kit	1
QM36	99-09		11144221	Coil nut	1

Order code: G

G04	98-02		11064118	End cap assembly, twin metric ports	1
G20	98-02		11017304 (8700030)	Journal bearing	1
G50	98-02		8700127	Diagnostic receptacle	1
G51	98-02		8700127	Diagnostic receptacle	1
G57	98-02		8700128	Dust cover	1
G58	98-02		8700128	Dust cover	1
G70	98-02		140644	Plug assembly	1

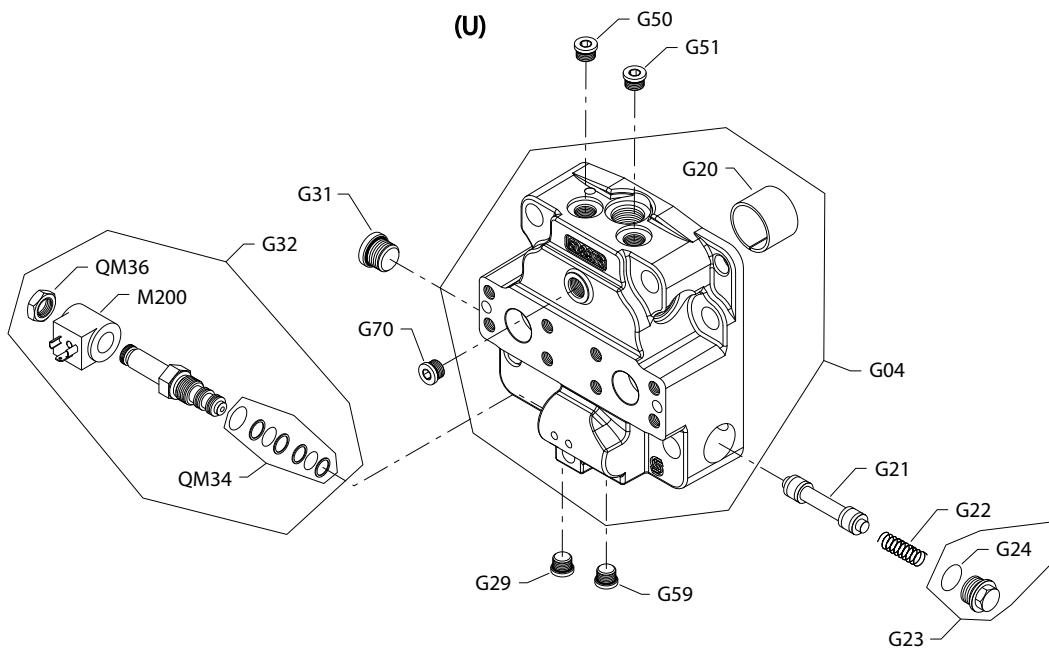
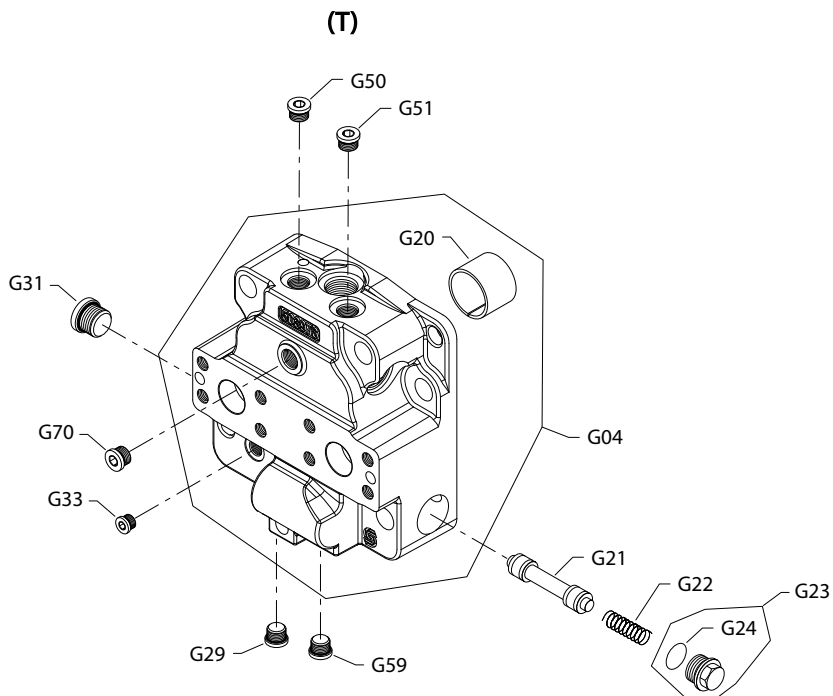
Order code: Q

G04	98-02		11064118	End cap assembly, twin metric ports	1
G20	98-02		11017304 (8700030)	Journal bearing	1
G50	98-02		8700127	Diagnostic receptacle	1
G51	98-02		8700127	Diagnostic receptacle	1
G57	98-02		8700128	Dust cover	1
G58	98-02		8700128	Dust cover	1
G70	98-02		140644	Plug assembly	1

End cap

S90 100cc motor end cap T, U

Parts configuration



Generic coils shown.

End cap

Order code: T

Item	Date Begin	Date End	Part Number	Part Name	Quantity per Model/Kit
G04	99-09		513899/P	End cap assembly, axial ports	1
G20	99-09		11017304 (8700030)	Journal bearing	1
G21	99-09		507587	Spool	1
G22	99-09		507534	Spring	1
G23	99-09		511926	Plug assembly	1
G24	99-09		012559	O-ring	1
G29	99-09		140644	Plug assembly	1
G31	99-09		315325 (9005110-8700)	Plug assembly	1
G33	99-09		9005110-4400	Plug assembly	1
G50	99-09		140644	Plug assembly	1
G51	99-09		140644	Plug assembly	1
G59	99-09		140644	Plug assembly	1
G70	99-09		140644	Plug assembly	1

