



# **Product Application Bulletin**

# Nox-Rust® 1100 VCI Liquid Engine Lay-Up and Preservation



### **Product Description**

Nox-Rust® VCI Liquid 1100 is a volatile corrosion inhibitive lubricating liquid for use in the preservation of ferrous and/or other metal parts in enclosed systems. Combining the protective properties of preservation oil with those of volatile corrosion inhibitors, Nox-Rust 1100 liquid provides long term protection against rust in "closed" systems or voids.

How VCI Works – When the metals are in the proximity of the VCI, the chemicals volatize from the carrier to the metals and form a molecular layer of protection on the surface of the metal. This protective layer prevents moisture, salt, dirt, oxygen and other materials from depositing on the metal and causing corrosion.

**Types of Engines** – For lay-up and preservation of all types of engines and other enclosed systems such as hydraulic systems, compressors, transmissions, and gear boxes.

### **Directions**

Start with a cold engine (below 100° F). Add required amounts of Nox-Rust 1100 to the crankcase, oil bath air cleaners, and multi-plunger injection pumps. Crank engine over for 20 seconds if possible. Add required amounts of

Nox-Rust 1100 to each cylinder through spark plug, glow plug, or injector openings and replace plugs or injectors. Engines may be stored for up to one year. If storing for longer than one year, inspect and re-preserve annually, as necessary.

#### **Amounts to Add**

For specific amounts of Nox-Rust 1100 for each engine model, see the application service bulletin. If bulletin not available, protect engine as follows;

### For gasoline and natural gas engines

Crankcase including crankshaft, bearings. crankcase oil rocker arms and -orsurfaces normally ☑ 1% by volume lubricated by crankcase oil. Cylinders 1/3 oz. per engine cylinder Fuel Tanks ☑ 2 oz. per gallon on tank volume

### For Diesel Engines

Fuel Tanks

cylinder

Fog 1 oz. per each 7 1/2 gallons (1 cu. ft) capacity. If tank contains oil or diesel, add 1 oz. for each gallon present.

☑ Fill governor with Nox-Rust 1100 if lubricated separately from engine.

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# For Drive Clutch and Steering Clutch Assemblies

☑ Fog 3 oz. of Nox-Rust 1100 to the hydraulic oil. After testing, add an additional 3 oz.

### For Transmissions

☑ Add 2% Nox-Rust 1100 to the lubricant.

**Sealing -** Nox-Rust 1100 gives off a protective vapor which penetrates engine interiors. All openings should be taped or reasonably well closed.

**Metals Protected -** Nox-Rust 1100 protects all metal parts in enclosed systems. While it may cause some discoloration of aluminum, it will not harm aluminum.

**Removal –** Engines stored in Nox-Rust 1100 may be put into use without concern for removal of Nox-Rust 1100. Injection pumps and hydraulic governors, however, should be drained and refilled with the recommended lubricant.

**Packaging and Storage -** Nox-Rust 1100 is available in 5-gal (18.9 I) pails and 55-gal (208 I) drums.

Store sealed, in a dry location, out of direct sunlight in temperatures not to exceed 100°F (40°C) or below 40°F (5°C).

### Other corrosion inhibitors -

Daubert Cromwell has many other types of corrosion inhibitor products for all preservation and packaging, including:

### VCI Paper:

 Nox-Rust® Vapor Wrapper®, Protek Wrap®, Ferro-Pak®, Ferro-Galv, Coppertex®, Silver Saver®, Alumitex® and Uniwrap® brand papers.

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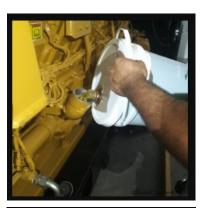
## **VCI Films**:

 Premium Metal-Guard, Metal-Guard, Ferro-Film® polyethylene films and bags, shrink film, stretch film, masking film, bonnets and custom constructions.

### <u>Daubrite VCI emitters and Nox-Rust</u> <u>powders</u>

## Rust removing products:

Evapo-Rust® Nox-Rust Premium Rust Removing gel.





The data, statements and recommendations in this product information sheet are based on testing, research and other development work, which has been carefully conducted by us, and we believe such data, statements and recommendations will serve as reliable guidelines. Physical properties shown above represent typical values and are not intended for use in writing specifications. However, this product is subject to numerous uses under varying conditions over which we have no control, and accordingly, we do NOT warrant that this product is suitable for any particular use. Users are advised to test the product in advance to make certain it is suitable for their particular production conditions and use. All products manufactured by us are warranted to be first class material and free from defects in material and workmanship. Liability under this warranty is limited to the net purchase price of any such products proven defective or, at our option, to the repair or replacement of said products upon their return to us transportation prepaid. All claims on defective products must be made in writing within 30 days after the receipt of such products in your plant and prior to further processing or combining with other material and products. WE MAKE NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE SUITABILITY OF ANY OF OUR PRODUCTS FOR ANY PARTICULAR USE, AND WE SHALL NOT BE SUBJECT TO LIABILITY FROM ANY DAMAGES RESULTING FROM THEIR USE IN OPERATIONS NOT UNDER OUR DIRECT CONTROL.

THIS WARRANTY IS EXCLUSIVE OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AND NO REPRESENTATIVE OF OURS OR ANY OTHER PERSON IS AUTHORIZED TO ASSUME FOR US ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF OUR PRODUCTS.

