FINAL REPORT
JUNE 1994

REPORT NO. 94-20

STINGER MISSILE EXTERNAL AERIAL TRANSPORT (EAT) CERTIFICATION

Prepared for:
U.S. Army Armament Research, Development and Engineering Center
ATTN: SMCAR-AEP
Picatinny Arsenal, NJ 07806-5000

Distribution Unlimited

VALIDATION ENGINEERING DIVISION
SAVANNA, ILLINOIS 61074-9639

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CHEMICAL COMMAND

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CENTER AND SCHOOL

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SAVANNA, ILLINOIS 61074-9639

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ATTENTION OF:

SMCAC-DEV (702-3b)

20 JUN 1995

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SUBJECT: STINGER Missile External Aerial Transport (EAT) Certification

1. Enclosed is the U.S. Army Defense Ammunition Center and School (USADACS) Report No. 94-20.

2. The POC is Mr. Quinn D. Hartman, SMCAC-DEV, DSN 585-8992, commercial (815) 273-8992.

FOR THE DIRECTOR:

JEROME H. KROHN
Chief, Validation Engineering Division

Encl
as

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STINGER Missile External Aerial Transport (EAT) Certification

12. PERSONAL AUTHOR(S)
Quinn D. Hartman

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16. SUPPLEMENTARY NOTATION

17. COSATI CODES			18. SUBJECT TERMS *(Continue on reverse if necessary and identify by block number)*
FIELD	GROUP	SUB-GROUP	

19. ABSTRACT *(Continue on reverse if necessary and identify by block number)*

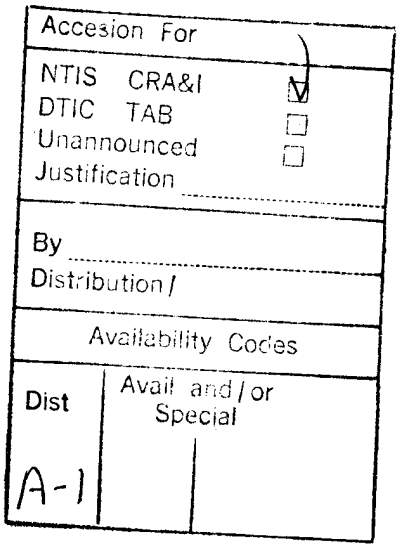
The U.S. Army Defense Ammunition Center and School (USADACS), Validation Engineering Division (SMCAC-DEV), was tasked by the U.S. Army Armament Research, Development and Engineering Center (ARDEC) to conduct a static pull test on the STINGER missile pallet as part of the helicopter External Aerial Transport (EAT) certification process. As prescribed by MIL-STD-209, Military Standard Slinging and Tiedown Provisions for Lifting and Tying Down Military Equipment, the pallet was loaded to 4,200 pounds for a period of 90 seconds utilizing a four-legged sling. The first article pallet initially tested was noted to have minor permanent deformation in the toplift frame upon completion of the test. Since no permament deformation is allowed, the first article pallet was determined to have failed the MIL-STD-209 static pull test. A second pallet toplift frame was constructed substituting 10 gauge metal for 12 gauge metal. The lift test was repeated with the new toplift frame on the pallet. Upon completion of the test, the pallet was inspected and determined to have sustained no permanent deformation as a (continued)

20. DISTRIBUTION / AVAILABILITY OF ABSTRACT XX UNCLASSIFIED/UNLIMITED ☐ SAME AS RPT. ☐ DTIC USERS	21. ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED
22a. NAME OF RESPONSIBLE INDIVIDUAL JEROME H. KROHN	22b. TELEPHONE *(Include Area Code)* 815-273-8929 22c. OFFICE SYMBOL SMCAC-DEV

DD Form 1473, Jun 86 *Previous editions are obsolete*

19. ABSTRACT (continued)

result of the static load. Having successfully passed MIL-STD-209 requirements, the STINGER missile pallet was transported to U.S. Army Combat Systems Test Activity (USACSTA) for helicopter flight testing.



U.S. ARMY DEFENSE AMMUNITION CENTER AND SCHOOL
VALIDATION ENGINEERING DIVISION
SAVANNA, IL 61074-9639

REPORT NO. 94-20

STINGER MISSILE EXTERNAL AERIAL TRANSPORTATION (EAT) CERTIFICATION

JUNE 1994

TABLE OF CONTENTS

PART 1

INTRODUCTION

A. BACKGROUND. The U.S. Army Defense Ammunition Center and School (USADACS), Validation Engineering Division (SMCAC-DEV), was tasked by the U.S. Army Armament Research, Development and Engineering Center (ARDEC) to conduct a static pull test on the STINGER missile pallet as part of the helicopter External Aerial Transport (EAT) certification process.Testing was conducted IAW MIL-STD-209, Military Standard Slinging and Tiedown Provisions for Lifting and Tying Down Military Equipment.

B. AUTHORITY. The test was accomplished IAW mission responsibilities delegated by the U.S. Army Armament, Munitions and Chemical Command (AMCCOM), Rock Island, Illinois. Reference is made to the following:

1. Change 4, 4 October 1974, to AR740-1, 23 April 1973, Storage and Supply Activity Operation.

2. AMCCOM-R 10-17, Mission and Major Functions of USADACS, 13 January 1986.

C. OBJECTIVE. The purpose of this test was to determine if the toplift frame and strapping configuration of the pallet was sufficient to withstand the rigors associated with EAT prior to flight testing.

D. CONCLUSION. Following successful completion of MIL-STD-209 requirements, the modified STINGER missile pallet was determined to be suitable for helicopter flight testing. The STINGER missile pallet was forwarded to U.S. Army Combat Systems Test Activity (USACSTA) for helicopter flight testing.

PART 2

23 MAY AND 17 JUNE 1994

ATTENDEES

Quinn D. Hartman General Engineer DSN 585-8992 815-273-8992	Director U.S. Army Defense Ammunition Center and School ATTN: SMCAC-DEV Savanna, IL 61074-9639
David V. Valant Electronics Technician DSN 585-8988 815-273-8988	Director U.S. Army Defense Ammunition Center and School ATTN: SMCAC-DEV Savanna, IL 61074-9639
Sandra M. Schultz Industrial Engineer DSN 585-8086 815-273-8086	Director U.S. Army Defense Ammunition Center and School ATTN: SMCAC-DES Savanna, IL 61074-9639
Thomas J. Michels Supervisory General Engineer DSN 585-8080 815-273-8080	Director U.S. Army Defense Ammunition Center and School ATTN: SMCAC-DES Savanna, IL 61074-9639

PART 3

TEST PROCEDURES

As part of the External Aerial Transport (EAT) certification procedure, a static load of 4,200 pounds was applied to the STINGER missile pallet IAW MIL-STD-209. Prior to testing, the 1,200-pound pallet was secured to an M872 semitrailer utilizing two 1-1/4-inch metal bands over the top of the second layer of missile containers (see part 5). A 50,000-pound-capacity container handler was connected to the pallet utilizing a four-legged sling appropriate for helicopter slinging. The pallet was then pulled to the design limit load (3.5 times the pallet weight) for a period of 90 seconds. During the pull, the static load was monitored with a 5,000-pound-capacity dynamometer. Upon completion of the test, the pallet was inspected for damage due to the static load.

