

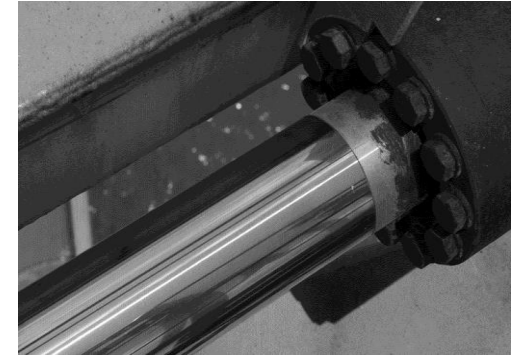
Castrol Hydraulic Oil & Excellent Customer Relations are a Winning Combo

AUTOMOTIVE (USA)

Engine Manufacturing

Castrol Hyspin® AWH-M 15 hydraulic oil

ANNUAL SAVINGS: \$8,330



THE SITUATION

A major automotive plant was using 7000 gallons per year of ISO 15 hydraulic oil in 19 Landis machines in their crankshaft and camshaft areas. They were looking for a less expensive oil with the same or better properties. The new oil should not just meet Landis specification but also have Landis approval.

Castrol has been a trusted partner of this plant for many years and worked with the plant as one team to meet the requirements.

OIL COMPARISON

Laboratory analysis of competitor and Castrol hydraulic oils

Properties	Hyspin AWH-M	Competitor
Viscosity Grade	ISO 15	ISO 15
Viscosity Index (VI)	> 150	140
Flash Point	205°C	188°C
Pour Point	-51°C	-42°C
Air Release	4 min.	Not Available
Water Demulsibility	5 min.	Not Available
4-Ball wear	0.4	Not Available
FZG fail stage	11	Not Available

THE SOLUTION

- Castrol Hyspin AWH-M 15 high viscosity index hydraulic oil was recommended at a price significantly lower than the previous oil.
- Competitive analysis of the hydraulic oils indicated superiority of Hyspin AWH-M as shown in the table:
 - Reliable operations across wide temperature range as indicated by higher VI, higher flash and lower pour point
 - Excellent air release and water separation
 - High wear protection as indicated by 4-Ball and FZG tests. These properties are not reported by the competitor.
- Castrol personnel, having excellent working relations with Cinetic Landis Ltd, were able to get OEM approval in a very short period of time.

Castrol Hydraulic Oil & Excellent Customer Relations are a Winning Combo

RECOMMENDATIONS

Cinetic Landis Ltd. has recommended Hyspin AWH-M for the variety of the Landis machines listed below:

Crankshaft Line

<u>OEM</u>	<u>Model</u>	<u>Op</u>	<u># of Mach</u>
Landis	Twin Orbital Pin 3L2	30	5
Landis	Angel 3SE	70	1
Landis	Multi-Wheel 5RIWE	80	2
Landis	Twin Orbital Pin 3L2	100	3

Camshaft Line

<u>OEM</u>	<u>Model</u>	<u>Op</u>	<u># of Mach</u>
Cinetic	Guistina	20	2
Landis	Grinder	70	4
Landis	Polisher	90	2

CONCLUSION

The key benefits of Castrol Hyspin AWH-M on top of lower price were reliable operations across a wide temperature range, extended life of hydraulic system components due to higher wear protection, reduced downtime, and more efficient use of personnel. In addition, Castrol provides other non-measurable savings through regular on-site support and data collection to ensure problems are proactively identified.

The measurable result - \$8,330 in savings per year.

The combination of Castrol high quality hydraulic oil, regular on-site support, and partnership with the customer provided outstanding results for the customer in terms of increased equipment reliability and overall improved maintenance costs & efficiency.



OTHER POTENTIAL APPLICATIONS

The Hyspin AWH-M series is suitable for use in industrial hydraulic systems that require high VI and anti-wear protection. This oil is specifically suited for outdoor equipment likely to operate in wide temperature ranges. It is equally well suited for indoor manufacturing equipment that incorporates control systems requiring minimal viscosity change with temperature.