



NEW HOLLAND

Product: New Holland CNH U.K. ENGINES F4BE Series Service Repair Workshop Manual
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REPAIR MANUAL FOR CNH U.K. ENGINES

F4BE0454B
F4BE0484D
F4BE0484E
F4BE0684B
F4BE0684M

REPAIR MANUAL FOR CNH U.K. ENGINES

F4BE0454B
F4BE0484D · E F4BE0684B · M

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Print No. 604.13.582
English - Printed in Italy

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REPAIR MANUAL FOR CNH U.K. ENGINES

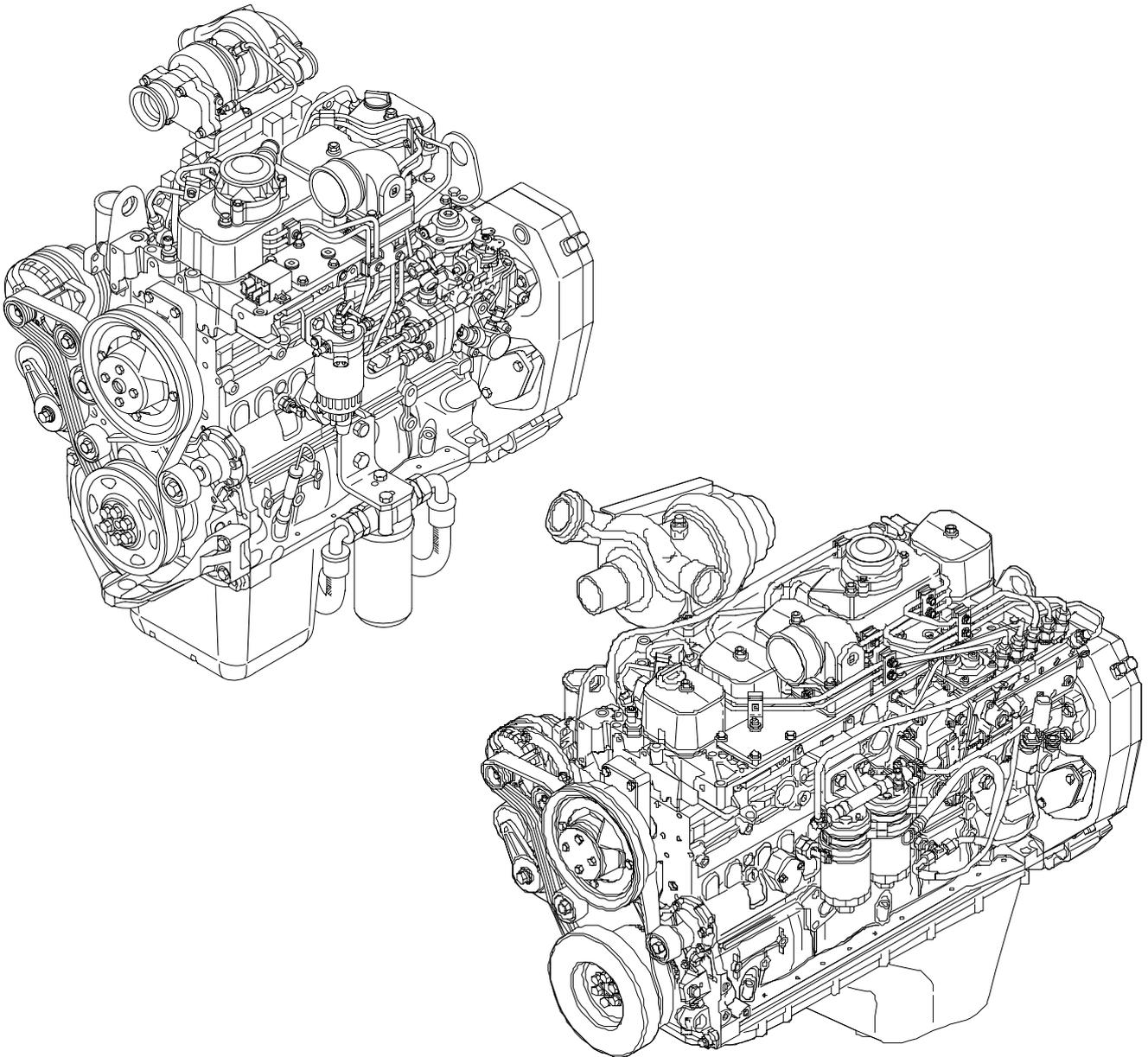
F4BE0454B – F4BE0484D – F4BE0484E

F4BE0684B – F4BE0684M

The following models are to integrate repair manuals:

NEW HOLLAND KOBELCO E145 – E175 – E195 – E215 – E245

NEW HOLLAND MH2.6 – MH3.6 – MH4.6 – MH Plus C



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. 604.13.582
Edition – April 2006

INTRODUCTION

TO THE READER

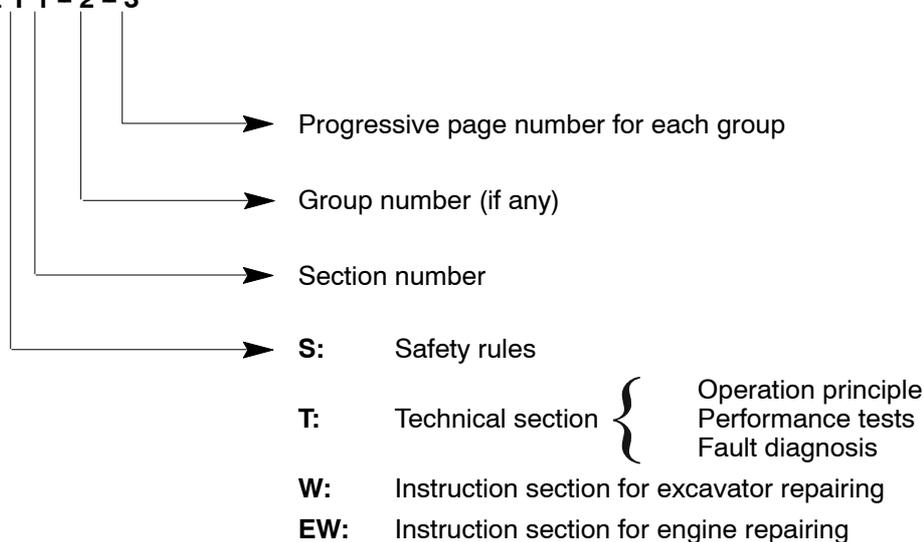
- This manual was written for a skilled technician and contains all the technical information needed to repair this vehicle.
- For any question or comment, or should you notice any mistake concerning the content of this manual, please contact:
- Read this manual carefully for the information concerning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

NEW HOLLAND
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 San Mauro Torinese (TO)
 10099 ITALIA
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 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

INDEX OF SECTIONS



Section 1 – Diagnostics

EW-1-1



Section 2 – Engines overhaul:

- F4BE0454B
- F4BE0484D
- F4BE0484E

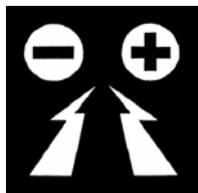
EW-2-1



Section 3 – Engine overhaul:

