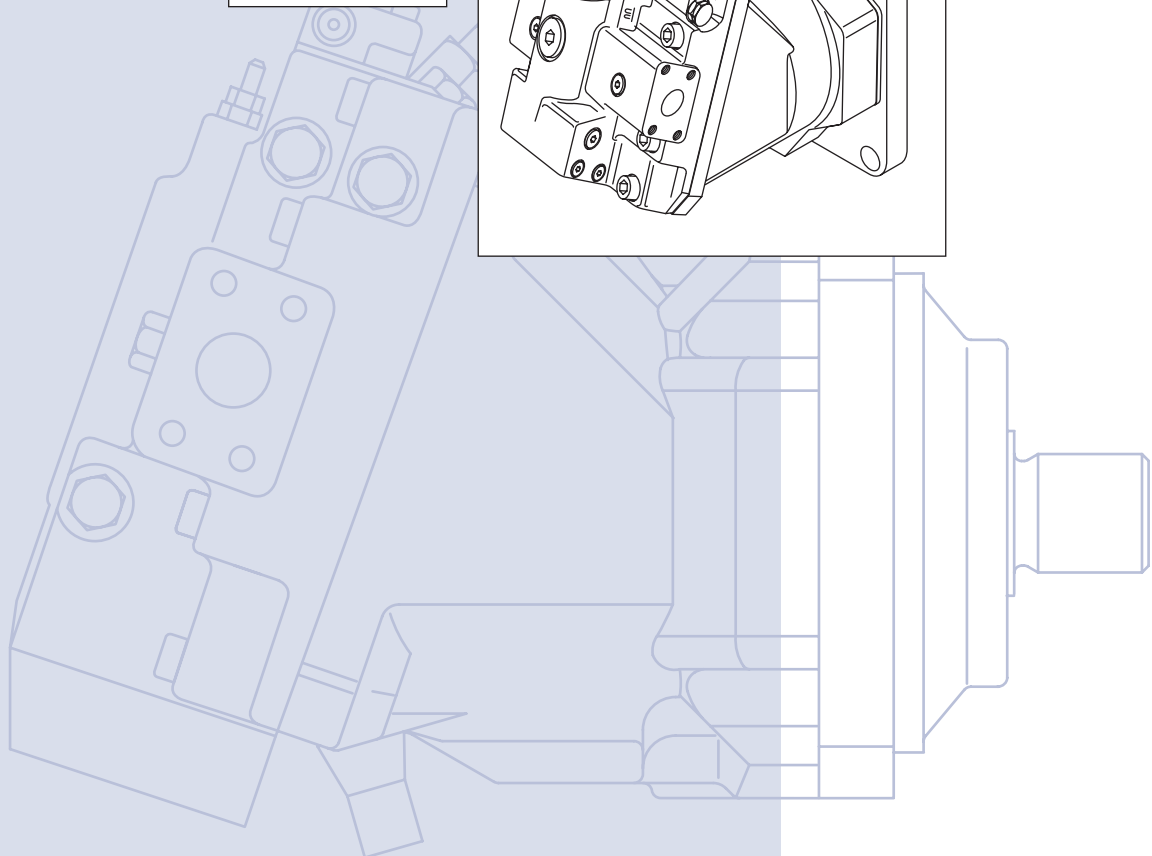
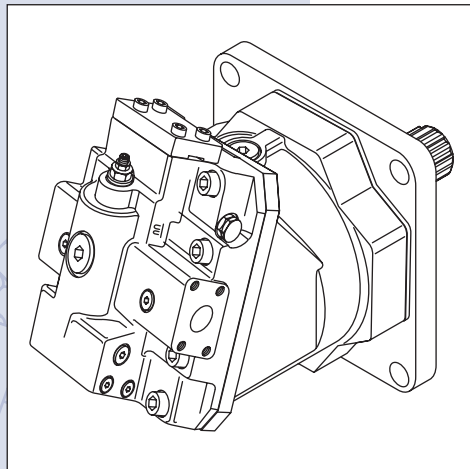
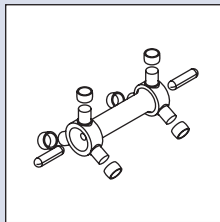
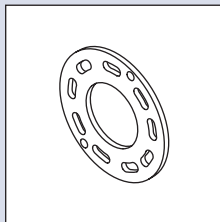
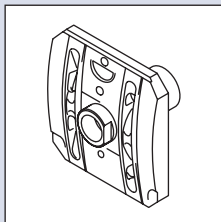




Series 51: 250 cc  
Variable  
Displacement  
Motors

Service Parts  
Manual



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**SERVICE PARTS  
 IDENTIFICATION**

Use this information and procedure to identify the module group, item number, manufacture date, part number, and part name of the parts included in the Series 51: 250cc variable displacement motor. Use the parts listed when performing minor repairs, major repairs, or conversions on Series 51: 250 cc motors. Refer to BLN-10043 Service Manual when doing this.

**NAMEPLATE**

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

**Model Code**

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

**Model Number**

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

**Serial Number**

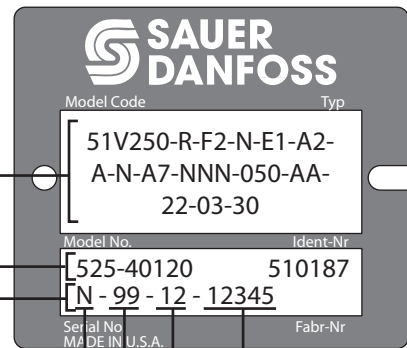
The Sauer-Danfoss serial number identifies the manufacture date and unit sequence in the build. The serial number also identifies the unit's warranty time period.

The letter code indicates the location of original manufacture (assembly). **N** indicates the unit was originally assembled in Neumunster, Germany.

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.



**DATE CODE**

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

EXAMPLE: The service part desired is Item L35.

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
V	L35	00-25		515752	Bearing housing (SB-2000-049)	1
	L35	92-33	00-24	743831	Bearing housing	1

All units using this order code with a date code of 92-33, up to and including 00-24, must use part number 743831. All units with a date code of 00-25, and newer, must use part number 515752..

**SERVICE BULLETINS**

A Service Bulletin Number (SB-\_\_\_\_-\_\_\_\_) may follow the part name of the part you desire. Read that Service Bulletin before ordering that part. The information contained in these Service Bulletins, as of the print date, are at the end of this manual. Service Bulletins contain more detailed information such as interchangeability, what additional parts are involved, and so forth. We suggest that you add additional Service Bulletins to this manual as you receive them.

**PROCEDURE TO IDENTIFY  
A PART****General**

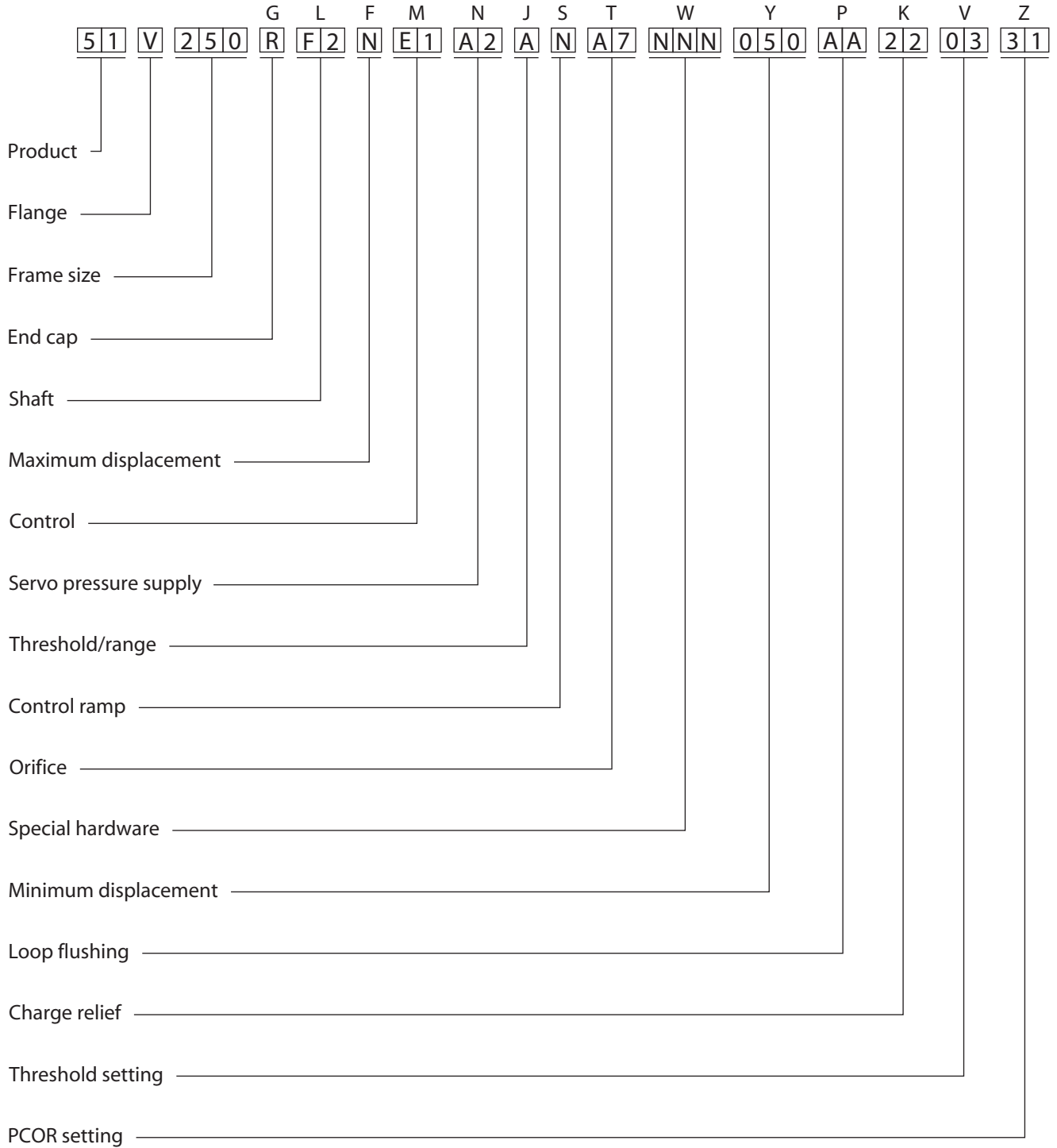
The modular design of Series 51 units results in a simplified service parts list and part number identification procedure. The same item numbers are used for same part names on all units within a product type. (Example: The lip seal, Item L40, has the same item number on all motors.)

A part number that has another number following in parentheses makes this a world-wide manual. The first number is sold in Germany. The number in parentheses is sold in the United States. (Example: 001289 (9004800-3708); customers order 9004800-3708 if ordering the part in the United States.)

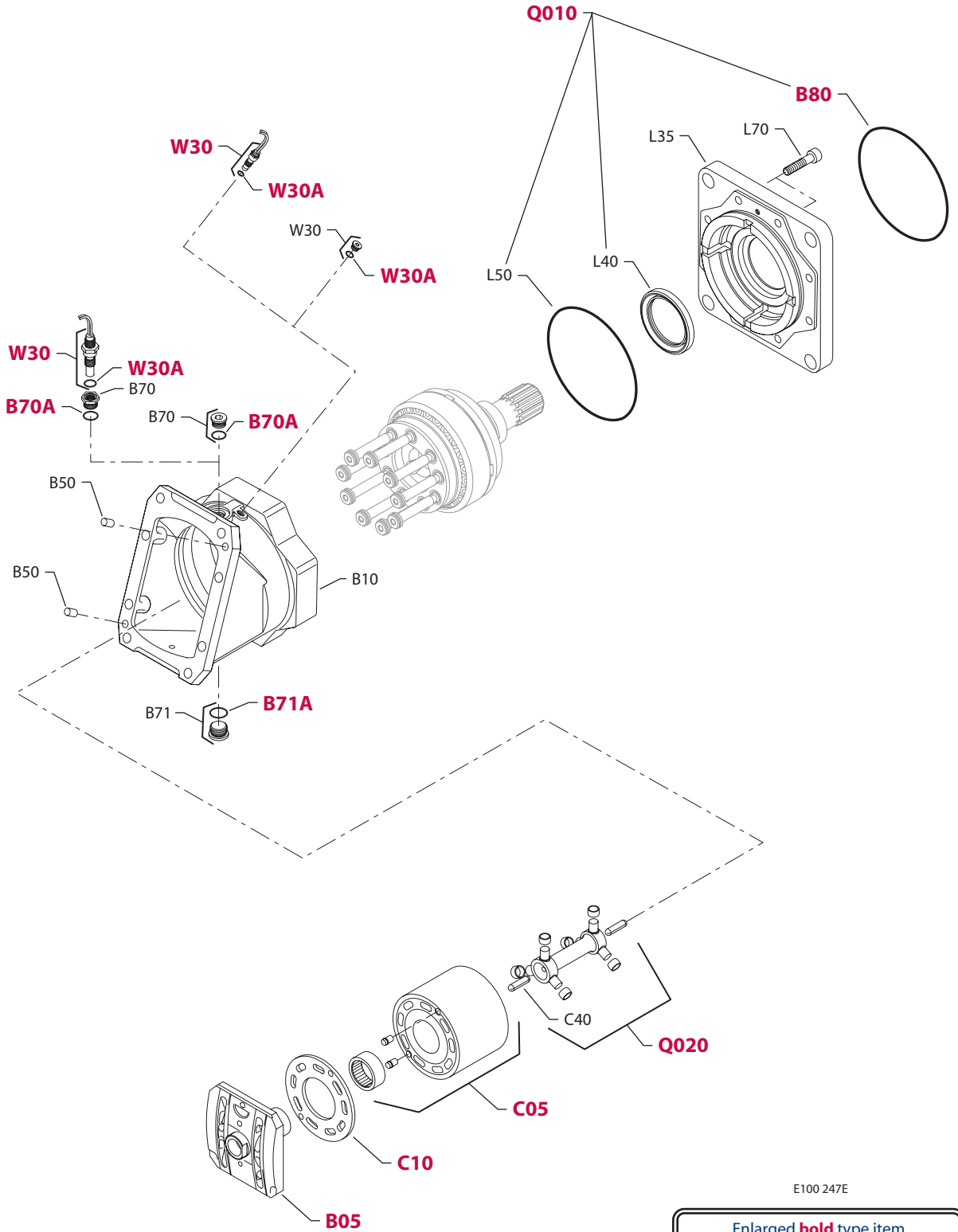
**Example of a part identification**

The nameplate on a Series 51 motor has an Order Code of 51V250 R F2 N TA C2 L N G0 NNN 074 AA 99 00 B0. Do this to determine the part number of the drive shaft used on this motor:

- 1) Referring to the shaft module in the Order Code (see page 7), the shaft option for this motor is identified by the code **F2** (51V250 R **F2** N TA C2 L N G0 NNN 074 AA 99 00 B0)
- 2) Referring to the Service Parts List, find the shaft group.
- 3) Find the order code that relates to this unit, which is **F2**.
- 4) The shaft is Item L1.
- 5) The part number 720086.



P100 541E



E100 247E

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



**COMMON PARTS**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
V	B05	91-30		508202	Valve segment (SB-1996-005 & SB-1997-030)	1
	B50	91-30		001289 (9004800-3708)	Pin	2
	B70A	91-30		001172 (9004201-9000)	O-ring	1
	B71A	91-30		001172 (9004201-9000)	O-ring	1
	B80	91-30		729319	O-ring	1
	C05	91-30		367870	Cylinder block assembly	1
	C10	91-30		515370	Bearing plate	1
	C40	91-30		364208	Support pin	2
	L35	91-30		511051	Front flange, SAE 'C'	1
	L40	91-30		341735	Lip seal	1
	L50	91-30		916759	O-ring	1
	L70	91-30		374207	Screw	8
	Q010	91-30		776872	Shaft seal kit	1
	Q020	91-30		517311	Synch shaft kit (SB-2001-015)	1

**SPECIAL HARDWARE**

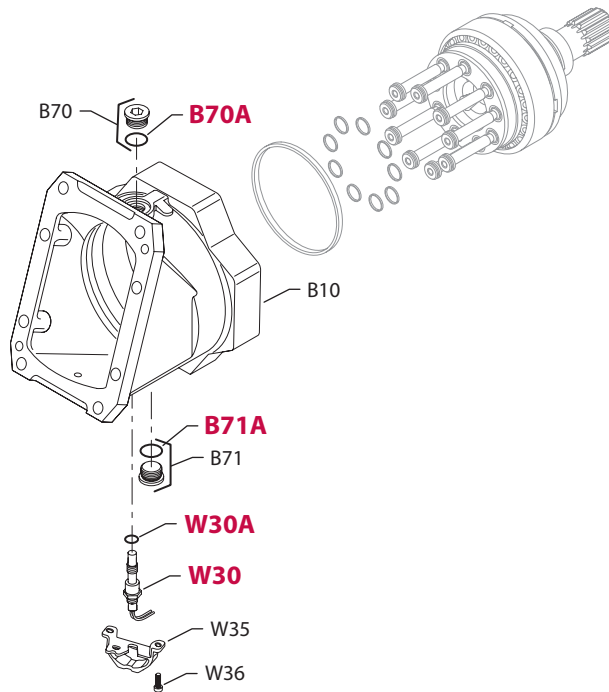
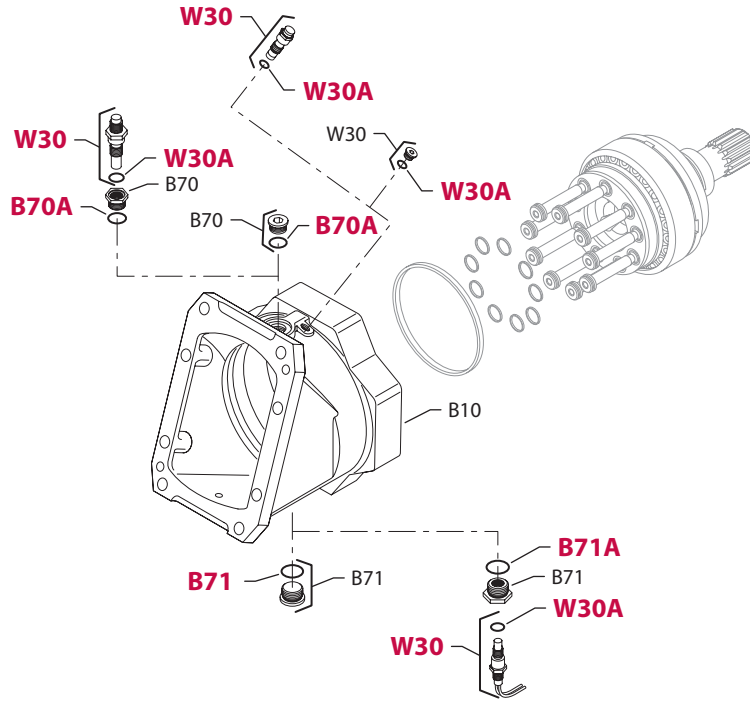
AAA	B10	95-42		505091	Housing with speed sensor port	1
	B70	95-42		320002 (9005110-9200)	Plug	1
	B70	93-35	95-41	788604	Adapter plug	1
	B71	93-35		320002 (9005110-9200)	Plug	1
	W30	93-35		512659 (KPPG12508)	Speed sensor	1
	W30A	93-35		085043 (9004201-3700)	O-ring	1

ABA	B10	95-42		505091	Housing with speed sensor port	1
	B70	95-42		320002 (9005110-9200)	Plug	1
	B70	93-35	95-41	788604	Adapter plug	1
	B71	93-35		320002 (9005110-9200)	Plug	1
	W30	93-35		515965 (9005110-5600)	Plug	1
	W30A	93-35		085043 (9004201-3700)	O-ring	1

ABC	B10	95-42		505091	Housing with speed sensor port	1
	B70	94-33		320002 (9005110-9200)	Plug	1
	B71	94-33		320002 (9005110-9200)	Plug	1
	W30	95-42		515965 (9005110-5600)	Plug	1
	W30A	95-42		085043 (9004201-3700)	O-ring	1

ACA	B10	95-42		505091	Housing with speed sensor port	1
	B70	95-42		320002 (9005110-9200)	Plug	1
	B70	94-04	95-41	788604	Adapter plug	1
	B71	94-04		320002 (9005110-9200)	Plug	1
	W30	94-04		512660 (KPPG13408)	Speed sensor	1
	W30A	94-04		085043 (9004201-3700)	O-ring	1

ACB	B10	95-42		505091	Housing with speed sensor port	1
	B70	94-33		320002 (9005110-9200)	Plug	1
	B71	94-33		320002 (9005110-9200)	Plug	1
	W30	00-38		512662 (KPPG16408)	Speed sensor	1
	W30A	00-38		085043 (9004201-3700)	O-ring	1

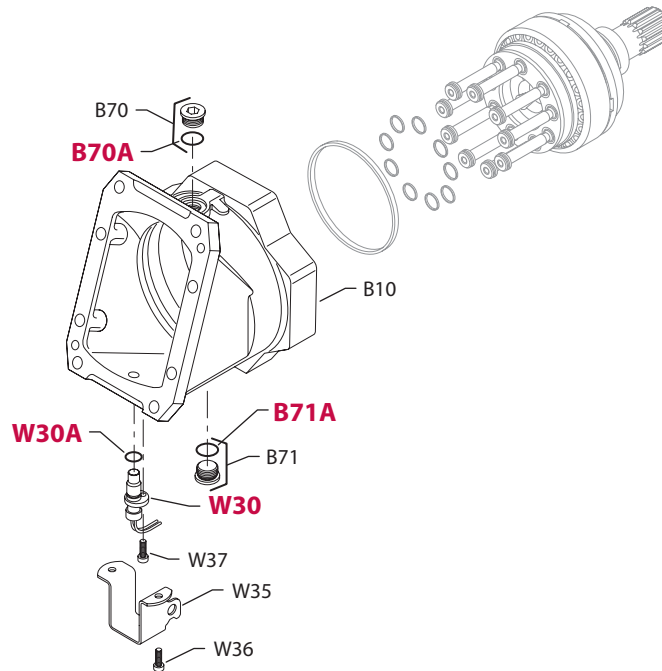
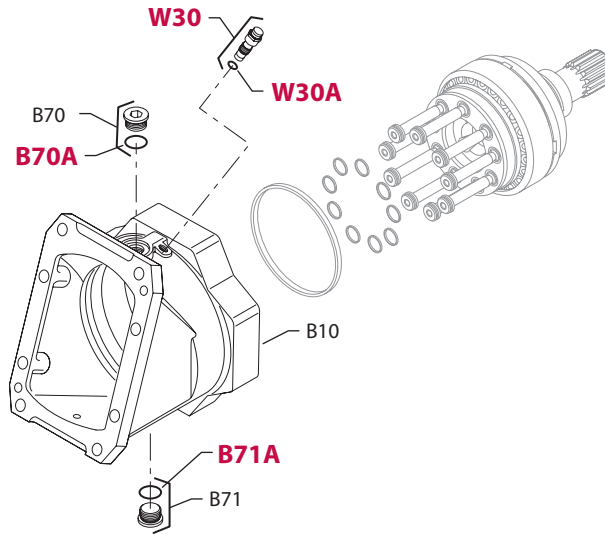


E100 328E

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

**SPECIAL HARDWARE**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
ADA	B10	95-42		505091	Housing with speed sensor port	1
	B70	95-42		320002 (9005110-9200)	Plug	1
	B70	94-33	95-41	788604	Adapter plug	1
	B71	94-33		320002 (9005110-9200)	Plug	1
	W30	94-33		512666 (KPPG156)	Speed sensor	1
	W30A	94-33		085043 (9004201-3700)	O-ring	1
ADE	B10	00-34		505091	Housing with speed sensor port	1
	B70	00-34		320002 (9005110-9200)	Plug	1
	B71	00-34		320002 (9005110-9200)	Plug	1
	W30	00-34		512666 (KPPG156)	Plug	1
	W30A	00-34		085043 (9004201-3700)	O-ring	1
AEA	B10	95-42		506067	Housing with speed sensor port	1
	B70	94-04		320002 (9005110-9200)	Plug	1
	B71	95-42		320002 (9005110-9200)	Plug	1
	B71	94-04	95-41	788604	Adapter plug	1
	W30	94-04		512669 (KPPG15408)	Speed sensor	1
	W30A	94-04		085043 (9004201-3700)	O-ring	1
	W35	98-52		506065	Speed sensor guard	1
	W36	98-52		067637	Screw	2
AEB	B10	98-52		506067	Housing with speed sensor port	1
	B70	98-52		320002 (9005110-9200)	Plug	1
	B71	98-52		320002 (9005110-9200)	Plug	1
	W30	98-52		512660 (KPPG13408)	Speed sensor	1
	W30A	98-52		085043 (9004201-3700)	O-ring	1
	W35	98-52		506065	Speed sensor guard	1
	W36	98-52		067637	Screw	2
AKB	B10	00-04		505091	Housing with speed sensor port	1
	B70	00-04		320002 (9005110-9200)	Plug	1
	B71	00-04		320002 (9005110-9200)	Plug	1
	W30	00-04		515965 (9005110-5000)	Plug	1
	W30A	00-04		085043 (9004201-3700)	O-ring	1
AMA	B10	01-06		515849	Housing with speed sensor port	1
	B70	01-06		320002 (9005110-9200)	Plug	1
	B71	01-06		320002 (9005110-9200)	Plug	1
	W30	01-06		518311 (KPPG13824)	Speed sensor	1
	W30A	01-06		085043 (9004201-3700)	O-ring	1
	W35	01-06		8801261	Speed sensor guard	1
	W36	01-06		395822 (9007315-0603)	Screw	2

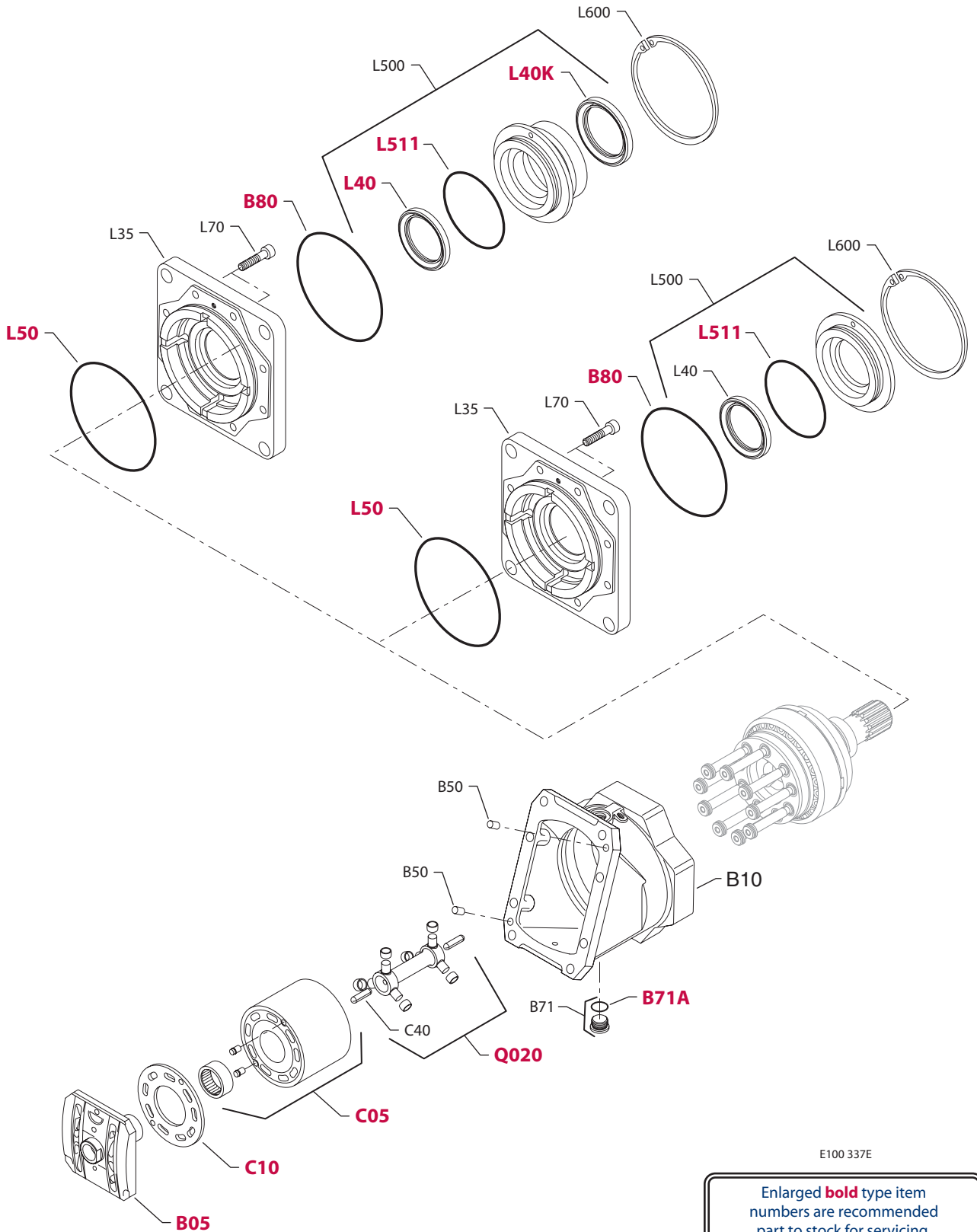


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**SPECIAL HARDWARE**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
AMB	B10	03-14		519420	Housing with speed sensor port	1
	B70	03-14		320002 (9005110-9200)	Plug	1
	B71	03-14		320002 (9005110-9200)	Plug	1
	W30	03-14		519148 (KPPG 4B724B)	Speed sensor	1
	W30A	03-14		085043 (9004201-3700)	O-ring	1
	W35	03-14		520021	Speed sensor guard	1
	W36	03-14		395822 (9007315-0603)	Screw	2
	W37	03-14		395822 (9007315-0603)	Screw	1
	ANB	B10	99-34		505091	Housing with speed sensor port
B70		99-34		320002 (9005110-9200)	Plug	1
B71		99-34		320002 (9005110-9200)	Plug	1
W30		99-34		513201 (KPPG 16719)	Speed sensor	1
W30A		99-34		085043 (9004201-3700)	O-ring	1
CCA		B10	93-35		367813	Housing without speed sensor port
	B70	93-35		320002 (9005110-9200)	Plug	1
	B71	93-35		320002 (9005110-9200)	Plug	1
DAA	B10	98-09		367813	Housing without speed sensor port	1
	B70	98-09		320002 (9005110-9200)	Plug	1
	B71	98-09		320002 (9005110-9200)	Plug	1
DDA	B10	00-04		367813	Housing without speed sensor port	1
	B70	00-04		320002 (9005110-9200)	Plug	1
	B71	00-04		320002 (9005110-9200)	Plug	1
DDC	B10	00-08		367813	Housing without speed sensor port	1
	B70	00-08		320002 (9005110-9200)	Plug	1
	B71	00-08		320002 (9005110-9200)	Plug	1
NNN	B10	91-30		367813	Housing without speed sensor port	1
	B70	91-30		320002 (9005110-9200)	Plug	1
	B71	91-30		320002 (9005110-9200)	Plug	1



