



**Federal Aviation  
Administration**

***55054001  
EN ROUTE  
RADAR ASSOCIATE  
CONTROLLER TRAINING PART A:  
BASIC CONCEPTS***

**Lesson 12: VFR and VFR-On-Top  
Procedures**

Version: 1.0 2022.08

***INSTRUCTOR LESSON PLAN***

PAGE INTENTIONALLY LEFT BLANK

# LESSON PLAN DATA SHEET

Course Name	En Route Radar Associate Controller Training Part A: Basic Concepts
Course Number	55054001
Lesson Title	VFR and VFR-On-Top Procedures
Duration	1 Hour (Includes lesson and ELT)
Version	1.0 2022.08
Reference(s)	JO 7110.65, Air Traffic Control; Aeronautical Information Manual (AIM); 14 CFR Part 91; JO 7400.10, Special Use Airspace
Prerequisites	NONE
Handout(s)	NONE
Exercise / Activity	NONE
Assessments	☉ YES - Written ( <i>Refer to ELT01_L12, print prior to class</i> )
Scenario	NONE
Materials and Equipment	☉ Pencil and/or pen
Other Pertinent Information	<ul style="list-style-type: none"> <li>☉ <b>Ensure lesson materials are downloaded to the classroom computer</b></li> <li>☉ Course 57847, VFR and VFR-ON-TOP PROCEDURES, or current course, is available as supplemental training for this lesson</li> <li>☉ This lesson is based on ERAM EAE410</li> <li>☉ The lesson has been reviewed and reflects current orders and manuals as of April 2022</li> </ul>












*As you prep for this lesson, recall and be prepared to talk about examples and personal experiences that illustrate or explain the teaching points in the lesson.*

---

# LESSON ICON LEGEND

---

	Description
	The Activity icon indicates an exercise, lab, or hands-on activity.
	The Discussion Question icon signals a discussion question to be asked to the students.
	The Handout icon indicates a handout is to be distributed to the students.
	The Instructor Note icon is in hidden text and indicates text that is for the instructor only.
	The Multimedia icon indicates a video or audio clip is in the presentation.
	The Phraseology icon indicates that phraseology is in the content.
	The WBT icon indicates a component of web-based training.
	The Click icon indicates a PPT slide with click-based functionality to present additional information.
	The Definition icon indicates a published definition.

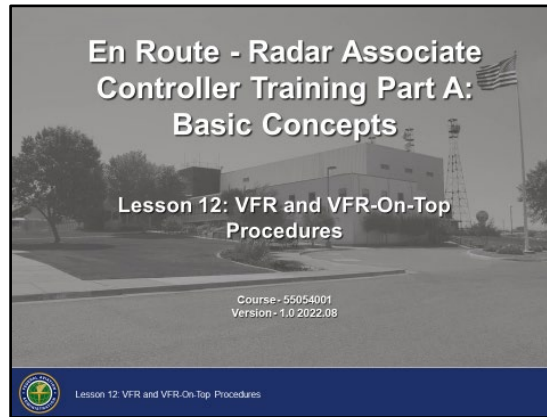
---

PAGE INTENTIONALLY LEFT BLANK

# LESSON INTRODUCTION

---

## Overview



## Overview

This lesson covers authorizing IFR aircraft to operate in VFR conditions on an ATC clearance. Also included are issuing alternative clearances in conjunction with VFR and VFR-on-top clearances, VFR altitudes for direction of flight, VFR traffic advisories, and VFR-on-top operations in relation to ATC Assigned Airspace (ATCAA).

---

# LESSON INTRODUCTION (CONT'D)


---

## Lesson Objectives

### Lesson Objectives

At the end of this lesson, you will be able to identify:

- VFR and VFR-on-top requirements
- VFR and VFR-on-top procedures
- Attributes of visual separation

 Lesson 12- VFR and VFR-On-Top Procedures 1

### Objectives

- ⦿ At the end of this lesson, you will be able to identify:
  - VFR and VFR-on-top requirements
  - VFR and VFR-on-top procedures
  - Attributes of visual separation

**NOTE:** There will be a graded end-of-lesson test upon completion of the lesson. The passing score is 70%. If you do not achieve a score of 70%, you will be provided study time and one retake of an alternate end-of-lesson test.



