TECHNICAL MANUAL

CALIBRATION PROCEDURE

FOR

AC/DC CAPACITANCE TESTER

01-1000-00 (PSD90-1M), 01-1000-60 (PSD90-1C)

(JCAIR)

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AC/DC CAPACITANCE TESTER

01-1000-00 (PSD90-1M), 01-1000-60 (PSD90-1C)

(JCAIR)

1 CALIBRATION DESCRIPTION:

Table 1.

Test Instrument (TI) Characteristics	Performance Specifications	Test Method
Voltage Measurement		
(All Models)	Range: 0 to ±50 VDC Accuracy: ±1% of rdg or ±0.02 VDC, whichever is greater	Compared to a known Voltage
Capacitance Measurement		
01-1000-00 (PSD90-1M)	Range: 0 to 39,990 pF Accuracy: AC Capacitance, ±0.1% of rdg or ±0.05 pF, whichever is greater; DC Capacitance, ±0.2% of rdg or ±0.05 pF, whichever is greater	Compared to a known Capacitance
01-1000-60 (PSD90-1C) 01-1000-62	Range: 0 to 39,990 pF Accuracy: AC and DC Capacitance, ±0.1% of rdg or ±0.1 pF, whichever is greater	
Megger		
01-1000-00 (PSD90-1M)	Range: 0 to 19,999 MΩ Accuracy: ≤2,000 MΩ, ±2% of rdg or ±0.1 Ω, whichever is greater; >2,000 MΩ, ±5% of rdg	Compared to a known Resistance
01-1000-60 (PSD90-1C) 01-1000-62	Range: 0 to 19,990 MΩ Accuracy: <2,000 MΩ, ±2% of rdg or ±0.1 Ω, whichever is greater; ≥2,000 MΩ, ±20% of rdg;	
Low Voltage/Low Current (Manual Mode)	0 to 19.999 Ω, ±5% of rdg or ±0.1 Ω, whichever is greater	Not Calibrated

Table 1. (Cont.)

Test Instrument (TI) Characteristics	Performance Specifications	Test Method
Capacitance Simulation		
01-1000-00 (PSD90-1M)	Range: Tank Unit (TU), 0 to 9,990 pF Compensator (COMP), 0 to 990 pF; Aux Capacitor (AUX), 0 to 990 pF (+ Tank Unit) Accuracy: ±0.3% of setting or ±0.3 pF, whichever is greater	Measured with a Capacitance Bridge
01-1000-60 (PSD90-1C) 01-1000-62	Range: Tank Unit (TU), 0 to 11,990 pF; Compensator (COMP), 0 to 1,190 pF; Aux Capacitor (AUX), 0 to 11,990 pF Accuracy: 300 to 9,600 Hz, ±0.3% of setting or ±0.3 pF, whichever is greater	
Internal Standards		
(All Models)	Range: 100 to 9,900 pF Accuracy: ±0.1% of charted values	Compared to charted value

2 EQUIPMENT REQUIREMENTS:

Noun	Minimum Use Specifications	Calibration Equipment	Sub-Item
2.1 TRANSFER STANDARD	Range: 10 to 39,000 pF; 22 Ω to 18,000 MΩ	JCAir PTS-1	
	Range: 10 to 39,000 pF; 18 Ω to 18,000 MΩ	Aeroflex PTS-1	
	Accuracy: ±0.025% of Charted value, pF; ±0.5% of Charted value, Ω		
2.2 DIGITAL MULTIMETER	Range: 0 to 50 VDC; 0 to 8 mA DC; 0 to 8 mA AC	Fluke 87 Series III	
	Accuracy: VDC, ±0.25% of ind; mA DC, ±1% of ind; mA AC, ±1.25% of ind		
2.3 POWER SUPPLY	Range: 0 to 50 VDC @ 0.2 A	As available	
	Accuracy: N/A		

	Noun	Minimum Use Specifications	Calibration Equipment	Sub-Item
2.4	ADAPTER	Range: N/A Accuracy: N/A	Amphenol UG-625B/U	
2.5	MULTI-FREQUENCY CAPACITANCE BRIDGE	Range: 0 to 10,000 pF Accuracy: ±250 ppm of ind @ 1 kHz	Andeen-Hagerling AH2700	

3 PRELIMINARY OPERATIONS:

3.1 Review and become familiar with entire procedure before beginning Calibration Process. Use only that portion of the Calibration Process, Calibration Performance Table and Appendix A applicable to TI being calibrated.

