



ABNORMAL



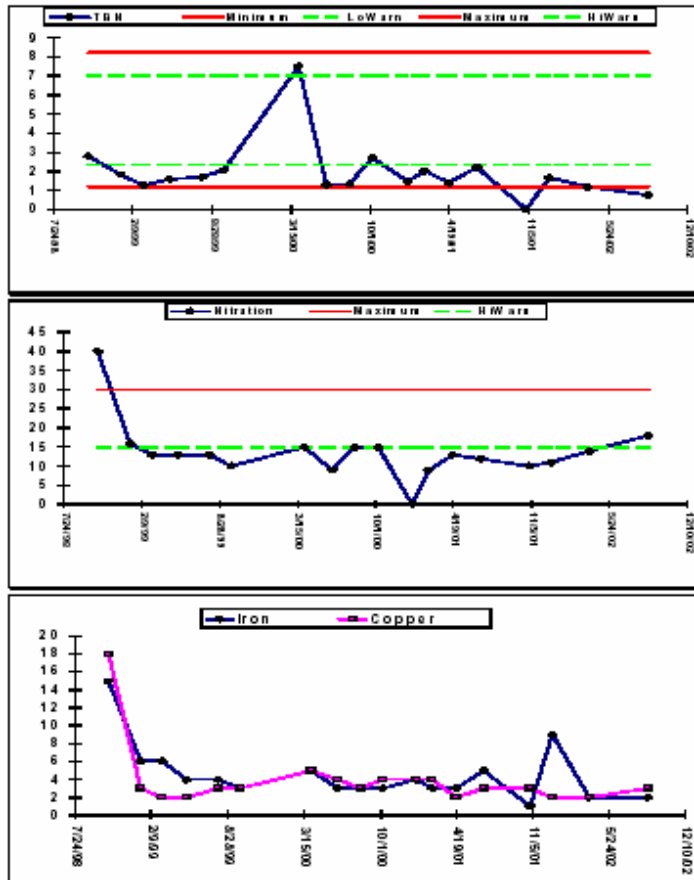
Lab Number : Q72787

ID: S70VOLVO	1998 Volvo T5
Unit Type: VV_GL001 Volvo Engine, Gasline	
Oil Type : CL_005 Castrol GTX SAE 10W-30	P.O. #: VERBAL
Sampled : 09/02/02	Shipped : 09/02/02 Received: 09/03/02 Printed: 09/06/02

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ABNORMAL: Abnormal results for oil are present. Equipment appears satisfactory. The Total Base Number (reserve alkalinity) is low.

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Lab Number	Minimum	Maximum	Ref Oil	P94814	Q25442	Q33440	Q48695	Q72787
Sample Date			10/25/00	06/28/01	10/30/01	12/26/01	04.02.02	09/02/02
Unit Time				0	116782	120680	125412	130340
Oil Time				6055	5500	3898	4732	4807
Metals								
Iron ppm		10	<1	5	1	9	2	2
Aluminum ppm		6	<1	4	1	2	1	2
Chromium ppm		4	<1	<1	<1	2	<1	<1
Copper ppm		6	<1	3	3	2	2	3
Lead ppm		4	<1	<1	<1	1	<1	<1
Tin ppm		4	<1	<1	<1	1	1	1
Nickel ppm		4	<1	<1	<1	1	<1	<1
Silver ppm		4	<1	<1	<1	<1	<1	<1
Silicon ppm		20		2	<1	2	3	2
Sodium ppm			<1	3	1	3	1	1
Boron ppm			1	<1	<1	2	2	<4
Zinc ppm			879	867	1086	972	824	888
Phosphorus ppm			735	804	826	769	677	750
Calcium ppm			1610	2250	1879	1601	1501	1677
Magnesium ppm			287	159	21	22	21	13
Barium ppm			<1	<1	<1	<1	<1	<1
Molybdenum ppm			94	81	49	42	42	45
Vanadium ppm			<1	<1	<1	<1	<1	<1
TAN mg KOH/g		4.49		2.14	2.22	1.95	2.29	2.87
TBN mg KOH/g	1.18	8.23	6.25	*2.23	**<0.10	*1.66	*1.21	**0.78
Oxidation Abs/cm		30	<2	5	5	9	12	12
Water FTIR % Vol		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nitration Abs/cm		30	<2	12	10	11	14	*18
Percent Fuel % Vol		5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Percent Glycol % Vo		0.20	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Vis @100 Deg C cSt	9.00	12.80	11.38	10.11	10.02	9.85	9.85	9.87

Evaluated By: Misty J. Trumppower

For questions about this report, please call 888 HER-GUTH (437-4884) between 8:00 am and 5:00 pm PST. A Technical Support Representative will be glad to help you.

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