



CALIFORNIA INSTITUTE OF TECHNOLOGY  
 MASSACHUSETTS INSTITUTE OF TECHNOLOGY

DCN No. E990305-00-D

SHEET 1 OF 1

# DOCUMENT CHANGE NOTICE (DCN)

DOCUMENT No. (DOC-REV-GP. ID)	TITLE	NEW REV.
D990381-A	ARM CAVITY BAFFLE, OUTER SUPPORT, FAR VERTICAL, ITM/ETM LEG	B
D990382-A	ARM CAVITY BAFFLE, OUTER SUPPORT, NEAR VERTICAL, ITM/ETM LEG	B
D990383-A	ARM CAVITY BAFFLE, OUTER SUPPORT,	

CHANGE DESCRIPTION (FROM/TO): Document List Continued

	ITM/ETM RAIL	B
D990384-00	ARM CAVITY BAFFLE, OUTER SUPPORT, ITM/ETM STABILIZER	A
D990385-00	ARM CAVITY BAFFLE, OUTER SUPPORT, ITM/ETM FOOT	A
D990386-00	ARM CAVITY BAFFLE, OUTER SUPPORT, ITM/ETM STOP	A
D990387-00	ARM CAVITY BAFFLE, OUTER SUPPORT, ITM/ETM LOCATOR	A
D990390-00	ARM CAVITY BAFFLE, OUTER SUPPORT, LOWER ANGLE, ITM/ETM ATTACHMENT	A
D990391-00	ARM CAVITY BAFFLE, OUTER SUPPORT, UPPER ANGLE, ITM/ETM ATTACHMENT	A
D990527-A	ARM CAVITY BAFFLE, OUTER SUPPORT, LEVER CLEARANCE HOLE, ETM RAIL	B

REASON FOR CHANGE: INITIAL RELEASE

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:
- List S/Ns to be reworked or scrapped:
- List S/Ns to be built with this change: ALL, 001 & UP
- List S/Ns to be retested per this change:
- 
- 
- 
- 

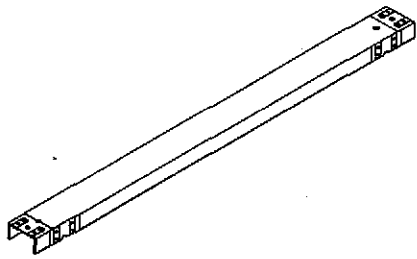
DCN DISTRIBUTION (X=incl. doc's)

Althouse	Barish	Coles
Coyne	Lazzarini	Lindquist
Raab	Sanders	Shoemaker
Stapfer	Tyler	
Weiss	Whitcomb	
Camp	Smith	
Conley	Mailand	
Romie		

SAFETY, COST, SCHEDULE, REQUIREMENTS IMPACT?  No  Yes (If yes, enter CR (CCB) or TCP (TRB) no. )

APPROVALS:	DATE	OTHER APPROVALS (specify)	DATE
ORIGINATOR: P. Kabot <i>P. Kabot</i>	10/28/99		
TASK LEADER: M. Smith <i>Michael Smith</i>	11/1/99		
GROUP LEADER: D. Coyne <i>D. Coyne</i>	10/29/99		
DCC RELEASE: <i>[Signature]</i>	11-2-99		



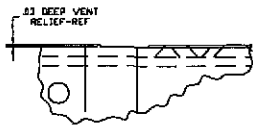


**NOTES-UNLESS OTHERWISE SPECIFIED**

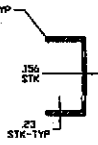
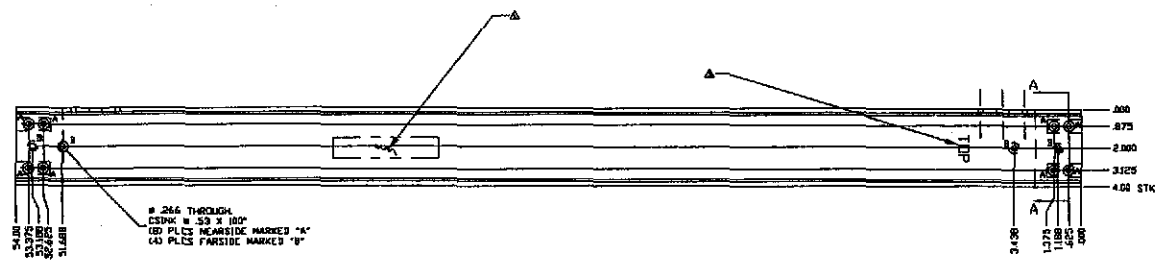
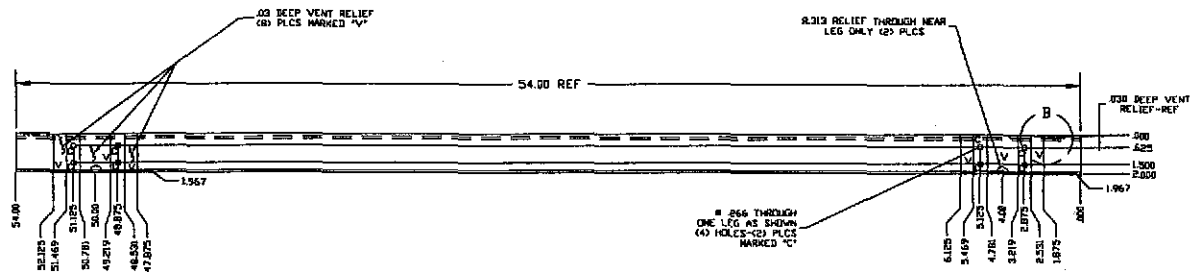
△ DIMS. TAKEN AS SHOWN UNLESS OTHERWISE SPECIFIED. DIMS. TO FACE UNLESS OTHERWISE SPECIFIED. DIMS. TO CENTER UNLESS OTHERWISE SPECIFIED. DIMS. TO CENTER UNLESS OTHERWISE SPECIFIED.

