

## General

Applies to type 2 retarder.

## Tools

Examples of suitable tools from Scania:

| Part number | Designation                        |
|-------------|------------------------------------|
| 87 095      | Guide pins                         |
| 98 257      | Support drift                      |
| 98 405      | Bracket and fixture beam           |
| 98 765      | Splined socket                     |
| 99 001      | Adapter                            |
| 99 003      | Hydraulic hole cylinder            |
| 99 004      | Hydraulic pump                     |
| 99 005-1    | Pusher adapter                     |
| 99 010      | Bush, included in 99 003           |
| 99 011      | Threaded bush, included in 99 003  |
| 99 012      | Fully threaded spindle, see 99 006 |
| 99 040      | Pusher adapter                     |
| 99 497      | Puller                             |
| 99 497      | Lifting tool                       |
| 587 313     | Gearbox jack                       |

## Work description

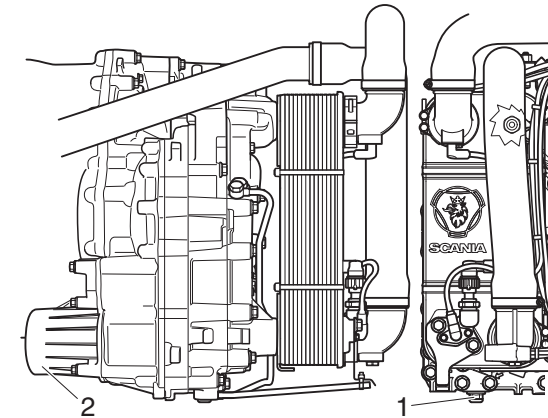
### Draining



#### **WARNING!**

- Beware of hot oil after driving. Wear protective gloves and goggles.
- Make sure the compressed air tanks are empty before starting work. Oil under pressure or blows from loose parts can cause personal injury.

1. Remove the plug (1) and drain the oil.
2. Drain the oil accumulator by turning the key to the drive position (pneumatic system filled to working pressure) and move the retarder lever between the 0 position and maximum position several times, waiting for 5 seconds at each end position.
3. Remove the oil filter (2).