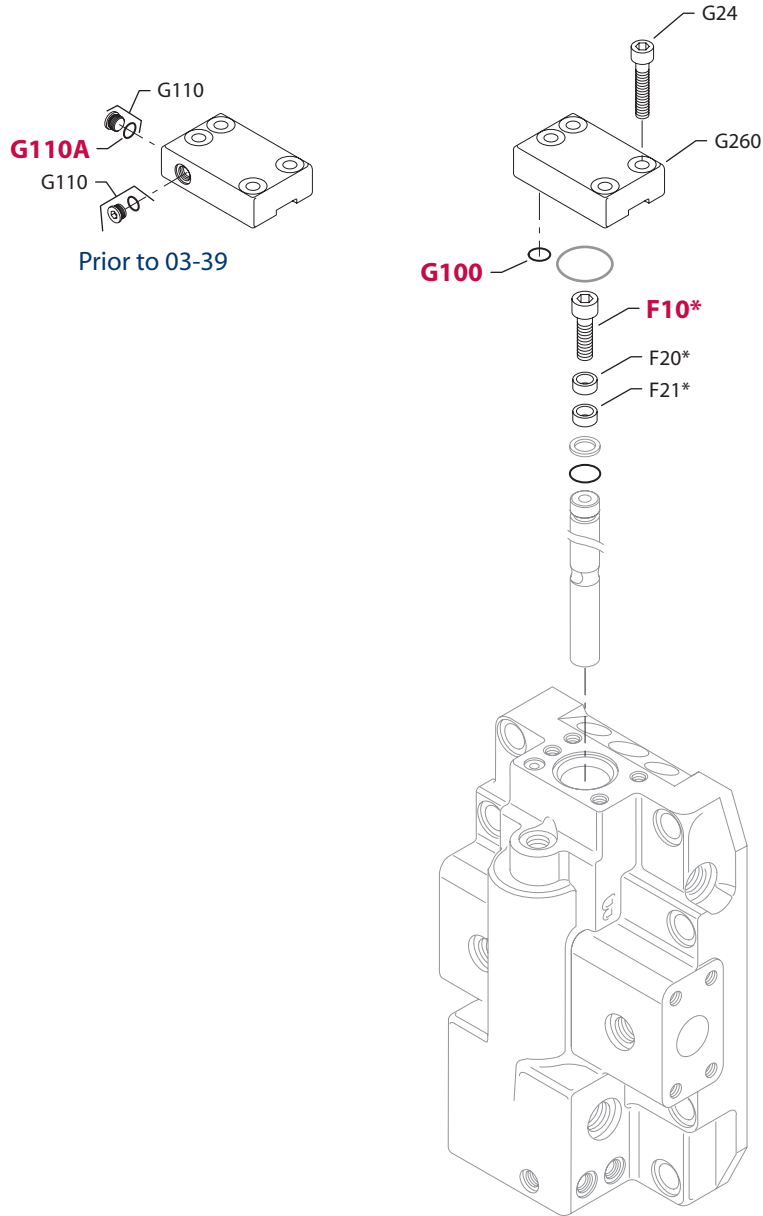
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**SPECIAL HARDWARE**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
FCA	B05	98-52		508202	Valve segment	1
	B10	98-52		367813	Housing without speed sensor port	1
	B70	98-52		320002 (9005110-9200)	Plug	1
	B70A	98-52		001172 (9004201-9000)	O-ring	1
	B71	98-52		320002 (9005110-9200)	Plug	1
	B71A	98-52		001172 (9004201-9000)	O-ring	1
	B80	98-52		729319	O-ring	1
	C05	98-52		367870	Cylinder block assembly	1
	C10	98-52		515370	Bearing plate	1
	C40	98-52		364208	Support pin	2
	L35	98-52		512354	Front flange, SAE 'E'	1
	L40	98-52		517580	Lip seal	1
	L50	98-52		916759	O-ring	1
	L70	98-52		374207	Screw	8
	L500	98-52		517579	Seal assembly	1
	L511	98-52		501879	O-ring	1
	L600	98-52		501120	Retaining ring	1
	Q020	98-52		517311	Synch shaft kit (SB-2001-015)	1

FCB	B05	03-16		508202	Valve segment	1
	B10	03-16		367813	Housing without speed sensor port	1
	B70	03-16		320002 (9005110-9200)	Plug	1
	B70A	03-16		001172 (9004201-9000)	O-ring	1
	B71	03-16		320002 (9005110-9200)	Plug	1
	B71A	03-16		001172 (9004201-9000)	O-ring	1
	B80	03-16		729319	O-ring	1
	C05	03-16		367870	Cylinder block assembly	1
	C10	03-16		515370	Bearing plate	1
	C40	03-16		364208	Support pin	2
	L35	03-16		512354	Front flange, SAE 'E'	1
	L40	03-16		517580	Lip seal	1
	L40K	03-16		519201	Lip seal	1
	L50	03-16		916759	O-ring	1
	L70	03-16		374207	Screw	8
	L500	03-16		519200	Seal assembly	1
	L511	03-16		501879	O-ring	1
	L600	03-16		501120	Retaining ring	1
	Q020	03-16		517311	Synch shaft kit (SB-2001-015)	1



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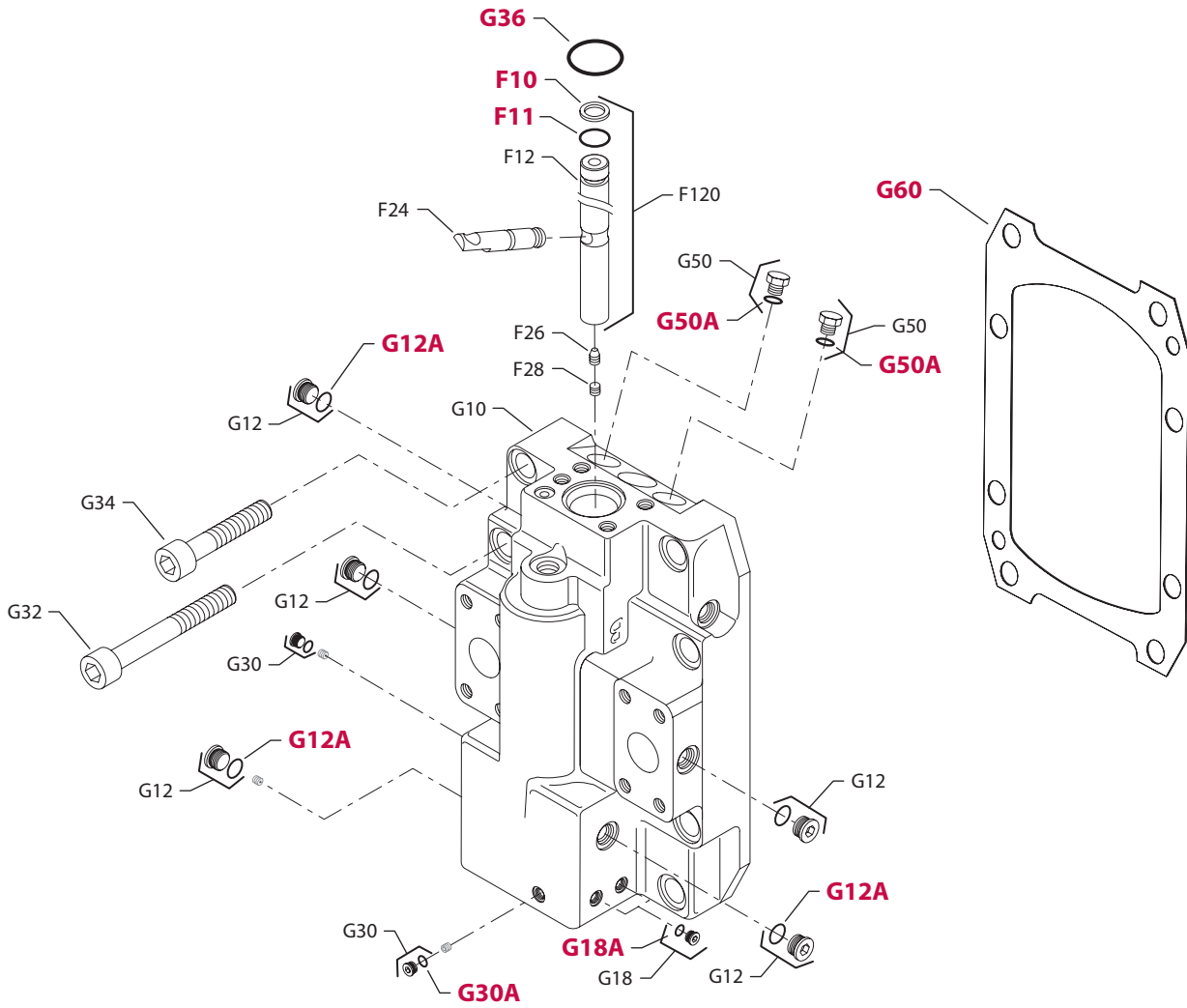


**MAXIMUM DISPLACEMENT COMMON PARTS**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
	G24	91-30		290502 (9007314-1008)	Screw	4
	G100	91-30		792739	O-ring	1
	G110	91-30	03-38	504519	Plug	2
	G110A	91-30	03-38	039297 (9004201-1200)	O-ring	2
	G260	91-30		518998	Cover	1

**MAXIMUM DISPLACEMENT**

A	F10A	94-47		064493	Screw, M10 x 30mm - 10.9	1
	F20A	94-47		505398	Spacer, 5.0mm	1
B	F10B	95-15		393702	Screw, M10 x 30mm - 8.8	1
	F20B	95-15		672071	Spacer, 4.5mm	1
	F21B	95-15		661199	Spacer, 5.5mm	1
C	F10C	91-30		396077	Screw, M10 x 35mm - 8.8	1
	F20C	91-30		682211	Spacer, 15.0mm	1
D	F10D	96-43		732982 (9007314-1009)	Screw, M10 x 40mm - 12.9	1
	F20D	96-43		679480	Spacer, 20.0mm	1
N	F10N			None		

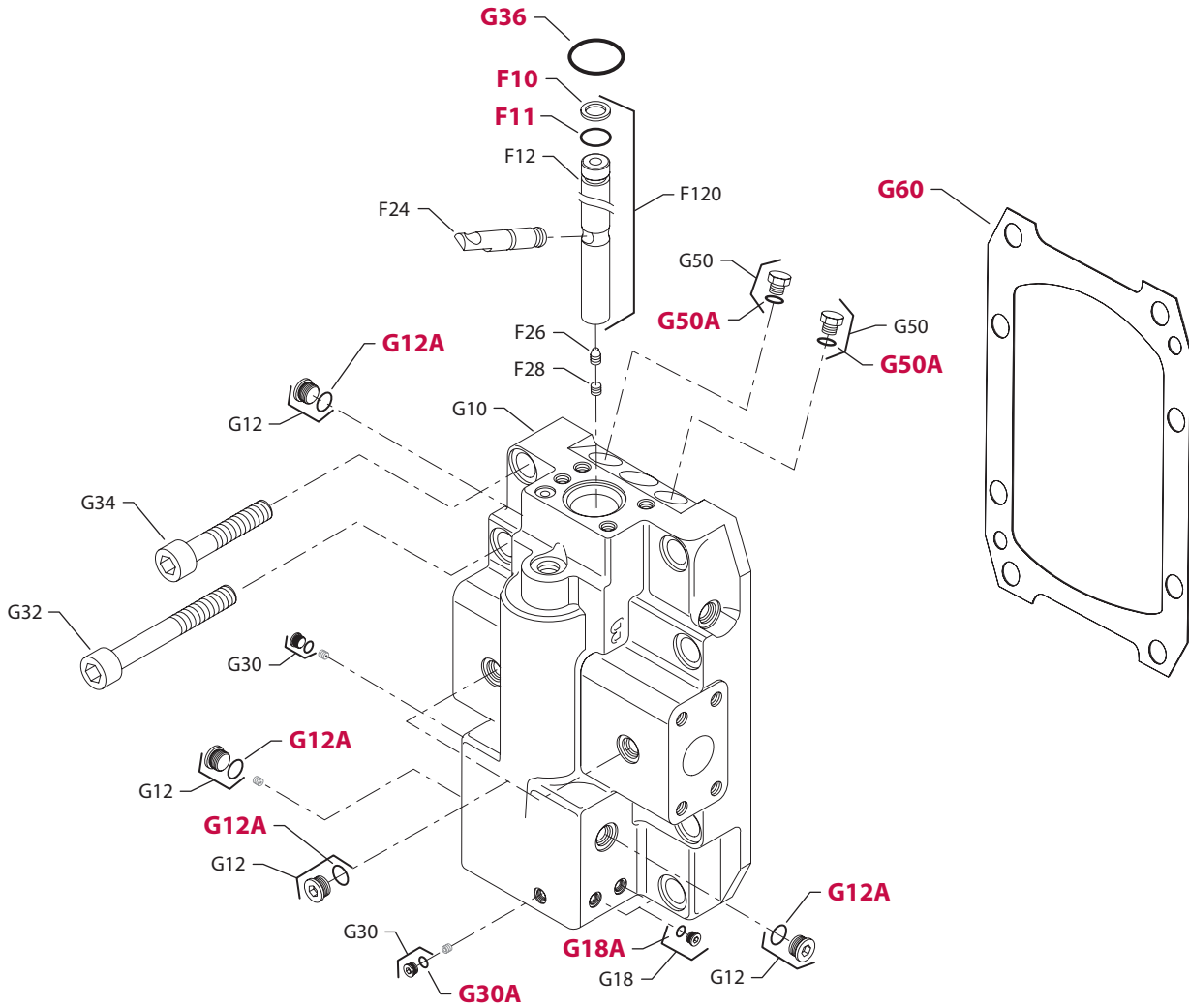


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Enlarged **bold** type item numbers are recommended part to stock for servicing.

**AXIAL PORTS**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
A	F10	93-04		508136	Servo piston seal ring (SB-1997-009)	1
	F11	93-04		504208	O-ring	1
	F24	93-04		511123	Feedback lever	1
	F26	93-04		396879	Set screw	1
	F28	93-04		042465	Set screw	1
	F120	93-04		510078	Servo piston assembly	1
	G10	93-04		513544	End cap, axial ports (SB-1996-005, SB-2002-001)	1
	G12	95-07		515965 (9005110-5600)	Plug	5
	"	93-04	95-06	515965 (9005110-5600)	Plug	7
	G12A	95-07		085043 (9004201-3700)	O-ring	5
	"	93-04	95-06	085043 (9004201-3700)	O-ring	7
	G18	95-07		504519	Plug	2
	"	93-04	95-06	092114 (9007712-0604)	Set screw	2
	G18A	95-07		039297 (9004201-1200)	O-ring	2
	G30	93-04		504519	Plug	2
	G30A	93-04		039297 (9004201-1200)	O-ring	2
	G32	93-04		641019	Screw	4
	G34	93-04		736389	Screw	4
	G36	93-04		707737	O-ring	1
	G50	93-04		001511 (9005100-4400)	Plug	2
	G50A	93-04		001123 (9004201-2500)	O-ring	2
	G60	93-04		501202	End cap gasket (SB-1993-006)	1

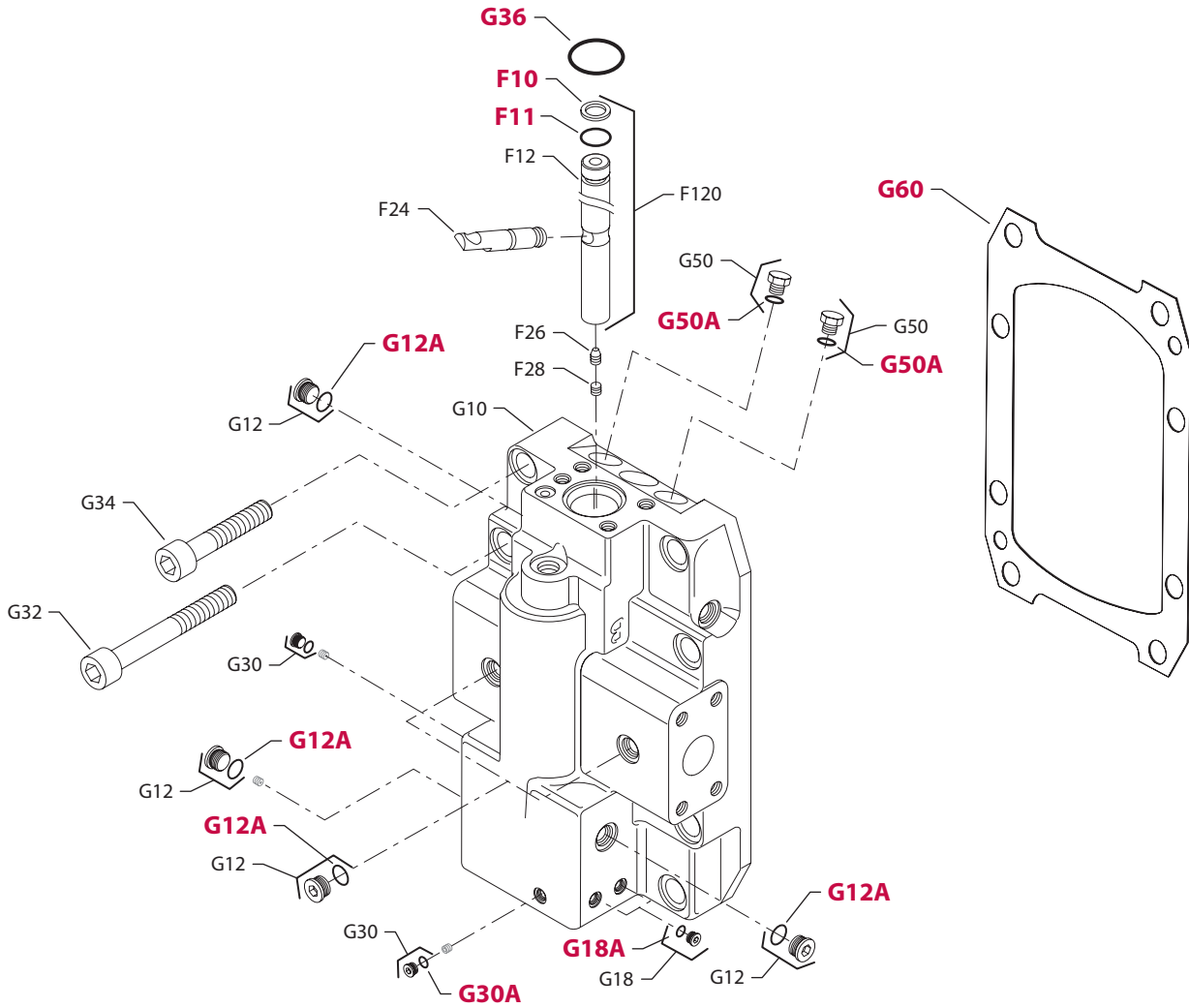


E100 297E

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

**SIDE PORTS**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
R	F10	93-04		508136	Servo piston seal ring (SB-1997-009)	1
	F11	93-04		504208	O-ring	1
	F24	93-04		511123	Feedback lever	1
	F26	93-04		396879	Set screw	1
	F28	93-04		042465	Set screw	1
	F120	93-04		510078	Servo piston assembly	1
	G10	93-04		516060	End cap, side ports (SB-1996-005, SB-2002-001)	1
	G12	95-07		515965 (9005110-5600)	Plug	5
	"	93-04	95-06	515965 (9005110-5600)	Plug	7
	G12A	95-07		085043 (9004201-3700)	O-ring	5
	"	93-04	95-06	085043 (9004201-3700)	O-ring	7
	G18	95-07		504519	Plug	2
	"	93-04	95-06	092114 (9007712-0604)	Set screw	2
	G18A	95-07		039297 (9004201-1200)	O-ring	2
	G30	93-04		504519	Plug	2
	G30A	93-04		039297 (9004201-1200)	O-ring	2
	G32	93-04		641019	Screw	4
	G34	93-04		736389	Screw	4
	G36	93-04		707737	O-ring	1
	G50	93-04		001511	Plug	2
	G50A	93-04		001123 (9004201-2500)	O-ring	2
	G60	93-04		501202	End cap gasket (SB-1993-006)	1

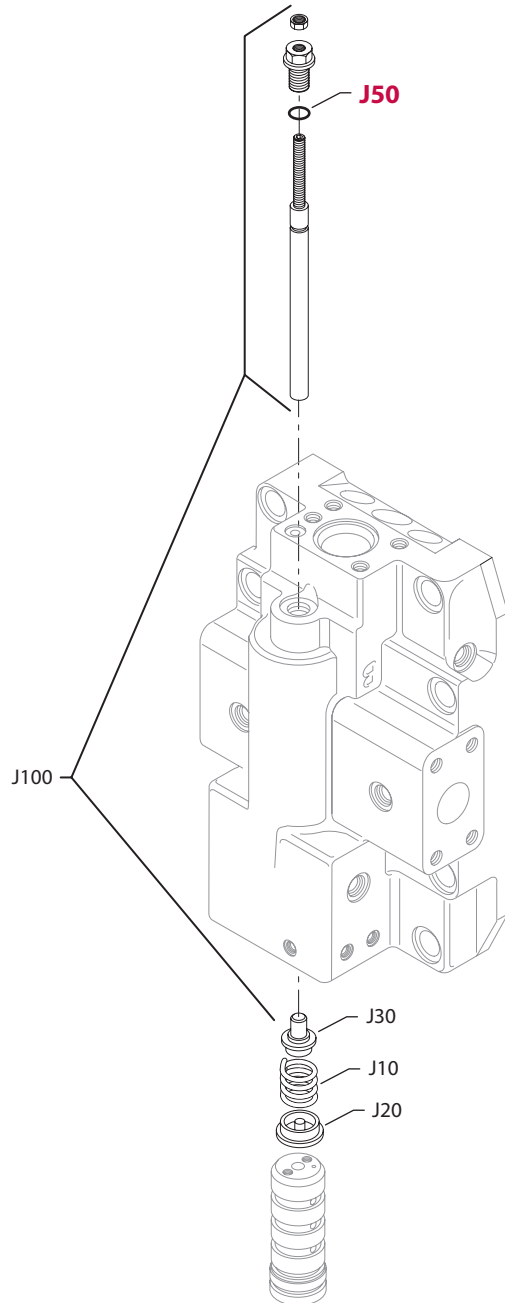


E100 297E

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

**SIDE PORTS**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
T	F10	93-04	01-18	508136	Servo piston seal ring (SB-1997-009)	1
	F11	93-04	01-18	504208	O-ring	1
	F24	93-04	01-18	511123	Feedback lever	1
	F26	93-04	01-18	396879	Set screw	1
	F28	93-04	01-18	042465	Set screw	1
	F120	93-04	01-18	510078	Servo piston assembly	1
	G10	93-04	01-18	504244	End cap, side ports (SB-1996-005)	1
	G12	95-07	01-18	515965 (9005110-5600)	Plug	5
	"	93-04	95-06	515965 (9005110-5600)	Plug	7
	G12A	95-07	01-18	085043 (9004201-3700)	O-ring	5
	"	93-04	95-06	085043 (9004201-3700)	O-ring	7
	G18	95-07	01-18	504519	Plug	2
	"	93-04	95-06	092114 (9007712-0604)	Set screw	2
	G18A	95-07	01-18	039297 (9004201-1200)	O-ring	2
	G30	93-04	01-18	504519	Plug	2
	G30A	93-04	01-18	039297 (9004201-1200)	O-ring	2
	G32	93-04	01-18	641019	Screw	4
	G34	93-04	01-18	736389	Screw	4
	G36	93-04	01-18	707737	O-ring	1
	G50	93-04	01-18	001511	Plug	2
	G50A	93-04	01-18	001123 (9004201-2500)	O-ring	2
	G60	93-04	01-18	501202	End cap gasket (SB-1993-006)	1



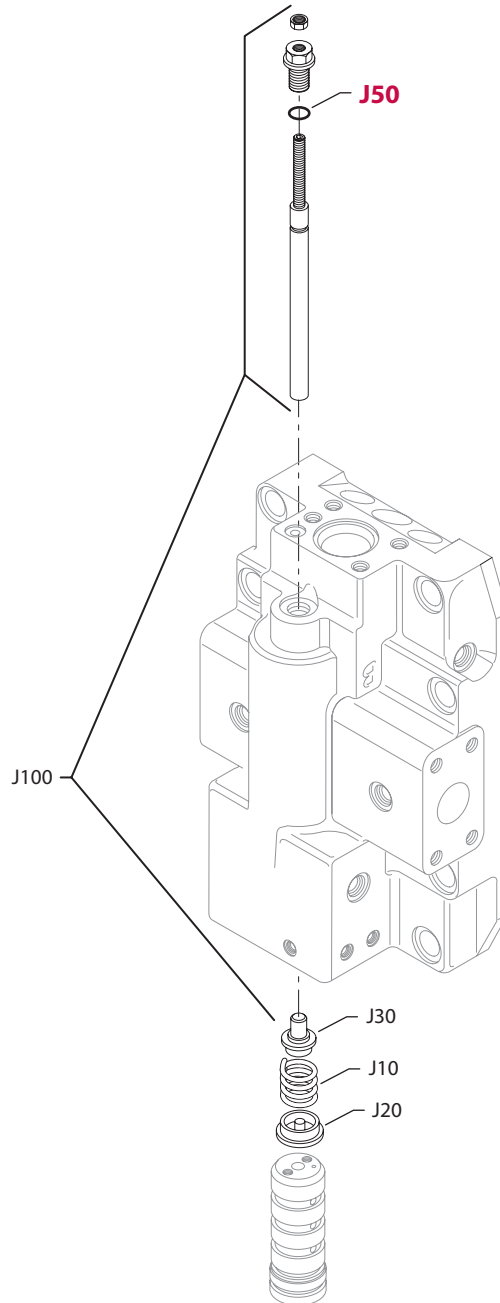
E100 299E

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



**THRESHOLD/RANGE**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
A	J10	91-30		507638	Spring	1
2-5 bar	J20	93-34		501347	Spring seat	1
	"	91-30	93-33	722231	Spring seat - OBSOLETE	1
	J30	96-07		507670	Spring seat (SB-1995-013)	1
	J50	91-30		732479 (9004105-0100)	O-ring	1
	J100	91-30		507695	Threshold adjustment kit (SB-1995-013)	1
B	J10	91-30		722215	Spring	1
5-12 bar	J20	93-34		501347	Spring seat	1
	"	91-30	93-33	722231	Spring seat - OBSOLETE	1
	J30	96-07		507670	Spring seat (SB-1995-013)	1
	J50	91-30		732479 (9004105-0100)	O-ring	1
	J100	91-30		507695	Threshold adjustment kit (SB-1995-013)	1
C	J10	91-30		722207	Spring	1
12-50 bar	J20	93-34		501347	Spring seat	1
	"	91-30	93-33	722231	Spring seat - OBSOLETE	1
	J30	96-07		507670	Spring seat (SB-1995-013)	1
	J50	91-30		732479 (9004105-0100)	O-ring	1
	J100	91-30		507695	Threshold adjustment kit (SB-1995-013)	1
E	J10	91-30		729442	Spring	1
3-5 bar						
G	J10	91-30		722207	Spring	1
3-5 bar	J20	93-34		501347	Spring seat	1
	"	91-30	93-33	722231	Spring seat - OBSOLETE	1
	J30	96-07		507670	Spring seat (SB-1995-013)	1
	J50	91-30		732479 (9004105-0100)	O-ring	1
	J100	91-30		507695	Threshold adjustment kit (SB-1995-013)	1
H	J10	91-30		722207	Spring	1
5-8 bar	J20	93-34		501347	Spring seat	1
	"	91-30	93-33	722231	Spring seat - OBSOLETE	1
	J30	96-07		507670	Spring seat (SB-1995-013)	1
	J50	91-30		732479 (9004105-0100)	O-ring	1
	J100	91-30		507695	Threshold adjustment kit (SB-1995-013)	1
J	J10	91-30		722215	Spring	1
15-50 mA	J20	93-34		501347	Spring seat	1
	"	91-30	93-33	722231	Spring seat - OBSOLETE	1
	J30	96-07		507670	Spring seat (SB-1995-013)	1
	J50	91-30		732479 (9004105-0100)	O-ring	1
	J100	91-30		507695	Threshold adjustment kit (SB-1995-013)	1

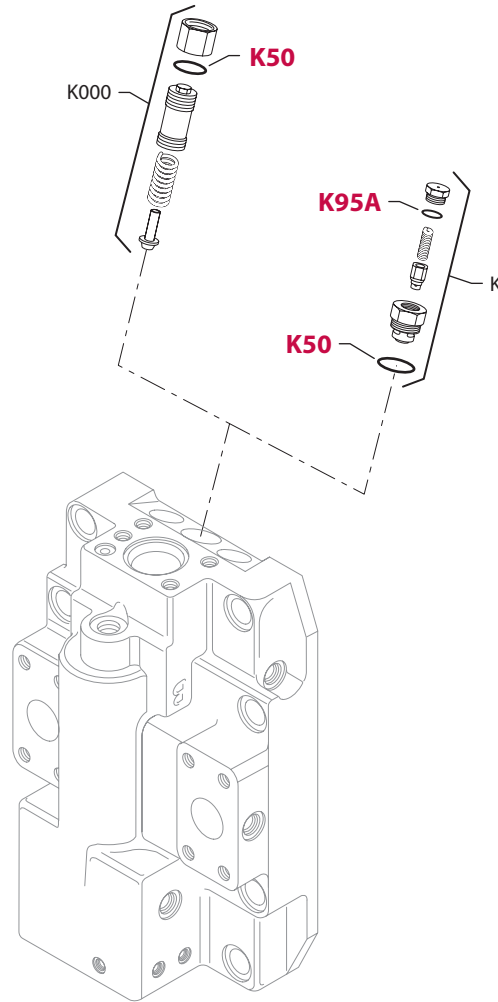


E100 299E

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

**THRESHOLD/RANGE**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
K 50-85 mA	J10	91-30		722207	Spring	1
	J20	93-34		501347	Spring seat	1
	"	91-30	93-33	722231	Spring seat - OBSOLETE	1
	J30	96-07		507670	Spring seat (SB-1995-013)	1
	J50	91-30		732479 (9004105-0100)	O-ring	1
	J100	91-30		507695	Threshold adjustment kit (SB-1995-013)	1
L 110-370 bar	J10	91-30		722215	Spring	1
	J20	93-34		501347	Spring seat	1
	"	91-30	93-33	722231	Spring seat - OBSOLETE	1
	J30	96-07		507670	Spring seat (SB-1995-013)	1
	J50	91-30		732479 (9004105-0100)	O-ring	1
	J100	91-30		507695	Threshold adjustment kit (SB-1995-013)	1
M 45-70 bar	J10	91-30		729442	Spring	1
N				No parts		
R 320 mA	J10	91-30		507638	Spring	1
	J20	93-34		501347	Spring seat	1
	"	91-30	93-33	722231	Spring seat - OBSOLETE	1
	J30	96-07		507670	Spring seat (SB-1995-013)	1
	J50	91-30		732479 (9004105-0100)	O-ring	1
	J100	91-30		507695	Threshold adjustment kit (SB-1995-013)	1
S 640 mA	J10	91-30		507638	Spring	1
	J20	93-34		501347	Spring seat	1
	"	91-30	93-33	722231	Spring seat - OBSOLETE	1
	J30	96-07		507670	Spring seat (SB-1995-013)	1
	J50	91-30		732479 (9004105-0100)	O-ring	1
	J100	91-30		507695	Threshold adjustment kit (SB-1995-013)	1
V 220 mA	J10	91-30		507638	Spring	1
	J20	93-34		501347	Spring seat	1
	"	91-30	93-33	722231	Spring seat - OBSOLETE	1
	J30	96-07		507670	Spring seat (SB-1995-013)	1
	J50	91-30		732479 (9004105-0100)	O-ring	1
	J100	91-30		507695	Threshold adjustment kit (SB-1995-013)	1
W 440 mA	J10	91-30		507638	Spring	1
	J20	93-34		501347	Spring seat	1
	"	91-30	93-33	722231	Spring seat - OBSOLETE	1
	J30	96-07		507670	Spring seat (SB-1995-013)	1
	J50	91-30		732479 (9004105-0100)	O-ring	1
	J100	91-30		507695	Threshold adjustment kit (SB-1995-013)	1