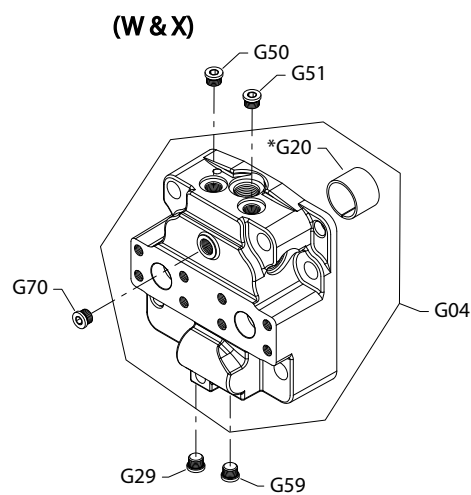
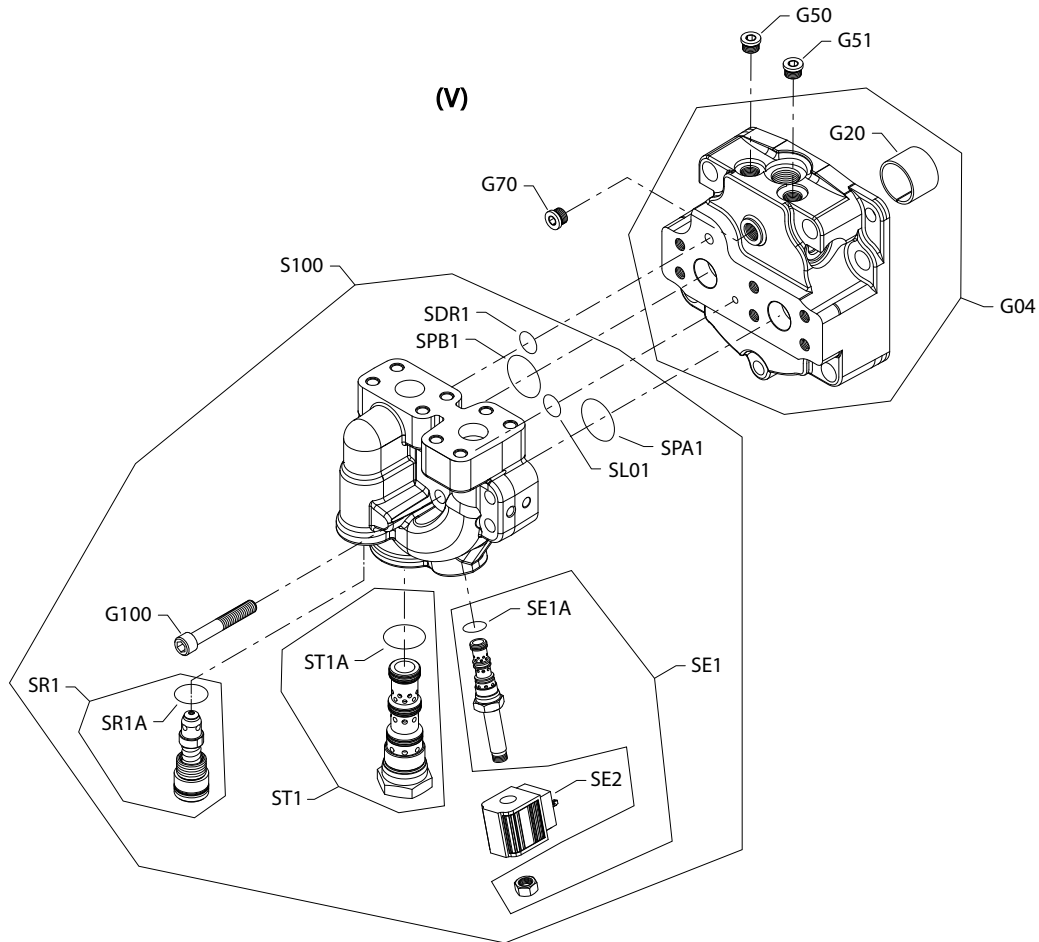
Order code: U

G04	99-09		516298/P	End cap assembly, axial	1
G20	99-09		11017304 (8700030)	Journal bearing	1
G21	99-09		507587	Spool	1
G22	99-09		507534	Spring	1
G23	99-09		511926	Plug assembly	1
G24	99-09		012559	O-ring	1
G29	99-09		140644	Plug assembly	1
G31	99-09		315325	Plug assembly	1
G32	99-09		517171/P	Solenoid valve, 12v	1
G59	99-09		140644	Plug assembly	1
G50	99-09		140644	Plug assembly	1
G51	99-09		140644	Plug assembly	1
G70	99-09		140644	Plug assembly	1
M200	99-09		517167	Coil, 12v, Weather-Pack	1
QM34	99-09		11144220	Solenoid seal kit	1
QM36	99-09		11144221	Coil nut	1

End cap

S90 100cc motor end cap V-X

Parts configuration



End cap

Order code: V

Item	Date Begin	Date End	Part Number	Part Name	Quantity per Model/Kit
G04	98-02		518212/P	End cap assembly, axial ports	1
G20	98-02		11017304 (8700030)	Journal bearing	1
G50	98-02		140644	Plug assembly	1
G51	98-02		140644	Plug assembly	1
G70	98-02		140644	Plug assembly	1
G100	98-02		9007300-4432	Screw	6
S100	98-02		11180882	Valve housing assembly	1
SDR1	98-02		518149	O-ring	1
SE1	98-02		518961	Solenoid pilot valve	1
SE1A	98-02		516735	Seal ring	1
SE2	98-02		520344	Coil, 12v	1
SL01	98-02		518149	O-ring	1
SPA1	98-02		516756	O-ring	1
SPB1	98-02		516756	O-ring	1
SR1	98-02		516970	Valve	1
SR1A	98-02		518151	O-ring	1
ST1	98-02		518052	Bypass valve	1
ST1A	98-02		518150	O-ring	1

Order code: W

G04	99-09		519388/P	End cap assembly, axial ports	1
G20	99-09		11017304 (8700030)	Journal bearing	1
G29	99-09		140644	Plug assembly	1
G50	99-09		140644	Plug assembly	1
G51	99-09		140644	Plug assembly	1
G59	99-09		140644	Plug assembly	1
G70	99-09		140644	Plug assembly	1

