



Blurred on purpose. The manual you buy has this page in full quality.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

3.5 Maintenance table

No.	Maintenance work	Comment	every 10 operating hours, daily	every 250 oper. hours	every 500 oper. hours	every 1000 oper. hours	every 2000 oper. hours	every 6000 oper. hours	as required
5.6	Check the engine oil level	Dipstick mark	X						
5.7	Check the fuel level	Instrument cluster	X						
5.8	Check the hydraulic oil level	Inspection glass	X						
5.9	Check the coolant level	Inspection glass	X						
5.10	Lubricate the machine		X						
5.11	Service the scraper belt			X					
5.12	Service the auger			X					
5.13	Grease the screed extension sliding surface			X					
5.14	Lubricate the machine			X					
5.15	Check the central lubrication system, top up			X					
5.16	Clean the cooling fins on engine and hydraulic oil cooler			X					
5.17	Check the oil level in track drive gear			X					
5.18	Service the battery, check the battery main switch	pole grease		X					
5.19	Checking the condition and tension of the screed heating generator V-belt, tensioning and if necessary replacing the V-belt			X					
5.20	Change engine oil and oil filter cartridge*	min. 1x per year see foot note			X				
5.21	Check, tension, replace the V-belt				X				
5.22	Drain the fuel tank sludge				X				
5.23	Check, adjust tamper bar and floor plates				X				
5.24	Checking track, track drive				X				
5.25	Replace the fuel filter					X			
5.26	Change the fuel filter, bleed the fuel system					X			

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

ID	Error code (dec)	Error code (hex)	SPN (dec)	SPN (hex)	FMI	Blink code	Description	Self-curing[1]
AirFltSysReac	11	0B	107	0000006B	1, 11	1-3-6	Air filter: pressure loss above target range with system reaction	yes
APP1	12	0C	91	0000005B	2, 3, 4, 11	2-2-6	Accelerator pedal: cable break or short circuit, implausible compared to signal of idle sensor	no
APPPwm	14	0E	91	0000005B	2, 8	2-2-2	PWM accelerator pedal: bad signal (range or frequency), cable break or short circuit	yes
APPPwmPer	15	0F	91	0000005B	8, 11	2-2-2	PWM accelerator pedal: bad pulse-width repetition rate	yes
APSCD	16	10	108	0000006C	2, 3, 4, 11	2-9-2	ECU internal error: ambient pressure sensor defective	yes
ArHt1	17	11	729	000002D9	3, 4, 5, 11	2-6-3	Air heater relay: cable break or short circuit	yes
ArHt2	18	12	730	000002DA	3, 4, 5, 11	2-6-3	Air heater magnetic valve: cable break or short circuit	yes
ArHtCD_NoLd	19	13	676	000002A4	4, 11	2-6-3	Air heater relay: cable break or wrong connection	no
ArHtCD_RlyErr	20	14	676	000002A4	2, 5, 11	2-6-3	Air heater relay: inoperable during shut-off	no
BattCD	22	16	168	000000A8	0, 1, 11	3-1-8	Battery input (voltage 0-5V): outside target range	yes
BattCDSysReac	23	17	168	000000A8	2, 11	3-1-8	Battery voltage: above target range with system reaction	yes
BIPCyl1	24	18	3561	00000DE9	2	5-3-1	Begin of injection period in cylinder 1: outside target range or missing	yes
BIPCyl2	25	19	3562	00000DEA	2	5-3-2	Begin of injection period in cylinder 2: outside target range or missing	yes
BIPCyl3	26	1A	3563	00000DEB	2	5-3-3	Begin of injection period in cylinder 3: outside target range or missing	yes
BIPCyl4	27	1B	3564	00000DEC	2	5-3-4	Begin of injection period in cylinder 4: outside target range or missing	yes
BIPCyl5	28	1C	3565	00000DED	2	5-3-5	Begin of injection period in cylinder 5: outside target range or missing	yes
BIPCyl6	29	1D	3566	00000DEE	2	5-3-6	Begin of injection period in cylinder 6: outside target range or missing	yes
BIPCyl7	30	1E	3567	00000DEF	2	5-3-7	Begin of injection period in cylinder 7: outside target range or missing	yes
BIPCyl8	31	1F	3568	00000DF0	2	5-3-8	Begin of injection period in cylinder 8: outside target range or missing	yes
BPSCD	32	20	102	00000066	2, 3, 4	2-2-3	Charge air pressure sensor: cable break or short circuit	yes
BPSCDSysReac	33	21	102	00000066	2, 11	2-2-3	Charge air pressure: outside target range	yes
CLSCDSysReac	37	25	111	0000006F	1, 11	2-3-5	Coolant level: outside target range	no
CmbChbMisfire1	38	26	1323	0000052B	11, 12	2-4-1	Misfire detected in cylinder 1	no
CmbChbMisfire2	39	27	1324	0000052C	11, 12	2-4-1	Misfire detected in cylinder 2	no
CmbChbMisfire3	40	28	1325	0000052D	11, 12	2-4-1	Misfire detected in cylinder 3	no
CmbChbMisfire4	41	29	1326	0000052E	11, 12	2-4-1	Misfire detected in cylinder 4	no

PREVIEW KOMATSU.COM

Download full manual at youfixthis.com

11.1 Hydraulic diagram 2542306

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

11.2 Wiring diagram DE006010

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

6.10 Check the engine oil level

⚠ Danger

Danger of injury!

Support the engine hood for all maintenance and repair work.

⚠ Caution

The machine must be in horizontal position.

If the engine is warm, shut it down and check the oil level after five minutes.

With a cold engine the oil level can be checked immediately.

For quality of oil refer to the "table of fuels and lubricants".

- Open the engine hood.

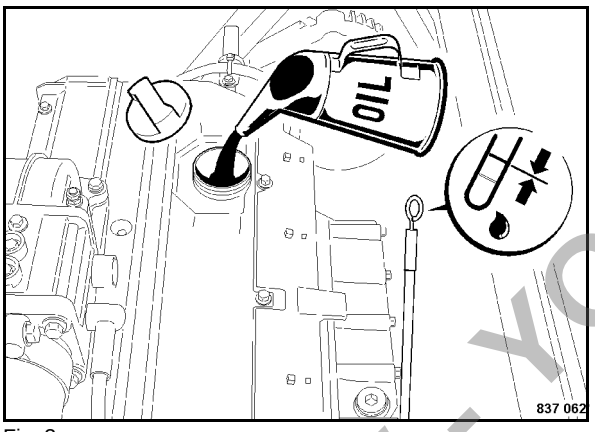


Fig. 3

- Pull the dipstick (Fig. 3) out, wipe it off with a lint-free, clean cloth and reinsert it until it bottoms.
- Pull the dipstick back out.
- The oil level must always be between the "MIN"- and "MAX"-marks. If the oil level is too low, top up oil to the "MAX" mark immediately.

6.11 Changing engine oil and oil filter cartridge

⚠ Danger

Danger of scalding!

When draining off hot oil.

