

SCANIA

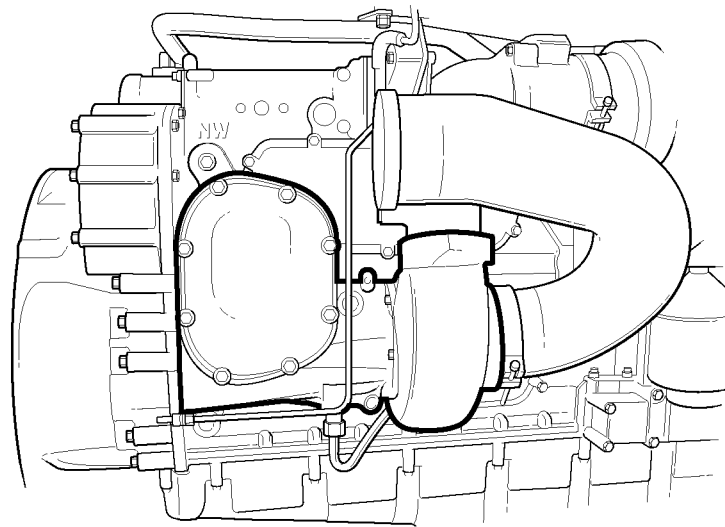
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Issue 2 en

Turbo compound

DT12

Work Description



b117491

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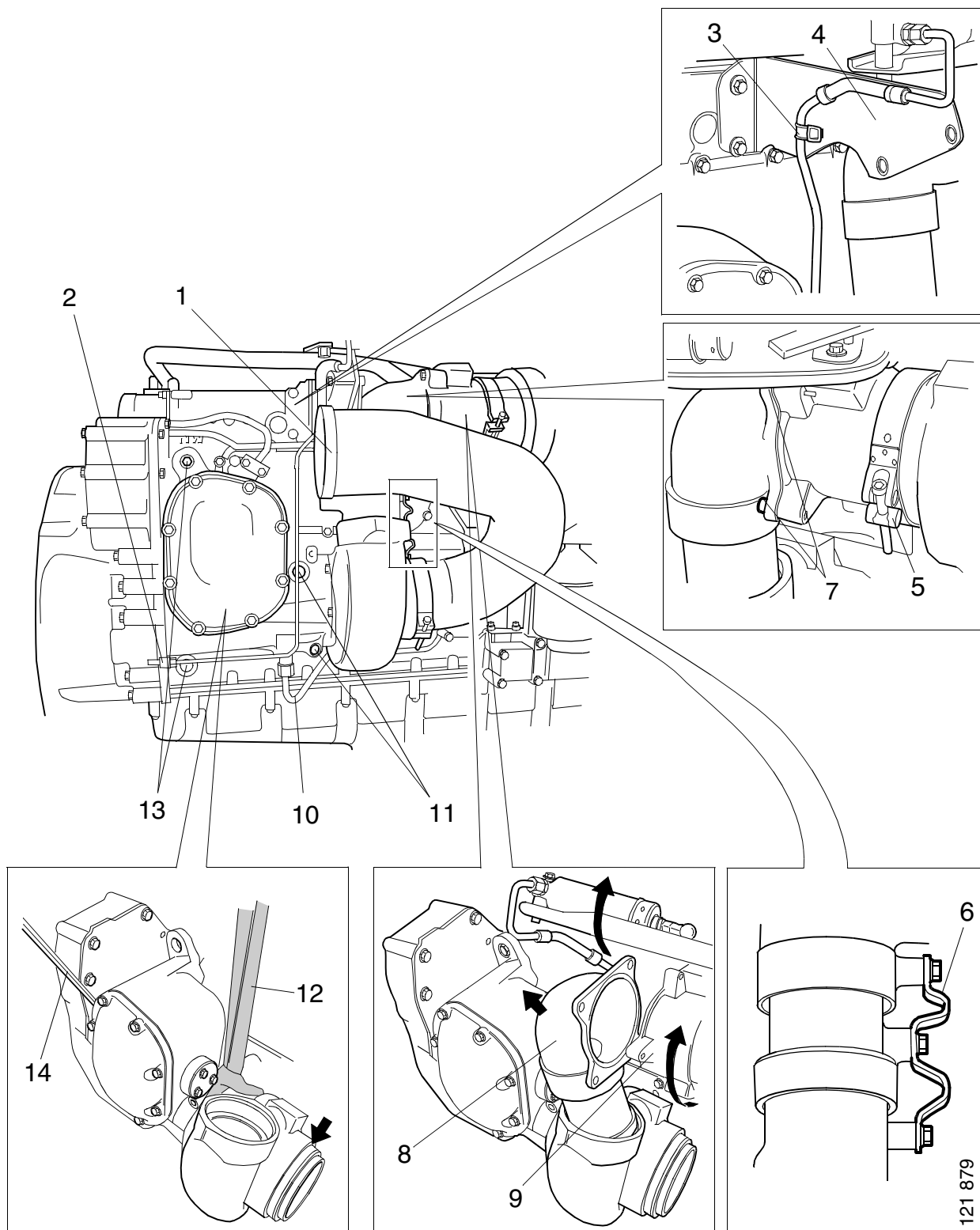
Work Description