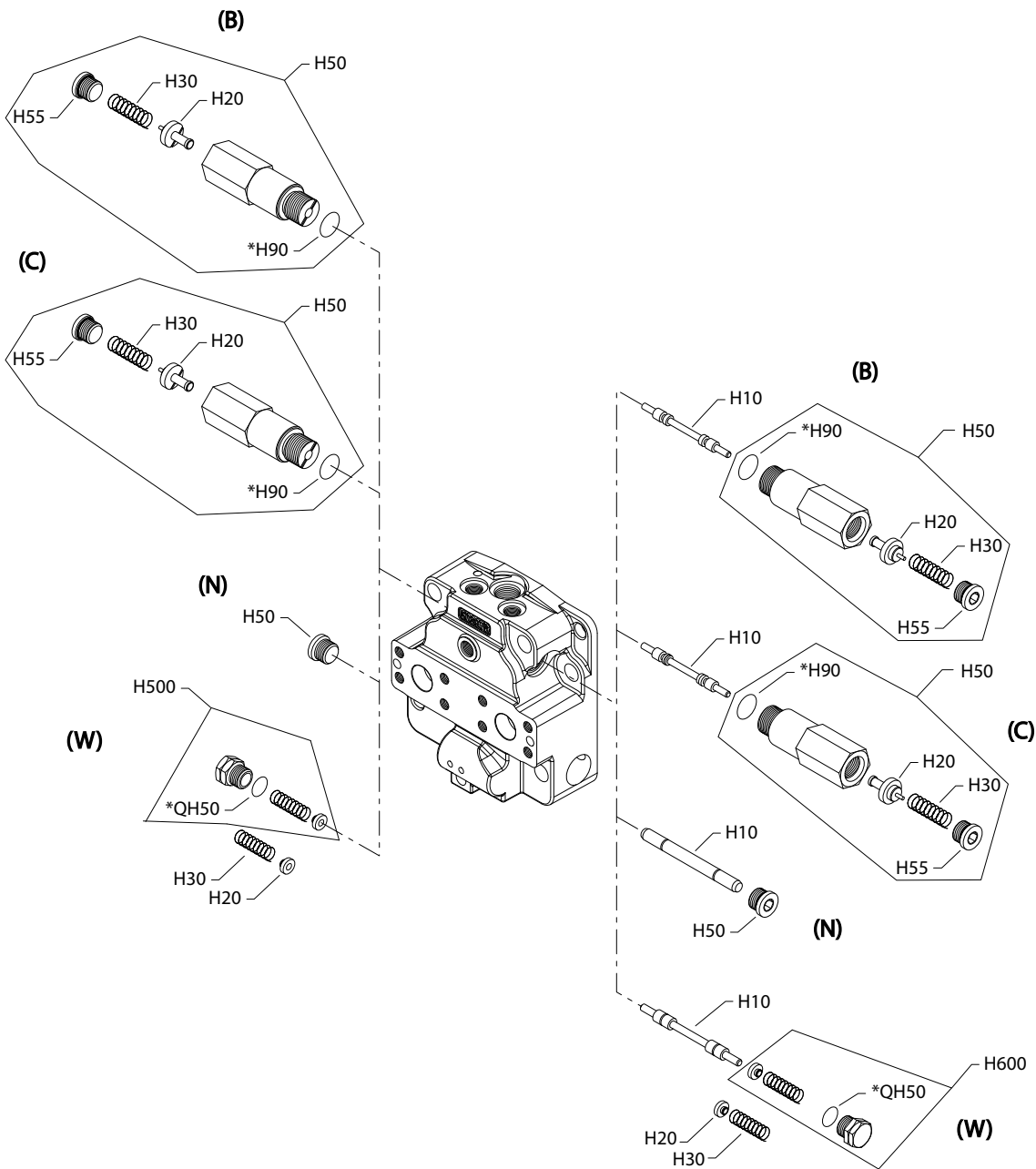
Order code: X

G04	98-02		11040386	End cap assembly, axial ports	1
G20	98-02		11017304 (8700030)	Journal bearing	1
G29	99-09		140644	Plug assembly	1
G50	99-09		140644	Plug assembly	1
G51	99-09		140644	Plug assembly	1
G59	99-09		140644	Plug assembly	1
G70	99-09		140644	Plug assembly	1

Loop flushing

S90 100cc motor loop flushing B-W

Parts configuration



Generic end cap used to show part location only

* Included in overhaul seal kit Q210

Loop flushing

Order code: B

Item	Date Begin	Date End	Part Number	Part Name	Quantity per Model/Kit
H10	00-14		516301	Loop flushing spool	1
H20	00-14		517438	Spring guide	2
H30	00-14		517439	Spring	2
H50	00-14		517436	Spring cartridge assembly	2
H55	00-14		140644	Plug assembly	1
H90	00-14		085043 (9004201-3700)	O-ring	2

Order code: C

H10	03-16		519242	Loop flushing spool	1
H20	03-16		517438	Spring guide	2
H30	03-16		517439	Spring	2
H50	03-16		517436	Spring cartridge assembly	2
H55	03-16		140644	Plug assembly	1
H90	03-16		085043 (9004201-3700)	O-ring	2

Order code: K

H10	89-38		365544 (8800550)	Shuttle spool	1
H50	89-38		518016	Plug assembly	2
H300	89-38		513596	Spring guide assembly (SB-2000-047 on page 66)	2
QH50	87-07		085043 (9004201-3700)	O-ring	2

Order code: N

H10	89-38		8800668	Loop flushing spool, defeated	1
H10	87-07	89-37	308486 (8800021)	Loop flushing spool, defeated (SB-1989-020 on page 59)	1
H50	87-07		140644	Plug assembly	2
H50A	87-07		085043 (9004201-3700)	O-ring	2

