

Comprehensive CAROL Query User Guide

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Introduction to CAROL

What is CAROL?

CAROL (Case Analysis and Reporting Online) is a publicly available system for searching the National Transportation Safety Board’s (NTSB) accident and crash investigations and safety recommendations. Prior to the creation of CAROL, NTSB provided the public a comprehensive aviation accident database and a separate safety recommendations database. NTSB did not previously have an investigations database for the surface modes (hazardous materials, highway, marine, pipeline, and railroad). CAROL allows you to search fields concerning both investigation records and safety recommendation records. It is crucial for you to understand how the search works and the limitations of our data to understand your results.

Investigative Records and Safety Recommendations

What are investigative records in CAROL?

Investigative records in CAROL are records containing details concerning an NTSB investigation. Records relate to one of NTSB’s six modes (aviation, hazardous materials, highway, marine, pipeline, and railroad) or safety studies. CAROL users can search data fields from these investigative records. There are 16 common investigative fields that apply to all records from all six modes. Safety studies from 2020 to the present are in CAROL. We plan to add the older studies in the future. There are also fields that only apply to a specific mode. There are 24 aviation specific fields, there are two for highway, marine, pipeline, and railroad, there are three for hazardous materials. Remember that CAROL does not contain investigative records for

all NTSB investigations ever conducted. The records are limited as described in more detail later in this guide. Look for the details on the CAROL home page and the *SIMPLE SEARCH* page. We are consistently working to add more investigative records to CAROL.

What are safety recommendations?

The NTSB may issue safety recommendations at any point during the investigation of transportation accidents and in connection with safety studies. Recommendations specify actions that recipients can take to help improve safety by addressing a specific issue uncovered during an investigation or study. Letters containing the recommendations are sent to the organization(s) best able to address the safety issue, whether public or private.

What is the relationship between investigative records and safety recommendations (SR) in CAROL?

CAROL contains Aviation investigations since 1983.

Investigative data from 2010 through the present from rail, pipeline, hazardous materials, highway, and marine is available in [CAROL](#).

When viewing content in CAROL, the data fields you search and the lens you select (*Investigations* or *Recommendations*) impact your search results. See the table “Completeness of Search Results Based on Fields Searched and Lens Selected” for more information.

Choosing a Lens: *Investigations* or *Recommendations*

What is a lens?

In CAROL you must choose to view your results through one of two lenses. The first lens is *Investigations* and the second lens is *Recommendations*. The lens icon is used throughout this guide to indicate information concerning this critical concept.



Figure 1: Lens icon used to indicate content discussing the investigation and recommendation data views



You select the lens on the home page of both the *SIMPLE SEARCH* and the *ADVANCED SEARCH* using a radio button to click the circle to the left of your selection.

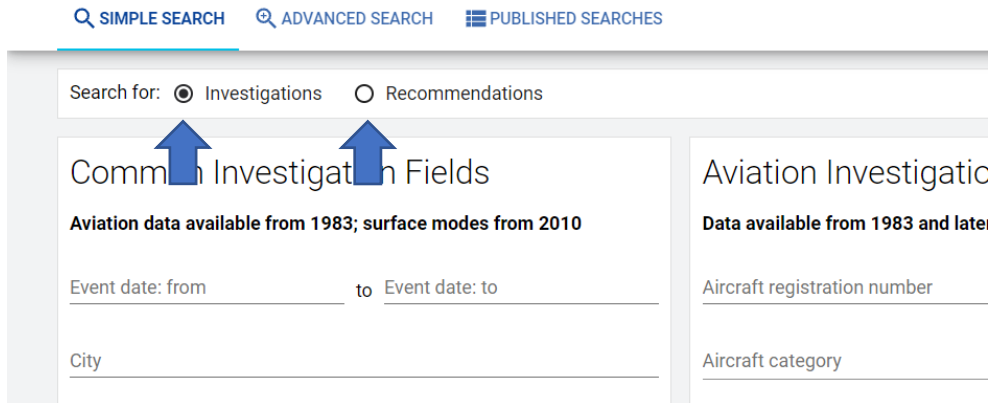


Figure 2: SIMPLE SEARCH home page with the Investigations and Recommendations lens options highlighted

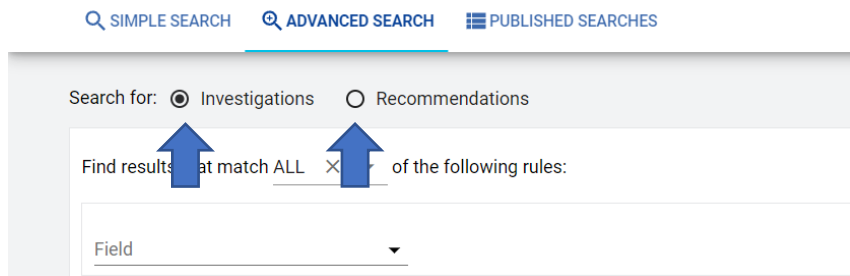


Figure 3: ADVANCED SEARCH home page with the Investigations and Recommendations lenses highlighted

What is the *Investigations* lens?



If you choose the *Investigations* lens, you will receive your search results as a list of investigative records. Remember, there are data limitations of the investigation records in CAROL.

What is the *Recommendations* lens?



If you choose to view your results through the *Recommendations* lens, you will receive your results as a list of recommendations. The recommendations data in CAROL is complete, **but** if you search incomplete investigative record fields, your results may be incomplete. The reason for this is explained in the later section, “How do CAROL’s data limitations impact my search results?”.

Using *SIMPLE SEARCH*



To use the *SIMPLE SEARCH*, click on the *SIMPLE SEARCH* button in the top left-hand corner of the CAROL top navigational bar. Or click the *SIMPLE SEARCH* icon at the bottom of the CAROL Query home page. Both icons link to the *SIMPLE SEARCH* homepage.

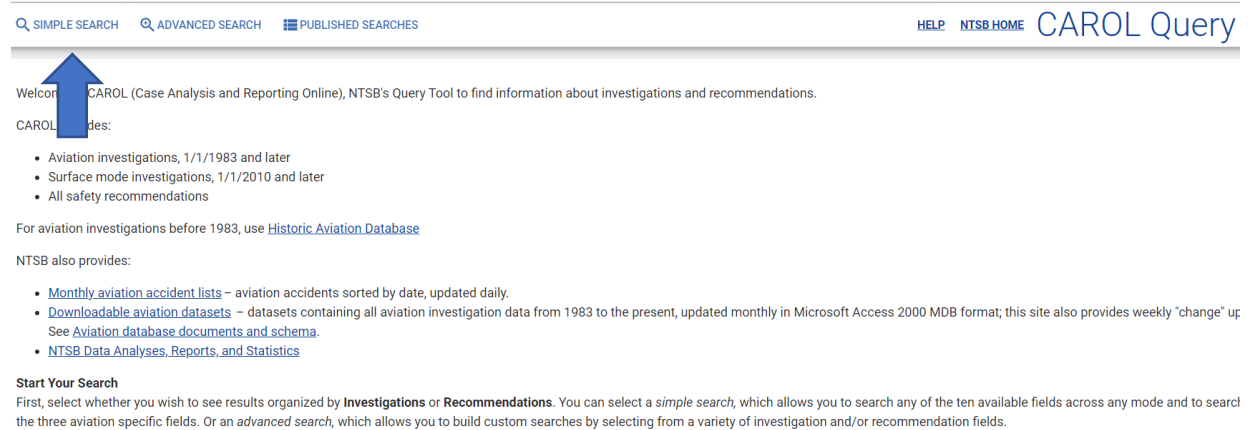


Figure 4: CAROL Query home page with the *SIMPLE SEARCH* links highlighted


Selecting a lens on *SIMPLE SEARCH*



On the *SIMPLE SEARCH* and the *ADVANCED SEARCH*, you are asked to choose the *Investigations* or *Recommendations* lens through which to view your results. Read the “Choosing a Lens: *Investigations* or *Recommendations*” and “Completeness of Search Results Based on Fields Searched and Lens Selected” sections of this manual for guidance in making this selection.

After you select either the *Investigations* or *Recommendations* lens, enter your desired *SIMPLE SEARCH* field query values. In this example *Investigations* is selected.

[SIMPLE SEARCH](#)
[ADVANCED SEARCH](#)
[PUBLISHED SEARCHES](#)

[HELP](#)
[NTSB HOME](#)
[CAROL Query](#)


Search for: Investigations Recommendations

Common Investigation Fields

Aviation data available from 1983; surface modes from 2010

Event date: from _____ to Event date: to _____

City _____

State _____

Country _____

Mode _____

NTSB number _____

Original publish date: from _____ to Original publish date: to _____

Highest injury level _____

Aviation Investigation Fields

Data available from 1983 and later

Aircraft registration number _____

Aircraft category _____

FAR part _____

Safety Recommendation Fields

All data available

Safety recommendation number _____

Recommendation text _____

Addressee name _____

Figure 5: SIMPLE SEARCH page with the Investigations lens selected and no field values entered

Entering search parameters on SIMPLE SEARCH



Enter your desired search parameter(s) and click the *Search* button. Refer to the table “Completeness of Search Results Based on Fields Searched and View Selected” to understand the limits of your search results. See the “Field Descriptions” section of this guide to learn about each available field.

In this sample search, the *FAR part* field in the section *Aviation Investigation Fields* is selected with the value *Part 135: Air taxi & commuter* selected from the drop-down menu. Additionally, in the *Safety Recommendation Fields* section, FAA is entered into the *Addressee* field. After clicking the *Search* button, 113 results appear.

[SIMPLE SEARCH](#)
[ADVANCED SEARCH](#)
[PUBLISHED SEARCHES](#)
[HELP](#)
[NTSB HOME](#)
CAROL Query

Search for: Investigations Recommendations

Common Investigation Fields

Aviation data available from 1983; surface modes from 2010

Event date: from _____ to Event date: to _____

City _____

State _____

Country _____

Mode _____

NTSB number _____

Original publish date: from _____ to Original publish date: to _____

Highest injury level _____

Aviation Investigation Fields

Data available from 1983 and later

Aircraft registration number _____

Aircraft category _____

FAR part
Part 135: Air taxi & commuter

Safety Recommendation Fields

All data available

Safety recommendation number _____

Recommendation text _____

Addressee name
FAA

[Go to Advanced Search](#)
[Reset](#)
[Search](#)

Search Results: 113

NTSB#	PUBLIC DOCKET	STATUS	EVENT DATE	LOCATION	REPORT	ORIGINAL PUBLISHED DATE	EVENT TYPE	HIGHEST INJURY	AIRCRAFT DETAILS	HAS SAFETY REC
+ DCA20MA059	Docket	Completed	01/26/2020	Calabasas, California	AAR2101	03/02/2021	Accident	Fatal	N72EX: Sikorsky / S76	✓

Figure 6: SIMPLE SEARCH menu with two fields completed

Referring to the table “Completeness of Search Results Based on Fields Searched and View Selected,” in the row with recommendation fields and aviation fields completed and the *Investigations* view selected the results are complete from 1983- present.

Navigating SIMPLE SEARCH results in the Investigations lens



Clicking the blue plus sign button on the far-left side of each results row expands the record to display more details. The vehicle(s), the findings codes, the probable cause, and any recommendations issued because of the accident are displayed.

NTSB#	PUBLIC DOCKET	STATUS	EVENT DATE	LOCATION	REPORT	ORIGINAL PUBLISHED DATE	EVENT TYPE	HIGHEST INJURY	AIRCRAFT DETAILS	HAS SAFETY REC
- DCA20MA059	Docket	Completed	01/26/2020	Calabasas, California	AAR2101	03/02/2021	Accident	Fatal	N72EX: Sikorsky / S76	✓

Vehicle(s)
N72EX Sikorsky S76

Findings
 Personnel issues Decision making/judgment - Pilot
 Personnel issues Spatial disorientation - Pilot
 Personnel issues Aircraft control - Pilot
 Personnel issues Motivation/respond to pressure - Pilot
 Organizational issues Adequacy of safety program - Operator
 Environmental issues (general) - Compliance w/ procedure
 Environmental issues Clouds - Decision related to condition
 Aircraft Data recorders (flight/maint) - Not installed/available
 Personnel issues Lack of communication - ATC personnel

Probable Cause
 The pilot's decision to continue flight under visual flight rules into instrument meteorological conditions, which resulted in the pilot's spatial disorientation and loss of control. Contributing to the accident was the pilot's likely self-induced pressure and the pilot's plan continuation bias, which adversely affected his decision-making, and Island Express Helicopters Inc.'s inadequate review and oversight of its safety management processes.

Recommendations
[A-21-005](#)
[A-21-006](#)

Figure 7: Details displayed in the Investigations results grid

Several of the fields are links. The *PUBLIC DOCKET* column *Docket* link opens the docket entry in a new tab. The *REPORT* column report number link opens the ntsb.gov event page in a new tab. Scroll down to the Related Reports section on the lower right hand side of the screen to access the investigation report pdf.

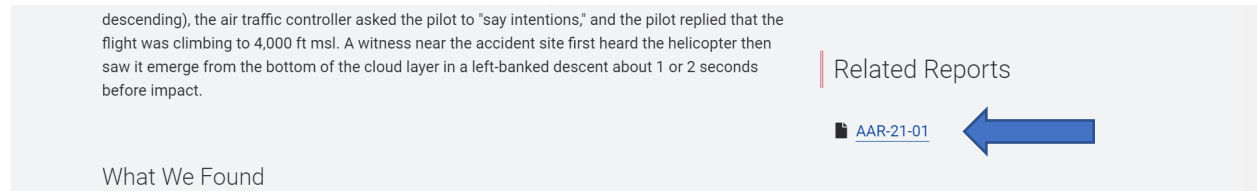


Figure 8: NTSB.gov event page with the link to the investigation report highlighted

The safety recommendation number links under the *Recommendations* section of the results grid links to the safety recommendations details page. This page contains details about the recommendation and its precipitating event.

