



Normal



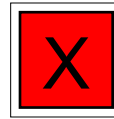
Caution



Serious



Critical

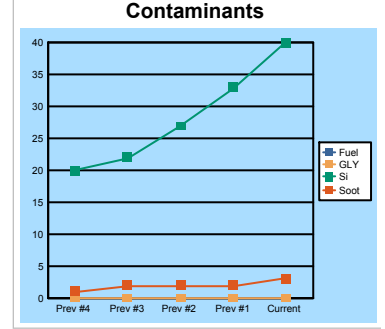
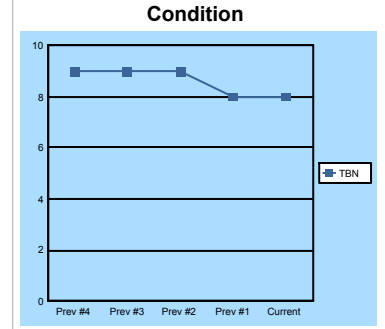
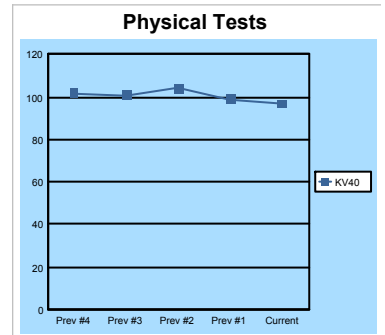


Customer Name Example Customer
 Address Unit 22-24,Business Park
 Big City,
 AB12 3AS
 Sample Date 02/10/2018
 Received Date 06/12/2018

Serial Number Air Filters Engine
 Unit Number Example Engine
 Make Model Misc Vehicle Diesel Vehicle
 Location Component Engine
 Job No
 Brand Not Given Unknown 15W40 (SAE)

Diagnosis: Silicon & Aluminium suggest Aluminium Silicate ingress. Aluminium, Iron and Chromium all suggest wear to the upper cylinder. Additionally, the LubeWear metals are significantly higher than ICP wear metals, suggesting wear particles are large, consistent with an abnormal wear process. Advice: Inspect air induction system including filters and trunking for source of dirt ingress. Change oil if not changed when sampled to remove the abrasive dirt particles from the system which could cause further wear. Resample in 150 hours following any corrective actions to confirm the issue has been resolved.

Sample Details	Test Method	Units	Current Result	Previous #1	Previous #2
Lab No	-	-	OAL1904005	OAL1904004	OAL1904003
Sample Date	-	-	02/10/2018	05/09/2018	05/08/2018
Meter Hrs	-	-	5500	4200	4012
Fluid Hrs	-	-	427	400	492
Fluid Added	-	-	10.00	0.00	0.00
Fluid Changed	-	-	No	No	No
Filter Changed	-	-	No	No	No
Brand	-	-	Not Given Un	Not Given Un	Not Given Un
Physical Tests					
Viscosity @ 40°C	ASTMD7279	mm2/s	97	99	104
Viscosity @ 100°C	ASTMD7279	mm2/s	13.9	13.9	14.5
Condition					
Base Number	ASTMD2896	mgKOH/g	8.1	8.2	8.7
Nitration	JOAP	A/cm	0	0	0
Oxidation	JOAP	A/cm	12	15	14
Sulphation	JOAP	A/cm	6	7	5
Contaminants					
Appearance Fluid	OAL Method	Visual	Dark	Dark	Dark
Appearance Solids	OAL Method	Visual	Colloidal	Colloidal	Colloidal
Fuel Dilution	OAL Method	%	<1	<1	<1
Glycol/AntiFreeze	JOAP	%	<0.1	<0.1	<0.1
Lithium (Li)	ASTMD5185	mg/kg	0	0	0
Lithium (Li)	LubeWear	mg/kg	0	0	0
Potassium (K)	ASTMD5185	mg/kg	0	0	0
Silicon (Si)	ASTMD5185	mg/kg	40	33	27
Silicon (Si)	LubeWear	mg/kg	52	35	28
Sodium (Na)	ASTMD5185	mg/kg	1	1	2
Soot	JOAP	%	2.5	2.3	1.7
Titanium (Ti)	ASTMD5185	mg/kg	0	0	0
Titanium (Ti)	LubeWear	mg/kg	0	0	0
Vanadium (V)	ASTMD5185	mg/kg	0	0	0
Water (dissolved)	ASTMD6304	mg/kg	401	415	422
Water (free)	Crackle & CaH2	%	<0.1	<0.1	<0.1
Wear Metals					
Aluminium	ASTMD5185	mg/kg	9	7	3
Aluminium (Al)	LubeWear	mg/kg	38	22	6
Cadmium (Cd)	ASTMD5185	mg/kg	0	0	0



Lab Address: Unit 5 creamery trade park, Station road, Mochdre, Colwyn bay, LL285EF

Interpreted By Adam Cutler



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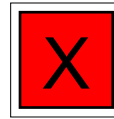
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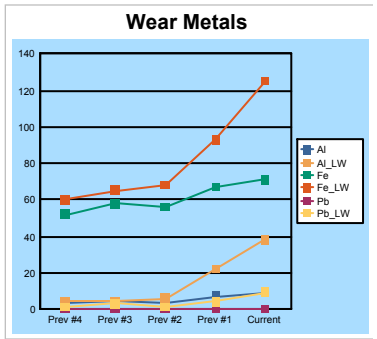


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Wear Metals					
<u>Cadmium (Cd)</u>	LubeWear	mg/kg	0	0	0
<u>Chromium (Cr)</u>	ASTMD5185	mg/kg	14	9	5
<u>Chromium (Cr)</u>	LubeWear	mg/kg	28	15	5
<u>Copper (Cu)</u>	ASTMD5185	mg/kg	7	4	6
<u>Copper (Cu)</u>	LubeWear	mg/kg	10	5	6
<u>Iron (Fe)</u>	ASTMD5185	mg/kg	71	67	56
<u>Iron (Fe)</u>	LubeWear	mg/kg	125	93	68
<u>Lead (Pb)</u>	ASTMD5185	mg/kg	0	0	0
<u>Lead (Pb)</u>	LubeWear	mg/kg	9	4	1
<u>Manganese (Mn)</u>	ASTMD5185	mg/kg	1	1	1
<u>Manganese (Mn)</u>	LubeWear	mg/kg	1	1	1
<u>Nickel (Ni)</u>	ASTMD5185	mg/kg	0	0	0
<u>Nickel (Ni)</u>	LubeWear	mg/kg	0	0	0
<u>Silver (Ag)</u>	ASTMD5185	mg/kg	0	0	0
<u>Silver (Ag)</u>	LubeWear	mg/kg	0	0	0
<u>Tin (Sn)</u>	ASTMD5185	mg/kg	1	3	2
<u>Tin (Sn)</u>	LubeWear	mg/kg	5	3	5
Additives					
<u>Barium (Ba)</u>	ASTMD5185	mg/kg	0	0	0
<u>Boron (B)</u>	ASTMD5185	mg/kg	0	0	0
<u>Calcium (Ca)</u>	ASTMD5185	mg/kg	1981	1955	1952
<u>Magnesium (Mg)</u>	ASTMD5185	mg/kg	13	11	15
<u>Molybdenum (Mo)</u>	ASTMD5185	mg/kg	0	0	0
<u>Molybdenum (Mo)</u>	LubeWear	mg/kg	0	0	0
<u>Phosphorus (P)</u>	ASTMD5185	mg/kg	605	615	650
<u>Zinc (Zn)</u>	ASTMD5185	mg/kg	625	652	681



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