▲ THIS IS A NEW SPECIFICATION AND ALL DIMS. MUST BE MADE TO THE DIMS. SHOWN UNLESS OTHERWISE SPECIFIED. DIMS. TO FACE UNLESS OTHERWISE SPECIFIED. DIMS. TO CENTER UNLESS OTHERWISE SPECIFIED. DIMS. TO CENTER UNLESS OTHERWISE SPECIFIED.

▲ THIS VIEW IS SHOWN FROM THE INTERIOR OF THE Baffle.



VIEW B



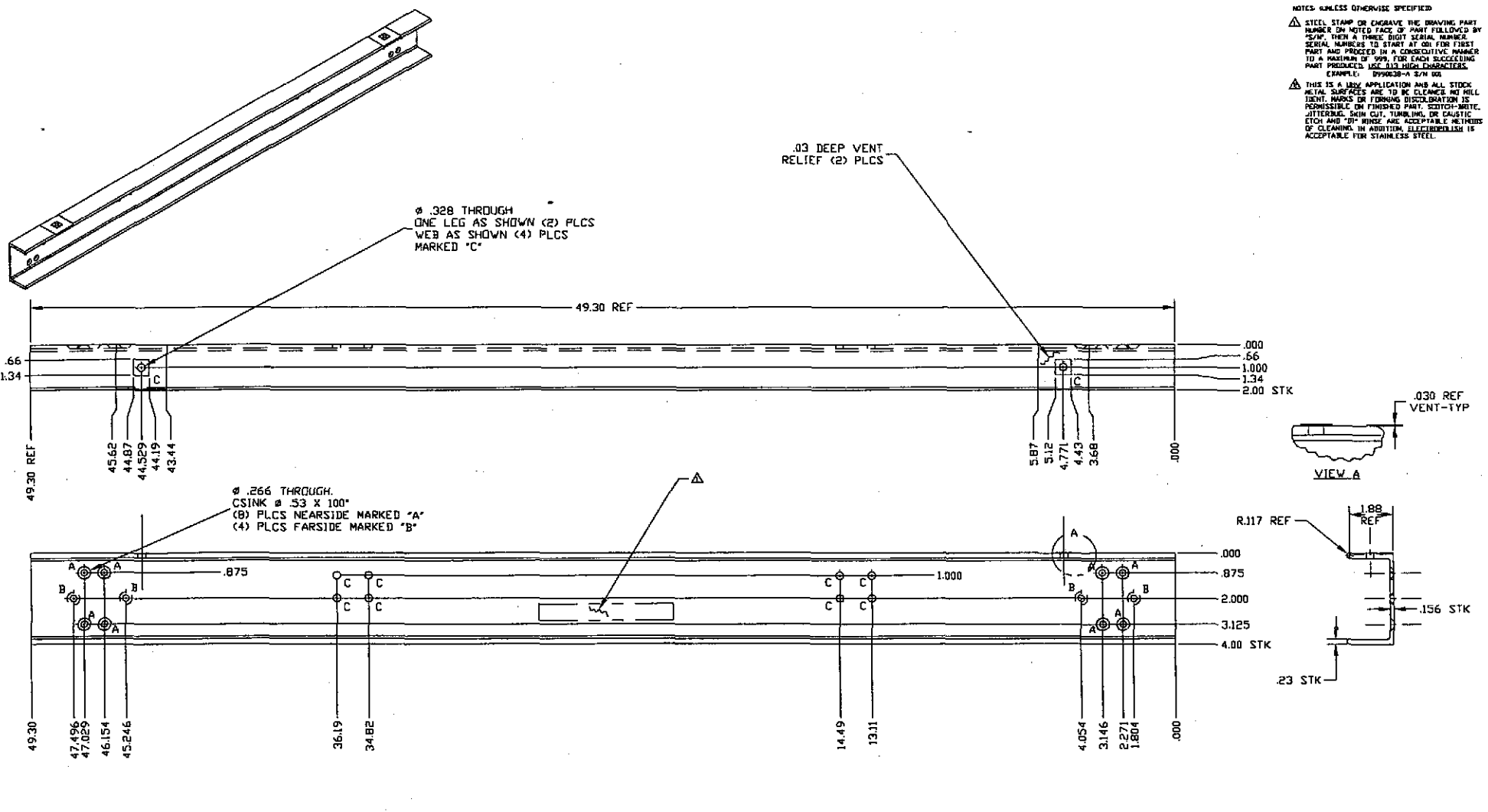
SECT A-A

	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES									LCO		
TELEPHONE: FRACTIONAL 3/164 DECIMAL 4/127	FINGER 3/164 FINGER 3/164	BREAK CORNER TO .010 REMOVE ALL BURRS										ARM CAVITY BAFFLE, RIFLE SUPPLY, NEAR VERTICAL, 117/118 LEG
MATERIAL: 7075-T6 ALUMINUM	NEAT TREAT	FINISH: △ △ △	A	B	RELEASE	E990385	KABOT	10-21-99				D990382-B
PREL. NO.	DESCRIPTION	DATE	REV	DESCRIPTION	REV	APP'R	CHECK	BY	DATE			1 OF 1

NOTES UNLESS OTHERWISE SPECIFIED

△ STEEL STAMP OR ENGRAVE THE DRAWING PART NUMBER ON NOTED FACE OF PART FOLLOWED BY "S/N", THEN A THREE DIGIT SERIAL NUMBER. SERIAL NUMBERS TO START AT 001 FOR FIRST PART AND PROCEED IN A CONSECUTIVE NUMBER TO A MAXIMUM OF 999. FOR EACH SUCCESSIVE PART PRODUCED, USE 010 HIGH CHARACTERISTICS. EXAMPLE: 099030-A S/N 001

