Pilot Briefing:
Climb Via, Descend Via, Speed Adjustments

NBAA Access Committee – Airspace, ATC, & Flight Technologies Working Group

Rev: 1.01 20 Feb 2014

Procedures Effective April 3, 2014
Acknowledgments
NBAA gratefully acknowledges the assistance of the following groups in the preparation of this program:

• Jeppesen, Inc.
  – Jeppesen navigation data and charts furnished for this program are for training & familiarization purposes only. They are not to be used for navigation purposes
• Performance-Based Aviation Rulemaking Committee (PARC) Pilot and Controller Phraseology System Integration (PCPSI) Working Group
• FAA’s PBN Policy and Support Group
• FAA Flight Standards - Performance Based Flight Systems Branch (AFS-470)
New & Revised Air Traffic Procedures
Climb Via,Descend Via, & Speed Adjustments

• Effective April 3, 2014
• Introduces the “Climb Via” clearance
• Updates the “Descend Via” clearance
• Revises & expands on ATC clearance phraseology supporting speed adjustments
• Provides ATC with new clearance/phraseology options
• Reduces frequency congestion
• Reduction in hear-back/read-back errors
Overview:

- Simple, intuitive phraseology for issuing a clearance to laterally & vertically navigate a departure or an arrival
- Pilots must be familiar with the application of these types of clearances:
  - “Climb Via/Descend Via”
  - Climb/Descend Via “Except Maintain”
  - Climb/Descend “and Maintain”
  - “Climb and Maintain” OR “Descend and Maintain”
  - Speed Phraseology
- Purpose of this program is to provide this familiarization
  - Definitions
  - Examples of operational application
  - Quick Reference Card
Pilots Need To Know

“Climb Via” & “Descend Via”

• **“Climb Via”**:  
  – An abbreviated ATC clearance that requires compliance with a procedure’s lateral path, associated speed restrictions and altitude restrictions along the cleared route or procedure until climbing to the “Top Altitude” published on the SID

• **“Descend Via”**:  
  – An abbreviated ATC clearance that requires compliance with a published procedure’s lateral path and associated speed restrictions and provides a pilot-discretion descent to comply with published altitude restrictions until descending to the “Bottom Altitude” published on the STAR
Pilots Need To Know

“Climb Via/Descend Via *Except Maintain*”

- Execute the Climb Via clearance to an ATC assigned “Top Altitude”
- Execute a Descend Via clearance to an ATC assigned “Bottom Altitude”
Pilots Need To Know

“Climb and Maintain” or “Descend and Maintain”

• Pilot is expected to vacate current altitude and commence an **unrestricted climb/descent** to comply with the clearance
• For aircraft already climbing via a SID, or descending via a STAR, published altitude restrictions **are deleted** unless re-issued by ATC
• Speed restrictions always **remain in effect** unless the controller explicitly cancels or amends the speed restrictions
Pilots Need To Know

“Comply With Restrictions”

- Requires aircraft joining or resuming a procedure to comply with published restrictions
- May be used in lieu of reissuing individual restrictions
Pilots Need To Know

Speed Phraseology

• **“Climb Via” or “Descend Via”:**
  - Absent any qualifying instructions, issuance of a climb or descend via clearance cancels a previously issued ATC speed adjustment and provides pilot discretion to adjust speed while requiring compliance with upcoming restrictions
  - ATC may require compliance with a previous ATC-issued speed adjustment using phraseology:
    - “Proceed direct FNCHR, maintain three zero zero knots until FNCHR, then descend via the FNCHR one arrival, landing north”
  - Where there are no upcoming speed restrictions, issuance of a “Proceed direct (WP name), climb/descend via ....” cancels a previously issued speed adjustment and authorizes speed at pilot’s discretion as appropriate for the phase of flight, ensuring compliance with 14 CFR 91.117

• **“Resume Normal Speed”:**
  - Cancels ATC issued speed restrictions and instructs pilot to return to normal aircraft speed where no restrictions are published on the procedure/route currently being flown
  - It does not delete speed restrictions on upcoming segments of flight (e.g. a STAR later in the flight)
  - This does not relieve the pilot of those speed restrictions which are applicable to 14 CFR Section 91.117

• **“Resume Published Speed”:**
  - Cancels ATC issued speed restrictions; pilot is expected to comply with speeds published on the SID/STAR

• **“Delete Speed Restrictions”:**
  - Cancels ATC assigned, and
  - Cancels all published speed restrictions on a charted procedure
Pilot/Controller Phraseology

• Pilots shall respond to “Climb Via” or “Descend Via” clearances by repeating the clearance verbatim; phrases such as “on the” or “descending on” a procedure are not acceptable and can create additional workload with unnecessary controller queries.

• When changing frequencies or on initial contact advise ATC of current altitude, “Climbing/Descending Via” procedure name, and runway transitions if assigned; if issued an altitude or speed not contained on the SID/STAR, advise ATC of restrictions issued by the prior controller.
Pilot/Controller Phraseology

Examples:

“Cactus Seven Eleven leaving two thousand climbing via the Laura Two departure.”

“Delta Fifty Eight climb via SID except cross MKALA at or above seven thousand.”

“American Seventy Seven proceed direct ROCKR, cross ROCKR at or above one zero thousand, climb via the BIZEE Two departure.”

“United Thirty Five cleared to Johnston Airport, Scott One departure, JONEZ transition, Q-one forty five, climb via SID except maintain flight level one eight zero.”

“JetBlue Six Zero Two leaving flight level two one zero descending via the IVANE two arrival landing south.”

“Delta One Twenty One leaving flight level one niner zero, descending via the EAGUL Five arrival runway two-six transition.”
Briefing Topics

Climb Via  Descend Via  Speed Adjustments  Additional Resources

Please click on the above picture to access the program pertaining to “Climb Via”, “Descend Via” and ATC speed adjustments. Within each briefing, you will have the option to return to this menu.

Exit Program
Briefing Topics – Climb Via (CV)

- Terminology
- Operational Application
- Predeparture Clearance (PDC)
- Briefing Card
- FAA “Climb Via” Video

Return To Briefing Topic Main Menu
Climb Via:

An abbreviated ATC clearance that requires compliance with the procedure lateral path, associated speed restrictions, and altitude restrictions along the cleared route or procedure.
Climb Via (AIM 5-2-8 e 4)

Authorizes Pilot To:

- When used in the IFR departure clearance, in a PDC, DCL* or when subsequently cleared after departure to a waypoint depicted on a SID, to join a procedure after departure or resume a procedure.

- When vertical navigation is interrupted and an altitude is assigned to maintain which is not contained on the published procedure, to climb from that previously assigned altitude at pilot’s discretion to the altitude depicted for the next waypoint.
  - ATC must ensure obstacle clearance until the aircraft is established on the lateral and vertical path of the SID.

- Once established on the depicted departure, to climb and to meet all published or assigned altitude and speed restrictions.