1. Plug
2. Oil filter

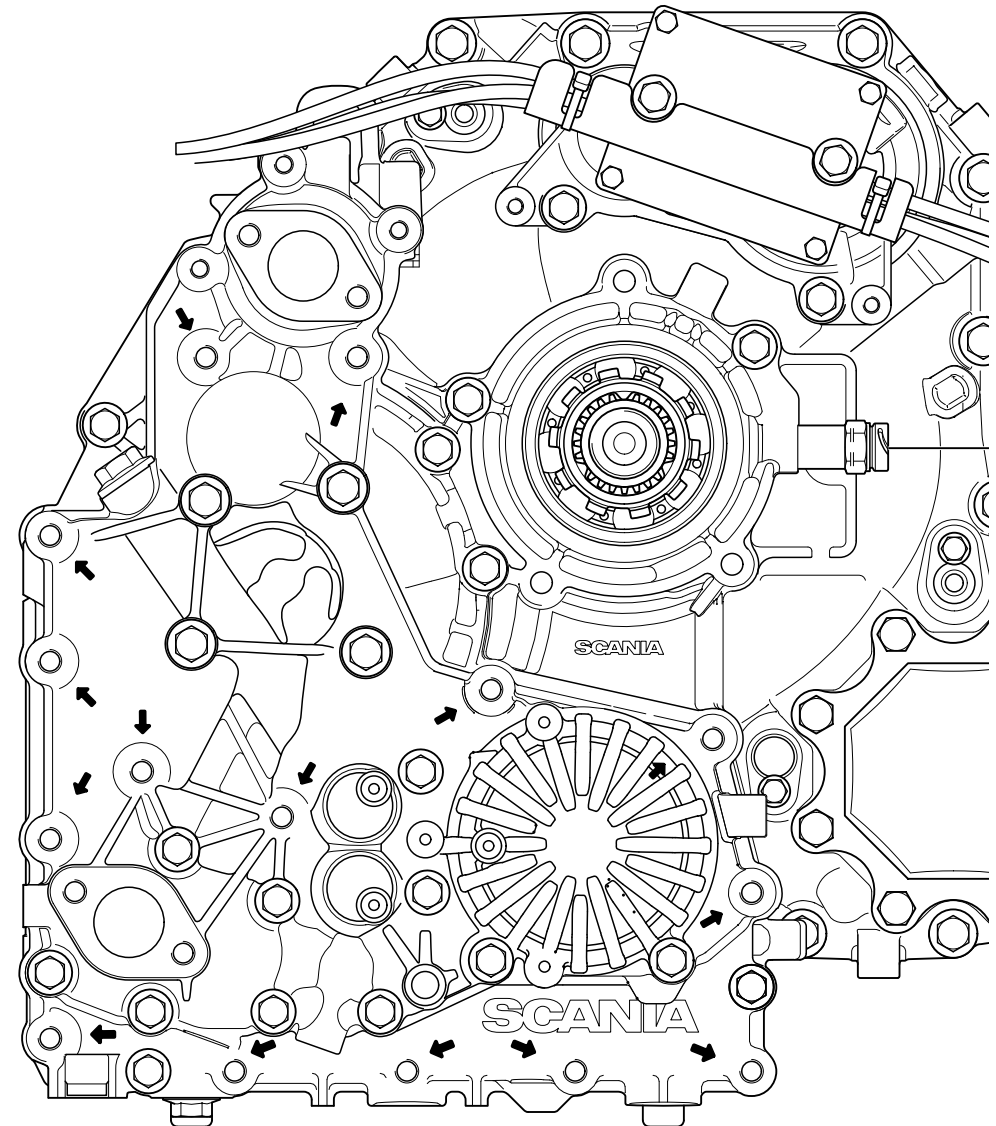
## Removing

### General

1. Drain the oil from the gearbox.
2. Drain the oil from the retarder.
3. Drain the coolant from the retarder.
4. Undo the hydraulic pump.<sup>1</sup>

Then remove the parts as follows:

1. The upper nuts holding the coolant pipe onto the bracket.
2. Brackets for coolant pipes.
3. Connection for road speed sensor A.
4. Ventilation line.
5. 3 of the 5 screws around the output shaft.
6. All screws marked with an arrow, total 20.

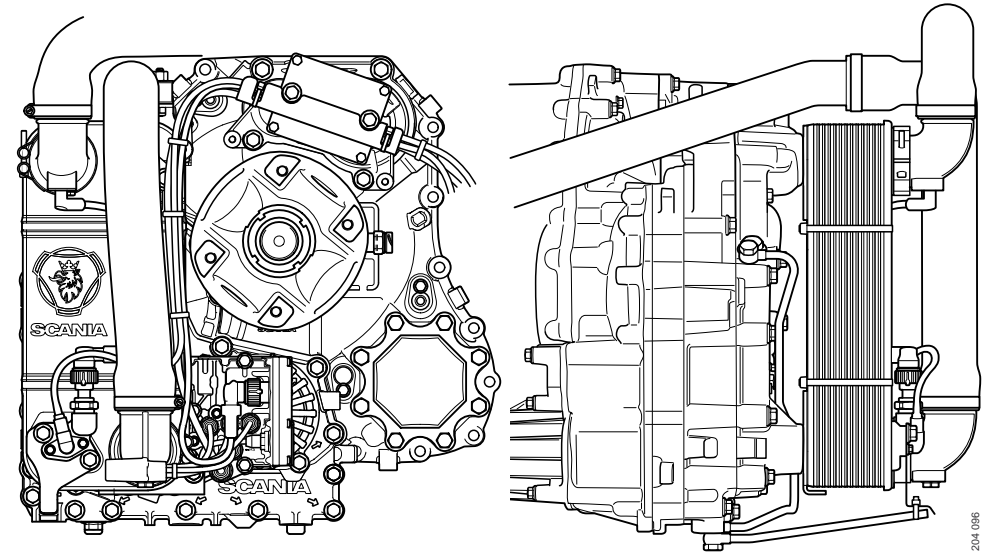



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1. Vehicles with dual-circuit steering.

