



Product: New Holland CNH U.K. ENGINES F4GE0404B, F4GE0454C, F4GE0484G Service Repair Workshop Manual
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**REPAIR MANUAL
FOR CNH U.K.
ENGINES
F4GE0404B
F4GE0454C
F4GE0484G**

REPAIR MANUAL FOR CNH U.K. ENGINES

F4GE0404B F4GE0454C F4GE0484G

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Print No. 604.13.694
English - Printed in Italy



REPAIR MANUAL FOR CNH U.K. ENGINES

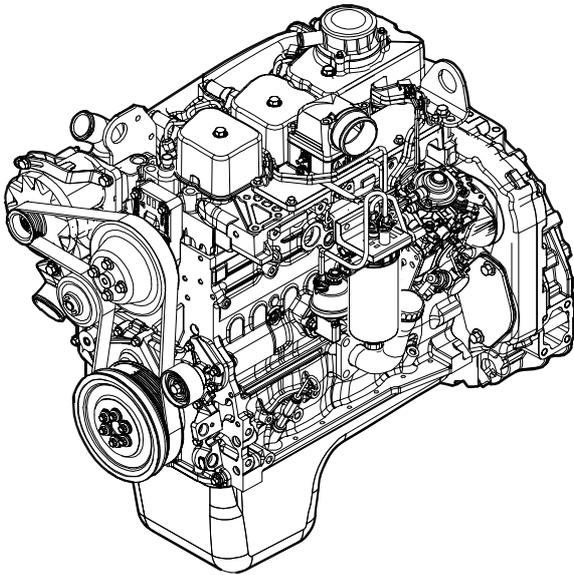
F4GE0404B – F4GE0454C – F4GE0484G

The following models are to integrate repair manuals:

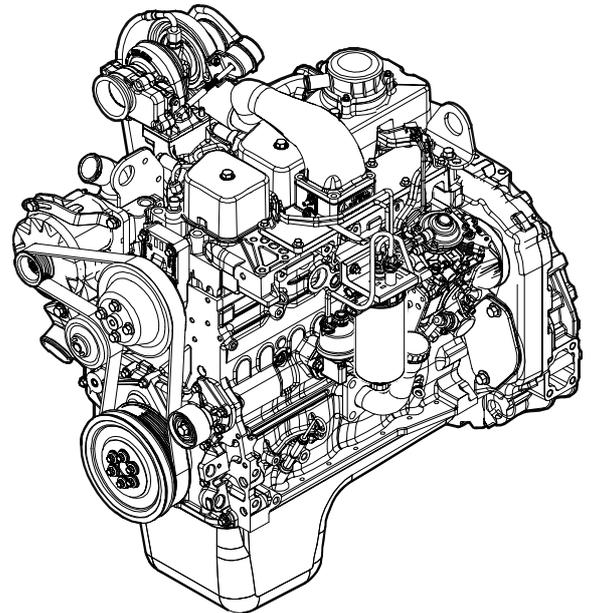
NEW HOLLAND LM1330 – LM1333 – LM1330 Turbo – LM1333 Turbo

LM1340 Turbo – LM 1343 Turbo – LM1345 Turbo

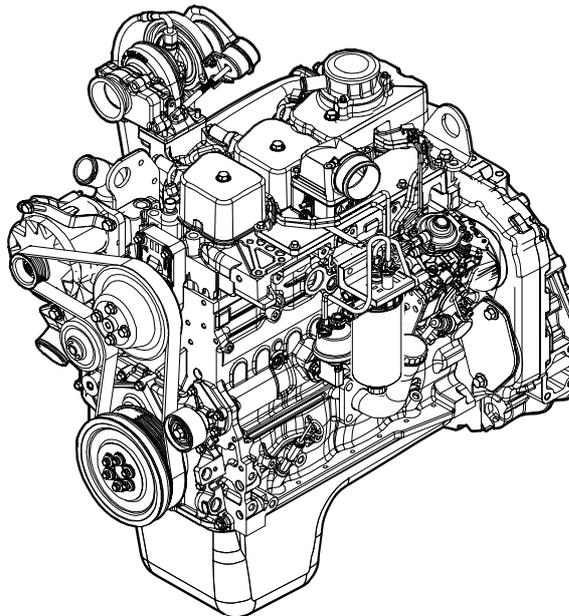
LM1443 Turbo – LM 1445 Turbo – LM1745 Turbo



F4GE0404B



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.

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NEW HOLLAND
Print No. 604.13.694
Edition – May 2006

INTRODUCTION

TO THE READER

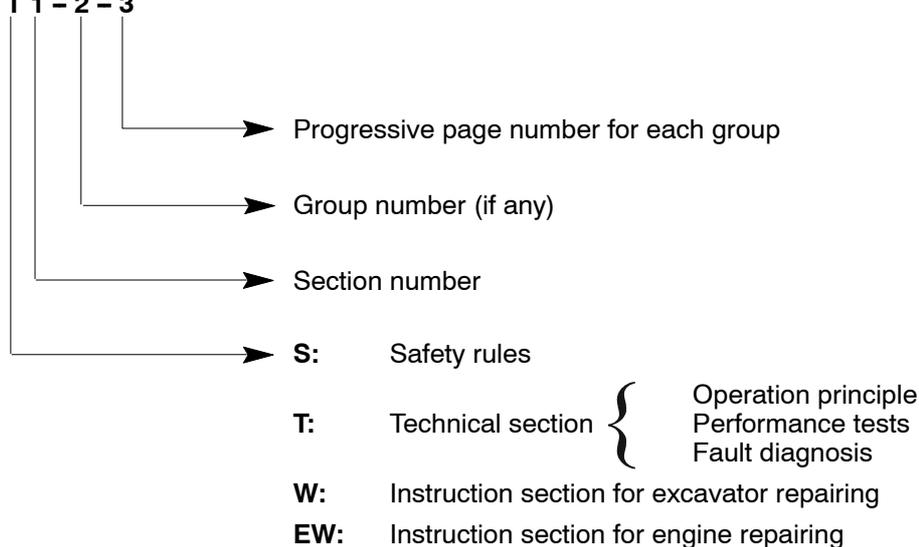
- This manual was written for a skilled technician and contains all the technical information needed to repair this vehicle.
- For any question or comment, or should you notice any mistake concerning the content of this manual, please contact:
- Read this manual carefully for the information concerning repairing operations.

NEW HOLLAND
 Strada Settimo, 323
 San Mauro Torinese (TO)
 10099 ITALIA
 PRODUCT SUPPORT
 Fax ++39 011 0077357

FURTHER REFERENCES**PAGE NUMBER**

- Every page carries a number on the top right corner. Every page contains the following information:

Example: **T 1 - 2 - 3**



SYMBOLS

This manual contains safety warning symbols and indications referring to possible injuries or vehicle damages.



This symbol regards safety.

Use great care when you see this symbol because possible injuries to the personnel may occur. Strictly observe the precautions marked with this symbol.

The safety warning symbol is used also to draw attention on the weight of a component or an element.

Make sure you are always using the right equipment and lifting techniques when handling heavy loads, in order to prevent injuries or damages.

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

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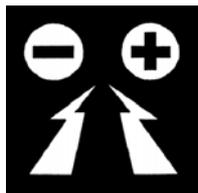
EW-1-1



Section 2 – Engines overhaul:

- FAGE0404B
- FAGE0454C
- FAGE0484G

EW-2-1



Section 3 – Recharging and start-up

EW-3-1

DIAGNOSTICS



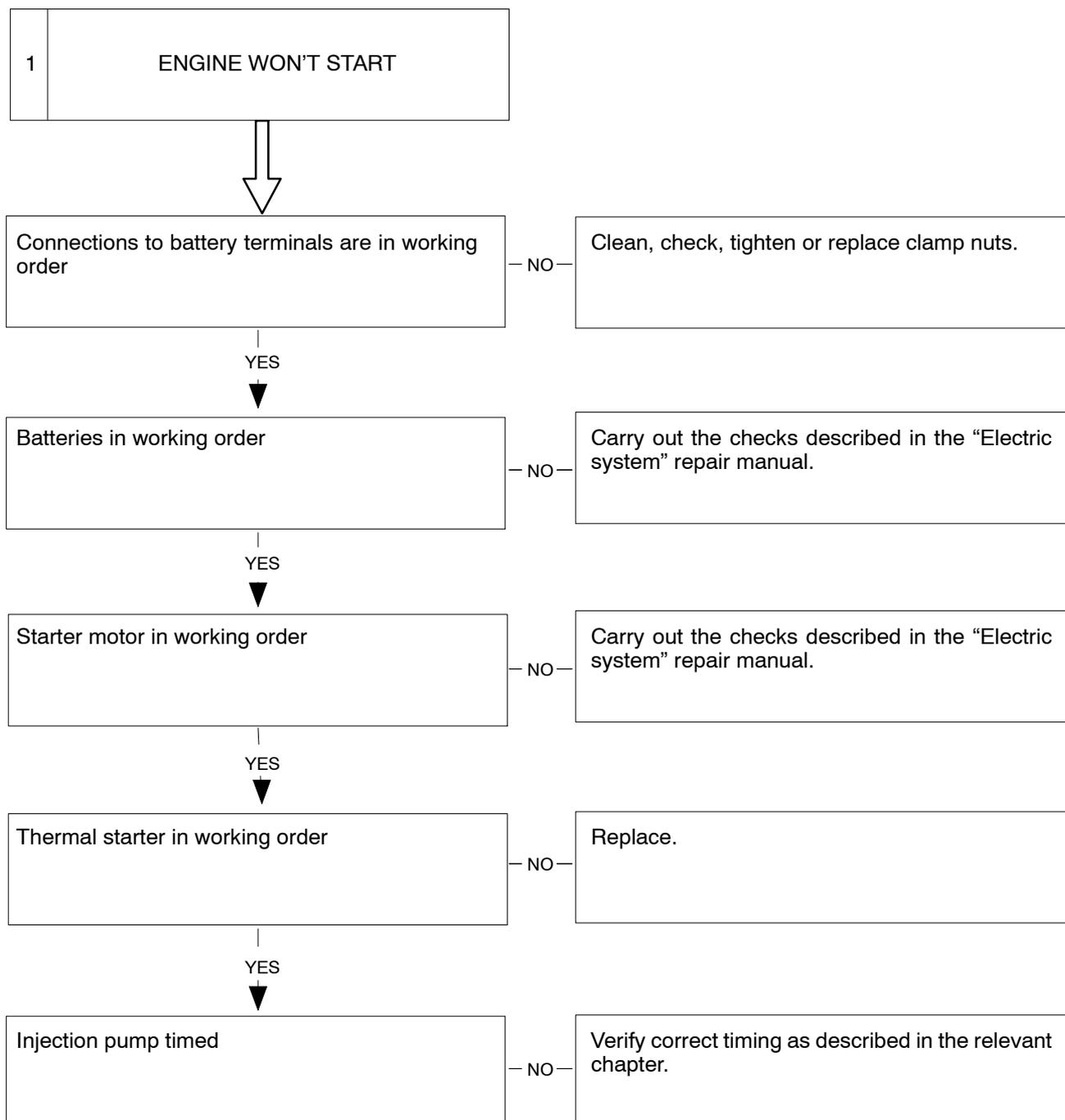
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DIAGNOSTICS

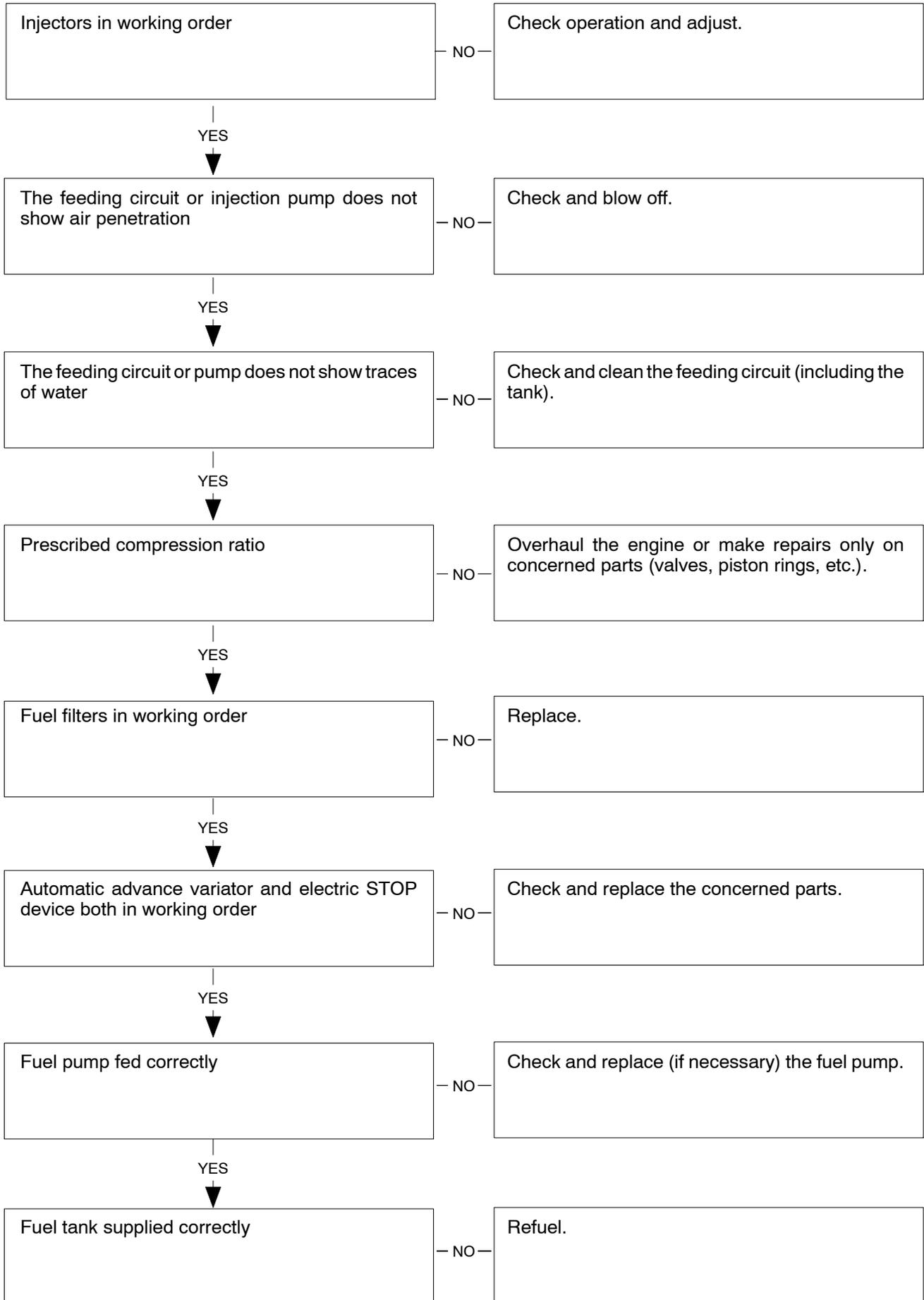
MAIN ENGINE OPERATING ANOMALIES

- | | | | |
|-----|---|------|---|
| 1 – | Engine won't start; | 6 – | Engine exhaust smoke light blue; |
| 2 – | Engine overheats; | 7 – | Engine knocks irregularly; |
| 3 – | Engine lacks power and works erratically; | 8 – | Engine stops; |
| 4 – | Engine exhaust smoke black or dark grey; | 9 – | Engine exceeds max. revs number; |
| 5 – | Engine exhaust smoke grey (verging on white); | 10 – | Excessive or insufficient oil pressure; |
| | | 11 – | Excessive fuel consumption; |
| | | 12 – | Engine won't stop. |