WARNING

Unless otherwise designated, and prior to beginning the Calibration Process, ensure that all test equipment voltage and/or current outputs are set to zero (0) or turned off, where applicable. Ensure that all equipment switches are set to the proper position before making connections or applying power. If not strictly observed, could result in injury to, or death of, personnel or long term health hazards.

3.2 Perform the appropriate Desiccant Filter inspection and Intrinsic Safety tests as listed in Appendix A prior to Calibration Process to ensure proper operation of TI.

3.3 Connect test equipment to an appropriate power source. Set POWER switches to ON and allow warm-up as required by the manufacturer.

3.4 On the Multi-Frequency Capacitance Bridge, determine the zero capacitance reading and record the value as Zero Capacitance for later use.

3.5 Set the TI POWER/TYPE SELECT switch to AC CAP and allow warm-up time of 5 minutes for 01-1000-00 or 1 minute for 01-1000-60 and 01-1000-62.

3.6 If TI digital display indicates % BATT of less than 10%, recharge or replace batteries as applicable.

3.7 Upon completion of calibration, annotate the Special block of the Certification Label with both the AC CAP and the DC CAP of the Internal Standards as follows. Internal Standards: 100 pF AC CAP, XXX.XX pF; 100 pF DC CAP, XXX.XX pF; 1000 pF AC CAP, XXXX.X pF; 1000 pF DC CAP, XXXX.X pF; 9900 pF AC CAP, XXXX pF; 9900 pF DC CAP, XXXX pF. (Where XXX.XX, XXXX.X and XXXX is the actual value for the applicable Internal Standard recorded in steps 4.5.4 and 4.5.6.)

4 CALIBRATION PROCESS:

NOTE

Unless otherwise specified, verify the results of each test and take corrective action whenever the test requirement is not met, before proceeding.

NOTE

If AUTO mode is selected with the TI SIMULATOR COARSE knob, the TI SIMULATOR COARSE knob must be pressed again to enter manual range selection mode.

4.1 VOLTAGE MEASUREMENT CALIBRATION:

4.1.1 Set TI FUNCTION SELECT switch to SIMULATE. Verify there are no connections to TI front panel jacks.

4.1.2 Verify TI indicates within 0.00 ±0.02 VDC.

4.1.3 Connect the Power Supply output to TI J1 connector pins 5 (+) and 6 (-), respectively.

4.1.4 Set Digital Multimeter to measure VDC. Monitor the Power Supply output with the Digital Multimeter.

4.1.5 Adjust the Power Supply output until the Digital Multimeter indicates 50 VDC.

4.1.6 The TI digital display should indicate within 49.5 to 50.5 VDC.

4.1.7 Set TI FUNCTION SELECT switch to MEGGER.

4.1.8 Verify the TI does not indicate the Power Supply voltage.

4.1.9 Jumper TI J1 connector pin 1 to pin 7.

4.1.10 Verify the TI indicates the Power Supply voltage.

4.1.11 Set the Power Supply for zero output.

4.1.12 Disconnect test setup.

4.2 CAPACITANCE MEASUREMENT CALIBRATION:

4.2.1 Set TI FUNCTION SELECT switch to MEAS EXT TU. Verify there are no connections to TI front panel jacks.

4.2.2 TI must indicate within 0.00 ±0.02 pF.

4.2.3 Connect the Transfer Standard to TI as follows:

Transfer Standard Capacitance	TI MEASURE TANKS
HI-Z/SHLD	HI-Z/DC- and SHIELD/DC+
LO-Z/GND	LO-Z and GND (use Adapter)
CHASSIS GND	CHASSIS GND