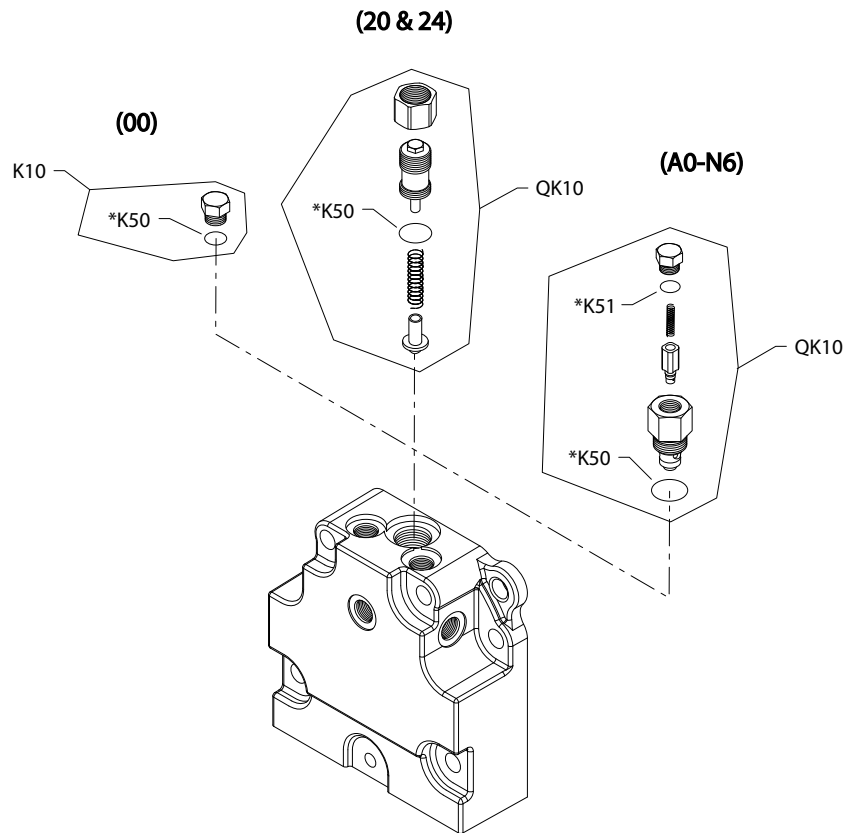
Order code: W

H10	89-38		365544 (8800550)	Shuttle spool	1
H10	89-38	89-37	674473 (8800069)	Loop flushing spool (SB-1989-020 on page 59)	1
H20	87-07	89-37	674481 (8800265)	Spring guide (SB-1989-020 on page 59)	2
H30	87-07	89-37	8800067	Spring (SB-1989-020 on page 59)	2
H50	87-07	89-37	674507 (9005475-0069)	Plug assembly (SB-1989-020 on page 59)	2
H500	17-33		11160971	Plug/spring assembly	1
H600	17-33		11160971	Plug/spring assembly	1
QH50	87-07		085043 (9004201-3700)	O-ring	2

Charge pressure setting

S90 100cc motor charge pressure setting 00-N6

Parts configuration



Generic end cap used to show part location only

* Included in overhaul seal kit Q210

Charge pressure setting

Order code: 00

Item	Date Begin	Date End	Part Number	Part Name	Quantity per Model/Kit
K10	89-44		9005100-8700	Plug assembly	1
K50	89-44		001149 (9004201-6200)	O-ring	1

Order code: 20-24

K000	90-20		8510012	Adjustable charge relief valve kit (SB-1989-020 on page 59)	1
K50	90-20		001149 (9004201-6200)	O-ring	1

Order code: A0

QK10	98-19		8510253	Cartridge CPRV kit, 13 bar, 11 L/min	1
K50	98-19		001149 (9004201-6200)	O-ring	1
K51	98-19		085043 (9004201-3700)	O-ring	1

Order code: A3

QK10	98-19		8510256	Cartridge CPRV kit, 13 bar, 16 L/min	1
K50	98-19		001149 (9004201-6200)	O-ring	1
K51	98-19		085043 (9004201-3700)	O-ring	1

Order code: B0

QK10	04-49		11020552	Cartridge CPRV kit, 13 bar, 22 L/min	1
K50	04-49		001149 (9004201-6200)	O-ring	1
K51	04-49		085043 (9004201-3700)	O-ring	1

Order code: B3

QK10	04-49		8510243	Cartridge CPRV kit, 13 bar, 26,5 L/min	1
K50	04-49		001149 (9004201-6200)	O-ring	1
K51	04-49		085043 (9004201-3700)	O-ring	1

Order code: E4

QK10	98-19		8510261	Cartridge CPRV kit, 16 bar, 4 L/min	1
K50	98-19		001149 (9004201-6200)	O-ring	1
K51	98-19		085043 (9004201-3700)	O-ring	1

Order code: E6

QK10	98-19		8510252	Cartridge CPRV kit, 16 bar, 7 L/min	1
K50	98-19		001149 (9004201-6200)	O-ring	1
K51	98-19		085043 (9004201-3700)	O-ring	1

Order code: F0

QK10	98-19		8510259	Cartridge CPRV kit, 16 bar, 11 L/min	1
K50	98-19		001149 (9004201-6200)	O-ring	1
K51	98-19		085043 (9004201-3700)	O-ring	1

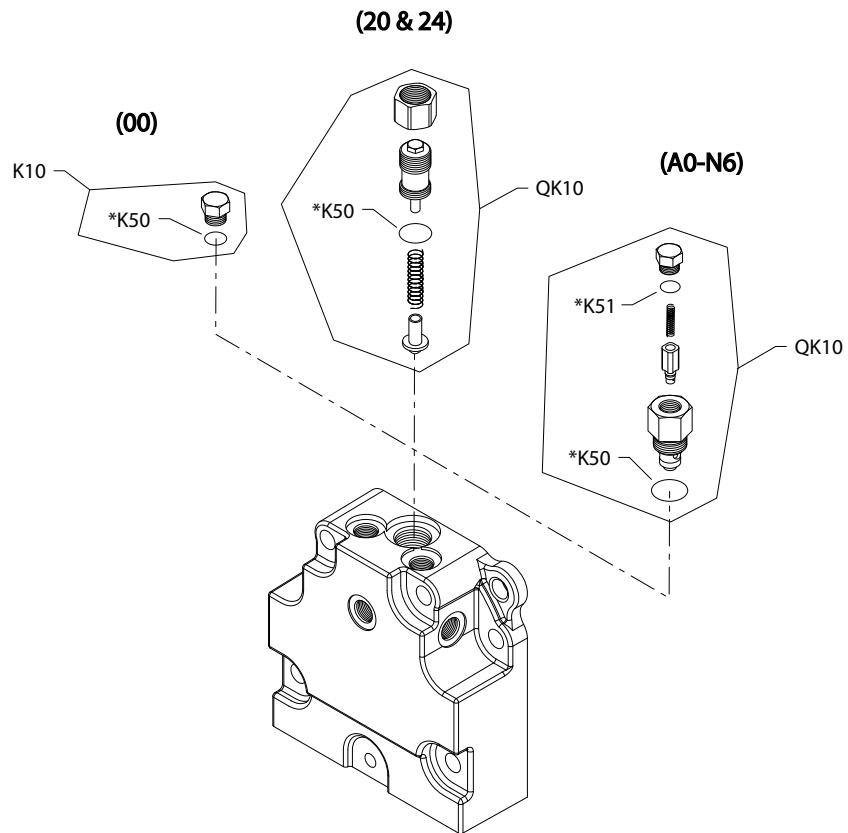
Charge pressure setting

Order code: F3

QK10	98-19		8510262	Cartridge CPRV kit, 16 bar, 16 L/min	1
K50	98-19		001149 (9004201-6200)	O-ring	1
K51	98-19		085043 (9004201-3700)	O-ring	1