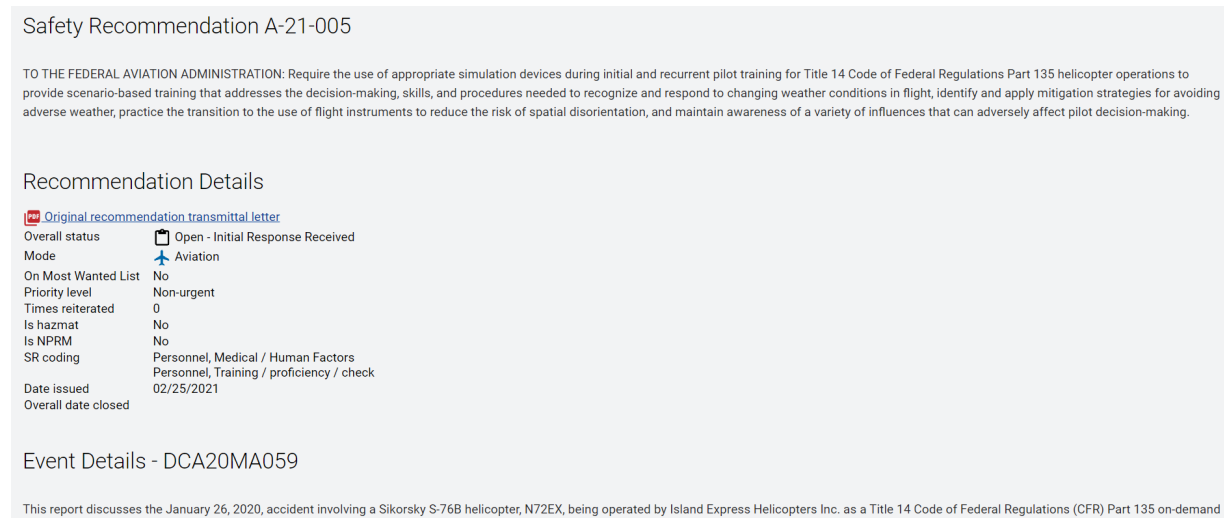


Figure 9: Safety recommendations details page

The safety recommendations details page also contains a link to the ntsb.gov event page, where you can access the pdf investigation report.

Event Details - DCA20MA059

This report discusses the January 26, 2020, accident involving a Sikorsky S-76B helicopter, N72EX, being operated by Island Express Helicopters Inc. as a Title 14 Code of Federal Regulations (CFR) Part 135 on-demand flight, that crashed into terrain in Calabasas, California. The pilot and the eight passengers died. Safety issues identified in this report include the pilot's preflight weather and flight risk planning, the flight's entry into instrument meteorological conditions and the pilot's inadequate adverse weather avoidance, the pilot's spatial disorientation, influences on the pilot's decision to continue the flight into adverse weather, Island Express' incomplete implementation of its safety management system (SMS), the benefits of a mandatory SMS, the benefits of flight simulation devices for pilot training in adverse weather avoidance, the benefits of a flight data monitoring program, and the value of crash-resistant flight recorder systems in preventing future accidents. As a result of this investigation, the National Transportation Safety Board makes two new safety recommendations each to the Federal Aviation Administration and Island Express.

Location Calabasas, USA
Accident date 01/26/2020
Accident # DCA20MA059
Report # [AAR-21-01](#)

Addressee Details

FAA - Open - Initial Response Received

Figure 10: Safety recommendations details page with the investigation report number link highlighted

On the safety recommendation details page, click the v-shaped button to the right of the addressee name and status to view the correspondence history between NTSB and the addressee.

Aviation investigation reports

Some aviation investigation records have a pdf icon with a link labelled *Final* in the *REPORT* results column. These investigations have direct links to the pdf investigation reports. These records differ from the records where the investigation report is available through the [ntsb.gov](#) events page under the *Related Reports* link. Click the *Final* link to download the investigation report.

Q SIMPLE SEARCH Q ADVANCED SEARCH PUBLISHED SEARCHES HELP NTSB HOME CAROL Query

						DATE						
+	DCA20MA059	Docket	Completed	01/26/2020	Calabasas, California	AAR2101	03/02/2021	Accident	Fatal	N72EX: Sikorsky / S76	✓	
+	CEN19MA141	Docket	Completed	05/13/2019	Ketchikan, Alaska	AAR2104	05/14/2021	Accident	Fatal	N952DB: De Havilland / DHC-2, N959PA: De Havilland / DHC-3	✓	
+	CEN19FA072	Docket	Completed	01/29/2019	Zaleski, Ohio	AAR2001	06/10/2020	Accident	Fatal	N191SF: Bell / 407	✓	
+	ANC17MA001	Docket	Completed	10/02/2016	Togiak, Alaska	AAR1802	05/01/2018	Accident	Fatal	N208SD: Cessna / 208B	✓	
-	WPR16FA153	Docket	Completed	07/29/2016	McKinleyville, California	Final	09/2018	Accident	Fatal	N661TC: Piper / PA-31T	✓	
Vehicle(s) N661TC Piper PA-31T		Findings Aircraft Electrical pwr sys wiring - Fatigue/wear/corrosion Aircraft Electrical pwr sys wiring - Design									Recommendations A-17-001	
Probable Cause An inflight fire in the floor area near the main bus tie circuit breaker panel that resulted from chafing between an electrical wire and a hydraulic line and/or airplane structure.											Recommendations A-17-001	

N727WR - BRITISH

Figure 11: Investigations results grid with an aviation record with the pdf icon and the Final link highlighted

Navigating *SIMPLE SEARCH* results in the *Recommendations* lens



To toggle to the *Recommendations* lens, click the circular button to the left of the *Recommendations* lens option in the *Search for* menu. Then click the *Search* button.

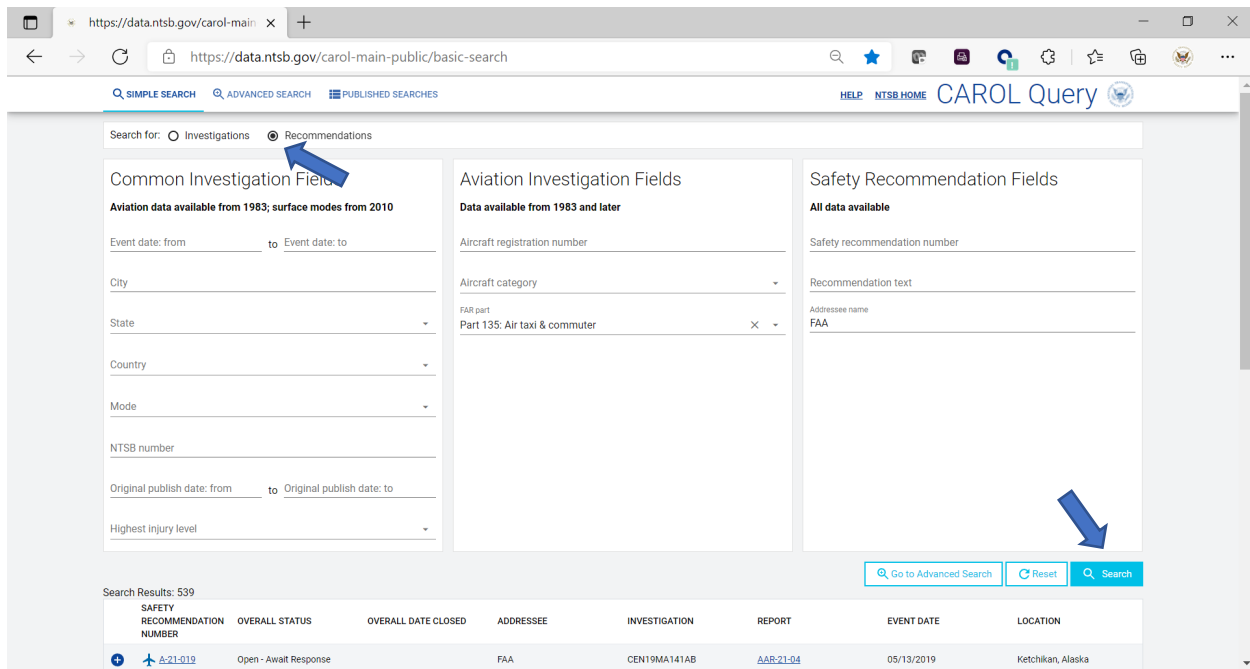


Figure 12:SIMPLE SEARCH results page with the Recommendations lens selected

You will notice that the number of results increases from 113 to 539. The results are displaying the safety recommendations issued because of the 113 investigations that were listed when viewing the results through the *Investigations* lens.

Looking at the results there are several items that are links: the report number, the SR number, and the blue plus sign. The report number links to the ntsb.gov event page. Scroll down to the *Related Reports* section on the right hand side to view the pdf investigation report. The ntsb.gov event page also displays links to SRs issued because of the investigation and links to related press releases and events.

The SR number links on both the ntsb.gov event page and on the CAROL results grid take you to the safety recommendations details page.

Clicking the blue plus sign on the left hand side of the CAROL results grid displays the recommendation text, the SR addressee(s), and any safety recommendation codings.

Search Results: 539

SAFETY RECOMMENDATION NUMBER	OVERALL STATUS	OVERALL DATE CLOSED	ADDRESSEE	INVESTIGATION	REPORT	EVENT DATE	LOCATION
A-21-019	Open - Await Response		FAA	CEN19MA141AB	AAR-21-04	05/13/2019	Ketchikan, Alaska
Addressee FAA (Open - Await Response)							
Recommendation TO THE FEDERAL AVIATION ADMINISTRATION: Ensure that checklists for all Capstone Program (phase 2) aircraft include verification that the Garmin GSL 71 control head selector knob is in the ON position and that the unit is in ALT mode before takeoff.							
Safety Rec Codings							
A-21-015	Open - Initial Response Received		FAA	CEN19MA141AB	AAR-21-04	05/13/2019	Ketchikan, Alaska
A-21-018	Open - Await Response		FAA	CEN19MA141AB	AAR-21-04	05/13/2019	Ketchikan, Alaska
A-21-020	Open - Initial Response Received		FAA	CEN19MA141AB	AAR-21-04	05/13/2019	Ketchikan, Alaska
A-21-016	Open - Initial Response Received		FAA	CEN19MA141AB	AAR-21-04	05/13/2019	Ketchikan, Alaska
A-21-017	Open - Initial Response Received		FAA	CEN19MA141AB	AAR-21-04	05/13/2019	Ketchikan, Alaska
A-21-006	Open - Initial Response Received		FAA	DCA20MA059	AAR-21-01	01/26/2020	Calabasas, California
A-21-005	Open - Initial Response Received		FAA	DCA20MA059	AAR-21-01	01/26/2020	Calabasas, California

Figure 13: SIMPLE SEARCH results in the Recommendations lens

Midair Collision

Investigation Details

Completed Investigation

Accident No
CEN19MA141AB

Aviation

Accident Date
5/13/2019



Location
Ketchikan, AK

Investigator in Charge

Public Affairs Contact
NTSB Media Relations
Peter Knudson, On Scene PAO
(202) 314-6101

Docket
• [CEN19MA141AB](#)



Recommendations

- [A-21-015](#)
- [A-21-016](#)
- [A-21-017](#)
- [A-21-018](#)
- [A-21-019](#)
- [A-21-020](#)
- [A-21-021](#)
- [A-21-022](#)
- [A-21-023](#)
- [A-21-024](#)

Related Reports

- [AAR-21-04](#)

Related News

Limitations of See-and-Avoid, Lack of Warning Alerts, Led to Alaska Midair Collision

WASHINGTON (April 20, 2021) — A midair collision of two air tour airplanes was caused by "the inherent limitations of the see-and-avoid concept"...

[Continue Reading](#) →

NTSB Publishes Preliminary Report for Investigation of Mid-Air Collision, Calls for

Figure 14: NTSB.gov event page

Navigating your results and sorting results grid columns

In all search results grids, regardless of lens or search type selected, use the numbered links at the bottom of the grid to select a different page of results.

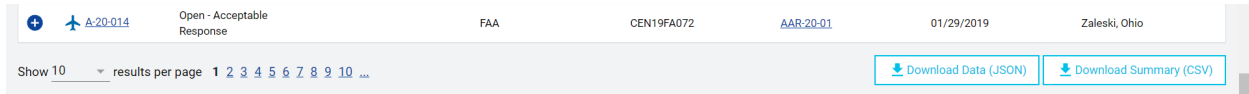


Figure 15: Bottom of the results grid with navigation to view the next page

Some of the columns in both the investigative and recommendations results grid in all lens and search pages are sortable in ascending and descending order. Hover your mouse over the column name. An arrow appears to the left of the column name. Click the arrow to sort the column data. The arrow will remain displayed to the left of the column name to indicate that the column's contents are sorted.



Figure 16: The Recommendations results grid with Event Date sorted in ascending order

Downloading your search results



You can download your search results in two formats (CSV and JSON). Both file formats download as a zip file. When you unzip the file there is a read me file containing your search parameters and the CSV or JSON file with your search results. Note that the downloaded search results differ depending on if you are viewing your results through the *Investigations* or *Recommendations* lens. The *Download Data (JSON)* and *Download Summary (CSV)* buttons are available at the bottom of the results grid.

