

GROUND TRAFFIC PHRASEOLOGY



NAV CANADA would like to thank all those from across the industry that contributed to the creation of this document.



GROUND TRAFFIC PHRASEOLOGY

Table of Contents

| | |
|---|----|
| Legend | 1 |
| About This Document..... | 2 |
| Document Format | 2 |
| Phraseology Examples..... | 2 |
| Phonetic Alphabet | 3 |
| Numbers..... | 3 |
| Roman Numerals | 4 |
| Standard Words and Phrases..... | 5 |
| Air Traffic Service (ATS) Units | 6 |
| What to Expect From Different ATS Units | 7 |
| Language | 9 |
| Radio Operation..... | 10 |
| Best Practices | 10 |
| Hot Spots..... | 11 |
| General Format of Radio Communication..... | 12 |
| Initial Contact..... | 13 |
| Stand By | 14 |
| Radio Check | 14 |
| Report Your Position | 15 |
| Proceed Via..... | 15 |
| Give Way To..... | 16 |
| Hold Position..... | 16 |
| Hold Short..... | 16 |

| | |
|--|----|
| Hold Short and Read Back..... | 17 |
| Crossing a Runway..... | 18 |
| Report Off..... | 19 |
| Say Again..... | 20 |
| Unsure of Position | 21 |
| Progressive Instructions..... | 21 |
| Operating on a Runway..... | 22 |
| Without Delay..... | 23 |
| Negative | 23 |
| Leave/Exit..... | 24 |
| “Did You Know” – Runway Incursions | 24 |
| Runway Protected Area | 25 |
| Instrument Landing System Critical Area | 25 |
| Repetitive Operations | 27 |
| Multiple Vehicles | 27 |
| Broken Down Vehicle..... | 28 |
| Towing an Aircraft..... | 29 |
| Low Visibility/Night | 30 |
| Wildlife..... | 31 |
| Foreign Object Debris (FOD) | 31 |
| Aircraft Rescue and Fire Fighting..... | 32 |
| Communication Failure/Flashing of Runway Lights..... | 33 |

Legend



Safety-Related Content



Best Practice-Related Content



Phraseology Used by Air Traffic Controllers



Phraseology Used by Flight Service Specialists



Phraseology Used by Ground Vehicle Operators



Phraseology Used by Air Traffic Services

About This Document

This document is intended as a learning tool and reference guide to phraseology for ground vehicle operators and aircraft maintenance engineers. This document has been created using resources including the *Canadian Aviation Regulations (CARs)*, *Transport Canada Aeronautical Information Manual (TC AIM)* and *Glossary for Pilots and Air Traffic Services Personnel*, as well as input from Air Traffic Controllers (ATC), Flight Service Specialists (FSS), Flight Information Centres (FIC), and commercial aviation leaders from across the country.

Safety is a driving force in aviation. Communications are an important contributing factor to safety and many incidents and occurrences cite communication as a primary cause. It is easy to forget that the voice on the other end of the radio is a person too. If everyone begins with the same foundation of standard phraseology, there is less room for error or misinterpretation.

Document Format

Examples of phraseology in this document are laid out as follows:

- any pertinent information is given
- the example is broken down into its critical parts
- a fictitious example is then shown to give the user a clear idea as to how the phraseology might be spoken



For simplification, Area Control Centres, Control Towers, Airport Advisory Services, Flight Information Services and Community Aerodrome Radio Stations will be identified as Air Traffic Services, or “ATS” in this document. For more details on these units, see section below, [What to Expect From Different ATS Units](#).



For definitions of unfamiliar or aviation-specific words found in the document, consult [Terminav[®]](#) or the [Transport Canada Glossary for Pilots and Air Traffic Services Personnel](#).

Phraseology Examples

In the examples given, the critical parts will be designated as follows:

- | | |
|-------------------------|---|
| UPPERCASE | Indicates words that are to be spoken exactly as written |
| (in parentheses) | Describes the information to be inserted |
| / slash | Indicates that there are alternative words or information; use only one |

Example:

Reads as: REPORT ON/AT (location)

Spoken as: Report on the apron ... or ... Report at the apron

Phonetic Alphabet

| Alphabet | Pronunciation | Alphabet | Pronunciation |
|-------------|---------------|--------------|---------------|
| A – Alfa | AL fah | N – November | No VEM ber |
| B – Bravo | BRAH VOH | O – Oscar | OSS cahr |
| C – Charlie | CHAR lee | P – Papa | Pah PAH |
| D – Delta | DELL tah | Q – Quebec | Keh BECK |
| E – Echo | ECK oh | R – Romeo | ROW me oh |
| F – Foxtrot | FOKS trot | S – Sierra | See AIR ah |
| G – Golf | GOLF | T – Tango | TANG go |
| H – Hotel | Hoh TELL | U – Uniform | YOU nee form |
| I – India | IN dee ah | V – Victor | VIK tah |
| J – Juliett | JEW lee ETT | W – Whiskey | WISS key |
| K – Kilo | KEY loh | X – X-Ray | ECKS Ray |
| L – Lima | LEE mah | Y – Yankee | YANG key |
| M – Mike | MIKE | Z – Zulu | ZOO loo |

Numbers

| Term | Pronunciation | Term | Pronunciation |
|------|---------------|----------|---------------|
| 0 | ZE RO | 7 | SEV en |
| 1 | WUN | 8 | AIT |
| 2 | TOO | 9 | NIN er |
| 3 | TREE | Decimal | DAY SEE MAL |
| 4 | FOW er | Hundred | HUN dred |
| 5 | FIFE | Thousand | TOU SAND |
| 6 | SIKS | | |

| Number | Pronunciation |
|--------|--|
| 10 | ONE ZERO |
| 74 | SEVEN FOUR |
| 100 | ONE ZERO ZERO |
| 584 | FIVE EIGHT FOUR |
| 12000 | ONE TWO THOUSAND or ONE TWO ZERO ZERO ZERO |
| 38542 | THREE EIGHT FIVE FOUR TWO |

ATS at times use NINER and FIFE (particularly when communicating with aircraft). However ground vehicle operators and aircraft maintenance engineers are not required to use these terms and may use NINE and FIVE.