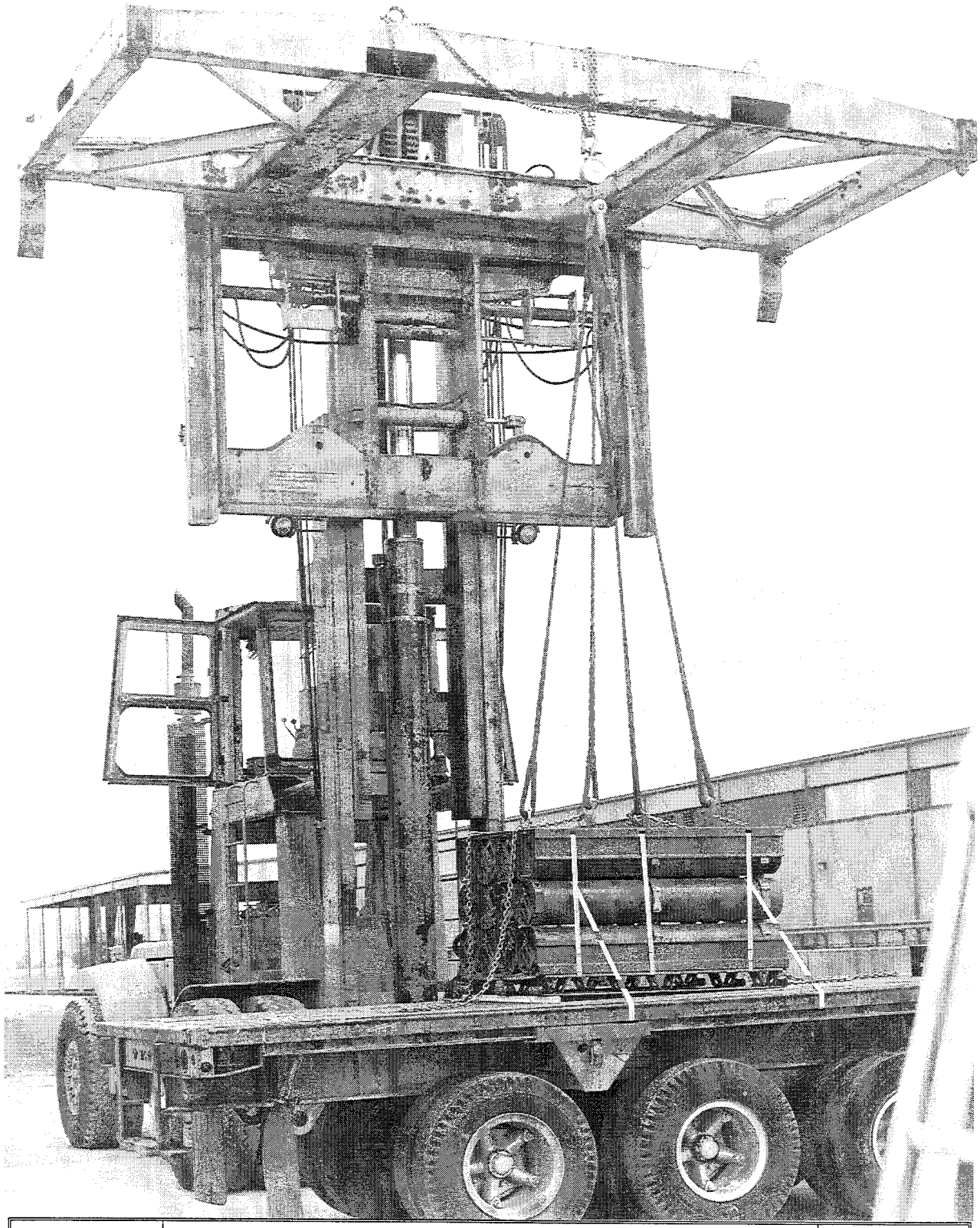
PART 4

TEST RESULTS

Upon completion of MIL-STD-209 testing, the STINGER missile pallet was inspected for damage from the static loading. The first article pallet that was initially tested was noted to have minor permanent deformation in the toplift frame. Since no permament deformation is allowed, the first article pallet was determined to have failed the MIL-STD-209 static pull test. A second pallet toplift frame was then constructed substituting 10 gauge metal for 12 gauge metal. The lift test was repeated with the new toplift frame on the pallet. Upon completion of this test, the pallet was inspected and determined to have sustained no permanent deformation as a result of the static load. Metal strapping used to unitize the pallet was also determined to have sustained no damage as a result of the static loading.

PART 5

PHOTOGRAPH



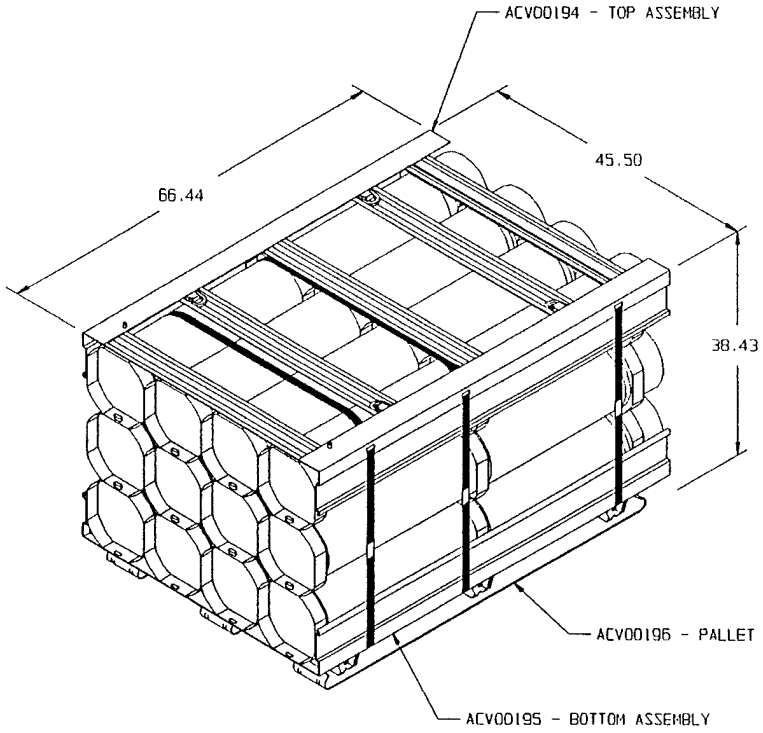
	U.S. ARMY DEFENSE AMMUNITION CENTER AND SCHOOL - SAVANNA, IL	
Photo No. AO317-SCN94-160-2378: This photo shows the STINGER missile pallet attached to the M872 semitrailer during MIL-STD-209 static pull testing.		