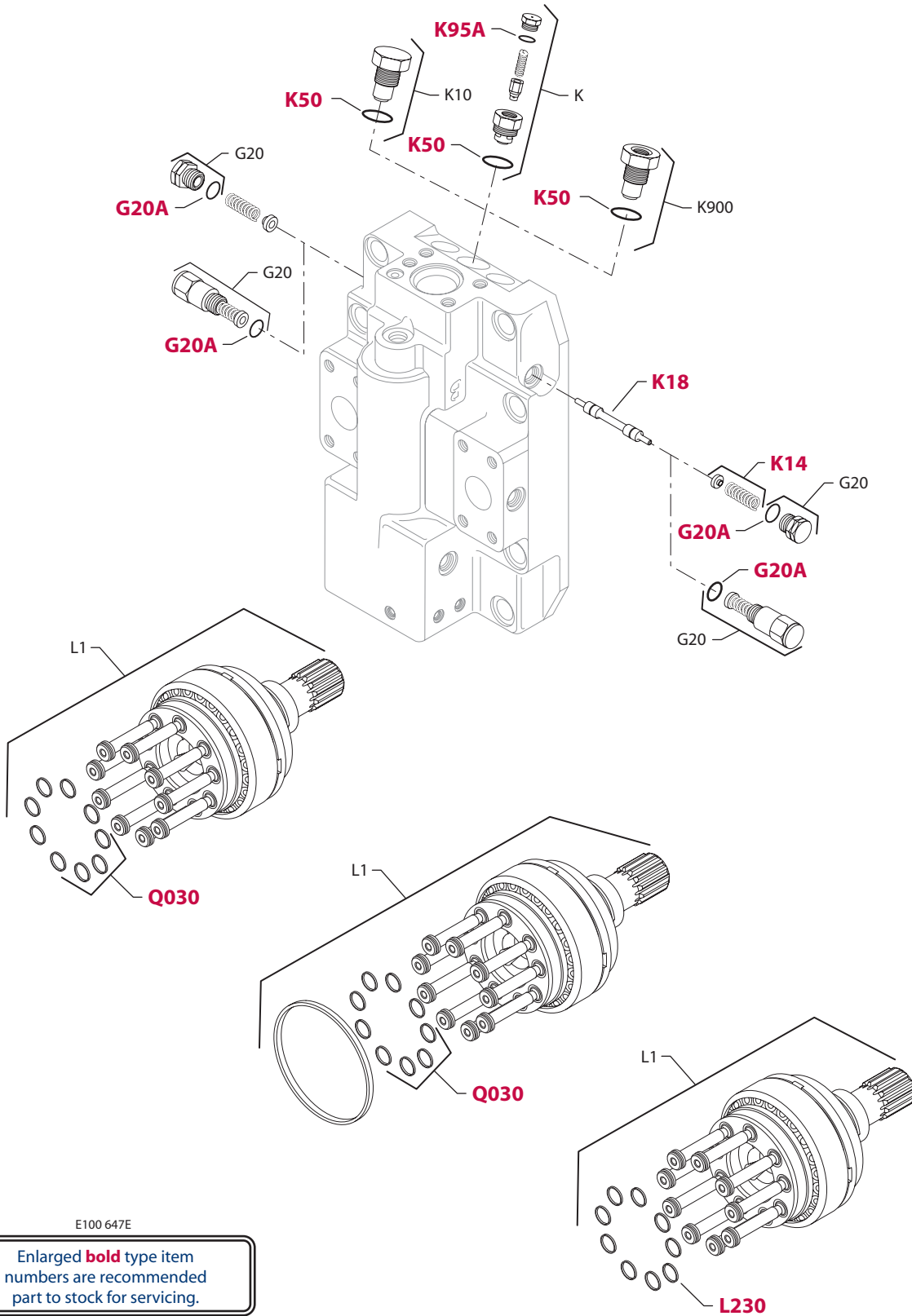


E100 300E

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

### CHARGE RELIEF

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
00		91-13	01-18	None		
10-99	K000	91-13	01-17	8510012	Charge relief valve kit	1
	K50	91-13	01-17	001149 (9004201-6200)	O-ring	1
A0	K	97-25		8510253	Cartridge kit, 13 bar, 11 l/min	1
	K50	97-25		001149 (9004201-6200)	O-ring	1
	K95A	97-25		085043 (9004201-3700)	O-ring	1
A3	K	97-25		8510256	Cartridge kit, 13 bar, 16 l/min	1
	K50	97-25		001149 (9004201-6200)	O-ring	1
	K95A	97-25		085043 (9004201-3700)	O-ring	1
B0	K	97-25		8510254	Cartridge kit, 13 bar, 22 l/min	1
	K50	97-25		001149 (9004201-6200)	O-ring	1
	K95A	97-25		085043 (9004201-3700)	O-ring	1
B3	K	97-25		8510243	Cartridge kit, 13 bar, 27 l/min	1
	K50	97-25		001149 (9004201-6200)	O-ring	1
	K95A	97-25		085043 (9004201-3700)	O-ring	1
C0	K	97-25		8510257	Cartridge kit, 13 bar, 34.5 l/min	1
	K50	97-25		001149 (9004201-6200)	O-ring	1
	K95A	97-25		085043 (9004201-3700)	O-ring	1
E6	K	97-25		8510252	Cartridge kit, 16 bar, 7 l/min	1
	K50	97-25		001149 (9004201-6200)	O-ring	1
	K95A	97-25		085043 (9004201-3700)	O-ring	1
F0	K	97-25		8510259	Cartridge kit, 16 bar, 11 l/min	1
	K50	97-25		001149 (9004201-6200)	O-ring	1
	K95A	97-25		085043 (9004201-3700)	O-ring	1
F3	K	97-25		8510262	Cartridge kit, 16 bar, 16 l/min	1
	K50	97-25		001149 (9004201-6200)	O-ring	1
	K95A	97-25		085043 (9004201-3700)	O-ring	1
G0	K	97-25		8510260	Cartridge kit, 16 bar, 22 l/min	1
	K50	97-25		001149 (9004201-6200)	O-ring	1
	K95A	97-25		085043 (9004201-3700)	O-ring	1
G3	K	97-25		8510263	Cartridge kit, 16 bar, 27 l/min	1
	K50	97-25		001149 (9004201-6200)	O-ring	1
	K95A	97-25		085043 (9004201-3700)	O-ring	1
H0	K	97-25		8510258	Cartridge kit, 16 bar, 34.5 l/min	1
	K50	97-25		001149 (9004201-6200)	O-ring	1
	K95A	97-25		085043 (9004201-3700)	O-ring	1



E100 647E

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

### CHARGE RELIEF

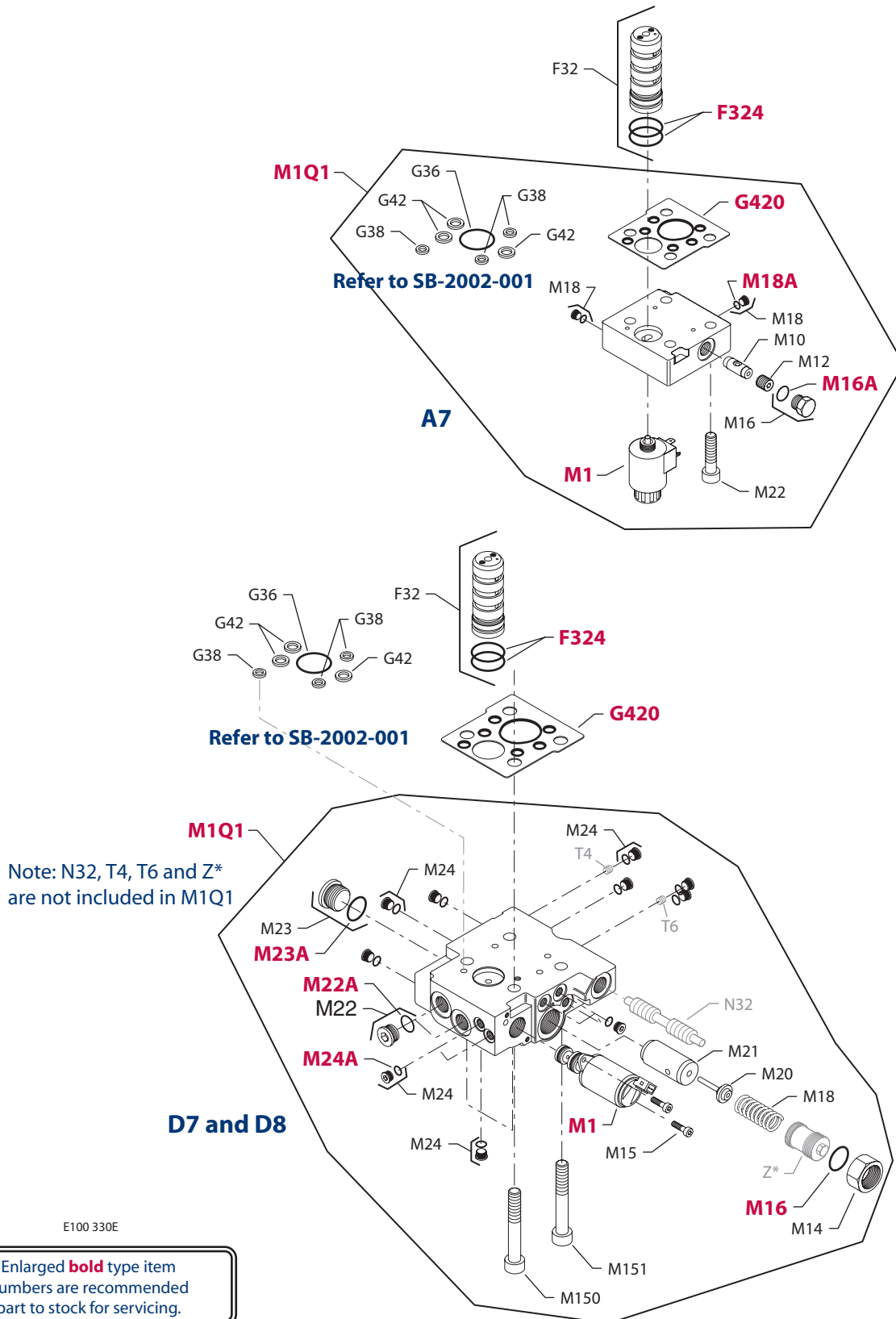
Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
J4	K900	02-13		518164	Adapter	1
	K50	02-13		001149 (9004201-6200)	O-ring	1
N4	K	97-25		8510255	Cartridge kit, 13 bar, 4 l/min	1
	K50	97-25		001149 (9004201-6200)	O-ring	1
	K95A	97-25		085043 (9004201-3700)	O-ring	1
N6	K	97-25		8510251	Cartridge kit, 13 bar, 7 l/min	1
	K50	97-25		001149 (9004201-6200)	O-ring	1
	K95A	97-25		085043 (9004201-3700)	O-ring	1
NN	K10	97-25		511826	Plug	1
	K50	97-25		001149 (9004201-6200)	O-ring	1

### LOOP FLUSHING

AA	G20	95-12		518016	Plug assembly	2
	"	91-30	95-11	5000472	Plug, without O-ring (SB-1995-021A)	2
	G20A	91-30		085043 (9004201-3700)	O-ring	2
	K14	91-30		513596	Spring guide assembly (SB-2000-044)	2
	K18	91-30		707745	Shuttle spool	1
BB	G20	02-30		518184	Plug assembly	2
	G20A	02-30		085043 (9004201-3700)	O-ring	2
	K18	02-30		707745	Shuttle spool	1
NN				No parts		

### SHAFT

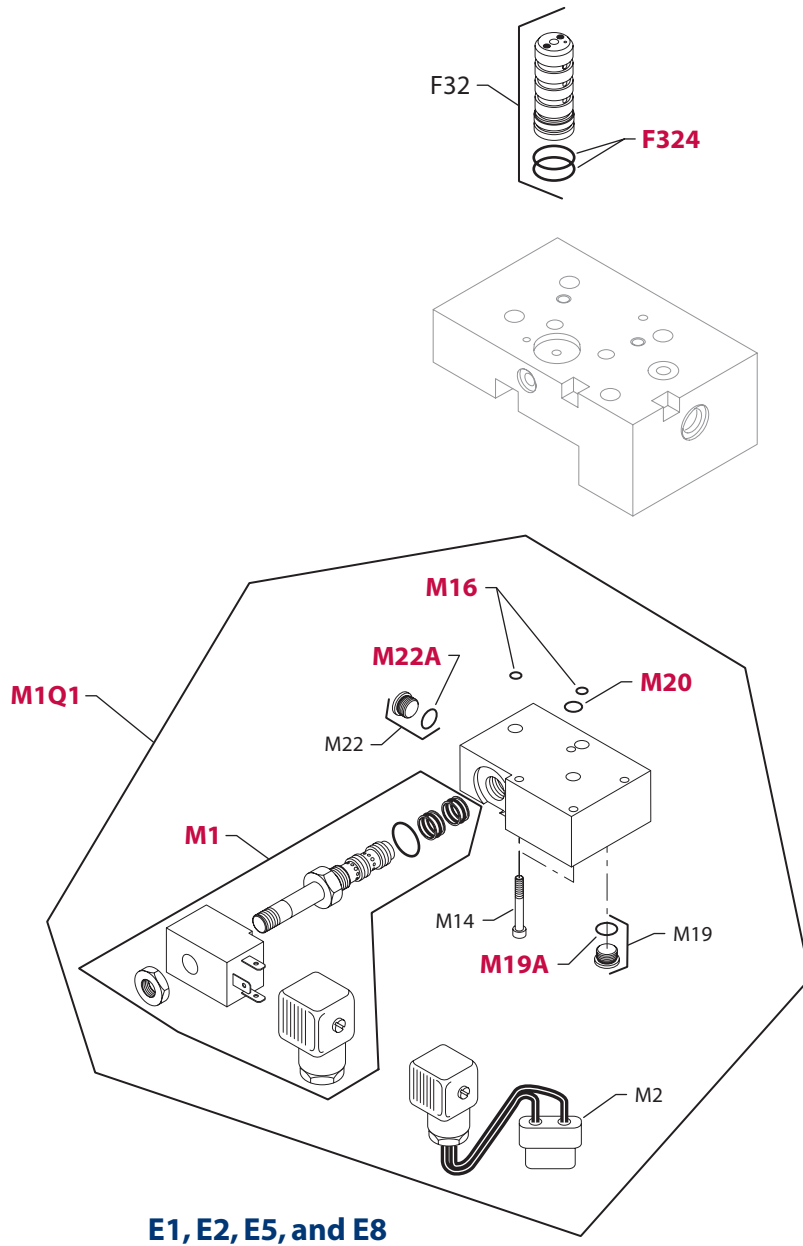
C8	L1	97-25		731117	Shaft, 27 tooth spline without speed ring	1
	"			517895	Shaft, 27 tooth spline with speed ring	1
	Q030	97-25		776856	Piston ring kit	1
F2	L1	97-25		720086	Shaft, 15 tooth spline without speed ring	1
	"			507080	Shaft, 15 tooth spline with speed ring	1
	Q030	97-25		776856	Piston ring kit	1
Z3	L1	97-25		519323	Shaft, 15 tooth spline without speed ring	1
	L230	97-25		519326	Piston ring	9





**SOLENOID PROPORTIONAL**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
A7	F32	98-03		509845	4-way valve assembly	1
	F324	98-03		730036	O-ring	2
	G36	98-03	03-07	364976	O-ring (SB-2002-001)	1
	G38	98-03	03-07	792739	O-ring (SB-2002-001)	3
	G42	98-03	03-07	754580	O-ring (SB-2002-001)	3
	G420	03-08		511851	Gasket/O-ring seal (SB-2002-001)	1
	M1	98-03		509706	Solenoid valve, 12 volt, Jet connector	1
	M1Q1	98-03		509841	Control kit, 12 volt, Jet connector	1
	M10	98-03		759415	Spool	1
	M12	98-03		759423	Orifice	1
	M16	98-03		515965 (9005110-5600)	Plug	1
	M16A	98-03		085043 (9004201-3700)	O-ring	1
	M18	99-35		504519	Plug	2
	M18A	99-35		039297 (9004201-1200)	O-ring	2
	M22	98-03		085183	Screw	4
D7 & D8	F32	99-35		727115	4-way valve assembly	1
	F324	99-35		730036	O-ring	2
	G36	99-35	03-07	364976	O-ring (SB-2002-001) <i>not included in M1Q1</i>	1
	G38	99-35	03-07	792739	O-ring (SB-2002-001) <i>not included in M1Q1</i>	3
	G42	99-35	03-07	754580	O-ring (SB-2002-001) <i>not included in M1Q1</i>	3
	G420	03-08		511851	Gasket/O-ring seal (SB-2002-001) <i>not included in M1Q1</i>	1
(D7)	M1	99-35		518080	Solenoid valve, 12 volt, Jet connector	1
(D8)	M1	99-35		518081	Solenoid valve, 24 volt, Jet connector	1
(D7)	M1Q1	99-35		518254	Control kit, 12 volt, Jet connector	1
(D8)	M1Q1	99-35		518255	Control kit, 24 volt, Jet connector	1
	M14	99-35		342709	Nut	1
	M15	99-35		067694	Screw	2
	M16J	99-35		001149 (9004201-6200)	O-ring	1
	M18	99-35		509152	Spring	1
	M20	99-35		501876	PCOR spool	1
	M21	99-35		501885	PCOR valve bushing	1
	M22	99-35		515965 (9005110-5600)	Plug	2
	M22A	99-35		085043 (9004201-3700)	O-ring	2
	M23	99-35		315325	Plug	1
	M23A	99-35		001149 (9004201-6200)	O-ring	1
	M24	99-35		504519	Plug	15
	M24A	99-35		039297 (9004201-1200)	O-ring	15
	M150	99-35		914143	Screw	2
	M151	99-35		914143	Screw	2

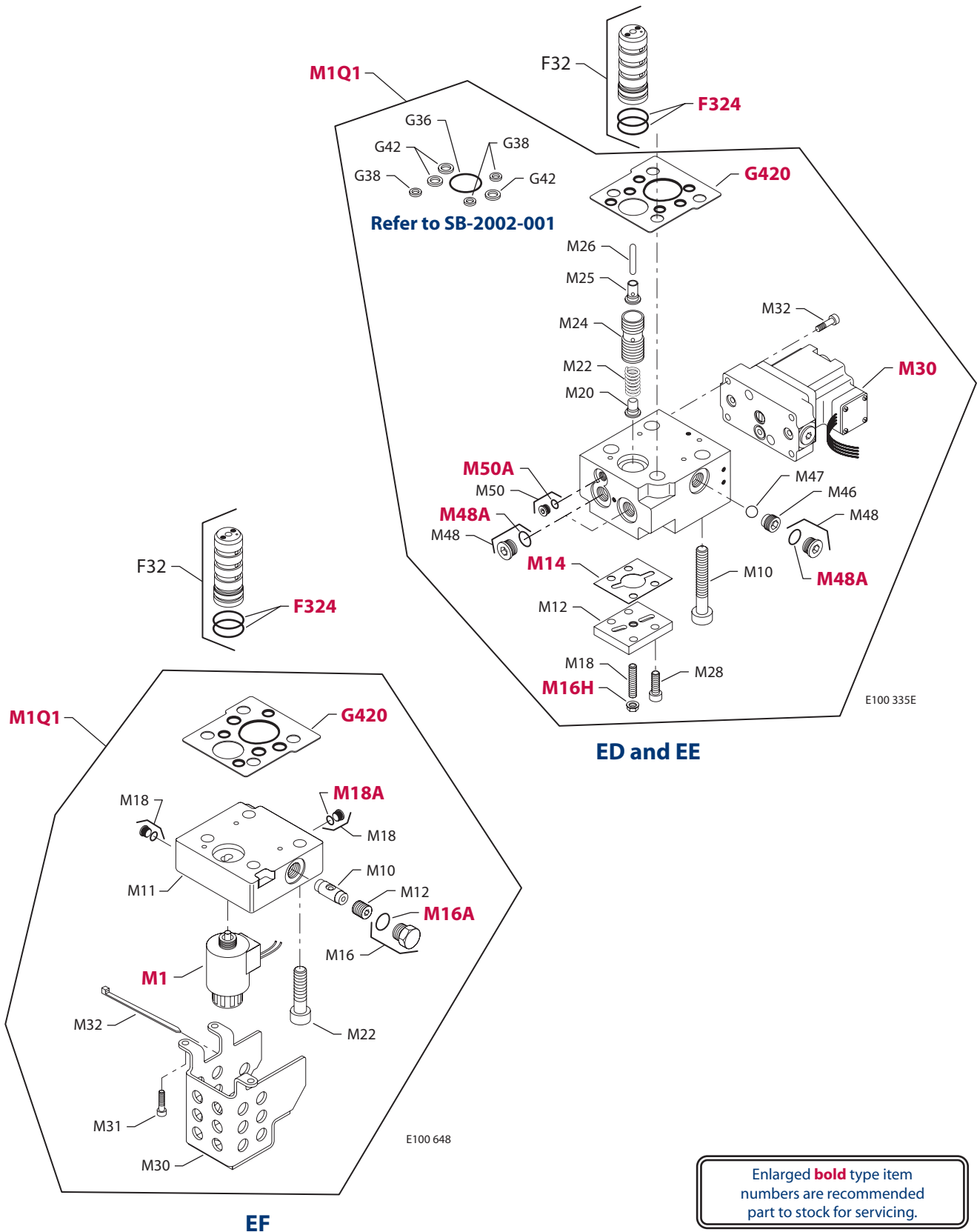


E100 257E

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

### ELECTRIC 2-POSITION

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
E1	F32	91-30		727115	4-way valve assembly	1
	F324	91-30		730036	O-ring	2
	M1	91-30		784942	Solenoid valve, 12 volt, Din connector	1
	M1Q1	91-30		503618	Control kit, 12 volt, Din connector	1
	M14	91-30		329599	Screw	4
	M16	91-30		732479 (9004105-0100)	O-ring	2
	M19	91-30		515965 (9005110-5600)	Plug	1
	M19A	91-30		085043 (9004201-3700)	O-ring	1
	M20	91-30		365015	O-ring	1
	M22	91-30		515965 (9005110-5600)	Plug	1
	M22A	91-30		085043 (9004201-3700)	O-ring	1
	E2	F32	91-30		727115	4-way valve assembly
F324		91-30		730036	O-ring	2
M1		91-30		784934	Solenoid valve, 24 volt, Din connector	1
M1Q1		91-30		503617	Control kit, 24 volt, Din connector	1
M14		91-30		329599	Screw	4
M16		91-30		732479 (9004105-0100)	O-ring	2
M19		91-30		515965 (9005110-5600)	Plug	1
M19A		91-30		085043 (9004201-3700)	O-ring	1
M20		91-30		365015	O-ring	1
M22		91-30		515965 (9005110-5600)	Plug	1
M22A		91-30		085043 (9004201-3700)	O-ring	1
E5		F32	91-30		727115	4-way valve assembly
	F324	91-30		730036	O-ring	2
	M1	91-30		784942	Solenoid valve, 12 volt, Din connector	1
	M2	91-30		770115	Packard adapter	1
	M1Q1	91-30		503619	Control kit, 12 volt, with Packard adapter	1
	M14	91-30		329599	Screw	4
	M16	91-30		732479 (9004105-0100)	O-ring	2
	M19	91-30		515965 (9005110-5600)	Plug	1
	M19A	91-30		085043 (9004201-3700)	O-ring	1
	M20	91-30		365015	O-ring	1
	M22	91-30		515965 (9005110-5600)	Plug	1
	M22A	91-30		085043 (9004201-3700)	O-ring	1
E8	F32	03-03		727115	4-way valve assembly	1
	F324	03-03		730036	O-ring	2
	M1	03-03		519956	Solenoid valve, 24 volt, Jet connector	1
	M1Q1	03-03		520459	Control kit, 24 volt, Jet connector	1
	M14	03-03		329599	Screw	4
	M16	03-03		732479 (9004105-0100)	O-ring	2
	M19	03-03		515965 (9005110-5600)	Plug	1
	M19A	03-03		085043 (9004201-3700)	O-ring	1
	M20	03-03		365015	O-ring	1
	M22	03-03		515965 (9005110-5600)	Plug	1
	M22A	03-03		085043 (9004201-3700)	O-ring	1



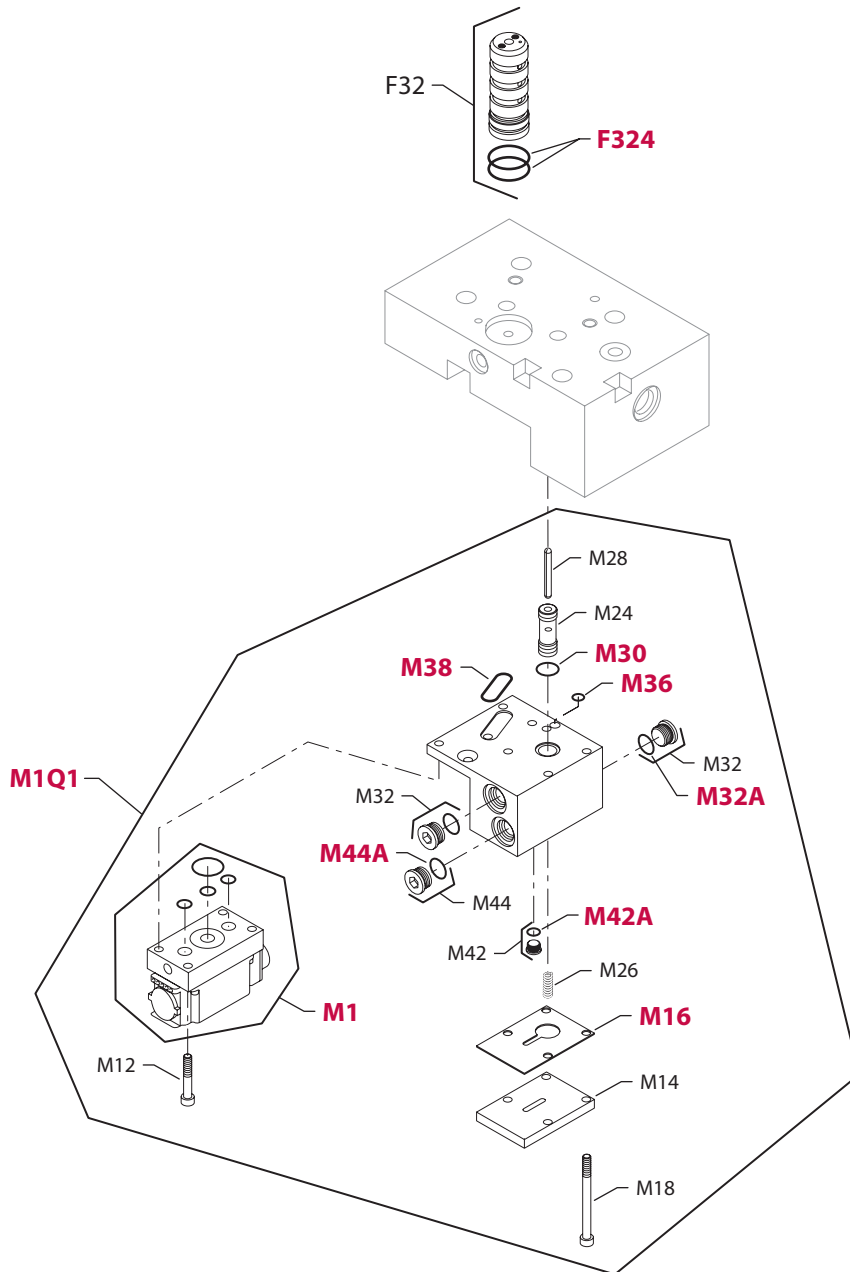
Enlarged **bold** type item numbers are recommended part to stock for servicing.

