



Pentagon Lubricants (I) Private Limited



*Recipient of 'Model 5s Company'
By ABK-AOTS DOSAKAI, Japan.
1st Company in India to be conferred in SSI category.*

Issue 7

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*an initiative
of
Pentagon Lubricants (India)
Private Limited,
Chennai,
India.*

*for the benefit of
its esteemed customers*

*to know more about us
please visit
www.pentagonlubricants.com*

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CUSTOMER EDUCATION PROGRAM

Customer Education Program, monthly mailer of Pentagon Lubricants (I) Private Limited

No.1, Appa Rao Colony, Tambaram Sanatorium, Chennai – 600 047, INDIA.

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Beyond Creating
Great Products,
We Are Here To
Create More
Educated
Customers!

*foreword
by
s.alex wilfred
managing director*

Dear All,

Greetings!

With the tremendous response received from customers and readers about our Customer Education Program (CEP) on our last issue which covered the topics on Lubricant Procurement and Maintaining Lubricant stores we will go head and cover more topics related to Hydraulic Oils in the current issue.

We are delighted to note that through Our CEP Issues, we are able to create awareness to our customers on Lubricants and by choosing the right Lubricant and proper oil analysis how they could maximize the system performance.

Now with your valuable support, we are pleased to present our 7th issue – October 2013.

If you wish your friend or colleague in Purchase/ Commercial/Production/Quality/Maintenance department to be benefitted by our CEP please send us their contact details.

Cheers!

S. Alex Wilfred

Topics Covered In This Issue:

- Choosing the Right Lubrication – In Hydraulic System
- How do you determine the right type of Hydraulic Oils?
- Best Practices for Hydraulic System Maintenance
- Conclusion

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Choosing the Right Lubricant - In Hydraulic Systems

Nearly all industrial and commercial market sectors have Hydraulic Systems.

Today's Hydraulic Units are far more sophisticated compared to older times.

Plant Managers and Equipment Maintenance professionals have to ensure that they properly protect their company's investment in a Hydraulic System

Two important ways to help improve the performance of the Hydraulic Systems are:-

1. To use a high performance Hydraulic Fluid
2. Institute a proactive maintenance and oil analysis plan.





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How do you determine the right type of Hydraulic oils?

➤ Right Specifications

- The equipment manufacturer's recommendation for choosing the right Hydraulic Oil is the first and foremost.
- The recommendation typically provides the appropriate viscosity grade for the expected operating temperature and pressure range
- The recommendation also provides minimum level of specifications and performance, such as having the DIN 51524 Part 2 & 3; AFNOR NFE 48603 HM-HV; CINCINNATI MILACRON P-68, 69,70; DENISON HF-2 & HF-0 and BIS; 10522-1993.

➤ Right Viscosity

- Viscosity is the most critical factor when selecting the right Hydraulic Oil.
- It is important to match the right viscosity grade to operating temperatures and load conditions that the system may undergo on a daily basis. Without proper viscosity the system will not operate as designed and efficiency of the system likely will fail.
- Field application advice from your lubricant supplier can be valuable in helping you make the right choice of the Hydraulic oil, if the systems are subjected to extreme working conditions or exposed to both hot and cold extremes.

➤ Right Performance Attributes

- Hydraulic Oils must do more than simply satisfy the correct viscosity when given higher pressures and higher temperatures.
- Higher pressures and higher temperatures require fluids that deliver oxidative and thermal stability, while preventing system deposits and providing a high degree of anti-wear protection.
- These fluids must also possess excellent air release properties, filterability and seal compatibility.
- The latest generation of hydraulic fluids can also help increase overall hydraulic system efficiency.



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Best Practices for Hydraulic System Maintenance

➤ Keep it clean

- Keeping hydraulic systems clean is a must for all environments.
- The combination of high pressures, small reservoir size and tight tolerance control systems make the exclusion of contaminants crucial in all systems
- To keep the system free of contamination, storing and handling oil properly is a good place to start
- Hydraulic Lubricants should be stored in a closed container in a controlled temperature environment with adequate spill containment.
- Transferring hydraulic lubricants should be done through the use of dedicated , sealed clean oil dispensing equipment.
- The hydraulic system reservoir should have quality desiccant breather and system filter.

➤ Oil Analysis

- As part of routine maintenance, one should be rigorous in checking the health of the hydraulic oil and the hydraulic system.
- It is advised to perform Quarterly oil Analysis and Annual System Inspection. For systems that operate on most extreme and critical conditions more frequent oil analysis should be considered.
- The oil analysis should include – 1. Fluid viscosity 2. Water content , Particle count and dissolved metals to determine how well the system is operation 3. Trending oil analysis is necessary to assess the condition of the Hydraulic oil.
- Visual inspection of the System should be conducted regularly and documented . These Inspection data can be used to perform maintenance on critical hydraulic components such as filters, breathers, valves, hoses, pumps etc.,
- Comprehensive leak detection should also be performed especially if excessive hydraulic oil usage is noted during routine system inspection.



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CONCLUSION

Hydraulic Units & systems must be protected with fundamental best practices – such as using a high performance hydraulic lubricant and implementing proactive oil analysis program.

The right lubricant and maintenance program can help improve productivity through efficiency benefits, more reliable equipment performance and increased machine availability.

By incorporating these key best practices and following the additional tips provided above, Plant Managers, Equipment Maintenance Professionals and purchasing Agents can make the right decisions that will help maximize the performance and life of their company's critical Hydraulic Systems.

