



NEW HOLLAND

REPAIR MANUAL FOR CNH U.K. ENGINES F4GE0454C F4GE0484G

Product: New Holland CNH U.K. ENGINES F4GE0454C, F4GE0484G Service Repair Workshop Manual
Full Download: <https://www.arespairmanual.com/downloads/new-holland-cn-h-u-k-engines-f4ge0454cf4ge0484g-service-repair-workshop-manual/>

REPAIR MANUAL FOR CNH U.K. ENGINES

F4GE0454C F4GE0484G

Sample of manual. Download All 117 pages at:
<https://www.arespairmanual.com/downloads/new-holland-cn-h-u-k-engines-f4ge0454cf4ge0484g-service-repair-workshop-manual/>

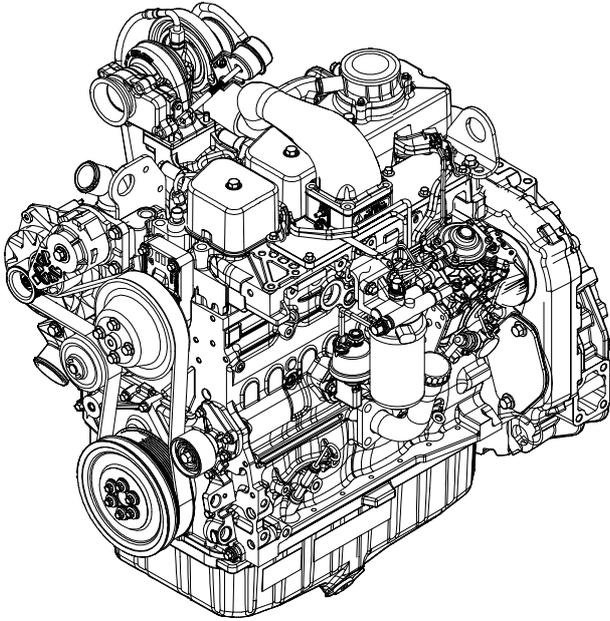
Print No. 604.13.612
English - Printed in Italy



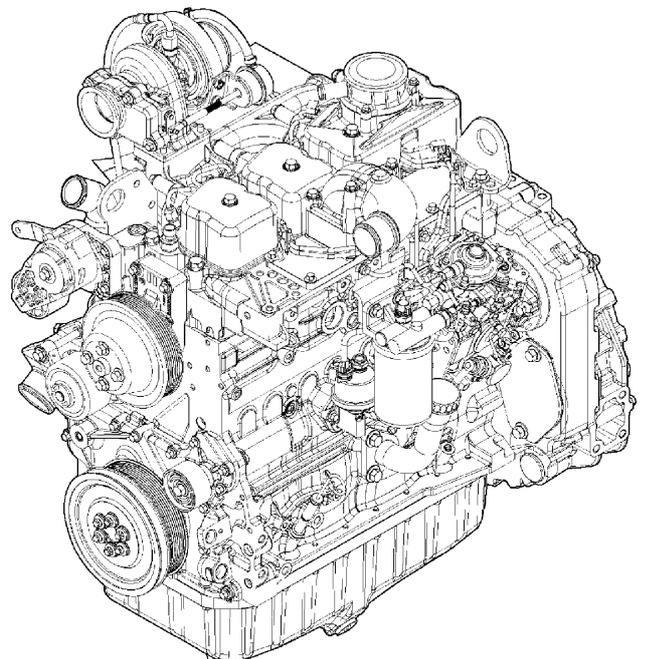
REPAIR MANUAL FOR CNH U.K. ENGINES

F4GE0454C – F4GE0484G

The following models are to integrate repair manuals:
NEW HOLLAND LB90.B – LB95.B – LB110.B – LB115.B



F4GE0454C



F4GE0484G

Every information, illustration and specification contained in the present manual is based on the most recent information available at the time of printing.

NEW HOLLAND reserves the right, to modify the text at any time without prior communication.

Sample of manual. Download All 117 pages at:

<https://www.arepairmanual.com/downloads/new-holland-cn-h-u-k-engines-f4ge0454cf4ge0484g-service-repair-workshop-manual/>

NEW HOLLAND
PRINT NO. 604.13.612
Edition – April 2006

UNIT OF MEASURE

This manual adopts the units of measure based on the International System.

The MKSA system units of measure are indicated within brackets after the units of measure of the International System.

Example: 24.5 Mpa (250 kgf/cm²).

The following table converts the International System units of measure in some of the main units belonging to other systems.

Quantity	To convert from (IS)	in (Others)	Multiply by	Quantity	To convert from (IS)	in (Others)	Multiply by
Length	mm	in	0.03937	Pressure	MPa	kgf/cm ²	10.197
	mm	ft	0.003281		MPa	psi	145.0
Volume	L	US gal	0.2642	Power	kW	PS	1.360
	L	US qt	1.057		kW	HP	1.341
	m ³	yd ³	1.308	Temperature	°C	°F	°C x 1.8 + 32
Mass	kg	lb	2.205	Speed	km/h	mph	0.6214
Force	N	kgf	0.10197		min ⁻¹	rpm	1.0
	N	lbf	0.2248	Capacity	L/min	US gpm	0.2642
Torque	N.m	kgf.m	0.10197		mL/rev	cc/rev	1.0
	N.m	lbf.ft	0.7375				

