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## Transportation Environment Data Bank Index

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Sandia Laboratories

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## TRANSPORTATION ENVIRONMENT DATA BANK INDEX

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### ABSTRACT

*In an effort to determine the environment intensities to which shipping containers will be exposed, a "Data Bank" of environmental information has been established by Sandia Laboratories, Division 1542, for the ERDA Division of Waste Management and Transportation. This document is an index which can be used to request data of interest.*

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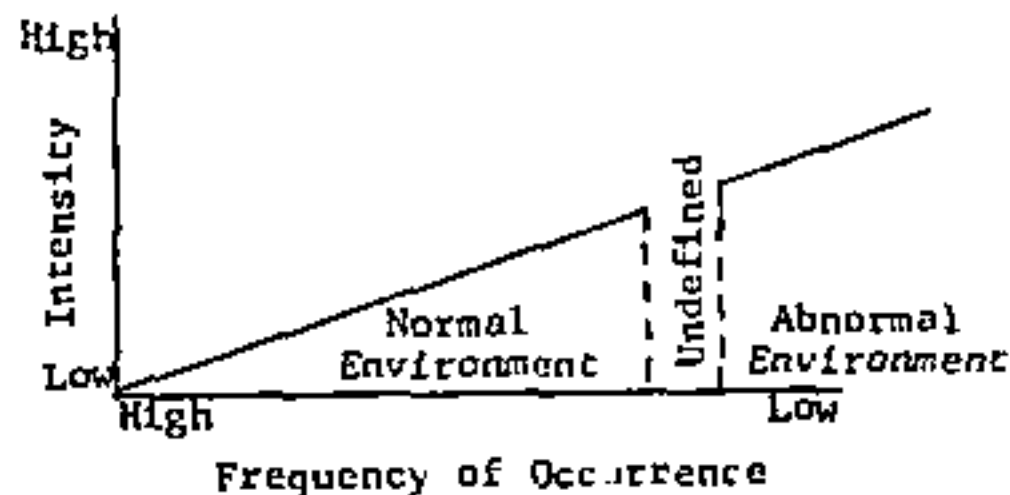
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## TRANSPORTATION ENVIRONMENT DATA BANK INDEX

### Introduction

The purpose of the Transportation Environment Data Bank is to store and make available descriptions of the environment of transportation expressed in engineering terms. The data are intended to provide environmental criteria to shipping container design and test engineers as a basis for their functions. The Transportation Environment Data Bank is a segment of a larger ERDA/DOD environmental Data Bank for weapons application.

For purposes of indexing and data retrieval, the data are catalogued under two major headings: *Normal and Abnormal Environments*. The diagram below illustrates the relationship between these environmental designations.



Normal environments are those which will be encountered at some level during every shipment. They have a high frequency of occurrence, but a relatively low intensity. The abnormal or accident environments, on the other hand, are characterized by higher intensities but lower frequency of occurrence. The very high intensities of environment occur very infrequently. The abnormal environments, while often called by different names to differentiate them, have actually the same engineering parameters as the normal. Thus, an acceleration is experienced by cargo as a truck crosses railroad tracks at 50 mph. A greater acceleration may result if it strikes a bridge abutment at the same speed. To make the difference clear in a succinct manner, the latter is termed, "impact." These short descriptions are shown in the index in parentheses where they apply.

### The Environments

Twelve categories of environment have been identified as relevant to transportation. These include:

- |                         |                  |
|-------------------------|------------------|
| 1. Acceleration/Time*   | 7. Pressure*     |
| 2. Acoustic Noise       | 8. Radiation     |
| 3. Atmospheric Contents | 9. Shock*        |
| 4. Fragmentation*       | 10. Temperature* |
| 5. Humidity             | 11. Vibration    |
| 6. Precipitation        | 12. Wind*        |

Three factors operate to limit the number of these environments for which abnormal levels require consideration:

1. Some environments reach an absolute limit regularly, and the limit thus is within the normal range;
2. The abnormal aspects of some of them are encountered so infrequently as to be of little interest; and
3. Protection against the effects of some environments include protection against the abnormal.

After eliminating from consideration those listed environments falling within the above limitations, (1) the environments indicated by an asterisk in the above list are of interest in the abnormal considerations. Figure 1 presents the environments which relate to transportation and the details of the abnormal environments as to input and response.

Input may be defined as the environmental level which exists at the cargo interface, while response is considered as the way in which the cargo reacts to the environments. As an example, consider the pressure environment. Pressure has both normal and abnormal levels. The normal, which all cargo will experience, includes the variations in atmospheric pressure at a specific location, as well as the variations produced by changes in elevation, both on the earth's surface and while flying. The abnormal aspects of the pressure environment are the result of exposure to an explosion or to immersion (inputs); if the intensity level of input is sufficiently high, a crush response of the cargo will result.

Four of the environments are considered only in the normal aspects for reasons mentioned above. One environment, fragmentation, is considered only in the abnormal aspect. This is because no elements which will cause puncture to the cargo are present under normal conditions, i.e., and be encountered frequently during transportation.

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\*Environments with both normal and abnormal aspects.