PART 6

DRAWINGS

REVISION			
LTR	DESCRIPTION	DATE	APPROVED
-	PRODUCT BASELINE ERR M302000 93-04-20	93-04-20	

COMBINATION OF ADOPTED ITEMS	PART NO
PALLET - SPECIAL SIZE 66.44 X 45.50 SHEET METAL	ACV00196
TOP ASSEMBLY PALLET ADAPTER PA158 CONTAINER	ACV00194
BOTTOM ASSEMBLY PALLET ADAPTER PA158 CONTAINER	ACV00195
UNITIZATION DRAWING	19-48-4231/130

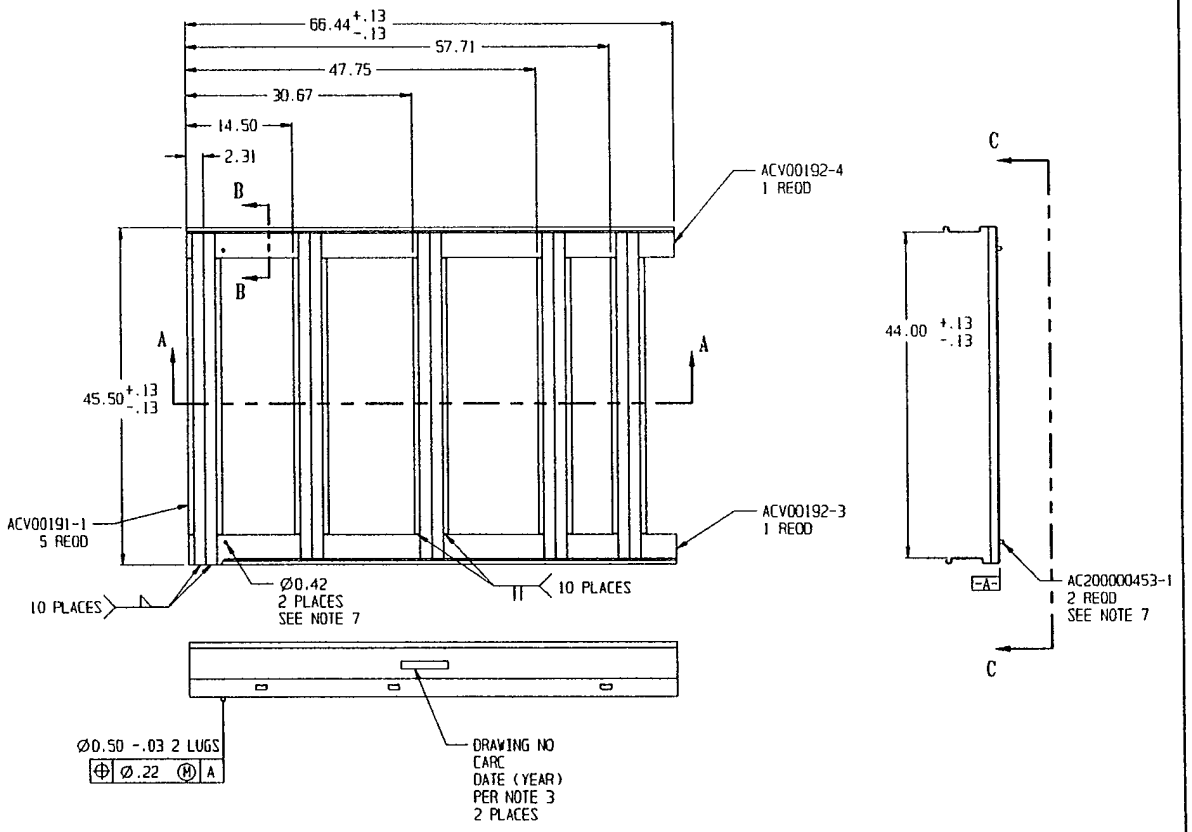


		UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. BREAK SHARP CORNERS AND EDGES. TOLERANCES ON FRACTIONS ____ DECIMALS ± .06 MATERIAL	DATE 93-04-20 DRAWN BJK CHECKED SMS PROJ ENGR SCHULTZ SUBMITTED	DESIGN ACTIVITY U.S. ARMY ARMAMENT, MUNITIONS AND CHEMICAL COMMAND DEFENSE AMMUNITION CENTER AND SCHOOL SAVANNA, ILLINOIS 61074-9639
	STINGER			COMBINATION OF ADOPTED ITEMS, PALLET AND PALLET ADAPTER, UNITIZATION OF PA158 CONTAINER
NEXT ASSY	USED ON			SIZE D CAGE CODE 28620 ACV00193
APPLICATION				SCALE 1/8 UNIT WT SHEET 1 OF 1

REVISION			
LTR	DESCRIPTION	DATE	APPROVED
-	PRODUCT BASELINE ERR M302000 93-04-20	93-04-20	

NOTES:
1. MIL-A-2550, ANSI/AWS A2.4-86, ANSI Y14.5M-1982 AND MIL-A-71179 APPLY.
2. PROTECTIVE FINISH SHALL BE IN ACCORDANCE WITH DWG AC200000423. COLOR SHALL BE GREEN NO 383 PER MIL-C-46168 (FED STD 595 NO 34096).
3. MARKING PAINT SHALL BE IN ACCORDANCE WITH DWG AC200000423. COLOR SHALL BE WHITE NO 37875 0.50 INCH HIGH LETTERS.
4. WELDMENT CONSTRUCTION SPEC MIL-STD-1261 APPLIES.
5. DIMENSIONS OF THE RETAINER RING MAY BE VARIED TO INSURE THE RING'S POSITION WHEN LIFTED VERTICALLY SHALL BE BETWEEN 75 AND 85 DEGREES WITH THE HORIZONTAL. THIS DIMENSION ASSURES THAT THE RING SHALL BE SELF NESTING WHEN NOT IN USE.
6. CHAMFERED CORNER SHALL NOT BE WELDED IN ORDER TO ALLOW ADDITIONAL DRAIN HOLE.
7. ALTERNATE ALIGNING LUG PART NO AC200000453-3 MAY BE USED INSTEAD OF PART NO AC200000453-1. IF ALTERNATE LUG IS USED, USE Ø0.52 2 PLACES.

