

## **Kühler**

Radiator  
Radiateur  
Radiatore  
Radiador  
Kylsystem  
Radiateur

## 17 Radiator

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## Specifications

### Radiator

Model	a) 320/6 b) 320/6 A		a) 323 i b) 323 i A *)
17 10 . . . Coolant			
Quantity of coolant incl. heater circuit app.	I (Imp. pints, US quarts)	12 (21.1, 12.7)	
Antifreeze <sup>1,2)</sup> Mixing ratio water : antifreeze)	%	60 : 40	
Version for Nordic countries	%	50 : 50	
17 11 . . . Radiator cap			
Pressure relief valve opens	bar (lb/in <sup>2</sup> )	1.0 $\pm$ 0.15 (14.2 $\pm$ 2.1) - 0.10 - 1.4)	
Vacuum relief valve opens	bar (lb/in <sup>2</sup> )	0.9 (12.8)	
17 11 . . . Radiator (without transmission oil cooler) – standard version			
BMW number (on top of radiator)	a) 1 112 064		
Number of radiator fins per dm (Behr radiator)	a) 60		
Test pressure (gauge)	bar (lb/in <sup>2</sup> )	1.5 (21.3)	

\*) Version for Sweden

1) Renew every 2 years

2) For approved long-term antifreezes and corrosion inhibitors, see Service Information

## Specifications

### Radiator

Model	a) 320/6 b) 320/6 A	a) 323 i b) 323 i A *)
17 11 . . . Radiator (with transmission oil cooler) – standard version		
BMW number (on top of radiator)	b) 1 120 001	
Number of fins per dm (Behr radiator)	60	
Test pressure (gauge)	bar (lb/in <sup>2</sup> )	1.5 (21.3)
Transmission oil cooler		
Test pressure (gauge)	bar (lb/in <sup>2</sup> )	b) 12
Operating pressure (gauge), max.	bar (lb/in <sup>2</sup> )	b) 8
17 40 . . . Auxiliary electric fan – for standard version and as special equipment		
Make	Bosch	
Bosch number	0 130 703 . . .	
Type	IPL 12 V	
Pattern	5-bladed	
Fan diameter	mm (in)	366 (14.4)

\*) Version for Sweden

## Specifications

### Radiator

Model	a) 320/6 b) 320/6 A		a) 323 i b) 323 i A*)
Tightening torques			
17 11 . . . Radiator (with or without transmission oil cooler) incl. special equipment			
Radiator mountings (M 6)	Nm kpm lb.ft	8 . . . 9 0.8 . . . 0.9 5.9 . . . 6.6	
Oil cooler pipes (feed and return) at transmission oil cooler	Nm kpm lb.ft	b) 12 . . . 15 b) 1.2 . . . 1.5 b) 8.8 . . . 11.1	
Oil cooler pipes (feed and return) at transmission	Nm kpm lb.ft	b) 40 . . . 45 b) 4.0 . . . 4.5 b) 28.9 . . . 32.5	

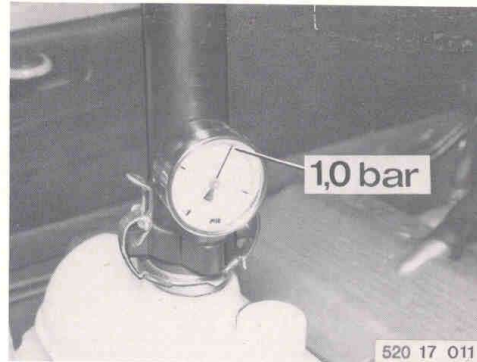
\*) Version for Sweden



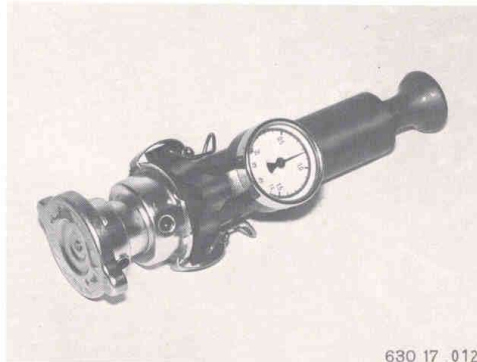
### 1700 009 Cooling system – checking for leaks

Attach tester 17 0 000 to header (compensating) tank.

