

## CALIBRATION CERTIFICATE

### IMPULSE FORCE HAMMER

Model No. 086C03 Customer \_\_\_\_\_

Serial No. 8133 \_\_\_\_\_

Range 0 - 500 lb.

Invoice No. \_\_\_\_\_

Linearity error <1.0 %

Discharge Time Constant 2000 s

Invoice Date \_\_\_\_\_

Output Impedance 100 ohms

Output Bias 9.97 volts

Traceable NIST project No. 822/253168 in compliance with MIL-STD 45662A.

Technician Chuck DiMaggio Date 05-24-1994

Accelerometer Model No. 302A07 Serial No. 7607 Sensitivity 9.67 mV/g

Pendulous Test Mass 1.05 lbs ( 476.0 grams) including accelerometer.

#### HAMMER SENSITIVITY:

Hammer Configuration	Tip	PLASTIC/VINYL	PLASTIC/VINYL	
	Extender	NONE	STEEL	
	mV/lb	9.58	10.2	
Hammer Sensitivity (S <sub>f</sub> )	(mV/N)	2.15	2.30	

Above data is valid for all supplied tips.

#### NOTES:

- To convert a measurement (typically mV) to engineering units (lbs or g's), each channel must be divided by its sensitivity (mV/lb or mV/g).
- Each specific hammer configuration has a different sensitivity. The difference is a constant percentage which depends on the mass of the cap and tip assembly relative to the total mass of the head. Calibrating the specific hammer structure being used automatically compensates for mass effects.
- PCB hammers 086B02, B03 and B04 may be calibrated by mounting the Model 302A07 Accelerometer on the back of the hammer head, impacting a convenient surface and measuring the output of both hammer (V<sub>f</sub>) and accelerometer (V<sub>a</sub>):

$$\text{Hammer sensitivity } S_f = S_a \left( \frac{V_f}{V_a} \right) \frac{1}{m} \text{ where 'm' is the Effective Mass and 'S}_a\text{' is Accelerometer Sensitivity.}$$

Effective mass 0.265 with 302A07 attached and vinyl-capped plastic tip.