Removal

Pos.	Remove	Remarks
1	Exhaust pipe	1 V-clamp, 2 bolts with spacers
2	Union on the pipe to the exhaust brake	
3	Clamp	
4	Bracket	4 bolts with spacers
5	V-clamp	
6	Bracket	
7	Pipe bend bolts at the exhaust brake valve disc housing	4 off
8	Pipe bend	There is a guide pin between the exhaust brake valve disc housing and the turbo. Separate the valve disc housing and the turbo, then turn the valve disc housing towards the engine so that the pipe bend does not contact the exhaust brake air cylinder.
9	Exhaust brake valve disc housing	With air cylinder, bracket and air pipe
10	Oil pipe	Remove the clamp and the lower connection. Detach the upper connection one turn and place the pipe to one side.
11	Turbocompound unit front retaining bolts	2 off
12	Place a strap around the turbocompound unit and lift carefully until the strap is tensioned.	
13	Turbocompound unit rear retaining bolts	2 off, with expander sleeve and spacer
14	Turbocompound unit	Prise carefully until the unit detaches from the plate and the guide pin in the engine block.

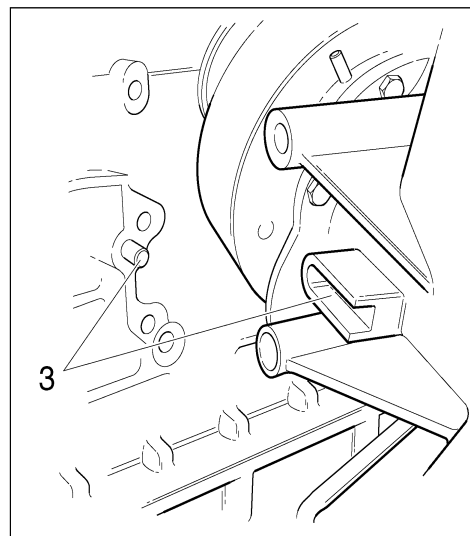
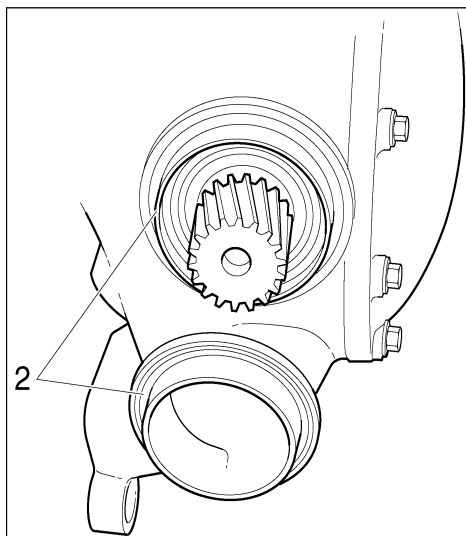
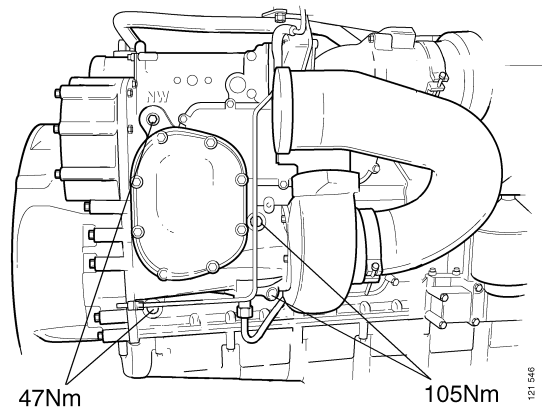
Note: The unit is not suspended at the centre of gravity. Therefore, the rear end tilts when the guide neck releases from the timing gear plate. Balance the unit by pressing the inlet connection.

