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AFRPL ltr, 15 May 1986

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AFRPL-TR-74-47 ✓



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SIMULATED AIR LAUNCH ENVIRONMENT

FINAL REPORT FOR PERIOD SEPT. 72 THROUGH MAY 74

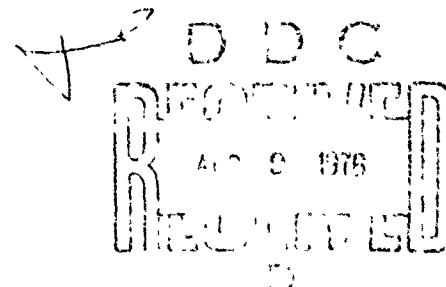
D. R. PRITTS, ET AL

THIOKOL CORPORATION
HUNTSVILLE DIVISION
HUNTSVILLE, ALABAMA 35807

OCTOBER 1974

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VOLUME II: AEROHEAT DATA SUMMARY



AIR FORCE ROCKET PROPULSION LABORATORY
DIRECTOR OF SCIENCE AND TECHNOLOGY
AIR FORCE SYSTEMS COMMAND
EDWARDS, CALIFORNIA 93523

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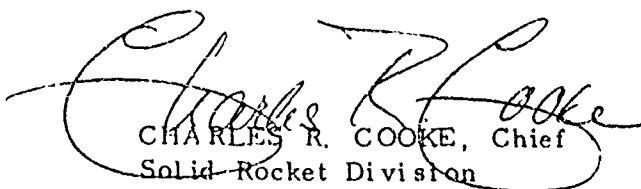
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FOREWORD

This program was sponsored by AFRPL. Dr. J. L. Trout, AFRPL/MKPB, was the Program Monitor. Mr. G. F. Mangum was Project Director and Mr. D. B. Turner was Program Manager for the Thiokol Corporation. Mr. O. R. Pritts was Principal Investigator. Significant contributions were made by Mr. J. M. Nelson in Stress Analysis and Physical Properties Testing, Mr. G. A. Collingwood in Stress Analysis, and Mr. J. D. Marlin, III who acted as Test Engineer. The contract was performed over the period September 1972 to May 1974.

This report has been read and is approved.


CHARLES R. COOKE, Chief
Solid Rocket Division

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REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM	
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18. SUPPLEMENTARY NOTES			
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Air Launch Environment, Aeroheat Analysis, THVINC, Uninstrumented Motor Test, Instrumented Motor Test, Gage Calibration, Failure Criteria, Propellant Characteristics, Temperature			
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) A program was conducted in which the response and failure characteristics of solid propellant rocket motors when subjected to transient thermal conditions representing air launch operational environments were recorded and analyzed. Future Air Force mission profiles were used. The Maverick motor, AGM-65A, was used as a test bed on the program.			

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INTRODUCTION

This volume contains the data summary of the tests conducted on the three instrumented SALE motors. The volume is divided into three separate sections: Section A, IM #2 Data Summary; Section B, IM #3 Data Summary; and Section C, IM #1 Data Summary. A test summary, a motor drawing showing the location of the gages, and data from the tests conducted on the instrumented motor are presented in each section for the three respective motors.

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SECTION A

SALE IM #2 DATA SUMMARY

CONTENTS

Motor Drawing

Test History

Temperature Profile Histories - Tests One through Six

Head End Normal Stress Response - Tests One through Six

Mid Motor Normal Stress Response - Tests One through Six

Aft Motor Normal Stress Response - Tests One through Six

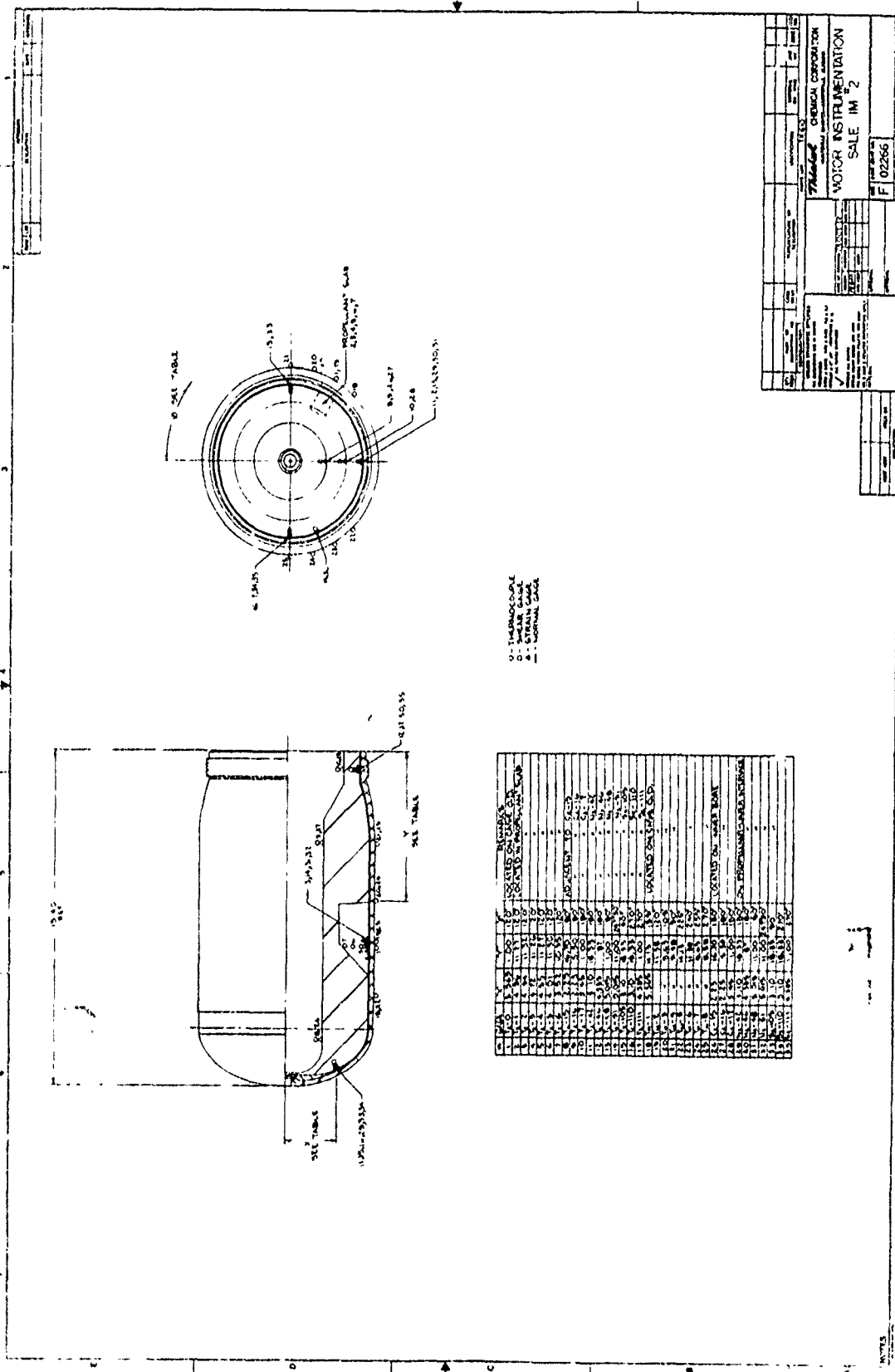
Head End Stress Response (Shear Gages) - Tests One through Six

Aft End Shear Stress Response (Shear Gages) - Tests One through Six

Bore Strain Results (Clip Gages) - Tests One through Six

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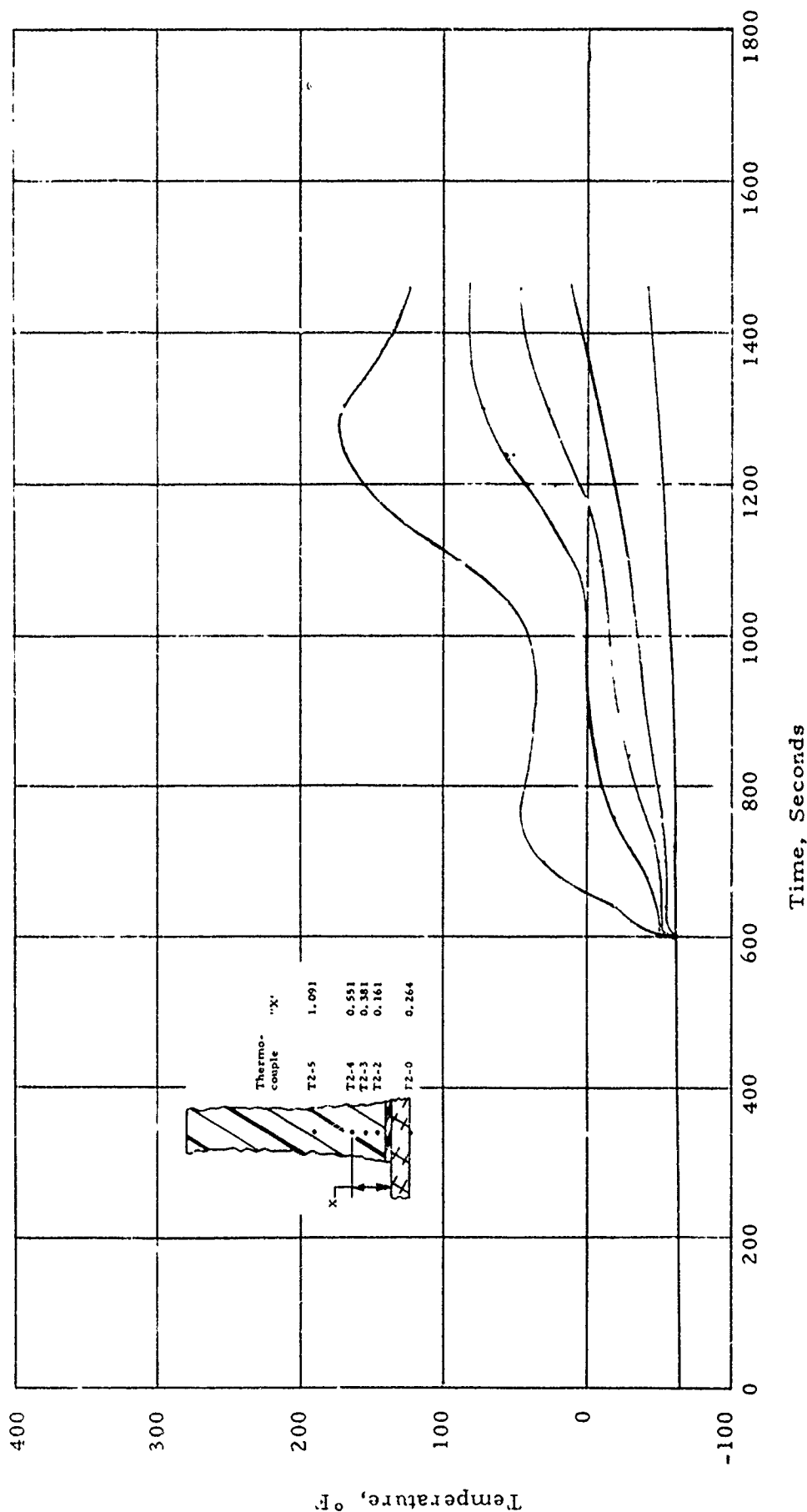
TEST HISTORY OF IM #2

<u>Test No.</u>	<u>Date</u>	<u>Aeroheat Mission</u>	<u>Initial Motor Temperature, °F</u>
A-1	73 Aug 03	DMP-3	-65
A-2	73 Aug 06	DMP-3	-65
A-3	73 Aug 07	SFPI	-65
A-4	73 Aug 08	SFPI	-65
A-5	73 Aug 09	HSMH	-65
A-6	73 Aug 10	HSMH	-65
A-7	73 Aug 22	HSMH	80
A-8	73 Aug 24	HSMH	140
A-9	73 Aug 27	HSMH	0
A-10	73 Aug 28	SFPI	-40
A-11	73 Aug 29	SFPI	80
A-12	73 Aug 30	SFPI	-65
A-13	73 Aug 31	SFPI	80 → -40*
A-14	73 Sep 04	SFPI	80 → -40*
A-15	73 Sep 05	SFPI	140 → -40
A-16	73 Sep 06	SFPI	140 → -40
A-17	73 Sep 07	SFPI	-65
A-18	73 Sep 19	SFPI	-65
A-19	73 Sep 20	SFPI	-65
A-20	73 Oct 08	DMP-3	-65
A-21	73 Oct 10	HSMH	-65

*Motor equilibrated at 80°F, then rapidly cooled to case wall temperature of -40°F before aeroheating.

Motor
Test
Gage
Location

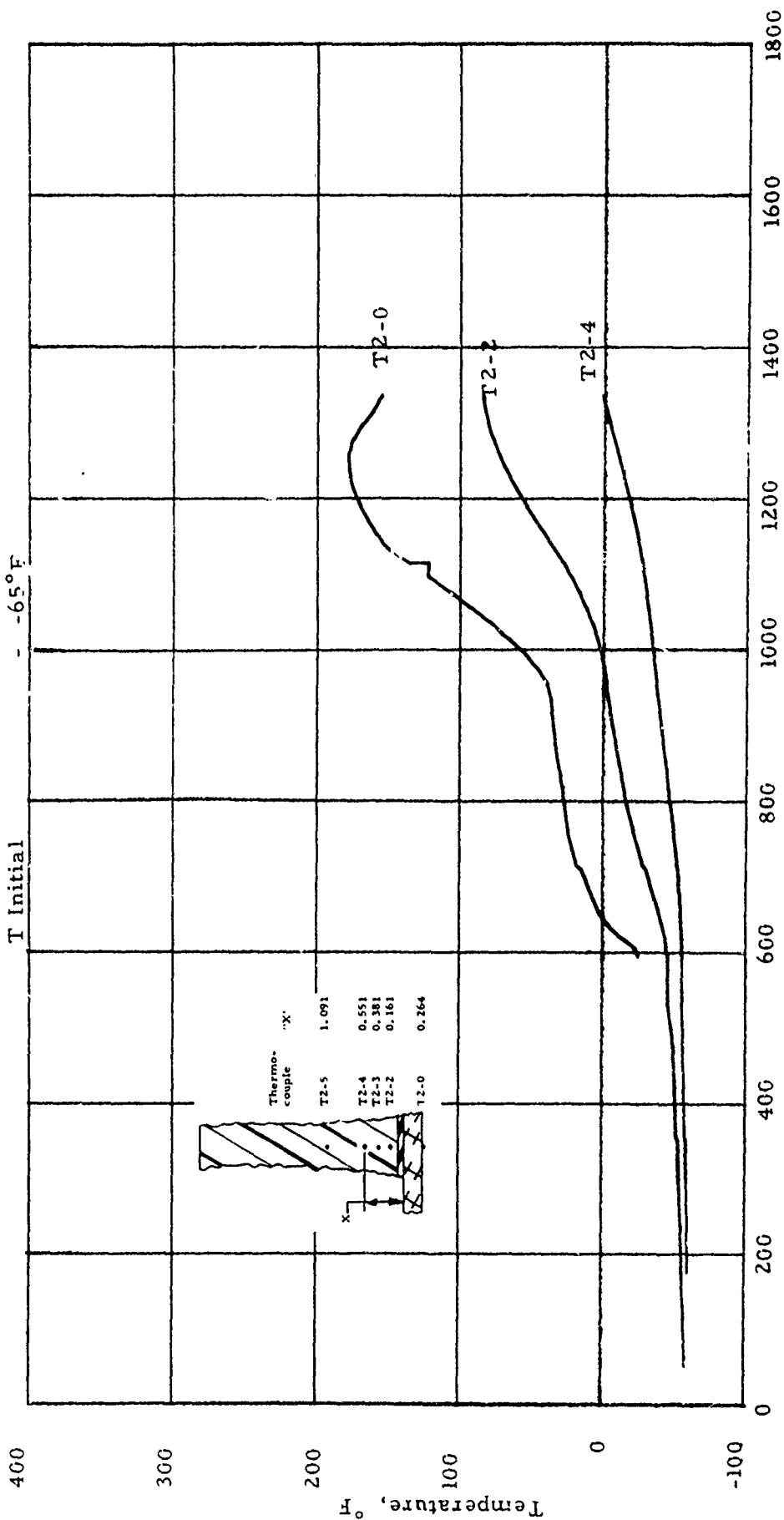
- IM #2
- A-1 (DMP-3)
- Temperature Profile
- Center



Temperature Profile Histories for Various Aerohead Loads. Test A-1

Motor
 Test
 Gage
 Location
 T Initial

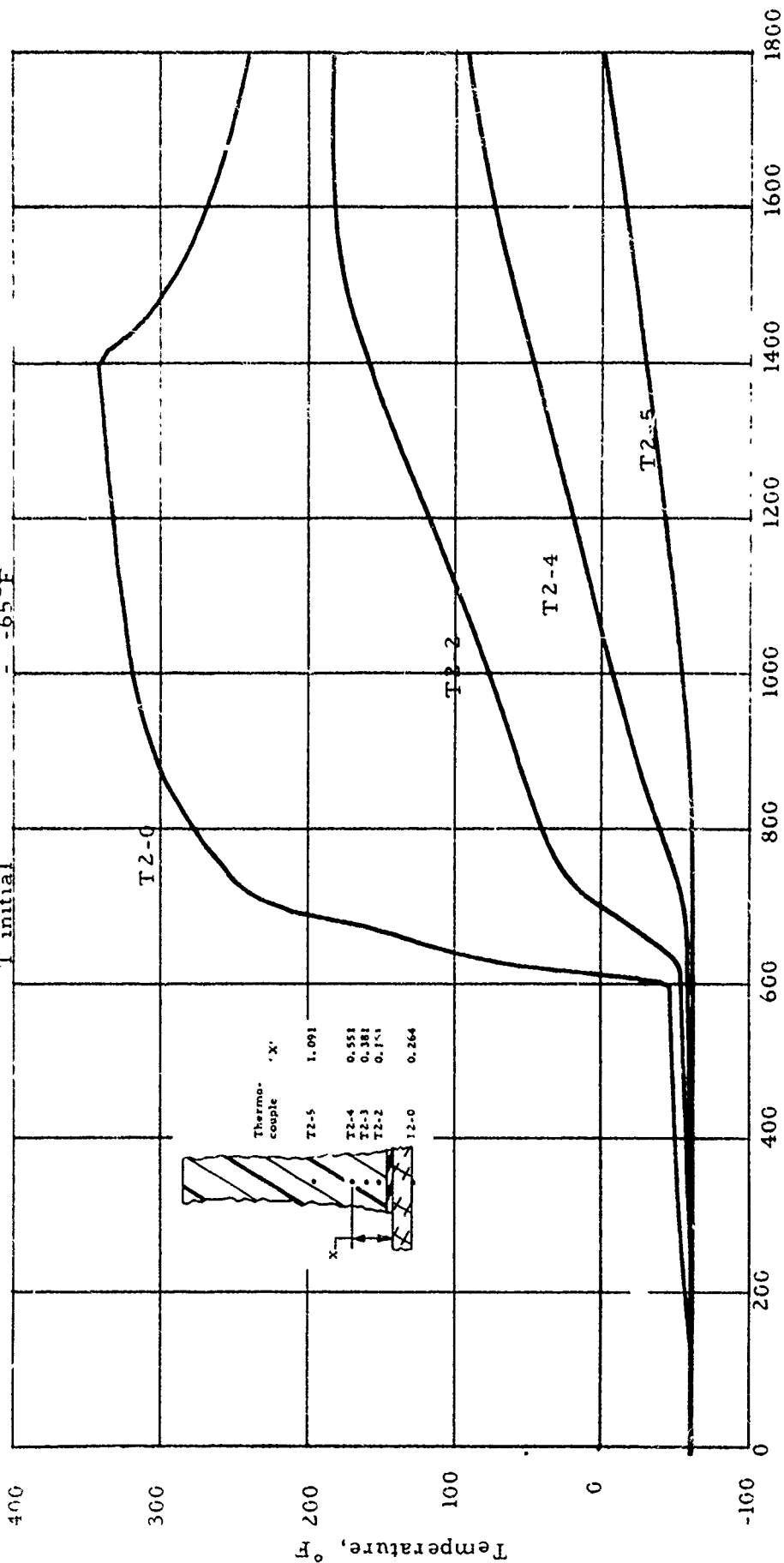
- IM #2
 - A-2 (DMP-3)
 - Temperature Profile
 - Center
 - -65°F



Temperature Profile Histories for Various Aeroheat Loads. Test A-2

Motor
Test
Gage
Location
T initial

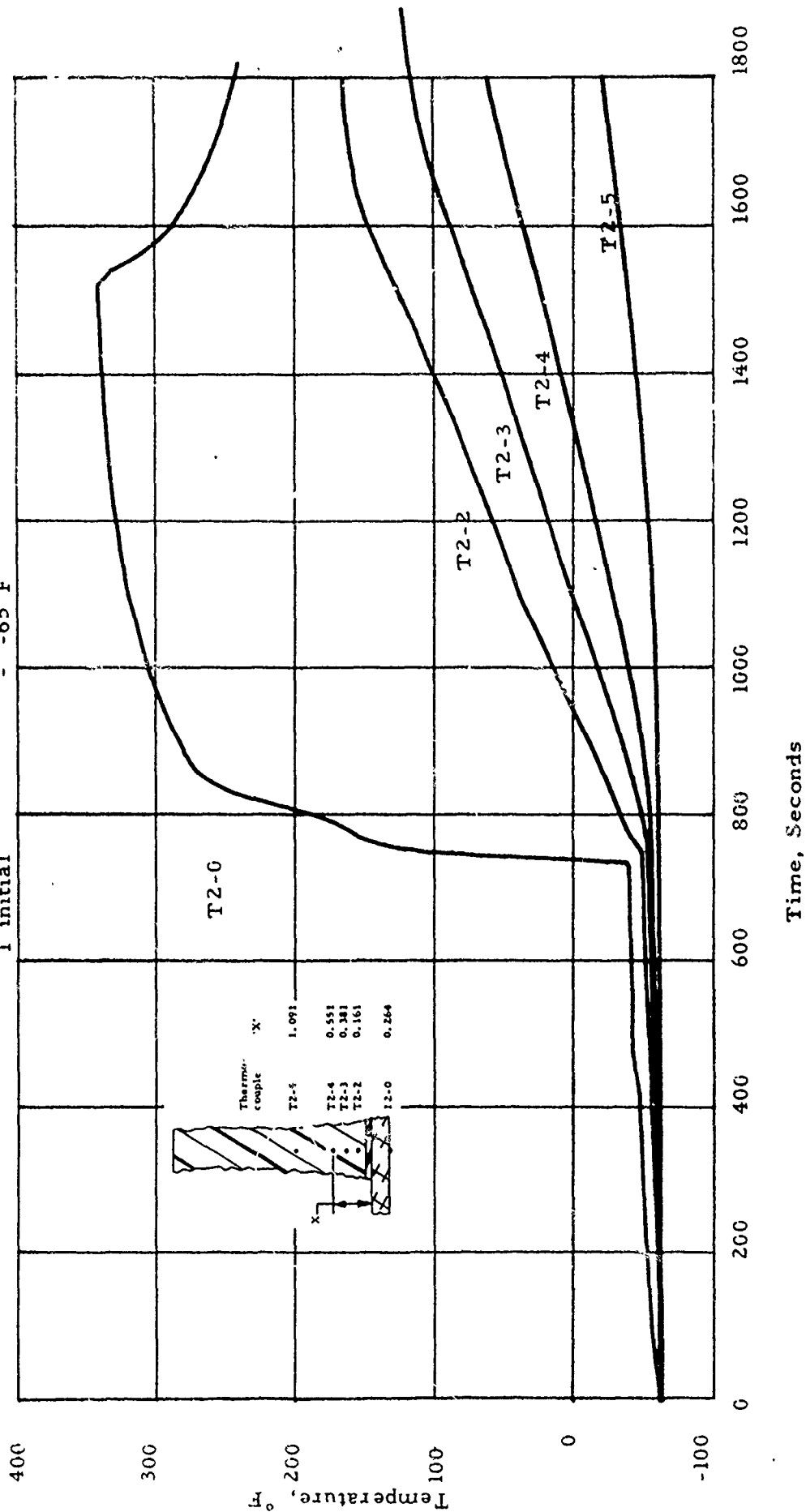
- IM #2
- A-3 (SFPI)
- Temperature Profile
- Center
- -65°F



Temperature Profile Histories for Various Aeroheat Loads. Test A-3

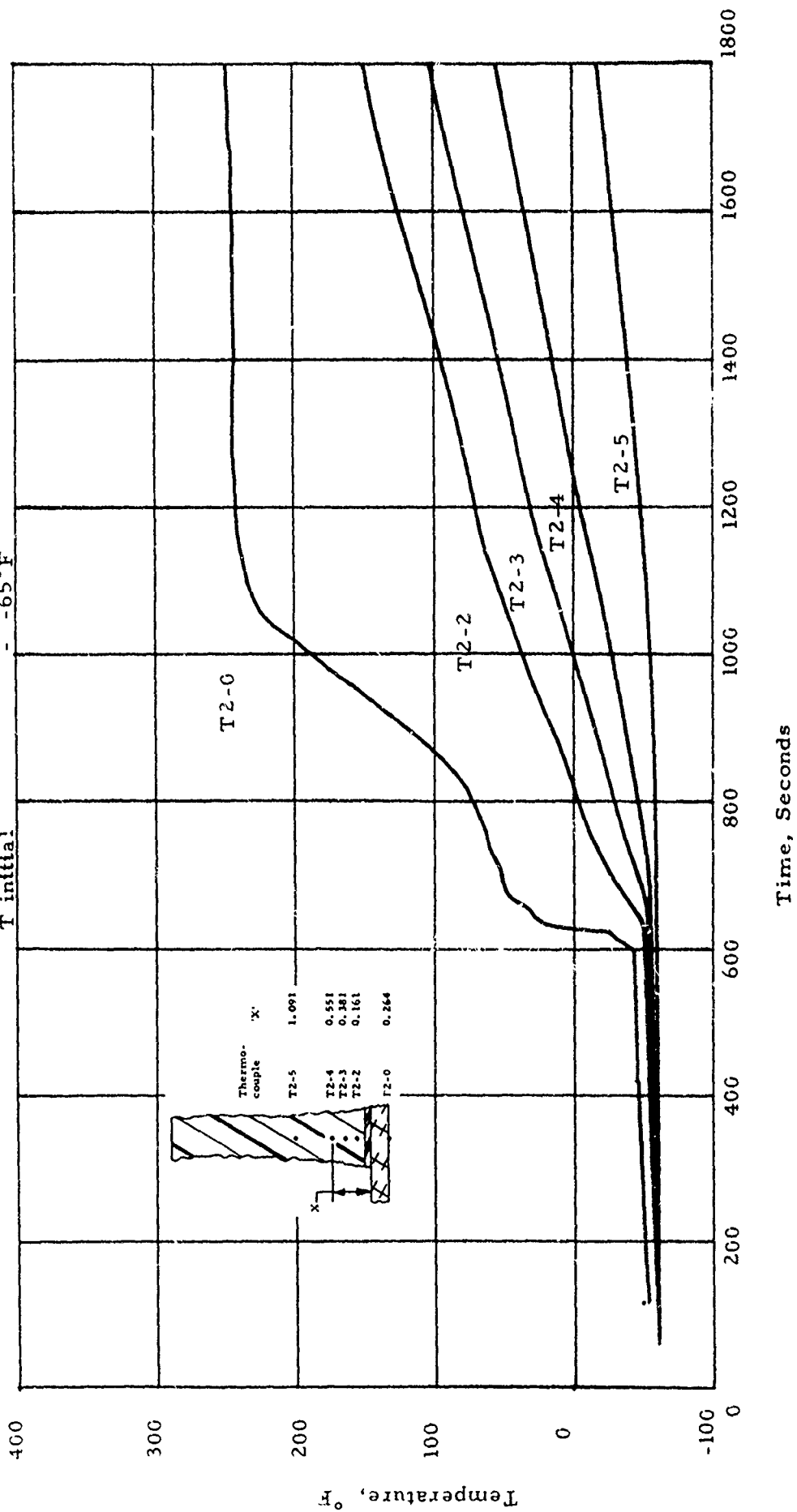
Motor
Test
Gage
Location
T initial

- IM #2
- A-4 (SFPI)
- Temperature Profile
- Center
- -65°F



Temperature Profile Histories for Various Aeroheat Loads. Test A-4

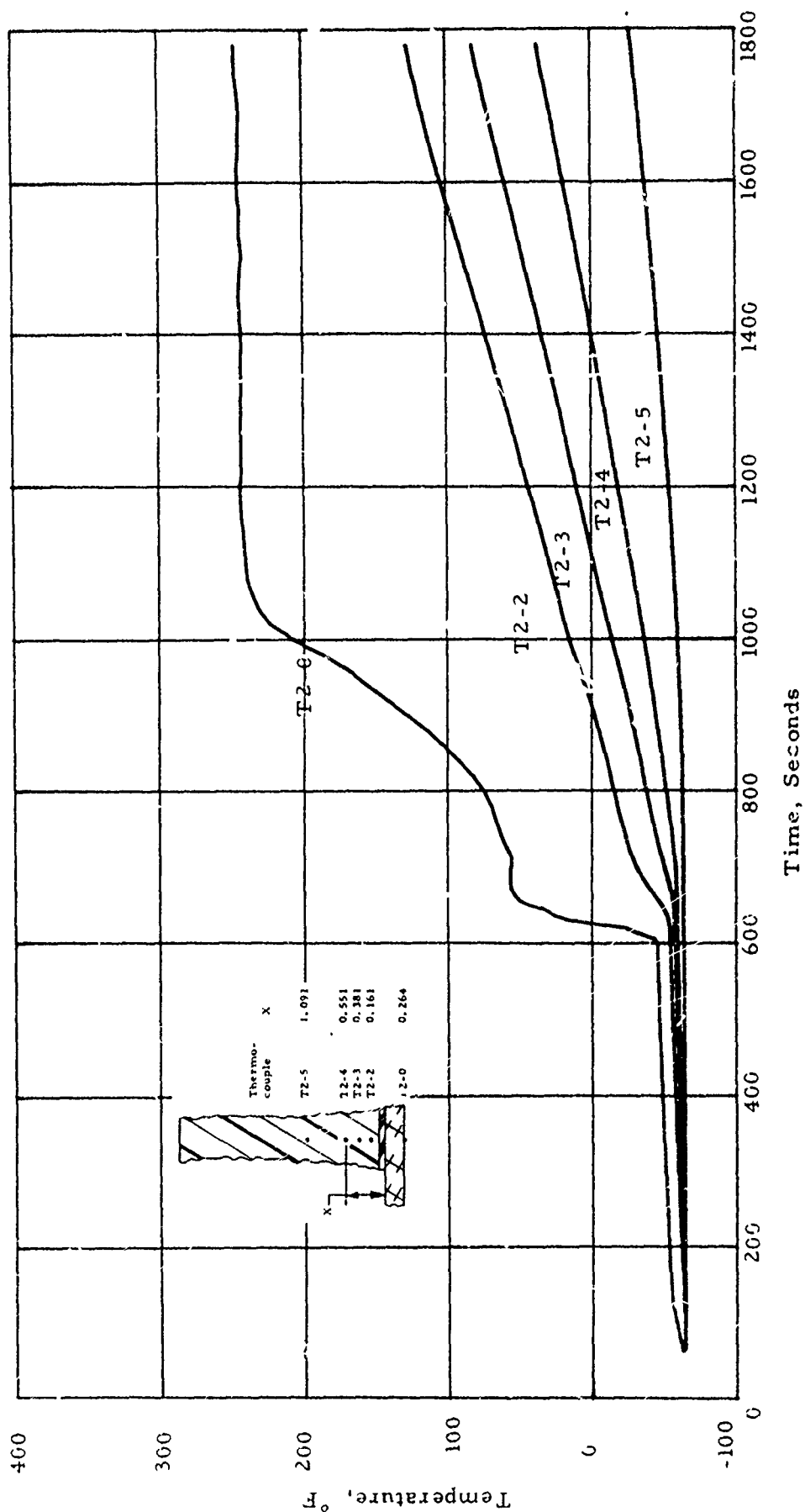
- IM #2
 - A5 (HSMH)
 - Temperature Profile
 - Center
 - -65°F
- Motor
Test
Gage
Location
T initial



Temperature Profile Histories for Various Aeroheat Loads. Test A-5

Motor
 Test
 Gage
 Location
 T initial

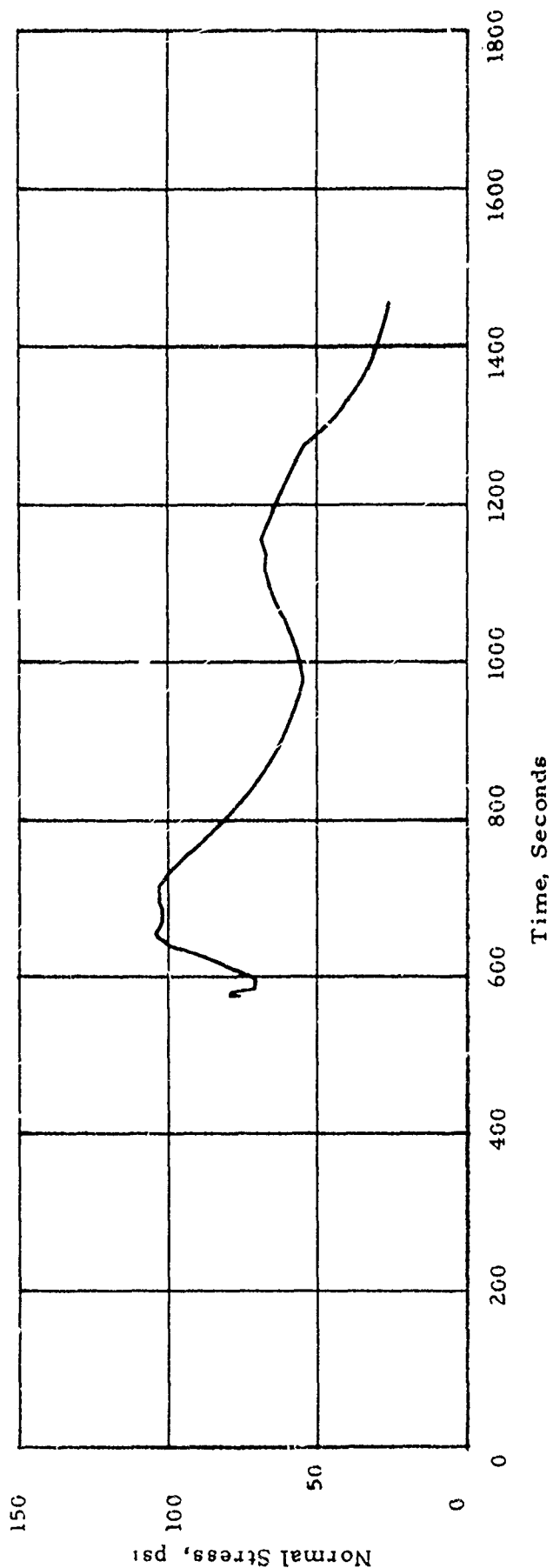
- IM #2
 - A-o (HSMH)
 - Temperature Profile
 - Center
 - -65°F



Temperature Profile Histories for Various Aeroheat Loads. Test A-6

Motor - IM #2
 Test - A-1 (DMP-3)
 Gage - N2-42
 Location - Fwd
 T initial - -65°F

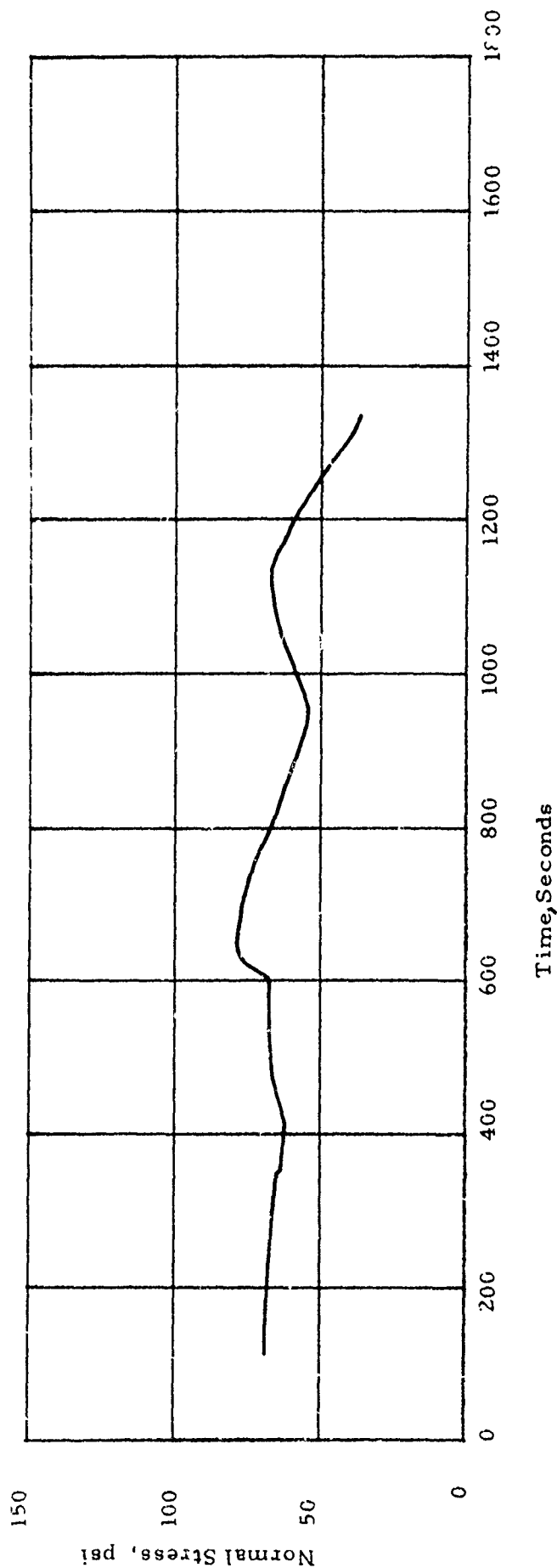
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of -65°F



Head end Normal Stress Response to Aeroheat Loads. Gage N2-42 Test A-1

Motor - IM #2
 Test - A-2 (DMP-3)
 Gage - N2-42
 Location - Fwd
 T initial - -65°F

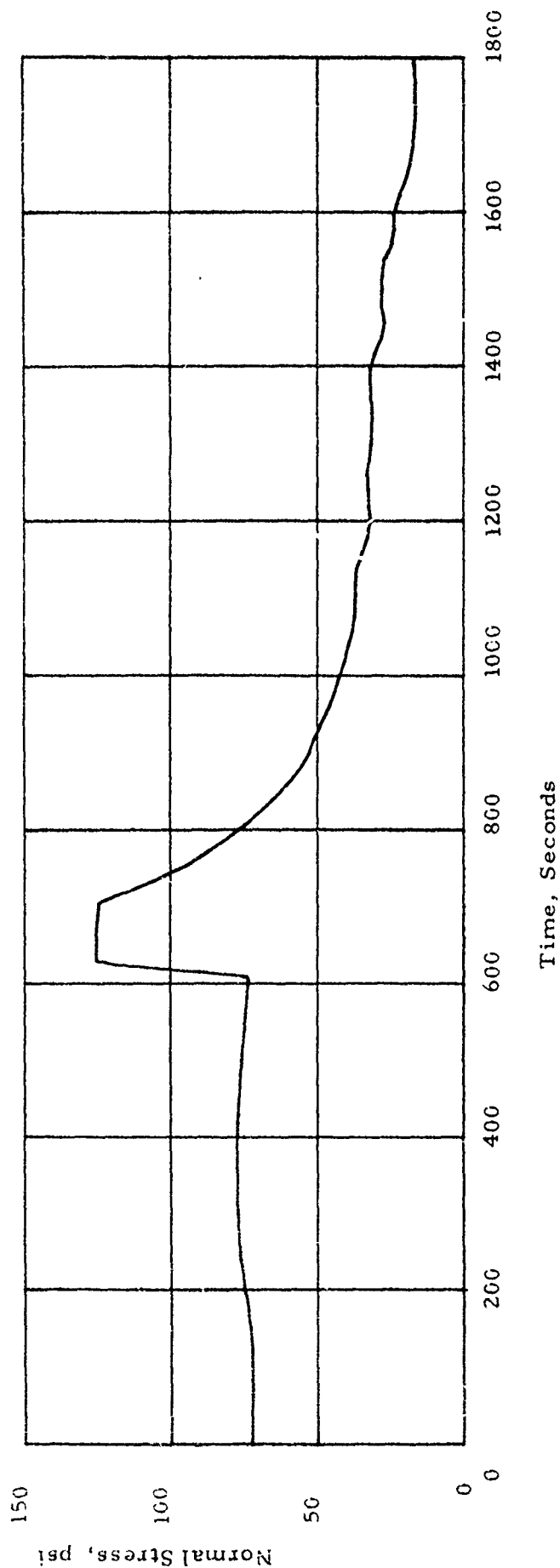
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F



Headwind Normal Stress Response to Aero heat Loads. Gage N2-42 Test A-2 (DMP-3)

Motor - IM #2
 Test - A-3 (SFPI)
 Gage - N2-42
 Location - Fwd
 T initial - -65°F

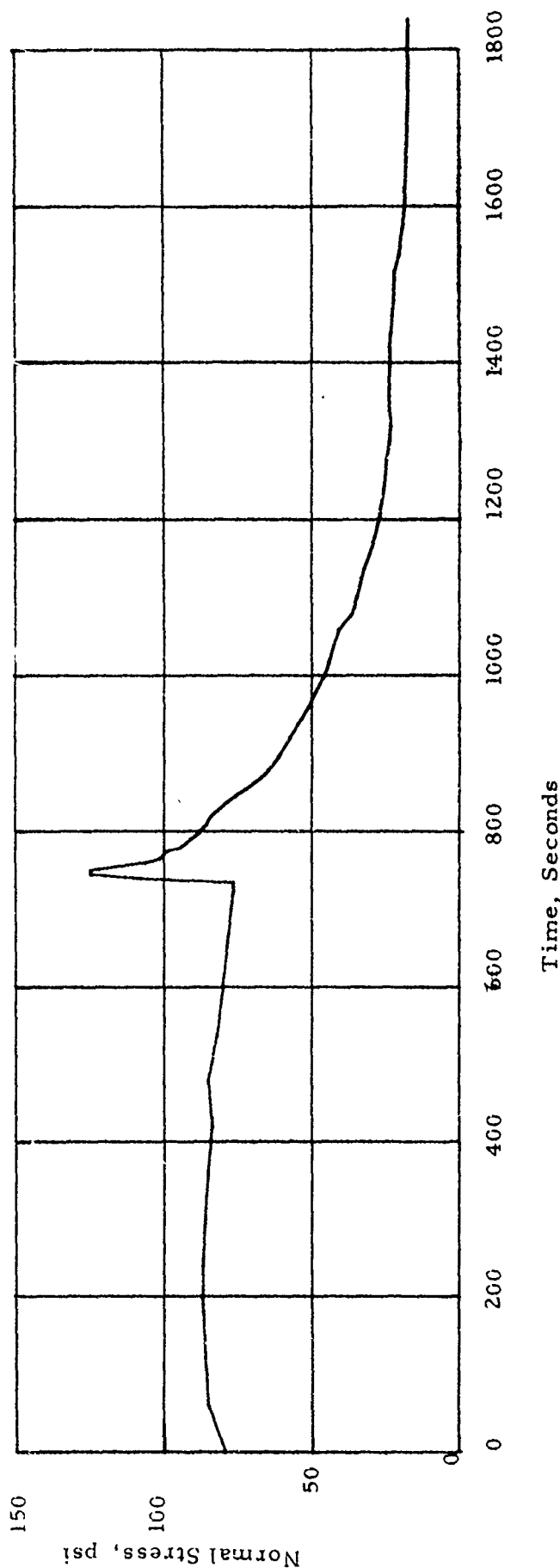
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Headend Normal Stress Response to Aeroheat loads. Gage N2-42 Test -A-3

Motor - IM #2
 Test - A-4 (SFPI)
 Gage - N2-42
 Location - Fwd
 T initial - -65°F

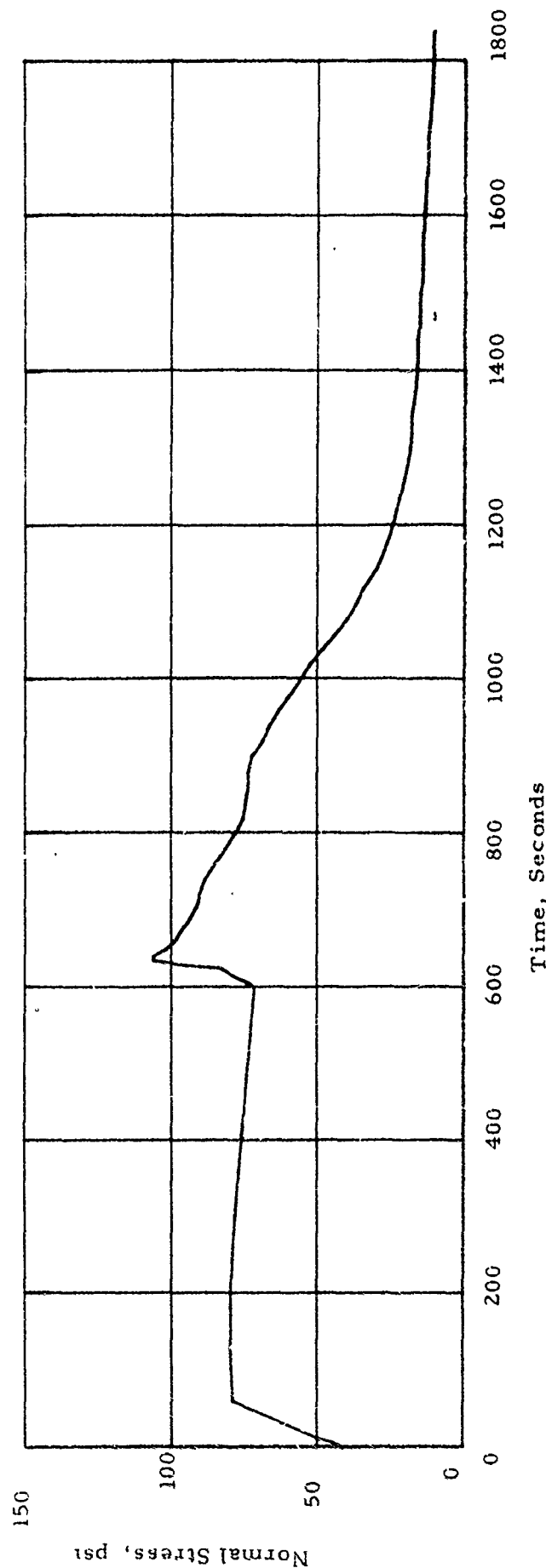
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F



Headend Normal Stress Response to Aeroheat Loads. Gage N2-42 Test A-4

Motor - IM #2
 Test - A-5 (HSMH)
 Gage - N2-42
 Location - Fwd
 T initial - -65°F

Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F

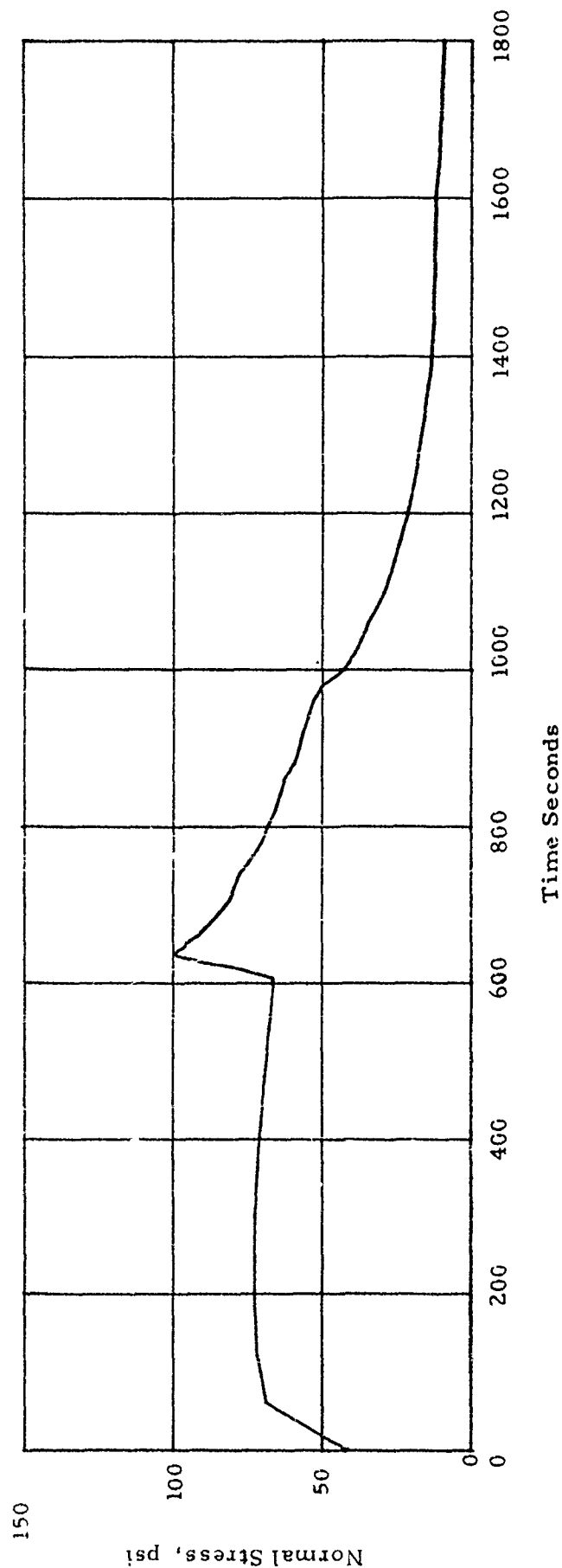


Headend Normal Response to Aeroheat Loads. Gage N2-42 Test A-5

Motor
 Test
 Gage
 Location
 T initial

- IM #2
 - A-6 (HSMH)
 - N2-42
 - Fwd
 - -65°F

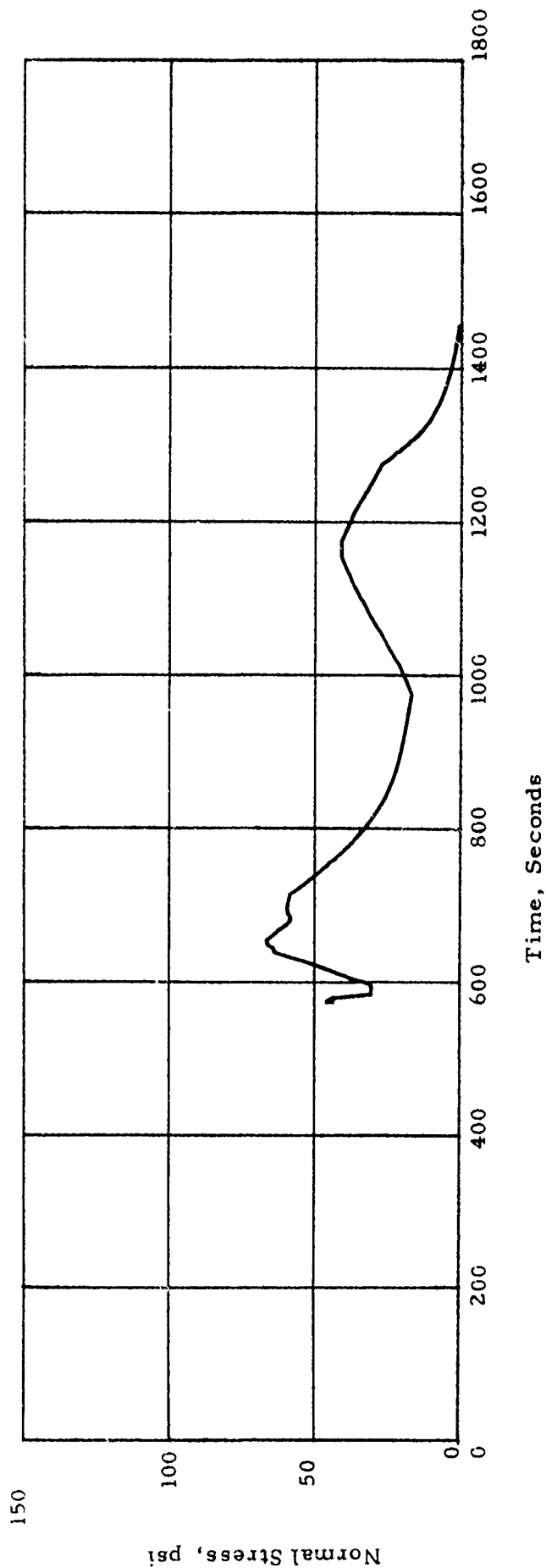
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Headend Normal Stress Response to Aeroheat Loads. Gage N2-42 Test A-6

Motor - IM #2
 Test - A-1 (DMP-3)
 Gage - N2-51
 Location - Center
 T initial - -65°F

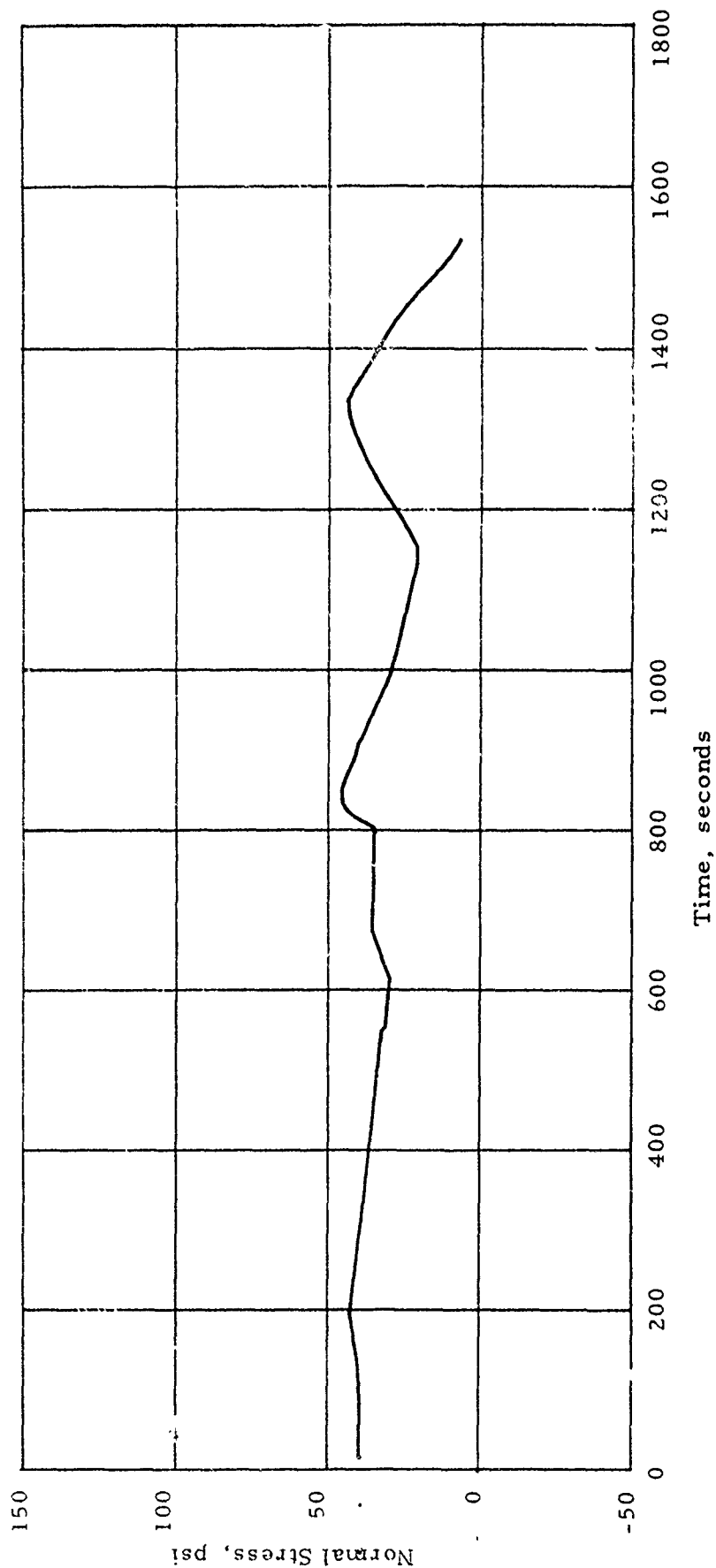
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Mid Motor Normal Stress Response to Aeroheat Loads. Gage N2-51 Test A-1

Motor	-	IM #2
Test	-	A-2 (DMP-3)
Gage	-	N2-51
Location	-	Fwd
T _{initial}	-	-65°F

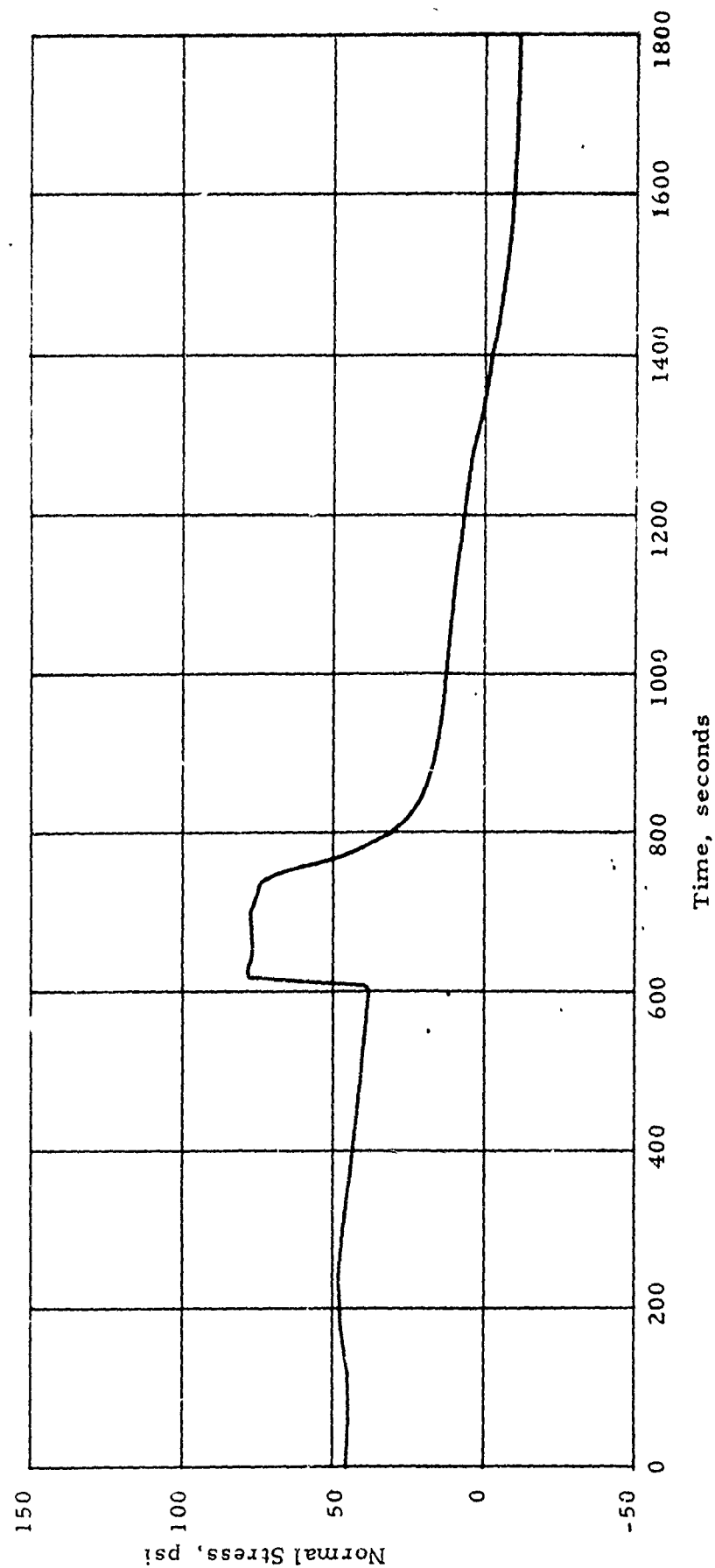
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Head End Normal Stress Response to Aeroheat Loads - Gage N2-51 Test A-2

Motor	-	IM #2
Test	-	A-3 (SFPI)
Gage	-	N2-51
Location	-	Fwd
T _{initial}	-	-65°F

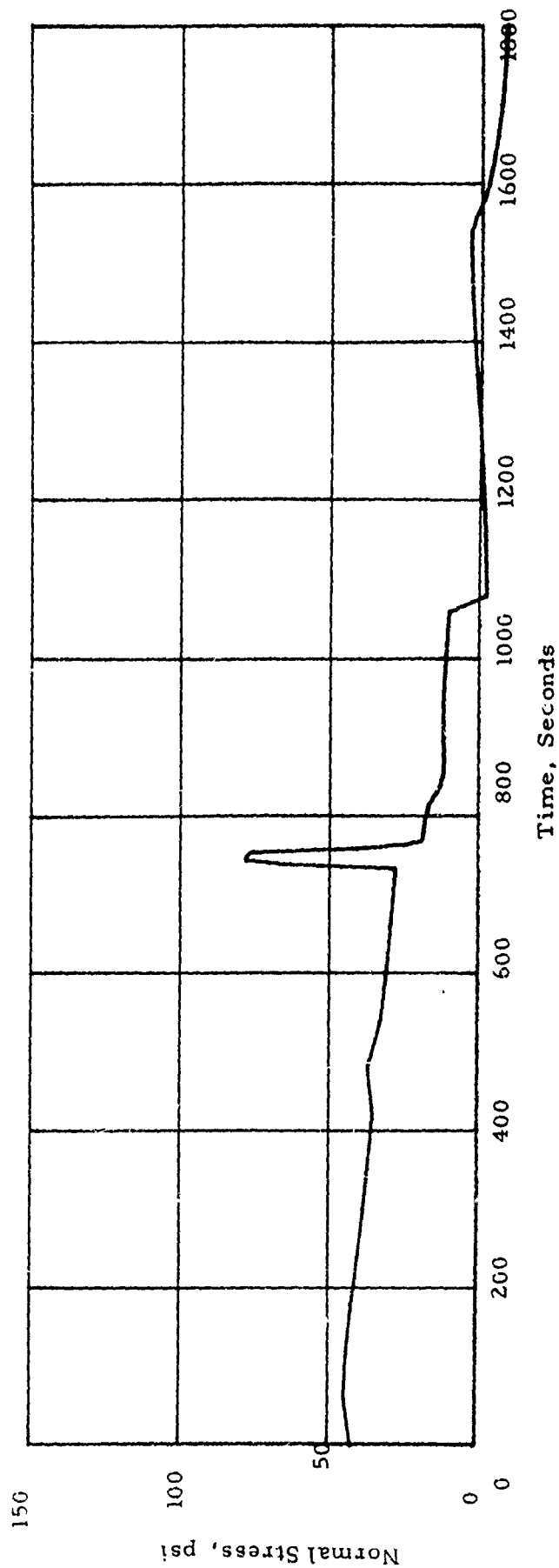
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F.



Head End Normal Stress Response to Aeroheat Loads - Gage N2-51 Test A-3

Motor - IM #2
 Test - A-4 (SFPI)
 Gage - N2-51
 Location - Center
 T initial - -65°F

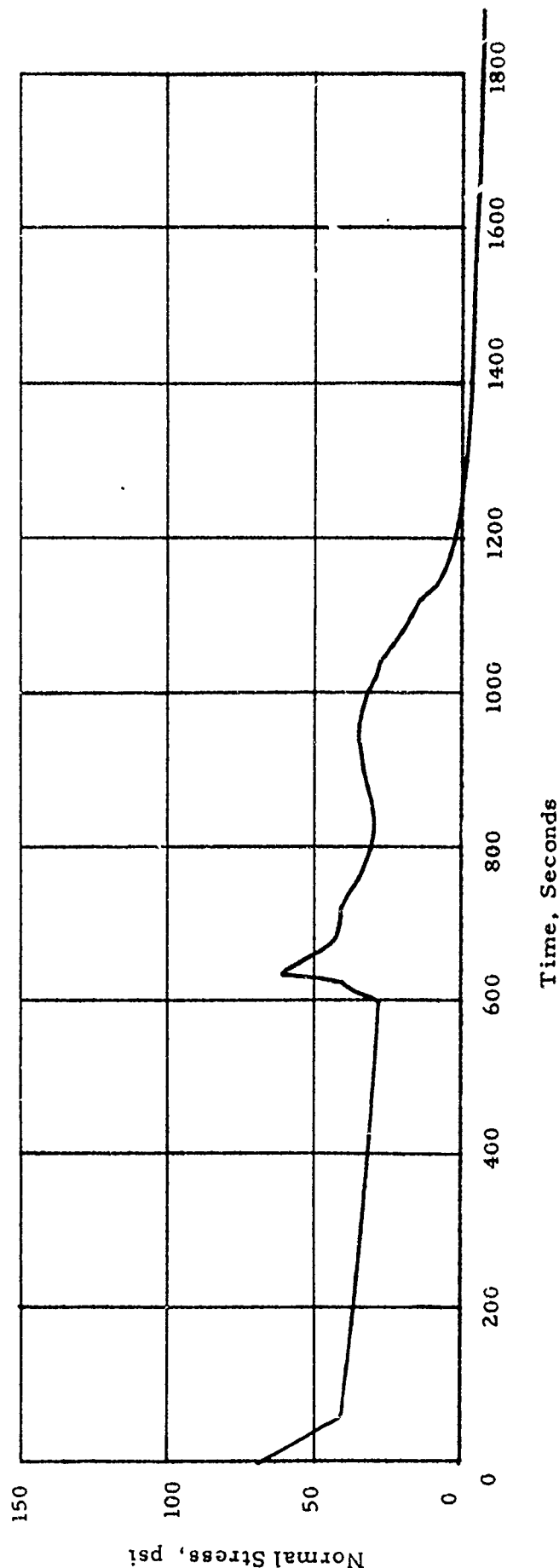
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F



Mid Motor Normal Stress Response to Aeroheat Loads. Gage N2-51 Test A-4

Motor - IM #2
 Test - A-5 (HSMF)
 Gage - N2-51
 Location - Center
 T initial - -65°F

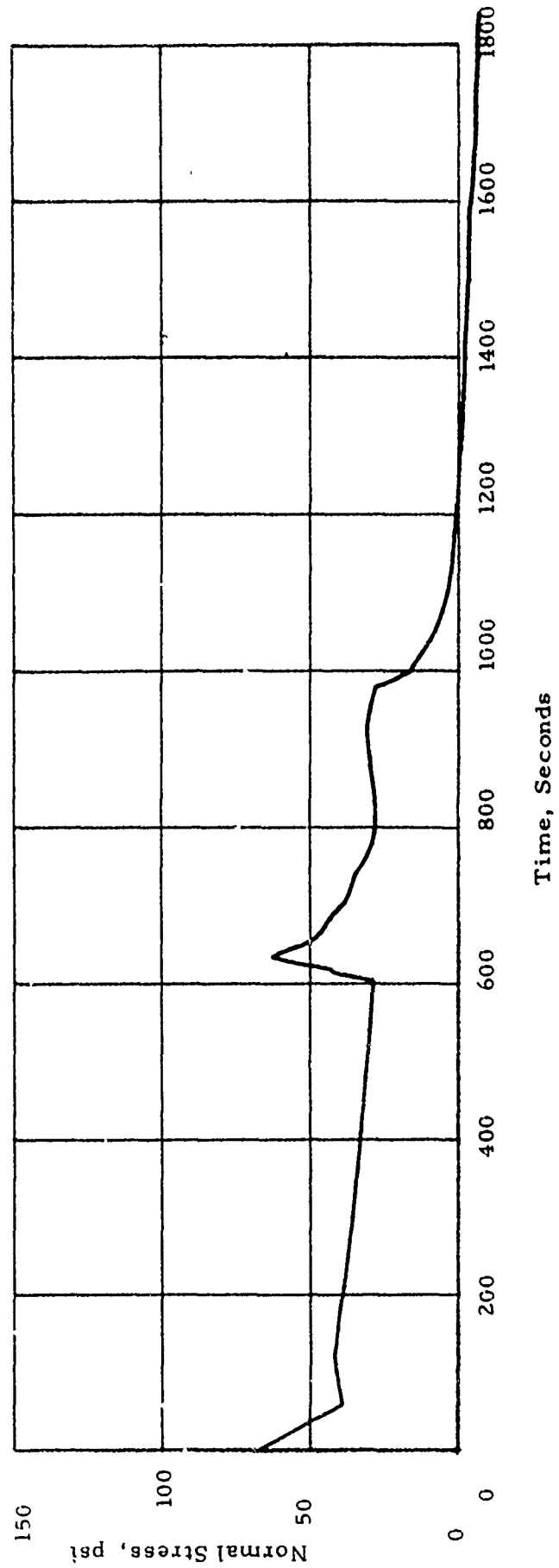
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F



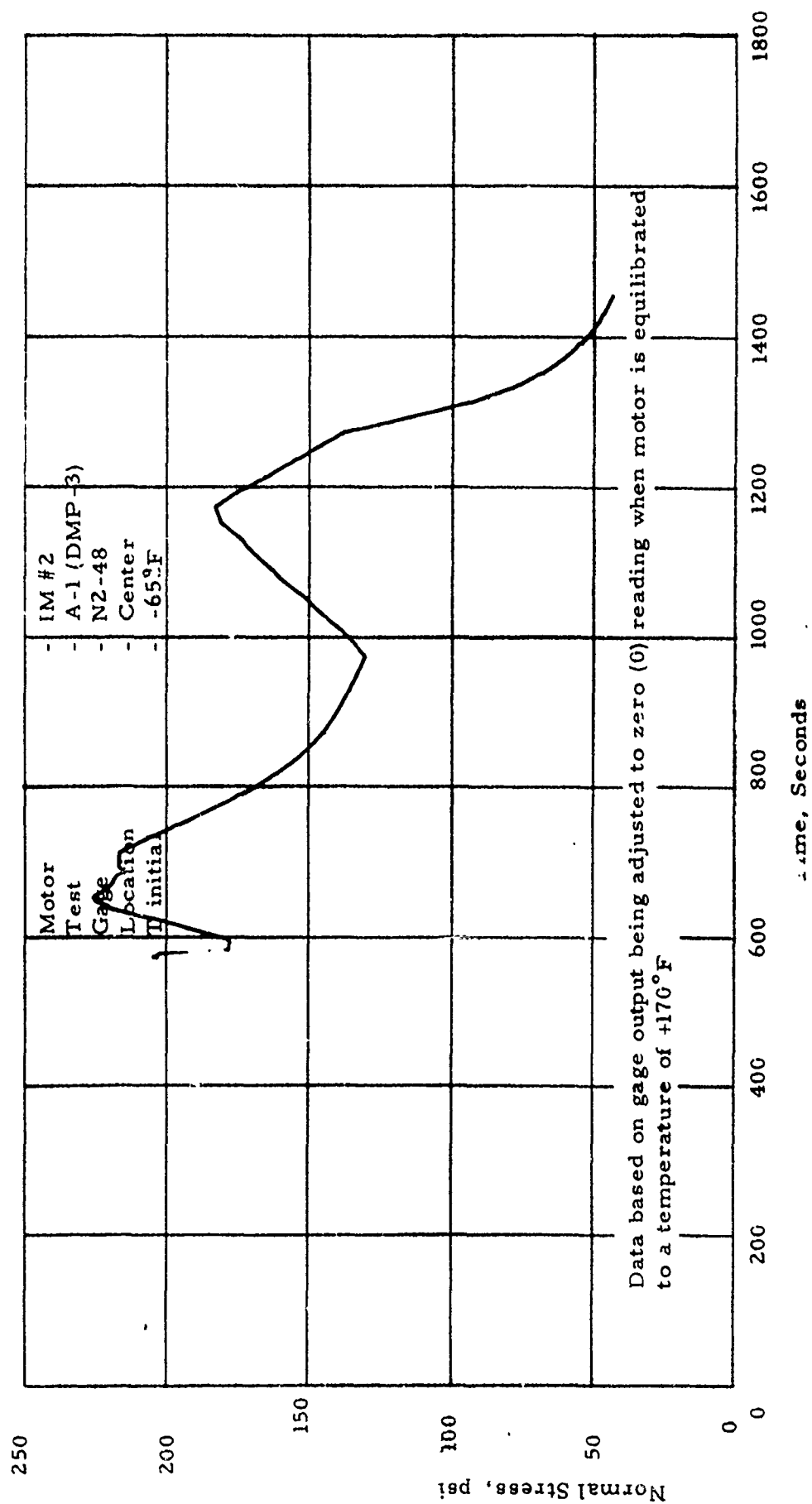
Mid Motor Normal Stress Response to Aeroheat Loads. Gage N2-51. Test A-5

- IM #2
- A-6 (HSMH)
- N2-51
- Center
- -65°F

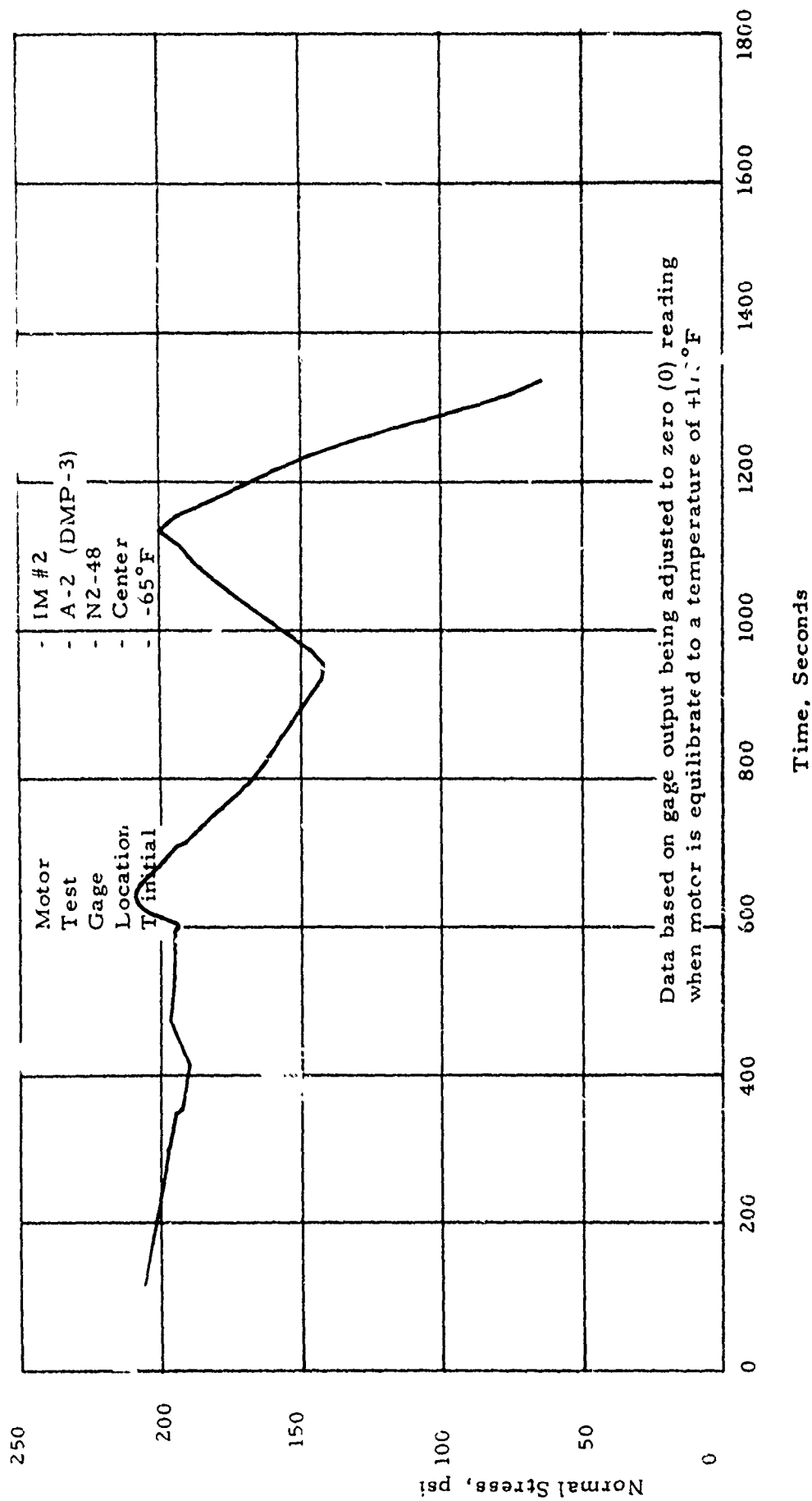
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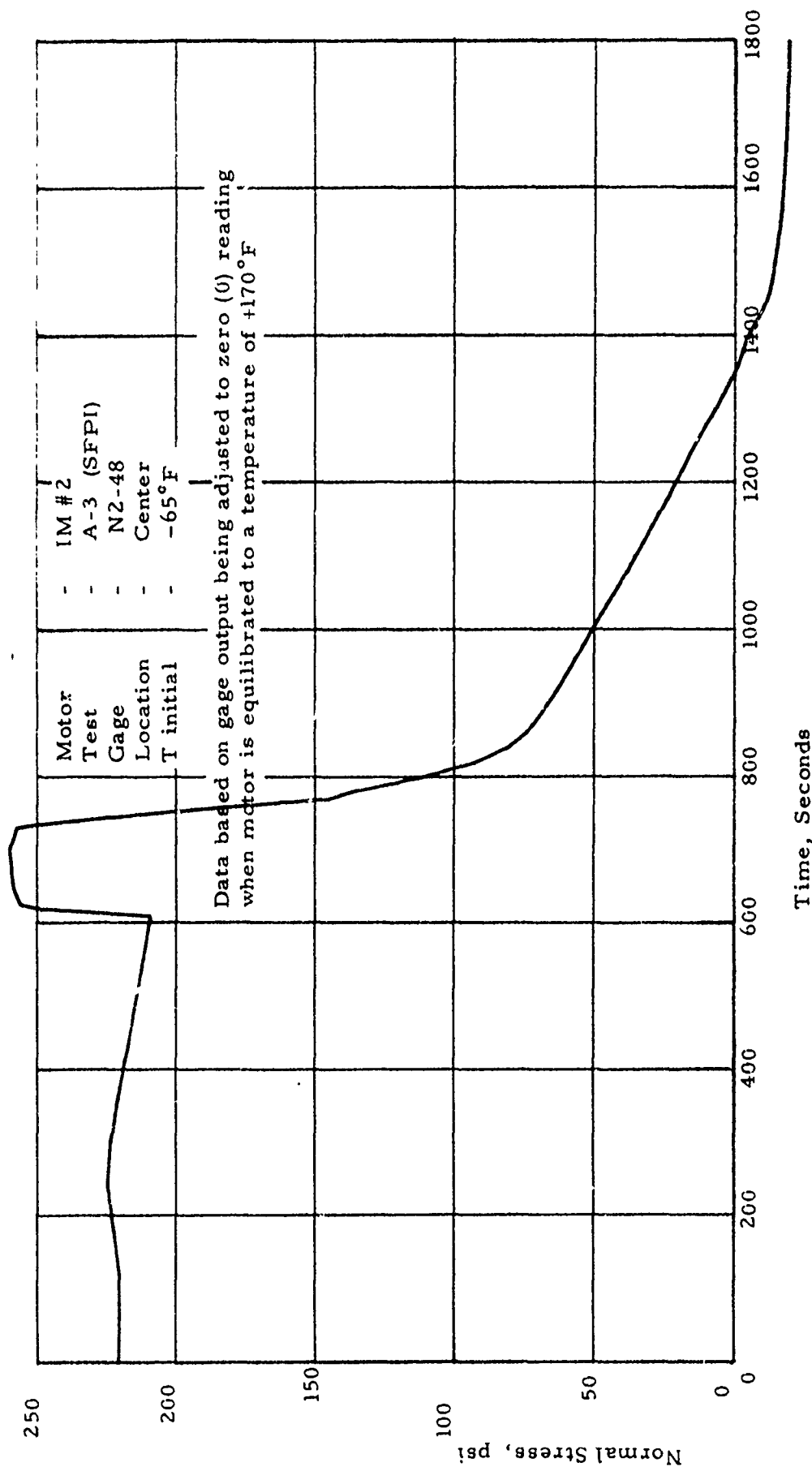
Mid Motor Normal Stress Response to Aeroheat Loads. Gage N2-51 · Test A-6



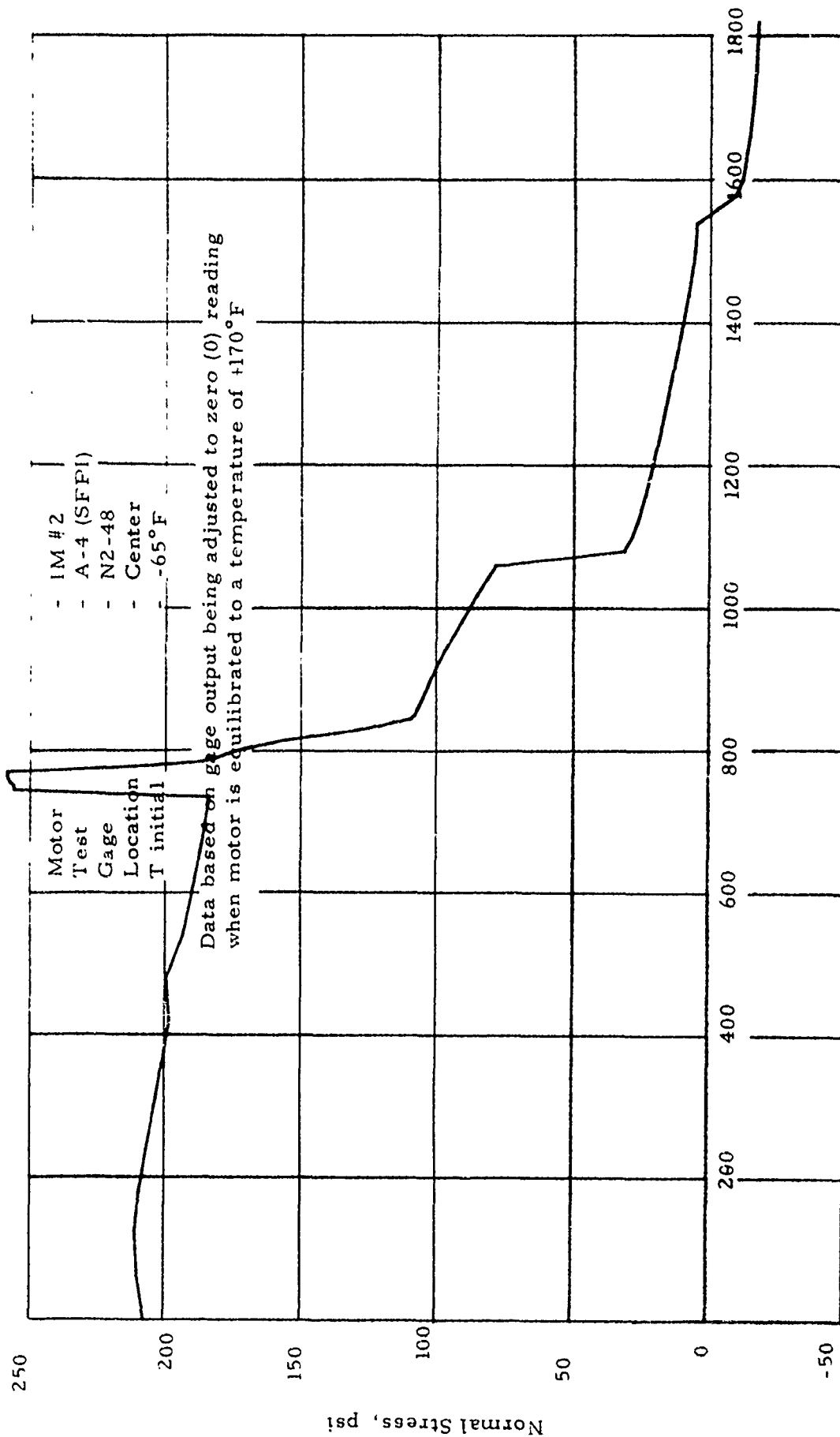
Mid Motor Normal Stress Response to Aeroheat Loads. Gage N2-48 Test A-1



Mid Motor Normal Stress Response to Aeroheat Loads. Gage N2-48 Test A-2

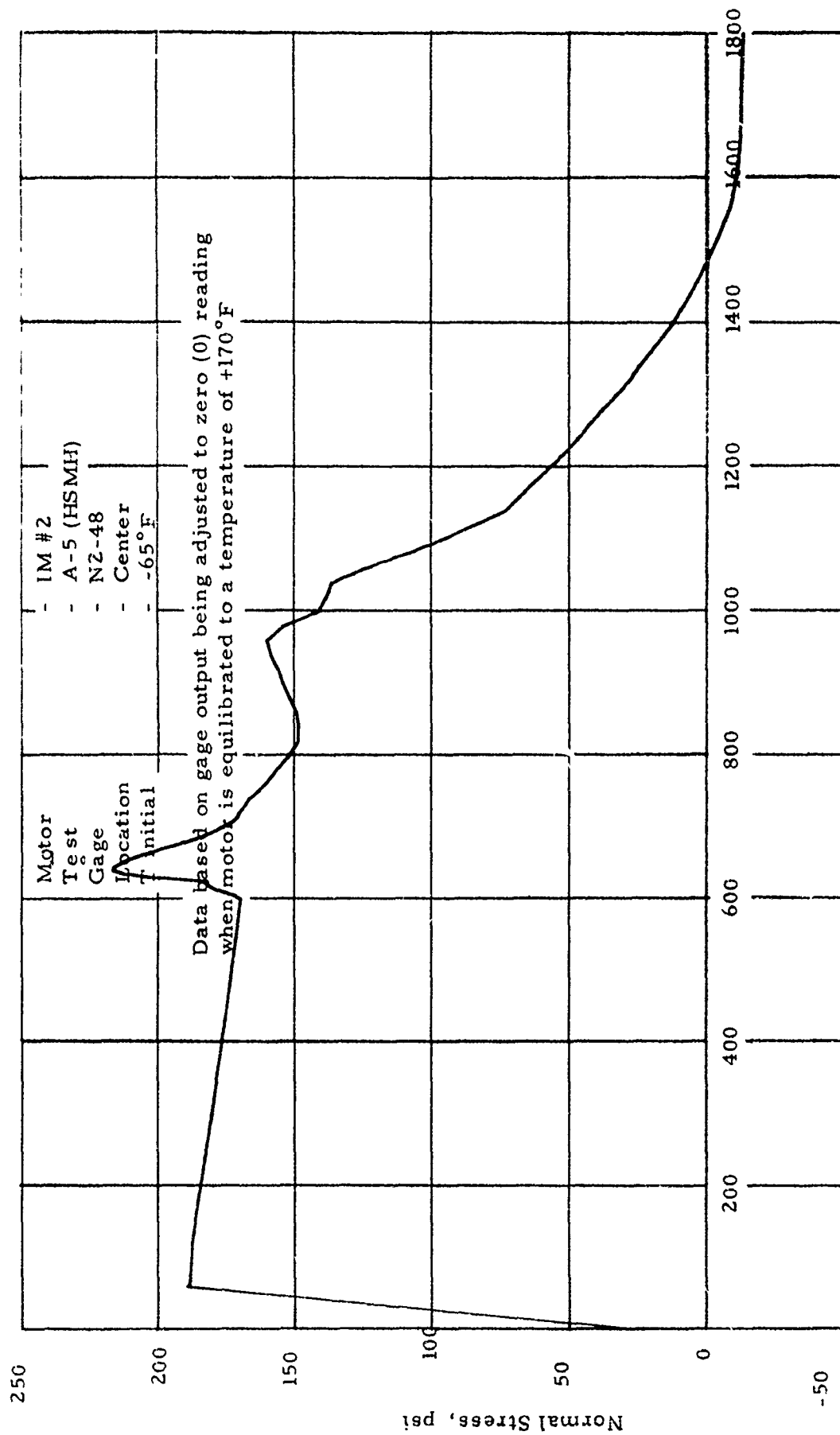


Mid Motor Normal Stress Response to Aeroheat Loads. Gage N2-48 A-3

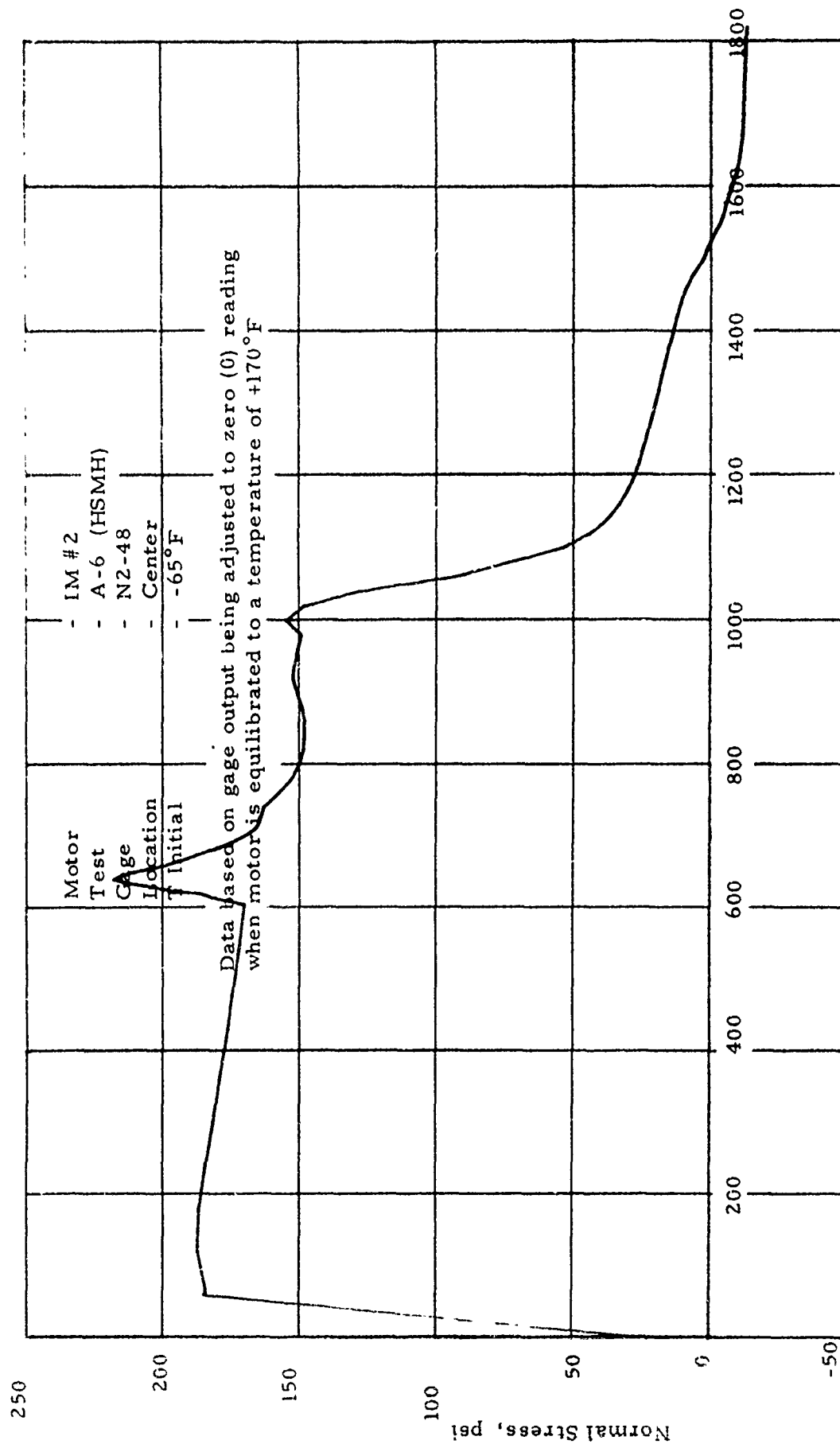


Time, Seconds

Mid Motor Normal Stress Response to Aeroheat Loads. Gage N2-48 Test A-4



Mid Motor Normal Stress Response to Aeroheat Loads. Gage N2-48 Test A-5

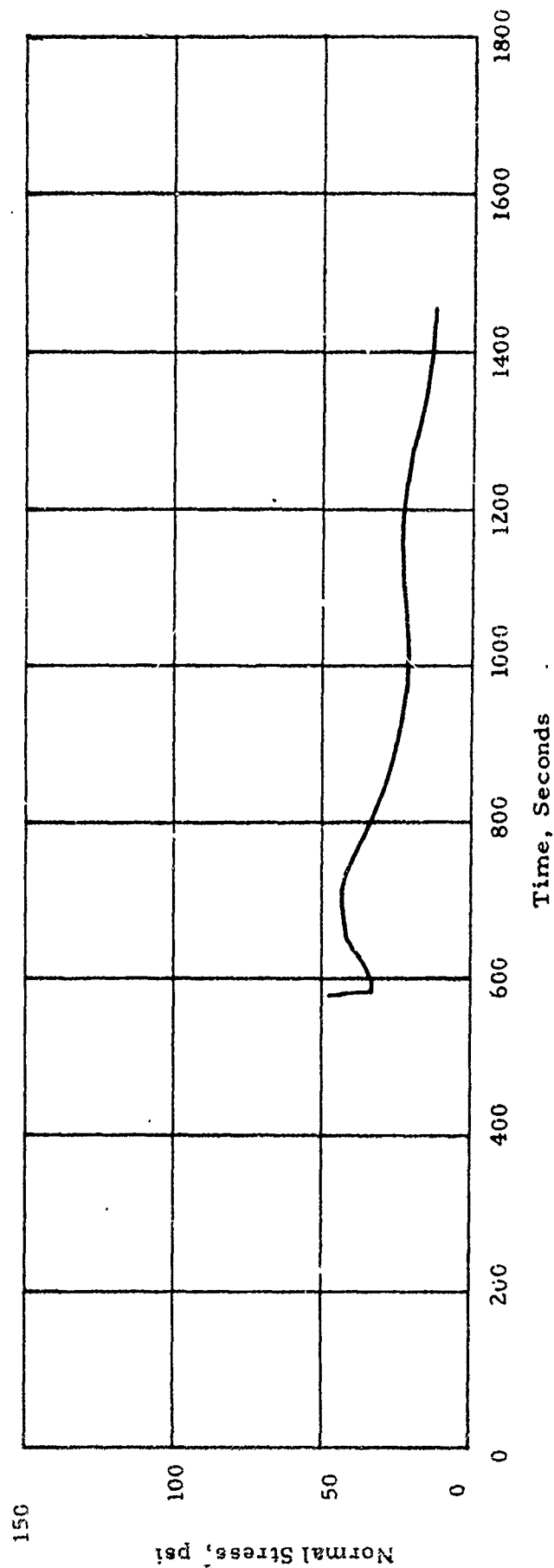


Time, Seconds

Mid Motor Normal Stress Response to Aeroheat Loads. Gage N2-48 Test A 6

Motor - IM #2
 Test - A-1 (DMP-3)
 Gage - N2-46
 Location - Aft
 T initial - -65°F

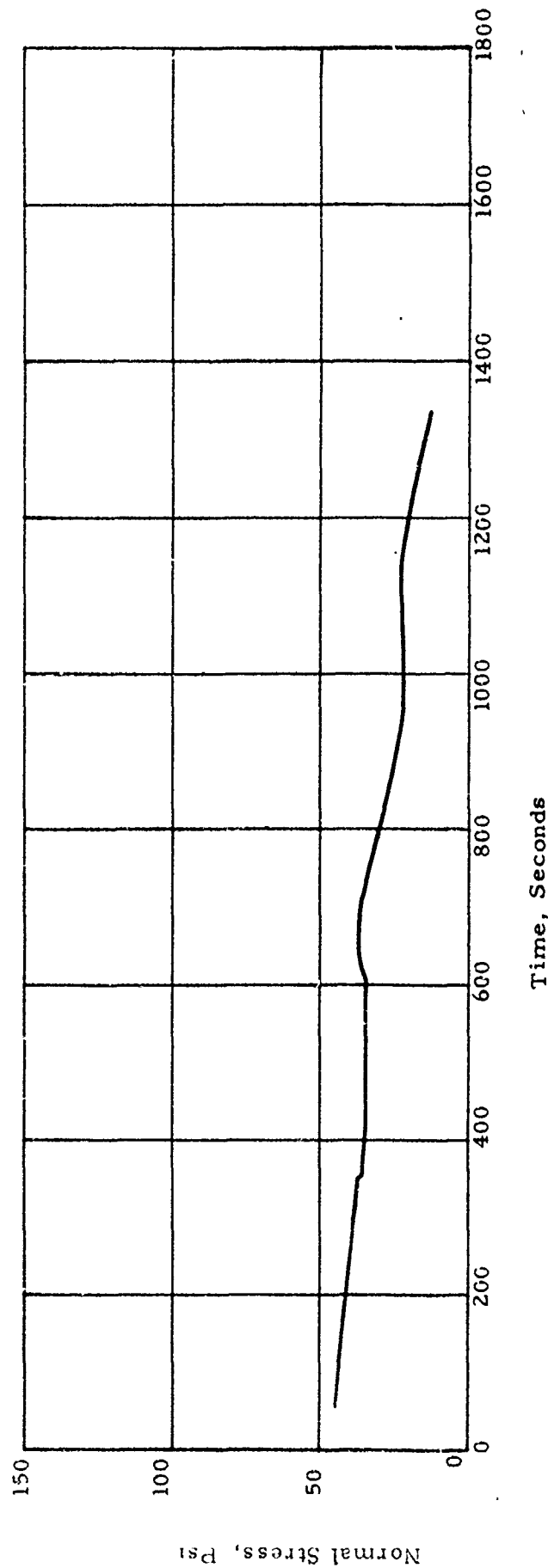
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F



Aft Motor Normal Stress Response to Aeroheat Loads. Gage N2-46 Test A-1

Motor - IM #2
 Test - A-2 (DMP-3)
 Gage - N2-46
 Location - Aft
 T initial - -65°F

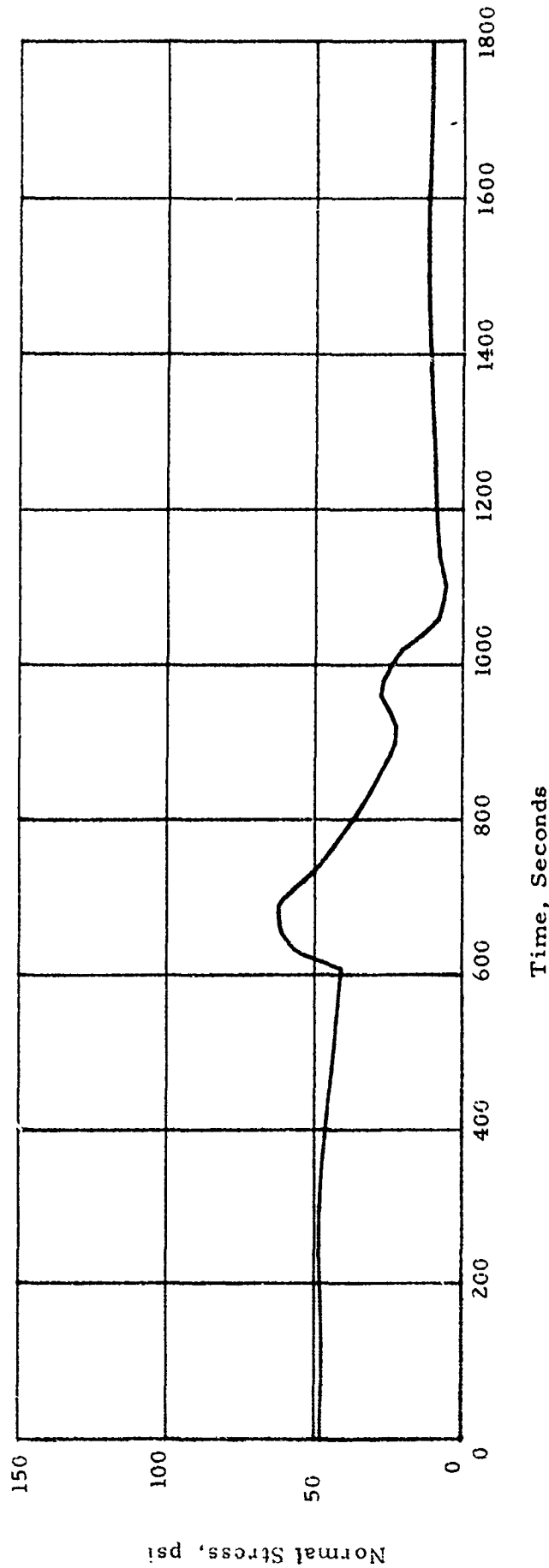
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 when motor is equilibrated to a temperature of +170°F



Aft Motor Normal Stress Response to Aeroheat Loads. Gage N2-46 Test A-2

Motor - IM #2
 Test - A-3 (SFPI)
 Gage - N2-46
 Location - Aft
 T initial - -65°F

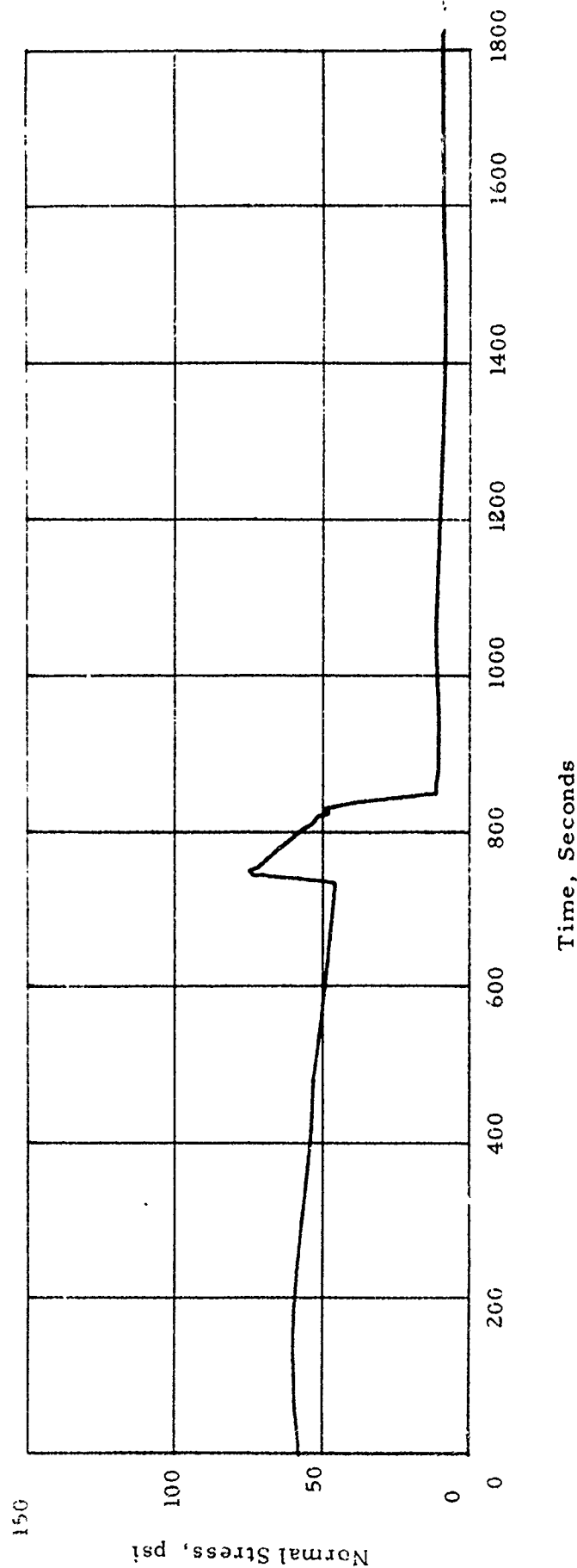
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F



Aft Motor Normal Stress Response to Aeroheat Loads. Gage - N2-46 Test A-3

Motor - IM #2
 Test - A-4 (SFPI)
 Gage - N2-46
 Location - Aft
 T initial - -65°F

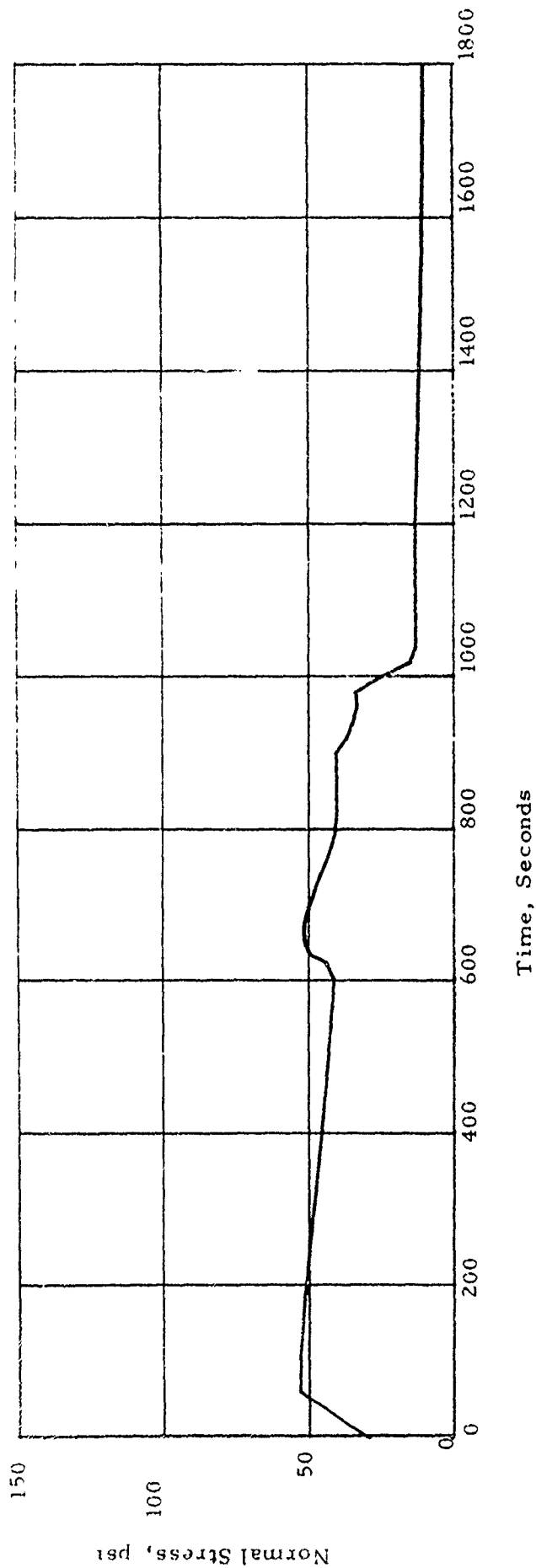
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Aft Motor Normal Stress Response to Aeroheat Loads. Gage N2-46 Test A-4

Motor - IM # 2
 Test - A-5 (HSMH)
 Gage - N2-46
 Location - Aft
 T initial - -65°F

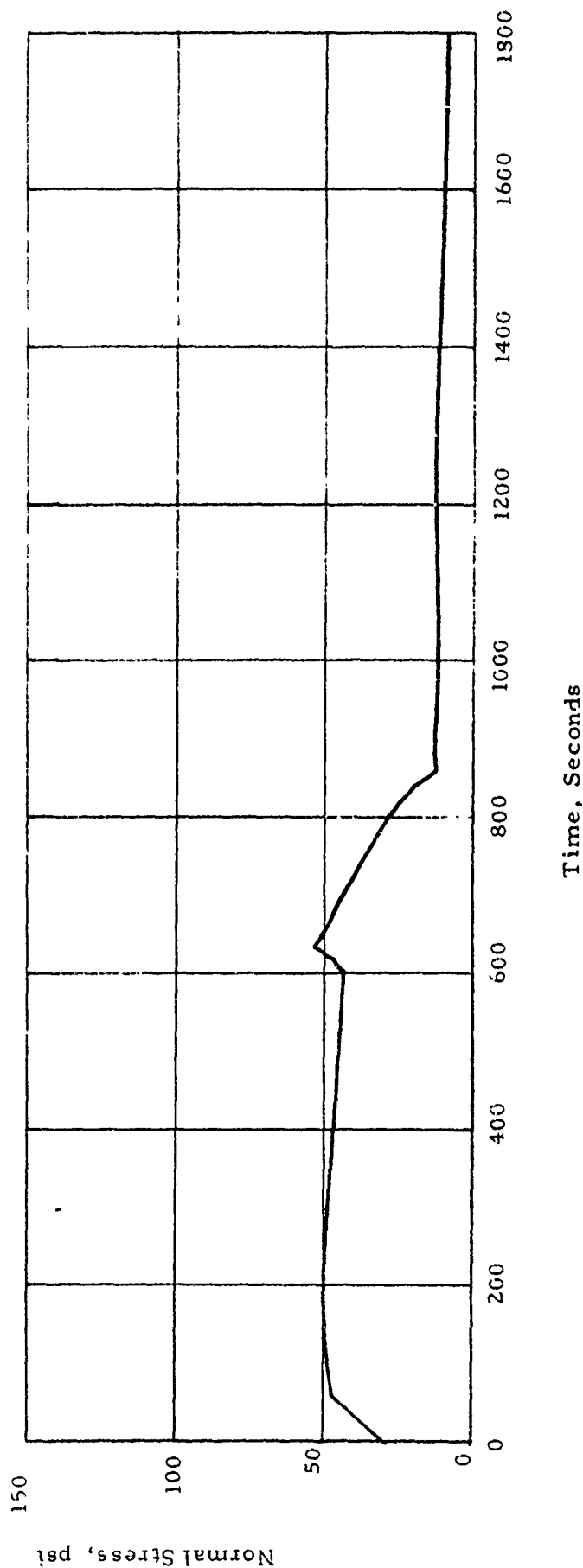
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Aft Motor Normal Stress Response to Aeroheat Loads. Gage N2-46 Test A-5

Motor - IM #2
 Test - A-6 (HSMH)
 Gage - N2-46
 Location - Aft
 T initial - -65°F

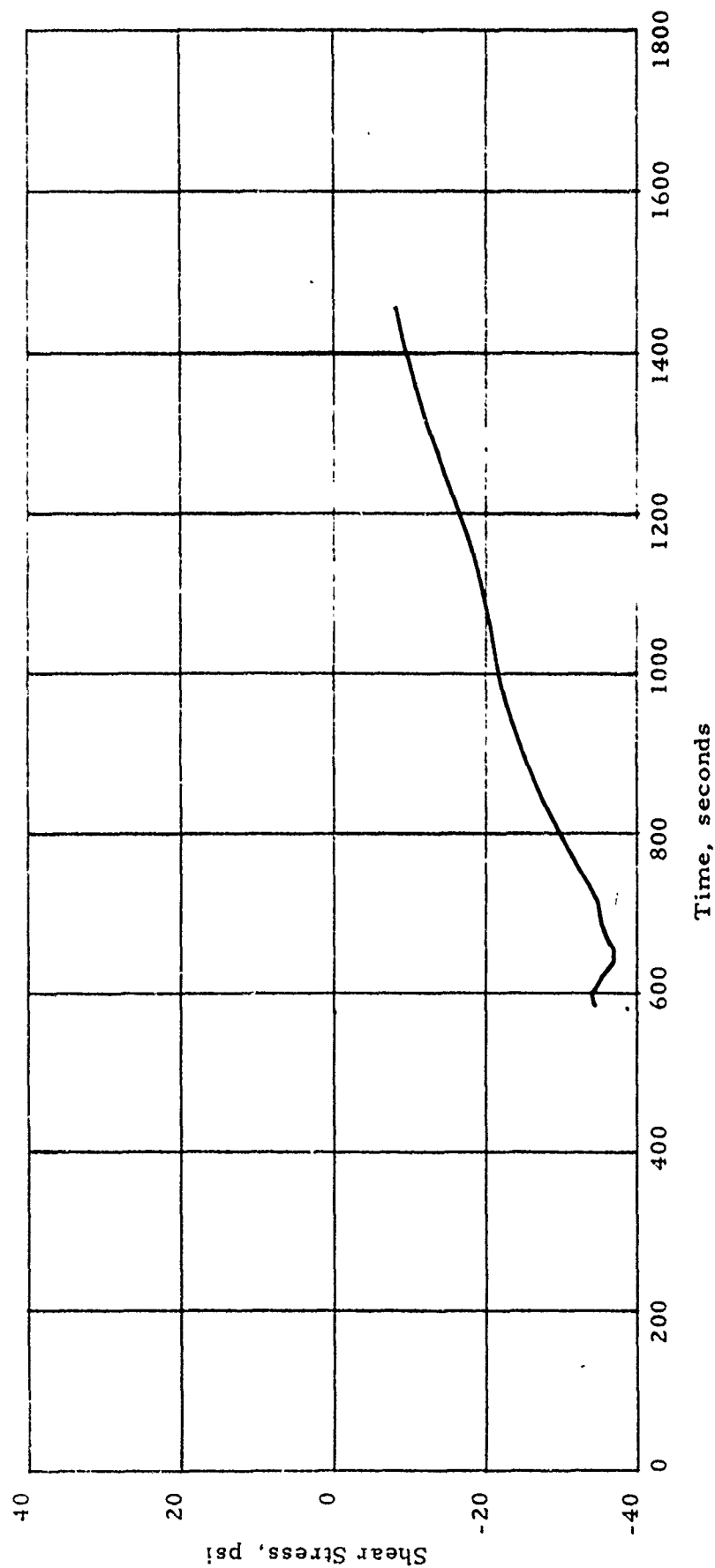
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Aft Motor Normal Stress Response to Aeroheat Loads. Gage N2-46 Test A-6

Motor - IM #2
 Test - A-1 (DMP-3)
 Gage - S2-105
 Location - Fwd
 T_{initial} - -65°F

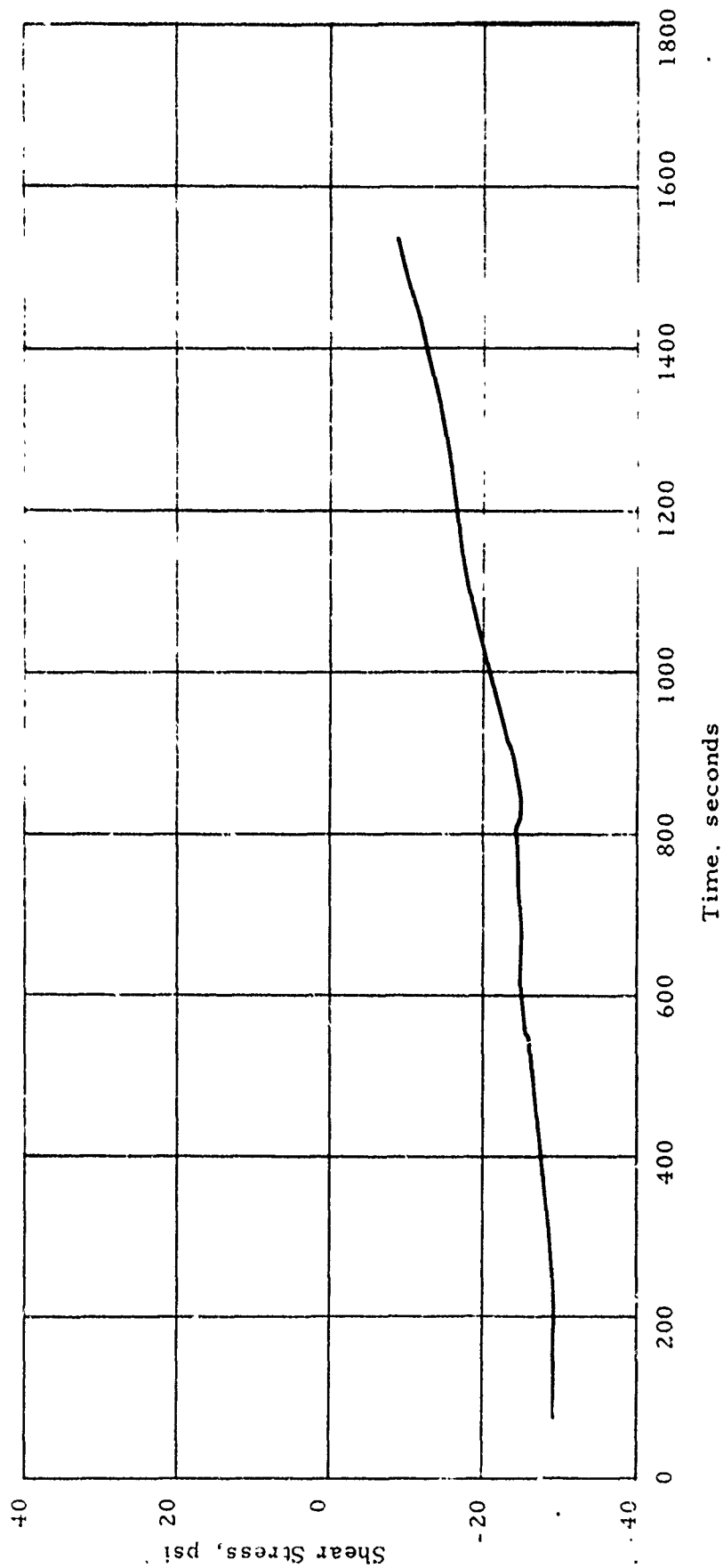
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F.



Head End Shear Stress Response to Aeroheat Loads--Gage S2-105

Motor - M 2
 Test - A-2 (DMP-3)
 Gage - S2 105
 Location - Fwd
 T_{initial} - -65°F

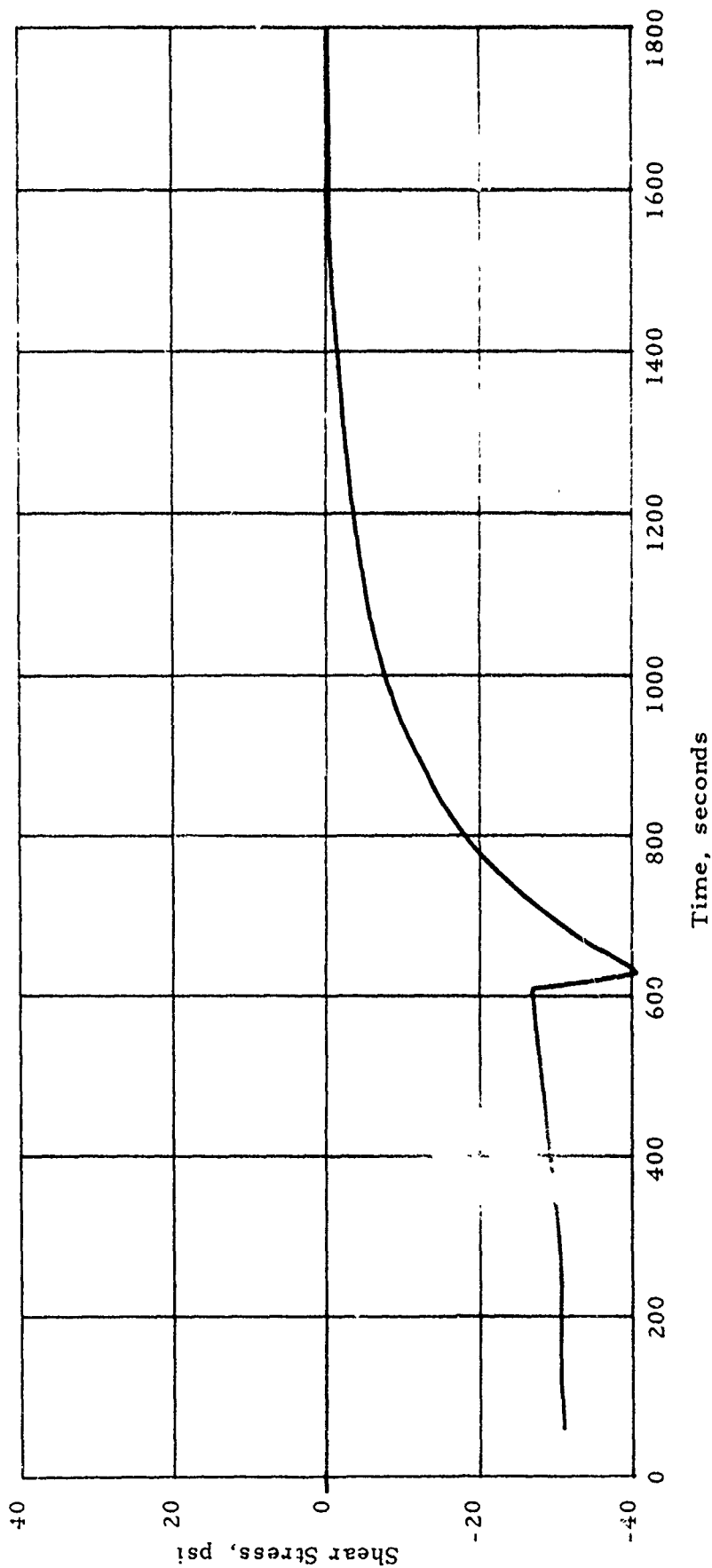
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of -170°F.



Head End Shear Stress Response to Aeroheat Loads--Gage S2-105

Motor	-	IM #2
Test	-	A-3 (SFPI)
Gage	-	S2-105
Location	-	Fwd
T _{initial}	-	-65°F

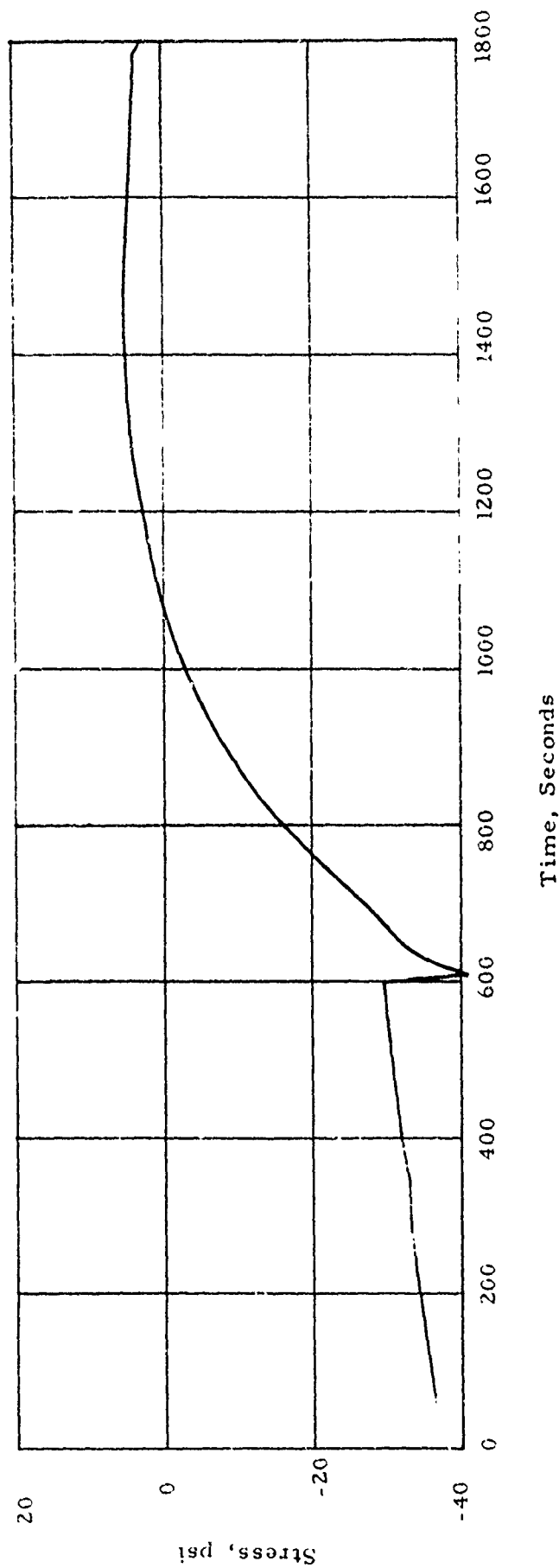
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F.



