

[25682]

WEAR SEVERE CONTAMINATION SEVERE FLUID CONDITION NORMAL



VOLVO EC350 314419

Rear Right Final Drive

VOLVO SUPER GEAR OIL 75W-80-GO102 (--- GAL)

RECOMMENDATION

We advise that you check all areas where dirt can enter the system. The oil change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

WEAR

Gear wear is indicated.

CONTAMINATION

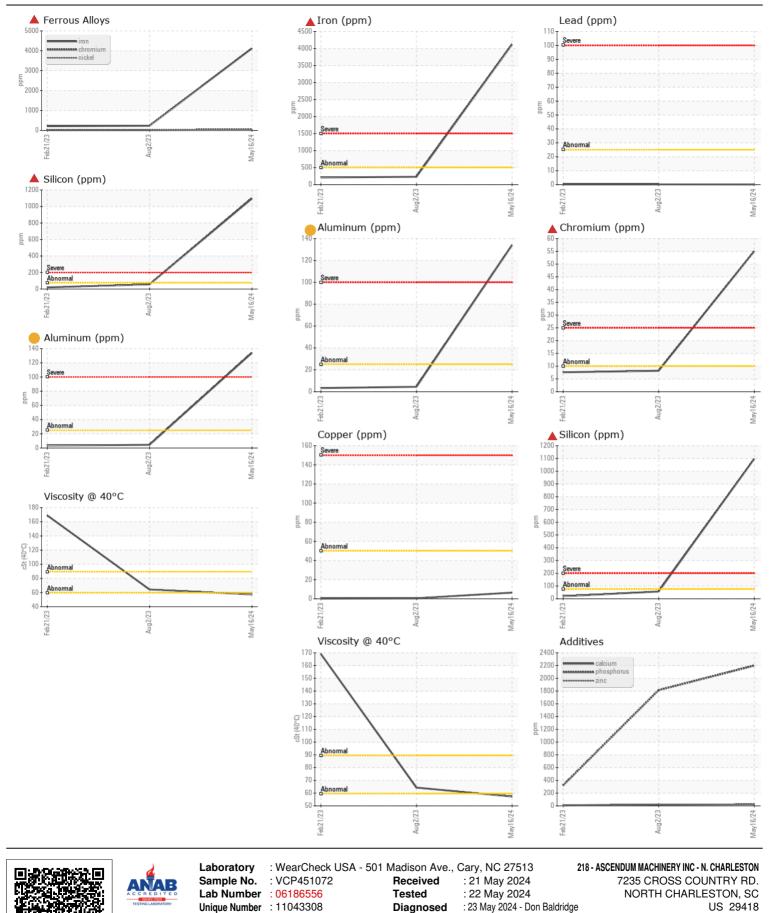
Elemental levels of silicon (Si) and aluminum (Al) indicate aluminasilicate (coarse dirt) ingress.

FLUID		

The oil is no longer serviceable due to the presence of contaminants.