SECTION A-A
SOME HIDDEN LINES OMITTED FOR CLARITY



PART NO ACV00194

		UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. BREAK SHARP CORNERS AND EDGES. TOLERANCES ON FRACTIONS ___ DECIMALS .06	DATE 93-04-20	DESIGN ACTIVITY U.S. ARMY ARMAMENT, MUNITIONS AND CHEMICAL COMMAND DEFENSE AMMUNITION CENTER AND SCHOOL SAVANNA, ILLINOIS 61074-9639	
			DRAWN BJK CHECKED SMS PROJ ENGR SCHULTZ	TOP ASSEMBLY PALLET ADAPTER PA158 CONTAINER	
		MATERIAL	SPEC-DEV CHIEF, SUPPLY ENGINEERING DIV		
			SUBMITTED CHIEF, LOGISTICS ENGINEERING OFFICE		
ACV00193	STINGER		APPROVED BY CHIEF OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND (ARMCOM)		
NEXT ASSY	USED ON			SIZE D CAGE CODE 28820	ACV00194
APPLICATION			DEFENSE AMMUNITION CENTER AND SCHOOL	SCALE 1/8 UNIT WT	SHEET 1 OF 2

REVISION			
LTR	DESCRIPTION	DATE	APPROVED
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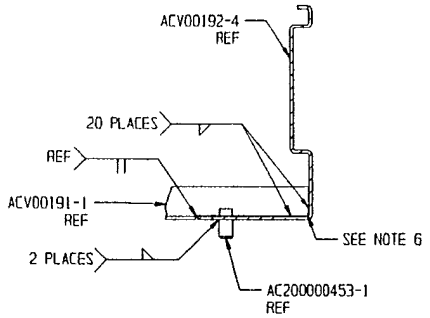
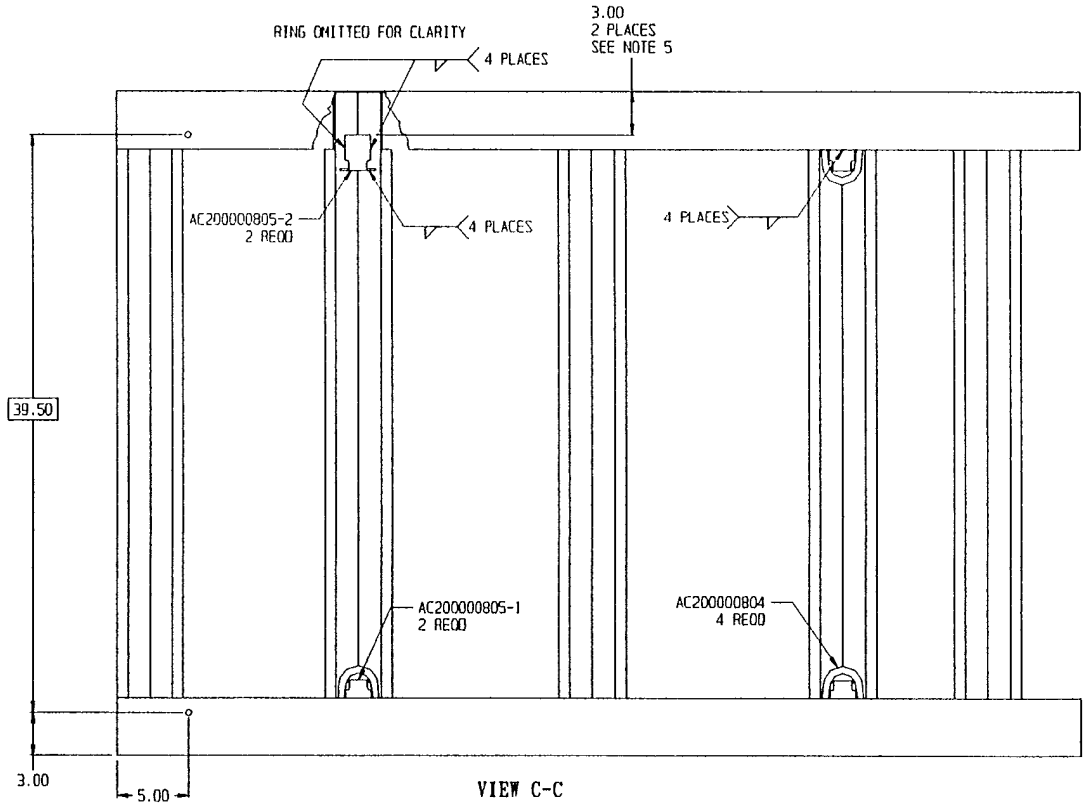


SECTION B-B

SCALE 1/2

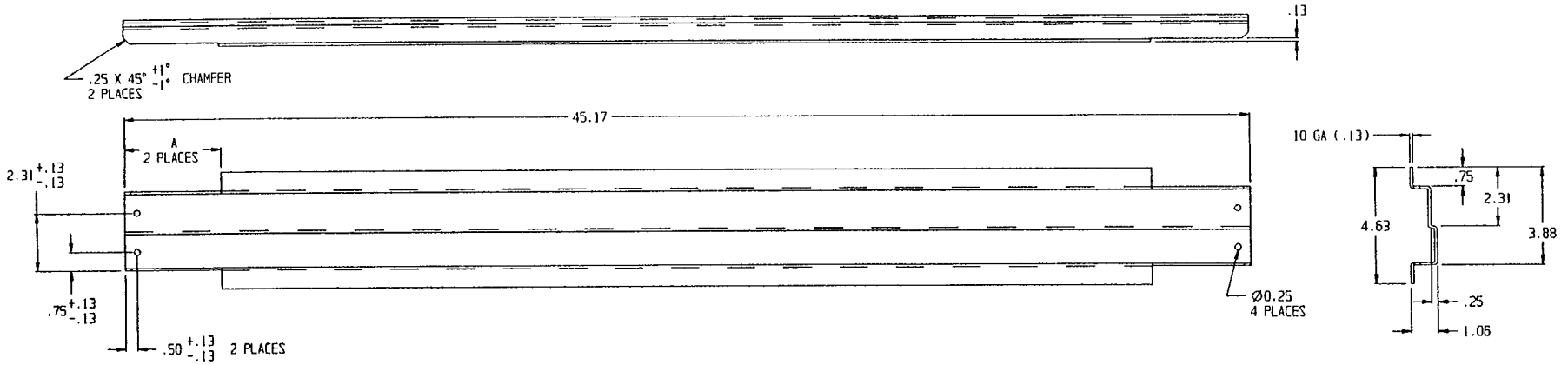


VIEW C-C

APPLICATION	UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. BREAK SHARP CORNERS AND EDGES. TOLERANCES ON FRACTIONS DECIMALS ± .06 MATERIAL	DATE 93-04-20 DRAWN BJK / CHECKED SMS / PROJ ENGR SCHULTZ DESIGN SUBMITTED APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND (AMC)	DESIGN ACTIVITY U.S. ARMY ARMAMENT, MUNITIONS AND CHEMICAL COMMAND DEFENSE AMMUNITION CENTER AND SCHOOL SAVANNA, ILLINOIS 61074-9639	TOP ASSEMBLY PALLET ADAPTER PA158 CONTAINER SIZE D / CAGE CODE 28620 / ACV00194 SCALE 1/4 / UNIT WT / SHEET 2 OF 2

REVISION			
LTR	DESCRIPTION	DATE	APPROVED
-	PRODUCT BASELINE ERR M3D2000 93-04-20	93-04-20	

NOTES:
1. BEND RADII 0.13 INCH MAX WHERE NOT NOTED.
2. SPEC ANSI Y14.5M-1982 APPLIES.
3. MATERIAL: SHEET, SAE OR ANSI 1005-1010 STEEL, CARBON, COLD ROLL OR HOT ROLL, PER ASTM A568, (ASTM A366 OR A569).



