

FINAL REPORT
APRIL 1997

REPORT NO. 96-51

ENVIRONMENTAL MONITORING OF
TRANSPORTATION OF 500-POUND
BOMBS ON AN M872 SEMITRAILER
FROM SAVANNA ARMY DEPOT
ACTIVITY (SVDA) TO BLUE GRASS
ARMY DEPOT (BGAD)

19971112 041

Prepared for:
U.S. Army Defense Ammunition Center
ATTN: SIOAC-DET
Savanna, IL 61074-9639

Distribution Unlimited

THIS COPY IS UNCLASSIFIED



VALIDATION ENGINEERING DIVISION
SAVANNA, ILLINOIS 61074-9639

AVAILABILITY NOTICE

A copy of this report will be furnished each attendee on automatic distribution. Additional copies or authority for reprinting may be obtained by written request from Director, U.S. Army Defense Ammunition Center, ATTN: SIOAC-DEV, Savanna, IL 61074-9639.

DISTRIBUTION INSTRUCTIONS

Destroy this report when no longer needed. Do not return.

Citation of trade names in this report does not constitute an official endorsement.

The information contained herein will not be used for advertising purposes.

| REPORT DOCUMENTATION PAGE | | | | Form Approved OMB No. 0704-0188 | |
|--|-------|--|---|---|----------------|
| 1a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED | | | 1b. RESTRICTIVE MARKINGS | | |
| 2a. SECURITY CLASSIFICATION AUTHORITY | | 3. DISTRIBUTION / AVAILABILITY OF REPORT UNLIMITED | | | |
| 2b. DECLASSIFICATION / DOWNGRADING SCHEDULE | | | | | |
| 4. PERFORMING ORGANIZATION REPORT NUMBER(S) 96-51 | | | 5. MONITORING ORGANIZATION REPORT NUMBER(S) | | |
| 6a. NAME OF PERFORMING ORGANIZATION U.S. Army Defense Ammunition Center | | 6b. OFFICE SYMBOL (if applicable) SIOAC-DEV | 7a. NAME OF MONITORING ORGANIZATION | | |
| 6c. ADDRESS (City, State, and ZIP Code) ATTN: SIOAC-DEV Savanna, IL 61074-9639 | | | 7b. ADDRESS (City, State, and ZIP Code) | | |
| 8a. NAME OF FUNDING / SPONSORING ORGANIZATION U.S. Army Defense Ammunition Center | | 8b. OFFICE SYMBOL (if applicable) SIOAC-DET | 9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER | | |
| 8c. ADDRESS (City, State, and ZIP Code) ATTN: SIOAC-DET Savanna, IL 61074-9639 | | | 10. SOURCE OF FUNDING NUMBERS | PROGRAM ELEMENT NO. | PROJECT NO. |
| | | | TASK NO. | WORK UNIT ACCESSION NO. | |
| 11. TITLE (Include Security Classification) Environmental Monitoring of Transportation of 500-Pound Bombs on an M872 Semitrailer from Savanna Army Depot Activity (SVDA) to Blue Grass Army Depot (BGAD) | | | | | |
| 12. PERSONAL AUTHOR(S) Quinn D. Hartman | | | | | |
| 13a. TYPE OF REPORT Final | | 13b. TIME COVERED FROM _____ TO _____ | | 14. DATE OF REPORT (Year, Month, Day) 1997 April | 15. PAGE COUNT |
| 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 (DAC), Validation Engineering Division (SIOAC-DEV), was tasked by DAC, Transportation Engineering Division (SIOAC-DET), to monitor a tarpaulin-covered load of 500-pound bombs on an M872 semitrailer en route from Savanna Army Depot Activity (SVDA), Savanna, IL, to Blue Grass Army Depot (BGAD), Lexington, KY. One Event Data Recorder (EDR), from Instrumented Sensor Technology, Inc., was set up to monitor shock/vibration on all three axes as well as temperature and humidity. Monitoring was conducted from 06 - 08 June 1996. During the monitoring, 2,238 shock/vibration events were experienced that met the triggering criteria programmed in the EDR and 274 temperature/humidity readings were collected. | | | | | |
| 20. DISTRIBUTION / AVAILABILITY OF ABSTRACT <input checked="" type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT. <input type="checkbox"/> 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 SIOAC-DEV | |

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

REPORT NO. 96-51

ENVIRONMENTAL MONITORING OF TRANSPORTATION OF 500-POUND BOMBS
ON AN M872 SEMITRAILER FROM SAVANNA ARMY DEPOT ACTIVITY (SVDA) TO
BLUE GRASS ARMY DEPOT (BGAD)

TABLE OF CONTENTS

| PART | PAGE NO. |
|---|----------|
| 1. INTRODUCTION..... | 1-1 |
| A. BACKGROUND..... | 1-1 |
| B. AUTHORITY..... | 1-1 |
| C. OBJECTIVE..... | 1-1 |
| D. CONCLUSION..... | 1-1 |
| 2. ATTENDEES..... | 2-1 |
| 3. TEST PROCEDURES..... | 3-1 |
| 4. TEST RESULTS..... | 4-1 |
| 5. PHOTOGRAPHS..... | 5-1 |
| 6. DRAWING..... | 6-1 |
| 7. GRAPHS..... | 7-1 |
| 8. MINIMUM AND MAXIMUM VALUES BY EVENT..... | 8-1 |

PART 1

INTRODUCTION

A. **BACKGROUND.** The U.S. Army Defense Ammunition Center (DAC), Validation Engineering Division (SIOAC-DEV), was tasked by DAC, Transportation Engineering Division (SIOAC-DET), to monitor the transportation of a tarpaulin-covered load of 500-pound bombs on an M872 semitrailer from Savanna Army Depot Activity (SVDA) to Blue Grass Army Depot (BGAD). One Event Data Recorder (EDR), from Instrumented Sensor Technology, Inc., was set up to monitor shock/vibration in all three axes as well as temperature and humidity. Monitoring was conducted from 06 - 08 June 1996.

B. **AUTHORITY.** This monitoring was conducted IAW mission responsibilities delegated by the U.S. Army Armament, Munitions and Chemical Command (AMCCOM), Rock Island, IL. 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 objective of this monitoring was to gain additional insight into the environmental factors that can effect ammunition during shipment.

D. **CONCLUSION.** Results from monitoring indicated that the environmental factors for this shipment of ammunition were relatively mild. Temperatures ranged from 60 - 91 degrees Fahrenheit, humidity ranged from 39 - 100 percent, and the majority of the shock/vibration readings were less than 2Gs.

PART 2

27 JUNE - 19 JULY 1995

ATTENDEES

Quinn D. Hartman
General Engineer
DSN 585-8992
815-273-8992

Director
U.S. Army Defense Ammunition Center
3700 Army Depot Road
ATTN: SIOAC-DEV
Savanna, IL 61074-9639

William R. Meyer
General Engineer
DSN 585-8090
815-273-8090

Director
U.S. Army Defense Ammunition Center
3700 Army Depot Road
ATTN: SIOAC-DEV
Savanna, IL 61074-9639

David V. Valant
Electronics Technician
DSN 585-8988
815-273-8988

Director
U.S. Army Defense Ammunition Center
3700 Army Depot Road
ATTN: SIOAC-DEV
Savanna, IL 61074-9639

PART 3

TEST PROCEDURES

The EDR was glued to the top of the rearmost, driver's side pallet. The EDR was positioned such that the positive X-axis direction was in the opposite direction of travel (longitudinal), the positive Y-axis direction was from the driver's side toward the passenger's side (lateral), and the positive Z-axis was in an upward direction (vertical). The EDR used during transportation monitoring was programmed to record temperature and humidity readings every 10 minutes and all shock and vibration events that exceeded 0.25Gs on any axis for a 10 millisecond duration. For this monitoring, 400 data samples were recorded for each acceleration event that exceeded the 0.25Gs trigger criteria, 200 points prior to the trigger, and 200 points after the trigger. Each acceleration event recorded was also stamped with the date and time the acceleration event occurred. Sample rate for the acceleration events was 200 points per second for each axis and all acceleration events were filtered with a 50Hz low bandpass analog filter. Temperature/humidity readings were collected at 10-minute intervals independent of the shock/vibration monitoring. Based on these memory requirements, the EDR was limited to retaining only 500 shock/vibration events. The EDR was programmed to save 500 peak events and discard the remainder of events based on the resultant vector value from each shock/vibration event.

PART 4

TEST RESULTS

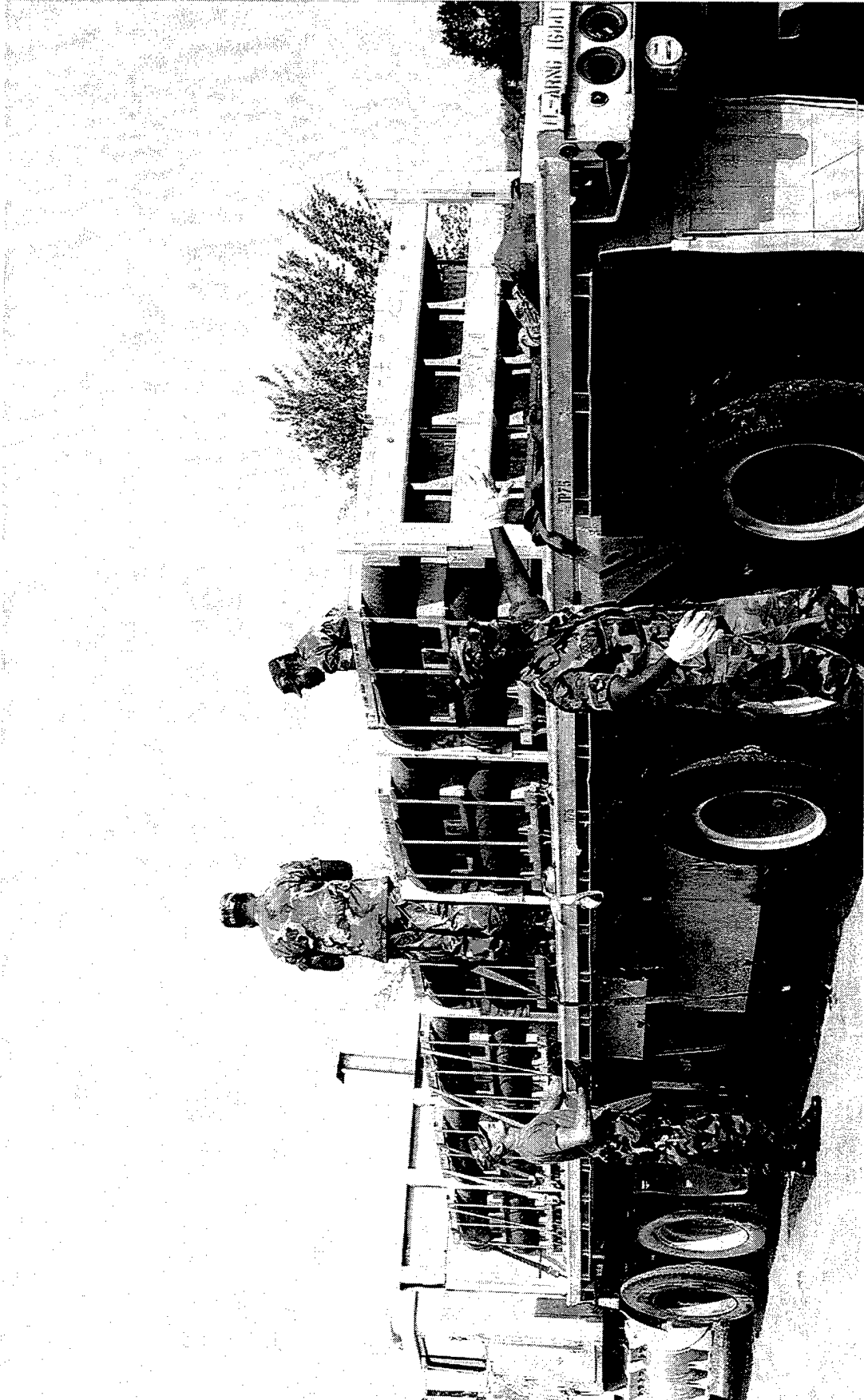
Following arrival at BGAD, the EDR was removed from the pallet and returned to DAC for downloading of collected test data. Results from the collected data indicated that the EDR experienced 2,238 shock/vibration events which met the triggering criteria (the peak 500 being saved) and had collected 274 temperature/humidity readings.

Temperature and Humidity. Temperature and humidity monitoring began the afternoon of 06 June 1996, the day prior to the start of the truck transport. As seen in the graphs, the temperature under the tarpaulin ranged from 60 - 91 degrees Fahrenheit and the humidity under the tarpaulin ranged from 36 - 100 percent.

Shock/Vibration. As seen in the shock/vibration report by event, the peak 500 events spanned the time from 07 June 1996 at 07:18:35 hours to 08 June 1996 at 11:50:44. Using both the minimum and maximum values from the 500 peak events, histograms were developed for each of the X (longitudinal), Y (lateral), and Z (vertical) axis. As seen in the histograms in part 7, the vast majority of the events were at or below a 2G level indicating that the load of bombs experienced a smooth ride the majority of the time. Peak G values for the 500 peak events were -1.98 to 2.26 for the longitudinal axis, -1.66 to 1.28 for the lateral axis, and -1.48 to 8.3 for the vertical axis. The final step in the analysis of the collected data was to produce graphs of the peak events for each axis. As can be seen in the shock/vibration report by event, the peak event for the longitudinal axis occurred on 06-07-96 at 08:52:39 and the peak event for both the lateral and vertical axis occurred on 06-07-96 at 08:59:58. Graphs of these two events were produced for all three axes and can be seen in part 7.

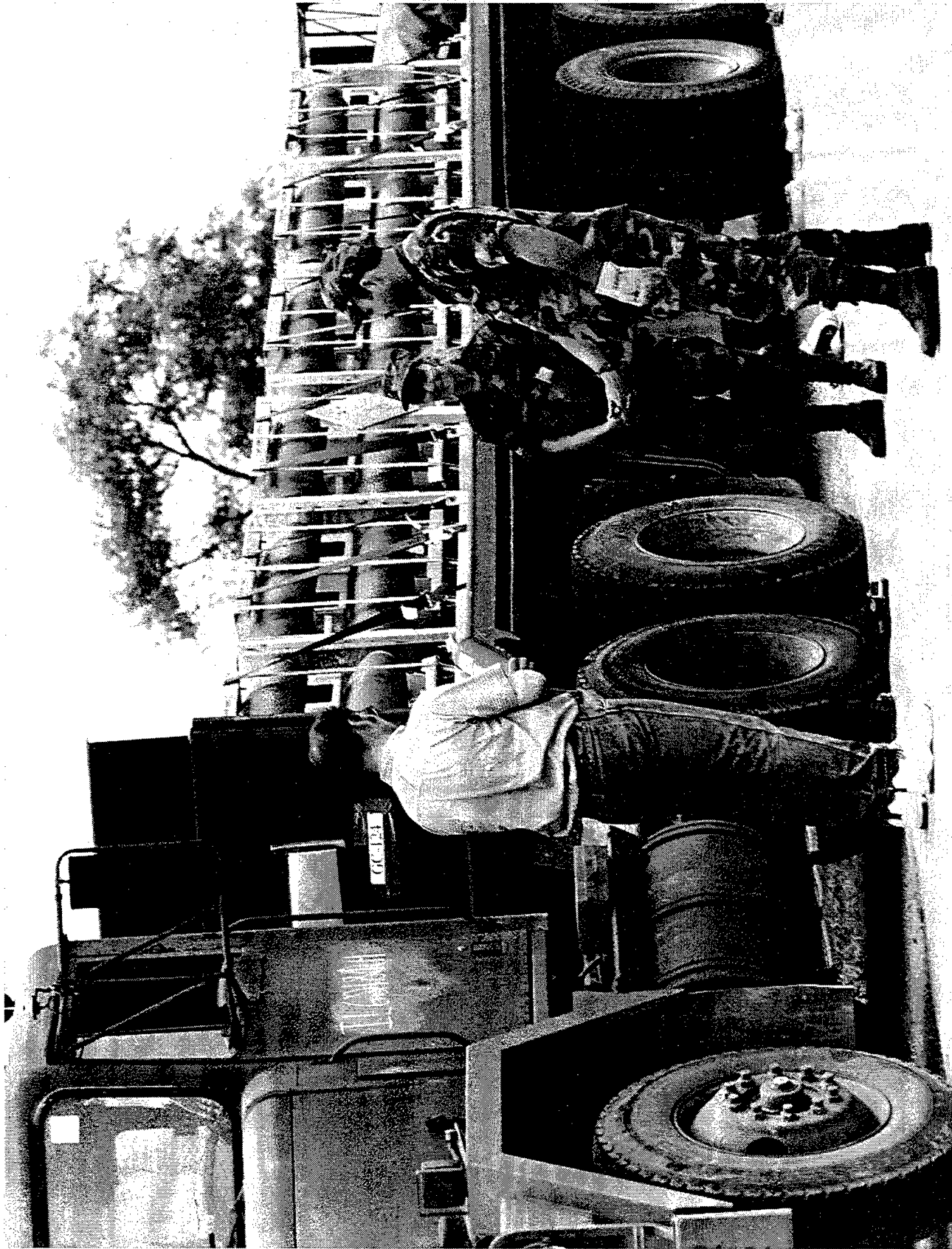
PART 5

PHOTOGRAPHS



U.S. ARMY DEFENSE AMMUNITION CENTER

PHOTO NO. AO317-SCN-96-96-3007: This photograph shows an M872 semitrailer being loaded with the 500-pound bombs.



U.S. ARMY DEFENSE AMMUNITION CENTER

PHOTO NO. AO317-SCN-96-96-3745: This photograph shows a loaded M872 semitrailer prior to the tarpaulin being placed over the load of bombs.

PART 6

DRAWING

LOADING AND TIEDOWN PROCEDURES[⊕] FOR THE MK82 500 LB BOMB LOADED ON THE 34-TON M872 SEMITRAILER

INDEX

| <u>ITEM</u> | <u>PAGE(S)</u> |
|---|----------------|
| GENERAL NOTES AND MATERIAL SPECIFICATIONS - - - - - | 2 |
| LOADING, TIEDOWN, AND UNLOADING PROCEDURES - - - - - | 3 |
| 14 PALLETS OF MK82 500 LB BOMB ON THE 34-TON M872 SEMITRAILER - - - - - | 4,5 |
| 13 PALLETS OF MK82 500 LB BOMB ON THE 34-TON M872-SEMITRAILER - - - - - | 6,7 |
| 12 PALLETS OF MK82 500 LB BOMB ON THE 34-TON M872 SEMITRAILER - - - - - | 8,9 |
| FULL PALLETS AND LESS-THAN-FULL PALLETS ON THE 34-TON M872 SEMITRAILER - - - - - | 10,11 |
| PALLETIZATION OF 1 THROUGH 6 BOMBS - - - - - | 12,13 |
| DETAILS - - - - - | 14-17 |
| RATCHET/RATCHETING DETAIL - - - - - | 18,19 |
| TIEDOWN ANCHOR DETAIL - - - - - | 20 |

⊕THE PROCEDURES DEPICTED
WITHIN THIS DRAWING ARE
FOR ON/OFF HIGHWAY
USE ONLY.

Prepared during December 1995 by:
U.S. Army Defense Ammunition
Center and School
ATTN: SIAOC-DET
Savanna, IL 61074-9639
POC: Mr. Jonh Sinons
DSN 585-8072/8927
Conn (815) 273-8072/8927
Fax 585-8811

William R. Frerichs

William R. Frerichs
Chief, Transportation Engineering Division

GENERAL NOTES

(GENERAL NOTES CONTINUED)

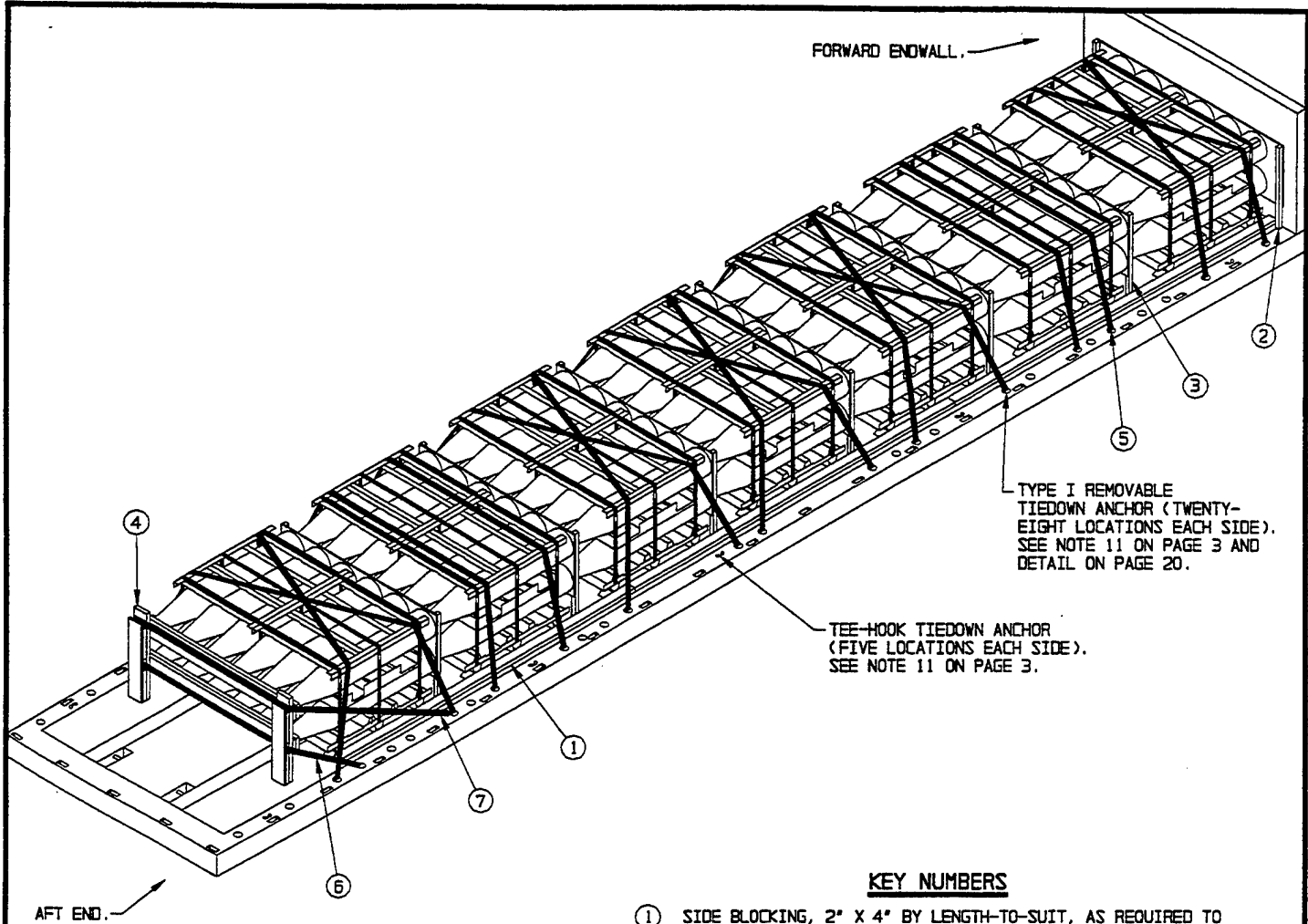
- A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AR-740-1.
- B. THIS DRAWING CONTAINS PROCEDURES APPLICABLE TO THE TRANSPORT OF THE MK82 500-LB BOMB, SIX PER PALLET UNIT, LOADED ON THE 34-TON M872 SEMITRAILER EQUIPPED WITH THE 10,000 POUND TYPE I (MICKEY MOUSE) TIEDOWN ANCHORS AND HAVING AN EMPTY WEIGHT OF 16,800 LBS (APPROX). THE MAXIMUM LOAD WEIGHT ON THE KINGPIN IS 27,600 LBS AND THE MAXIMUM LOAD WEIGHT ON THE THREE REAR AXLES IS 56,400 LBS.
- C. FOR DETAIL OF THE MK82 500-LB BOMB PALLET UNIT SEE PAGE 12 OF THIS DRAWING.
- DIMENSIONS - - - : 61.75" LONG BY 35.50" WIDE BY 33.50" HIGH.
GROSS WEIGHT - - : 3,035 POUNDS (APPROX).
CUBE - - - - - : 42.7 CUBIC FEET (APPROX).
- D. ALL LOADS SHOWN HEREIN ARE TYPICAL AND ARE BASED ON TESTED PROCEDURES FOR ON AND/OR OFF HIGHWAY TRANSPORT OF FULL AND/OR LESS THAN FULL PALLET UNITS. COMBINATIONS OF PROCEDURES MAY BE USED. HOWEVER, THE APPROVED METHODS SPECIFIED HEREIN MUST BE FOLLOWED AS CLOSELY AS POSSIBLE.
- E. WEB STRAP TIEDOWN ASSEMBLIES MUST BE SECURELY HOOKED INTO ANCHORING DEVICES ON THE TRANSPORTING VEHICLE AND FIRMLY TENSIONED. FIRMLY TENSIONED MEANS, WHEN THE OPERATOR PULLS ON THE RATCHET HANDLE BY HAND, THE RATCHET WILL NOT ADVANCE ANOTHER NOTCH. NO TYPE OF MECHANICAL EXTENSION OR LEVER WILL BE USED. EXERCISE CARE DURING STRAP APPLICATION, AVOID TWISTS IN THE STRAP TO THE EXTENT POSSIBLE (IF TIME PERMITS) BUT ENSURE THERE ARE NO KNOTS IN THE STRAP. ON THE TAKE-UP SPOOL OF THE RATCHET, ENSURE STRAIGHT LAY OF THE STRAP WHEN TENSIONING. AFTER INITIAL WEBBING-TO-WEBBING CONTACT HAS BEEN MADE, BY ROTATING THE TAKE-UP SPOOL UNTIL NO METAL ON THE SPOOL IS SHOWING AND THE STRAP HAS MADE CONTACT WITH ITSELF. THE TENSIONED STRAP MUST FORM AT LEAST 1/2 BUT NOT MORE THAN 1-1/2 WRAPS OF STRAP ON THE TAKE-UP SPOOL OF THE TENSIONING RATCHET. AFTER TENSIONING IS COMPLETED ENSURE THAT THE SPOOL LOCKING LATCH IS FULLY SEATED AT BOTH ENDS OF THE SPOOL IN MATCHING LOCKING NOTCHES. TIE BACK THE LOOSE ENDS OF THE STRAP AFTER TENSIONING IS COMPLETED (LOOSE ENDS MAY BE FOLDED AND TAPED OR TIED TO THE TENSIONING STRAP IF TIME PERMITS). FOR ADDITIONAL GUIDANCE, SEE "RATCHET/RATCHETING DETAILS" ON PAGES 18 AND 19.
- F. ADJUSTABLE SCUFF SLEEVES PROVIDED ON WEB STRAP TIEDOWN ASSEMBLIES WILL BE LOCATED TO PROVIDE A PAD WHERE STRAPS PASS OVER SHARP EDGES, OR RATCHETS AND HOOKS ON PREVIOUSLY INSTALLED WEB STRAP TIEDOWN ASSEMBLIES.
- G. IF THE SIDERACKS FOR A SEMITRAILER ARE TO BE TRANSPORTED ON THE LOADED TRAILER, THEY WILL BE STACKED ON THE TRAILER AND SECURED WITH A SUFFICIENT QUANTITY OF WEB STRAP TIEDOWN ASSEMBLIES TO PREVENT LOSS DURING TRANSPORT. NOTE: IF DESIRED, THE SIDE RACKS FOR THE M872 SEMITRAILER MAY BE POSITIONED IN PLACE AFTER THE LOAD HAS BEEN SECURED. AFTER ALL SIDE PANELS AND REAR PANELS ARE IN POSITION, THE STAKES MUST BE SECURELY "PINNED" OR "WIRE-TIED" TO THE STAKE POCKETS TO PREVENT VERTICAL DISPLACEMENT DURING TRANSPORT. ALSO, THE SIDE PANELS MUST BE SECURED AT THE TOP WITH THE CROSS-CHAINS WHICH ARE PROVIDED WITH THE VEHICLE.
- H. PROCEDURES DEPICTED HEREIN ARE TYPICAL IN NATURE RELATIVE TO ITEM LOCATION IN/ON THE VEHICLE AND THE QUANTITIES SHOWN. ITEM LOCATION AND QUANTITIES OF THE DESIGNATED ITEM MAY BE VARIED TO SATISFY OPERATIONAL REQUIREMENTS, PROVIDED LOADING AND TIEDOWN PRINCIPLES SPECIFIED HEREIN ARE RETAINED.
- J. WHEN ONE WEB STRAP TIEDOWN ASSEMBLY IS NOT LONG ENOUGH TO SPAN THE DISTANCE DEPICTED, TWO ASSEMBLIES MAY BE HOOKED TOGETHER TO GAIN THE NECESSARY LENGTH.
- K. CONVERSION TO METRIC EQUIVALENTS: DIMENSIONS WITHIN THIS DOCUMENT ARE EXPRESSED IN INCHES, AND WEIGHTS ARE EXPRESSED IN POUNDS. WHEN NECESSARY, THE METRIC EQUIVALENTS MAY BE COMPUTED ON THE BASIS OF ONE INCH EQUALS 25.4MM AND ONE POUND EQUALS 0.454KG.
- L. SOME TIEDOWN METHODS WITHIN THIS DRAWING SHOW TWO HOOKS TO BE CONNECTED TO ONE TIEDOWN EYE. THIS IS AUTHORIZED AS SPECIFIED HEREIN.
- M. DURING LONG HAULS, WHEN POSSIBLE, STRAPS SHOULD BE CHECKED DURING VEHICLE STOPS AND TIGHTENED IF NECESSARY.
- N. ONLY THE BED OF THE M872 SEMITRAILER IS SHOWN HEREIN TO PREVENT DISTRACTION FROM THE DELINEATED LOADING AND TIEDOWN PROCEDURES, AND IS SHOWN IN OUTLINE FORM WITH THE STRUCTURAL PORTIONS OMITTED AS NECESSARY TO IMPROVE THE CLARITY OF THE DEPICTED PROCEDURES.
- O. DUE TO VARIOUS REASONS, SUCH AS ROUGH TERRAIN DURING OFF HIGHWAY TRANSPORT, PANIC STOPS, AND NORMAL STRETCH OF WEB STRAPS, LOADED ITEMS MAY SLIDE SLIGHTLY Laterally AND/OR LONGITUDINALLY DURING TRANSPORT. THIS IS AN ACCEPTABLE CHARACTERISTIC AND IS NOT DETRIMENTAL TO LOAD SECUREMENT.
- P. IF THE TIEDOWN ANCHORS ON THE SIDE OF THE VEHICLE ARE TOO CLOSE TOGETHER, TOO FAR APART, OR ARE NOT IN A LOCATION THAT WILL ALLOW ADEQUATE HOLD DOWN OF LOAD WHEN WEB STRAPS ARE POSITIONED STRAIGHT OVER TOP, THE LOAD HOLD DOWN STRAPS MAY BE CROSSED OVER THE TOP OF THE LOAD AS SHOWN IN THE LOAD ON PAGE 4.
- Q. FOR ADDITIONAL GUIDANCE SEE THE "LOADING, TIEDOWN, AND UNLOADING PROCEDURES" ON PAGE 3, AND THE "SPECIAL NOTES" ON EACH LOAD PAGE.