DCA83AA023	AAR-84-11	03/30/1983	NEWARK, New Jersey
MIA83LA139		05/06/1983	GAINESVILLE, Florida
MIA83LA139		05/06/1983	GAINESVILLE, Florida
MIA83LA139		05/06/1983	GAINESVILLE, Florida
ANC83FA131		07/31/1983	NEAR ILLIUMNA, Alaska

Download Data (JSON) Download Summary (CSV)

Figure 17: The download data buttons at the bottom of the results grid

```

readme - Notepad
File Edit Format View Help
Run time: 29/09/2021 18:37:49

Json query: {"ExportFormat":"data","ResultSetSize":50}

Query text: [
    (RegulationFlightConductedUnder) is (135)
    And
    (AddresseeName) search engine (FAA)
]

```

Figure 18: Read me file for the JSON download in the RECOMMENDATIONS lens

```

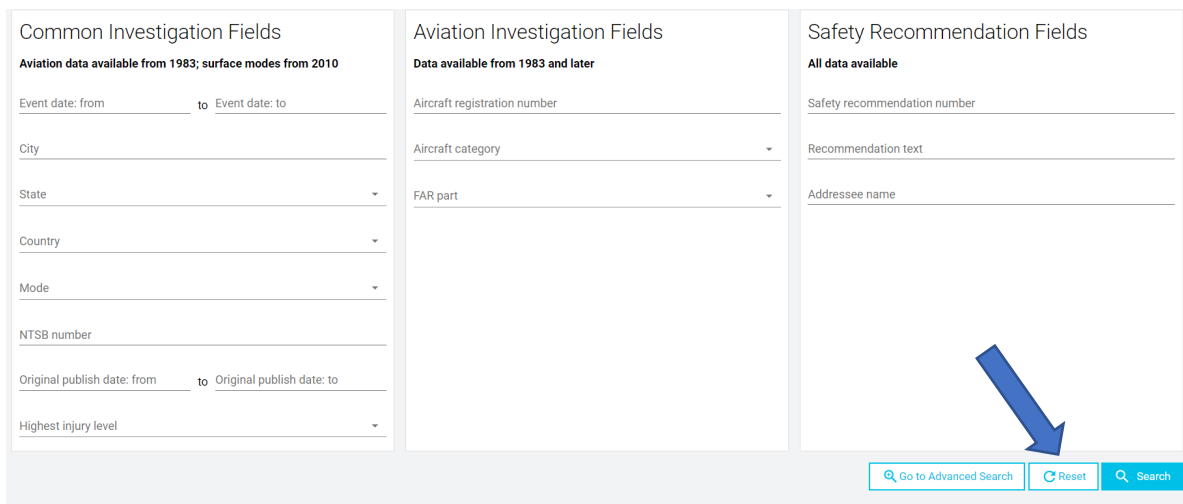
safetyrecs2021-09-29_14-37 - Notepad
File Edit Format View Help
[
  {
    "srid": "A-21-016",
    "dateClosed": null,
    "division": null,
    "greenSheet": "http://www.nts.gov/safety/safety",
    "hazmat": false,
    "isReiterated": false,
    "keywords": null,
    "legacy": false,
    "mode": "Aviation",
    "mostWanted": false,
    "nprm": false,
    "office": null,
  }
]

```

Figure 19: JSON file for the SIMPLE SEARCH download in the RECOMMENDATIONS lens

Clearing your search terms and starting a new search

Click the *Reset* button, available on *SIMPLE SEARCH* and *ADVANCED SEARCH*, to clear your search terms and start a new search.

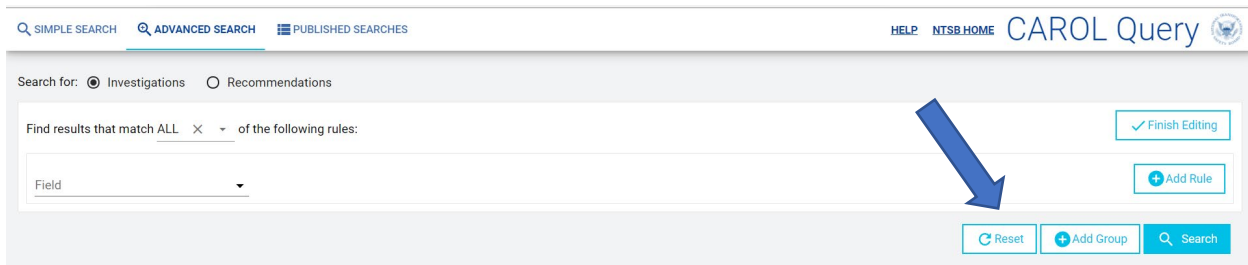


The screenshot shows the SIMPLE SEARCH interface with three columns of search fields: Common Investigation Fields, Aviation Investigation Fields, and Safety Recommendation Fields. A blue arrow points to the 'Reset' button in the bottom right corner of the search area.

Common Investigation Fields	Aviation Investigation Fields	Safety Recommendation Fields
Aviation data available from 1983; surface modes from 2010	Data available from 1983 and later	All data available
Event date: from _____ to _____ Event date: to _____	Aircraft registration number _____	Safety recommendation number _____
City _____	Aircraft category _____	Recommendation text _____
State _____	FAR part _____	Addressee name _____
Country _____		
Mode _____		
NTSB number _____		
Original publish date: from _____ to _____ Original publish date: to _____		
Highest injury level _____		

Buttons: [Go to Advanced Search](#) [Reset](#) [Search](#)

Figure 20: SIMPLE SEARCH screen with the Reset button highlighted



The screenshot shows the ADVANCED SEARCH interface. It includes a navigation bar with 'SIMPLE SEARCH', 'ADVANCED SEARCH', and 'PUBLISHED SEARCHES'. Below the navigation bar, there are search options for 'Investigations' and 'Recommendations'. A search rule is defined: 'Find results that match ALL of the following rules:'. A blue arrow points to the 'Reset' button in the bottom right corner of the search area.

Navigation: [SIMPLE SEARCH](#) [ADVANCED SEARCH](#) [PUBLISHED SEARCHES](#) [HELP](#) [NTSB HOME](#) [CAROL Query](#)

Search for: Investigations Recommendations

Find results that match ALL of the following rules:

Field _____

Buttons: [Reset](#) [Add Group](#) [Search](#) [Finish Editing](#) [Add Rule](#)

Figure 21: The ADVANCED SEARCH screen with the RESET button highlighted

Using *ADVANCED SEARCH*



Purpose of *ADVANCED SEARCH*

The purpose of *ADVANCED SEARCH* is to allow you to enter multiple search parameters (rules) using any available data fields. Data fields are placed in the categories: *Common investigation fields*, *Safety recommendations*, and the modal-specific fields. For any field(s) you select, you enter the *Condition* of your rule and your *Query value*. You select whether you wish to receive results that match *Any* or *All* of your rules.

For more complex searches, you can use the *Add Group* button to create groups of rules with their own separate search parameters. When using the *Add Group* feature, you select if you want results matching at least one of your groups to be returned or if you want results matching all of your groups to be returned.

Navigating to *ADVANCED SEARCH* and choosing a lens

To use *ADVANCED SEARCH*, click the *ADVANCED SEARCH* button at the top left-hand side of the top navigational menu. Or click the *Advanced Search* button at the bottom of the CAROL Query home page. Alternatively, you can access *ADVANCED SEARCH* by clicking the *Go to Advanced Search* button on the *SIMPLE SEARCH* screen.

At the top of the *ADVANCED SEARCH* screen click circular radio button to the left of either the *Investigations* or *Recommendations* option in the *Search for* menu. If you select *Investigations*, your results will be displayed as a list of investigations. If you select *Recommendations*, your results will be displayed as a list of recommendations.

Because all investigation data is not yet available in CAROL, when searching for safety recommendations, to receive complete results always choose the Recommendations option in the *Search for* menu and only search on *Safety recommendations* fields.

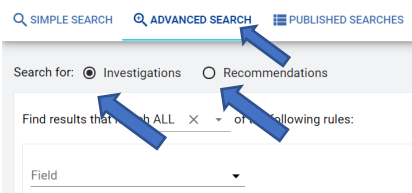


Figure 22: The *ADVANCED SEARCH* button and *Search for* menu

Entering rules and selecting whether the results match *ANY* or *ALL* of the rules

To add a rule to your query, click the down arrow on the *Field* box. This shows the field options in a drop-down menu. Fields are divided into eight categories. All of the categories, except *Safety recommendations*, relate to investigations data.

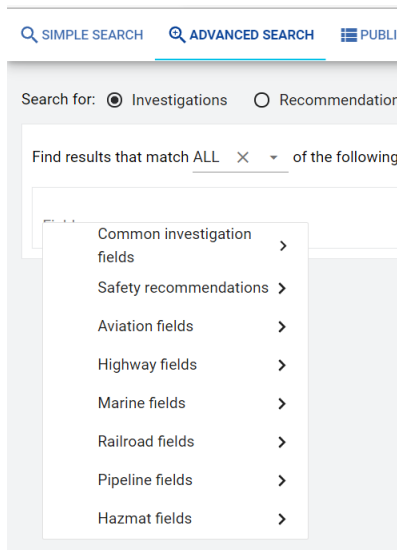


Figure 23: ADVANCED SEARCH field categories

ADVANCED SEARCH Field Categories

1. *Common investigation fields*
2. *Safety recommendations*
3. *Aviation fields*
4. *Highway fields*
5. *Marine fields*
6. *Rail fields*
7. *Pipeline fields*
8. *Hazmat fields*

You can change whether you want your results to match *ANY* or *ALL* of the rules you create by selecting the option *ANY* or *ALL* from the drop-down menu in box labelled *Find results that match (ANY or ALL) of the following rules*:

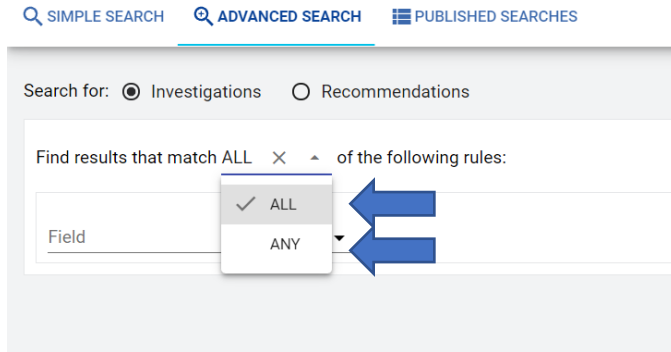


Figure 24: ADVANCED SEARCH menu with the Find results that match (ALL and ANY) of the following rules highlighted

Adding Search Parameters

To add a parameter to your query, hover your mouse over the category and then hover your mouse over one of the subcategories (if applicable) and then click on your desired parameter value. Depending on which parameter you choose, the *Condition* field options will vary. You use the *Condition* drop-down menu to select your desired *Condition* option.

Condition Options

For free text entries, the *Condition* options are:

- *contains*
- *does not contain*
- *is*
- *is not*
- *starts with*
- *ends with*

For drop-down menus, the *Condition* options are:

- *is*
- *is not*

For dates, the *Condition* options are:

- *is*
- *is not*
- *is before*
- *is after*
- *is on or before*

- *is on or after*

For true/ false, the *Condition* options are:

- *is*
- *is not*

For numerical values, the *Condition* options are:

- *is*
- *is not*
- *is greater than*
- *is less than*

Entering Search Parameters

How you enter content into the *Query value* field varies depending on the parameter type.

Free Text

For the free text parameters type your desired text. For an individual *Safety recommendation ID*, CAROL is flexible regarding data entry on the *SIMPLE SEARCH* and *ADVANCED SEARCH* screens.

The letter in an SR ID represents the SR mode. The first two numbers represent the SR's adoption year. The final three numbers represent the sequential order of the SR for that mode and that year. So, M-05-001 is the first marine recommendation adopted in 2005.

When using *SIMPLE SEARCH* or *ADVANCED SEARCH*, you do not need to enter the dashes in an SR number. Also, you can omit the lead-in zeroes in the last three digits of an SR number. If you wish to view M-05-001, you can type M051.

Note, that you still need the zeroes that represent the year the Board adopted the SR.

When using *ADVANCED SEARCH*, if you want to view all the recommendations that contain a specific portion of a safety recommendation number you can enter the partial number, such as A-19-, and select the *Condition* option *contains*.

Drop-Down Menus

For drop-down menus, choose a single value from the drop-down menu.

Dates

For date parameters enter a date using the month/day/year format. For example, 01/05/2005. To create a date range, make two rules. Choose the *Condition* option *is on or after* and enter the first date in your range. Choose the *Condition* option *is on or before* and enter the most recent date in your range.

For example, for the date range January 1, 2016 through December 31, 2016, the parameters would be *Condition is on or after* 1/1/2016 and *Condition is on or before* 12/31/2016.

True/ False

For true/ false parameters, select *True* or *False* from the *Query value* drop-down menu.

Numerical Values

For numerical values, use the arrows in the *Query value* box to select the desired numerical value.

Adding Rules

When you have finished entering your selections for *Field*, *Condition*, and *Query value*, click the *Add Rule* button. You can continue adding more rules to your query.

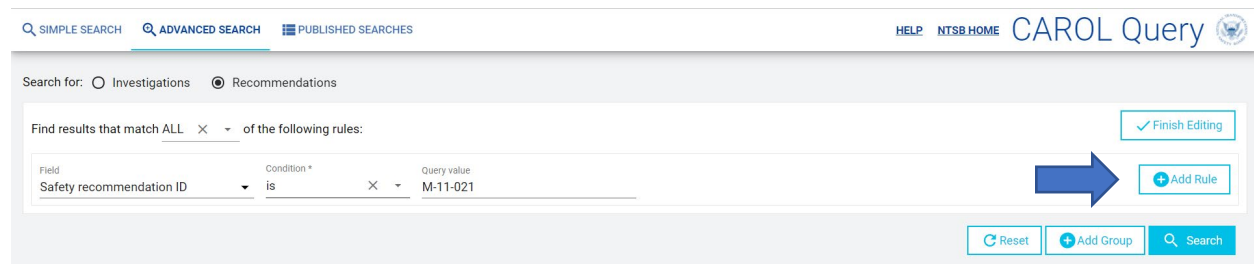



Figure 25: The ADVANCED SEARCH menu with the Add Rule button highlighted

If you have more than one rule, you need to select the *Find results that match (ANY or ALL) of the following rules* option. If you select the *ALL* option both of your rules must apply for records to be returned. In the example below, the *Recommendation text* must contain “fatigue” ***and*** the *Addressee name* must be FAA. The *Find results that match (ALL or ANY) of the following rules* option is set to *ALL*. This search yielded 80 results in the *RECOMMENDATIONS* view.