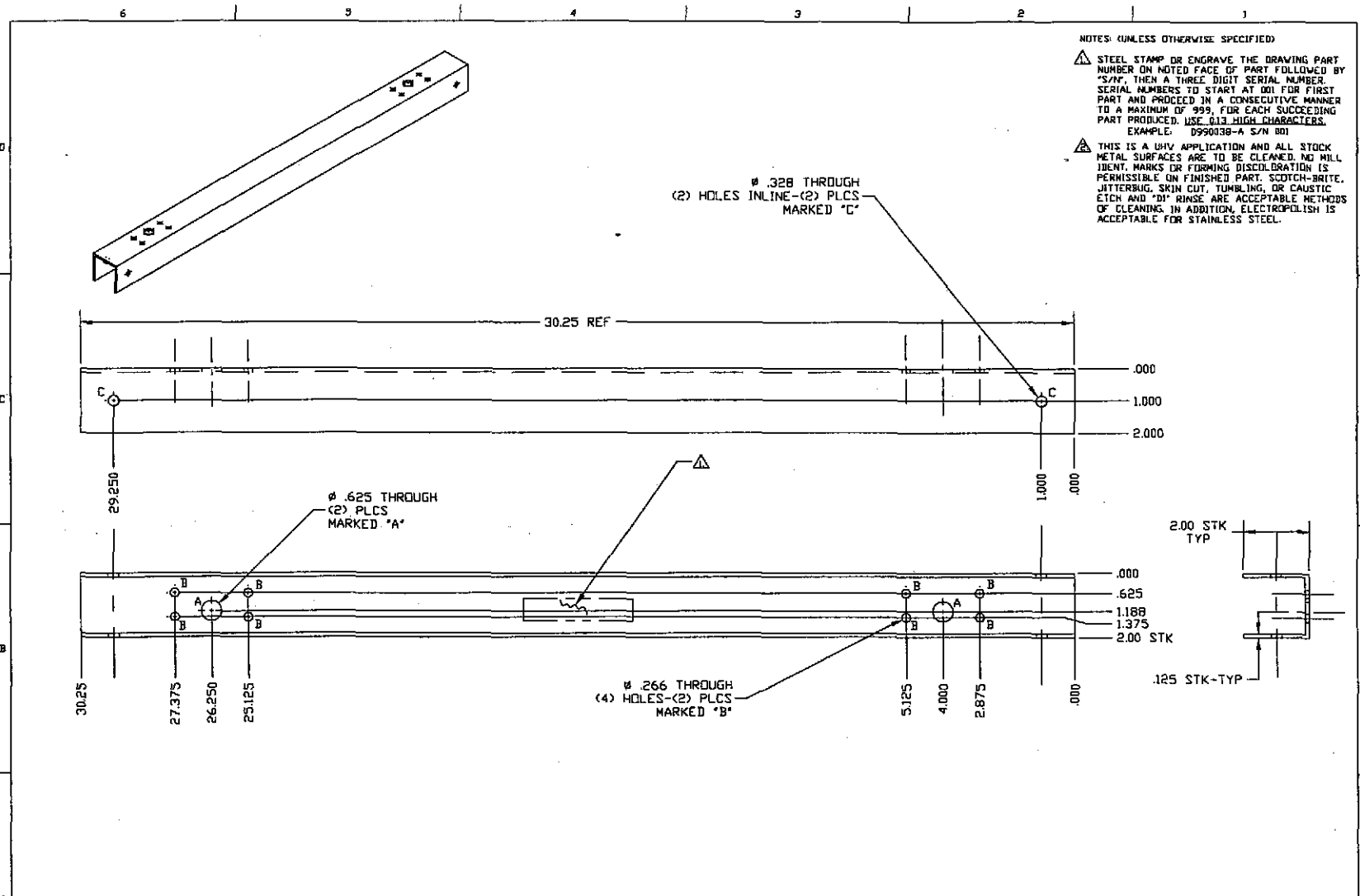
△ THIS IS A LENS APPLICATION AND ALL STOCK METAL SURFACES ARE TO BE CLEANED BY MILL IDENT. MARKS OR FORMING DISCREPANCY IS PERMISSIBLE ON FINISHED PART. SCOTCH-BRITE, JITTERBUG, SKIN CUT, TUMBLING, OR CAUSTIC ETCH AND 10% VINEGAR ARE ACCEPTABLE METHODS OF CLEANING. IN ADDITION, ELECTROBRUSH IS ACCEPTABLE FOR STAINLESS STEEL.



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		TOLERANCES: FRACTIONAL ± 1/64 ANGULAR ± 1/2° TWO PLACE DECIMAL ±.01 THREE PLACE DECIMAL ±.003		INSIDE RADIUS AS FINISHED SURFACE ONE BREAK OUTSIDE CORNERS .005 - .010 REMOVE ALL BURRS		MATERIAL: TYPE 6061-T6 ALUM. EXTR. SIZES (AL13A22)		HEAT TREAT:		FINISH: △ △		NEXT ASSY: 099030, 099047, 099048		REV: A		DESCRIPTION: RELEASE		ISSN NUMBER: E99030		APPR'D: KASOT		CHECK: 10-21-99		DATE: 10-21-99		DRAWN: KASOT		PART NO: 0990383-B		SHEET: 1 OF 1	
Dwg. No.		DESCRIPTION: REFERENCE DRAWINGS		USED Dwg.		MATERIAL: ALUM. EXTR. SIZES (AL13A22)		HEAT TREAT:		FINISH: △ △		NEXT ASSY: 099030, 099047, 099048		REV: A		DESCRIPTION: RELEASE		ISSN NUMBER: E99030		APPR'D: KASOT		CHECK: 10-21-99		DATE: 10-21-99		DRAWN: KASOT		PART NO: 0990383-B		SHEET: 1 OF 1	

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ARM CAVITY BAFFLE,  
 OUTER SUPPORT,  
 ITM/ETM RAIL

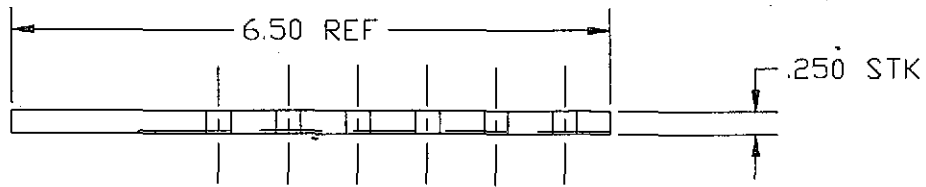
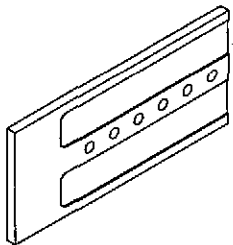