Removing the turbocompound unit



Fitting

Pos.	Fit	Remarks
1	Turbocompound unit in reverse order	The two parts of the rear retaining bolt expander spacers have to be separated when the bolts are fitted. The rear bolts must be fitted before the front bolts. Tightening torque, see illustration
2		Make sure that the sealing rings on the gear housing are clean, intact and lubricated.
3		Use the guide pin on the engine block and the groove on the gear housing to locate the gear housing against the timing gear plate.



Dismantling, assembly and renewing bearings

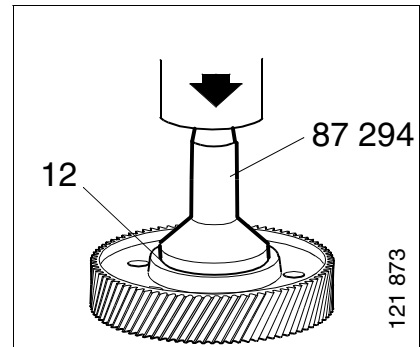
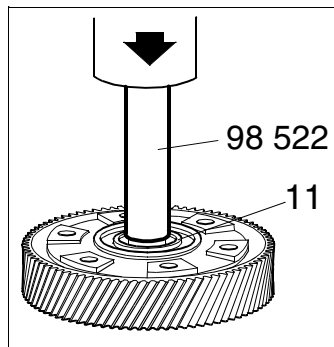
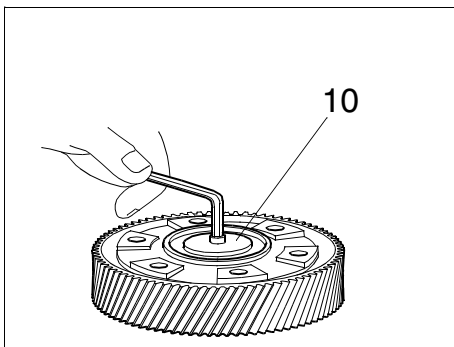
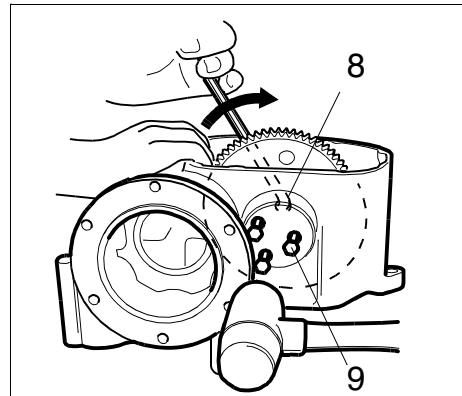
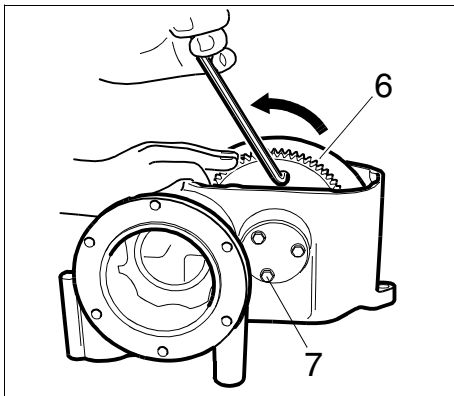
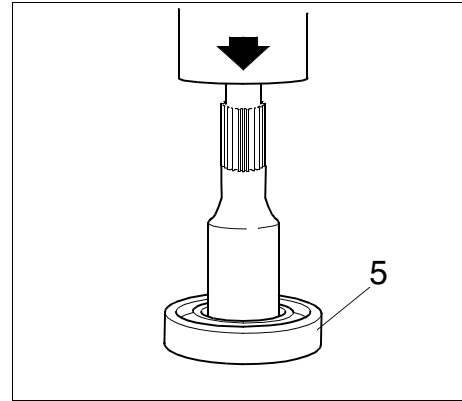
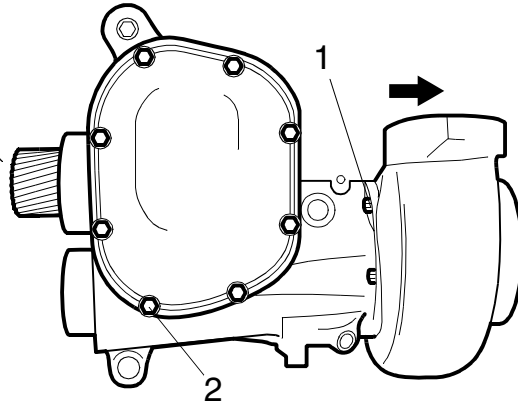
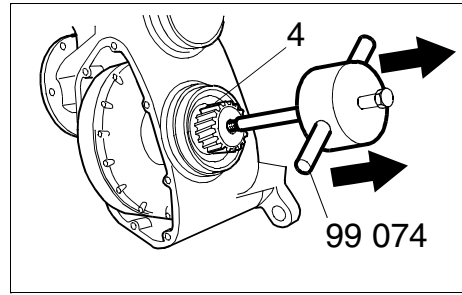
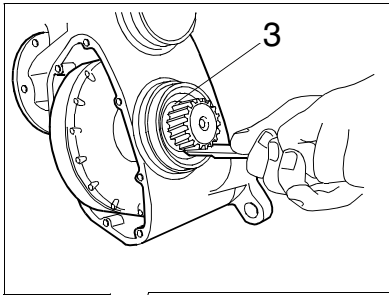
Tools for dismantling and assembly