**ELECTRIC-HYDRAULIC PROPORTIONAL COMMON PARTS (ED & EE)**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
ED & EE	F32	95-10		501055	4-way valve assembly	1
	F324	95-10		730036	O-ring	2
	G36	95-10	03-07	364976	O-ring (SB-2002-001)	1
	G38	95-10	03-07	792739	O-ring (SB-2002-001)	3
	G42	95-10	03-07	754580	O-ring (SB-2002-001)	3
	G420	03-08		511851	Gasket/O-ring seal (SB-2002-001)	1
	M12	95-10		717199	Cover block	1
	M14	95-10		509940	Gasket	1
	M16H	95-10		517862	Seal nut	1
	M18	95-10		043240	Adjusting screw	1
	M20	95-10		719377	Spring guide	1
	M22	95-10		729434	Spring	1
	M24	95-10		728998	Piston	1
	M25	95-10		728980	Spring seat	1
	M26	95-10		736983	Pin	1
	M28	95-10		704395 (9007314-0604)	Screw	4
	M32	95-10		716860	Screw	4
	M46	95-10		625210	Valve seat	1
	M47	95-10		916007	Ball	1
	M48	95-10		515965 (9005110-5600)	Plug	3
	M48A	95-10		085043 (9004201-3700)	O-ring	3
	M50	95-10		504519	Plug	1
	M50A	95-10		039297 (9004201-1200)	O-ring	1

**ELECTRIC-HYDRAULIC PROPORTIONAL**

ED	M1Q1	95-10	03-26	506882	Control kit (SB-2002-001)	1
	M30	95-10	03-26	506560 (MCV116A4204)	PCP, Weatherpack connector	1
EE	M1Q1	98-52		513397	Control kit (SB-2002-001)	1
	M30	98-52		513398 (MCV116G4213)	PCP, Metripack connector	1
EF	F32	03-14		509845	4-way valve assembly	1
	F324	03-14		730036	O-ring	2
	G420	03-14		511851	Gasket/O-ring seal	1
	M1	03-14		519435	Solenoid, 24 volt, Deutsch connector	1
	M1Q1	03-14		8510344	Control kit, 24 volt Deutsch connector	1
	M10	03-14		759415	Shuttle valve spool	1
	M12	03-14		759423	Orifice	1
	M16	03-14		515965 (9005110-5600)	Plug	1
	M16A	03-14		085043 (9004201-3700)	O-ring	1
	M18	03-14		504519	Plug	2
	M18A	03-14		039297 (9004201-1200)	O-ring	2
	M22	03-14		085183	Screw	4
	M30	03-14		512757	Guard	1
	M31	03-14		395822 (9007315-0603)	Screw	3
	M32	03-14		513415	Cable tie	1



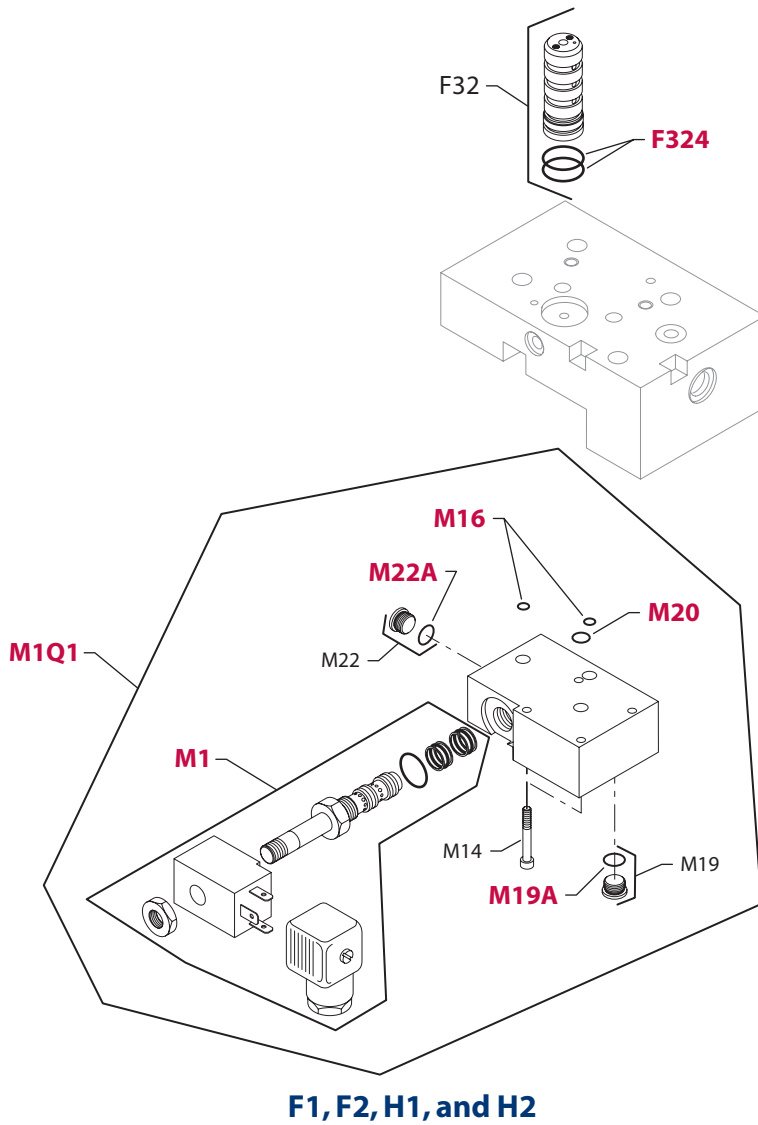
**EP, EQ, ER and ES**

E100 258E

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

**ELECTRIC-HYDRAULIC PROPORTIONAL**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
	F32	91-30		753186	4-way valve assembly	1
	F324	91-30		730036	O-ring	2
	M12	91-30		067678 (9007315-0504)	Screw	4
	M14	91-30		751883	Cover	1
	M16	91-30		504358	Gasket	1
	M18	91-30		771832	Screw	4
	M24	91-30		741942	Piston	1
	M26	91-30		717454	Spring	1
	M28	91-30		742320	Pin	1
	M30	91-30		056770 (9004105-0150)	O-ring	1'
	M32	91-30		515965 (9005110-5600)	Plug	2
	M32A	91-30		085043 (9004201-3700)	O-ring	2
	M36	91-30		732479 (9004105-0100)	O-ring	1
	M38	91-30		011395 (9004104-0230)	O-ring	1
	M42	91-30		504519	Plug	1
	M42A	91-30		039297 (9004201-1200)	O-ring	1
EP	M1	91-30		731109 (MCV110A1058)	PCP, Packard connector	1
	M1Q1	91-30		503791	Control kit, Packard connector	1
EQ	M1	91-30		701417 (MCV110A1017)	PCP, MS connector	1
	M1Q1	91-30		503790	Control kit, MS connector	1
ER	M1	95-17		731109 (MCV110A1058)	PCP, Packard connector	1
	M1Q1	95-17		507391	Control kit, Packard connector	1
	M44	95-17		515965 (9005110-5600)	Plug	1
	M44A	95-17		085043 (9004201-3700)	O-ring	1
ES	M1	95-17		701417 (MCV110A1017)	PCP, MS connector	1
	M1Q1	95-17		507393	Control kit, MS connector	1
	M44	95-17		515965 (9005110-5600)	Plug	1
	M44A	95-17		085043 (9004201-3700)	O-ring	1



**F1, F2, H1, and H2**

E100 301E

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



**ELECTRIC/HYDRAULIC 2-POSITION**

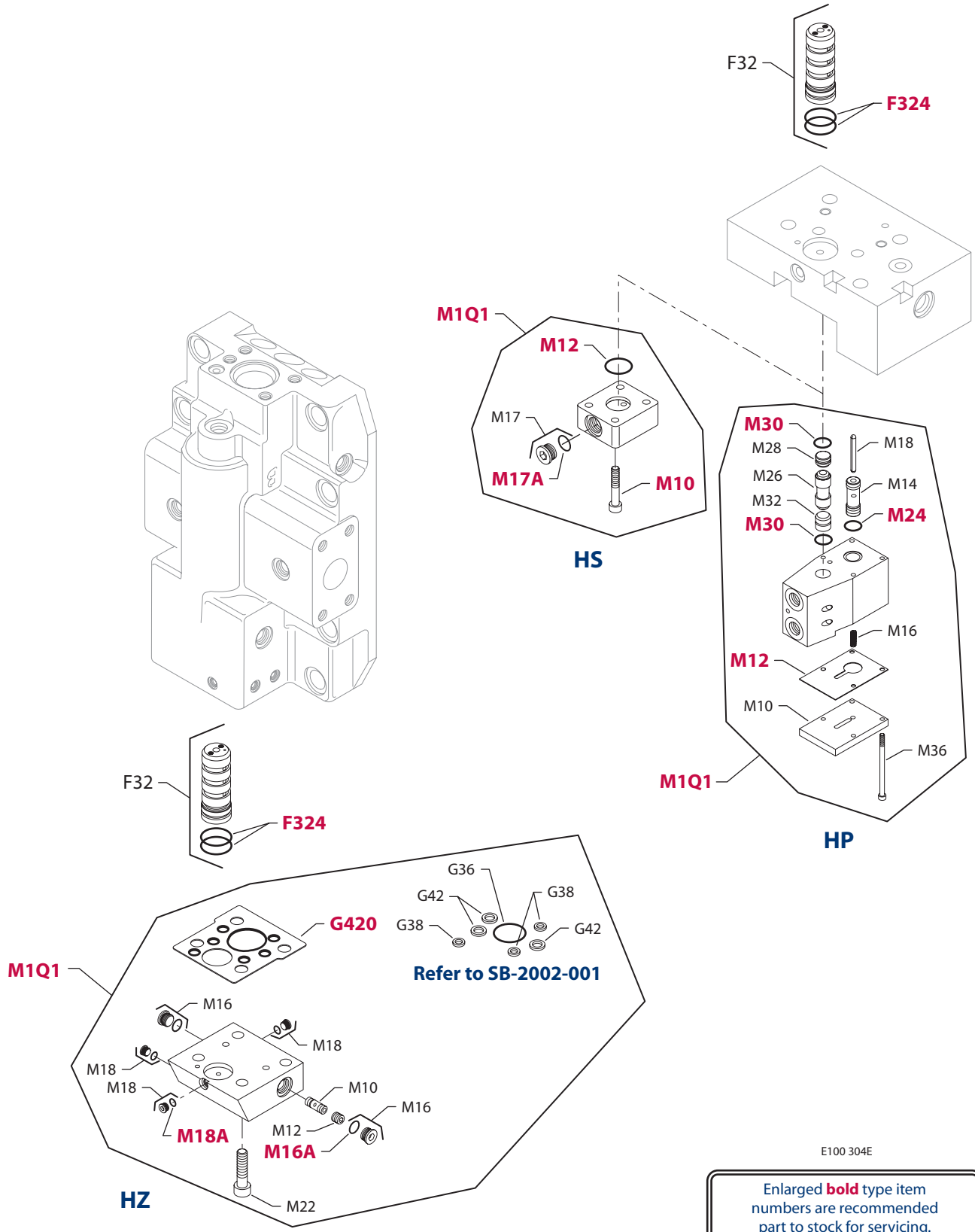
Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
F1	F32	91-30		500820	4-way valve assembly	1
	F324	91-30		730036	O-ring	2
	M1	91-30		784942	Solenoid valve, 12 volt, DIN connector	1
	M1Q1	91-30		503618	Control kit, 12 volt, DIN connector	1
	M14	91-30		329599 (9007315-0508)	Screw	4
	M16	91-30		732479 (9004105-0100)	O-ring	2
	M19	91-30		515965 (9005110-5600)	Plug	1
	M19A	91-30		085043 (9004201-3700)	O-ring	1
	M20	91-30		365015	O-ring	1
	M22	91-30		515965 (9005110-5600)	Plug	1
	M22A	91-30		085043 (9004201-3700)	O-ring	1

F2	F32	91-30		500820	4-way valve assembly	1
	F324	91-30		730036	O-ring	2
	M1	91-30		784934	Solenoid valve, 24 volt, DIN connector	1
	M1Q1	91-30		503617	Control kit, 24 volt, DIN connector	1
	M14	91-30		329599 (9007315-0508)	Screw	4
	M16	91-30		732479 (9004105-0100)	O-ring	2
	M19	91-30		515965 (9005110-5600)	Plug	1
	M19A	91-30		085043 (9004201-3700)	O-ring	1
	M20	91-30		365015	O-ring	1
	M22	91-30		515965 (9005110-5600)	Plug	1
	M22A	91-30		085043 (9004201-3700)	O-ring	1

**HYDRAULIC PROPORTIONAL WITH ELECTRIC OVERRIDE**

H1	F32	91-30		727115	4-way valve assembly	1
	F324	91-30		730036	O-ring	2
	M1	91-30		784942	Solenoid valve, 12 volt, DIN connector	1
	M1Q1	91-30		503613	Control kit, 12 volt, DIN connector	1
	M14	91-30		329599 (9007315-0508)	Screw	4
	M16	91-30		732479 (9004105-0100)	O-ring	2
	M19	91-30		515965 (9005110-5600)	Plug	1
	M19A	91-30		085043 (9004201-3700)	O-ring	1
	M20	91-30		365015	O-ring	1

H2	F32	91-30		727115	4-way valve assembly	1
	F324	91-30		730036	O-ring	2
	M1	91-30		784934	Solenoid valve, 24 volt, DIN connector	1
	M1Q1	91-30		503614	Control kit, 24 volt, DIN connector	1
	M14	91-30		329599 (9007315-0508)	Screw	4
	M16	91-30		732479 (9004105-0100)	O-ring	2
	M19	91-30		515965 (9005110-5600)	Plug	1
	M19A	91-30		085043 (9004201-3700)	O-ring	1
	M20	91-30		365015	O-ring	1

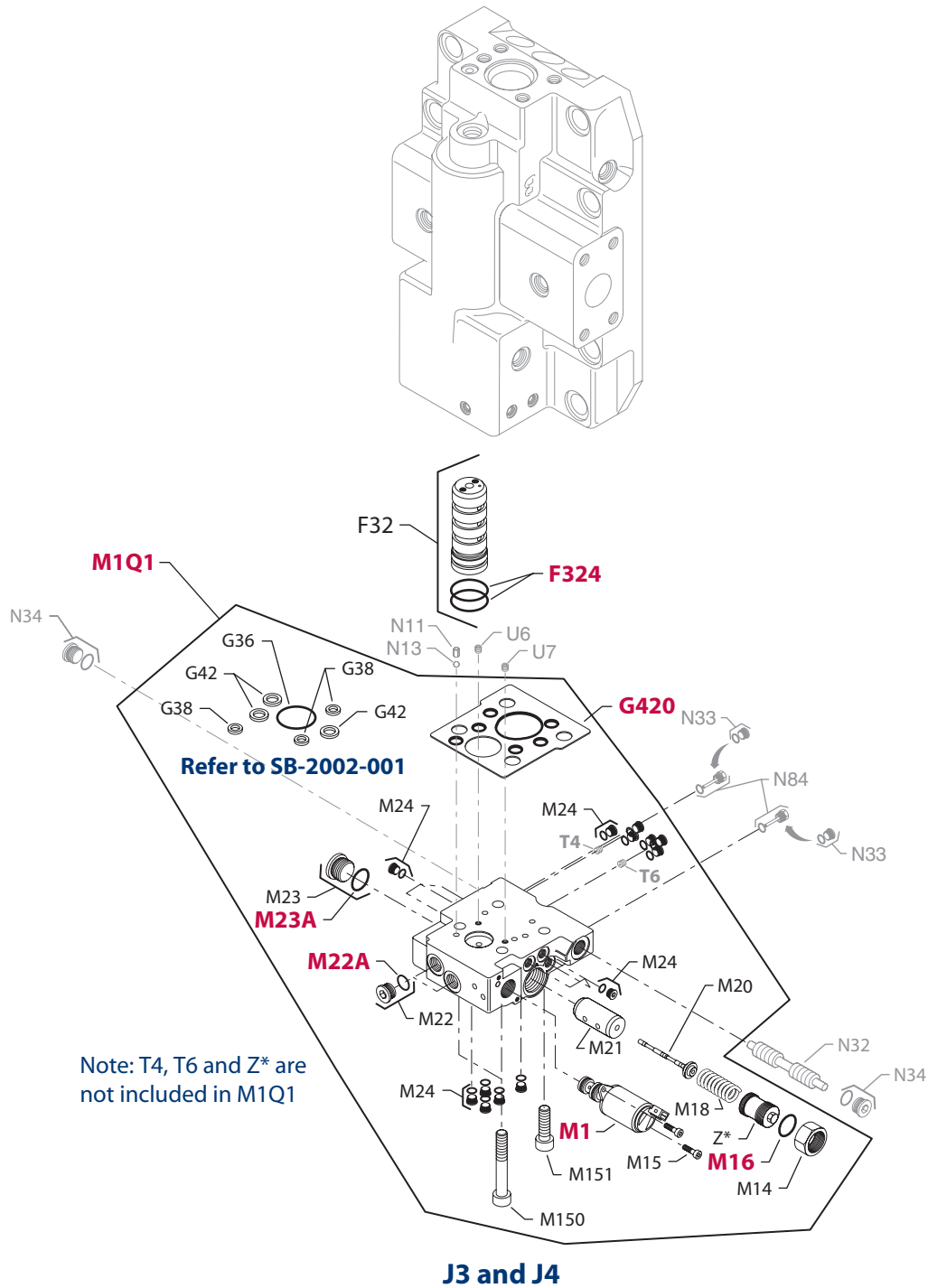


E100 304E

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

### HYDRAULIC PROPORTIONAL

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
HP	F32	91-30		753186	4-way valve assembly	1
	F324	91-30		730036	O-ring	2
	M1Q1	91-30		796482	Control kit	1
	M10	91-30		751883	Cover	1
	M12	91-30		504358	Gasket	1
	M14	91-30		741942	Shuttle piston	1
	M16	91-30		717454	Spring	1
	M18	91-30		742320	Pin	1
	M24	91-30		056770	O-ring	1
	M26	91-30		751644	Shuttle valve	1
	M28	91-30		342246	Sealing plug	1
	M30	91-30		011296 (9004105-0120)	O-ring	2
	M32	91-30		353615	Sealing plug	1
	M36	91-30		771832	Screw	4
HS	F32	91-30		727115	4-way valve assembly	1
	F324	91-30		730036	O-ring	2
	M1Q1	91-30		503804	Control kit	1
	M10	91-30		124115	Screw	4
	M12	91-30		364984	O-ring	1
	M17	91-30		515965 (9005110-5600)	Plug	1
	M17A	91-30		085043 (9004201-3700)	O-ring	1
HZ	F32	92-02		727115	4-way valve assembly	1
	F324	92-02		730036	O-ring	2
	G36	92-02	03-07	364976	O-ring (SB-2002-001)	1
	G38	92-02	03-07	792739	O-ring (SB-2002-001)	3
	G42	92-02	03-07	754580	O-ring (SB-2002-001)	3
	G420	03-08		511851	Gasket/O-ring seal (SB-2002-001)	1
	M1Q1	92-02		503564	Control kit (SB-2002-001)	1
	M10	92-02		759415	Spool valve	1
	M12	92-02		759423	Orifice	1
	M16	92-02		515965 (9005110-5600)	Plug	2
	M16A	92-02		085043 (9004201-3700)	O-ring	2
	M18	92-02		504519	Plug	3
	M18A	92-02		039297 (9004201-1200)	O-ring	3
	M22	92-02		290502	Screw	4



E100 332E

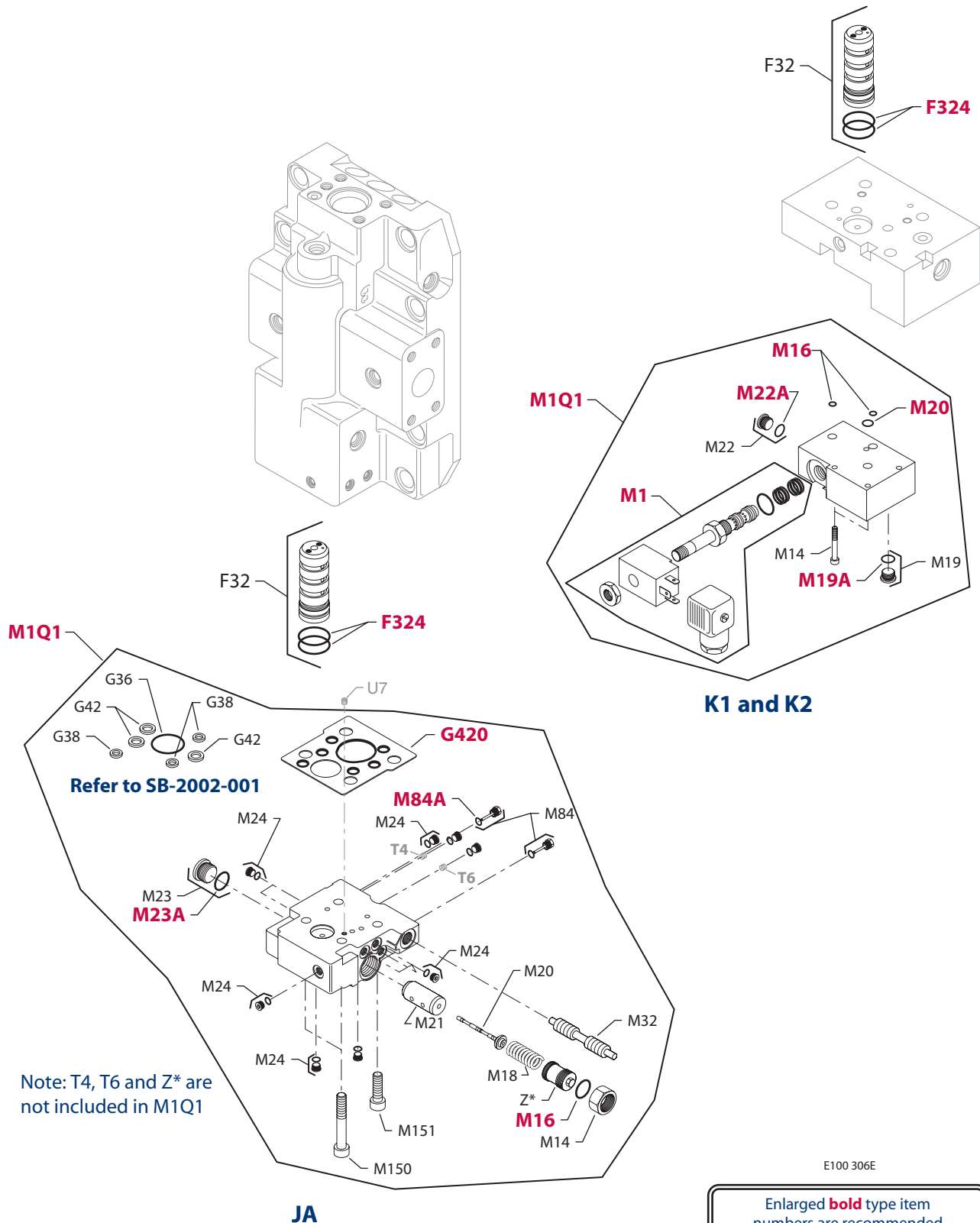
Enlarged **bold** type item numbers are recommended part to stock for servicing.

**HYDRAULIC PROPORTIONAL WITH ELECTRIC OVERRIDE COMMON PARTS**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
	F32	95-11		727115	4-way valve assembly	1
	F324	95-11		730036	O-ring	2
	G36	95-11	03-07	364976	O-ring (SB-2002-001)	1
	G38	95-11	03-07	792739	O-ring (SB-2002-001)	3
	G42	95-11	03-07	754580	O-ring (SB-2002-001)	3
	G420	03-08		511851	Gasket/O-ring seal (SB-2002-001)	1
	M14	95-11		342709 (9003575-0101)	Nut	1
	M15	95-11		067694	Screw	2
	M16	95-11		001149 (9004201-6200)	O-ring	1
	M18	95-11		509152	Spring	1
	M20	95-11		746016	PCOR spool assembly	1
	M21	95-11		732081	PCOR valve bushing	1
	M22	95-11		515965 (9005110-5600)	Plug	2
	M22A	95-11		085043 (9004201-3700)	O-ring	2
	M23	95-11		315325 (9005110-8700)	Plug	1
	M23A	95-11		001149 (9004201-6200)	O-ring	1
	M24	95-11		504519	Plug	17
	M24A	95-11		039297 (9004201-1200)	O-ring	17
	M150	95-11		914143	Screw	2
	M151	95-11		914143	Screw	2
	Z*	95-11		745661	Adjuster, 100-260 bar	1
	"	95-11		745679	Adjuster. 270-370 bar	1

**HYDRAULIC PROPORTIONAL WITH ELECTRIC OVERRIDE**

J3	M1	95-11		518079	Solenoid valve, 12 volt, Jet connector	1
	M1Q1	95-11		507718	Control kit, 12 volt, Jet connector	1
J4	M1	95-11		517214	Solenoid valve, 24 volt, Jet connector	1
	M1Q1	95-11		511390	Control kit, 24 volt, Jet connector	1



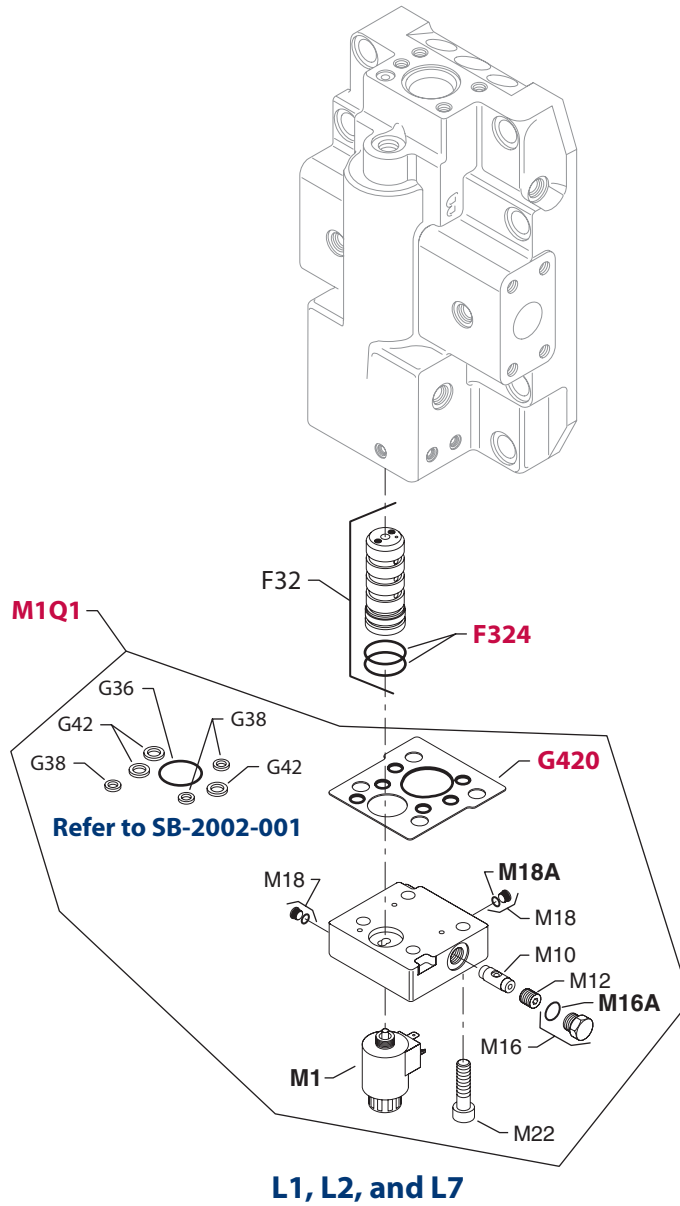
### HYDRAULIC PROPORTIONAL

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
JA	F32	96-04		727115	4-way valve assembly	1
	F324	96-04		730036	O-ring	2
	G36	96-04	03-07	364976	O-ring (SB-2002-001)	1
	G38	96-04	03-07	792739	O-ring (SB-2002-001)	3
	G42	96-04	03-07	754580	O-ring (SB-2002-001)	3
	G420	03-08		511851	Gasket/O-ring seal (SB-2002-001)	1
	M1Q1	96-04		508177	Control kit	1
	M14	96-04		342709 (9003575-0101)	Nut	1
	M16	96-04		001149 (9004201-6200)	O-ring	1
	M18	96-04		509152	Spring	1
	M20	96-04		501876	PCOR spool assembly	1
	M21	96-04		501885	PCOR valve bushing	1
	M23	96-04		315325 (9005110-8700)	Plug	1
	M23A	96-04		001149 (9004201-6200)	O-ring	1
	M24	96-04		504519	Plug	11
	M24A	96-04		039297 (9004201-1200)	O-ring	11
	M32	96-04		346080	Spool	1
	M84	96-04		735266	Plug assembly	2
	M84A	96-04		039297 (9004201-1200)	O-ring	2
	M150	96-04		914143	Screw	2
	M151	96-04		914143	Screw	2
	Z*	96-04		745661	Adjuster, 100-260 bar	1
	"	96-04		745679	Adjuster. 270-370 bar	1

### HYDRAULIC PROPORTIONAL WITH ELECTRIC OVERRIDE

K1	F32	91-35		727115	4-way valve assembly	1
	F324	91-35		730036	O-ring	2
	M1	91-35		784942	Solenoid valve, 12 volt, DIN connector	1
	M1Q1	91-35		503620	Control kit, 12 volt, DIN connector	1
	M14	91-35		329599	Screw	4
	M16	91-35		732479 (9004105-0100)	O-ring	2
	M19	91-35		515965 (9005110-5600)	Plug	1
	M19A	91-35		085043 (9004201-3700)	O-ring	1
	M20	91-35		365015	O-ring	1

K2	F32	91-35		727115	4-way valve assembly	1
	F324	91-35		730036	O-ring	2
	M1	91-35		784934	Solenoid valve, 24 volt, DIN connector	1
	M1Q1	91-35		503806	Control kit, 24 volt, DIN connector	1
	M14	91-35		329599	Screw	4
	M16	91-35		732479 (9004105-0100)	O-ring	2
	M19	91-35		515965 (9005110-5600)	Plug	1
	M19A	91-35		085043 (9004201-3700)	O-ring	1
	M20	91-35		365015	O-ring	1



E100 307E

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

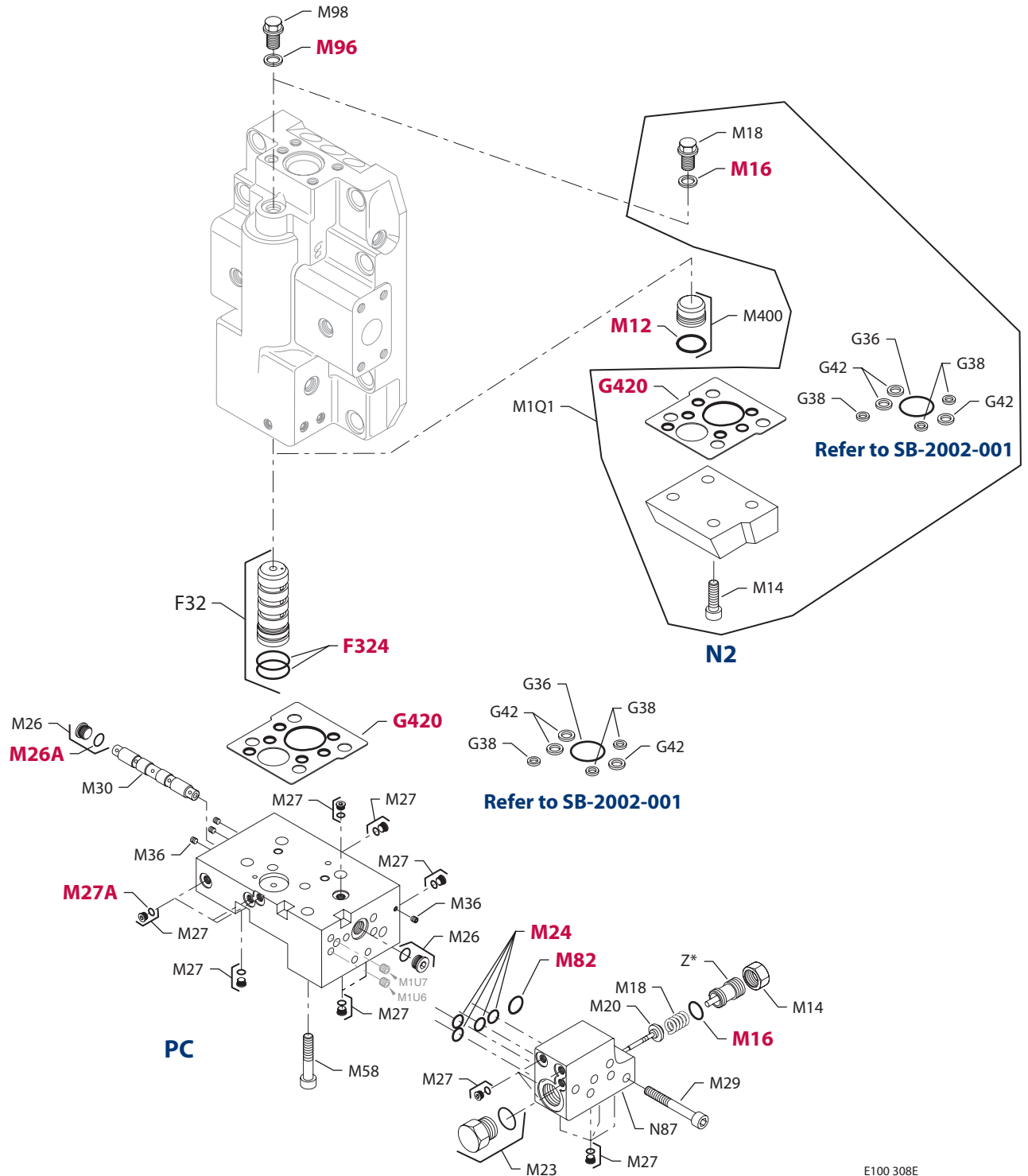


**SOLENOID PROPORTIONAL**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
L1	F32	95-35		509845	4-way valve assembly	1
	F324	95-35		730036	O-ring	2
	G36	95-35	03-07	364976	O-ring (SB-2002-001)	1
	G38	95-35	03-07	792739	O-ring (SB-2002-001)	3
	G42	95-35	03-07	754580	O-ring (SB-2002-001)	3
	G420	03-08		511851	Gasket/O-ring seal (SB-2002-001)	1
	M1	95-35		509712	Solenoid, 12 volt, DIN connector	1
	M1Q1	95-35		509837	Control kit, 12 volt, DIN connector	1
	M10	95-35		759415	Spool	1
	M12	95-35		759423	Orifice	1
	M16	95-35		515965 (9005110-5600)	Plug	1
	M16A	95-35		085043 (9004201-3700)	O-ring	1
	M18	95-35		504519	Plug	2
	M18A	95-35		039297 (9004201-1200)	O-ring	2
	M22	95-35		085183	Screw	4