4.2.4 Set the Transfer Standard NORM/DTF ZERO/DTF switch to NORM.

4.2.5 Set the Transfer Standard CAPACITANCE switch to the first applied value listed in Table 2.

4.2.6 The TI must indicate within the corresponding values (relative to the charted value of the Transfer Standard) listed in the Limits column of Table 2.

4.2.7 Repeat steps 4.2.5 and 4.2.6 for each remaining applied value listed in Table 2.

Table 2.

Applied (pF)		Limits (pF)
10	(01-1000-00 only)	9.95 to 10.05
10	(01-1000-60, 01-1000-62)	9.90 to 10.10
180		179.82 to 180.18
220		219.8 to 220.2
500		499.5 to 500.5
900		899.1 to 900.9
1800		1798.2 to 1801.8
2200		2198 to 2202
5000		4995 to 5005
9000		8991 to 9009
18000		17982 to 18018
39000		38.96 to 39.04 k

4.2.8 Disconnect test setup.

4.2.9 Set the TI POWER/TYPE SELECT switch to DC CAP for 01-1000-00 or to DC CAP (DC-) for 01-1000-60 and 01-1000-62. Verify there are no connections to TI front panel jacks.

4.2.10 TI must indicate within 0.00 ±0.02 pF.

4.2.11 Connect the Transfer Standard to TI as follows:

Transfer Standard Capacitance	TI MEASURE TANKS
DC- and DC+ (shield)	HI-Z/DC- and SHIELD/DC+
LO-Z/GND	LO-Z and GND
CHASSIS (GND)	CHASSIS

4.2.12 For TI 01-1000-00 repeat steps 4.2.5 through 4.2.8, except use Table 3. Skip to para 4.3 upon completion.

4.2.13 For TI 01-1000-60 and 01-1000-62 repeat steps 4.2.5 through 4.2.7, except use Table 3.

4.2.14 Set the TI POWER/TYPE SELECT switch to REV DC (DC+).

4.2.15 Repeat step 4.2.13.

4.2.16 Disconnect test setup.

Table 3.

Applied (pF)	01-1000-00 Limits (pF)	01-1000-60 01-1000-62 Limits (pF) *
10	9.95 to 10.05	9.90 to 10.10
180	179.64 to 180.36	179.82 to 180.18
220	219.6 to 220.4	219.8 to 220.2
500	499.0 to 501.0	499.5 to 500.5
900	898.2 to 901.8	899.1 to 900.9
1800	1796.4 to 1803.6	1798.2 to 1801.8
2200	2196 to 2204	2198 to 2202
5000	4990 to 5010	4995 to 5005
9000	8982 to 9018	8991 to 9009
18000	17964 to 18036	17982 to 18018
39000	38.92 to 39.08 k	38.96 to 39.04 k

* Limits listed are absolute values only.

4.3 MEGGER CALIBRATION:

4.3.1 Set TI FUNCTION SELECT switch to MEGGER. For TI 01-1000-60 and 01-1000-62, set the MEG MODE switch to 3-WIRE. Verify there are no connections to TI front panel jacks.

4.3.2 TI must indicate -Or-.

4.3.3 Connect the Transfer Standard to TI as follows:

Transfer Standard MEG STANDARD	TI MEASURE TANKS
HI-Z (DC-)/SHLD (DC+)	HI-Z/DC- and SHIELD/DC+
CHASSIS (GND)	CHASSIS

4.3.4 Set the Transfer Standard MEG STANDARD SOURCE switch to HI-Z/SHIELD.

4.3.5 Set TI MEGGER SELECT switch to SHIELD/HI-Z DC+/DC-.

4.3.6 Set the Transfer Standard RESISTANCE switch to the first applicable applied value listed in Table 4.

4.3.7 The TI must indicate within the corresponding values (relative to the charted value of the Transfer Standard) listed in the Limits column of Table 4.