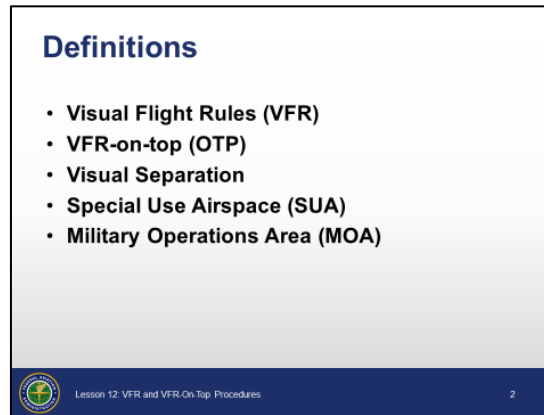
*Review the lesson objectives.*

---

# VFR AND VFR-ON-TOP REQUIREMENTS

## Definitions

JO 7110.65,  
PCG



## Definitions



**VISUAL FLIGHT RULES (VFR)** - Rules that govern the procedures for conducting flight under visual conditions. The term VFR is also used in the United States to indicate weather conditions that are equal to or greater than minimum VFR requirements. In addition, it is used by pilots and controllers to indicate type of flight plan.



**VFR-ON-TOP** - ATC authorization for an IFR aircraft to operate in VFR conditions at any appropriate VFR altitude.



**VISUAL SEPARATION** - A means employed by ATC to separate aircraft in terminal areas and en route airspace.



**SPECIAL USE AIRSPACE (SUA)** - Airspace of defined dimensions identified by an area on the surface of the earth wherein activities must be confined because of their nature and/or wherein limitations may be imposed upon aircraft operations that are not a part of those activities.



**MILITARY OPERATIONS AREA (MOA)** - Permanent and temporary MOAs are airspace established outside of Class A airspace area to separate or segregate certain nonhazardous military activities from IFR traffic and to identify for VFR traffic where these activities are conducted. Permanent MOAs are depicted on Sectional Aeronautical, VFR Terminal Area, and applicable En Route Low Altitude Charts.




# VFR AND VFR-ON-TOP REQUIREMENTS (CONT'D)

## Definitions (Cont'd)

**Definitions (Cont'd)**

- ATC Assigned Airspace (ATCAA)
- Altitude Reservation (ALTRV)
- Military Training Route (MTR)

 Lesson 12: VFR and VFR-On-Top Procedures 3



**ATC ASSIGNED AIRSPACE (ATCAA)** - Airspace of defined vertical/lateral limits, assigned by ATC, for the purpose of providing air traffic segregation between the specified activities being conducted within the assigned airspace and other IFR air traffic.



**ALTITUDE RESERVATION (ALTRV)** - Airspace utilization under prescribed conditions normally employed for the mass movement of aircraft or other special user requirements which cannot otherwise be accomplished. ALTRVs are approved by the appropriate FAA facility.



**MILITARY TRAINING ROUTE (MTR)** - Airspace of defined vertical and lateral dimensions established for the conduct of military flight training at airspeeds in excess of 250 knots IAS.

# VFR AND VFR-ON-TOP REQUIREMENTS (CONT'D)

## VFR Climb or Descent

JO 7110.65,  
pars. 7-1-1  
through 7-1-2

### VFR Climb or Descent

- Clear aircraft to maintain VFR conditions if the pilot of an aircraft on an IFR flight plan requests a VFR climb or descent
- If flight in VFR conditions becomes impractical, issue an alternative clearance
- In Class A airspace, do not apply visual separation or issue VFR or VFR-on-top clearances



Lesson 12- VFR and VFR-On-Top Procedures

4

## VFR Climb or Descent

- ⦿ Clear aircraft to maintain VFR conditions if the pilot of an aircraft on an IFR flight plan requests a VFR climb or descent
- ⦿ When, in your judgement, there is reason to believe that flight in VFR conditions may become impractical, issue an alternative clearance which will ensure separation from all other aircraft for which you have separation responsibility



