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Title: Dielectric Grease Change

Applies To: CV, MV, HV, HX, RH, LT, LoneStar

CHANGE LOG

Please refer to the change log text box below for recent changes to this article:

08/31/2020 - Updated to include assembly instructions when using dielectric grease vs. red enamel coating. Added additional part numbers.
 10/07/2019 - Updated per user feedback - This article is still valid as of this date.
 12/03/2018 - Update per user feedback - added chart and text as to when engineering changed from Grafo Grease.
 11/06/2018 - Updated article owner and added Manufacturer's P/N information for ordering directly from NanoMech.
 01/09/2018 - Removed part numbers due to lack of availability.
 01/04/2018 - Initial Article Release.

DESCRIPTION

This document will guide the user through the changes of the dielectric grease/coatings used in certain areas on all International vehicles built after 1/8/2018. Navistar's Electrical Engineering Team made this change to improve the longevity of the OEM coatings and to improve applications at the factory.

SYMPTOM(s)

On all International vehicles built after 1/8/2018; the color/type of dielectric grease being applied at the factory on all major electrical points has changed depending on the location of the connection on the truck. (Please see pictures below for reference.) International Service Part Numbers will be added to this article once available and will be orderable from Kemcrest through PDC. Until that update is available please refer to the service part section of this article to order the grease/paint coating directly from the manufacturer.

Note: For all field repairs, service shops can continue to use Grafo grease or equivalent where it was originally applied. Grafo may also be applied over the blue grease or red paint if Nanomech products are not available at the time of service. Every effort should be made to reapply the same product that was originally applied by the factory.

New Changes for Color and Type of Dielectric Grease Coatings for Electrical Interconnections

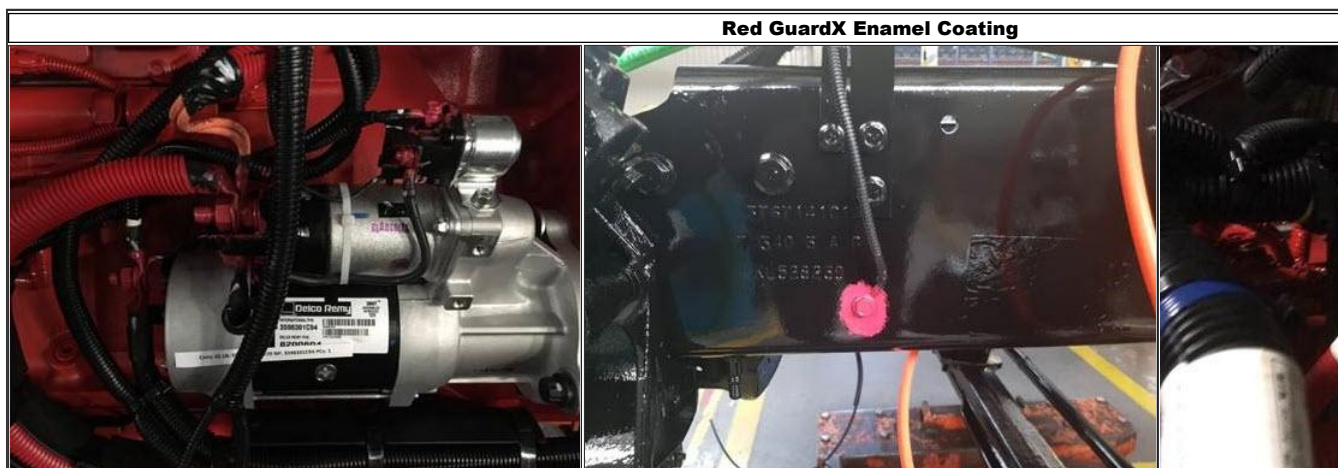
<div style="border: 1px solid red; padding: 5px; width: fit-content;">GuardX Red Enamel</div>			Above Engine Cross-member Inside Frame Rail Typical Connections: <ul style="list-style-type: none"> • Alternator • Starter • Frame / Engine Grounds • Cab Grounds
	Tribo Tuff Premium Dielectric Grease	Below Engine Cross-member Outside Frame Rail Typical Connections: <ul style="list-style-type: none"> • Horns (Old Design) 	Below Cab Floor Starting From Behind Front Tire (Wheel / Road Spray) Typical Connections: <ul style="list-style-type: none"> • Batteries • Optional Chassis PDM • Battery Disconnect Switch

EXAMPLES:

Battery box interconnections will use **BLUE** dielectric grease coating.