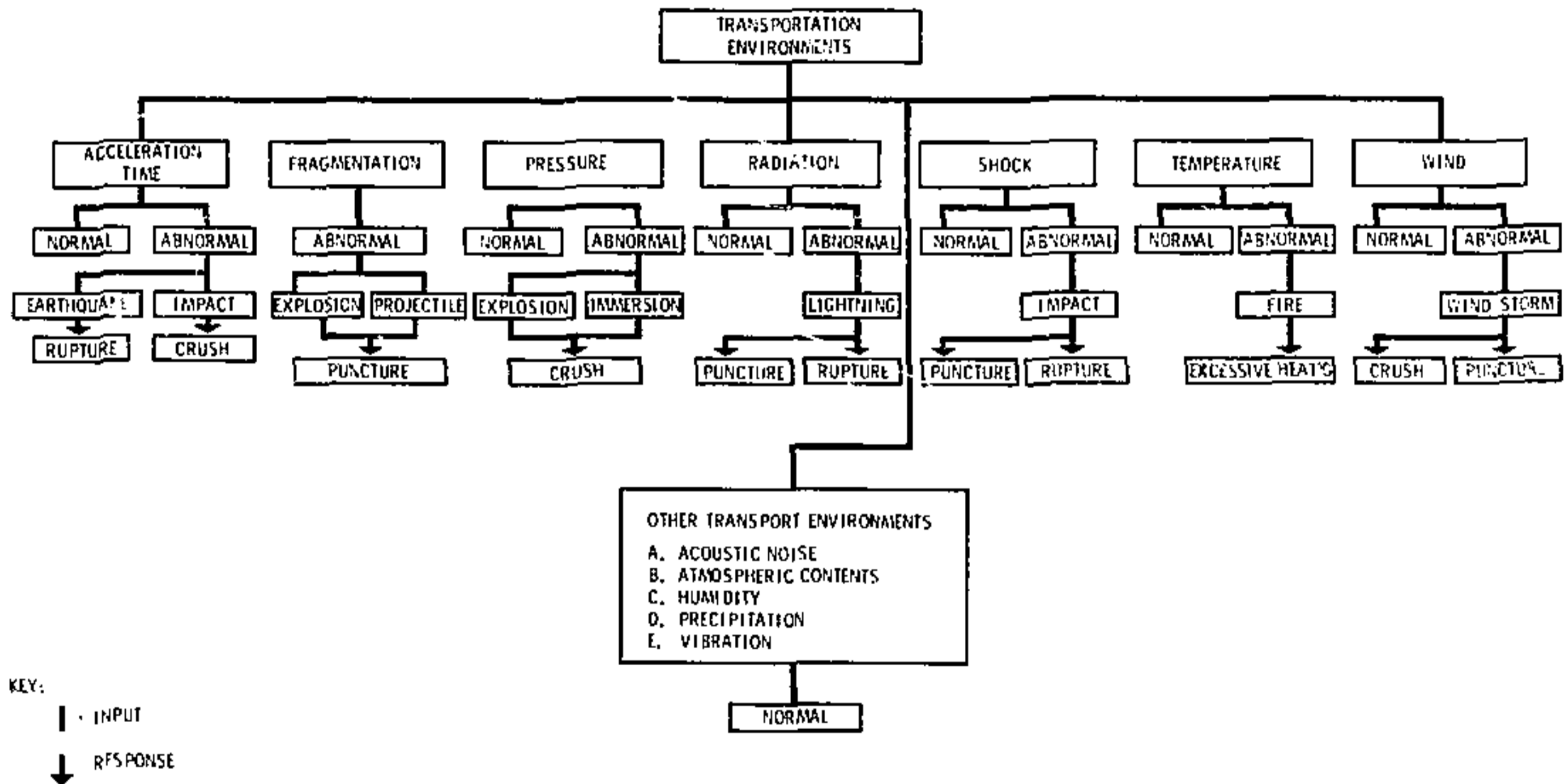


Figure 1. Structure of the Transportation Environment Data Bank

## The Data

Both input and response data contained in the Transportation Environment Data Bank relative to the normal environments are measured data. They were obtained from reliable sources, both within Sandia Laboratories and from other reputable agencies. When data were required, but not available, the Data Bank operators arranged for measurements to provide the information.

Most input data in the Data Bank under the heading of Abnormal Environments, however, were not measured directly. Because of the number and randomness of occurrence and type, it is impossible to provide engineering instrumentation for measurement. If an instrumented vehicle is subjected to a staged accident, it represents only the one type of event. Therefore, it is necessary to use statistical techniques to characterize the range of environmental intensities which may be experienced by cargo in accidents. The data to which these techniques are applied are often estimated. The basic data which are most useful to estimate abnormal inputs include the following.

<u>Abnormal Input</u>	<u>Useful Data Parameters</u>
1. Earthquake	Time History
2. Impact	Velocity
3. Explosion	Pressure or Missile Velocity, Radius
4. Projectile/Impalement	Velocity, Radius
5. Immersion	Depth
6. Lightning	Voltage, Amperage, Rise Time, etc.
7. Fire	Temperature or Heat Flux and Duration
8. Windstorm	Velocity

It is these types of data, or information which permit the derivation of these values, which are stored in the input section of the Abnormal Environment part of the Transportation Environment Data Bank. The response section of the Bank is expressed in terms of damage to cargo. Since the damage can be described and measured, measurements and descriptions are included wherever possible.

### Mechanics of the Data Bank

The data which have been retrieved and entered in the Data Bank are on microfilm. Two types of microfilm are used: aperture cards and microfiche. Facilities for viewing the data and obtaining hard copy are located at the bank site. When processing large requests for information, the Bank's operators have access to automated means for obtaining hard copy.

When either raw data or published information is acquired, it is reviewed for engineering data content. Pertinent information is then extracted, collated, and microfilmed. The data cards and/or microfiche are filed in numerical order without regard to subject. This simple technique is

possible because of a computerized indexing and retrieval program which was developed for efficient use of the Data Bank.

The use of a computer-aided system makes it possible to obtain a more flexible file, permits more complete data retrieval, shortens the time necessary for search, and makes feasible more frequent publication of a current index.

#### Data Sources

Normal environmental information for inclusion in the Data Bank is acquired by the Data Bank's operators from many sources. Military agencies, such as Aberdeen Proving Ground, Wright Air Development Center, Naval Ordnance Test Center, and Army QM R&E Center, and industrial groups, such as railroads, aircraft companies, and trucking concerns, have contributed information. A considerable portion of the information has been obtained from the various test groups in Sandia Laboratories. The Data Bank's operators not only extract information from published sources, but engage in specific research activities to obtain data not otherwise available.

Abnormal environmental information is obtained primarily from U. S. Department of Transportation sources and reports produced by the National Transportation Safety Board. Contacts have been established with various individuals and agencies responsible for accident investigation in the various modes of transportation. An information sources file is maintained as an adjunct to the Bank which integrates this Data Bank's efforts with other Data Banks collecting related accident information such as accident rates, fatalities, etc.

#### Availability of the Data

The information in the Data Bank is available, within the limits of time, workload, and security regulations, to any requestor. Requests for data should be sent to Division 1542, Sandia Laboratories, Albuquerque, New Mexico, 87115. The request should either outline the specific area for which information is desired, or it should list specific entries, including serial numbers. Requests will be processed as time allows. Agencies outside of the ERDA complex will be furnished information subject to the review and release procedures established by the ERDA.



## The Index

The index provided on the following pages is what the Bank's operators call a category index. Entries are made into this index by finding the environmental category of interest, such as shock, temperature, vibration, etc. The 12 categories are listed alphabetically.

The two-part number listed after the title of a particular Data Bank entry is the access number to the data on file. The first number, e.g., 1614, is the file number. The number after the dash (-) is the number of file cards available on the subject. Requests for hard copies of data should cite these two numbers.

## **Normal Environments**

05/13/75

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....ACCELERATION/TIME.....TRANSPORTATION.....AIRCRAFT.....

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MANEUVER LOAD DATA C-130 AIRCRAFT	UNC	00944-002+
FATIGUE DAMAGE PARAMETERS, TRANSPORT AIRCRAFT	UNC	01085-001+
GUST LOAD FREQUENCY, AIRCRAFT FLIGHTS, 40-45 KILOFEET, IN STORM	UNC	01087-002+
AIRCRAFT RECORDINGS DURING A TURBULENCE INCIDENT	UNC	01090-001+

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SHIP MOTIONS, T-2 TANKER, ESSO ASHVILLE, NORMAL OPERATIONS	UNC	00747-001+
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....ACCELERATION/TIME.....RESPONSE.....TRANSPORTATION.....AIRCRAFT.....

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AIRCRAFT RECORDINGS DURING A TURBULENCE INCIDENT	UNC	01090-001+

IMPACT)

....ACCELERATION/TIME.....INPUT.....GENERAL.....OTHER.....

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.....ACOUSTIC NOISE.....INPUT.....TRANSPORTATION.....AIRCRAFT.....