Head End Shear Stress Response to Aeroheat Loads--Gage S2-105

Motor - U #2
 Test - A-4 (SFPI)
 Gage - S2-105
 Location - Fwd
 T initial - -65°F

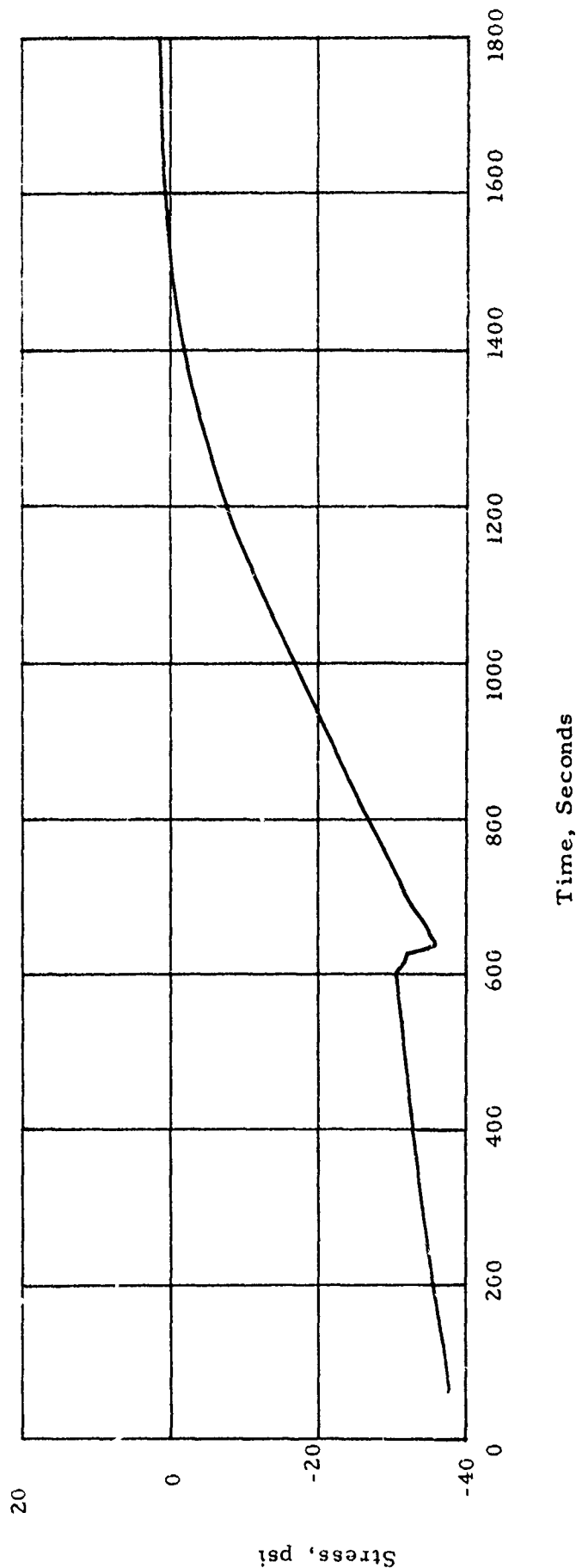
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of -170°F



Head End Stress Response to Aeroheat Loads. Gage S2-105 A-4

Motor - IM #2
 Test - A-5 (HSMH)
 Gage - S2-105
 Location = Fwd
 T initial - -65°F

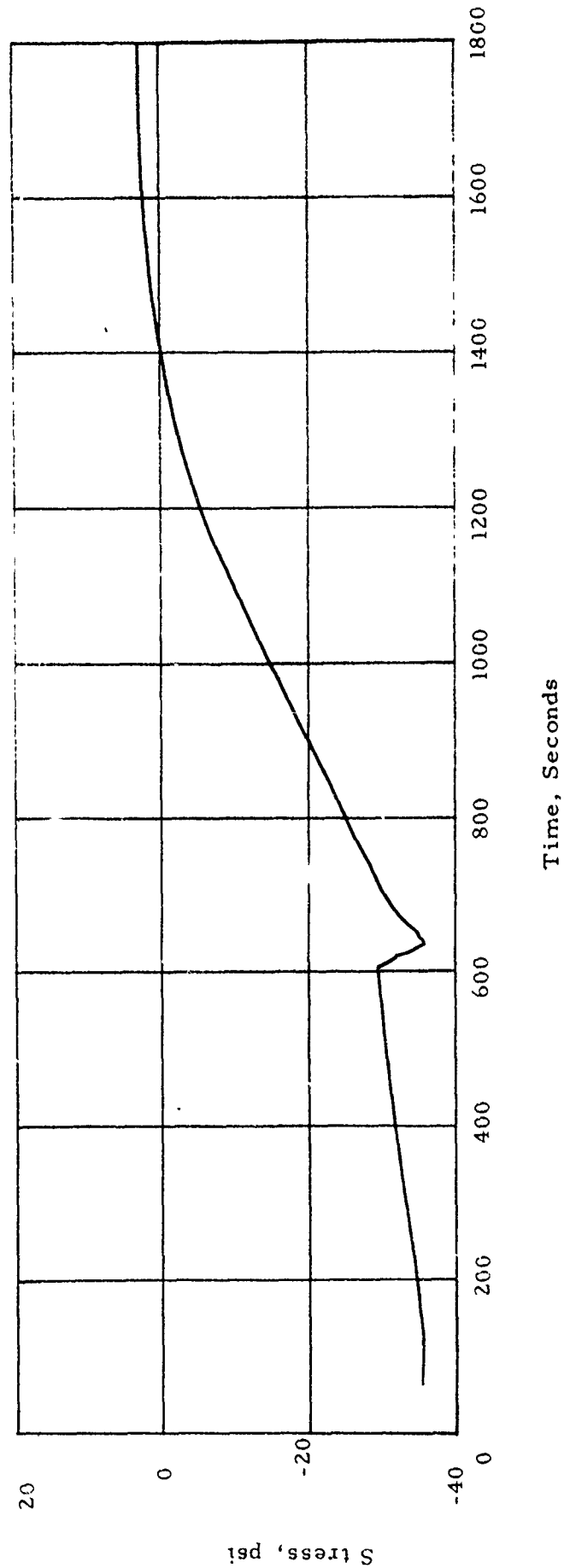
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Head End Stress Response to Aeroheat Loads Gage S2-105 Test A-5

Motor - IM #2
 Test - A-6 (HSMH)
 Gage - S2-105
 Location - Fwd
 T initial - -65°F

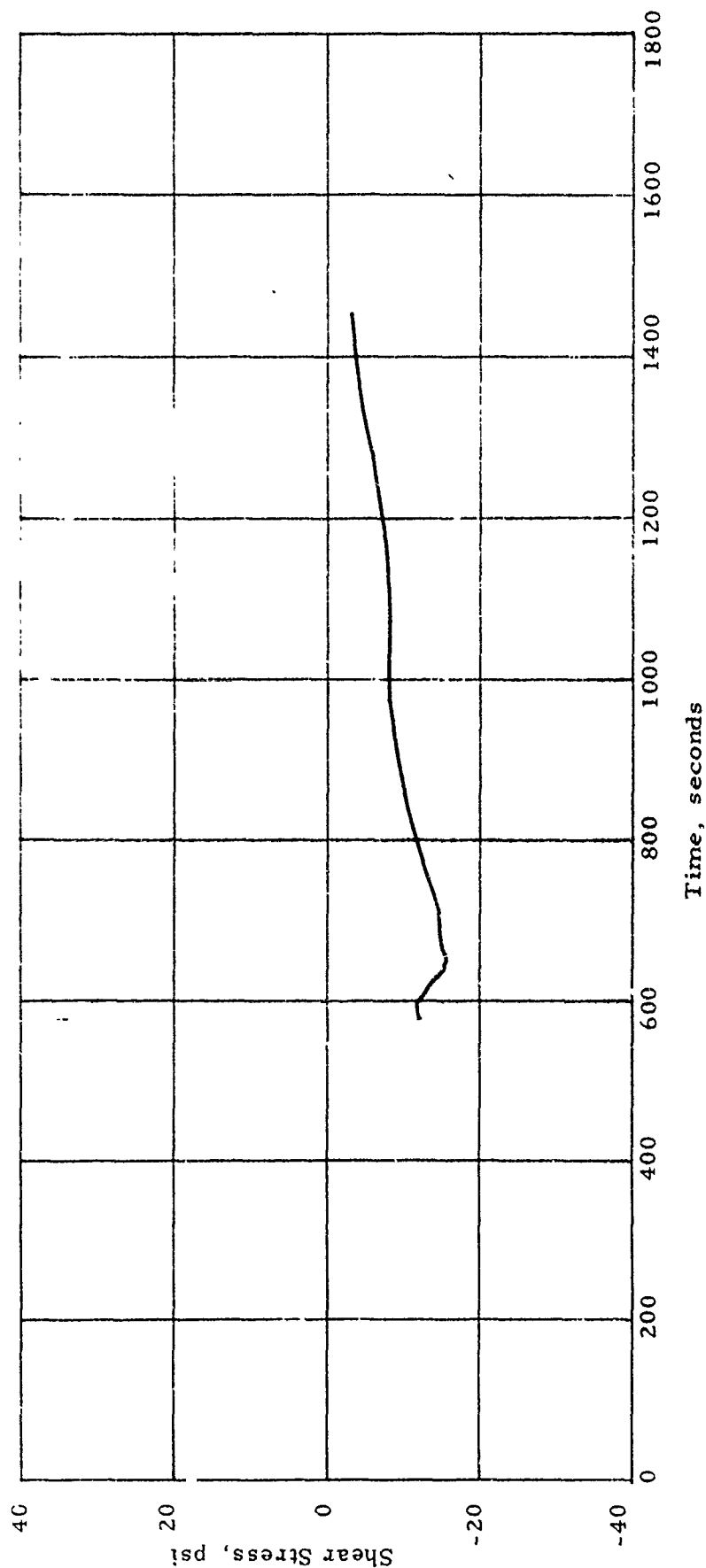
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Head End Stress Response to Aeroheat Loads. Gage S2-105 Test A-6

Motor	-	IM-2
Test	-	A-1 (DMP-3)
Gage	-	S2-110
Location	-	Fwd
T _{initial}	-	-65°F

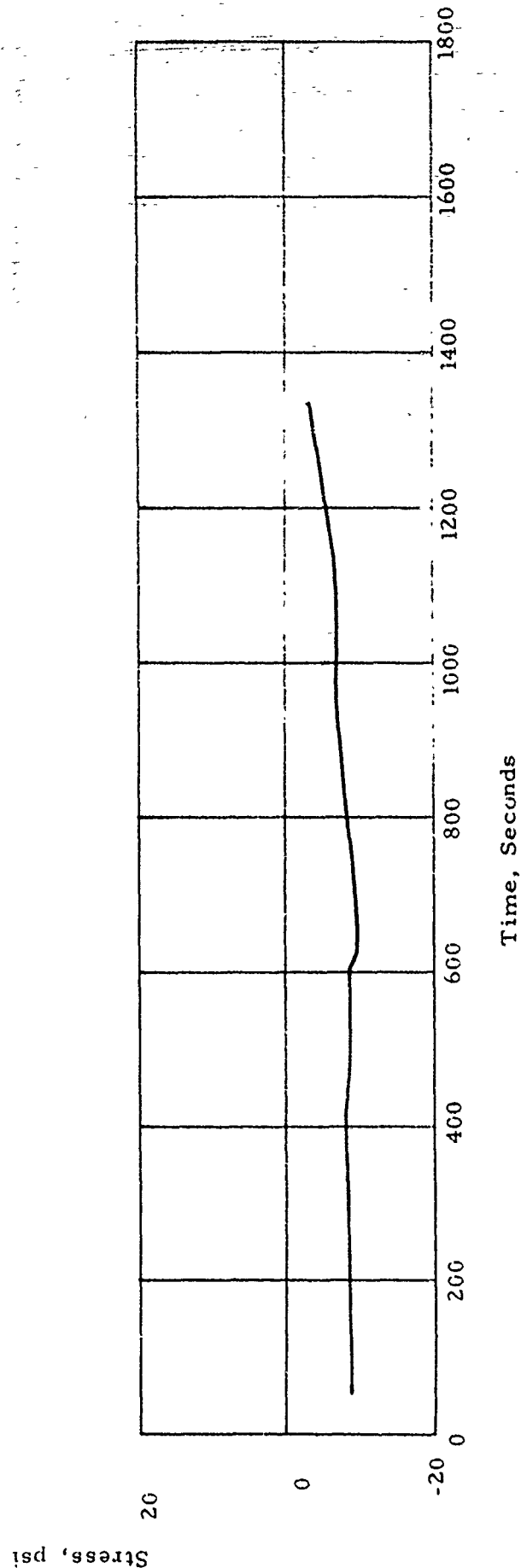
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F.



Head End Shear Stress Response to Aeroheat Loads - Gage S2-110

Motor - IM #2
 Test - A-2 (DMP-3)
 Gage - S2-110
 Location - Fwd
 T initial - -65°F

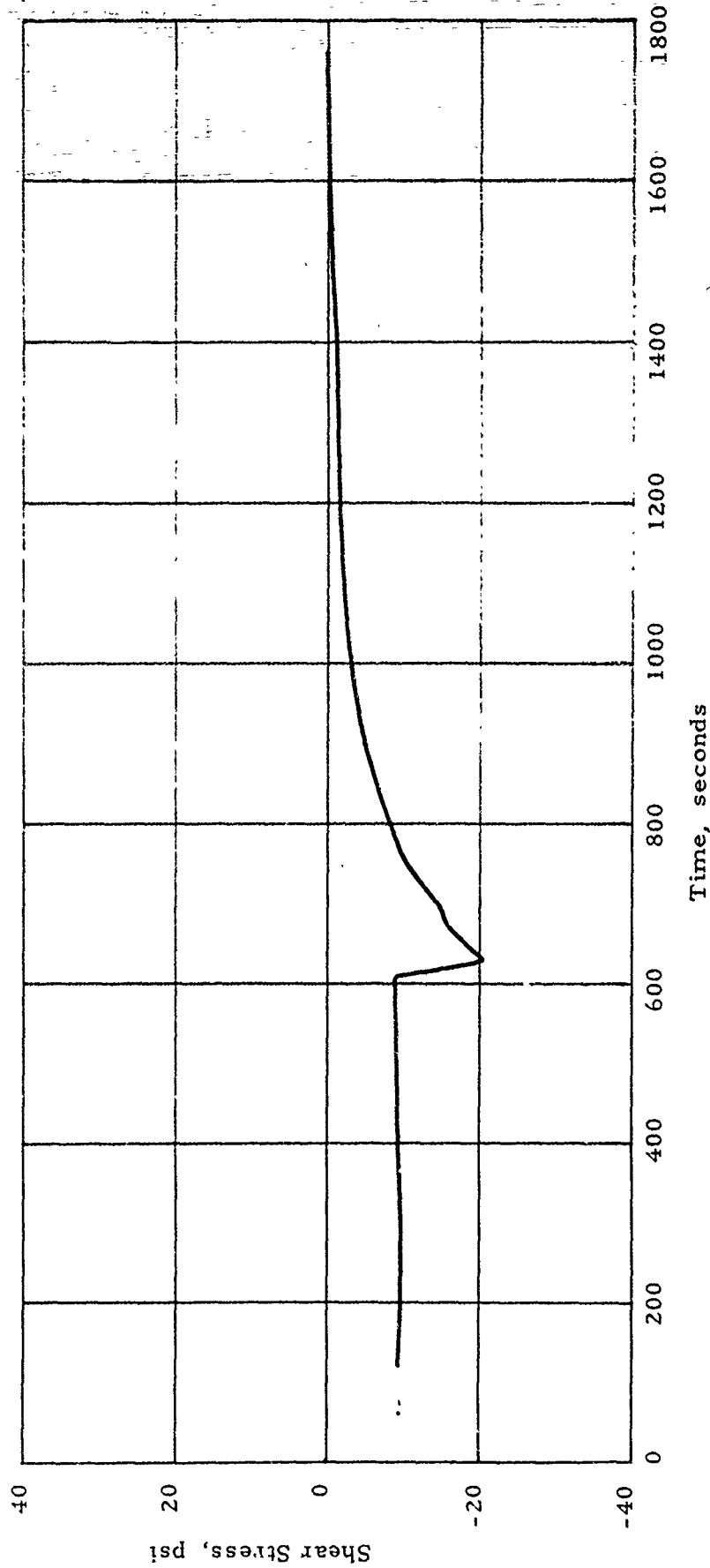
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F



Head End Stress Response to Aeroheat Loads. Gage S2-110 Test A-2

Motor - IM #2
 Test - A-3 (SFPI)
 Gage - S2-110
 Location - Fwd
 T_{initial} - -65°F

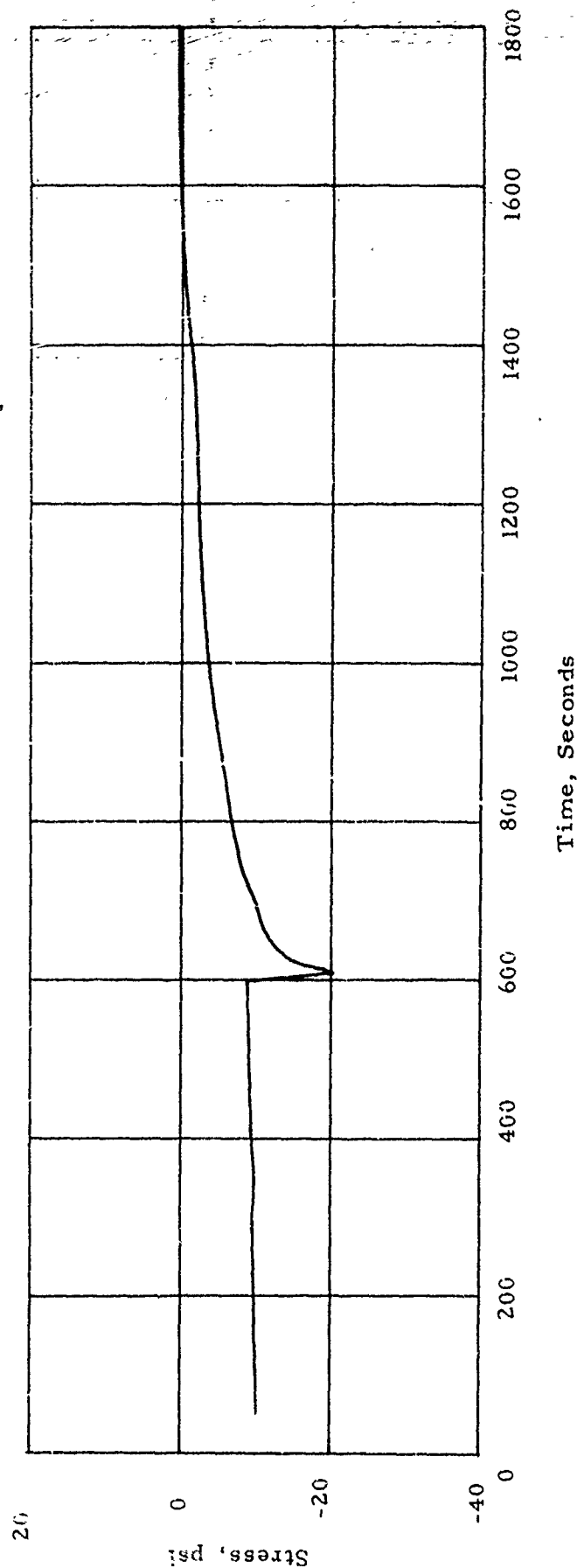
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F.



Head End Shear Stress Response to Aeroheat Loads - Gage S2-110

Motor - IM #2
 Test - S-4 (SFP)
 Gage - S2-110
 Location - Fwd
 T initial - -65°F

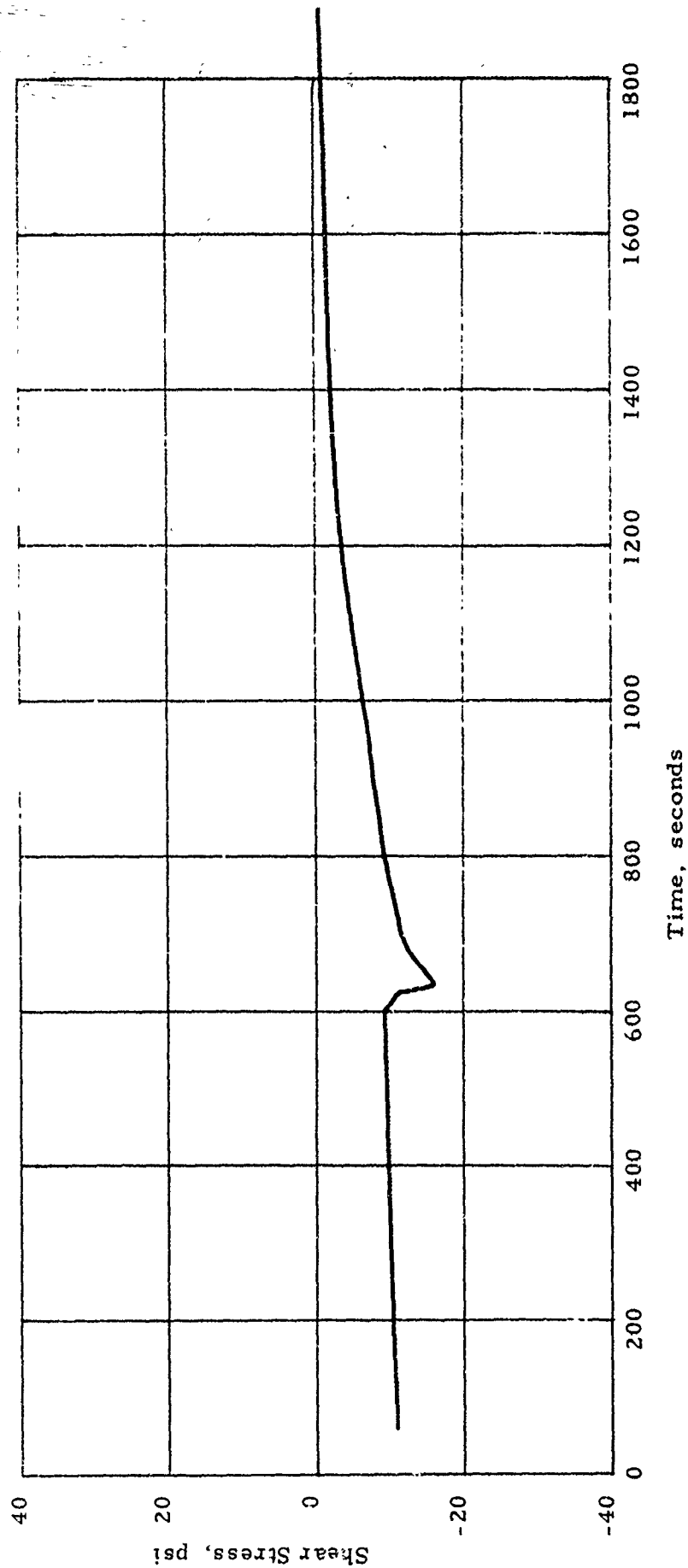
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F



Head End Stress Response to Aeroheat Loads. Gage S2-110 Test A-3

Motor - IM #2
 Test - A-5 (HSMH)
 Gage - S2-110
 Location - Fwd
 T_{initial} - -65°F

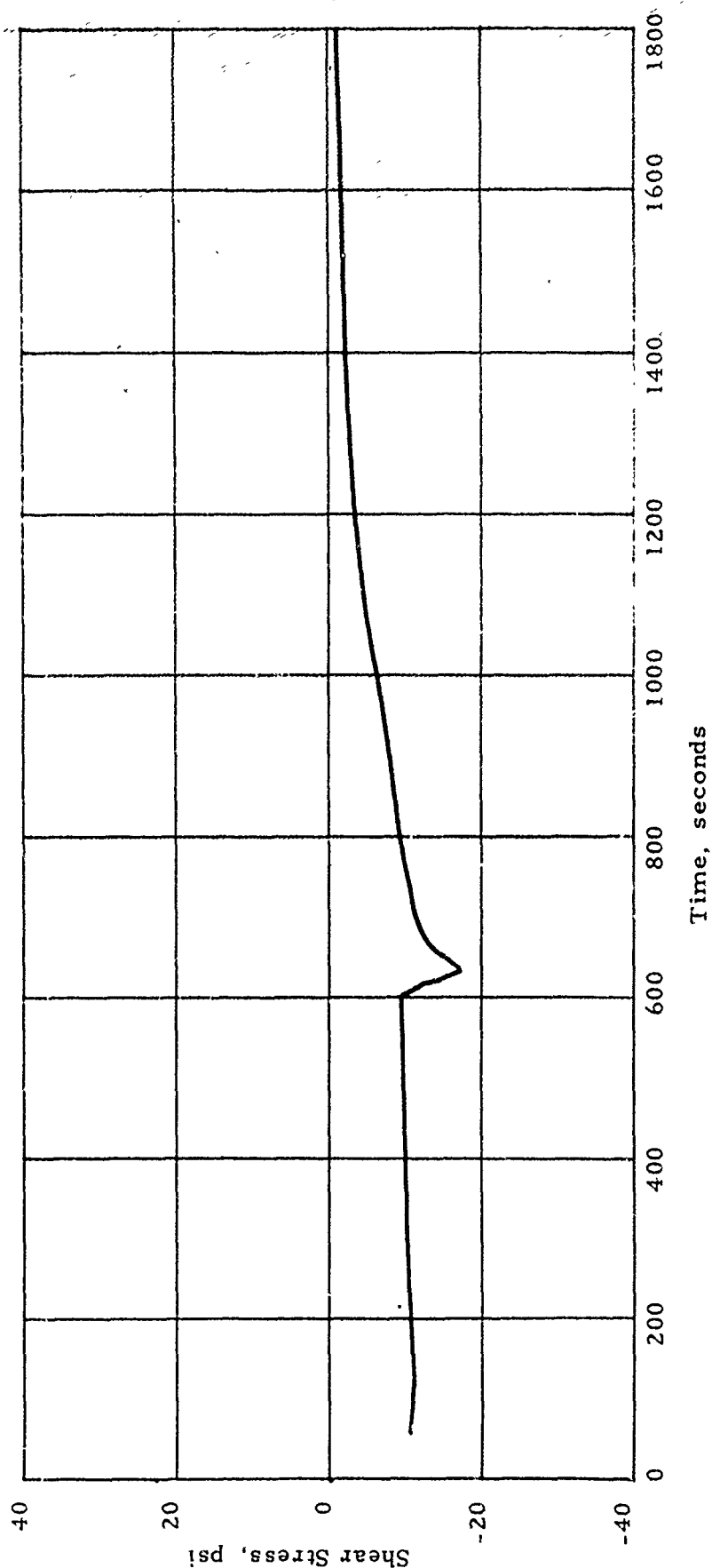
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F.



Head End Shear Stress Response to Aeroheat Loads - Gage S2-110

Motor	-	IM #2
Test	-	A-6 (HSMH)
Gage	-	S2-110
Location	-	Fwd
T _{initial}	-	-65°F

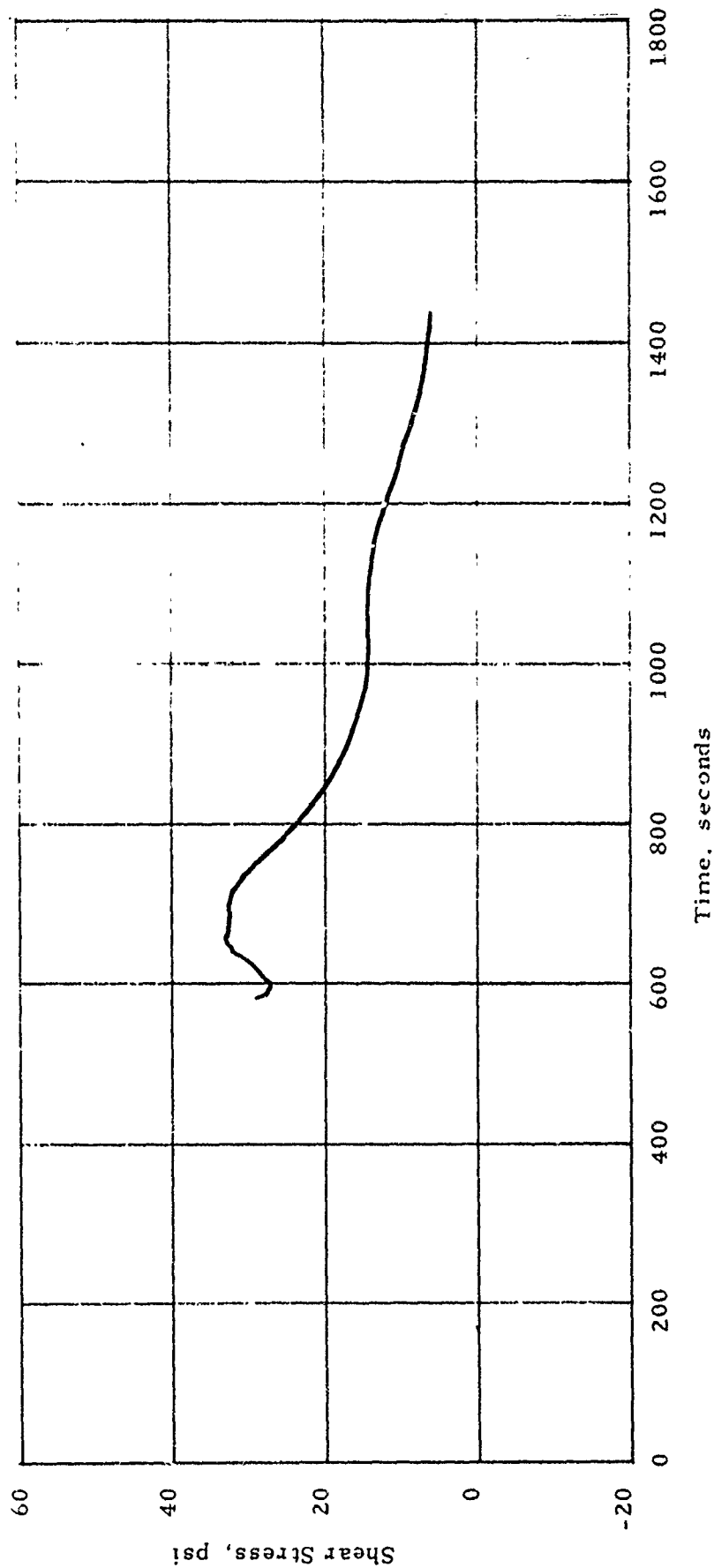
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F.



Head End Shear Stress Response to Aeroheat Loads - Gage S2-110

Motor - IM-2
 Test - A-1
 Gage - S2-111 (DMP-3)
 Location - Aft
 T_{initial} - -65°F

Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F.

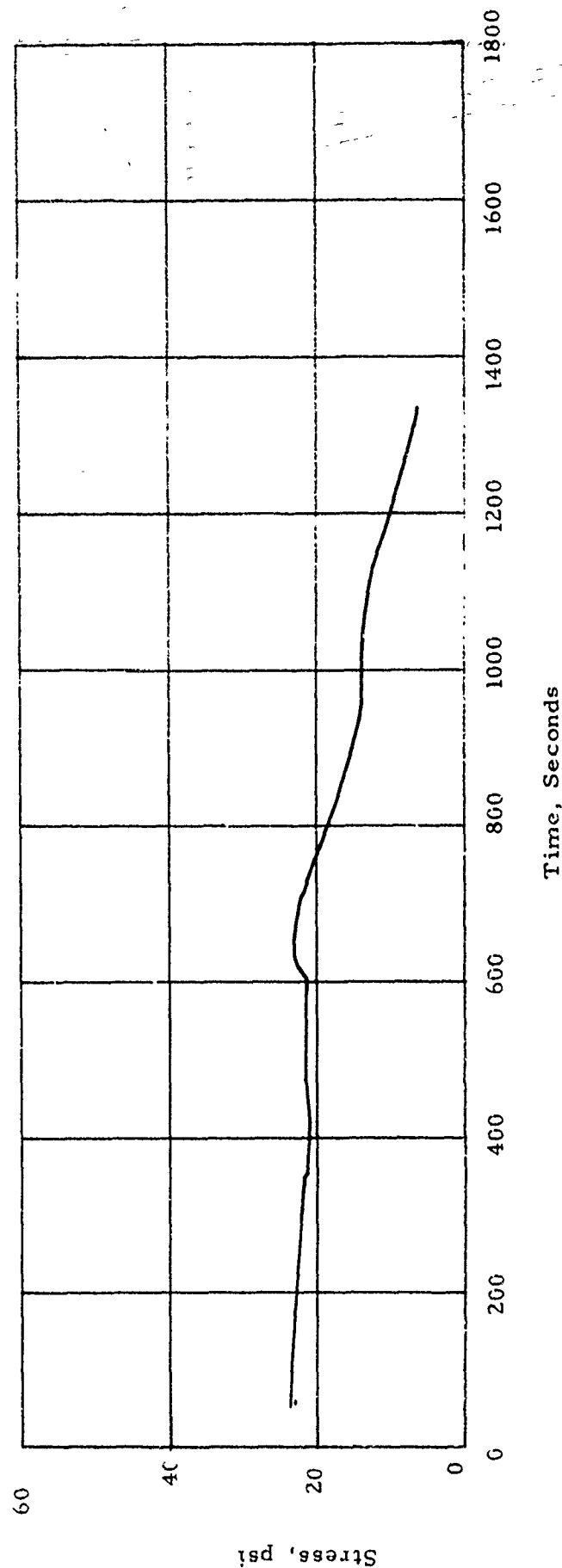


Aft End Shear Stress Response to Aeroheat Loads - Gage S2-111

Motor
 Test
 Gage
 Location
 T initial

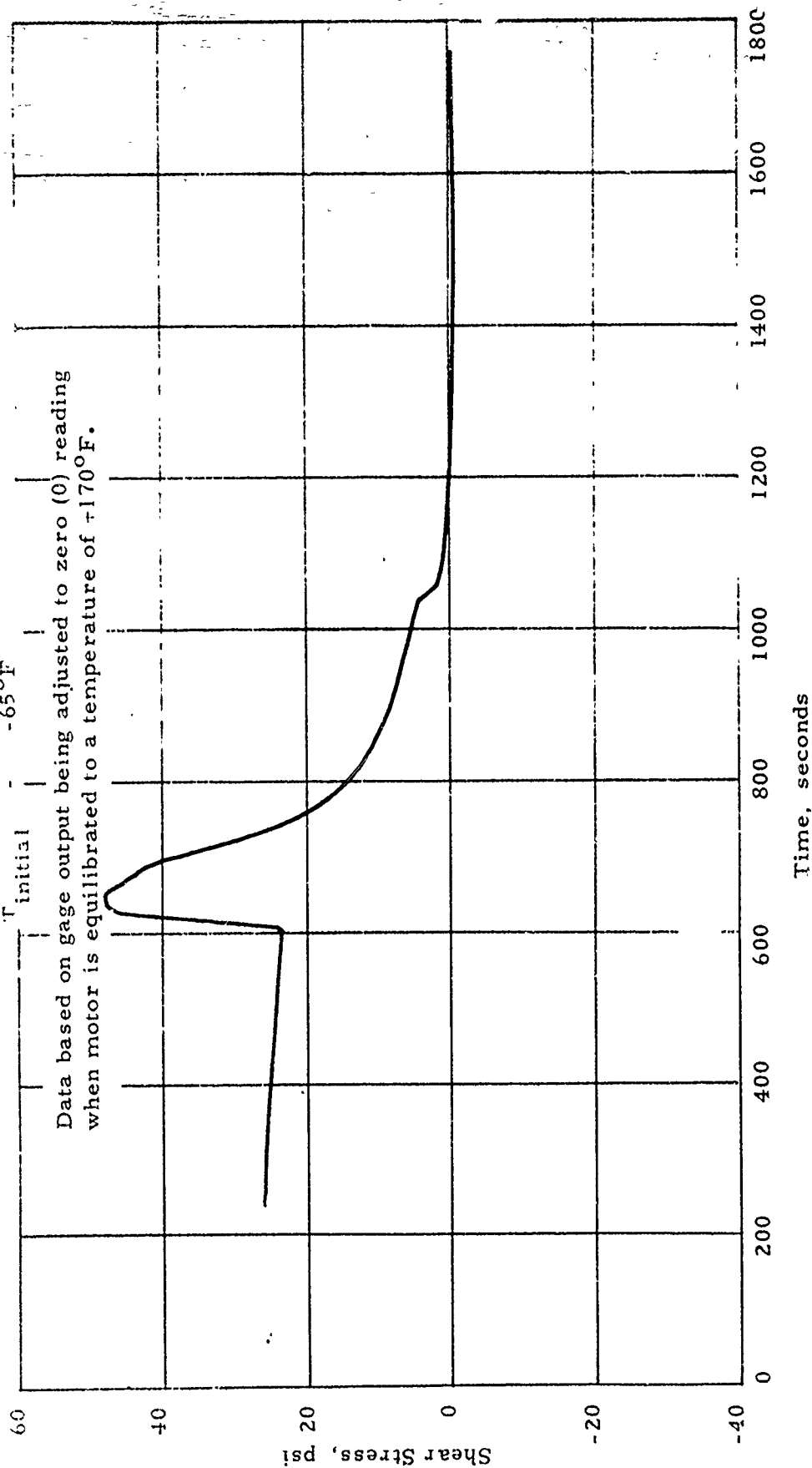
- IM #2
 - A-2 (DMP-3)
 - S2-111
 - Aft
 - -65°F

Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



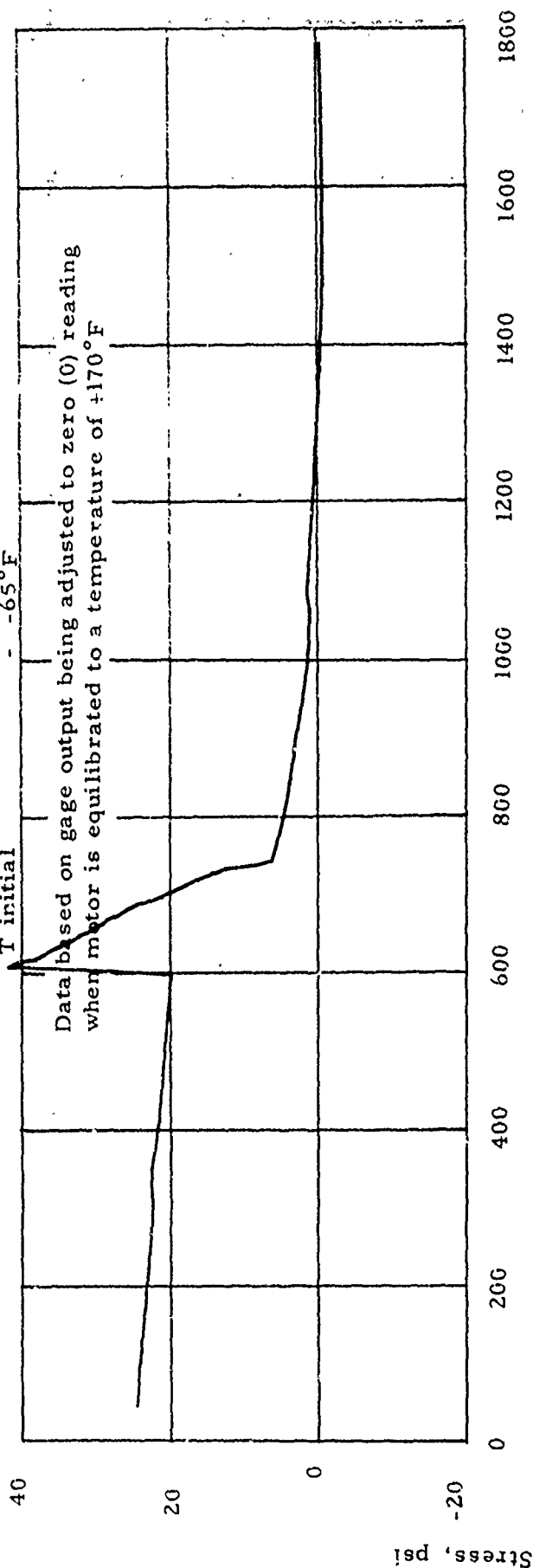
Aft End Shear Stress Response to Aeroheat Loads. Gage S2-111 Test A-2

Motor - IM #2
 Test - A-3 (SFPI)
 Gage - S2-111
 Location - Aft
 T initial - -65°F



Aft End Shear Stress Response to Aeroheat Loads - Gage S2-111

Motor - IM #2
 Test - A-4 (SFPI)
 Gage - S2-III
 Location - Aft
 T initial - -65°F

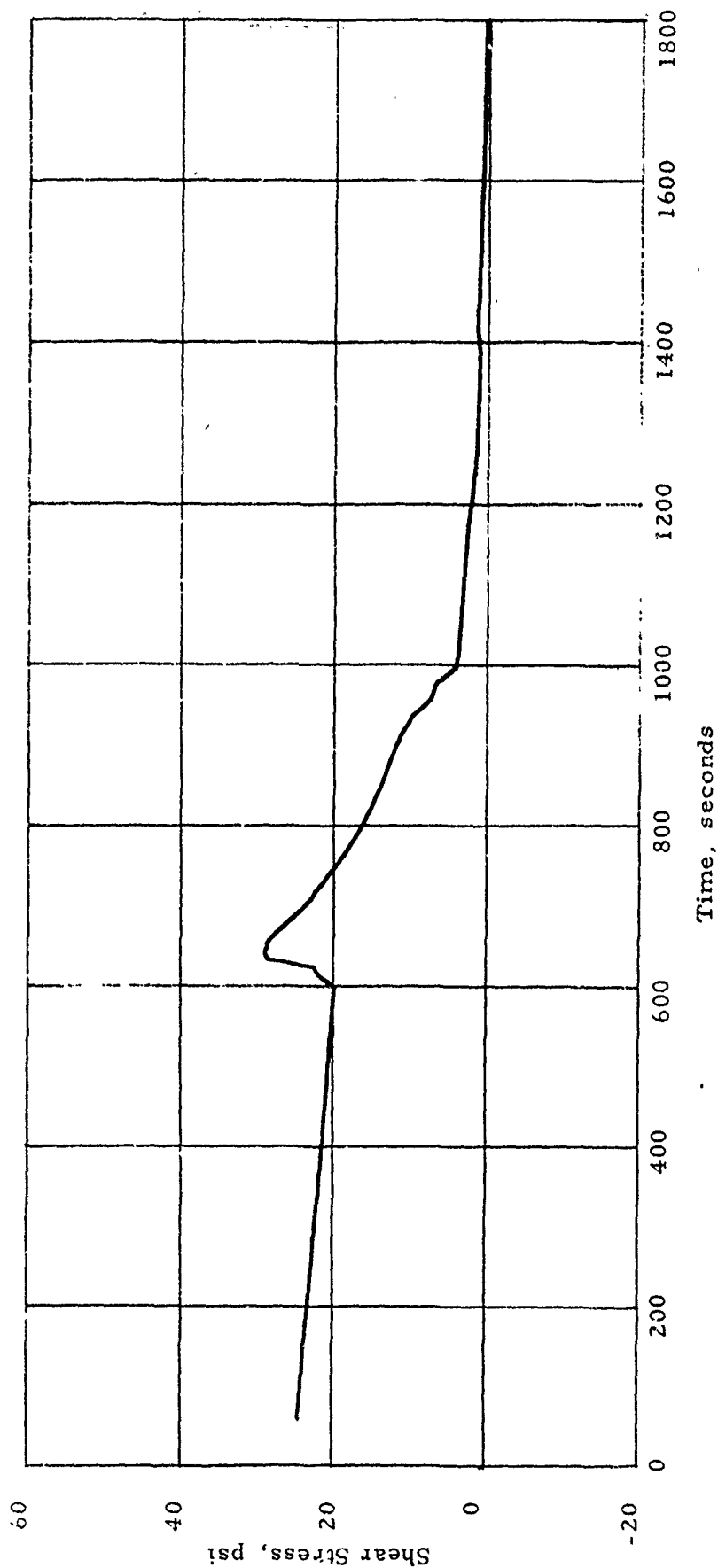


Time, Seconds

Aft End Shear Stress Response to Aeroheat Loads. Gage S2-III Test A-4

Motor	-	IM-2
Test	-	A-5 (HSMH)
Gage	-	S2-111
Location	-	Aft
T _{initial}	-	-65°F

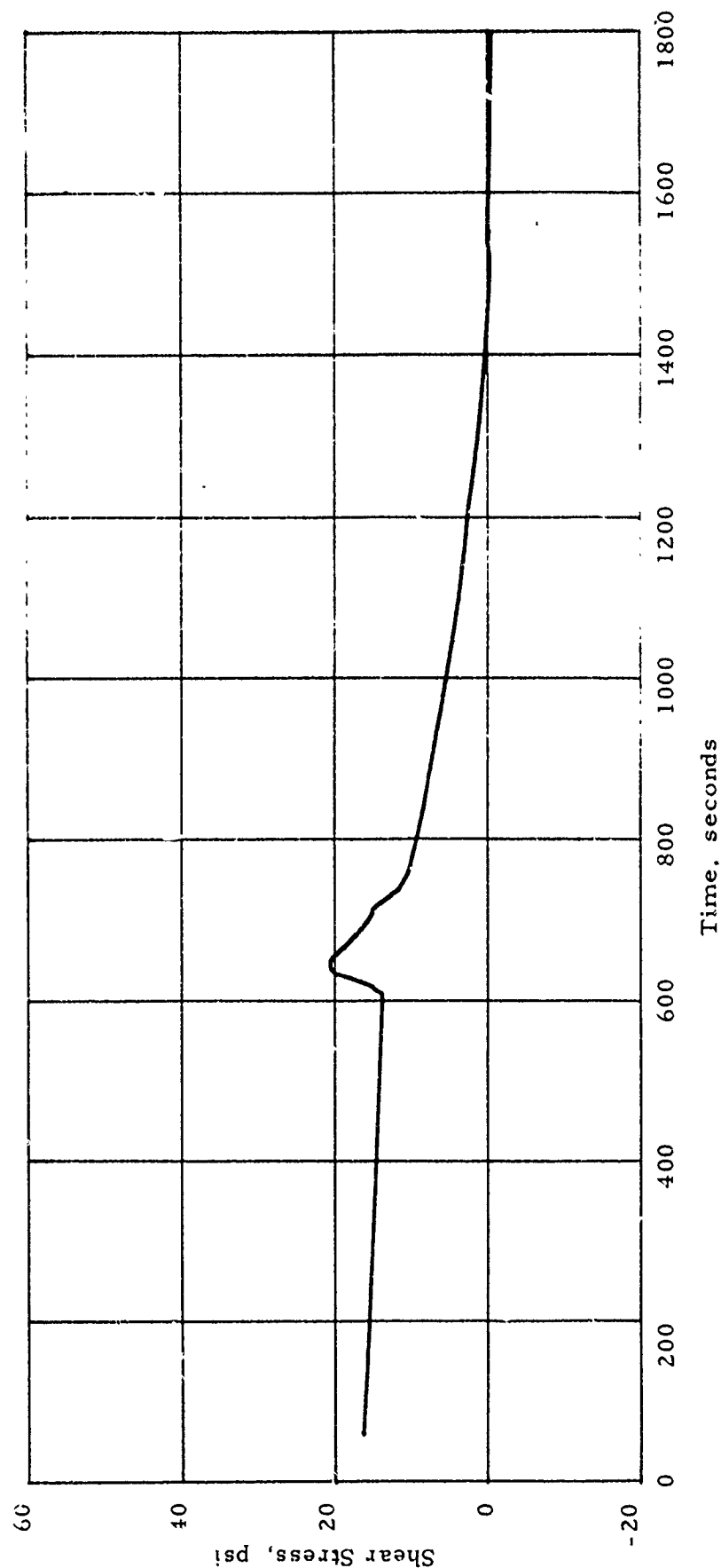
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F.



Aft End Shear Stress Response to Aeroheat Loads - Gage S2-111

Motor	-	IM-2
Test	-	A-6 (HSMH)
Gage	-	S2-111
Location	-	Aft
T _{initial}	-	-65°F

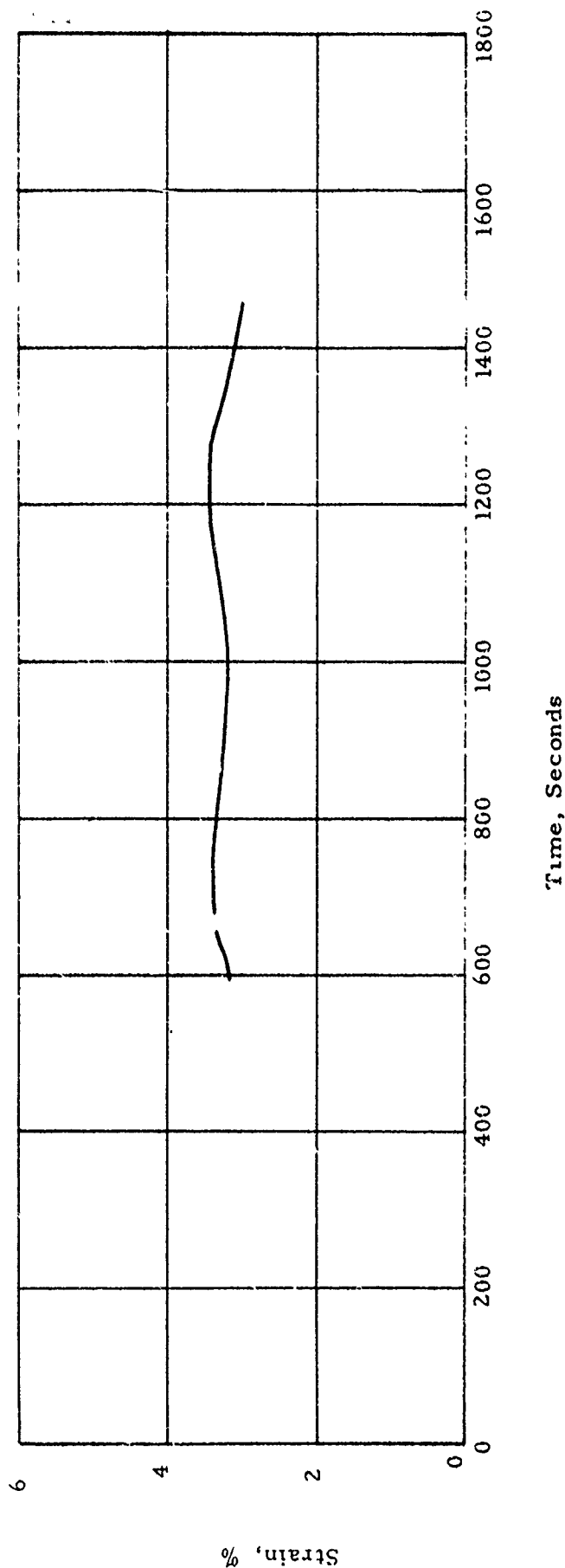
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F.



Aft End Shear Stress Response to Aeroheat Loads - Gage S2-111

Motor - IM #2
 Test - A-1 (DMF-3)
 Gage - C2-15
 Location - Fwd
 T initial - -65°F

Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F

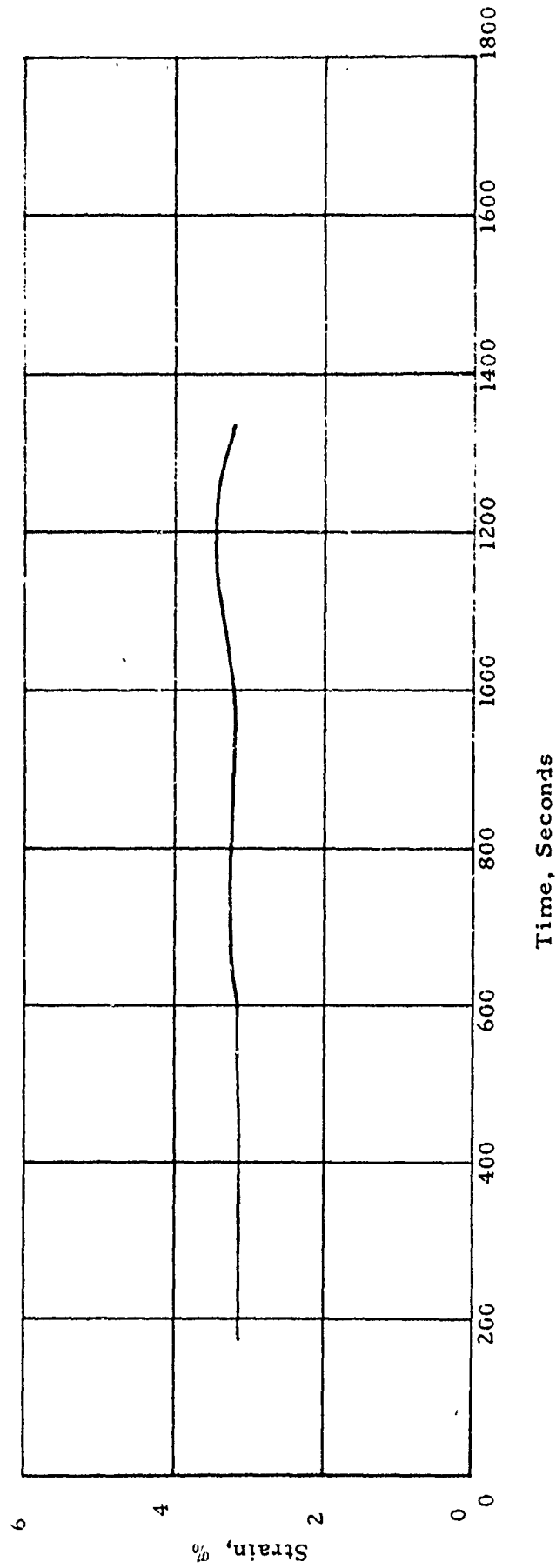


Bore Strain Results to Aeroheat Loads. Gage C2-15 Test A-1

Motor
 Test
 Gage
 Location
 T initial

- IM #2
 - A-2 (DMP-3)
 - C2-15
 - Fwd
 - -65°F

Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F

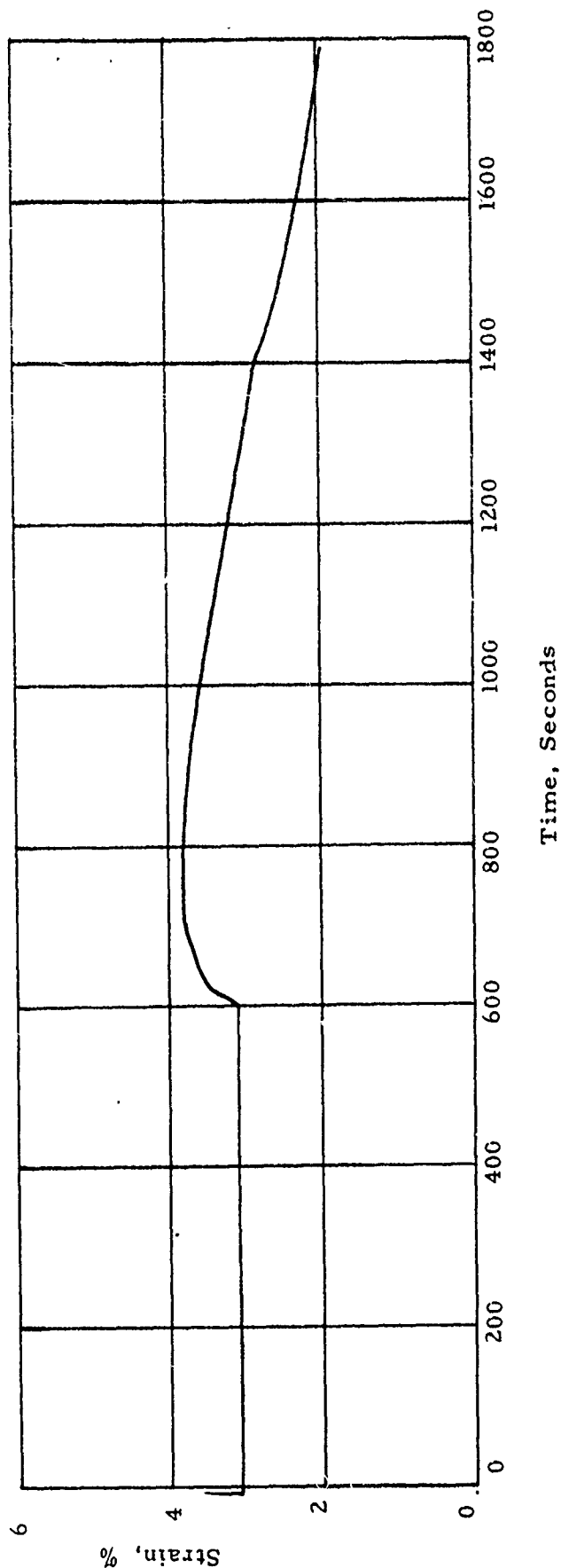


Bore Strain Results to Aeroheat Loads. Gage C2-15 Test A-2

Motor
Test
Gage
Location
T initial

- IM #2
- A-3 (SFPI)
- C2-15
- Fwd
- -65°F

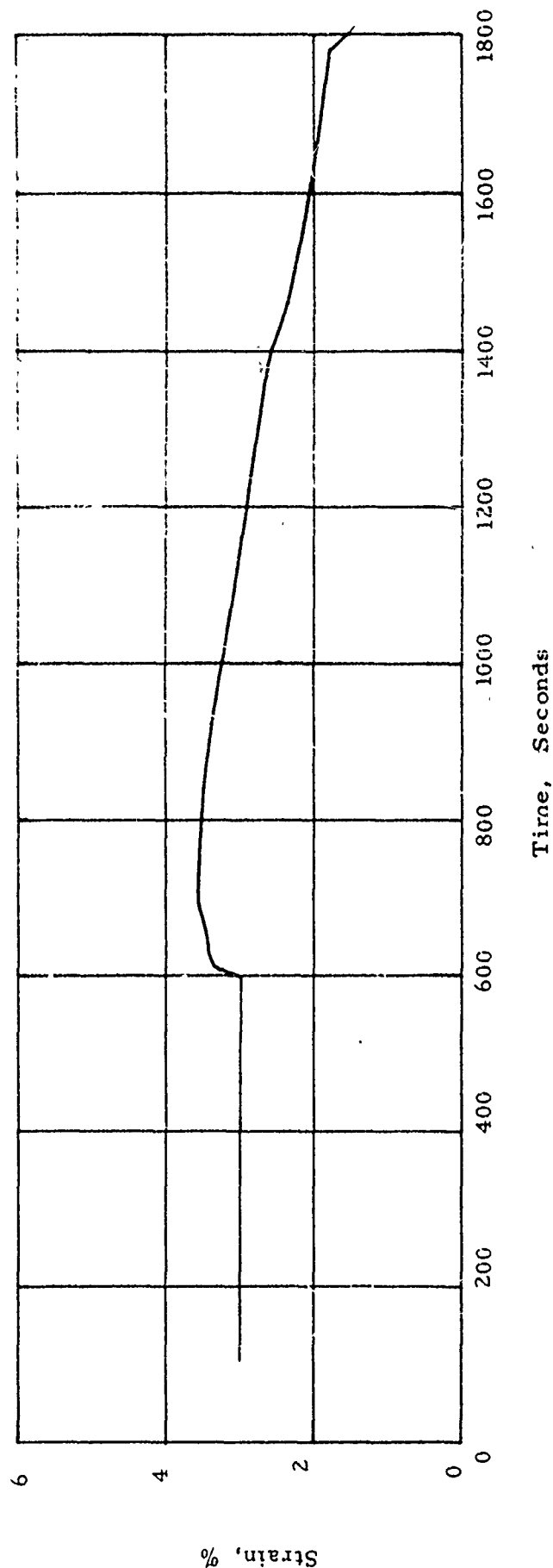
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F



Bore Strain Results to Aeroheat Loads. Gage C2-15 Test A-3

Motor - IM #2
 Test - A-4 (SFPI)
 Gage - C2-15
 Location - Fwd
 T initial - -65°F

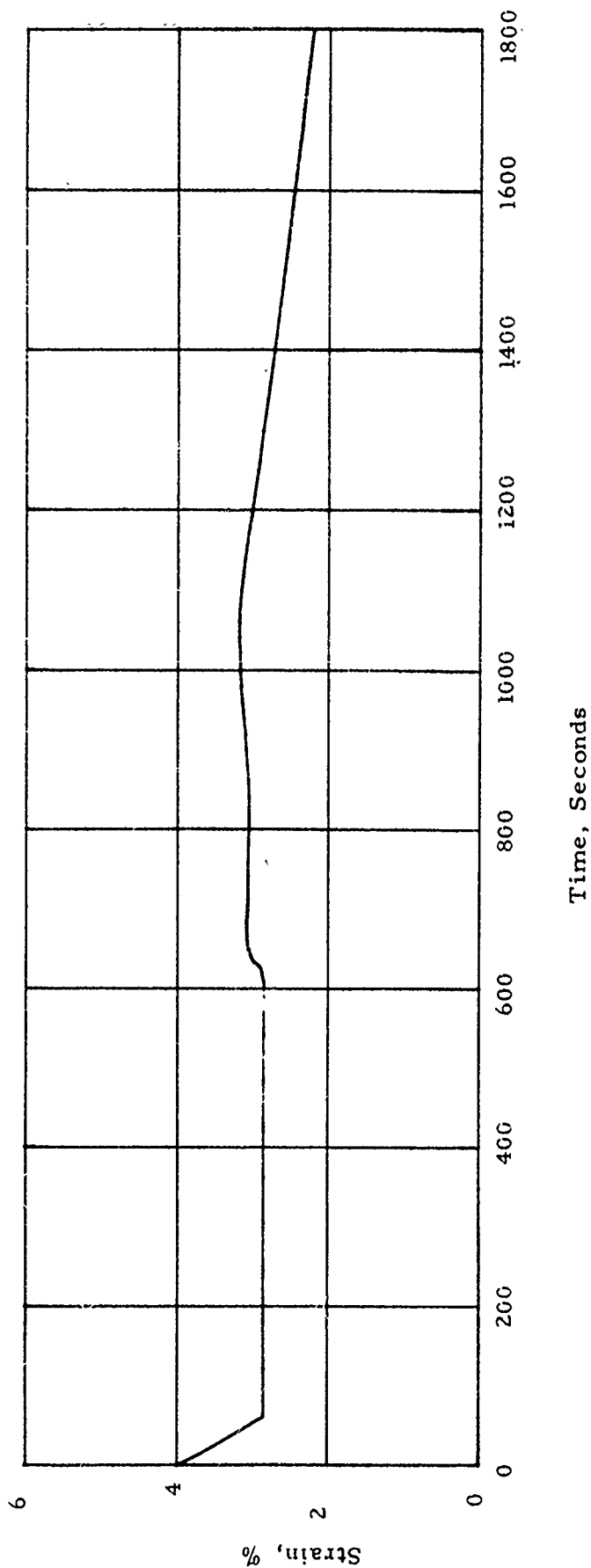
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Results to Aeroheat Loads. Gage C2-15 Test A-4

Motor · IM #2
 Test · A-5 (HSMH)
 Gage · C2-15
 Location · Fwd
 T initial · -65°F

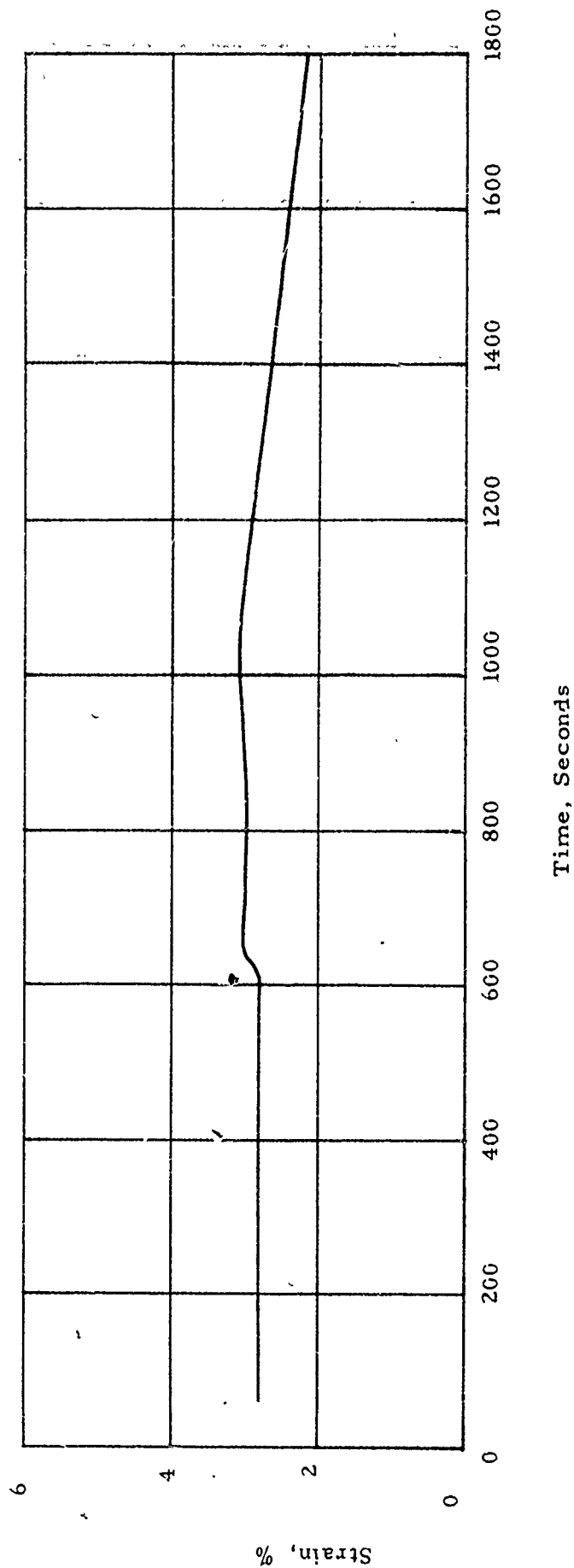
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Results to Aeroheat Loads. Gage C2-15 Test A-5

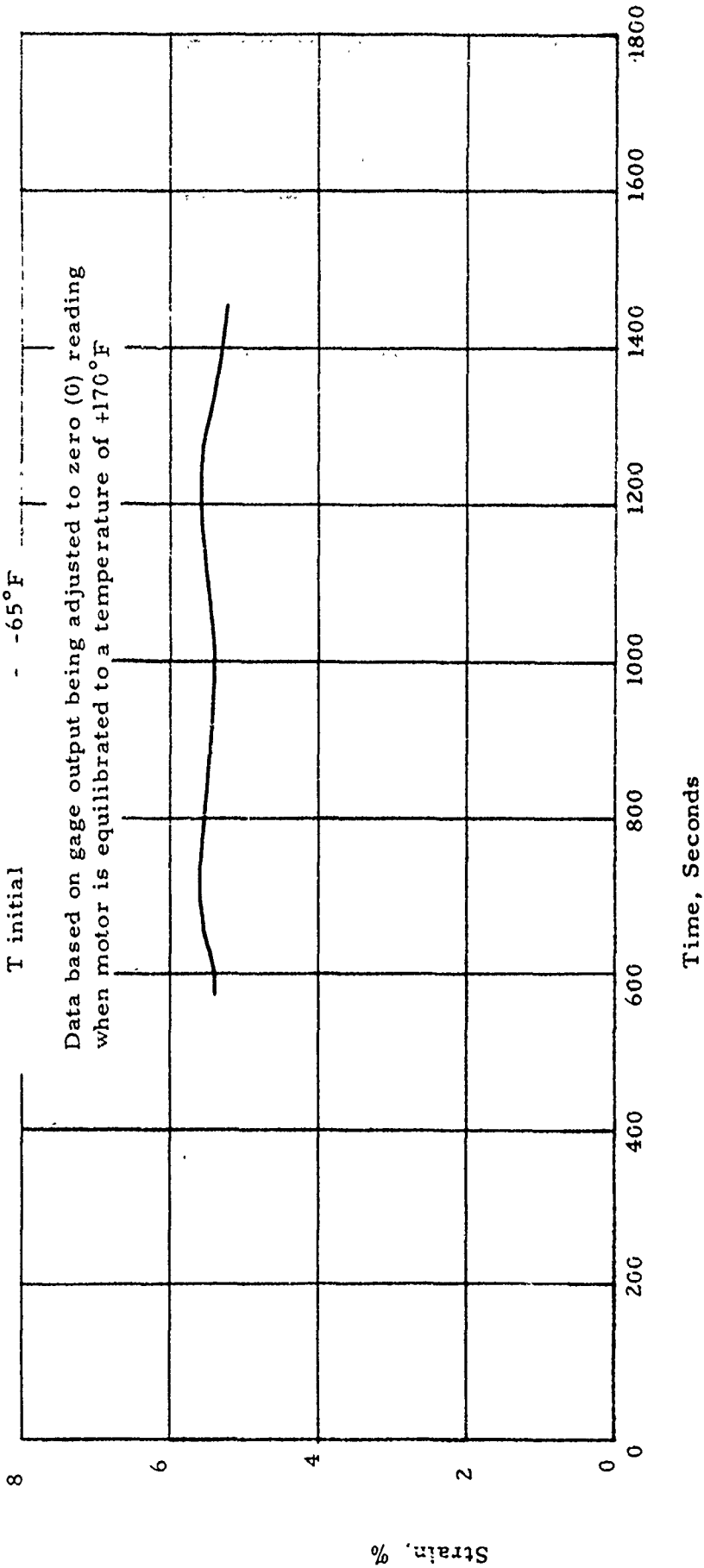
Motor - IM #2
 Test - A-6 (HSMH)
 Gage - C2-15
 Location - Fwd
 T initial - -65°F

Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Results to Aeroheat Loads. Gage C2-15 Test A-6

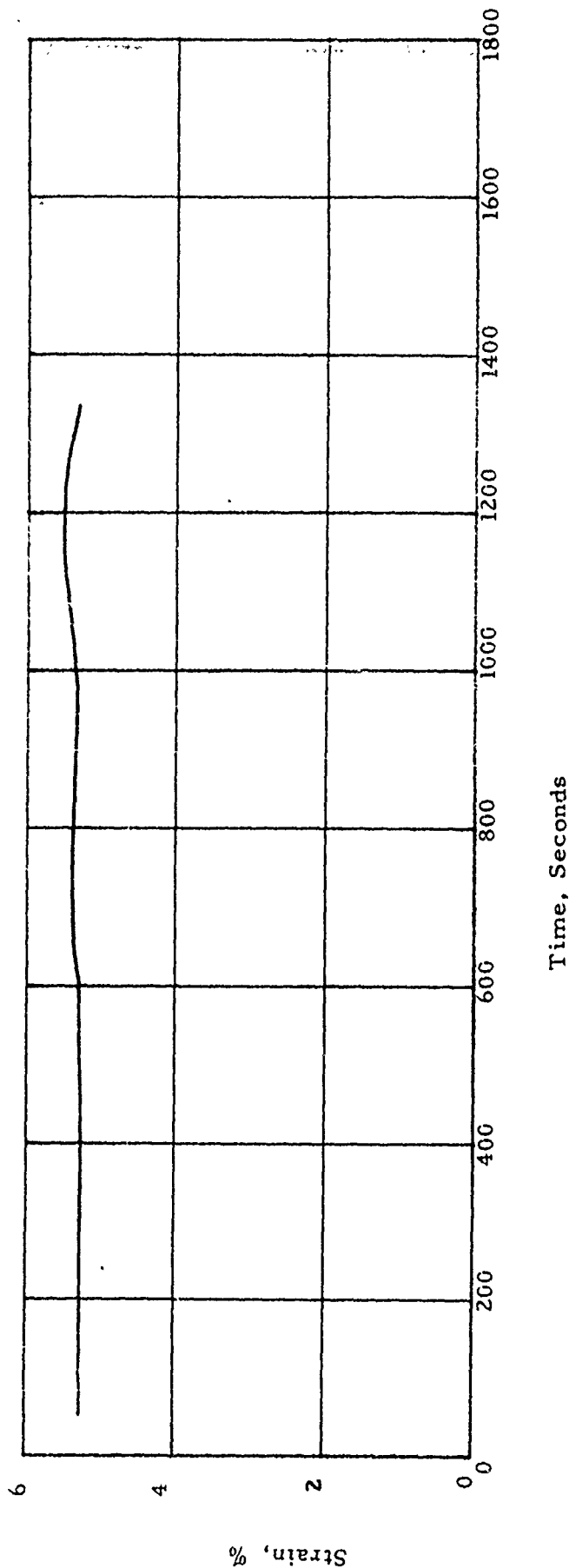
- Motor
 - Test
 - Gage
 - Location
 - T initial
- IM #2
 - A-1 (DMP-3)
 - C2-13
 - Aft (small bore)
 - -65°F



Bore Strain Response to Aeroheat Loads. Gage C2-16 Test A-1

Motor - IM #2
 Test - A-2 (DMP-3)
 Gage - C2-16
 Location - Aft (small bore)
 T initial - -65°F

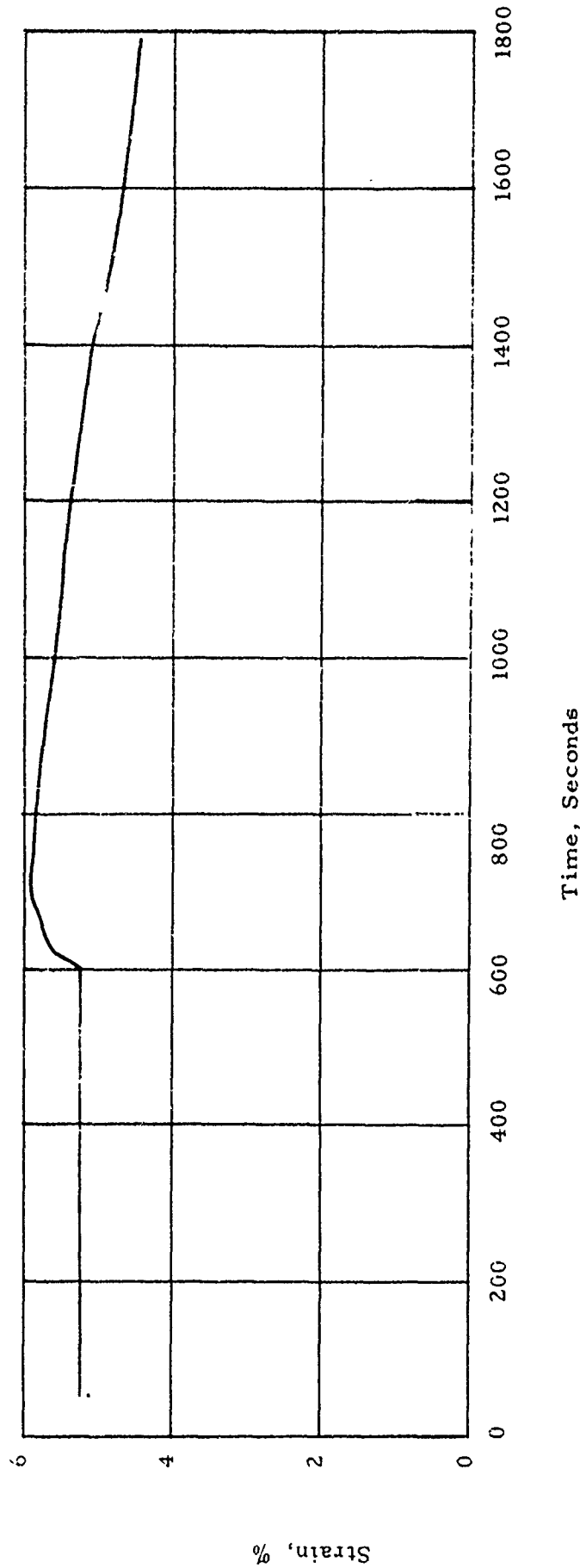
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads. Gage C2-16 Test A-2

Motor - IM #2
 Test - A-3 (SFPI)
 Gage - C2-16
 Location - Aft (small bore)
 T initial - -65°F

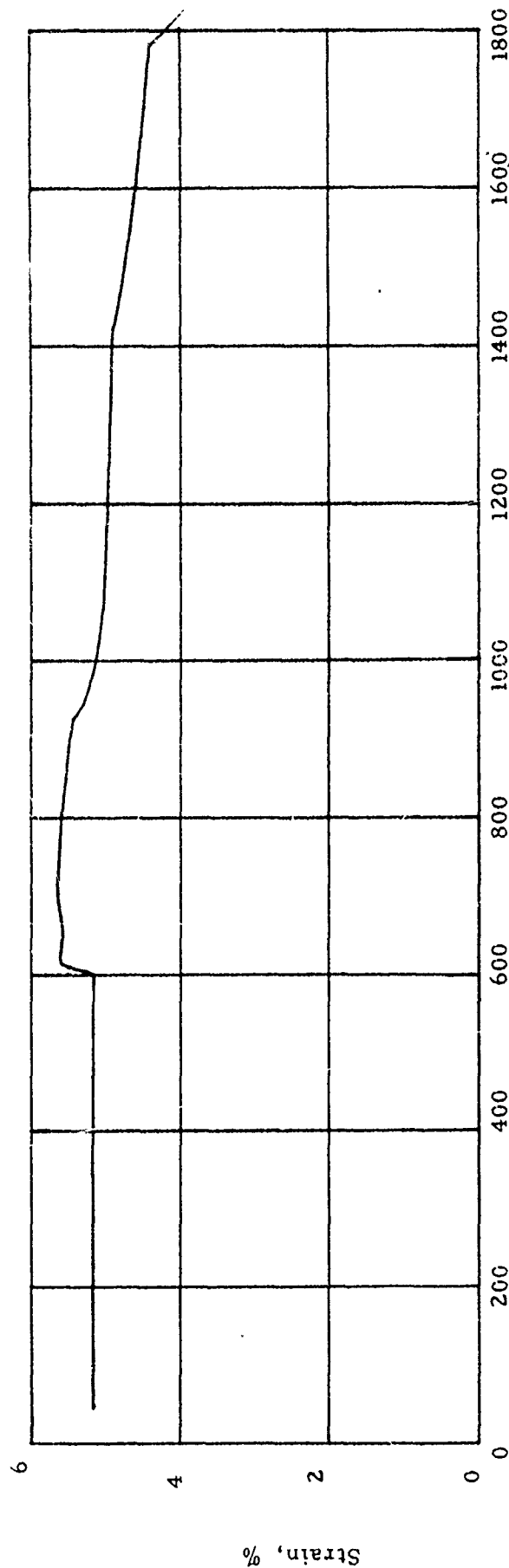
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads. Gage C2-16 Test A-3

Motor - IM #2
 Test - A-4 (SFPI)
 Gage - C2-16
 Location - Aft (small bore)
 T initial - -65°F

Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F.

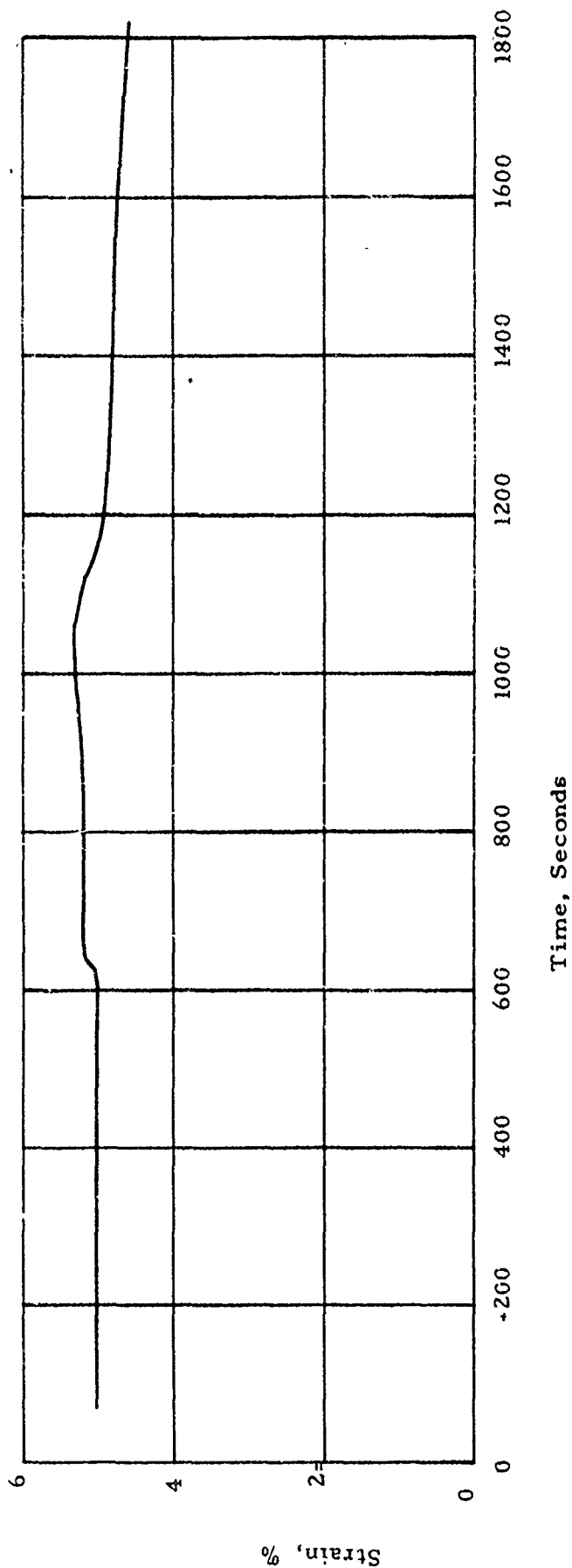


Time, Seconds

Bore Strain Response to Aeroheat Loads. Gage C2-16 Test A-4

Motor - IM #2
 Test - A-5 (HSMH)
 Gage - C2-16
 Location - Aft (small bore)
 T initial - -65°F

Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F

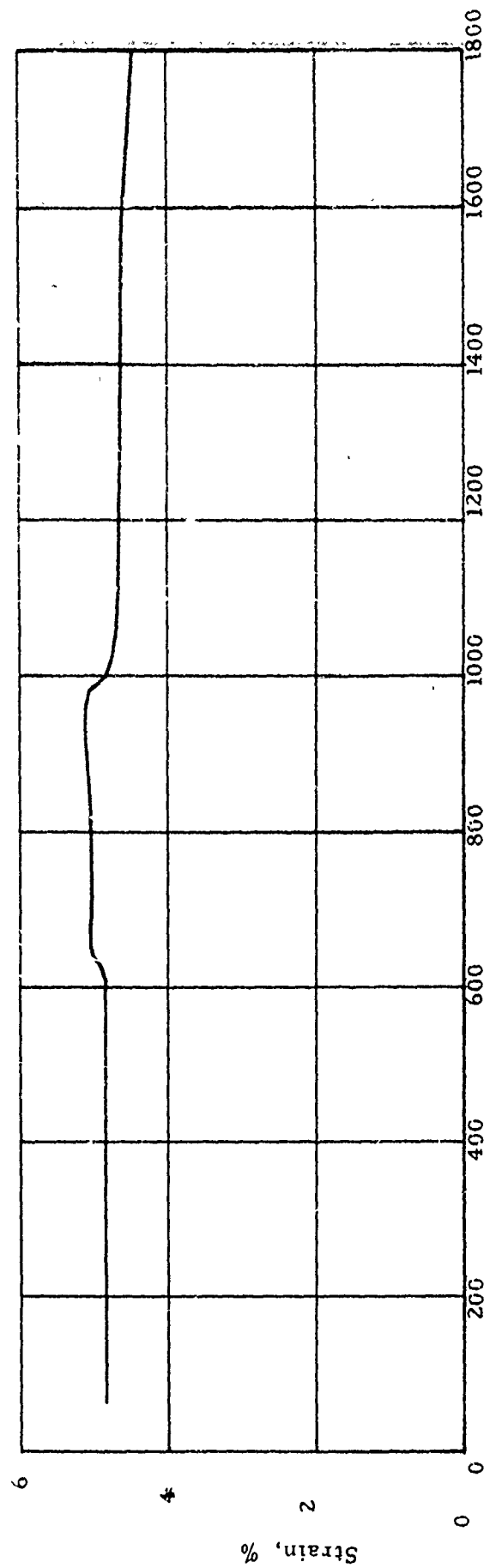


Bore Strain Response to Aeroheat Loads. (Gage C2-16) Test A-5

Motor
 Test
 Gage
 Location
 T initial

- IM #2
 - A-6 (HSMH)
 - C2-16
 - Aft (small bore)
 - -65°F

Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F

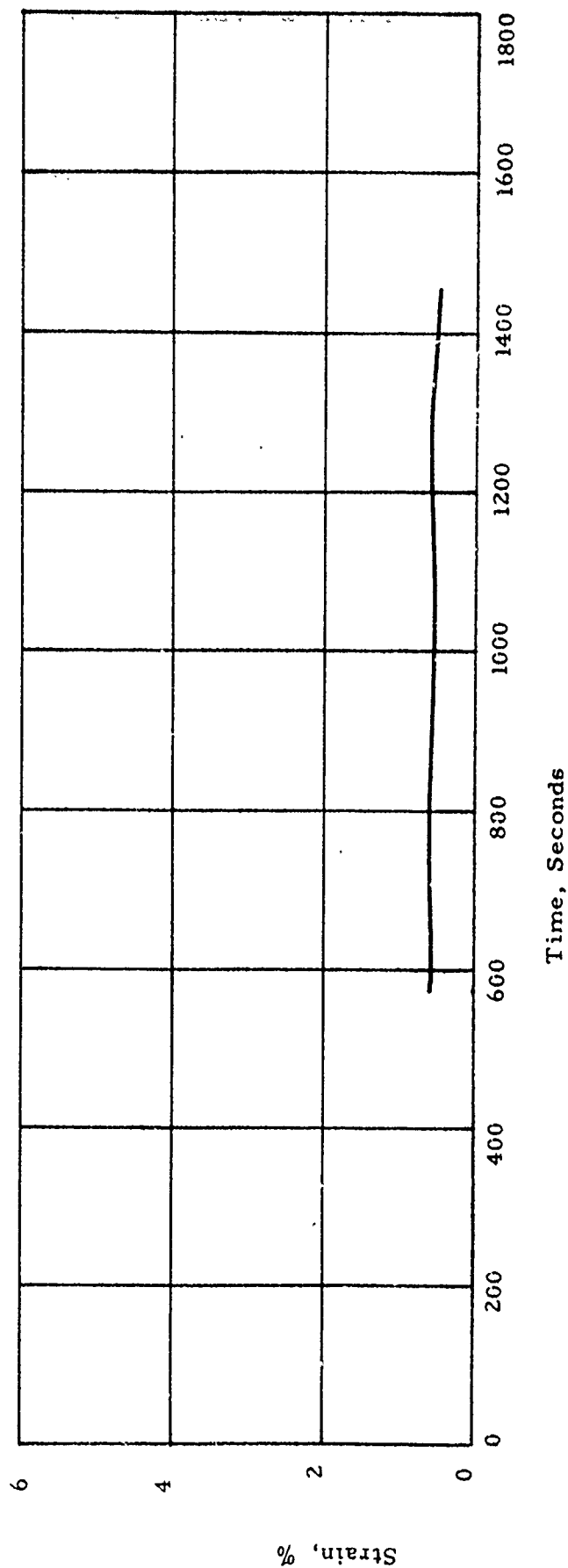


Time, Seconds

Bore Strain Response to Aeroheat Loads. Gage C2-16 Test A-6

Motor - IM #2
 Test - A-1 (DMP-3)
 Gage - C2-17
 Location - Aft
 T initial - -65° F

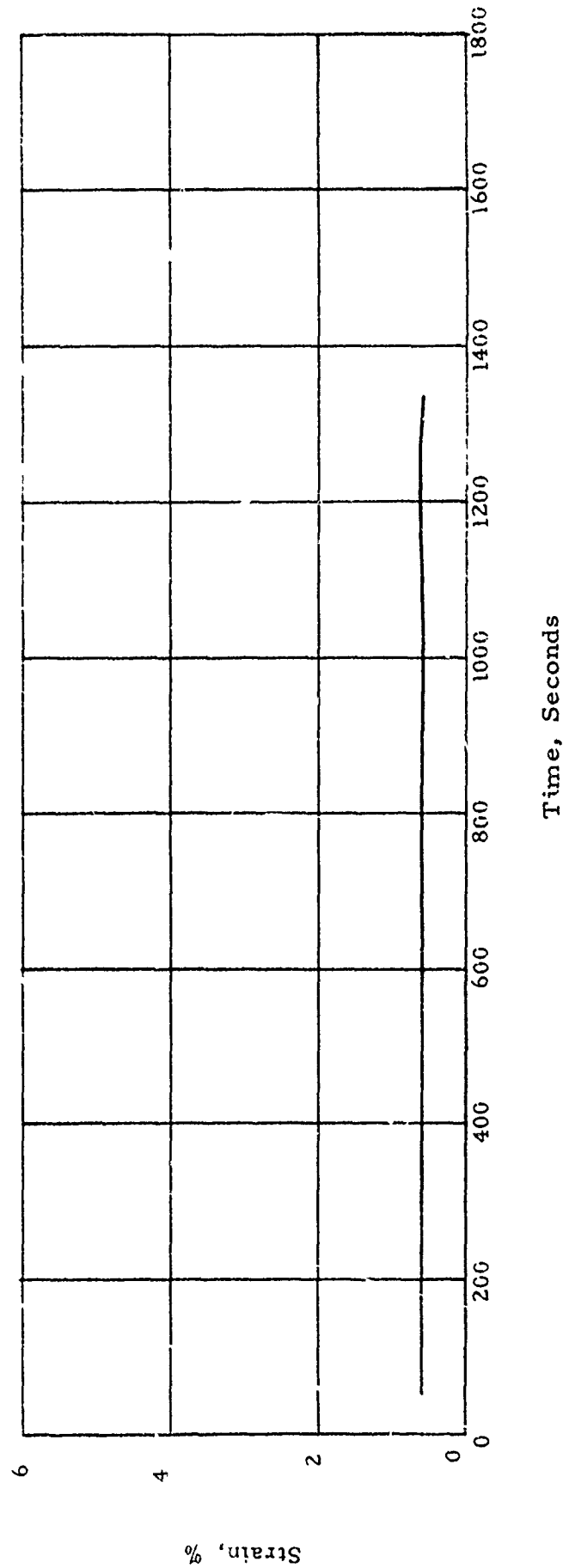
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170° F



Bore Strain Response to Aeroheat Loads. Gage C2-17 Test A-1

Motor - IM #2
 Test - A-2 (DMP-3)
 Gage - C2-17
 Location - Aft
 T initial - -65°F

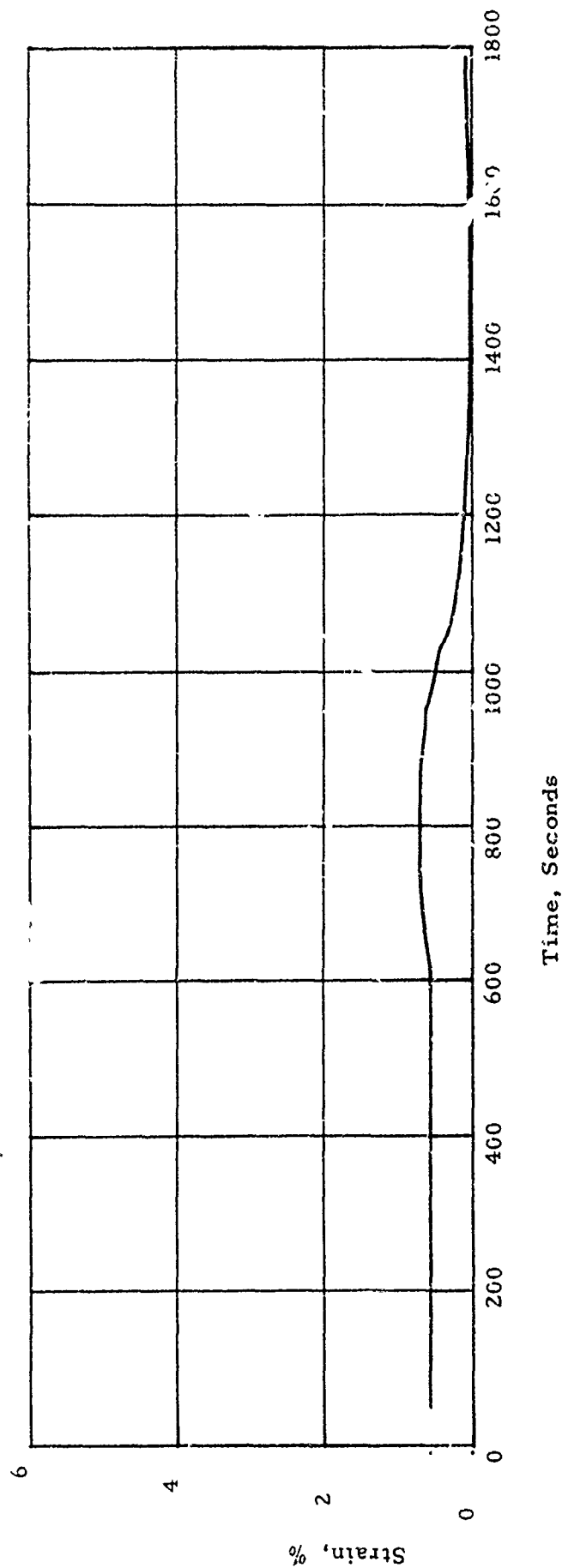
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads. Gage C2-17 Test A-2

Motor - IM #2
 Test - A-3 (SFPI)
 Gage - C2-17
 Location - Aft
 T initial - -65°F

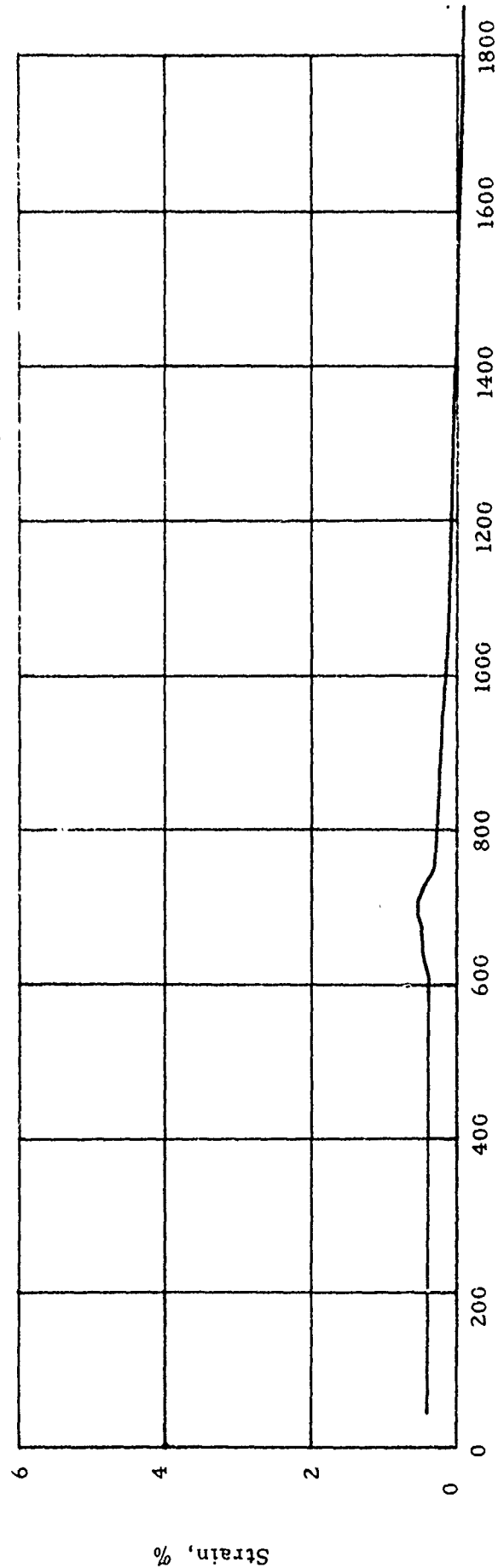
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of -170°F



Bore Strain Response to Aerosat Loads. Gage C2-17 Test A-3

Motor - IM #2
 Test - A-4 (SFP)
 Gage - C2-17
 Location - Aft
 T initial - -65%

Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F

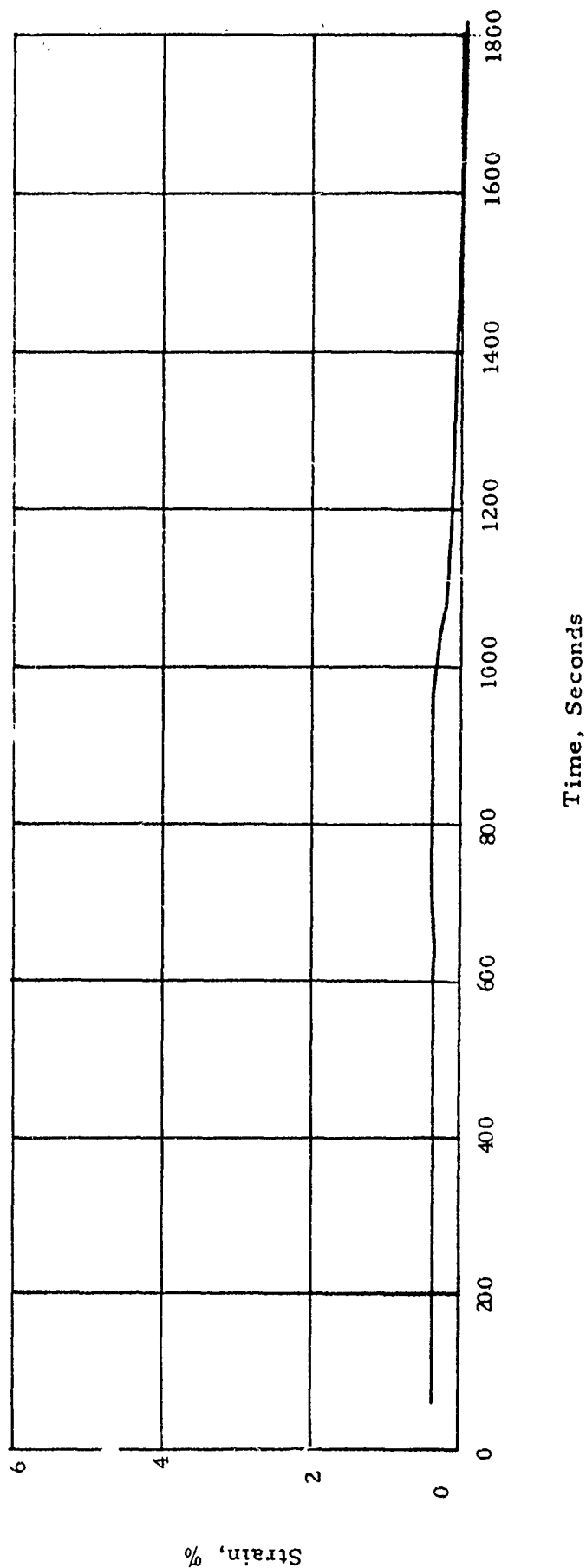


Time, Seconds

Figure Bore Strain Response to Aeroheat Loads. Gage C2-17 Test A-4

Motor - IM #2
 T_c st - A-5 (HSMH)
 Gage - C2-17
 Location - Aft
 T initial - -65°F

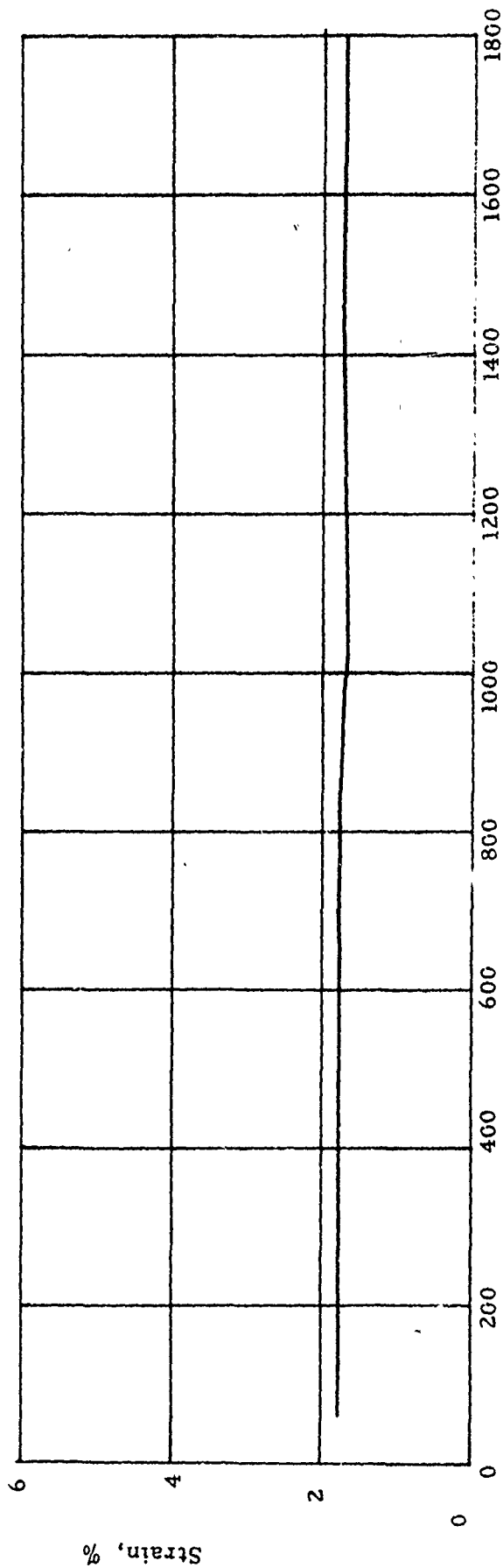
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of 470°F



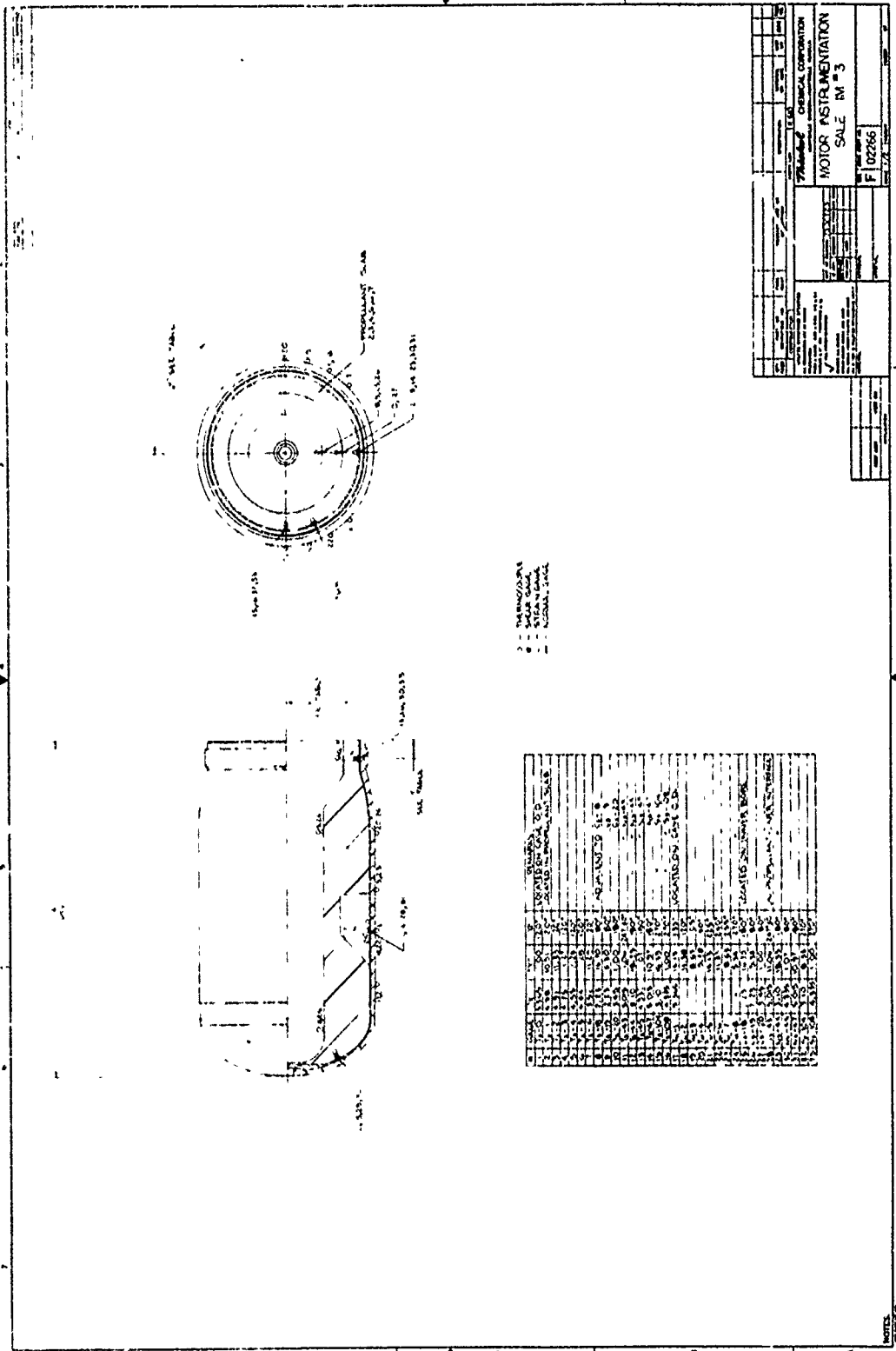
Bore Strain Response to Aeroheat Loads. Gage C2-17 Test A-5

Motor - IM #2
 Test - A-6 (HSMH)
 Gage - C2-17
 Location - Aft
 T initial - -65°F

Data based on gage output, being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F

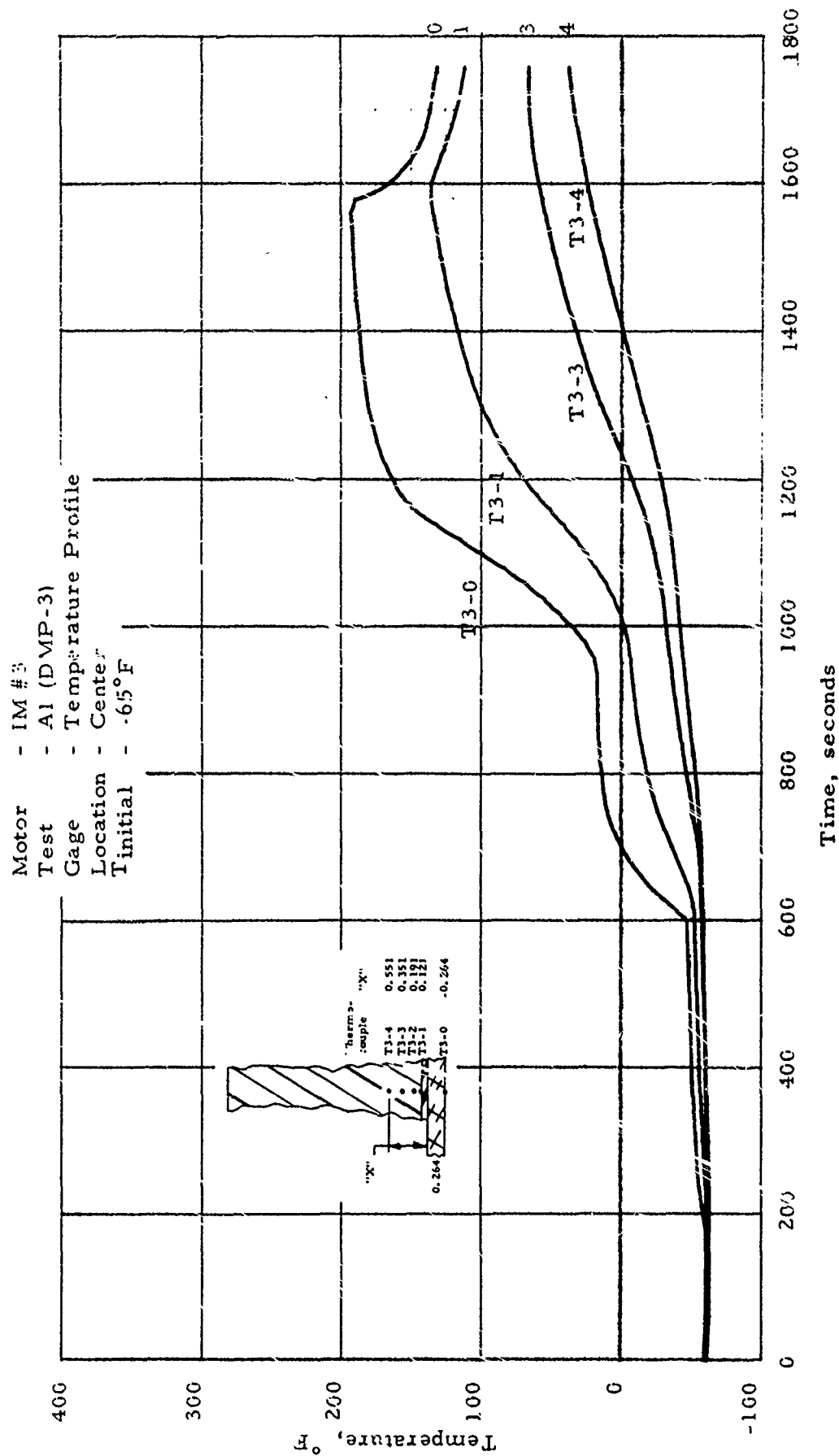


Time, Seconds
 Bore Strain Response to Aeroheat Loads. Gage C2-17 Test A-6



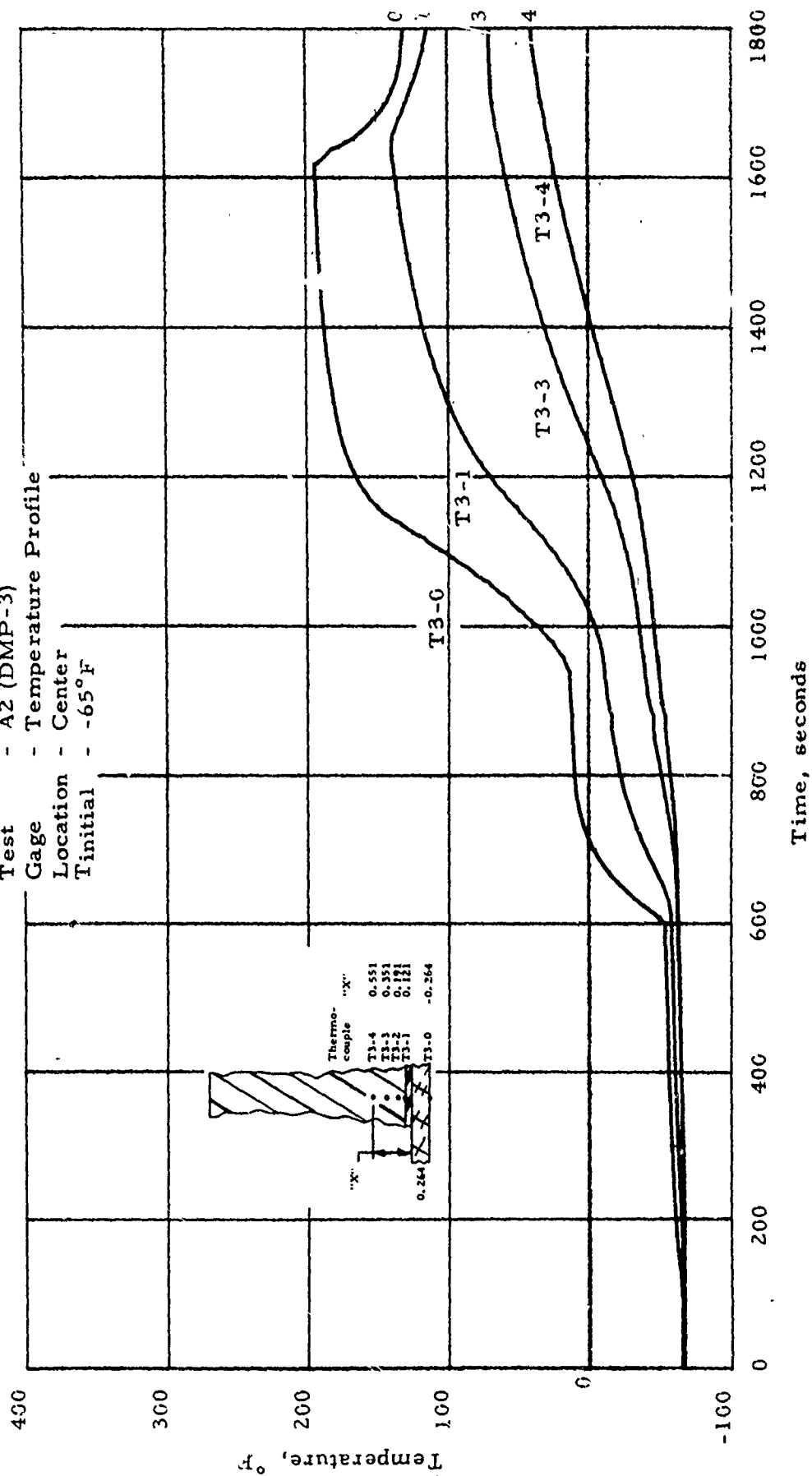
TEST HISTORY OF IM #3

<u>Test</u>	<u>Date</u>	<u>Aeroheat Mission</u>	<u>Initial Motor Temperature, °F</u>
A-1	73 Dec 04 (1335 hrs)	DMP-3	-65
A-2	73 Dec 06 (1330 hrs)	DMP-3	-65
A-3	73 Dec 07 (1320 hrs)	DMP-3	-65
A-4	73 Dec 11 (0910 hrs)	HSMH	+55
A-5	73 Dec 21 (1510 hrs)	HSMH	-65
A-6	73 Dec 27 (1300 hrs)	HSMH	-65
A-7	73 Dec 28 (1500 hrs)	SFPI	+60
A-8	74 Jan 03 (1520 hrs)	SFPI	0
A-9	74 Jan 04 (1500 hrs)	SFPI	-40
A-10	74 Jan 08 (1500 hrs)	SFPI	-40
A-11	74 Jan 10 (0830 hrs)	DMP-3	-65
A-12	74 Jan 11 (1350 hrs)	SFPI	-65
A-13	74 Jan 14 (1330 hrs)	SFPI	-65
A-14	74 Jan 15 (1330 hrs)	SFPI	-65
A-15	74 Jan 16 (1500 hrs)	SFPI	-65
A-16	74 Jan 17 (1430 hrs)	SFPI	-65
A-17	74 Jan 18 (1300 hrs)	DMP-3	-65

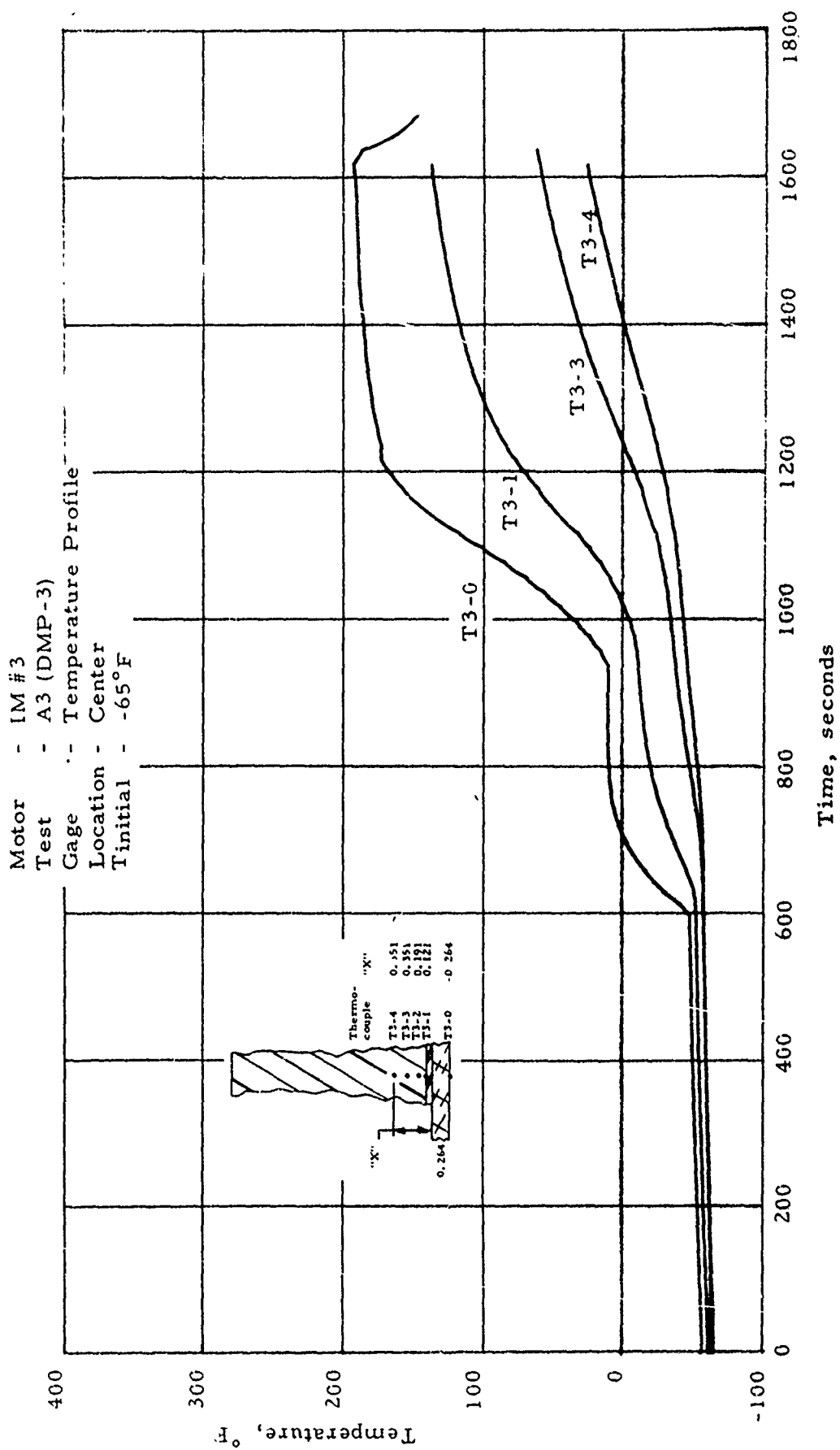


Temperature Profile Histories for Various Aeroheat Loads (Test No. A-1)

Motor - IM #3
 Test - A2 (DMP-3)
 Gage - Temperature Profile
 Location - Center
 Tinitial - -65°F

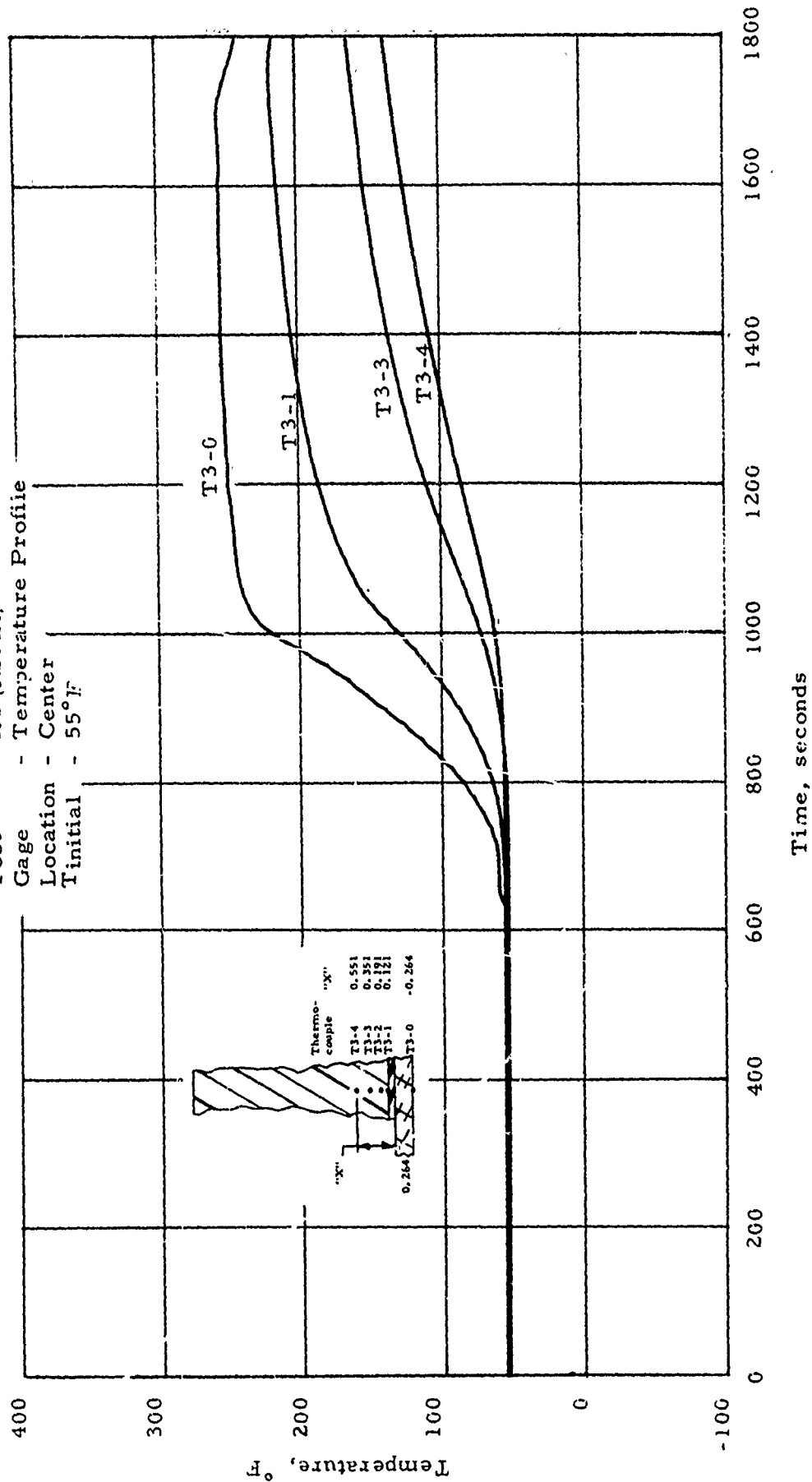


Temperature Profile Histories for Various Aeroheat Loads (Test No. A-2)

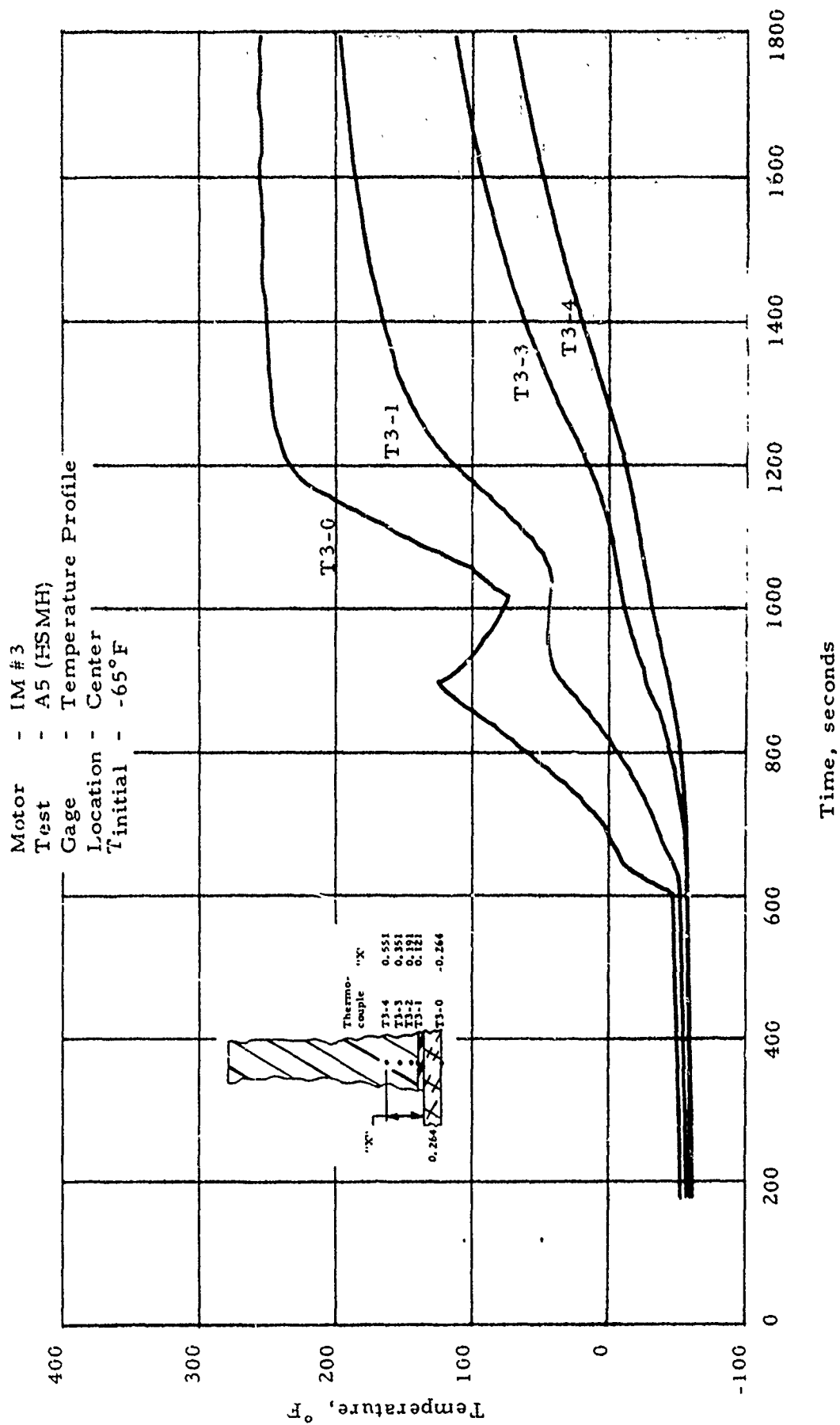


Temperature Profile Histories for Various Aeroheat Loads (Test No. A-3)

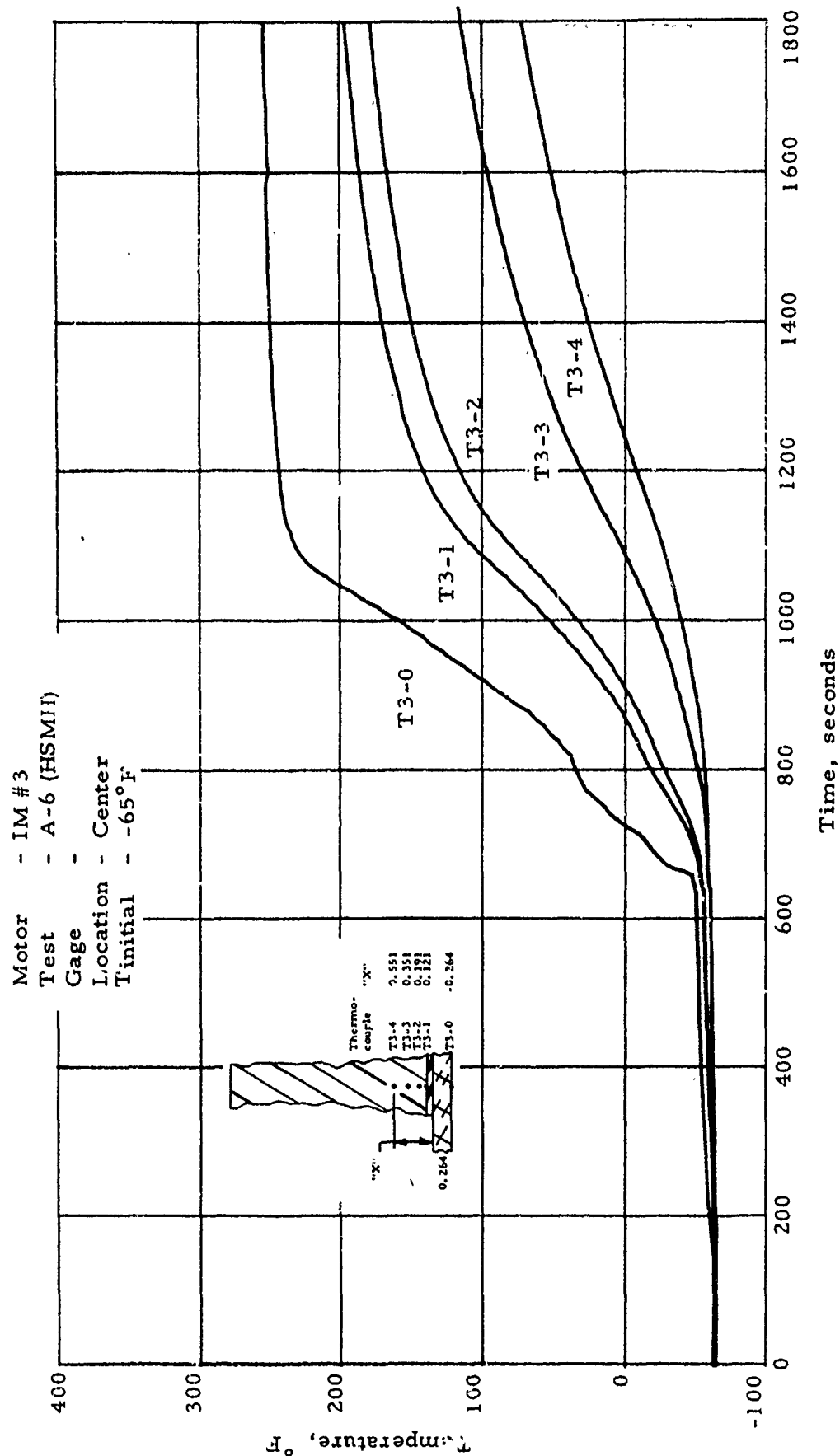
Motor - IM #3
 Test - A4 (FSMH)
 Gage - Temperature Profile
 Location - Center
 T initial - 55°F