NOTES: UNLESS OTHERWISE SPECIFIED

⚠ STEEL STAMP OR ENGRAVE THE DRAWING PART NUMBER ON NOTED FACE OF PART FOLLOWED BY 'S/N', THEN A THREE DIGIT SERIAL NUMBER. SERIAL NUMBERS TO START AT 001 FOR FIRST PART AND PROCEED IN A CONSECUTIVE MANNER TO A MAXIMUM OF 999, FOR EACH SUCCEEDING PART PRODUCED. USE 013 HIGH CHARACTERS. EXAMPLE: D99038-A S/N 001

⚠ THIS IS A UHV APPLICATION AND ALL STOCK METAL SURFACES ARE TO BE CLEANED. NO MILL IDENT. MARKS OR FIRMING DISCOLORATION IS PERMISSIBLE ON FINISHED PART. SCOTCH-BRITE, JITTERBUG, SKIN CUT, TUMBLING, OR CAUSTIC ETCH AND 'DI' RINSE ARE ACCEPTABLE METHODS OF CLEANING. IN ADDITION, ELECTROPOLISH IS ACCEPTABLE FOR STAINLESS STEEL.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED		TOLERANCES: FUNCTIONAL ±.154 ANGULAR ±.3° TWO PLACE DECIMAL ±.01 THREE PLACE DECIMAL ±.002		FINISH: UNLESS NOTED AS FINISHED SURFACE END BREAK CLIPPING CORNER .005 ± .015 REMOVE ALL BURRS		MATERIAL: 316L SS DIN EN 10088-2 HEAT TREAT: FINISH: ⚠		RELEASE E990382		DATE 8-5-99		LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY	
MATERIAL: 316L SS DIN EN 10088-2 HEAT TREAT: FINISH: ⚠		NEXT ASSY: D990380, 0491, 0492		ISSUE DESCRIPTION		SCALE: NTS		DRAWN: C		DATE: 8-5-99		PART: D990384-A	
DRAWING NO. REFERENCE DRAWINGS		USED ON		REV. DESCRIPTION		CHECK		DATE		SCALE		SHEET 1 OF 1	



NOTES: (UNLESS OTHERWISE SPECIFIED)

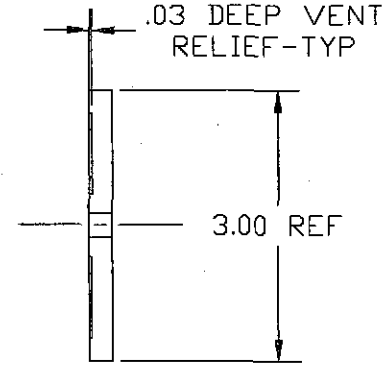
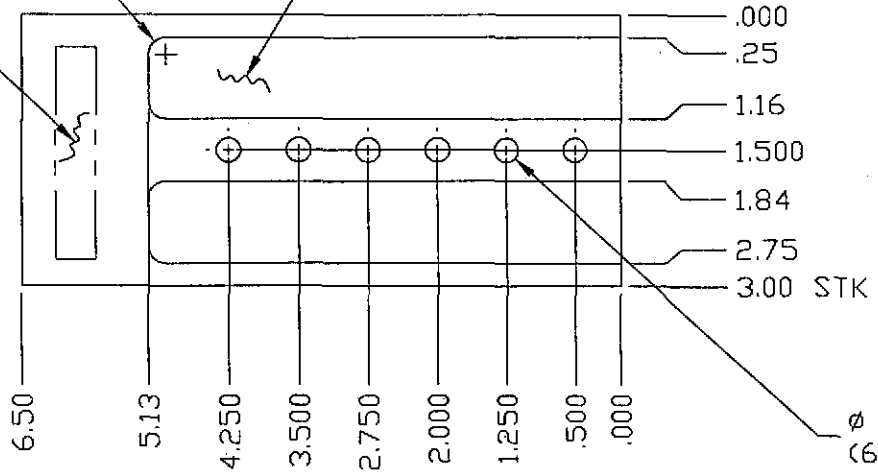
⚠ STEEL STAMP OR ENGRAVE THE DRAWING PART NUMBER ON NOTED FACE OF PART FOLLOWED BY "S/N", THEN A THREE DIGIT SERIAL NUMBER. SERIAL NUMBERS TO START AT 001 FOR FIRST PART AND PROCEED IN A CONSECUTIVE MANNER TO A MAXIMUM OF 999, FOR EACH SUCCEEDING PART PRODUCED. USE .013 HIGH CHARACTERS.  
EXAMPLE: D990038-A S/N 001

⚠ THIS IS A UHV APPLICATION AND ALL STOCK METAL SURFACES ARE TO BE CLEANED. NO MILL IDENT. MARKS OR FORMING DISCOLORATION IS PERMISSIBLE ON FINISHED PART. SCOTCH-BRITE, JITTERBUG, SKIN CUT, TUMBLING, OR CAUSTIC ETCH AND "DI" RINSE ARE ACCEPTABLE METHODS OF CLEANING. IN ADDITION, ELECTROPOLISH IS ACCEPTABLE FOR STAINLESS STEEL.