L2	F32	95-15		509845	4-way valve assembly	1
	F324	95-15		730036	O-ring	2
	G36	95-15	03-07	364976	O-ring (SB-2002-001)	1
	G38	95-15	03-07	792739	O-ring (SB-2002-001)	3
	G42	95-15	03-07	754580	O-ring (SB-2002-001)	3
	G420	03-08		511851	Gasket/O-ring seal (SB-2002-001)	1
	M1	95-15		509713	Solenoid, 24 volt, DIN connector	1
	M1Q1	95-15		509839	Control kit, 24 volt, DIN connector	1
	M10	95-15		759415	Spool	1
	M12	95-15		759423	Orifice	1
	M16	95-15		515965 (9005110-5600)	Plug	1
	M16A	95-15		085043 (9004201-3700)	O-ring	1
	M18	95-15		504519	Plug	2
	M18A	95-15		039297 (9004201-1200)	O-ring	2
	M22	95-15		085183	Screw	4

L7	F32	96-38		509845	4-way valve assembly	1
	F324	96-38		730036	O-ring	2
	G36	96-38	03-07	364976	O-ring (SB-2002-001)	1
	G38	96-38	03-07	792739	O-ring (SB-2002-001)	3
	G42	96-38	03-07	754580	O-ring (SB-2002-001)	3
	G420	03-08		511851	Gasket/O-ring seal (SB-2002-001)	1
	M1	96-38		509706	Solenoid, 12 volt, Jet connector	1
	M1Q1	96-38		509841	Control kit, 12 volt, Jet connector	1
	M10	96-38		759415	Spool	1
	M12	96-38		759423	Orifice	1
	M16	96-38		515965 (9005110-5600)	Plug	1
	M16A	96-38		085043 (9004201-3700)	O-ring	1
	M18	96-38		504519	Plug	2
	M18A	96-38		039297 (9004201-1200)	O-ring	2
	M22	96-38		085183	Screw	4



E100 308E

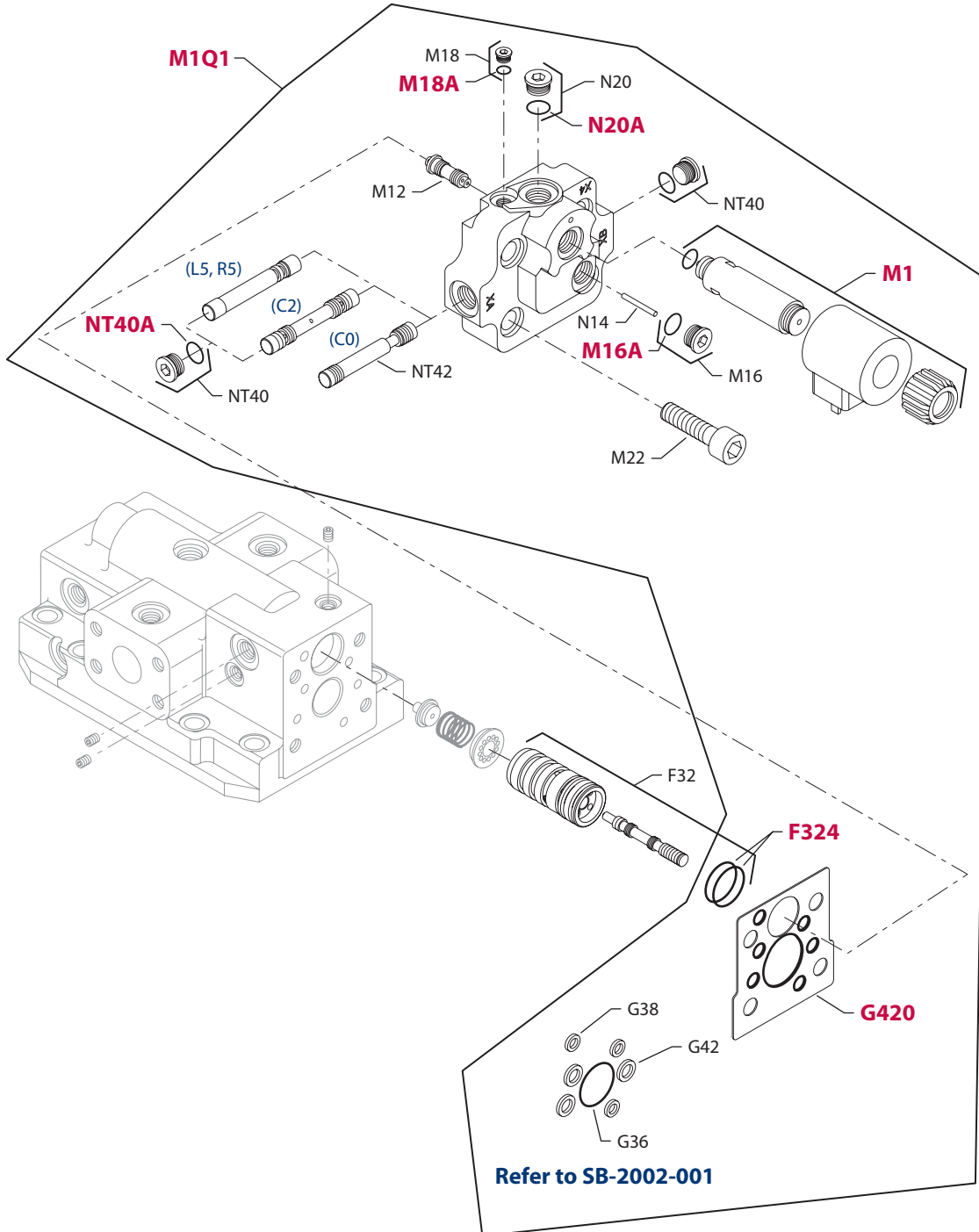
Enlarged **bold** type item numbers are recommended part to stock for servicing.

### HYDRAULIC 2-POSITION

N2	G36	91-30	03-07	364976	O-ring (SB-2002-001)	1
	G38	91-30	03-07	792739	O-ring (SB-2002-001)	3
	G42	91-30	03-07	754580	O-ring (SB-2002-001)	3
	G420	03-08		511851	Gasket/O-ring seal (SB-2002-001)	1
	M1Q1	91-30		506877	Control kit	1
	M12	91-30		730036	O-ring	1
	M400	91-30		510415	Sleeve assembly	1
	M14	91-30		085183	Screw	4
	M16	91-30		084673	Sealing ring	2
	M18	91-30		745331	Plug	1

### PRESSURE COMPENSATOR

PC	F32	91-30		510416	4-way valve assembly	1
	F324	91-30		730036	O-ring	2
	G36	91-30	03-07	364976	O-ring (SB-2002-001)	1
	G38	91-30	03-07	792739	O-ring (SB-2002-001)	3
	G42	91-30	03-07	754580	O-ring (SB-2002-001)	3
	G420	03-08		511851	Gasket/O-ring seal (SB-2002-001)	1
	M14	91-30		342709 (9003575-0101)	Nut	1
	M16	91-30		001149 (9004201-6200)	O-ring	1
	M18	91-30		509152	Spring	1
	M20	91-30		746016	Relief valve	1
	M23	91-30		315325 (9005110-8700)	Plug	1
	M23A	91-30		001149 (9004201-6200)	O-ring	1
	M24	91-30		732479 (9004105-0100)	O-ring	4
	M26	91-30		515965 (9005110-5600)	Plug	2
	M26A	91-30		085043 (9004201-3700)	O-ring	2
	M27	91-30		504519	Plug	16
	M27A	91-30		039297 (9004201-1200)	O-ring	16
	M29	91-30		713719 (9007314-0610)	Screw	4
	M30	91-30		718833	Shuttle valve assembly	1
	M36	91-30		092114 (9007712-0604)	Set screw	4
	M58	91-30		503499	Screw	4
	M82	91-30		144725 (9004105-0110)	O-ring	1
	M96	91-30		084673	Sealing ring	1
	M98	91-30		745331	Plug	1
	N87	91-30		503887	PCOR housing assembly	1
	Z*	91-30		745661	Adjuster, 100-260 bar	1
	"	91-30		745649	Adjuster, 270-370 bar	1



E100 333E

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

**ELECTRIC-HYDRAULIC 2-POSITION WITH PRESSURE COMPENSATOR**

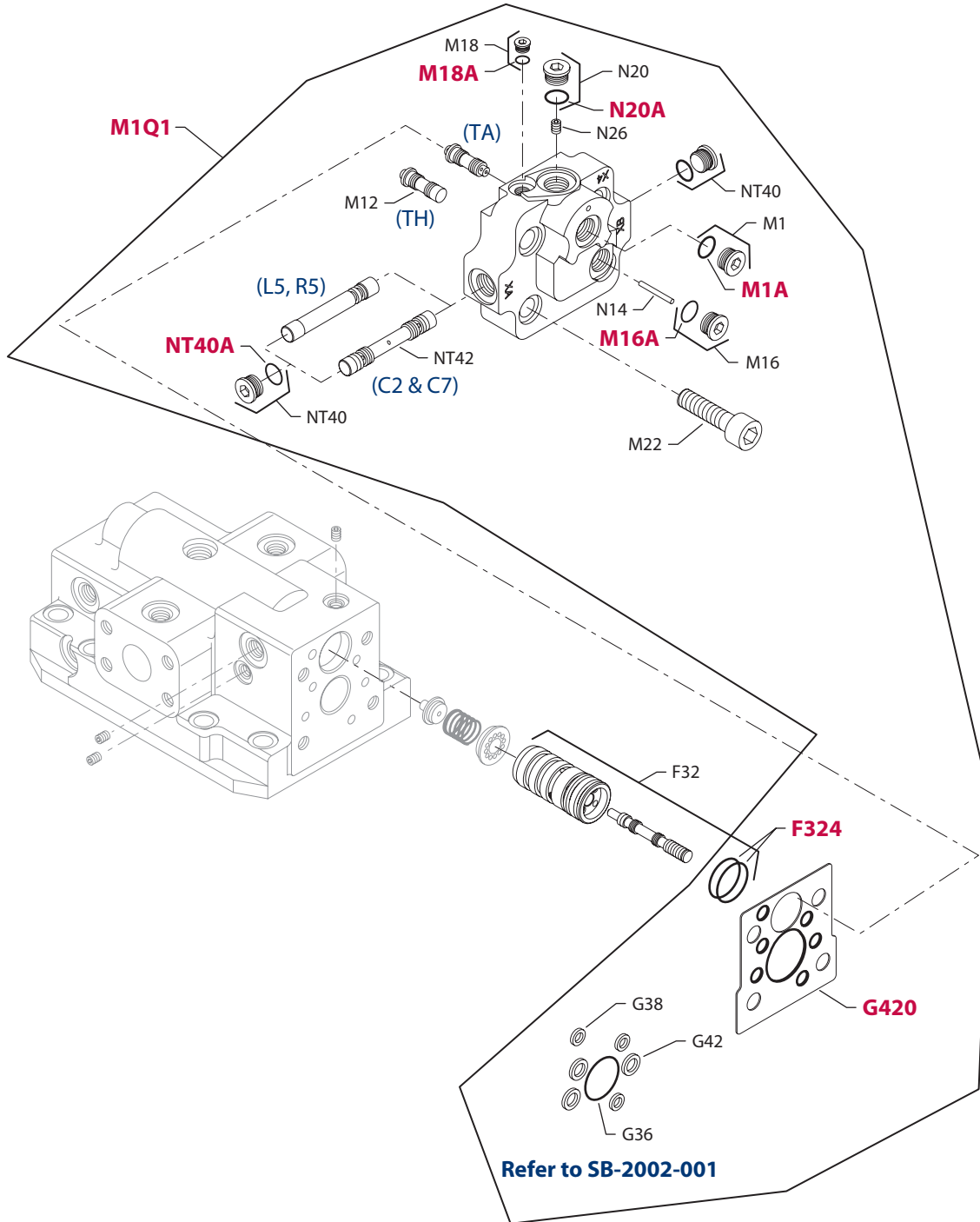
Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
	F32	96-31		503380	4-way valve assembly	1
	F324	96-31		730036	O-ring	2
	G36	96-31	03-07	364976	O-ring (SB-2002-001)	1
	G38	96-31	03-07	792739	O-ring (SB-2002-001)	3
	G42	96-31	03-07	754580	O-ring (SB-2002-001)	3
	G420	03-08		511851	Gasket/O-ring seal (SB-2002-001)	1
T1	M1	96-31		509534	Solenoid, 12 volt, DIN connector	1
T2	M1	96-31		509537	Solenoid, 24 volt, DIN connector	1
T3	M1	96-31		519468	Solenoid, 12 volt, JET connector	1
T4	M1	00-39		509542	Solenoid, 24 volt, JET connector	1
	M12	96-31		503192	Piston	1
	M16	96-31		515965 (9005110-5600)	Plug	1
	M16A	96-31		085043 (9004201-3700)	O-ring	1
	M18	96-31		504519	Plug	1
	M18A	96-31		039297 (9004201-1200)	O-ring	1
	M22	96-31		503499	Screw	4

**T1, T2, AND T3 CONTROL KITS USED WITH VARIOUS SERVO PRESSURE SUPPLY OPTIONS**

T1/C0	M1Q1	96-31		508326	Control kit, T1/C0, 12 volt, DIN connector	1
	N14	96-31		503503	Pin	1
	N20	96-31		515965 (9005110-5600)	Plug	1
	N20A	96-31		085043 (9004201-3700)	O-ring	1
	NT42	96-31		508175	Spool	1

T1/C2	M1Q1	96-31		506886	Control kit, T1/C2, 12 volt, DIN connector	1
T2/C2	M1Q1	96-31		506888	Control kit, T2/C2, 24 volt, DIN connector	1
	N20	96-31		515965 (9005110-5600)	Plug	1
	N20A	96-31		085043 (9004201-3700)	O-ring	1
	NT40	96-31		515965 (9005110-5600)	Plug	2
	NT40A	96-31		085043 (9004201-3700)	O-ring	2
	NT42	96-31		508156	Spool	1

T1/L5, R5	M1Q1	96-31		506908	Control kit, T1/L5 or T1/R5, 12 volt, DIN connector	1
T2/L5, R5	M1Q1	96-31		506906	Control kit, T2/L5 or T1/R5, 24 volt, DIN connector	1
T3/L5, R5	M1Q1	96-31		506930	Control kit, T3/L5 or T1/R5, 12 volt, Jet connector	1
	N14	96-31		503503	Pin	1
	N20	96-31		515965 (9005110-5600)	Plug	1
	N20A	96-31		085043 (9004201-3700)	O-ring	1
	NT40	96-31		515965 (9005110-5600)	Plug	2
	NT40A	96-31		085043 (9004201-3700)	O-ring	2
	NT42	96-31		507782	Spool	1



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

**PRESSURE COMPENSATOR AND HYDRAULIC 2-POSITION WITH PRESSURE COMPENSATOR**

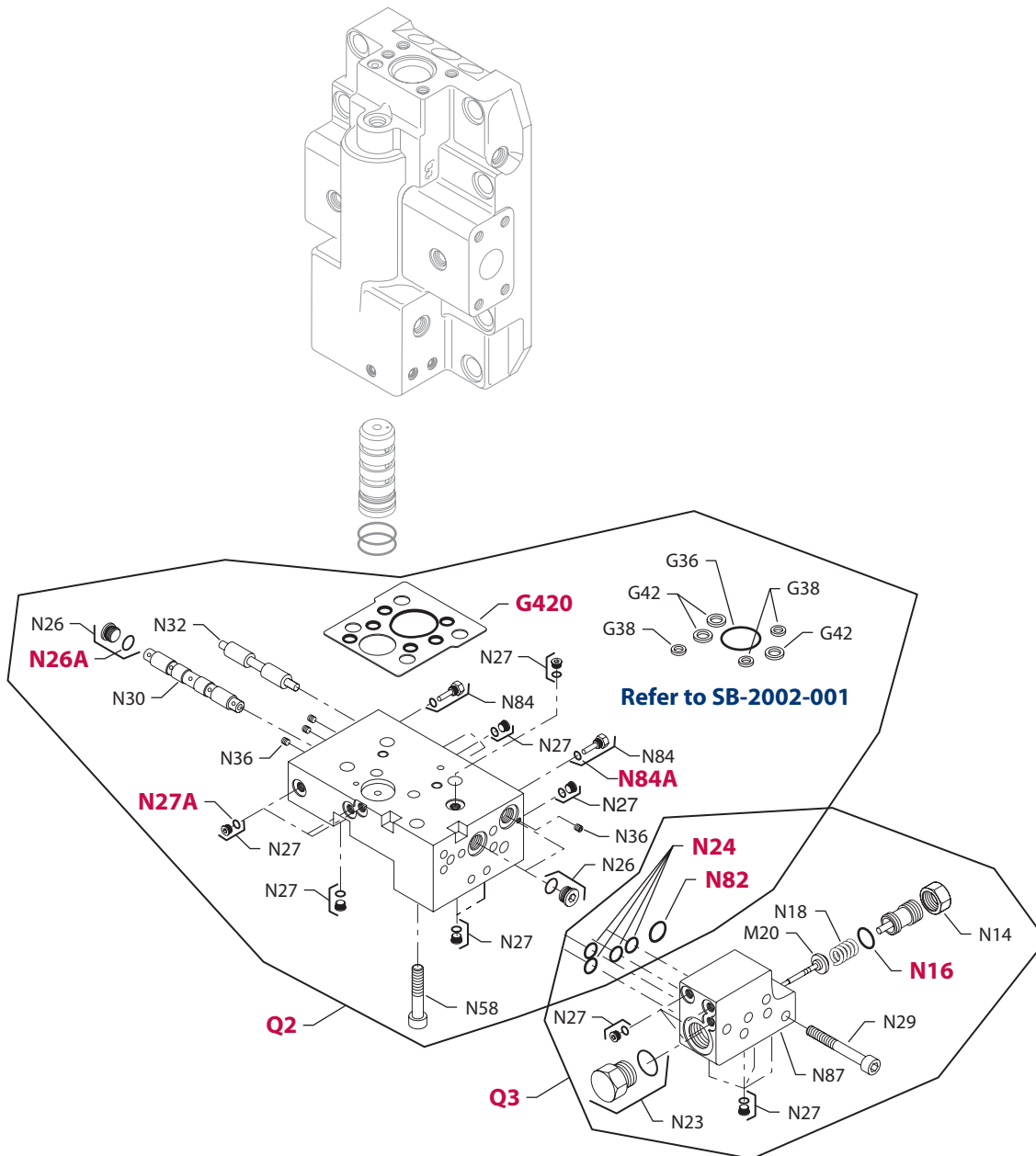
Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
	F32	96-31		503380	4-way valve assembly	1
	F324	96-31		730036	O-ring	2
	G36	96-31	03-07	364976	O-ring (SB-2002-001)	1
	G38	96-31	03-07	792739	O-ring (SB-2002-001)	3
	G42	96-31	03-07	754580	O-ring (SB-2002-001)	3
	G420	03-08		511851	Gasket/O-ring seal (SB-2002-001)	1
TA	M1	96-31		515965 (9005110-5600)	Plug	1
TA	M1A	96-31		085043 (9004201-3700)	O-ring	1
TA	M12	96-31		503192	Piston	1
TH	M12	96-31		503194	Piston	1
	M16	96-31		515965 (9005110-5600)	Plug	1
	M16A	96-31		085043 (9004201-3700)	O-ring	1
	M18	96-31		504519	Plug	1
	M18A	96-31		039297 (9004201-1200)	O-ring	1
	M22	96-31		503499	Screw	4

**TA AND TH CONTROL KITS USED WITH VARIOUS SERVO PRESSURE SUPPLY OPTIONS**

TA/C2	M1Q1	96-31		506884	Control kit, TA/C2	1
TH/C2	M1Q1	96-31		503801	Control kit, TH/C2	1
	N20	96-31		515965 (9005110-5600)	Plug	1
	N20A	96-31		085043 (9004201-3700)	O-ring	1
	NT40	96-31		515965 (9005110-5600)	Plug	2
	NT40A	96-31		085043 (9004201-3700)	O-ring	2
	NT42	96-31		508156	Spool	1

TA/L5, R5	M1Q1	96-31		506909	Control kit, TA/L5 or TA/R5	1
TH/L5, R5	M1Q1	96-31		506910	Control kit, TH/L5 or TH/R5	1
	N14	96-31		503503	Pin	1
	N20	96-31		515965 (9005110-5600)	Plug	1
	N20A	96-31		085043 (9004201-3700)	O-ring	1
	NT40	96-31		515965 (9005110-5600)	Plug	2
	NT40A	96-31		085043 (9004201-3700)	O-ring	2
	NT42	96-31		507782	Spool	1

TH/C7	M1Q1	96-31		508272	Control kit, TH/C7	1
	N26	96-31		913897 (9007712-0605)	Set screw	1
	NT40	96-31		515965 (9005110-5600)	Plug	2
	NT40A	96-31		085043 (9004201-3700)	O-ring	2
	NT42	96-31		508156	Spool	1



E100 309E

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

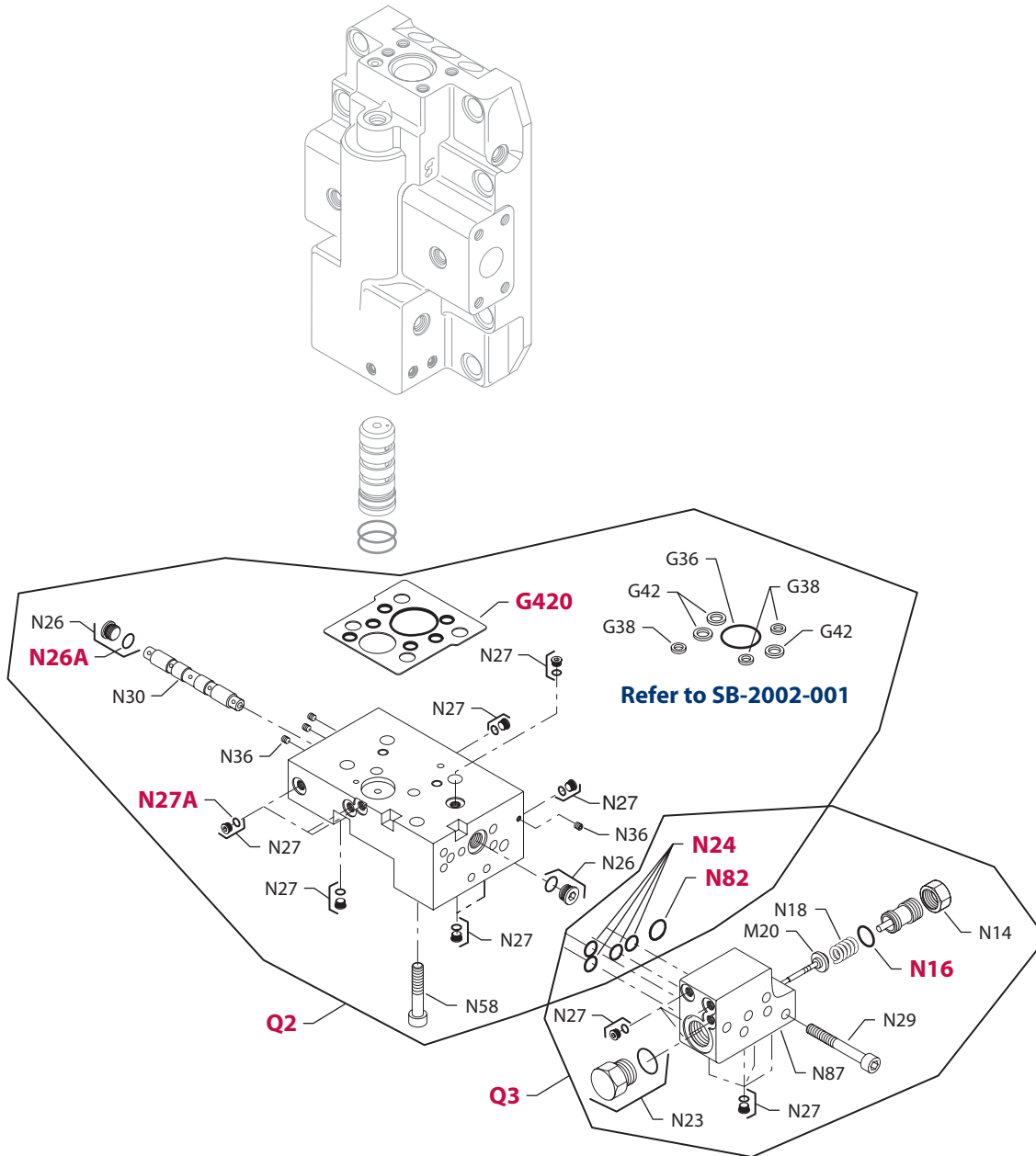


**SERVO PRESSURE SUPPLY**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
A1 & A3	G36	91-30	03-07	364976	O-ring (SB-2002-001)	1
	G38	91-30	03-07	792739	O-ring (SB-2002-001)	3
	G42	91-30	03-07	754580	O-ring (SB-2002-001)	3
	G420	03-08		511851	Gasket/O-ring seal (SB-2002-001)	1
	N14	91-30		342709 (9003575-0101)	Nut	1
	N16	91-30		001149 (9004201-6200)	O-ring	1
	N18	91-30		509152	Spring	1
	N20	91-30		746016	Relief valve	1
	N23	91-30		315325 (9005110-8700)	Plug	1
	N23A	91-30		001149 (9004201-6200)	O-ring	1
	N24	91-30		732479 (9004105-0100)	O-ring	4
	N26	91-30		515965 (9005110-5600)	Plug	3
	N26A	91-30		085043 (9004201-3700)	O-ring	3
	N27	91-30		504519	Plug	18
	N27A	91-30		039297 (9004201-1200)	O-ring	18
	N29	91-30		713719 (9007314-0610)	Screw	4
	N30	91-30		718833	Shuttle valve assembly	1
	N32	91-30		346080	Spool	1
	N36	91-30		092114 (9007712-0604)	Set screw	4
	N58	91-30		714436	Screw	4
	N82	91-30		144725 (9004105-0110)	O-ring	1
	N84	91-30		735266	Stop assembly	2
	N84A	91-30		039297 (9004201-1200)	O-ring	2
	N87	91-30		503887	PCOR housing assembly	1
	Q3	91-30		503610	PCOR kit, 100-260 bar	1
	Q3	91-30		503612	PCOR kit, 270-370 bar	1

**A1 AND A3 SERVO PRESSURE SUPPLY KITS USED WITH VARIOUS CONTROL OPTIONS**

Control code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
E1	Q2	91-30		503596	Multi-function block kit	1
E2	Q2	91-30		503596	Multi-function block kit	1
E5	Q2	91-30		503596	Multi-function block kit	1
F1	Q2	91-30		503596	Multi-function block kit	1
F2	Q2	91-30		503596	Multi-function block kit	1
HP	Q2	91-30		503572	Multi-function block kit	1
HS	Q2	91-30		503572	Multi-function block kit	1



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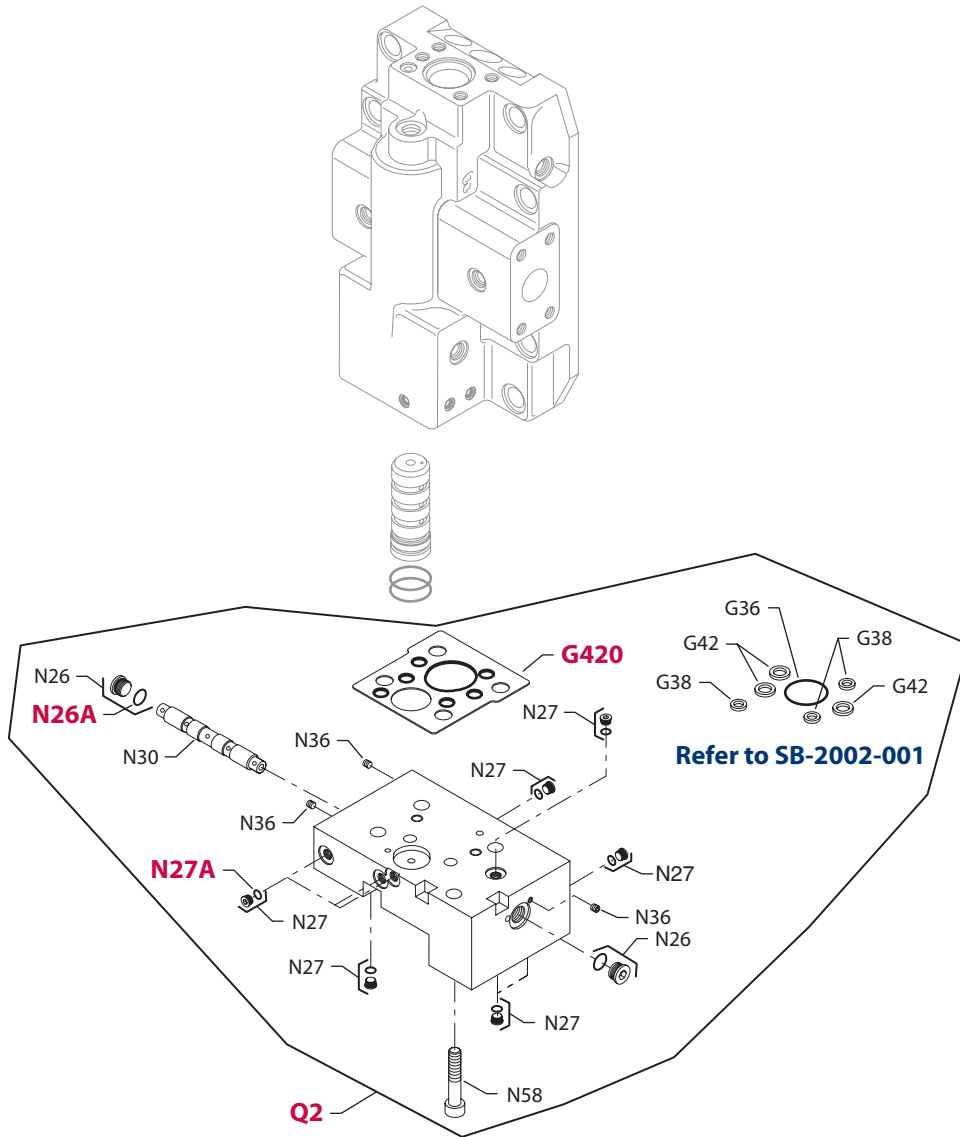
Enlarged **bold** type item numbers are recommended part to stock for servicing.