MATERIAL SPECIFICATIONS

- STRAP - - - - - : WEBBING, UNIVERSAL TIEDOWN,
NSN 5340-01-204-3009, PN9392419;
NSN 5340-01-089-4997, PN11669588;
NSN 1670-00-725-1437, PN1376-013; OR
NSN 5340-00-980-9277, PN10900880.
- ANTI-CHAFING
MATERIAL - - - - - : CANVAS, BURLAP, TAPE OR ANY OTHER
SUITABLE MATERIAL.
- LUMBER - - - - - : SEE TM 743-200-1 (DUNNAGE LUMBER) AND
FED SPEC MM-L-751.
- NAILS - - - - - : FED SPEC FF-N-105; COMMON.

LOADING, TIEDOWN, AND UNLOADING PROCEDURES:

1. PRIOR TO LOADING AND/OR UNLOADING THE TRAILER, SET BRAKES ON THE VEHICLE AND REMOVE SIDE RACKS AND/OR TARPS, IF INSTALLED. ASSURE THAT THE TRAILER FLOOR IS FREE OF EXCESSIVE AMOUNTS OF DIRT, SAND AND GRAVEL.
2. PRIOR TO LOADING THE TRAILER, DETERMINE THE QUANTITY OF PALLETS TO BE LOADED, SELECT THE BEST METHOD TO SECURE THE ITEMS FROM THE METHODS SHOWN WITHIN THIS DRAWING. NOTE: A COMBINATION OF THE METHODS SHOWN WITHIN THIS DRAWING MAY BE USED IN/ON THE SAME TRAILER.
3. THE LOADS WITHIN THIS DRAWING SHOW THE NOSE END OF THE BOMBS POINTING TOWARD THE AFT END OF THE TRAILER. IF DESIRED, THE NOSE END MAY POINT TOWARD THE FORWARD END OF THE TRAILER. HOWEVER, ALL PALLET UNITS WITHIN A LOAD MUST HAVE THE NOSE END POINTING IN THE SAME DIRECTION.
4. ALL PALLETS OF BOMBS FROM ONE THROUGH SIX MUST BE LOADED WITH THE NOSE END POINTING TOWARDS THE AFT END OR FORE END OF THE TRAILER AND MUST BE BLOCKED AT EACH END TO KEEP THE BOMBS FROM "INCHING" OUT OF POSITION DURING TRANSPORT. DO NOT POSITION PALLET UNITS WITH THE NOSE END POINTING TOWARD THE SIDE OF THE TRAILER.
5. FOR PALLETIZATION OF ONE THROUGH SIX BOMBS SEE PAGES 12 AND 13. FOR LOADING AND SECUREMENT OF LESS-THAN-FULL PALLETS SEE THE LOADS ON PAGES 10 AND 11.
6. PRIOR TO LOADING THE PALLET UNITS ON THE TRAILER ASSURE THAT ALL SIX BOMBS ARE IN VERTICAL AND HORIZONTAL ALIGNMENT.
7. ASSURE THAT ALL STEEL STRAPPING ON EACH PALLET IS IN POSITION AND IS TIGHT. MISSING AND/OR LOOSE STEEL STRAPPING SHOULD BE REPLACED.
8. NOTE THAT AFTER THE 2" X 4" BY LENGTH-TO-SUIT SIDE BLOCKING SHOWN AS PIECE MARKED ①, HAS BEEN NAILED IN PLACE ON EACH SIDE OF THE LOAD, THE PALLET UNITS CAN BE REMOVED AND/OR LOADED WITHOUT REMOVING THE SIDE BLOCKING.
9. ASSURE THAT ALL PALLET UNITS ARE POSITIONED TIGHTLY AGAINST EACH OTHER Laterally AND LONGITUDINALLY AS LOADING PROGRESSES. THIS WILL REDUCE LOAD MOVEMENT AND THE QUANTITY OF WEB STRAPS REQUIRED TO SECURE THE LOAD. VOID SPACES BETWEEN PALLET UNITS WILL FILL IN DURING TRANSPORT CAUSING WEB STRAPPING TO BECOME LOOSE.
10. AFTER ALL LOADING PROCEDURES ARE COMPLETE, CHECK ALL WEB STRAPS FOR MAXIMUM TIGHTNESS AND RATCHET TIGHTER IF REQUIRED, PRIOR TO FOLDING UP AND TAPING THE LOOSE ENDS OF STRAPS AS INSTRUCTED IN GENERAL NOTE "E" ON PAGE 2.
11. THE M872 SEMITRAILER IS EQUIPPED WITH TWO DIFFERENT TYPES OF TIEDOWN ANCHORS AS INDICATED IN THE LOAD ON PAGE 4. TYPE I IS A REMOVABLE TIEDOWN ANCHOR THAT HAS ONE RING AND IS POSITIONED BY REACHING UNDER THE FLOOR OF THE TRAILER, INSERTING IT UP THROUGH THE HOLE AND ROTATING IT INTO POSITION. THERE ARE 28 LOCATIONS FOR THESE TIEDOWN ANCHORS ON EACH SIDE OF THE M872 SEMITRAILERS, THE QUANTITY AND LOCATION MAY VARY ON SOME M872 SEMITRAILERS. THE SECOND TYPE OF TIEDOWN ANCHOR IS THE "TEE-HOOK". THIS IS A REMOVABLE TIEDOWN ANCHOR EQUIPPED WITH ONE ELONGATED RING AND IS POSITIONED BY INSERTING IT IN TO ONE OF THE ELONGATED SLOTTED HOLES WHICH ARE AT A 45° ANGLE TO THE SIDE OF THE TRAILER. THERE ARE FIVE LOCATIONS FOR THESE TIEDOWN ANCHORS ON EACH SIDE OF THE M872 SEMITRAILERS. THE QUANTITY AND LOCATION MAY VARY ON SOME M872 SEMITRAILERS. ASSURE THAT THE TIEDOWN ANCHOR IS FIRMLY SEATED AND ROTATED APPROXIMATELY 45° TO ENGAGED POSITION BEFORE ATTACHING THE WEB STRAP TIEDOWN ASSEMBLY. THE LOADS WITHIN THIS DRAWING REQUIRE THE USE OF TYPE I TIEDOWN ANCHORS ONLY. NO TEE-HOOK TIEDOWN ANCHORS ARE REQUIRED, HOWEVER, THEY MAY BE USED IF DESIRED. SEE "TIEDOWN ANCHOR DETAIL" ON PAGE 20.



ISOMETRIC VIEW

KEY NUMBERS

- ① SIDE BLOCKING, 2" X 4" BY LENGTH-TO-SUIT, AS REQUIRED TO EXTEND FROM THE FORWARD ENDWALL TO THE AFT END OF THE REARMOST PALLET BASE, WHICH IS A LENGTH OF 35'-0" (2 REOD). FOR POSITIONING AND INSTALLATION SEE LOADING SEQUENCE NOTES 1 AND 7 ON PAGE 5.
- ② SEPARATOR GATE A (1 REOD). POSITION WITH THE PLYWOOD SURFACE TIGHT AGAINST THE FORWARD END WALL. SEE THE DETAIL ON PAGE 14.
- ③ SEPARATOR GATE B (6 REOD). POSITION THE SIDE WITH THE 2" X 2" LEGS TIGHT AGAINST THE NOSE ENDS OF THE BOMBS. SEE THE DETAIL ON PAGE 14.
- ④ RETAINER GATE A (1 REOD). POSITION WITH THE 2" X 6" BEARING PIECES TIGHT AGAINST THE NOSE ENDS OF THE BOMBS AT THE AFT END OF THE LOAD. SEE THE DETAIL ON PAGE 15.
- ⑤ WEB STRAP TIEDOWN ASSEMBLY (14 REOD). INSTALL EACH STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON SIDE OF TRAILER, OVER TOP OF TWO LATERALLY ADJACENT PALLET UNITS, TO A TIEDOWN ANCHOR ON THE OPPOSITE SIDE OF THE TRAILER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. SEE SPECIAL NOTE 4 ON PAGE 5 AND GENERAL NOTES "E" AND "F" ON PAGE 2.
- ⑥ WEB STRAP TIEDOWN ASSEMBLY (1 REOD). INSTALL STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON SIDE OF TRAILER, AROUND BOTTOM OF RETAINER GATE A, TO A TIEDOWN ANCHOR ON THE OPPOSITE SIDE OF THE TRAILER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. NOTE: THIS STRAP MUST BE THREADED THROUGH THE OPENING ON EACH SIDE OF THE RETAINER GATE A. SEE GENERAL NOTES "E" AND "F" ON PAGE 2.
- ⑦ WEB STRAP TIEDOWN ASSEMBLY (1 REOD). INSTALL STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON SIDE OF TRAILER, AROUND TOP OF RETAINER GATE A, TO A TIEDOWN ANCHOR ON THE OPPOSITE SIDE OF THE TRAILER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. SEE GENERAL NOTES "E" AND "F" ON PAGE 2.

SPECIAL NOTES:

1. A TYPICAL LOAD OF 14 PALLETS OF MK82 500-LB BOMBS IS SHOWN LOADED ON THE M872 SEMITRAILER HAVING DIMENSIONS OF 489-1/2" LONG BY 96" WIDE.
2. PRIOR TO LOADING THE 500-LB BOMB PALLETS ON THE SEMITRAILER, READ THE "LOADING SEQUENCE" NOTES ON THIS PAGE.
3. THE LOAD ON PAGE 4 IS SHOWN POSITIONED AGAINST THE FORWARD ENDWALL. IF DESIRED, THE LOAD MAY BE POSITIONED ANYWHERE ON THE TRAILER LENGTH BY OMITTING THE SEPARATOR GATE A AND POSITIONING A SECOND RETAINER GATE A WITH TWO ADDITIONAL WEB STRAPS MARKED ⑥ AND ⑦ AT THE FORWARD END OF THE LOAD. SEE THE 12 PALLET LOAD ON PAGES 8 AND 9 FOR ADDITIONAL GUIDANCE.
4. EACH LATERAL ROW OF TWO PALLETS MUST BE SECURED WITH TWO WEB STRAPS OVER THE TOP AS SHOWN. THESE TWO STRAPS MAY BE CROSSED AND/OR POSITIONED STRAIGHT ACROSS THE TOP OF A ROW, DEPENDING ON THE LOCATION OF THE TIEDOWN ANCHORS. ASSURE THAT THE STRAPS ARE POSITIONED OVER THE PALLET FRAME. DO NOT POSITION THE STRAPS ON/OVER THE BOMBS.
5. THE PROCEDURES SHOWN ON PAGE 4 MAY ALSO BE USED FOR TRANSPORTING 2, 4, 6, 8, 10, OR 12 PALLETS BY DELETING PALLETS FROM THE AFT END OF THE LOAD SHOWN AND REDUCING THE LENGTH OF THE SIDE BLOCKING MARKED ① AS REQUIRED.
6. A TOTAL OF 30 TYPE I (MICKEY MOUSE) TIEDOWN ANCHORS ARE REQUIRED FOR THE LOAD SHOWN. SEE LOADING SEQUENCE NOTE 9 ON THIS PAGE AND TIEDOWN ANCHOR DETAIL ON PAGE 20.
7. A TOTAL OF 16 WEB STRAP TIEDOWN ASSEMBLIES ARE REQUIRED FOR THE LOAD SHOWN.

LOADING SEQUENCE:

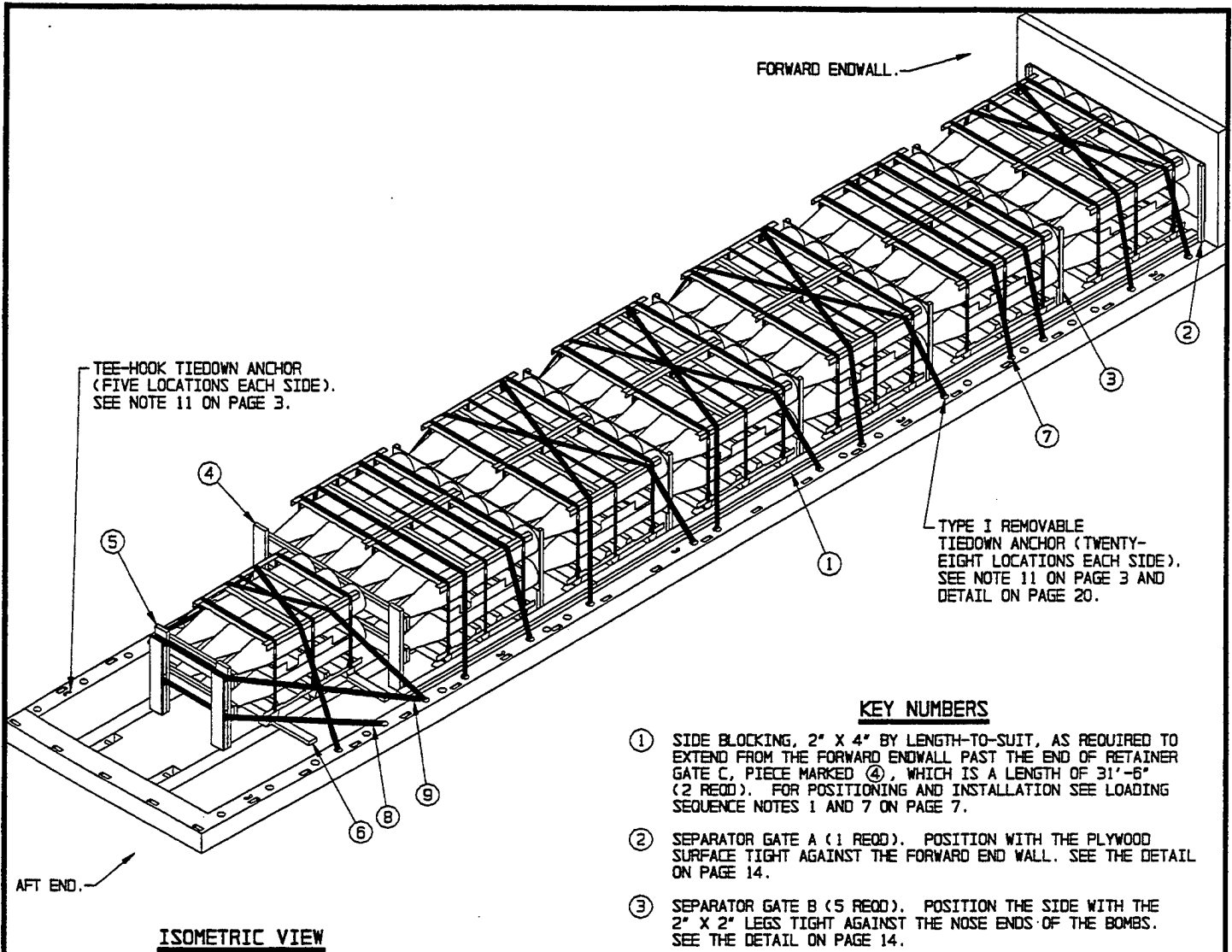
1. PRIOR TO LOADING PALLET UNITS, POSITION THE 2" X 4" LENGTH-TO-SUIT SIDE BLOCKING, PIECE MARKED ①, ON ONE SIDE OF THE TRAILER ONLY. POSITION ONE END AGAINST THE FORWARD END WALL WITH THE OUTER EDGE 9" IN FROM THE OUTSIDE EDGE OF THE TRAILER. NAIL TO THE TRAILER FLOOR W/1-10d NAIL EVERY 8". THE SIDE BLOCKING WILL CONSIST OF AVAILABLE LENGTHS OF 2" X 4" LUMBER FOR A DISTANCE OF 35'-0".
2. POSITION THE SEPARATOR GATE A, PIECE MARKED ②, WITH THE PLYWOOD SURFACE TIGHT AGAINST THE FORWARD END WALL.
3. POSITION ONE 500-LB BOMB PALLET ON THE TRAILER FLOOR WITH THE BASE END TIGHT AGAINST THE SEPARATOR GATE A AND PALLET BASE TIGHT AGAINST THE 2" X 4" SIDE BLOCKING. ASSURE THAT THE BASE ENDS OF ALL SIX BOMBS ARE TIGHT AGAINST THE SEPARATOR GATE A.
4. POSITION THE SECOND 500-LB BOMB PALLET ON THE TRAILER FLOOR WITH THE BASE END TIGHT AGAINST THE SEPARATOR GATE A AND TIGHT AGAINST THE ADJACENT PALLET. ASSURE THAT THE BASE ENDS OF ALL SIX BOMBS ARE TIGHT AGAINST THE SEPARATOR GATE A.
5. POSITION A SEPARATOR GATE B, PIECE MARKED ③, TIGHT AGAINST THE NOSE END OF THE BOMBS IN THE FIRST TWO PALLETS. NOTE THAT THE SIDE WITH THE 2" X 2" LEGS IS POSITIONED AGAINST THE NOSE END OF THE BOMBS.
6. REPEAT STEPS 3, 4, AND 5 UNTIL ALL 14 PALLETS OF 500 LB BOMBS ARE LOADED.
7. AFTER ALL PALLETS ARE LOADED, POSITION THE 2" X 4" BY LENGTH-TO-SUIT SIDE BLOCKING, PIECE MARKED ①, 1/2" AWAY FROM THE PALLET BASE AND AGAINST THE FORWARD END WALL. NAIL TO THE TRAILER FLOOR W/1-10d NAIL EVERY 8". THE SIDE BLOCKING WILL CONSIST OF AVAILABLE LENGTHS OF 2" X 4" LUMBER FOR A DISTANCE OF 35'-0". NOTE THAT THE PALLETS CAN BE REMOVED AND/OR LOADED WITHOUT REMOVING THE SIDE BLOCKING.
8. POSITION THE RETAINER GATE A, PIECE MARKED ④, AGAINST THE AFT END OF THE LOAD.
9. INSTALL 15 MICKEY MOUSE TIEDOWN ANCHORS ON EACH SIDE OF THE TRAILER AT EACH LOCATION A WEB STRAP TIEDOWN ASSEMBLY IS REQUIRED.
10. INSTALL WEB STRAP TIEDOWN ASSEMBLIES AS INSTRUCTED IN KEY NUMBERS ⑤, ⑥, AND ⑦ ON PAGE 4.

| BILL OF MATERIAL | | |
|------------------|---------------|------------|
| LUMBER | LINEAR FEET | BOARD FEET |
| 1" X 4" | 5 | 2 |
| 2" X 2" | 38 | 13 |
| 2" X 4" | 80 | 54 |
| 2" X 6" | 24 | 24 |
| NAILS | NO. REQD | POUNDS |
| 6d (2") | 98 | 3/4 |
| 10d (3") | 168 | 2-3/4 |
| PLYWOOD, 1/2" | 85.50 FT REQD | 117 LBS |
| WEB STRAPS | 16 REQD | 80 LBS |

LOAD AS SHOWN (SEE NOTE BELOW)

| ITEM | QUANTITY | WEIGHT (APPROX) |
|--------------|----------|-----------------|
| PALLET | 14 | 42,490 LBS |
| DUNNAGE | | 387 LBS |
| TOTAL WEIGHT | | 42,877 LBS |

NOTE: THE LOAD WEIGHT ON THE KINGPIN IS 14,847 LBS (APPROX), AND THE LOAD WEIGHT ON THE THREE REAR AXLES IS 28,030 LBS (APPROX). SEE GENERAL NOTE B ON PAGE 2.



ISOMETRIC VIEW

KEY NUMBERS

- ① SIDE BLOCKING, 2" X 4" BY LENGTH-TO-SUIT, AS REQUIRED TO EXTEND FROM THE FORWARD ENDWALL PAST THE END OF RETAINER GATE C, PIECE MARKED ④, WHICH IS A LENGTH OF 31'-6" (2 REOD). FOR POSITIONING AND INSTALLATION SEE LOADING SEQUENCE NOTES 1 AND 7 ON PAGE 7.
- ② SEPARATOR GATE A (1 REOD). POSITION WITH THE PLYWOOD SURFACE TIGHT AGAINST THE FORWARD END WALL. SEE THE DETAIL ON PAGE 14.
- ③ SEPARATOR GATE B (5 REOD). POSITION THE SIDE WITH THE 2" X 2" LEGS TIGHT AGAINST THE NOSE ENDS OF THE BOMBS. SEE THE DETAIL ON PAGE 14.
- ④ RETAINER GATE C (1 REOD). POSITION WITH THE 2" X 6" BEARING PIECES TIGHT AGAINST THE NOSE ENDS OF THE BOMBS AT THE AFT END OF THE TWO-WIDE LOAD. SEE THE DETAIL ON PAGE 16.
- ⑤ RETAINER GATE B (1 REOD). POSITION WITH THE 2" X 6" BEARING PIECES TIGHT AGAINST THE NOSE ENDS OF THE BOMBS IN THE ONE PALLET UNIT AT THE REAR OF THE LOAD. SEE THE DETAIL ON PAGE 15.
- ⑥ SIDE BLOCKING, 2" X 4" X 18" (4 REOD). POSITION TIGHT AGAINST THE PALLET BASE AND NAIL TO THE TRAILER FLOOR W/5-10d NAILS.
- ⑦ WEB STRAP TIEDOWN ASSEMBLY (14 REOD). INSTALL EACH STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON SIDE OF TRAILER, OVER ONE AND/OR TWO LATERALLY ADJACENT PALLET UNITS, TO A TIEDOWN ANCHOR ON THE OPPOSITE SIDE OF THE TRAILER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. SEE SPECIAL NOTE 4 ON PAGE 7 AND GENERAL NOTES "E" AND "F" ON PAGE 2.
- ⑧ WEB STRAP TIEDOWN ASSEMBLY (1 REOD). INSTALL STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON SIDE OF TRAILER, AROUND BOTTOM OF RETAINER GATE B, TO A TIEDOWN ANCHOR ON THE OPPOSITE SIDE OF THE TRAILER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. NOTE: THIS STRAP MUST BE THREADED THROUGH THE OPENING ON EACH SIDE OF THE RETAINER GATE B. SEE GENERAL NOTES "E" AND "F" ON PAGE 2.
- ⑨ WEB STRAP TIEDOWN ASSEMBLY (1 REOD). INSTALL STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON SIDE OF TRAILER, AROUND TOP OF RETAINER GATE B, TO A TIEDOWN ANCHOR ON THE OPPOSITE SIDE OF THE TRAILER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. SEE GENERAL NOTES "E" AND "F" ON PAGE 2.

SPECIAL NOTES:

1. A TYPICAL LOAD OF 13 PALLETS OF MK82 500-LB BOMBS IS SHOWN LOADED ON THE 34-TON M872 SEMITRAILER HAVING DIMENSIONS OF 489-1/2" LONG BY 96" WIDE.
2. PRIOR TO LOADING THE 500-LB BOMB PALLETS ON THE SEMITRAILER, READ THE "LOADING SEQUENCE" NOTES ON THIS PAGE.
3. THE LOAD ON PAGE 6 IS SHOWN POSITIONED AGAINST THE FORWARD ENDWALL. IF DESIRED, THE LOAD MAY BE POSITIONED ANYWHERE ON THE TRAILER LENGTH BY OMITTING THE SEPARATOR GATE A AND POSITIONING A RETAINER GATE A AS SHOWN ON PAGE 15, WITH TWO ADDITIONAL WEB STRAPS MARKED ⑤ AND ⑥ AT THE FORWARD END OF THE LOAD. SEE THE 12 PALLET LOAD ON PAGES 8 AND 9 FOR ADDITIONAL GUIDANCE.
4. EACH LATERAL ROW OF ONE OR TWO PALLETS MUST BE SECURED WITH TWO WEB STRAPS OVER THE TOP AS SHOWN. THESE TWO STRAPS MAY BE CROSSED AND/OR POSITIONED STRAIGHT ACROSS THE TOP OF A ROW, DEPENDING ON THE LOCATION OF THE TIEDOWN ANCHORS. ASSURE THAT THE STRAPS ARE POSITIONED OVER THE PALLET FRAME. DO NOT POSITION THE STRAPS ON/OVER THE BOMBS.
5. THE PROCEDURES SHOWN ON PAGE 6 MAY ALSO BE USED FOR TRANSPORTING 1 THROUGH 12 PALLETS BY DELETING PALLETS FROM THE AFT END OF THE LOAD SHOWN AND REDUCING THE LENGTH OF THE SIDE BLOCKING MARKED ① AS REQUIRED.
6. A TOTAL OF 30 TYPE I (MICKEY MOUSE) TIEDOWN ANCHORS ARE REQUIRED FOR THE LOAD SHOWN. SEE LOADING SEQUENCE NOTE 11 ON THIS PAGE AND TIEDOWN ANCHOR DETAIL ON PAGE 20.
7. A TOTAL OF 16 WEB STRAP TIEDOWN ASSEMBLIES ARE REQUIRED FOR THE LOAD SHOWN.

LOADING SEQUENCE:

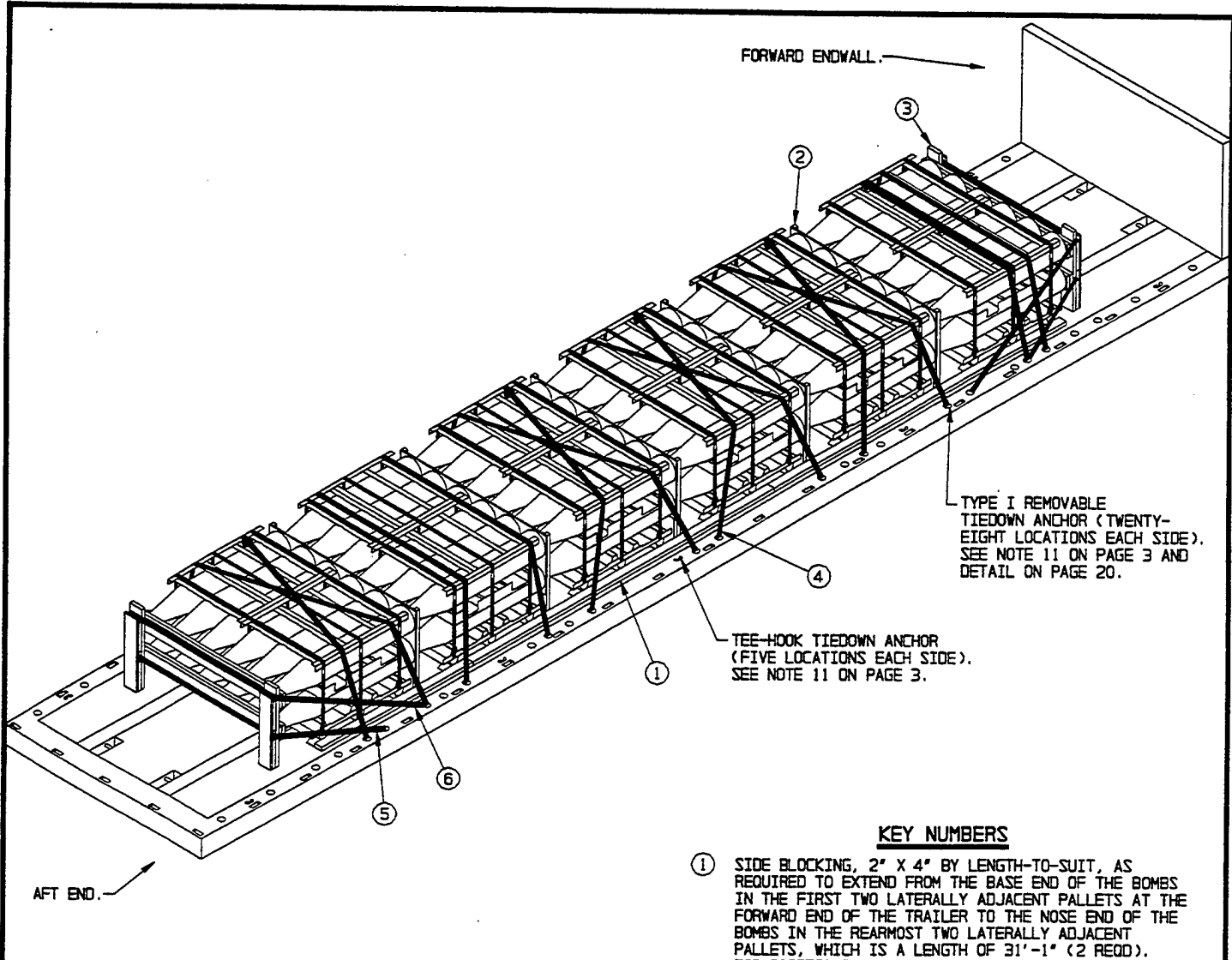
1. PRIOR TO LOADING PALLET UNITS, POSITION THE 2" X 4" BY LENGTH-TO-SUIT SIDE BLOCKING, PIECE MARKED ①, ON ONE SIDE OF THE TRAILER ONLY. POSITION ONE END AGAINST THE FORWARD END WALL WITH THE OUTER EDGE 9" IN FROM THE OUTSIDE EDGE OF THE TRAILER. NAIL TO THE TRAILER FLOOR W/1-10d NAIL EVERY 8". THE SIDE BLOCKING WILL CONSIST OF AVAILABLE LENGTHS OF 2" X 4" LUMBER FOR A DISTANCE OF 31'-6".
2. POSITION THE SEPARATOR GATE A, PIECE MARKED ②, WITH THE PLYWOOD SURFACE TIGHT AGAINST THE FORWARD END WALL.
3. POSITION ONE 500-LB BOMB PALLET ON THE TRAILER FLOOR WITH THE BASE END TIGHT AGAINST THE SEPARATOR GATE A AND THE PALLET BASE TIGHT AGAINST THE 2" X 4" SIDE BLOCKING. ASSURE THAT THE BASE ENDS OF ALL SIX BOMBS ARE TIGHT AGAINST THE SEPARATOR GATE A.
4. POSITION THE SECOND 500-LB BOMB PALLET ON THE TRAILER FLOOR WITH THE BASE END TIGHT AGAINST THE SEPARATOR GATE A AND TIGHT AGAINST THE ADJACENT PALLET. ASSURE THAT THE BASE ENDS OF ALL SIX BOMBS ARE TIGHT AGAINST THE SEPARATOR GATE A.
5. POSITION A SEPARATOR GATE B, PIECE MARKED ③, TIGHT AGAINST THE NOSE END OF THE BOMBS IN THE FIRST TWO PALLETS. NOTE THAT THE SIDE WITH THE 2" X 2" LEGS IS POSITIONED AGAINST THE NOSE END OF THE BOMBS.
6. REPEAT STEPS 3, 4, AND 5 UNTIL ALL 12 TWO-WIDE PALLETS OF 500-LB BOMBS ARE LOADED.
7. AFTER ALL 12 TWO-WIDE PALLETS ARE LOADED POSITION THE 2" X 4" BY LENGTH-TO-SUIT SIDE BLOCKING, PIECE MARKED ①, 1/2" AWAY FROM THE PALLET BASE AND AGAINST THE FORWARD END WALL. NAIL TO THE TRAILER FLOOR W/1-10d NAIL EVERY 8". THE SIDE BLOCKING WILL CONSIST OF AVAILABLE LENGTHS OF 2" X 4" LUMBER FOR A DISTANCE OF 31'-6". NOTE THAT THE PALLETS CAN BE REMOVED AND/OR LOADED WITHOUT REMOVING THE SIDE BLOCKING.
8. POSITION THE RETAINER GATE C, PIECE MARKED ④, WITH THE 2" X 6" BEARING PIECES TIGHT AGAINST NOSE ENDS OF THE BOMBS.
9. POSITION ONE 500-LB BOMB PALLET IN THE CENTER OF THE TRAILER WIDTH WITH THE BASE END TIGHT AGAINST THE RETAINER GATE C. ASSURE THAT THE BASE ENDS OF ALL SIX BOMBS ARE TIGHT AGAINST THE RETAINER GATE C.
10. POSITION THE SIDE BLOCKING, PIECES MARKED ⑥, AGAINST THE AFT END PALLET BASE AND NAIL IN PLACE AS INSTRUCTED IN KEY NUMBER ⑥ ON PAGE 6.
11. POSITION RETAINER GATE B, PIECE MARKED ⑤, AGAINST THE AFT END OF THE LOAD.
12. INSTALL 15 MICKEY MOUSE TIEDOWN ANCHORS ON EACH SIDE OF THE TRAILER AT EACH LOCATION A WEB STRAP TIEDOWN ASSEMBLY IS REQUIRED.
13. INSTALL WEB STRAP TIEDOWN ASSEMBLIES AS INSTRUCTED IN KEY NUMBERS ⑦, ⑧, AND ⑨ ON PAGE 6.

| BILL OF MATERIAL | | |
|------------------|----------------|------------|
| LUMBER | LINEAR FEET | BOARD FEET |
| 1" X 4" | 5 | 2 |
| 2" X 2" | 32 | 11 |
| 2" X 4" | 75 | 50 |
| 2" X 6" | 36 | 36 |
| NAILS | NO. REQD | POUNDS |
| 6d (2") | 84 | 1/2 |
| 10d (3") | 200 | 3-1/4 |
| PLYWOOD, 1/2" | 73' SO FT REQD | 101 LBS |
| WEB STRAPS | 16 REQD | 80 LBS |

LOAD AS SHOWN (SEE NOTE BELOW)

| ITEM | QUANTITY | WEIGHT (APPROX) |
|--------------|----------|-----------------|
| PALLET | 13 | 39,455 LBS |
| DUNNAGE | | 383 LBS |
| TOTAL WEIGHT | | 39,838 LBS |

NOTE: THE LOAD WEIGHT ON THE KINGPIN IS 18,909 LBS (APPROX), AND THE LOAD WEIGHT ON THE THREE REAR AXLES IS 20,930 LBS (APPROX). SEE GENERAL NOTE B ON PAGE 2.



