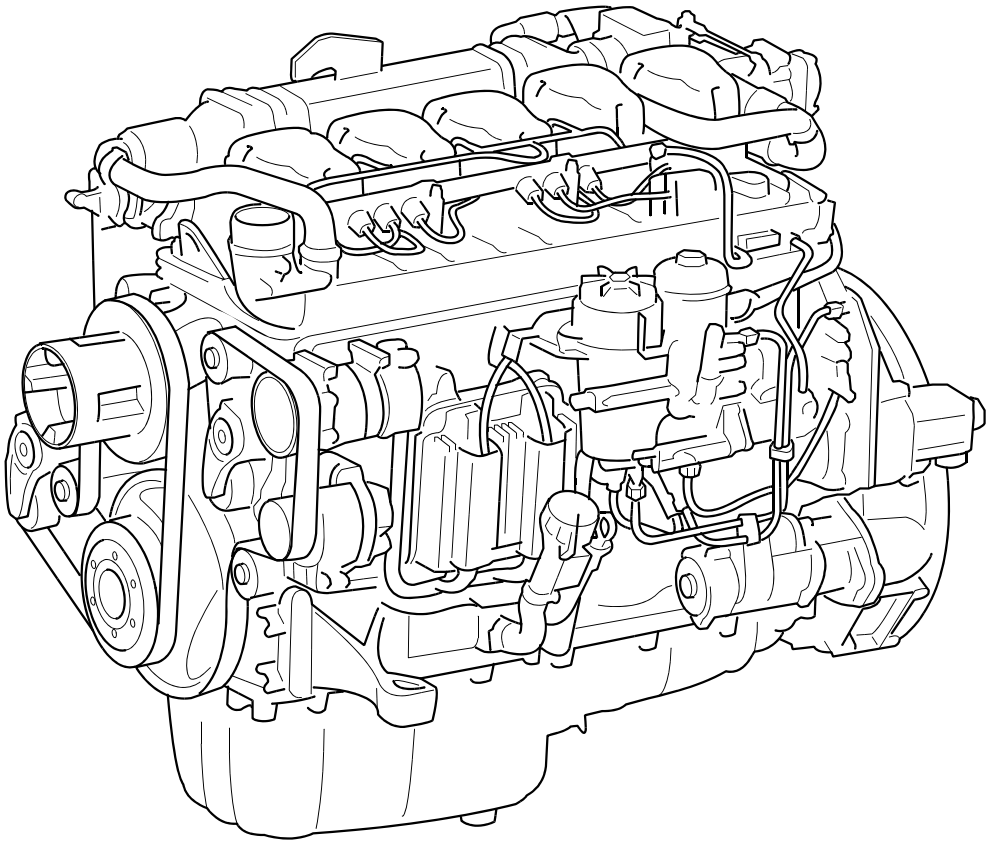
SCANIA

00:23-02

Issue 7.0 **en-GB**

Maintenance instructions
DC09 industrial engine with XPI

E2011



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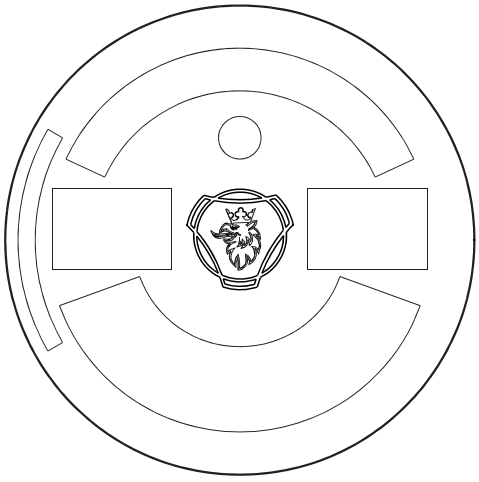
Labels for top-up engine oil grade

When changing oil it is important to use the correct engine oil grade.

The oil filler cap must be clearly marked with a label showing the top-up oil grade. If the label is missing or if the engine oil grade is changed, a new label must be fitted.

Filling label in the cylinder block.



Filling label in the rocker cover.

Parts

Oil grade	Colour	Part No.	Part No.
		Filling in the cylinder block	Filling in the rocker cover
Scania LDF-2	Blue	2 132 424	2 296 064
Scania LDF-3	Red	2 132 426	2 296 066
Scania LDF	Grey	2 269 345	2 296 071
ACEA E7	White	2 132 425	2 296 065
Scania Low Ash	Green	2 132 427	2 296 067
Scania Bioethanol	Black	2 132 428	2 296 068
Scania BEO-2	Orange	2 258 841	2 296 070
ACEA E9	-	2 132 429	2 296 069

Antifreeze and corrosion inhibitor concentration table

35% by volume of antifreeze provides sufficient protection against corrosion.

Example:

1. The total volume of the cooling system is 40 litres in this example.
2. The measured concentration of ethylene glycol is 35% by volume (freezing point -21 °C). According to the table, there are 14 litres of ethylene glycol in the cooling system.
3. The measured concentration of ethylene glycol is 45% by volume (freezing point -30°C). According to the table, 18 litres of ethylene glycol are required in the cooling system.
4. Since there are already 14 litres in the cooling system, 4 litres of ethylene glycol must be added to the cooling system (18 - 14 = 4 litres).

