

PROTOFLIGHT ENVIRONMENTS

FOR

HYDRAZINE TANK ASSEMBLY

ATK P/N 80353-1

80353-1 was subjected to the following protoflight tests:

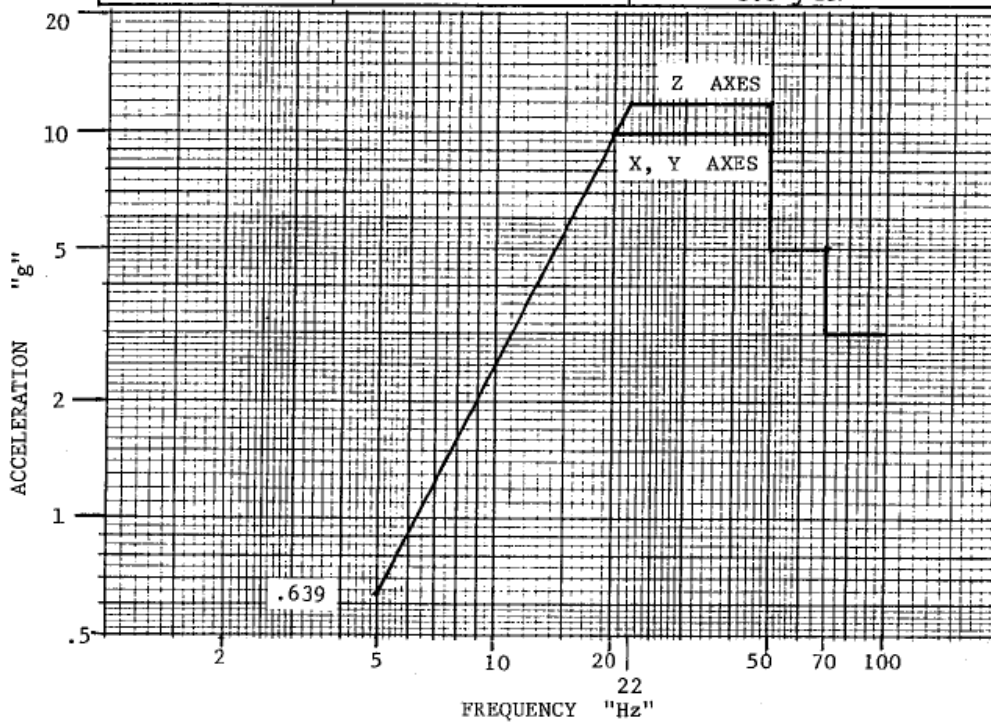
<u>Test Sequence</u>	<u>Test Description</u>	<u>Pa</u>
1	Preliminary Inspection of Product	
2	Radiographic & Penetrant Inspection	
3	Volumetric Capacity Test	
4	Proof Pressure Test	
5	Post-Proof Volumetric Expansion	
6	Cryogenic Proof Pressure Test	
7	Post-Cryogenic Proof Dimensional Inspection	
8	Environmental Tests	
9	External Leakage Test	
10	Expulsion Pressure Differential	
11	Weld Quality Inspection	
12	Weight	
13	Cleanliness Verification	
14	Preparation For Delivery	

Environmental Test

Sine Vibration (Wet)

Tank is loaded with 93, ± 1 lbs of D.I. water and pressurized to 350, ± 5 psig with gaseous nitrogen.

SINE VIBRATION TEST REQUIREMENTS		
MODE	FREQUENCY Hz	ACCELERATION
THRUST (Z-AXIS)	5.0 - 22	0.5 INCH D.A.
	22 - 50	12.0 g 0-PK
	50 - 70	5.0 g 0-PK
	70 - 100	3.0 g 0-PK
LATERAL (X, Y-AXES)	5.0 - 20	0.5 INCH D.A.
	20 - 50	10 g PK
	50 - 70	5.0 g PK
	70 - 100	3.0 g PK



Random Vibration (Wet)

Tank is loaded with 93, ±1 lbs of D.I. water and pressurized to 350, ± 5 psig with gaseous nitrogen.

RANDOM VIBRATION TEST REQUIREMENTS		
MODE	FREQUENCY Hz	POWER SPECTRAL DENSITY
ALL AXES X, Y, & Z	20 - 2000	0.10 g ² /Hz
	OVERALL	14.1 grms