## Solenoid valve block

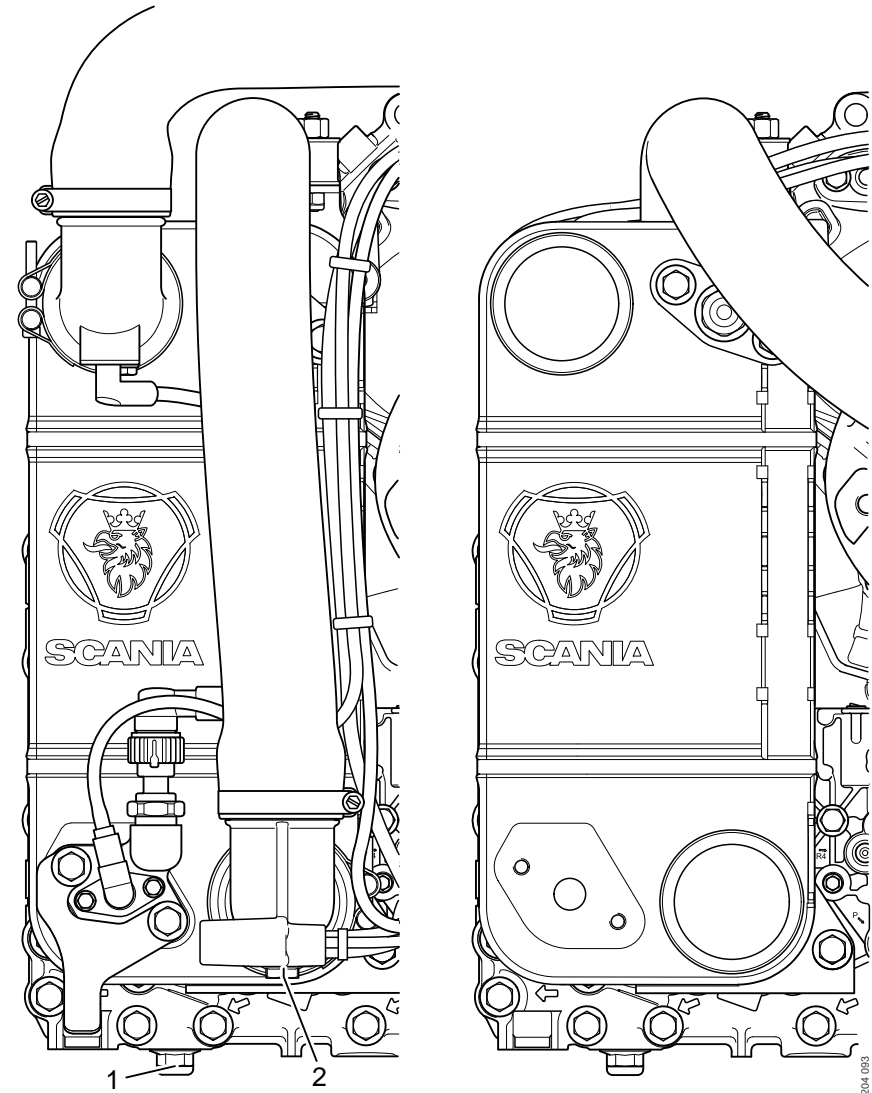
1. Cut the tie straps holding the electrical cables and compressed air lines onto the bracket on the oil cooler.
2. Remove the screws and solenoid valve block.