**SERVO PRESSURE SUPPLY**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
A2 & A4	G36	91-30	03-07	364976	O-ring (SB-2002-001)	1
	G38	91-30	03-07	792739	O-ring (SB-2002-001)	3
	G42	91-30	03-07	754580	O-ring (SB-2002-001)	3
	G420	03-08		511851	Gasket/O-ring seal (SB-2002-001)	1
	N14	91-30		342709 (9003575-0101)	Nut	1
	N16	91-30		001149 (9004201-6200)	O-ring	1
	N18	91-30		509152	Spring	1
	N20	91-30		746016	Relief valve	1
	N23	91-30		315325 (9005110-8700)	Plug	1
	N23A	91-30		001149 (9004201-6200)	O-ring	1
	N24	91-30		732479 (9004105-0100)	O-ring	4
	N26	91-30		515965 (9005110-5600)	Plug	2
	N26A	91-30		085043 (9004201-3700)	O-ring	2
	N27	91-30		504519	Plug	16
	N27A	91-30		039297 (9004201-1200)	O-ring	16
	N29	91-30		713719 (9007314-0610)	Screw	4
	N30	91-30		718833	Shuttle valve assembly	1
	N36	91-30		092114 (9007712-0604)	Set screw	4
	N58	91-30		714436	Screw	4
	N82	91-30		144725 (9004105-0110)	O-ring	1
	N87	91-30		503887	PCOR housing assembly	1
	Q3	91-30		503610	PCOR kit, 100-260 bar	1
	Q3	91-30		503612	PCOR kit, 270-370 bar	1

**A2 AND A4 SERVO PRESSURE SUPPLY KITS USED WITH VARIOUS CONTROL OPTIONS**

Control code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
E1	Q2	91-30		503579	Multi-function block kit	1
E2	Q2	91-30		503579	Multi-function block kit	1
E5	Q2	91-30		503579	Multi-function block kit	1
EP	Q2	91-30		503575	Multi-function block kit	1
EQ	Q2	91-30		503575	Multi-function block kit	1
ER	Q2	91-30		503579	Multi-function block kit	1
F1	Q2	91-30		503579	Multi-function block kit	1
F2	Q2	91-30		503579	Multi-function block kit	1
H1	Q2	91-30		503575	Multi-function block kit	1
H2	Q2	91-30		503575	Multi-function block kit	1
HP	Q2	91-30		503608	Multi-function block kit	1
HS	Q2	91-30		503608	Multi-function block kit	1
K1	Q2	91-30		503575	Multi-function block kit	1
K2	Q2	91-30		503575	Multi-function block kit	1



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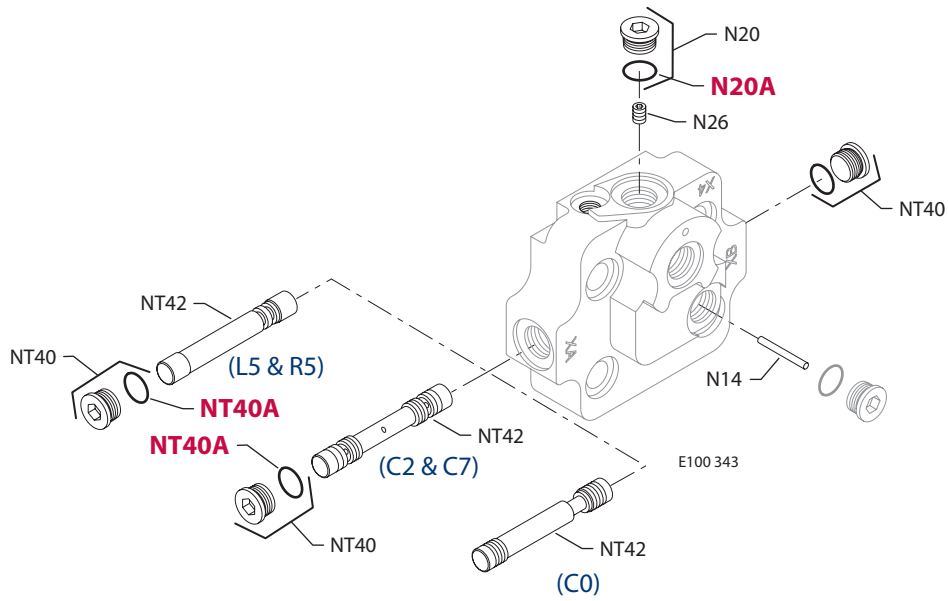
Enlarged **bold** type item numbers are recommended part to stock for servicing.

**SERVO PRESSURE SUPPLY**

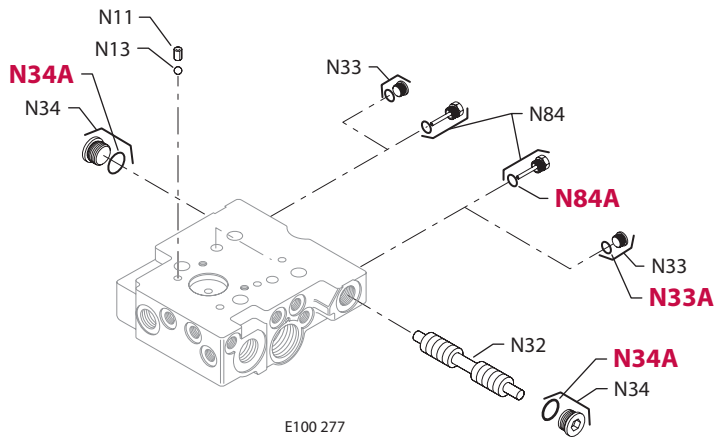
Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
A5 & A6	G36	91-30	03-07	364976	O-ring (SB-2002-001)	1
	G38	91-30	03-07	792739	O-ring (SB-2002-001)	3
	G42	91-30	03-07	754580	O-ring (SB-2002-001)	3
	G420	03-08		511851	Gasket/O-ring seal (SB-2002-001)	1
	N26	91-30		515965 (9005110-5600)	Plug	2
	N26A	91-30		085043 (9004201-3700)	O-ring	2
	N27	91-30		504519	Plug	4
	N27A	91-30		039297 (9004201-1200)	O-ring	4
	N30	91-30		718833	Shuttle valve assembly	1
	N36	91-30		092114 (9007712-0604)	Set screw	3
	N58	91-30		714436	Screw	4

**A5 AND A6 SERVO PRESSURE SUPPLY KITS USED WITH VARIOUS CONTROL OPTIONS**

Control code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
E1	Q2	91-30		503592	Multi-function block kit	1
E2	Q2	91-30		503592	Multi-function block kit	1
E5	Q2	91-30		503592	Multi-function block kit	1
EP	Q2	91-30		503588	Multi-function block kit	1
EQ	Q2	91-30		503588	Multi-function block kit	1
ER	Q2	91-30		503592	Multi-function block kit	1
F1	Q2	91-30		503592	Multi-function block kit	1
F2	Q2	91-30		503592	Multi-function block kit	1
H1	Q2	91-30		503588	Multi-function block kit	1
H2	Q2	91-30		503588	Multi-function block kit	1
K1	Q2	91-30		503588	Multi-function block kit	1
K2	Q2	91-30		503588	Multi-function block kit	1



**C0, C2, C7, L5, and R5**

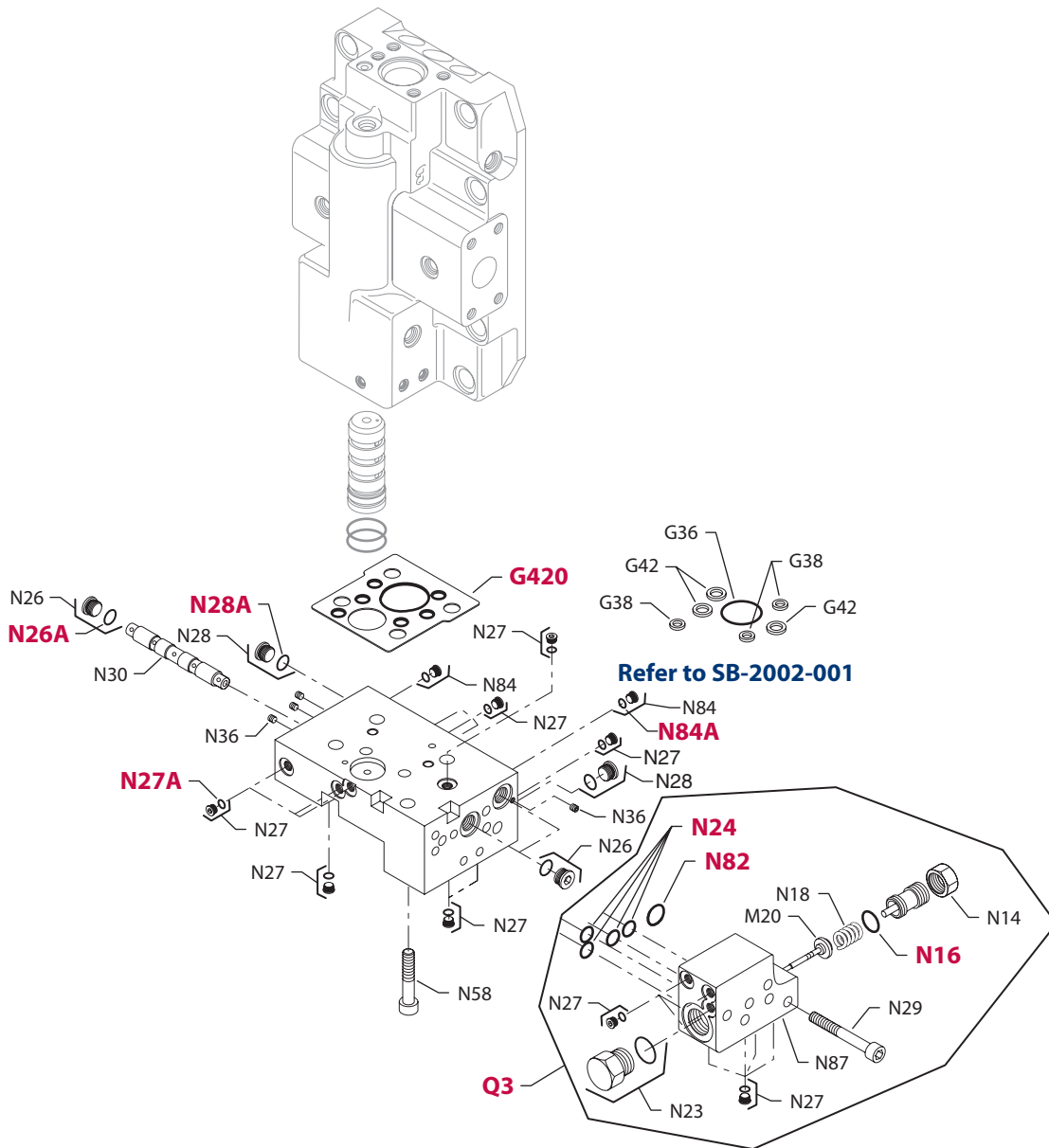


**K3, K4, K5, and M1**

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

**SERVO PRESSURE SUPPLY**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
B1 & B2				No parts		
C0	N14	96-10		503503	Pin	1
	N20	96-10		515965 (9005110-5600)	Plug	1
	N20A	96-10		085043 (9004201-3700)	O-ring	1
	NT42	96-10		508175	Spool	1
C2	N20	95-15		515965 (9005110-5600)	Plug	1
	N20A	95-15		085043 (9004201-3700)	O-ring	1
	NT40	95-15		515965 (9005110-5600)	Plug	2
	NT40A	95-15		085043 (9004201-3700)	O-ring	2
	NT42	95-15		508156	Spool	1
C7	N26	02-45		913897	Set screw	1
	NT40	02-45		515965 (9005110-5600)	Plug	2
	NT40A	02-45		085043 (9004201-3700)	O-ring	2
	NT42	02-45		508156	Spool	1
K3 & K4	N11	95-24		505522	Slotted pin	1
	N13	95-24		915967	Ball	1
	N33	95-24		504519	Plug	2
	N33A	95-24		039297 (9004201-1200)	O-ring	2
	N34	95-24		515965 (9005110-5600)	Plug	2
	N34A	95-24		085043 (9004201-3700)	O-ring	2
K5 & M1	N32	91-30		346080	Spool	1
	N84	91-30		735266	Stop assembly	2
	N84A	91-30		039297 (9004201-1200)	O-ring	2
L5 & R5	N14	96-10		503503	Pin	1
	N20	96-10		515965 (9005110-5600)	Plug	1
	N20A	96-10		085043 (9004201-3700)	O-ring	1
	NT40	96-10		515965 (9005110-5600)	Plug	2
	NT40A	96-10		085043 (9004201-3700)	O-ring	2
	NT42	96-10		507782	Spool	1



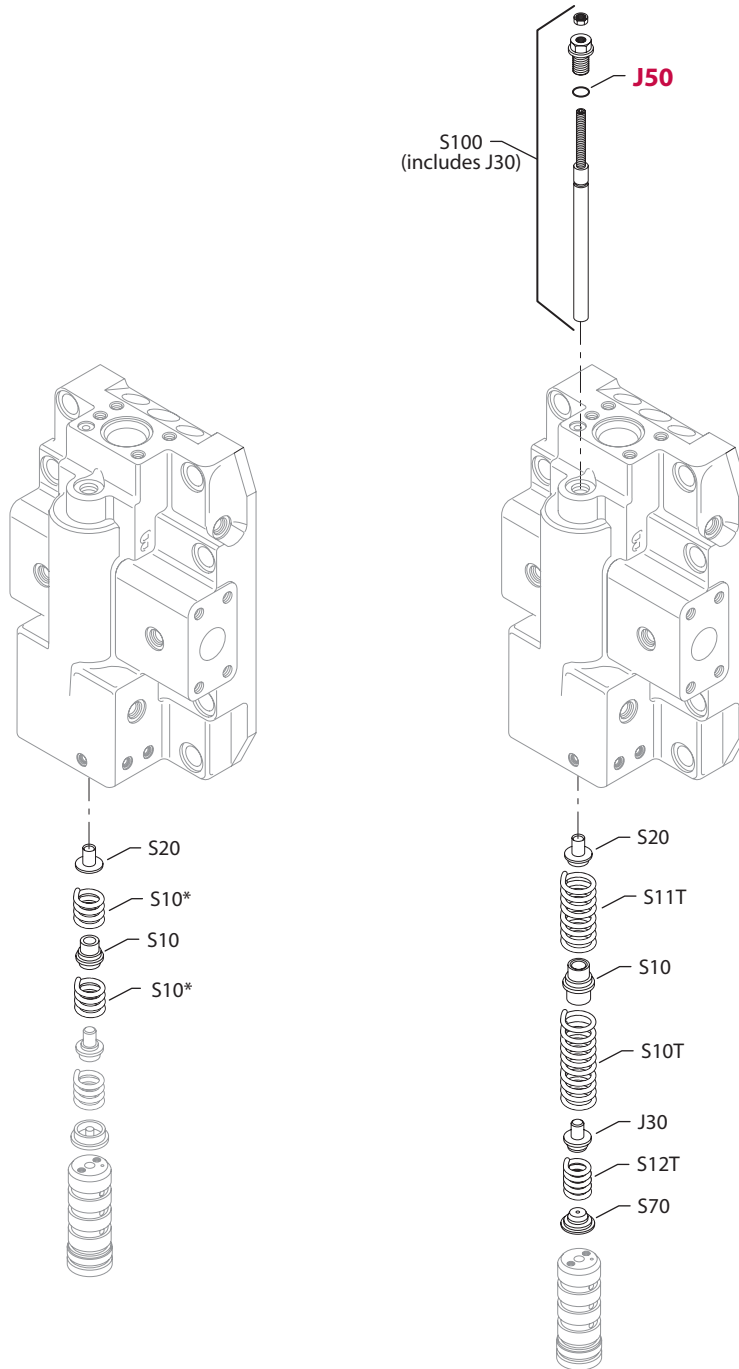
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Enlarged **bold** type item numbers are recommended part to stock for servicing.



**SERVO PRESSURE SUPPLY**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
L2, L4, R2	G36	91-30	03-07	364976	O-ring (SB-2002-001)	1
& R4	G38	91-30	03-07	792739	O-ring (SB-2002-001)	3
	G42	91-30	03-07	754580	O-ring (SB-2002-001)	3
	G420	03-08		511851	Gasket/O-ring seal (SB-2002-001)	1
	N14	91-30		342709 (9003575-0101)	Nut	1
	N16	91-30		001149 (9004201-6200)	O-ring	1
	N18	91-30		509152	Spring	1
	N20	91-30		746016	Relief valve	1
	N23	91-30		315325 (9005110-8700)	Plug	1
	N23A	91-30		001149 (9004201-6200)	O-ring	1
	N24	91-30		732479 (9004105-0100)	O-ring	4
	N26	91-30		515965 (9005110-5600)	Plug	3
	N26A	91-30		085043 (9004201-3700)	O-ring	3
	N27	91-30		504519	Plug	18
	N27A	91-30		039297 (9004201-1200)	O-ring	18
	N28	91-30		515965 (9005110-5600)	Plug	2
	N28A	91-30		085043 (9004201-3700)	O-ring	2
	N29	91-30		713719 (9007314-0610)	Screw	4
	N30	91-30		718833	Shuttle valve assembly	1
	N36	91-30		092114 (9007712-0604)	Set screw	4
	N58	91-30		714436	Screw	4
	N82	91-30		144725 (9004105-0110)	O-ring	1
	N84	91-30		504519	Plug	2
	N84A	91-30		039297 (9004201-1200)	O-ring	2
	N87	91-30		503887	PCOR housing assembly	1
	Q3	91-30		503610	PCOR kit, 100-260 bar	1
	Q3	91-30		503612	PCOR kit, 270-370 bar	1
NN				No parts		

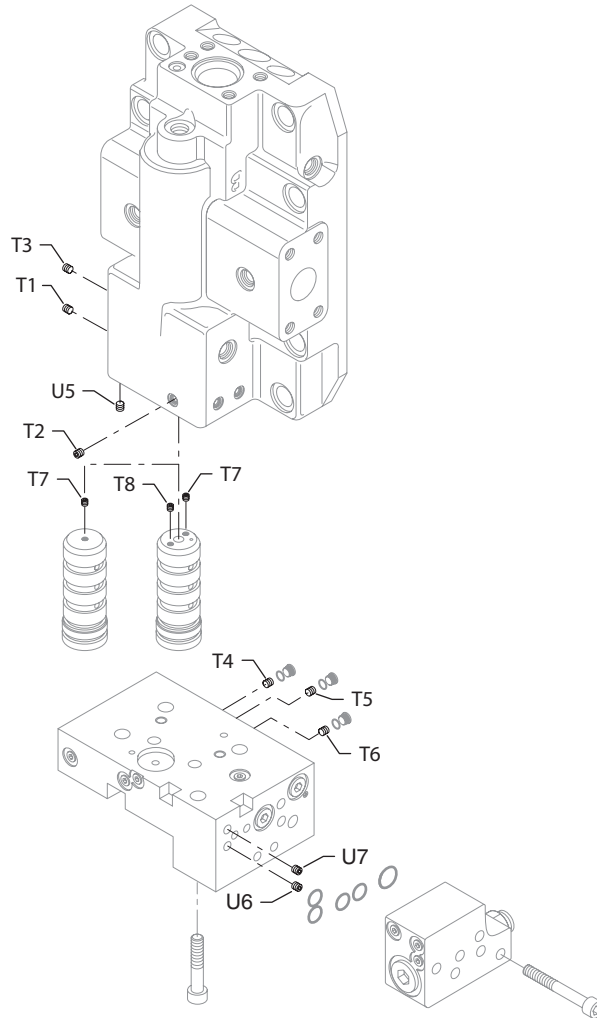


E100 336E

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

**CONTROL RAMP**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
A & B	S10	95-31		724534	Spring guide	1
	S10E	95-31		721555	Spring	2
	S20	95-31		722249	Spring guide	1
D	S10	91-30		724534	Spring guide	1
	S10D	91-30		721571	Spring	2
	S20	91-30		722249	Spring guide	1
E	S10	91-30		724534	Spring guide	1
	S10E	91-30		721555	Spring	2
	S20	91-30		722249	Spring guide	1
G	S10	91-30		724534	Spring guide	1
	S10G	91-30		721563	Spring	2
	S20	91-30		722249	Spring guide	1
H, J, & K	S10	91-30		724534	Spring guide	1
	S10Y	91-30		721597	Spring	2
	S20	91-30		722249	Spring guide	1
N				No parts		
S & T	J30	95-24		507670	Spring guide	1
	J50	95-24		732479 (9004105-0100)	O-ring	1
	S10	95-24		735944	Spring guide	1
	S10T	95-24		735852	Spring	1
	S11T	95-24		735845	Spring	1
	S12T	95-24		509180	Spring	1
	S20	95-24		735910	Spring guide	1
	S70	95-24		505281	Spring seat	1
	S100	95-24		509234	Threshold adjust screw kit	1
U	S10	91-30		724534	Spring guide	1
	S10U	91-30		721589	Spring	2
	S20	91-30		722249	Spring guide	1
Y	S10	91-30		724534	Spring guide	1
	S10Y	91-30		721597	Spring	2
	S20	91-30		722249	Spring guide	1
Z	S10	91-30		724534	Spring guide	1
	S10Z	91-30		721605	Spring	2
	S20	91-30		722249	Spring guide	1

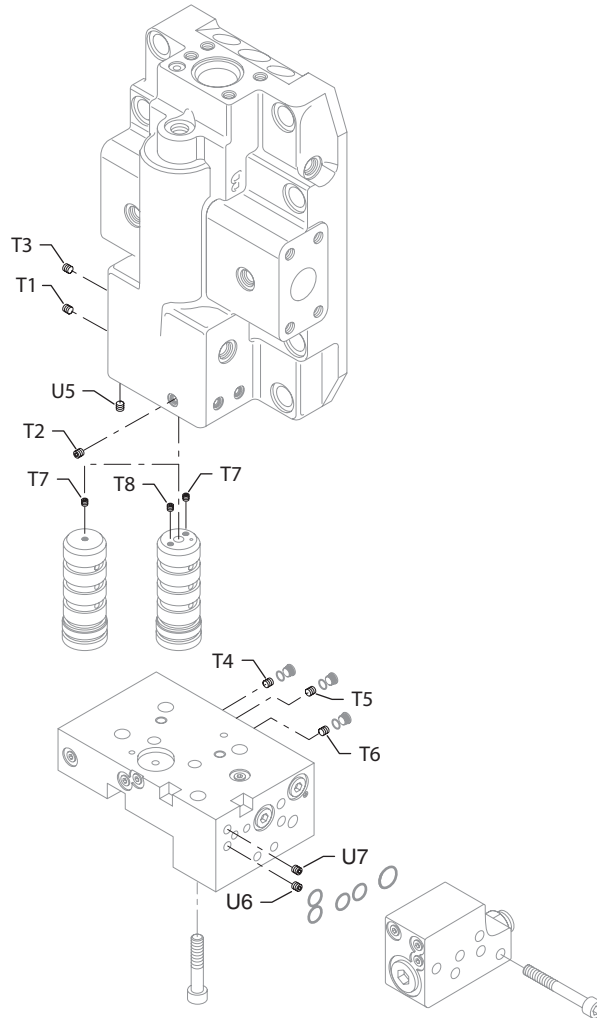


E100 315E

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

**ORIFICE**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
A0	T1	92.38		913897 (9007712-0605)	Set screw	1
	T2	92.38		913897 (9007712-0605)	Set screw	1
	T3	92.38		913897 (9007712-0605)	Set screw	1
A1	T1	91-30		739128	Orifice. 0.5, M6 x 6	1
	T2	91-30		739144	Orifice. 0.8, M6 x 6	1
	T3	91-30		739144	Orifice. 0.8, M6 x 6	1
	T4	91-30		092114 (9007712-0604)	Set screw	1
	T5	91-30		578542	Orifice. 0.8, M6 x 8	1
	T6	91-30		092114 (9007712-0604)	Set screw	1
	T7	91-30		639096	Orifice. 0.6, M5 x 6	1
	T8	91-30		639096	Orifice. 0.6, M5 x 6	1
A2	T1	91-30		679316	Orifice. 0.5, M6 x 8	1
	T2	91-30		578542	Orifice. 0.8, M6 x 8	1
	T3	91-30		578542	Orifice. 0.8, M6 x 8	1
	T4	91-30		578542	Orifice. 0.8, M6 x 8	1
	T5	91-30		913897 (9007712-0605)	Set screw	1
	T6	91-30		578542	Orifice. 0.8, M6 x 8	1
	T7	91-30		639096	Orifice. 0.6, M5 x 6	1
	T8	91-30		639096	Orifice. 0.6, M5 x 6	1
A3	T1	91-30		739128	Orifice. 0.5, M6 x 6	1
	T2	91-30		739144	Orifice. 0.8, M6 x 6	1
	T3	91-30		739144	Orifice. 0.8, M6 x 6	1
	T4	91-30		578542	Orifice. 0.8, M6 x 8	1
	T5	91-30		092114 (9007712-0604)	Set screw	1
	T6	91-30		578542	Orifice. 0.8, M6 x 8	1
	T7	91-30		639096	Orifice. 0.6, M5 x 6	1
	T8	91-30		639096	Orifice. 0.6, M5 x 6	1
A4	T1	91-30		739128	Orifice. 0.5, M6 x 6	1
	T2	91-30		739144	Orifice. 0.8, M6 x 6	1
	T3	91-30		739144	Orifice. 0.8, M6 x 6	1
	T4	91-30		092114 (9007712-0604)	Set screw	1
	T5	91-30		092114 (9007712-0604)	Set screw	1
	T6	91-30		092114 (9007712-0604)	Set screw	1
	T7	91-30		639096	Orifice. 0.6, M5 x 6	1
	T8	91-30		639096	Orifice. 0.6, M5 x 6	1
A6	T1	91-30		679316	Orifice. 0.5, M6 x 8	1
	T2	91-30		578542	Orifice. 0.8, M6 x 8	1
	T3	91-30		578542	Orifice. 0.8, M6 x 8	1
	T7	91-30		639096	Orifice. 0.6, M5 x 6	1
	T8	91-30		639096	Orifice. 0.6, M5 x 6	1

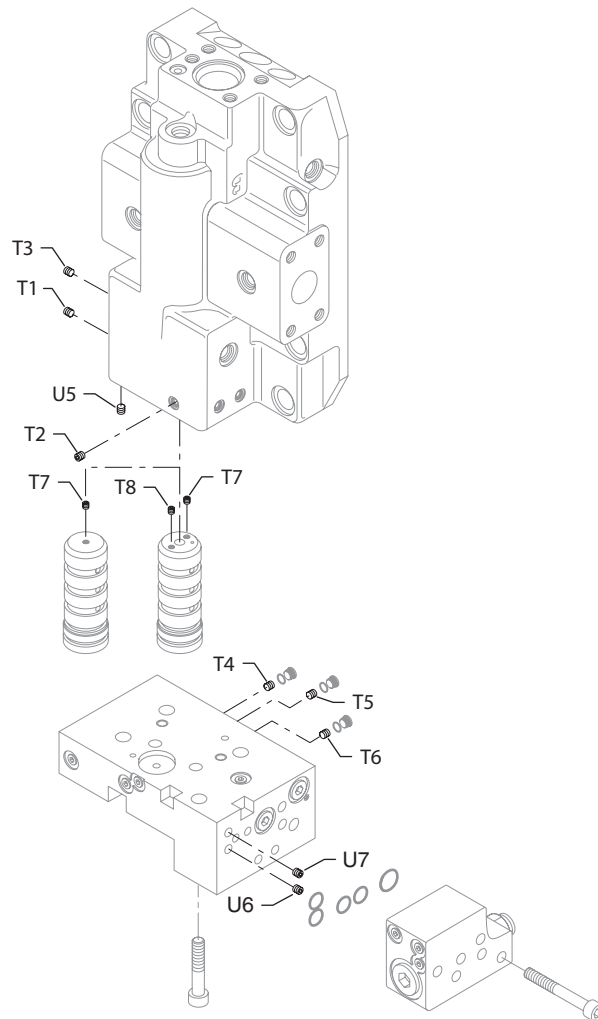


E100 315E

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

**ORIFICE**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit	
A7	T1	91-30		679316	Orifice. 0.5, M6 x 8	1	
	T2	91-30		578542	Orifice. 0.8, M6 x 8	1	
	T3	91-30		578542	Orifice. 0.8, M6 x 8	1	
	T5	91-30		578542	Orifice. 0.8, M6 x 8	1	
	T7	91-30		639096	Orifice. 0.6, M5 x 6	1	
	T8	91-30		639096	Orifice. 0.6, M5 x 6	1	
	A8	T1	91-30		679316	Orifice. 0.5, M6 x 8	1
		T2	91-30		578542	Orifice. 0.8, M6 x 8	1
T3		91-30		578542	Orifice. 0.8, M6 x 8	1	
T4		91-30		913897 (9007712-0605)	Set screw	1	
T5		91-30		913897 (9007712-0605)	Set screw	1	
T6		91-30		578542	Orifice. 0.8, M6 x 8	1	
T7		91-30		639096	Orifice. 0.6, M5 x 6	1	
T8		91-30		639096	Orifice. 0.6, M5 x 6	1	
A9	T1	91-30		679316	Orifice. 0.5, M6 x 8	1	
	T2	91-30		578542	Orifice. 0.8, M6 x 8	1	
	T3	91-30		578542	Orifice. 0.8, M6 x 8	1	
	T7	91-30		639096	Orifice. 0.6, M5 x 6	1	
	T8	91-30		639096	Orifice. 0.6, M5 x 6	1	
	U5	91-30		913897 (9007712-0605)	Set screw	1	
	B1	T1	91-30		044081	Orifice. 0.7, M6 x 8	1
T2		91-30		578542	Orifice. 0.8, M6 x 8	1	
T3		91-30		578542	Orifice. 0.8, M6 x 8	1	
T7		91-30		639096	Orifice. 0.6, M5 x 6	1	
T8		91-30		639096	Orifice. 0.6, M5 x 6	1	
B4		T1	91-30		739128	Orifice. 0.5, M6 x 6	1
	T2	91-30		739144	Orifice. 0.8, M6 x 6	1	
	T3	91-30		739144	Orifice. 0.8, M6 x 6	1	
	T7	91-30		639096	Orifice. 0.6, M5 x 6	1	
	T8	91-30		639096	Orifice. 0.6, M5 x 6	1	
	B6	T1	91-30		679316	Orifice. 0.5, M6 x 8	1
T2		91-30		578542	Orifice. 0.8, M6 x 8	1	
T3		91-30		578542	Orifice. 0.8, M6 x 8	1	
T4		91-30		578542	Orifice. 0.8, M6 x 8	1	
T5		91-30		913897 (9007712-0605)	Set screw	1	
T6		91-30		913897 (9007712-0605)	Set screw	1	
T7		91-30		639096	Orifice. 0.6, M5 x 6	1	
T8		91-30		639096	Orifice. 0.6, M5 x 6	1	



