

USAF Cape Canaveral Station, Florida

US Army Sea Side Corrosion Test Site

Report issued by MMI, Dick Yesensky, Nov.21st 2003



US Army Sea Side Corrosion Test Site



Army trucks after 3 years of exposure using typical epoxy paints. 3 years of sea side exposure shows massive corrosion and complete loss of steel panels and structures

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Control Door – typical epoxy paint used on truck door – 3 years of exposure in the sea side tests done by US Army

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Control Door (epoxy paint)– Close up of “cut” shows deep pitting and the beginning of holes in the steel control door – this is the result of 3 years at the US Army sea side test site.

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Quad Tests – Doors were divided into quadrants for a test of coatings and primers. Each quadrant was used for primer only; top coat only; & primer and top coats

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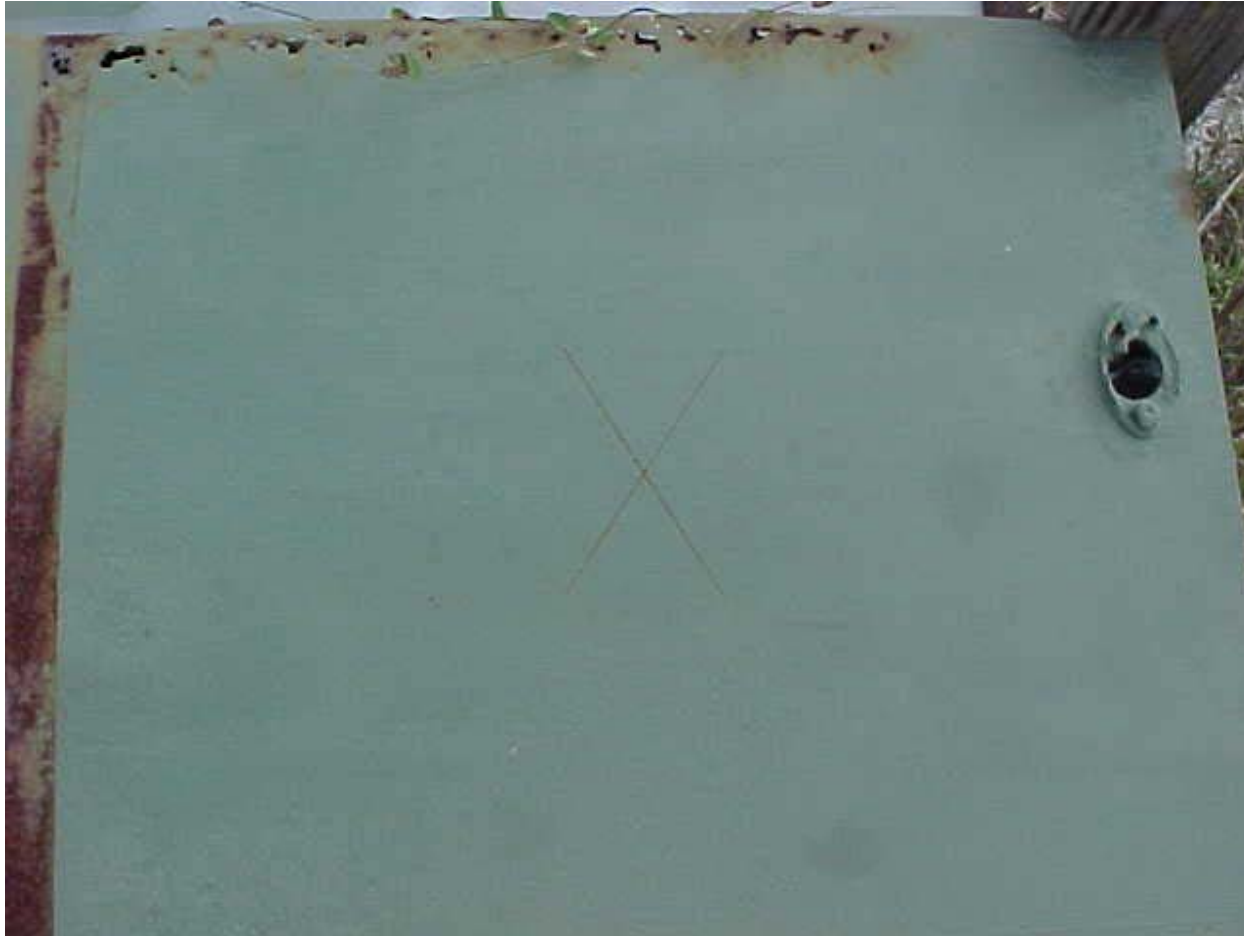
Quad Tests- The Army Truck Door is divided into Quads- Lower Right Quadrant is ZINGA ALONE (PRIMER ALONE); Upper Right Quadrant is ZINGA With CARC top coating. Lower Left Quad is NO ZINGA, only top coat; Upper Left Quad is ZINGA with top coat and CARC: KEY Results: ZINGA ONLY shows NO RUST; the Quad w/o ZINGA shows rust coming thru at several places, showing major rust after 3 years.

