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## Transportation Technical Environmental Information Center Index

Clarence A. Davidson, Jerry T. Foley



**Sandia National Laboratories**

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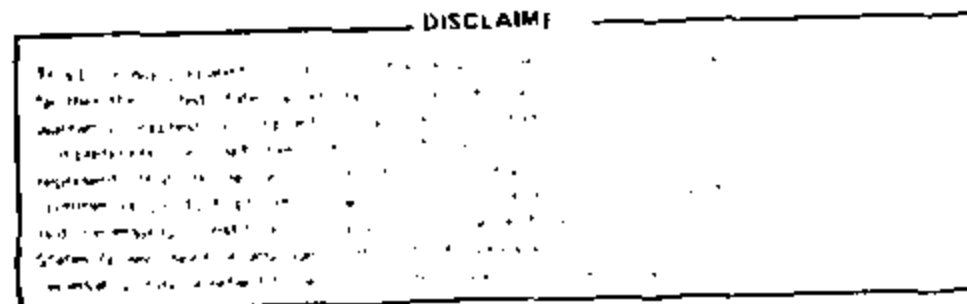
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# Transportation Technical Environmental Information Center Index

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## Abstract

In an effort to determine the environmental intensities to which energy materials in transit may be exposed, a *Data Center* of technical environmental information has been established by Sandia National Laboratories, Division 5523, for the DOE Office of Transportation Fuel Storage. This document is an index which can be used to request data of interest. Access to the information held is not limited to Sandia personnel.

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## **Contents**

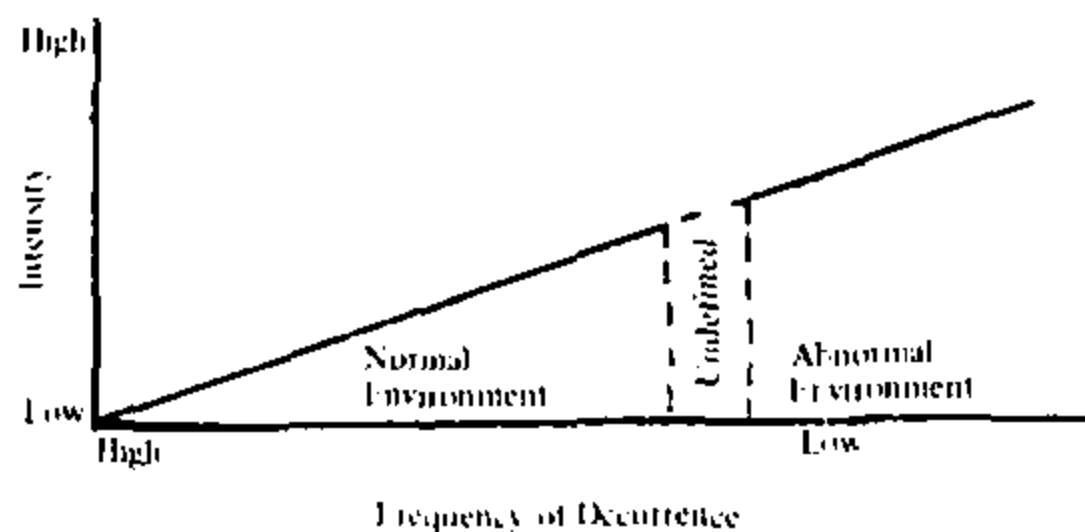
|                                   |    |
|-----------------------------------|----|
| Introduction .....                | 7  |
| The Environments.....             | 7  |
| The Data.....                     | 8  |
| Mechanics of the Data Center..... | 9  |
| Data Sources.....                 | 9  |
| Availability of the Data.....     | 9  |
| The Index.....                    | 9  |
| Normal Environments.....          | 11 |
| Abnormal Environments.....        | 27 |

# Transportation Technical Environmental Information Center Index

## Introduction

The purpose of the Transportation Technical Environmental Information Center is to collect, analyze, store, and make available descriptions of the environment of transportation expressed in engineering terms. The data stored in the Center are expected to be useful in a variety of transportation related analyses. Formulations of environmental criteria for shipment of cargo, risk assessments, and detailed structural analyses of shipping containers are examples where these data have been applied. The Transportation Technical Environmental Information Center is a segment of a larger DOE/DOD Environmental Data Center 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 a conceptual relationship between these environmental designations as a function of the expected rate of occurrence.



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

These short descriptions are shown in the index in parentheses where they apply.

## The Environments

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

1. Acceleration/Time\*
2. Acoustic Noise
3. Atmospheric Content
4. Fragmentation\*
5. Humidity
6. Precipitation
7. Pressure\*
8. Radiation\*
9. Shock\*
10. Temperature\*
11. Vibration
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. For example, humidity is limited by ambient temperature e.g., relative humidity cannot exceed 100 percent.
2. The abnormal aspects of some environments are encountered so infrequently that they are of little interest; e.g., acoustic noise of such intensity as to cause structural damage.
3. Protection against the effects of some normal environments includes protection against the abnormal; e.g., protection against entry of liquid water is effective in a cloudburst as well as during drizzle.

After eliminating those environmental categories covered by the above factors, only the environments indicated by an asterisk in the above list are of interest in the abnormal considerations. Figure 1 is a chart which illustrates the organization of data in the Center by categories and by additional nomenclature which differentiates between input and response phenomena. Input may be defined as the environmental level which exists at the cargo interface while response is measured in terms of how the cargo reacts

\*Environments with both normal and abnormal aspects.

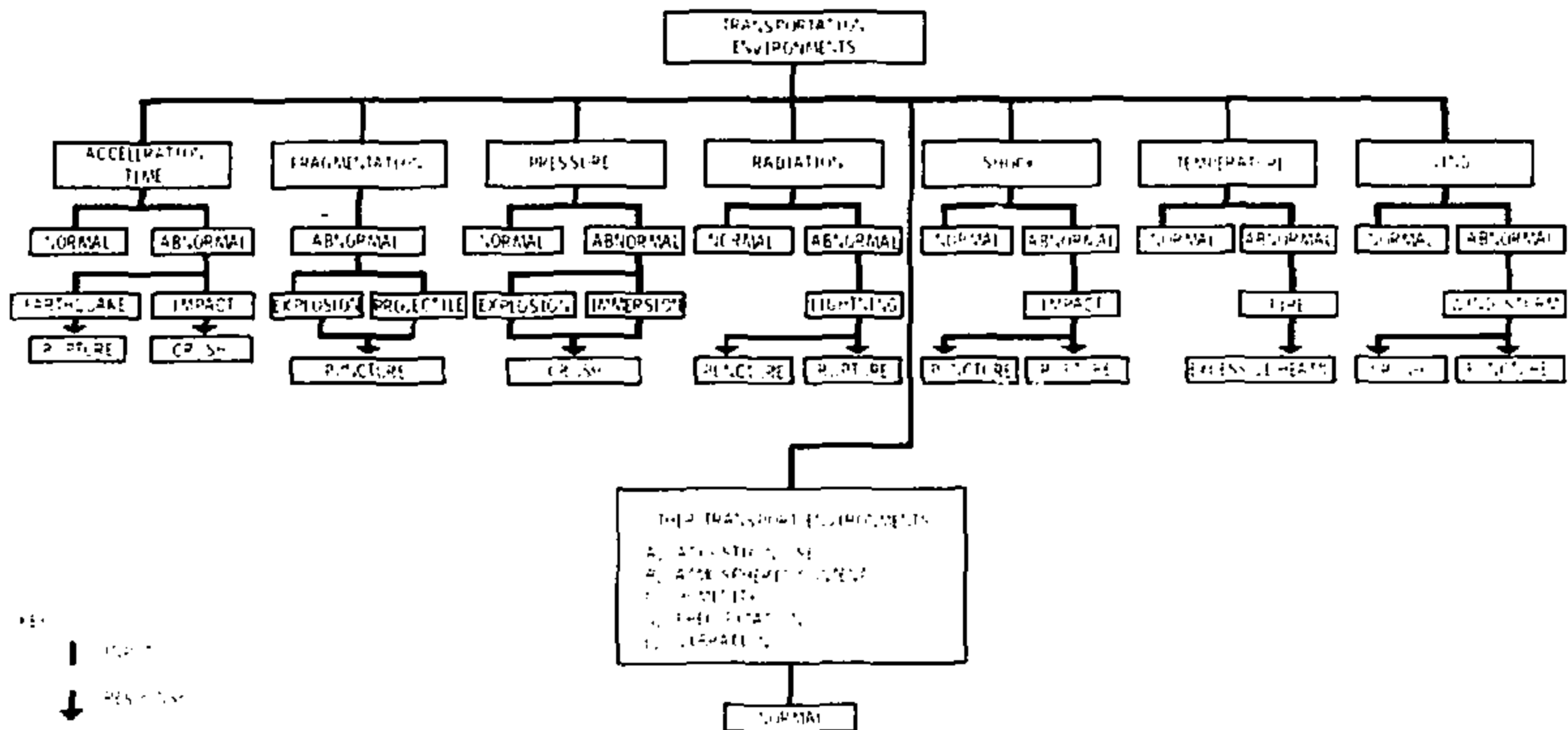


Figure 1 Structure of the Transportation Technical Environmental Information Center

to the environments. As an example consider the pressure environment, which 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 input pressure is sufficiently high, a crush (collapse) 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., those which will be encountered frequently during transportation.

## The Data

Normal environmental data stored in the Transportation Technical Environmental Information Center are measured data. They were obtained from reliable sources, both from within Sandia National Laboratories and from other reputable agencies. When data were required, but not available, the Data Center operators arranged for measurements to provide some of the information.

Most input data in the Data Center 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 information which is most useful in estimating abnormal inputs includes the following:

| Environmental Categories    | Abnormal Manifestation Examples            |
|-----------------------------|--|
| Acceleration/time histories | Earthquake, vehicle collision              |
| Fragmentation               | Projectile impalement, explosion, puncture |
| Pressure                    | Explosion, immersion depth, crush          |
| Radiation                   | Lightning (direct strike)                  |
| Shock                       | Impact (vehicle collision)                 |
| Temperature                 | Fire                                       |
| Wind                        | Wind storm (tornado, hurricane, etc.)      |

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

Under the input and response headings, each of the categories is further divided into the individual use phases that occur during the life of a system:

1. Handling,
2. Storage,
3. Transport,
4. Utilization, and
5. General.

The transport and utilization phases are further subdivided into the type of carrier involved: i.e., aircraft, automobile, railroad, etc.

## Mechanics of the Data Center

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

The two-part number listed after the title of a particular Data Center entry is the access number for the data file. The first number, e.g., 1614, is the file number. The number after the dash (-) is the number of pages available on the subject. Requests for hard copies of data should cite these two numbers. For large data requests, it is faster and cheaper for the data center operators to transmit the data to the requestor in the form of duplicate microfilm aperture cards or duplicate microfiche. If the requestor has facilities for reading information in these formats, it should be so stated in the request.

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 Center.

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 Center is acquired by the Data Center'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 various project groups within Sandia National Laboratories. The Data Center'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 source file is maintained as an adjunct to the Center, which integrates this Data Center'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 Center is available, within the limits of time, workload, and security regulations, to any requestor. Requests for data should be sent to Division 5523, Sandia National Laboratories, Albuquerque, NM, 87185. The request should either outline the specific area for which information is desired, or it should list specific entries, including file numbers. Requests will be processed as time allows. Agencies outside of the DOE complex will be furnished information subject to the review and release procedures established by the DOE.

## The Index

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

## **Normal Environments**

JP/Q5/BC

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

LOADS IMPOSED ON CARGO BY FLIGHT AND LANDING 00750-001  
MANEUVER LOAD DATA C-130 AIRCRAFT 00944-004  
FATIGUE DAMAGE PARAMETERS, TRANSPORT AIRCRAFT 01085-002  
GUST LOAD FREQUENCY, AIRCRAFT FLIGHTS, 40-45 KILOFEET, IN STORM 01087-003  
AIRCRAFT RECORDINGS DURING A TURBULENCE INCIDENT 01090-002

....ACCELERATION/TIME.....INPUT.....TRANSPORTATION.....SHIP.....

AN ASSESSMENT OF VIBRATION ENV ON COMM CARGO SHIPS C2253-004  
ACCELERATION, SHIP MOTIONS, MAXIMUM 00739-001  
ACCELERATIONS ON PACKAGES STORED IN SHIPS HOLDS 00740-001  
ACCELERATION, EXPECTED PEAK VALUES, MARINE 00741-001  
SHIP MOTIONS, SS SILVER MARINER, NEW YORK-BREMENHAVEN, GERMANY 00746-001  
SHIP MOTIONS, T-2 TANKER, ESSO ASHVILLE, NORMAL OPERATIONS 00747-001  
WAVE HEIGHT DISTRIBUTION - ATLANTIC OCEAN 01573-017

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

GUST LOAD FREQUENCY, AIRCRAFT FLIGHTS, 40-45 KILOFEET, IN STORM 01087-003  
AIRCRAFT RECORDINGS DURING A TURBULENCE INCIDENT 01090-002

....ACCELERATION/TIME.....RESPONSE.....TRANSPORTATION.....SHIP.....

AN ASSESSMENT OF VIBRATION ENV ON COMM CARGO SHIPS C2253-004

(IMPACT) ....ACCELERATION/TIME.....INPUT.....GENERAL.....SHIP.....

HYDRODYNAMIC ASPECT OF DYNAMIC DRILL SHIP POSITIONING 01981-020

(IMPACT) ....ACCELERATION/TIME.....INPUT.....GENERAL.....OTHER.....

APPROXIMATE DURATION OF SOME SHORT ACCELERATION LOADS 00734-001

(IMPACT) ....ACCELERATION/TIME.....INPUT.....HANDLING.....OTHER.....

CARGO HANDLING, DROP HEIGHT, PROBABILITIES C2252-014

(IMPACT) ....ACCELERATION/TIME.....INPUT.....TRANSPORTATION.....AUTOMOBILE.....

TRACTOR/TRAILER TRANSPORT, 3 TYPES SUSPENSION SYSTEM 01988-009

....ACOUSTIC NOISE.....INPUT.....GENERAL.....AIRCRAFT AND MISSILE..

SPACE SHUTTLE ORBITER VIBROACOUSTICS C2061-046

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

SOUND PRESSURE LEVEL VS ANGLE AT 200 FEET, C124, 2 ENGINES UP 00612-001  
SOUND PRESSURE LEVEL VS ANGLE AT 200 FEET, C124, 3 ENGINES UP 00613-001  
OVERALL SOUND PRESSURE LEVEL VS ANGLE, C124, VARIOUS CONDITION 00614-001



JPL/US/ND

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

SOUND PRESSURE LEVEL, AVERAGE, COMPARISON OF C133A AND C124 00615-001  
 COMPARISON OF C112, C124, C133A AND MIL-A-8806 SPL IN COCKPIT 00616-001  
 SOUND PRESSURE LEVEL, OVERALL, CABIN, C133 AIRCRAFT 00617-001  
 NOISE LEVELS IN VICINITY OF JET ENGINES AND NEAR 4-ENGINE AC 00618-001  
 SOUND PRESSURE LEVEL, OVERALL, FOR SIX TURBOJET AIRCRAFT, 100 FT 00619-001  
 SOUND PRESSURE LEVEL, OVERALL, FOR 5 TURBOJET AIRCRAFT, 200 FT 00620-001  
 SOUND PRESSURE LEVEL, OVERALL, FOR 4 TURBOJET AIRCRAFT, 400 FT 00621-001  
 SOUND PRESSURE LEVEL, OVERALL, 2 TURBOJET A/C, WITH AFTERBURNER 00622-001  
 SOUND PRESSURE LEVEL, OVERALL, MAXIMUM, 4 USAF TURBOJET A/C 00623-001  
 NOISE SPECTRUM OF TURBOJET WITH AFTERBURNER 00827-001  
 NOISE, MH43 HELICOPTER, TAKEOFF, HOVER, LANDING 01564-042  
 ENVIRONMENT OF A STORE IN AN AIRCRAFT WEAPONS BAY 02073-009  
 CAVITY NOISE MEASUREMENT AND SUPPRESSION ON THE P-3 AC 02287-009

.....ACOUSTIC NOISE.....INPUT.....TRANSPORTATION.....AUTOMOBILE.....

CONTROL OF HIGHWAY NOISE 01134-008  
 ACOUSTIC NOISE SOURCES, TRUCK 01608-002  
 NOISE, TRANSPORTATION, SURFACE AND AIR 01624-034  
 CONCEPTS FOR NOISE REDUCTION IN TRACKED VEHICLES 02050-080

.....ACOUSTIC NOISE.....INPUT.....TRANSPORTATION.....RAILROAD.....

ACOUSTIC NOISE SOURCES, TRAIN 01939-009

.....ACOUSTIC NOISE.....INPUT.....UTILIZATION.....AUTOMOBILE.....

SURVEY TRUCK NOISE LEVELS AND THE EFFECT OF REGULATION 02025-042

.....ACOUSTIC NOISE.....INPUT.....UTILIZATION.....MISSILE.....

NOISE EXPOSURE OF PAYLOADS SPACE SHUTTLE DRIVEN VEH 02288-027

.....ACOUSTIC NOISE.....RESPONSE.....TRANSPORTATION.....AUTOMOBILE.....

CONCEPTS FOR NOISE REDUCTION IN TRACKED VEHICLES 02050-080

.....ATMOSPHERIC CONTENTS.....INPUT.....GENERAL.....OTHER.....

ENVIRONMENT CONDITIONS PREVAILING DURING TRANSIT 00078-001  
 SALT SPRAY PARTICLES IN AIR, DISTRIBUTION, CONCENTRATION, SIZE 00274-001  
 SAND AND DUST-CHARACTERISTICS 01274-004

.....ATMOSPHERIC CONTENTS.....INPUT.....STORAGE.....OTHER.....

AIRBORNE PARTICULATES 01568-043

06/05/80

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

SAND/DUST IN HELICOPTER/VSTOL A/C FLIGHTS 01084-007  
FREQUENCY OF OCCURENCE OF AIRCRAFT ICING PARAMETERS 01089-003

..ATMOSPHERIC CONTENTS.....INPUT.....TRANSPORTATION.....SHIP.....

SEA SALT ENVIRONMENT ON DECK AT SEA 01179-004

.....HUMIDITY.....INPUT.....GENERAL.....OTHER.....

ENVIRONMENT CONDITIONS PREVAILING DURING TRANSIT 00078-001  
HUMIDITY,RELATIVE,IN DESERT,TROPICS,ARCTIC AND IN SHIPHOLDS 00229-001  
HUMIDITY EXTREMES,PROBABLE, FOR STORAGE AND TRANSIT 00230-001

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

TEMPERATURES AND RELATIVE HUMIDITY,SHIP HOLD 00058-001  
HUMIDITY,RELATIVE,ABOARD SHIP 00232-001

.....PRECIPITATION.....INPUT.....GENERAL.....OTHER.....

ENVIRONMENT CONDITIONS PREVAILING DURING TRANSIT 00078-001  
RAINFALL,AVERAGE RATES OF 00237-001  
HAILSTONES,SIZE,TERMINAL VELOCITIES,DISTRIBUTION OF 00250-001  
HAIL,FREQUENCY AND DISTRIBUTION OF,FLIGHT THRU THUNDERSTORM 00251-001  
ELECTROSTATIC FIELDS IN THE ATMOSPHERE 00459-002  
RAINFALL INTENSITY,FREQUENCY,U.S.,50 STATES,PURTO RICO 01113-058  
HAILSTONE EXTREMES 01513-026  
GLAZE ICE,WIND LOADS AT EARTH'S SURFACE 01722-035  
ICE THICKNESS/STRATIGRAPHY,GREAT LAKES NEARSHORE LOC 02296-442

.....PRECIPITATION.....INPUT.....TRANSPORTATION.....AIRCRAFT.....

STATIC ELECTRICITY ACCUMULATION ON HELICOPTERS 00463-001  
FREQUENCY OF OCCURENCE OF AIRCRAFT ICING PARAMETERS 01089-003

.....PRECIPITATION.....INPUT.....TRANSPORTATION.....OTHER.....

RAINFALL INTENSITY, DURATION, HAWAII 01761-064

.....PRESSURE.....INPUT.....GENERAL.....OTHER.....

PRESSURE,TYPICAL DAILY VS TIME OF DAY 00140-001  
BAROMETRIC VALUES,MAXIMUM NORMAL VARIATION,UNITED STATES 00143-001

.....PRESSURE.....INPUT.....TRANSPORTATION.....AIRCRAFT.....

PRESSURE CHANGES,ATMOSPHERIC,AIRCRAFT CARGO HOLDS 00147-001  
PERFORMANCE AND LOADING-C130B 00148-001  
PERFORMANCE AND LOADING-C133A 00149-001  
FLIGHT PROFILE,NORMAL,C133 CARGO AIRCRAFT 00150-001  
FLIGHT PROFILE,NORMAL,C124 CARGO AIRCRAFT 00151-001

.....RADIATION.....INPUT.....GENERAL.....OTHER.....

68705780

.....RADIATION.....INPUT.....GENERAL.....OTHER.....

RADIATION, SOLAR, DIRECT NORMAL 24-56 DEG N/LATITUDE C2218-002  
 ENVIRONMENTAL CONDITIONS PREVAILING DURING TRANSIT 00078-001  
 TEMPERATURE EXTREMES/DURATION, FOR STORAGE, HANDLING, TRANSPORT 00080-002  
 ELECTRIC CHARGES IN THE ATMOSPHERE 00459-002  
 STATIC ELECTRICITY-ELECTRICAL CHARACTERISTICS OF ATMOSPHERE 00450-003  
 RADIATION, SOLAR, AT EARTH'S SURFACE AND ATMOSPHERE'S EDGE 00479-003  
 RADIATION, SOLAR 00480-001  
 RADIATION, MEAN DAILY TOTAL, FLAT SURFACE, LOCATIONS, US/CANADA 00495-004  
 INSOLATION, MONTHLY MAPS OF MEAN DAILY, FOR THE UNITED STATES 00831-006  
 LIGHTNING CHARACTERISTICS 01107-017

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

STATIC ELECTRICITY ACCUMULATION ON HELICOPTERS 00463-001  
 HELICOPTER STATIC ELECTRICITY MEASUREMENTS 00503-006  
 STUDY OF STATIC ELECTRIC PHENOMENA APPLIED HELICOPTERS 02297-078  
 HEAVY LIFT HELICOPTER ACTIVE/PASSIVE STATIC DISCHARGE 02298-233

.....RADIATION.....INPUT.....TRANSPORTATION.....RAILROAD.....

TEMPERATURE, INTERNAL AIR, RAILROAD BOXCAR IN DESERT 00056-001

(LIGHTNING) .....RADIATION.....INPUT.....TRANSPORTATION.....AIRCRAFT.....

LIGHTNING HAZARD TO AIRCRAFT 01415-011

.....SHOCK.....INPUT.....HANDLING.....OTHER.....