Roman Numerals

| Number | Roman Numeral | Number | Roman Numeral |
|--------|---------------|--------|---------------|
| 1 | I | 11 | XI |
| 2 | II | 12 | XII |
| 3 | III | 13 | XIII |
| 4 | IV | 14 | XIV |
| 5 | V | 15 | XV |
| 6 | VI | 16 | XVI |
| 7 | VII | 17 | XVII |
| 8 | VIII | 18 | XVIII |
| 9 | IX | 19 | XIX |
| 10 | X | 20 | XX |

Some airports use Roman numerals to distinguish apron locations and instrument landing system (ILS) category hold lines.

Example:



Regina Ground, this is Staff two-three located at Apron I



Staff two-three, Regina Ground, state your request/what are your intentions?

Standard Words and Phrases

| Word | Meaning |
|---------------------|---|
| ACKNOWLEDGE | Let me know you have received the message |
| AFFIRMATIVE | Yes |
| APPROVED | Permission granted |
| BREAK | Separation between portions of the message |
| BREAK BREAK | Separation between messages for two different vehicles/aircraft |
| CHECK | Examine a system or procedure (e.g.: check the runway lights) |
| CONFIRM | I request verification of: (clearance, instruction, action, information) |
| CONTACT | Establish communication with |
| CORRECT | True/accurate |
| CORRECTION | An error was made in transmission, the correction will follow |
| DISREGARD | Ignore |
| EXPEDITE | Follow instructions expeditiously, specifically and safely |
| HOW DO YOU READ | Can you hear my transmission clearly |
| I DO NOT UNDERSTAND | I do not understand, please rephrase your last transmission |
| I SAY AGAIN | I repeat for clarity or emphasis |
| IMMEDIATELY | Immediate action is required for safety reasons |
| MONITOR | Listen to (frequency) |
| NEGATIVE | No/permission not granted/not correct/not capable |
| NO DELAY | Follow instructions expeditiously, specifically and safely |
| OVER | End of transmission, require response |
| READ BACK | Repeat all, or specified part of message back |
| ROGER | I have received your transmission (generally used by ATIS) |
| SAY AGAIN | Repeat all, or specified part of last transmission |
| SPEAK SLOWER | Reduce rate of speech |
| STAND BY | Wait and monitor frequency, caller will re-establish contact |
| UNABLE | Cannot comply with instruction/clearance/request |
| WILCO | I understand the message and will comply |
| WITHOUT DELAY | Follow instructions expeditiously, specifically and safely (used primarily by FSS) |
| WORDS TWICE | Communication difficult: please say every word/group of words twice Communication difficult: therefore I will repeat every word/group of words twice |

Air Traffic Service (ATS) Units

ATS Units will identify themselves using terminology as in the following examples:

| ATS Unit | Service | Call Sign |
|--|--------------------------------|-------------------------------|
| Airport Control | Clearance Delivery | (location) CLEARANCE DELIVERY |
| | Ground Control | (location) GROUND |
| | Tower Control | (location) TOWER |
| Terminal Control | Arrival Control | (location) ARRIVAL |
| | Departure Control | (location) DEPARTURE |
| | Terminal Control | (location) TERMINAL |
| Area Control | Enroute Control | (location) CENTRE |
| Flight Service Station (FSS) | Airport Advisory Service (AAS) | (location) RADIO |
| Flight Information Centre (FIC) | Information Service | (location) FIC |
| Community Airport Radio Station (CARS) | WX Service, Information | (location) AIRPORT RADIO |

Example: Ottawa Clearance Delivery Montreal Arrival Vancouver Ground
 Norman Wells Radio Cambridge Bay Airport Radio Edmonton Radio



What to Expect From Different ATS Units

The Importance of Phraseology

The use of proper phraseology on the airfield benefits not only the communication between ATS, pilots, and ground vehicle operators, but proper phraseology also ensures the safety of the customer. Phraseology gives the opportunity for fast, effective, and clear communication. With safety being a number one priority in aviation, the frequencies used in radio communication need to remain free from congestion with quick and concise wording. The use of easily understood phraseology allows for ATS, pilots and ground vehicle operators to communicate precise information without taking up too much time on the frequency. Proper phraseology may take some time to absorb, but once it is understood and put into practice, it makes the communication process simple and easy for all.

Area Control Centres (Terminal/Centre)

Area Control Centres (ACC) provide control, advisory, and alerting services for IFR and controlled VFR aircraft. Air traffic controllers located at these centres across the country coordinate the safe, efficient and orderly flow of air traffic as it travels across Canada.

Each ACC is responsible for air traffic in a large section of Canadian airspace known as a Flight Information Region (FIR). Each FIR is divided into smaller “sectors” and assigned to controllers who know that airspace. Using radar and advanced flight data management systems, controllers track all flights within a sector, give pilots enroute instructions, and provide terminal clearances at certain airports. It is unlikely that you will have a need to talk to one of these controllers as a ground vehicle operator.

Control Towers (Tower, Ground, Clearance, Delivery, etc.)