Temperature Profile Histories for Various Aeroheat Loads (Test No. A-4)

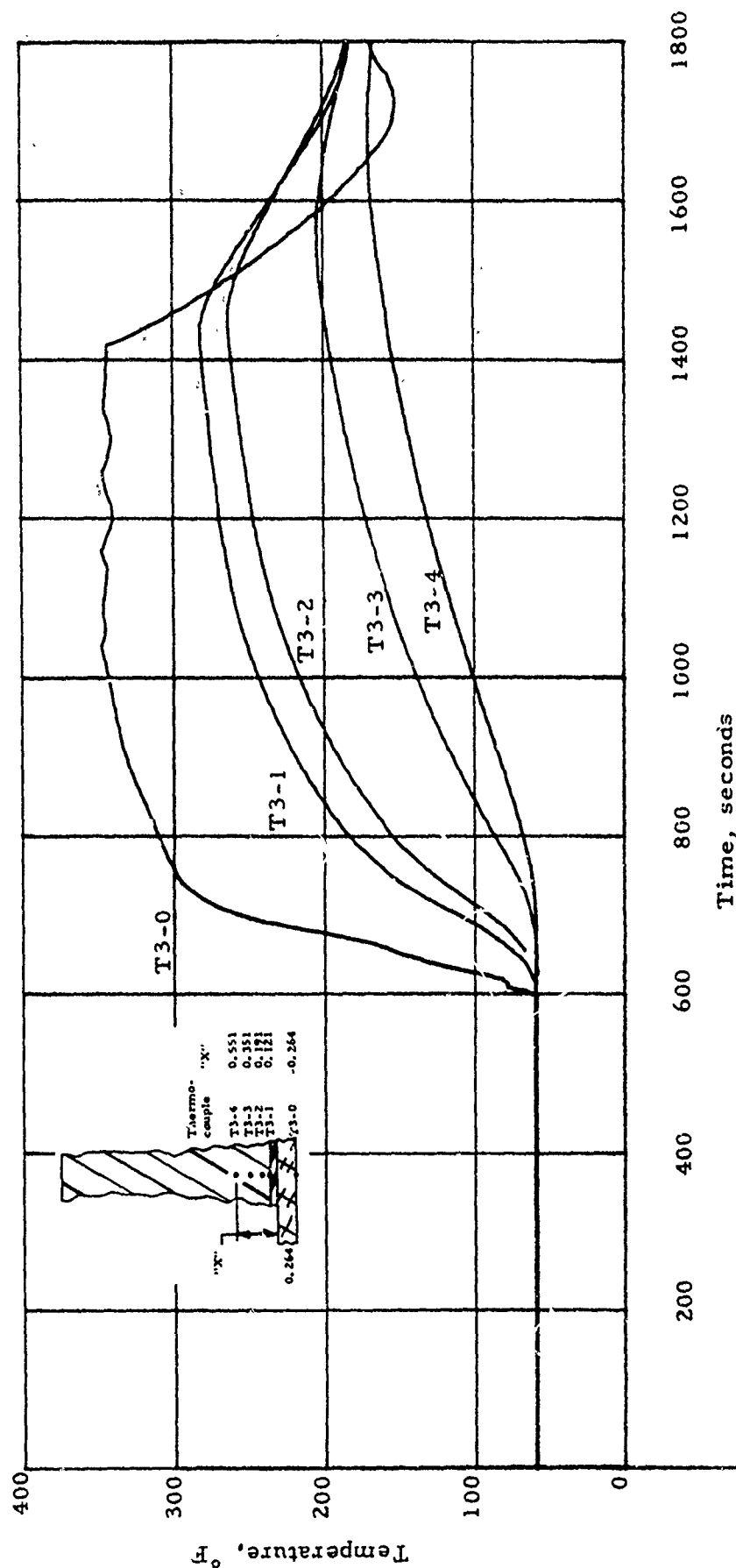


Temperature Profile Histories for Various Aeroheat Loads (Test No. A-5)



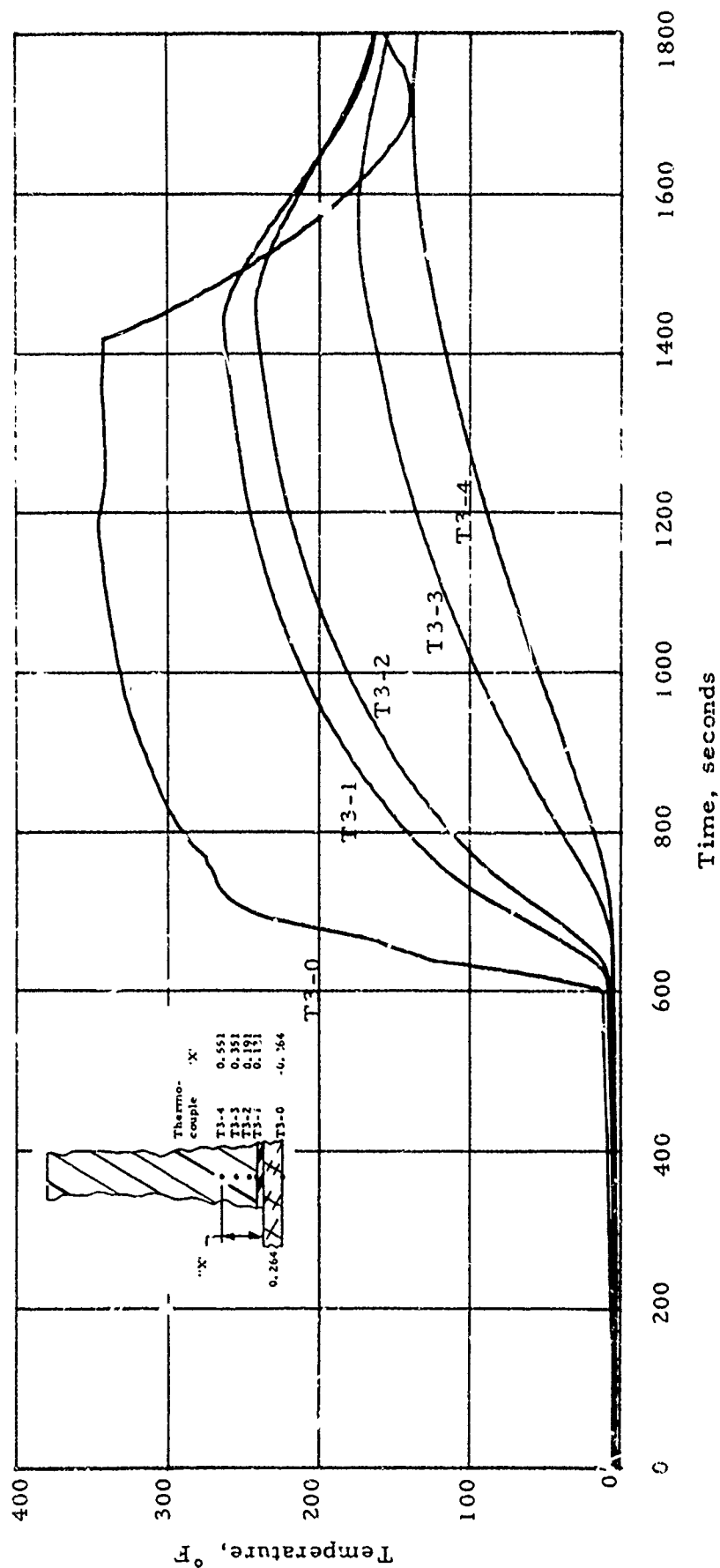
Temperature Profile Histories for Various Aeroheat Loads (Test No. A-6)

Motor - IM #3
 Test - A7 (SFPI)
 Gage - Temperature Profile
 Location - Center
 Tinitial - +60°F



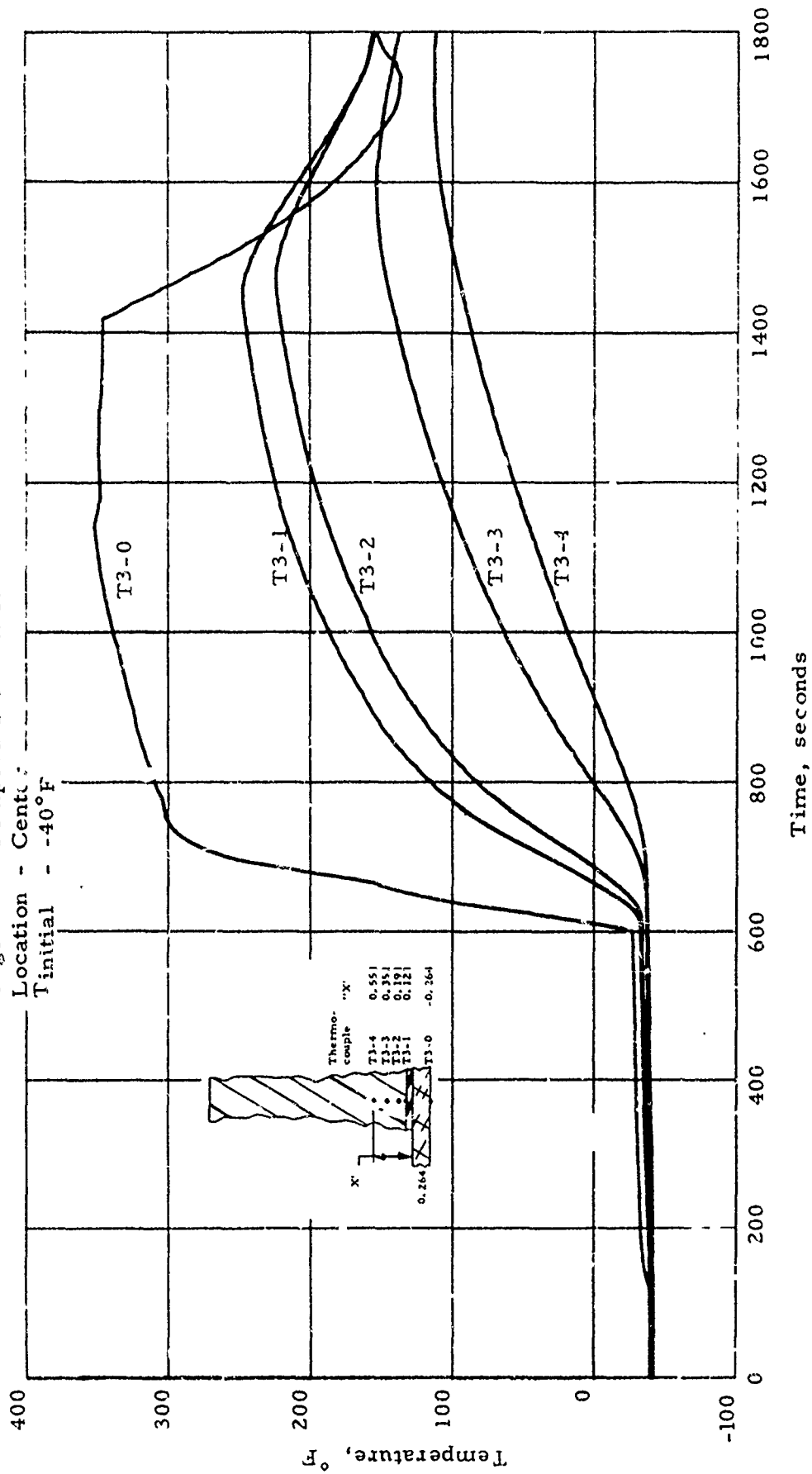
Temperature Profile Histories for Various Aeroheat Loads (Test No. A-7)

Motor - IM #3
 Test - A8 (SFPI)
 Gage - Temperature Profile
 Location - Center
 T initial - 0°F

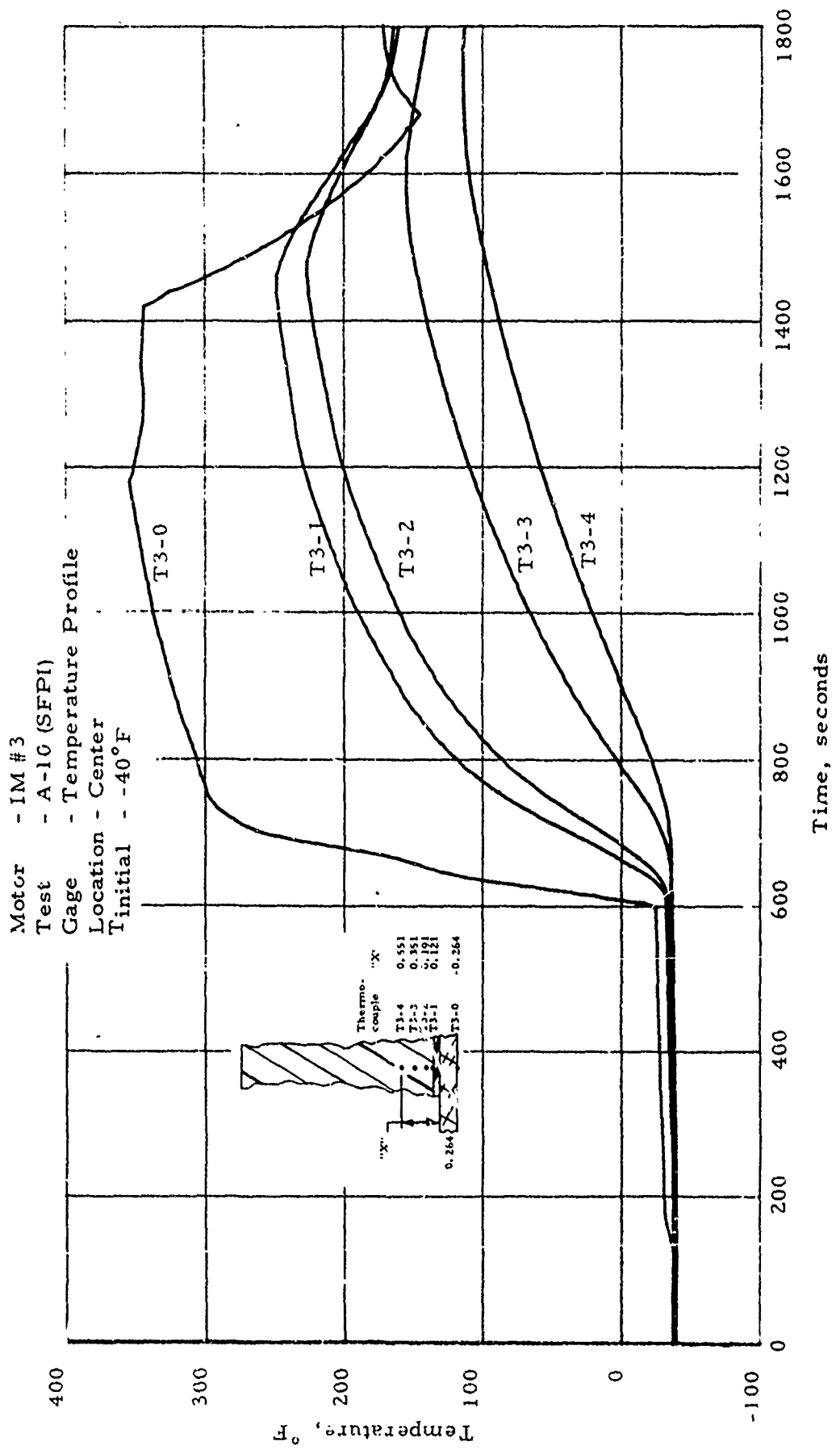


Temperature Profile Histories for Various Aeroheat Loads

Motor - IM #3
 Test - A9 (SFPI)
 Gage - Temperature profile
 Location - Cent.
 T initial - -40°F

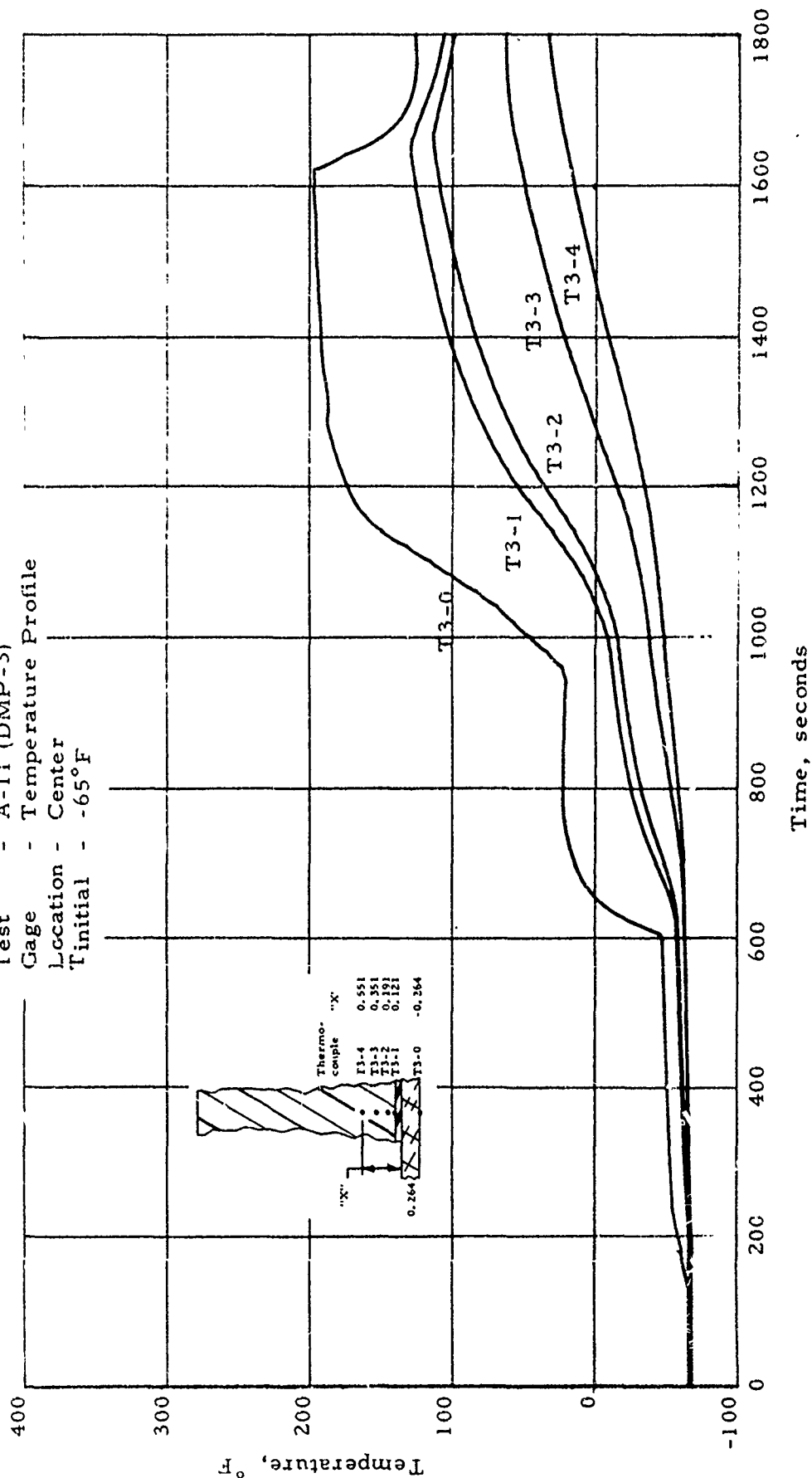


Temperature Profile Histories for Various Aeroneat Loads

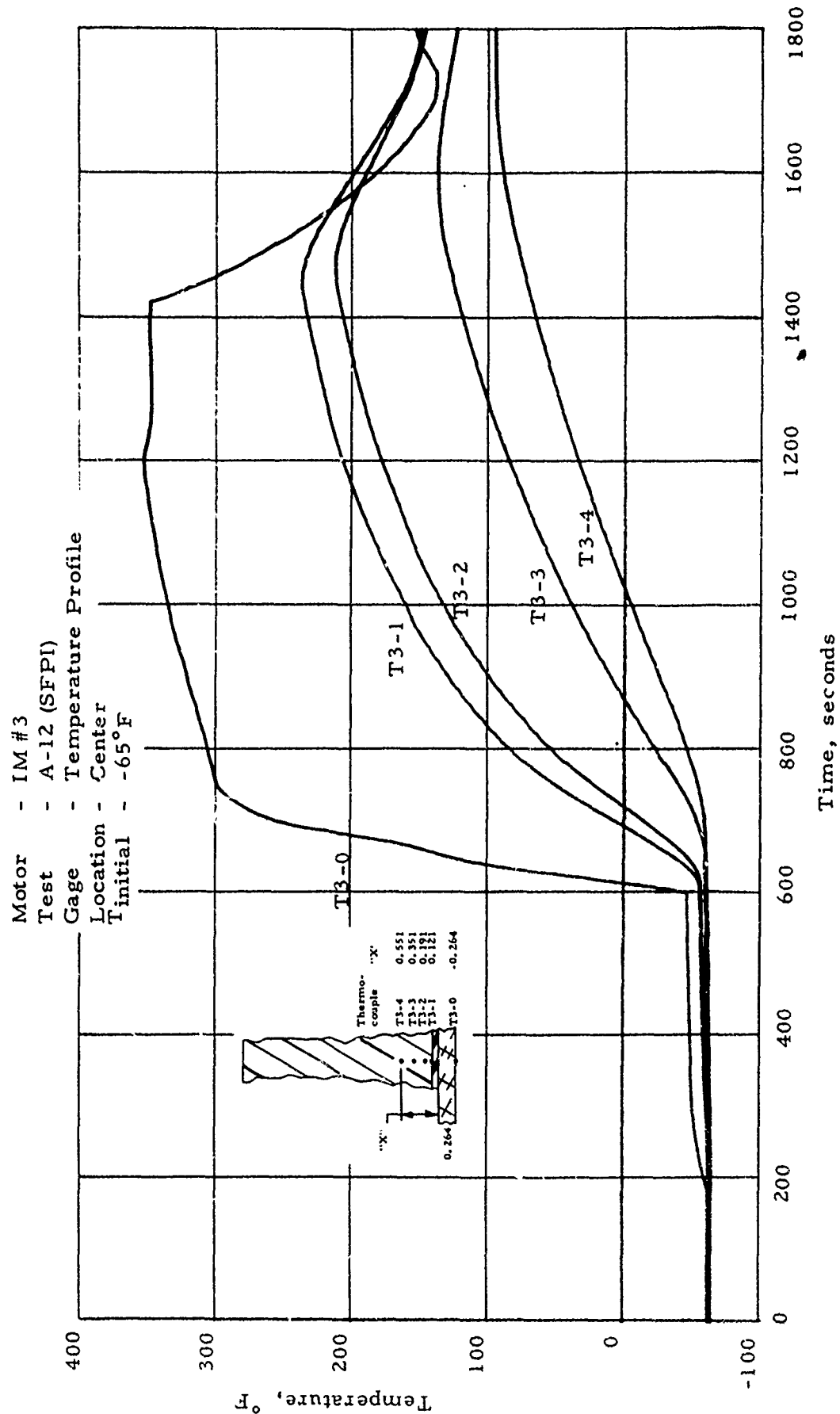


Temperature Profile Histories for Various Aeroheat Loads

Motor - IM #3
 Test - A-11 (DMP-3)
 Gage - Temperature Profile
 Location - Center
 T_{initial} - -65°F

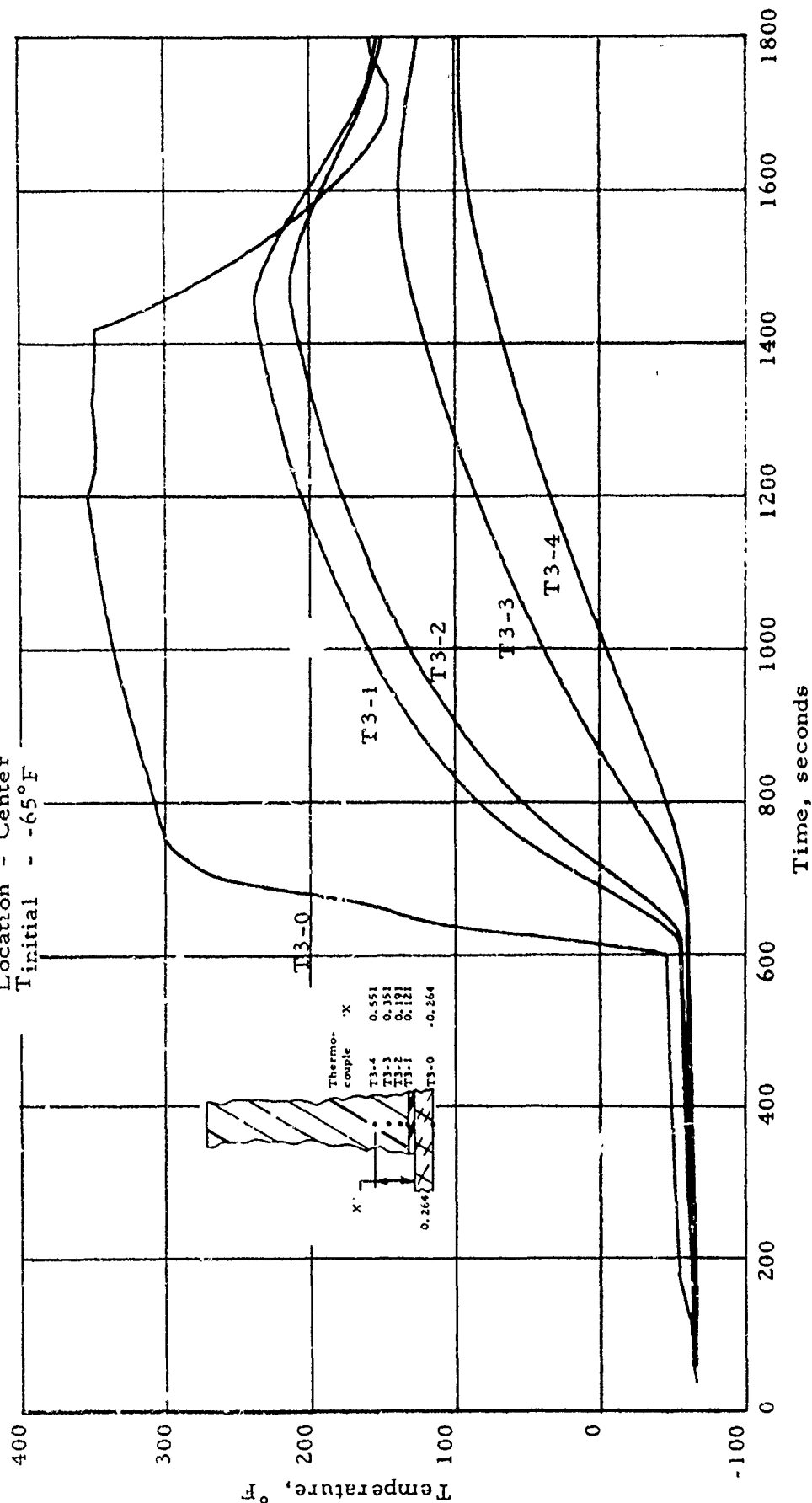


Temperature Profile Histories for Various Aeroheat Loads



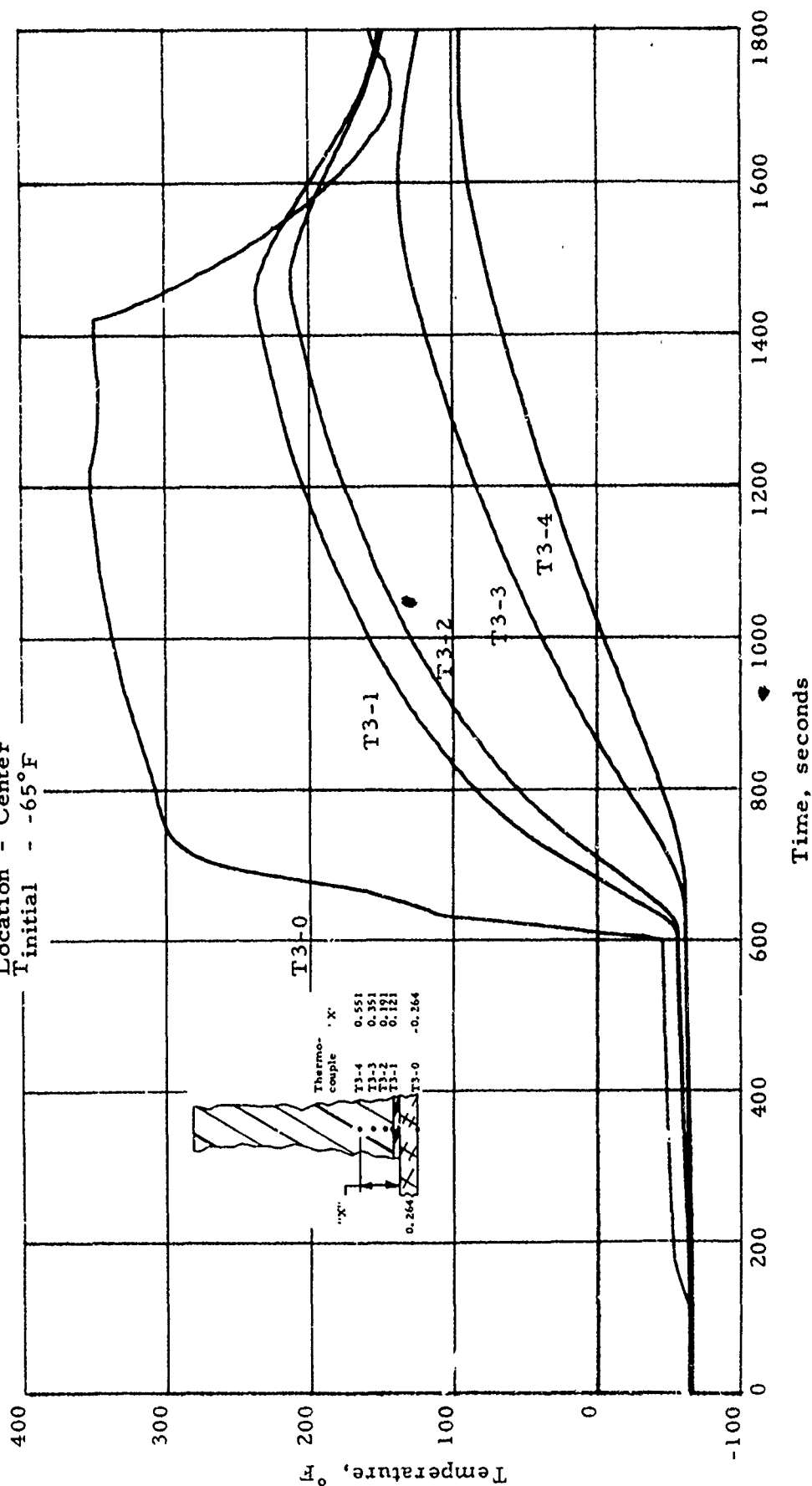
Temperature Profile Histories for Various Aeroheat Loads

Motor - IM #3
 Test - A-13 (SFPI)
 Gage - Temperature Profile
 Location - Center
 T_{initial} - -65°F



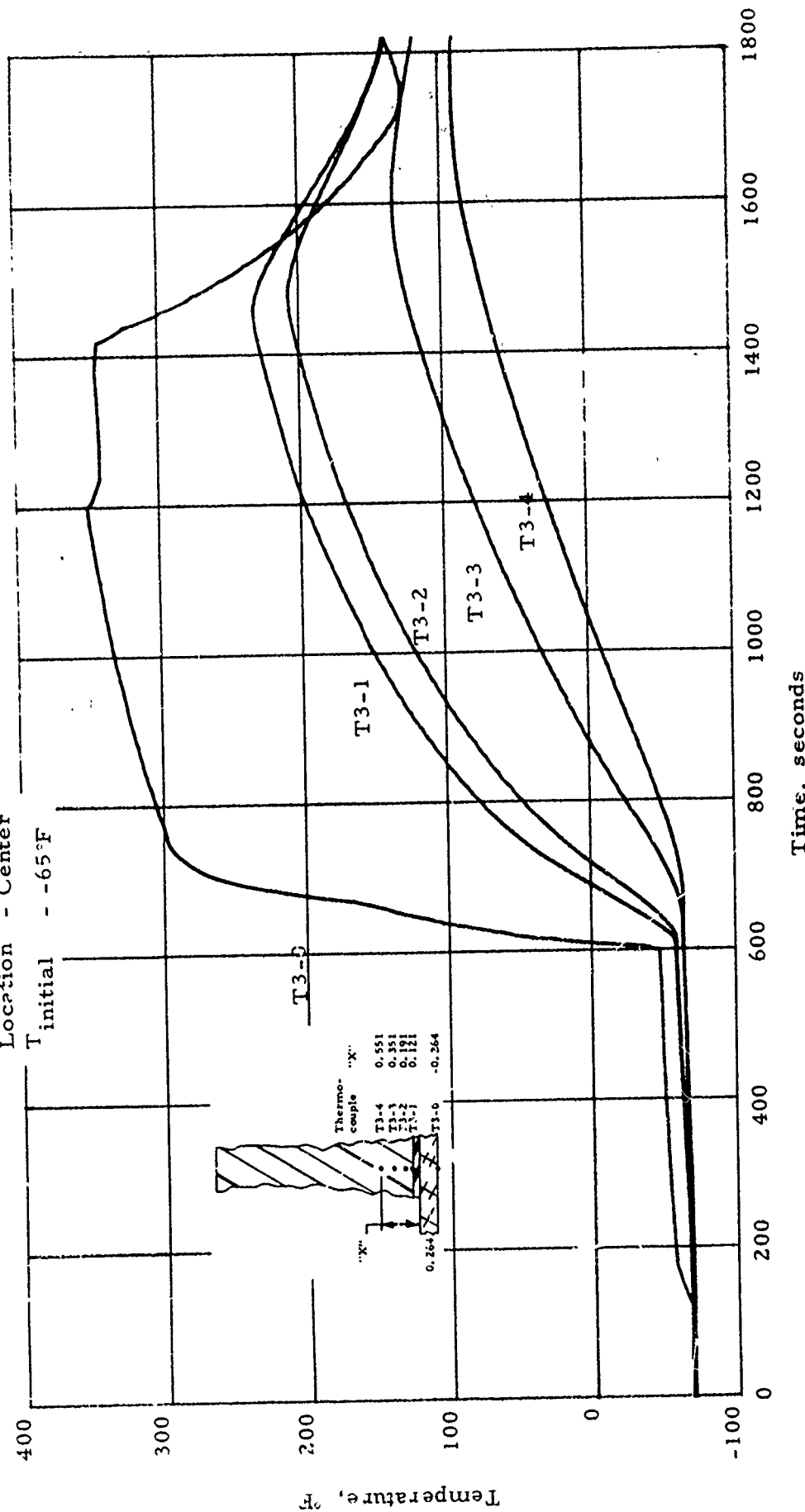
Temperature Profile Histories for Various Aeroheat Loads

Motor - IM #3
 Test - A-14 (SFPI)
 Gage - Temperature Profile
 Location - Center
 T_{initial} - -65°F



Temperature Profile Histories for Various Aeroheat Loads

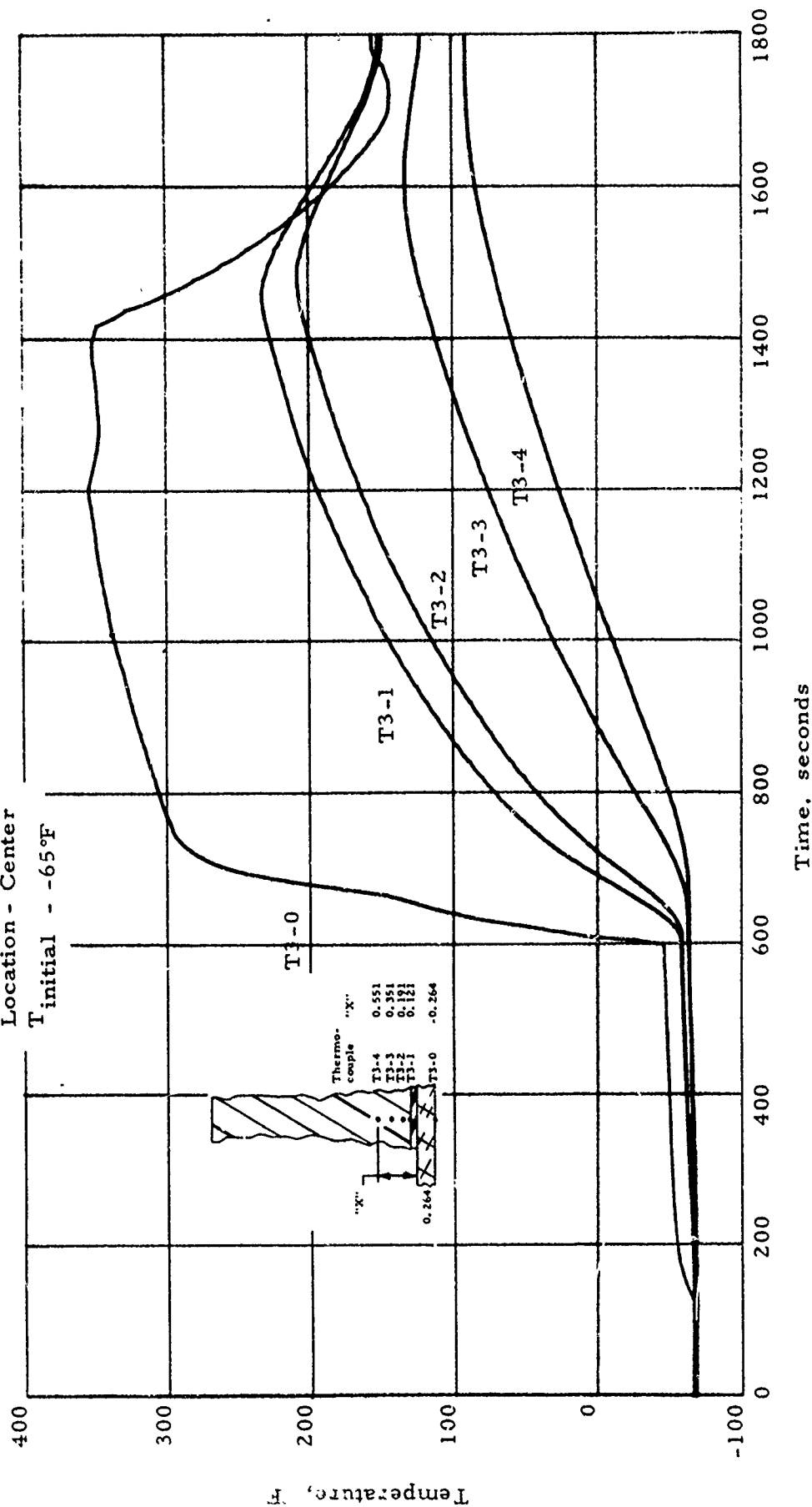
Motor - IM #3
 Test - A-15 (SFPI)
 Gage - Temperature Profile
 Location - Center
 T_{initial} - -65°F



Temperature Profile Histories for Various Aeroheat Loads

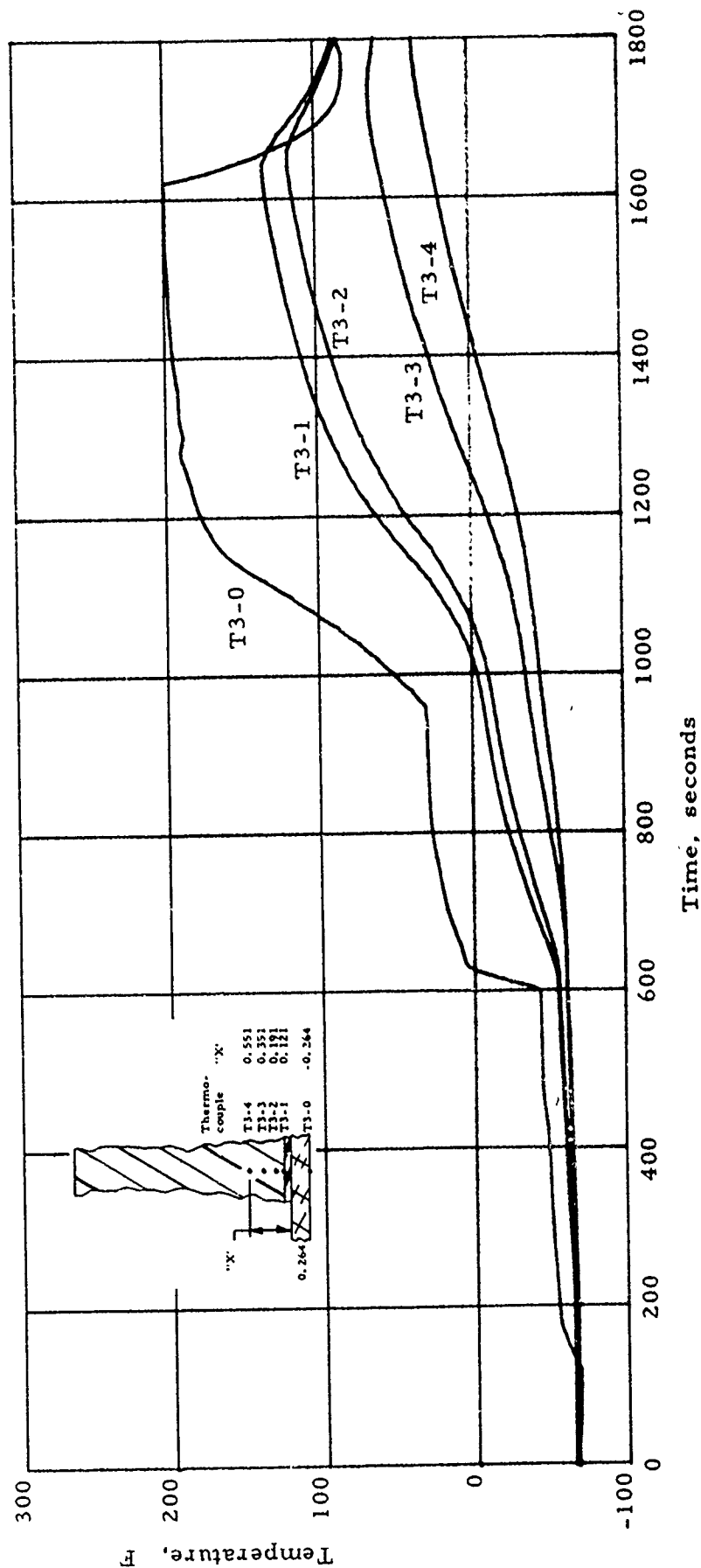
Motor - IM #3
 Test - A-16 (SFPI)
 Gage - Temperature Profile
 Location - Center

T_{initial} - -65°F



Temperature Profile Histories for Various Aeroheat Loads

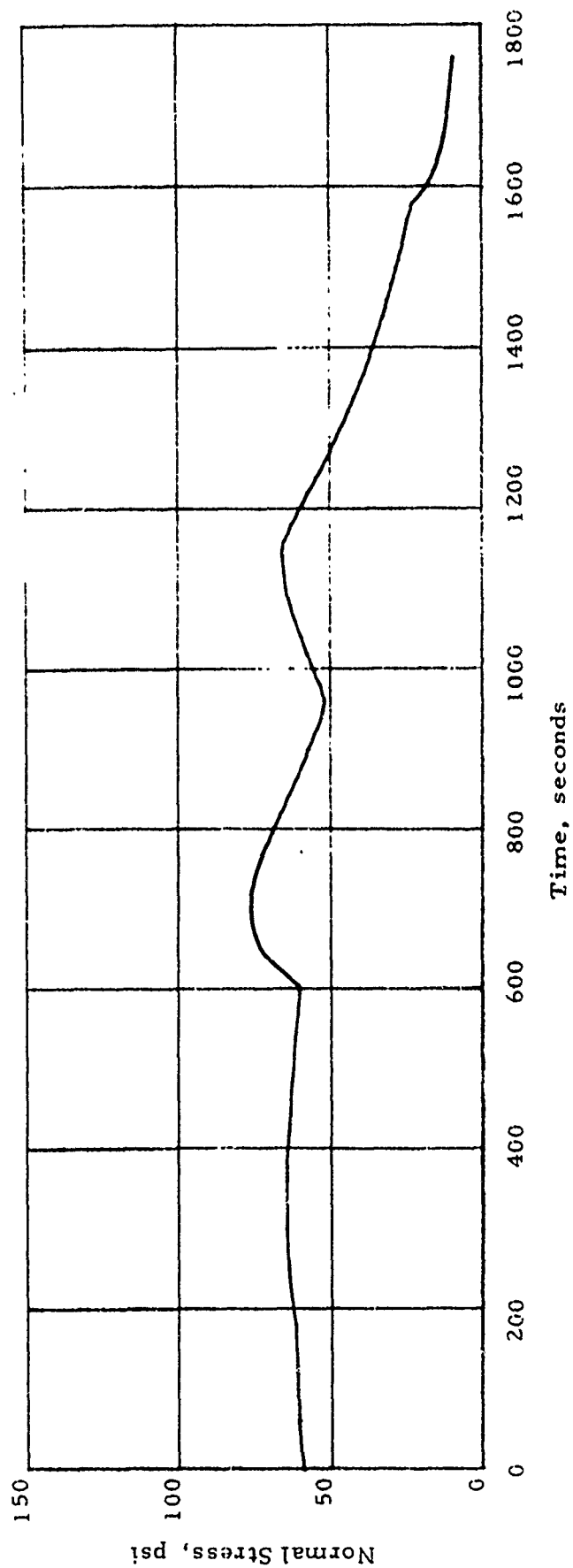
Motor - LM #3
 Test - A-17 (DMP-3)
 Gage - Temperature Profile
 Location - Center
 $T_{initial}$ - -65 F



Temperature Profile Histories for Various Aeroheat Loads

Motor - IM #3
 Test - A1 (DMP-3)
 Gage - N3-44
 Location - Fwd
 T initial - -65°F

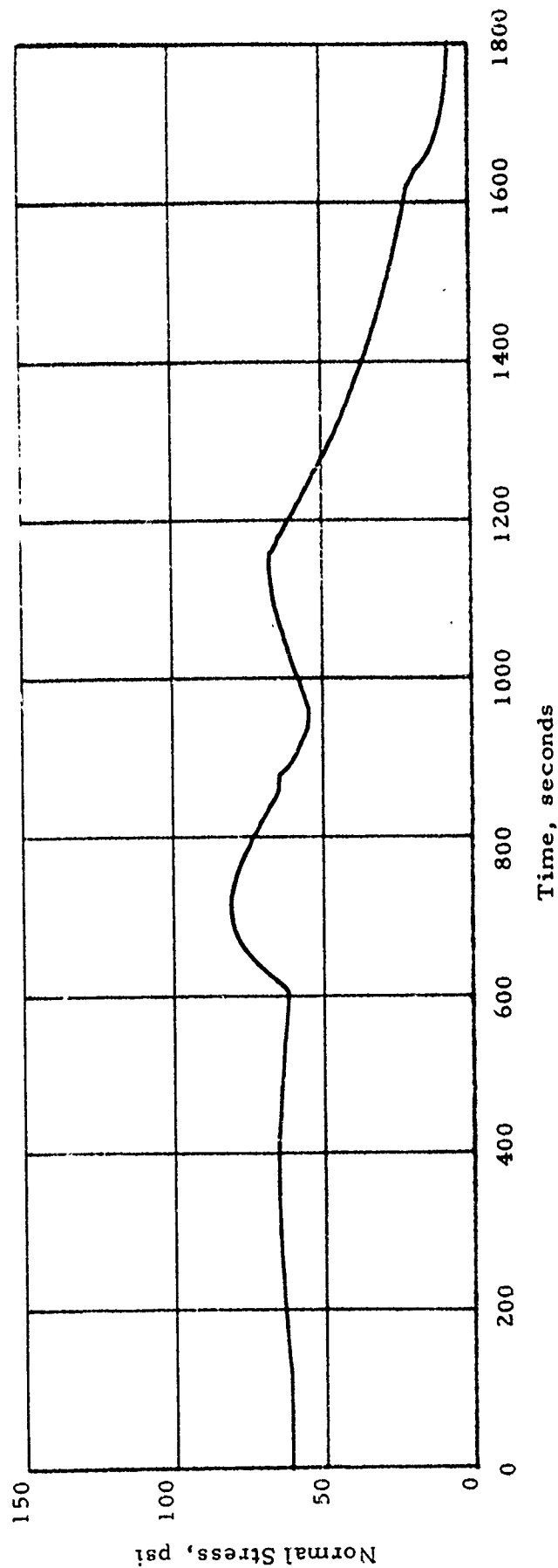
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Head End Normal Stress Response to Aeroheat Loads -- Gage N3-44

Motor - IM #3
 Test - A2 (DMP-3)
 Gage - N3-44
 Location - Fwd
 T initial - -65°F

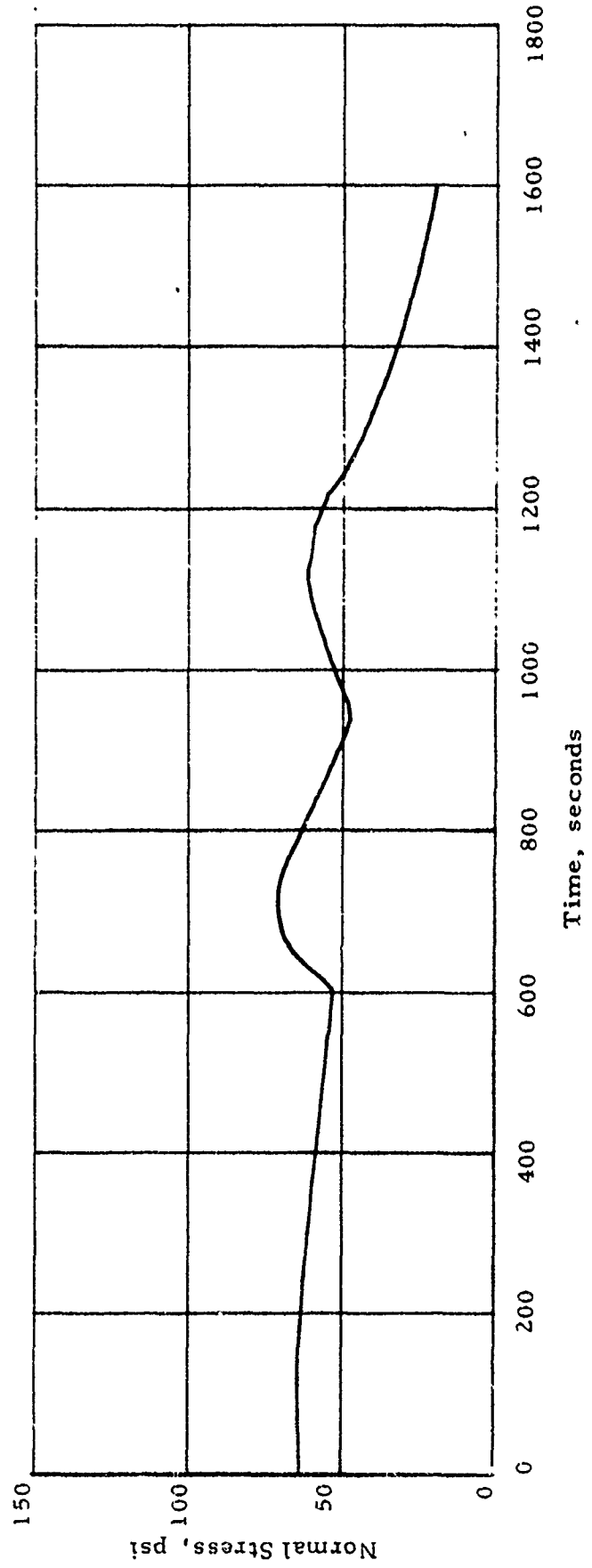
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Head End Normal Stress Response to Aeroheat Loads -- Gage N3-44

Motor - IM #3
 Test - A3 (DMP-3)
 Gage - N3-44
 Location - Fwd
 T initial - -65°F

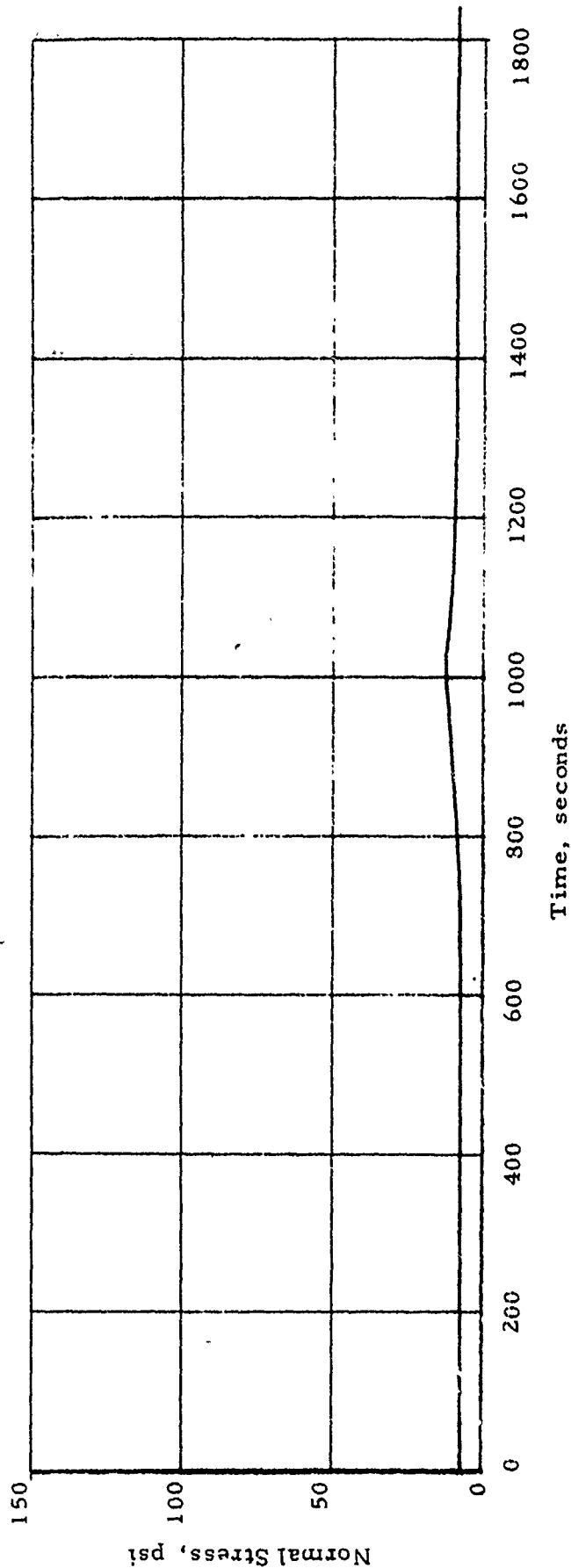
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Head End Normal Stress Response to Aeroheat Loads --Gage N3-44

Motor - IM #3
 Test - A4 (HSMH)
 Gage - N3-44
 Location - Fwd
 Tinitial - 55°F

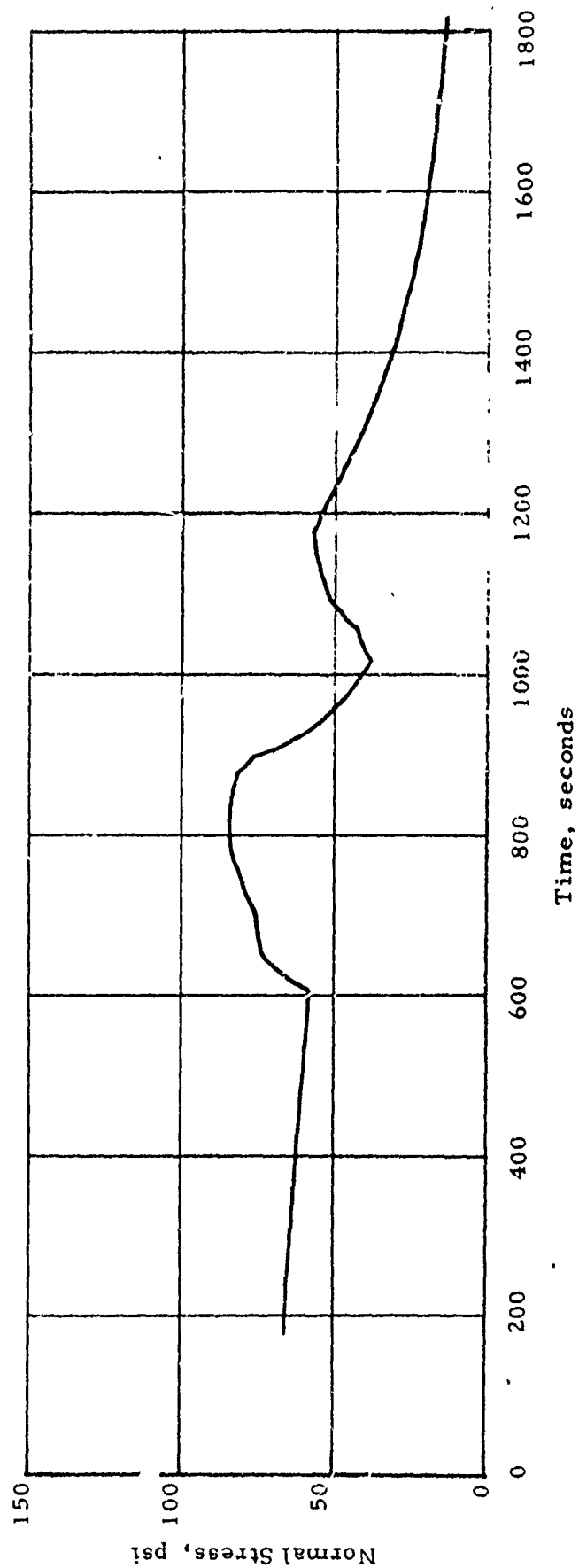
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Head End Normal Stress Response to Aeroheat Loads -- Gage N3-44

Motor - IM #3
 Test - A5 (HSMH)
 Gage - N3-44
 Location - Fwd
 T_{initial} - -65°F

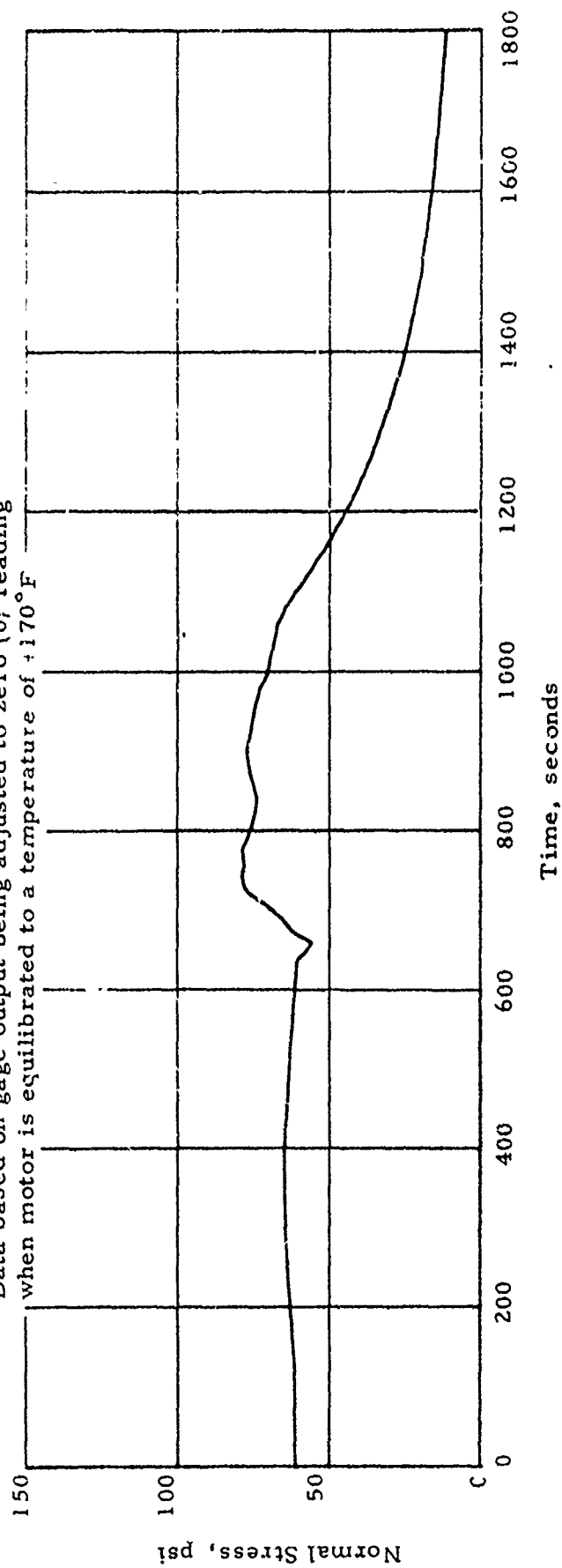
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Head End Normal Stress Response to Aeroheat Loads -- Gage N3-44

Motor - IM #3
 Test - A6 (HSMH)
 Gage - N3-44
 Location - Fwd
 Tinitial - -65°F

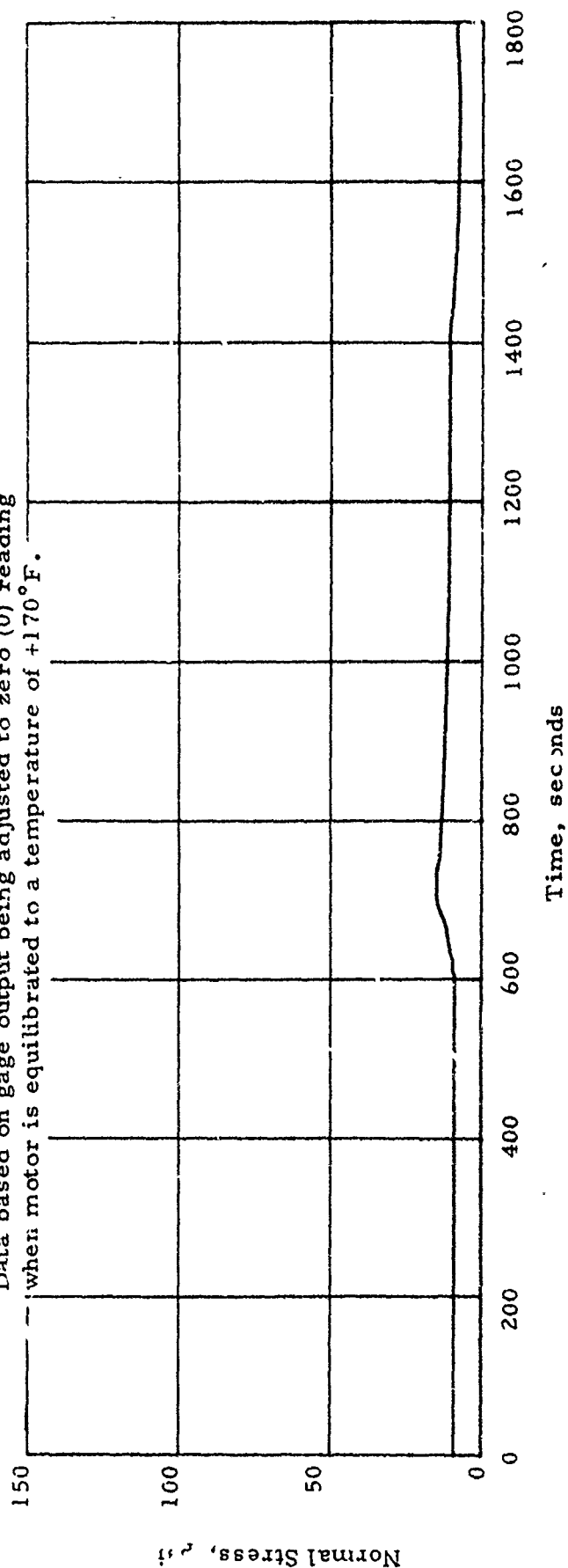
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Head End Normal Stress Response to Aeroheat Loads --Gage N3-44

Motor - IM #3
 Test - A7 (SFPI)
 Gage - N3-44
 Location - Fwd
 T_{initial} - +60°F

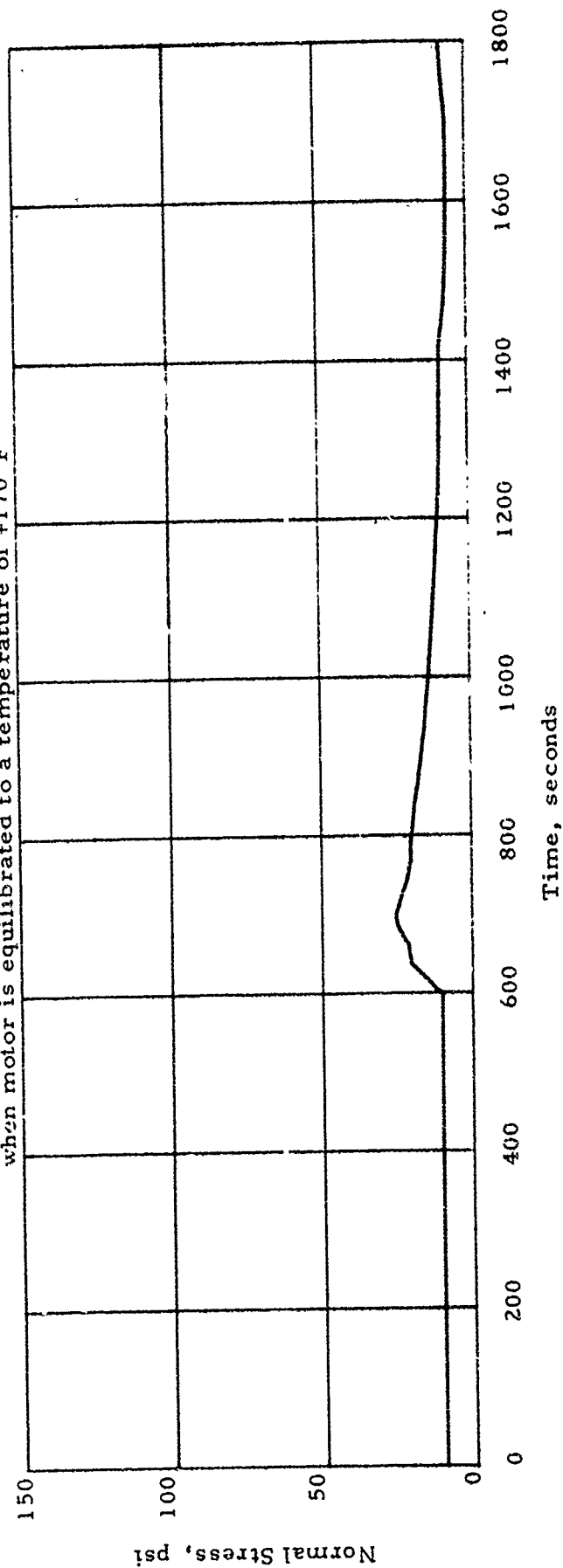
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F.



Head End Normal Stress Response to Aeroheat Loads --Gage N3-44

Motor - IM 23
 Test - A3 (SFPI)
 Cage - N3-44
 Location - Fwd
 T initial - 0°F

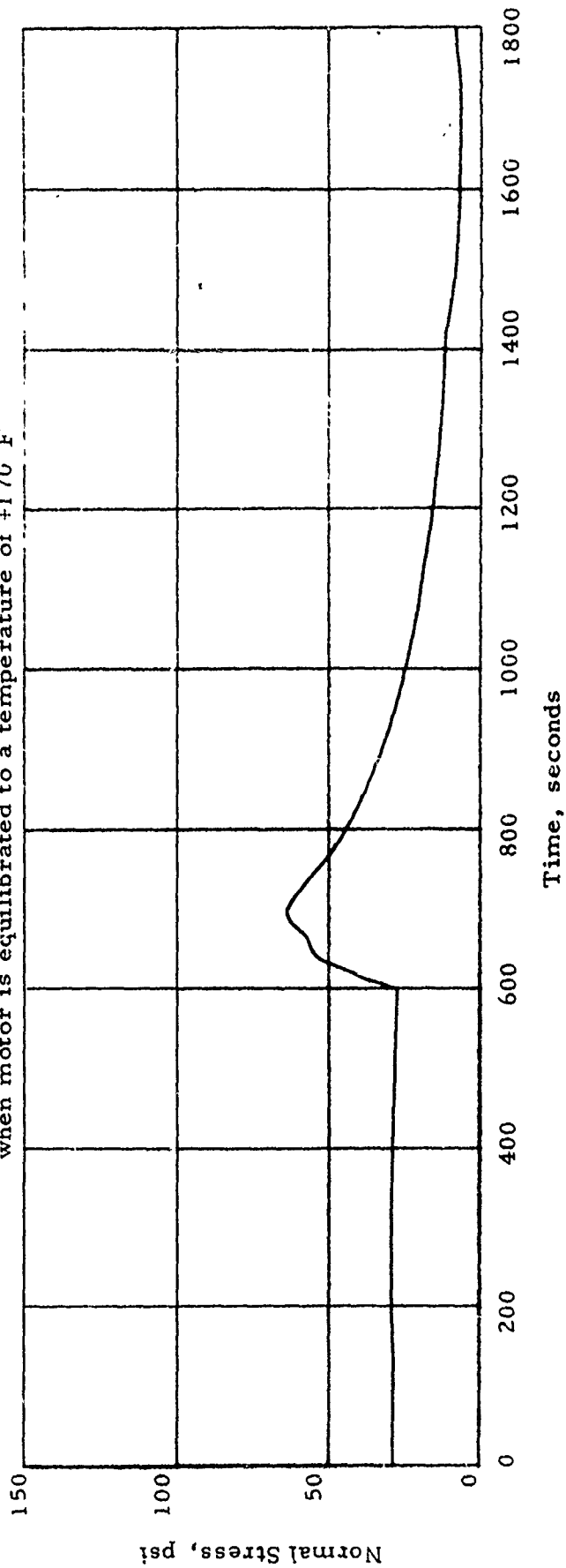
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Head End Normal Stress Response to Aeroheat Load is --Gage N3-44

Motor - IM #3
 Test - A9 (SFPI)
 Gage - N3-44
 Location - Fwd
 T_{initial} - -40°F

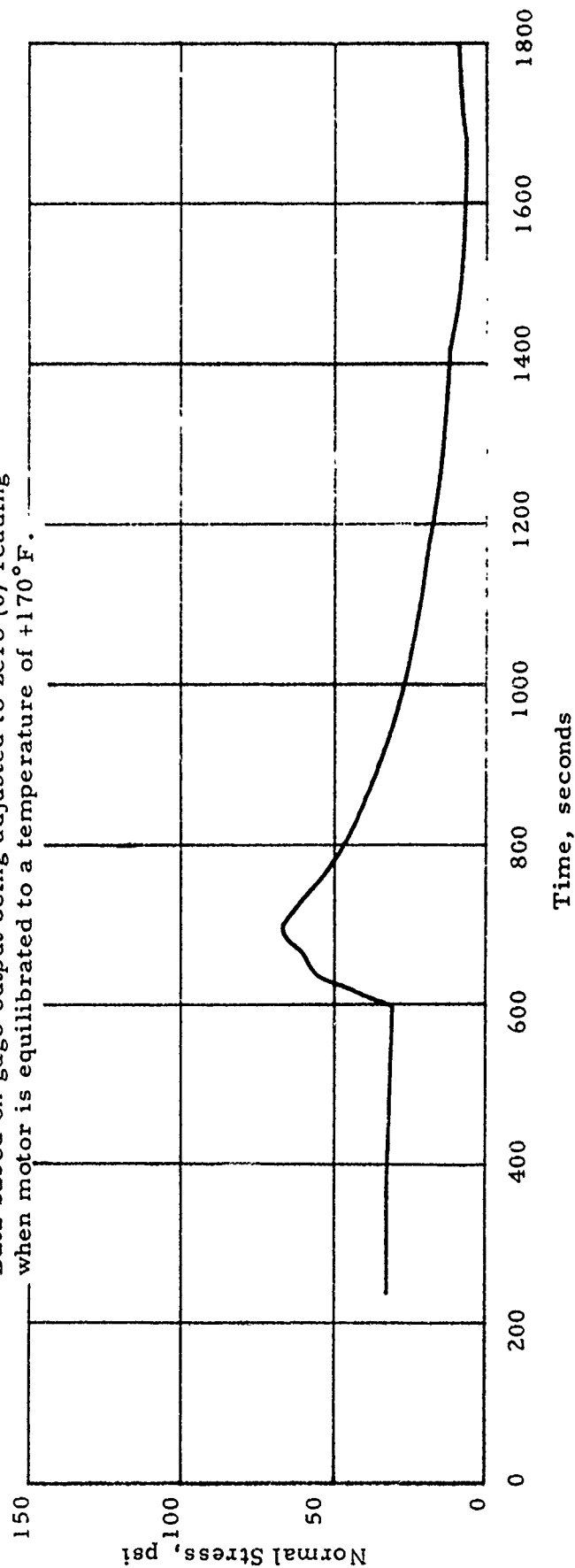
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Head End Normal Stress Response to Aeroheat Loads --Gage N3-44

Motor - IM #3
 Test - A-10 (SFPI)
 Gage - N3-44
 Location - Fwd
 T_{initial} - -40°F

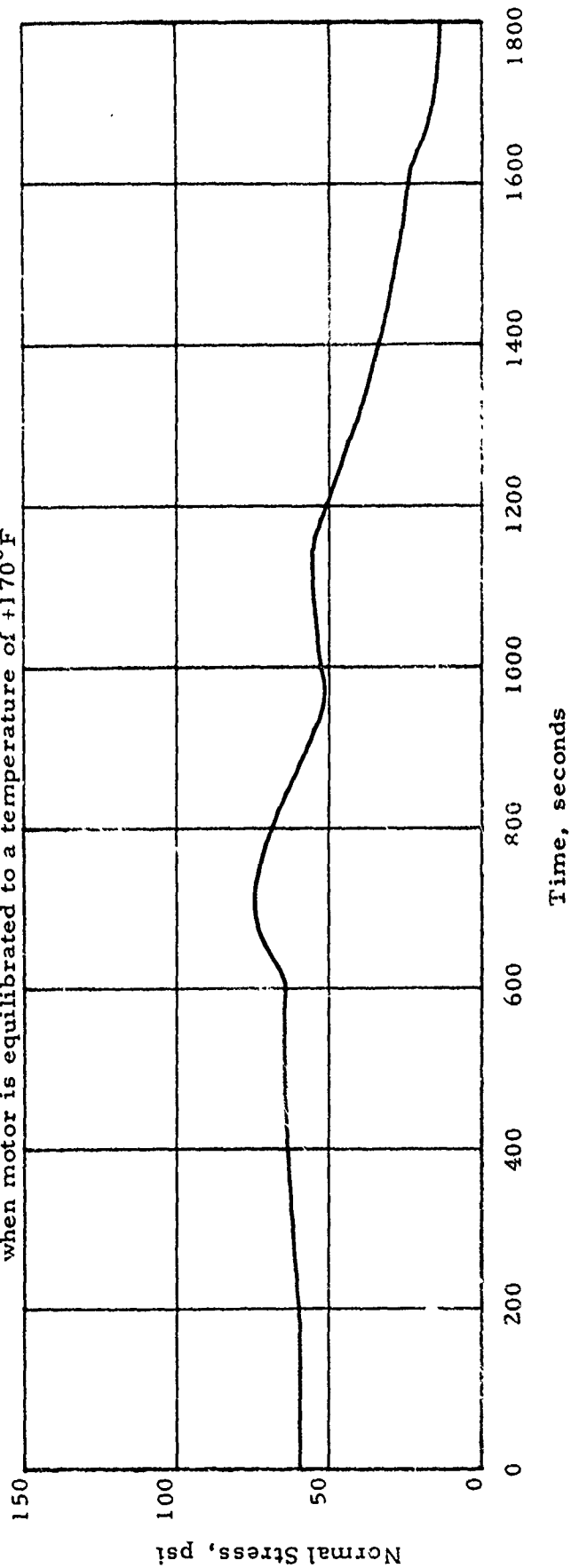
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F.



Head End Normal Stress Response to Aeroheat Loads --Gage N3-44

Motor - IM #3
 Test - A-11 (DMP-3)
 Gage - N3-44
 Location - Fwd
 T_{initial} - -65°F

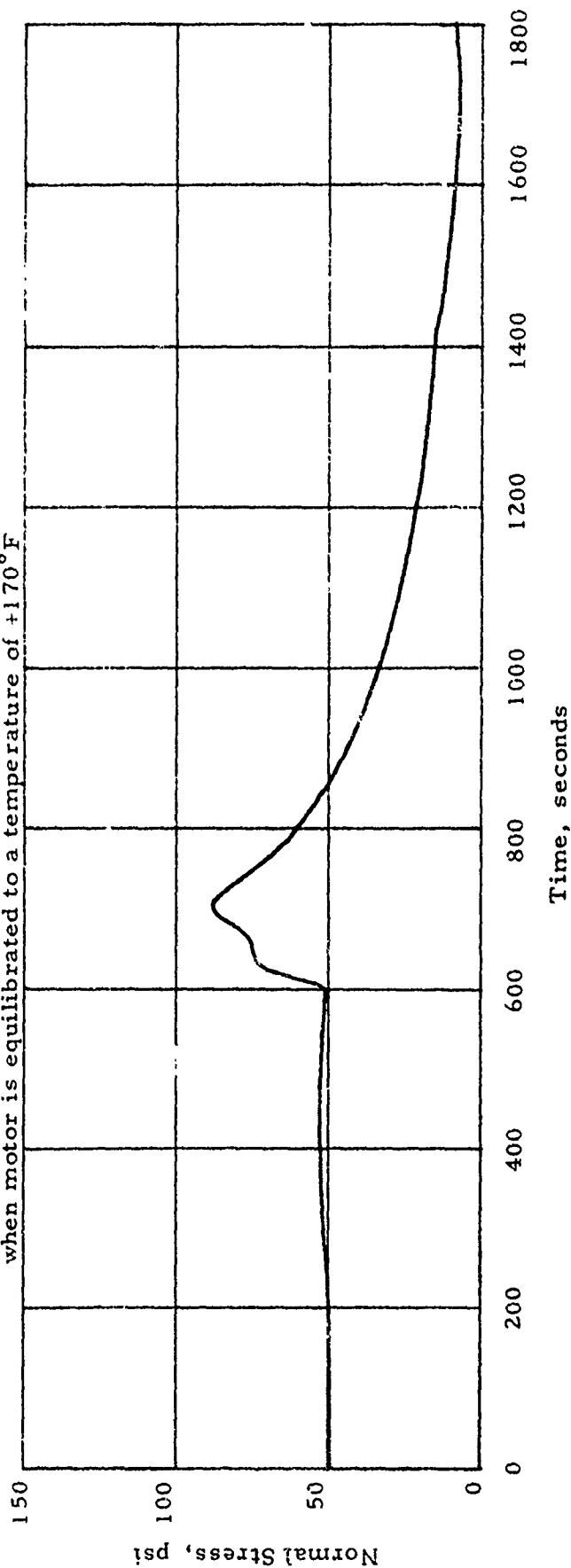
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Head End Normal Stress Response to Aeroheat Loads --Gage N3-44

Motor - IM #3
 Test - A-12 (SFPI)
 Gage - N3-44
 Location - Fwd
 T_{initial} - -65°F

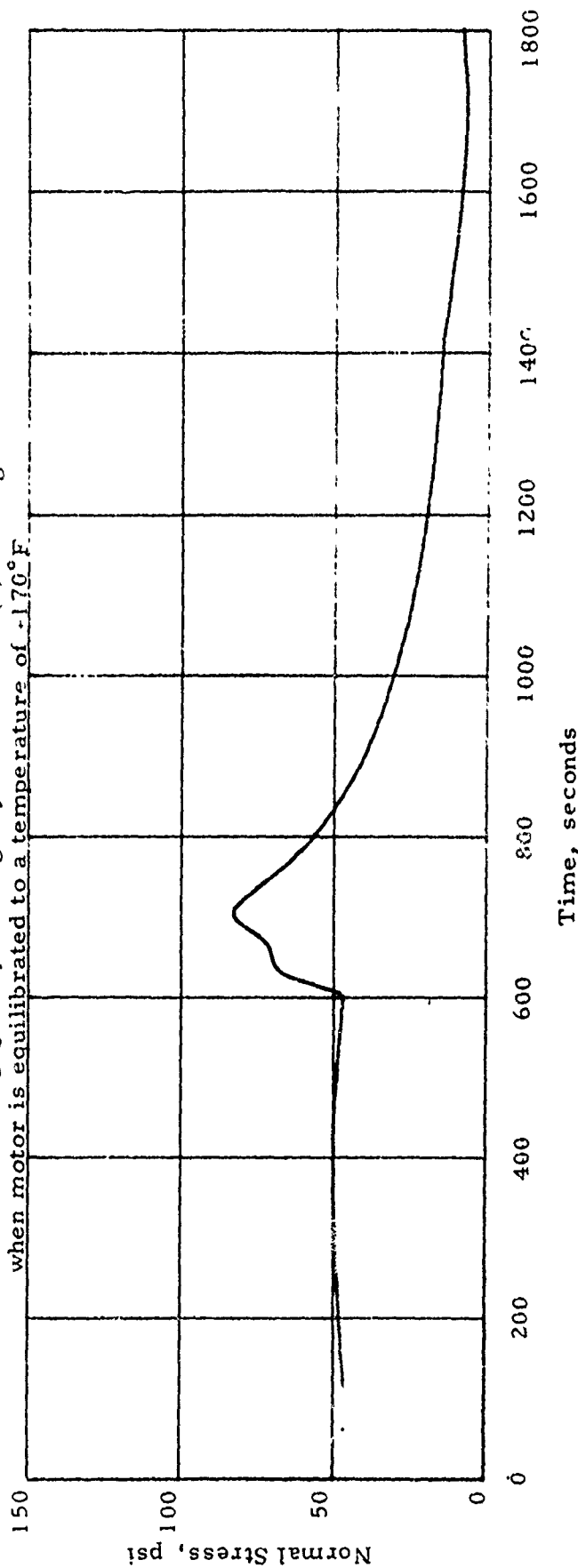
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Head End Normal Stress Response to Aeroheat Loads -- Gage N3-44

Motor - IM #3
 Test - A-13 (SFPI)
 Gage - N3-44
 Location - Fwd
 T initial - -65°F

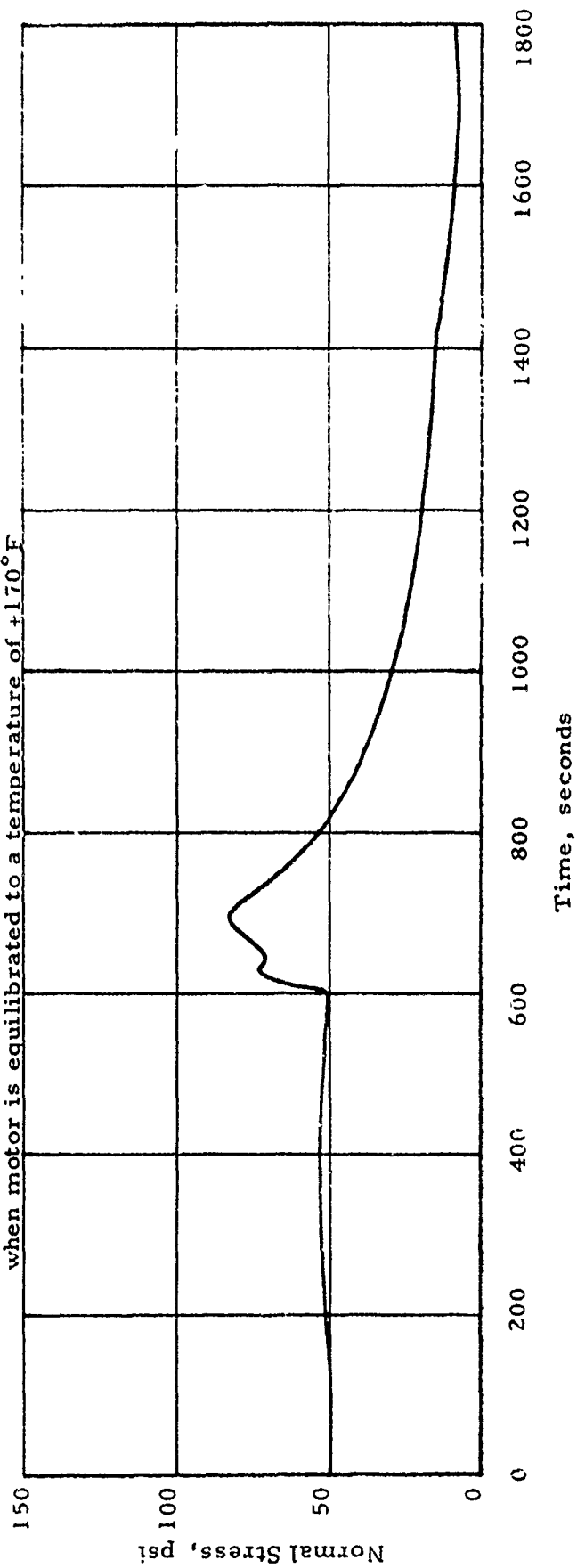
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of -170°F



Head End Normal Stress Response to Aeroheat Loads -- Gage N3-44

Motor - IM #3
 Test - A-14
 Gage - N3-44
 Location - Fwd
 T_{initial} - -65°F

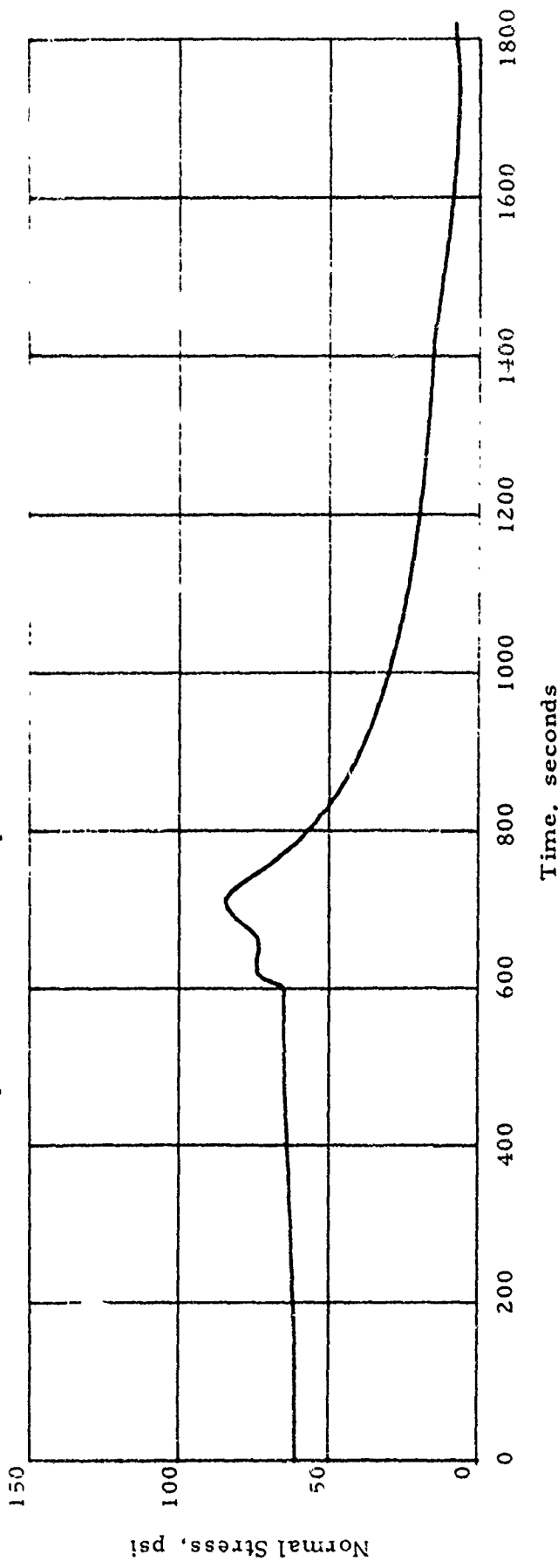
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Head End Normal Stress Response to Aeroheat Loads --Gage N3-44

Motor - IM #3
 Test - A-15 (SFPI)
 Gage N3-44
 Location - Fwd
 T_{initial} - -65 F

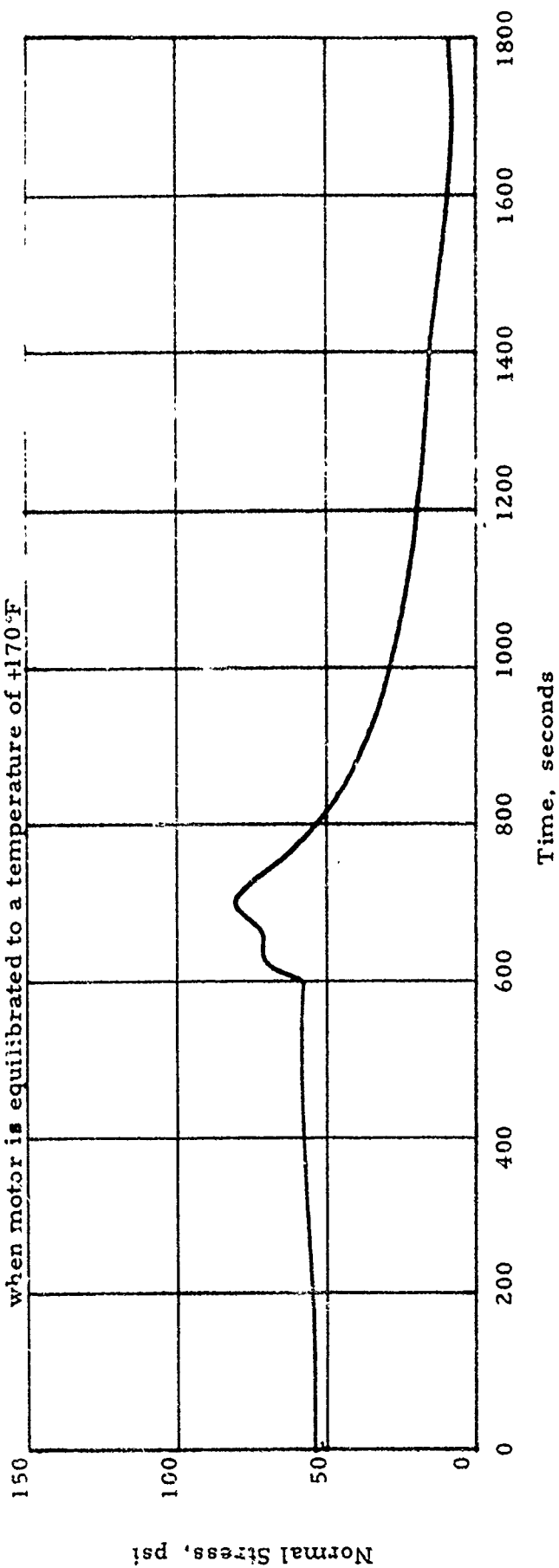
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170 F



Head End Normal Stress Response to Aeroheat Loads--Gage N3-44

Motor - IM #3
 Test - A-16 (SFPI)
 Gage - N3-44
 Location - Fwd
 T_{initial} - -65°F

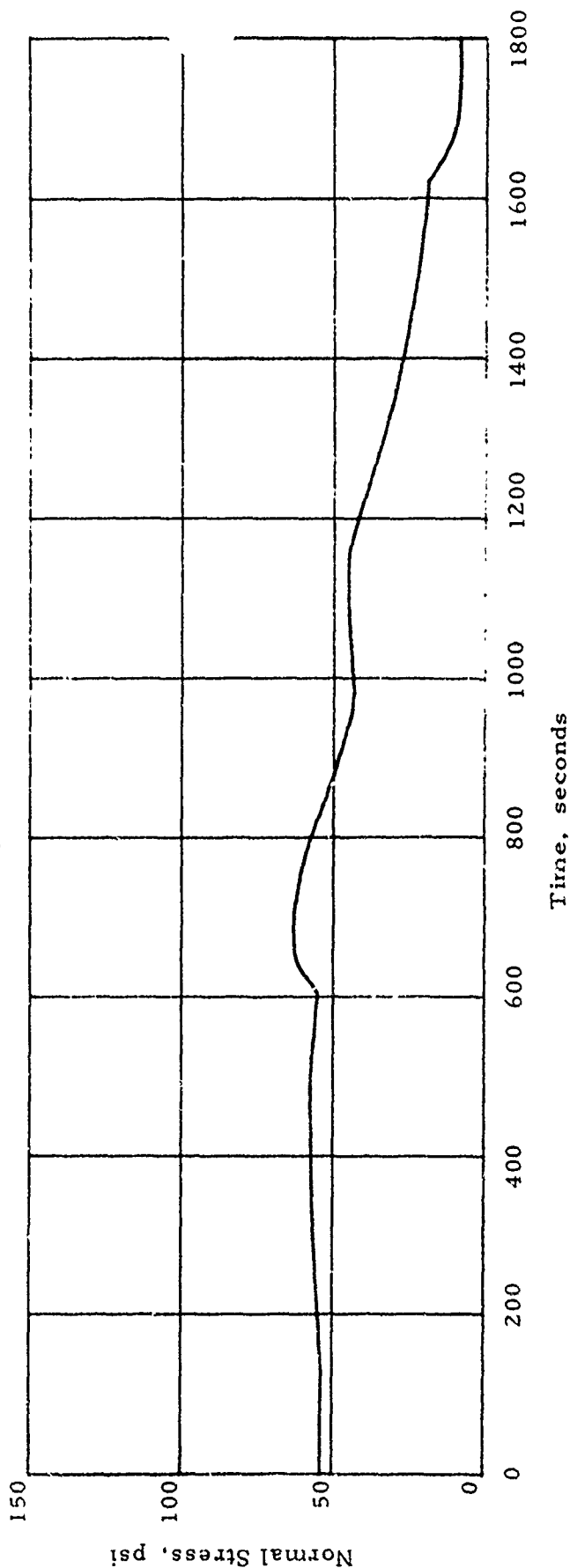
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Head End Normal Stress Response to Aeroheat Loads--Gage N3-44

Motor - IM #3
 Test - A-17 (DMP-3)
 Gage - N3-44
 Location - Fwd
 T_{initial} - -65 F

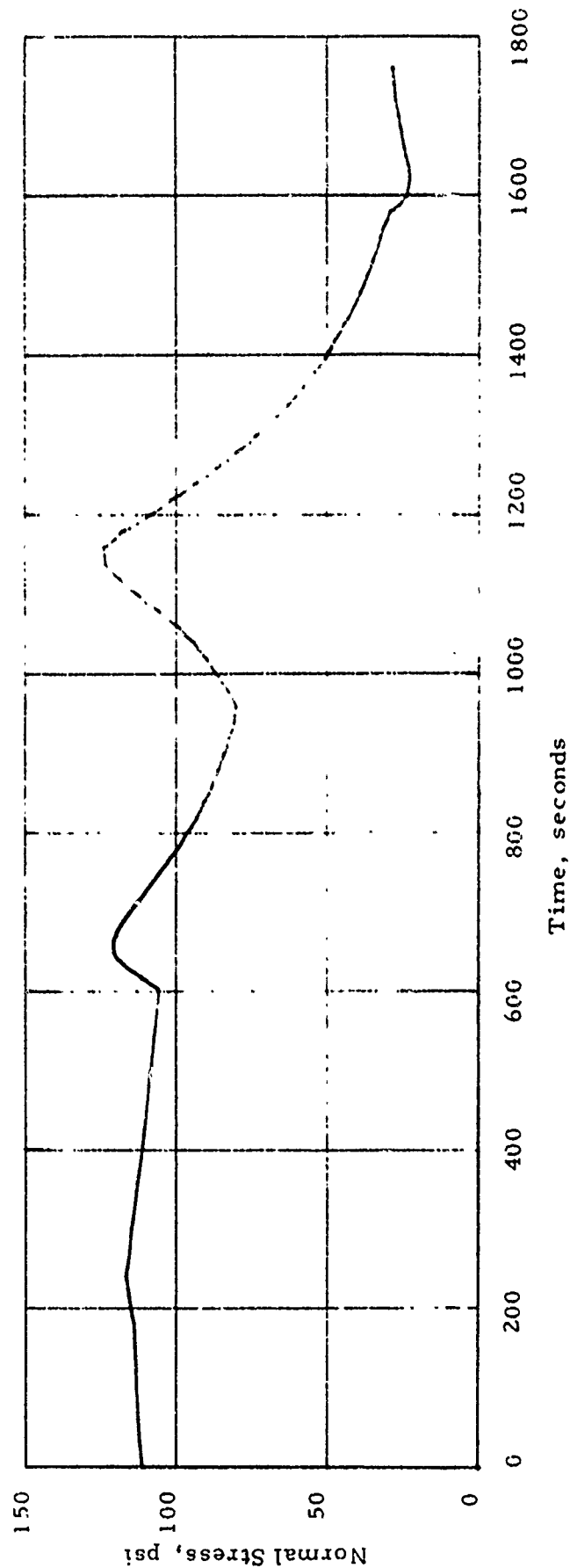
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170 F



Head End Normal Stress Response to Aeroheat Loads--Gage N3-44

Motor - 1M #3
 Test - A1 (DMP-3)
 Gage - N3-47
 Location - Center
 T_{initial} - -65°F

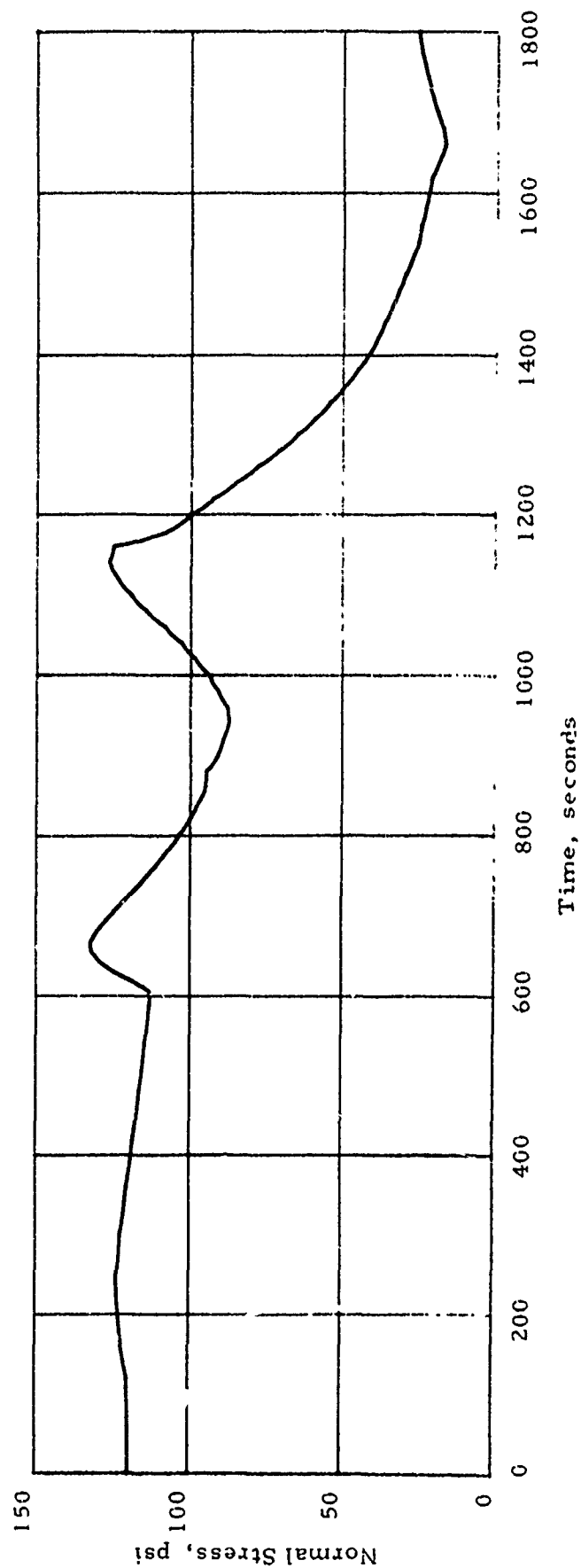
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F



Mid-Motor Normal Stress Response to Aeroheat Loads - Gage N3-47 (Test No. A-1)

Motor - IM #3
 Test - A2 (DMP-3)
 Gage - N3-47
 Location - Center
 T_{initial} - -65°F

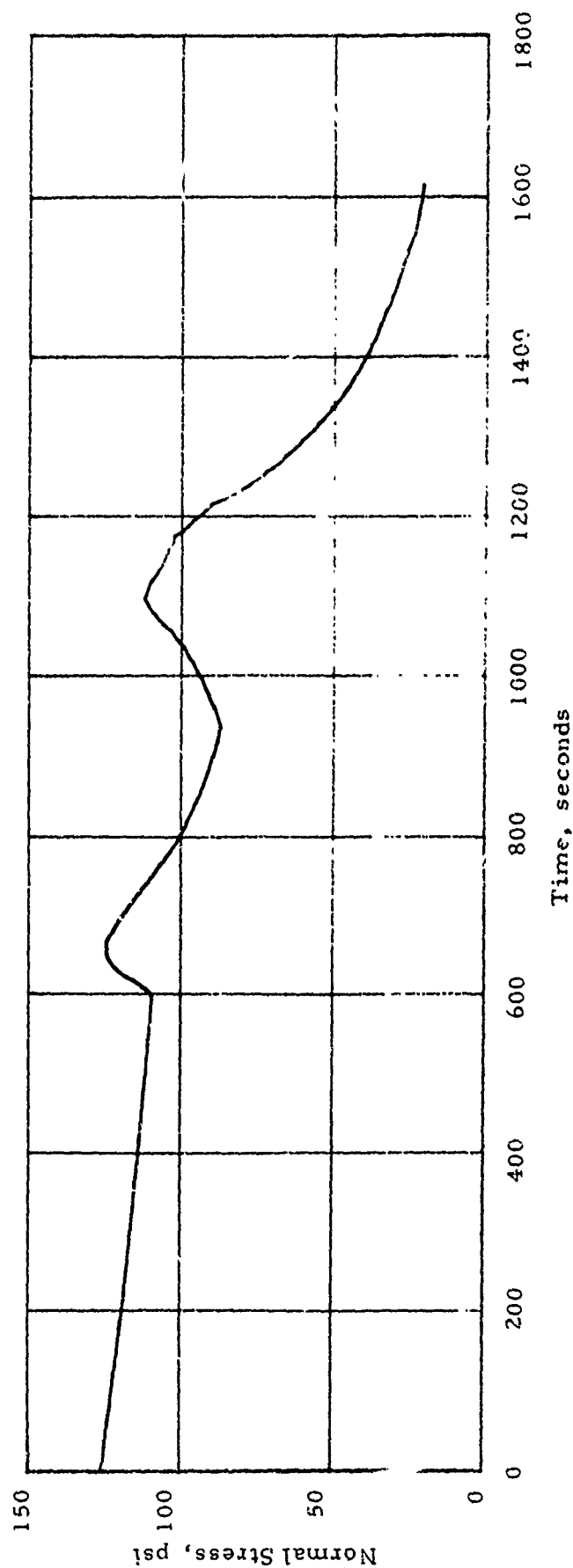
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F



Mid-Motor Normal Stress Response to Aeroheat Loads - Gage N3-47 (Test No. A-2)

Motor - IM #3
 Test - A3 (DMP-3)
 Gage - N3-47
 Location - Center
 T initial - -65°F

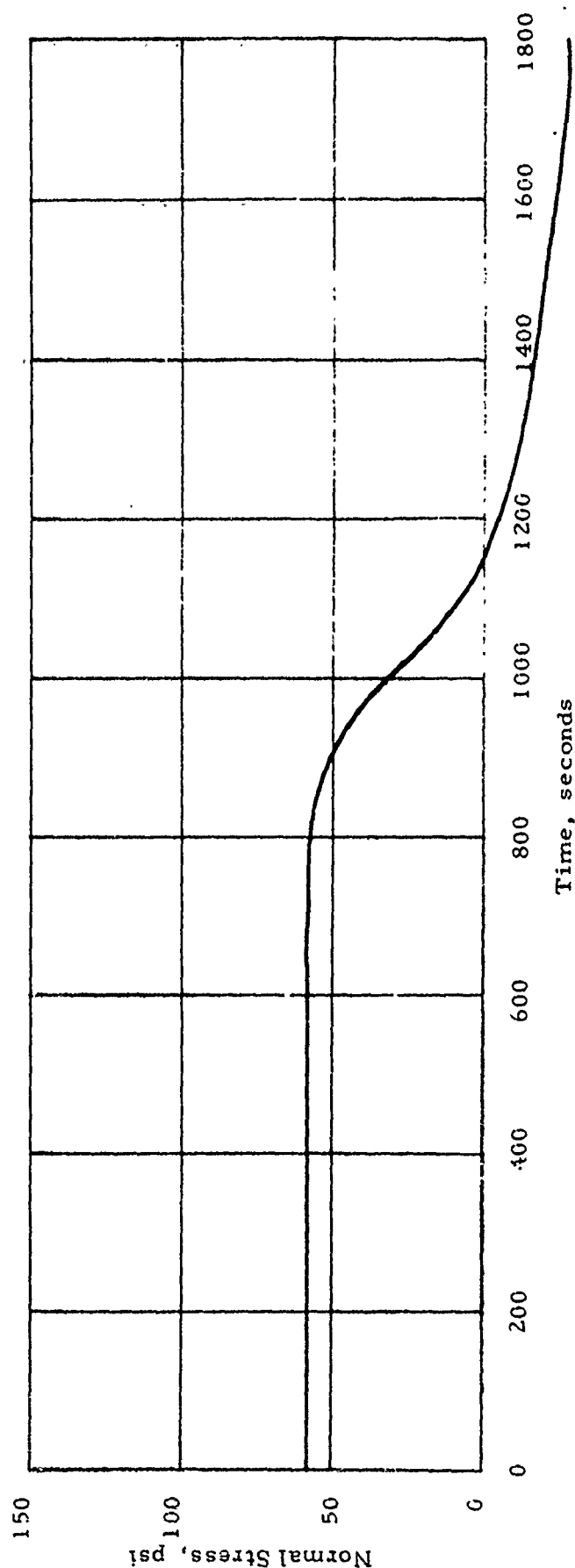
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of -170°F



Mid-Motor Normal Stress Response to Aeroheat Loads - Gage N3-47 (Test No. A-3)

Motor - IM #3
 Test - A4 (HSMH)
 Gage - N3-47
 Location - Center
 T initial - 55°F

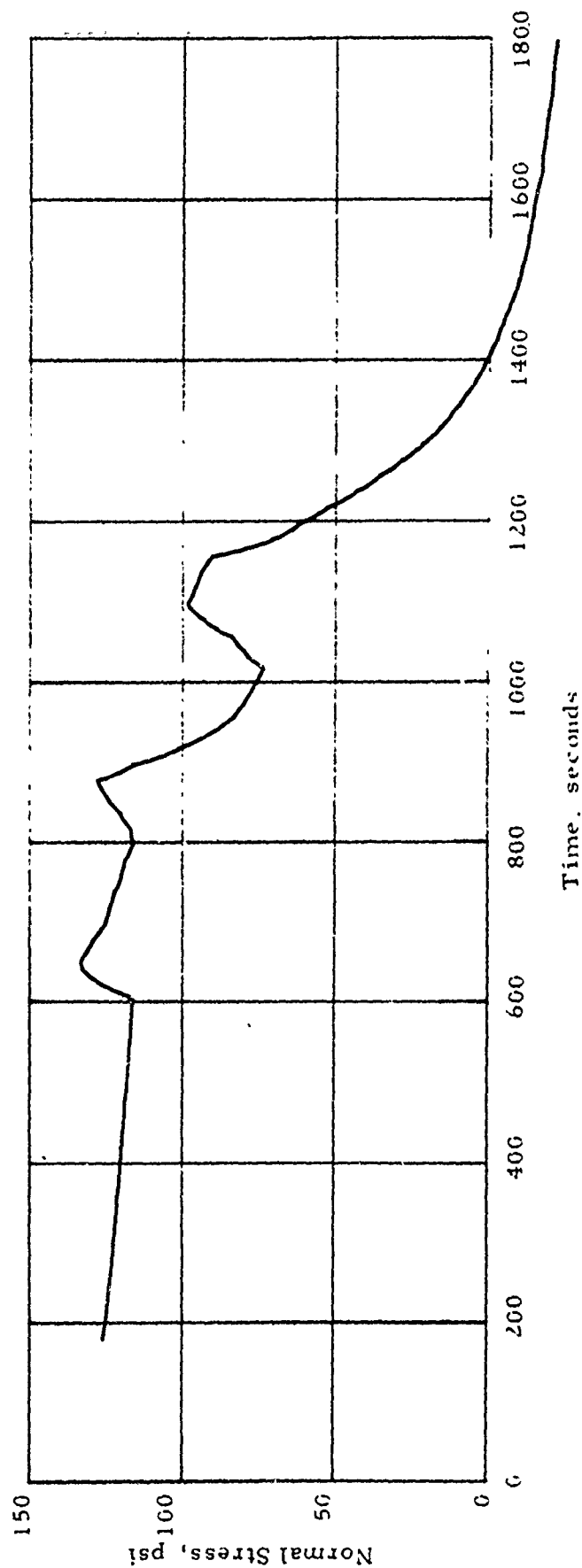
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F



Mid-Motor Normal Stress Response to Aeroheat Loads - Gage N3-47 (Test No. A-4)

Motor - IM #3
 Test - A5 (HSMH)
 Gage - N3-47
 Location - Center
 T initial - -65°F

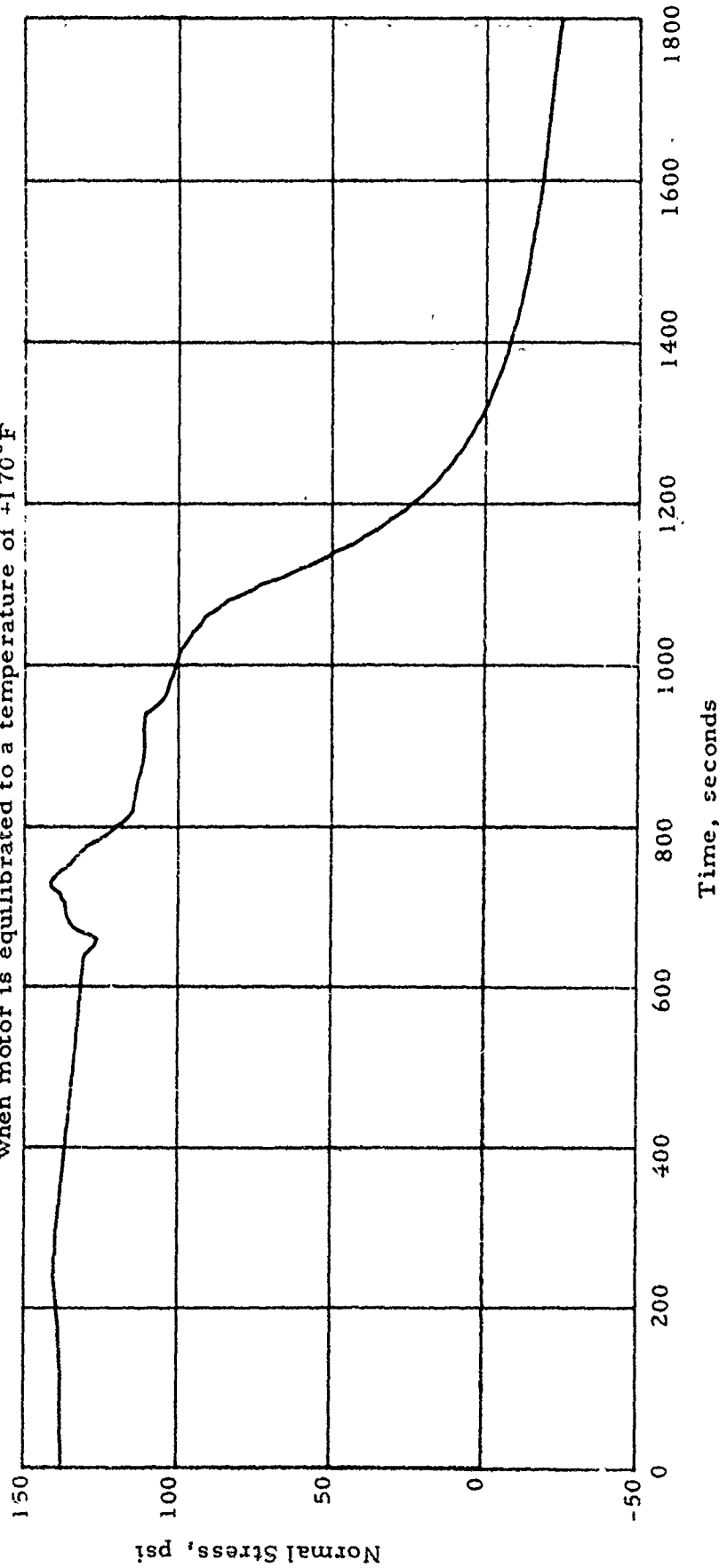
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Mid-Motor Normal Stress Response to Aeroheat Loads - Gage N3-47 (Test No. A-5)

Motor - IM #3
 Test - A6 (HSMH)
 Gage - N3-47
 Location - Center
 T initial - -65°F

Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Mid-Motor Normal Stress Response to Aeroheat Loads - Gage N3-47 (Test No. A-6)

Motor - JM #3
 Test - A7 (SFPI)
 Gage - N3-47
 Location - Center
 T_{initial} - +60°F

Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F

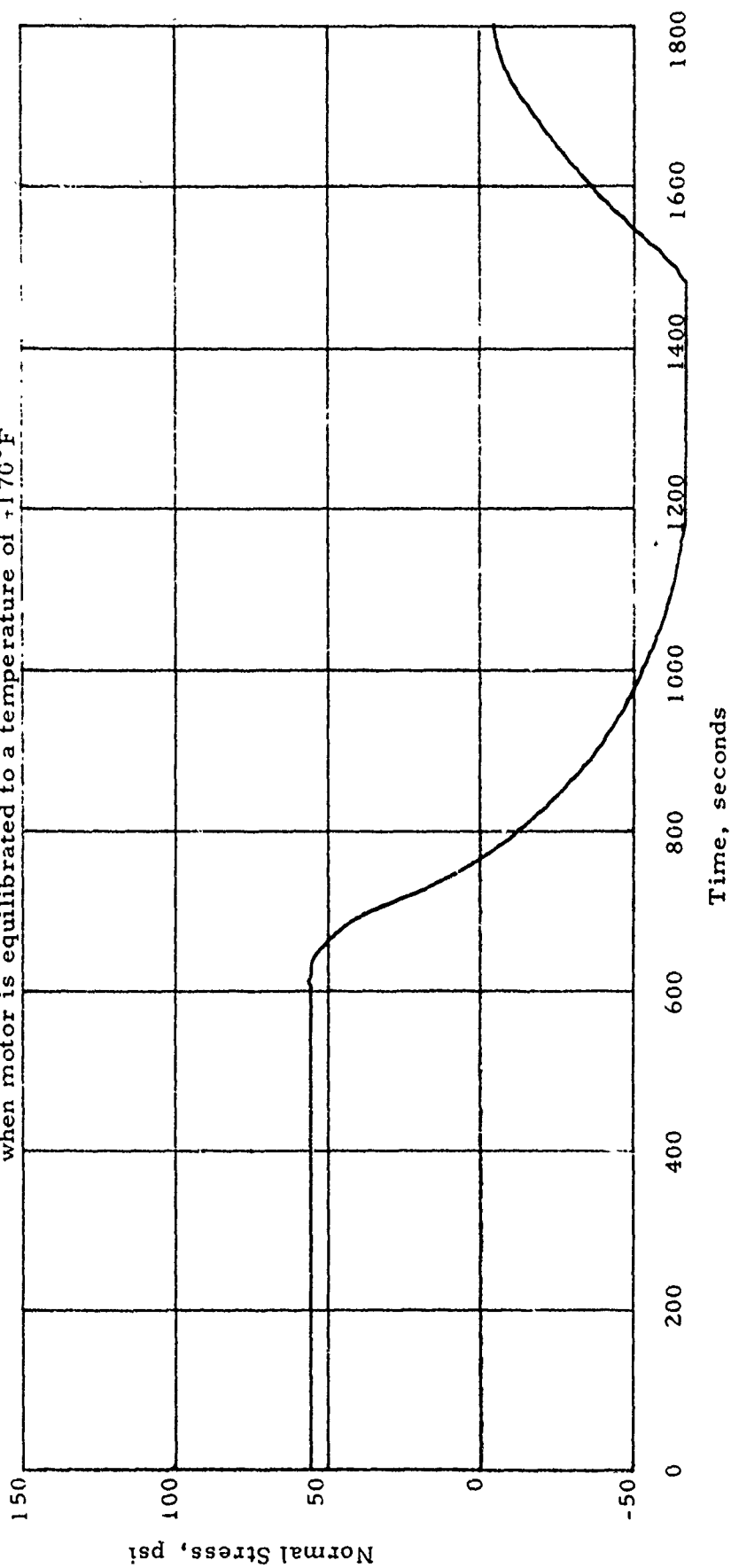
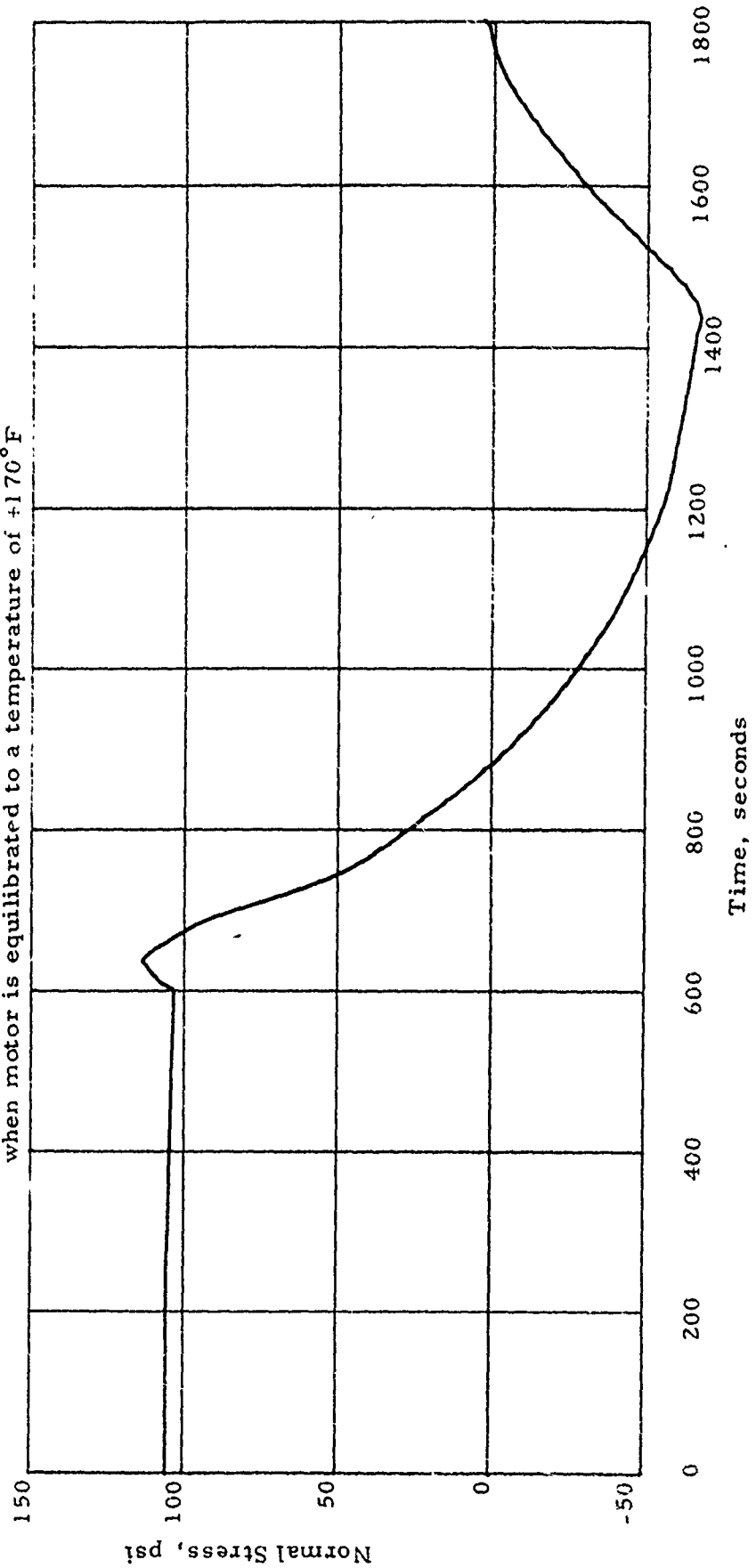


Figure 2-g. Mid-Motor Normal Stress Response to Aeroheat Loads - Gage N3-47 (Test No. A-7)

Motor - IM #3
 Test - A8 (SFPI)
 Gage - N3-47
 Location - Center
 T initial - 0°F

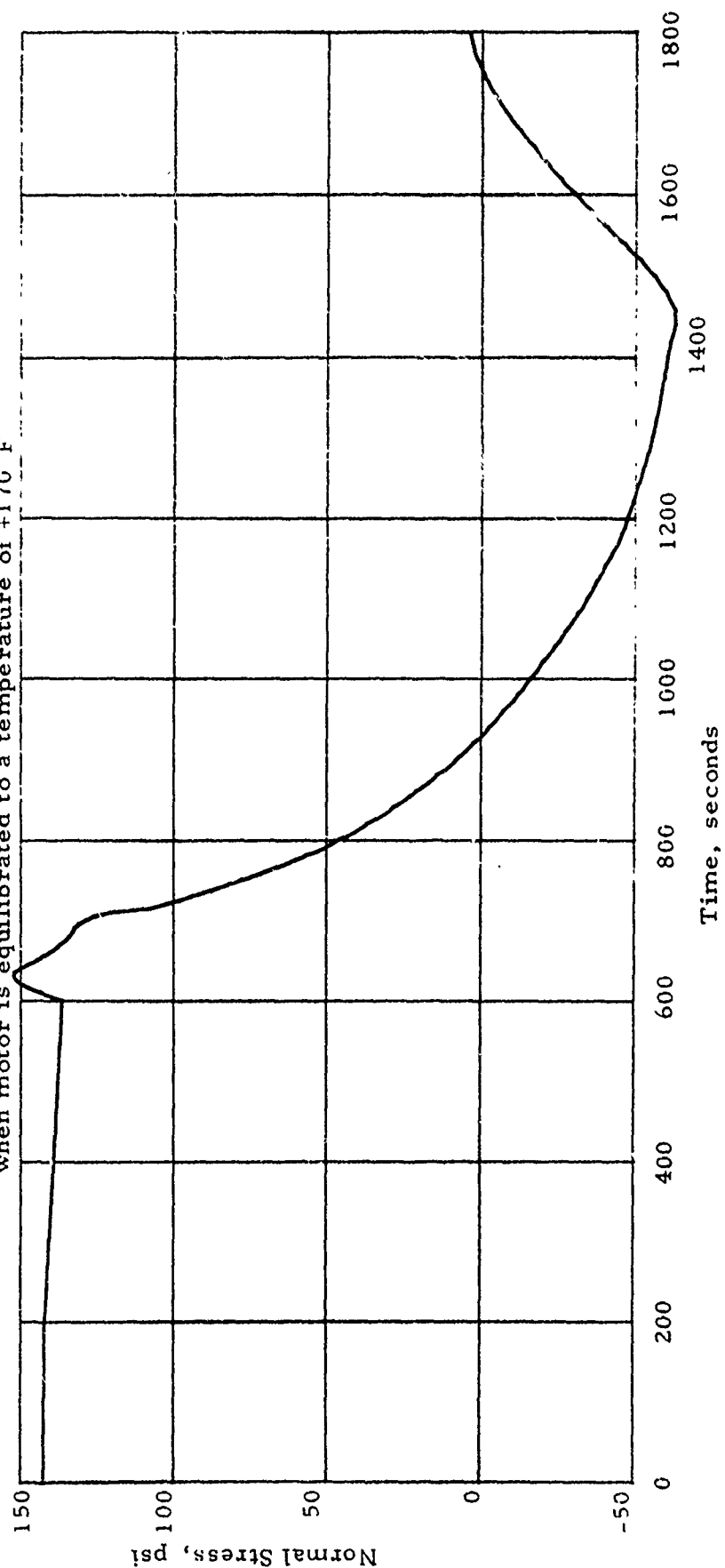
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Mid-Motor Normal Stress Response to Aeroheat Loads --Gage N3-47

Motor - IM #3
 Test - A9 (SFPI)
 Gage - N3-47
 Location - Center
 T_{initial} - -40°F

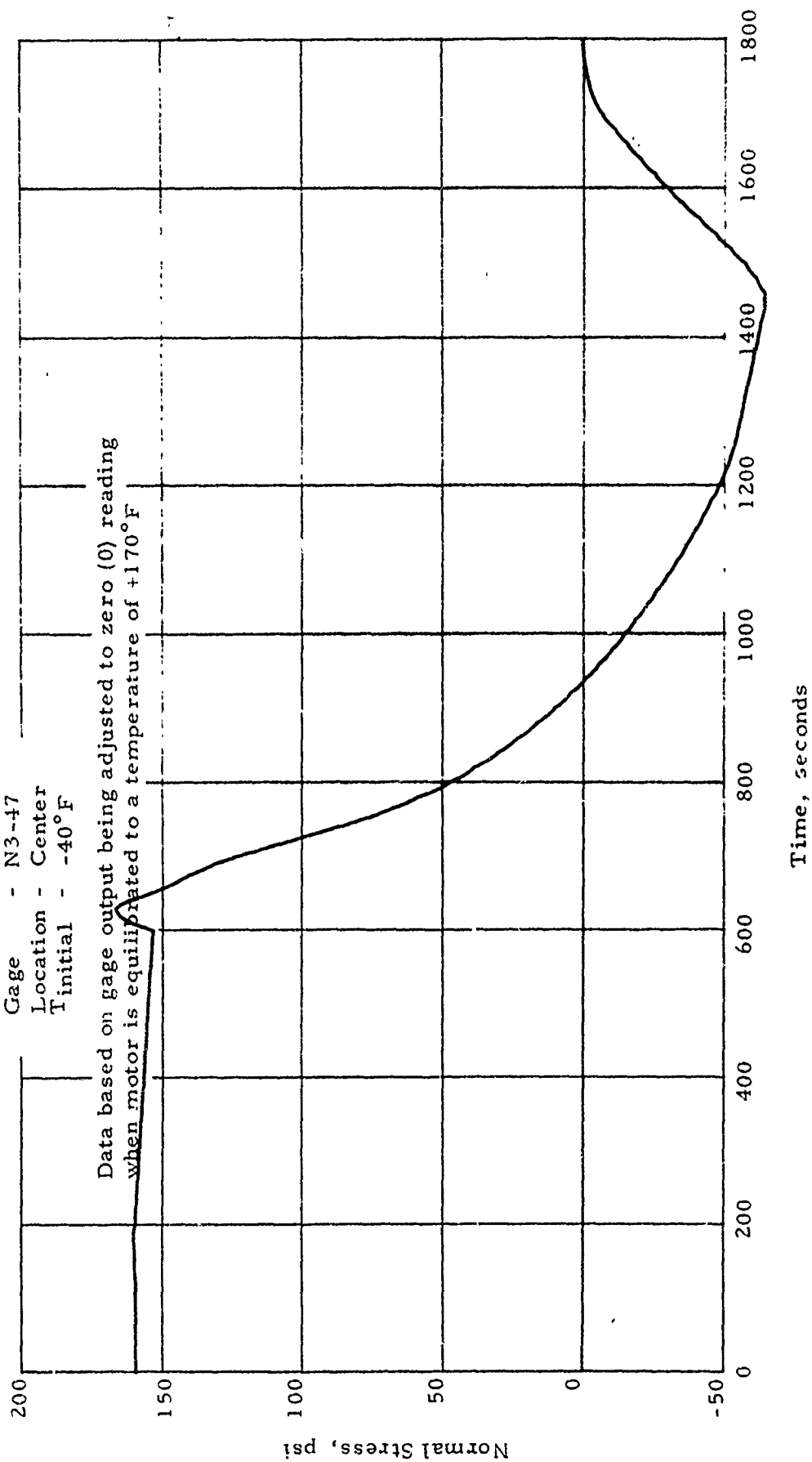
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Mid-Motor Normal Stress Response to Aeroheat Loads--Gage N3-47