CARGO HANDLING, DROP HEIGHT, PROBABILITIES C2252-014  
 SHOCK MEASUREMENT, DOCKSIDE/SHIPBOARD HANDLING SEE EDB 60202 00335-000  
 PACKAGE DROPPED ON EARTH, WOOD AND CONCRETE FLOORS 00337-001  
 PACKAGES, TREATMENT OF DURING HANDLING 00343-001  
 SHOCK ZONES REGISTERED IN CARGO DURING HANDLING SEE EDB 336 00814-000  
 SUMMARY, DYNAMIC ENVIRONMENT, FORKLIFT TRUCKS 01744-061  
 SHOCK, VIBRATION, 2000 LB FORKLIFT TRUCK (SEE 1744) 01745-092  
 SHOCK, INPUT, 3000 LB FORKLIFT TRUCK (SEE 1744) 01746-114  
 SHOCK, INPUT, 4000 LB FORKLIFT TRUCK (SEE 1744) 01749-116  
 SHOCK, VIBRATION, 7000 LB FORKLIFT TRUCK (SEE 1744) 01752-081

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

DYNAMIC ENVIRONMENT, SUBJETS CARGO AIRCRAFT A1533-006  
 SHOCK DATA, AIRCRAFT/CARGO 00334-001  
 SHOCK ZONES REGISTERED IN AIR CARGO TESTS DURING FLIGHT 00336-001  
 SHOCK, CSA CARGO FLOOR, (SEE 1439) 01444-084

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

SHOCK SUMMARY, TRUCK SHIPMENT 56,000 LB CASK SEE 2066 A2065-013  
 SHOCK SUMMARY, TRUCK SHIPMENT 44,000 LB CASK SEE 2070 A2069-013

JB/OS/EC

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

|  |           |
|--|-----------|
| TRUCK SHOCK/VIB ENV, LARGE SHIPPING CONTAINER SEE 2071       | A2072-000 |
| SHOCK/VIB ENV LARGE SHIPPING CONTAINER BY TRUCK PART 1       | A2164-019 |
| SHOCK/VIB ENV LARGE SHIPPING CONTAINER BY TRUCK PART 2       | A2165-031 |
| SHOCK DATA-TRUCKS  | 00311-001 |
| SHOCKS FROM ROAD IRREGULARITIES AND TOWBAR SNATCH            | 00314-001 |
| SHOCK AND VIBRATION ENVIRONMENT IN COMMERCIAL TRUCKS/TRAILER | 00315-002 |
| ENVIRONMENT IN VEHICLES TRAVELING OVER PAVED ROADS           | 00317-001 |
| VIBRATION-ACCELERATIONS IN HIGHWAY OPERATION OF TRUCKS       | 00370-001 |
| SHOCK ZONES REGISTERED BY CARGO SURFACE TRANSFER SEE EDB 336 | 00813-000 |
| DYNAMIC ENVIRONMENT ON A FLAT BED TRACTOR/TRAILER (AEC/DOD)  | 01006-015 |
| FINAL ANALYSIS, AEC/DOD FLATBED TRUCK TEST                   | 01083-060 |
| VIBRATION/SHOCK, 2 1/2 TON TRUCK                             | 01264-016 |
| VIBRATION/SHOCK AIR SUSPENSION VAN                           | 01277-011 |
| SHOCK/VIBRATION SUMMARY, UNION CARBIDE TRUCK TEST            | 01312-013 |
| SHOCK DATA, UNION CARBIDE TRUCK TEST                         | 01314-011 |
| TRACTOR/TRAILER TRANSPORT, 3 TYPES SUSPENSION SYSTEM         | 01988-009 |
| SHOCK RESPONSE, TRUCK SHIPMENT 56,000 LB CASK SEE 2065       | 02066-222 |
| SHOCK RESPONSE, TRUCK SHIPMENT 44,000 LB CASK SEE 2069       | 02070-172 |
| SHOCK SPECTRA STD FRT TRL, EMPTY TEST NO. R20402B            | 02239-032 |
| SHOCK SPECTRA STD FRT TRL, LOADED TEST NO. R20402B           | 02240-057 |

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

|   |           |
|---|-----------|
| RAIL HUMP SHOCK CRITERIA SUMMARY                                | A1202-010 |
| RAILCAR SHOCK/VIB ENV, LARGE SHIPPING CONTAINER                 | A2071-033 |
| BOXCAR SHOCK CRITERIA SUMMARY                                   | B1203-003 |
| ATMX CAR SHOCK CRITERIA SUMMARY                                 | B1210-002 |
| SHOCK/VIBRATION ENVIRONMENT SUMMARY, RAIL TRANSPORT             | B1320-021 |
| SHOCK SPECTRA SUMMARY, SIX-ATMX CAR TRAIN                       | C1215-023 |
| SPEEDS, SWITCHING, OBSERVED AT VARIOUS HUMP YARDS               | 00284-001 |
| SPEEDS, SWITCHING, OBSERVATION OF, AT ILLINOIS CENTRAL MK YARDS | 00285-004 |
| SPEEDS, SWITCHING, OBSERVED                                     | 00286-001 |
| SHOCK, SWITCHING, RAIL, OCCURANCE OF                            | 00287-001 |
| SPEED, SWITCHING, DATA COMPARED WITH NEW DATA, NY CENTRAL RR    | 00288-002 |
| SPEED, HUMPING, FREQUENCY OF IMPACTS AT VARIOUS                 | 00289-001 |
| RAIL SWITCHING AND HUMPING OPERATIONS                           | 00290-001 |
| SHOCK DATA, RAILROAD SWITCHING                                  | 00293-002 |
| SHOCK DATA, RAILROAD SWITCHING                                  | 00294-002 |
| SHOCK DATA, RAILROAD SWITCHING                                  | 00295-002 |
| SHOCK DATA, RAIL  | 00296-001 |
| SHOCK DATA, RAIL/BOXCAR/  | 00297-001 |
| SHOCKS IN TRAINS WHEN STOPPING, STARTING AND SWITCHING          | 00300-001 |
| SHOCK, RAILROAD HUMPING   | 00302-005 |
| RAILROAD SWITCHING TEST OF SPECIAL RAIL CAR ATMX 500            | 00304-002 |
| RAIL HUMPING TEST, 500 SERIES ATMX CAR                          | 00305-014 |
| IMPACT SPEED VS HORIZONTAL TRAVEL OF STUCK EMPTY CAR            | 00309-001 |
| VIBRATION ENVIRONMENT PRODUCED DURING RAIL TRANSPORT            | 00366-002 |
| SHOCK, RAIL HUMPING 3.4 TO 10 MPH, 3 DIRECTIONS                 | 01033-010 |
| SHOCK RAIL HUMP SPECIAL DRAFT CAR, 10 1/2 MPH LONGITUDINAL      | 01034-004 |

JB705/80

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

|  |           |
|--|-----------|
| SHOCK SPECTRA,BOXCAR, LONGITUDINAL AXIS              | 01204-113 |
| SHOCK SPECTRA,BOXCAR,VERTICAL AXIS                   | 01205-128 |
| SHOCK SPECTRA,BOXCAR, LATERAL AXIS                   | 01206-121 |
| SHOCK SPECTRA,SERIES 500 ATM CAR, LONGITUDINAL AXIS  | 01211-162 |
| SHOCK SPECTRA,SERIES 500 ATM CAR, VERTICAL AXIS      | 01212-098 |
| SHOCK SPECTRA,500 SERIES ATM CAR, LATERAL AXIS       | 01213-038 |
| SHOCK SPECTRA,SERIES 600 ATM CAR, ALL AXES           | 01214-072 |
| SHOCK SPECTRA,HAMMER CAR,SIX-ATM CAR TRAIN           | 01216-195 |
| SHOCK SPECTRA,1ST STRUCK CAR,SIX-ATM CAR TRAIN       | 01217-059 |
| SHOCK SPECTRA,2ND STRUCK CAR, SIX-ATM CAR TRAIN      | 01218-029 |
| SHOCK SPECTRA,3RD STRUCK CAR, SIX-ATM CAR TRAIN      | 01219-169 |
| SHOCK SPECTRA,4TH STRUCK CAR,SIX ATM CAR TRAIN       | 1220-029  |
| SHOCK SPECTRA,5TH STRUCK CAR, SIX-ATM CAR TRAIN      | 01221-029 |
| SHOCK/VIBRATION SUMMARY,UNION CARBIDE RAIL TEST      | 01315-013 |
| SHOCK DATA, UNION CARBIDE RAIL TEST                  | 01317-066 |
| SWITCHING SHOCK,CUSHION UNDERFRAME BOXCAR            | 01326-109 |
| SPEEDS, RAIL SWITCHING, DISTRIBUTION                 | 01638-002 |
| PERFORMANCE FREIGHT-CAR TRKS THROUGH ROAD TESTING    | 02105-010 |
| TRAIN RUN-IN AND RUN-OUT FORCE ANALYSIS ENSCO REPORT | 02111-026 |

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

|  |           |
|--|-----------|
| SHOCK SPECTRA,SHIP,TYPICAL                   | 00333-001 |
| ACCELERATION IN CARGO SHIPS DURING MANEUVERS | 01133-005 |

.....SHOCK.....INPUT.....TRANSPORTATION.....OTHER.....

|  |           |
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| SUMMARY, DYNAMIC ENVIRONMENT OF TRANSPORTATION - 1973      | A1354-035 |
| SHOCK AND ACCELERATION DATA FOR VARIOUS MEANS OF TRANSPORT | 00344-061 |
| SHOCK + VIBRATION DATA OBTAINED FROM TRUCK + RAIL SHIPMENT | 01003-012 |
| TRANSPORTATION OF EUROPEAN SPACELAB COMPONENTS             | 02210-100 |

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

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|---|-----------|
| SUMMARY,DYNAMIC ENVIRONMENT,FORKLIFT TRUCKS         | 01744-061 |
| SHOCK,VIBRATION, 2000 LB FORKLIFT TRUCK (SEE 1744)  | 01745-042 |
| SHOCK,RESPONSE, 3000 LB FORKLIFT TRUCK (SEE 1744)   | 01747-116 |
| SHOCK,RESPONSE,4000LB FORKLIFT TRUCK (SEE 1744)     | 01750-116 |
| SHOCK, VIBRATION, 7000 LB FORKLIFT TRUCK (SEE 1744) | 01752-081 |

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

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| TRUCK SHOCK/VIB ENV, LARGE SHIPPING CONTAINER SEE 2071 | A2072-000 |
| SHOCK/VIB ENV LARGE SHIPPING CONTAINER BY TRUCK PART 1 | A2164-019 |
| SHOCK/VIB ENV LARGE SHIPPING CONTAINER BY TRUCK PART 2 | A2165-031 |
| SHOCK/VIBRATION SUMMARY,UNION CARBIDE TRUCK TEST       | 01312-013 |
| SHOCK DATA,UNION CARBIDE TRUCK TEST                    | 01314-025 |

08/05/80

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

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|---|-----------|
| RAIL HUMP SHOCK CRITERIA SUMMARY                      | A1202-010 |
| RAILCAR SHOCK/VIB ENV, LARGE SHIPPING CONTAINER       | A2071-036 |
| BOXCAR SHOCK CRITERIA SUMMARY                         | B1203-003 |
| ATMX CAR SHOCK CRITERIA SUMMARY                       | B1210-002 |
| SHOCK/VIBRATION ENVIRONMENT SUMMARY, RAIL TRANSPORT   | B1320-021 |
| SHOCK SPECTRA SUMMARY, SIX-ATMX CAR TRAIN             | C1215-023 |
| SHOCK SPECTRA, BOXCAR, LONGITUDINAL AXIS              | 01204-113 |
| SHOCK SPECTRA, BOXCAR, VERTICAL AXIS                  | 01205-128 |
| SHOCK SPECTRA, BOXCAR, LATERAL AXIS                   | 01206-121 |
| SHOCK SPECTRA, SERIES 500 ATMX CAR, LONGITUDINAL AXIS | 01211-162 |
| SHOCK SPECTRA, SERIES 500 ATMX CAR, VERTICAL AXIS     | 01212-098 |
| SHOCK SPECTRA, 500 SERIES ATMX CAR, LATERAL AXIS      | 01213-038 |
| SHOCK SPECTRA, SERIES 600 ATMX CAR, ALL AXES          | 01214-072 |
| SHOCK SPECTRA, HAMMER CAR, SIX-ATMX CAR TRAIN         | 01216-195 |
| SHOCK SPECTRA, 1ST STRUCK CAR, SIX-ATMX CAR TRAIN     | 01217-059 |
| SHOCK SPECTRA, 2ND STRUCK CAR, SIX-ATMX CAR TRAIN     | 01218-029 |
| SHOCK SPECTRA, 3RD STRUCK CAR, SIX-ATMX CAR TRAIN     | 01219-169 |
| SHOCK SPECTRA, 4TH STRUCK CAR, SIX-ATMX CAR TRAIN     | 01220-029 |
| SHOCK SPECTRA, 5TH STRUCK CAR, SIX-ATMX CAR TRAIN     | 01221-029 |
| SHOCK/VIBRATION SUMMARY, UNION CARBIDE RAIL TEST      | 01315-013 |
| SHOCK DATA, UNION CARBIDE RAIL TEST                   | 01317-066 |
| SWITCHING SHOCK, CUSHION UNDERFRAME BOXCAR            | 01326-109 |
| PERFORMANCE FREIGHT-CAR TRKS THROUGH ROAD TESTING     | 02105-010 |
| TRAIN RUN-IN AND RUN-OUT FORCE ANALYSIS FMSCO REPORT  | 02111-026 |

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

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| SHOCK + VIBRATION DATA OBTAINED FROM TRUCK + RAIL SHIPMENT | 01003-012 |
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.....SHOCK.....RESPONSE.....UTILIZATION.....RAILROAD.....

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| DYNAMIC MEASUREMENT OF TRACK-INDUCED RAILCAR WHEEL ACC | 02016-012 |
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(IMPACT) .....SHOCK.....INPUT.....GENERAL.....OTHER.....

|   |           |
|---|-----------|
| APPROXIMATE DURATION OF SOME SHORT ACCELERATION LOADS | 00734-001 |
|---|-----------|

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

|                                    |           |
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| MAXIMUM DROPS, PACKAGES IN TRANSIT | 01608-008 |
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(IMPACT) .....SHOCK.....RESPONSE.....HANDLING.....OTHER.....

|                                    |           |
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| MAXIMUM DROPS, PACKAGES IN TRANSIT | 01608-008 |
|------------------------------------|-----------|

.....TEMPERATURE.....INPUT.....GENERAL.....AIRCRAFT AND MISSILE..

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| SPACE SHUTTLE ORBITER VIBROACOUSTICS | 02061-046 |
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.....TEMPERATURE.....INPUT.....GENERAL.....OTHER.....
TEMPERATURE REGIME FOR DESERT REGIONS                                00006-002
TEMPERATURES, 1°-99° DESIGN, FOR UNITED STATES AND CANADA          00018-002
ENVIRONMENT CONDITIONS PREVAILING DURING TRANSIT                    00078-001
TEMPERATURE, EXTREMES/DURATION, FOR STORAGE, HANDLING, TRANSPORT    00080-002
TEMPERATURE EXTREMES IN TRANSIT SEE EDB 00083                       00084-000
RADIATION, MEAN DAILY TOTAL, FLAT SURFACE, LOCATIONS, US/CANADA     00495-004
TEMPERATURE, MEAN DATE OF FIRST 32 DEG F IN AUTUMN US               02171-002
TEMPERATURE, MEAN DATE OF LAST 32 DEG F IN SPRING US               02172-002
TEMPERATURE, MEAN MONTHLY NO. OF DAYS 32 F AND BELOW US            02173-002
TEMPERATURE, MEAN LENGTH OF FREEZE-FREE PERIOD-DAYS US             02174-002

.....TEMPERATURE.....INPUT.....TRANSPORTATION.....AIRCRAFT.....
TEMPERATURES, CARGO COMPARTMENT, C119C AIRCRAFT, ALASKA, WINTER     00061-001
TEMPERATURES, AIRCRAFT COMPARTMENT                                  00062-001
TEMPERATURES, MAXIMUM/MINIMUM, IN AIR AND AIRCRAFT CARGO HOLDS     00064-001
TEMPERATURES, COMPARTMENT, C141A                                    00066-001
FREQUENCY OF OCCURENCE OF AIRCRAFT ICING PARAMETERS                01089-003
TEMP/TIME DATA AIRCRAFT, TRUCK, TRAIN, ATMA                       01288-007

.....TEMPERATURE.....INPUT.....TRANSPORTATION.....AUTOMOBILE.....
TEMPERATURE/TIME DATA, TRUCK (SEE 1288)                            01309-000
TEMPERATURE, TRUCK CARGO, HIGH AND LOW                              01327-053

.....TEMPERATURE.....INPUT.....TRANSPORTATION.....RAILROAD.....
TEMPERATURE, INTERNAL AIR, RAILROAD BOXCAR IN DESERT                00056-001
TEMPERATURE TESTS, INTERNAL, RAILROAD FREIGHT CARS WINTER          00057-002
TEMPERATURE/TIME DATA, RAIL AND ATMA CARS (SEE 1288)              01310-000
TEMPERATURE, HIGH, STANDING BOXCARS                                 01401-039

.....TEMPERATURE.....INPUT.....TRANSPORTATION.....SHIP.....
TEMPERATURES AND RELATIVE HUMIDITY, SHIP HOLD                       00058-001
TEMPERATURES, MAXIMUM AND MINIMUM, AT SEA                           00059-001
HUMIDITY, RELATIVE, ABOARD SHIP                                    00232-001
TEMPERATURE IN SHIPS HOLDS                                          01262-003

.....TEMPERATURE.....RESPONSE.....TRANSPORTATION.....AIRCRAFT.....
TEMP/TIME DATA AIRCRAFT, TRUCK, TRAIN, ATMA                       01288-007

.....TEMPERATURE.....RESPONSE.....TRANSPORTATION.....AUTOMOBILE.....
TEMPERATURE/TIME DATA, TRUCK (SEE 1288)                            01309-000
TEMPERATURE, TRUCK CARGO, HIGH AND LOW                              01327-053

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DE/65/90

.....TEMPERATURE.....RESPONSE.....TRANSPORTATION.....RAILROAD.....  
TEMPERATURE/TIME DATA, RAIL AND AIRCRAFT CARS (SEE 1258) 01310-000

.....VIBRATION.....INPUT.....GENERAL.....AIRCRAFT.....  
VIBRATION OF HELICOPTERS (ISOLATION AND ABSORBERS) 02117-009

.....VIBRATION.....INPUT.....GENERAL.....AIRCRAFT AND MISSILE..  
SPACE SHUTTLE ORBITER VIBROACOUSTICS 02061-046

.....VIBRATION.....INPUT.....GENERAL.....RAILROAD.....  
PARAMETRIC STUDIES RR FRT CAR MATH MODEL HARMONIC ROLL 01980-009  
RIDE QUALITY OF A CONTAINER FLAT CAR 01982-012

.....VIBRATION.....INPUT.....HANDLING.....OTHER.....  
CARGO HANDLING, DROP HEIGHT, PROBABILITIES 02252-014  
SUMMARY, DYNAMIC ENVIRONMENT, FORKLIFT TRUCKS 01744-061  
SHOCK, VIBRATION, 2000 LB FORKLIFT TRUCK (SEE 1744) 01745-092  
VIBRATION, INPUT/RESPONSE, 3000 LB FORKLIFT (SEE 1744) 01748-150  
VIBRATION, INPUT/RESPONSE, 4000 LB FORKLIFT (SEE 1744) 01751-119  
SHOCK, VIBRATION, 7000 LB FORKLIFT TRUCK (SEE 1744) 01752-081

.....VIBRATION.....INPUT.....TRANSPORTATION.....AIRCRAFT.....  
DYNAMIC ENVIRONMENT, TURBOJET CARGO AIRCRAFT A1533-006  
VIBRATION, MOST PROBABLE EXTREME, PROPELLER DRIVEN AIRCRAFT B0420-001  
VIBRATION ENVIRONMENT, ENVELOPE, CARGO AIRCRAFT C2255-005  
VIBRATION DATA, AIRCRAFT 00424-001  
VIBRATIONS, MAXIMUM LATERAL AND VERTICAL, HELICOPTER FLOOR 00433-001  
VIBRATION, KC-135 FLOOR, VERTICAL, LATERAL, LONGITUDINAL 00846-001  
VIBRATION, FLOOR, PROPELLER, JET, HELICOPTER AIRCRAFT 00847-001  
VIBRATION, H-37 HELICOPTER FLOOR, VERTICAL, LATERAL FORE/AFT 00848-001  
VIBRATION, C-123 FLOOR, LONGITUDINAL, VERTICAL, LATERAL AXES 00851-001  
VIBRATION, C-130 FLOOR, VERTICAL, LATERAL, LONGITUDINAL AXES 00852-001  
RESPONSE OF TURBOJET/PISTON ENGINE A/C TO RUNWAY ROUGHNESS C0910-004  
VIBRATION, AIR-RIDE VAN AND C-130, C-133 AIRCRAFT 01148-017  
VIBRATION NC135 AFT PASSENGER COMPARTMENT 01318-019  
VIBRATION SUMMARY, HELICOPTER, HH43, UH1, OH6, CH46, CH47 01321-027  
VIBRATION, CARGO FLOOR, UH-1 HELICOPTER 01322-013  
VIBRATION, CARGO FLOOR, OH-6 HELICOPTER 01323-013  
VIBRATION, CARGO FLOOR, CH-46 HELICOPTER 01324-065  
VIBRATION, CARGO FLOOR, CH-47 HELICOPTER 01325-061  
VIBRATION, C130A, C130B CARGO FLOOR 01356-002  
VIBRATION C130, C133 TAKE OFF AND CRUISE 01357-002  
VIBRATION, CSA CARGO FLOOR - SUMMARY- SEE 1440 TO 1444 01439-057  
VIBRATION, CSA CARGO FLOOR, STANDARD VIBRAN (SEE 1439) 01440-168  
VIBRATION, CSA CARGO FLOOR, FORMAT 2 VIBRAN, (SEE 1439) 01441-059  
VIBRATION, CSA CARGO FLOOR, PSD (SEE 1439) 01442-175



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

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| VIBRATION, CSA CARGO FLOOR, PSD, (SEE 1430)                  | 01443-189 |
| DYNAMIC ENVIRONMENT, C1-1 JET CARGO AIRCRAFT - FIRST FLIGHT  | 01534-047 |
| DYNAMIC ENVIRONMENT, C141 JET CARGO AIRCRAFT - SECOND FLIGHT | 01535-064 |
| DYNAMIC ENVIRONMENT, CSA JET CARGO AIRCRAFT                  | 01536-191 |
| VIBRATION OF A LARGE TRANSPORT HELICOPTER (CH-53A)           | 02074-010 |
| HELICOPTER VIBRATION, THREE SIGMA LEVELS                     | 02251-002 |

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

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| VAIL SUMMARY, TRUCK SHIPMENT OF 56,000 LB CASK SEE 2063       | A2064-007 |
| VAIL SUMMARY, TRUCK SHIPMENT 44,000 LB CASK SEE 2067          | A2068-007 |
| TRUCK SHOCK/VIB ENV, LARGE SHIPPING CONTAINER SEE 2071        | A2072-000 |
| SHOCK/VIB ENV LARGE SHIPPING CONTAINER BY TRUCK PART 1        | A2164-019 |
| SHOCK/VIB ENV LARGE SHIPPING CONTAINER BY TRUCK PART 2        | A2165-031 |
| VIBRATION, PROBABLE MAXIMUM, TRUCK, TRAILER, TRACKED VEHICLE  | R0367-002 |
| VIBRATION SUMMARY, STANDARD FREIGHT TRAILER R20422            | R1998-137 |
| VIBRATION-ACCELERATIONS IN HIGHWAY OPERATION OF TRUCKS        | 00370-001 |
| VIBRATION IN ROAD VEHICLES                                    | 00374-001 |
| VIBRATION, MAXIMUM, ON TRUCKBED, VARIETY OF ROAD OPERATIONS   | 00377-001 |
| VIBRATION, MAXIMUM ACCELERATION IN CARGO TRUCK                | 00379-001 |
| VIBRATION DATA, TYPICAL, VAN TRAILER, NORMAL SUSPENSION       | 00397-001 |
| VIBRATION, FLAT-BED TRACTOR-TRAILER                           | 00401-001 |
| VIBRATION, TRUCK FLOOR, EMPTY AND FULLY LOADED                | 00849-001 |
| DYNAMIC ENVIRONMENT ON A FLAT BED TRACTOR/TRAILER (AEC/DOD)   | 01006-015 |
| FINAL ANALYSIS, AEC/DOD FLATBED TRUCK TEST                    | 01083-080 |
| VIBRATION ENVIRONMENT, AEC VAN WITH TRANSIT RIG SHIPPING CONT | 01245-122 |
| VIBRATION/SHOCK, 2 1/2 TON TRUCK                              | 01264-016 |
| VIBRATION/SHOCK AIR SUSPENSION VAN                            | 01277-011 |
| SHOCK/VIBRATION SUMMARY, UNION CARBIDE TRUCK TEST             | 01312-013 |
| VIBRATION DATA, UNION CARBIDE TRUCK TEST                      | 01313-089 |
| VIBRATION, TRUCK, TANDEM AXLE, AIR BAG SUSPENSION             | 01361-001 |
| VIBRATION IN COMMON MOTOR CARRIERS                            | 01742-013 |
| TRACTOR/TRAILER TRANSPORT, 3 TYPES SUSPENSION SYSTEM          | 01988-009 |
| VIBRATION, SPECTRAL DENSITY, STANDARD FREIGHT TRAILER         | 01997-470 |
| CONCEPTS FOR NOISE REDUCTION IN TRACKED VEHICLES              | 02050-060 |
| PSD STANDARD FREIGHT TRAILER RE-REDUCTION ALSO SEE 1997       | 02052-013 |
| VIBRATION/PSD, TRUCK SHIPMENT OF 56,000 LB CASK SEE 2064      | 02063-226 |
| VIBRATION/PSD, TRUCK SHIPMENT OF 44,000 LB CASK SEE 2068      | 02067-137 |

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

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| RAILCAR SHOCK/VIB ENV, LARGE SHIPPING CONTAINER                   | A2071-036 |
| SHOCK/VIBRATION ENVIRONMENT SUMMARY, RAIL TRANSPORT               | R1320-021 |
| VAIL SUMMARY, ATMX RAIL CAR TEST R80046 <sup>2</sup> SEE ED3 2079 | R2080-037 |
| SHOCK/VIBRATION ENVIRONMENT, TRANSPORT, COUPLING IMPACT           | C2254-017 |
| VIBRATION, RAIL TRANSPORT, SUMMARY OF DATA ON                     | C0355-001 |
| VIBRATION DATA, RAIL  | 00357-001 |
| VIBRATION TESTS, RAILROAD, SPEED 40MPH                            | 00358-001 |
| VIBRATION TESTS, RAILROAD, SPEED 73MPH                            | 00359-001 |

08/05/80

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

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| VIBRATION TESTS,RAILROAD,SPEED 20MPH                        | 00360-001 |
| VIBRATIONS IN RAILROAD FREIGHT CARS AT SPEEDS FROM 31-73MPH | 00362-001 |
| VIBRATIONS MEASURED ON ATMX SOC CAR AT SPEEDS 30-70MPH      | 00363-001 |
| VIBRATION ENVIRONMENT PRODUCED DURING RAIL TRANSPORT        | 00366-002 |
| VIBRATION,RAILROAD,SOFT SPRUNG CAR,VERTICAL AND LATERAL     | 00850-001 |
| VIBRATION,RAILROAD CONTINUOUS AND TRANSIENT                 | 01031-001 |
| VIBRATION,RAILROAD ENVELOPES DIRECTIONAL COMPOSITES         | 01032-001 |
| SHOCK/VIBRATION SUMMARY,UNION CARBIDE RAIL TEST             | 01315-013 |
| VIBRATION DATA,UNION CARBIDE RAIL TEST                      | 01316-130 |
| VIBRATION, MAIL BOX CAR W/EMPTY, HALF AND FULL LOAD         | 01328-148 |
| VIBRATION/PSD, ATMX MAIL CAR TEST R2D0473                   | 02079-061 |
| VIBRATION ENV IN FREIGHT CARS AND DAMAGE TO LADING          | 02227-008 |
| 5000 MILE BOX CAR VIBRATION TEST                            | 02228-011 |
| TRAM VIB SENSITIVE EQUIP BY HIGHWAY TRL ON INTERODAL RAIL   | 02362-125 |

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

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|---|-----------|
| VIBRATION,MOST EXTREME PROBABLY EXPECTED IN SEA TRANSPORT | 00404-001 |
| AN ASSESSMENT OF VIBRATION ENV ON COMM CARGO SHIPS        | 02253-004 |
| VIBRATION MEASUREMENTS ON SHIPBOARD DURING TRANSPORT      | 00202-002 |
| VIBRATION DATA,SHIPS                                      | 00405-001 |
| VIBRATION DATA,SHIPS IN STRAIGHT RUNS AT VARIOUS SPEEDS   | 00407-001 |
| VIBRATION,SHIPBOARD,NORMAL STEAMING AND HARD TURNS        | 00408-001 |
| VIBRATION DATA,SHIPS,HIGH SPEED MANEUVER AND CRASH BACK   | 00409-001 |
| VIBRATIONS,SHIPBOARD,FROM VARIOUS SOURCES                 | 00415-001 |
| VIBRATIONS,MERCHANT SHIP SS WOLVERINE STATE               | 00418-025 |
| VIB LEVELS ON BRIDGE OF AUSTRALIAN SHIP, ROUGH SEAS       | 02242-017 |

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

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| SUMMARY, DYNAMIC ENVIRONMENT OF TRANSPORTATION - 1973      | A1354-035 |
| VIBRATION SUMMARIES OF LDD1354 IN PSD FORMATS              | 01354-011 |
| VIBRATION-MAXIMUM ACCELERATIONS FOR VARIOUS VEHICLES       | 00368-001 |
| SHOCK + VIBRATION DATA OBTAINED FROM TRUCK + MAIL SHIPMENT | 01003-012 |
| TRANSPORTATION VIBRATION ENVIRONMENTS                      | 01176-004 |
| TRANSPORTATION OF EUROPEAN SPACELAB COMPONENTS             | 02210-100 |

.....VIBRATION.....RESPONSE.....GENERAL.....AIRCRAFT.....

|  |           |
|--|-----------|
| VIBRATION OF HELICOPTERS (ISOLATION AND ABSORBERS) | 02117-009 |
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.....VIBRATION.....RESPONSE.....GENERAL.....AUTOMOBILE.....