- F4BE0684B
- F4BE0684M

EW-3-1



Section 4 – Recharging and start-up

EW-4-1

DIAGNOSTICS



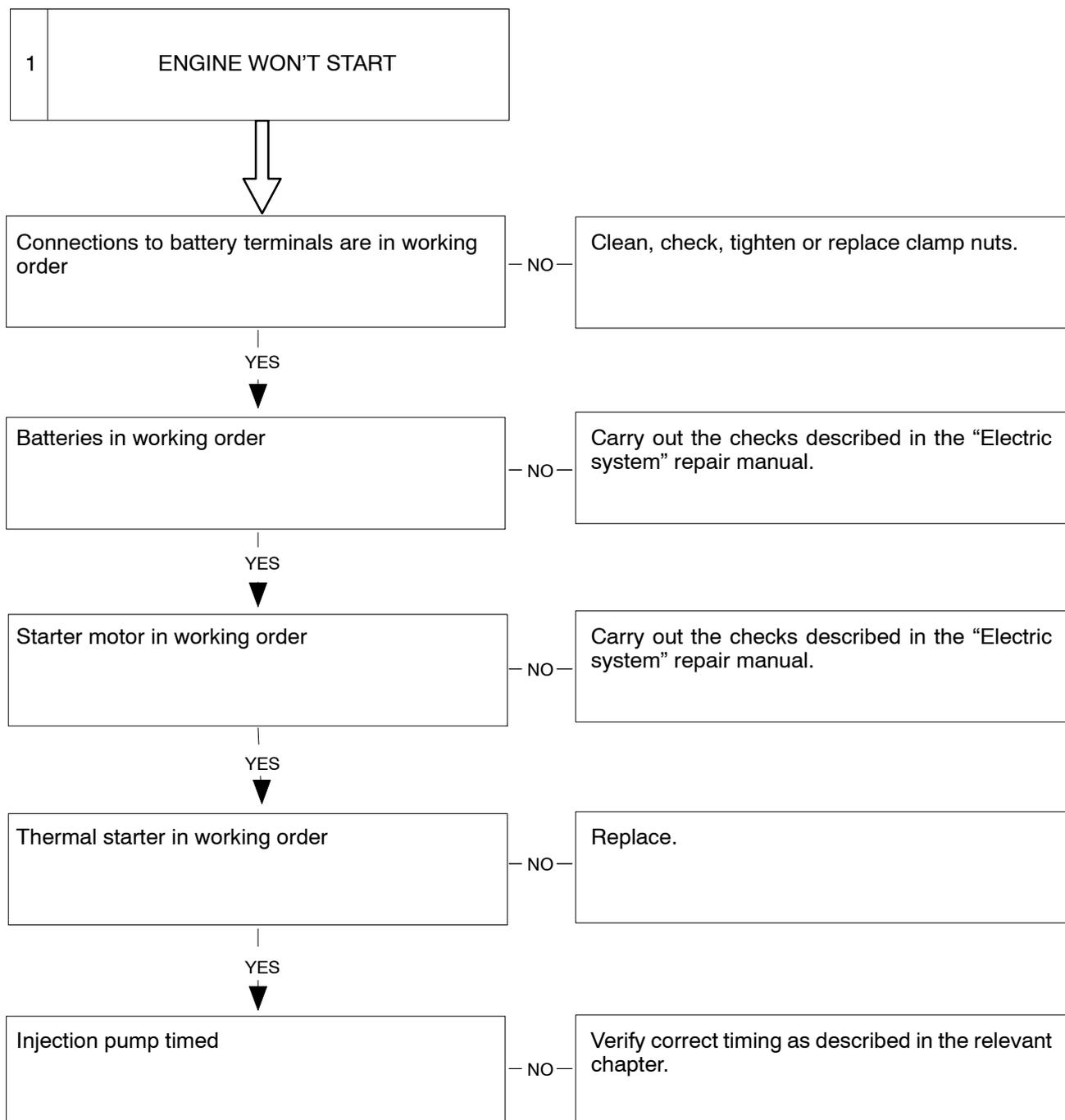
INDEX

Diagnostics	EW-1-3
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DIAGNOSTICS

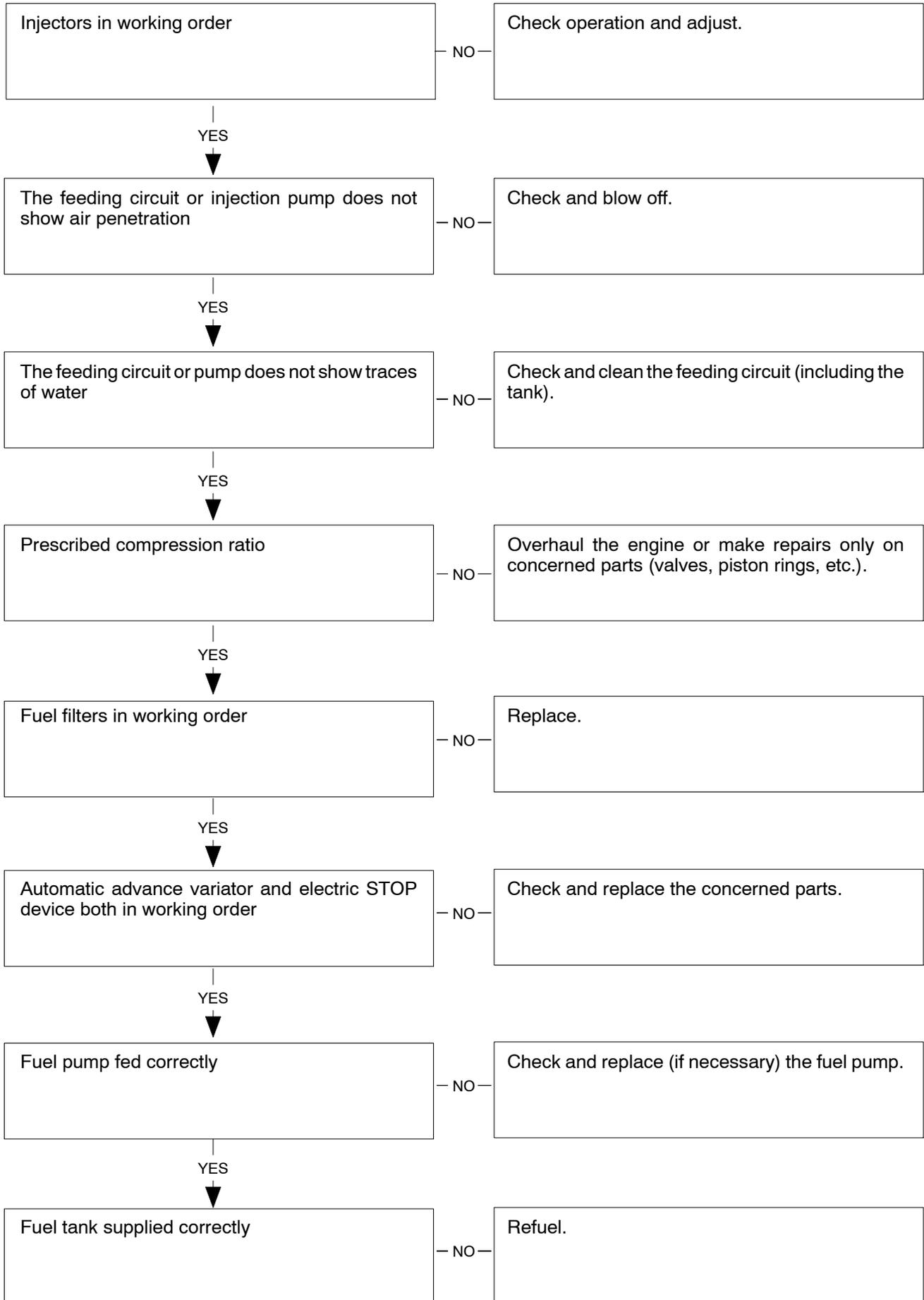
Main engine operating anomalies:

- | | |
|--|--|
| <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. |
|--|--|