	Adequate protection against corrosion					
Volume of ethylene glycol (%)	**35**	**40**	**45**	**50**	**60**	**Cooling system volume (litres)**
Ice slush forms (°C)	**-21**	**-24**	**-30**	**-38**	**-50**	
Volume of ethylene glycol (litres)	11	12	14	15	18	30
	14	16	18	20	24	40
	18	20	23	25	30	50
	21	24	27	30	36	60
	25	28	32	35	42	70
	28	32	36	40	48	80
	32	36	41	45	54	90
	35	40	45	50	60	100
	39	44	50	55	66	110
	42	48	54	60	72	120
	46	52	59	65	78	130
	49	56	63	70	84	140
	53	60	68	75	90	150
	56	64	72	80	96	160
	60	68	77	85	102	170
	63	72	81	90	108	180
	67	76	86	95	114	190
	70	80	90	100	120	200

Refilling coolant with coolant trolley

This procedure applies when the cooling system has been drained and needs to be filled with a large amount of coolant.

WARNING!

Use protective gloves as coolant can cause irritation if it comes in contact with the skin. Hot coolant can also cause scalding.

IMPORTANT!

When it is necessary to fill a large quantity of coolant, it must be pumped in from underneath. This is to ensure that air does not get into the cooling system, which can cause the coolant pump to overheat.

IMPORTANT!

Mix the coolant as specified under the section Coolant.

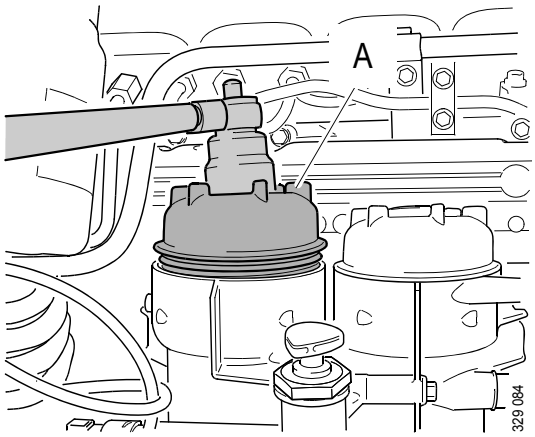
IMPORTANT!

Do not start the engine until the correct coolant level has been obtained. If the engine is started with a coolant level that is too low, the coolant pump shaft seal may be damaged, which can result in leaks.

IMPORTANT!

Do not use an adjustable spanner or other open tool to undo the filter covers, as this risks damaging the filter covers.

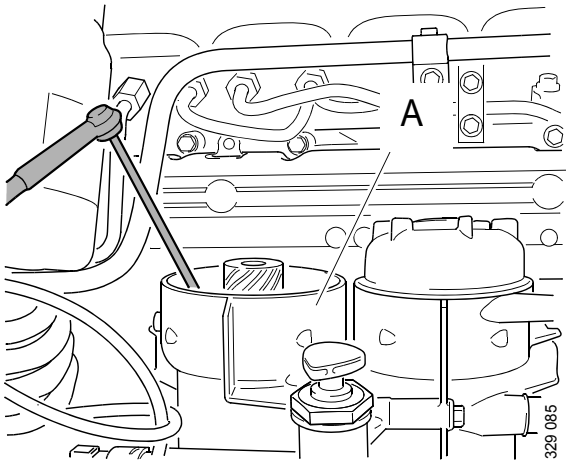
1. Make a mark on the water separating suction filter cover (A). Unscrew the cover 3 to 4 turns, use the socket.



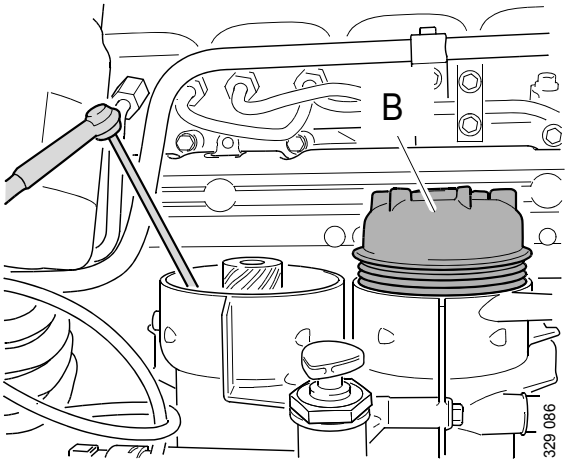
IMPORTANT!

Wait a minimum of 2 minutes to allow as much of the fuel as possible to drain out of the filter housing.

2. Unscrew the filter cover (A) and lift it up slowly with the filter element.
3. Make sure the suction tool is completely drained before starting work. Draw out remaining fuel and any particles using the suction tool or a similar tool.
4. Keep the suction tool hose in the filter housing for the water separating suction filter (A).



5. Make a mark on the pressure filter cover (B). Unscrew the cover 3 to 4 turns, use the socket. Draw out fuel which may drain into the water separating suction filter housing when the pressure filter is detached.



IMPORTANT!

Wait a minimum of 2 minutes to allow as much of the fuel as possible to drain out of the filter housing.