*DCL = Departure Clearance Via Data Link FANS 1/A Aircraft/Operators
Top Altitude:
In reference to SID published altitude restrictions the charted “maintain” altitude contained in the procedure description or assigned by ATC.
Top Altitude

- May be published for all runways & transitions
- May be specific to a particular runway/transition
- It is **not**:
  - The altitude filed in the IFR flight plan
  - The “expect” altitude in the IFR clearance or published on the SID
An ATC Clearance That Includes An IFR Departure Procedure

- Is a clearance to fly the depicted route & assigned transition
- Is a clearance requiring compliance with published speed restrictions
- However, altitude assignment & vertical navigation is a separate clearance
ATC Voice:
“Cleared...Cowboy Five Departure, Gallup Transition, Then As Filed. Climb Via SID...”

From COWBY via transition. **MAINTAIN FL190** EXPECT filed altitude 10 minutes after departure.
"Climb Via SID" Clearance

After takeoff, the pilot should:

- Track the lateral path of the COWBY
- Comply with published speed restrictions
- Climb to meet all published altitude restrictions
- Climb to the “Top Altitude” published on the SID

Published “Top Altitude” FL 190

Climb Via – Operational Application
Pilot/Controller Initial Contact Phraseology

“Las Vegas Departure, Gulfstream Six Five Zero Golf Alpha, Leaving Two Thousand Eight Hundred, Climbing Via The Cowboy Five Departure”

“Gulfstream Six Five Zero Golf Alpha, Las Vegas Departure, Radar Contact”
ATC Voice:
“Cleared...EPKEE Two Departure, DUUCE Transition, Then As Filed. Climb Via SID...”

Published “Top Altitude” (FL 230) Is Below The Last Published Altitude Restriction
Do Not Climb Above The Published “Top Altitude” Without Further ATC Clearance
“Climb Via SID”

After Takeoff, The Pilot Should:

- Track the lateral path of the EPKEE2
- Climb to meet all published altitude restrictions
- Climb to the published “Top Altitude” (FL 230)
- ATC **must issue** further climb clearance to cross CLAMR at or above FL 300
Climb Via, Except Maintain…
Used To Assign Or Amend The Top Altitude

• Used to assign a “Top Altitude” when not published on the chart
  – Some SIDs do not publish a “Top Altitude”
  – “Top Altitudes” will be charted in the future on all SIDs
  – In the interim, “Climb Via, Except Maintain” phraseology will be used to assign the “Top Altitude” that is not published on the chart

• When a “Top Altitude” is published on a chart
  – Used to instruct the pilot to comply with all published altitude and speed restrictions, but to climb and maintain a “Top Altitude” that differs from that published on the chart
Assign A “Top Altitude” When One Is Not Published On A SID

**ATC Voice:**
“Cleared...HAROB Four Departure, ERAVE Transition, Climb Via SID, Except Maintain One Five Thousand...”

**MAINTAIN**
assigned altitude

**MAINTAIN**
assigned altitude
“Climb Via SID, Except Maintain…”

After Takeoff, The Pilot Should:

- Track the lateral path of the HAROB
- Comply with published speed restrictions
- Climb to meet all published altitude restrictions
- Climb to the “Top Altitude” stated in the “Climb Via SID, Except Maintain” clearance
Assign A “Top Altitude” That Differs From That Published On A SID

**ATC Voice:**
“Cleared...STAAV Four Departure, Milford Transition, Climb Via SID, Except Maintain One-Three Thousand...”
“Climb Via SID, Except Maintain…”

After Takeoff, The Pilot Should:

- Track the lateral path of the STAAV4
- Comply with published speed restrictions
- Climb to meet all published altitude restrictions
- Climb to the “Top Altitude” stated in the “Climb Via SID, Except Maintain” clearance

<table>
<thead>
<tr>
<th>RWY</th>
<th>INITIAL CLimb</th>
<th>ALTITUDE</th>
</tr>
</thead>
<tbody>
<tr>
<td>25L</td>
<td>Climb heading 255° to at or above 2660’ then direct POOLZ, then via 333° track to TOMIS.</td>
<td>MAINTAIN FL150</td>
</tr>
<tr>
<td>25R</td>
<td>Climb heading 255° to at or above 2680’ then direct LEELN, then via 332° track to TOMIS.</td>
<td></td>
</tr>
</tbody>
</table>
Pilot/Controller Initial Contact Phraseology

Pilot Must Provide The “Top Altitude” On Initial Contact
When Climbing With A “Climb Via, Except Maintain” Altitude Assignment

“Las Vegas Departure, Gulfstream November One, Leaving Two Thousand Seven Hundred For One-Three Thousand, Climbing Via The STAAV Four Departure”

“Gulfstream November One, Las Vegas Departure, Radar Contact”
“Climb Via”

Applications After Takeoff

• Issue a clearance to resume vertical navigation on a SID after an ATC-issued interim altitude assignment
  – “Climb Via SID”

• Change a waypoint crossing restriction:
  – “Climb Via SID Except Cross MKALA At Or Above Seven Thousand”

• Issue a revised “Top Altitude” after departure:
  – “Climb Via SID Except Maintain Flight Level Three Zero Zero”

• Clear an aircraft to a fix & to resume vertical navigation on a SID:
  – “Proceed Direct DVINE, Then Climb Via The Suzan Two Departure”
  – “Proceed Direct ROCKR, Cross ROCKR At Or Above One Zero Thousand, Climb Via The BIZEE Two Departure”
ATC Intervention On A SID

- ATC will issue an altitude to maintain and all appropriate altitude restrictions when a vector will take the aircraft off an assigned procedure that contains altitude instructions or the previously issued clearance included crossing restrictions.
- ATC must advise the pilot what to expect when the vector is completed.
- Phraseology:
  - “Lear Two Three Mike X-ray, Fly Heading One Five Zero, Vectors For Spacing, Maintain One Zero Thousand, Expect To Resume The EPPKE Two Departure”
- Pilots may consider the SID canceled, unless the controller adds “expect to resume [SID name] departure”, in which case pilots should be prepared to rejoin the SID at a subsequent fix or procedure leg.
ATC Intervention On A SID

• If ATC interrupts lateral/vertical navigation while an aircraft is flying a SID, ATC must ensure obstacle clearance.

• When issuing a “climb via” clearance to join a procedure, ATC must ensure obstacle clearance until the aircraft is established on the lateral and vertical path of the SID.