[SIMPLE SEARCH](#)
[ADVANCED SEARCH](#)
[PUBLISHED SEARCHES](#)

[HELP](#)
[NTSB HOME](#)
CAROL Query


Search for: Investigations Recommendations

Find results that match ALL of the following rules: [Finish Editing](#)

Field	Condition *	Query value	
Recommendation text	contains	fatigue	Delete Rule Add Rule
Addressee name	is	FAA	Delete Rule Add Rule

[Reset](#) [Add Group](#) [Search](#)


Search Results: 80

SAFETY RECOMMENDATION NUMBER	OVERALL STATUS	OVERALL DATE CLOSED	ADDRESSEE	INVESTIGATION	REPORT	EVENT DATE	LOCATION
A-14-072	Open - Unacceptable Response		FAA	DCA13MA133	AAR-14-02	08/14/2013	Birmingham, Alabama
A-14-024	Closed - Unacceptable Action	05/24/2018	FAA	WPR14CA003	SIR-14-01	10/01/2013	Wellton, Arizona
A-14-009	Closed - Acceptable	07/11/2013	FAA	DCA13MA133	AAR-14-02	08/14/2013	Birmingham, Alabama

Figure 26: ADVANCED SEARCH page with two rules entered and the Find results set to ALL

If you change the selection in the *Find results that match (ANY or ALL) of the following rules* to the ANY option and keep the same search parameters as above and remain in the RECOMMENDATIONS lens, the search yielded 5,222 results. The number of results increased significantly because now the query is searching for records where the *Recommendation text* contains “fatigue” or the *Addressee name* is FAA.

[SIMPLE SEARCH](#)
[ADVANCED SEARCH](#)
[PUBLISHED SEARCHES](#)

[HELP](#)
[NTSB HOME](#)
CAROL Query


Search for: Investigations Recommendations

Find results that match ANY of the following rules: [Finish Editing](#)

Field	Condition *	Query value	
Recommendation text	contains	fatigue	Delete Rule Add Rule
Addressee name	is	FAA	Delete Rule Add Rule

[Reset](#) [Add Group](#) [Search](#)

Search Results: 5222

SAFETY RECOMMENDATION NUMBER	OVERALL STATUS	OVERALL DATE CLOSED	ADDRESSEE	INVESTIGATION	REPORT	EVENT DATE	LOCATION
A-21-025	Open - Await Response		FAA	DCA18SS003	SS-21-01	03/28/2018	Washington
A-21-026	Open - Await Response		FAA	DCA18SS003	SS-21-01	03/28/2018	Washington
A-21-032	Open - Await Response		FAA	DCA18SS003	SS-21-01	03/28/2018	Washington

Figure 27: ADVANCED SEARCH results with the Find results that match (ANY or ALL) of the following rules set to ANY

Grouping Rules

Additionally, you can group your rules, so results match any or all of the rules within your grouping. To group one or more rules, after you enter the rules, click the *Add Group* button.

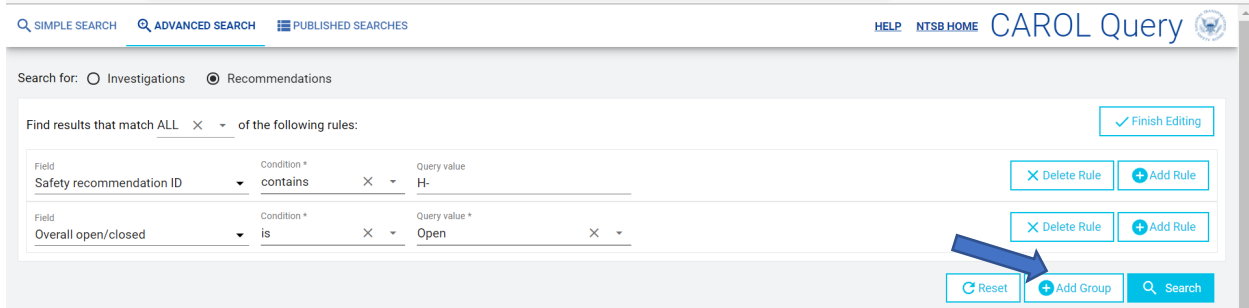


Figure 28: The ADVANCED SEARCH page with two search rules entered and the Add Group button highlighted

The sample search above has two rules. The first is looking for records where the SR ID contains H-. This will locate highway recommendations. The second rule is looking for recommendations where the overall status is open. The *find results that match (ANY or ALL) of the following rules* is set to ALL. This query, as written so far, will find all open highway SRs. The lens is set to RECOMMENDATIONS.

By clicking the *Add Group* button you can add another set of rules. The ultimate goal of this query is to locate all open highway recommendations and all open marine recommendations.

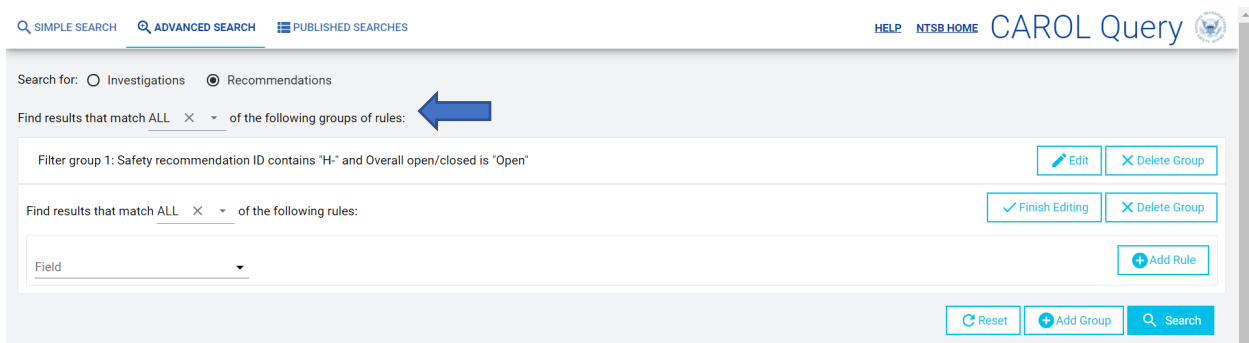


Figure 29: ADVANCED SEARCH with one filter group created

After clicking the *Add Group* button another line for entering a new group of rules appears.

At this point, there is a field above *Filter group 1* that says *Find results that match (ANY or ALL) of the following groups of rules*. This is the option that determines if you want your results to match the conditions of at least one group of rules (ANY) or match the conditions of all the groups of rules (ALL).

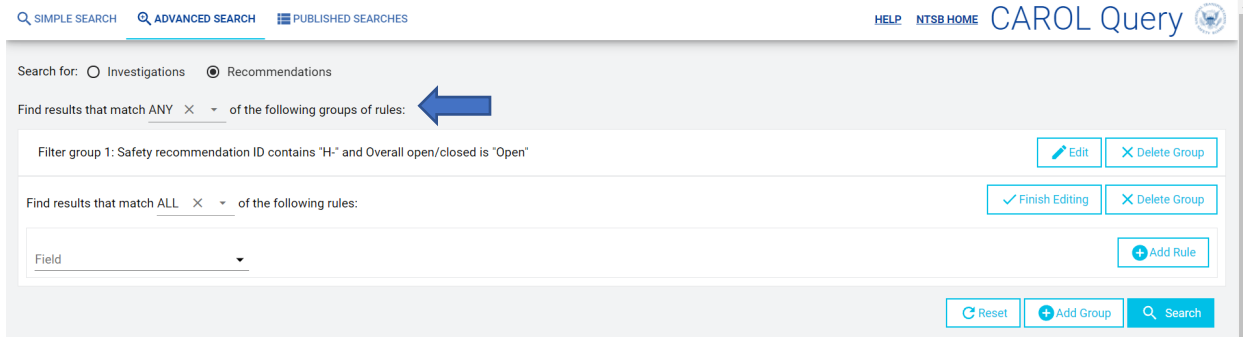


Figure 30: Find results that match (ALL or ANY) of the following groups of rules with ANY selected and the second group not added yet

In this example, this box will need to be updated from its default setting of ALL to become ANY. It should be ANY, in this case, because the first group is looking for open highway recommendations and the second group will be looking for open marine recommendations. We would like to view results from both groups.

A recommendation can only have one *Recommendation mode*, so if the toggle is left on ALL no results would be found because the query would be looking for recommendations in the highway mode and the marine mode. If this setting listed as ANY, the results will be looking for recommendations in an open status in the highway mode or the marine mode.

Now, to complete this example, the second group of rules needs to be added.

The second group's rules are *Safety recommendation ID Contains Query value M-* and *Overall open/closed with the Condition is* and the *Query value* set to *Open*. The *Find results that match (ANY or ALL) of the following rules* is set to ALL. Remember, this is the setting for *Filter group 2* only.

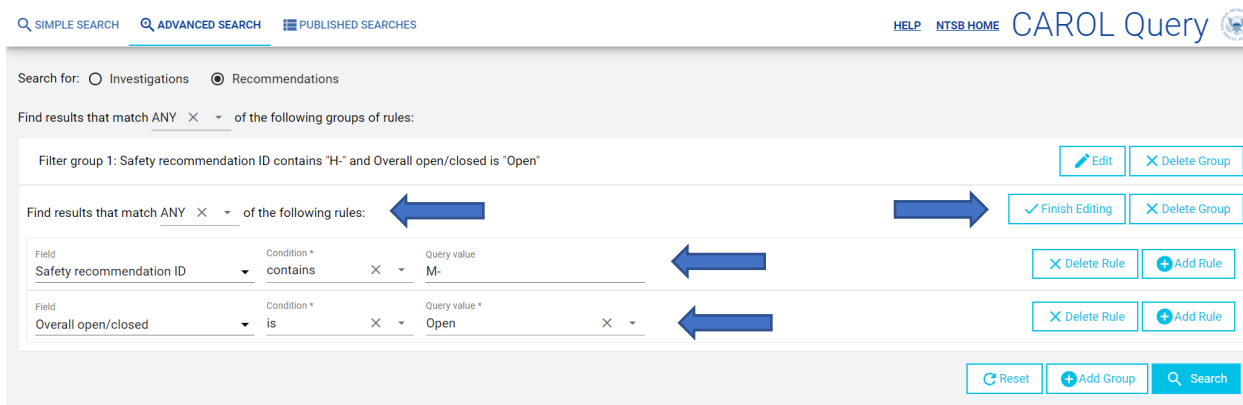


Figure 31: The ADVANCED SEARCH screen with two groups of rules entered

Click the *Finish Editing* button to close the second group. Then click the *Search* button to run your search. If you wish to edit your groups, click the *Edit* button.

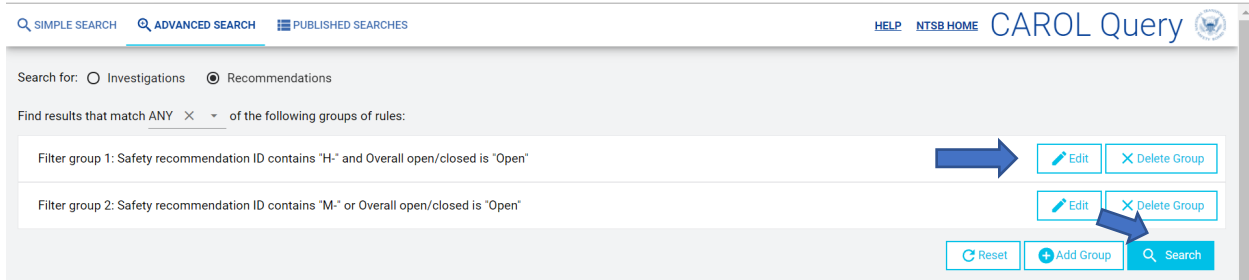


Figure 32: The ADVANCED SEARCH screen with two groups entered

The search yields 521 results, which is the number of open marine and highway safety recommendations at the time it was run.

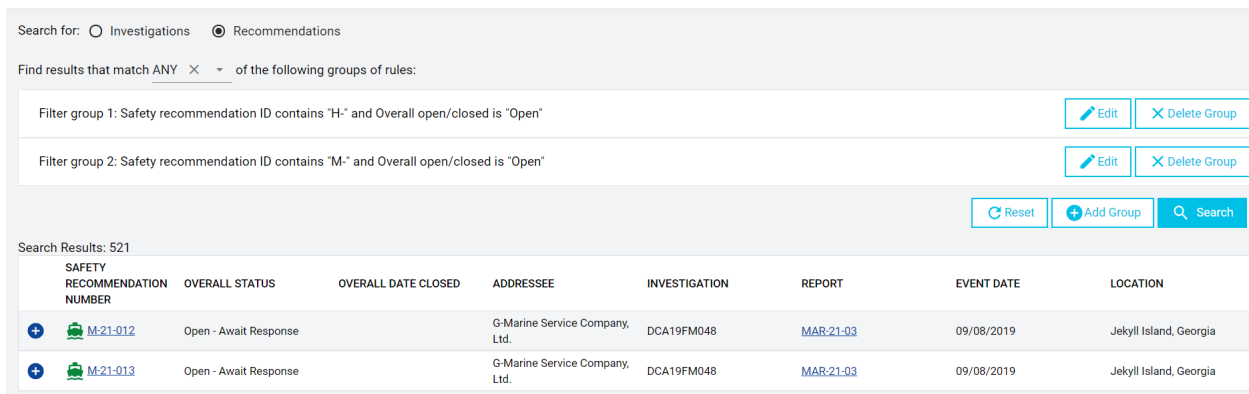


Figure 33: Completed query with 521 results

Completing Your Search and Viewing Results

When you have created your query, click the *Search* button to run the query.