R.19 MIN (4) PLCS

.03 DEEP VENT RELIEF (2) PLCS

.03 DEEP VENT RELIEF-TYP

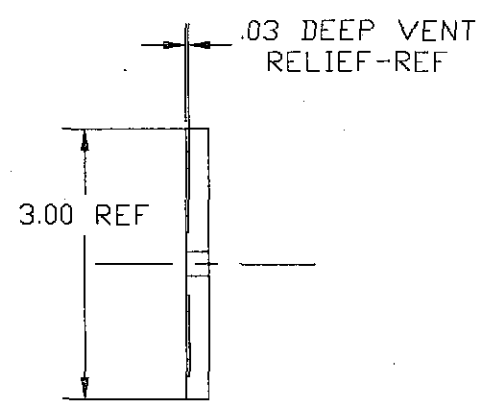
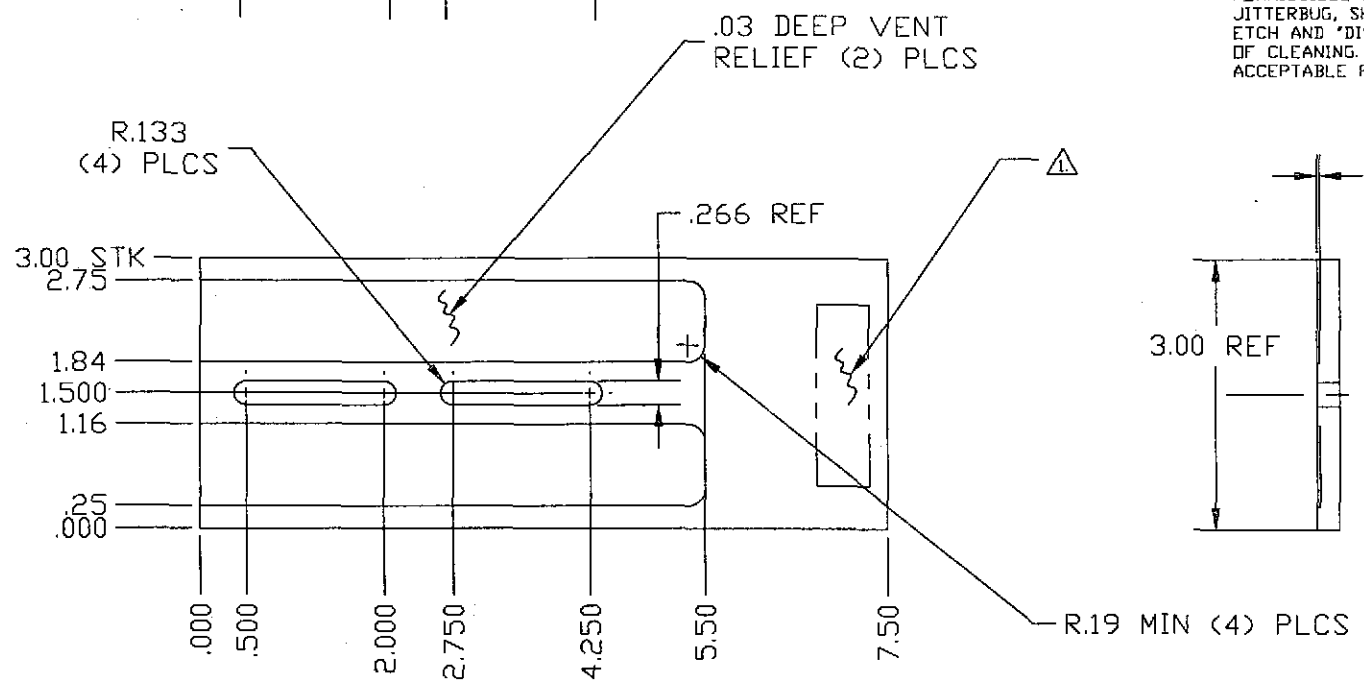
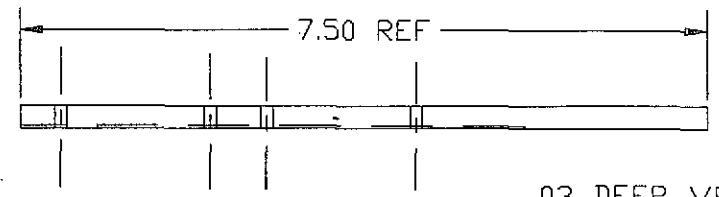
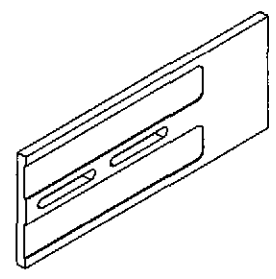


		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES (G99)						1160 CALIFORNIA INSTITUTE OF TECHNOLOGY MUSCHAGHETTI INSTITUTE OF TECHNOLOGY	
		TOLERANCES: FRACTIONAL ± 1/64 DECIMAL ± .010 THREE PLACE DECIMAL ± .003		INSIDE RADI .06 FINISHED SURFACE RNC BREAK OUTSIDE CORNERS .003 - .015 REMOVE ALL BURRS				ARH CAVITY BAFFLE, OUTER SUPPORT, ITM/ETH FOOT	
		MATERIAL: TYPE 6061-T6 ALUMINUM RECTANGULAR BAR 30 x 3.00		HEAT TREAT: FRESH		A		RELEASE	
DVC NO.		DESCRIPTION		REV		DESCRIPTION		ISSUE DESCRIPTION	
REFERENCE DRAWINGS		USED ON		NEXT ASSEMBLY: D990380, D990478, D990490		REV		DATE	
						E990382		18-7-99	
						SON NUMBER		APPROV CHECK DRAW DATE	
								SCALE: NTS	
								REV: 1 OF 1	

NOTES: (UNLESS OTHERWISE SPECIFIED)

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EXAMPLE: D990038-A S/N 001

⚠ THIS IS A UHV APPLICATION AND ALL STOCK METAL SURFACES ARE TO BE CLEANED. NO MILL IDENT. MARKS OR FORMING DISCOLORATION IS PERMISSIBLE ON FINISHED PART. SCOTCH-BRITE, JITTERBUG, SKIN CUT, TUMBLING, OR CAUSTIC ETCH AND 'DI' RINSE ARE ACCEPTABLE METHODS OF CLEANING. IN ADDITION, ELECTROPOLISH IS ACCEPTABLE FOR STAINLESS STEEL.