IF UNABLE, (alternative procedure), AND ADVISE

**Example:** "IF UNABLE, MAINTAIN SIX THOUSAND AND ADVISE"

- ⦿ In Class A airspace, do not apply visual separation or issue VFR or VFR-on-top clearances


# VFR AND VFR-ON-TOP REQUIREMENTS (CONT'D)

## Visual Phraseology

JO 7110.65, par. 7-1-2

### Visual Phraseology

- MAINTAIN VFR CONDITIONS
- MAINTAIN VFR CONDITIONS UNTIL (time or fix)
- MAINTAIN VFR CONDITIONS ABOVE/BELOW (altitude)
- CLIMB/DESCEND VFR and if required, BETWEEN (altitude) AND (altitude)

 Lesson 12: VFR and VFR-On-Top Procedures 5

### Visual Phraseology

- ⦿ Instruct an aircraft to maintain VFR with no other instructions or restrictions:



MAINTAIN V-F-R



MAINTAIN V-F-R CONDITIONS

- ⦿ VFR clearance with restrictions:



MAINTAIN V-F-R CONDITIONS UNTIL (time or fix)



MAINTAIN V-F-R CONDITIONS ABOVE/BELOW (altitude)

- ⦿ VFR climb or descent:

- A pilot may request a VFR climb/descent so as to get a requested altitude sooner than an IFR climb/descent would allow



CLIMB/DESCEND V-F-R

*and if required,*



BETWEEN (altitude) AND (altitude)

**Example:** “CLIMB V-F-R BETWEEN SIX THOUSAND AND EIGHT THOUSAND”

*or*



ABOVE/BELOW (altitude)

**Example:** “MAINTAIN V-F-R AT OR ABOVE SIX THOUSAND FIVE HUNDRED”

# VFR AND VFR-ON-TOP REQUIREMENTS (CONT'D)



---

## Knowledge Check

**Knowledge Check**

**When would alternative instructions to a pilot requesting a VFR climb be issued?**

- A. To prevent the pilot from climbing VFR through the altitude of an IFR aircraft
- B. To prevent the pilot from climbing through meteorological obscurations
- C. To ensure separation if VFR climb becomes impractical

 Lesson 12: VFR and VFR-On-Top Procedures  6

**Question:** When would alternative instructions to a pilot requesting a VFR climb be issued?



**Answer:** C. To ensure separation if VFR climb becomes impractical

---

# VFR AND VFR-ON-TOP REQUIREMENTS (CONT'D)

---


## VFR-on-top Clearances

JO 7110.65, par. 7-3-1

AIM, par. 4-4-8

### VFR-on-top Clearances

- Clear aircraft to maintain VFR-on-top if the aircraft is on an IFR flight plan and requested by the pilot
- Pilot responsibilities:
  - Fly at appropriate VFR altitude
  - Comply with VFR visibility requirements
  - See and avoid other aircraft
  - Comply with instrument flight rules that are applicable to this flight



Lesson 12- VFR and VFR-On-Top Procedures

7

## VFR-on-top Clearances

- ⦿ Clear aircraft to maintain VFR-on-top if the aircraft is on an IFR flight plan and requested by the pilot
- ⦿ Pilot responsibilities
  - Fly at appropriate VFR altitude
  - Comply with VFR visibility requirements; pilots may fly:
    - Above clouds
    - Between clouds
    - Below clouds
  - See and avoid other aircraft
  - Comply with instrument flight rules that are applicable to this flight
    - Minimum IFR altitudes
    - Position reporting
    - Radio communications
    - Course to be flown
    - Adherence to ATC clearance, etc.

**NOTE:** Although IFR separation is not applied, controllers must continue to provide traffic advisories and safety alerts, and apply merging target procedures to aircraft operating VFR-on-top.