Control towers provide air traffic control and information services within a defined control zone around busy airports. Controllers at these airports provide ground vehicle operators with clearances and instructions in order to help them maintain a safe distance from aircraft while still being able to do their job. They can provide information to both aircraft and vehicles moving on the airfield, as well as flight information to aircraft operating in airspace around their airports. Control towers also issue clearances and instructions to aircraft and other vehicles on the ground.

Aerodrome Advisory Services (Flight Service Station, Mandatory Frequency)

At some airports with a lower density of traffic, pilots are responsible for maintaining a safe distance from other aircraft, as control services are not provided.

Airport advisory services may be provided by Flight Service Specialists working at Flight Service Stations (FSS) located at these airports or via Remote Communication Outlet (RCO). The services they provide include local weather information, airport advisory services (information on traffic in the area, runway conditions, wind and altimeter and other information required by pilots), and vehicle control and emergency assistance. Additionally, Remote Aerodrome Advisory Services (RAAS) provide Vehicle Advisory Services to vehicle operators remotely using very similar phraseologies and additional phraseologies due to the non-visual environment.

Flight Information Services (Flight Information Centre, WXBRIEF, Enroute Services)

Flight Information Centres (FIC) are centralized Air Traffic Services units responsible for providing pre-flight, enroute flight information, and VFR alerting service.

Flight Service Specialists working at these centres are trained to interpret meteorological information and use this information to provide in-depth, interpretive weather briefings and Notice to Airmen (NOTAMs) information to pilots operating anywhere in Canadian airspace. They are also responsible for managing VFR flight plans and for providing alerting service and coordination with search and rescue. It is unlikely that you will have a need to talk to one of these specialists as a ground vehicle operator.

Community Aerodrome Radio Stations

NAV CANADA provides specified services in northern and remote areas, utilizing Community Aerodrome Radio Station (CARS) facilities to provide aviation weather and communication services at designated sites in the Yukon, Northwest Territories, Nunavut and Northern Quebec along the James Bay Coast.

CARS are not specifically an ATS unit however as mentioned earlier, for simplification it will be so referred in this manual. CARS facilities consist of meteorological equipment for producing aviation surface weather observations (METARs) and office space equipped with a communications console for providing operational information to pilots. CARS operators provide aviation support in the form of air/ground communication, flight planning, aviation weather observation, and emergency response.

Unless a situation applies specifically to one type of service provider, all of the above agencies will be identified as Air Traffic Services or “ATS” in this document.

Frequency Coupling

When frequencies are coupled together, any transmission received on a frequency is simultaneously broadcasted on all other frequencies within that group. This allows for all users on all frequencies within a coupled group to hear transmissions regardless of which frequency they originate on. The main advantages to this are the reduction/elimination of two users transmitting on two separate frequencies at the same time and thereby “stepping on each other” on the receiving (ATS) end, as well as an increased situational awareness of all users. This may occur at both FSS and ATC units.



Language

All ATS units in Canada provide service in English. However, Canada is unique in that within the boundaries of Quebec, as well as at Ottawa-Macdonald Cartier International Airport, a pilot or ground vehicle operator may choose to communicate in either English or French.

The initial contact sets the language for the entire communication. You must initiate contact in the desired language of communication and continue communicating in that language for the duration of your contact.

Note: A French version of this document is also available.



Radio Operation

Radio operations at manned sites are subject to an agreement between the ground station and the aerodrome operator. These agreements should contain the procedures that are required to be implemented and followed at that site. The necessary form of communication between a ground vehicle operator and ATS is done through the use of the radio. Make sure to familiarize yourself with how the radio operates before initiating communication with any ATS. To ensure that speech will be clear and continuous, have the microphone positioned correctly for you. Once you are ready to transmit a message, press the "push to talk" button firmly and hold down with constant pressure until your transmission is complete. Once finished, release the button and wait for a response. Always remember to release the button once your transmission is done so that the frequency is not jammed. Do not be nervous when communicating with ATS; your communication works toward providing safety for everyone on the airfield.

Best Practices

Maintain a continuous listening watch on the appropriate frequency. This will ensure you do not miss any transmissions directed to or affecting you, and will also help you maintain situational awareness.

Remember, your voice is a tool. Speaking calmly and clearly indicates you are composed and alert of situations, whereas quick, frenzied or excessively loud communications are more difficult to understand and may indicate urgency, or even panic.

The following practices are recommended to make communications easier for yourself as well as the receiver:

- Vehicle operators, prior to each shift, should listen to the Automatic Terminal Information Service (ATIS) frequency where available and also check NOTAMs to have a better understanding of airport operations that day
- Think about and plan what you are going to say before beginning transmission
- Listen on frequency before speaking to avoid making a call while another aircraft or vehicle is also transmitting
- After pressing the push to talk button, a slight pause before beginning to speak (and again when you are finished) ensures that your entire transmission will be heard and not cut off
- Use a normal, conversational tone and volume of speech
- Keep calls brief by using concise, standard phraseology
- Remember that the information being relayed may need to be written down, speak slightly slower than normal during conversation, and transmit no more than three ideas (phrases, information, instructions) at once
- Only operational transmissions should be made (i.e. avoid general conversation)
- Make all transmissions professional (keep in mind that frequencies are public domain)
- Advise ATS if you will be out of the vehicle for any length of time

