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REF: Oiling & Lubrication - Sub-03A

Etching a Chrome Oil Dipstick for Better Visibility

This is a solution to the measurement-invisibility problem on a chrome oil dipstick. ¹⁾
It will etch the shine off the dipstick.

You can etch the stick using hydrochloric acid and then neutralize it by quenching it in a bicarb soda solution.

It may seem like a lot of steps, but much of it is for safety and other little details that are very important. You don't want to end up losing eyes or injuring yourself (we're dealing with acid here, after all). But you also don't want to end up contaminating the oil in your bike.

Parts List:

- Hydrochloric acid (can be bought from hardware store - (app. 30%)
- Disposable gloves (nitrile preferred), eye protection (full safety glasses or face shield preferred).
- Bicarb soda (baking soda).
- A glass tall enough to contain at least the dipstick.
- A piece of stiff paper (larger than the glass).
(a bit of stiff plastic with a hole drilled in may work better)
- A small torch (optional - helps with process inspection).

Prep:

1. Make a reasonably large quantity of bicarb soda solution (app. 5 tbsp. into 1qt/1L of water).
Make sure this is in a container large enough to at least stick your hand in without getting stuck.
(and that you can soak your whole hand in the liquid, should you end up spilling acid on your skin)
2. Ensure the area is free of contaminants, such as metal shavings, dirt and grease.
3. Ensure the area is free of pets and children, as they may react explosively, causing injury.

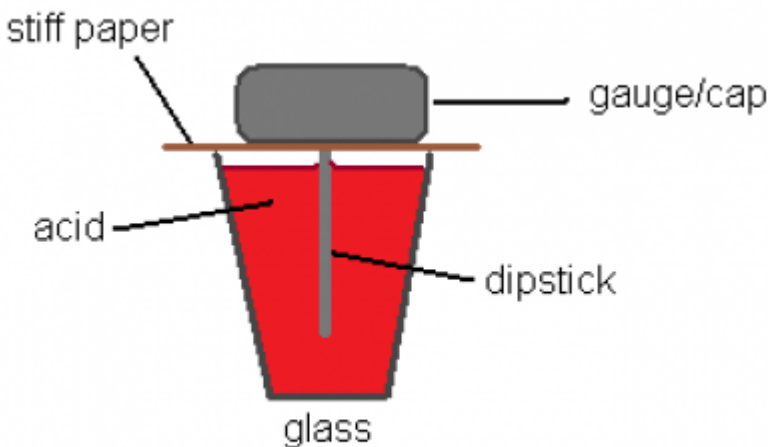
Procedure:

1. Cover the cap in glad wrap leaving just the dipstick exposed.
Note: As careful as you may be, covering the rest of the cap / gauge.
 - HCl vapours rise from the acid, mix with moisture in the air and turn the chrome green.
 - This may still happen even if you cover it, but it should be mild enough that you can polish it near the end.
2. Poke the dipstick through the stiff paper and clean the area around the dipstick.
3. Place the stick in a glass of hydrochloric acid for 1-5 minutes

(be sure you have plenty of ventilation!).

Keep watch during the entire duration of this step.

If you see a dark strip that runs along the length of the dipstick, remove from the acid immediately and proceed to the next step.



4. Inspect the result.

If satisfied with the etch, remove the stiff paper and glad wrap covering. Then wipe the cap using a paper towel soaked in bicarb soda solution.

Wipe the stick after wiping the cap.

5. Carefully run a sharp pin around both upper and lower marks to enhance their visibility.

6. Quench the dip stick in bicarb soda solution for about 5 minutes.

7. Wipe the whole assembly with a paper towel that is wetted with just water.

Clean and dry the whole cap/dipstick unit.

Clean-up:

1. Place paper in bicarb solution, let it soak for 5 minutes.

2. Empty the glass, rinse with some bicarb soda solution.

Pour some solution inside it and leave for 5 minutes.

3. Wash as per your usual glass washing routine.

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1)

article by Sportycus of the XLFORUM

<https://www.xlforum.net/forum/sportster-motorcycle-buell-motorcycle-forum-general-discussion/product-reviews/36517-oil-dipstick-with-temperature-gauge-63023-05/page4?t=70800&page=4>

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