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NOTICE the QUAD Dividing lines. This is where NO ZINGA or protection was Provided. Rust has caused major damage in these areas. With no protection the Rust in just 3 years has ruined this door. This door is not serviceable and will have To be replaced.

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Quad Tests- This is closer picture of Upper Right Quad which is ZINGA Primer with CARC top coating- NO RUST present except Slight rusting at CUT where ZINGA is NOT present.

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Quad Tests- This is closer picture of Upper Right Quad which is ZINGA Primer with CARC top coating- NO RUST present except Slight rusting at CUT where ZINGA has been removed by CUT

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Quad Tests: This shows the LOWER LEFT Quad where NO ZINGA Has been applied – this is top coat only and after 3 years major Rust can be seen coming through all over the door.

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Quad Tests: This shows the LOWER LEFT Quad where NO ZINGA has been applied – this is top coat only and after 3 years major rust can be seen coming through all over the door.

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Quad Tests: This shows the Lower Right quadrant which was 'coated with ZINGA ONLY. The cathodic reaction can be seen clearly from the Zinc Salts (white-grey) forming on the surface. This shows SUPERIOR cathodic protection. NO RUST

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Quad Tests: This shows a **CLOSE UP** view of the lower right quadrant which was 'coated with **ZINGA ONLY**. The cathodic reaction can be seen clearly from the **Zinc Salts (white-grey)** forming on the surface. Note no rust at all even in the **CUT**. This is a outstanding picture of cathodic protection.

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**Quad tests- This is a extreme close up of ZINGA ONLY
Quadrant showing absolutely NO RUST forming or coming
Through due to paint strokes. NO RUST**

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Quad Tests- This is ZINGA competitor, a Zinc rich paint A, at the US Army sea side test site sitting on a stand in front of ZINGA stand. Note that rust is coming through at all four quadrants.

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Quad Tests- This is upper right quadrant of Zinc rich paint A. Note that rust is coming through even with the paint A and a top coat. Clearly the Zinc rich paint has been ineffective In rust prevention after just 3 years in sea air environment.