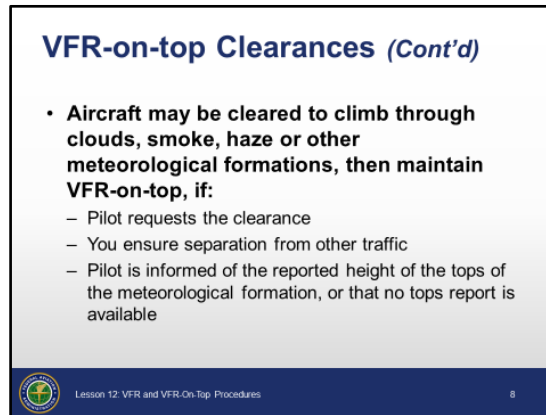
---

# VFR AND VFR-ON-TOP REQUIREMENTS (CONT'D)

---

## VFR-on-top Clearances (Cont'd)

JO 7110.65, par.  
7-3-1



- ⊙ Aircraft may be cleared to climb through clouds, smoke, haze or other meteorological formations, then maintain VFR-on-top, if:
  - Pilot requests the clearance
  - You ensure separation from other traffic for which you have separation responsibility by issuing an alternative clearance
  - Pilot is informed of reported height of the tops of the meteorological formation, or that no top report is available
- ⊙ When an aircraft is climbing to and reports reaching VFR-on-top, reclear the aircraft to maintain VFR-on-top

**NOTE:** A clearance to climb/descend to and report reaching VFR-on-top authorizes climb/descent until reaching on top conditions, unless alternative instructions are issued.

---


# VFR AND VFR-ON-TOP REQUIREMENTS (CONT'D)

## VFR-on-top Phraseology

JO 7110.65, par.  
7-3-1

### VFR-on-top Phraseology

- CLIMB TO AND REPORT REACHING V-F-R-ON-TOP  
*and,*
- TOPS REPORTED (altitude)  
*or,*
- NO TOPS REPORTS  
*Alternative instructions,*
- IF NOT ON TOP AT (altitude), MAINTAIN (altitude), AND ADVISE

 Lesson 12- VFR and VFR On Top Procedures 9

### VFR-on-top Phraseology

- ⦿ IFR aircraft requesting VFR-on-top clearance



CLIMB TO AND REPORT REACHING V-F-R-ON-TOP

*and,*

TOPS REPORTED (altitude)

*or,*

NO TOPS REPORTS

*Alternative instructions if needed,*



IF NOT ON TOP AT (altitude), MAINTAIN (altitude), AND ADVISE

**Example:** "CLIMB TO AND REPORT REACHING V-F-R-ON-TOP, TOPS REPORTED SIX THOUSAND. IF NOT ON TOP AT SEVEN THOUSAND, MAINTAIN SEVEN THOUSAND AND ADVISE."

- ⦿ If an IFR aircraft reports VFR-on-top and requests an on top clearance, reclear the aircraft to maintain VFR-on-top

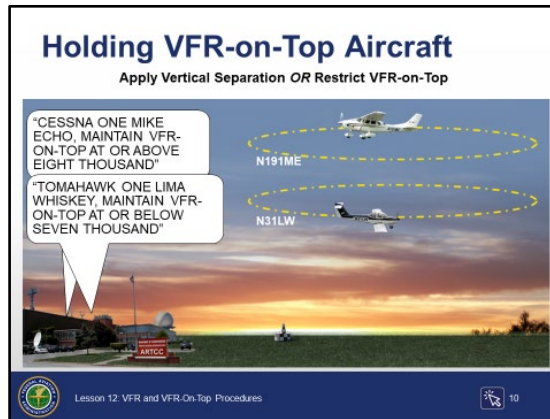


MAINTAIN V-F-R-ON-TOP

# VFR AND VFR-ON-TOP REQUIREMENTS (CONT'D)

## Holding VFR-on-Top Aircraft

JO 7110.65, par. 7-3-1



## Holding VFR-on-Top Aircraft



*This slide is animated, 2 clicks. Click where indicated by click icon.*

- ⦿ Do not clear an aircraft to maintain “VFR-on-top” between sunset and sunrise to separate holding aircraft from each other, or from en route aircraft unless restrictions are applied to ensure appropriate IFR vertical separation
  - Do not restrict a VFR-on-top aircraft to one altitude due to cloud clearance and visibility requirements, instead issue holding:
    - At or above an altitude
    - At or below an altitude
    - Between altitudes