DIMENSION	
PART NO	A
ACV00191-1	3.90
ACV00191-2	5.40

PART NO SEE TABLE

ACV00189	TOW 2A
ACV00190	
ACV00194	STINGER
ACV00195	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. BREAK SHARP CORNERS AND EDGES.
TOLERANCES ON
FRACTIONS
DECIMALS .X .06
MATERIAL

DATE 93-04-20
ORIGINATOR BJK | CHECKED SMS | PROJ ENGR SCHULTZ
SPEC-DEV
SUBMITTED
APPROVED BY BRANCH OR EQUIVALENT

DESIGN ACTIVITY
U.S. ARMY
ARMAMENT, MUNITIONS AND CHEMICAL COMMAND
DEFENSE AMMUNITION CENTER AND SCHOOL
SAVANNA, ILLINOIS 61074-9639

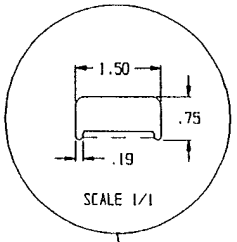
SQUARE BELL RESTRAINT

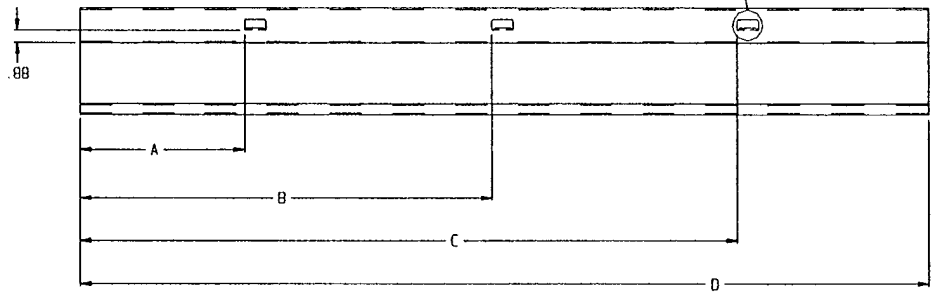
SIZE	CAGE CODE	
D	28620	ACV00191

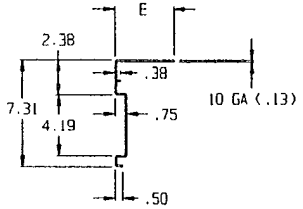
SCALE 1/2 | UNIT WT | SHEET 1 OF 1

NOTES:
1. BEND RADII 0.13 INCH MAX WHERE NOT NOTED.
2. SPEC ANSI Y14.5M-1982 APPLIES.
3. MATERIAL: SHEET, SAE OR ANSI 1005-1010 STEEL, CARBON, COLD ROLL OR HOT ROLL, PER ASTM A568, (ASTM A366 OR A569).

REVISION			
LTR	DESCRIPTION	DATE	APPROVED
-	PRODUCT BASELINE ERR M3D2000 93-04-20	93-04-20	







DIMENSION					
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ACV00192-2	---	---	---	58.92	5.50
ACV00192-3	9.00	37.94	55.94	66.44	4.00
ACV00192-4	9.00	27.00	55.94	66.44	4.00
ACV00192-5	---	---	---	66.44	4.00

PART NO SEE TABLE

ACV00189	TOW 2A
ACV00190	
ACV00194	STINGER
ACV00195	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. BREAK SHARP CORNERS AND EDGES.
TOLERANCES ON
FRACTIONS
DECIMALS .06
MATERIAL

DATE 93-04-20
DRAWN BJK | CHECKED SMS | APPD BY SCHULTZ
DES-ENGR
SUBMITTED
CHIEF, LOGISTICS ENGINEERING OFFICE
APPROVED BY ORDER OF THE COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND (AMC)
CHIEF, SUPPLY ENGINEERING DIV.
CHIEF, DEFENSE AMMUNITION CENTER AND SCHOOL

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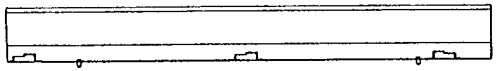
ARMAMENT, MUNITIONS AND CHEMICAL COMMAND
DEFENSE AMMUNITION CENTER AND SCHOOL
SAVANNA, ILLINOIS 61074-9639

SIDE RAIL

SIZE D | CAGE CODE 28620 | ACV00192
SCALE 1/4 | UNIT WT | SHEET 1 OF 1

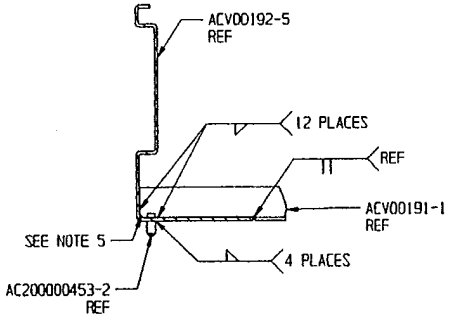
REVISION			
LTR	DESCRIPTION	DATE	APPROVED
-	PRODUCT BASELINE ERR M3D2000 93-04-20	93-04-20	

NOTES:
1. MIL-A-2550, ANSI/AWS A2.4-86, ANSI Y14.5M-1982 AND MIL-A-71179 APPLY.
2. PROTECTIVE FINISH SHALL BE IN ACCORDANCE WITH DWG AC200000423. COLOR SHALL BE GREEN NO 383 PER MIL-C-46168 (FED STD 595 NO 34096).
3. MARKING PAINT SHALL BE IN ACCORDANCE WITH DWG AC200000423. COLOR SHALL BE WHITE NO 37875 0.50 INCH HIGH LETTERS.
4. WELDMENT CONSTRUCTION SPEC MIL-STD-1261 APPLIES.
5. CHAMFERED CORNER SHALL NOT BE WELDED IN ORDER TO ALLOW ADDITIONAL DRAIN HOLE.
6. ALTERNATE ALIGNING LUG PART NO AC200000453-4 MAY BE USED INSTEAD OF PART NO AC200000453-2. IF ALTERNATE LUG IS USED USE Ø0.33 4 PLACES.