Number	Description	Tool board
99 074	Slide hammer	D1
87 505	Drift	AM1
98 522	Drift	D1
87 294	Drift	G3 and AD/AS3
87 592	Drift	G1

Dismantling

Pos.	Remove	Remarks
1	Power turbine from gear housing	6 off M8 bolts and related washers. Do not dismantle the power turbine, it can only be renewed as an assembly.
2	Gear housing cover	
3	Bearing retaining ring	
4	Shaft and bearing using slide hammer 99 074	
5	Bearing retaining ring from shaft and press off the bearing	
6	Bolts securing the hydraulic coupling	Do not dismantle the hydraulic coupling, it can only be renewed as an assembly.
7	Gearshaft retaining bolts	3 off
8	Undo the bolt on the shaft end.	It is easier to undo the bolt before removing the gear.
9	Gear with shaft and bearing	If the shaft is stuck, fit three 60 mm bolts (M8) and tap until the shaft releases from the housing.
10	Bolt and spacer on shaft end	
11	Shaft from bearing in gear using drift 98 522	
12	Retaining ring and press out bearing from gear using drift 87 294	

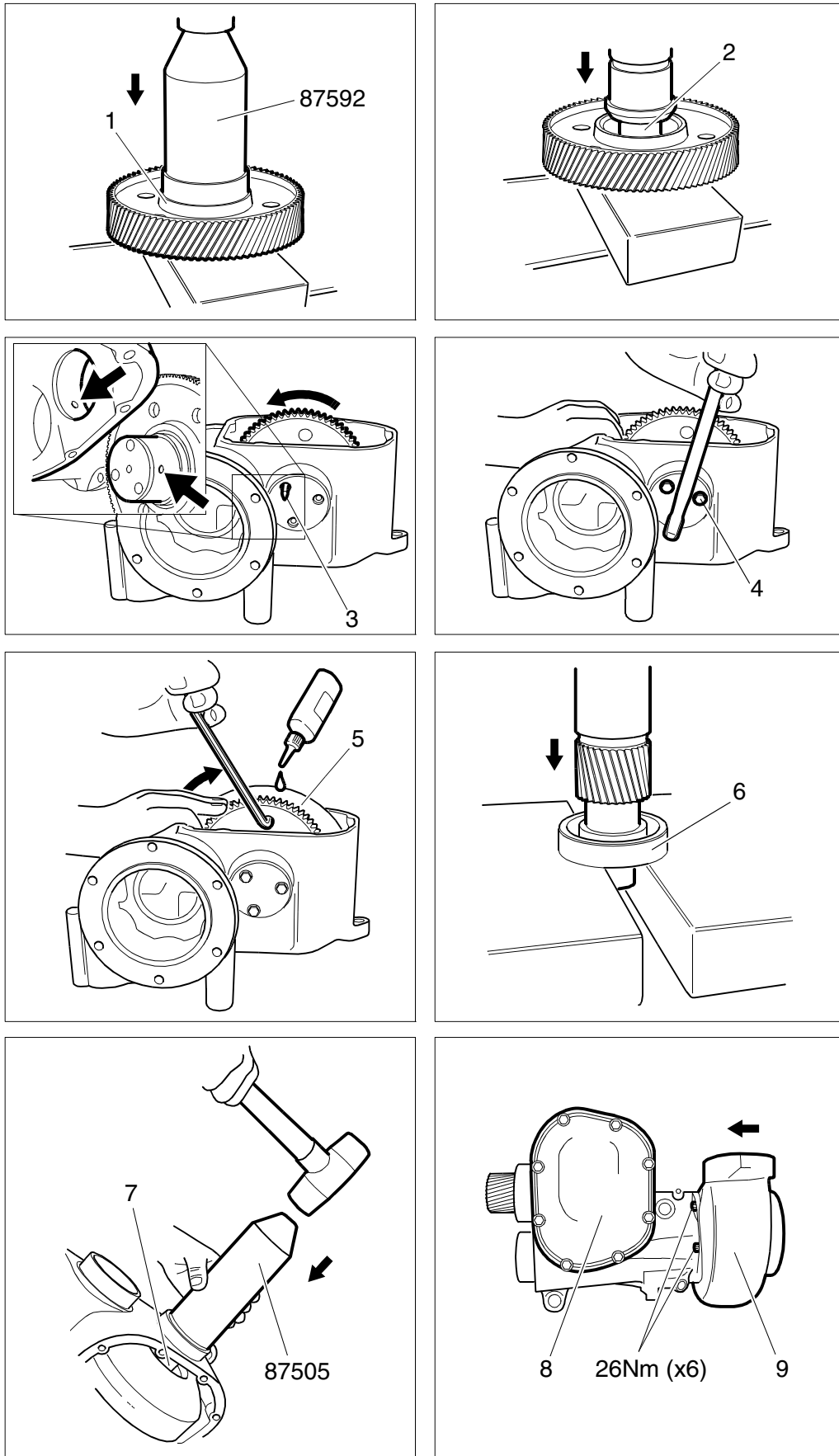
Dismantling the turbocompound unit



Assembly

Pos.	Fit	Remarks
1	Retaining ring in gear and press on a new bearing using drift 87 592	
2	Shaft in bearing, spacer and bolt	
3	Shaft with gear	<p>The hole pattern is eccentric. The fitting is easier if an M8X75 bolt with the head cut off is used as a guide pin.</p> <p>Important! Make sure that the oil ways in the shaft and the gear housing are lined up. If the holes are not opposite each other the hydraulic coupling will not receive any oil and will fail. In addition, the bearing will not be lubricated.</p>
4	Bolts	Make sure that the rubber seals in the spacers are intact.
5	Hydraulic coupling	Use locking compound.
6	Bearing on shaft and fit retaining ring	
7	Splined part of the shaft into the hydraulic coupling	Tap the shaft bearing home using drift 87 505
8	Gear housing cover	
9	Power turbine	Fit new seals. Fit new bolts (6 off special bolt M8x25) and spacers when the turbocompound unit has been dismantled. Bolts and spacers cannot be reused because of the intense heat. Tightening torque, 26 Nm +/- 15 %.

Assembly of the turbocompound unit



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