Engine Trim interconnections will use **RED** dielectric paint coating.



SPECIAL TOOL(s) / SOFTWARE

Tool Description	Tool Number	Comments	Instructions
Small Brush		Obtain Locally	Use to apply grease
Protective Gloves		Obtain Locally	Use to protect skin from grease

[Tool Resource Center](#)



SERVICE PARTS INFORMATION

BLUE

RED



Description	MFR's Part Number (Not an International P/N)	Quantity Required	Notes
BLUE Dielectric Grease Coating	2133005	1 Lb Jar	Only available from NanoMech directly by calling their customer service at: (479) 725-8008
RED Paint, Type Elec Sealant	4311832	1QT Can	Reference Website: http://www.nanomech.com/
Description			Notes

	International Part Number	Quantity Required	
Seal, Compound, 4oz tube	472141C2	4oz Tube	Grafo 112x
BLUE Dielectric Grease Coating	NANO2133005	1 Lb Jar	Direct Ship Item
RED Paint, Type Elec Sealant	NANO4311816		Direct Ship Item
RED Paint, Type Elec Sealant	NANO4311832	1 Quart	Direct Ship Item
Nut, Battery Terminal 3/8" UNC	476074C1	As needed	Prevailing torque nut. Replace when removed. 
Nut Sealed Battery Terminal 3/8" UNC	522639C1	As needed	Not a prevailing torque nut. Can be re-used 

DIAGNOSTIC STEP(s)



WARNING:

Grease may cause skin & eye irritation. Wear protective clothing, gloves, and glasses.



CAUTION:

Wash exposed skin that may have come in contact with grease thoroughly after handling.

REPAIR STEP(s)

Fully remove and clean all old dielectric grease/ paint coating from components during repair/disconnection of electrical joint. Apply the appropriate grease/paint coating to the electrical connection components as needed after all service work is complete. Follow manufacturer's instructions for application and clean-up of grease/ paint coating.

Assembly Instructions

Blue Grease in Battery Box

1. Clean battery terminals with a wire brush.
2. Clean battery terminals and battery studs with a liberal amount of electrical contact cleaner.
3. Dry battery terminals and battery studs with compressed air.
4. Apply dielectric grease to battery cable terminals.
5. Connect all battery terminals to proper battery studs.
6. Tighten battery terminal nuts to the proper specification 12 to 15 lb-ft (16.3 to 20.3 Nm)

NOTE:

The blue dielectric grease should be applied prior to assembly and torque.
Battery stud nuts are prevailing torque nuts, and should be replaced whenever they are removed.

Red Enamel on Starter, Frame, Alternator, and more

1. Clean battery terminals with a wire brush.
2. Clean battery terminals and component studs with a liberal amount of electrical contact cleaner.
3. Dry battery terminals and component studs with compressed air.
4. Connect all battery terminals to proper component studs.
5. Tighten battery terminal nuts to the proper specification.
6. Apply red enamel to the terminals as studs / bolts.

NOTE:

The red enamel is applied after the terminals are assembled and torqued.

WARRANTY INFORMATION

Warranty Claim Coding:

Refer to the [Warranty Coding Manual](#) for Group and Noun Codes.

Standard Repair Time(s):

Refer to the [SRT Manual](#) for Repair Times

OTHER RESOURCES

[Master Service Information Site](#)

[IK0800582 - 'Red Gel Coat' Removal From Starter Studs and Electrical Connections](#)

[IK0800567 - LT Starter power connection cleaning](#)

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