ISOMETRIC VIEW

KEY NUMBERS

- ① SIDE BLOCKING, 2" X 4" BY LENGTH-TO-SUIT, AS REQUIRED TO EXTEND FROM THE BASE END OF THE BOMBS IN THE FIRST TWO LATERALLY ADJACENT PALLETS AT THE FORWARD END OF THE TRAILER TO THE NOSE END OF THE BOMBS IN THE REAR MOST TWO LATERALLY ADJACENT PALLETS, WHICH IS A LENGTH OF 31'-1" (2 REOD). FOR POSITIONING AND INSTALLATION SEE LOADING SEQUENCE NOTES 1 AND 6 ON PAGE 9.
- ② SEPARATOR GATE B (5 REOD). POSITION THE SIDE WITH THE 2" X 2" LEGS TIGHT AGAINST THE NOSE ENDS OF THE BOMBS. SEE THE DETAIL ON PAGE 14.
- ③ RETAINER GATE A (2 REOD). POSITION WITH THE 2" X 6" BEARING PIECES TIGHT AGAINST THE NOSE AND/OR AFT END OF THE BOMBS. SEE THE DETAIL ON PAGE 15.
- ④ WEB STRAP TIEDOWN ASSEMBLY (12 REOD). INSTALL EACH STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON SIDE OF TRAILER, OVER TOP OF TWO LATERALLY ADJACENT PALLET UNITS, TO A TIEDOWN ANCHOR ON THE OPPOSITE SIDE OF THE TRAILER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. SEE SPECIAL NOTE 4 ON PAGE 9 AND GENERAL NOTES "E" AND "F" ON PAGE 2.
- ⑤ WEB STRAP TIEDOWN ASSEMBLY (2 REOD). INSTALL EACH STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON SIDE OF TRAILER, AROUND BOTTOM OF RETAINER GATE A, TO A TIEDOWN ANCHOR ON THE OPPOSITE SIDE OF THE TRAILER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. NOTE: THIS STRAP MUST BE THREADED THROUGH THE OPENING ON EACH SIDE OF THE RETAINER GATE A. SEE GENERAL NOTES "E" AND "F" ON PAGE 2.
- ⑥ WEB STRAP TIEDOWN ASSEMBLY (2 REOD). INSTALL EACH STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON SIDE OF TRAILER, AROUND TOP OF RETAINER GATE A, TO A TIEDOWN ANCHOR ON THE OPPOSITE SIDE OF THE TRAILER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. SEE GENERAL NOTES "E" AND "F" ON PAGE 2.

SPECIAL NOTES:

1. A TYPICAL LOAD OF 12 PALLETS OF MK82 500-LB BOMBS IS SHOWN LOADED ON THE 34-TON M872 SEMITRAILER HAVING DIMENSIONS OF 489-1/2" LONG BY 96" WIDE.
2. PRIOR TO LOADING THE 500-LB BOMB PALLETS ON THE SEMITRAILER, READ THE "LOADING SEQUENCE" NOTES ON THIS PAGE.
3. THE LOAD ON PAGE 8 SHOWS THE FORWARD END POSITIONED 60" FROM THE FORWARD ENDWALL. HOWEVER, THE LOAD MAY BE POSITIONED ANYWHERE ON THE TRAILER LENGTH BY USING A RETAINER GATE A WITH WEB STRAPS MARKED ⑤ AND ⑥ AT EACH END OF THE LOAD AS SHOWN.
4. EACH LATERAL ROW OF TWO PALLETS MUST BE SECURED WITH TWO WEB STRAPS OVER THE TOP AS SHOWN. THESE TWO STRAPS MAY BE CROSSED AND/OR POSITIONED STRAIGHT ACROSS THE TOP OF A ROW, DEPENDING ON THE LOCATION OF THE TIEDOWN ANCHORS. ASSURE THAT THE STRAPS ARE POSITIONED OVER THE PALLET FRAME. DO NOT POSITION THE STRAPS ON/OVER THE BOMBS.
5. THE PROCEDURES SHOWN ON PAGE 8 MAY ALSO BE USED FOR TRANSPORTING 2, 4, 6, 8, OR 10 PALLETS BY DELETING PALLETS FROM THE AFT END OF THE LOAD SHOWN AND REDUCING THE LENGTH OF THE SIDE BLOCKING MARKED ① AS REQUIRED.
6. A TOTAL OF 28 TYPE I (MICKEY MOUSE) TIEDOWN ANCHORS ARE REQUIRED FOR THE LOAD SHOWN. SEE LOADING SEQUENCE NOTE B ON THIS PAGE AND TIEDOWN ANCHOR DETAIL ON PAGE 20.
7. A TOTAL OF 16 WEB STRAP TIEDOWN ASSEMBLIES ARE REQUIRED FOR THE LOAD SHOWN.

LOADING SEQUENCE:

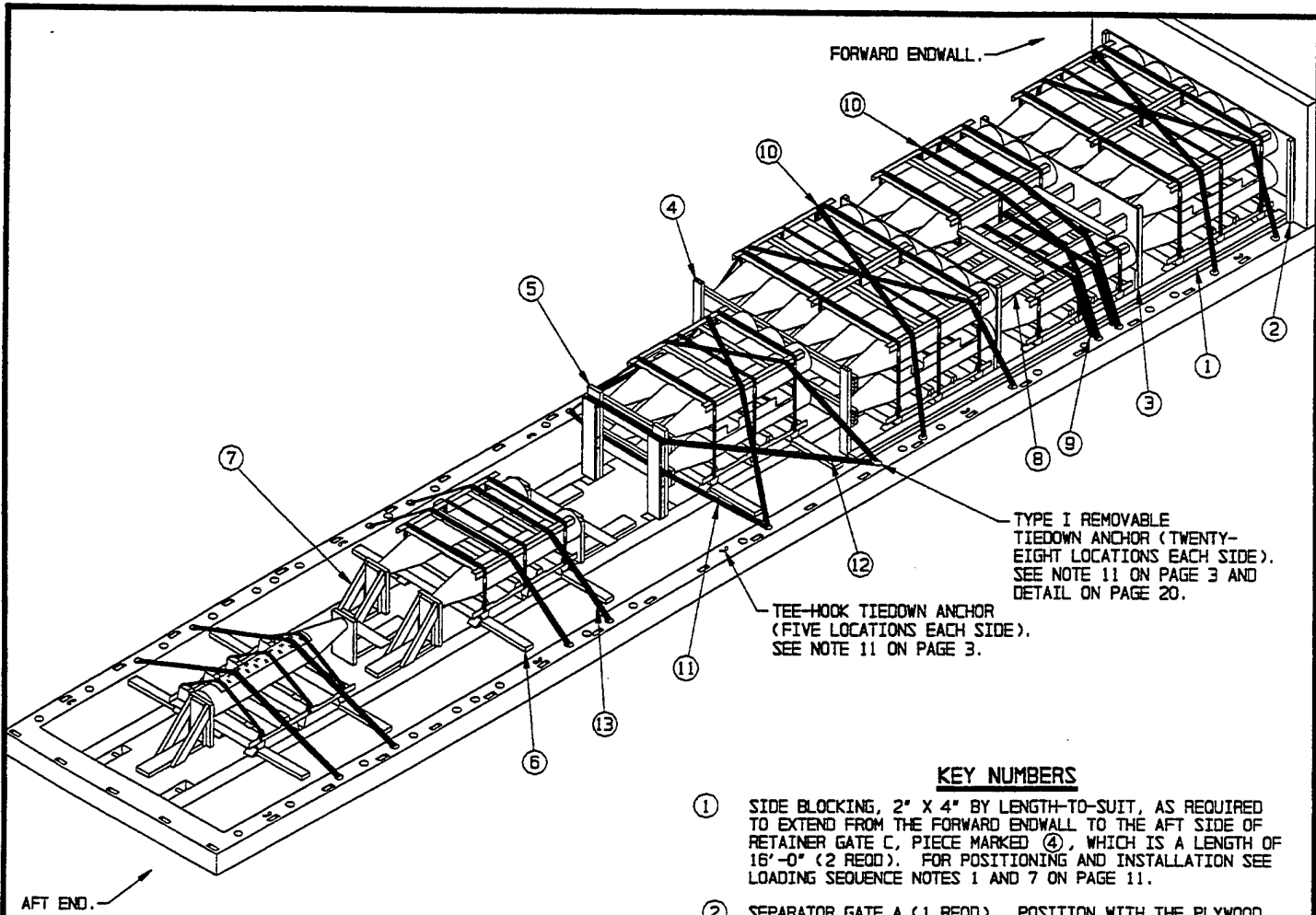
1. PRIOR TO LOADING PALLET UNITS, POSITION THE 2" X 4" BY LENGTH-TO-SUIT SIDE BLOCKING, PIECE MARKED ①, ON ONE SIDE OF THE TRAILER ONLY. AFTER DETERMINING HOW FAR THE BASE ENDS OF THE BOMBS ON THE FORWARD TWO PALLETS ARE TO BE FROM THE FORWARD ENDWALL, MAKE A MARK ON THE TRAILER FLOOR. POSITION ONE END ON THE MARK WITH THE OUTER EDGE 9" IN FROM THE OUTSIDE EDGE OF THE TRAILER. NAIL TO THE TRAILER FLOOR W/1-10d NAIL EVERY 8". THE SIDE BLOCKING WILL CONSIST OF AVAILABLE LENGTHS OF 2" X 4" LUMBER FOR A DISTANCE OF 31'-1".
2. POSITION ONE 500-LB BOMB PALLET ON THE TRAILER FLOOR WITH THE BASE END IN LINE WITH THE FORWARD END OF THE 2" X 4" SIDE BLOCKING AND THE PALLET BASE TIGHT AGAINST THE SIDE BLOCKING.
3. POSITION THE SECOND 500-LB BOMB PALLET ON THE TRAILER FLOOR IN LINE WITH AND TIGHT AGAINST THE FIRST PALLET.
4. POSITION A SEPARATOR GATE B, PIECE MARKED ②, TIGHT AGAINST THE NOSE END OF THE BOMBS IN THE FIRST TWO PALLETS. NOTE THAT THE SIDE WITH THE 2" X 2" LEGS IS POSITIONED AGAINST THE NOSE END OF THE BOMBS.
5. REPEAT STEPS 2, 3, AND 4 UNTIL ALL 12 TWO-WIDE PALLETS OF 500-LB BOMBS ARE LOADED.
6. AFTER ALL 12 PALLETS ARE LOADED, POSITION THE 2" X 4" BY LENGTH-TO-SUIT SIDE BLOCKING, PIECE MARKED ①, 1/2" AWAY FROM THE PALLET BASE AND IN LINE WITH THE SIDE BLOCKING ON THE OPPOSITE SIDE OF THE TRAILER. NAIL TO THE TRAILER FLOOR W/1-10d NAIL EVERY 8".
7. POSITION A RETAINER GATE A, PIECE MARKED ③, AT EACH END OF THE LOAD. NOTE THAT THE 2" X 6" BEARING PIECE IS POSITIONED AGAINST THE NOSE AND/OR BASE END OF THE BOMBS.
8. INSTALL 14 MICKEY MOUSE TIEDOWN ANCHORS ON EACH SIDE OF THE TRAILER AT EACH LOCATION A WEB STRAP TIEDOWN ASSEMBLY IS REQUIRED.
9. INSTALL WEB STRAP TIEDOWN ASSEMBLIES AS INSTRUCTED IN KEY NUMBERS ④, ⑤, AND ⑥ ON PAGE 8.

| BILL OF MATERIAL | | |
|------------------|----------------|------------|
| LUMBER | LINEAR FEET | BOARD FEET |
| 1" X 4" | 10 | 4 |
| 2" X 2" | 27 | 9 |
| 2" X 4" | 82 | 55 |
| 2" X 6" | 47 | 47 |
| NAILS | NO. REQD | POUNDS |
| 6d (2") | 70 | 1/2 |
| 10d (3") | 218 | 3-1/4 |
| PLYWOOD, 1/2" | 59' 50 FT REQD | 82 LBS |
| WEB STRAPS | 16 REQD | 80 LBS |

LOAD AS SHOWN (SEE NOTE BELOW)

| ITEM | QUANTITY | WEIGHT (APPROX) |
|--------------|----------|-----------------|
| PALLET | 12 | 36,420 LBS |
| DUNNAGE | | 396 LBS |
| TOTAL WEIGHT | | 36,816 LBS |

NOTE: THE LOAD WEIGHT ON THE KINGPIN IS 12,708 LBS (APPROX), AND THE LOAD WEIGHT ON THE THREE REAR AXLES IS 24,108 LBS (APPROX). SEE GENERAL NOTE B ON PAGE 2.



ISOMETRIC VIEW

(KEY NUMBERS CONTINUED)

- ⑩ WEB STRAP TIEDOWN ASSEMBLY (8 REQD). INSTALL EACH STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON SIDE OF TRAILER, OVER TOP OF TWO LATERALLY ADJACENT PALLET UNITS, TO A TIEDOWN ANCHOR ON THE OPPOSITE SIDE OF THE TRAILER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. NOTE: POSITION THESE STRAPS OVER TOP OF THE SUPPORT ASSEMBLY, PIECE MARKED ⑧. SEE GENERAL NOTES "E" AND "F" ON PAGE 2.
- ⑪ WEB STRAP TIEDOWN ASSEMBLY (1 REQD). INSTALL STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON SIDE OF TRAILER, AROUND BOTTOM OF RETAINER GATE B, TO A TIEDOWN ANCHOR ON THE OPPOSITE SIDE OF THE TRAILER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. NOTE: THIS STRAP MUST BE THREADED THROUGH THE OPENING ON EACH SIDE OF THE RETAINER GATE B. SEE GENERAL NOTES "E" AND "F" ON PAGE 2.
- ⑫ WEB STRAP TIEDOWN ASSEMBLY (1 REQD). INSTALL STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON SIDE OF TRAILER, AROUND TOP OF RETAINER GATE B, TO A TIEDOWN ANCHOR ON THE OPPOSITE SIDE OF THE TRAILER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. SEE GENERAL NOTES "E" AND "F" ON PAGE 2.
- ⑬ WEB STRAP TIEDOWN ASSEMBLY (4 REQD). INSTALL EACH STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON SIDE OF TRAILER, OVER TOP OF THE ONE AND/OR TWO-BOMB PALLET, TO A TIEDOWN ANCHOR ON THE OPPOSITE SIDE OF THE TRAILER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES AND POSITION ONE STRAP SCUFF SLEEVE ON TOP OF THE ONE BOMB AT EACH STRAP LOCATION. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. SEE GENERAL NOTES "E" AND "F" ON PAGE 2.

KEY NUMBERS

- ① SIDE BLOCKING, 2" X 4" BY LENGTH-TO-SUIT, AS REQUIRED TO EXTEND FROM THE FORWARD ENDWALL TO THE AFT SIDE OF RETAINER GATE C, PIECE MARKED ④, WHICH IS A LENGTH OF 16'-0" (2 REQD). FOR POSITIONING AND INSTALLATION SEE LOADING SEQUENCE NOTES 1 AND 7 ON PAGE 11.
- ② SEPARATOR GATE A (1 REQD). POSITION WITH THE PLYWOOD SURFACE TIGHT AGAINST THE FORWARD END WALL. SEE THE DETAIL ON PAGE 14.
- ③ SEPARATOR GATE B (2 REQD). POSITION THE SIDE WITH THE 2" X 2" LEGS TIGHT AGAINST THE NOSE ENDS OF THE BOMBS. SEE THE DETAIL ON PAGE 14.
- ④ RETAINER GATE C (1 REQD). POSITION WITH THE 2" X 6" BEARING PIECES TIGHT AGAINST THE NOSE ENDS OF THE BOMBS AT THE AFT END OF THE TWO-WIDE LOAD. SEE THE DETAIL ON PAGE 16.
- ⑤ RETAINER GATE B (1 REQD). POSITION WITH THE 2" X 6" BEARING PIECES TIGHT AGAINST THE NOSE ENDS OF THE BOMBS IN THE ONE PALLET UNIT AT THE REAR OF THE TWO-WIDE PALLET UNITS. SEE THE DETAIL ON PAGE 15.
- ⑥ SIDE BLOCKING, 2" X 4" X 18" (12 REQD). POSITION TIGHT AGAINST THE PALLET BASE AND NAIL TO THE TRAILER FLOOR W/5-10d NAILS.
- ⑦ END BRACE (6 REQD). POSITION THE LOAD BEARING PIECE TIGHT AGAINST THE NOSE AND/OR BASE END OF THE BOMB AND NAIL TO THE TRAILER FLOOR W/7-10d NAILS. SEE THE DETAIL ON PAGE 17.
- ⑧ SUPPORT ASSEMBLY (1 REQD). POSITION ON TOP OF THE THREE-BOMB PALLET. ASSURE THAT THE BOTTOM TIE-PIECES ARE SITTING ON THE TOP OF THE PALLET FRAME. SEE THE DETAIL ON PAGE 16.
- ⑨ WEB STRAP TIEDOWN ASSEMBLY (2 REQD). INSTALL EACH STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON SIDE OF TRAILER, OVER TOP OF THE 3-BOMB PALLET AND THREADED THROUGH AND OVER THE TOP OF THE BOTTOM 3 BOMBS IN THE LATERALLY ADJACENT 6-BOMB PALLET, TO A TIEDOWN ANCHOR ON THE OPPOSITE SIDE OF THE TRAILER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. NOTE: DO NOT POSITION THESE STRAPS OVER TOP OF THE SUPPORT ASSEMBLY, PIECE MARKED ⑧. SEE GENERAL NOTES "E" AND "F" ON PAGE 2.

(CONTINUED AT LEFT)

FULL PALLET AND LESS-THAN-FULL PALLET OF THE MK82 500-LB BOMB ON THE 34-TON M872 SEMITRAILER

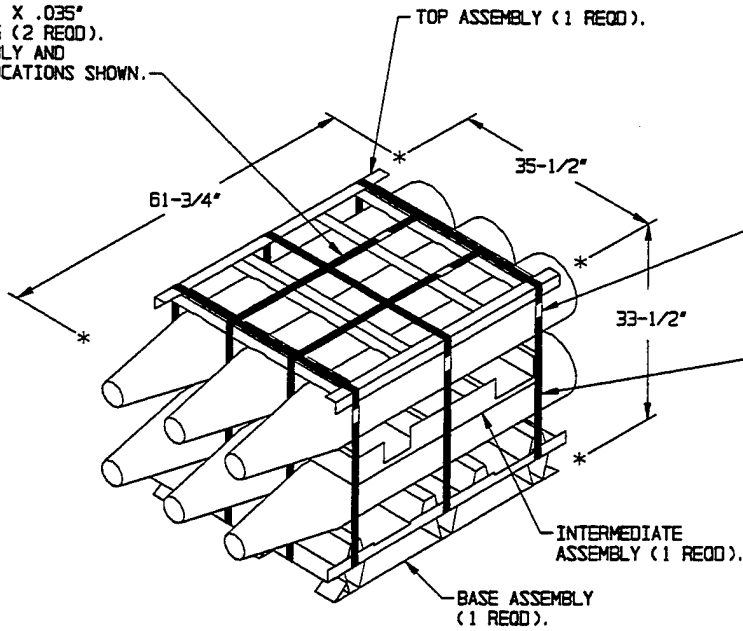
SPECIAL NOTES:

1. A TYPICAL LOAD DEPICTING FULL PALLETS AND LESS-THAN-FULL PALLETS OF THE 500-LB BOMB IS SHOWN LOADED ON THE 34-TON M872 SEMITRAILER HAVING DIMENSIONS OF 489-1/2" LONG BY 96" WIDE.
2. PRIOR TO LOADING THE 500-LB BOMB PALLETS ON THE SEMITRAILER, READ THE "LOADING SEQUENCE" NOTES ON THIS PAGE.
3. THE PURPOSE OF THIS LOAD IS TO DEPICT METHODS OF SECURING LESS-THAN-FULL PALLETS OF BOMBS AS SHOWN ON PAGES 12 AND 13:
 - (A) PALLETS CONTAINING ONE, TWO, OR THREE BOMBS CAN BE POSITIONED ON THE TRAILER FLOOR AND SECURED WITH SIDE BLOCKING, END BRACES, AND WEB STRAPS AS SHOWN ON PAGE 10.
 - (B) PALLETS CONTAINING TWO OR THREE BOMBS CAN ALSO BE POSITIONED WITHIN A LOAD OF SIX-BOMB PALLETS AS SHOWN IN THE LOAD ON PAGE 10.
 - (C) PALLETS CONTAINING FOUR AND/OR FIVE BOMBS CAN BE POSITIONED WITHIN A LOAD AND SECURED IN THE SAME MANNER AS FULL SIX-BOMB PALLETS.
4. EACH LATERAL ROW OF ONE OR TWO PALLETS MUST BE SECURED WITH TWO WEB STRAPS OVER THE TOP AS SHOWN. THESE TWO STRAPS MAY BE CROSSED AND/OR POSITIONED STRAIGHT ACROSS THE TOP OF A ROW, DEPENDING ON THE LOCATION OF THE TIEDOWN ANCHORS. ASSURE THAT THE STRAPS ARE POSITIONED OVER THE PALLET FRAME. DO NOT POSITION THE STRAPS ON/OVER THE BOMBS UNLESS A ONE-BOMB PALLET IS BEING LOADED.
5. A TOTAL OF 24 TYPE I (MICKEY MOUSE) TIEDOWN ANCHORS ARE REQUIRED FOR THE LOAD SHOWN. SEE LOADING SEQUENCE NOTE 15 ON THIS PAGE AND TIEDOWN ANCHOR DETAIL ON PAGE 20.
6. A TOTAL OF 16 WEB STRAP TIEDOWN ASSEMBLIES ARE REQUIRED FOR THE LOAD SHOWN.

LOADING SEQUENCE:

1. PRIOR TO LOADING THE TWO WIDE PALLET UNITS, POSITION THE 2" X 4" BY LENGTH-TO-SUIT SIDE BLOCKING, PIECE MARKED ①, ON ONE SIDE OF THE TRAILER ONLY. POSITION ONE END AGAINST THE FORWARD END WALL WITH THE OUTER EDGE 9" IN FROM THE OUTSIDE EDGE OF THE TRAILER. NAIL TO THE TRAILER FLOOR W/1-10d NAIL EVERY 8". THE SIDE BLOCKING WILL CONSIST OF AVAILABLE LENGTHS OF 2" X 4" LUMBER FOR A DISTANCE OF 16'-0".
2. POSITION THE SEPARATOR GATE A, PIECE MARKED ②, WITH THE PLYWOOD SURFACE TIGHT AGAINST THE FORWARD ENDWALL.
3. POSITION ONE 500-LB BOMB PALLET ON THE TRAILER FLOOR WITH THE BASE END TIGHT AGAINST THE SEPARATOR GATE A AND THE PALLET BASE TIGHT AGAINST THE 2" X 4" SIDE BLOCKING. ASSURE THAT THE BASE ENDS OF ALL SIX BOMBS ARE TIGHT AGAINST THE SEPARATOR GATE A.
4. POSITION THE SECOND 500-LB BOMB PALLET ON THE TRAILER FLOOR WITH THE BASE END TIGHT AGAINST THE SEPARATOR GATE A AND TIGHT AGAINST THE ADJACENT PALLET. ASSURE THAT THE BASE ENDS OF ALL SIX BOMBS ARE TIGHT AGAINST THE SEPARATOR GATE A.
5. POSITION A SEPARATOR GATE B, PIECE MARKED ③, TIGHT AGAINST THE NOSE END OF THE BOMBS IN THE FIRST TWO PALLETS. NOTE THAT THE SIDE WITH THE 2" X 2" LEGS IS POSITIONED AGAINST THE NOSE END OF THE BOMBS.
6. REPEAT STEPS 3, 4, AND 5 UNTIL ALL 6 TWO-WIDE PALLETS OF 500-LB BOMBS ARE LOADED.
7. AFTER ALL 6 TWO-WIDE PALLETS ARE LOADED, POSITION THE 2" X 4" BY LENGTH-TO-SUIT SIDE BLOCKING, PIECE MARKED ①, 1/2" AWAY FROM THE PALLET SKIDS AND AGAINST THE FORWARD ENDWALL. NAIL TO THE TRAILER FLOOR W/1-10d NAIL EVERY 8". THE SIDE BLOCKING WILL CONSIST OF AVAILABLE LENGTHS OF 2" X 4" LUMBER FOR A DISTANCE OF 16'-0". NOTE THAT THE PALLETS CAN BE REMOVED AND/OR LOADED WITHOUT REMOVING THE SIDE BLOCKING.
8. POSITION A RETAINER GATE C, PIECE MARKED ④, WITH THE 2" X 6" BEARING PIECE TIGHT AGAINST THE NOSE ENDS OF THE BOMBS AT THE AFT END OR THE TWO-WIDE LOAD.
9. POSITION THE SUPPORT ASSEMBLY, PIECE MARKED ⑧, ON TOP OF THE 3-BOMB PALLET AS INSTRUCTED IN KEY NUMBER ⑧.
10. POSITION ONE 500-LB BOMB PALLET IN THE CENTER OF THE TRAILER WIDTH WITH THE BASE END TIGHT AGAINST THE RETAINER GATE C. ASSURE THAT THE BASE ENDS OF ALL SIX BOMBS ARE TIGHT AGAINST THE RETAINER GATE C.
11. POSITION THE RETAINER GATE B, PIECE MARKED ⑤, WITH THE LOAD BEARING PIECES TIGHT AGAINST THE NOSE END OF THE BOMBS IN THE ONE PALLET UNIT AT THE REAR OF THE TWO-WIDE PALLET UNITS.
12. POSITION THE ONE-BOMB AND TWO-BOMB PALLETS ON THE TRAILER FLOOR AT A LOCATION THAT WILL ALLOW ROOM FOR THE END BRACE, PIECE MARKED ⑦, TO BE POSITIONED AT EACH END OF THE BOMBS.
13. POSITION THE END BRACES, PIECES MARKED ⑦, AS INSTRUCTED IN KEY NUMBER ⑦.
14. POSITION THE SIDE BLOCKING, PIECES MARKED ⑥, AS INSTRUCTED IN KEY NUMBER ⑥.
15. INSTALL 12 TYPE I (MICKEY MOUSE) TIEDOWN ANCHORS ON EACH OF THE TRAILER AT EACH LOCATION A WEB STRAP TIEDOWN ASSEMBLY IS REQUIRED.
16. INSTALL WEB STRAP TIEDOWN ASSEMBLIES AS INSTRUCTED IN KEY NUMBERS ⑨, ⑩, ⑪, ⑫, AND ⑬.

