



# The Skydrol sample analysis program

How-to guide for your complimentary analysis program

**EASTMAN**

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aviation solutions



## Welcome!

We are happy your company has chosen Skydrol™ aviation hydraulic fluid, the most advanced aviation hydraulic fluid supported by recognized experts in phosphate-ester fluid technology.

As a Skydrol customer, you are eligible for our Skydrol sample analysis program at no extra cost to you. This program provides you free Skydrol sample kits; each kit includes:

- A sample bottle (Nalgene, HDPE)
- Sample label
- Plastic bag (polyethylene)
- Carton box

To ensure the quality and safety of the program, we have established specific procedures and guidelines that must be followed when using this service. Following these guidelines ensures you get the best results from the program.

Because of safety concerns, the following will not be accepted and will be discarded on arrival:

- Glass bottles
- Bottles that have leaked due to being made of incompatible material or improper lid usage. One-click lids are not suitable.

**NOTE:** Incorrect sample bottles, incomplete labeling, or insufficient packaging can be a safety hazard. Our laboratory will reject samples that are not sent in accordance to requirements as explained herein.

In urgent situations, it may be acceptable to use alternative packaging and another sample bottle if a Skydrol sample kit is not immediately available. Make sure the sample bottle material is compatible with Skydrol (HDPE is strongly recommended) and the bottle is clean for safety and quality purposes.

### *Why is analysis important?*

During aircraft operations, hydraulic fluid is subjected to an environment that, in time, alters certain properties of the fluid. No two types of aircraft hydraulic systems operate under the same conditions. Heat, moisture, and overall cleanliness are factors that affect the operating life limit of hydraulic fluid. Therefore, the operating life of Skydrol fluids is determined on the basis of both physical and chemical properties rather than by a fixed number of operating hours.

We suggest that you have your hydraulic fluid analyzed periodically to ensure it meets airframe manufacturer in-service limits. Eastman's Technical Service fluid sampling program offers comprehensive analysis and evaluation of the fluid, with recommendations for corrective action when required.

To order Skydrol sample kits, contact your local Eastman customer service representative.

# Sampling procedure

The sampling steps listed here are general guidelines for obtaining a proper sample from your aircraft while ensuring the safety and quality of the results. These guidelines do not supersede the aircraft maintenance manual (AMM) or the airframe manufacturer's recommended sampling procedure.

1. Pressurize and operate the hydraulic system for 10 to 15 minutes. During this period, operate various flight controls to activate valves and thoroughly mix hydraulic fluid.
2. Before taking a sample, always be sure to wear proper personal protective equipment.
3. Wipe off the sampling port with a lint-free cloth. Do not use shop towels or paper products that could produce lint. (Due to the limitations of the human eye, it is easy to contaminate a sample without ever seeing it.)
4. Allow approximately 250 mL (1 pint) of fluid to drain. This will purge any settled particles from the sampling port.
5. Insert the precleaned sample bottle under the fluid stream and fill, leaving only a small space of air at the top. Withdraw the bottle and cap immediately.
6. Close the drain valve.
7. Fill out the sample label as directed. (See the following.)
8. Service system reservoirs to replace the fluid that was removed.

## Labeling samples

Filling out labels completely and correctly is paramount because they are the primary sources for identifying and registering your samples in our system. We encourage you to use the labels received with the sample kit and complete all fields.

Use an ink pen, not a marker or pencil.

All the listed information should be in English. The requirements for the sample label are as follows:

|                    |  |
|--------------------|--|
| AIRLINE:           | Required (e.g., ABC Airlines)                        |
| AIRCRAFT TYPE:     | Required (e.g., A320, B737)                          |
| AIRCRAFT TAIL #:   | Required (e.g., A-BCDE)                              |
| MRO:               | Optional<br>(if MRO sends sample instead of airline) |
| HYD. SYST. IDENT.: | Required (e.g., 1, center, green)                    |
| DATE SAMPLE:       | Required   |
| HOURS:             | Optional<br>(total flight hours of the aircraft)     |
| REMARKS:           | Optional   |

## Packaging sample bottles

It is imperative that each sample bottle sent to our laboratory for analysis be packed according to the following protocol:

1. Ensure that the bottle lid is tightly sealed.
2. Ensure that each sample bottle is separately labeled and each label is filled out completely.
3. Apply appropriate GHS label to the bottle. Contact your local sales representative if assistance is needed.
4. Place the sample bottle inside the plastic bag and seal the bag.
5. Put the bagged bottle into the carton box.
6. Include the completed label in the carton box—but not inside the plastic bag. (In case of accidental leakage, the label will not be destroyed.)
7. Ship the sample bottle to the designated laboratory.

**NOTE:** If your sample is considered hazardous for transport or meets the definition of dangerous goods, do not use the sample packaging provided. Select the appropriate packaging, as it is the shippers responsibility to classify, package, mark, and label hazardous materials for transport pursuant to applicable dangerous goods regulatory requirement (US DOT, ICAO/IATA, IMDG, ADR, etc.).

# Shipping

Skydrol aviation hydraulic fluid samples should be shipped to the appropriate address for your region. If you are unsure

which address to use, contact your local sales manager or technical service specialist:

| Americas   | Asia Pacific  | Europe, Middle East, Africa   |
|--|---|---|
| Eastman Chemical Company<br>QA Laboratory<br>702 Clydesdale Avenue<br>Anniston, Alabama 36201-5390<br>U.S.A. | Eastman Chemical Singapore Pte Ltd<br>Q&AS Laboratory<br>50 Sakra Ave.<br>Jurong Island<br>Singapore 627891 | Eastman Chemical Company<br>FAO: Fluids Testing<br>QA Laboratory<br>Corporation Road<br>Newport<br>NP19 4XF<br>U.K. |

## Results you can trust

These guidelines have been established to maintain the safety of the sample analysis program, allow us to correctly identify each sample, and provide the highest quality analysis. By following these steps, you help us maintain the high standards

that your company expects from Eastman Aviation Solutions. For more information or for any questions you may have about these requirements, contact your local sales manager or technical service specialist. We appreciate your use of Skydrol aviation hydraulic fluid and our complimentary Skydrol sample analysis program.

For questions about the Skydrol sample analysis program, email [team.skydrol@eastman.com](mailto:team.skydrol@eastman.com) or visit [Eastman.com/Aviation](http://Eastman.com/Aviation).

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