



# Cooling replacement

Technical Bulletin – September 2011

Cooling  
replacement



All car makers



Cooling recommendations



During the water pump replacement, SKF strongly recommends to use the appropriate coolant to prevent from water pump failure and engine damage.

## Cooling replacement instructions

### Emptying the system:

- 1- Remove the cap from the bottle of coolant and the radiator cap.
- 2- Start draining the radiator by disconnecting the bottom hose.
- 3- Open the drain valve (where fitted) on the radiator.
- 4- Open the bleed screw (where fitted) from the engine block.
- 5- Use your automotive technical documentation for locating all of the water drain screws in the engine block and cooling system.
- 6- Let the system completely drain.





# Cooling replacement

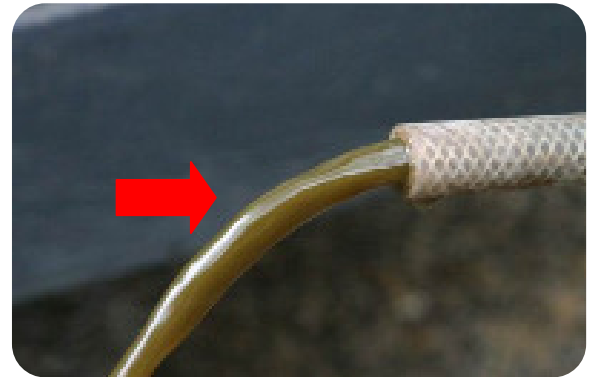
Technical Bulletin – September 2011

## Flush the system:

- 1- With the exception of the engine block – close all of the bleed screws.
- 2- Unclip and pull off the top radiator hose and insert your garden water hose.
- 3- Flush until the water runs clear through the bottom hose.
- 4- Re-attach the bottom hose and rinse until the water runs clear through the engine block drain hole.

## Cooling replacement

- 1- Replace the drain cap on the engine block.
- 2- Reposition all hoses.
- 3- Close the screw or drain valve on the the radiator.
- 4- Remove the fasteners on the header tank.
- 5- Suspend the header tank on the open bonnet.
- 6- Open the various purge screws on the system, except those on the engine block which must be closed.
- 7- Begin to fill the circuit slowly by pouring the coolant into the suspended header tank.
- 8- Close the screw when a jet of coolant liquid flows freely and no air bubbles are present (ie. no bubbles or hiss due to the presence of air in the system). The bleed screws must be closed, starting with the one located at the lowest point of the system.



Start of flush



End of flush





# Cooling replacement

Technical Bulletin – September 2011

## The different types of coolants

Depending on the car manufacturer, the coolant type may differ. Always follow car manufacturers specifications when choosing the coolant type – failure to do so could result in water pump failure!



### Permanent liquid -25°C / TypeG11 / G12 / G12+ / Pink color

- Long-life coolant, containing corrosion inhibitors as specified by the vehicle manufacturer. Mostly used for VAG Group applications.



### Permanent liquid -25°C / -30°C / Universal /Green color

- Universal coolant, usually Ethylene Glycol based with the addition of corrosion inhibitors.



### Permanent liquid type D /Yellow color

- Long-life coolant, containing corrosion inhibitors as specified by the vehicle manufacturer. Mostly used for Renault applications.



### Permanent liquid -25°C/-30°C/-35°C / Universal / Blue color

- Universal coolant, usually Ethylene Glycol based.



**Never mix coolant types! It can lead to major technical issues by damaging the water pump and most probably the entire engine system!**

© SKF is a registered trademark of the SKF Group.

© SKF Group 2011

The contents of this publication are the copyright of the publisher and may not be reproduced (even extracts) unless written permission is granted. Every care has been taken to ensure the accuracy of the information contained in this publication but no liability can be accepted for any loss or damage whether direct, indirect or consequential arising out of the use of the information contained herein.