By hot oil when unscrewing the engine oil filter.

⚠ Caution

Drain the oil only when the engine is warm.

For quality and quantity of oil refer to the "table of fuels and lubricants".

Environment

Catch running out oil and dispose of environmentally together with the oil filter cartridge.

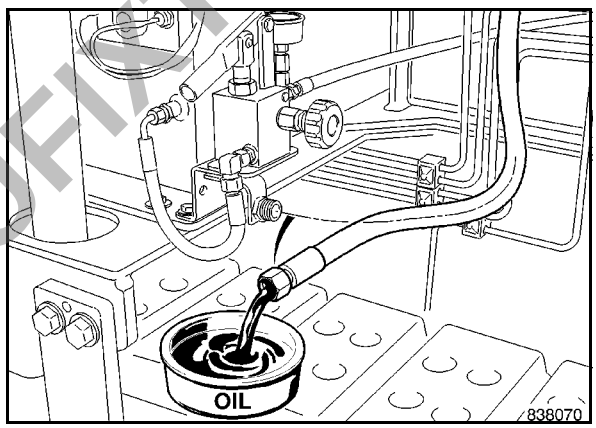


Fig. 4

- Unscrew the drain hose (Fig. 4) and catch running out oil.
- Fasten the drain hose again in place.

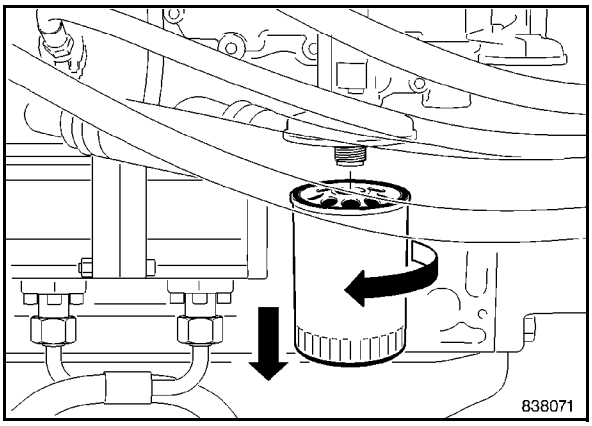


Fig. 5

- Thoroughly clean the outside of the filter cartridge (Fig. 5).
- Unscrew the filter cartridge using an appropriate filter wrench.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

General **7**

1.1 Introduction 8
1.2 Safety regulations 9
1.3 General repair instructions 13
1.4 Tightening torques 25

Technical data **29**

2.1 Technical data 30

Maintenance **39**

3.1 General notes on maintenance 40
3.2 Fuels and lubricants 41
3.3 Table of fuels and lubricants 44
3.4 Running-in instructions 45
3.5 Maintenance table 46

Fundamental electrics **49**

4.1 Understanding wiring diagrams 50
4.2 Circuit symbols in the circuit diagram 55
4.3 Battery ground and analog ground 56
4.4 Processor signals 56
4.5 Current and voltage 57
4.6 Pulse Width Modulation (PWM) 59
4.7 Resistance 61
4.8 Series / parallel connection 63
4.9 Ohm's law 65
4.10 Electrical energy 65
4.11 Formula diagram 66
4.12 Metrology 67
4.13 Diodes, relays, fuses 71
4.14 Inductive proximity switches 74
4.15 Plug connectors 75
4.16 Magnetic coil plug 76
4.17 Deutsch plug, series DT and DTM 78
4.18 Plugs and terminals in spring clamping technology 79
4.19 Batteries 83
4.20 Battery maintenance 87
4.21 Starting with jump wires 88
4.22 Main battery switch 88
4.23 Fuses 89
4.24 Replace heating elements 92
4.25 Failure codes, SAUER controller 95

Engine electrics **97**

5.1 Installation location for engine control unit 98
5.2 EMR3 system components 99
5.3 Pin assignment of engine control EDC16 / EMR3 104
5.4 Camshaft speed sensor 109
5.5 Crankshaft speed sensor 110
5.6 Rail pressure sensor 113

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Important notes

These safety regulations must be read and applied by every person involved in the repair /maintenance of this machine. The applicable accident prevention instructions and the safety regulations in the operating and maintenance instructions must be additionally observed.

Repair work shall only performed by appropriately trained personnel or by the after sales service of BOMAG.

Workshop equipment and facilities as well as the use and waste disposal of fuels and lubricants, cleaning agents and solvent as well as gases and chemicals are subject to legal regulations, which are intended to provide a minimum on safety. It is obviously your own responsibility to know and adhere to these regulations.

This manual contains headers like "Note", "Attention", "Danger" and "Environment", which must be strictly complied with in order to inform about and avoid dangers to persons, property and the environment.

i Note

Paragraphs marked like this contain technical information for the optimal economical use of the machine.

⚠ Caution

Paragraphs marked like this highlight possible dangers for machines or parts of the machine.

⚠ Danger

Paragraphs marked like this highlight possible dangers for persons.

Environment

Paragraphs marked like this point out practices for safe and environmental disposal of fuels and lubricants as well as replacement parts.

Observe the regulations for the protection of the environment.

General

- For repair and maintenance work move the machine on a firm base and shut it down.
- Always secure the machine against unintended rolling.
- Secure the engine reliably against unintentional starting.
- Mark a defective machine and a machine under repair by attaching a clearly visible warning label to the dashboard.
- Block the articulated joint with the articulation lock.
- Use protective clothes like hard hat, safety boots and gloves.
- Keep unauthorized persons away from the machine during repair work.
- Tools, lifting gear, lifting tackle, supports and other auxiliary equipment must be fully functional and in safe condition.
- Use only safe and approved lifting gear of sufficient load bearing capacity to remove and install parts or components from and to the machine.
- Do not use easily inflammable or harmful substances, such as gasoline or paint thinners for cleaning.
- Do not smoke or use open fire and avoid sparks when cleaning or repairing a tank.
- When performing welding work strictly comply with the respective welding instructions.

Transport work with cranes and lifting tackle

i Note

Cranes must only be operated by instructed persons who had been trained in handling cranes.

- Follow the operating instructions of the manufacturer when working with cranes.
- Follow the operating instructions of the operator when working with cranes.
- Always comply with the applicable accident prevention instructions when working with cranes and lifting tackle.

Precautions and codes of conduct for welding work

Welding work must only be carried out by properly trained personnel.

⚠ Danger

Electric shock!

Sparks, fire hazard, burning of skin!

Infrared or ultraviolet radiation (arc), flashing of eyes!

Health hazard caused by welding work on highly alloyed work pieces, metal coatings, paint coatings, plastic coatings, oil containing dirt deposits, grease or solvent residues, etc.!