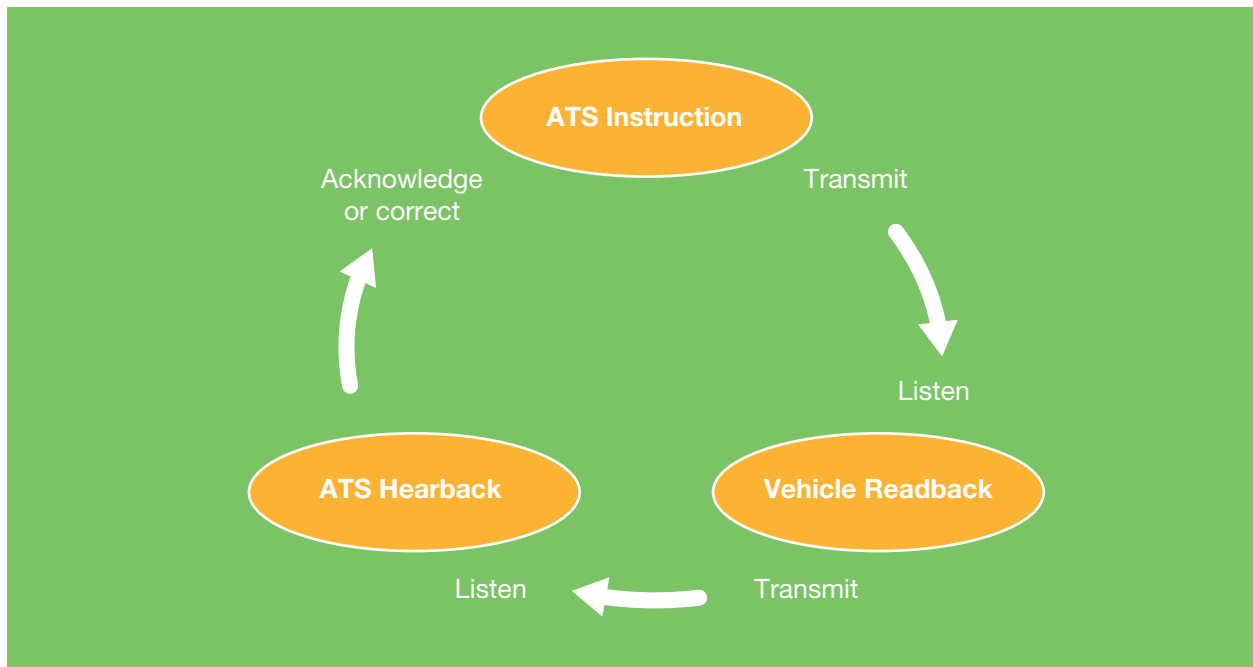
Driving on the Airfield



- Need and right – You have a need to go across the runway, but do you have a right?
- Whether or not you get a clearance, you need to pay attention to your surroundings on an airfield
- Once you are given an instruction to cross a runway, you must go straight across the runway. Do not go back unless given clearance. When crossing a runway, look both ways then cross and go immediately
- In low visibility, vehicles can still be on runways and not visible to ATS
- If you are unsure of the route you have been given, ask ATS for clarification before proceeding
- Call onto a runway and call off of a runway
- If you are a slow moving vehicle, inform ATS
- Know the local speed regulations and be reasonable with speed. Weather conditions directly relate to the speed you should be going
- When driving a vehicle, have a map available for use
- Be as precise as possible. Always know where you are on the airfield
- Night driving requires attention to different aspects of the airfield
- Identify the hotspots on the airfield (see below). Be aware of your surroundings and stay clear of these hotspots at night if possible
- Have confidence, but be watchful while operating on the airfield.
- Communicate to ATS if you see or hear an error
- Double check the tuned frequencies to ensure that they are set correctly.
- Ensure that the radio speaker is turned on. If it is not, you could tie up the airways trying to get instructions you cannot hear
- Before transmitting, listen. This is very important so you do not cut into the middle of another radio conversation
- Write down complex instructions
- If there is any confusion between vehicle crew members regarding instructions, you should contact ATS for confirmation and clarification

Hot Spots

A “hot spot” is a location on an aerodrome movement area with a history of, or a potential risk for collisions or runway incursions and where heightened attention by pilots and vehicle operators is necessary. The best strategy for dealing with hot spots is to be aware of where they are and to be extra vigilant when proceeding through them.

General Format of Radio Communication








| | |
|---|---|
|  ATC | Staff three-three, Ground, hold short of runway two-three. |
|  DRIVER | Ground, Staff three-three, roger, hold short of runway two-three. |

Initial Contact

On initial contact, inform ATS of who you are (using your full call sign) and where you are. This will give them a better idea as how to proceed with your request. Next, identify the destination you want to go to and your intentions once you get there. Be sure you are not requesting a specific route unless it is necessary; ATS will provide a route for you.

Driver: (Operating position/function) THIS IS (vehicle ident) LOCATED AT (location ident).

ATS: (vehicle ident) (Operating position/function) STATE YOUR REQUEST/WHAT ARE YOUR INTENTIONS?

| | |
|--|--|
|  DRIVER | Ground, Staff two-eight is on Juliet |
|  ATC | Staff two-eight, Ground, what are your intentions? |
|  DRIVER | Staff two-eight request permission to go on Alfa to check the lights. |
|  ATC | Staff two-eight, Ground. Proceed on Alfa, hold short runway zero-five. |
|  DRIVER | Ground, Staff two-eight will hold short runway zero-five on Alfa. |






Stand By

“Stand by” is generally used when there is time needed between transmissions. This may be to verify or gather information, or because there is another task being performed. “Stand by” means wait, the individual that initiated the stand by will re-establish contact when they are ready to do so.

Driver: (Operating position/function) THIS IS (vehicle ident).

ATS: (vehicle ident) (station ident) STAND BY.