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SOUND PRESSURE LEVEL VS ANGLE AT 200 FEET, C124, 2 ENGINES OFF	UNC	00613-001+
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SOUND PRESSURE LEVEL, OVERALL, FOR 4 TURBOJET AIRCRAFT, 400 FT	UNC	00621-001+
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SAND AND DUST-CHARACTERISTICS	UNC	01274-002+

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..ATMOSPHERIC CONTENTS.....INPUT.....TRANSPORTATION.....AIRCRAFT.....

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..... HUMIDITY..... INPUT..... TRANSPORTATION..... SHIP.....

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TYPHOON REPORT - PACIFIC OCEAN - 1966	UNC	01808-003+
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.....RADIATION.....INPUT.....TRANSPORTATION.....AIRCRAFT.....

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.....RADIATION.....INPUT.....TRANSPORTATION.....AIRCRAFT.....

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(LIGHTNING)

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.....SHOCK.....INPUT.....TRANSPORTATION.....AIRCRAFT.....

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.....SHOCK.....INPUT.....TRANSPORTATION.....RAILROAD.....

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.....SHOCK.....INPUT.....TRANSPORTATION.....SHIP.....

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SHOCK,VIBRATION, 2000 LB FORKLIFT TRUCK (SEE 1744)	UNC	01744-047+



.....SHOCK.....RESPONSE.....HANDLING.....OTHER.....

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SHOCK, RESPONSE, 4000 LB FORKLIFT TRUCK (SEE 1744) UNC 01750-054+

SHOCK, VIBRATION, 7000 LB FORKLIFT TRUCK (SEE 1744) UNC 01752-041+

.....SHOCK.....RESPONSE.....TRANSPORTATION.....AUTOMOBILE.....

SHOCK/VIBRATION SUMMARY, UNION CARBIDE TRUCK TEST UNC 01312-007+

SHOCK DATA, UNION CARBIDE TRUCK TEST UNC 01314-013+

.....SHOCK.....RESPONSE.....TRANSPORTATION.....RAILROAD.....

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BOXCAR SHOCK CRITERIA SUMMARY UNC B1203-002+

ATMX CAR SHOCK CRITERIA SUMMARY UNC B1210-002+

SHOCK/VIBRATION ENVIRONMENT SUMMARY, RAIL TRANSPORT UNC B1320-011+

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SHOCK SPECTRA, BOXCAR, VERTICAL AXIS UNC 01205-064+

SHOCK SPECTRA, BOXCAR, LATERAL AXIS UNC 01206-059+

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SHOCK SPECTRA, 4TH STRUCK CAR, SIX-ATMX CAR TRAIN UNC 01220-015+

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SHOCK/VIBRATION SUMMARY, UNION CARBIDE RAIL TEST UNC 01315-007+

SHOCK DATA, UNION CARBIDE RAIL TEST UNC 01317-033+

SWITCHING SHOCK, CUSHION UNDERFRAME BOXCAR UNC 01326-056+

.....SHOCK.....RESPONSE.....TRANSPORTATION.....OTHER.....

SHOCK + VIBRATION DATA OBTAINED FROM TRUCK + RAIL SHIPMENT UNC 01003-006+

(IMPACT) .....SHOCK.....INPUT.....GENERAL.....OTHER.....

APPROXIMATE DURATION OF SLIME SHIFT ACCELERATION LOADS UNC 00724-001+

(IMPACT) .....SHOCK.....INPUT.....HANDLING.....OTHER.....

MAXIMUM LOADS, PACKAGES IN TRAILER UNC 01609-014+





..... VIBRATION..... INPUT..... TRANSPORTATION..... AIRCRAFT.....

DYNAMIC ENVIRONMENT, TURBOJET CARGO AIRCRAFT	UNC	01533-002+
VIBRATION, MOST PROBABLE EXTREME, PROPELLER DRIVEN AIRCRAFT	UNC	00470-001+
VIBRATION DATA, AIRCRAFT	UNC	00424-001+
VIBRATIONS, MAXIMUM LATERAL AND VERTICAL, HELICOPTER FLOOR	UNC	00433-001+
VIBRATION, KC-135 FLOOR, VERTICAL, LATERAL, LONGITUDINAL	UNC	00846-001+
VIBRATION, FLOOR, PROPELLER, JET, HELICOPTER AIRCRAFT	UNC	00847-001+
VIBRATION, H-37 HELICOPTER FLOOR, VERTICAL, LATERAL FLOOR/AFT	UNC	00848-001+
VIBRATION, C-123 FLOOR, LONGITUDINAL, VERTICAL, LATERAL AXES	UNC	00851-001+
VIBRATION, C-130 FLOOR, VERTICAL, LATERAL, LONGITUDINAL AXES	UNC	00852-001+
RESPONSE OF TURBOJET/PISTON ENGINE A/C TO RUNWAY ROUGHNESS	UNC	00910-006+
VIBRATION, AIR-RIDE VAN AND C-130, C-133 AIRCRAFT	UNC	01148-009+
VIBRATION NC135 AFT PASSENGER COMPARTMENT	UNC	01318-010+
VIBRATION SUMMARY, HELICOPTER, HH43, UH1, OH6, CH46, CH47	UNC	01321-009+
VIBRATION, CARGO FLOOR, UH-1 HELICOPTER	UNC	01322-007+
VIBRATION, CARGO FLOOR, OH-6 HELICOPTER	UNC	01323-007+
VIBRATION, CARGO FLOOR, CH-46 HELICOPTER	UNC	01324-043+
VIBRATION, CARGO FLOOR, CH-47 HELICOPTER	UNC	01325-031+
VIBRATION, C130A, C130B CARGO FLOOR	UNC	01356-001+
VIBRATION C130, C133 TAKE OFF AND CRUISE	UNC	01357-001+
C-133 UTILIZATION	UNC	01400-001+
VIBRATION, C5A CARGO FLOOR -- SUMMARY-- SEE 1440 TO 1444	UNC	01439-029+
VIBRATION, C5A CARGO FLOOR, STANDARD VIBRAN (SEE 1439)	UNC	01440-085+
VIBRATION, C5A CARGO FLOOR, FORMAT 2 VIBRAN, (SEE 1439)	UNC	01441-030+
VIBRATION, C5A CARGO FLOOR, PSD (SEE 1439)	UNC	01442-088+
VIBRATION, C5A CARGO FLOOR, PSD, (SEE 1439)	UNC	01443-055+
DYNAMIC ENVIRONMENT, C141 JET CARGO AIRCRAFT -- FIRST FLIGHT	UNC	01534-024+
DYNAMIC ENVIRONMENT, C141 JET CARGO AIRCRAFT -- SECOND FLIGHT	UNC	01535-037+
DYNAMIC ENVIRONMENT, C5A JET CARGO AIRCRAFT	UNC	01536-096+

..... VIBRATION..... INPUT..... TRANSPORTATION..... AUTOMOBILE.....

VIBRATION-ACCELERATIONS IN HIGHWAY OPERATION OF TRUCKS	UNC	00370-001+
VIBRATION IN ROAD VEHICLES	UNC	00374-001+
VIBRATION, MAXIMUM, ON TRUCKS OF VARIOUS TYPES OF ROAD OPERATIONS	UNC	00377-001+
VIBRATION, MAXIMUM ACCELERATION IN CARGO TRUCK	UNC	00379-001+
VIBRATION DATA, TYPICAL, VAN TRAILER, NORMAL SUSPENSION	UNC	00397-001+
VIBRATION, FLAT-BED TRACTOR-TRAILER	UNC	00401-001+
VIBRATION, TRUCK FLOOR, EMPTY AND FULLY LOADED	UNC	00449-001+

.....VIBRATION.....INPUT.....TRANSPORTATION.....TRUCK.....