ENGINES

INDEX OF SECTIONS



Section 1 – Diagnostics

EW-1-1



Section 2 – Engines overhaul:
– F4GE0454C
– F4GE0484G

EW-2-1



Section 3 – Recharging and start-up

EW-3-1

DIAGNOSTICS



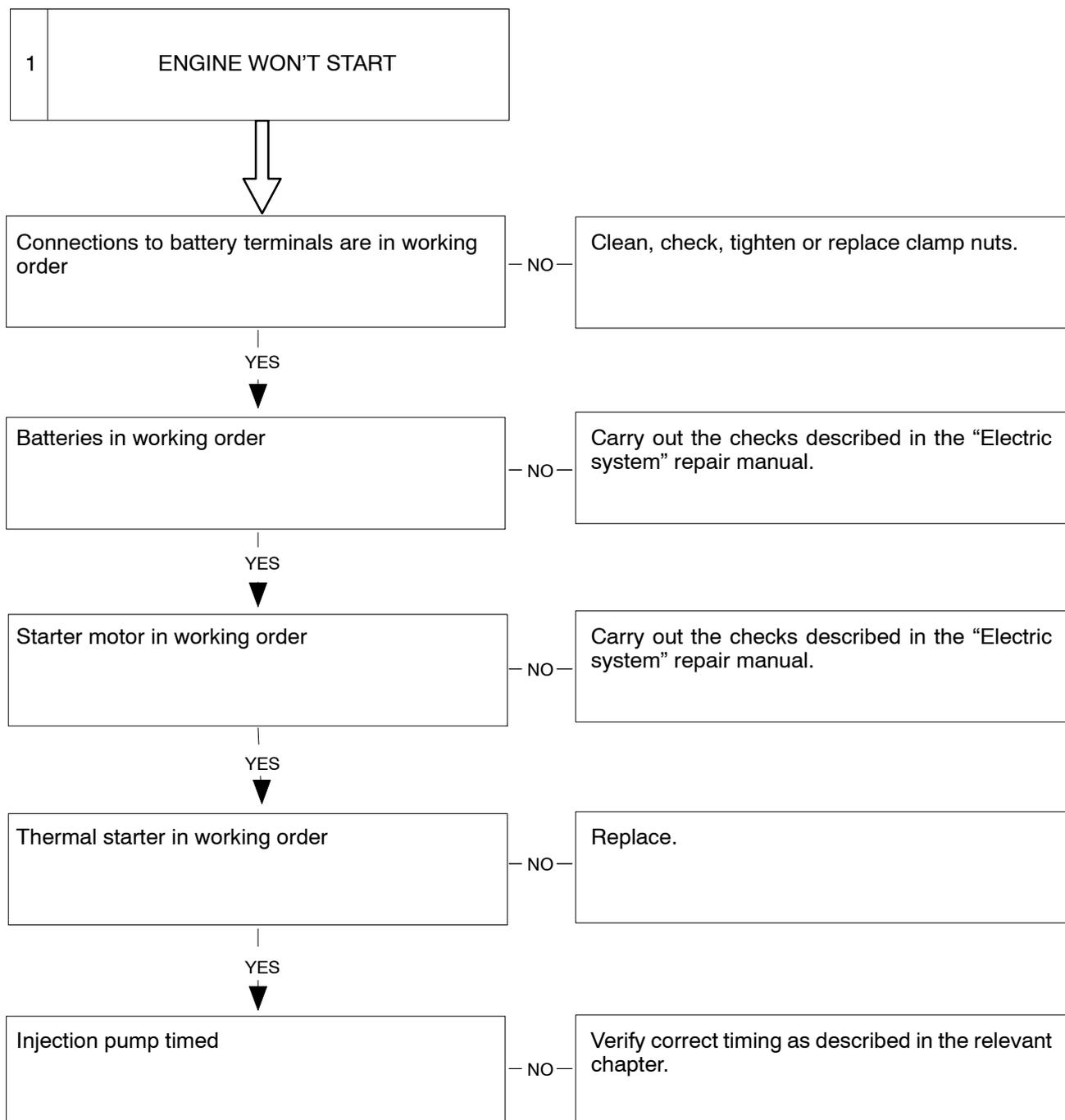
INDEX

Diagnostics	EW-1-3
Main engine operating anomalies ...	EW-1-3

DIAGNOSTICS

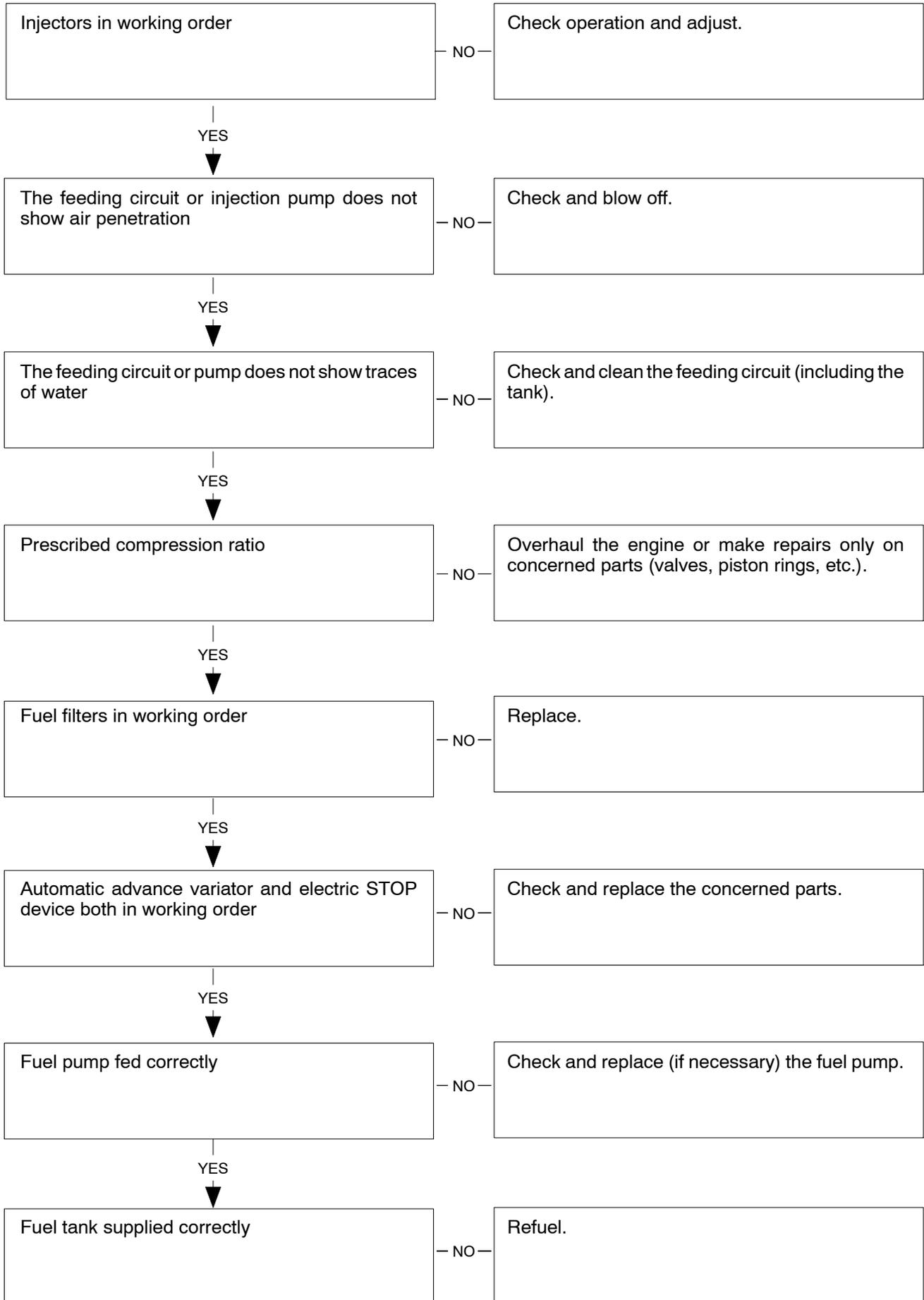
MAIN ENGINE OPERATING ANOMALIES

- | | |
|--|--|
| <ul style="list-style-type: none"> 1 – Engine won't start; 2 – Engine overheats; 3 – Engine lacks power and works erratically; 4 – Engine exhaust smoke black or dark grey; 5 – Engine exhaust smoke grey (verging on white); | <ul style="list-style-type: none"> 6 – Engine exhaust smoke light blue; 7 – Engine knocks irregularly; 8 – Engine stops; 9 – Engine exceeds max. revs number; 10 – Excessive or insufficient oil pressure; 11 – Excessive fuel consumption; 12 – Engine won't stop. |
|--|--|

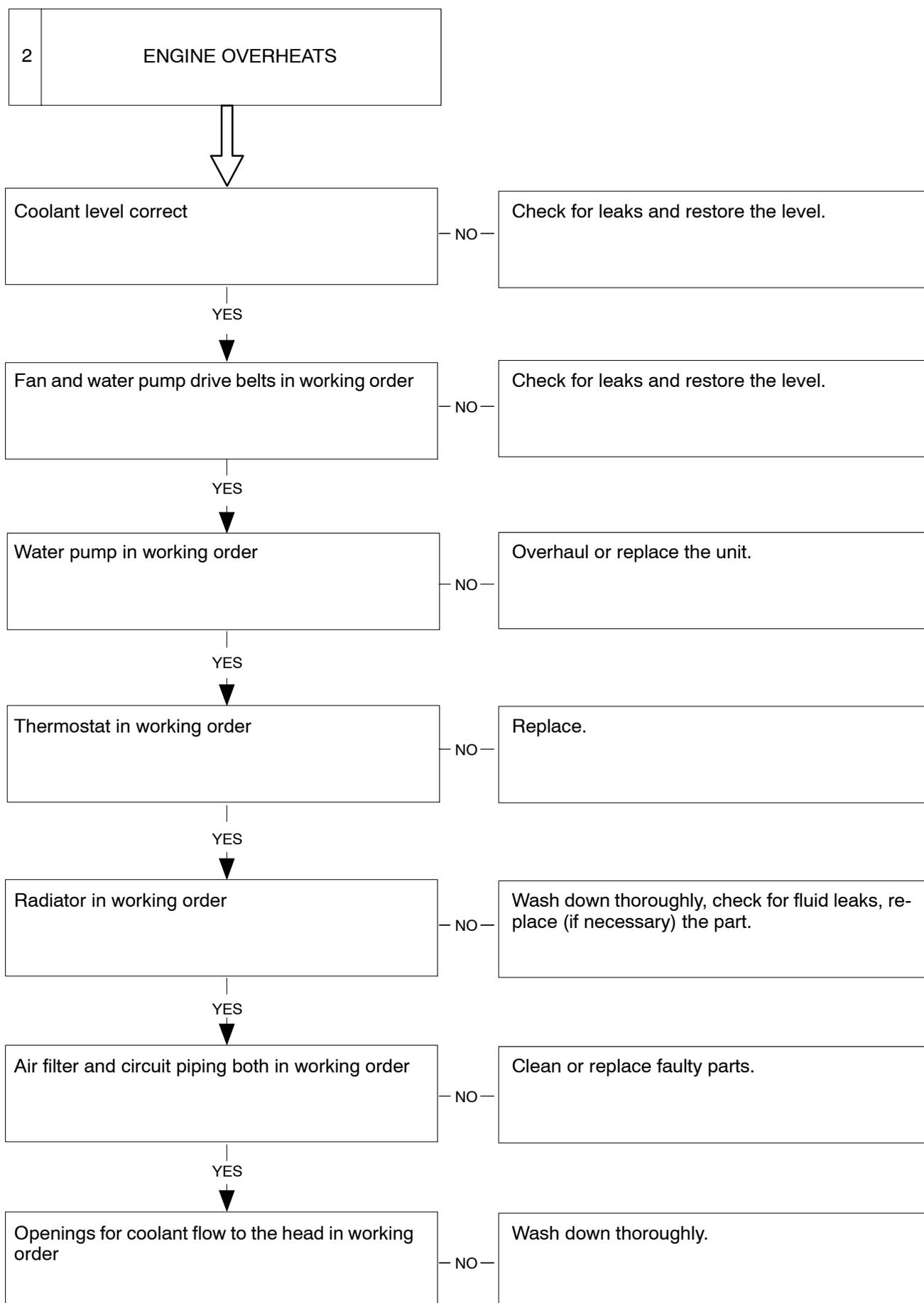


(to be continued)