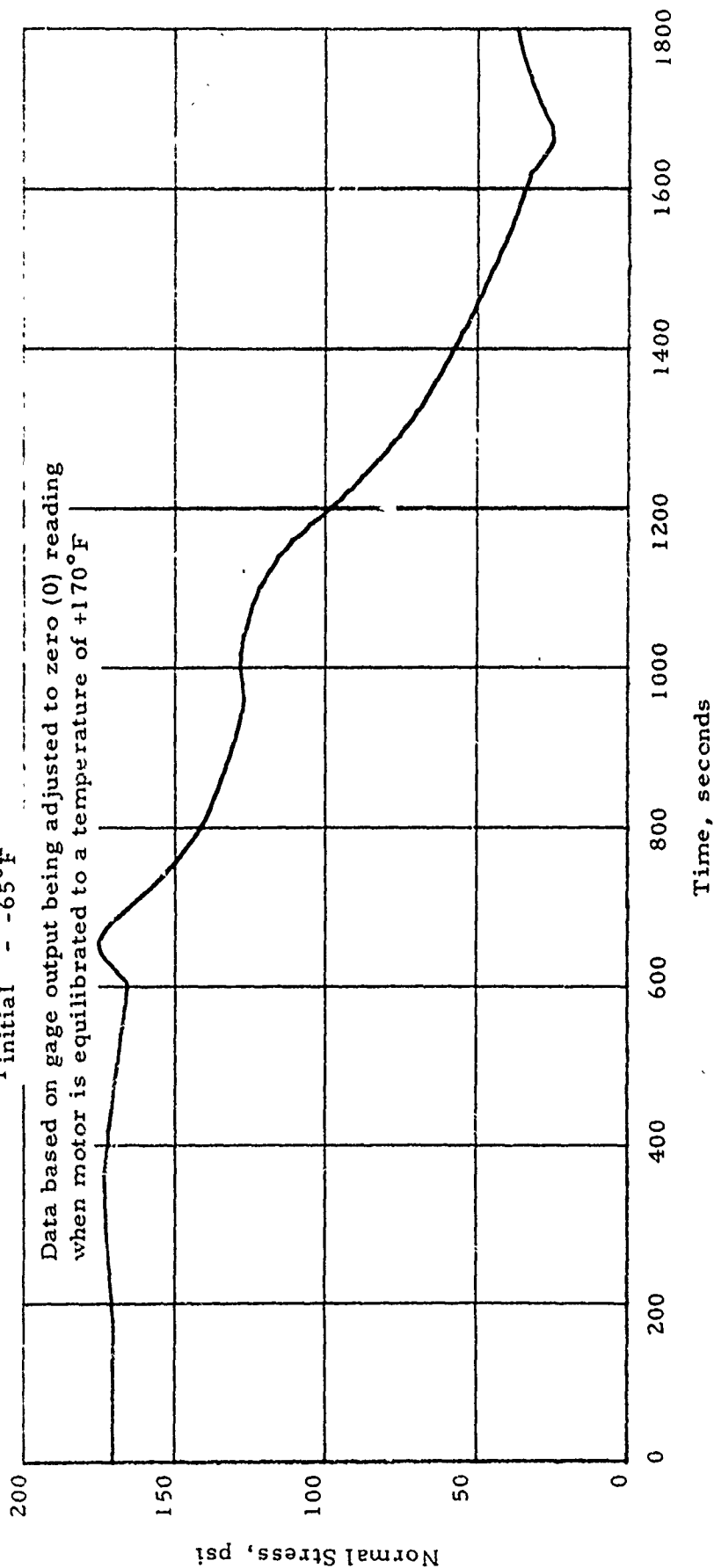
Motor - IM #3
 Test - A-10 (SFPI)
 Gage - N3-47
 Location - Center
 T initial - -40°F

Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



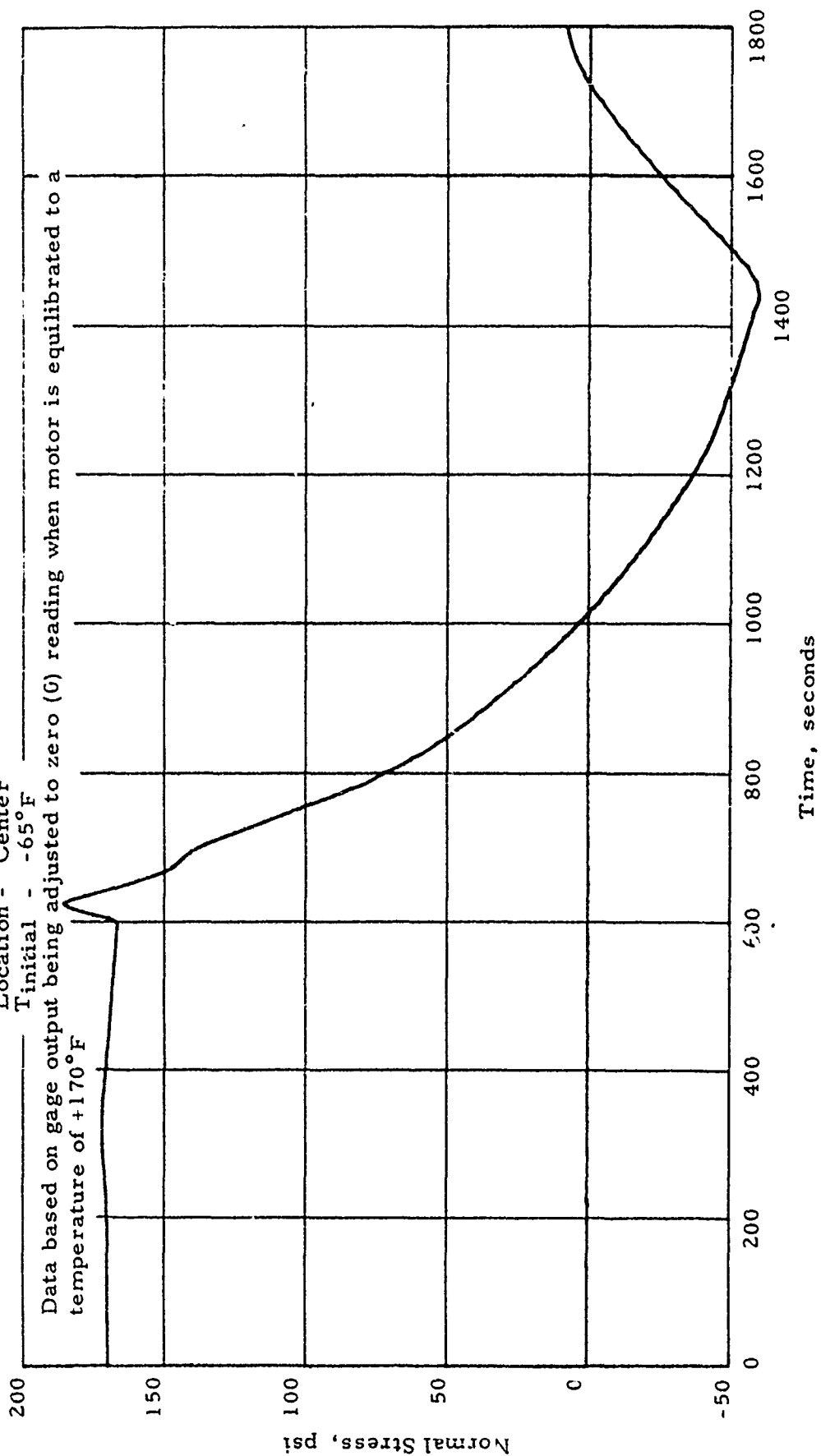
Mid-Motor Normal Stress Response to Aeroheat Loads -- Gage N3-47

Motor - IM #3
 Test - A-11 (DMP-3)
 Gage - N3-47
 Location - Center
 T_{initial} - -65°F



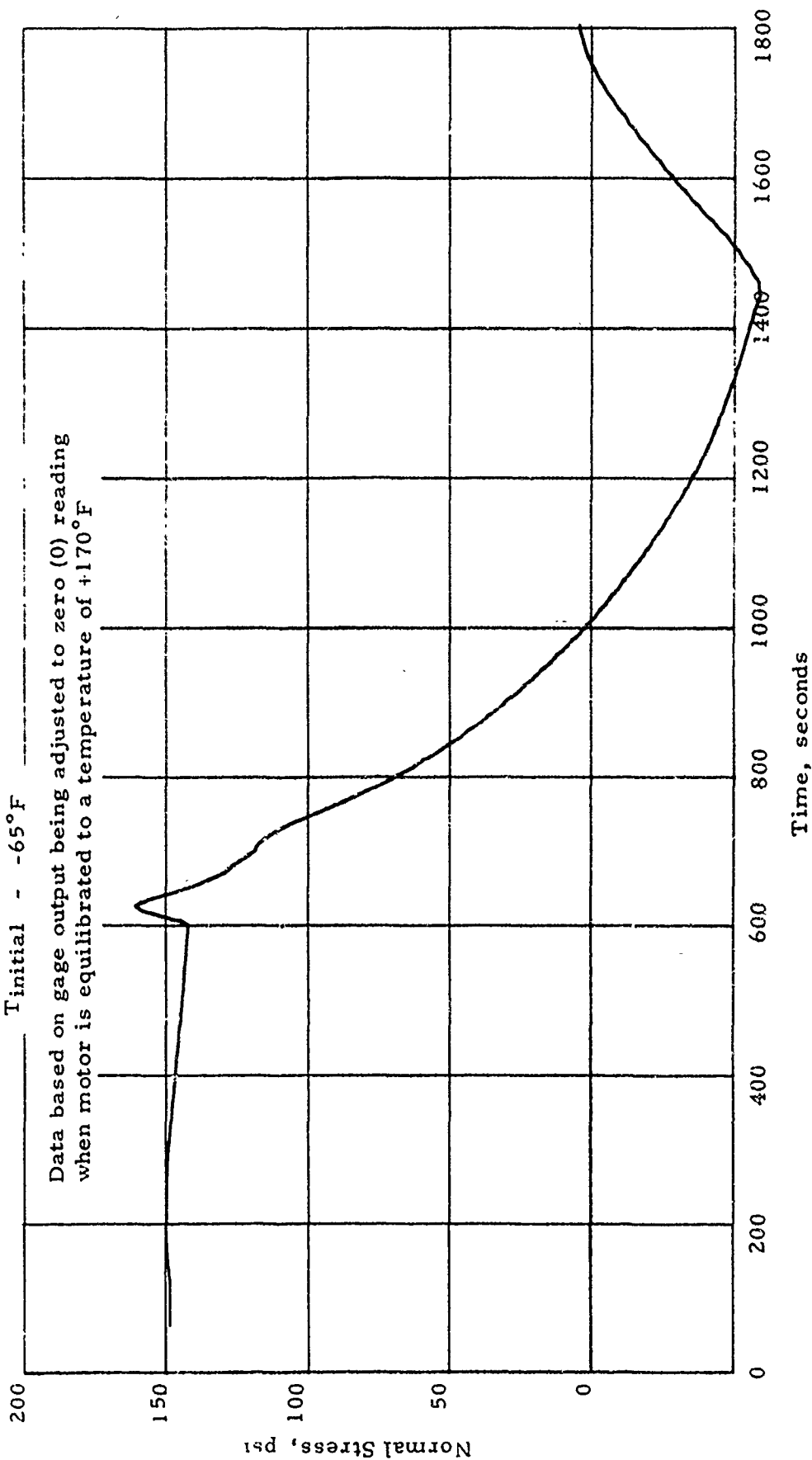
Mid-Motor Normal Stress Response to Aeroheat L ads --Gage N3-47

Motor - IM #3
 Test - A-12 (SFPI)
 Gage - N3-47
 Location - Center
 T_{initial} - -65°F



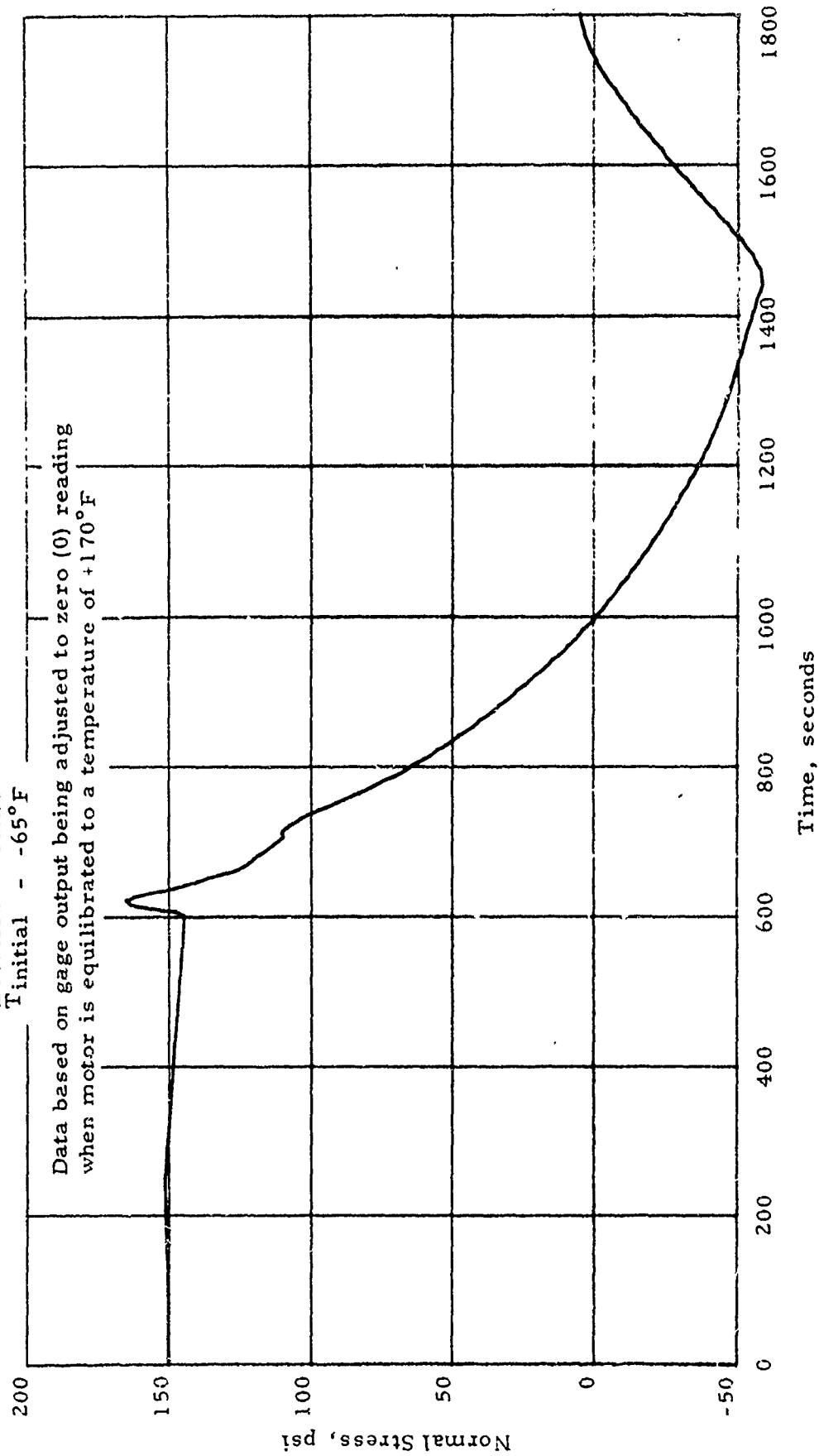
Mid-Motor Normal Stress Response to Aeroheat Loads --Gage N3-47

Motor - IM #3
 Test - A-13
 Gage - N3-47
 Location - Center
 T_{initial} - -65°F



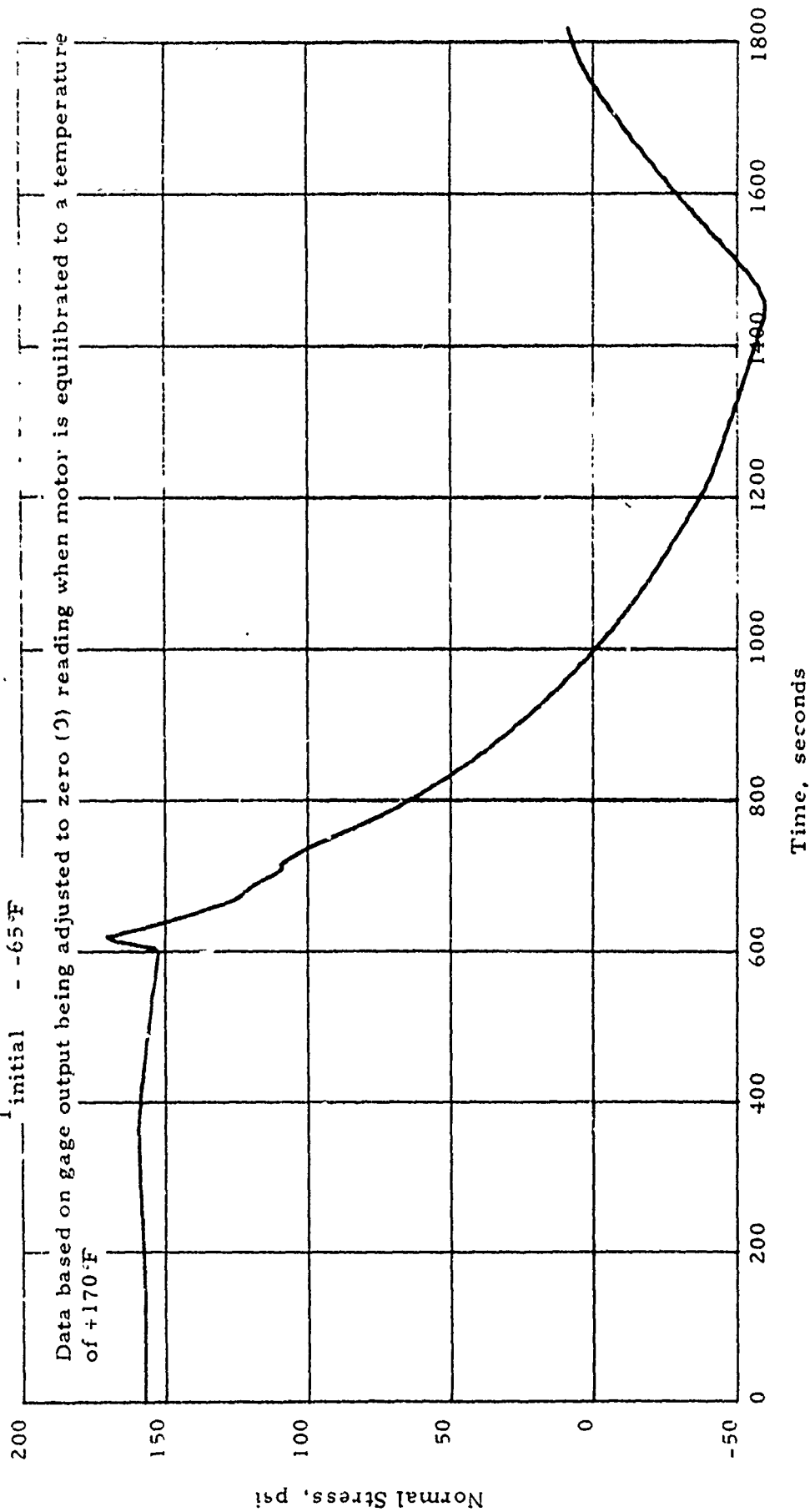
Mid-Motor Normal Stress Response to Aeroheat Loads--Gage N3-47

Motor - IM #3
 Test - A-14 (SFPI)
 Gage - N3-47
 Location - Center
 T initial - -65°F



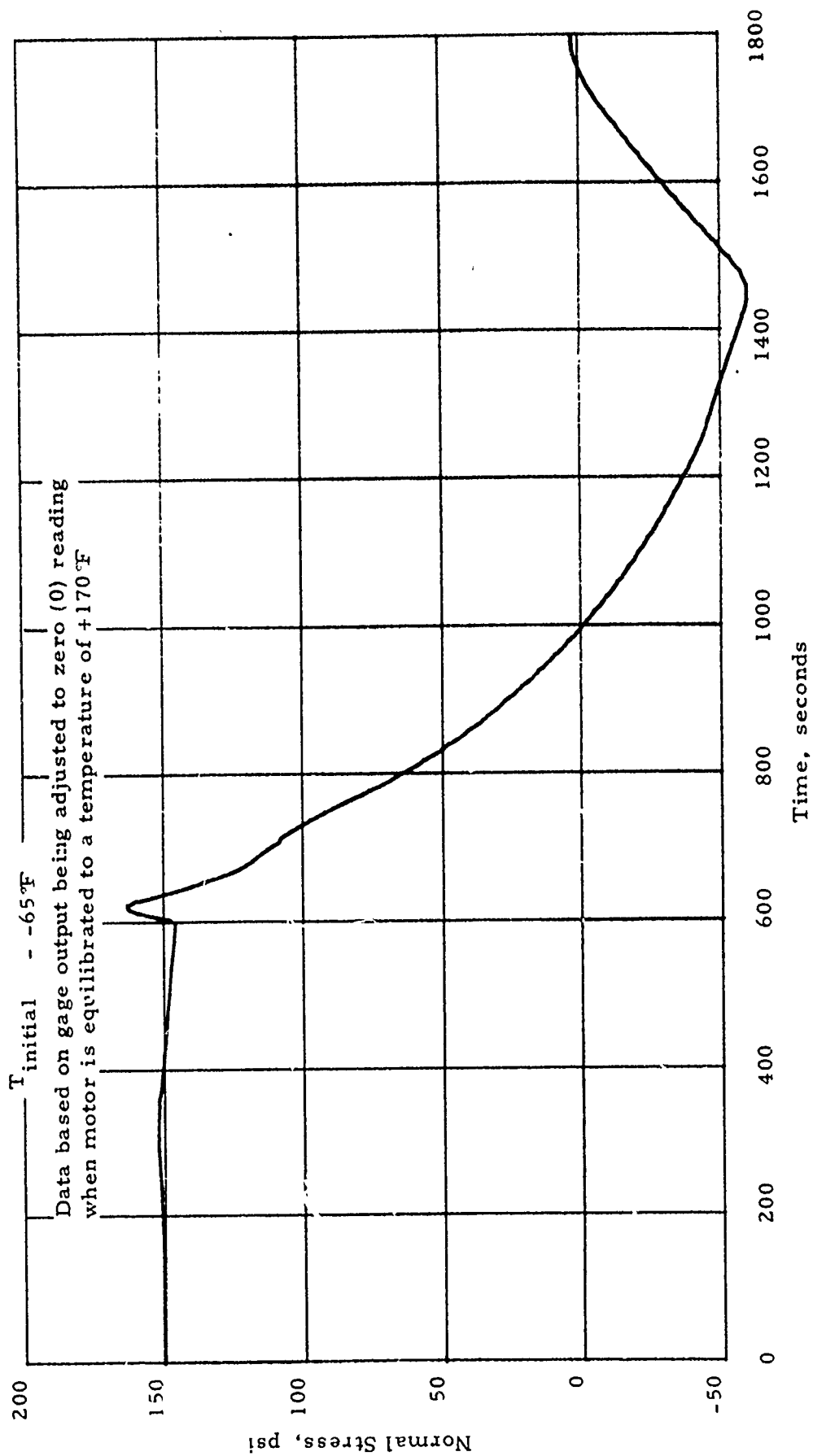
Mid-Motor Normal Stress Response to Aeroheat Loads --Gage N3-47

Motor - IM N3
 Test - A-15 (SFPI)
 Gage - N3-47
 Location - Center
 T_{initial} - -65°F



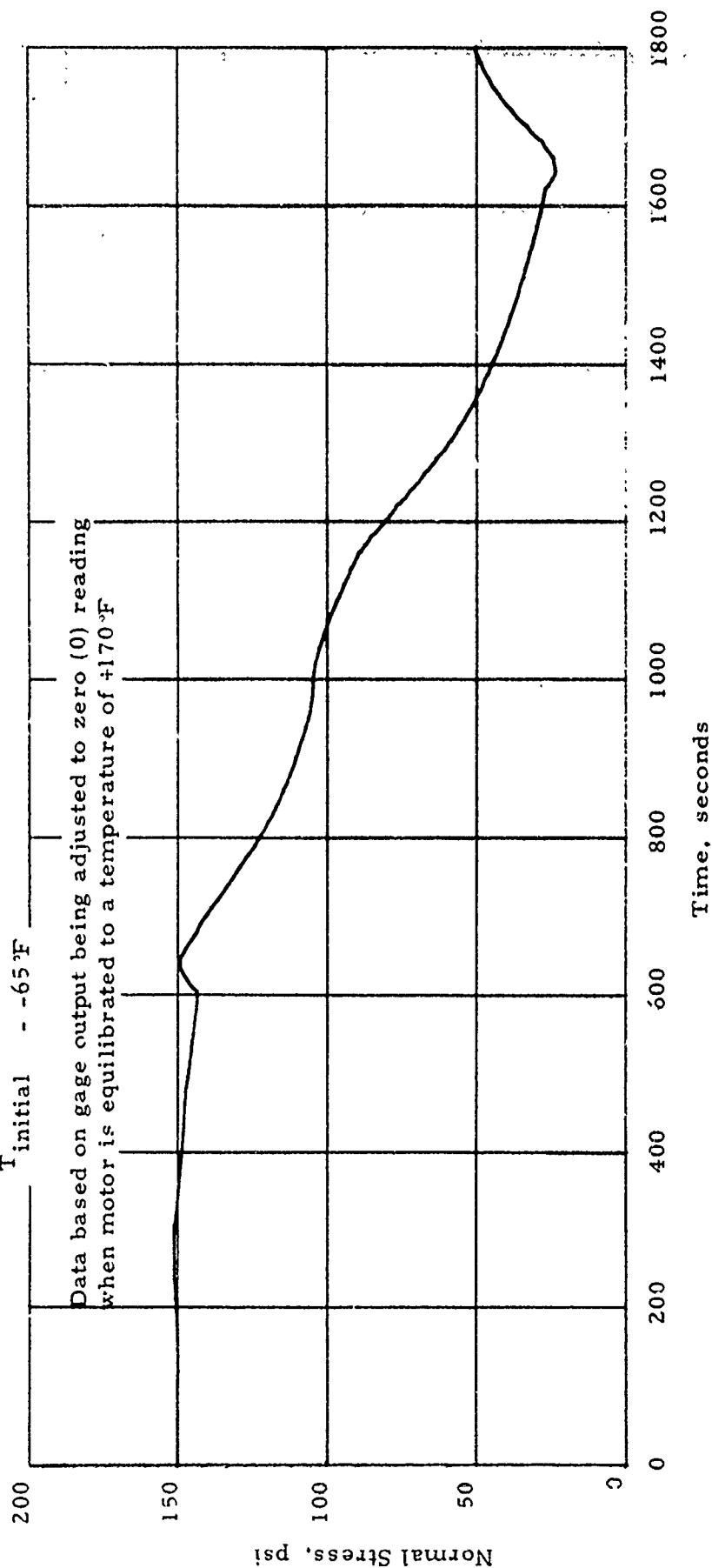
Mid-Motor Normal Stress Response to Aeroheat Loads--Gage N3-47

Motor - IM #3
 Test - A-16 (SFPI)
 Gage - N3-47
 Location - Center



Mid-Motor Normal Stress Response to Aeroheat Loads--Gage N3-47

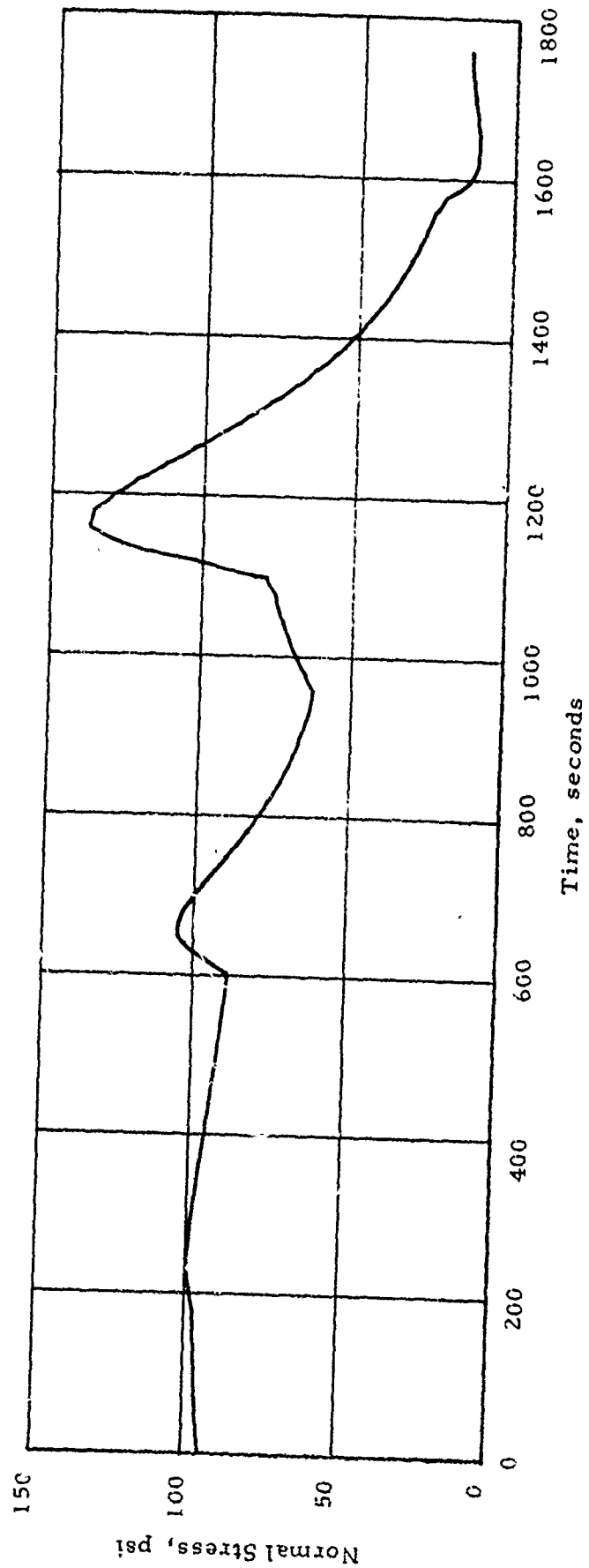
Motor - IM #3
 Test - A-17 (DMP-3)
 Gage - N3-47
 Location - Center
 T_{initial} - -65°F



Mid-Motor Normal Stress Response to Aeroheat Loads--Gage N3-47

Motor - 7M #3
 Test - /A1 (DMP-3)
 Gage - N3-43
 Location - Center
 T initial - -65° F

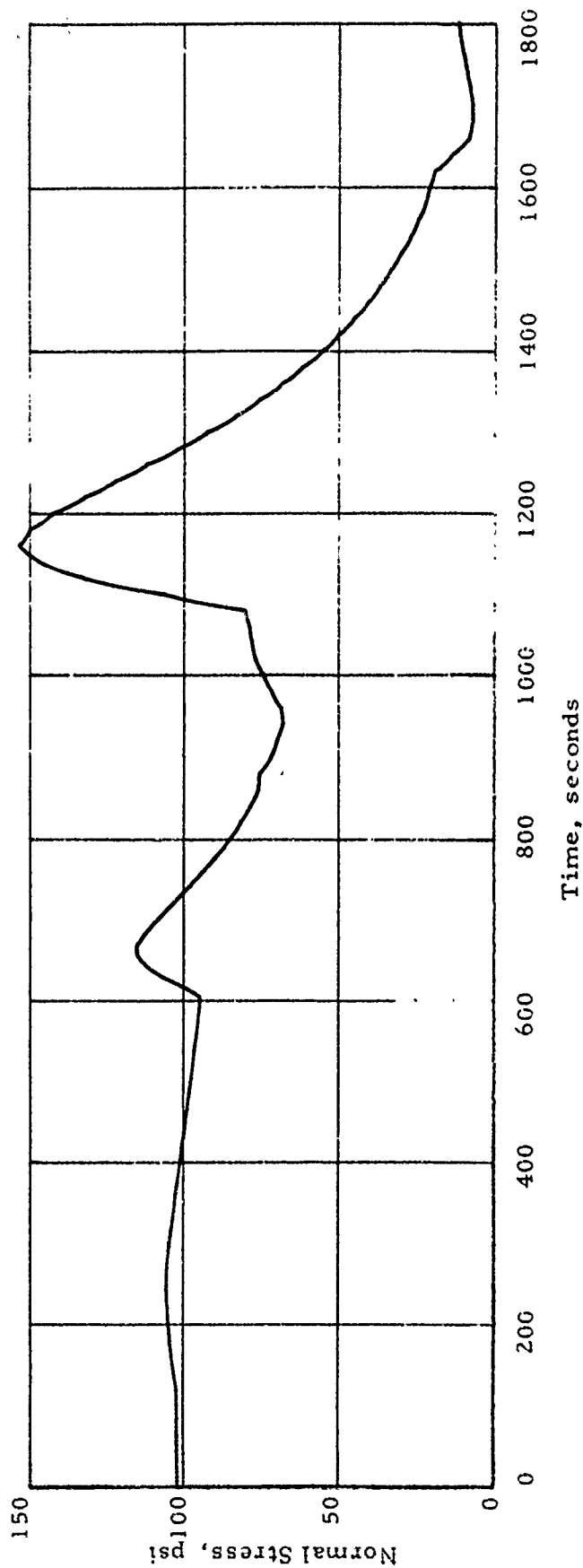
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170° F



Mid-Motor Normal Stress Response to Aeroheat Loads - Gage N3-43 (Test No. A-1)

Motor - IM #3
 Test - A2 (DMP-3)
 Gage - N3-43
 Location - Center
 T_{initial} - -65°F

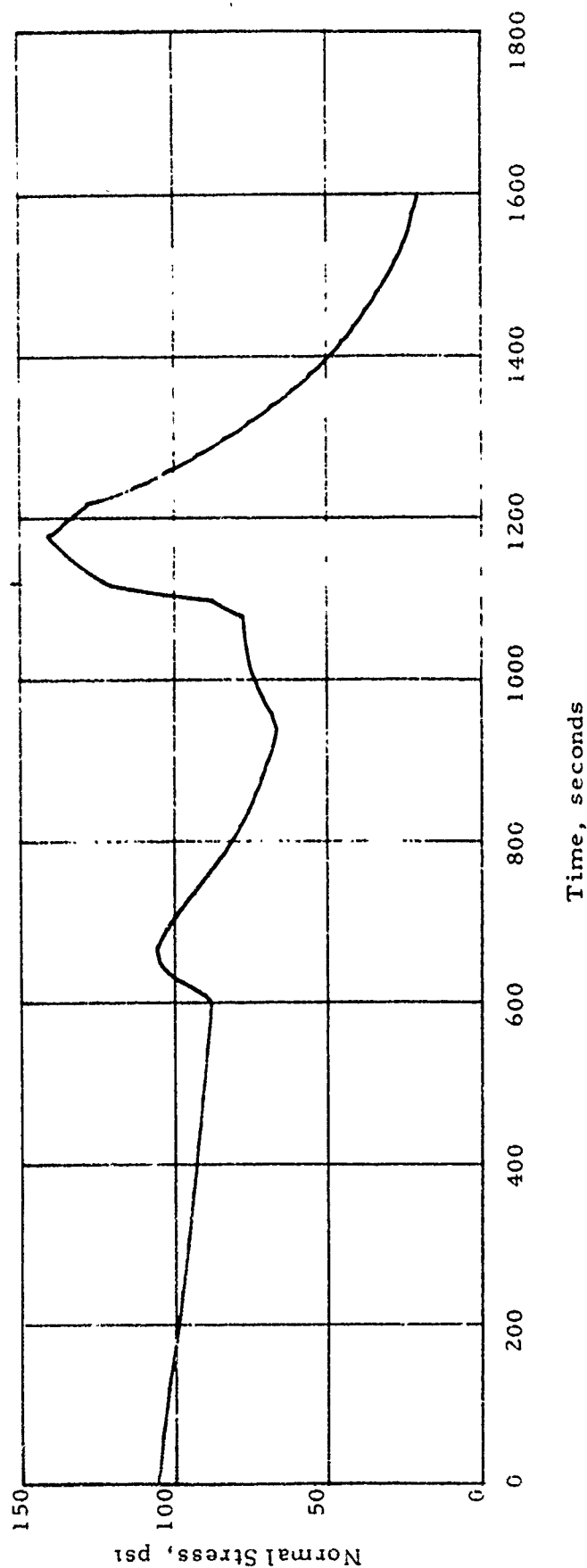
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Mid-Motor Normal Stress Response to Aeroheat Loads - Gage N3-43 (Test No. A-2)

Motor - IM #3
 Test - A3 (DMP-3)
 Gage - N3-43
 Location - Center
 T_{initial} - -65°F

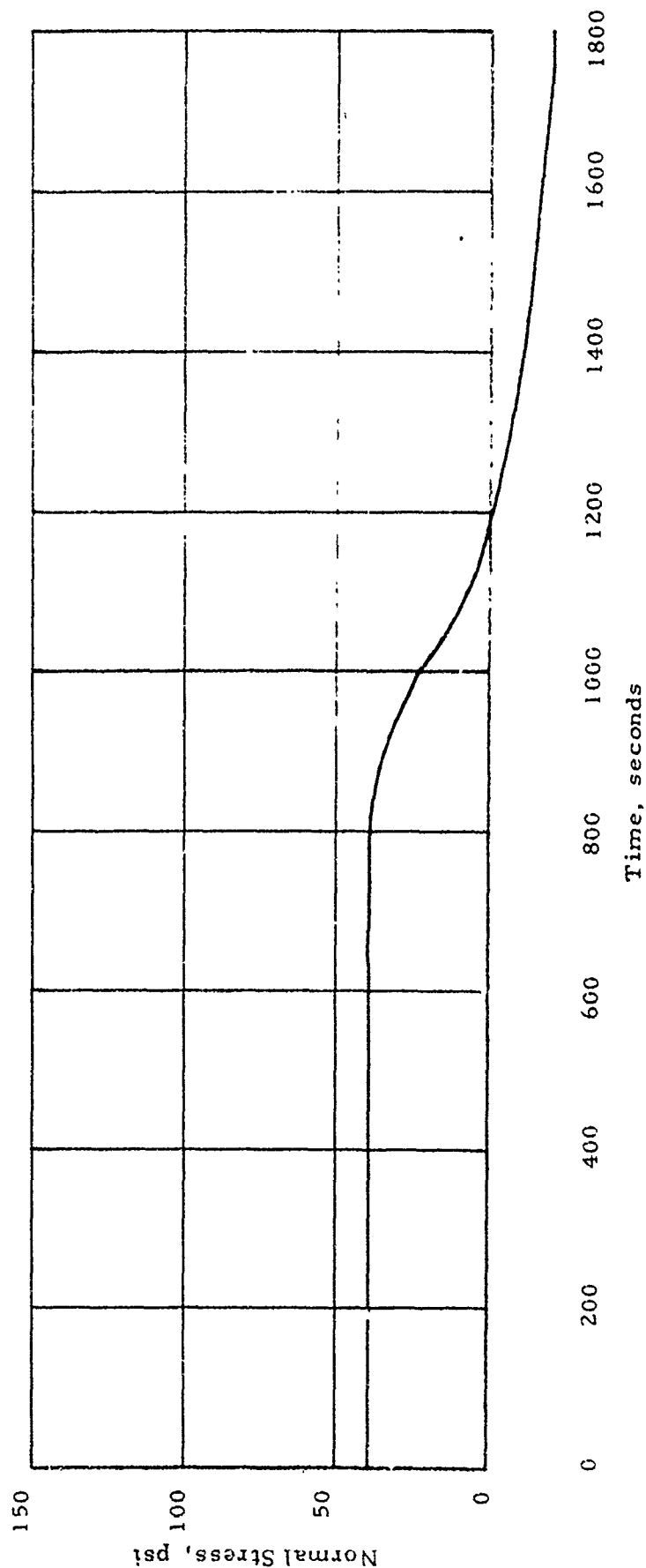
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F.



Mid-Motor Normal Stress Response to Aeroheat Loads - Gage N3-43 (Test No. A-3)

Motor - IM #3
 Test - A4 (HSMH)
 Gage - N3-43
 Location - Center
 T_{initial} - 55°F

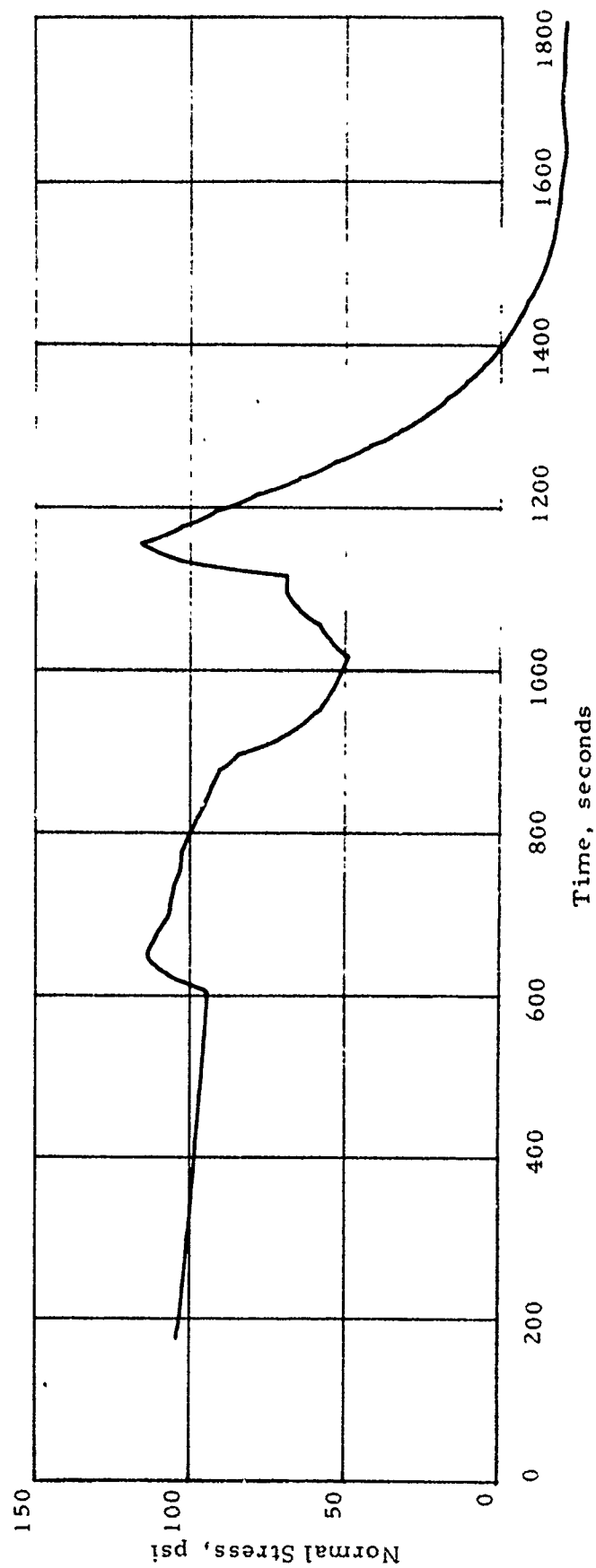
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F.



Mid-Motor Normal Stress Response to Aeroheat Loads - Gage N3-43 (Test No. A-4)

Motor - IM #3
 Test - A5 (HSMH)
 Gage - N3-43
 Location - Center
 T_{initial} - -65°F

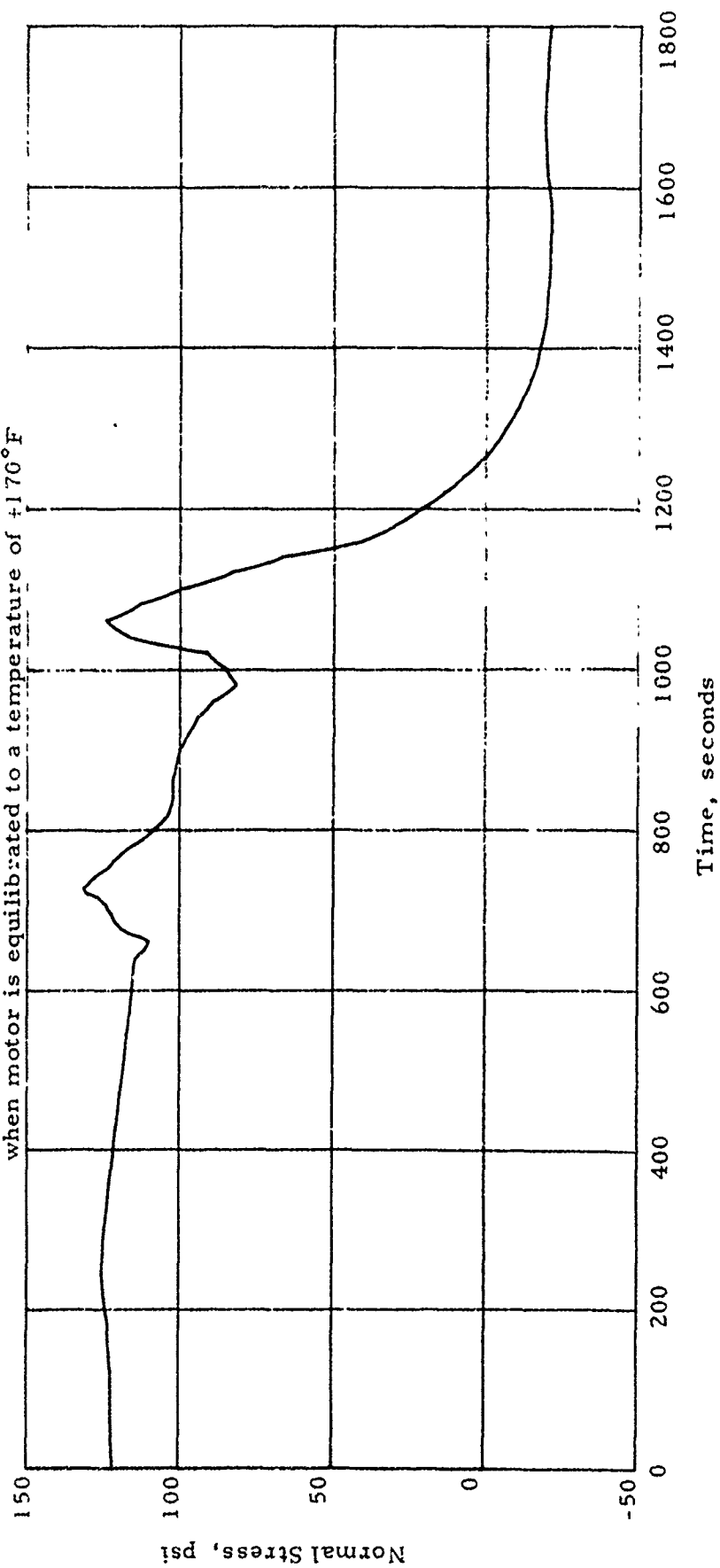
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F



Mid-Motor Normal Stress Response to Aeroheat Loads - Gage N3-43 (Test No. A-5)

Motor .IM #3
 Test A6 (HSMH)
 Gage N3-43
 Location Center
 Tinitial -65°F

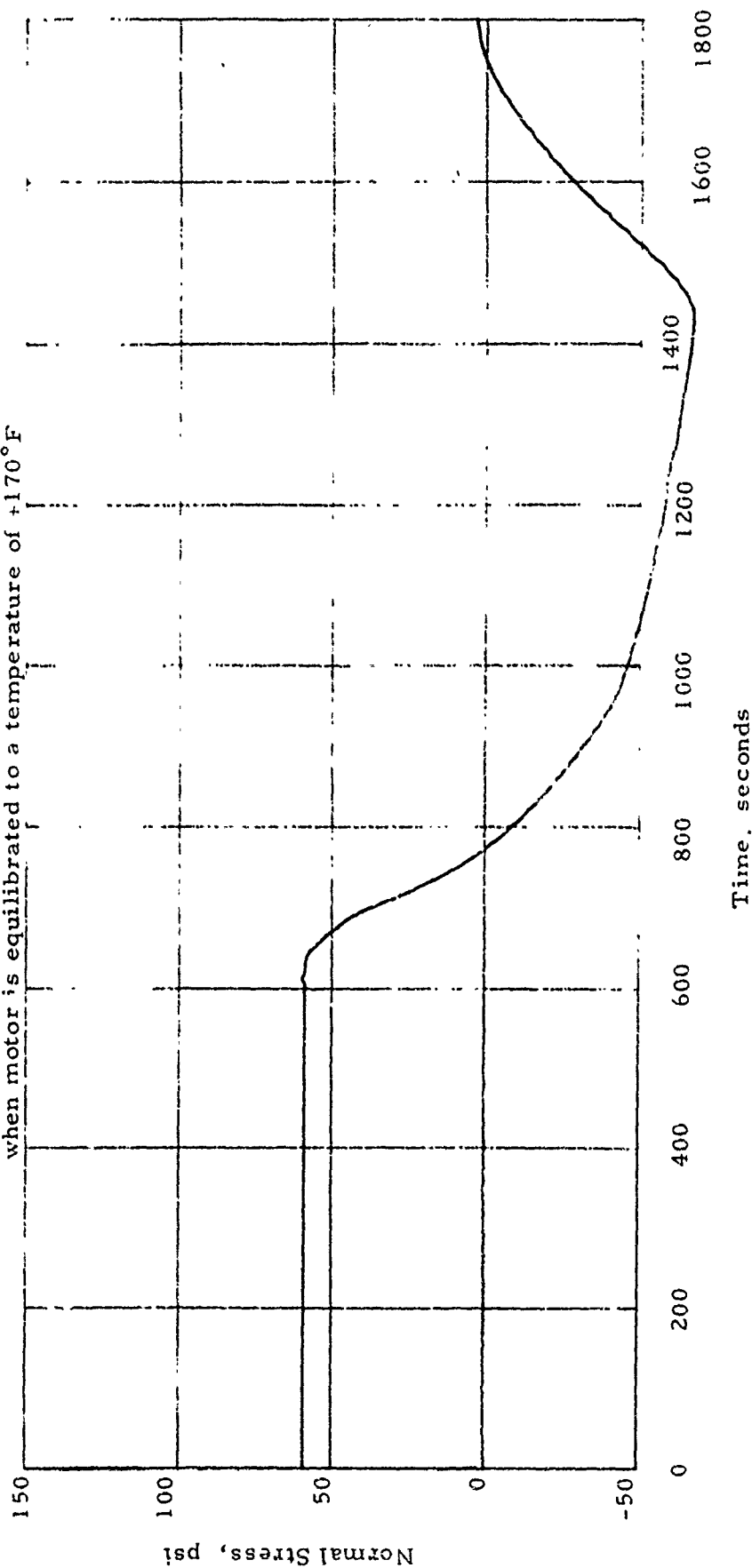
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Mid-Motor Normal Stress Response to Aeroheat Loads - Gage N3-43 (Test No. A-6)

Motor - IM #3
 Test - A7 (SFPI)
 Gage - N3-43
 Location - Center
 T_{initial} - +60°F

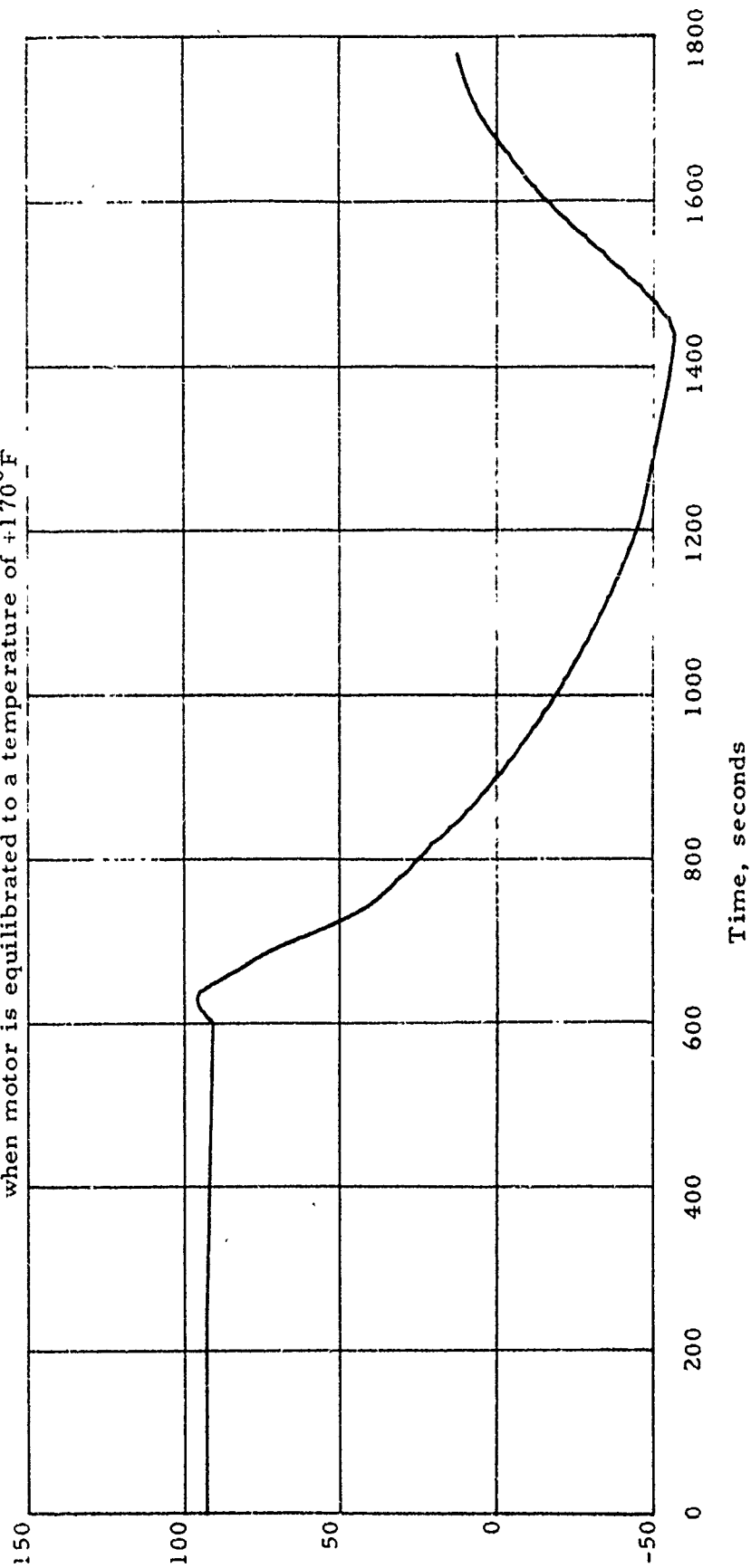
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Mid-Motor Normal Stress Response to Aeroheat Loads - Gage N3-43 (Test No. A-7)

Motor - IM #3
 Test - A8 (SFPI)
 Gage - N3-43
 Location - Center
 T_{initial} - 0°F

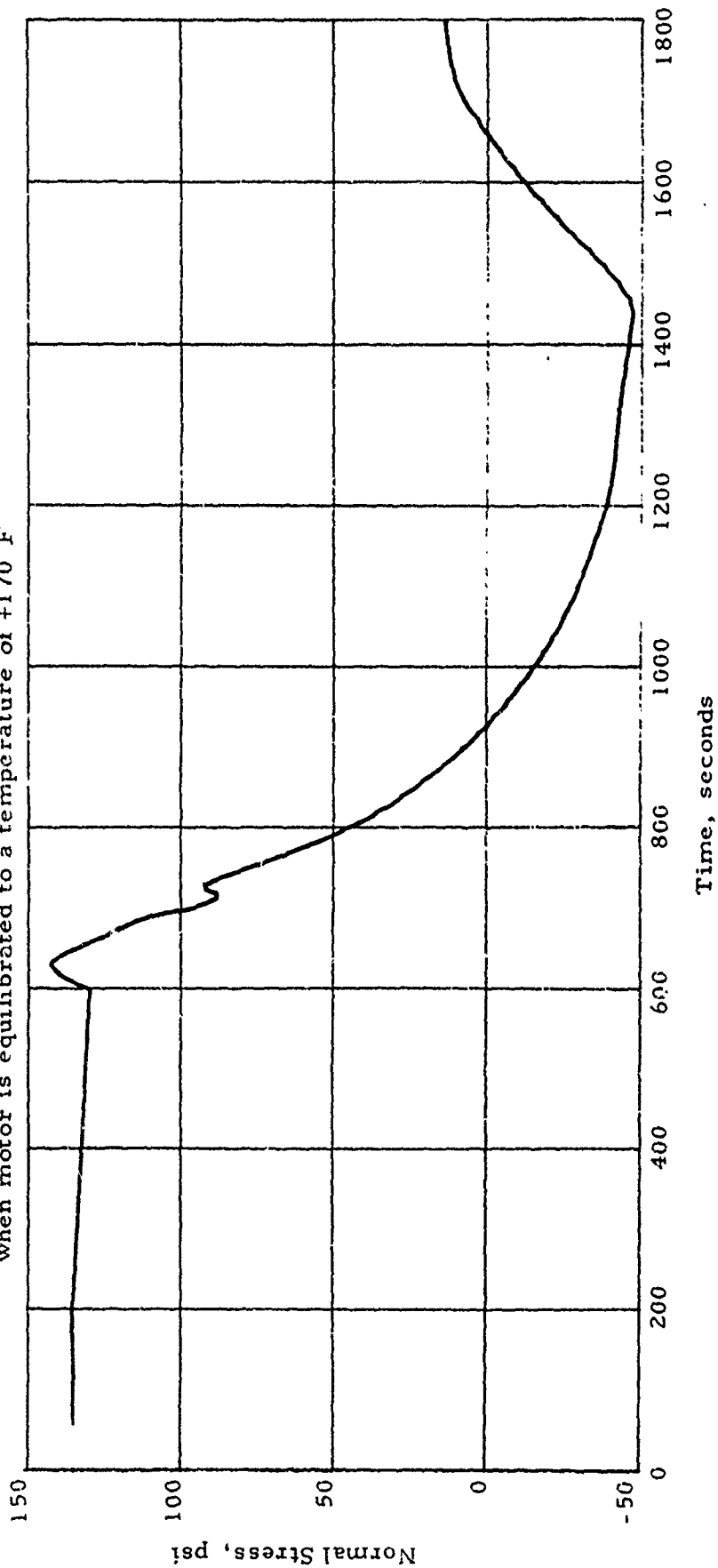
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Mid-Motor Normal Stress Response to Aeroheat Loads --Gage N3-43

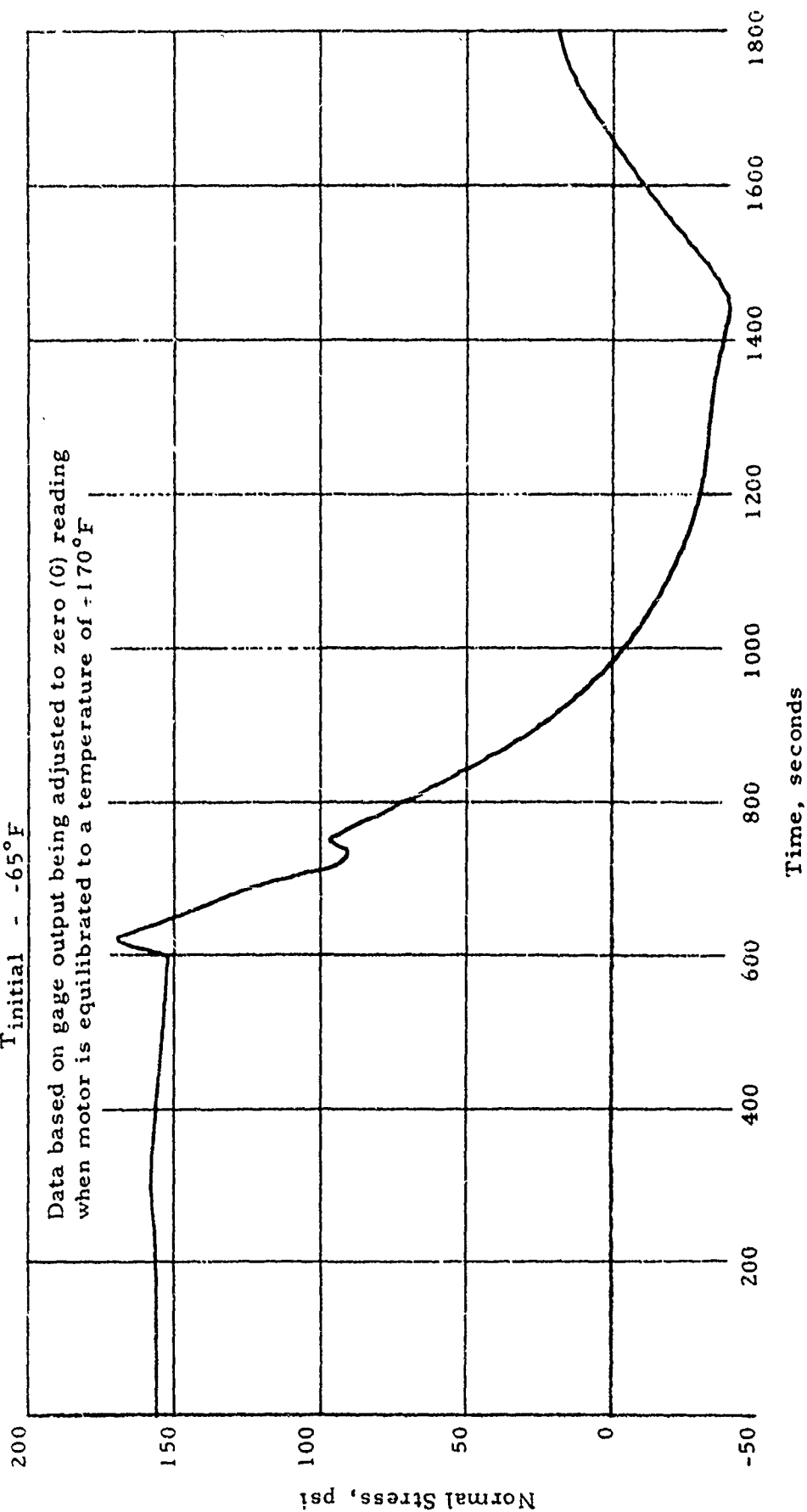
Motor - IM #3
 Test - A-10 (SFPI)
 Gage - N3-i3
 Location - Center
 T_{initial} - -40°F

Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Mid-Motor Normal Stress Response to Aeroheat Loads -- Gage N3-43

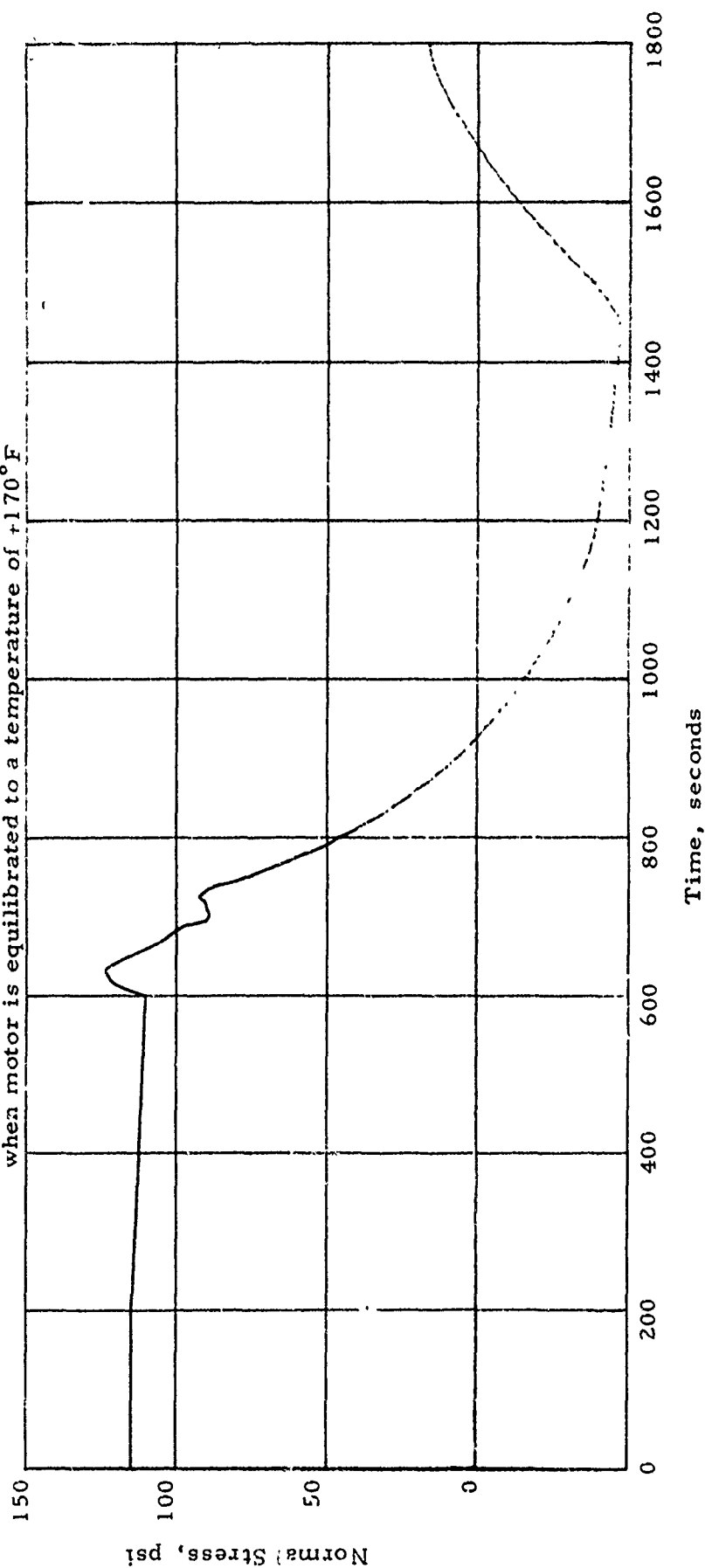
Motor - IM #3
 Test - A-12
 Gage - N3-43
 Location - Center
 T_{initial} - -65°F



Mid-Motor Normal Stress Response to Aeroheat Loads--Gage N3-43

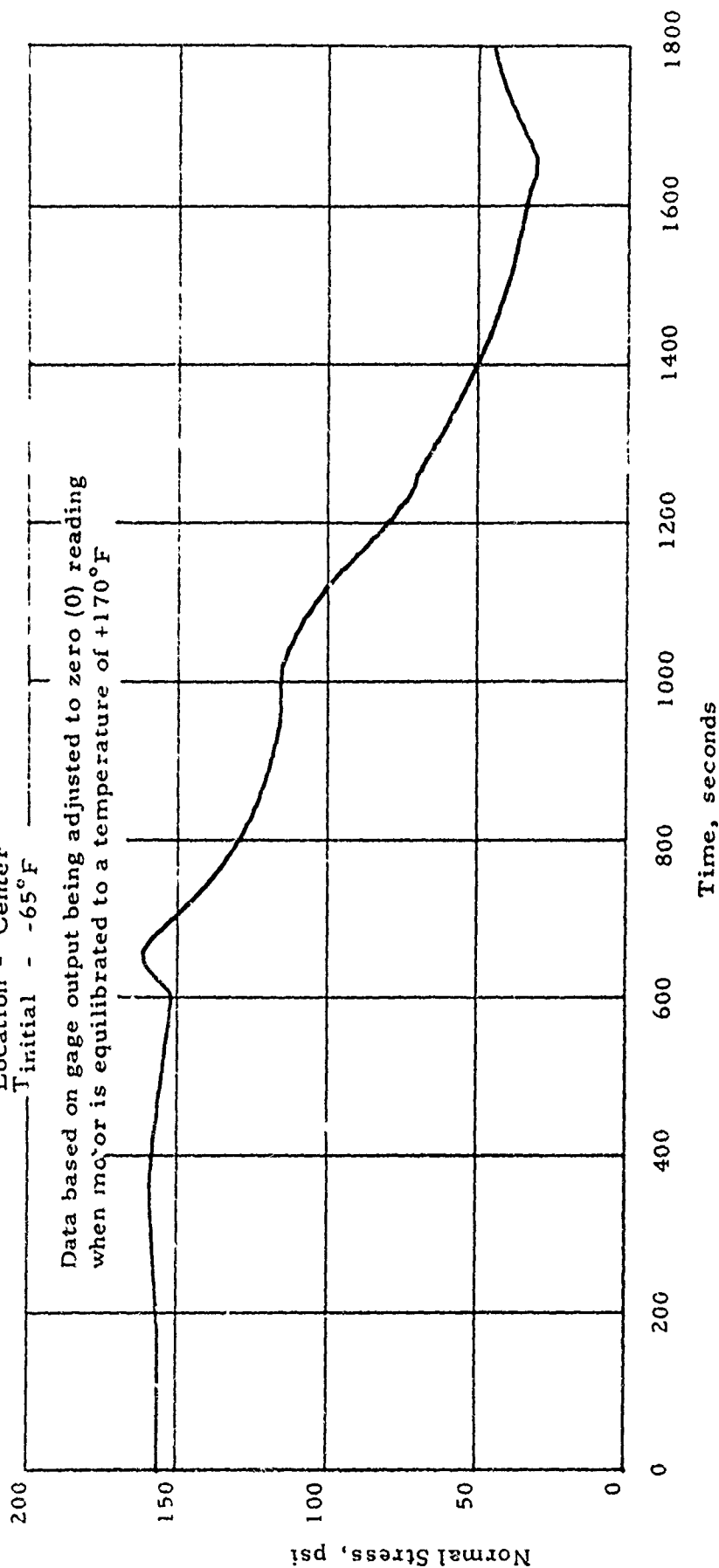
Motor - IM #3
 Test - A9 (SFPI)
 Gage - N3-43
 Location - Center
 T_{initial} - -40°F

Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



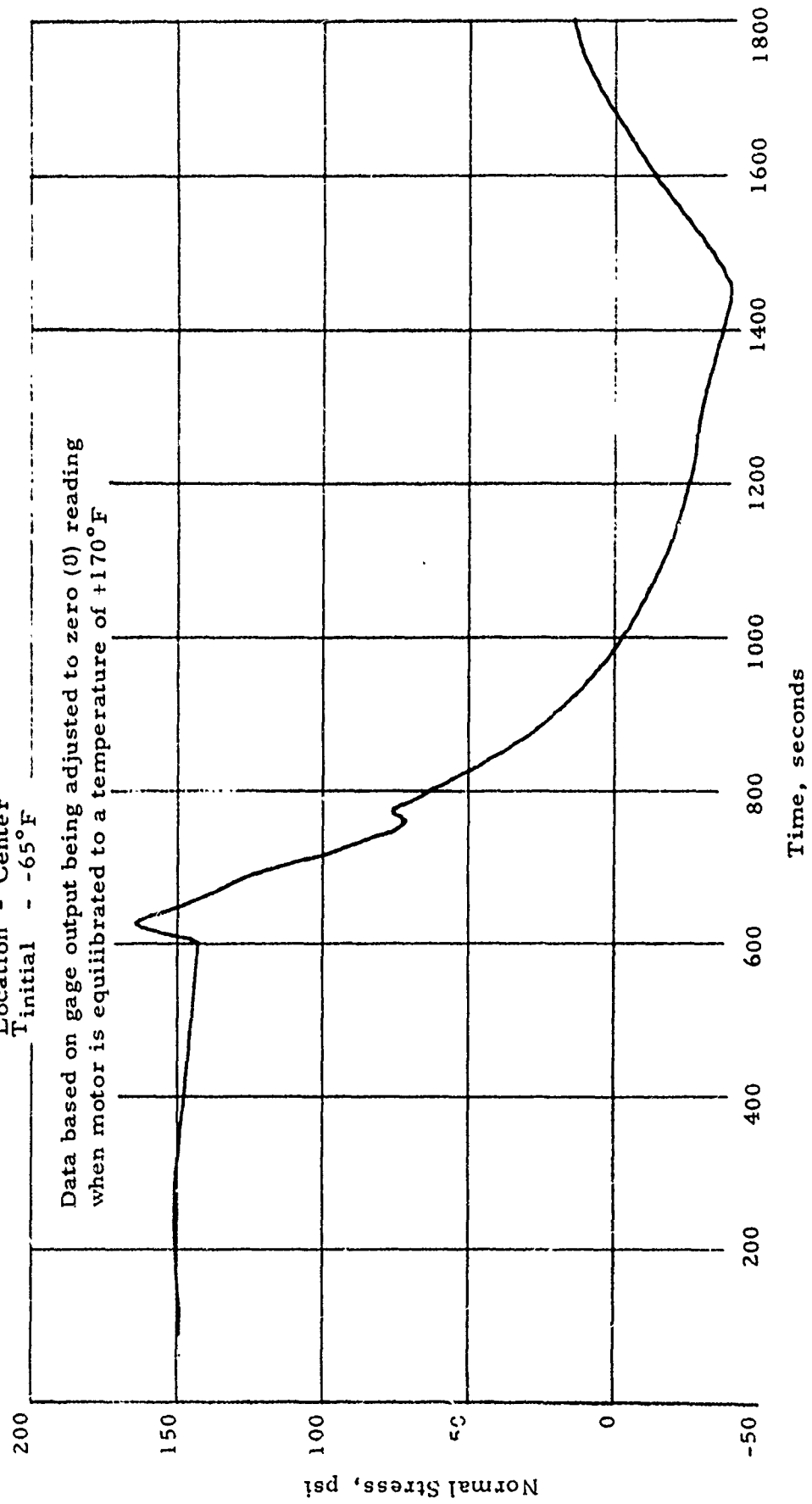
Mid-Motor Normal Stress Response to Aeroheat Loads --Gage N3-43

Motor - IM #3
 Test - A-11 (DMP-3)
 Gage - N3-43
 Location - Center
 T_{initial} - -65°F



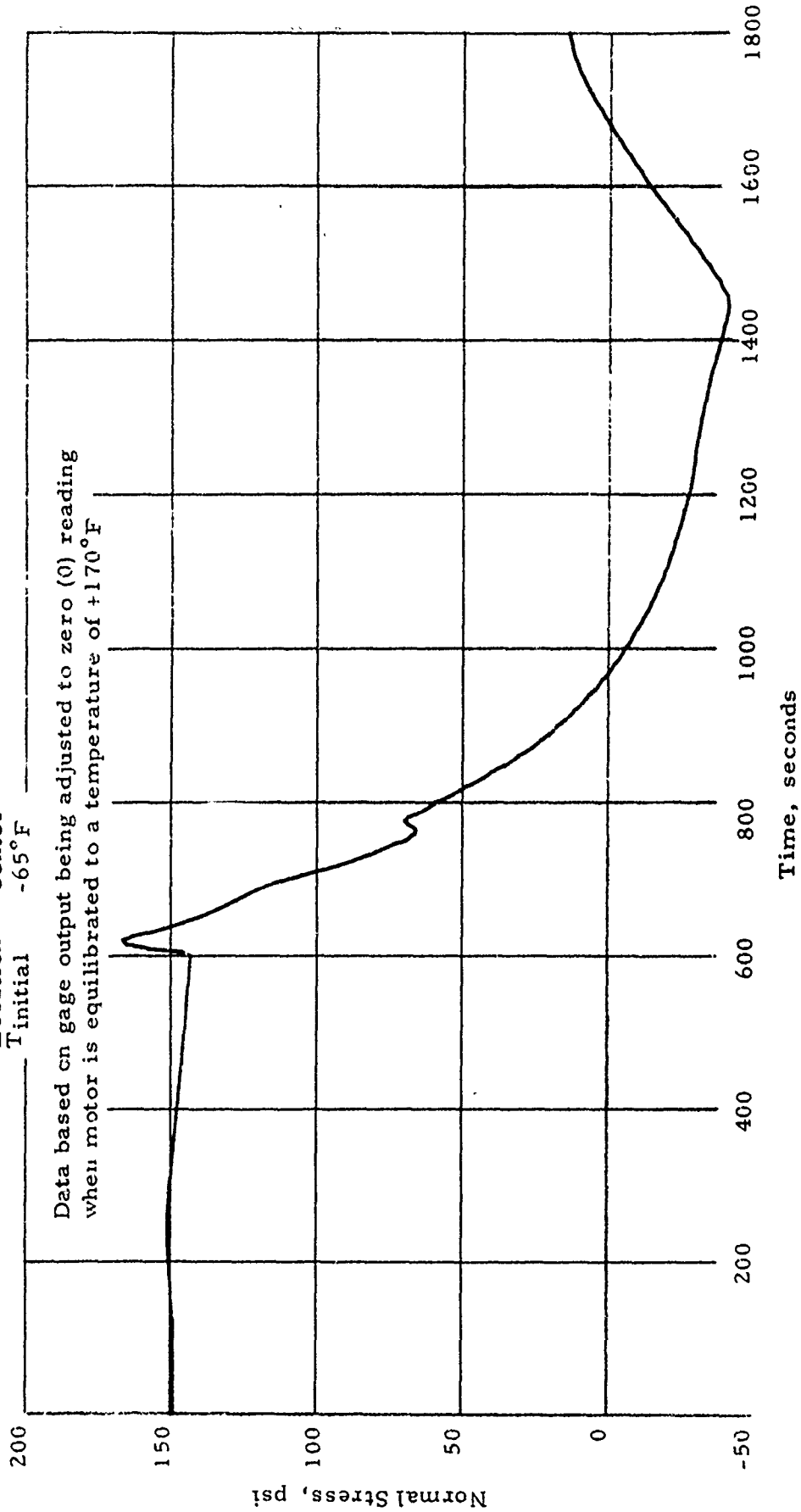
Mid-Motor Normal Stress Response to Aeroheat Loads --Gage N3-43

Motor - IM #3
 Test - A-13 (SFPI)
 Gage - N3-43
 Location - Center
 T_{initial} - -65°F



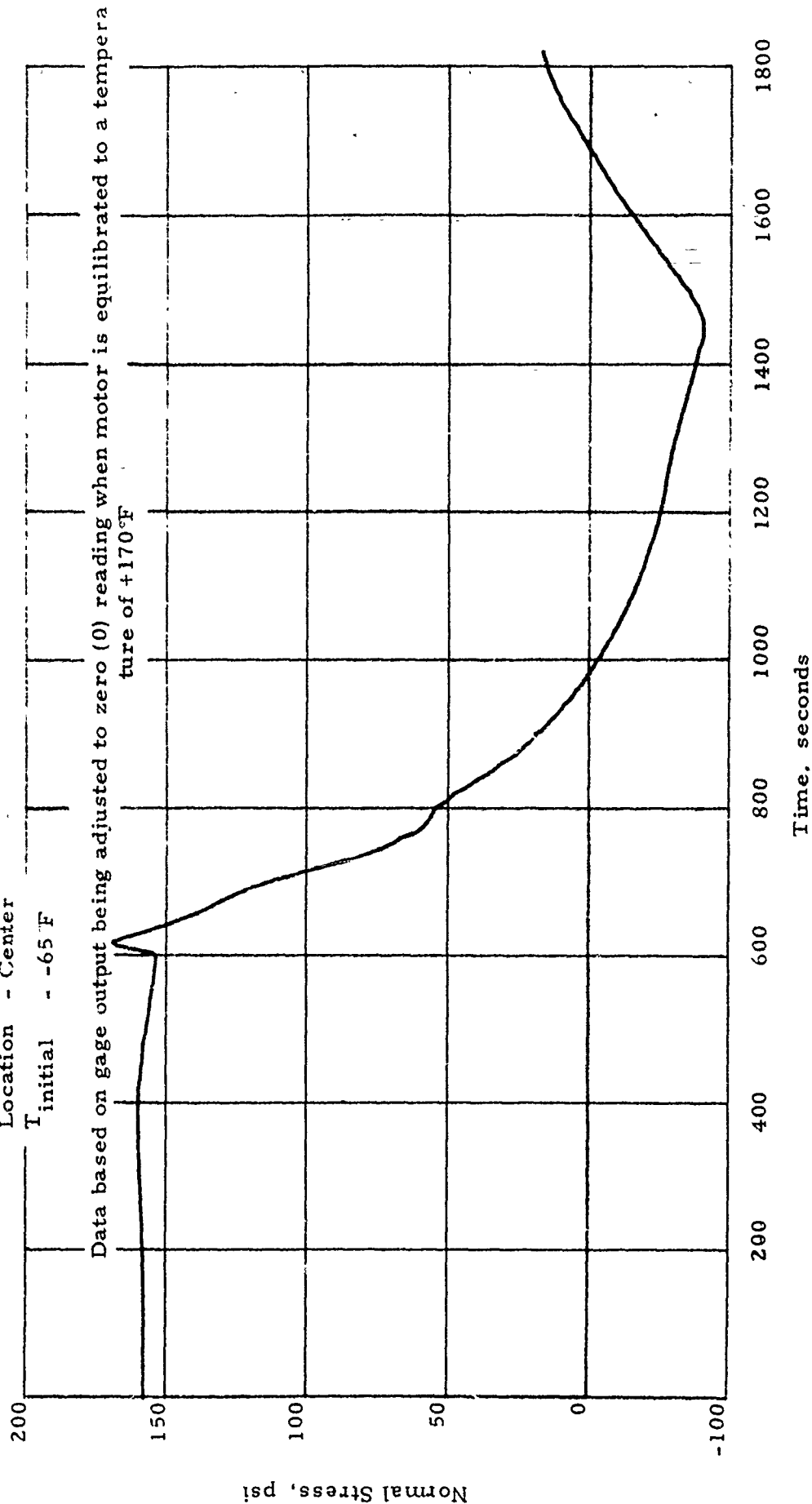
Mid-Motor Normal Stress Response to Aeroheat Loads--Gage N3-43

Motor IM #3
 Test A-14 (SFPI)
 Gage N3-43
 Location Center
 T initial -65°F



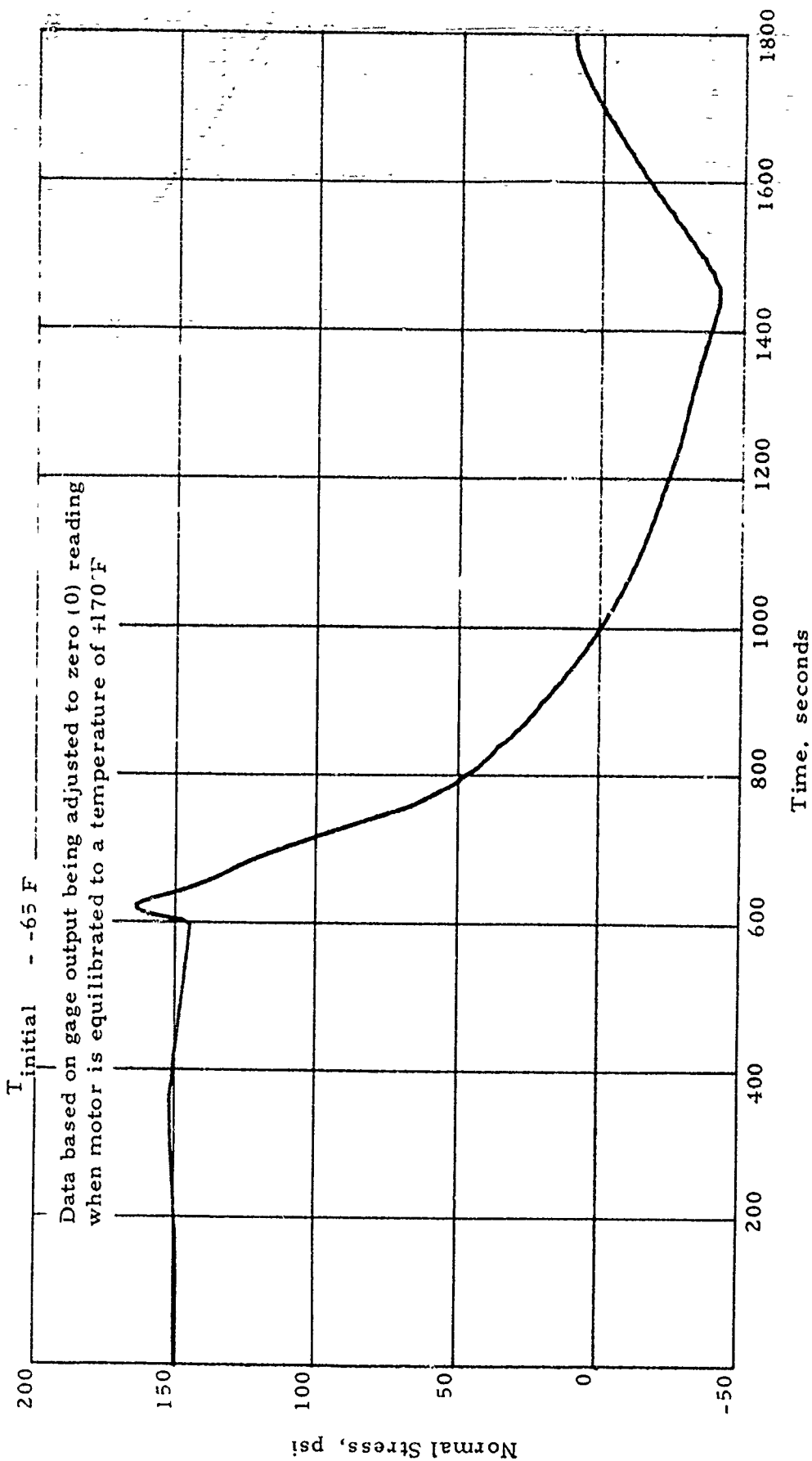
Mid-Motor Normal Stress Response to Aeroheat Loads --Gage N3-43

Motor - IM #3
 Test - A-15 (SFPI)
 Gage - N3-43
 Location - Center
 T_{initial} - -65 F



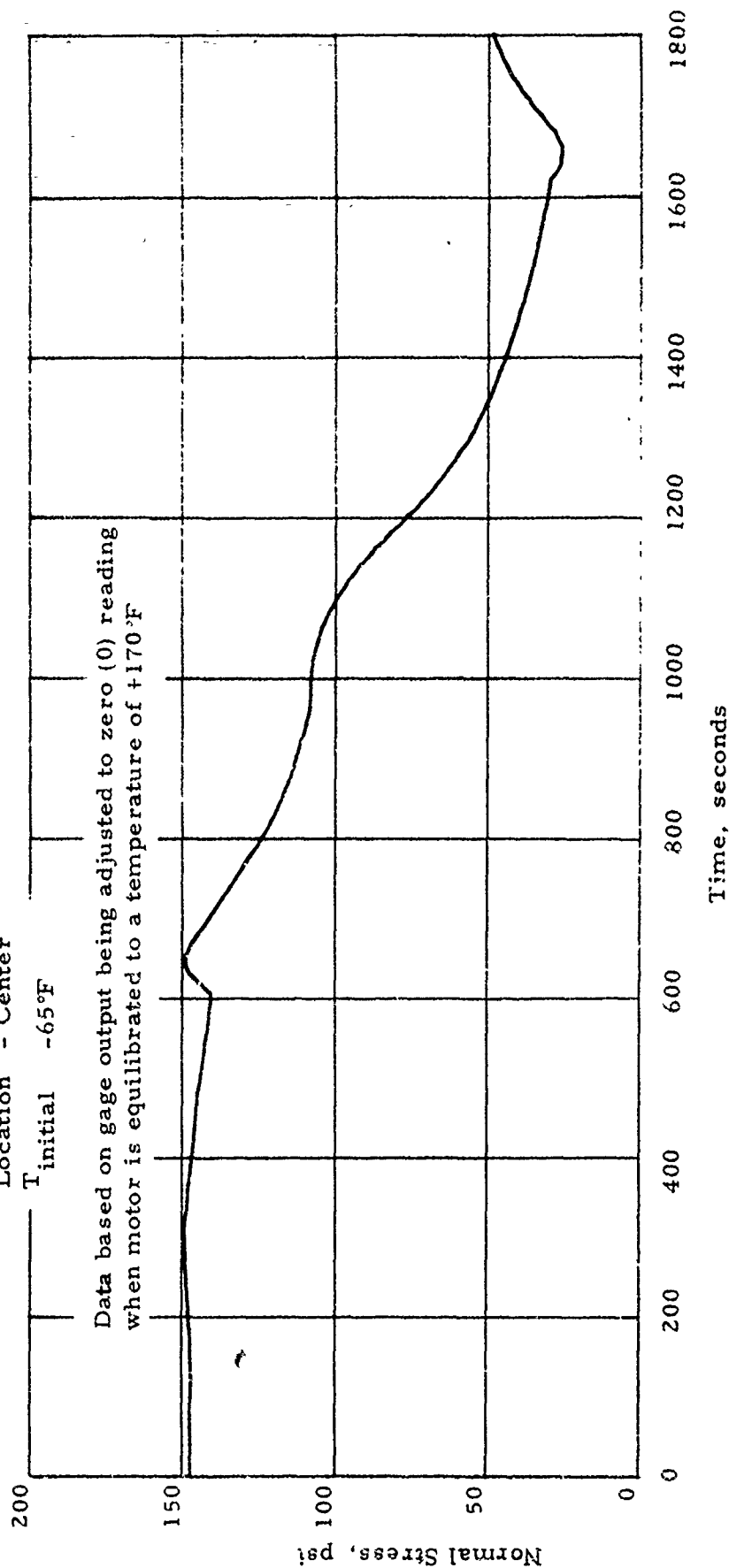
Mid-Motor Normal Stress Response to Aeroheat Loads--Gage N3-43

Motor - IM #3
 Test - A-16 (SFPI)
 Gage - N3-43
 Location - Center



Mid-Motor Normal Stress Response to Aeroheat Loads--Gage N3-43

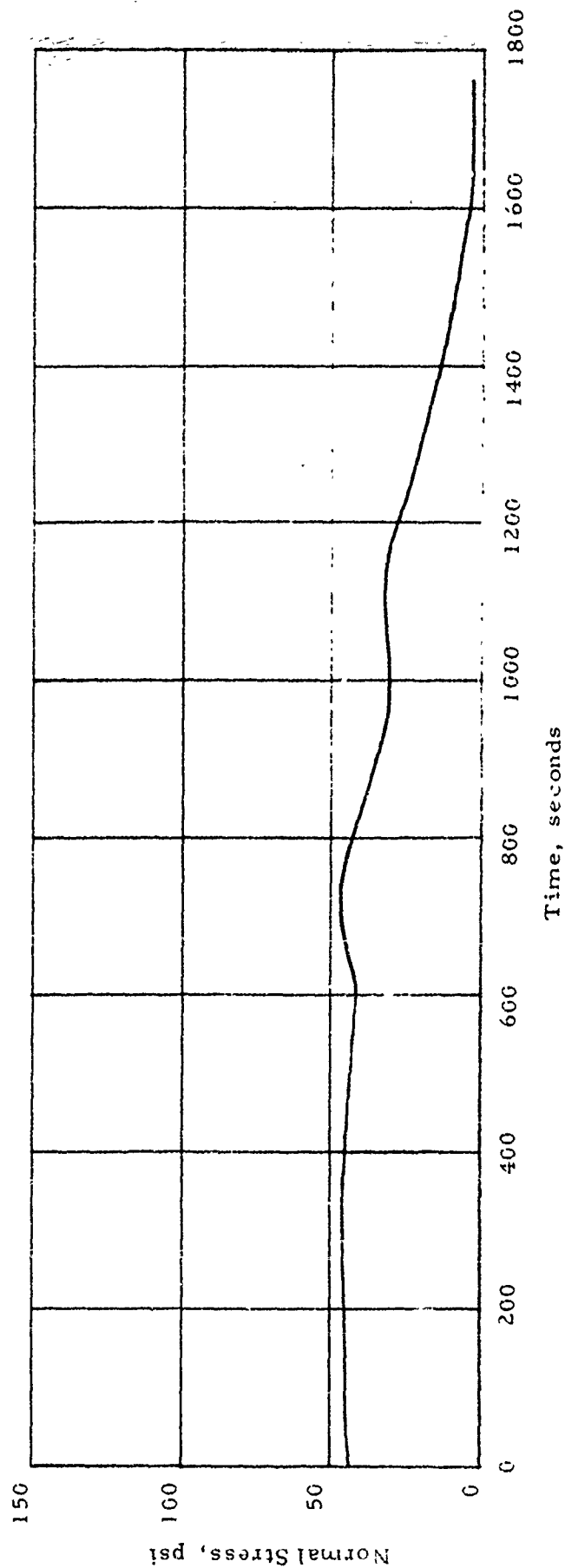
Motor - IM #3
 Test - A-17 (DMP-3)
 Gage - N3-43
 Location - Center



Mid-Motor Normal Stress Response to Aeroheat Loads--Gage N3-43

Motor - IM #3
 Test - A1 (DMP-3)
 Gage - N3-45
 Location - Aft
 T_{initial} - -65°F

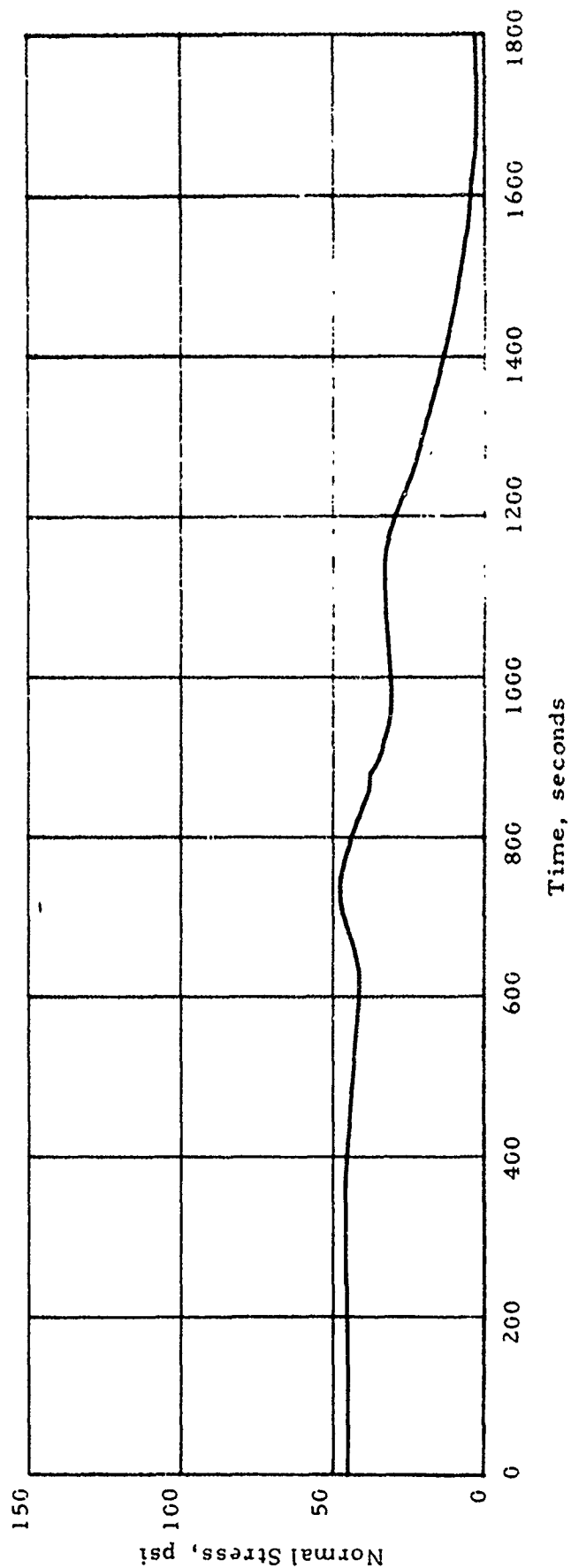
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Aft End Normal Stress Response to Aeroheat Loads--Gage N3-45

Motor - IM #3
 Test - A2 (DMP-3)
 Gage - N3-45
 Location - Aft
 T_{initial} - -65°F

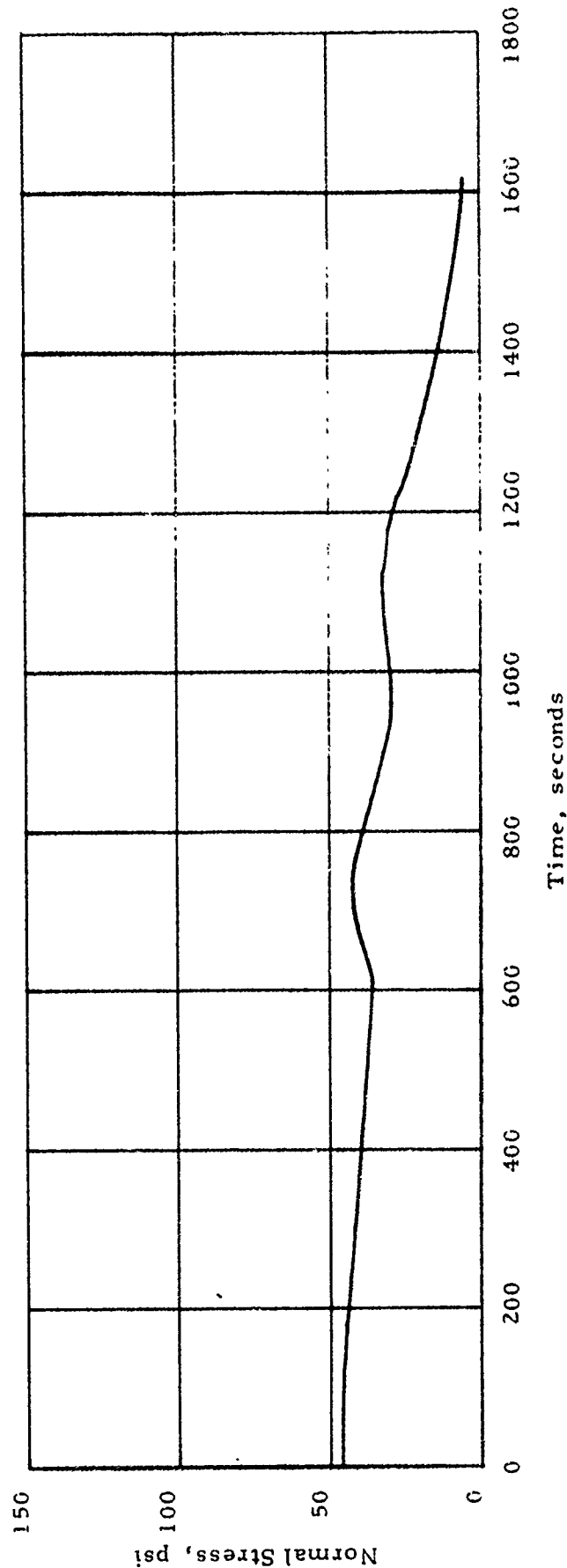
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Aft End Normal Stress Response to Aeroheat Loads--Gage N3-45

Motor - IM #3
 Test - A3 (DMP-3)
 Gage - N3-45
 Location - Aft
 T_{initial} - -65°F

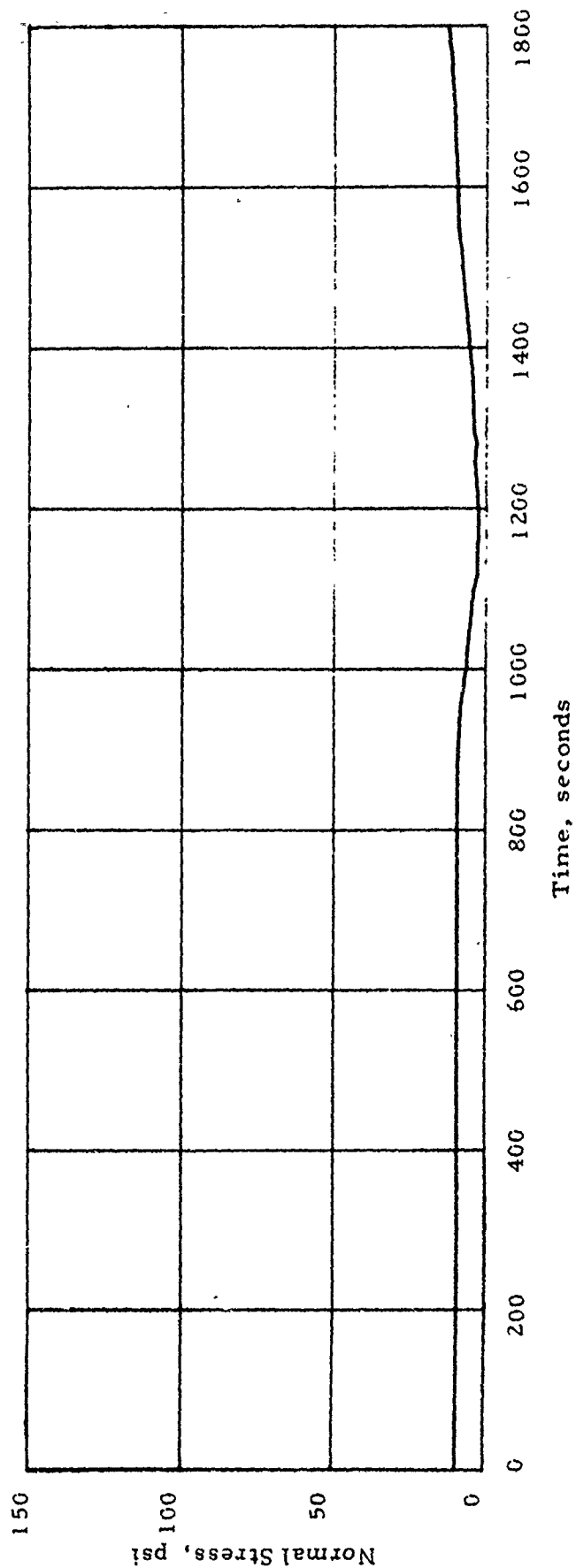
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Aft End Normal Stress Response to Aeroheat Loads --Gage N3-45

Motor - IM #3
 Test - A4 (HSMH)
 Gage - N3-45
 Location - Aft
 T_{initial} - 55°F

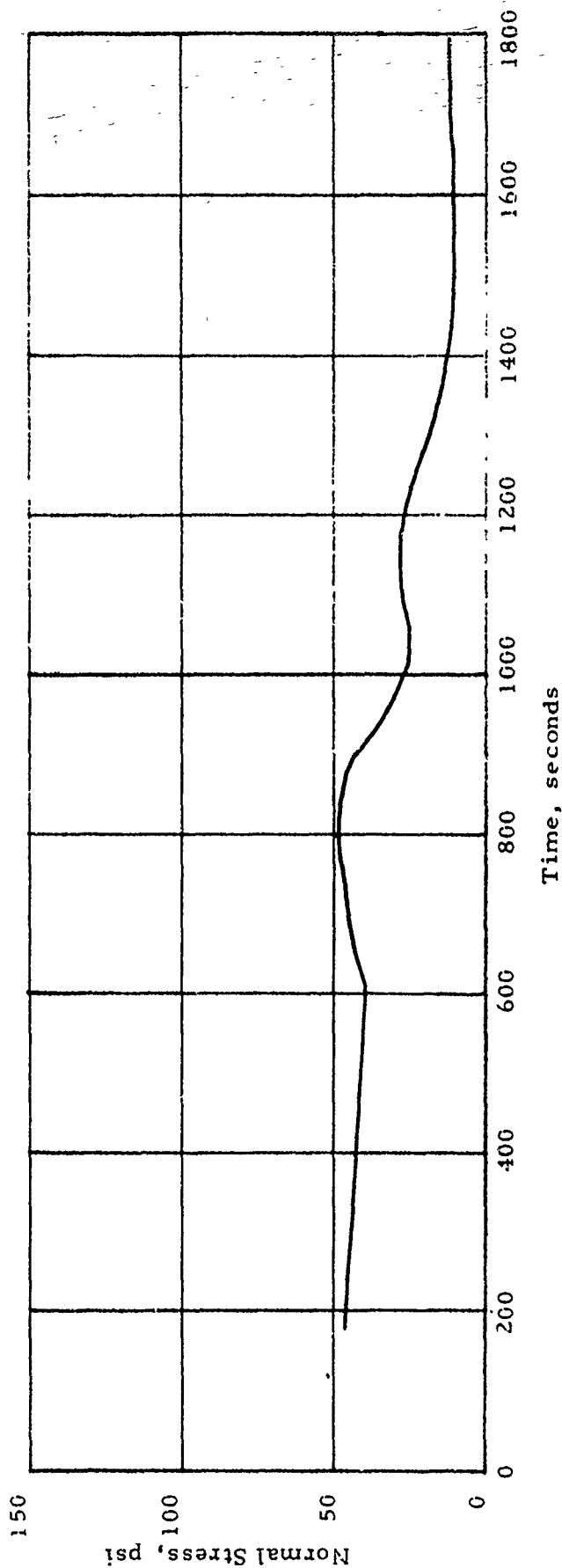
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Aft End Normal Stress Response to Aeroheat Loads -- Gage N3-45

Motor - TM #3
 Test - A5 (HSMH)
 Gage - N3-45
 Location - Aft
 T_{initial} - -65°F

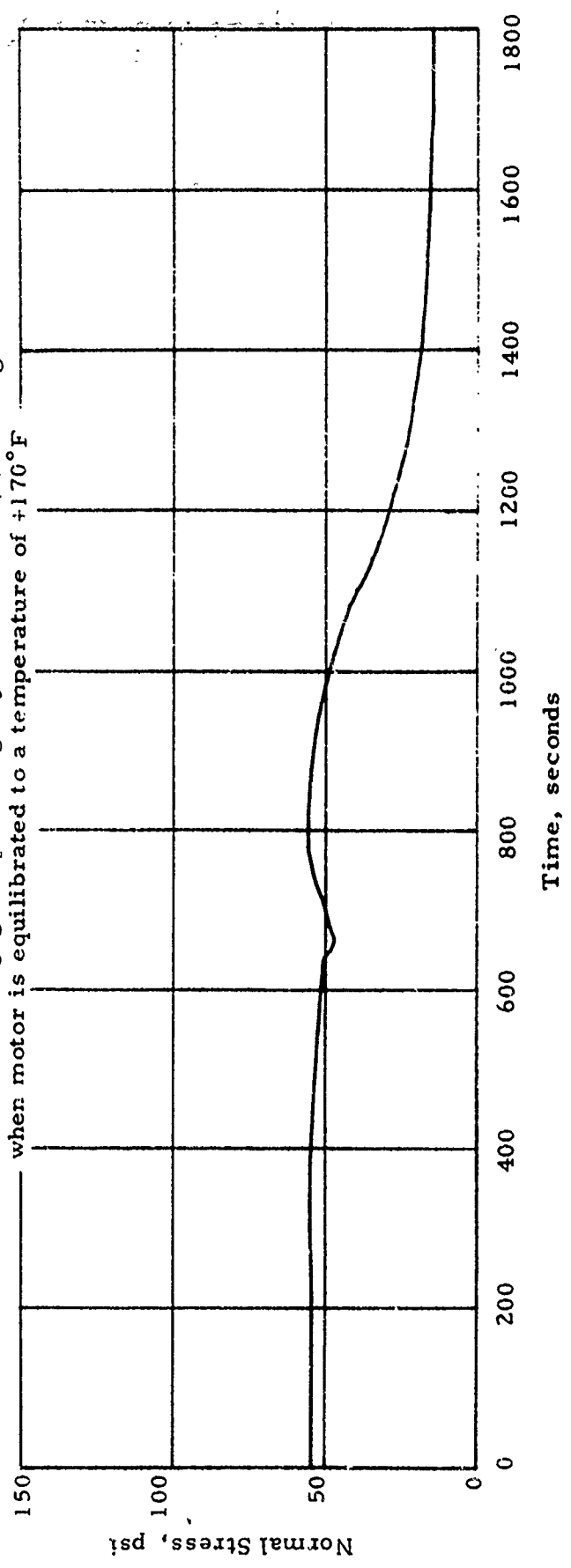
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Aft End Normal Stress Response to Aeroheat Loads -- Gage N3-45

Motor - 1M #3
 Test - A6 (HSMH)
 Gage - N3-45
 Location - Aft
 T_{initial} - -65°F

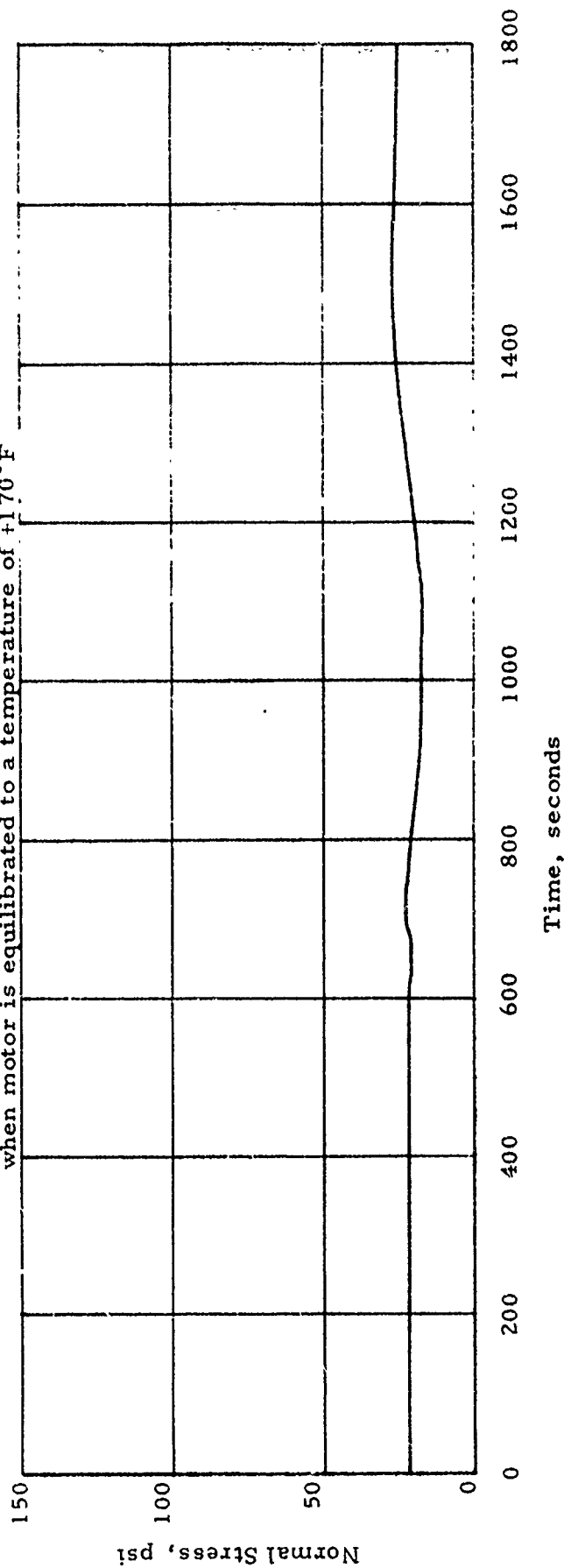
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Aft End Normal Stress Response to Aeroheat Loads -- Gage N3-45

Motor - IM #3
 Test - A7 (SFPI)
 Gage - N3-45
 Location - Aft
 T_{initial} - +60°F

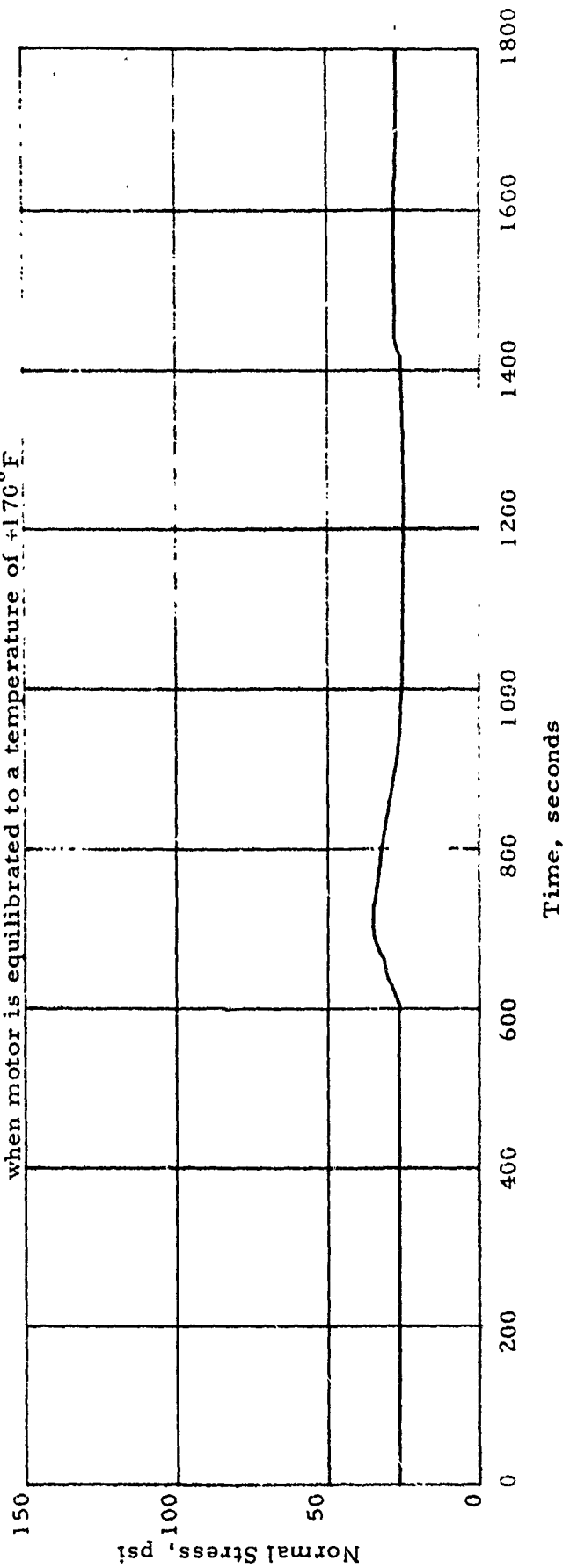
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Aft End Normal Stress Response to Aeroheat Loads--Gage N3-45

Motor - IM #3
 Test - A8 (SFPI)
 Gage - N3-45
 Location - Aft
 T_{initial} - 0°F

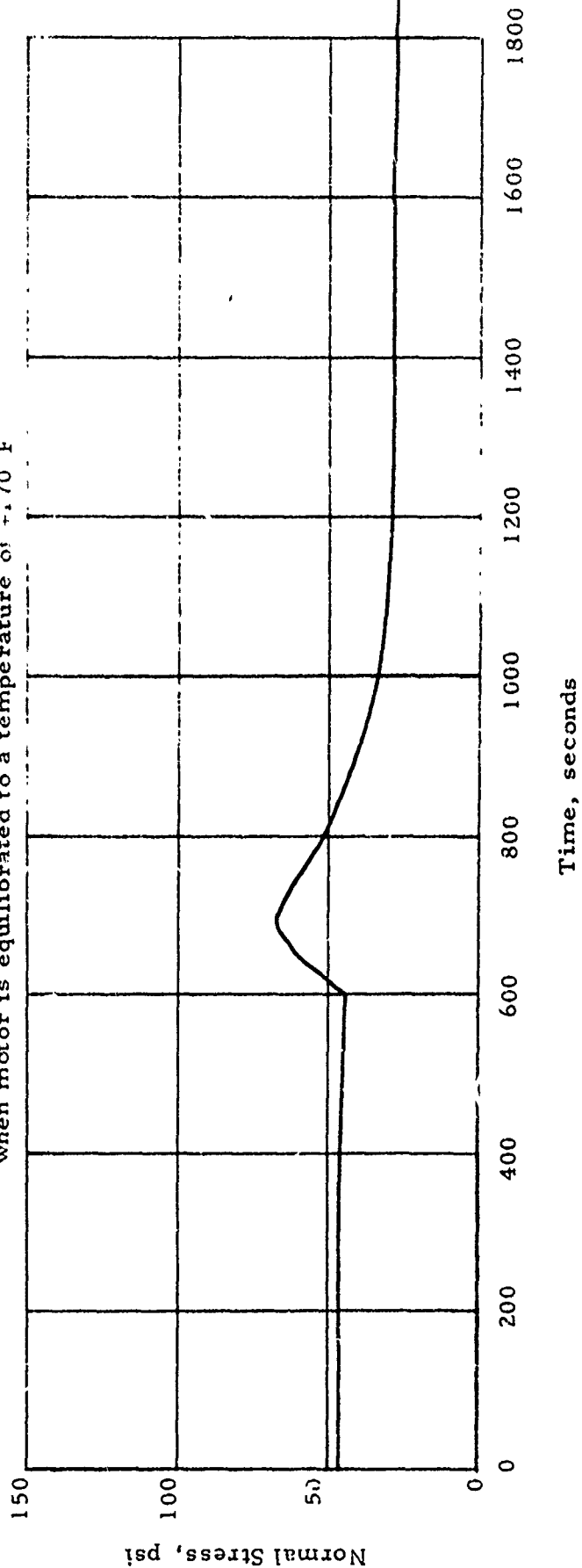
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Aft End Normal Stress Response to Aeroheat Loads--Gage N3-45

Motor - 1M #3
 Test - A9 (SFPI)
 Gage - N3-45
 Location - Aft
 T_{initial} - -40°F

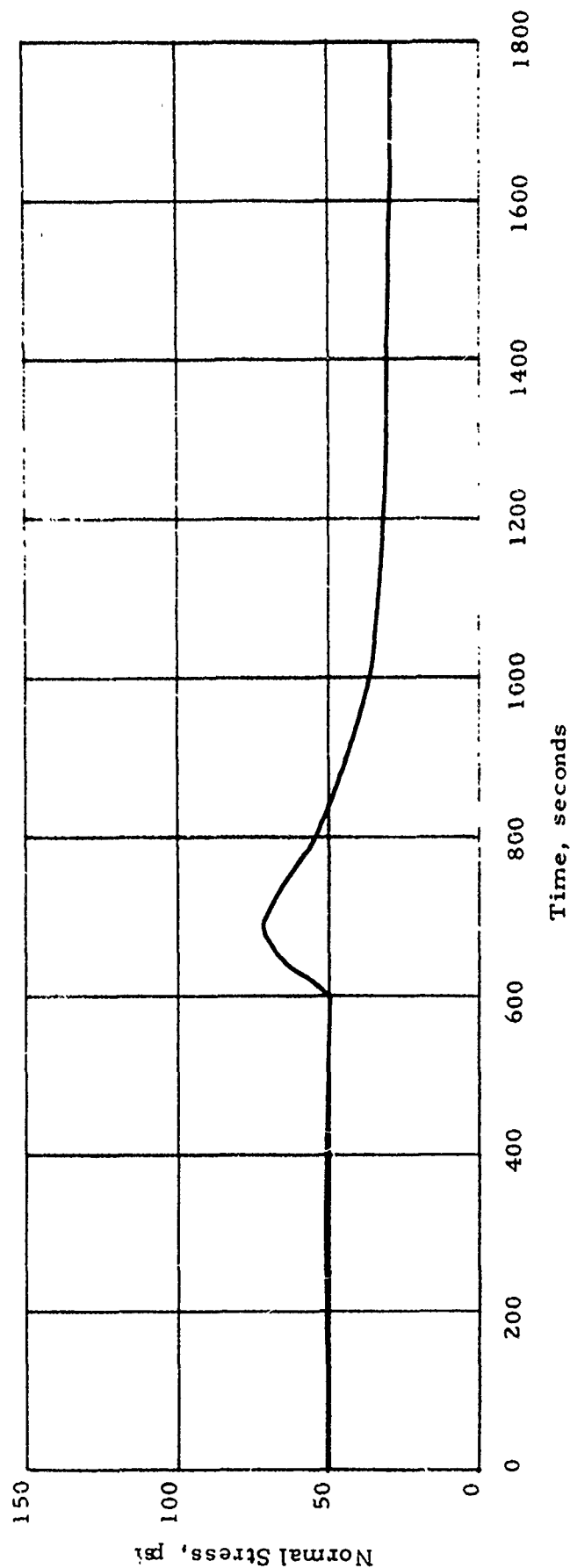
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Aft End Normal Stress Response to Aeroheat Loads -- Gage N3-45

Motor - IM #3
 Test - A-10 (SFPI)
 Gage - N3-45
 Location - Aft
 T_{initial} - -65°F

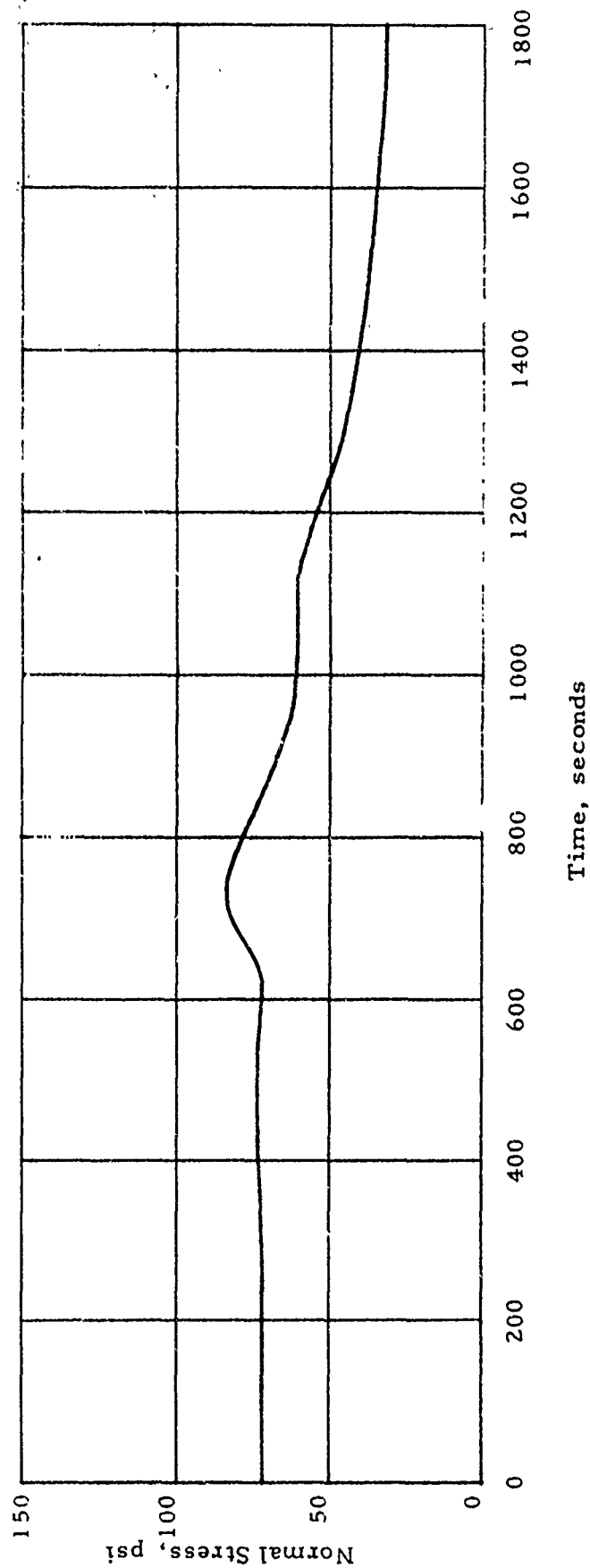
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Aft End Normal Stress Response to Aeroheat Loads --Gage N3-45

Motor - IM #3
 Test - A-11 (DMP-3)
 Gage - N3-45
 Location - Aft
 T_{initial} - -65°F

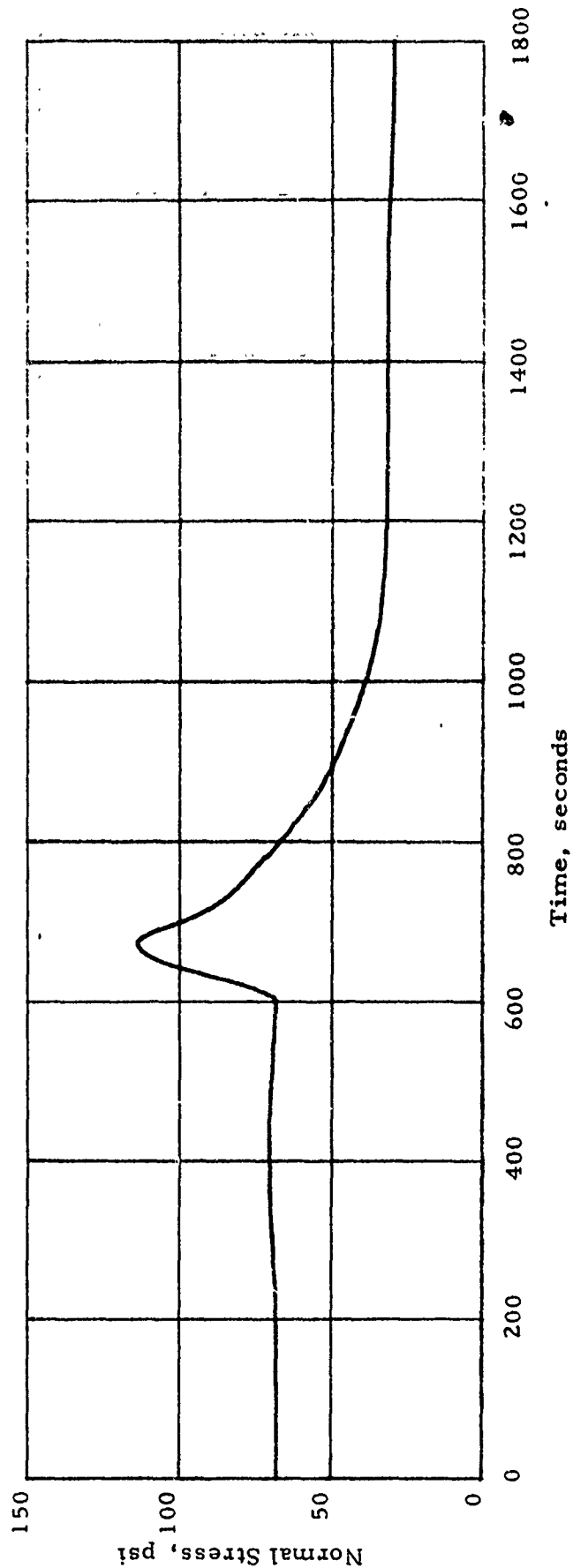
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of -170°F