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| STUDY OF PASSENGER RESPONSE TO IDEAL AND REAL VEH VIB | 01941-034 |
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.....VIBRATION.....RESPONSE.....HANDLING.....OTHER.....

|  |           |
|--|-----------|
| SUMMARY,DYNAMIC ENVIRONMENT,FORKLIFT TRUCKS        | C1744-061 |
| SHOCK,VIBRATION, 2CGU LB FORKLIFT TRUCK (SEE 1744) | C1745-092 |

0P/05/80

.....VIBRATION.....RESPONSE.....HANDLING.....OTHER.....

VIBRATION, INPUT/RESPONSE, 3000 LB FORKLIFT (SEE 1744) 01748-150  
 VIBRATION, INPUT/RESPONSE, 4000 LB FORKLIFT (SEE 1744) 01751-114  
 SHOCK, VIBRATION, 7000 LB FORKLIFT TRUCK (SEE 1744) 01752-081

.....VIBRATION.....RESPONSE.....TRANSPORTATION.....AIRCRAFT.....

VIBRATION NC135 AFT PASSENGER COMPARTMENT 01318-019  
 HELICOPTER VIBRATION, THREE SIGMA LEVELS 02251-002  
 UH-60A BLACKHAWK VIBRATION RESPONSE DATA 02322-017

.....VIBRATION.....RESPONSE.....TRANSPORTATION.....AUTOMOBILE.....

TRUCK SHOCK/VIB ENV, LARGE SHIPPING CONTAINER SEE 2071 A2072-000  
 SHOCK/VIB ENV LARGE SHIPPING CONTAINER BY TRUCK PART 1 A2164-019  
 SHOCK/VIB ENV LARGE SHIPPING CONTAINER BY TRUCK PART 2 A2165-031  
 VIBRATION ENVIRONMENT, AEC VAN WITH TRANSIT RIG SHIPPING CONT 01245-122  
 SHOCK/VIBRATION SUMMARY, UNION CARBIDE TRUCK TEST 01312-013  
 VIBRATION DATA, UNION CARBIDE TRUCK TEST 01313-089  
 CONCEPTS FOR NOISE REDUCTION IN TRACKED VEHICLES 02050-080

.....VIBRATION.....RESPONSE.....TRANSPORTATION.....RAILROAD.....

RAILCAR SHOCK/VIB ENV, LARGE SHIPPING CONTAINER A2071-036  
 SHOCK/VIBRATION ENVIRONMENT SUMMARY, RAIL TRANSPORT 01320-021  
 VAIL SUMMARY, ATMA RAIL CAR TEST R000483 SEE ED9 2079 02080-037  
 SHOCK/VIBRATION ENVIRONMENT, TRANSPORT, LOUPLING IMPACT 02254-017  
 SHOCK/VIBRATION SUMMARY, UNION CARBIDE RAIL TEST 01315-013  
 VIBRATION DATA, UNION CARBIDE RAIL TEST 01316-130  
 VIBRATION, RAIL BOX CAR W/EMPTY, HALF AND FULL LOAD 01328-148  
 VIBRATION/PSD, ATMA RAIL CAR TEST R000483 02079-061  
 VIBRATION ENV IN FREIGHT CARS AND DAMAGE TO LADING 02227-008  
 TRAN VIB SENSITIVE EQUIP BY HIGHWAY TRL ON INTERMODAL RAIL 02362-125

.....VIBRATION.....RESPONSE.....TRANSPORTATION.....SHIP.....

AN ASSESSMENT OF VIBRATION ENV ON COMM CARGO SHIPS 02253-004  
 VIB LEVELS ON BRIDGE OF AUSTRALIAN SHIP, ROUGH SEAS 02242-017

.....VIBRATION.....RESPONSE.....TRANSPORTATION.....OTHER.....

SHOCK + VIBRATION DATA OBTAINED FROM TRUCK + RAIL SHIPMENT 01003-012

.....VIBRATION.....RESPONSE.....UTILIZATION.....RAILROAD.....

DYNAMIC MEASUREMENT OF TRACK-INDUCED RAILCAR WHEEL ACC 02016-012

.....WIND.....INPUT.....GENERAL.....AIRCRAFT AND MISSILE..

SPACE SHUTTLE ORBITER VIBROACOUSTICS 02061-046

58/05/80

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

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| ENVIRONMENT CONDITIONS PREVAILING DURING TRANSIT               | 00078-001 |
| WIND VELOCITIES, WORLDWIDE, AND DISTRIBUTION IN TEMPERATE ZONE | 00258-001 |
| WIND SPEED DISTRIBUTION IN THE UNITED STATES                   | 01595-005 |
| GLAZE ICE, WIND LOADS AT EARTH'S SURFACE                       | 01722-035 |

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

|   |           |
|---|-----------|
| FATIGUE DAMAGE PARAMETERS, TRANSPORT AIRCRAFT                   | 01085-002 |
| GUST LOAD FREQUENCY, AIRCRAFT FLIGHTS, 40-45 KILOFEET, IN STORM | 01087-003 |
| AIRCRAFT RECORDINGS DURING A TURBULENCE INCIDENT                | 01090-002 |

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

|   |           |
|---|-----------|
| GUST LOAD FREQUENCY, AIRCRAFT FLIGHTS, 40-45 KILOFEET, IN STORM | 01087-003 |
| AIRCRAFT RECORDINGS DURING A TURBULENCE INCIDENT                | 01090-002 |

(STORM) .....WIND.....INPUT.....GENERAL.....OTHER.....

|   |           |
|---|-----------|
| WIND AND WAVE HEIGHTS - TROPICAL STORMS | 01636-028 |
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## **Abnormal Environments**

DP/05/90

.....ACCELERATION/TIME.....INPUT.....GENERAL.....AIRCRAFT.....

|   |           |
|---|-----------|
| ACCIDENT RATES, CIVIL AIRCRAFT 1964 - 1974                    | 01634-011 |
| CIVIL AIRCRAFT ACCIDENT TYPES, 1970 - 1974                    | 01673-009 |
| AIRCRAFT ACCIDENT REPORTS - NTSB - 1972                       | 01724-103 |
| AIRCRAFT ACCIDENTS, TYPE, RATE, NTSB 1970                     | 01756-178 |
| AIRCRAFT ACCIDENTS, TYPE, RATE, NTSB 1973                     | 01757-019 |
| NTSB 1974 REPORT TO CONGRESS, AIRCRAFT                        | 01904-008 |
| SUMMARY US CIVIL AVIATION ACCIDENT STATISTICS 1965-75         | 01923-014 |
| AIRCRAFT ACCIDENTS INVOLVING FIRES 1963-1974 ANALYSIS         | 01940-144 |
| ACCIDENT RATES, CIVIL AIRCRAFT 1974                           | 01942-007 |
| COMPARISON 1974 CIVIL A/C ACCIDENT RATES TO 1969-73           | 01943-013 |
| ACCIDENT RATES, CIVIL AIRCRAFT, 1963-1973                     | 01959-014 |
| ACCIDENT RATES CIVIL AIRCRAFT 1966 - 1976                     | 02005-015 |
| ACCIDENT RATES BY MAKE AND MODEL 1973-1976 SEE DB 2005        | 02062-002 |
| ACCIDENT RATES US GENERAL AVIATION 1967 TO 1977               | 02128-002 |
| ACCIDENT RATES CIVIL AIRCRAFT 1967 - 1977                     | 02129-012 |
| ACCIDENT RATES BY MAKE AND MODEL 1960-1967                    | 02134-006 |
| AIRCRAFT ACCIDENTS INVOLVING FIRES 1965-1974 SPECIAL ANALYSIS | 02135-061 |
| US NAVY MAJOR AIRCRAFT ACCIDENTS 1972-1974                    | 02151-053 |
| AIRCRAFT COLLISIONS WITH FLYING WILDLIFE (BAT HAZARD)         | 02187-069 |
| PURE JET A/C ACCIDENT RATES BY MAKE AND MODEL 1968-77         | 02217-003 |
| WORLDWIDE SPENT FUEL TRANS LOGISTICS 1977-2000                | 02223-011 |
| ACCIDENT RATES, CIVIL AIRCRAFT 1968 - 1976                    | 02229-020 |
| ACCIDENT RATES, CIVIL AIRCRAFT 1969 - 1979                    | 02305-018 |
| ACCIDENT/INCIDENT RATES CH-47 AND CH-54 1969-1976 ARMY        | 02341-003 |

.....ACCELERATION/TIME.....INPUT.....GENERAL.....AUTOMOBILE.....

|   |           |
|---|-----------|
| NTSB 1974 REPORT TO CONGRESS, AUTOMOBILE                | 01905-002 |
| ACCIDENTS INVOLVING VEHICLES PARKED OR STOPPED 1967-75  | 02077-027 |
| INCIDENCE OF HAZARDOUS MATERIAL ACCIDENT-TRUCK SEE 2180 | 02181-000 |
| SUMMARY FMCS ROADSIDE INSPECTION ACTIVITIES 1976-1977   | 02235-038 |
| WET PAVEMENT FATAL ACCIDENTS, SPECIAL STUDY, 1976-1977  | 02313-042 |

.....ACCELERATION/TIME.....INPUT.....GENERAL.....RAILROAD.....

|   |           |
|---|-----------|
| RAIL ACCIDENT SPEED STATISTICS                          | 01020-076 |
| RAIL ACCIDENT STATISTICS, 1969                          | 01666-003 |
| RAIL ACCIDENT STATISTICS, 1971                          | 01667-003 |
| NTSB 1974 REPORT TO CONGRESS, RAIL                      | 01906-062 |
| TRAIN ACCIDENT RATES, 1955-1974                         | 01920-007 |
| A SAFETY/COST STUDY SHIPPING SPENT FUEL SPECIAL TRAIN   | 02099-033 |
| RAIL-HIGHWAY GRADE CROSSING ACCIDENTS 1965-1974         | 02113-006 |
| BROKEN RAILS, MAJOR CAUSE OF TRAIN ACCIDENTS 1962-1976  | 02137-020 |
| INCIDENCE OF HAZARDOUS MATERIAL ACCIDENT-RAIL SEE 2180  | 02182-000 |
| WORLDWIDE SPENT FUEL TRANS LOGISTICS 1977-2000 SEE 2223 | 02224-000 |
| REVIEW OF RAIL HAZ MATERIALS AND TRACK SAFETY PROGRAMS  | 02247-009 |

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| ....ACCELERATION/TIME.....INPUT.....GENERAL.....SHIP.....                 |           |
| SUMMARY FRT SHIPS AND FRT BARGE ACCIDENTS 1965 - 1974                     | 01985-009 |
| SUMMARY US TANK SHIPS AND TNR BARGE ACCIDENTS 1963-1975                   | 01992-010 |
| INCIDENCE OF HAZARDOUS MATERIAL ACCIDENT-SHIP                             | 02180-041 |
| COMMERCIAL VESSELS THAT CARRY FMT IN ACCIDENTS 1963-74                    | 02205-040 |
| PUBLIC CARGO VESSEL INVOLVED IN ACCIDENTS 1963-74                         | 02206-016 |
| FREIGHT BARGE ACCIDENTS REPORTED 1965-74                                  | 02207-285 |
| US INSPECTED CARGO FRT VESSELS ACCIDENTS REPORTED 63-74                   | 02208-345 |
| WORLDWIDE SPENT FUEL TRANS LOGISTICS 1977-2000 SEE 2223                   | 02225-000 |
| REGISTER OF MERCHANT SHIPS LOST, BROKEN UP, ETC. 1978                     | 02300-040 |
| ....ACCELERATION/TIME.....INPUT.....TRANSPORTATION.....AIRCRAFT.....      |           |
| INCIDENCE UNCONTAINED ROTOR BURSTS COMM AVIATION 62-76                    | 02140-003 |
| AIRCRAFT GAS TURBINE ROTOR FAILURES COMM AVIATION 1976                    | 02226-031 |
| GUIDELINES, DESIGN TURBIN ROTOR BURST FRAGMENT COLLING                    | 02307-052 |
| ....ACCELERATION/TIME.....INPUT.....TRANSPORTATION.....AUTOMOBILE.....    |           |
| TRAN ACCIDENT RISKS IN NUCLEAR POWER IND 1975-2020                        | 01989-131 |
| ANALYSIS AND SUMMARY, ACCIDENT INVESTIGATIONS 1973-76                     | 02144-017 |
| TRUCK CAR ACCIDENT, LANE CHANGE, ST LOUIS, MO 25 SEP 77                   | 02249-021 |
| ....ACCELERATION/TIME.....INPUT.....TRANSPORTATION.....RAILROAD.....      |           |
| TRAN ACCIDENT RISKS IN NUCLEAR POWER IND SEE EDB 1989                     | 01990-000 |
| RAIL ACCIDENT, REAR-END/DERAILMENT, SEABROOK, MD 06/78                    | 02248-034 |
| ....ACCELERATION/TIME.....INPUT.....TRANSPORTATION.....SHIP.....          |           |
| TRAN ACCIDENT RISKS IN NUCLEAR POWER IND SEE EDB 1989                     | 01991-000 |
| ....ACCELERATION/TIME.....RESPONSE.....TRANSPORTATION.....AUTOMOBILE..... |           |
| TRUCK CAR ACCIDENT, LANE CHANGE, ST LOUIS, MO 25 SEP 77                   | 02249-021 |
| ....ACCELERATION/TIME.....RESPONSE.....TRANSPORTATION.....RAILROAD.....   |           |
| RAIL ACCIDENT, REAR-END/DERAILMENT, SEABROOK, MD 06/78                    | 02248-034 |
| (EARTHQUAKE) ....ACCELERATION/TIME.....INPUT.....GENERAL.....OTHER.....   |           |
| EARTHQUAKES IN THE UNITED STATES  | 00948-006 |
| EARTHQUAKE, STRONG MOTION - ACCELLOGRAMS G VS TIME                        | 01526-205 |
| EARTHQUAKE, STRONG MOTION - ACCELLOGRAMS G VS TIME                        | 01527-302 |
| EARTHQUAKE - ROCK MOTION ACCELLOGRAMS G VS TIME, DISTANCE                 | 01528-019 |
| STRONG MOTION EARTHQUAKE ACCELLOGRAMS - PART F                            | 01570-338 |
| STRONG MOTION EARTHQUAKE ACCELLOGRAMS - PART G                            | 01571-299 |
| STRONG MOTION EARTHQUAKE ACCELLOGRAMS - PART H                            | 01572-365 |
| STRONG MOTION EARTHQUAKE ACCELLOGRAMS- VOL I,PT I, DATA                   | 01600-293 |

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(EARTHQUAKE)

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

STRONG MOTION EARTHQUAKE ACCELOGRAMS- VOL I,PT J, DATA 01601-302  
STRONG MOTION EARTHQUAKE ACCELOGRAMS- VOL I,PT K, DATA 01602-307  
STRONG MOTION EARTHQUAKE ACCELOGRAMS-VOL III,RES. SPECTRA 01603-279  
STRONG MOTION EARTHQUAKE ACCELOGRAMS-VOL IV,FOURIER SPECTRA 01604-171  
EARTHQUAKE, ANCHORAGE, 1964 ENGINEERING INFORMATION 01667-004  
EARTHQUAKE ACCELOGRAMS-DIGITIZED AND PLOTTED DATA 01852-164  
EARTHQUAKE ACCELOGRAMS-RESPONSE SPECTRA 01853-311  
EARTHQUAKE ACCELOGRAMS-RESPONSE SPECTRA 01854-287  
EARTHQUAKE ACCELOGRAMS-FOURIER SPECTRA 01855-219

(IMPACT)

....ACCELERATION/TIME.....INPUT.....GENERAL.....AUTOMOBILE.....

TRUCK ACCIDENT SPEEDS A - SUMMARY 01687-003  
STATISTICAL STUDY OF TRUCK ACCIDENT SPEEDS 01698-024

(IMPACT)

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

APPROXIMATE DURATION OF SOME SHORT ACCELERATION LOADS 00734-001

(IMPACT)

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

ANALYSIS OF DIRECTION OF LOADS IN AIRCRAFT ACCIDENTS 01 001  
ACCELERATION OF FLOOR-AIRCRAFT CRASHES 01 001  
ACCELERATION,AIRCRAFT CRASH-VARIOUS ANGLES OF IMPACT 01 008  
CIVIL AVIATION ACCIDENT DATA - 1962 TO 1972 01 008  
AIRCRAFT ACCIDENT - BOEING 707 - 8/28/73 0181 007  
AIRCRAFT ACCIDENT - BOEING 747 - 4/12/74 01818-028  
A RISK AND COMPARATIVE ANALYSIS OF NAVY AIRCRAFT DATA 01857-091  
ARMY ROTARY WING AIRCRAFT ACCIDENTS-COST STUDY 1970-71 01895-032  
CRASH RESISTANT FLAMMABLE FLUIDS SYSTEM UH-1A COPTER 02001-165  
FULL SCALE CRASH TEST OF A CH-47C HELICOPTER 02024-040  
AIRCRAFT ACCIDENT, BOEING 727-225 24 JUN 75 02152-059  
AIRCRAFT ACCIDENT, CONVAIR 440 (CV-340) 09 JAN 75 02153-031  
AIRCRAFT ACCIDENT, BOEING 707-351B 08 SEP 74 02154-044  
AIRCRAFT ACCIDENT, BOEING 727-224 7 AUG 75 02155-047  
AIRCRAFT ACCIDENT, BOEING 727-25 01 DEC 74 02156-033  
AIRCRAFT ACCIDENT, DEHAVILLAND LHC-6 9 JAN 75 02157-025  
AIRCRAFT ACCIDENT, DC-8 62 15 SEP 70 02158-026  
AIRCRAFT ACCIDENT, DC-8 631 8 SEP 70 02159-038  
AIRCRAFT ACCIDENT, DC-8 531 27 NOV 70 02160-048  
AIRCRAFT ACCIDENT, DC-9 33 11 SEP 74 02161-040  
AIRCRAFT ACCIDENT, OH-119 24 JUN 72 02162-014  
LIGHT PLANE CRASH TESTS AT IMPACT VEL. 13 AND 27 M SEC 02166-054  
MIDAIR COLLISION 727/CESSNA 172 SAN DIEGO CA 25 SEP 76 02263-074  
AIRCRAFT ACCIDENT, NORD 262, MOHAWK/FRANKS 29F FEB 74 02294-031  
AIRCRAFT ACCIDENT, NORD 262, SANTA MONICA,CA 10 MAR 74 02285-031  
IMPACT/TRAJECTORY VELOCITY, FREE FALLING CH-47 AND 2 CARGO 02342-019



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(IMPACT)

.....ACCELERATION/TIME.....IMPACT.....TRANSPORTATION.....AUTOMOBILE.....

|   |           |
|---|-----------|
| TRUCK ACCIDENT ENVIRONMENT ANALYSIS PAC - STUDY           | C1944-146 |
| ACCELERATIONS, AUTOMOBILE CRASH (HEAD-ON)                 | 00737-001 |
| DECELERATION PATTERNS FOR AUTOMOBILE HEAD-ON COLLISIONS   | 00738-001 |
| TRUCK ACCIDENTS INVESTIGATED IN THE STATE OF UTAH 1972    | 01875-037 |
| TRUCK ACCIDENTS, SUMMIT COUNTY, UTAH 25 MAY 74            | 01876-006 |
| TRUCK ACCIDENTS, ROLLOVER, COLLISION, SALT LAKE CITY      | 01877-007 |
| TRUCK ACCIDENTS, GREATER SALT LAKE CITY                   | 01878-015 |
| TRUCK ACCIDENTS INVESTIGATED IN THE STATE OF NY 1974      | 01879-012 |
| TRUCK ACCIDENTS INVESTIGATED BY CALSPAN                   | 01880-021 |
| TRUCK ACCIDENTS INVESTIGATED BY CALSPAN 1974              | 01881-027 |
| VEHICLE EXPLOSION W/SUBSEQUENT FIRE NY 23 APR 75          | 01898-010 |
| TRUCK ACCIDENT, ROLLOVER, PENDELTON, NY 27 SEP 74         | 01899-010 |
| TRUCK ACCIDENT, FRONTAL IMPACT, HAMBURG, NY 16 DEC 74     | 01900-008 |
| TRUCK/PICKUP TRUCK W/CAMPER AND TRAILER COLLISION         | 01901-030 |
| AUTO COLLISION W/AND COLL'USE OF BRIDGE, SILDAM, NC       | 01952-027 |
| TRUCK ACCIDENT, EXPLOSION/FIRE, EAGLE PASS, TEXAS         | 01953-021 |
| SCHOOLBUS/AUTO COLLISION/ROLLOVER, ASHLAND, OREGON        | 01954-034 |
| COLLISION OF TRUCK AND BUS, NEAR HAMILTON, GA JUL 1975    | 01955-018 |
| COLLISION OF WINNEBAGO MOTOR HOME W/BRIDGE 1 JUL 1975     | 01956-030 |
| COLLISION OF TRUCK AND CAR, LOVINGTON, NM 3 JAN 1976      | 01957-012 |
| CAR COLLISION, FRONT-TO-FRONT IMPACT TEST AT 20 MPH       | 01958-134 |
| TRUCK TRACTOR-TRAILER/GROUND/ROLLOVER VOL 7, NO 1         | 01962-007 |
| TRUCK TRACTOR-SPORTS VAN IMPACT VOL 7, NO 1               | 01963-009 |
| TRUCK CAR ACCIDENT, BALTIMORE, MD, ON INTERSTATE          | 01964-012 |
| TRUCK CAR ACCIDENT, REAR END UNDER-RIDE IMPACT, VOL 7     | 01965-011 |
| GASOLINE TRUCK ACCIDENT, SEATTLE, WA 4 DEC 1975           | 01966-002 |
| TRACTOR TRAILER/CAR/SCHOOL BUS, REAR END, ROLLOVER        | 01967-010 |
| CAR BUS ACCIDENT, OVERLAND PARK, KANSAS 7 OCT 1975        | 01968-009 |
| STATION WAGON/TRAIN ACCIDENT, BALTIMORE, MD DEC 1975      | C1969-012 |
| TRACTOR TRAILER, REAR END AND ROLLOVER NY 1 JUL 1975      | 01970-009 |
| TRUCK ACCIDENT, TIRE BLEW OUT, IMPACT, NY 21 JUN 1975     | 01971-009 |
| STATION WAGON/SCHOOL BUS, HEAD ON, HAMBURG, NY SEP 1975   | 01972-009 |
| TRUCK/SCHOOL BUS/TRAIN ACCIDENT, ARKANSAS 11 SEP 1975     | 01973-010 |
| TRACTOR TRAILER, FRONT TO SIDE IMPACT FEB 1975            | 01974-011 |
| TRUCK CAR ACCIDENT INTERSECTION, BALTIMORE, MD FEB 1975   | 01975-011 |
| CAR/POLE/TRAIN SIDESWIPER IMPACT, LOS ANGELES 25 SEP 1975 | 01976-008 |
| TRUCK CAR ACCIDENT, REAR END, SAN DIEGO FREEWAY JAN 1976  | 01977-009 |
| UNDERIDE OVERIDE INTERVEHICULAR COLLISIONS                | 02002-194 |
| TRUCK ACCIDENT, TRI-STATE RIG, GILA BEND AZ               | 02006-012 |
| TRUCK ACCIDENT, COLLISION LEFT ROADWAY WASHINGTON DC      | 02007-014 |
| TRUCK/SCHOOL BUS COLLISION LAKE PLACID FL                 | 02008-012 |
| TRUCK/VAN/AUTO ACCIDENT LEXINGTON VA 20 AUG 1976          | C2013-014 |
| LUMBER TRUCK ACCIDENT-CARGO SHIFT, HARTFORD 6 DEC 1975    | 02027-014 |
| TRUCK/TRAIN CROSSING ACCIDENT NY ROUTE 19 10 NOV 1973     | 02028-017 |
| TRUCK, FRONT CORNER IMPACT, CONCORD, NY 27 NOV 1973       | 02030-011 |
| TRUCK WHEEL/CAR - TOP IMPACT NY STATE 26 NOV 1973         | 02031-009 |
| CAR/TRACTOR-TRAILER UNDERIDE COLLISION 13 DEC 1974        | 02033-008 |
| TRACTOR-TRAILER CAMPING ACCIDENT, HARDIN, KY JUN 1975     | 02036-007 |
| MOTOR HOME, MAN-OFF ROADWAY, IMPACT, FIRE, EXPLOSION 1975 | 02037-012 |

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(IMPACT)

.....ACCELERATION/TIME.....INPUT.....TRANSPORTATION.....AUTOMOBILE.....

