

**RESULTS OF INDEPENDENT LABORATORY TESTING  
FOR TASK FORCE TIPS, INC.®  
SALT SPRAY EXPOSURE TESTING PER  
5% ASTM B117 1000 HOURS**

<b>ALLOY</b>	<b>COATING</b>	<b>SAMPLE NO.</b>	<b>NOTES:</b>
<b>ALUMINUM 6061-T6</b>	<b>HB1A</b>	<b>R1</b>	<b>BAR STOCK WITH HARD ANODIZING .002"</b>
<b>ALUMINUM 6061-T6</b>	<b>HB2F</b>	<b>D</b>	<b>TUBE STOCK WITH HARD ANODIZING .002" AND RUBBER</b>
<b>ALUMINUM 356-T6</b>	<b>HN2A PC</b>	<b>AB</b>	<b>CASTING WITH HARD ANODIZING AND POWER PAINT ON AREAS</b>
<b>ALUMINUM 356-T6</b>	<b>HN2A PC</b>	<b>AC</b>	<b>CASTING WITH HARD ANODIZING AND PARTS POWER PAINTED</b>
<b>BRASS 83600</b>	<b>BARE</b>	<b>N1</b>	<b>CASTING</b>
<b>BRONZE 642</b>	<b>BARE</b>	<b>N2</b>	<b>BAR STOCK</b>
<b>BRONZE 955</b>	<b>BARE</b>	<b>N3</b>	<b>CASTING</b>



CHARLES C. KAWIN COMPANY  
METALLURGICAL LABORATORIES

MAILING ADDRESS / P.O. BOX 310 / MAYWOOD, ILLINOIS 60153

TASK FORCE TIPS 7229  
2800 EAST EVANS AVENUE  
VALPARAISO IN 46383  
ROBERT STEINGASS

P. O. # 305193  
DESCR 5/19/95  
PER ASTM B117

REPORT DATE: 07/07/95

LAB NO: 0522-075 / 20

JOB NO:

SAMPLE R1 #555 Collar  
.001 Hc Black dye Nickel Acetate (meas .0021)  
accurate

1000 HR SALT SPRAY

6061-T6

AFTER 120 HOURS OF SALT SPRAY TESTING BOTH THE GREASED AND UNGREASED RINGS EXHIBITED VERY LIGHT WHITE CORROSION PRODUCTS. AFTER 1000 HOURS OF EXPOSURE BOTH SAMPLES EXHIBITED A FEW AREAS OF LIGHT WHITE CORROSION

TEST METHODS: ASTM B 117

ID of grease sample nearly by thin film of residue on ID

THIS REPORT SHALL NOT BE  
WITHOUT THE WRITTEN APP





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TASK FORCE TIPS 7229  
2800 EAST EVANS AVENUE  
VALPARAISO IN 46383  
ROSS MACK

P. D. #  
DESCR 1000 HR SALT SPRAY PER  
ASTM B117

REPORT DATE: 03/31/95

LAB NO: 0214-012 / 04

JOB NO:

D

H500 HANDLINE Shaper & Bumper  
HB2F  
Pioneer  
6061-T6

SALT SPRAY TEST

AFTER 1000 HOURS OF CONTINUOUS SALT SPRAY TESTING, PERFORMED IN ACCORDANCE WITH ASTM B117, THERE WAS VISIBLE EVIDENCE OF VERY LIGHT TO LIGHT WHITE CORROSION PRODUCTS ON THE SUBMITTED SAMPLE.

TEST METHODS: ASTM B 117 ;

no pits. products of corrosion appear on surface, but scrape off w/ knife. Inside looks much worse than outside. Some rust staining from stainless parts.

No evidence of corrosion at Rubber/Alum interface. Rubber is OK



*Charles C. Kawin*  
QA INSPECTOR

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P. O. #  
DESCR 1000 HR SALT SPRAY PER  
ASTM B117

REPORT DATE: 03/31/95

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LAB NO: 0214-012 / 47

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JOB NO:

AC *K330 EL Bow*  
*356-T6 Alum*  
*.002 Hard Coat Nickel Acetate seal*  
*Standard Amer Red Powder coat*

SALT SPRAY TEST

AFTER 1000 HOURS OF CONTINUOUS SALT SPRAY EXPOSURE PER ASTM B117 THERE WAS VISIBLE EVIDENCE OF LIGHT WHITE CORROSION PRODUCTS ON THE UNPAINTED SURFACES. THIS CORROSION WAS DETECTED AFTER 27 DAYS (648 HOURS).

TEST METHODS: ASTM B 117 ;

*EXTERIOR + interior Powder coated Surfaces are excellent.*  
*There are a number of white spots on the exposed machined surfaces that have been Hard coated, but*



*of corrosion at or peeling back in Photo at bend*

*Charles C. Kawin*  
\_\_\_\_\_  
QA INSPECTOR

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DESCR 5/19/95  
PER ASTM B117

REPORT DATE: 07/07/95

LAB NO: 0522-073 / 63

JOB NO:

SAMPLE AB X712 XF 2 inlet Base  
HC .002 Nukel Acetate Seal  
H 09139/PA 9202/9 Polyester PC (Amer Red)