[Parts continue to the next 2 pages.](#)

Parts configuration



[Generic end cap used to show part location only](#)

Charge pressure setting

* Included in overhaul seal kit Q210

Order code: G0

Item	Date Begin	Date End	Part Number	Part Name	Quantity per Model/Kit
QK10	98-19		8510260	Cartridge CPRV kit, 16 bar, 22 L/min	1
K50	98-19		001149 (9004201-6200)	O-ring	1
K51	98-19		085043 (9004201-3700)	O-ring	1

Order code: G3

QK10	98-19		8510263	Cartridge CPRV kit, 16 bar, 27 L/min	1
K50	98-19		001149 (9004201-6200)	O-ring	1
K51	98-19		085043 (9004201-3700)	O-ring	1

Order code: N4

QK10	98-19		8510255	Cartridge CPRV kit, 13 bar, 4 L/min	1
K50	98-19		001149 (9004201-6200)	O-ring	1
K51	98-19		085043 (9004201-3700)	O-ring	1

Order code: N6

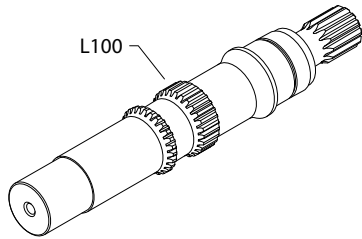
QK10	98-19		11097072	Cartridge CPRV kit, 13 bar, 7 L/min	1
K50	98-19		001149 (9004201-6200)	O-ring	1
K51	98-19		085043 (9004201-3700)	O-ring	1

Shaft

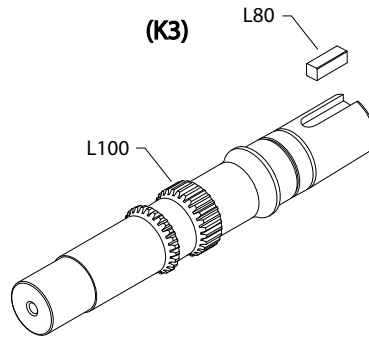
S90 100cc motor shaft C6-TJ

Parts configuration

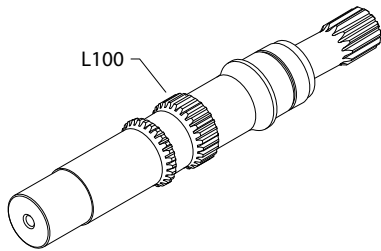
(C6, C7, F1, G7, S1)



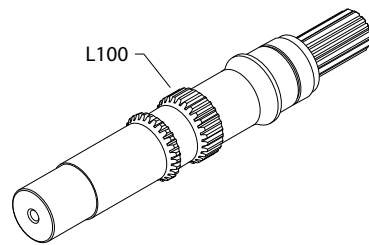
(K3)



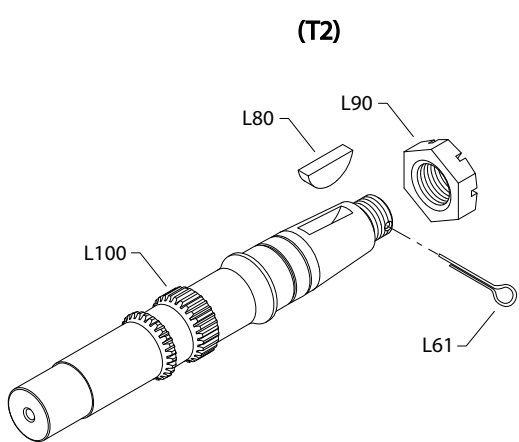
(L1)



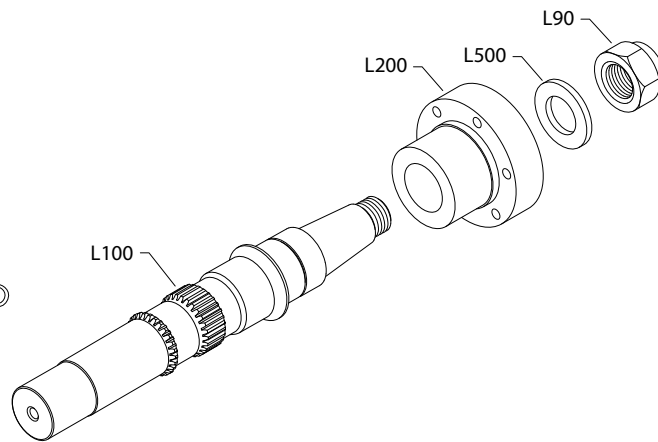
(S5)



(T2)



(TJ)



Shaft

Order code: C6

Item	Date Begin	Date End	Part Number	Part Name	Quantity per Model/Kit
L100	87-07		11045036	Shaft, 21 tooth spline, 16/32	1

Order code: C7

L100	87-07		11044408	Shaft, 23 tooth spline, 16/32	1
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Order code: F1

L100	87-07		8200597	Shaft, 13 tooth spline, 8/16	1
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Order code: G7

L100	05-21		8200591	Shaft, 23 tooth spline, 16/32	1
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Order code: K3

L100	87-07		11012428	Shaft, straight key	1
L80	87-07		9003261-3724	Key, .375 x 1.5	1

Order code: L1

L100	10-15		11081469	Shaft, 27 tooth spline, 12/24, special length	1
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Order code: S1

L100	87-07		11012429	Shaft, 14 tooth spline, 12/24	1
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Order code: S5

L100	87-07		11014534	Shaft, 17 tooth spline, 12/24	1
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Order code: T2

