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Extended Life Coolant Test Kit Specifications & Instructions

ACU-ELC4048

Please read all instructions and safety information prior to using product.

Introduction

The Acustrip ELC4048 series of test strips combines two of our most popular extended life coolant tests in a single kit. Experts recommend testing extended life coolant at every oil change interval to measure its purity and detect possible contamination. The kit contains two R071-ELC (Ford Rotunda Part Number 328-071ELC) tests and two CTS-3 (Ford Rotunda part number 328-2050) strips. The kit comes complete with sample container, syringe and tubing, vial, pipette and instructions. Testing your extended life coolant can help detect depletion of additives and help prevent small problems from becoming big ones.



Availability

The Acustrip ELC4048 series is available as individual kits or in master cases of 24.

General Procedures

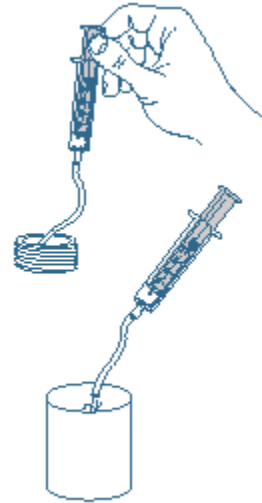
Test antifreeze coolant before maintenance is performed. The test strips should be used by the date on the packaging. For best results:

- Start with clean, dry hands and utensils.
- Run test in a well-lit area with natural light if possible.
- Antifreeze coolant sample should be between 40° and 110° F.
- Follow the test procedure enclosed with the strips.
- Dip the reactive (pad) end of the test strip into the antifreeze coolant.
- Test again if drain 1/2 or drain all maintenance is performed.
- If the result falls between colors, select the block in between.
- Read the color of the test strip after one but not more than after three minutes. (The pad's color will change as the pad dries).

- Below 50° F read the color after 2 but before 5 minutes.
- Use the test strips by the expiration date on the bottle.
- Discoloration is caused by exposure for long periods above 100°F, direct sunlight, or leaving the bottle caps open for an extended period of time.
- On occasion the dye in your antifreeze coolant may interfere with an exact match on the color chart. If this occurs, select the best match by color shade or depth. With practice, you will gain confidence and proficiency with the test strips.

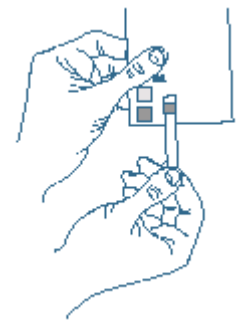
Step One: Collect Sample

- Attach tubing to the syringe
- Insert the end of the tube into the coolant reservoir and remove a syringe full of coolant sample. **CAUTION:** Do not remove radiator cap on a hot engine. Wait until the temperature is below 120° F (50° C) before removing radiator cap. Failure to wait may result in personal injury from spray of hot coolant and steam. Remove the cap slowly to relieve all pressure.
- Dispense the coolant in the syringe into the sample container and remove the tubing from the syringe.
- Be sure to observe safety procedures.



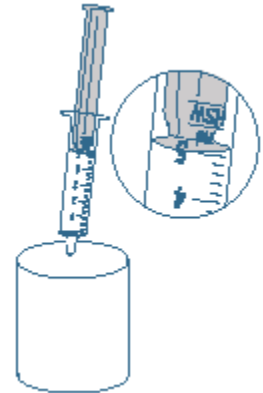
Step Two: Determine RA

- Dip an RA test strip into the coolant sample for 2 seconds and remove. Shake once briskly to remove excess sample from strip and wait 30 seconds.
- Match the color to the closest RA color spot.
- If RA level is LOW (orange-red or brownish-orange), use the orange capped vial in step 3 below. If the RA is HIGH (greenish to green) use the clear-capped vial in step 3 below.



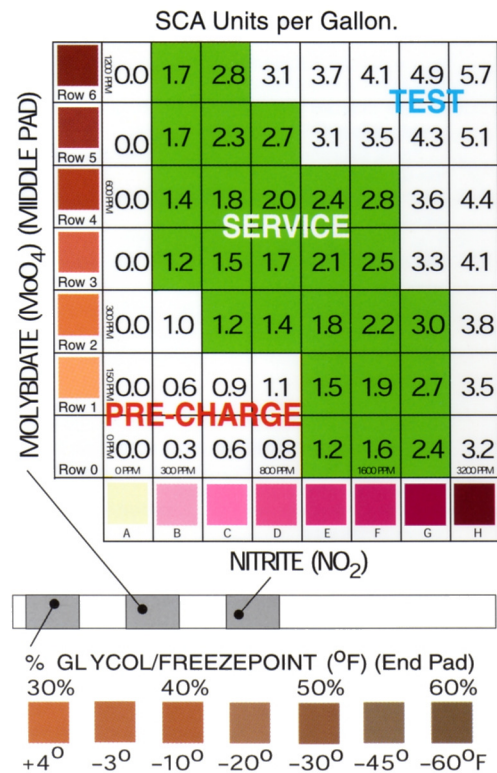
Step Three: Determine Contamination (Protection Level)

- Fill syringe EXACTLY to the 5mL line with coolant and transfer the sample to the appropriate vial determined in Step 2.
- Recap the vial and shake for a FULL 15 seconds
- Uncap the vial and dip contamination strip for 2 seconds. Remove and shake once briskly to remove excess coolant sample. After 60 seconds, match the color on the test strip to the contamination color spot closest to the strip pad color.
- Report results: Pass - your system does not show excessive contamination. No action is required. Fail - an unsafe level of contamination is indicated and coolant should be changed out or serviced per manufacturer's recommendation.