Recommendations lens grid results



When searching for safety recommendations, it is recommended that you choose the *Recommendations* radio button option in the *Search for* menu. If you choose this option, the results will be displayed in a grid that has the following columns:

- *Safety Recommendation Number*
- *Overall Status*
- *Overall Date Closed*
- *Addressee*
- *Investigation*

- *Report*
- *Event Date*
- *Location*
- *+*

The *SAFETY RECOMMENDATION NUMBER* column links to the *Recommendation Details and Addressee Details* page. To view the correspondence history for an individual recommendation recipient, click the v-shaped button on the same line as the recipient’s name in the *Addressee Details* section.

Addressee Details

 G-Marine Service Company, Ltd. - Open - Await Response ^ 

Name G-Marine Service Company, Ltd.
 Acronym
 Category Private Industry
 Addressee status Open - Await Response

From NTSB
 To G-Marine Service Company, Ltd.
 Date 09/14/2021
 Type Transmittal Letter
 Response

The National Transportation Safety Board (NTSB) is an independent federal agency that investigates accidents and incidents involving other modes of transportation—railroad, highway, marine, and pipeline. In addition, we carry out special studies concerning transportation safety and

Figure 34: The Addressee Details section with the correspondence show/hide button highlighted

The *REPORT* column links to the ntsb.gov event page for the investigation or study that generated the recommendation.

Clicking the + displays the Addressees and their individual statuses, the recommendation text, and any Safety Rec Codings.

Search for: Investigations Recommendations

Find results that match ANY of the following groups of rules:

Filter group 1: Safety recommendation ID contains "H-" and Overall open/closed is "Open" [Edit](#) [Delete Group](#)

Filter group 2: Safety recommendation ID contains "M-" and Overall open/closed is "Open" [Edit](#) [Delete Group](#)

[Reset](#) [Add Group](#) [Search](#)

Search Results: 521



SAFETY RECOMMENDATION NUMBER	OVERALL STATUS	OVERALL DATE CLOSED	ADDRESSEE	INVESTIGATION	REPORT	EVENT DATE	LOCATION
 M-21-012	Open - Await Response		G-Marine Service Company, Ltd.	DCA19FM048	MAR-21-03	09/08/2019	Jekyll Island, Georgia
<p>Addressee G-Marine Service Company, Ltd. (Open - Await Response)</p> <p>Recommendation TO G-MARINE SERVICE COMPANY, LTD: Revise your safety management system to establish procedures for verifying stability calculations and implement audit procedures to ensure your vessels meet stability requirements before leaving port.</p> <p>Safety Rec Codings</p>							
 M-21-013	Open - Await Response		G-Marine Service Company, Ltd.	DCA19FM048	MAR-21-03	09/08/2019	Jekyll Island, Georgia

Figure 35: The Safety Recommendations results grid with the + menu expanded



Investigations lens grid results

When searching for *Investigations*, your results grid has the following columns:

- *NTSB #*
- *Public Docket* (links to public docket page)
- *Status* (In-work or Completed)
- *Event date*
- *Location*
- *Report*
- *Original Published Date*
- *Event type*
- *Highest injury*
- *Aircraft details*
- *Has Safety Rec* (checked if the investigation resulted in the issuance of safety recommendations)
- +

Clicking + displays details about the vehicle(s) involved, the findings categorization, the probable cause, and a list of the related safety recommendations with links to the safety recommendations details page.

ADVANCED SEARCH Field Options

Common investigation fields, *Safety recommendations*, and *Aviation fields* have second-level category menus to further organize your field options. Under *Common investigation fields*, these second-level categories are *Admin info*, *Basic info*, and *Other*. Under *Safety recommendations*, these second-level categories are *Admin info*, *Status*, and *Other*. Under *Aviation fields*, these second-level categories are *Aircraft info*, *Airport info*, *Operation*, *Narratives*, *Sequence of events*, and *Weather*.

The field options under each *Common investigation fields* subcategory are:

Admin info

- *NTSB #*
- *Investigation mode*
- *Keys #*
- *Report number*
- *Has safety recommendation*
- *Lead agency*
- *Original Published Date*

Basic Info

- *Event date*
- *City*
- *State*
- *Country*
- *Highest injury level*
- *Event type*

Other

- *Finding text*
- *Probable cause*
- *Status*

The field options under each *Safety recommendations* subcategory are:

Admin info

- *Safety recommendation ID*
- *Recommendation text*
- *Addressee name*
- *Addressee category*
- *Correspondence text*
- *Correspondence type*

Status

- *Overall open/closed*
- *Overall status*
- *Addressee open/closed*
- *Addressee acronym*
- *Addressee status*
- *Date issued*
- *Date overall closed*
- *Date addressee closed*
- *Is reiterated*
- *Times reiterated*

Other

- *Coding text*
- *On Most Wanted List*
- *Recommendation mode*
- *Accident abstract text*
- *Is multiple recipients*
- *Priority level*
- *Is hazmat*
- *Is NPRM*

The field options under each *Aviation fields* subcategory are:

Aircraft info

- *Aircraft category*
- *Engine type*
- *Registration number*
- *Aircraft make*
- *Aircraft model*
- *Amateur built*
- *Number of engines*

Airport info

- *Airport ID*
- *Airport name*

Operation

- *Registered owner*
- *Operator name*
- *General aviation (GA)*
- *FAR part*
- *Purpose of flight*
- *Passenger/cargo/mail*
- *Scheduled*
- *Air medical*
- *Commercial sightseeing*
- *Second pilot present*

Narratives

- *Preliminary narrative*
- *Factual narrative*
- *Analysis narrative*

Sequence of events

- *Event category*

Weather

- *Basic weather condition*

The field options for each of the other first level categories are:

Highway fields

- *Vehicle type*
- *Vehicle make*

Marine fields

- *Vessel type*
- *Vessel name*

Railroad fields

- *Train type*
- *Railroad name*

Pipeline fields

- *Pipeline operator*
- *Pipeline type*

Hazmat fields

- *Chemical released*
- *State of material*
- *Hazard class*

Search parameters Listed by Type

Free text

The free text entry parameters are:

- *NTSB #*
- *Report number*
- *Keys #*
- *City*
- *Finding text*
- *Probable cause*
- *Registration number*
- *Aircraft make*
- *Aircraft model*
- *Registered owner*
- *Operator name*
- *Airport ID*
- *Airport name*
- *Preliminary narrative*
- *Factual narrative*
- *Analysis narrative*
- *Safety recommendation ID*
- *Recommendation text*
- *Addressee name*
- *Correspondence text*
- *Addressee acronym*
- *Coding text*
- *Accident abstract text*
- *Vehicle make*
- *Vessel name*
- *Railroad name*
- *Pipeline operator*
- *Chemical released*

Drop-down menu

The drop-down menu parameters are:

- *Investigation mode*
- *Lead agency*
- *State*
- *Country*
- *Highest injury level*
- *Event type*
- *Status*
- *Addressee category*
- *Overall open/closed*
- *Overall status*
- *Addressee open/closed*
- *Addressee status*
- *Recommendation mode*
- *Priority level*
- *Aircraft category*
- *Engine type*
- *FAR part*
- *Purpose of flight*
- *Passenger/cargo/mail*
- *Scheduled*
- *Event category* (the drop-down menu has categories and subcategories)
- *Basic weather condition*
- *Vehicle type*
- *Vessel type*
- *Train type*
- *Pipeline type*
- *State of material*
- *Hazard class*

Dates

The date parameters are:

- *Original published date*
- *Event date*
- *Date issued*
- *Date overall closed*
- *Date addressee closed*

True/false

The true/ false parameters are:

- *Has safety recommendation*
- *Is reiterated*
- *On Most Wanted List*
- *Is multiple recipients*
- *Is hazmat*
- *Is NPRM*
- *Amateur built*
- *General aviation (GA)*
- *Air medical*
- *Commercial sightseeing*
- *Second pilot present*

Numerical

The numerical parameters are:

- *Times reiterated*
- *Number of engines*

Using *PUBLISHED SEARCHES*

Click on the *PUBLISHED SEARCHES* button on the top-level navigational bar to view the list of published searches. You can also access the *PUBLISHED SEARCHES* by clicking the *Published Searches* button at the bottom of the CAROL Query home page.

The goal of *PUBLISHED SEARCHES* is to provide you a list of canned searches that address common subject areas. For example, safety recommendations issue areas, such as human fatigue or positive train control, or topical searches related to recent accidents. Click on the search you are interested in and the search will run in a new tab and provide you current results.

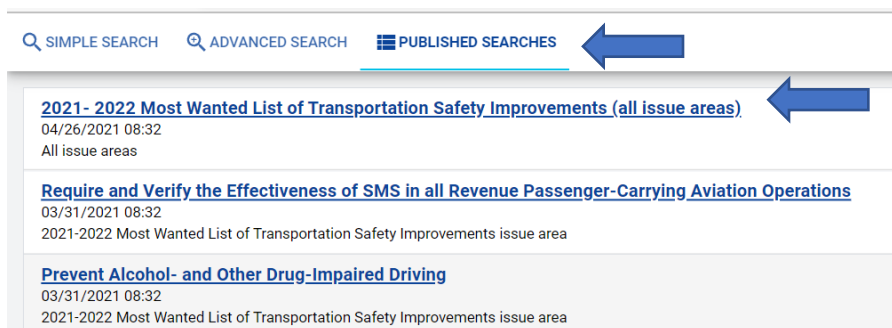


Figure 36: *PUBLISHED SEARCHES* page

Field Descriptions

Common investigation fields

Field Descriptions – Common investigation fields- Admin Info

NTSB #

NTSB assigns a unique case number to each accident/incident. This number is used as a reference in all documents referring to the event. *NTSB #* is available in the *SIMPLE SEARCH* and *ADVANCED SEARCH*. This field is free text entry.

Investigation mode

The primary mode involved in the investigation or study. Options include *Aviation, Hazmat, Highway, Marine, Pipeline, and Railroad*. This field is available in the *SIMPLE SEARCH* and *ADVANCED SEARCH*. This field is a drop-down menu.

The *Investigation mode* is the mode of the lead NTSB office that conducted the investigation. This can differ from the mode of individual recommendations that result from the investigation. For example, the highway office is the lead for the investigation of the “Collision Between Freight Train and Charter Motorcoach at High-Profile Highway–Railroad Grade Crossing Biloxi, Mississippi March 7, 2017.” The recommendations generated from this highway investigation are both highway (H-) and railroad (R-) recommendations.

Keys #

A numerical value used by NTSB to identify an investigation or study. This field is only available in the *ADVANCED SEARCH*. This field is a numerical entry field.

Report #

The NTSB-assigned value used to identify a report. Examples include AIR2201, AAR2001 or MAB1901.

Note that the report number, as it appears on the report pdf, contains a hyphen and a slash, for example, AAR-20/01, but these punctuation marks must be omitted when searching the *Report number* field in CAROL.

Report # is available in *ADVANCED SEARCH*. This field is a free text entry.

Report numbering convention as of January 1, 2022, and beyond

The first letter or two letters references the report mode. A for Aviation, HZ for hazmat, H for Highway, M for Marine, P for Pipeline, and R for Railroad. The modal letters are followed by the letters IR, which stands for Investigation Report.

The next two digits reference to the calendar year the report was adopted. The last two digits refer to the sequential order of that modal category of report during that year.

For example, AIR2201 is the first aviation investigation report adopted in calendar year 2022.

As of January 1, 2022, the report number for Safety Reports and Safety Studies begins with SRR, which stands for Safety Research Report.

As of January 1, 2022, Special Investigation Reports (SIR) are assigned the appropriate modal designation or are classified as a Safety Research Report (SRR), depending on the report's content.

Report numbering convention prior to January 1, 2022

The first three letters reference the mode and type of report, such as aviation accident report (AAR) or marine accident brief (MAB). The next two digits reference to the calendar year the report was adopted. The last two digits refer to the sequential order of that modal category of report during that year.

For example, AAR2001 is the first aviation accident report adopted in calendar year 2020.

Has safety recommendation

This *True/False* query option filters investigations that either resulted in the issuance of one or more safety recommendations or did not result in the issuance of any safety recommendations. This field is only available in the *ADVANCED SEARCH*.

Lead agency

This drop-down menu field allows you to filter investigations based on the agency leading the investigation. The drop-down options are: *NTSB*, *Other*, and *US Coast Guard*. This field is only available in the *ADVANCED SEARCH*.

Original published date

The date the investigation report was originally published. Sometimes investigations reports are corrected and republished for a variety of reasons.

Field Descriptions – Common investigation fields- Basic Info

Event date

The date of the event. Dates are entered in the format: MM/DD/YYYY. This field is available in the *SIMPLE SEARCH* and *ADVANCED SEARCH*.

City

The city or place location closest to the site of the event. This field is available in the *SIMPLE SEARCH* and *ADVANCED SEARCH*. This field is a free text entry.

State

This drop-down menu field lists the state in which the event took place. This field is available in the *SIMPLE SEARCH* and *ADVANCED SEARCH*.

Country

This drop-down menu field lists the country in which the event took place. This field is available in the *SIMPLE SEARCH* and *ADVANCED SEARCH*.

Highest injury level

This drop-down menu field indicates the highest level of injury among all injuries sustained during the event. This field is available in the *SIMPLE SEARCH* and *ADVANCED SEARCH*.