TRACTOR-TRAILER/CAR SIDESWIPE MURAL KY AUG 1973 02038-009  
 TRUCK CAR ACCIDENT PACIFIC COAST HIGHWAY 17 JUN 1975 02039-008  
 WHITE FREIGHTLINER ACCIDENT VENTURA FREEWAY JUN 1975 02040-007  
 TRUCK TRAILER ROLLOVER, POOR BRAKES, VERN., CA JUN 1975 02041-007  
 TRUCK CAR ACCIDENT, LANE CHANGE, LOS ANGELES JUN 1975 02042-008  
 TANKTRUCK ACCIDENT, HELIUM FUEL LEAKAGE JUL 1975 02043-008  
 JACKKNIFING TRAILER FORCED TRAYLGR INTO BRIDGE JUL 1975 02044-007  
 TRUCK TRAILER ACCIDENT, CARGO SHIFT, ROLLOVER AUG 1975 02045-007  
 TRUCK ACCIDENT, PROPANE, OVERTURN AND FIRE 9 MAR 1972 02078-028  
 CAR/TRAIN, GRADE CROSSING, DES MOINES, IOWA SEE DB 2085 02087-000  
 TRACTOR TRAILER COLLIDED WITH CAR BAXTER, CA 11 MAR 77 02092-013  
 TRACTOR/CARGO TANK TRAILER ACCIDENT, CHERRY HILL, NJ 02094-010  
 TANKTRUCK/RAIL GRADE CROSSING ACCIDENT SEE DB 2095 02096-000  
 SCHOOL BUS TRAIN GRADE CROSSING ACCIDENT SEE DB 2098 02097-000  
 TRUCK ACCIDENT, CANADA, GASOLINE FIRE AND OTHER MM 02108-013  
 TRACTOR-SEMITRAILER COLLISION MULTIPLE VEHICLES AUG 76 02112-026  
 MINI MOTOR HOME/CAR ACCIDENT MEALESTER, OK 14 JUL 77 02115-028  
 TRUCK ACCIDENT, PENETRATED BRIDGE RAIL RELEASEDMM CG 02116-020  
 TANKTRUCK RAIL CROSSING ACCIDENT SEE DB 2118 10 MAR 75 02119-000  
 TRUCK ACCIDENT, GASOLINE FIRE, BEATTYVILLE KY 09/24/77 02168-028  
 TRUCK RAIL CROSSING ACCIDENT SEE DB 2203 27 JAN 76 02204-000  
 HIGHWAY ACCIDENT, SPILLED YELLOWCAKE, SPRINGFIELD, CO 02222-009  
 TRACTOR TRAILER REAR-END COLLISION, NC 27 APR 78 02234-016  
 TRUCK ACCIDENT, HEAD-ON WITH VAN, SCIPIC, UT 28 AUG 77 02246-037  
 STATIONWAGON PENETRATION OF BRIDGE RAIL 110 11 NOV 78 02264-020  
 AMBULANCE OVERTURN, ROUTE 116, LITTLETON NH 22 AUG 78 02266-026  
 TRUCK, FIXED OBJECT COLLISION, CROFTON, MD 23 APR 79 02281-020  
 MULTIPLE VEHICLE COLLISION/FIRE, WILLOWICK, OH 6 MAY 79 02282-025  
 TRUCK ACCIDENT, SPEEDING, NEAR BETHESDA, MD 14 MAR 78 02296-014  
 TRUCK ACCIDENT, SIDESWIPE, NEAR LARAMIE WY 24 AUG 79 02312-030  
 ODDGE VAN COLLIDED W/FARM VEHICLE, GFLTA, UT 12 SEP 74 02333-027  
 AUTO ACCIDENT, COLLIDED HEAD-ON, INDIANA, PA 22 SEP 79 02334-022

(IMPACT)

.....ACCELERATION/TIME.....INPUT.....TRANSPORTATION.....RAILROAD.....

REAR END COLLISION AND DERAILMENT MEEREN, LA MAY 1975 01924-024  
 RAIL ACCIDENT, HEAD-IN, EL MONTE, CA 2 APR 1973 01925-007  
 RAIL ACCIDENT, HEAD-ON, LUFKIN, TEXAS 18 NOV 1973 01926-005  
 RAIL ACCIDENT, HEAD-ON, COHDEN, ILLINOIS 2 DEC 1973 01927-006  
 RAIL ACCIDENT, HEAD-ON, PLAINVIEW, TEXAS 15 DEC 1973 01928-005  
 RAIL ACCIDENT, HEAD-ON, ST LOUIS, MISSOURI 22 JUN 1974 01929-007  
 RAIL ACCIDENT, HEAD-ON, MEMPHIS, TEN 24 JAN 1975 01930-005  
 RAIL ACCIDENT, SIDE-ON, EARLS, TEXAS 29 NOV 1974 01931-005  
 RAIL ACCIDENT, OPEN SWITCH, WINDHAM, OHIO 22 NOV 1973 01932-004  
 RAIL ACCIDENT, RAKING, LAKE JUNCTION, NJ 17 JUN 1974 01933-007  
 RAIL ACCIDENT, NEAR END, HURRICANE, ALASKA 5 JUL 1975 01945-024  
 RAIL ACCIDENT, REAR END, LEBTONIA, OHIO 6 JUN 1975 01946-028  
 RAIL ACCIDENT, REAR END, DUFO, ILLINOIS 3 JAN 1975 01947-008  
 RAIL ACCIDENT, GRADE CROSSING, DEL MAR, CA 27 FEB 1974 01948-006

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(IMPACT)

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.....ACCELERATION/TIME.....INPUT.....TRANSPORTATION.....RAILROAD.....
RAIL ACCIDENT, BROKEN RAIL, THOMPSONTOWN, PA DEC 1974 01949-004
RAIL ACCIDENT, GRADE CROSSING, TRACY, CA 4 MAR 1975 01950-029
RAIL ACCIDENT, GRADE CROSSING, ELWOOD, IL 19 NOV 1975 01951-024
RAIL ACCIDENT, UNPROTECTED GRADE CROSSING 7 FEB 1975 02010-011
RAIL ACCIDENT, DERAILMENT JARRATT VA 5 MAY 1976 02011-026
RAIL ACCIDENT, HEAD-ON 2 TRAINS PETTISVILLE OH 02012-015
AUTOMATED WHEEL-ON-THE-GROUND DERAILMENT DETECTION SYS 02017-011
BIRMINGHAM DERAILMENT, TRACK GAGE WIDENS 16 JAN 1977 02023-003
RAIL CROSSING ACCIDENT WITH TANK TRUCK SEE ED02028 02029-000
CAR/TRAIN-FRONT TO SIDE IMPACT UNPROTECTED CROSSING 02032-009
SCHOOL BUS-TRAIN COLLISION STRATTON, NL 8 AUG 1976 02034-011
TRAIN DERAILMENT CARRYING 2 CONTAINERS OF RAM 02049-003
RAIL ACCIDENT, GRADE CROSSING, DES MOINES, IOWA 02085-022
RAIL ACCIDENT, GRADE CROSSING, MARLAND, OK 15 DEC 76 02095-016
RAIL CROSSING ACCIDENT WITH SCHOOL BUS LAFAYETTE, OR 02098-017
RAIL ACCIDENT, DERAILMENT YOUNGSTOWN, FL 26 FEB 76 02102-020
TRAIN ACCIDENT, RAIL FAILURE, RELEASED ANHYDROUS AMMON 02109-023
RAIL CROSSING ACCIDENT W/TANKTRUCK THAYLR, MS 10 MAR 7 02118-007
RAIL ACCIDENT, REAR-END BLACK ROCK, NY 15 JUN 75 02121-007
RAIL ACCIDENT, REAR-END NEW YORK CITY, NY 29 JUL 75 02122-008
RAIL DERAILMENT, FIRE, EXPLOSION FERTILE, MN 22 OCT 75 02123-009
RAIL ACCIDENT, HEAD-ON COAHOMA, MS 23 NOV 75 02124-006
RAIL ACCIDENT, HEAD-ON, STATE-OF-ART TRANSIT 11 AUG 73 02136-057
RAIL ACCIDENT, DERAILMENT HASTINGS NE 2 AUG 76 02141-015
RAIL ACCIDENT, HEAD-ON, 2 TRAINS, NEW HAVEN IN OCT 75 02142-019
RAIL ACCIDENT, DERAILMENT GOODMAN MS AMTRAK 30 JUN 76 02143-020
RAIL ACCIDENT, DERAILMENT GOLDONNA LA 27 DEC 77 02147-027
RAIL ACCIDENT, RAIL FAILURE, PENSACOLA FL 9 NOV 77 02169-046
RAIL ACCIDENT, REAR-END BROOKLYN JUNCTION WV 27 JAN 76 02194-008
RAIL ACCIDENT, REAR-END SANBORN NY 27 JAN 76 02195-009
RAIL ACCIDENT, DERAILMENT WARD AR 3 FEB 76 02196-011
RAIL ACCIDENT, REAR-END TRACK CAR DINGLL ID 1 MAR 76 02197-009
RAIL ACCIDENT, DERAILMENT/FIRE CALVERT TX 30 MAR 76 02198-010
RAIL ACCIDENT, REAR-END BLAIRSVILLE PA 7 APR 76 02199-007
RAIL ACCIDENT, SHIFTED LOAD HUGHES OH 7 JUN 76 02200-011
RAIL ACCIDENT, DERAILMENT CLIFFORD MI 18 OCT 76 02201-006
RAIL ACCIDENT, AMTRAK DERAILMENT CHICAGO IL 18 OCT 76 02202-007
RAIL ACCIDENT, GRADE CROSSING GOLDEN MS 27 JAN 76 02203-011
TRAIN DERAILMENT, URANIUM CYLINDERS, ROCKINGHAM, NC 77 02221-004
RAIL ACCIDENT, DERAILMENT, LEWISVILLE, AR 29 MAR 78 02230-023
RAIL ACCIDENT, GRADE CROSSING, PLANT CITY, FL 2 OCT 77 02231-026
RAIL ACCIDENT, HEAD-ON, FLORENCE, AL 18 SEP 78 02233-034
RAIL ACCIDENT, DERAILMENT NEAR LEVIS, WI 15 AUG 77 02243-009
RAIL ACCIDENT, SIDE COLLISION, NEELYVILLE, MO 16 JUN 77 02244-014
RAIL ACCIDENT, DERAILMENT, MANOR, PA 19 FEB 77 02245-008
RAIL ACCIDENT, DERAILMENT, ELMA VA 3 DEC 78 02265-026
RAIL ACCIDENT, REAR END, MAURAS OR 15 JAN 78 02267-009
RAIL ACCIDENT, DERAILMENT, WASHINGTON DC 15 FEB 78 02268-008
RAIL ACCIDENT, DERAILMENT, SUMMIT CA 6 MAR 78 02269-007

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08/05/80

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....ACCELERATION/TIME.....INPUT.....TRANSPORTATION.....RAILROAD.....

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| RAIL ACCIDENT, HEAD-END, IDAHO FALLS ID        | 21 JUN 78 | 02273-010 |
| RAIL ACCIDENT, HEAD-END, FT MADISON IA         | 24 JUN 78 | 02274-008 |
| RAIL ACCIDENT, AMTRAK DERAILMENT, LOHMAN MT    | 28 MAR 79 | 02276-017 |
| RAIL ACCIDENT, SUBWAY DERAILMENT, NYC NY       | 12 DEC 78 | 02277-034 |
| RAIL ACCIDENT, REAR-END, CONRAIL, MUNCY PA     | 31 JAN 79 | 02280-021 |
| RAIL ACCIDENT, DERAILMENT, RAMSEY, WY          | 29 MAR 79 | 02283-030 |
| RAIL ACCIDENT, DERAILMENT, CRESTVIEW FL        | 8 APR 79  | 02289-060 |
| RAIL ACCIDENT, HEAD-ON/DERAILMENT EDISON NJ    | 20 APR 79 | 02290-027 |
| RAIL ACCIDENT, COLLISION/DERAILMENT, AMTRAK    | 6 APR 78  | 02293-009 |
| RAIL ACCIDENT, HEAD-END, ST JOSEPH, TN         | 6 JUL 78  | 02294-010 |
| RAIL ACCIDENT, DERAILMENT, GRANITE, WY         | 31 JUL 79 | 02304-026 |
| RAIL ACCIDENT, REAR-END, GORHAM IL             | 17 MAY 78 | 02308-012 |
| RAIL ACCIDENT, COLLISION WITH WORK CRANE, WY   | 28 AUG 78 | 02309-009 |
| RAIL ACCIDENT, COLLISION W/ON-TRACK TAMPER, SD | 7 SEP 78  | 02310-010 |
| RAIL ACCIDENT, SIDE COLLISION, HELCA KS        | 5 OCT 78  | 02311-013 |
| RAIL ACCIDENT, COLLISION, HARVEY, IL           | 12 OCT 79 | 02335-034 |
| RAIL ACCIDENT, REAR-END COLLISION, ANGOHA, PA  | 16 OCT 79 | 02339-037 |
| RAIL ACCIDENT, DERAILMENT, LAWRENCE, KA        | 2 OCT 79  | 02343-059 |

(IMPACT)

....ACCELERATION/TIME.....INPUT.....TRANSPORTATION.....SHIP.....

|  |           |           |
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| NATURE OF SHIP COLLISIONS WITHIN PORTS                 |           | 02026-049 |
| TANKSHIP ACCIDENT, PENETRATION/GAS FIRE IN CARGO TANKS |           | 02048-002 |
| SS BAUNE COLLIDED W/TANKSHIP SS KEYTRADER              | 18 JAN 74 | 02126-002 |
| M/V WORLD MOBILITY/SS PENN GETTY COLLISION             | 29 DEC 78 | 02270-020 |
| TANKER ANCO SCEPTRE STRUCK LOADING FACILITY            | 9 FEB 78  | 02271-017 |
| SHIP ACCIDENT, PERUVIAN FREIGHTER/BUYANE BARGE         | 30 AUG 79 | 02344-037 |

(IMPACT)

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

|  |           |           |
|--|-----------|-----------|
| FULL SCALE CRASH TEST OF A CH-47C HELICOPTER               |           | 02024-040 |
| LIGHT PLANE CRASH TESTS AT IMPACT VEL. 13 AND 27 M SEC     |           | 02166-054 |
| PLANE COLLISION 727/CESSNA 172 SAN DIEGO CA                | 25 SEP 78 | 02263-074 |
| AIRCRAFT ACCIDENT, NORD 262, MOHAWK/FRANKS                 | 29 FEB 79 | 02284-031 |
| AIRCRAFT ACCIDENT, NORD 262, SANTA MONICA, CA              | 10 MAR 79 | 02285-031 |
| IMPACT/TRAJECTORY VELOCITY, FREE FALLING CH-47 AND 2 CARGO |           | 02342-019 |

(IMPACT)

....ACCELERATION/TIME.....RESPONSE.....TRANSPORTATION.....AUTOMOBILE.....

|  |           |           |
|--|-----------|-----------|
| TRUCK ACCIDENTS INVESTIGATED IN THE STATE OF UTAH    | 1972      | 01875-037 |
| TRUCK ACCIDENTS, SUMMIT COUNTY, UTAH                 | 25 MAY 74 | 01876-006 |
| TRUCK ACCIDENTS, ROLLOVER, COLLISION, SALT LAKE CITY |           | 01877-007 |
| TRUCK ACCIDENTS, GREATER SALT LAKE CITY              |           | 01878-015 |
| TRUCK ACCIDENTS INVESTIGATED IN THE STATE OF NY      | 1974      | 01879-012 |
| TRUCK ACCIDENTS INVESTIGATED BY CALSPAN              |           | 01880-021 |
| TRUCK ACCIDENTS INVESTIGATED BY CALSPAN              | 1974      | 01881-027 |
| VEHICLE EXPLOSION W/SUBSEQUENT FIRE NY               | 23 APR 75 | 01898-010 |
| TRUCK ACCIDENT, ROLLOVER, PENDLETON, NY              | 27 SEP 74 | 01899-010 |
| TRUCK ACCIDENT, FRONTAL IMPACT, HAMBURG, NY          | 16 DEC 74 | 01900-008 |

08/05/EC

(IMPACT)

....ACCELERATION/TIME.....RESPONSE.....TRANSPORTATION.....AUTOMOBILE.....

|   |           |
|---|-----------|
| TRUCK/PICKUP TRUCK w/CAMPER AND TRAILER COLLISION         | 01901-030 |
| AUTO COLLISION w/AND COLLAPSE OF BRIDGE, SILOAM, NC       | 01952-027 |
| TRUCK ACCIDENT, EXPLOSION/FIRE, EAGLE PASS, TEXAS         | 01953-021 |
| SCHOOLBUS/AUTO COLLISION/ROLLOVER, ASHLAND, OREGON        | 01954-034 |
| COLLISION OF TRUCK AND BUS, NEAR HAMILTON, GA JUN 1975    | 01955-018 |
| COLLISION OF WINNEBAGO MOTOR HOME w/BRIDGE 1 JUL 1975     | 01956-030 |
| COLLISION OF TRUCK AND CAR, LOVINGTON, NM 3 JAN 1976      | 01957-012 |
| CAR COLLISION, FRONT-TO-FRONT IMPACT TEST AT 60 MPH       | 01958-134 |
| TRUCK TRACTOR-TRAILER/GROUND/ROLLOVER VOL 7, NO 1         | 01962-007 |
| TRUCK TRACTOR-SPORTS VAN IMPACT VOL 7, NO 1               | 01963-009 |
| TRUCK CAR ACCIDENT, BALTIMORE, MD, ON INTERSTATE          | 01964-012 |
| TRUCK CAR ACCIDENT, REAR END UNDER-RIDE IMPACT, VOL 7     | 01965-011 |
| GASOLINE TRUCK ACCIDENT, SEATTLE, WA 4 DEC 1975           | 01966-002 |
| TRACTOR TRAILER/CAR/SCHOOL BUS, REAR END, ROLLOVER        | 01967-010 |
| CAR BUS ACCIDENT, OVERLAND PARK, KANSAS 7 OCT 1975        | 01968-009 |
| STATION WAGON/TRAIN ACCIDENT, BALTIMORE, MD DEC 1975      | 01969-012 |
| TRACTOR TRAILER, REAR END AND ROLLOVER NY 1 JUL 1975      | 01970-009 |
| TRUCK ACCIDENT, TIRE GLEW OUT, IMPACT, NY 21 JUN 1975     | 01971-009 |
| STATION WAGON/SCHOOL BUS, HEAD ON, HAMBURG, NY SEP 1975   | 01972-009 |
| TRUCK/SCHOOL BUS/TRAIN ACCIDENT, ARKANSAS 11 SEP 1975     | 01973-010 |
| TRACTOR TRAILER, FRONT TO SIDE IMPACT FEB 1975            | 01974-011 |
| TRUCK CAR ACCIDENT INTERSECTION, BALTIMORE, MD FEB 1975   | 01975-011 |
| CAR/POLE/TRAIN SIDESWIPE IMPACT, LOS ANGELES 25 SEP 1975  | 01976-008 |
| TRUCK CAR ACCIDENT, REAR END, SAN DIEGO FREEWAY JAN 1976  | 01977-009 |
| TRUCK ACCIDENT, TRI-STATE RIG, GILA BEND AZ               | 02006-012 |
| TRUCK ACCIDENT, COLLISION LEFT ROADWAY WASHINGTON DC      | 02007-014 |
| TRUCK/SCHOOL BUS COLLISION LAKE PLACID FL                 | 02008-012 |
| TRUCK/VAN/AUTO ACCIDENT LEXINGTON VA 20 AUG 1976          | 02013-014 |
| LUMBER TRUCK ACCIDENT-CARGO SHIFT, HARTFORD 6 DEC 1975    | 02027-014 |
| TRUCK/TRAIN CROSSING ACCIDENT NY ROUTE 19 10 NOV 1973     | 02028-012 |
| TRUCK, FRONT CORNER IMPACT, CONCORD, NY 27 NOV 1973       | 02030-011 |
| TRUCK WHEEL/CAR - TOP IMPACT NY STATE 26 NOV 1973         | 02031-009 |
| CAR/TRACTOR-TRAILER UNDERIDE COLLISION 13 DEC 1974        | 02033-008 |
| TRACTOR-TRAILER CAMPING ACCIDENT, HARDIN, KY JUN 1975     | 02036-007 |
| MOTOR HOME, RAN-OFF ROADWAY, IMPACT, FIRE, EXPLOSION 1975 | 02037-012 |
| TRACTOR-TRAILER/CAR SIDESWIPE RURAL KY AUG 1973           | 02038-009 |
| TRUCK CAR ACCIDENT PACIFIC COAST HIGHWAY 17 JUN 1975      | 02039-008 |
| WHITE FREIGHTLINER ACCIDENT VENTURA FREEWAY JUN 1975      | 02040-007 |
| TRUCK TRAILER ROLLOVER, POOR BRAKES, VERNON, CA JUN 1975  | 02041-007 |
| TRUCK CAR ACCIDENT, LANE CHANGE, LOS ANGELES JUN 1975     | 02042-008 |
| TANKTRUCK ACCIDENT, HELIUM FUEL LEAKAGE JUL 1975          | 02043-008 |
| JACKKNIFING TRAILER FORCED TRACTOR INTO BRIDGE JUL 1975   | 02044-007 |
| TRUCK TRAILER ACCIDENT, CARGO SHIFT, WOLI OVER AUG 1975   | 02045-007 |
| TRUCK ACCIDENT, PROPANE, OVERTURN AND FIRE 9 MAR 1972     | 02078-028 |
| CAR/TRAIN, GRADE CROSSING, DES MOINES, IOWA SEE DB 2085   | 02087-000 |
| TRACTOR TRAILER COLLIDED WITH CAR BAXTER, CA 11 MAR 77    | 02092-013 |
| TRACTOR/CARGO TANK TRAILER ACCIDENT, CHERRY HILL, NJ      | 02094-010 |
| TANKTRUCK/RAIL GRADE CROSSING ACCIDENT SEE DB 2095        | 02096-000 |
| SCHOOL BUS TRAIN GRADE CROSSING ACCIDENT SEE DB 2098      | 02097-000 |

08/05/80

(IMPACT)

....ACCELERATION/TIME.....RESPONSE....TRANSPORTATION.....AUTOMOBILE.....

|   |           |
|---|-----------|
| TRUCK ACCIDENT, CANADA, GASOLINE FIRE AND OTHER HM      | 02108-013 |
| TRACTOR-SEMITRAILER COLLISION MULTIPLE VEHICLES AUG 76  | 02112-026 |
| MINI MOTOR HOME/CAR ACCIDENT MCALESTER,OK 14 JUL 77     | 02115-028 |
| TRUCK ACCIDENT, PENETRATED BRIDGE RAIL RELEASED HM CG   | 02116-020 |
| TANKTRUCK RAIL CROSSING ACCIDENT SEE DB2118 10 MAR 75   | 02119-000 |
| TRUCK ACCIDENT, GASOLINE FIRE, BEATTYVILLE KY 09/24/77  | 02168-028 |
| TRUCK RAIL CROSSING ACCIDENT SEE DB 2203 27 JAN 76      | 02204-000 |
| HIGHWAY ACCIDENT, SPILLED YELLOWCAKE, SPRINGFIELD, CO   | 02222-009 |
| TRACTOR TRAILER REAR-END COLLISION, NC 27 APR 76        | 02234-016 |
| TRUCK ACCIDENT, HEAD-ON WITH VAN, SCIPIO, UT 26 AUG 77  | 02246-037 |
| STATIONWAGON PENETRATION OF BRIDGERAIL 110 11 NOV 78    | 02264-020 |
| AMBULANCE OVERTURN, ROUTE 116, LITTLETON NH 22 AUG 78   | 02266-026 |
| TRUCK, FIXED OBJECT COLLISION, CROFTON, MD 23 APR 79    | 02287-020 |
| MULTIPLE VEHICLE COLLISION/FIRE, WILLOWICK, OH 6 MAY 79 | 02282-025 |
| TRUCK ACCIDENT, SPEEDING, NEAR BETHESDA, MD 14 MAR 78   | 02296-014 |
| TRUCK ACCIDENT, SIDE IMPACT, NEAR LARAMIE WY 22 AUG 79  | 02312-030 |
| DODGE VAN COLLIDED W/FARM VEHICLE, DELTA, VT 12 SEP 79  | 02333-027 |
| AUTO ACCIDENT, COLLIDED HEAD-ON, INDIANA, PA 22 SEP 79  | 02334-022 |

(IMPACT)

....ACCELERATION/TIME.....RESPONSE....TRANSPORTATION.....RAILROAD.....

