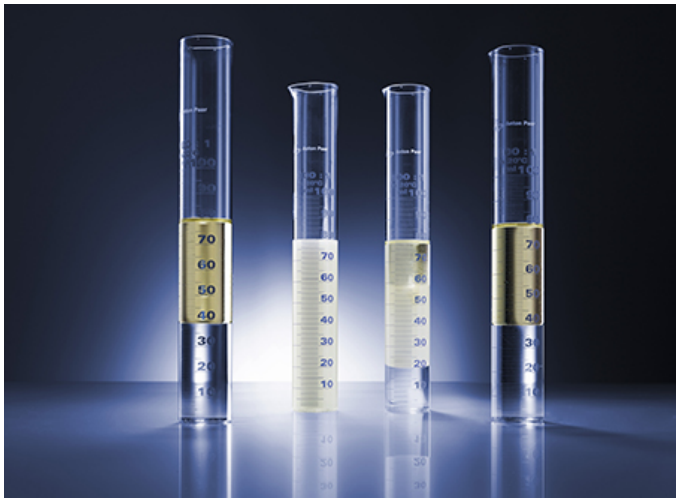
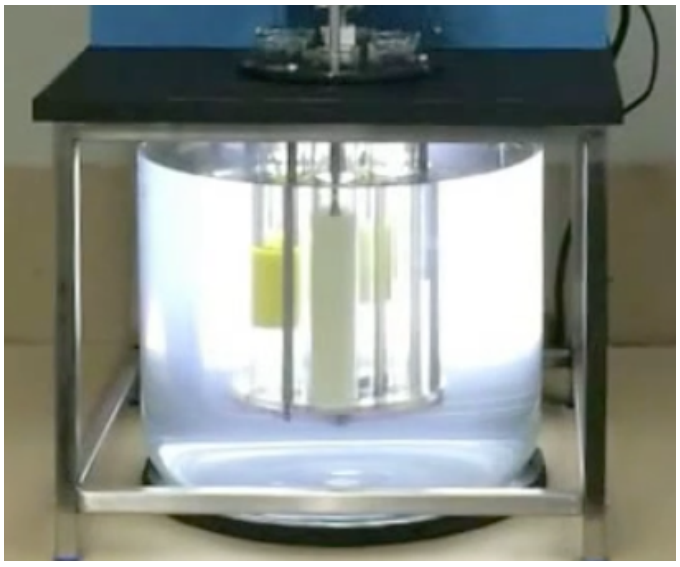
PAN AMERICAN LUBRICANTS

Demulsibility Test

Demulsibility of oil, or its ability to release water, is a very important characteristic of lubricating oil. Emulsified water tends to make the oil appear cloudy or milky and may cause the oil to foam. Worse, the emulsified water will reduce the oil's ability to provide lubrication, increase temperatures and can promote corrosion and oil oxidization and degradation.



Water contamination of oil can be caused by a variety of processes as well as environmental factors. High humidity atmospheres, equipment cleaning processes, condensation caused by repeated heating and cooling of equipment and lubricants, accidental exposure to water-based chemicals or process fluids and a host of other sources can cause water contamination.



ASTM D1401 measures the oil's ability to separate from water. The test includes a specimen containing equal parts of oil and distilled water, stirred at 1500 rpms for 5 minutes, and then allowing the emulsion to separate while observing the degree of separation every 5 minutes. Once separation is complete or the test time limit expires, the amount of oil, water and emulsion are recorded as well as the time required to achieve the result. For example, 40/40/0 (15) would indicate 40 ml of oil, 40 ml of water, 0 ml of emulsion observed after 15 minutes of settling.