

SOUTHWEST RESEARCH INSTITUTE

Department of Quality Assurance

Calibration Laboratory • 522-5215

WORK ORDER

CERTIFICATE # 25033 ASSET # 00370 DATE 07 Aug 97

ITEM DATA:

Manufacturer Kossel Model ASTM 82C

Description SPINDLE Serial # 32900

Accessories \_\_\_\_\_

ACTION REQUESTED 01

CUSTODIAN Dr. D. D. D.

Turned in by: \_\_\_\_\_ Phone 100

CHARGE # 205700501 Date Required \_\_\_\_\_

INSTRUMENT USED ON:  NUCLEAR  DOD  NASA  GLP  SPPE  
 OTHER \_\_\_\_\_

COPY OF CALIBRATION CERTIFICATE  Yes  No

CONDITION RECEIVED: \_\_\_\_\_ Out of tolerance, repaired to specifications  
\_\_\_\_\_ In tolerance, minor adjustments/repairs made  
 In tolerance, no adjustments/repairs  
\_\_\_\_\_ Out of tolerance, adjusted to specifications  
\_\_\_\_\_ Received into system, introduced or reactivated  
\_\_\_\_\_ Calibration interval  
\_\_\_\_\_ Reliability code

ACTION TAKEN: (Calibration/Repair/Parts) Calibrated by Random  
111 415  
-0.02°C 0.0°C

25033

CAL ENVIRONMENT:  
Temperature 70 °F Humidity 40 %RH

CALIBRATED/REPAIRED:  
By [Signature] Cal Procedure 411-9.30-7403  
Date 15 Aug 97 Accuracy ± 1°C  
Cal Interval 12 mos Time to complete:  
Next Cal due 15 Aug 98 Cal 2.0 Repair \_\_\_\_\_  
Standards used (Asset#) 106, 5174

DATE COMPLETED 15 Aug 97  
DATE PICKED UP 4/17/97 PICKED UP BY [Signature]

SOUTHWEST RESEARCH INSTITUTE  
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WORK ORDER

CERTIFICATE # 30695 ASSET # 003778 DATE 8/13/98

ITEM DATA:  
Manufacturer KESSLER Model ASTM 82C  
Description THERMOMETER Serial # 32922  
Accessories Box

ACTION REQUESTED Cal

CUSTODIAN D. Dunn

Turned in by: Dunge Phone \_\_\_\_\_

CHARGE # 20-1402-5 Date Required \_\_\_\_\_

INSTRUMENT USED ON:  (DOD/NASA)  (NUCLEAR)  (GLP)  (SPPE)  (ISO)  
 OTHER \_\_\_\_\_

COPY OF CALIBRATION CERTIFICATE  (Yes)  (No)

NEW WORK  Yes  No If yes, an evaluation shall be made to verify capabilities.

By JMU Date 8/13/98

Work involves proprietary/confidential information or equipment  (Yes)  (No)

CONDITION RECEIVED: \_\_\_\_\_ (F) Out of tolerance, repaired to specifications  
\_\_\_\_\_ (G) In tolerance, minor adjustments/repairs made  
\_\_\_\_\_ (J) In tolerance, no adjustments/repairs  
\_\_\_\_\_ (K) Out of tolerance, adjusted to specifications  
\_\_\_\_\_ (S) Received into system, introduced or reactivated

ACTION TAKEN: (Calibration/Repair/Parts) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

CAL ENVIRONMENT:  
Temperature 76 °F Humidity 46%RH

CALIBRATED/REPAIRED:  
By W. Hill Cal Procedure WI-9-30-T403  
Date 5 Aug 98 Accuracy +/- 1 deg C  
Cal Interval 2 mo Reliability Code: \_\_\_\_\_  
Next Cal due 6 Aug 99 Cal Time \_\_\_\_\_ Repair Time \_\_\_\_\_  
Standards used (Asset#) 000219 / 00328

DATE COMPLETED 6 Aug 98  
DATE PICKED UP 8/8/98 PICKED UP BY [Signature]

30695

SOUTHWEST RESEARCH INSTITUTE  
Department of Quality Assurance  
Calibration Laboratory • 522-5215

WORK ORDER

CERTIFICATE # 35951 ASSET # 003778 DATE 09 Sept. 99

ITEM DATA:

Manufacturer Kessler Model ASTM 82C  
Description Thermometer Serial # 32922  
Accessories \_\_\_\_\_

ACTION REQUESTED Cal

CUSTODIAN Div. 20, Darrell Dunn

Turned in by: \_\_\_\_\_ Phone 6090

CHARGE # 20-04 Date Required \_\_\_\_\_

INSTRUMENT USED ON:  (DOD/NASA)  (NUCLEAR)  (GLP)  (SPPE)  (ISO)  
 OTHER \_\_\_\_\_

COPY OF CALIBRATION CERTIFICATE  (Yes)  (No)

NEW WORK  Yes  No If yes, an evaluation shall be made to verify capabilities.

By WAS Date 09-09-99

Work involves proprietary/confidential information or equipment  (Yes)  (No)

CONDITION RECEIVED: \_\_\_\_\_ (F) Out of tolerance, repaired to specifications  
\_\_\_\_\_ (G) In tolerance, minor adjustments/repairs made  
 (J) In tolerance, no adjustments/repairs  
\_\_\_\_\_ (K) Out of tolerance, adjusted to specifications  
\_\_\_\_\_ (S) Received into system, introduced or reactivated

ACTION TAKEN: (Calibration/Repair/Parts) Cal

SWRI CALIBRATION LAB  
(210) 522-5215  
CAL. BY AAA  
DUE ID 3778  
SN 32922

CAL ENVIRONMENT:  
Temperature 78 °F Humidity 45%RH

CALIBRATED/REPAIRED:  
By [Signature] Cal Procedure CL-9 May 99  
Date 9-13-99 Accuracy ± 1°C  
Cal Interval 1 Ann Reliability Code: \_\_\_\_\_  
Next Cal due 9-13-00 Cal Time 2 Repair Time \_\_\_\_\_  
Standards used (Asset#) 219/328

DATE COMPLETED 9-13-99  
DATE PICKED UP 9/16/99 PICKED UP BY [Signature] 9/16/99

35951

## WORK ORDER HISTORY

DATE	START STOP	CAL	REP	REMARKS:
				100
				0°C                      -0.05
				<del>20</del> 21.6                      21.5
				40 41.1                      41.5
				60 62.01                      62
				80 77.1                      77
				<del>100</del> 99.0                      99
TOTAL CAL/REPAIR				TOTAL HOURS _____

### CALIBRATION WORKSHEET

Date Calibrated 9-13-99 Work Order 35951 Cal By [Signature]  
 Procedure No./Date CL-9 May 99 Unit Under Test Thermometer  
 Mfg. Kessler Model ASTM 82C SN 32922 AN 3778

STEP	FUNCTION OR RANGE	APPLIED	TOLERANCE	MEASURED VALUES		P/F
			MIN - MAX	AS FOUND	RELEASED	
			$\pm 1^{\circ}\text{C}$			
		0°C		-0.05°C		P
		21.6°C		21.5°C		P
		41.1°C		41.5°C		D
		62.01°C		62.0°C		P
		77.1°C		77.0°C		P
		99.0		99.0°C		D