DYNAMIC ENVIRONMENT ON A FLAT BED TRACTOR/TRAILER (AFC/001)	UNC	01006-008+
FINAL ANALYSIS, AFC/000 FLATBED TRUCK TEST	UNC	01013-041+
VIBRATION ENVIRONMENT, AFC VAN WITH TRAVISIT 410 SHEETMETAL CAB	UNC	01245-061+
VIBRATION/SHOCK, 2 1/2 TON TRUCK	UNC	01274-008+
VIBRATION/SHOCK AIR SUSPENSION VAN	UNC	01277-006+
SHOCK/VIBRATION SUMMARY, UNION CARBIDE TRUCK TEST	UNC	01312-007+
VIBRATION DATA, UNION CARBIDE TRUCK TEST	UNC	01313-045+
VIBRATION, TRUCK, TANDEM AXLE, AIR BAG SUSPENSION	UNC	01361-001+
VIBRATION IN COMMON MOTOR CARRIERS	UNC	01742-007+

.....VIBRATION.....INPUT.....TRANSPORTATION.....RAILROAD.....

SHOCK/VIBRATION ENVIRONMENT SUMMARY, RAIL TRANSPORT	UNC	00320-011+
VIBRATION, RAIL TRANSPORT, SUMMARY OF DATA ON	UNC	00355-001+
VIBRATION DATA, RAIL	UNC	00357-001+
VIBRATION TESTS, RAILROAD, SPEED 40MPH	UNC	00358-001+
VIBRATION TESTS, RAILROAD, SPEED 70MPH	UNC	00359-001+
VIBRATION TESTS, RAILROAD, SPEED 80MPH	UNC	00360-001+
VIBRATIONS IN RAILROAD FREIGHT CARS AT SPEEDS FROM 31-73MPH	UNC	00362-001+
VIBRATIONS MEASURED ON ATX 500 CAR AT SPEEDS 30-70MPH	UNC	00363-001+
VIBRATION ENVIRONMENT PRODUCED DURING RAIL TRANSPORT	UNC	00366-001+
VIBRATION, RAILROAD, SOFT SPRUNG CAR, VERTICAL AND LATERAL	UNC	00950-001+
VIBRATION, RAILROAD CONTINUOUS AND TRANSIENT	UNC	01031-001+
VIBRATION, RAILROAD ENVELOPES EFFECTIVE COMPACTS	UNC	01032-001+
SHOCK/VIBRATION SUMMARY, UNION CARBIDE RAIL TEST	UNC	01315-007+
VIBRATION DATA, UNION CARBIDE RAIL TEST	UNC	01316-065+

.....VIBRATION.....INPUT.....TRANSPORTATION.....SHIP.....

VIBRATION, MOST EXTREME PROBABLE, EXPECTED IN SEA TRANSPORT	UNC	00404-001+
VIBRATION MEASUREMENTS ON SHIPBOARD DURING TRANSPORT	UNC	00207-001+
VIBRATION DATA, SHIPS	UNC	00405-001+
VIBRATION DATA, SHIPS IN STRAIGHT RUNS AT VARIOUS SPEEDS	UNC	00407-001+
VIBRATION, SHIPBOARD, NORMAL STEERING AND HARBOR TURNS	UNC	00408-001+
VIBRATION DATA, SHIPS, HIGH SPEED MANEUVER AND CLASH BACK	UNC	00409-001+
VIBRATIONS, SHIPBOARD, FROM VARIOUS SOURCES	UNC	00415-001+
VIBRATIONS, MERCHANT SHIP SS ALLVERINE STATE	UNC	00418-025+

.....VIBRATION.....INPUT.....TRANSPORTATION.....OTHER.....

SUMMARY, DYNAMIC ENVIRONMENT OF TRANSPORTATION - 1977	UNC	01354-018+
VIBRATION--MAXIMUM ACCELERATIONS FOR VARIOUS VEHICLES	UNC	00365-001+
SHOCK + VIBRATION DATA OBTAINED FROM TRUCK + RAIL SHIPMENT	UNC	01003-006+
TRANSPORTATION VIBRATION ENVIRONMENTS	UNC	01176-002+



.....WIND.....INPUT.....GENERAL.....OTHER.....

ENVIRONMENT CONDITIONS PREVAILING DURING TRANSIT	UNC	00078-001+
WIND VELOCITIES, WORLDWIDE, AND DISTRIBUTION IN TEMPERATE ZONE	UNC	00258-001+
WIND SPEED DISTRIBUTION IN THE UNITED STATES	UNC	01595-005+
GLAZE ICE, WIND LOADS AT EARTH'S SURFACE	UNC	01722-001+

.....WIND.....INPUT.....TRANSPORTATION.....AIRCRAFT.....

FATIGUE DAMAGE PARAMETERS, TRANSPORT AIRCRAFT	UNC	01085-001+
GUST LOAD FREQUENCY, AIRCRAFT FLIGHTS, 40-45 KILOFEET, IN STORM	UNC	01087-002+
AIRCRAFT RECORDINGS DURING A TURBULENCE INCIDENT	UNC	01090-001+

.....WIND.....RESPONSE.....TRANSPORTATION.....AIRCRAFT.....

GUST LOAD FREQUENCY, AIRCRAFT FLIGHTS, 40-45 KILOFEET, IN STORM	UNC	01087-002+
AIRCRAFT RECORDINGS DURING A TURBULENCE INCIDENT	UNC	01090-001+

(STORMS)

.....WIND.....INPUT.....GENERAL.....OTHER.....

WIND AND WAVE HEIGHTS - TROPICAL STORMS	UNC	01636-002+
TYPHOON REPORT - PACIFIC OCEAN - 1959	UNC	01802-003+
TYPHOON REPORT - PACIFIC OCEAN - 1960	UNC	01803-003+
TYPHOON REPORT - PACIFIC OCEAN - 1961	UNC	01804-003+
TYPHOON REPORT - PACIFIC OCEAN - 1962	UNC	01805-004+
TYPHOON REPORT - PACIFIC OCEAN - 1963	UNC	01806-003+
TYPHOON REPORT - PACIFIC OCEAN - 1965	UNC	01807-003+
TYPHOON REPORT - PACIFIC OCEAN - 1966	UNC	01808-003+
TYPHOON REPORT - PACIFIC OCEAN - 1967	UNC	01809-003+
TYPHOON REPORT - PACIFIC OCEAN - 1968	UNC	01810-004+
TYPHOON REPORT - PACIFIC OCEAN - 1969	UNC	01811-002+
TYPHOON REPORT - PACIFIC OCEAN - 1970	UNC	01812-003+
TYPHOON REPORT - PACIFIC OCEAN - 1974	UNC	01813-003+

