

Parts Manual

Series 42 Axial Piston Pumps

Size 41/51

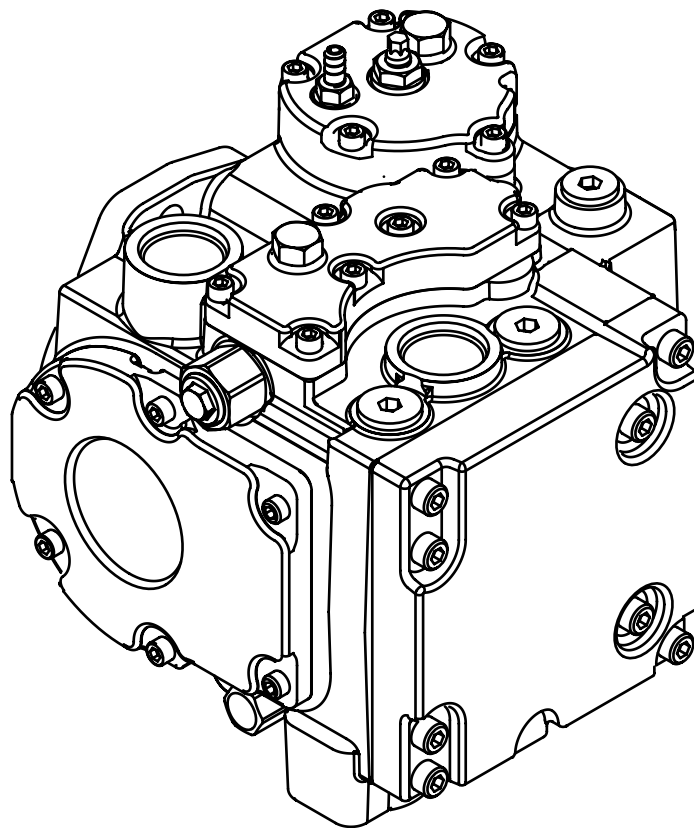




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General information

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 series 42, 41 & 51cc displacement pump.

The parts listed include all parts which may be used when performing either "Minor Repairs", "Major Repairs" or "Conversions" on the series 42, 41 & 51cc displacement pump.

This manual only contains the order codes defined from January 1998 to present.

Nameplate

Each unit will have a nameplate affixed to the housing. The nameplate 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 Number

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

Serial Number

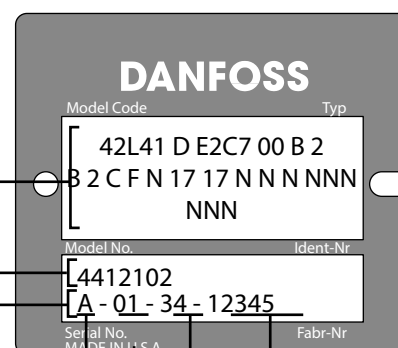
The Danfoss serial number is used to identify the manufacture date and the unit sequence in the build. The serial number is also used to identify the units warranty time period.

The letter code indicates the location of original manufacture (assembly). "A" indicates the unit was originally assembled in Ames, Iowa, USA. And "Y" or "J" indicates assembled in Osaka, Japan.

The first number (2 digits) indicates the year of manufacture. ("99" would indicate the unit was manufactured in 1999).

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.

Loop flushing, spool and relief valve

Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
2	Q050	07-18		1745328-01	Plug assembly	1
	"	94-04		4800279	Plug assembly	1
	Q050A	07-18		9004201-3700	O-ring	1
	"	94-04		085043(9004201-3700)	O-ring	1
	Q051	98-01		4800708	Spool assembly (SB-1997-029C)	1
	"	94-04	99-52	4800349	Spool assembly (SB-1996-023)	1
	Q060	07-18		1745332-02	Plug assembly	1
	"	94-04		4800747	Plug assembly (SB-1998-085)	1
	Q060A	07-18		9004201-3100	O-ring	1
	"	94-04		015818(9004201-3100)	O-ring	1
	Q061	07-18		1745318	Spring	1
	"	97-37		4800654	Spring (SB-1997-027)	1
	"	94-04	97-36	768853	Spring	1
	Q062	07-18		1733723	Poppet	1
	"	94-04		4800389	Poppet	1
	Q063	94-04	98-01	9510447	Shim kit (SB-1997-027)	1

All units using this order code with a date code of 94-28 and up to and including 97-52 must use part number "4800708". All units with a date code of 98-01 and newer must use part number "4800708". The part number highlighted red is the global new part number.

This change is only for part number and design change hasn't been initiated, so the all affected parts are interchangeable.

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.

General information

Procedure to identify a part

General

The modular design of Series 42 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 C018 has the same item number on all pumps.)

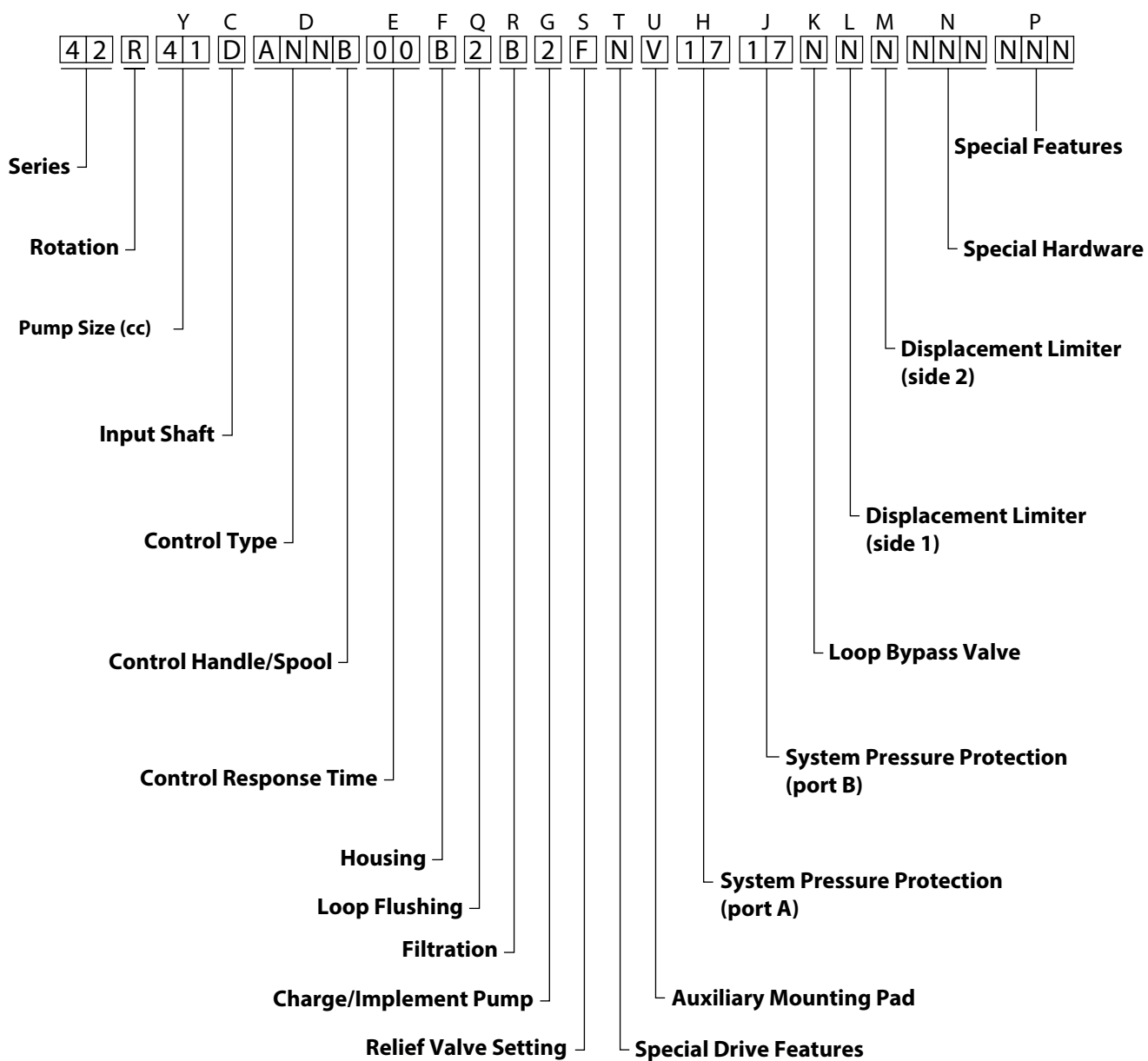
Example of a Part Identification

The nameplate on a Series 42 pump has an Order Code of 42R28 C ANN6 01 B 4 B 2 C N A 21 21 N N N NNN NNN. Use the following procedures to determine the part number of the drive shaft used on this pump.

1. Referring to the input shaft module in the Order Code (see page 7), the input shaft option for this pump is identified by the code "C". (42R28 C ANN6 01 B 4 B 2 C N A 21 21 N N N NNN NNN).
2. Referring to the Service Parts List, find the shaft group. Next find the order code that relates to this unit, which is "C". The shaft is found to be item C001 and part number 1716093.



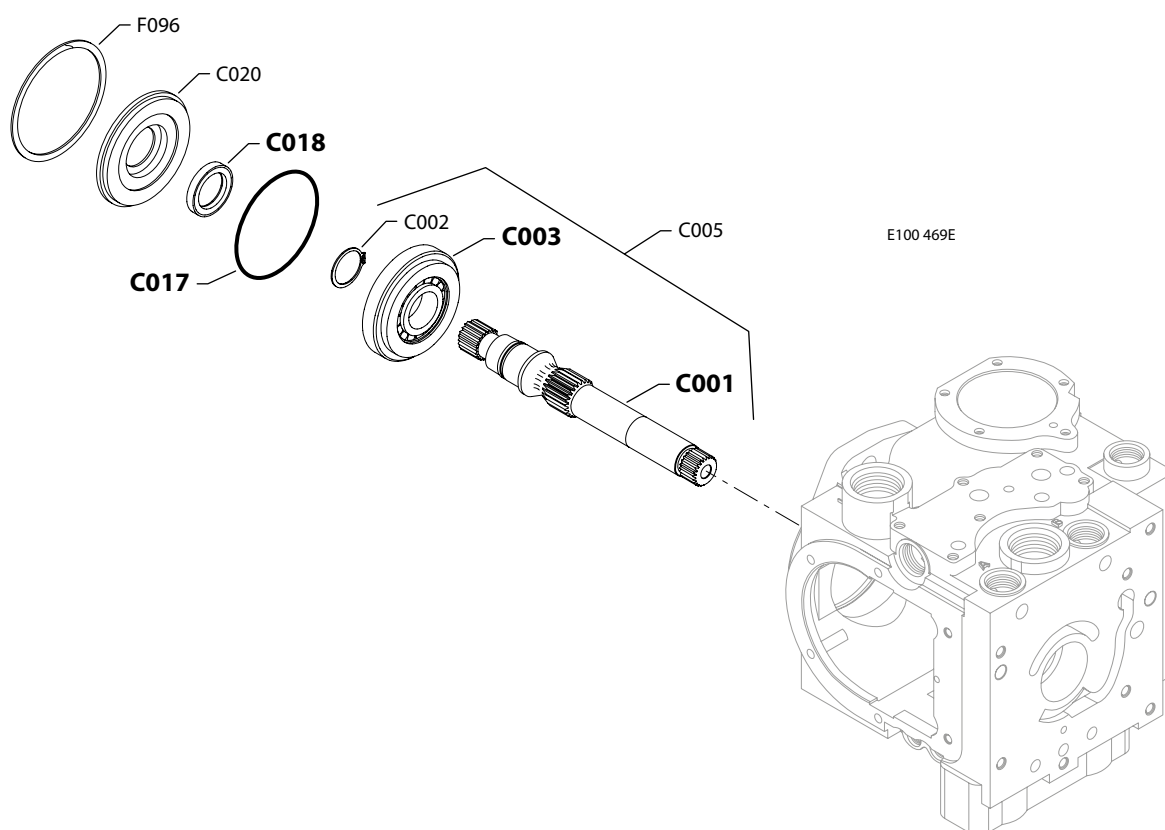
Order code



P100 564E

Notes

Input shaft configuration



Enlarged **bold** type item numbers are recommended parts to be stocked for servicing

Input shaft configuration

	Global new part number
	Obsolete part number
	No change

Splined, 13 teeth

Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
C	C001	07-18		1716097	Shaft 13 tooth spline	1
	"	95-25		4410034	Shaft 13 tooth spline	1
	"	95-18	95-24	4410085	Shaft 13 tooth spline	1
	"	94-05	95-17	4410034	Shaft 13 tooth spline	1
	C002	95-25		5000098	Retaining ring	1
	"	95-18	95-24	615245(9006300-0137)	Retaining ring	1
	"	94-05	95-17	5000098	Retaining ring	1
	C003	07-18		1735399	Roller bearing	1
	"	95-25		4700068	Roller bearing	1
	"	95-18	95-24	373282(9001315-0011)	Roller bearing	1
	"	94-05	95-17	4700068	Roller bearing	1
	C005	95-25		4410042	Shaft assembly, 13 tooth spline	1
	C017	94-25		38315	O-ring	1
	C018	07-18		9008000-0131	Lip seal	1
	"	95-25		506515(9008000-0131)	Lip seal	1
	"	95-18	95-24	314583(9008000-0118)	Lip seal	1
	"	94-05	95-17	506515(9008000-0131)	Lip seal	1
	C020	07-18		1735155	Seal carrier	1
	"	94-25		4800264	Seal carrier	1
	"	95-18	95-24	4800405	Seal carrier	1
	"		95-17	4800264	Seal carrier	1

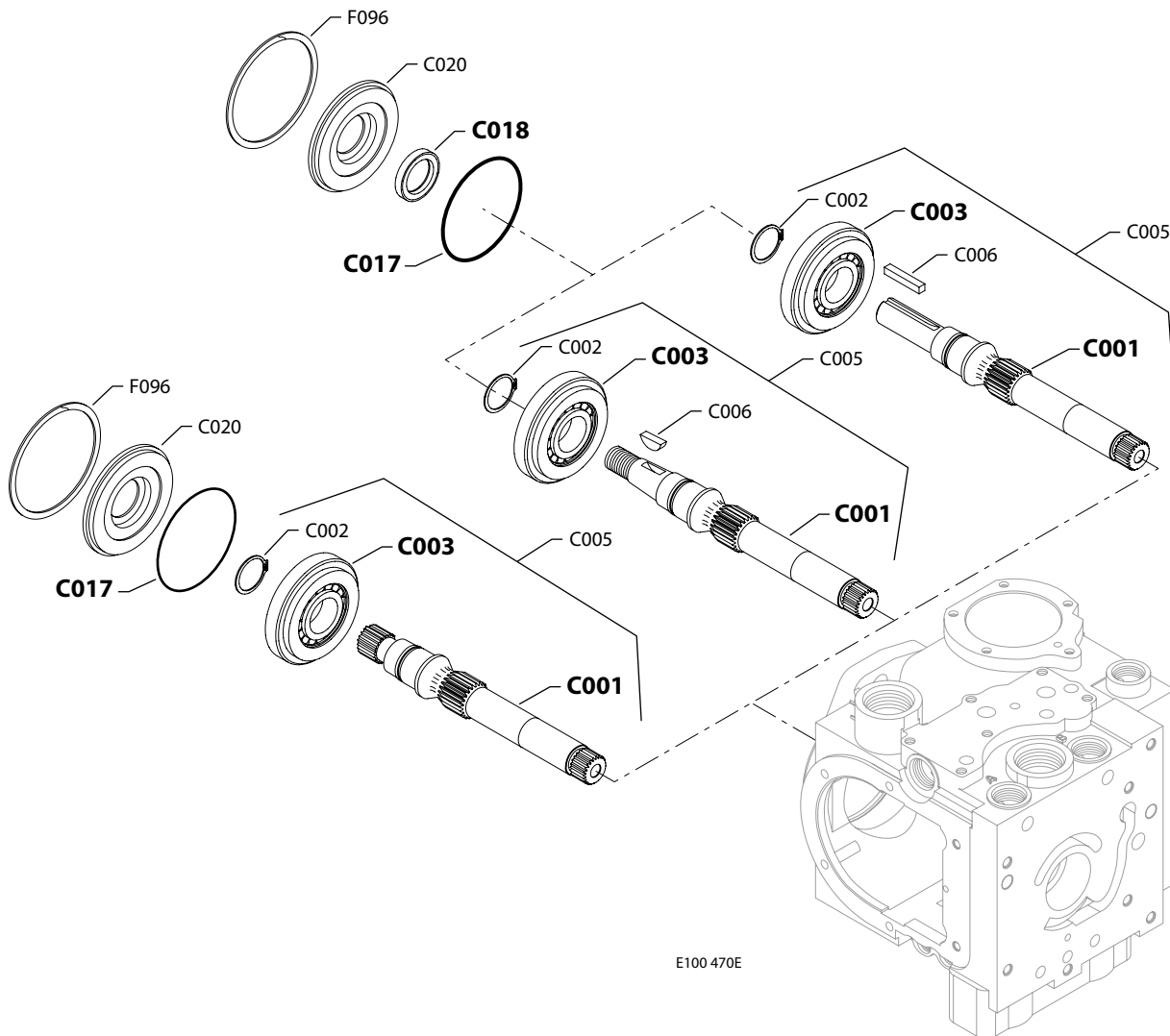
Splined, 15 teeth

D	C001	07-18		1716096	Shaft 15 tooth spline	1
	"	95-25		4410005	Shaft 15 tooth spline	1
	"	95-18	95-24	4410086	Shaft 15 tooth spline	1
	"	94-05	95-17	4410005	Shaft 15 tooth spline	1
	C002	95-25		5000098	Retaining ring	1
	"	95-18	95-24	615245(9006300-0137)	Retaining ring	1
	"	94-05	95-17	5000098	Retaining ring	1
	C003	07-18		1735399	Roller bearing	1
	"	95-25		4700068	Roller bearing	1
	"	95-18	95-24	373282(9001315-0011)	Roller bearing	1
	"	94-05	95-17	4700068	Roller bearing	1
	C005	95-25		4410027	Shaft assembly, 15 tooth spline	1
	C017	94-25		38315	O-ring	1
	C018	07-18		9008000-0131	Lip seal	1
	"	95-25		506515(9008000-0131)	Lip seal	1
	"	95-18	95-24	314583(9008000-0118)	Lip seal	1
	"	94-05	95-17	506515(9008000-0131)	Lip seal	1
	C020	07-18		1735155	Seal carrier	1
	"	94-25		4800264	Seal carrier	1
	"	95-18	95-24	4800405	Seal carrier	1
	"		95-17	4800264	Seal carrier	1

Splined, 19 teeth

E	C001	07-18		1716098	Shaft 19 tooth spline	1
	"	94-24		4410037	Shaft 19 tooth spline	1
	C002	07-18		9006300-0137	Retaining ring	1
	"	94-24		5000098	Retaining ring	1
	C003	07-18		1735400	Roller bearing	1
	"	94-24		4700069	Roller bearing	1
	C005	94-24		4410043	Shaft assembly, 19 tooth spline	1
	C017	94-24		38315	O-ring	1
	C018	07-18		9008000-0118	Lip seal	1
	"	94-24		314583(9008000-0118)	Lip seal	1
E	C020	07-18		1735156	Seal carrier	1
	"	94-24		4800405	Seal carrier	1

Input shaft configuration



Enlarged **bold** type item numbers are recommended parts to be stocked for servicing

Input shaft configuration

	Global new part number
	Obsolete part number
	No change

Straight keyed

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per Model/Kit
G	C001	07-18		1716099	Shaft, straight keyed	1
	"	94-25		4410038	Shaft, straight keyed	1
	C002	94-25		5000098	Retaining ring	1
	C003	07-18		1735399	Roller bearing	1
	"	94-25		4700068	Roller bearing	1
	C005	94-25		4410044	Shaft assembly, straight keyed	1
	C006	07-18		9003261-2524	Key	1
	"	94-25		5000158(9003261-2524)	Key	1
	C017	94-25		38315	O-ring	1
	C018	07-18		9008000-0131	Lip seal	1
	"	94-25		506515(9008000-0131)	Lip seal	1
	C020	07-18		1735155	Seal carrier	1
	"	94-25		4800264	Seal carrier	1

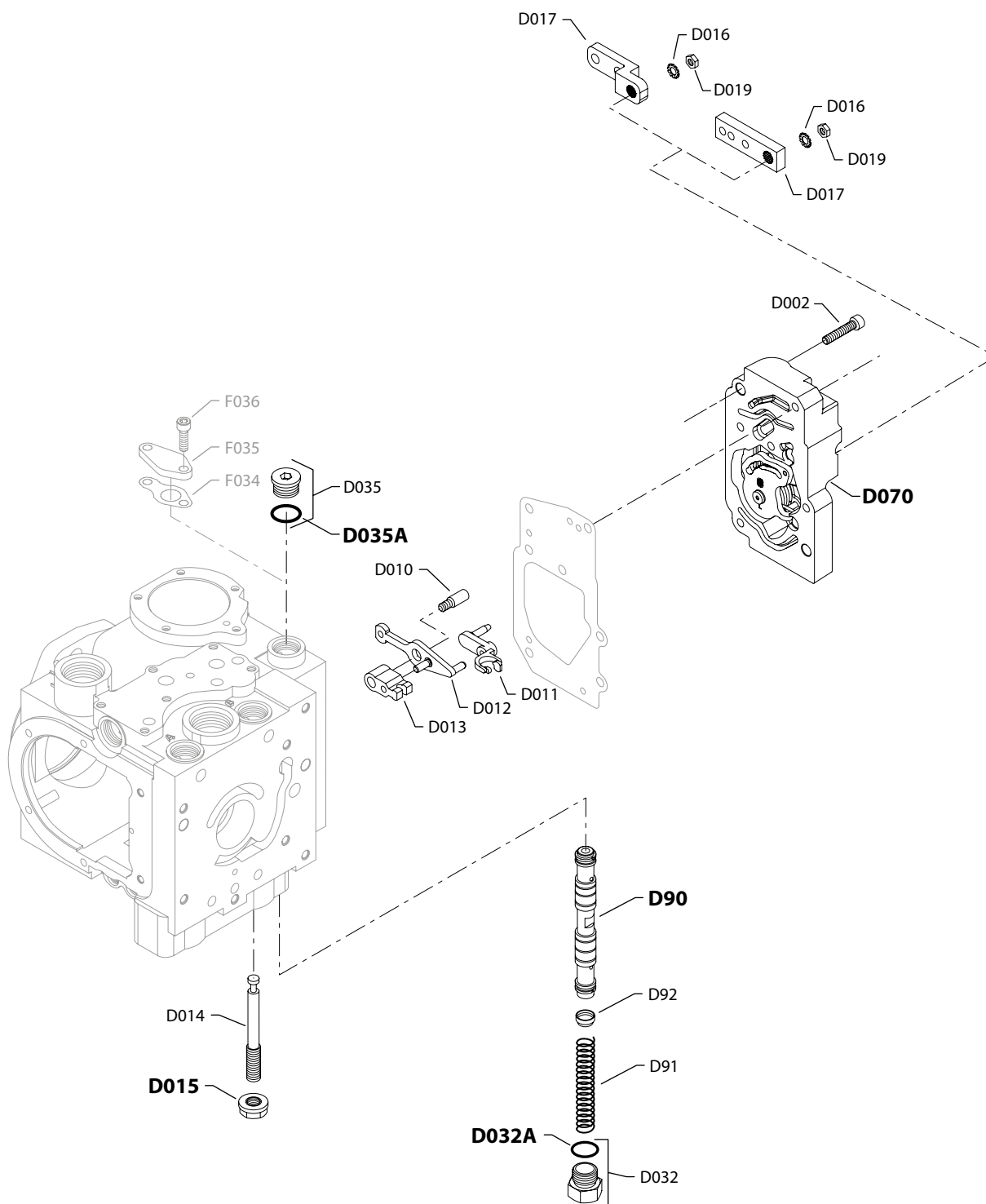
Tapered

K	C001	94-25		4410039	Shaft, tapered	1
	C002	94-25		5000098	Retaining ring	1
	C003	07-18		1735399	Roller bearing	1
	"	94-25		4700068	Roller bearing	1
	C005	94-25		4410045	Shaft assembly, tapered	1
	C006	07-18		9003310-2514	Key	1
	"	94-25		532432(9003310-2514)	Key	1
	C017	94-25		38315	O-ring	1
	C018	07-18		9008000-0131	Lip seal	1
	"	94-25		506515(9008000-0131)	Lip seal	1
	C020	07-18		1735155	Seal carrier	1
	"	94-25		4800264	Seal carrier	1

Splined, 15 teeth, unsealed

R	C001	07-18		1716096	Shaft, tapered	1
	"	99-47		4410005	Shaft, tapered	1
	C002	99-47		5000098	Retaining ring	1
	C003	07-18		1735399	Roller bearing	1
	"	99-47		4700068	Roller bearing	1
	C005	99-47		4410027	Shaft assembly, 15 tooth spline	1
	C017	99-47		38315	O-ring	1
	C020	07-18		1735155	Seal carrier	1
	"	99-47		4800264	Seal carrier	1

Control



Enlarged **bold** type item numbers are recommended parts to be stocked for servicing

Control

	Global new part number
	Obsolete part number
	No change

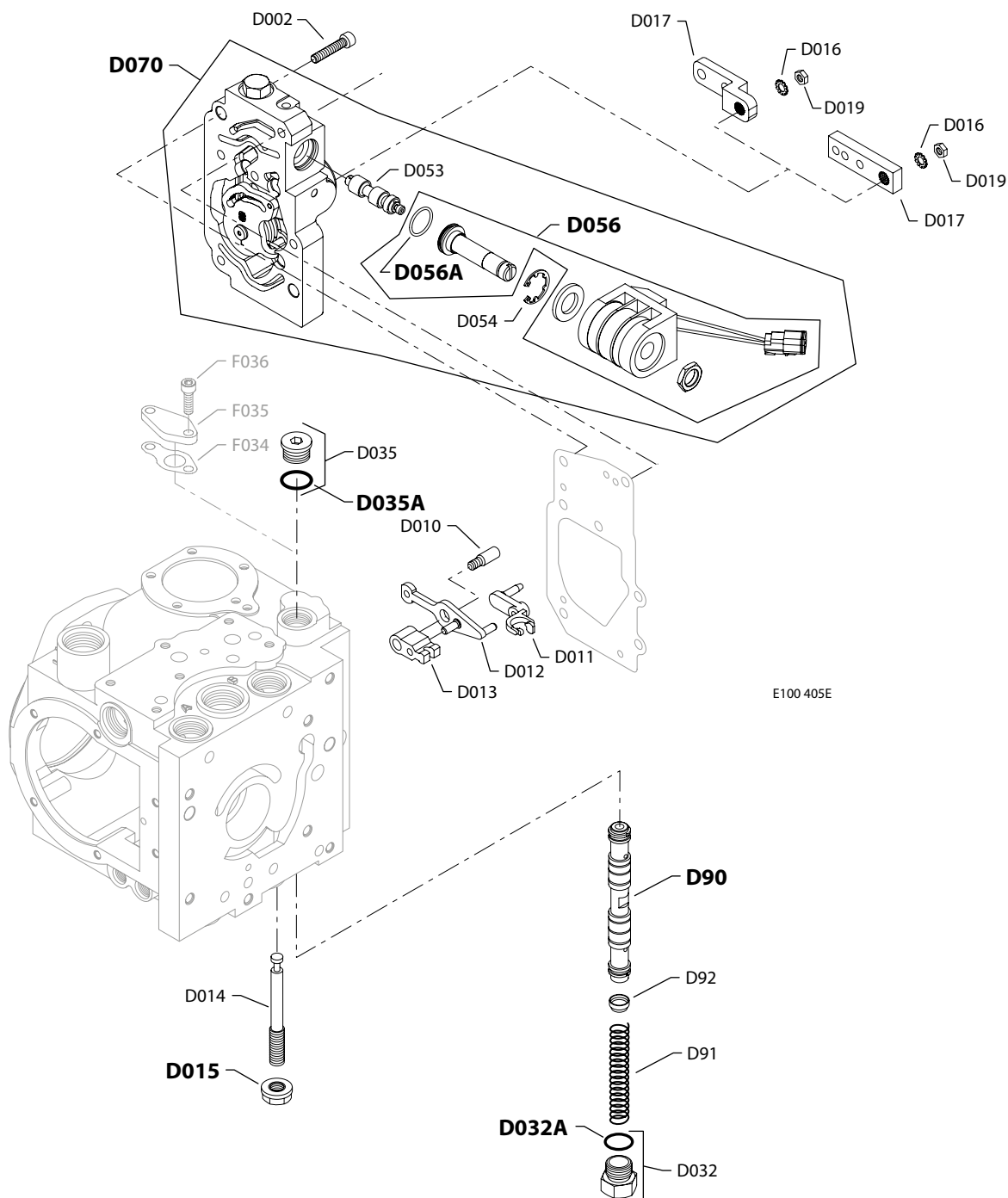
MDC common parts

Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
	D002	07-18		9007314-0607	Screw (AAM603001)	7
	"	93-20		5000002	Screw	7
	D010	07-18		1734449	Screw	1
	"	93-20		4800326	Screw	1
	D011	93-20		4800196	Control summing link	1
	D012	93-20		4800214	Control feedback link	1
	D013	93-20		4800201	Neutral adjust link	1
	D014	07-17		1734450	Neutral adjust screw	1
	"	93-20		4800658	Neutral adjust screw (SB-1997-026)	1
	D015	93-20		336826	Seal nut	1
	D016	07-18		9009660-3100	Washer	1
	"	93-20		689018(9009660-3100)	Washer	1
	D019	07-18		9003513-0800	Nut	1
	"	93-20		040642(9003513-0800)	Nut	1
	D032	93-20		4800615	Plug	1
	D032A	07-18		9004201-5000	O-ring	1
	"	-		001131(9004201-5000)	O-ring	1
	D035	07-18		9005110-7500	Plug	1
	"	98-02		681296(9005110-7500)	Plug	1
	D035A	07-18		9004201-5000	O-ring	1
	"	98-02		001131(9004201-5000)	O-ring	1
	D91	07-18		1746004	Control backlash spring	1
	"	-		4800515	Control backlash spring	1
	"	-		4800243	Control backlash spring	1
	D92	07-18		1746003	Spring adapter	1
	"	-		4800519	Spring adapter	1
	F034	93-20	98-01	4800200	Control spool cover gasket (SB-1997-029)	1
	F035	93-20	98-01	4800199	Control spool cover(SB-1997-029)	1
	F036	93-20	98-01	5000001	Screw(SB-1997-029)	2

MDC

ANN3	D017	93-45		9800916	Control handle	1
	D070	93-45		4800529	Control assembly	1
	D90	93-45		4800464	Control spool assembly	1
ANN5	D017	97-10		4800689	Control handle, off-set (SB-1997-046)	1
	D070	97-10		4800529	Control assembly	1
	D90	97-10		4800410	Control spool assembly	1
ANNA	D017	94-14		4800689	Control handle, off-set (SB-1997-046)	1
	D070	94-14		4800529	Control assembly	1
	D90	94-14		4800464	Control spool assembly	1
ANNB	D017	07-18		9800916	Control handle	1
	D070	07-18		4800529	Control assembly	1
	D90	07-18		4800410	Control spool assembly	1
LNN3	D017	94-02		9800916	Control handle	1
	D070	94-02		4800522	Control assembly	1
	D90	94-02		4800464	Control spool assembly	1
LNN8	D017	96-09		4800689	Control handle, off-set (SB-1997-046)	1
	D070	96-09		4800522	Control assembly	1
	D90	96-09		4800488	Control spool assembly	1
LNNNA	D017	96-09		4800689	Control handle, off-set (SB-1997-046)	1
	D070	96-09		4800522	Control assembly	1
	D90	96-09		4800464	Control spool assembly	1

Control



Enlarged **bold** type item numbers are recommended parts to be stocked for servicing

Control

	Global new part number
	Obsolete part number
	No change

MDC common parts

Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
	D002	07-18		9007314-0607	Screw (AAM0603001)	7
	"	93-20		5000002	Screw	7
	D010	07-18		1734449	Screw	1
	"	93-20		4800326	Screw	1
	D011	93-20		4800196	Control summing link	1
	D012	93-20		4800214	Control feedback link	1
	D013	93-20		4800201	Neutral adjust link	1
	D014	07-17		1734450	Neutral adjust screw	1
	"	93-20		4800658	Neutral adjust screw (SB-1997-026)	1
	D015	93-20		336826	Seal nut	1
	D016	07-18		9009660-3100	Washer	1
	"	93-20		689018(9009660-3100)	Washer	1
	D019	06-01		9003513-0800	Nut	1
	"	93-20		040642(9003513-0800)	Nut	1
	D032	93-20		4800615	Plug	1
	D032A	07-18		9004201-5000	O-ring	1
	"	-		001131(9004201-5000)	O-ring	1
	D035	07-18		9005110-7500	Plug	1
	"	98-02		681296(9005110-7500)	Plug	1
	D035A	07-18		9004201-5000	O-ring	1
	"	98-02		001131(9004201-5000)	O-ring	1
	D91	07-18		1746004	Control backlash spring	1
	"	-		4800515	Control backlash spring	1
	"	-	-	4800243	Control backlash spring	1
	D92	07-18		1746003	Spring adapter	1
	"	-		4800519	Spring adapter	1
	F034	93-20	98-01	4800200	Control spool cover gasket (SB-1997-029)	1
	F035	93-20	98-01	4800199	Control spool cover(SB-1997-029)	1
	F036	93-20	98-01	5000001	Screw(SB-1997-029)	2

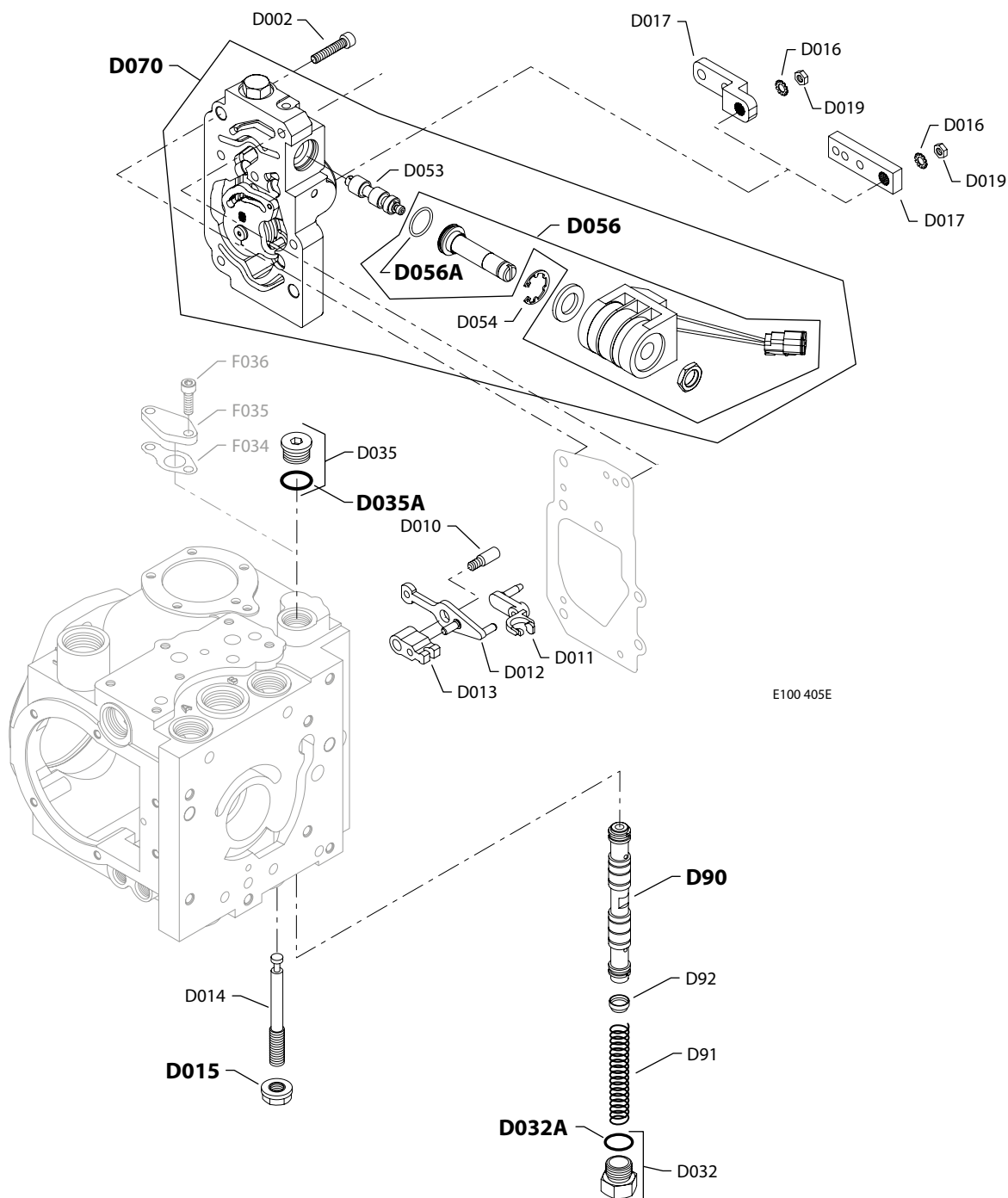
MDC

ANA3	D017	97-36		9800916	Control handle	1
	D053	97-36		4800411	Brake solenoid spool	1
	D054	01-31		4280279	Retaining ring (SB-2001-008)	1
	"	97-36	01-30	5000196	Retaining ring	1
	D056	97-36		4700043	Solenoid, 12v, Weatherpack connector	1
	D056A	07-18		9004104-0180	O-ring	1
	"	97-36		633354(9004104-0180)	O-ring	1
	D070	97-36		4800518	Control assembly	1
	D90	97-36		4800464	Control spool assembly	1

ANA5	D017	97-33		4800689	Control handle, off-set (SB-1997-046)	1
	D053	97-33		4800411	Brake solenoid spool	1
	D054	01-31		4280279	Retaining ring (SB-2001-008)	1
	"	97-33	01-30	5000196	Retaining ring (SB-2001-008)	1
	D056	97-33		4700043	Solenoid, 12v, Weatherpack connector	1
	D056A	07-18		9004104-0180	O-ring	1
	"	97-33		633354(9004104-0180)	O-ring	1
	D070	97-33		4800518	Control assembly	1
	D90	97-33		4800410	Control spool assembly	1

ANAB	D017	97-36		9800916	Control handle	1
	D053	97-36		4800411	Brake Solenoid spool	1
	D054	01-31		4280279	Retaining ring (SB-2001-008)	1
	"	97-36	01-30	5000196		
	D056	97-36		4700043	Solenoid, 12V, Weatherpack connector	1
	D056A	07-18		9004104-0180	O-ring	1
	"	97-36		633354(9004104-0180)	O-ring	1
	D070	97-36		4800518	Control Assembly	1
	D90	97-36		4800410	Control Spool Assembly	1

Control



Enlarged **bold** type item numbers are recommended parts to be stocked for servicing

Control

	Global new part number
	Obsolete part number
	No change

MDC common parts

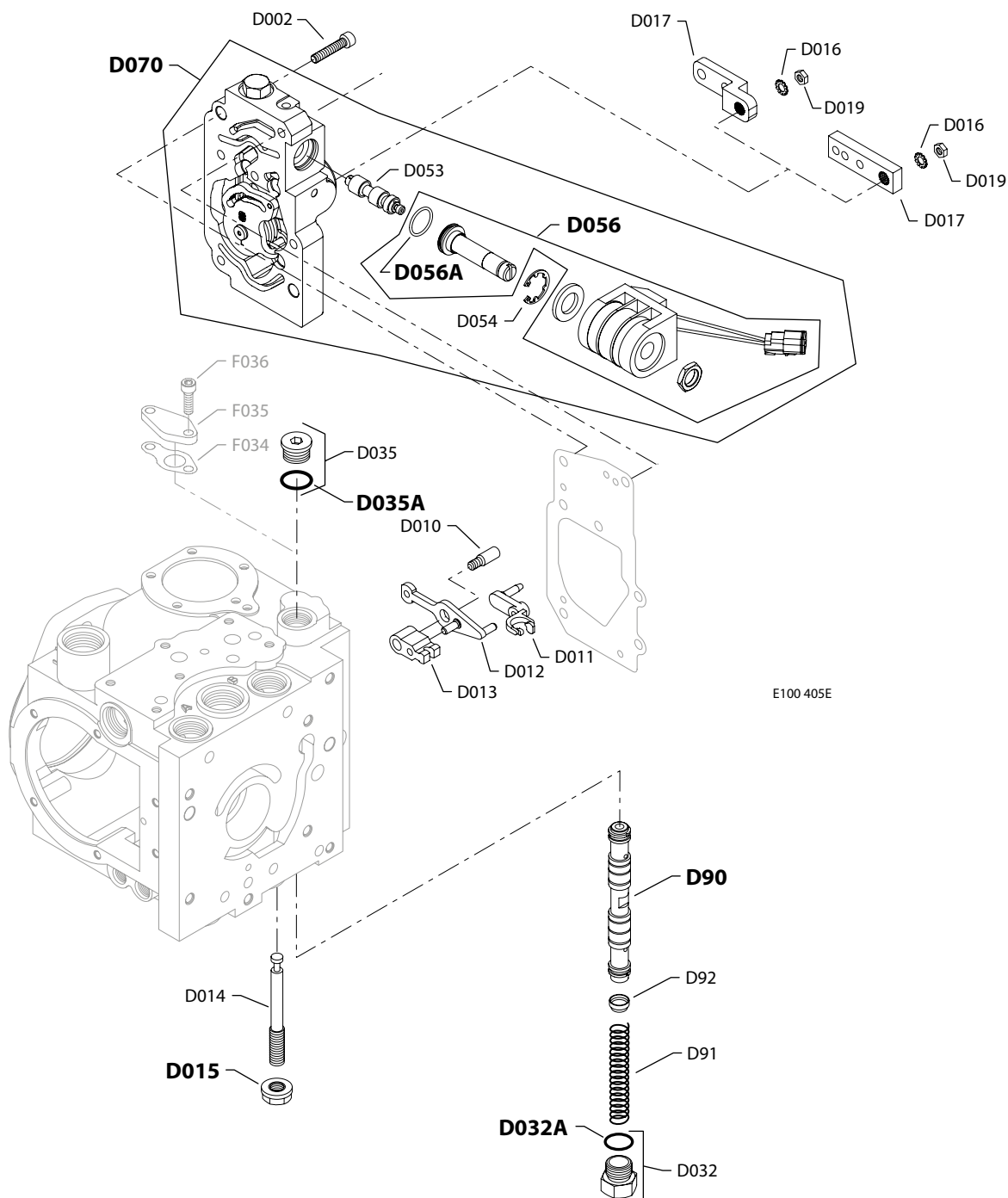
Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
	D002	07-18		9007314-0607	Screw (AAM0603001)	7
	"	93-20		5000002	Screw	7
	D010	07-18		1734449	Screw	1
	"	93-20		4800326	Screw	1
	D011	93-20		4800196	Control summing link	1
	D012	93-20		4800214	Control feedback link	1
	D013	93-20		4800201	Neutral adjust link	1
	D014	07-17		1734450	Neutral adjust screw	1
	"	93-20		4800658	Neutral adjust screw (SB-1997-026)	1
	D015	93-20		336826	Seal nut	1
	D016	07-18		9009660-3100	Washer	1
	"	93-20		689018(9009660-3100)	Washer	1
	D019	06-01		9003513-0800	Nut	1
	"	93-20		040642(9003513-0800)	Nut	1
	D032	93-20		4800615	Plug	1
	D032A	07-18		9004201-5000	O-ring	1
	"	-		001131(9004201-5000)	O-ring	1
	D035	07-18		9005110-7500	Plug	1
	"	98-02		681296(9005110-7500)	Plug	1
	D035A	07-18		9004201-5000	O-ring	1
	"	98-02		001131(9004201-5000)	O-ring	1
	D91	07-18		1746004	Control backlash spring	1
	"	-		4800515	Control backlash spring	1
	"	-	-	4800243	Control backlash spring	1
	D92	07-18		1746003	Spring adapter	1
	"	-		4800519	Spring adapter	1
	F034	93-20	98-01	4800200	Control spool cover gasket (SB-1997-029)	1
	F035	93-20	98-01	4800199	Control spool cover(SB-1997-029)	1
	F036	93-20	98-01	5000001	Screw(SB-1997-029)	2

MDC

ANB5	D017	97-36		4800689	Control handle, off-set (SB-1997-046)	1
	D053	97-36		4800411	Brake Solenoid spool	1
	D054	01-31		4280279	Retaining ring (SB-2001-008)	1
	"	97-36	01-30	5000196		1
	D056	97-36		4700045	Solenoid, 12V, DIN connector	1
	D056A	07-18		9004104-0180	O-ring	1
	"	97-36		633354(9004104-0180)	O-ring	1
	D070	97-36		4800537	Control Assembly	1
	D90	97-36		4800410	Control Spool Assembly	1

ANBB	D017	97-36		9800916	Control handle	1
	D053	97-36		4800411	Brake Solenoid spool	1
	D054	01-31		4280279	Retaining ring (SB-2001-008)	1
	"	97-36	01-30	5000196		1
	D056	97-36		4700045	Solenoid, 12V, DIN connector	1
	D056A	07-18		9004104-0180	O-ring	1
	"	97-36		633354(9004104-0180)	O-ring	1
	D070	97-36		4800537	Control Assembly	1
	D90	97-36		4800410	Control Spool Assembly	1

Control



Enlarged **bold** type item numbers are recommended parts to be stocked for servicing

