1MOBILITY (Global Mobility Bibliographic Database)

Subject Coverage

- Automation
- Emissions
- Environment
- Fuels & Lubricants
- Human factors
- Management
- Manufacturing
- Marketing
- Materials
- Noise & Vibration
- Population
- Reliability
- Research & Design
- Quality
- Safety
- Testing
- Transportation

File Type

Bibliographic

Features

Thesaurus	None				
Alerts (SDIs)	Monthly				
CAS Registry Numbers®	☐	Page Images	☐	STN AnaVist	☐
Keep & Share	☑	SLART	☐	STN Easy	☐
Learning Database	☐	Structures	☐	STN Viewer	☐

Record Content

- Bibliographic information
- Controlled and supplementary terms
- Abstracts

File Size

More than 179,000 records (08/11)

Coverage

1906-present

Updates

Monthly

Language

English

Database Producer

SAE International
400 Commonwealth Drive
Warrendale, PA 15096 USA
Phone: (724) 772-7108
Telefax:(724) 776-3036

Sources	Books, conference proceedings, journals, papers, and file data
User Aids	• Online Helps (HELP DIRECTORY lists all help messages available) • STNGUIDE
Clusters	• ALLBIB • AUTHORS • ENGINEERING • FUELS • MATERIALS • MEETINGS • MOBILITY • SAFETY STN Database Clusters information (PDF).
Pricing	See the STN Price List or enter HELP COST at an arrow prompt (=>).

Search and Display Field Codes

There are no fields that allow left truncation in this file.

Search Field Name	Search Code	Search Examples	Display Codes
Basic Index (contains single words from the abstract (AB), controlled (CT) and supplementary terms (ST), and title (TI)	None (or /BI)	S DUMP TRUCK# S PASSENGER CAR#/BI S NISSAN AND 1996	AB, CT, ST, TI
Accession Number	/AN	S 1998:1004/AN	AN
Author	/AU	S BAKER T?/AU S BAKER,T?/AU	AU
Classification Code **(1)**	/CC	S SPACE/CC S "LAND OR SEA"/CC S AIR SPACE/CC	CC
Controlled Term	/CT	S ADHESIVES/CT S MANUFACTURING PROCESSES/CT	CT
Controlled Word	/CW	S INTELLIGENT VEHICLE/CW	CT
Corporate Source **(1)**	/CS	S HONEYWELL AERONAUTIC?/CS	CS, AU
Country of Publication (code and text)	/CY	S US/CY S UNITED STATES/CY	CY
Cross Reference	/CR	S 630115/CR	CR
Document Number	/DN	S 080008/DN	DN
Document Type (code and text)	/DT	S CONFERENCE?/DT S CA/DT	TC
Entry Date **(2)**	/ED	S ED>=200000100	Not displayed
Field Availability	/FA	S AB/FA	Not displayed
File Segment (code and text)	/FS	S SAE/FS	FS
International Standard (Document) Number (contains ISSN, AND ISBN)	/ISN	S 0736-2536/ISN	ISN, SO
Journal Title	/JT	S AUTOMOTIVE ENGINEER?/JT	JT, SO
Language (code and text)	/LA	S EN/LA S ENGLISH/LA	LA
Meeting Date **(2,3)**	/MD	S 20-23 APR 1992/MD	MD, SO
Meeting Location	/ML	S (AIRLINE OR AEROSPACE)/SO AND CALIF?/ML	ML, SO
Meeting Title	/MT	S CAR CRASH CONFERENCE/MT	MT, SO
Meeting Year **(2)**	/MY	S 1987<1999	MD, SO
Publication Date **(2)**	/PD	S PD>19900600 AND ISUZU/CS	SO
Publication Year **(2)**	/PY	S 1996-2000/PY	PY, SO
Source (contains journal title, meeting information, collation information (volume, issue, pagination), publishing information, ISBN, and ISSN)	/SO	S USA/SO S 1991/SO	ISN, JT, MD, ML, MT, PY, SO
Supplementary Term	/ST	S MISSILES/ST AND THERMAL CONTROL/CT	ST
Title	/TI	S BRAKE CYLINDER?/TI	TI
Update Date **(2)**	/UP	S UP>=19980100	Not displayed

(1) Searching with implied (S) proximity is available in this field.
(2) Numeric search field that may be searched using numeric operators or ranges.
(3) When the meeting date is multiple days, e.g., 20-23 APR 1992, only the first and last days are searchable.