Sample DateClient InfoIn16 May 202402 Aug 202321 Feb 2024Machine AgehrsClient InfoI202097747710Oil AgehrsClient InfoI0100050010Filter AgehrsClient InfoIChangedChangedChangedChangedOil ChangedIClient InfoIChangedChangedChangedChangedFilter ChangedIClient InfoIChangedN/AChangedSample StatusIISEVERENORMALNORMALIronppmASTM D5185>500IIIIronppmASTM D5185IIIINickelppmASTM D5185IIIIItaniumppmASTM D5185IIIISilverppmASTM D5185IIIIItaniumppmASTM D5185IIIIItaniumppmASTM D5185IIIIItaniumppmASTM D5185IIIIIItaniumppmASTM D5185IIIIIItaniumppmASTM D5185IIIIIItaniumppmASTM D5185IIIIIItaniumppmASTM D5185IIIIIIt							
Sample DateClient IntoI6 May 20221 Feb 202Machine AgehrsClient Into2020977477Oil AgehrsClient Into01000500Filter AgehrsClient IntoCChangedChangedOil ChangedICClient IntoICChangedN/AChangedFilter ChangedICClient IntoICSEVERENORMALChangedSample StatusITSEVERENORMAL2007CChromiumppmASTM D5185>500A 1202307207ChromiumppmASTM D5185>106<1<1NickelppmASTM D5185>106<1<1SilverppmASTM D5185>106<1<1GopperppmASTM D5185>506<1<1CopperppmASTM D5185>506<1<1GuadatiumppmASTM D5185>506<1<1VanadiumppmASTM D5185>506<1<1VanadiumppmASTM D5185>506<1<1VanadiumppmASTM D5185>506<1<1VanadiumppmASTM D5185>506<1<1VanadiumppmASTM D5185>506<1<1VanadiumppmASTM D5185>506<1<1Vanadiu	Test	UOM	Method	Limit/Abn	Current	History1	History2
Machine AgehrsClient Info2020977477Oil AgehrsClient Info01000500500Filter AgehrsClient InfoChangedChangedChangedChangedOil ChangedClient InfoChangedN/AChangedFilter ChangedClient InfoChangedN/AChangedSample StatusClient InfoSEVERENORMALNORMALIronpmASTM D5185>5004 4120230207ChromiumpmASTM D5185>106<1	Sample Number		Client Info		VCP451072	VCP405863	VCP404418
Oil Age Filter AgeIclient InfoIclient InfoIcli	Sample Date		Client Info		16 May 2024	02 Aug 2023	21 Feb 2023
Filter Age Oil ChangedhrsClient InfoOOChanged	Machine Age	hrs	Client Info		2020	977	477
Oil Changed Filter Changed Filter Changed Filter Changed Image StatusClient InfoChanged Changed NAChanged NAChanged NAChanged NAChanged NAChanged NAChanged NAChanged NAChanged NAChanged NAChanged NAChanged NAChanged NAChanged NAChanged NANoRMALIronppmASTM D5185m ASTM D5185m>10 A 120333	Oil Age	hrs	Client Info		0	1000	500
Filter Changed Sample StatusClient IntoChanged Kample StatusN/AChanged Kample StatusIronppmASTM D5185m5.500A 41202.3002.07ChromiumppmASTM D5185m5.10A 5588NickelppmASTM D5185m1.01A 5588NickelppmASTM D5185m1.016<1.1<1.1TitaniumppmASTM D5185m2.5291.344.43LeadppmASTM D5185m5.250<1.1<1.1AluminumppmASTM D5185m5.006.6<1.1<1.1CopperppmASTM D5185m5.006.6<1.00.0VanadiumppmASTM D5185m5.00A.10.00.0VanadiumppmASTM D5185m5.00A.10.00.0VisualNONENONENONENONENONENONEVeltow Metalscalar'VisualNONENONENONENONESiliconppmASTM D5185m>.20921VaterWC Methodo.2.2NEGNONENONENONESiliconppmASTM D5185m>.20921VaterWC Methodo.2.2NEGNONENONESoliconppmASTM D5185m>.20NORENONEDebrisscalar'VisualNONENONENONESodium<	Filter Age	hrs	Client Info		0	0	0