4.3.8 Repeat steps 4.3.6 and 4.3.7 for each remaining applicable applied value listed in Table 4.

Table 4.

Applied (Ω)	Limits (Ω)
18 (Aeroflex)	17.64 to 18.36
22 (JCAir)	21.56 to 22.44
180	176.40 to 183.60
220	215.6 to 224.4
1.8 k	1764.0 to 1836.0
2.2 k	2.156 to 2.244 k
18 k	17.640 to 18.360 k
22 k	21.56 to 22.44 k
100 k	98.00 to 102.00 k
180 k	176.40 to 183.60 k
220 k	215.6 to 224.4 k
1.8 M	1764.0 to 1836.0 k
2.2 M	2.156 to 2.244 M
10 M	9.800 to 10.200 M
18 M	17.640 to 18.360 M
22 M	21.56 to 22.44 M
180 M	176.40 to 183.60 M
220 M	215.6 to 224.4 M
1800 M	1764.0 to 1836.0 M

Table 4. (Cont.)

Applied (Ω)		Limits (Ω)
2200 M	(01-1000-00 only)	2090 to 2310 M
2200 M	(01-1000-60, 01-1000-62)	1760 to 2640 M
18000 M	(01-1000-00 only)	17100 to 18900 M
18000 M	(01-1000-60, 01-1000-62)	14400 to 21600 M

4.3.9 Set the Transfer Standard RESISTANCE switch to 10 MΩ. Ensure TI COMP IN/OUT switch is set to IN position.

4.3.10 Set the Transfer Standard and TI to each corresponding switch and connections position as listed below.

Transfer Standard MEG STANDARD SOURCE (switch)	TI MEGGER SELECT (switch)	Transfer Standard MEG STANDARD SOURCE (connections)	TI MEGGER SELECT (connections)
LO-Z/SHLD	LO-Z/SHIELD	LO-Z and SHLD (DC+)	LO-Z and SHIELD/DC+
LO-Z/HI-Z	LO-Z/HI-Z	LO-Z and HI-Z (DC-)	LO-Z and HI-Z/DC-
HI-Z/SHLD	HI-Z/SHIELD	HI-Z (DC-) and SHLD (DC+)	HI-Z/DC- and SHIELD/DC+
LO-Z/GND	LO-Z/GND	LO-Z and CHASSIS (GND)	LO-Z and CHASSIS
SHLD/GND	SHIELD/GND	SHLD (DC+) and CHASSIS (GND)	SHIELD/DC+ and CHASSIS
HI-Z/GND	GND/HI-Z	HI-Z (DC-) and CHASSIS (GND)	HI-Z/DC- and CHASSIS
LO-Z/COMP	LO-Z/COMP	LO-Z and COMP	LO-Z and COMP/SHIELD
COMP/SHLD	COMP/SHIELD	COMP and SHLD (DC+)	COMP/SHIELD and SHIELD/DC+
COMP/HI-Z	COMP/HI-Z	COMP and HI-Z (DC-)	COMP/SHIELD and HI-Z/DC-
COMP/GND	GND/COMP	COMP and CHASSIS (GND)	COMP/SHIELD and CHASSIS

4.3.11 The TI should indicate 10 MΩ ±0.2 MΩ (relative to the charted value of the Transfer Standard).

4.3.12 Disconnect the test setup.

4.4 CAPACITANCE SIMULATION CALIBRATION:

4.4.1 Set the TI POWER/TYPE SELECT switch to AC CAP, FUNCTION SELECT switch to MEASURE INT and COMP switch to the IN position.