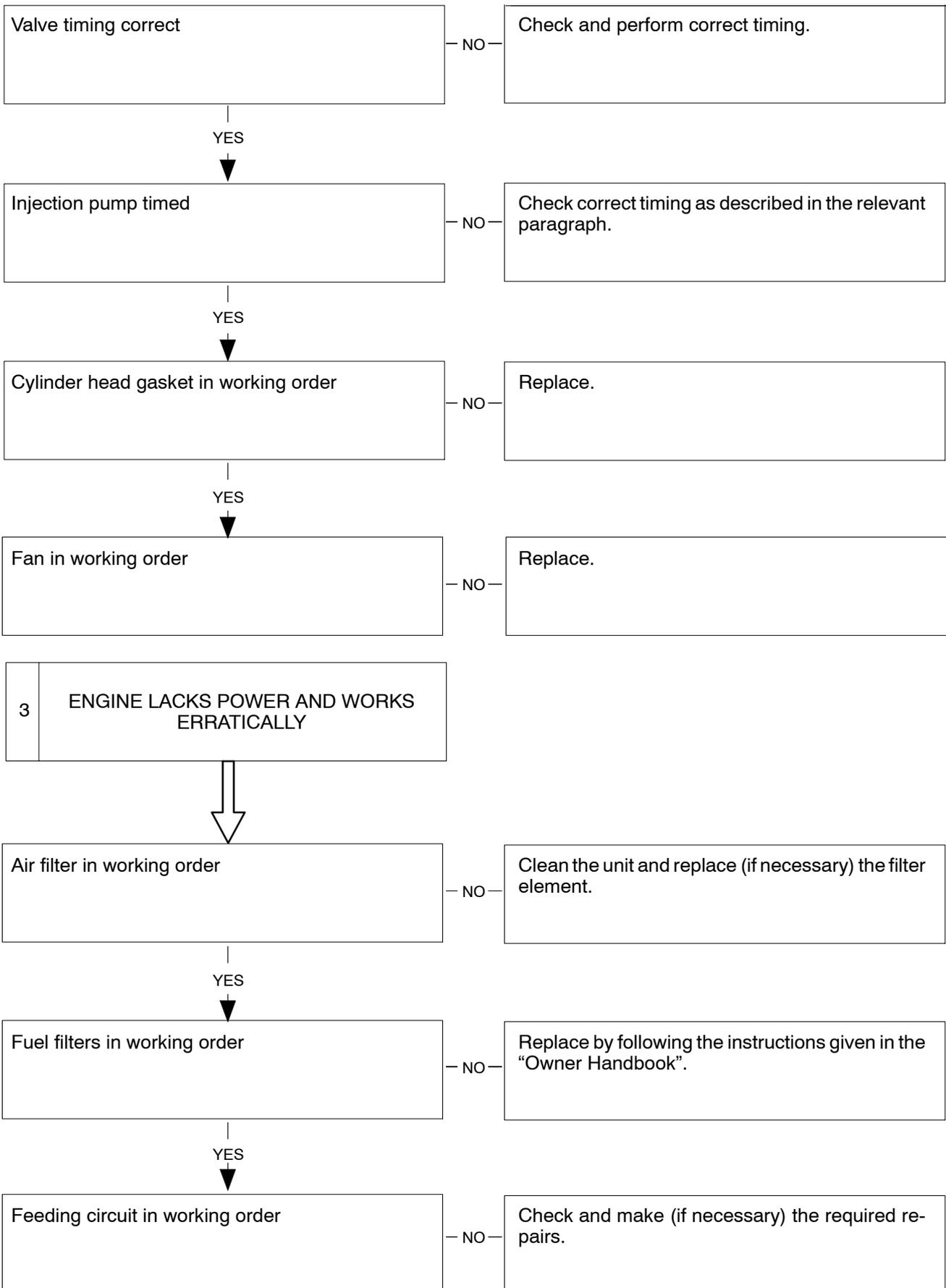
DIAGNOSTICS



DIAGNOSTICS

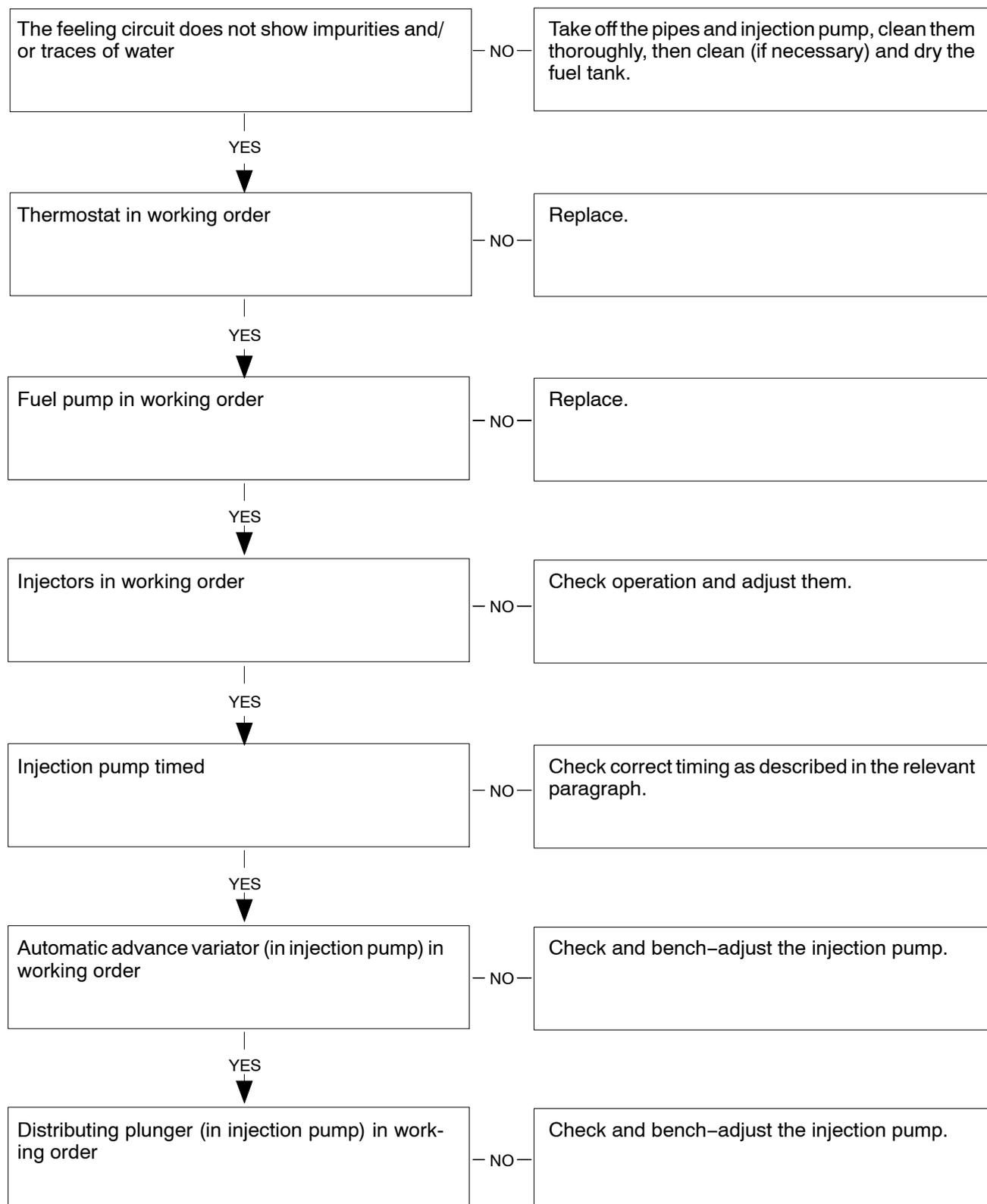


DIAGNOSTICS



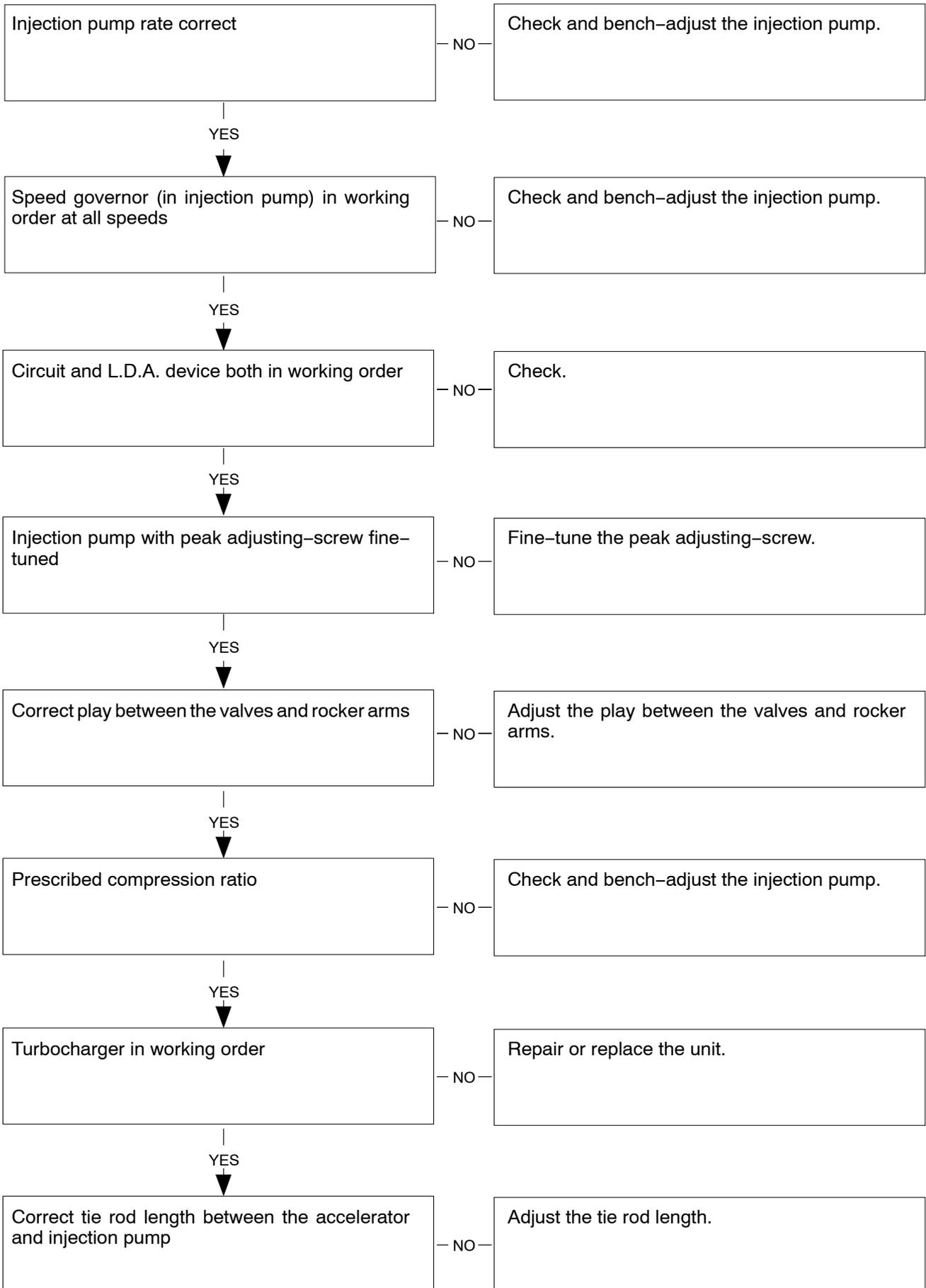
(to be continued)