• ATC will assign an altitude to cross if no altitude is depicted at a waypoint/fix, or when otherwise necessary/required, for an aircraft on a direct route to a waypoint fix where the SID will be joined or resumed.
After Passing GISTT, ATC Issues Heading Vector:
“Fly Heading One Two Zero, Vectors For Spacing, Climb and Maintain One Four Thousand, Expect To Resume The EXTAN Departure”

- Fly heading 120 degrees
- Climb unrestricted to 14,000’
- Expect to resume EXTAN Three
After Takeoff, ATC Issues Clearance: “Climb Via The LEETZ Two Departure, Except After LEETZ, Maintain Flight Level One Niner Zero”

- Track the lateral path of the LEETZ SID
- Comply with published speed restrictions
- Comply with published altitude restrictions until crossing LEETZ
- Then climb to the ATC assigned “Top Altitude” (FL 190)
After Passing ZEETA, ATC Issues Clearance:
“Proceed Direct MUCKI, Climb Via The LEETZ Two Departure”

- Proceed direct to MUCKI
- Then track the lateral path of the LEETZ SID
- Cross MUCKI at or below FL 230
- Climb to the “Top Altitude” (FL 230)
- Do not exceed 250 KT until MUCKI

230 KT Speed Restriction Published At HUCKK Is Not Applicable Unless Restated By ATC
After Takeoff, ATC Issues Clearance:
“Proceed Direct TUNNN, Cross TUNNN At Or Above One-One Thousand, Then Climb Via The CONNR Two Departure”

- Proceed direct to TUNNN
- Then track the lateral path of the CONNR SID
- Cross TUNNN at or above 11,000’
- Comply with altitude & speed restrictions published after TUNNN
- Climb to the published “Top Altitude” (FL 230)
Unrestricted Climb

Phraseology: “Maintain” or “Climb & Maintain”

- Initial IFR clearance:
  - “Cleared To …, LOOP Six Departure, As Filed, Maintain Four Thousand”
- After initial IFR clearance, but prior to or after takeoff:
  - “Hawker Two Three Yankee, Climb And Maintain One-two Thousand”
- Receipt of a “Maintain” or “Climb & Maintain” altitude clearance means:
  - All Published Altitude Restrictions **Are Canceled**
  - All Published Speed Restrictions **Remain In Effect**
Initial IFR Clearance: “Cleared...STAKR Two Departure, Climb Via SID...”

After Takeoff, ATC Issue Clearance: “Climb And Maintain Flight Level Two Three Zero”

- Track the lateral path of the STAKR SID
- Climb and maintain FL 230
- Disregard all published altitude restrictions
- Comply with published speed restrictions (280 KT until LENNN)
The Pilot Should:

• Track the lateral path of the STAKR2
• **Comply with all published speed restrictions**
• Published altitude restrictions are canceled
• Climb to the assigned “Maintain” altitude
Speed Restrictions Published On A SID

- When cleared along a route or procedure that contains published speed restrictions, pilots must comply with those speed restrictions **independent of a “Climb Via” or “Climb & Maintain” clearance**.

- ATC anticipates pilots will begin accelerating after passing a speed restriction commensurate with normal aircraft operations, but will not exceed the next speed restriction, if any, published on the SID.

- If vectored off a SID route segment where a published speed restriction applies, pilots **are expected to maintain** the published speed restriction until further advised.

- Absent any qualifying instructions, issuance of a “Climb Via” clearance cancels a previously issued ATC speed adjustment and provides pilot discretion to adjust speed while requiring compliance with upcoming restrictions.

- ATC may require compliance with previously issued speed adjustments using phraseology:
  
  - “Proceed to (WP name), then climb via...”
  
  - “Maintain (speed) until (WP name), then climb via...”
  
  - “Cross (WP name) at (speed) then climb via...”

- Where there are no upcoming speed restrictions, issuance of a “Proceed direct (WP name), climb via ....” cancels a previously issued speed adjustment and authorizes speed at pilot’s discretion as appropriate for the phase of flight, ensuring compliance with 14 CFR 91.117.
Pre-Departure Clearances

IFR Clearance Received Via Data Link Service

- “Climb Via” clearance is always provided in the “Remarks” section of the PDC.
- The ATC assigned departure (SID or ODP) may be furnished in the:
  - “Route” section, or
  - “Remarks” section
- The filed departure procedure is listed in the “filed flight plan” section of the PDC.
- The ATC assigned departure may differ from that filed in the IFR flight plan.
- **Fly the ATC-assigned departure, not the departure that was filed!**
- Insure the filed departure procedure is uplinked to the FMS.
- Verify the correct departure procedure in the FMS.

*Note: The “Route” & “Remarks” sections are generic descriptions of the elements of a typical the PDC message. They are not necessarily specific sections in the PDC as the format of these messages will vary with FOC or service provider.*
Climb Via – PDC

Note: PDC Format Varies With AOC or Service Provider

• ATC-assigned SID in the “ROUTE” section
• “Climb Via SID” clearance issued in the “REMARKS” section
<XXxxxx> DEPARTING KLAS TRANSPOINTER 6762
SKED DEP TIME 1515   EQUIP B738/L
FILED FLT LEVEL 330

ROUTING
**********************************************************************************
-ATC CLEARANCE-   ***CHANGED***
STAAV4 MLF
THEN AS FILED
**********************************************************************************
CLIMB VIA SID, EXCEPT MAINTAIN 13000

Note: PDC Format Varies With AOC or Service Provider

- ATC-assigned SID in the “ROUTE” section
- “Climb Via SID” clearance issued in the “REMARKS” section
- ATC-assigned “Top Altitude” of 13,000’ in the “REMARKS” section

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- ATC-assigned SID in the “REMARKS” section
- “Climb Via SID” is always issued in the “REMARKS” section
- Verify FMS contains the ATC-assigned SID (HAROB4), not the filed SID (ELMAA9)
**Climb Via – PDC**

*Note: PDC Format Varies With AOC or Service Provider*

PDC N-----
KRNO KSEA
RECEIVED AT: 29-Apr-13 1922Z

**ATC Clearance**
FMG J92 WNDEL LKV

**Filed Flight Plan**
KRNO FMG WNDEL LKV J67 BTG
HAWKZ3 KSEA

**Remarks**
CLEARED FMG7 DEP
CLIMB VIA SID
SQUAWK 2021

**Other Info**
REQUESTED ALT: 410
PROPOSED ETD: 2020z
CLERANCE ETD: Z
AIRCRAFT; F2TH/Q
***END OF CLEARANCE***

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**“Climb Via” May Be Applied To A Conventional SID**

**INITIAL CLIMB**
Climb to **10000’** or assigned altitude via IRNO localizer SOUTH course to RIJTU/DJ IRNO, then LEFT turn direct to FMG.

**ROUTING**
Climb in FMG holding pattern to depart FMG at or above MEA/MCA for direction of flight. EXPECT clearance to requested altitude five minutes after departure.