ATS: (vehicle ident) (station ident) STATE YOUR REQUEST/WHAT IS YOUR REQUEST.

| | |
|---|--|
|  DRIVER | Ottawa Ground, Tractor one-five-zero at Esso. |
|  ATC | Tractor one-five-zero, Ground, stand by. |
|  ATC | Tractor one-five-zero, Ground, say your request. |



If the frequency is busy, ATS will ensure the highest priority calls are made first. If you have contacted ATS and they do not respond immediately, wait; they may be attending to a higher-priority task. ATS personnel may be doing other tasks that do not require the use of the frequency, but are equally important. Radio silence does not mean that ATS personnel are not occupied.

Radio Check

| Readability | Description |
|-------------|--------------------------|
| 1 | Unreadable |
| 2 | Readable now and then |
| 3 | Readable with difficulty |
| 4 | Readable |
| 5 | Perfectly readable |

ATS may ask you to verify the readability of their radio transmission. Conversely, you may ask ATS to verify the readability of your radio transmissions.

Driver: (Operating position/function) (vehicle ident) RADIO CHECK/HOW DO YOU READ?

ATS: (vehicle ident) (station ident) READ YOU (readability number).



Ottawa Ground, Truck one-one-three, how do you read?



Truck one-one-three, Ottawa Ground, read you three, background static.



Truck one-one-three.

Report Your Position

ATS may ask you to report your position. Be sure to be as precise as possible in your response. Use runway numbers, taxiway letters, etc.

ATS: (vehicle ident) REPORT/SAY/STATE YOUR POSITION.

Driver: (vehicle ident) (location ident).



Maintenance two-four-seven, report your position.



Ground, Maintenance two-four-seven at apron one.

Proceed Via

Every route that is given to you will be specified following the words "proceed via." Note that the route you are given may not be exactly as you anticipate.



Calgary Ground, Truck eight-one, off runway one-one request to proceed to the apron (driver is anticipating instructions via Charlie, Juliett, Juliett-Romeo which is often the normal route).



Truck eight-one, roger proceed via Charlie, Juliett, Juliett-Tango to the apron.



Truck eight-one, proceed Charlie, Juliett, Juliett-Tango to the apron.





Be mindful that ATS may have to redirect you on a different route than usual due to different factors including: traffic, construction, obstacles, etc. Listen carefully so you don't over-anticipate the instructions.

Give Way To

"Give way to" requires you to yield right of way to specified aircraft or vehicles. Once given this instruction, scan the area to locate the vehicle or aircraft stated by ATIS.



ATS: (vehicle ident) PROCEED VIA (runway, taxiway, location) GIVE WAY TO (description and position of aircraft/vehicle).

| | |
|---|---|
|  DRIVER | Toronto ground, Truck eight-one on Juliett, request to proceed to main apron. |
|  ATC | Truck eight-one proceed via Alfa give way to the Boeing seven-three-seven joining Alpha at Tango. |

Hold Position

While on the airfield you may be instructed to "hold position." When you are given this instruction, you must remain where you are until given further details.




FSS: (vehicle ident) HOLD POSITION.

| | |
|---|---|
|  ATC | Staff two-seven, hold position. |
|  DRIVER | Staff two-seven, roger, holding position. |

Hold Short

When instructed to "hold short," you do not have permission to enter the runway; you must stay behind the hold short line until further advised. Being told to hold short of taxiways or other specific locations on the airfield is also a frequent occurrence. It should also be noted that you do not have permission to enter a runway unless you are given permission onto that runway. Vehicles should question an instruction that does not have a hold short or permission onto a runway if the route takes them to a runway.

ATS: (vehicle ident) HOLD SHORT (runway, taxiway, location).



| | |
|---|--|
|  DRIVER | Thompson Radio, Sweeper one-five-one, at the south apron, request to go to the north apron via Alfa Charlie. |
|  FSS | Sweeper one-five-one, negative, proceed via Alfa, hold short runway zero-six. |
|  DRIVER | Thompson Radio, Sweeper one-five-one, proceeding via Alfa, hold short runway zero-six. |

Hold Short and Read Back

When you are told to “hold short,” you are required to read back the instruction. When this occurs, read back the complete instruction given.

FSS: (vehicle ident) HOLD SHORT (runway, taxiway ident).

Driver: (vehicle ident) ROGER, HOLD SHORT (runway/taxiway ident).

| | |
|---|---|
|  FSS | Staff two-two proceed onto taxiway Alfa, hold short runway two-four. |
|  DRIVER | Staff two-two, Roger, proceed onto taxiway Alfa, hold short runway two-four. |



An instruction to HOLD SHORT of a runway must be read back.



Your speed should change according to weather conditions, as it could be slippery at hold short lines.




To ensure ATS knows you are able to stop when weather conditions are poor, you should visibly slow down before reaching hold short line.

Crossing a Runway

If you need to cross a runway, you must get specific permission and instructions from ATS first. ATS will give you the instruction to either "cross" or "hold short" of each runway.

ATS: (vehicle ident) CROSS RUNWAY (runway number).

 **Blower one-two-two, cross runway zero-six right.**

 **Blower one-two-two, crossing runway zero-six right.**

 **Red one, proceed via Echo, cross runway two-eight to de-icing facility.**

 **Red one, proceeding via Echo, crossing runway two-eight to de-icing facility.**



Before crossing a runway, you must be given clearance from ATS.



When instructed to cross a runway, make sure you go past the hold short line on the opposite side of the runway.