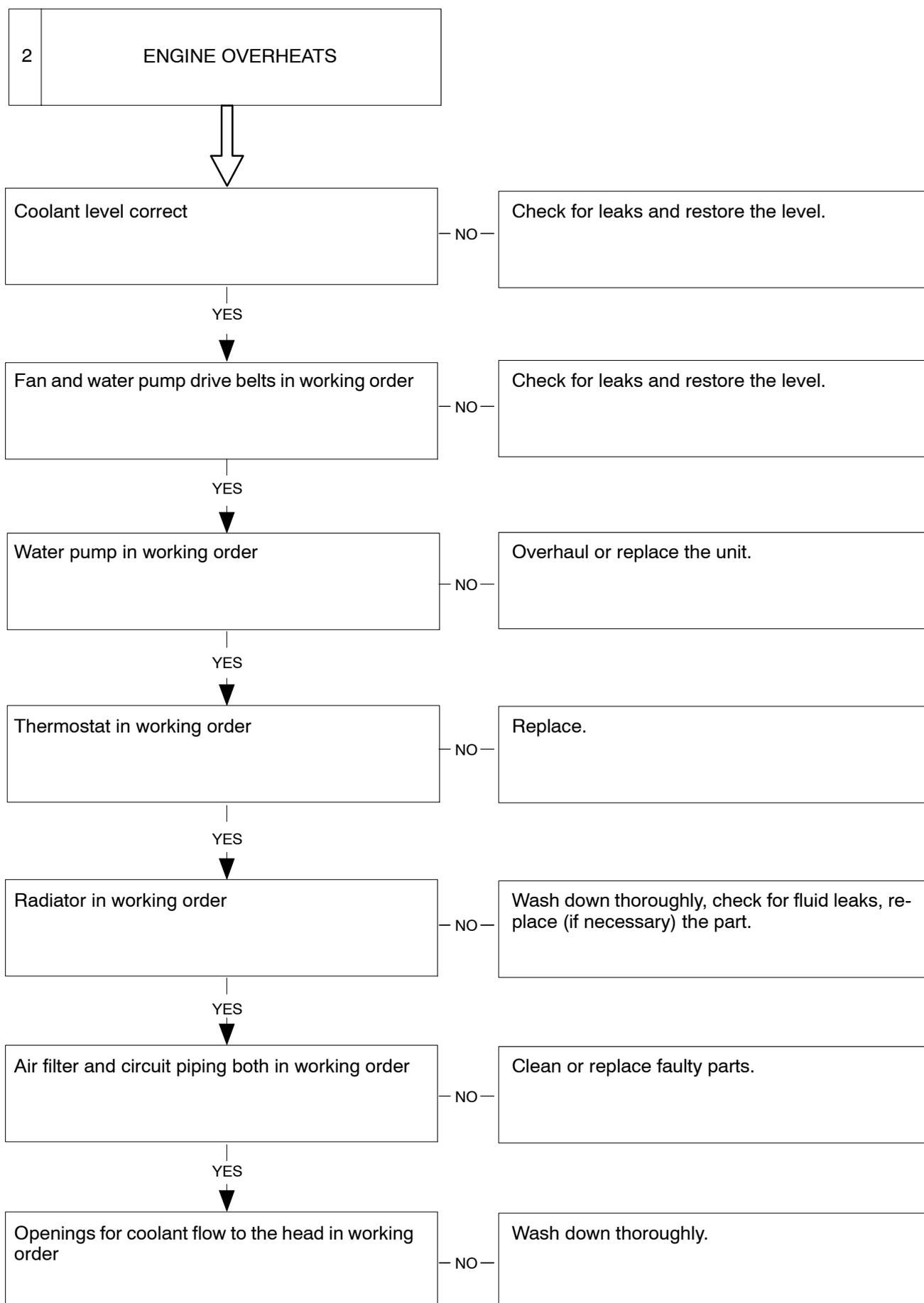


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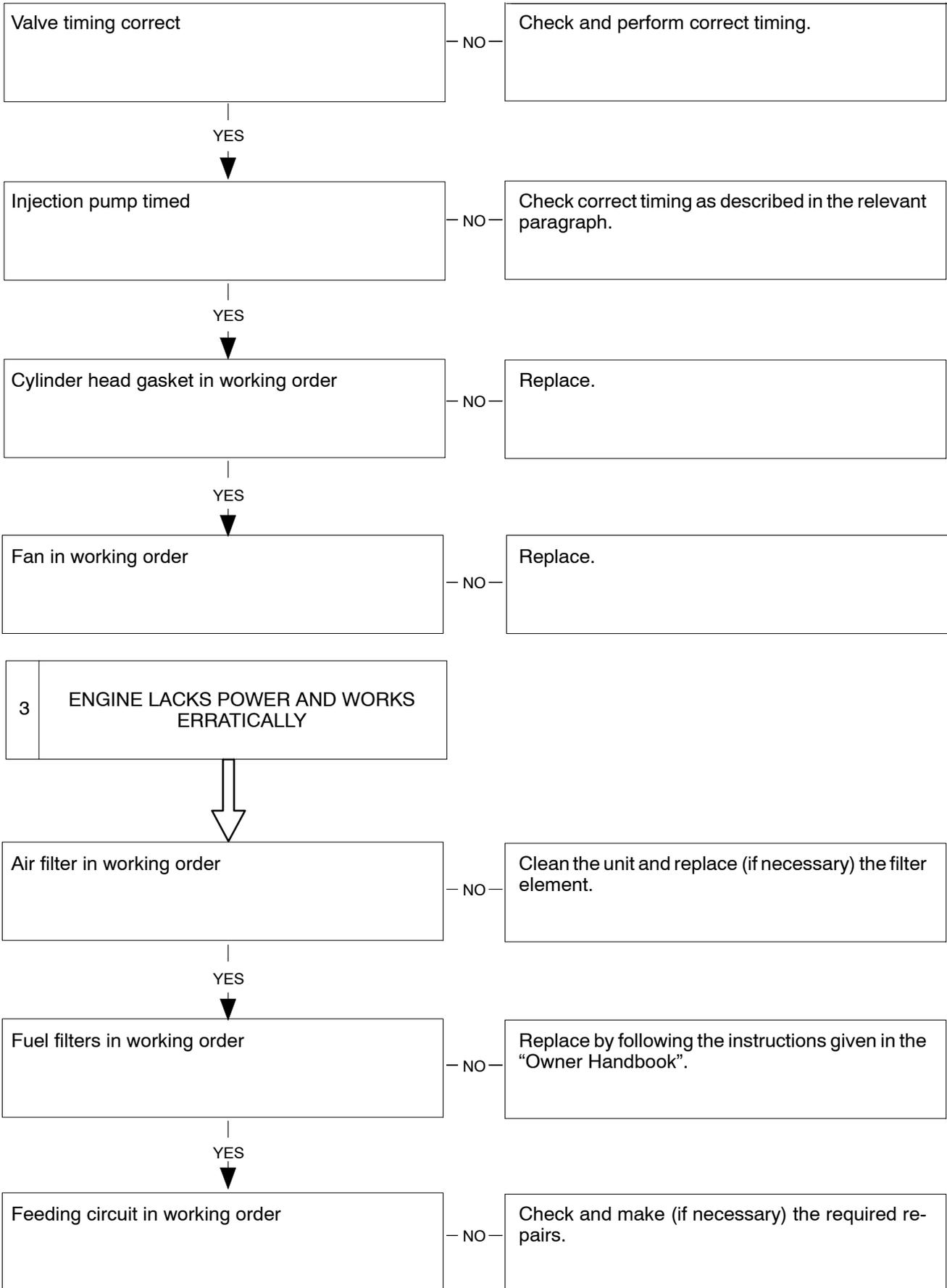
DIAGNOSTICS