## **Abnormal Environments**



( EARTHQUAKE )	....ACCELERATION/TIME.....INPUT.....GENERAL.....OTHER.....		
	EARTHQUAKES IN THE UNITED STATES	UNC	00948-004+
	EARTHQUAKE, STRONG MOTION - ACCELOGRAMS G VS TIME	UNC	01526-004+
	EARTHQUAKE, STRONG MOTION - ACCELOGRAMS C VS TIME	UNC	01527-004+
	EARTHQUAKE - ROCK MOTION ACCELOGRAMS G VS TIME, DISTANCE	UNC	01528-001+
	STRONG MOTION EARTHQUAKE ACCELOGRAMS - PART F	UNC	01570-004+
	STRONG MOTION EARTHQUAKE ACCELOGRAMS - PART G	UNC	01571-004+
	STRONG MOTION EARTHQUAKE ACCELOGRAMS - PART H	UNC	01572-004+
	STRONG MOTION EARTHQUAKE ACCELOGRAMS-VOL I,PT I, DATA	UNC	01600-004+
	STRONG MOTION EARTHQUAKE ACCELOGRAMS-VOL I,PT J, DATA	UNC	01601-004+
	STRONG MOTION EARTHQUAKE ACCELOGRAMS-VOL I,PT K, DATA	UNC	01602-004+
	STRONG MOTION EARTHQUAKE ACCELOGRAMS-VOL III,RES. SPECTRA	UNC	01603-003+
	STRONG MOTION EARTHQUAKE ACCELOGRAMS-VOL IV,FOURIER SPECTRA	UNC	01604-002+
	EARTHQUAKE, ANCHORAGE, 1964( ENGINEERING INFORMATION	UNC	01641-007+
( IMPACT )	....ACCELERATION/TIME.....INPUT.....GENERAL.....OTHER.....		
	APPROXIMATE DURATION OF SOME SHORT ACCELERATION LOADS	UNC	00734-001+
( IMPACT )	....ACCELERATION/TIME.....INPUT.....TRANSPORTATION.....AIRCRAFT.....		
	ANALYSIS OF DIRECTION OF LOADS IN AIRCRAFT ACCIDENTS	UNC	00751-001+
	ACCELERATION OF FLOOR-AIRCRAFT CRASHES	UNC	00752-001+
	ACCELERATION,AIRCRAFT CRASH-VARIOUS ANGLES OF IMPACT	UNC	00753-008+
	FLOOR ACCELERATIONS, TRANSPORT AIRCRAFT ACCIDENTS	UNC	01629-001+
	CIVIL AVIATION ACCIDENT DATA - 1967 TO 1972	UNC	01664-009+
	AIRCRAFT ACCIDENT - BOEING 707 - 8/28/73	UNC	01801-001+
	AIRCRAFT ACCIDENT - BOEING 747 - 4/12/72	UNC	01818-001+
( IMPACT )	....ACCELERATION/TIME.....INPUT.....TRANSPORTATION.....AUTOMOBILE.....		
	ACCELERATIONS,AUTOMOBILE CRASH (H AC-UN)	UNC	00737-001+
	DECELERATION PATTERNS FOR AUTOMOBILE HEAD-ON COLLISIONS	UNC	00738-001+
( IMPACT )	....ACCELERATION/TIME.....INPUT.....TRANSPORTATION.....RAILROAD.....		
	RAIL ACCIDENT STATISTICS	UNC	01020-025+

(PUNCTURE)	.....FRAGMENTATION.....INPUT.....GENERAL.....CTHEF.....		
	FRAGMENTS, MASS, VELOCITY, STANDARD ARTILLEPY SHELLS	UNC	01814-002+
(PUNCTURE)	.....FRAGMENTATION.....INPUT.....TRANSPORTATION.....AIRCRAFT.....		
	ROTOR FRAGMENT CONTAINMENT-JET ENGINE FAILURE - 1972	UNC	01781-010+
(PUNCTURE)	.....FRAGMENTATION.....INPUT.....TRANSPORTATION.....AUTOMOB E.....		
	MOTOR CARRIER ACCIDENT ENVIRONMENT - TAC STUDY	UNC	01662-007+
	TRUCK ACCIDENT-FLORIDA-8/6/71	UNC	01695-003+
	TRUCK ACCIDENT REPORTS, NHTSA, NO. 7	UNC	01753-005+
	TRUCK ACCIDENT REPORTS, NHTSA, NO. 8	UNC	01754-004+
	TRUCK ACCIDENT REPORTS, NHTSA, NO. 9	UNC	01755-005+
(PUNCTURE)	.....FRAGMENTATION.....INPUT.....TRANSPORTATION.....RAILROAD.....		
	RAILROAD ACCIDENT ENVIRONMENT - TAC STUDY	UNC	01663-006+
(PUNCTURE)	.....FRAGMENTATION.....INPUT.....TRANSPORTATION.....SHIP.....		
	IMPACT, PENETRATION, SHIP COLLISION AND GROUNDING	UNC	01550-001+
(PUNCTURE)	.....FRAGMENTATION.....RESPONSE.....TRANSPORTATION.....AUTOMOBILE.....		
	CARGO RESPONSE TRUCK AND RAIL ACCIDENTS	UNC	01688-002+
	TRUCK ACCIDENT-FLORIDA-8/6/71	UNC	01695-003+
(PUNCTURE)	.....FRAGMENTATION.....RESPONSE.....TRANSPORTATION.....RAILROAD.....		
	CARGO RESPONSE TRUCK AND RAIL ACCIDENTS SEE EDB1688	UNC	01699-002+
(EXPLOSION)	.....FRAGMENTATION.....INPUT.....TRANSPORTATION.....AUTOMOBILE.....		
	TRUCK ACCIDENT-NEW JERSEY 9/21/72	UNC	01690-003+
	TRUCK ACCIDENT-GEORGIA-6/4/71	UNC	01694-003+
	TRUCK ACCIDENT-VIRGINIA-3/9/72	UNC	01456-003+