|  |           |
|--|-----------|
| RAIL ACCIDENT, HEAD-IN, EL MONTE, CA 2 APR 1973        | 01925-007 |
| RAIL ACCIDENT, HEAD-ON, LUFKIN, TEXAS 18 NOV 1973      | 01926-005 |
| RAIL ACCIDENT, HEAD-ON, COBDEN, ILLINOIS 7 DEC 1973    | 01927-006 |
| RAIL ACCIDENT, HEAD-ON, PLAINVIEW, TEXAS 15 DEC 1973   | 01928-005 |
| RAIL ACCIDENT, HEAD-ON, ST LOUIS, MISSOURI 22 JUN 1974 | 01929-007 |
| RAIL ACCIDENT, HEAD-ON, MEMPHIS, TEN 24 JAN 1975       | 01930-005 |
| RAIL ACCIDENT, SIDE-ON, EARLS, TEXAS 29 NOV 1974       | 01931-005 |
| RAIL ACCIDENT, OPEN SWITCH, WINDHAM, OHIO 22 NOV 1973  | 01932-004 |
| RAIL ACCIDENT, RAKING, LAKE JUNCTION, NJ 17 JUN 1974   | 01933-007 |
| RAIL ACCIDENT, REAR END, HURRICANE, ALASKA 5 JUL 1975  | 01945-024 |
| RAIL ACCIDENT, REAR END, LEETONIA, OHIO 6 JUN 1975     | 01946-028 |
| RAIL ACCIDENT, REAR END, DUPO, ILLINOIS 3 JAN 1975     | 01947-009 |
| RAIL ACCIDENT, GRADE CROSSING, DEL MAR, CA 27 FEB 1974 | 01948-006 |
| RAIL ACCIDENT, BROKEN RAIL, THOMPSONTOWN, PA DEC 1974  | 01949-004 |
| RAIL ACCIDENT, GRADE CROSSING, TRACY, CA 9 MAR 1975    | 01950-029 |
| RAIL ACCIDENT, GRADE CROSSING, ELWOOD, IL 19 NOV 1975  | 01951-024 |
| RAIL ACCIDENT, UNPROTECTED GRADE CROSSING 7 FEB 1976   | 02010-011 |
| RAIL ACCIDENT, DERAILMENT JARRATT VA 5 MAY 1976        | 02011-026 |
| RAIL ACCIDENT, HEAD-ON 2 TRAINS PETTISVILLE OH         | 02012-015 |
| AUTOMATED WHEEL-ON-THE-GROUND DERAILMENT DETECTION SYS | 02017-011 |
| BIRMINGHAM DERAILMENT, TRACK GAGE WIDENS 16 JAN 1977   | 02023-003 |
| RAIL CROSSING ACCIDENT WITH TANK TRUCK SEE EDB2028     | 02029-000 |
| CAR/TRAIN-FRONT TO SIDE IMPACT UNPROTECTED CROSSING    | 02032-009 |
| SCHOOL BUS-TRAIN COLLISION STRATTON, NE 8 AUG 1976     | 02034-011 |
| TRAIN DERAILMENT CARRYING 2 CONTAINERS OF RAM          | 02049-003 |
| RAIL ACCIDENT, GRADE CROSSING, DES MOINES, IOWA        | 02085-022 |
| RAIL ACCIDENT, GRADE CROSSING, MARLAND, OK 15 DEC 76   | 02095-016 |
| RAIL CROSSING ACCIDENT WITH SCHOOL BUS LAFAYETTE, OR   | 02098-017 |

02/05/80

(IMPACT)

.....ACCELERATION/TIME.....RESPONSE.....TRANSPORTATION.....RAILROAD.....

|  |           |           |
|--|-----------|-----------|
| RAIL ACCIDENT, DERAILMENT YOUNGSTOWN, FL               | 26 FEB 78 | 02102-020 |
| TRAIN ACCIDENT, RAIL FAILURE, RELEASED ANHYDROUS AMMON |           | 02109-023 |
| RAIL CROSSING ACCIDENT w/TANKTRUCK THAYER, MS          | 10 MAR 7  | 02118-007 |
| RAIL ACCIDENT, REAR-END BLACK ROCK, NY                 | 15 JUN 75 | 02121-007 |
| RAIL ACCIDENT, REAR-END NEW YORK CITY, NY              | 29 JUL 75 | 02122-008 |
| RAIL DERAILMENT, FIRE, EXPLOSION FERTILE, MN           | 22 JCT 75 | 02123-009 |
| RAIL ACCIDENT, HEAD-ON COAHOMA, MS                     | 23 NOV 75 | 02124-006 |
| RAIL ACCIDENT, HEAD-ON, 2 TRAINS, NEW HAVEN IN         | OCT 76    | 02142-019 |
| RAIL ACCIDENT, DERAILMENT GOODMAN MS AMTRAK            | 30 JUN 76 | 02143-020 |
| RAIL ACCIDENT, DERAILMENT GOLDONNA LA                  | 2R DEC 77 | 02147-027 |
| RAIL ACCIDENT, RAIL FAILURE, PENSACOLA FL              | 9 NOV 77  | 02169-046 |
| RAIL ACCIDENT, REAR-END BROOKLYN JUNCTION WV           | 27 JAN 76 | 02194-00P |
| RAIL ACCIDENT, REAR-END SANBORN NY                     | 27 JAN 76 | 02195-009 |
| RAIL ACCIDENT, DERAILMENT WARD AR                      | 3 FEB 76  | 02196-011 |
| RAIL ACCIDENT, REAR-END TRACK CAR DINGLE ID            | 1 MAR 76  | 02197-009 |
| RAIL ACCIDENT, DERAILMENT/FIRE CALVERT TX              | 30 MAR 76 | 02198-010 |
| RAIL ACCIDENT, REAR-END BLAIRSVILLE PA                 | 7 APR 76  | 02199-007 |
| RAIL ACCIDENT, SHIFTED LOAD HUGHES OH                  | 7 JUN 76  | 02200-011 |
| RAIL ACCIDENT, DERAILMENT CLIFFORD MI                  | 18 OCT 76 | 02201-006 |
| RAIL ACCIDENT, AMTRAK DERAILMENT CHICAGO IL            | 18 OCT 76 | 02202-007 |
| RAIL ACCIDENT, GRADE CROSSING GOLDEN MS                | 27 JAN 76 | 02203-011 |
| TRAIN DERAILMENT, URANIUM CYLINDERS, ROCKINGHAM, NC    | 77        | 02221-004 |
| RAIL ACCIDENT, DERAILMENT, LEWISVILLE, AR              | 29 MAR 78 | 02230-023 |
| RAIL ACCIDENT, GRADE CROSSING, PLANT CITY, FL          | 2 OCT 77  | 02231-026 |
| RAIL ACCIDENT, HEAD-ON, FLORENCE, AL                   | 1R SEP 78 | 02233-034 |
| RAIL ACCIDENT, DERAILMENT NEAR LEVIS, WI               | 15 AUG 77 | 02243-009 |
| RAIL ACCIDENT, SIDE COLLISION, NEELYVILLE, MO          | 16 JUN 77 | 02244-014 |
| RAIL ACCIDENT, DERAILMENT, MANOR, PA                   | 19 FEB 77 | 02245-008 |
| RAIL ACCIDENT, DERAILMENT, ELMA VA                     | 3 DEC 78  | 02265-026 |
| RAIL ACCIDENT, REAR END, MADRAS OR                     | 15 JAN 78 | 02267-009 |
| RAIL ACCIDENT, DERAILMENT, WASHINGTON DC               | 15 FEB 78 | 02268-008 |
| RAIL ACCIDENT, DERAILMENT, SUMMIT CA                   | 6 MAR 78  | 02269-007 |
| RAIL ACCIDENT, HEAD-END, IDAHO FALLS ID                | 21 JUN 78 | 02273-010 |
| RAIL ACCIDENT, HEAD-END, FT MADISON IA                 | 24 JUN 78 | 02274-008 |
| RAIL ACCIDENT, AMTRAK DERAILMENT, LOHMAN MT            | 2R MAR 79 | 02276-017 |
| RAIL ACCIDENT, SUBWAY DERAILMENT, NYC NY               | 12 DEC 78 | 02277-034 |
| RAIL ACCIDENT, REAR-END, CONRAIL, MUNCY PA             | 31 JAN 79 | 02280-021 |
| RAIL ACCIDENT, DERAILMENT, RAMSEY, WY                  | 29 MAR 79 | 02283-030 |
| RAIL ACCIDENT, DERAILMENT, CRESTVIEW FL                | 8 APR 79  | 02289-060 |
| RAIL ACCIDENT, HEAD-ON/DERAILMENT EDISON NJ            | 20 APR 79 | 02290-027 |
| RAIL ACCIDENT, COLLISION/DERAILMENT, AMTRAK            | 6 APR 78  | 02293-009 |
| RAIL ACCIDENT, HEAD-END, ST JOSEPH, TN                 | 6 JUL 78  | 02294-010 |
| RAIL ACCIDENT, DERAILMENT, GRANITE, WY                 | 31 JUL 79 | 02304-026 |
| RAIL ACCIDENT, REAR-END, GORHAM IL                     | 17 MAY 78 | 02308-012 |
| RAIL ACCIDENT, COLLISION WITH WORK CRANL, WY           | 29 AUG 78 | 02309-009 |
| RAIL ACCIDENT, COLLISION w/DN-TRACK TAMPER, SD         | 7 SEP 78  | 02310-010 |
| RAIL ACCIDENT, SIDE COLLISION, HELCA KS                | 5 OCT 78  | 02311-013 |
| RAIL ACCIDENT, COLLISION, HARVEY, IL                   | 12 OCT 79 | 02335-034 |
| RAIL ACCIDENT, REAR-END COLLISION, ANGONA, PA          | 16 OCT 79 | 02339-037 |

08/05/80

(IMPACT) .....ACCELERATION/TIME.....RESPONSE.....TRANSPORTATION.....RAILROAD.....  
RAIL ACCIDENT, DERAILMENT, LAWRENCE, KA 2 OCT 79 02343-059

(IMPACT) .....ACCELERATION/TIME.....RESPONSE.....TRANSPORTATION.....SHIP.....  
NATURE OF SHIP COLLISIONS WITHIN PORTS 02026-049  
TANKSHIP ACCIDENT, PENETRATION/GAS FIRE IN LARGO TANKS 02048-002  
SS BAUME COLLIDED W/TANKSHIP SS KEYTRADER 18 JAN 74 02126-002  
M/V WORLD MOBILITY/SS PLYN GETTY COLLISION 29 DEC 78 02270-020  
TANKER ANCO SCEPTRE STRUCK LOADING FACILITY 9 FEB 78 02271-017  
SHIP ACCIDENT, PERUVIAN FREIGHTER/BUTANE BARGE 30 AUG 79 02344-037

.....FRAGMENTATION.....INPUT.....TRANSPORTATION.....AIRCRAFT.....  
HELICOPTER LANDING GEAR COLLAPSED PAN AM BLOC NY 02046-002  
HELICOPTER MAIN ROTOR HUB TRUNNION FRACTURED/SEPARATED 02047-002

.....FRAGMENTATION.....RESPONSE.....TRANSPORTATION.....AIRCRAFT.....  
HELICOPTER LANDING GEAR COLLAPSED PAN AM BLOC NY 02046-002  
HELICOPTER MAIN ROTOR HUB TRUNNION FRACTURED/SEPARATED 02047-002

(PROJECTILE/IMPALEMENT) .....FRAGMENTATION.....INPUT.....TRANSPORTATION.....AIRCRAFT.....  
AIRCRAFT ACCIDENT, INFLIGHT SEPARATION PROPELLER BLADE 02004-002  
AN ASSESSMENT OF TECHNOLOGY TURBOJET ENGINE FAILURES 02139-418  
INCIDENCE UNCONTAINED ROTOR BURSTS COMM AVIATION 62-76 02140-003  
AIRCRAFT GAS TURBINE ROTOR FAILURES COMM AVIATION 1976 02226-031  
GUIDELINES, DESIGN TURBIN ROTOR BURST FRAGMENT COLLING 02307-052

(PUNCTURE) .....FRAGMENTATION.....INPUT.....GENERAL.....AIRCRAFT.....  
TURBIN ENGINE ROTOR DISK FAILURES 1962 TO EARLY 1973 02054-025

(PUNCTURE) .....FRAGMENTATION.....INPUT.....GENERAL.....OTHER.....  
FRAGMENTS, MASS, VELOCITY, STANDARD ARTILLERY SHELLS 01814-117

(PUNCTURE) .....FRAGMENTATION.....INPUT.....TRANSPORTATION.....AIRCRAFT.....  
ROTOR FRAGMENT CONTAINMENT-JET ENGINE FAILURE - 1972 01781-020  
ROTOR FAILURES, GAS TURBINE, US COMM AVIATION 1973 02183-033  
ROTOR FAILURES, GAS TURBINE, US COMM AVIATION 1974 02184-032  
ROTOR FAILURES, GAS TURBINE, US COMM AVIATION 1975 02306-030

(PUNCTURE) .....FRAGMENTATION.....INPUT.....TRANSPORTATION.....AUTOMOBILE.....  
SEVERITIES TRAN ACCIDENT VOL 3 MOTON CARRIER SEE A1630 A1663-111  
SEVERITIES TRAN ACCIDENTS INVOLVING LARGE PACKAGES A2130-160  
TRUCK ACCIDENT-FLORIDA-6/8/71 01695-006  
TRUCK ACCIDENT REPORTS, NHTSA, NO. 7 01753-365



JP/05/80

(PUNCTURE) .....FRAGMENTATION.....INPUT.....TRANSPORTATION.....AUTOMOBILE.....

TRUCK ACCIDENT REPORTS, NHTSA, NO. 6 01754-245  
 TRUCK ACCIDENT REPORTS, NHTSA, NO. 4 01755-306  
 EXPANSION OF CLOUDS FROM PRESSURIZED LIQUIDS SEE EDB 2316 02321-000

(PUNCTURE) .....FRAGMENTATION.....INPUT.....TRANSPORTATION.....RAILROAD.....

SEVERITIES TRAN ACCIDENT VOL 4 TRAIN SEE A1630 A1986-081  
 SEVERITIES RAIL ACCIDENTS LARGE PACKAGES SEE DB A2130 A2131-000  
 RAIL ACCIDENT, HOUSTON, TEXAS 21 SEPT, 1974 01893-028  
 RAIL ACCIDENT, DERAILMENT YOUNGSTOWN, FL 26 FEB 76 02102-020  
 TRAIN ACCIDENT, RAIL FAILURE, RELEASED ANHYDROUS AMMON 02109-023  
 TRAIN DERAILMENT, FIRES AND EXPLOSION, BELT, MONTANA 02110-019  
 TRAIN ACCIDENT, COLLISION W/RAIL MAIN, AZ 16 MAR 75 02120-009  
 RAIL ACCIDENT, DERAILMENT GOLDONNA LA 28 DEC 77 02147-027  
 RAIL ACCIDENT, RAIL FAILURE, PENSACOLA FL 9 NOV 77 02169-046  
 RAIL ACCIDENT, SHIFTED LOAD HUGHES OH 7 JUN 76 02200-011  
 RAIL ACCIDENT, DERAILMENT CLIFFORD MI 18 OCT 76 02201-006  
 RAIL ACCIDENT, SIDE COLLISION, NEELYVILLE, MO 16 JUN 77 02244-014  
 RAIL ACCIDENT, DERAILMENT, CRESTVIEW FL 8 APR 79 02289-060  
 EXPANSION OF CLOUDS FROM PRESSURIZED LIQUIDS 02316-013  
 RAIL ACCIDENT, DERAILMENT, COLLINSVILLE, IL 6 AUG 78 02329-010

(PUNCTURE) .....FRAGMENTATION.....INPUT.....TRANSPORTATION.....SHIP.....

SS BAUNE COLLIDED W/TANKSHIP S9 KEYTRADLR 18 JAN 74 02126-002  
 IMPACT, PENETRATION, SHIP COLLISION AND GROUNDING 02257-049

(PUNCTURE) .....FRAGMENTATION.....INPUT.....TRANSPORTATION.....OTHER.....

SEVERITIES OF TRANSPORTATION ACCIDENTS VOL 1 SUMMARY A1630-034

(PUNCTURE) .....FRAGMENTATION.....RESPONSE.....TRANSPORTATION.....AUTOMOBILE.....

CARGO RESPONSE TRUCK AND RAIL ACCIDENTS 01688-004  
 TRUCK ACCIDENT-FLORIDA-5/8/71 01695-006

(PUNCTURE) .....FRAGMENTATION.....RESPONSE.....TRANSPORTATION.....RAILROAD.....

CARGO RESPONSE TRUCK AND RAIL ACCIDENTS SEE EDB1688 01695-000  
 RAIL ACCIDENT, HOUSTON, TEXAS, 19OCT1971 01846-012  
 RAIL ACCIDENT, CRESCENT CITY, 19AUG1970 01847-018  
 RAIL ACCIDENT, HOUSTON, TEXAS 21 SEPT, 1974 01893-028  
 RAIL ACCIDENT, DERAILMENT YOUNGSTOWN, FL 26 FEB 76 02102-020  
 TRAIN ACCIDENT, RAIL FAILURE, RELEASED ANHYDROUS AMMON 02109-023  
 TRAIN DERAILMENT, FIRES AND EXPLOSION, BELT, MONTANA 02110-019  
 TRAIN ACCIDENT, COLLISION W/RAIL MAIN, AZ 16 MAR 75 02120-009  
 RAIL ACCIDENT, DERAILMENT GOLDONNA LA 28 DEC 77 02147-027  
 RAIL ACCIDENT, RAIL FAILURE, PENSACOLA FL 9 NOV 77 02169-046  
 RAIL ACCIDENT, SHIFTED LOAD HUGHES OH 7 JUN 76 02200-011

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| (PUNCTURE)  | .....FRAGMENTATION.....RESPONSE....TRANSPORTATION.....RAILROAD..... |  |
|             | RAIL ACCIDENT, DERAILMENT CLIFFORD MI 18 OCT 76 02201-006           |  |
|             | RAIL ACCIDENT, SIDE COLLISION, NEELYVILLE, MO 16 JUN 77 02244-014   |  |
|             | RAIL ACCIDENT, DERAILMENT, CRESTVIEW FL 8 APR 79 02289-060          |  |
|             | RAIL ACCIDENT, DERAILMENT, COLLINSVILLE, IL 6 AUG 78 02329-010      |  |
| (PUNCTURE)  | .....FRAGMENTATION.....RESPONSE....TRANSPORTATION.....SHIP.....     |  |
|             | SS BAUNE COLLIDED W/TANKSHIP SS RETRADLR 19 JAN 74 02126-002        |  |
| (EXPLOSION) | .....FRAGMENTATION.....INPUT....TRANSPORTATION.....AIRCRAFT.....    |  |
|             | AIRCRAFT ACCIDENT, BOEING 707-331B DP SEP 74 02154-044              |  |
| (EXPLOSION) | .....FRAGMENTATION.....INPUT....TRANSPORTATION.....AUTOMOBILE.....  |  |
|             | TRUCK ACCIDENT-NEW JERSEY 9/21/72 01690-005                         |  |
|             | TRUCK ACCIDENT-GEORGIA-6/4/77 01694-004                             |  |
|             | TRUCK ACCIDENT-VIRGINIA-3/9/72 01696-005                            |  |
|             | RISK ASSESSMENT OF TRANSPORT OF LPG 02177-091                       |  |
| (EXPLOSION) | .....FRAGMENTATION.....INPUT....TRANSPORTATION.....RAILROAD.....    |  |
|             | RAIL DERAILMENT, FIRE, EXPLOSION FERTILE, MN 22 OCT 75 02123-009    |  |
| (EXPLOSION) | .....FRAGMENTATION.....INPUT....TRANSPORTATION.....SHIP.....        |  |
|             | EXPLOSION FIRE ENGULFED THE M/T ELIAS, UNLOADING APR 74 02127-005   |  |
|             | RISK ASSESSMENT OF TRANSPORT OF LNG SEE EDB 2177 02178-001          |  |
| (EXPLOSION) | .....FRAGMENTATION.....INPUT....TRANSPORTATION.....OTHER.....       |  |
|             | NATURAL GAS PIPELINE EXPLOSION AND FIRE 24 OCT 76 02295-003         |  |
| (EXPLOSION) | .....FRAGMENTATION.....RESPONSE....TRANSPORTATION.....RAILROAD..... |  |
|             | RAIL DERAILMENT, FIRE, EXPLOSION FERTILE, MN 22 OCT 75 02123-009    |  |
| (EXPLOSION) | .....FRAGMENTATION.....RESPONSE....TRANSPORTATION.....SHIP.....     |  |
|             | EXPLOSION FIRE ENGULFED THE M/T ELIAS, UNLOADING APR 74 02127-005   |  |
| (EXPLOSION) | .....FRAGMENTATION.....RESPONSE....TRANSPORTATION.....OTHER.....    |  |
|             | NATURAL GAS PIPELINE EXPLOSION AND FIRE 24 OCT 76 02295-003         |  |
|             | .....PRECIPITATION.....INPUT.....GENERAL.....AUTOMOBILE.....        |  |
|             | WET PAVEMENT FATAL ACCIDENTS, SPECIAL STUDY, 1976-1977 02313-042    |  |
|             | .....PRESSURE.....INPUT.....GENERAL.....OTHER.....                  |  |

08/05/80

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|             | .....PRESSURE.....INPUT.....GENERAL.....OTHER.....                |           |
|             | TYPHOON REPORT - PACIFIC OCEAN - 1959                             | 01802-199 |
|             | TYPHOON REPORT - PACIFIC OCEAN - 1960                             | 01803-227 |
|             | TYPHOON REPORT - PACIFIC OCEAN - 1961                             | 01804-256 |
|             | TYPHOON REPORT - PACIFIC OCEAN - 1962                             | 01805-306 |
|             | TYPHOON REPORT - PACIFIC OCEAN - 1963                             | 01806-211 |
|             | TYPHOON REPORT - PACIFIC OCEAN - 1965                             | 01807-255 |
|             | TYPHOON REPORT - PACIFIC OCEAN - 1966                             | 01808-261 |
|             | TYPHOON REPORT - PACIFIC OCEAN - 1967                             | 01809-272 |
|             | TYPHOON REPORT - PACIFIC OCEAN - 1969                             | 01810-329 |
|             | TYPHOON REPORT - PACIFIC OCEAN - 1969                             | 01811-172 |
|             | TYPHOON REPORT - PACIFIC OCEAN - 1970                             | 01812-235 |
|             | TYPHOON REPORT - PACIFIC OCEAN - 1974                             | 01813-253 |
|             | TROPICAL CYCLONES   | 01856-177 |
| (CRUSH)     | .....PRESSURE.....INPUT.....GENERAL.....AIRCRAFT.....             |           |
|             | CRUSH ENVIRONMENT SMALL CONTAINERS CARRIED BY US JETS             | 02114-023 |
| (CRUSH)     | .....PRESSURE.....INPUT.....TRANSPORTATION.....AUTOMOBILE.....    |           |
|             | GASOLINE TRUCK ACCIDENT, SEATTLE, WA 4 DEC 1975                   | 01966-002 |
|             | TRUCK CAR ACCIDENT, LANE CHANGE, ST LOUIS, MO 25 SEP 77           | 02249-021 |
| (CRUSH)     | .....PRESSURE.....RESPONSE.....GENERAL.....AIRCRAFT.....          |           |
|             | CRUSH ENVIRONMENT SMALL CONTAINERS CARRIED BY US JETS             | 02114-023 |
| (CRUSH)     | .....PRESSURE.....RESPONSE.....TRANSPORTATION.....AUTOMOBILE..... |           |
|             | CARGO RESPONSE TRUCK AND RAIL ACCIDENTS                           | 01688-004 |
|             | GASOLINE TRUCK ACCIDENT, SEATTLE, WA 4 DEC 1975                   | 01966-002 |
|             | TRUCK CAR ACCIDENT, LANE CHANGE, ST LOUIS, MO 25 SEP 77           | 02249-021 |
| (CRUSH)     | .....PRESSURE.....RESPONSE.....TRANSPORTATION.....RAILROAD.....   |           |
|             | CARGO RESPONSE TRUCK AND RAIL ACCIDENTS SEE EDB1688               | 01699-000 |
| (IMMERSION) | .....PRESSURE.....INPUT.....TRANSPORTATION.....AIRCRAFT.....      |           |
|             | SEVERITIES TRAN ACCIDENT VOL 2 CARGO AIRCRAFT SEE 1630            | A1662-106 |
|             | A/C ACCIDENT DEHAVILLAND DHC 16 FEB 1970                          | 01679-005 |
|             | A/C ACCIDENT DC9 MAY 1973   | 01682-005 |
|             | A/C ACCIDENT SKYWAN SERIES 3 JULY 1970                            | 01683-005 |
|             | AIRCRAFT ACCIDENT, NORD 262, SANTA MONICA, CA 10 MAR 79           | 02285-011 |
| (IMMERSION) | .....PRESSURE.....INPUT.....TRANSPORTATION.....AUTOMOBILE.....    |           |
|             | SEVERITIES TRAN ACCIDENT VOL 3 MOTOR CARRIER SEE A1630            | A1663-111 |
|             | SEVERITIES TRAN ACCIDENTS INVOLVING LARGE PACKAGES                | A2130-160 |

DR/05/60

(IMMERSION) .....PRESSURE.....INPUT.....TRANSPORTATION.....RAILROAD.....  
SEVERITIES TRAN ACCIDENT VOL 4 TRAIN SEL A1630 A1986-081  
SEVERITIES RAIL ACCIDENTS LARGE PACKAGES SEE DR A2130 A2131-000

(IMMERSION) .....PRESSURE.....INPUT.....TRANSPORTATION.....SHIP.....  
SINKING SS SILVER DOVE, CRACKED WALL IN CARGO HOLD 02009-005  
SINKING GREAT LAKES BULK CARGO VESSEL SS ED FITZGERALD 02125-002

(IMMERSION) .....PRESSURE.....INPUT.....TRANSPORTATION.....OTHER.....  
SEVERITIES OF TRANSPORTATION ACCIDENTS VOL 1 SUMMARY A1630-034

(IMMERSION) .....PRESSURE.....RESPONSE.....TRANSPORTATION.....AIRCRAFT.....  
AIRCRAFT ACCIDENT, NORD 262, SANTA MONICA, CA 10 MAR 79 02285-031

(IMMERSION) .....PRESSURE.....RESPONSE.....TRANSPORTATION.....SHIP.....  
SINKING SS SILVER DOVE, CRACKED WALL IN CARGO HOLD 02009-005  
SINKING GREAT LAKES BULK CARGO VESSEL SS ED FITZGERALD 02125-002

(EXPLOSION) .....PRESSURE.....INPUT.....GENERAL.....OTHER.....  
LIQUID-PROPELLANT ROCKET ABORT FIRE MODEL 02314-004  
SKIN BURNS RESULTING FROM EXPOSURE TO CHEMICAL FIREBALLS 02318-020

(EXPLOSION) .....PRESSURE.....INPUT.....TRANSPORTATION.....AUTOMOBILE.....  
HYDROGEN TRANSPORT AND HANDLING EXPLOSION 01758-041  
TRUCK ACCIDENT, EXPLOSION/FIRE, EAGLE PASS, TEXAS 01953-021  
COLLISION OF WINNEBAGO MOTOR HOME W/BRIDGE 1 JUL 1975 01956-030  
MOTOR HOME, HAN-OFF ROADWAY, IMPACT, FIRE, EXPLOSION 1975 02037-012  
THERMAL HAZARD FROM TANK TRUCK ACCIDENTS SEE EDB 2315 02320-000

(EXPLOSION) .....PRESSURE.....INPUT.....TRANSPORTATION.....RAILROAD.....  
RAIL ACCIDENT, EAST ST LOUIS, ILLINOIS - 7/22/72 01706-005  
RAIL ACCIDENT, CRITZ, NEBRASKA - 2/19/66 01707-005  
RAIL ACCIDENT, HOUSTON, TEXAS - 10/19/71 01708-019  
RAIL ACCIDENT, DECATUR, ILL 14 JULY, 1974 01889-023  
RAIL ACCIDENT, DEANSON, AR 24 MAY, 1973 01891-031  
RAIL ACCIDENT, HOUSTON, TEXAS 21 SEPT, 1974 01893-028  
RAIL ACCIDENT, EXPLOSION OF PRM, WENATCHEE, WA AUG 1974 01938-069  
RAIL ACCIDENT, DERAILMENT, LEWISVILLE, AR 29 MAR 76 02230-023  
RAIL ACCIDENT, DERAILMENT, WAVERLY, TN 22 FEB 76 02232-020  
RAIL ACCIDENT, DERAILMENT, CRESTVIEW, FL 8 APR 79 02289-060  
THERMAL HAZARD FROM PROPANE FIREBALLS 02315-008  
RAIL ACCIDENT, DERAILMENT, COLLINSVILLE, IL 6 AUG 76 02329-010

JP/DS/AC

(EXPLOSION) .....PRESSURE.....INPUT.....TRANSPORTATION.....OTHER.....