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Note: PDC Format Varies With AOC or Service Provider

PDC N-----
KSJC KLAS
RECEIVED AT: 22-Jun-13 2019Z

ATC Clearance
MOONY3 MOONY
THEN AS FILED

Filed Flight Plan
KSJC MOONY PMD DAG KEPEC3 KLAS

Remarks
CLIMB AND MAINTAIN 10000
SQUAWK 5247

Other Info
REQUESTED ALT: 410
PROPOSED ETD: 2020z
CLERANCE ETD: Z
AIRCRAFT; LJ45/Q
***END OF CLEARANCE***
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<tr>
<th>PHASE OF FLIGHT</th>
<th>SCENARIO</th>
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<tbody>
<tr>
<td>INITIAL IFR CLEARANCE</td>
<td>Assign a SID or ODP with the initial IFR clearance.</td>
</tr>
<tr>
<td>Assign a SID with a &quot;Top Altitude&quot; published in the SID route description. ж The assigned altitude may be omitted and pilots instructed to climb via SID when a &quot;Top Altitude&quot; is published in the SID route description.</td>
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<tr>
<td>Assign a SID that has published altitude restrictions but the &quot;Top Altitude&quot; is not published, or must be modified.</td>
<td>Use the phrase &quot;climb via SID except mandatory&quot; to assign the &quot;Top Altitude&quot;.</td>
</tr>
<tr>
<td>AFTER TAKEOFF</td>
<td>ATC desires an unrestricted climb-out and cancels all altitude restrictions.</td>
</tr>
<tr>
<td>ATC must interrupt the climb and assign an interim altitude to maintain while the aircraft continues to follow the SID's lateral path.</td>
<td>Issue an altitude to maintain. j ATC must ensure obstacle clearance until the aircraft is re-established on the vertical path of the SID.</td>
</tr>
<tr>
<td>ATC desires that the aircraft resume climb to the original &quot;Top Altitude&quot; while complying with all published altitude and speed restrictions on the SID.</td>
<td>Instruct aircraft to resume climb to comply with published altitude and speed restrictions.</td>
</tr>
<tr>
<td>During the climb, ATC must assign an interim &quot;Top Altitude&quot; or assign a &quot;Top Altitude&quot; past obstacles from that published on the SID.</td>
<td>Instruct aircraft to climb via the SID to a specific fix published on the SID. Then assign the new &quot;Top Altitude&quot;.</td>
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<td>Established on the SID, ATC must assign an altitude at a waypoint that differs from the altitude restriction published in a SID.</td>
<td>Instruct aircraft to climb via the SID. Amend the altitude restriction at the desired waypoint.</td>
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<td>ATC desires an unrestricted climb-out and cancels all altitude restrictions.</td>
<td>Clear aircraft for unrestricted climb. Cancel all published altitude restrictions.</td>
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<tr>
<td>Comply with the latest path of the DAVID Two SID, Kingston transition. ж On initial contact, climb unassigned up to and then maintain 9000 MSL. ж Comply with any published speed restrictions.</td>
<td></td>
</tr>
<tr>
<td>Comply with the latest path of the DAVID Two SID, Kingston transition. ж Comply with any published speed &amp; altitude restrictions. ж Climbing Via The DAVID Two Departure. ж On initial contact, climbing Via The DAVID Two Departure. ж On initial contact with departure control, climbing Via The DAVID Two Departure.</td>
<td></td>
</tr>
<tr>
<td>Comply with the latest path of the DAVID Two SID, Kingston transition. ж Climbing Via The DAVID Two Departure. ж On initial contact, climbing Via The DAVID Two Departure.</td>
<td></td>
</tr>
<tr>
<td>Track the lateral path of the SID. ж From the current altitude to FL 240. ж All published altitude restrictions are canceled. ж Speed restrictions remain in effect unless the controller explicitly approves the speed restrictions.</td>
<td></td>
</tr>
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Download the latest version from NBAA’s Website.
## Climb Via – Briefing Card

**CLIMB VIA DEPARTURE PHRASEOLOGY**

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<tr>
<td><strong>SPEED</strong></td>
<td>ATO must assign a speed restriction to a departing aircraft climbing in conjunction with a “climb via” clearance.</td>
<td><strong>ACTION</strong>&lt;br&gt;Assign a speed to maintain until a waypoint on the SID.</td>
<td><strong>PHRASEOLOGY</strong>&lt;br&gt;American Two, Cross Alisa At Two Zero Knots. Then Climb Via The DAVID Two Departure.¹&lt;br&gt;Note: Issued speed adjustments to aircraft flying procedures with published speed restrictions may impact the pilots ability to fly the intended flight path of the procedure.</td>
</tr>
<tr>
<td><strong>SPEED</strong></td>
<td>ATO must amend the altitude restriction published at a waypoint, after which the aircraft is to continue climb and comply with published altitude restrictions. In addition, ATO must assign a speed to maintain during the climb instead of the published speeds on the SID.</td>
<td><strong>ACTION</strong>&lt;br&gt;Assign an altitude to cross the waypoint.</td>
<td><strong>PHRASEOLOGY</strong>&lt;br&gt;American Two, Cross Alisa At One Zero Thousand. Then Climb Via The DAVID Two Departure.¹&lt;br&gt;Note: Issued speed adjustments to aircraft flying procedures with published speed restrictions may impact the pilots ability to fly the intended flight path of the procedure.</td>
</tr>
<tr>
<td><strong>ROUTE</strong></td>
<td>ATO must issue a heading and vector the aircraft off the lateral path of a SID with altitude restrictions.</td>
<td><strong>ACTION</strong>&lt;br&gt;Assign a heading to maintain.</td>
<td><strong>PHRASEOLOGY</strong>&lt;br&gt;American Two, Fly Heading Zero Niner Zero. Vectors To Spacing. Maintain Eight Thousand. Expect To Resume The DAVID Two Departure.²</td>
</tr>
<tr>
<td><strong>ROUTE</strong></td>
<td>Clear an aircraft to resume the SID at a waypoint with a published altitude restriction then to comply with published altitude &amp; speed restrictions.</td>
<td><strong>ACTION</strong>&lt;br&gt;Clear the aircraft to a waypoint with a published restriction.</td>
<td><strong>PHRASEOLOGY</strong>&lt;br&gt;American Two, Proceed Direct DIVINE. Climb Via The DAVID Two Departure.³&lt;br&gt;Note: Issued speed adjustments to aircraft flying procedures with published speed restrictions may impact the pilots ability to fly the intended flight path of the procedure.</td>
</tr>
<tr>
<td><strong>ROUTE</strong></td>
<td>Clear an aircraft to resume the SID at a waypoint with a published altitude restriction then to comply with published altitude &amp; speed restrictions.</td>
<td><strong>ACTION</strong>&lt;br&gt;Clear the aircraft to cross waypoint &amp; assign an altitude to maintain.</td>
<td><strong>PHRASEOLOGY</strong>&lt;br&gt;American Two, Proceed Direct DENIS. Cross DENIS At Or Above One Zero Thousand. Then Climb Via The DAVID Two Departure.³&lt;br&gt;Note: Issued speed adjustments to aircraft flying procedures with published speed restrictions may impact the pilots ability to fly the intended flight path of the procedure.</td>
</tr>
<tr>
<td><strong>GENERAL</strong></td>
<td>Issue/rescue the aircraft to resume the SID.</td>
<td><strong>ACTION</strong>&lt;br&gt;Issue/rescue the aircraft to resume the SID.</td>
<td><strong>PHRASEOLOGY</strong>&lt;br&gt;American Two, Resume DAVID Two Departure. Comply With Restrictions.⁴</td>
</tr>
</tbody>
</table>