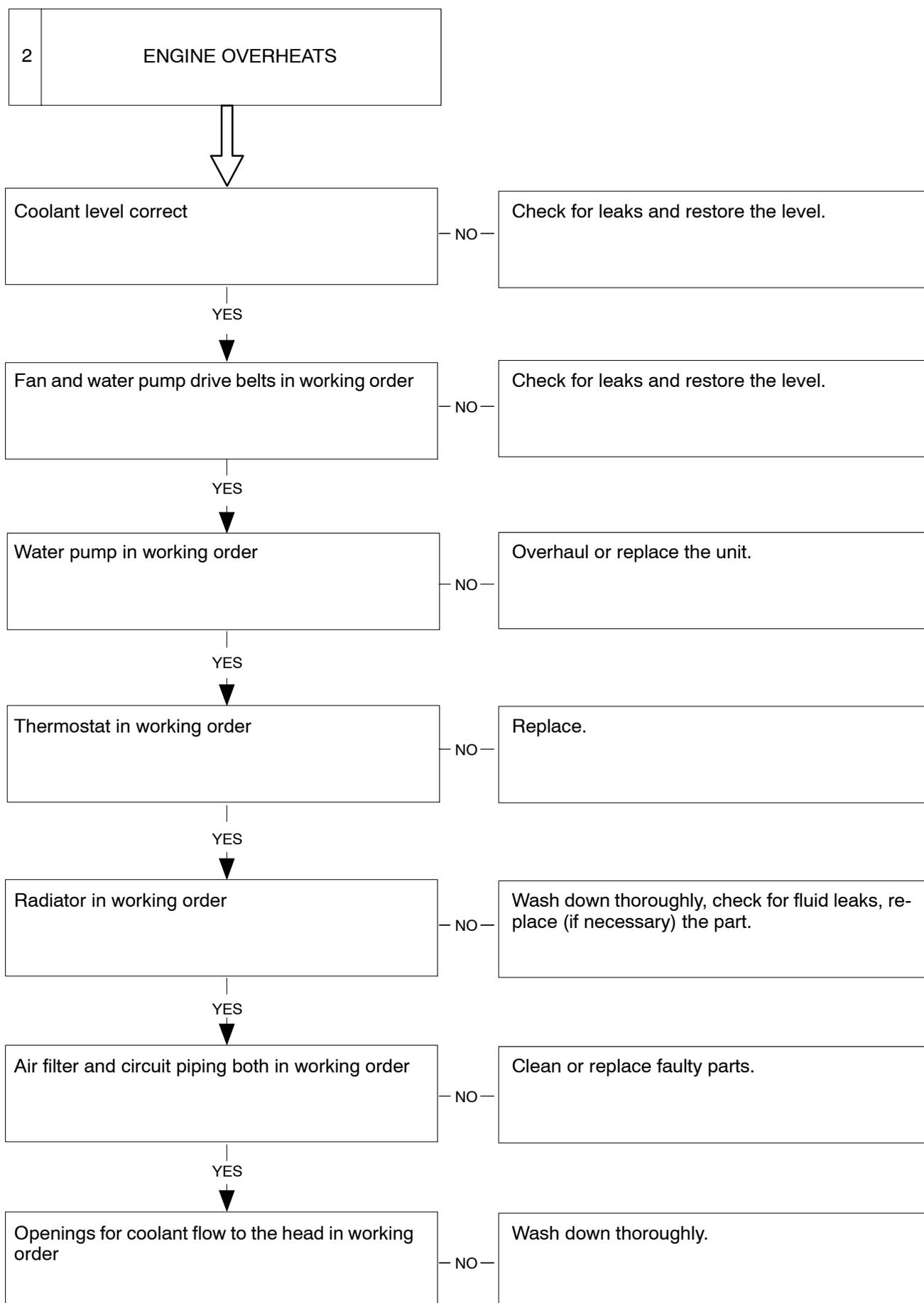


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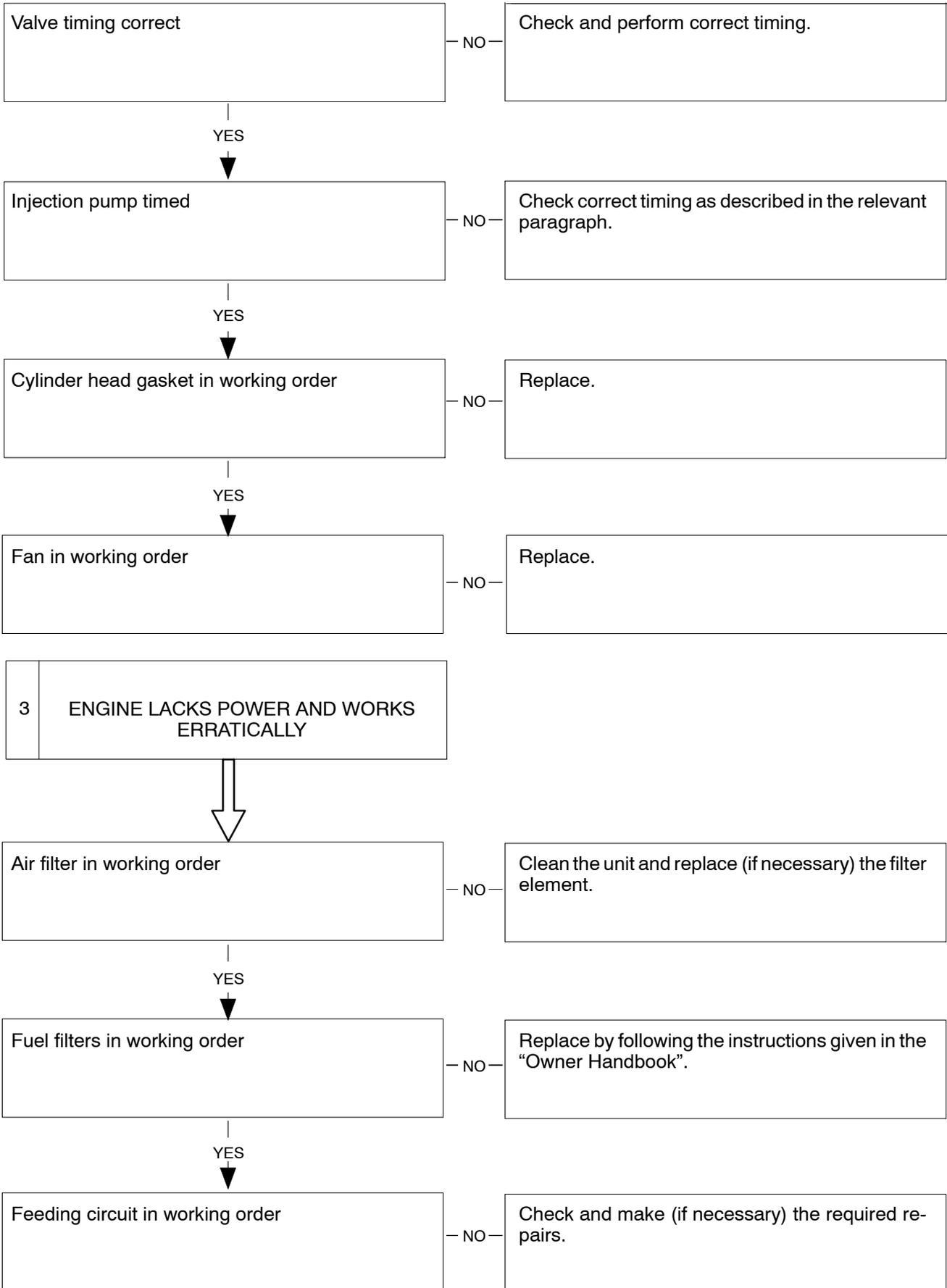
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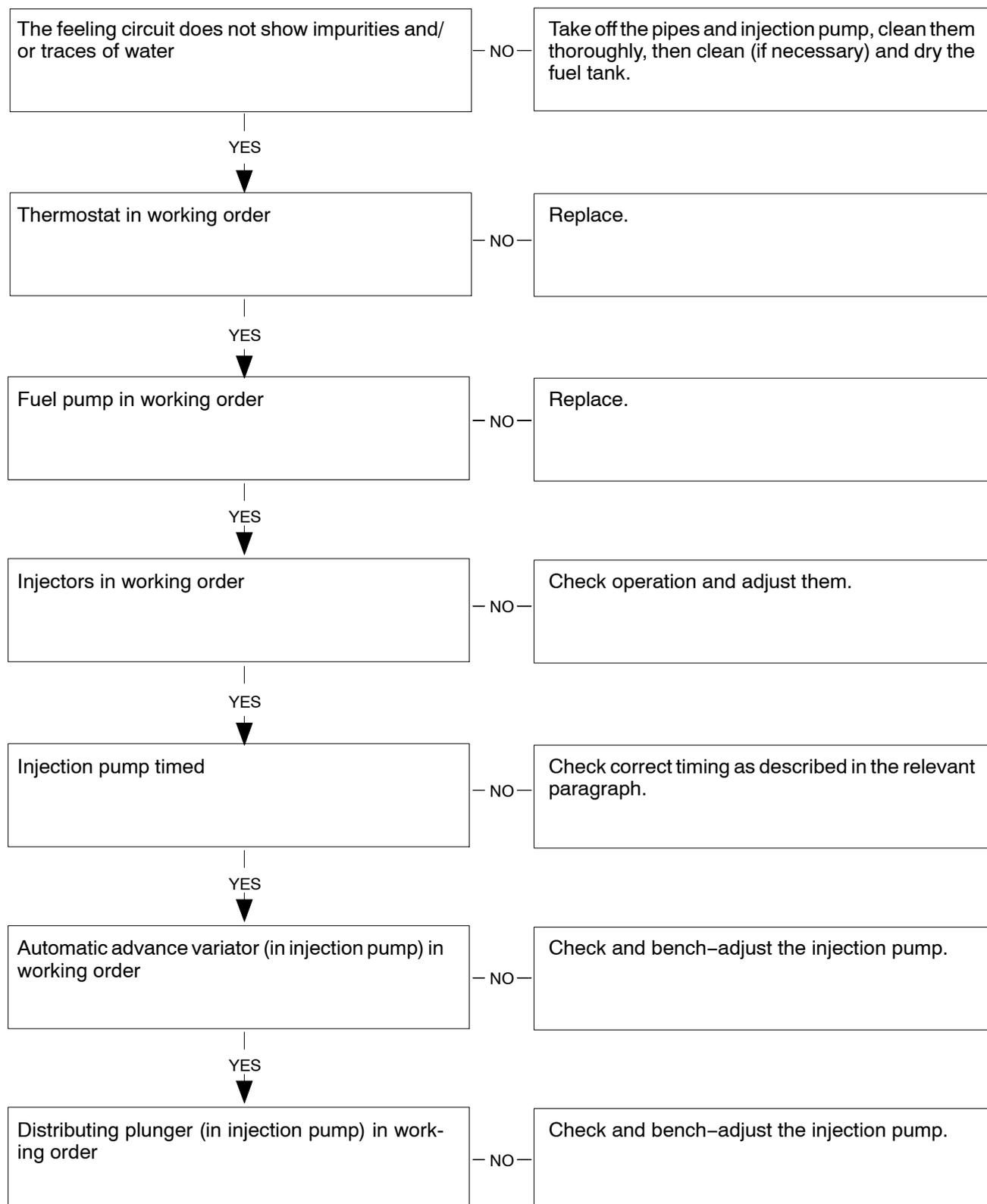