NATURAL GAS PIPELINE EXPLOSION AND FIRE 24 OCT 78 02295-003  
 THERMAL HAZARD FROM LNG FIREBALLS 02317-021  
 THERMAL HAZARD FROM HYDROGEN FIREBALLS 02319-015

(EXPLOSION) .....PRESSURE.....RESPONSE.....TRANSPORTATION.....AUTOMOBILE.....

TRUCK ACCIDENT, EXPLOSION/FIRE, EAGLE PASS, TEXAS 01953-021  
 COLLISION OF WINNEBAGO MOTOR HOME W/BRIDGE 1 JUL 1975 01956-030  
 MOTOR HOME, RAN-OFF ROADWAY, IMPACT, FIRE, EXPLOSION 1975 02037-012

(EXPLOSION) .....PRESSURE.....RESPONSE.....TRANSPORTATION.....RAILROAD.....

RAIL ACCIDENT, DECATUR, ILL 19 JULY, 1974 01889-023  
 RAIL ACCIDENT, HENSON, AR 24 MAY, 1973 01891-031  
 RAIL ACCIDENT, HOUSTON, TEXAS 21 SEPT, 1974 01893-028  
 RAIL ACCIDENT, DERAILMENT, LEWISVILLE, AR 29 MAR 76 02230-023  
 RAIL ACCIDENT, DERAILMENT, WAVERLY, TN 22 FEB 75 02232-020  
 RAIL ACCIDENT, DERAILMENT, CRESTVIEW, FL 8 APR 79 02289-060  
 RAIL ACCIDENT, DERAILMENT, COLLINSVILLE, IL 6 AUG 78 02329-010

(EXPLOSION) .....PRESSURE.....RESPONSE.....TRANSPORTATION.....OTHER.....

NATURAL GAS PIPELINE EXPLOSION AND FIRE 24 OCT 78 02295-003

.....RADIATION.....INPUT.....TRANSPORTATION.....AUTOMOBILE.....

TRAN ACCIDENT RISKS IN NUCLEAR POWER IND 1975-2020 01989-131

.....RADIATION.....INPUT.....TRANSPORTATION.....RAILROAD.....

TRAN ACCIDENT RISKS IN NUCLEAR POWER IND SEE LDB 1989 01990-000

.....RADIATION.....INPUT.....TRANSPORTATION.....SHIP.....

TRAN ACCIDENT RISKS IN NUCLEAR POWER IND SEE LDB 1989 01991-000

(LIGHTNING) .....RADIATION.....INPUT.....GENERAL.....OTHER.....

VOLTAGE AND CURRENT CHARACTERISTICS OF LIGHTNING STRIKE 00464-003  
 PROPERTIES OF LIGHTNING STROKES 00999-001

(LIGHTNING) .....RADIATION.....INPUT.....TRANSPORTATION.....AIRCRAFT.....

LIGHTNING THREAT TO AIRCRAFT 01000-004  
 LIGHTNING HAZARD TO AIRCRAFT 01415-011  
 MEASUREMENT LIGHTING INDUCED VOLTAGES IN AN F4H-1 02185-127

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

RAIL ACCIDENT, REAR-END/DERAILMENT, SEABROOK, MD 06/78 02248-034

JA/05/80

.....SHOCK.....RESPONSE.....TRANSPORTATION.....RAILROAD.....  
RAIL ACCIDENT, REAR-END/DERAILMENT, SEABROOK, MD 06/78 02248-034

(CRUSH) .....SHOCK.....INPUT.....GENERAL.....AIRCRAFT.....  
CRUSH ENVIRONMENT SMALL CONTAINERS CARRIED BY US JETS 02114-023

(CRUSH) .....SHOCK.....INPUT.....TRANSPORTATION.....AUTOMOBILE.....  
SEVERITIES TRAN ACCIDENT VOL 3 MOTOR CARRIER SEE A1630 A1663-111  
SEVERITIES TRAN ACCIDENTS INVOLVING LARGE PACKAGES A2130-160  
TRUCK ACCIDENT REPORTS, NHTSA, NO. 7 01753-365  
TRUCK ACCIDENT REPORTS, NHTSA, NO. 8 01754-245  
TRUCK ACCIDENT REPORTS, NHTSA, NO. 9 01755-308  
TRUCK ACCIDENT, ROLLOVER, PENDELTON, NY 27 SEP 74 01899-010  
TRUCK ACCIDENT, FRONTAL IMPACT, HAMBURG, NY 16 DEC 74 01900-008  
TRUCK/PICKUP TRUCK W/CAMPER AND TRAILER COLLISION 01901-030  
TRUCK TRACTOR-TRAILER/CHOUNG/ROLLOVER VOL 7, NO 1 01962-007  
TRUCK TRACTOR-SPORTS VAN IMPACT VOL 7, NO 1 01963-009  
TRUCK CAR ACCIDENT, BALTIMORE, MD, ON INTERSTATE 01964-012  
TRUCK CAR ACCIDENT, REAR END UNDER-RIDE IMPACT, VOL 7 01965-011  
LUMBER TRUCK ACCIDENT-CARGO SHIFT, HARTFORD 5 DEC 1975 02027-014  
TRUCK WHEEL/CAR - TOP IMPACT NY STATE 26 NOV 1973 02031-009  
TRACTOR-TRAILER CAMPING ACCIDENT, HARDIN, KY JUN 1975 02036-007

(CRUSH) .....SHOCK.....INPUT.....TRANSPORTATION.....RAILROAD.....  
SEVERITIES TRAN ACCIDENT VOL 4 TRAIN SEE A1630 A1986-061  
SEVERITIES RAIL ACCIDENTS LARGE PACKAGES SEE DE A2130 A2131-000  
RAIL ACCIDENT, HOUSTON, TEXAS 21 SEPT, 1974 01893-027

(CRUSH) .....SHOCK.....INPUT.....TRANSPORTATION.....OTHER.....  
SEVERITIES OF TRANSPORTATION ACCIDENTS VOL 1 SUMMARY A1630-034

(CRUSH) .....SHOCK.....RESPONSE.....GENERAL.....AIRCRAFT.....  
CRUSH ENVIRONMENT SMALL CONTAINERS CARRIED BY US JETS 02114-023

(CRUSH) .....SHOCK.....RESPONSE.....TRANSPORTATION.....AUTOMOBILE.....  
TRUCK ACCIDENT, ROLLOVER, PENDELTON, NY 27 SEP 74 01899-010  
TRUCK ACCIDENT, FRONTAL IMPACT, HAMBURG, NY 16 DEC 74 01900-008  
TRUCK/PICKUP TRUCK W/CAMPER AND TRAILER COLLISION 01901-030  
TRUCK TRACTOR-TRAILER/CHOUNG/ROLLOVER VOL 7, NO 1 01962-007  
TRUCK TRACTOR-SPORTS VAN IMPACT VOL 7, NO 1 01963-009  
TRUCK CAR ACCIDENT, BALTIMORE, MD, ON INTERSTATE 01964-012  
TRUCK CAR ACCIDENT, REAR END UNDER-RIDE IMPACT, VOL 7 01965-011  
LUMBER TRUCK ACCIDENT-CARGO SHIFT, HARTFORD 6 DEC 1975 02027-014  
TRUCK WHEEL/CAR - TOP IMPACT NY STATE 26 NOV 1973 02031-009

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| (CRUSH)  | .....SHOCK.....RESPONSE.....TRANSPORTATION.....AUTOMOBILE..... |           |
|          | TRACTOR-TRAILER CAMPING ACCIDENT, HARDIN, KY JUN 1975          | 02036-007 |
| (CRUSH)  | .....SHOCK.....RESPONSE.....TRANSPORTATION.....RAILROAD.....   |           |
|          | RAIL ACCIDENT, HOUSTON, TEXAS, 19 OCT 1971                     | 01846-012 |
|          | RAIL ACCIDENT, CRESCENT CITY, 19 AUG 1970                      | 01847-018 |
|          | RAIL ACCIDENT, HOUSTON, TEXAS 21 SEPT, 1974                    | 01893-028 |
| (IMPACT) | .....SHOCK.....INPUT.....GENERAL.....AUTOMOBILE.....           |           |
|          | TRUCK ACCIDENT SPEEDS A - SUMMARY                              | 01687-003 |
|          | STATISTICAL STUDY OF TRUCK ACCIDENT SPEEDS                     | 01698-024 |
| (IMPACT) | .....SHOCK.....INPUT.....GENERAL.....RAILROAD.....             |           |
|          | FREIGHT TRAIN ACCIDENTS, NUMBER OF CARS INVOLVED               | 01729-013 |
| (IMPACT) | .....SHOCK.....INPUT.....GENERAL.....OTHER.....                |           |
|          | APPROXIMATE DURATION OF SOME SHORT ACCELERATION LOADS          | 00754-001 |
| (IMPACT) | .....SHOCK.....INPUT.....HANDLING.....OTHER.....               |           |
|          | IMPACTS DUE TO LARGE DROPS WHEN LOADING                        | 00342-001 |
|          | MAXIMUM DROPS, PACKAGES IN TRANSIT                             | 01608-008 |
| (IMPACT) | .....SHOCK.....INPUT.....TRANSPORTATION.....AIRCRAFT.....      |           |
|          | SEVERITIES TRAN ACCIDENT VOL 2 CARGO AIRCRAFT SEE 1630         | A1662-106 |
|          | ANALYSIS OF DIRECTION OF LOADS IN AIRCRAFT ACCIDENTS           | 00751-001 |
|          | ACCELERATION OF FLOOR-AIRCRAFT CRASHES                         | 00752-001 |
|          | ACCELERATION, AIRCRAFT CRASH-VARIOUS ANGLES OF IMPACT          | 00753-008 |
|          | CRASH TEST, DC-7 AIRCRAFT                                      | 01104-013 |
|          | CRASH TEST, CONSTELLATION AIRCRAFT                             | 01105-027 |
|          | CIVIL AVIATION ACCIDENT DATA - 1962 TO 1972                    | 01664-018 |
|          | ANALYSIS OF CARGO A/C CRASH RECORDS CAB DATA                   | 01668-010 |
|          | CRASH IMPACT CONDITIONS, MULTI ENGINE TRANSPORT A/C            | 01670-058 |
|          | SURVEY OF A/C CRASH SURVIVABILITY, CARGO AT A/C CG             | 01671-008 |
|          | ACCIDENT DATA, MULTIENGINE AIRCRAFT                            | 01672-020 |
|          | A/C ACCIDENT DC8 62 SEPT 1970                                  | 01676-005 |
|          | A/C ACCIDENT MARTIN 404 OCT 1970                               | 01677-005 |
|          | A/C ACCIDENT CONVAIR 580 DEC 1968                              | 01678-005 |
|          | A/C ACCIDENT DEHAVILLAND DHC 14 FEB 1970                       | 01679-005 |
|          | A/C ACCIDENT DOUGLAS C540 APRIL 1970                           | 01680-005 |
|          | A/C ACCIDENT DC 9 JAN 1970                                     | 01681-005 |
|          | A/C ACCIDENT DC9 MAY 1970                                      | 01682-005 |
|          | A/C ACCIDENT SKYVAN SERIES 3 JULY 1970                         | 01683-005 |
|          | A/C ACCIDENT DC9 32 SEPT 1970 SEE EDB 2159                     | 01684-005 |
|          | A/C ACCIDENT DC8 63F SEPT 1970                                 | 01686-005 |

08/05/80

(IMPACT)

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

|   |           |
|---|-----------|
| AIRCRAFT ACCIDENT - BOEING 707 - 1/16/74                | 01800-031 |
| AIRCRAFT CRASH ENVIRONMENTS - NAVY                      | 01819-087 |
| AIRCRAFT ACCIDENT - COMVAIR 800 - 9/27/73               | 01820-039 |
| AIRCRAFT MIDAIR COLLISIONS                              | 01822-188 |
| AIRCRAFT DITCHING INVESTIGATION                         | 01823-081 |
| A/C CRASH, B707, BOSTON, 3 NOV 1973                     | 01843-046 |
| A RISK AND COMPARATIVE ANALYSIS OF NAVY AIRCRAFT DATA   | 01857-091 |
| ARMY ROTARY WING AIRCRAFT ACCIDENTS-COST STUDY 1970-71  | 01895-032 |
| FULL SCALE CRASH TEST OF A CH-47C HELICOPTER            | 02024-040 |
| MIDAIR COLLISION 7/27/CESSNA 177 SAN DIEGO CA 25 SEP 78 | 02263-074 |
| AIRCRAFT ACCIDENT, NORD 252, WOHAWK/FRAKES 296 FEB 79   | 02284-031 |
| AIRCRAFT ACCIDENT, NORD 262, SANTA MONICA, CA 10 MAR 79 | 02285-031 |

(IMPACT)

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

|   |           |
|---|-----------|
| SEVERITIES TRAM ACCIDENTS INVOLVING LARGE PACKAGES      | A2130-160 |
| TRUCK ACCIDENT ENVIRONMENT ANALYSIS TAC - STUDY         | C1944-146 |
| ACCELERATIONS, AUTOMOBILE CRASH (HEAD-ON)               | 00737-001 |
| DECELERATION PATTERNS FOR AUTOMOBILE HEAD-ON COLLISIONS | 00738-001 |
| ACCIDENT REPORT, TRUCK - VENTURA, CALIFORNIA, 8-18-71   | 01659-006 |
| TRUCK ACCIDENT-NEW JERSEY 9/21/72                       | 01690-005 |
| TRUCK ACCIDENT-ARIZONA 8/51/70                          | 01691-003 |
| TRUCK ACCIDENT-VIRGINIA 4/13/72                         | 01692-003 |
| TRUCK ACCIDENT-PENN-9/5/71                              | 01693-003 |
| TRUCK ACCIDENT-GEORGIA-6/4/71                           | 01694-004 |
| TRUCK ACCIDENT-FLORIDA-6/8/71                           | 01695-006 |
| TRUCK ACCIDENT-VIRGINIA-5/9/72                          | 01696-005 |
| TRUCK ACCIDENT-TENN-5/13/72                             | 01697-003 |
| RAIL/ROAD VEHICLE ACCIDENT, OKLAHOMA - 4/5/71-SEE 1710  | 01711-000 |
| RAIL/ROAD VEHICLE ACCIDENT, NEW YORK - 3/24/72          | 01712-005 |
| RAIL/ROAD VEHICLE ACCIDENT, ILLINOIS - 1/24/70-SEE 1714 | 01713-000 |
| TRUCK ACCIDENT REPORTS, NHTSA, NO. 7                    | 01753-365 |
| TRUCK ACCIDENT REPORTS, NHTSA, NO. 8                    | 01754-245 |
| TRUCK ACCIDENT REPORTS, NHTSA, NO. 9                    | 01755-306 |
| TRUCK ACCIDENT REPORTS - BOSTON UNIV., 1973             | 01770-339 |
| TRUCK ACCIDENT REPORTS - NHTSA, NO. 3                   | 01771-281 |
| RAIL-HIGHWAY GRADE CROSSING ACCIDENTS, 1972 (SEE 1775)  | 01776-000 |
| RAIL-HIGHWAY GRADE CROSSING ACCIDENTS, 1973 (SEE 1777)  | 01778-000 |
| TRUCK ACCIDENT - TENNESSEE - 8/27/71                    | 01763-002 |
| TRUCK ACCIDENT - VIRGINIA - 4/13/72                     | 01764-003 |
| TRUCK ACCIDENT - TEXAS - 3/7/71                         | 01785-003 |
| TRUCK ACCIDENT - IOWA - 6/3/73                          | 01786-002 |
| TRUCK ACCIDENT - VIRGINIA - 3/26/74                     | 01787-002 |
| TRUCK ACCIDENT - MASSACHUSETTS - 10/16/73               | 01788-003 |
| TRUCK/BUS ACCIDENT, NEW JERSEY, 19 OCT 1973             | 01845-027 |
| TRUCK ACCIDENTS INVESTIGATED IN THE STATE OF UTAH 1972  | 01875-037 |
| TRUCK ACCIDENTS, SUMMIT COUNTY, UTAH 25 MAY 74          | 01876-006 |
| TRUCK ACCIDENTS, FOLLOWER, COLLISION, SALT LAKE CITY    | 01877-007 |
| TRUCK ACCIDENTS, GREAT SALT LAKE CITY                   | 01878-015 |



JE/OS/EG

(IMPACT)

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

|   |             |           |
|---|-------------|-----------|
| TRUCK ACCIDENTS INVESTIGATED IN THE STATE OF NY       | 1974        | 01879-012 |
| TRUCK ACCIDENTS INVESTIGATED BY CALSPAN               |             | 01880-021 |
| TRUCK ACCIDENTS INVESTIGATED BY CALSPAN               | 1974        | 01881-027 |
| ACCIDENTS,CANADA,RAM CONTAINERS                       |             | 01888-026 |
| AUTO COLLISION W/AND COLLAPSE OF BRIDGE, SILOAM, NC   |             | 01952-027 |
| TRUCK ACCIDENT, EXPLOSION/FIRE, EAGLE PASS, TEXAS     |             | 01953-021 |
| SCHOOLBUS/AUTO COLLISION/ROLLOVER, ASHLAND, OREGON    |             | 01954-034 |
| COLLISION OF TRUCK AND BUS, NEAR HAMILTON, GA         | JUN 1975    | 01955-018 |
| COLLISION OF WINNEBAGO MOTOR HOME W/BRIDGE            | 1 JUL 1975  | 01956-030 |
| COLLISION OF TRUCK AND CAR, LOVINGTON, N.C.           | 3 JAN 1976  | 01957-012 |
| CAR COLLISION, FRONT-TO-FRONT IMPACT TEST AT 60 MPH   |             | 01958-134 |
| GASOLINE TRUCK ACCIDENT, SEATTLE, WA                  | 4 DEC 1975  | 01966-002 |
| TRACTOR TRAILER/CAR/SCHOOL BUS, REAR END, ROLLOVER    |             | 01967-010 |
| CAR BUS ACCIDENT, OVERLAND PARK, KANSAS               | 7 OCT 1975  | 01968-009 |
| STATION WAGON/TRAIN ACCIDENT, BALTIMORE, MD           | DEC 1975    | 01969-012 |
| TRACTOR TRAILER, REAR END AND ROLLOVER NY             | 1 JUL 1975  | 01970-009 |
| TRUCK ACCIDENT, TIRE BLEW OUT, IMPACT, NY             | 21 JUN 1975 | 01971-009 |
| STATION WAGON/SCHOOL BUS, HEAD ON, HAMEBURG, NY       | SEP 1975    | 01972-009 |
| TRUCK/SCHOOL BUS/TRAIN ACCIDENT, ARKANSAS             | 11 SEP 1975 | 01973-010 |
| TRACTOR TRAILER, FRONT TO SIDE IMPACT                 | FEB 1975    | 01974-011 |
| TRUCK CAR ACCIDENT INTERSECTION, BALTIMORE, MD        | FEB 1975    | 01975-011 |
| CAR/POLE/TRAIN SIDESWIPE IMPACT, LOS ANGELES          | 25 SEP 1975 | 01976-008 |
| TRUCK CAR ACCIDENT, REAR END, SAN DIEGO FREEWAY       | JAN 1976    | 01977-009 |
| UNDERIDE OVERRIDE INTERVEHICULAR COLLISIONS           |             | 02002-194 |
| TRUCK ACCIDENT, COLLISION LEFT ROADWAY WASHINGTON DC  |             | 02007-014 |
| TRUCK/VAN/AUTO ACCIDENT LEXINGTON VA                  | 20 AUG 1976 | 02013-014 |
| TRUCK, FRONT CORNER IMPACT, CONCORD, NY               | 27 NOV 1973 | 02030-011 |
| CAR/TRACTOR-TRAILER UNDERIDE COLLISION                | 13 DEC 1976 | 02033-008 |
| TRUCK CAR ACCIDENT PACIFIC COAST HIGHWAY              | 17 JUN 1975 | 02039-008 |
| WHITE FREIGHTLINER ACCIDENT VENTURA FREEWAY           | JUN 1975    | 02040-007 |
| TRUCK TRAILER ROLLOVER, POOR BRAKES, VERNON, CA       | JUN 1975    | 02041-007 |
| TANKTRUCK ACCIDENT, HELIUM FUEL LEAKAGE               | JUL 1975    | 02043-008 |
| JACKKNIFING TRAILER FORCED TRACTOR INTO BRIDGE        | JUL 1975    | 02044-007 |
| TRUCK TRAILER ACCIDENT, CARGO SHIFT, ROLLOVER         | AUG 1975    | 02045-007 |
| CAR/TRAIN, GRADE CROSSING, DES MOINES, IOWA           | SEE DB 2085 | 02087-000 |
| TRACTOR TRAILER COLLIDED WITH CAR DAXTER, CA          | 11 MAR 77   | 02092-013 |
| TRACTOR/CARGO TANK TRAILER ACCIDENT, CHERRY HILL, NJ  |             | 02094-010 |
| TANKTRUCK/RAIL GRADE CROSSING ACCIDENT                | SEE DB 2095 | 02096-000 |
| SCHOOL BUS TRAIN GRADE CROSSING ACCIDENT              | SEE DB 2098 | 02097-000 |
| TRUCK ACCIDENT, CANADA, GASOLINE FIRE AND OTHER HP    |             | 02108-013 |
| TRACTOR-SEMITRAILER COLLISION MULTIPLE VEHICLES       | AUG 76      | 02112-026 |
| MINI MOTOR HOME/CAR ACCIDENT MCALESTER, OK            | 14 JUL 77   | 02115-028 |
| TRUCK ACCIDENT, PENETRATED BRIDGE RAIL RELEASED HM CG |             | 02116-020 |
| TANKTRUCK RAIL CROSSING ACCIDENT SEE DB 2119          | 10 MAR 75   | 02119-000 |
| TRUCK RAIL CROSSING ACCIDENT SEE DB 2203              | 27 JAN 76   | 02204-000 |
| TRACTOR TRAILER REAR-END COLLISION, NC                | 27 APR 76   | 02236-016 |
| TRUCK ACCIDENT, HEAD-ON WITH VAN, SCIPPIO, UT         | 26 AUG 77   | 02246-037 |
| TRUCK CAR ACCIDENT, LANE CHANGE, ST LOUIS, MO         | 25 SEP 77   | 02249-021 |
| STATIONWAGON PENETRATION OF BRIDGE RAIL ITC           | 11 NOV 78   | 02264-020 |

08/05/80

(IMPACT)

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

|  |           |           |
|--|-----------|-----------|
| TRUCK, FIXED OBJECT COLLISION, CROFTON, MD     | 23 APR 79 | 02281-020 |
| MULTIPLE VEHICLE COLLISION/FIRE, WILLOWICK, OH | 6 MAY 79  | 02282-025 |
| TRUCK ACCIDENT, SPEEDING, NEAR BETHESDA, MD    | 14 MAR 76 | 02296-014 |
| TRUCK ACCIDENT, SIDESWIPE, NEAR LARAMIE WY     | 22 AUG 79 | 02312-030 |
| DODGE VAN COLLIDED W/FARM VEHICLE, DELTA, UT   | 12 SEP 79 | 02333-027 |
| AUTO ACCIDENT, COLLIDED HEAD-ON, INDIANA, PA   | 22 SEP 79 | 02334-022 |

(IMPACT)