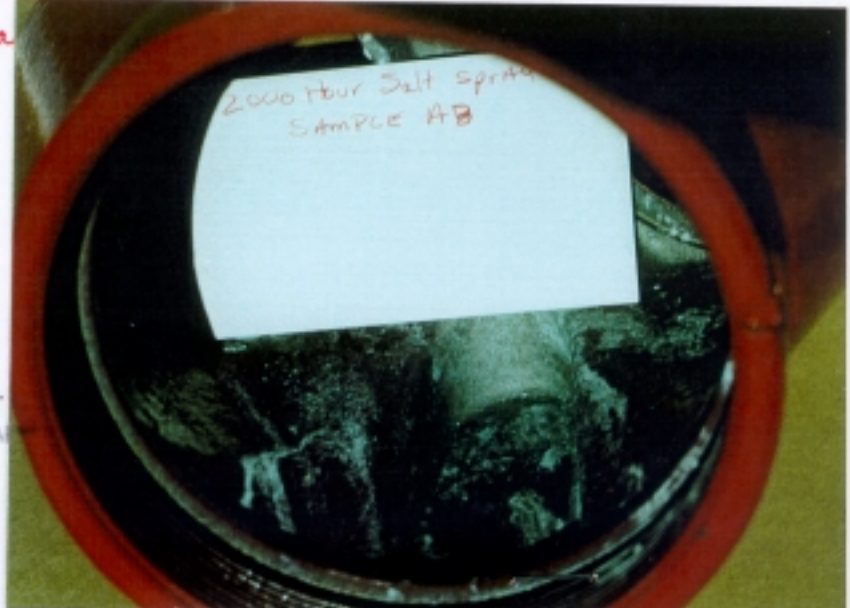
356 T6 2000 HR SALT SPRAY

THIS SAMPLE EXHIBITED LIGHT WHITE CORROSION PRODUCTS PRIOR TO THIS SALT SPRAY EXPOSURE. AFTER 648 HOURS OF EXPOSURE SOME MODERATE AREAS OF WHITE CORROSION WERE VISIBLE ON THE INSIDE SURFACES. A FEW AREAS OF WHITE CORROSION PRODUCTS ARE ALSO VISILBE ON THE PAINTED SURFACES.

TEST METHODS: ASTM B 117 ;

*Very little change on inside.  
The area that was scratched shows no  
corrosion. There is corrosion at  
The HSBG and shoulder of inlet on OD.  
These surfaces were powder  
coated. The rest of  
exterior surface  
goal as new*

*Corrosion*



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DESCR 1000 HR SALT SPRAY PER  
ASTM B117

REPORT DATE: 03/31/95

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LAB NO: 0214-012 / 30

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JOB NO:

N1 *83600 Bronze Sample*  
*Base*  
*X110 casting Sample in bronze*  
SALT SPRAY TEST

AFTER 1000 HOURS OF CONTINUOUS SALT SPRAY EXPOSURE PER ASTM B117 THERE WAS EVIDENCE OF LIGHT TO MODERATE AMOUNTS OF GREEN CORROSION PRODUCTS ON THIS SPECIMEN. CORROSION BEGAN TO OCCUR AFTER 5 DAYS (120 HOURS).

TEST METHODS: ASTM B 117 ;

*OD worse than ID surface is nearly all Darkened and is about 25% green. No pitting evident.*



*B. Karhu*

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DESCR 1000 HR SALT SPRAY PER  
ASTM B117

REPORT DATE: 03/31/95

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LAB NO: 0214-012 / 31

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JOB NO:

N2 *642 Bronze Sample*

*Bone*

*Bone Stock Coupon*

SALT SPRAY TEST

AFTER 1000 HOURS OF CONTINUOUS SALT SPRAY EXPOSURE PER ASTM B117 THERE WAS A LIGHT TO MODERATE AMOUNT OF GREEN AND WHITE CORROSION PRODUCTS ON THE SURFACES OF THIS SAMPLE. CORROSION PRODUCTS WERE DETECTED AFTER 7 DAYS (168 HOURS).

TEST METHODS: ASTM B 117 ;

*Sample has dark areas + green streaks.  
One can tell it is still Bronze. looks much  
better than 83600 Bronze*



*1000 HOUR SALT SPRAY  
SAMPLE N2  
642 Bronze*

*Charles C. Kawin*

GA INSPECTOR

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P. O. #  
DESCR 1000 HR SALT SPRAY PER  
ASTM B117

REPORT DATE: 03/31/95

LAB NO: 0214-012 / 32

JOB NO:

N3 *Venturi casting*  
*955 Bronze*  
*Base*

SALT SPRAY TEST

AFTER 1000 HOURS OF CONTINUOUS SALT SPRAY EXPOSURE PER ASTM B117  
THERE WAS HEAVY AMOUNTS OF GREEN CORROSION PRODUCTS PRESENT.  
THERE WAS ALSO A MODERATE AMOUNT OF RED CORROSION PRODUCTS.  
CORROSION BEGAN TO OCCUR AFTER 7 DAYS (168 HOURS)

TEST METHODS: ASTM B 117 ;

*mostly green & thick Build up on <sup>OD</sup> threads. I D threads look*  
*flapped holes*  
*flapped and no pitting evident. Metal still sound under flaps*



*1000 HOUR SALT SPRAY*  
*955 Bronze*  
*SAMPLE N3*

*Charles Silber*  
QA INSPECTOR

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CHARLES C. KAWIN CO.