L100	87-02		11014535	Shaft, tapered	1
L61	87-02		9004600-1230	Cotter pin	1
L80	87-02		9003310-3724	Woodruff key, .3730 x 1.5	1
L90	87-02		5000606	Slotted nut	1

Order code: TJ

L90	97-47		504060	Nut	1
L100	97-47		511785	Shaft, tapered	1
L200	97-47		511462	Flange coupling	1
L500	97-47		511627	Washer	1

Overhaul seal kit

S90 100cc motor seal kit

Item	Date Begin	Date End	Part Number	Part Name	Quantity per Model/Kit
Q210	87-07		11134055	Overhaul seal kit, 90M100, standard	1
G30	87-07		8200511	End cap gasket (SB-2001-011 on page 67)	1
K51	87-07		085043 (9004201-3700)	O-ring	1
K50	89-44		001149 (9004201-6200)	O-ring	1
L25	87-07		521722	Seal carrier assembly	1
QB83	87-07		085043 (9004201-3700)	O-ring	1
QH50	87-07		085043 (9004201-3700)	O-ring	2

Service bulletin

SB-1988-018

Products affected

Series 90 fixed motors

Subject

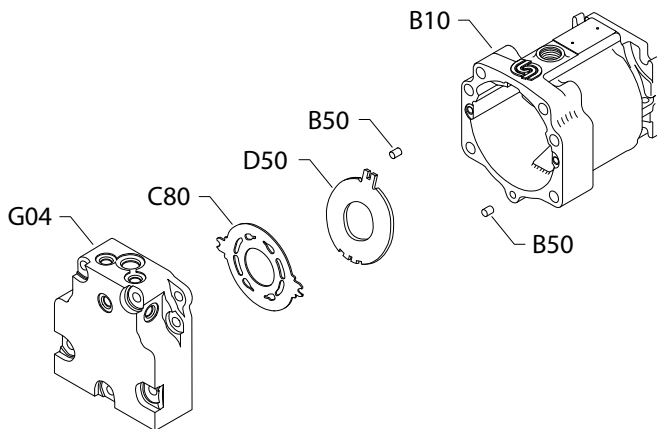
Dowel pin change

Description

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

The dowel pins (item B50) have increased in diameter from 1/4" to 3/8". With this change, the dowel pin hole diameters in the end cap (item G04), housing (item B10), and the valve plate (item C80) have also changed. In addition, the thrust plate (item D50) in the 100 cc fixed displacement motor has also changed to fit the new housing.

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



Models affected

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

Serial numbers

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

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

Part numbers affected

Item*	Quantity per motor	75 cc Prior to 88-43	75 cc From 88-43	100 cc Prior to 88-23	100 cc From 88-23
G04 (axial)	1	8100233	8100306	8200123	8200152
G04 (twin)	1	8100232	8100279	8200122	8200151
C80	1	8100095	8100278	8200103	8200134
D50	1	No Change	No Change	8200014	8200167
B50	2	9004800-2512	9004800-3708	9004800-3116	9004800-3708
B10	1	8100252	8100465	8200099	333641

Service bulletin

Parts disposition

Non-interchangeable

Service bulletin

SB-1988-023

Products affected

Series 90 pumps and motors

Subject

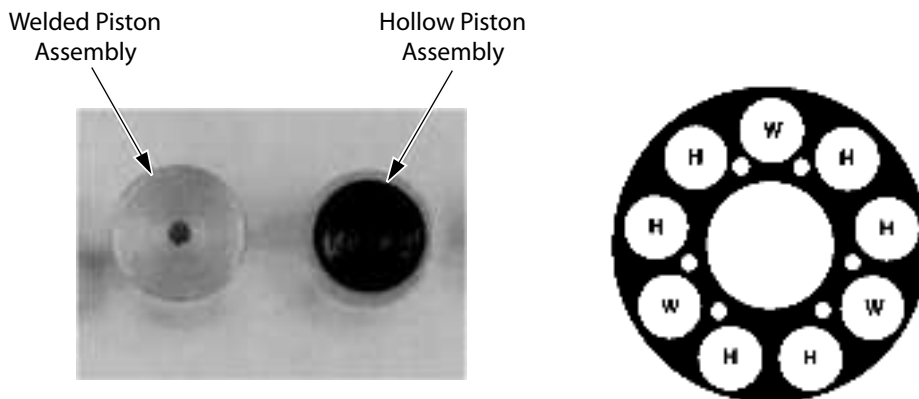
Piston improvement

Description

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

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

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



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

Models affected

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

Serial numbers

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

Part numbers affected

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

Service bulletin

Parts disposition

Interchangeable

Service bulletin

SB-1989-020

Products affected

Series 90 fixed displacement motors

Subject

Incorporation of adjustable charge relief valve

Description

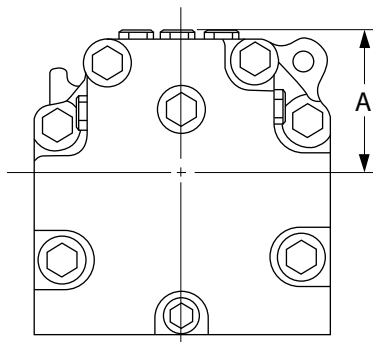
As a product improvement, Danfoss is incorporating an externally adjustable charge relief valve on all series 90 fixed displacement motors. This design replaces the previous shimmed relief valve. The new design valve provides a range of pressure adjustment from 10 to 32 bar.

