

## ENGINE-ALTERNATOR AND TURBINE ENGINE SETS CRANKCASE AND GEAR BOX OIL ANALYSIS

### 1. GENERAL

1.01 This practice describes how to have Faber Laboratories analyze the crankcase oil and gear box in permanently installed and/or trailer-mounted engine-alternator and turbine engine units.

1.02 It is reissued to:

- Change the title of the section
- Change the interval for oil and filter changes
- Include turbine engine sets

1.03 The crankcase oil analysis will change the frequency of lubricating oil changes and the servicing of lubricating oil filters specified in other sections. The recommendations made on the lubricating oil test report will determine the maintenance work, to include lubricating oil changes and the servicing of lubricating oil filters, on a particular

engine. All other scheduled tests and routine work on the engine shall be continued.

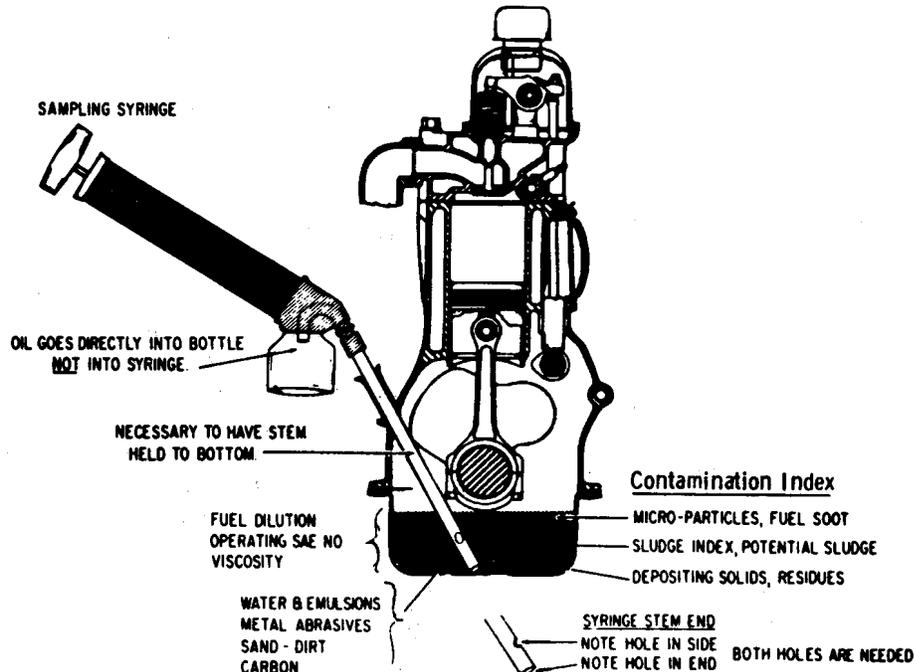
1.04 During the period of time that an engine is in warranty, the manufacturer's instructions shall determine the frequency of oil change, should they vary from those listed herein.

### 2. OIL SAMPLING AND REPORTS

#### Ordering the Supplies

2.01 To order the supplies necessary for oil sampling, the supervisor responsible for engine maintenance will ask the maintenance supervisor (or equivalent) to order the following supplies from Faber Laboratories:

- (a) Sampling Syringe: A syringe equipped with a pliable plastic stem for obtaining a composite crankcase oil sample (see Fig. 1).



Crankcase Oil Contamination Index and  
Component Parts of Sampling Syringe

Fig. 1

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SECTION 155-199-903PT

(b) **Sampling Bottles:** Two 2-ounce plastic bottles with screw caps that fit the sampling syringe.

(c) **Mailing Container:** A container and a gummed label addressed to Faber Laboratories.

2.02 Faber Laboratories will:

(a) Ship the supplies directly to the supervisor responsible for engine maintenance

(b) Maintain the sampling syringe

(c) Furnish all subsequent sample bottles and mailing containers on a no-charge basis

2.03 The maintenance supervisor's office will handle all contacts with the laboratories.

2.04 When to Take the Oil Sample:

(a) Once in the spring (March or April)

(b) Again in the fall (September or October)

(c) Upon request of the maintenance supervisor's office

(d) Within 30 minutes after an extended (4 hours or more) routine engine run (the engine should not be running)

*Note:* If possible, take one of the samples after the 7-hour annual routine engine run.