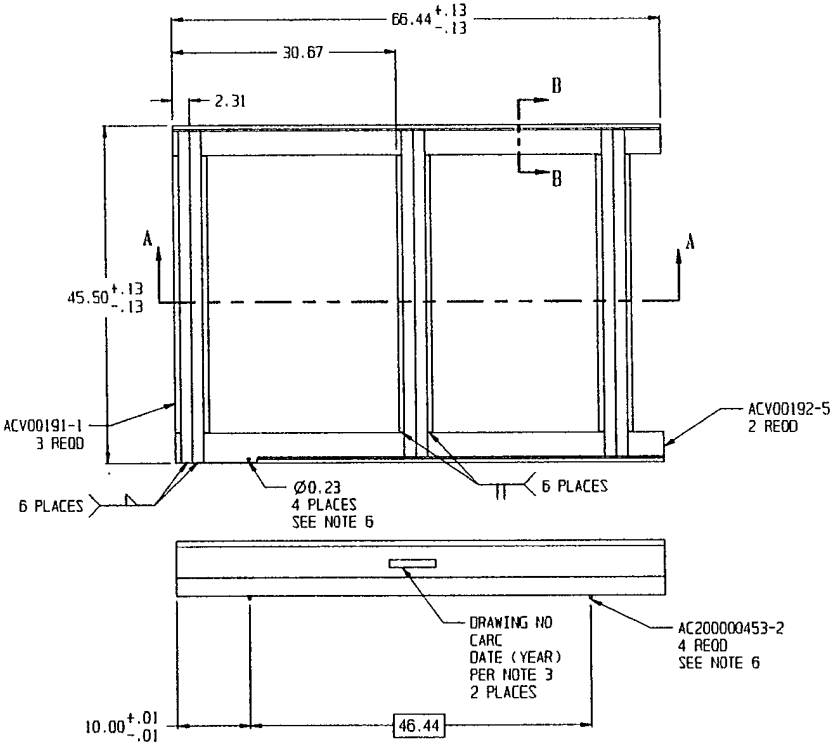
SECTION A-A

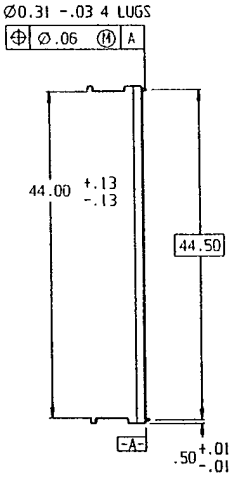
SOME HIDDEN LINES OMITTED FOR CLARITY



SECTION B-B

SCALE 1/2



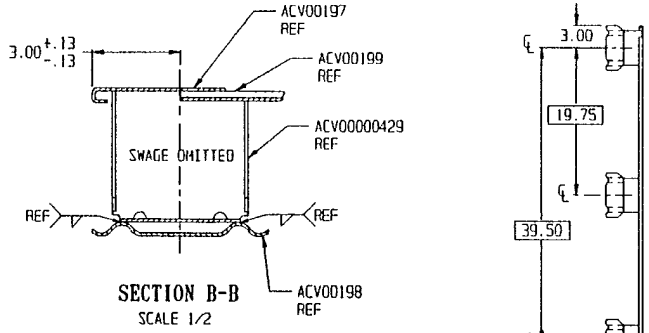


PART NO ACV00195

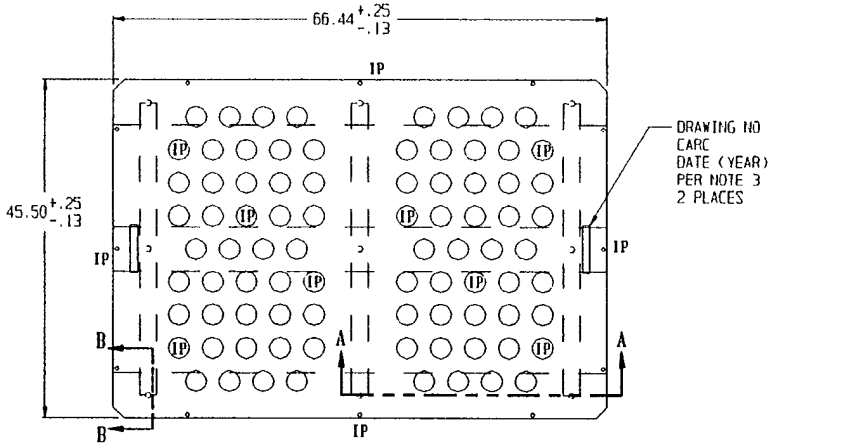
		UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. BREAK SHARP CORNERS AND EDGES. TOLERANCES ON FRACTIONS DECIMALS ±.06 MATERIAL	DATE 93-04-20 DRAWN B.JK · CHECKED SMS · PROJ ENGR SCHULTZ SIZE-DEV · CHIEF, SUPPLY ENGINEERING BR SUBMITTED CHIEF, LOGISTICS ENGINEERING OFFICE APPROVED BY ORDER OF COMMANDER U.S. ARMY DEFENSE AMMUNITION CENTER AND SCHOOL	DESIGN ACTIVITY U.S. ARMY ARMAMENT, MUNITIONS AND CHEMICAL COMMAND DEFENSE AMMUNITION CENTER AND SCHOOL SAVANNA, ILLINOIS 61074-9639 BOTTOM ASSEMBLY PALLET ADAPTER PA158 CONTAINER
ACV00193	STINGER			SIZE D · CAGE CODE 28620 · ACV00195	
NEXT ASSY	USED ON			SCALE 1/8 · UNIT WT · SHEET 1 OF 1	
APPLICATION					

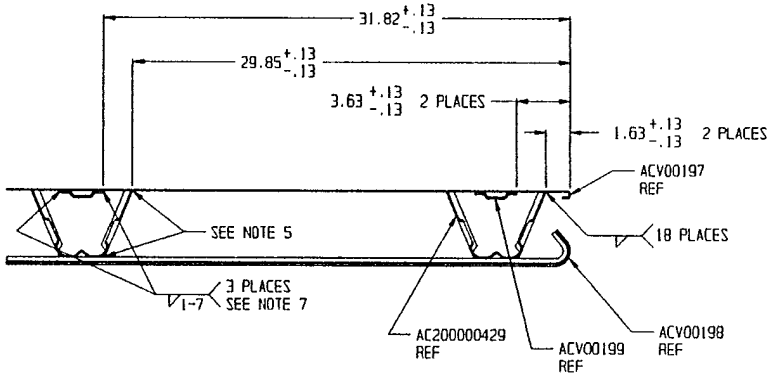
NOTES:
1. MIL-A-2550, ANSI/AWS A2.4-86, ANSI Y14.5M-1982 AND MIL-P-71171 APPLY.
2. PROTECTIVE FINISH SHALL BE IN ACCORDANCE WITH DWG AC200000423. COLOR SHALL BE GREEN NO 383 PER MIL-C-46168 (FED STD 595 NO 34096).
3. MARKING PAINT SHALL BE IN ACCORDANCE WITH DWG AC200000423. COLOR SHALL BE WHITE NO 37875 0.50 INCH HIGH LETTERS.
4. WELDMENT CONSTRUCTION SPEC MIL-STD-1261 APPLIES.
5. MAXIMUM GAP ALONG WELD LINE BETWEEN POST AND DECK OR POST AND SKID WILL NOT EXCEED 0.02 INCHES PRIOR TO WELDING. THIS MAY BE CHECKED WHEN RESTRAINED BY UP TO 1500 LBS UNIFORMLY APPLIED TO THE TOP SURFACE OF THE DECK.
6. THIS DIMENSION IS TO BE CHECKED AT THE INSPECTION POINTS (IP) DEFINED IN THE TOP VIEW. THE MEASUREMENTS WILL ORIGINATE FROM DATUMS A AND B.
7. WELDING WILL START 1.75 INCHES FROM END OF PART NO ACV00199.

