

NOTICE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

N 8400.73

09/07/04

Cancellation
Date: 09/07/05

**SUBJ: DESCEND VIA PROCEDURES FOR U.S. OPERATORS FLYING STANDARD
TERMINAL ARRIVAL (STAR) OR FLIGHT MANAGEMENT SYSTEM
PROCEDURES (FMSP) IN U.S. AIRSPACE**

1. PURPOSE. This notice provides guidance for Federal Aviation Administration (FAA) inspectors regarding Descend via procedures, for conveying to their respective operators, and further conveyance to pilots. Specifically, this guidance is for principal operations inspectors (POI) overseeing certificate holders under Part 121 and Part 135, and for POIs overseeing fractional ownership programs under Part 91 subpart K. This guidance may also be useful to training center program managers (TCPM) overseeing Part 142 training centers.

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2. DISTRIBUTION. This notice is distributed to the division level in the Flight Standards Service in Washington headquarters; to the branch level in the regional Flight Standards divisions; to the Flight Standards District Offices, and to the Regulatory Standards Division at the Mike Monroney Aeronautical Center. This notice is also distributed electronically to the division level in the Flight Standards Service in Washington headquarters and to all regional Flight Standards divisions and district offices. This information is also available on the Federal Aviation Administration's (FAA) Web site at: <http://www.faa.gov/avr/afs/notices/>.

3. BACKGROUND. Aeronautical Information Manual (AIM) paragraph 5-4-1, *Standard Terminal Arrival (STAR), Flight Management System Procedures (FMSP) for Arrivals*, describes current pilot and controller responsibilities when an aircraft is cleared to "descend via" a STAR or FMSP (such as the KEPEC ONE shown in Appendix I). This notice will describe those procedures that will be implemented in August 2004 for two situations (**a** and **b**):

a. DESCEND VIA WHEN ESTABLISHED ON A STAR OR FMSP. Air Traffic Control (ATC) may assign an altitude to an aircraft that is established on a STAR or FMSP. Pilots are expected to navigate laterally on the STAR or FMSP and maintain the assigned altitude until a "descend via" instruction is issued. ATC will advise the pilot to "descend via" the STAR or FMSP (Example: "*Descend via the KEPEC ONE arrival*"), which then authorizes the pilot to navigate both laterally and vertically on the STAR or FMSP. Pilots are expected to comply with all altitude and/or airspeed restrictions depicted on the STAR or FMSP after a "descend via" instruction is issued. Pilots cleared to "descend via" shall inform ATC of this clearance upon initial contact with a new frequency (Example: "*Cactus One Twenty One leaving Flight Level Two Four Zero, descending via the KEPEC ONE arrival.*")

(1) ATC may change a waypoint altitude and/or speed restriction of the STAR or FMSP for operational requirements via the initial "descend via" instruction.

Distribution: A-W(FS)-2; A-X(FS)-3; A-FFS-7 (LTD); AMA-200 (80 cys)
(Electronically: A-W(FS)-2; A-X(FS)-2; A-FFS-7)

Initiated By: AFS-410

(a) Example 1: “*American Two Ten, descend via the KEPEC ONE arrival, except cross SUNST at Seven Thousand, then maintain Five Thousand.*” The aircraft should track laterally and vertically on the KEPEC ONE Arrival and should descend so as to comply with all speed and altitude restrictions in order to cross SUNST at Seven Thousand; then should continue the descent to Five Thousand. Upon reaching 5,000 feet, the aircraft should maintain 5,000 feet until cleared by ATC to continue to descend.

(b) Example 2: “*Cactus Seven Eleven, descend via the KEPEC ONE Arrival, except after IPUMY, maintain One Zero Thousand.*” The aircraft should track laterally and vertically on the KEPEC ONE arrival and should descend so as to comply with all speed and altitude restrictions until reaching IPUMY and then maintain 10,000 feet. Upon reaching 10,000 feet, the aircraft should maintain 10,000 feet until cleared by ATC to continue to descend.

(2) ATC may also include an altitude and/or speed restriction prior to the “descend via” instruction. Example: “*American Two Ten cross ZELMA at One Six Thousand, then descend via KEPEC ONE Arrival.*” The aircraft should track laterally and vertically on the KEPEC ONE arrival in order to cross ZELMA at 16,000 feet. Upon crossing ZELMA at 16,000 feet, the aircraft should track laterally and vertically on the arrival to comply with all speed and altitude restrictions until reaching the terminus fix.

b. DESCEND VIA WHEN ON AN OFF-ROUTE VECTOR. Aircraft on an off-route vector issued by ATC may be instructed to proceed direct to a waypoint and instructed to “descend via” the STAR or FMSP (Example: “*Proceed direct CLARR, then descend via KEPEC ONE arrival.*”)

(1) DIRECT TO A WAYPOINT WITH A PUBLISHED ALTITUDE RESTRICTION. If an altitude is depicted at the waypoint, pilots are expected to descend at their discretion to comply with the altitude at the waypoint for which they have been cleared (Example: “*Proceed direct MISEN, then descend via KEPEC ONE arrival.*”) ATC is responsible for ensuring that the aircraft will remain clear of all obstacles from its present position for the route of flight to the waypoint. Once established on the STAR or FMSP, pilots are expected to comply with all altitude and/or airspeed restrictions on the STAR or FMSP. Pilots cleared to “descend via” shall inform ATC of this clearance upon initial contact with a new frequency (Example: “*American Two Ten leaving One Two Thousand, descending via the KEPEC ONE arrival.*”)

(2) DIRECT TO A WAYPOINT WITHOUT A PUBLISHED ALTITUDE RESTRICTION. Aircraft on an off-route vector issued by ATC may be instructed to proceed to a waypoint and instructed to “descend via” the STAR or FMSP. If altitude is not depicted at the waypoint, ATC must assign an altitude for the pilot to cross the waypoint (Example: “*Proceed direct JOTNU, cross JOTNU at Flight level Two Zero Zero, then descend via KEPEC ONE arrival.*”) Pilots are expected to descend at their discretion to comply with the altitude issued by ATC at the waypoint for which they have been cleared. ATC is responsible for ensuring the aircraft will remain clear of all obstacles from its present position for its route of flight to the waypoint. Once established on the STAR or FMSP, pilots are expected to comply with all altitude and/or airspeed restrictions on the STAR or FMSP. Pilots cleared to “descend via” shall inform ATC of this clearance upon initial contact with a new frequency (Example: “*Southwest Three Forty leaving Flight Level Two Four Zero, descending via the KEPEC ONE arrival.*”)

4. ACTION.

a. Inspectors should be aware of the procedures regarding descend via clearances to be effective August 2004.

b. Each POI should convey the information contained in this notice to the Director of Safety of each part 121 operator, the Director of Operations of each part 135 operator, or the Program Manager of each 91-K fractional ownership program, for which the inspector has oversight responsibility. Each POI should include the FAA's recommendation that this information be further conveyed, by the operator, to the operator's pilots.

5. PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) INPUT. Document the conveyance of this notice to each affected operator.

a. Use PTRS code 1030, Convey Non-Reg. Info.

b. Enter "N8400.DV" (without quotes) in the "National Use" field.

c. Once the aforementioned information has been conveyed to the air carrier, close out the PTRS.

6. DISPOSITION. This notice will not be incorporated into 8400.10, Air Transportation Operations Inspector's Handbook. Questions regarding this notice should be directed to the Flight Operations Branch (AFS-410) at (202) 385-4613/15.

James J. Ballough
Director, Flight Standards Service