4.4.2 Press the TI SIMULATOR COARSE adjust knob as required to toggle between TU, COMP and AUX as indicated by the display. Using the SIMULATOR COARSE and applicable FINE adjust knobs, set TU and COMP to read 0 ±0.01 pF and AUX to read 20 ±0.01 pF.

4.4.3 Press the TI SIMULATOR COARSE adjust knob as required to toggle to the TU display.

NOTE

To minimize backlash on Variable Capacitors, always rotate the dial in the up-scale direction when approaching required setting.

4.4.4 Using the TI SIMULATOR COARSE and TU FINE adjust knobs set TI for the first applied value listed in Table 5.

4.4.5 Set the TI FUNCTION SELECT switch to the SIMULATE position and the SIMULATE SELECT switch to the TU & (COMP) position.

4.4.6 Set the Multi-Frequency Capacitance Bridge measurement frequency for 1 kHz.

4.4.7 Connect the Multi-Frequency Capacitance Bridge to TI as follows:

Multi-Frequency Capacitance Bridge	TI SIMULATE TO INDICATOR
UNKNOWN CAPACITANCE LOW	HI-Z/DC- and SHIELD/DC+
UNKNOWN CAPACITANCE HIGH	LO-Z and GND (use Adapter)
	Connect the COMP/ SHIELD center conductor to the CHASSIS ground
CHASSIS	CHASSIS

NOTE

Test setup grounding and shielding variations may be required to obtain accurate and stable readings.

4.4.8 The Multi-Frequency Capacitance Bridge must indicate within the corresponding values listed in the Limits column of Table 5 after subtracting the Zero Capacitance value recorded in step 3.4.

4.4.9 Set the TI FUNCTION SELECT switch to the MEASURE INT position.

4.4.10 Disconnect the Multi-Frequency Capacitance Bridge from the TI connections.

4.4.11 Repeat steps 4.4.4 through 4.4.10, as required, for each remaining applied value listed in Table 5.

4.4.12 Press the TI SIMULATOR COARSE adjust knob as required to toggle to the COMP display.

4.4.13 Using the TI SIMULATOR COARSE and COMP FINE adjust knobs set TI for the first applied value listed in Table 5.

4.4.14 Set the TI FUNCTION SELECT switch to the SIMULATE position.

4.4.15 Connect the Multi-Frequency Capacitance Bridge to TI as follows:

Multi-Frequency Capacitance Bridge	TI SIMULATE TO INDICATOR
UNKNOWN CAPACITANCE LOW	HI-Z/DC- and SHIELD/DC+
UNKNOWN CAPACITANCE HIGH	COMP/ SHIELD and GND Connect the LO-Z (use Adapter) center conductor to the CHASSIS ground
CHASSIS	CHASSIS

4.4.16 The Multi-Frequency Capacitance Bridge must indicate within the corresponding values listed in the Limits column of Table 5 after subtracting the Zero Capacitance value recorded in step 3.4.

4.4.17 Set the TI FUNCTION SELECT switch to the MEASURE INT position.

4.4.18 Disconnect the Multi-Frequency Capacitance Bridge from the TI connections.

4.4.19 Repeat steps 4.4.12 through 4.4.18, as required, for each remaining applied value ≤800 pF listed in Table 5.

Table 5.

Applied (pF)	**Limits (pF) ***
10	9.7 to 10.3
20	19.7 to 20.3
40	39.7 to 40.3
80	79.7 to 80.3
100	99.7 to 100.3
200	199.4 to 200.6
400	398.8 to 401.2
800	797.6 to 802.4
1000	997 to 1003
2000	1994 to 2006
4000	3988 to 4012
8000	7976 to 8024

* Limits values are calculated values and not necessarily the resolution of the Multi-Frequency Capacitance Bridge.

4.5 INTERNAL STANDARDS CALIBRATION:

4.5.1 Press the TI SIMULATOR COARSE adjust knob as required to toggle to the TU display and adjust for a display near 0 pF.