Aft End Normal Stress Response to Aeroheat Loads--Gage N3-45

Motor - IM #3
 Test - A-12 (SFPI)
 Gage - N3-45
 Location - Aft
 T_{initial} - -65°F

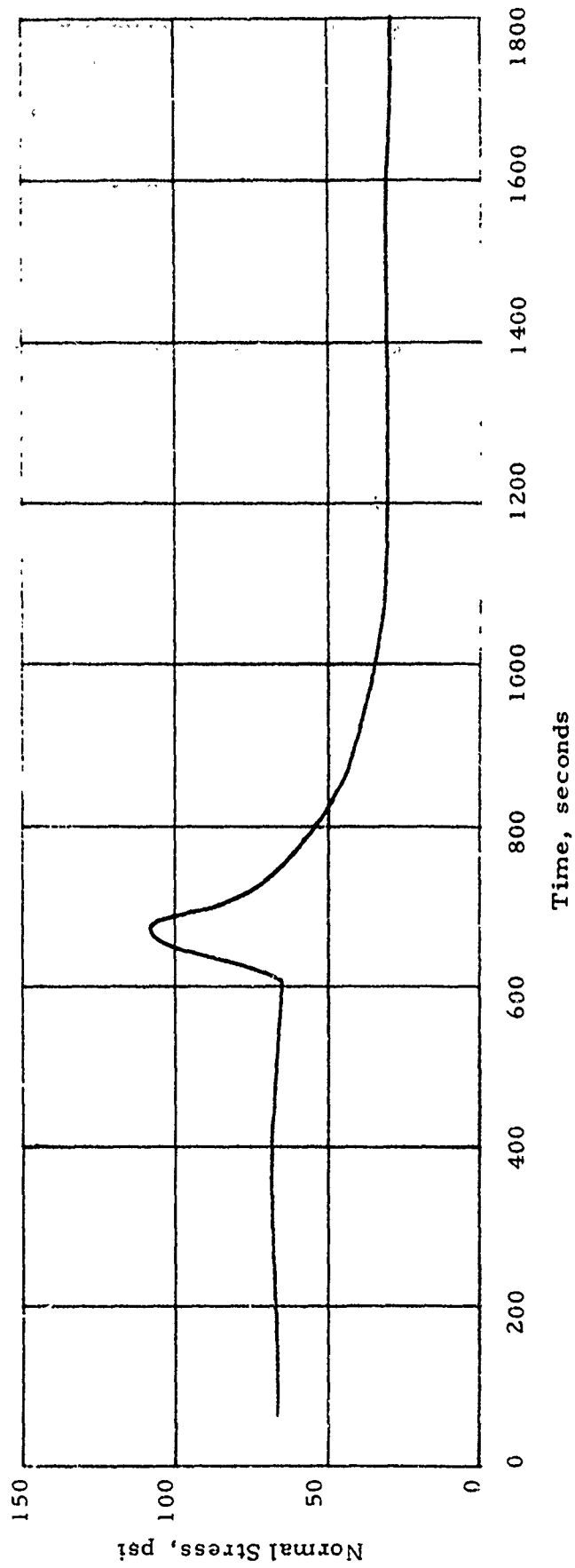
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Aft End Normal Stress Response to Aeroheat Loads --Gage N3-45

Motor - IM #3
 Test - A-13 (SFPI)
 Gage - N3-45
 Location - Aft
 T_{initial} - -65°F

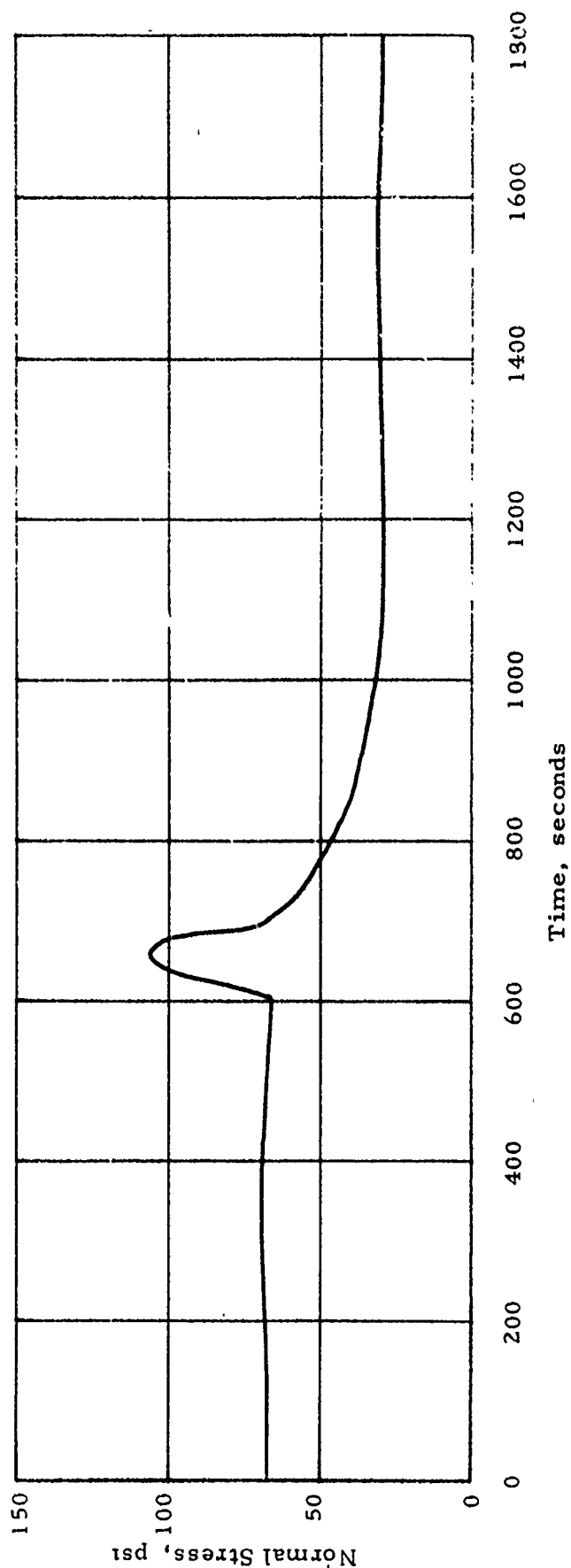
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Aft End Normal Stress Response to Aeroheat Loads --Gage N3-45

Motor - IM #3
 Test - A-14 (SFPI)
 Gage - N3-45
 Location - Aft
 T_{initial} - -65°F

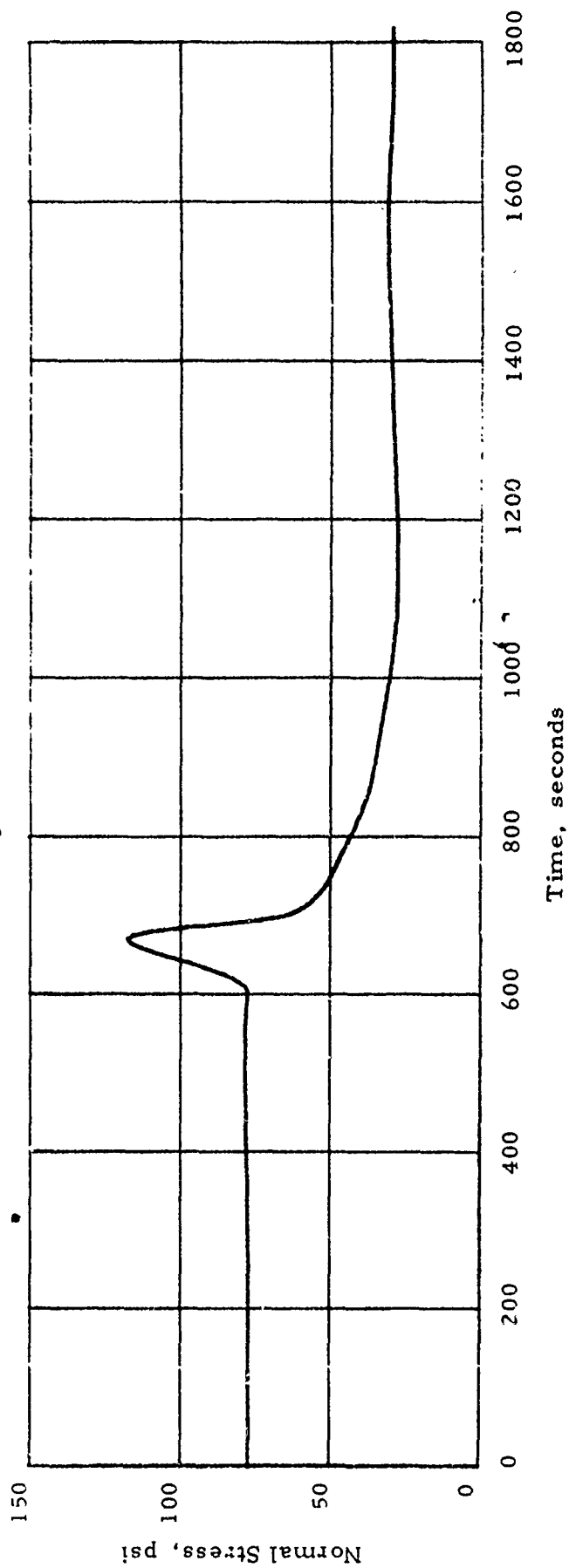
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Aft End Normal Stress Response to Aeroheat Loads -- Gage N3-45

Motor - IM #3
 Test - A-15 (SFPI)
 Gage - N3-45
 Location - Aft
 T_{initial} - -65°F

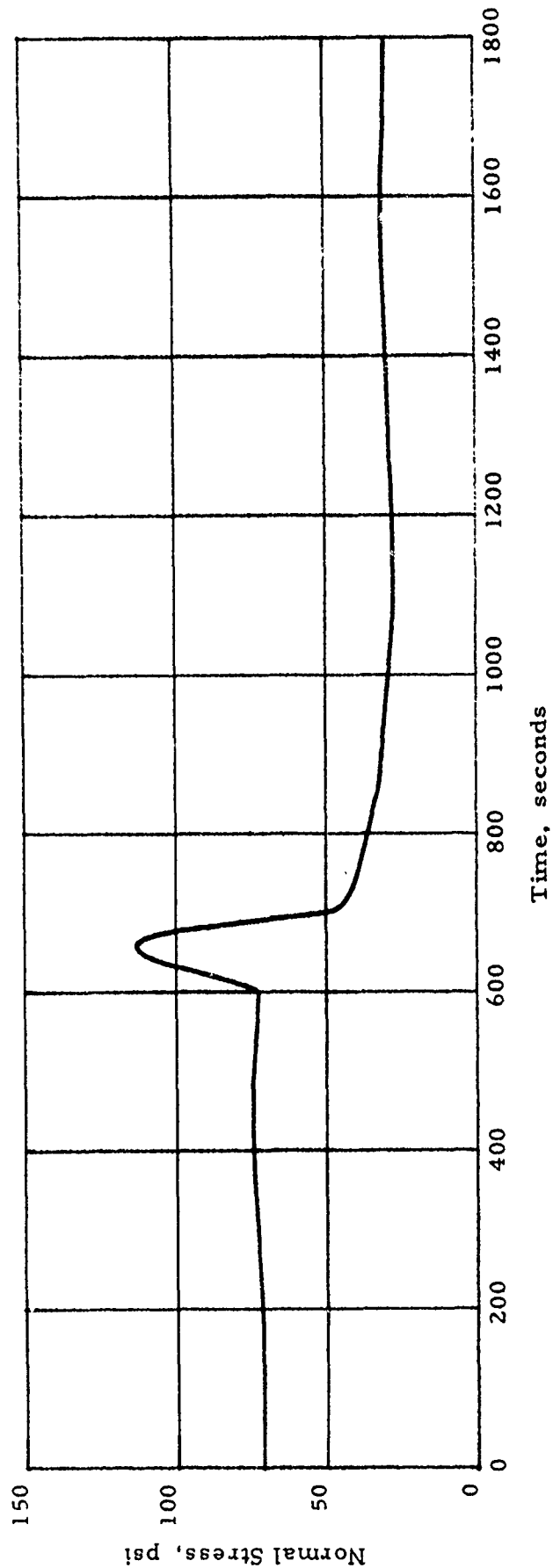
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Aft End Normal Stress Response to Aeroheat Loads--Gage N3-45

Motor - IM #3
 Test - A-16 (SFPI)
 Gage - N3-45
 Location - Aft
 T_{initial} - -65°F

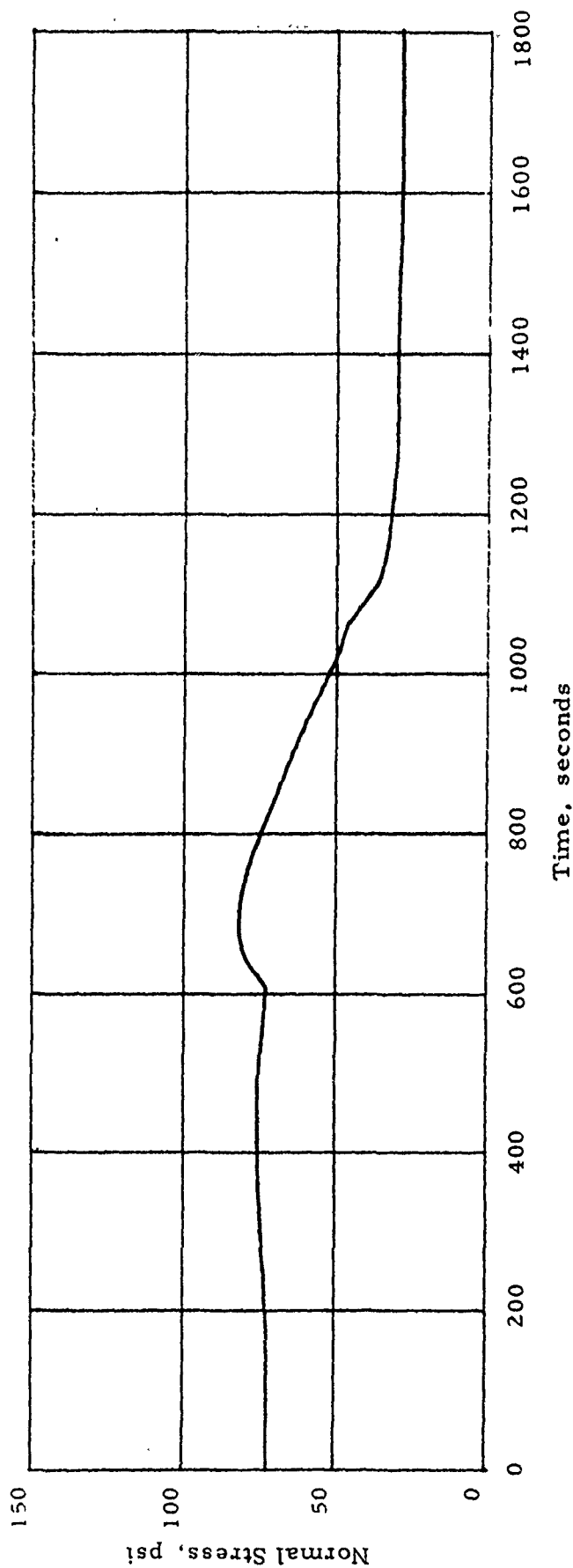
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Aft End Normal Stress Response to Aeroheat Loads--Gage N3-45

Motor - IM #3
 Test - A-17 (DMP .3)
 Gage - N3-45
 Location - Aft
 T_{initial} - -65°F

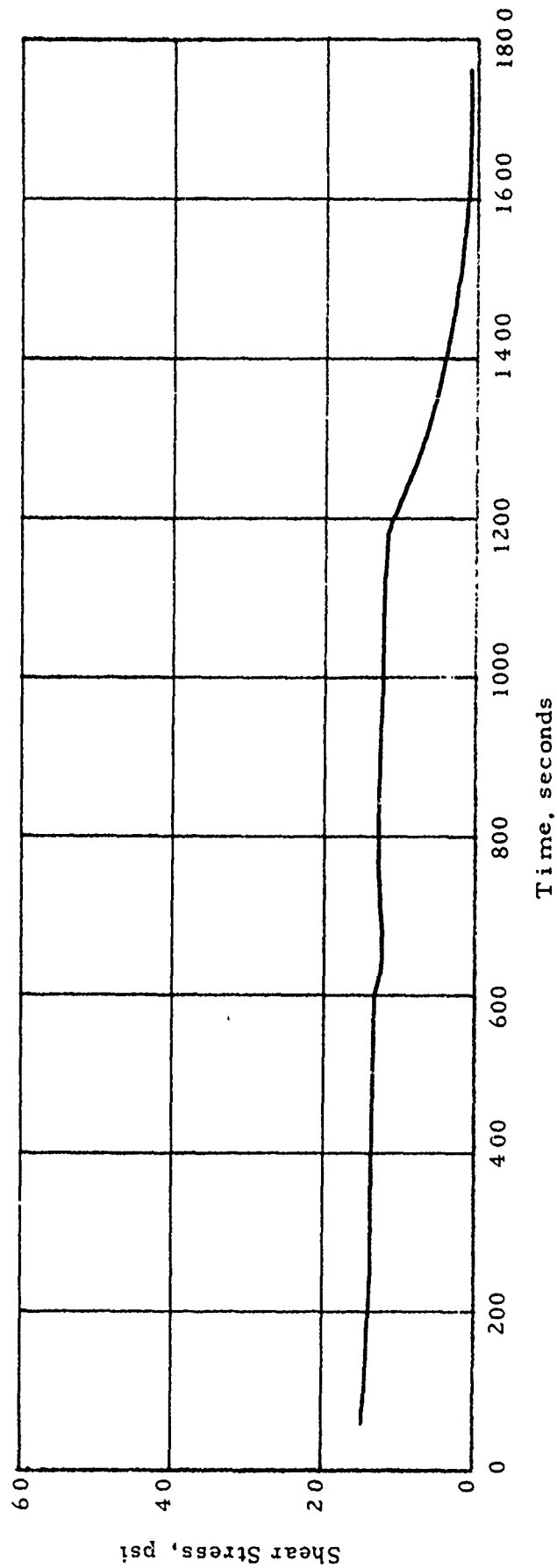
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Aft End Normal Stress Response to Aercheat Loads--Gage N3-45

Motor - IM #3
 Test - A1 (DMP-3)
 Gage - S3-104
 Location - Fwd
 T_{initial} - -65°F

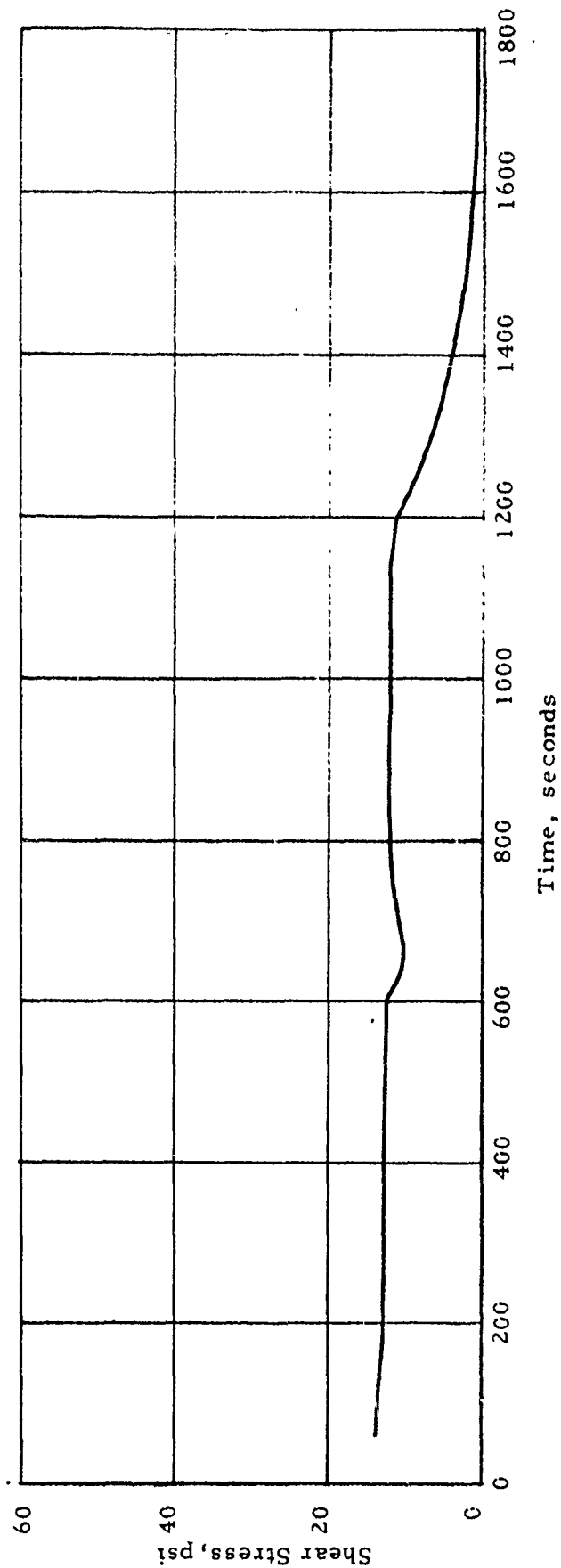
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of $+170^{\circ}\text{F}$



Head End Shear Stress Response to Aeroheat Loads -- Gage S3-104

Motor - IM #3
 Test - A2 (DMP-3)
 Gage - S3-104
 Location - Fwd
 T_{initial} - 65°F

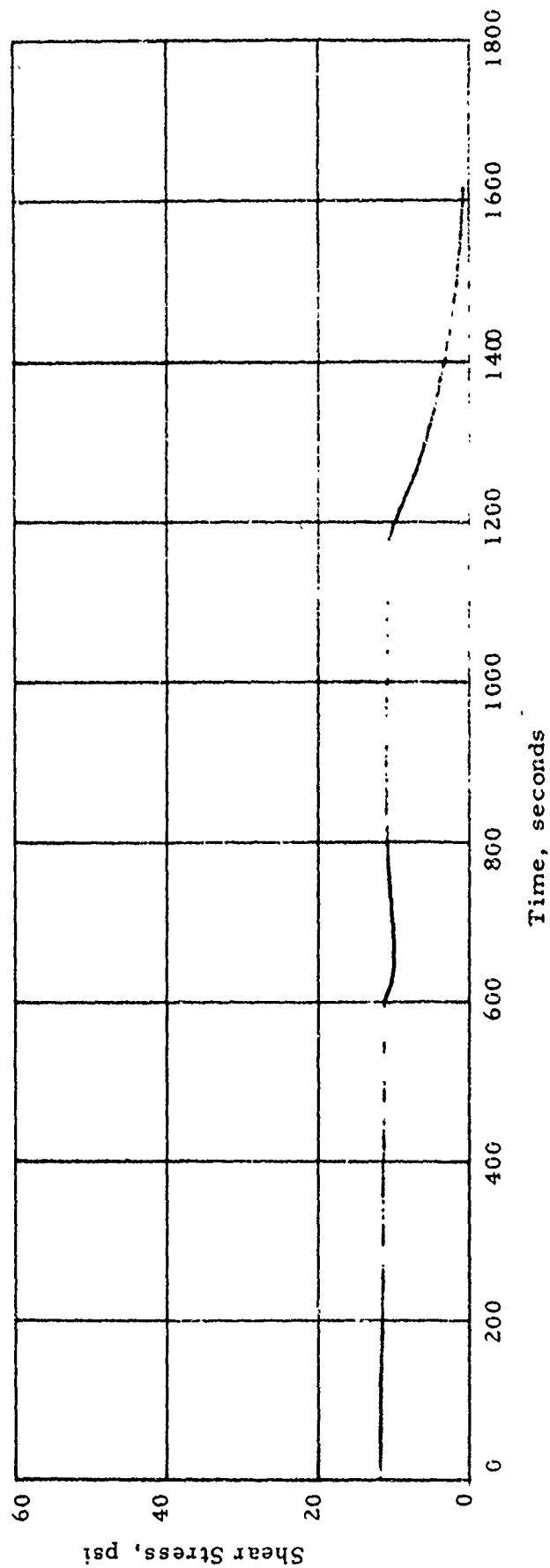
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F.



Head End Shear Stress Response to Aeroheat Loads -- Gage S3-104

Motor - IM #3
 Test - A3(DMP-3)
 Gage - S3-104
 Location - Fwd
 T_{initial} - -65°F

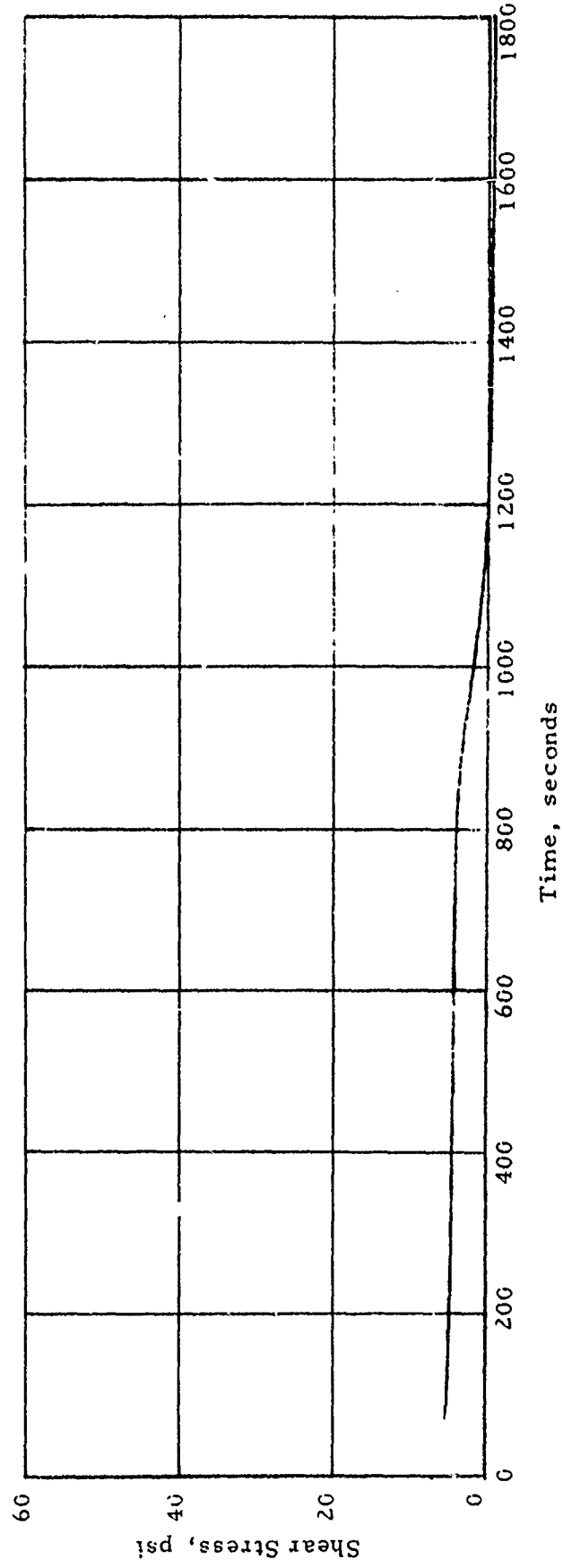
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +176°F



Head End Shear Stress Response to Aeroheat Loads -- Gage S3-104

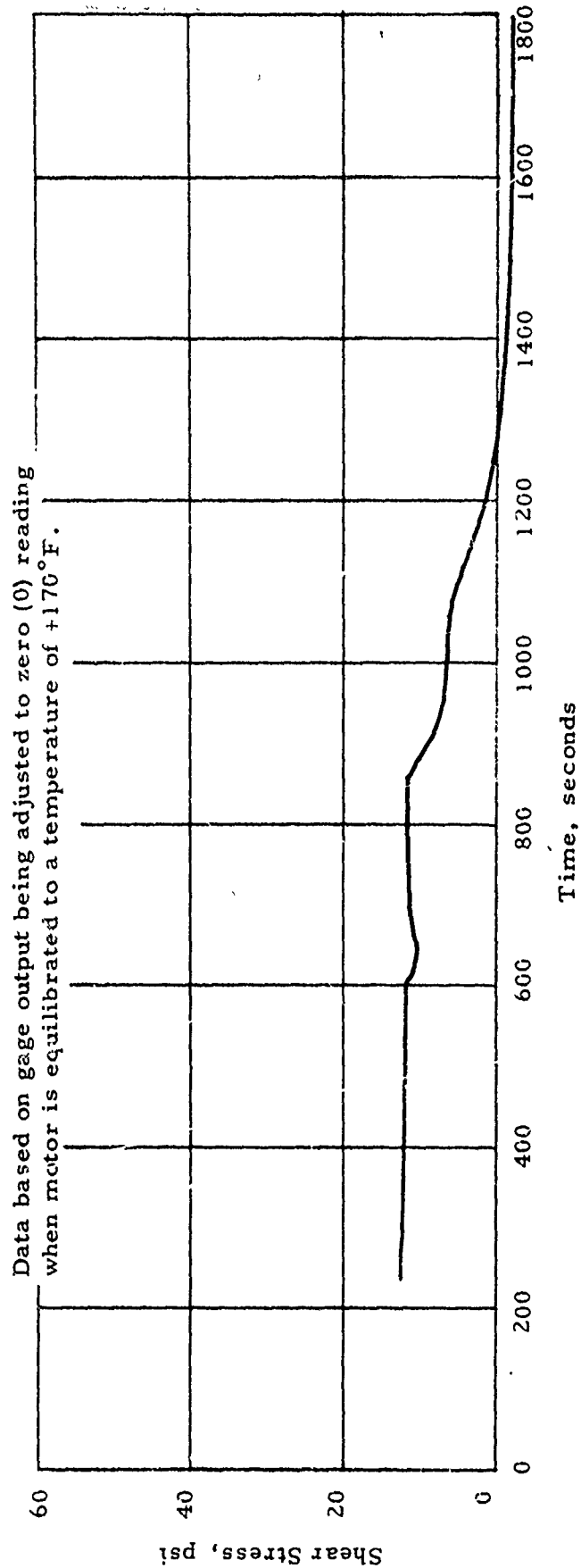
Motor - IM #3
 Test - A4 (HSMH)
 Gage - S3-104
 Location - Fwd
 T_{initial} - 55°F

Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F.



Head End Shear Stress Response to Aeroheat Loads -- Gage S3-104

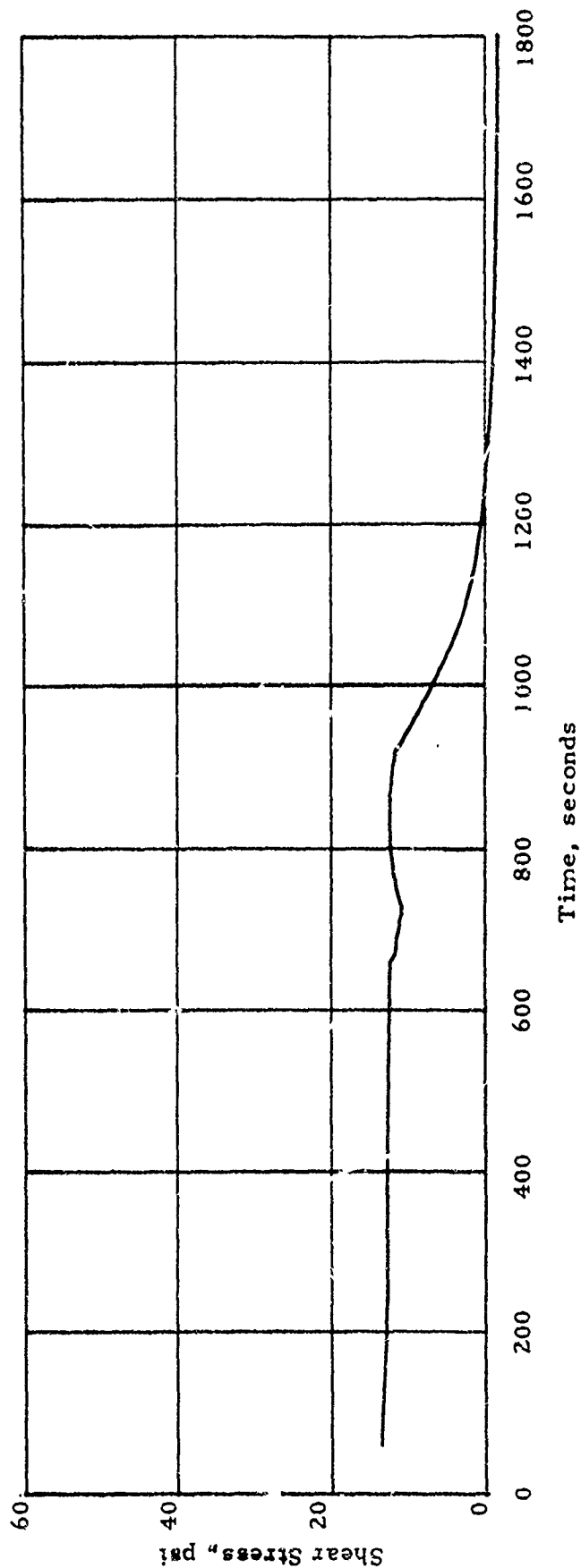
Motor - IM #3
 Test -- A5 (HSMH)
 Gage - S3-104
 Location - Fwd
 T_{initial} - -65°F



Head End Shear Stress Response to Aeroheat Loads -- Gage S3-104

Motor IM #3
 Test A6 (HSMH)
 Gage S3-104
 Location Fwd
 T_{initial} -65°F

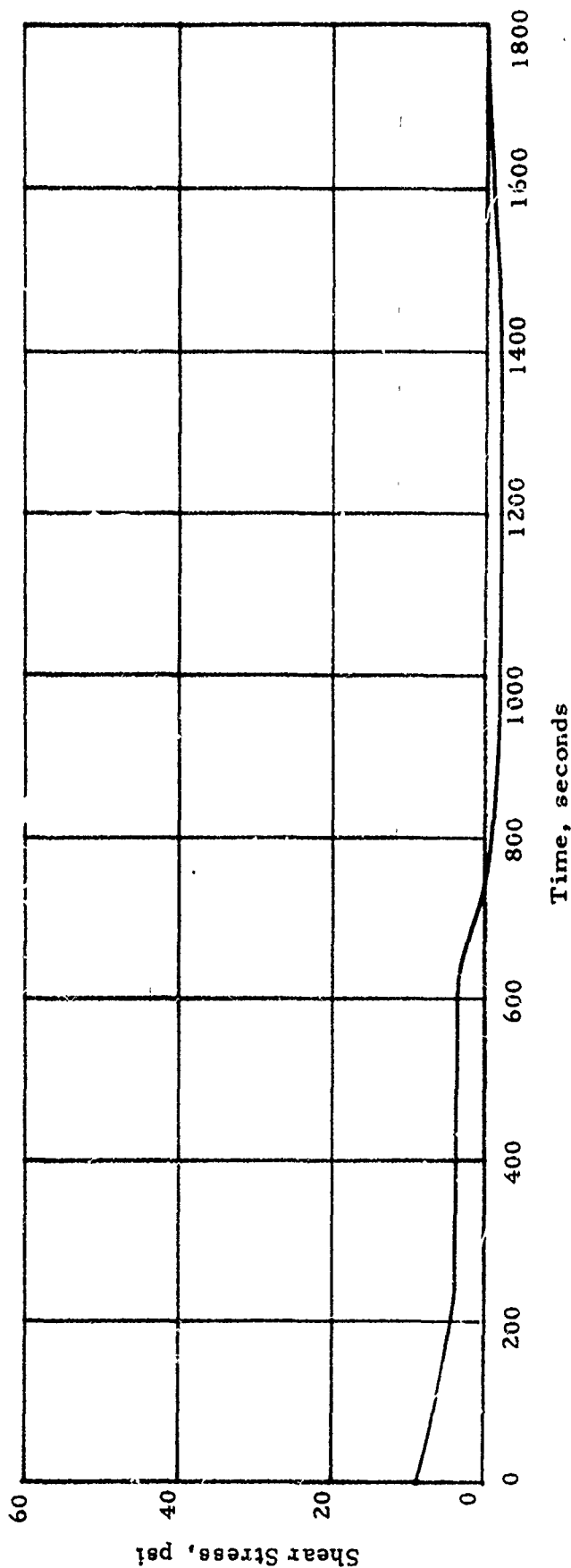
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F.



Head End Shear Stress Response to Aeroheat Loads -- Gage S3-104

Motor IM #3
 Test A7 (SFPI)
 Gage S3-104
 Location Fwd
 T_{initial} +60°F

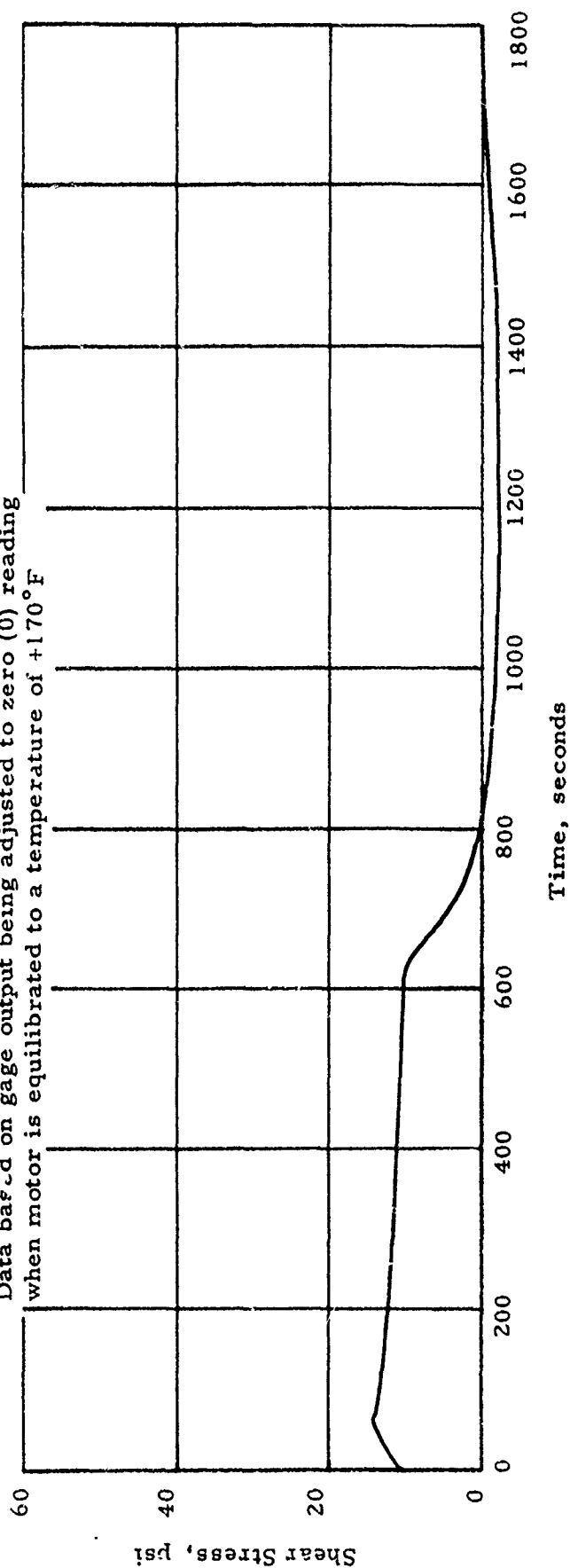
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F.



Head End Shear Stress Response to Aeroheat Loads--Gage S3-104

Motor - IM #3
 Test - A8 (SFPI)
 Gage - S3-104
 Location - Fwd
 T_{initial} - 0°F

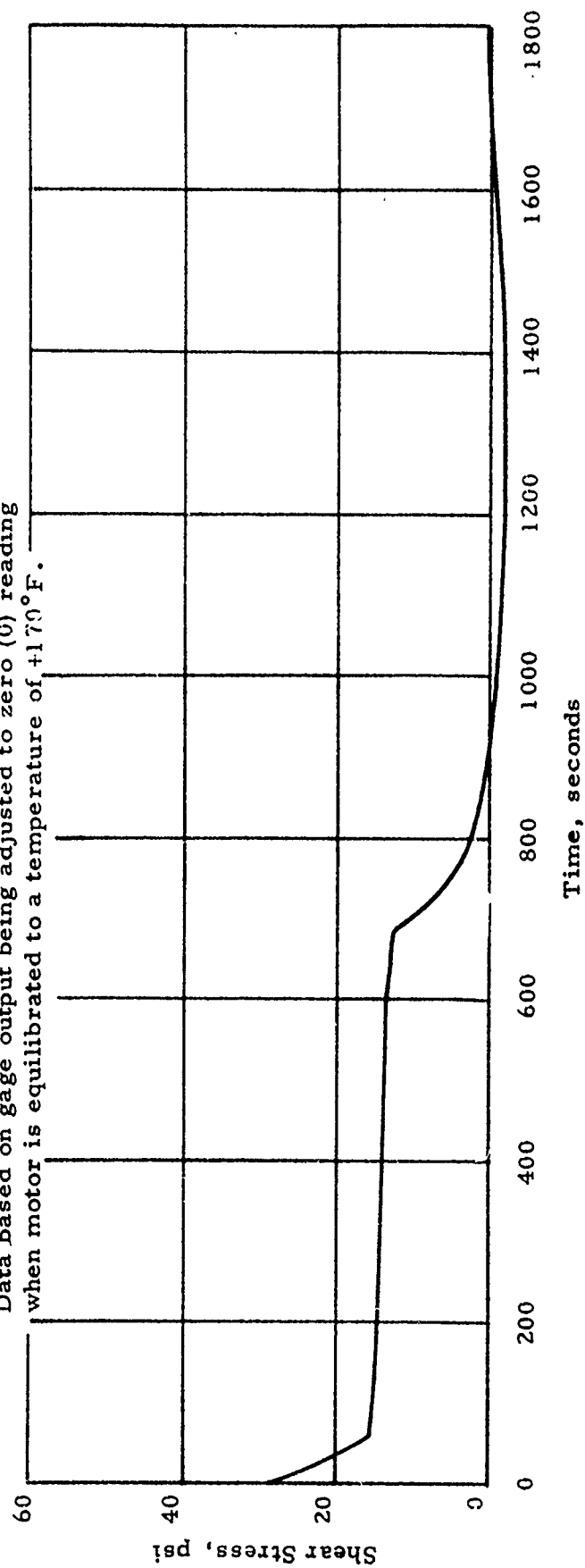
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Head End Shear Stress Response to Aeroheat Loads -- Gage S3-104

Motor - IM #3
 Test - A9 (SFPI)
 Gage - S3-104
 Location - Fwd
 T_{initial} - -40°F

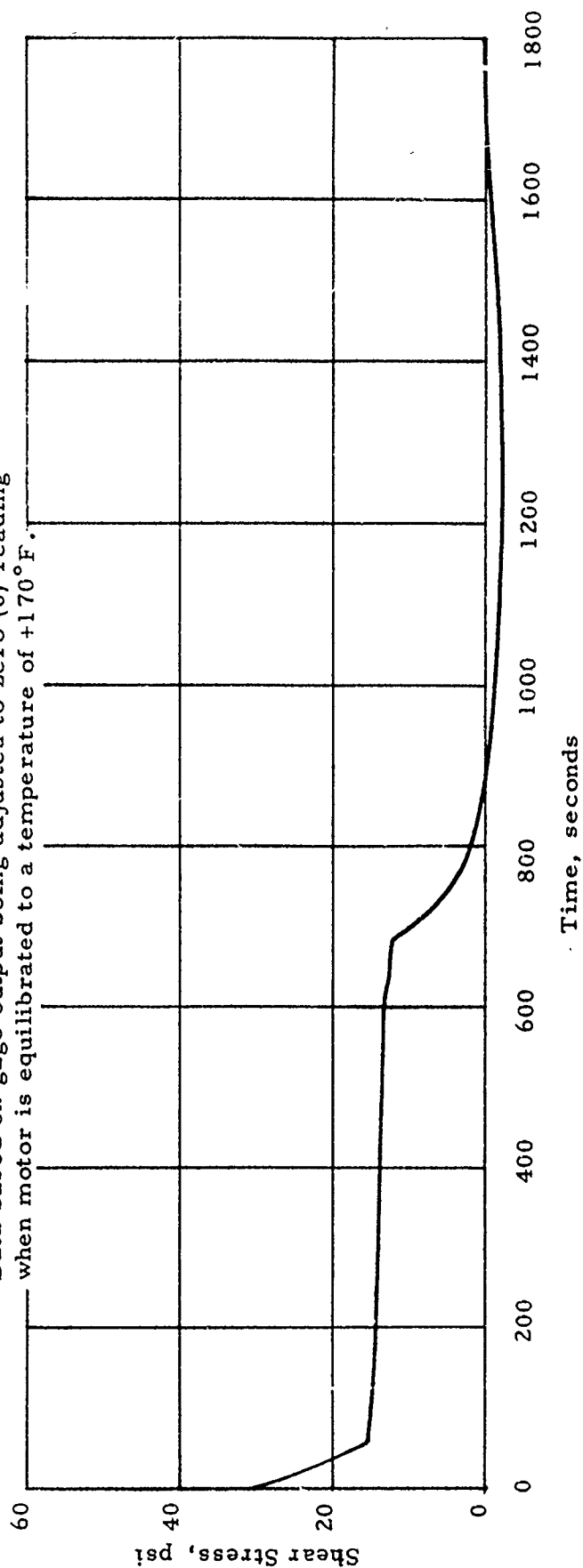
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F.



Head End Shear Stress Response to Aeroheat Loads--Gage S3-104

Motor - IM #3
 Test - A10 (SFPI)
 Gage - S3-104
 Location - Fwd
 T initial - -40°F

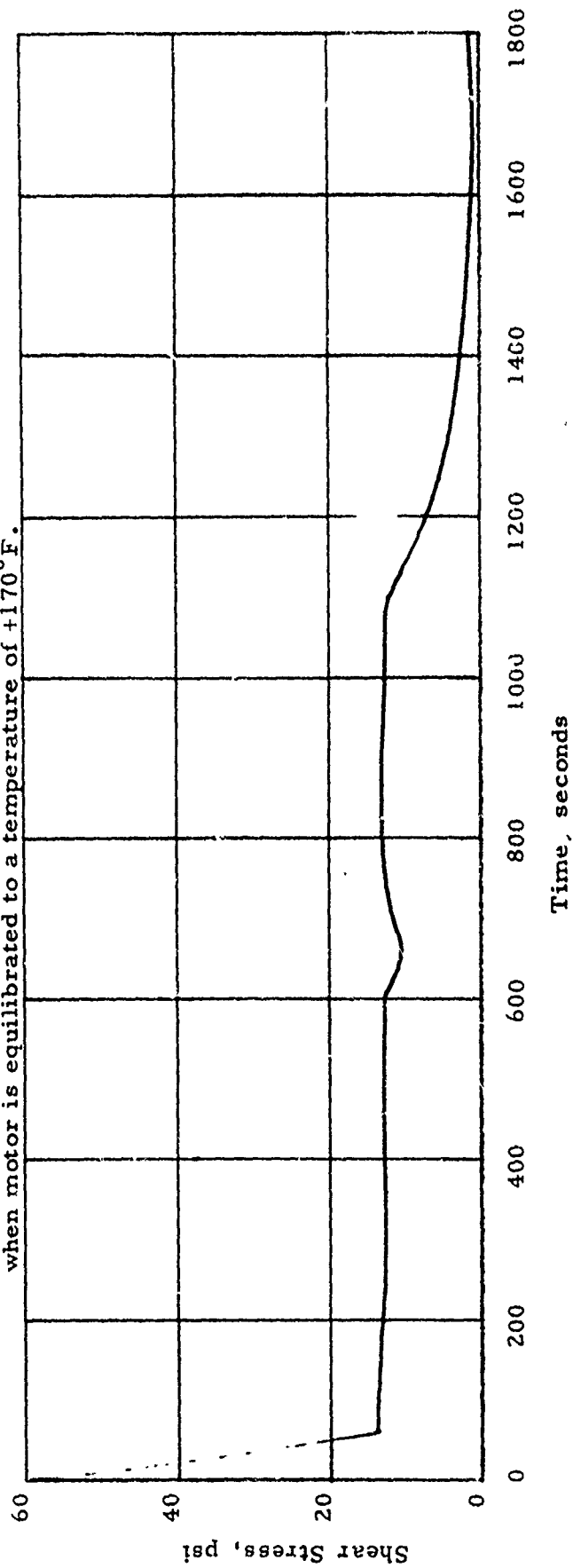
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F.



Head End Shear Stress Response to Aeroheat Loads -- Gage S3-104

Motor - IM #3
 Test - A-11 (DMP-3)
 Gage - S3-104
 Location - Fwd
 T initial - -65°F

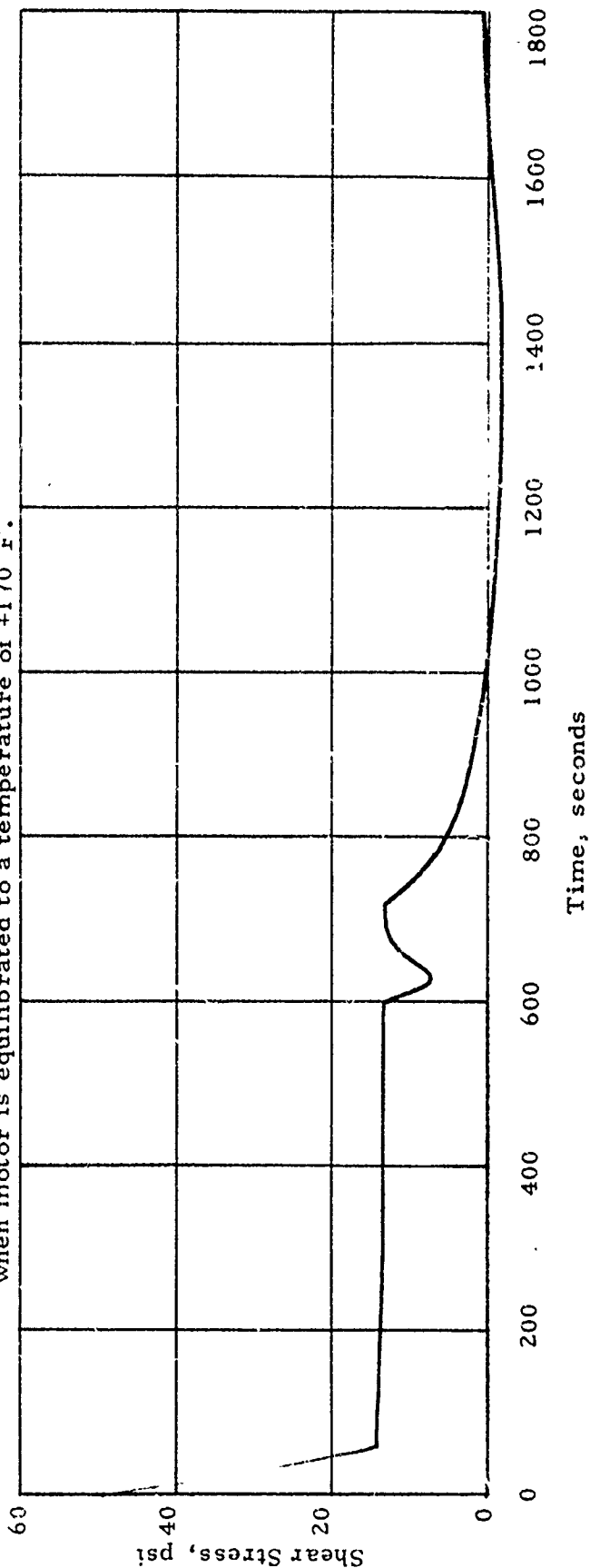
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F.



Head End Shear Stress Response to Aeroheat Loads -- Gage S3-104

Motor - IM #3
 Test - A-12 (SFPI)
 Gage - S3-104
 Location - Fwd
 T_{initial} - -65°F

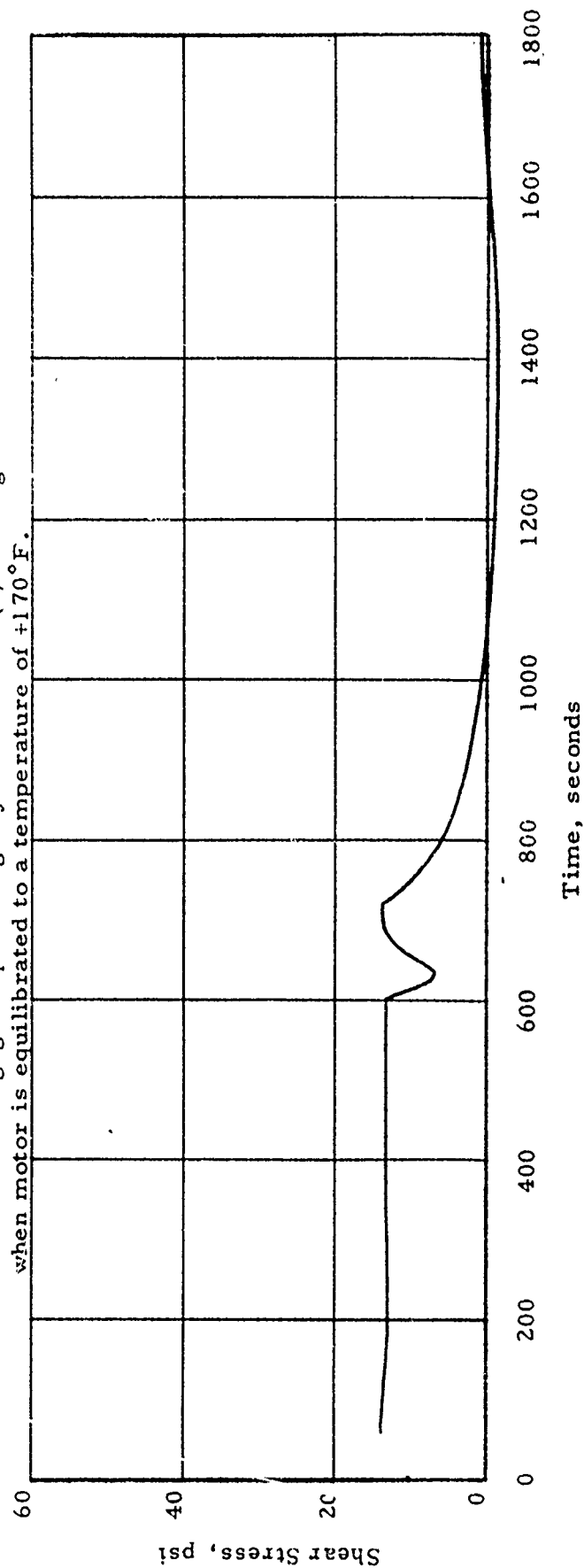
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F.



Head End Shear Stress Response to Aeroheat Loads --Gage S3-104

Motor - IM #3
 Test - A-13 (SFPI)
 Gage - S3-104
 Location - Fwd
 T_{initial} - -65°F

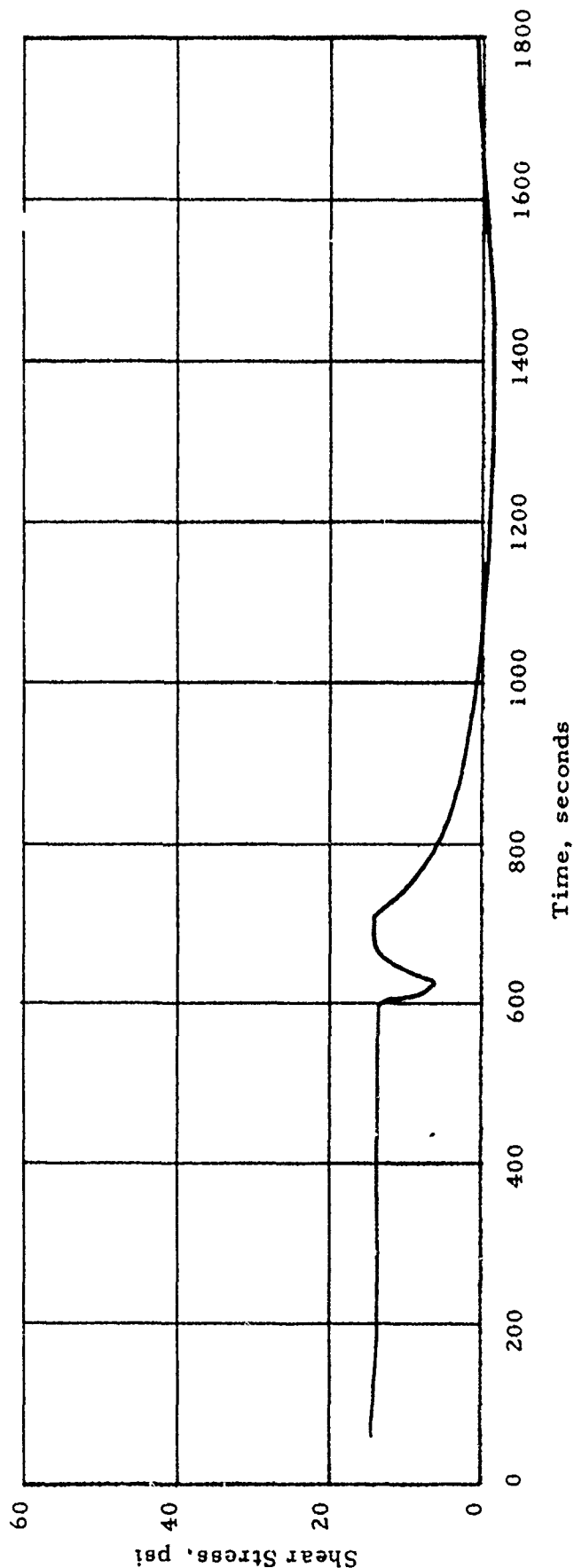
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F.



Head End Shear Stress Response to Aeroheat Load -- Gage S3-104

Motor - IM-3
 Test - A-14 (SFPI)
 Gage - S3-104
 Location - Fwd
 T_{initial} - -65°F

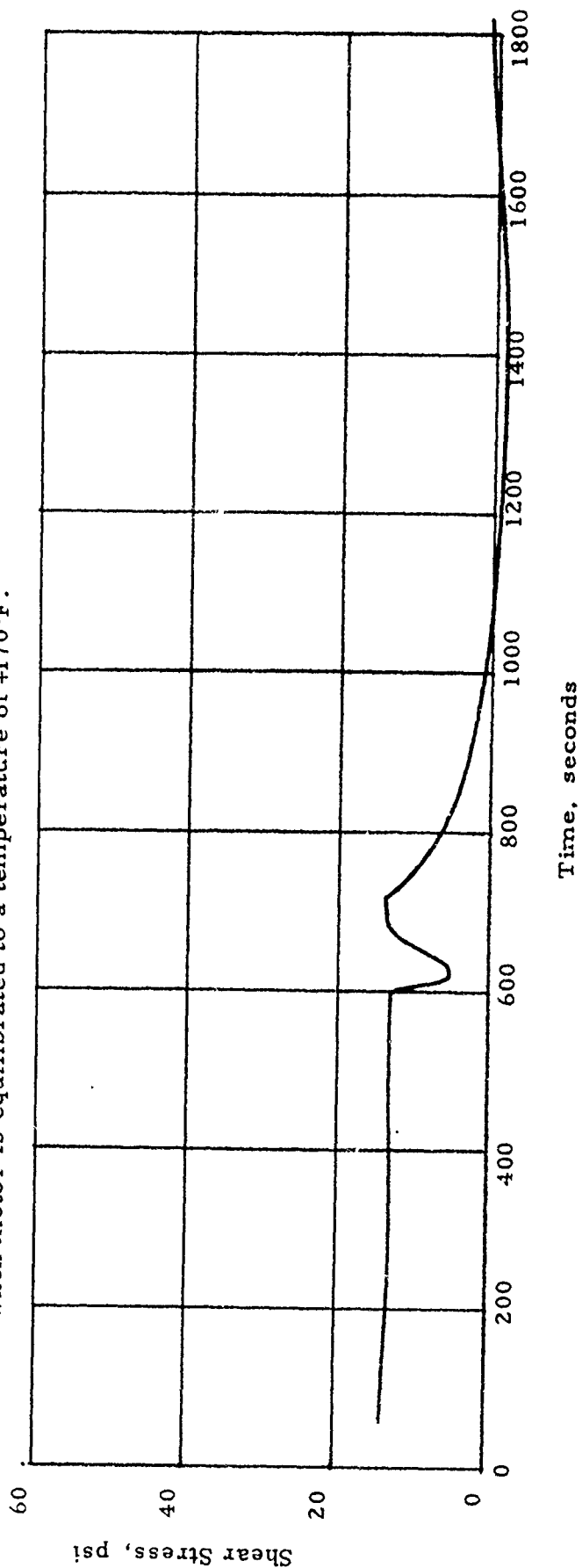
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of 170°F.



Head End Shear Stress Response to Aeroheat Load--Gage S3-104

Motor - IM #3
 Test - A-15 (SFPI)
 Gage - S3-104
 Location - Fwd
 T_{initial} - -65°F

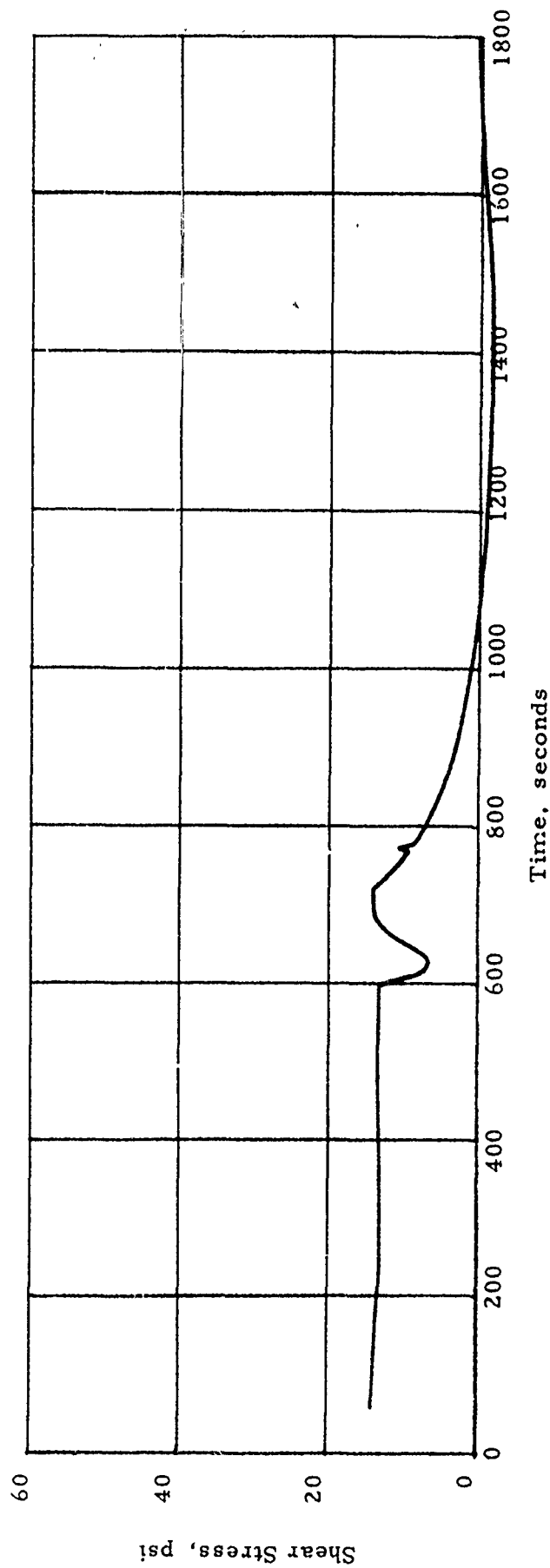
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F.



Head End Shear Stress Response to Aeroheat Load--Gage S3-104

Motor - IM #3
 Test - A-16 (SFPI)
 Gage - S3-104
 Location - Fwd
 T_{initial} - -65°F

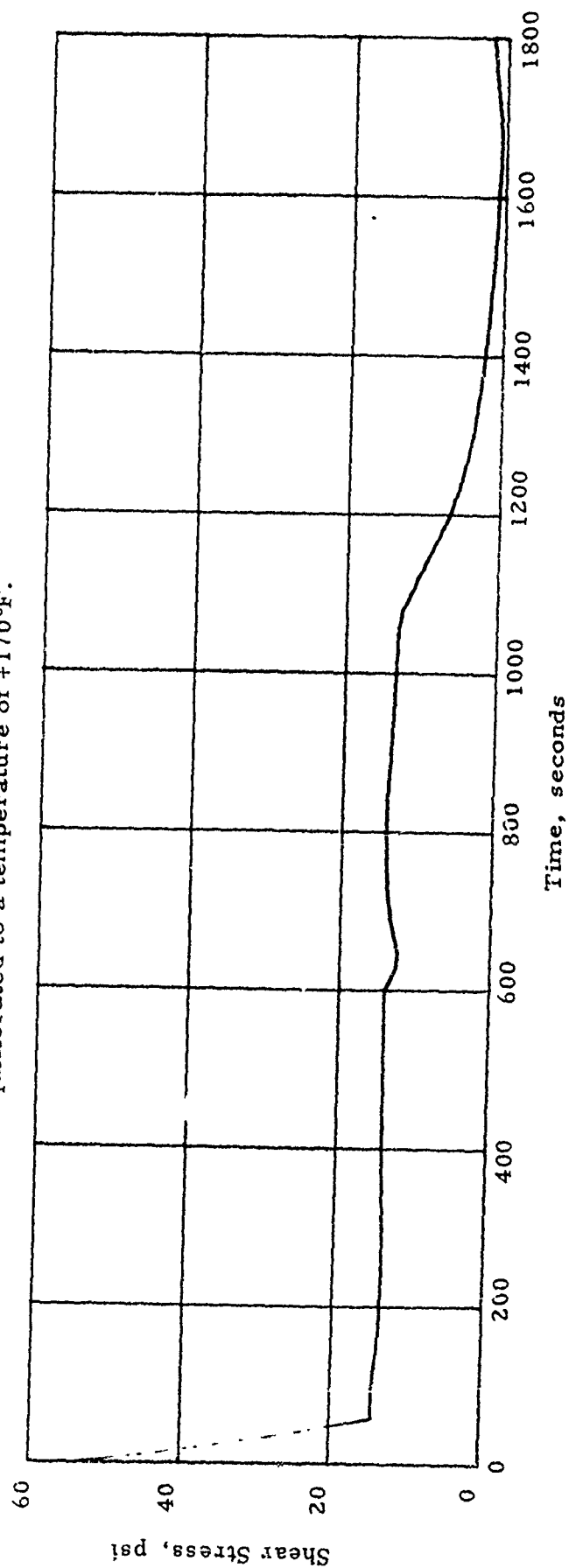
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F.



Head End Shear Stress Response to Aeroheat Load--Gage S3-104

Motor - IM #3
 Test - A-17 (DMP-3)
 Gage - S3-104
 Location - Fwd
 T_{initial} - -65°F

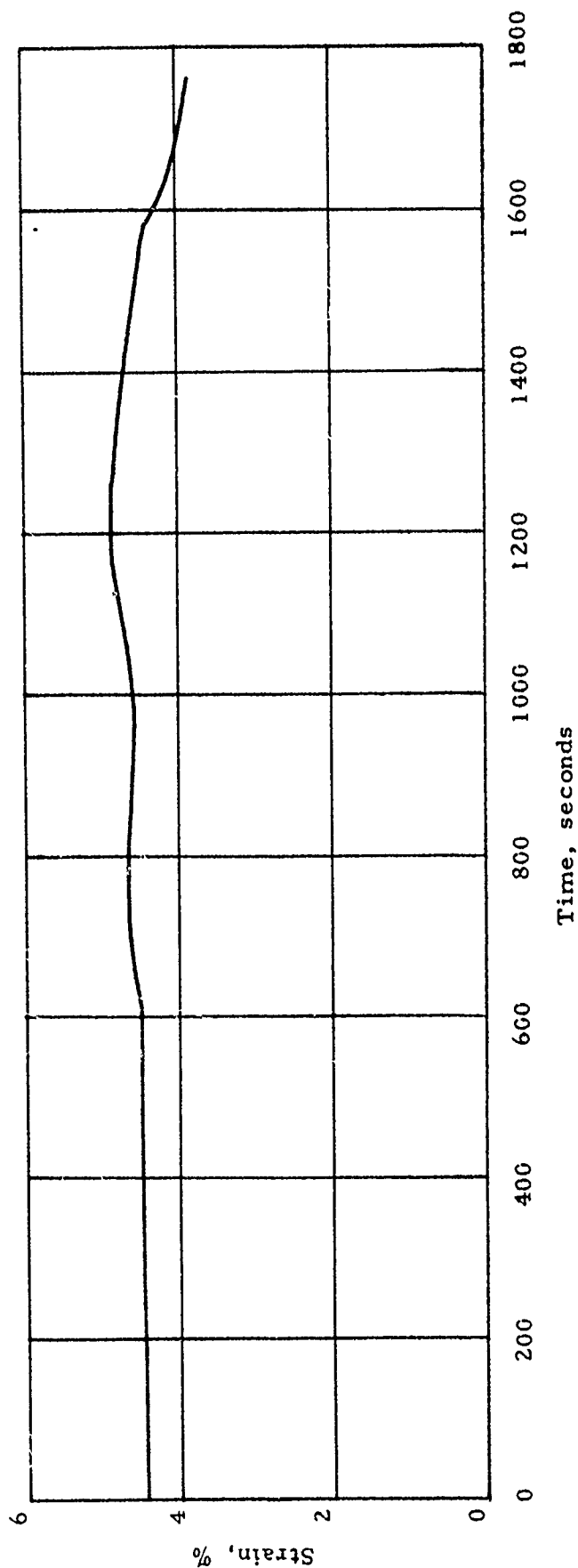
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F.



Head End Shear Stress Response to Aeroheat Load--Gage S3-104

Motor - IM #3
 Test - A-1 (DMP-3)
 Gage - C3-18
 Location - Fwd
 Tinitial - -65°F

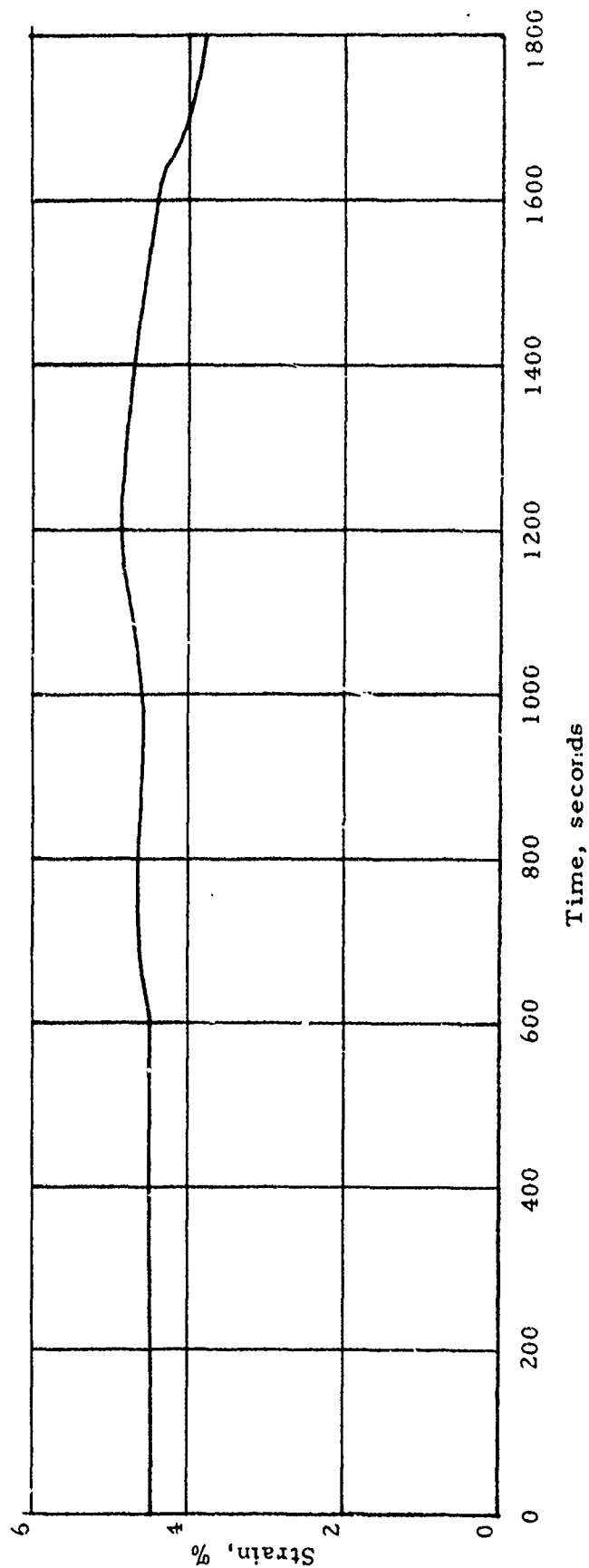
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads -- Gage C3-18

Motor - IM #3
 Test - A2 (DMP-3)
 Gage - C3-18
 Location - Fwd
 Tinitial - -65°F

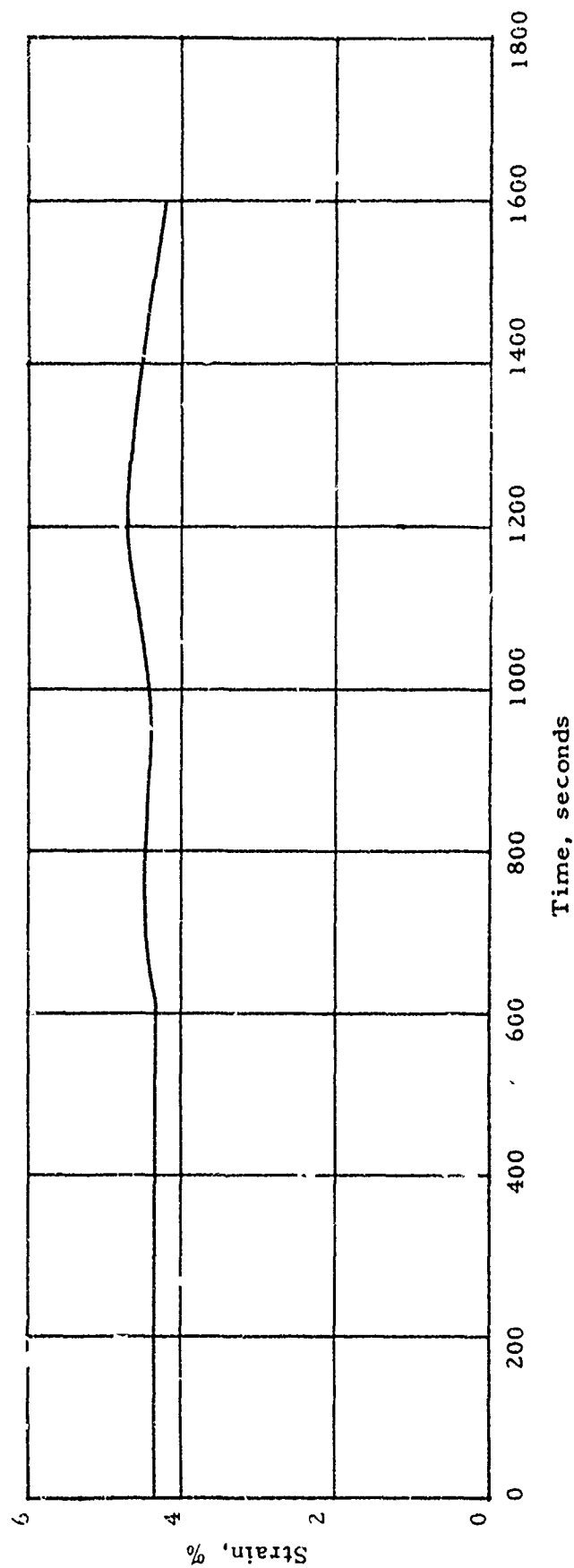
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads--Gage C3-18

Motor - IM #3
 Test - A3 (DMP-3)
 Gage - C3-18
 Location - Fwd
 T initial - -65°F

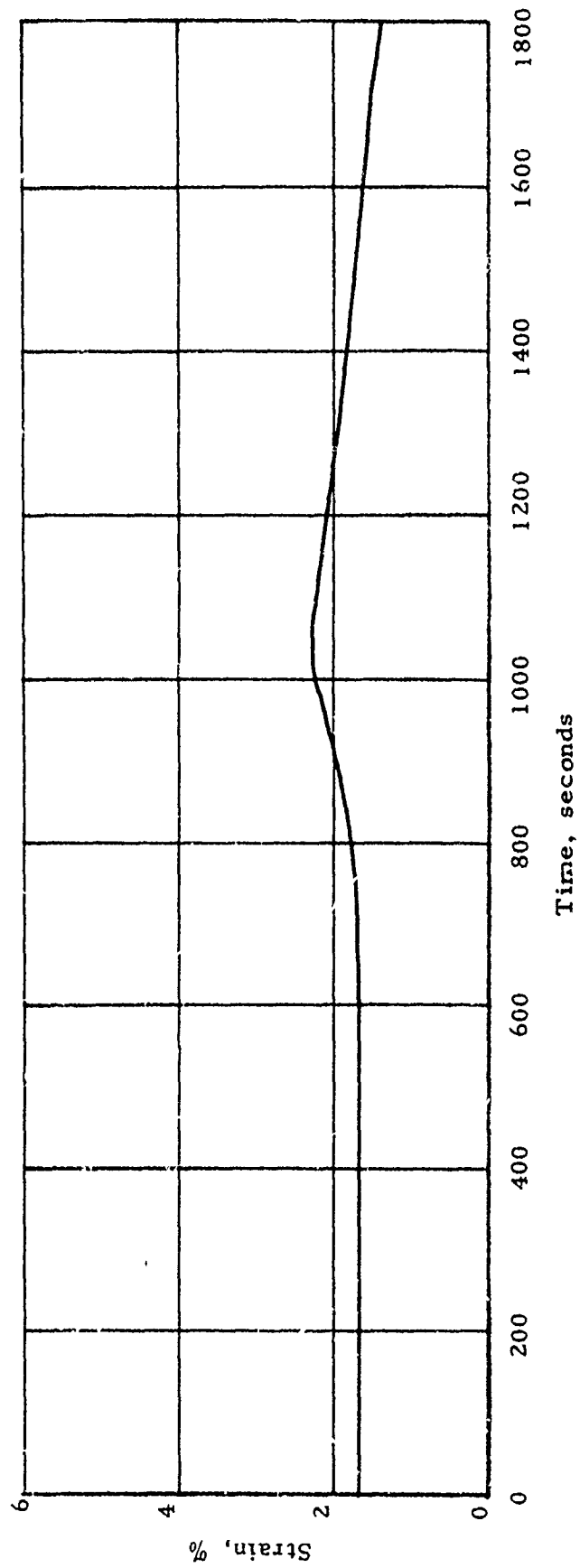
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of 170°F



Bore Strain Response to Aeroheat Loads -- Gage C3-18

Motor - IM #3
 Test - A4 (HSMH)
 Gage - C3-18
 Location - Fwd
 T initial - 55°F

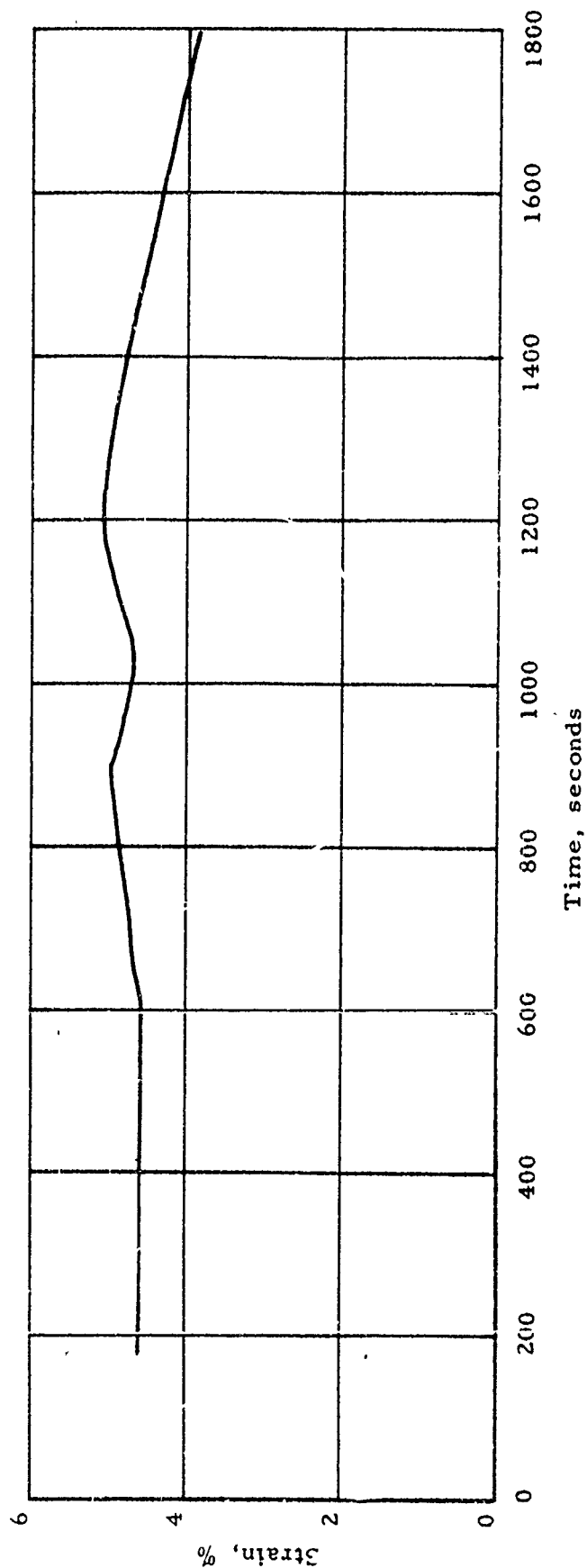
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads--Gage C3-18

Motor - IM #3
 Test - A5 (H5MH)
 Gage - C3-18
 Location - Fwd
 T_{initial} - -65°F

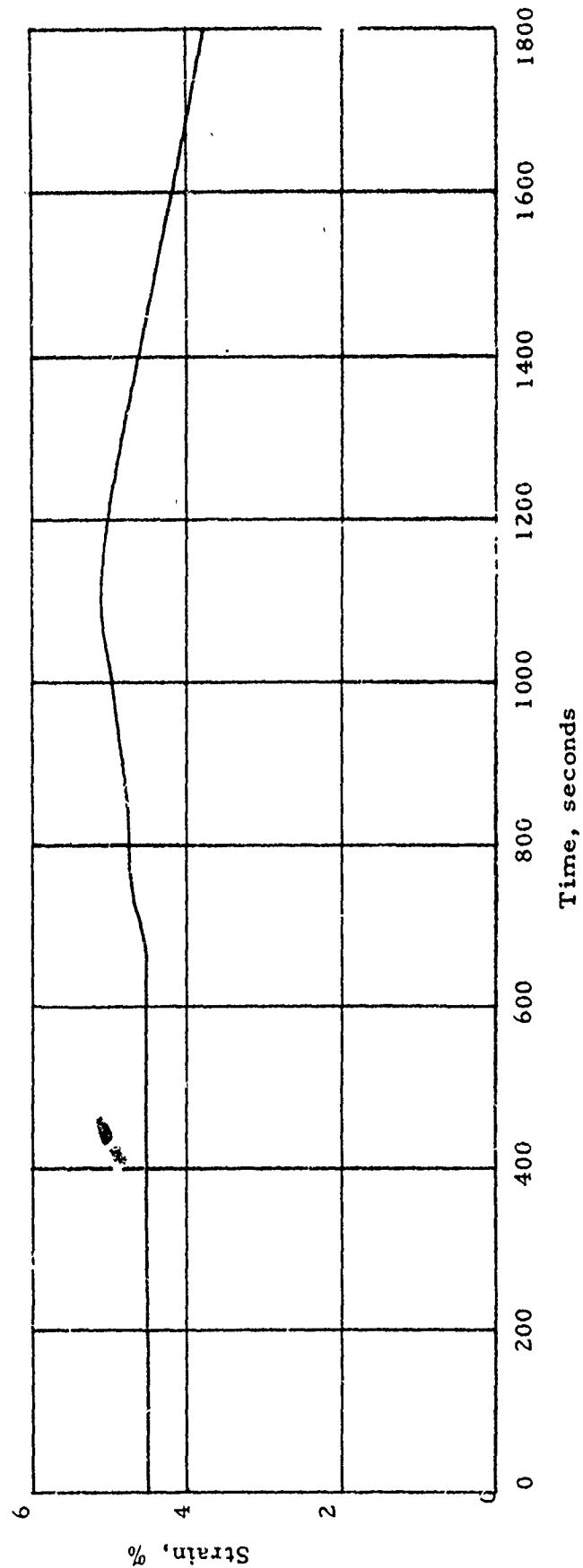
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads --Gage C3-18

Motor - IM #3
 Test - A6 (HSMH)
 Gage - C3-18
 Location - Fwd
 T_{initial} - -65° F

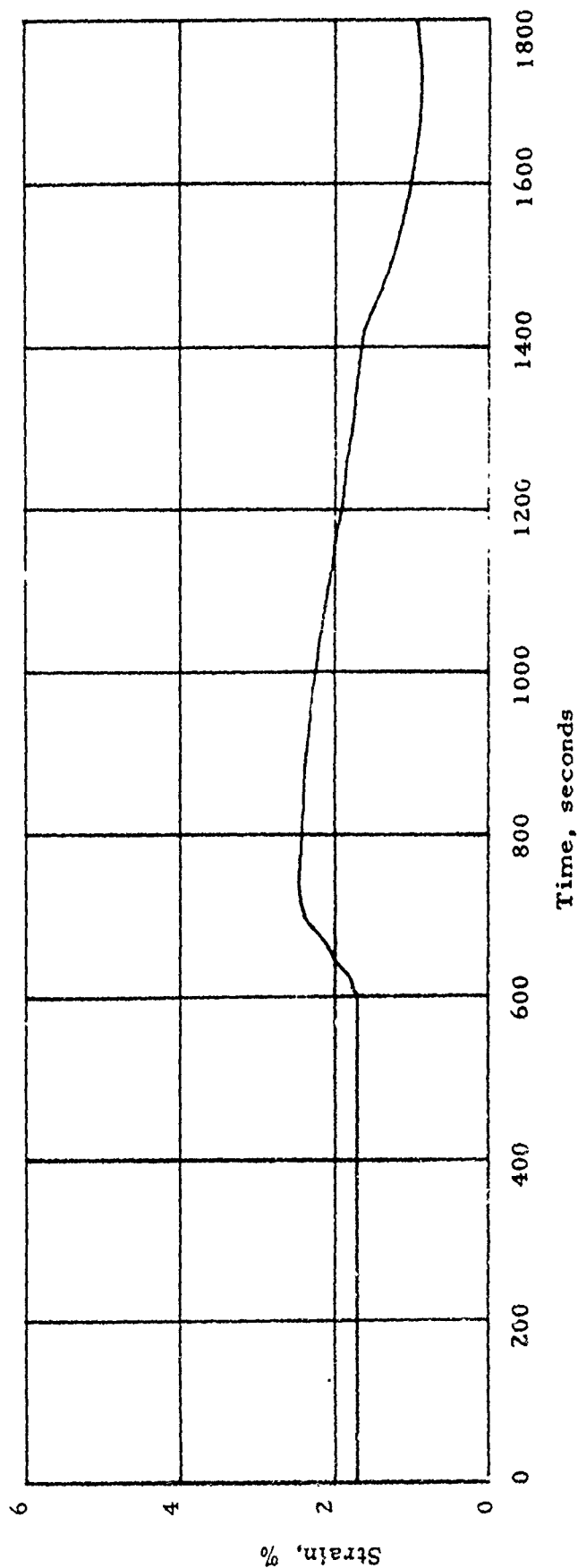
Data based on gage output being adjusted to zero (0)
 reading when motor is equilibrated to a temperature
 of +170° F



Bore Strain Response to Aeroheat Loads--Gage C3-18

Motor - IM #3
 Test - A7 (SFPI)
 Gage - C3-18
 Location - Fwd
 T_{initial} - +60°F

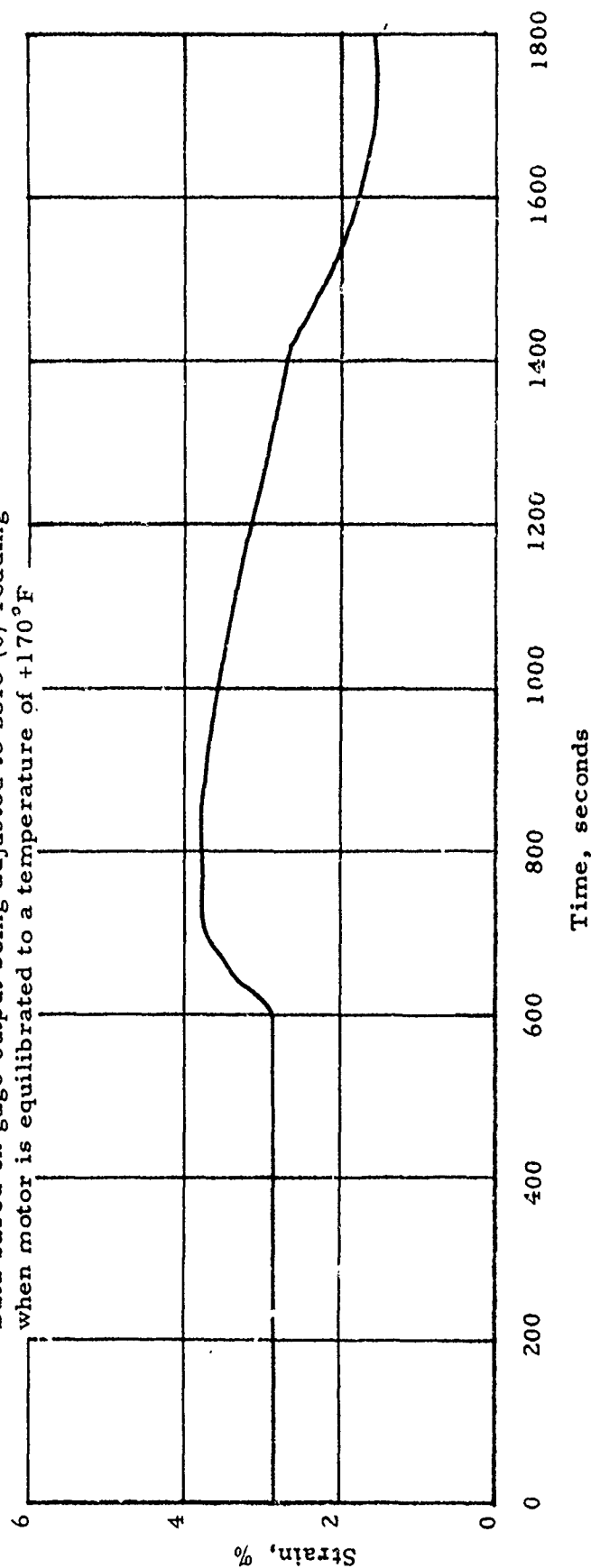
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads -- Gage C3-18

Motor IM #3
 Test A8 (SFPI)
 Gage C3-18
 Location Fwd
 T_{initial} 0°F

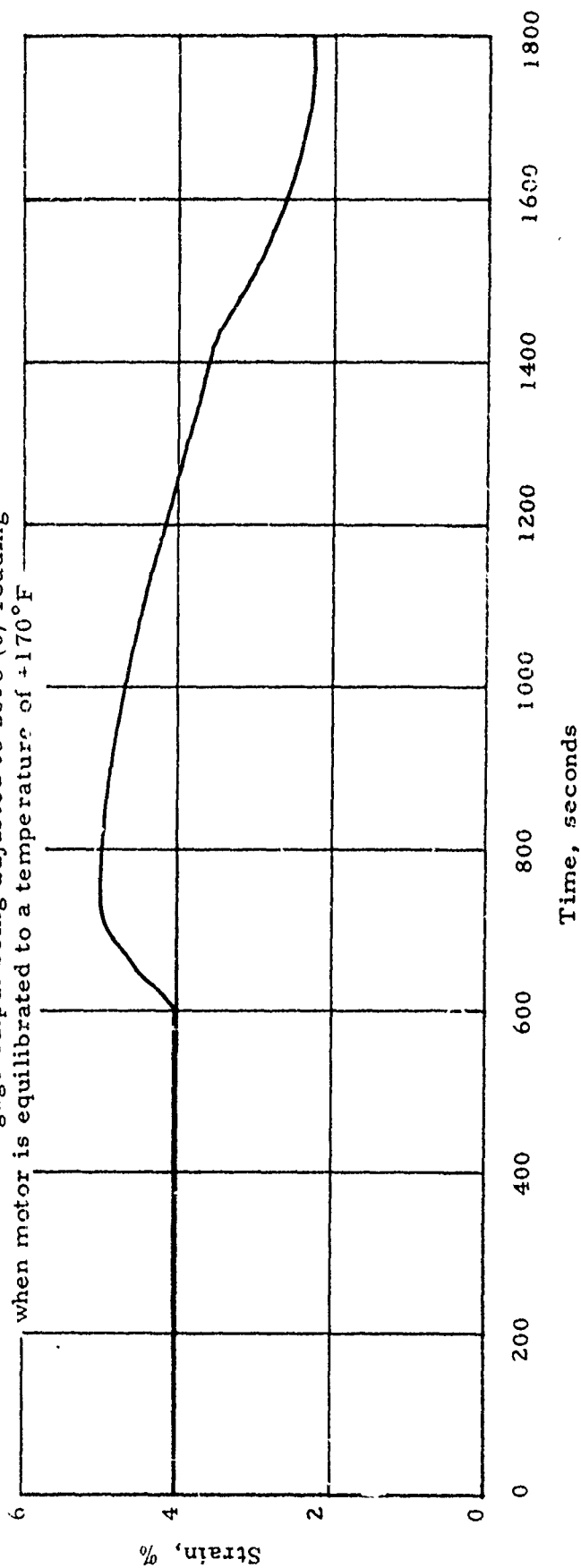
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads -- Gage C3-18

Motor - IM #3
 Test - A9 (SFPI)
 Gage - C3-18
 Location - Fwd
 T_{initial} - -40°F

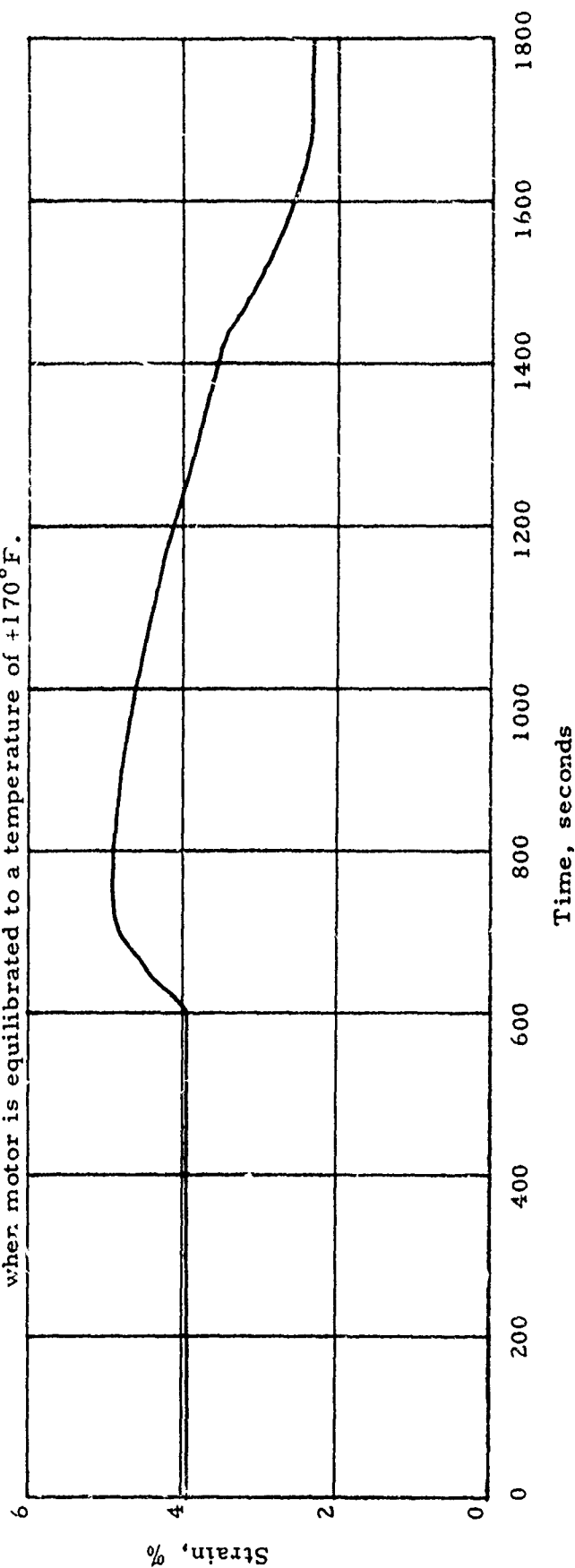
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads -- Gage C3-18

Motor - IM #3.
 Test - A-10 (SFPI)
 Gage - C3-18
 Location - Fwd
 T_{initial} - -40°F

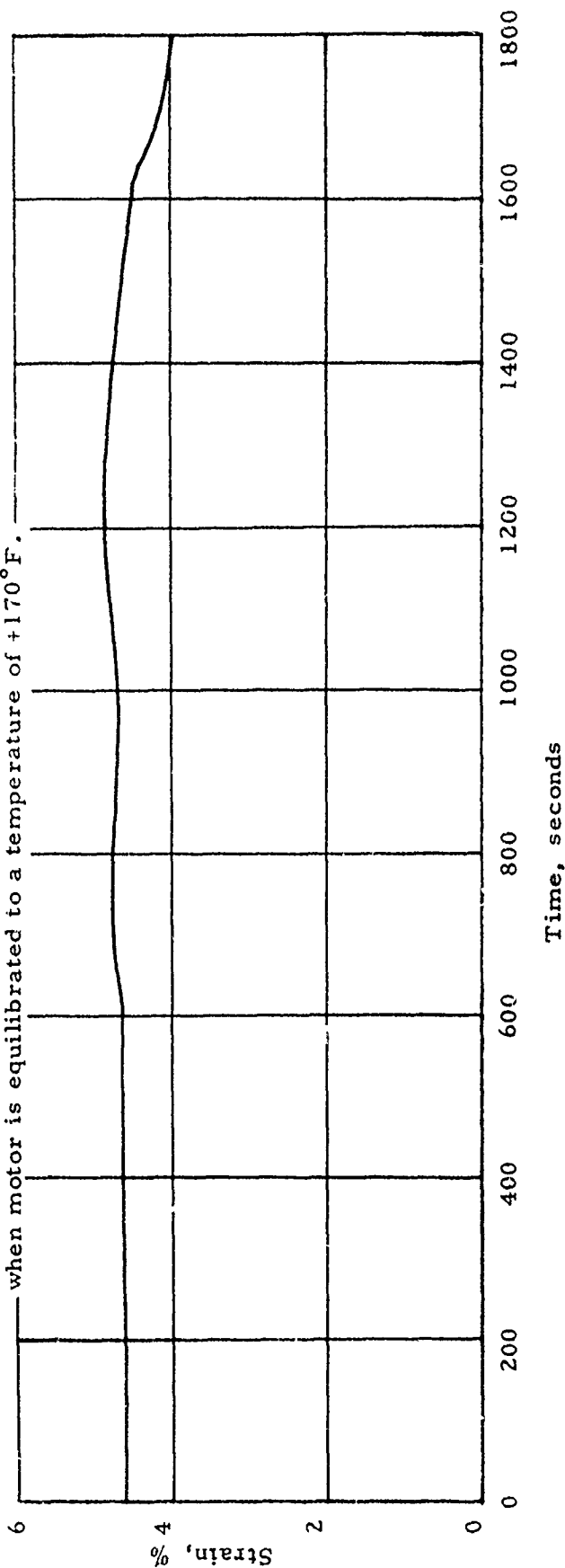
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F.



Bore Strain Response to Aeroheat Loads -- Gage C3-18

Motor - IM #3
 Test - A-11 (DMP-3)
 Gage - C3-18
 Location - Fwd
 T_{initial} - -65°F

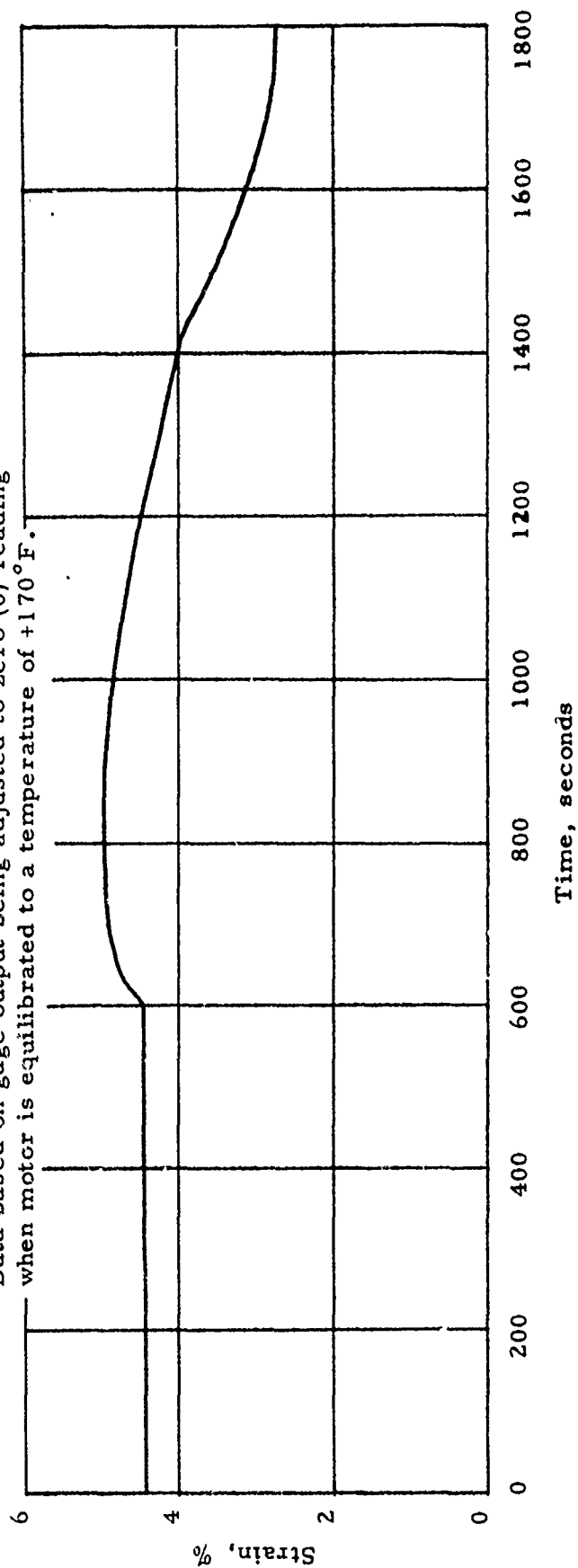
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F.



Bore Strain Response to Aeroheat Loads--Gage C3-18

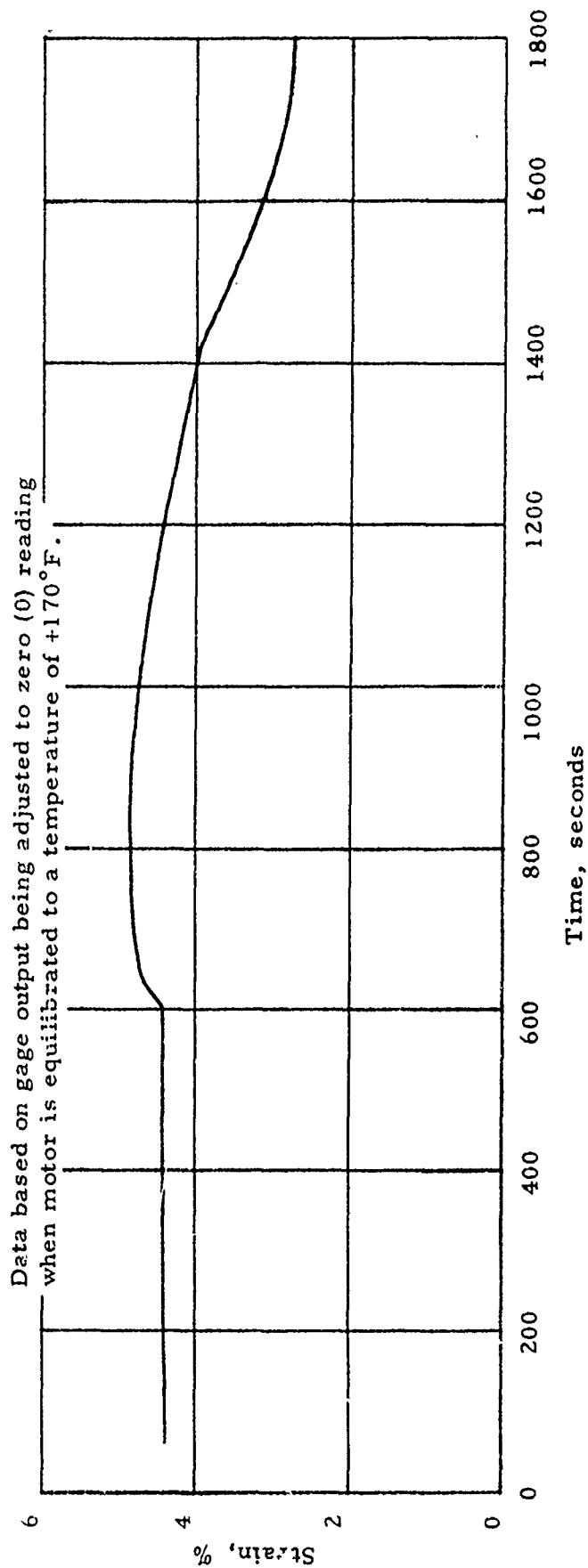
Motor IM #3
 Test A-12 (SFPI)
 Gage C3-18
 Location Fwd
 T_{initial} -65°F

Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F.



Bore Strain Response to Aeroheat Loads --Gage C3-18

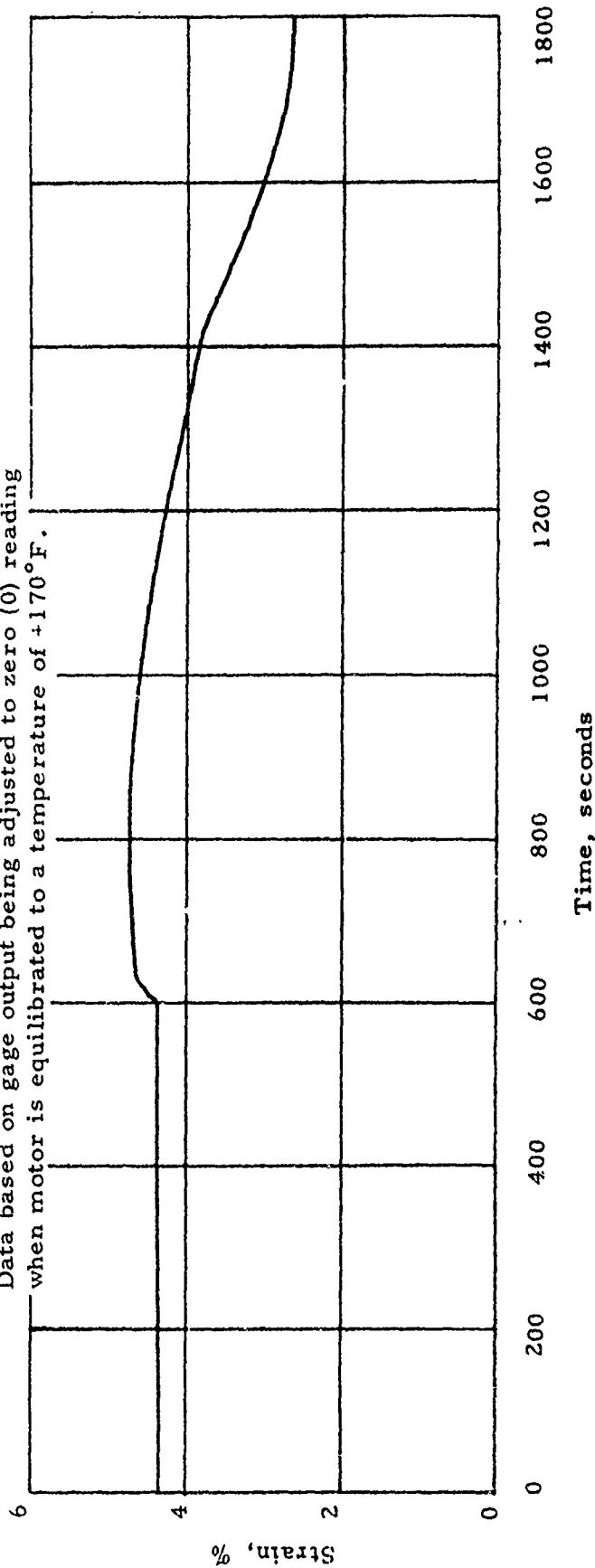
Motor - IM #3
 Test - A-13 (SFPI)
 Gage - C3-18
 Location - Fwd
 Tinitial - -65°F



Bore Strain Response to Aeroheat Loads -- Gage C3-18

Motor IM #3
 Test A-14 (SFPI)
 Gage C3-18
 Location Fwd
 T initial -65°F

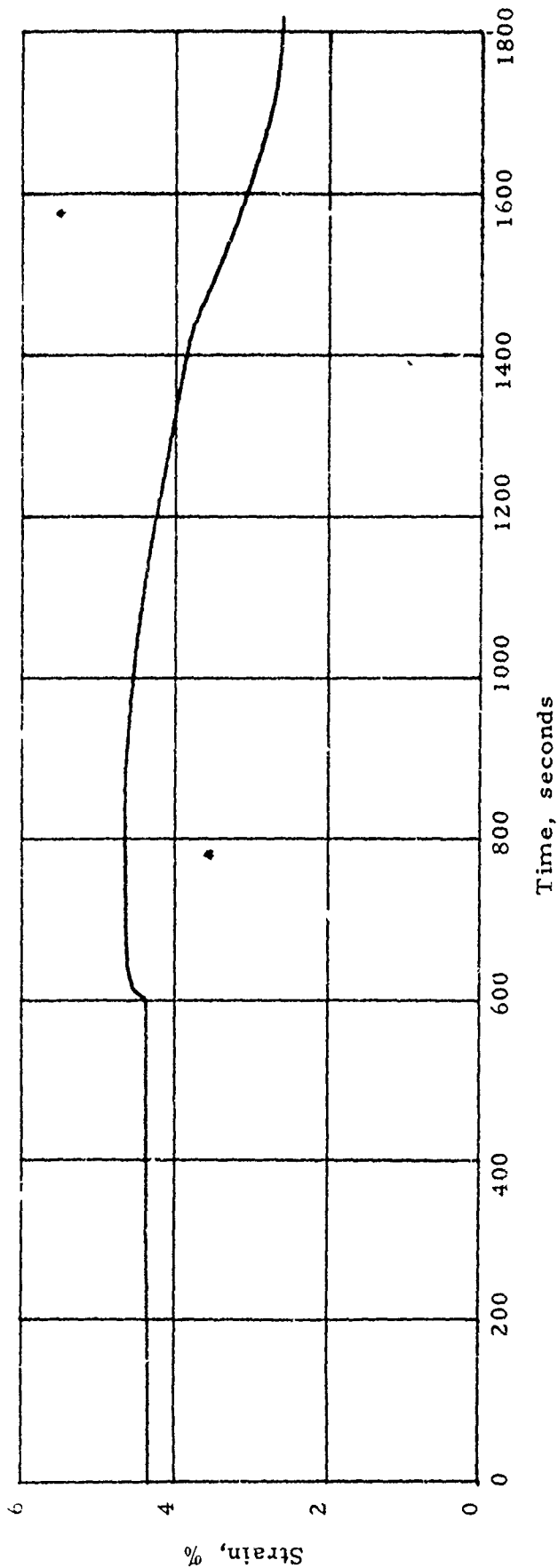
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F.



Bore Strain Response to Aeroheat Loads--Gage C3-18

Motor IM #3
 Test A-15 •
 Gage C3-18
 Location Fwd
 T_{initial} -65 F

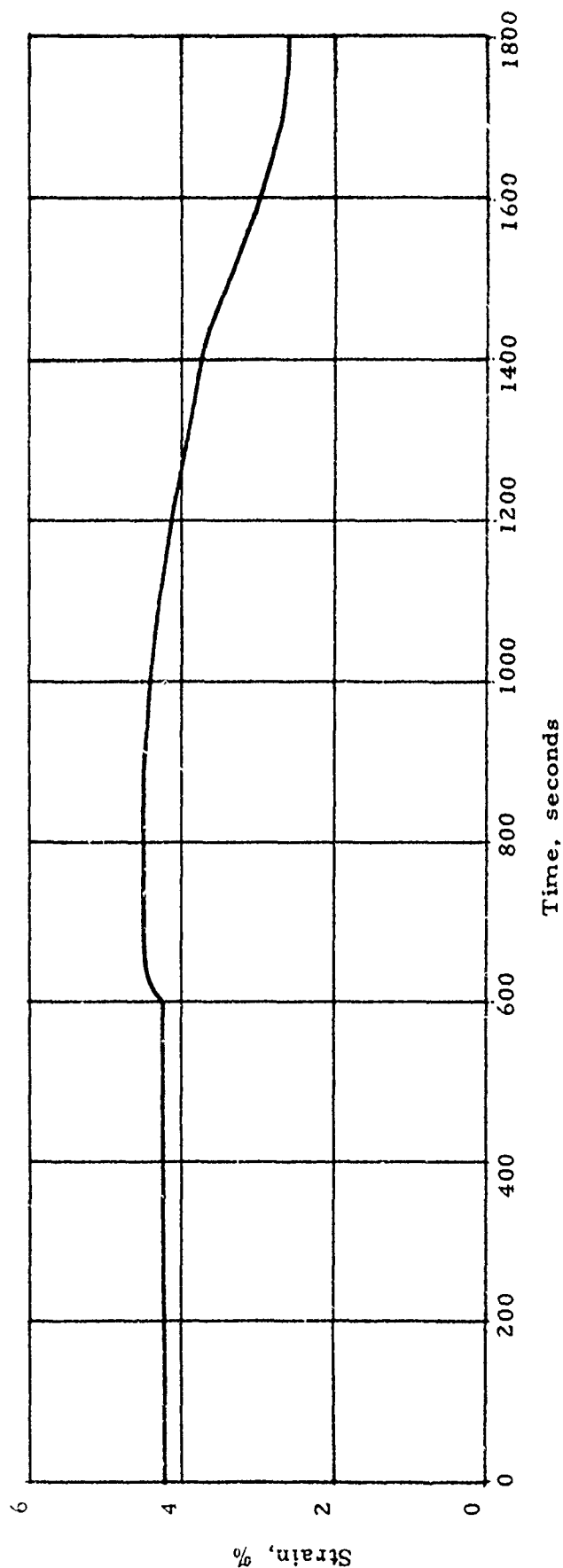
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170 F.



Bore Strain Response to Aeroheat Loads -- Gage C3-18

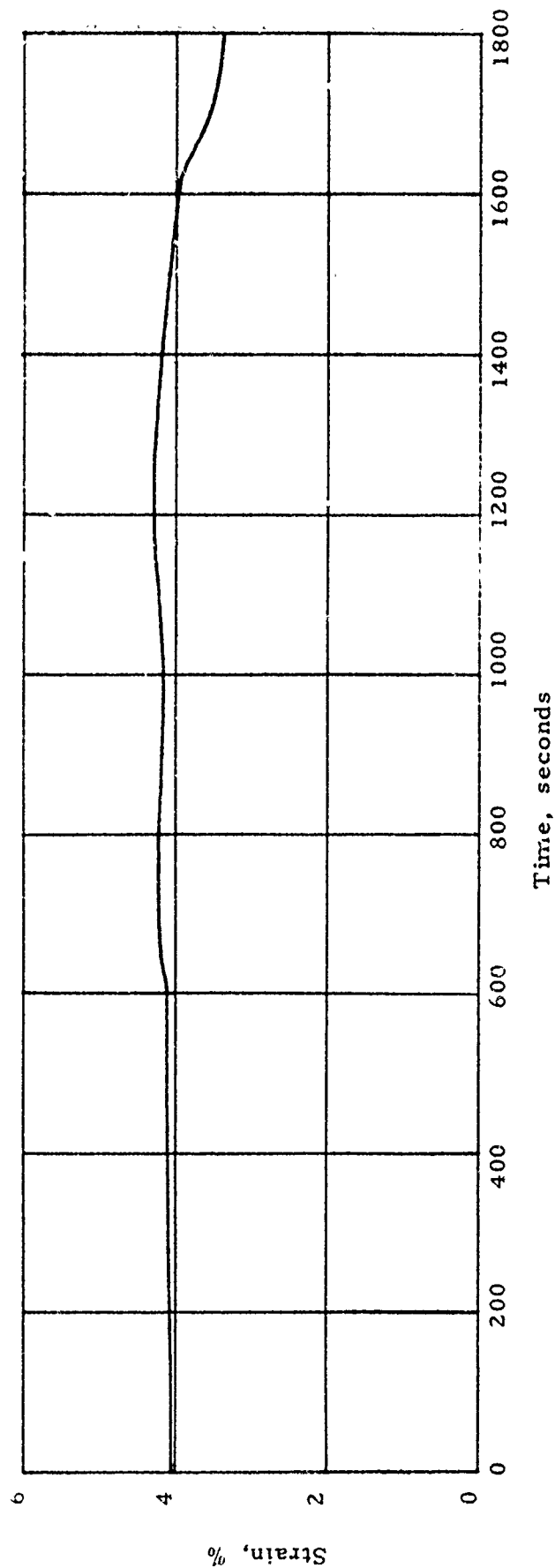
Motor IM #3
 Test A-16 (SFPI)
 Gage C3-18
 Location Fwd
 T_{initial} -65°F

Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F.