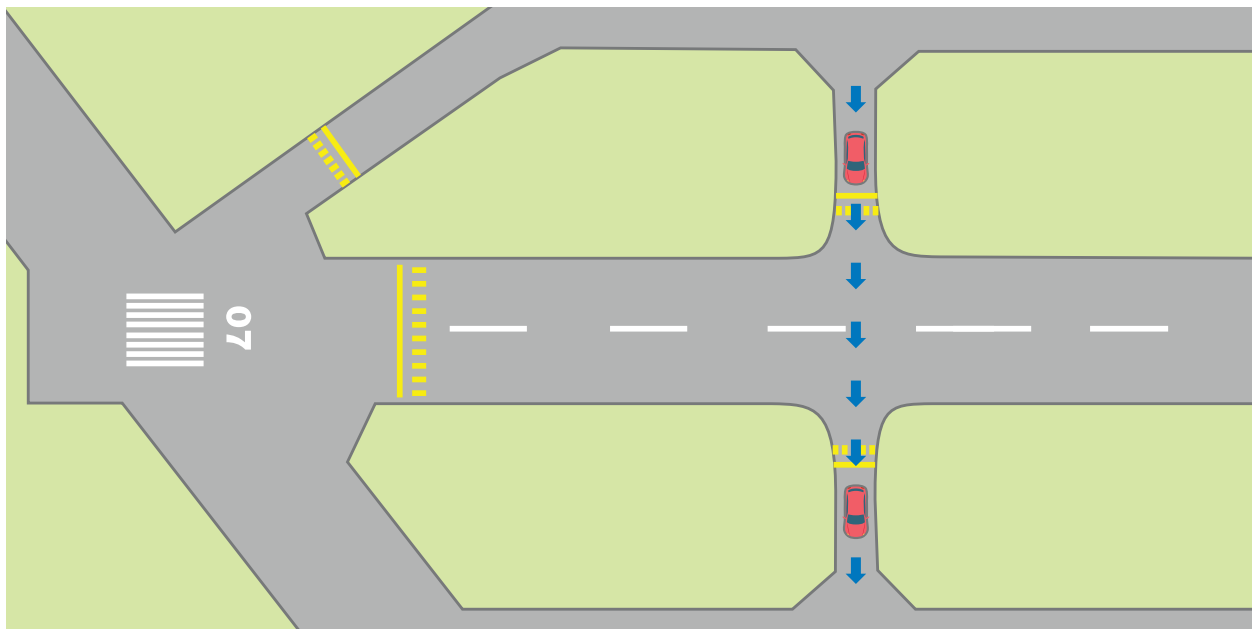
Only cross a runway when it is absolutely necessary. Use perimeter roads when possible.

Report Off

You may be required to notify ATIS when you are no longer on a runway or taxiway. ATIS may instruct you to either "report off" or "advise off." When off of the runway, contact ATIS and advise that you have vacated the runway.

ATIS: (vehicle ident) ADVISE OFF/REPORT OFF (runway, taxiway, location).

| | |
|---|--|
|  ATC | Maintenance two-four-zero, advise off runway zero-seven. |
|  DRIVER | Maintenance two-four-zero, roger. |
|  DRIVER | Maintenance two-four-zero, off runway zero-seven. |



Do not report off until you are across the hold short line of a runway.


Say Again

If you do not hear or understand a transmission from ATS, reply with “say again” and ATS will repeat the transmission.

ATS: (vehicle ident) (instruction).

Driver: (vehicle ident) SAY AGAIN.

ATS: (vehicle ident) (instruction).

| | |
|---|--|
|  ATC | Truck eight-two, proceed via Alfa and Hotel hold short runway two-three. |
|  DRIVER | Ground, Truck eight-two, say again. |
|  ATC | Truck eight-two, proceed via Alfa and Hotel hold short runway two-three. |
|  DRIVER | Truck eighty-two, roger, proceed via Alfa and Hotel hold short runway two-three. |





**If you are unsure of the route you have been given,
ask ATS for further clarification.**


Unsure of Position

If you are unsure of your position, make sure you are clear of any runway and other traffic. Stop and inform ATS, requesting progressive taxi if necessary. They will give you further direction or call for assistance.

Driver: (station ident) (vehicle ident) UNSURE OF POSITION.

ATS: (vehicle ident) (instructions).

| | |
|---|--|
|  DRIVER | Saskatoon Ground, Truck eight-two, unsure of position. |
|  ATS | Truck eight-two, roger, hold your position. |






 **When driving, have a map available for use.**

 **Always know where you are on the airfield. Be as precise as possible.**

Progressive Instructions

If you are unsure of the airfield and need assistance in manoeuvring from one point to another, you can ask ATS for “progressive instructions.” You will be given step-by-step directions to where you need to go.

Driver: (station) (vehicle ident) (location).

| | |
|---|---|
|  DRIVER | Thunder Bay Ground, this is Shell three-five-three, on Foxtrot. |
|  ATC | Shell three-five-three, Ground. |
|  DRIVER | Shell three-five-three, request progressive clearance to main apron. |
|  ATC | Shell three-five-three, proceed via runway one-two, hold short runway zero-seven. |
|  DRIVER | Shell three-five-three, proceed via runway one-two, hold short runway zero-seven. |



DRIVER

Shell three-five-three holding short runway zero-seven.



ATC

Shell three-five-three, cross runway zero-seven, proceed Alfa to main apron.



DRIVER

Shell three-five-three, cross runway zero-seven, proceed Alfa to main apron.



DRIVER

Shell three-five-three, reporting off runway zero-seven.

Operating on a Runway

ATS cannot give instructions that allow for unrestricted ground movement on the manoeuvring area. ATS cannot authorize you to: "proceed on the field," "proceed unrestricted," or "proceed on all manoeuvring areas." Clearances onto runways must specify the runway number.



