

Tribol GR 100-00 PD Success in Robots

AUTOMOTIVE (USA)

Assembly Plant Robot Grease

Castrol Tribol® GR 100-00 PD*

ANNUAL SAVINGS: \$79,495

THE SITUATION

An opportunity was presented to replace a robot grease supplied by Company K. This major automotive customer was experiencing long deliveries of the grease from Japan which were 6 weeks to 3 months in length.

This would upset the maintenance schedule designed to service 300+ robots in the weld shop which are lubricated on a 2-year cycle.

In addition to the long delivery time, the grease was very expensive.

BEFORE

- Long grease delivery times from Japan (6-12 weeks), leading to maintenance disruption
- High grease price
- Good grease performance

AFTER

- Short delivery times from the US, improving maintenance schedule
- Much lower grease price (\$509 less per pail, **a reduction of over 60%**)
- Improved grease performance

THE SOLUTION

- Castrol performed a complete lab analysis of the two grease side-by-side prior to conversion.
- The analysis showed that Tribol GR 100-00 PD was at minimum equivalent and actually better in some key areas.
- Tribol GR 100-00 PD proved superior in friction reducing performance, per the aggressive SRV testing run. The coefficient of friction was lower and the ball scar diameter was much smaller.



- **Excellent performance in robots**
- **Much lower cost and delivery time than most typical robot greases**

SRV Friction Test

SCAR DIAMETER

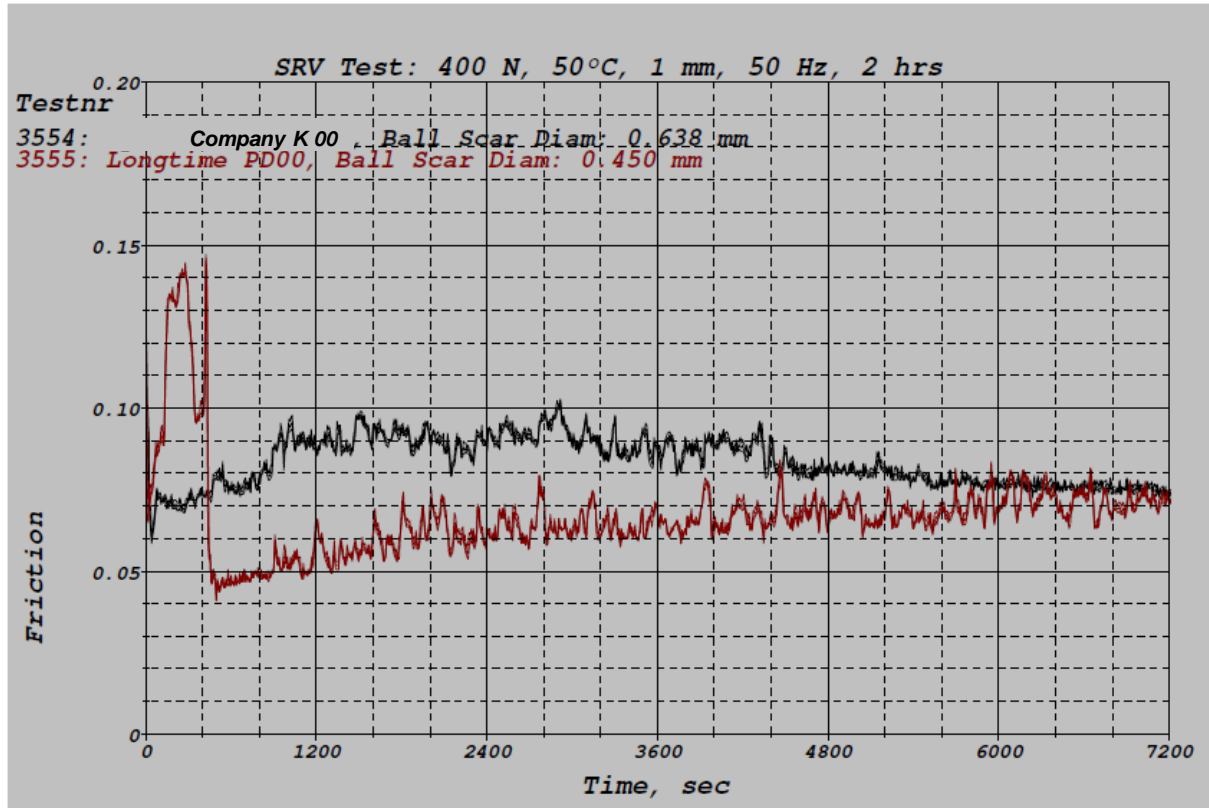
Tribol GR 100-00 PD – 0.450 mm

Company K 00 – 0.638 mm

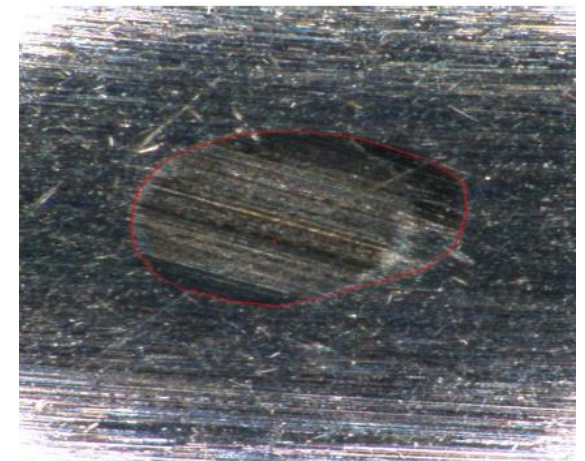
AVG COEF OF FRICTION

Tribol GR 100-00 PD – 0.65

Company K 00 – 0.85



Tribol GR 100-00 PD scar
(0.450 mm)



Company K 00 scar (0.638 mm)

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RECOMMENDATIONS

Tribol GR 100-00 PD is being utilized in grease lubricated robot gear drives on several Kawasaki robot models (ZX 165, ZX 200, and ZB 150) for the major axes of X, Y, Z.

The spend with the previous grease was \$131,200 annually. This was reduced to \$51,705 with Castrol while improving the gear lubrication.

CONCLUSION

Castrol Tribol GR 100-00 PD significantly reduced the cost and delivery time for the plant's robot grease.

In addition, the Microflux Trans additive system in the Tribol GR 100-00 PD provides increased wear protection of the gears, leading to long-term reliable robot operation.



OTHER POTENTIAL APPLICATIONS

Castrol Tribol GR 100 series of greases contain the proprietary MFT additive package to improve metal surfaces and greatly extend equipment life. They are suitable for grease applications where lower grease usage and longer component life are desired.

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