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

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

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

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



Size	Non-adjustable dimension (A)	Adjustable dimension (A)
55cc	82.3 mm [3.24 in]	98.3 mm [3.87 in]
75cc	88.9 mm [3.50 in]	105 mm [4.13 in]
100cc	92.5 mm [3.64 in]	108.5 mm [4.27 in]

Models affected

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

Series numbers

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

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

Service bulletin

All 100cc motors (96-3xxx) will change at s/n A-90-20-xxxxx

Part numbers affected

Charge relief and loop flushing hardware for old vintage motors can be found in the Series 90 Parts Manual (AX152886481715). The new part numbers are as follows:

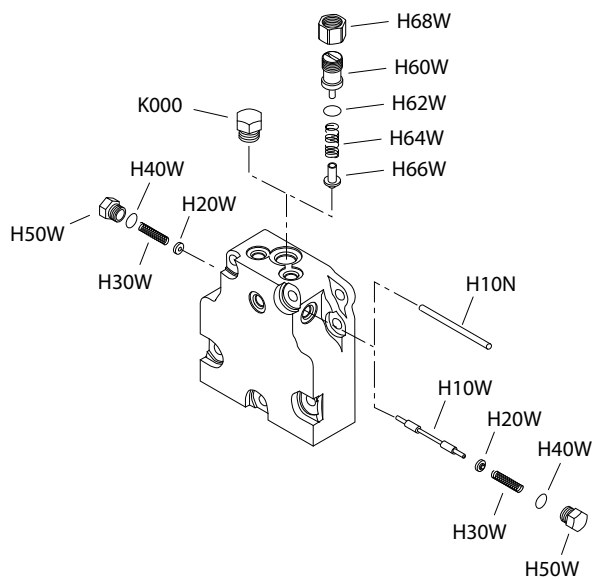
New charge relief and loop flushing hardware

Item	Part number	Description	Quantity
K90	9003575-0101	Nut	1
K10	8800488-1000	Plug assembly	1
K50	9004201-6200	O-ring	1
K70	8800476	Spring	1
K80	8800449	Poppet	1
K000	9005100-8700	Plug assembly	1
H10	8800550	Shuttle valve spool	1
H20	8800551	Washer	2
H30	364950	Spring	2
H40	9004201-3700	O-ring	2
H50	9005475-0097	Plug assembly	2
H10	8800552	Loop flushing spool, defeated	1

New end caps

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

Service bulletin



Parts disposition

Non-interchangeable

Service bulletin

SB-1998-007

Products affected

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

Subject

Charge relief seat

Description

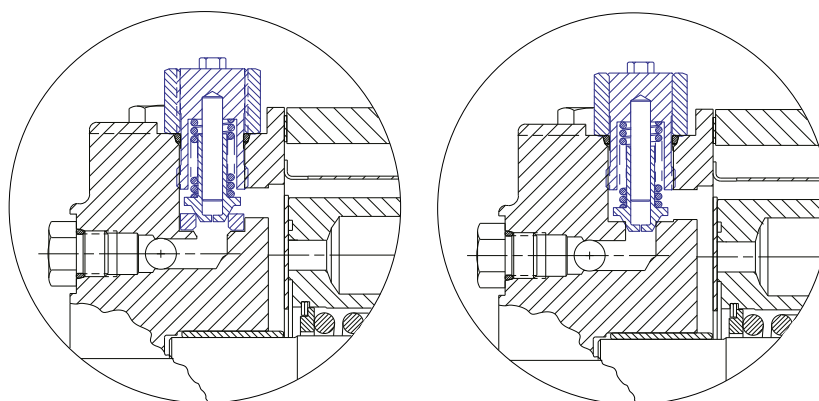
Danfoss has initiated a change to the end caps used on series 90 55cc, 75cc, and 100cc fixed displacement motors, and the series 90 55cc and 75cc variable displacement motors.

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

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

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

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



Models affected

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

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

Serial numbers

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

Service bulletin

Part numbers affected

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

Parts disposition

Interchangeable

Service bulletin

SB-1999-036

Products affected

Series 90 100cc fixed displacement motors

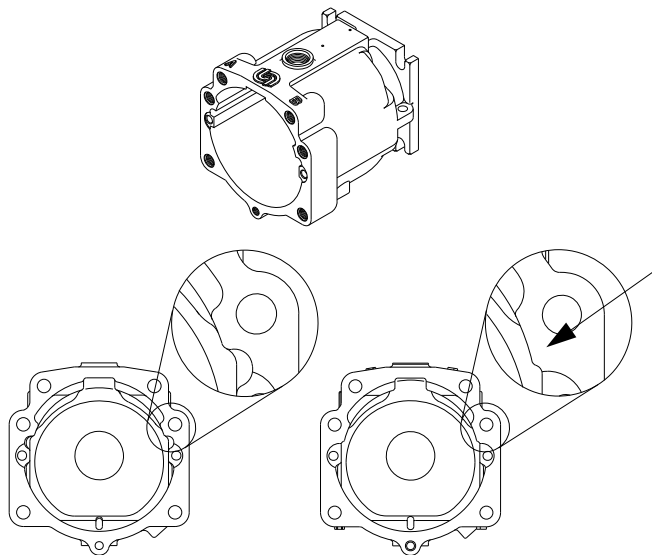
Subject

Motor housing change

Description

Danfoss has introduced a design change to the motor housings used on all series 90 100cc fixed displacement motors. The housing strength has been increased in the area of the casting ribs, by increasing the size of the rib. This change will reduce the potential for cracking the rib of the housing when tightening the two shorter end cap bolts.

To assist in identifying this change, Danfoss has released a new housing part number. The new housing is completely interchangeable with the previous housing. The previous housing has been obsoleted and is no longer available



Models affected

All 96-3xxx, and 963xxxx fixed displacement motors.

Serial numbers

Danfoss Ames Production - Effective on motor serial number A-99-44-xxxxx.

Danfoss Neumunster Production - Effective on motor serial number N-99-45-xxxxx.

Danfoss Shanghai Production- effective during the fourth quarter of 2000.

Part numbers affected

Description	Previous Housing	New Housing
motor housing - MF	8200230	8200447

Service bulletin

Parts disposition

Interchangeable

Service bulletin

SB-2000-047

Products affected

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

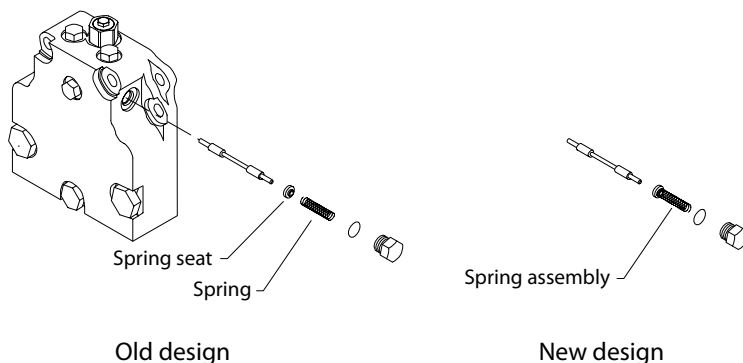
Subject

Loop flushing spring and spring seat change

Description

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

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



Models affected

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

All 94-4xxx, 944xxxx, 95-4xxx, and 954xxxx variable displacement motors with loop flushing options of A, B, or C.