DIAGNOSTICS

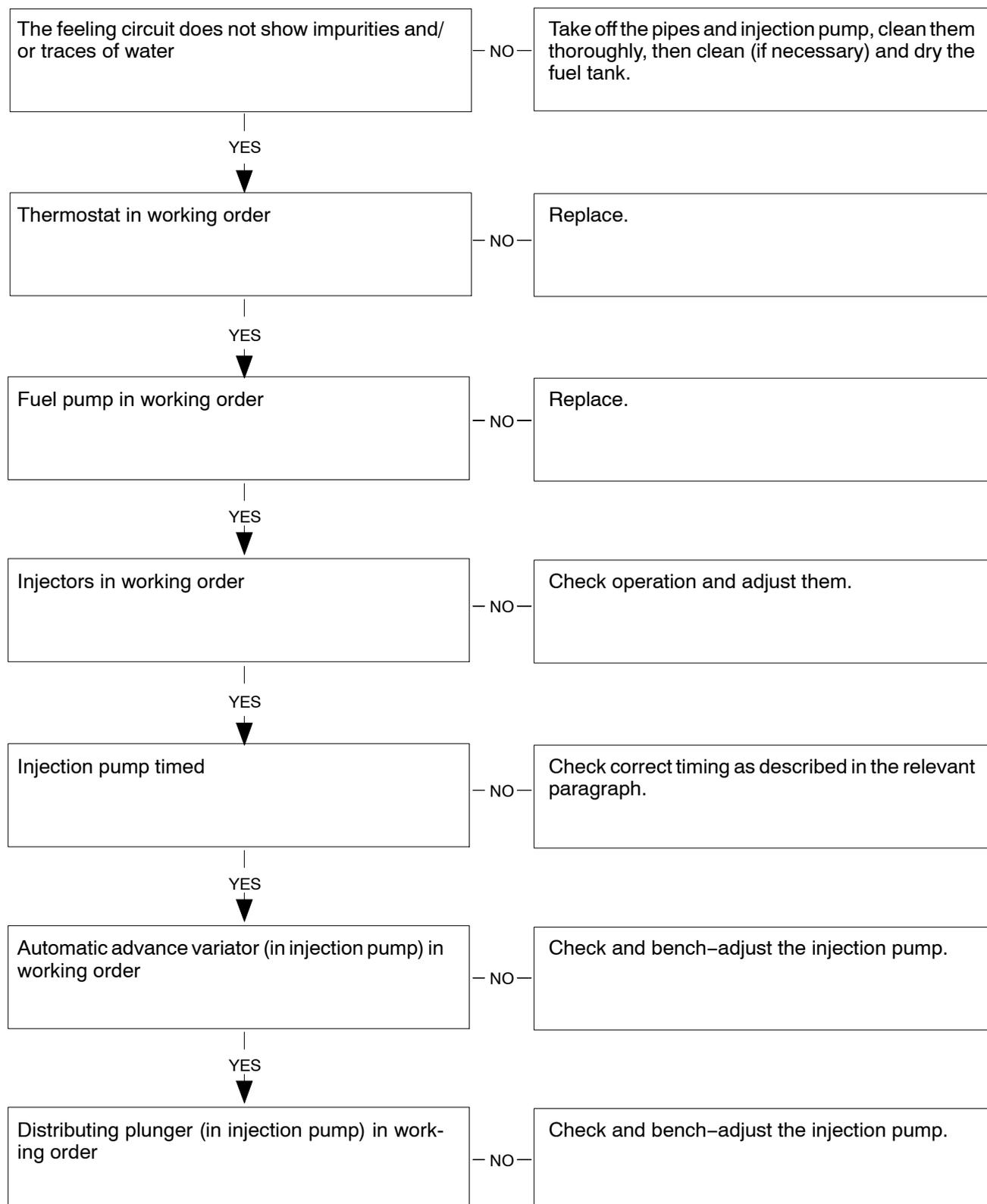


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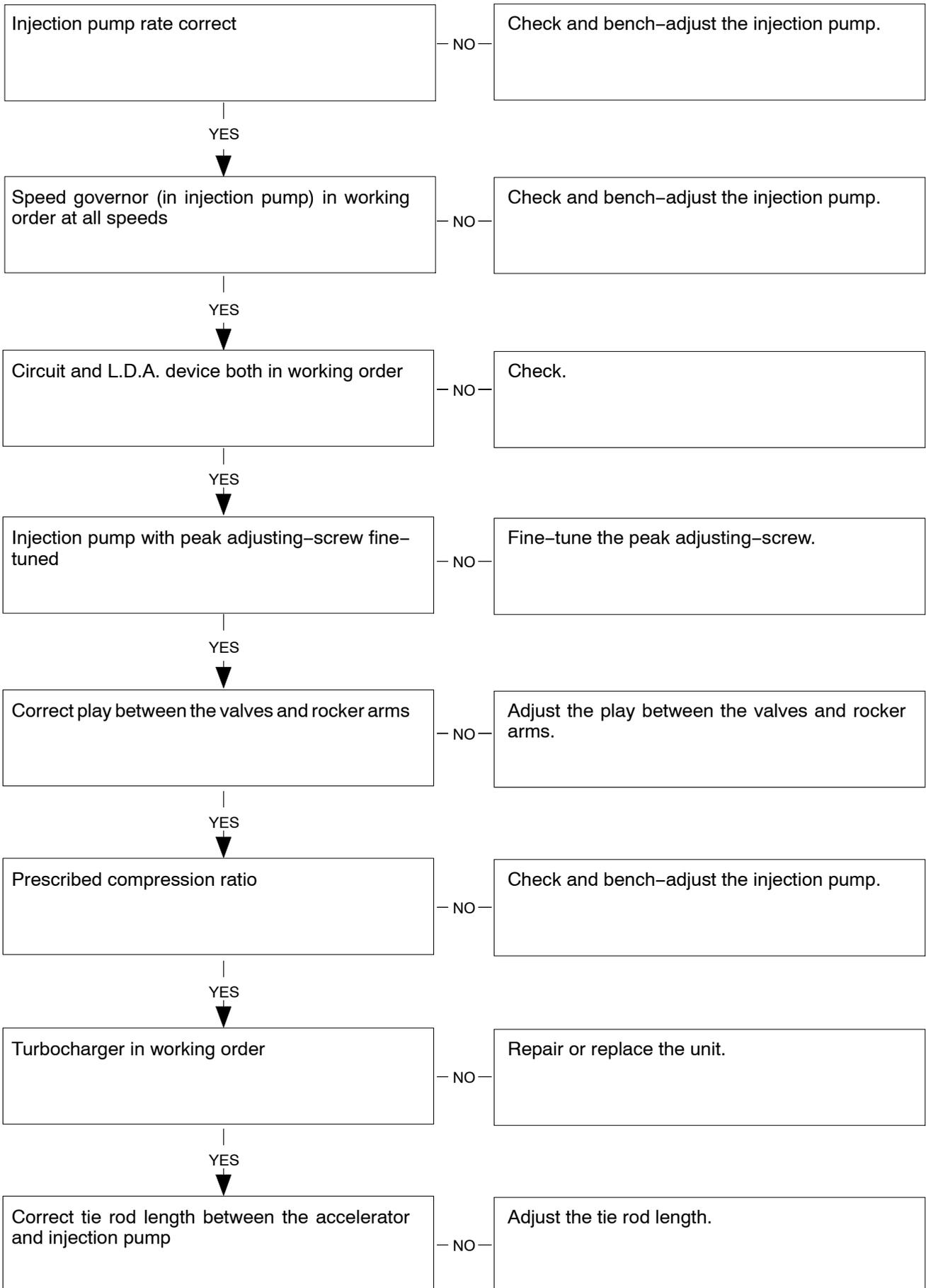
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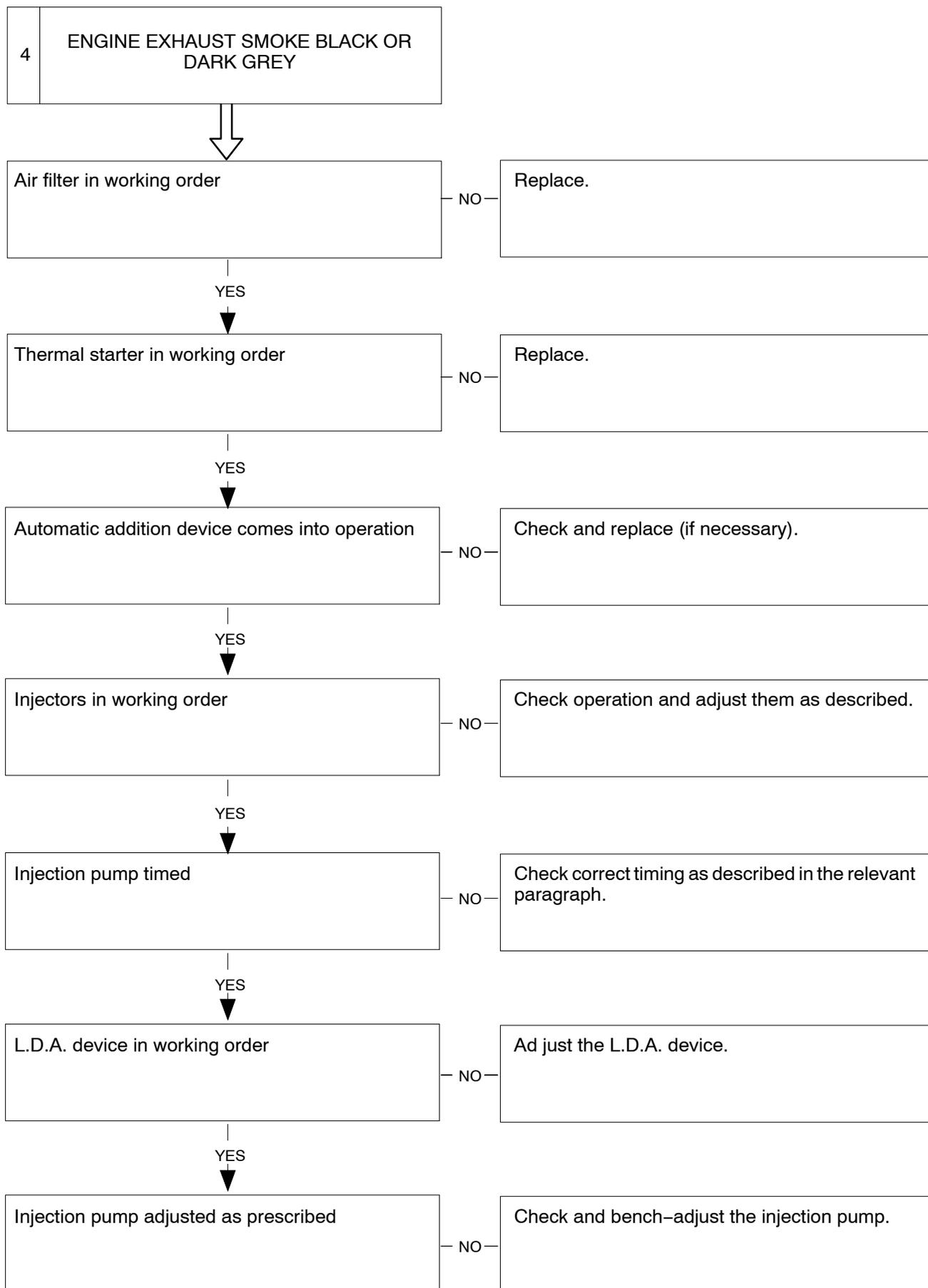