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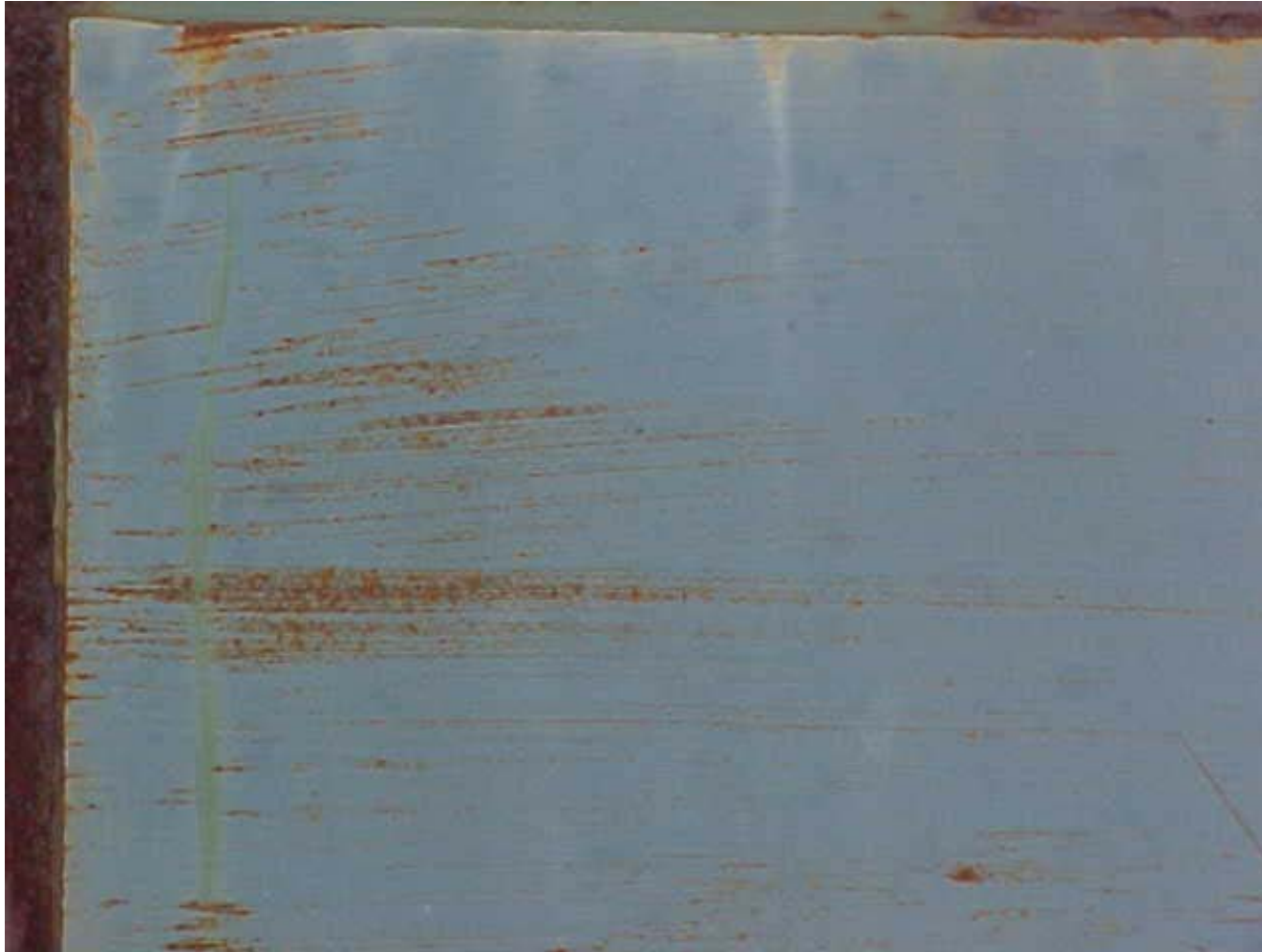
Quad Tests- This is lower right quadrant of Zinc rich paint A. This is Zinc rich paint A ONLY coating. Note that rust is coming through the paint strokes .Clearly the A has been Ineffective In rust prevention. Note also the lack of cathodic reaction, as very little Zinc salts can be seen. Extremely poor cathodic Protection.

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Quad Tests- This is lower right quadrant of Paint A. This is Zinc rich paint A ONLY coating. Note that rust is coming through the paint strokes Clearly A has been Ineffective In rust prevention.

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Quad Tests- This is close up of lower right quadrant of Paint A. This is Zinc rich paint A ONLY coating. Note that rust is coming through the paint strokes. Clearly A has been Ineffective In rust prevention. Note also the lack of cathodic reaction, as very little Zinc salts can be seen. Extremely poor cathodic Protection.