Event type

Options for *Event type* are: *Accident*, *Incident*, and *Occurrence*. *Event type* refers to a regulatory definition of the event severity. The severity of a general aviation accident or incident is classified as the combination of the highest level of injury sustained by the persons involved (that is, fatal, serious, minor, or none) and level of damage to the aircraft involved (that is, destroyed, substantial, minor, or none). This drop-down menu field is only available in the *ADVANCED SEARCH*.

Field Descriptions – Common investigation fields- Other

Finding text

A free text search field searching the text of the NTSB's findings codes. This does not search the text of the findings themselves only the codes used to categorize the findings. This field is only available in the *ADVANCED SEARCH*.

Probable cause

A free text search field searching the text of the NTSB's probable cause of the event. This field is only available in the *ADVANCED SEARCH*.

Status

A drop-down search field concerning the general status of the investigation. The *Query value* options are *Completed* and *In-work*. This field is only available in the *ADVANCED SEARCH*.

Safety Recommendation fields

Field Descriptions – Safety recommendations – Admin info

Safety recommendation ID

Safety recommendation ID refers to the recommendation number. This ID starts with a letter that corresponds to the recommendation mode. A for aviation, H for highway, I for intermodal, M for marine, P for pipeline, and R for railroad. The letter is followed by a dash. Then there are two numerals that represent the calendar year in which the recommendation was adopted. This is not necessary the year that the recommendation was issued. These two digits are followed by another dash. Then there are three numerals that represent the order in which the recommendation was adopted in that year and in that recommendation mode. For example, M-11-021 is the twenty-first marine recommendation adopted in calendar year 2011.

This field is available on the SIMPLE SEARCH, and ADVANCED SEARCH. Both SIMPLE SEARCH and ADVANCED SEARCH are flexible in accepting SR numbers. You can omit the dashes. You can also omit the lead-in zeroes in the last three digits of the SR number. You cannot omit any zeroes in the adopted year portion of the SR number. For example, for M-09-001 you can enter:

- M-09-001
- M-09-01
- M-09-1
- M09001
- M0901
- M091

But you cannot enter M91 to receive M-09-001. If you enter, M91 you will receive all the marine recommendations adopted in 1991.

In the ADVANCED SEARCH, you can enter partial recommendation numbers, such as M-11- , if you select the *Condition contains*. Searching for M-11- or M11with the *Condition contains* will return all marine safety recommendations adopted in calendar year 2011.

Recommendation text

Recommendation text refers to the text of the recommendation sent to the recipient or recipients. This field is available on *SIMPLE SEARCH* and *ADVANCED SEARCH*. Using *SIMPLE SEARCH* you can enter one or more words to search the recommendation text. Using *SIMPLE SEARCH* both words must appear in the recommendation text for a result to be returned, but the words do not need to be sequential. Using *ADVANCED SEARCH*, you can choose the *Condition contains, does not contain, is, is not, starts with, or ends with*. In *ADVANCED SEARCH*, multiple words must appear in sequential order in the *Recommendation text* to appear as a query result

Addressee name

Safety recommendation letters are addressed to the entity best able to act on a problem, whether it be public or private. Addressee name is a non-standardized text-entry field. Names of specific agencies, organizations, states, or cities may be used, and reflect the name at the time the recommendation was issued.

United States Department of Transportation Office of the Secretary and all DOT modal agencies are listed as acronyms in both the *Addressee name* and the *Addressee acronym* fields. For example, DOT, FAA, FHWA, FMCSA, FRA, FTA, and NHTSA. United States Coast Guard is also listed as an acronym (USCG) in both the *Addressee name* and the *Addressee acronym* fields. All other entities are listed using their full names.

Federal government agencies are listed starting with the cabinet level agency. For example, United States Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service. Addressees for agencies within a state or commonwealth begin with the state or commonwealth name. For example, State of Georgia, County of DeKalb, Police Department, Special Operations.

If you aren't sure of the name used in the database, type a partial name and use the *Condition contains*. Then re-do the search with the full correct name, after you obtain it. While addressees are identified individually in the database, the actual letter salutation may show addressees only in the aggregate.

The *Addressee name* field is available in the *ADVANCED SEARCH* and the *SIMPLE SEARCH*. On *SIMPLE SEARCH* both words must appear anywhere in the *Addressee name* for a result to be returned, but the words do not need to be sequential. On *ADVANCED SEARCH*, you can choose the *Condition contains, does not contain, is, is not, starts with, or ends with*. In the *ADVANCED SEARCH*, multiple words must appear in sequential order in the *Addressee name* to appear as a query result.

Addressee category

This field is only available on *ADVANCED SEARCH*. Each addressee in the database is assigned an Addressee category. The *Addressee category* options are *Associations, Federal Government, Foreign, Local Government, Private Industry, State Government, and Union*.

The *Condition* options for *Addressee category* are *is* and *is not*.

Correspondence text

This free text search field is only available in *ADVANCED SEARCH*. It searches the text of the correspondence we have sent to the recommendation recipients and the text of the correspondence the recipients have sent to us. On the *ADVANCED SEARCH*, you can choose the *Condition* options *contains, does not contain, is, is not, starts with, or ends with*. Multiple words must appear in sequential order in the *Correspondence text* to appear as a query result.

Correspondence type

This field is only available in *ADVANCED SEARCH*. It is a drop-down menu field with the *Condition* options *is* and *is not*. It allows you to limit your search to recommendations whose correspondence history contains or does not contain correspondence entries in any of the six available categories. The six *Correspondence type* options are defined below.

Non- Recipient Correspondence: A relevant letter received from an organization that did not receive the recommendation.

NPRM Response: NTSB’s response to another Federal agency’s Federal Register notice. When our response letter references a safety recommendation, the relevant portion of the response letter is entered into that recommendation’s correspondence history.

Official Correspondence: The most common type of correspondence entry. An official response letter received from the recommendation recipient or NTSB’s official reply to the recommendation recipient’s letter.

Reiteration: A correspondence history entry describing a reiteration of the recommendation.

Report Reclassification: A correspondence entry describing the reclassification of the recommendation that occurred in an investigative report or study and not in the usual recommendation classification letter, which are independent of investigative reports and studies.

Transmittal Letter: A correspondence entry of the initial transmittal letter sent to the recommendation recipient, informing them of the recommendation.

Field Descriptions – Safety recommendations- Status

Overall open/closed

This field is only available in *ADVANCED SEARCH*. It allows you to search whether the overall status of a recommendation is open or closed. (“Open” and “closed” each include multiple statuses). The “Open” statuses are:

- Open—Acceptable Response,
- Open—Acceptable Alternate Response,
- Open—Unacceptable Response,
- Open—Response Received, and
- Open—Await Response.

The “Closed” statuses are:

- Closed—Exceeds Recommended Action,
- Closed—Acceptable Action,
- Closed—Unacceptable Action,
- Closed—Unacceptable Action/ No Response Received,
- Closed—Reconsidered,
- Closed—No Longer Applicable,

- Closed—Superseded,
- Closed—Acceptable Action/ Superseded, and
- Closed—Unacceptable Action/ Superseded.

For multiple recipient recommendations, the overall status is the status of the plurality of open recommendation recipients, if there are remaining open recipients. The plurality means the status most often encountered but not necessarily the majority. Here’s an example with 7 open recommendation recipients:

- 1st recipient: Open—Acceptable Response
- 2nd recipient: Open—Acceptable Response
- 3rd recipient: Open—Unacceptable Response
- 4th recipient: Open—Await Response
- 5th recipient: Open—Initial Response Received
- 6th recipient: Closed—Acceptable Action
- 7th recipient: Closed—Acceptable Action

The overall status would be Open—Acceptable Response because it is the plurality of open recipients. It is not the majority because in this case there is no majority of open recipients; only 2 out of 5, not 3 out of 5, are in Open—Acceptable Response status.

If all the recipients are closed, the overall status is the status of the plurality of all recipients. For single recipient recommendations, the overall status and the addressee status are the same. The *Condition* options for *Overall open/closed* are *is* and *is not*.

Overall status

This field is only available in *ADVANCED SEARCH*. It allows you to search on the overall status of safety recommendations. In the *Query value field*, you choose from the list of all statuses.

For multiple recipient recommendations, the overall status is the status of the plurality or open recommendation recipients, if there are remaining open recipients. If the recommendation is closed for all the recipients, the overall status is the status of the plurality of all recipients.

For single recipient recommendations, the overall status and the addressee status are the same. The *Condition* options for *Overall status* are *is* and *is not*.

Addressee open/closed

This field is only available in *ADVANCED SEARCH*. The addressee status refers to the status of the recommendation to an individual recipient. The overall status and the addressee status are the same if there is only one recipient for a recommendation. If there is more than one recommendation recipient, the addressee status can vary from the overall status. This field allows you to select whether the addressee status is an open or a closed classification status. “Open” and “closed” each include multiple statuses. The “Open” statuses are:

- Open—Acceptable Response,
- Open—Acceptable Alternate Response,
- Open—Unacceptable Response,
- Open—Response Received, and Open—Await Response.

The “Closed” statuses are:

- Closed—Exceeds Recommended Action,
- Closed—Acceptable Action,
- Closed—Unacceptable Action,
- Closed—Unacceptable Action/ No Response Received,
- Closed—Reconsidered,
- Closed—No Longer Applicable,
- Closed—Superseded,
- Closed—Acceptable Action/ Superseded, and
- Closed—Unacceptable Action/ Superseded.

The *Condition* options for *Addressee open/closed* are *is* and *is not*.

Addressee acronym

This field is only available in *ADVANCED SEARCH*. It allows you to search on the addressee acronym in a free text search field. You can choose the *Condition* options *contains*, *does not contain*, *is*, *is not*, *starts with*, or *ends with*. **Not** all *Addressee name* entries have an entry in the

Addressee acronym field. Only organizations with commonly used acronyms have a value in this field.

As noted in the description of the *Addressee name* field, the United States Department of Transportation Office of the Secretary and all DOT modal agencies are listed as acronyms in both the *Addressee name* and the *Addressee acronym* fields. For example, DOT, FAA, FHWA, FMCSA, FRA, FTA, and NHTSA. United States Coast Guard is also listed as an acronym (USCG) in both the *Addressee name* and the *Addressee acronym* fields.

Addressee status

This field is only available in *ADVANCED SEARCH*. It allows you to search on the addressee status of safety recommendations. In the *Query value field*, you choose from the list of all statuses. For single recipient recommendations, the overall status and the addressee status are the same. If there is more than one recommendation recipient, the addressee status can vary from the overall status. The *Condition* options for Addressee status are *is* and *is not*.

Date issued

This field is only available in *ADVANCED SEARCH*. It refers to the date the safety recommendation was transmitted to the recipient. For date parameters enter a date using the month/day/year format. For example, 01/05/2005.

To create a date range, make two rules. Choose the *Condition is on or after* and enter the first date in your range. Choose the *Condition is on or before* and enter the most recent date in your range. For example, for the date range January 1, 2016 through December 31, 2016, the parameters would be *Condition is on or after* 01/01/2016 and *Condition is on or before* 12/31/2016.

The *Condition* options for *Date issued* are *is*, *is not*, *is after*, *is before*, *is on or after*, and *is on or before*.

Date overall closed

This field is only available in *ADVANCED SEARCH*. This field refers to the date that the safety recommendation closed for its last recipient.

For single-recipient recommendations, the overall date closed and the addressee date closed are the same. For multiple-recipient recommendations, the overall date closed and the addressee date closed can vary.

For date parameters enter a date using the month/day/year format. For example, 01/05/2005. To create a date range, make two rules. Choose the *Condition is on or after* and enter the first date in your range. Choose the *Condition is on or before* and enter the most recent date in your range. For example, for the date range January 1, 2016 through December 31, 2016, the parameters would be *Condition is on or after* 01/01/2016 and *Condition is on or before* 12/31/2016.

The *Condition* options for *Date overall closed* are *is*, *is not*, *is after*, *is before*, *is on or after*, and *is on or before*.

Date addressee closed

This field is only available in *ADVANCED SEARCH*. This field refers to the date that a recommendation status was changed to closed for an individual recipient.

For single-recipient recommendations, the overall date closed and the addressee date closed are the same. For multiple-recipient recommendations, the overall date closed and the addressee date closed can vary. For date parameters enter a date using the month/day/year format. For example, 01/05/2005.

To create a date range, make two rules. Choose the *Condition is on or after* and enter the first date in your range. Choose the *Condition is on or before* and enter the most recent date in your range. For example, for the date range January 1, 2016 through December 31, 2016, the parameters would be *Condition is on or after* 01/01/2016 and *Condition is on or before* 12/31/2016.

The *Condition* options for *Date addressee closed* are *is*, *is not*, *is after*, *is before*, *is on or after*, and *is on or before*.

Is reiterated

This field is only available in *ADVANCED SEARCH*. This field refers to whether a safety recommendation has been reiterated or not. The *Condition* options for *Is reiterated* are *is* and *is not*. The *Query value options* are *True* and *False*.

We reiterate recommendations when the safety issue addressed in the recommendation comes up again in a later investigation or study. Recommendations can be reiterated multiple times.

Times reiterated

This field is only available in *ADVANCED SEARCH*. This field refers to how many times a safety recommendation has been reiterated. The Condition options for *Times reiterated* are *is*, *is not*, *is greater than*, and *is less than*. The *Query value box* has up and down arrows allowing you to select a number. Safety recommendations cannot be reiterated a negative number of times.

We reiterate recommendations when the safety issue addressed in the recommendation comes up again in a later investigation or study. Recommendations can be reiterated multiple times. This field returns items with an exact match. For example, selecting a *Times reiterated* value of 3 returns all recommendations reiterated exactly three times, not recommendations reiterated more than three times.

Field Descriptions – Safety recommendations- Other

Coding text

This field is only available in *ADVANCED SEARCH*. It refers to the text of the taxonomy used to categorize safety recommendations. We are working on updating the recommendations to assign them the appropriate categorizations to facilitate the optimal use of this field. This field is not yet operational.

