



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 8

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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*

*mail your views to
customercare@pentagonlubricants.com*

CUSTOMER EDUCATION PROGRAM

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

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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 immense pleasure we now present our 8th issue – November 2013 against the tremendous response received from our customers and readers about our Customer Education Program (CEP).

In our last issue we had covered topics on Hydraulic oils – Choosing the right type of Hydraulic oil and Maintenance of Hydraulic Systems.

In the current issue we will cover topics on Coolant Management Systems – The Do's and Dont's

Through our CEP Issues, we are able reach to our customers and create awareness to them on Lubricants and by proper analysis and maintenance how they could maximize the system performance.

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:

- Cleaning & Filling the Coolant Systems
- Operation of Coolant Systems
- Maintenance of Fluid & Coolant Systems
- Conclusion

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Why & When Do Coolants Become Unusable ?

- ❖ Coolants and cutting oils become unusable when they become excessively contaminated with bacteria, tramp oil, metal fines, or wastes.
- ❖ They can break down from use, but are most commonly broken down by bacteria growing in the system.
- ❖ Bacteria and fungi can cause the coolant to become rancid, lose its effectiveness, and irritate skin.
- ❖ The presence of wastes, tramp oils and metal fines can stimulate the growth of bacteria.
- ❖ The life span of most metal working coolants can be extended two or three-fold with proper management techniques.

“The Guide lines given below helps you to maintain the coolant systems”





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Cleaning & Filling the Coolant Systems

The following to be observed for a Good Maintenance while Cleaning and Filling the coolant system

Must Do ➡

- ✓ Thoroughly clean sump, coolant line, machine and guards before refilling with coolant
- ✓ Use a cleaner compatible with a coolant
- ✓ Mix fluids immediately before use
- ✓ Mix them in a clean container
- ✓ Use water of correct hardness
- ✓ Add emulsion concentrate to water while stirring
- ✓ Use a refractometer to verify proper concentration
- ✓ Use protective clothing when handling fluid concentrate and for machine cleaning

Don'ts ➡

- ✗ Don't put clean coolant in dirty machines or sumps
- ✗ Don't dispose of used coolants directly into sewers
- ✗ Don't store excessive amounts of mixed emulsions
- ✗ Don't mix coolants in the machine itself
- ✗ Don't use water from stagnant lines or contaminated sources
- ✗ Don't add water to product concentrate
- ✗ Don't check fluid strength by feel





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Operation of Coolant System Machine

The following to be observed for Operation of Coolant System Machines

Must Do ↗

- ✓ Do ensure correct coolant flow
- ✓ Do use all guards and spray covers properly
- ✓ Do follow precautions regarding parts & mechanisms in motion
- ✓ Do remind operators not to contaminate the fluid
- ✓ Do ask operators to wash down their machines with the coolant at the end of their shift

Don'ts ↗

- × Don't allow mist or spray to be emitted
- × Don't allow fluid to overheat; maintain full sump volume
- × Don't allow stagnation of water soluble
- × Don't allow operators to put their hands into the fluids unnecessarily
- × Don't allow operators to smoke, eat or drink next to machines





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Maintenance of Fluids & Coolant Systems

The following to be observed for maintenance of Fluids & Coolant Systems

Must Do ☞

- ✓ Do ensure regular monitoring of the fluids
- ✓ Do record and act on results of monitoring
- ✓ Do make up with separately mixed emulsion of premix
- ✓ Do keep the machine clean and keep the coolant tank covered
- ✓ Do use filters to remove swarf and fines

Don'ts ☞

- × Don't add biocide indiscriminately
- × Don't use MWF beyond its useful working life
- × Don't add water to existing emulsions except for decreasing concentration only
- × Don't allow the fluid to be contaminated with rubbish
- × Don't allow tramp oil to accumulate





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CONCLUSION

**When machine coolants and cutting oils last longer,
you can save money on**

- + reduced waste disposal costs
- + fewer purchases of new coolants and cutting oils
- + reduced maintenance labor
- + reduction in lost production time
- + reduced regulatory costs

