

		ANALYSES	METHOD
CONDITION		Antioxidant level (Ruler)	in – house
		Dispersancy	in – house
		FT – IR -analysis: oxidation	JOAP
		FT – IR -analysis: nitration	JOAP
		FT – IR -analysis: sulfation	JOAP
		pH (<i>coolant</i>)	DIN 51369
		Initial pH (<i>oils</i>)	in – house
		Elemental analysis by ICP/ XRF, additives	ASTM D 5185 (ICP), ASTM D 6481 (XRF)
		Pour point	ASTM D 97
		Total acid number (TAN)	ASTM D 664
		Total base number (TBN)	ASTM D 664
		Flash point	DIN EN 2719
		Sulfur	ASTM D 6481
		Density	DIN EN ISO 12185
		Cloud point	ASTM D 2500
		Appearance	in – house
		Viscosity at + 40° C and at + 100° C	ASTM D 445, DIN 51562
		Viscosity index	ASTM D 2270, ISO 2909
		Colour	ASTM D 1500
	Oil type determination	in – house	
WEAR		Elemental analysis by ICP, wear metals and level of corrosion	ASTM D 5185, in – house
		PQ – index	in – house
		Wear metals and inorganic substance analyses by SEM	in – house
		Tribomonitoring - microscope analyses	in – house
		Elemental analysis by XRF, metals	in – house
CLEANLINESS		Biodiesel content	DIN 51451
		FT – IR –analysis: organic contaminants	JOAP
		Glycol content	DIN 51451, JOAP
		Gravimetric analysis of impurities	in – house
		Carbon residue (Conradson)	ASTM D 189
		Particle counting with an APC and cleanliness class	ISO 11500, ISO 4406
		Elemental analysis by ICP, contaminants	ASTM D 5185
		Chloride content	DIN 51408
		Insolubles	in – house
		Membrane filtration	in – house
		Membrane filtration -- visual identification of contaminants by microscope	in – house
		Membrane filtration – particle counting with microscope – cleanliness class	ISO 4407, ISO 4406
		Soot content	DIN 51452, JOAP
		Blotter spot	in – house
		Fuel content	DIN 51451, JOAP
	Elemental analyses by SEM, inorganic contaminants	in – house	
	Water by Karl Fisher titration	ASTM D 6304 C	

	ANALYSES	METHOD
PERFORMANCE	Air separation	ISO EN 9120
	Varnish potential	in – house
	Corrosiveness to Copper	ASTM D 130
	Rust – Preventing Characteristics (A and B)	ASTM D 665
	RPVOT oxidation test	ASTM 2272
	Filterability	ISO 13357 – 2 , in – house
	Foaming tendency, sequence I	ISO DIN 6247
	Foaming tendency, sequence I-III	ASTM D 892
	Water separation	DIN 51589
GREASE ANALYSES	FT – IR –analysis, base oil oxidation and cross contaminations	DIN 51451, JOAP
	Total acid number (TAN)	ASTM D 664
	Corrosion prevention	ASTM D 130
	Hardness of grease a. k. a. penetration (unworked)	ISO 2137
	Hardness of grease a. k. a. penetration (worked)	ISO 2137
	Wear metals and contamination analysis with microscope	in – house
	Amount of base oil in grease	Siemens
	PQ – index, ferromagnetic metals	in – house
	RDE/AES – analysis, wear metals	ASTM D 6595
	RDE/AES – analysis, additives	ASTM D 6595
	RDE/AES – analysis, contaminants	ASTM D 6595
	SEM – analysis, wear metals	in – house
	Drop point	ASTM D 566
	Water content	ASTM D 6304 C
	Oil separation from grease, + 40 C (18h)	ASTM D 1742
	Oil separation from grease, + 40 C (7 days)	ASTM D 1742