Control

	Global new part number
	Obsolete part number
	No change

MDC common parts

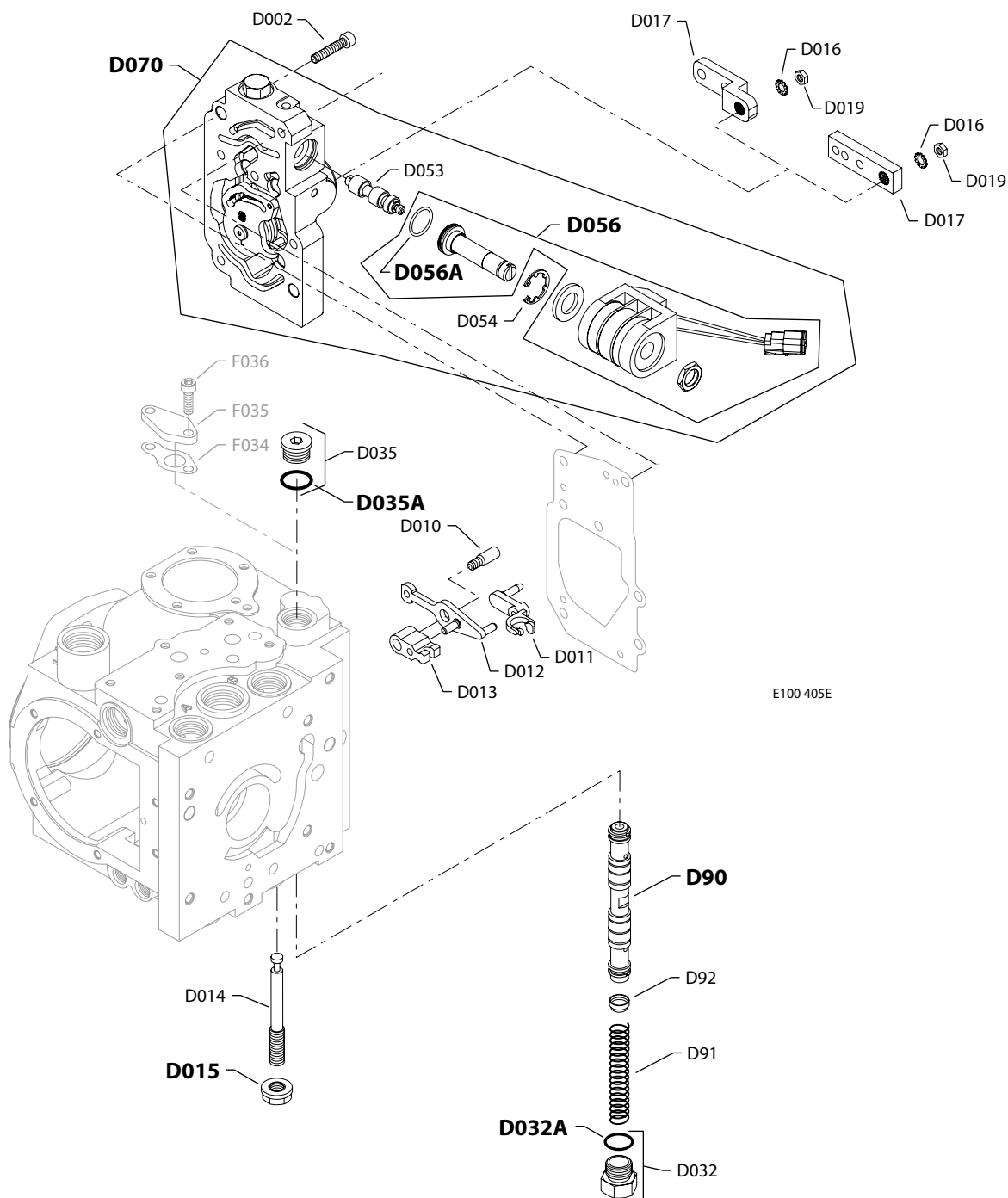
Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
	D002	07-18		9007314-0607	Screw (AAM0603001)	7
	"	93-20		5000002	Screw	7
	D010	07-18		1734449	Screw	1
	"	93-20		4800326	Screw	1
	D011	93-20		4800196	Control summing link	1
	D012	93-20		4800214	Control feedback link	1
	D013	93-20		4800201	Neutral adjust link	1
	D014	07-17		1734450	Neutral adjust screw	1
	"	93-20		4800658	Neutral adjust screw (SB-1997-026)	1
	D015	93-20		336826	Seal nut	1
	D016	07-18		9009660-3100	Washer	1
	"	93-20		689018(9009660-3100)	Washer	1
	D019	06-01		9003513-0800	Nut	1
	"	93-20		040642(9003513-0800)	Nut	1
	D032	93-20		4800615	Plug	1
	D032A	07-18		9004201-5000	O-ring	1
	"	-		001131(9004201-5000)	O-ring	1
	D035	07-18		9005110-7500	Plug	1
	"	98-02		681296(9005110-7500)	Plug	1
	D035A	07-18		9004201-5000	O-ring	1
	"	98-02		001131(9004201-5000)	O-ring	1
	D91	07-18		1746004	Control backlash spring	1
	"	-		4800515	Control backlash spring	1
	"	-		4800243	Control backlash spring	1
	D92	07-18		1746003	Spring adapter	1
	"	-		4800519	Spring adapter	1
	F034	93-20	98-01	4800200	Control spool cover gasket (SB-1997-029)	1
	F035	93-20	98-01	4800199	Control spool cover(SB-1997-029)	1
	F036	93-20	98-01	5000001	Screw(SB-1997-029)	2

MDC

ANJ5	D017	97-36		4800689	Control handle, off-set (SB-1997-046)	1
	D053	97-36		4800411	Brake Solenoid spool	1
	D054	01-31		4280279	Retaining ring (SB-2001-008)	1
	"	97-36	01-30	5000196		1
	D056	97-36		4700145	Solenoid, 12V, Deutsch connector	1
	D056A	07-18		9004104-0180	O-ring	1
	"	97-36		633354(9004104-0180)	O-ring	1
	D070	97-36		1746723	Control Assembly	1
	D90	97-36		4800410	Control Spool Assembly	1

ANK5	D017	97-36		4800689	Control handle, off-set (SB-1997-046)	1
	D053	97-36		4800411	Brake Solenoid spool	1
	D054	01-31		4280279	Retaining ring (SB-2001-008)	1
	"	97-36	01-30	5000196		1
	D056	97-36		4700158	Solenoid, 24V, Deutsch connector	1
	D056A	07-18		9004104-0180	O-ring	1
	"	97-36		633354(9004104-0180)	O-ring	1
	D070	97-36		4410358	Control Assembly	1
	D90	97-36		4800410	Control Spool Assembly	1

Control



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Control

	Global new part number
	Obsolete part number
	No change

MDC common parts

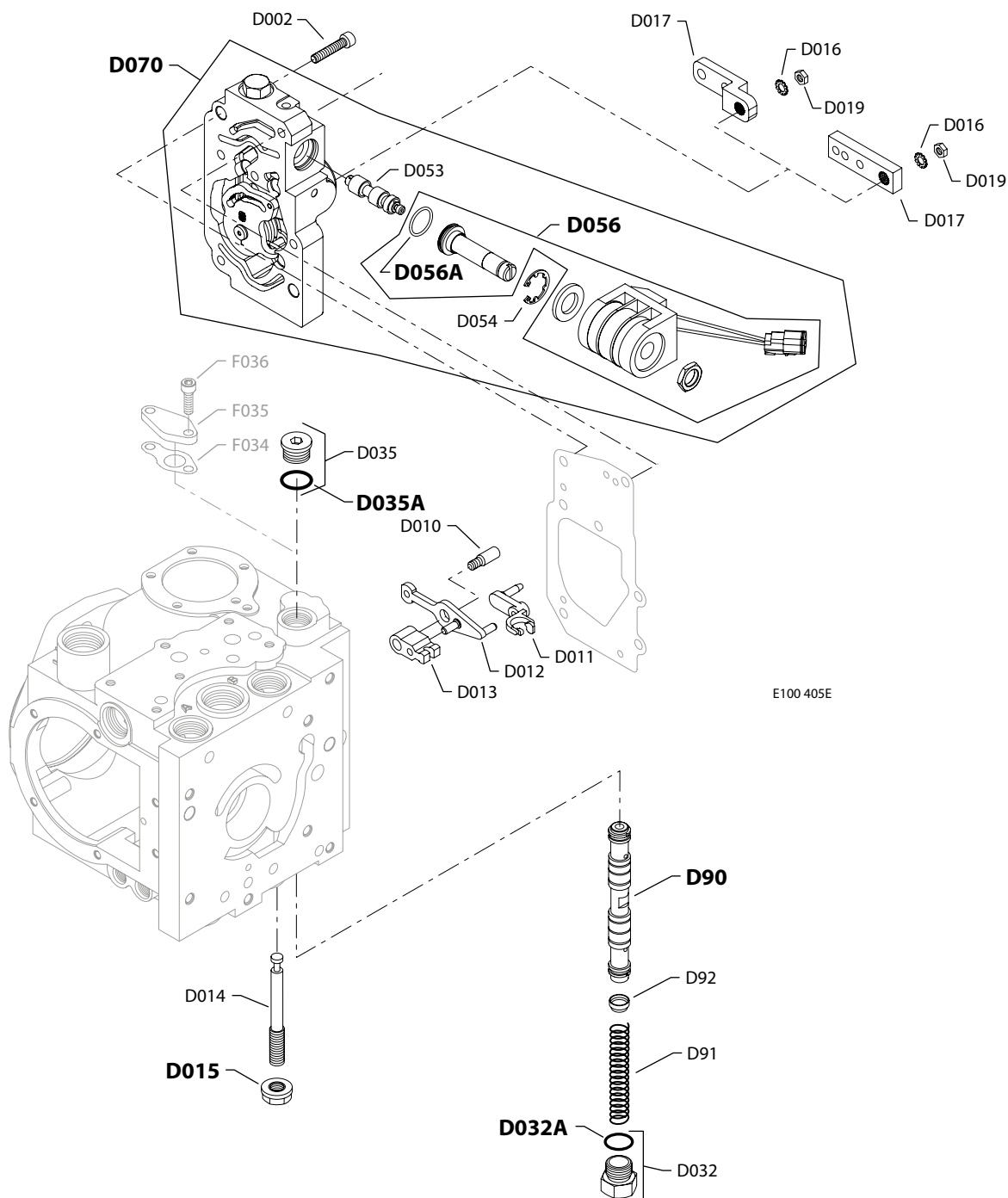
Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
	D002	07-18		9007314-0607	Screw (AAM0603001)	7
	"	93-20		5000002	Screw	7
	D010	07-18		1734449	Screw	1
	"	93-20		4800326	Screw	1
	D011	93-20		4800196	Control summing link	1
	D012	93-20		4800214	Control feedback link	1
	D013	93-20		4800201	Neutral adjust link	1
	D014	07-17		1734450	Neutral adjust screw	1
	"	93-20		4800658	Neutral adjust screw (SB-1997-026)	1
	D015	93-20		336826	Seal nut	1
	D016	07-18		9009660-3100	Washer	1
	"	93-20		689018(9009660-3100)	Washer	1
	D019	06-01		9003513-0800	Nut	1
	"	93-20		040642(9003513-0800)	Nut	1
	D032	93-20		4800615	Plug	1
	D032A	07-18		9004201-5000	O-ring	1
	"	-		001131(9004201-5000)	O-ring	1
	D035	07-18		9005110-7500	Plug	1
	"	98-02		681296(9005110-7500)	Plug	1
	D035A	07-18		9004201-5000	O-ring	1
	"	98-02		001131(9004201-5000)	O-ring	1
	D91	07-18		1746004	Control backlash spring	1
	"	-		4800515	Control backlash spring	1
	"	-		4800243	Control backlash spring	1
	D92	07-18		1746003	Spring adapter	1
	"	-		4800519	Spring adapter	1
	F034	93-20	98-01	4800200	Control spool cover gasket (SB-1997-029)	1
	F035	93-20	98-01	4800199	Control spool cover(SB-1997-029)	1
	F036	93-20	98-01	5000001	Screw(SB-1997-029)	2

MDC

ANKB	D017	97-36		9800916	Control handle	1
	D053	97-36		4800411	Brake Solenoid spool	1
	D054	01-31		4280279	Retaining ring (SB-2001-008)	1
	"	97-36	01-30	5000196		1
	D056A	07-18		9004104-0180	O-ring	1
	"	97-36		633354(9004104-0180)	O-ring	1
	"	97-36				1
	D070	97-36		4410358	Control Assembly	1
	D90	97-36		4800410	Control Spool Assembly	1

LNBA	D017	97-36		4800689	Control handle, off-set (SB-1997-046)	1
	D053	97-36		4800411	Brake Solenoid spool	1
	D054	01-31		4280279	Retaining ring (SB-2001-008)	1
	"	97-36	01-30	5000196		1
	D056	97-36		4700045	Solenoid, 12V, DIN connector	1
	D056A	07-18		9004104-0180	O-ring	1
	"	97-36		633354(9004104-0180)	O-ring	1
	D070	97-36		4800542	Control Assembly	1
	D90	97-36		4800464	Control Spool Assembly	1

Control



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Control

	Global new part number
	Obsolete part number
	No change

MDC common parts

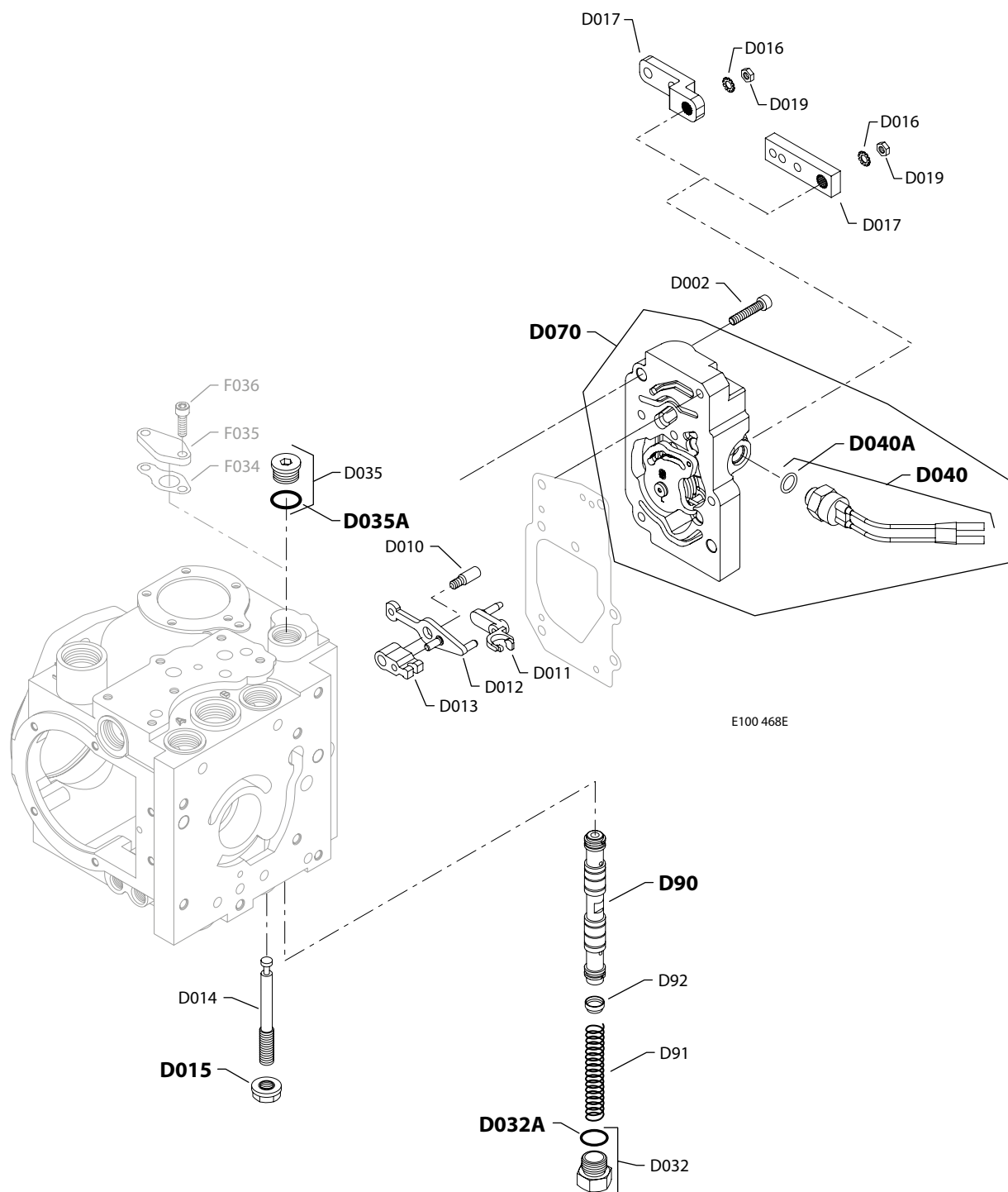
Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
	D002	07-18		9007314-0607	Screw (AAM0603001)	7
	"	93-20		5000002	Screw	7
	D010	07-18		1734449	Screw	1
	"	93-20		4800326	Screw	1
	D011	93-20		4800196	Control summing link	1
	D012	93-20		4800214	Control feedback link	1
	D013	93-20		4800201	Neutral adjust link	1
	D014	07-17		1734450	Neutral adjust screw	1
	"	93-20		4800658	Neutral adjust screw (SB-1997-026)	1
	D015	93-20		336826	Seal nut	1
	D016	07-18		9009660-3100	Washer	1
	"	93-20		689018(9009660-3100)	Washer	1
	D019	06-01		9003513-0800	Nut	1
	"	93-20		040642(9003513-0800)	Nut	1
	D032	93-20		4800615	Plug	1
	D032A	07-18		9004201-5000	O-ring	1
	"	-		001131(9004201-5000)	O-ring	1
	D035	07-18		9005110-7500	Plug	1
	"	98-02		681296(9005110-7500)	Plug	1
	D035A	07-18		9004201-5000	O-ring	1
	"	98-02		001131(9004201-5000)	O-ring	1
	D91	07-18		1746004	Control backlash spring	1
	"	-		4800515	Control backlash spring	1
	"	-	-	4800243	Control backlash spring	1
	D92	07-18		1746003	Spring adapter	1
	"	-		4800519	Spring adapter	1
	F034	93-20	98-01	4800200	Control spool cover gasket (SB-1997-029)	1
	F035	93-20	98-01	4800199	Control spool cover(SB-1997-029)	1
	F036	93-20	98-01	5000001	Screw(SB-1997-029)	2

MDC

ANB3	D017	94-14		9800916	Control handle	1
	D053	94-14		4800411	Brake solenoid spool	1
	D054	01-31		4280279	Retaining ring (SB-2001-008)	1
	"	94-14	01-30	5000196	Retaining ring	1
	D056	94-14		4700045	Solenoid, 12v, DIN connector	1
	D056A	07-18		9004104-0180	O-ring	1
	"	94-14		633354(9004104-0180)	O-ring	1
	D070	94-14		4800537	Control assembly	1
	D90	94-14		4800464	Control spool assembly	1

LNB3	D017	94-13		9800916	Control handle	1
	D053	94-13		4800411	Brake solenoid spool	1
	D054	01-31		4280279	Retaining ring (SB-2001-008)	1
	"	94-13	01-30	5000196	Retaining ring	1
	D056	94-13		4700045	Solenoid, 12v, DIN connector	1
	D056A	07-18		9004104-0180	O-ring	1
	"	94-13	-	633354(9004104-0180)	O-ring	1
	D070	94-13		4800542	Control assembly	1
	D90	94-13		4800464	Control spool assembly	1

Control



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Enlarged **bold** type item numbers are recommended parts to be stocked for servicing

Control

	Global new part number
	Obsolete part number
	No change

MDC common parts

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per Model/Kit
	D002	07-18		9007314-0607	Screw (AAM0603001)	7
	"	93-20		5000002	Screw	7
	D010	07-18		1734449	Screw	1
	"	93-20		4800326	Screw	1
	D011	93-20		4800196	Control summing link	1
	D012	93-20		4800214	Control feedback link	1
	D013	93-20		4800201	Neutral adjust link	1
	D014	07-17		1734450	Neutral adjust screw	1
	"	93-20		4800658	Neutral adjust screw (SB-1997-026)	1
	D015	93-20		336826	Seal nut	1
	D016	07-18		9009660-3100	Washer	1
	"	93-20		689018(9009660-3100)	Washer	1
	D019	06-01		9003513-0800	Nut	1
	"	93-20		040642(9003513-0800)	Nut	1
	D032	93-20		4800615	Plug	1
	D032A	07-18		9004201-5000	O-ring	1
	"	-		001131(9004201-5000)	O-ring	1
	D035	07-18		9005110-7500	Plug	1
	"	98-02		681296(9005110-7500)	Plug	1
	D035A	07-18		9004201-5000	O-ring	1
	"	98-02		001131(9004201-5000)	O-ring	1
	D91	07-18		1746004	Control backlash spring	1
	"	-		4800515	Control backlash spring	1
	"	-	-	4800243	Control backlash spring	1
	D92	07-18		1746003	Spring adapter	1
	"	-		4800519	Spring adapter	1
	F034	93-20	98-01	4800200	Control spool cover gasket (SB-1997-029)	1
	F035	93-20	98-01	4800199	Control spool cover(SB-1997-029)	1
	F036	93-20	98-01	5000001	Screw(SB-1997-029)	2

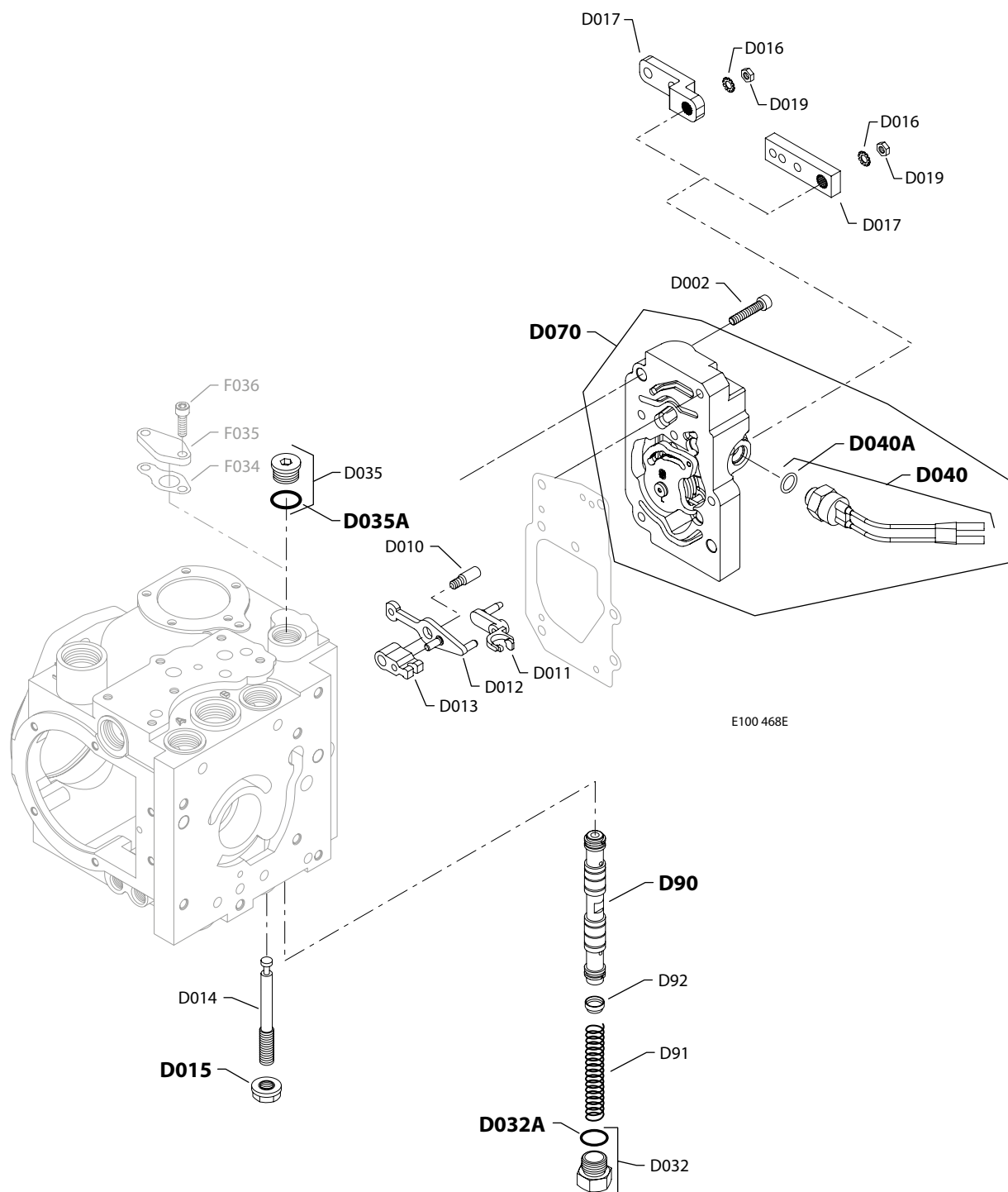
MDC

A1N3	D017	97-36		9800916	Control handle	1
	D040	97-36		4700033	Neutral start switch	1
	D040A	07-18		9004201-3700	O-ring	1
	"	97-06		085043(9004201-3700)	O-ring	1
	D070	97-36		4800532	Control Assembly	1
	D90	97-36		4800464	Control Spool Assembly	1

A1N5	D017	02-04		4800689	Control handle, off-set (SB-1997-046)	1
	D040	97-06		4700033	Neutral start switch	1
	D040A	07-18		9004201-3700	O-ring	1
	"	97-06		085043(9004201-3700)	O-ring	1
	D070	97-06		4800532	Control assembly	1
	D90	97-06		4800410	Control spool assembly	1

A1NB	D017	07-18		9800916	Control handle	1
	D040	07-18		4700033	Neutral start switch	1
	D040A	07-18		9004201-3700	O-ring	1
	D070	07-18		4800532	Control assembly	1
	D90	07-18		4800410	Control spool assembly	1

Control



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Control

	Global new part number
	Obsolete part number
	No change

MDC common parts

Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
	D002	07-18		9007314-0607	Screw (AAM0603001)	7
	"	93-20		5000002	Screw	7
	D010	07-18		1734449	Screw	1
	"	93-20		4800326	Screw	1
	D011	93-20		4800196	Control summing link	1
	D012	93-20		4800214	Control feedback link	1
	D013	93-20		4800201	Neutral adjust link	1
	D014	07-17		1734450	Neutral adjust screw	1
	"	93-20		4800658	Neutral adjust screw (SB-1997-026)	1
	D015	93-20		336826	Seal nut	1
	D016	07-18		9009660-3100	Washer	1
	"	93-20		689018(9009660-3100)	Washer	1
	D019	06-01		9003513-0800	Nut	1
	"	93-20		040642(9003513-0800)	Nut	1
	D032	93-20		4800615	Plug	1
	D032A	07-18		9004201-5000	O-ring	1
	"	-		001131(9004201-5000)	O-ring	1
	D035	07-18		9005110-7500	Plug	1
	"	98-02		681296(9005110-7500)	Plug	1
	D035A	07-18		9004201-5000	O-ring	1
	"	98-02		001131(9004201-5000)	O-ring	1
	D91	07-18		1746004	Control backlash spring	1
	"	-		4800515	Control backlash spring	1
	"	-	-	4800243	Control backlash spring	1
	D92	07-18		1746003	Spring adapter	1
	"	-		4800519	Spring adapter	1
	F034	93-20	98-01	4800200	Control spool cover gasket (SB-1997-029)	1
	F035	93-20	98-01	4800199	Control spool cover(SB-1997-029)	1
	F036	93-20	98-01	5000001	Screw(SB-1997-029)	2

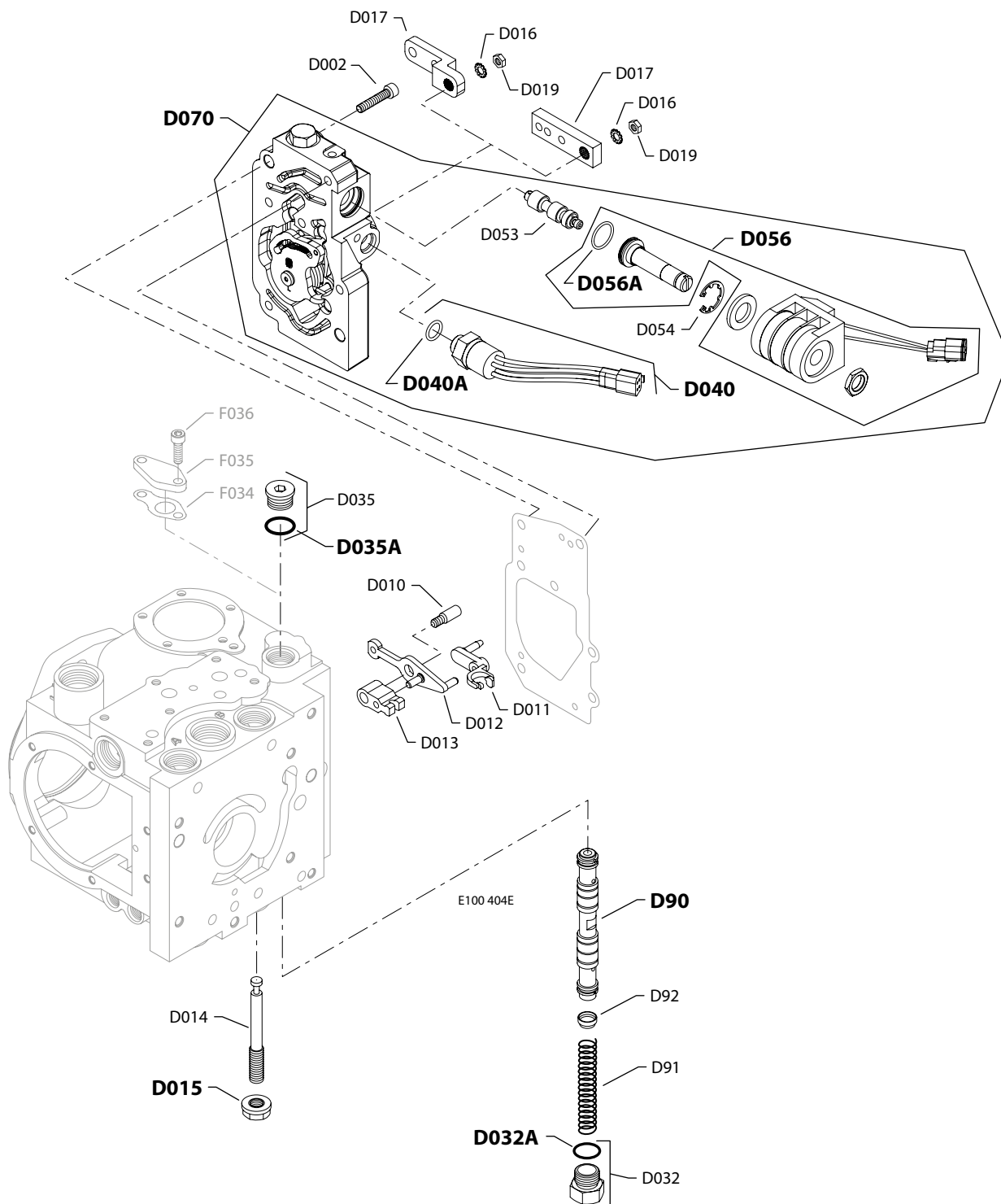
MDC

A2N5	D017	97-36		4800689	Control handle, off-set (SB-1997-046)	1
	D040	97-36		4700032	Neutral start switch	1
	D040A	07-18		9004201-3700	O-ring	1
	"	97-06		085043(9004201-3700)	O-ring	1
	D070	97-36		11070599	Control Assembly	1
	D90	97-36		4800410	Control Spool Assembly	1

A3NB	D017	97-36		9800916	Control handle	1
	D040	97-36		4700025	Neutral start switch and backup alarm	1
	D040A	07-18		9004201-3700	O-ring	1
	"	97-06		085043(9004201-3700)	O-ring	1
	D070	97-36		4800863	Control Assembly	1
	D90	97-36		4800410	Control Spool Assembly	1

A7NB	D017	99-06		9800916	Control handle	1
	D040	99-06		4700113	Neutral start switch and backup alarm	1
	D040A	07-18		9004201-3700	O-ring	1
	"	-		085043(9004201-3700)	O-ring	1
	D070	99-06		4800656	Control assembly	1
	D90	99-06		4800410	Control spool assembly	1

Control



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Control

	Global new part number
	Obsolete part number
	No change

MDC common parts

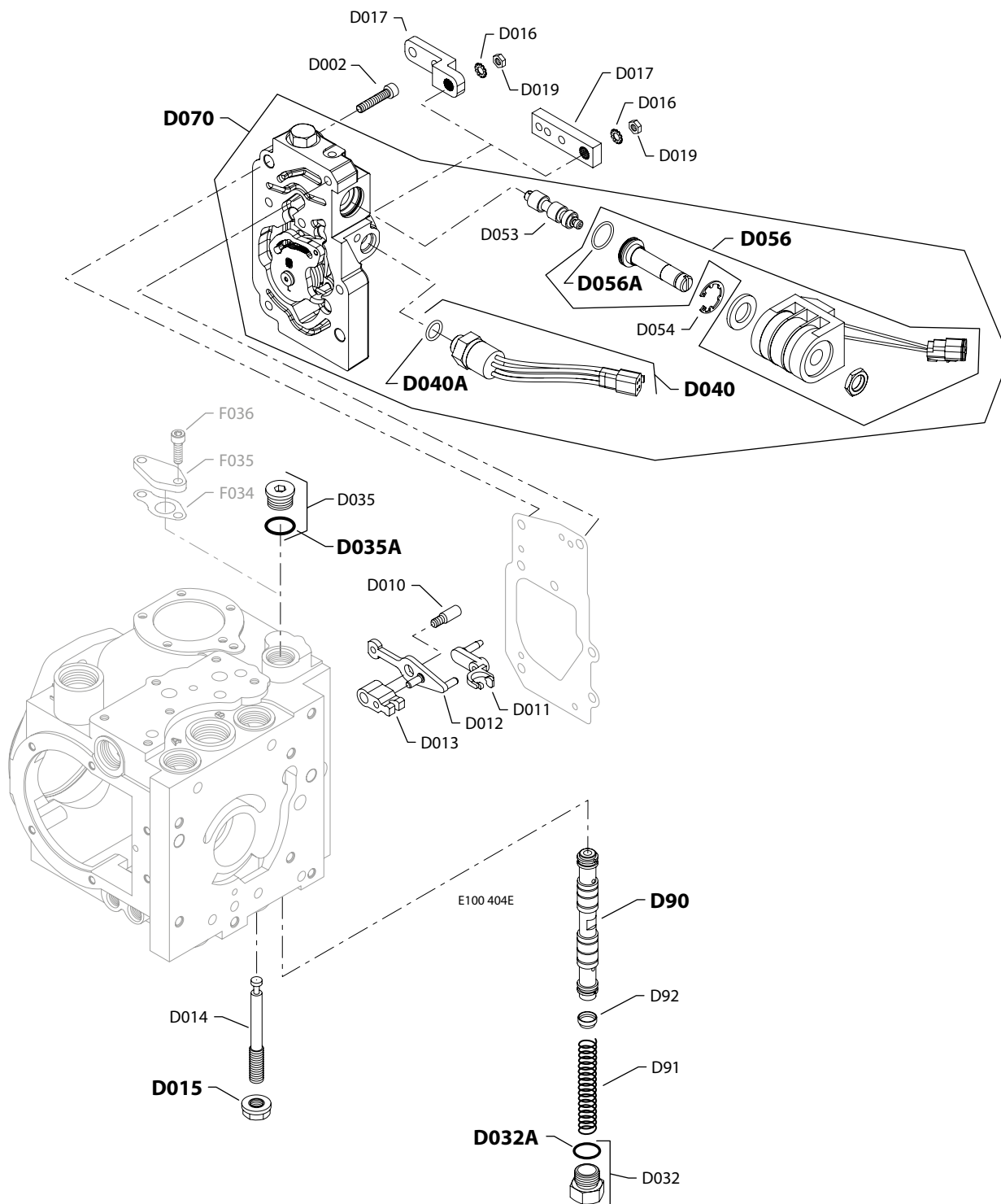
Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
	D002	07-18		9007314-0607	Screw (AAM0603001)	7
	"	93-20		5000002	Screw	7
	D010	07-18		1734449	Screw	1
	"	93-20		4800326	Screw	1
	D011	93-20		4800196	Control summing link	1
	D012	93-20		4800214	Control feedback link	1
	D013	93-20		4800201	Neutral adjust link	1
	D014	07-17		1734450	Neutral adjust screw	1
	"	93-20		4800658	Neutral adjust screw (SB-1997-026)	1
	D015	93-20		336826	Seal nut	1
	D016	07-18		9009660-3100	Washer	1
	"	93-20		689018(9009660-3100)	Washer	1
	D019	06-01		9003513-0800	Nut	1
	"	93-20		040642(9003513-0800)	Nut	1
	D032	93-20		4800615	Plug	1
	D032A	07-18		9004201-5000	O-ring	1
	"	-		001131(9004201-5000)	O-ring	1
	D035	07-18		9005110-7500	Plug	1
	"	98-02		681296(9005110-7500)	Plug	1
	D035A	07-18		9004201-5000	O-ring	1
	"	98-02		001131(9004201-5000)	O-ring	1
	D91	07-18		1746004	Control backlash spring	1
	"	-		4800515	Control backlash spring	1
	"	-	-	4800243	Control backlash spring	1
	D92	07-18		1746003	Spring adapter	1
	"	-		4800519	Spring adapter	1
	F034	93-20	98-01	4800200	Control spool cover gasket (SB-1997-029)	1
	F035	93-20	98-01	4800199	Control spool cover(SB-1997-029)	1
	F036	93-20	98-01	5000001	Screw(SB-1997-029)	2

MDC

A1A5	D017	98-19		4800689	Control handle, off-set (SB-1997-046)	1
	D040	98-19		4700033	Neutral start switch	1
	D040A	07-18		9004201-3700	O-ring	1
	"	98-19		085043(9004201-3700)	O-ring	1
	D053	98-19		4800411	Brake solenoid spool	1
	D054	01-31		4280279	Retaining ring (SB-2001-008)	1
	"	98-19	01-30	5000196	Retaining ring	1
	D056	98-19		4700043	Solenoid, 12V, Weatherpack connector	1
	D056A	07-18		9004104-0180	O-ring	1
	"	98-19		633354(9004104-0180)	O-ring	1
	D070	98-19		4800521	Control assembly	1
	D90	98-19		4800410	Control spool assembly	1

A2B3	D017	94-14		9800916	Control handle	1
	D040	94-14		4700032	Neutral start switch	1
	D040A	07-18		9004201-3700	O-ring	1
	"	94-14		085043(9004201-3700)	O-ring	1
	D053	94-14		4800411	Brake Solenoid spool	1
	D054	01-31		4280279	Retaining ring (SB-2001-008)	1
	"	94-14	01-30	5000196	Retaining ring	1
	D056	94-14		4700045	Solenoid, 12v, DIN connector	1
	D056A	07-18		9004104-0180	O-ring	1
	"	94-14		633354(9004104-0180)	O-ring	1
	D070	94-14		4800538	Control assembly	1
	D90	94-14		4800464	Control Spool assembly	1

Control



Enlarged **bold** type item numbers are recommended parts to be stocked for servicing

Control

	Global new part number
	Obsolete part number
	No change

MDC common parts

Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
	D002	07-18		9007314-0607	Screw (AAM0603001)	7
	"	93-20		5000002	Screw	7
	D010	07-18		1734449	Screw	1
	"	93-20		4800326	Screw	1
	D011	93-20		4800196	Control summing link	1
	D012	93-20		4800214	Control feedback link	1
	D013	93-20		4800201	Neutral adjust link	1
	D014	07-17		1734450	Neutral adjust screw	1
	"	93-20		4800658	Neutral adjust screw (SB-1997-026)	1
	D015	93-20		336826	Seal nut	1
	D016	07-18		9009660-3100	Washer	1
	"	93-20		689018(9009660-3100)	Washer	1
	D019	06-01		9003513-0800	Nut	1
	"	93-20		040642(9003513-0800)	Nut	1
	D032	93-20		4800615	Plug	1
	D032A	07-18		9004201-5000	O-ring	1
	"	-		001131(9004201-5000)	O-ring	1
	D035	07-18		9005110-7500	Plug	1
	"	98-02		681296(9005110-7500)	Plug	1
	D035A	07-18		9004201-5000	O-ring	1
	"	98-02		001131(9004201-5000)	O-ring	1
	D91	07-18		1746004	Control backlash spring	1
	"	-		4800515	Control backlash spring	1
	"	-	-	4800243	Control backlash spring	1
	D92	07-18		1746003	Spring adapter	1
	"	-		4800519	Spring adapter	1
	F034	93-20	98-01	4800200	Control spool cover gasket (SB-1997-029)	1
	F035	93-20	98-01	4800199	Control spool cover(SB-1997-029)	1
	F036	93-20	98-01	5000001	Screw(SB-1997-029)	2

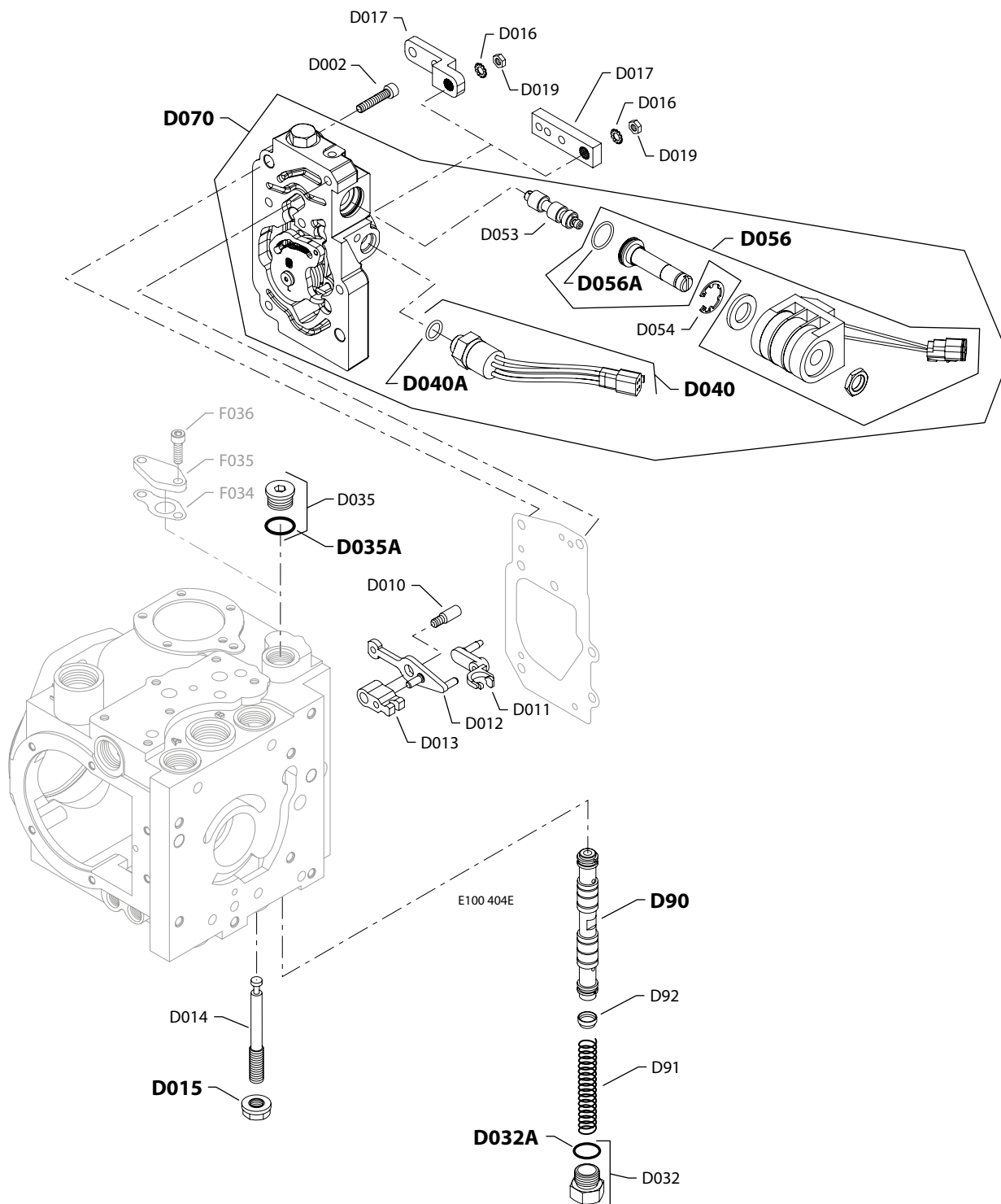
MDC

A3AB	D017	06-01		9800916	Control handle	1
	D040	97-15		4700025	Neutral start switch and backup alarm	1
	D040A	07-18		9004201-3700	O-ring	1
	D053	97-15		4800411	Brake solenoid spool	1
	D054	01-31		4280279	Retaining ring (SB-2001-008)	1
	D056	97-15		4700043	Solenoid, 12v, Weatherpack connector	1
	D056A	07-18		9004104-0180	O-ring	1
	D070	06-01		4800635	Control assembly	1
	D90	06-01		4800410	Control spool assembly	1

A5AA	D017	97-15		4800689	Control handle, off-set (SB-1997-046)	1
	D040	97-15		4700025	Neutral start switch and backup alarm	1
	D040A	07-18		9004201-3700	O-ring	1
	"	97-15		085043(9004201-3700)	O-ring	1
	D053	97-15		4800411	Brake solenoid spool	1
	D054	01-31		4280279	Retaining ring (SB-2001-008)	1
	"	97-15	01-30	5000196	Retaining ring	1
	D056	97-15		4700043	Solenoid, 12v, Weatherpack connector	1
	D056A	07-18		9004104-0180	O-ring	1
	"	97-15		633354(9004104-0180)	O-ring	1
	D070	97-15		4800539	Control assembly	1
	D90	97-15		4800464	Control spool assembly	1

A7J5	D017	97-36		4800689	Control handle, off-set (SB-1997-046)	1
	D040	97-36		4700113	Neutral start switch and backup alarm	1
	D040A	07-18		9004201-3700	O-ring	1
	"	97-06		085043(9004201-3700)	O-ring	1
	D053	97-36		4800411	Brake Solenoid spool	1
	D054	01-31		4280279	Retaining ring (SB-2001-008)	1
	"	97-36	01-30	5000196		1
	D056	97-36		4700145	Solenoid, 12V, Deutsch connector	1
	D056A	07-18		9004104-0180	O-ring	1
	"	97-36		633354(9004104-0180)	O-ring	1
	D070	97-36		4800823	Control Assembly	1
	D90	97-36		4800410	Control Spool Assembly	1

Control



Enlarged **bold** type item numbers are recommended parts to be stocked for servicing