Bore Strain Response to Aeroheat Loads -- Gage C3-18

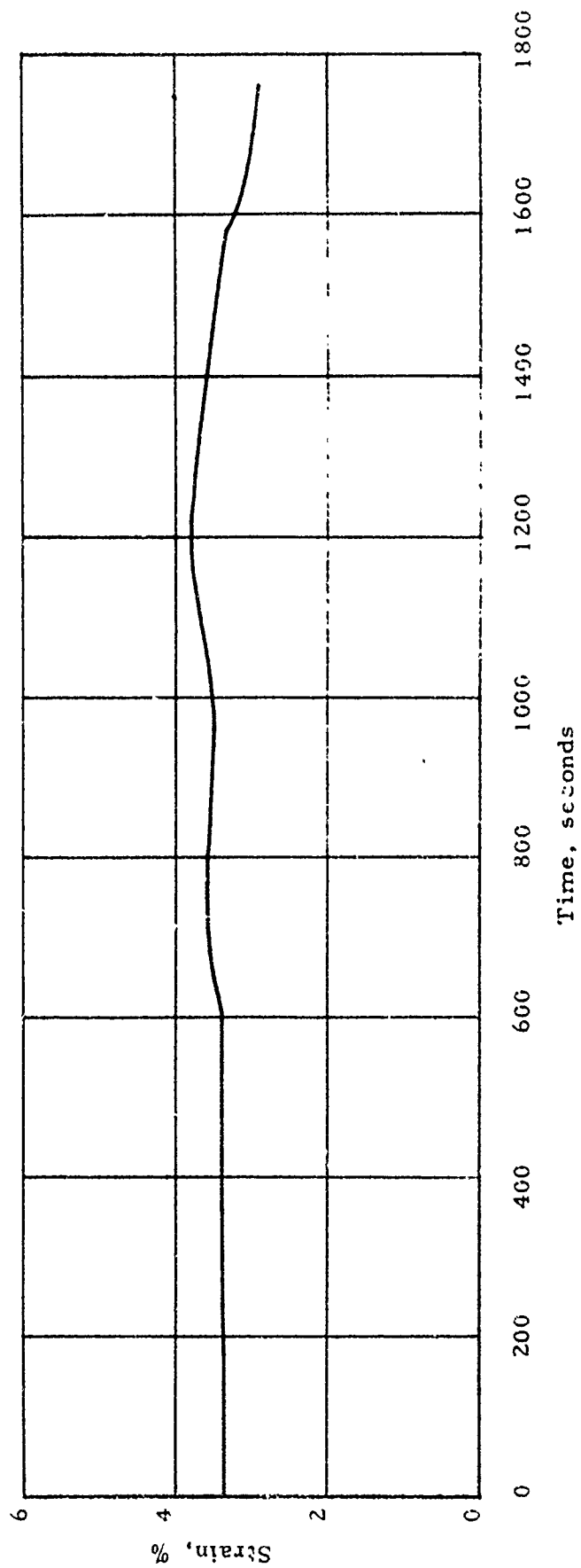
Motor IM #3
 Test A-17 (DMP-3)
 Gage C3-18
 Location Fwd
 T_{initial} -65 F



Bore Strain Response to Aeroheat Loads--Gage C3-18

Motor - IM #3
 Test - A-1 (DMP-3)
 Gage - C3-19
 Location - Aft (small bore)
 T_{initial} - -65°F

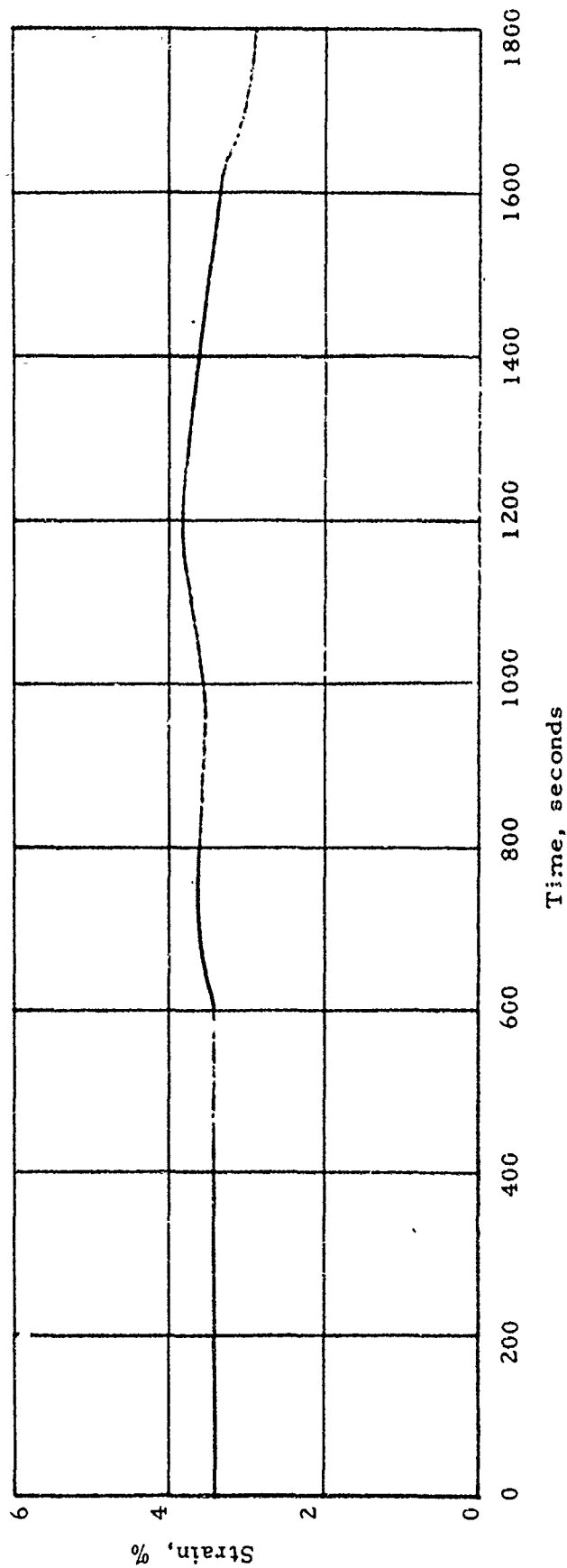
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads -- Gage C3-19

Motor - IM #3
 Test - A2 (DMP-3)
 Gage - C3-19
 Location - Aft (small bore)
 T_{initial} - -65°F

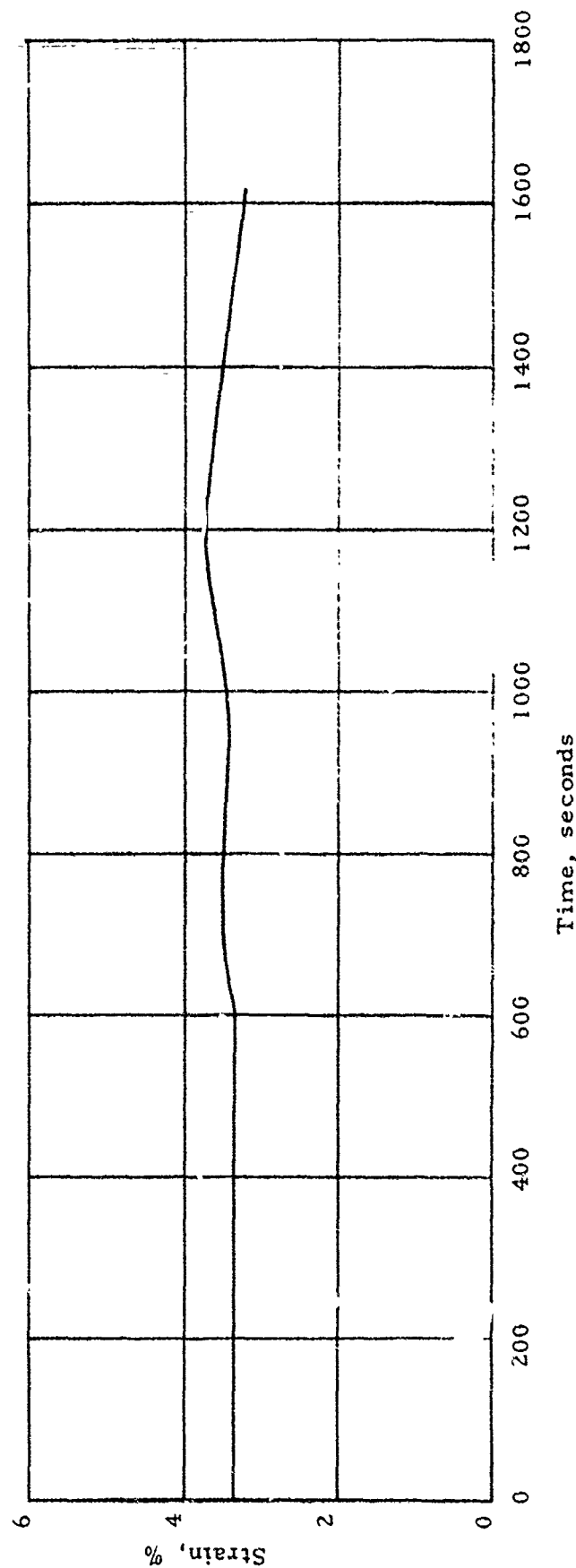
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads -- Gage C3-19

Motor - M #3
 Test - A3 (DM²-3)
 Gage - C3-19
 Location - Aft (small bore)
 T initial - -65°F

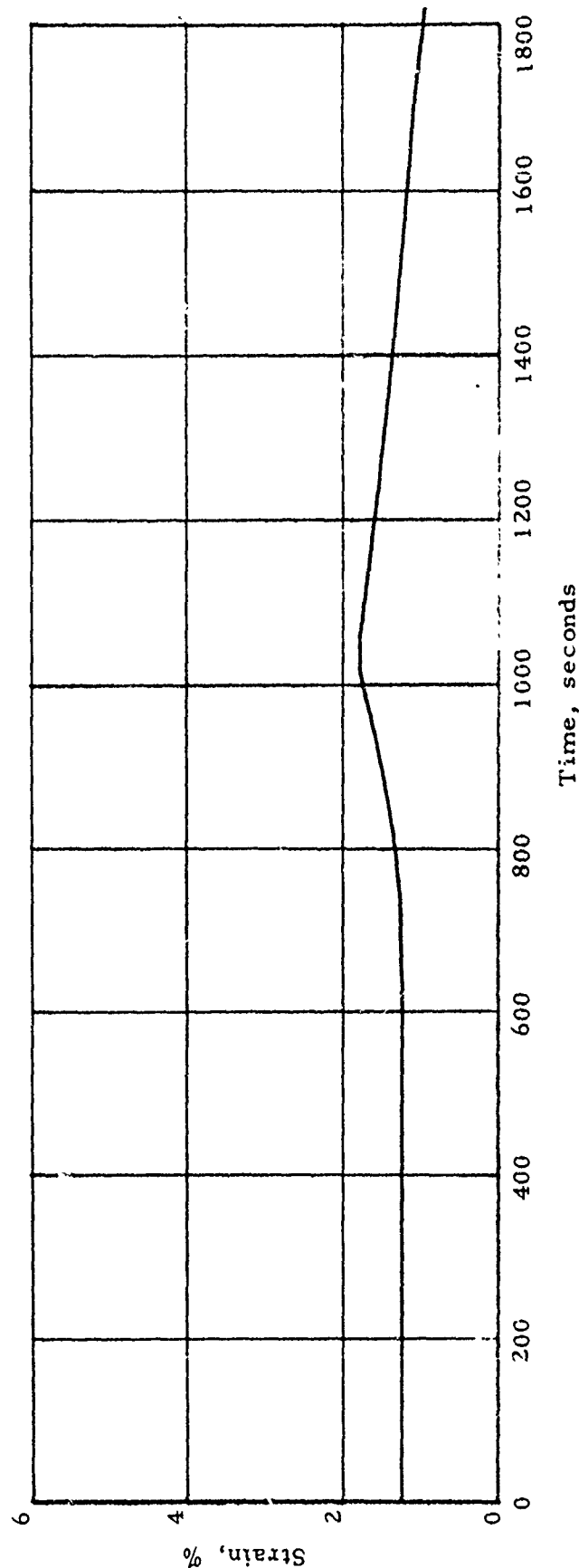
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Load - Gage C3-19

Motor - IM #3
 Test - A4 (HSMH)
 Gage - C3-19
 Location - Aft (small bore)
 T_{initial} - 55°F

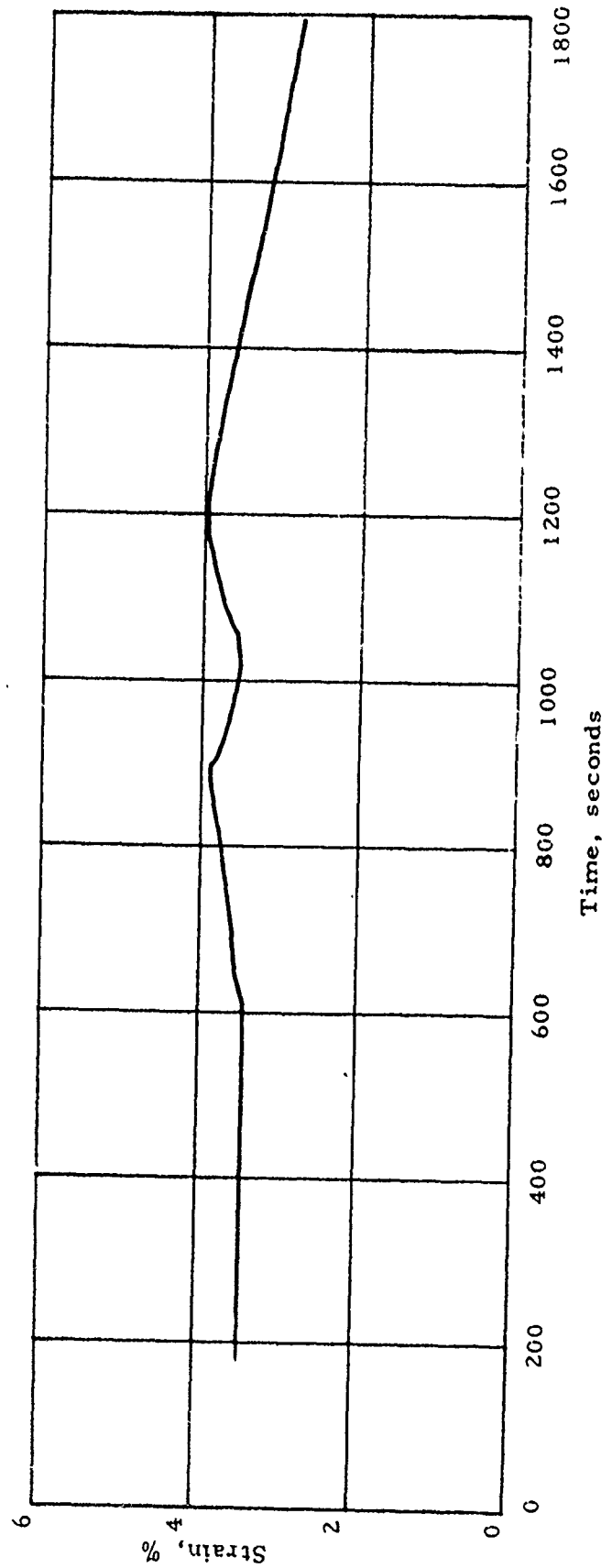
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads--Gage C3-19

Motor - IM #3
 Test - A5 (DMP-3)
 Gage - C3-19
 Location - Aft (small bore)
 T_{initial} - -65°F

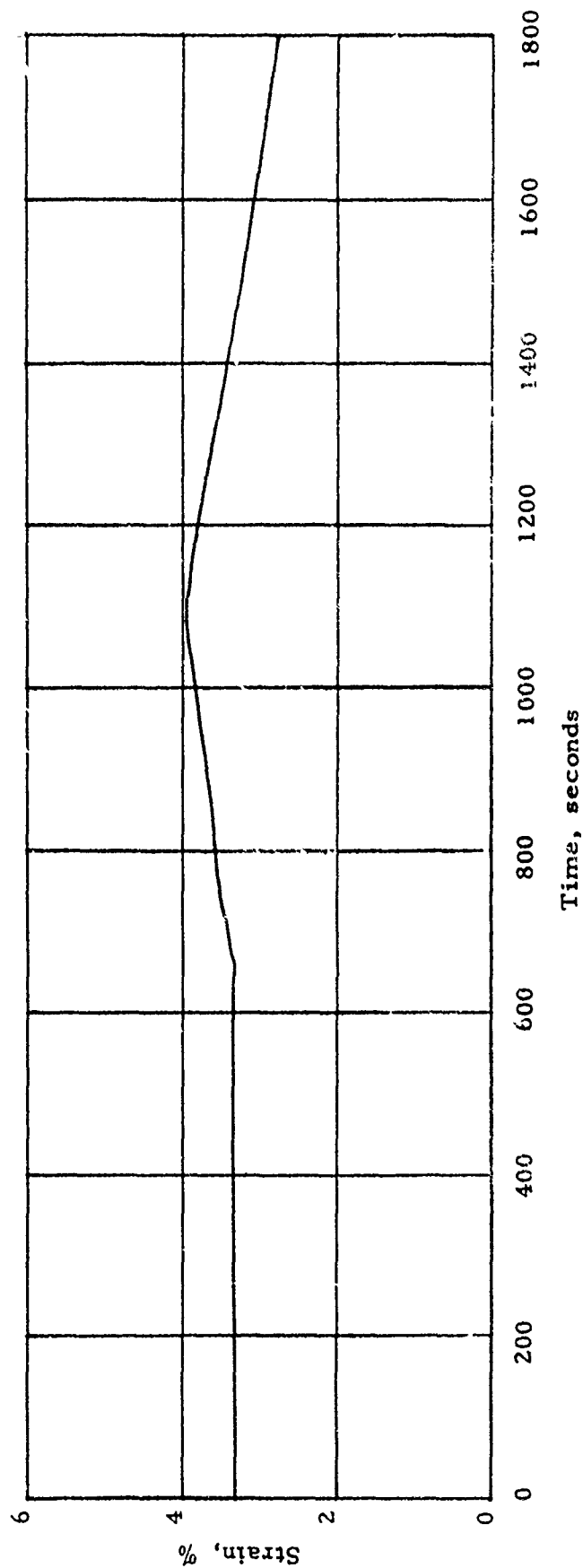
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads--Gage C3-19

Motor - IM #3
 Test - A6 (HSMH)
 Gage - C3-19
 Location - Aft (small bore)
 T initial - -65°F

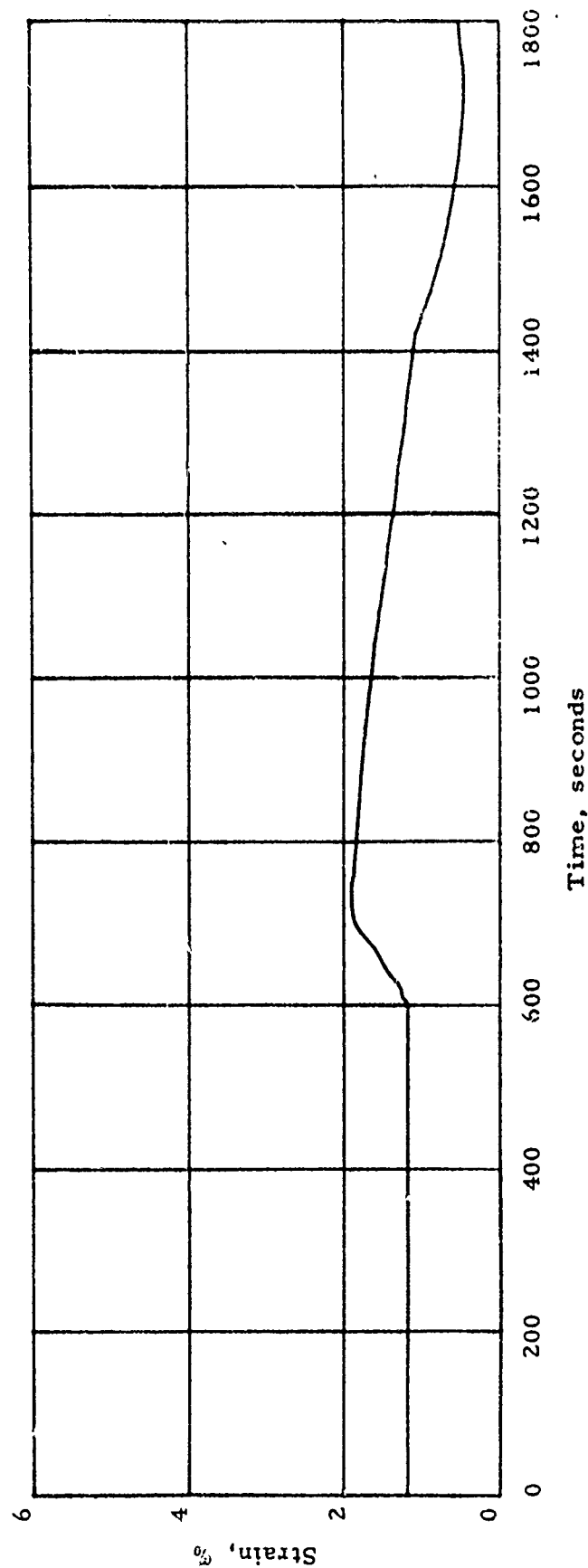
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F.



Bore Strain Response to Aeroheat Loads--Gage C3-19

Motor - IM #3
 Test - A7 (SFPI)
 Gage - C3-19
 Location - Aft (small bore)
 T_{initial} - +60°F

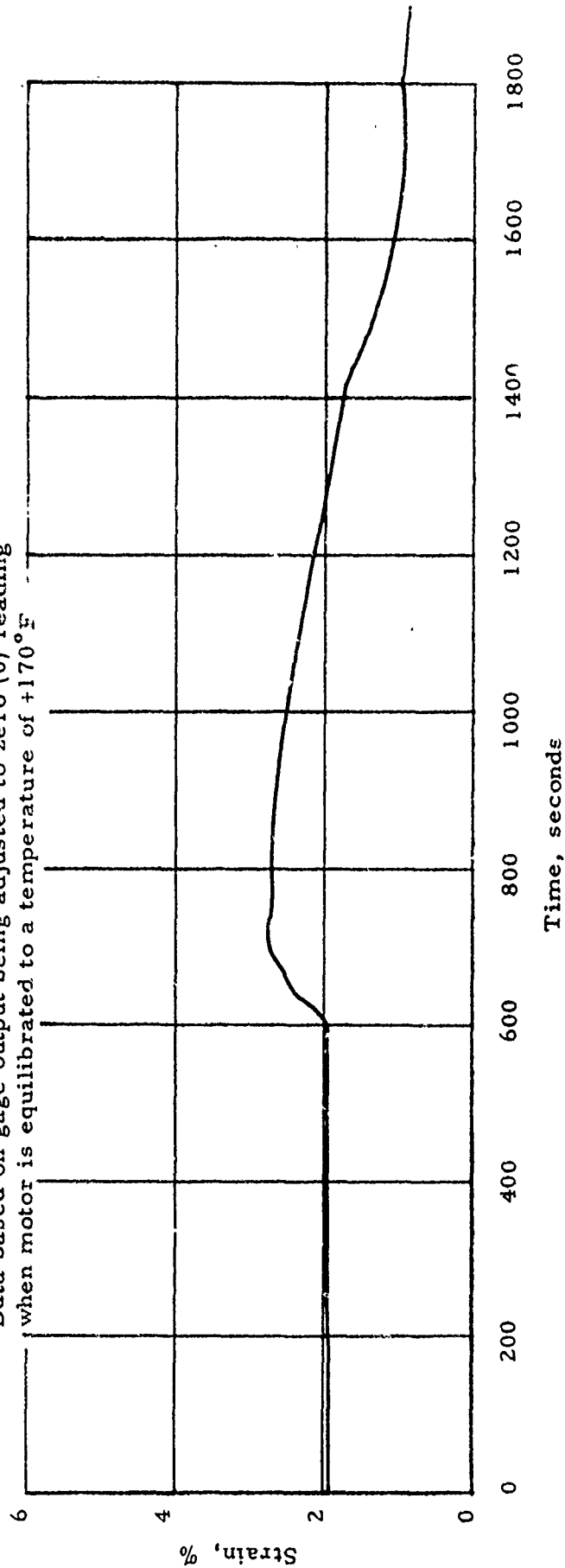
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F.



Bore Strain Response to Aeroheat Loads -- Gage C3-19

Motor - IM #3
 Test - A8 (SFPI)
 Gage - C3-19
 Location - Aft (small bore)
 T_{initial} - 0°F

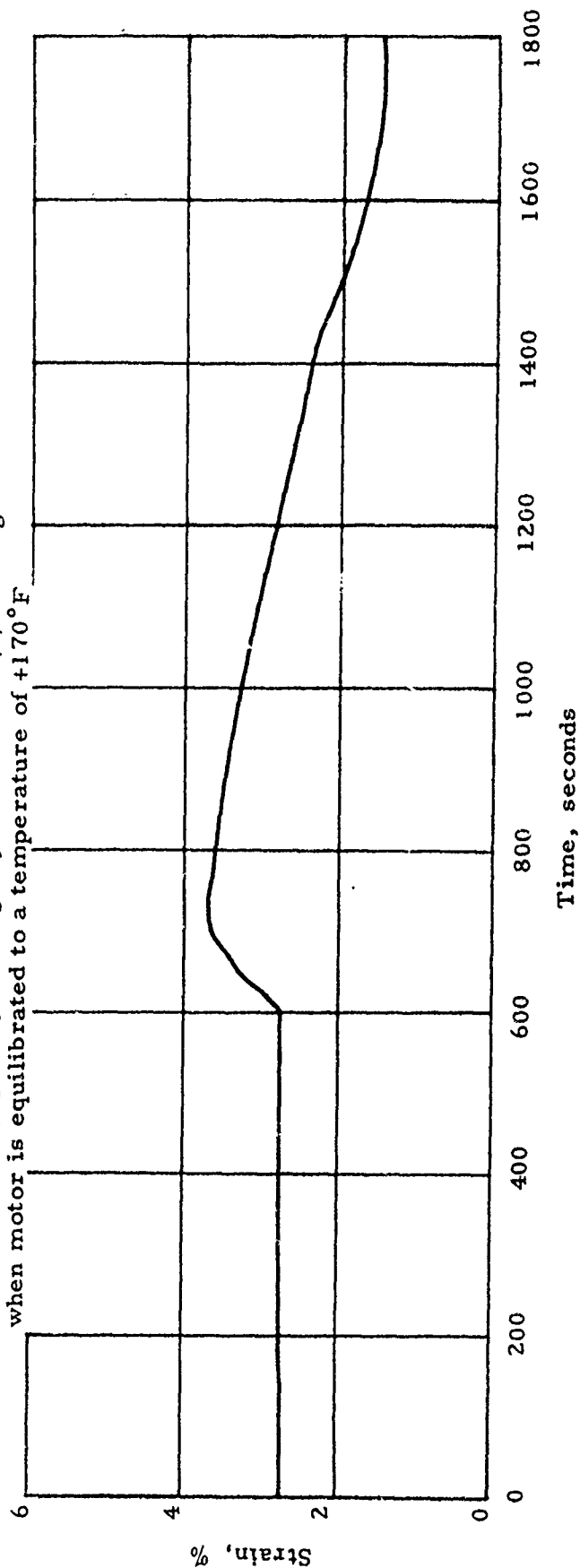
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads -- Gage C3-19

Motor - IM #3
 Test - A9 (SFPI)
 Gage - C3-19
 Location - Aft (small bore)
 T_{initial} - -40°F

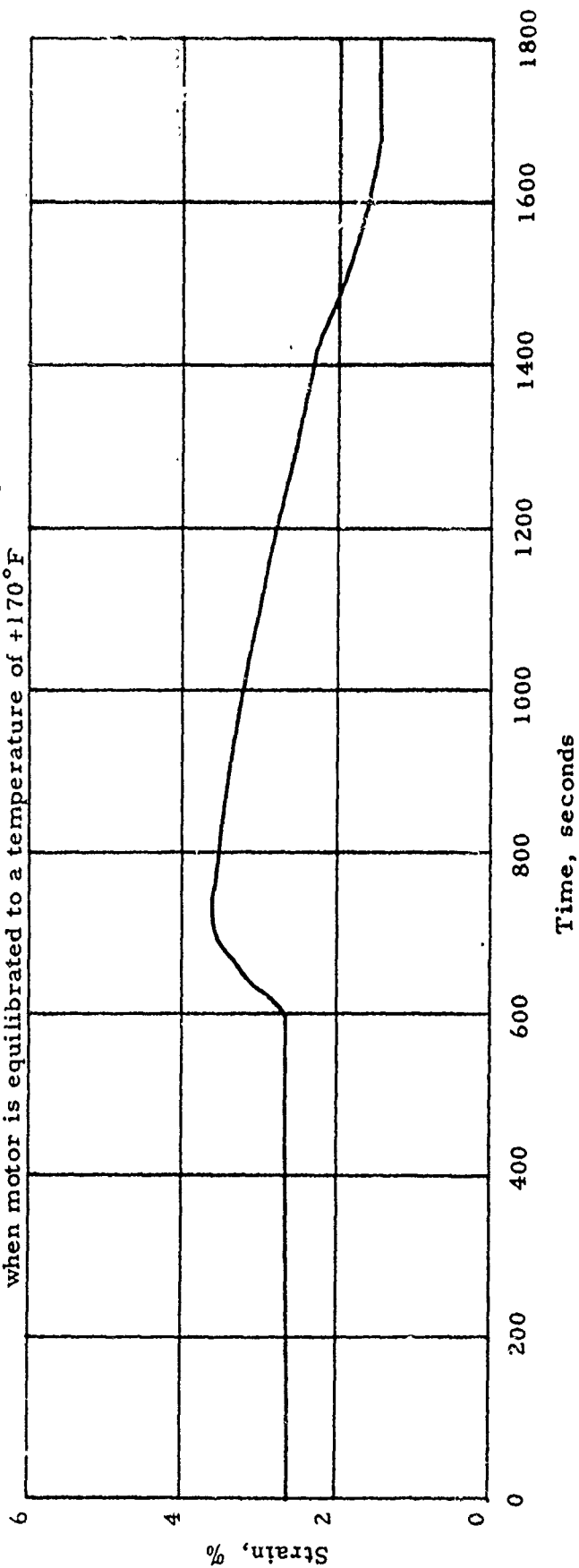
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads -- Gage C3-19

Motor - IM #3.
 Test - AIG (SFPI)
 Gage - C3-19
 Location - Aft (small bore)
 T initial - -40°F

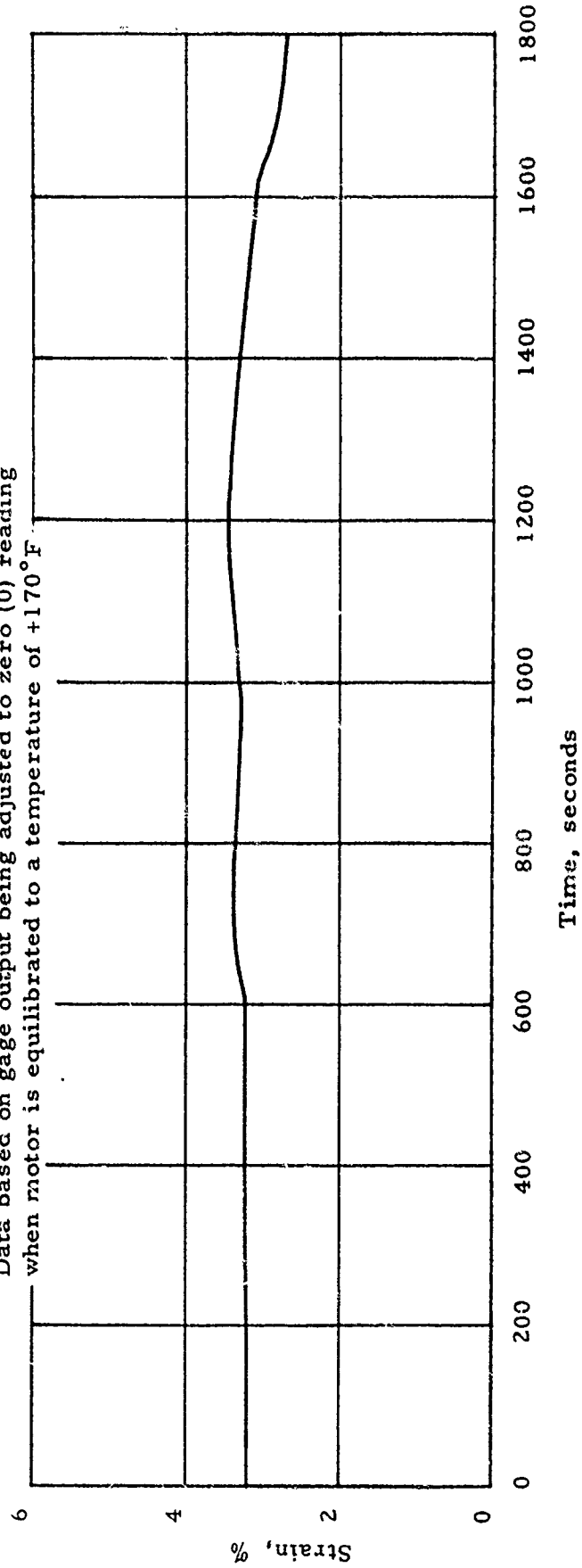
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads -- Gage C3-19

Motor - IM #3
 Test - A-11 (DMP-3)
 Gage - C3-19
 Location - Aft (small bore)
 T_{initial} - -65°F

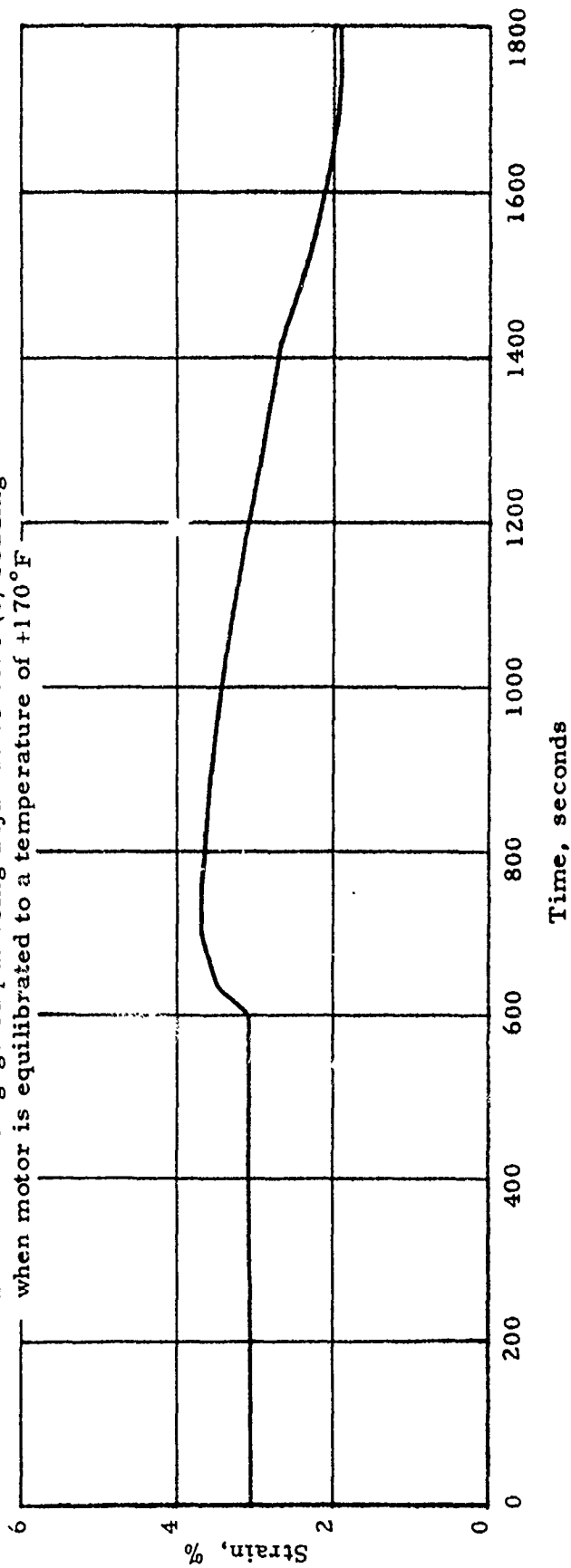
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads--Gage C3-19

Motor - IM #3
 Test - A-12 (SFPI)
 Gage - C3-19
 Location - Aft (small bore)
 Tinitial - -65°F

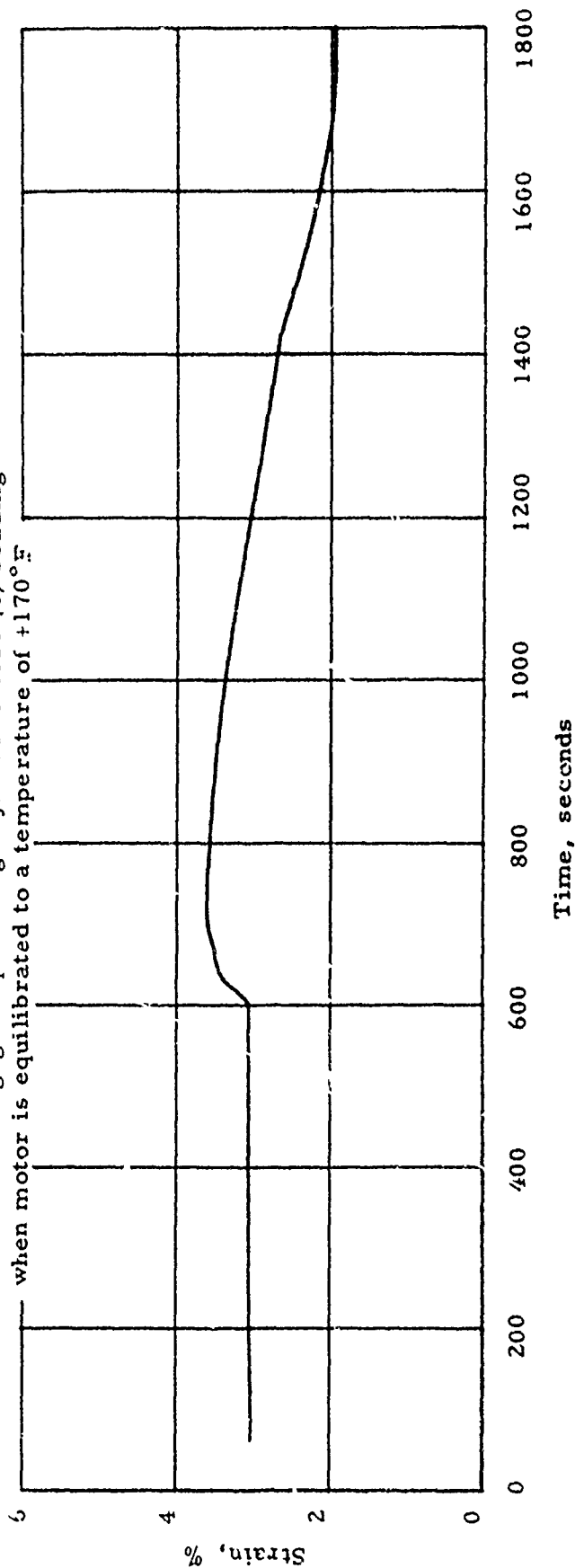
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads -- Gage C3-19

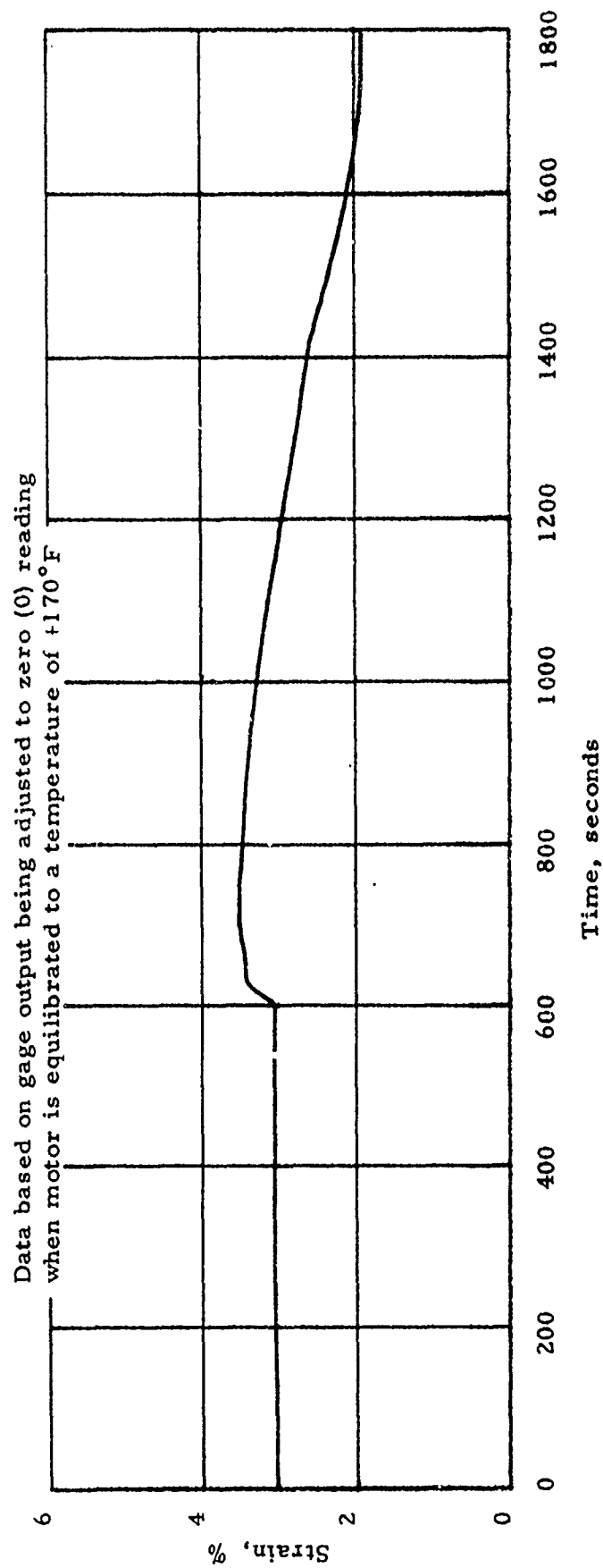
Motor - IM #3
 Test - A-13 (SFPI)
 Gage - C3-19
 Location - Aft (small bore)
 T_{initial} - -65°F

Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads -- Gage C3-19

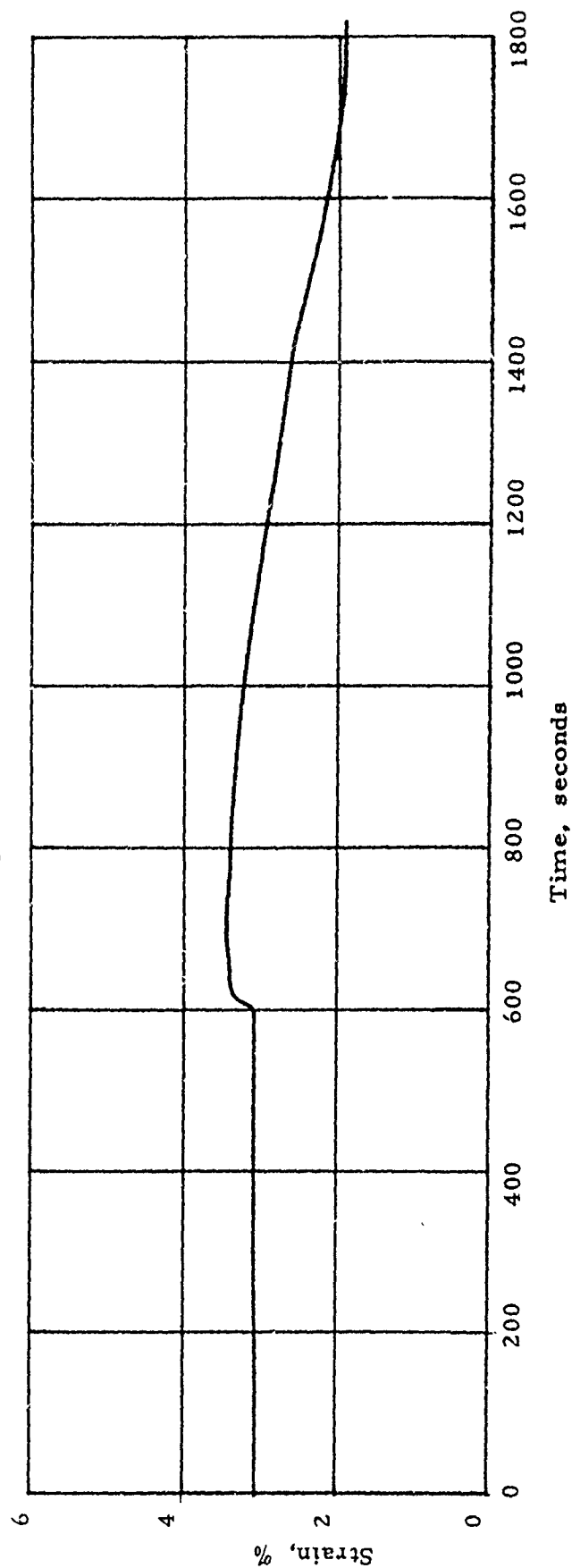
Motor - IM #3
 Test - A-14 (SFPI)
 Gage - C3-19
 Location - Att (small bore)
 T_{initial} - -65°F



Bore Strain Response to Aeroheat Loads --Gage C3-19

Motor - IM #3
 Test - A-15 (SFPI)
 Gage - C3-19
 Location - Aft (small bore)
 T_{initial} - -65°F

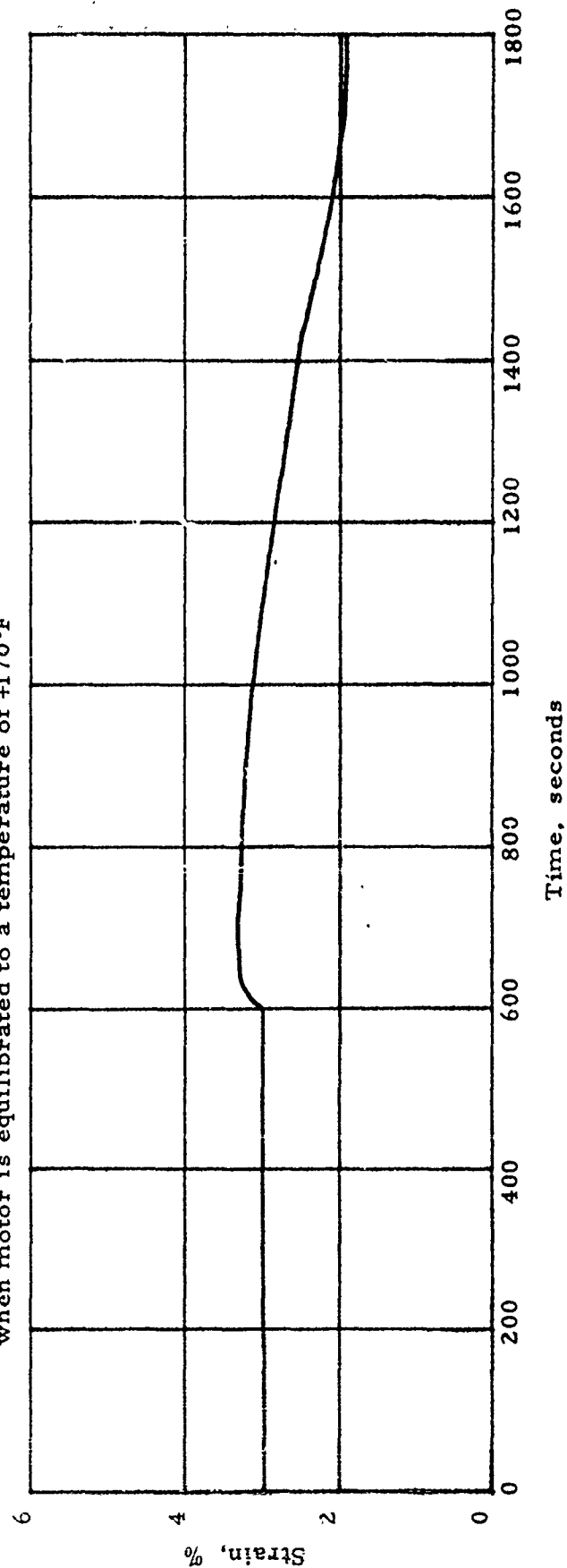
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads--Gage C3-19

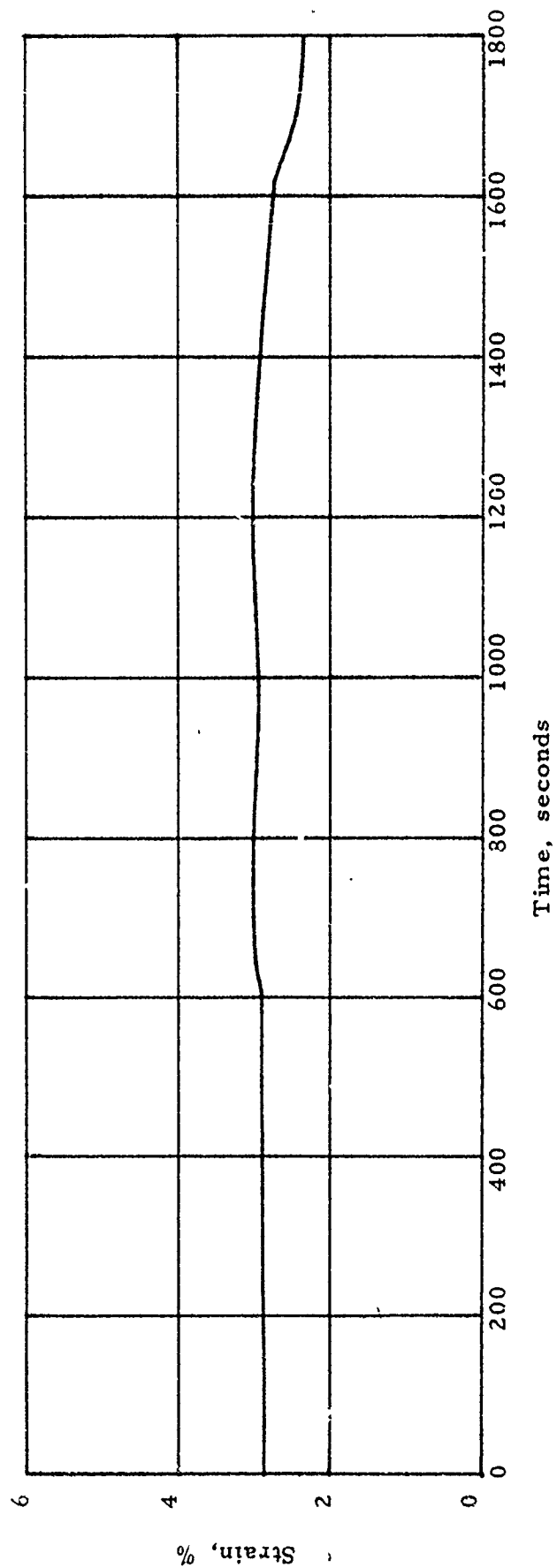
Motor - IM #3
 Test - A-16 (SFPI)
 Gage - C3-19
 Location - Aft (small bore)
 T_{initial} - -65°F

Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads--Gage C3-19

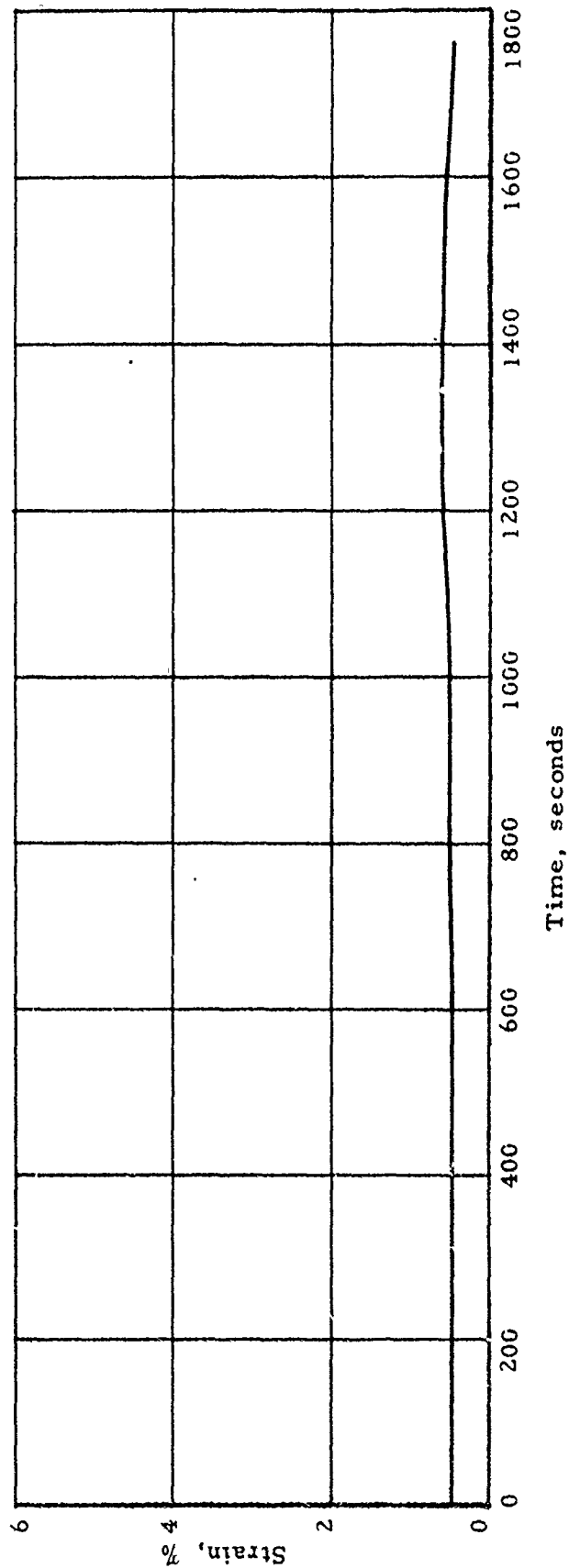
Motor - IM #3
 Test - A-17 (DMP-3)
 Gage - C3-19
 Location - Aft (small bore)
 T_{initial} - -65°F



Bore Strain Response to Aeroheat Loads--Gage C3-19

Motor - IM #3
 Test - A-1 (DMP-3)
 Gage - C3-20
 Location - Aft
 T_{initial} - -65°F

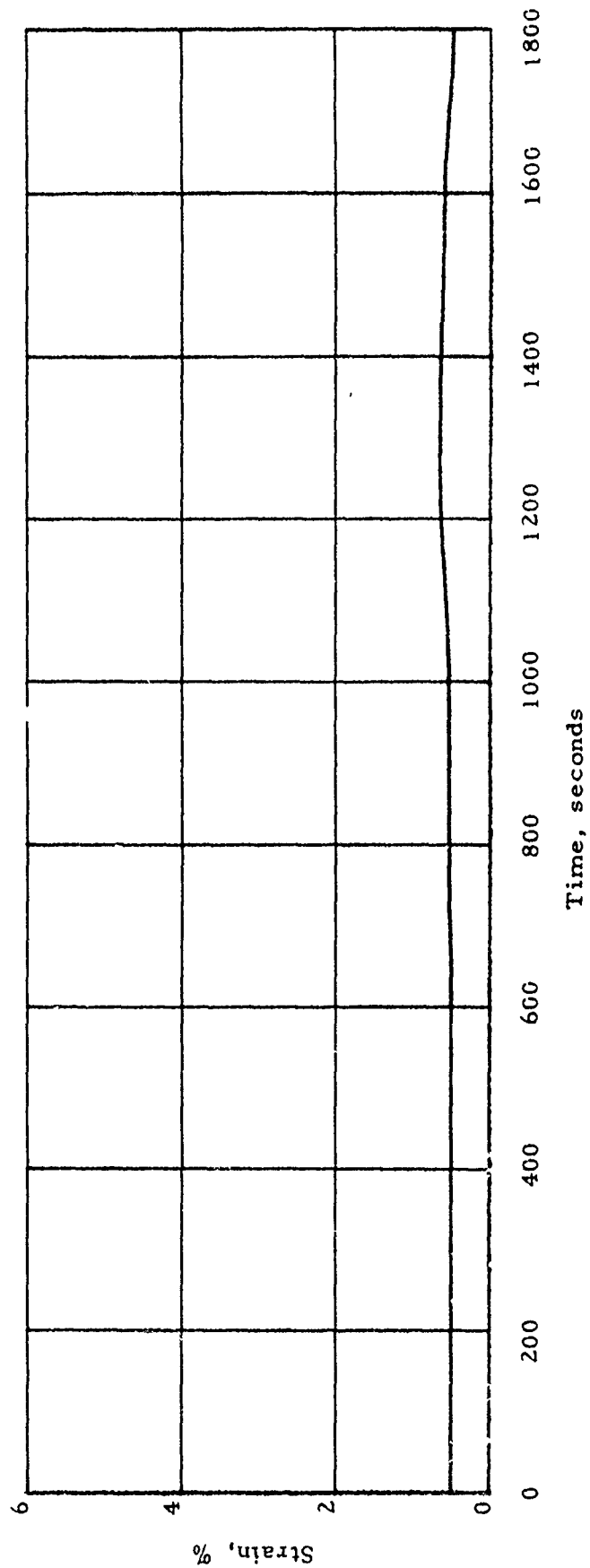
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads -- Gage C3-20

Motor - IM #3
 Test - A-2 (DMP-3)
 Gage - C3-20
 Location - Aft
 T_{initial} - -65°F

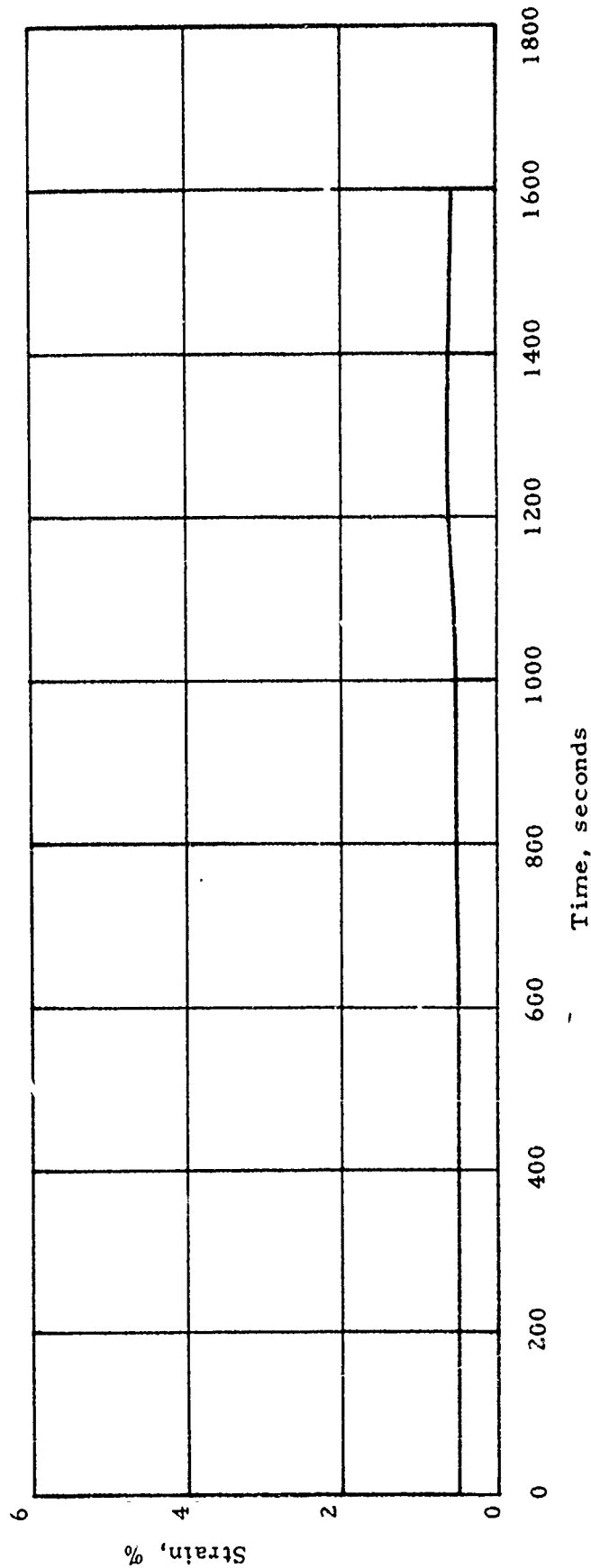
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aercheat Loads -- Gage C3-20

Motor - IM #3
 Test - A-3 (DMP-3)
 Gage - C3-20
 Location - Aft
 T initial - -65°F

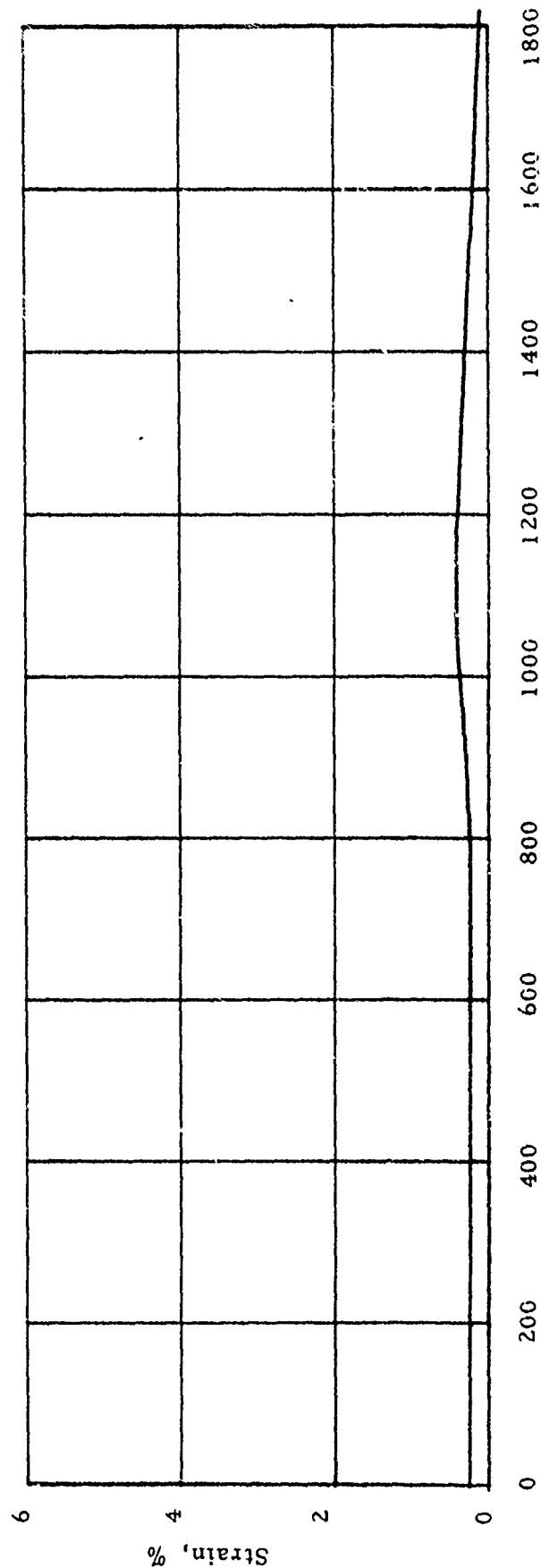
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads --Gage C3-20

Motor - IM #3
 Test - A-4 (HSMH)
 Gage - C3-20
 Location - Aft
 T initial - 55°F

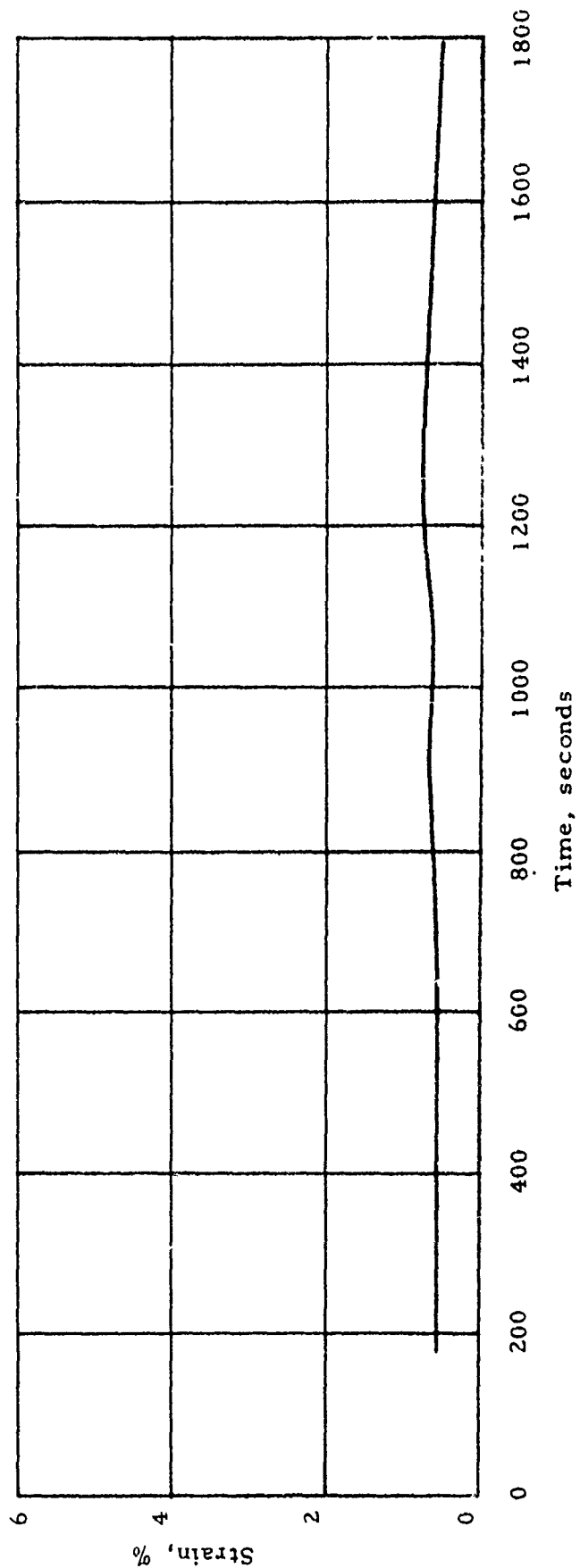
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Time, seconds
 Bore Strain Response to Aeroheat Loads -- Gage C3-20

Motor - IM #3
 Test - A5 (HSMH)
 Gage - C3-20
 Location - Aft
 T_{initial} - -65°F

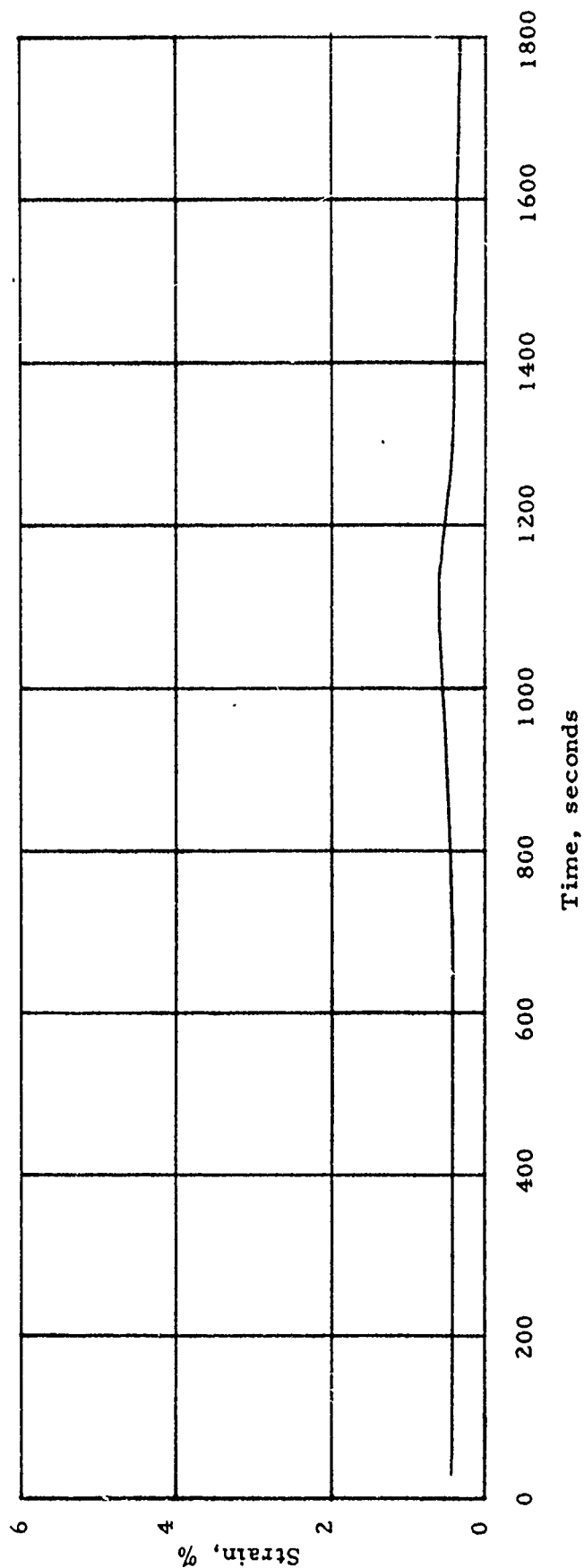
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads--Gage C3-20

Motor - IM #3
 Test - A6 (HSMH)
 Gage - C3-20
 Location - Aft
 Tinitial - -65°F

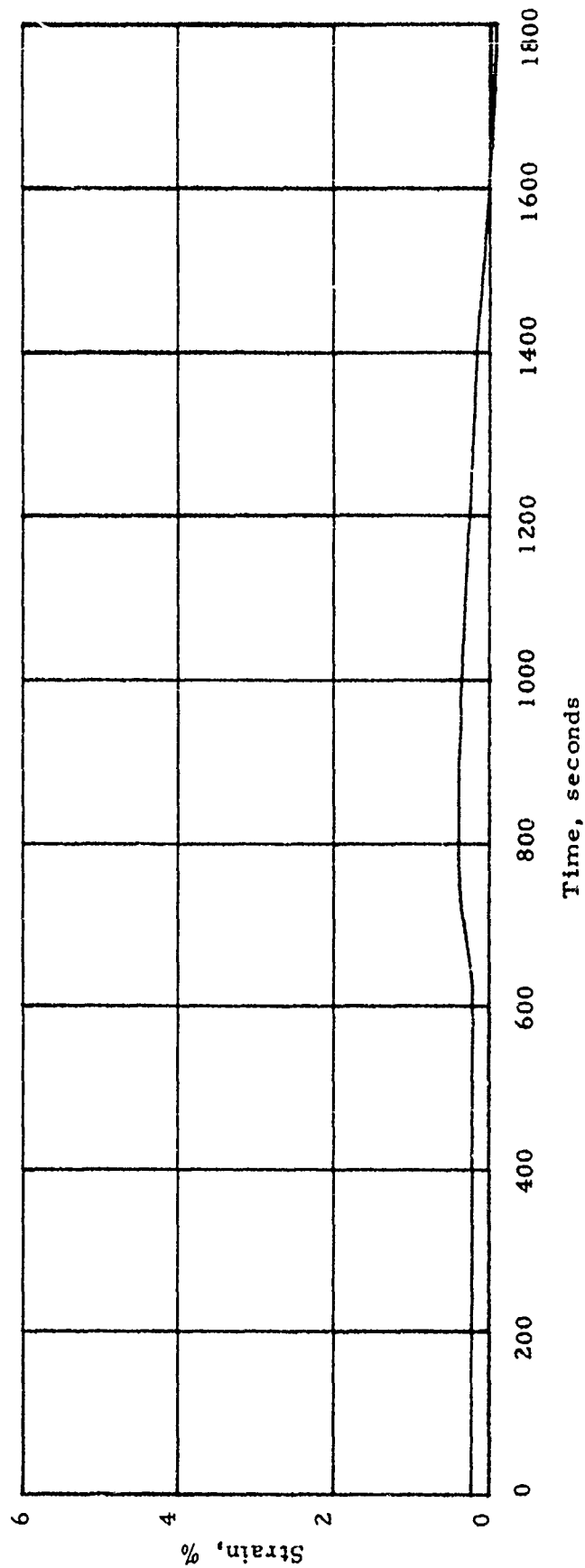
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F.



Bore Strain Response to Aeroheat Loads--Gage C3-20

Motor - IM #3
 Test - A7 (SFPI)
 Gage - C3-20
 Location - Aft
 T_{initial} - +60°F

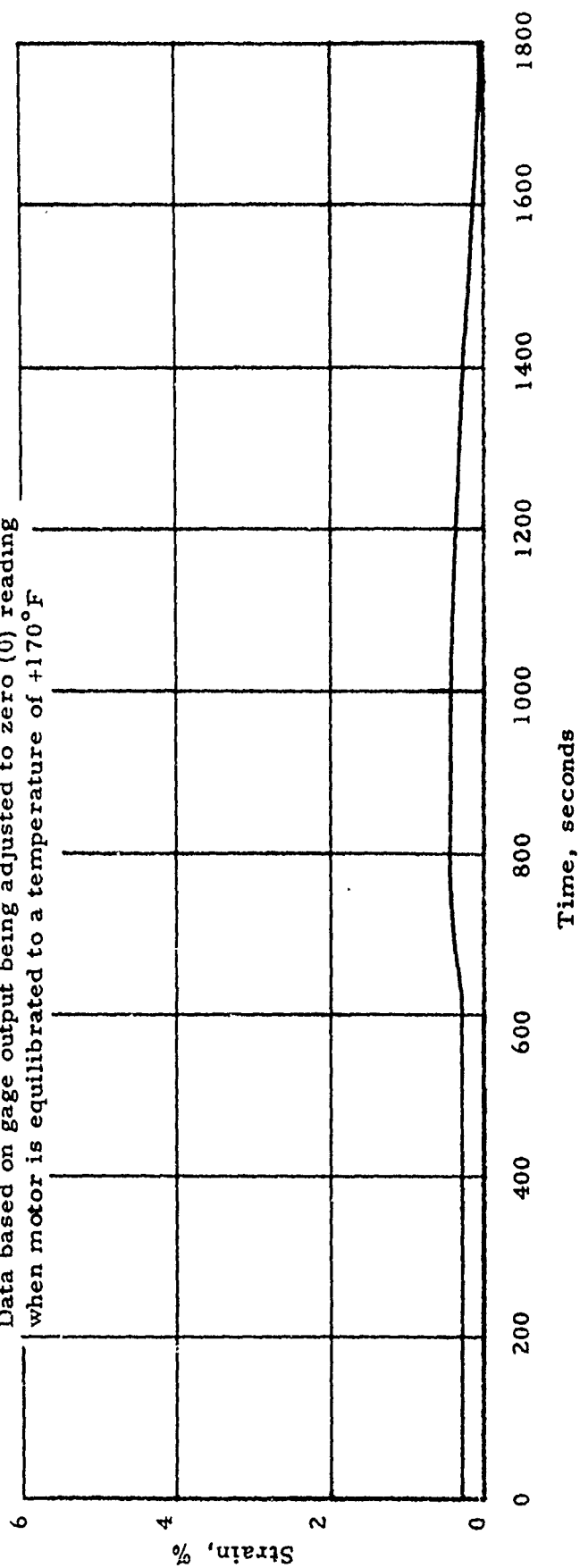
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads--Gage C3-20

Motor - IM #3
 Test - A8 (SFPI)
 Gage - C3-20
 Location - Aft
 Initial - 0°F

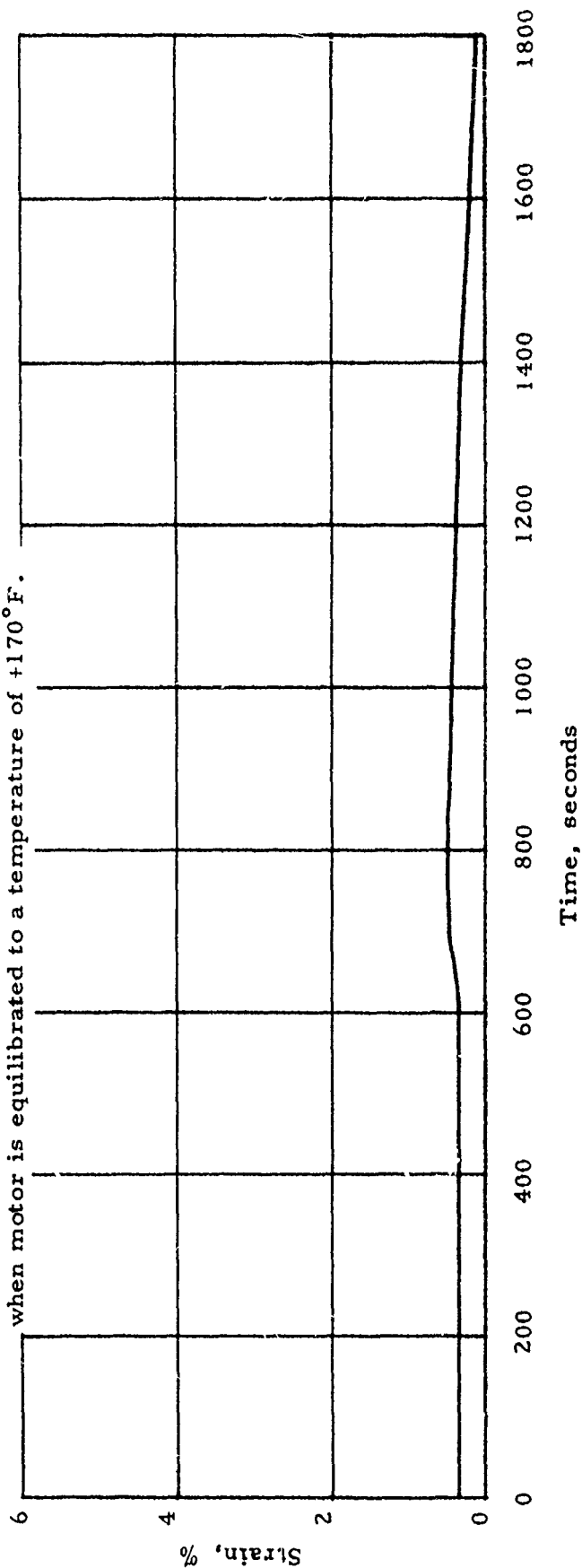
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads --Gage C3-20

Motor - IM #3
 Test - A9 (SFPI)
 Gage - C3-20
 Location - Aft
 T initial - -40°F

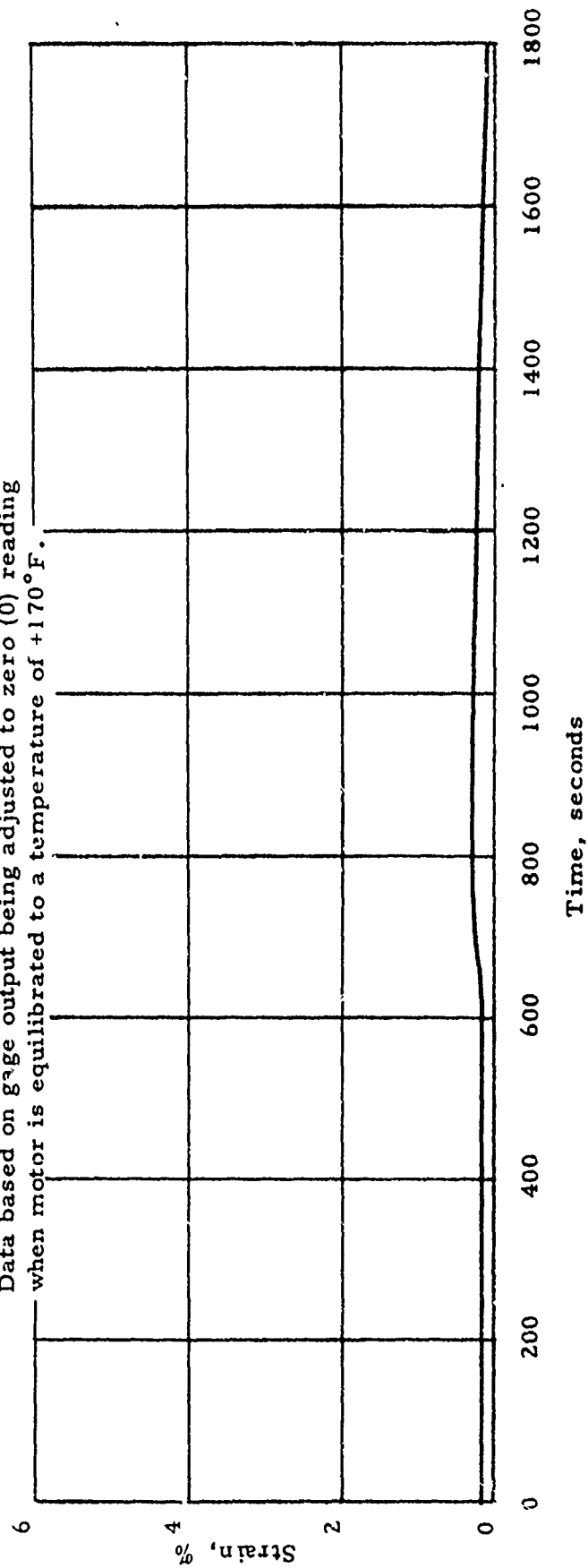
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F.



Bore Strain Response to Aeroheat Loads --Gage C3-20

Motor - IM #3
 Test - A-10 (SFPI)
 Gage - C3-20
 Location - Aft
 T_{initial} - -40°F

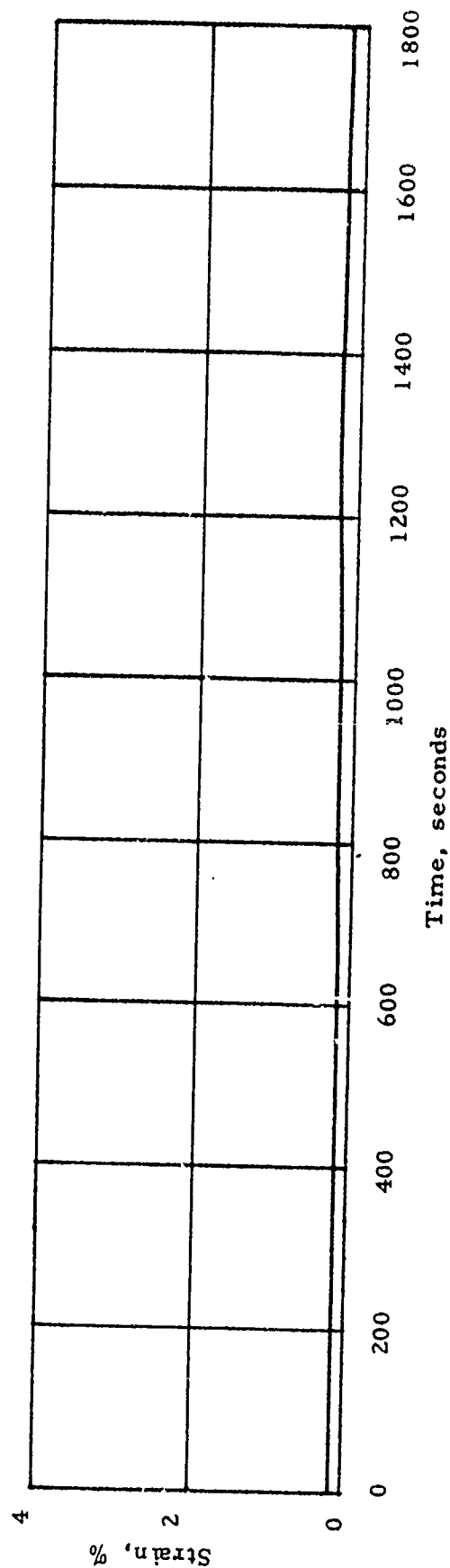
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F.



Bore Strain Response to Aeroheat Loads -- Gage C3-20

Motor - IM #3
 Test - A-11 (DMP-3)
 Gage - C3-20
 Location - Aft
 T_{initial} - -40°F

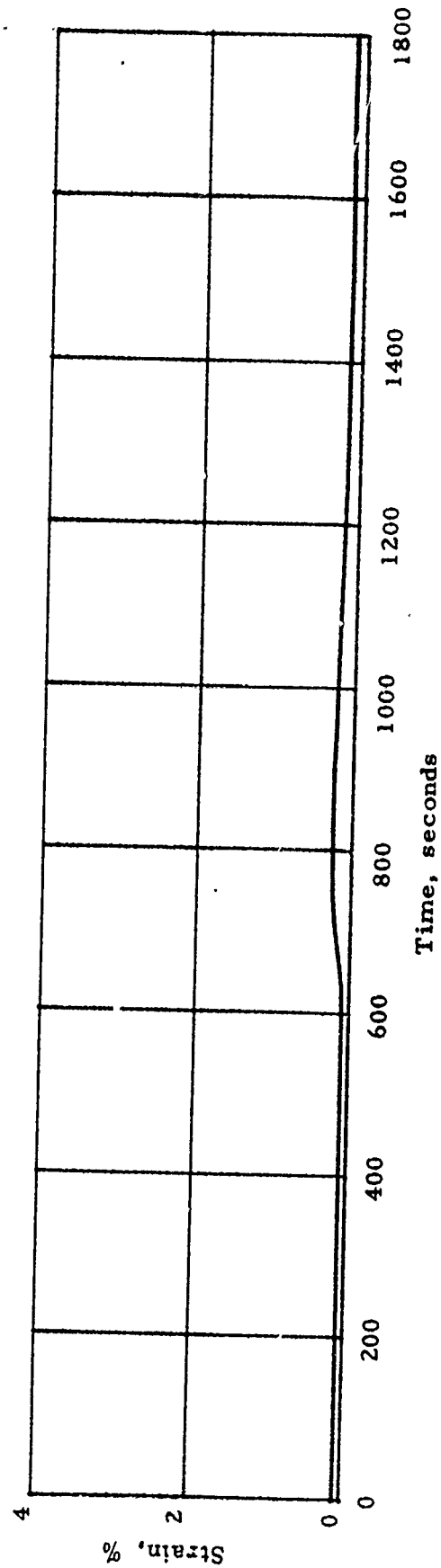
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F.



Bore Strain Response to Aeroheat Loads -- Gage C3-20

Motor - IM #3
 Test - A-12 (SFPI)
 Gage - C3-20
 Location - Aft
 T_{initial} - -40°F

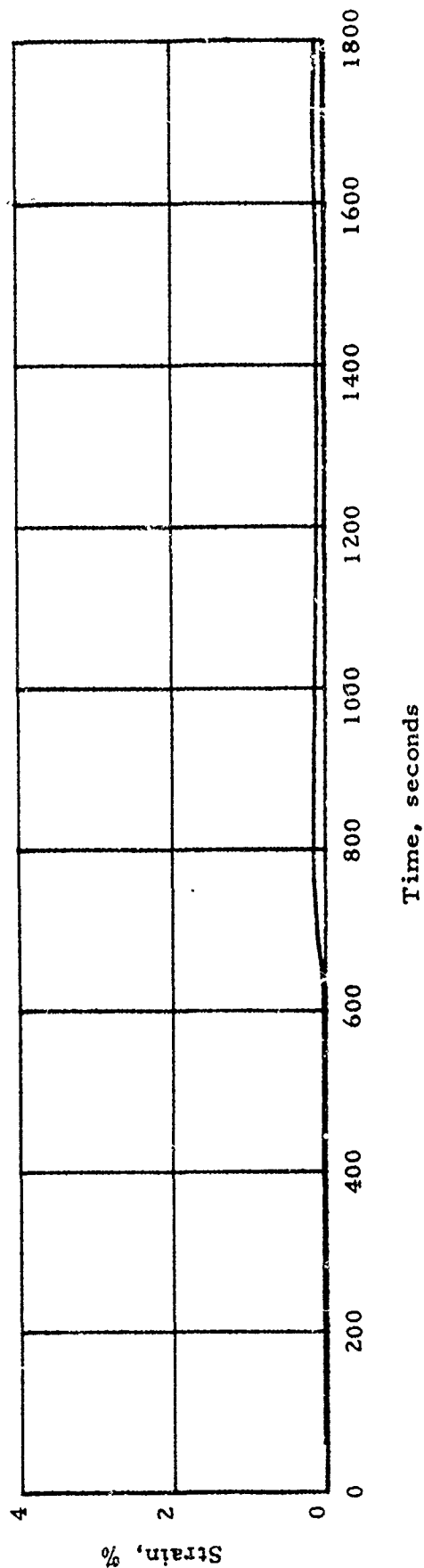
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads -- Gage C3-20

Motor IM #3
 Test A-13 (SFPI)
 Gage C3-20
 Location Aft
 T_{initial} -65°F

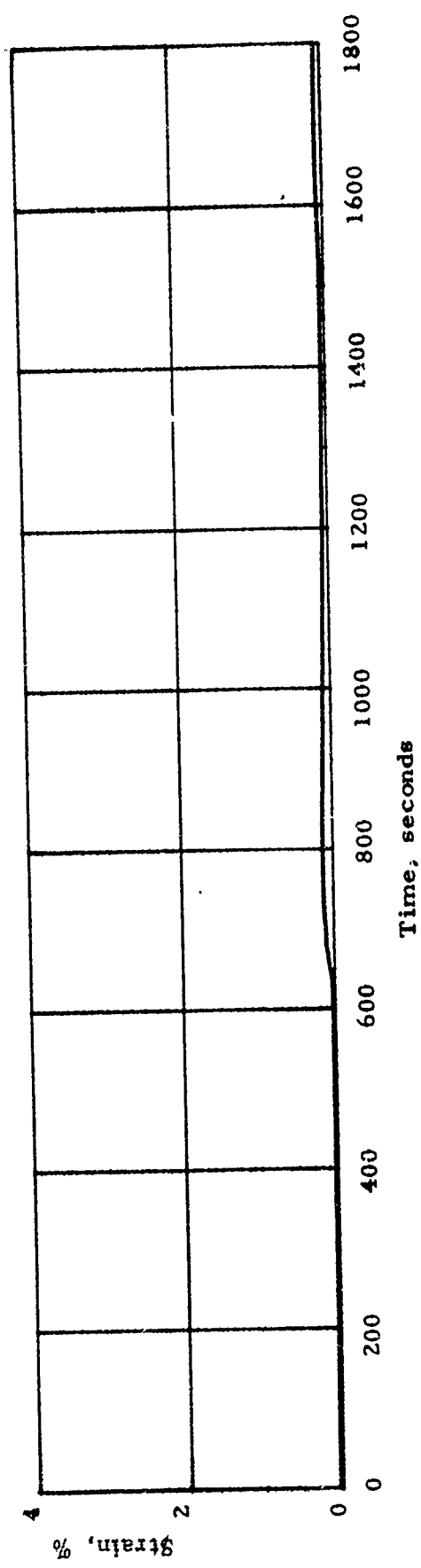
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F.



Bore Strain Response to Aeroheat Loads --Gage C3-20

Motor - IM #3.
 Test - A-14
 Gage - C3-20
 Location - Aft
 Tinitial - -65°F

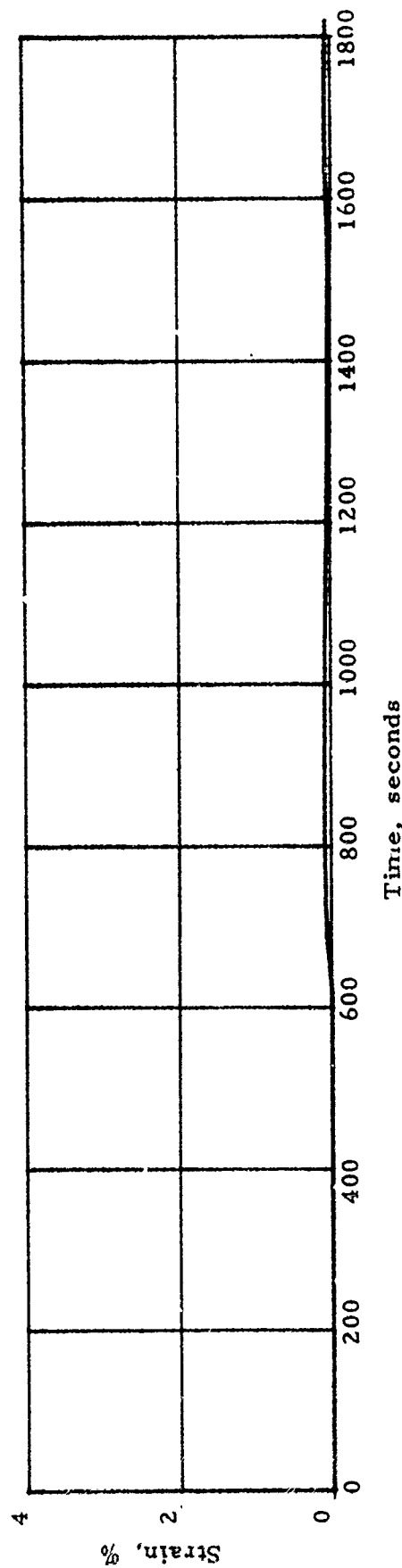
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F.



Bore Strain Response to Aeroheat Loads -- Gage C3-20

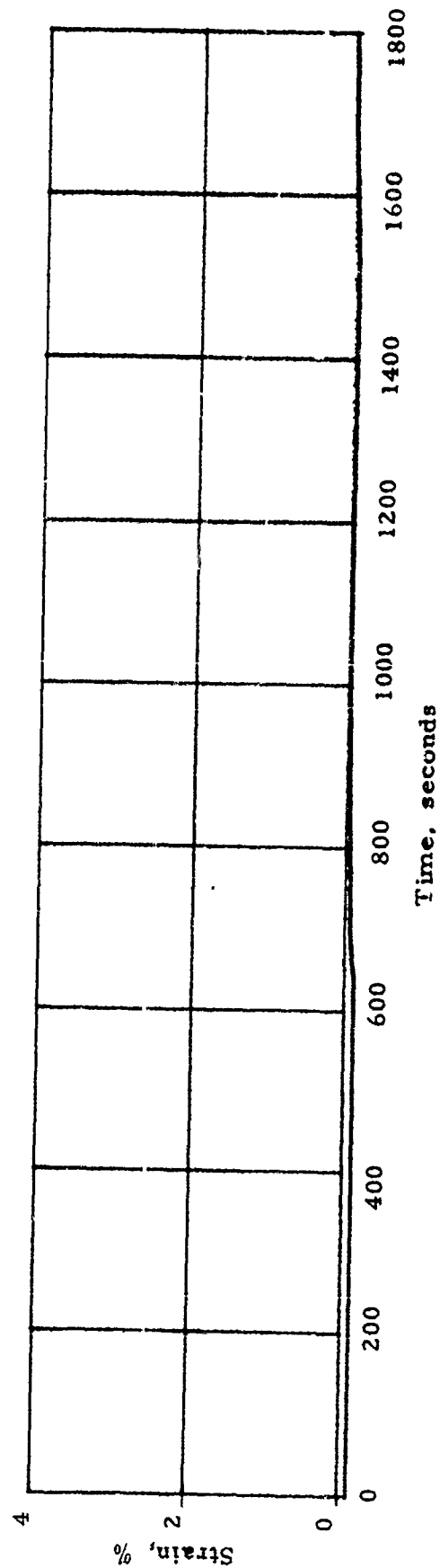
Motor - IM #3
 Test - A-15 (SFPI)
 Gage - C3-20
 Location - Aft
 T_{initial} - -65°F

Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F.



Bore Strain Response to Aeroheat Loads--Gage C3-20

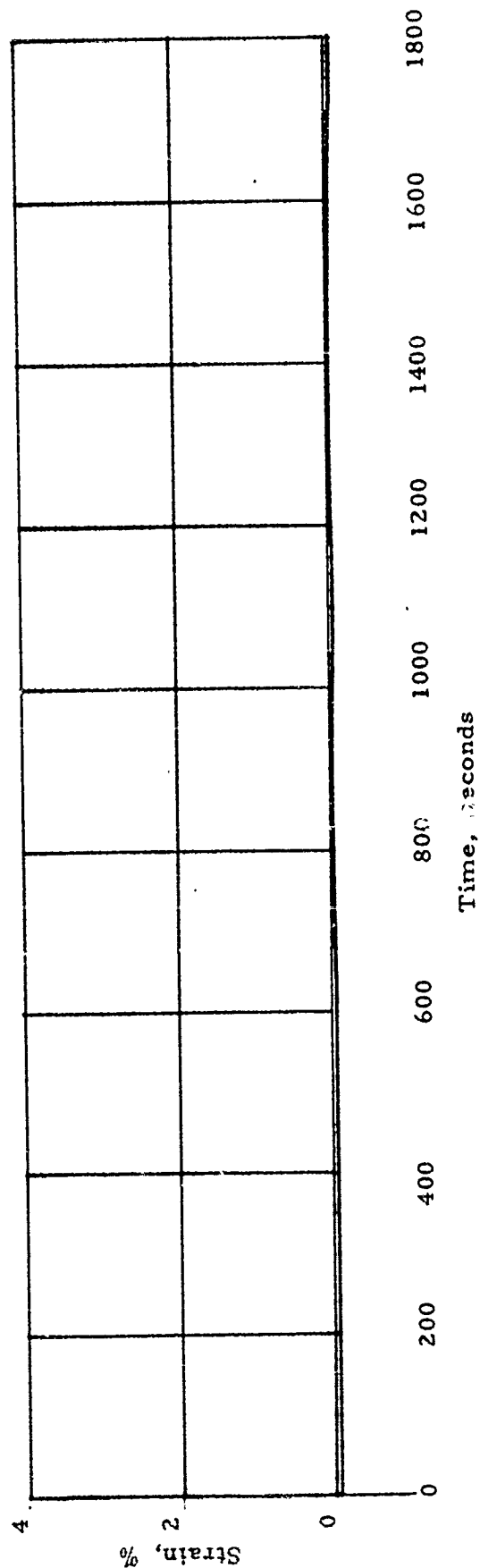
Motor - IM #3
 Test - A-16 (SFPI)
 Gage - C3-20
 Location - Aft
 T_{initial} - -65°F



Bore Strain Response to Aeroheat Loads--Gage C3-20

Motor - IM #3
 Test - A-17 (DMP-3)
 Gage - C3-20
 Location - Aft
 T_{initial} - -65°F

Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F.



Bore Strain Response to Aeroheat Loads--Gage C3-20

UNCLASSIFIED

SECTION C

SALE IM #3 DATA SUMMARY

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Motor Drawing

Test History

Temperature Profile Histories - Tests One through Ten and Twelve

Head End Normal Stress Response - Tests One through Twelve

Mid Motor Stress Response - Tests One through Ten and Twelve

Aft End Normal Stress Response - Tests One through Ten and Twelve

Head End Shear Stress Response (Shear Gages) - Tests One through
Ten and Twelve

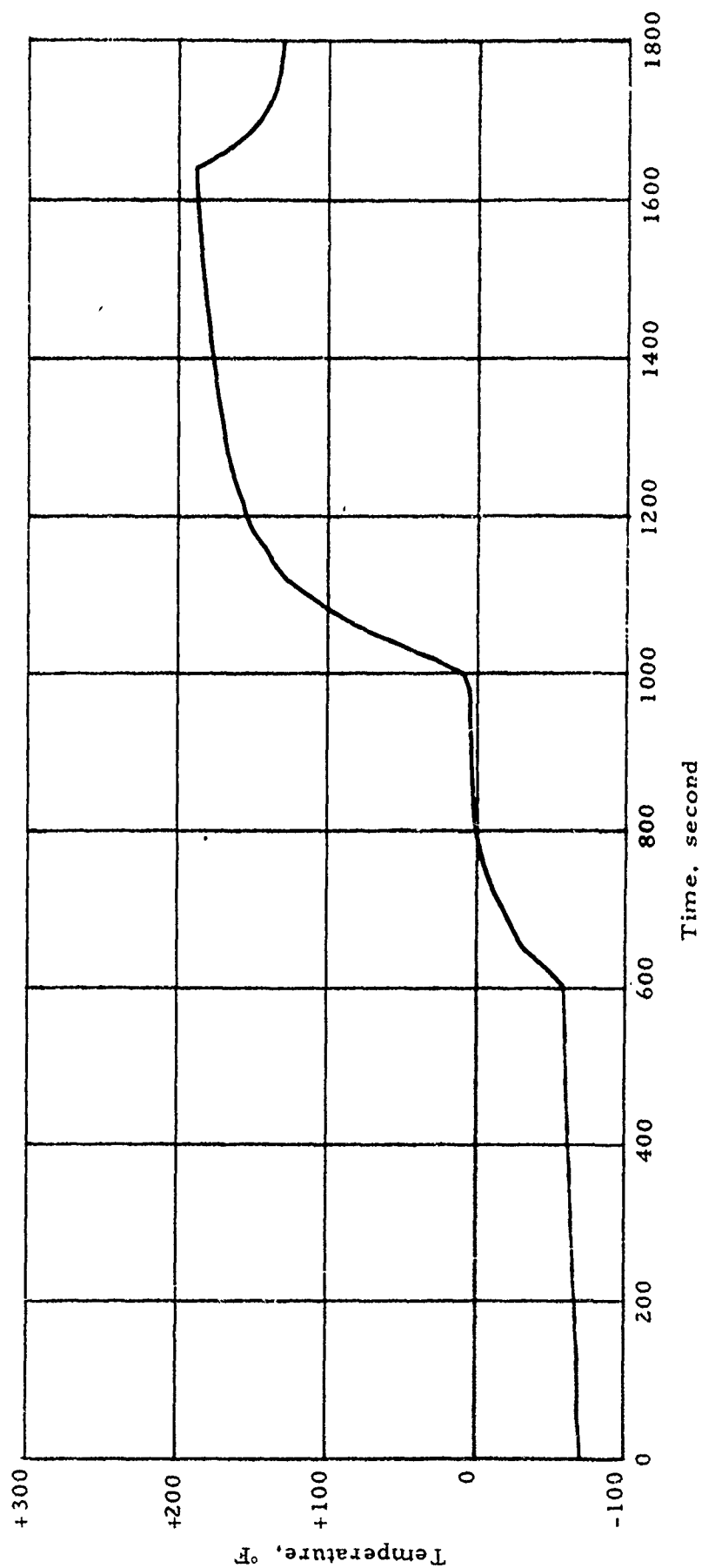
Bore Strain Response (Clip Gages) - Tests One through Ten and
Twelve

UNCLASSIFIED

TEST CHRONOLOGY OF IM #1

<u>Test</u>	<u>Test Dates</u>	<u>Aeroheat Mission</u>	<u>Initial Motor Temperature, °F</u>
A-1	74 Feb 05 (1500 hrs)	DMP-3	-65
A-2	74 Feb 07 (1510 hrs)	DMP-3	-65
A-3	74 Feb 08 (1310 hrs)	HSMH	-65
A-4	74 Feb 11 (1050 hrs)	SFPI	0
A-5	74 Feb 12 (1500 hrs)	SFPI	-40
A-6	74 Feb 13 (1440 hrs)	DMP-3	-65
A-7	74 Feb 14 (1230 hrs)	SFPI	-65
A-8	74 Feb 15 (1440 hrs)	SFPI	-65
A-9	74 Feb 19 (1300 hrs)	SFPI	-65
A-10	74 Feb 20 (1240 hrs)	SFPI	-65
A-11	74 Feb 21 (1330 hrs)	SFPI	-65
A-12	74 Feb 22 (1050 hrs)	DMP-3	-65

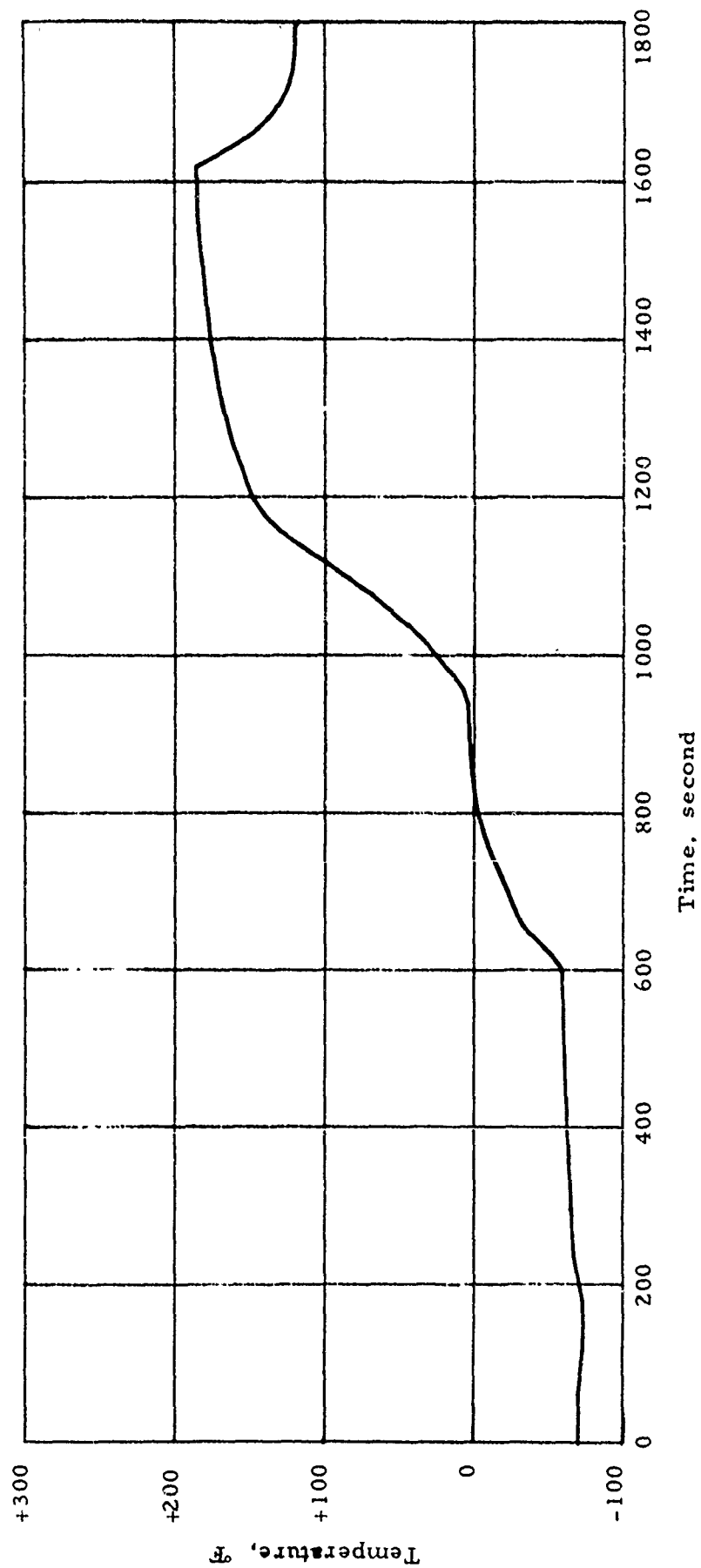
Motor - IM #1
 Test - A-1(DMP-3)
 Gage - TM-5
 Location - Center
 T_{initial} - -65°F



Temperature Profile

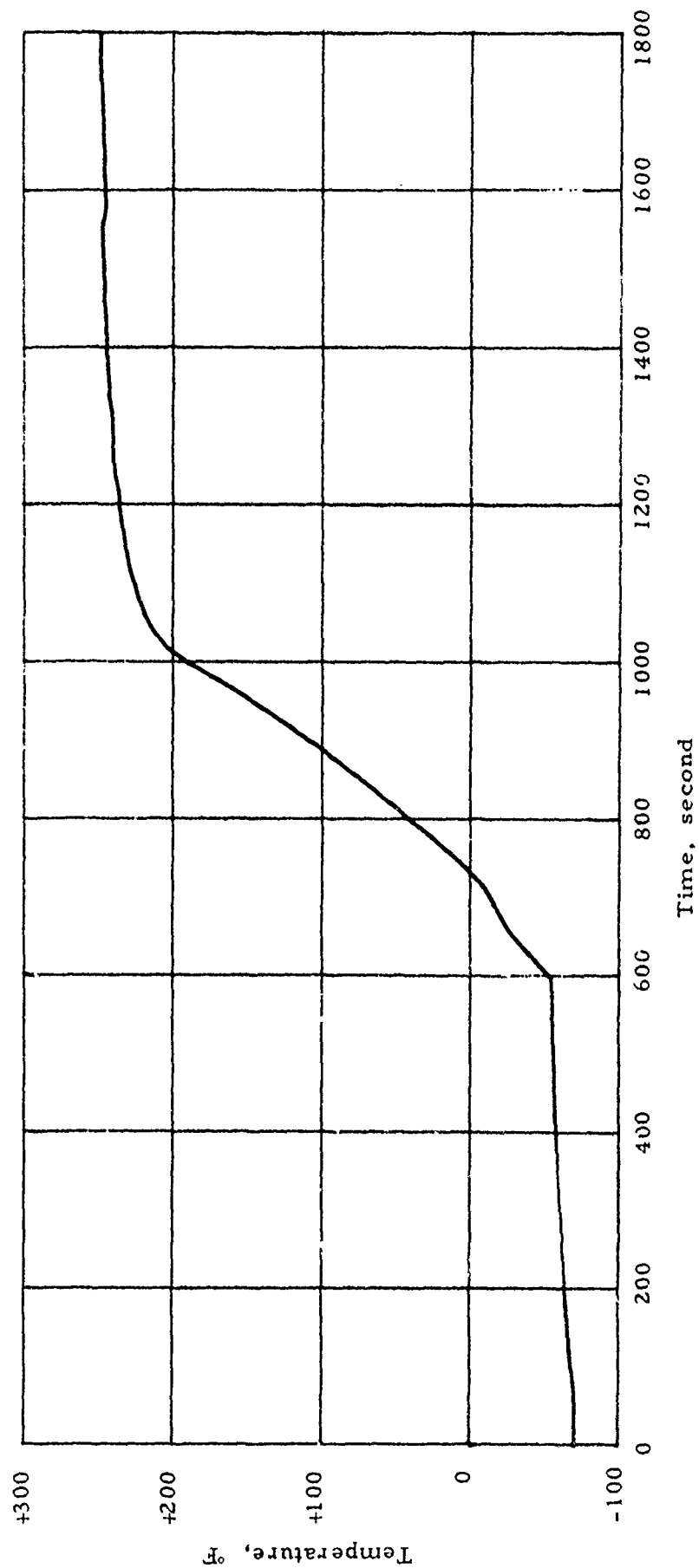
Motor
Test
Gage
Location
 $T_{initial}$

- IM #1
- A-2 (DMP-3)
- TM-5.
- Center
- -65°F



Temperature Profile

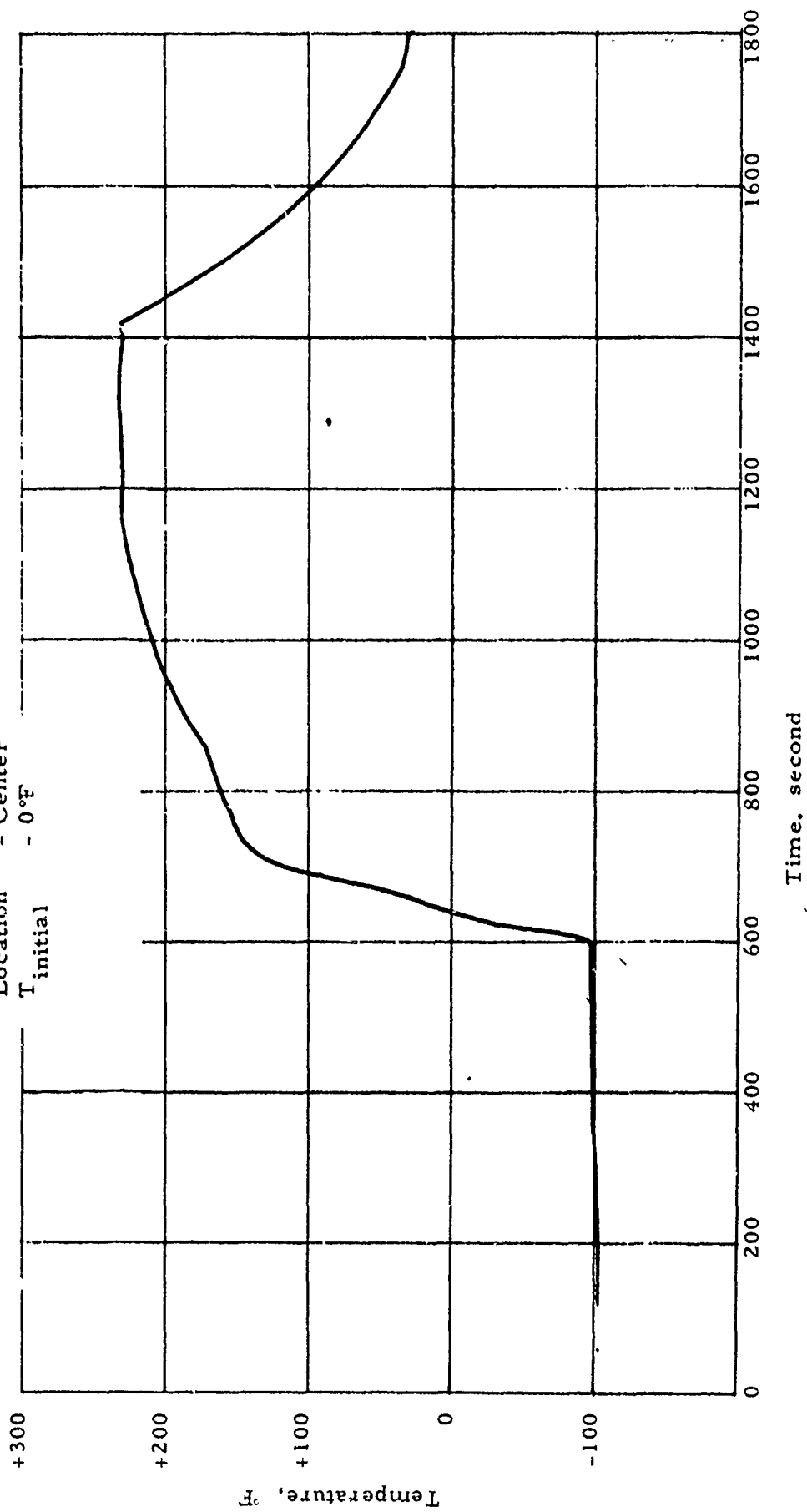
Motor - IM #1
 Test - A-3 (HSMH)
 Gage - TM-5
 Location - Center
 T_{initial} - -65°F



Temperature Profile

Motor
Test
Gage
Location
T_{initial}

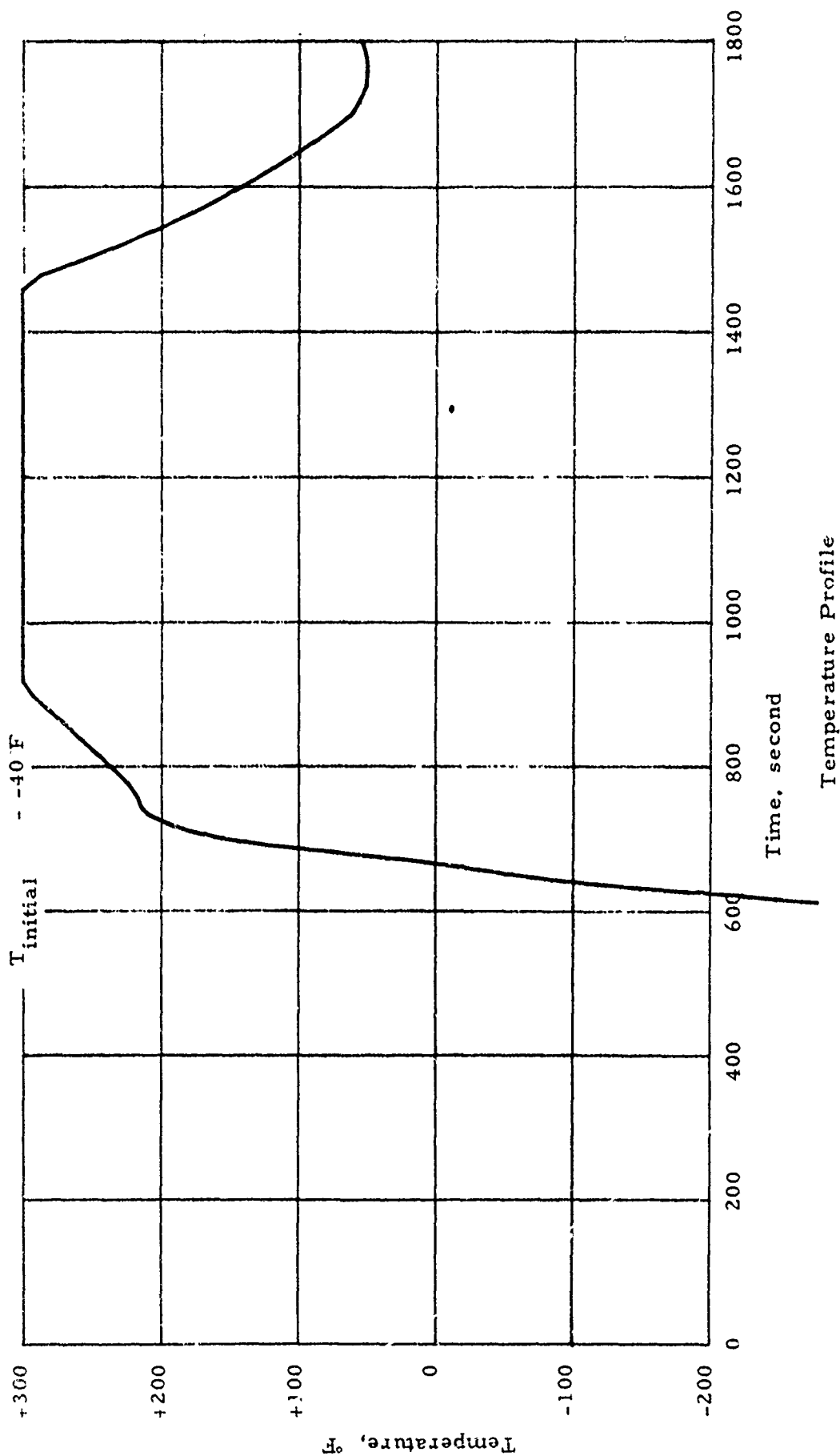
- IM #1
- A-4 (SFPI)
- TM-5
- Center
- 0°F



Temperature Profile

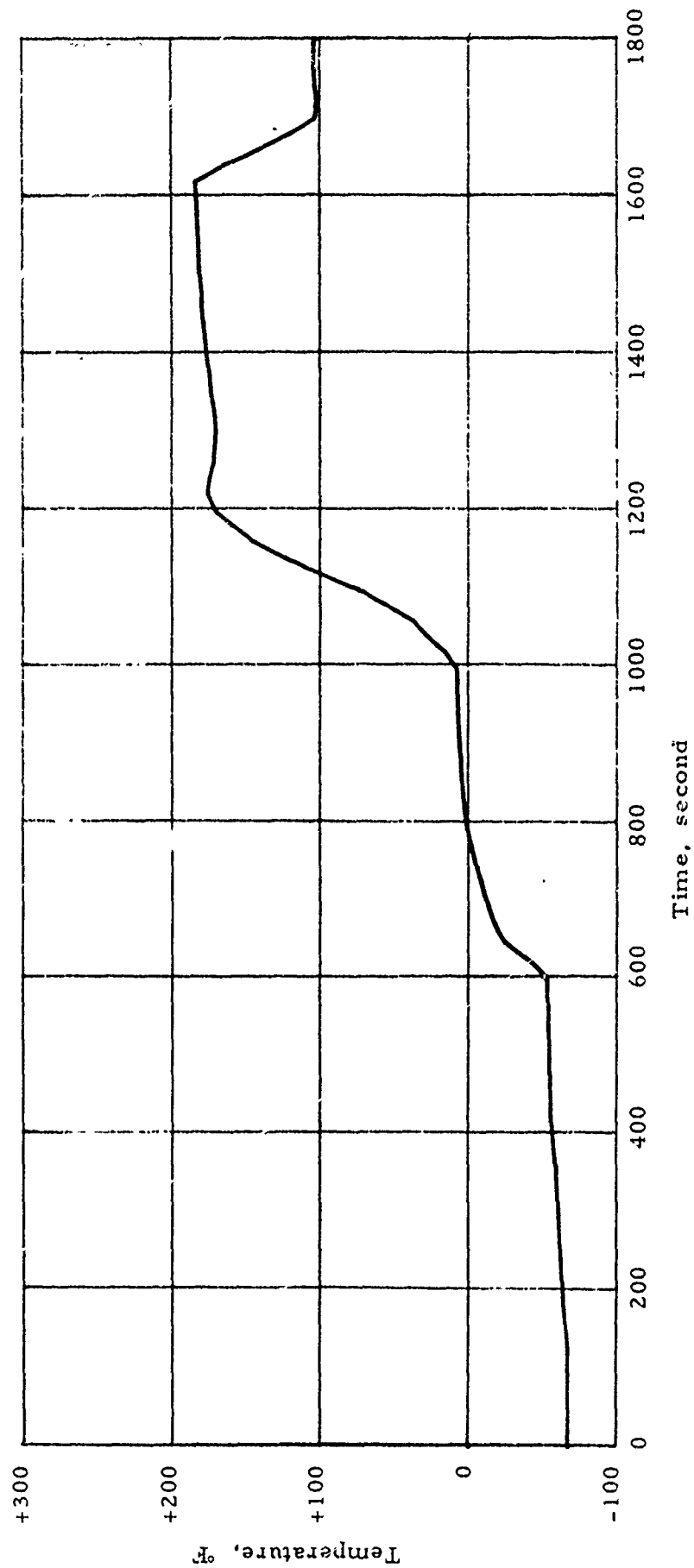
Motor
Test
Gage
Location
T_{initial}

- IM #1
- A-5 (SFPI)
- TM-5
- Center
- -40 F



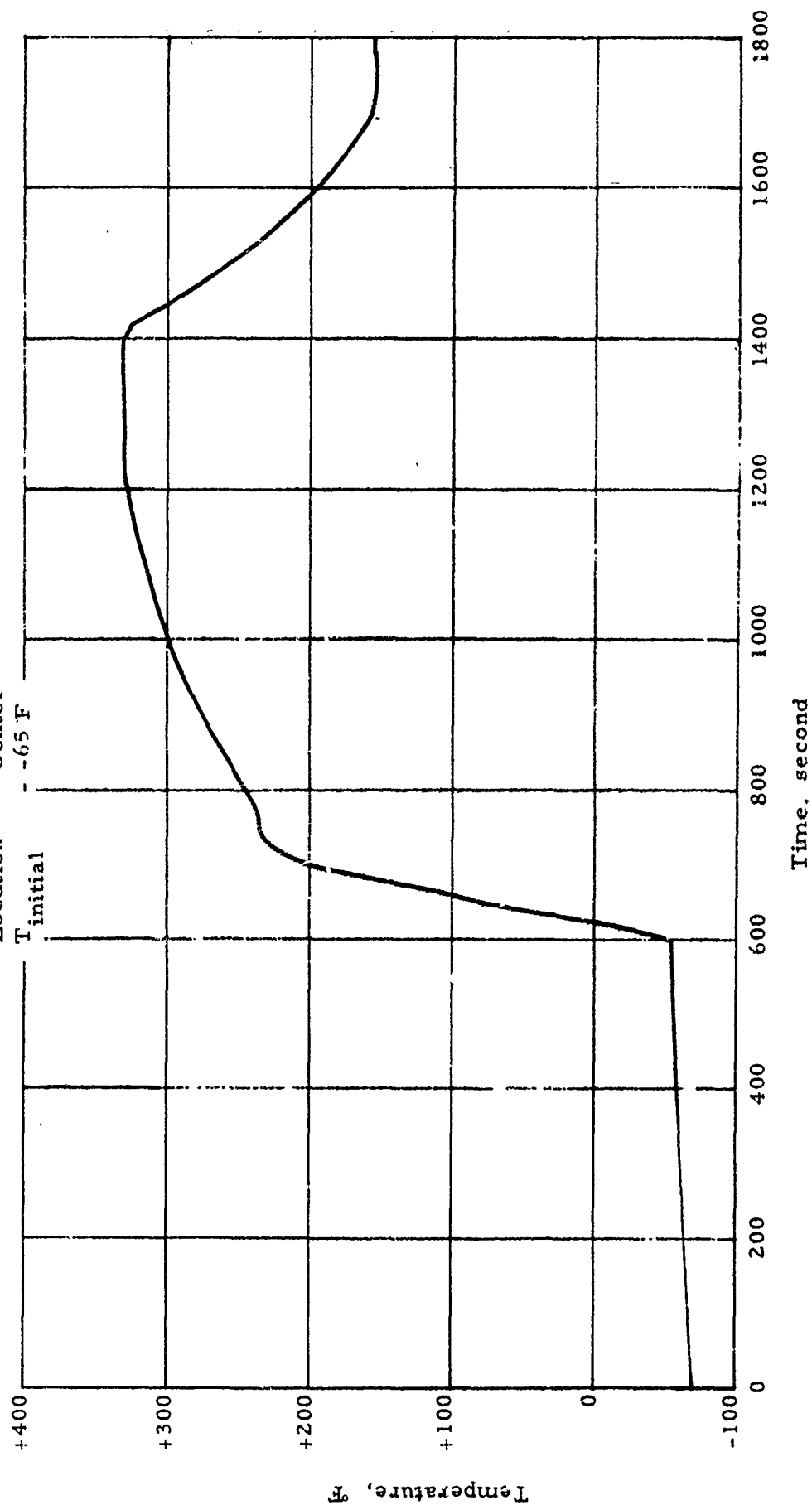
Motor
 Test
 Gage
 Location
 $T_{initial}$

- IM #1
 - A-6 (DMP-3)
 - IM-5
 - Center
 - -65°F



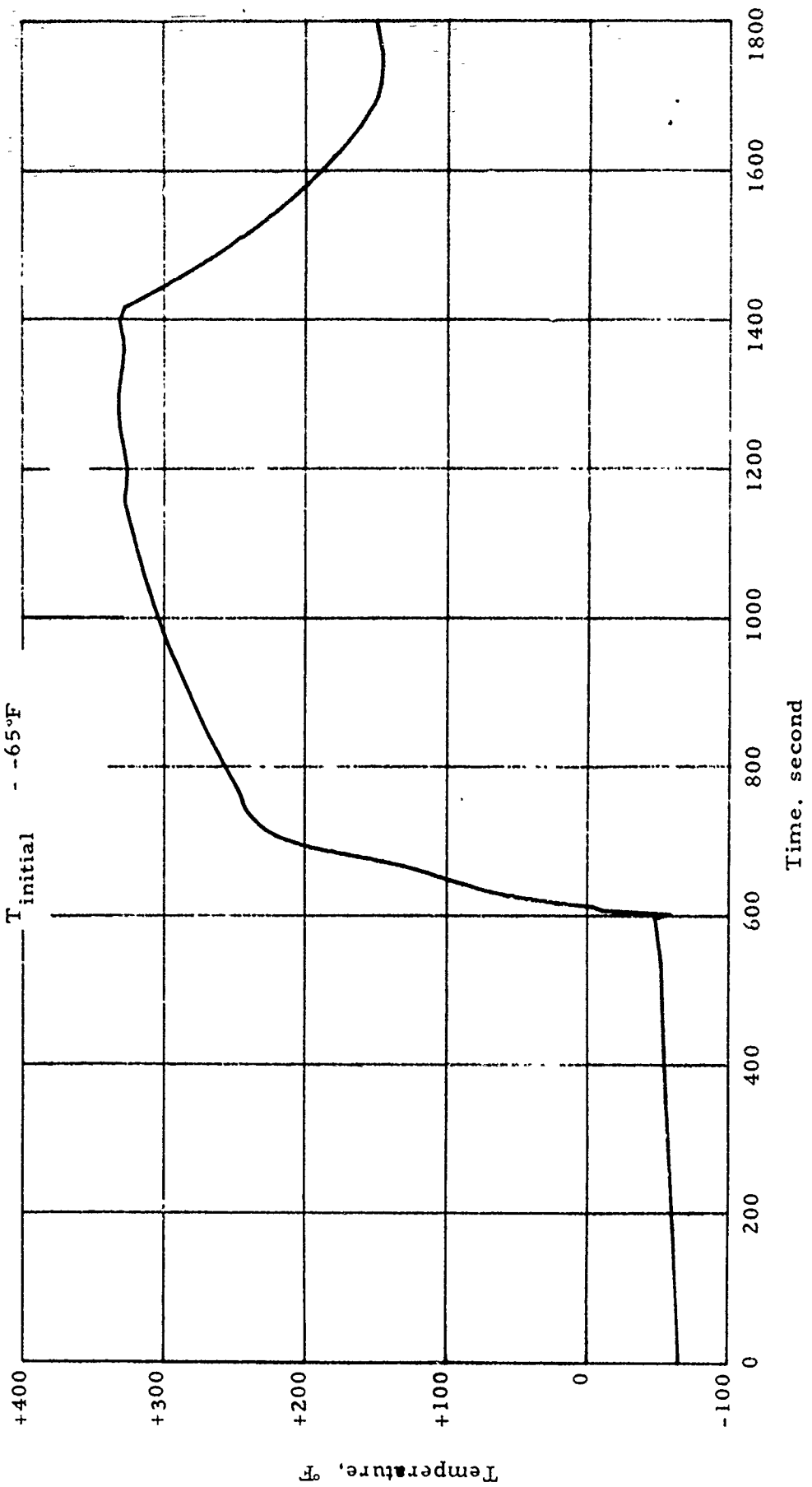
Temperature Profile

Motor - IM #1
 Test - A-7 (SFPI)
 Gage - TM-5
 Location - Center
 T initial - -65 F



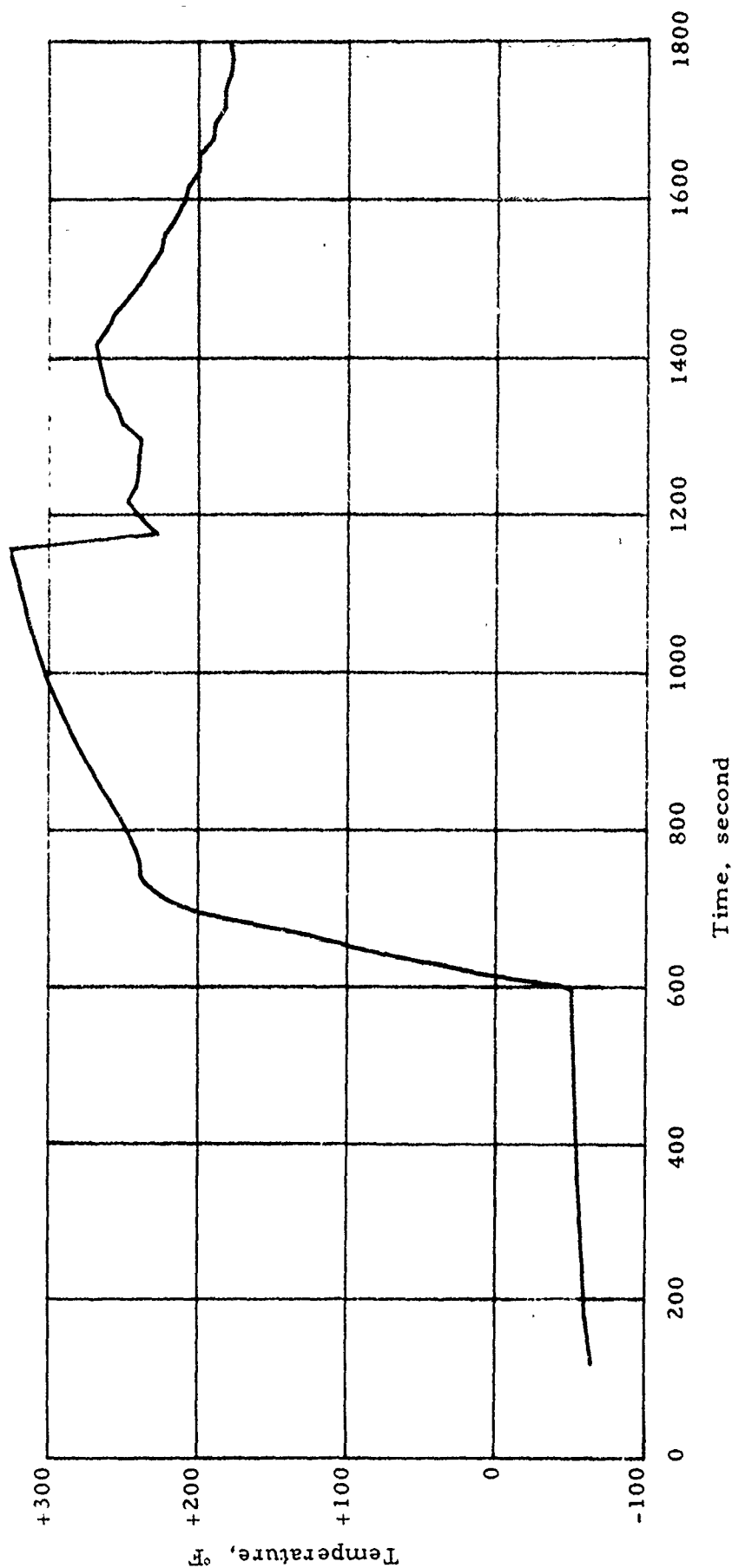
Temperature Profile

Motor - IM #1
 Test - A-8 (SFPI)
 Gage - TM-5
 Location - Center
 T_{initial} - -65°F