- Check welding equipment and cables for damage before use (also the validity of inspection stickers).
- Ensure good conductivity between ground cable and workpiece, avoid joints and bearings.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

	5.7 Fuel pressure sensor	115
	5.8 Fuel control unit FCU	116
	5.9 Injectors	118
	5.10 Oil pressure sensor	119
	5.11 Charge air temperature - charge air pressure sensor	120
	5.12 EMR coolant temperature sensor	122
	5.13 Glow plugs	124
	5.14 Sensor, water in fuel, C39	125
	5.15 Air filter vacuum switch, C40	125
	5.16 Level probe coolant tank, C38	126
	5.17 Diagnostics interface	126
	5.18 Diagnose with CAN-bus	128
	5.19 Diagnose with SERDIA	129
	5.20 Fault code indication, diesel engine	132
	5.21 EMR3 List of fault codes	133
	5.22 Generator	206
	5.23 Electric starter	215
Engine		**223**
	6.1 Diesel engine	224
	6.2 Engine description TCD 2013, 4 and 6 cylinder	225
	6.3 Lubrication oil circuit TCD 2012 / 2013	229
	6.4 Coolant circuit TCD 2012 / 2013	230
	6.5 Fuel system TCD 2012 / 2013	231
	6.6 Deutz Common Rail (DCR) injection system for TCD 2012 / 2013	233
	6.7 Exhaust gas recirculation TCD 2012 / 2013	237
	6.8 Wastegate - charge pressure controller on TCD-engines	238
	6.9 Engine problems	240
	6.10 Check the engine oil level	244
	6.11 Changing engine oil and oil filter cartridge	244
	6.12 Replace the fuel filter cartridges.	245
	6.13 Changing the fuel filter, bleeding the fuel system	246
	6.14 Check, clean the water separator	248
	6.15 Check the coolant level	249
	6.16 Replacing the coolant	249
	6.17 Air filter maintenance	250
	6.18 Adjust the valve clearance	252
	6.19 Adjusting the control piston play	253
	6.20 Clean the cooling fins on engine and hydraulic oil cooler	254
	6.21 Check the engine mounts	255
	6.22 Replace the crank case ventilation valve	256
	6.23 Electronic injector test EMR	256
	6.24 Engine conservation	257
	6.25 Checking the condition and tension of the screed heating generator V-belt, tensioning and if necessary replacing the V-belt	257
	6.26 Check, tension, replace the V-belt	258
	6.27 Special tools, Deutz engine (TCD 2013 2V)	260
Hydraulics		**279**
	7.1 Hydraulic circuit	280

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

4 Fundamental electrics

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Replacing the heating element for the tamper

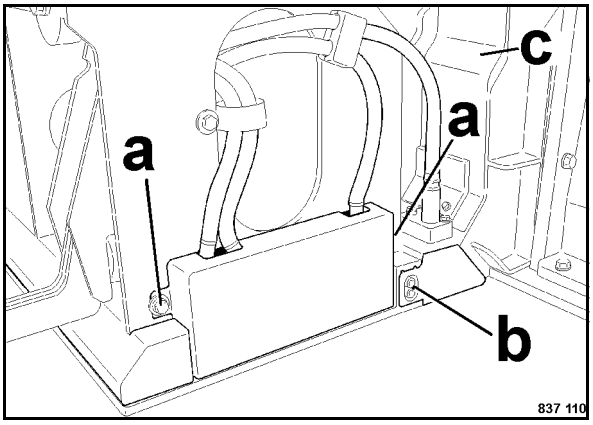


Fig. 9

- Unscrew the fastening screws b (Fig. 9) and take off the holding block.
- Remove the protection plate (c).
- Disconnect the cable inside the terminal box (Fig. 7).

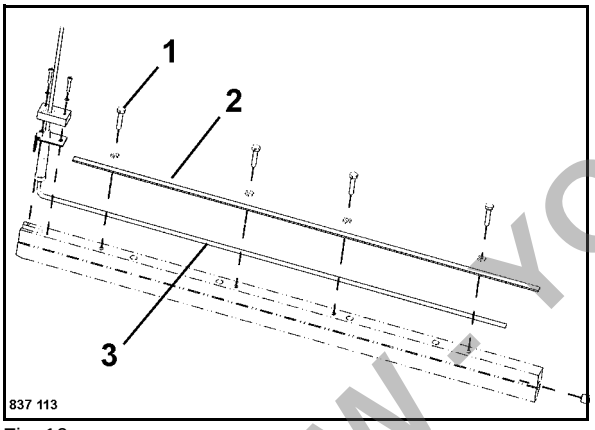


Fig. 10

- Loosen the fastening screws 1 (Fig. 10) for the terminal strip (2) and pull out the heating element.
- Slide in, fasten and connect a new heating element.

PREVIEW YOUFIXTHIS.COM

Download full manual at youfixthis.com

DTC-List
Diagnosis- and Errorcodes

referrenced ECU-Software
P490_: 220, 310, 501
P491_: 220, 310, 400, 501
P492_: 213
P513_: 214, 300