Control

	Global new part number
	Obsolete part number
	No change

MDC common parts

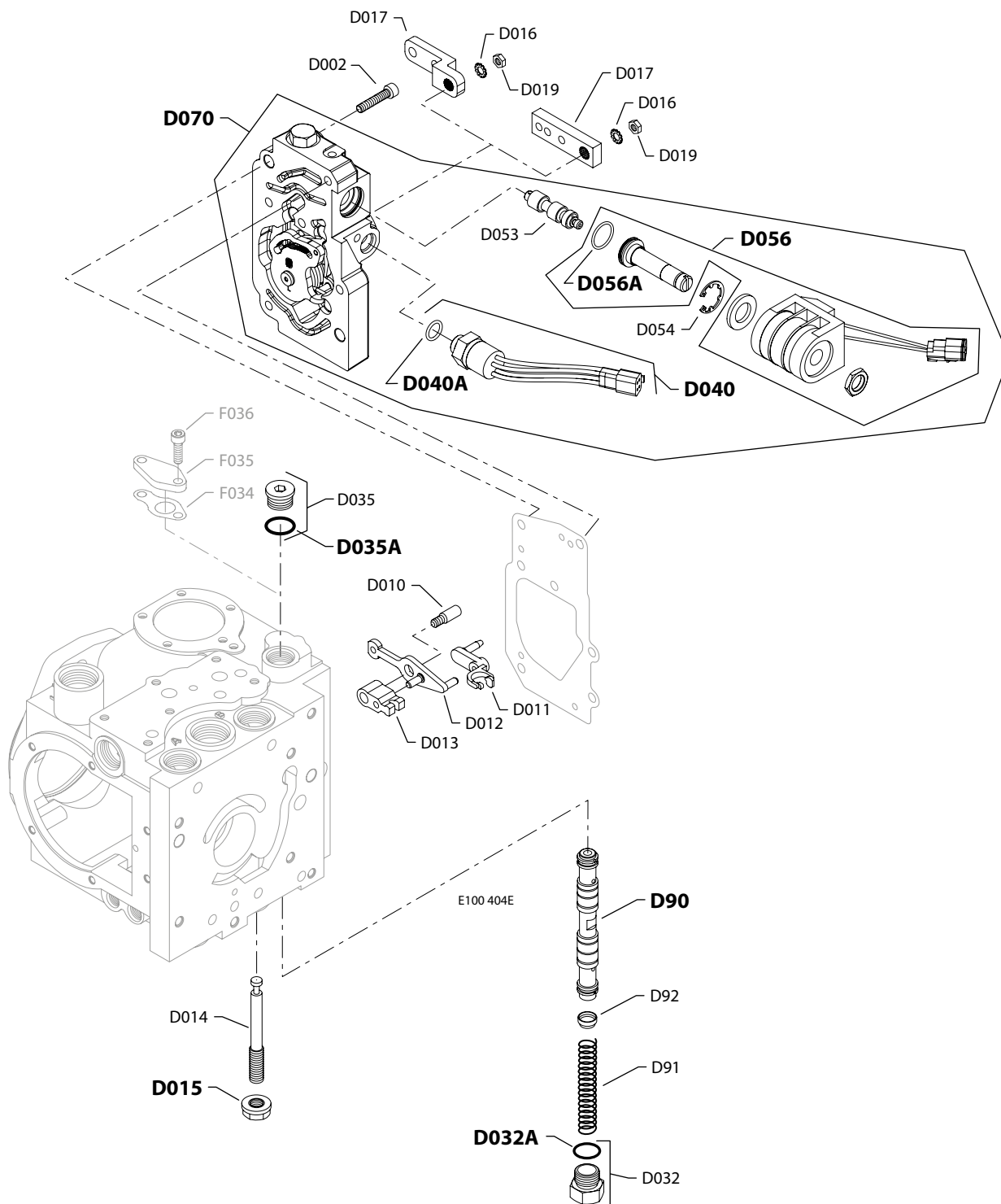
Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
	D002	07-18		9007314-0607	Screw (AAM0603001)	7
	"	93-20		5000002	Screw	7
	D010	07-18		1734449	Screw	1
	"	93-20		4800326	Screw	1
	D011	93-20		4800196	Control summing link	1
	D012	93-20		4800214	Control feedback link	1
	D013	93-20		4800201	Neutral adjust link	1
	D014	07-17		1734450	Neutral adjust screw	1
	"	93-20		4800658	Neutral adjust screw (SB-1997-026)	1
	D015	93-20		336826	Seal nut	1
	D016	07-18		9009660-3100	Washer	1
	"	93-20		689018(9009660-3100)	Washer	1
	D019	06-01		9003513-0800	Nut	1
	"	93-20		040642(9003513-0800)	Nut	1
	D032	93-20		4800615	Plug	1
	D032A	07-18		9004201-5000	O-ring	1
	"	-		001131(9004201-5000)	O-ring	1
	D035	07-18		9005110-7500	Plug	1
	"	98-02		681296(9005110-7500)	Plug	1
	D035A	07-18		9004201-5000	O-ring	1
	"	98-02		001131(9004201-5000)	O-ring	1
	D91	07-18		1746004	Control backlash spring	1
	"	-		4800515	Control backlash spring	1
	"	-	-	4800243	Control backlash spring	1
	D92	07-18		1746003	Spring adapter	1
	"	-		4800519	Spring adapter	1
	F034	93-20	98-01	4800200	Control spool cover gasket (SB-1997-029)	1
	F035	93-20	98-01	4800199	Control spool cover(SB-1997-029)	1
	F036	93-20	98-01	5000001	Screw(SB-1997-029)	2

MDC

A7JB	D017	01-37		9800916	Control handle	1
	D040	01-37		4700113	Neutral start switch and backup alarm	1
	D040A	07-18		9004201-3700	O-ring	1
	"	01-37		085043(9004201-3700)	O-ring	1
	D053	01-37		4800411	Brake solenoid spool	1
	D054	01-37		4280279	Retaining ring (SB-2001-008)	1
	D056	01-37		4700145	Solenoid, 12v, Deutsch connector	1
	D056A	07-18		9004104-0180	O-ring	1
	"	97-15		633354(9004104-0180)	O-ring	1
	D070	01-37		4800823	Control assembly	1
	D90	01-37		4800410	Control spool assembly	1

L2B3	D017	97-36		9800916	Control handle	1
	D040	97-36		4700032	Neutral start switch	1
	D040A	07-18		9004201-3700	O-ring	1
	"	97-06		085043(9004201-3700)	O-ring	1
	D053	97-36		4800411	Brake Solenoid spool	1
	D054	01-31		4280279	Retaining ring (SB-2001-008)	1
	"	97-36	01-30	5000196		1
	D056	97-36		4700045	Solenoid, 12V, DIN connector	1
	D056A	07-18		9004104-0180	O-ring	1
	"	97-36		633354(9004104-0180)	O-ring	1
	D070	97-36		4800544	Control Assembly	1
	D90	97-36		4800464	Control Spool Assembly	1

Control



Enlarged **bold** type item numbers are recommended parts to be stocked for servicing

Control

	Global new part number
	Obsolete part number
	No change

MDC common parts

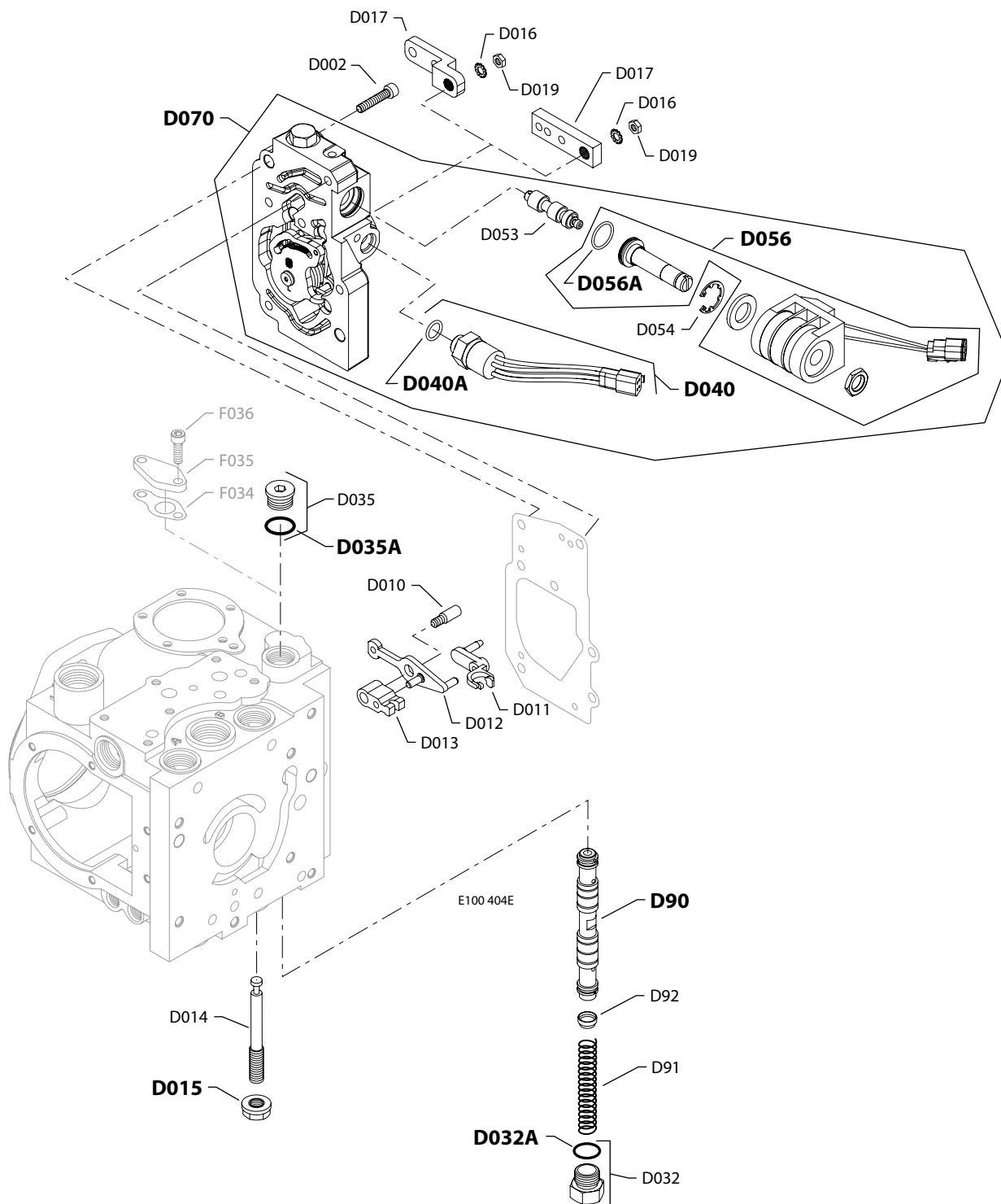
Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
	D002	07-18		9007314-0607	Screw (AAM0603001)	7
	"	93-20		5000002	Screw	7
	D010	07-18		1734449	Screw	1
	"	93-20		4800326	Screw	1
	D011	93-20		4800196	Control summing link	1
	D012	93-20		4800214	Control feedback link	1
	D013	93-20		4800201	Neutral adjust link	1
	D014	07-17		1734450	Neutral adjust screw	1
	"	93-20		4800658	Neutral adjust screw (SB-1997-026)	1
	D015	93-20		336826	Seal nut	1
	D016	07-18		9009660-3100	Washer	1
	"	93-20		689018(9009660-3100)	Washer	1
	D019	06-01		9003513-0800	Nut	1
	"	93-20		040642(9003513-0800)	Nut	1
	D032	93-20		4800615	Plug	1
	D032A	07-18		9004201-5000	O-ring	1
	"	-		001131(9004201-5000)	O-ring	1
	D035	07-18		9005110-7500	Plug	1
	"	98-02		681296(9005110-7500)	Plug	1
	D035A	07-18		9004201-5000	O-ring	1
	"	98-02		001131(9004201-5000)	O-ring	1
	D91	07-18		1746004	Control backlash spring	1
	"	-		4800515	Control backlash spring	1
	"	-	-	4800243	Control backlash spring	1
	D92	07-18		1746003	Spring adapter	1
	"	-		4800519	Spring adapter	1
	F034	93-20	98-01	4800200	Control spool cover gasket (SB-1997-029)	1
	F035	93-20	98-01	4800199	Control spool cover(SB-1997-029)	1
	F036	93-20	98-01	5000001	Screw(SB-1997-029)	2

MDC

L2B8	D017	97-36		4800689	Control handle, off-set (SB-1997-046)	1
	D040	97-36		4700032	Neutral start switch	1
	D040A	07-18		9004201-3700	O-ring	1
	"	97-06		085043(9004201-3700)	O-ring	1
	D053	97-36		4800411	Brake Solenoid spool	1
	D054	01-31		4280279	Retaining ring (SB-2001-008)	1
	"	97-36	01-30	5000196		1
	D056	97-36		4700045	Solenoid, 12V, DIN connector	1
	D056A	07-18		9004104-0180	O-ring	1
	"	97-36		633354(9004104-0180)	O-ring	1
	D070	97-36		4800544	Control Assembly	1
	D90	97-36		4800488	Control Spool Assembly	1

L3A3	D017	97-15		9800916	Control handle	1
	D040	97-15		4700025	Neutral start switch and backup alarm	1
	D040A	07-18		9004201-3700	O-ring	1
	"	97-15		085043(9004201-3700)	O-ring	1
	D053	97-15		4800411	Brake solenoid spool	1
	D054	01-31		4280279	Retaining ring (SB-2001-008)	1
	"	97-15	01-30	5000196	Retaining ring	1
	D056	97-15		4700043	Solenoid, 12v, Weatherpack connector	1
	D056A	07-18		9004104-0180	O-ring	1
	"	97-15		633354(9004104-0180)	O-ring	1
	D070	97-15		4800637	Control assembly	1
	D90	97-15		4800464	Control spool assembly	1

Control



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Control

	Global new part number
	Obsolete part number
	No change

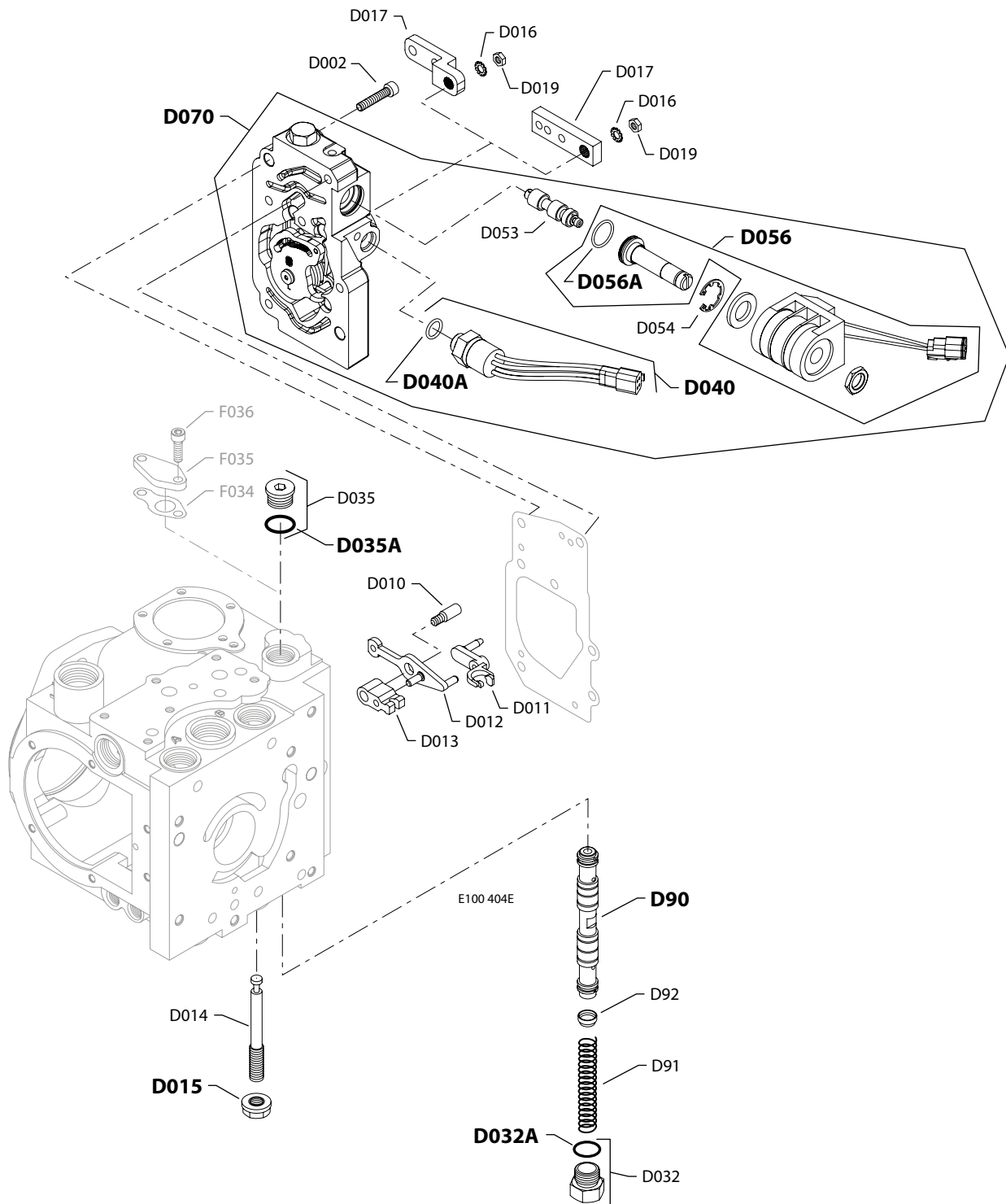
MDC common parts

Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
	D002	07-18		9007314-0607	Screw (AAM0603001)	7
	"	93-20		5000002	Screw	7
	D010	07-18		1734449	Screw	1
	"	93-20		4800326	Screw	1
	D011	93-20		4800196	Control summing link	1
	D012	93-20		4800214	Control feedback link	1
	D013	93-20		4800201	Neutral adjust link	1
	D014	07-17		1734450	Neutral adjust screw	1
	"	93-20		4800658	Neutral adjust screw (SB-1997-026)	1
	D015	93-20		336826	Seal nut	1
	D016	07-18		9009660-3100	Washer	1
	"	93-20		689018(9009660-3100)	Washer	1
	D019	06-01		9003513-0800	Nut	1
	"	93-20		040642(9003513-0800)	Nut	1
	D032	93-20		4800615	Plug	1
	D032A	07-18		9004201-5000	O-ring	1
	"	-		001131(9004201-5000)	O-ring	1
	D035	07-18		9005110-7500	Plug	1
	"	98-02		681296(9005110-7500)	Plug	1
	D035A	07-18		9004201-5000	O-ring	1
	"	98-02		001131(9004201-5000)	O-ring	1
	D91	07-18		1746004	Control backlash spring	1
	"	-		4800515	Control backlash spring	1
	"	-	-	4800243	Control backlash spring	1
	D92	07-18		1746003	Spring adapter	1
	"	-		4800519	Spring adapter	1
	F034	93-20	98-01	4800200	Control spool cover gasket (SB-1997-029)	1
	F035	93-20	98-01	4800199	Control spool cover(SB-1997-029)	1
	F036	93-20	98-01	5000001	Screw(SB-1997-029)	2

MDC

L3B3	D017	94-28		9800916	Control handle	1
	D040	94-28		4700025	Neutral start switch and backup alarm	1
	D040A	07-18		9004201-3700	O-ring	1
	"	94-28		085043(9004201-3700)	O-ring	1
	D053	94-28		4800411	Brake solenoid spool	1
	D054	01-31		4280279	Retaining ring (SB-2001-008)	1
	"	94-28	01-30	5000196	Retaining ring	1
	D056	94-28		4700045	Solenoid, 12v, DIN connector	1
	D056A	07-18		9004104-0180	O-ring	1
	"	94-28		633354(9004104-0180)	O-ring	1
	D070	94-28		4800545	Control assembly	1
	D90	94-28		4800464	Control spool assembly	1

L4B3	D017	94-28		9800916	Control handle	1
	D040	94-28		4700041	Neutral start switch and backup alarm	1
	D040A	07-18		9004201-3700	O-ring	1
	"	94-28		085043(9004201-3700)	O-ring	1
	D053	94-28		4800411	Brake solenoid spool	1
	D054	01-31		4280279	Retaining ring (SB-2001-008)	1
	"	94-28	01-30	5000196	Retaining ring	1
	D056	94-28		4700045	Solenoid, 12v, DIN connector	1
	D056A	07-18		9004104-0180	O-ring	1
	"	94-28		633354(9004104-0180)	O-ring	1
	D070	94-28		4800547	Control assembly	1
	D90	94-28		4800464	Control spool assembly	1



Enlarged **bold** type item numbers are recommended parts to be stocked for servicing

Control

	Global new part number
	Obsolete part number
	No change

MDC common parts

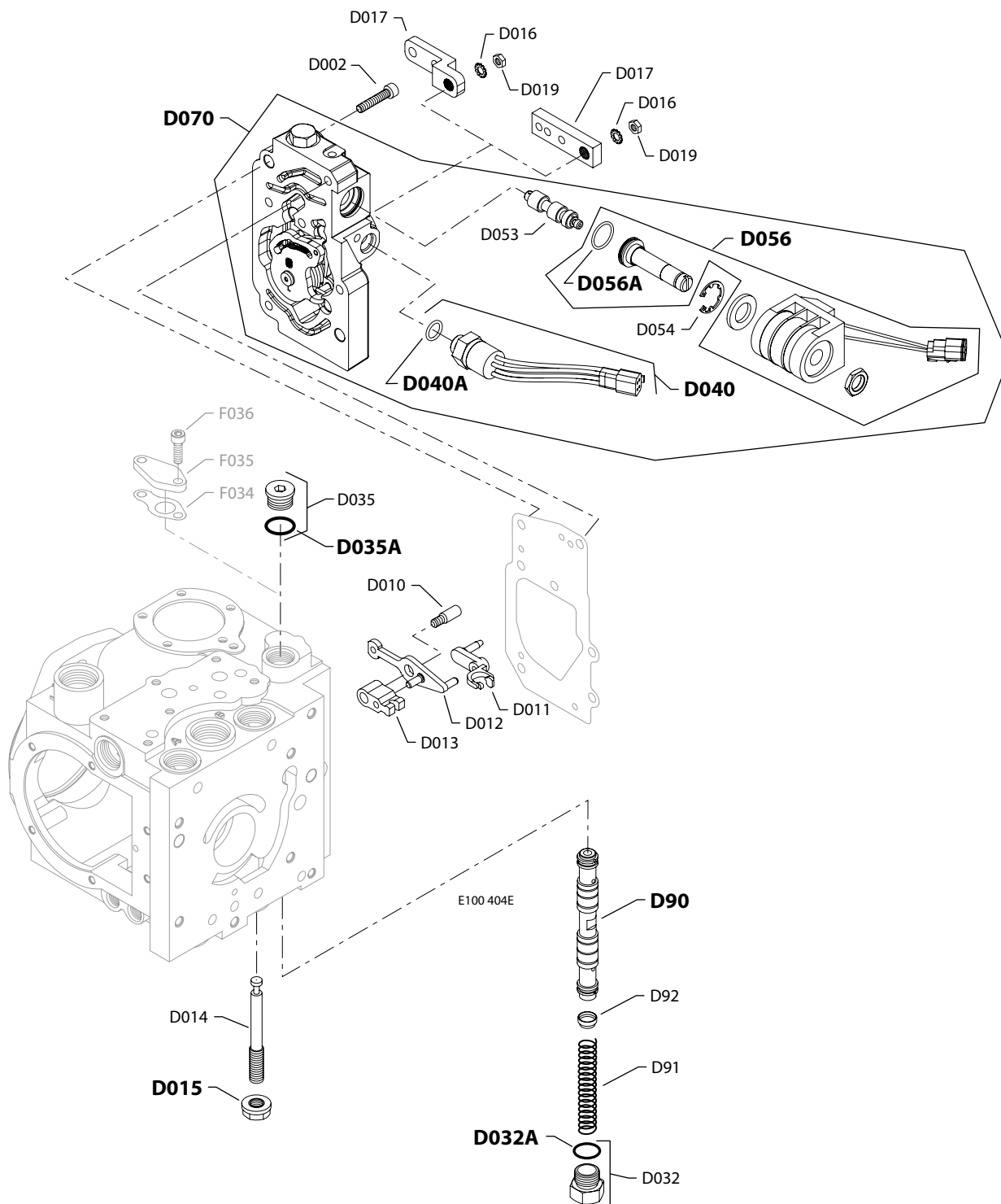
Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
	D002	07-18		9007314-0607	Screw (AAM0603001)	7
	"	93-20		5000002	Screw	7
	D010	07-18		1734449	Screw	1
	"	93-20		4800326	Screw	1
	D011	93-20		4800196	Control summing link	1
	D012	93-20		4800214	Control feedback link	1
	D013	93-20		4800201	Neutral adjust link	1
	D014	07-17		1734450	Neutral adjust screw	1
	"	93-20		4800658	Neutral adjust screw (SB-1997-026)	1
	D015	93-20		336826	Seal nut	1
	D016	07-18		9009660-3100	Washer	1
	"	93-20		689018(9009660-3100)	Washer	1
	D019	06-01		9003513-0800	Nut	1
	"	93-20		040642(9003513-0800)	Nut	1
	D032	93-20		4800615	Plug	1
	D032A	07-18		9004201-5000	O-ring	1
	"	-		001131(9004201-5000)	O-ring	1
	D035	07-18		9005110-7500	Plug	1
	"	98-02		681296(9005110-7500)	Plug	1
	D035A	07-18		9004201-5000	O-ring	1
	"	98-02		001131(9004201-5000)	O-ring	1
	D91	07-18		1746004	Control backlash spring	1
	"	-		4800515	Control backlash spring	1
	"	-	-	4800243	Control backlash spring	1
	D92	07-18		1746003	Spring adapter	1
	"	-		4800519	Spring adapter	1
	F034	93-20	98-01	4800200	Control spool cover gasket (SB-1997-029)	1
	F035	93-20	98-01	4800199	Control spool cover(SB-1997-029)	1
	F036	93-20	98-01	5000001	Screw(SB-1997-029)	2

MDC

L7J3	D017	01-01		9800916	Control handle	1
	D040	01-01		4700113	Neutral start switch and backup alarm	1
	D040A	07-18		9004201-3700	O-ring	1
	"	01-01		085043(9004201-3700)	O-ring	1
	D053	01-01		4800411	Brake solenoid spool	1
	D054	01-31		4280279	Retaining ring (SB-2001-008)	1
	"	01-01	01-30	5000196	Retaining ring	1
	D056	01-01		4700145	Solenoid, 12v, Deutsch connector	1
	D056A	07-18		9004104-0180	O-ring	1
	"	01-01		633354(9004104-0180)	O-ring	1
	D070	06-01		4800750	Control assembly	1
	D90	01-01		4800464	Control spool assembly	1

L7J5	D017	97-36		4800689	Control handle, off-set (SB-1997-046)	1
	D040	97-36		4700113	Neutral start switch and backup alarm	1
	D040A	07-18		9004201-3700	O-ring	1
	"	97-06		085043(9004201-3700)	O-ring	1
	D053	97-36		4800411	Brake Solenoid spool	1
	D054	01-31		4280279	Retaining ring (SB-2001-008)	1
	"	97-36	01-30	5000196		1
	D056	97-36		4700145	Solenoid, 12V, Deutsch connector	1
	D056A	07-18		9004104-0180	O-ring	1
	"	97-36		633354(9004104-0180)	O-ring	1
	D070	97-36		4800750	Control Assembly	1
	D90	97-36		4800410	Control Spool Assembly	1

Control



Enlarged **bold** type item numbers are recommended parts to be stocked for servicing



Control

	Global new part number
	Obsolete part number
	No change

MDC common parts

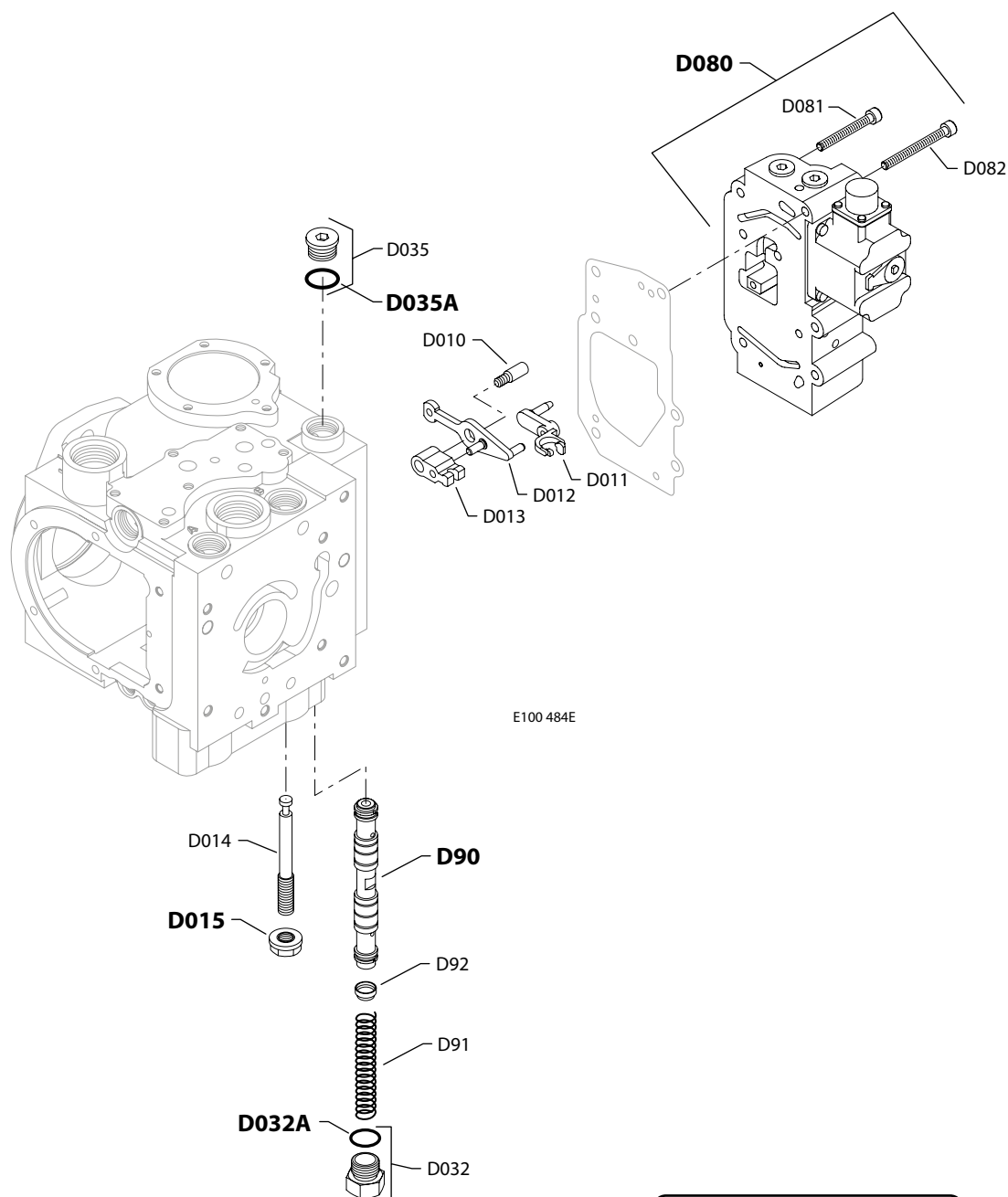
Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
	D002	07-18		9007314-0607	Screw (AAM0603001)	7
	"	93-20		5000002	Screw	7
	D010	07-18		1734449	Screw	1
	"	93-20		4800326	Screw	1
	D011	93-20		4800196	Control summing link	1
	D012	93-20		4800214	Control feedback link	1
	D013	93-20		4800201	Neutral adjust link	1
	D014	07-17		1734450	Neutral adjust screw	1
	"	93-20		4800658	Neutral adjust screw (SB-1997-026)	1
	D015	93-20		336826	Seal nut	1
	D016	07-18		9009660-3100	Washer	1
	"	93-20		689018(9009660-3100)	Washer	1
	D019	06-01		9003513-0800	Nut	1
	"	93-20		040642(9003513-0800)	Nut	1
	D032	93-20		4800615	Plug	1
	D032A	07-18		9004201-5000	O-ring	1
	"	-		001131(9004201-5000)	O-ring	1
	D035	07-18		9005110-7500	Plug	1
	"	98-02		681296(9005110-7500)	Plug	1
	D035A	07-18		9004201-5000	O-ring	1
	"	98-02		001131(9004201-5000)	O-ring	1
	D91	07-18		1746004	Control backlash spring	1
	"	-		4800515	Control backlash spring	1
	"	-	-	4800243	Control backlash spring	1
	D92	07-18		1746003	Spring adapter	1
	"	-		4800519	Spring adapter	1
	F034	93-20	98-01	4800200	Control spool cover gasket (SB-1997-029)	1
	F035	93-20	98-01	4800199	Control spool cover(SB-1997-029)	1
	F036	93-20	98-01	5000001	Screw(SB-1997-029)	2

MDC

L7JA	D017	99-02		4800689	Control handle, off-set (SB-1997-046)	1
	D040	99-02		4700113	Neutral start switch and backup alarm	1
	D040A	07-18		9004201-3700	O-ring	1
	"	99-02		085043(9004201-3700)	O-ring	1
	D053	99-02		4800411	Brake solenoid spool	1
	D054	01-31		4280279	Retaining ring (SB-2001-008)	1
	"	99-02	01-30	5000196	Retaining ring	1
	D056	99-02		4700145	Solenoid, 12v, Deutsch connector	1
	D056A	07-18		9004104-0180	O-ring	1
	"	99-02	-	633354(9004104-0180)	O-ring	1
	D070	99-02		4800750	Control assembly	1
	D90	99-02		4800464	Control spool assembly	1

L7JC	D017	99-28		4800763	Control handle, off-set, special	1
	D040	99-28		4700113	Neutral start switch and backup alarm	1
	D040A	07-18		9004201-3700	O-ring	1
	"	99-28		085043(9004201-3700)	O-ring	1
	D053	99-28		4800411	Brake solenoid spool	1
	D054	01-31		4280279	Retaining ring (SB-2001-008)	1
	"	99-28	01-30	5000196	Retaining ring	1
	D056	99-28		4700145	Solenoid, 12v, Deutsch connector	1
	D056A	07-18		9004104-0180	O-ring	1
	"	99-28		633354(9004104-0180)	O-ring	1
	D070	99-28		4800750	Control assembly	1
	D90	99-28		4800464	Control spool assembly	1

Control



Control

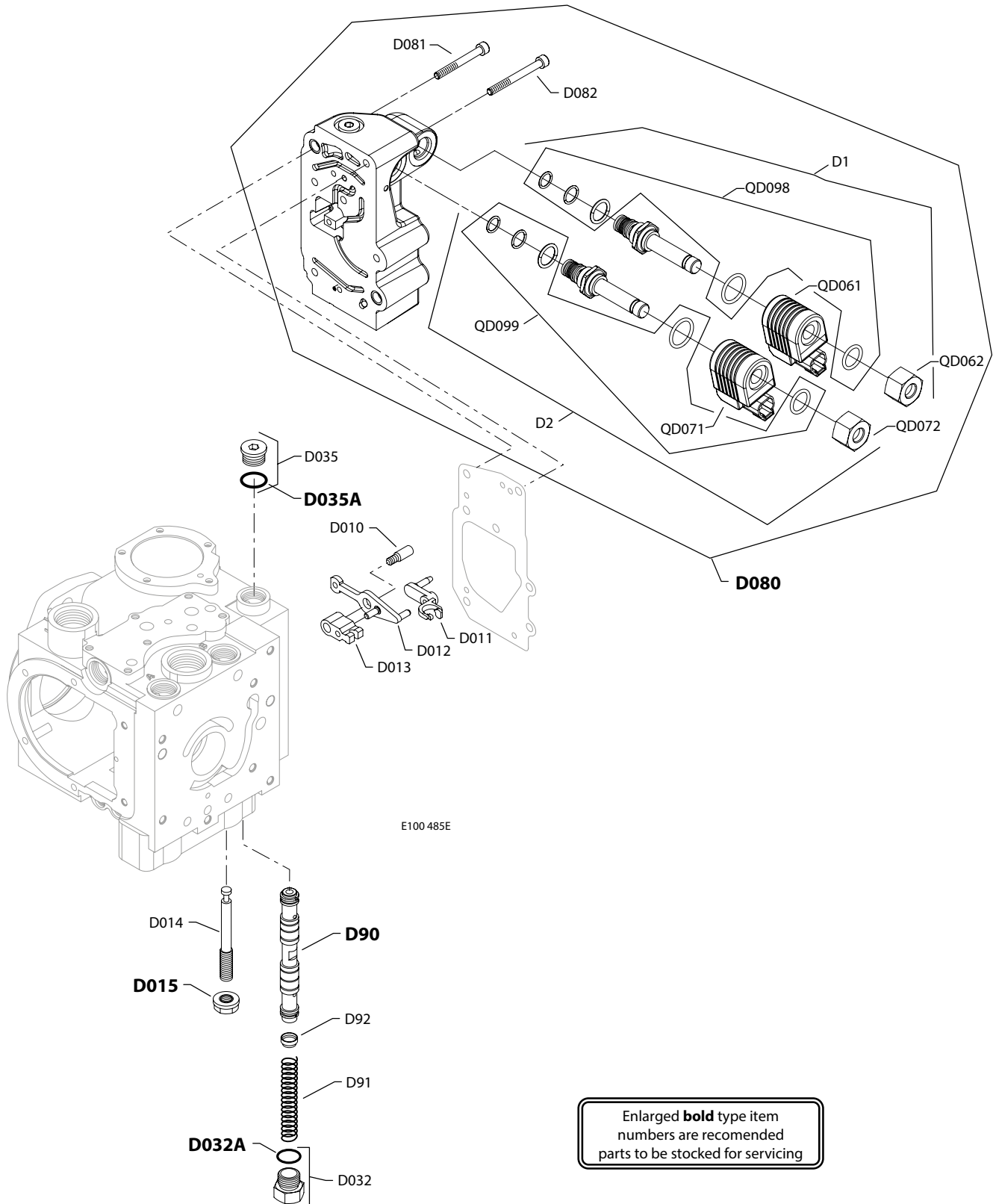
	Global new part number
	Obsolete part number
	No change

EDC common parts

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per Model/Kit
	D010	06-01		1734449	Screw	1
	"	94-04	06-01	4800326	Screw	1
	D011	94-04		4800196	Control summing link	1
	D012	94-04		4800214	Control feedback link	1
	D013	94-04		4800201	Neutral adjust link	1
	D014	94-04		4800658	Neutral adjust screw	1
	D015	94-04		336826	Seal Nut	1
	D032			4800615	Plug	1
	"	94-04		681296(9005110-7500)	Plug	1
	D032A	94-04		9004201-5000	O-ring	1
	"	94-00		001131 (9004201-5000)	O-ring	1
	D035	94-01		9005110-7500	Plug	1
	"	94-02		681296 (9005110-7500)	Plug	1
	D035A	94-03		9004201-5000	O-ring	1
	"	94-04		001131 (9004201-5000)	O-ring	1
	D081	07-18		9007314-0611	Screw (AAM0605001)	4
	"	94-04		5000003	Screw	4
	D082	07-18		354407	Screw (AAM0606001)	3
	"	94-04	07-18	5000004	Screw	3
	D91	06-01		1746004	Control backlash spring	1
	"		06-01	4800515	Control backlash spring	1
	"	94-04		4800243	Control backlash spring	1
	D92	07-18		1746003	Spring Adapter	1
	"		07-18	4800519	Spring Adapter	1

EDC

E1A3	D080	94-04		4510048	EDC kit, Weatherpack connector	1
	D90	94-04		4800464	Control spool assembly	1
E1A4	D080	00-06		4510049	EDC kit, MS connector	1
	D90	00-06		4800464	Control spool assembly	1
E1A5	D080	95-19		4510048	EDC kit, Weatherpack connector	1
	D90	95-19		4800410	Control spool assembly	1
E1A6	D080	95-19		4510049	EDC kit, MS connector	1
	D90	95-19		4800410	Control spool assembly	1
E1A7	D080	99-08		4510393	EDC kit, Deutsch connector	1
	D90	99-08		4800410	Control spool assembly	1
E1B3	D080	00-06		4510394	EDC kit, Weatherpack connector	1
	D90	00-06		4800464	Control spool assembly	1
E1B6	D080	01-11		4510395	EDC kit, MS Connector	1
	D90	01-11		4800410	Control spool assembly	1



Control

	Global new part number
	Obsolete part number
	No change

HC-EDC common parts

Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
	D010	06-01		1734449	Screw	1
	"	01-10	06-01	4800326	Screw	1
	D011	01-10		4800196	Control summing link	1
	D012	01-10		4800214	Control feedback link	1
	D013	01-10		4800201	Neutral adjust link	1
	D014	01-10		4800658	Neutral adjust screw	1
	D015	01-10		336826	Seal Nut	1
	D032			4800615	Plug	1
	"	01-10		681296(9005110-7500)	Plug	1
	D032A	01-10		9004201-5000	O-ring	1
	"	94-00		001131 (9004201-5000)	O-ring	1
	D035	94-01		9005110-7500	Plug	1
	"	94-02		681296 (9005110-7500)	Plug	1
	D035A	94-03		9004201-5000	O-ring	1
	"	01-10		001131 (9004201-5000)	O-ring	1
	D081	07-18		9007314-0611	Screw (AAM0605001)	4
	"	01-10		5000003	Screw	4
	D082	07-18		354407	Screw (AAM0606001)	3
	"	01-10	07-18	5000004	Screw	3
	D91	06-01		1746004	Control backlash spring	1
	"		06-01	4800515	Control backlash spring	1
	"	01-10		4800243	Control backlash spring	1
	D92	07-18		1746003	Spring Adapter	1
	"		07-18	4800519	Spring Adapter	1
	D097	01-10	17-13	11016794	Kit seal, Coil o-rings	2
	D098	01-10	17-13	11016151	Kit seal, Valve o-rings	2

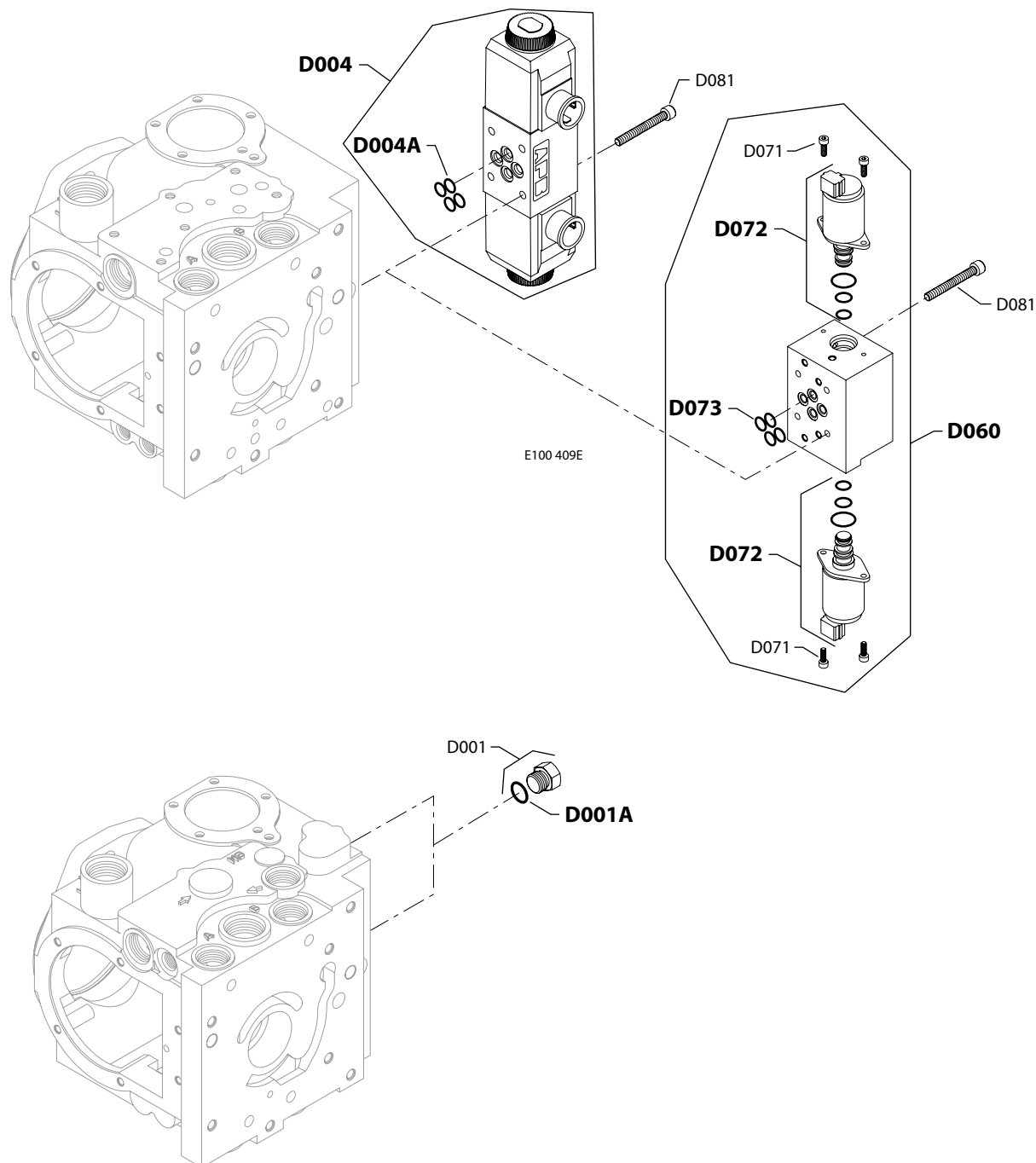
HC-EDC

E2C7	D080	01-10		11076847	HC-EDC kit, 12V Deutsch Connectors on wires	1
	D90	01-10	17-13	4800410	Control spool assembly	1
	D093	01-10	17-13	322466	Coil	2
	D1	01-10		138108	Valve Assembly	1
	D2	17-13		138108	Valve Assembly	1
	QD061	17-13		322466	Coil, 12V	1
	QD071	17-13		322466	Coil, 12V	1
	QD062	17-13		322399	Nut, Coil	1
	QD072	17-13		322399	Nut, Coil	1
	QD098	17-13		11136912	Kit-Seal-Buna-N, S42_HC-EDC	1
	QD099	17-13		11136912	Kit-Seal-Buna-N, S42_HC-EDC	1

E2C8	D080	10-09		11076848	HC-EDC kit, 12V Integrated Deutsch Connectors	1
	D90	10-09	17-13	4800410	Control spool assembly	1
	D093	10-09	17-13	322113	Coil	2
	D1	10-09		138516	Valve Assembly	1
	D2	17-13		138516	Valve Assembly	1
	QD061	17-13		322113	Coil, 12V	1
	QD071	17-13		322113	Coil, 12V	1
	QD062	17-13		322399	Nut, Coil	1
	QD072	17-13		322399	Nut, Coil	1
	QD098	17-13		11136912	Kit-Seal-Buna-N, S42_HC-EDC	1
	QD099	17-13		11136912	Kit-Seal-Buna-N, S42_HC-EDC	1

E2D8	D080	10-09		11076849	HC-EDC kit, 24V Integrated Deutsch Connectors	1
	D90	10-09	17-13	4800410	Control spool assembly	1
	D093	10-09	17-13	322115	Coil	2
	D1	10-09		138692	Valve Assembly	2
	D2	17-13		138692	Valve Assembly	1
	QD061	17-13		322115	Coil, 24V	1
	QD071	17-13		322115	Coil, 24V	1
	QD062	17-13		322399	Nut, Coil	1
	QD072	17-13		322399	Nut, Coil	1
	QD098	17-13		11136912	Kit-Seal-Buna-N, S42_HC-EDC	1
	QD099	17-13		11136912	Kit-Seal-Buna-N, S42_HC-EDC	1

Control



Enlarged **bold** type item numbers are recommended parts to be stocked for servicing

Control

	Global new part number
	Obsolete part number
	No change

3 position control

Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
F2NN	D004	94-04		4700034	Solenoid valve, 12 volt, DIN connector	1
	D004A	07-18		9004105-0120	O-ring	4
	"	94-04		011296(9004105-0120)	O-ring	4
	D081	07-18		9007315-0507	Screw (AAM0503001)	4
	"	94-04		5000164(9007315-0507)	Screw	4

F4NN	D004	97-03		9700918	Solenoid valve, 24 volt, DIN connector	1
	D004A	07-18		9004105-0120	O-ring	4
	"	97-03		011296(9004105-0120)	O-ring	4
	D081	07-18		9007315-0507	Screw (AAM0503001)	4
	"	97-03		5000164(9007315-0507)	Screw	4