DRIVER

Saskatoon radio, Staff two-three on taxiway Charlie, request to proceed onto runway zero-nine.



FSS

Staff two-three proceed onto runway zero-nine, cross runway one-five until further advised.





When operating on a runway, keep your eyes and ears open; people can make mistakes.




Without Delay

You may be asked by ATS to increase your speed while on the airfield. This must be done with caution and within reason. The phrases “without delay” or “expedite” are used for this instruction.

ATS: EXIT/PROCEED/CROSS (runway, taxiway) WITHOUT DELAY

| | |
|---|--|
|  ATS | Staff two-seven, cross runway one-four without delay and report off. |
|  DRIVER | Staff two-seven crossing runway one-four without delay and will report off. |







 **If unable to comply with the promptness of the instruction do not proceed and advise ATS immediately unless the instruction is to vacate a runway!**

Negative

ATS may at times refuse or delay your request. ATS will inform you as to why and, if they are able, they will give you an alternative option or further instructions.

Driver: (station ident) (vehicle ident) (request).

ATS: NEGATIVE, (instruction) HOLD SHORT/HOLD YOUR POSITION (reason).

| | |
|---|---|
|  DRIVER | Kelowna Ground, Sweeper one-seven-three, request to cross runway one-six. |
|  ATC | Sweeper one-seven-three, Ground, negative, hold short runway one-six, landing traffic. |
|  DRIVER | Sweeper one-seven-three, hold short runway one-six. |
|  DRIVER | Kelowna Ground, Sweeper one-seven-three, request to proceed onto taxiway Delta. |
|  ATC | Sweeper one-seven-three, negative, hold short Delta, opposite direction traffic. |
|  DRIVER | Sweeper one-seven-three, hold short Delta. |

Leave/Exit

When instructed to vacate a runway or taxiway, ATS will provide you with information, direction, and a reason, if necessary. You may be required to report off.

ATS: LEAVE/EXIT/VACATE/GET OFF (runway id, taxiway id) AT (location) REPORT OFF

| | |
|---|--|
|  | Mower two-two-six, exit the runway protected area, aircraft landing runway one-one, report off. |
|  | Mower two-two-six, roger, exit the runway protected area and report off. |
|  | Truck eight-zero, exit runway three-four at Juliett, report off. |
|  | Truck eight-zero, roger, exit runway three-four at Juliett and will report off. |
|  | Blower one-two-one, leave taxiway Juliett at Hotel and report off. |
|  | Blower one-two-one, roger, exit Juliett at Hotel and report off. |

“Did You Know” – Runway Incursions

Definition: Runway Incursion includes any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle, or person on the protected area of a surface designated for landing and take-off of aircraft.







The Transportation Safety Board (TSB) put runway incursions on its watch list in 2014 and it is still on its watch list today. From 2004 to 2013 there were 4,153 runway incursions in Canada.

As part of the Safety Management System (SMS), NAV CANADA is proactively managing risk associated with runway incursions. Best practices play an important role in this process.

Runway Protected Area





Runway Protected Area (RPA) is the 200-foot area (unless otherwise designated) from the edge of a runway established to protect aircraft that are taking off and landing from taxiing aircraft as well as ground traffic. The RPA is usually depicted by a line, however not always (e.g. grassy areas). Before requesting to go into the RPA, you must first give ATS the following information: identification, present position, and your intentions. ATS will either approve your request, or instruct you to remain outside of the RPA. The phrase "RPA" or "runway protected area" may not be used in the actual clearance, but an area inside the RPA may be referenced (see examples below).

Driver: (station ident)(vehicle ident)(location)(request).

| | |
|---|---|
|  DRIVER | Windsor Ground, Truck eight-one, on taxiway Foxtrot request to work on Foxtrot at the edge of runway three-zero. |
|  ATC | Truck eight-one, roger, proceed Foxtrot to the edge of runway three-zero. |
|  DRIVER | Windsor Ground, Mower two-two-five, request to cut grass along runway two-five. |
|  ATC | Mower two-two-five, negative, traffic departing. |

Instrument Landing System Critical Area

The Instrument Landing System (ILS) Critical area is identified by "Restricted Area" signs. This area must be clear of vehicles prior to an aircraft landing. This is intended to ensure the integrity of the ILS antenna signal and reduce the possibility of interference. You must obtain specific instructions to enter this area.

| | |
|--|--|
|  ATC | Tech five-four, proceed to the ILS shack, report leaving the restricted area. |
|  ATC | Tech five-four, negative, traffic landing. |
|  ATC | Tech five-four, negative, hold short ILS critical area due to aircraft on approach. |
|  ATS | Staff two-seven, leave the restricted area, traffic landing, report off. |



Truck eight-one, negative, hold short ILS critical area due to aircraft on approach.



Truck eight-one, holding short ILS critical area.



Truck eight-one, leave the restricted area, aircraft on approach, report off.



Truck eight-one, roger, off the restricted area.



Repetitive Operations








During times of repetitive ground traffic operations, ATS may instruct you to operate on a single runway and through a runway intersection. Multiple vehicles may be authorized to operate on different runways, but each vehicle is limited to a single runway at a time.