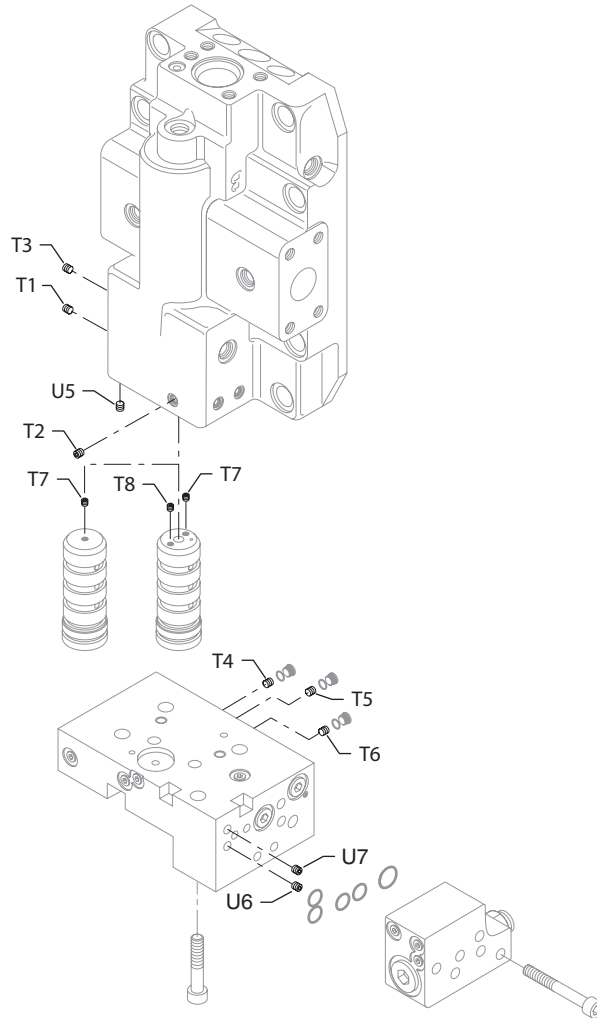
E100 315E

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



**ORIFICE**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
B9	T1	91-30		679316	Orifice. 0.5, M6 x 8	1
	T2	91-30		679316	Orifice. 0.5, M6 x 8	1
	T3	91-30		679316	Orifice. 0.5, M6 x 8	1
	T4	91-30		578542	Orifice. 0.8, M6 x 8	1
	T5	91-30		913897 (9007712-0605)	Set screw	1
	T6	91-30		578542	Orifice. 0.8, M6 x 8	1
	T7	91-30		639096	Orifice. 0.6, M5 x 6	1
U5	T8	91-30		639096	Orifice. 0.6, M5 x 6	1
	U5	91-30		913897 (9007712-0605)	Set screw	1
U6	U6	91-30		511825	Orifice. 0.6, M6 x 8	1
	U7	91-30		511825	Orifice. 0.6, M6 x 8	1
C0				No parts		
C1	T1	91-30		679316	Orifice. 0.5, M6 x 8	1
	T2	91-30		578542	Orifice. 0.8, M6 x 8	1
	T3	91-30		578542	Orifice. 0.8, M6 x 8	1
	T4	91-30		913897 (9007712-0605)	Set screw	1
	T5	91-30		578542	Orifice. 0.8, M6 x 8	1
	T6	91-30		913897 (9007712-0605)	Set screw	1
	T7	91-30		639096	Orifice. 0.6, M5 x 6	1
	T8	91-30		639096	Orifice. 0.6, M5 x 6	1
C2	T1	91-30		679316	Orifice. 0.5, M6 x 8	1
	T2	91-30		578542	Orifice. 0.8, M6 x 8	1
	T3	91-30		578542	Orifice. 0.8, M6 x 8	1
	T7	91-30		639096	Orifice. 0.6, M5 x 6	1
	T8	91-30		639096	Orifice. 0.6, M5 x 6	1
C5	T1	91-30		679316	Orifice. 0.5, M6 x 8	1
	T2	91-30		578542	Orifice. 0.8, M6 x 8	1
	T3	91-30		578542	Orifice. 0.8, M6 x 8	1
	T5	91-30		578542	Orifice. 0.8, M6 x 8	1
	T7	91-30		639096	Orifice. 0.6, M5 x 6	1
	T8	91-30		639096	Orifice. 0.6, M5 x 6	1
	U5	91-30		913897 (9007712-0605)	Set screw	1
	U6	91-30		511825	Orifice. 0.6, M6 x 8	1
	U7	91-30		511825	Orifice. 0.6, M6 x 8	1
C7	T1	91-30		679316	Orifice. 0.5, M6 x 8	1
	T2	91-30		578542	Orifice. 0.8, M6 x 8	1
	T3	91-30		578542	Orifice. 0.8, M6 x 8	1
	T4	91-30		578542	Orifice. 0.8, M6 x 8	1
	T5	91-30		913897 (9007712-0605)	Set screw	1
	T6	91-30		913897 (9007712-0605)	Set screw	1
	T7	91-30		639096	Orifice. 0.6, M5 x 6	1
	T8	91-30		639096	Orifice. 0.6, M5 x 6	1
	U5	91-30		913897 (9007712-0605)	Set screw	1

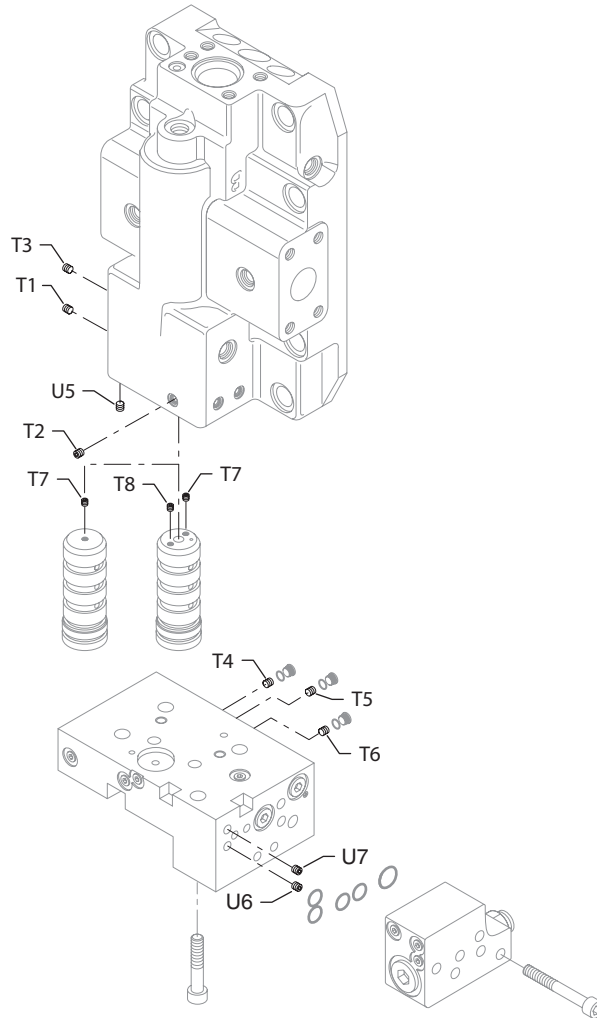


E100 315E

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

**ORIFICE**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
C8	T1	91-30		679316	Orifice, 0.5, M6 x 8	1
	T2	91-30		578542	Orifice, 0.8, M6 x 8	1
	T3	91-30		578542	Orifice, 0.8, M6 x 8	1
	T4	91-30		913897 (9007712-0605)	Set screw	1
	T5	91-30		913897 (9007712-0605)	Set screw	1
	T6	91-30		578542	Orifice, 0.8, M6 x 8	1
	T7	91-30		639096	Orifice, 0.6, M5 x 6	1
	T8	91-30		639096	Orifice, 0.6, M5 x 6	1
	U5	91-30		913897 (9007712-0605)	Set screw	1
D3	T1	91-30		578542	Orifice, 0.8, M6 x 8	1
	T2	91-30		511825	Orifice, 0.6, M6 x 8	1
	T3	91-30		511825	Orifice, 0.6, M6 x 8	1
	T4	91-30		913897 (9007712-0605)	Set screw	1
	T5	91-30		913897 (9007712-0605)	Set screw	1
	T6	91-30		578542	Orifice, 0.8, M6 x 8	1
	T7	91-30		639096	Orifice, 0.6, M5 x 6	1
	T8	91-30		639096	Orifice, 0.6, M5 x 6	1
	U5	91-30		913897 (9007712-0605)	Set screw	1
	U6	91-30		511825	Orifice, 0.6, M6 x 8	1
	U7	91-30		511825	Orifice, 0.6, M6 x 8	1
D5	T1	91-30		578542	Orifice, 0.8, M6 x 8	1
	T2	91-30		511825	Orifice, 0.6, M6 x 8	1
	T3	91-30		511825	Orifice, 0.6, M6 x 8	1
	T4	91-30		578542	Orifice, 0.8, M6 x 8	1
	T5	91-30		913897 (9007712-0605)	Set screw	1
	T6	91-30		913897 (9007712-0605)	Set screw	1
	T7	91-30		639096	Orifice, 0.6, M5 x 6	1
	T8	91-30		639096	Orifice, 0.6, M5 x 6	1
	U5	91-30		913897 (9007712-0605)	Set screw	1
	U6	91-30		511825	Orifice, 0.6, M6 x 8	1
	U7	91-30		511825	Orifice, 0.6, M6 x 8	1
D7	T1	91-30		578542	Orifice, 0.8, M6 x 8	1
	T2	91-30		578542	Orifice, 0.8, M6 x 8	1
	T3	91-30		578542	Orifice, 0.8, M6 x 8	1
	T7	91-30		511825	Orifice, 0.6, M6 x 8	1
	T8	91-30		511825	Orifice, 0.6, M6 x 8	1
	U7	91-30		044081	Orifice, 0.7, M6 x 8	1
	E1	T1	91-30		679316	Orifice, 0.5, M6 x 8
T2		91-30		578542	Orifice, 0.8, M6 x 8	1
T3		91-30		578542	Orifice, 0.8, M6 x 8	1
T5		91-30		578542	Orifice, 0.8, M6 x 8	1
T7		91-30		639096	Orifice, 0.6, M5 x 6	1
T8		91-30		639096	Orifice, 0.6, M5 x 6	1
U6		91-30		044081	Orifice, 0.7, M6 x 8	1
U7		91-30		044081	Orifice, 0.7, M6 x 8	1

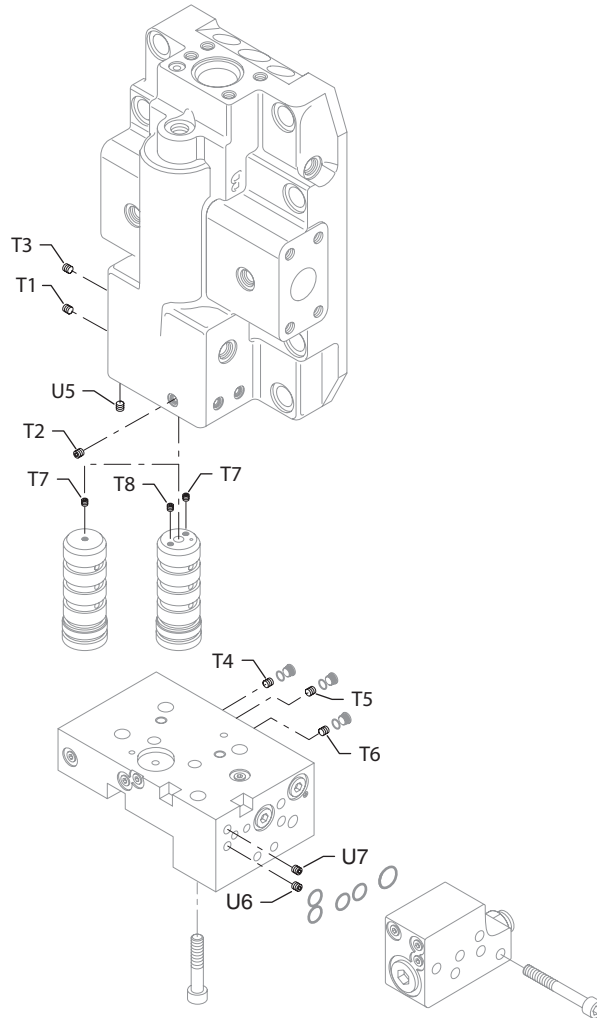


E100 315E

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

**ORIFICE**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
E2	T1	91-30		679316	Orifice. 0.5, M6 x 8	1
	T2	91-30		578542	Orifice. 0.8, M6 x 8	1
	T3	91-30		578542	Orifice. 0.8, M6 x 8	1
	T4	91-30		578542	Orifice. 0.8, M6 x 8	1
	T5	91-30		913897 (9007712-0605)	Set screw	1
	T6	91-30		578542	Orifice. 0.8, M6 x 8	1
	T7	91-30		639096	Orifice. 0.6, M5 x 6	1
	T8	91-30		639096	Orifice. 0.6, M5 x 6	1
U6	U6	91-30		044081	Orifice. 0.7, M6 x 8	1
	U7	91-30		044081	Orifice. 0.7, M6 x 8	1
E3	T1	91-30		679316	Orifice. 0.5, M6 x 8	1
	T2	91-30		578542	Orifice. 0.8, M6 x 8	1
	T3	91-30		578542	Orifice. 0.8, M6 x 8	1
	T4	91-30		578542	Orifice. 0.8, M6 x 8	1
	T5	91-30		913897 (9007712-0605)	Set screw	1
	T6	91-30		913897 (9007712-0605)	Set screw	1
	T7	91-30		639096	Orifice. 0.6, M5 x 6	1
	T8	91-30		639096	Orifice. 0.6, M5 x 6	1
U6	U6	91-30		044081	Orifice. 0.7, M6 x 8	1
	U7	91-30		044081	Orifice. 0.7, M6 x 8	1
E4	T1	91-30		679316	Orifice. 0.5, M6 x 8	1
	T2	91-30		578542	Orifice. 0.8, M6 x 8	1
	T3	91-30		578542	Orifice. 0.8, M6 x 8	1
	T4	91-30		913897 (9007712-0605)	Set screw	1
	T5	91-30		913897 (9007712-0605)	Set screw	1
	T6	91-30		578542	Orifice. 0.8, M6 x 8	1
	T7	91-30		639096	Orifice. 0.6, M5 x 6	1
	T8	91-30		639096	Orifice. 0.6, M5 x 6	1
U6	U6	91-30		044081	Orifice. 0.7, M6 x 8	1
	U7	91-30		044081	Orifice. 0.7, M6 x 8	1
E5	T1	91-30		679316	Orifice. 0.5, M6 x 8	1
	T2	91-30		578542	Orifice. 0.8, M6 x 8	1
	T3	91-30		578542	Orifice. 0.8, M6 x 8	1
	T4	91-30		578542	Orifice. 0.8, M6 x 8	1
	T5	91-30		913897 (9007712-0605)	Set screw	1
	T6	91-30		578542	Orifice. 0.8, M6 x 8	1
	T7	91-30		639096	Orifice. 0.6, M5 x 6	1
	T8	91-30		639096	Orifice. 0.6, M5 x 6	1
U5	U5	91-30		913897 (9007712-0605)	Set screw	1
	U6	91-30		511825	Orifice. 0.6, M6 x 8	1

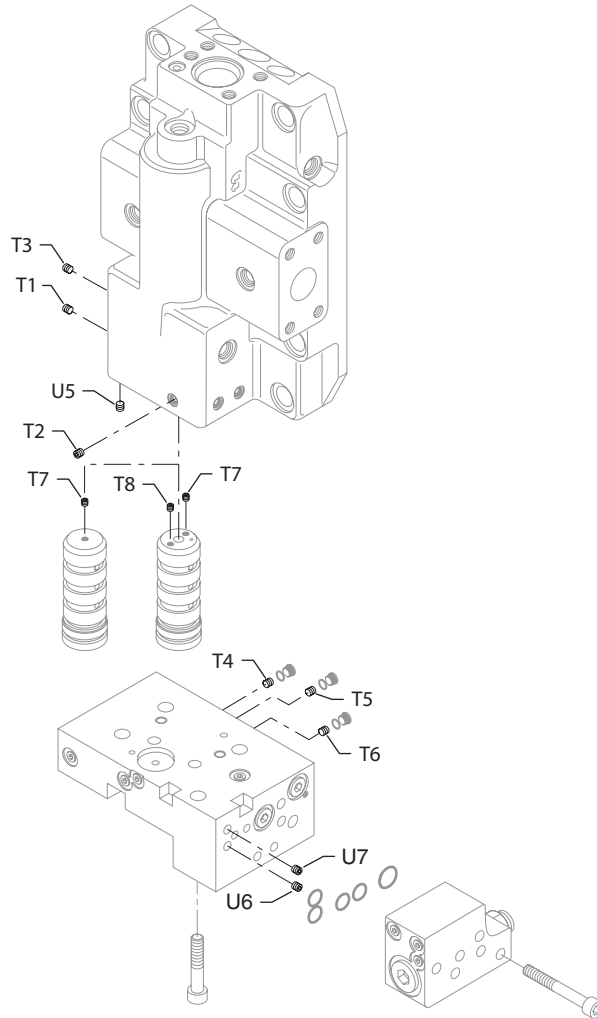


E100 315E

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

**ORIFICE**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit	
E6	T1	91-30		679316	Orifice. 0.5, M6 x 8	1	
	T2	91-30		578542	Orifice. 0.8, M6 x 8	1	
	T3	91-30		578542	Orifice. 0.8, M6 x 8	1	
	T7	91-30		639096	Orifice. 0.6, M5 x 6	1	
	T8	91-30		639096	Orifice. 0.6, M5 x 6	1	
	U5	91-30		913897 (9007712-0605)	Set screw	1	
E8	T1	91-30		679316	Orifice. 0.5, M6 x 8	1	
	T2	91-30		578542	Orifice. 0.8, M6 x 8	1	
	T3	91-30		578542	Orifice. 0.8, M6 x 8	1	
	T4	91-30		913897 (9007712-0605)	Set screw	1	
	T5	91-30		913897 (9007712-0605)	Set screw	1	
	T6	91-30		578542	Orifice. 0.8, M6 x 8	1	
	T7	91-30		639096	Orifice. 0.6, M5 x 6	1	
	T8	91-30		639096	Orifice. 0.6, M5 x 6	1	
	U5	91-30		913897 (9007712-0605)	Set screw	1	
	U6	91-30		511825	Orifice. 0.6, M6 x 8	1	
	U7	91-30		511825	Orifice. 0.6, M6 x 8	1	
	F1	T1	91-30		679316	Orifice. 0.5, M6 x 8	1
		T2	91-30		578542	Orifice. 0.8, M6 x 8	1
T3		91-30		578542	Orifice. 0.8, M6 x 8	1	
T5		91-30		578542	Orifice. 0.8, M6 x 8	1	
T7		91-30		639096	Orifice. 0.6, M5 x 6	1	
T8		91-30		639096	Orifice. 0.6, M5 x 6	1	
U6		91-30		578542	Orifice. 0.8, M6 x 8	1	
U7		91-30		578542	Orifice. 0.8, M6 x 8	1	
F5	T7	91-30		639096	Orifice. 0.6, M5 x 6	1	
	T8	91-30		639096	Orifice. 0.6, M5 x 6	1	
	U6	91-30		913897 (9007712-0605)	Set screw	1	
	U7	91-30		044081	Orifice. 0.7, M6 x 8	1	
F7	T2	91-30		578542	Orifice. 0.8, M6 x 8	1	
	T3	91-30		578542	Orifice. 0.8, M6 x 8	1	
	T4	91-30		578542	Orifice. 0.8, M6 x 8	1	
	T5	91-30		913897 (9007712-0605)	Set screw	1	
	T6	91-30		578542	Orifice. 0.8, M6 x 8	1	
	T7	91-30		639096	Orifice. 0.6, M5 x 6	1	
	T8	91-30		639096	Orifice. 0.6, M5 x 6	1	
	U5	91-30		913897 (9007712-0605)	Set screw	1	



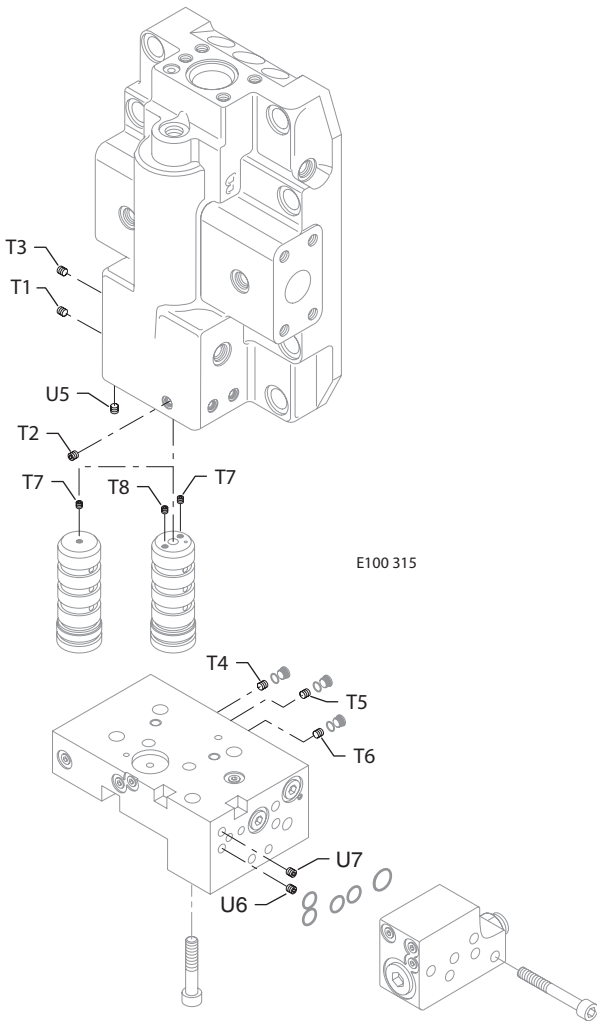
E100 315E

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

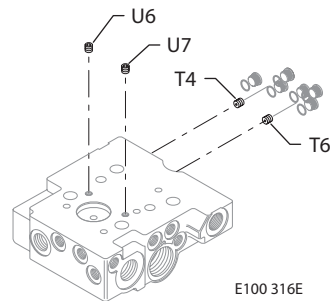


### ORIFICE

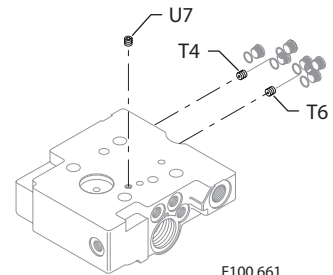
Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
F8	T1	91-30		578542	Orifice, 0.8, M6 x 8	1
	T2	91-30		578542	Orifice, 0.8, M6 x 8	1
	T3	91-30		578542	Orifice, 0.8, M6 x 8	1
	T4	91-30		913897 (9007712-0605)	Set screw	1
	T5	91-30		578542	Orifice, 0.8, M6 x 8	1
	T6	91-30		913897 (9007712-0605)	Set screw	1
	T7	91-30		639096	Orifice, 0.6, M5 x 6	1
	T8	91-30		639096	Orifice, 0.6, M5 x 6	1
G0	T1	91-30		578542	Orifice, 0.8, M6 x 8	1
	T2	91-30		679316	Orifice, 0.5, M6 x 8	1
	T3	91-30		679316	Orifice, 0.5, M6 x 8	1
G1	T1	91-30		578542	Orifice, 0.8, M6 x 8	1
	T2	91-30		679316	Orifice, 0.5, M6 x 8	1
	T3	91-30		679316	Orifice, 0.5, M6 x 8	1
	U6	91-30		578542	Orifice, 0.8, M6 x 8	1
	U7	91-30		578542	Orifice, 0.8, M6 x 8	1
G2	T1	91-30		578542	Orifice, 0.8, M6 x 8	1
	T2	91-30		679316	Orifice, 0.5, M6 x 8	1
	T3	91-30		679316	Orifice, 0.5, M6 x 8	1
	T5	91-30		913897 (9007712-0605)	Set screw	1
	U6	91-30		578542	Orifice, 0.8, M6 x 8	1
	U7	91-30		578542	Orifice, 0.8, M6 x 8	1
G5	T1	91-30		679316	Orifice, 0.5, M6 x 8	1
	T2	91-30		679316	Orifice, 0.5, M6 x 8	1
	T3	91-30		679316	Orifice, 0.5, M6 x 8	1
G6	T1	91-30		679316	Orifice, 0.5, M6 x 8	1
	T2	91-30		679316	Orifice, 0.5, M6 x 8	1
	T3	91-30		679316	Orifice, 0.5, M6 x 8	1
	U6	91-30		578542	Orifice, 0.8, M6 x 8	1
	U7	91-30		578542	Orifice, 0.8, M6 x 8	1
G7	T1	91-30		679316	Orifice, 0.5, M6 x 8	1
	T2	91-30		679316	Orifice, 0.5, M6 x 8	1
	T3	91-30		679316	Orifice, 0.5, M6 x 8	1
	T5	91-30		913897 (9007712-0605)	Set screw	1
	U6	91-30		578542	Orifice, 0.8, M6 x 8	1
	U7	91-30		578542	Orifice, 0.8, M6 x 8	1



E100 315



E100 316E

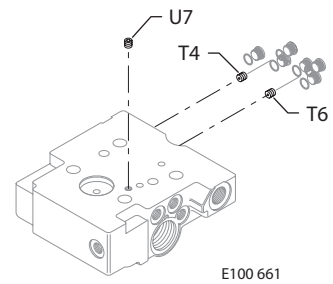
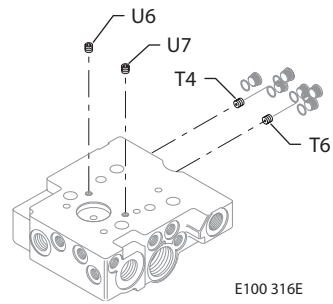
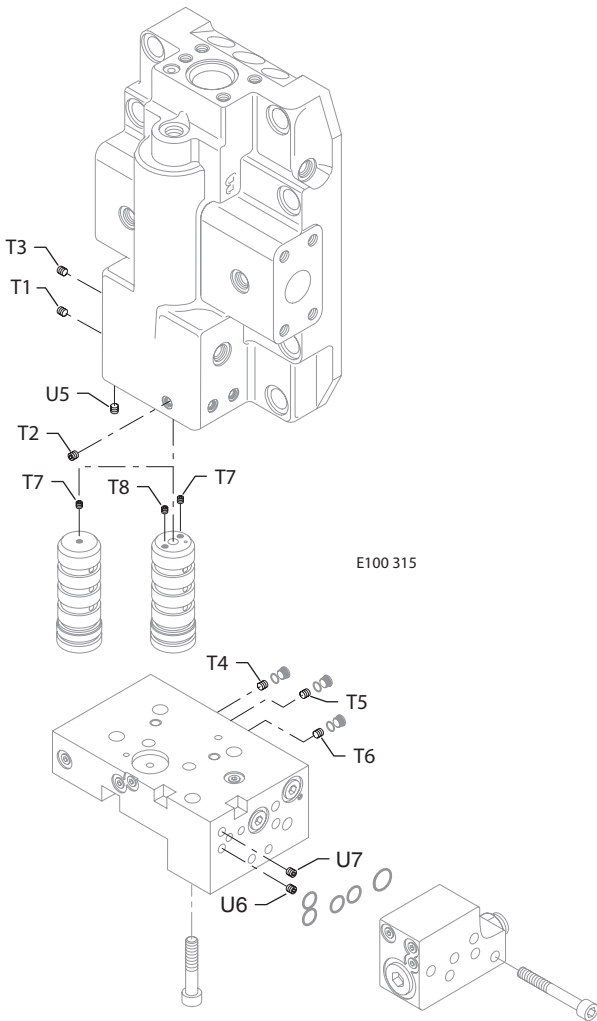


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Enlarged **bold** type item numbers are recommended part to stock for servicing.