Sample StatusSEVERNORMALNORMALIronppmASTM D5185m>500A 4120230207ChromiumppmASTM D5185m>10A 5588NickelppmASTM D5185m>106<1<1TitaniumppmASTM D5185m>106<1<1SilverppmASTM D5185m20171<1AluminumppmASTM D5185m>20134443LeadppmASTM D5185m>206<1<1CopperppmASTM D5185m>206<1<1TinppmASTM D5185m>10000VanadiumppmASTM D5185m>10000VanadiumppmASTM D5185m>75A 109657720Vellow Metalscalar*VisualNONENONENONENONESiliconppmASTM D5185m>20921VaterVC Method>.22NEGNONENONESilitonscalar*VisualNONENONENONESolitscalar*VisualNORENONENONEAppearancescalar*VisualNORENORENOREAppearancescalar*VisualNORENORENORESodiumppmASTM D5185m-0.2NORENOREBoronppmASTM D5185mIC1	Oil Changed		Client Info		Changed	Changed	Changed
IronppmASTM D5185m>500A 41202230207ChromiumppmASTM D5185m>10A 5588NickelppmASTM D5185m>106<1	Filter Changed		Client Info		Changed	N/A	Changed
ChromiumppmASTM D5185m>10A 55888NickelppmASTM D5185m>106<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1 <t< th=""><th>Sample Status</th><th></th><th></th><th></th><th>SEVERE</th><th>NORMAL</th><th>NORMAL</th></t<>	Sample Status				SEVERE	NORMAL	NORMAL
NickelpmASTM D5185m>106<1	Iron	ppm	ASTM D5185m	>500	4120	230	207
TitaniumppmASTM D5185m171<1	Chromium	ppm	ASTM D5185m	>10	4 55	8	8
SilverppmASTM D5185m0<1	Nickel	ppm	ASTM D5185m	>10	6	<1	<1
AluminumppmASTM D5185m>2513443LeadppmASTM D5185m>250<1	Titanium	ppm	ASTM D5185m		17	1	<1
LeadppmASTM D5185m>200<1	Silver		ASTM D5185m		0	<1	<1
LeadppmASTM D5185m>200<1	Aluminum		ASTM D5185m	>25	— 134	4	3
CopperppmASTM D5185m>506<1	Lead		ASTM D5185m	>25	0	<1	<1
TinppmASTM D5185m>10000VanadiumppmASTM D5185mIII00White Metalscalar*VisualNONENONENONENONEMODEFYellow Metalscalar*VisualNONENONENONENONENONESiliconppmASTM D5185m>75I 109657720PotassiumppmASTM D5185m>20921WaterWC Method>0.2NEGNEGNEGSilitscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNORMNORMLNORMLNORMLAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLCodorscalar*VisualNORMLNORMLNORMLNORMLGoronppmASTM D5185m-202BoronppmASTM D5185m-1002MolybdenumppmASTM D5185m-30034MaganesiumppmASTM D5185m-15219PhosphorusppmASTM D5185m-20121CalciumppmASTM D5185m-21981813320Sodiumppm	Copper	ppm	ASTM D5185m	>50	6	<1	<1
White Metal Yellow Metalscalar*VisualNONENONENONENONENONEMODERYellow Metalscalar*VisualNONENONENONENONENONENONENONENONESiliconppmASTM D5185m>2092111 <t< th=""><th>Tin</th><th></th><th>ASTM D5185m</th><th>>10</th><th>0</th><th>0</th><th>0</th></t<>	Tin		ASTM D5185m	>10	0	0	0
Yellow Metalscalar*VisualNONENONENONENONENONESiliconppmASTM D5185m>75▲ 109655720PotassiumppmASTM D5185m>20921WaterWC Method>0.2NEGNEGNEGSilitscalar*VisualNONENONELIGHTNONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGSodiumppmASTM D5185m202BariumppmASTM D5185m2102MolybdenumppmASTM D5185m3034MagnesiumppmASTM D5185m15219PhosphorusppmASTM D5185m15219PhosphorusppmASTM D5185m272012SulfurppmASTM D5185m272012SulfurppmASTM D5185m272012SulfurppmASTM D5185m272012SulfurppmASTM D5185m2724822 <th>Vanadium</th> <th>ppm</th> <th>ASTM D5185m</th> <th></th> <th><1</th> <th>0</th> <th>0</th>	Vanadium	ppm	ASTM D5185m		<1	0	0