**MAINTAIN V-F-R-ON-TOP AT OR ABOVE/BELOW/BETWEEN (altitudes)**



**“CESSNA ONE MIKE ECHO, MAINTAIN VFR-ON-TOP AT OR ABOVE EIGHT THOUSAND”**



**“TOMAHAWK ONE LIMA WHISKEY, MAINTAIN VFR-ON-TOP AT OR BELOW SEVEN THOUSAND”**



# VFR AND VFR-ON-TOP REQUIREMENTS (CONT'D)



---

## Knowledge Check

**Knowledge Check**

What is the phraseology to clear N126Y to VFR-on-top, with no traffic, or tops reported?

- A. "NOVEMBER TWO SIX YANKEE MAINTAIN V-F-R-ON-TOP NO TOPS REPORTS"
- B. "NOVEMBER TWO SIX YANKEE CLIMB TO AND REPORT REACHING V-F-R-ON-TOP NO TOPS REPORTS"
- C. "NOVEMBER TWO SIX YANKEE CLIMB IN V-F-R CONDITIONS MAINTAIN V-F-R-ON-TOP"

 Lesson 12: VFR and VFR-On-Top Procedures  11

**Question:** What is the phraseology to clear N126Y to VFR-on-top with no traffic or tops reported?



**Answer:** B. "NOVEMBER TWO SIX YANKEE CLIMB TO AND REPORT REACHING V-F-R-ON-TOP NO TOPS REPORTS"

---

# VFR AND VFR-ON-TOP PROCEDURES

---


## VFR Altitudes

JO 7110.65, par.  
7-3-2

14 CFR Part  
91.159

### VFR Altitudes

- **VFR and VFR-on-top altitudes for direction of flight:**
  - Zero degrees through 179 degrees magnetic:
    - Any odd cardinal altitude plus 500'
  - 180 degrees through 359 degrees magnetic:
    - Any even cardinal altitude plus 500'

 Lesson 12: VFR and VFR-On-Top Procedures 12

## VFR Altitudes

⦿ VFR and VFR-on-top procedures may be conducted

- Below FL180
- Above FL600

⦿ Direction of flight

- Zero degrees through 179 degrees magnetic:
  - Any odd cardinal altitude plus 500'
- 180 degrees through 359 degrees magnetic:
  - Any even cardinal altitude plus 500'

**Example:** 3,500', 5,500', 7,500'

**Example:** 4,500', 6,500', 8,500'

**NOTE:** Aircraft operating less than three thousand feet above the surface may cruise at any altitude for any direction of flight.

⦿ Inform an aircraft maintaining VFR or VFR-on-top when they are not complying with appropriate altitude for direction of flight



V-F-R/V-F-R-ON-TOP CRUISING LEVELS FOR YOUR DIRECTION OF FLIGHT ARE ODD/EVEN ALTITUDES PLUS FIVE HUNDRED FEET


# VFR AND VFR-ON-TOP PROCEDURES (CONT'D)

## Traffic Advisories

JO 7110.65, par.  
2-1-21

### Traffic Advisories

- **Issue traffic advisories to all aircraft, IFR or VFR, when:**
  - Proximity may diminish to less than the applicable separation minima
- **Where no separation minima exist:**
  - Issue traffic advisories to those aircraft when, in your judgement, their proximity warrants it

 Lesson 12- VFR and VFR-On-Top Procedures 13

### Traffic Advisories

- ⦿ Issue traffic advisories to all aircraft, IFR or VFR, when:
  - Proximity may diminish to less than the applicable separation minima
- ⦿ Where no separation minima exist, such as VFR aircraft outside of Class B or Class C airspace:
  - Issue traffic advisories to those aircraft when, in your judgement, their proximity warrants it
- ⦿ To aircraft that are not radar identified, issue:
  - Distance and direction from fix
  - Direction in which traffic is proceeding
  - If known, type of aircraft and altitude
  - ETA over the fix the aircraft is approaching if appropriate