On Most Wanted List

This field is only available in *ADVANCED SEARCH*. We associate related recommendations to each issue area on our Most Wanted List of Transportation Safety Improvements (MWL). The MWL represents the NTSB's advocacy priorities and is designed to increase awareness of the most critical changes needed to reduce transportation accidents and save lives.

This field allows you to search for SRs associated with the current MWL. The Query value options for the *On Most Wanted List field* are *True* and *False*. The *Condition* options are *is* and *is not*.

Recommendation mode

This field is only available in *ADVANCED SEARCH*. This field refers to the mode of the individual recommendation, which may differ from the investigation mode.

For example, the aviation office may investigate parasailing accidents, causing the investigation to be associated with the aviation mode. But, the recommendations that the aviation office issues may be marine recommendations. For these marine recommendations, issued by the aviation office, the recommendation mode is marine.

The first letter of the recommendation ID refers to the recommendation mode. A for aviation, H for Highway, I for intermodal, M for marine, P for pipeline, and R for rail. To search the recommendation mode, select from the list of choices in the *Query value field*. Intermodal recommendations are a unique category that may cross two or more modal areas; however, their *Recommendation mode* will only be represented under intermodal. The *Condition options* are *is* and *is not*.

Accident abstract text

Accident abstract text refers to the text of the abstract for the investigation or study which generated the recommendation. This field is only available in *ADVANCED SEARCH*. You can choose the *Condition contains, does not contain, is, is not, starts with, or ends with*. In the *ADVANCED SEARCH*, multiple words entered in the *Query value* field must appear in sequential order in the *Accident abstract text* to appear as a query result.

Is multiple recipients

This field is only available on *ADVANCED SEARCH*. The *Condition* options are *is* and *is not*. The *Query value* options are *true* and *false*. Some recommendations are issued to more than one recipient. These are known as multiple recipient recommendations. This search field allows you to search for whether a recommendation is a multiple recipient recommendation or not.

Priority level

This field is only available on *ADVANCED SEARCH*. We occasionally designate safety recommendations as urgent, when they represent a pressing safety issue. We expect recipients to take action on urgent recommendations immediately. This field allows you to search for *Urgent or Non-urgent* recommendations in the *Query value* drop-down menu. The *Condition* options are *is* and *is not*.

Is hazmat

This field is only available on *ADVANCED SEARCH*. This field designates whether a recommendation concerns hazardous materials. Hazmat recommendations can be associated with any recommendation mode. The *Query value* options are *True* and *False*. The *Condition* options are *is* and *is not*.

Is NPRM

This field is only available on *ADVANCED SEARCH*. We monitor the Federal Register and comment on submissions from other federal agencies that concern transportation safety. Sometimes, our comments reference safety recommendations. If our comments reference recommendations, the comments are included in the recommendation database correspondence history and the recommendations are marked as being associated with an NPRM response. This field allows you to search for recommendations associated with our comments on other federal agencies' Federal Register notices. The *Query value* options are *True* and *False*. The *Condition* options are *is* and *is not*.

Recommendation Status

The status of a recommendation is "open" until the sufficient action has been achieved to mark it "closed". Please see the chart below for a list and explanation of all the recommendation statuses. Status determination is made periodically by the Board.

Status	Status Definition
CEX	<i>Closed--Exceeds Recommended Action:</i> Response by recipient indicates action on the safety recommendation has been completed. The action taken surpasses what the Safety Board envisioned.
CAA	<i>Closed--Acceptable Action:</i> Response by recipient indicates action on the safety recommendation has been completed. The action complies with the safety recommendation.
CAAA	<i>Closed--Acceptable Alternate Action:</i> Response by recipient indicates an alternate course of action has been completed that meets the objective of the safety recommendation.
CUA	<i>Closed--Unacceptable Action:</i> Response by recipient expresses disagreement with the need outlined in the recommendation. There is no further evidence to offer, and the Safety Board concludes that further correspondence on, or discussion of, the matter would not change the recipient's position. This status can also be used when the timeframe goals outlined in this order have not been met.
CUAN	<i>Closed--Unacceptable Action/No Response Received:</i> No response to the recommendation was ever received.
CR	<i>Closed--Reconsidered:</i> Recipient rejects the safety recommendation and supports this rejection with a rationale with which the Board concurs. Reasons for the "Reconsidered" status would include situations where the recipient is able to convince the Board that the proposed action would not be effective or that it might create other problems. This status is also assigned when the recipient of a recommendation was in compliance before the recommendation was issued or when the recipient was incorrectly chosen and cannot perform the recommended action.
CNLA	<i>Closed--No Longer Applicable:</i> The recommended action has been overtaken by events. For example, if technology and/or regulatory action has eliminated the reason for the recommendation or if a company has gone out of business.

Status	Status Definition
CS	<i>Closed--Superseded:</i> Applied to recommendations held in an open status when a new, more appropriate safety recommendation is issued that includes the necessary elements of the recommendation to be closed.
CAAS, CAAAS, CUAS	<i>Closed--Acceptable/Acceptable Alternate/Unacceptable Action Superseded:</i> Applied to recommendations held in an open status when a new, more appropriate safety recommendation is issued that includes the necessary elements of the recommendation to be closed. The Board determines the Acceptable/Acceptable Alternate/Unacceptable status based on the criteria defined above prior to superseding the recommendation.
OAA	<i>Open--Acceptable Response:</i> Response by recipient indicates a planned action that would comply with the safety recommendation when completed.
OAAR	<i>Open--Acceptable Alternate Response:</i> Response by recipient indicates an alternate plan or implementation program that would satisfy the objective of the safety recommendation when implemented.
OUA	<i>Open--Unacceptable Response:</i> Response by recipient expresses disagreement with the need outlined in the recommendation or attempts to convince the Board (unsuccessfully) that an alternative course of action is acceptable. The Board believes, however, that there is enough supporting evidence to ask the recipient to reconsider its position. This status can also be used when the Board believes that action is not being taken in a timely manner.
ORR	<i>Open--Response Received:</i> Response has been received from recipient, but staff evaluation of the response has not been approved by the Board Members.
OAR	<i>Open--Await Response:</i> When a safety recommendation is issued, the status "Open-Await Response" is automatically assigned.

Aviation fields

Field Descriptions – Aviation fields- Aircraft info

Aircraft category

The category of the involved aircraft. In this case, the definition of aircraft category is the same as that used with respect to the certification, ratings, privileges, and limitations of airmen. Also note that there is some overlap of category and class in the available choices. This drop-down menu field is available in the *SIMPLE SEARCH* and *ADVANCED SEARCH*.

Engine Type

A drop-down menu search option listing a variety of engine types. This field is only available in *ADVANCED SEARCH*.

Registration number

The full registration (tail) number of the involved aircraft, including the International Civil Aviation Organization (ICAO) country prefix. Note: the prefix for US registered aircraft is "N." This free text search field is available in the *SIMPLE SEARCH* and *ADVANCED SEARCH*.

Aircraft make

Name of the manufacturer of the involved aircraft. This free text search field is only available in the *ADVANCED SEARCH*.

Aircraft model

The full alphanumeric aircraft model code, including any applicable series or derivative identifiers. For example, a 200 series Boeing 737 is entered as 737-200. This free text search field is only available in the *ADVANCED SEARCH*.

Amateur built

Aircraft is a homebuilt (true/false). This field is only available in the *ADVANCED SEARCH*.

Number of engines

The total number of engines on the accident aircraft. This numerical search field is only available in the *ADVANCED SEARCH*.

Field Descriptions – Aviation fields- Airport info

Airport ID

Airport code if the event took place within 3 miles of an airport, or the involved aircraft was taking off from, or on approach to, an airport. This free text search field is only available in the *ADVANCED SEARCH*.

Airport name

Airport name if the event took place within 3 miles of an airport, or the involved aircraft was taking off from, or on approach to, an airport. This free text search field is only available in the *ADVANCED SEARCH*.

Field Descriptions – Aviation fields- Operation

Registered owner

This is a free text field that is only available in *ADVANCED SEARCH*. The contents of the *Registered owner* field are only available in the JSON file download.

Operator name

This is a free text field that is only available in *ADVANCED SEARCH*. The contents of the *Operator name* field are only available in the JSON file download.

General aviation (GA)

A true/false field allowing you to narrow your search to general aviation investigations. This field is only available in the *ADVANCED SEARCH*.

FAR part

The applicable regulation part (14 CFR) or authority the aircraft was operating under at the time of the accident. This drop-down menu field is available in the *SIMPLE SEARCH* and *ADVANCED SEARCH*.

Purpose of flight

This drop-down menu allows you to select the purpose of the flight. Options for this field include categories derived from the FAA's General Aviation Activity Survey, such as *Personal*, *Business*, *Aerial application* and *Firefighting* flights. This field is only available in the *ADVANCED SEARCH*.

Passenger/cargo/mail

This drop-down menu field allows you to select from the options: cargo, mail contract only, passenger, passenger/cargo, and unknown. This field is only available in the *ADVANCED SEARCH*.

Scheduled

If the accident aircraft was conducting air carrier operations under 14 CFR 121, 125, 129, or 135, indicate whether it was operating as a "scheduled or commuter" air carrier or as a "non-scheduled or air taxi" carrier. This drop-down menu field is only available in the *ADVANCED SEARCH*.

Air medical

A true/false field allowing you to select if the event was an air medical operation. This field is only available in the **ADVANCED SEARCH**.

Commercial sightseeing

A true/false field allowing you to select if the event was a commercial sightseeing operation. This field is only available in the **ADVANCED SEARCH**.

Second pilot present

A true/false field allowing you to select if a second pilot was present during the event. This field is only available in the **ADVANCED SEARCH**.

Field Descriptions – Aviation fields- Narratives

Preliminary narrative

A free text search field searching the text of the preliminary narrative. This field is only available in the **ADVANCED SEARCH**.

Factual narrative

A free text search field searching the text of the factual narrative. This field is only available in the **ADVANCED SEARCH**.

Analysis narrative

A free text search field searching the text of the analysis narrative. This field is only available in the **ADVANCED SEARCH**.

Field Descriptions – Aviation fields- Sequence of events

Event category

This field is a drop-down menu of the event categories and subcategories, which you can use to filter the investigations. The event category options follow the Commercial Aviation Safety Team (CAST) / International Civil Aviation Organization (ICAO) Common Taxonomy definitions and usage notes available at <http://www.intlaviationstandards.org>. This field is only available in the **ADVANCED SEARCH**.

Field Descriptions – Aviation fields- Weather

Basic weather condition

This drop down menu field allows you to select from two options: (1) IMC (Instrument meteorological conditions) (2): VMC (Visual meteorological conditions).

Highway fields

Vehicle type

This field is a drop-down menu allowing you to choose the general type of vehicle, for example, passenger car and bus. This field is only available in the *ADVANCED SEARCH*.

Vehicle make

This is a free text field allowing you to enter the vehicle make, for example Ford or Chevrolet. This field is only available in the *ADVANCED SEARCH*.

Marine fields

Vessel type

This drop-down field allows you to choose the vessel type. Options include cargo and passenger. This field is only available in the *ADVANCED SEARCH*.

Vessel name

This free text search field allows you to enter the vessel name, such as Century Queen or USS Fitzgerald. This field is available in the *KEYOWRD SEARCH* and *ADVANCED SEARCH*.

Railroad fields

Train type

This is a drop-down field that allows you to search on the type of train operation. Options include *FRA regulated freight*, *FRA regulated passenger*, *FTA regulated transit*, and *Unregulated fixed guideways*. This field is only available in the *ADVANCED SEARCH*.

Railroad name

This free text search field allows you to enter the railroad name, such as Cando Rail. This field is only available in the *ADVANCED SEARCH*.

Pipeline fields

Pipeline operator

This free text field allows you to search the name of the pipeline operator. Examples of pipeline operators include Atmos Energy and Pacific Gas & Electric. This field is only available in the *ADVANCED SEARCH*.

Pipeline type

This drop-down field allows you to choose the pipeline type. Options include *Distribution* and *Gas transmission*. This field is only available in the *ADVANCED SEARCH*.

Hazmat fields

Chemical released

This free text type allows you to enter the type of chemical released. Examples include crude oil and anhydrous ammonia. This field is only available in the *ADVANCED SEARCH*.