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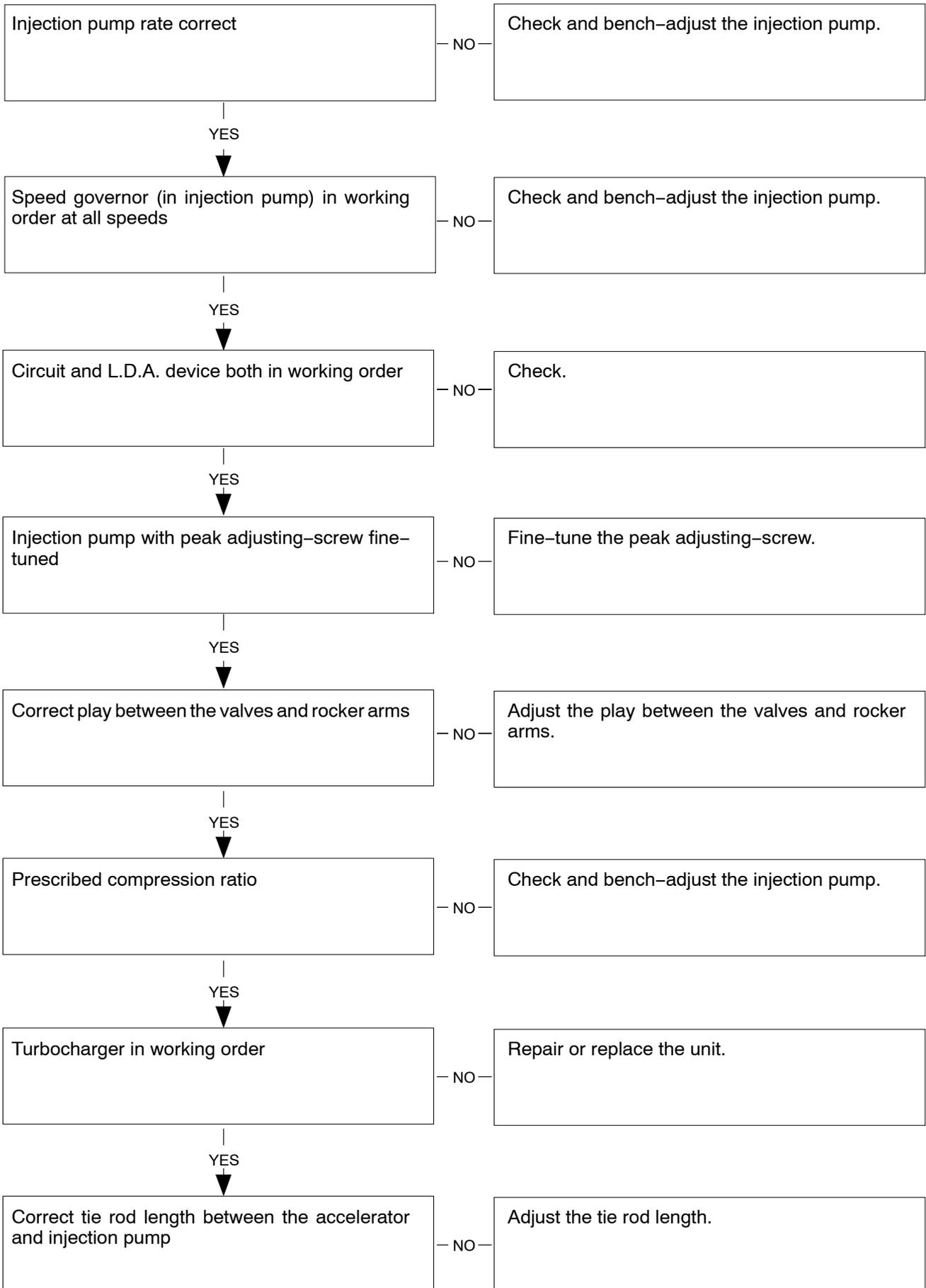
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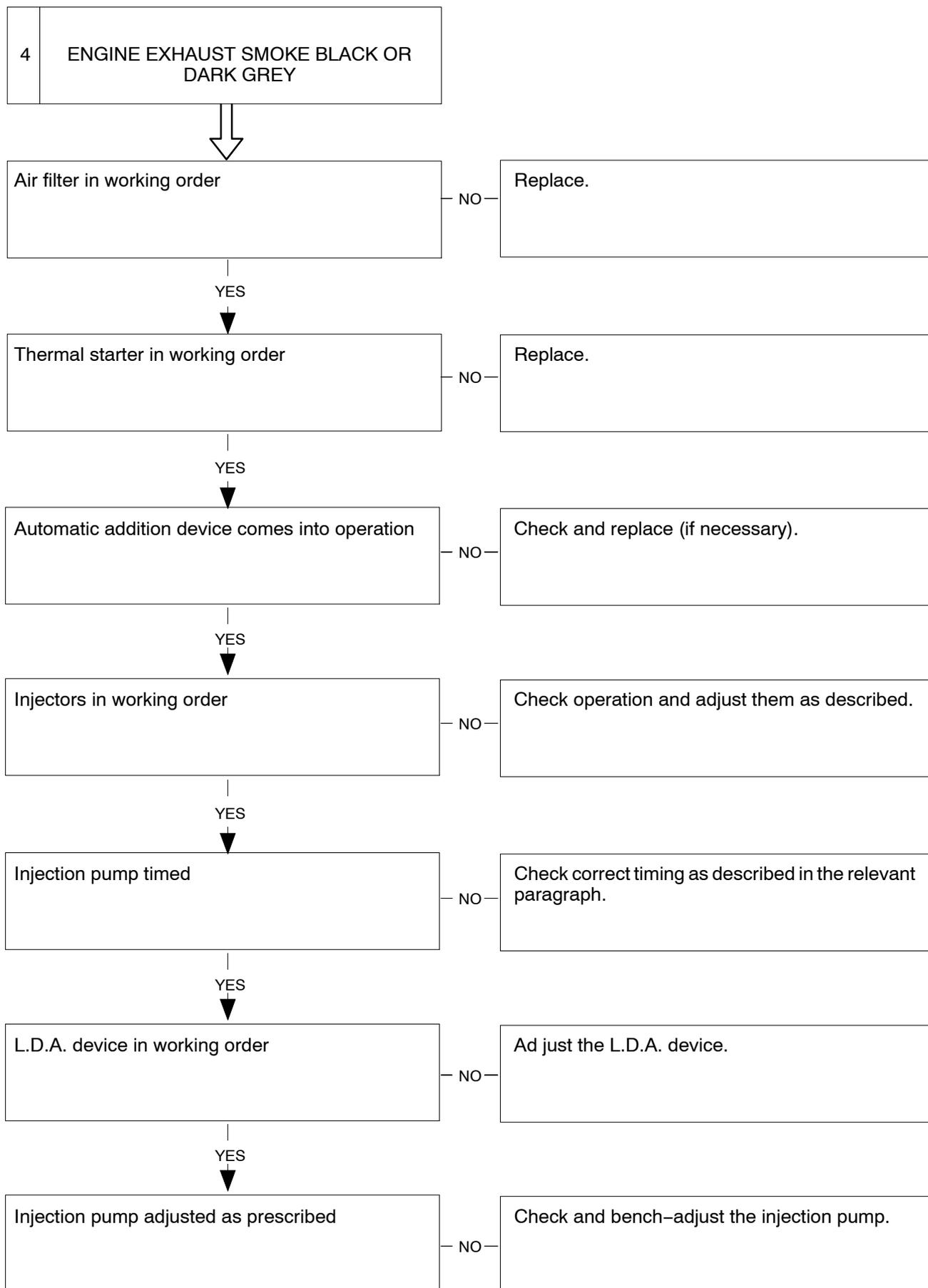