STEEL STRAPPING, 1-1/4" X .035" OR .031" BY 12'-0" LONG (2 REOD). ENCIRCLE THE TOP ASSEMBLY AND THE BASE ASSEMBLY AT LOCATIONS SHOWN.

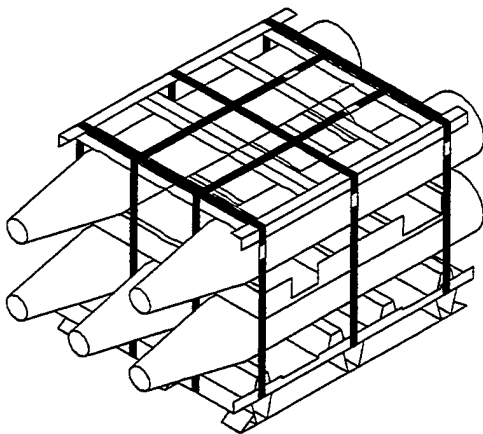


SEAL FOR 1-1/4" STEEL STRAPPING (5 REOD). CRIMP EACH SEAL WITH TWO PAIR OF NOTCHES.

STEEL STRAPPING, 1-1/4" X .035" OR .031" BY 12'-0" LONG (3 REOD). ENCIRCLE THE TOP ASSEMBLY AND THE BASE ASSEMBLY AT LOCATIONS SHOWN.

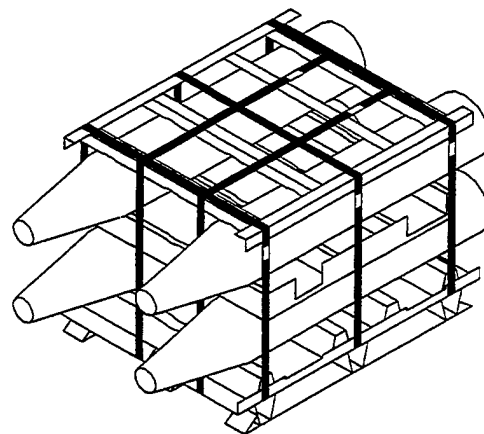
6-BOMB PALLET UNIT

GROSS WEIGHT ----- 3,035 LBS (APPROX)
 CUBE ----- 42.7 CU FT (APPROX)



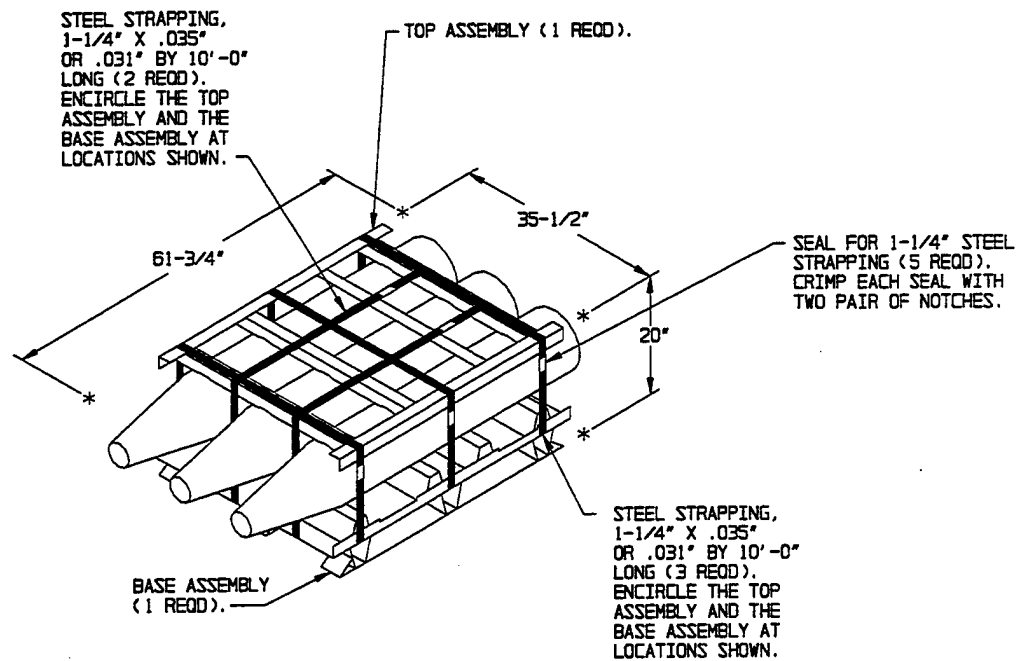
5-BOMB PALLET UNIT

OMIT CENTER BOMB IN THE TOP LAYER FROM 6-BOMB PALLET UNIT.

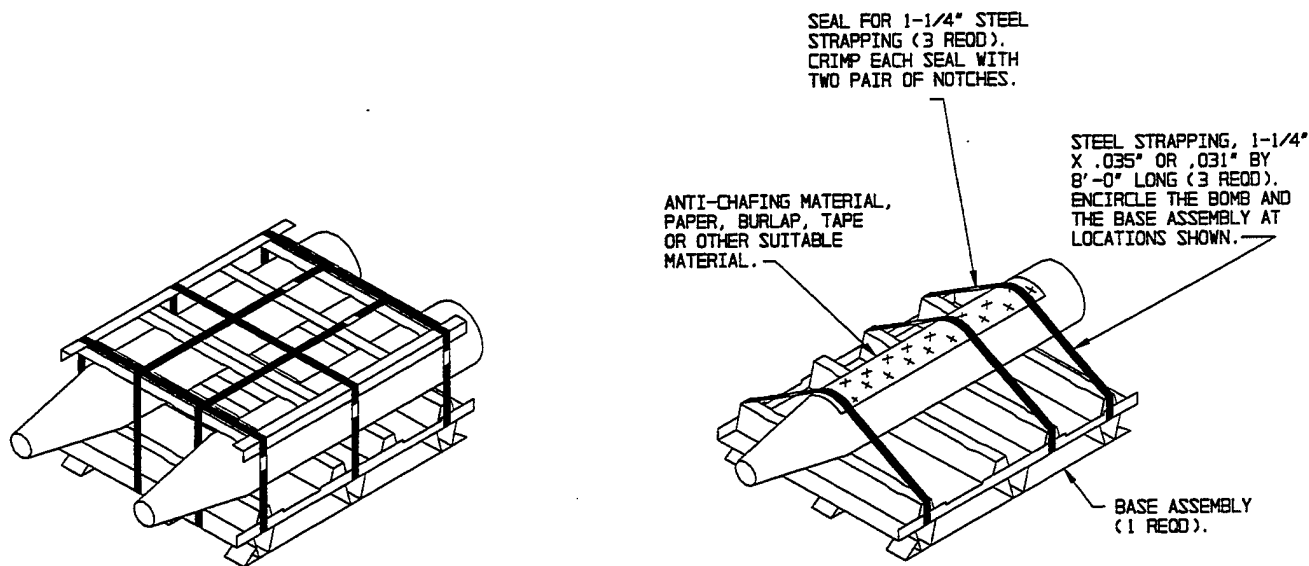


4-BOMB PALLET UNIT

OMIT CENTER BOMBS IN THE TOP AND BOTTOM LAYER FROM 6-BOMB PALLET UNIT.



3-BOMB PALLET UNIT



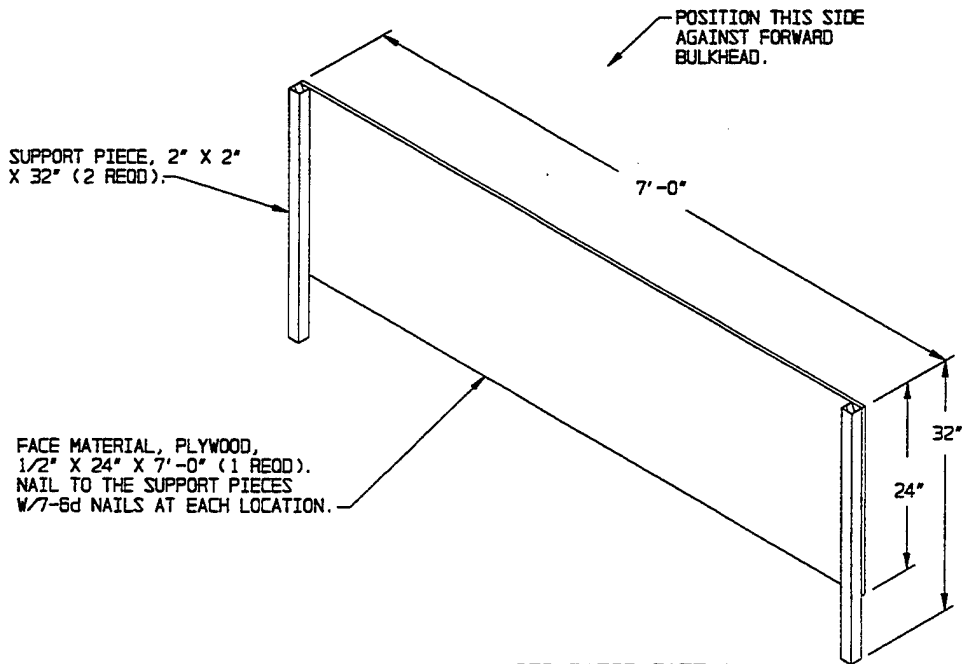
2-BOMB PALLET UNIT

OMIT CENTER BOMB FROM 3-BOMB PALLET UNIT.

1-BOMB PALLET UNIT

POSITION BOMB IN CENTER OF THE BASE ASSEMBLY.

NOTE:
IF LOADING LESS-THAN-FULL PALLET UNITS SEE THE LOAD ON PAGE 10 AND SPECIAL NOTE 3 ON PAGE 11.



SUPPORT PIECE, 2" X 2"
X 32" (2 REED).

7'-0"

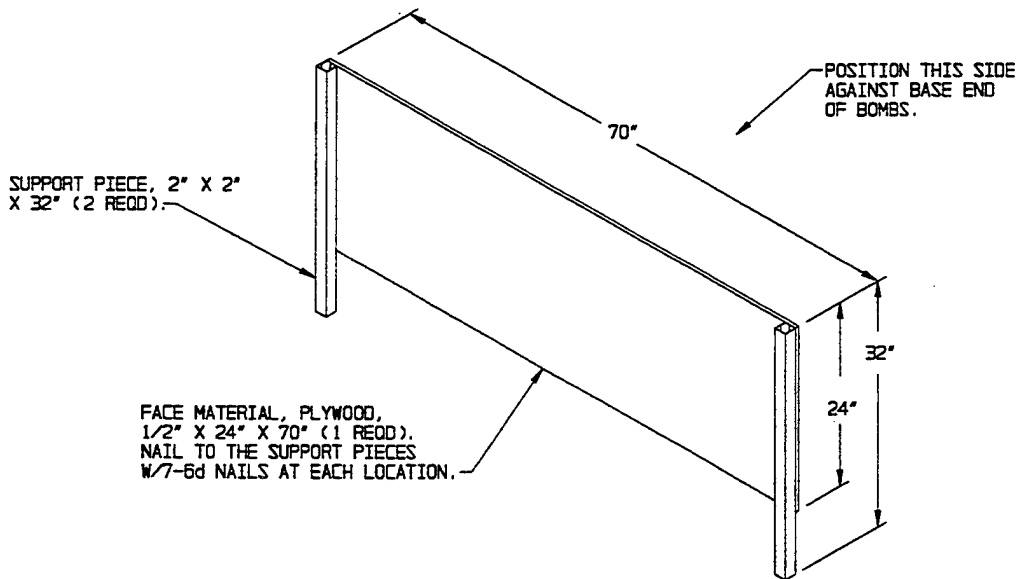
FACE MATERIAL, PLYWOOD,
1/2" X 24" X 7'-0" (1 REED).
NAIL TO THE SUPPORT PIECES
W7-6d NAILS AT EACH LOCATION.

32"

24"

SEPARATOR GATE A

POSITION AGAINST FORWARD BULKHEAD AS
SHOWN IN THE LOAD ON PAGES 4, 6, AND 10.



SUPPORT PIECE, 2" X 2"
X 32" (2 REED).

70"

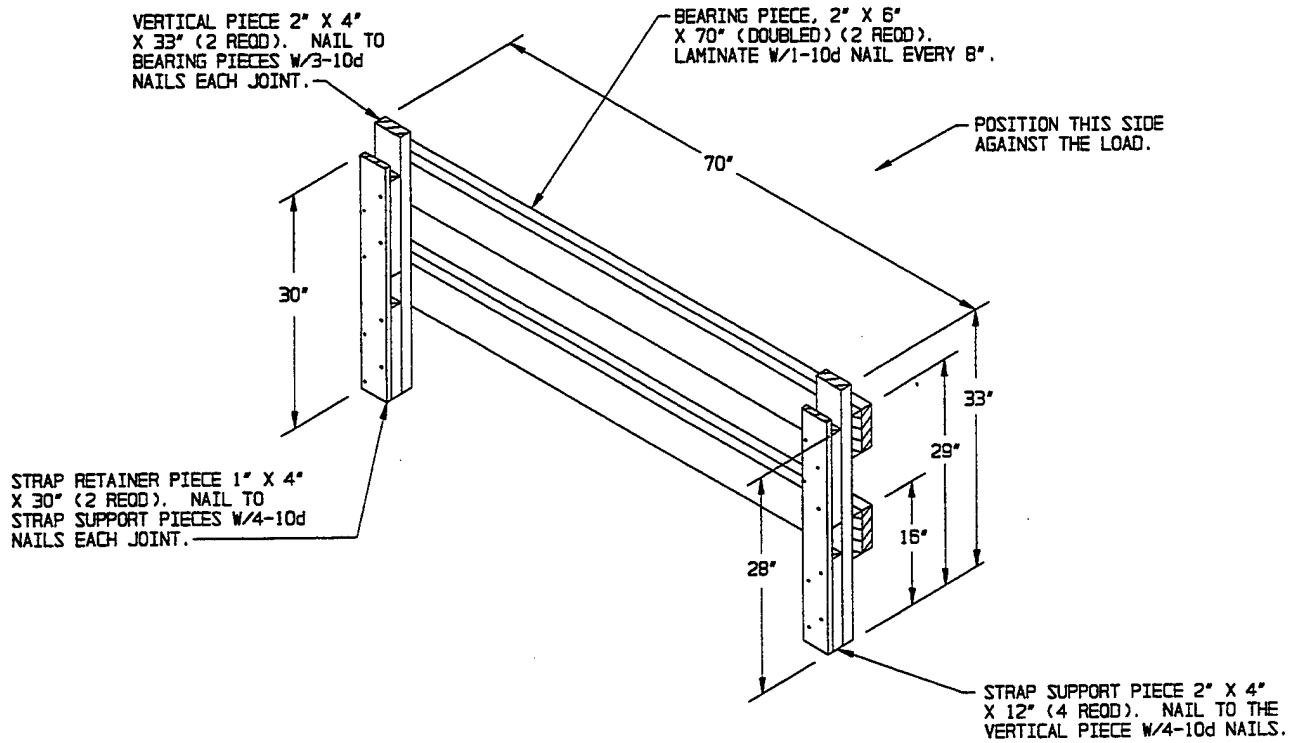
FACE MATERIAL, PLYWOOD,
1/2" X 24" X 70" (1 REED).
NAIL TO THE SUPPORT PIECES
W7-6d NAILS AT EACH LOCATION.

32"

24"

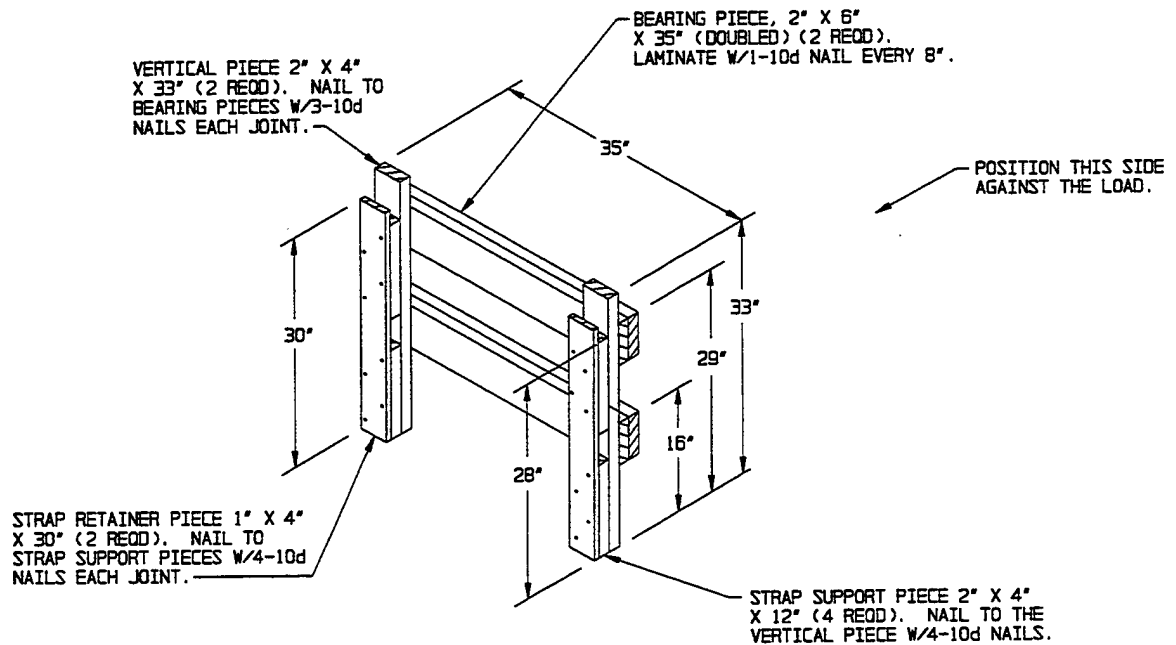
SEPARATOR GATE B

POSITION BETWEEN ROWS OF BOMBS AS SHOWN
IN THE LOAD ON PAGES 4, 6, 8, AND 10.



RETAINER GATE A

POSITION AGAINST TWO-WIDE PALLETS AT END OF LOAD AS SHOWN IN THE LOAD ON PAGES 4 AND 8.



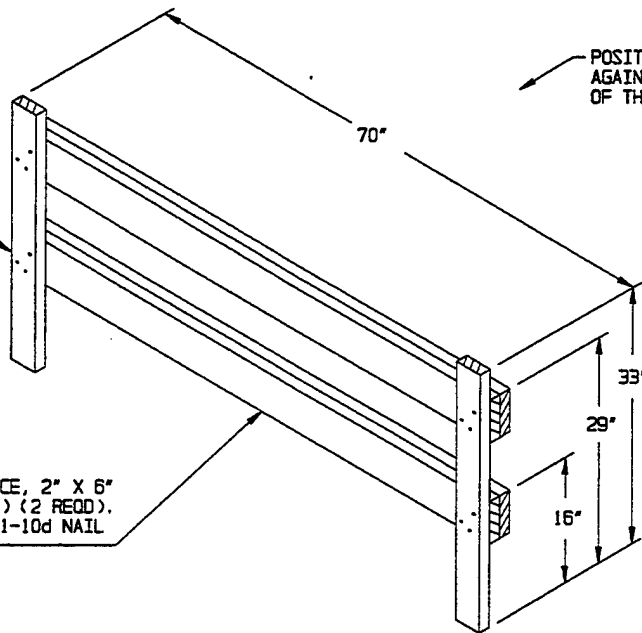
RETAINER GATE B

POSITION AGAINST ONE-WIDE PALLET AT END OF LOAD AS SHOWN IN THE LOAD ON PAGES 6 AND 10.

VERTICAL PIECE,
2" X 4" X 33"
(2 REQD). NAIL
TO THE HORIZONTAL
PIECES W/3-10d
NAILS AT EACH JOINT.

HORIZONTAL PIECE, 2" X 6"
X 70" (DOUBLED) (2 REQD).
LAMINATE WITH 1-10d NAIL
EVERY 8".

POSITION THIS SIDE
AGAINST THE NOSE END
OF THE TWO-WIDE PALLETS.

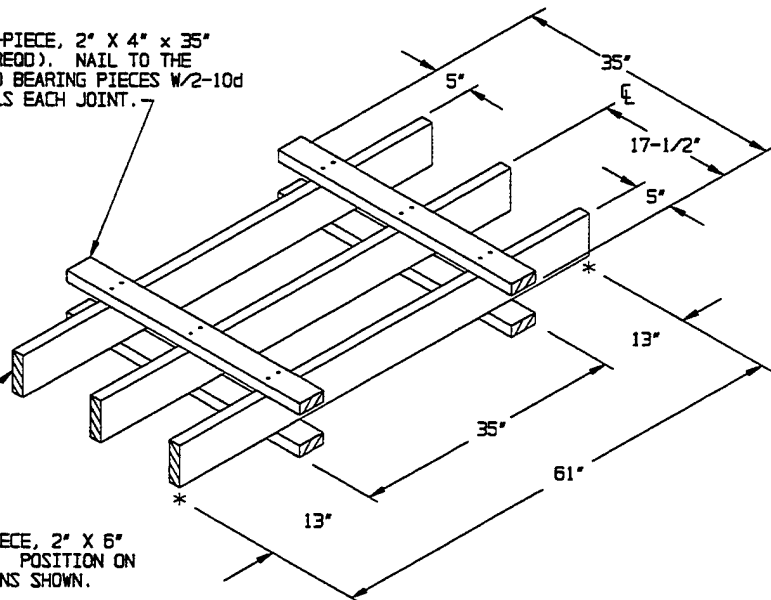


RETAINER GATE C

POSITION AGAINST TWO-WIDE PALLETS AS
SHOWN IN THE LOAD ON PAGES 6 AND 10.

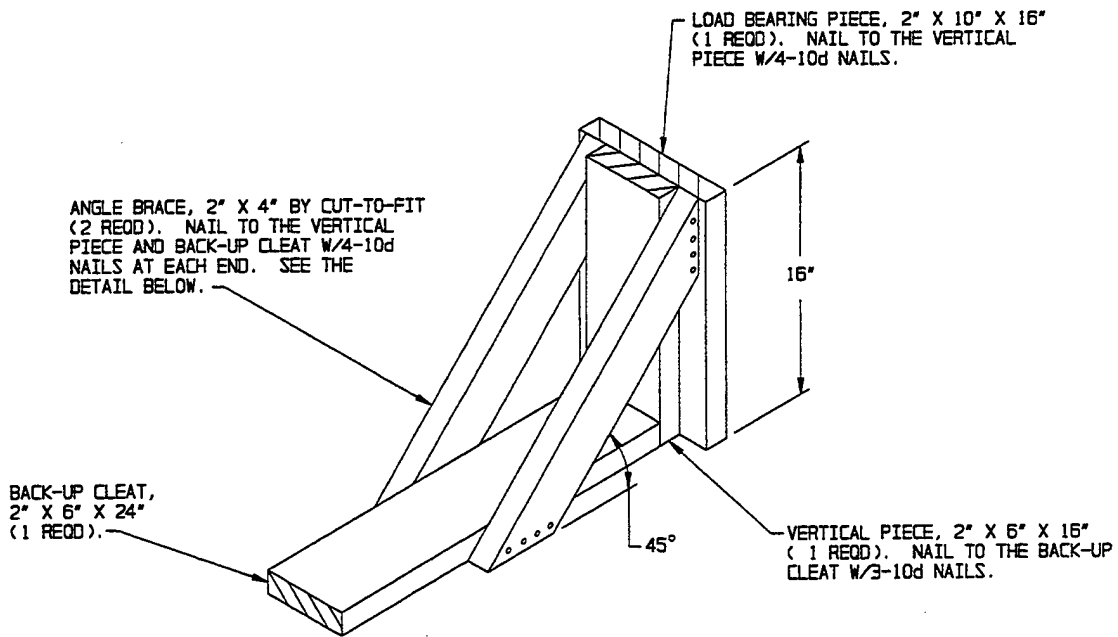
TIE-PIECE, 2" X 4" X 35"
(4 REQD). NAIL TO THE
LOAD BEARING PIECES W/2-10d
NAILS EACH JOINT.

LOAD BEARING PIECE, 2" X 6"
X 61" (3 REQD). POSITION ON
EDGE AT LOCATIONS SHOWN.



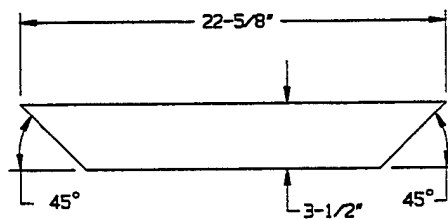
SUPPORT ASSEMBLY

THIS ASSEMBLY IS FOR USE ON TOP OF A TWO
OR THREE-BOMB PALLET UNIT POSITIONED IN
BETWEEN TWO SIX-BOMB PALLET UNITS, AS
SHOWN IN THE LOAD ON PAGE 10.



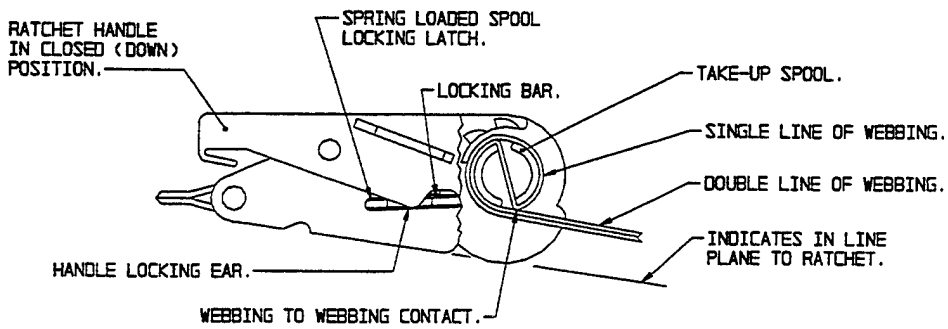
END BRACE

FABRICATE THIS BRACE PRIOR TO POSITIONING AGAINST THE BOMBS. POSITION WITH THE LOAD BEARING PIECE TIGHT AGAINST THE NOSE AND/OR BASE END OF THE BOMB AND NAIL TO THE TRAILER FLOOR W/7-10d NAILS. THIS BRACE IS FOR ONE, TWO, OR THREE-BOMB PALLETS ONLY. SEE THE LOAD ON PAGE 10 FOR ADDITIONAL GUIDANCE.



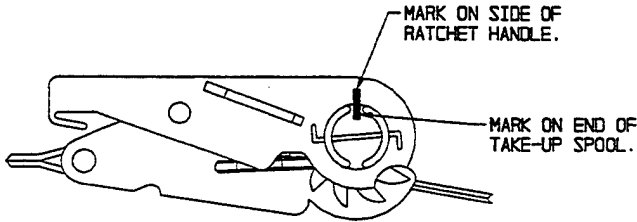
ANGLE BRACE

2 REOD PER EACH END
BRACE SHOWN ABOVE.



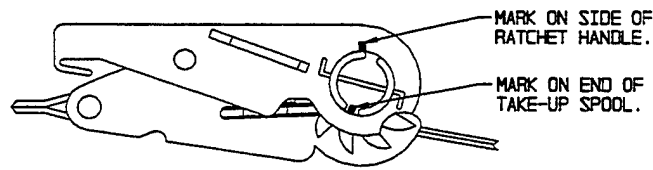
STEP 1

IN THIS VIEW PART OF THE RATCHET HOUSING IS SHOWN BROKEN AWAY TO DEPICT WEBBING-TO-WEBBING CONTACT ON THE TAKE-UP SPOOL OF THE RATCHET. WEBBING-TO-WEBBING CONTACT IS ACHIEVED WHEN THE OPERATOR HOLDS THE DOUBLE LINE OF WEBBING IN AN "IN LINE PLANE TO THE RATCHET" AND IT MAKES CONTACT WITH THE SINGLE LINE OF WEBBING.



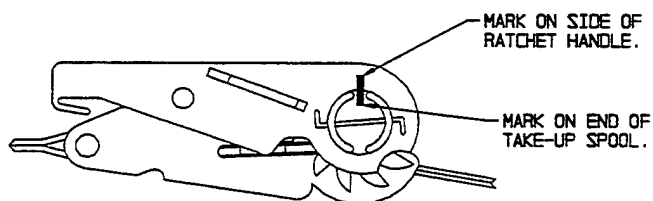
STEP 2

THIS VIEW DEPICTS THE LOCATION OF THE FIXED MARK ON THE RATCHETING HANDLE, WITH ANOTHER MATCHING MARK ON THE TAKE-UP SPOOL, AFTER WEBBING-TO-WEBBING CONTACT HAS BEEN MADE.



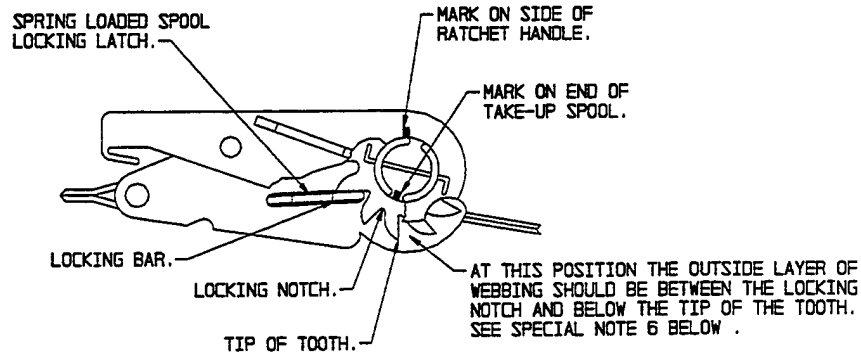
STEP 3

THIS VIEW DEPICTS THE LOCATION OF THE MARK ON THE END OF THE TAKE-UP SPOOL AFTER THE SPOOL HAS BEEN ROTATED ONE-HALF TURN, AFTER WEBBING-TO-WEBBING CONTACT HAS BEEN MADE.



STEP 4

THIS VIEW DEPICTS THE LOCATION OF THE MARK ON THE END OF THE TAKE-UP SPOOL AFTER THE SPOOL HAS BEEN ROTATED ONE FULL TURN, AFTER WEBBING-TO-WEBBING CONTACT HAS BEEN MADE.