Build up a pressure of app. 1 bar (14.2 lb/in<sup>2</sup>) in the cooling system with the hand pump. The cooling system has no leaks if pressure remains constant for 1... 2 minutes.



Attach the radiator cap and the tester to the connecting piece, and build up pressure with the hand pump.



The opening pressure must agree with the value stated in the Specifications.



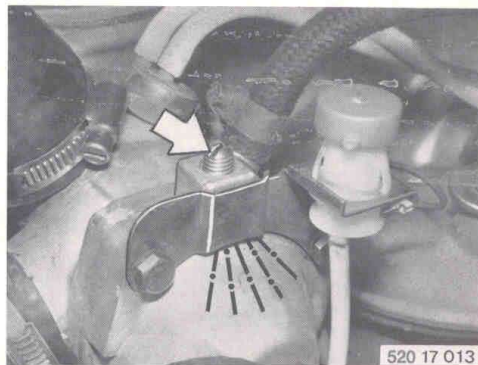
### 17 00 039 Cooling system – bleeding

Set the rotary heater control to "Warm".

With the engine at its normal operating temperature, loosen the bleed screw.

Run the engine at a fast idle speed until the water emerges free from air bubbles.

During bleeding, top up the coolant level in the header tank whenever it tends to drop.



### 17 11 000 Radiator – removing and installing or renewing

Remove the radiator cap from the header (compensating) tank.

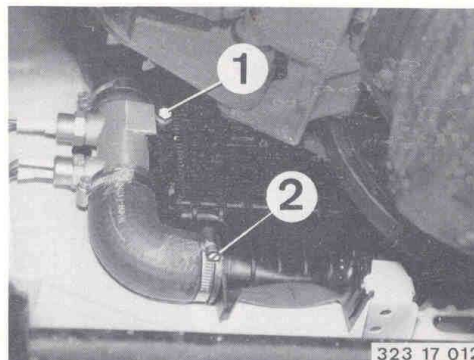
Take out screw (1).

Take off the radiator hose (2) and drain the coolant.

*When installing:* add coolant to correct level.

Bleed cooling system – 17 00 039.

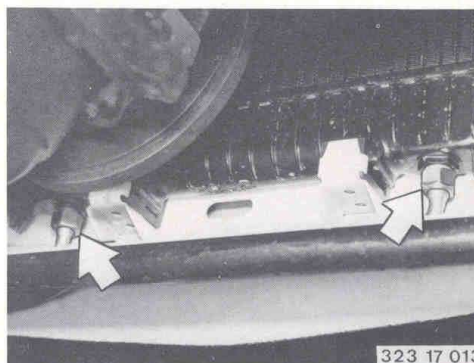
Note correct tightening torque<sup>1)</sup>.



On automatic transmission cars:  
unscrew and detach the oil lines:

*When installing:* if the transmission has failed or suffered damage, remove the radiator and immediately blow through the oil cooler in the lower water chamber of the radiator with compressed air, then flush out twice with ATF (automatic transmission fluid).

Note correct tightening torque<sup>1)</sup>.



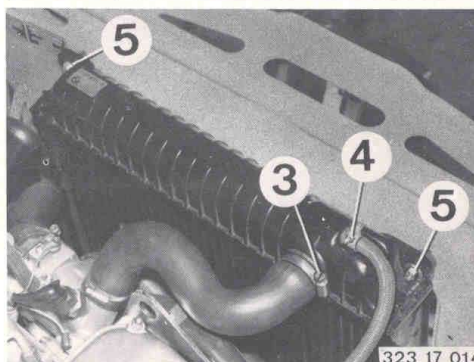
Detach hoses (3) and (4).

Unscrew the radiator mountings (5).