F5NN	D004	96-35		519354	Solenoid valve, 12 volt, APM connector	1
	D004A	07-18		9004105-0120	O-ring	4
	"	96-35		011296(9004105-0120)	O-ring	4
	D081	07-18		9007315-0510	Screw (AAM0504501)	4
	"	96-35		5000164(9007315-0507)	Screw	4

NFPE control

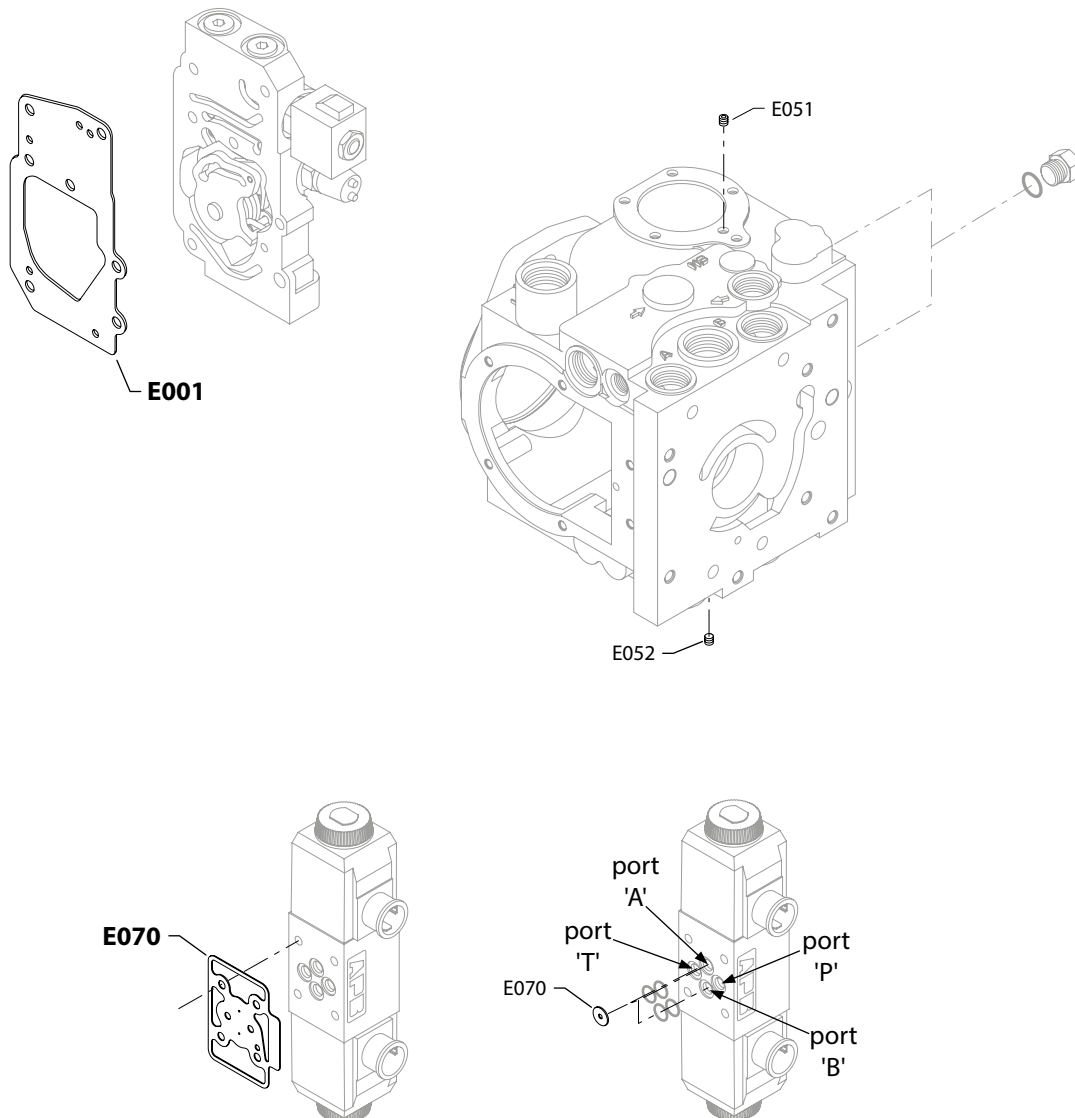
G1A1	D060	07-18		1746717	Control valve assembly, 20 bar, AMP, connector	1
	"	95-42		4800499	Control valve assembly, 20 bar, AMP, connector	1
	D071	07-18		9007315-0403	Screw (AAM0401201)	4
	"	95-42		5000378(9007315-0403)	Screw	4
	D072	95-42		4700150	Solenoid valve, 20 bar (SB-1999-066)	2
	D073	07-18		9004105-0110	O-ring	4
	"	95-42		144725(9004105-0110)	O-ring	4
	D081	07-18		9007315-0507	Screw (AAM0503001)	4
	"	95-42		5000164(9007315-0507)	Screw	4

G1B1	D060	99-24		4800761	Control valve assembly, 25 bar, AMP, connector	1
	D071	07-18		9007315-0403	Screw (AAM0401201)	4
	"	95-42		5000378(9007315-0403)	Screw	4
	D072	99-24		4700151	Solenoid valve, 25 bar	2
	D073	07-18		9004105-0110	O-ring	4
	"	99-24		144725(9004105-0110)	O-ring	4
	D081	07-18		9007315-0507	Screw (AAM0503001)	4
	"	99-24		5000164(9007315-0507)	Screw	4

NFPE hydraulic

G3AN	D001	07-18		9005100-5600	Plug	2
	"	93-50		046151(9005100-5600)	Plug	2
	D001A	07-18		9004201-3700	O-ring	2
	"	93-50		085043(9004201-3700)	O-ring	2

Control Response



Enlarged **bold** type item numbers are recommended parts to be stocked for servicing

Control Response

	Global new part number
	Obsolete part number
	No change

Gasket/orifice

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per Model/Kit
00	E001	93-20		4800301	Control gasket, no orifice	1
01	E001	93-20		4800478	Control gasket, 1.6 mm	1
02	E001	93-20		4800479	Control gasket, 1.0 mm	1
03	E001	93-20		4800480	Control gasket, 0.8&4.0 mm	1
05	E001	95-38		4800524	Control gasket, 0.9&4.0 mm	1
06	E001	95-38		4800572	Control gasket, 0.7 FD/0.9 DR mm	1
09	E001	96-47		4800595	Control gasket, 0.8/1.44 & 4.0 mm	1
10	E001	97-15		4800633	Control gasket, 0.725 & 4.0 mm	1
11	E001	97-40		4800660	Control gasket, 0.8 & 4.0 mm	1
50	E001	93-50		None	None, NFPH control	0

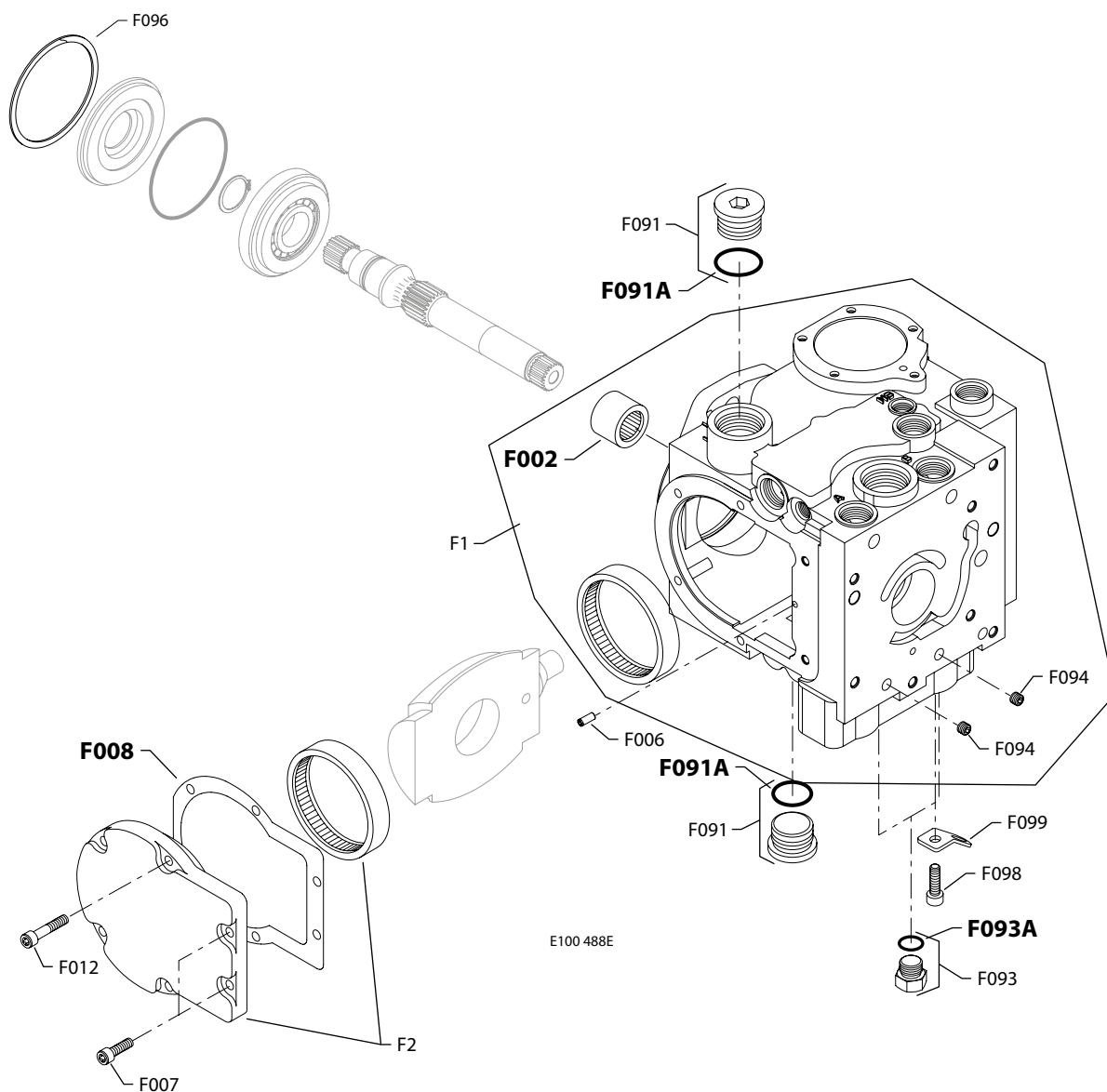
52	E051	07-18		SP2370-0610	Orifice plug, 1.0 mm	1
	"	97-16		4570063	Orifice plug, 1.0 mm (SB-1997-012)	1
	"	93-50	97-15	636241(9001418-0003)	Orifice plug, 1.0 mm (SB-1997-012)	1
	E052	07-18		SP2370-0610	Orifice plug, 1.0 mm	1
	"	97-16		4570063	Orifice plug, 1.0 mm (SB-1997-012)	1
	"	93-50	97-15	636241(9001418-0003)	Orifice plug, 1.0 mm (SB-1997-012)	1

53	E051	07-18		SP2370-0608	Orifice plug, 0.8 mm	1
	"	97-16		739144	Orifice plug, 0.8 mm (SB-1997-012)	1
	"	93-50	97-15	636258(9001418-0004)	Orifice plug, .75 mm (SB-1997-012)	1
	E052	07-18		SP2370-0608	Orifice plug, 0.8 mm	1
	"	97-16		739144	Orifice plug, 0.8 mm (SB-1997-012)	1
	"	93-50	97-15	636258(9001418-0004)	Orifice plug, .75 mm (SB-1997-012)	1

55	E051	07-18		SP2370-0613	Orifice plug, 1.3 mm	1
	"	99-46	01-48	4570064	Orifice plug, 1.3 mm	1
	E052	07-18		SP2370-0613	Orifice plug, 1.3 mm	1
	"	99-46	01-48	4570064	Orifice plug, 1.3 mm	1

70		96-38		None	None, NFPE	0
72	E070	96-38		4800651	Gasket, 1.0 mm A & B ports (SB-1998-030)	1
73	E070	96-38		4800650	Gasket, 0.8 mm A & B ports (SB-1998-030)	1
74	E070	98-32		512837	Orifice disc, 0.8 mm A & B ports (SB-1998-055)	3
75	E070	97-10		4800667	Gasket, 0.8 mm A, B & T ports	1
76	E070	98-09		4800710	Gasket, 1.2 mm A & B ports	1
NN		94-08		None	None	0

Housing



Enlarged **bold** type item numbers are recommended parts to be stocked for servicing

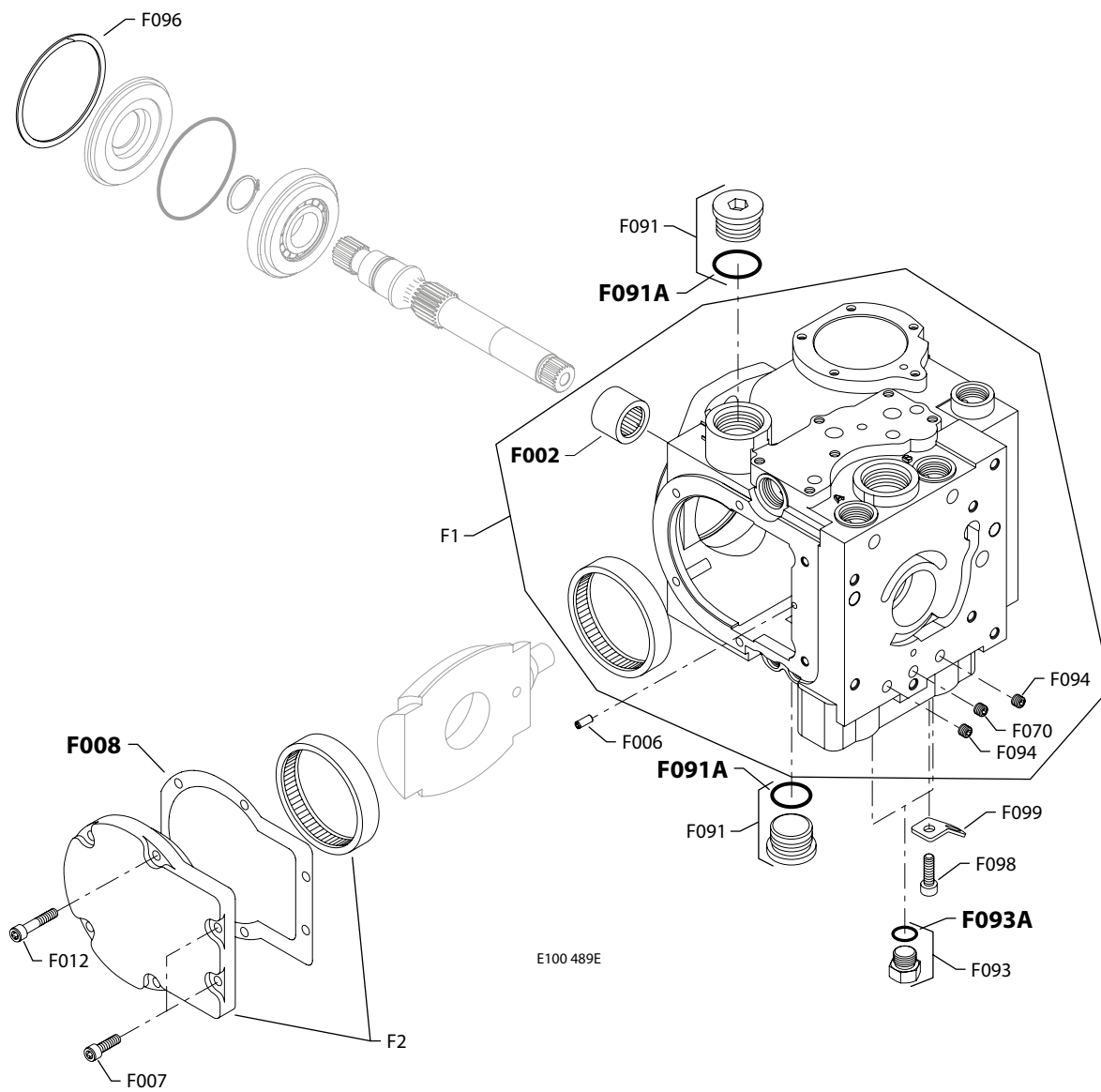
Housing

	Global new part number
	Obsolete part number
	No change

XDC, base

Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
A	F1	98-01		4410287	Housing assembly (SB-1997-029 & 1999-048)	1
	F2	93-48		4410143	Side cover assembly	1
	F002	07-18		9001465-0015	Needle bearing	1
	"	94-04		5000140 (9001465-0015)	Needle bearing	1
	F006	07-18		1745710	Pin	1
	"	94-44		5000179	Pin	1
	F007	07-18		9007314-0605	Screw (AAM0602001)	2
	"	98-01		5000001	Screw (SB-1999-029)	2
	"	94-04	99-52	5000001	Screw	6
	F008	94-04		4410272	Side cover gasket (SB-1999-044)	1
	F012	07-18		9007314-0607	Screw (AAM0603001)	4
	"	98-01		5000002	Screw (SB-1997-029)	4
	F091	07-18		9005110-9200	Plug	2
	"	94-04		320002(9005110-9200)	Plug	2
	F091A	07-18		9004201-9000	O-ring	2
	"	94-04		001172(9004201-9000)	O-ring	2
	F093	07-18		9005100-5600	Plug	2
	"	94-04		46151(9005100-5600)	Plug	2
	F093A	07-18		9004201-3700	O-ring	2
	"	94-04		085043(9004201-3700)	O-ring	2
	F094	07-18		SP2914-SL-02	Pipe plug	2
	"	-		9005003-1200	Pipe plug	2
	"	94-04		001479(9005001-1200)	Pipe plug	2
	F096	94-04		5000114	Retaining ring	1
	F098	06-01		9007314-0605	Screw (AAM0602001)	1
	"	98-31		5000001	Screw (SB-1999-048)	1
	F099	98-31		4800754	Lifting bracket (SB-1999-048)	1

Housing



Enlarged **bold** type item numbers are recommended parts to be stocked for servicing

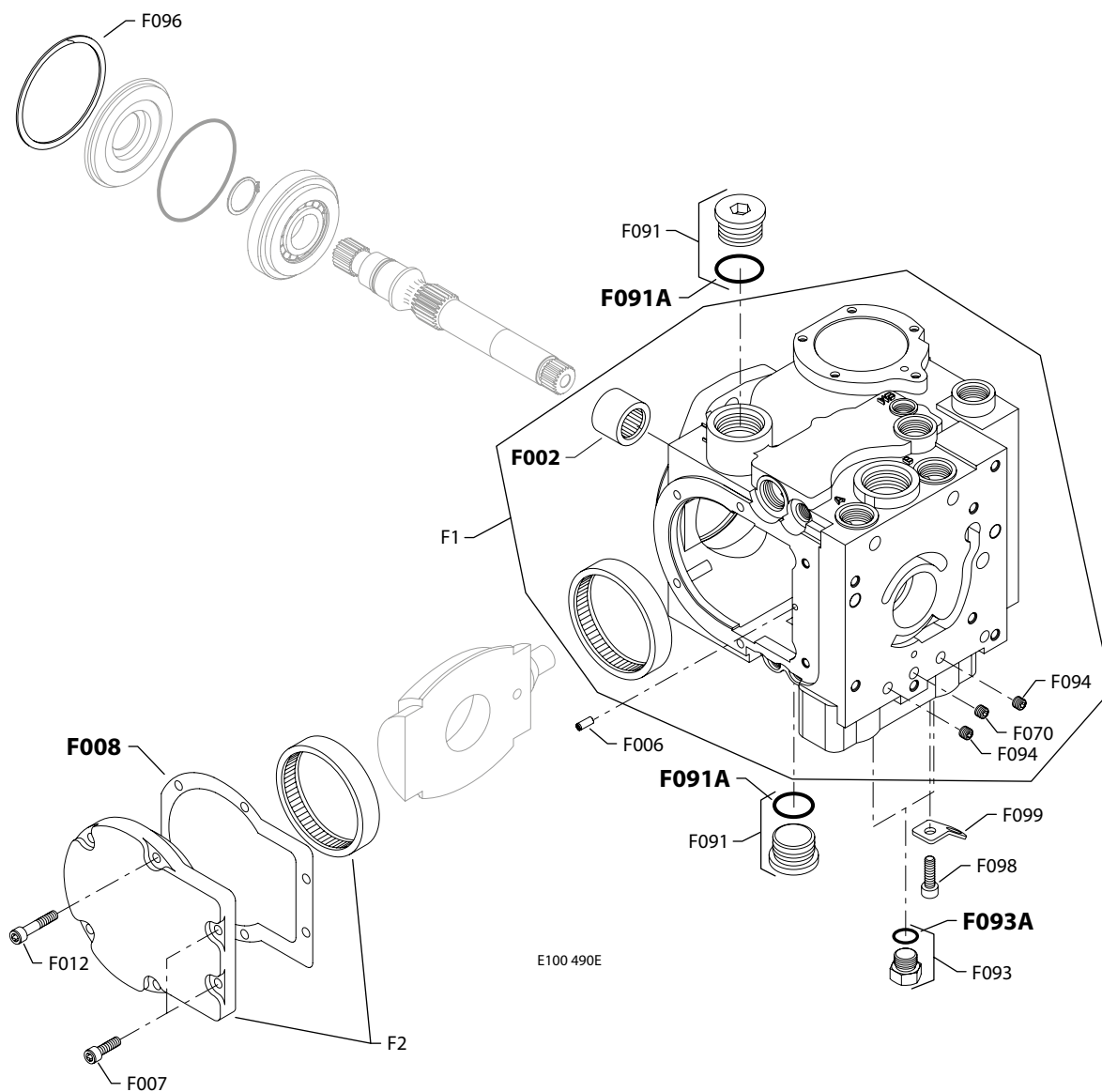
Housing

	Global new part number
	Obsolete part number
	No change

XDC, full featured

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per Model/Kit
B	F1	98-01		4410288	Housing assembly (SB-1997-029 & 1999-048)	1
	F2	93-48		4410143	Side cover assembly	1
	F002	07-18		9001465-0015	Needle bearing	1
	"	94-04		5000140 (9001465-0015)	Needle bearing	1
	F006	07-18		1745710	Pin	1
	"	94-44		5000179	Pin	1
	F007	07-18		9007314-0605	Screw (AAM0602001)	2
	"	98-01		5000001	Screw (SB-1999-029)	2
	"	94-04	99-52	5000001	Screw	6
	F008	94-04		4410272	Side cover gasket (SB-1999-044)	1
	F012	07-18		9007314-0607	Screw (AAM0603001)	4
	"	98-01		5000002	Screw (SB-1997-029)	4
	F070	07-18		SP2914-SL-02	Pipe plug	1
	"	-		9005003-1200	Pipe plug	1
	"	94-04		001479(9005001-1200)	Pipe plug	1
	F091	07-18		9005110-9200	Plug	2
	"	94-04		320002(9005110-9200)	Plug	2
	F091A	07-18		9004201-9000	O-ring	2
	"	94-04		001172(9004201-9000)	O-ring	2
	F093	07-18		9005100-5600	Plug	2
	"	94-04		46151(9005100-5600)	Plug	2
	F093A	07-18		9004201-3700	O-ring	2
	"	94-04		085043(9004201-3700)	O-ring	2
	F094	07-18		SP2914-SL-02	Pipe plug	2
	"	-		9005003-1200	Pipe plug	2
	"	94-04		001479(9005001-1200)	Pipe plug	2
	F096	94-04		5000114	Retaining ring	1
	F098	07-18		9007314-0605	Screw (AAM0602001)	1
	"	98-31		5000001	Screw (SB-1999-048)	1
	F099	98-31		4800754	Lifting bracket (SB-1999-048)	1

Housing



Enlarged **bold** type item numbers are recommended parts to be stocked for servicing

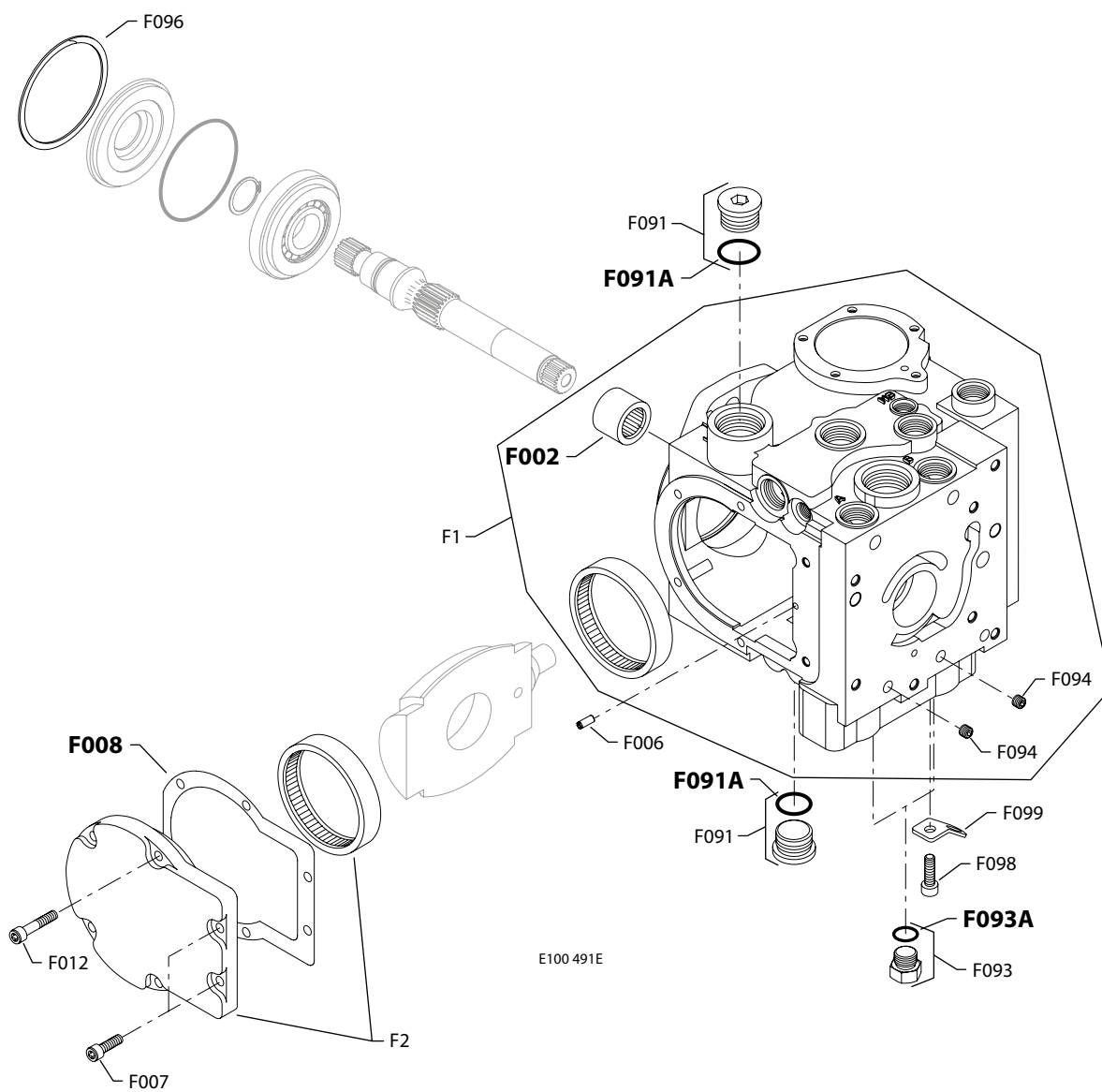
Housing

	Global new part number
	Obsolete part number
	No change

XDC, with loop flushing

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per Model/Kit
C	F1	98-01		4410330	Housing assembly (SB-1997-029 & 1999-048)	1
	F2	93-48		4410143	Side cover assembly	1
	F002	07-18		9001465-0015	Needle bearing	1
	"	94-04		5000140 (9001465-0015)	Needle bearing	1
	F006	07-18		1745710	Pin	1
	"	94-44		5000179	Pin	1
	F007	07-18		9007314-0605	Screw (AAM0602001)	2
	"	98-01		5000001	Screw (SB-1999-029)	2
	"	94-04	99-52	5000001	Screw	6
	F008	94-04		4410272	Side cover gasket (SB-1999-044)	1
	F012	07-18		9007314-0607	Screw (AAM0603001)	4
	"	98-01		5000002	Screw (SB-1997-029)	4
	F070	07-18		SP2914-SL-02	Pipe plug	1
	"	-		9005003-1200	Pipe plug	1
	"	94-04		001479(9005001-1200)	Pipe plug	1
	F091	07-18		9005110-9200	Plug	2
	"	94-04		320002(9005110-9200)	Plug	2
	F091A	07-18		9004201-9000	O-ring	2
	"	94-04		001172(9004201-9000)	O-ring	2
	F093	07-18		9005100-5600	Plug	2
	"	94-04		46151(9005100-5600)	Plug	2
	F093A	07-18		9004201-3700	O-ring	2
	"	94-04		085043(9004201-3700)	O-ring	2
	F094	07-18		SP2914-SL-02	Pipe plug	2
	"	-		9005003-1200	Pipe plug	2
	"	94-04		001479(9005001-1200)	Pipe plug	2
	F096	94-04		5000114	Retaining ring	1
	F098	07-18		9007314-0605	Screw (AAM0602001)	1
	"	98-31		5000001	Screw (SB-1999-048)	1
	F099	98-31		4800754	Lifting bracket (SB-1999-048)	1

Housing



Enlarged **bold** type item numbers are recommended parts to be stocked for servicing

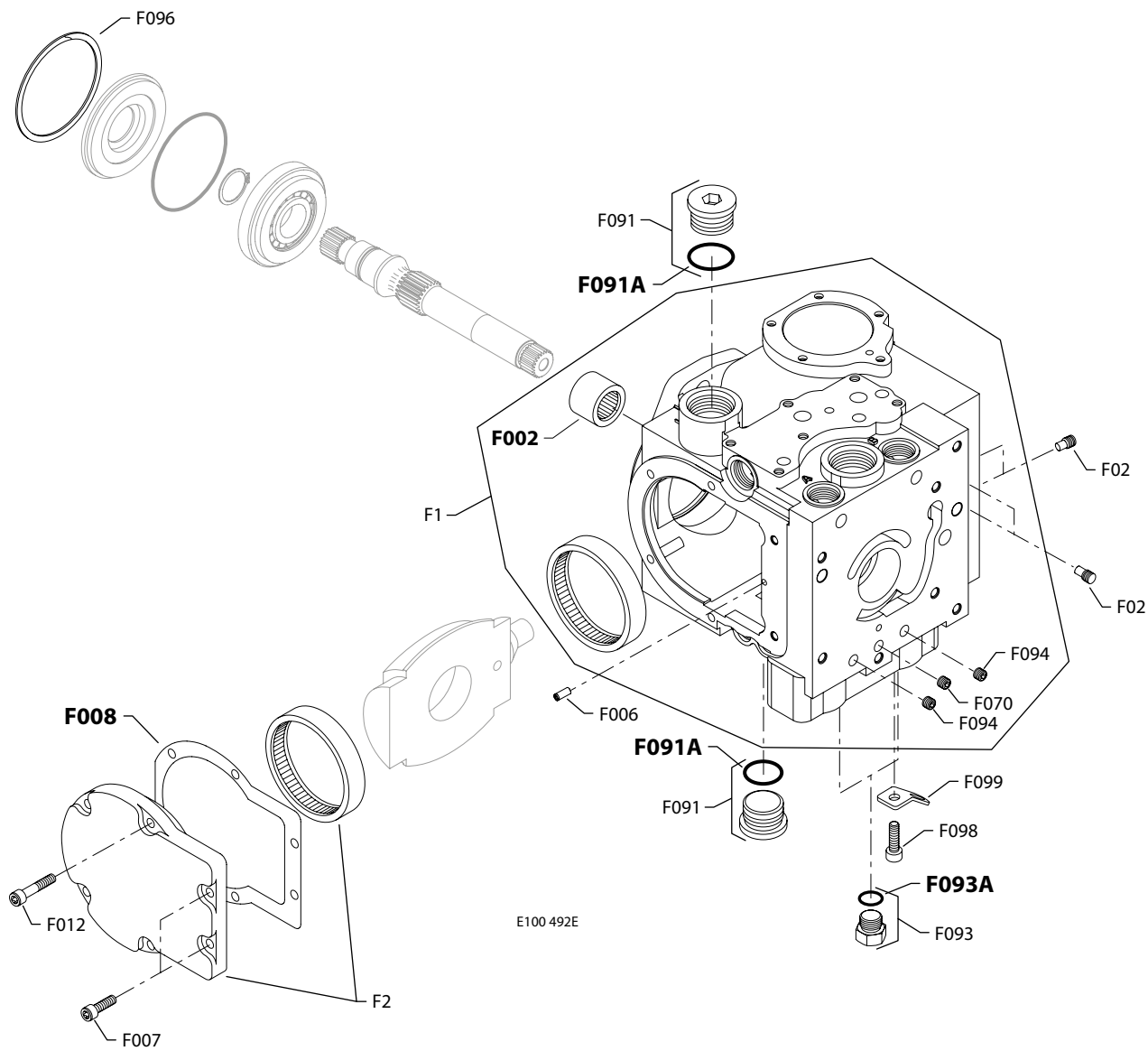
Housing

	Global new part number
	Obsolete part number
	No change

XDC, no loop flushing, full flow filtration

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per Model/Kit
D	F1	02-30		4410334	Housing assembly	1
	F2	02-30		4410143	Side cover assembly	1
	F002	07-18		9001465-0015	Needle bearing	1
	"	94-04		5000140 (9001465-0015)	Needle bearing	1
	F006	07-18		1745710	Pin	1
	"	02-30		5000179	Pin	1
	F007	07-18		9007314-0605	Screw (AAM0602001)	2
	"	02-30		5000001	Screw (SB-1999-029)	2
	F008	02-30		4410272	Side cover gasket (SB-1999-044)	1
	F012	07-18		9007314-0607	Screw (AAM0603001)	4
	"	02-30		5000002	Screw (SB-1997-029)	4
	F091	07-18		9005110-9200	Plug	2
	"	02-30		320002(9005110-9200)	Plug	2
	F091A	07-18		9004201-9000	O-ring	2
	"	02-30		001172(9004201-9000)	O-ring	2
	F093	07-18		9005100-5600	Plug	2
	"	02-30		46151(9005100-5600)	Plug	2
	F093A	07-18		9004201-3700	O-ring	2
	"	02-30		085043(9004201-3700)	O-ring	2
	F094	07-18		SP2914-SL-02	Pipe plug	2
	"	-		9005003-1200	Pipe plug	2
	"	02-30		001479(9005001-1200)	Pipe plug	2
	F096	02-30		5000114	Retaining ring	1
	F098	07-18		9007314-0605	Screw (AAM0602001)	1
	"	02-30		5000001	Screw (SB-1999-048)	1
	F099	02-30		4800754	Lifting bracket	1

Housing



Enlarged **bold** type item numbers are recommended parts to be stocked for servicing



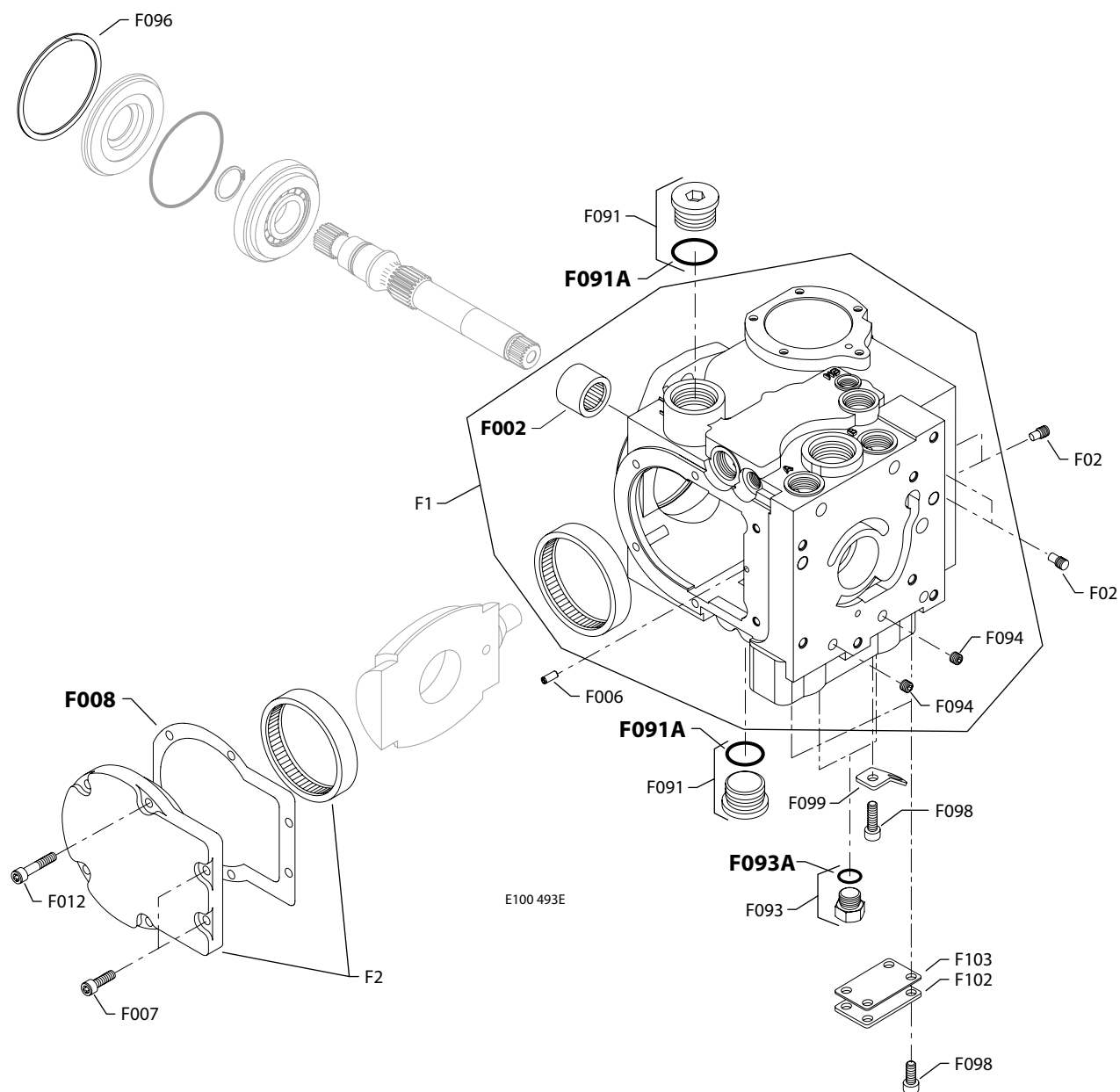
Housing

	Global new part number
	Obsolete part number
	No change

MDC common parts

Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
J	F1	99-52		4410289	Housing assembly (SB-1997-029 & 1999-048)	1
	F2	93-48		4410143	Side cover assembly	1
	F02	07-18		5000565	Plug expansn	4
	F002	07-18		9001465-0015	Needle bearing	1
	"	94-04		5000140 (9001465-0015)	Needle bearing	1
	F006	07-18		1745710	Pin	1
	"	94-44		5000179	Pin	1
	F007	07-18		9007314-0605	Screw (AAM0602001)	2
	"	98-01		5000001	Screw (SB-1999-029)	2
	"	94-04	99-52	5000001	Screw	6
	F008	94-04		4410272	Side cover gasket (SB-1999-044)	1
	F012	07-18		9007314-0607	Screw (AAM0603001)	4
	"	98-01		5000002	Screw (SB-1997-029)	4
	F070	07-18		SP2914-SL-02	Pipe plug	1
	"	-		9005003-1200	Pipe plug	1
	"	94-04		001479(9005001-1200)	Pipe plug	1
	F091	07-18		9005110-9200	Plug	2
	"	02-30		320002(9005110-9200)	Plug	2
	F091A	07-18		9004201-9000	O-ring	2
	"	02-30		001172(9004201-9000)	O-ring	2
	F093	07-18		9005100-5600	Plug	2
	"	94-04		46151(9005100-5600)	Plug	2
	F093A	07-18		9004201-3700	O-ring	2
	"	94-04		085043(9004201-3700)	O-ring	2
	F094	07-18		SP2914-SL-02	Pipe plug	2
	"	-		9005003-1200	Pipe plug	2
	"	94-04		001479(9005001-1200)	Pipe plug	2
	F096	94-04		5000114	Retaining ring	1
	F098	07-18		9007314-0605	Screw (AAM0602001)	1
	"	94-04		5000001	Screw (SB-1999-048)	1
	F099	94-04		4800754	Lifting bracket (SB-1999-048)	1

Housing



Enlarged **bold** type item numbers are recommended parts to be stocked for servicing

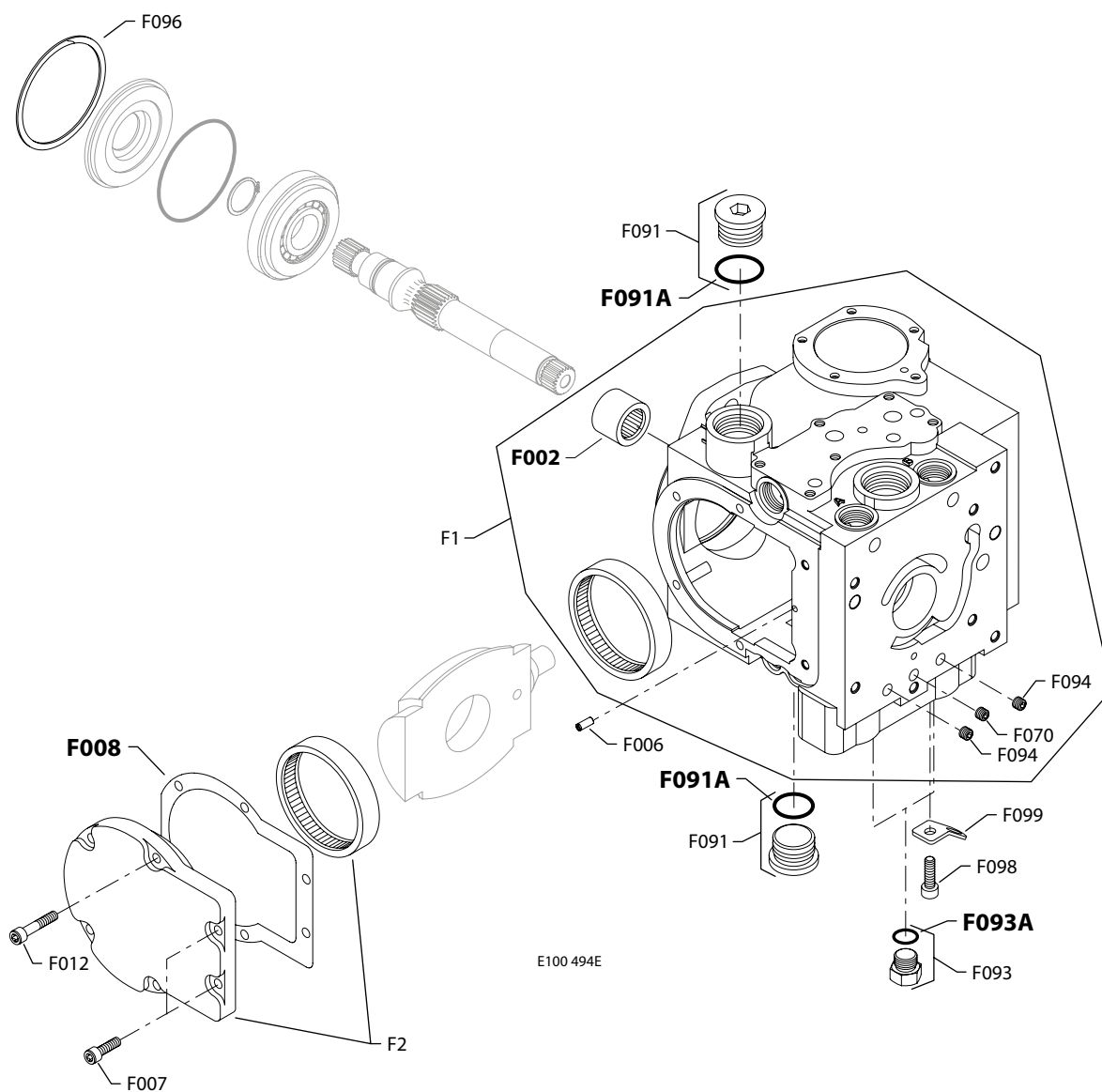
Housing

	Global new part number
	Obsolete part number
	No change

NFPE/FNR, full featured, code 61 ports

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per Model/Kit
M	F1	99-52		4410290	Housing assembly (SB-1997-029 & 1999-048)	1
	F2	93-48		4410143	Side cover assembly	1
	F02	07-18		5000565	Plug expansn	4
	F002	07-18		9001465-0015	Needle bearing	1
	"	94-04		5000140 (9001465-0015)	Needle bearing	1
	F006	07-18		1745710	Pin	1
	"	94-44		5000179	Pin	1
	F007	07-18		9007314-0605	Screw (AAM0602001)	2
	"	98-01		5000001	Screw (SB-1999-029)	2
	"	94-04	99-52	5000001	Screw	6
	F008	94-04		4410272	Side cover gasket (SB-1999-044)	1
	F012	07-18		9007314-0607	Screw (AAM0603001)	4
	"	98-01		5000002	Screw (SB-1997-029)	4
	F015	07-18		5000622	Screw (AAM1002001)	8
	F091	07-18		9005110-9200	Plug	2
	"	02-30		320002(9005110-9200)	Plug	2
	F091A	07-18		9004201-9000	O-ring	2
	"	02-30		001172(9004201-9000)	O-ring	2
	F093	07-18		9005100-5600	Plug	2
	"	94-04		46151(9005100-5600)	Plug	2
	F093A	07-18		9004201-3700	O-ring	2
	"	94-04		085043(9004201-3700)	O-ring	2
	F094	07-18		SP2914-SL-02	Pipe plug	2
	"	-		9005003-1200	Pipe plug	2
	"	94-04		001479(9005001-1200)	Pipe plug	2
	F096	94-04		5000114	Retaining ring	1
	F098	07-18		9007314-0605	Screw (AAM0602001)	1
	"	94-04		5000001	Screw (SB-1999-048)	1
	F099	94-04		4800754	Lifting bracket (SB-1999-048)	1
	F102	07-18		4410306	Port cover	2
	F103	07-18		4410307	Gasket	2

Housing



Enlarged **bold** type item numbers are recommended parts to be stocked for servicing