TRAFFIC, (number) MILES/MINUTES (direction) OF (airport or fix),  
(direction) BOUND,

*and if known,*

ESTIMATED (fix) (time),

*or*



TRAFFIC, NUMEROUS AIRCRAFT VICINITY (location)

*If altitude is unknown,*

ALTITUDE UNKNOWN

# VFR AND VFR-ON-TOP PROCEDURES (CONT'D)


## Special Use Airspace SUA/ATCAA Separation Minima

JO 7110.65,  
pars. 9-3-2, 9-3-3;

JO 7400.10,  
Part I, Subparts  
B, C; Part II

### SUA/ATCAA Separation Minima

- **VFR Aircraft:**
  - May not enter prohibited or active restricted areas
  - May enter an active MOA, alert area, warning area, MTR, or ALTRV, however, advisories should be issued
- **VFR-on-top Aircraft:**
  - May not enter prohibited or active restricted areas
  - May not enter an active MOA, MTR, or ALTRV
  - Must maintain at least 500' vertical separation above or below SUA

 Lesson 12- VFR and VFR-On-Top Procedures 14

## SUA/ATCAA Separation Minima

- ⊙ VFR aircraft:
  - May not enter prohibited or active restricted areas
  - May enter an active MOA, alert area, warning area, MTR, or ALTRV; however, advisories should be issued
- ⊙ VFR-on-top aircraft:
  - May not enter prohibited or active restricted areas
  - May not enter an active MOA, MTR, warning area, or ALTRV
  - Must maintain at least 500' of vertical separation above the upper limit or below the lower limit of an active SUA
    - If unable to comply, clear the aircraft via a routing that provides approved separation



**MAINTAIN V-F-R-ON-TOP AT LEAST 500 FEET ABOVE/BELOW (upper/lower limit of airspace) ACROSS (name or number of airspace) BETWEEN (fix) AND (fix)**

*and if the airspace is an ATCAA:*

*(name of ATCAA) IS ATC ASSIGNED AIRSPACE*

**Example:** “NOVEMBER TWO SIX LIMA WHISKEY, MAINTAIN V-F-R-ON-TOP AT LEAST FIVE HUNDRED FEET ABOVE THE MAXWELL ONE M-O-A”

# VFR AND VFR-ON-TOP PROCEDURES (CONT'D)



---

## Knowledge Check

**Knowledge Check**

**What is the required minimum vertical separation for a VFR-on-top aircraft above or below an active SUA?**

- A. 500'
- B. 1000'
- C. 2000'

 Lesson 12: VFR and VFR-On-Top Procedures  15

**Question:** What is the required minimum vertical separation for a VFR-on-top aircraft above or below an active SUA?



**Answer:** A. 500'

# VISUAL SEPARATION

---

## Visual Separation

AIM, par. 4-4-14

JO 7110.65,  
PCG



### Visual Separation

- ⦿ Visual separation is a means employed by ATC to separate aircraft in terminal areas and en route airspace in the NAS
  - ⦿ There are two methods to employ visual separation:
    - The tower controller sees the aircraft involved and issues instructions, as necessary, to ensure that the aircraft avoid each other
    - A pilot sees the other aircraft involved and upon instructions from the controller, provides separation by maneuvering the aircraft to avoid it
      - When pilots accept responsibility to maintain visual separation, they must maintain constant visual surveillance and not pass the other aircraft until it is no longer a factor
-

# VISUAL SEPARATION (CONT'D)


---

## Application Considerations

JO 7110.65, par. 7-2-1

### Application Considerations

- Visual separation may be applied when other approved separation is assured before and after application of visual separation
- To ensure that other separation will exist consider:
  - Aircraft performance
  - Wake turbulence
  - Closure rate
  - Routes of flight
  - Known weather conditions
  - Aircraft position