DIAGNOSTICS

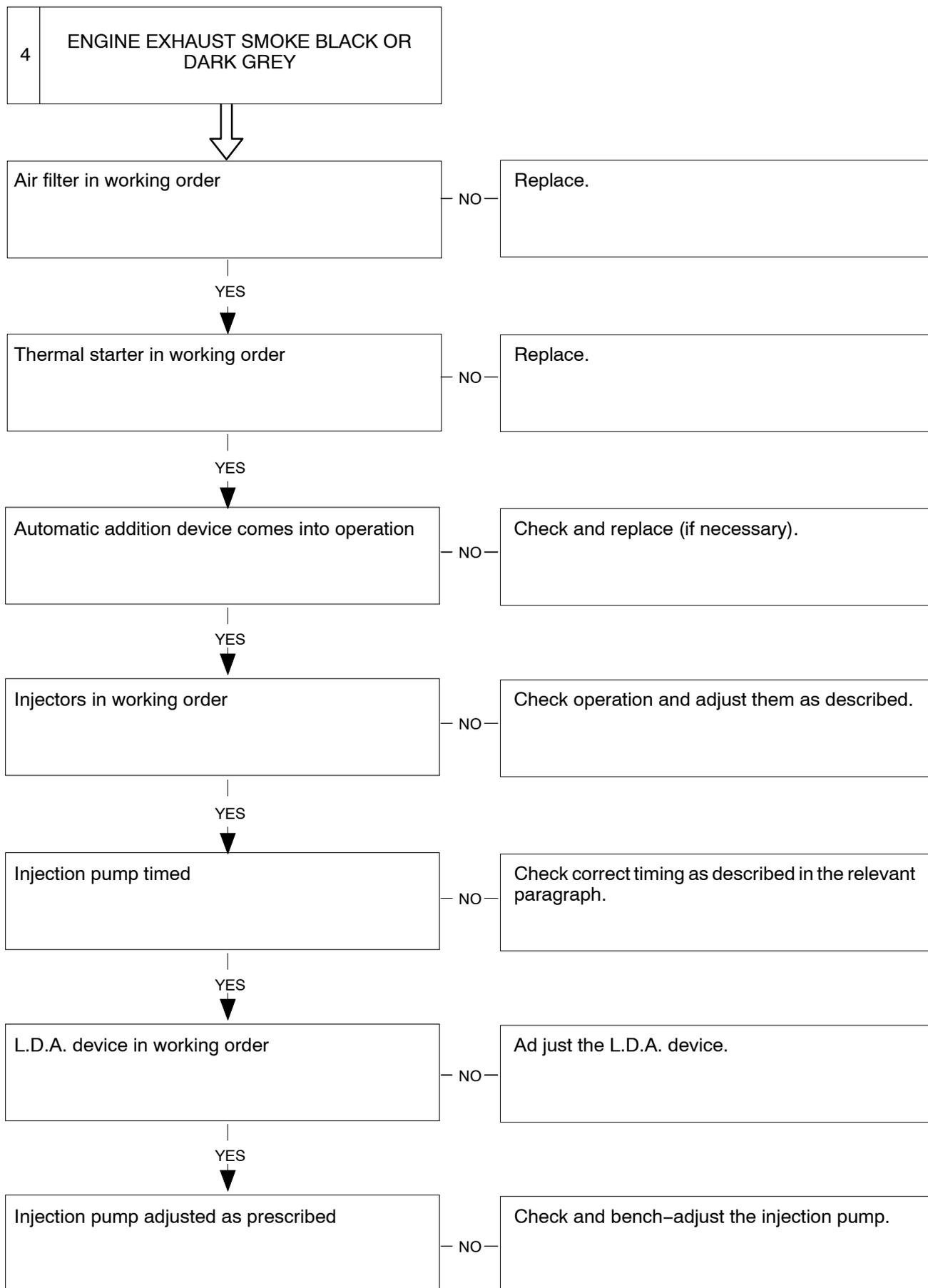


(to be continued)

