

Tactical Vehicles...

# CUTTING CORROSION



HOW CAN WE  
HOPE TO *DEFEAT*  
THESE *CORROSION*  
CREATURES IF WE  
CAN'T *IDENTIFY*  
'EM!?



CONNIE, WE  
COULD *REALLY*  
USE A HAND  
HERE!



I'M UPLOADING THE  
SPECS TO YOUR  
HELMET NOW!

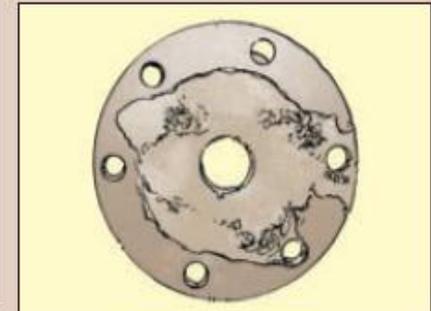
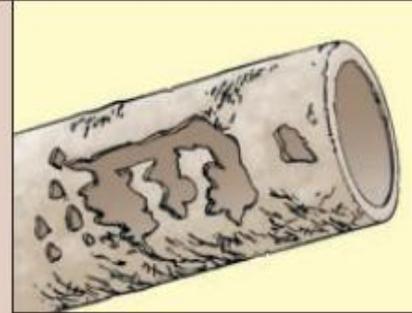


THE SOONER THE  
BETTER! WE'RE IN  
A *TOUGH SPOT!*

# 9 Types of Corrosion

## UNIFORM (or general attack):

Affects a large area of exposed metal surface, like rust on steel or tarnish on silver. It gradually reduces the thickness of the metal until it fails.

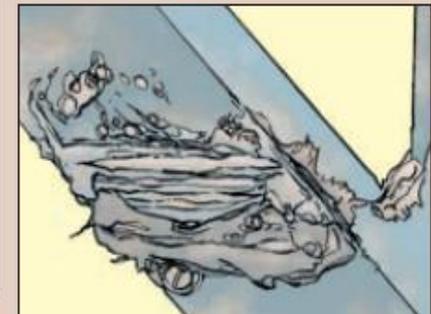
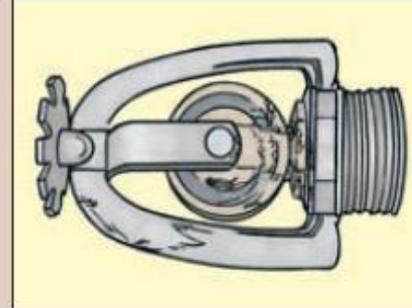


## CREVICE:

Occurs in crevices created by rubber seals, gaskets, bolt heads, lap joints, dirt or other surface deposits. It will develop anywhere moisture or other corrosive agents are trapped and unable to drain or evaporate.

## SELECTIVE LEACHING:

One element, usually the anodic element of an alloy, corrodes away, leaving the cathodic element. This can create holes in metal.



## INTERGRANULAR:

Metal deterioration caused by corrosion of the bonds between or across the grain boundaries of a metal. The metal will appear to be peeling off in sheets, flaking, or being pushed apart by layers. A particular type of intergranular corrosion is exfoliation.



SERGEANT DROHEN!  
I'VE UPLOADED  
THE INFO TO YOUR  
SYSTEM, DO YOU  
SEE IT?

ROGER  
THAT,  
CONNIE!



**INTER-  
GRANULAR**

**EROSION**

**GALVANIC**

A SHORT TIME  
LATER...



ONCE YOU KNOW THE KIND  
OF CORROSION YOU'RE  
DEALING WITH, IT'S MUCH  
EASIER TO DEFEAT IT!

IT'S DEFINITELY  
BETTER TO FIND OUT  
ABOUT CORROSION  
IN LESS STRESSFUL  
CIRCUMSTANCES.



WITH THIS  
KNOWLEDGE,  
YOU CAN CATCH  
AND CLIP  
CORROSION  
BEFORE IT  
GETS OUT OF  
HAND.

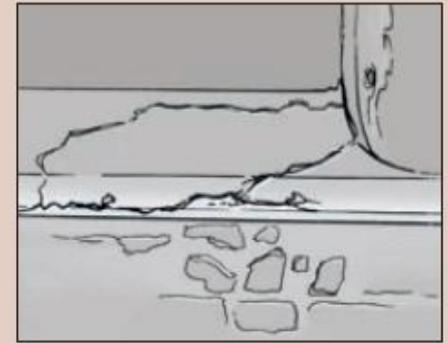
## PITTING:

This can result from conditions similar to those for crevice corrosion. Pits can develop on various materials due to their composition. Rifle bores are big victims of pitting.



## STRESS:

Term used to describe corrosion cracking and corrosion fatigue.

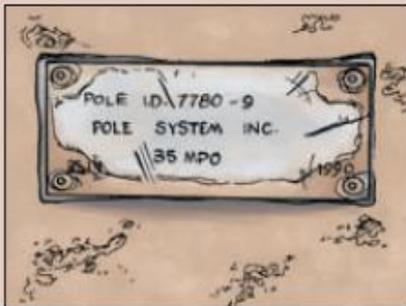
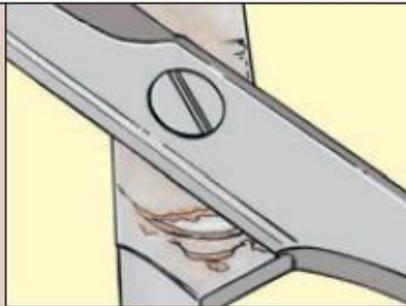


## EROSION:

Results when a moving fluid (or gas) flows across a metal, particularly when solid particles are present in the fluid. Corrosion actually occurs on the surface of the metal, but the moving fluid washes away the corrosion and exposes a new metal surface, which also corrodes.