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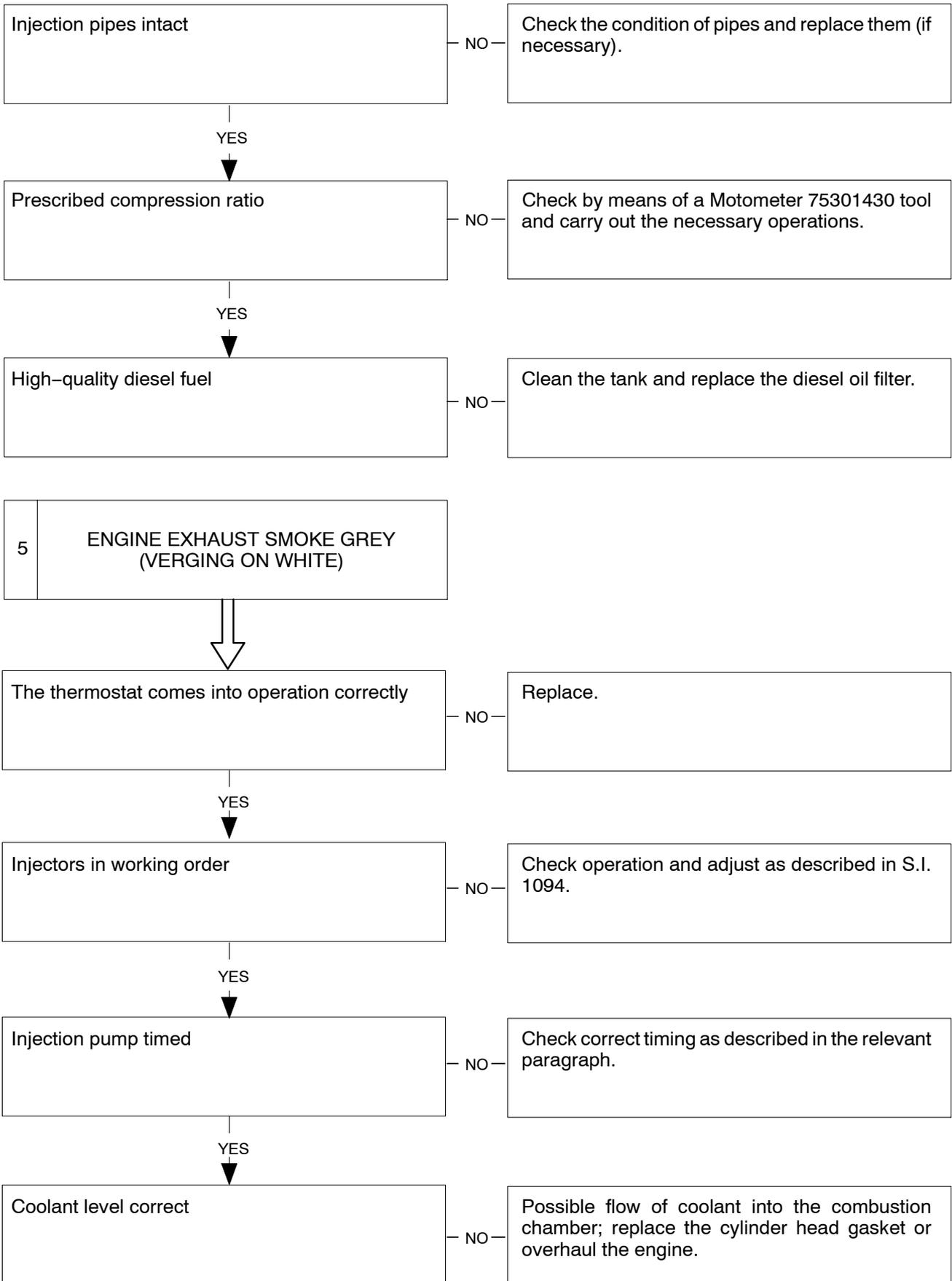


