



OIL REPORT

LAB NUMBER: K87367
 REPORT DATE: 1/22/2019
 CODE: 63/32

UNIT ID: BRAD PENN
 CLIENT ID:
 PAYMENT: Prepaid

UNIT	MAKE/MODEL: Virgin 20W/50	OIL TYPE & GRADE: Brad Penn 20W/50
	FUEL TYPE:	OIL USE INTERVAL:
	ADDITIONAL INFO: Old package	

CLIENT	
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COMMENTS This is the virgin sample of Brad Penn 20W/50. As promised in the PennGrade report, both oils looked similar in testing. The elements sodium through zinc are additives, and you can see both oils utilize the same balance of one additive to another. The viscosity read in the 20W/50 range, right where it should be. The small amounts of metal won't hurt anything, nor will the trace of insolubles, which are just from light oxidation. This oil is ready for use.

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil		UNIT / LOCATION AVERAGES					UNIVERSAL AVERAGES
	MI/HR on Unit							
	Sample Date	1/11/2019						
	Make Up Oil Added							
ALUMINUM	1	1						0
CHROMIUM	0	0						0
IRON	2	2						1
COPPER	0	0						0
LEAD	0	1						0
TIN	0	0						0
MOLYBDENUM	0	0						80
NICKEL	0	0						0
MANGANESE	0	0						0
SILVER	0	0						0
TITANIUM	0	1						1
POTASSIUM		1						1
BORON	1	2						46
SILICON	5	4						11
SODIUM	384	403						98
CALCIUM	1325	1436						1574
MAGNESIUM	579	638						207
PHOSPHORUS	1248	1339						997
ZINC	1383	1519						1087
BARIUM	0	0						0

Values Should Be*

PROPERTIES	SUS Viscosity @ 210°	94.4	81-102				
	cSt Viscosity @ 100°C	19.04	15.8-21.1				
	Flashpoint in °F	415	>400				
	Fuel %	<0.5	<2.0				
	Antifreeze %	0.0	0.0				
	Water %	0.0	<0.1				
	Insolubles %	TR	<0.6				
	TBN						
	TAN						
	ISO Code						

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

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