

NORMAL

For the attention of
 Telephone
 Fax
 Laboratory Report Reference AV91444
 Laboratory Report Date 28-Jul-15
 Receipt Date 27-Jul-15
 Sample Date § 23-Jul-15

Equipment Information

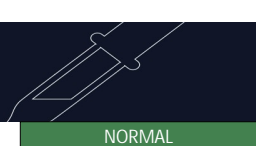
Registration §
 Position § MGB
 Description § MGB
 Manufacturer § ZF
 Model § 4649 020 SERIES
 Serial Number §
 Customer Reference §
 Unique Code
 Oil Grade § CASTROL TRANSMAX Z
 Unit Life §
 Oil Life §

Comment

Publication reference EC135-63A-012 dated 08-Aug-07 (including Revision 06 dated 18-Nov-13) has been used in this diagnosis.

Please note that on 1st July the Spectro | Jet-Care analysis report style changed to reflect our brand identity. If you have any questions about the changes please contact us at communications@spectro-oil.com.

Sample Number	29	30	31	32 **	33	34	35	36	37	38	
Analysis Date	29-Jul-14	16-Sep-14	18-Nov-14	09-Dec-14	07-Jan-15	28-Jan-15	04-Mar-15	17-Apr-15	24-Jun-15	28-Jul-15	
Sample Date §	25-Jul-14	11-Sep-14	17-Nov-14	08-Dec-14	06-Jan-15	27-Jan-15	02-Mar-15	-	22-Jun-15	23-Jul-15	
Lab Reference	AV83297	AV84494	AV86089	AV86518	AV87045	AV87465	AV88232	AV89194	AV90691	AV91444	
Unit Life §	2913:00	2913:00	3326:00	3371:56	3423:00	2913:00	2870:30	2913:00	3178:20	3270:40	
Oil Life §	334:00	64:00	235:00	294:00	38:00	91:00	176:30	287:00	484:20	576:40	
Oil Added §	-	-	-	-	-	-	-	-	-	-	
Ticket Number §	-	-	-	-	-	-	-	-	-	-	
Physical Condition											
Viscosity at 100°C (M002)	cSt	7.4	7.5	7.5	7.5	7.6	7.4	7.4	7.5	7.4	7.4
Water by KF (M023)	% weight	0.0352	0.0224	0.0237	0.1054 **	0.0844	0.0530	0.0505	0.0231	0.0162	0.0205
Water by KF (M023)	ppm	352	224	237	1054 **	844	530	505	231	162	205
Spectrographic Analysis											
Iron (M019)	ppm	18.4	7.8	13.5	19.9	8.2	10.3	16.0	21.1	32.7	31.7
Aluminium (M019)	ppm	4.5	2.5	4.7	6.2	2.1	2.7	4.2	5.4	8.4	9.5
Chromium (M019)	ppm	0.6	0.2	0.4	0.6	0.2	0.3	0.5	0.8	1.4	1.6
Molybdenum (M019)	ppm	0.2	0.3	0.4	0.5	0.4	0.3	0.3	0.4	0.5	0.5
Copper (M019)	ppm	1.4	0.5	0.9	1.1	0.3	0.3	0.5	0.6	0.8	0.9
Lead (M019)	ppm	<0.1	0.2	0.1	0.3	0.1	0.1	0.1	0.2	0.2	0.2
Tin (M019)	ppm	0.2	0.1	<0.1	0.1	0.1	<0.1	<0.1	0.1	0.2	<0.1
Nickel (M019)	ppm	0.3	0.1	0.4	0.6	0.1	0.2	0.3	0.5	0.7	0.6
Silver (M019)	ppm	0.9	0.4	0.6	0.8	0.2	0.2	0.4	0.7	1.1	1.5
Vanadium (M019)	ppm	0.4	0.6	1.2	1.5	0.6	0.8	1.0	1.2	1.8	2.2
Titanium (M019)	ppm	7.6	11.9	21.4	26.8	12.0	13.9	18.5	25.4	37.3	41.5
Silicon (M019)	ppm	7	10	12	14	7	8	9	11	14	16
Phosphorus (M019)	ppm	219	202	210	208	202	208	211	229	217	229
Magnesium (M019)	ppm	0.5	0.4	0.5	0.7	0.6	0.7	0.7	1.0	1.2	1.3
Tungsten (M019)	ppm	0.2	<0.1	0.3	0.4	0.1	0.2	0.2	0.6	0.8	0.7
Zinc (M019)	ppm	7.3	1.7	5.8	19.2	11.0	13.0	13.5	14.6	15.8	15.2



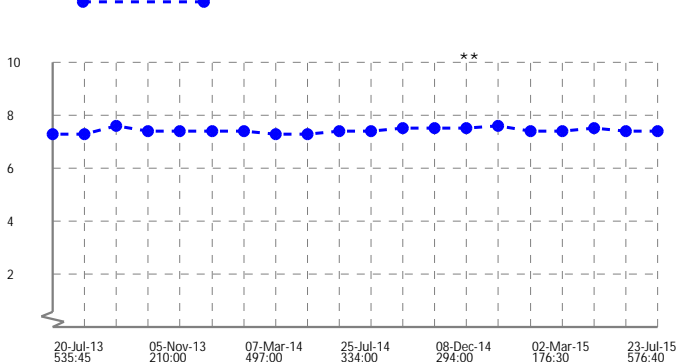
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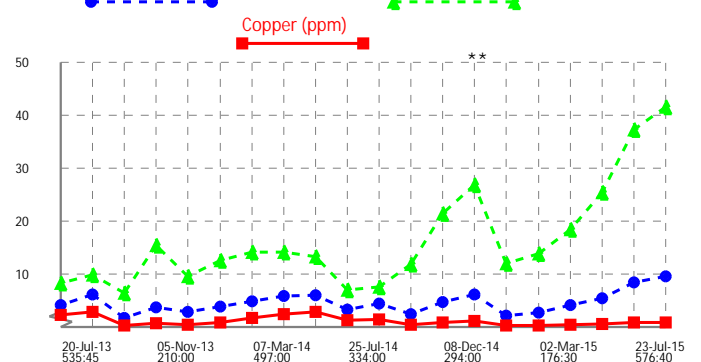
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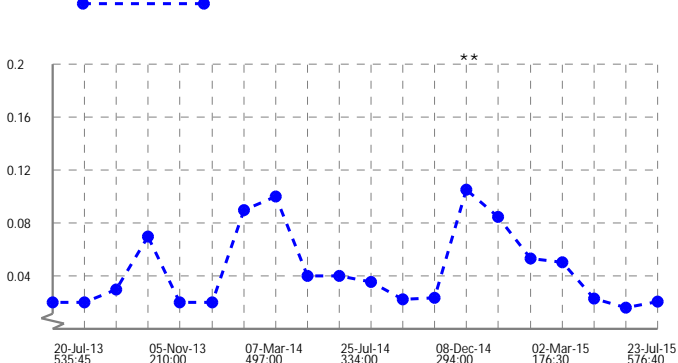
Viscosity at 100°C (cSt)



Aluminium (ppm)



Water (% wt)



Chromium (ppm)