Deutz-Code / SPN / Fehlername	Seite
11 / 107 / AirFltSysReac	3
12 / 91 / APP1	3
14 / 91 / APPPwm	3
15 / 91 / APPPwmPer	4
16 / 108 / APSCD	4
17 / 729 / ArHt1	4
18 / 730 / ArHt2	5
19 / 676 / ArHtCD_NoLd	5
20 / 676 / ArHtCD_RlyErr	5
22 / 168 / BattCD	6
23 / 168 / BattCDSysReac	6
24 / 523561 / BIPCyl1	6
25 / 523562 / BIPCyl2	7
26 / 523563 / BIPCyl3	7
27 / 523564 / BIPCyl4	7
28 / 523565 / BIPCyl5	8
29 / 523566 / BIPCyl6	8
30 / 523567 / BIPCyl7	8
31 / 523568 / BIPCyl8	9
32 / 102 / BPSCD	9
33 / 102 / BPSCDSysReac	9
37 / 111 / CLSCDSysReac	10
38 / 1323 / CmbChbMisfire1	10
39 / 1324 / CmbChbMisfire2	10
40 / 1325 / CmbChbMisfire3	11
41 / 1326 / CmbChbMisfire4	11
42 / 1327 / CmbChbMisfire5	11
43 / 1328 / CmbChbMisfire6	12
44 / 1450 / CmbChbMisfire7	12
45 / 1451 / CmbChbMisfire8	12
46 / 1322 / CmbChbMisfireMul	13
47 / 1346 / CmbChbSysReac	13
48 / 1109 / CoEngShOffDemIgr	13
52 / 1072 / CRERCD	14
53 / 1081 / CSLpCD	14
54 / 704 / CTLpCD	14
55 / 110 / CTSCD	15
56 / 110 / CTSCDSysReac	15
57 / 701 / Dummy1CD_Max	15
58 / 701 / Dummy1CD_Min	16
59 / 701 / Dummy1CD_SigNpl	16
60 / 702 / Dummy2CD_Max	16
61 / 702 / Dummy2CD_Min	17
62 / 702 / Dummy2CD_SigNpl	17
69 / 2791 / EGRCD_Max	17
70 / 2791 / EGRCD_Min	18
71 / 2791 / EGRCD_SigNpl	18
72 / 2791 / EGRCDIntEGR	18
74 / 923 / EngCDTrqCalcOut	19
75 / 190 / EngMBackUp	19
76 / 190 / EngMCaS1	19
77 / 190 / EngMCrS1	20
78 / 190 / EngMOfsCaSCrS	20
79 / 190 / EngPrtSysReacFOC	20
80 / 190 / EngPrtSysReacORC	21
81 / 703 / ESLpCD	21
82 / 1074 / ExFlCD	21
83 / 975 / FanCD	22
85 / 1639 / FanCDEval	22
86 / 523602 / FanCDSysReac	22
87 / 97 / FlFCD	23
89 / 97 / FlFCD_WtLvl	23
90 / 94 / FlPSCD	23
91 / 94 / FlPSCDSysReac	24
94 / 523239 / FrmMngDecV1	24
95 / 523240 / FrmMngFunModCtl	24
106 / 523212 / FrmMngTOEngPrt	25
110 / 523216 / FrmMngTOPrHtEnCmd	25
112 / 523218 / FrmMngTORxCCVS	25
113 / 523604 / FrmMngTORxEngTemp	26
117 / 523238 / FrmMngTOSwtOut	26
118 / 523222 / FrmMngTOTCO1	26
120 / 523605 / FrmMngTOTSC1AE	27
121 / 523606 / FrmMngTOTSC1AR	27
122 / 523607 / FrmMngTOTSC1DE	27
123 / 523608 / FrmMngTOTSC1DR	28
124 / 523609 / FrmMngTOTSC1PE	28
125 / 898 / FrmMngTOTSC1TE	28
126 / 520 / FrmMngTOTSC1TR	29
127 / 523610 / FrmMngTOTSC1VE	29
128 / 523611 / FrmMngTOTSC1VR	29
131 / 523500 / FrmMngTxTO	30
133 / 174 / FTSCD	30
134 / 174 / FTSCDSysReac	30
136 / 523618 / GOTSCD	31
137 / 523619 / GOTSCDSysReac	31
138 / 29 / HdThrt	31
139 / 1638 / HOTSCD	32
140 / 1638 / HOTSCDSysReac	32
141 / 523617 / HWEMonCom	32
142 / 630 / HWEMonEEPROM	33
143 / 523612 / HWEMonRcyLocked	33
144 / 523612 / HWEMonRcySuppressed	33
145 / 523612 / HWEMonRcyVisible	34
146 / 523612 / HWEMonUMaxSupply	34
147 / 523612 / HWEMonUMinSupply	34
149 / 105 / IATSCD	35
150 / 105 / IATSCDSysReac	35
153 / 523350 / InjVlvBnk1A	35
154 / 523351 / InjVlvBnk1B	36
155 / 523352 / InjVlvBnk2A	36
156 / 523353 / InjVlvBnk2B	36
157 / 523354 / InjVlvChipA	37
158 / 523355 / InjVlvChipB	37
159 / 651 / InjVlvCyl1A	37
160 / 651 / InjVlvCyl1B	38
161 / 652 / InjVlvCyl2A	38
162 / 652 / InjVlvCyl2B	38
163 / 653 / InjVlvCyl3A	39
164 / 653 / InjVlvCyl3B	39
165 / 654 / InjVlvCyl4A	39

PREVIEW YOUFIXTHIS.COM
Download full manual at youfixthis.com

187 / 563 / MRlyCDMnRly2

Error description MAIN RELAY 2
Main relay 2 (in ECU): during the switching off, main relay does not switch on within an allowed time

Error codes
DEUTZ-Errorcode: 187
BlinkCode (short-long-short): 2 - 6 - 1
SPN: 563
possible FMI:
7: Mechanical system not OK
12: Defective component
12. Errormode not identifiable
12. Errormode not identifiable

Errordetection
Errorlamp shows permanent light. Entry in errormemory.

Possible reason for error
rapid shut-off of the ECU (without waiting till the end of the afterrun), ECU defective

Take actions for error repair
If error not removable, change ECU

other error properties
System reaction:
Behaviour error lamp: permanent light
Selfhealing: no
Signal Priority: 3
Measurement @ errortime: actual value

188 / 2634 / MRlyCDMnRly3

Error description MAIN RELAY
Main relay 3 (in ECU): during the switching off, main relay does not switch on within an allowed time

Error codes
DEUTZ-Errorcode: 188
BlinkCode (short-long-short): 2 - 6 - 1
SPN: 2634
possible FMI:
7: Mechanical system not OK
12: Defective component
12. Errormode not identifiable
12. Errormode not identifiable

Errordetection
Errorlamp shows permanent light. Entry in errormemory.

Possible reason for error
Short circuit to ground or emergency shut-off (relay 3 internal), rapid shut-off of the ECU (without waiting till the end of the afterrun), ECU defective

Take actions for error repair
Check cabling, check ECU, if error not removable, change ECU

other error properties
System reaction: Warning, shutoff the outputs MPROP (see BOSCH-Electricity operating plan)
Behaviour error lamp: permanent light
Selfhealing: no
Signal Priority: 3
Measurement @ errortime: actual value

189 / 523450 / MSSCD1

Error description MULTISTATE SWITCH 1
Multi state switch 1: the voltage measured by ECU is out of the target range or the swith setting is not plausible

Error codes
DEUTZ-Errorcode: 189
BlinkCode (short-long-short): 1 - 4 - 3
SPN: 523450
possible FMI:
3: Voltage to high or short circuit to +Ubatt
4: Voltage to low or short circuit to -Ubatt
12. Errormode not identifiable
2: data stream is defective

Errordetection
Errorlamp shows permanent light. Entry in errormemory.

Possible reason for error
Cable break or short circuit, input voltage outside target range (switch 1), switch defective, connection cable demaged

Take actions for error repair
Check cabling and sensor, check switch and if necessary replace it, check connection cable and if necessary repair or replace it

other error properties
System reaction: Warning, substitute value
Behaviour error lamp: permanent light
Selfhealing: yes
Signal Priority: 2
Measurement @ errortime: default value