DISPLAY and PRINT Formats

Any combination of display fields and formats may be used to display and print answers. Multiple codes must be separated by commas or spaces, e.g., D L1 1-5 TI SO. The fields are displayed or printed in the order requested.

Hit-term highlighting is available for all displayable fields except PY. Highlighting must be ON during SEARCH to use the HIT, KWIC, and OCC formats.

Format	Content	Examples
AB	Abstract	D L4 1-4 ABS
AN	Accession Number	D L1 3 AN
AU (CS)	Author (includes Corporate Source)	D AU 1,3-5
CC	Classification Code	D CC 5-10
CR	Cross Reference	D 1-3,7,8 CR
CT	Controlled Term	D CT
CY	Country of Publication	D CY 1-5
DN	Document Number	D L1 DN 3
DT (TC)	Document Type	D 1,3,6 DT L5
FS	File Segment	D FS
ISN	International Standard (Document) (ISSN and ISBN) Number	D ISN 2
JT	Journal Title	D L8 JT 1-3
LA	Language	D 1,4 LA
MD	Meeting Date	D L1 MD
ML	Meeting Location	D ML
MT	Meeting Title	D MT L1 4
PY	Publication Year	D PY
SO	Source	D SO
ST	Supplementary Term	D L3 ST
TC	Treatment Code (DT)	D TC 2 L5
TI	Title	D TI 2
ABS	AB	D 2,6 ABS
ALL	AN, DN, TI, AU, SO (MT, ML, MD), CR, CY, DT, FS, LA, AB, CC, CT, ST	D L1 ALL
BIB	AN, DN, TI, AU, CS, SO (MT, ML, MD), CY, DT, FS, LA (default)	D BIB
CBIB	Compressed bibliographic information	D 4-7 CBIB
IALL	ALL, indented with text labels	D IALL 3
IBIB	BIB, indented with text labels	D L4 IBIB 2 5
IND **(1)**	CC, CT, ST	D IND L8
SAM	TI, CC, CT, ST	D 1-5 SAM
SCAN **(2,3)**	TI, CC, CT, ST (random display without answer number)	D SCAN
HIT	Fields containing hit terms	D HIT
KWIC	Hit term with 20 words on either side (KeyWord-In-Context)	D KWIC
OCC **(1)**	Fields that contain hit terms and number of times they occur	D OCC

(1) No online display fee for this format.
(2) No online display charge for this option.
(3) SCAN must be specified on the command line, i.e., D SCAN or DISPLAY SCAN.

SELECT, ANALYZE, and SORT Fields

The SELECT command is used to create E-numbers or an L-number containing terms taken from the specified field in an answer set.

The ANALYZE command is used to create an L-number containing terms taken from the specified field in an answer set.

The SORT command is used to rearrange the search results in either alphabetic or numeric order of the specified field(s).

Field Name	Field Code	ANALYZE/ SELECT (1)	SORT
Abstract	AB	Y **(2)**	N
Accession Number	AN	Y	N
Author	AU	Y **(3)**	Y
Classification Code	CC	Y	Y
Controlled Term	CT	Y	N
Corporate Source	CS	Y **(4)**	Y
Country of Publication	CY	Y	Y
Cross Reference	CR	Y	N
Document Number	DN	Y	Y
Document Type	DT	Y	Y
File Segment	FS	Y	Y
International Standard Book Number	ISBN	N	Y
International Standard (Document) Number	ISN	Y **(5)**	Y
International Standard Serial Number	ISSN	N	Y
Journal Title	JT	Y	Y
Language	LA	Y	Y
Meeting Date	MD	Y	Y
Meeting Location	ML	Y	Y
Meeting Title	MT	Y	Y
Occurrence count of hit terms	OCC	N	Y
Publication Date	PD	Y	Y
Publication Year	PY	Y **(6)**	Y
Source	SO	Y **(7)**	N
Supplementary Term	ST	Y	N
Title	TI	Y (default)	Y
Treatment Code	TC	Y	Y

