Fluid Sampling Procedure

Purpose: To obtain a fluid sample for assessment of the contamination level in a manner that minimizes the possibility of introducing additional contamination or distortion during the collection process which could skew the fluid analysis results.

Note: Due to the relatively small volume of fluid being extracted for the test (compared to the size of the overall system fluid volume), even the smallest amount of contamination introduced into the sample from a source outside the system (such as off of a valve stem at the sample port) can inflate the contamination level observed by the analytical lab compared to the true level, thereby rendering the lab results incorrect.

Materials Needed

a. Ultra-clean sample bottle(s). (One for each sample, usually provided by the analytical lab handling the analysis)
b. Data sheet for each sample that details the fluid involved (e.g., fluid name, operating temperature, age of fluid, etc.), as well as the company identifier for equipment in which the fluid operates (form usually provided with the sample bottles from the analytical lab conducting the fluid test).
c. Suitably sized container for the purge volume of fluid generated during the sampling procedure (typically a one to five gallon bucket).
d. Appropriate cleaning rags for wiping sample bottle surfaces (e.g., oil absorbent sheets or pads).
e. Permanent black marker to label sample bottles (or printed bottle label with sample ID number that matches ID number of the data sheet, as per step 1.b).
f. Tape for locking sample bottle cap in place and to protect markings on sample bottle.

Procedure Instructions

a. Mark the sample bottle with permanent marker with sample ID number and any other appropriate information. Then, wrap the bottle with tape to protect the writing and minimize erosion of the marking by the fluid being sampled.
b. Place the purge container under the sample valve port and open the sample valve until a small, yet steady stream of fluid is established. *Once flow is established, do not shut off or adjust the valve for the duration of the sample extraction.*
c. Uncap sample bottle and fill ¼ full of fluid. Then, recap and shake vigorously for three seconds. Uncap sample bottle, drain into purge container, and then repeat this step two more times (three total bottle flushes).
d. Fill the sample bottle ¾ full and cap bottle.
e. Tighten cap on the sample bottle, then tape cap in position to minimize chance of cap unscrewing during shipment to analytical lab.
f. Repeat procedure for each fluid sample to be taken.