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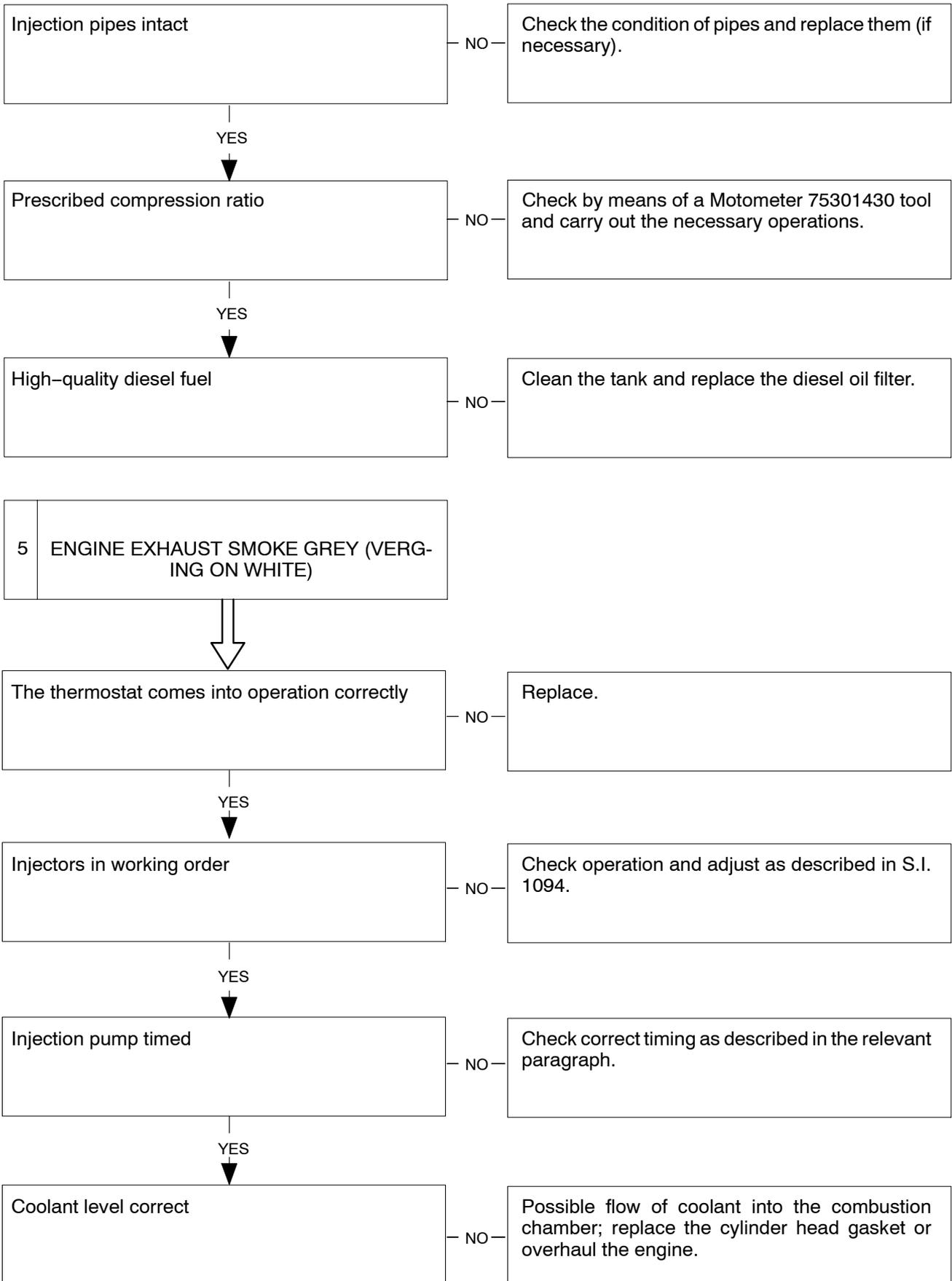


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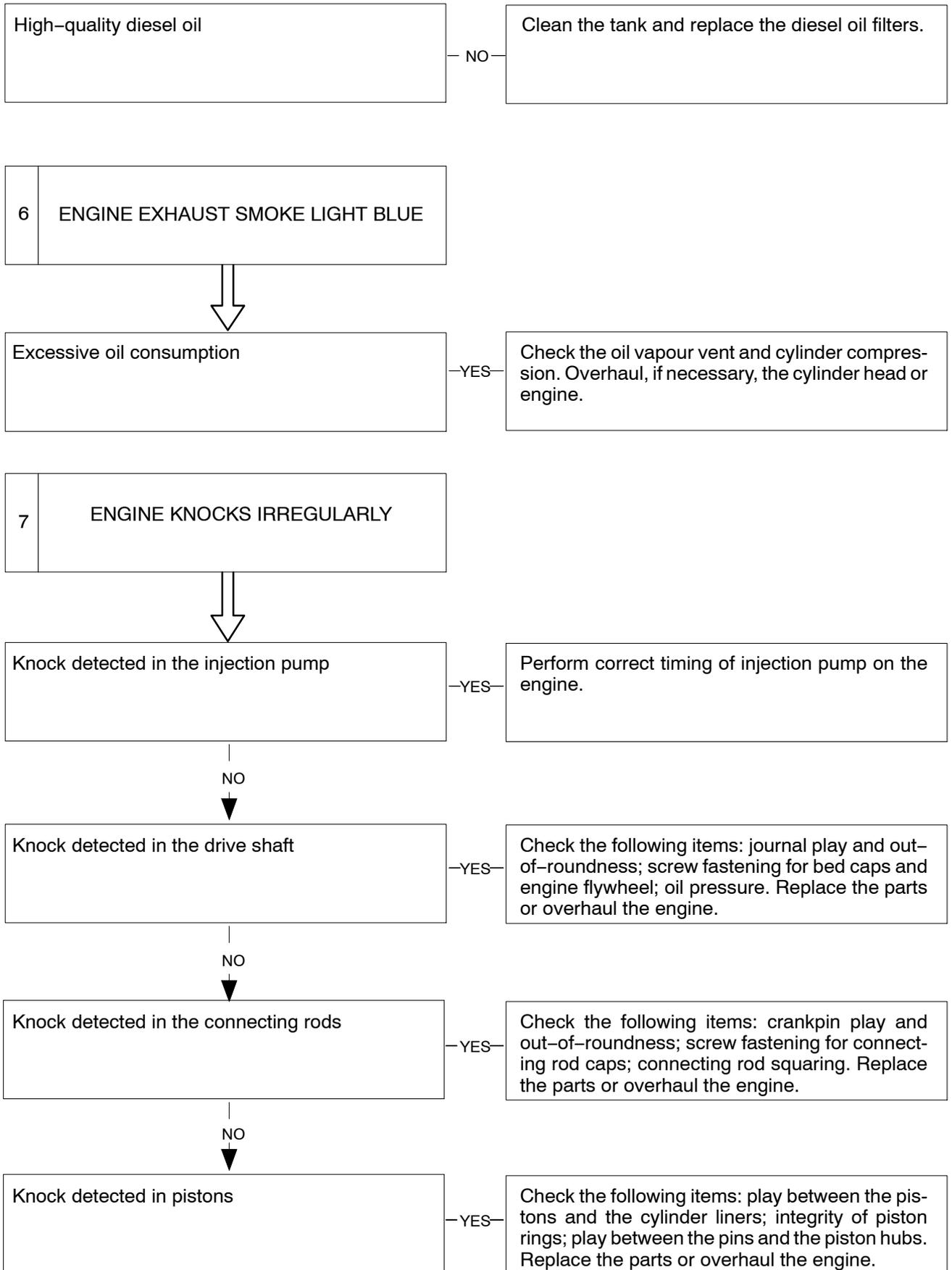
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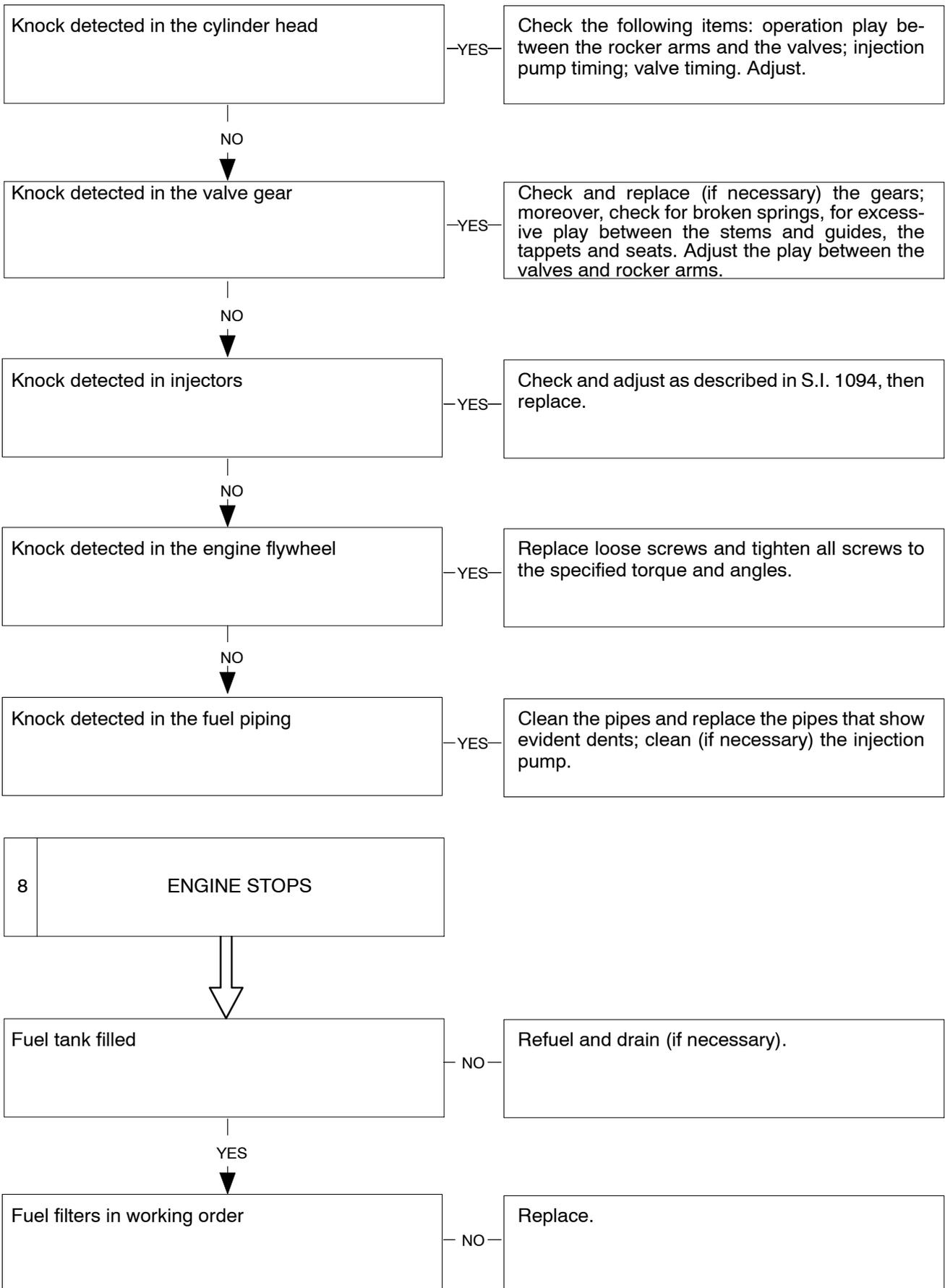
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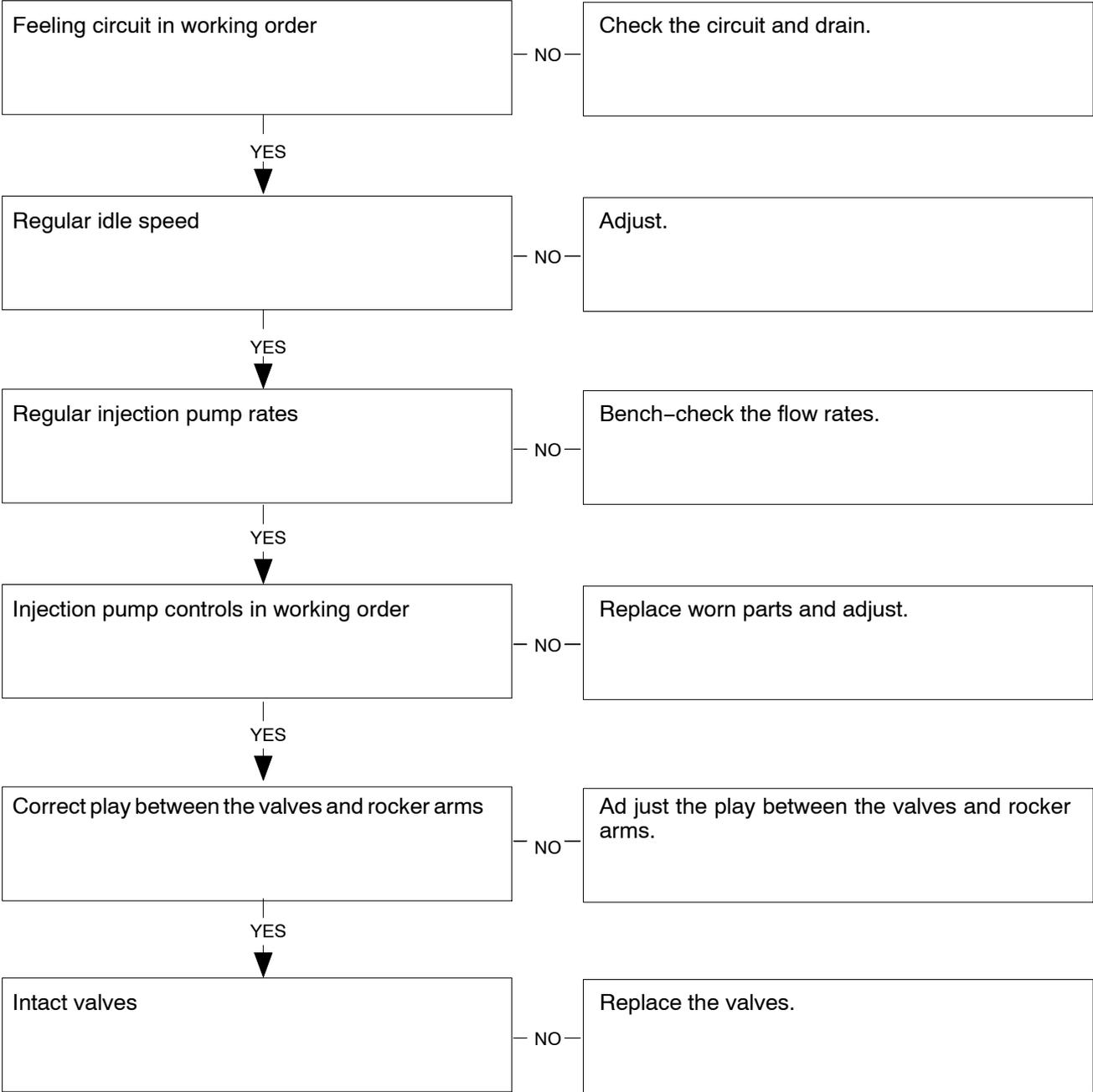
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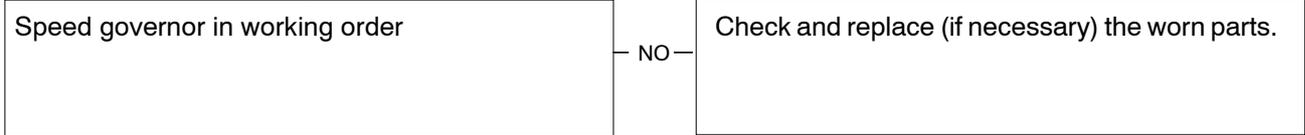
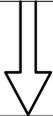


