



X/C® 5606J and X/C® 5606A Aviation Hydraulic Fluids

Phillips 66 X/C 5606J and X/C 5606A Aviation Hydraulic Fluids are mineral oil-based, high viscosity index, ashless (zinc-free) antiwear hydraulic fluids designed to meet the severe demands of aerospace and industrial applications. They have excellent oxidation resistance and outstanding low-temperature properties for use over a wide temperature range. They provide excellent wear protection for hydraulic pumps and motors, protect hydraulic system components against rust and corrosion, and are resistant to excessive foam buildup that can cause poor or sluggish hydraulic system response.

X/C 5606J Aviation Hydraulic Fluid meets the cleanliness requirements for “super clean” hydraulic fluid for use in modern aircraft hydraulic systems. X/C 5606A Aviation Hydraulic Fluid is recommended for use in hydraulic systems that do not require a “super clean” fluid. Both fluids are dyed red for identification and leak detection purposes.

Applications

X/C Aviation Hydraulic Fluids are recommended for use in non-pressurized systems operating between -54°C and 90°C (-65°F to 194°F), and in pressurized systems operating between -54°C and 135°C (-65°F to 275°F) at pressures up to 3,000 psi.⁽¹⁾ Typical applications include:

- Aircraft and missile control systems, autopilots and shock absorbers
- Auto wreckers, boom trucks and electrical service equipment (cherry pickers) where all-weather performance is required
- Industrial robotics
- Hydraulic systems that require a “super clean” fluid for extended service life and reliability (X/C 5606J)

X/C 5606J Aviation Hydraulic Fluid meets the requirements of:

- U.S. Military Specification MIL-PRF-5606J (supercedes MIL-O-5606, AN-O-336, AN-VV-O-336 and AAF-3580)

X/C 5606A Aviation Hydraulic Fluid meets the requirements of:

- U.S. Military Specification MIL-H-5606A (obsolete)

⁽¹⁾ Note: Do not use these products in hydraulic systems with natural rubber elastomers.

Features/Benefits

- Very high viscosity index for use over a wide temperature range
- Outstanding low-temperature properties
- Excellent wear protection
- Resists deposit formation and viscosity increase due to oxidation
- Protects against rust and corrosion
- Good foam resistance
- Does not contain zinc or other heavy metals

**Zinc-Free
Antiwear
Hydraulic Fluids
for Aerospace
& Industrial
Applications**

**KEEPING THE
WORLD
RUNNING
SMOOTHLY.**





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X/C® 5606J Aviation Hydraulic Fluid

| Typical Properties | |
|--|-----------|
| ISO Grade | 15 |
| Gravity, °API | 31.0 |
| Specific Gravity @ 60°F | 0.871 |
| Density, lbs/gal @ 60°F | 7.25 |
| Color, Visual | Red |
| Flash Point (PMCC), °C (°F) | 90 (194) |
| Pour Point, °C (°F) | -64 (-83) |
| Viscosity, Kinematic | |
| cSt @ -54°C | 2,450 |
| cSt @ -40°C | 495 |
| cSt @ 40°C | 13.5 |
| cSt @ 100°C | 5.1 |
| Viscosity Index | 382 |
| Acid Number, ASTM D664, mg KOH/g | 0.05 |
| Copper Corrosion, ASTM D130, 17°C (160°F), 72 Hours | 1b |
| Dielectric Strength ASTM D877, KV <small>(At the point of manufacture)</small> | 49.6 |
| Evaporation Loss, ASTM D972, 71°C (160°F), 6 Hours, wt % | 13.6 |
| Foam Resistance, ASTM D892, 75°F | 25-0 |
| Four-Ball Wear, ASTM D4172, Scar Diameter, mm | 0.65 |
| Gravimetric Filtration, FTM 131, mg/100 ml. 0.45 microns @ 25°C, | |
| Filter Time, minutes | 6 |
| Particulate Contamination, FTM 3012, Automatic Counter, | |
| Particulate Size, microns | |
| 5-15 | 1,200 |
| 16-25 | 175 |
| 26-50 | 60 |
| 51-100 | 5 |
| 100+ | 0 |
| Water Content, ASTM D6304, ppm | 60 |



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| Density, lbs/gal @ 60°F | 7.25 |
| Color, Visual | Red |
| Flash Point (PMCC), °C (°F) | 90 (194) |
| Pour Point, °C (°F) | -64 (-83) |
| Viscosity, Kinematic | |
| cSt @ -54°C | 2,450 |
| cSt @ -40°C | 495 |
| Viscosity Index | 382 |
| Acid Number, ASTM D664, mg KOH/g | 0.05 |
| Precipitation Number, ASTM D91 | 0 |

Health Safety Information

For recommendations on safe handling and use of this product, please refer to the Material Safety Data Sheet via <http://3apps.phillips66.com/NetMSDS>.