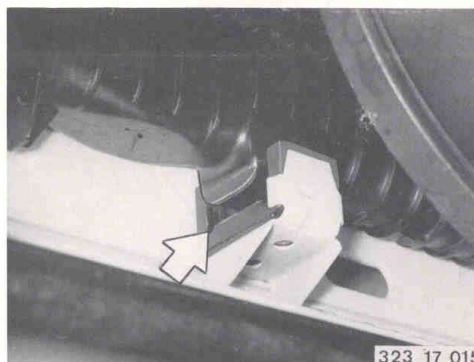
Lift out the radiator.

*Warning:* pull off the bleed line (4) carefully.

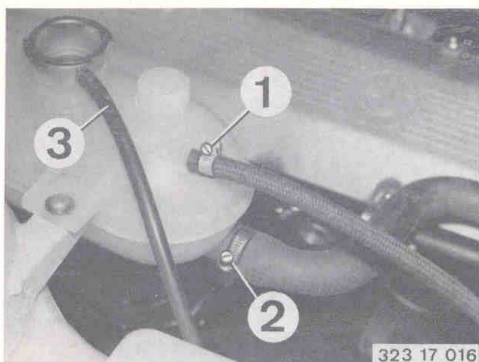
*When installing:* check radiator mountings and renew if necessary.



*When installing:* check condition of rubber underlay pads and renew if necessary. The rubber underlay is located between the webs of the radiator.



<sup>1)</sup> See specifications

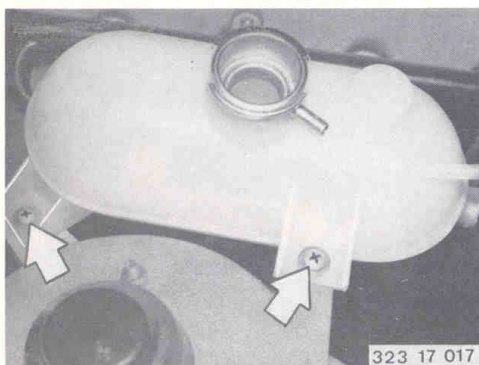


323 17 016

# **17 11 100 Coolant header (compensating) tank – removing and installing or renewing**

Partly drain the coolant.

Detach hose (1), pipe elbow (2) and overflow hose (3).



323 17 017

Remove screws and take out header tank.

When installing: add coolant.

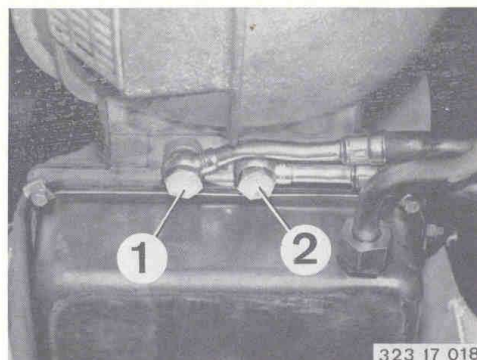
Bleed cooling system – 17 00 039.



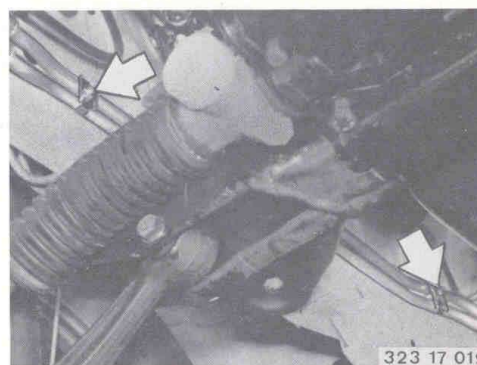
**17 22 080 Oil cooler feed and return lines – removing and installing**