DIAGNOSTICS

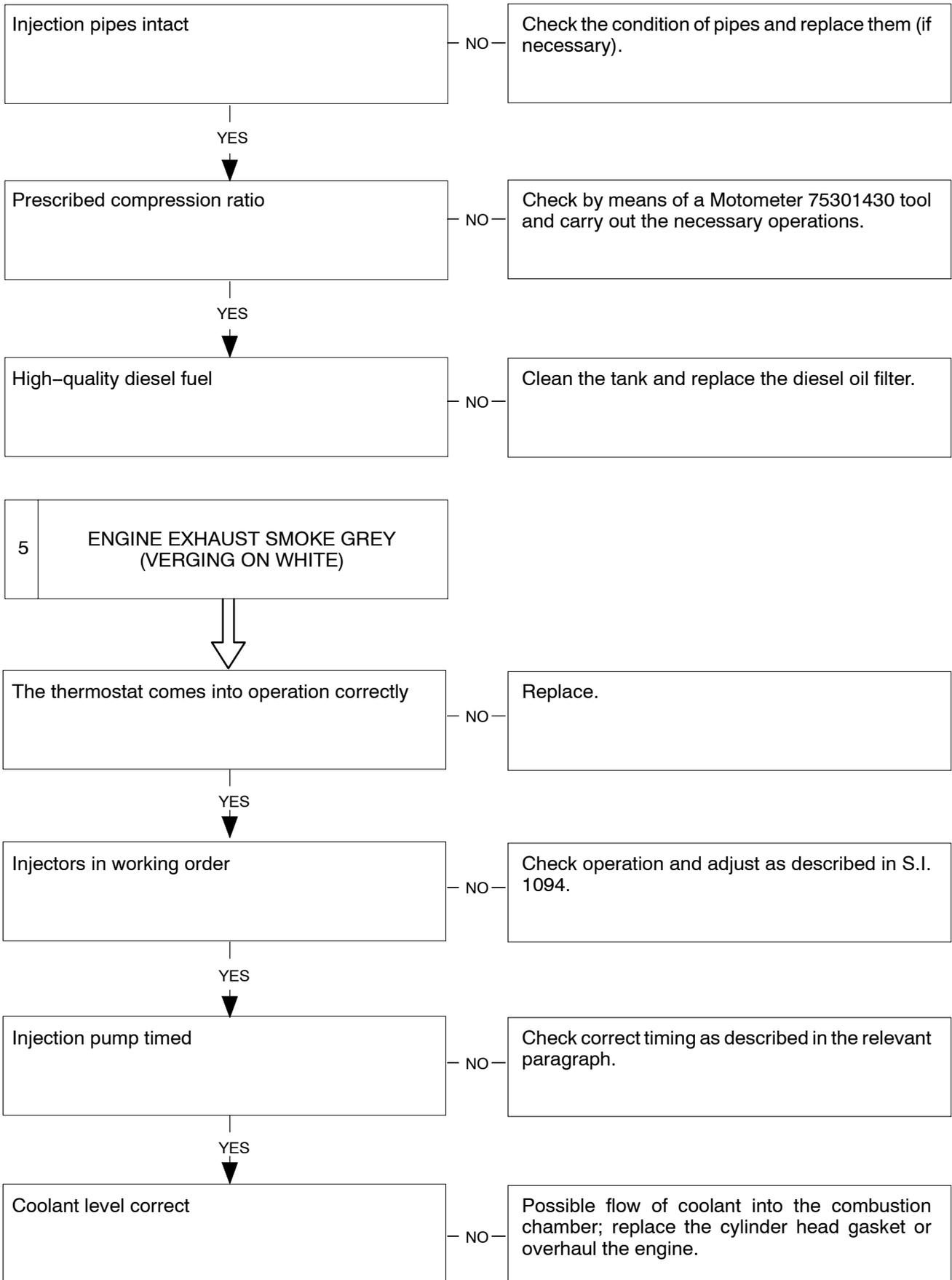


DIAGNOSTICS



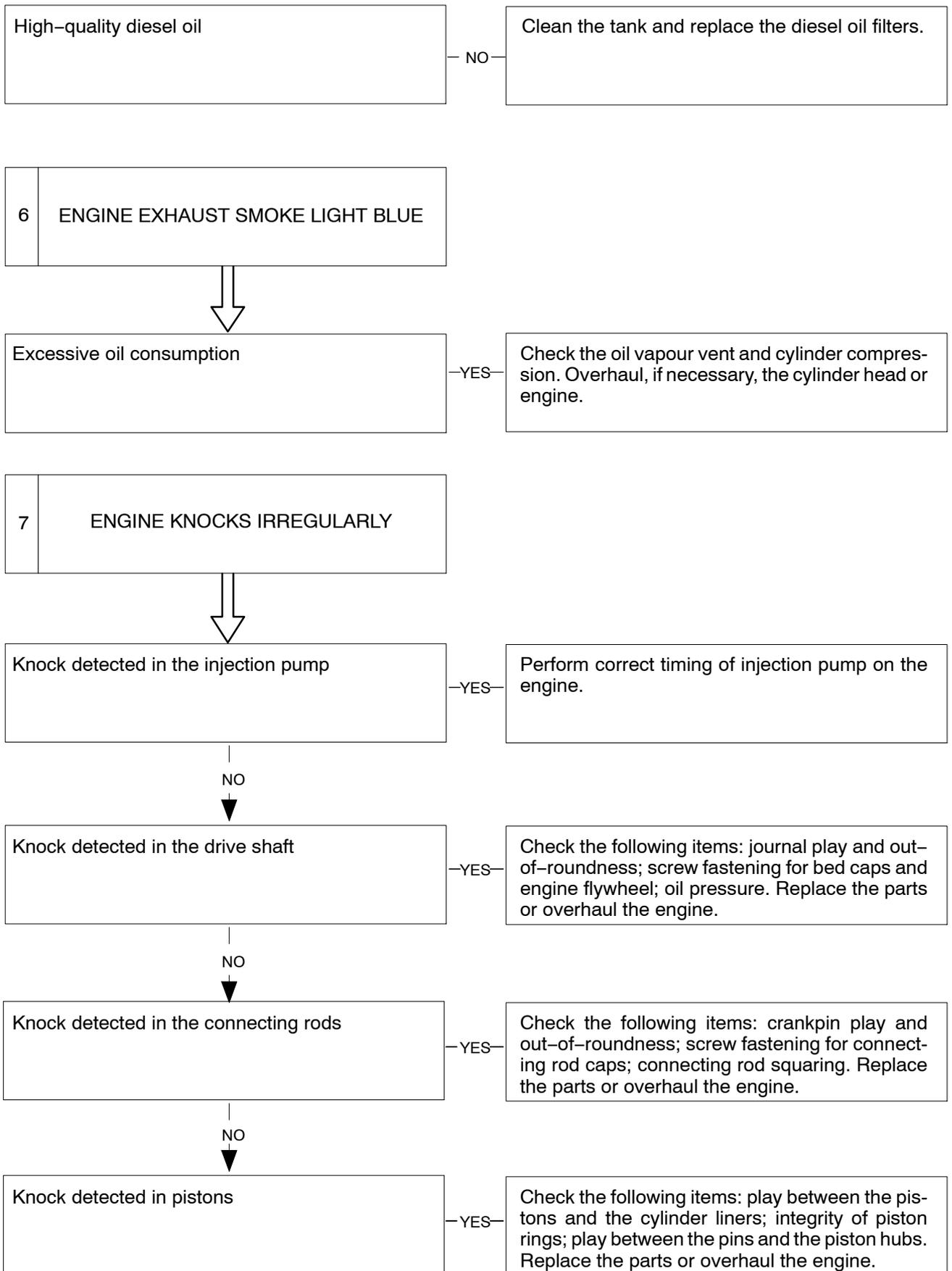
(to be continued)

DIAGNOSTICS



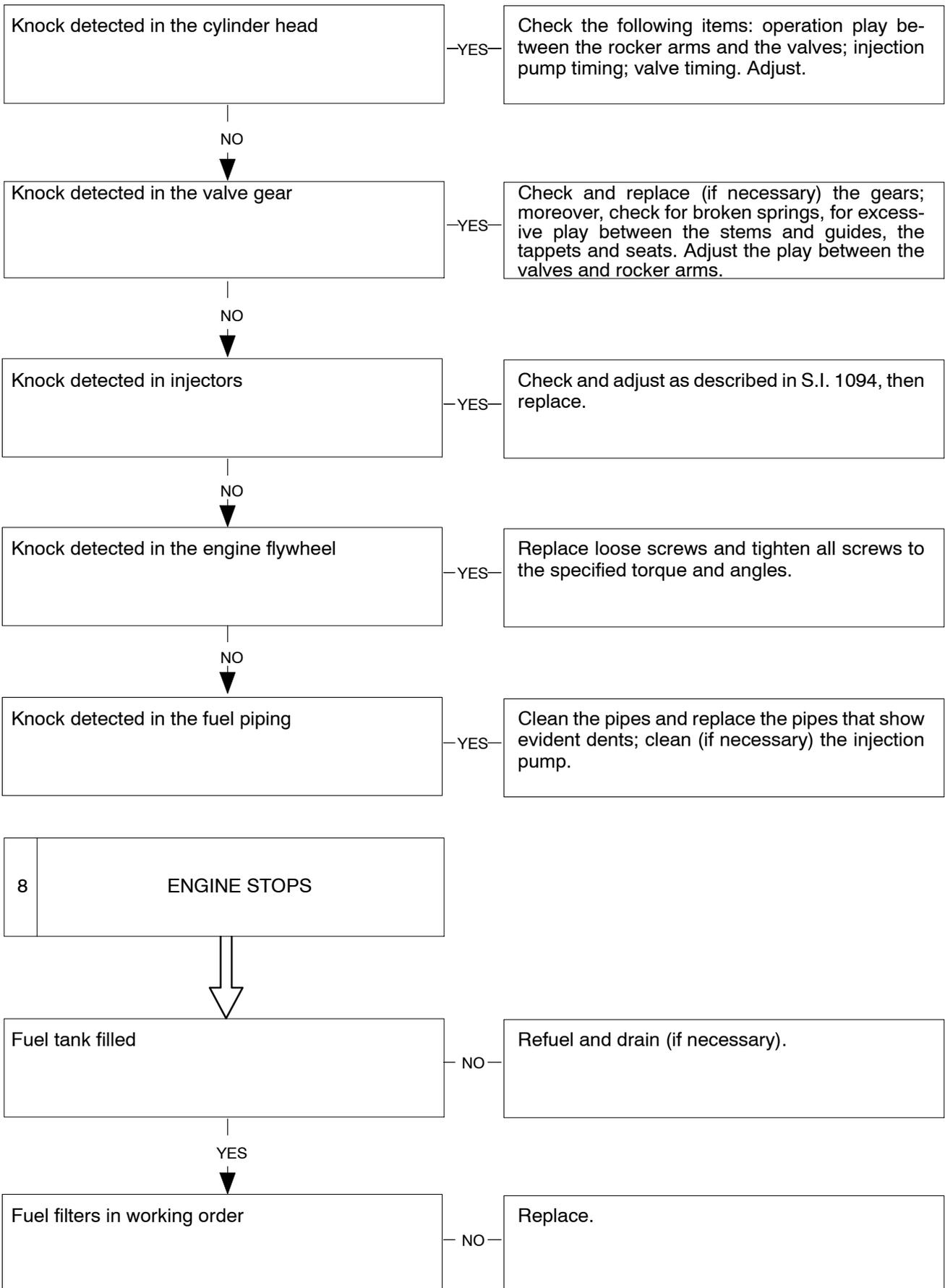
(to be continued)