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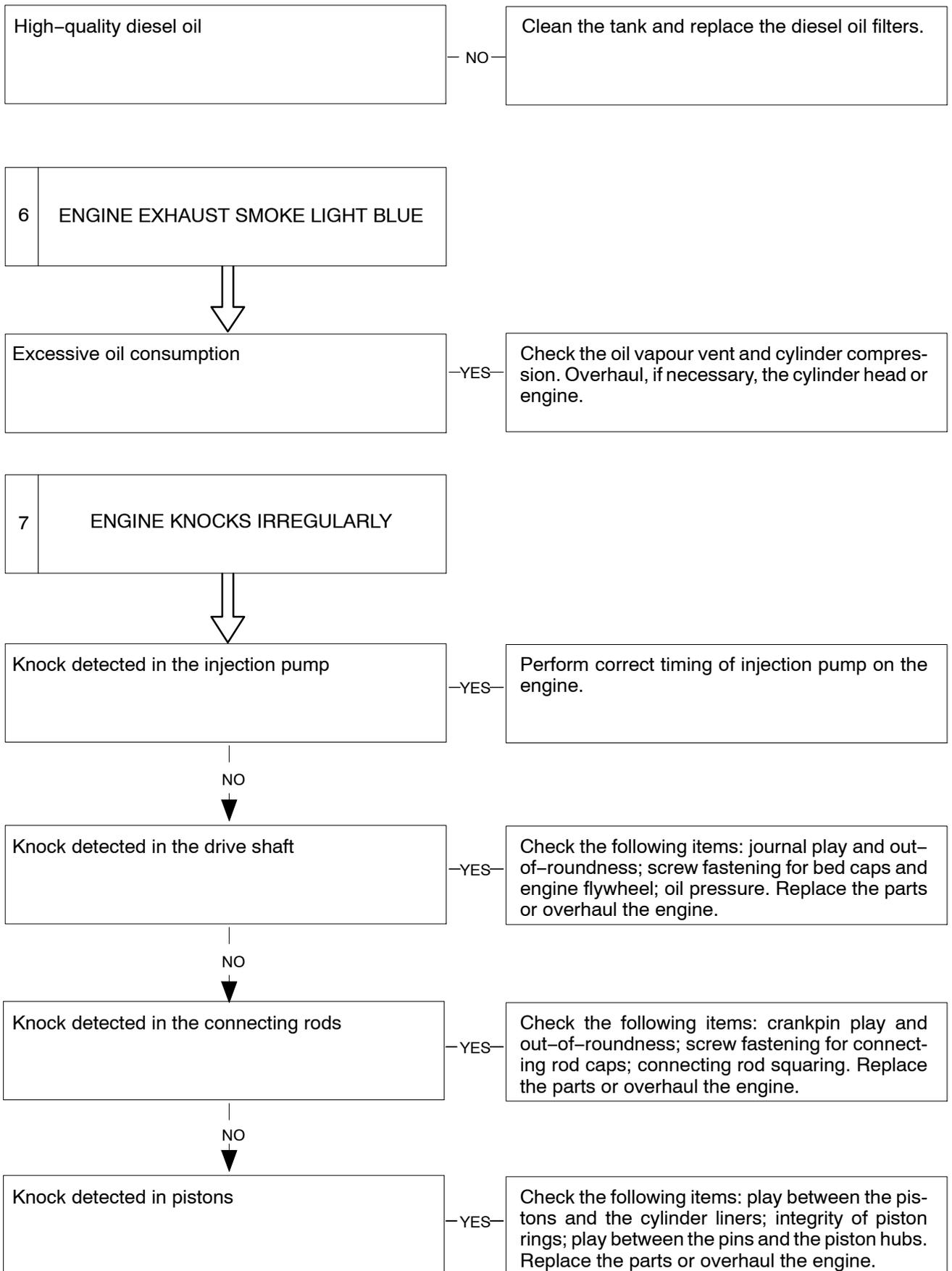
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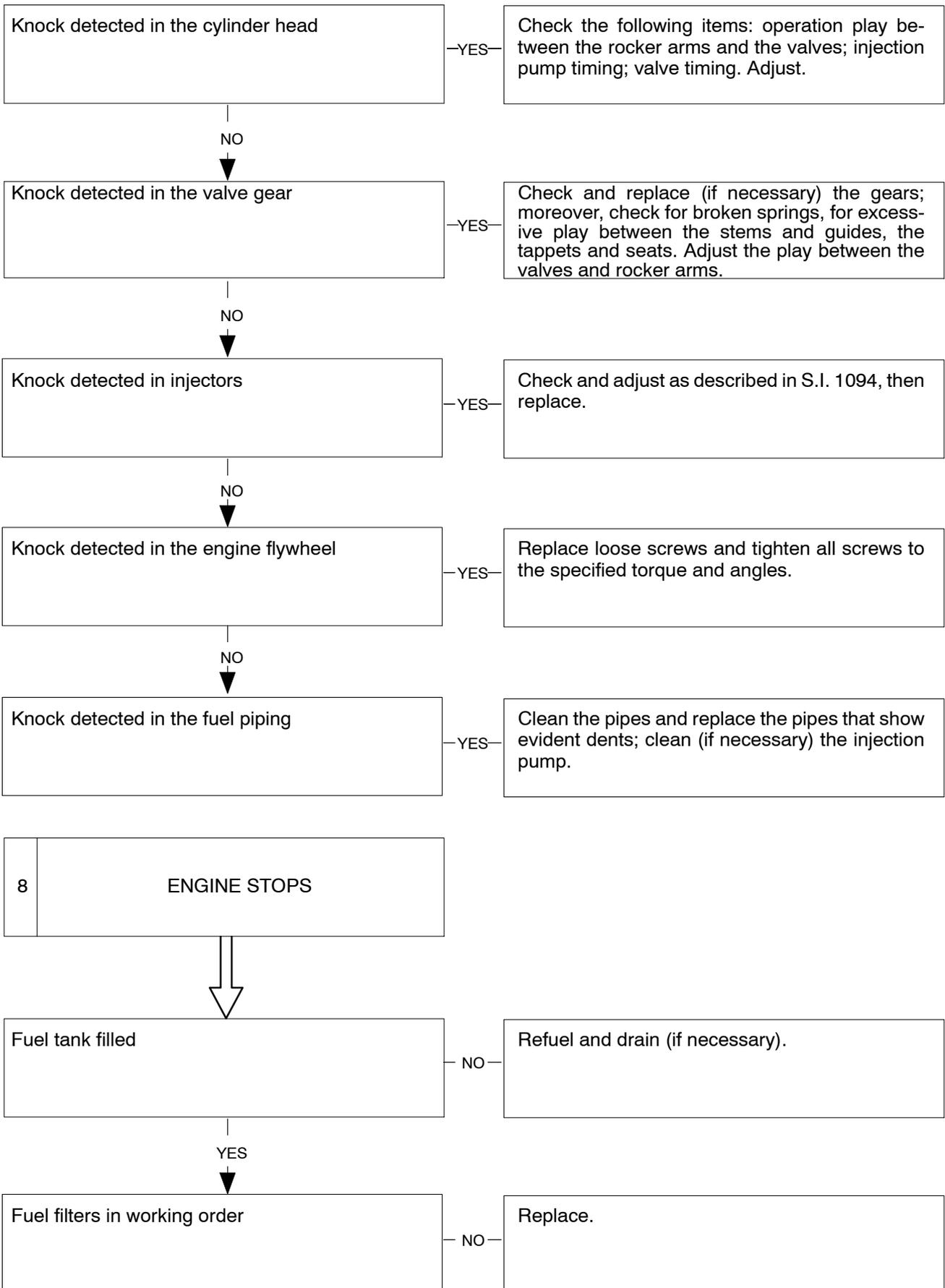
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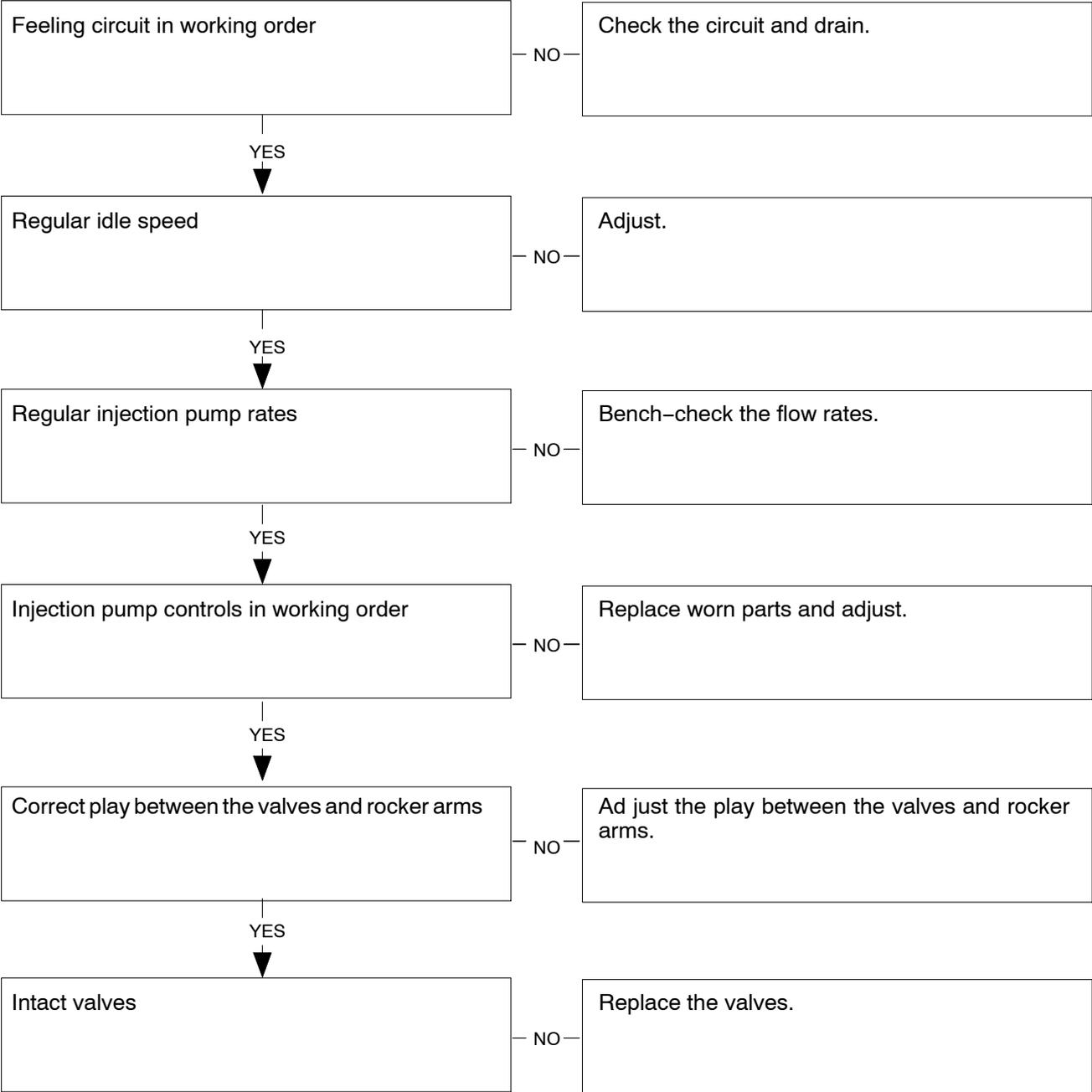
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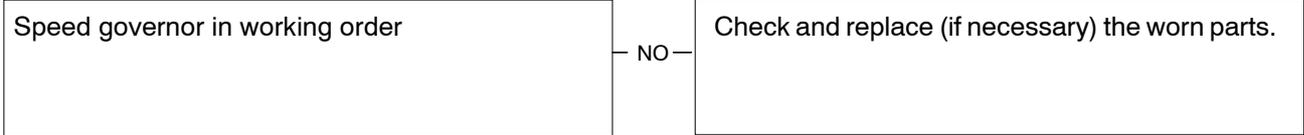
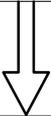


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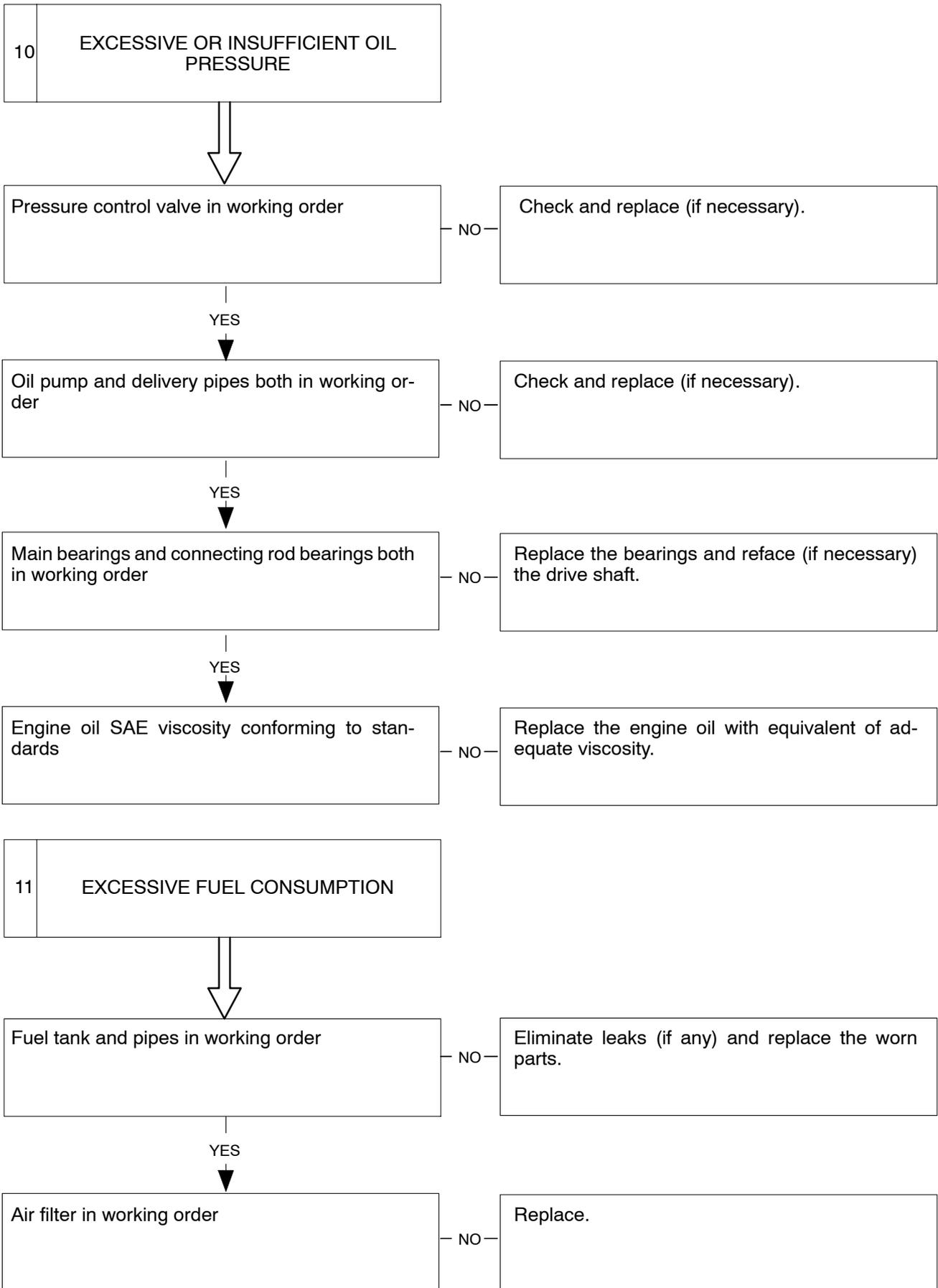
DIAGNOSTICS