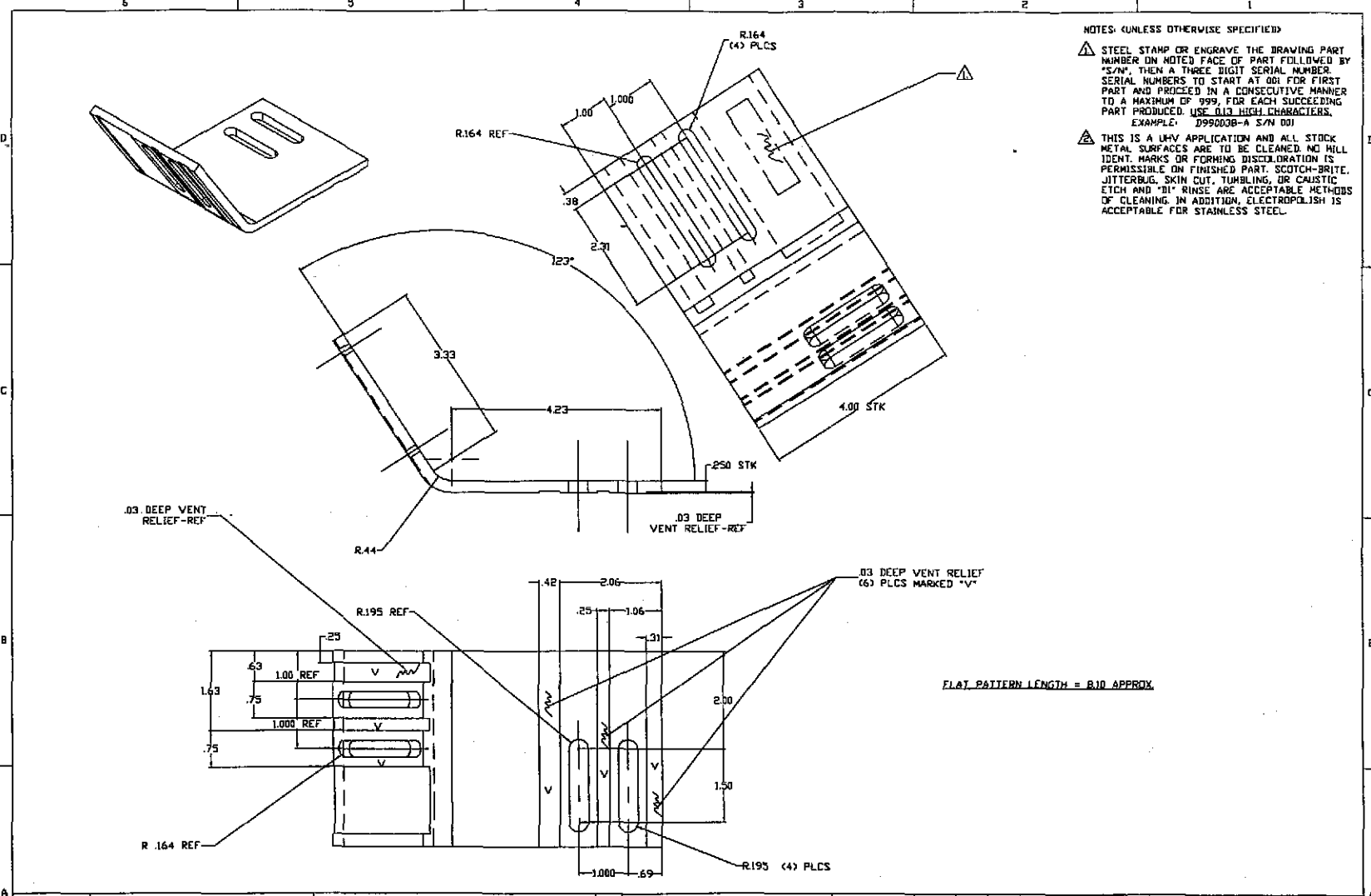
		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES (IN)								LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MICROSYSTEMS INSTITUTE OF TECHNOLOGY	
		TOLERANCES: FRACTIONAL ± 1/64 ANGULAR ± 1/2° TWO PLACE DECIMAL ±.01 THREE PLACE DECIMAL ±.003		INSIDE RADIUS .26 FINISHED SURFACE HAS BREAK OUTSIDE CORNERS .005 - .015 REMOVE ALL BURRS						ARM CAVITY BAFFLE, OUTER SUPPORT, 1TH/2TH STOP	
		MATERIAL: TYPE 6061-T6 ALUMINUM RECTANGULAR BAR 25 x 300		HEAT TREAT: A		FINISH: ⚠		RELEASE: C990305		KABIT 10-7-99	
EVS. NO.		DESCRIPTION		USED ON		NEXT ASSY: D990038, D990491, D990492		ISSUE DESCRIPTION		ISSUE NO. D990386-A	
REFERENCE DRAWING								APPR: [ ] CHECK: [ ] INRV: [ ] DATE: [ ]		SCALE: NTS	





