



OIL REPORT

LAB NUMBER:
 REPORT DATE: 2/28/2014
 CODE: 44/75

UNIT ID: 06 VIBE
 CLIENT ID:
 PAYMENT:

UNIT	EQUIP. MAKE/MODEL: Toyota 1.8L 4-cyl (1ZZ-FE)	OIL TYPE & GRADE: AC Delco 5W/30
	FUEL TYPE: Gasoline (Unleaded)	OIL USE INTERVAL: 5,200 Miles
	ADDITIONAL INFO:	

CLIENT	PHONE:
	FAX:
	ALT PHONE:
	EMAIL:

COMMENTS As you probably know, there a lot of things that can affect MPG. We don't see anything obvious in the wear metals that would explain your drop. Iron is a little high compared to universal averages. That's showing some excess wear at steel parts, but it's nothing to call a problem at this point. If the engine sees hard use like city driving or idling, that might explain it. Universal averages show typical wear levels for this type of engine after about 5,800 miles on the oil. The viscosity is in the 5W/20 range, but that's fine. Try 6,000 miles on the next oil and check back.

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	5,200	UNIT / LOCATION AVERAGES					UNIVERSAL AVERAGES
	MI/HR on Unit	162,893						
	Sample Date	02/15/14						
	Make Up Oil Added	0.5 qts						
ALUMINUM	3	3					3	
CHROMIUM	0	0					0	
IRON	13	13					8	
COPPER	1	1					2	
LEAD	0	0					1	
TIN	1	1					1	
MOLYBDENUM	3	3					74	
NICKEL	0	0					0	
MANGANESE	0	0					2	
SILVER	0	0					0	
TITANIUM	30	30					1	
POTASSIUM	0	0					12	
BORON	4	4					46	
SILICON	6	6					15	
SODIUM	280	280					50	
CALCIUM	1708	1708					2151	
MAGNESIUM	31	31					139	
PHOSPHORUS	630	630					716	
ZINC	791	791					839	
BARIIUM	0	0					0	

Values
Should Be*

PROPERTIES	SUS Viscosity @ 210°F	52.9	56-63				
	cSt Viscosity @ 100°C	8.16	9.1-11.3				
	Flashpoint in °F	375	>365				
	Fuel %	<0.5	<2.0				
	Antifreeze %	0.0	0.0				
	Water %	0.0	<0.1				
	Insolubles %	0.3	<0.6				
	TBN						
	TAN						
	ISO Code						

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

416 E. PETTIT AVE. FORT WAYNE, IN 46806 (260) 744-2380 www.blackstone-labs.com