REVISION			
LTR	DESCRIPTION	DATE	APPROVED
-	PRODUCT BASELINE ERR M302000 93-04-20	93-04-20	



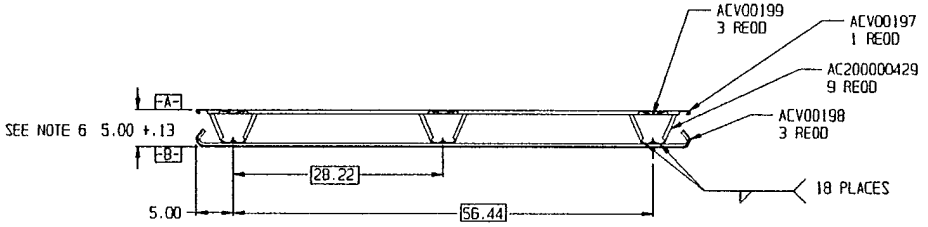
SECTION B-B
SCALE 1/2





SECTION A-A
SCALE 1/4

SWAGE HOLES OMITTED FOR CLARITY



PART NO ACV00196

ACV00193	STINGER
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. BREAK SHARP CORNERS AND EDGES. TOLERANCES ON FRACTIONS ____ DECIMAL .__ ±.06
MATERIAL

DATE 93-04-20
DRAWN BJK | CHECKED SMS | PROJ MGR SCHULTZ
TEST ENGR | DESIGN | CHIEF, EVALUATION DIV
SUBMITTED
CHIEF, LOGISTICS ENGINEERING OFFICE
APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND (AMC)
U.S. ARMY DEFENSE AMMUNITION CENTER AND SCHOOL

DESIGN ACTIVITY
U.S. ARMY
ARMAMENT, MUNITIONS AND CHEMICAL COMMAND
DEFENSE AMMUNITION CENTER AND SCHOOL
SAVANNA, ILLINOIS 61074-9639

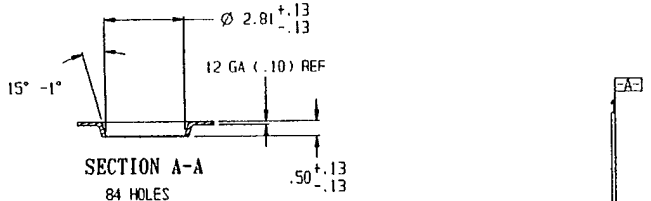
PALLET-
SPECIAL SIZE 66.44 X 45.50
SHEET METAL

SIZE	CAGE CODE	ACV00196
D	28620	

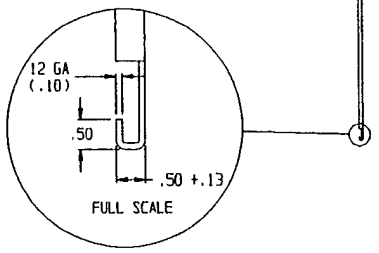
SCALE 1/8 | UNIT WT | SHEET 1 OF 1

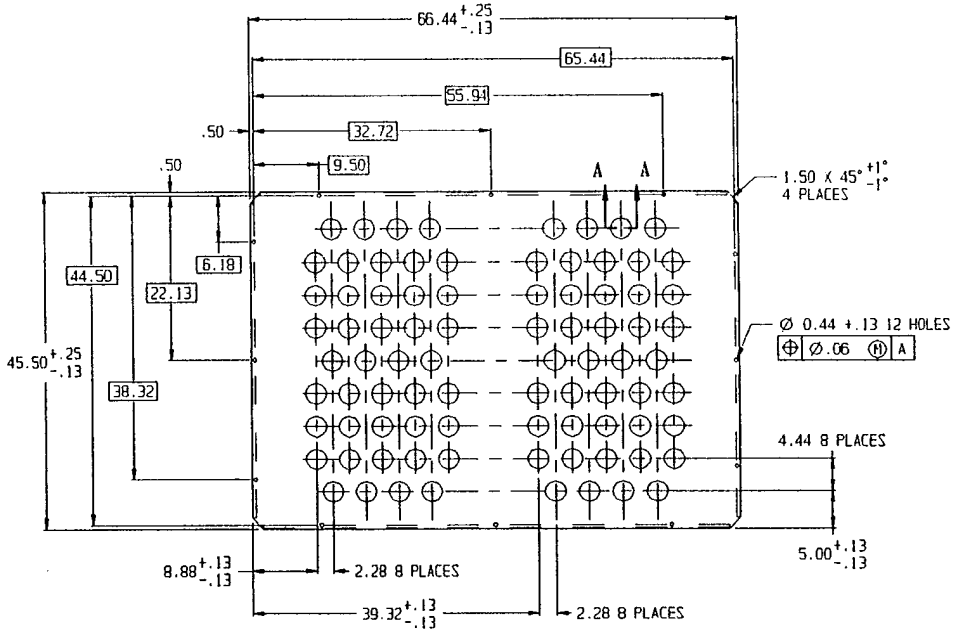
REVISION			
LTR	DESCRIPTION	DATE	APPROVED
-	PRODUCT BASELINE ERR M302000 93-04-20	93-04-20	

NOTES:
1. BEND RADII 0.13 INCH MAX WHERE NOT NOTED.
2. SPEC ANSI Y14.5M-1982 APPLIES.
3. MATERIAL: SHEET, SAE OR ANSI 1005-1010 STEEL, CARBON, COLD ROLL OR HOT ROLL, PER ASTM A568, (ASTM A366 OR A569).