DIAGNOSTICS



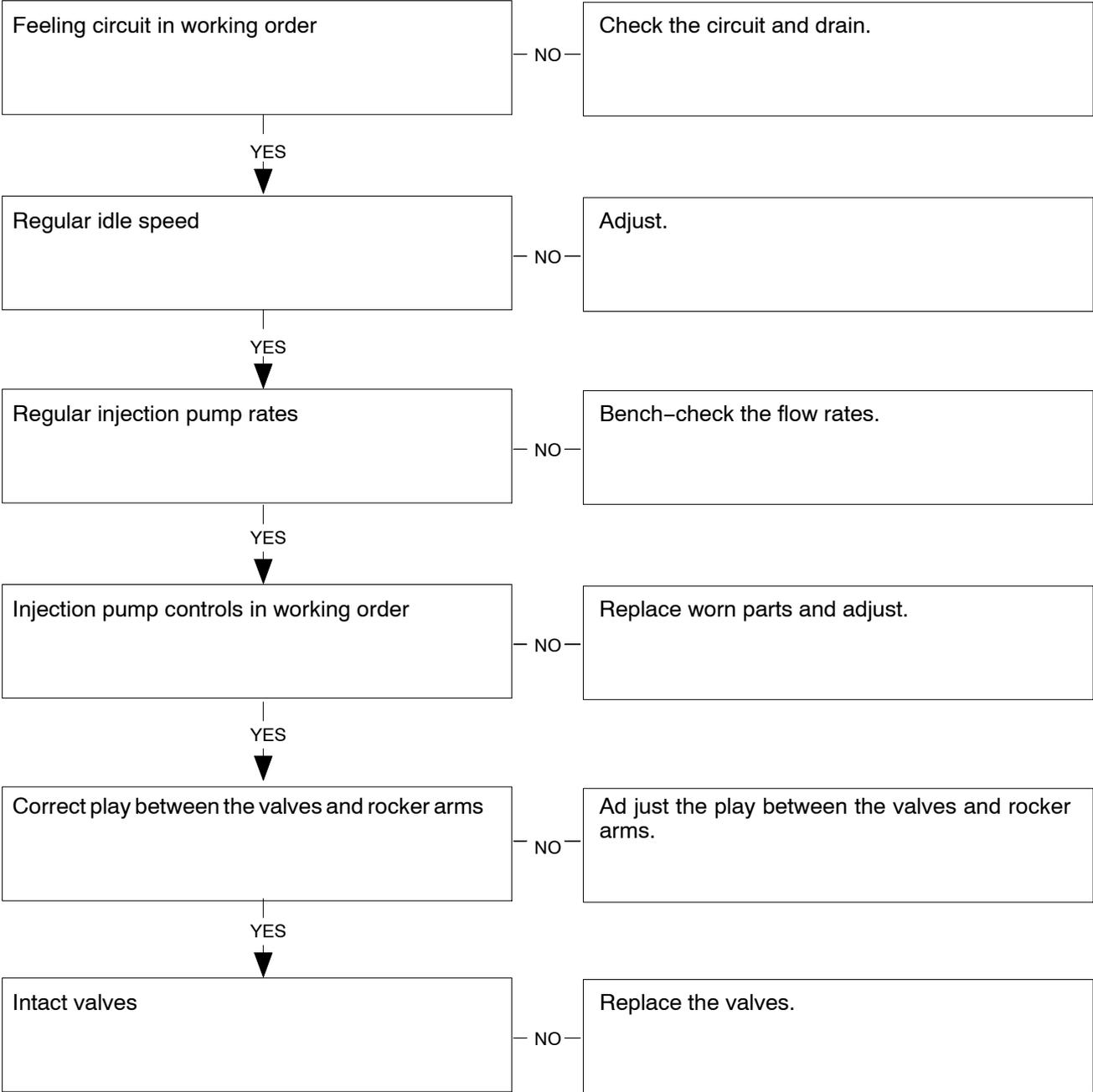
(to be continued)

DIAGNOSTICS

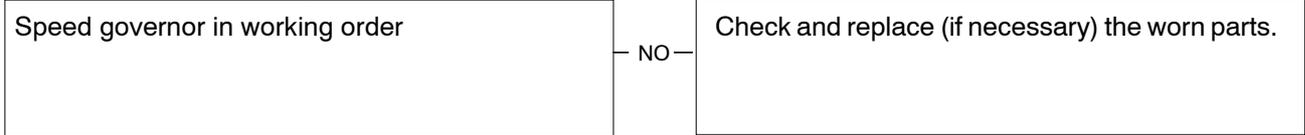
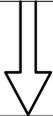


(to be continued)

