



TRANSMISSION REPORT

LAB NUMBER: D95618
REPORT DATE: 7/25/2018
CODE: 22/16

UNIT ID: 15 F250
CLIENT ID: 28751
PAYMENT: CC: Visa

You'll need your client ID if you want to log on to www.blackstone-labs.net and view your reports.

This is a good place to identify things like bypass filtration, mods, etc.

| | | |
|------|---|---|
| UNIT | EQUIP. MAKE/MODEL: Transmission Ford R100 | OIL TYPE & GRADE: Auto Transmission Fluid |
| | FUEL TYPE: | OIL USE INTERVAL: |
| | ADDITIONAL INFO: This truck is the love of my life. I will never sell it. | |

| | | |
|--------|----------------------|----------------------------|
| CLIENT | OSCAR HUFF | PHONE: (828) 123-5897 |
| | OSCAR'S WORKSHOP | FAX: (828) 123-1547 |
| | 132 PERIWINKLE RD | ALT PHONE: (828) 123-1564 |
| | STE. 102 | EMAIL: oscar@bellsouth.com |
| | SWANNANOVA, NC 18752 | |

COMMENTS

OSCAR: Things have definitely taken a turn for the worse. Iron and chrome are cautionary, showing a drastic increase in steel wear. the thumping noise is another sign that something is wrong. A brc vg the issue. Change this oil and consider further inspection. Keep the oil changes very short until you can determine what the problem is.

Sample report

The amount of oil you added between oil changes.

| ELEMENTS IN PARTS PER MILLION | MI/HR on Oil | 607 | UNIT / LOCATION AVERAGES | | | | UNIVERSAL AVERAGES |
|-------------------------------|---------------|----------|--------------------------|--|--|-----|--------------------|
| | MI/HR on Unit | 47,356 | | | | | |
| | Sample Date | 12/02/18 | | | | | |
| | Make Up Oil | 0 qts | | | | | |
| ALUMINUM | 4 | 4 | 4 | | | 3 | |
| CHROMIUM | 7 | 4 | 1 | | | 1 | |
| IRON | 530 | 287 | 44 | | | 23 | |
| COPPER | 2 | 4 | 3 | | | 3 | |
| LEAD | 2 | 3 | 3 | | | 3 | |
| TIN | 0 | 1 | 0 | | | 1 | |
| MOLYBDENUM | 4 | 4 | 5 | | | 209 | |
| NICKEL | 1 | 1 | 1 | | | 0 | |
| MANGANESE | 0 | 0 | 0 | | | 0 | |
| SILVER | 0 | 0 | 0 | | | 0 | |
| TITANIUM | 0 | 0 | 0 | | | 0 | |
| POTASSIUM | 3 | 3 | 2 | | | 4 | |
| BORON | 0 | 2 | | | | 1 | |
| SILICON | 9 | 14 | 1 | | | 11 | |
| SODIUM | 4 | 3 | 3 | | | 3 | |
| CALCIUM | 18 | 37 | 70 | | | 10 | |
| MAGNESIUM | 10 | 11 | 11 | | | 5 | |
| PHOSPHORUS | 364 | 325 | 289 | | | 316 | |
| ZINC | 12 | 15 | 18 | | | 12 | |
| BARIUM | 0 | 0 | 0 | | | 2 | |

This is the average wear for this particular type of engine for you or your business.

This column shows average wear for all the samples we've seen from this type of tranny.

The additives in this column are a mix of all different types of oil, so you can't compare them to your sample.

Values Should Be*

From left to right, these are your past samples.

The tests in the Properties box look at the physical condition of the oil.

| | | | | | | |
|------------|-----------------------|-------|-----------|-------|--|--|
| PROPERTIES | SUS Viscosity @ 210°F | 45.5 | 69-80 | 45.9 | | |
| | cSt Viscosity @ 100°C | 11.74 | 12.7-15.5 | 11.85 | | |
| | Flashpoint in °F | 405 | >410 | 390 | | |
| | Fuel % | 0.5 | <2.0 | - | | |
| | Antifreeze % | 0.0 | 0.0 | - | | |
| | Water % | 0.0 | 0.0 | 0.0 | | |
| | Insolubles % | 0.3 | <0.6 | 0.3 | | |
| | TBN | | | | | |
| | TAN | | | | | |
| | ISO Code | | | | | |

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

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Averages: Both the universal and unit averages are running averages and change with the number of samples we analyze.

Elements: Elements are quantified in the oil at parts per million levels (PPM). This list shows the most common sources of the elements in manual or automatic transmission oil. Following each element is a description of where it comes from. They are grouped by category.

Wear Metals

Aluminum: Housing, oil pump, bearings, gear and vane pumps

Chromium: Ball and roller bearings, alloy of steel parts like gears

Iron: Gears, bearings, shafts, some cases, clutch plates

Copper: Bronze bushings, oil cooler oxides, clutch plates, brass fittings

Lead: Residual gear marking compound, alloy of bronze

Tin: Some bearing cages, alloy of bronze

Nickel: Clutch bands, gear/shaft steel alloy

Silver: Some soft friction bearings, Allison needle bearings

Manganese: Alloy of steel

Titanium: Trace wear metal

Contaminants

Potassium: Antifreeze

Sodium: Antifreeze, additive in some engine oils

Silicon: Airborne dirt, sealers, gaskets, sand-casted parts, and spray lubricants, antifreeze

Oil Additives

Boron

Calcium

Magnesium

Phosphorus

Zinc

Barium

Physical properties

Viscosity/Flashpoint: If a contaminant is present in the oil, the Viscosity and Flashpoint will often be lower than stated in the "Values Should Be" line. A viscosity reading high or low may show oil oxidation.

Antifreeze %: Indicates the amount of antifreeze found in the oil. A question mark means we found possible traces of coolant, but not enough to definitively say it's there.

Water %: Indicates the amount of water found in the oil.

Insolubles %: Insolubles are solid materials present in the oil. They are typically free carbon from the oxidation of the oil itself, and accumulated metal in the system.