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VOITH

Lubricants for Voith retarders



Voith retarder fluids contribute substantially to the excellent performance of the Voith retarder. Lubricants are of fundamental importance as all braking power is transmitted to the oil which is subject to high thermal and mechanical strain. Continuous warming and cooling cycles are also detrimental to the fluid, therefore high quality oil is essential.

Overview

Oil brand name	Fluid type	Voith retarder oil class
VR Fluid	Mineral	A
VR Fluid S	Synthetic	B
VR Fluid PLUS*	Synthetic with PAO (Poly-Alpha-Olefin), blue coloured	C

Approval Voith 153.00455710 for bus and truck

*Approved by Mercedes see BeVo list at the link:

http://bevo.mercedes-benz.com/bevolistenmain.php?navigation_path=bevolisten&blatt=235.29&content_action=show

Lubricants for Voith retarders



VR Fluid

Chemical and physical features

SAE Viscosity grade	20W-20
Kinematic viscosity at 100° C	9.1 cSt
Viscosity index	130
Flash point (C.O.C)	210° C
Pour point	-32° C

Package & code

Packaging	Quantity	Cod. Voith
Tank	1,000 lt	301 505 178
Drum	209 lt	301 505 177
Bucket	25 lt	301 505 176
Can	5 lt	301 505 175

Additives bases

- High anti-rust and anti-corrosive properties
- First-rate anti-foam properties

Approvals

Voith retarder oil class A

Maintenance

Oil change intervals are required at specified mileage intervals or every two years (whichever occurs first)

Bus

Profile 1	135,000 km
Profile 2	90,000 km
Profile 3	65,000 km

Determination of applications category

Application profile

- Long-distance traffic
 - Long-distance passenger traffic
 - Distances covered on interstates (> 80 %)
 - Climatic conditions similar to Central Europe
-
- Regular services, distribution services, local passenger transport – stop & go
 - Distances covered on interstates (> 50 %)
 - Share of time travelled in city traffic (> 50 %)
-
- Areas with higher average outside temperatures (than in Central Europe)
 - Frequent use in altitudes above 1,500 meters above sea level
 - Distances with a high gradient share
 - Construction vehicles and timber trucks
-

Truck

90,000 / 120,000* km

65,000 / 50,000** km

45,000 km

* only for Retarder VR 3250 installed into Volvo and Renault Trucks

** only for Retarder VR 115 HR

Total weight of vehicle

Application category

up to 44 t

Profile 1

up to 50 t

Profile 2

over 50 t

Profile 3

up to 44 t

Profile 2

up to 50 t

Profile 2

over 50 t

Profile 3

up to 44 t

Profile 3

up to 50 t

Profile 3

over 50 t

Profile 3

VR Fluid S

Chemical and physical features

SAE viscosity grade	10W40
Kinematic viscosity at 100° C	14.1 cSt
Viscosity index	152
Flash point (C.O.C)	236° C
Pour point	-33° C
Brookfield viscosity at -30° C	13,935 cP

Package & code

Packaging	Quantity	Cod. Voith
Tank	1,000 lt	301 505 182
Drum	209 lt	301 505 181
Bucket	25 lt	301 505 180
Can	5 lt	301 505 179

Additives

- High anti-rust and anti-corrosive properties
- First-rate anti-foam properties

Synthetic bases

- High thermal-oxidative stability
- Good properties at low temperatures

Approvals

Voith retarder oil class B

Maintenance

Oil change intervals are required at specified mileage intervals or every two years (whichever occurs first)

Bus

Profile 1	180 000 km
Profile 2	120 000 km
Profile 3	90 000 km

Determination of applications category

Application profile

-
- Long-distance traffic
 - Long-distance passenger traffic
 - Distances covered on interstates (> 80 %)
 - Climatic conditions similar to Central Europe
-
- Regular services, distribution services, local passenger transport – stop & go
 - Distances covered on interstates (> 50 %)
 - Share of time travelled in city traffic (> 50 %)
-
- Areas with higher average outside temperatures (than in Central Europe)
 - Frequent use in altitudes above 1,500 meters above sea level
 - Distances with a high gradient share
 - Construction vehicles and timber trucks
-

Truck

135 000 km

90 000 km

65 000 km

Total weight of vehicle

Application category

up to 44 t

Profile 1

up to 50 t

Profile 2

over 50 t

Profile 3

up to 44 t

Profile 2

up to 50 t

Profile 2

over 50 t

Profile 3

up to 44 t

Profile 3

up to 50 t

Profile 3

over 50 t

Profile 3

VR Fluid PLUS

Chemical and physical features

Colour	Amber
SAE Viscosity grade	75W80
Density at 15° C	0.858 kg/l
Kinematic viscosity at 100° C	9.35 cSt
Viscosity index	157
Flash point (C.O.C)	240° C
KRL shear stability (stage C-20 hours)	1.67 % (cSt/cSt)
Pour point	-42° C
Brookfield viscosity at -40° C	< 50,000 cP

Package & code

Packaging	Quantity	Cod. Voith
Tank	1,000 lt	301 505 463
Drum	209 lt	301 505 462
Bucket	25 lt	301 505 461
Can	5 lt	301 505 459

Additivation

An optimal combination of additives and premium synthetic base used, VR Fluid PLUS provides the following properties:

- Complete compatibility with gaskets used by Voith
- High anti-rust and anti-corrosive properties
- Good anti-foam properties
- Superior sludge control
- Excellent wear control

Synthetic bases

- High thermal-oxidative stability
- Good properties at low temperatures
- Excellent performance stability (also in severe conditions)
- Excellent viscosity stability

Approvals

- Voith retarder oil class C
- MB-Approval 235.29

Maintenance

Oil change intervals are required at specified mileage intervals or every two years (whichever occurs first)

Bus

Application category 1	240,000 / 300,000* km
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Application category 2	180,000 / 200,000** km
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Application category 3	135,000 km
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* only for retarders VR 115 E and VR 3250 applied on Evobus and Volvo Bus

** only for retarder VR 3250 applied on Volvo Bus

Determination of applications category

Bus application profile

Category 1

- Long-distance passenger traffic
- Distances covered on interstates (> 80 %)
- Climatic conditions similar to Central Europe
- Sporadic mountainous routes

Category 2

- Regular services stop & go
- Local passengers transport
- Distances covered on highways (> 50 %)
- Share of time travelled in city traffic (> 50 %)

Category 3

- Heavy Tourism Service
 - Areas with higher average outside temperatures
 - Routes above 1,500 meters above sea level
 - Distances with a high gradient share
-

Truck

180,000 / 200,000* km

135,000 / 150,000* km

90,000 / 100,000* km

* only for retarder VR 3250 applied on Volvo an Renault trucks

Truck application profile

Category 1

- Long-distance traffic
 - Distances covered on interstates (> 80 %)
 - Climatic conditions similar to Central Europe
 - Sporadic mountainous routes
 - Transports cross weights \leq 44 ton
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Category 2

- Regular services stop & go
 - Distribution traffic
 - Distances covered on highways (> 50 %)
 - Share of time travelled in city traffic (> 50 %)
 - Transports cross weights > 44 and < 50 ton
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Category 3

- Areas with higher average outside temperatures
 - Construction vehicles and timber trucks
 - Routes above 1,500 meters above sea level
 - Distances with a high gradient share
 - Transports cross weights > 50 ton
-

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