	..... PRESSURE..... INPUT..... GENERAL..... OTHER.....		
	TYPHOON REPORT - PACIFIC OCEAN - 1955	UNC	01802-003+
	TYPHOON REPORT - PACIFIC OCEAN - 1960	UNC	01803-003+
	TYPHOON REPORT - PACIFIC OCEAN - 1961	UNC	01804-003+
	TYPHOON REPORT - PACIFIC OCEAN - 1962	UNC	01805-004+
	TYPHOON REPORT - PACIFIC OCEAN - 1963	UNC	01806-003+
	TYPHOON REPORT - PACIFIC OCEAN - 1965	UNC	01807-003+
	TYPHOON REPORT - PACIFIC OCEAN - 1966	UNC	01808-003+
	TYPHOON REPORT - PACIFIC OCEAN - 1967	UNC	01809-003+
	TYPHOON REPORT - PACIFIC OCEAN - 1968	UNC	01810-004+
	TYPHOON REPORT - PACIFIC OCEAN - 1969	UNC	01811-002+
	TYPHOON REPORT - PACIFIC OCEAN - 1970	UNC	01812-003+
	TYPHOON REPORT - PACIFIC OCEAN - 1974	UNC	01813-003+
(CRUSH)	..... PRESSURE..... RESPONSE..... TRANSPORTATION..... AUTOMOBILE.....		
	CARGO RESPONSE TRUCK AND RAIL ACCIDENTS	UNC	01688-002+
(CRUSH)	..... PRESSURE..... RESPONSE..... TRANSPORTATION..... RAILROAD.....		
	CARGO RESPONSE TRUCK AND RAIL ACCIDENTS SEE 001688	UNC	01699-002+
(IMPERSION)	..... PRESSURE..... INPUT..... TRANSPORTATION..... AIRCRAFT.....		
	A/C ACCIDENT DEHAVILLAND DHC 14 FEB 1970	UNC	01679-003+
	A/C ACCIDENT DC9 MAY 1970	UNC	01682-003+
	A/C ACCIDENT SKYVAN SERIES 3 JULY 1970	UNC	01683-003+
(EXPLOSION)	..... PRESSURE..... INPUT..... TRANSPORTATION..... AUTOMOBILE.....		
	HYDROGEN TRANSPORT AND HANDLING EXPLOSION	UNC	01758-001+
(EXPLOSION)	..... PRESSURE..... INPUT..... TRANSPORTATION..... RAILROAD.....		
	RAIL ACCIDENT, EAST ST LOUIS, ILLINOIS - 1/22/72	UNC	01706-003+
	RAIL ACCIDENT, CRETE, NEBRASKA - 2/15/69	UNC	01707-003+
	RAIL ACCIDENT, HOUSTON, TEXAS - 10/19/71	UNC	01708-001+
	RAIL ACCIDENT - ONEONTA, NY - 2/17/74	UNC	01762-004+

(LIGHTNING)	.....RADIATION.....INPUT.....GENERAL.....OTHER.....		
	VOLTAGE AND CURRENT CHARACTERISTICS OF LIGHTNING STRIKE	UNC	00464-002+
	PROPERTIES OF LIGHTNING STROKES	UNC	00999-001+
(LIGHTNING)	.....RADIATION.....INPUT.....TRANSPORTATION.....AIRCRAFT.....		
	LIGHTNING THREAT TO AIRCRAFT	UNC	01000-002+
	LIGHTNING HAZARD TO AIRCRAFT	UNC	01415-006+
(CRUSH)	.....SHOCK.....INPUT.....TRANSPORTATION.....AUTOMOBILE.....		
	MOTOR CARRIER ACCIDENT ENVIRONMENT - TAC STUDY	UNC	A1662-007+
	TRUCK ACCIDENT REPORTS, NHTSA, NO. 7	UNC	01753-005+
	TRUCK ACCIDENT REPORTS, NHTSA, NO. 8	UNC	01754-004+
	TRUCK ACCIDENT REPORTS, NHTSA, NO. 9	UNC	01755-005+
(CRUSH)	.....SHOCK.....INPUT.....TRANSPORTATION.....RAILROAD.....		
	RAILROAD ACCIDENT ENVIRONMENT - TAC STUDY	UNC	A1663-006+
(IMPACT)	.....SHOCK.....INPUT.....GENERAL.....OTHER.....		
	APPROXIMATE DURATION OF SOME SHORT ACCELERATION LOADS	UNC	00774-001+
(IMPACT)	.....SHOCK.....INPUT.....HANDLING.....OTHER.....		
	IMPACTS DUE TO LARGE DROPS WHEN LOADING	UNC	00342-001+
	MAXIMUM DROPS, PACKAGES IN TRANSIT	UNC	01608-004+

(IMPACT)

.....SHOCK.....INPUT.....TRANSPORTATION.....AIRCRAFT.....

AIRCRAFT ACCIDENT ENVIRONMENT - TAC STUDY	UNC	01630-004+
ANALYSIS OF DIRECTION OF LOADS IN AIRCRAFT ACCIDENTS	UNC	00751-001+
ACCELERATION OF FLOOR-AIRCRAFT CRASHES	UNC	00752-001+
ACCELERATION, AIRCRAFT CRASH-VARIOUS ANGLES OF IMPACT	UNC	00753-008+
CRASH TEST, DC-7 AIRCRAFT	UNC	01104-007+
CRASH TEST, CONSTELLATION AIRCRAFT	UNC	01105-018+
FLOOR ACCELERATIONS, TRANSPORT AIRCRAFT ACCIDENTS	UNC	01629-001+
CIVIL AVIATION ACCIDENT DATA - 1962 TO 1972	UNC	01664-005+
ANALYSIS OF CARGO A/C CRASH RECORDS CAB DATA	UNC	01668-005+
CRASH IMPACT CONDITIONS, MULTI ENGINE TRANSPORT A/C	UNC	01670-029+
SURVEY OF A/C CRASH SURVIVABILITY, CARGO AT A/C CG	UNC	01671-004+
ACCIDENT DATA, MULTIENGINE AIRCRAFT	UNC	01672-010+
A/C ACCIDENT DC8 62 SEPT 1970	UNC	01676-003+
A/C ACCIDENT MARTIN 404 OCT 1970	UNC	01677-003+
A/C ACCIDENT CONVAIR 580 DEC 1968	UNC	01678-003+
A/C ACCIDENT DEHAVILLAND CMC 16 FEB 1970	UNC	01679-003+
A/C ACCIDENT DOUGLAS C540 APRIL 1970	UNC	01680-003+
A/C ACCIDENT DC 9 JAN 1970	UNC	01681-003+
A/C ACCIDENT DC9 MAY 1970	UNC	01682-003+
A/C ACCIDENT SKYVAN SERIES 3 JULY 1970	UNC	01683-003+
A/C ACCIDENT DC9 32 SEPT 1970	UNC	01684-003+
A/C ACCIDENT DC8 63F SEPT 1970	UNC	01686-003+
AIRCRAFT ACCIDENT REPORTS - NTSB - 1972	UNC	01724-002+
AIRCRAFT ACCIDENTS, TYPE, RATE, NTSB 1970	UNC	01756-002+
AIRCRAFT ACCIDENTS, TYPE, RATE, NTSB 1973	UNC	01757-001+
AIRCRAFT ACCIDENT - BOEING 707 - 1/16/74	UNC	01800-001+

(IMPACT)

.....SHOCK.....INPUT.....TRANSPORTATION.....AIRCRAFT.....

AIRCRAFT CRASH ENVIRONMENTS - NAVY	UNC	01819-001+
AIRCRAFT ACCIDENT - CONVAIR 600 - 9/27/73	UNC	01820-001+
AIRCRAFT MIDAIR COLLISIONS	UNC	01822-002+
AIRCRAFT DITCHING INVESTIGATION	UNC	01823-003+

{IMPACT}

.....SHOCK.....INPUT.....TRANSPORTATION.....AUTOMOBILE.....

