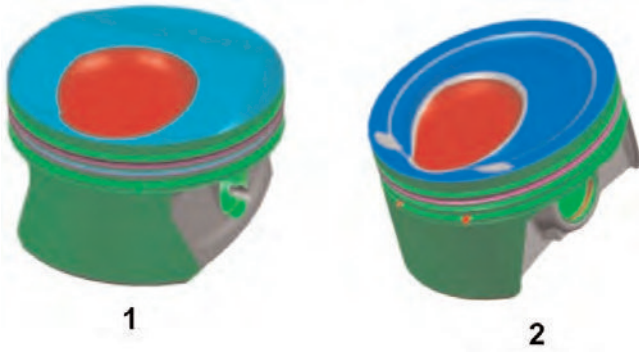


Engine – Cayenne S/T – 2nd Generation

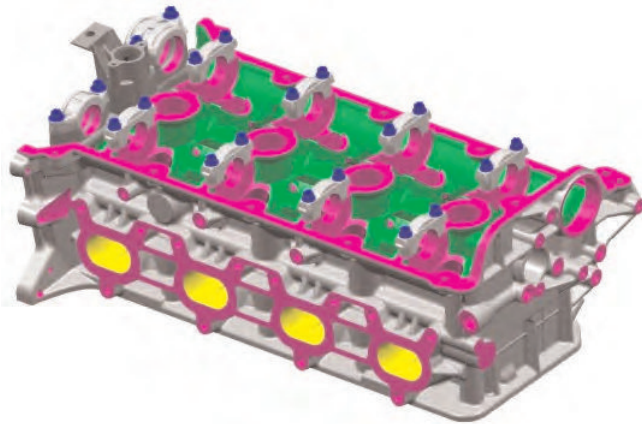
Pistons



1 - Piston (naturally aspirated engine)
2 - Piston (turbo engine)

The pistons are designed as recessed pistons made of aluminum alloy. They have an iron coating (Ferrocut) at the sides to improve friction characteristics. The pistons are different on cylinder bank 1 and 2 both in the Cayenne S and Cayenne Turbo. Another difference between the pistons in the Cayenne S and Cayenne Turbo is that the combustion cavities have different depths because the compression ratios of both engines are different. The piston ring packages for the turbo and naturally aspirated engines are the same.

Cylinder Head



The cylinder head and camshaft mount is one joined component and is identical for the Cayenne S and Cayenne Turbo.

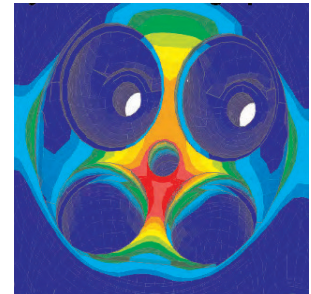
Technical Data, Valve Drive

Intake valve diameter	.....38.3mm
Intake valve lift, large	.....11.0mm
Intake valve lift, small	.....3.6mm
Exhaust valve diameter	.....33.0mm
Exhaust valve lift, cyl. 3, 4, 5, 7	.....9.2mm
Exhaust valve lift, cyl. 1, 2, 6, 8	.....8.0mm
Intake valve angle	.....13.5°
Exhaust valve angle	.....15.4°
Fuel injector installation angle	.....29.0°
Camshaft bearing diameter	.....28.0mm

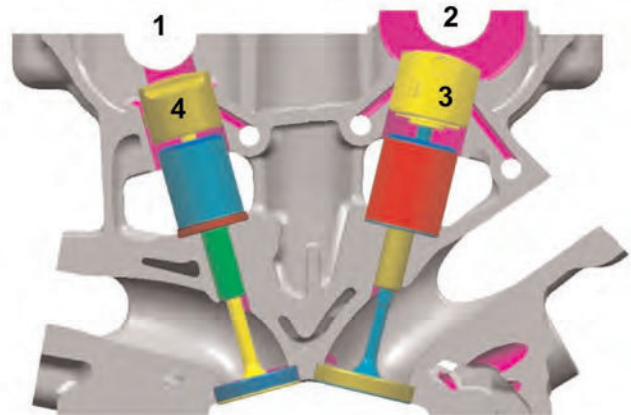
To ensure efficient gas exchange and valve lift control, the camshaft mount is 9 mm higher on the intake side compared to the outlet side. This arrangement meant that it was possible to optimize the intake port. The cooling system was designed in such a way that high temperature parts are optimally cooled. The cylinder head is made of AlSi7Mg.



Cylinder head water jacket.



Combustion chamber stress area.



1 - Exhaust side
2 - Intake side
3 - Operating plunger
4 - Outlet valve tappet