

Esso Has Weatherford-Ampscot Install Magnetic Filter Rods in Pump jack Gear Boxes at the Factory

The Challenge

Esso Canada upstream field services wanted to increase the efficiency of their oil field equipment and extend the length of their service and maintenance intervals. Part of the initiative included extending the life of their LeGrand 160 pump jacks.

The Test

FilterMaster 2000 & 3000 Magnetic Filter Rods were introduced and tested on 6 pump jacks (E-8: 1, 6, 11, 12, 13, 19). All 6 of the test rods were installed on June 15, 2003 on LeGrand 160 pump jacks and were to be removed and evaluated for effectiveness 37 days later.

The Results

Before the test, the original factory installed magnetic rod which had been in service for about 8 years, was removed from the gear box for the first time. It had never been cleaned and had about 1/8" of ferrous material on it. The rod had a Gauss rating (the scientific measure of the magnetic strength) of about 350.

After 37 days of normal operation the FilterMaster 2000 Series Magnetic Filter Rod (with a Gauss rating of about 12,000) was removed. It was covered by ferrous material a 1/2" thick.

Randy Wilson, the field service inspector said, "When the rod was removed from the gear box I could not believe what I was looking at. The rod was totally covered in ferrous contaminants that had been in there for years. We had no idea that there was that much metal in there. Obviously the equipment will work better with all of that metal removed. This will definitely increase gearbox life."

As a result of the test Esso has Weatherford-Ampscott install the FilterMaster rods in all of their pump jack gear boxes at the factory.

Background

FilterMaster 2000 / 3000 Series Magnetic Filter Rods are manufactured under patented processes which create magnetic fields in excess of 1,400% stronger than other magnets. They are able to capture and hold ferrous contaminants (iron & steel) down to 1 micron in size which significantly slows the wear cycle.

Filter rods are easily cleaned with a wipe of a cloth, have a warranty of 3 years and an effective life of 10+ years.



Trial magnetic filter rod location in gear box of a LeGrand 160. (Arrow indicates gear box.)



Above: The original magnetic rod in service for about 8 years.

Below: The FilterMaster 2000 Series Magnetic Filter Rod, in service on the same gear box for only 37 days.