Serial numbers

Danfoss Ames, IA production - Change effective at serial number A-02-03-xxxxx.

Danfoss Neumunster, Germany production - Change effective at serial number N-01-08-xxxxx..

Part numbers affected

Previous spring seat	Previous spring	New spring assembly
8800551	4350286	513596

Parts disposition

Interchangeable

Service bulletin

SB-2001-011

Products affected

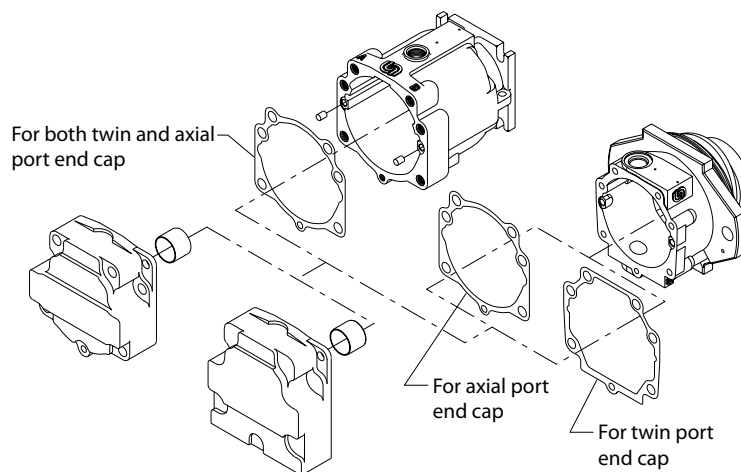
Series 90 55cc, 75cc, and 100cc fixed displacement motors

Subject

Change to end cap gasket material

Description

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



Models affected

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

Serial numbers

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

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

Part numbers affected

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

Parts disposition

Interchangeable

Service bulletin

SB-2002-048

Products affected

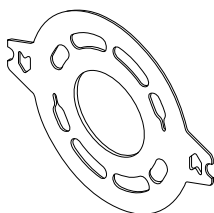
Series 90 55cc pumps and motors, and 75 - 100 cc motors

Subject

Consolidation of valve plate part numbers

Description

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



Models affected

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

Serial numbers

This change became effective at serial number A-02-46-xxxxx.

Part numbers affected

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

Parts disposition

Non-interchangeable

Service bulletin

SB-2003-010

Products affected

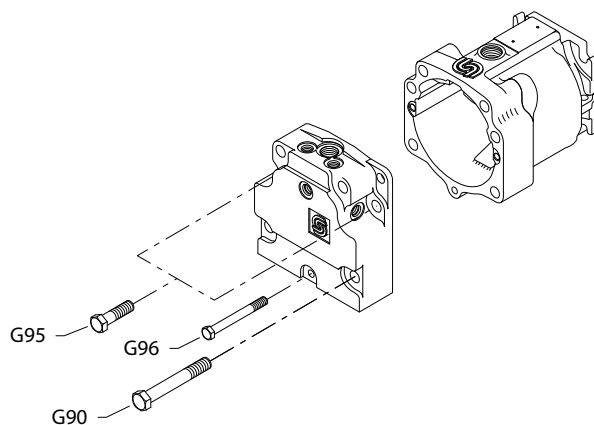
Series 90 100cc fixed displacement motors

Subject

Housing change to accept long screws

Description

Danfoss has changed the housing used in series 90 100 cc fixed motors. Material was added at the area of the two shorter end cap mounting screws (G95). The hole for these screws is now deeper to accept the longer screw (G90) that is used for the other four large end cap mounting screws. The six larger screws will have the same stretch and therefore the same clamping force for the gasket sealing area. The smaller end cap mounting screw (G96) remains the same. The “old” housing and the short screws will become obsolete and no longer available for service.



Models affected

All series 90 100 cc fixed displacement motors

Serial numbers

US production started on 5 April 2004 (serial number A-04-15-xxxxx)

Part numbers affected

Description	Old part number	New part number
Housing	8200447	8200509
Screw (G95)	9007210-1609	9007210-1617

Parts disposition

Non-interchangeable

Service bulletin

SB-2008-058

Products affected

Series 90 motors, 100cc

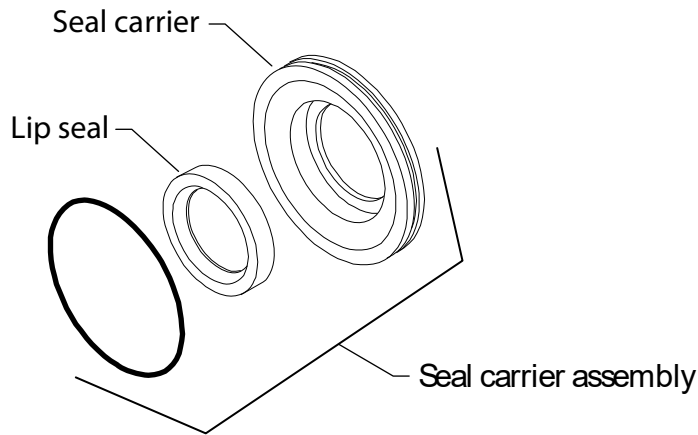
Subject

Seal change

Description

As a product improvement, the shaft lip seal and seal carrier have changed on the 100cc motors. The new lip seal has a smaller O.D., and the I.D. of the seal carrier changed accordingly. The old lip seal will remain available as a service part. The old seal carrier will become obsolete and not available for service.

The seal carrier assembly part number has changed to better track this change. The new seal carrier assembly is interchangeable, but the piece parts are not.



Models affected

All series 90 100cc motors

Serial numbers affected

This change takes effect at serial number: A-09-02-XXXXX.

Part numbers affected

Description	Old part number	New part number
Seal carrier assembly	8200309	521722
Lip seal	9008000-0114	519021

Parts disposition

- Interchangeable - assembly only, not individual parts
- Use parts in stock
- Order replacement parts
- Revise existing part orders

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- Hoses and fittings
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- Hydraulic valves
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- PLUS+1® software
- Pumps
- Steering
- Transmissions

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