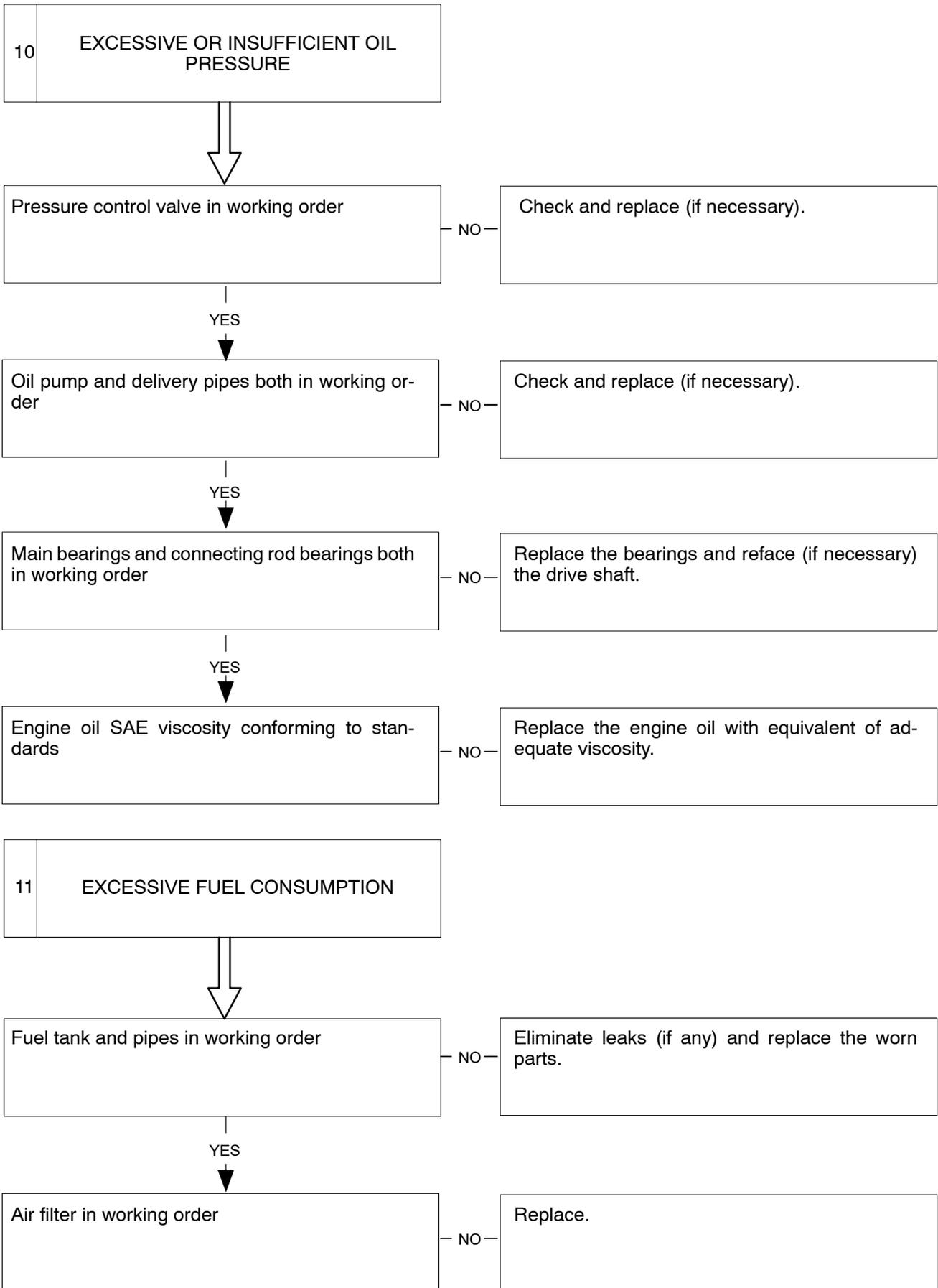
DIAGNOSTICS



9	ENGINE EXCEEDS MAX. REVS NUMBER
---	---------------------------------

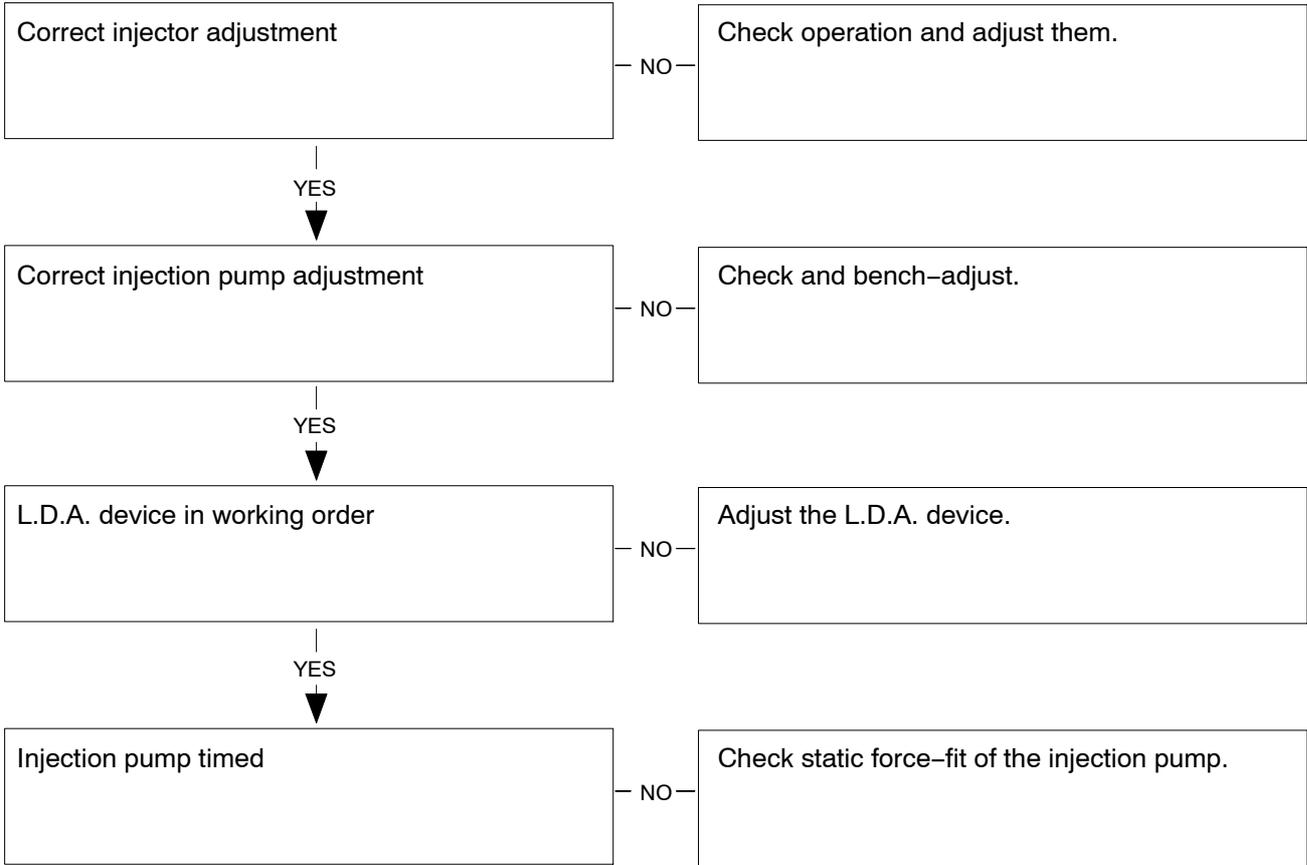


DIAGNOSTICS

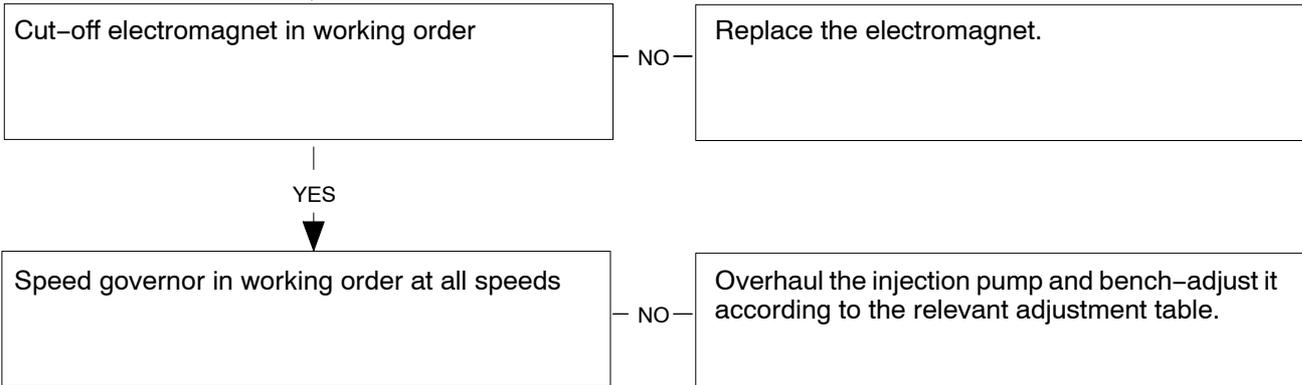


(to be continued)

DIAGNOSTICS



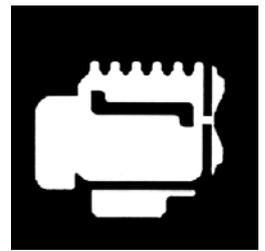
12 ENGINE WON'T STOP



DIAGNOSTICS

NOTES

ENGINES F4GE0454C F4GE0484C F4GE0484G OVERHAUL



INDEX

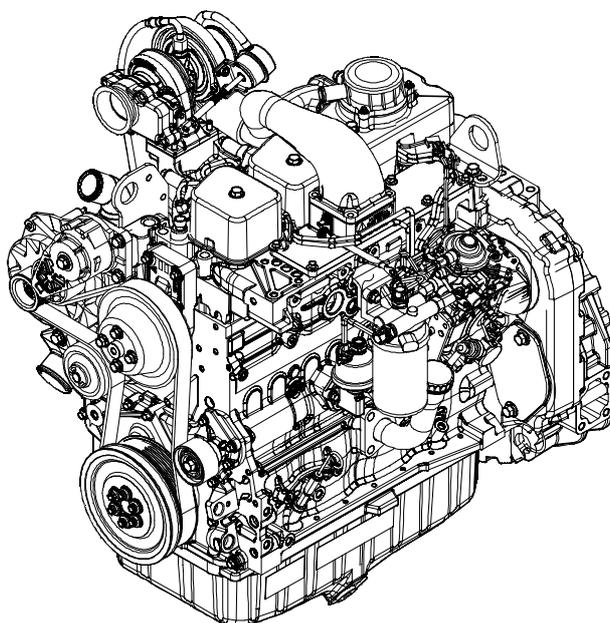
Engines F4GE0454C	EW-2-3	Removing the injection pump	EW-2-45
Engines F4GE0484G	EW-2-3	Removing the rocker arm assembly ...	EW-2-47
Coding of source engines	EW-2-4	Repair work on cylinder cluster	EW-2-50
Main engines features	EW-2-5	Checks and measurements	EW-2-50
General engines features	EW-2-6	Checking the surface supporting the head on the cylinder cluster	EW-2-51
Assembling play – specifications ...	EW-2-8	Checking the eccentric lift and the pin alignment	EW-2-52
Tightening torque	EW-2-14	Valve gear	EW-2-52
Tools	EW-2-15	Distributing shaft	EW-2-52
Graphic indications and symbols ...	EW-2-16	Bushings	EW-2-53
General remarks	EW-2-17	Replacing the bushings	EW-2-54
F4GE0454C engine	EW-2-17	Tappets	EW-2-54
F4GE0484G engine	EW-2-18	Mounting the tappets – Distributing shaft	EW-2-54
Description of main mechanic engine components	EW-2-19	Drive shaft	EW-2-55
Crankcase	EW-2-19	Measuring the journals and crankpins ..	EW-2-55
Drive shaft	EW-2-20	Replacing the oil pump drive gears ...	EW-2-58
Connecting rods	EW-2-21	Mounting the main bearings	EW-2-58
Pistons	EW-2-22	Measuring the journal assembling play .	EW-2-58
Distributing shaft	EW-2-23	Checking the drive shaft shoulder play .	EW-2-59
Valve control	EW-2-24	Connecting rod–piston assembly	EW-2-60
Cylinder head (F4GE0454C engine) ...	EW-2-25	Pistons	EW-2-61
Cylinder head (F4GE0484G engines)	EW-2-26	Measuring the piston diameter	EW-2-61
Valves and valve seats	EW-2-27	Gudgeon pins	EW-2-62
Valve guides	EW-2-28	Conditions for correct pin/piston matching	EW-2-62
Engine flywheel	EW-2-29	Piston rings	EW-2-62
Auxiliary component drive	EW-2-30	Connecting rods	EW-2-63
Additional masses	EW-2-31	Bushings	EW-2-64
Lubrication	EW-2-32	Checking the connecting rods	EW-2-64
Heat exchanger	EW-2-33	Checking the torsion	EW-2-64
Oil pump	EW-2-34	Checking the flexion	EW-2-64
Oil sump	EW-2-35	Mounting the connecting rod–piston assembly	EW-2-65
Engines F4GE0454C*D660 – F4GE0454C*D603 – F4GE0484G*D660 – F4GE0484G*D606	EW-2-35	Connecting rod–piston match	EW-2-65
Engine F4GE0484G*D655 – F4GE0484G*605	EW-2-35	Mounting the piston rings	EW-2-65
Oil vapour recirculation	EW-2-36	Mounting the connecting rod/piston assemblies in the cylinder liners	EW-2-66
Cooling	EW-2-37	Measuring the crankpin assembling play	EW-2-66
Water pump	EW-2-38	Checking piston protrusion	EW-2-67
Mechanic injection feeding system ..	EW-2-39	Valve gear	EW-2-67
Fuel filter	EW-2-39	Distribution gearbox case	EW-2-67
Mechanic fuel pump	EW-2-40	Valve timing	EW-2-68
Injection assembly	EW-2-41	Injection pump – 1st phase	EW-2-69
Engine bench–overhaul	EW-2-42	Timing	EW-2-69
Disassembling the engine	EW-2-42	Assembling the additional masses	EW-2-69
O–ring replacement	EW-2-44	Flywheel cover case	EW-2-71

INDEX

Engine flywheel	EW-2-72	Valve guide	EW-2-78
Replacing the engine flywheel ring gear	EW-2-72	Checking the play between the valve stem, valve guide and valve centring ...	EW-2-78
Injection pump – 2nd phase	EW-2-73	Valve springs	EW-2-80
Mounting the injection pump – 2nd phase	EW-2-73	Mounting the cylinder head	EW-2-80
Mounting the oil and water pumps	EW-2-73	Rocker arm assembly	EW-2-81
Mounting the water / oil heat exchanger	EW-2-75	Reattaching the cylinder head	EW-2-81
Cylinder head	EW-2-75	Mounting the injectors	EW-2-82
Removing the valves	EW-2-75	Replacing the injectors	EW-2-85
Checking the cylinder head supporting surface	EW-2-76	Removal	EW-2-85
Checking the cylinder head water seal .	EW-2-77	Reassembling	EW-2-86
Valve descaling, check and grinding ...	EW-2-77	Rocker arm removal/reassembling ..	EW-2-86
Valves	EW-2-77	Removal	EW-2-86
Valve seats	EW-2-78	Reassembling	EW-2-86
Valve seat reconditioning – replacement	EW-2-78	Adjusting the tappets	EW-2-87
		Check priming of the injection pump ...	EW-2-88

