

Technical Instructions

UNITOR TOTAL ACID NUMBER (TAN) KIT

Product number: 673160



Note: If printed, please print in colour

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Directions for Use

1. Add approximately 20 ml of TS-01 reagent into the test bottle. (Red in colour)
2. Add the total acid number titrant TD-01 drop by drop until TS01 reagent changes from **RED** to **GREEN**.
3. Shake the oil sample thoroughly.
4. Using a 1 ml syringe, add the recommended amount of oil sample into the test bottle, based on the expected TAN value (see table reference below). If the TAN value is completely unknown, use 1 ml.

Most gear oils, turbine oils, and hydraulic oils used in industry are in the range of 0–1.5 TAN.

Expected TAN	Sample amount	Factor
0 – 1.5	2 ml	0.05
0 – 3	1 ml	0.1
0 – 6	0.5 ml	0.2

Note:

- If the oil sample contains measurable acidity, the solution will change from green to red after the oil sample is added.
 - If the solution remains green, the TAN is < 0.05 mg KOH/g.
5. Hold the TD-01 titrant bottle vertically and add it drop by drop into the test bottle until the colour changes from red back to green. Record the number of titrant drops added.
 6. Result: Number of TD-01 titrant drops (TAN Drops) × Factor = TAN Value (mg KOH/g)
Example:

Drops used	Factor	TAN value
22	0.1	2.2 mg KOH/g

With a 1 ml oil sample and 22 drops needed for the colour change from red to green:

$$22 \times 0.1 = 2.2 \text{ mg KOH/g}$$

Colour Reference for TS-01 reagent:



Warning: Reagent TD-01 should be consumed within 3 months after opening to ensure optimal performance and accuracy.