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

|   |             |           |
|---|-------------|-----------|
| SEVERITIES TRAM ACCIDENT VOL 4 TRAIN SEE A1630          |             | A1986-081 |
| SEVERITIES RAIL ACCIDENTS LARGE PACKAGES SEE DB A2130   |             | A2131-000 |
| COLLISIONS, RAIL, HEAD ON AND REAR END                  |             | 01665-017 |
| RAIL ACCIDENT TANK CAR RUPTURE, FIRE                    |             | 01675-072 |
| TRANSPORT ACCIDENTS OF RAM 1948-1965 SEE EDB 1669       |             | 01700-000 |
| RAIL ACCIDENT, COTULLA, TEXAS - 12/1/73                 |             | 01701-002 |
| RAIL ACCIDENT, INDIO, CALIFORNIA - 6/25/73              |             | 01702-002 |
| RAIL ACCIDENT, SALEM, ILLINOIS - 6/10/71                |             | 01703-003 |
| RAIL ACCIDENT, MAQUIN, ILLINOIS - 5/24/72               |             | 01704-002 |
| RAIL ACCIDENT, TAFT, LOUISIANA - 2/29/73                |             | 01705-012 |
| RAIL ACCIDENT, EAST ST LOUIS, ILLINOIS - 1/22/72        |             | 01706-005 |
| RAIL ACCIDENT, CRETE, NEBRASKA - 2/18/69                |             | 01707-005 |
| RAIL ACCIDENT, HOUSTON, TEXAS - 10/19/71                |             | 01708-019 |
| RAIL ACCIDENT, HERRNDON, PENNSYLVANIA - 3/12/72         |             | 01709-005 |
| RAIL/ROAD VEHICLE ACCIDENT, OKLAHOMA - 4/5/71           |             | 01710-003 |
| RAIL/ROAD VEHICLE ACCIDENT, NEW YORK - 3/24/72-SEE 1712 |             | 01713-000 |
| RAIL/ROAD VEHICLE ACCIDENT, ILLINOIS - 1/24/70          |             | 01714-003 |
| RAIL-HIGHWAY GRADE CROSSING ACCIDENTS, 1972             |             | 01775-004 |
| RAIL-HIGHWAY GRADE CROSSING ACCIDENTS, 1973             |             | 01777-004 |
| RAIL ACCIDENT, ONEONTA, NY 12 FEB, 1974                 |             | 01890-024 |
| RAIL ACCIDENT, MUSTANG, OK, 1 SEPT, 1974                |             | 01892-019 |
| RAIL ACCIDENT, HEAD-ON, EL MONTE, CA                    | 2 APR 1973  | 01925-007 |
| RAIL ACCIDENT, HEAD-ON, LUFKIN, TEXAS                   | 18 NOV 1973 | 01926-005 |
| RAIL ACCIDENT, HEAD-ON, COBDEN, ILLINOIS                | 2 DEC 1973  | 01927-006 |
| RAIL ACCIDENT, HEAD-ON, PLAINVIEW, TEXAS                | 15 DEC 1973 | 01928-005 |
| RAIL ACCIDENT, HEAD-ON, ST LOUIS, MISSOURI              | 22 JUN 1974 | 01929-007 |
| RAIL ACCIDENT, HEAD-ON, MEMPHIS, TEN                    | 24 JAN 1975 | 01930-005 |
| RAIL ACCIDENT, SIDE-ON, EARLS, TEXAS                    | 29 NOV 1974 | 01931-005 |
| RAIL ACCIDENT, OPEN SWITCH, WINDHAM, OHIO               | 22 NOV 1973 | 01932-004 |
| RAIL ACCIDENT, RAKING, LAKE JUNCTION, NJ                | 17 JUN 1974 | 01933-007 |
| RAIL ACCIDENT, REAR END, HURRICANE, ALASKA              | 5 JUL 1975  | 01945-024 |
| RAIL ACCIDENT, REAR END, LEETONIA, OHIO                 | 6 JUN 1975  | 01946-028 |
| RAIL ACCIDENT, REAR END, DUPO, ILLINOIS                 | 3 JAN 1975  | 01947-008 |
| RAIL ACCIDENT, GRADE CROSSING, DEL MAR, CA              | 27 FEB 1974 | 01948-006 |
| RAIL ACCIDENT, BROKEN RAIL, THOMPSONTOWN, PA            | DEC 1974    | 01949-004 |
| RAIL ACCIDENT, GRADE CROSSING, TRACY, CA                | 9 MAR 1975  | 01950-026 |
| RAIL ACCIDENT, GRADE CROSSING, ELWOOD, IL               | 19 NOV 1975 | 01951-024 |
| RAIL ACCIDENT, UNPROTECTED GRADE CROSSING               | 7 FEB 1976  | 02010-011 |
| RAIL ACCIDENT, DERAILMENT JARRATT VA                    | 5 MAY 1976  | 02011-026 |
| RAIL ACCIDENT, HEAD-ON 2 TRAINS PETTISVILLE OH          |             | 02012-015 |

02/05/80

(IMPACT)

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

|   |           |
|---|-----------|
| AUTOMATED WHEEL-ON-THE-GROUND DERAILMENT DETECTION SYS  | 02017-011 |
| BIRMINGHAM DERAILMENT, TRACK GAGE WIDENS 16 JAN 1977    | 02023-003 |
| RAIL CROSSING ACCIDENT WITH TANK TRUCK SEE EDB2026      | 02029-000 |
| CAR/TRAIN-FRONT TO SIDE IMPACT UNPROTECTED CROSSING     | 02032-009 |
| SCHOOL BUS-TRAIN COLLISION STRATTON, NE 8 AUG 1976      | 02034-011 |
| RAIL ACCIDENT, GRADE CROSSING, DES MOINES, IOWA         | 02085-022 |
| RAIL ACCIDENT, GRADE CROSSING, MARLAND, OK 15 DEC 76    | 02095-016 |
| RAIL CROSSING ACCIDENT WITH SCHOOL BUS LAFAYETTE, OR    | 02098-017 |
| TRAIN ACCIDENT, RAIL FAILURE, RELEASED ANHYDROUS AMMON  | 02109-023 |
| TRAIN DERAILMENT, FIRES AND EXPLOSION, BELT, MONTANA    | 02110-019 |
| RAIL CROSSING ACCIDENT W/TANKTRUCK THAYER, MS 10 MAR 7  | 02118-007 |
| TRAIN ACCIDENT, COLLISION W/RAIL MAIN, AZ 16 MAR 75     | 02120-009 |
| RAIL ACCIDENT, REAR-END BLACK ROCK, NY 15 JUN 75        | 02121-007 |
| RAIL ACCIDENT, REAR-END NEW YORK CITY, NY 29 JUL 75     | 02122-008 |
| RAIL DERAILMENT, FIRE, EXPLOSION FERTILE, MN 22 OCT 75  | 02123-009 |
| RAIL ACCIDENT, HEAD-ON COAHOMA, MS 23 NOV 75            | 02124-006 |
| RAIL ACCIDENT, HEAD-ON, 2 TRAINS, NEW HAVEN IN OCT 76   | 02142-019 |
| RAIL ACCIDENT, DERAILMENT GOODMAN MS AMTRAK 30 JUN 76   | 02143-020 |
| RAIL ACCIDENT, REAR-END BROOKLYN JUNCTION WV 27 JAN 76  | 02194-008 |
| RAIL ACCIDENT, REAR-END SANBORN NY 27 JAN 76            | 02195-009 |
| RAIL ACCIDENT, DERAILMENT WARD AR 3 FEB 76              | 02196-011 |
| RAIL ACCIDENT, REAR-END TRACK CAR DINGLE ID 1 MAR 76    | 02197-009 |
| RAIL ACCIDENT, REAR-END BLAIRSVILLE PA 7 APR 76         | 02199-007 |
| RAIL ACCIDENT, AMTRAK DERAILMENT CHICAGO IL 18 OCT 76   | 02202-007 |
| RAIL ACCIDENT, GRADE CROSSING GOLDEN MS 27 JAN 76       | 02203-011 |
| RAIL ACCIDENT, DERAILMENT, LEWISVILLE, AP 29 MAR 76     | 02230-023 |
| RAIL ACCIDENT, GRADE CROSSING, PLANT CITY, FL 2 OCT 77  | 02231-026 |
| RAIL ACCIDENT, HEAD-ON, FLORENCE, AL 19 SEP 78          | 02233-034 |
| RAIL ACCIDENT, DERAILMENT NEAR LEVIS, WI 15 AUG 77      | 02243-009 |
| RAIL ACCIDENT, DERAILMENT, MANOR, PA 19 FEB 77          | 02245-008 |
| RAIL ACCIDENT, DERAILMENT, ELMA VA 3 DEC 76             | 02265-026 |
| RAIL ACCIDENT, REAR END, MADRAS OR 15 JAN 78            | 02267-009 |
| RAIL ACCIDENT, DERAILMENT, WASHINGTON DC 15 FEB 78      | 02268-008 |
| RAIL ACCIDENT, DERAILMENT, SUMMIT CA 6 MAR 78           | 02269-007 |
| RAIL ACCIDENT, HEAD-END, IDAHO FALLS ID 21 JUN 76       | 02273-010 |
| RAIL ACCIDENT, HEAD-END, FT MADISON IA 24 JUN 78        | 02274-008 |
| RAIL ACCIDENT, AMTRAK DERAILMENT, LOHMAN MT 29 MAR 79   | 02276-017 |
| RAIL ACCIDENT, SUBWAY DERAILMENT, NYC NY 12 DEC 78      | 02277-034 |
| RAIL ACCIDENT, REAR-END, CONRAIL, MUNCY PA 31 JAN 79    | 02280-021 |
| RAIL ACCIDENT, DERAILMENT, HAMSEY, WY 29 MAR 79         | 02283-030 |
| RAIL ACCIDENT, HEAD-ON/DERAILMENT EDISON NJ 20 APR 79   | 02290-027 |
| RAIL ACCIDENT, COLLISION/DERAILMENT, AMTRAK 4 APR 78    | 02293-009 |
| RAIL ACCIDENT, HEAD-END, ST JOSEPH, IN 6 JUL 76         | 02294-010 |
| RAIL ACCIDENT, DERAILMENT, GRANITE, WY 31 JUL 79        | 02304-026 |
| RAIL ACCIDENT, REAR-END, GOVHAW IL 17 MAY 78            | 02308-017 |
| RAIL ACCIDENT, COLLISION WITH WORK CRANE, WY 28 AUG 78  | 02309-009 |
| RAIL ACCIDENT, COLLISION W/ON-TRACK TAMPER, SD 7 SEP 76 | 02310-010 |
| RAIL ACCIDENT, SIDE COLLISION, HELCA KS 5 OCT 78        | 02311-013 |
| RAIL ACCIDENT, DERAILMENT, COLLINGSVILLE, IL 6 AUG 78   | 02329-010 |

08/05/80

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

RAIL ACCIDENT, COLLISION/DERAILMENT, ALMA, MI 28 AUG 78 02330-012  
RAIL ACCIDENT, DERAILMENT, MCINTOSH, GA 11 FEB 79 02331-006  
RAIL ACCIDENT, COLLISION, HARVEY, IL 12 OCT 79 02335-034  
RAIL ACCIDENT, REAR-END COLLISION, ANCONA, PA 16 OCT 79 02339-037  
RAIL ACCIDENT, DERAILMENT, LAWRENCE, KA 2 OCT 79 02343-059

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

COLLISION - TUG/BARGE WITH BRIDGE 01725-030  
SS BAUME COLLIDED W/TANASHIP SS KEYTRADER 18 JAN 74 02126-002  
IMPACT, PENETRATION, SHIP COLLISION AND GROUNDING 02257-049  
T/V WORLD MOBILITY/SS PENN GETTY COLLISION 29 DEC 78 02270-020  
TANKER ARCO SCEPTRE STRUCK LOADING FACILITY 9 FEB 78 02271-017  
SHIP ACCIDENT, PERUVIAN FREIGHTER/BUTANE BARGE 30 AUG 79 02344-037

(IMPACT) .....SHOCK.....INPUT.....TRANSPORTATION.....OTHER.....

SEVERITIES OF TRANSPORTATION ACCIDENTS VOL 1 SUMMARY 41630-034

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

MAXIMUM DROPS, PACKAGES IN TRANSIT 01608-008

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

SHOCK SPECTRA, STAGED A/C CRASH TESTS 01669-036  
SURVEY OF A/C CRASH SURVIVABILITY, CARGO AT A/C CG 01671-008  
A/C CRASH, 0707, BOSTON, 3 NOV 1973 01843-046  
FULL SCALE CRASH TEST OF A CH-47C HELICOPTER 02024-040  
MIDAIR COLLISION 727/CESSNA 172 SAN DIEGO CA 25 SEP 78 02263-074  
AIRCRAFT ACCIDENT, NORD 262, MOHAWK/FRAKES 298 FEB 79 02284-031  
AIRCRAFT ACCIDENT, NORD 262, SANTA MONICA, CA 10 MAR 79 02285-031

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

CARGO RESPONSE TRUCK AND RAIL ACCIDENTS 01688-004  
TRANSPORT ACCIDENTS OF RAM 1948 TO 1965-UNITED KINGDOM 01689-022  
TRUCK ACCIDENT-FLORIDA-8/8/71 01695-006  
TRUCK ACCIDENTS INVESTIGATED IN THE STATE OF UTAH 1972 01875-037  
TRUCK ACCIDENTS, SUMMIT COUNTY, UTAH 25 MAY 74 01876-006  
TRUCK ACCIDENTS, ROLLOVER, COLLISION, SALT LAKE CITY 01877-007  
TRUCK ACCIDENTS, GREATER SALT LAKE CITY 01878-015  
TRUCK ACCIDENTS INVESTIGATED IN THE STATE OF NY 1974 01879-012  
TRUCK ACCIDENTS INVESTIGATED BY CALSPAN 01880-021  
TRUCK ACCIDENTS INVESTIGATED BY CALSPAN 1974 01881-027  
ACCIDENTS, CANADA, RAM CONTAINERS 01888-026  
AUTO COLLISION W/AND COLLAPSE OF BRIDGE, SILDAM, NC 01952-027  
TRUCK ACCIDENT, EXPLOSION/FIRE, EAGLE PASS, TEXAS 01953-021  
SCHOOLBUS/AUTO COLLISION/ROLLOVER, ASHLAND, OREGON 01954-034

38/05/80

(IMPACT)

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

|   |                       |           |
|---|-----------------------|-----------|
| COLLISION OF TRUCK AND BUS, NEAR HAMILTON, GA         | JUN 1975              | 01955-018 |
| COLLISION OF WINNEGAGO MOTOR HOME W/BRIDGE            | 1 JUL 1975            | 01956-030 |
| COLLISION OF TRUCK AND CAR, LOVINGTON, NM             | 3 JAN 1976            | 01957-012 |
| CAR COLLISION, FRONT-TO-FRONT IMPACT TEST AT 60 MPH   |                       | 01958-134 |
| GASOLINE TRUCK ACCIDENT, SEATTLE, WA                  | 4 DEC 1975            | 01966-002 |
| TRACTOR TRAILER/CAR/SCHOOL BUS, REAR END, ROLLOVER    |                       | 01967-010 |
| CAR BUS ACCIDENT, OVERLAND PARK, KANSAS               | 7 OCT 1975            | 01968-009 |
| STATION WAGON/TRAIN ACCIDENT, BALTIMORE, MD           | DEC 1975              | 01969-012 |
| TRACTOR TRAILER, REAR END AND ROLLOVER NY             | 1 JUL 1975            | 01970-009 |
| TRUCK ACCIDENT, TIRE BLEW OUT, IMPACT, NY             | 21 JUN 1975           | 01971-009 |
| STATION WAGON/SCHOOL BUS, HEAD ON, HAMBURG, NY        | SEP 1975              | 01972-009 |
| TRUCK/SCHOOL BUS/TRAIN ACCIDENT, ARKANSAS             | 11 SEP 1975           | 01973-010 |
| TRACTOR TRAILER, FRONT TO SIDE IMPACT                 | FEB 1975              | 01974-011 |
| TRUCK CAR ACCIDENT INTERSECTION, BALTIMORE, MD        | FEB 1975              | 01975-011 |
| CAR/POLE/TRAIN SIDESWIPE IMPACT, LOS ANGELES          | 25 SEP 1975           | 01976-008 |
| TRUCK CAR ACCIDENT, REAR END, SAN DIEGO FREEWAY       | JAN 1976              | 01977-009 |
| TRUCK ACCIDENT, COLLISION LEFT ROADWAY WASHINGTON DC  |                       | 02007-014 |
| TRUCK/VAN/AUTO ACCIDENT LEXINGTON VA                  | 20 AUG 1976           | 02013-014 |
| TRUCK, FRONT CORNER IMPACT, CONCORD, NY               | 27 NOV 1973           | 02030-011 |
| CAR/TRACTOR-TRAILER UNDERRIDE COLLISION               | 13 DEC 1974           | 02033-008 |
| TRUCK CAR ACCIDENT PACIFIC COAST HIGHWAY              | 17 JUN 1975           | 02039-008 |
| WHITE FREIGHTLINER ACCIDENT VENTURA FREEWAY           | JUN 1975              | 02040-007 |
| TRUCK TRAILER ROLLOVER, POOR BRAKES, VERN., CA        | JUN 1975              | 02041-007 |
| TANKTRUCK ACCIDENT, HELIUM FUEL LEAKAGE               | JUL 1975              | 02043-008 |
| JACKKNIFING TRAILER FORCED TRACTOR INTO BRIDGE        | JUL 1975              | 02044-007 |
| TRUCK TRAILER ACCIDENT, CARGO SHIFT, ROLLOVER         | AUG 1975              | 02045-007 |
| CAR/TRAIN, GRADE CROSSING, DES MOINES, IOWA           | SEE DB 2085           | 02087-000 |
| TRACTOR TRAILER COLLIDED WITH CAR BAXTER, CA          | 11 MAR 77             | 02092-013 |
| TRACTOR/CARGO TANK TRAILER ACCIDENT, CHERRY HILL, NJ  |                       | 02094-010 |
| TANKTRUCK/RAIL GRADE CROSSING ACCIDENT                | SEE DB 2095           | 02096-000 |
| SCHOOL BUS TRAIN GRADE CROSSING ACCIDENT              | SEE DB 2098           | 02097-000 |
| TRUCK ACCIDENT, CANADA, GASOLINE FIRE AND OTHER 4M    |                       | 02108-013 |
| TRACTOR-SEMITRAILER COLLISION MULTIPLE VEHICLES       | AUG 76                | 02112-026 |
| MINI MOTOR HOME/CAR ACCIDENT McALESTER, OK            | 14 JUL 77             | 02115-028 |
| TRUCK ACCIDENT, PENETRATED BRIDGE RAIL RELEASED NM CG |                       | 02116-020 |
| TANKTRUCK RAIL CROSSING ACCIDENT                      | SEE DB 2118 10 MAR 75 | 02119-000 |
| TRUCK RAIL CROSSING ACCIDENT                          | SEE DB 2203 27 JAN 76 | 02204-000 |
| TRACTOR TRAILER REAR-END COLLISION, NC                | 27 APR 76             | 02234-016 |
| TRUCK ACCIDENT, HEAD-ON WITH VAN, SCIPIO, UT          | 26 AUG 77             | 02246-037 |
| TRUCK CAR ACCIDENT, LANE CHANGE, ST LOUIS, MO         | 25 SEP 77             | 02249-021 |
| STATION WAGON PENETRATION OF BRIDGE RAIL ITC          | 11 NOV 76             | 02264-020 |
| TRUCK, FIXED OBJECT COLLISION, CROFTON, MD            | 23 APR 79             | 02281-020 |
| MULTIPLE VEHICLE COLLISION/FIRE, WILLOWICK, OH        | 6 MAY 79              | 02282-025 |
| TRUCK ACCIDENT, SPEEDING, NEAR BETHESDA, MD           | 14 MAR 78             | 02296-014 |
| TRUCK ACCIDENT, SIDESWIPE, NEAR LARAMIE WY            | 22 AUG 79             | 02312-030 |
| DODGE VAN COLLIDED W/FARM VEHICLE, DELTA, UT          | 12 SEP 79             | 02333-027 |
| AUTO ACCIDENT, COLLIDED HEAD-ON, INDIANA, PA          | 22 SEP 79             | 02334-022 |

08/05/80

(IMPACT)

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

|  |           |
|--|-----------|
| CARGO RESPONSE TRUCK AND RAIL ACCIDENTS SEE E081688    | 01699-000 |
| RAIL ACCIDENT, ONEONTA, NY 12 FEB, 1974                | 01890-024 |
| RAIL ACCIDENT, MUSTANG, OK, 1 SEPT, 1974               | 01892-019 |
| RAIL ACCIDENT, HEAD-IN, EL MONTE, CA 2 APR 1973        | 01925-007 |
| RAIL ACCIDENT, HEAD-ON, LUFKIN, TEXAS 18 NOV 1973      | 01926-005 |
| RAIL ACCIDENT, HEAD-ON, COBDEN, ILLINOIS 2 DEC 1973    | 01927-006 |
| RAIL ACCIDENT, HEAD-ON, PLAINVIEW, TEXAS 15 DEC 1973   | 01928-005 |
| RAIL ACCIDENT, HEAD-ON, ST LOUIS, MISSOURI 22 JUN 1974 | 01929-007 |
| RAIL ACCIDENT, HEAD-ON, MEMPHIS, TEN 24 JAN 1975       | 01930-005 |
| RAIL ACCIDENT, SIDE-ON, EARLS, TEXAS 29 NOV 1974       | 01931-005 |
| RAIL ACCIDENT, OPEN SWITCH, WINDHAM, OHIO 22 NOV 1973  | 01932-004 |
| RAIL ACCIDENT, RAKING, LAKE JUNCTION, NJ 17 JUN 1974   | 01933-007 |
| RAIL ACCIDENT, REAR END, HURRICANE, ALASKA 5 JUL 1975  | 01945-024 |
| RAIL ACCIDENT, REAR END, LEETONIA, OHIO 6 JUN 1975     | 01946-028 |
| RAIL ACCIDENT, REAR END, DUPO, ILLINOIS 3 JAN 1975     | 01947-008 |
| RAIL ACCIDENT, GRADE CROSSING, DEL MAR, CA 27 FEB 1974 | 01948-006 |
| RAIL ACCIDENT, BROKEN RAIL, THOMPSONTOWN, PA DEC 1974  | 01949-004 |
| RAIL ACCIDENT, GRADE CROSSING, TRACY, CA 9 MAR 1975    | 01950-029 |
| RAIL ACCIDENT, GRADE CROSSING, ELWOOD, IL 19 NOV 1975  | 01951-024 |
| RAIL ACCIDENT, UNPROTECTED GRADE CROSSING 7 FEB 1976   | 02010-011 |
| RAIL ACCIDENT, DERAILMENT JARRATT VA 5 MAY 1976        | 02011-026 |
| RAIL ACCIDENT, HEAD-ON 2 TRAINS PETTISVILLE OH         | 02012-015 |
| AUTOMATED WHEEL-ON-THE-GROUND DERAILMENT DETECTION SYS | 02017-011 |
| BIRMINGHAM DERAILMENT, TRACK GAGE WIDENS 16 JAN 1977   | 02023-003 |
| RAIL CROSSING ACCIDENT WITH TANK TRUCK SEE EDB2028     | 02029-000 |
| CAR/TRAIN-FRONT TO SIDE IMPACT UNPROTECTED CROSSING    | 02032-009 |
| SCHOOL BUS-TRAIN COLLISION STPATTON, NE 8 AUG 1976     | 02034-011 |
| RAIL ACCIDENT, GRADE CROSSING, DES MOINES, IOWA        | 02085-022 |
| RAIL ACCIDENT, GRADE CROSSING, MARLAND, OK 15 DEC 76   | 02095-016 |
| RAIL CROSSING ACCIDENT WITH SCHOOL BUS LAFAYETTE, OR   | 02098-017 |
| TRAIN ACCIDENT, RAIL FAILURE, RELEASED ANHYDROUS AMMON | 02109-023 |
| TRAIN DERAILMENT, FIRES AND EXPLOSION, BELT, MONTANA   | 02110-019 |
| RAIL CROSSING ACCIDENT W/TANKTRUCK THAYER, MS 10 MAR 7 | 02118-007 |
| TRAIN ACCIDENT, COLLISION W/RAIL MAIN, AZ 16 MAR 75    | 02120-009 |
| RAIL ACCIDENT, REAR END BLACK ROCK, NY 15 JUN 75       | 02121-007 |
| RAIL ACCIDENT, REAR-END NEW YORK CITY, NY 29 JUL 75    | 02122-008 |
| RAIL DERAILMENT, FIRE, EXPLOSION FERTILE, MN 22 OCT 75 | 02123-009 |
| RAIL ACCIDENT, HEAD-ON COAHOMA, MS 23 NOV 75           | 02124-006 |
| RAIL ACCIDENT, HEAD-ON, 2 TRAINS, NEW HAVEN IN OCT 76  | 02142-019 |
| RAIL ACCIDENT, DERAILMENT GOODMAN MS AMTRAK 30 JUN 76  | 02143-020 |
| RAIL ACCIDENT, REAR-END BROOKLYN JUNCTION WV 27 JAN 76 | 02194-008 |
| RAIL ACCIDENT, REAR-END SANGORN NY 27 JAN 76           | 02195-009 |
| RAIL ACCIDENT, DERAILMENT WARD AR 3 FEB 76             | 02196-011 |
| RAIL ACCIDENT, REAR-END TRACK CAR DINGLE ID 1 MAR 76   | 02197-009 |
| RAIL ACCIDENT, REAR-END BLAIRSVILLE PA 7 APR 76        | 02199-007 |
| RAIL ACCIDENT, AMTRAK DERAILMENT CHICAGO IL 18 OCT 76  | 02202-007 |
| RAIL ACCIDENT, GRADE CROSSING GOLDEN MS 27 JAN 76      | 02203-011 |
| RAIL ACCIDENT, DERAILMENT, LEWISVILLE, AR 29 MAR 76    | 02230-023 |
| RAIL ACCIDENT, GRADE CROSSING, PLANT CITY, FL 2 OCT 77 | 02231-026 |