10/12/99

2



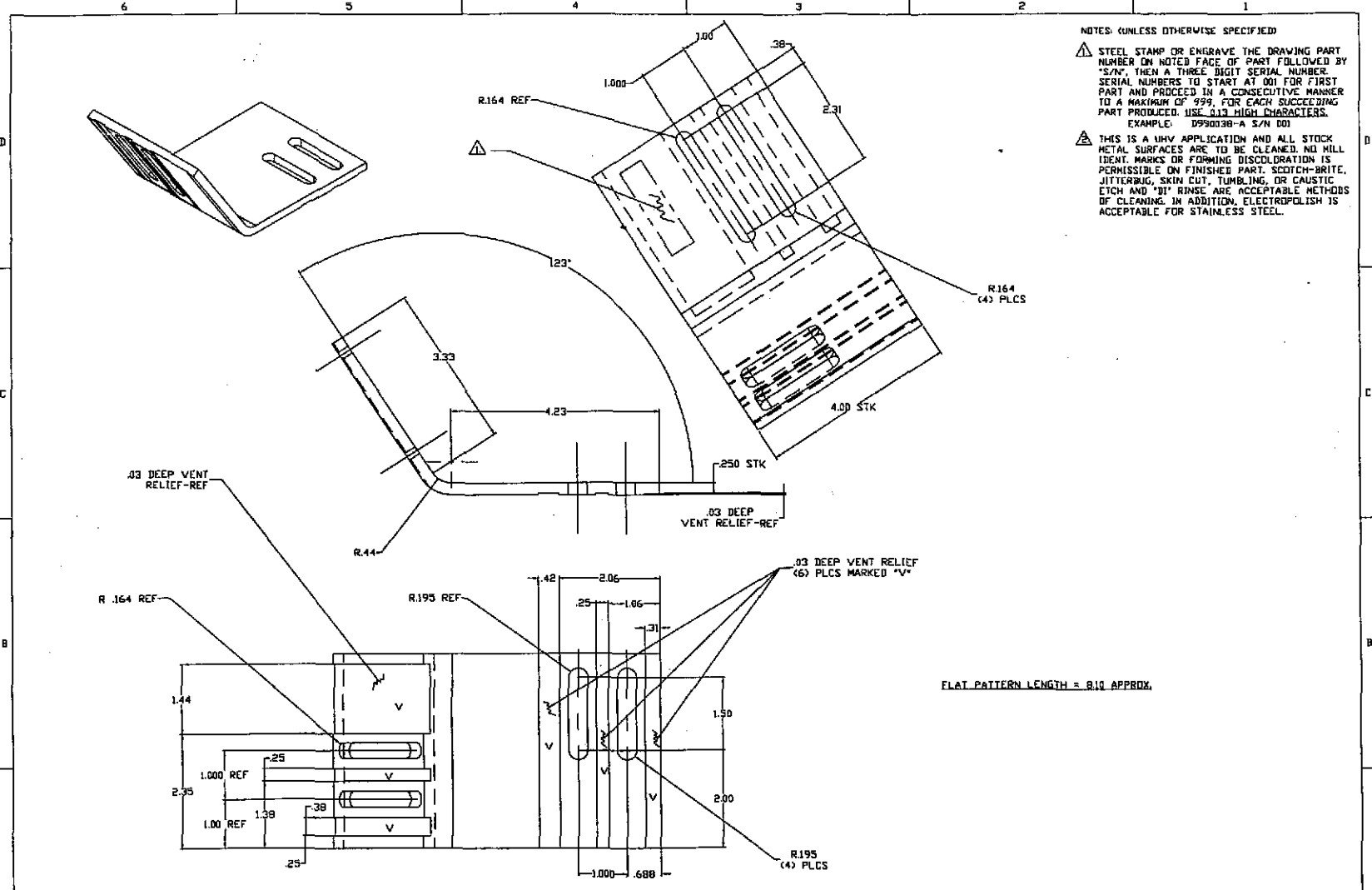
NOTES: (UNLESS OTHERWISE SPECIFIED)

- ▲ STEEL STAMP OR ENGRAVE THE DRAWING PART NUMBER ON NOTED FACE OF PART FOLLOWED BY "S/N", THEN A THREE DIGIT SERIAL NUMBER. SERIAL NUMBERS TO START AT 001 FOR FIRST PART AND PROCEED IN A CONSECUTIVE MANNER TO A MAXIMUM OF 999, FOR EACH SUCCEEDING PART PRODUCED. USE 011 HIGH CHARACTERS. EXAMPLE: D990398-A S/N 001
- ▲ THIS IS A LHM APPLICATION AND ALL STOCK METAL SURFACES ARE TO BE CLEANED. NO MILL IDENT. MARKS OR FORMING DISCOLORATION IS PERMISSIBLE ON FINISHED PART. SCOTCH-BRITE, JITTERBUG, SKIN CUT, TUMBLING, OR CAUSTIC ETCH AND "DI" RINSE ARE ACCEPTABLE METHODS OF CLEANING. IN ADDITION, ELECTROPOLISH IS ACCEPTABLE FOR STAINLESS STEEL.

FLAT PATTERN LENGTH = B.ID APPROX.

<p>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE</p> <p>TOLERANCES: FRACTIONAL ± .010 DECIMAL ± .005 TWO PLACE DECIMAL ± .005 THREE PLACE DECIMAL ± .002</p> <p>MATERIAL: TYPE 304-18 ALUMINUM RECTANGULAR BAR JIS # 400</p> <p>HEAT TREAT: NONE</p> <p>FINISH: A</p>		<p>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE</p> <p>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE</p>		<p>RELEASE: C990398</p> <p>DATE: 10-8-99</p>		<p>LGPO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY</p> <p>ARM CAVITY BAFFLE, OUTER SUPPORT, LOWER ANGLE ITM/ETH ATTACHMENT</p> <p>DWG FILE: D990398 SHEET: C REV: D990398-A</p>	
DIVL NO.	DESCRIPTION	USED BY	DATE	ISSUE DESCRIPTION	SCALE	NTS	SHEET 1 OF 1
6	REFERENCE DRAWINGS	5	4	3	2	1	

10/12/99



NOTES: (UNLESS OTHERWISE SPECIFIED)

⚠ STEEL STAMP OR ENGRAVE THE DRAWING PART NUMBER ON NOTED FACE OF PART FOLLOWED BY "S/N", THEN A THREE DIGIT SERIAL NUMBER. SERIAL NUMBERS TO START AT 001 FOR FIRST PART AND PROCEED IN A CONSECUTIVE MANNER TO A MAXIMUM OF 999, FOR EACH SUCCEEDING PART PRODUCED. USE 212 HIGH CHARACTERISTICS. EXAMPLE: D99038-A S/N 001

⚠ THIS IS A UVW APPLICATION AND ALL STOCK METAL SURFACES ARE TO BE CLEANED. NO MILL IDENT. MARKS OR FORMING DISCOLORATION IS PERMISSIBLE ON FINISHED PART. SCOTCH-BRITE, JITTERBUG, SKIN CUT, TUMBLING, OR CAUSTIC ETCH AND "BY" RINSE ARE ACCEPTABLE METHODS OF CLEANING. IN ADDITION, ELECTROPOLISH IS ACCEPTABLE FOR STAINLESS STEEL.