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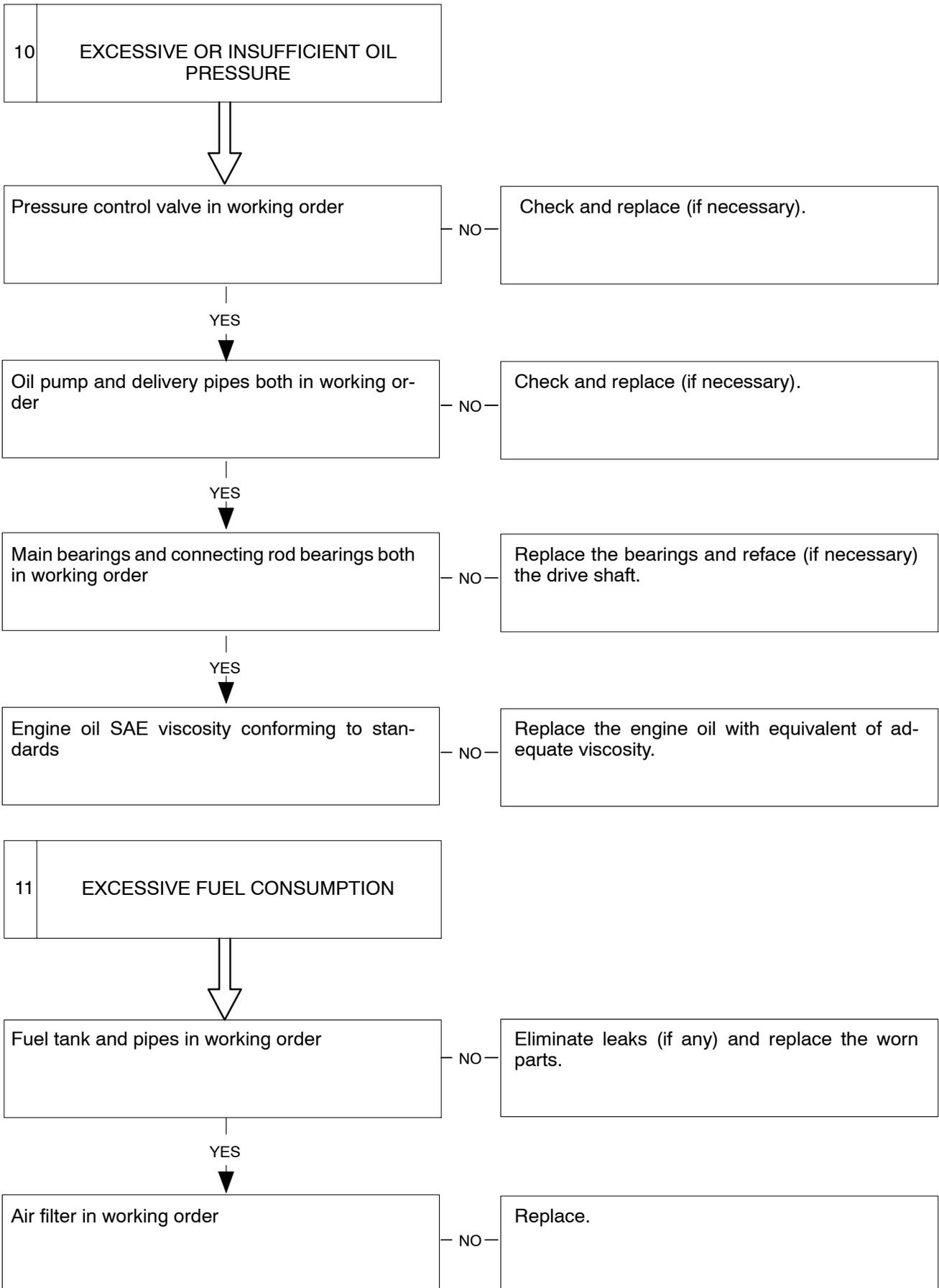
DIAGNOSTICS