SiliconppmASTM D5185m>75A 10965720PotassiumppmASTM D5185m>20921WaterWC Method>0.2NEGNEGNEGSiliscalar*VisualNONENONELIGHT0Debrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMNORMLNORMLNORMLOdorscalar*VisualNORMNORMLNORMLNORMLEmulsified Watescalar*VisualNOR1891990BoronppmASTM D5185m_1891990BariumppmASTM D5185m_1021MaganeseppmASTM D5185m_300334MagnesiumppmASTM D5185m_15219PhosphorusppmASTM D5185m_15219PhosphorusppmASTM D5185m_15219PhosphorusppmASTM D5185m_272012SulfurppmASTM D5185m_272012MagnesiumppmASTM D5185m_219320PhosphorusppmASTM D5185m_213320PhosphorusppmASTM D5185m_2720 <t< th=""><th>White Metal</th><th>scalar</th><th>*Visual</th><th>NONE</th><th>NONE</th><th>NONE</th><th>MODEF</th></t<>	White Metal	scalar	*Visual	NONE	NONE	NONE	MODEF
PotassiumppmASTM D5185m>20921WaterWC Method>0.2NEGNEGNEGSiltscalar*VisualNONENONELIGHTNONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLSodiumppmASTM D5185m18919902BariumppmASTM D5185m3034MagnesiumppmASTM D5185m3034MagnesiumppmASTM D5185m15219PhosphorusppmASTM D5185m21981813320ZincppmASTM D5185m21981813320KingppmASTM D5185m21981813320PhosphorusppmASTM D5185m21982482215390	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
PotassiumppmASTM D5185m>20921WaterWC Method>0.2NEGNEGNEGSiltscalar*VisualNONENONELIGHTNONEDebrisscalar*VisualNONENONENONENONENONESand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGNEGNEGSodiumppmASTM D5185mS1891990SBariumppmASTM D5185mImageImageImageImageImageImageMolybdenumppmASTM D5185mImageImageImageImageImageImageImagePhosphorusppmASTM D5185mImageImageImageImageImageImageImageImagePhosphorusppmASTM D5185mImageImageImageImageImageImageImageImagePhosphorusppmASTM D5185mImageImageImageImageImageImageImageImageImageppmASTM D5185mImageImageImageImageImageImageImageImage <tr< th=""><th>Silicon</th><th>mag</th><th>ASTM D5185m</th><th>>75</th><th>1096</th><th>57</th><th>20</th></tr<>	Silicon	mag	ASTM D5185m	>75	1096	57	20
Siltscalar*VisualNONENONELIGHTNONEDebrisscalar*VisualNONENONENONENONENONENONESand/Dirtscalar*VisualNONENONENONENONENONENONEAppearancescalar*VisualNORMNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGNEGSodiumppmASTM D5185m202BoronppmASTM D5185m1002BariumppmASTM D5185m1002ManganeseppmASTM D5185m3003.34MagnesiumppmASTM D5185m15.313.20PhosphorusppmASTM D5185m	Potassium	ppm	ASTM D5185m	>20	9	2	1
Debrisscalar*VisualNONENONENONENONENONESand/Dirtscalar*VisualNORNORMENONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGNEGNEGNEGSodiumppmASTM D5185m<1891990211 </th <th>Water</th> <th></th> <th>WC Method</th> <th>>0.2</th> <th>NEG</th> <th>NEG</th> <th>NEG</th>	Water		WC Method	>0.2	NEG	NEG	NEG
Sand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGNEGNEGSodiumppmASTM D5185m2022BoronppmASTM D5185m18919902BariumppmASTM D5185m4021MolybdenumppmASTM D5185m3003.344MagnesiumppmASTM D5185m152199PhosphorusppmASTM D5185m219818133202ZincppmASTM D5185m2720122SulfurppmASTM D5185m385252482215390	Silt	scalar	*Visual	NONE	NONE	LIGHT	NONE