 Lesson 12: VFR and VFR-On-Top Procedures 17

### Application Considerations

- ⦿ Visual separation may be applied when other approved separation is assured before and after the application of visual separation
  - ⦿ To ensure that other separation will exist consider:
    - Aircraft performance
    - Wake turbulence
    - Closure rate
    - Routes of flight
    - Known weather conditions
      - Weather conditions must allow the aircraft to remain within sight until other separation exists
    - Aircraft position
-

# VISUAL SEPARATION (CONT'D)

---


## Application

JO 7110.65,  
pars. 7-2-1, 2-1-  
20

### Application

- **Visual Separation may be used:**
  - Between successive departures when routes and/or aircraft performance assure maintaining separation
  - In conjunction with visual approach procedures
  - Up to but not including FL180 with constraints

**NOTE:** Visual separation is not authorized when the lead aircraft is a super.

Lesson 12: VFR and VFR-On Top Procedures18

## Application

Visual separation may be used:

- ⦿ Between successive departures when routes and/or aircraft performance assure maintaining separation
- ⦿ In conjunction with visual approach procedures
- ⦿ Up to but not including FL180 with these constraints:
  - Direct communication is maintained with one aircraft involved and the ability to communicate with other aircraft exists
  - Pilot sees another aircraft and is instructed to maintain visual separation from it as follows:
    - Tell pilot about other aircraft including position, direction, and type. If it is not obvious, include other aircraft's intentions.
    - Obtain acknowledgment from pilot that other aircraft is in sight
    - Instruct pilot to maintain visual separation from that aircraft
    - Advise pilot if radar targets appear likely to converge
    - If aircraft are on converging courses issue traffic information and inform other pilot that visual separation is being applied
    - Advise pilots if either aircraft is heavy
    - Issue wake turbulence cautionary advisories
- ⦿ If the pilot reports the traffic in sight and will maintain visual separation from it (the pilot must state both), the controller may "approve" the operation instead of restating the instructions

**NOTE:** Visual separation is not authorized when the lead aircraft is a super.

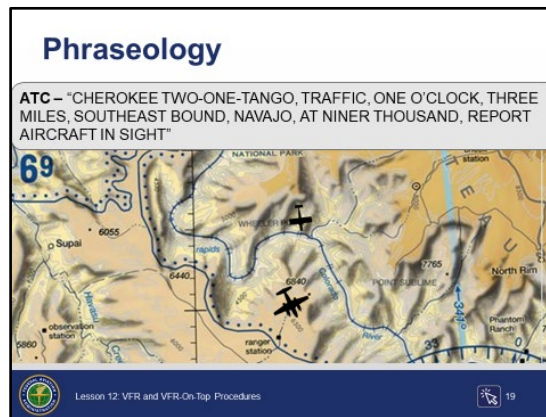
---



# VISUAL SEPARATION (CONT'D)

## Phraseology

JO 7110.65, par.  
7-2-1



## Phraseology



*This slide is animated, 3 clicks. Click where indicated by click icon.*



(ACID), TRAFFIC, (clock position and distance), (direction) BOUND,  
(type of aircraft), (intentions and other relevant information)

*If required,*

(ACID), REPORT TRAFFIC IN SIGHT

*or*

DO YOU HAVE IT IN SIGHT?



"CHEROKEE TWO ONE TANGO, TRAFFIC IN SIGHT"

*If the pilot reports traffic in sight, or the answer is in the affirmative,*



"CHEROKEE TWO ONE TANGO, MAINTAIN VISUAL  
SEPARATION, DESCEND AND MAINTAIN NINER THOUSAND"



"CHEROKEE TWO ONE TANGO, MAINTAINING VISUAL  
SEPARATION, DESCENDING TO NINER THOUSAND"



(ACID), MAINTAIN VISUAL SEPARATION

*If aircraft are on converging courses, advise the other aircraft:*

(ACID) TRAFFIC, (clock position and distance), (direction)-BOUND,  
(type of aircraft), ON CONVERGING COURSE, HAS YOU IN SIGHT  
AND WILL MAINTAIN VISUAL SEPARATION