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Briefing Topics – Climb Via (CV)

FAA “Climb Via” Video
Briefing Topics – Descend Via (DV)

Terminology
Operational Application
Briefing Card

Return To Briefing Topic Main Menu
Descend Via:

An abbreviated ATC clearance that requires compliance with a published procedure lateral path and associated speed restrictions and provides a pilot-discretion descent to comply with published altitude restrictions.
Descend Via (AIM 5-4-1 a 2)

Authorizes The Pilot To

- Descend at pilot’s discretion to meet published restrictions and laterally navigate on a STAR
- When cleared to a waypoint depicted on a STAR, to descend from a previously assigned altitude at pilot’s discretion to the altitude depicted at the waypoint
- Once established on the depicted arrival, to descend and to meet all published or assigned altitude and/or speed restrictions
Bottom Altitude:

In reference to published altitude restrictions on a STAR or STAR runway transition, the lowest altitude authorized.
“Bottom Altitude” 7,000'

Bottom Altitude Is Not The Lowest MEA Published On The STAR
Or
Any Altitude Published On An Instrument Approach That Connects To The STAR

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Bottom Altitude

In reference to published altitude restrictions on a STAR or STAR runway transition, the lowest altitude authorized.

- Runway transition or landing direction may be provided by ARTCC
  - An advisory note may be included on the chart:

5. EXPECT “descend via” clearance and landing direction assignment (NORTH or SOUTH) by ARTCC. Charlotte approach will assign landing runway.

- Otherwise, landing runway must be assigned by Arrival Controller on initial contact or as soon a practical thereafter, and no later than 10 miles prior to the runway transition waypoint

- Landing runway in use broadcast by the ATIS may be used to determine anticipated STAR transition for planning purposes
ATC Clearance That Includes A STAR:

- Is a clearance to fly the depicted route & assigned transition
- Is a clearance requiring compliance with published speed restrictions
- **However, altitude assignment & vertical navigation is a separate clearance!**

**ATC Clearance:**

“Proceed Direct Bowling Green, Cleared BLUZZ One Arrival”
**ATC Clearance:**

“Learjet Four Five Lima Juliet, Descend Via the GEELA Six Arrival, Runway Two Five Left”

---

**Routing:**

From WYDOM via 078° track to GEELA. Then as depicted on runway transitions.

| RWY | LANDING | FROM GEELA via 055° track to PENTM, then via 055° track to TEICM, then via 055° track to TESL, then via 078° track to SALGO, then via 078° track to FOVLX, then via 078° track to BALTE, expect ILS approach or RADAR vectors to final approach course. If unable, proceed direct PXR and hold. MAINTAIN 9000'. Landing Runway 26A, at BATWA turn LEFT, intercept and execute Runway 26L ILS approach. If unable, proceed direct PXR and hold. MAINTAIN 9000'. For runway transitions, see chart.
“Descend Via” Clearance

The Pilot Should:

• Track the lateral path of the GEELA6
• Comply with published speed restrictions
• Descend at pilot’s discretion to comply with all published altitude restrictions
• Descend to the “Bottom Altitude” published on the STAR
Pilot/Controller Initial Contact Phraseology

“Phoenix Approach, Learjet Four Five Lima Juliet, Leaving Flight Level Two Eight Zero, Descending Via The GEELA Six Arrival, Runway Two Five Left, Information Alpha”

“Learjet Four Five Lima Juliet, Phoenix Approach, Expect I-L-S Two Five Left Approach”
ATC Clearance:
“Falcon Five Zero Delta Alpha, Descend Via The IVANE Two Arrival, Landing North Contact Washington Center On One Three Two Point Two Five”

“Washington Center, Falcon Five Zero Delta Alpha, Leaving Flight Level Three Zero Zero, Descending Via The IVANE Two Arrival, Landing North”
A “Descend Via” Clearance From The Approach Controller Will Include The Landing Runway

“Charlotte Approach, Falcon Five Zero Delta Alpha, Leaving One Five Thousand, Descending Via The IVANE Two Arrival, Landing North Information Charlie”

ATC Clearance:
“Falcon Five Zero Delta Alpha, Descend Via the IVANE Two Arrival, Runway Three Six Center”
A “Descend Via” Clearance Will Not Be Used Where The STAR Contains Only Published “Expect” Altitude And/Or Speed Restrictions
ATC Clearance:
“Gulfstream Two Three Echo, Cross PEEDS At Flight Level Two Four Zero, Then Descend Via The JAIKE Three Arrival”

“Descend Via” May Be Used On Procedures That Contain Both “EXPECT” And REQUIRED Altitude And Speed Restrictions Only If Altitude And/Or Speed Restrictions Or Alternate Restrictions Are Issued For The Fix/Waypoint Associated With All Expect Restrictions

“Descend Via” Clearances May Also Be Issued If An Aircraft Is Past All Fixes/Waypoints That Have Expect Restrictions

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STARs

ATC Clearances

• Lateral/Routing Clearance:
  – “Cleared TYLER One Arrival”
    • No descent authorized
    • Comply with published speed restrictions

• Lateral Route & Unrestricted Descent:
  – “Cleared TYLER One Arrival, Descend At Pilot’s Discretion, Maintain One Zero Thousand”
    • Initiate descent at pilot’s discretion to 10,000’
    • All published altitude restrictions are canceled
    • All published speed restrictions remain in effect
ATC Clearance:
“Proceed Direct Bowling Green, Cleared BLUZZ One Arrival, Landing North, Descend and Maintain One Zero Thousand”

- Track the lateral path of the BLUZZ One STAR
- Descend and maintain 10,000’
- Disregard all published altitude restrictions
- Transition from cruise Mach to 290 KT
- Comply with published speed restrictions
ATC Clearance:
“Falcon 900 Delta Alpha, Descend Via The GIBBZ Two Arrival, Landing North, Except After KIKKR Descend And Maintain One Zero Thousand”
“Descend Via” With An Interim Altitude Or Revised Bottom Altitude

The Pilot Should:

- Track the lateral path of the GIBBZ2, Runway 1 Center transition
- Descend at pilot’s discretion to comply with published altitude restrictions until KIKKR
- Then descend unrestricted and at an optimum rate to 10,000’
- Comply with all published speed restrictions (e.g., 250 KT at MOSLE)
“Potomac Approach, Falcon Nine Zero Zero Delta Alpha, Leaving Flight Level Two Four Zero For One Zero Thousand, Descending Via The GIBBZ Two Arrival, Landing North, Information Bravo”