2.05 Taking the Oil Sample: Follow instructions carefully when taking oil samples.

(a) Push syringe stem to bottom of crankcase or gear box through dipstick hole (Fig. 2).

(b) Pull syringe handle out, holding stem to crankcase or gear box bottom until bottle is 3/4 full (Fig. 2).

(c) Raise stem one foot before pumping handle several times to discharge excess (Fig. 2).

*Note:* Do not pour from one sample bottle to another.

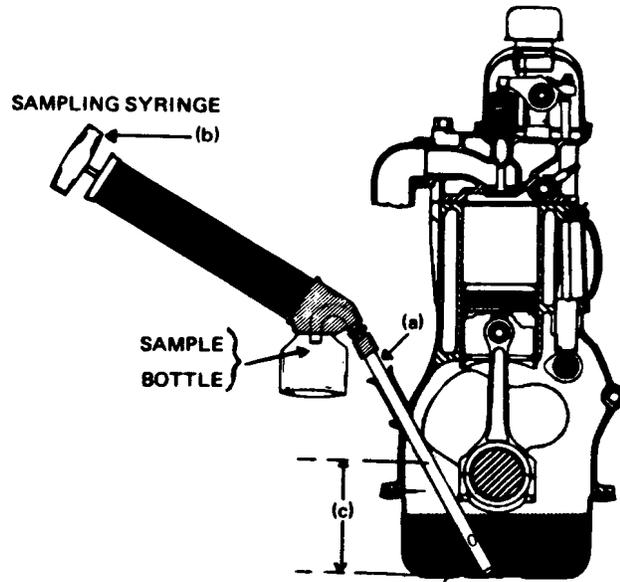


Fig. 2

2.06 Care of Syringe and Oil Sample Bottle: Keep a spare bottle on the syringe to keep foreign matter off the internal parts.

(a) Keep stem of syringe clean.

(b) Store the unit in a clean dry place.

*Note:* Do not alter stem design or holes.

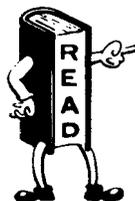
2.07 Marking the Sample: When the sample is ready to send to Faber Laboratories, record the following information on Form P 530:

(a) Date sample was taken

(b) Central office identification code (as assigned by the maintenance supervisor's office, so each sector can identify its engine locations in the most convenient manner)

*Note:* It is important to use the method of identification designated by your sector. Any deviations will affect billing.

(c) Address of engine location (if the office is unattended, give the office address of the supervisor responsible for maintaining the engine)



- (d) Total hours engine has been operated — computed from the engine log if elapsed time meter is not provided
  - (e) Engine set number (for example: Set No. 1, No. 2, or No. 3)
  - (f) SAE number (weight of oil used)
  - (g) Hours on engine since last oil change
  - (h) Type of engine fuel used (gasoline, natural gas, or diesel)
  - (i) Name of sector
  - (j) Name and address of division
- Note: For billing purposes, identify division, and engine location neatly and accurately.*
- 2.08 Mailing the Sample:** When mailing the sample:
- (a) Attach Form P 530 to bottle
  - (b) **Screw bottle cap on tightly;** retighten cap after sample has cooled

- (c) Place sample bottle in mailing container and mail to Faber Laboratories

**2.09 Routing the Report:** Faber Laboratories will mail the oil analysis report to the maintenance supervisor (or equivalent) for review.

**2.10** The maintenance supervisor will forward the report to the supervisor responsible for engine maintenance who will complete any work recommended on the report.

**3. BILLING**

**3.01** Twice each year, Faber Laboratories will bill each division for:

- Oil sample analyses sent to that division
- Syringes sent to that division

**3.02** To ensure proper billing, the bill will also list each central office identification code and the number of samples analyzed per office.