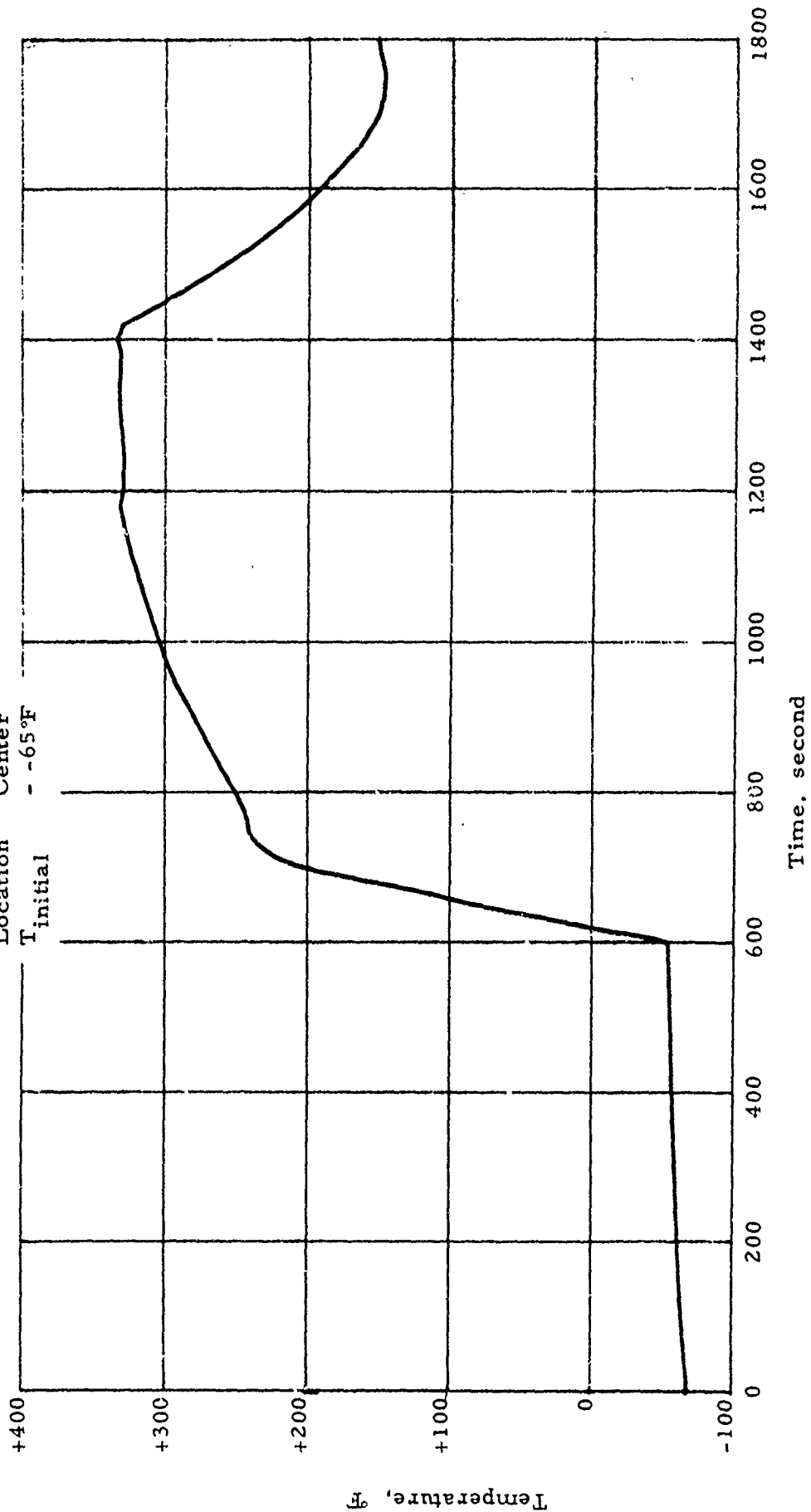
Temperature Profile

Motor - IM #1
 Test - A-9 (SFPI)
 Gage - 1M-5
 Location - Center
 T_{initial} - -65°F



Temperature Profile

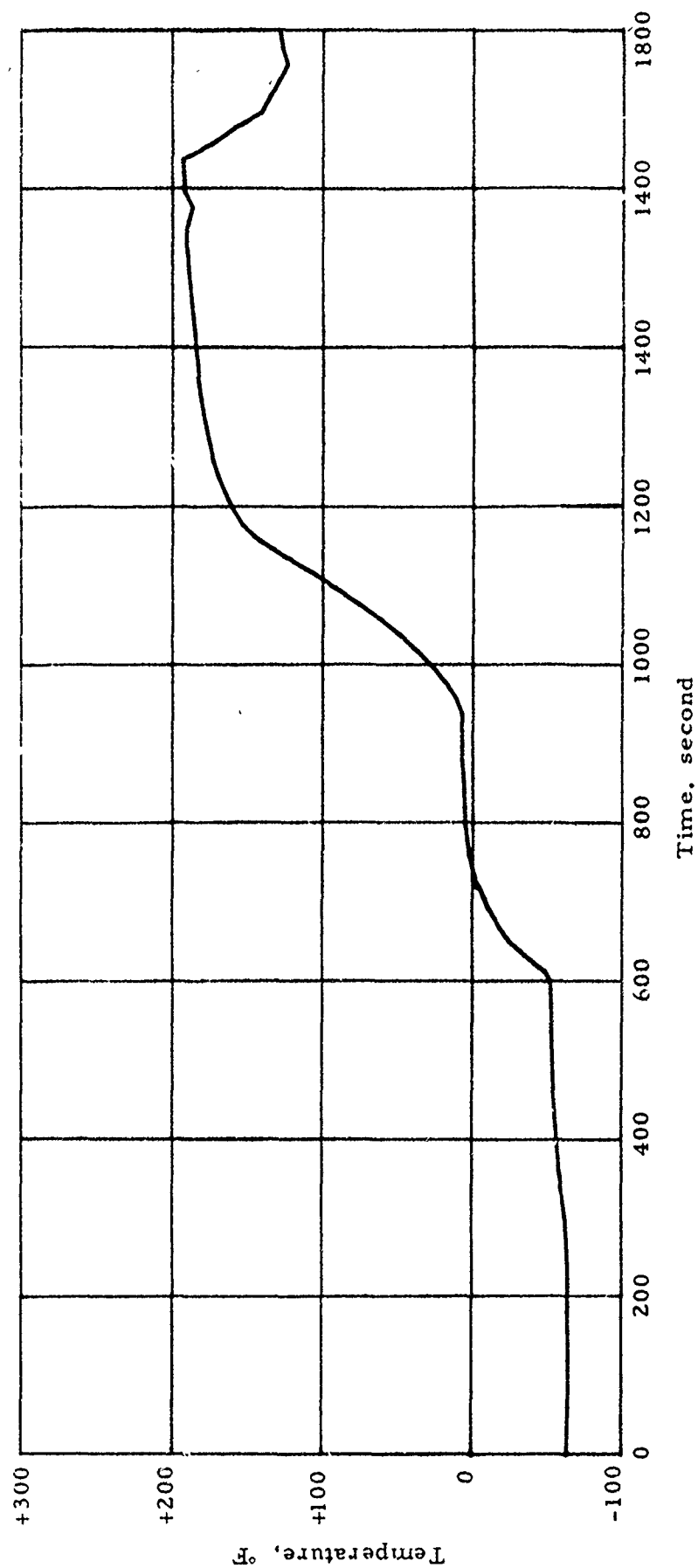
Motor - IM #1
 Test - A-10 (SFPI)
 Gage - TM-5
 Location Center
 T_{initial} - -65°F



Temperature Profile

Motor
 Test
 Gage
 Location
 T_{initial}

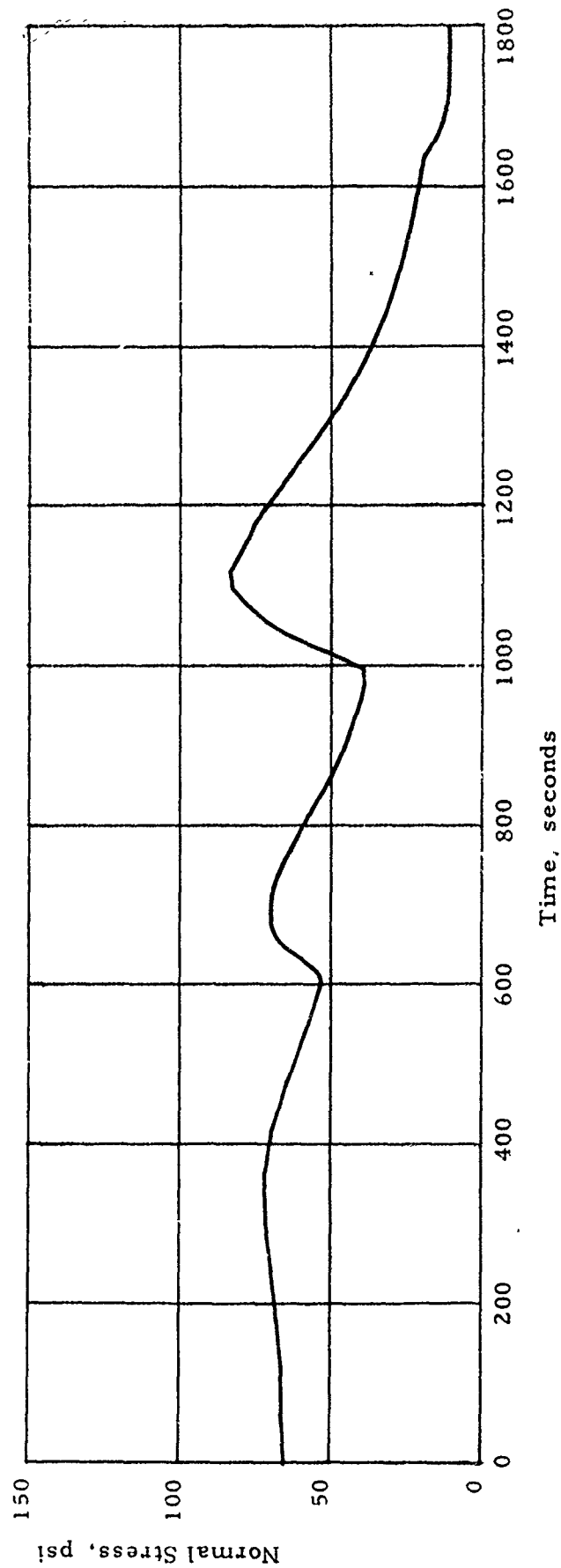
- IM #1
 - A-12 (DMP-3)
 - TM-6
 - Center
 - -65°F



Temperature Profile

Motor - IM #1
 Test - A-1 (DMP-3)
 Gage - N1-50
 Location - Fwd
 T_{initial} - -65°F

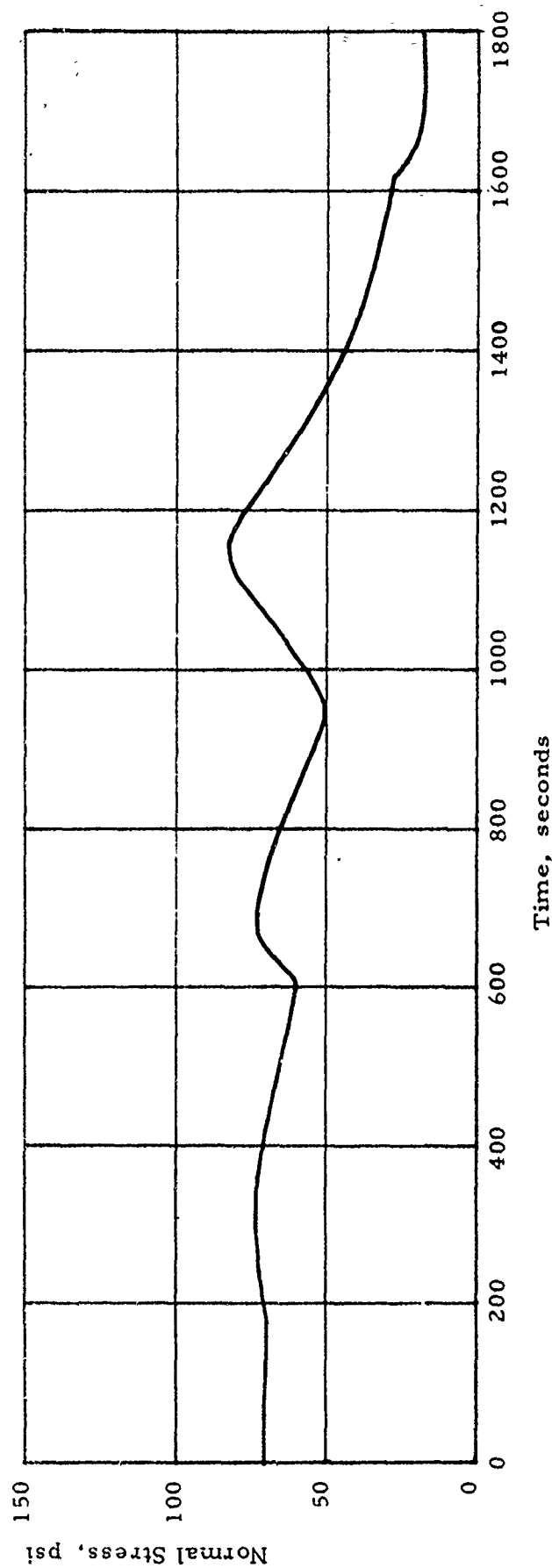
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Head End Normal Stress Response to Aeroheat Loads - Gage N1-50 (Test No. A-1)

Motor - IM #1
 Test - A-2 (DMP-3)
 Gage - NI-50
 Location - Fwd
 T_{initial} - -65°F

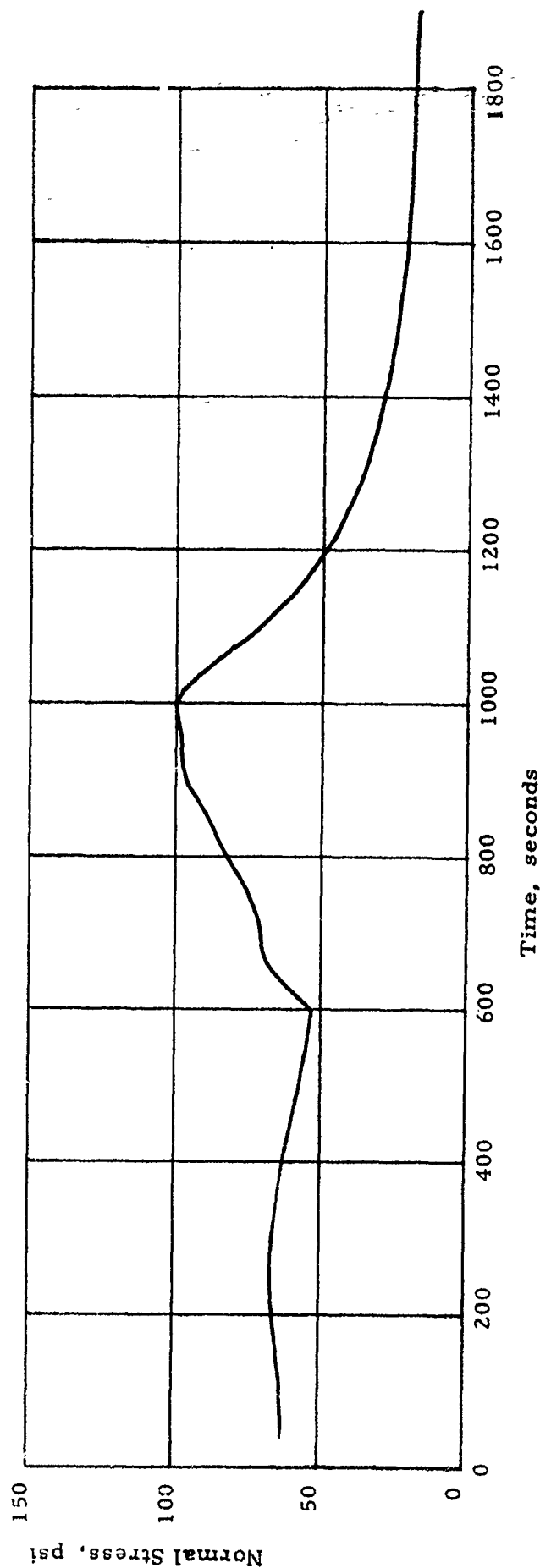
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Head End Normal Stress Response to Aeroheat Loads - Gage NI-50 (Test No. A-2)

Motor - IM #1
 Test - A-3 (HSMH)
 Gage - N1-50
 Location - Fwd
 T_{initial} - -65°F

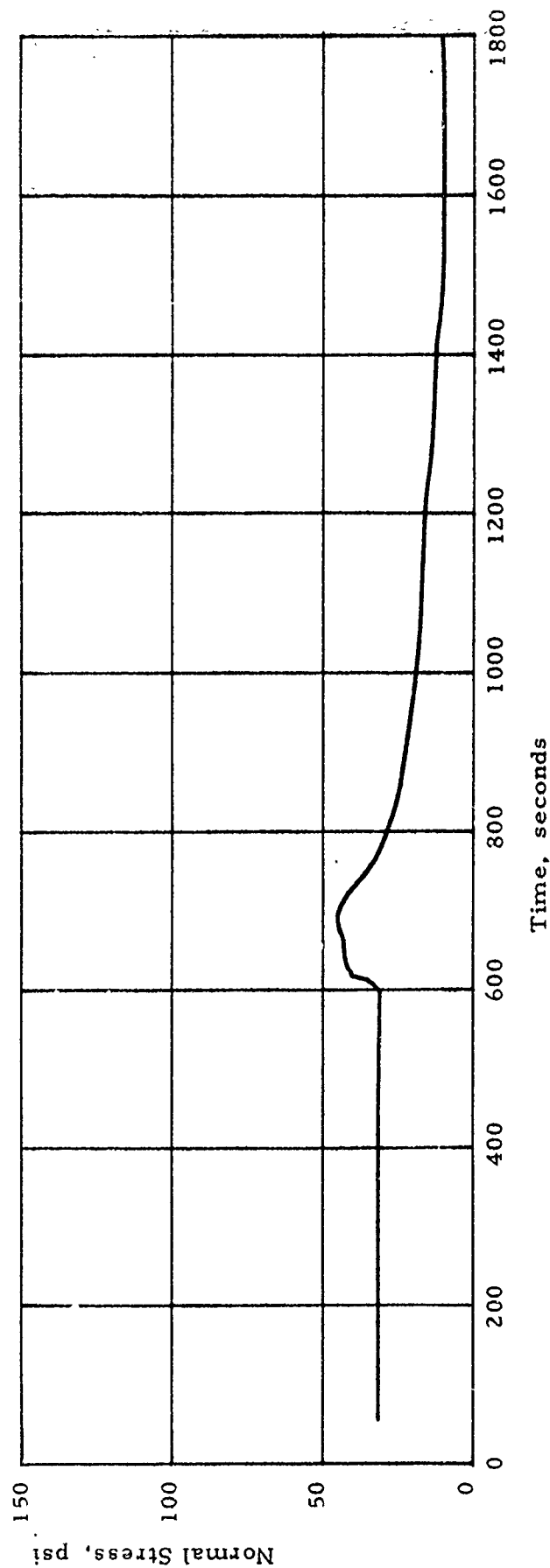
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Head End Normal Stress Response to Aeroheat Loads - Gage N1-50 (Test No. A-3)

Motor - IM #1
 Test - A-4 (SFPI)
 Gage - N1-50
 Location - Fwd
 T_{initial} - 0°F

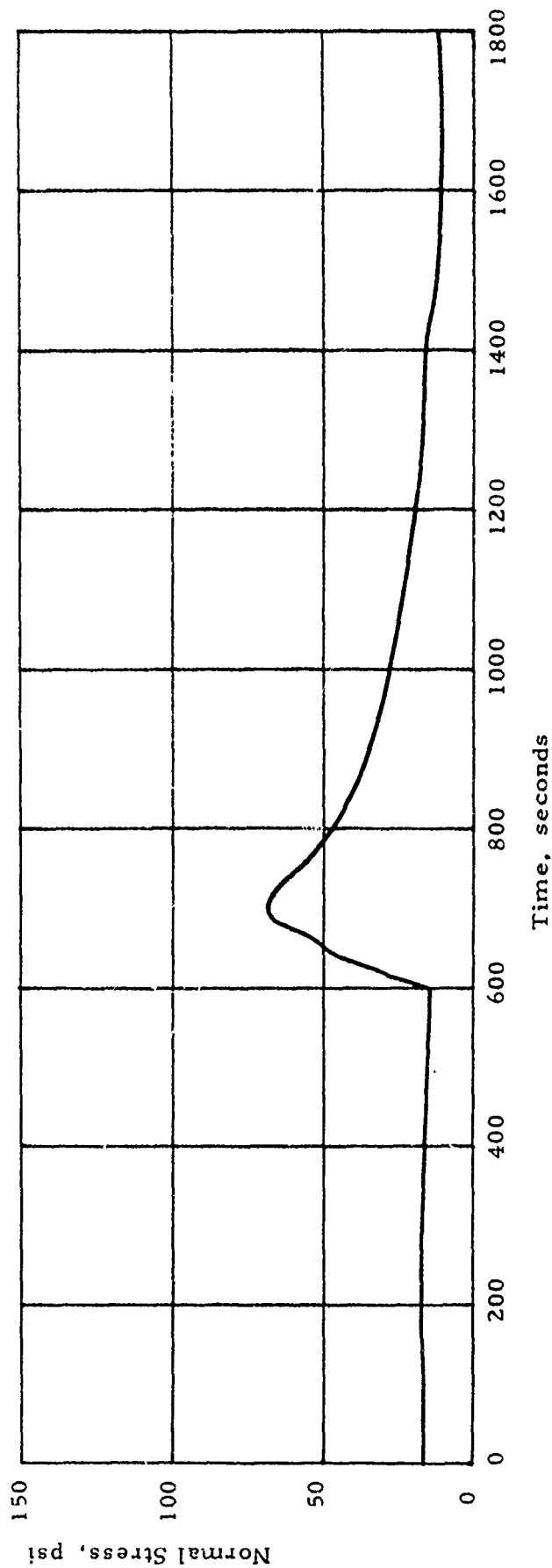
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of + 170°F



Head End Normal Stress Response to Aeroheat Loads - Gage N1-50 (Test No. A-4)

Motor - IM #1
 Test - A-5 (SFPI)
 Gage - N1-50
 Location - Fwd
 T_{initial} - -40°F

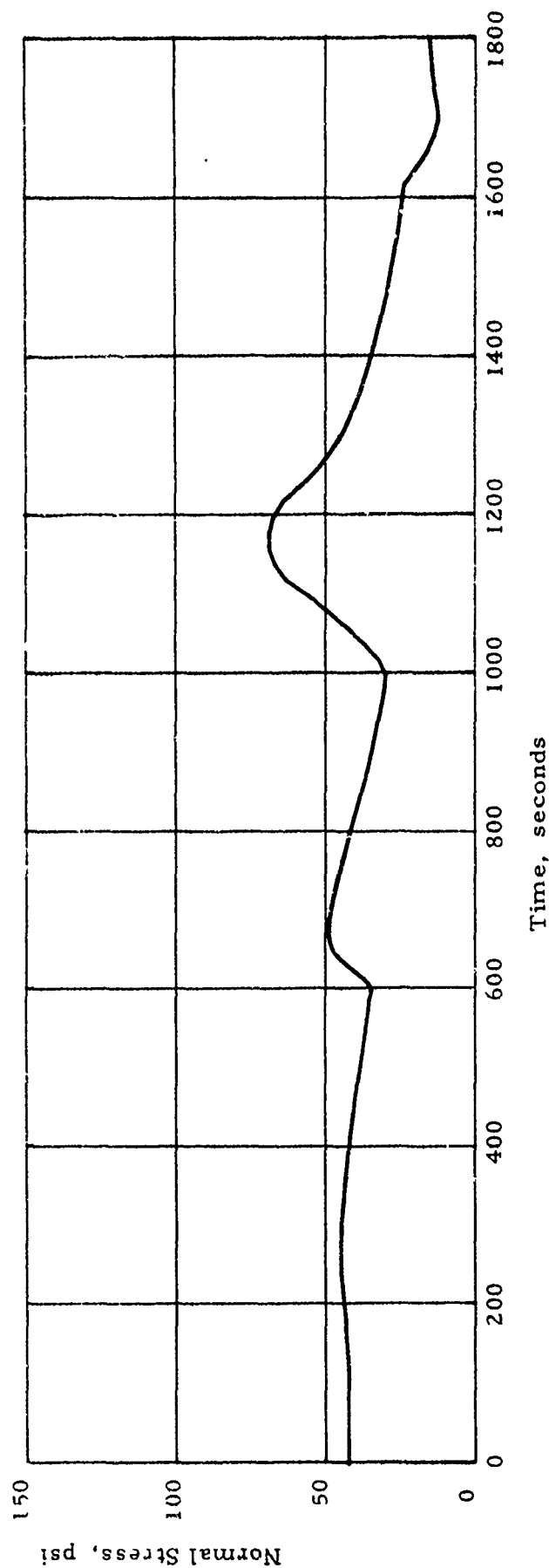
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Head End Normal Stress Response to Aeroheat Loads - Gage N1-50 (Test No. A-5)

Motor - IM #1
 Test - A-6 (DMP-3)
 Gage - N1-50
 Location - Fwd
 T_{initial} - -65°F

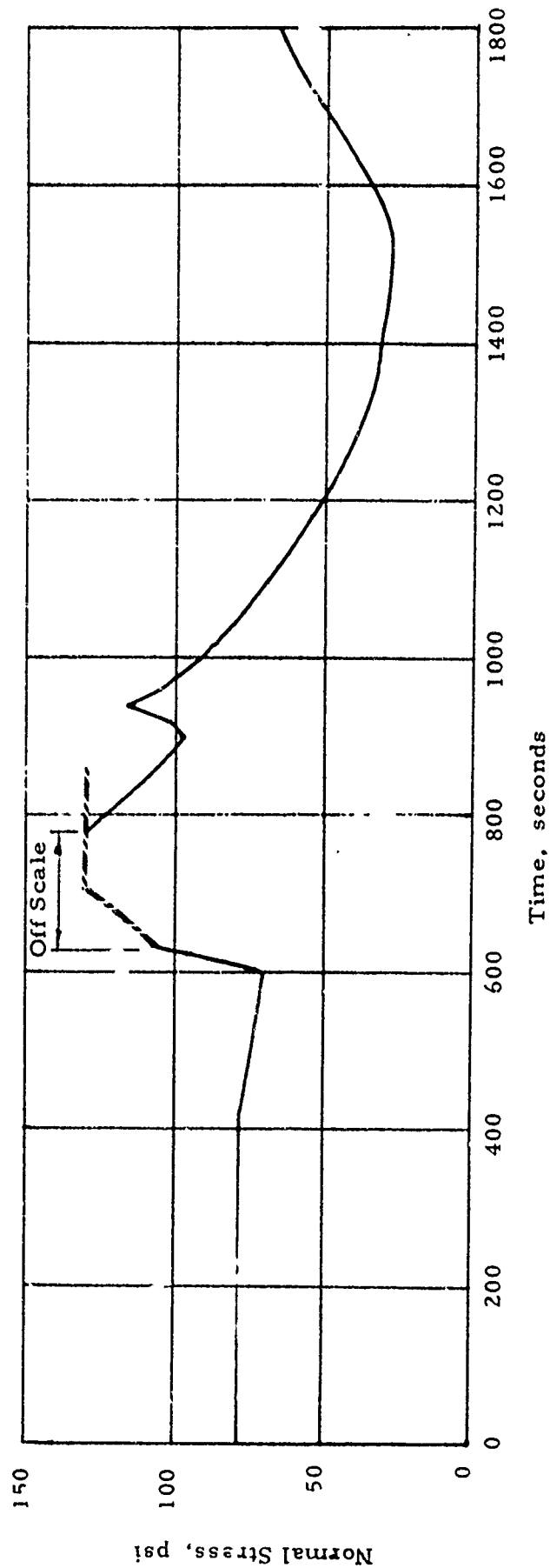
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Head End Normal Stress Response to Aeroheat Loads - Gage N1-50 (Test No. A-6)

Motor - IM #1
 Test - A-7 (SFPI)
 Gage - N1-50
 Location - Fwd
 T_{initial} - -65°F

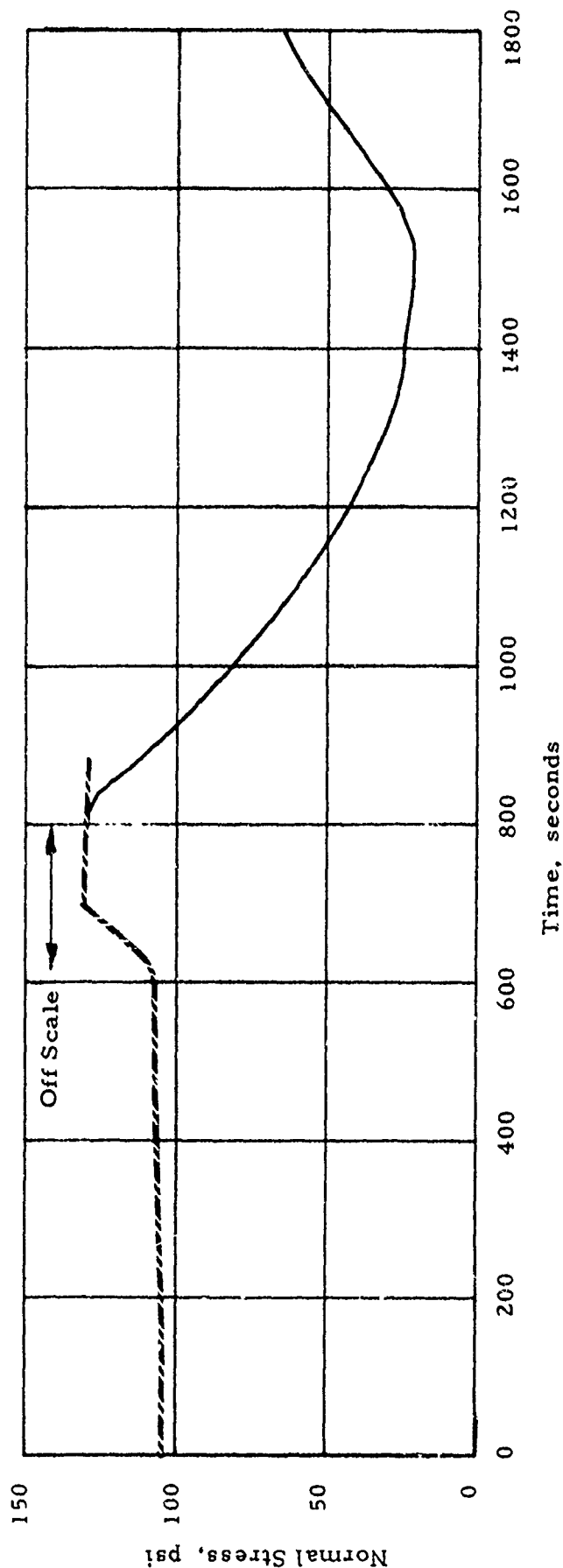
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Head End Normal Stress Response to Aeroheat Loads - Gage N1-50 (Test No. A-7)

Motor - IM #1
 Test - A-8 (SFPI)
 Gage - N1-50
 Location - Fwd
 T_{initial} - -65°F

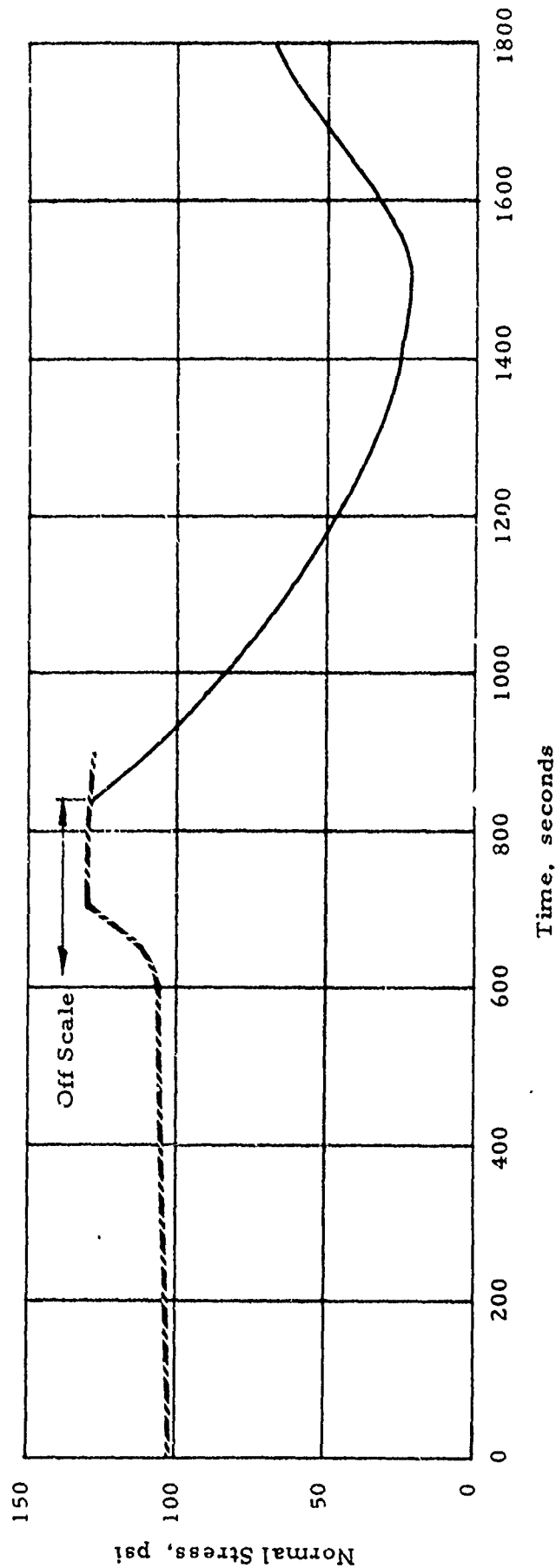
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Head End Normal Stress Response to Aeroheat Loads - Gage N1-50 (Test No. A-8)

Motor - IM #1
 Test - A-9 (SFPI)
 Gage - N1-50
 Location - Fwd
 T_{initial} - -65°F

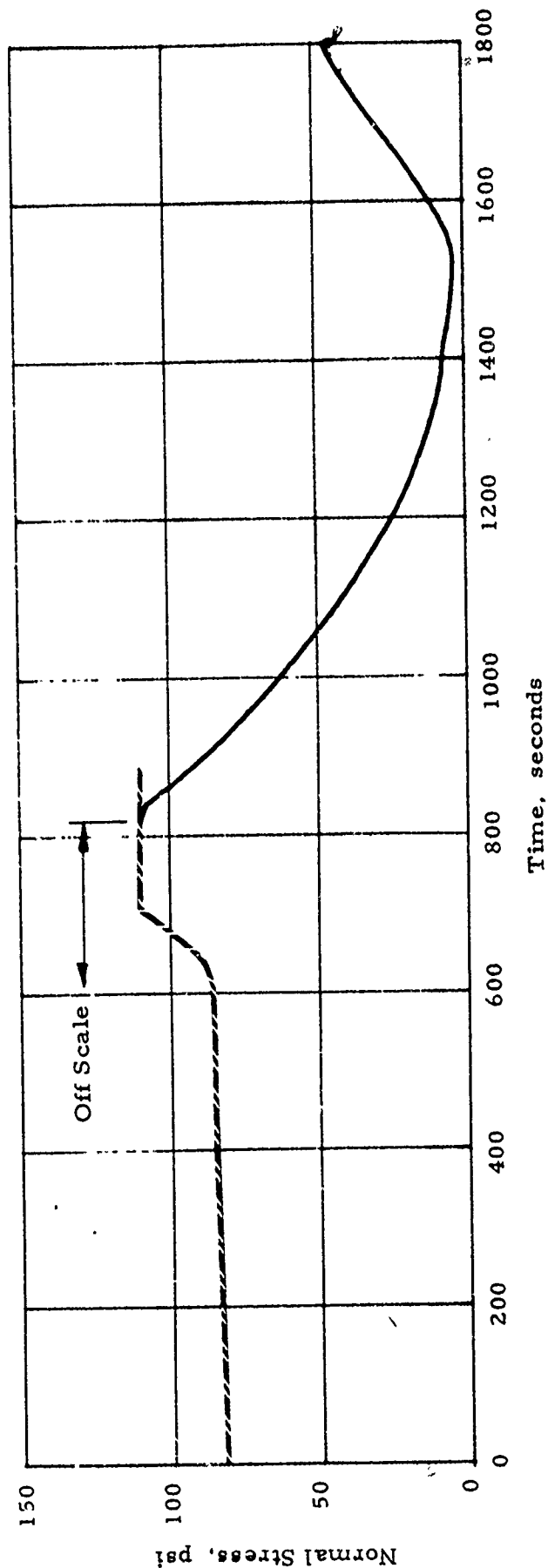
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Head End Normal Stress Response to Aeroheat Loads - Gage N1-50 (Test No. A-9)

Motor - IM #1
 Test - A-10 (SFPI)
 Gage - N1-50
 Location - Fwd
 T_{initial} - -65°F

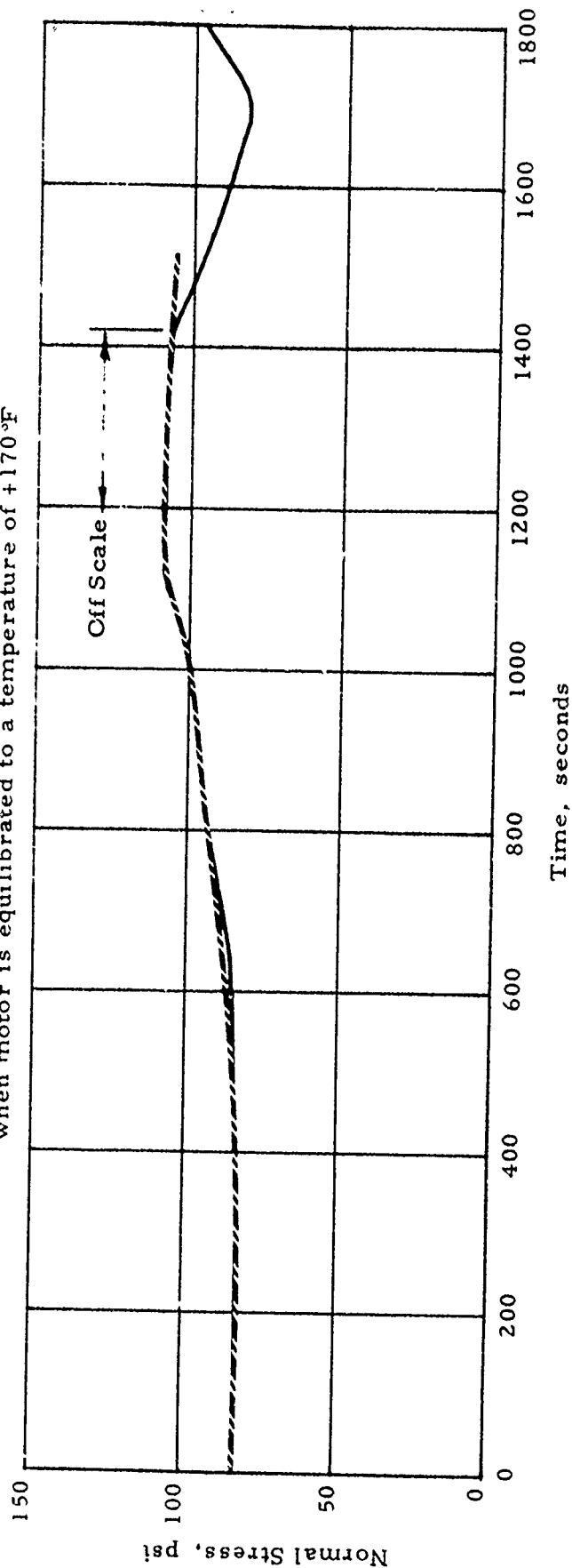
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Head End Normal Stress Response to Aeroheat Loads - Gage N1-50 (Test No. A-10)

Motor - IM #1
 Test - A-12 (DMP-3)
 Gage - N1-50
 Location - Fwd
 T_{initial} - -65°F

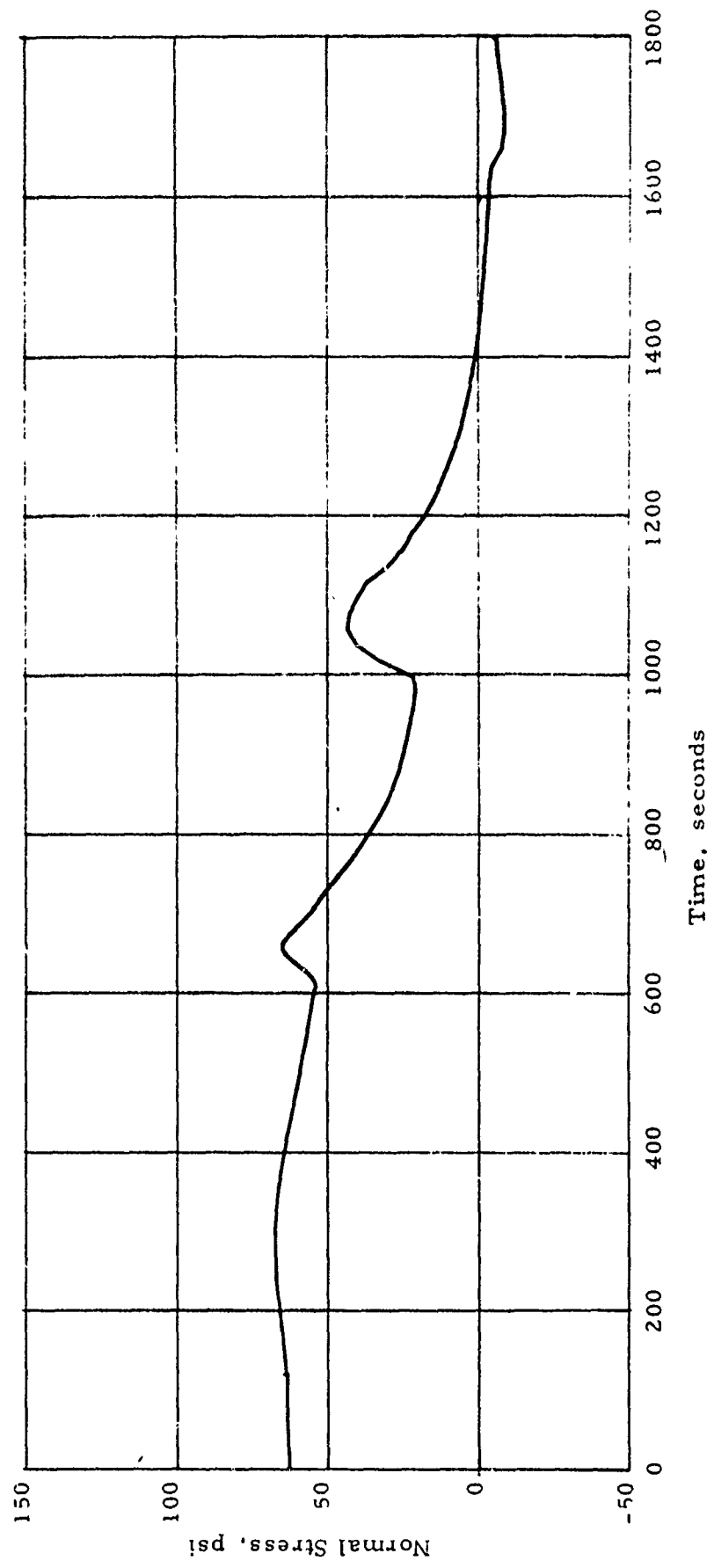
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Head End Normal Stress Response to Aeroheat Loads - Gage N1-50 (Test No. A-12)

Motor - IM #1
 Test - A-1 (DMP-3)
 Gage - N1-40
 Location - Center
 T_{initial} - -65°F

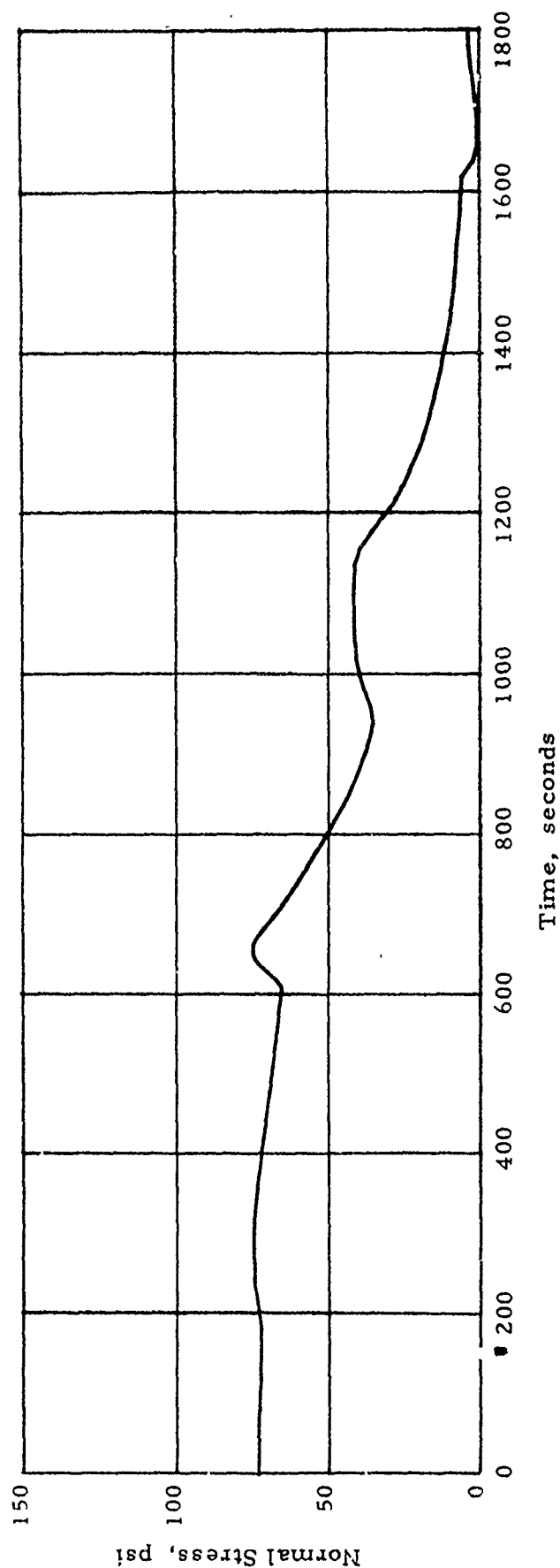
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Mid Motor Stress Response to Aeroheat Loads - Gage N1-40 (Test No. A-1)

Motor - IM #1
 Test - A-2 (DMP-3)
 Gage - N1-40
 Location - Center
 T_{initial} - -65°F

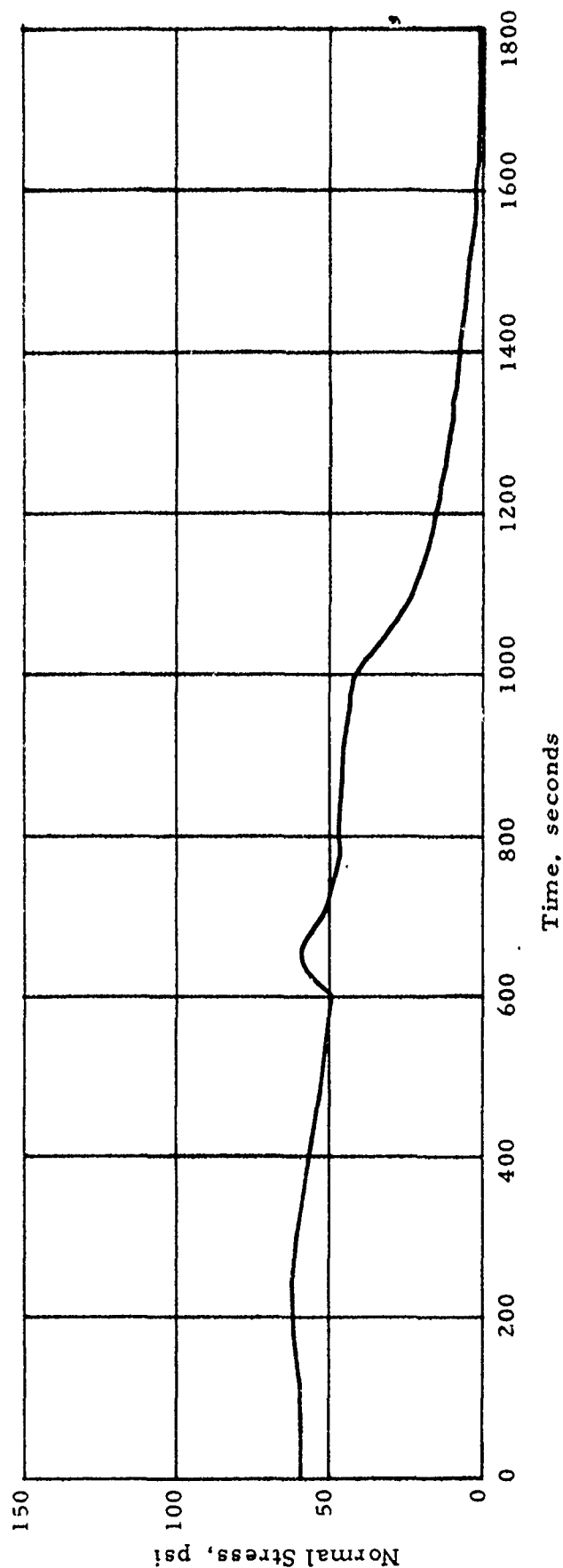
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Mid Motor Stress Response to Aeroheat Loads - Gage N1-40 (Test No. A-2)

Motor - IM #1
 Test - A-3 (HSMH)
 Gage - N1-40
 Location - Center
 T_{initial} - -65°F

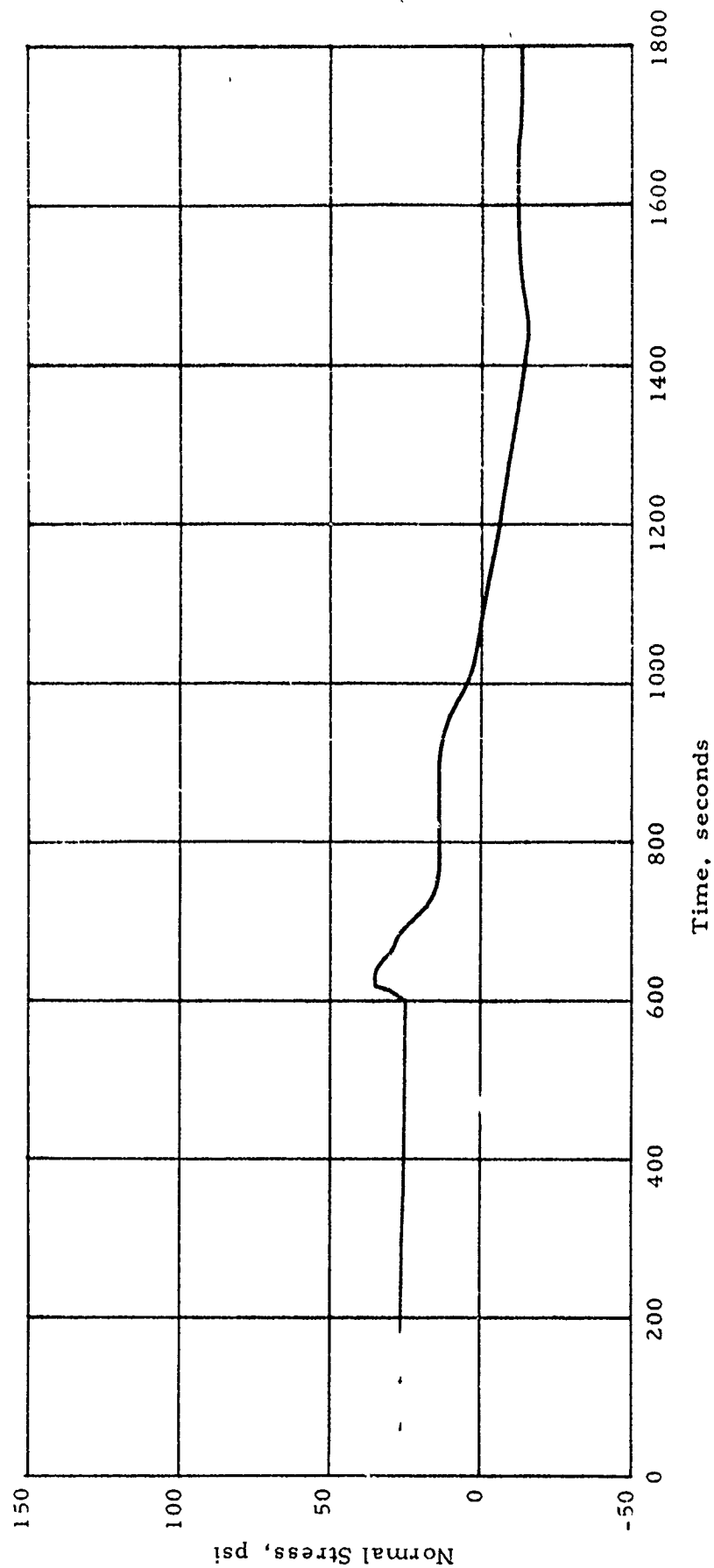
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Mid Motor Stress Response to Aeroheat Loads - Gage N1-40 (Test No. A-3)

Motor - IM #1
 Test - A-4 (SFPI)
 Gage - N1-40
 Location - Center
 T_{initial} - 0°F

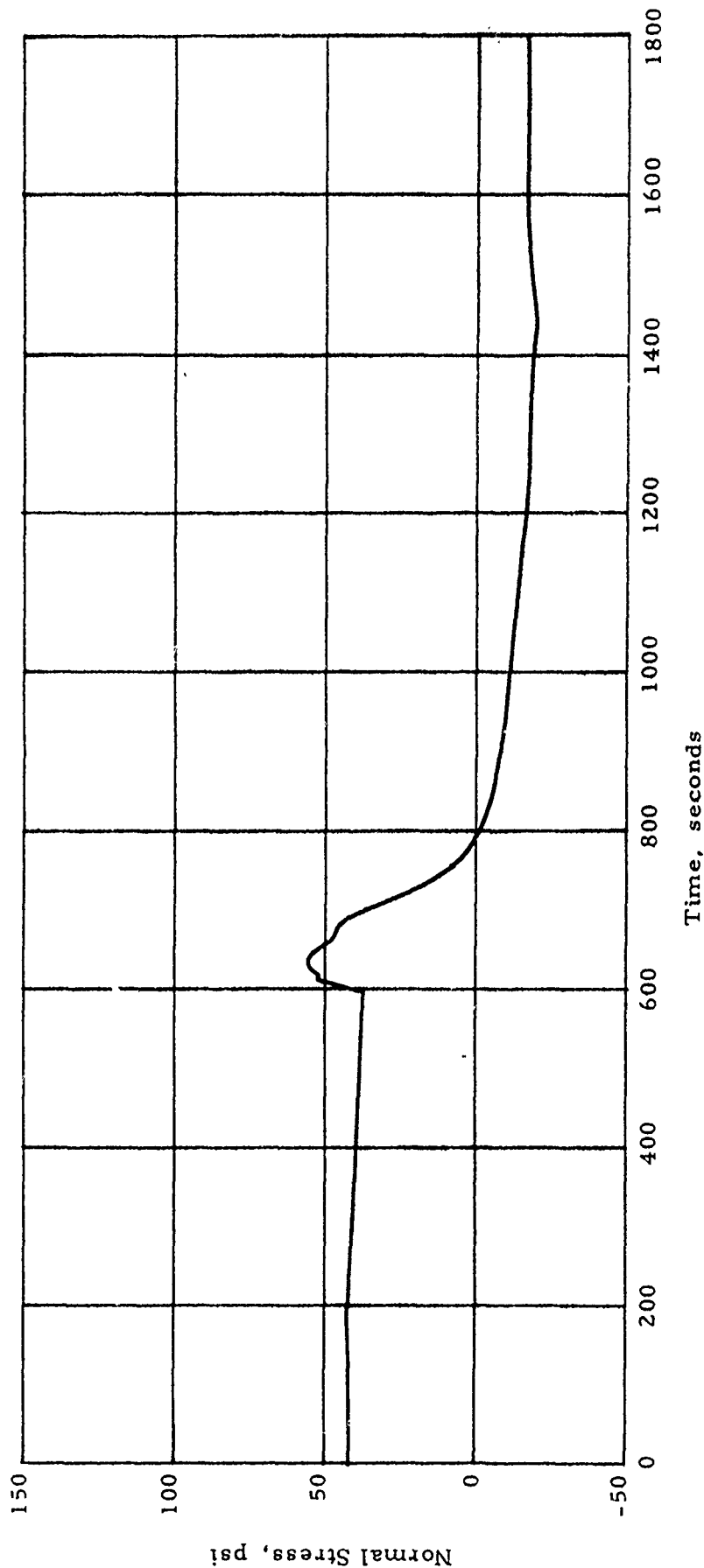
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Mid Motor Stress Response to Aeroheat Loads - Gage N1-40 (Test No. A-4)

Motor - IM #1
 Test - A-5 (SFPI)
 Gage - N1-40
 Location - Center
 T_{initial} - -40°F

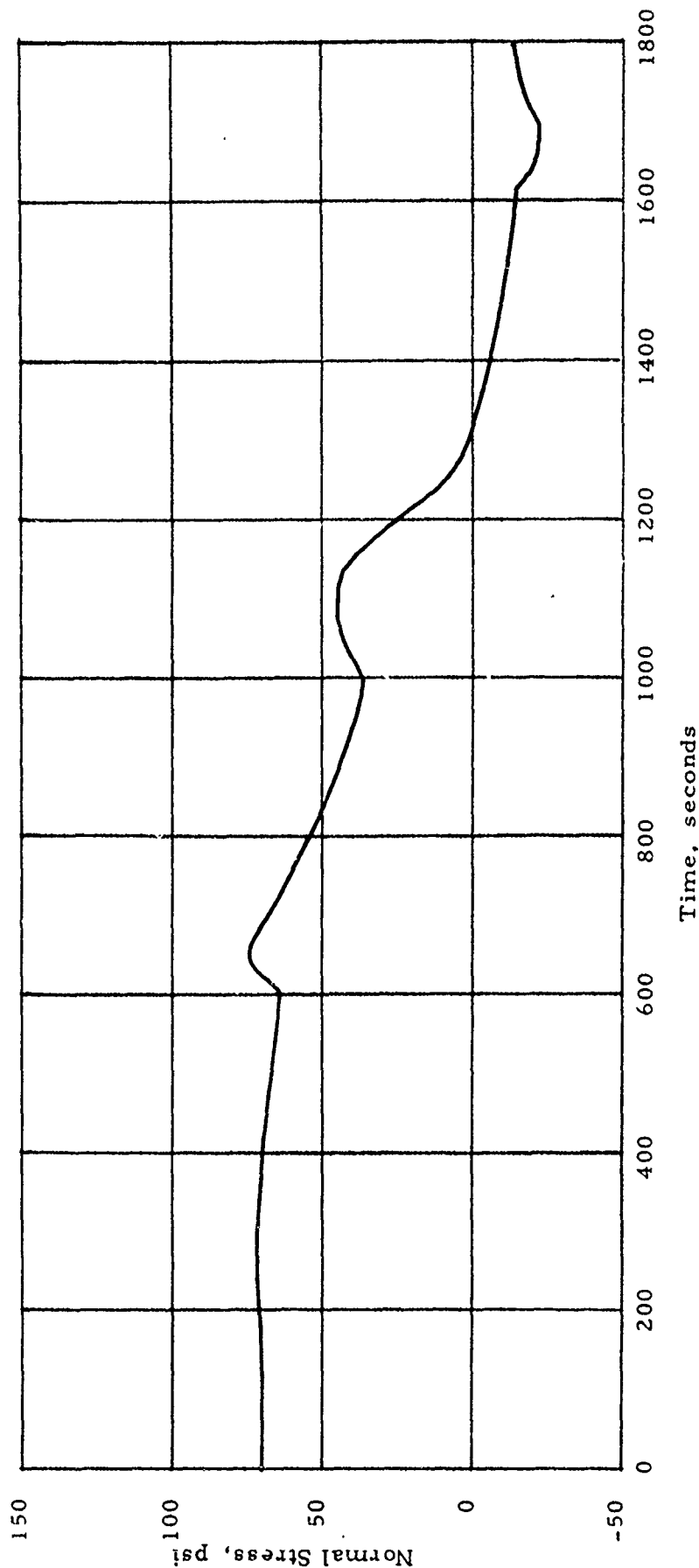
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Mid Motor Stress Response to Aeroheat Loads - Gage N1-40 (Test No. A-5)

Motor - IM #1
 Test - A-6 (DMP-3)
 Gage - N1-40
 Location - Center
 T_{initial} - -65°F

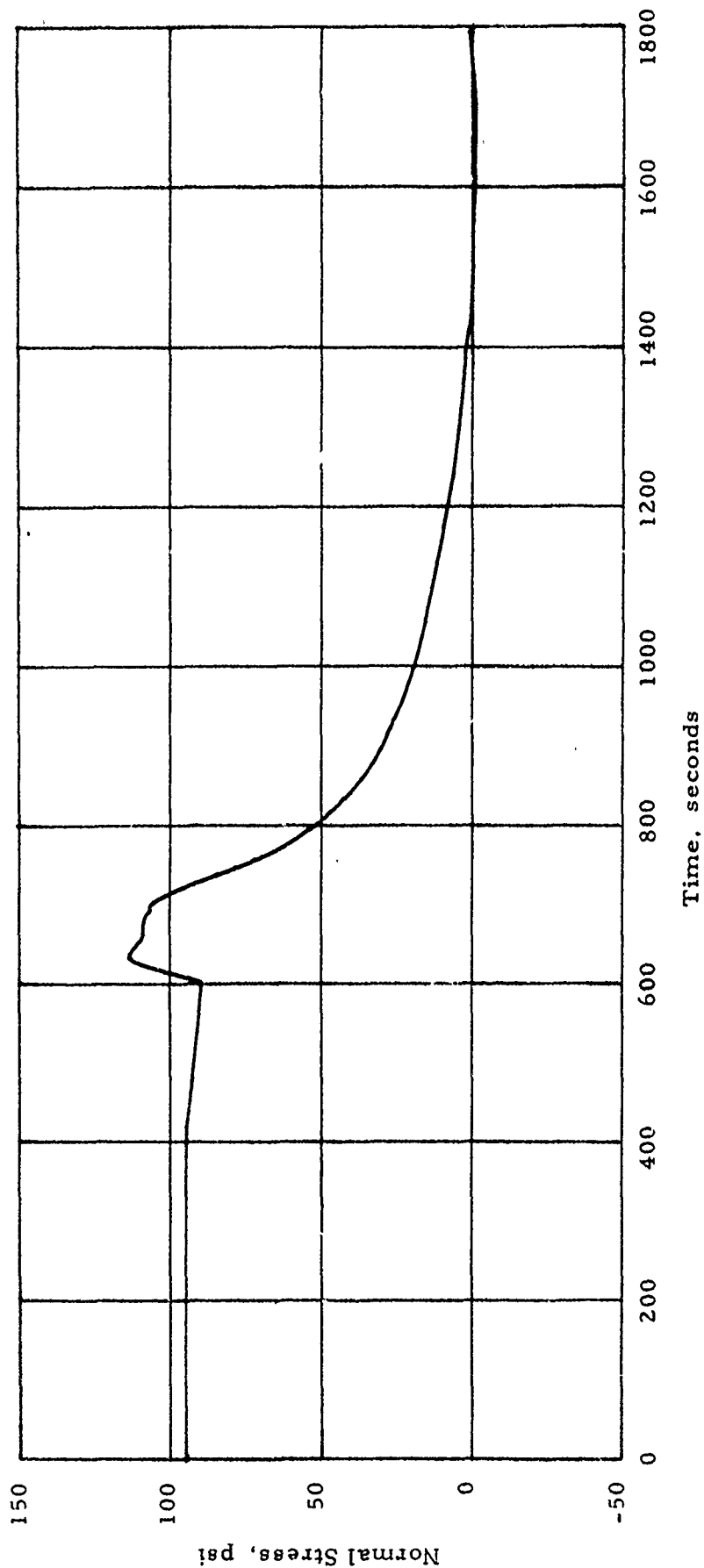
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Mid Motor Stress Response to Aeroheat Loads - Gage N1-40 (Test No. A-6)

Motor - IM #1
 Test - A-7 (SFPI)
 Gage - N1-40
 Location - Center
 T_{initial} - 65°F

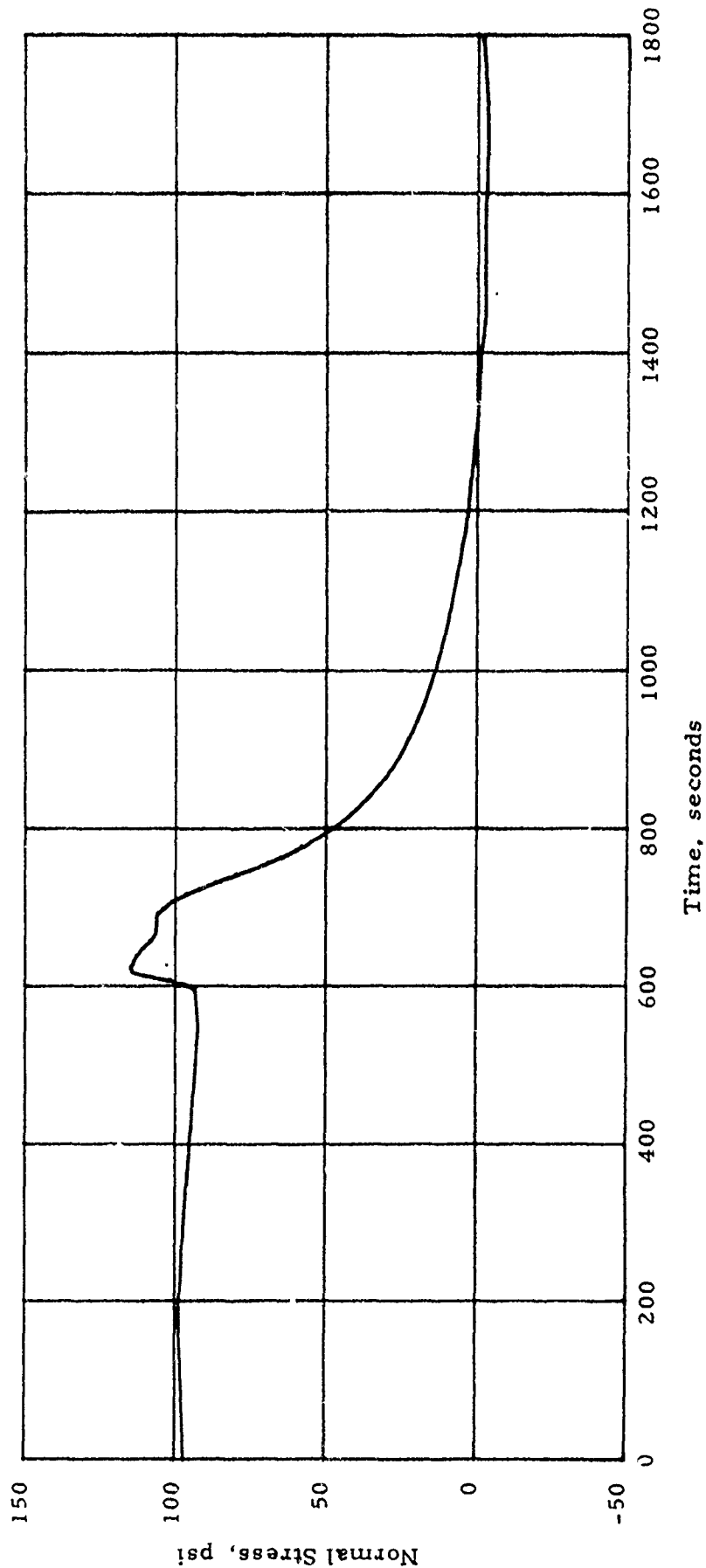
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Mid Motor Stress Response to Aeroheat Loads - Gage N1-40 (Test No. A-7)

Motor - IM #1
 Test - A-8 (SFPI)
 Gage - N1-40
 Location - Center
 T_{initial} - -65°F

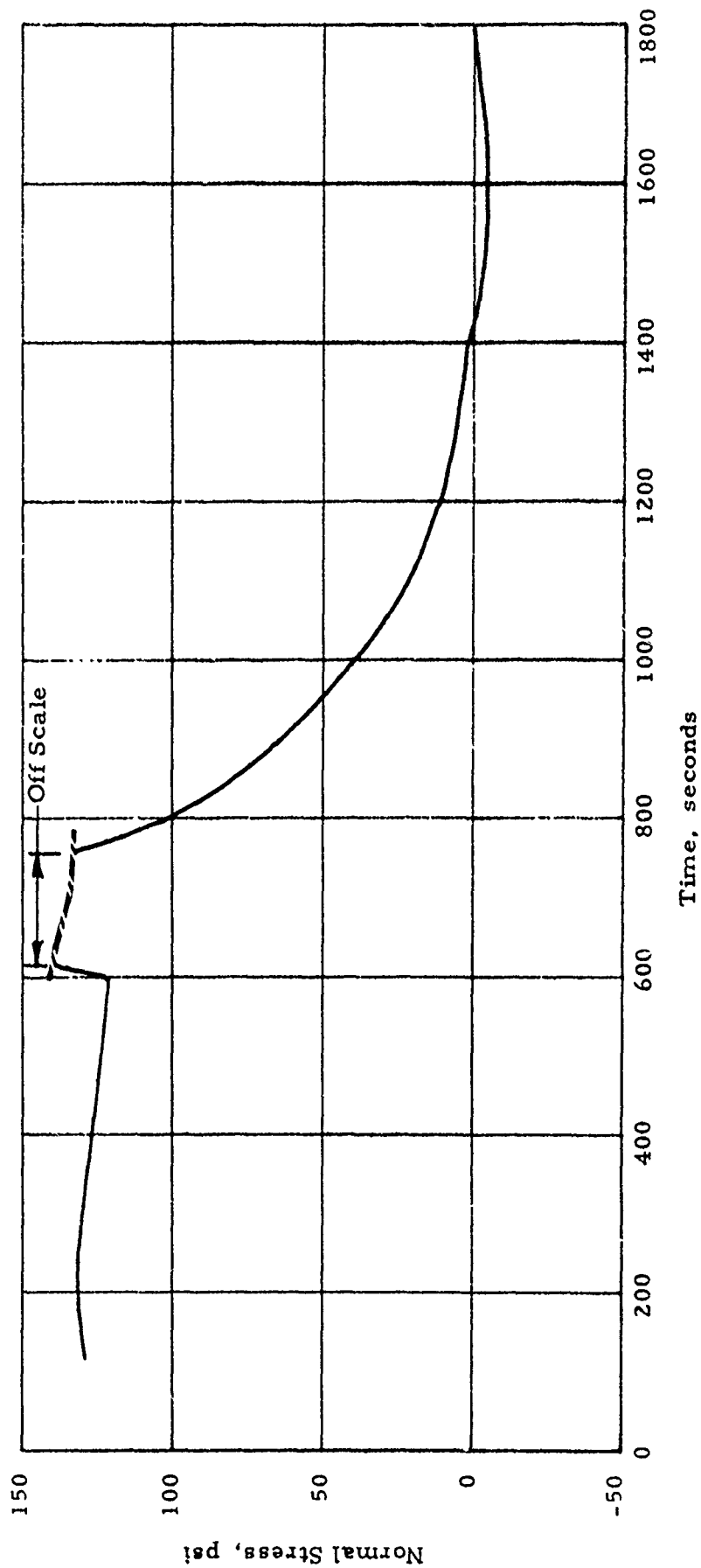
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Mid Motor Stress Response to Aeroheat Loads - Gage N1-40 (Test No. A-8)

Motor - IM #1
 Test - A-9 (SFPI)
 Gage - N1-40
 Location - Center
 T_{initial} - -65°F

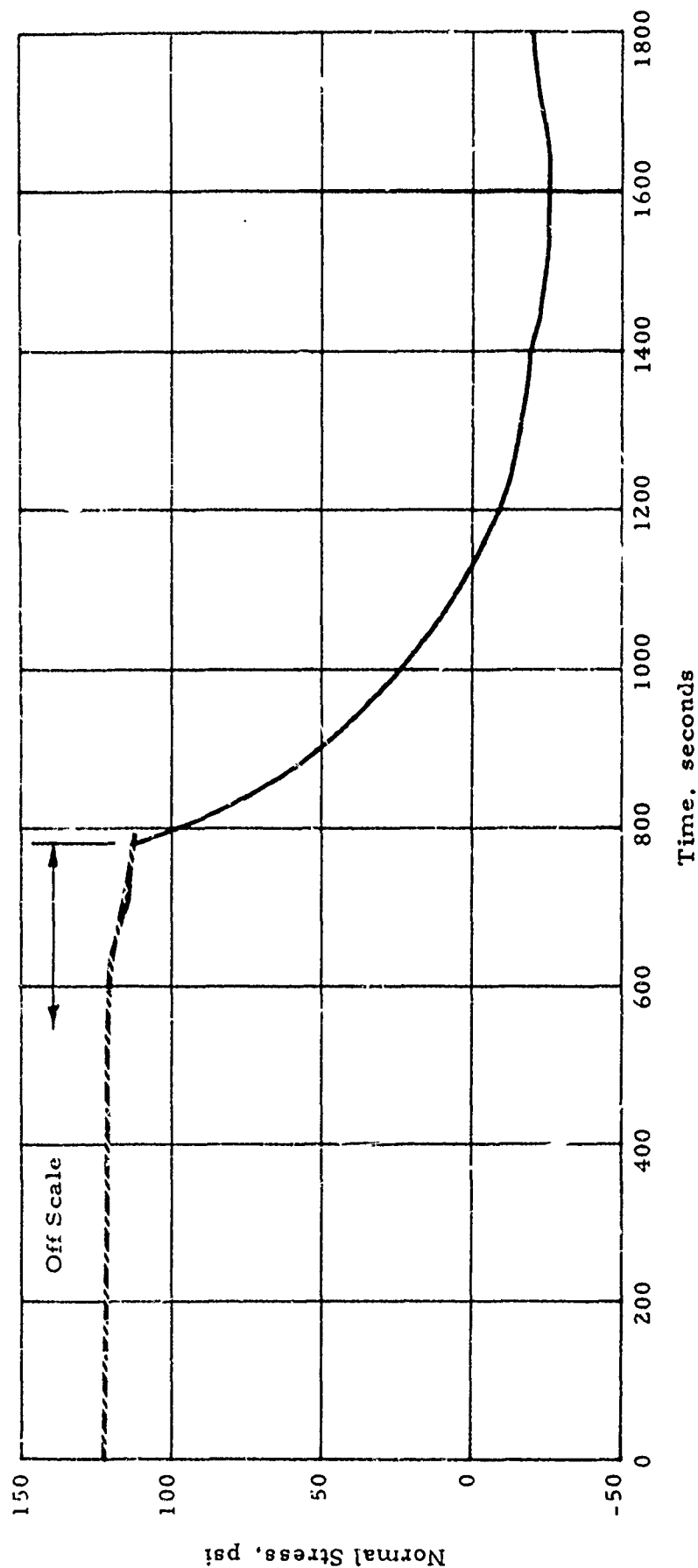
• Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Mid Motor Stress Response to Aeroheat Loads - Gage N1-40 (Test No. A-9)

Motor - 1M #1
 Test - A-10 (SFPI)
 Gage - N1-40
 Location - Center
 T_{initial} - -65°F

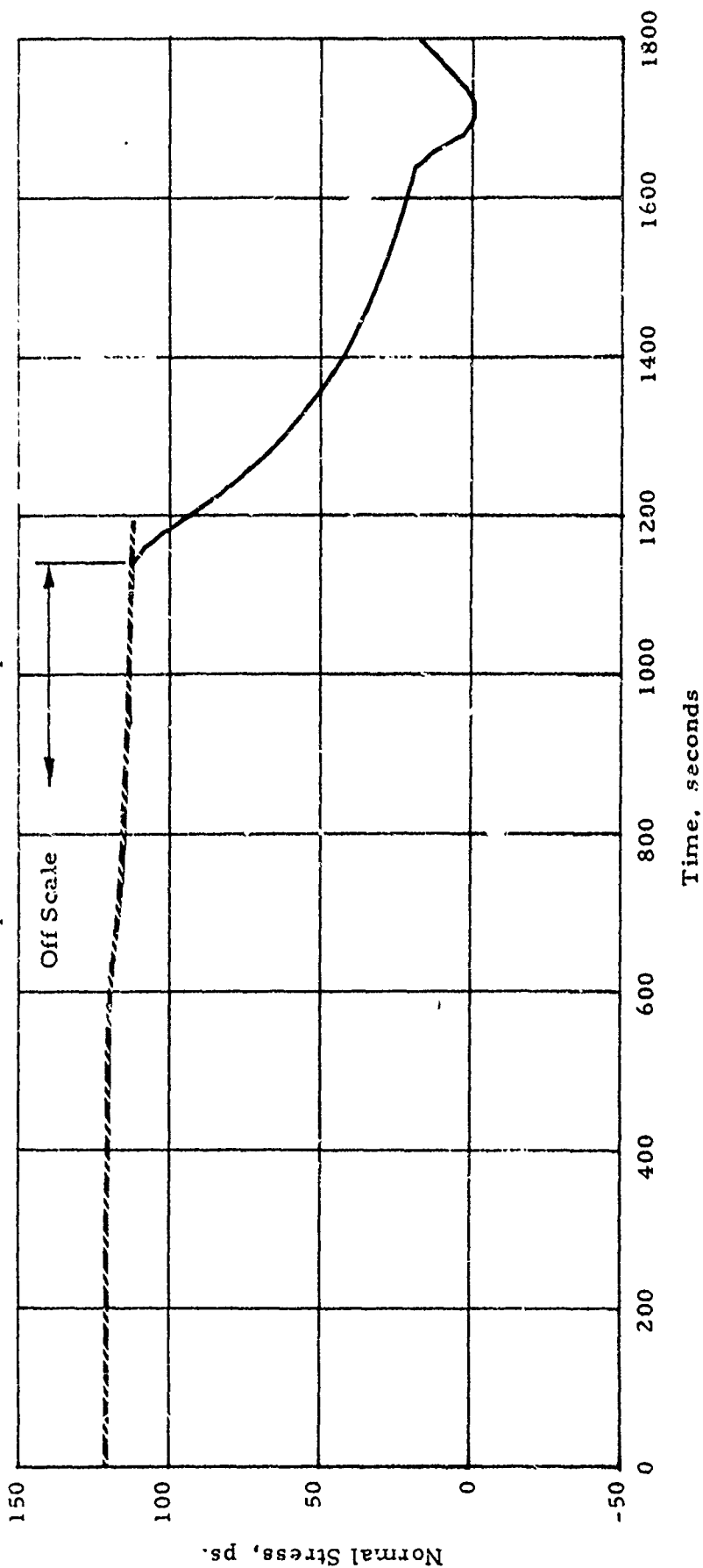
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F



Mid Motor Stress Response to Aeroheat Loads - Gage N1-40 (Test No. A-10)

Motor - IM #1
 Test - A-12 (DMP-3)
 Gage - N1-40
 Location - Center
 T_{initial} - -65°F

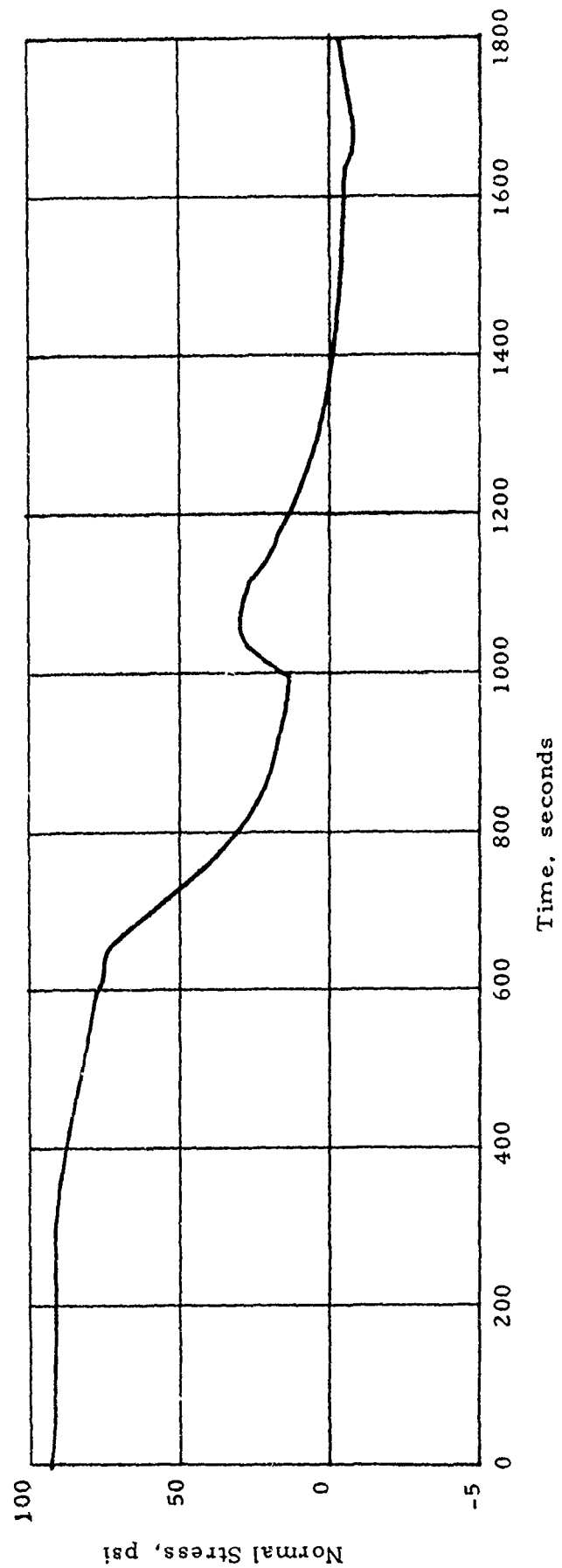
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F



Mid Motor Stress Response to Aeroheat Loads - Gage N1-40 (Test No. A-12)

Motor - IM #1
 Test - A-1 (DMP-3)
 Gage - NI-49
 Location - Center
 T_{initial} - -65°F

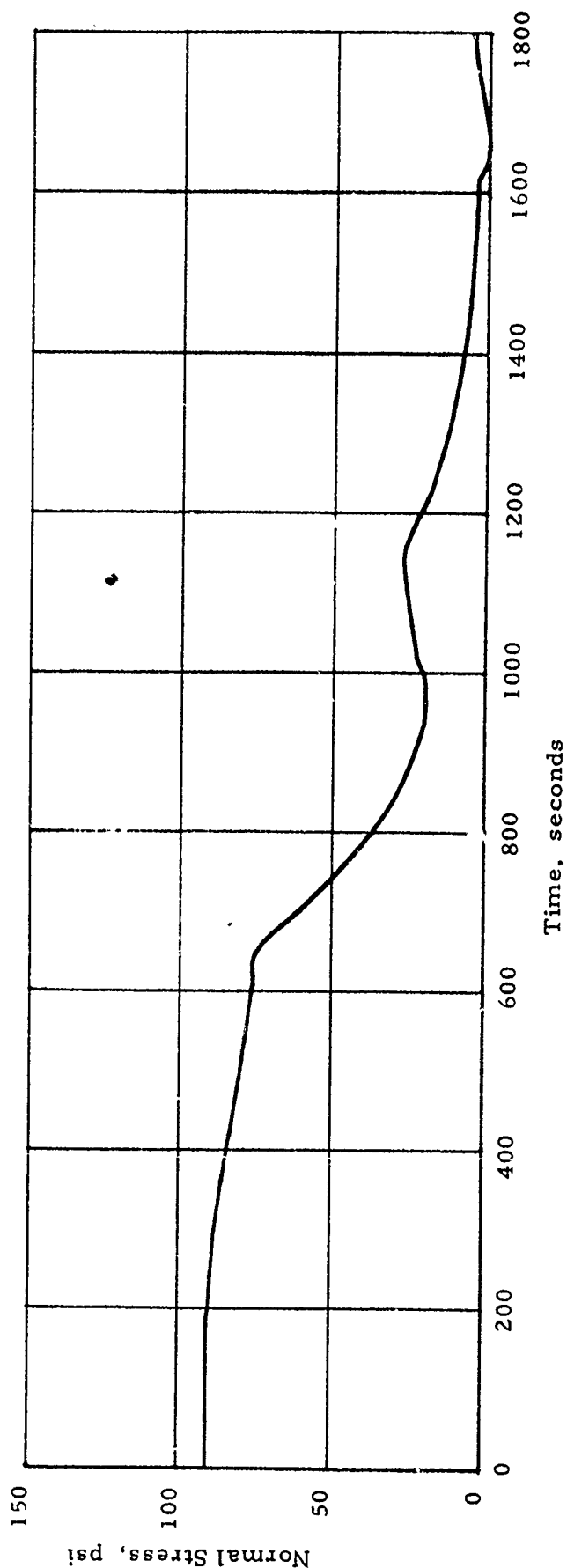
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Mid Motor Normal Stress Response to Aeroheat Loads - Gage NI-49 (Test No. A-1)

Motor - IM #1
 Test - A-2 (DMP-3)
 Gage - N1-49
 Location - Center
 T_{initial} - -65°F

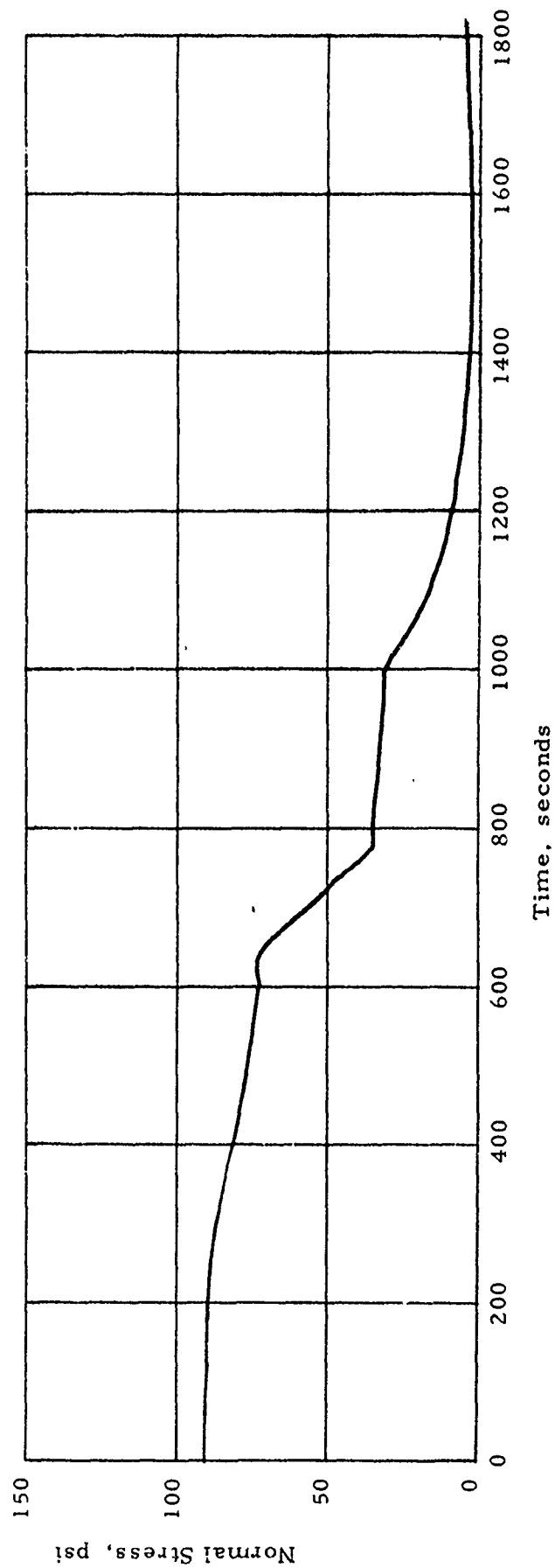
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F



Mid Motor Normal Stress Response to Aeroheat Loads - Gage N1-49 (Test No. A-2)

Motor - IM #1
 Test - A-3 (HSMH)
 Gage - N1-49
 Location - Center
 T_{initial} - -65°F

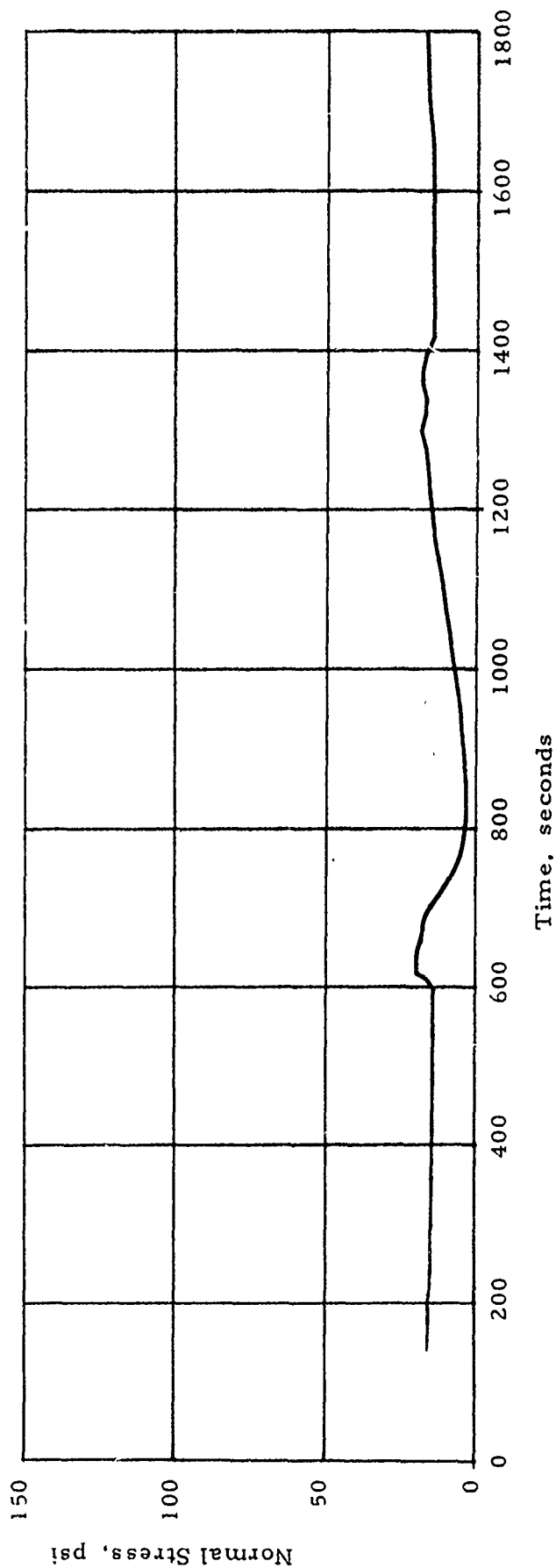
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Mid Motor Normal Stress Response to Aeroheat Loads - Gage N1-49 (Test No. A-3)

Motor - IM #1
 Test - A-4 (SFPI)
 Gage - N1-49
 Location - Center
 T_{initial} - 0°F

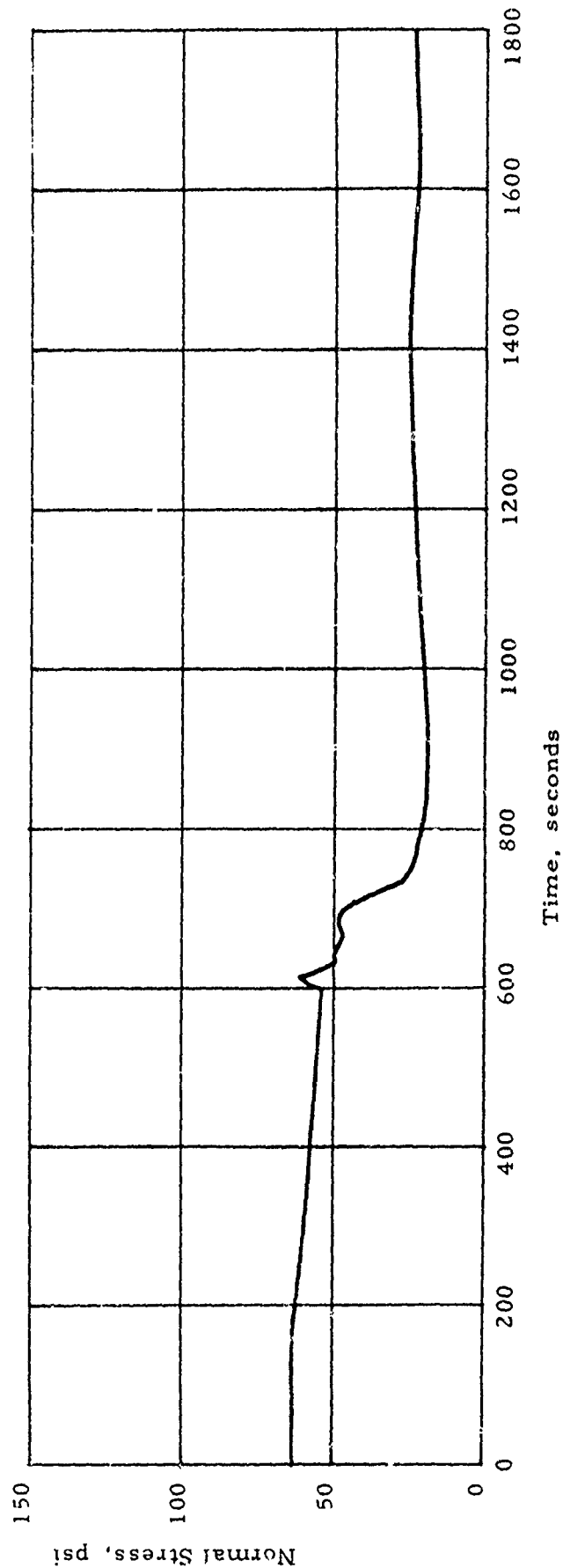
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F



Mid Motor Normal Stress Response to Aeroheat Load - Gage N1-49 (Test No A-4)

Motor - IM #1
 Test - A-5 (SFPI)
 Gage - N1-49
 Location - Center
 T_{initial} - -40°F

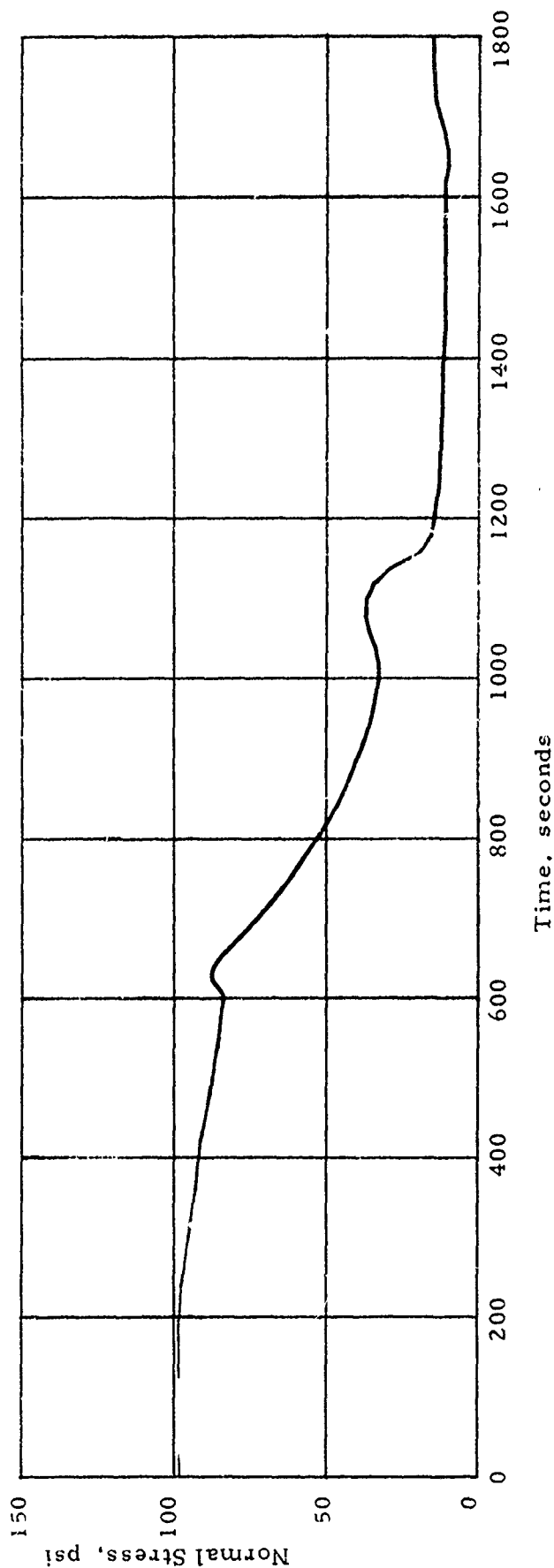
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F



Mid Motor Normal Stress Response to Aeroheat Loads - Gage N1-49 (Test No. A-5)

Motor - IM #1
 Test - A-6 (DMP-3)
 Gage - N1-49
 Location - Center
 T_{initial} - -65°F

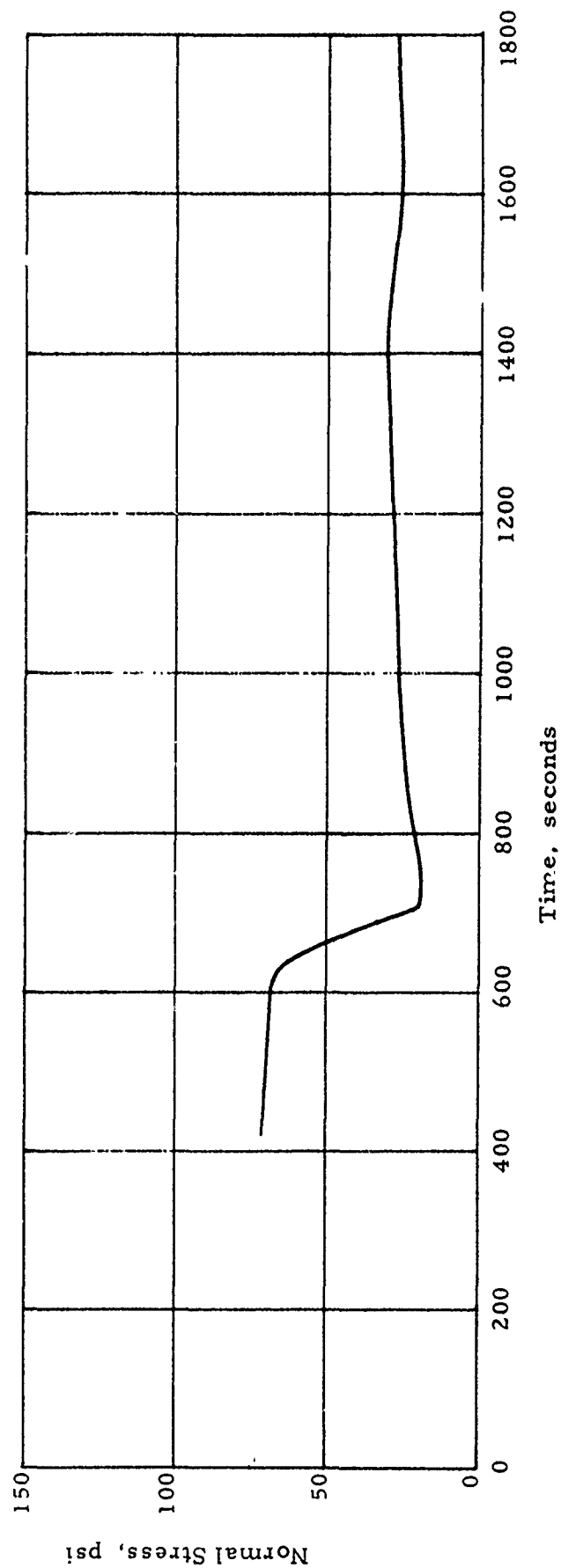
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Mid Motor Normal Stress Response to Aeroheat Loads - Gage N1-49 (Test No. A-6)

Motor - IM #1
 Test - A-7 (SFPI)
 Gage - N1-49
 Location - Center
 T_{initial} - -65°F

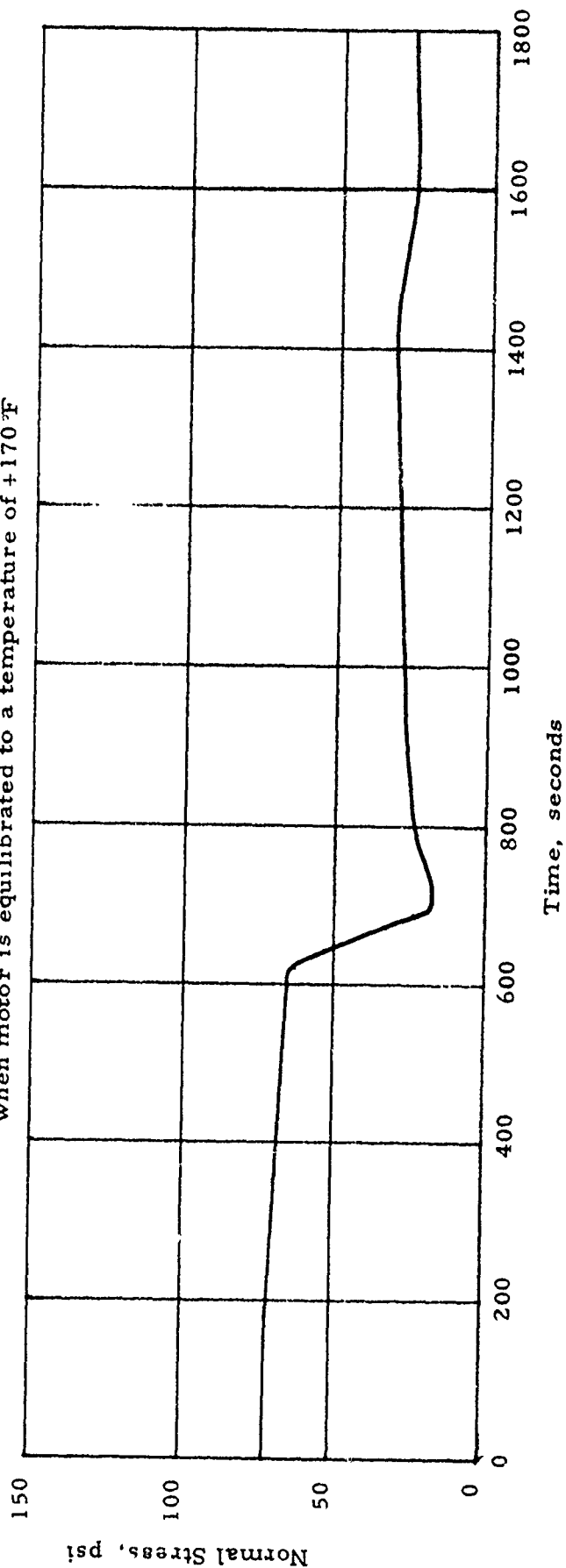
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Mid Motor Normal Stress Response to Aeroheat Loads - Gage N1-49 (Test No. A-7)

Moto: - IM #1
 Test - A-8 (SFPI)
 Gage - N1-49
 Location - Center
 T_{initial} - -65°F

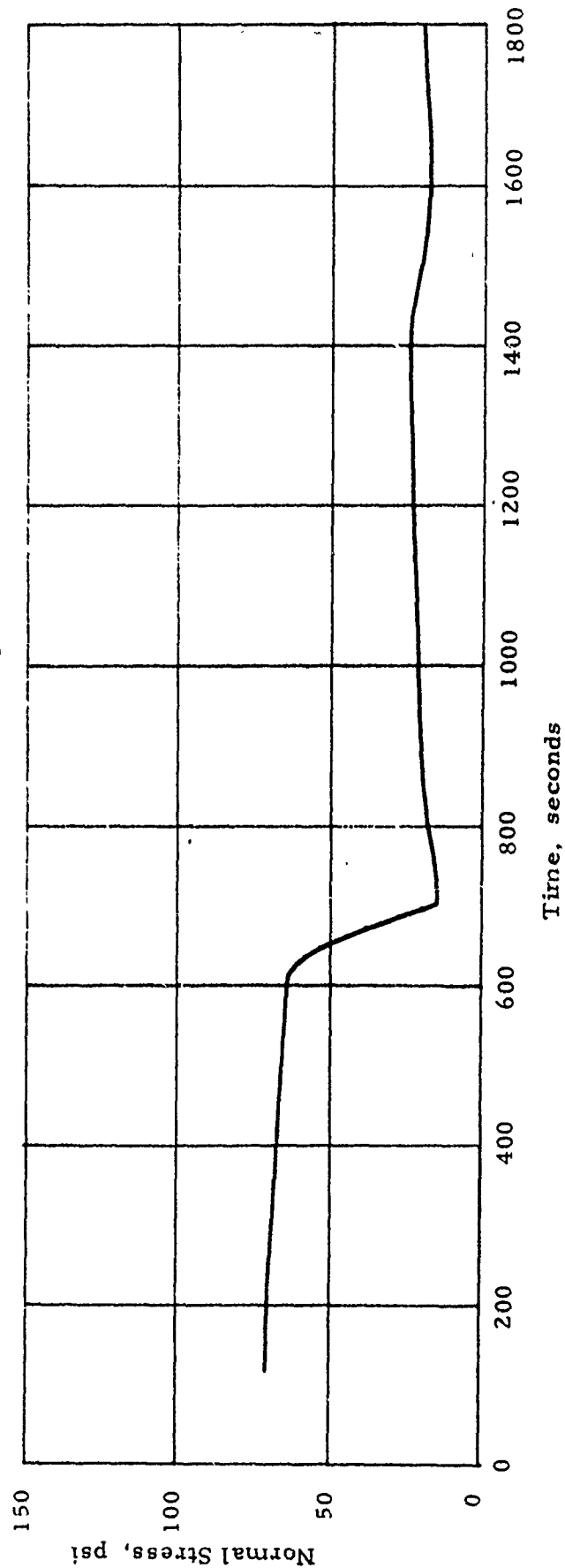
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Mid Motor Normal Stress Response to Aeroheat Loads - Gage N1-49 (Test No. A-8)

Motor - IM #1
 Test - A-9 (SFPI)
 Gage - N1-49
 Location - Center
 T_{initial} - -65°F

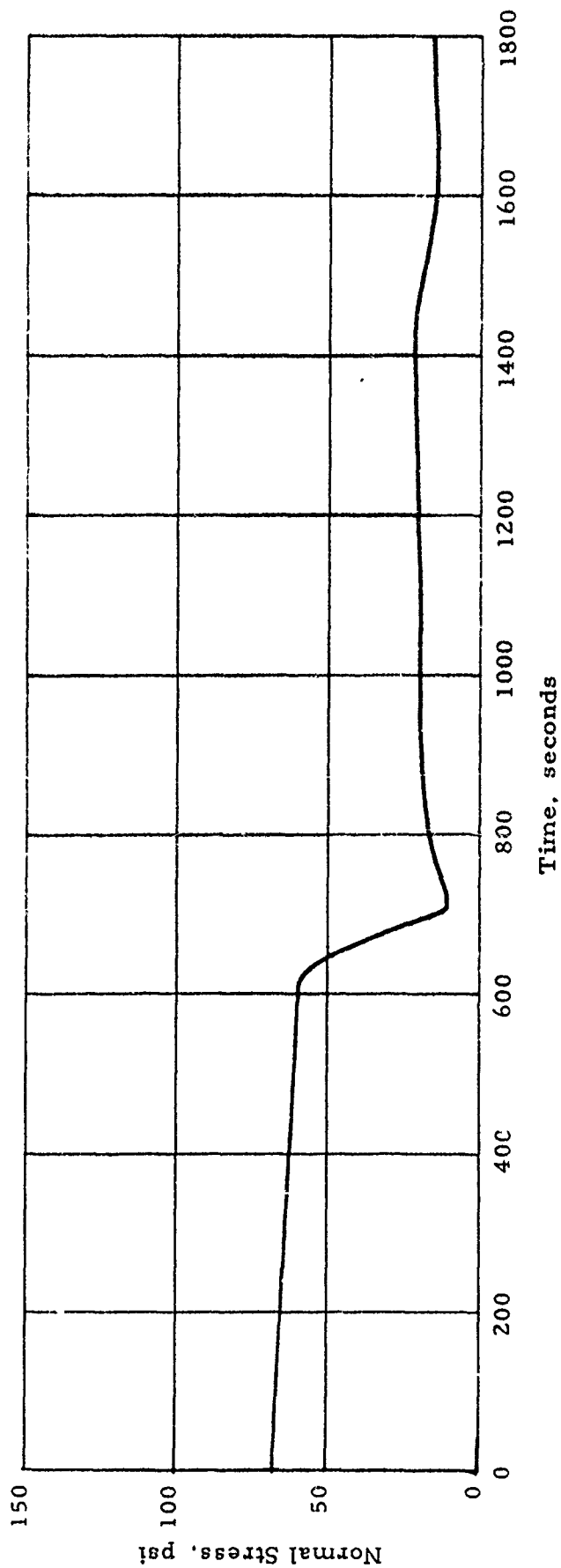
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Mid Motor Normal Stress Response to Aeroheat Loads - Gage N1-49 (Test No. A-9)

Motor - IM #1
 Test - A-10 (SFPI)
 Gage - N1-49
 Location - Center
 T_{initial} - -65°F

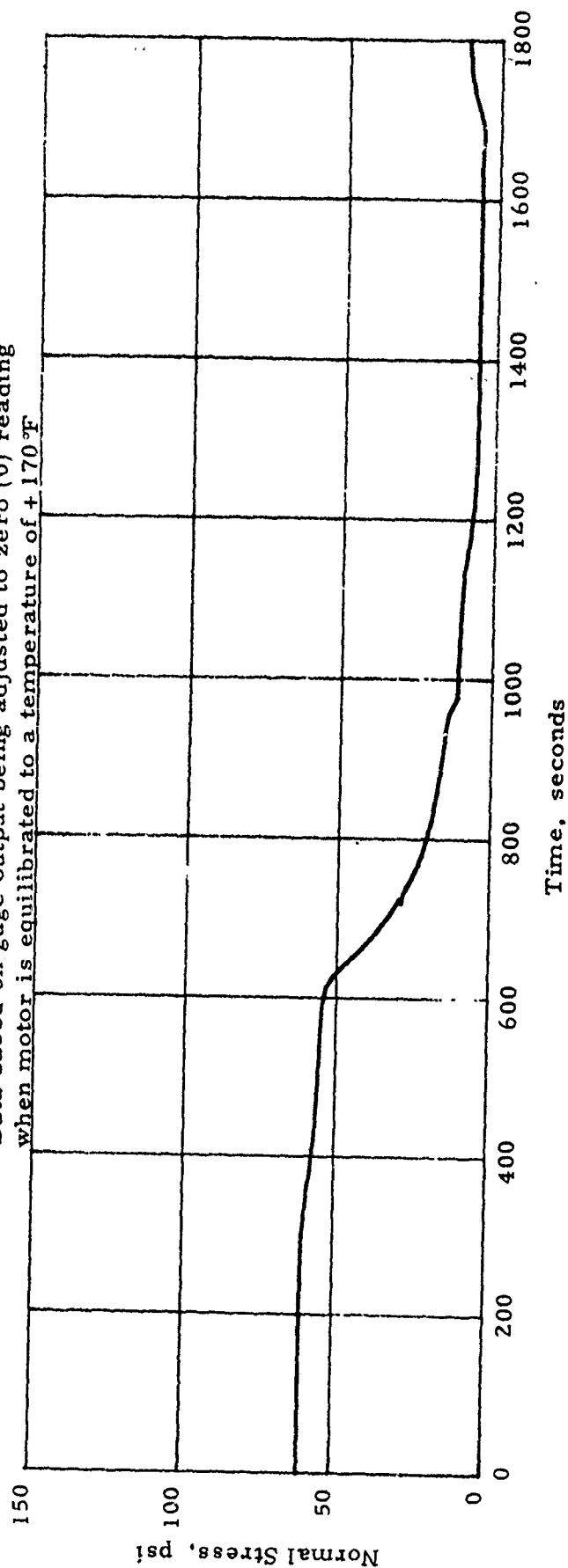
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Mid Motor Normal Stress Response to Aeroheat Loads - Gage N1-49 (Test No. A-10)

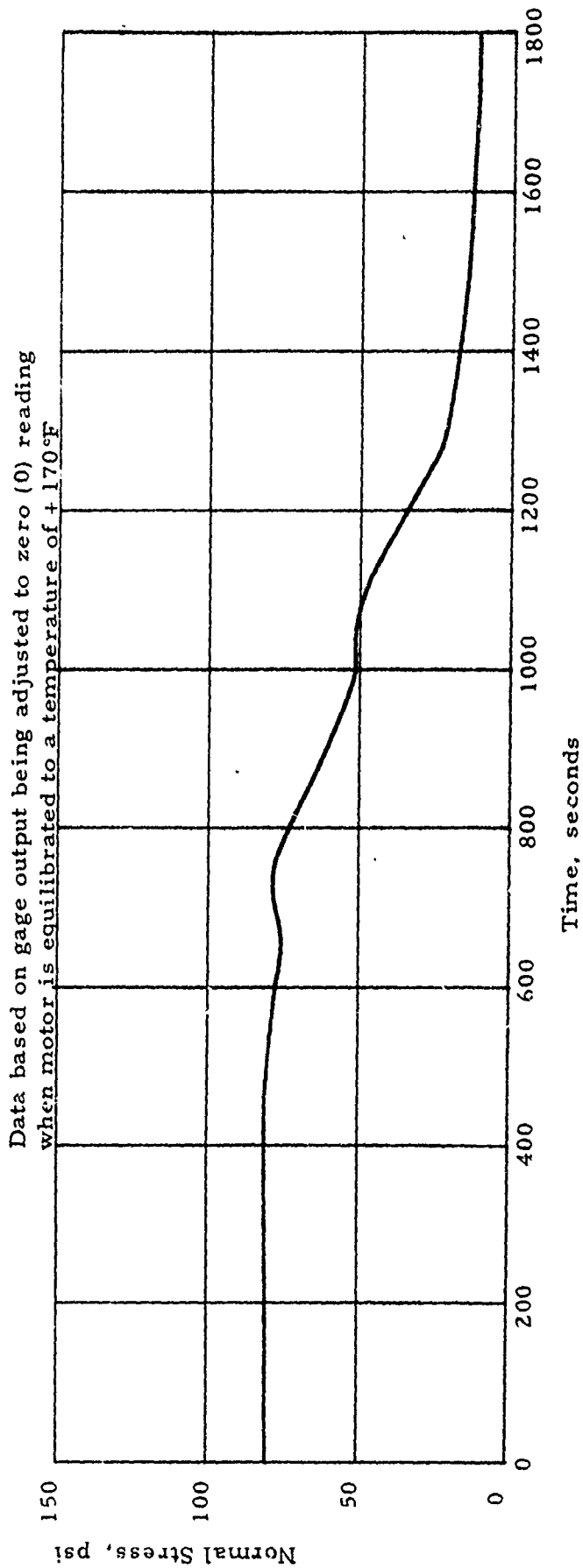
Motor - IM #1
 Test - A-12 (DMP-3)
 Gage - N1-49
 Location - Center
 T_{initial} - -65°F

Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F



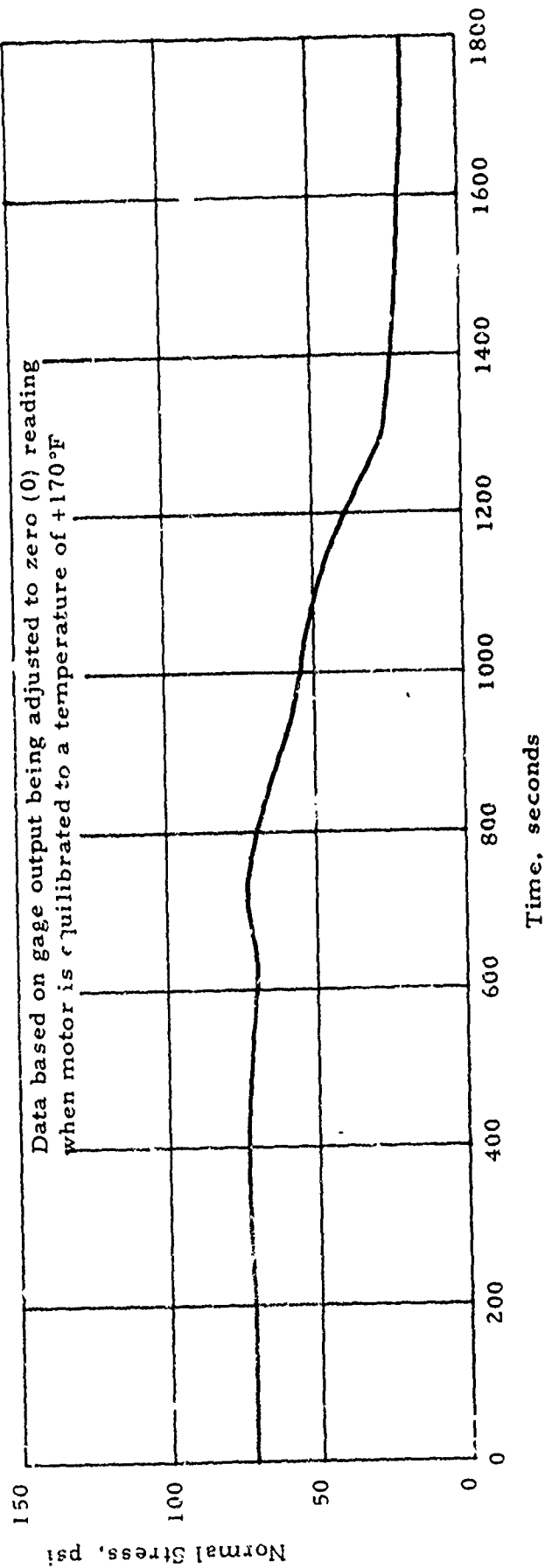
Mid Motor Normal Stress Response to Aeroheat Loads - Gage N1-49 (Test No. A-12)

Motor - IM #1
 Test - A-1 (DMP-3)
 Gage - N1-41
 Location - Aft
 T_{initial} - -65°F



Aft End Normal Stress Response to Aeroheat Loads - Gage N1-41 (Test No. A-1)

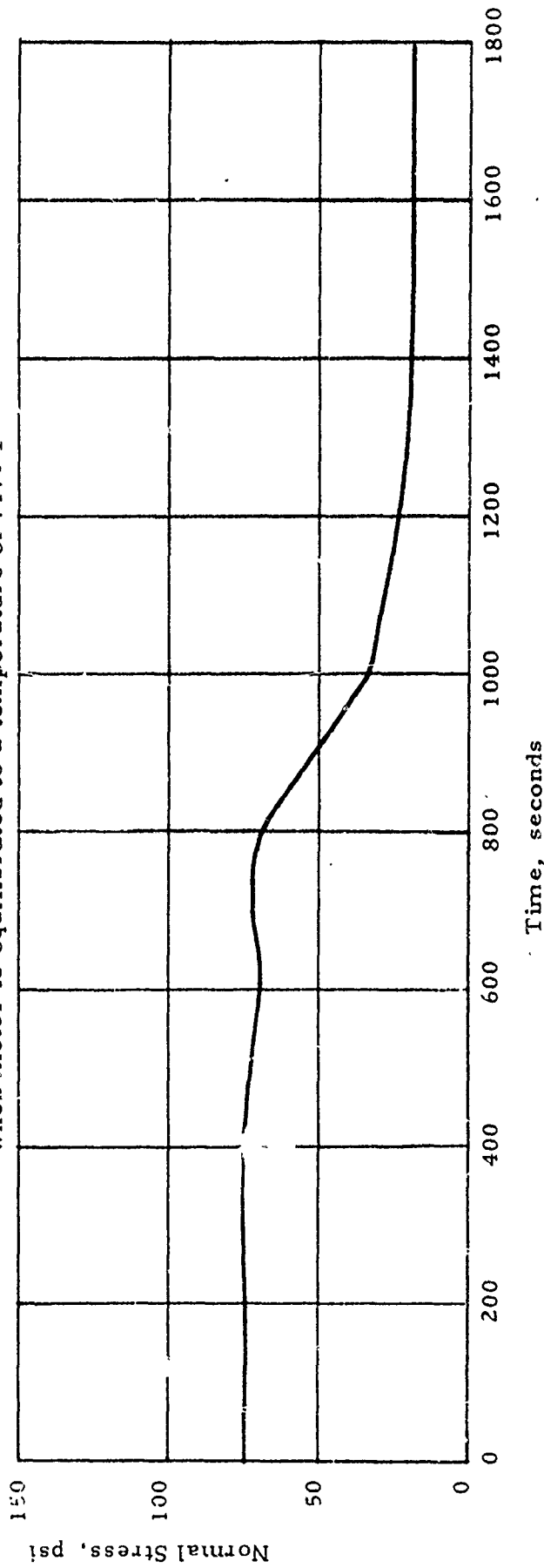
Motor - IM #1
 Test - A-2 (DMP-3)
 Gage - N1-41
 Location - Aft
 T_{initial} - -65°F



Aft End Normal Stress Response to Aeroheai Loads - Gage N1-41 (Test No. A-2)

Motor - IM #1
 Test - A-3 (HSMH)
 Gage - N1-41
 Location - Aft
 T_{initial} - -65°F

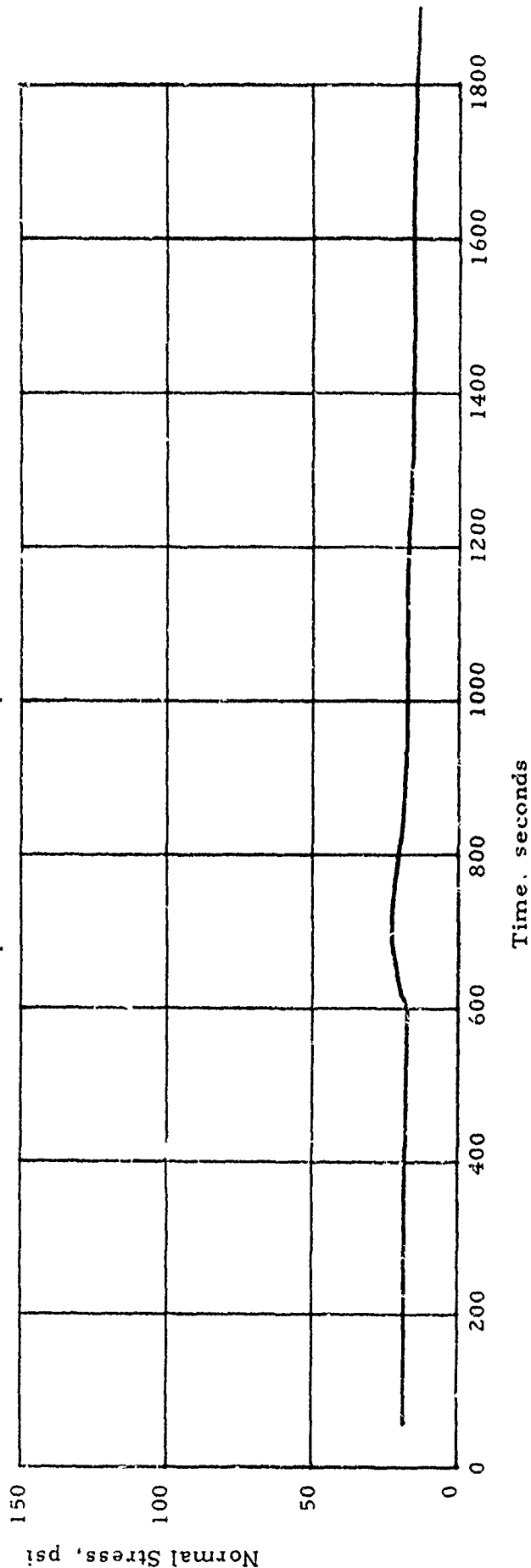
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Aft End Normal Stress Response to Aeroheat Loads - Gage N1-41 (Test No. A-3)

Motor - IM #1
 Test - A-4 (SFPI)
 Gage - N1-41
 Location - Aft
 T_{initial} - 0°F

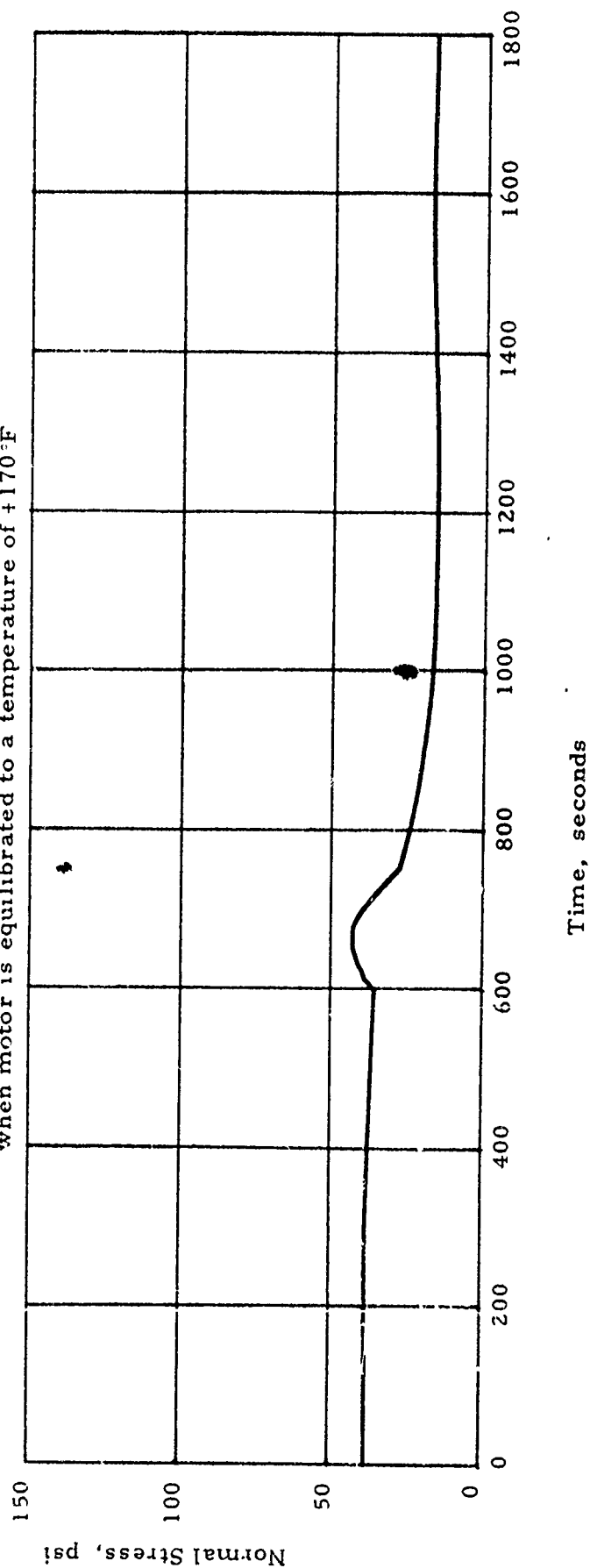
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Aft End Normal Stress Response to Aeroheat Loads - Gage N1-41 (Test No. A-4)