ATS: PROCEED onto (runway ident), CROSS (runway ident) UNTIL FURTHER ADVISED.

| | |
|---|---|
|  | Blower one-two-zero proceed onto runway two-four cross runway three-six until further advised. |
|---|---|

Multiple Vehicles

The lead vehicle in a group of vehicles is the one contacting ATS. They must inform the ATS of the number of vehicles ("plus three"), the operation/task being performed, and the speed and duration of movement on the airfield. The vehicle leading the group is the only one who will be in contact with ATS. They inform ATS when a vehicle needs to leave the group, join the group etc. If the lead vehicle needs to leave, it is their job to identify a new vehicle contact – this new contact should establish communication with ATS.

| | |
|---|--|
|  DRIVER | Winnipeg Ground, this is Blower one-two-eight plus three. |
|  ATC | Blower one-two-eight plus three, Winnipeg Ground. |
|  DRIVER | Ground, Blower one-two-eight plus three request to plow runway three-one full length. |
|  ATC | Blower one-two-eight plus three, proceed onto runway three-one, cross runway three-six until further advised. |
|  DRIVER | Ground, Blower one-two-eight is requesting to proceed to the main apron, Blower one-two-two now lead vehicle. |
|  ATC | Blower one-two-eight, roger, exit runway three-one at Victor to the apron. |
|  ATC | Blower one-two-two plus two, you are now the contact vehicle on runway three-one. |



Have a briefing for all drivers before moving onto the airfield. Set up communications between all drivers, have a plan before starting, and set up a response route for vehicles that might join the group.



Broken Down Vehicle

If your vehicle breaks down, inform ATS of your exact location immediately. They will send another vehicle to assist.

Driver: (station ident) (vehicle ident) BROKEN DOWN (location).



Fort McMurray Ground, Staff two-seven, broken down, taxiway Delta north side of runway zero-seven.



Best Practice - Be aware that some vehicles operating at uncontrolled aerodromes may not be equipped with a radio, in particular vehicles requiring an escort.

Towing an Aircraft

Before towing an aircraft on the field or on the manoeuvring area, you must first contact ATS for instruction. You must also inform them of the aircraft type (primarily at smaller airports).

Driver: (station ident) (vehicle ident) REQUEST TOW (location).



Regina Ground, Tug two-two-nine request tow Boeing 737 from maintenance hangar three to gate two-five.



Tug two-two-nine, Regina Ground, proceed via Charlie to gate two-five.



Tug two-two-nine, roger proceed via Charlie.



Best Practice – Always state aircraft type when towing an aircraft.



Low Visibility/Night

There is often a greater chance of runway and taxiway incursions taking place during low visibility and at night. Be prepared and be familiar with the airfield and phraseology to ensure safety for everyone.

Focusing more on the signage instead of bright lights will help you to navigate through the airfield more effectively.



Workers do not usually use interior vehicle lights at night to ensure reflections from inside the car do not affect their driving vision.








Be aware of your surroundings and stay clear of hot spots, especially at night and in low visibility. Be mindful that it is very possible that ATS personnel may have difficulty seeing you during these times.



Wildlife

It is common for ground vehicle operators to spot wildlife on the airfield. It is important to report these sightings as soon as possible to ATS or to airside operations. Birds or animals can be a hazard to aircraft, causing major damage or potential accidents.

| | |
|---|--|
|  DRIVER | Timmins Radio, staff two-one. |
|  FSS | Staff two-one, Timmins Radio. |
|  DRIVER | Staff two-one, we've had a report of a coyote at the threshold of runway zero-three, request to proceed via Bravo to the threshold of runway zero-three. |
|  FSS | Staff two-one, proceed via Bravo onto runway zero-three, hold short runway two-eight. |
|  DRIVER | Staff two-one, roger, proceeding Bravo onto runway zero-three, hold short runway two-eight. |

Foreign Object Debris (FOD)



FOD is a substance, debris, or article alien to a vehicle or system which could potentially cause damage. Ingesting FOD into a jet engine or a propeller hit can cause significant damage and pose a major safety risk.







Foreign object debris (FOD) at airports can cause damage that costs airlines, airports, and airport tenants millions of dollars every year.



If you see it, pick it up.

| | |
|---|----------------------------------|
|  FSS | Staff two-two, Lethbridge Radio. |
|  DRIVER | Lethbridge Radio, Staff two-two. |

| | |
|---|---|
|  | <p>Staff two-two, FOD reported at the intersection of Bravo and runway one-two.</p> |
|  | <p>Staff two-two Roger, at the main apron request to proceed via bravo onto runway one-two.</p> |
|  | <p>Staff two-two, proceed via Bravo onto runway one-two, hold short runway two-three.</p> |
|  | <p>Staff two-two Roger, proceed via Bravo to runway one-two, hold short runway two-three.</p> |

Aircraft Rescue and Fire Fighting

When an emergency situation takes place on the airfield, ATS will give emergency crews specific instructions and routing in order to address it in the safest manner possible. During emergency situations, ground vehicles responding must always ensure communication with ATS. ATS will provide emergency crews with specific instructions and follow emergency procedures established by both parties. As a rule, Aircraft Rescue and Fire Fighting (ARFF) have priority over other vehicles.



Communication Failure/Flashing of Runway Lights

If you lose radio communications, at an airport with a control tower, position your vehicle facing the tower and stop. Control towers will use light signals (commonly known as a light gun) to issue further instructions. The lights control aircraft and the movement of vehicles, equipment, and personnel on the manoeuvring area when radio communications cannot be employed. Not included in the chart below are flashing runway edge lights; if all other communication fails, you may flash the **runway lights** on and off as a signal to vehicles and pedestrians to vacate the active runway.

Steady green



NA

Flashing green



Cleared to cross; proceed; go.

Steady red



Hold your position; stop.

Flashing red



Vacate the runway immediately

Flashing white



Return to starting point on aerodrome



Remember

Use appropriate phraseology at all times.

Be very alert when operating on the airfield.

Questions, comments and feedback can be directed to:
service@navcanada.ca