ENGINES F4GE0454C – F4GE0484G OVERHAUL

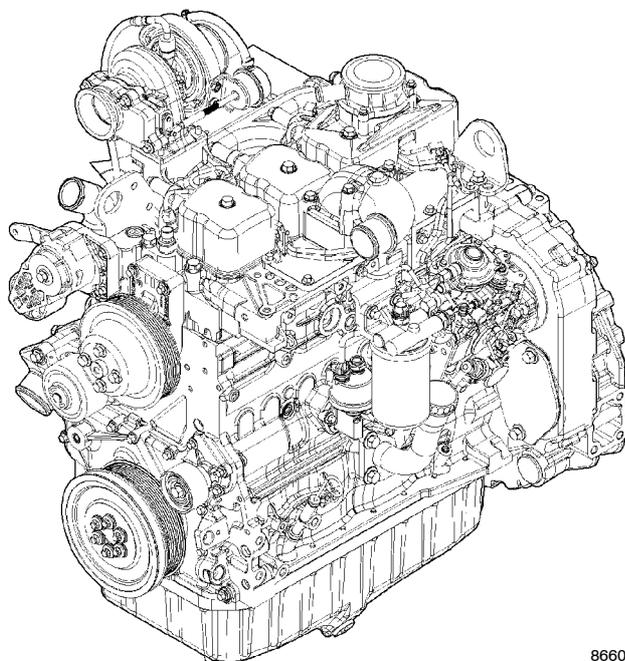
Figure 1



86607

ENGINES F4GE0454C

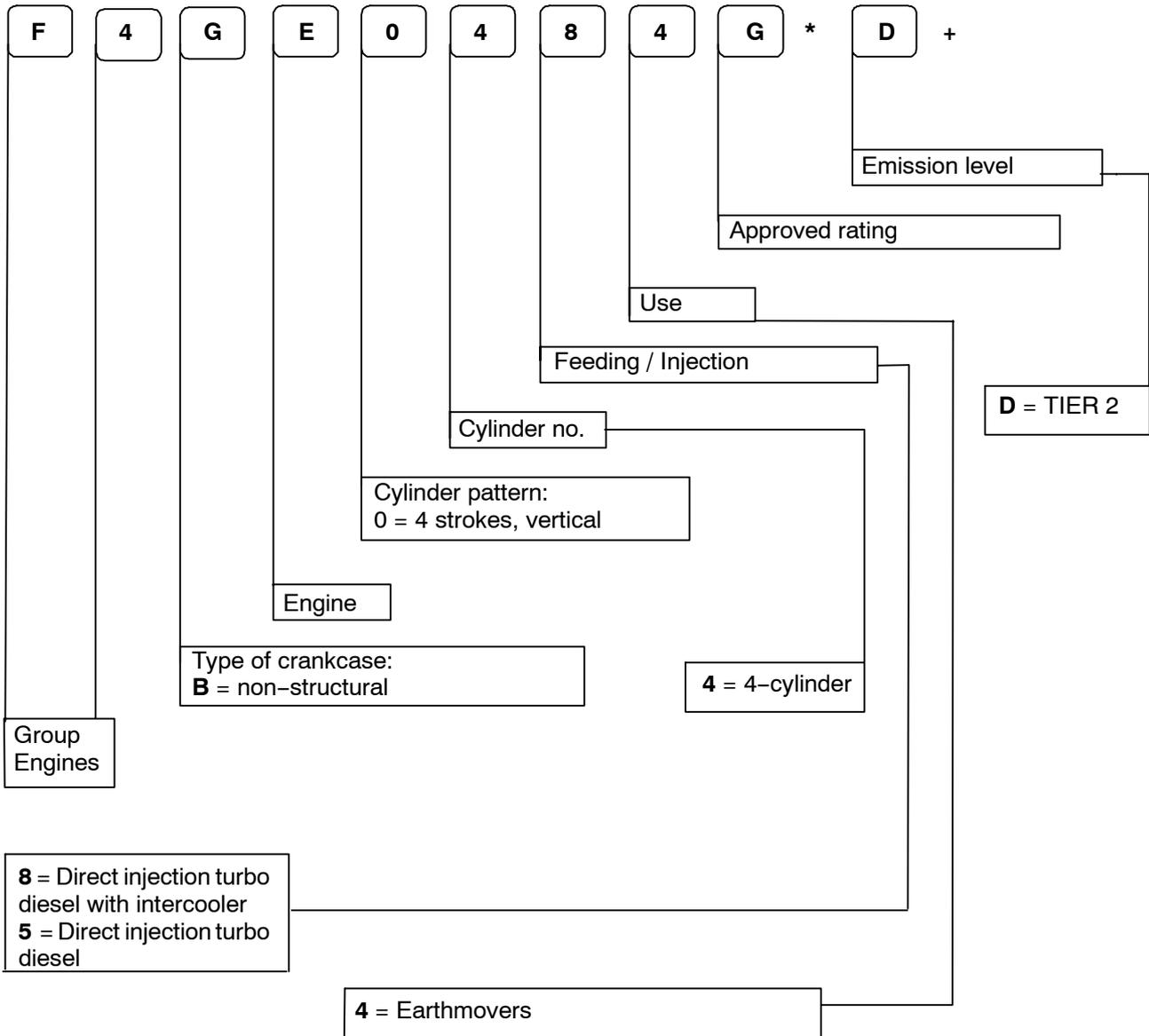
Figure 2



86608

ENGINES F4GE0484G

CODING OF SOURCE ENGINES



X Y Y

X = 6 rotary, 2-valve injection pump
Y = Engine model

Y Y Y Y Y Y

Manufacturing sequence number

ENGINES F4GE0454C – F4GE0484G OVERHAUL

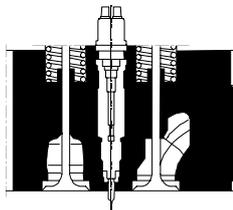
MAIN ENGINES FEATURES

Applications						
A →	LB90.B LB95.B	LB90.B LB95.B	LB110.B	LB110.B	LB115.B	LB115.B
B →	F4GE0454C	F4GE0454C	F4GE0484G	F4GE0484G	F4GE0484G	F4GE0484G
C →	*D660	*D603	*D660	*D606	*D655	*D605
D →						
E →	4485					
F →	71 kW 2200 min ⁻¹	71 kW 2200 min ⁻¹	82 kW 2200 min ⁻¹			

Net power at flywheel (ISO 14396)

G →

Direct injection

**H** →

Rotary injection pump

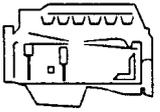
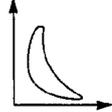
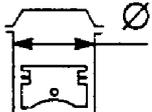
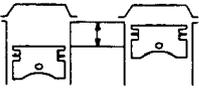
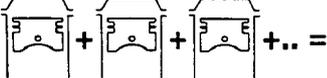
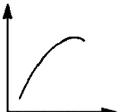
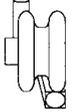
I →

T.C. (Boosted)	T.A.A. (Boosted by intercooler)				
Up to chassis no. N5GH04353	From chassis no. N5GH04354	Up to chassis no. 031056821	From chassis no. 031056822	Up to chassis no. 031056893	From chassis no. 031056894

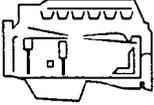
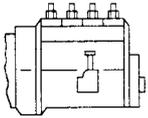
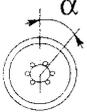
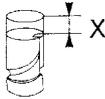
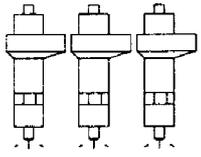
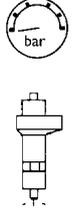
- A** Backhoe-loaders
- B** Type of engine
- C** Engine model
- D** Number of cylinders
- E** Total displacement
- F** Max. power currently available
- G** Type of injection
- H** Injection system
- I** Air supply system

ENGINES F4GE0454C – F4GE0484G OVERHAUL

GENERAL ENGINES FEATURES

	Type	F4GE0484G		F4GE0484G		F4GE0454C	
		*D660	*D655	*D606	*D605	*D660	*D603
	Cycle	4-stroke diesel engine					
	Feeding	Boosted by intercooler				Boosted	
	Injection	Direct					
	Number of cylinders	4 in-line					
	Bore	mm		104			
	Stroke	mm		132			
	Total displacement	cm ³		4485			
	Compression ratio	17.5 : 1					
 	Max. rating	kW min ⁻¹		82 2200	82 2200	71 2000	
 	Max. torque	Nm min ⁻¹		480 (48) 1400	-		398 (39.8) 1400
	No-load idle rpm	min ⁻¹		-			
	No-load peak rpm	min ⁻¹		-			
	BOOSTING Type of turbocompressor:	With intercooler HOLSET HX25W				HOLSET HX25W	
 	LUBRICATION Oil pressure with hot engine: at idle rpm at peak rpm	bar bar		Forced by means of gear pump, pressure relief valve, oil filter - -			

ENGINES F4GE0454C - F4GE0484G OVERHAUL

	Type	F4GE0484G		F4GE0484G		F4GE0454C	
		*D660	*D655	*D606	*D605	*D660	*D603
COOLING	Water pump drive:	By fluid					
	Thermostat:	By means of belt					
	Start of opening: °C	81 ± 2					
 Ambra Mastergold HSP 15W40	FILLING						
	Total capacity 1 st filling: litres kg	-					
	- engine sump litres kg	-					
	- engine sump + filter litres kg	-					
	FEEDING	VE4 / 12 F					
	Bosch-type injection	1100 L 954		1100 L 956-2		1100 L 954	
	Pump setting	0° ± 0.5°					
	Start of delivery mm	1					
	Type of nozzle	DSL A 145 1174					
	Injection sequence	1 - 3 - 4 - 2					
	Injection pressure (bar)	245 bar					