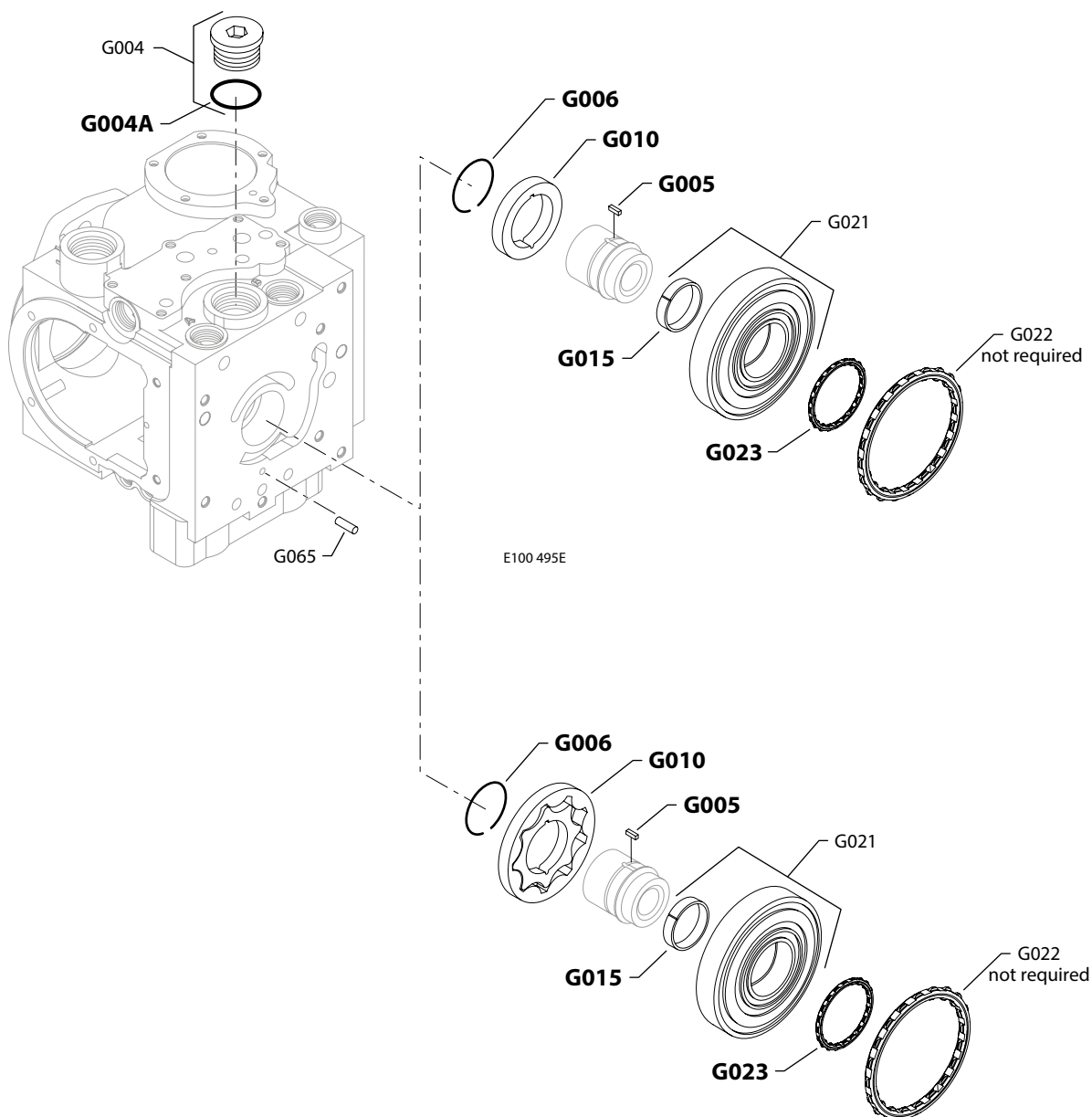
Housing

	Global new part number
	Obsolete part number
	No change

NFPH, full featured

Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
P	F1	99-52		4410291	Housing assembly (SB-1997-029 & 1999-048)	1
	F2	93-48		4410143	Side cover assembly	1
	F002	07-18		9001465-0015	Needle bearing	1
	"	94-04		5000140(9001465-0015)	Needle bearing	1
	F006	07-18		1745710	Pin	1
	"	94-44		5000179	Pin	1
	F007	07-18		9007314-0605	Screw (AAM0602001)	2
	"	98-01		5000001	Screw (SB-1999-029)	2
	"	94-04	99-52	5000001	Screw	6
	F008	94-04		4410272	Side cover gasket (SB-1999-044)	1
	F012	07-18		9007314-0607	Screw (AAM0603001)	4
	"	98-01		5000002	Screw (SB-1997-029)	4
	F070	07-18		SP2914-SL-02	Pipe plug	1
	"	-		9005003-1200	Pipe plug	1
	"	94-04		001479(9005001-1200)	Pipe plug	1
	F091	07-18		9005110-9200	Plug	2
	"	02-30		320002(9005110-9200)	Plug	2
	F091A	07-18		9004201-9000	O-ring	2
	"	02-30		001172(9004201-9000)	O-ring	2
	F093	07-18		9005100-5600	Plug	2
	"	94-04		46151(9005100-5600)	Plug	2
	F093A	07-18		9004201-3700	O-ring	2
	"	94-04		085043(9004201-3700)	O-ring	2
	F094	07-18		SP2914-SL-02	Pipe plug	2
	"	-		9005003-1200	Pipe plug	2
	"	94-04		001479(9005001-1200)	Pipe plug	2
	F096	94-04		5000114	Retaining ring	1
	F098	07-18		9007314-0605	Screw (AAM0602001)	1
	"	94-04		5000001	Screw (SB-1999-048)	1
	F099	94-04		4800754	Lifting bracket (SB-1999-048)	1

Charge Pump



Enlarged **bold** type item numbers are recommended parts to be stocked for servicing

Charge Pump

	Global new part number
	Obsolete part number
	No change

11 cc

Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
2	G005	98-01		4700103	Key	1
	"	94-04	99-52	015643(9004800-2506)	Pin (SB-1997-029C)	1
	G006	98-01		5000469	Retaining ring	1
	G010	98-01		4800636	Gear rotor assembly, 11cc (SB-1997-029C)	1
	"	94-04	99-52	Refer to SB-1997-029C	Gear rotor assembly replacement kit	
	G015	94-04		4700027	Journal bearing	1
	G021	98-01		4800640	Gear rotor cover assembly, 11cc CW (SB-1997-029C)	1
	"	98-01		4800641	Gear rotor cover assembly, 11cc CCW (SB-1997-029C)	1
	"	94-04	99-52	Refer to SB-1997-029C	Gear rotor assembly replacement kit	
	G023	94-04		5000531	O-ring (SB-1998-079)	1
	G065	07-18		1745710	Pin, .1878 x .625	1
	"	98-01		5000179	Pin, .1878 x .625 (SB-1997-029C)	1
	"	94-04	99-52	016220(9004800-1908)	Pin, .1878 x .500	1

15.6 cc

3	G005	98-01		4700103	Key	1
	"	94-04	99-52	015643(9004800-2506)	Pin (SB-1997-029C)	1
	G006	98-01		5000469	Retaining ring	1
	G010	98-01		4800624	Gear rotor assembly, 15.6cc (SB-1997-029C)	1
	"	94-04	99-52	Refer to SB-1997-029C	Gear rotor assembly replacement kit	
	G015	98-01		4700027	Journal bearing	1
	G021	98-01		4800642	Gear rotor cover assembly, 15.6cc CW (SB-1997-029C)	1
	"	98-01		4800643	Gear rotor cover assy, 15.6cc CCW (SB-1997-029C)	1
	"	94-04	99-52	Refer to SB-1997-029C	Gear rotor assembly replacement kit	
	G023	94-04		5000531	O-ring (SB-1998-079)	1
	G065	07-18		1745710	Pin, .1878 x .625	1
	"	98-01		5000179	Pin, .1878 x .625 (SB-1997-029C)	1
	"	94-04	99-52	016220(9004800-1908)	Pin, .1878 x .500	1

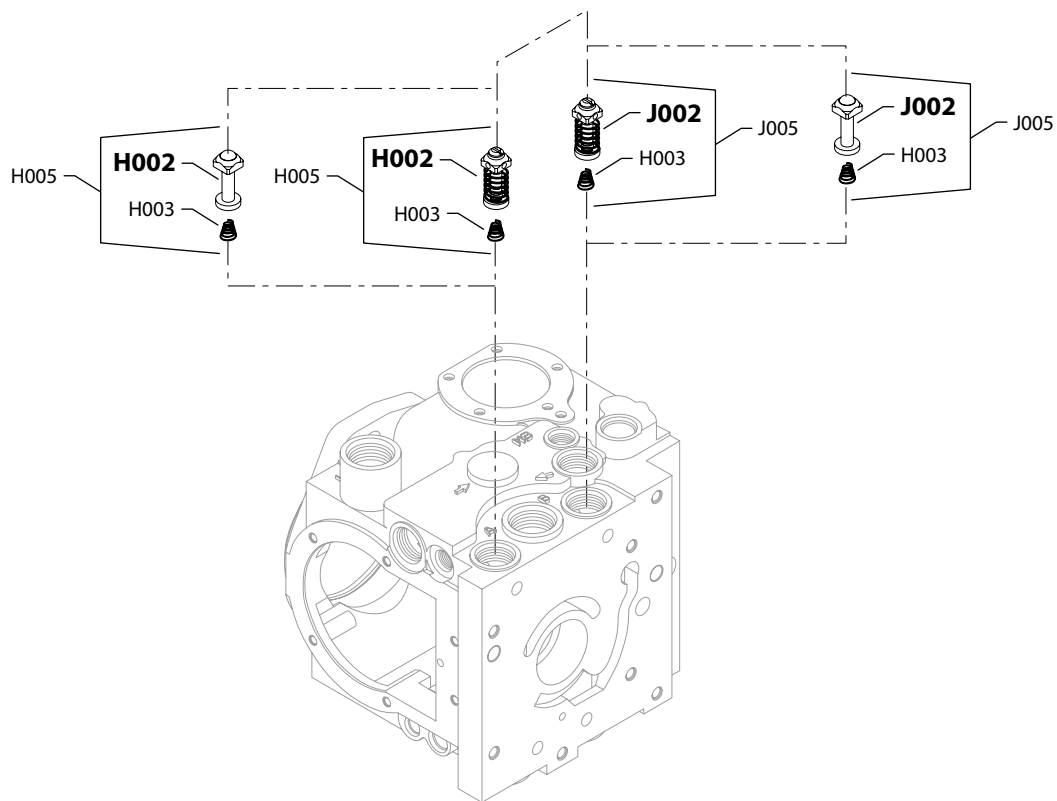
None, no auxiliary mounting pad

A & B	G004	07-18		9005110-9200	Plug	1
	"	93-23		664524(9005110-9200)	Plug	1
	G004A	07-18		9004201-9000	O-ring	1
	"	93-23		001156(9004201-9000)	O-ring	1

None, with auxiliary mounting pad

C & N	G004	07-18		9005110-9200	Plug	1
	"	93-23		664524(9005110-9200)	Plug	1
	G004	07-18		9004201-9000	O-ring	1
	"	93-23		001156(9004201-9000)	O-ring	1
	G005	98-01		4700103	Key	1
	"	94-04	99-52	015743(9004800-2506)	Pin (SB-1997-029C)	1
	G006	98-01		5000469	Retaining ring	1
	G010	94-04		4800644	Spacer	1
	"	94-04	99-52	Refer to SB-1997-029C	Gear rotor cover replacement kit	
	G021	'07-18		4800640	Gear rotor cover Assy	1
	G023	94-04	07-18	5000531	O-ring (SB-1998-079)	1
	G065			1745710	Pin, .1878 x .625	1
	"	98-01		5000179	Pin, .1878 x .625 (SB-1997-029C)	1
	"	94-04	99-52	016220(9004800-1908)	Pin, .1878 x .500	1

System pressure protection



E100 424E

Enlarged **bold** type item numbers are recommended parts to be stocked for servicing

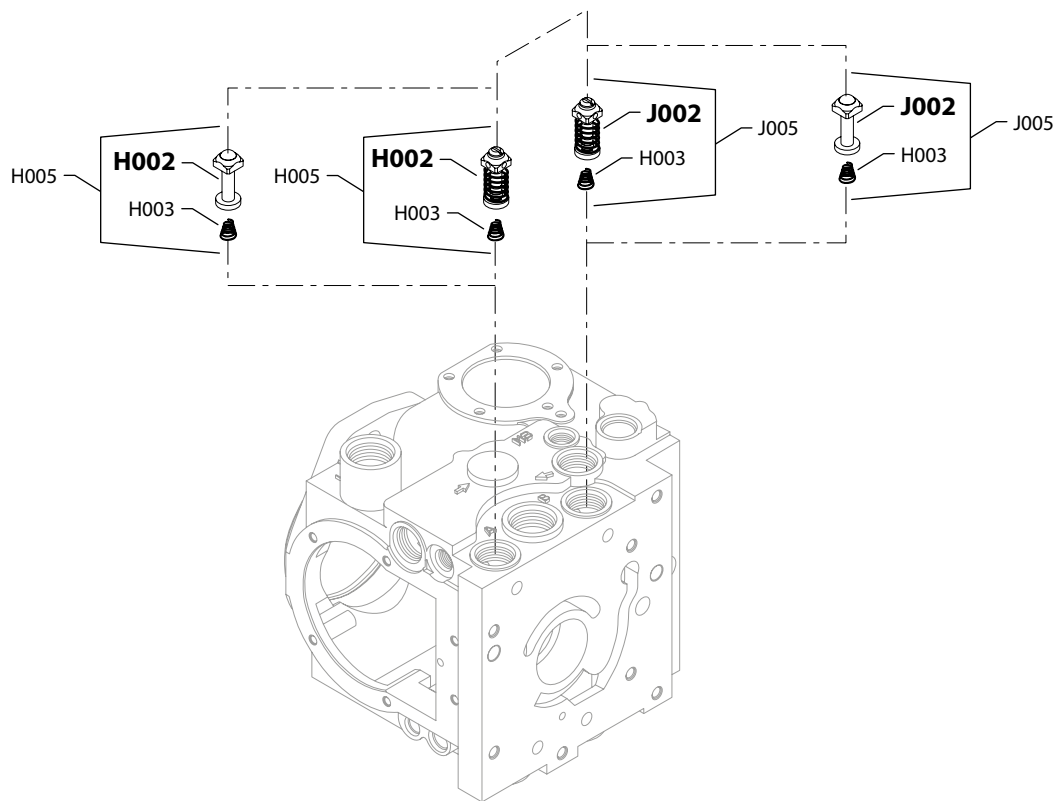
System pressure protection

	Global new part number
	Obsolete part number
	No change

System check relief (SCR)

Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
00	H000	07-18		none	No valve	1
	J000	07-18		none	No valve	1
14	H002	07-18		3103375-0140	SCR valve, 140 bar/2030 psi	1
	"	93-44		353854(3103375-0140)	SCR valve, 140 bar/2030 psi	1
	H003	93-44		4800780	Spring	1
	H005	93-44		4800290	SCR valve assembly, port A, 140 bar/2030 psi	1
	J002	07-18		3103375-0140	SCR valve, 140 bar/2030 psi	1
	"	93-44		353854(3103375-0140)	SCR valve, 140 bar/2030 psi	1
	J003	93-44		4800780	Spring	1
17	H002	07-18		3103375-0175	SCR valve, 175 bar/2540 psi	1
	"	93-44		318491(3103375-0175)	SCR valve, 175 bar/2540 psi	1
	H003	93-44		4800780	Spring	1
	H005	93-44		4800291	SCR valve assembly, port A, 175 bar/2540 psi	1
	J002	07-18		3103375-0175	SCR valve, 175 bar/2540 psi	1
	"	93-44		318691(3103375-0175)	SCR valve, 175 bar/2540 psi	1
	J003	93-44		4800780	Spring	1
19	H002	07-18		3103375-0190	SCR valve, 190 bar/2755 psi	1
	"	93-44		328310(3103375-0190)	SCR valve, 190 bar/2755 psi	1
	H003	93-44		4800780	Spring	1
	H005	93-44		4800292	SCR valve assembly, port A, 190 bar/2755 psi	1
	J002	07-18		3103375-0190	SCR valve, 190 bar/2755 psi	1
	"	93-44		328310(3103375-0190)	SCR valve, 190 bar/2755 psi	1
	J003	93-44		4800780	Spring	1
21	H002	07-18		3103375-0210	SCR valve, 210 bar/3045 psi	1
	"	93-44		328328(3103375-0210)	SCR valve, 210 bar/3045 psi	1
	H003	93-44		4800780	Spring	1
	H005	93-44		4800293	SCR valve assembly, port A, 210 bar/3045 psi	1
	J002	07-18		3103375-0210	SCR valve, 210 bar/3045 psi	1
	"	93-44		328328(3103375-0210)	SCR valve, 210 bar/3045 psi	1
	J003	93-44		4800780	Spring	1
23	H002	07-18		3103375-0230	SCR valve, 230 bar/3335 psi	1
	"	93-44		328336(3103375-0230)	SCR valve, 230 bar/3335 psi	1
	H003	93-44		4800780	Spring	1
	H005	93-44		4800294	SCR valve assembly, port A, 230 bar/3335 psi	1
	J002	07-18		3103375-0230	SCR valve, 230 bar/3335 psi	1
	"	93-44		328336(3103375-0230)	SCR valve, 230 bar/3335 psi	1
	J003	93-44		4800780	Spring	1
25	H002	07-18		3103375-0250	SCR valve, 250 bar/3625 psi	1
	"	93-44		318709(3103375-0250)	SCR valve, 250 bar/3625 psi	1
	H003	93-44		4800780	Spring	1
	H005	93-44		4800295	SCR valve assembly, port A, 250 bar/3625 psi	1
	J002	07-18		3103375-0250	SCR valve, 250 bar/3625 psi	1
	"	93-44		318709(3103375-0250)	SCR valve, 250 bar/3625 psi	1
	J003	93-44		4800780	Spring	1
28	H002	07-18		3103375-0280	SCR valve, 280 bar/4060 psi	1
	"	93-44		328344(3103375-0280)	SCR valve, 280 bar/4060 psi	1
	H003	93-44		4800780	Spring	1
	H005	93-44		4800296	SCR valve assembly, port A, 280 bar/4060 psi	1
	J002	07-18		3103375-0280	SCR valve, 280 bar/4060 psi	1
	"	93-44		328344(3103375-0280)	SCR valve, 280 bar/4060 psi	1
	J003	93-44		4800780	Spring	1
	H005	07-18		4520055	SCR valve assembly, port B, 280 bar/4060 psi	1
	"	93-44		4800296	SCR valve assembly, port B, 280 bar/4060 psi	1

System pressure protection



E100 424E

Enlarged **bold** type item numbers are recommended parts to be stocked for servicing

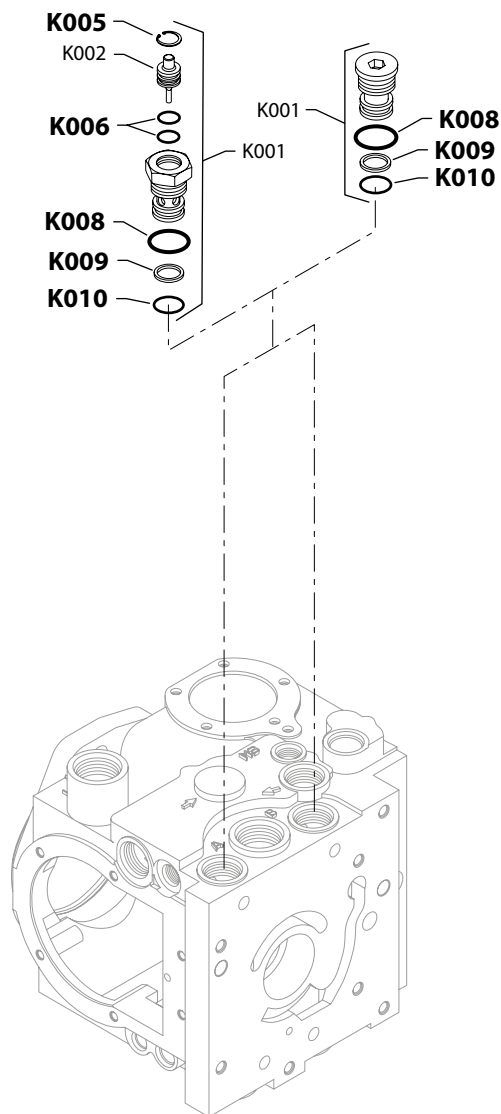
System pressure protection

	Global new part number
	Obsolete part number
	No change

System check relief (SCR)

Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
30	H002	07-18		3103375-0300	SCR valve, 300 bar/4350 psi	1
	"	93-44		318725(3103375-0300)	SCR valve, 300 bar/4350 psi	1
	H003	93-44		4800780	Spring	1
	H005	93-44		4800297	SCR valve assembly, port A, 300 bar/4350 psi	1
	J002	07-18		3103375-0300	SCR valve, 300 bar/4350 psi	1
	"	93-44		318725(3103375-0300)	SCR valve, 300 bar/4350 psi	1
	J003	93-44		4800780	Spring	1
	J005	06-01		4520056	SCR valve assembly, port B, 300 bar/4350 psi	1
32	"	93-44		4800297	SCR valve assembly, port B, 300 bar/4350 psi	1
	H002	07-18		3103375-0325	SCR valve, 325 bar/4712 psi	1
	"	93-44		4800676(3103375-0325)	SCR valve, 325 bar/4712 psi	1
	H003	93-44		4800780	Spring	1
	H005	93-44		4800677	SCR valve assembly, port A, 325 bar/4712 psi	1
	J002	07-18		3103375-0325	SCR valve, 325 bar/4712 psi	1
	"	93-44		4800676(3103375-0325)	SCR valve, 325 bar/4712 psi	1
	J003	93-44		4800780	Spring	1
34	J005	06-01		4520057	SCR valve assembly, port B, 325 bar/4712 psi	1
	"	93-44		4800677	SCR valve assembly, port B, 325 bar/4712 psi	1
	H002	07-18		3103375-0345	SCR valve, 345 bar/5000 psi	1
	"	93-44		318717(3103375-0345)	SCR valve, 345 bar/5000 psi	1
	H003	93-44		4800780	Spring	1
	H005	93-44		4800298	SCR valve assembly, port A, 345 bar/5000 psi	1
	J002	07-18		3103375-0345	SCR valve, 345 bar/5000 psi	1
	"	93-44		318717(3103375-0345)	SCR valve, 345 bar/5000 psi	1
36	J003	93-44		4800780	Spring	1
	J005	06-01		4520058	SCR valve assembly, port B, 345 bar/5000 psi	1
	"	93-44		4800298	SCR valve assembly, port B, 345 bar/5000 psi	1
	H002	93-44		3103375-0360	SCR valve, 360 bar/5220 psi	1
	H003	93-44		4800780	Spring	1
	H005	93-44		4800849	SCR valve assembly, port A, 360 bar/5220 psi	1
	J002	93-44		3103375-0360	SCR valve, 360 bar/5220 psi	1
	J003	93-44		4800780	Spring	1
38	J005	93-44		4800849	SCR valve assembly, port B, 360 bar/5220 psi	1
	H002	07-18		3103375-0385	SCR valve, 385 bar/5580 psi	1
	"	93-44		4800325(3103375-0385)	SCR valve, 385 bar/5580 psi	1
	H003	93-44		4800780	Spring	1
	H005	93-44		4800327	SCR valve assembly, port A, 385 bar/5580 psi	1
	J002	07-18		3103375-0385	SCR valve, 385 bar/5580 psi	1
	"	93-44		4800325(3103375-0385)	SCR valve, 385 bar/5580 psi	1
	J003	93-44		4800780	Spring	1
41	J005	06-01		4520060	SCR valve assembly, port B, 385 bar/5580 psi	1
	"	93-44		4800327	SCR valve assembly, port B, 385 bar/5580 psi	1
	H002	07-18		3103375-0415	SCR valve, 415 bar/6020 psi	1
	"	93-44		328351(3103375-0415)	SCR valve, 415 bar/6020 psi	1
	H003	93-44		4800780	Spring	1
	H005	93-44		4800299	SCR valve assembly, port A, 415 bar/6020 psi	1
	J002	07-18		3103375-0415	SCR valve, 415 bar/6020 psi	1
	"	93-44		328351(3103375-0415)	SCR valve, 415 bar/6020 psi	1
NN	J003	93-44		4800780	Spring	1
	J005	06-01		4520062	SCR valve assembly, port B, 415 bar/6020 psi	1
	"	93-44		4800299	SCR valve assembly, port B, 415 bar/6020 psi	1
	H002	93-44		3103348	Check valve poppet	1
	H003	93-44		4800780	Spring	1
	H005	93-44		4800300	Check valve assembly, port A	1
	J002	93-44		3103348	Check valve poppet	1
	J003	93-44		4800780	Spring	1
NN	J005	06-01		4520063	Check valve assembly, port B	1
	"	93-44		4800300	Check valve assembly, port B	1

Loop by-pass valve



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Enlarged **bold** type item numbers are recommended parts to be stocked for servicing

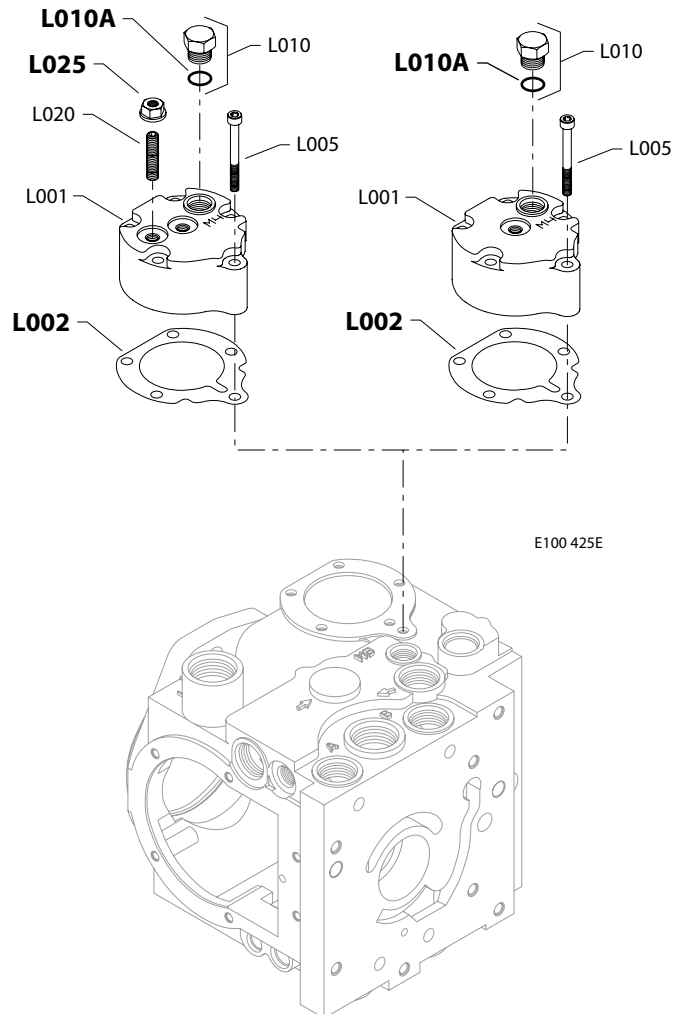
Loop by-pass valve

	Global new part number
	Obsolete part number
	No change

By-pass valve

Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
B	K001	93-44		4800768	By-pass valve assembly (SB-1999-037)	2
	K002	07-18		1735282	By-pass shaft	2
	"	"		4800767	By-pass shaft (SB-1999-037)	2
	K005	98-30		5000448	Retaining ring (SB-1998-039)	2
	K006	98-30		9004105-0130	O-ring (SB-1998-039)	4
	K008	07-18		9004201-6200	O-ring	2
	"	93-44		001149(9004201-6200)	O-ring	2
	K009	07-18		9006110-0160	Back-up ring	2
	"	93-44		018481(9006110-0160)	Back-up ring	2
	K010	07-18		9004105-0160	O-ring	2
	"	93-44		5000090(9004105-0160)	O-ring	2
N	K001	93-44	-	4800589	SCR valve plug (SB-1998-082)	2
	K008	07-18		9004201-6200	O-ring	2
	"	93-44		001149(9004201-6200)	O-ring	2
	K009	07-18		9006110-0160	Back-up ring	2
	"	93-44		018481(9006110-0160)	Back-up ring	2
	K010	07-18		9004105-0160	O-ring	2
	"	93-44		5000090(9004105-0160)	O-ring	2

Displacement limiter



Enlarged **bold** type item numbers are recommended parts to be stocked for servicing

Displacement limiter

	Global new part number
	Obsolete part number
	No change

Displacement limiter common parts

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per Model/Kit
	L002	93-44		4410271	Servo cover gasket (SB-1999-022)	1
	L010	07-18		9005100-5600	Plug	1
	"	93-44		46151(9005100-5600)	Plug	1
	L010A	07-18		9004201-3700	O-ring	1
	"	93-44		085043(9004201-3700)	O-ring	1

Side 1

0	L001	07-18		1723394-02	Servo cover, NFP	1
	"	95-34		4410108	Servo cover, NFP	1
	L005	07-18		354407	Screw (AAM0606001)	5
	"	98-01		5000004	Screw (SB-1997-029C)	5
	"	95-34	99-52	5000003	Screw	5

1	L001	07-18		1723394-01	Servo cover, NFP, full	1
	"	95-34		4410207	Servo cover, NFP, full	1
	L005	07-18		354407	Screw (AAM0606001)	5
	"	98-01		5000004	Screw (SB-1997-029C)	5
	"	95-34	99-52	5000003	Screw	5
	L020	07-18		1745312	Set screw	1
	"	95-34		5000487	Set screw (SB-1997-034)	1
	L025	07-18		612291	Seal nut	1
	"	95-34		612291(9003508-0008)	Seal nut	1

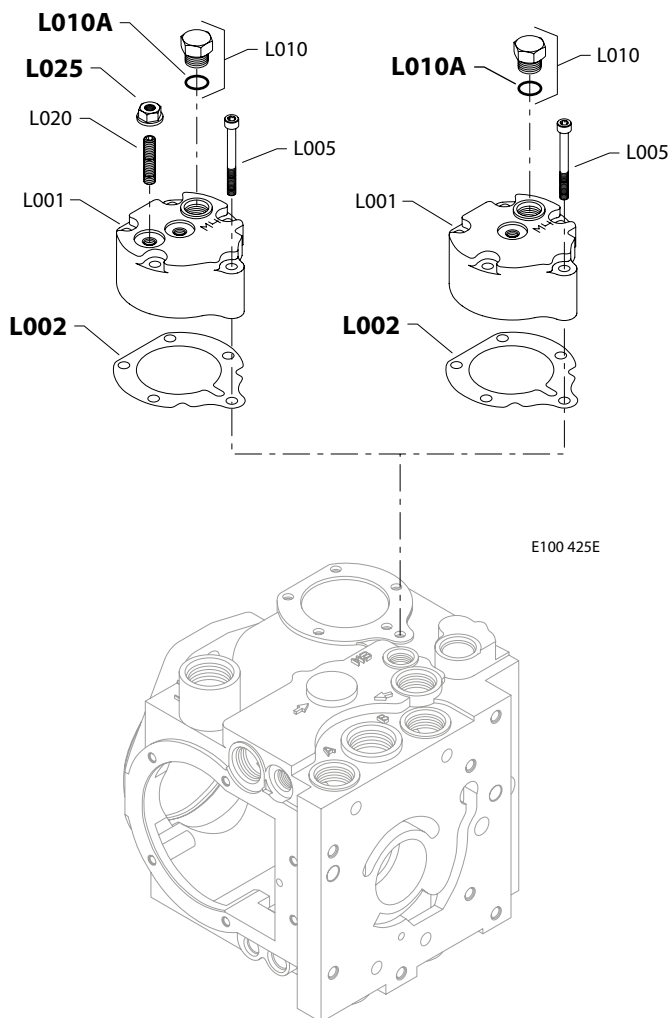
2	L001	07-18		1723394-01	Servo cover, NFP, 96%	1
	"	98-17		4410207	Servo cover, NFP, 96%	1
	L005	07-18		354407	Screw (AAM0606001)	5
	"	98-01		5000004	Screw (SB-1997-029C)	5
	L020	07-18		1745312	Set screw	1
	"	95-34		5000487	Set screw (SB-1997-034)	1
	L025	07-18		612291	Seal nut	1
	"	95-34		612291(9003508-0008)	Seal nut	1

3	L001	07-18		1723394-01	Servo cover, NFP, 92%	1
	"	98-17		4410207	Servo cover, NFP, 92%	1
	L005	07-18		354407	Screw (AAM0606001)	5
	"	98-01		5000004	Screw (SB-1997-029C)	5
	L020	07-18		1745312	Set screw	1
	"	95-34		5000487	Set screw (SB-1997-034)	1
	L025	07-18		612291	Seal nut	1
	"	95-34		612291(9003508-0008)	Seal nut	1

4	L001	07-18		1723394-01	Servo cover, NFP, 88%	1
	"	98-17		4410207	Servo cover, NFP, 88%	1
	L005	07-18		354407	Screw (AAM0606001)	5
	"	98-01		5000004	Screw (SB-1997-029C)	5
	"	95-34	99-52	5000003	Screw	5
	L020	07-18		1745312	Set screw	1
	"	95-34		5000487	Set screw (SB-1997-034)	1
	L025	07-18		612291	Seal nut	1
	"	95-34		612291(9003508-0008)	Seal nut	1

5	L001	07-18		1723394-01	Servo cover, NFP, 84%	1
	"	98-17		4410207	Servo cover, NFP, 84%	1
	L005	07-18		354407	Screw (AAM0606001)	5
	"	98-01		5000004	Screw (SB-1997-029C)	5
	L020	07-18		1745312	Set screw	1
	"	95-34		5000487	Set screw (SB-1997-034)	1
	L025	07-18		612291	Seal nut	1
	"	95-34		612291(9003508-0008)	Seal nut	1

Displacement limiter



Enlarged **bold** type item numbers are recommended parts to be stocked for servicing



Displacement limiter

	Global new part number
	Obsolete part number
	No change

Displacement limiter common parts

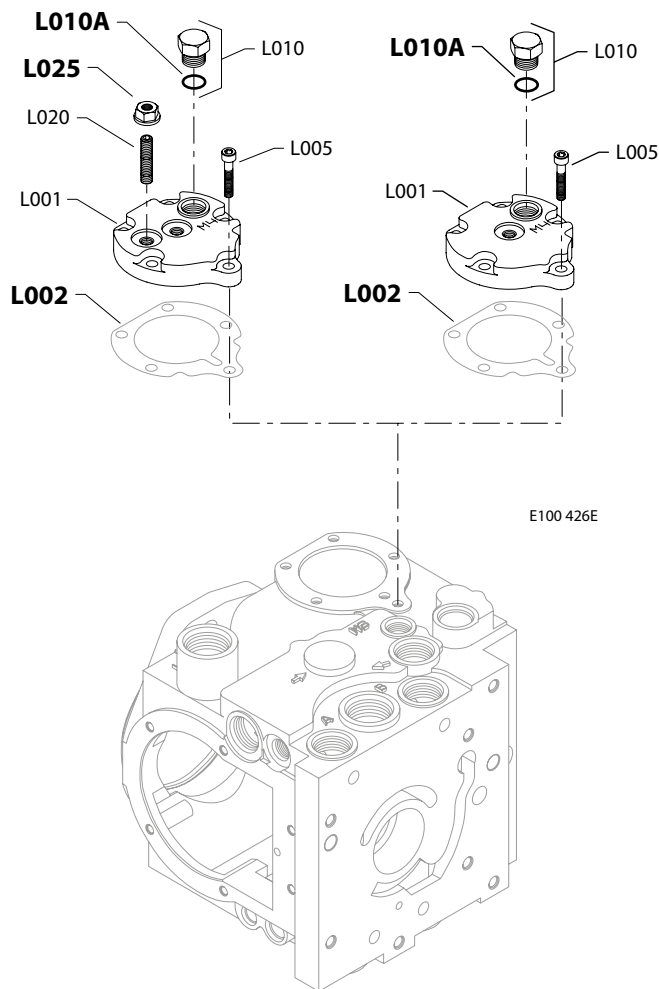
Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
	L002	93-44		4410271	Servo cover gasket (SB-1999-022)	1
	L010	07-18		9005100-5600	Plug	1
	"	93-44		46151(9005100-5600)	Plug	1
	L010A	07-18		9004201-3700	O-ring	1
	"	93-44		085043(9004201-3700)	O-ring	1

Side 1

6	L001	07-18		1723394-01	Servo cover, NFP, 80%	1
	"	98-17		4410207	Servo cover, NFP, 80%	1
	L005	07-18		354407	Screw (AAM0606001)	5
	"	98-01		5000004	Screw (SB-1997-029C)	5
	L020	07-18		1745312	Set screw	1
	"	95-34		5000487	Set screw (SB-1997-034)	1
	L025	07-18		612291	Seal nut	1
	"	95-34		612291(9003508-0008)	Seal nut	1

8	L001	07-18		1723394-01	Servo cover, NFP, 72%	1
	L005	07-18		354407	Screw (AAM0606001)	5
	L020	07-18		1745312	Set screw	1
	L025	07-18		612291	Seal nut	1

Displacement limiter



Enlarged **bold** type item numbers are recommended parts to be stocked for servicing

Displacement limiter

	Global new part number
	Obsolete part number
	No change

Displacement limiter common parts

Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
	L002	93-44		4410271	Servo cover gasket (SB-1999-022)	1
	L010	07-18		9005100-5600	Plug	1
	"	93-44		46151(9005100-5600)	Plug	1
	L010A	07-18		9004201-3700	O-ring	1
	"	93-44		085043(9004201-3700)	O-ring	1

Side 1

A	L001	07-16		1723900-01	Servo cover, full	1
	"	94-10		4410106	Servo cover, full	1
	L005	07-18		9007314-0607	Screw (AAM0603001)	5
	"	98-01		5000002	Screw (SB-1997-029C)	5
	"	94-10	99-52	5000001	Screw	5
	L020	07-18		1745312	Set screw	1
	"	94-10		5000487	Set screw (SB-1997-034)	1
	L025	07-18		612291	Seal nut	1
	"	94-10		612291(9003508-0008)	Seal nut	1

B	L001	07-16		1723900-01	Servo cover, 96%	1
	"	98-17		4410106	Servo cover, 96%	1
	L005	07-18		9007314-0607	Screw (AAM0603001)	5
	"	98-17		5000002	Screw (SB-1997-029C)	5
	"	94-10	99-52	5000001	Screw	5
	L020	07-18		1745312	Set screw	1
	"	98-17		5000487	Set screw (SB-1997-034)	1
	L025	07-18		612291	Seal nut	1
	"	98-17		612291(9003508-0008)	Seal nut	1

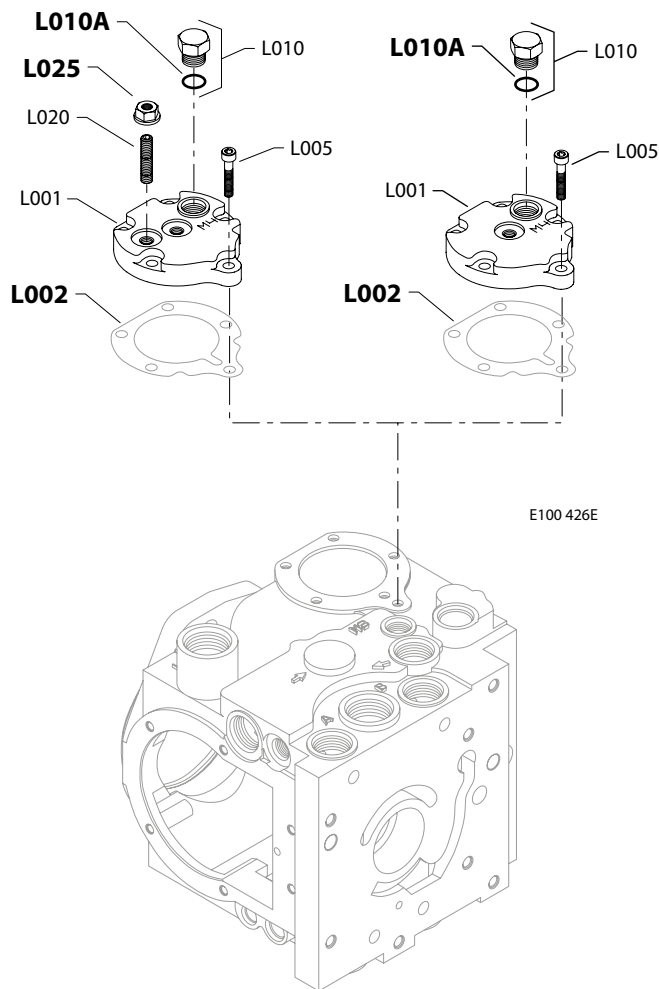
C	L001	07-16		1723900-01	Servo cover, 92%	1
	"	98-17		4410106	Servo cover, 92%	1
	L005	07-18		9007314-0607	Screw (AAM0603001)	5
	"	98-17		5000002	Screw (SB-1997-029C)	5
	"	94-10	99-52	5000001	Screw	5
	L020	07-18		1745312	Set screw	1
	"	98-17		5000487	Set screw (SB-1997-034)	1
	L025	07-18		612291	Seal nut	1
	"	98-17		612291(9003508-0008)	Seal nut	1

D	L001	07-16		1723900-01	Servo cover, 88%	1
	"	98-17		4410106	Servo cover, 88%	1
	L005	07-18		9007314-0607	Screw (AAM0603001)	5
	"	98-17		5000002	Screw (SB-1997-029C)	5
	"	94-10	99-52	5000001	Screw	5
	L020	07-18		1745312	Set screw	1
	"	98-17		5000487	Set screw (SB-1997-034)	1
	L025	07-18		612291	Seal nut	1
	"	98-17		612291(9003508-0008)	Seal nut	1

E	L001	07-16		1723900-01	Servo cover, 84%	1
	"	98-17		4410106	Servo cover, 84%	1
	L005	07-18		9007314-0607	Screw (AAM0603001)	5
	"	98-17		5000002	Screw (SB-1997-029C)	5
	"	94-10	99-52	5000001	Screw	5
	L020	07-18		1745312	Set screw	1
	"	98-17		5000487	Set screw (SB-1997-034)	1
	L025	07-18		612291	Seal nut	1
	"	98-17		612291(9003508-0008)	Seal nut	1

F	L001	07-16		1723900-01	Servo cover, 80%	1
	"	98-17		4410106	Servo cover, 80%	1
	L005	07-18		9007314-0607	Screw (AAM0603001)	5
	"	98-17		5000002	Screw (SB-1997-029C)	5
	"	94-10	99-52	5000001	Screw	5
	L020	07-18		1745312	Set screw	1
	"	98-17		5000487	Set screw (SB-1997-034)	1
	L025	07-18		612291	Seal nut	1
	"	98-17		612291(9003508-0008)	Seal nut	1

Displacement limiter



Enlarged **bold** type item numbers are recommended parts to be stocked for servicing

Displacement limiter

	Global new part number
	Obsolete part number
	No change

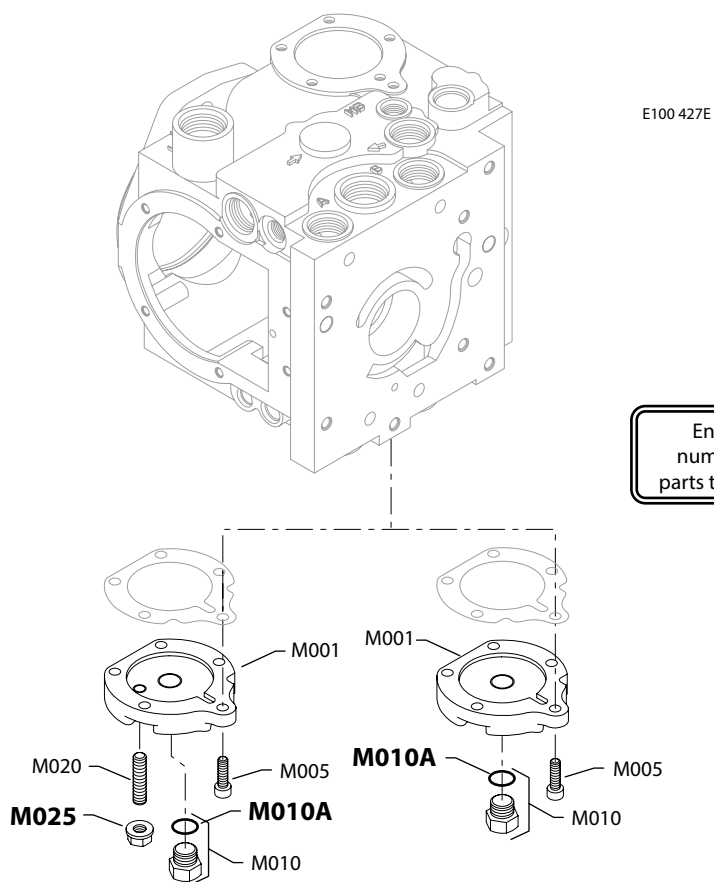
Displacement limiter common parts

Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
	L002	93-44		4410271	Servo cover gasket (SB-1999-022)	1
	L010	07-18		9005100-5600	Plug	1
	"	93-44		46151(9005100-5600)	Plug	1
	L010A	07-18		9004201-3700	O-ring	1
	"	93-44		085043(9004201-3700)	O-ring	1

Side 1

N	L001	07-18		1723900-02	Servo cover	1
	"	98-17		4410105	Servo cover	1
	L005	07-18		9007314-0607	Screw (AAM0603001)	5
	"	98-17		5000002	Screw (SB-1997-029C)	5
	"	94-49	98-01	5000001	Screw	5

Displacement limiter



Displacement limiter

	Global new part number
	Obsolete part number
	No change

Displacement limiter common parts

Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
	M002	93-44		4410271	Servo cover gasket (SB-1999-022)	1
	M010	07-18		9005100-5600	Plug	1
	"	93-44		46151(9005100-5600)	Plug	1
	M010A	07-18		9004201-3700	O-ring	1
	"	93-44		085043(9004201-3700)	O-ring	1

Side 2

0	M001	07-10		1723392-02	Servo cover	1
	"	95-34		4410014	Servo cover	1
	M005	07-18		9007314-0607	Screw (AAM0603001)	5
	"	98-01		5000002	Screw (SB-1997-029C)	5
	"	95-34	99-52	5000001	Screw	5

1	M001	07-10		1723392-01	Servo cover, full	1
	"	95-34		4280041	Servo cover, full	1
	M005	07-18		9007314-0607	Screw (AAM0603001)	5
	"	98-01		5000002	Screw (SB-1997-029C)	5
	"	95-34	99-52	5000001	Screw	5
	M020	07-18		1745312	Set screw	1
	"	93-54		5000487	Set screw (SB-1997-034)	1
	M025	07-18		612291	Seal nut	1
	"	93-54		612291(9003508-0008)	Seal nut	1