ACCELERATIONS, AUTOMOBILE CHASH (HEAD-ON)	UNC	00737-001+
DECELERATION PATTERNS FOR AUTOMOBILE HEAD-ON COLLISIONS	UNC	00738-001+
ACCIDENT REPORT, TRUCK - VENTURA, CALIFORNIA, 8-18-71	UNC	01659-003+
TRUCK ACCIDENT SPEEDS-A SUMMARY	UNC	01687-002+
TRUCK ACCIDENT-NEW JERSEY 9/21/72	UNC	01690-003+
TRUCK ACCIDENT-ARIZONA 8/31/70	UNC	01691-003+
TRUCK ACCIDENT-VIRGINIA 4/13/72	UNC	01692-003+
TRUCK ACCIDENT-PENN-9/5/71	UNC	01693-003+
TRUCK ACCIDENT-GEORGIA-6/4/71	UNC	01694-003+
TRUCK ACCIDENT-FLORIDA-8/8/71	UNC	01695-003+
TRUCK ACCIDENT-VIRGINIA-3/9/72	UNC	01696-003+
TRUCK ACCIDENT-TENN-5/13/72	UNC	01697-002+
STATISTICAL STUDY OF TRUCK ACCIDENT SPEEDS	UNC	01698-012+
RAIL/ROAD VEHICLE ACCIDENT, OKLAHOMA - 4/5/71-SEE 1710	UNC	01711-001+
RAIL/ROAD VEHICLE ACCIDENT, NEW YORK - 3/24/72	UNC	01712-003+
RAIL/ROAD VEHICLE ACCIDENT, ILLINOIS - 1/24/70-SEE 1714	UNC	01715-001+
TRUCK ACCIDENT REPORTS, NHTSA, NO. 7	UNC	01753-005+
TRUCK ACCIDENT REPORTS, NHTSA, NO. 8	UNC	01754-004+
TRUCK ACCIDENT REPORTS, NHTSA, NO. 9	UNC	01755-005+
TRUCK ACCIDENT REPORTS - BOSTON UNIV., 1973	UNC	01770-004+
TRUCK ACCIDENT REPORTS - NHTSA, NO. 3	UNC	01771-003+
RAIL-HIGHWAY GRADE CROSSING ACCIDENTS, 1972 (SEE 1775)	UNC	01776-001+
RAIL-HIGHWAY GRADE CROSSING ACCIDENTS, 1973 (SEE 1777)	UNC	01778-001+
TRUCK ACCIDENT - TENNESSEE - 8/27/73	UNC	01783-001+
TRUCK ACCIDENT - VIRGINIA - 4/13/72	UNC	01784-002+
TRUCK ACCIDENT - TEXAS - 3/7/73	UNC	01785-002+
TRUCK ACCIDENT - IOWA - 4/3/73	UNC	01786-001+
TRUCK ACCIDENT - VIRGINIA - 3/28/74	UNC	01787-003+
TRUCK ACCIDENT - MASSACHUSETTS - 10/18/73	UNC	01788-002+

{IMPACT}

.....SHOCK.....INPUT.....TRANSPORTATION.....RAILROAD.....

RAILROAD ACCIDENT ENVIRONMENT - TAC STUDY	UNC	01663-006+
RAIL ACCIDENT STATISTICS	UNC	01020-025+
COLLISIONS, RAIL, HEAD ON AND REAR END	UNC	01665-006+
RAIL ACCIDENT STATISTICS, 1969	UNC	01666-002+
RAIL ACCIDENT STATISTICS, 1971	UNC	01667-002+
ACCIDENT DATA RAILROAD 1952 THRU 1955	UNC	01673-001+
RAIL ACCIDENT TANK CAR RUPTURE, FIRE	UNC	01675-036+

(IMPACT) .....SHOCK.....INPUT.....TRANSPORTATION.....RAILROAD.....

TRANSPORT ACCIDENTS OF RAIL 1948-1965 SEE ENR 1684 UNC 01700-011+

RAIL ACCIDENT, COTULLA, TEXAS - 12/1/73 UNC 01701-001+

RAIL ACCIDENT, INDIO, CALIFORNIA - 6/29/73 UNC 01702-001+

RAIL ACCIDENT, SALEM, ILLINOIS - 6/10/71 UNC 01703-002+

RAIL ACCIDENT, MAQUIN, ILLINOIS - 5/24/72 UNC 01704-001+

RAIL ACCIDENT, TAFT, LOUISIANA - 2/21/73 UNC 01705-006+

RAIL ACCIDENT, EAST ST LOUIS, ILLINOIS - 1/22/72 UNC 01706-003+

RAIL ACCIDENT, CRETE, NEBRASKA - 2/18/59 UNC 01707-003+

RAIL ACCIDENT, HOUSTON, TEXAS - 10/19/71 UNC 01708-001+

RAIL ACCIDENT, HERRON, PENNSYLVANIA - 3/12/77 UNC 01709-003+

RAIL/ROAD VEHICLE ACCIDENT, OKLAHOMA - 4/5/71 UNC 01710-002+

RAIL/ROAD VEHICLE ACCIDENT, NEW YORK - 3/24/72-SEE 1712 UNC 01713-001+

RAIL/ROAD VEHICLE ACCIDENT, ILLINOIS - 1/24/70 UNC 01714-002+

FREIGHT TRAIN ACCIDENTS, NUMBER OF CARS INVOLVED UNC 01729-007+

RAIL-HIGHWAY GRADE CROSSING ACCIDENTS, 1972 UNC 01775-002+

RAIL-HIGHWAY GRADE CROSSING ACCIDENTS, 1973 UNC 01777-002+

RAIL ACCIDENT - ONEONTA, NY - 2/12/74 UNC 01782-004+

(IMPACT) .....SHOCK.....INPUT.....TRANSPORTATION.....SHIP.....

IMPACT, PENETRATION, SHIP COLLISION AND GROUNDING UNC 01560-001+

COLLISION - TUG/BARGE WITH BRIDGE UNC 01725-001+

(IMPACT) .....SHOCK.....RESPONSE.....HANDLING.....OTHER.....

MAXIMUM DROPS, PACKAGES IN TRANSIT UNC 01608-004+

(IMPACT) .....SHOCK.....RESPONSE.....TRANSPORTATION.....AIRCRAFT.....

SHOCK SPECTRA, STAGED A/C CRASH TESTS UNC 01649-018+

SURVEY OF A/C CRASH SURVIVABILITY, CAPEN AT A/C Co. UNC 01671-004+

(IMPACT) .....SHOCK.....RESPONSE.....TRANSPORTATION.....AUTOMOBILE.....

CARGO RESPONSE TRUCK AND RAIL ACCIDENTS UNC 01684-002+

TRANSPORT ACCIDENTS OF RAIL 1948 TO 1965-UNITED KINGDOM UNC 01684-011+

TRUCK ACCIDENT-FLORIDA-8/6/71 UNC 01695-003+

(IMPACT) .....SHOCK.....RESPONSE.....TRANSPORTATION.....TRUCK.....

CARGO RESPONSE TRUCK AND RAIL ACCIDENTS SEE ENR 1684 UNC 01649-002+

.....TEMPERATURE.....INPUT.....GENERAL.....ITEM.....