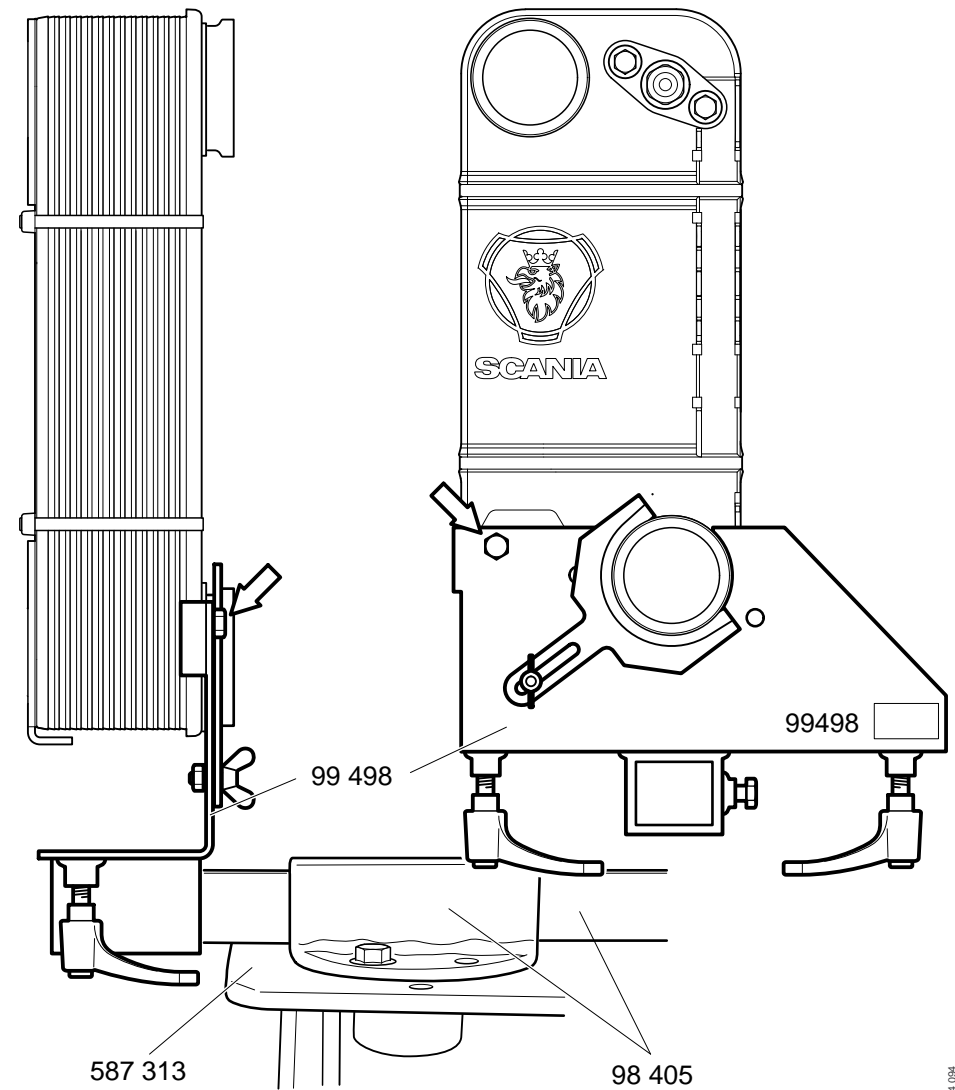
*Solenoid valve block*

## Oil cooler

1. Drain the oil and coolant. Also drain the coolant pipe between the engine and retarder inlet at its lowest point.
2. Cut the tie straps securing the air lines and electrical cables to the bracket on the oil cooler.
3. Undo and remove the clamps securing the pipe bends.

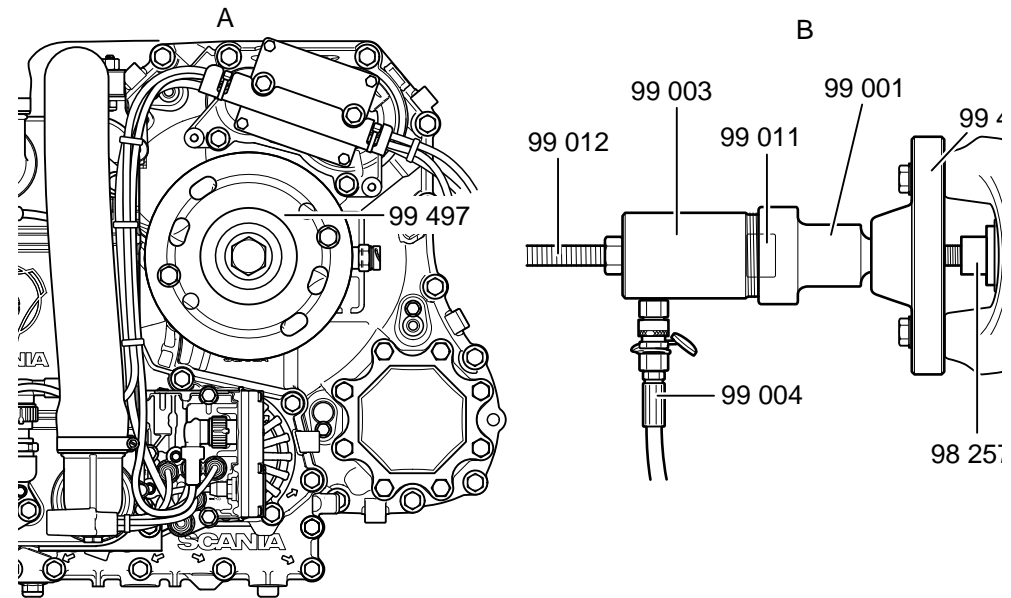


4. Remove the lower retaining screws and bracket with sensor.
5. Fit the oil cooler in the tool as illustrated. Insert one of the attaching screws at the arrow so that the cooler does not fall sideways.
6. Remove the upper retaining screws and remove the oil cooler.



## End yoke

1. Remove the nut using splined socket 98 765.
2. Tighten the end yoke as indicated in alternative A or B.



## Removed from above.

1. Hook into the retarder lifting eye.
2. Remove the remaining 2 screws around the output shaft.
3. Lower the retarder.

## Removal from below

1. Fit the retarder on gearbox jack 587 313 using the tool as illustrated.
2. Remove the remaining 2 screws around the output shaft.