**ORIFICE**

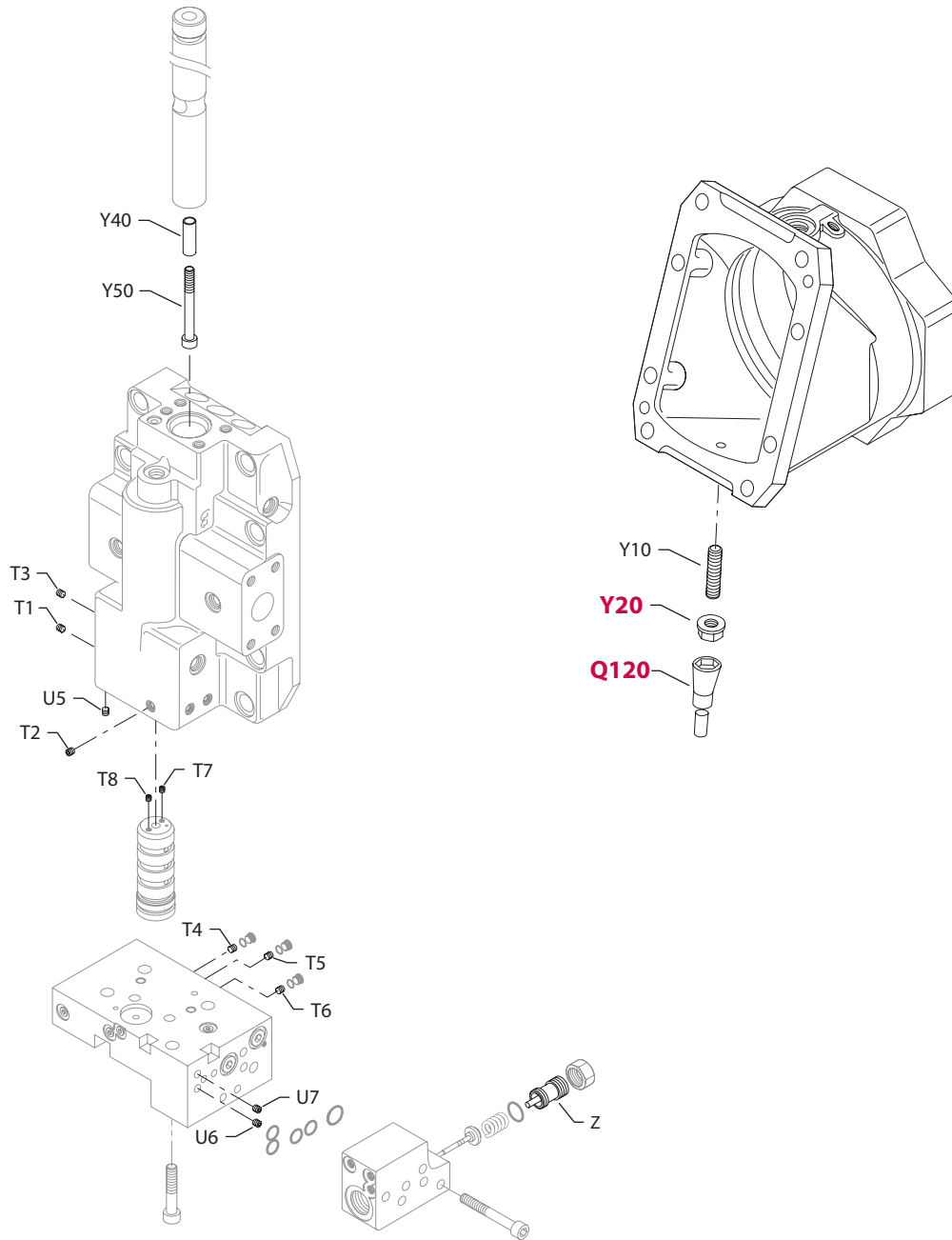
Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
G8	T1	91-30		679316	Orifice. 0.5, M6 x 8	1
	T2	91-30		679316	Orifice. 0.5, M6 x 8	1
	T3	91-30		679316	Orifice. 0.5, M6 x 8	1
	T5	91-30		913897 (9007712-0605)	Set screw	1
	T6	91-30		913897 (9007712-0605)	Set screw	1
	U6	91-30		578542	Orifice. 0.8, M6 x 8	1
	U7	91-30		578542	Orifice. 0.8, M6 x 8	1
H7	T1	91-30		578542	Orifice. 0.8, M6 x 8	1
	T2	91-30		578542	Orifice. 0.8, M6 x 8	1
	T3	91-30		578542	Orifice. 0.8, M6 x 8	1
	U5	91-30		913897 (9007712-0605)	Set screw	1
J1	T1	91-30		578542	Orifice. 0.8, M6 x 8	1
	T2	91-30		578542	Orifice. 0.8, M6 x 8	1
	T3	91-30		578542	Orifice. 0.8, M6 x 8	1
J2	T1	91-30		511825	Orifice. 0.6, M6 x 8	1
	T2	91-30		511825	Orifice. 0.6, M6 x 8	1
	T3	91-30		511825	Orifice. 0.6, M6 x 8	1
J5	T4	91-30		578542	Orifice. 0.8, M6 x 8	1
	T6	91-30		913897 (9007712-0605)	Set screw	1
	T7	91-30		639096	Orifice. 0.6, M5 x 6	1
	T8	91-30		639096	Orifice. 0.6, M5 x 6	1
	U6	91-30		578542	Orifice. 0.8, M6 x 8	1
	U7	91-30		578542	Orifice. 0.8, M6 x 8	1
	J6	T4	91-30		913897 (9007712-0605)	Set screw
T6		91-30		578542	Orifice. 0.8, M6 x 8	1
T7		91-30		639096	Orifice. 0.6, M5 x 6	1
T8		91-30		639096	Orifice. 0.6, M5 x 6	1
U6		91-30		578542	Orifice. 0.8, M6 x 8	1
U7		91-30		578542	Orifice. 0.8, M6 x 8	1
K1		T1	91-30		679316	Orifice. 0.5, M6 x 8
	T2	91-30		679316	Orifice. 0.5, M6 x 8	1
	T3	91-30		679316	Orifice. 0.5, M6 x 8	1
	U5	91-30		913897 (9007712-0605)	Set screw	1
K3	T2	91-30		511825	Orifice. 0.6, M6 x 8	1
	T7	91-30		639096	Orifice. 0.6, M5 x 6	1
	T8	91-30		639096	Orifice. 0.6, M5 x 6	1
	U7	91-30		511825	Orifice. 0.6, M6 x 8	1
K4	T2	91-30		578542	Orifice. 0.8, M6 x 8	1
	T3	91-30		578542	Orifice. 0.8, M6 x 8	1



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

**ORIFICE**

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
K7	T1	91-30		578542	Orifice, 0.8, M6 x 8	1
	T2	91-30		679316	Orifice, 0.5, M6 x 8	1
	T3	91-30		679316	Orifice, 0.5, M6 x 8	1
	T7	91-30		639096	Orifice, 0.6, M5 x 6	1
	T8	91-30		639096	Orifice, 0.6, M5 x 6	1
L1	T4	91-30		578542	Orifice, 0.8, M6 x 8	1
	T6	91-30		578542	Orifice, 0.8, M6 x 8	1
	T7	91-30		639096	Orifice, 0.6, M5 x 6	1
	T8	91-30		639096	Orifice, 0.6, M5 x 6	1
	U5	91-30		913897 (9007712-0605)	Set screw	1
	U6	91-30		044081	Orifice, 0.7, M6 x 8	1
	U7	91-30		044081	Orifice, 0.7, M6 x 8	1
L4	T1	91-30		578542	Orifice, 0.8, M6 x 8	1
	T7	91-30		639096	Orifice, 0.6, M5 x 6	1
	T8	91-30		639096	Orifice, 0.6, M5 x 6	1
L5	T1	91-30		578542	Orifice, 0.8, M6 x 8	1
	T3	91-30		679316	Orifice, 0.5, M6 x 8	1
M1	T4	91-30		578542	Orifice, 0.8, M6 x 8	1
	T6	91-30		578542	Orifice, 0.8, M6 x 8	1
	T7	91-30		639096	Orifice, 0.6, M5 x 6	1
	T8	91-30		639096	Orifice, 0.6, M5 x 6	1
	U7	91-30		044081	Orifice, 0.7, M6 x 8	1
M4	T2	91-30		578542	Orifice, 0.8, M6 x 8	1
	T3	91-30		578542	Orifice, 0.8, M6 x 8	1
	U7	91-30		511825	Orifice, 0.6, M6 x 8	1
M6	T1	91-30		578542	Orifice, 0.8, M6 x 8	1
	T2	91-30		578542	Orifice, 0.8, M6 x 8	1
	T3	91-30		578542	Orifice, 0.8, M6 x 8	1
	T5	91-30		913897 (9007712-0605)	Set screw	1
	U7	91-30		578542	Orifice, 0.8, M6 x 8	1
M7	T2	91-30		578542	Orifice, 0.8, M6 x 8	1
	T3	91-30		578542	Orifice, 0.8, M6 x 8	1
N1	T2	91-30		516598	Orifice, 1.2, M6 x 8	1
	T3	91-30		508014	Orifice, 1.0, M6 x 8	1
N3	T1	91-30		511825	Orifice, 0.6, M6 x 8	1
	T2	91-30		578542	Orifice, 0.8, M6 x 8	1
	T3	91-30		578542	Orifice, 0.8, M6 x 8	1



E100 659E

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

### ORIFICE

Order code	Item	Date begin	Date end	Part number	Part name	Qty. per model/kit
N5	T2	91-30		578542	Orifice, 0.8, M6 x 8	1
	T3	91-30		578542	Orifice, 0.8, M6 x 8	1
	T7	91-30		598292	Orifice, 0.8, M5 x 6	1
	T8	91-30		598292	Orifice, 0.8, M5 x 6	1
N6	T1	91-30		511825	Orifice, 0.6, M6 x 8	1
	T2	91-30		511825	Orifice, 0.6, M6 x 8	1
	T3	91-30		511825	Orifice, 0.6, M6 x 8	1
	U5	91-30		913897 (9007712-0605)	Set screw	1
N8	T1	91-30		578542	Orifice, 0.8, M6 x 8	1
	T2	91-30		679316	Orifice, 0.5, M6 x 8	1
	T3	91-30		578542	Orifice, 0.8, M6 x 8	1
	U6	91-30		578542	Orifice, 0.8, M6 x 8	1
	U7	91-30		578542	Orifice, 0.8, M6 x 8	1

### MINIMUM DISPLACEMENT

050-090	Q120	91-30		770842	Safety cap	1
	Y10	91-30		750646	Set screw, M12 x 75	1
	Y20	91-30		076042 (9003509-0012)	Seal nut, M12	1
091-130	Q120	91-30		770842	Safety cap	1
	Y10	91-30		749564	Set screw, M12 x 90	1
	Y20	91-30		076042 (9003509-0012)	Seal nut, M12	1
131-168	Q120	91-30		770842	Safety cap	1
	Y10	91-30		750653	Set screw, M12 x 100	1
	Y20	91-30		076042 (9003509-0012)	Seal nut, M12	1
177	Q120	91-30		770842	Safety cap	1
	Y10	91-30		689190 (9007712-1215)	Set screw, M12 x 50	1
	Y20	91-30		076042 (9003509-0012)	Seal nut, M12	1
	Y40	91-30		329136	Spacer, 35 mm	1
	Y50	91-30		091579	Screw, M10 x 110	1
N78	Y50	91-30		393751	Screw, M10 x 60	1

### PCOR ADJUSTER

00				No parts		
11-26	Z	91-30		745661	Adjuster, 70-260 bar	1
27-37	Z	91-30		745679	Adjuster, 270-420 bar	1
A1-C7				No parts		



Series 51: 250 cc Variable Displacement Motors  
Service Parts Manual  
Notes



**PRODUCTS AFFECTED**

All Series 51 motors

**SUBJECT**

End cap gasket change.

**DESCRIPTION**

Effective immediately, a new end cap gasket has been incorporated on all Series 51 motors. It is a direct replacement for the current gasket. The visible differences between the two gaskets are:

1. The new gasket is thicker. It measures .040" versus .030"
2. The new gasket has a red tint to the surface.

The new gasket is a stand alone gasket which should not be used with any sealing aid. The current torque values stay the same.

The new gaskets are now available and **MUST** be used in any repair or conversion.

**MODELS AFFECTED**

All series 51 motors

**SERIAL NUMBERS**

N/A

**PART NUMBERS AFFECTED**

Frame size	Old part number	New part number
60cc	729228	501198
80cc	734368	501199
110cc	734376	501200
160cc	734384	501201
250cc	734392	501202

**PARTS DISPOSITION**

- Interchangeable
- Scrap used parts
- Order replacement parts
- Revise existing part orders

**PRODUCTS AFFECTED**

Series 51: 60cc-250cc motors

**SUBJECT**

Threshold adjustment screw.

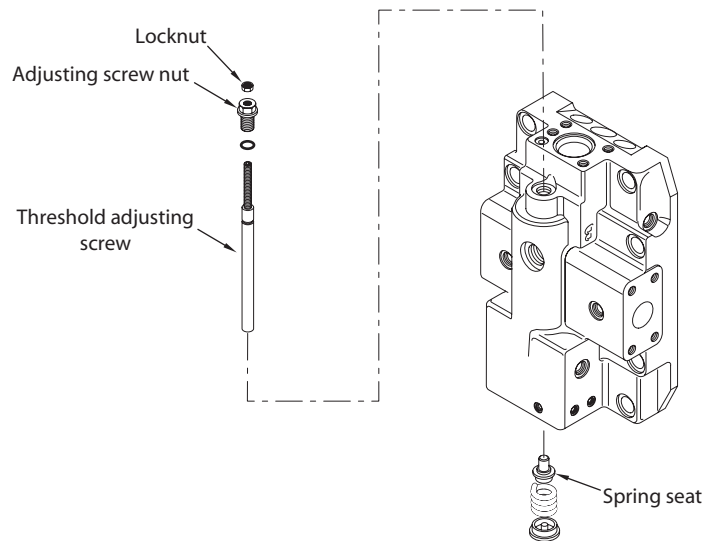
**DESCRIPTION**

To improve the sensitivity of the threshold adjustment on Series 51 motors, the threads on the adjusting screw are being changed from standard pitch thread to fine pitch thread. The adjusting screw nut and lock nut will also change. At the same time, the bore diameter in the end of the adjusting screw and the pin diameter on the end of the spring seat will decrease.

The old style parts will be obsolete and no longer available as service parts. A service kit containing the adjusting assembly and the spring seat has been created.

**Piece parts are not interchangeable.**

**All noted parts must be replaced.**



**MODELS AFFECTED**

All series 51: 60cc - 250cc motors

**SERIAL NUMBERS**

This change became effective at serial number N-96-07-xxxxx.

**PART NUMBERS AFFECTED**

Frame size	Old hardware				New kits
	Spring seat	Adjusting screw nut	Lock nut	Theshold adjusting screw	Threshold adjusting kit
60cc	722264	732487	69393	729251	507691
80cc	722264	732487	69393	732503	507692
80cc	722264	732487	69393	737353	507672
110cc	722264	732487	69393	732511	507693
110cc	722264	732487	69393	732503	507677
160cc	722264	732487	69393	792051	507694
250cc	722264	732487	69393	792069	507695

**PARTS DISPOSITION**

■ Interchangeable - Piece part are not interchangeable

**PRODUCTS AFFECTED**

All Series 51: 250 cc motors

**SUBJECT**

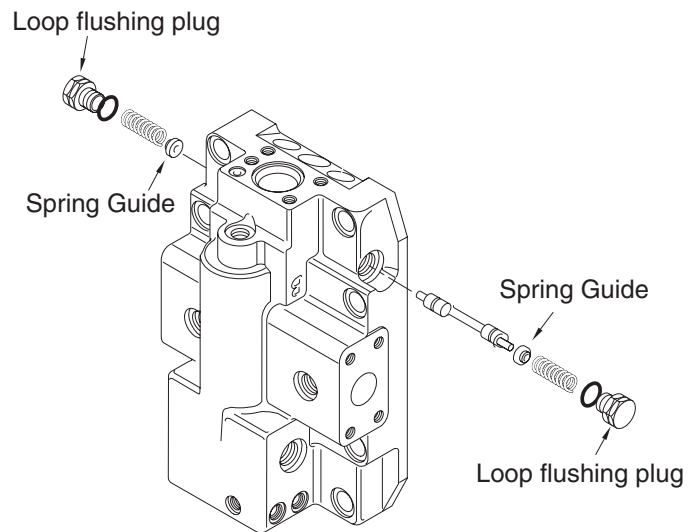
Loop flushing valve plugs and spring guides.

**DESCRIPTION**

To improve reliability, Sauer-Danfoss has changed the end cap on all Series 51, 250 cc motors built with axial system ported end caps after serial number N-95-12-xxxxx and motors built with radial system ported end caps after serial number N-95-20-xxxxx. The spot face for the loop flushing plugs have been recessed to accommodate the standard plugs (p/n 508302).

Early vintage motors used a long spacer as a spring guide. Under certain conditions, the spacer was found to cause mushrooming in the end cap and ultimately sticking of the spool. As a containment action, special longer plugs (p/n 5000472) were used with standard spring guides (p/n 4800353).

All Series 51, 250 cc motors built before serial number N-95-12-xxxxx with axial ports end caps and N-95-20-xxxxx with radial port end caps, should be converted to the longer plugs (p/n 5000472) and standard spring guides (p/n 4800353, at first repair.



**MODELS AFFECTED**

All series 51, 250 cc motors

**SERIAL NUMBERS**

N-95-12-xxxxx for motors with axial system ported end caps  
 N-95-20-xxxxx for motors with radial system ported end caps

**PART NUMBERS AFFECTED**

Description	Axial Ports before 95-11	Axial Ports after 96-12	Radial Ports before 95-19	Radial Ports after 95-20
Special Plug	5000472		5000472	
Standard plug		508302		508302
Spring guide	4800353	4800353	4800353	4800353

**PARTS DISPOSITION**

- Non-interchangeable
- Scrap used parts

**PRODUCTS AFFECTED**

Series 51: 60cc - 250cc motors

**SUBJECT**

Change to balanced areas between end cap and valve segment.

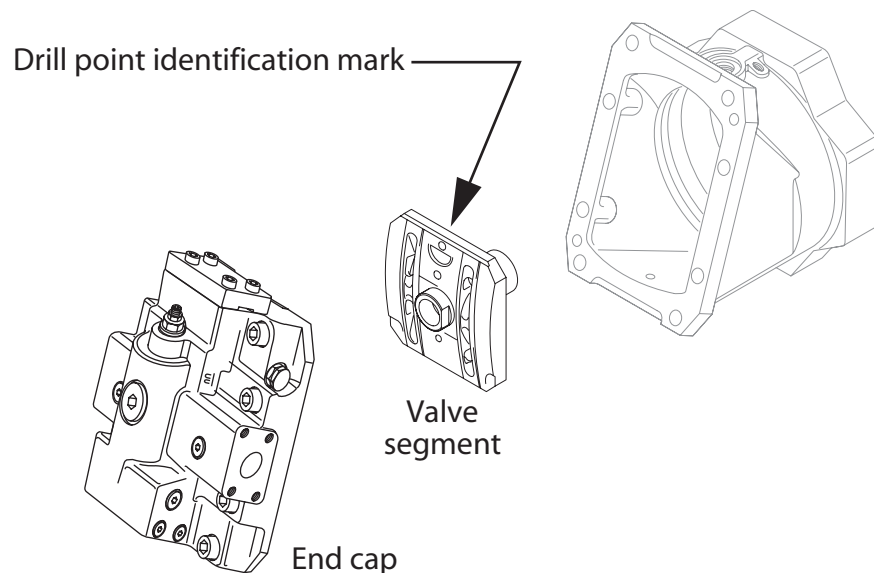
**DESCRIPTION**

As part of the continuing Series 51 product improvement program, the balance lands on the end cap and valve segment have been changed. The valve segment now defines the balance. The contact surface of the end cap has been made larger while the contact surface of the valve segment has been reduced. The change was implemented in three steps:

1. Change the valve segment so it defines the balance between the valve segment and the end cap. This change was implemented May 1994.
2. Change the end cap to allow a larger contact surface to keep the load area constant. This change was implemented January 1995
3. Change the valve segment to allow a smaller contact surface and reduce the balance. This change was implemented February 1996.

**Do not** use a new end cap with an old valve segment. However a new valve segment will work with an old end cap. The new valve segment (3rd step) is marked with a drill point on the cylinder block interface side next to the outer drain hole.

The old end cap and valve segment part numbers are obsolete. They are no longer available as genuine service parts.



**MODELS AFFECTED**

All Series 51 motors

**SERIAL NUMBERS**

N-96-12-xxxxx and later

**PART NUMBERS AFFECTED**

End caps	Radial ports		Radial ports		Axial ports		Axial ports	
	w/LF		w/o LF		w/LF		w/o LF	
	Old	New	Old	New	Old	New	Old	New
60cc	729210	504226	779793	504227	-	-	-	-
80cc	731794	504230	731794	504231	739615	504232	739615	504234
110cc	731802	504236	731802	504236	739631	504237	739631	504238
160cc	731810	504239	731810	504240	731828	504242	731828	504243
250cc	731836	504244	783282	504245	731844	504246	731844	504247

Valve segment	Standard spindle		Retained spindle	
	Old	New	Old	New
60cc	732701	504718	-	-
80cc	360354	503939	-	-
110cc	349076	504715	501349	507758
160cc	356139	507242	500341	507759
250cc	367896	508202	502561	508202

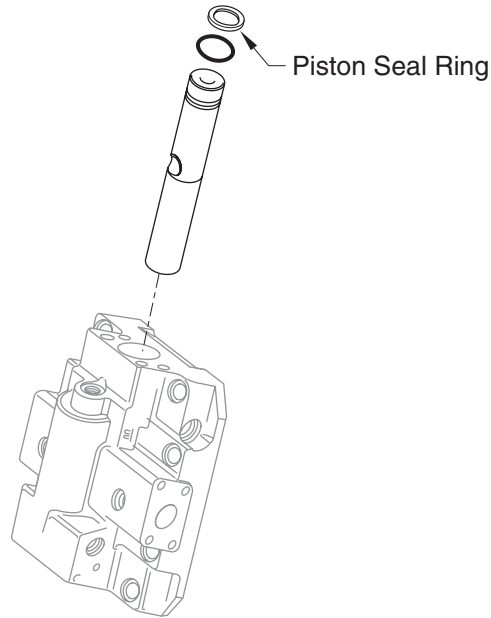
**PARTS DISPOSITION**

■ Interchangeable - except where noted

**PRODUCTS AFFECTED** Series 51: 60 thru 250cc variable motors

**SUBJECT** Servo piston seal ring change

**DESCRIPTION** As a product improvement, Sauer-Danfoss is changing the vendor for the servo piston seal ring used in the Series 51 variable motors. As a result, the old piston seal ring will become obsolete and no longer available as a service part.



**MODELS AFFECTED** All Series 51 motors

**SERIAL NUMBERS** N-96-08-xxxxx and after

**PART NUMBERS AFFECTED**

Frame size	Old part number	New part number
60cc	504202	508131
80cc	504203	508132
110cc	504204	508133
160cc	504205	508134
250cc	687277	504136

**PARTS DISPOSITION** ■ Interchangeable

**PRODUCTS AFFECTED**

Series 51: 60 thru 250cc variable motors

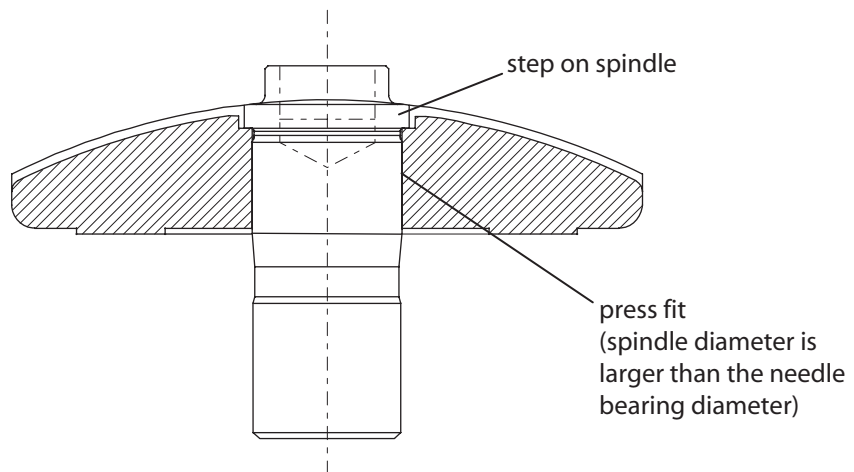
**SUBJECT**

Change to stepped spindle in valve segment

**DESCRIPTION**

As part of the continuing Series 51 product improvement, the valve segment spindle design has been changed. The new design spindle has a step that stops against a recess in the valve segment. The new stepped spindle valve segment assembly replaces the valve segment assemblies with the straight spindle and the retained spindle.

The old segment valve assemblies will become obsolete. The stepped spindle valve segment assembly will be the standard for all models.



**MODELS AFFECTED**

All Series 51 motors

**SERIAL NUMBERS**

N-96-08-xxxxx and after

**PART NUMBERS AFFECTED**

Frame size	Obsolete Straight spindle valve segment	Obsolete Retained spindle valve segment	New Stepped spindle valve segment
60cc	504718	-	508197
80cc	503939	-	508198
110cc	504715	507758	508199
160cc	507252	507759	508201
250cc	507757	507760	508202

**PARTS DISPOSITION**

■ Interchangeable - except where noted

**PRODUCTS AFFECTED**

All Series 51 & 51-1 motors

**SUBJECT**

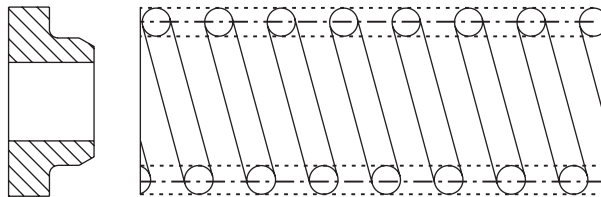
Change to spring and spring seat at ends of loop flushing shuttle spool.

**DESCRIPTION**

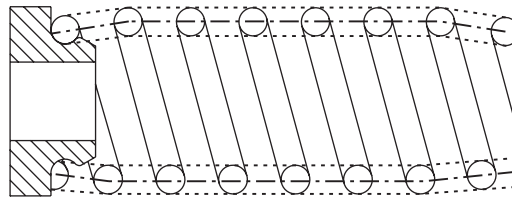
As a product improvement, and to ease assembly, the spring and spring seat at the ends of the loop flushing shuttle spool have been changed. The new spring and spring seat clip together. The old spring and spring seat are interchangeable with the new spring and spring seat as an assembly only.

The old spring seat will become obsolete and no longer available as a service part. The old spring will remain available as a service part.

From:



To:



**MODELS AFFECTED**

All Series 51 and 51-1 variable motors

**SERIAL NUMBERS**

This change became effective at serial number N-00-50-xxxxx

**PART NUMBERS AFFECTED**

From: Spring part number 4350286 and spring seat part number 4800353

To: Spring seat assembly part number 513596

**PARTS DISPOSITION**

■ Interchangeable - as an assembly only



**PRODUCTS AFFECTED**

All Series 51 & 51-1 motors

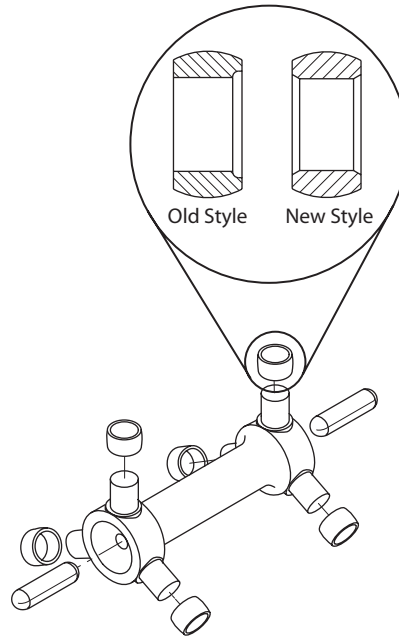
**SUBJECT**

Incorporation of symmetrical rollers on the synchronizing shaft

**DESCRIPTION**

As a product improvement and to improve ease of assembly, Sauer-Danfoss has changed the design of the rollers used on the synchronizing shaft in Series 51 and 51-1 motors. The new rollers are symmetrical, in that they can be assembled either direction on the synchronizing shaft. The old rollers were asymmetrical and had to be assembled only one way. The synchronizing shaft has also been changed to accept the symmetrical rollers. The legs for the rollers are now longer in length.

A service kit is available to replace the old design synchronizing shaft and rollers, which are obsolete and no longer available as service parts. The pins at each end of the synchronizing shaft are still the same parts.



**MODELS AFFECTED**

All Series 51 and 51-1 motors

**SERIAL NUMBERS**

Effective after N-01-39-xxxxx

**PART NUMBERS AFFECTED**

Frame size	Old kit part number	New kit part number
60cc	771675	517308
80cc	771121	517309
110cc	773267	516485
160cc	776823	517310
250cc	776831	517311

**PARTS DISPOSITION**

- Interchangeable; as an assembly only
- Use parts in stock

**PRODUCTS AFFECTED**

All Series 51 & 51-1 motors

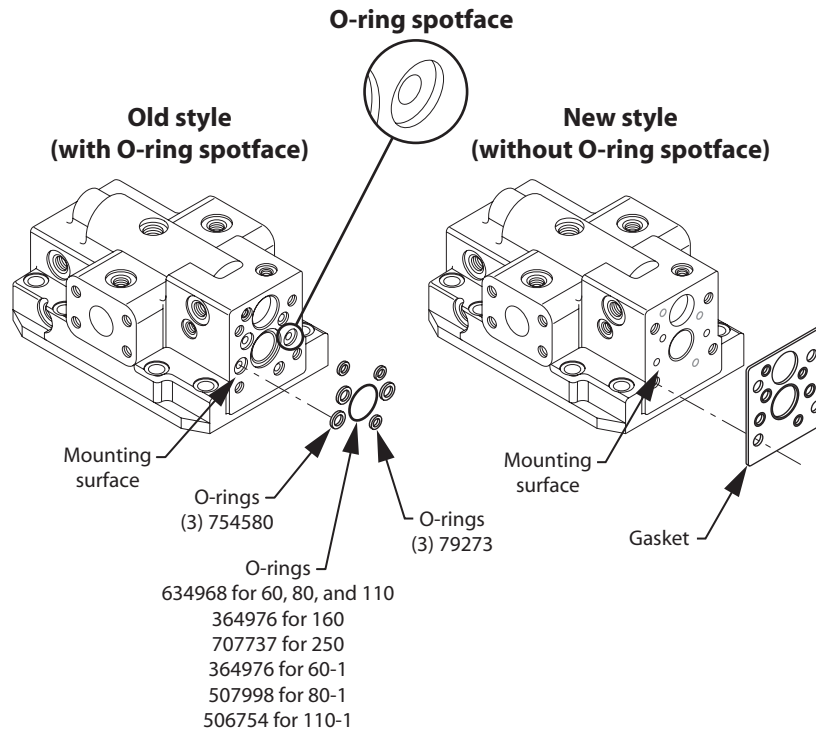
**SUBJECT**

Sealing change to end cap/control interface

**DESCRIPTION**

The sealing is improved between the end cap and controls or multi-function blocks on all Series 51 and 51-1 motors. This change replaces individual O-rings with a gasket that incorporates imbedded rubber seal rings. The O-ring spot faces are removed from the end cap mounting face. There is no change to controls' and multi-function blocks' sealing surface.

New end cap part numbers allow better control of this change. Old end cap part numbers are obsolete. You cannot use the new gasket with old end caps and you cannot use the O-rings with new end caps. Control and multi-function block kit now include the O-rings and the new gasket.



**MODELS AFFECTED**

All Series 51 and 51-1 motors

**SERIAL NUMBERS**

See table below

**PART NUMBERS AFFECTED**

End cap code	Frame size	Old part number	New part number	Manufacture date code	Gasket part number
R and T	60	504226	516057	N-03-14-xxxxx	511810
A	60	504228	515695	N-03-12-xxxxx	511810
R	60-1	506563	516902	N-03-39-xxxxx	512411
A	60-1	506564	516905	N-03-28-xxxxx	512411
H	60-1	510643	516920	N-03-28-xxxxx	512411
R and T	80	504230	515056	N-03-14-xxxxx	511810
A	80	504232	515696	N-03-27-xxxxx	511810
R	80-1	507976	516903	N-03-39-xxxxx	512411
A	80-1	507977	516907	N-03-39-xxxxx	512411
H	80-1	507978	516921	N-03-39-xxxxx	512411
R and T	110	504235	516058	N-03-14-xxxxx	511810
A	110	504237	513592	N-03-01-xxxxx	511810
R	110-1	506601	516904	N-03-39-xxxxx	512411
A	110-1	506602	515697	N-03-39-xxxxx	512411
H	110-1	510634	516923	N-03-39-xxxxx	512411
R	160	504239	516059	N-03-07-xxxxx	511851
A	160	504242	513543	N-03-01-xxxxx	511851
R	250	504244	516060	N-03-07-xxxxx	511851
A	250	504246	513544	N-03-08-xxxxx	511851

**PARTS DISPOSITION**

- Non-interchangeable;
- Order replacement parts



## OUR PRODUCTS

Hydrostatic transmissions  
Hydraulic power steering  
Electric power steering  
Electrohydraulic power steering  
Closed and open circuit axial piston pumps and motors  
Gear pumps and motors  
Bent axis motors  
Orbital motors  
Transit mixer drives  
Planetary compact gears  
Proportional valves  
Directional spool valves  
Cartridge valves  
Hydraulic integrated circuits  
Hydrostatic transaxles  
Integrated systems  
Fan drive systems  
Electrohydraulics  
Microcontrollers and software  
Electric motors and inverters  
Joysticks and control handles  
Displays  
Sensors

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

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

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

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

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

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

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