Step Four: CTS3 3-Way HD Antifreeze Test

- Collect coolant sample from the radiator or petcock. DO NOT collect from the coolant recovery or overflow system. Coolant must be between 50° F and 130° F when tested. Room temperature is preferred.
- Remove one strip from one packet. DO NOT touch the pads on the end of the strip. DISCARD STRIP IF NITRITE TEST PAD HAS TURNED BROWN.
- Dip strip in coolant sample for one second, remove, and shake strip briskly to remove excess liquid.
- 45 SECONDS after dipping strip compare and record results in the following order: (1) Compare FREEZEPOINT (end pad) to the color chart (see the color card or chart to the right) and record the result. For OAT coolants, a purple hue develops with the brown color development. This is an expected result. (2) Next compare MOLYBDATE (middle pad) to the color chart and record result (be sure to use the bottom row on the chart if the result is white). (3) Finally compare NITRITE test to the color chart and record result. NOTE: The color chart to the right is a reference - your computer monitor or printer might not print colors accurately.



- All three readings must be completed NO LATER THAN 75 SECONDS after dipping strip.
- It is okay to estimate a value BETWEEN color blocks, but if uncertain about the color match, pick the LOWER numbered block (for example, if nitrite color is not F, use column E).
- Determine where the MOLYBDATE level intersects the NITRITE level on the chart. The amount of SCA units per gallon in the cooling system is given where the MOLYBDATE row intersects the NITRITE column.
- For best results follow test times carefully. Use a stopwatch or clock with a sweep second hand. Comparing the test strips to the color chart too soon or too late may result in incorrect readings and improper treatment and could result in liner pitting and engine damage.

Please Note: Unlike the color chart on this page, the chart printed on the card or bottle accompanying your test strips may contain a blank (white) space between some of the color samples. The blank (white) space is meant to depict an intermediate blend of the two (upper and lower) corresponding color samples.

What To Do With Coolant Test Results:

For Vehicles Using Motorcraft Premium Gold Engine Coolant (pale yellow-colored) VC-7-B WSS-M97B51-A1

- If the NITRITE level exceeds 800 Parts Per Million (PPM), no action is required, anti-corrosion strength meets specifications.
- If the NITRITE level is between 300 PPM and 800 PPM, anti-corrosion strength is low. Add Motorcraft Coolant Additive VC-8, Ford Specification ESN-M99B169-A, as directed in Workshop Manual Procedure 303-03.
- If NITRITE level is less than 300 PPM, anti-corrosion strength is very low and cannot be restored - refer to step d.
- Flush cooling system following Workshop Manual Procedure 303-03 and refill with 50/50 mix of Motorcraft Premium Gold Engine Coolant and distilled water. A 50/50 mix of Motorcraft Premium Gold Engine Coolant and distilled water provides the proper cooling system protection for operating temperatures to -34 °F.
- If FREEZEPOINT is lower than 50%, adjust with full strength coolant and retest.

CAUTION: Do NOT add VC-8 when refilling the cooling system after a cooling system flush with VC-9. This may lead to possible engine damage due to very high Nitrite level concentration.

**For Vehicles Using Motorcraft Specialty
Orange Engine Coolant (orange-colored)
VC-3-B (US) CVC-3-B (Canada) WSS-M97B44-D**

- a) If there is NO indication (lower than 300 PPM) of NITRITES, proceed to step c.
- b) If test strip indicates > 300 PPM presence of NITRITES, refer to step e.
- c) If FREEZE POINT is lower than 40% or higher than 60%, correct the coolant strength concentration and retest.
- d) **FOR DIESEL ENGINES ONLY** - If FREEZE POINT is between 40%-60%, proceed with testing system reserve alkalinity level and anti-corrosion strength with ROTUNDA test kit 328-071ELC. **(Do not perform this test for gasoline engines.)**
- e) Flush cooling system following Workshop Manual Procedure 303-03 and refill with 50/50 mix of Motorcraft Specialty Orange Engine Coolant and distilled water. A 50/50 mix of Motorcraft Specialty Orange Coolant and distilled water provides the proper cooling system protection for operating temperatures to -34 °F.

CAUTION: Do NOT add VC-8 to cooling systems utilizing Motorcraft Specialty Orange Engine Coolant. This will cause system contamination and may lead to possible engine damage due to high Nitrite level concentrations.



SAFETY WARNING: REMOVAL OF RADIATOR CAP IS DANGEROUS

Radiators are under pressure. Hot coolant under pressure can cause severe burns. Do not remove the radiator cap on a hot engine. Wait until the temperature is below 50° Celsius (120° Fahrenheit) before removing the cap. Failure to wait may result in personal injury from hot coolant spray or steam. Remove cap slowly to relieve all pressure.