*Ask the students what type of separation will be provided after the  
application of visual separation (e.g., longitudinal - the lead aircraft is faster  
than the trailing aircraft).*

# VISUAL SEPARATION (CONT'D)

## Nonapproach Control Towers

JO 7110.65, par.  
7-2-1



Nonapproach Control Towers (i.e., VFR towers)

- ⦿ May be authorized to provide visual separation between aircraft within surface areas or designated areas when approved separation is provided before and after the application of visual separation



VISUAL SEPARATION APPROVED BETWEEN (ACID) AND (ACID)

*and for departing aircraft,*

(departing/succeeding aircraft) (ACID), RELEASED

**Example:** “VISUAL SEPARATION APPROVED BETWEEN BONANZA NINER-NINER-DELTA AND COMANCHE SIX-TWO-UNIFORM, BONANZA NINER-NINER-DELTA RELEASED”

- ⦿ If the nonapproach control tower controller states to the radar controller that they will provide visual separation between arrivals, departures/arrivals and/or successive departures, and states the call signs of all aircraft involved, the radar controller can approve the application of visual separation as requested



VISUAL SEPARATION APPROVED

*and for departing/succeeding aircraft,*

(ACIDs) RELEASED



# VISUAL SEPARATION (CONT'D)

## Knowledge Check

**Knowledge Check**

N316K is on approach. N13Y requests clearance to depart. What phraseology would the center controller use to authorize the tower to provide visual separation?

- A. "VISUAL SEPARATION APPROVED BETWEEN N13Y AND N316K. N13Y RELEASED."
- B. "RELEASE N13Y YOUR DISCRETION WHEN N316K IS IN SIGHT."
- C. "APPLY VFR BETWEEN N13Y AND N316K."

 Lesson 12: VFR and VFR-On-Top Procedures  21

**Question:** N316K is on approach. N13Y requests clearance to depart. What phraseology would the center controller use to authorize the tower to provide visual separation?



**Answer:** A. "VISUAL SEPARATION APPROVED BETWEEN N13Y AND N316K. N13Y RELEASED."

# VISUAL SEPARATION (CONT'D)

---

## Knowledge Check

### Knowledge Check

Visual separation may be used \_\_\_\_\_ when direct communication is maintained with one of the aircraft involved and there is an ability to communicate with the other.

- A. Up to but not including FL190
- B. Up to and including FL180
- C. Up to but not including FL180



Lesson 12: VFR and VFR-On-Top Procedures

22

**Question:** Visual separation may be used \_\_\_\_\_ when direct communication is maintained with one of the aircraft involved and there is an ability to communicate with the other.



**Answer:** C. Up to but not including FL180

---


# CONCLUSION

## Lesson Summary

### Lesson Summary

**This lesson covered:**

- VFR and VFR-on-top requirements
- VFR and VFR-on-top procedures
- Attributes of visual separation



Lesson 12: VFR and VFR-On-Top Procedures

23



*Review and elaborate briefly on the following topics. Ask students if they have questions about any of the concepts covered in the lesson.*

### Summary

- ⦿ VFR/VFR-on-top requirements
  - Visual restrictions
  - VFR conditions
  - Visual phraseology
  - VFR-on-top
  - VFR-on-top clearances
  - VFR-on-top phraseology
  - Holding VFR-on-top aircraft
- ⦿ VFR/VFR-on-top procedures
  - Altitude for direction of flight
  - Traffic advisories
  - SUA operations

---

*Continued on next page*

# CONCLUSION (CONT'D)

---

## Lesson Summary (Cont'd)

- ⊙ Attributes of visual separation
  - Application considerations
    - Separation before and after the application of visual separation
  - Other factors
    - Aircraft performance
    - Wake turbulence
    - Closure rate
    - Routes of flight
    - Known weather conditions
    - Aircraft position
  - Application
  - Phraseology
  - Nonapproach control towers (VFR Towers)



*Hand out and administer the end of lesson test. Provide feedback on missed items, including why particular answers are correct, as well as why some responses are incorrect.*

---