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# PRODUCT FACT SHEET

## **DSI Hydraulic Particles Test Kit** Order code DS K25

### **Key Facts about Particle Contamination**

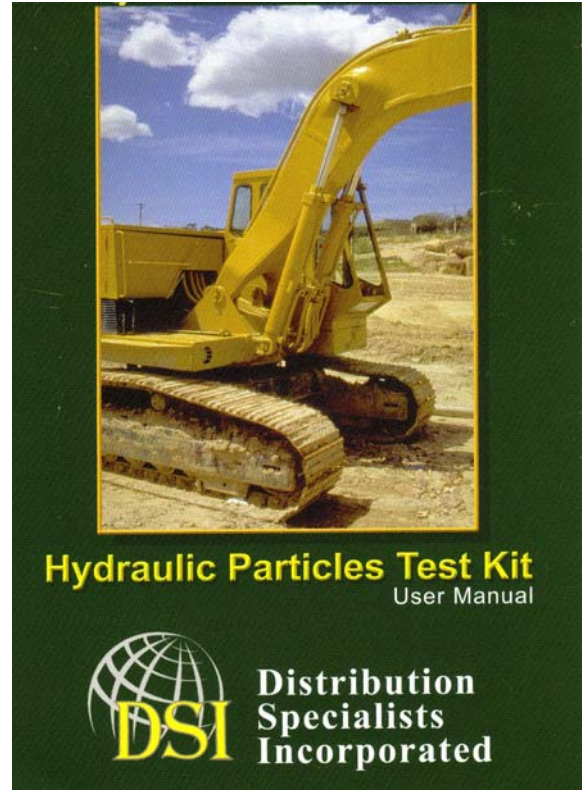
- Up to 80% of lubrication-related machinery failures are caused by hard particles in the oil.
- Particles enter the system through seals, breathers, oil additions and changes, and wear.
- Particles cause increased maintenance and downtime through abrasion, fatigue and eroding component surfaces.
- The patch test is a time-proven, cost effective and simple way to quickly identify abnormal contamination and wear.
- The patch test can also help identify the primary types and sources of the particulate contaminants.

This DSI Hydraulic Particles Test Kit provides rugged patch test apparatus that is reliable and easy to use on-site with industrial, fleet, marine and off-highway equipment.

The 13-page User Manual for this kit includes sections on:

- o Sampling methods
- o Diluting Samples
- o Using Filter Patches
- o Interpreting Results
- o Typical Fluid Cleanliness Requirements for various hydraulic system components
- o and more.

Page 2 of this sheet is an excerpt from the User Manual on Interpreting Results.



### **Kit Contents**

This kit includes:

- Heavy-duty 10ml syringe
- Check valve and weighted pick-up tube
- Filter holder and wrenches
- Tweezers
- 8.0 micron filter patches - pack of 100
- Illuminated Magnifier 30x
- Instruction Manual



## Interpreting Results

The vast majority of test filter patches will be clean with very little contamination present. If metallic particles are present, use a small magnet to determine if they are ferrous in nature. If these particles were generated internally, component wear is indicated.

Larger particles indicate that the filters are not working or may be inadequately sized for the system. Any visual level of dirt is unsatisfactory.

A dark filter generally indicates degradation of oil that has been in service too long or exposed to temperatures above its performance capability.

If the patch is clean, the oil is satisfactory for continued service. A patch that shows a lot of dirt, metallic particles and oil degradation materials indicates that the system oil and filters should be changed.

A high level of contamination indicates that the system should be drained and flushed. If the test sample indicates borderline conditions, use of a portable filter unit and re-testing in a month or other appropriate interval is indicated.

Note: Photos on this page do not accurately depict the color and detail of the photos in the User Guide

### Different Types of Contamination



#### Hydraulic Oil

##### **Slight particle contamination**

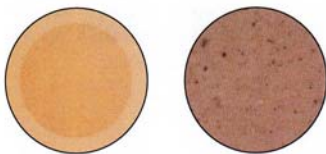
(iron flakes, fibre & light silica)



Sample ok. Additional filtration may be required in close tolerance systems.

##### **Moderate Contamination**

(silica & metallic particles)



Filter or change oil.

##### **Moderately Heavy Contamination**

(silica, dirt & metallic particles)



Fluid change required. May also require system flush.

No Magnification

30x Magnification

#### Gear Lube

##### **Slight particle contamination**

(very light silica, dirt & metallic particles)



Sample ok, if normal drain sample interval.

##### **Marginal Contamination**

(silica & metallic particles)



Filter or change the oil.

##### **Moderate to Heavy Contamination**

(silica & metallic particles)



Oil change required. May also require system flush.

No Magnification

30x Magnification