

Terminal Checklist 4/18

Answers on page 20

Refer to the 12-4 RNAV (GPS) Rwy 26 for PHL (Philadelphia PA) when necessary to answer the following questions:

- The temperature is -15° C. Select the true statement(s) about the cold temperature operations that apply to this approach.
 - The approach is not authorized.
 - Cold temperature altitude corrections are required.
 - The approach may be flown to LPV minimums with an uncompensated baro-VNAV system.
 - The approach may not be flown to LNAV/VNAV minimums with an uncompensated baro-VNAV system.
- Select the true statement(s) regarding simultaneous operations.
 - Simultaneous operations may occur at any time without ATC notification.
 - Use of a flight director or autopilot is required during simultaneous operations.
 - Using lateral guidance only to fly to an MDA of 500 ft MSL is not permitted during simultaneous operations.
 - An aircraft must have WAAS-certified GPS equipment to fly an approach when simultaneous operations are in effect.
- Select all that apply. The approach may not be flown to a DA of 513 ft MSL if _____.
 - RAIM is unavailable.
 - The MALS is inoperative.
 - The GPS equipment is not WAAS-certified.
 - A NOTAM for PHL states that "WAAS LPV AND LNAV/VNAV MNM UNREL."
- Select the true statement(s) regarding flying the initial approach segment.
 - Regardless of the IAF, a minimum altitude of 3300 ft MSL applies.
 - The initial approach segment from ALBEK requires a descent at CIBOP.
 - The procedure is not authorized for an arrival on V312 westbound at ALBEK.
 - Arrivals on V123-157-123 northeast bound may not fly the procedure from MENGE.
- A visual descent at an angle of 3.0° may not clear obstacles in the approach path to the runway past the waypoint 1.2 nm to Rwy 26.
 - True
 - False
- Select all that apply. When flying the approach to LNAV minimums _____.
 - The VDP at 1.2 nm to Rwy 26 applies.
 - The aircraft must remain at 1040 ft MSL until passing ZOKAR.
 - The GPS receiver performs a RAIM prediction at least 2 nm prior to the IAF.
 - Simultaneous approaches are authorized with use of a flight director or autopilot providing RNAV track guidance.
- Flying a continuous descent final approach (CDFA) to LNAV minimums requires special authorization.
 - True
 - False
- The LPV landing minimums are lower than the LNAV landing minimums.
 - True
 - False

KPHL/PHL PHILADELPHIA INTL 26 JAN 18 (2-4) Eff 1 Feb PHILADELPHIA, PA RNAV (GPS) Rwy 26

D-ATIS Arrival	PHILADELPHIA Approach (R)	PHILADELPHIA Tower Rwys 8/26, 9L/27R, 17/35	Rwy 9R/27L	Ground
133.4	124.35	118.5	135.1	121.65 121.9
WAAS Ch 78117 W-26A	Final Apch Crs 268°	Minimum Alt KANKE 2000' (1964')	LNAV MDA(H) 500' (464')	Appt Elev 36'
MISSED APCH: Climb to 800' then climbing RIGHT turn to 3000' direct FROSE and hold.				2600
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'				MSA RW26

1. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -12° C (11° F) or above 54° C (130° F). 2. DME/DME RNP-0.30 not authorized. 3. Simultaneous approach authorized. 4. LNAV procedure not authorized during simultaneous operations. 5. Use of Flight Director or Autopilot providing RNAV track guidance required during simultaneous operations. 6. Rwy 26 helicopter visibility reduction below RVR 40 or 3/4 SM not authorized.

TERMS	STRAIGHT-IN LANDING RWY 26				CIRCLE-TO-LAND	
	LPV	LNAV/VNAV		LNAV		
	DA(H) 513' (477')	DA(H) 573' (537')	DA(H) 500' (464')	MDA(H) 500' (464')	Max Kts	MDA(H)
A	RAIL/ALS out	RAIL/ALS out	RAIL/ALS out	RAIL/ALS out	90	540' (504') - 1
B					120	640' (604') - 1
C	RVR 60 or 1/4	1%	1%	RVR 50 or 1	140	640' (604') - 1 3/4
D				1 1/2	165	640' (604') - 2

CHANGES: Procedure. © JEPPESEN, 2003, 2018. ALL RIGHTS RESERVED.

Not to be used for navigational purposes

- Select the true statement(s) regarding the landing minimums.
 - The circling MDA is 640 ft MSL regardless of aircraft speed.
 - An inoperative PAPI increases the LPV minimum visibility by 1/4 sm.
 - With inoperative runway alignment indicator lights, the LPV minimum visibility increases by 3/8 sm.
 - The MDA for aircraft circling to land at a maximum speed of 90 kts is 33 ft lower than the LNAV/VNAV MDA.
- The missed approach procedure requires _____.
 - 4 nm legs in the holding pattern.
 - A direct entry to the holding pattern.
 - 1 minute legs in the holding pattern.
 - A climb to 3000 ft MSL before turning direct to FROSE.
 - A climb to 800 ft MSL before turning direct to FROSE.

