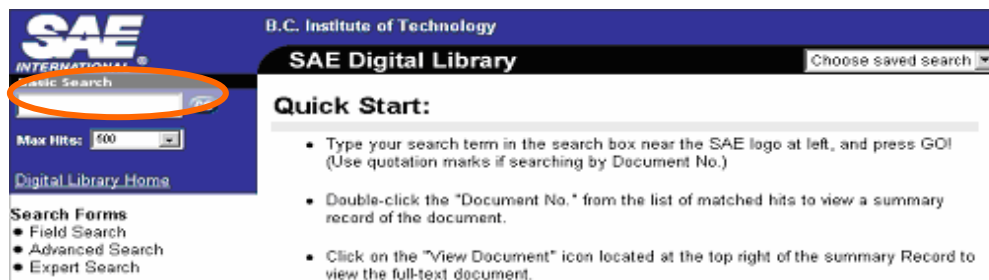


Using the Society of Automotive Engineers (SAE) Digital Library

The SAE Digital Library is a vast repository of authoritative technical content. It references thousands of SAE Technical Papers covering the latest advances and research in all areas of mobility engineering including ground vehicle, aerospace, off-highway, and manufacturing technology. Sample coverage includes fuels and lubricants, emissions, electronics, brakes, restraint systems, noise, engines, materials, lighting, and more. From the Library Home Page, select *Electronic Resources*, *Databases & Indexes*, *S* on the Alphabetical Listing, and then *SAE Digital Library*.

Basic Search

When you open the database, the Basic Search window will be displayed. Although a **Basic Search** is the simplest way to search, it is **not** the best way of obtaining specific results, because **all** fields in all records are searched, and all records containing your term(s) are retrieved, regardless of where the term appears, when the document was published or whether it is full-text or not.

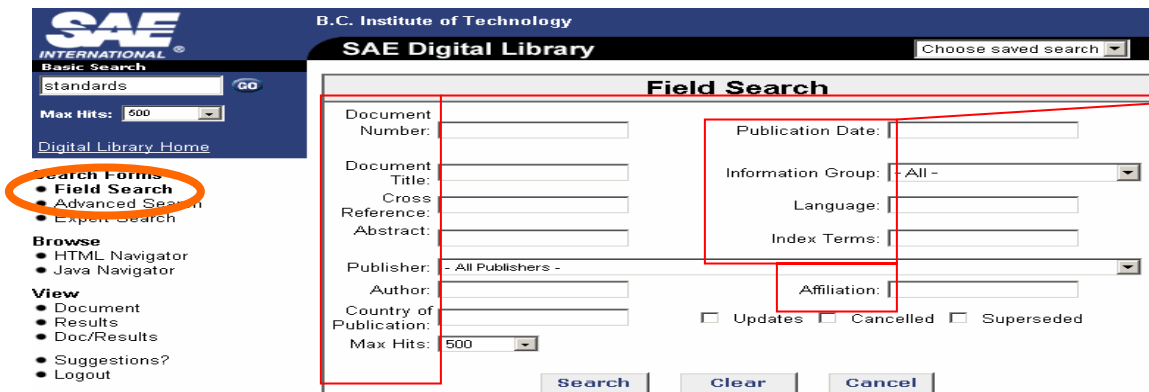


The screenshot shows the SAE Digital Library interface. At the top left is the SAE logo. Below it is a search box labeled 'Basic Search' which is circled in orange. To the right of the search box is a 'GO' button. Below the search box is a 'Max Hits' dropdown menu set to 500. On the left side, there are links for 'Digital Library Home' and 'Search Forms' which includes 'Field Search', 'Advanced Search', and 'Expert Search'. The main content area has a 'Quick Start' section with three bullet points: 1. Type your search term in the search box near the SAE logo at left, and press GO! (Use quotation marks if searching by Document No.) 2. Double-click the "Document No. * from the list of matched hits to view a summary record of the document. 3. Click on the "View Document" icon located at the top right of the summary Record to view the full-text document.

- Type in a word(s) or number, hit ENTER or GO.
- To search a phrase, enter it in quotes, e.g. "brake fluid".
- If you use Boolean operators, you must use the operator symbols, not the words. Example: & instead of and. See help/search tips for a list of symbols.

Field Search

A better way to obtain specific results is doing a **Field Search**. This option allows you to conduct a search within a **particular data field** of a document, rather than search the entire summary of every document.




The screenshot shows the SAE Digital Library interface with the 'Field Search' form open. The 'Field Search' form is highlighted with a red box. It contains several input fields: 'Document Number', 'Document Title', 'Reference', 'Abstract', 'Publisher', 'Author', 'Country of Publication', 'Publication Date', 'Information Group', 'Language', 'Index Terms', and 'Affiliation'. There are also checkboxes for 'Updates', 'Cancelled', and 'Superseded'. A 'Max Hits' dropdown menu is set to 500. At the bottom of the form are 'Search', 'Clear', and 'Cancel' buttons. On the left side, the 'Search Forms' menu is highlighted with an orange oval, showing 'Field Search' as the selected option. A red arrow points from the word 'Fields' on the right side of the form to the red box highlighting the form fields.