SECTION A-A
84 HOLES





SOME HIDDEN LINES OMITTED FOR CLARITY

PART NO ACV00197

ACV00196	STINGER
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. BREAK SHARP CORNERS AND EDGES.
TOLERANCES ON
FRACTIONS
DECIMAL ± .06
MATERIAL

DATE 93-04-20
DRAWN BJK | CHECKED SMS | PROJ ENGR SCHULTZ
TEST ENGR | STAND-ARDS | CHIEF, EVALUATION DIV
SUBMITTED
CHIEF, LOGISTICS ENGINEERING OFFICE
APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIAL COMMAND (AMC)
U.S. ARMY DEFENSE AMMUNITION CENTER AND SCHOOL

DESIGN ACTIVITY U.S. ARMY
ARMAMENT, MUNITIONS AND CHEMICAL COMMAND
DEFENSE AMMUNITION CENTER AND SCHOOL
SAVANNA, ILLINOIS 61074-9639

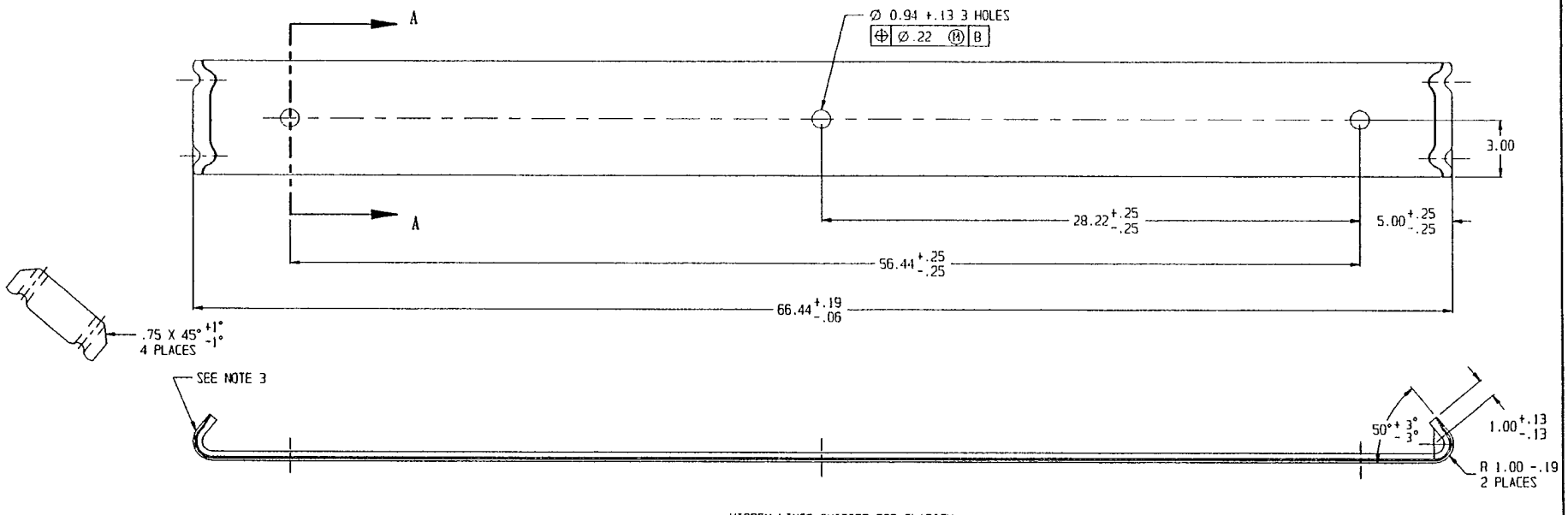
DECK- PALLET,
SPECIAL SIZE 66.44 X 45.50
SHEET METAL

SIZE	CAGE CODE	
D	28820	ACV00197

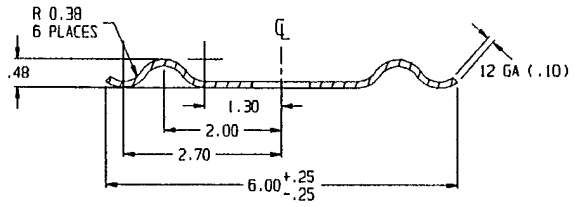
SCALE 1/8 | UNIT WT | SHEET 1 OF 1

NOTES:
1. SPEC ANSI Y14.5-1982M APPLIES.
2. MATERIAL: SHEET, SAE OR ANSI 1005-1010 STEEL, CARBON, COLD ROLL OR HOT ROLL, PER ASTM A568 (ASTM A366 OR A569).
3. DISTORTION IN THE BEND IS PERMISSIBLE.

REVISION			
LTR	DESCRIPTION	DATE	APPROVED
-	PRODUCT BASELINE ERR M3D2000 93-04-20	93-04-20	



HIDDEN LINES OMITTED FOR CLARITY



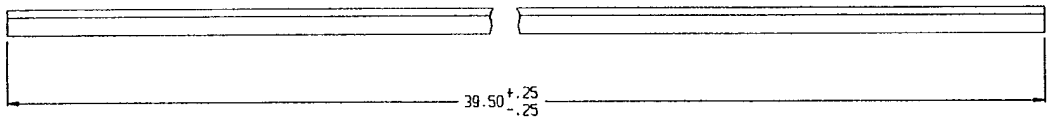
SECTION A-A
SCALE 1/1

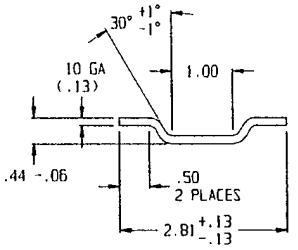
PART NO ACV00198

ACV00196	STINGER	UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. BREAK SHARP CORNERS AND EDGES. TOLERANCES ON FRACTIONS ± DECIMAL .06	DATE 93-04-20	DESIGN ACTIVITY U.S. ARMY ARMAMENT, MUNITIONS AND CHEMICAL COMMAND DEFENSE AMMUNITION CENTER AND SCHOOL SAVANNA, ILLINOIS 61074-9639	
NEXT ASSY	USED ON		BJK / SMS / SCHULTZ	SKID PALLET, SHEET METAL	
APPLICATION		MATERIAL		SIZE D	CAGE CODE 28620	ACV00198
				SCALE 3/8	UNIT WT	SHEET 1 OF 1

REVISION			
LTR	DESCRIPTION	DATE	APPROVED
-	PRODUCT BASELINE ERR M302000 93-04-20	93-04-20	

NOTES:
1. BEND RADII 0.13 INCH MAX WHERE NOT NOTED.
2. SPEC ANSI Y14.5-1982M APPLIES.
3. MATERIAL: SHEET, SAE OR ANSI 1005-1010 STEEL, CARBON, COLD ROLL OR HOT ROLL, PER ASTM A568, (ASTM A366 OR A569).





PART NO ACV00199

ACV00196	STINGER
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. BREAK SHARP CORNERS AND EDGES.
TOLERANCES ON
FRACTIONS
DECIMAL .XX
MATERIAL

DATE 93-04-20
DRAWN BJK | CHECKED SMS | PROJ ENGR SCHULTZ
TEST ENGR | DCAC-QAR | CHIEF, EVALUATION DIV
SUBMITTED
CHIEF, LOGISTICS ENGINEERING OFFICE
APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND (AMC)
U.S. ARMY DEFENSE AMMUNITION CENTER AND SCHOOL

DESIGN ACTIVITY U.S. ARMY ARMAMENT, MUNITIONS AND CHEMICAL COMMAND DEFENSE AMMUNITION CENTER AND SCHOOL SAVANNA, ILLINOIS 61074-9639

STIFFENER - PALLET, SHEET METAL

SIZE	CAGE CODE	
D	28620	ACV00199

SCALE 1/1 | UNIT WT | SHEET 1 OF 1