# Oil Contamination Test Kit

## Contamination Patch test kit

A Patch test is a qualitative method for testing oil for both 'hard' and "soft contaminants".
Hard contaminants mean wear particles or dust particles. Soft Contaminants means Sludge/Varnish. Sludge/Varnish is a product of oxidation of oil. Presence of sludge/varnish means the oil has been in use forlong time and that it has to be replaced.
Sludge/Varnish settle on lubricating surfaces and interfere with lubrication (as well as heat transfer) and ultimately damage sliding surfaces leading to wear and tear of precision components.
Hard contaminants can be removed by hydraulic filters but soft contaminants cannot be removed by regularfilters.

0.45micrion or 0.8micron filter papers are required to check for varnish/sludge particles as they are very fine. 3micron filter paper is used for checking particles in oil.

Note that a patch test cannot tell particle size distribution (as reported in ISO4406 particle count test) for which you have to send it to a laboratory. But before you send a sample to the lab for a particle count you canscreen the sample with a Patch test instead of paying for expensive lab test. A lab test however is must to arrive at the particle count necessary to evaluate oil cleanliness to protect your precision components.

**Testing for particulate matter (Dirt and Wear Particles)**

Similarly, presence of "particulate matter" can be judged by using a filter patch of 3 micron pore size. (Minimum measure of particle size as specified in an ISO 4406 code is 4 microns and in NAS code is 5mic).
Note these are only visual indicative tests and cannot replace laboratory tests for particle count. You can obtain ISO 4406 particle count code or NAS code from a reputed Laboratory to determine the cleanliness level of the oil.
Different systems require different levels of cleanliness levels. Check with your equipment manuals which particle count or ISO code is applicable to your equipment.
Darker the color of the patch, higher is the concentration of particles in the oil.
Our Patch test kit is Vacuum type. The kit requires compressed air to generate vacuum (5/6bar standard shop air pressure available in any workshop) to prepare a patch quickly and conveniently without much hassle. It does not require a separate compressor and therefor is cheaper and does not require maintenance.

**Including Accessories :**

| Sr. No. | Description |
|---|---|
| 1 | Case Bag |
| 2 | Ss forceps |
| 3 | Measuring Beaker 500 ml |
| 4 | 0.8 um x 47mm / 25 mm filter membrane (Make Sartorius) |
| 5 | Wash Bottle 500 ml |
| 6 | Filter flask 1000 ml |
| 7 | Assembly clamp |
| 8 | Oil free vacuum pump AE 15 with tubing |
| 9 | Filtration Assembly Funnel |
| 10 | Sample Bottle 300 ml |
| 11 | Filtration assembly Base Part 47 mm |
| 12 | User Manual |