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com
BOMAG

6.4 Coolant circuit TCD 2012 / 2013

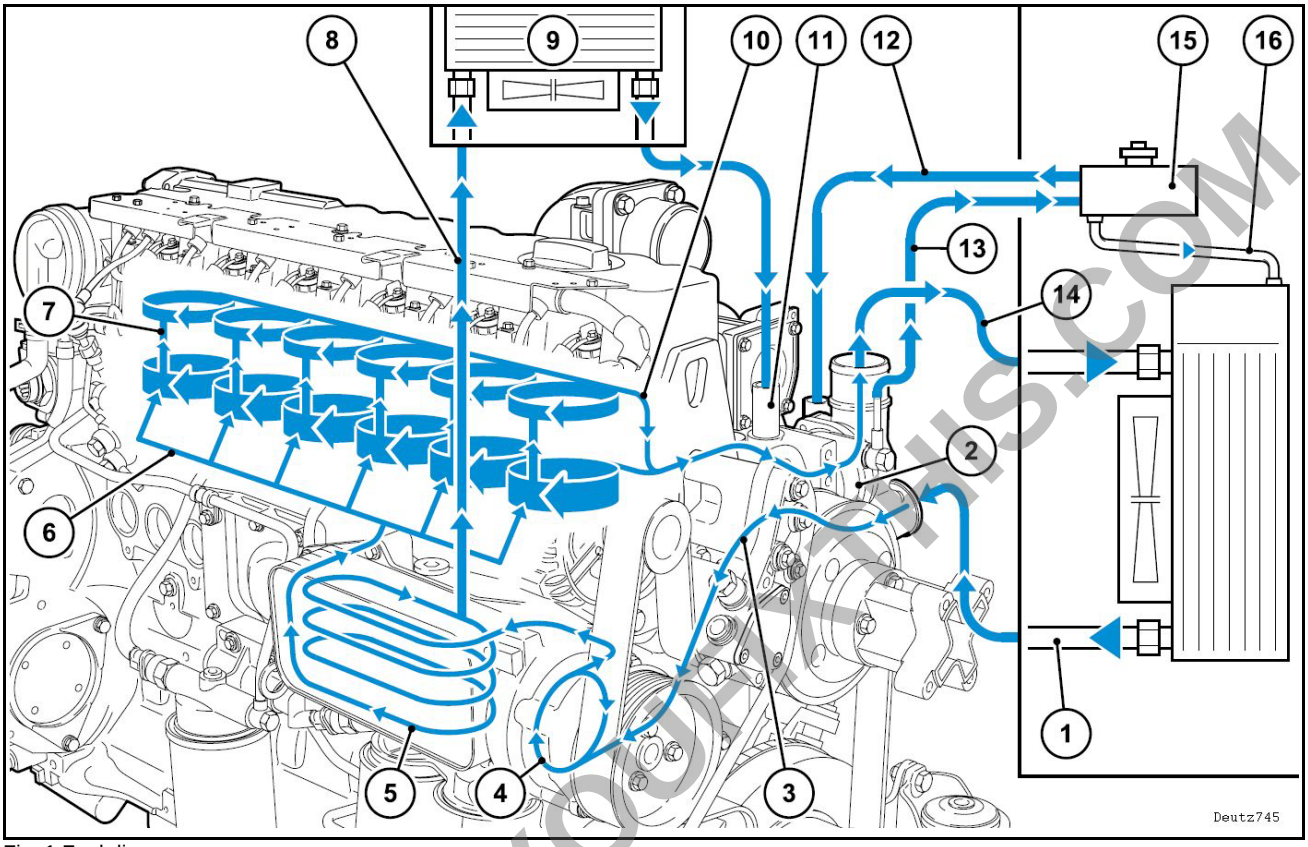


Fig. 1 Fuel diagram

1 Coolant outlet on radiator
2 Thermostat
3 Coolant - supply to water pump
4 Coolant pump
5 Lubrication oil cooler
6 Cylinder cooling
7 Cylinder liner / head cooling
8 Coolant flow to heater
9 Cabin heater (optional)
10 Coolant to thermostat
11 Connection for cabin heater
12 Compensation line
13 Ventilation line to compensation tank
14 Coolant outlet to radiator
15 Compensation tank
16 Compensation line to heat exchanger

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Special tools

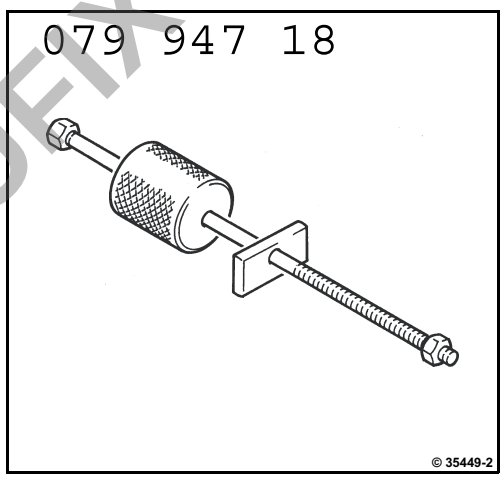
TCD 2013 2V

150 191
Washer
(in conjunction with assembly tool 150 190)
for liner diameter: 108 mm
Installing cylinder liner



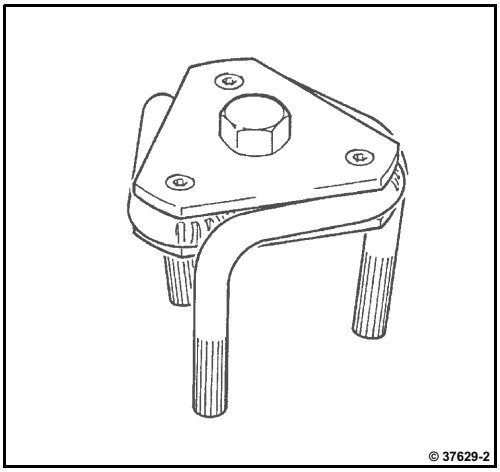
150 800
Slide hammer
(in conjunction with puller 120 680)
Removing injector sealing ring

