



OIL REPORT

LAB NUMBER: E83645 UNIT ID: 11 335-TR
 REPORT DATE: 12/21/2011 CLIENT ID: 41207
 CODE: 20/75 PAYMENT: Prepaid

UNIT	MAKE/MODEL: Transmission BMW Manual	OIL TYPE & GRADE: BMW MTF-1 Manual Trans Fluid
	FUEL TYPE:	OIL USE INTERVAL: 5,111 Miles
	ADDITIONAL INFO: 2011	

CLIENT	PHONE:
	FAX:
	ALT PHONE:
	EMAIL:

COMMENTS
 TOM: Thanks for the notes. We are aware of BMW's lifetime oils, but we don't typically recommend that kind of interval for any fluid. This sample from your transmission looks pretty good overall. Iron can be considered a little high for a short oil run, but that's likely just wear-in at steel parts. Silicon is probably factory sealants and sand-casted parts. Things should look better next time, even if you run the oil a little longer. Universal averages show typical wear levels for a BMW manual transmission after about 27,800 miles on the oil. No obvious problems at 5,111 miles.

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	5,111	UNIT / LOCATION AVERAGES					UNIVERSAL AVERAGES
	MI/HR on Unit	5,111						
	Sample Date	11/25/11						
	Make Up Oil Added	0 qts						
ALUMINUM	8	8					27	
CHROMIUM	0	0					1	
IRON	33	33					60	
COPPER	10	10					31	
LEAD	1	1					18	
TIN	0	0					2	
MOLYBDENUM	1	1					5	
NICKEL	1	1					0	
MANGANESE	4	4					19	
SILVER	0	0					0	
TITANIUM	0	0					0	
POTASSIUM	5	5					2	
BORON	96	96					137	
SILICON	16	16					16	
SODIUM	3	3					14	
CALCIUM	40	40					696	
MAGNESIUM	0	0					4	
PHOSPHORUS	420	420					1017	
ZINC	11	11					653	
BARIUM	4	4					16	

Values Should Be*

PROPERTIES	SUS Viscosity @ 210°F	48.5	44-50				
	cSt Viscosity @ 100°C	6.81	5.4-7.6				
	Flashpoint in °F	405	>420				
	Fuel %	-					
	Antifreeze %	-					
	Water %	0.0	<0.1				
	Insolubles %	0.1	<0.4				
	TBN						
	TAN						
	ISO Code						

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

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