State of material

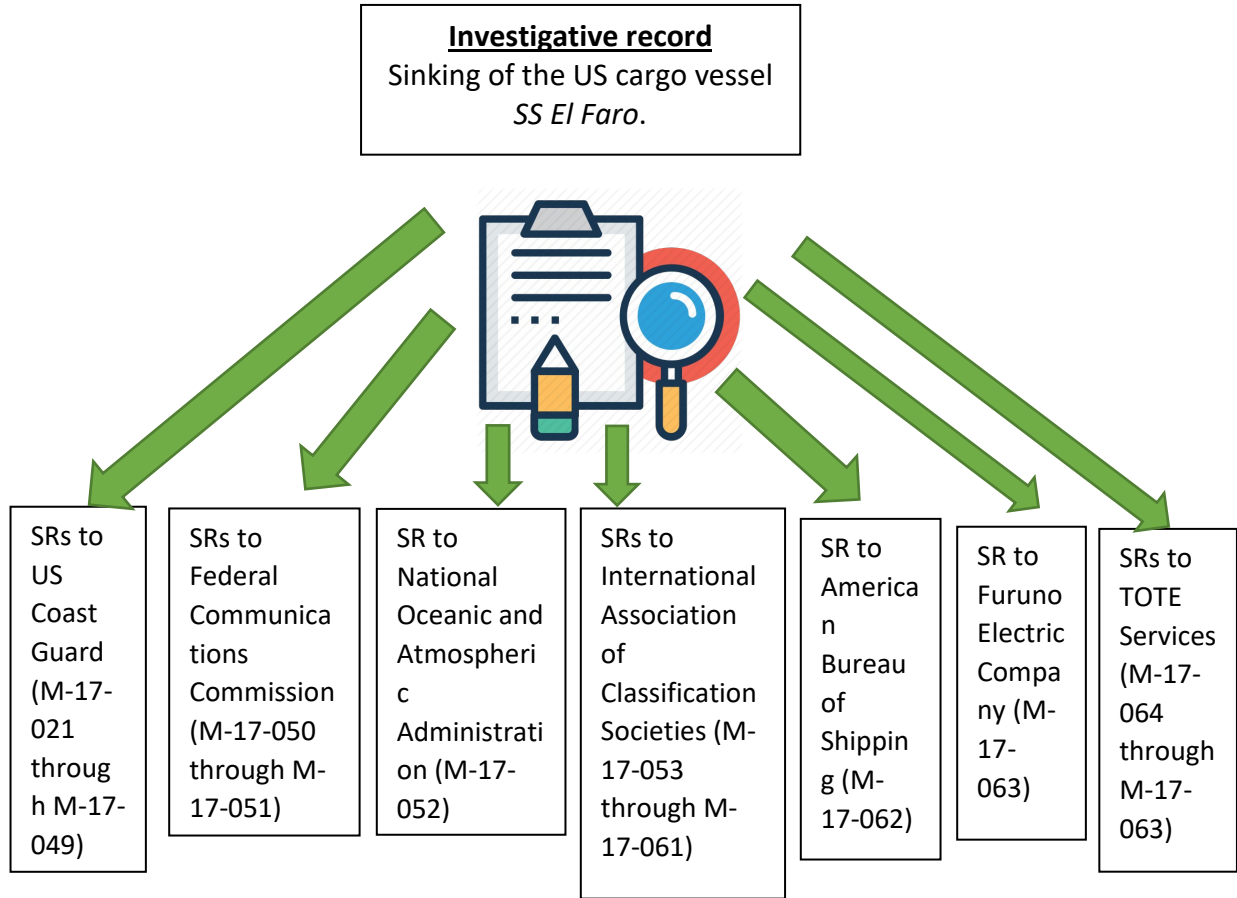
The state of material is a drop-down field referring to the state of the material involved in the accident. The options are *Gas*, *Liquid*, *Other*, and *Solid*. This field is only available in the *ADVANCED SEARCH*.

Hazard class

This drop-down field lists the hazard classes one through nine. Examples include *Class 7: Radioactive* and *Class 8: Corrosive*. This field is only available in the *ADVANCED SEARCH*.

Data Limitations in CAROL

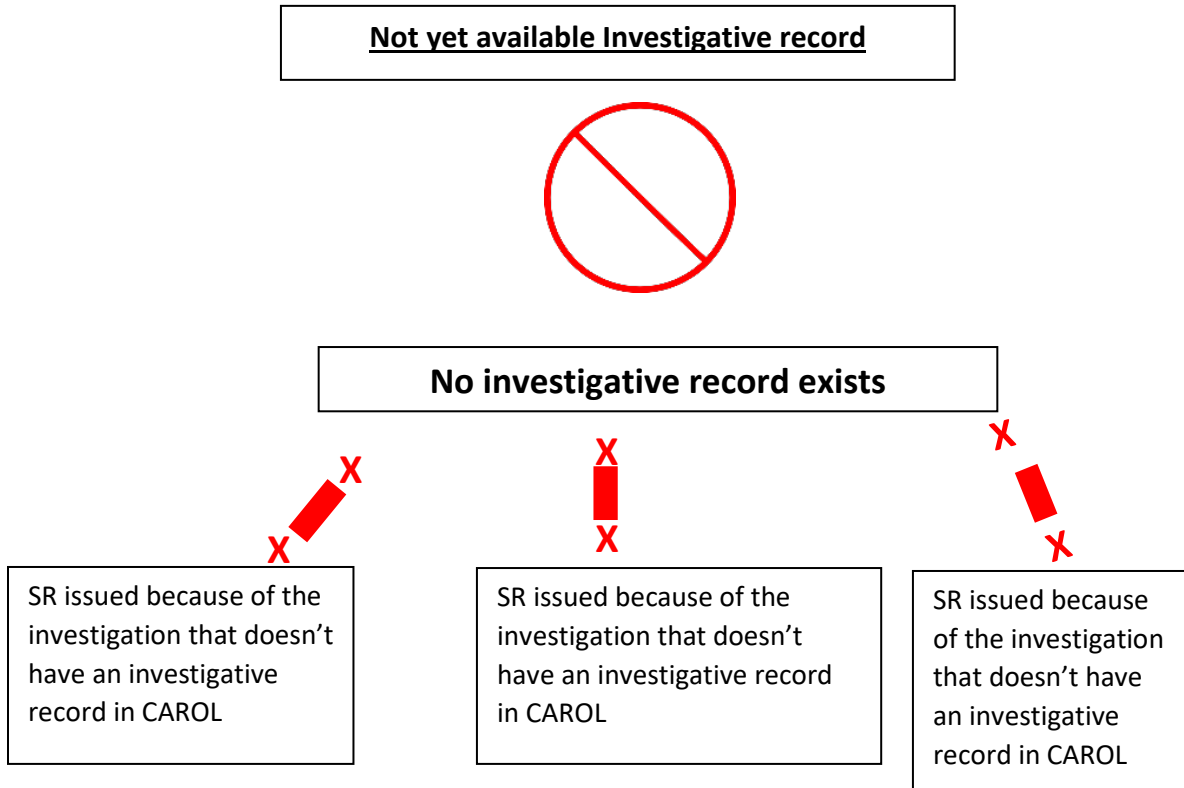
Every safety recommendation we issued because of an investigation, a safety study, or stand-alone document describing safety issues we observed. In CAROL, the project which resulted in one or more safety recommendations is known as an investigative record. See the chart below for a visual example of this concept.



How do CAROL's data limitations impact my search results?



As described in greater detail in the table “Completeness of Search Results Based on Fields Searched and Lens Selected,” the limited nature of the investigative records in CAROL has a direct impact on your search results in both the *INVESTIGATIONS* lens and the *RECOMMENDATIONS* lens.



The chart above shows that when an investigative record does not yet exist in CAROL, if you search for any of the safety recommendations issued because of the accident and you choose the *INVESTIGATIONS* lens, you will receive zero results.

Your lens selection is zooming in on the empty investigation record. If you search for only safety recommendation fields and choose the *RECOMMENDATIONS* lens, you will receive complete results.

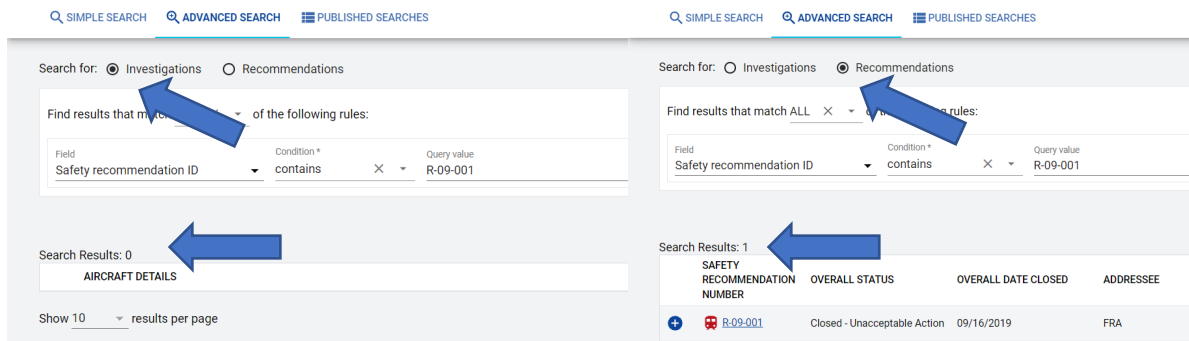


Figure 37: Zero search results in Investigations lens for a search for an SR and 1 result in the Recommendations lens for the same search

The only way to ensure complete results from 1967 through the present is to only search safety recommendations fields and to choose the *Recommendations* lens. The chart below describes

each combination of search fields and lens selections and the completeness of the results. Surface modal fields are hazmat, highway, marine, pipeline, or railroad fields.

If you search modal-specific fields from multiple modes, such as pipeline and highway, without using an ANY clause, you will always receive zero results. Modal-specific field values from more than one mode will not exist in an individual investigative record. Pipeline-specific fields, such as *Pipeline type*, and highway-specific fields, such as *Vehicle make*, do not both exist on a single pipeline or highway investigative record.



Completeness of Search Results Based on Fields Searched and Lens Selected

Fields Searched using AND operator to require records exist in all fields searched	Lens selected	Completeness of results
Recommendation fields only	<i>RECOMMENDATIONS</i>	100% from 1967- present
Recommendation fields only	<i>INVESTIGATIONS</i>	Aviation complete from 1983- present Surface modes (hazardous materials, highway, marine, pipeline, and railroad) complete from 2010- present. Safety studies are complete from 2020- present.
Aviation fields only	<i>RECOMMENDATIONS</i>	Complete from 1983- present, <i>except</i> SRs resulting from safety studies, stand-alone letters, or accidents that were multi-modal. Safety studies are complete from 2020- present.
Aviation fields only	<i>INVESTIGATIONS</i>	Complete from 1983- present
Surface modal fields, from only one surface mode	<i>RECOMMENDATIONS</i>	Surface modes (hazardous materials, highway, marine, pipeline, and railroad) complete from 2010- present. Safety studies are complete from 2020- present.

Fields Searched using AND operator to require records exist in all fields searched	Lens selected	Completeness of results
Surface modal fields, from only one surface mode	<i>INVESTIGATIONS</i>	Surface modes (hazardous materials, highway, marine, pipeline, and railroad) complete from 2010-present. Safety studies are complete from 2020-present.
Common investigative fields	<i>RECOMMENDATIONS</i>	Aviation complete from 1983- present, <i>except</i> SRs resulting from safety studies, stand-alone letters, or accidents that were multi-modal Surface modes (hazardous materials, highway, marine, pipeline, and railroad) complete from 2010-present. Safety studies are complete from 2020-present.
Common investigative fields	<i>INVESTIGATIONS</i>	Aviation complete from 1983- present Surface modes (hazardous materials, highway, marine, pipeline, and railroad) complete from 2010-present. Safety studies are complete from 2020-present.
Recommendation fields and aviation fields	<i>RECOMMENDATIONS</i>	Complete from 1983-present, <i>except</i> SRs resulting from safety studies, stand-alone letters, or accidents that were multi-modal. Safety studies are complete from 2020-present.
Recommendation fields and aviation fields	<i>INVESTIGATIONS</i>	Complete from 1983-present

Fields Searched using AND operator to require records exist in all fields searched	Lens selected	Completeness of results
Recommendation fields and surface modal fields, from only one surface mode	<i>RECOMMENDATIONS</i>	Surface modes (hazardous materials, highway, marine, pipeline, and railroad) complete from 2010-present. Safety studies are complete from 2020-present.
Recommendation fields and surface modal fields, from only one surface mode	<i>INVESTIGATIONS</i>	Surface modes (hazardous materials, highway, marine, pipeline, and railroad) complete from 2010-present. Safety studies are complete from 2020-present.
Recommendation fields and common investigation fields	<i>RECOMMENDATIONS</i>	Aviation complete from 1983- present, <i>except</i> SRs resulting from safety studies, stand-alone letters, or accidents that were multi-modal. Surface modes (hazardous materials, highway, marine, pipeline, and railroad) complete from 2010-present. Safety studies are complete from 2020-present.
Recommendation fields and common investigation fields	<i>INVESTIGATIONS</i>	Aviation complete from 1983- present Surface modes (hazardous materials, highway, marine, pipeline, and railroad) complete from 2010-present. Safety studies are complete from 2020-present.
Aviation fields and common investigation fields	<i>RECOMMENDATIONS</i>	Complete from 1983-present, <i>except</i> SRs resulting from safety studies, stand-alone letters,

Fields Searched using AND operator to require records exist in all fields searched	Lens selected	Completeness of results
		or accidents that were multi-modal. Safety studies are complete from 2020-present.
Aviation fields and common investigation fields	<i>INVESTIGATIONS</i>	Complete from 1983-present.
Common investigations fields and surface modal fields, from only one surface mode	<i>RECOMMENDATIONS</i>	Surface modes (hazardous materials, highway, marine, pipeline, and railroad) complete from 2010-present. Safety studies are complete from 2020-present.
Common investigations fields and surface modal fields, from only one surface mode	<i>INVESTIGATIONS</i>	Surface modes (hazardous materials, highway, marine, pipeline, and railroad) complete from 2010-present. Safety studies are complete from 2020-present.
Recommendation fields, aviation fields, and common investigation fields	<i>RECOMMENDATIONS</i>	Complete from 1983-present, <i>except</i> SRs resulting from safety studies, stand-alone letters, or accidents that were multi-modal. Safety studies are complete from 2020-present.
Recommendation fields, aviation fields, and common investigation fields	<i>INVESTIGATIONS</i>	Complete from 1983-present
Recommendation fields, common investigation fields, and surface modal fields, from only one surface mode	<i>RECOMMENDATIONS</i>	Surface modes (hazardous materials, highway, marine, pipeline, and railroad) complete from 2010-present. Safety studies are complete from 2020-present.
Recommendation fields, common investigation fields, and surface	<i>INVESTIGATIONS</i>	Surface modes (hazardous materials, highway, marine,

Fields Searched using AND operator to require records exist in all fields searched	Lens selected	Completeness of results
modal fields, from only one surface mode		pipeline, and railroad) complete from 2010-present. Safety studies are complete from 2020-present.