079 947 18



170 050
Special wrench
Unscrewing the filter cartridges

079 947 28



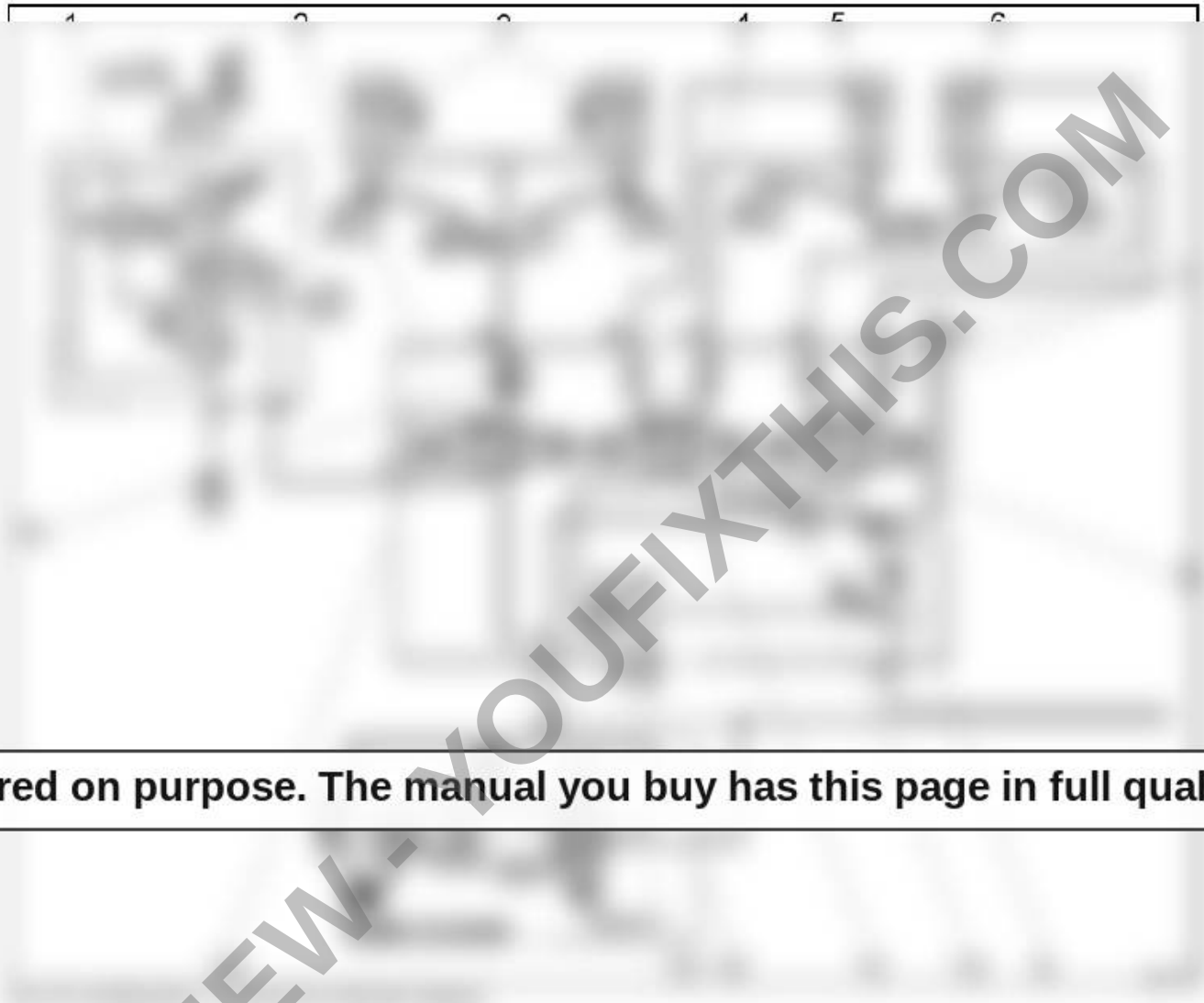
PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Levelling block

Valve block

The levelling block (2) (Fig. 45) is a valve block made up of three 4/3-way solenoid valves.



Blurred on purpose. The manual you buy has this page in full quality.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

8.2 Checking and adjusting the tamping process

⚠ Caution

Perform measurements at operating temperature of the hydraulic oil (40 °C).

Special tools

Hydraulic test case **[BOMAG Part-No.: 079 930 01]**

Pressure test tamper drive, mobile screed right and left

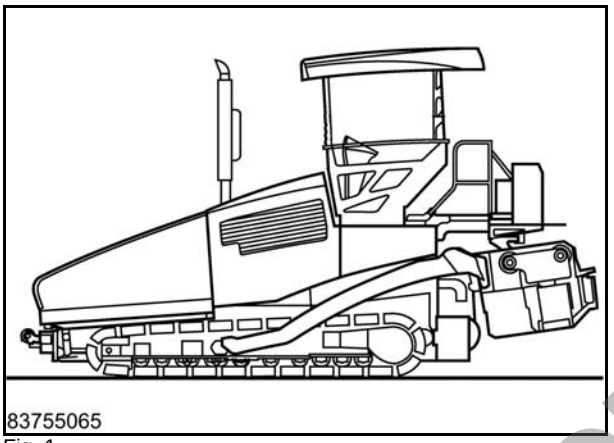


Fig. 1

1. Raise and lock the screed (Fig. 1).
2. Fully extend right and left hand screeds.
3. Shut down the engine.

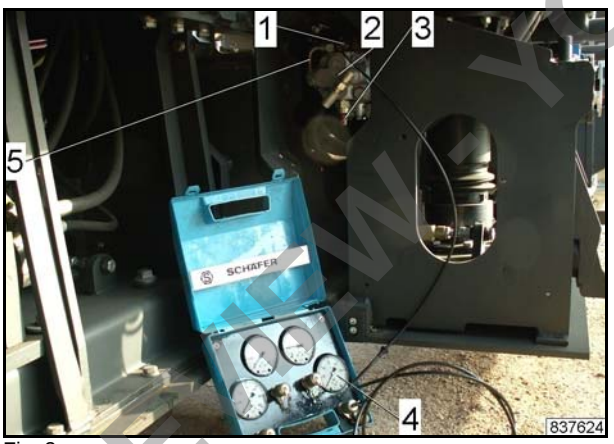


Fig. 2

⚠ Danger

Danger of injury!

Before connecting the pressure gauge make sure that the engine has been shut down!

i Note

Perform the following work steps also on the tamper motor, mobile screed left.

4. Disconnect the hydraulic line (5) (Fig. 2) from the tamper motor for the right mobile screed (2) and close the hydraulic line/port with a plugs.
5. Connect a high pressure gauge (600 bar) (4) to pressure test port M_1 (1) on the tamper motor for right mobile screed.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

SYMBOLS USED IN SAUER-DANFOSS LITERATURE

- WARNING may result in injury
- CAUTION may result in damage to product or property
- Reusable part
- Non-reusable part, use a new part
- Non-removable item
- Option – either part may exist
- Superseded – parts are not interchangeable
- Measurement required
- Flatness specification
- Parallelism specification
- External hex head
- Internal hex head
- Torx head
- O-ring boss port
- Tip, helpful suggestion
- Lubricate with clean hydraulic fluid
- Apply grease/petroleum jelly
- Apply locking compound
- Inspect for wear or damage
- Clean area or part
- Be careful not to scratch or damage
- Note correct orientation
- Mark orientation for reinstallation
- Torque specification
- Press in – press fit
- Pull out with tool – press fit
- Cover splines with installation sleeve
- Pressure measurement/gauge location or specification

The symbols above appear in the illustrations and text of this manual. They are intended to communicate helpful information at the point where it is most useful to the reader. In most instances, the appearance of the symbol itself denotes its meaning. The legend above defines each symbol and explains its purpose.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

MULTI-FUNCTION VALVE CARTRIDGES - PRE 1988 (continued)

Reassembly

9. Lubricate and install internal components (P01, P11, P09, P14, P15, and P21).
10. Install poppet seat (P1).
11. Install retaining ring (P22).
12. If previously removed, lubricate and install O-ring (P19).
13. If previously removed, reassemble and install bypass actuator (P14). Torque to 40 N•m [30 lbf•ft].
14. Lubricate and install new O-rings (P06, P13).

Caution

If pressure limiter was removed from bypass actuator (P14), adjust pressure limiter to model code specifications.

Caution

Do not overtorque the multi-function valve cartridges

15. Install cartridges and torque as shown in the table below.

Multi-function valve torque

Frame size	Torque
030 – 100	89 N•m [66 lbf•ft]
130 – 250	210 N•m [155 lbf•ft]

PRESSURE OVERRIDE VALVE (OPTION FOR 180 FRAME SIZE)

Removal

1. Remove the four screws attaching the pressure override valve to the pump end cap with a 5 mm internal hex wrench. Remove and discard the O-rings.