9	ENGINE EXCEEDS MAX. REVS NUMBER
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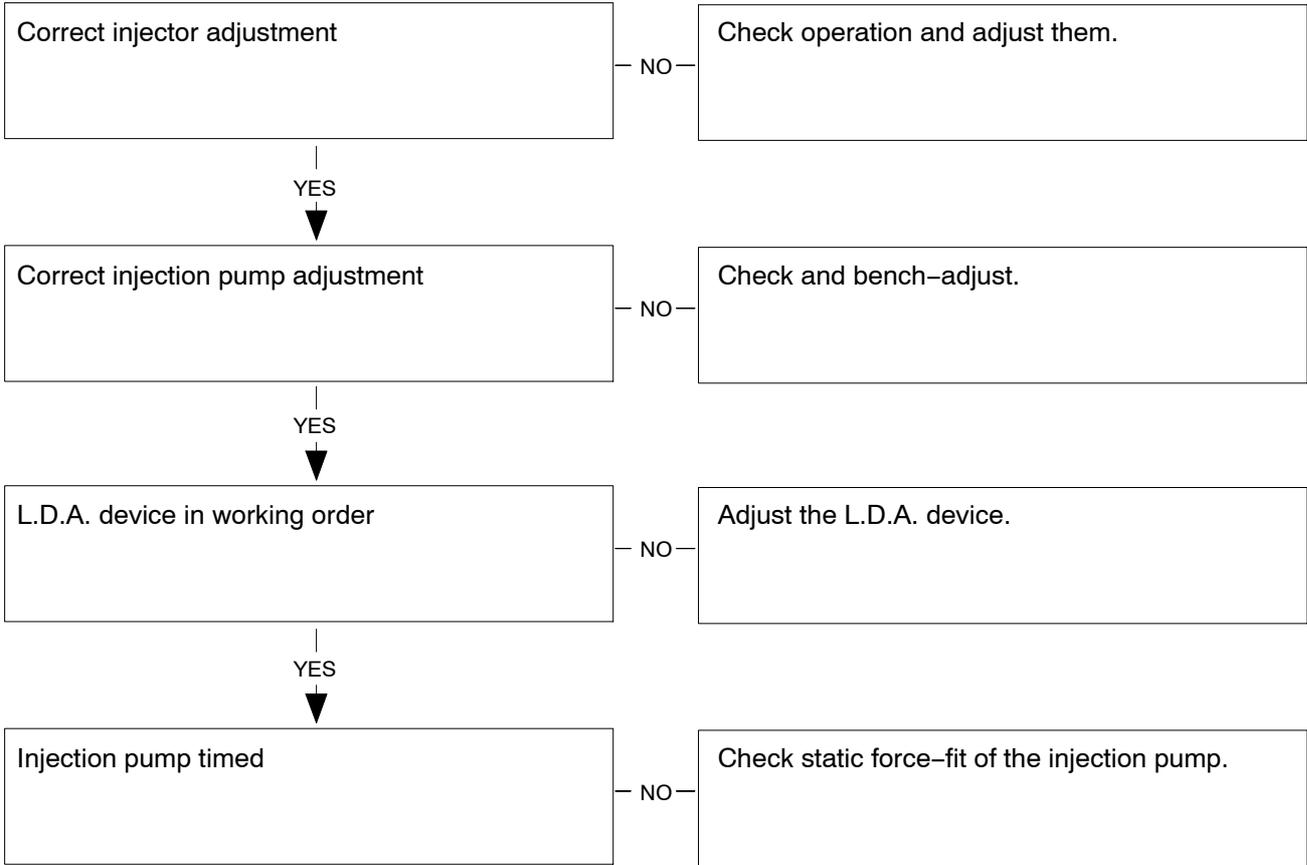


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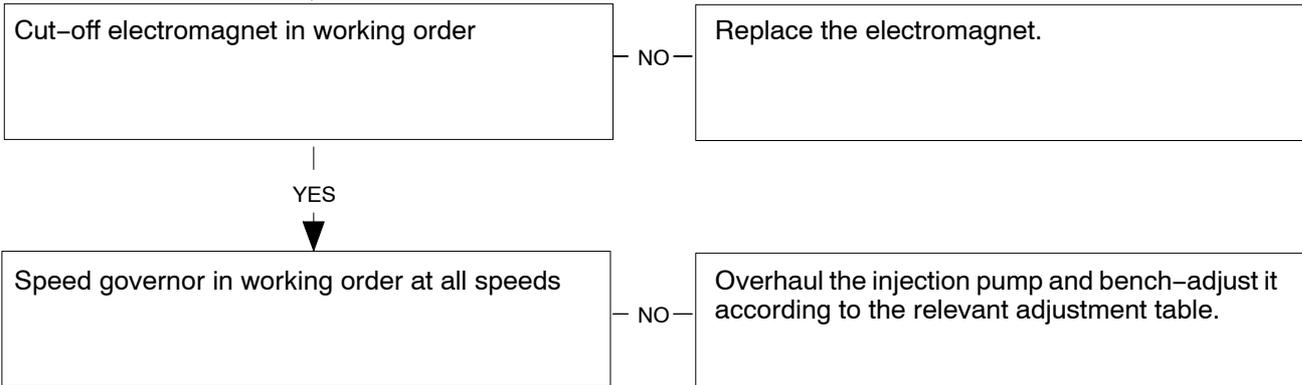


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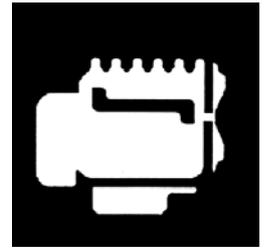


12 ENGINE WON'T STOP



NOTES

ENGINES F4BE0454B F4BE0484D F4BE0484E OVERHAUL



INDEX

Engines F4BE0484	EW-2-3	Checking the eccentric lift and the pin alignment	EW-2-59
Coding of source engines	EW-2-4	Bushings	EW-2-60
Main engines features	EW-2-5	Replacing the bushings	EW-2-61
Torque and rating features	EW-2-7	Tappets	EW-2-61
General engines features F4BE0454 ..	EW-2-8	Mounting the tappets – Distributing shaft	EW-2-61
Assembling engines play F4BE0454 – specifications	EW-2-10	Drive shaft	EW-2-62
General engines features F4BE0484 ..	EW-2-16	Measuring the journals and crankpins ..	EW-2-62
Assembling engines play F4BE0484 – specifications	EW-2-18	Replacing the oil pump drive gears	EW-2-65
Tightening torque	EW-2-24	Mounting the main bearings	EW-2-65
Tools	EW-2-25	Measuring the journal assembling play ..	EW-2-65
Graphic indications and symbols ..	EW-2-26	Checking the drive shaft shoulder play ..	EW-2-66
General remarks	EW-2-27	Connecting rod–piston assembly ...	EW-2-67
Description of main mechanic engine components	EW-2-28	Measuring the piston diameter	EW-2-68
Crankcase	EW-2-28	Gudgeon pins	EW-2-69
Drive shaft	EW-2-29	Conditions for correct pin/piston matching.	EW-2-69
Drive shaft seal rings	EW-2-29	Piston rings	EW-2-69
Connecting rods	EW-2-30	Connecting rods	EW-2-70
Pistons	EW-2-31	Bushings	EW-2-71
Distributing shaft	EW-2-32	Checking the connecting rods	EW-2-71
Valve control	EW-2-33	Checking the torsion	EW-2-71
Cylinder head	EW-2-34	Checking the flexion	EW-2-71
Valves and valve seats	EW-2-35	Connecting rod–piston match	EW-2-72
Valve guides	EW-2-36	Mounting the piston rings	EW-2-72
Engine flywheel	EW-2-37	Mounting the connecting rod/piston assemblies in the cylinder liners	EW-2-73
Auxiliary component drive	EW-2-38	Measuring the crankpin assembling play	EW-2-73
Lubrication	EW-2-39	Checking piston protrusion	EW-2-74
Heat exchanger	EW-2-40	Valve gear	EW-2-74
Oil pump	EW-2-41	Distribution gearbox case	EW-2-74
Oil sump	EW-2-42	Valve timing	EW-2-75
Oil vapour recirculation	EW-2-43	Injection pump – 1st phase	EW-2-76
Cooling	EW-2-44	Timing	EW-2-76
Water pump	EW-2-45	Flywheel cover case	EW-2-76
Mechanic injection feeding system	EW-2-46	Mounting the rear seal ring	EW-2-77
Fuel prefilter	EW-2-46	Engine flywheel	EW-2-77
Fuel filter	EW-2-46	Replacing the engine flywheel ring gear	EW-2-77
Mechanic fuel pump	EW-2-47	Injection pump – 2nd phase	EW-2-78
Injection assembly	EW-2-48	Mounting the injection pump – 2 nd phase	EW-2-78
Engine bench–overhaul	EW-2-49	Mounting the oil and water pumps ..	EW-2-79
Disassembling the engine	EW-2-49	Monting the front seal ring	EW-2-79
Removing the front seal ring	EW-2-51	Mounting the oil sump	EW-2-80
Removing the injection pump	EW-2-52	Mounting the water / oil heat exchanger	EW-2-81
Removing the rear seal ring	EW-2-53	Cylinder head	EW-2-81
Removing the rocker arm assembly and cylinder head	EW-2-55	Removing the valves	EW-2-81
Repair work on cylinder cluster	EW-2-57		
Checks and measurements	EW-2-57		
Checking the surface supporting the head on the cylinder cluster	EW-2-58		
Valve gear	EW-2-59		
Distributing shaft	EW-2-59		