STEP 5

THIS VIEW DEPICTS THE LOCATION OF THE MARK ON THE END OF THE TAKE-UP SPOOL AFTER THE SPOOL HAS BEEN ROTATED ONE AND ONE-HALF TURNS, AFTER WEBBING-TO-WEBBING CONTACT HAS BEEN MADE. ALSO IN THIS VIEW, PART OF THE RATCHET HANDLE IS BROKEN AWAY TO SHOW THE LOCKING BAR FULLY SEATED IN THE MATCHING LOCKING NOTCH (SPROCKET GEAR TEETH).

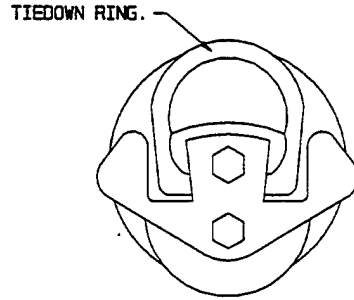
SPECIAL NOTES:

1. THE PURPOSE OF THE RATCHET DETAILS ON PAGE 18 AND THE DETAIL AND NOTES ON THIS PAGE ARE TO AUGMENT THE GUIDANCE SET FORTH WITHIN GENERAL NOTE "E" ON PAGE 2.
2. THE REQUIREMENTS FOR 1/2 BUT NOT MORE THAN 1-1/2 WRAPS OF STRAP ON THE TAKE-UP SPOOL OF THE TENSIONING RATCHET, AS SPECIFIED WITHIN GENERAL NOTE "E" ON PAGE 2, ACTUALLY MEANS 1/2 TO 1-1/2 WRAPS OF DOUBLE WEBBING. ALSO, THE 1/2 TO 1-1/2 WRAPS (TURNS) ARE TO BE ACCOMPLISHED ONLY AFTER ENOUGH WEBBING HAS BEEN WOUND ONTO THE SPOOL TO ACHIEVE A WEBBING-TO-WEBBING CONFIGURATION, AS SHOWN IN THE "STEP 1" DETAIL ON PAGE 18.
3. ONE METHOD THAT CAN BE USED TO ENSURE THAT THE 1/2 TO 1-1/2 WRAPS ARE WOUND ONTO THE TAKE-UP SPOOL, AFTER WEBBING-TO-WEBBING CONTACT HAS BEEN MADE, IS TO PLACE A FIXED MARK (PAINT OR SIMILAR MATERIAL) ON THE SIDE OF THE RATCHETING HANDLE, WITH THE HANDLE IN ITS CLOSED (DOWN) POSITION, AND ANOTHER SHORT MATCHING MARK ON THE END OF THE SPOOL, AS SHOWN IN THE "STEP 2" DETAIL ON PAGE 18. AS THE SPOOL IS ROTATED TO TENSION A TIEDOWN STRAP ASSEMBLY, THE NUMBER OF WRAPS (TURNS) CAN BE DETERMINED VISUALLY BY COMPARING THE "MARK" LOCATION ON THE SPOOL TO THE "MARK" LOCATION ON THE RATCHETING HANDLE WITH THE HANDLE IN CLOSED POSITION. SEE THE "STEP 3" AND "STEP 4" DETAILS ON PAGE 18, AND "STEP 5" ABOVE.
4. ANOTHER METHOD THAT CAN BE USED TO ENSURE THAT THE 1/2 TO 1-1/2 WRAPS ARE ACHIEVED, AFTER WEBBING-TO-WEBBING CONTACT HAS BEEN MADE, IS TO COUNT THE AUDIBLE CLICKS MADE BY THE RATCHET ASSEMBLY AS A WEB STRAP ASSEMBLY IS BEING TENSIONED. THE RATCHET ASSEMBLY ON MOST WEB STRAP ASSEMBLIES HAVE 11 TEETH ON THE GEARLIKE DEVICE ON EACH END OF THE TAKE-UP SPOOL; SOME OTHER STRAP ASSEMBLIES HAVE ONLY 9 TEETH. THEREFORE, AFTER INITIAL WEBBING-TO-WEBBING CONTACT HAS BEEN MADE, ROTATE (TURN) THE SPOOL THROUGH A MINIMUM OF 6 TO A MAXIMUM OF 16 CLICKS (1/2 TO 1-1/2 WRAPS) WHEN THE GEAR HAS 11 TEETH, AND ROTATE (TURN) THE SPOOL THROUGH A MINIMUM OF 5 TO A MAXIMUM OF 13 CLICKS (1/2 TO 1-1/2 WRAPS) IF THE GEAR HAS 9 TEETH.

(CONTINUED AT RIGHT)

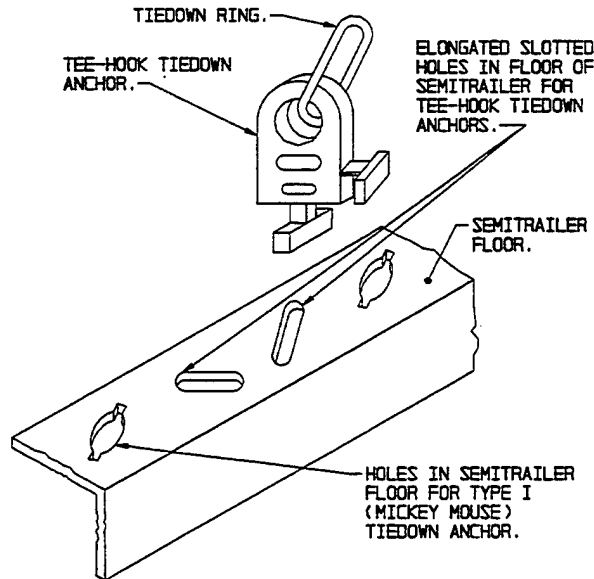
(SPECIAL NOTES CONTINUED)

5. AFTER A STRAP ASSEMBLY HAS BEEN PROPERLY TENSIONED, CARE MUST BE EXERCISED TO ASSURE THAT THE TAKE-UP SPOOL LOCKING LATCH (SPRING LOADED DEVICE WITH A LOCKING BAR ON EACH SIDE OF THE RATCHET ASSEMBLY) IS FULLY SEATED ON BOTH SIDES IN MATCHING LOCKING NOTCHES, WHICH ARE SIMILAR TO SPROCKET GEAR TEETH, THAT ARE LOCATED ON EACH END OF THE TAKE-UP SPOOL. SEE "STEP 5" DETAIL ABOVE. THE LOCKING LATCH IS "FULLY SEATED" WHEN THE HANDLE WILL CLOSE AND THE LOCKING EAR, OR SIMILAR DEVICE ON THE HANDLE, PREVENTS THE ACCIDENTAL WITHDRAWAL OF THE LOCKING LATCH. SEE "STEP 1" DETAIL ON PAGE 18. IF THE FULLY SEATED CONDITION CANNOT BE ACHIEVED, THE STRAP MUST BE RELEASED AND HAND RETENSIONED AS TIGHT AS POSSIBLE TO ACHIEVE THE FULLY SEATED CONDITION.
6. ANOTHER VISUAL METHOD OF DETERMINING WHEN THERE IS 1/2 TO 1-1/2 WRAPS OF WEBBING ON THE TAKE-UP SPOOL, AFTER INITIAL WEBBING-TO-WEBBING CONTACT HAS BEEN MADE, IS TO LOOK AT THE SPOOL. WHEN A TIEDOWN IS COMPLETE, THE STRAP WEBBING ON THE SPOOL OF THE RATCHET SHOULD BE ABOVE THE LOWER CURVE OF THE LOCKING NOTCH, AND SHOULD BE BELOW THE TIPS OF THE TEETH OF THE RATCHET AS IDENTIFIED IN "STEP 5" ABOVE. IT SHOULD BE NOTED THAT ANY PROCEDURES THAT ENSURE PROPER TENSIONING ARE ACCEPTABLE AND METHODS ON THE DRAWING ONLY PROVIDE SOME METHODS.



REMOVABLE TIEDOWN ANCHOR (TOP VIEW)

THIS TIEDOWN ANCHOR IS RATED AT 10,000 POUNDS AND IS INSTALLED ON THE M872 SEMITRAILERS. IT IS COMMONLY REFERRED TO AS THE "MICKEY MOUSE" TIEDOWN ANCHOR. THERE ARE APPROXIMATELY TWENTY-EIGHT LOCATIONS IN EACH SIDE RAIL OF THE M872 SEMITRAILER. FOR INSTALLATION OF THIS TIEDOWN ANCHOR, IT IS POSITIONED BY REACHING UNDER THE FLOOR OF THE SEMITRAILER, INSERTING IT UP THROUGH THE HOLE AND ROTATING IT COUNTERCLOCKWISE UNTIL THE CENTER OF THE TIEDOWN RING POINTS DIRECTLY ACROSS THE TRAILER WIDTH. THIS TIEDOWN ANCHOR IS FURTHER IDENTIFIED AS NSN 2540-01-112-1732. SEE SPECIAL NOTE 11 ON PAGE 3.



TEE-HOOK TIEDOWN ANCHOR (ISOMETRIC VIEW)

THIS TIEDOWN ANCHOR IS RATED AT 5,000 POUNDS AND IS INSTALLED ON THE M872 SEMITRAILERS. IT IS COMMONLY REFERRED TO AS THE "TEE-HOOK" TIEDOWN ANCHOR. THERE ARE FIVE TIEDOWN ANCHOR LOCATIONS IN EACH SIDE RAIL OF THE M872 SEMITRAILER. FOR INSTALLATION OF THIS TIEDOWN ANCHOR, IT IS POSITIONED BY INSERTING IT FROM THE TOP INTO ONE OF THE ELONGATED SLOTTED HOLES LOCATED IN THE SIDERAIL. ASSURE THAT THE TIEDOWN ANCHOR IS FIRMLY SEATED AND ROTATED APPROXIMATELY 45° TO ENGAGED POSITION BEFORE ATTACHING THE WEB STRAP TIEDOWN ASSEMBLY. THIS TIEDOWN ANCHOR IS FURTHER IDENTIFIED AS NSN 2540-01-113-9285. SEE SPECIAL NOTE 11 ON PAGE 3.

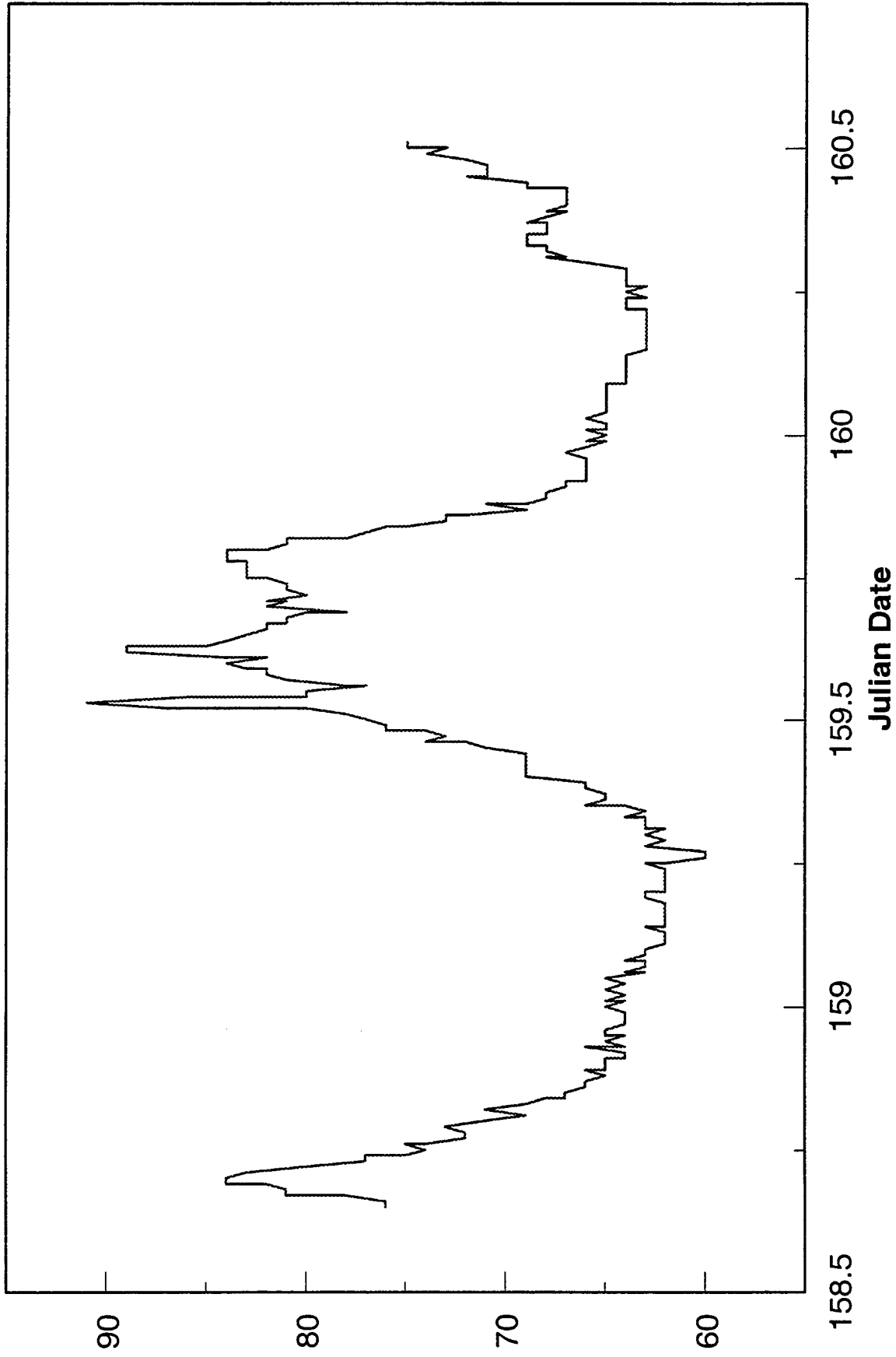
PART 7

GRAPHS

Temperature Under Tarpaulin During Transport

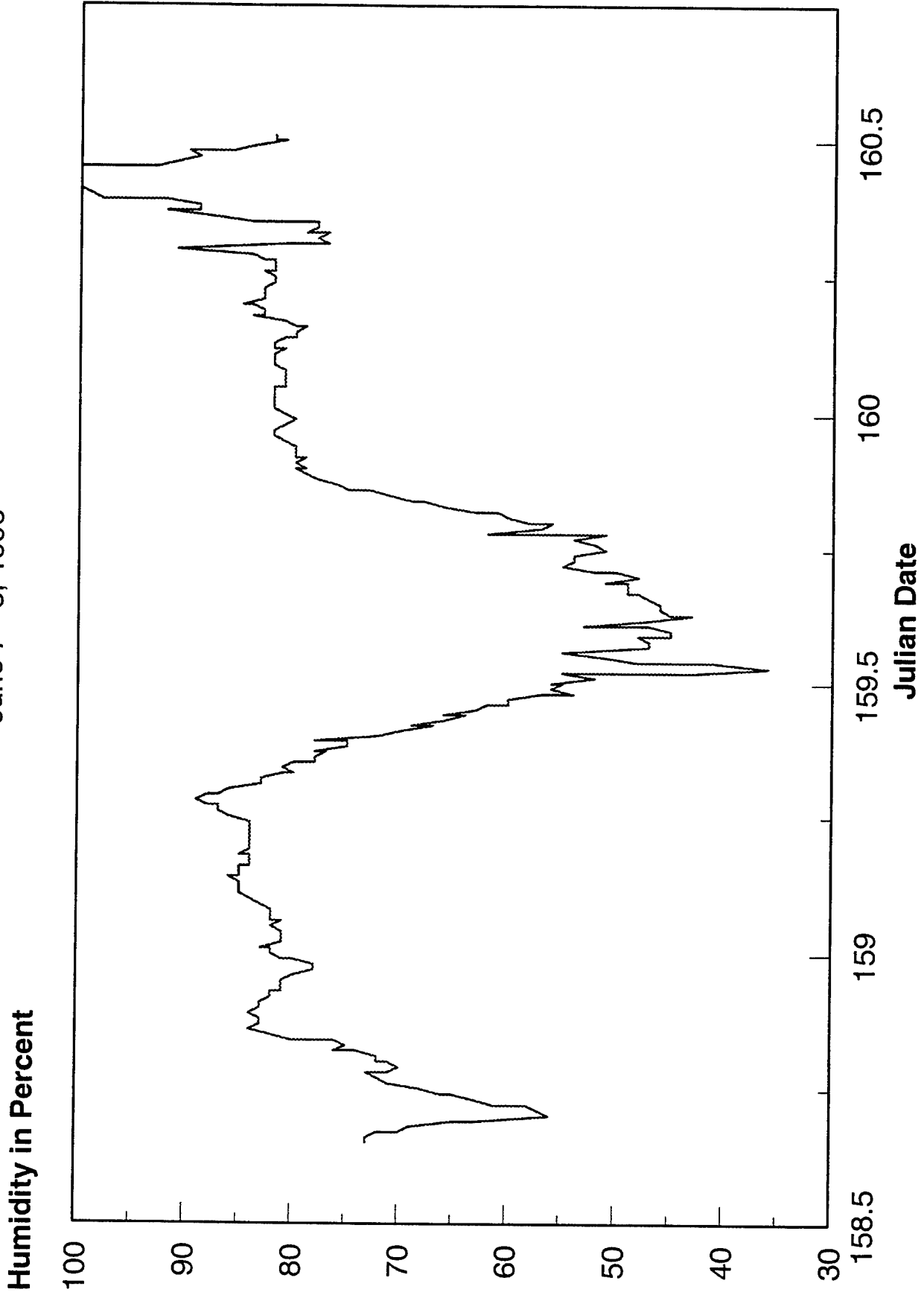
June 7 - 8, 1996

Temperature in Fahrenheit



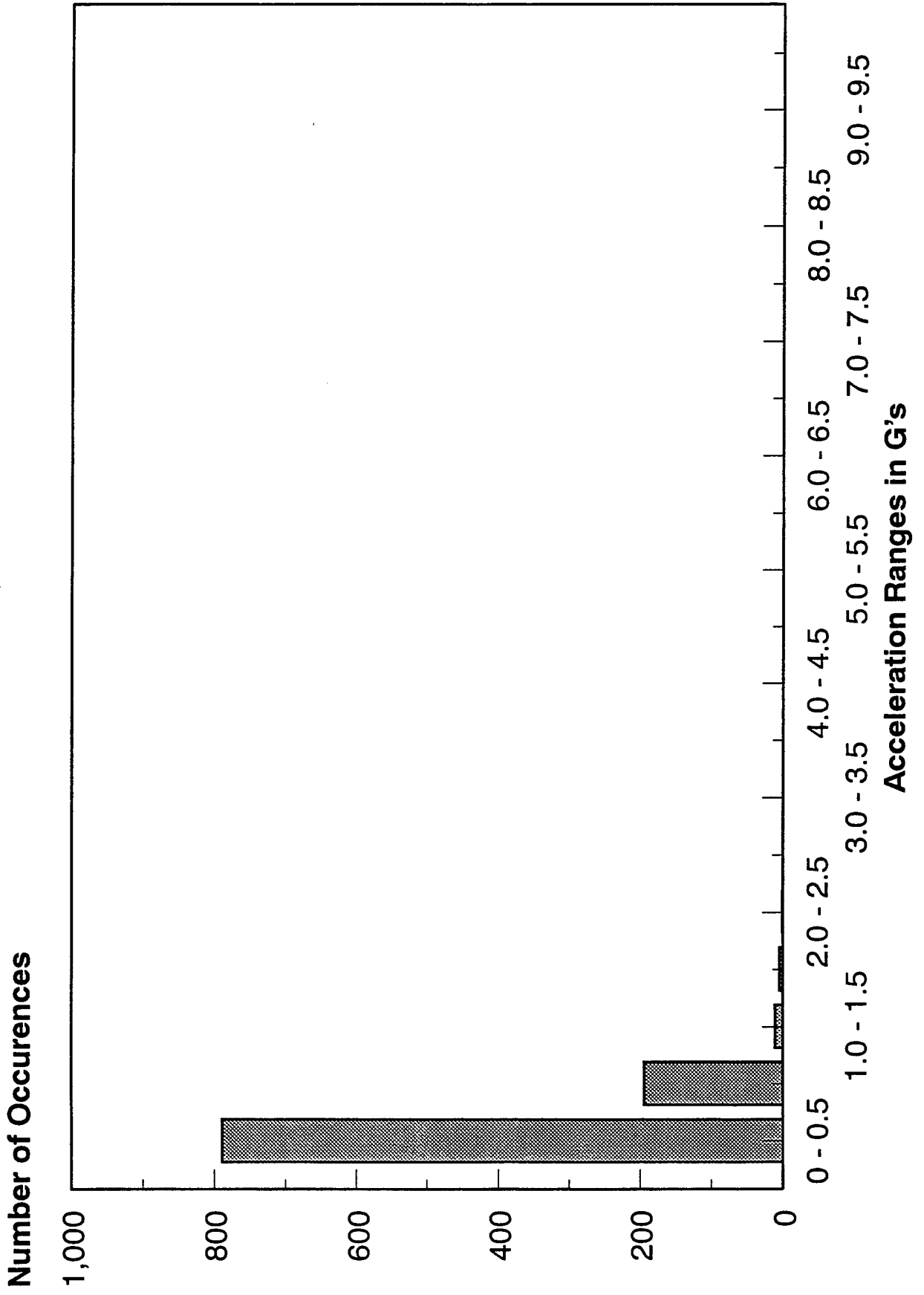
Humidity Under Tarpaulin During Transport

June 7 - 8, 1996



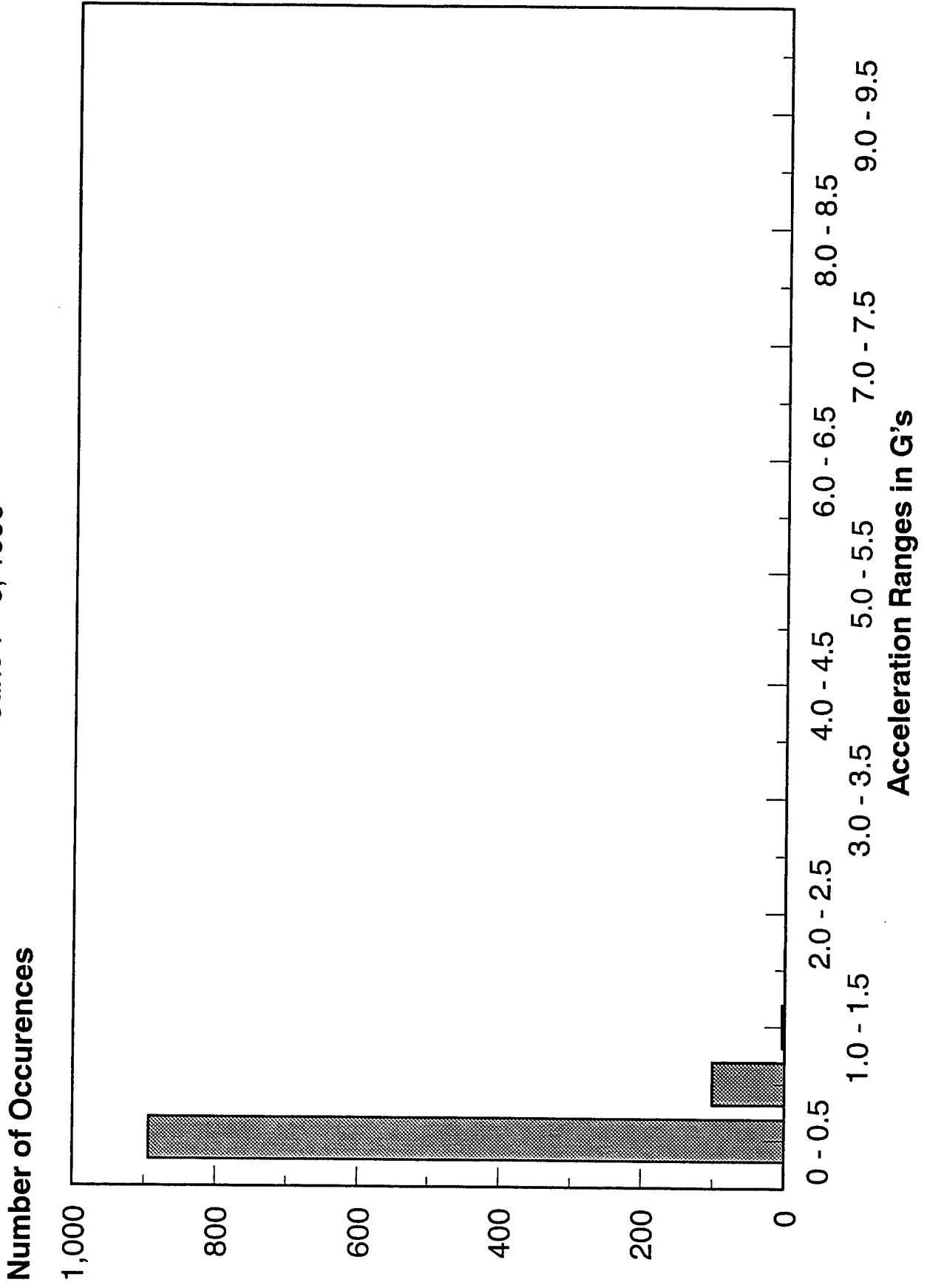
Histogram of Peak Longitudinal Accelerations

