

Hydraulic Fluid Requirements for *Team* Hydraulic Systems

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ABSTRACT

This document defines the hydraulic fluid requirements for all *Team Corporation* hydraulic systems. Any deviation from these requirements without the consent of *Team Corporation* will void the system warranty.

HYDRAULIC FLUID TYPE

Team Corporation uses and recommends [Mobil DTE-26](#) hydraulic fluid for all *Team* servo-hydraulic test systems.

Use of hydraulic fluids other than Mobil DTE-26 may adversely affect the performance and reliability of *Team* equipment. If it is necessary to use a fluid other than Mobil DTE-26 please contact *Team* for assistance.

FLUID CONDITIONING

It is estimated that at least 75% of hydraulic system failures and maintenance activities are the result of contaminated hydraulic fluid. Obviously fluid conditioning plays a critical role in maintaining the performance of all hydraulic equipment. This is especially true in the case of servo-hydraulic equipment where the precision clearances and high relative velocities between moving parts place extreme demands on the hydraulic fluid.

NOTE: *Team Corporation's* warranty coverage DOES NOT extend to damage caused by the use of hydraulic fluid other than Mobil DTE-26 unless specifically approved by *Team*, damage caused by contaminated hydraulic fluid, or damage caused by over-heated hydraulic fluid.

CLEANLINESS

Hydraulic fluid cleanliness is specified using the ISO Solid Contaminant Code. This code represents fluid

contamination levels by a three-number designator. For example, in a fluid with a 23/21/16 designation the first number represents particles 2 μ m and larger, the second number counts particles 5 μ m and larger, and the third is a measure of particles 15 μ m and larger

Team Corporation requires that hydraulic fluid used in our systems meet a minimum cleanliness level of ISO 16/14/11 and a preferred level of ISO 15/13/10 at all times.

WATER REMOVAL

Oil contamination due to the introduction of water must be prevented. This is especially critical in applications where the hydraulic equipment is exposed to high humidity, condensing environments such as a thermal chamber. The water content in the hydraulic fluid should not exceed 0.01% or 100 parts per million (ppm).

FILTRATION

Team recommends the use of 3 μ m filtration absolute on all hydraulic supply lines including the pilot pressure, main pressure, return and drain lines.. We also recommend the use of non-bypassing filter designs.

TEMPERATURE

For best performance the temperature of the hydraulic fluid supplied to *Team* equipment should be between 100 and 115 degrees F.

MAINTENANCE

Team recommends regular, diligent, preventive maintenance of the hydraulic system including filter changes and fluid analysis. In general, *Team* recommends oil analysis and filter maintenance every 500 hours of hydraulic power unit operating time or every 3 months, whichever

comes first. *Team* recommends the [Parker Par-Test™ Fluid Sampling Kit](#). The kit is available from Parker distributors or from *Team Corporation*. For additional information refer to the *Team* document [How to Take a Fluid Test Sample](#).

ADDITIONAL REFERENCES

The Parker web site, www.parker.com, contains a great deal of information on hydraulic fluids, filtration and systems. In particular, the [Parker Handbook of Hydraulic Filtration](#) is an excellent reference for information on proper maintenance of hydraulic fluids.

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