

VOLKSWAGEN engine oil specifications

- 1 -

Specification	VW 504.00/507.00	VW 508.00/509.00	VW 508.88/509.99	VW 502.00/505.00	VW 501.01/505.00	VW 505.01	VW First Fill ex. EU
First Fill	TL 521.95	TL 525.77	TL 525.53 (5W-40 only)		-		TL 521.67
Last version date	Dec 2004 / Dec 2004	1-Aug-2017	Apr-13	Dec-14	Mar 2005 / May 2010	Jan-15	March 2005
Service Fill	VW low ash, universal service Fill oil, fully backward compatible and in Europe used for extended drain. Mandatory for diesels with DPF. Only allowed in ultra low sulfur fuel regions.	VW 0W-20 low ash, long drain, high fuel economy oil. Suitable only for HTHS 2,6 capable VW engines in EU and US. Not backward compatible. Not allowed outside EU and USA.	VW high ash oil for outside Europe with different quality fuel than in EU. Normal drain. Not allowed for diesels with DPF. Currently allowed only in Brazil.	VW normal ash service fill oil for gasoline engines under server duty and pump injector diesels WITHOUT DPF.	VW normal ash standard service fill oil. Not allowed for Pump injector diesels. Not allowed for modern day VW engines.	No New Approvals! Existing approvals can requalify as long as no changes. VW mid SAPS stand alone service fill oil for diesel engines at severe duty and pump injector diesels for non DPF diesels	No New Approvals! Existing approvals can requalify as long as no changes. VW mid SAPS factory fill for gasoline engines under severe duty and pump injector diesels without DPF.
ACEA basis	A3/B4-16 (VW DPF test drives to C3)	C5-16	A3/B4 -16	A3/B4 -16	A3/B3 -16	C3-16	C3 -16
SAE viscosity grade	0/5W-30	0W-20	0/5/10W-30/40	0/5W-30/40	0...20W-30...60	0/5W-30/40	5W-40
HTHS (CEC L-36-A-90), mPa.s, min.	3.5	2.6	3.5	3.5	3.5	3.5	3.5
KV 100 (DIN 51562-1), mm²/s	According SAE J300	≥ 7.8 & ≤ 9.3	According SAE J300	According SAE J300	According SAE J300	According SAE J300	According SAE J300
Shear stability (CEC L-14-A-93, 30 cycles)							
KV 100 (DIN 51562-1), mm²/s, % loss after shear, max.	15%	15%	15%	15%	15%	15%	15%
KV 100 (DIN 51562-1), mm²/s, after shear, min.	Stay in grade	6.9	Stay in grade	Stay in grade	Stay in grade	Stay in grade	Stay in grade
Noack volatility (CEC L-40-A-93), loss, B method, max.	11%	11%	13%	13%	13%	13%	13%
TBN (DIN 51639-1), mg KOH/g, min.	6.0	6.0	11.0	10.0	8.0	7.0	7.0
Sulfated ash (DIN 51575), % m/m,	≤ 1.5 & Pass VW DPF test	≤ 1.0 & Pass VW DPF test	≥ 1.0 & ≤ 1.5	≥ 1.0 & ≤ 1.5	≤ 1.5	≤ 0.8	≤ 0.8
Chlorine (DIN ISO 15597), % m/m, max.	-	0.0050	-	-	-	-	-
Phosphorus (DIN 51363-3), % m/m,	Rate & Report	Rate & Report	≥ 0.08 & ≤ 0.15	≥ 0.09 ⁽¹⁾	≥ 0.08 ⁽¹⁾	≥ 0.07 ⁽¹⁾	Rate & Report