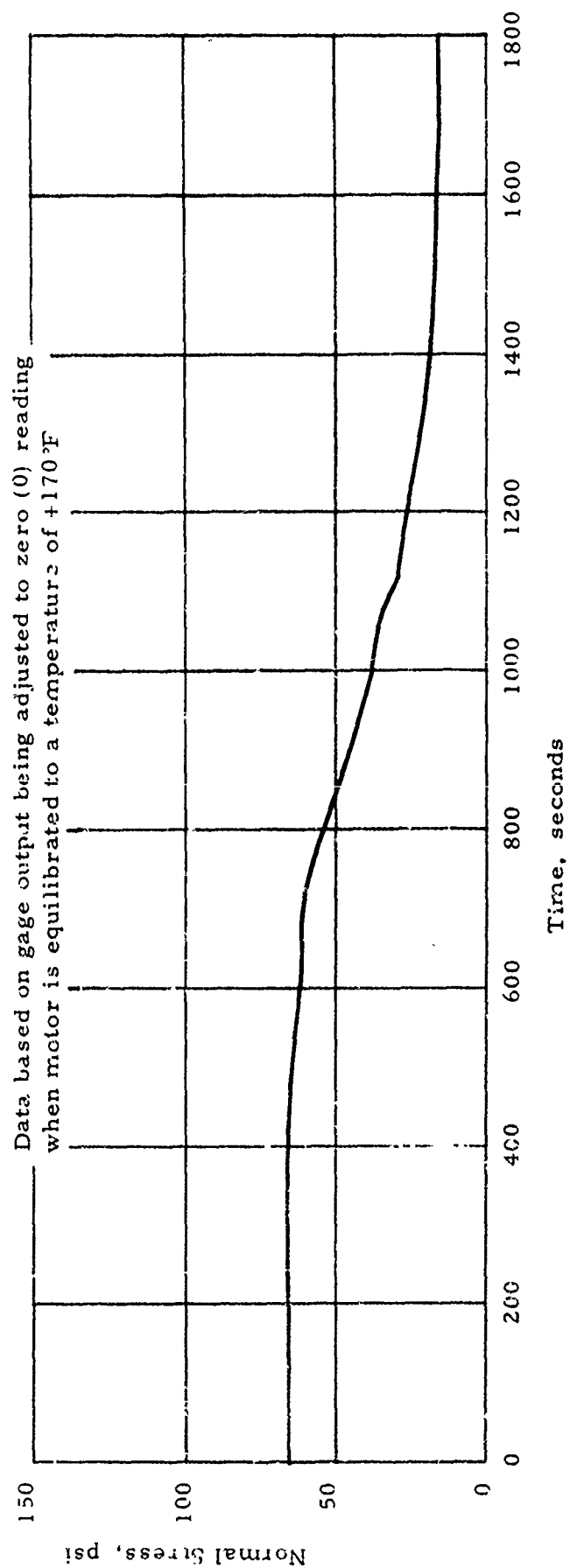
Motor - IM #1
 Test - A-5 (S.F.P.I.)
 Gage - N1-41
 Location - Aft
 T_{initial} - -40°F

Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



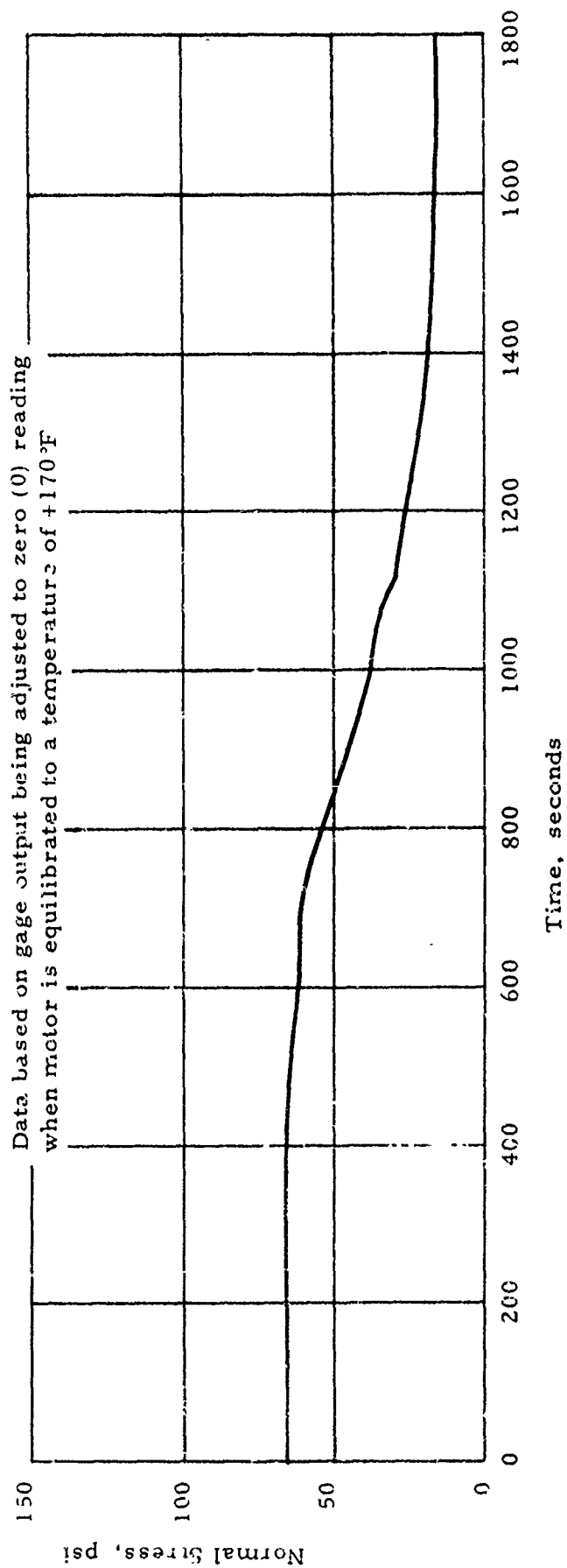
Aft End Normal Stress Response to Aeroheat Loads - Gage N1-41 (Test No. A-5)

Motor - IM #1
 Test - A-6 (DMP-3)
 Gage - N1-41
 Location - Aft
 T_{initial} - -65°F



Aft End Normal Stress Response to Aeroheat Loads - Gage N1-41 (Test No. A-6)

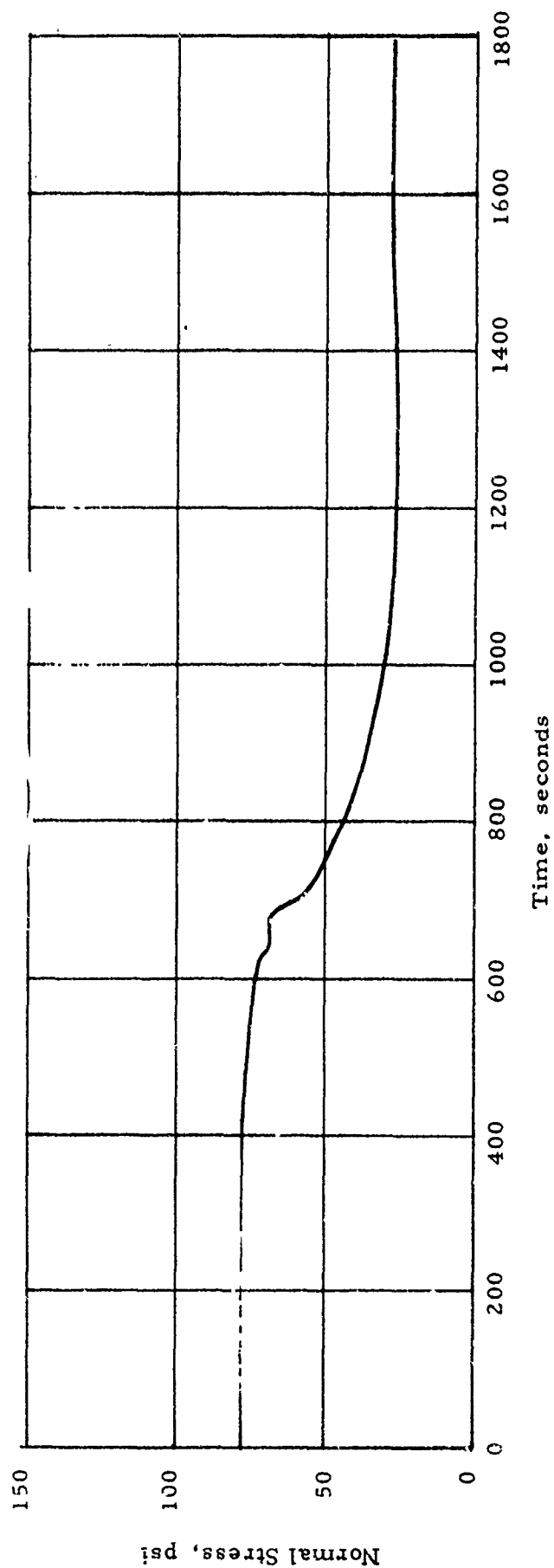
Motor - IM #1
 Test - A-6 (DMP-3)
 Gage - N1-41
 Location - Aft
 T_{initial} - -65°F



Aft End Normal Stress Response to Aeroheat Loads - Gage N1-41 (Test No. A-6)

Motor - IM #1
 Test - A-7 (SFPI)
 Gage - N1-41
 Location - Aft
 T_{initial} - -65°F

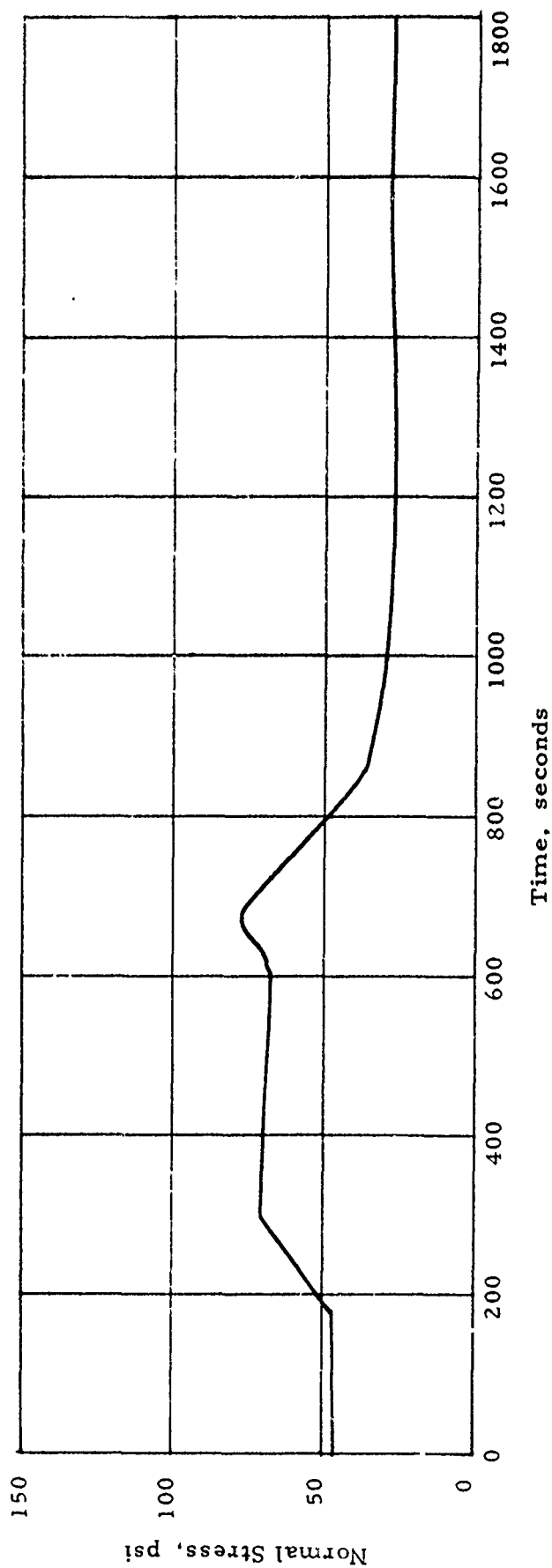
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Aft End Normal Stress Response to Aeroheat Loads - Gage N1-41 (Test No. A-7)

Motor - IM #1
 Test - A-8 (SFPI)
 Gage - N1-41
 Location - Aft
 T_{initial} - -65°F

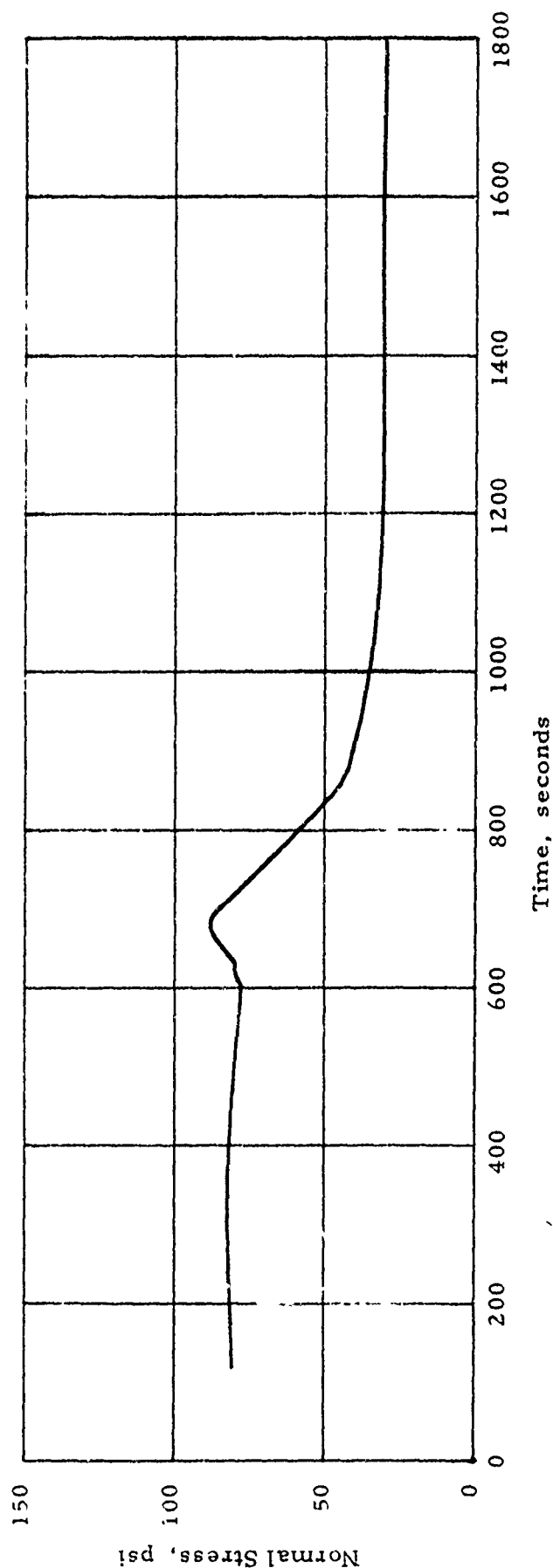
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of + 170°F



Aft End Normal Stress Response to Aeroheat Loads - Gage N1-41 (Test No. A-8)

Motor - IM #1
 Test - A-9 (SFPI)
 Gage - NI-41
 Location - Aft
 T_{initial} - -65°F

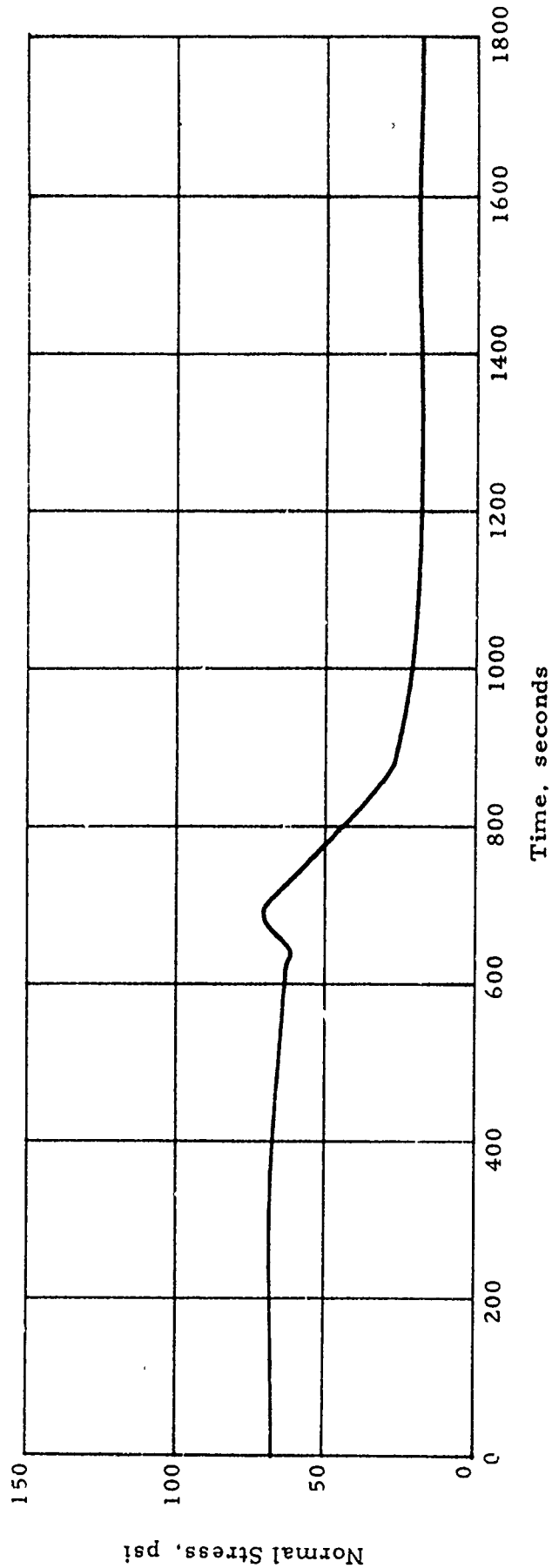
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Aft End Normal Stress Response to Aeroheat Loads - Gage NI-41 (Test No. A-9)

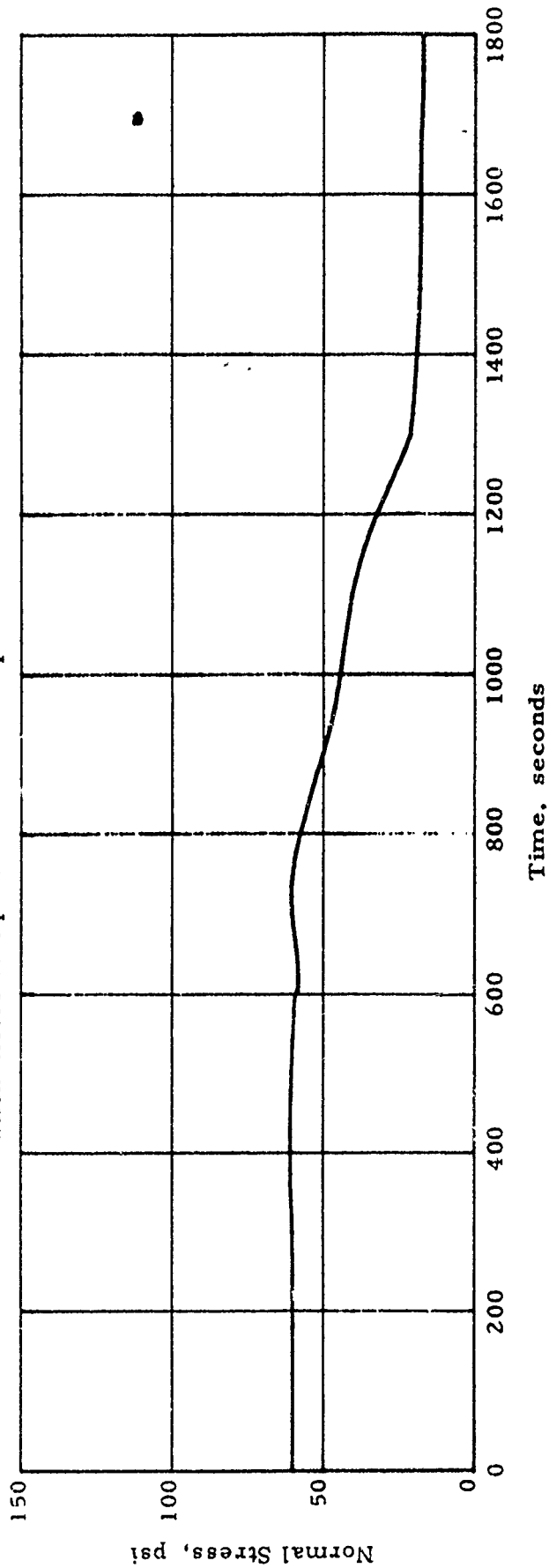
Motor - IM #1
 Test - A-10 (SFPI)
 Gage - N1-41
 Location - Aft
 T_{initial} - -65°F

Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Motor - IM #1
 Test - A-12 (DMP-3)
 Gage - N1-41
 Location - Aft
 T_{initial} - -65°F

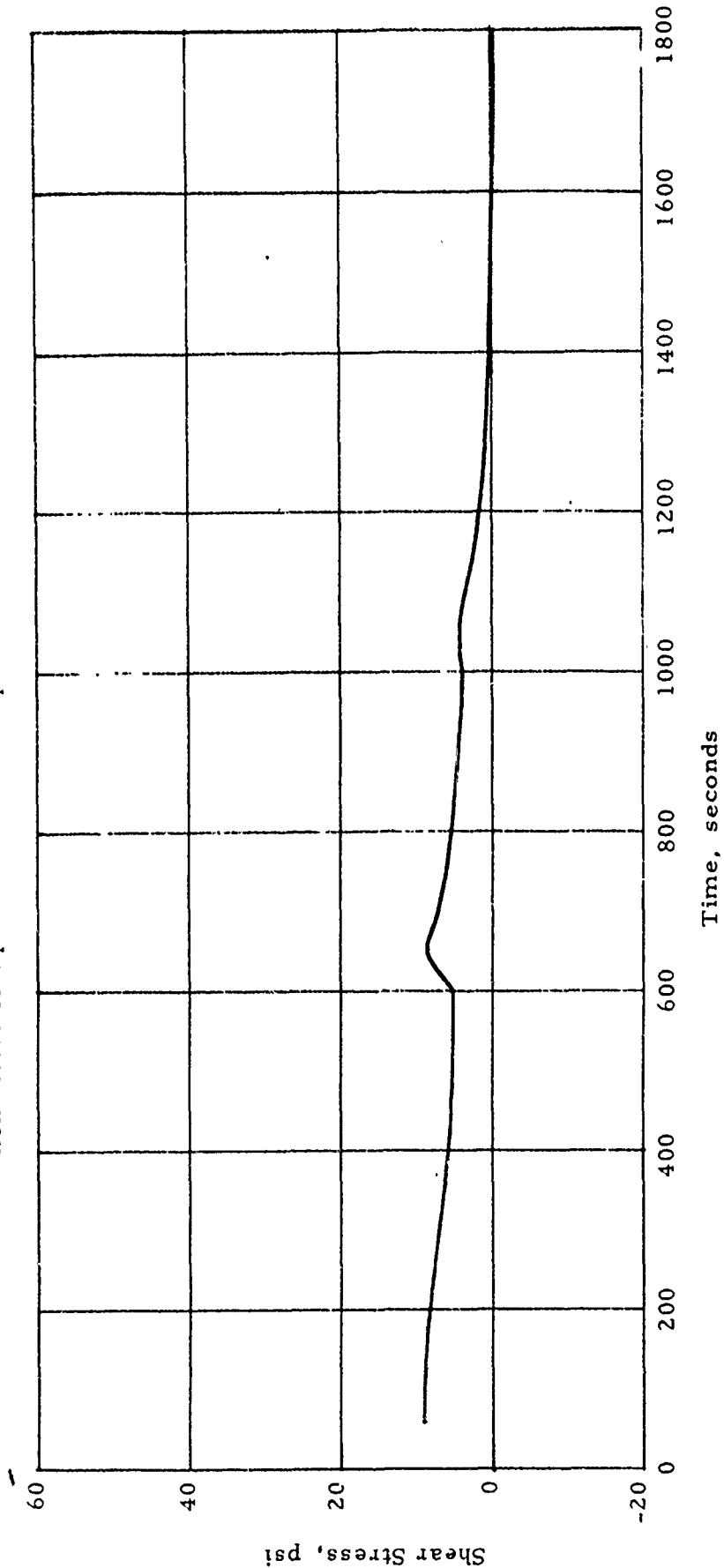
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Aft End Normal Stress Response to Aeroheat Loads - Gage N1-41 (Test No. A-12)

Motor - IM #1
 Test - A-1 (DMP-3)
 Gage - S1-109
 Location - Fwd
 T_{initial} - -65°F

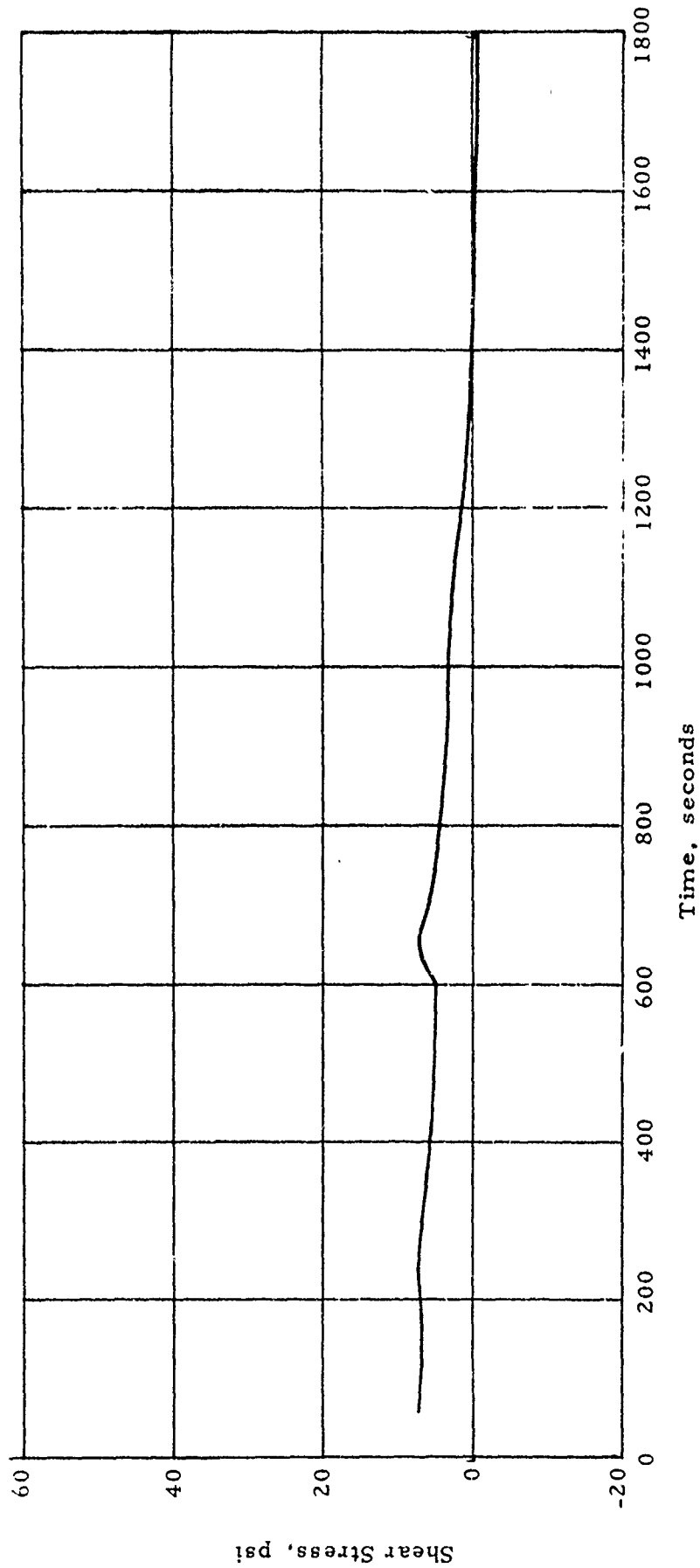
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Head End Shear Stress Response to Aeroheat Loads - Gage S1-109 (Test No. A-1)

Motor - IM #1
 Test - A-2 (DMP-3)
 Gage - S1-109
 Location - Fwd
 T_{initial} - -65°F

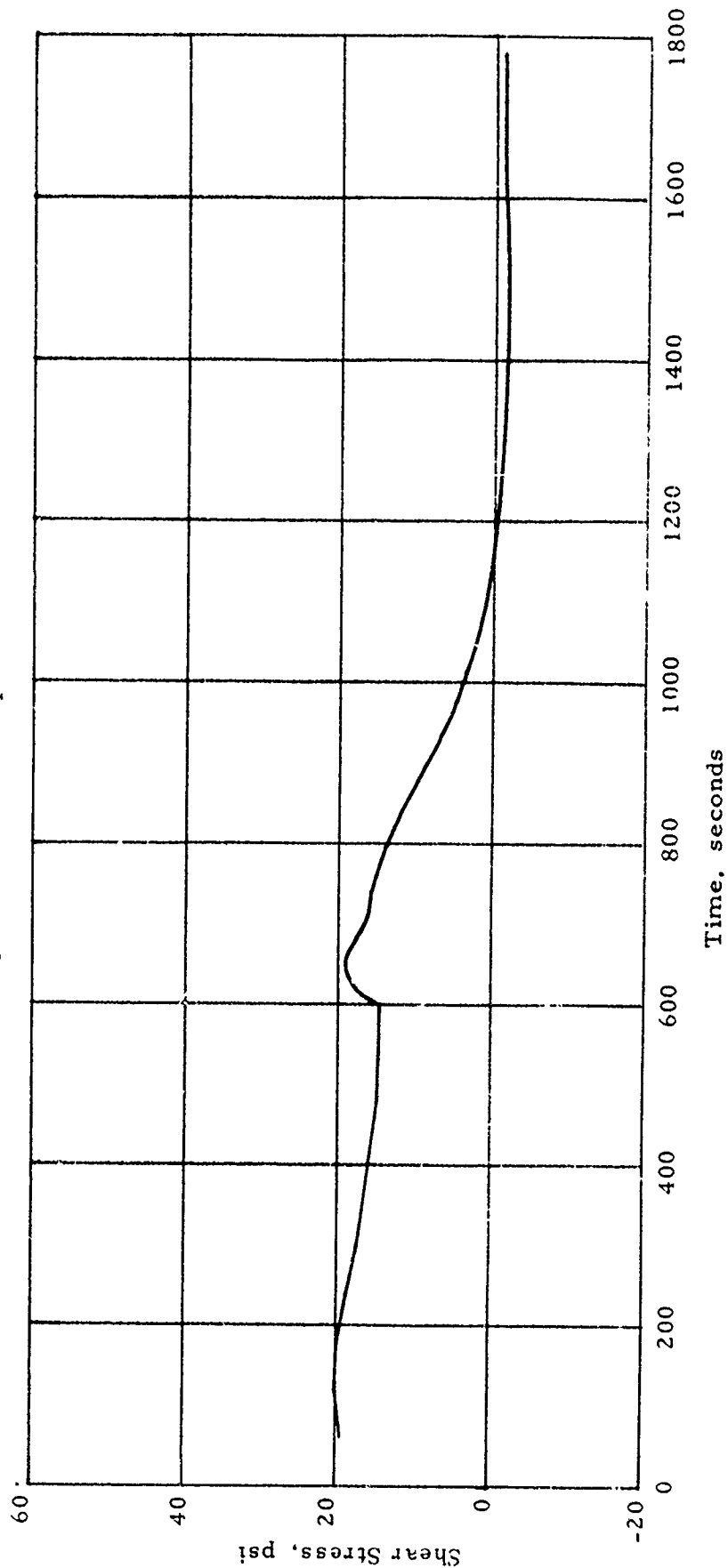
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Head End Shear Stress Response to Aeroheat Loads - Gage S1-109 (Test No. A-2)

Motor - IM #1
 Test - A-3 (HSMH)
 Gage - S1-109
 Location - Fwd
 T_{initial} - -65°F

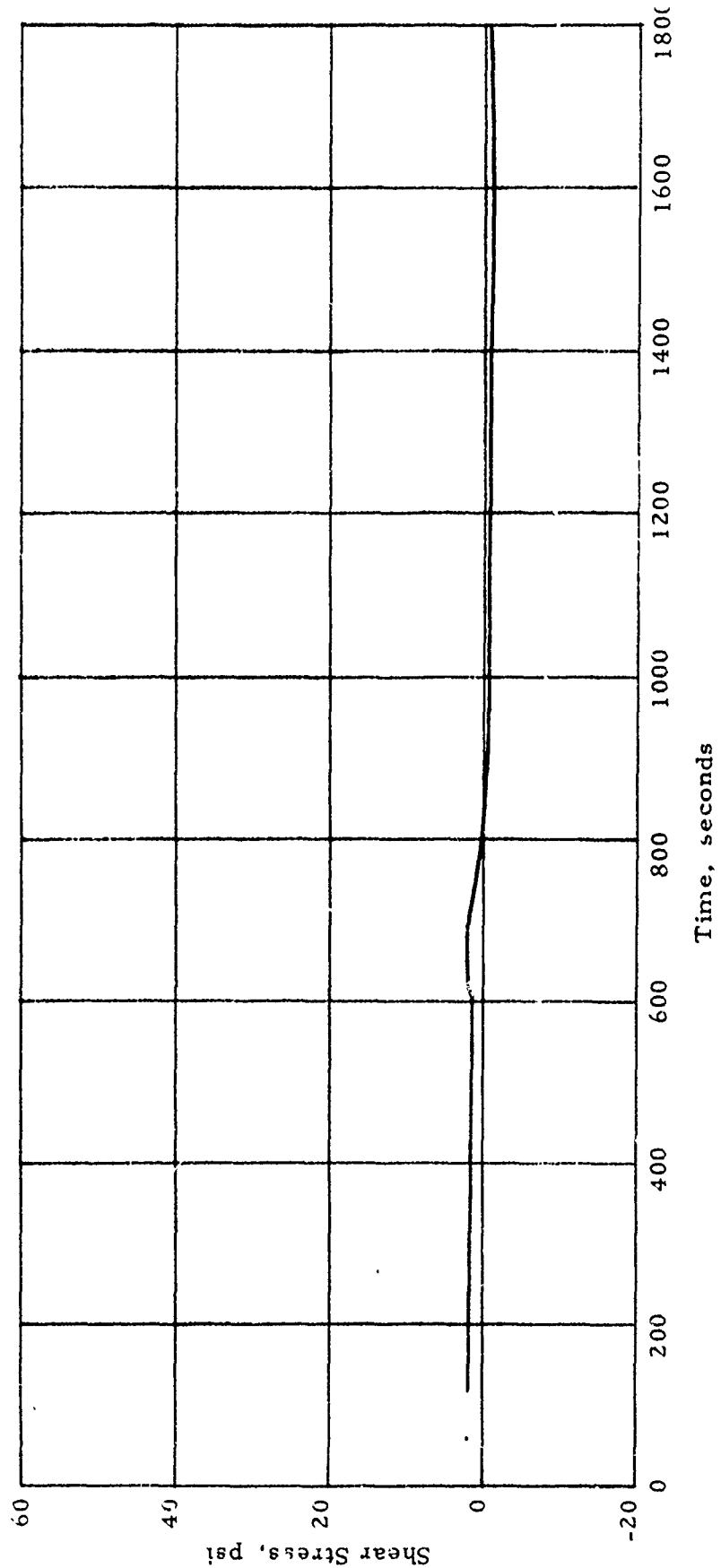
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Head End Shear Stress Response to Aeroheat Loads - Gage S1-109 (Test No. A-3)

Motor - IM #1
 Test - A-4 (SFPI)
 Gage - S1-109
 Location - Fwd
 T_{initial} - 0°F

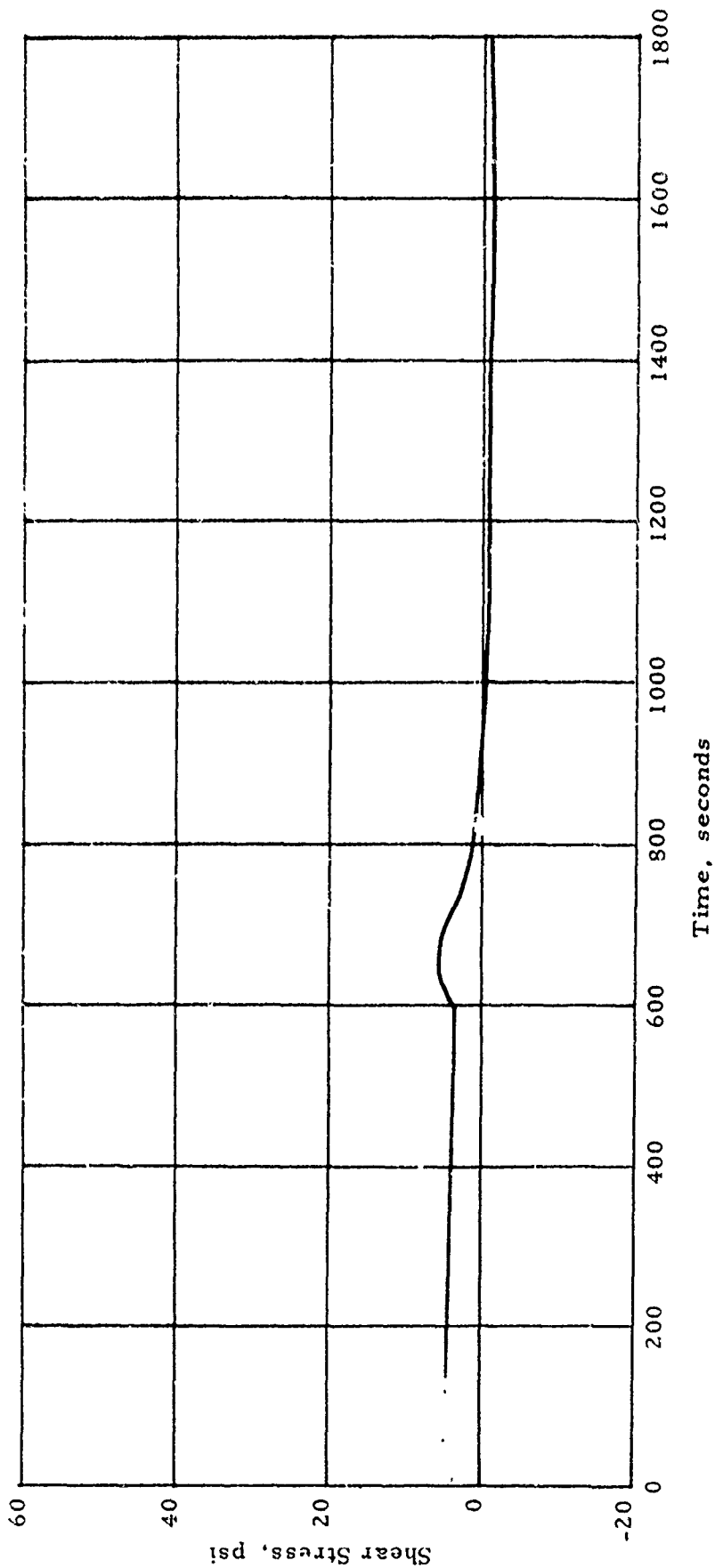
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Head End Shear Stress Response to Aeroheat Loads - Gage S1-109 (Test No. A-4)

Motor - IM #1
 Test - A-5 (SFPI)
 Gage - S1-109
 Location - Fwd
 T_{initial} - '0°F

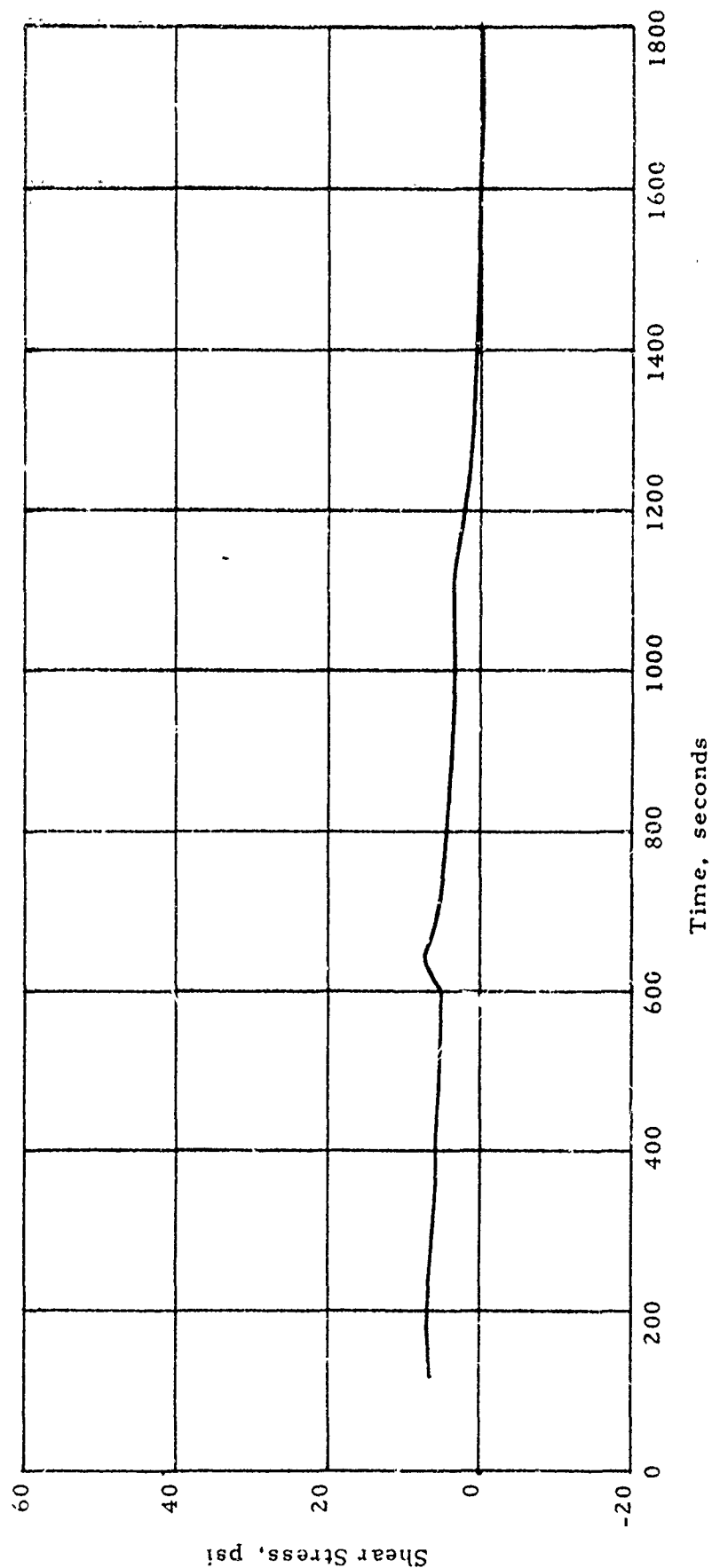
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Head End Shear Stress Response to Aeroheat Loads - Gage S1-109 (Test No. A-5)

Motor - IM #1
 Test - A-6 (DMP-3)
 Gage - S1-109
 Location - Fwd
 T_{initial} - -65°F

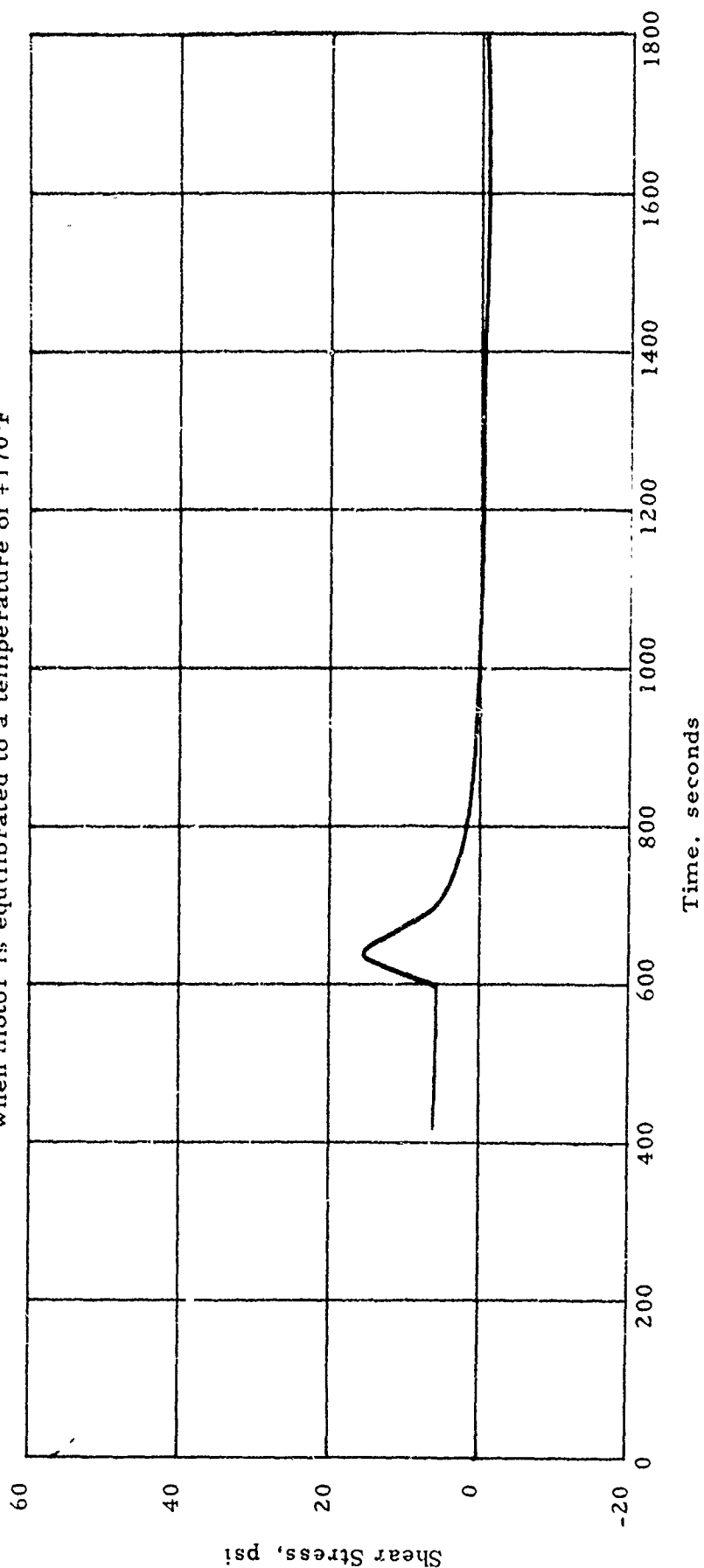
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of $\pm 170^\circ\text{F}$



Head End Shear Stress Response to Aeroheat Loads - Gage S1-109 (Test No. A-6)

Motor - IM #1
 Test - A-7 (SFPI)
 Gage - S1-109
 Location - Fwd
 T_{initial} - -65°F

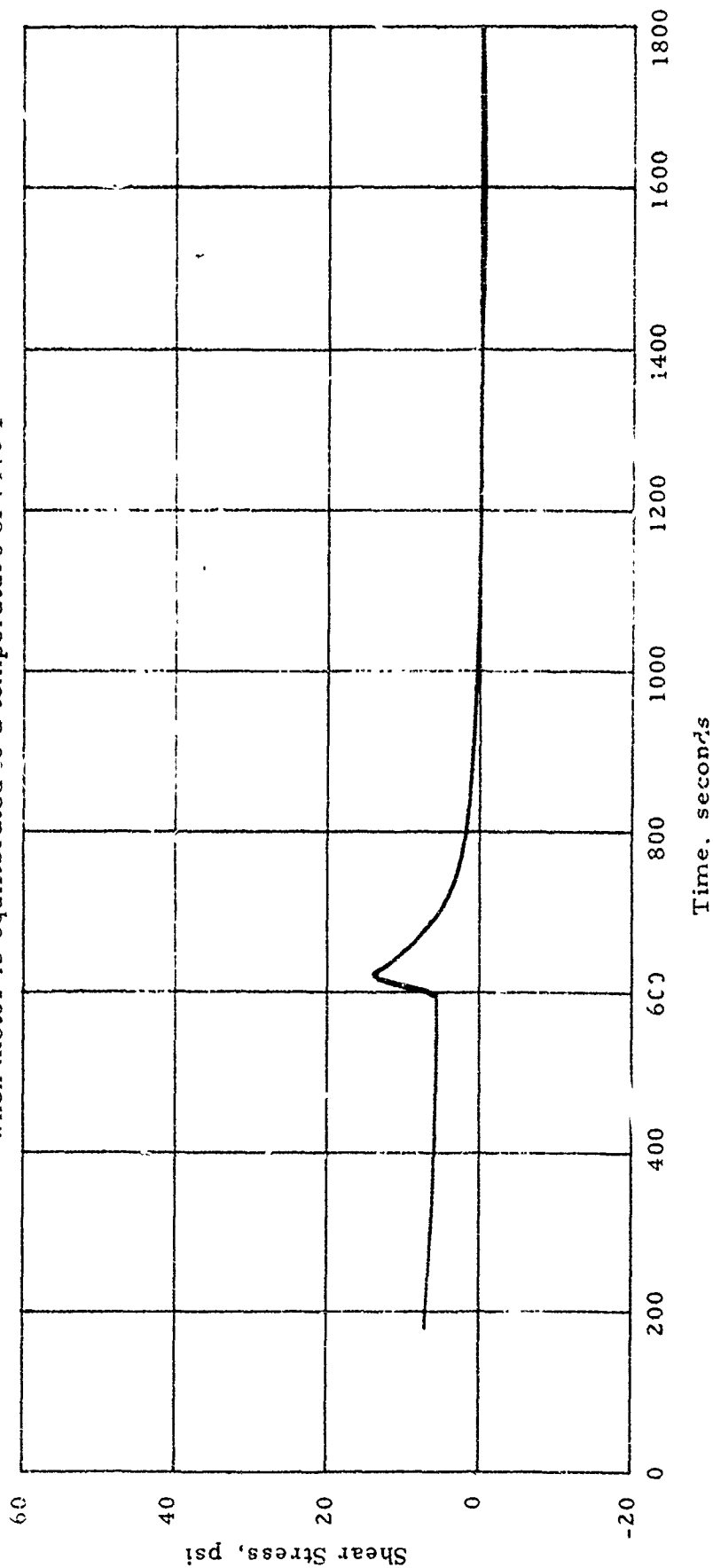
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Head End Shear Stress Response to Aeroheat Loads - Gage S1-109 (Test No. A-7)

Motor - IM #1
 Test - A-8 (SFPI)
 Gage - S1-109
 Location - Fwd
 T_{initial} - -64°F

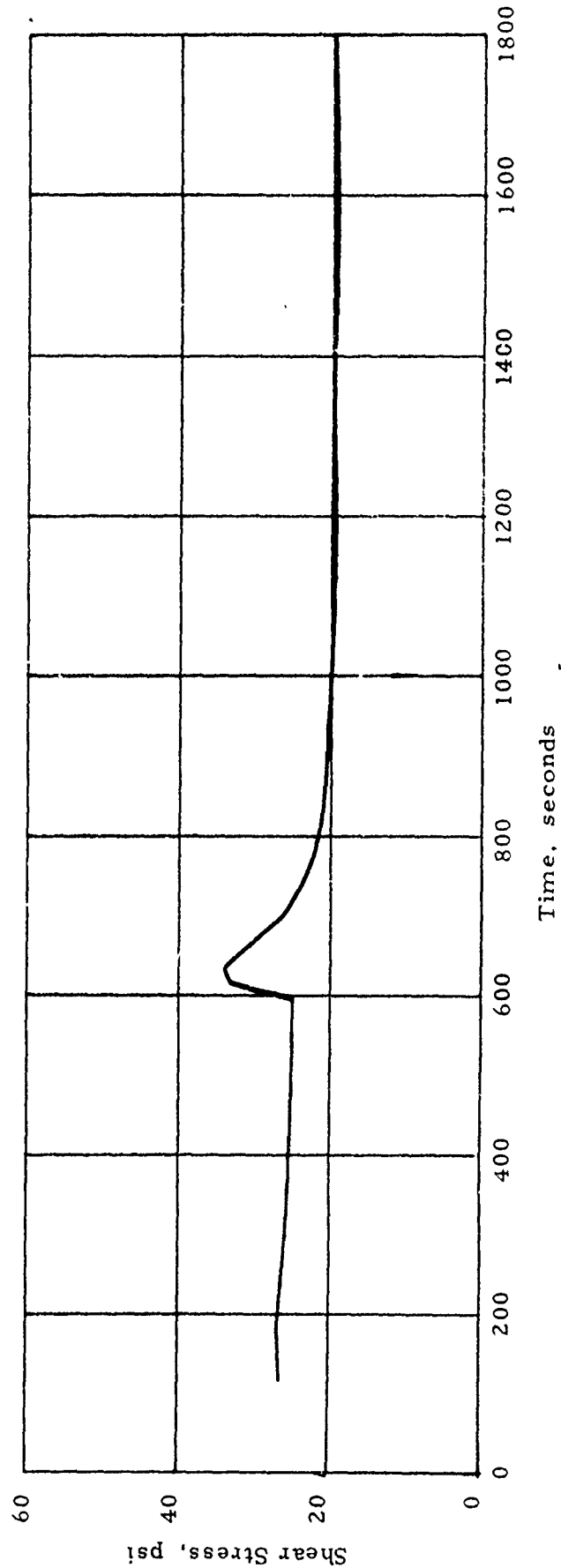
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Head End Shear Stress Response to Aeroheat Loads Gage S1-109 (Test No. A-8)

Motor - IM #1
 Test - A-9 (SFPI)
 Gage - S1-109
 Location - Fwd
 T_i initial - -65°F

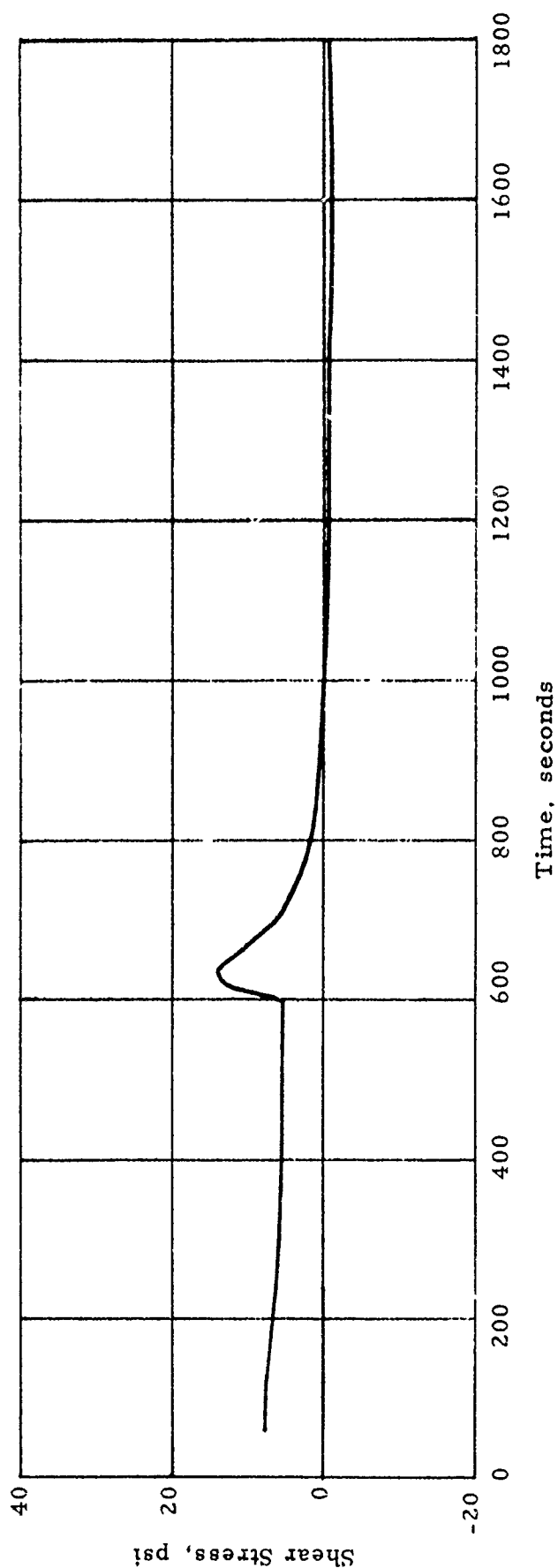
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Head End Shear Stress Response to Aeroheat Loads - Gage S1-109 (Test No. A-9)

Motor - IM #1
 Test - A-10 (SFPI)
 Gage - S1-109
 Location - Fwd
 T_{initial} - -65°F

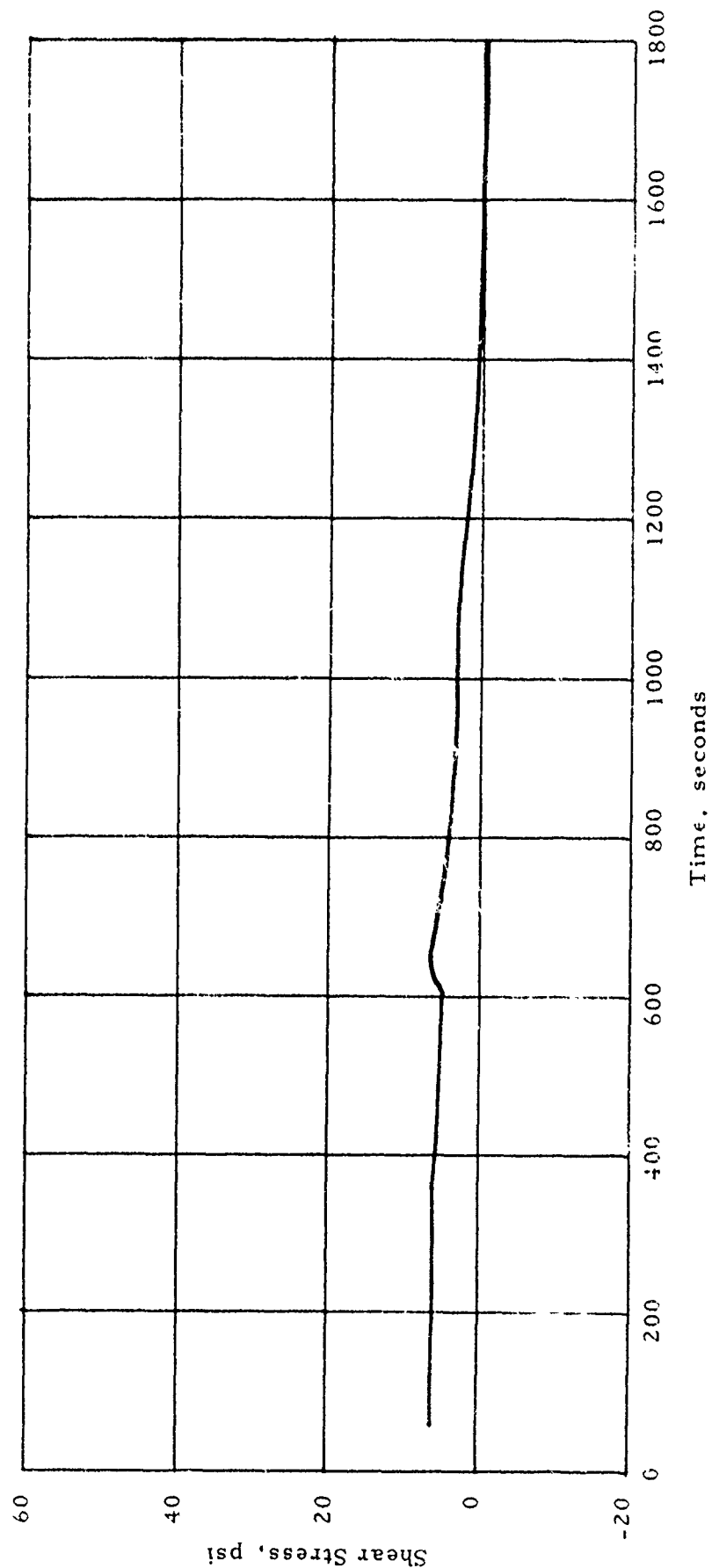
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F



Head End Shear Stress Response to Aeroheat Loads - Gage S1-109 (Test No. A-10)

Motor - IM #1
 Test - A-12 (DMP-3)
 Gage - S1-109
 Location - Fwd
 T_{initial} - -65°F

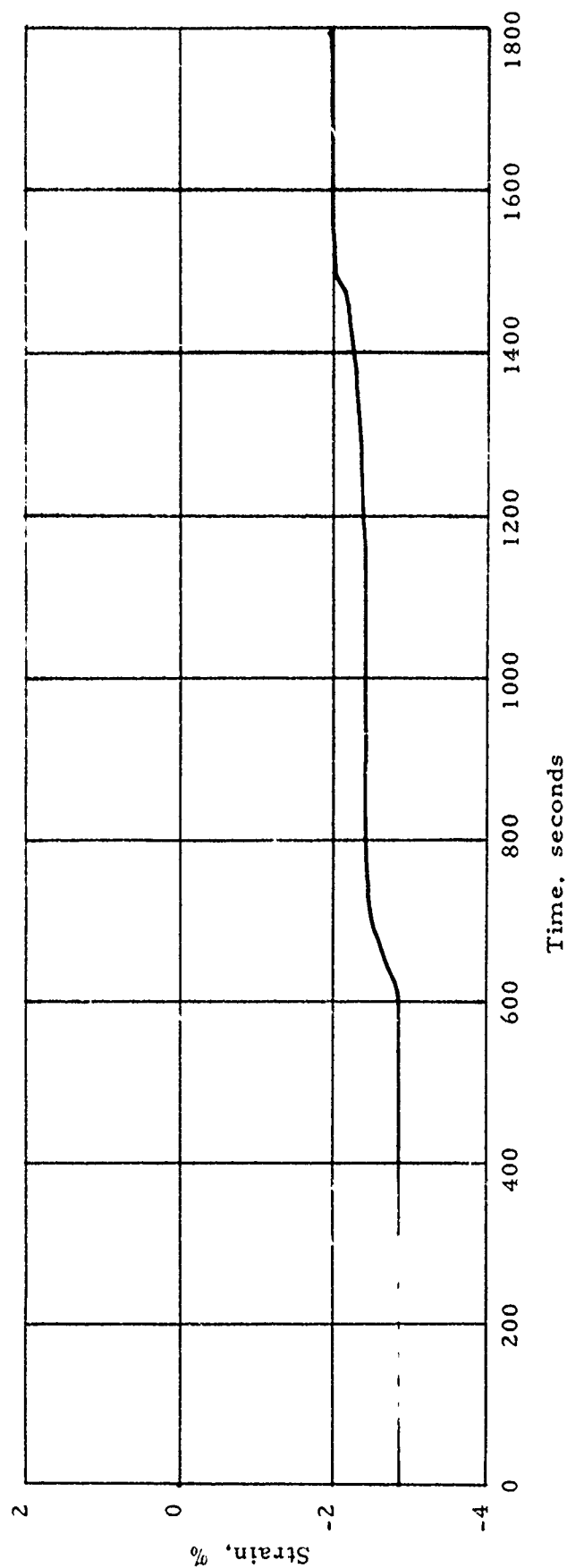
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Head End Shear Stress Response to Aeroheat Loads - Gage S1-109 (Test No. A-12)

Motor - IM #1
 Test - A-7 (SFP1)
 Gage - C1-12
 Location - Fwd
 T_{initial} - -65°F

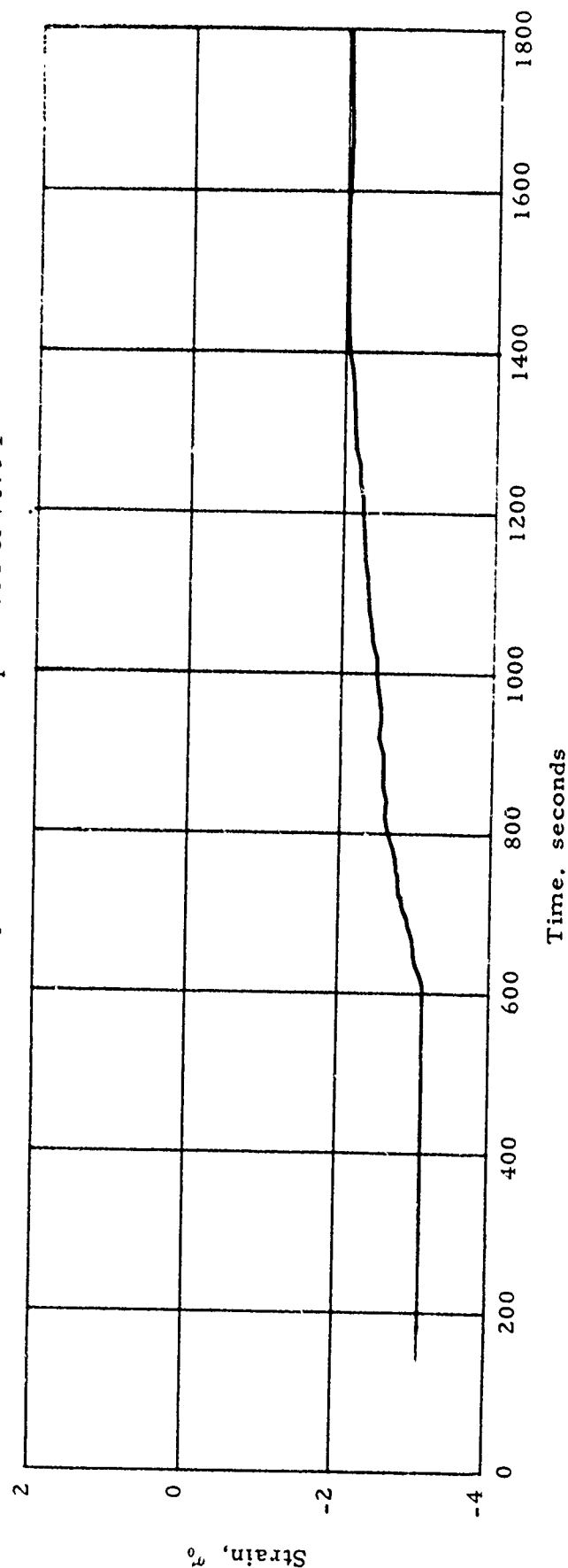
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads - Gage C1-12 (Test - A-7)

Motor - IM #1
 Test - A-8 (SFPI)
 Gage - C1-12
 Location - Fwd
 T_{initial} - -65 F

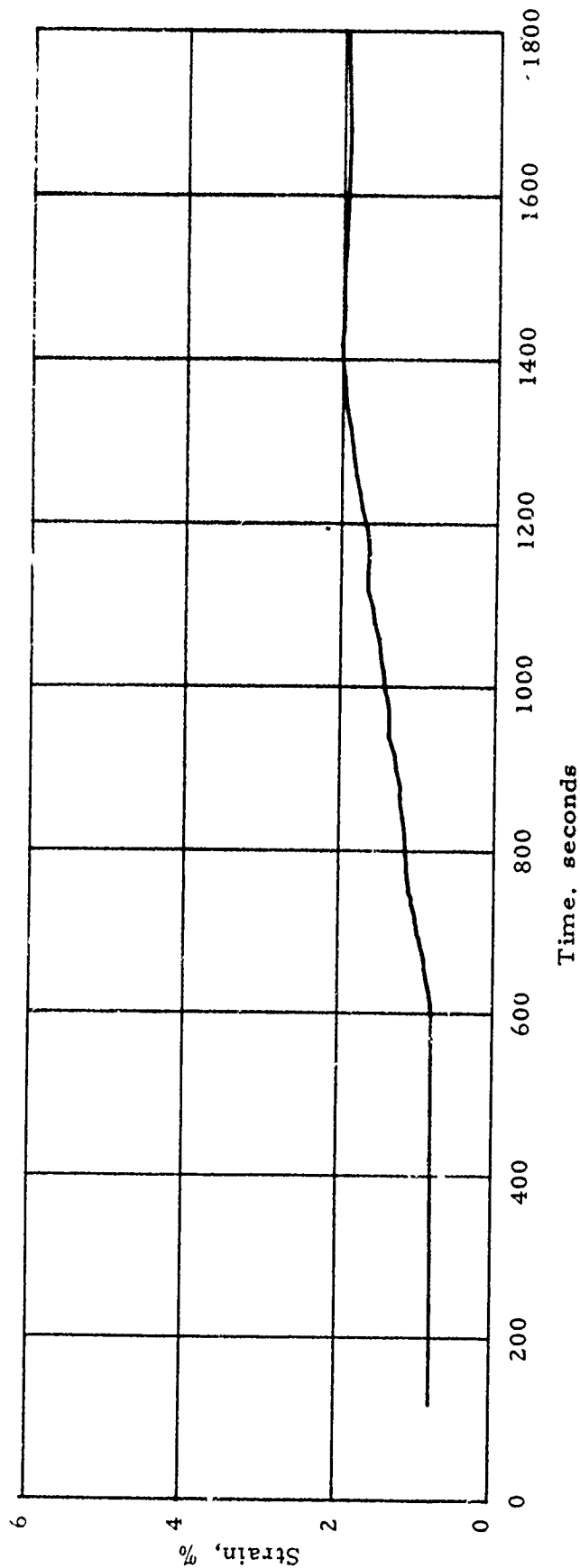
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170 F



Bore Strain Response to Aeroheat Loads - Gage C1-12 (Test A-7)

Motor - IM #1
 Test - A-9 (SFPI)
 Gage - C1-12
 Location - Fwd
 T_{initial} - -65°F

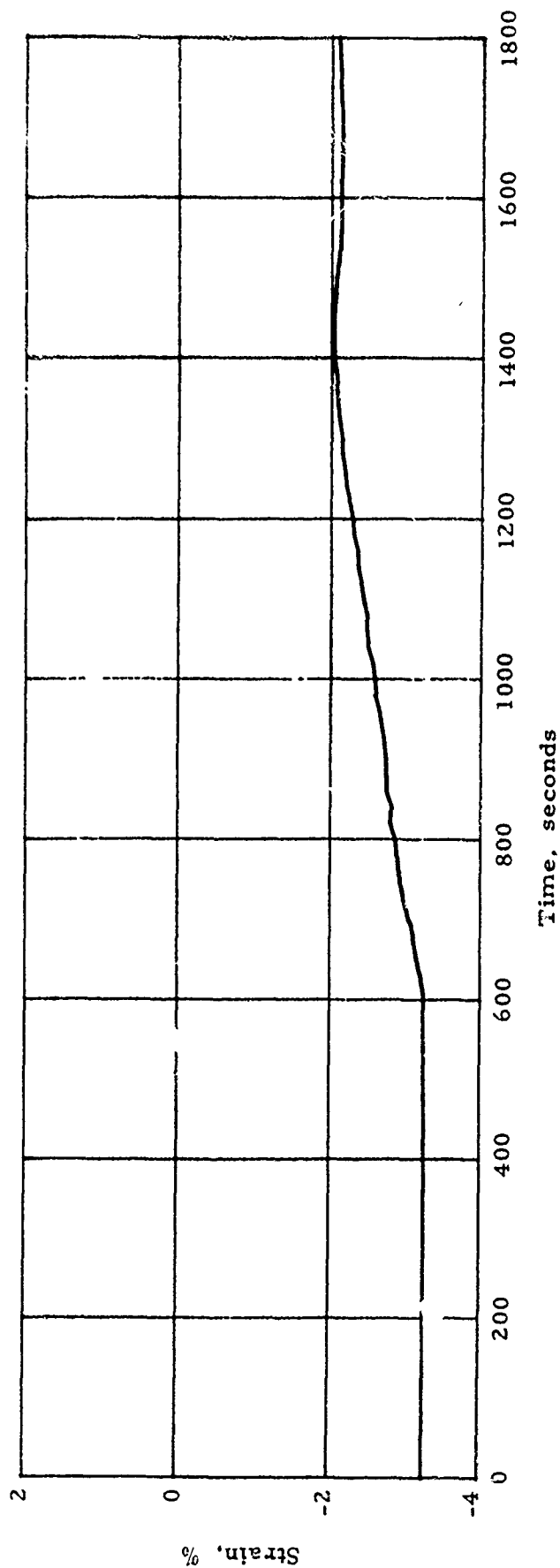
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads - Gage C1-12 (Test - A-9)

Motor IM #1
 Test A-10 (SFPI)
 Gage C1-12
 Location Fwd
 T_{initial} -65°F

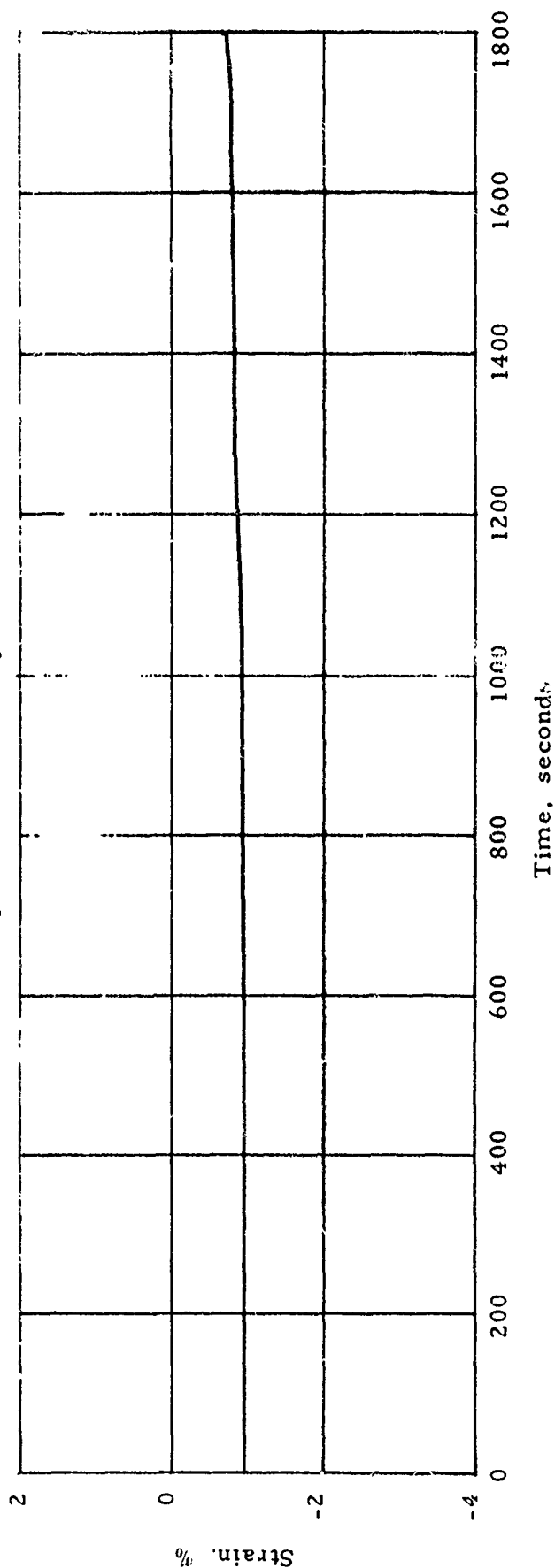
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads - Gage C1-12 (Test - A-10)

Motor - IM #1
 Test - A-12 (DMP-3)
 Gage - C1-12
 Location - Fwd
 T_{initial} - -65°F

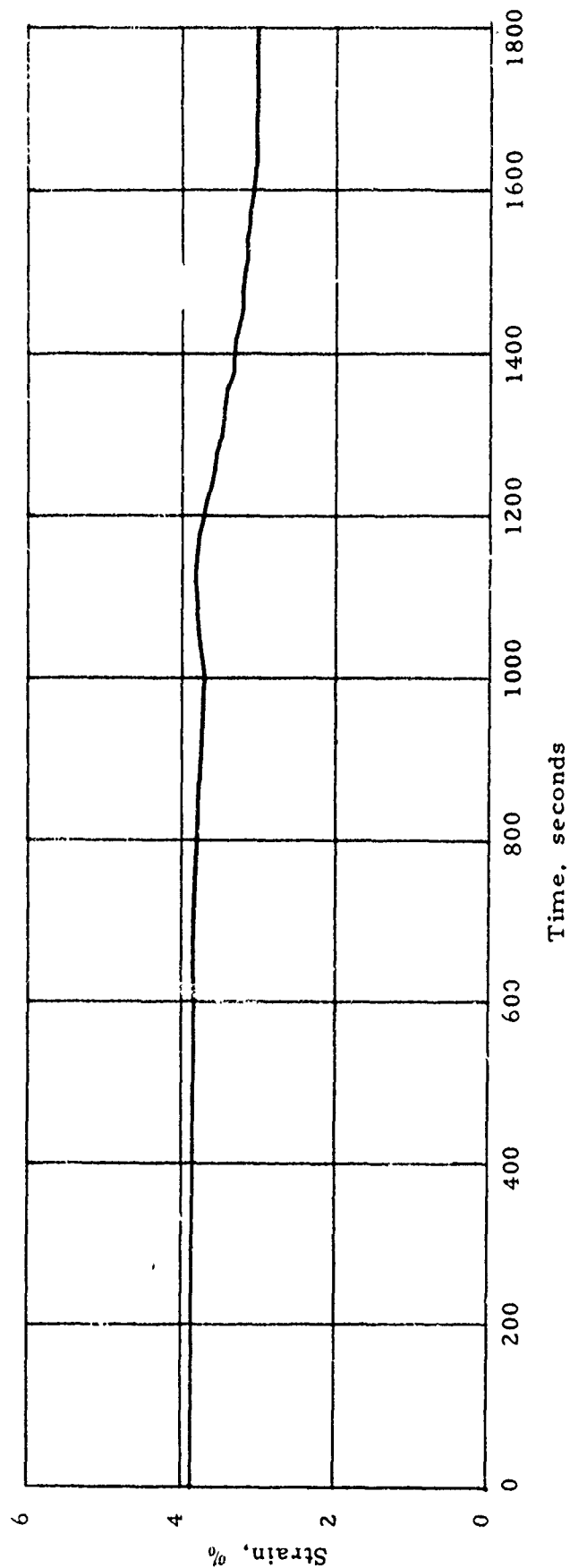
Data based on gage output being adjusted to zero (0) reading when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads - Gage C1-12 (Test A-12)

Motor - IM #1
 Test - A-1 (DMP-3)
 Gage - C1-13
 Location - Center
 T_{initial} - -65°F

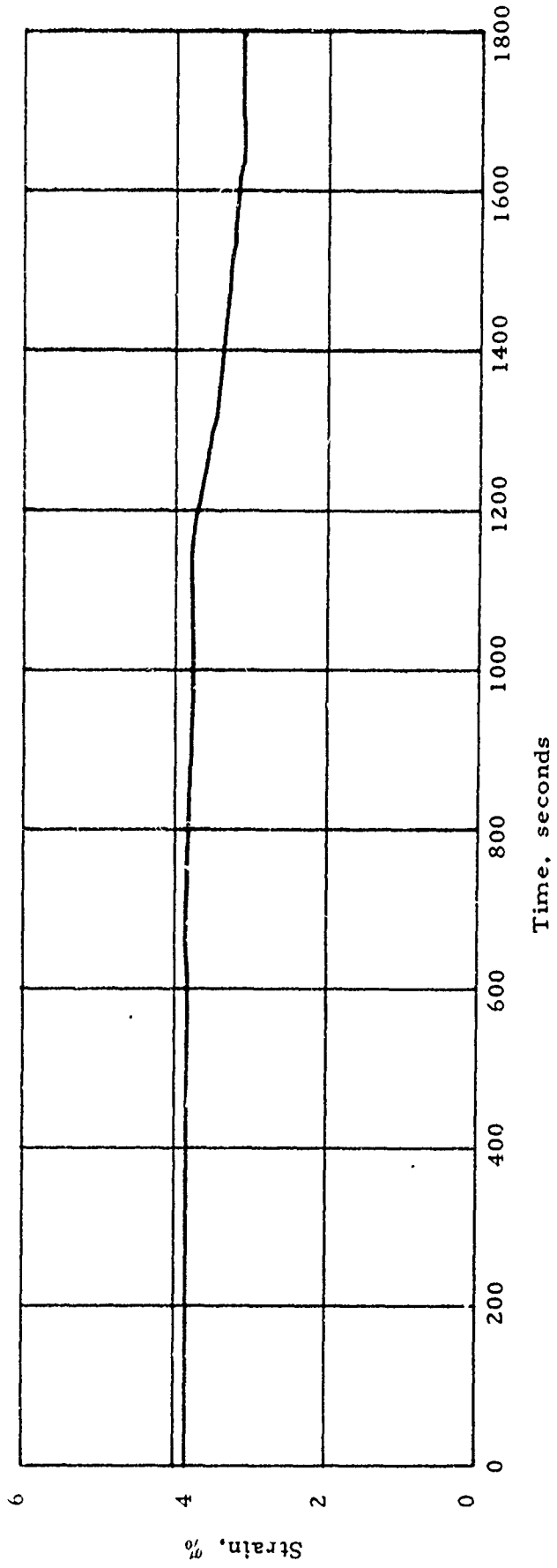
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads - Gage C1-13 (Test - A-1)

Motor - IM #1
 Test - A-2 (DMP-3)
 Gage - C1-13
 Location - Center
 T_{initial} - -65°F

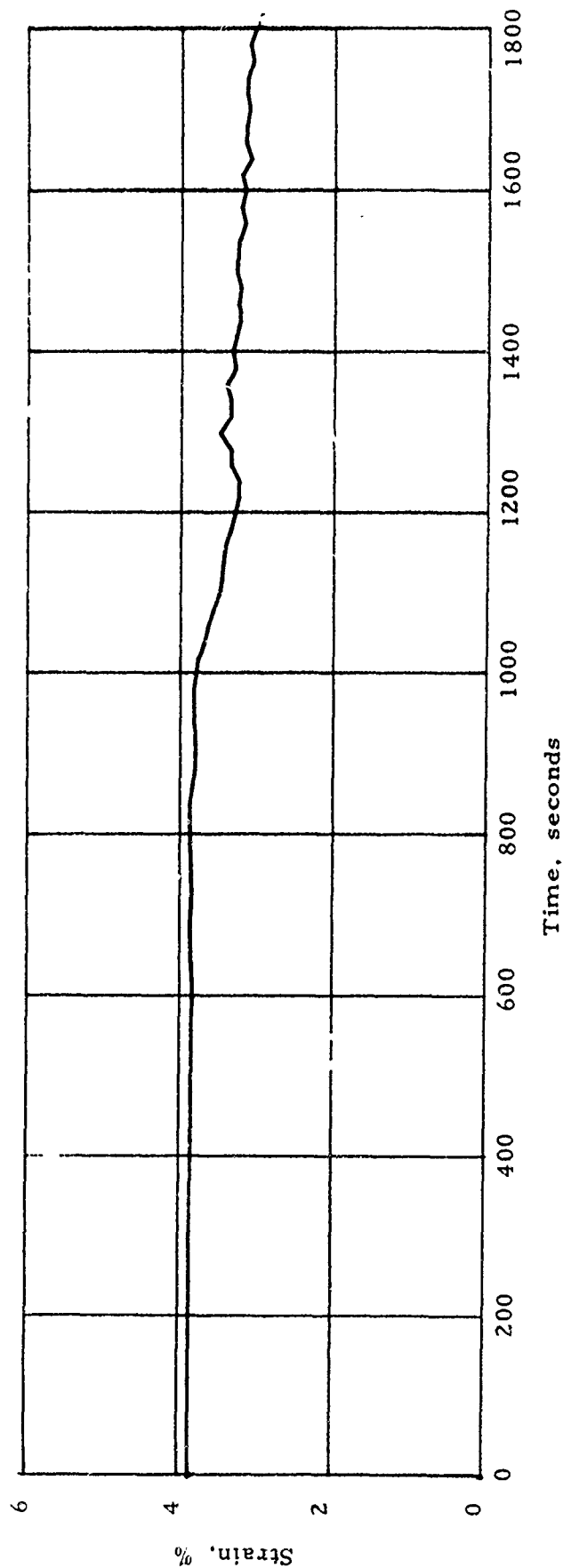
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads - Gage C1-13 (Test - A-2)

Motor - IM #1
 Test - A-3 (HSMH)
 Gage - C1-13
 Location - Center
 T_{initial} - -65°F

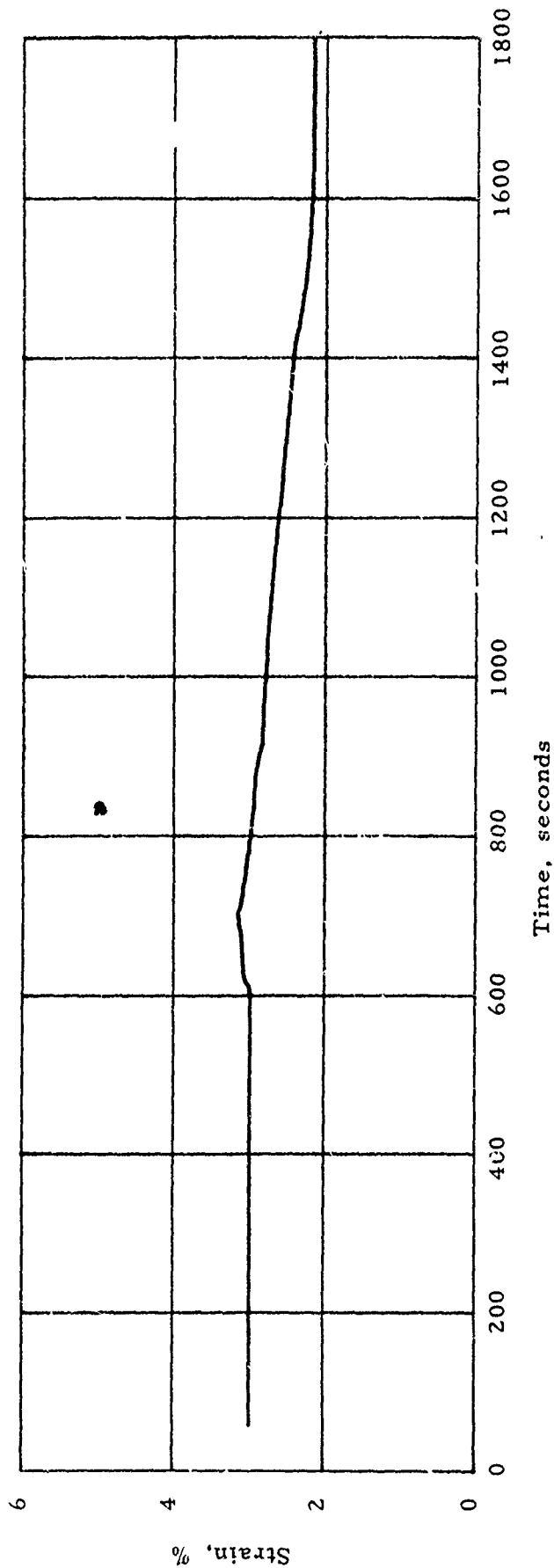
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads - Gage C1-13 (Test - A-3)

Motor - IM #1
 Test - A-4 (SFPI)
 Gage - C1-13
 Location - Center
 T_{initial} - -40°F

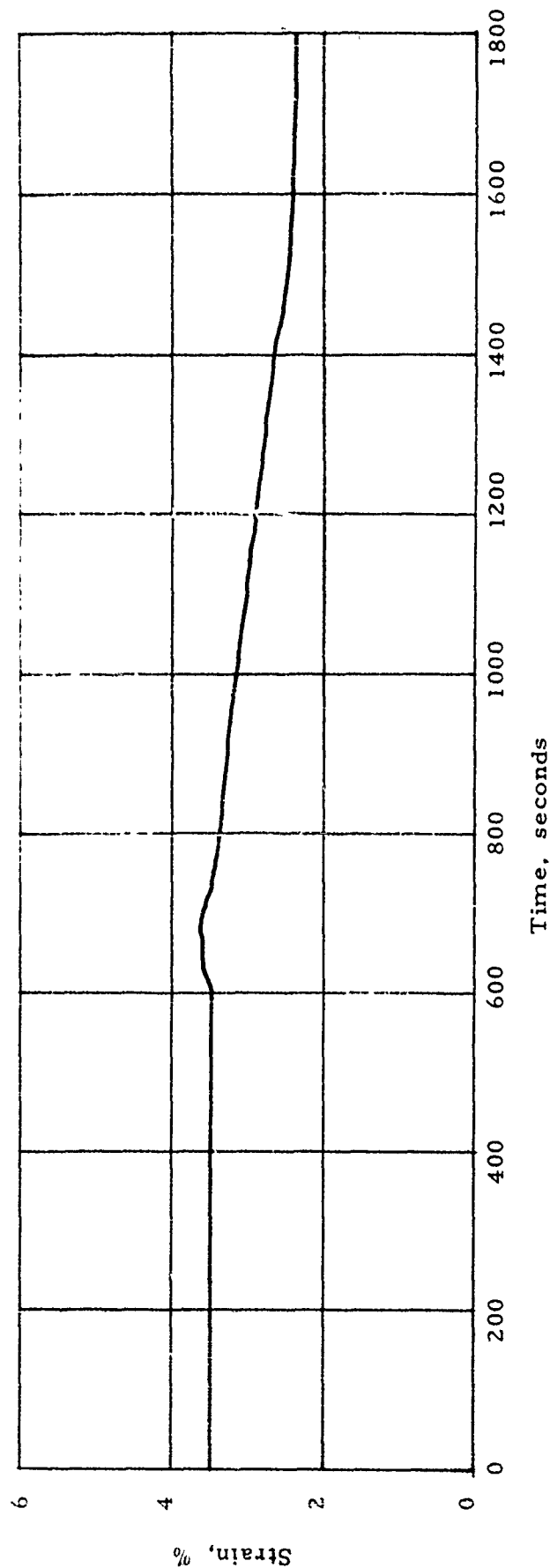
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads - Gage C1-13 (Test - A-4)

Motor - IM #1
 Test - A-5 (SFPI)
 Gage - C1-13
 Location - Center
 T_{initial} - 0 F

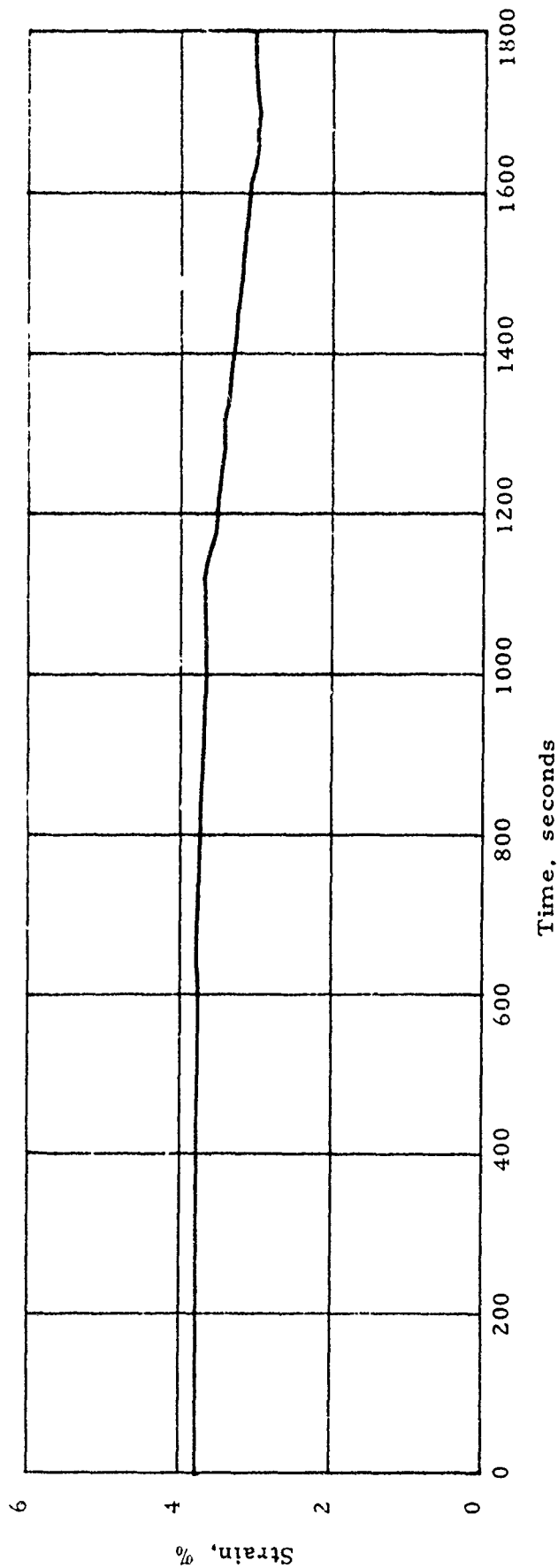
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads - Gage C1-13 (Test - A-5)

Motor - IM #1
 Test - A-6 (DMP-3)
 Gage - C1-13
 Location - Center
 T_{initial} - -65°F

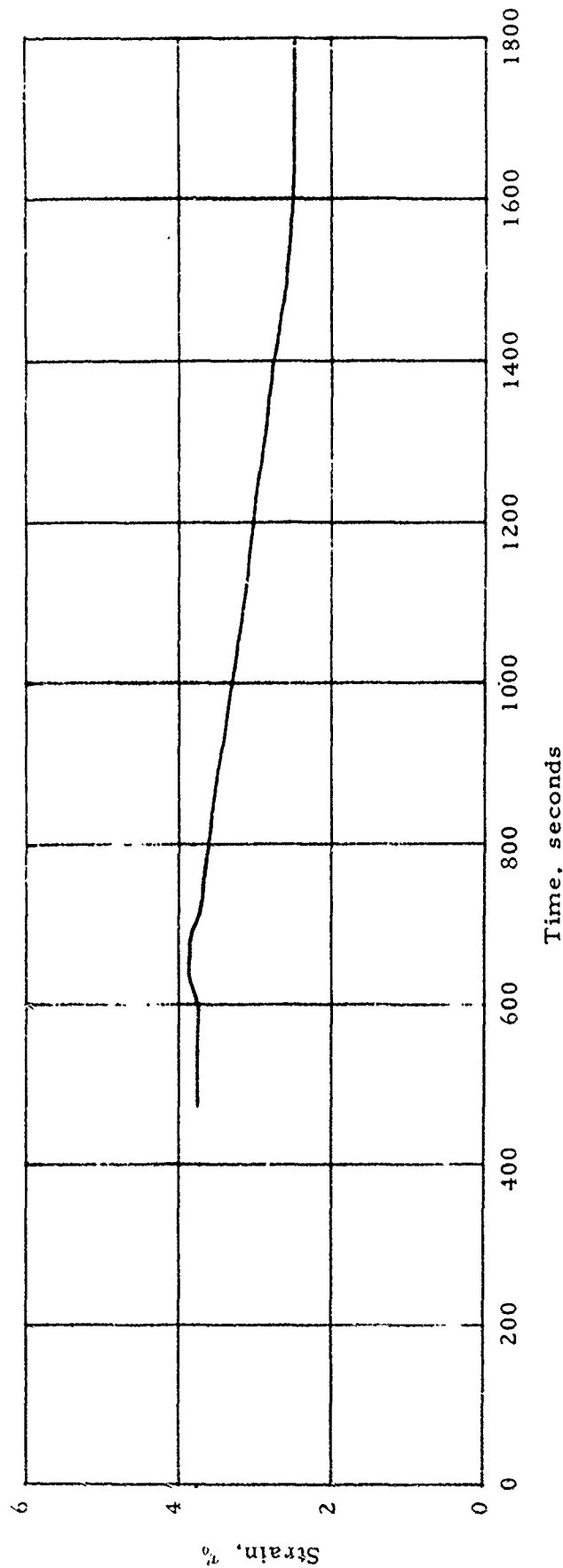
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads - Gage C1-13 (Test - A-6)

Motor - IM #1
 Test - A-7 (SFPI)
 Gage - C1-13
 Location - Center
 T_{initial} - -65°F

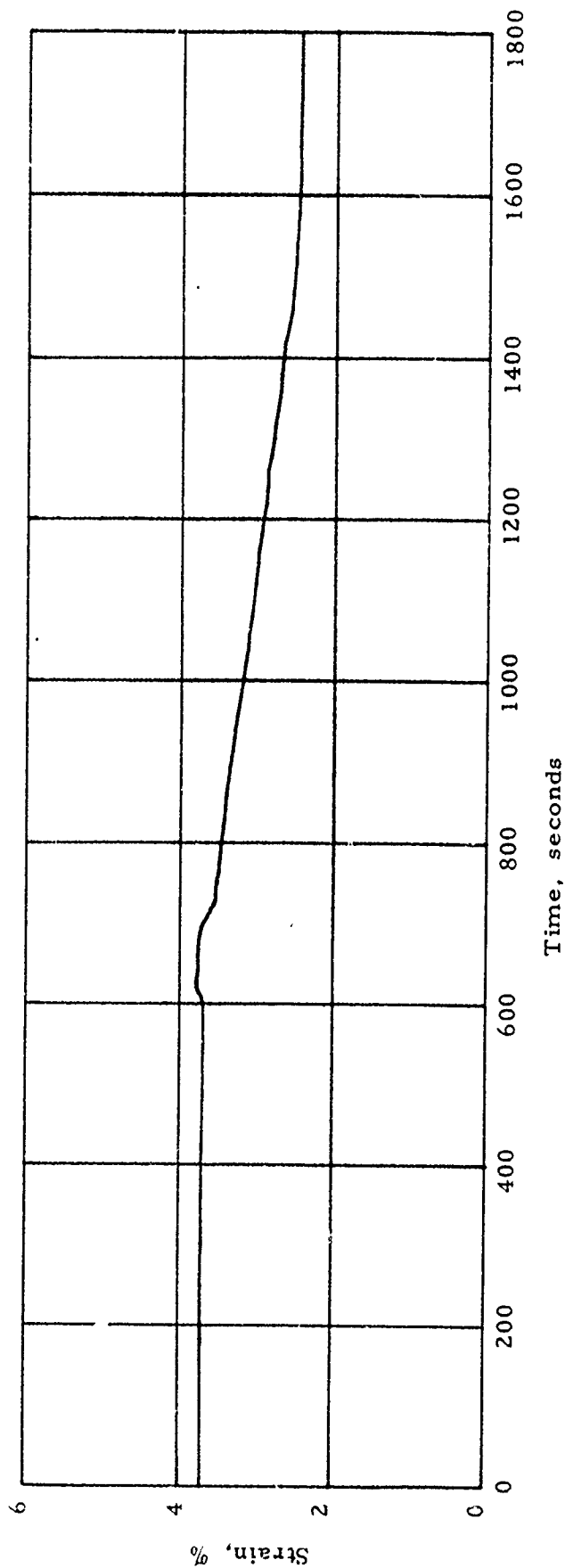
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads - Gage C1-13 (Test - A-7)

Motor - IM #1
 Test - A-8 (SFPI)
 Gage - C1-13
 Location - Center
 T_{initial} - -65°F

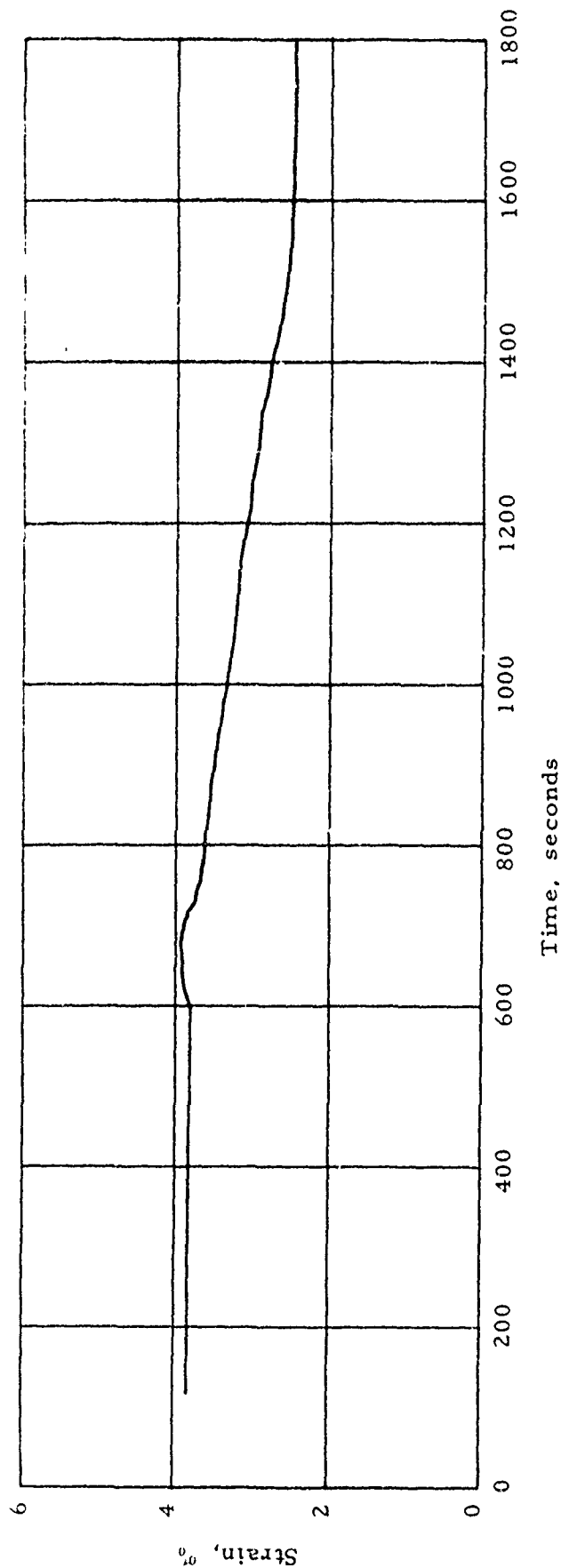
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads - Gage C1-13 (Test - A-8)

Motor - IM #1
 Test - A-9 (SFPI)
 Gage - C1-13
 Location - Center
 T_{initial} - -65°F

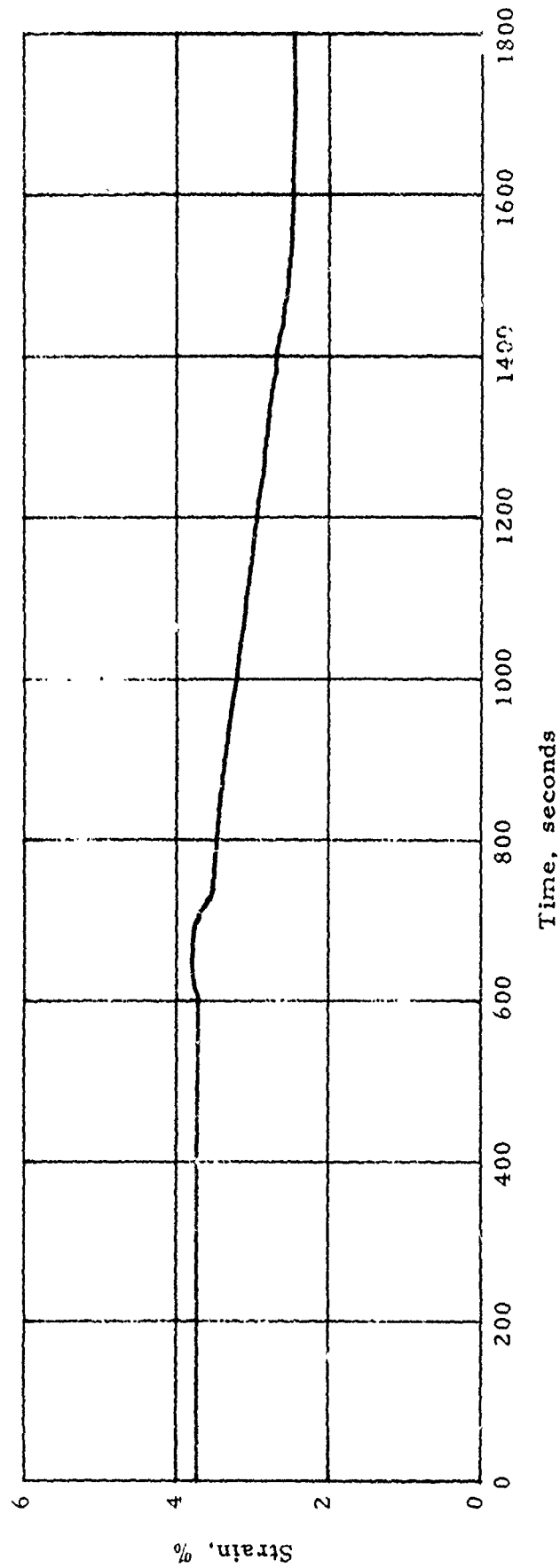
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads - Gage C1-13 (Test - A-9)

Motor - IM #1
 Test - A-10 (SFPI)
 Gage - C1-13
 Location - Center
 T_{initial} - -65°F

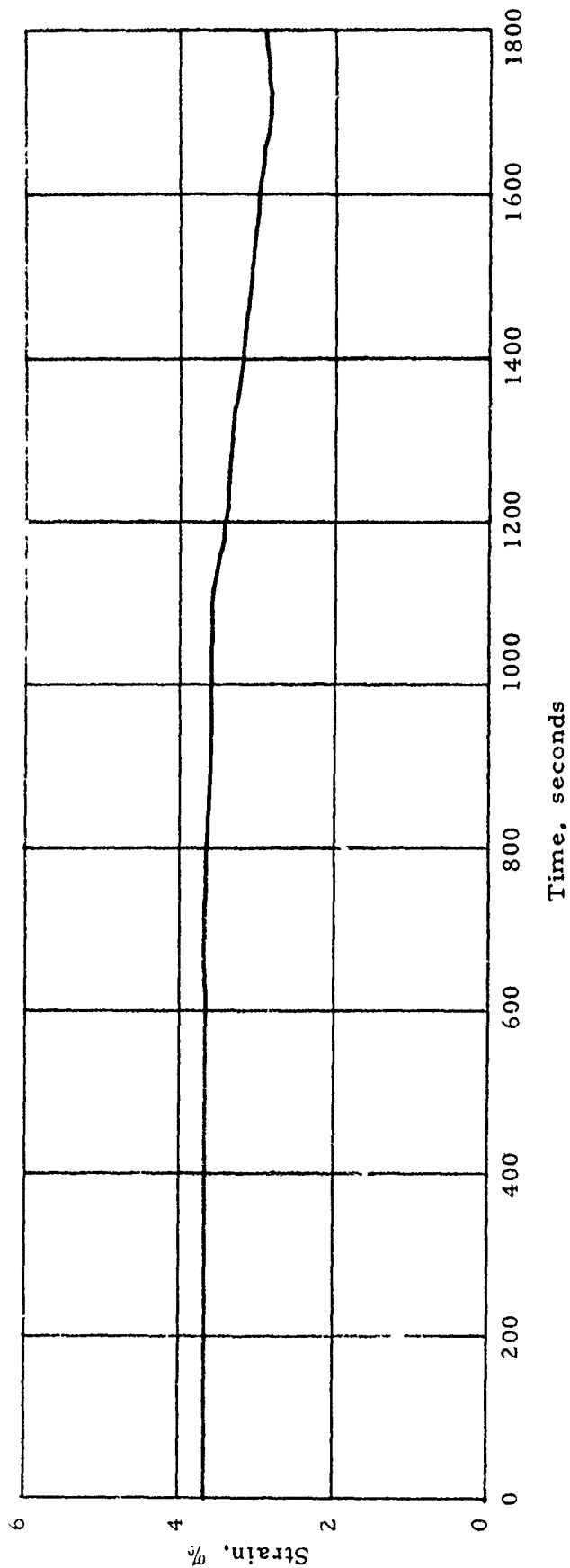
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads - Gage C1-13 (Test - A-10)

Motor - IM #1
 Test - A-12 (DMP-3)
 Gage - C1-13
 Location - Center
 T_{initial} - -65°F

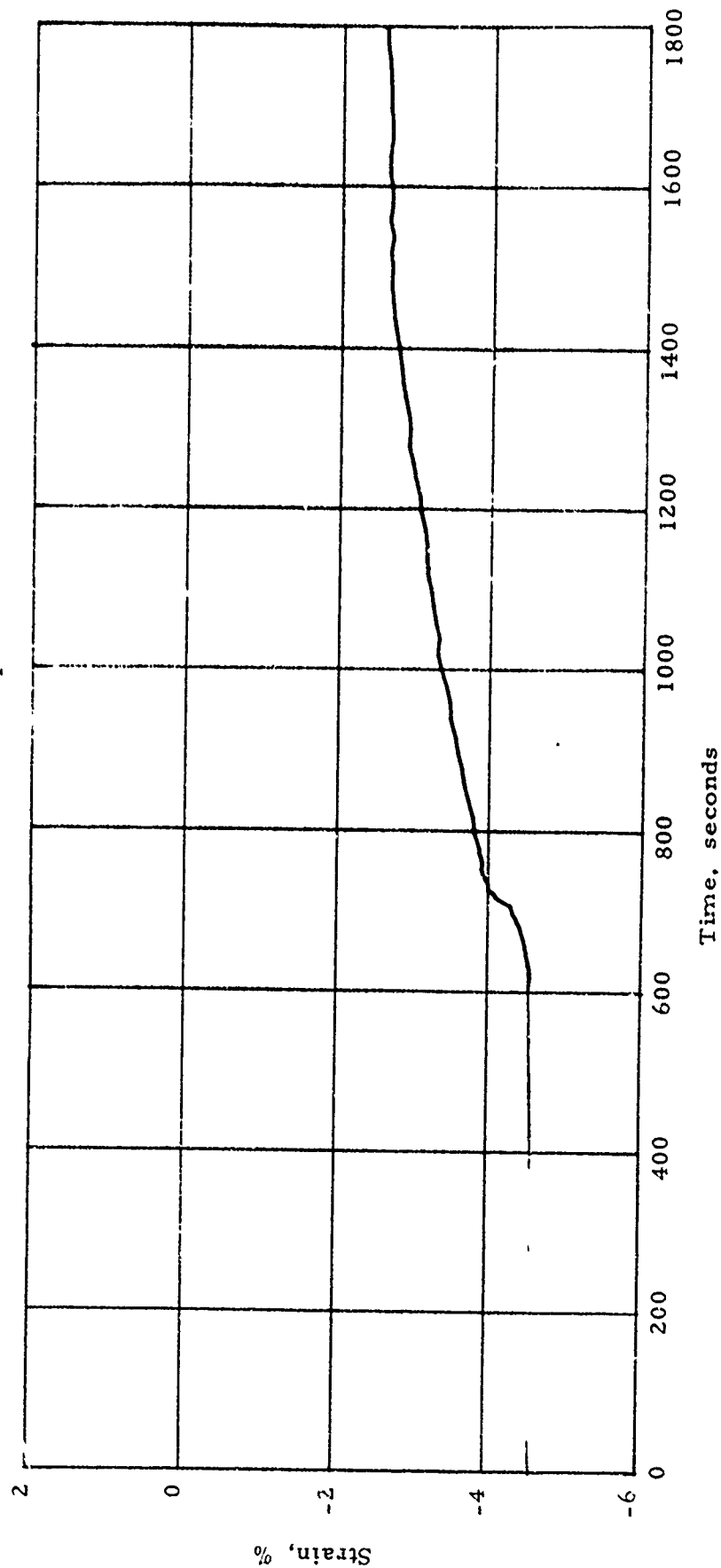
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads - Gage C1-13 (Test - A-12)

Motor - IM #1
 Test - A-7 (SFPI)
 Gage - C1-14
 Location - Aft
 T_{initial} - -65°F

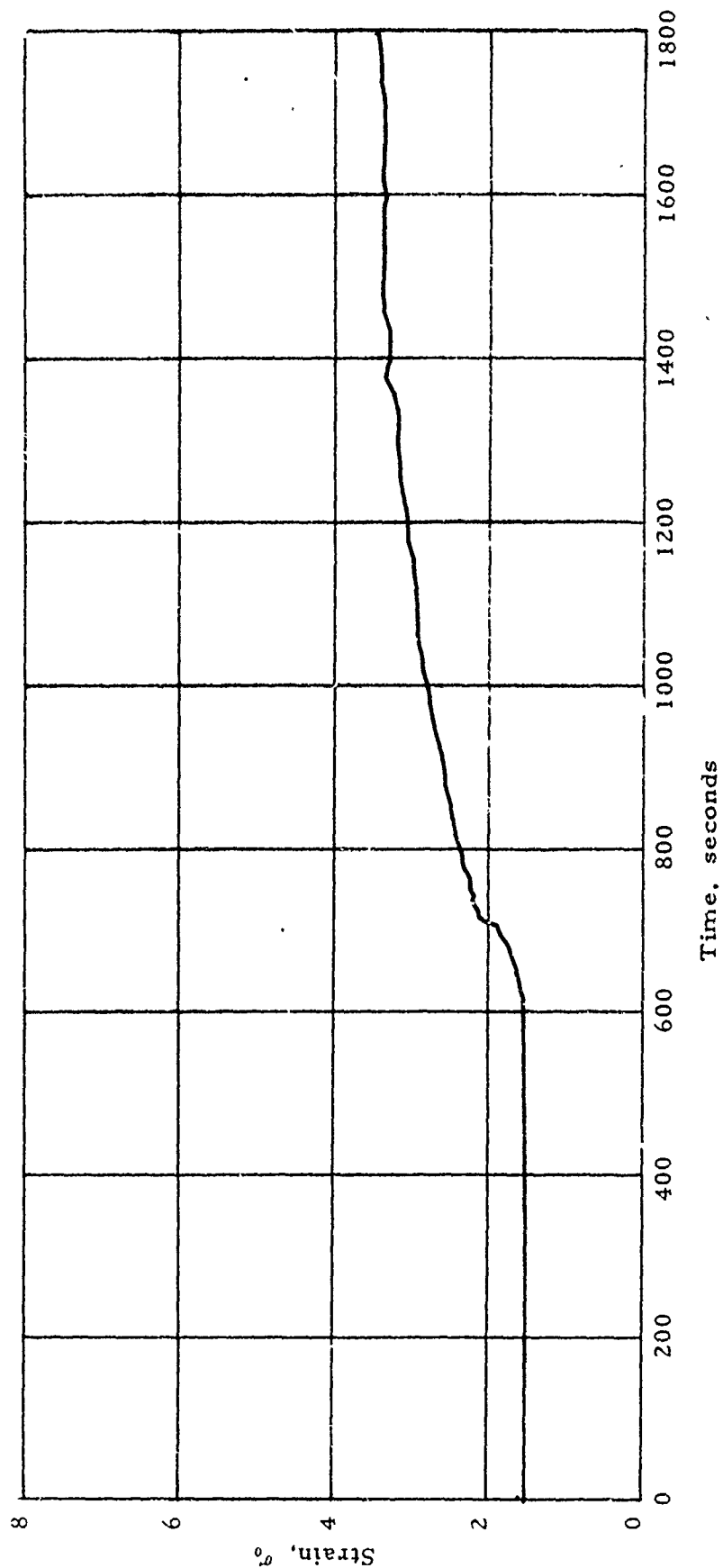
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads - Gage C1-14 (Test - A-7)

Motor - IM #1
 Test - A-8 (SFPI)
 Gage - C1-14
 Location - Aft
 T_{initial} - -65°F

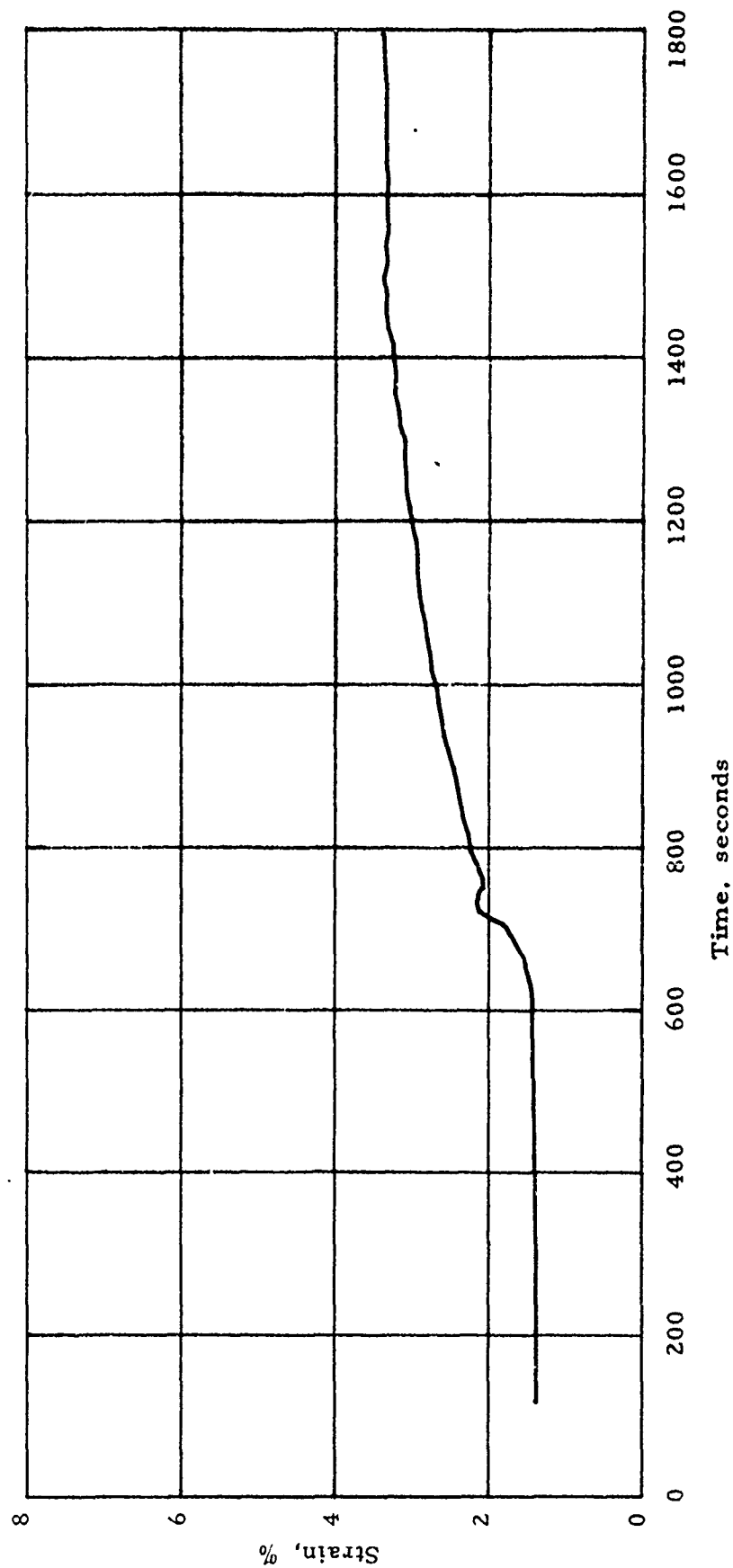
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads - Gage C1-14 (Test A-8)

Motor - IM #1
 Test - A-9 (SFPI)
 Gage - C1-14
 Location - Aft
 T_{initial} - -65°F

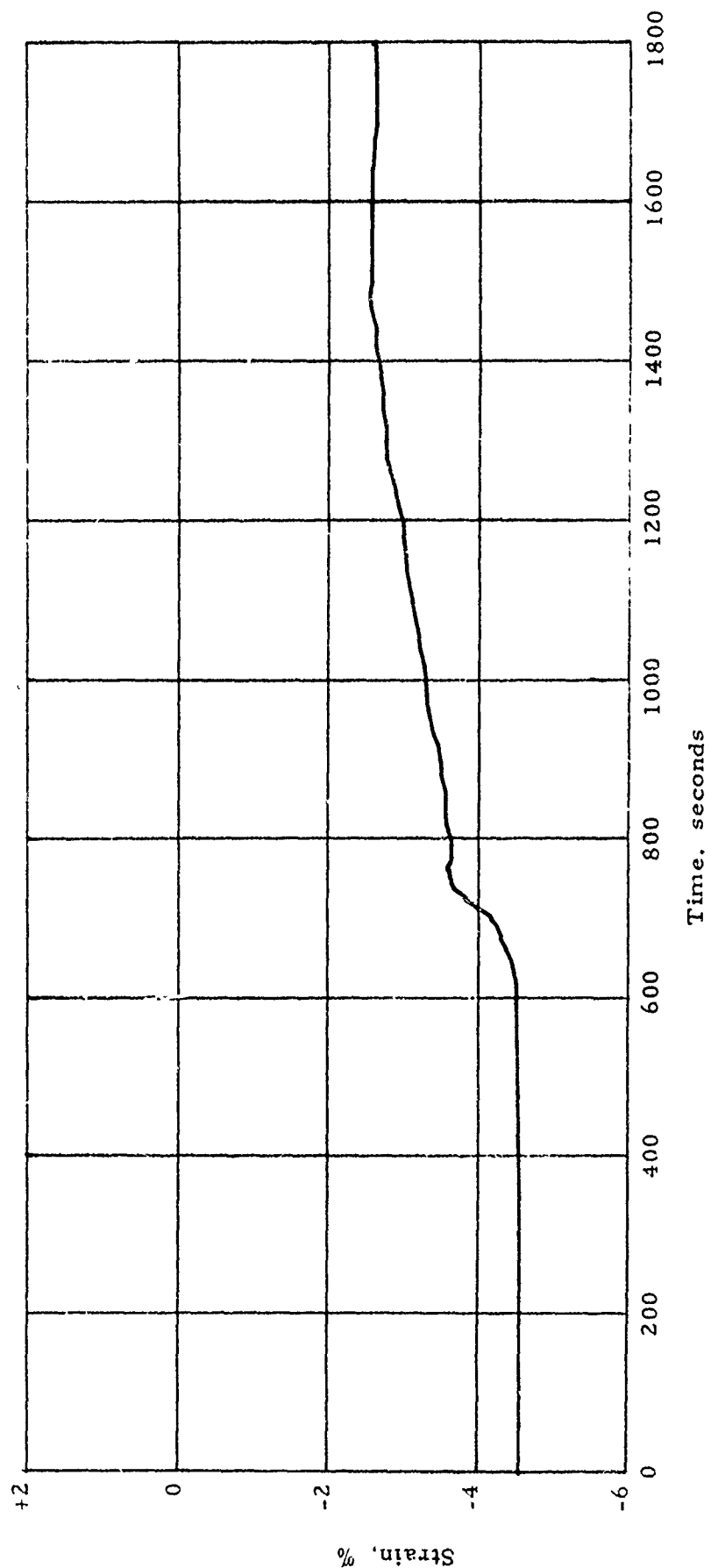
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads - Gage C1-14 (Test - A-9)

Motor - IM #1
 Test - A-10 (SFPI)
 Gage - C1-14
 Location - Aft
 T_{initial} - -65°F

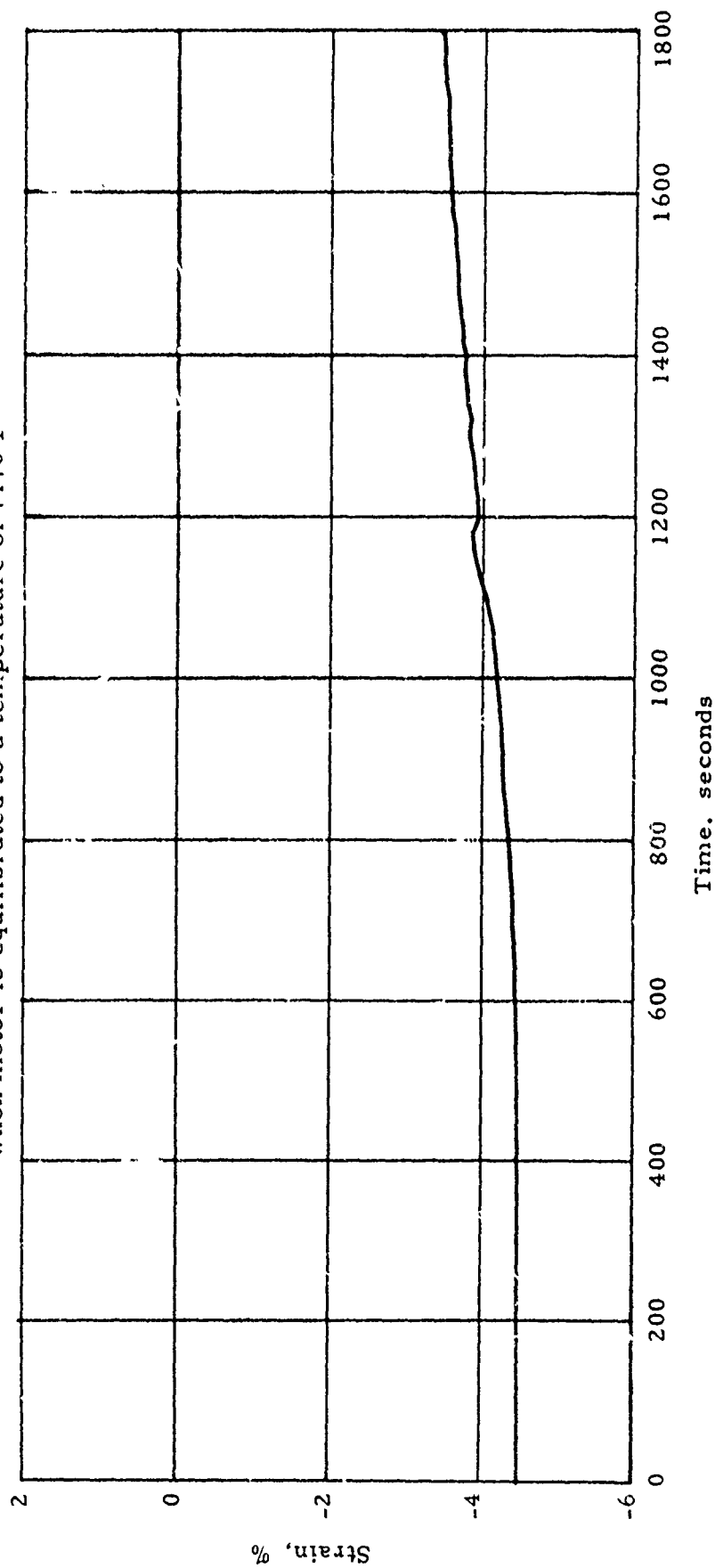
Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aeroheat Loads - Gage C1-14 (Test - A-10)

Motor - IM #1
 Test - A-12 (DMP-3)
 Gage - C1-14
 Location - Aft
 T_{initial} - -65°F

Data based on gage output being adjusted to zero (0) reading
 when motor is equilibrated to a temperature of +170°F



Bore Strain Response to Aercheat Loads - Gage C1-14 (Test - A-12)