Appearancescalar*VisualNORML<	Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Odorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGNEGNEGSodiumppmASTM D5185m202BoronppmASTM D5185m1891990BariumppmASTM D5185m<1891990BariumppmASTM D5185m<<102MolybdenumppmASTM D5185m<3003.34ManganeseppmASTM D5185m421CalciumppmASTM D5185m15219PhosphorusppmASTM D5185m21981813320ZincppmASTM D5185m272012SulfurppmASTM D5185m385252482215390	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Emulsified Waterscalar*Visual>0.2NEGNEGNEGSodiumppmASTM D5185m202BoronppmASTM D5185m1891990BariumppmASTM D5185mcc102MolybdenumppmASTM D5185mc71<1ManganeseppmASTM D5185mc30034CalciumppmASTM D5185mc15219PhosphorusppmASTM D5185mc21981813320ZincppmASTM D5185mc272012SulfurppmASTM D5185mc385252482215390	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Sodium ppm ASTM D5185m 2 0 2 Boron ppm ASTM D5185m 189 199 0 Barium ppm ASTM D5185m <189 199 0 Barium ppm ASTM D5185m <11 0 2 Molybdenum ppm ASTM D5185m <71 1 <11 Manganese ppm ASTM D5185m 300 33 4 Magnesium ppm ASTM D5185m 44 2 1 Calcium ppm ASTM D5185m 44 2 1 Phosphorus ppm ASTM D5185m 15 21 9 Phosphorus ppm ASTM D5185m 2198 1813 320 Zinc ppm ASTM D5185m 27 20 12 Sulfur ppm ASTM D5185m 38525 24822 15390	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Boron ppm ASTM D5185m 189 199 0 Barium ppm ASTM D5185m <1	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Boron ppm ASTM D5185m 189 199 0 Barium ppm ASTM D5185m <1 0 2 Molybdenum ppm ASTM D5185m 7 1 <1 Manganese ppm ASTM D5185m 30 3.3 4 Magnesium ppm ASTM D5185m 4 2 1 Calcium ppm ASTM D5185m 15 21 9 Phosphorus ppm ASTM D5185m 2198 1813 320 Zinc ppm ASTM D5185m 27 20 12 Sulfur ppm ASTM D5185m 38525 24822 15390	Sodium	ppm	ASTM D5185m		2	0	2
Molybdenum ppm ASTM D5185m 7 1 <1	Boron	ppm	ASTM D5185m		189	199	0
Manganese ppm ASTM D5185m 30 3 4 Magnesium ppm ASTM D5185m 4 2 1 Calcium ppm ASTM D5185m 4 21 9 Phosphorus ppm ASTM D5185m 2198 1813 320 Zinc ppm ASTM D5185m 27 20 12 Sulfur ppm ASTM D5185m 38525 24822 15390	Barium	ppm	ASTM D5185m		<1	0	2
Magnesium ppm ASTM D5185m 4 2 1 Calcium ppm ASTM D5185m 15 21 9 Phosphorus ppm ASTM D5185m 2198 1813 320 Zinc ppm ASTM D5185m 27 20 12 Sulfur ppm ASTM D5185m 38525 24822 15390	Molybdenum	ppm	ASTM D5185m		7	1	<1
Calcium ppm ASTM D5185m 15 21 9 Phosphorus ppm ASTM D5185m 2198 1813 320 Zinc ppm ASTM D5185m 27 20 12 Sulfur ppm ASTM D5185m 38525 24822 15390	Manganese	ppm	ASTM D5185m		30	3	4
Phosphorus ppm ASTM D5185m 2198 1813 320 Zinc ppm ASTM D5185m 27 20 12 Sulfur ppm ASTM D5185m 38525 24822 15390	Magnesium	ppm	ASTM D5185m		4	2	1
Zinc ppm ASTM D5185m 27 20 12 Sulfur ppm ASTM D5185m 38525 24822 15390	Calcium	ppm	ASTM D5185m		15	21	9
Sulfur ppm ASTM D5185m 38525 24822 15390	Phosphorus	ppm	ASTM D5185m		2198	1813	320
	Zinc	ppm	ASTM D5185m		27	20	12
Visc @ 40°C cSt ASTM D445 57.3 64.3 169	Sulfur	ppm	ASTM D5185m		38525	24822	15390
	Visc @ 40°C	cSt	ASTM D445		57.3	64.3	169

Contact/Location: MATT MITCHAM - VOLVO3387



Test Package : MOB 1 Contact: MATT MITCHAM Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. matt.mitcham@ascendummachinery.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: (843)414-1129

Contact/Location: MATT MITCHAM - VOLVO3387

T: