



CALIFORNIA INSTITUTE OF TECHNOLOGY
 MASSACHUSETTS INSTITUTE OF TECHNOLOGY

DCN No. E990360-00-D

SHEET 1 OF 1

DOCUMENT CHANGE NOTICE (DCN)

DOCUMENT No. (DOC-REV-GP. ID)	TITLE	NEW REV.
D960138-02-D	Sensor/Actuator Head Assembly, LOS	A

CHANGE DESCRIPTION (FROM/TO): Extensive changes for initial release. See rev 02 for "was" condition.

REASON FOR CHANGE: document as-built configuration

ACTION: Incorporate change Attach DCN to drawing(s) Other action (specify):

DISPOSITION OF HARDWARE (IDENTIFY SERIAL NUMBERS)

- No hardware affected (record change only)
- List S/Ns which comply already: all LHO 2k sensor/actuator heads, SOS & LOS
- List S/Ns to be reworked or scrapped:
- List S/Ns to be built with this change:
- List S/Ns to be retested per this change:
-
-
-
-

DCN DISTRIBUTION (X=incl. docs)

Althouse	Barish	Coles
X Coyne	Lazzarini	Lindquist
Raab	Sanders	Shoemaker
Stapfer	Tyler	Weiss
Whitcomb	Zydowicz	
Bork		Zucker
X Barton	Mason	
Camp		Jones
Fine		
X Romie		

SAFETY, COST, SCHEDULE, REQUIREMENTS IMPACT? No Yes (If yes, enter Change Request number)

APPROVALS:

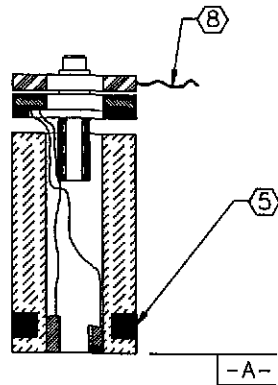
APPROVALS:	DATE
ORIGINATOR: J. Romie	12-6-99
TASK LEADER: J. Romie	12-6-99
GROUP LEADER: <i>J. Coyne</i>	<i>12/19/99</i>
DCC RELEASE: <i>J. Romie</i>	<i>12-10-99</i>

OTHER APPROVALS (specify)

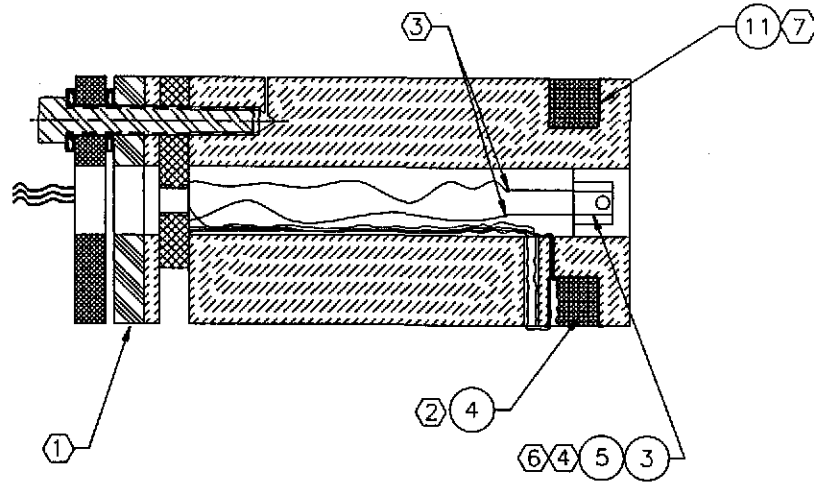
DATE

NOTES, UNLESS OTHERWISE SPECIFIED:

- ① SOLDER WIRES TO PINS IN PIN PLATE.
- ② LABEL BEGINNING AND END OF COIL.
- ③ SOLDER WIRES TO LED AND PHOTODIODE LEAD WIRES. CHECK THAT LEAD WIRES ARE NON-MAGNETIC BEFORE SOLDERING.
- ④ POSITION LED USING SPACER IN SENSOR/ACTUATOR HEAD. LED SHOULD FIT IN ARCH OF SENSOR/ACTUATOR HEAD SPACER.
- ⑤ WIND MAGNET WIRE AS TO FILL VOLUME AS SHOWN, 1.010 OD MAX.
- ⑥ BOND LED AND PHOTODIODE TO SENSOR ACTUATOR HEAD USING A MINIMUM OF VAC SEAL EPOXY.
- ⑦ POSITION PHOTODIODE FLUSH TO -A-.
- ⑧ APPLY ITEM 10, TEFLON TAPE, TO COVER THE INSIDE OF THE CHANNEL BEFORE WINDING THE MAGNET WIRE, ITEM 4.
- ⑨ ASSEMBLE THE SENSOR/ACTUATOR PIGTAIL, ITEM NOS. 13 OR 14, SUCH THAT THE PIGTAIL END IS OPPOSITE TO THE PHOTODIODE.
- ⑩ D990675 LONG PIGTAIL IS USED ON THE ETM, ITM, BS AND FM LOS SUSPENSIONS MOUNTED IN BSC CHAMBERS. D990676 SHORT PIGTAIL IS USED ON THE RM AND MMT3 LOS SUSPENSIONS MOUNTED IN HAM CHAMBERS.
- ⑪ DUE TO VARIATIONS IN THICKNESS OF THE BRACKETS, ITEM NOS. 6, 7, 8 AND 12, ITEM 10 MAY BE USED AS AN ALTERNATE TO ITEM 9.

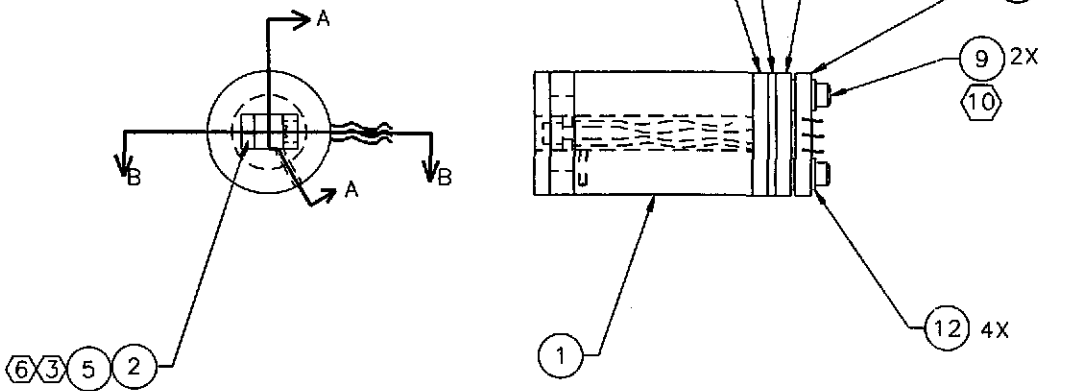


SECTION B-B



SECTION A-A

SCALE 2:1



ALT	QTY	PART NO.	PART OR IDENTIFYING NO.	REMARKS OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO.
	1	D990676		SENSOR/ACTUATOR PIGTAIL, SHORT		14
	1	D990675		SENSOR/ACTUATOR PIGTAIL, LONG		13
	4			#4 FLAT WASHER	TEFLON	12
A/R		MILL ROSE CO. P/N 70887		FULL DENSITY WHITE TEFLON THREAD SEALING TAPE	100% VIRGIN TEFLON 1/2" WIDE	11
ALT		U-C COMPONENTS P/N C-113-0A		#4-40 X 3/4 SHCS	SILVER PLATED STAINLESS STEEL	10
	2	U-C COMPONENTS P/N C-113-0A		#4-40 X 5/8 SHCS	SILVER PLATED STAINLESS STEEL	9
	1	D970617		SENSOR/ACTUATOR PAM BRACKET		8
	1	D970073		SENSOR/ACTUATOR PIN PLATE		7
	1	D970618		SENSOR/ACTUATOR SPACER		6
A/R		PHYSICAL ELECTRONICS P/N 2895000		VAC SEAL EPOXY, MANUF BY PERKIN ELMER		5
A/R		EY-5456-1		WIRE, MWS INDUSTRIES P/N		4
	1	TLN107A		LED, TOSHIBA P/N		3
	1	TPS703A		PHOTODIODE, TOSHIBA P/N		2
	1	D960754		SENSOR/ACTUATOR HEAD		1

PARTS LIST			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN IN (mm) TOLERANCES ARE FRACTIONS DECIMALS	APPROVALS	DATE	TITLE
N/A	DESIGNER: J. HANSEN CHECKED:	1/96	LIGO
DO NOT SCALE DRAWING			SENSOR/ACTUATOR HEAD ASSEMBLY, LOS
MATERIAL: N/A			SIZE: B
FINISH: N/A			DWG NO.: D960138
SCALE: NONE	FILENAME: /home/dcc/docs/D960138.pdf		REV: A

REV	DATE	DRAWN BY	CHECKED	DCE	CHG/DESCRIPTION OF CHANGE
A	9-26-96	J. ROMIE			E990360/INITIAL RELEASE

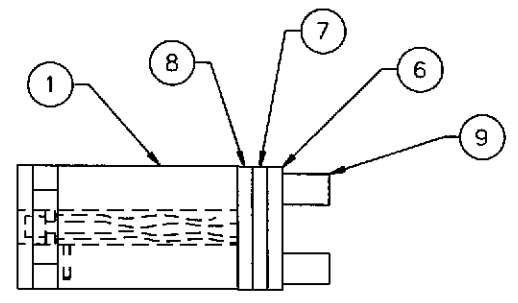
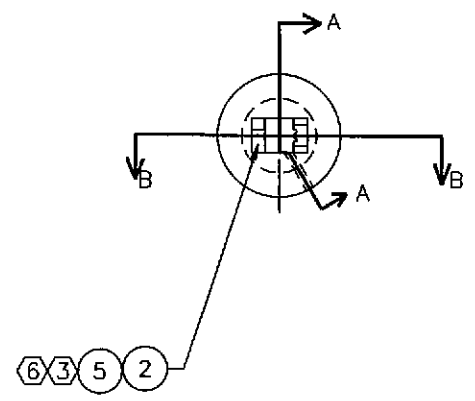
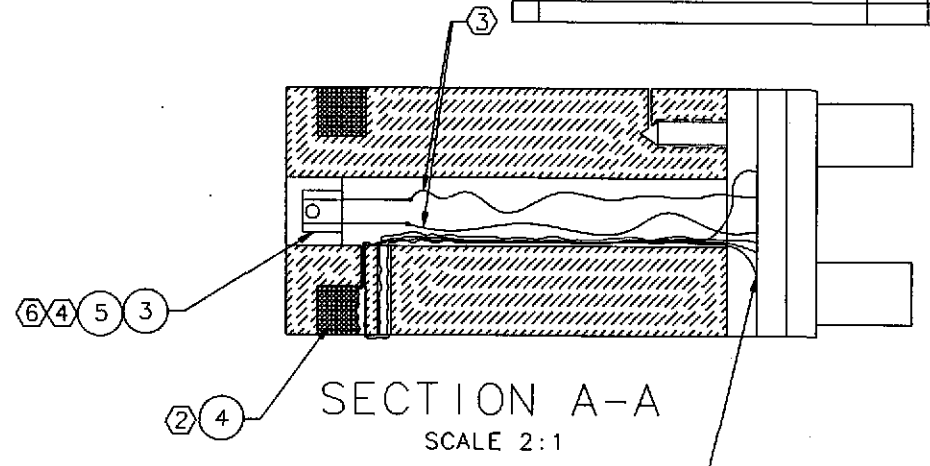
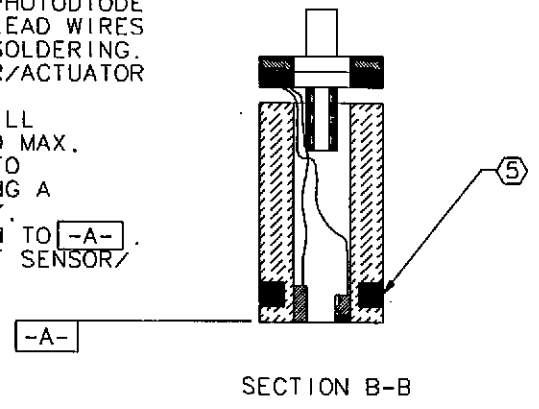
1

2

3

REV	DESCRIPTION OF CHANGE	APPROVAL	DATE

NOTES, UNLESS OTHERWISE SPECIFIED:
 ① SOLDER WIRES TO PINS IN PIN PLATE.
 ② LABEL BEGINNING AND END OF COIL.
 ③ SOLDER WIRES TO LED AND PHOTODIODE LEAD WIRES. CHECK THAT LEAD WIRES ARE NON-MAGNETIC BEFORE SOLDERING.
 ④ POSITION LED USING SENSOR/ACTUATOR TOOL, P/N D950126.
 ⑤ WIND MAGNET WIRE AS TO FILL VOLUME AS SHOWN, 1.013 OD MAX.
 ⑥ BOND LED AND PHOTODIODE TO SENSOR ACTUATOR HEAD USING A MINIMUM OF VAC SEAL EPOXY. POSITION PHOTODIODE FLUSH TO -A-. LED SHOULD FIT IN ARCH OF SENSOR/ACTUATOR HEAD SPACER.



QTY	REQD	PART NO	PART OR IDENTIFYING NO	DESCRIPTION OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
2		67674-SS-1		HEX JACK SCREW, ACCURATE SCREW MACHINE P/N	STAINLESS STEEL	9
1		D970617		SENSOR/ACTUATOR PAM BRACKET		8
1		D970073		SENSOR/ACTUATOR PIN PLATE		7
1		D970618		SENSOR/ACTUATOR SPACER		6
A/R				VAC SEAL EPOXY, MANUF BY PERKIN ELMER		5
A/R		EY-5456-1		WIRE, MWS INDUSTRIES P/N		4
1		TLN107A		LED, TOSHIBA P/N		3
1		TPS703A		PHOTODIODE, TOSHIBA P/N		2
1		D960754		SENSOR/ACTUATOR HEAD		1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN () IN ()		APPROVALS		DATE	TITLE	LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY
TOLERANCES ARE:	FRACTIONS	DECIMALS	DRWNG	GROUP		
N/A			J. Hozel	1/96	SENSOR/ACTUATOR HEAD ASSEMBLY	
DO NOT SCALE DRAWING						
MATERIAL N/A						
FINISH N/A					SIZE B	DWG NO. D960138
SCALE NONE			FILENAME	janeen/nD960138.asc		REV 02