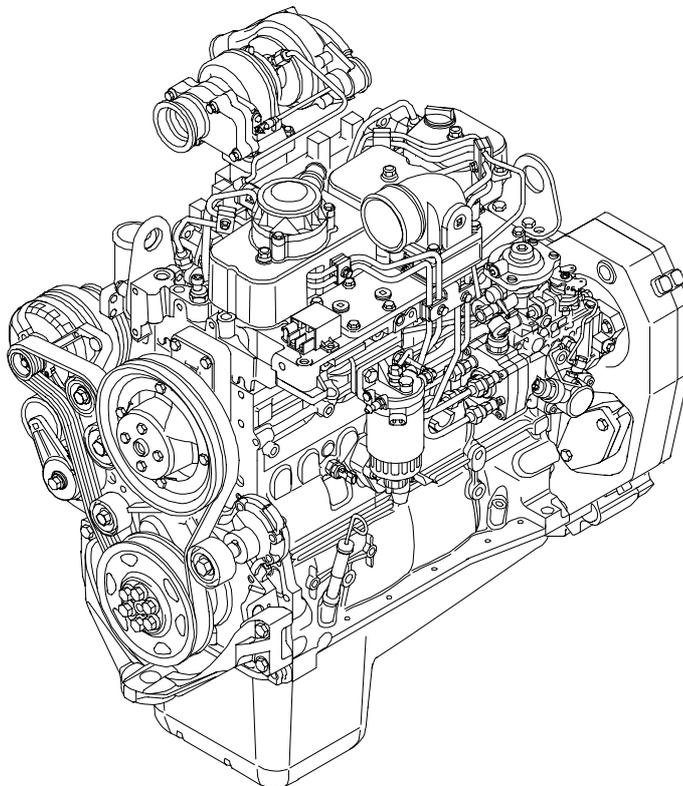
INDEX

Checking the cylinder head supporting surface	EW-2-82	Rocker arm assembly	EW-2-87
Checking the cylinder head water seal .	EW-2-83	Mounting the injectors	EW-2-88
Valves	EW-2-83	Intake manifold unit	EW-2-89
Valve descaling, check and grinding ...	EW-2-83	Replacing the injectors	EW-2-91
Checking the play between the valve stem, valve guide and valve centring ...	EW-2-84	Removal	EW-2-91
Valve guide	EW-2-84	Reassembling	EW-2-92
Valve seat reconditioning – replacement	EW-2-84	Rocker arm removal/reassembling ..	EW-2-92
Valve springs	EW-2-86	Removal	EW-2-92
Mounting the cylinder head	EW-2-86	Reassembling	EW-2-92
Reattaching the cylinder head	EW-2-87	Adjusting the tappets	EW-2-93
		Valve timing	EW-2-93
		Check priming of the injection pump ...	EW-2-94

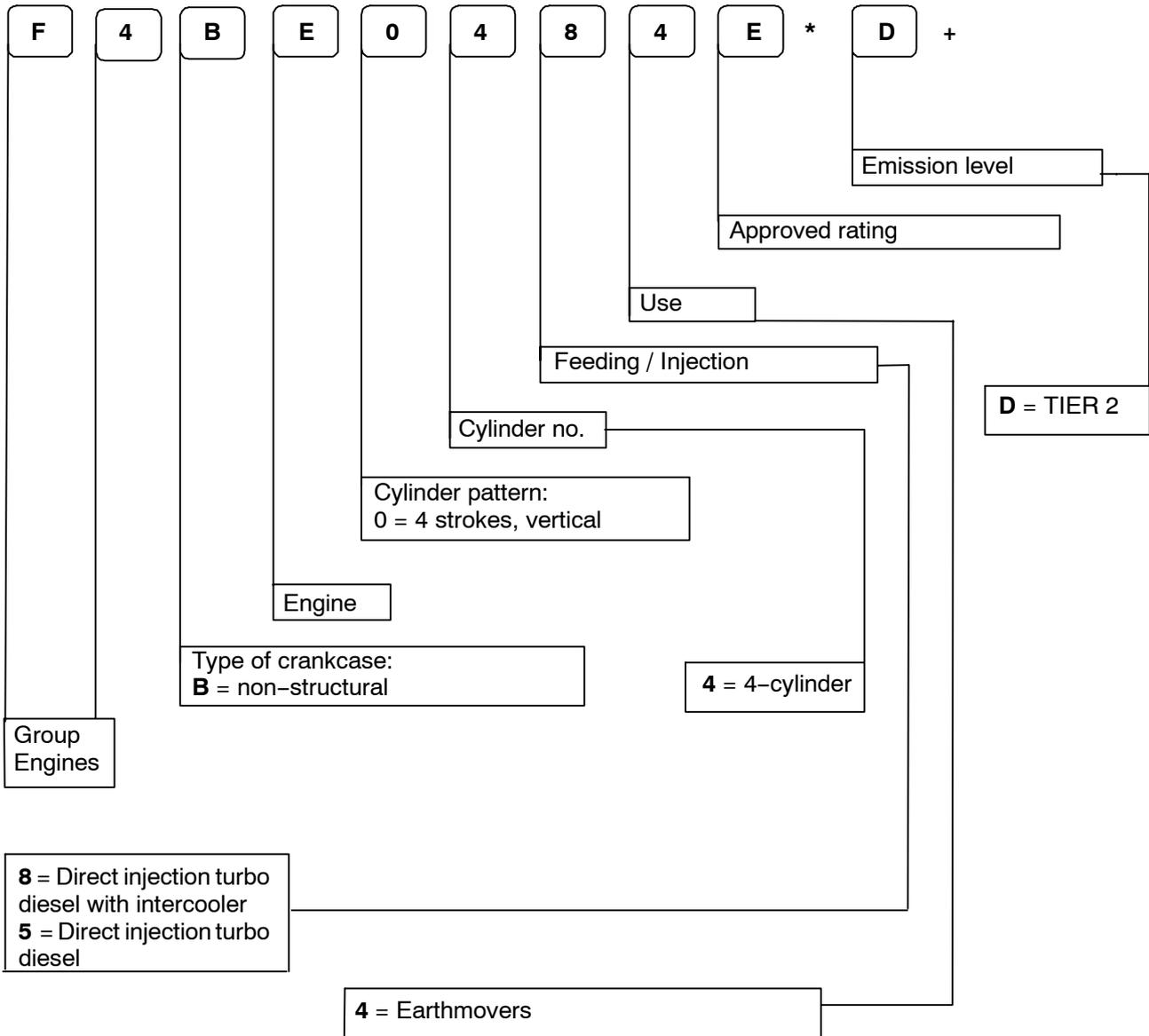
ENGINES F4BE0454 – F4BE0484 OVERHAUL

ENGINES F4BE0484E

Figure 1



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

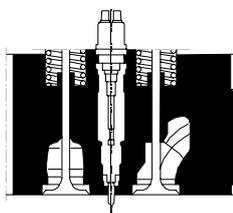
ENGINES F4BE0454 – F4BE0484 OVERHAUL

MAIN ENGINES FEATURES

A →	MH2.6	E145	E195
B →	F4BE0454B		F4BE0484D
C →	*D602	*D601	*D608
D →			
E →	3922 cm ³		
F →	74kW 2100 min ⁻¹		88 kW 2200 min ⁻¹

G →

Direct injection



H →

Rotary injection pump

I →

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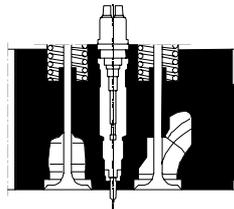
- A** Excavator initials
- B** Type of engine
- C** Engine model
- D** Number of cylinders
- E** Total displacement
- F** Max. power currently available
- G** Type of injection
- H** Injection system
- I** Air supply system

MAIN ENGINES FEATURES

A	MH3.6	MH4.6	E175
B	F4BE0484E		
C	*D605	*D601	*D607
D			
E	3922 cm ³		
F	83 kW 2000 min ⁻¹		

G

Direct injection



H

Rotary injection pump

I

T.A.A.
(Boosted by intercooler)

- A Excavator 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 F4BE0454 - F4BE0484 OVERHAUL

TORQUE AND RATING FEATURES

Figure 2