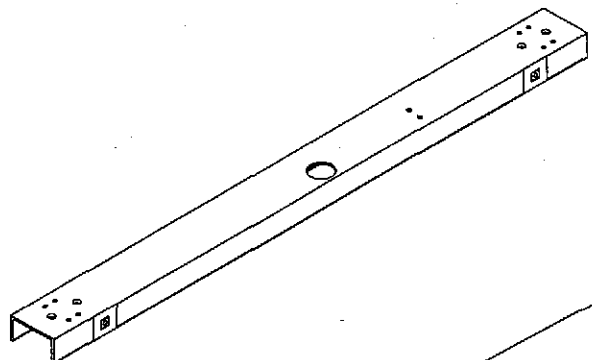
FLAT PATTERN LENGTH = 8.10 APPROX.

<p>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES (mm)</p> <p>TOLERANCES: FRACTIONAL ± .125 DECIMAL ± .010 TWO PLACE DECIMAL, AS SHOWN THREE PLACE DECIMAL, .000</p> <p>FINISH: UNLESS NOTED AS FOLLOWS: FURNISHED SURFACE FINISH REMOVE ALL BURRS</p> <p>MATERIAL: TYPE 304L-16 ALUMINUM RECTANGULAR BAR 25 x .400</p> <p>HEAT TREAT: A</p> <p>FINISH: A</p>		<p>RELEASE: C990303</p> <p>DCN NUMBER: -</p> <p>APPROB: -</p> <p>CHECK: -</p> <p>DRWN: -</p> <p>DATE: 10-8-99</p>		<p>LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY</p> <p>ARM CAVITY BAFFLE, OUTER SUPPORT, UPPER ANGLE, ITM/ETH ATTACHMENT</p> <p>END FILE: D990391-A</p> <p>REV: E</p> <p>DATE: 10-8-99</p> <p>DRWN: E</p> <p>DATE: 10-8-99</p> <p>ISSUE DESCRIPTION: 1</p>	
<p>DWG. NO. 6</p> <p>REFERENCE DRAWINGS</p>	<p>USED ON: 5</p>	<p>NEXT ASSY: D990380, 0491, 0492</p>	<p>ISSUE DESCRIPTION: 3</p>	<p>DATE: 2</p>	<p>DRWT: 1 OF 1</p>

NOTES: UNLESS OTHERWISE SPECIFIED

▲ STEEL STAMP OR ENGRAVE THE DRAWING PART NUMBER ON NOTED FACE OF PART FOLLOWED BY "REV" THEN A THREE DIGIT SERIAL NUMBER. SERIAL NUMBERS TO START AT 001 FOR FIRST PART AND PROCEED IN A CONSECUTIVE NUMBER TO A MAXIMUM OF 999 FOR EACH SUCCEEDING PART PRODUCTION. SEE THE DRAWING CHARACTERISTICS. EXAMPLE: 999028-A 5/74 001

▲ THIS IS A NEW APPLICATION AND ALL STOCK METAL SURFACES ARE TO BE CLEANED AND ALL IDENT. MARKS OR FORMING DICES CRATERING IS PERMISSIBLE ON FINISHED PART. SCRATCH-WRITE, JITTERING, SKIN CUT, TURNING, OR CHASTIC ETON AND "IN" SENSE ARE ACCEPTABLE METHODS OF CLEANING. IN ADDITION, ELECTROLYTIC IS ACCEPTABLE FOR STAINLESS STEEL.



Ø .328 THROUGH ONE LEG AS SHOWN (2) PLCS ON WEB AS SHOWN (2) PLCS MARKED "C"

Ø3 DEEP VENT RELIEF (2) PLCS

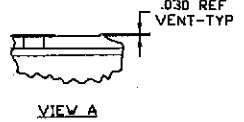
49.30 REF

49.30 REF  
1.34  
.66

45.62  
44.87  
44.529  
44.19  
43.44

5.87  
5.12  
4.771  
4.43  
3.68

.000  
.56  
1.000  
1.34  
2.00 STK



Ø .266 THROUGH CSINK Ø .53 X 100" (B) PLCS NEARSIDE MARKED "A" (4) PLCS FAR SIDE MARKED "B"

Ø 1.94 THROUGH

.000  
.875  
3.125  
49.30  
47.496  
47.029  
46.154  
45.246

A  
A  
B  
A  
A  
B

1.22

23.40

14.49

1.000

A  
B  
A  
A  
A  
B  
A  
A  
B  
A  
A  
B

R.117 REF  
1.88 REF  
.000  
.875  
2.000  
3.125  
4.00 STK  
.23 STK  
.156 STK

<p>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES</p> <p>TOLERANCES FRACTIONAL ± 1/64 ANGLE ± .02° THIS PLACE DECIMAL ±.01 THREE PLACE DECIMAL ±.003</p> <p>INSIDE RADIUS .06 FINISHED SURFACE DIMS BREAK OUTSIDE DIMENSIONS .005 - .015 REMOVE ALL BURS</p> <p>MATERIAL: TYPE 6061-T6 ALUM. ASSOC. SIZE 4x2x1/8x23 HEAT TREAT: F355</p> <p>USED ON: NEXT ASS'Y: 9990492</p>		<p>REV: B RELEASE C990305</p> <p>REV: A PRE-RELEASE</p> <p>REV: DESCRIPTION</p>		<p>ISSUE DESCRIPTION</p>		<p>DATE: 10-21-99</p> <p>DATE: 10-3-99</p>		<p>SCALE: 1 OF 1</p>	
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LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY

ARM CAVITY BAFFLE, OUTER SUPPORT, LEVER CLEARANCE HOLE, ETH RAIL

FIGURE NO: D990527-B