June 7 - 8, 1996



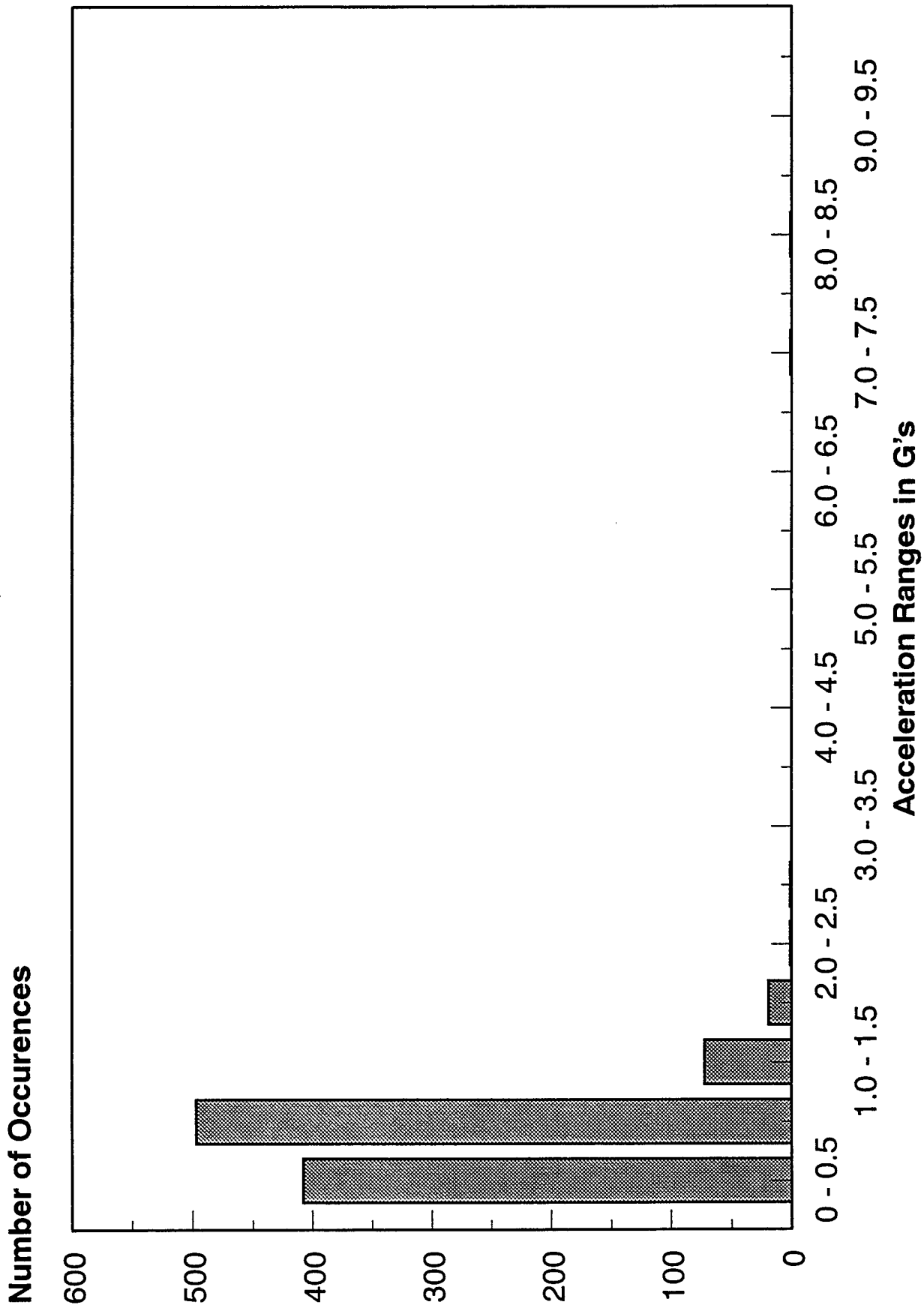
Histogram of Peak Lateral Accelerations

June 7 - 8, 1996



Histogram of Peak Vertical Accelerations

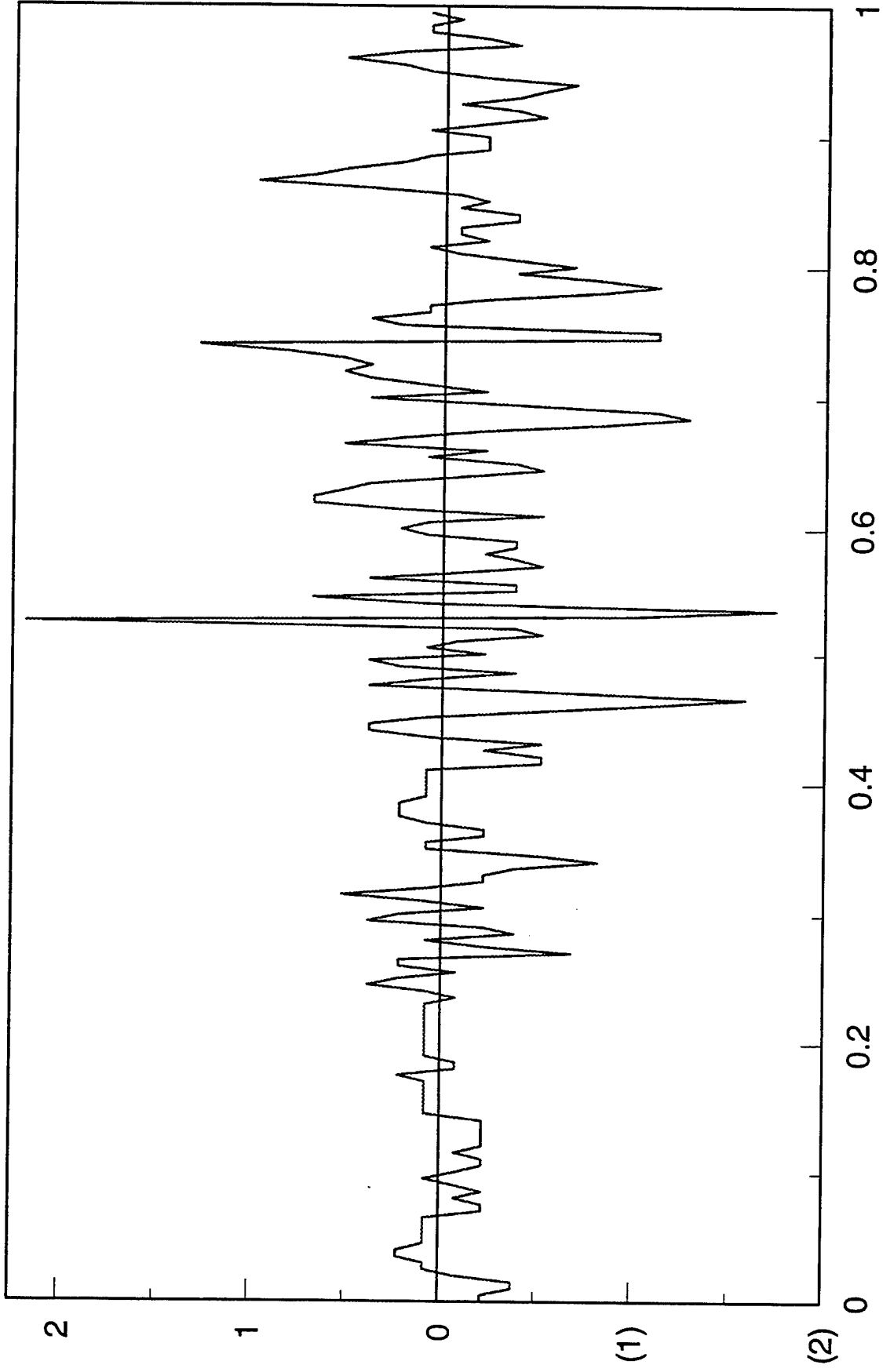
June 7 - 8, 1996



Longitudinal Acceleration

06-07-96, 08:52:39

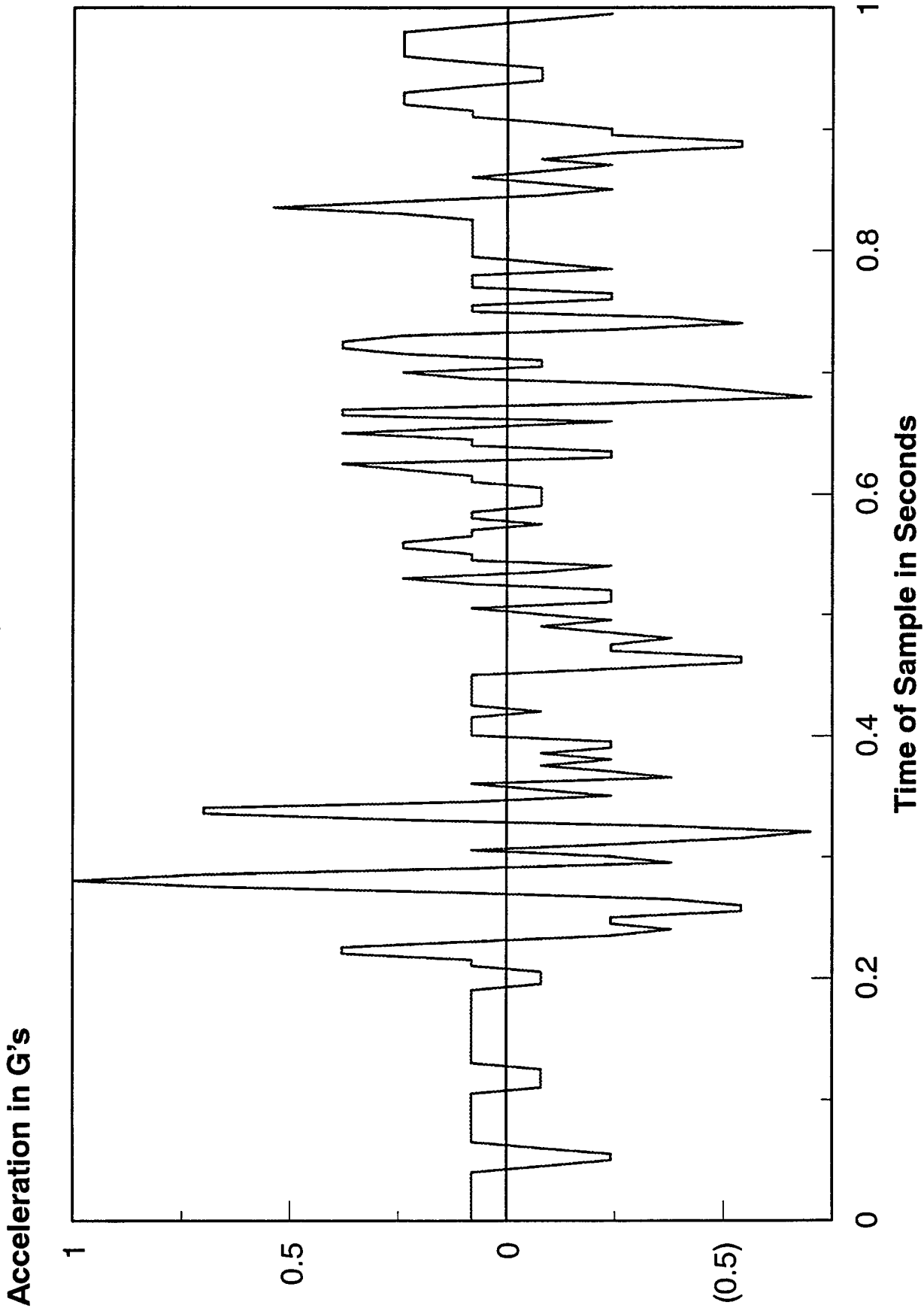
Acceleration in G's



Time of Sample in Seconds

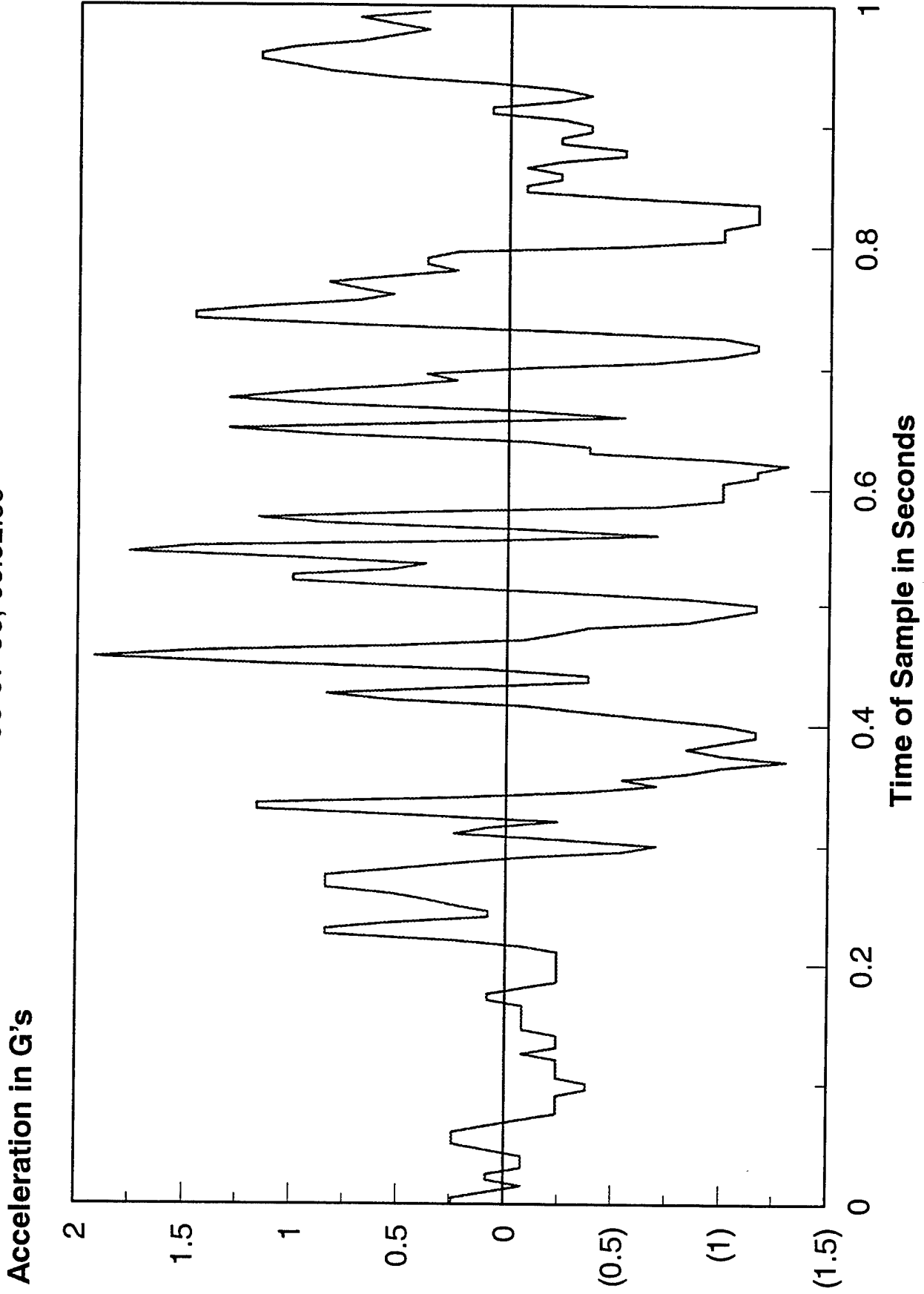
Lateral Acceleration

06-07-96, 08:52:39



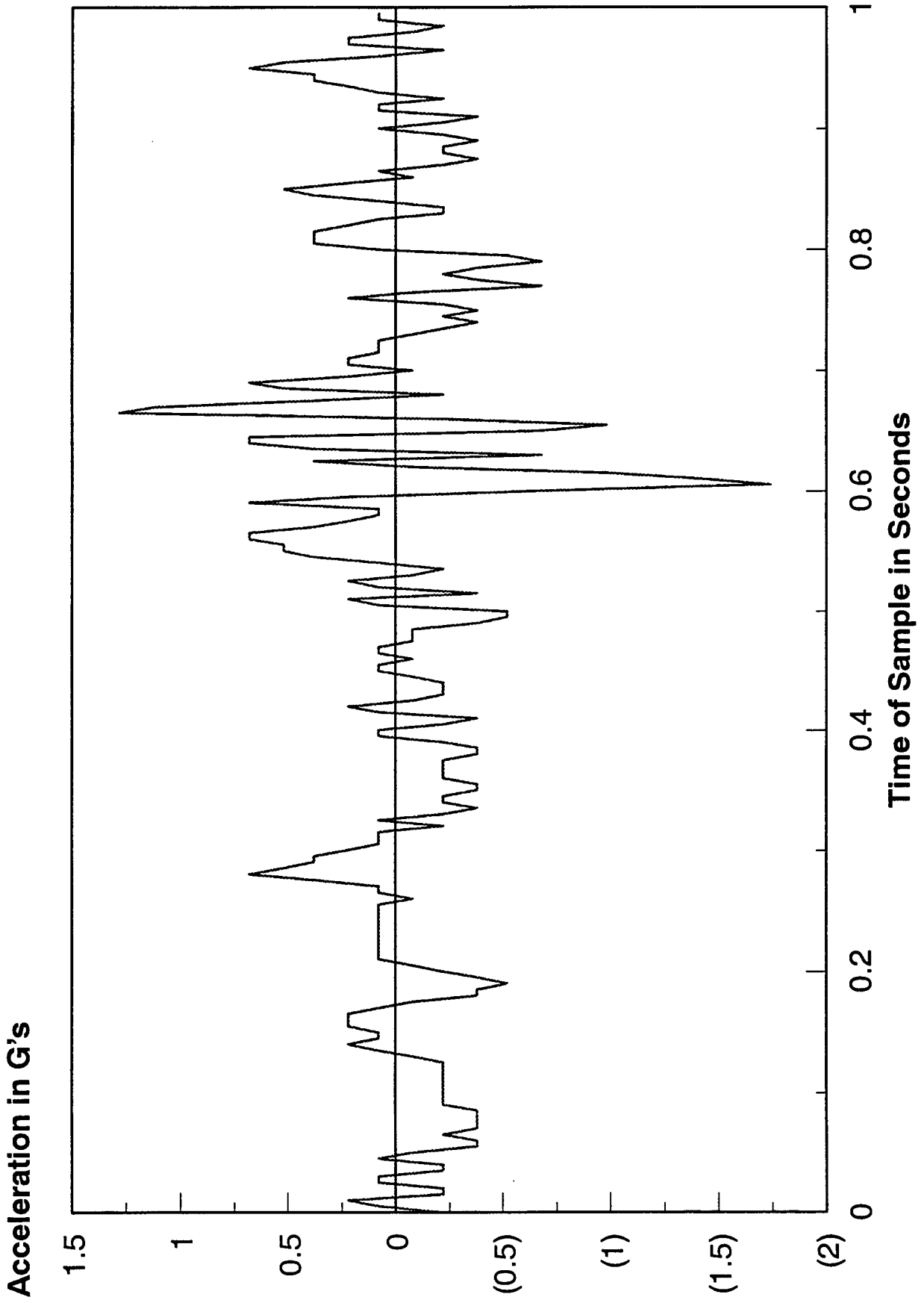
Vertical Acceleration

06-07-96, 08:52:39



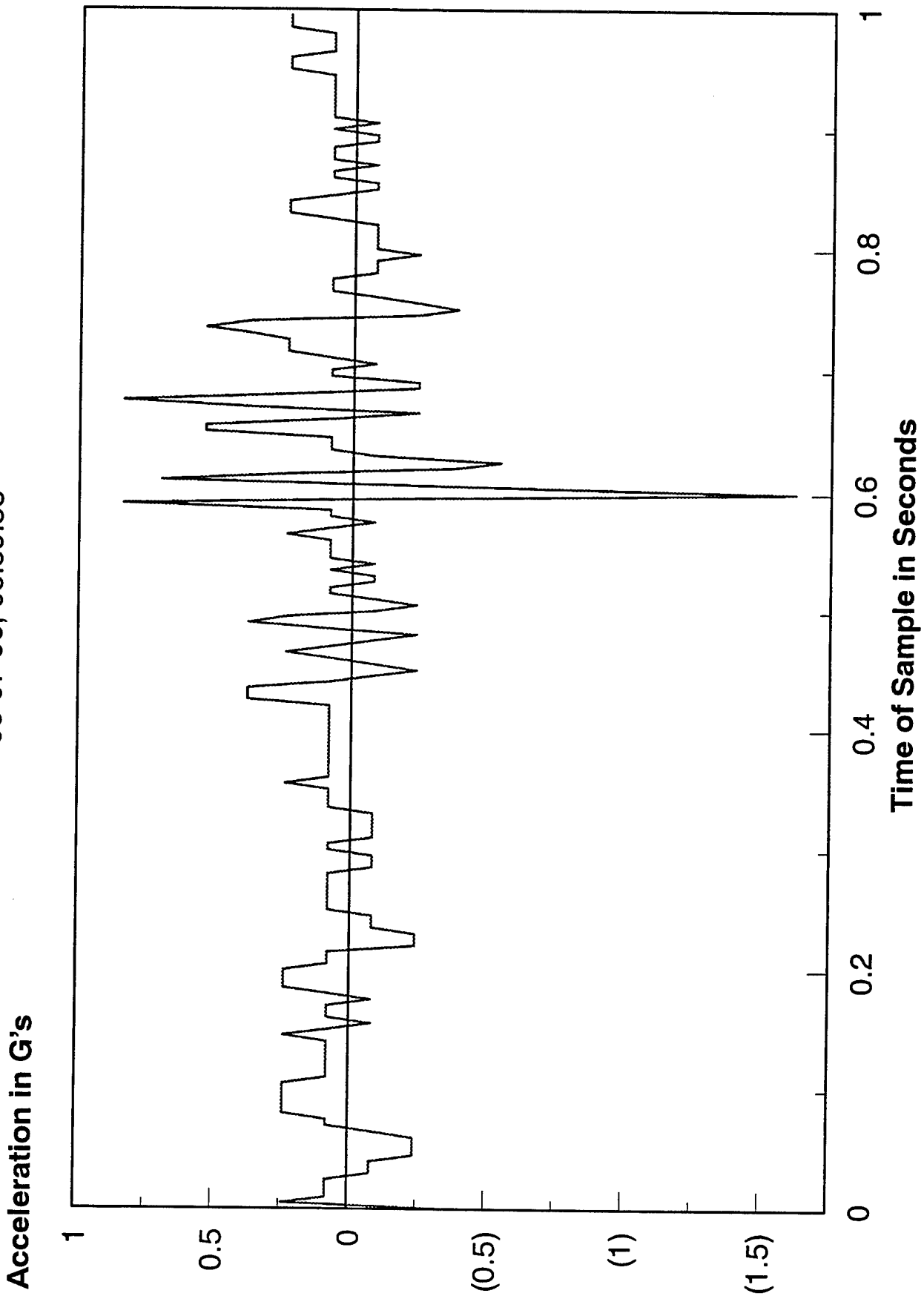
Longitudinal Acceleration

06-07-96, 08:59:58



Lateral Acceleration

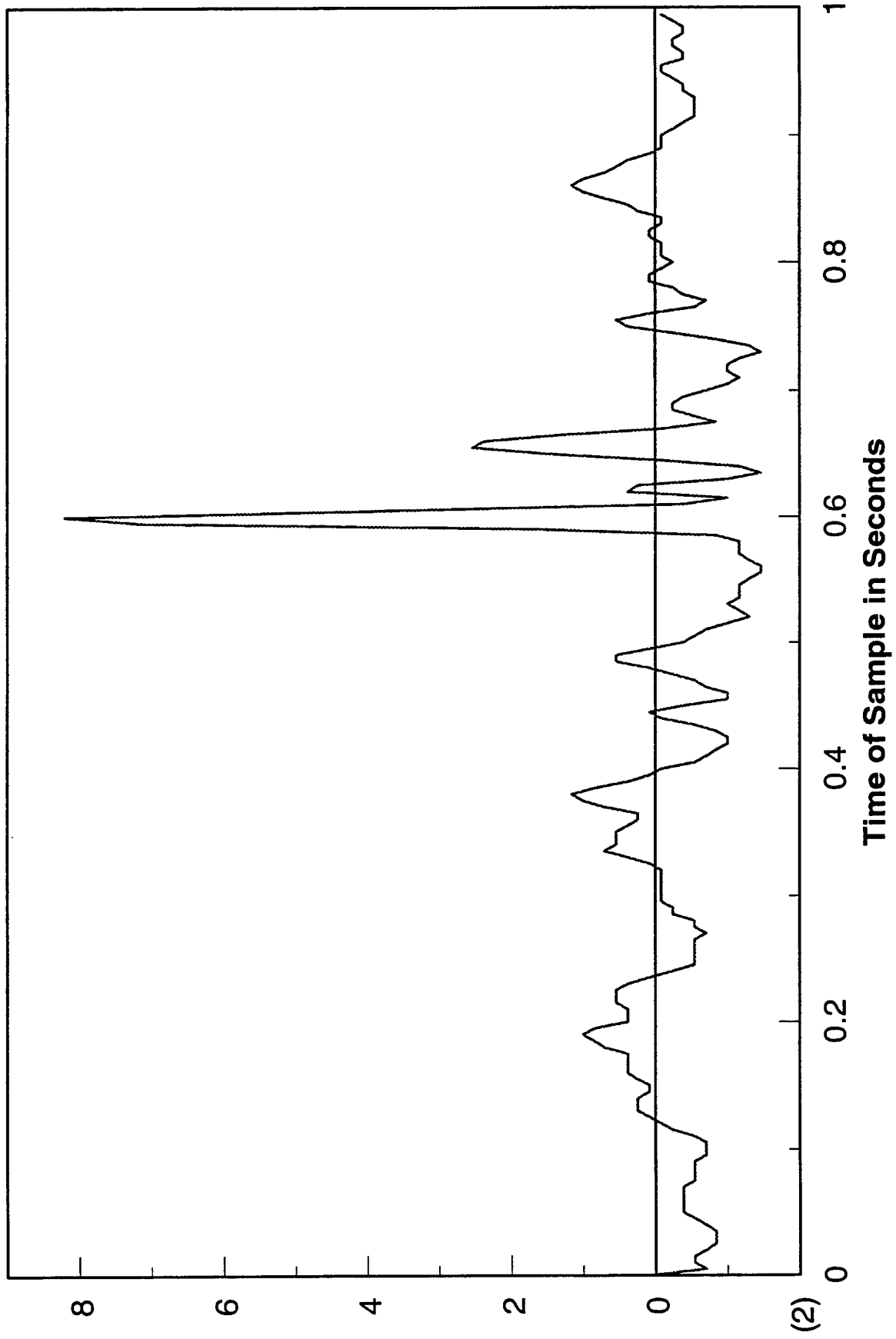
06-07-96, 08:59:58



Vertical Acceleration

06-07-96, 08:59:58

Acceleration in G's



PART 8

MINIMUM AND MAXIMUM VALUES BY EVENT

| Shock/Vibration Report by Event | | | | | | | |
|---------------------------------|----------|--------------------|--------------------|---------------------|---------------------|---------------------|---------------------|
| Date | Time | Lat Accel (min) | Lat Accel (max) | Long Accel (min) | Long Accel (max) | Vert Accel (min) | Vert Accel (max) |
| 06/07/96 | 07:18:35 | -0.22 | 0.08 | -0.26 | 0.06 | -0.34 | 0.42 |
| 06/07/96 | 07:18:52 | -0.92 | 1.04 | -0.24 | 0.22 | -0.82 | 0.56 |
| 06/07/96 | 07:19:08 | -0.48 | 0.26 | -0.26 | 0.34 | -0.34 | 0.42 |
| 06/07/96 | 07:20:03 | -0.22 | 0.24 | -0.26 | 0.06 | -0.36 | 0.42 |
| 06/07/96 | 07:20:19 | -0.64 | 0.72 | -0.26 | 0.20 | -0.64 | 0.44 |
| 06/07/96 | 07:20:35 | -0.66 | 0.54 | -0.42 | 0.36 | -0.36 | 0.70 |
| 06/07/96 | 07:21:42 | -0.48 | 0.58 | -0.24 | 0.22 | -0.36 | 0.42 |
| 06/07/96 | 07:21:59 | -0.36 | 0.24 | -0.10 | 0.06 | -0.34 | 0.44 |
| 06/07/96 | 07:23:04 | -0.62 | 0.74 | -0.26 | 0.20 | -0.36 | 0.56 |
| 06/07/96 | 07:23:21 | -0.64 | 0.72 | -0.26 | 0.20 | -0.36 | 0.56 |
| 06/07/96 | 07:23:37 | -0.22 | 0.08 | -0.26 | 0.20 | -0.46 | 0.46 |
| 06/07/96 | 07:25:05 | -0.22 | 0.08 | -0.26 | 0.20 | -0.50 | 0.42 |
| 06/07/96 | 07:25:24 | -0.48 | 0.42 | -0.26 | 0.06 | -0.38 | 0.54 |
| 06/07/96 | 07:26:14 | -0.64 | 0.86 | -0.54 | 0.38 | -0.68 | 0.70 |
| 06/07/96 | 07:27:03 | -0.48 | 0.42 | -0.10 | 0.06 | -0.36 | 0.26 |
| 06/07/96 | 07:28:08 | -0.36 | 0.24 | -0.40 | 0.20 | -0.48 | 0.44 |
| 06/07/96 | 07:28:24 | -0.22 | 0.08 | -0.10 | 0.06 | -0.46 | 0.30 |
| 06/07/96 | 07:28:43 | -0.22 | 0.08 | -0.10 | 0.06 | -0.32 | 0.28 |
| 06/07/96 | 07:30:18 | -0.50 | 0.40 | -0.26 | 0.50 | -0.80 | 0.74 |
| 06/07/96 | 07:35:04 | -0.50 | 0.40 | -0.26 | 0.22 | -0.36 | 0.42 |
| 06/07/96 | 07:35:55 | -0.36 | 0.24 | -0.56 | 0.52 | -0.36 | 0.26 |
| 06/07/96 | 07:36:45 | -0.20 | 0.24 | -0.40 | 0.22 | -0.46 | 0.46 |
| 06/07/96 | 07:37:37 | -0.22 | 0.22 | -0.42 | 0.20 | -0.48 | 0.58 |
| 06/07/96 | 07:37:54 | -0.20 | 0.24 | -0.26 | 0.36 | -0.36 | 0.40 |
| 06/07/96 | 07:38:14 | -0.36 | 0.38 | -0.40 | 0.36 | -0.52 | 0.40 |
| 06/07/96 | 07:38:35 | -0.34 | 0.26 | -0.42 | 0.20 | -0.34 | 0.28 |
| 06/07/96 | 07:38:53 | -0.22 | 0.24 | -0.56 | 0.52 | -0.52 | 0.56 |
| 06/07/96 | 07:39:19 | -0.20 | 0.10 | -0.24 | 0.22 | -0.36 | 0.40 |
| 06/07/96 | 07:40:09 | -0.22 | 0.08 | -0.24 | 0.22 | -0.34 | 0.42 |
| 06/07/96 | 07:40:25 | -0.20 | 0.10 | -0.10 | 0.06 | -0.28 | 0.32 |

| Shock/Vibration Report by Event | | | | | | | |
|---------------------------------|----------|--------------------|--------------------|---------------------|---------------------|---------------------|---------------------|
| Date | Time | Lat Accel (min) | Lat Accel (max) | Long Accel (min) | Long Accel (max) | Vert Accel (min) | Vert Accel (max) |
| 06/07/96 | 07:41:51 | -0.36 | 0.24 | -0.40 | 0.38 | -0.52 | 0.40 |
| 06/07/96 | 07:42:27 | -0.34 | 0.10 | -0.42 | 0.50 | -0.34 | 0.42 |
| 06/07/96 | 07:43:18 | -0.22 | 0.24 | -0.28 | 0.34 | -0.34 | 0.44 |
| 06/07/96 | 07:44:00 | -0.36 | 0.24 | -0.26 | 0.20 | -0.36 | 0.56 |
| 06/07/96 | 07:44:40 | -0.36 | 0.26 | -0.42 | 0.20 | -0.52 | 0.56 |
| 06/07/96 | 07:45:21 | -0.32 | 0.28 | -0.26 | 0.06 | -0.36 | 0.26 |
| 06/07/96 | 07:45:37 | -0.32 | 0.42 | -0.62 | 0.62 | -0.48 | 0.58 |
| 06/07/96 | 07:47:27 | -0.96 | 1.00 | -0.38 | 0.22 | -0.66 | 1.34 |
| 06/07/96 | 07:47:44 | -0.52 | 0.54 | -0.42 | 0.36 | -0.52 | 0.40 |
| 06/07/96 | 07:48:00 | -0.94 | 1.30 | -0.54 | 0.38 | -0.64 | 1.20 |
| 06/07/96 | 07:48:17 | -0.32 | 0.42 | -0.40 | 0.22 | -0.36 | 0.56 |
| 06/07/96 | 07:49:07 | -0.36 | 0.40 | -0.58 | 0.50 | -0.36 | 0.72 |
| 06/07/96 | 07:49:50 | -0.36 | 0.40 | -0.24 | 0.06 | -0.32 | 0.28 |
| 06/07/96 | 07:50:06 | -0.50 | 0.70 | -0.28 | 0.32 | -0.48 | 0.60 |
| 06/07/96 | 07:50:35 | -0.64 | 0.72 | -0.40 | 0.20 | -0.66 | 0.72 |
| 06/07/96 | 07:51:01 | -0.20 | 0.24 | -0.44 | 0.48 | -0.36 | 0.56 |
| 06/07/96 | 07:51:19 | -0.50 | 0.24 | -0.40 | 0.38 | -0.50 | 0.42 |
| 06/07/96 | 07:51:52 | -0.36 | 0.24 | -0.26 | 0.20 | -0.36 | 0.40 |
| 06/07/96 | 07:54:00 | -0.38 | 0.08 | -0.26 | 0.20 | -0.44 | 0.32 |
| 06/07/96 | 07:54:57 | -0.46 | 0.44 | -0.10 | 0.20 | -0.36 | 0.42 |
| 06/07/96 | 07:55:14 | -0.22 | 0.24 | -0.42 | 0.36 | -0.34 | 0.42 |
| 06/07/96 | 07:55:48 | -0.32 | 0.28 | -0.26 | 0.20 | -0.36 | 0.40 |
| 06/07/96 | 07:56:04 | -0.50 | 0.40 | -0.56 | 0.36 | -0.96 | 1.20 |
| 06/07/96 | 07:56:21 | -0.34 | 0.26 | -0.26 | 0.20 | -0.36 | 0.26 |
| 06/07/96 | 07:56:54 | -0.36 | 0.24 | -0.26 | 0.20 | -0.36 | 0.26 |
| 06/07/96 | 07:58:03 | -0.34 | 0.26 | -0.26 | 0.20 | -0.32 | 0.44 |
| 06/07/96 | 07:58:20 | -0.36 | 0.40 | -0.26 | 0.36 | -0.48 | 0.58 |
| 06/07/96 | 07:58:36 | -0.24 | 0.06 | -0.26 | 0.20 | -0.36 | 0.56 |
| 06/07/96 | 07:58:52 | -0.34 | 0.40 | -0.26 | 0.20 | -0.34 | 0.58 |
| 06/07/96 | 07:59:11 | -0.22 | 0.22 | -0.24 | 0.22 | -0.36 | 0.56 |
| 06/07/96 | 07:59:28 | -0.36 | 0.24 | -0.26 | 0.20 | -0.34 | 0.44 |
| 06/07/96 | 07:59:44 | -0.36 | 0.24 | -0.26 | 0.22 | -0.36 | 0.56 |
| 06/07/96 | 08:00:04 | -0.20 | 0.24 | -0.24 | 0.22 | -0.34 | 0.28 |
| 06/07/96 | 08:00:20 | -0.38 | 0.22 | -0.26 | 0.36 | -0.50 | 0.58 |
| 06/07/96 | 08:00:36 | -0.52 | 0.40 | -0.24 | 0.22 | -0.50 | 0.42 |