**Detach feed (1) and return (2) pipes from transmission.**

*When installing: note correct tightening torque<sup>1)</sup>.*

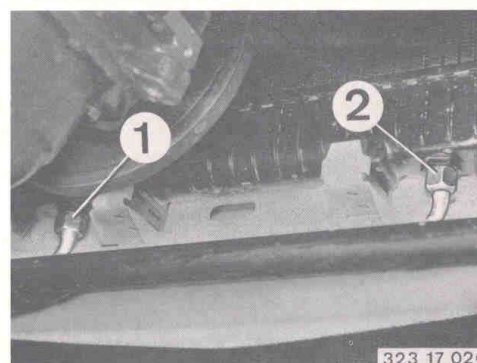


**Take off clips.**

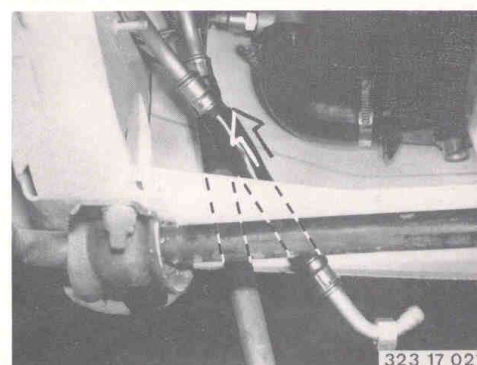


**Unscrew feed (1) and return (2) from radiator.**  
*Warning: hold union with open-ended wrench to prevent movement.*

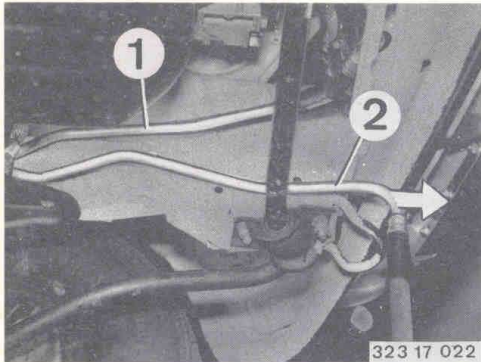
*When installing: note correct tightening torque<sup>1)</sup>.*



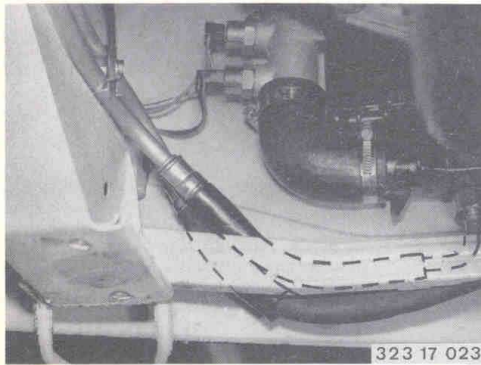
**Pull hoses out of apron.**



<sup>1)</sup> See specifications



First push the return line (2) – top – out forwards, then lift the feed line (1) – bottom – over the threaded rod of the rear clip and pull out forwards.



When installing: note correct positions of pipes, hoses and protective sleeves.  
Feed line at bottom (shorter hose)  
Return line at top (longer hose).

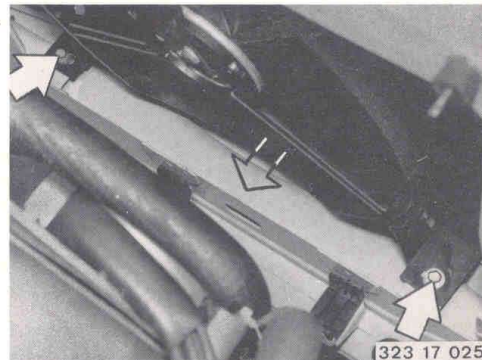
**17 40 000 Auxiliary fan – removing and installing or renewing**

**Remove radiator – 17 11 000.**

**Unscrew nut and take screw out downwards.**



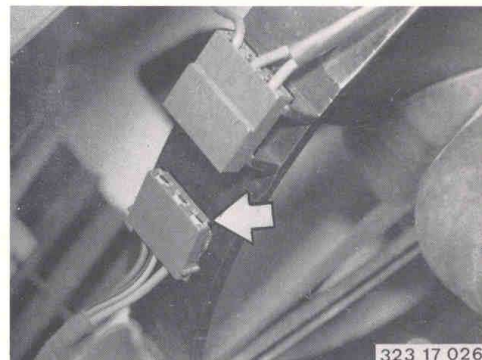
**Remove screws and pull fan out downwards.**



**Detach plug connector.**

**Lift fan out.**

*When installing: cutouts on plug face fan.*



**When renewing auxiliary fan:  
transfer resistor and retaining bracket.  
Do not tighten the screws for the retaining  
bracket until the fan has been installed.**

