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TECHNICAL NOTE

SHIPPING CONTROL FLUID SAMPLES

Routine fluid sampling and testing is an essential part of fluid condition monitoring. For this to be effective requires consistent sampling from the right location. It also is very important that the correct lab tests are being done and that the results get back in time. In addition, the test results have to get back to the right person.

In most cases Forsythe provides fluid testing as one part of customer service. This requires that the fluid samples be sent to our central lab. The lab has years of experience in testing phosphate ester fluids and can provide excellent service with some results often available within one working day.

This does require that the samples get to the lab and if there is any urgency make sure that the samples are sent by courier for next day or expedited delivery. Samples sent standard or economy can take a week and samples sent by mail can take over a week to arrive.

If the results are required as soon as possible, hand carry to your shipping point/person, mark Rush or Urgent on the shipping container, call the lab to let them know it is coming and to discuss which test results are required the fastest.

SAMPLING

Proper sampling is essential if the fluid test results are to be meaningful and if full benefit is to be realized from fluid condition monitoring. It is very important that the samples be taken using the correct procedures, using the same procedures each time and from the same location. It is easy to do correctly, but simple things such as not flushing out enough fluid or touching the sampling valve at the wrong time will affect the results. If a detailed procedure is not available, please contact Forsythe.

Use only 'clean' bottles made of LDPE, HDPE, PP or glass. Do not use PVC. If rinsing is required do not blow out or flush with water or use anything except the fluid to be sampled. Then only fill the container a little over 3/4 full. This is to allow room for proper agitation when splitting the sample and for expansion and/or rough handling. A 500 ml or pint bottle is usually sufficient for the standard tests. Include two bottles if in doubt or if the fluid is in poor condition.

Please mark on the bottle or include with the bottle the following information; station, unit, turbine supplier, sample date, sample point (ie. valve number or location) and name of sampler. If a first time sample or if there have been changes, include information on to whom the results should be sent and both their phone and fax number. E-mail

addresses can also be helpful.

PACKAGING

Tape the outside of the cap to the neck and then put the bottle in a plastic bag. Tape the end of the bag and then pack it in a suitable box or tube type shipping container.

Do not pack in granular 'kitty litter' type absorbent material because this can contribute to false high particle counts. Cardboard, bubble sheets or plastic foam chips have been used.

COURIER

All the major companies take fluid samples. Typically they ask what the sample contains because of concerns about leaks and flammability. It is usually sufficient to say that it is a fire resistant hydraulic oil.

The flash point of these fluids is higher than for mineral oils so that the same procedures can normally be used. The criteria for the US DOT is if the flash point is above 141°F (60 °C). Phosphate esters have much higher flash points and for GLCC Turbofluid 46B (was called Durad EHB) it is 455°F (235°C). Lastly, sending samples of mixed phosphate ester fluids should also not be a problem because the flash points for all the others usually used are >141°F (60°C).

In the MSDS it is given that for "non-bulk", such as samples, the DOT Classification is "Not Regulated".

Very Important: If shipping from the US make sure that an **International Waybill** is used. Do not use the domestic one because this is only for the continental USA. Please provide all the required data, including the amount of fluid, that it is a sample for testing with no commercial value, and that it is not for resale. For the value of the sample, \$1.00 is usually appropriate. This is because the shipment can be delayed or even returned if taxes or duty have to be paid. Lastly, the country of origin for Turbofluid 46B is the USA.

ADDRESS

Ship to the following;

Forsythe Lubrication Associates
120 Chatham Street
Hamilton, ON Canada L8P 2B5
Attention: L. Billings
phone: 905 525-7192

The phone number should be included both on the waybill and on the package.