



Fleetfacts

Fleetguard[®] PG Platinum[™]

Testing Procedures

Modern diesel engines require a fully formulated coolant like PG Platinum by Fleetguard. Much like engine oils, coolant has an additive package to improve fluid performance. Newer formulations of coolants require different testing methods than older, less environmentally-friendly formulations. PG Platinum requires a new test kit to be used with it to ensure it's in peak condition to offer engines maximum protection.

The new test kit for PG Platinum is part number CC36089. This four-way kit comprises two bottles of test strips, containing 50 strips each, plus a bottle of reagent used in the testing process.

The four-way test kit measures the following:

- Molybdate as a measure of dilution with water or light duty coolants
- Nitrite to indicate if PG Platinum has been mixed with other heavy duty coolants
- Glycol percentage to determine freeze point
- pH to determine the level of contamination and degradation.

Always remember these pre-test instructions to ensure accurate testing every time:

- Check the expiration date printed on the test kit cap or pouch (discard the kit if it's past its expiration date)
- Collect the coolant sample from the radiator or petcock (using correct safety procedure to avoid injury)
- **Do not** collect the coolant sample from the coolant recovery or overflow system
- Remove one strip from the bottle and replace cap immediately

- **Do not** touch the pads on the end of the strip
- Discard the kit if nitrite test pads of unused strips have turned tan to brown
- Coolant must be tested at a temperature between 100 and 550C
- The test must be completed within 75 seconds of dipping the strip
- Use a stopwatch or clock with a sweep second hand during the test procedure to accurately measure elapsed time.



How to effectively test PG Platinum coolant:

1. Molybdate, nitrite and freezepoint strip (Fig. 1)

- Dip the strip in the coolant sample for three seconds, remove and shake briskly to remove excess fluid
- Immediately use the dropper bottle to add one drop of dilute acid reagent to the (end) molybdate pad (Fig. 2).

Caution: do not shake the strip after the reagent addition.

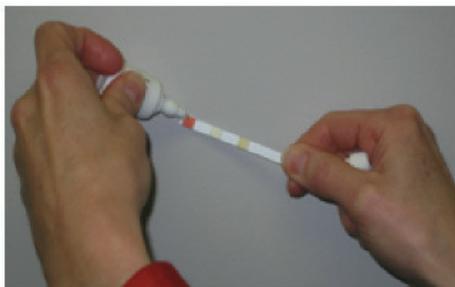


Fig. 2

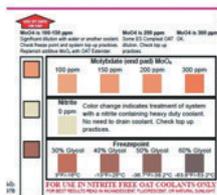


Fig. 1

- **45 seconds after dipping the strip,** compare and record results in the following order:
 - a) Compare molybdate (end pad) to colour chart and record results
 - b) Compare nitrite pad (2nd pad) to colour chart and record results
 - c) Compare freeze point pad to colour chart and record results

All readings must be completed no later than 75 seconds after dipping the strip.

It is OK to estimate a value between colour blocks, but if uncertain about the colour match, pick the lower numbered block.

2. pH strip (Fig. 3)

- Dip the strip in the coolant sample for **three seconds**, remove and shake briskly to remove excess fluid
- **45 seconds after dipping the strip,** compare and record results.

Again, all readings must be completed no later than 75 seconds after dipping strip.

It is OK to estimate a value between colour blocks, but if uncertain about the colour match, pick the lower numbered block.

Comparing the test strips to the colour chart too soon before, or too late after, the required test time will result in incorrect readings.

What do the results mean?

- Low molybdate indicates dilution of the coolant with water or light duty automotive antifreeze

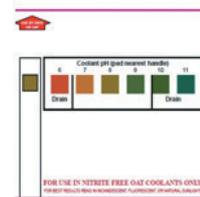


Fig. 3

- Nitrite indicates the addition of conventional heavy duty coolant or unnecessary SCA's to the coolant
- Either condition indicates inconsistent top up practices.

Solutions:

1. Change system coolant with a complete fill of PG Platinum and control top up practices by only using PG Platinum premixed coolant.

OR

2. Continue current practices and treat as a conventional coolant using CC2602 three-way test kit and DCA4 supplemental coolant additive.

Failing the pH test

- If the pH of the coolant measures in the fail region it means the coolant has been contaminated or degraded.

Solution:

- Discard the coolant. Identify the source of contamination or degradation and rectify the problem before refilling with new PG Platinum coolant premix.

Important points to note:

- The CC36089 test kit is a Go/No Go Test designed for nitrite-free coolants. Older formula coolant test kits measure the amount of nitrite in parts per million (ppm) or units per litre using a chart. PG Platinum coolant test kits do not determine ppm or units per gallon and do not have a service chart included with the kit.

- Coolants should be tested a minimum of twice a year.
- Keep the test kit out of direct sunlight. Heat and humidity will quickly damage the test strips
- Keep the lid tightly closed. The lid should be removed only long enough to remove the strip.
- Do not use a test kit after its expiration date or if any of the Nitrite pad is discoloured.
- Testing glycol concentration in coolant can be done more accurately with an instrument known as a refractometer.
- Refractometers are used to measure the freeze point of a fluid and thus provide an indication of the glycol percentage in the coolant.
- Having the correct amount of glycol is critical to maintaining a higher boil point for the coolant and avoiding engine damage.
- PG Platinum requires a specially calibrated refractometer that needs to be calibrated with new, clean PG Platinum prior to checking the test sample.
- Each refractometer comes with a set of clear instructions and a set of calibration tools. The part number for the PG Platinum refractometer is CC36090.



Refractometer, CC36090

■ PG Platinum should be serviced with PG Platinum Extender, part number CC36091. This additive booster should be added to the coolant system at a rate of one litre of extender for every 60 litres of PG Platinum coolant. This service only needs to be carried out every 6000 hours or 500,000kms.

- PG Platinum should not be used with coolant filters containing any additive.
- Only non-chemical filters should be used when servicing coolant systems that contain PG Platinum.

Question time

- 1) What is the part number for the PG Platinum 4-way test kit?
 - a) CC36090
 - b) CC36089
 - c) CC36091

- 2) How long do you dip the strips in the coolant sample for?
 - a) One minute
 - b) 30 seconds
 - c) 3 seconds

- 3) How long do you have to complete all readings after dipping the strips in the coolant sample?
 - a) 75 minutes
 - b) 75 hours
 - c) 75 seconds



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