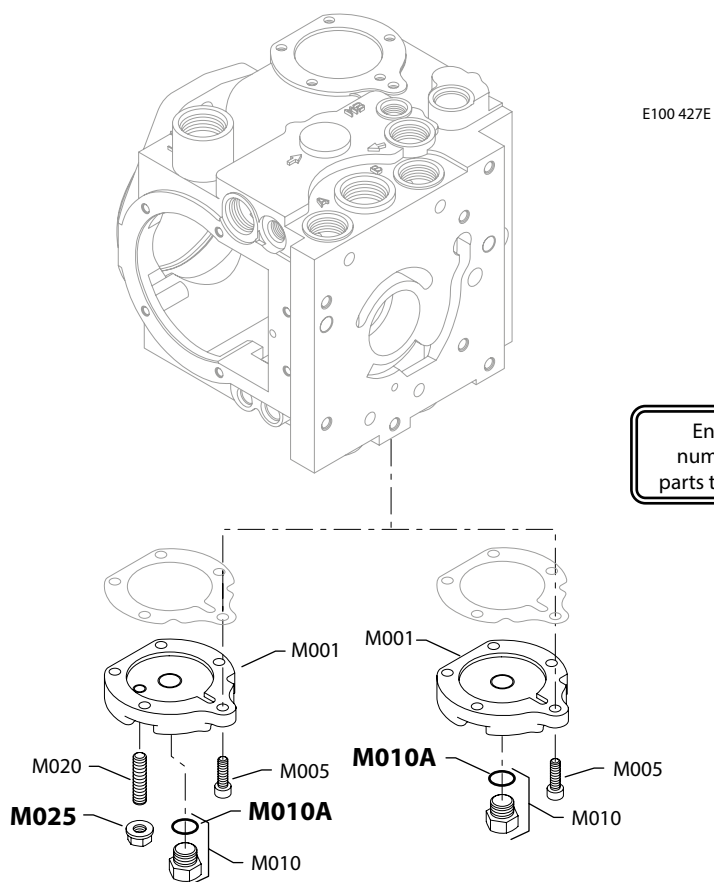
2	M001	07-10		1723392-01	Servo cover, NPF, 96%	1
	"	98-17		4410035	Servo cover, NPF, 96%	1
	M005	07-18		9007314-0607	Screw (AAM0603001)	5
	"	98-01		5000002	Screw (SB-1997-029C)	5
	"	98-17	99-52	5000001	Screw	5
	M020	07-18		1745312	Set screw	1
	"	98-17		5000487	Set screw (SB-1997-034)	1
	M025	07-18		612291	Seal nut	1
	"	98-17		612291(9003508-0008)	Seal nut	1

3	M001	07-10		1723392-01	Servo cover, NPF, 92%	1
	"	98-17		4410035	Servo cover, NPF, 92%	1
	M005	07-18		9007314-0607	Screw (AAM0603001)	5
	"	98-01		5000002	Screw (SB-1997-029C)	5
	"	98-17	99-52	5000001	Screw	5
	M020	07-18		1745312	Set screw	1
	"	98-17		5000487	Set screw (SB-1997-034)	1
	M025	07-18		612291	Seal nut	1
	"	98-17		612291(9003508-0008)	Seal nut	1

4	M001	07-10		1723392-01	Servo cover, NPF, 88%	1
	"	97-03		4410035	Servo cover, NPF, 88%	1
	M005	07-18		9007314-0607	Screw (AAM0603001)	5
	"	98-01		5000002	Screw (SB-1997-029C)	5
	"	98-17	99-52	5000001	Screw	5
	M020	07-18		1745312	Set screw	1
	"	98-17		5000487	Set screw (SB-1997-034)	1
	M025	07-18		612291	Seal nut	1
	"	98-17		612291(9003508-0008)	Seal nut	1

5	M001	07-10		1723392-01	Servo cover, NPF, 84%	1
	"	98-17		4410035	Servo cover, NPF, 84%	1
	M005	07-18		9007314-0607	Screw (AAM0603001)	5
	"	98-01		5000002	Screw (SB-1997-029C)	5
	"	98-17	99-52	5000001	Screw	5
	M020	07-18		1745312	Set screw	1
	"	98-17		5000487	Set screw (SB-1997-034)	1
	M025	07-18		612291	Seal nut	1
	"	98-17		612291(9003508-0008)	Seal nut	1

Displacement limiter



Enlarged **bold** type item numbers are recommended parts to be stocked for servicing

Displacement limiter

	Global new part number
	Obsolete part number
	No change

Displacement limiter common parts

Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
	M002	93-44		4410271	Servo cover gasket (SB-1999-022)	1
	M010	07-18		9005100-5600	Plug	1
	"	93-44		46151(9005100-5600)	Plug	1
	M010A	07-18		9004201-3700	O-ring	1
	"	93-44		085043(9004201-3700)	O-ring	1

Side 2

6	M001	07-10		1723392-01	Servo cover, NPF, 80%	1
	"	98-17		4410035	Servo cover, NPF, 80%	1
	M005	07-18		9007314-0607	Screw (AAM0603001)	5
	"	98-01		5000002	Screw (SB-1997-029C)	5
	"	98-17	99-52	5000001	Screw	5
	M020	07-18		1745312	Set screw	1
	"	98-17		5000487	Set screw (SB-1997-034)	1
	M025	07-18		612291	Seal nut	1
	"	98-17		612291(9003508-0008)	Seal nut	1

8	M001	07-18		1723392-01	Servo cover, NFP, 72%	1
	M005	07-18		9007314-0607	Screw (AAM0603001)	5
	M020	07-18		1745312	Set screw	1
	M025	07-18		612291	Seal nut	1

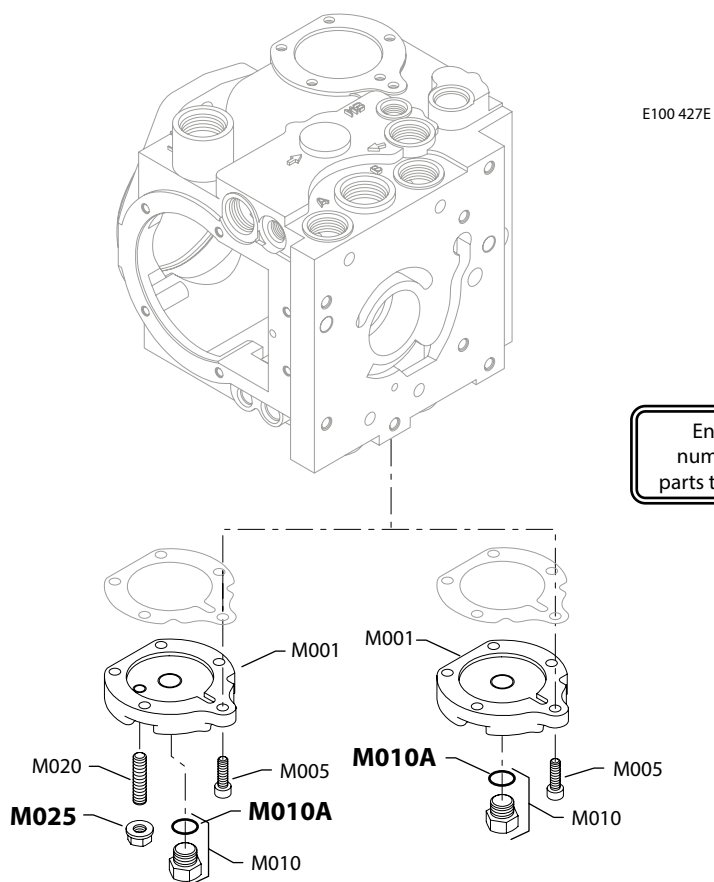
A	M001	07-18		1723392-01	Servo cover, full	1
	"	94-08		4410035	Servo cover, full	1
	M005	07-18		9007314-0607	Screw (AAM0603001)	5
	"	98-01		5000002	Screw (SB-1997-029C)	5
	"	98-17	99-52	5000001	Screw	5
	M020	07-18		1745312	Set screw	1
	"	98-17		5000487	Set screw (SB-1997-034)	1
	M025	07-18		612291	Seal nut	1
	"	98-17		612291(9003508-0008)	Seal nut	1

C	M001	07-18		1723392-01	Servo cover, 92%	1
	"	98-17		4410035	Servo cover, 92%	1
	M005	07-18		9007314-0607	Screw (AAM0603001)	5
	"	98-01		5000002	Screw (SB-1997-029C)	5
	"	98-17	99-52	5000001	Screw	5
	M020	07-18		1745312	Set screw	1
	"	98-17		5000487	Set screw (SB-1997-034)	1
	M025	07-18		612291	Seal nut	1
	"	98-17		612291(9003508-0008)	Seal nut	1

D	M001	07-18		1723392-01	Servo cover, 88%	1
	"	98-17		4410035	Servo cover, 88%	1
	M005	07-18		9007314-0607	Screw (AAM0603001)	5
	"	98-01		5000002	Screw (SB-1997-029C)	5
	"	98-17	99-52	5000001	Screw	5
	M020	07-18		1745312	Set screw	1
	"	98-17		5000487	Set screw (SB-1997-034)	1
	M025	07-18		612291	Seal nut	1
	"	98-17		612291(9003508-0008)	Seal nut	1

E	M001	07-18		1723392-01	Servo cover, 84%	1
	"	98-17		4410035	Servo cover, 84%	1
	M005	07-18		9007314-0607	Screw (AAM0603001)	5
	"	98-01		5000002	Screw (SB-1997-029C)	5
	"	98-17	99-52	5000001	Screw	5
	M020	07-18		1745312	Set screw	1
	"	98-17		5000487	Set screw (SB-1997-034)	1
	M025	07-18		612291	Seal nut	1
	"	98-17		612291(9003508-0008)	Seal nut	1

Displacement limiter



Displacement limiter

	Global new part number
	Obsolete part number
	No change

Displacement limiter common parts

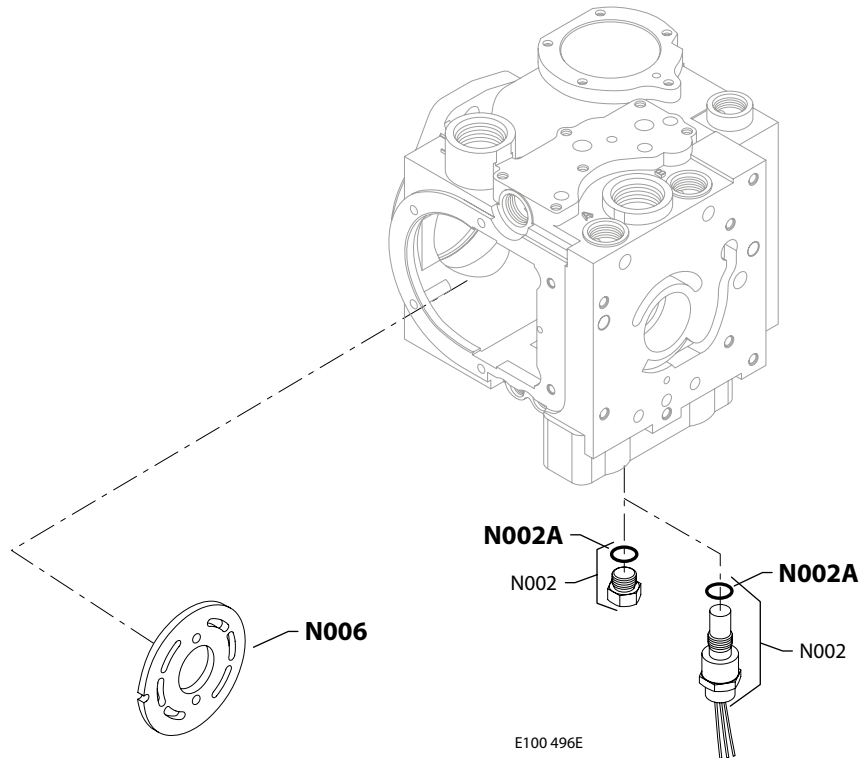
Order code	Item	Date begin	Date end	Part number	Part name	Qty. per Model/Kit
	M002	93-44		4410271	Servo cover gasket (SB-1999-022)	1
	M010	07-18		9005100-5600	Plug	1
	"	93-44		46151(9005100-5600)	Plug	1
	M010A	07-18		9004201-3700	O-ring	1
	"	93-44		085043(9004201-3700)	O-ring	1

Side 2

F	M001	07-18		1723392-01	Servo cover, 80%	1
	"	98-17		4410035	Servo cover, 80%	1
	M005	07-18		9007314-0607	Screw (AAM0603001)	5
	"	98-01		5000002	Screw (SB-1997-029C)	5
	"	98-17	99-52	5000001	Screw	5
	M020	07-18		1745312	Set screw	1
	"	98-17		5000487	Set screw (SB-1997-034)	1
	M025	07-18		612291	Seal nut	1
	"	98-17		612291(9003508-0008)	Seal nut	1

N	M001	07-18		1723392-02	Servo cover	1
	"	93-20		4410014	Servo cover	1
	M005	07-18		9007314-0607	Screw (AAM0603001)	5
	"	98-01		5000002	Screw (SB-1997-029C)	5
	"	98-17	99-52	5000001	Screw	5

Special Hardware



Enlarged **bold** type item numbers are recommended parts to be stocked for servicing

Special Hardware

	Global new part number
	Obsolete part number
	No change

Speed sensor & valve plate

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per Model/Kit
AAA	N002	97-16		KPPG13408	Speed sensor, weatherpack connector	1
	N002A	07-18		9004201-3700	O-ring	1
	"	97-16		085043(9004201-3700)	O-ring	1
	N006	97-16		4410081	Valve plate, CCW	1
	"	97-16		4410075	Valve plate, CW	1

ABA	N002	97-16		KPPG156	Speed sensor, Turck connector	1
	N002A	07-18		9004201-3700	O-ring	1
	"	97-16		085043(9004201-3700)	O-ring	1
	N006	97-16		4410081	Valve plate, CCW	1
	"	97-16		4410075	Valve plate, CW	1

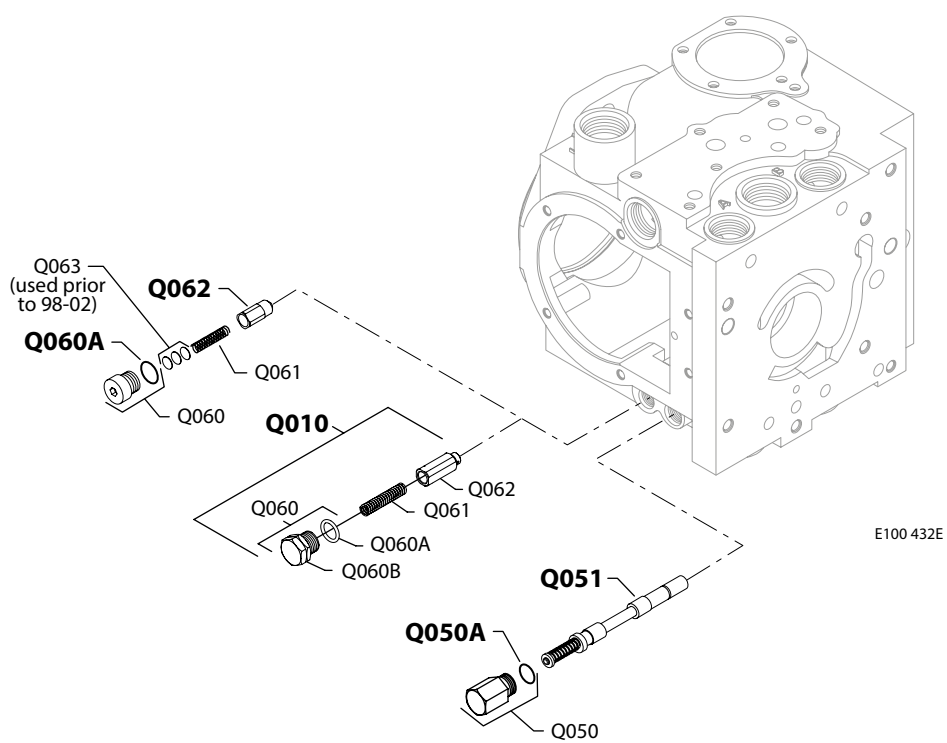
CAA	N002	07-18		46151	Plug	1
	"	97-11		046151(9005100-5600)	Plug	1
	N002A	07-18		9004201-3700	O-ring	1
	"	97-11		085043(9004201-3700)	O-ring	1
	N006	97-11		4410081	Valve plate, CCW	1
	"	97-11		4410075	Valve plate, CW	1

CBA	N002	07-18		46151	Plug	1
	"	97-11		046151(9005100-5600)	Plug	1
	N002A	07-18		9004201-3700	O-ring	1
	"	97-11		085043(9004201-3700)	O-ring	1
	N006	97-11		4410081	Valve plate, CCW	1
	"	97-11		4410075	Valve plate, CW	1

CCA	N002	07-18		46151	Plug	1
	"	97-11		046151(9005100-5600)	Plug	1
	N002A	07-18		9004201-3700	O-ring	1
	"	97-11		085043(9004201-3700)	O-ring	1
	N006	97-11		4410081	Valve plate, CCW	1
	"	97-11		4410075	Valve plate, CW	1

NNN	N002	07-18		46151	Plug	1
	"	94-04		046151(9005100-5600)	Plug	1
	N002A	07-18		9004201-3700	O-ring	1
	"	94-04		085043(9004201-3700)	O-ring	1
	N006	94-04		4410081	Valve plate, CCW	1
	"	94-04		4410075	Valve plate, CW	1

Loop flushing



Enlarged **bold** type item
numbers are recommended
parts to be stocked for servicing

Loop flushing

	Global new part number
	Obsolete part number
	No change

Loop flushing, spool and relief valve

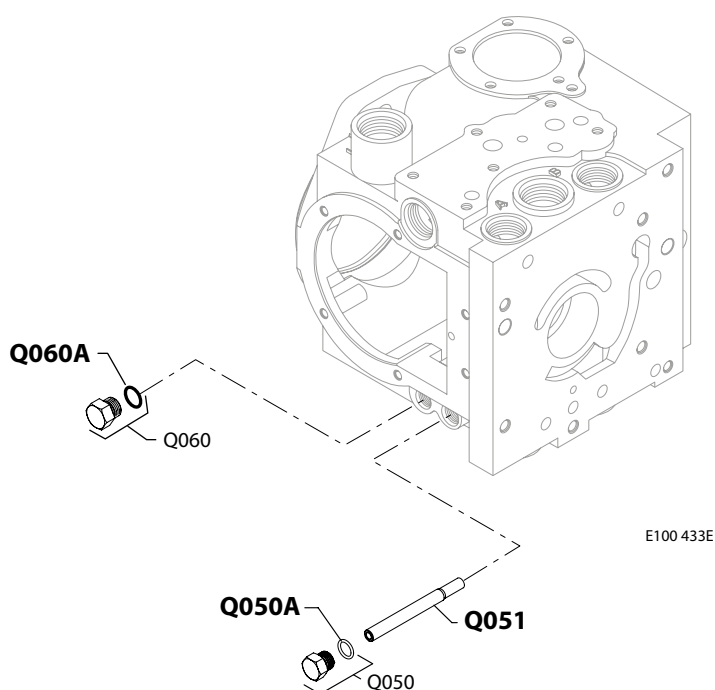
Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
2	Q050	94-04		4800279	Plug assembly	1
	Q050A	07-18		9004201-3700	O-ring	1
	"	94-04		085043(9004201-3700)	O-ring	1
	Q051	07-18		1735296	Spool assembly	1
	"	98-01		4800708	Spool assembly (SB-1997-029C)	1
	"	94-04	99-52	4800349	Spool assembly (SB-1996-023)	1
	Q060	94-04		4800747	Plug assembly (SB-1998-085)	1
	Q060A	07-18		9004201-3100	O-ring	1
	"	94-04		015818(9004201-3100)	O-ring	1
	Q061	07-18		1745318	Spring	1
	"	97-37		4800654	Spring (SB-1997-027)	1
	"	94-04	97-36	768853	Spring	1
	Q062	07-18		1733723	Poppet	1
	"	94-04		4800389	Poppet	1
	Q063	94-04	98-01	9510447	Shim kit (SB-1997-027)	1

3	Q050	94-04		4800279	Plug assembly	1
	Q050A	07-18		9004201-3700	O-ring	1
	"	94-04		085043(9004201-3700)	O-ring	1
	Q051	07-18		1735296	Spool assembly	1
	"	98-01		4800708	Spool assembly (SB-1997-029C)	1
	"	94-04	99-52	4800349	Spool assembly (SB-1996-023)	1
	Q060	94-04		4800747	Plug assembly (SB-1998-085)	1
	Q060A	07-18		9004201-3100	O-ring	1
	"	94-04		015818(9004201-3100)	O-ring	1
	Q061	07-18		1745318	Spring	1
	"	97-37		4800654	Spring (SB-1997-027)	1
	"	94-04	97-36	768853	Spring	1
	Q062	07-18		1735195	Poppet	1
	"	93-20		4800396	Poppet	1
	Q063	94-04	98-01	9510447	Shim kit (SB-1997-027)	1

4	Q050	98-48		4800279	Plug assembly	1
	Q050A	07-18		9004201-3700	O-ring	1
	"	98-48		085043(9004201-3700)	O-ring	1
	Q051	07-18		1735296	Spool assembly	1
	"	98-48		4800708	Spool assembly (SB-1997-029C)	1
	Q060	98-48		4800280	Plug assembly	1
	Q060A	07-18		9004201-3100	O-ring	1
	"	98-48		015818(9004201-3100)	O-ring	1
	Q061	07-18		1745318	Spring	1
	"	98-48		4800654	Spring (SB-1997-027)	1
	Q062	07-18		1733723	Poppet	1
	"	98-48		4800389	Poppet	1

5	Q050	98-48		4800279	Plug assembly	1
	Q050A	07-18		9004201-3700	O-ring	1
	"	98-48		085043(9004201-3700)	O-ring	1
	Q051	07-18		1735296	Spool assembly	1
	"	98-48		4800708	Spool assembly (SB-1997-029C)	1
	Q060	98-48		4800280	Plug assembly	1
	Q060A	07-18		9004201-3100	O-ring	1
	"	98-48		015818(9004201-3100)	O-ring	1
	Q061	07-18		1745318	Spring	1
	"	98-48		4800654	Spring (SB-1997-027)	1
	Q062	07-18		1735195	Poppet	1
	"	98-48		4800396	Poppet	1

Loop flushing



Enlarged **bold** type item numbers are recommended parts to be stocked for servicing

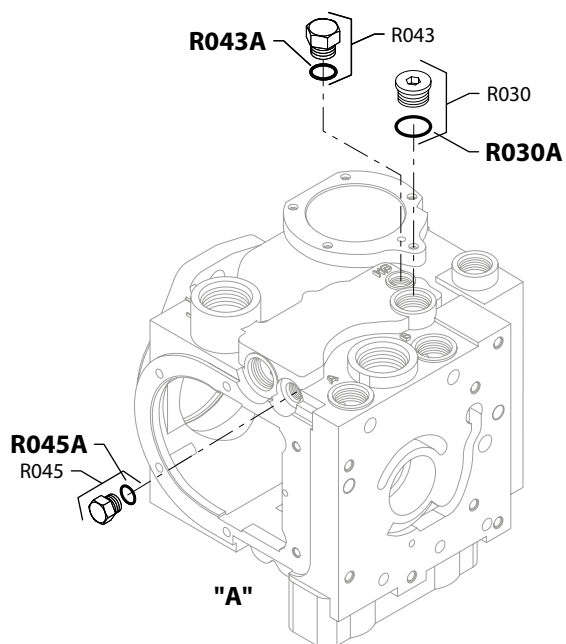
Loop flushing

	Global new part number
	Obsolete part number
	No change

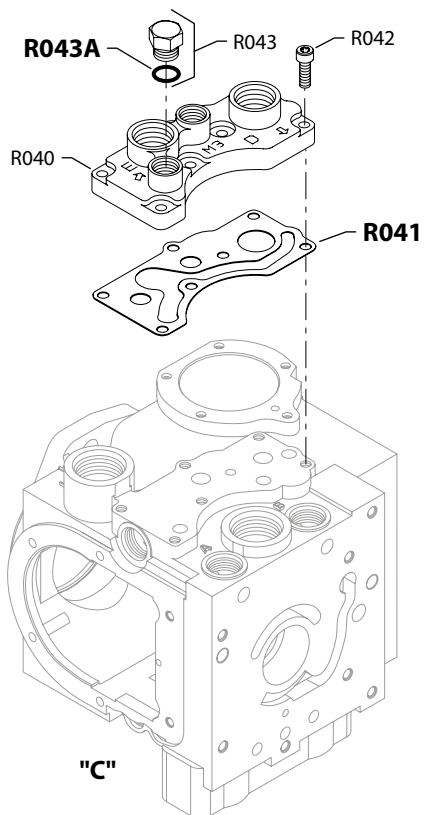
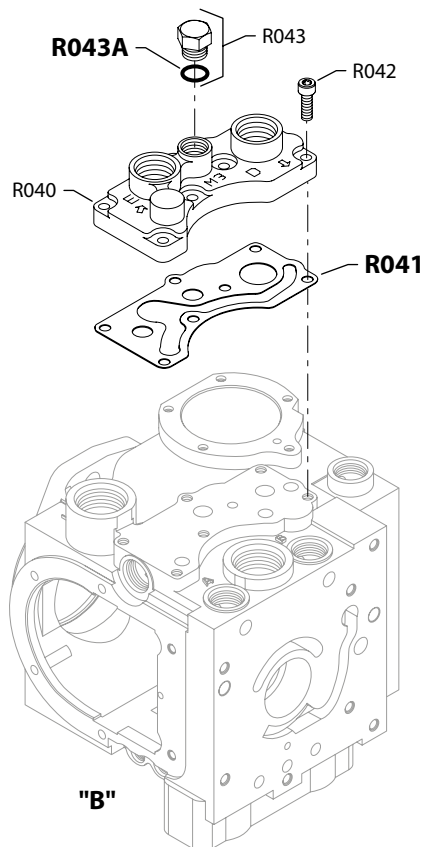
Loop flushing, spool and relief valve

Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
D	Q050	07-18		9005100-5600	Plug assembly	1
	"	07-26		4800279	Plug assembly	1
	"	07-18		9005100-5600	Plug assembly	1
	"	94-08		046151(9005100-5600)	Plug assembly	1
	Q050A	07-18		9004201-3700	O-ring	1
	"	94-08		085043(9004201-3700)	O-ring	1
	Q051	07-18		1735242	Spool, defeated	
	"	07-26		11022477	Spool, defeated	1
	"	07-18		1735242	Spool, defeated	1
	"	94-08		4800626	Spool, defeated	1
	Q060	94-08		4800323	Plug assembly	1
	Q060A	07-18		9004201-3100	O-ring	1
	"	94-08		015818(9004201-3100)	O-ring	1
N	None	93-20		No parts		

Filtration



E100 498E



Enlarged **bold** type item numbers are recommended parts to be stocked for servicing

Filtration

	Global new part number
	Obsolete part number
	No change

Suction, no adapter

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per Model/Kit
A	R030	07-18		9005110-7500	Plug assembly	1
	"	98-01		671296(9005110-7500)	Plug assembly	1
	"	94-04	99-52	001479(9005099-4700)	Pipe plug	1
	R030A	07-18		9004201-5000	O-ring	1
	"	98-01		001131(9004201-5000)	O-ring	1
	R043	07-18		9005100-5600	Plug assembly	1
	"	98-01		046151(9005100-5600)	Plug assembly	1
	"	94-04	99-52	681296(9005110-7500)	Plug	1
	R043A	07-18		9004201-3700	O-ring	1
	"	98-01		085043(9004201-3700)	O-ring	1
	"	94-04	99-52	001131(9004201-5000)	O-ring	1
	R045	94-04		4800323	Plug assembly	1
	R045A	07-18		9004201-3100	O-ring	1
	"	94-04		015818(9004201-3100)	O-ring	1

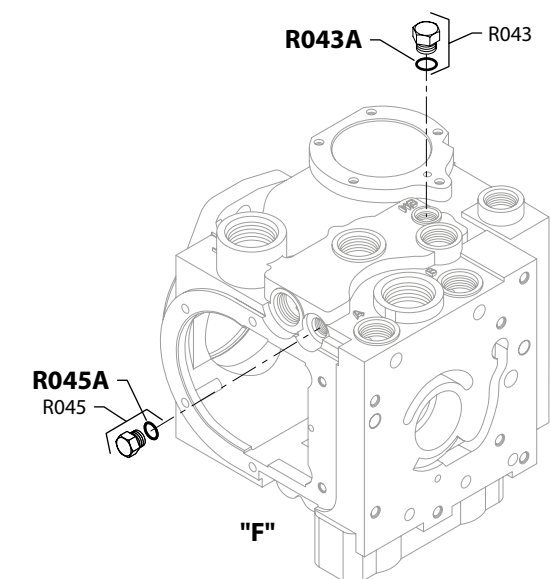
Remote, full flow, with adapter

B	R040	06-49		1714963-02	Remote filter adapter	1
	"	94-04		4800218	Remote filter adapter	1
	R041	94-04		4800213	Filter adapter gasket	1
	R042	07-18		9007314-0607	Screw (AAM0603001)	7
	"	94-04		5000002	Screw	7
	R043	07-18		9005100-5600	Plug	1
	"	94-04		046151(9005100-5600)	Plug	1
	R043A	07-18		9004201-3700	O-ring	1
	"	94-04		085043(9004201-3700)	O-ring	1

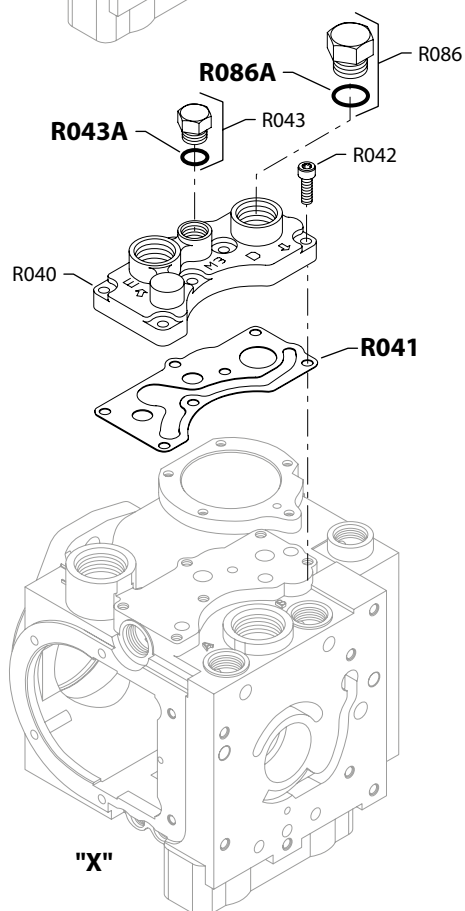
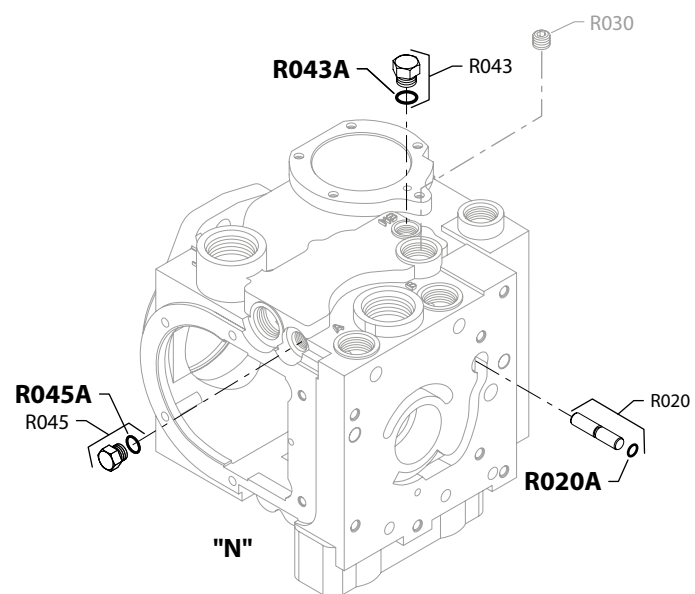
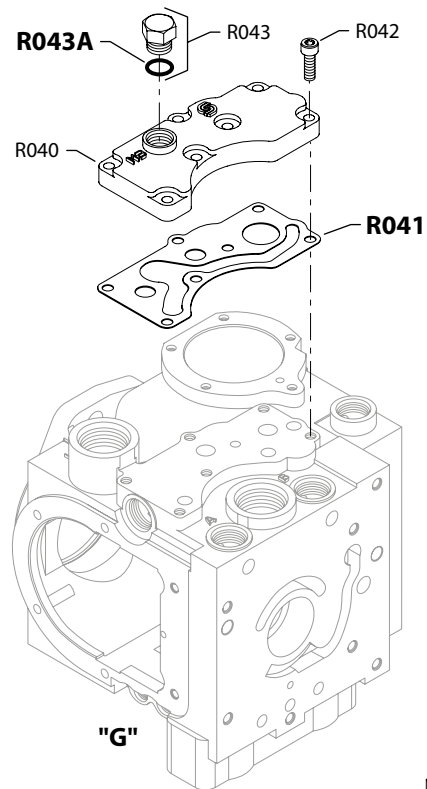
Remote, partial flow, with adapter

C	R040	06-49		1714963	Remote filter adapter	1
	"	94-04		4800219	Remote filter adapter	1
	R041	94-04		4800213	Filter adapter gasket	1
	R042	07-18		9007314-0607	Screw (AAM0603001)	7
	"	98-01		5000002	Screw (SB-1997-029C)	7
	"	94-04	99-52	5000001	Screw	7
	R043	07-18		9005100-5600	Plug	1
	"	94-04		046151(9005100-5600)	Plug	1
	R043A	07-18		9004201-3700	O-ring	1
	"	94-04		085043(9004201-3700)	O-ring	1

Filtration



E100 499E



Enlarged **bold** type item numbers are recommended parts to be stocked for servicing

Filtration

	Global new part number
	Obsolete part number
	No change

Remote, full flow, no adapter

Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
F	R043	07-18		9005100-5600	Plug	1
	"	02-35		046151(9005100-5600)	Plug	1
	R043A	07-18		9004201-3700	O-ring	1
	"	02-35		085043(9004201-3700)	O-ring	1
	R045	02-35		4800323	Plug assembly	1
	R045A	07-18		9004201-3100	O-ring	1
	"	02-35		015818(9004201-3100)	O-ring	1

Suction, with adapter

G	R040	06-49		1715889-01	Suction filter adapter	1
	"	94-13		4800204	Suction filter adapter	1
	R041	94-13		4800213	Filter adapter gasket	1
	R042	07-18		9007314-0607	Screw (AAM0603001)	7
	"	98-02		5000002	Screw (SB-1997-029C)	7
	"	93-20	98-01	5000001	Screw	7
	R043	07-18		9005100-5600	Plug	1
	"	94-13		046151(9005100-5600)	Plug	1
	R043A	07-18		9004201-3700	O-ring	1
	"	94-13		085043(9004201-3700)	O-ring	1

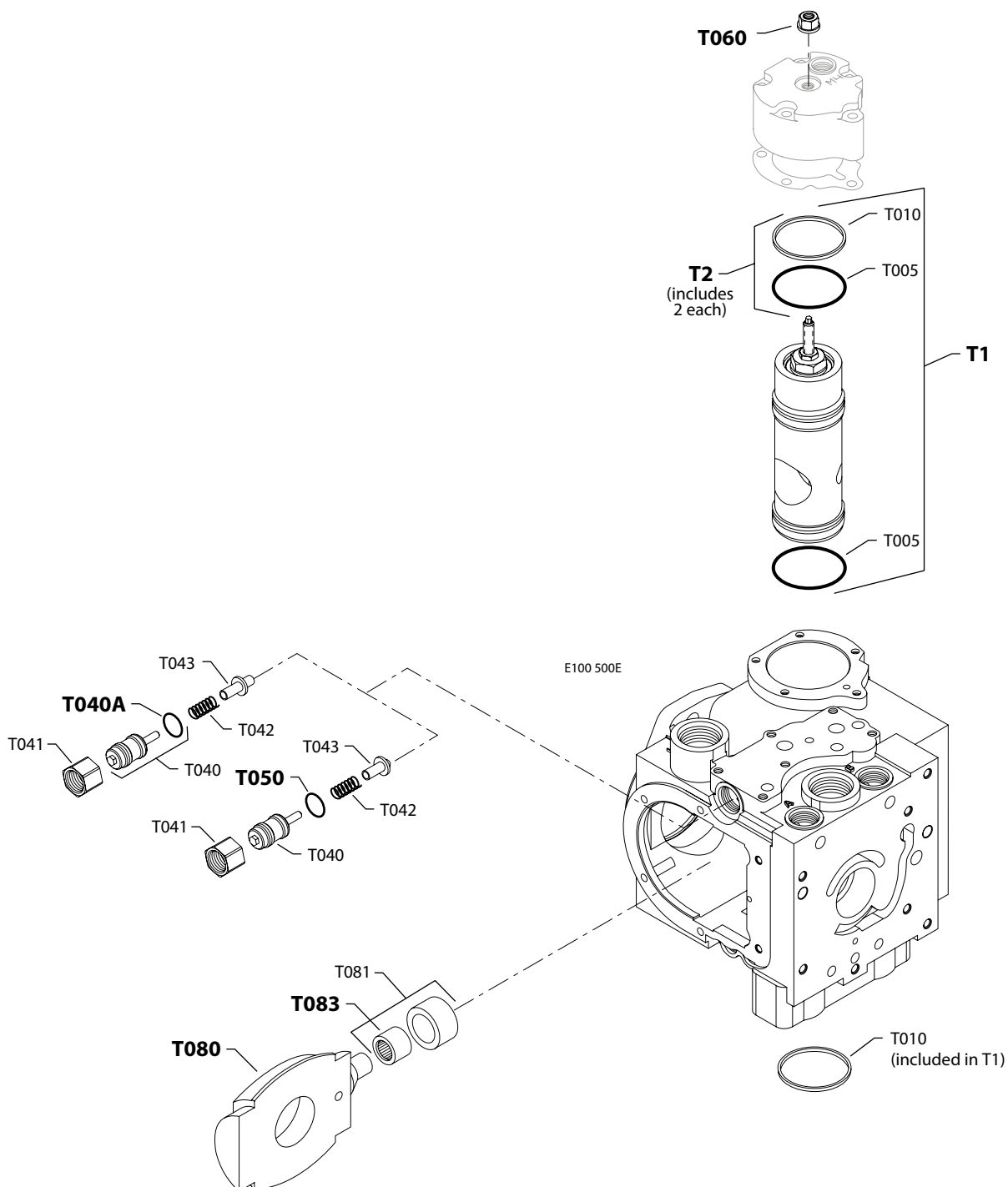
None, external charge supply, no adapter

N	R020	94-13		4800332	Plug assembly	1
	R020A	07-18		144725	O-ring	1
	"	94-13		144725(9004105-0110)	O-ring	1
	R030	98-02		9005200-7500	Pile plug	1
	"	94-13	98-01	001479(9005001-1200)	Pile plug	1
	R043	07-18		9005100-5600	Plug	1
	"	98-02		046151(9005100-5600)	Plug	1
	"	94-13	98-01	681296(9005110-7500)	Plug	1
	R043A	07-18		9004201-3700	O-ring	1
	"	98-02		085043(9004201-3700)	O-ring	1
	"	94-13	98-01	001131(9004201-5000)	O-ring	1
	R045	94-13		4800323	Plug assembly	1
	R045A	07-18		9004201-3100	O-ring	1
	"	94-13		015818(9004201-3100)	O-ring	1

None, external charge supply, with adapter

X	R040	06-49		1714963-02	Remote filter adapter	1
	"	96-38		4800218	Remote filter adapter	1
	R041	96-38		4800213	Filter adapter gasket	1
	R042	07-18		9007314-0607	Screw (AAM0603001)	7
	"	98-02		5000002	Screw (SB-1997-029C)	7
	"	96-38	98-01	5000001	Screw	7
	R043	07-18		9005100-5600	Plug	1
	"	96-38		046151(9005100-5600)	Plug	1
	R043A	07-18		9004201-3700	O-ring	1
	"	96-38		085043(9004201-3700)	O-ring	1
	R086	07-18		9005100-8700	Plug	1
	"	96-38		001537(9005100-8700)	Plug	1
	R086A	07-18		9004201-6200	O-ring	1
	"	96-38		001149(9004201-6200)	O-ring	1

Special drive features



Enlarged **bold** type item numbers are recommended parts to be stocked for servicing

Special drive features

	Global new part number
	Obsolete part number
	No change

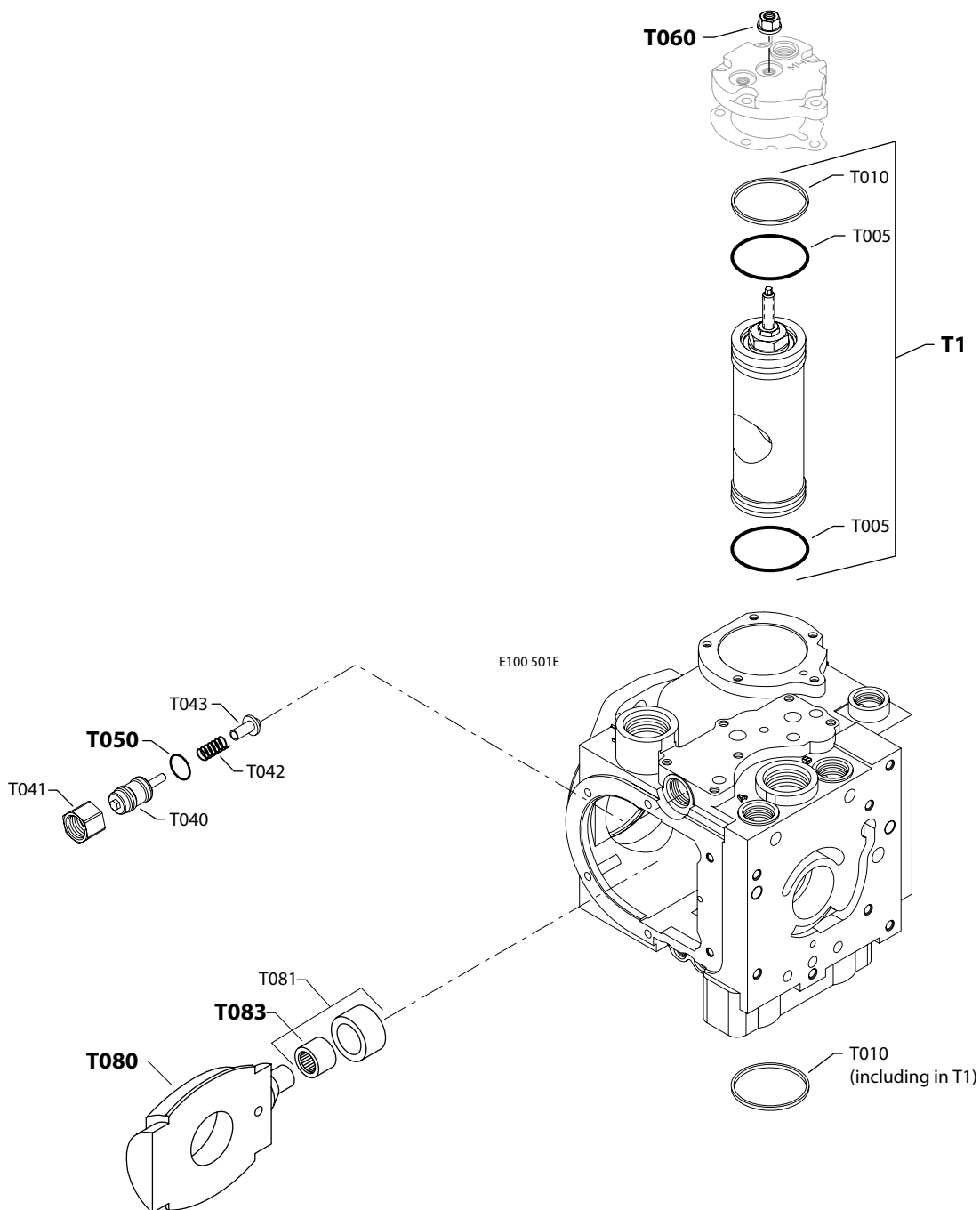
NFP with anti-stall

Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
1	T1	06-01		4410125	Servo piston kit	1
	"	95-34		4510295	Servo piston kit	1
	T2	06-01		4410219	Servo piston ring kit	1
	"	95-34		4510120	Servo piston ring kit	1
	T005	07-18		9004100-1390	O-ring	2
	"	95-34		000869(9004100-1390)	O-ring	2
	T010	95-34		4700035	Piston ring	2
	T040	95-34		4800352	Plug assembly	1
	T040A	07-18		9004201-6200	O-ring	1
	"	95-34		012559(9004201-6200)	O-ring	1
	T041	07-18		9003575-0101	Nut	1
	"	95-34		342709(9003575-0101)	Nut	1
	T042	95-34		8800496	Spring	1
	T043	07-18		1733732	Poppet	1
	"	95-34		4350299	Poppet	1
	T060	95-34		336826	Seal nut, M10	1
	T080	07-18		1715229-02	Swashplate	1
	"	99-36		4410270	Swashplate (SB-1999-048)	1
	"	95-34	99-35	4410228	Swashplate (SB-1998-006)	1
	T081	95-34		4410148	Cam follower bearing assembly	1
	T083	95-34		5000154	Needle bearing	1

NFP with standard CPRV

5	T1	06-01		4410125	Servo piston kit	1
	"	96-38		4510295	Servo piston kit	1
	T2	06-01		4410219	Servo piston ring kit	1
	"	96-38		4510120	Servo piston ring kit	1
	T005	07-18		9004100-1390	O-ring	2
	"	96-38		000869(9004100-1390)	O-ring	2
	T010	96-38		4700035	Piston ring	2
	T040	96-38		502470	Adjuster	1
	"	96-38	99-52	4800308	Plug assembly	1
	T041	07-18		9003575-0101	Nut	1
	"	96-38		342709(9003575-0101)	Nut	1
	"	96-38	99-52	4510027	Shim kit	1
	T042	07-18		1041419	Spring	1
	"	98-01		8800476	Spring	1
	"	96-38	99-52	8800496	Spring	1
	T043	07-18		1030940	Poppet	1
	"	98-01		342428(8800449)	Poppet	1
	"	96-38	99-52	4800134	Poppet	1
	T050	07-18		9004201-6200	O-ring	1
	"	96-38		012559(9004202-6200)	O-ring	1
	T060	96-38		336826	Seal nut, M10	1
	T080	07-18		1715229-02	Swashplate	1
	"	99-36		4410270	Swashplate (SB-1999-048)	1
	"	95-73	99-35	4410228	Swashplate	1
	T081	96-38		4410148	Cam follower bearing assembly	1
	T083	96-38		5000154	Needle bearing	1

Special drive features



Enlarged **bold** type item numbers are recommended parts to be stocked for servicing

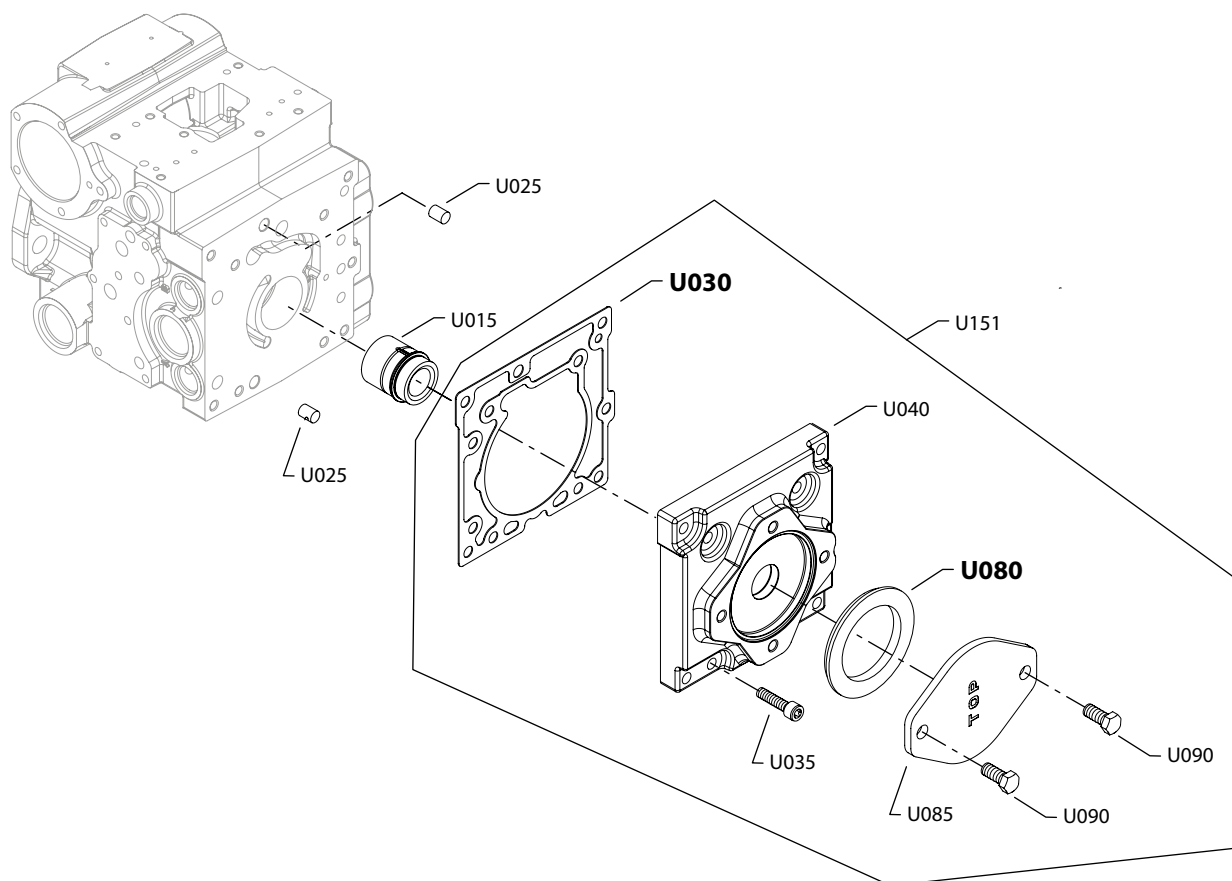
Special drive features

	Global new part number
	Obsolete part number
	No change

Standard

Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
N	T1	06-01		4410119	Servo piston kit	1
	"	93-20		4510131	Servo piston kit	1
	T005	07-18		9004100-1390	O-ring	2
	"	93-20		673236(9004100-1390)	O-ring	2
	T010	93-20		4700035	Piston ring	2
	T040	98-02		502470	Adjuster	1
	"	93-20	98-01	4800308	Plug assembly	1
	T041	07-18		9003575-0101	Nut	1
	"	98-02		342709(9003575-0101)	Nut	1
	"	93-20	98-01	4510027	Shim kit	1
	T042	07-18		1041419	Spring	1
	"	98-02		8800476	Spring	1
	"	93-20	98-01	8800496	Spring	1
	T043	07-18		1030940	Poppet	1
	"	98-02		342428(8800449)	Poppet	1
	"	93-20	98-01	4800134	Poppet	1
	T050	07-18		9004201-6200	O-ring	1
	"	93-20		012559(9004202-6200)	O-ring	1
	T060	07-18		336826	Seal nut, M10	1
	T080	07-18		1715229-02	Swashplate	1
	"	99-36		4410270	Swashplate (SB-1999-048)	1
	"	95-73	99-35	4410228	Swashplate	1
	T081	93-20		4410148	Cam follower bearing assembly	1
	T083	93-20		5000154	Needle bearing	1

Auxiliary mounting



Enlarged **bold** type item numbers are recommended parts to be stocked for servicing

Auxiliary mounting

	Global new part number
	Obsolete part number
	No change

'A'PAD, 9 tooth coupling

Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
A	U015	07-10		1724104	Coupling, 9 tooth	1
	"	99-52		4410161	Coupling, 9 tooth	1
	"	94-10		Refer to SP-1997-029C	Service replacement kit	1
	U025	07-18		9004800-3708	Pin	2
	"	94-10		001289(9004800-3708)	Pin	2
	U151	09-52		11076613	Service Kit, A-Pad	1
	U000	09-52		11077166	Service Instructions	1
	U030	08-13		1716227	Charge pump cover gasket (SB-2009-070)	1
	"	94-10		4800855	Charge pump cover gasket (SB-2002-012)	1
	U035	08-13		746594	Screw(AAM0803001)	8
	"	07-18		746594	Screw(AAM0803001)	7
	"	94-10		5000080	Screw	7
	U040	09-52		11076948	Charge pump cover, A-pad, (SB-2009-070)	1
	"	06-49	08-13	1714957-02	Charge pump cover, A-pad	1
	"	94-10		4800699	Charge pump cover, A-pad	1
	U080	09-17		4800482 (1735473)	A pad seal (SB-1997-029C)	1
	"	99-52		4800482	A pad seal (SB-1997-029C)	1
	"	94-10		726950(9004104-0420)	O-ring	1
	U085	99-52		4460586	Cover plate (SB-1997-029C)	1
	"	94-10		9802336	Cover plate	1
	U090	07-18		9007200-3712	Screw	2
	"	94-10		0019125(9007200-3712)	Screw	2

'A'PAD, 13 tooth coupling

R	U015	07-10		1724088	Coupling, 13 tooth	1
	"	99-52		4410163	Coupling, 13 tooth	1
	"	94-10		Refer to SP-1997-029C	Service replacement kit	1
	U025	07-18		9004800-3708	Pin	2
	"	94-10		001289(9004800-3708)	Pin	2
	U151	09-52		11076613	Service Kit, A-Pad	1
	U000	09-52		11077166	Service Instructions	1
	U030	08-13		1716227	Charge pump cover gasket (SB-2009-070)	1
	"	94-10		4800855	Charge pump cover gasket (SB-2002-012)	1
	U035	08-13		746594	Screw(AAM0803001)	8
	"	07-18	08-13	746594	Screw(AAM0803001)	7
	"	94-10		5000080	Screw	7
	U040	09-52		11076948	Charge pump cover, A-pad, (SB-2009-070)	1
	"	06-49	08-13	1714957-02	Charge pump cover, A-pad	1
	"	94-10		4800699	Charge pump cover, A-pad	1
	U080	09-17		4800482 (1735473)	A pad seal (SB-1997-029C)	1
	"	99-52		4800482	A pad seal (SB-1997-029C)	1
	"	94-10		726950(9004104-0420)	O-ring	1
	U085	99-52		4460586	Cover plate (SB-1997-029C)	1
	"	94-10		9802336	Cover plate	1
	U090	07-18		9007200-3712	Screw	2
	"	94-10		0019125(9007200-3712)	Screw	2

This diagram illustrates the assembly of the rear components of the device. The main housing is shown on the left. The rear cover (U030) is positioned in the center, with a gasket (U015) and a small pin (U025) being installed into its rear face. To the right, the rear plate (U080) is shown with four screws (U090) being inserted through its mounting holes. The rear plate has a 'TOP' label indicating its orientation. A screw (U035) is also shown near the rear cover. The entire assembly is shown in an exploded view to show the relative positions of the parts.