“Falcon Nine Zero Zero Delta Alpha, Potomac Approach, Expect R-NAV Zulu Runway One Center”
ATC Intervention On A STAR

• ATC will issue an altitude to maintain and all appropriate altitude restrictions when the vector will take the aircraft off an assigned procedure that contains altitude instructions or the previously issued clearance included crossing restrictions

• ATC must advise the pilot what to expect when the vector is completed

• Phraseology:
  – “Citation Two Charlie Alpha, Fly Heading Zero Nine Zero, Vector For Spacing, Descend And Maintain Flight Level Two Nine Zero, Expect To Resume The BRBBQ One Arrival”

• Air traffic will assign an altitude to cross the waypoint/fix, if no altitude is depicted at the waypoint/fix, for aircraft on a direct routing to a STAR

• Air traffic must ensure obstacle clearance when issuing a “Descend Via” instruction to the pilot
ATC Clearance:
“Fly Heading One Two Zero, Vectors For Spacing, Descend And Maintain Flight Level Two Nine Zero, Expect To Resume The BRBBQ One Arrival”

- Fly the ATC-assigned heading (120 degrees)
- Descend & maintain FL 290
- Transition from cruise Mach to 290 KT
- Be prepared to re-join the BRBBQ STAR
ATC Clearance:
“Proceed Direct BRBBQ, Descend Via The BRBBQ One Arrival, Landing North”

- Proceed direct to BRBBQ
- Transition from cruise Mach to 290 KT
- Cross BRBBQ at or below FL 230 and at 280 KT
- Track the lateral path of the BRBBQ STAR
- Comply with published speed restrictions
- Comply with published altitude restrictions to the “Bottom Altitude” (4,000’)

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ATC Clearance:
“Proceed Direct JESTI, Cross JESTI At One Zero Thousand, Then Descend Via The BRBBQ One Arrival, Landing North”

- Proceed direct to JESTI
- Transition from cruise Mach to 290 KT
- Cross JESTI at 10,000’
- *Then* track the lateral path of the BRBBQ STAR
- Comply with published speed restrictions
- Comply with published altitude restrictions to the “Bottom Altitude” (4,000’)

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ATC Clearance:
“Proceed Direct BEERT, Descend Via The BRBBQ One Arrival, Landing North”

- Proceed direct to BEERT
- Transition from cruise Mach to 290 KT
- Cross BEERT between 12,000’ & 10,000’
- Cross BEERT at 250 KT
  - Reduce speed the minimum distance required prior to BEERT commensurate with normal aircraft performance
- Track the lateral path of the BRBBQ STAR
- Comply with published speed restrictions
- Comply with published altitude restrictions to the “Bottom Altitude” (4,000’)

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Speed Restrictions Published On A STAR

- When otherwise cleared along a route or procedure that contains published speed restrictions, the pilot must comply with those speed restrictions **independent of a “Descend Via” or “Descend & Maintain” clearance**
- ATC anticipates pilots will begin adjusting speed the minimum distance necessary prior to a published speed restriction, commensurate with normal aircraft deceleration, to cross the waypoint/fix at the published speed
- Once at the published speed, ATC expects pilots will maintain the published speed until additional adjustment is required to comply with further published or ATC assigned speed restrictions or as required to ensure compliance with 14 CFR Section 91.117
- If vectored off a STAR route segment where a published speed restriction applies, pilots are expected to maintain the published speed restriction until further advised
- Absent any qualifying instructions, issuance of a “Descend Via” clearance cancels a previously issued ATC speed adjustment and provides pilot discretion to adjust speed while requiring compliance with upcoming restrictions
- ATC may require compliance with previously issued speed adjustments using phraseology:
  - “Proceed to (WP name), then descend via...”,
  - “Maintain (speed) until (WP name), then descend via...”
  - “Cross (WP name) at (speed) then descend via...”
- Where there are no upcoming speed restrictions, issuance of a “Proceed direct (WP name), descend via ...” cancels a previously issued speed adjustment and authorizes speed at pilot's discretion as appropriate for the phase of flight, ensuring compliance with 14 CFR 91.117
## Descend Via – Briefing Card

### Descend Via Arrival Phraseology

<table>
<thead>
<tr>
<th>Phase of Flight</th>
<th>Scenario</th>
<th>Controller</th>
<th>Phraseology</th>
<th>Pilot</th>
<th>Phraseology</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Enroute</strong></td>
<td>STAR was filed IFR flight plan &amp; aircraft was cleared as filed.</td>
<td>None required.</td>
<td>NA</td>
<td>Track the lateral path of the STAR, Compensate for published speed restrictions, Maintain last assigned altitude.</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>Assign a STAR to an IFR aircraft.</td>
<td>Clear aircraft to a fix on STAR, if required.</td>
<td>American Two, Proceed Direct Charleston VORTAC, Cleared TYLER Two Amblé.</td>
<td>Track the lateral path of the STAR, Compensate for published speed restrictions, Maintain last assigned altitude.</td>
<td>American Two, Proceed Direct Charleston VORTAC, Cleared TYLER Two Amblé.</td>
</tr>
<tr>
<td><strong>Terminal</strong></td>
<td>Initiate a descent on an aircraft at the controller’s discretion, if required.</td>
<td>Issue the altitude to maintain.</td>
<td>American Two, Descend Via The TYLER Two Arrival, Landing North.</td>
<td>Track the lateral path of the STAR, Compensate for published speed restrictions, Descend at pilot’s discretion from the last assigned altitude to comply with all published altitude restrictions.</td>
<td>American Two, Descend Via The TYLER Two Arrival, Landing North.</td>
</tr>
<tr>
<td><strong>Terminal</strong></td>
<td>Instruct aircraft to descend and comply with all restrictions published on a STAR.</td>
<td>Issue the altitude to maintain.</td>
<td>American Two, Descend Via The TYLER Two Arrival, Runway One Center.</td>
<td>Track the lateral path of the STAR, Compensate for published speed restrictions, Descend at pilot’s discretion from the last assigned altitude to comply with all published altitude restrictions.</td>
<td>American Two, Descend Via The TYLER Two Arrival, Runway One Center.</td>
</tr>
<tr>
<td><strong>Descent</strong></td>
<td>Assign a waypoint altitude restriction, and then instruct aircraft to descend and comply with all restrictions published on a STAR.</td>
<td>Issue the altitude to maintain.</td>
<td>American Two, Cross GARYM at Flight Level Two Four Zero, then Descend Via The TYLER Two Arrival.</td>
<td>Track the lateral path of the STAR, Compensate for published speed restrictions, Descend at pilot’s discretion to cross GARYM at FL 240. Then, descend at pilot’s discretion to comply with all published altitude restrictions.</td>
<td>“American Two, Cross GARYM at Flight Level Two Four Zero, then Descend Via The TYLER Two Arrival.”</td>
</tr>
<tr>
<td><strong>Descent</strong></td>
<td>Instruct aircraft to descend and comply with all restrictions published on a STAR, but assign ‘Bottom Altitude’ that differs from that published on the STAR.</td>
<td>Issue the altitude and then instruct aircraft to descend via the STAR.</td>
<td>American Two, Descend Via The TYLER Two Arrival Except After ARDAH Maintain Seven Thousand.</td>
<td>Track the lateral path of the STAR, Compensate for published speed restrictions, Comply with published altitude restrictions until ARDAH, then descend &amp; maintain the ATC-assigned ‘Bottom Altitude’.</td>
<td>American Two, Descend Via The TYLER Two Arrival Except After ARDAH Maintain Seven Thousand.</td>
</tr>
<tr>
<td><strong>Descent</strong></td>
<td>Instruct aircraft to descend and comply with all restrictions published on a STAR, but assign an altitude restriction at a waypoint that differs from that published at that waypoint on the STAR.</td>
<td>Issue the altitude and then instruct aircraft to descend via the STAR.</td>
<td>American Two, Descend Via The TYLER Two Arrival Except Cross ARDAH At One Zero Thousand.</td>
<td>Track the lateral path of the STAR, Compensate for published speed restrictions, Comply with published altitude restrictions except cross ARDAH at the ATC-assigned altitude.</td>
<td>American Two, Descend Via The TYLER Two Arrival Except Cross ARDAH At One Zero Thousand.</td>
</tr>
</tbody>
</table>