Shock/Vibration Report by Event

| Date | Time | Lat Accel (min) | Lat Accel (max) | Long Accel (min) | Long Accel (max) | Vert Accel (min) | Vert Accel (max) |
|-------------|-------------|----------------------------|----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| 06/07/96 | 08:00:52 | -0.38 | 0.38 | -0.26 | 0.20 | -0.36 | 0.56 |
| 06/07/96 | 08:01:26 | -0.34 | 0.10 | -0.26 | 0.36 | -0.54 | 0.70 |
| 06/07/96 | 08:01:43 | -0.34 | 0.26 | -0.26 | 0.20 | -0.52 | 0.40 |
| 06/07/96 | 08:02:01 | -0.36 | 0.40 | -0.24 | 0.22 | -0.36 | 0.40 |
| 06/07/96 | 08:02:18 | -0.34 | 0.26 | -0.26 | 0.20 | -0.50 | 0.42 |
| 06/07/96 | 08:03:07 | -0.22 | 0.08 | -0.26 | 0.06 | -0.44 | 0.62 |
| 06/07/96 | 08:04:44 | -0.50 | 0.40 | -0.26 | 0.20 | -0.52 | 0.54 |
| 06/07/96 | 08:05:00 | -0.34 | 0.26 | -0.26 | 0.20 | -0.32 | 0.28 |
| 06/07/96 | 08:05:36 | -0.36 | 0.24 | -0.40 | 0.36 | -0.68 | 1.02 |
| 06/07/96 | 08:05:52 | -0.34 | 0.40 | -0.26 | 0.20 | -0.34 | 0.42 |
| 06/07/96 | 08:06:25 | -0.34 | 0.26 | -0.24 | 0.22 | -0.50 | 0.58 |
| 06/07/96 | 08:06:42 | -0.20 | 0.24 | -0.24 | 0.22 | -0.50 | 0.58 |
| 06/07/96 | 08:06:58 | -0.48 | 0.42 | -0.26 | 0.20 | -0.34 | 0.42 |
| 06/07/96 | 08:07:14 | -0.20 | 0.26 | -0.24 | 0.22 | -0.34 | 0.42 |
| 06/07/96 | 08:07:30 | -0.38 | 0.24 | -0.42 | 0.20 | -0.50 | 0.56 |
| 06/07/96 | 08:07:47 | -0.20 | 0.10 | -0.26 | 0.06 | -0.48 | 0.60 |
| 06/07/96 | 08:08:03 | -0.52 | 0.38 | -0.56 | 0.66 | -1.14 | 1.16 |
| 06/07/96 | 08:08:19 | -0.24 | 0.22 | -0.26 | 0.20 | -0.62 | 0.60 |
| 06/07/96 | 08:08:35 | -0.36 | 0.24 | -0.26 | 0.20 | -0.46 | 0.60 |
| 06/07/96 | 08:08:52 | -0.36 | 0.40 | -0.26 | 0.36 | -0.68 | 0.86 |
| 06/07/96 | 08:09:08 | -0.50 | 0.40 | -0.26 | 0.36 | -0.50 | 0.72 |
| 06/07/96 | 08:09:24 | -0.52 | 0.54 | -0.40 | 0.38 | -0.94 | 1.20 |
| 06/07/96 | 08:09:41 | -0.50 | 0.56 | -0.26 | 0.36 | -0.50 | 1.18 |
| 06/07/96 | 08:09:57 | -0.22 | 0.22 | -0.26 | 0.20 | -0.34 | 0.58 |
| 06/07/96 | 08:10:13 | -0.32 | 0.28 | -0.26 | 0.36 | -0.66 | 0.72 |
| 06/07/96 | 08:10:29 | -0.36 | 0.24 | -0.24 | 0.22 | -0.48 | 0.58 |
| 06/07/96 | 08:10:46 | -0.36 | 0.24 | -0.26 | 0.36 | -0.50 | 0.58 |
| 06/07/96 | 08:11:02 | -0.38 | 0.22 | -0.26 | 0.20 | -0.50 | 0.42 |
| 06/07/96 | 08:11:19 | -0.38 | 0.38 | -0.42 | 0.34 | -0.82 | 0.72 |
| 06/07/96 | 08:11:35 | -0.54 | 0.36 | -0.22 | 0.08 | -0.36 | 0.86 |
| 06/07/96 | 08:12:21 | -0.36 | 0.40 | -0.28 | 0.34 | -0.34 | 0.42 |
| 06/07/96 | 08:12:39 | -0.20 | 0.10 | -0.40 | 0.36 | -0.22 | 0.40 |
| 06/07/96 | 08:12:55 | -0.34 | 0.26 | -0.42 | 0.50 | -0.34 | 0.42 |
| 06/07/96 | 08:13:11 | -0.34 | 0.40 | -0.44 | 0.18 | -0.36 | 0.40 |
| 06/07/96 | 08:13:27 | -0.66 | 0.40 | -0.42 | 0.36 | -0.64 | 1.06 |

| Shock/Vibration Report by Event | | | | | | | |
|---------------------------------|----------|--------------------|--------------------|---------------------|---------------------|---------------------|---------------------|
| Date | Time | Lat Accel (min) | Lat Accel (max) | Long Accel (min) | Long Accel (max) | Vert Accel (min) | Vert Accel (max) |
| 06/07/96 | 08:13:43 | -0.50 | 0.56 | -0.74 | 0.34 | -0.96 | 1.18 |
| 06/07/96 | 08:14:00 | -0.22 | 0.24 | -0.26 | 0.20 | -0.38 | 0.70 |
| 06/07/96 | 08:14:16 | -0.22 | 0.08 | -0.26 | 0.20 | -0.44 | 0.48 |
| 06/07/96 | 08:15:12 | -0.22 | 0.08 | -0.10 | 0.04 | -0.48 | 0.44 |
| 06/07/96 | 08:19:03 | -0.36 | 0.24 | -0.26 | 0.20 | -0.50 | 0.42 |
| 06/07/96 | 08:19:23 | -0.22 | 0.08 | -0.26 | 0.06 | -0.36 | 0.42 |
| 06/07/96 | 08:20:01 | -0.36 | 0.24 | -0.40 | 0.36 | -0.68 | 0.70 |
| 06/07/96 | 08:20:18 | -0.50 | 0.24 | -0.26 | 0.36 | -0.36 | 0.42 |
| 06/07/96 | 08:21:13 | -0.36 | 0.24 | -0.26 | 0.36 | -0.50 | 0.26 |
| 06/07/96 | 08:21:46 | -0.36 | 0.24 | -0.24 | 0.22 | -0.48 | 0.44 |
| 06/07/96 | 08:22:02 | -0.52 | 0.38 | -0.24 | 0.22 | -0.36 | 0.42 |
| 06/07/96 | 08:22:52 | -0.50 | 0.26 | -0.26 | 0.36 | -0.50 | 0.42 |
| 06/07/96 | 08:23:08 | -0.22 | 0.38 | -0.26 | 0.20 | -0.36 | 0.40 |
| 06/07/96 | 08:23:25 | -0.36 | 0.24 | -0.28 | 0.34 | -0.34 | 0.42 |
| 06/07/96 | 08:23:41 | -0.34 | 0.26 | -0.26 | 0.20 | -0.50 | 0.58 |
| 06/07/96 | 08:23:57 | -0.34 | 0.26 | -0.26 | 0.20 | -0.34 | 0.42 |
| 06/07/96 | 08:24:31 | -0.24 | 0.22 | -0.26 | 0.36 | -0.36 | 0.40 |
| 06/07/96 | 08:24:48 | -0.20 | 0.24 | -0.26 | 0.22 | -0.50 | 0.74 |
| 06/07/96 | 08:25:04 | -0.34 | 0.26 | -0.24 | 0.06 | -0.36 | 0.40 |
| 06/07/96 | 08:26:42 | -0.36 | 0.24 | -0.26 | 0.20 | -0.36 | 0.42 |
| 06/07/96 | 08:26:59 | -0.24 | 0.36 | -0.26 | 0.20 | -0.34 | 0.28 |
| 06/07/96 | 08:27:15 | -0.34 | 0.26 | -0.24 | 0.08 | -0.64 | 0.74 |
| 06/07/96 | 08:27:32 | -0.36 | 0.68 | -0.26 | 0.20 | -0.78 | 1.20 |
| 06/07/96 | 08:27:48 | -0.22 | 0.24 | -0.24 | 0.06 | -0.76 | 0.78 |
| 06/07/96 | 08:28:04 | -0.36 | 0.24 | -0.24 | 0.22 | -0.34 | 0.44 |
| 06/07/96 | 08:28:21 | -0.36 | 0.24 | -0.10 | 0.20 | -0.78 | 0.74 |
| 06/07/96 | 08:28:37 | -0.34 | 0.10 | -0.26 | 0.22 | -0.36 | 0.70 |
| 06/07/96 | 08:29:28 | -0.36 | 0.24 | -0.24 | 0.22 | -0.52 | 0.40 |
| 06/07/96 | 08:29:46 | -0.34 | 0.26 | -0.26 | 0.34 | -0.36 | 0.40 |
| 06/07/96 | 08:30:51 | -0.22 | 0.08 | -0.26 | 0.20 | -0.34 | 0.42 |
| 06/07/96 | 08:31:07 | -0.20 | 0.10 | -0.26 | 0.22 | -0.48 | 0.60 |
| 06/07/96 | 08:31:41 | -0.34 | 0.26 | -0.24 | 0.22 | -0.36 | 0.42 |
| 06/07/96 | 08:32:13 | -0.34 | 0.42 | -0.26 | 0.20 | -0.48 | 0.58 |
| 06/07/96 | 08:33:38 | -0.22 | 0.24 | -0.24 | 0.22 | -0.36 | 0.42 |
| 06/07/96 | 08:33:55 | -0.34 | 0.26 | -0.26 | 0.20 | -0.48 | 0.44 |

Shock/Vibration Report by Event

| Date | Time | Lat Accel (min) | Lat Accel (max) | Long Accel (min) | Long Accel (max) | Vert Accel (min) | Vert Accel (max) |
|----------|----------|--------------------|--------------------|---------------------|---------------------|---------------------|---------------------|
| 06/07/96 | 08:34:11 | -0.22 | 0.24 | -0.26 | 0.20 | -0.52 | 0.72 |
| 06/07/96 | 08:34:27 | -0.22 | 0.08 | -0.26 | 0.20 | -0.50 | 0.58 |
| 06/07/96 | 08:34:45 | -0.20 | 0.10 | -0.24 | 0.22 | -0.50 | 0.42 |
| 06/07/96 | 08:35:01 | -0.22 | 0.08 | -0.24 | 0.22 | -0.60 | 0.62 |
| 06/07/96 | 08:35:18 | -0.34 | 0.12 | -0.26 | 0.20 | -0.36 | 0.40 |
| 06/07/96 | 08:35:35 | -0.22 | 0.08 | -0.26 | 0.36 | -0.36 | 0.56 |
| 06/07/96 | 08:35:51 | -0.22 | 0.08 | -0.26 | 0.20 | -0.50 | 0.58 |
| 06/07/96 | 08:36:08 | -0.34 | 0.42 | -0.26 | 0.20 | -0.50 | 0.42 |
| 06/07/96 | 08:36:59 | -0.50 | 0.26 | -0.26 | 0.20 | -0.34 | 0.44 |
| 06/07/96 | 08:37:16 | -0.36 | 0.40 | -0.26 | 0.20 | -0.48 | 0.44 |
| 06/07/96 | 08:37:32 | -0.34 | 0.26 | -0.26 | 0.22 | -0.34 | 0.42 |
| 06/07/96 | 08:38:05 | -0.34 | 0.26 | -0.24 | 0.22 | -0.48 | 0.44 |
| 06/07/96 | 08:38:55 | -0.36 | 0.40 | -0.26 | 0.20 | -0.52 | 0.56 |
| 06/07/96 | 08:39:12 | -0.20 | 0.26 | -0.26 | 0.36 | -0.50 | 0.42 |
| 06/07/96 | 08:39:28 | -0.34 | 0.26 | -0.26 | 0.22 | -0.46 | 0.30 |
| 06/07/96 | 08:40:02 | -0.36 | 0.24 | -0.26 | 0.20 | -0.34 | 0.42 |
| 06/07/96 | 08:40:19 | -0.22 | 0.24 | -0.26 | 0.20 | -0.36 | 0.42 |
| 06/07/96 | 08:40:36 | -0.36 | 0.24 | -0.24 | 0.22 | -0.34 | 0.58 |
| 06/07/96 | 08:40:52 | -0.36 | 0.24 | -0.26 | 0.36 | -0.32 | 0.28 |
| 06/07/96 | 08:41:10 | -0.52 | 0.38 | -0.44 | 0.50 | -0.36 | 0.56 |
| 06/07/96 | 08:43:12 | -0.36 | 0.08 | -0.26 | 0.20 | -0.46 | 0.46 |
| 06/07/96 | 08:43:39 | -0.20 | 0.26 | -0.26 | 0.36 | -0.36 | 0.26 |
| 06/07/96 | 08:45:41 | -0.34 | 0.28 | -0.28 | 0.34 | -0.34 | 0.42 |
| 06/07/96 | 08:46:52 | -0.22 | 0.10 | -0.26 | 0.36 | -0.36 | 0.42 |
| 06/07/96 | 08:47:56 | -0.20 | 0.10 | -0.24 | 0.22 | -0.34 | 0.28 |
| 06/07/96 | 08:48:36 | -0.36 | 0.24 | -0.24 | 0.22 | -0.36 | 0.42 |
| 06/07/96 | 08:48:52 | -0.36 | 0.10 | -0.26 | 0.36 | -0.48 | 0.60 |
| 06/07/96 | 08:51:33 | -0.22 | 0.08 | -0.26 | 0.06 | -0.50 | 0.42 |
| 06/07/96 | 08:51:50 | -0.66 | 0.40 | -0.24 | 0.22 | -0.74 | 0.96 |
| 06/07/96 | 08:52:23 | -0.52 | 0.54 | -0.54 | 0.38 | -0.76 | 0.92 |
| 06/07/96 | 08:52:39 | -1.66 | 2.26 | -0.68 | 1.02 | -1.30 | 1.92 |
| 06/07/96 | 08:52:57 | -0.34 | 0.26 | -0.24 | 0.22 | -0.34 | 0.42 |
| 06/07/96 | 08:54:10 | -0.36 | 0.40 | -0.24 | 0.22 | -0.74 | 0.50 |
| 06/07/96 | 08:54:26 | -0.38 | 0.38 | -0.42 | 0.50 | -0.76 | 0.92 |
| 06/07/96 | 08:56:38 | -0.20 | 0.10 | -0.26 | 0.36 | -0.36 | 0.42 |

| Shock/Vibration Report by Event | | | | | | | |
|---------------------------------|----------|--------------------|--------------------|---------------------|---------------------|---------------------|---------------------|
| Date | Time | Lat Accel (min) | Lat Accel (max) | Long Accel (min) | Long Accel (max) | Vert Accel (min) | Vert Accel (max) |
| 06/07/96 | 08:56:54 | -0.36 | 0.24 | -0.24 | 0.22 | -0.36 | 0.40 |
| 06/07/96 | 08:57:11 | -0.34 | 0.26 | -0.26 | 0.20 | -0.34 | 0.44 |
| 06/07/96 | 08:57:44 | -0.22 | 0.08 | -0.26 | 0.20 | -0.62 | 0.60 |
| 06/07/96 | 08:58:01 | -0.22 | 0.08 | -0.24 | 0.36 | -0.48 | 0.44 |
| 06/07/96 | 08:58:18 | -0.36 | 0.24 | -0.26 | 0.06 | -0.50 | 0.42 |
| 06/07/96 | 08:59:09 | -0.34 | 0.26 | -0.24 | 0.22 | -0.34 | 0.42 |
| 06/07/96 | 08:59:26 | -1.26 | 1.30 | -0.72 | 0.66 | -1.26 | 2.88 |
| 06/07/96 | 08:59:42 | -0.22 | 0.24 | -0.10 | 0.20 | -0.34 | 0.58 |
| 06/07/96 | 08:59:58 | -1.70 | 1.32 | -1.66 | 0.80 | -1.36 | 8.30 |
| 06/07/96 | 09:00:15 | -0.50 | 0.40 | -0.26 | 0.20 | -0.66 | 0.88 |
| 06/07/96 | 09:00:31 | -1.98 | 1.02 | -1.34 | 0.82 | -1.22 | 7.08 |
| 06/07/96 | 09:00:47 | -0.22 | 0.24 | -0.24 | 0.22 | -0.46 | 0.46 |
| 06/07/96 | 09:01:04 | -0.48 | 0.42 | -0.24 | 0.22 | -0.48 | 0.58 |
| 06/07/96 | 09:01:20 | -0.50 | 0.40 | -0.24 | 0.22 | -0.46 | 0.32 |
| 06/07/96 | 09:01:36 | -0.50 | 0.40 | -0.40 | 0.36 | -0.94 | 1.04 |
| 06/07/96 | 09:01:52 | -0.36 | 0.70 | -0.24 | 0.22 | -0.62 | 1.06 |
| 06/07/96 | 09:02:09 | -0.22 | 0.08 | -0.10 | 0.20 | -0.48 | 0.44 |
| 06/07/96 | 09:02:25 | -0.36 | 0.24 | -0.26 | 0.20 | -0.34 | 0.42 |
| 06/07/96 | 09:03:17 | -0.36 | 0.24 | -0.24 | 0.22 | -0.50 | 0.74 |
| 06/07/96 | 09:03:33 | -0.36 | 0.24 | -0.10 | 0.20 | -0.62 | 0.76 |
| 06/07/96 | 09:03:49 | -0.52 | 0.54 | -0.26 | 0.20 | -0.78 | 0.90 |
| 06/07/96 | 09:04:06 | -0.34 | 0.26 | -0.26 | 0.20 | -0.52 | 0.56 |
| 06/07/96 | 09:04:22 | -0.34 | 0.26 | -0.10 | 0.06 | -0.50 | 0.58 |
| 06/07/96 | 09:04:38 | -0.34 | 0.26 | -0.26 | 0.20 | -0.50 | 0.56 |
| 06/07/96 | 09:04:55 | -0.34 | 0.26 | -0.26 | 0.04 | -0.46 | 0.46 |
| 06/07/96 | 09:05:11 | -0.36 | 0.10 | -0.24 | 0.06 | -0.48 | 0.44 |
| 06/07/96 | 09:05:27 | -0.52 | 0.54 | -0.40 | 0.22 | -0.92 | 1.06 |
| 06/07/96 | 09:05:43 | -0.62 | 0.42 | -0.56 | 0.36 | -0.60 | 0.78 |
| 06/07/96 | 09:06:00 | -0.36 | 0.26 | -0.24 | 0.06 | -0.48 | 0.46 |
| 06/07/96 | 09:06:16 | -0.34 | 0.28 | -0.26 | 0.34 | -0.48 | 0.44 |
| 06/07/96 | 09:06:32 | -0.36 | 0.54 | -0.42 | 0.50 | -0.96 | 1.34 |
| 06/07/96 | 09:06:48 | -0.52 | 0.54 | -0.24 | 0.22 | -0.94 | 1.52 |
| 06/07/96 | 09:07:05 | -0.34 | 0.40 | -0.26 | 0.20 | -0.48 | 0.60 |
| 06/07/96 | 09:07:21 | -0.20 | 0.10 | -0.24 | 0.06 | -0.34 | 0.58 |
| 06/07/96 | 09:07:37 | -0.50 | 0.24 | -0.42 | 0.36 | -0.52 | 0.56 |

Shock/Vibration Report by Event

| Date | Time | Lat Accel (min) | Lat Accel (max) | Long Accel (min) | Long Accel (max) | Vert Accel (min) | Vert Accel (max) |
|----------|----------|--------------------|--------------------|---------------------|---------------------|---------------------|---------------------|
| 06/07/96 | 09:07:53 | -0.38 | 0.38 | -0.26 | 0.22 | -0.66 | 1.02 |
| 06/07/96 | 09:08:10 | -0.22 | 0.24 | -0.26 | 0.20 | -0.34 | 0.44 |
| 06/07/96 | 09:08:43 | -0.34 | 0.26 | -0.26 | 0.20 | -0.50 | 0.58 |
| 06/07/96 | 09:08:59 | -0.34 | 0.26 | -0.26 | 0.20 | -0.50 | 0.42 |
| 06/07/96 | 09:09:16 | -0.34 | 0.42 | -0.24 | 0.22 | -0.64 | 0.74 |
| 06/07/96 | 09:09:33 | -0.20 | 0.24 | -0.24 | 0.22 | -0.34 | 0.42 |
| 06/07/96 | 09:09:49 | -0.22 | 0.24 | -0.26 | 0.20 | -0.48 | 0.44 |
| 06/07/96 | 09:10:05 | -0.34 | 0.26 | -0.26 | 0.20 | -0.50 | 0.58 |
| 06/07/96 | 09:10:21 | -0.48 | 0.28 | -0.24 | 0.22 | -0.80 | 0.74 |
| 06/07/96 | 09:10:53 | -0.50 | 0.56 | -0.40 | 0.22 | -0.92 | 0.62 |
| 06/07/96 | 09:11:10 | -0.34 | 0.26 | -0.24 | 0.22 | -0.50 | 0.42 |
| 06/07/96 | 09:12:51 | -0.36 | 0.24 | -0.40 | 0.36 | -0.62 | 0.78 |
| 06/07/96 | 09:13:07 | -0.34 | 0.40 | -0.26 | 0.20 | -0.50 | 0.58 |
| 06/07/96 | 09:13:23 | -0.34 | 0.26 | -0.26 | 0.22 | -0.50 | 0.58 |
| 06/07/96 | 09:13:57 | -0.36 | 0.24 | -0.24 | 0.36 | -0.64 | 0.58 |
| 06/07/96 | 09:14:32 | -0.34 | 0.26 | -0.26 | 0.22 | -0.36 | 0.42 |
| 06/07/96 | 09:15:05 | -0.34 | 0.26 | -0.10 | 0.20 | -0.20 | 0.40 |
| 06/07/96 | 09:42:35 | -0.52 | 0.38 | -0.60 | 0.64 | -0.82 | 1.50 |
| 06/07/96 | 09:42:52 | -0.36 | 0.26 | -0.26 | 0.20 | -0.34 | 0.28 |
| 06/07/96 | 09:43:08 | -0.36 | 0.40 | -0.42 | 0.34 | -0.66 | 0.88 |
| 06/07/96 | 09:43:58 | -0.36 | 0.26 | -0.26 | 0.22 | -0.36 | 0.56 |
| 06/07/96 | 09:44:14 | -0.48 | 0.28 | -0.24 | 0.22 | -0.80 | 0.74 |
| 06/07/96 | 09:44:30 | -0.36 | 0.26 | -0.26 | 0.22 | -0.60 | 0.62 |
| 06/07/96 | 09:44:47 | -0.34 | 0.28 | -0.24 | 0.22 | -0.34 | 0.44 |
| 06/07/96 | 09:45:03 | -0.36 | 0.26 | -0.26 | 0.22 | -0.64 | 0.44 |
| 06/07/96 | 09:45:19 | -0.36 | 0.38 | -0.58 | 0.52 | -0.64 | 1.36 |
| 06/07/96 | 09:45:35 | -0.36 | 0.40 | -0.26 | 0.20 | -0.50 | 0.74 |
| 06/07/96 | 09:45:52 | -0.50 | 0.40 | -0.24 | 0.22 | -0.64 | 0.74 |
| 06/07/96 | 09:51:02 | -0.20 | 0.26 | -0.10 | 0.22 | -0.34 | 0.42 |
| 06/07/96 | 09:51:19 | -0.36 | 0.24 | -0.26 | 0.36 | -0.34 | 0.44 |
| 06/07/96 | 09:51:35 | -0.36 | 0.26 | -0.26 | 0.20 | -0.36 | 0.56 |
| 06/07/96 | 09:52:09 | -0.34 | 0.42 | -0.28 | 0.50 | -0.36 | 0.56 |
| 06/07/96 | 09:52:25 | -0.36 | 0.24 | -0.10 | 0.06 | -0.36 | 0.42 |
| 06/07/96 | 09:52:42 | -0.34 | 0.26 | -0.26 | 0.22 | -0.34 | 0.44 |
| 06/07/96 | 09:53:33 | -0.36 | 0.24 | -0.26 | 0.20 | -0.36 | 0.42 |

Shock/Vibration Report by Event

| Date | Time | Lat Accel (min) | Lat Accel (max) | Long Accel (min) | Long Accel (max) | Vert Accel (min) | Vert Accel (max) |
|-------------|-------------|----------------------------|----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| 06/07/96 | 09:55:23 | -0.32 | 0.28 | -0.42 | 0.36 | -0.38 | 0.70 |
| 06/07/96 | 09:56:16 | -0.20 | 0.10 | -0.26 | 0.20 | -0.36 | 0.42 |
| 06/07/96 | 09:56:33 | -0.22 | 0.24 | -0.28 | 0.18 | -0.36 | 0.56 |
| 06/07/96 | 09:57:23 | -0.36 | 0.24 | -0.26 | 0.20 | -0.34 | 0.58 |
| 06/07/96 | 09:57:42 | -0.22 | 0.22 | -0.26 | 0.52 | -0.50 | 0.58 |
| 06/07/96 | 10:00:59 | -0.34 | 0.26 | -0.26 | 0.22 | -0.34 | 0.44 |
| 06/07/96 | 10:01:48 | -0.22 | 0.10 | -0.26 | 0.20 | -0.36 | 0.58 |
| 06/07/96 | 10:02:22 | -0.22 | 0.24 | -0.26 | 0.20 | -0.50 | 0.58 |
| 06/07/96 | 10:02:38 | -0.36 | 0.40 | -0.24 | 0.22 | -0.64 | 0.74 |
| 06/07/96 | 10:02:54 | -0.20 | 0.26 | -0.24 | 0.22 | -0.36 | 0.72 |
| 06/07/96 | 10:03:11 | -0.22 | 0.24 | -0.26 | 0.20 | -0.50 | 0.58 |
| 06/07/96 | 10:03:43 | -0.22 | 0.24 | -0.26 | 0.20 | -0.48 | 0.44 |
| 06/07/96 | 10:04:00 | -0.36 | 0.40 | -0.26 | 0.20 | -0.50 | 0.58 |
| 06/07/96 | 10:04:16 | -0.22 | 0.24 | -0.26 | 0.20 | -0.34 | 0.58 |
| 06/07/96 | 10:04:32 | -0.48 | 0.12 | -0.42 | 0.36 | -0.96 | 1.36 |
| 06/07/96 | 10:05:23 | -0.22 | 0.24 | -0.26 | 0.20 | -0.22 | 0.40 |
| 06/07/96 | 10:06:51 | -0.34 | 0.26 | -0.26 | 0.20 | -0.20 | 0.42 |
| 06/07/96 | 10:07:08 | -0.36 | 0.40 | -0.24 | 0.22 | -0.34 | 0.28 |
| 06/07/96 | 10:07:43 | -0.34 | 0.28 | -0.24 | 0.22 | -0.34 | 0.28 |
| 06/07/96 | 10:08:16 | -0.34 | 0.10 | -0.26 | 0.20 | -0.34 | 0.28 |
| 06/07/96 | 10:08:32 | -0.38 | 0.38 | -0.26 | 0.20 | -0.36 | 0.26 |
| 06/07/96 | 10:09:06 | -0.36 | 0.26 | -0.26 | 0.06 | -0.32 | 0.44 |
| 06/07/96 | 10:09:22 | -0.22 | 0.22 | -0.26 | 0.06 | -0.50 | 0.58 |
| 06/07/96 | 10:09:40 | -0.20 | 0.10 | -0.28 | 0.18 | -0.36 | 0.42 |
| 06/07/96 | 10:09:57 | -0.34 | 0.26 | -0.26 | 0.20 | -0.36 | 0.42 |
| 06/07/96 | 10:10:14 | -0.22 | 0.22 | -0.26 | 0.20 | -0.48 | 0.44 |
| 06/07/96 | 10:10:30 | -0.36 | 0.24 | -0.26 | 0.20 | -0.48 | 0.44 |
| 06/07/96 | 10:11:04 | -0.36 | 0.40 | -0.26 | 0.20 | -0.50 | 0.58 |
| 06/07/96 | 10:13:41 | -0.36 | 0.40 | -0.26 | 0.22 | -0.36 | 0.56 |
| 06/07/96 | 10:15:13 | -0.22 | 0.24 | -0.12 | 0.20 | -0.36 | 0.42 |
| 06/07/96 | 10:15:49 | -0.18 | 0.12 | -0.26 | 0.36 | -0.36 | 0.40 |
| 06/07/96 | 10:16:40 | -0.34 | 0.10 | -0.40 | 0.22 | -0.36 | 0.42 |
| 06/07/96 | 10:18:00 | -0.20 | 0.26 | -0.26 | 0.22 | -0.36 | 0.40 |
| 06/07/96 | 10:18:42 | -0.36 | 0.24 | -0.26 | 0.20 | -0.32 | 0.30 |
| 06/07/96 | 10:19:15 | -0.20 | 0.26 | -0.26 | 0.20 | -0.36 | 0.42 |