9 ENGINE EXCEEDS MAX. REVS NUMBER

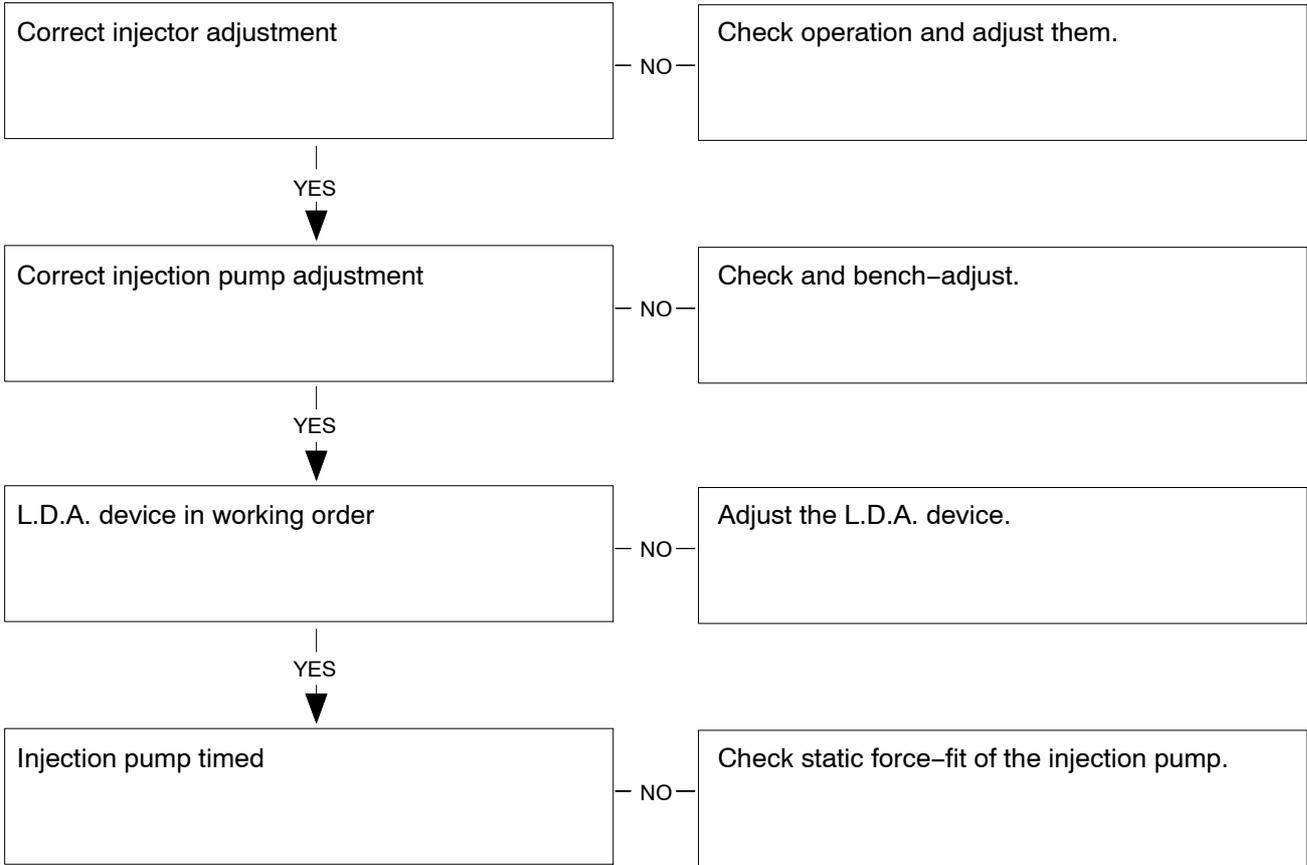


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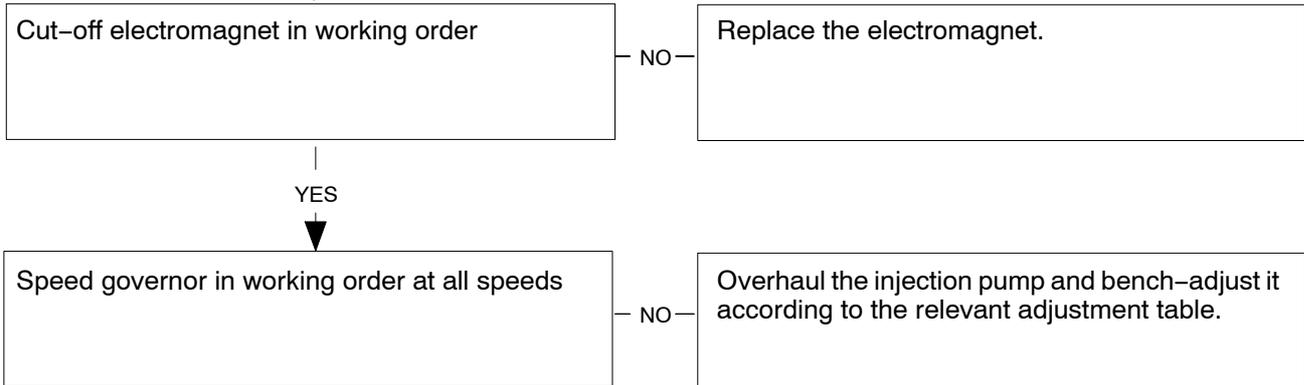


(to be continued)

DIAGNOSTICS



12 ENGINE WON'T STOP



DIAGNOSTICS

NOTES

ENGINES F4GE0404B F4GE0454C F4GE0484G OVERHAUL



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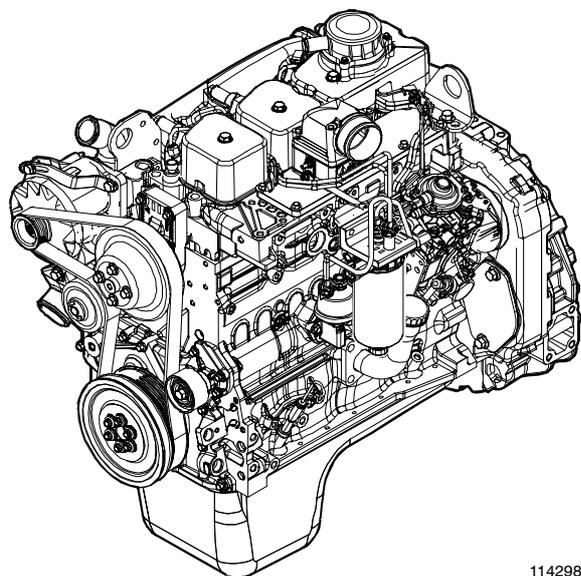
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ENGINES F4GE0404B – F4GE0454C – F4GE0484G OVERHAUL