4.5.2 Using the TI TU FINE adjust knob only, set TI for a display reading of 0 ±0.01 pF.

4.5.3 Using the TI SIMULATOR COARSE adjust knob only, set TI for the first applied value listed in Table 6.

4.5.4 The TI display must indicate within the corresponding values listed in the Limits column of Table 6, record TI display.

4.5.5 Repeat steps 4.5.1 through 4.5.4, as required, for each remaining applied value listed in Table 6.

4.5.6 Set the TI POWER/TYPE SELECT switch to DC CAP and repeat steps 4.5.1 through 4.5.5.

Table 6.

Applied (pF)	Limits (pF)
100	±0.1% of previous charted value
1000	±0.1% of previous charted value
9900	±0.1% of previous charted value

4.5.7 Set all power switches to OFF or STANDBY. Disconnect and secure all equipment.

4.5.8 Annotate the Special block of the Certification Label as per step 3.7.

CALIBRATION PERFORMANCE TABLE

Not Required

APPENDIX A

DESICCANT FILTER INSPECTION AND INTRINSIC SAFETY TESTS

A-1 DESICCANT FILTER INSPECTION:

A-1.1 Remove the unit from the case and shielding and perform a visual inspection to ensure that a Desiccant Filter is installed and that there is no loose hardware. If a Desiccant Filter is not installed, go to step A-1.3.

A-1.2 Verify the desiccant in the Desiccant Filter is royal blue in color. If it is no longer royal blue in color, the desiccant must be replaced or baked at 150 °F until color is restored.

A-1.3 Reinstall the unit in the case.

A-2 MAX LO-Z DRIVE TEST: (All Models)

A-2.1 Set the TI POWER/TYPE SELECT switch to AC CAP and allow warm-up time of 5 minutes for P/N 01-1000-00 or 1 minute for P/N 01-1000-60 and 01-1000-62.

A-2.2 Set the TI FUNCTION SELECT switch to the MEAS EXT TU position.

A-2.3 Set the Digital Multimeter controls to mA AC.

A-2.4 Connect the Digital Multimeter mA/μA and COM input terminals to the TI MEASURE TANKS LO-Z (center pin) and GND (connector shell), respectively.

A-2.5 The Digital Multimeter should indicate <8 mA AC.

A-2.6 Disconnect the test setup.

A-3 HI-Z INPUT PROTECTION TEST: (All Models)

A-3.1 Set the Digital Multimeter controls to mA DC.

A-3.2 Connect the Power Supply - output connector to the TI CHASSIS terminal.

A-3.3 Connect the Power Supply + output connector to the Digital Multimeter mA/μA input terminal and the Digital Multimeter COM input terminal to the TI MEASURE TANKS HI-Z/DC (center pin).

A-3.4 Set the Power Supply controls to apply 15 VDC.

A-3.5 The Digital Multimeter should indicate <8 mA DC.

A-3.6 Set the Power Supply controls for minimum.

A-4 MEGGER INPUT PROTECTION TEST: (All Models)

A-4.1 Set the TI FUNCTION SELECT switch to the MEGGER position.

A-4.2 Set the TI MEGGER SELECT switch to the SHIELD/HI-Z DC+/DC- position.

A-4.3 Set the MEG MODE switch to 3-WIRE, press and rotate the TI SIMULATOR COARSE knob until 19999 MΩ is displayed in the TI Display (01-1000-60 only).

APPENDIX A *(Cont.)*

A-4.4 Set the MEG MODE switch to 3-WIRE, press the TI SIMULATOR COARSE knob and release. When AUTO is displayed and before the four dashes appear, rotate the TI SIMULATOR COARSE knob until 19999 MΩ is displayed in the TI Display (01-1000-62 only).

A-4.5 Set the Power Supply controls to apply 15 VDC.

NOTE

The Digital Multimeter indication must be noted within the first 5 sec after applying voltage, while the TI is in the megohm mode of operation (01-1000-00 and 01-1000-60 only).

