

how to take good samples

Because FAST analysis requires relatively small sample volumes, it is crucial to ensure that the samples accurately represent the specific system or piece of equipment. The following steps provide guidance.

- Take samples from locations that best represent the system's overall condition, preferably from a point where the oil flows steadily during operation.
- Always take the samples from the same locations to ensure comparability over time.
- Whenever possible, take the sample while the machinery is running at operating temperature.
- Ensure all sampling tools and containers are clean and free from contaminants.
- Attach Part 2 of the FAST sample label to the bottle prior filling it.
- Flush the sampling pipe and valve adequately before taking the actual sample to ensure it is representative.
- Fill the Chevron FAST sample bottle up to the shoulder.
- Close the sample bottle tightly and clean the outside before placing it in the FAST sampling bag for shipment.



sampling intervals

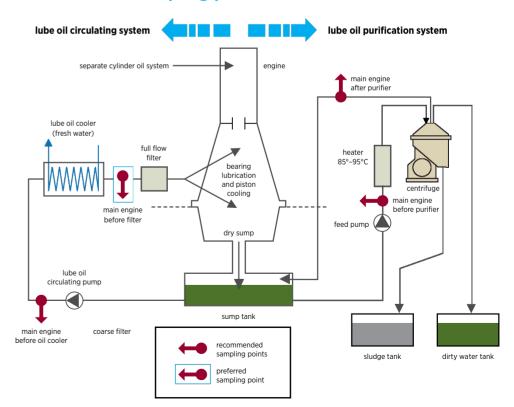
Except for special circumstances, where there is a good reason to believe that a potential problem could exist (such as accidental contamination), the number of samples submitted for analysis per piece of equipment should be kept to a minimum and should be restricted to those that are technically necessary and economically justified. General guidelines for the sampling of propulsion machinery and auxiliary equipment are given in the table below.

Slow-speed engine system	4-6 months
Medium speed engine	4-6 months
High speed engine	4-6 months
Steam turbine	6-12 months
Stern tube and thruster As required by Class	Every 6 months minimum
Large auxiliary equipment Hydraulic systems, cranes and winches.	6–12 months Unless specified differently by maker
Thermal oil systems As required by Class	Every 6 months minimum

examples of good sampling points

Main engine	Before full flow filter (preferred), before and/or after purifier, before oil cooler (discharge side of circulating pump).
Compressors	Mid-point of the crankcase or bearing return line.
Gears	Return line, before the filter.
Hydraulic systems	Return line, before the filter.
Pumps	Bearing return line.
Turbines	Bearing return line.
Storage tanks	Draw samples from both the top and near the bottom and mix together in equal portions.

recommended sampling points



sampling is as easy as...



Prepare sample and complete the information on Part 3.



Attach Part 2 to the bottle, keeping Part 1 for your records.



Send the sample bottle along with Part 3 (unless completed in FAST Onboard app*) in the sample bag provided.

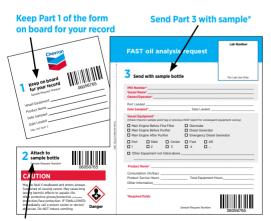
Complete a FAST oil analysis request form for each sample:

- Ensure that all required fields are completed, including IMO number, vessel name, owner/operator, sampling date, equipment and product name.
- For main engine drip oil samples a duly completed copy of the DOT.FAST Engine Datasheet must be included with each batch as well.
- ✓ If this information is incomplete, it will result in sample processing delays.
- Check the Chevron sampling point tag or previous FAST report for consistent equipment naming.

We recommend completing the FAST analysis request form and, if applicable, the DOT.FAST service engine datasheet digitally via the FAST Onboard app. This saves time and reduces the risk of errors.

- 2 Attach Part 2 of the FAST sample analysis request form to the sample bottle prior sampling.
- If the FAST sample analysis request form is completed via the FAST Onboard app, only Part 2 will be used.
- **3** Ensure the samples bottles are closed tightly and the outside is clean before placing them in a FAST sampling bag for shipment.
- Attach the appropriate laboratory address label sticker to the FAST sample bag.
- Hand the complete package, including a separate copy of the Safety Data Sheet for used lubricating oil and a copy of the template for the proforma invoice, to the vessel's agent for shipment to the laboratory.

Any samples landed at ports in mainland China can be sent to the laboratory in Shanghai. For other ports please use the laboratory in Antwerp. Standard analyses will be completed within 24–48 hours after the sample is received at the laboratory and the report will be delivered by email.



Attach Part 2 to sample bottle

attention

- ✓ **Do not copy labels.** Each sample request must have a unique number.
- Add specific test requests (such as particle count - ISO4406/ISO4407) and/or additional information (such as mixing ratio in case of product mixes) in the field "Other Information"
- Indicate "mixed product" along with the product names of the constituents for the field "Product Name", in case.
- Peel off Part 2 label only. Keep backing on Parts 1 and 3 for easy handling.
- If the samples are digitally registered via the FAST Onboard app, only Part 2 of the FAST sample request form is used.