TYPHOON REPORT - PACIFIC OCEAN - 1959	UNC	01802-003*
TYPHOON REPORT - PACIFIC OCEAN - 1960	UNC	01803-003*
TYPHOON REPORT - PACIFIC OCEAN - 1961	UNC	01804-003*
TYPHOON REPORT - PACIFIC OCEAN - 1962	UNC	01805-004*
TYPHOON REPORT - PACIFIC OCEAN - 1963	UNC	01806-003*
TYPHOON REPORT - PACIFIC OCEAN - 1965	UNC	01807-003*

(FIRE) .....TEMPERATURE.....INPUT.....GENERAL.....ITEM.....

FIRE, LIQUID HYDROCARBON FUEL, HEAT TRANSFER IN BURNING CONDITIONS OF PETROLEUM LIQUIDS	UNC	00517-011*
	UNC	00518-001*

(FIRE) .....TEMPERATURE.....INPUT.....TRANSPORTATION.....AIRCRAFT.....

AIRCRAFT ACCIDENT ENVIRONMENT - TAL STUDY	UNC	01630-004*
CIVIL AVIATION ACCIDENT DATA - 1962 TO 1972	UNC	01664-009*
FIRE INFORMATION AIRCRAFT ACCIDENTS	UNC	01674-002*
A/C ACCIDENT MARTIN 404 OCT 1970	UNC	01677-003*
A/C ACCIDENT CONVAIR 580 DEC 1968	UNC	01578-001*
A/C ACCIDENT DOUGLAS C540 APRIL 1970	UNC	01680-003*
A/C ACCIDENT 747 12 SEPT 1970	UNC	01685-003*
A/C ACCIDENT DCB 63F SEPT 1970	UNC	01696-003*
AIRCRAFT ACCIDENT REPORTS - NTSB - 1972	UNC	01724-002*
AIRCRAFT ACCIDENTS, TYPE, RATE, NTSB 1970	UNC	01756-002*
AIRCRAFT ACCIDENTS, TYPE, RATE, NTSB 1973	UNC	01757-001*
AIRCRAFT ACCIDENT - BEIJING 707 - 1/16/74	UNC	01809-001*
AIRCRAFT ACCIDENT - DC 8 - 6/20/73	UNC	01821-001*

(FIRE) .....TEMPERATURE.....INPUT.....TRANSPORTATION.....AUTOMOBILE.....

MOTOR CARRIER ACCIDENT ENVIRONMENT - TAL STUDY	UNC	01682-007*
FIRE TEMPERATURES-TRUCK	UNC	00520-001*
ACCIDENT REPORT, TRUCK - VENTURA, CALIFORNIA, 8-12-72	UNC	01659-003*
TRUCK ACCIDENT-VIRGINIA 4/13/72	UNC	01692-003*
TRUCK ACCIDENT-PENNA-9/5/71	UNC	01643-003*
TRUCK ACCIDENT-TENN-5/13/72	UNC	01697-002*
TRUCK ACCIDENT REPORTS, NHTSA, N.J. #	UNC	01754-004*
HYDROGEN TRANSPORT AND HANDLING EXPLOSION	UNC	01758-001*
TRUCK ACCIDENT - VIRGINIA - 4/12/72	UNC	01784-002*
TRUCK ACCIDENT - TEXAS - 3/7/72	UNC	01785-002*
TRUCK ACCIDENT - MASSACHUSETTS - 10/18/72	UNC	01784-002*

(FIRE) .....TEMPERATURE.....INPUT.....TRANSPORTATION.....RAIL.....

RAILROAD ACCIDENT ENVIRONMENT - TAL STUDY	UNC	01663-006*
FIRE TEMPERATURES-RAIL	UNC	00519-001*



(FIRE) .....TEMPERATURE.....INPUT.....TRANSPORTATION.....SHIP.....

ACCIDENT DATA RAILROAD 1952 TO 1966	UNC	01673-001+
RAIL ACCIDENT TANK CAR RUPTURE, FIRE	UNC	01675-001+
TRANSPORT ACCIDENTS OF RAM 1946-1965 SEE FOR 1969	UNC	01700-001+
RAIL ACCIDENT, COTULLA, TEXAS - 12/1/71	UNC	01701-001+
RAIL ACCIDENT, INDIO, CALIFORNIA - 6/25/73	UNC	01702-001+
RAIL ACCIDENT, SALEM, ILLINOIS - 6/10/71	UNC	01703-002+
RAIL ACCIDENT, MAQUIN, ILLINOIS - 5/24/72	UNC	01704-001+
RAIL ACCIDENT, TAFT, LOUISIANA - 2/21/73	UNC	01705-006+
RAIL ACCIDENT, EAST ST LOUIS, ILLINOIS - 1/22/72	UNC	01706-003+
RAIL ACCIDENT, HOUSTON, TEXAS - 10/19/71	UNC	01708-001+
RAIL ACCIDENT, HERNDON, PENNSYLVANIA - 3/12/72	UNC	01709-003+
FREIGHT TRAIN ACCIDENTS, NUMBER OF CARS INVOLVED	UNC	01729-007+
RAIL ACCIDENT - ONEONTA, NY - 2/12/74	UNC	01762-004+

(FIRE) .....TEMPERATURE.....INPUT.....TRANSPORTATION.....SHIP.....

FIRE TEMPERATURES-SHIP	UNC	00571-001+
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(FIRE) .....TEMPERATURE.....RESPONSE.....TRANSPORTATION.....AUTOMOBILE.....

CARGO RESPONSE TRUCK AND RAIL ACCIDENTS	UNC	01688-002+
TRANSPORT ACCIDENTS OF RAM 1946 TO 1965-UNITED KINGDOM	UNC	01689-011+

(FIRE) .....TEMPERATURE.....RESPONSE.....TRANSPORTATION.....RAILROAD.....

CARGO RESPONSE TRUCK AND RAIL ACCIDENTS SEE FOR 1968	UNC	01699-002+
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.....WIND.....INPUT.....TRANSPORTATION.....AIRCRAFT.....

HELICOPTER DOWNWASH DATA	UNC	01760-001+
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(STORM) .....WIND.....INPUT.....GENERAL.....OTHER.....

TORNADO, FREQUENCY AND LOCATION - UNITED STATES	UNC	01541-011+
WIND AND WAVE HEIGHTS - TROPICAL STORMS	UNC	01636-002+
TYPHOON REPORT - PACIFIC OCEAN - 1959	UNC	01802-003+
TYPHOON REPORT - PACIFIC OCEAN - 1960	UNC	01803-003+
TYPHOON REPORT - PACIFIC OCEAN - 1961	UNC	01804-003+
TYPHOON REPORT - PACIFIC OCEAN - 1962	UNC	01805-004+
TYPHOON REPORT - PACIFIC OCEAN - 1963	UNC	01806-003+
TYPHOON REPORT - PACIFIC OCEAN - 1965	UNC	01807-003+
TYPHOON REPORT - PACIFIC OCEAN - 1966	UNC	01808-003+
TYPHOON REPORT - PACIFIC OCEAN - 1967	UNC	01809-003+
TYPHOON REPORT - PACIFIC OCEAN - 1968	UNC	01810-004+
TYPHOON REPORT - PACIFIC OCEAN - 1969	UNC	01811-002+
TYPHOON REPORT - PACIFIC OCEAN - 1970	UNC	01812-003+
TYPHOON REPORT - PACIFIC OCEAN - 1974	UNC	01813-003+