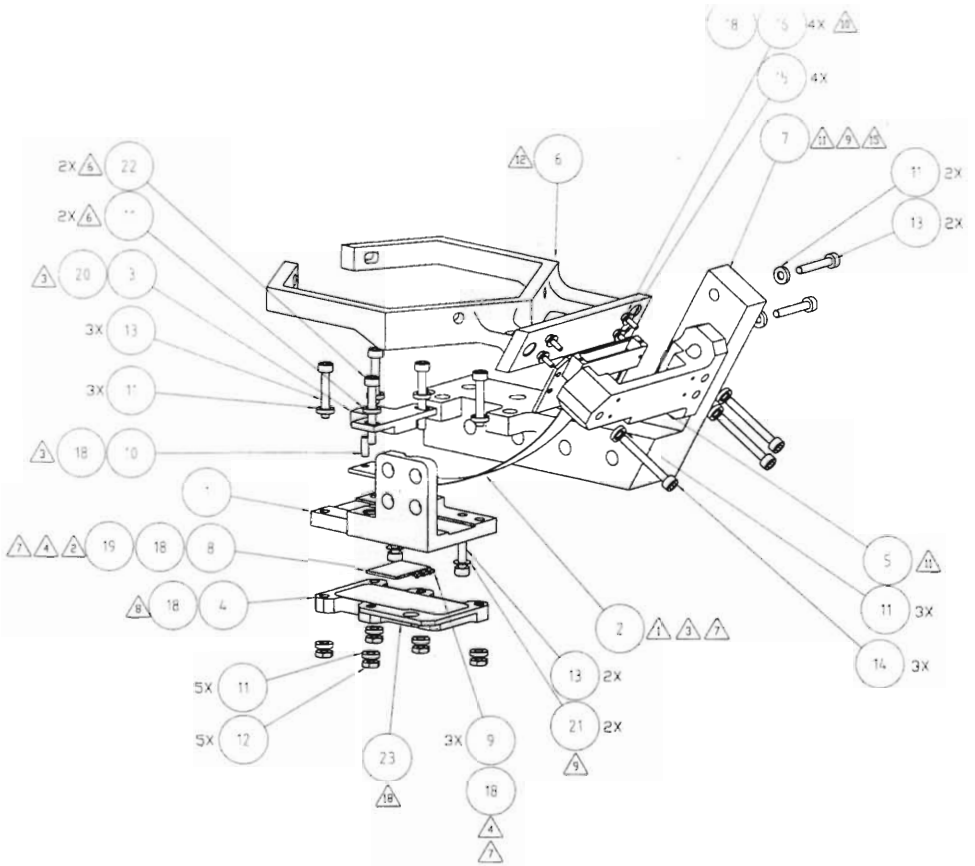


	AR	23				PERMANENT MARKING INK, BLACK	B5502673		
	2	22				SCREW, SHC, M1.6x0.35 x 12.6 LONG	NA0069	14	
	2	21			10217701	TEFLON WASHER, 0.127 THICK			
	AR	20			MILLER-STEPH 907	EPOXY, NON-CONDUCTIVE			
	AR	19				0.00125" GOLD WIRE	B5518425		
	AR	18			EC 2216 A/B	EPOXY	B5502533		
	AR	17			ST12088	KAPTON TAPE			
	4	16		0PJN9	1589332-1	SCREW, 1MM	TYCO/NANONICS	303 CRES	
	4	15		95548	W00CE	WASHER, FLAT, #00	J.I. MORRIS	303 CRES	
	3	14			NA0069-016014	SHCS, M1.6X0.35 X 14			
	7	13			NA0069-016010	SHCS, M1.6X0.35 X 10			
	5	12			934-A2 M1.6X0.35	NUT, M1.6x0.35	DIN 934	A2 CRES	
	15	11			ST1259-016	WASHER M1.6			
	1	10		0014.1	MDP2-2	PIN, 1.5MM X 4MM		303 CRES 14	
	3	9		3WSP5	NTC-F	THERMISTOR, SAPPHIRE MOUNTED	HALLER-BEEMAN	13	
	1	8			10209838-1	LOAD RESISTOR		8	
	1	7			10217693-1	SUPPORT BRACKET			
	1	6			10240997-1	FLANGE, CONNECTOR			
	1	5			10217697-1	MOUNT, CABLE			
	1	4			10240998-1	COVER			
	1	3			10209844-2	CABLE CLAMP			
	1	2			10209815-1	CABLE ASSEMBLY, CENTER		1	
	1	1			10217666-1	ADAPTER			
-2 QTY REQD	-1	ITEM NO	REF DES	CAGE NO	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	SPECIFICATION	MATERIAL OR NOTE	ZONE

PARTS LIST

18. SECURE ITEM 5, CONNECTOR MOUNT, TO ITEM 6, CONNECTOR FLANGE, USING ITEM 11, WASHER, AND ITEM 14, SCREW. TORQUE TO 140 NxMM PER JPL SPEC ES517040.

17. SECURE ITEM 5, CONNECTOR MOUNT, TO ITEM 7, SUPPORT BRACKET, USING ITEM 11, WASHER, AND ITEM 13, SCREW. DO NOT STAKE SCREW HEADS.

16. SECURE ITEM 2, CABLE ASSEMBLY, TO ITEM 5, CABLE MOUNT, USING ITEM 15, WASHER, AND ITEM 16, SCREW. TORQUE TO 25 NxMM PER JPL SPEC ES517040. STAKE SCREW HEADS WITH ITEM 18, 2216A/B EPOXY.

15. SECURE ITEM 1, ADAPTER, TO ITEM 7, SUPPORT BRACKET, USING ITEM 13, SCREW AND ITEM 21 WASHER. DO NOT STAKE SCREWS.

8. SECURE ITEM 4, COVER, TO ITEM 1, ADAPTER, USING ITEM 11, WASHER, ITEM 13, SCREW, AND ITEM 12, NUT. TORQUE TO 140 NxMM PER JPL SPEC ES517040. STAKE NUTS WITH ITEM 18, 2216A/B EPOXY.

7. WIREBOND ITEM 2, CABLE ASSEMBLY, AND ITEM 9 THERMISTOR, TO ITEM 8, LOAD RESISTOR, USING ITEM 19, GOLD WIRE PER ENGINEERING INSTRUCTION TO OBTAIN CIRCUIT SHOWN ON SHEET 3. NOMINAL WIREBOND ARRANGEMENT SHOWN IN DETAIL A AND IS SUBJECT TO MODIFICATION.

6. SECURE ITEM 2, CABLE ASSEMBLY, TO ITEM 1, ADAPTER, USING ITEMS 3, CABLE CLAMP, ITEM 11, WASHER, AND ITEM 22, SCREW. TORQUE TO 140 NxMM PER JPL SPEC ES517040. STAKE SCREW HEADS WITH ITEM 18, 2216A/B EPOXY.

5. APPLY ITEM 17, KAPTON TAPE, TO ITEM 1, ADAPTER ON INDICATED SURFACE.

4. BOND ITEM 8, LOAD RESISTOR, AND ITEM 9, THERMISTOR, 3X, TO ITEM 1, ADAPTER, USING ITEM 18, 2216A/B EPOXY.

3. BOND ITEM 10, PIN, TO ITEM 3, CABLE CLAMP, USING ITEM 18, 2216A/B EPOXY. BOND ITEM 2, CABLE ASSEMBLY, TO CABLE CLAMP USING ITEM 20, MS-907 EPOXY.

2. MODIFY ITEM 8, LOAD RESISTOR, IN ACCORANCE WITH ENGINEERING INSTRUCTION TO CUT LENGTH TO APPROX. 11MM, LEAVING ONLY THE CENTER SECTION OF RESISTORS.

1. MODIFY ITEM 2, CABLE ASSEMBLY, BY REMOVING STAINLESS STEEL SPACERS ON BOTH SIDES OF THE NANONICS CONNECTOR.

NOTES: UNLESS OTHERWISE SPECIFIED.

18. USING ITEM 23 INK, STAMP EXTERIOR OF ITEM 4 COVER WITH PART NUMBER AND SERIAL NUMBER. CHARACTER HEIGHT TO BE 3.09 INCHES (APPROX.)

17. SCREWS ARE NA0069-014 OR LONGER CUT TO 12.6 MM LENGTH.

16. 300MK SECTION MASS: 26 GRAMS
MASS DOES NOT INCLUDE TEMPORARY SUPPORT BRACKET NOR 4X BUSS BAR CLAMP FASTENERS.

15. ITEM 7, BRACKET IS FOR TEMPORARY SUPPORT ONLY. REMOVE AFTER THERMAL CONTROL INSTALLATION.

14. SUGGESTED SOURCE OF SUPPLY:
PIC DESIGN
PRECISION INDUSTRIAL COMPONENTS CORP.
86 BENSON RD.
P.O. BOX 1004
MIDDLEBURY, CT 06762-1004

13. SUGGESTED SOURCE OF SUPPLY:
HALLER-BEEMAN
5020 SANTA RITA RD
EL SOBRANTE, CA 94803
PHONE: (510) 243-6606

MATERIAL

METRIC

THIRD ANGLE PROJECTION

SPIRE

NEXT ASSEMBLY | USED ON

APPLICATION

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN MILLIMETERS

LINEAR TOLERANCES:

0-6	± 0.1
OVER 6-30	± 0.2
OVER 30-120	± 0.3
OVER 120-315	± 0.5
OVER 315-1000	± 0.8
OVER 1000	± 1.2

ANGULAR TOLERANCES: ± 0.5°

MACHINE FINISH (MICROMETERS) √

DO NOT SCALE DRAWING
INTERPRET DWG PER ASME Y14.100M

CONTRACT NO 1244808

APPD		DATE
DWN	D CRUMB	05/24/04
CHK		
STRUCT		
MATL		
THRM CONTL		
ENGR		
SUPV		

JET PROPULSION LABORATORY
CALIFORNIA INSTITUTE OF TECHNOLOGY
PASADENA, CA 91109
RELEASED THROUGH EDMS

THERMAL CONTROL, SPIRE

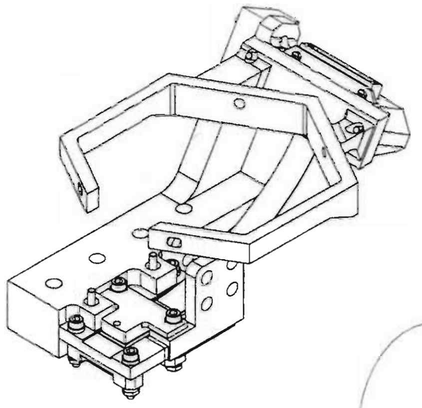
SIZE	CAGE NO		REV
A1	23835	10217660	A

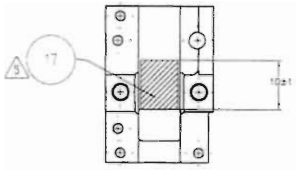
SCALE 2:1 | UNCLASSIFIED | SHEET 1 OF 3

REV 2/00

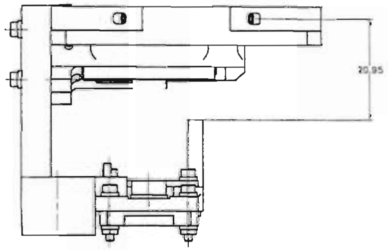
A1 10217660

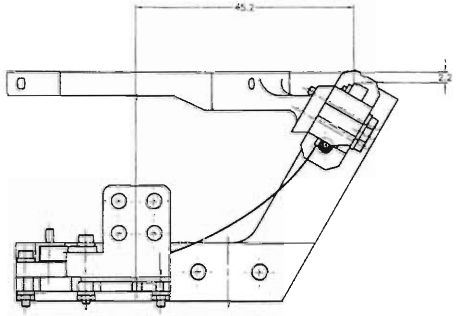
AutoCAD GENERATED

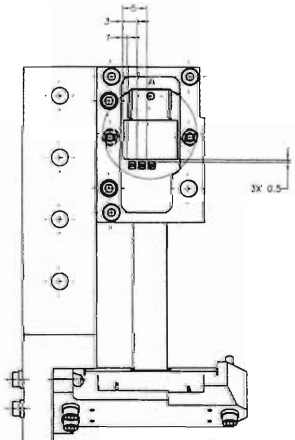




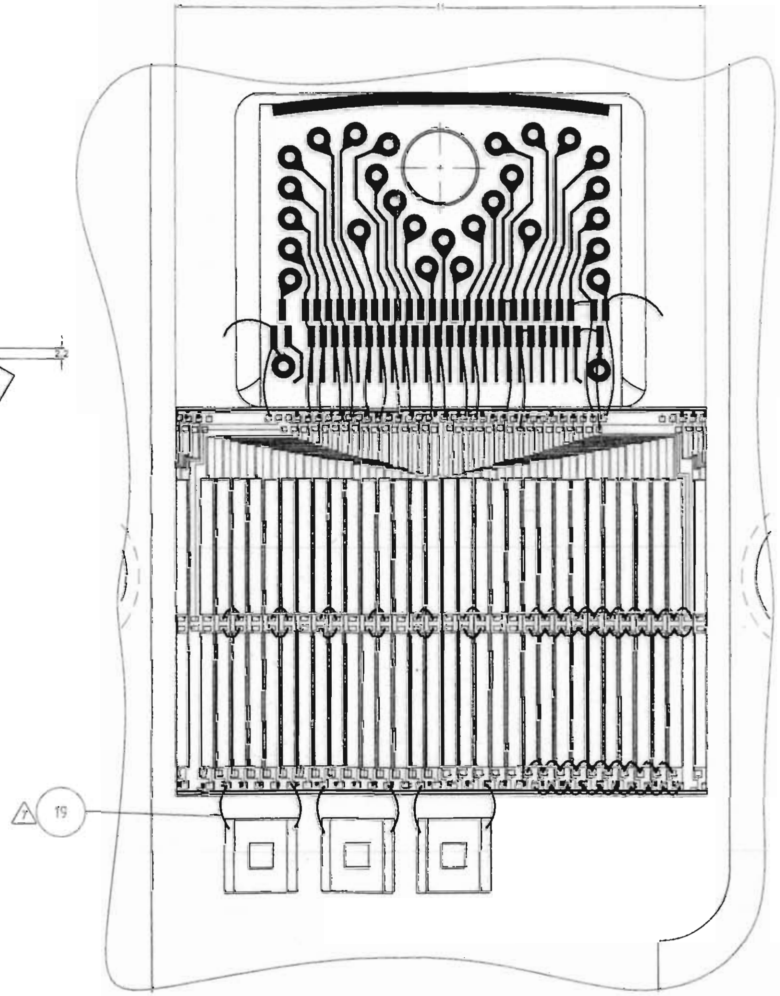
ONLY ADAPTER SHOWN







COVER REMOVED



VIEW A

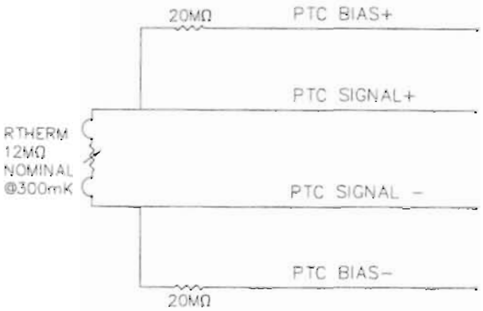
SIZE	CAGE NO.		REV
A1	23835	10217660	A
SCALE 2:1	UNCLASSIFIED	SHEET 2 OF 3	

REV 2/00

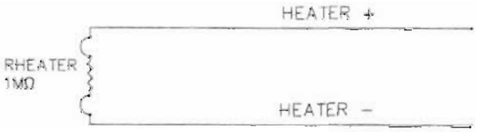
AutoCAD GENERATED

A1 10217660

Released on JAN-03-... by Richard G Bannister and signed by Richard S Menabb CHK, Paul D M... STRU, Michael D Knopp MATL, Dustin J Crumb DEGN, Mark A Weiler QGE, Richard G Bannister



PTC THERMISTOR CHANNEL, TYPICAL ⚠7



PTC HEATER, TYPICAL ⚠7

⚠7 NANONICS CONNECTOR
STM051M6SN

PIN	FUNCTION
1	REDUNDANT HEATER+
2	NC
3	NC
4	NC
5	REDUNDANT HEATER-
6	REDUNDANT HEATER-
7	NC
8	NC
9	NC
10	PTC CH. 1 SIGNAL+
11	PTC CH. 1 BIAS+
12	NC
13	PTC CH. 1 BIAS-
14	PTC CH. 1 SIGNAL-
15	NC
16	PTC CH. 2 SIGNAL+
17	PTC CH. 2 BIAS+
18	PTC CH. 2 BIAS-
19	PTC Ch. 2 SIGNAL-
20	NC
21	PTC CH. 3 SIGNAL+
22	PTC CH. 3 BIAS+
23	PTC CH. 3 BIAS-
24	PTC CH. 3 SIGNAL-
25	REDUNDANT HEATER+
26	PRIME HEATER+
27	NC
28	NC
29	NC
30	NC
31	PRIME HEATER-
32	PRIME HEATER-
33	NC
34	PTC CH. 1 SIGNAL+
35	PTC CH. 1 BIAS+
36	NC
37	PTC CH. 1 BIAS-
38	PTC CH. 1 SIGNAL-
39	NC
40	PTC CH. 2 SIGNAL+
41	PTC CH. 2 BIAS+
42	NC
43	PTC CH. 2 BIAS-
44	PTC CH. 2 SIGNAL-
45	NC
46	PTC CH. 3 SIGNAL+
47	PTC CH. 3 BIAS +
48	PTC CH. 3 BIAS -
49	PTC CH. 3 SIGNAL-
50	PRIME HEATER+
51	300mK CHASIS GND

NC = NOT CONNECTED

IDENTICAL SIGNALS ARE COMBINED INTERNALLY AT 300mK END OF KAPTON CABLE

IDENTICAL SIGNALS ARE EXPECTED TO BE TIED TOGETHER AT MATING NANONICS CONNECTOR

RESISTANCES ARE ±40 %

SIZE	CAGE NO		REV
A1	23835	10217660	A
SCALE 2:1	UNCLASSIFIED	SHEET 3 OF 3	

A1 10217660

AutoCAD GENERATED

Released on JAN-... by Richard G Bannister and signed by Richard S Mcnabb CHK, Paul D M... STRU, Michael D Knopp MATL, Dustin J Crumb DES, Mark A Weiler CGE, Richard G Bannister