Report of the Month

A 45-year old oil sample

To learn where the elements are coming from, click here and scroll down.

UNIT				
EQUIP. MAKE/MODEL:	Triumph Sports Car 2.0L 4-cyl (TR7)	OIL TYPE & GRADE:	Gasoline Engine Oil	
FUEL TYPE:	Gasoline (Unleaded)	OIL USE INTERVAL:	Miles	
ADDITIONAL INFO:				

ELEMENTS IN PARTS PER MILLION		UNIT / LOCATION AVERAGES	UNIVERSAL AVERAGES
MI/HR on Oil			
MI/HR on Unit	54,938		
Sample Date	3/29/2026		
Make Up Oil Added			
ALUMINUM	3	3	9
CHROMIUM	1	1	2
IRON	41	41	28
COPPER	**56**	56	9
LEAD	**1087**	1087	3
TIN	0	0	0
MOLYBDENUM	1	1	66
NICKEL	0	0	0
MANGANESE	3	3	1
SILVER	0	0	0
TITANIUM	0	0	0
POTASSIUM	1	1	3
BORON	37	37	114
SILICON	7	7	12
SODIUM	16	16	12
CALCIUM	898	898	1397
MAGNESIUM	442	442	679
PHOSPHORUS	869	869	1099
ZINC	886	886	1259
BARIUM	12	12	0

PROPERTIES		
SUS Viscosity @ 210°F	62.4	
cSt Viscosity @ 100°C	10.90	
Flashpoint in °F	**375**	>385
Fuel %	0.5	<2.0
Antifreeze %	0.0	0.0
Water %	0.0	0.0
Insolubles %	0.3	<0.6
TBN		
TAN		
ISO Code		

This sample was from a classic Triumph sports car, a 1976 TR7 (pictured above). The client stated “This car has been sitting for 45 years [What a shame!] with this oil, curious what it looks like.”

We often get asked if oil goes bad just by sitting. In modern engines, inactvity isn’t really an issue, but 45 years is a long time. We thought this oil looked pretty good all things considered, though. Insolubles at 0.3% indicate the oil didn’t get too oxidized. The original oil grade was unknown, but this sample had a viscosity in the 30W range. Up in the spectral results, you’ll see the addtives (mainly boron and calcium through zinc here) are the same as the ones you’ll find in modern engine oils, too.

The client hasn’t had the time to run the engine yet, but they did let us know “everything has been looking better than expected” so far. Copper and lead were high, but hopefully most of the lead was just from past use of leaded fuel.