(1) HIT may be used to restrict terms extracted to terms that match the search expression used to create the answer set, e.g., SEL HIT TI.
(2) Appends /BI to the terms created by SELECT..
(3) Selects or analyzes author and corporate source with /AU appended to the terms created by SELECT.
(4) Selects or analyzes author and corporate source with /CS appended to the terms created by SELECT.
(5) Selects or analyzes ISSN and ISBN with /ISN appended to the terms created by SELECT.
(6) SELECT HIT and ANALYZE HIT are not valid with this field.
(7) Selects ISSN and ISBN with /SO appended to the terms created by SELECT.

Sample Records

DISPLAY IALL

ACCESSION NUMBER: 2010:1616 1MOBILITY
DOCUMENT NUMBER: 2010-01-1092
TITLE: Development of Fuel Cell Hybrid Vehicle Rapid Start-Up from Sub-Freezing Temperatures
AUTHOR: Manabe, Kota(Toyota Motor Corp.); Naganuma, Yoshiaki(Toyota Motor Corp.); Nonobe, Yasuhiro(Toyota Motor Corp.); Kizaki, Mikio(Toyota Motor Corp.); Ogawa, Tomoya(Toyota Technical Development Corp.)
SOURCE: (2010 Apr 12) . SAE International, Warrendale, Pennsylvania, USA. Also published in: SP-2276. Meeting Info.: SAE 2010 World Congress. Detroit, Michigan, USA. 2010 Apr 13 - 2010 Apr 15.
PUB. COUNTRY: United States
DOCUMENT TYPE: Conference Article; (Technical Paper)
FILE SEGMENT: SAE
LANGUAGE: English
ABSTRACT: The Fuel Cell is a highly efficient device that when integrated with hybrid technology yields even higher system-level efficiencies. This impressive efficiency is one of the key reasons fuel cell technology is one of the most promising future power sources. However, this benefit creates a significant challenge in cold climates. With so much of the energy converted directly to power, there is little waste heat compared to conventional internal combustion engine (ICE) technologies. This challenge is particularly apparent at system start up from ambient sub-freezing temperatures due to the fact that the fuel cell heats-up slower than internal combustion engines (ICEs). Clearly, the amount of heat generation can be increased if the total power produced by the system is increased proportionally, but this method can be challenging because the excess power must be consumed in some manner (such as by a cabin heater). Toyota has resolved this issue with a 'rapid start-up' methodology to speed warm-up during start by limiting fuel supply to increase its concentration overvoltage, thereby reducing efficiency and maximizing waste heat generation. At this operating point, power generation can be controlled to fulfill the system requirement while waste heat generation can be maximized as much as the fuel cell polarization curve allows. This method yields 10 to 20 times the waste heat generation compared to normal idle operation without using an additional heater unit. This rapid start-up operation method was realized as a stable vehicle start-up system while resolving electro-circuit topology issues and also established the fuel concentration overvoltage control methodology for operating the fuel cell stack at low efficiency.
CLASSIFICATION: Land or Sea
CONTROLLED TERM: Cold starting; Cold weather operation; Fuel cells; Hybrid Vehicles

DISPLAY BIB

```
AN   2009:4985  1MOBILITY
DN   2009-01-2641
TI   Test and Control of Fuel Injector Deposits in Direct Injected Spark
     Ignition Vehicles
AU   DuMont, Richard J.(Afton Chemical); Evans, Joel A.(Afton Chemical); Feist,
     Dennis P.(Shell Global Solutions (US) Inc.); Studzinski, William
     M.(General Motors Powertrain); Cushing, Timothy J.(General Motors
     Powertrain)
SO   (2009 Nov 02) . SAE International, Warrendale, Pennsylvania, USA.
     Meeting Info.: SAE Powertrains, Fuels and Lubricants Meeting. San Antonio,
     Texas, USA. 2009 Nov 02 - 2009 Nov 04.
CY   United States
DT   Conference Article; (Technical Paper)
FS   SAE
LA   English
```

DISPLAY SCAN

```
TI   Transmissions
CC   Land or Sea
CT   Automatic transmissions; Clutches; Continuously variable transmissions;
     Gear ratios; Torque converters
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