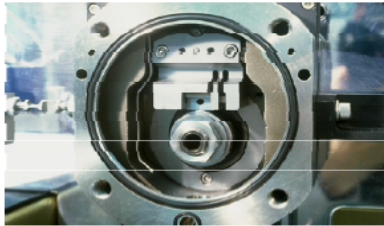


# Galling Resistance Test

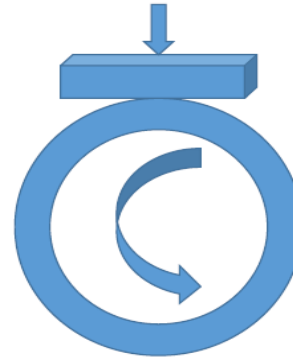
## BOR Scuffing Test



Marginal Grease Lubrication

- Block (bearing) – 8620 carburized
- Ring (pin) – Trivalent Cr
- Grease lubricated – **marginal lube**
- Room temperature
- Step loading (50 lbf – 1275 lbf)
- Constant velocity – 100 rpm (0.18 m/s)

Ring (pin)	Block (bearing)
Hard Cr (Baseline)	8620
Trivalent Cr	8620



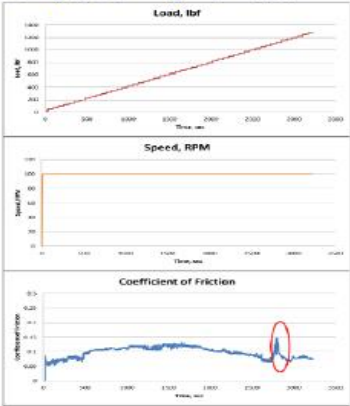
# BOR Wear Test Results

Hard Cr Plated rings were prepared using the traditional process and tested as a comparative baseline to Savroc's TripleHard plating.

The 'spike' in friction shown below for the Hard Cr sample is due to galling (i.e., metal-to-metal adhesion). The Savroc plating did not exhibit any galling up to the maximum loading of 1275 lb force. The estimated contact stress at this maximum loading is ~850 MPa.

## BOR Test Results – Hard Cr (baseline) vs. steel

- Grease lubricated – **marginal lube**
- Grease: Cat multi-purpose grease
- Scuffing load: initiation at 1125 lbf?



## BOR Test Results – Trivalent Cr vs. steel

- Grease lubricated – **marginal lube**
- Grease: Cat multi-purpose grease
- Final load: No scuffing up to 1275 lbf
- Contact pressure: ~ 850 MPa