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<ESC Exit>
### Descend Via Arrival Phraseology

<table>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Speed</strong></td>
<td>Issue an altitude to cross a waypoint, then instruct the aircraft to descend and comply with all altitude restrictions published on the STAR, but assign an speed to maintain instead of complying with the published speed restrictions on the STAR.</td>
<td>Assign the waypoint's altitude restriction.</td>
<td><strong>American Two</strong> Cross LMND at or above one seven thousand, then descend via TYLER Two Arrival, except maintain three zero zero knots.</td>
<td>Track the latest path of the STAR.</td>
<td><strong>American Two</strong> Descend via the TYLER Two Arrival, landing north, except maintain three zero zero knots.</td>
</tr>
<tr>
<td><strong>Descent</strong></td>
<td>Ensure an aircraft to descend and comply with all published speed restrictions on the STAR.</td>
<td>Instruct the aircraft to descend via the STAR, issue a speed to be maintained in the descent.</td>
<td><strong>American Two</strong> Descend via the TYLER Two Arrival, landing north, except maintain three zero zero knots.</td>
<td><strong>American Two</strong> Descend via the TYLER Two Arrival, landing north, except maintain three zero zero knots.</td>
<td></td>
</tr>
<tr>
<td><strong>Route</strong></td>
<td>ATC must vector an aircraft away from the lateral path of a STAR with altitude restrictions.</td>
<td>Assign a heading to maintain.</td>
<td><strong>American Two</strong> Fly heading zero nine zero, vectors for spacing descend and maintain nine thousand. Expect to resume the TYLER Two Arrival.</td>
<td>Proceed direct to GARYY &amp; resume the STAR.</td>
<td><strong>American Two</strong> Proceed direct to GARYY &amp; resume the STAR.</td>
</tr>
<tr>
<td></td>
<td>Clear an aircraft to rejoin the STAR at a waypoint with a published altitude restriction, then instruct the aircraft to descend and comply with all published restrictions on the STAR.</td>
<td>Ensure obstacle clearance until the aircraft is established on the lateral and vertical path of the STAR.</td>
<td><strong>American Two</strong> Proceed direct to BTOVN, cross BTOVN at or above one zero thousand, then descend via TYLER Two Arrival.</td>
<td><strong>American Two</strong> Proceed direct to BTOVN &amp; resume the STAR.</td>
<td><strong>American Two</strong> Proceed direct to BTOVN &amp; resume the STAR.</td>
</tr>
<tr>
<td></td>
<td>Clear an aircraft to rejoin the STAR at a waypoint that does not have a published altitude restriction, then instruct the aircraft to descend and comply with all published restrictions on the STAR.</td>
<td>Clear the aircraft to the waypoint.</td>
<td><strong>American Two</strong> Proceed direct to GARYY, descend via TYLER Two Arrival.</td>
<td><strong>American Two</strong> Proceed direct to GARYY &amp; resume the STAR.</td>
<td><strong>American Two</strong> Proceed direct to GARYY &amp; resume the STAR.</td>
</tr>
<tr>
<td><strong>General</strong></td>
<td>Aircraft has been issued a descent via clearance with no change to the STAR's bottom altitude. Aircraft is making the initial contact following a frequency change.</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>Aircraft has been issued a descent via clearance for an ATD-assisted bottom altitude of 7000. Aircraft is making the initial contact following a frequency change.</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

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Published Speeds On SIDs & STARs

Unless Otherwise Assigned By ATC, Pilots Must Comply With Published Speed Restrictions *Independent* Of Any Climb Or Descent Clearance
SID & STAR Published Speed Restrictions

- Strict compliance with published speed restrictions is necessary to maintain lateral & longitudinal spacing and to prevent "compression" of the sequential aircraft flow.
- Where a speed reduction is required, ATC anticipates pilots will begin adjusting speed the minimum distance necessary, commensurate with normal aircraft performance, prior to a published speed restriction so as to cross the waypoint/fix at the published speed.
- Once at the published speed, ATC expects pilots will maintain the published speed until additional adjustment is required to comply with further published or ATC assigned speed restrictions or as required to ensure compliance with 14 CFR Section 91.117.

**HYDRR**
At 265 KT Between 17000’ & 15000’

**GEELA**
At 250 KT At or Below 16000’

**MNSTR**
At 250 KT Between 16000’ & 15000’

**HENSN**
At 250 KT At 11000’

**NIMBY**
At 210KT At 7000’

**LOOSY**
At 210KT At 9000’

**Speed 265 KT**
Begin Speed Reduction At The Minimum Distance Necessary Commensurate With Normal Aircraft Performance To Cross GEELA At 250 KT.
Speed Adjustments

• However, ATC may issue speed adjustments to address tactical requirements necessary for the separation & spacing of aircraft.

• ATC uses the phraseology “Maintain (speed) knots” to assign a speed to be maintained:
  – “Learjet Four Five Lima Juliet, Maintain Two Five Zero Knots”

• It is recommended that pilots provide the ATC-assigned speed on subsequent frequency changes:
  – (ref: AIM 4-4-12. Speed Adjustments)

• ATC-assigned speeds remain in effect until canceled by ATC.

• When issuing speed adjustments to aircraft cleared on procedures with published speed restrictions, ATC will specify the point at which the issued restriction begins, ends, or changes the published restrictions using the methods described on the following slides to cancel or amend speed assignments.
Phraseology

“Climb Via” & “Descend Via”

- Absent any qualifying instructions, issuance of a climb or descend via clearance cancels a previously issued ATC speed adjustment and provides pilot discretion to adjust speed while requiring compliance with upcoming restrictions.