Shock/Vibration Report by Event

| Date | Time | Lat Accel (min) | Lat Accel (max) | Long Accel (min) | Long Accel (max) | Vert Accel (min) | Vert Accel (max) |
|----------|----------|--------------------|--------------------|---------------------|---------------------|---------------------|---------------------|
| 06/07/96 | 10:19:32 | -0.22 | 0.08 | -0.24 | 0.22 | -0.36 | 0.42 |
| 06/07/96 | 10:19:49 | -0.36 | 0.24 | -0.24 | 0.22 | -0.50 | 0.58 |
| 06/07/96 | 10:20:05 | -0.22 | 0.38 | -0.24 | 0.22 | -0.60 | 0.48 |
| 06/07/96 | 10:22:58 | -0.36 | 0.24 | -0.10 | 0.20 | -0.34 | 0.28 |
| 06/07/96 | 10:24:00 | -0.34 | 0.12 | -0.28 | 0.20 | -0.34 | 0.28 |
| 06/07/96 | 10:25:54 | -0.36 | 0.40 | -0.24 | 0.38 | -0.52 | 0.56 |
| 06/07/96 | 10:26:16 | -0.20 | 0.26 | -0.26 | 0.22 | -0.50 | 0.42 |
| 06/07/96 | 10:27:20 | -0.36 | 0.26 | -0.26 | 0.20 | -0.36 | 0.24 |
| 06/07/96 | 10:27:53 | -0.36 | 0.24 | -0.26 | 0.06 | -0.36 | 0.42 |
| 06/07/96 | 10:28:28 | -0.20 | 0.26 | -0.26 | 0.20 | -0.38 | 0.54 |
| 06/07/96 | 10:42:33 | -0.52 | 0.40 | -0.26 | 0.20 | -0.44 | 0.34 |
| 06/07/96 | 10:49:14 | -0.36 | 0.40 | -0.42 | 0.36 | -0.64 | 0.60 |
| 06/07/96 | 10:49:30 | -0.34 | 0.26 | -0.24 | 0.06 | -0.52 | 0.72 |
| 06/07/96 | 10:50:02 | -0.34 | 0.42 | -0.42 | 0.20 | -0.76 | 0.94 |
| 06/07/96 | 10:50:19 | -0.48 | 0.42 | -0.26 | 0.36 | -0.78 | 1.54 |
| 06/07/96 | 10:52:05 | -0.34 | 0.26 | -0.26 | 0.06 | -0.50 | 0.74 |
| 06/07/96 | 10:52:38 | -0.22 | 0.24 | -0.10 | 0.20 | -0.80 | 0.58 |
| 06/07/96 | 10:53:27 | -0.40 | 0.52 | -0.26 | 0.36 | -0.86 | 0.68 |
| 06/07/96 | 10:55:41 | -0.50 | 0.42 | -0.26 | 0.52 | -0.84 | 1.32 |
| 06/07/96 | 10:55:57 | -0.52 | 0.98 | -0.40 | 0.38 | -1.08 | 1.86 |
| 06/07/96 | 10:56:13 | -0.52 | 0.38 | -0.26 | 0.36 | -0.60 | 0.64 |
| 06/07/96 | 10:58:10 | -0.34 | 0.26 | -0.26 | 0.22 | -0.52 | 0.72 |
| 06/07/96 | 11:00:44 | -0.64 | 0.88 | -0.72 | 0.68 | -0.52 | 0.88 |
| 06/07/96 | 11:02:06 | -0.36 | 0.26 | -0.74 | 0.36 | -0.64 | 1.06 |
| 06/07/96 | 11:02:23 | -0.36 | 0.40 | -0.42 | 0.36 | -0.52 | 0.58 |
| 06/07/96 | 11:02:55 | -0.48 | 0.42 | -0.88 | 0.36 | -0.82 | 0.90 |
| 06/07/96 | 11:03:12 | -0.34 | 0.26 | -0.42 | 0.36 | -0.66 | 1.06 |
| 06/07/96 | 11:04:33 | -0.36 | 0.54 | -0.86 | 0.40 | -0.64 | 1.22 |
| 06/07/96 | 11:05:39 | -0.68 | 0.70 | -0.38 | 0.24 | -0.96 | 1.22 |
| 06/07/96 | 11:08:18 | -0.36 | 0.40 | -0.44 | 0.50 | -0.96 | 1.52 |
| 06/07/96 | 11:09:50 | -0.34 | 0.26 | -0.42 | 0.20 | -0.50 | 0.58 |
| 06/07/96 | 11:15:19 | -0.52 | 0.56 | -0.42 | 0.36 | -1.12 | 1.68 |
| 06/07/96 | 11:21:45 | -0.48 | 0.42 | -0.40 | 0.22 | -0.94 | 0.92 |
| 06/07/96 | 11:23:45 | -0.36 | 0.40 | -0.26 | 0.22 | -0.48 | 0.76 |
| 06/07/96 | 11:28:10 | -0.36 | 0.26 | -0.26 | 0.36 | -0.68 | 0.88 |

Shock/Vibration Report by Event

| Date | Time | Lat Accel (min) | Lat Accel (max) | Long Accel (min) | Long Accel (max) | Vert Accel (min) | Vert Accel (max) |
|-------------|-------------|----------------------------|----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| 06/07/96 | 11:34:07 | -0.38 | 0.40 | -0.10 | 0.20 | -0.48 | 0.46 |
| 06/07/96 | 11:37:01 | -0.38 | 0.38 | -0.40 | 0.22 | -0.64 | 0.76 |
| 06/07/96 | 11:37:17 | -0.36 | 0.70 | -0.42 | 0.52 | -0.62 | 0.62 |
| 06/07/96 | 11:37:35 | -0.34 | 0.42 | -0.40 | 0.38 | -0.82 | 0.58 |
| 06/07/96 | 12:42:19 | -0.34 | 0.28 | -0.26 | 0.22 | -0.48 | 0.46 |
| 06/07/96 | 12:42:35 | -0.50 | 0.72 | -0.26 | 0.22 | -1.00 | 1.06 |
| 06/07/96 | 12:43:08 | -0.52 | 0.42 | -0.76 | 0.66 | -0.66 | 0.92 |
| 06/07/96 | 12:43:59 | -0.40 | 0.38 | -0.26 | 0.06 | -0.46 | 0.48 |
| 06/07/96 | 12:46:49 | -0.36 | 0.56 | -0.42 | 0.38 | -0.52 | 0.74 |
| 06/07/96 | 12:47:27 | -0.82 | 0.58 | -1.04 | 0.54 | -0.68 | 1.04 |
| 06/07/96 | 12:50:11 | -0.36 | 0.56 | -0.28 | 0.20 | -0.52 | 0.58 |
| 06/07/96 | 13:01:17 | -0.38 | 0.40 | -0.26 | 0.06 | -0.50 | 0.58 |
| 06/07/96 | 13:01:33 | -0.34 | 0.26 | -0.40 | 0.22 | -0.66 | 0.58 |
| 06/07/96 | 13:01:49 | -0.36 | 0.42 | -0.56 | 0.54 | -0.62 | 0.94 |
| 06/07/96 | 13:03:12 | -0.36 | 0.26 | -0.10 | 0.20 | -0.50 | 0.76 |
| 06/07/96 | 13:03:28 | -0.36 | 0.24 | -0.26 | 0.20 | -0.52 | 0.58 |
| 06/07/96 | 13:03:45 | -0.52 | 0.40 | -0.44 | 0.34 | -0.64 | 0.76 |
| 06/07/96 | 13:04:50 | -0.36 | 0.26 | -0.26 | 0.20 | -0.50 | 0.74 |
| 06/07/96 | 13:07:33 | -0.36 | 0.40 | -0.24 | 0.22 | -0.52 | 0.74 |
| 06/07/96 | 13:07:49 | -0.36 | 0.40 | -0.26 | 0.22 | -0.66 | 0.74 |
| 06/07/96 | 13:08:06 | -0.34 | 0.28 | -0.26 | 0.20 | -0.60 | 0.64 |
| 06/07/96 | 13:08:38 | -0.36 | 0.24 | -0.42 | 0.36 | -0.76 | 0.80 |
| 06/07/96 | 13:09:27 | -0.36 | 0.42 | -0.26 | 0.22 | -0.64 | 0.62 |
| 06/07/96 | 13:09:44 | -0.22 | 0.40 | -0.24 | 0.22 | -0.82 | 1.06 |
| 06/07/96 | 13:10:17 | -0.36 | 0.26 | -0.26 | 0.20 | -0.50 | 0.74 |
| 06/07/96 | 13:10:34 | -0.36 | 0.40 | -0.26 | 0.20 | -0.58 | 0.50 |
| 06/07/96 | 13:14:08 | -0.34 | 0.58 | -0.40 | 0.22 | -1.00 | 1.02 |
| 06/07/96 | 13:15:54 | -0.22 | 0.38 | -0.26 | 0.06 | -0.60 | 0.96 |
| 06/07/96 | 13:29:16 | -0.50 | 0.56 | -0.56 | 0.38 | -0.48 | 0.60 |
| 06/07/96 | 13:29:33 | -0.50 | 0.42 | -0.72 | 0.52 | -0.52 | 0.88 |
| 06/07/96 | 13:29:49 | -0.52 | 0.24 | -0.40 | 0.38 | -0.94 | 0.92 |
| 06/07/96 | 13:30:23 | -0.54 | 0.68 | -0.56 | 0.54 | -0.80 | 0.92 |
| 06/07/96 | 13:31:13 | -0.46 | 0.60 | -0.56 | 0.38 | -0.66 | 1.06 |
| 06/07/96 | 13:32:34 | -0.54 | 0.54 | -0.58 | 0.68 | -0.76 | 0.96 |
| 06/07/96 | 13:34:02 | -0.38 | 0.40 | -0.28 | 0.36 | -0.52 | 0.88 |

Shock/Vibration Report by Event

| Date | Time | Lat Accel (min) | Lat Accel (max) | Long Accel (min) | Long Accel (max) | Vert Accel (min) | Vert Accel (max) |
|----------|----------|--------------------|--------------------|---------------------|---------------------|---------------------|---------------------|
| 06/07/96 | 13:35:07 | -0.36 | 0.24 | -0.24 | 0.22 | -0.62 | 0.94 |
| 06/07/96 | 13:36:13 | -0.22 | 0.24 | -0.28 | 0.20 | -0.64 | 0.62 |
| 06/07/96 | 13:37:04 | -0.50 | 0.72 | -0.26 | 0.36 | -1.08 | 0.96 |
| 06/07/96 | 13:40:05 | -0.22 | 0.24 | -0.26 | 0.36 | -0.68 | 0.90 |
| 06/07/96 | 13:40:22 | -0.50 | 0.42 | -0.58 | 0.36 | -0.66 | 0.90 |
| 06/07/96 | 13:49:59 | -0.34 | 0.26 | -0.26 | 0.36 | -0.52 | 0.56 |
| 06/07/96 | 13:54:48 | -0.34 | 0.58 | -0.40 | 0.22 | -0.68 | 0.88 |
| 06/07/96 | 13:56:10 | -0.22 | 0.24 | -0.26 | 0.22 | -0.50 | 0.74 |
| 06/07/96 | 13:56:42 | -0.20 | 0.26 | -0.26 | 0.38 | -0.64 | 0.62 |
| 06/07/96 | 13:59:41 | -0.82 | 0.72 | -0.42 | 0.52 | -1.32 | 1.64 |
| 06/07/96 | 13:59:58 | -0.38 | 0.40 | -0.40 | 0.22 | -0.80 | 0.76 |
| 06/07/96 | 14:01:36 | -0.36 | 0.42 | -0.26 | 0.38 | -0.52 | 0.88 |
| 06/07/96 | 14:01:52 | -0.50 | 0.42 | -0.42 | 0.52 | -0.94 | 0.78 |
| 06/07/96 | 14:02:25 | -0.34 | 0.74 | -0.26 | 0.06 | -0.66 | 0.60 |
| 06/07/96 | 14:04:04 | -0.36 | 0.42 | -0.40 | 0.22 | -0.94 | 0.92 |
| 06/07/96 | 14:04:52 | -0.54 | 0.54 | -0.58 | 0.68 | -0.52 | 0.72 |
| 06/07/96 | 14:06:34 | -0.40 | 0.38 | -0.26 | 0.22 | -0.64 | 0.62 |
| 06/07/96 | 14:07:50 | -0.38 | 0.70 | -0.42 | 0.38 | -0.66 | 0.74 |
| 06/07/96 | 14:09:30 | -0.98 | 1.02 | -0.58 | 0.52 | -1.48 | 1.66 |
| 06/07/96 | 14:14:17 | -0.36 | 0.26 | -0.26 | 0.36 | -0.64 | 0.78 |
| 06/07/96 | 14:14:49 | -0.38 | 0.40 | -0.56 | 0.22 | -0.88 | 1.16 |
| 06/07/96 | 14:21:41 | -0.68 | 0.54 | -0.56 | 0.38 | -1.10 | 1.26 |
| 06/07/96 | 14:44:29 | -0.48 | 0.44 | -0.40 | 0.38 | -0.52 | 0.90 |
| 06/07/96 | 14:47:19 | -0.24 | 0.24 | -0.28 | 0.34 | -0.64 | 0.78 |
| 06/07/96 | 14:48:15 | -0.54 | 0.24 | -0.26 | 0.36 | -0.66 | 0.76 |
| 06/07/96 | 14:48:33 | -0.66 | 0.42 | -0.42 | 0.52 | -0.82 | 1.38 |
| 06/07/96 | 14:49:44 | -0.22 | 0.08 | -0.10 | 0.22 | -0.58 | 0.66 |
| 06/07/96 | 14:50:37 | -0.38 | 0.24 | -0.42 | 0.38 | -0.52 | 0.58 |
| 06/07/96 | 14:53:36 | -0.52 | 0.42 | -0.44 | 0.34 | -0.80 | 0.78 |
| 06/07/96 | 15:05:41 | -0.36 | 0.56 | -0.44 | 0.34 | -1.12 | 1.54 |
| 06/07/96 | 15:10:59 | -0.34 | 0.28 | -0.26 | 0.36 | -0.86 | 0.72 |
| 06/07/96 | 15:18:15 | -0.52 | 0.40 | -0.56 | 0.38 | -0.80 | 1.24 |
| 06/07/96 | 15:21:06 | -0.36 | 0.42 | -0.26 | 0.22 | -0.50 | 0.76 |
| 06/07/96 | 15:22:16 | -0.38 | 0.38 | -0.24 | 0.06 | -0.64 | 0.60 |
| 06/07/96 | 15:22:51 | -0.50 | 0.58 | -0.24 | 0.22 | -0.56 | 0.86 |

| Shock/Vibration Report by Event | | | | | | | |
|---------------------------------|----------|--------------------|--------------------|---------------------|---------------------|---------------------|---------------------|
| Date | Time | Lat Accel (min) | Lat Accel (max) | Long Accel (min) | Long Accel (max) | Vert Accel (min) | Vert Accel (max) |
| 06/07/96 | 15:28:47 | -0.40 | 0.38 | -0.26 | 0.20 | -0.44 | 0.50 |
| 06/07/96 | 15:29:42 | -0.40 | 0.38 | -0.26 | 0.22 | -0.46 | 0.48 |
| 06/07/96 | 15:35:10 | -0.40 | 0.36 | -0.26 | 0.06 | -0.46 | 0.62 |
| 06/07/96 | 15:36:07 | -0.82 | 0.86 | -0.24 | 0.38 | -0.50 | 0.44 |
| 06/07/96 | 15:36:40 | -0.36 | 0.40 | -0.26 | 0.22 | -0.34 | 0.44 |
| 06/07/96 | 15:37:13 | -0.52 | 0.86 | -0.44 | 0.34 | -0.92 | 1.12 |
| 06/07/96 | 15:41:28 | -0.36 | 0.40 | -0.44 | 0.66 | -0.66 | 1.36 |
| 06/07/96 | 15:41:44 | -0.36 | 0.56 | -0.26 | 0.36 | -0.66 | 1.06 |
| 06/07/96 | 15:46:39 | -0.36 | 0.56 | -0.42 | 0.38 | -0.68 | 1.04 |
| 06/07/96 | 15:48:02 | -0.50 | 0.42 | -0.26 | 0.20 | -0.52 | 0.88 |
| 06/07/96 | 15:53:40 | -0.64 | 0.90 | -0.40 | 0.22 | -0.64 | 1.22 |
| 06/07/96 | 15:53:57 | -0.40 | 0.36 | -0.28 | 0.20 | -0.44 | 0.34 |
| 06/07/96 | 15:55:48 | -0.36 | 0.40 | -0.26 | 0.20 | -0.48 | 0.46 |
| 06/07/96 | 15:56:53 | -0.64 | 0.44 | -0.46 | 0.34 | -0.52 | 1.04 |
| 06/07/96 | 16:02:56 | -0.36 | 0.40 | -0.26 | 0.22 | -0.36 | 0.42 |
| 06/07/96 | 16:10:40 | -0.36 | 0.70 | -0.42 | 0.52 | -0.64 | 0.60 |
| 06/07/96 | 16:11:04 | -0.68 | 0.70 | -0.58 | 0.36 | -0.66 | 1.06 |
| 06/07/96 | 16:12:48 | -0.52 | 0.40 | -0.42 | 0.52 | -0.68 | 1.04 |
| 06/07/96 | 16:14:32 | -0.48 | 0.28 | -0.28 | 0.20 | -0.66 | 0.58 |
| 06/07/96 | 16:19:13 | -0.70 | 0.84 | -0.58 | 0.52 | -1.12 | 1.52 |
| 06/07/96 | 16:19:47 | -0.50 | 0.40 | -0.42 | 0.36 | -0.94 | 1.10 |
| 06/07/96 | 16:20:54 | -0.50 | 1.02 | -0.40 | 0.38 | -0.68 | 0.88 |
| 06/07/96 | 16:21:58 | -0.38 | 0.40 | -0.56 | 0.36 | -0.52 | 0.56 |
| 06/07/96 | 16:23:01 | -0.66 | 0.72 | -0.42 | 0.36 | -0.68 | 0.88 |
| 06/07/96 | 16:24:20 | -0.34 | 0.28 | -0.28 | 0.20 | -0.48 | 0.46 |
| 06/07/96 | 16:32:03 | -0.38 | 0.68 | -0.56 | 0.54 | -0.68 | 0.88 |
| 06/07/96 | 16:50:00 | -0.36 | 0.40 | -0.40 | 0.38 | -0.54 | 0.72 |
| 06/07/96 | 16:52:28 | -0.36 | 0.26 | -0.42 | 0.22 | -0.66 | 0.74 |
| 06/07/96 | 16:54:41 | -0.48 | 0.44 | -0.54 | 0.40 | -0.54 | 0.72 |
| 06/07/96 | 16:55:40 | -0.52 | 0.56 | -0.44 | 0.34 | -0.52 | 0.42 |
| 06/07/96 | 16:59:31 | -0.40 | 0.38 | -0.24 | 0.08 | -0.48 | 0.46 |
| 06/07/96 | 17:09:24 | -0.40 | 0.50 | -0.26 | 0.22 | -0.46 | 0.48 |
| 06/07/96 | 17:12:43 | -0.48 | 0.90 | -0.44 | 0.50 | -0.98 | 1.84 |
| 06/07/96 | 17:13:16 | -0.22 | 0.10 | -0.26 | 0.20 | -0.36 | 0.42 |
| 06/07/96 | 17:13:52 | -0.46 | 0.46 | -0.56 | 0.38 | -0.66 | 0.58 |

Shock/Vibration Report by Event

| Date | Time | Lat Accel (min) | Lat Accel (max) | Long Accel (min) | Long Accel (max) | Vert Accel (min) | Vert Accel (max) |
|----------|----------|--------------------|--------------------|---------------------|---------------------|---------------------|---------------------|
| 06/07/96 | 17:26:25 | -0.48 | 0.44 | -0.26 | 0.06 | -0.50 | 0.60 |
| 06/07/96 | 17:30:12 | -0.24 | 0.06 | -0.26 | 0.20 | -0.48 | 0.46 |
| 06/07/96 | 18:26:56 | -0.50 | 0.42 | -0.26 | 0.20 | -0.64 | 0.60 |
| 06/07/96 | 18:32:02 | -0.38 | 0.54 | -0.28 | 0.34 | -0.66 | 0.76 |
| 06/08/96 | 06:54:07 | -0.36 | 0.24 | -0.26 | 0.36 | -0.62 | 0.76 |
| 06/08/96 | 07:05:39 | -0.50 | 0.40 | -0.26 | 0.36 | -0.52 | 0.56 |
| 06/08/96 | 07:07:39 | -0.20 | 0.10 | -0.28 | 0.34 | -0.34 | 0.44 |
| 06/08/96 | 07:10:35 | -0.52 | 0.68 | -0.40 | 0.36 | -0.64 | 0.58 |
| 06/08/96 | 07:32:38 | -0.40 | 0.52 | -0.26 | 0.20 | -0.30 | 0.32 |
| 06/08/96 | 07:37:02 | -0.54 | 0.68 | -0.24 | 0.22 | -0.44 | 0.48 |
| 06/08/96 | 07:52:42 | -0.96 | 0.70 | -0.42 | 0.50 | -0.68 | 1.64 |
| 06/08/96 | 07:53:57 | -0.36 | 0.54 | -0.40 | 0.68 | -0.52 | 0.86 |
| 06/08/96 | 08:03:45 | -0.48 | 0.42 | -0.24 | 0.22 | -0.50 | 0.74 |
| 06/08/96 | 08:13:28 | -0.52 | 0.38 | -0.26 | 0.36 | -0.64 | 0.90 |
| 06/08/96 | 08:20:24 | -0.22 | 0.22 | -0.24 | 0.38 | -0.50 | 0.72 |
| 06/08/96 | 08:25:06 | -0.50 | 0.40 | -0.56 | 0.52 | -0.66 | 1.02 |
| 06/08/96 | 08:26:19 | -0.34 | 0.42 | -0.26 | 0.20 | -0.62 | 0.76 |
| 06/08/96 | 08:54:36 | -0.50 | 0.42 | -0.42 | 0.34 | -0.70 | 0.54 |
| 06/08/96 | 08:56:06 | -0.32 | 0.28 | -0.26 | 0.22 | -0.32 | 0.44 |
| 06/08/96 | 09:04:14 | -0.50 | 0.70 | -0.58 | 0.66 | -0.84 | 1.78 |
| 06/08/96 | 09:18:25 | -0.52 | 0.40 | -0.54 | 0.54 | -0.64 | 0.58 |
| 06/08/96 | 09:20:07 | -0.48 | 0.56 | -0.42 | 0.36 | -0.66 | 0.72 |
| 06/08/96 | 09:20:24 | -0.36 | 0.70 | -0.88 | 0.66 | -0.66 | 0.88 |
| 06/08/96 | 09:20:44 | -0.48 | 0.44 | -0.70 | 0.54 | -0.82 | 0.88 |
| 06/08/96 | 09:24:08 | -0.36 | 0.24 | -0.24 | 0.22 | -0.66 | 0.74 |
| 06/08/96 | 09:24:25 | -0.36 | 0.26 | -0.26 | 0.22 | -0.90 | 0.94 |
| 06/08/96 | 09:24:41 | -0.52 | 0.54 | -0.24 | 0.22 | -0.50 | 0.58 |
| 06/08/96 | 09:24:58 | -0.38 | 0.38 | -0.26 | 0.36 | -0.76 | 0.62 |
| 06/08/96 | 09:25:14 | -0.38 | 0.52 | -0.26 | 0.20 | -0.74 | 0.48 |
| 06/08/96 | 09:25:30 | -0.54 | 0.66 | -0.72 | 0.66 | -0.64 | 1.06 |
| 06/08/96 | 09:26:19 | -0.68 | 0.38 | -0.28 | 0.34 | -0.76 | 0.92 |
| 06/08/96 | 09:26:36 | -0.32 | 0.28 | -0.26 | 0.20 | -0.66 | 0.58 |
| 06/08/96 | 09:26:52 | -0.36 | 0.40 | -0.40 | 0.22 | -0.66 | 0.88 |
| 06/08/96 | 09:27:58 | -0.38 | 0.52 | -0.26 | 0.20 | -0.64 | 0.90 |
| 06/08/96 | 09:32:27 | -0.50 | 0.56 | -0.26 | 0.36 | -0.64 | 0.60 |

| Shock/Vibration Report by Event | | | | | | | |
|---------------------------------|----------|--------------------|--------------------|---------------------|---------------------|---------------------|---------------------|
| Date | Time | Lat Accel (min) | Lat Accel (max) | Long Accel (min) | Long Accel (max) | Vert Accel (min) | Vert Accel (max) |
| 06/08/96 | 09:38:59 | -0.76 | 0.60 | -0.40 | 0.52 | -1.14 | 1.62 |
| 06/08/96 | 09:52:11 | -0.34 | 0.42 | -0.24 | 0.22 | -0.52 | 0.70 |
| 06/08/96 | 10:00:08 | -0.50 | 0.40 | -0.72 | 0.68 | -0.82 | 0.72 |
| 06/08/96 | 10:00:40 | -0.36 | 0.24 | -0.24 | 0.22 | -0.44 | 0.78 |
| 06/08/96 | 10:01:30 | -0.34 | 0.40 | -0.40 | 0.22 | -0.64 | 0.74 |
| 06/08/96 | 10:02:19 | -0.50 | 0.70 | -0.26 | 0.36 | -0.64 | 0.90 |
| 06/08/96 | 10:02:35 | -0.66 | 1.00 | -0.42 | 0.50 | -0.76 | 0.94 |
| 06/08/96 | 10:03:24 | -0.76 | 0.60 | -0.56 | 0.52 | -1.10 | 0.90 |
| 06/08/96 | 10:05:06 | -0.34 | 0.40 | -0.40 | 0.22 | -0.34 | 0.58 |
| 06/08/96 | 10:05:57 | -0.50 | 0.26 | -0.26 | 0.36 | -0.68 | 1.02 |
| 06/08/96 | 10:06:47 | -0.96 | 1.00 | -0.42 | 0.52 | -0.92 | 1.68 |
| 06/08/96 | 10:07:03 | -0.50 | 0.40 | -0.26 | 0.20 | -0.76 | 1.10 |
| 06/08/96 | 10:07:37 | -0.36 | 0.40 | -0.26 | 0.06 | -0.62 | 0.76 |
| 06/08/96 | 10:08:28 | -0.52 | 1.00 | -0.42 | 0.36 | -0.94 | 1.06 |
| 06/08/96 | 10:08:44 | -0.50 | 0.56 | -0.26 | 0.22 | -0.78 | 0.76 |
| 06/08/96 | 10:09:00 | -1.72 | 1.74 | -0.88 | 1.28 | -1.40 | 2.46 |
| 06/08/96 | 10:09:33 | -0.52 | 0.54 | -0.56 | 0.36 | -1.22 | 1.24 |
| 06/08/96 | 10:10:22 | -0.50 | 0.56 | -0.56 | 0.36 | -0.80 | 1.52 |
| 06/08/96 | 10:12:03 | -0.36 | 0.26 | -0.24 | 0.22 | -0.50 | 0.58 |
| 06/08/96 | 10:13:10 | -1.26 | 1.16 | -0.56 | 0.66 | -1.28 | 1.18 |
| 06/08/96 | 10:14:00 | -0.52 | 0.54 | -0.26 | 0.34 | -0.62 | 0.92 |
| 06/08/96 | 10:14:33 | -0.50 | 0.42 | -0.26 | 0.20 | -0.78 | 0.78 |
| 06/08/96 | 10:15:54 | -0.34 | 0.42 | -0.26 | 0.20 | -0.66 | 0.72 |
| 06/08/96 | 10:16:11 | -0.66 | 0.26 | -0.26 | 0.20 | -0.78 | 1.06 |
| 06/08/96 | 10:16:27 | -0.36 | 0.40 | -0.26 | 0.20 | -0.50 | 0.74 |
| 06/08/96 | 10:19:36 | -0.50 | 0.56 | -0.40 | 0.38 | -0.64 | 1.06 |
| 06/08/96 | 10:19:53 | -0.38 | 0.36 | -0.26 | 0.20 | -0.62 | 0.46 |
| 06/08/96 | 10:20:09 | -0.20 | 0.26 | -0.26 | 0.36 | -0.66 | 0.74 |
| 06/08/96 | 10:41:21 | -0.34 | 0.42 | -0.26 | 0.06 | -0.48 | 0.76 |
| 06/08/96 | 10:41:54 | -0.22 | 0.40 | -0.26 | 0.36 | -0.48 | 0.60 |
| 06/08/96 | 10:42:26 | -0.50 | 0.40 | -0.28 | 0.20 | -0.76 | 0.80 |
| 06/08/96 | 10:42:43 | -0.38 | 0.24 | -0.26 | 0.22 | -0.48 | 0.60 |
| 06/08/96 | 10:42:59 | -0.34 | 0.26 | -0.26 | 0.20 | -0.62 | 0.76 |
| 06/08/96 | 10:43:48 | -0.36 | 0.24 | -0.26 | 0.20 | -0.56 | 0.82 |
| 06/08/96 | 10:44:04 | -0.50 | 0.56 | -0.26 | 0.20 | -0.62 | 1.08 |

Shock/Vibration Report by Event

| Date | Time | Lat Accel (min) | Lat Accel (max) | Long Accel (min) | Long Accel (max) | Vert Accel (min) | Vert Accel (max) |
|-------------|-------------|----------------------------|----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| 06/08/96 | 10:48:17 | -0.36 | 0.40 | -0.26 | 0.20 | -0.60 | 0.78 |
| 06/08/96 | 11:02:57 | -0.50 | 0.70 | -0.24 | 0.22 | -0.98 | 1.32 |
| 06/08/96 | 11:03:49 | -0.64 | 0.42 | -0.40 | 0.22 | -0.68 | 1.18 |
| 06/08/96 | 11:15:27 | -0.50 | 0.40 | -0.26 | 0.20 | -0.64 | 0.90 |
| 06/08/96 | 11:18:52 | -0.66 | 0.56 | -0.86 | 0.70 | -0.80 | 1.82 |
| 06/08/96 | 11:23:57 | -0.50 | 0.26 | -0.30 | 0.32 | -0.62 | 0.60 |
| 06/08/96 | 11:25:04 | -0.34 | 0.28 | -0.26 | 0.04 | -0.46 | 0.46 |
| 06/08/96 | 11:28:09 | -1.12 | 0.84 | -0.86 | 0.38 | -1.14 | 1.66 |
| 06/08/96 | 11:31:24 | -0.62 | 0.90 | -0.26 | 0.20 | -0.68 | 0.86 |
| 06/08/96 | 11:35:59 | -0.64 | 0.74 | -0.40 | 0.38 | -0.66 | 0.58 |
| 06/08/96 | 11:43:27 | -0.54 | 0.52 | -0.38 | 0.24 | -0.46 | 0.48 |
| 06/08/96 | 11:45:47 | -0.38 | 0.68 | -0.10 | 0.06 | -0.52 | 0.56 |
| 06/08/96 | 11:46:53 | -0.34 | 0.26 | -0.42 | 0.36 | -0.48 | 0.76 |
| 06/08/96 | 11:50:06 | -0.82 | 0.86 | -0.40 | 0.38 | -0.82 | 0.90 |
| 06/08/96 | 11:50:44 | -0.22 | 0.10 | -0.10 | 0.06 | -0.36 | 0.42 |