Enlarged **bold** type item numbers are recommended parts to be stocked for servicing

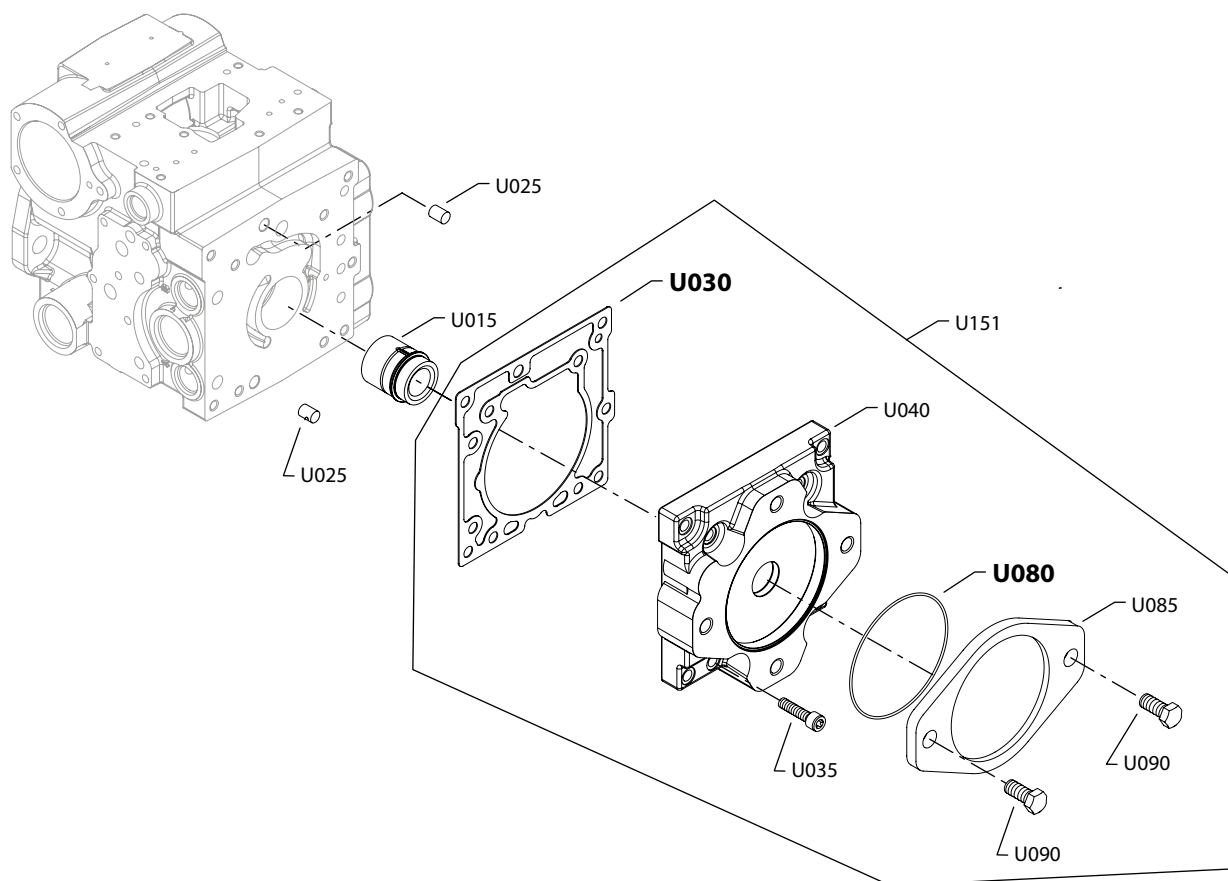
Auxiliary mounting

	Global new part number
	Obsolete part number
	No change

'A'PAD, 11 tooth coupling, special

Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
T	U015	07-10		1724105	Coupling, 11 tooth	1
	"	99-52		4410162	Coupling, 11 tooth	1
	"	94-10		Refer to SP-1997-029C	Service replacement kit	1
	U025	07-18		9004800-3708	Pin	2
	"	94-10		001289(9004800-3708)	Pin	2
	U151	09-52		11076613	Service Kit, A-Pad	1
	U000	09-52		11077166	Service Instructions	1
	U030	08-13		1716227	Charge pump cover gasket (SB-2009-070)	1
	"	94-10		4800855	Charge pump cover gasket (SB-2002-012)	1
	U035	08-13		746594	Screw(AAM0803001)	8
	"	07-18	08-13	746594	Screw(AAM0803001)	7
	"	94-10		5000080	Screw	7
	U040	09-52		11076948	Charge pump cover, A-pad, (SB-2009-070)	1
	"	06-49	08-13	1714957-02	Charge pump cover, A-pad	1
	"	94-10		4800699	Charge pump cover, A-pad	1
	U080	09-17		4800482 (1735473)	A pad seal (SB-1997-029C)	1
	"	99-52		4800482	A pad seal (SB-1997-029C)	1
	"	94-10		726950(9004104-0420)	O-ring	1
	U085	99-52		4460586	Cover plate (SB-1997-029C)	1
	"	94-10		9802336	Cover plate	1
	U090	07-18		9007200-3712	Screw	2
	"	94-10		0019125(9007200-3712)	Screw	2

Auxiliary mounting



Enlarged **bold** type item numbers are recommended parts to be stocked for servicing

Auxiliary mounting

	Global new part number
	Obsolete part number
	No change

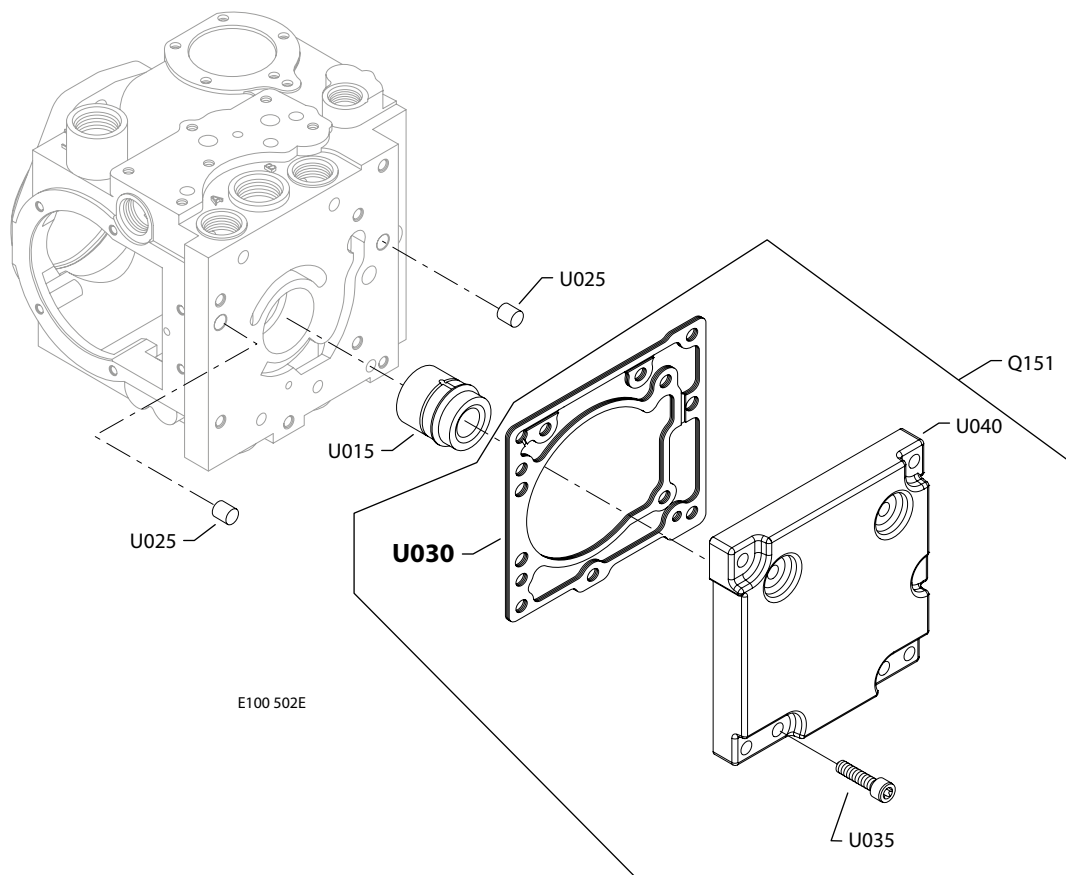
'B'PAD, 13 tooth coupling

Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
B	U015	07-18		1724088	Coupling, 13 tooth	1
	"	99-52		4410163	Coupling, 13 tooth	1
	"	94-10	97-52	Refer to SB-1997-029C	Service replacement kit	1
	U025	07-18		9004800-3708	Pin	2
	"	94-10		001289(9004800-3708)	Pin	2
	U151	09-52		11076614	Service Kit, B-Pad	1
	U000	09-52		11077166	Service Instructions	1
	U030	08-13		1716227	Charge pump cover gasket (SB-2009-070)	1
	"	94-10		4800855	Charge pump cover gasket (SB-2002-012)	1
	U035	08-13		746594	Screw(AAM0803001)	8
	"	07-18		746594	Screw(AAM0803001)	6
	"	94-10		5000080	Screw	6
	U040	08-13		1714958-04	Charge pump cover, B pad (SB-2009-070)	1
	"	07-18	08-13	1714958-06	Charge pump cover, B pad	1
	"	94-10		4800306	Charge pump cover, B pad	1
	U080	99-52		9004104-0440	O-ring	1
	"	94-10	97-52	680892(9004104-0440)	O-ring	1
	U085	94-10		4460370	Cover Plate	1
	U090	07-18		9007200-5016	Screw	2
	"	94-10		544478(9007200-5016)	Screw	2

'B-B'PAD, 15 tooth coupling

V	U015	07-18		1724089	Coupling, 15 tooth	1
	"	99-52		4410178	Coupling, 15 tooth	1
	"	94-10	97-52	Refer to SB-1997-029C	Service replacement kit	1
	U025	07-18		9004800-3708	Pin	2
	"	94-10		001289(9004800-3708)	Pin	2
	U151	09-52		11076614	Service Kit, B-Pad	1
	U000	09-52		11077166	Service Instructions	1
	U030	08-13		1716227	Charge pump cover gasket (SB-2009-070)	1
	"	94-10		4800855	Charge pump cover gasket (SB-2002-012)	1
	U035	08-13		746594	Screw(AAM0803001)	8
	"	07-18	08-13	746594	Screw(AAM0803001)	6
	"	94-10		5000080	Screw	6
	U040	08-13		1714958-04	Charge pump cover, B pad (SB-2009-070)	1
	"	07-18	08-13	1714958-06	Charge pump cover, B pad	1
	"	94-10		4800306	Charge pump cover, B pad	1
	U080	99-52		9004104-0440	O-ring	1
	"	94-10	97-52	680892(9004104-0440)	O-ring	1
	U085	94-10		4460370	Cover Plate	1
	U090	07-18		9007200-5016	Screw	2
	"	94-10		544478(9007200-5016)	Screw	2

Auxiliary mounting



Enlarged **bold** type item
numbers are recommended
parts to be stocked for servicing



Auxiliary mounting

	Global new part number
	Obsolete part number
	No change

No auxiliary PAD

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per Model/Kit
N	U015	07-12		1724104	Coupling, 9 tooth	1
	"	99-52		4410161	Coupling, 9 tooth	1
	G005	94-10	99-52	Refer to SB-1997-029C	Service replacement kit	1
	U025	07-18		9004800-3708	Pin	2
	"	94-10		001289(9004800-3708)	Pin	2
	U151	09-52		11076615	Service Kit, No-Aux Pad	1
	U000	09-52		11077166	Service Instructions	1
	U030	08-13		1716227	Charge pump cover gasket (SB-2009-070)	1
	"	94-10	08-13	4800855	Charge pump cover gasket (SB-2002-012)	1
	U035	08-13		746593	Screw(AAM0803001)	8
	"	07-18		746594	Screw(AAM0803001)	7
	"	94-10		5000080	Screw	7
	U040	09-52		11076951	Charge pump cover, no pad (SB-2009-070)	1
	"	06-49	08-13	1715358-01	Charge pump cover, no pad	1
	"	94-10		4800774	Charge pump cover, no pad (SB-1999-064)	1

No auxiliary PAD, without coupling

Z	U025	07-18		9004800-3708	Pin	2
	"	94-10		001289(9004800-3708)	Pin	2
	U151	09-52		11076615	Service Kit, No-Pad	1
	U000	09-52		11077166	Service Instructions	1
	U030	08-13		1716227	Charge pump cover gasket (SB-2009-070)	1
	"	94-10	08-13	4800855	Charge pump cover gasket (SB-2002-012)	1
	U035	08-13		746593	Screw(AAM0803001)	8
	"	07-18		746594	Screw(AAM0803001)	7
	"	94-10		5000080	Screw	7
	U040	09-52		11076951	Charge pump cover, no pad (SB-2009-070)	1
	"	06-49	08-13	1715358-01	Charge pump cover, no pad	1
	"	94-10		4800774	Charge pump cover, no pad (SB-1999-064)	1

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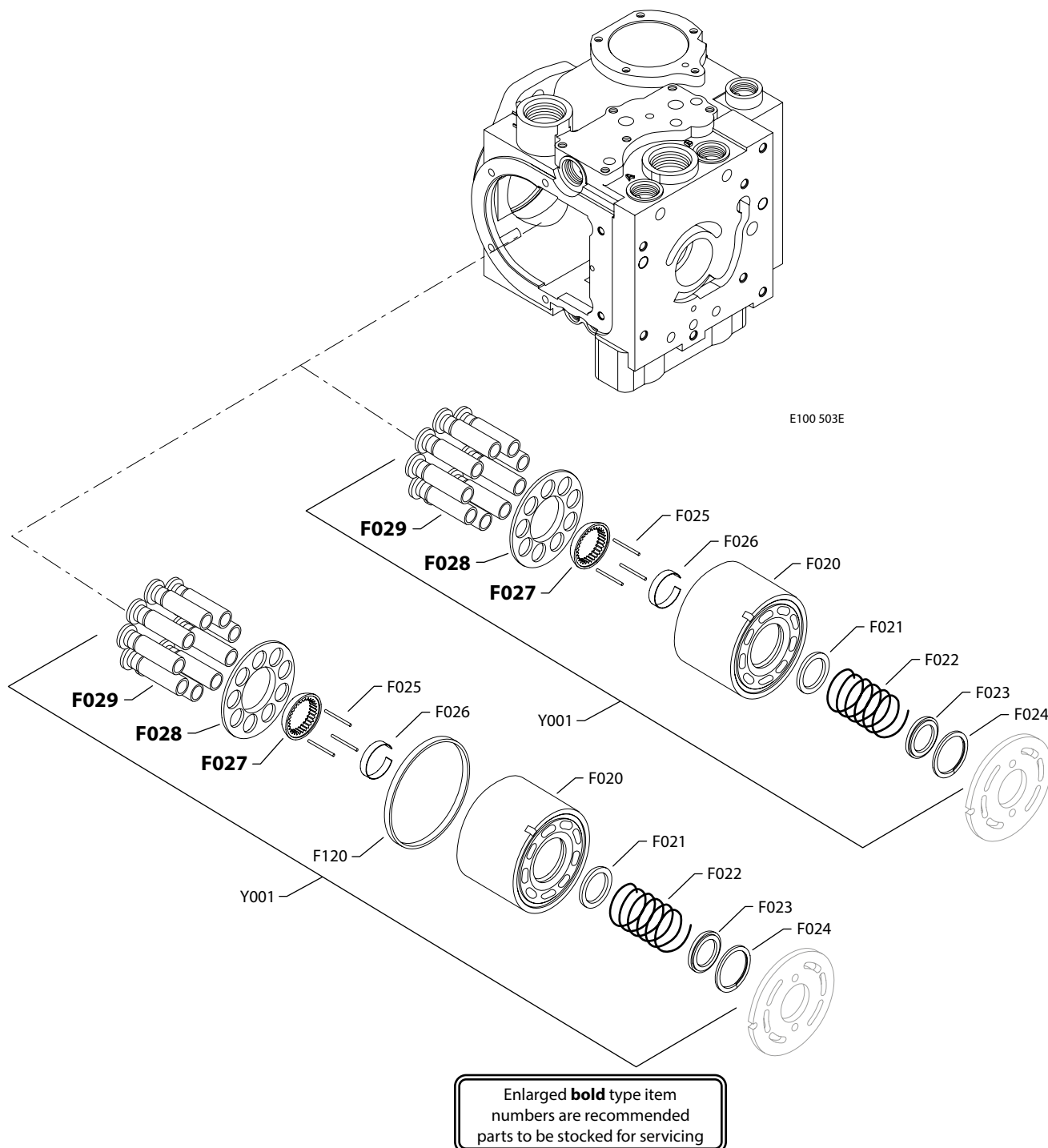
Auxiliary mounting

	Global new part number
	Obsolete part number
	No change

'B'PAD, 15 tooth coupling special

Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
F	U015	07-18		1724089	Coupling, 15 tooth	1
	"	99-47		4410178	Coupling, 15 tooth	1
	U025	07-18		9004800-3708	Pin	2
	"	99-47		001289(9004800-3708)	Pin	2
	U030	08-13		1716227	Charge pump cover gasket (SB-2009-070)	1
	"	02-41	08-13	4800855	Charge pump cover gasket (SB-2002-012)	1
	U035	08-13		746594	Screw(AAM0803001)	8
	"	07-18	08-13	746594	Screw(AAM0803001)	6
	"	99-47		5000080	Screw	6
	U040	08-13		1714958-02	Charge pump cover, B pad (SB-2009-070)	1
	"	07-18	08-13	1714958-05	Charge pump cover, B pad	1
	"	99-47		4800398	Charge pump cover, B pad	1
	U080	07-18		9004104-0440	O-ring	1
	"	99-47		680892(9004104-0440)	O-ring	1
	U081	07-18		9004104-0170	O-ring	1
	"	99-47		688721(9004104-0170)	O-ring	1
	U082	07-18		9004104-0190	O-ring	1
	"	99-47		011288(9004104-0190)	O-ring	1

Displacement



Displacement

	Global new part number
	Obsolete part number
	No change

Cylinder block kit

Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
41	Y001	10-04		1734100-01	Cylinder Block Kit-41cc w/o Spd Ring	1
	Y001	94-04	10-03	4410082	Cylinder Block Kit-41cc w/o Spd Ring	1
	F020	14-30		11150736	Cylinder Block (PVM41)	1
	F020	10-04	14-29	1715245-03	Cylinder Block (PVM41)	1
	F020	94-04	10-03	4410077	Cylinder Block (PVM41)	1
	F021	94-04		4350012	Washer-Special	1
	F022	10-04		1743311	Spring-Cyl Block	1
	F022	94-04	10-03	4350172	Spring-Cyl Block	1
	F023	15-09		11149858	Washer-Special	1
	F023	94-04	15-08	9009625-0105 (615450)	Washer-Special	1
	F024	94-04		9006250-0162 (615443)	Ring-Rtng, Int 1.500 HSG ID X .043	1
	F025	14-30		11129964	Pin-Slipper Hold Down	3
	F025	10-04	14-29	1745660	Pin-Slipper Hold Down	3
	F025	94-04	10-03	4700091	Pin-Slipper Hold Down	3
	F026	94-04		4350048	Retainer-Hold Down Pin	1
	F027	94-04		4410205	Guide-Slipper Retainer	1
	F028	94-04		4410204	Retainer-Slipper	1
	F029	10-04		1743310	Piston Assy 41cc	9
	F029	94-04	10-03	4410079	Piston Assembly DWG-Hollow	9

4A	Y001	11-35		11076723	Cylinder Block Kit-41cc w/ Spd Ring	1
	Y001	99-47	11-34	4410166	Cylinder Block Kit-41cc w/ Spd Ring	1
	F020	14-30		11150736	Cylinder Block (PVM41)	1
	F020	11-35	14-29	1715245-03	Cylinder Block (PVM41)	1
	F020	99-47	11-34	4410077	Cylinder Block (PVM41)	1
	F021	99-47		4350012	Washer-Special	1
	F022	11-35		1743311	Spring-Cyl Block	1
	F022	99-47	11-34	4350172	Spring-Cyl Block	1
	F023	15-09		11149858	Washer-Special	1
	F023	99-47	15-08	9009625-0105 (615450)	Washer-Special	1
	F024	99-47		9006250-0162 (615443)	Ring-Rtng, Int 1.500 HSG ID X .043	1
	F025	14-30		11129964	Pin-Slipper Hold Down	3
	F025	11-35	14-29	1745660	Pin-Slipper Hold Down	3
	F025	99-47	11-34	4700091	Pin-Slipper Hold Down	3
	F026	99-47		4350048	Retainer-Hold Down Pin	1
	F027	99-47		4410205	Guide-Slipper Retainer	1
	F028	99-47		4410204	Retainer-Slipper	1
	F029	11-35		1743310	Piston Assy 41cc	9
	F029	99-47	11-34	4410079	Piston Assembly DWG-Hollow	9
	F120	06-01		KK14722	Magnetic Speed Ring,3.646 ID	1



Displacement

	Global new part number
	Obsolete part number
	No change

Cylinder block kit

Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
51	Y001	99-47		4520004	Cylinder Block Kit-51cc w/o Spd Ring	1
	F020	99-47		4520003	Cylinder Block (PVM51)	1
	F021	99-47		4350012	Washer-Special	1
	F022	99-47		4350172	Spring-Cyl Block	1
	F023	99-47		9009625-0105 (615450)	Washer-Special	1
	F024	99-47		9006250-0162 (615443)	Ring-Rtng, Int 1.500 HSG ID X .043	1
	F025	99-47		4700091	Pin-Slipper Hold Down	3
	F026	99-47		4350048	Retainer-Hold Down Pin	1
	F027	99-47		4410205	Guide-Slipper Retainer	1
	F028	99-47		4410204	Retainer-Slipper	1
	F029	99-47		4440003	Piston Assembly DWG-Hollow	9

5A	Y001	11-15		11076724	Cylinder Block Kit-51cc w/Spd Ring	1
	Y001	06-01	11-14	4410357	Cylinder Block Kit-51cc w/Spd Ring	1
	F020	14-30		11150745	Cylinder Block (PVM51)	1
	F020	11-15	14-29	1715245-08	Cylinder Block (PVM51)	1
	F020	99-47	11-14	4520003	Cylinder Block (PVM51)	1
	F021	99-47		4350012	Washer-Special	1
	F022	11-15		1743311	Spring-Cyl Block	1
	F022	99-47	11-14	4350172	Spring-Cyl Block	1
	F023	15-09		11149858	Washer-Special	1
	F023	99-47	15-08	9009625-0105 (615450)	Washer-Special	1
	F024	99-47		9006250-0162 (615443)	Ring-Rtng, Int 1.500 HSG ID X .043	1
	F025	14-30		11129964	Pin-Slipper Hold Down	3
	F025	11-15	14-29	1745660	Pin-Slipper Hold Down	3
	F025	99-47	11-14	4700091	Pin-Slipper Hold Down	3
	F026	99-47		4350048	Retainer-Hold Down Pin	1
	F027	99-47		4410205	Guide-Slipper Retainer	1
	F028	99-47		4410204	Retainer-Slipper	1
	F029	11-15		1745861-01	Piston Assy (51cc)	9
	F029	99-47	11-14	4440003	Piston Assembly DWG-Hollow	9
	F120	06-01		KK14722	Magnetic Speed Ring,3.646 ID	1

Seal kit

	Global new part number
	Obsolete part number
	No change

Overhaul seal kit

Order code	Item	Date begin	Date end	Part number	Part name	Qty.per Model/Kit
	C017	94-25		38315	O-ring	1
	C018	07-18		9008000-0131	Lip seal	1
	"	94-25		506515(9008000-0131)	Lip seal	1
	D015	94-04		336826	seal nut	1
	D032A	07-18		9004201-5000	O-ring	1
	"	94-04		001131(9004201-5000)	O-ring	1
	F008	94-04		4410272	Side cover gasket (SB-1999-044)	1
	F035	94-04		9004201-5000	Control spool cover gasket	2
	F091A	06-01		9004201-9000	O-ring	2
	F093A	07-18		9004201-3700	O-ring	2
	"	93-20		085043(9004201-3700)	O-ring	2
	G023	93-23		5000531	O-ring (SB-1998-079)	1
	K008	07-18		9004201-6200	O-ring	2
	"	93-44		001149(9004201-6200)	O-ring	2
	K009	07-18		9006110-0160	Back-up ring	2
	"	93-44		018481(9006110-0160)	Back-up ring	2
	K010	07-18		9004105-0160	O-ring	2
	"	93-44		5000090(9004105-0160)	O-ring	2
	L002	94-04		4410271	Servo cover gasket (SB-1999-022)	1
	L10A	07-18		9004201-3700	O-ring	1
	"	94-04		085043(9004201-3700)	O-ring	1
	M002	94-04		4410271	Servo cover gasket (SB-1999-022)	1
	M025	07-18		612291(9003508-0008)	Seal nut	1
	"	94-04		9003508-0008	Seal nut	1
	M010A	07-18		9004201-3700	O-ring	1
	"	94-04		085043(9004201-3700)	O-ring	1
	N002A	07-18		9004201-3700	O-ring	1
	"	94-04		085043(9004201-3700)	O-ring	1
	N004A	07-18		9004201-9000	O-ring	1
	N005A	07-18		9004201-3700	O-ring	1
	Q000	07-18		BLN-10117	Parts kit	1
	Q050A	07-18		9004201-3700	O-ring	1
	"	94-04		085043(9004201-3700)	O-ring	1
	Q060A	07-18		9004201-3100	O-ring	1
	"	94-04		015818(9004201-3100)	O-ring	1
	R020A	07-18		9004105-0110	O-ring	1
	"	93-44		144725(9004105-0110)	O-ring	1
	R030A	07-18		9004201-5000	O-ring	1
	"	98-02		001131(9004201-5000)	O-ring	1
	R041	94-04		4800213	Filter adapter gasket	1
	R043A	07-18		9004201-3700	O-ring	1
	"	94-04		085043(9004201-3700)	O-ring	1
	R045A	07-18		9004201-3100	O-ring	1
	"	93-44		015818(9004201-3100)	O-ring	1
	R085A	07-18		9004201-6200	O-ring	1
	"	97-06		001149(9004201-6200)	O-ring	1
	T005	07-18		9004100-1390	O-ring	2
	"	94-04		673236(9004100-1310)	O-ring	2
	T010	94-04		4700035	Piston ring	2
	T050	07-18		9004202-6200	O-ring	1
	"	94-04		012559(9004202-6200)	O-ring	1
	T060	95-05		336826	Seal nut, M10	1
	U030	09-52		1716227	Charge pump cover gasket (SB-2009-***)	1
	"	94-04		4800855	Charge pump cover gasket (SB-2002-012)	1
	U080	94-04		6004104-0440	O-ring	1
	U080	94-04		6004104-0420	O-ring	1

Service Bulletin:
SB-1996-021
Products affected

Series 42 - 28 cc, 41 cc variable pumps and 51 cc tandem pumps

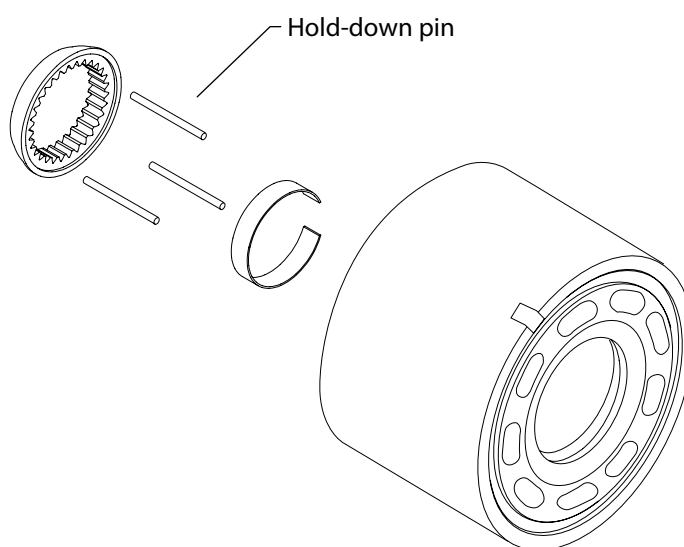
Subject

Ball guide hold-down pins

Description

A defect has been discovered on series 42 ball guide hold-down pins. The ends of the pins are flat instead of being chamfered. This causes wear at the ball guide and hold-down pin interface. To create a more robust design, the hold-down pins will be manufactured with chamfered ends.

Authorized service centers must update units built prior to A-95-45-xxxxx at first repair.

**Models affected**

All series 42 - 28cc and 41cc variable pumps, all 51cc tandem pumps

Serial numbers

All of the above mentioned units built prior to 96-45-xxxxx

Part numbers affected

Part Description	Old Part Number	New Part Number
Pin	4700016	700091

Parts disposition

- Interchangeable
- Scrap used parts
- Scrap new parts and apply for credit

Service Bulletin:
SB-1996-023

Products affected Series 42 - 41 cc variable pumps

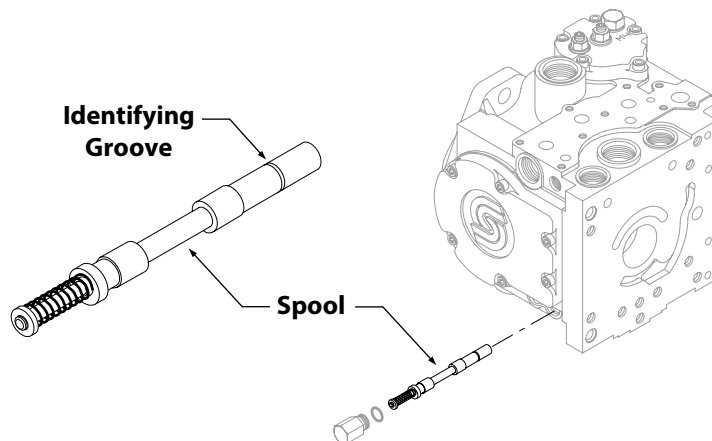
Subject Change in loop flushing spool

Description A defect has been discovered with series 42 - 41cc pump loop flushing valve option. The nature of the defect leads to an inoperative loop flushing circuit.

Any unit built prior to A-96-43-xxxxx must be updated with the new spool.

The 4800349 spool assembly must not be used in a 41cc housing. However, the 4800349 spool assembly will function properly in a 28cc pump housing.

The new 4410154 spool assembly can be identified by a groove opposite the spring end of the valve assembly.



Models affected All 4412xxx variable pumps

Serial numbers All of the above mentioned units built prior to 96-43-xxxxx

Part numbers affected

Description	Old Part Number	New Part Number
Spool assembly	4800349	4410154

Parts disposition • Interchangeable

Service Bulletin:
SB-1996-022**Products affected**

Series 42 - 41 cc variable pumps

Subject

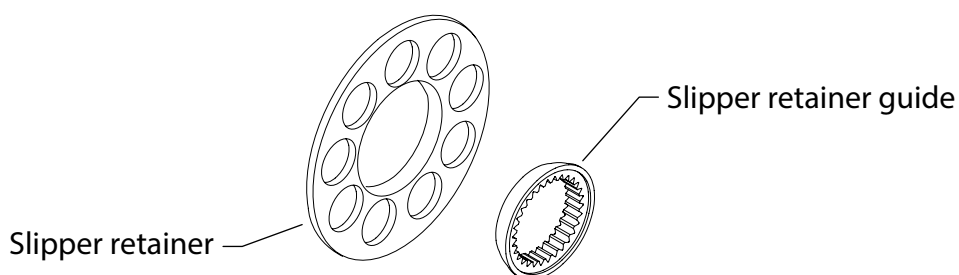
Slipper retainer and retainer guide change

Description

As a product improvement, Sauer-Sundstrand has changed the design of the slipper retainer and the retainer guide on all series 42 - 41cc variable pumps.

The old slipper retainer and retainer guide are interchangeable with the new slipper retainer and retainer guide if they are changed together.

The old style slipper retainer and retainer guide are obsolete and no longer available as a service part.

**Models affected**

All 4412xxx variable pumps

Serial numbers

This change became effective at serial number A-97-52-xxxxx

Part numbers affected

Part Description	Old Part Number	Replacement Part Number
Slippert retainer guide	4410003	4510167
Slippert retainer	4410076	4510167

Parts disposition

- Interchangeable - **If slipper guide and retainer are changed together**

Service Bulletin:
SB-1996-026
Products affected

Series 42 - 28 & 41 cc Variable Pumps

Subject

Neutral Adjust Screw Change

Description

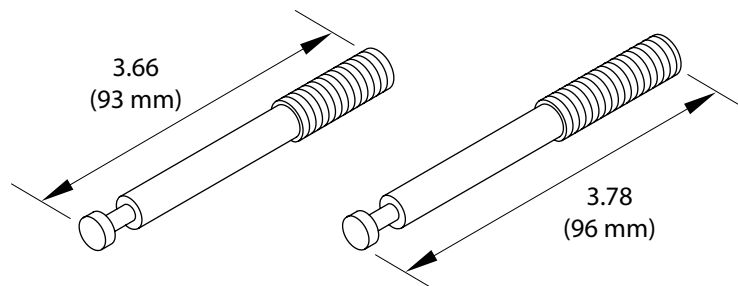
As a product improvement, Danfoss has changed the material of the neutral adjust screw to allow for a higher torque on the neutral adjust seal nut.

The old seal nut/neutral adjust screw has an installation torque of 10 to 18 lbf·ft. The new seal nut/neutral adjust screw has an installation torque of 23 to 37 lbf·ft.

The old style neutral adjust screw has an overall length of 3.66 inches (93 mm). The new style neutral adjust screw has an overall length of 3.78 inches (96 mm). the old style screw should not be substituted for the new style screw.

The old style neutral adjust screw is obsolete and no longer available as a service part.

The old style slipper retainer and retainer guide are obsolete and no longer available as a service part.

**Models affected**

All 4282xxx and 4412xxx Variable Pumps

Serial numbers

This change became effective at serial number A-97-42-xxxxx

Part numbers affected

Part Description	Old Part Number	New Part Number
Neutral Adjust Screw	4800198	4800658

Parts disposition

- Interchangeable - **Do Not substitute the old screw for the new screw**

**Service Bulletin:**
SB-1997-027**Products affected**

Series 42 - 28 & 41 cc variable pumps

Subject

Loop flushing relief valve spring change

Description

As a product improvement, Sauer-Sundstrand has changed the design of the loop flushing relief valve spring used in series 42 - 28 and 41 cc variable pumps.

The design change eliminates the need to shim the loop flushing relief valve to a specific pressure setting. However, the old spring should not be used in place of the new spring. The new spring is red in color to aid in identification.

The old spring will remain available as a service part.

Models affected

All 4282xxx and 4412xxx variable pumps

Serial numbers

This change became effective at serial number A-97-37-xxxxx

Part numbers affected

Part Description	Old Part Number	New Part Number
Spring - loop flushing relief valve	768853	4800654

Parts dispositionInterchangeable - Do **Not** replace the old spring for the new spring


Service Bulletin:
SB-1997-029C
Products affected

Series 42 - 28 & 41 cc Variable Pumps

Subject

1998 Model upgrade

Description

As part of our continuous improvement plan for the Series 42 product, a design change has been initiated. This process is referred to as a model year upgrade. The objective of this upgrade is to minimize the number of times we change the product. These improvements will provide increased reliability and additional application flexibility.

Description of change:

Housing:	The port cover for the control spool (FOB** option-28 cc only) changed from a flat plate with (2) screws to a SAE O-ring plug. The screw holes for the servo covers and 4 of the 6 screw holes for the side cover are deeper to accept a 10mm longer screw. The two holes next to the charge pump cover stayed the same length.
Charge Pump:	The gerotor drive pin changed to a parallel key. A retaining ring has been added to the charge pump shaft to locate the gerotor. The outer step on the gerotor cover has been eliminate and the locating pin slot depth has increased.
Auxiliary Flange:	Changed to a flat cover plate with a special seal ring (not to be used to seal an auxiliary pump) under the cover. (A pad only).
Charge Relief Valve:	Changed from a non-adjustable to an adjustable relief valve. This change requires a '98 Upgrade housing.
Spool - Loop Flushing:	Changed to become common between the 28 & 41 cc pumps. This change requires a '98 Upgrade housing.

Note:

Revision C of this document has been released to communicate part number corrections and clarification as to which changes are interchangeable and which changes are non-interchangeable. updates over revision B are denoted by "shading" the change.

Models affected

All 4282xxx and 4412xxx variable pumps

Serial numbers

This change became effective at serial number A-98-02-xxxxx

Part numbers affected

See Tables

Parts disposition

- Interchangeable - (**See Tables**)
- Non-Interchangeable - (**See Tables**)

Series 42 Axial Piston Pumps Size 41/51

**Service Bulletin:
SB-1997-029C**
Series 42 model upgrade – part number changes

Item	Item Description	Frame Size	Old Part Number	Quantity	New Part Number	Quantity
F007	Screw - Side Cover	28/41	5000001	6	5000001	2
F011	Screw - Side Cover (FOE** only)	28	704395	2	693341	2
F012	Screw - Side Cover	28/41	N/A	-	5000002	4
F030	Plug Assembly - SAE	28	N/A	-	681296	1
F034	Gasket - Spool Cover	28	4800200	1	N/A	-
F035	Control Spool Cover	28	4800199	1	N/A	-
F036	Screw - Spool Cover	28	5000001	2	N/A	-
F042	Screw - Filtration Adapter	28/41	5000001	6	5000002	6
F051	Spool Assembly Loop Flushing	41	4410154	1	4800708	1
F051	Spool Assembly Loop Flushing	28	4800349	1	4800708	1
F1	Housing (FOB**)	41	4410141	1	4410208	1
F1	Housing (FOA**)	41	4410142	1	4410203	1
F1	Housing (FOJ**)	41	4410144	1	4410211	1
F1	Housing (FOP**)	41	4410147	1	4410212	1
F1	Housing (FOM**)	41	4410174	1	4410213	1
F1	Housing (FOB**)	28	4280140	1	4280184	1
F1	Housing (FOA**)	28	4280141	1	4280185	1
F1	Housing (FOG**)	28	4280135	1	4280190	1
F1	Housing (FOE**)	28	4280138	1	4280191	1
F1	Housing (FOP**)	28	4280134	1	4280189	1
F1	Housing (FOT**)	28	4280137	1	4280187	1
F1	Housing (FOJ**)	28	4280119	1	4280178	1
G040	Plug Assembly - CPRV	28/41	4800308	1	N/A	-
G040	Charge Pressure Relief Valve Assembly	28/41	N/A	-	4800573	1
G041	Shim Kit - CPRV	28/41	4510027	1	N/A	-
G042	Spring - CPRV	28/41	8800496	1	344135	1
G043	Poppet - CPRV	28/41	4800134	1	8800449	1
L005	Screw - Servo Cover	28/41	5000001	5	5000002	5
L005	Screw - Servo Cover (NFP Housing)	28/41	5000003	5	5000004	5
M005	Screw - Servo Cover	28/41	5000001	5	5000002	5

Service Bulletin:
SB-1997-029C
S42 Charge Pump Block Point Change

Required information				Old service parts				Service Replacement Kits
Pump Frame Size	Pump Rotation	Charge Pump Displacement	Coupling	Coupling Drive Pin	Gerotor Cover	Gerotor	Coupling	
28cc	CW	None	9	15743 (9004800-2506)	4800228	None	4280052	4510206
			11	15743 (9004800-2506)	4800228	None	4280053	4510212
			13	15743 (9004800-2506)	4800228	None	4280057	4510218
			15	N/A	4800228	None	N/A	4510224
		11cc	9	15743 (9004800-2506)	4800228	4700029	4280052	4510208
			11	15743 (9004800-2506)	4800228	4700029	4280053	4510214
			13	15743 (9004800-2506)	4800228	4700029	4280057	4510220
			15	N/A	4800228	4700029	N/A	4510226
		15.6cc	9	15743 (9004800-2506)	N/A	N/A	4280052	4510210
			11	15743 (9004800-2506)	N/A	N/A	4280053	4510216
			13	15743 (9004800-2506)	N/A	N/A	4280057	4510222
			15	N/A	N/A	N/A	N/A	4510228
	CCW	None	9	15743 (9004800-2506)	4800231	None	4280052	4510207
			11	15743 (9004800-2506)	4800231	None	4280053	4510213
			13	15743 (9004800-2506)	4800231	None	4280057	4510219
			15	N/A	4800231	None	N/A	4510225
		11cc	9	15743 (9004800-2506)	4800231	4700029	4280052	4510209
			11	15743 (9004800-2506)	4800231	4700029	4280053	4510215
			13	15743 (9004800-2506)	4800231	4700029	4280057	4510221
			15	N/A	4800231	4700029	N/A	4510227
		15.6cc	9	15743 (9004800-2506)	N/A	N/A	4280052	4510211
			11	15743 (9004800-2506)	N/A	N/A	4280053	4510217
			13	15743 (9004800-2506)	N/A	N/A	4280057	4510223
			15	N/A	N/A	N/A	N/A	4510229


Service Bulletin:
SB-1997-029C
S42 Charge Pump Block Point Change

Required information				Old service parts				Service Replacement Kits
Pump Frame Size	Pump Rotation	Charge Pump Displacement	Coupling	Coupling Drive Pin	Gerotor Cover	Gerotor	Coupling	
41cc	CW	None	9	15743 (9004800-2506)	4800228	None	4410137	4510243
			11	15743 (9004800-2506)	4800228	None	4410138	4510252
			13	15743 (9004800-2506)	4800228	None	4410139	4510261
			15	N/A	4800228	None	N/A	4510270
		11cc	9	15743 (9004800-2506)	4800228	4700029	4410137	4510246
			11	15743 (9004800-2506)	4800228	4700029	4410138	4510255
			13	15743 (9004800-2506)	4800228	4700029	4410139	4510264
			15	N/A	4800228	4700029	N/A	4510273
		15.6cc	9	15743 (9004800-2506)	N/A	N/A	4410137	4510249
			11	15743 (9004800-2506)	N/A	N/A	4410138	4510258
			13	15743 (9004800-2506)	N/A	N/A	4410139	4510267
			15	N/A	N/A	N/A	N/A	4510276
	CCW	None	9	15743 (9004800-2506)	4800231	None	4410137	4510244
			11	15743 (9004800-2506)	4800231	None	4410138	4510253
			13	15743 (9004800-2506)	4800231	None	4410139	4510262
			15	N/A	4800231	None	N/A	4510271
		11cc	9	15743 (9004800-2506)	4800231	4700029	4410137	4510247
			11	15743 (9004800-2506)	4800231	4700029	4410138	4510256
			13	15743 (9004800-2506)	4800231	4700029	4410139	4510265
			15	N/A	4800231	4700029	N/A	4510274
		15.6cc	9	15743 (9004800-2506)	N/A	N/A	4410137	4510250
			11	15743 (9004800-2506)	N/A	N/A	4410138	4510259
			13	15743 (9004800-2506)	N/A	N/A	4410139	4510268
			15	N/A	N/A	N/A	N/A	4510277

Item	Old service parts	Service replacement	Notes
Gerotor Cover Locating Pin	16220 (9004800-1908)	5000179	Non-Interchangeable (New Pin is longer hole in cover is deeper)
Charge Pump Cover with A-Pad	4800305	4800699	Interchangeable
A-Pad O-ring - Shipping	726950 (9004104-0420)	4800482*	Non-Interchangeable
A-Pad Shipping Cover	9802336	4460586	Non-Interchangeable

* 4800482 is used as a shipping seal only. Customers currently re-using the pad cover O-ring to seal an auxiliary pump must now supply their own O-ring after this change. The O-ring required is a standard 90 Durometer O-ring with a .103" cross section and 3.237" ID. This O-ring can be ordered from Sauer-Sunstrand under part number 5000373.