Reproduced with permission of Jeppesen Sanderson. Reduced for illustrative purposes.

PROFESSIONAL PILOT

Answers to TC 4/18 questions

- 1. d** Procedural note 1 in the Briefing Strip indicates that flying the approach to LNAV/VNAV minimums is not authorized for uncompensated baro-VNAV systems when the temperature is below -12° C. A procedural note would state if cold altitude corrections were required for the airport. In that case, the FAA NOTAM *Cold Temperature Restricted Airports* indicates that pilots must calculate and make manual cold temperature altitude corrections. Regardless of the temperature, baro-VNAV equipment may not be used to fly an approach to LPV minimums.
- 2. b, c** Procedural notes 3, 4, and 5 in the Briefing Strip apply to simultaneous operations. Simultaneous approaches are authorized but only to LPV or LNAV/VNAV minimums. Baro-VNAV may be used to fly to LNAV/VNAV minimums; WAAS-certified GPS equipment is not required. Use of a flight director or autopilot providing RNAV track guidance is required during simultaneous operations. *AIM 5-4-13* indicates that pilots will be advised when simultaneous approaches are in use. This information may be provided through the ATIS.
- 3. c** To fly the approach to the LPV minimums – a DA of 513 ft MSL and minimum visibility of RVR 60 – the aircraft must have WAAS-certified GPS equipment under TSO C145/C146. If the RAIL or ALS (in this case, a MALSR) is inoperative, the DA remains at 513 ft MSL. According to the *AIM 1-1-20*, the term UNRELIABLE in a WAAS-related NOTAMs is an advisory to pilots indicating that the expected level of WAAS service (LNAV/VNAV, LPV) may not be available. Upon commencing an approach at locations NOTAMED “WAAS UNRELIABLE,” if the WAAS-certified GPS equipment indicates LNAV/VNAV or LPV service is available, then vertical guidance may be used to complete the approach.
- 4. a, c** As shown on the plan view, the minimum altitude for the initial approach segment from any IAF is 3300 ft MSL, including the segment from CIBOP to FERIN IF. Each IAF has limitations regarding the arrival at the fix—the procedure is not authorized for an arrival on V479 northbound at MENGE (ballflag note 1), V123-157-123 northeast bound at ENZEW (ballflag note 2), or V312 westbound at ALBEK (ballflag note 3).
- 5. a** The note “34:1 is not clear” in the profile view section indicates that the 34:1 OCS (obstacle clearance surface) is not free of obstructions. The 34:1 slope is a 3.0° visual descent angle (VDA). The absence of this note indicates that a normal descent at a 3.0° angle from the VDP (in this case 1.2 nm to Rwy 26) can be made clear of obstacles.
- 6. a, b** Ballflag note 4 in the profile view section indicates that both the stepdown fix of ZOKAR and the VDP of 1.2 nm to Rwy 26 apply to the LNAV approach. Procedural note 4 states that “LNAV procedure not authorized during simultaneous operations.” According to the *AIM 1-1-17*, when flying an approach procedure with non-WAAS GPS equipment, the receiver performs a RAIM prediction at least 2 nm prior to the FAF to ensure RAIM availability before it enters approach mode.
- 7. b** AC 120-108, *Continuous Descent Final Approach*, provides guidance for flying the final approach segment of a nonprecision approach as a continuous descent. A CDFA requires the use of a published VDA or barometric vertical guidance (in this case, the glidepath angle of 3.00°). No specific training or aircraft equipment (other than that specified by the title of the approach procedure) is required. However, operators should provide flight crews with appropriate ground training before performing CDFA operations.
- 8. b** As shown in the profile view, the LNAV MDA of 500 ft MSL is lower than the LPV and LNAV/VNAV DAs of 513 ft MSL and 573 ft MSL respectively. In addition, the required visibilities for all aircraft categories flying an approach to LNAV minimums are lower than those for both the LPV and LNAV/VNAV approaches. The lower LNAV minimums are due to the fact that performing the approach to the LNAV MDA brings the aircraft closer to the runway before reaching the missed approach point (as shown in the profile view) and different obstacle assessment areas apply to each approach type.
- 9. c, d** A circling MDA of 540 ft MSL applies to 90 kts and 640 ft MSL applies to all other circling approach speeds. The LNAV/VNAV MDA for a straight-in landing is 573 ft MSL. Inoperative runway alignment indicator lights increases the LPV minimum visibility from RVR 60 or 1 1/4 sm to 1 5/8 sm—a 3/8 sm increase. An inoperative PAPI does not affect the landing minimums.
- 10. a, e** The missed approach instructions and icons indicate at climb to 800 ft MSL prior to a climbing right turn to 3000 ft MSL direct to FROSE. According to the plan view, a parallel entry is appropriate with 4 nm legs in the holding pattern.

