



# OIL REPORT

LAB NUMBER:  
 REPORT DATE: 4/30/2018  
 CODE: 20/32

UNIT ID:  
 CLIENT ID:  
 PAYMENT:

UNIT	EQUIP. MAKE/MODEL: Toyota 1.8L 4-cyl (2ZR-FXE)	OIL TYPE & GRADE: Toyota Synthetic 0W/20
	FUEL TYPE: Gasoline (Unleaded)	OIL USE INTERVAL: 8,826 Miles
	ADDITIONAL INFO:	

CLIENT	PHONE:
	FAX:
	ALT PHONE:
	EMAIL:

**COMMENTS** If we had to guess, we'd say this engine had some work done recently. If so, that would explain the extra copper and silicon, which may be material from new parts and harmless sealers. Otherwise, you'll want to check the air filtration system in case there's an issue allowing unfiltered air into the engine, causing some extra wear. Other metals are a bit higher than before too, but only copper is high enough to mark. We didn't get enough oil to check the viscosity or the flashpoint for fuel dilution. No coolant or water was detected. Check back at the next service.

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	8.826	UNIT / LOCATION AVERAGES	6.830	8.845	10.000	10.756	10.000	UNIVERSAL AVERAGES
	MI/HR on Unit	74.650		65.824	58.994	50.000	40.885	30.128	
	Sample Date	4/21/2018		9/7/2017	2/2/2017	6/4/2016	9/17/2015	5/9/2015	
	Make Up Oil Added	0 qts		0 qts	0 qts	0 qts	0 qts	0 qts	
ALUMINIUM	5	5	4	4	5	3	4	5	
CHROMIUM	0	0	0	0	0	0	0	0	
IRON	15	9	5	9	7	5	5	10	
COPPER	13	12	1	1	1	1	1	1	
LEAD	0	0	0	0	0	0	0	0	
TIN	1	1	0	0	3	0	0	0	
MOLYBDENUM	70	139	41	37	36	40	46	94	
NICKEL	0	0	0	0	0	0	0	0	
MANGANESE	1	0	0	0	0	0	0	0	
SILVER	0	0	0	0	0	0	0	0	
TITANIUM	0	0	0	0	0	0	0	1	
POTASSIUM	0	1	0	2	2	0	6	2	
BORON	8	24	5	8	2	7	14	37	
SILICON	50	50	8	8	9	8	6	12	
SODIUM	6	10	5	6	6	9	5	25	
CALCIUM	2090	2193	2097	2021	2103	2301	2712	1843	
MAGNESIUM	83	21	18	13	9	11	15	270	
PHOSPHORUS	721	640	598	560	513	564	762	641	
ZINC	844	730	665	631	616	683	876	748	
BARIUM	1	1	0	0	0	0	0	0	

Values Should Be\*

PROPERTIES	SUS Viscosity @ 210°F	-	46-57	49.8	49.6	48.6	53.0	49.0
	cSt Viscosity @ 100°C	SHORT	6.0-9.7	7.21	7.15	6.85	8.19	6.97
	Flashpoint in °F	SHORT	>385	390	330	365	400	375
	Fuel %	-	<2.0	<0.5	2.8	1.0	<0.5	0.5
	Antifreeze %	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Water %	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Insolubles %	0.2	<0.6	0.3	0.3	TR	0.3	0.1
	TBN							
	TAN							
	ISO Code							

\* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

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