JP/05/50

(IMPACT)

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

|  |           |           |
|--|-----------|-----------|
| RAIL ACCIDENT, HEAD-ON, FLORENCE, AL           | 19 SEP 78 | 02233-034 |
| RAIL ACCIDENT, DERAILMENT NEAR LEVISO, WI      | 15 AUG 77 | 02243-009 |
| RAIL ACCIDENT, DERAILMENT, MANOR, PA           | 19 FEB 77 | 02245-008 |
| RAIL ACCIDENT, DERAILMENT, ELMA VA             | 7 DEC 78  | 02265-026 |
| RAIL ACCIDENT, REAR END, MADRAS OH             | 15 JAN 78 | 02267-009 |
| RAIL ACCIDENT, DERAILMENT, WASHINGTON DC       | 15 FEB 78 | 02268-008 |
| RAIL ACCIDENT, DERAILMENT, SUMMIT CA           | 6 MAR 78  | 02269-007 |
| RAIL ACCIDENT, HEAD-END, IDAHO FALLS ID        | 21 JUN 78 | 02273-010 |
| RAIL ACCIDENT, HEAD-END, FT MADISON IA         | 24 JUN 78 | 02274-008 |
| RAIL ACCIDENT, AMTRAK DERAILMENT, LOHMAN MT    | 28 MAR 79 | 02276-017 |
| RAIL ACCIDENT, SUBWAY DERAILMENT, NYC NY       | 12 DEC 78 | 02277-034 |
| RAIL ACCIDENT, REAR-END, CONRAIL, MUNCY PA     | 31 JAN 79 | 02280-021 |
| RAIL ACCIDENT, DERAILMENT, HANSLY, WY          | 29 MAR 79 | 02283-030 |
| RAIL ACCIDENT, HEAD-ON/DERAILMENT EDISON NJ    | 20 APR 79 | 02290-027 |
| RAIL ACCIDENT, COLLISION/DERAILMENT, AMTRAK    | 6 APR 78  | 02293-009 |
| RAIL ACCIDENT, HEAD-END, ST JOSEPH, TN         | 6 JUL 78  | 02294-010 |
| RAIL ACCIDENT, DERAILMENT, GRANITE, WY         | 31 JUL 79 | 02304-026 |
| RAIL ACCIDENT, REAR-END, GORHAM IL             | 17 MAY 78 | 02308-012 |
| RAIL ACCIDENT, COLLISION WITH WORK CRANE, WY   | 28 AUG 78 | 02309-009 |
| RAIL ACCIDENT, COLLISION W/ON-TRACK TAMPER, SD | 7 SEP 78  | 02310-010 |
| RAIL ACCIDENT, SIDE COLLISION, MELCA KS        | 5 OCT 78  | 02311-013 |
| RAIL ACCIDENT, DERAILMENT, COLLINSVILLE, IL    | 6 AUG 78  | 02329-010 |
| RAIL ACCIDENT, COLLISION/DERAILMENT, ALMA, MI  | 79 AUG 78 | 02330-012 |
| RAIL ACCIDENT, DERAILMENT, MCINTOSH, GA        | 11 FEB 79 | 02331-006 |
| RAIL ACCIDENT, COLLISION, HARVEY, IL           | 12 OCT 79 | 02335-034 |
| RAIL ACCIDENT, REAR-END COLLISION, ANGOHA, PA  | 16 OCT 79 | 02339-037 |
| RAIL ACCIDENT, DERAILMENT, LAWRENCE, KA        | 7 OCT 79  | 02343-059 |

(IMPACT)

.....SHOCK.....RESPONSE.....TRANSPORTATION.....SHIP.....

|  |           |           |
|--|-----------|-----------|
| SS BAUNE COLLIDED W/TANKSHIP SS KEVERADER      | 18 JAN 74 | 02126-062 |
| M/V WORLD MOBILITY/SS PELVY GETTY COLLISION    | 29 DEC 78 | 02270-020 |
| TANKER ANCO SCEPTRE STRUCK LOADING FACILITY    | 9 FEB 78  | 02271-017 |
| SHIP ACCIDENT, PERUVIAN FREIGHTER/BUTANE BARGE | 30 AUG 79 | 02344-037 |

.....TEMPERATURE.....INPUT.....GENERAL.....OTHER.....

|                                       |           |
|---------------------------------------|-----------|
| TYPHOON REPORT - PACIFIC OCEAN - 1959 | 01802-199 |
| TYPHOON REPORT - PACIFIC OCEAN - 1960 | 01803-227 |
| TYPHOON REPORT - PACIFIC OCEAN - 1961 | 01804-256 |
| TYPHOON REPORT - PACIFIC OCEAN - 1962 | 01805-306 |
| TYPHOON REPORT - PACIFIC OCEAN - 1963 | 01806-211 |
| TYPHOON REPORT - PACIFIC OCEAN - 1965 | 01807-255 |

.....TEMPERATURE.....INPUT.....TRANSPORTATION.....AIRCRAFT.....

|  |           |
|--|-----------|
| CRASH RESISTANT FLAMMABLE FLUIDS SYSTEM UH-1A COPTER | 02001-165 |
|--|-----------|

DP/05/BC

(FIRE) .....TEMPERATURE.....INPUT.....GENERAL.....AIRCRAFT.....  
AIRCRAFT ACCIDENTS INVOLVING FIRES 1963-1974 ANALYSIS D1940-164  
AIRCRAFT ACCIDENTS INVOLVING FIRES 1965-1974 SPECIAL D2135-061

(FIRE) .....TEMPERATURE.....INPUT.....GENERAL.....RAILROAD.....  
FREIGHT TRAIN ACCIDENTS, NUMBER OF CARS INVOLVED D1729-013

(FIRE) .....TEMPERATURE.....INPUT.....GENERAL.....OTHER.....  
FIRES, LIQUID HYDROCARBON FUEL, HEAT TRANSFER IN D0517-022  
BURNING CONDITIONS OF PETROLEUM LIQUIDS D0518-001  
FIRE EXPOSURE TESTS POLYETHYLENE/55 GAL STEEL DRUMS D2190-145  
LIQUID-PROPELLANT ROCKET ABORT FIRE MODEL D2314-004  
SKIN BURNS RESULTING FROM EXPOSURE TO CHEMICAL FIREBALLS D2318-020

(FIRE) .....TEMPERATURE.....INPUT.....TRANSPORTATION.....AIRCRAFT.....  
SEVERITIES TRAN ACCIDENT VOL 2 CARGO AIRCRAFT SEE 1630 A1662-106  
CIVIL AVIATION ACCIDENT DATA - 1962 TO 1972 01664-018  
FIRE INFORMATION AIRCRAFT ACCIDENTS 01674-135  
A/C ACCIDENT MARTIN 404 OCT 1970 D1677-005  
A/C ACCIDENT CONVAIR 580 DEC 1968 01678-005  
A/C ACCIDENT DOUGLAS C540 APRIL 1970 01680-005  
A/C ACCIDENT 747 12 SEPT 1970 01685-005  
A/C ACCIDENT DCB 63F SEPT 1970 01686-005  
AIRCRAFT ACCIDENT - BOEING 707 - 1/16/74 D1800-031  
AIRCRAFT ACCIDENT - DC 8 - 6/20/73 01821-014  
A/C CRASH, B707, BOSTON, 3 NOV 1973 01843-046  
AIRCRAFT ACCIDENT, BOEING 727-225 24 JUN 75 02152-059  
AIRCRAFT ACCIDENT, CONVAIR VT-270 (CV-340) 09 JAN 75 02153-031  
AIRCRAFT ACCIDENT, DC-8 63F 8 SEP 70 02159-038  
AIRCRAFT ACCIDENT, DC-8 63F 27 NOV 70 02160-048  
AIRCRAFT ACCIDENT, DC-9 31 11 SEP 74 02161-040  
FIRE SAFETY EVALUATION OF AIRCRAFT CARGO COMPARTMENT 02186-056  
WIDAIR COLLISION 727/CESSNA 172 SAN DIEGO CA 25 SEP 78 02263-074

(FIRE) .....TEMPERATURE.....INPUT.....TRANSPORTATION.....AUTOMOBILE.....  
SEVERITIES TRAN ACCIDENT VOL 3 MOTOR CARRIER SEE A1630 A1663-111  
SEVERITIES TRAN ACCIDENTS INVOLVING LARGE PACKAGES A2130-160  
FIRE TEMPERATURES-TRUCK D0520-001  
ACCIDENT REPORT, TRUCK - VENTURA, CALIFORNIA, 6-18-71 01659-006  
TRUCK ACCIDENT-VIRGINIA 4/13/72 01692-003  
TRUCK ACCIDENT-PENN-9/5/71 01693-003  
TRUCK ACCIDENT-TENN-5/13/72 01697-003  
TRUCK ACCIDENT REPORTS, NHTSA, NO. 0 01754-245  
HYDROGEN TRANSPORT AND HANDLING EXPLOSION 01758-041  
TRUCK ACCIDENT - VIRGINIA - 4/13/72 01764-003  
TRUCK ACCIDENT - TEXAS - 3/7/72 01785-063



DP/05/70

(FILE)

.....TEMPERATURE.....INPUT.....TRANSPORTATION.....AUTOMOBILE.....

|   |           |
|---|-----------|
| TRUCK ACCIDENT - MASSACHUSETTS - 10/16/73                 | 01788-003 |
| ACCIDENTS, CANADA, RAM CONTAINERS                         | 01888-026 |
| VEHICLE EXPLOSION W/SUBSEQUENT FIRE NY 23 APR 75          | 01898-010 |
| TRUCK ACCIDENT, EXPLOSION/FIRE, EAGLE PASS, TEXAS         | 01933-021 |
| COLLISION OF WINNEBAGO MOTOR HOME W/BRIDGE 1 JUL 1975     | 01956-030 |
| TRUCK FIRE-ACCIDENT DATA - 1969                           | 01960-018 |
| TRUCK FIRE-ACCIDENT DATA - 1971                           | 01961-021 |
| TRUCK CAR ACCIDENT, BALTIMORE, MD, ON INTERSTATE          | 01964-012 |
| GASOLINE TRUCK ACCIDENT, SEATTLE, WA 4 DEC 1975           | 01966-002 |
| TRUCK ACCIDENT, TRI-STATE RIG, GILA BEG AZ                | 02006-012 |
| MOTOR HOME TOWING PASSENGER CAR, FINE, RURAL FEB 1975     | 02035-007 |
| MOTOR HOME, HAN-OFF ROADWAY, IMPACT, FIRE, EXPLOSION 1975 | 02037-012 |
| TRACTOR-TRAILER/CAR SIDESWIPE RURAL KY AUG 1973           | 02038-009 |
| TRUCK CAR ACCIDENT, LANE CHANGE, LOS ANGELES JUN 1975     | 02042-008 |
| TRUCK ACCIDENT, PROPANE, OVERTURN AND FIRE 9 MAR 1972     | 02078-028 |
| TRACTOR/CARGO TANK TRAILER ACCIDENT, CHERRY HILL, NJ      | 02094-010 |
| TANKTRUCK/RAIL GRADE CROSSING ACCIDENT SEE DB 2095        | 02096-000 |
| TRUCK ACCIDENT, CANADA, GASOLINE FIRE AND OTHER FM        | 02108-013 |
| TRACTOR-SEMI: MILLER COLLISION MULTIPLE VEHICLES AUG 76   | 02112-026 |
| TANKTRUCK RAIL CROSSING ACCIDENT SEE DB 2118 10 MAR 75    | 02119-000 |
| TRUCK ACCIDENT, GASOLINE FIRE, BEATTYVILLE KY 09/24/77    | 02168-028 |
| RISK ASSESSMENT OF TRANSPORT OF LPG                       | 02177-091 |
| MULTIPLE VEHICLE COLLISION/FIRE, WILLOWICK, OH 6 MAY 79   | 02282-025 |
| THERMAL HAZARD FROM TANK TRUCK ACCIDENTS SEE LDB 2315     | 02320-000 |
| EXPANSION OF CLOUDS FROM PRESSURIZED LIQUIDS SEE EDB 2316 | 02321-000 |
| AUTO ACCIDENT, COLLIDED HEAD-ON, INDIANA, PA 22 SEP 79    | 02334-022 |

(FILE)

.....TEMPERATURE.....INPUT.....TRANSPORTATION.....RAILROAD.....

|   |           |
|---|-----------|
| SEVERITIES TRAN ACCIDENT VOL 4 TRAIN SEE AT630        | A1986-081 |
| SEVERITIES RAIL ACCIDENTS LARGE PACKAGES SEE DB A2130 | A2131-000 |
| FIRE TEMPERATURES-RAIL                                | 00519-001 |
| RAIL ACCIDENT TANK CAR RUPTURE, FIRE                  | 01675-072 |
| TRANSPORT ACCIDENTS OF RAM 1948-1965 SEE EDB 1680     | 01700-000 |
| RAIL ACCIDENT, COTULLA, TEXAS - 12/1/73               | 01701-002 |
| RAIL ACCIDENT, INDIO, CALIFORNIA - 6/25/73            | 01702-002 |
| RAIL ACCIDENT, SALEM, ILLINOIS - 6/30/71              | 01703-003 |
| RAIL ACCIDENT, MAQUIN, ILLINOIS - 5/24/72             | 01704-002 |
| RAIL ACCIDENT, TAFT, LOUISIANA - 2/21/73              | 01705-012 |
| RAIL ACCIDENT, EAST ST LOUIS, ILLINOIS - 1/22/72      | 01706-005 |
| RAIL ACCIDENT, HOUSTON, TEXAS - 10/19/71              | 01708-019 |
| RAIL ACCIDENT, HERNDON, PENNSYLVANIA - 1/12/72        | 01709-005 |
| RAIL ACCIDENT, DECATUR, ILL 29 JULY, 1974             | 01889-023 |
| RAIL ACCIDENT, ONEONTA, NY 12 FEB, 1974               | 01890-024 |
| RAIL ACCIDENT, BENSON, AR 24 MAY, 1973                | 01891-031 |
| RAIL ACCIDENT, MUSTANG, OK, 1 SEPT, 1974              | 01892-019 |
| TRAIN DERAILMENT CARRYING 2 CONTAINERS OF RAM         | 02049-003 |
| RAIL ACCIDENT, GRADE CROSSING, MARLAND, OK 15 DEC 76  | 02095-016 |
| TRAIN DERAILMENT, FIRES AND EXPLOSION, BELT, MONTANA  | 02110-019 |

28/05/80

(FIRE) .....TEMPERATURE.....INPUT.....TRANSPORTATION.....RAILROAD.....

RAIL CROSSING ACCIDENT W/TANKTRUCK THAYER, MS 10 MAR 7 02118-007  
RAIL DERAILMENT, FIRE, EXPLOSION FERTILL, MN 22 OCT 75 02123-009  
RAIL ACCIDENT, DERAILMENT GOLDONNA LA 2<sup>ND</sup> DEC 77 02147-027  
RAIL ACCIDENT, DERAILMENT/FIRE CALVERT TX 30 MAR 76 02198-010  
RAIL ACCIDENT, DERAILMENT CLIFFORD MI 19 OCT 76 02201-006  
TRAIN DERAILMENT, URANIUM CYLINDERS, WOLKINGHAM, NC 77 02221-004  
RAIL ACCIDENT, DERAILMENT, LEWISVILLE, AR 29 MAR 76 02230-023  
RAIL ACCIDENT, DERAILMENT, WAVEHLY, TN 22 FEB 76 02232-020  
RAIL ACCIDENT, DERAILMENT, LLMA VA 3 DEC 76 02265-026  
RAIL ACCIDENT, DERAILMENT, SUMMIT CA 6 MAR 76 02269-007  
RAIL ACCIDENT, TRANSBAY TUBE FIRE, OAKLAND/SF 17 JAN 79 02278-060  
RAIL ACCIDENT, DERAILMENT, CRESTVIEW FL 9 APR 79 02289-060  
RAIL ACCIDENT, HEAD-END/DERAILMENT EDISON NJ 20 APR 79 02290-027  
RAIL ACCIDENT, HEAD-END, ST JOSEPH, TN 6 JUL 76 02294-010  
THERMAL HAZARD FROM PROPANE FIREBALLS 02315-008  
EXPANSION OF CLOUDS FROM PRESSURIZED LIQUIDS 02316-013  
RAIL ACCIDENT, DERAILMENT, COLLINSVILLE, IL 6 AUG 78 02329-010

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

FIRE TEMPERATURES-SHIP 00521-001  
TANKSHIP ACCIDENT, PENETRATION/GAS FIRE IN CARGO TANKS 02048-002  
SS BAUME COLLIDED W/TANKSHIP SS KEYTRADER 18 JAN 74 02126-002  
EXPLOSION FIRE ENGULFED THE M/T ELIAS, UNLOADING APR 74 02127-005  
RISK ASSESSMENT OF TRANSPORT OF LNG SFE EDB 2177 02178-001  
SHIP ACCIDENT, PERUVIAN FREIGHTER/BUOYANE BARGE 30 AUG 74 02344-037

(FIRE) .....TEMPERATURE.....INPUT.....TRANSPORTATION.....OTHER.....

SEVERITIES OF TRANSPORTATION ACCIDENTS VOL 1 SUMMARY A1630-034  
NATURAL GAS PIPELINE EXPLOSION AND FIRE 24 OCT 78 02295-003  
THERMAL HAZARD FROM LNG FIREBALLS 02317-021  
THERMAL HAZARD FROM HYDROGEN FIREBALLS 02319-015

(FIRE) .....TEMPERATURE.....RESPONSE.....TRANSPORTATION.....AIRCRAFT.....

A/C CRASH, B707, BOSTON, 3 NOV 1973 01843-046  
MIDAIR COLLISION 727/CESSNA 172 SAN DIEGO CA 25 SEP 78 02263-074

(FIRE) .....TEMPERATURE.....RESPONSE.....TRANSPORTATION.....AUTOMOBILE.....

CARGO RESPONSE TRUCK AND RAIL ACCIDENTS 01688-004  
TRANSPORT ACCIDENTS OF MAR 1948 TO 1965-UNITED KINGDOM 01689-022  
ACCIDENTS, CANADA, RAM CONTAINERS 01888-026  
VEHICLE EXPLOSION W/SUBSEQUENT FIRE NY 23 APR 75 01898-010  
TRUCK ACCIDENT, EXPLOSION/FIRE, EAGLE PASS, TEXAS 01953-021  
COLLISION OF WINNEBAGO MOTOR HOME W/BRIDGE 1 JUL 1975 01956-030  
TRUCK CAR ACCIDENT, BALTIMORE, MD, ON INTERSTATE 01964-012  
GASOLINE TRUCK ACCIDENT, SEATTLE, WA 4 DEC 1975 01966-002

02/05/80

(FIRE)

.....TEMPERATURE.....RESPONSE.....TRANSPORTATION.....AUTOMOBILE.....

|   |           |
|---|-----------|
| TRUCK ACCIDENT, TRI-STATE RIG, GILA BEND AZ               | 02006-012 |
| MOTOR HOME TOWING PASSENGER CAR, FIRE, RURAL FEB 1975     | 02035-007 |
| MOTOR HOME, MAN-OFF ROADWAY, IMPACT, FIRE, EXPLOSION 1975 | 02037-012 |
| TRACTOR-TRAILER/CAR SIDESWIPE RURAL KY AUG 1973           | 02038-009 |
| TRUCK CAR ACCIDENT, LANE CHANGE, LOS ANGELES JUN 1975     | 02042-008 |
| TRUCK ACCIDENT, PROPANE, OVERTURN AND FIRE 9 MAR 1972     | 02078-028 |
| TRACTOR/CARGO TANK TRAILER ACCIDENT, CHERRY HILL, NJ      | 02094-010 |
| TANKTRUCK/RAIL GRADE CROSSING ACCIDENT SEE DB 2095        | 02096-000 |
| TRUCK ACCIDENT, CANADA, GASOLINE FIRE AND OTHER 4M        | 02108-013 |
| TRACTOR-SEMITRAILER COLLISION MULTIPLE VEHICLES AUG 76    | 02112-026 |
| TANKTRUCK RAIL CROSSING ACCIDENT SEE DB2118 10 MAR 75     | 02119-000 |
| TRUCK ACCIDENT, GASOLINE FIRE, BEATTYVILLE KY 09/24/77    | 02168-028 |
| MULTIPLE VEHICLE COLLISION/FIRE, WILLOWICK, OH 6 MAY 79   | 02282-025 |
| AUTO ACCIDENT, COLLIDED HEAD-ON, INDIANA, PA 22 SEP 79    | 02334-027 |

(FIRE)

.....TEMPERATURE.....RESPONSE.....TRANSPORTATION.....RAILROAD.....

|   |           |
|---|-----------|
| CARGO RESPONSE TRUCK AND RAIL ACCIDENTS SEE LDB1688     | 01699-000 |
| RAIL ACCIDENT, DECATUR, ILL 19 JULY, 1974               | 01889-023 |
| RAIL ACCIDENT, ONEONTA, NY 12 FEB, 1974                 | 01890-024 |
| RAIL ACCIDENT, BENSON, AR 24 MAY, 1973                  | 01891-031 |
| RAIL ACCIDENT, MUSTANG, OK, 1 SEPT, 1974                | 01892-019 |
| TRAIN DERAILMENT CARRYING 2 CONTAINERS OF RAM           | 02049-003 |
| RAIL ACCIDENT, GRADE CROSSING, MARLAND, OK 15 DEC 76    | 02095-016 |
| TRAIN DERAILMENT, FIRES AND EXPLOSION, BELT, MONTANA    | 02110-019 |
| RAIL CROSSING ACCIDENT W/TANKTRUCK THAYER, MS 10 MAR 7  | 02118-007 |
| RAIL DERAILMENT, FIRE, EXPLOSION FERTILE, MN 22 OCT 75  | 02123-009 |
| RAIL ACCIDENT, DERAILMENT BULDONNA LA 12 DEC 77         | 02147-027 |
| RAIL ACCIDENT, DERAILMENT/FIRE CALVERT TX 30 MAR 76     | 02198-010 |
| RAIL ACCIDENT, DERAILMENT CLIFFORD MS 18 OCT 76         | 02201-006 |
| TRAIN DERAILMENT, URANIUM CYLINDERS, ROCKINGHAM, NC 77  | 02221-004 |
| RAIL ACCIDENT, DERAILMENT, LEWISVILLE, AR 29 MAR 78     | 02230-023 |
| RAIL ACCIDENT, DERAILMENT, JAVERLY, TN 22 FEB 78        | 02232-020 |
| RAIL ACCIDENT, DERAILMENT, ELMA VA 3 DEC 78             | 02265-026 |
| RAIL ACCIDENT, DERAILMENT, SUMMIT CA 6 MAR 78           | 02269-007 |
| RAIL ACCIDENT, TRANSWAY TUBE FIRE, OAKLAND/SF 17 JAN 79 | 02278-060 |
| RAIL ACCIDENT, DERAILMENT, CRESTVIEW FL 8 APR 79        | 02289-060 |
| RAIL ACCIDENT, HEAD-ON/DERAILMENT EDISON NJ 20 APR 74   | 02290-027 |
| RAIL ACCIDENT, HEAD-END, ST JOSEPH, TN 6 JUL 78         | 02294-010 |
| RAIL ACCIDENT, DERAILMENT, COLLINSVILLE, IL 6 AUG 78    | 02329-010 |

(FIRE)

.....TEMPERATURE.....RESPONSE.....TRANSPORTATION.....SHIP.....

|  |           |
|--|-----------|
| TANKSHIP ACCIDENT, PENETRATION/GAS FIRE IN CARGO TANKS   | 02048-002 |
| SS BAUNE COLLIDED W/TANKSHIP SS KEYTRADER 18 JAN 74      | 02176-002 |
| EXPLOSION FIRE ENGULFED THE M/T ILIAS, UNLOADING APR 74  | 02127-005 |
| SHIP ACCIDENT, PERUVIAN FREIGHTER/BUTANI RANGE 30 AUG 74 | 02344-037 |

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(FIRE)

.....TEMPERATURE.....RESPONSE.....TRANSPORTATION.....OTHER.....

NATURAL GAS PIPELINE EXPLOSION AND FIRE 24 OCT 76 02295-003

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

AIRCRAFT ACCIDENT, DH-114 11 JUL 75 02163-032

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

TROPICAL CYCLONES 01856-177

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

HELICOPTER DOWNWASH DATA 01760-049

(STORM)

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

TORNADOS, FREQUENCY AND LOCATION - UNITED STATES 01541-021

WIND AND WAVE HEIGHTS - TROPICAL STORMS 01636-028

TYPHOON REPORT - PACIFIC OCEAN - 1959 01802-199

TYPHOON REPORT - PACIFIC OCEAN - 1960 01803-227

TYPHOON REPORT - PACIFIC OCEAN - 1961 01804-256

TYPHOON REPORT - PACIFIC OCEAN - 1962 01805-306

TYPHOON REPORT - PACIFIC OCEAN - 1963 01806-211

TYPHOON REPORT - PACIFIC OCEAN - 1964 01807-255

TYPHOON REPORT - PACIFIC OCEAN - 1965 01808-261

TYPHOON REPORT - PACIFIC OCEAN - 1966 01809-272

TYPHOON REPORT - PACIFIC OCEAN - 1967 01810-319

TYPHOON REPORT - PACIFIC OCEAN - 1968 01811-172

TYPHOON REPORT - PACIFIC OCEAN - 1969 01812-235

TYPHOON REPORT - PACIFIC OCEAN - 1970 01813-253

(STORM)

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

AIRCRAFT ACCIDENT, BOEING 727-224 7 AUG 75 02155-047