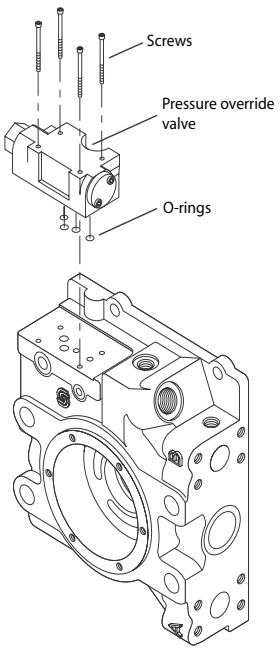
Inspection

2. Clean and inspect valve for damage to parts.

Reassembly

3. Install new O-rings. Install the valve onto the pump end cap and torque the screws to 16 N•m [12 lbf•ft].

Pressure override valve components



E101 079E

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

SERVO RELIEF VALVES (continued)

Installing servo relief valves

1. Install servo relief valves or relief valve passage plugs into the end cap or rotation block.
2. Install servo relief valves in the end cap or rotation block of pumps with pressure limiter functions or relief valves.
3. Install the rotation pipe plugs into the end cap or rotation block. ⚠

⚠ Warning

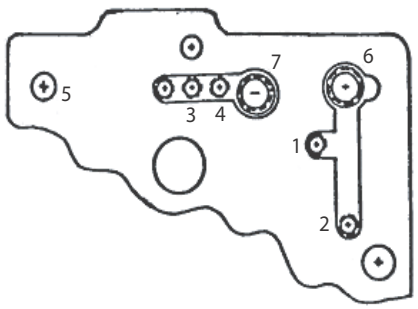
Make sure the pressure limiter logic plugs are in the correct ports for pump rotation. Uncontrollable machine movement results from improper plug installation. Verify correct pressure limiter function. Test the pump before installing in machine. Also, test it before releasing the machine from repair.

4. Torque the servo relief valves or relief valve passage plugs to 12.2 N•m [9.0 lbf•ft].
5. Torque the rotation pipe plugs to 5.4 N•m [4 lbf•ft].
6. Install rotation block, gasket, and screws, if used.
7. Torque the rotation block screws to 16.3 N•m [12.0 lbf•ft].

Specifications

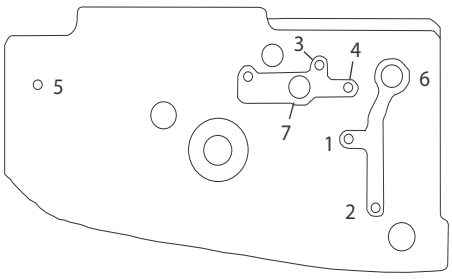
Pressure limiter		Pump rotation	Holes with pipe plugs	Holes with servo relief valves	Holes with O-ring plugs	Open holes
Port A	Port B					
Yes	Yes	Right (CW)	1, 3	6, 7	None	2, 4, 5
Yes	Yes	Left (CCW)	2, 4	6, 7	None	1, 3, 5
No	No	Either	1, 2, 5	None	6	3, 4, 7
Yes	No	Right (CW)	1, 3, 5	6	None	2, 4, 7
Yes	No	Left (CCW)	2, 4, 5	6	None	1, 3, 7
Yes	Yes	Right (CW) with automotive control	1, 3	None	6, 7	2, 4, 5
Yes	Yes	Left (CCW) with automotive control	2, 4	None	6, 7	1, 3, 5

030 twin ported end cap (early units)



P104 189

030 Twin ported end cap



P104 190

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

PRESSURE CONTROL PILOT (PCP) FOR ELECTRIC DISPLACEMENT CONTROL (EDC)

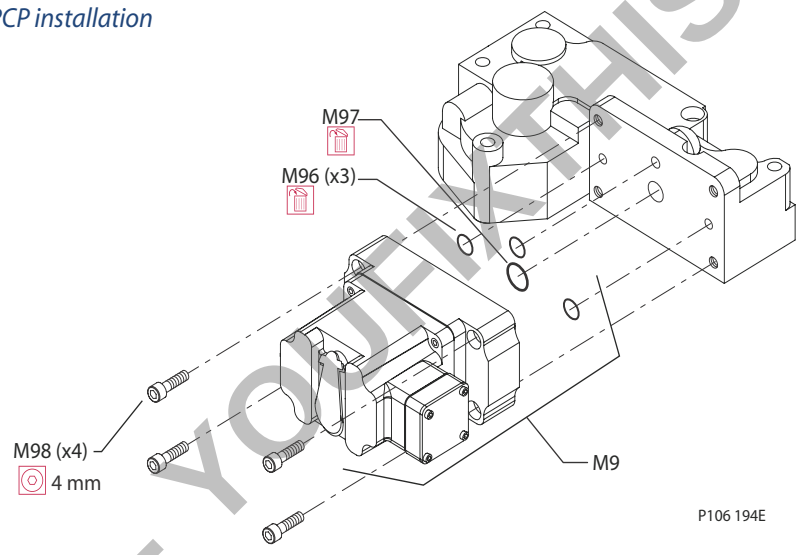
Assembly

1. Using petroleum jelly to retain them, install new O-rings (M96 and M97) in PCP Housing.

2. Place PCP against EDC housing and using a 4 mm internal hex, install the screws (M98). Torque to 5.4 N•m [4 lbf•ft].

Do not remove black plastic cover from the aluminum plate. This is not a serviceable item and removal voids the product warranty.

PCP installation



PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

MAXIMUM DISPLACEMENT LIMITER

Limit the maximum displacement by setting the stroke of the servo piston. A stop screw and spacer is on the servo piston to limit the maximum displacement of the motor to less than 100%. Spacers are available in 5% increments.

⚠ WARNING
Adjusting the maximum displacement limiter can result in undesirable or unsafe speed conditions. Consult with the Original Equipment Manufacturer or your Sauer-Danfoss representative before changing the maximum displacement setting.

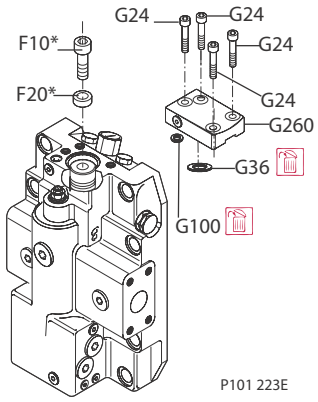
Limit the displacement by using spacers on the displacement stop screw. When changing the maximum displacement, you may need a different length screw to accommodate the alternate spacers.

Detect changes in motor displacement by providing a constant flow of fluid to the motor, while maintaining the motor at maximum displacement and monitoring the motor output shaft speed.

An increase in displacement results in a decrease in shaft speed. A decrease in displacement results in an increase in shaft speed.