- Type a word, name, or number into the box next to the field(s) you want the database to search. This will retrieve only documents that have matching term(s) in these specific field(s). The Field Search allows you to enter one term per field; a logical "AND" is applied to the search if terms are entered into more than one field.
- When searching on Publication Date, follow this format: MM-DD-YYYY. You may also enter a range of dates using the greater than (>) and less than (<) signs for "after" and "before". You will be able to retrieve mostly **full-text** technical papers by limiting your search to publications after 1997 (enter >1997 in the **Publication Date** field).
- **Important note: full-text is ONLY available for technical papers!**

Hit List

After performing a search, a list of all documents matching your search criteria will be displayed. The maximum number of hits is 500, and 20 documents are displayed at a time. Click on **More** (at the bottom of the screen) to see the next 20 in the list.



No.	Document No	Pub Date	Document Title	Group
1.	1959-12-0005	11-30-1959	Motoring and safety	Technical Papers
2.	1961-12-0005	09-14-1961	Interconnected motorist injuries of the hip, femoral shaft and knee	Technical Papers
3.	1961-12-0012	09-14-1961	Systematic automobile design for pedestrian injury prevention	Technical Papers
4.	1962-12-0007	11-07-1962	Emergency medical care	Technical Papers

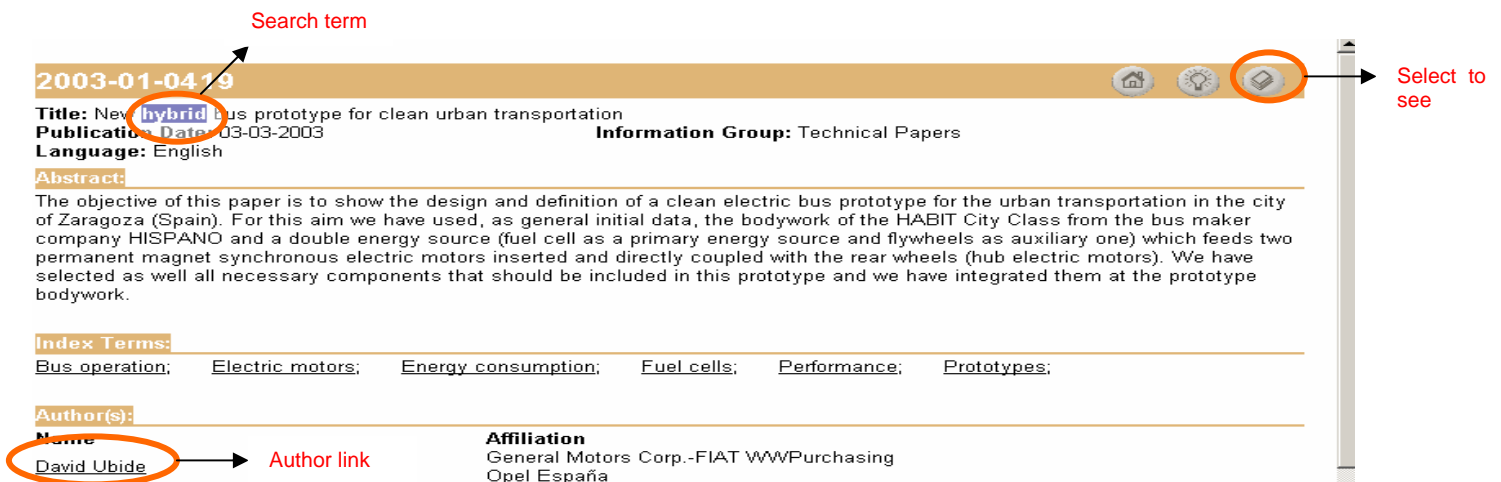
Sorting the Hit List

After a **basic search**, the result list is displayed in ranked order (greatest number of terms matched) while after a **field search**, the list is presented in order of document number. You can sort the list by any of the column headings.

- Select the Document No. up or down arrow to put the list in ascending or descending numerical order.
- Select Pub Date up or down arrow to put the document in oldest or newest first order.
- Select Document Title up or down arrow to sort them alphabetically A-Z or Z-A by the first word.
- Select Group Sorts up or down arrow to sort them by Information group (books, reports, etc.)

Document Summary

To view the summary of an individual document, select the document number in the result list. The document will be displayed at the point where a search term was found (search terms are highlighted).



2003-01-0479 Select to see

Title: New hybrid bus prototype for clean urban transportation
Publication Date: 03-03-2003 **Information Group:** Technical Papers
Language: English

Abstract:
The objective of this paper is to show the design and definition of a clean electric bus prototype for the urban transportation in the city of Zaragoza (Spain). For this aim we have used, as general initial data, the bodywork of the HABIT City Class from the bus maker company HISPANO and a double energy source (fuel cell as a primary energy source and flywheels as auxiliary one) which feeds two permanent magnet synchronous electric motors inserted and directly coupled with the rear wheels (hub electric motors). We have selected as well all necessary components that should be included in this prototype and we have integrated them at the prototype bodywork.

Index Terms:
[Bus operation](#); [Electric motors](#); [Energy consumption](#); [Fuel cells](#); [Performance](#); [Prototypes](#);

Author(s):
Name: David Ubide Author link **Affiliation:**
General Motors Corp.-FIAT WWVPurchasing
Opel España

Links are provided in some fields. Selecting a link (underlined term, e.g. the **Author Link**) will bring up a list of all the documents that have the same information in that field.

If full-text is available, you will see this icon on the top right corner . Click on it to view the document.