- ATC may require compliance with previously issued speed adjustments using phraseology such as
  - “Proceed to (WP name), then climb/descend via...”
  - “Maintain (speed) until (WP name), then climb/descend via...”
  - “Cross (WP name) at (speed) then climb/descend via....”

- Where there are no upcoming speed restrictions, issuance of a “Proceed direct (WP name), climb/descend via ....” cancels a previously issued speed adjustment and authorizes speed at pilot's discretion as appropriate for the phase of flight, ensuring compliance with 14 CFR 91.117
• Resume climb & comply with published altitude restrictions to the “Top Altitude” (FL 230)
• The last ATC-assigned speed (230 KT) is canceled
• Pilot may adjust speed at their discretion in compliance with 14 CFR 91.117, not to exceed the 250 KT speed restriction at DOCKT
**ATC Clearance #1:**
“Fly Heading Three Five Zero, Vectors for Spacing, Do Not Exceed Two Five Zero Knots”

**ATC Clearance #2:**
“Proceed Direct SHOBO, Climb Via The EEONS Three Departure”

- Proceed direct to SHOBO & resume EEONS SID
- The last ATC-assigned speed (250 KT) is canceled
- Pilot may adjust speed at their discretion in compliance with 14 CFR 91.117
- Continue climb & comply with published altitude restrictions to the “Top Altitude” (FL 230)
**ATC Clearance #1:**
“Fly Heading Two Seven Zero, Vectors for Spacing, Maintain Two Five Zero Knots”

**ATC Clearance #2:**
“Proceed Direct LENNN, Climb Via The STAKR Two Departure”

- The last ATC-assigned speed (250 KT) is canceled
- Pilot may adjust speed at their discretion in compliance with 14 CFR 91.117, not to exceed the 280 KT speed restriction at LENNN
- Proceed direct to LENNN & track the lateral path of the STAKR SID
- Comply with published altitude & speed restrictions
- Climb to the published “Top Altitude” (FL 230)
ATC Clearance #1: “Maintain Three One Zero Knots”

- The last ATC-assigned speed (310 KT) is canceled
- Pilot may adjust speed at their discretion in compliance with 14 CFR 91.117
- Cross SAUCC at 290 KT
- Comply with published altitude restrictions to “Bottom Altitude” (4,000’)
- Comply with published speed restrictions

ATC Clearance #2: “Descend Via The BRBBQ One Arrival, Landing North”

Recommended That Pilots Not Make Excessive Speed Variations Without Advising ATC
ATC Clearance #1: "Maintain Three One Zero Knots"

• Maintain ATC-assigned speed (310 KT) until SAUCC.
• The 290 KT speed restriction at SAUCC is canceled
• Then, comply with the published speed restrictions beginning at BRBBQ
• Comply with published altitude restrictions to “Bottom Altitude” (4,000’)

ATC Clearance #2: "Maintain Three One Zero Knots Until SAUCC, Then Descend Via The BRBBQ One Arrival, Landing North"
ATC Clearance #2:
“Maintain Three One Zero Knots Until SAUCC,
Then Descend Via The BRBBQ One Arrival, Landing North”

Begin Speed Reduction At The Minimum Distance Necessary Commensurate With Normal Aircraft Performance To Comply With The Next Published Speed Restriction (BRBBQ At 280 KT)
ATC Clearance #1:
“Maintain Three One Zero Knots”

- Maintain ATC-assigned speed (310 KT)
- Cross SAUCC at 290 KT, Then...
- Comply with published altitude restrictions to “Bottom Altitude” (4,000’)
- Comply with published speed restrictions

ATC Clearance #2:
“Cross SAUCC At Two Niner Zero Knots, Then Descend Via The BRBBQ One Arrival, Landing North”

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ATC Clearance:
“Fly Heading Two Seven Zero, Vectors For Weather Over QUENY, Descend And Maintain One Zero Thousand, Expect To Resume The EAGUL Five Arrival”

- Maintain published speed (250 KT)
- Maintain ATC-assigned altitude (10,000’)
- Expect to resume EAGUL Five
ATC Clearance:
“Descend Via The EAGUL Five Arrival, Except Maintain Three Zero Zero Knots”

- Comply with published altitude restrictions to the “Bottom Altitude” (7,000’)
- Maintain 300 KT – Published speed restrictions are canceled
- When necessary, reduce to 250 KT below 10,000’ MSL (14 CFR 91.117)
- Then maintain 250 KT until advised by ATC
Phraseology

“Resume Normal Speed”

- Used to terminate ATC assigned speed adjustments on segments where no published speed restrictions apply
- It does not delete speed restrictions on upcoming segments of flight and does not relieve the pilot of those speed restrictions which are applicable to 14 CFR Section 91.117

**ATC Clearance:**

“Maintain Two Three Zero Knots Until PEVEE, Then Resume Normal Speed”

- Maintain 230 KT until PEVEE
- Resume normal speed passing PEVEE
- Do not exceed 250 KT until above 10,000’
Phraseology
“Resume Published Speed”

- Used by ATC to terminate a speed adjustment where speed restrictions are published on a charted procedure
Complying With Speed Restrictions

- When instructed to “resume published speed,” ATC anticipates pilots will begin adjusting speed the minimum distance necessary prior to a published speed restriction so as to cross the waypoint/fix at the published speed.

- Once at the published speed, ATC expects pilots will maintain the published speed until additional adjustment is required to comply with further published or ATC assigned speed restrictions or as required to ensure compliance with 14 CFR Section 91.117.

ATC-Assigned Speed 310 KT or Greater

Begin Speed Reduction At The Minimum Distance Necessary Commensurate With Normal Aircraft Performance To Cross GEELA At 250 KT
Phraseology

“Delete Speed Restrictions”

• ATC will advise the pilot to “Delete Speed Restrictions” when either ATC assigned or published speed restrictions on a charted procedure are no longer required

• When deleting published restrictions, ATC must ensure obstacle clearance until aircraft are established on a route where no published restrictions apply

• This does not relieve the pilot of those speed restrictions which are applicable to 14 CFR Section 91.117
Speed Adjustments

**Initial IFR Clearance:**
“Cleared...STAAV Four Departure, Dove Creek Transition, Climb Via SID...”

- Delete all speed restrictions on STAAV SID
- Do not exceed 250 KT until above 10,000’ (14 CFR 91.117)
- Comply with all published altitude restrictions
- Climb to the published “Top Altitude” (FL 190)

When Deleting Published Restrictions, ATC Must Ensure Obstacle Clearance Until The Aircraft Is Established On A Route Where No Published Restrictions Apply

**After Takeoff - ATC Clearance:**
“Delete Speed Restrictions”
DEDICATED TO HELPING BUSINESS ACHIEVE ITS HIGHEST GOALS.