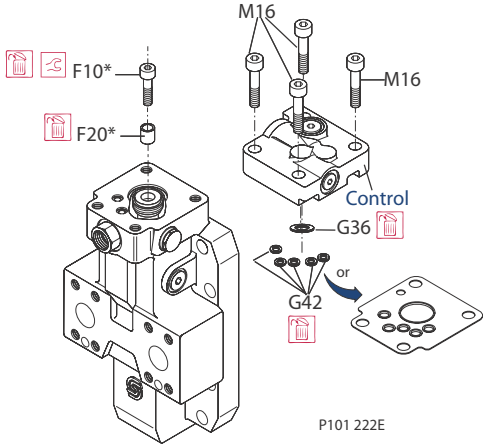
Series 51 motors

Series 51 Maximum displacement limiter



1. Remove the 4 screws (G24) retaining the servo cover (G260) using:
   - an 8mm hex wrench (060cm³, 080cm³, 110cm³, and 160cm³ motors),
   or:
   - a 10 mm hex wrench (250cm³ motors).
2. Remove the servo cover (G260) and O-rings (G36) and (G100).
3. Remove the displacement limiter screw (F10) and spacer (F20)(if used) with a 10 mm hex wrench for 60cm³, 80 cm³, 110 cm³, 160 cm³ and 250 cm³ motors.
4. Save original spacer, replacing each with the appropriate spacer and screw to achieve the desired maximum displacement. (See the *chart on the next page*).

Series 51-1 Maximum displacement limiter



Series 51-1 motors

1. Remove the 4 screws (M16) retaining the control assembly using an 8 mm hex wrench.
2. Remove the control assembly.
3. Remove interface (G36) and O-rings (G42) or seal plate.
4. Add appropriate spacer (F20) and screw to achieve the desired displacement (see *chart below*).

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

ENDCAP ASSEMBLY (continued)

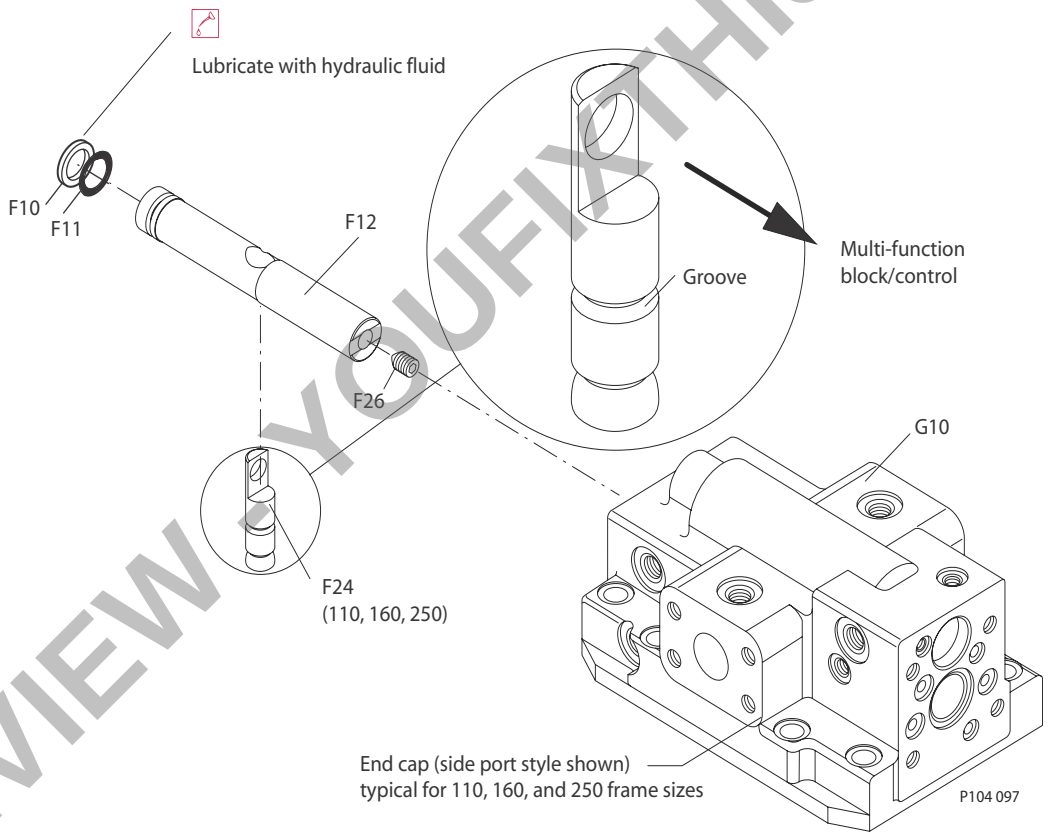
110-250 frames

1. Install feedback fork (F24) / setting lug into the servo piston from inside of the endcap.

The offset of the fork must be away from the multi-function block / control end of the end cap.

2. Install the cone-point set screw (F26) so that its point enters the groove in the feedback fork (F24) / setting lug. Do not tighten the set screw yet. See page 21 for final assembly instructions.

Cone-point screw and feedback fork



PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

8.0 SMONTAGGIO

8.0 DISASSEMBLY



8.

Sfilare il pacco dei dischi freno (23-24).

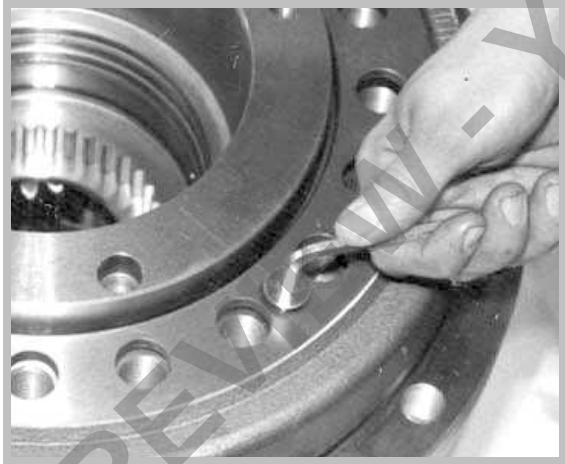
Remove brake discs pack (23-24).



9.

Togliere la guarnizione O-ring (30) e l'anello antiestrusione (31) dalle proprie sedi situate nel mozzo flangiato (18).

Remove the O-ring seal (30) and the backup ring (31) from their seats in the flanged hub (18).



10.

Svitare le n°3 viti TSPEI M10x25 (22), classe di resistenza 10.9, che fissano l'anello ritegno (20) al mozzo flangiato (18).

Unscrew the nos.3 flathead screws M10x25 (22) grade 10.9, which fix the cover (20) to the flanged hub (18).



11.

Sfilare l'anello ritegno (20).

Remove the cover (20).

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

PREVIEW - YOUFIXTHIS.COM

Blurred on purpose. The manual you buy has this page in full quality.

Download full manual at youfixthis.com

PREVIEW ONLY

You're viewing 25 of 778 pages

The full manual includes:

- All 778 pages, complete
- Searchable PDF (find any keyword)
- No watermarks
- Instant download
- Print-ready quality

GET FULL MANUAL NOW

Bomag BF 600 C-HSE, BF 600 C-HCE Service Manual

Scan or click anywhere
youfixthis.com

Click anywhere on this page to get the full manual