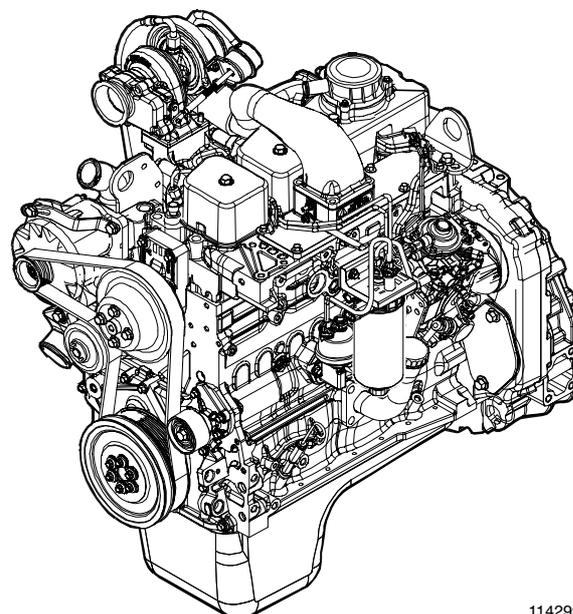
Figure 1



114298

ENGINE F4GE0404B

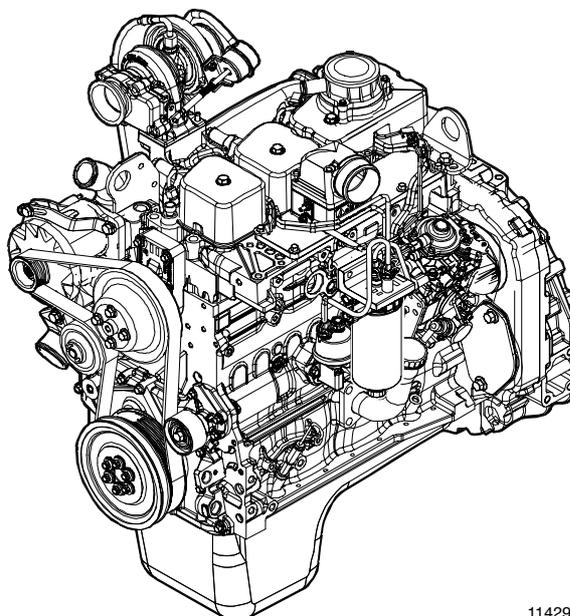
Figure 2



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ENGINE F4GE0454C

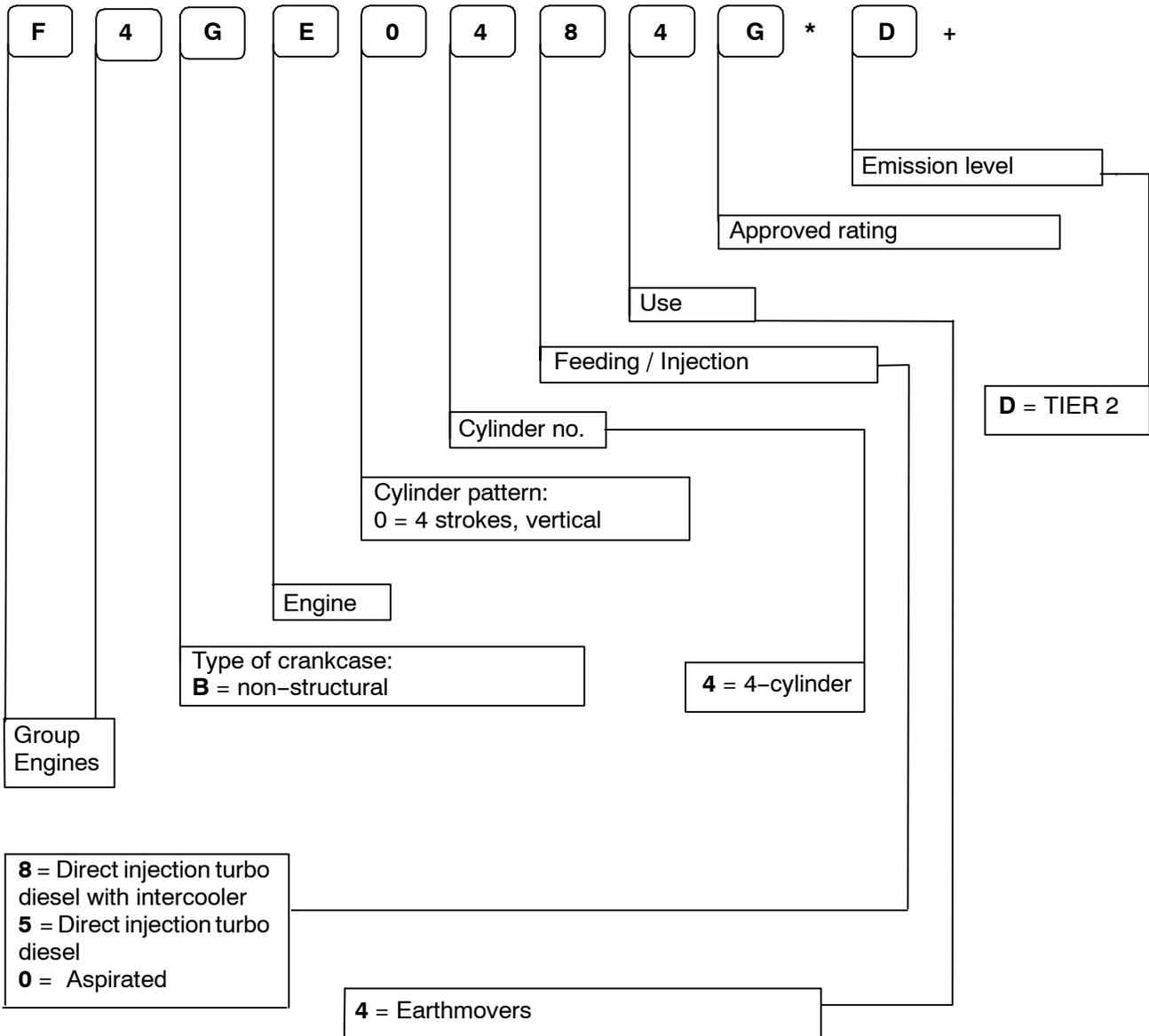
Figure 3



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ENGINE 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 F4GE0404B – F4GE0454C – F4GE0484G OVERHAUL

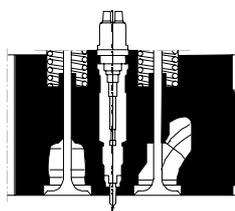
MAIN ENGINES FEATURES

A →	LM1330 LM1333	LM1330 Turbo LM1333 Turbo	LM1340 Turbo – LM1343 Turbo LM1345 Turbo – LM1443 Turbo LM1445 Turbo – LM1745 Turbo
B →	F4GE0404B	F4GE0454C	F4GE0484G
C →	*D600		
D →			
E →	4485		
F →	60 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

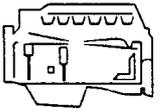
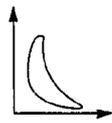
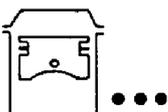
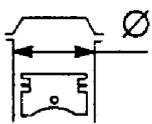
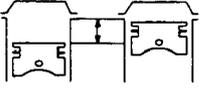
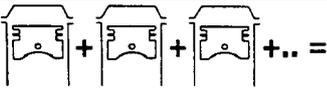
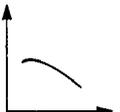
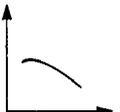
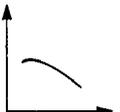
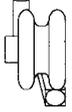
I →

N.A. (Aspirated)	T.C. (Boosted)	T.A.A. (Boosted by intercooler)
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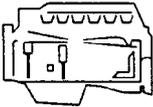
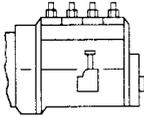
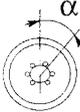
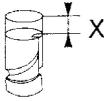
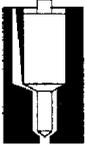
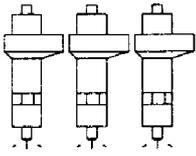
- A** Telescopic Handlers initials
- B** Type of engine
- C** Engine model
- D** Number of cylinders
- E** Total displacement
- F** Max. power currently available
- G** Type of injection
- H** Injection system
- I** Air supply system

ENGINES F4GE0404B – F4GE0454C – F4GE0484G OVERHAUL

GENERAL ENGINES FEATURES

		F4GE0404B	F4GE0454C	F4GE0484G	
		*D600			
	Type				
	Cycle	4-stroke diesel engine			
	Feeding	aspirated	supercharged -	with intercooler	
	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	60	71	82
			2200	2200	2200
	Max. torque	Nm min ⁻¹	320 (32)	398 (39.8)	480 (48)
			1400	1400	1400
	No-load idle rpm	min ⁻¹	-		
	No-load peak rpm	min ⁻¹	-		
	BOOSTING		-	-	with intercooler
	Type of turbocharger:		-	HOLSET HX25W	
	LUBRICATION		Forced by means of gear pump, pressure relief valve, oil filter		
	Oil pressure with hot engine:	bar			
			at idle rpm	bar	-
	at peak rpm	bar	-		

ENGINES F4GE0404B - F4GE0454C - F4GE0484G OVERHAUL

		F4GE0404B	F4GE0454C	F4GE0484G
	Type	*D600		
COOLING	Water pump drive:	By fluid		
	Thermostat: Start of opening: °C	By means of belt		
		81 ± 2		
 Ambra Mastergold HSP 15W40	FILLING			
	Total capacity 1 st filling:	litres kg	-	
	- engine sump	litres kg	-	
	- engine sump + filter	litres kg	-	
	FEEDING Bosch-type injection		VE4 / 12 F 1100 L 954	
	Pump setting	0° ± 0.5°		
	Start of delivery	mm	1	
	Type of nozzle	DSLA 145 PV	DSLA 145 P 1174	
	Injection sequence	1 - 3 - 4 - 2		
	Injection pressure (bar)	260 + 14	245	