## FRETTING:

Occurs between two pieces of weight-bearing metal in contact with each other. It's usually identified by a black powder corrosion product or pits on the surface.



## GALVANIC:

Occurs when two different kinds of metal come in contact with each other, like steel bolts on aluminum, for example. This is a common problem on aircraft because of their mix of metals.

## Reach for Rust Inhibitor

RAIN, SALT, WIND AND SAND ARE SOME OF THE CAUSES OF CORROSION.



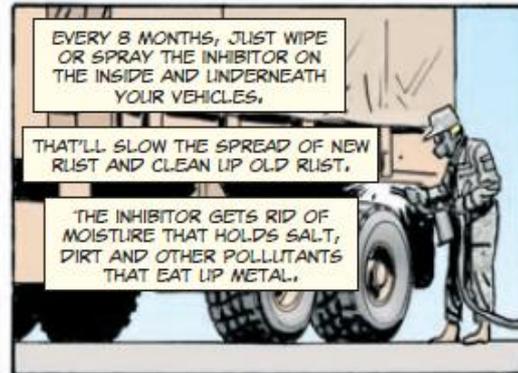
BUT YOU CAN CURB THEIR EFFECTS AND LOWER REPAIR COSTS BY USING **RUST INHIBITOR**, ALSO KNOWN AS CORROSION PREVENTIVE COMPOUND.



EVERY 8 MONTHS, JUST WIPE OR SPRAY THE INHIBITOR ON THE INSIDE AND UNDERNEATH YOUR VEHICLES.

THAT'LL SLOW THE SPREAD OF NEW RUST AND CLEAN UP OLD RUST.

THE INHIBITOR GETS RID OF MOISTURE THAT HOLDS SALT, DIRT AND OTHER POLLUTANTS THAT EAT UP METAL.



IT ALSO LUBES MOVING PARTS AND PENETRATES EXISTING RUST.



# Counteract Corrosion

RUST INHIBITOR IS PETROLEUM-BASED AND CONTAINS NO HAZARDOUS MATERIAL.



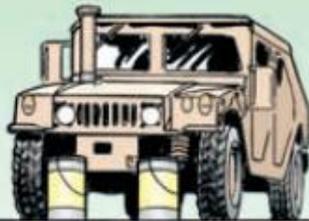
BUT THE HEADSHED STILL RECOMMENDS THAT YOU WEAR A RESPIRATOR, GOGGLES AND GLOVES WHEN APPLYING IT BECAUSE OF POSSIBLE IRRITATION TO YOUR RESPIRATORY TRACT OR SKIN.



ORDER THE AMOUNT OF INHIBITOR YOU NEED...

Quantity	NSN 8030-01-414-
16-oz bottles (12)	7423
5-gal container	8947

AS A RULE OF THUMB, IT TAKES ABOUT 2 GALLONS TO TREAT A HMMWV...



...AND UP TO 3 GALLONS FOR A 2 1/2-TON OR 5-TON TRUCK.



AND RUST INHIBITOR WON'T HARM PAINTED SURFACES, PLASTICS, RUBBER, GLASS OR WIRING, BUT IT'LL MAKE THEM SHINE FOR A WEEK OR TWO.



AS YOU CAN SEE, THAT **RUINS** YOUR CAMOUFLAGE, SO KEEP IT OFF THE PAINT ON THE OUTSIDE OF YOUR EQUIPMENT.



HERE ARE A FEW OTHER THINGS YOU CAN DO TO CUT BACK ON YOUR EQUIPMENT'S CORROSION...



- Paint or lube unprotected surfaces. Unprotected surfaces can corrode.
- Keep your equipment clean.
- Lube like the lube orders prescribe to prevent rust and premature replacement of pins and assemblies.



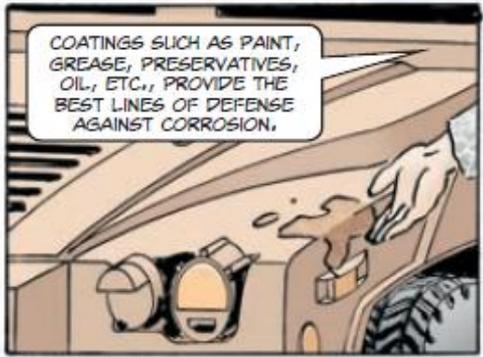
CLEAN YOUR WEAPON'S BARREL AFTER FIRING.



KEEP DRAIN HOLES UNBLOCKED, THAT WAY, WATER HAS LESS OF A CHANCE TO COLLECT AND CAUSE RUST.



A CORROSION FIGHTER MUST ACTIVELY SEEK OUT THOSE AREAS WHERE WATER CAN BE TRAPPED AND GET RID OF IT!



COATINGS SUCH AS PAINT, GREASE, PRESERVATIVES, OIL, ETC., PROVIDE THE BEST LINES OF DEFENSE AGAINST CORROSION.



AN UNPROTECTED SURFACE NEEDS TO BE REPAINTED OR RECOATED ASAP!

# Helpful Pubs