A-4.6 The Digital Multimeter should indicate <8 mA DC.

A-4.7 Disconnect the test setup.

A-5 MAX LOW VOLTAGE OHMMETER DRIVE TEST: (01-1000-60, 01-1000-62)

A-5.1 Rotate the TI SIMULATOR COARSE knob until 19.999 Ω is displayed in the TI Display.

A-5.2 Connect the Digital Multimeter mA/μA and COM input terminals to the TI MEASURE TANKS SHIELD/DC+ (connector shell) and HI-Z/DC (center pin), respectively.

A-5.3 The Digital Multimeter should indicate 2 ±0.2 mA DC.

A-5.4 Disconnect the test setup.

A-6 MAX LOW VOLTAGE OHMMETER VOLTAGE TEST: (01-1000-60, 01-1000-62)

A-6.1 Set the Digital Multimeter controls to measure DC Volts.

A-6.2 Connect the Digital Multimeter Ω/⊣►⊢/V and COM input terminals to the TI MEASURE TANKS SHIELD/DC+ (connector shell) and HI-Z/DC (center pin), respectively.

A-6.3 Rotate the TI SIMULATOR COARSE knob until 19.999 Ω is displayed in the TI display.

A-6.4 The Digital Multimeter should indicate 72 ±4.0 mV DC.

A-6.5 Disconnect the test setup.

A-7 MAX OHMMETER DRIVE TEST: (All Models)

A-7.1 Press and rotate the TI SIMULATOR COARSE knob until 199.99 Ω is displayed in the TI Display (01-1000-60 only).

A-7.2 Rotate the TI SIMULATOR COARSE knob until 199.99 Ω is displayed in the TI Display (01-1000-62 only).

A-7.3 Set the Digital Multimeter controls to measure DC mA.

A-7.4 Connect the Digital Multimeter mA/μA and COM input terminals to the TI MEASURE TANKS SHIELD/DC+ (connector shell) and HI-Z/DC (center pin), respectively (01-1000-60, 01-1000-62).

APPENDIX A *(Cont.)*

A-7.5 Connect the Digital Multimeter COM and mA/μA input terminals to the TI MEASURE TANKS HI-Z (HI-Z center) (LO) and MEASURE TANKS SHIELD (HI-Z shell) (HI), respectively (01-1000-00 only). Wait approximately 10 seconds.

A-7.6 The Digital Multimeter should indicate 5 mA DC ±0.2 mA DC.

A-7.7 Disconnect the test setup.

A-8 MAX MEGGER DRIVE TEST: (All Models)

A-8.1 Press and rotate the TI SIMULATOR COARSE knob until AUTO Ω is displayed in the TI Display (01-1000-60 only).

A-8.2 Rotate the TI SIMULATOR COARSE knob until AUTO is displayed in the TI Display (01-1000-62 only).

A-8.3 Connect the Digital Multimeter mA/μA and COM input terminals to the TI MEASURE TANKS SHIELD/DC+ (HI-Z connector shell) and GND (LO-Z connector shell), respectively (01-1000-60, 01-1000-62).

A-8.4 Set the TI FUNCTION SELECT switch to the MEGGER POSITION (01-1000-00 only).

A-8.5 Set the TI MEGGER SELECT switch to SHIELD/HI-Z (01-1000-00 only).

A-8.6 Connect the Digital Multimeter mA/μA and COM input terminals to the TI MEASURE TANKS SHIELD (HI-Z shell) (HI) and GND (MEASURE TANKS LO-Z (shell) (LO), respectively (01-1000-00 only).

A-8.7 The Digital Multimeter should indicate <8 mA DC.

A-8.8 Disconnect the test setup.

A-9 Any failures of the above tests may indicate a problem with the TI. Consult the manufacturers manual for troubleshooting procedures or instructions for repair.

A-10 When all applicable tests are performed without failures return to the Calibration Process