Service Bulletin:
SB-1997-034

Products affected

Series 42 - 28 & 41 cc variable pumps

Subject

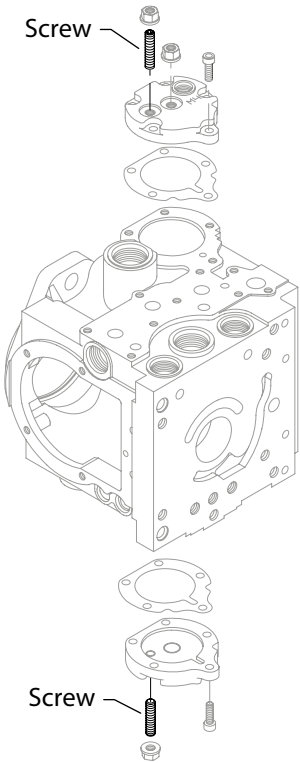
Displacement limiter screw chang

Description

As a product improvement, Sauer-Sundstrand has changed the material requirement of the screw used in the displacement limiter option on series 42 - 28 and 41 cc variable pumps.

The new screw can be used in place of the old screw.

The old screw has become obsolete and no longer available as a service part.



Models affected

All 4282xxx and 4412xxx variable pumps

Serial numbers

This change became effective at serial number A-97-40-xxxxx and beyond

Part numbers affected

Description	Old Part Number	New Part Number
Screw - displacement limiter	5000082	5000487

Parts disposition

• Interchangeable - **Do not use the old screw in place of the new screw**



Service Bulletin:
SB-1997-046

Products affected Series 42 Variable Displacement Pumps

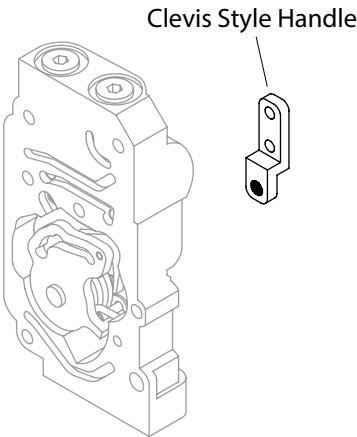
Subject Manual displacement control handle change

Description The series 42 variable displacement pump product family offers two styles of manual displacement control handles. Straight style or clevis (offset) style handles (reference technical manual BLN-10092 page 30) are the two options. The handle style option is designated in the control section of the product nomenclature.

As a product improvement, Sauer-Sundstrand has modified the design of the clevis (offset) style control handle.

The previous handle included an abrupt corner at each end of the offset. The new handle includes a generous radius at each corner, which improves the asthetic appearance of the handle. The location of the mounting holes for the customer linkage and the overall height of the control handle have not been altered.

A new handle part number has been creared to aid in identifying this product improvement. The new handle is completely interchangeable with the previous handle. The previous handle will be obsoleted.



Models affected All 4282xxx and 4412xxx pumps specified with clevis (offset) style control handles

Serial numbers This change became effective at serial number A-98-10-xxxxx and beyond

Part numbers affected	Handle	Prior to 98-10	98-10 and beyond
	Clevis style	4800461	4800689

Parts disposition • Interchangeable

**Service Bulletin:
SB-1998-006****Products affected** Series 42, 41cc Variable Displacement Pumps**Subject** Possible interference problem

Description There has been an interference problem identified on the series 42, 41cc pump. The interference occurs at the swashplate and servo interface. To correct the possibility, Sauer-Sundstrand has incorporated a new swashplate. The new swashplate is interchangeable with the old swashplate. The old swashplate is obsolete and no longer available as a service part. See page two for part number information.

Models affected All 4412xxx and 452xxxx model numbers**Serial numbers** Any product built before A-98-05-xxxxx**Part numbers affected**

Part Description	Old Part Number	New Part Number
Swashplate	4410102	4410228

Parts disposition • Interchangeable



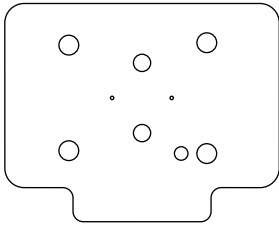
Service Bulletin:
SB-1998-030

Products affected Series 42 - 28 & 41 cc Pumps

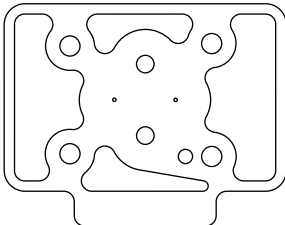
Subject Control gasket change

Description As a product improvement, Sauer-Sundstrand has changed the design of the control gasket for the Series 42, 28 and 41 cc variable pumps. The improvements made to this part consist of changing the material used to manufacture the gaskets as well as the gasket appearance.

The new control gasket is interchangeable with the old gasket and the old gasket has been made obsolete.



Old Control Gasket



New Control Gasket

Models affected All 4282xxx and 4412xxx variable pumps

Serial numbers This change became effective at serial number A-98-16-xxxxx

Part numbers affected

Part Description	Old Part Number	New Part Number
Control Gasket - (0.8, A-B)	4800604	4800650
Control Gasket - (1.0, A-B)	4800603	4800651
Control Gasket - (1.6, A-B)	4800602	4800652
Control Gasket - (0.8, A-B-T)	4800549	4800667

Parts disposition • Interchangeable

Service Bulletin:
SB-1998-039

Products affected Series 42 - 28 & 41 cc variable pumps

Subject Change to by-pass valve design

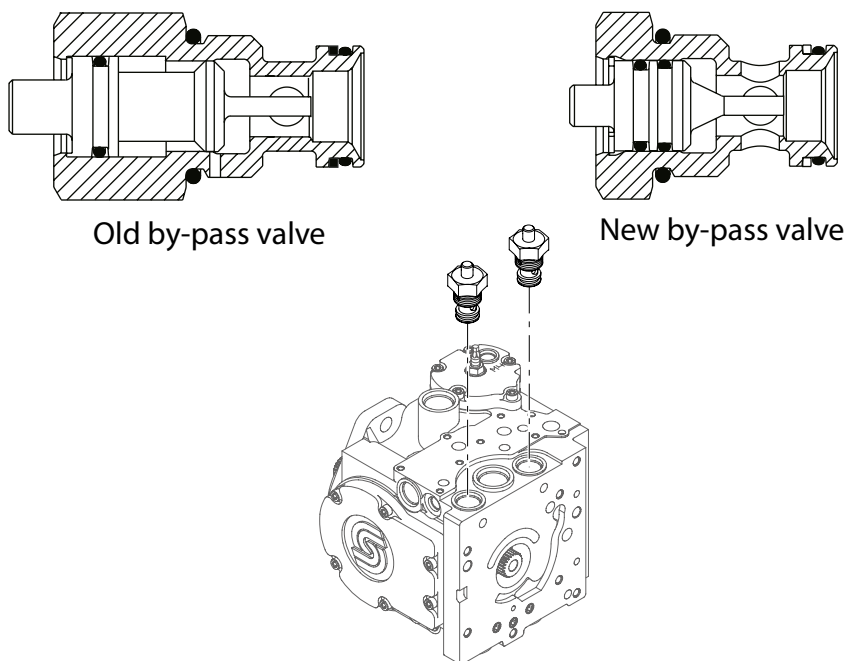
Description As a product improvement, Sauer-Sundstrand has changed the design of the by-pass valve option for the series 42, 28 & 41 cc variable pumps. This change was first announced in Product Information Bulletin PIB-9809.

The new design utilizes a smaller overall package size and reduces the distance that the valve extends from the pump housing. This improvement provides for an easier installation of plumbing to the charge inlet port.

In addition to the more compact design, the reset pressure associated with the valve has been increased. This change reduces the tendency of the valve to reset to the closed, or normal operating condition, position when the by-pass mode is activated.

The new by-pass valve is interchangeable with the old by-pass valve if, and only if, the valves are replaced as a complete assembly. It is the component parts of the two valves that have changed, and these component parts are not interchangeable.

The old valve will become obsolete and will no longer be available as a service part.



Models affected All 4282xxx and 4412xxx variable pumps with the by-pass valve option

Serial numbers This change became effective at serial number A-98-30-xxxxx

Part numbers affected

Description	Old Part Number	New Part Number
By-pass valve assembly	4800395	4800600

Parts disposition • Interchangeable


Service Bulletin:
SB-1998-055
Products affected

Series 20, 42 and 90

Subject

3-Position control orifice change

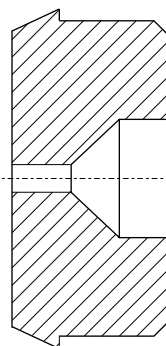
Description

As a product improvement, Sauer-Sundstrand has changed the design of the servo supply orifice and the control drain orifice from the disk type and O-ring to a design that pilots in the body with an O-ring of the electrical portion of the control assembly.

This change was made because of potential assembly problems causing the O-ring to be damaged and causing a leak.

This change is interchangeable with the old style orifice. The O-ring does not change.

The old style orifice will be obsolete and no longer available for service.

**Old Style****New Style****Models affected**

All Series 20, 42 and 90 that use 3-position controls

Serial numbers

This change became effective at serial number A-98-31-xxxxx

Part numbers affected

Orifice Size	Old Part Number	New Part Number
0.6 mm	511046	512835
0.7 mm	509162	512836
0.8 mm	509163	512837
0.9 mm	509164	512838
1.0 mm	509165	512834
1.1 mm	505850	512841
1.2 mm	509167	512839
1.5 mm	509168	512840

Parts disposition

• Interchangeable

Service Bulletin:
SB-1998-079
Products affected

Series 42 pumps (41 and 28 cc)

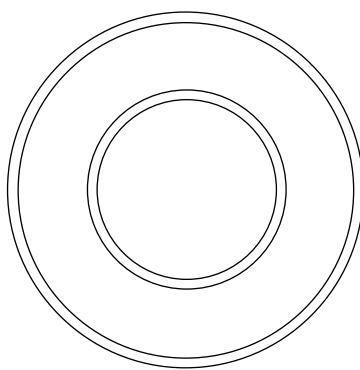
Subject

Charge pump cover O-rings

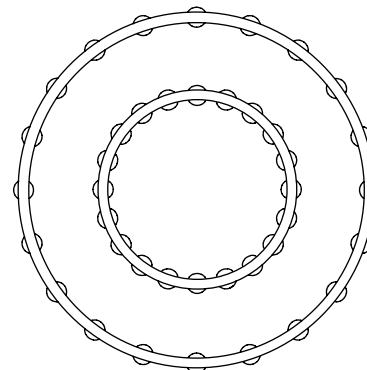
Description

As a product improvement, Sauer-Sundstrand has introduced an H-seal O-ring in the charge pump cover. This new style O-ring will replace both the inner and outer O-rings. The design is improved by preventing the possibility of the O-ring from being extruded from the O-ring groove within the charge pump cover.

This is an interchangeable change and the old O-rings will be obsoleted.



Old O-ring



New H-seal O-ring

Models affected

All series 42 pumps
 All series 42 auxiliary mounting kits - (service)
 All series 42 overhaul seal kits - (service)
 All series 42 charge pump kits - (service)

Serial numbers

This change became effective at serial number A-99-06-xxxxx

Part numbers affected

Old item description	Old part number	New item description	New part number
O-ring 0.139 x 3.484	5000161	H seal O-ring	5000530
O-ring 0.139 x 1.734	5000160	H seal O-ring	5000531

Parts disposition

- Interchangeable



Service Bulletin:
SB-1998-082

Products affected

Series 42 pumps

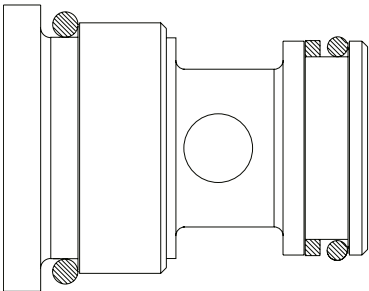
Subject

SCR valve plug standardization

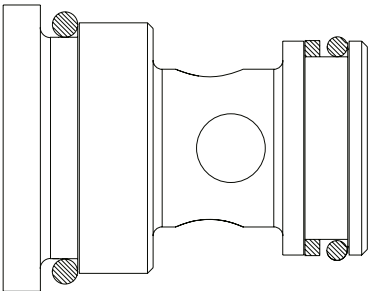
Description

In order to reduce the number of repetitive part numbers and utilize common parts across product lines, Sauer-Sundstrand has standardized the SCR valve plug used on series 42 pumps with the no by-pass option. This change affects all series 42 product, including 26 cc pumps, 41 cc pumps and all series 42 integrated tandem pumps.

This change is interchangeable and the old SCR valve plugs have been obsoleted.



Old SCR valve plug



New SCR valve plug

Models affected

All series 42 pumps

Serial numbers

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

Part numbers affected

Description	Old Part Number	New Part Number
SCR valve plug	4800278	4800589

Parts disposition

- Interchangeable

**Service Bulletin:
SB-1998-085**

Products affected Series 42 pumps

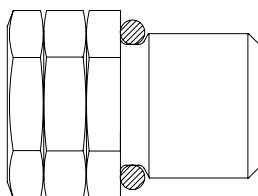
Subject Loop flushing relief valve plug

Description Sauer-Sundstrand has added an additional plug option for the loop flushing relief valve option on the series 42 pump. This addition has been made in response to the fact that in some applications, the valve cracking pressure needs to be higher in order to maintain sufficient charge pressure.

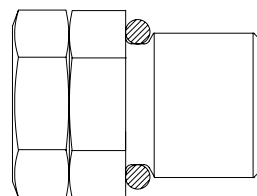
The new plug will be used on all pumps with an 18 bar charge relief setting and up. The old plug will continue to be used on all pumps with a charge pressure relief setting below 18 bar.

The difference between the two plugs will be denoted by identifying grooves on the plugs themselves. The old plug will have one identifying groove as before and the new plug will have two identifying grooves.

All units produced prior to the date of effectivity listed on this service bulletin were built with the single grooved plug. It is recommended that of those units with a charge pressure setting of 18 bar or higher, should be updated to the new dual groove plug at first repair.



New style plug
(Charge pressure 18 bar and above)



Old style plug
(Charge pressure below 18 bar)

Models affected All series 42 pumps

Serial numbers This change became effective at serial number A-98-50-xxxxx

Part numbers affected

Item description	Charge pressure setting	Part number
Loop flushing relief valve plug	Under 18 bar	4800280
Loop flushing relief valve plug	18 bar and higher	4800747

Parts disposition • Interchangeable

Service Bulletin:
SB-1999-022
Products affected

Series 42 Pumps - 28 cc, 41 cc and Integrated Tandems

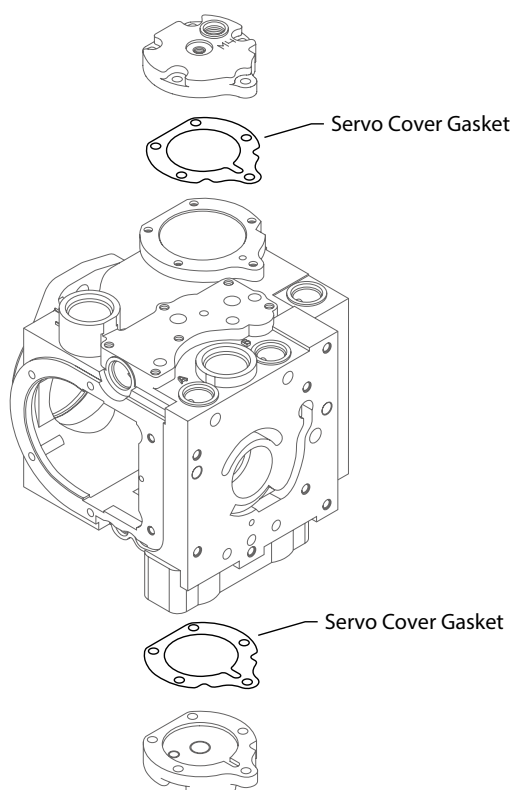
Subject

Servo cover gasket change

Description

As a product improvement, Sauer-Sundstrand has redesigned the servo cover gasket used on all Series 42 pumps (28 cc, 41 cc and integrated tandems). The new gasket is made from a different material and replaces the old foam-coated gasket. This new material improves the gasket's ability to seal and reduces torque loss caused by gasket relaxation.

The new gasket is interchangeable with the old gasket. The old gasket has become obsolete.

**Models affected**

All Series 42 pumps - 28 cc, 41 cc and Integrated Tandem

Serial numbers

This change became effective at serial number A-99-37-xxxxx for the 41 cc and integrated tandem pumps and A-99-49-xxxxx for the 28 cc pumps.

Part numbers affected

Item Description	Old Part Number	New Part Number
41 cc Servo Cover Gasket	4410013	4410271
Integrated Tandem Servo Cover Gasket	4410013	4410271
28cc Servo Cover Gasket	4280022	4280225

Parts disposition

• Interchangeable

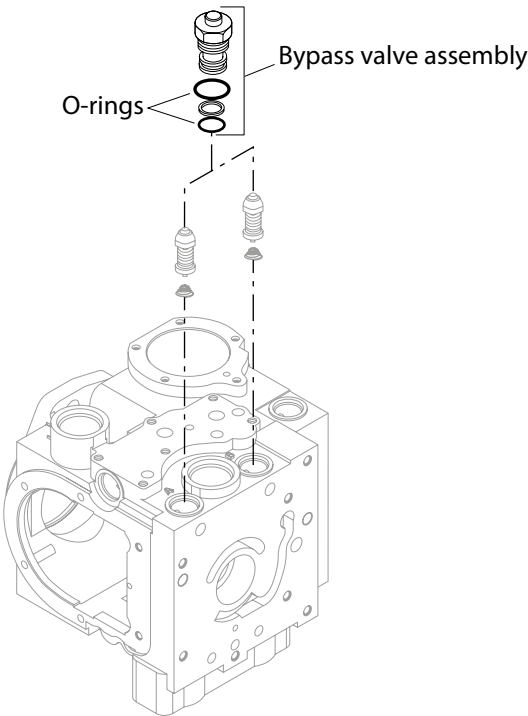
Service Bulletin:
SB-1999-037

Products affected Series 42 pumps

Subject New by-pass valve

Description As a product improvement, Sauer-Sundstrand has change the design of the by-pass valve assembly in order to better retain the bypass plunger. The O-ring within the by-pass valve assembly has also been upgraded to a viton O-ring in order to allow the valve to be functional at higher temperatures.

This is an interchangeable change and the old by-pass valve assembly has been obsoleted and is no longer available as a service part.



Models affected All series 42 pumps - 28 cc and 41 cc - with system by-pass valves

Serial numbers This change was incorporated at serial number A-99-33-xxxxx

Part numbers affected

Item Description	Old Part Number	New Part Number
By-pass valve assembly	4800600	4800768

Parts disposition • Interchangeable



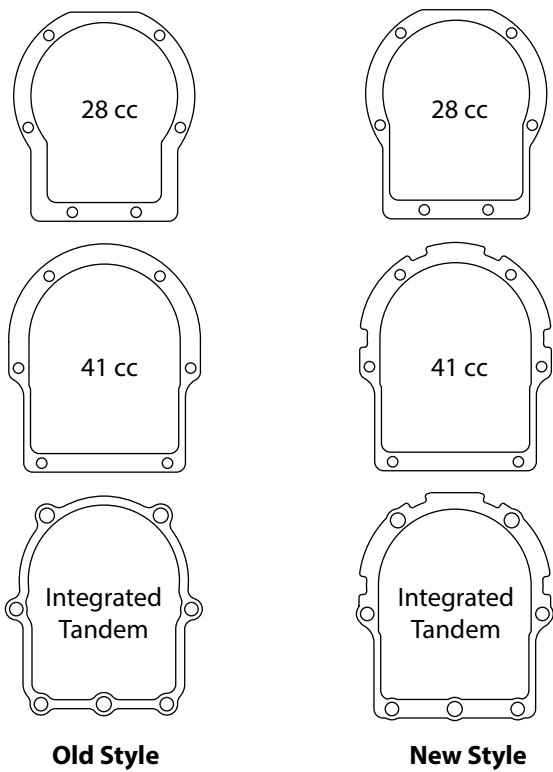
Service Bulletin:
SB-1999-044A

Products affected Series 42 Pumps - 28 cc, 41 cc and Integrated Tandems

Subject Side cover gasket change

Description As a product improvement, Sauer-Sundstrand has redesigned the side cover gasket used on all Series 42 pumps (all frame sizes and configurations). The new gasket is made from a different material and replaces the old foam coated gasket. This new material improves the gasket’s ability to seal and reduces torque loss cause by gasket relaxation.

The new gasket is interchangeable with the old gasket. The old gasket is obsolete.



Models affected All Series 42 pumps - 28 cc, 41 cc and Integrated Tandems

Serial numbers This change became effective for 28cc pumps at A-99-49-xxxxx
This change became effective for 41cc pumps at A-00-03-xxxxx
This change became effective for integrated tandem pumps at A-99-30-xxxxx

Part numbers affected	Item Description	Old Part Number	New Part Number
	Side Cover Gasket - 28cc	4280021	4280226
	Side Cover Gasket - 41cc	4410012	4410272
	Side Cover Gasket - Tandem	4520013	4410262

Parts disposition • nterchangeable

Service Bulletin:
SB-1999-048**Products affected**

Series 42 Variable Pumps

Subject

Housing and swashplate change

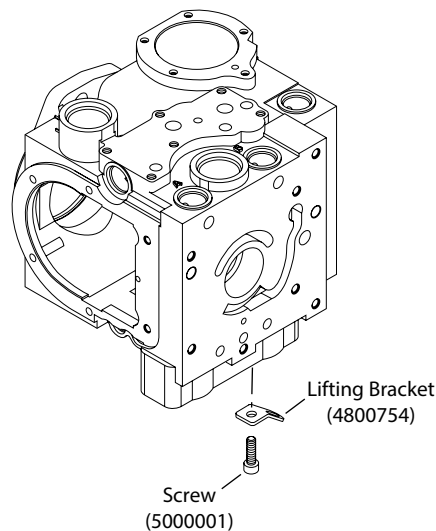
Description

As a product improvement, Sauer-Sundstrand has redesigned the Series 42 pump housing for the 28cc, 41cc and 51cc integrated tandem frame sizes. Several important changes have been implemented within this new design and serve as distinguishing characteristics between this design and the one prior to it.

The most noticable physical difference on the 28cc and 41cc frame size pumps, is the omission of the cast-on lifting brackets. These have been replaced by a lifting bracket that is bolted into the side of the housing via a blind hole added to the housing.

Another important difference initiated with this change is that the bearing bore within the housing was modified to alleviate excessive stress to the swashplate needle bearing while maintaining snug retention. In conjunction with this change, the swashplate has also been redesigned so as to be compatible with the change in the bearing surface profile.

The housing change is such that the new housing is interchangeable with the old housing, provided the swashplate is also replaced. All of the old housings have become obsolete, but the old swashplates will be retain for repairs performed on older units.

**Models affected**

All Series 42 pumps - 28 cc, 41 cc and 51cc Integrated Tandems

Serial numbers

A-99-36-xxxxx

Part numbers affected

See parts listing on page 3

Parts disposition

• Interchangeable - new housing must have new swashplates, see front page text


Service Bulletin:
SB-1999-048

Series 42 - 28cc Housings		
Item Description	Old Part Number	New Part Number
XDC Full Featured	4280184	4280240
XDC Base	4280185	4280239
XDC Base w/LF	4280190	4280247
XDC Base w/AF and SS	4280191	4280241
XDC Special w/LF	4280142	4280242
NFPH Full Featured	4280189	4280245
NFPH Base	4280187	4280244
NFPH Tandem Rear Special w/LF	4280205	4280248
NFPH Tandem Rear Special w/o LF	4280201	4280246
NFPE Full Featured	4280178	4280243
Series 42 - 41cc Housing		
Item Description	Old Part Number	New Part Number
XDC Full Featured	4410208	4410288
XDC Base	4410203	4410287
NFPH Full Featured	4410212	4410291
NFPE/FNR Full Featured	4410211	4410289
NFPE/FNR Full Featured (ISO System Ports)	4410213	4410290
Series 42 - 51cc Integrated Housings		
Item Description	Old Part Number	New Part Number
XDC Base	4410269	4410286
HFPH Base	4410267	4410285
Series 42 - Swashplates		
Item Description	Old Part Number	New Part Number
28cc Swashplate	4280110	4280224
41cc Swashplate	4410228	4410270
51cc Swashplate	4410228	4410270

LF - Housing machined for loop flushing
 AF - Housing machine for adaptable filtration
 SS - Housing machined for speed sensor

Service Bulletin:
SB-1999-064
Products affected

Series 42 pumps (28 cc and 41 cc)

Subject

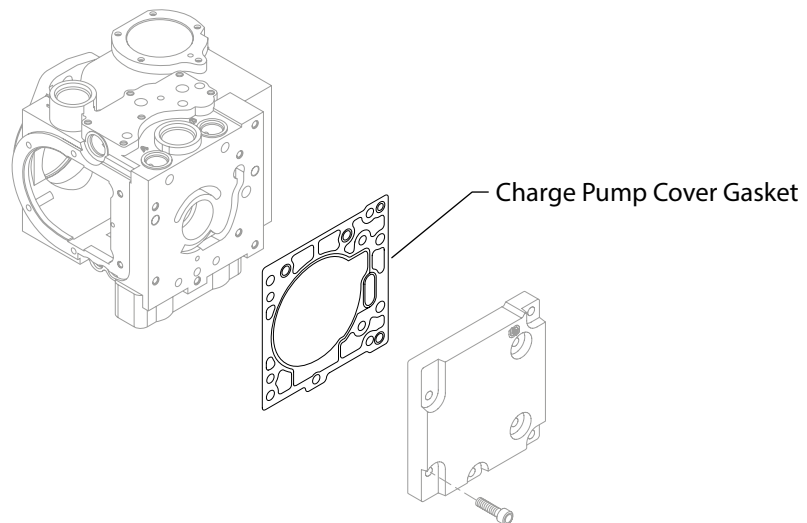
Charge pump cover and gasket change

Description

As a product improvement, Danfoss has redesigned the charge pump cover gasket used on the series 42 pumps, (both 28 cc and 41 cc frame sizes). The new gasket is made from a different material and replaces the old foam-coated gasket. The new gasket material improves the gasket's ability to seal and reduces torque loss caused by gasket relaxation.

To further improve the pump's resistance to leaks, the no auxiliary pad charge pump cover material has been changed to ductile iron. The old charge pump cover has become obsolete and no longer available as a service part.

The new gasket is interchangeable with the old gasket, providing the charge pump cover is made from ductile iron. The old gasket will remain available as a service part for pumps with no auxiliary pad and non-ductile, (gray) iron charge pump covers only.

**Models affected**

All series 42 pumps - 28 cc and 41 cc with the no auxiliary pad option

Serial numbers

This change became effective at serial number A-00-10-xxxxx

Part numbers affected

Item Description	Old Part Number	New Part Number
Charge pump cover - no pad	4800304	4800774
Charge pump cover gasket	4800484	4800759
Charge pump cover gasket	4800638	4800759

Parts disposition

- Interchangeable - new housing must have new swashplates, see front page text



Service Bulletin:
SB-1999-066

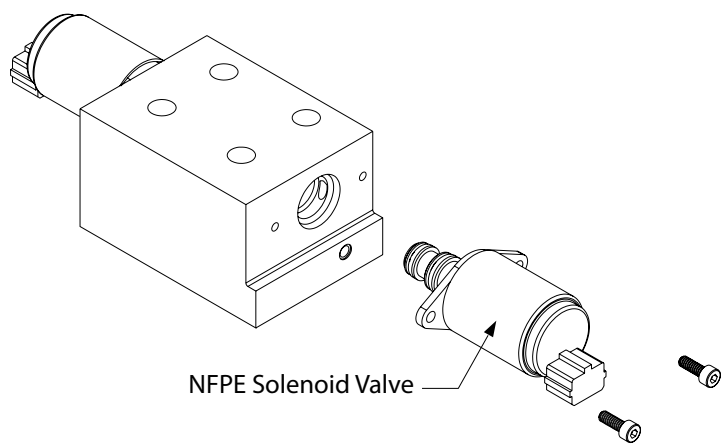
Products affected Series 42 Pumps

Subject NFPE Solenoid valve change

Description The solenoid valve used on the NFPE controls mounted onto the Sauer-Sunstrand Series 42 pump have been changed to a valve with better repeatability.

 In order to track this change, the solenoid valve’s part number has been changed. This is an interchangeable change and the old part number has been obsoleted.

NFPE Control Valve Assembly



Models affected All Series 42 pumps with NFPE controls

Serial numbers This change became effective at serial number A-99-49-xxxxx

Part numbers affected

Item Description	Old Part Number	New Part Number
NFPE Solenoid Valve	4700095	4700150

Parts disposition • Interchangeable

Service Bulletin:
SB-2000-035
Products affected

Series 42 Pumps

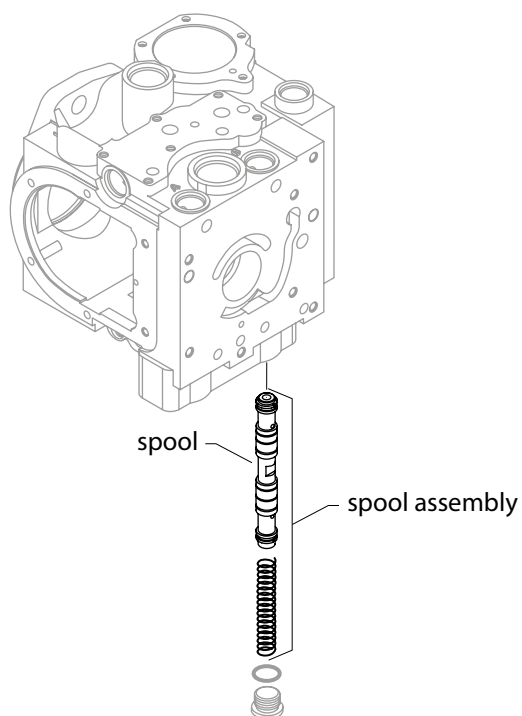
Subject

Control spool change

Description

As a product improvement, Danfoss has discontinued the use of one of the control spool options used on Series 42 pump. Pumps that formerly used the control spool option denoted in the "Models Affected" portion of this service bulletin, now use a control spool designed to have better droop characteristics, especially when operating at higher system pressures.

The old control spool, and its applicable assembly, have been obsoleted and will no longer be available as a service part. Although the new control spool is directly interchangeable with the old control spool, the new control spool may result in a more aggressive control in certain applications, and should be verified to be acceptable on an application, by application, basis.

**Models affected**

All Series 42 pumps built with the 4800265 control spool or the 4800320 control spool assembly.

This includes all pumps with the following order code for the control (D) module.

A1N1	A5A1	ANA1	BNN2	C1N2	C3N2	CNN1	D1N1	E1A1	E1B1
A1N2	A5N1	ANA2	ANN2			CNN2		E1A2	E1B2

Serial numbers

This change became effective at serial number A-00-29-xxxxx

Part numbers affected

Item Description	Old Part Number	New Part Number
Control Spool	4800265	4800464
Control Spool Assembly	4800320	4800575

Parts disposition

- Interchangeable

Service Bulletin:
SB-2001-008**Products affected**

Series 42, Single and Integrated Tandem Pumps

Subject

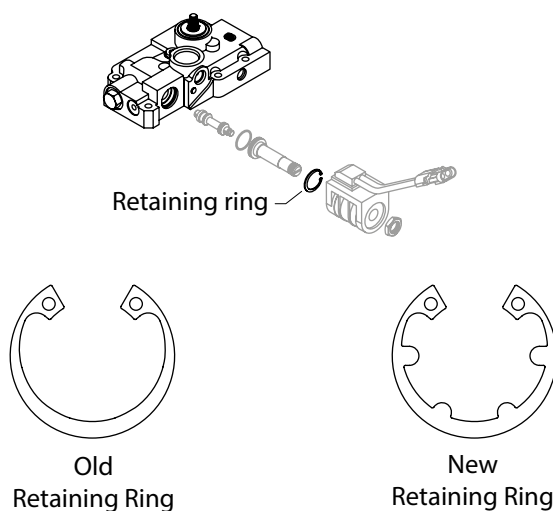
MDC housing with optional NOR

Description

As a product improvement, Danfoss has redesigned the Series 42 manual displacement control (MDC) housing equipped with a solenoid override valve assembly in order to accommodate a more robust retaining ring, thus reducing the potential for premature retaining ring failure.

The control housing part number has been changed, but the control assembly and control kit part numbers will remain the same part number. This change is only interchangeable if the old housing and old retaining ring are replaced with the new housing and new retaining ring, or if the old control assembly is replaced with the new control assembly. The old retaining ring will remain available, but the old control housing has been obsoleted and is no longer available as a service part.

Visual identification can confirm the control vintage once the solenoid override assembly is removed. The old retaining ring is thinner and its inner circumference is as smooth as the outer circumference. The new retaining ring is thicker and its inner circumference contains four protrusions.



Service Bulletin:
SB-2001-008
Models affected

All Series 42 Pumps that use the following control assemblies:

Single Pumps		Integrated Tandem Pumps	
Control Assembly	Control Kit	Control assembly	Control Kit
4800518	4510133	4520020	Not Applicable
4800521	4510139	4520021	Not Applicable
4800537	Not Applicable	4520023	Not Applicable
4800538	Not Applicable	4520027	Not Applicable
4800539	4510089		
4800541	Not Applicable		
4800542	Not Applicable		
4800544	Not Applicable		
4800545	4510091		
4800546	Not Applicable		
4800547	4510093		
4800548	Not Applicable		
4800635	Not Applicable		
4800806	Not Applicable		

Serial numbers

This change became effective at serial number A-01-31-xxxxx

Part numbers affected

Part Description	Old Part Number	New Part Number
Retaining Ring	5000196	4280279

Parts disposition

• Interchangeable - refer to text on front page

Service Bulletin:
SB-2001-022A**Products affected**

All series 42 pumps

Subject

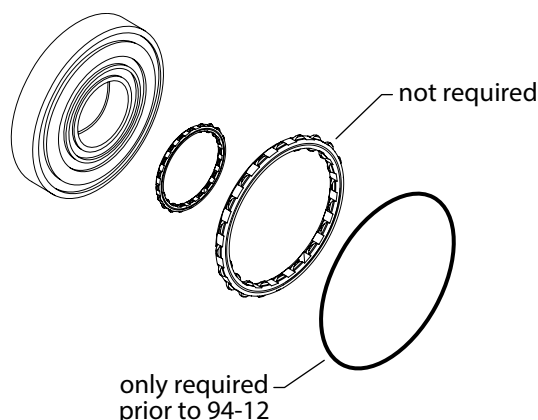
Removal of gerotor cover O-ring

Description

Through engineering calculation and performance testing, it has been determined that the need for the outer O-ring on the gerotor cover of the series 42 charge pump no longer exists. This o-ring is no longer required because historical changes to the series 42 pump charge circuit resulted in the charge pressure being equal on both sides of the O-ring.

The removal, or reinsertion, of this O-ring at the time of repair of a series 42 pump built before the incorporation of this change is at the discretion of the person performing the repair. However, units manufactured before A-94-12-xxxx require the reinsertion of the outermost O-ring, located on the side of the gerotor cover. This O-ring is installed to prevent external leaks through the charge pump cover mounting bolt holes.

Since this is the only product, and location, that utilize this particular "H" seal O-ring, it is obsolete and no longer required or available as a service part.

**Models affected**

All frame sizes, (28, 41 and 51 cc) of series 42 pumps

Serial numbers

This O-ring was removed from the build of materials used in production at serial number A-01-40-xxxxx. Units built prior to A-94-12-xxxxx still require O-ring part number 9004100-1550, due to a design change to the charge pump cover.

Part numbers affected

Part Number	Item description
5000530	O-ring (H seal)

Parts disposition

• Interchangeable

Service Bulletin:
SB-2002-012**Products affected**

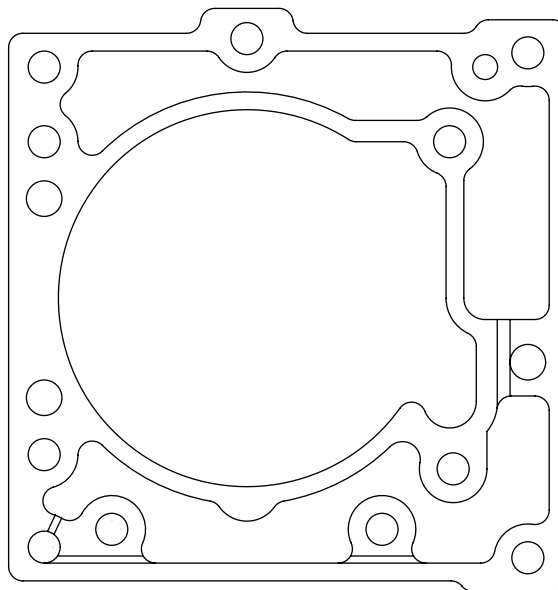
All series 42 pumps

Subject

Charge pump cover gasket change

Description

As a product improvement, Danfoss has changed the design of the Series 42 charge pump cover gasket used on all models for the series 42 pump. the new gasket is still a foam coated, steel-core gasket, but the design is more robust.

**Models affected**

All series 42 pumps

Serial numbers

This change became effective at serial number A-02-41-xxxxx

Part numbers affected

Item description	Old part number	New part number
Charge pump cover gasket	4800638	4800855
Charge pump cover gasket	4800638	4800855
Charge pump cover gasket	4800456	4800856

Parts disposition

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


Service Bulletin:
SB-2009-070
Products affected

All series 42 pumps

Subject

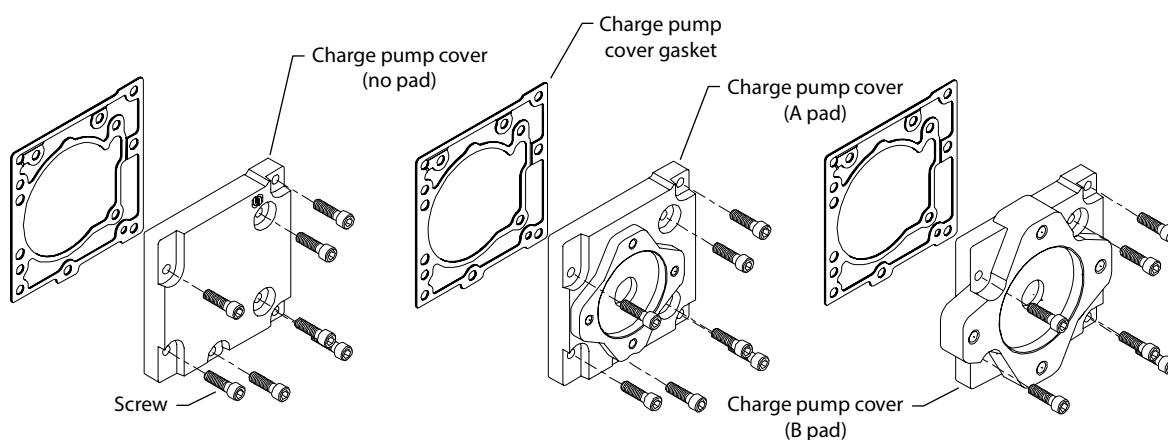
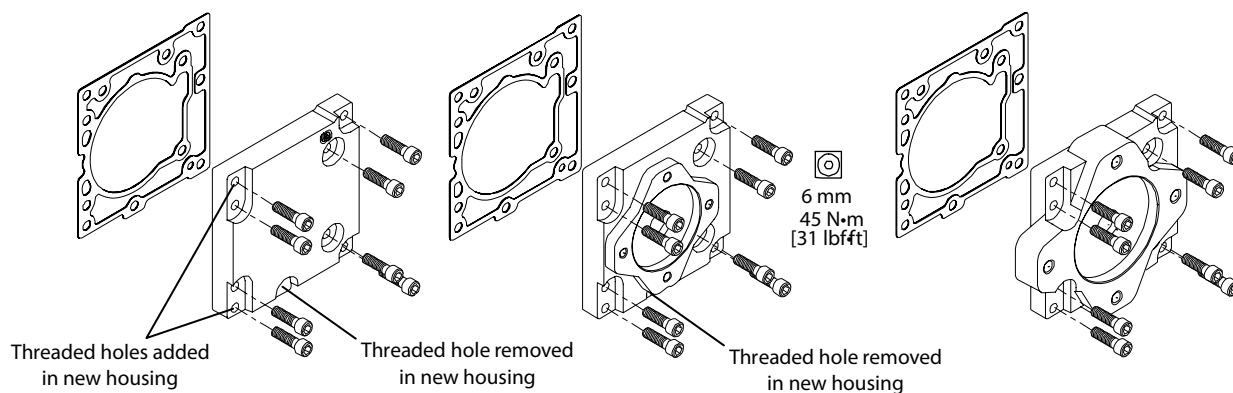
Auxiliary Pad Adaptor and Gasket Change

Description

A design change has been made to the charge pump cover and cover gasket. The major change to the cover is the number of screws used. The old SAE "A" and non-auxiliary pad covers used seven screws, and the SAE "B" used six screws to attach the cover to the housing. The new covers will each use eight screws. The new eight screw design is interchangeable with the old design. Place screws in the cover where the pump housing has a threaded hole for a screw. Older vintages of pumps used torx head screws (T-45). Newer vintages use internal hex cap head fastener (6 mm).

The new gasket is thinner and is designed to work with new or old charge pump covers.

In order to reduce the number of auxiliary pad adaptor service kits, the couplings that were once supplied in the appropriate kit must now be purchased separately.

**Old Design****New Design**

**Service Bulletin:
SB-2009-070**
Models affected

All Series 42 pumps

Serial numbers

All pumps produced after March 1, 2008.

Part numbers affected**Obsoleted kits:**

Kit part number	Global new part number
4510071	AUX PAD KIT-SAE A SPEC PAD,11T (GXXXT)
4510061	AUX. MTG. KIT, NO PAD
4510062	AUX. MTG. KIT, A PAD, 9 TOOTH
4510063	AUX. MTG. KIT. B PAD, 13 TOOTH
4510163	AUX. MTG KIT, A PAD, 9 TOOTH, 41CC
4510312	AUX MTG KIT, B-B PAD,15T, 28CC
4510313	AUX. MTG KIT, B-B PAD,15 TOOTH, 41CC
4510315	AUX. MTG. KIT, NO PAD, 41CC
4510164	AUX. MTG KIT, B PAD,13 TOOTH, 41CC
4510198	AUXILARY KIT, A PAD, S42
4510199	AUXILARY KIT, B PAD, S42
4510204	AUXILARY KIT, NO PAD, S42
11076607	AUX. MTG. KIT, NO PAD, 28CC
11076608	AUX. MTG. KIT, A PAD, 9 TOOTH, 28CC
11076609	AUX. MTG. KIT. B PAD, 13 TOOTH, 28CC
11076611	AUX. MTG KIT, A PAD, 9 TOOTH, 41CC
11076616	AUX. MTG KIT, B PAD,13 TOOTH, 41CC
11076617	AUX MTG KIT, B-B PAD,15T, 28CC
11076618	AUX. MTG. KIT, NO PAD, 28CC
11076612	AUX. MTG. KIT, NO PAD, 41CC

New universal kits:

Kit part number	Description
11076613	AUXILARY KIT, A PAD, S42 (coupling purchased separately)
11076614	AUXILARY KIT, B PAD, S42 (coupling purchased separately)
11076615	AUXILARY KIT, NO PAD, S42

Gasket change:

Old gasket part number	New gasket part number
4800855 (obsolete)	1716227

Parts disposition

- Interchangeable- Auxiliary pad adaptors
- Non-interchangeable- Gaskets
- Scrap old gaskets and apply for credit.
 - (Overhaul seal kits purchased before November 16, 2009 will contain the old gasket part number and will need to be updated to the new gasket part number.)

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