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SERVICE INFORMATION LETTER

Racetrack Pattern Entry with Course to Fix (CF-CF) Leg Types

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Transmittal Information

Publication Number D201510000061

Summary

This revision is a FULL replacement. This revision includes the changes that follow:

- Changed part number 7017300-61012 to 7017300-61013 in Table 2
- Added part number PS7027709-00310 to Table 2.
- Added part number EB7036889-00120 to Table 2.
- Added part number EB7036889-00209 to Table 2.
- Added part number EB7034843-00108 to Table 2.
- Added part number EB7031236-00421 (ASC 912) to Table 2.
- Added part number EB7031236-00325 (ASC 912) to Table 2.
- Added part number EB60000487-0112 (Build 10.9) to Table 2.
- Added part number PEB60002734-0104 (Load 4.4) to Table 2.
- Added Recommendation section.

Revision History

This service information letter has had one revision(s) as shown in Table 1.

Table 1. Revision History

Revision Number	Revision Date
0	17 Dec 2015
1	4 Oct 2016

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1. **General Information**

A. **Effectivity**

(1) This service information letter is applicable to the equipment identified in Table 2.

Table 2. Effectivity Configuration Data

Equipment Model or Aircraft Identification	Part Number and/or Load
NZ-2000/NZ-2010/FMZ-2000/PRIMUS Apex/PRIMUS Epic FMS: NZ-2000/2010 and FMZ-2000/IC-615/IC-800/IC-810/IC-1080	PN 7018879-01001, -01002, -02003 thru -02007, -02010, -02017, -03008, -03012, -03014, -03016, -03018, -03020, -03022, -03024, -03026, -03028, -03030, -03032, -03034, -03036, -03036 (MOD A), -03038, -03040, -03042, -03044, -10000, -11009, -11015, -11019, -11021, -11023, -11024, -11025 PN 7017000-21XXX, -94XXX, -95XXX, -98XXX, -99XXX, PN 7017300-01XXX, -11XXX, -21XXX, -31XXX, -41XXX, -43XXX, -45XXX, -56XXX, -56026, -56027, -6100X, -61010, -61013, -63XXX
AgustaWestland AW139	PN EB7030191-00105 (Phase 4), PN EB7030191-00107 (Phase 5), PN EB7030191-00108 (Phase 6), PN EB7030191-00109 (Phase 6), PN EB7030191-00110 (Phase 7)
Cessna Sovereign	PN EB7031847-00105 (Phase 3), PN EB7031847-00106 (Phase 4), PN EB7031847-00108 (Phase 4.1), PN EB7031847-00109 (Phase 4.2), PN EB7031847-00111 (Phase 5), PN EB7031847-00114 (Phase 5.2)
Dassault PRIMUS Epic F900	PN EB7036889-00112, PN EB7036889-00114 (EASy II), PN EB7036889-00116, PN EB7036889-00117, PN EB7036889-00118, PN EB7036889-00120
Dassault PRIMUS Epic F2000	PN EB7036889-00203, PN EB7036889-00205, PN EB7036889-00206, PN EB7036889-00207, PN EB7036889-00208, PN EB7036889-00209
Dassault F7X	PN EB7034843-00103, PN EB7034843-00102, PN EB7034843-00104, PN EB7034843-00107, PN EB7034843-00108

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Table 2. Effectivity Configuration Data (Cont)

Equipment Model or Aircraft Identification	Part Number and/or Load
Embraer 170	PN PS7027709-00124 (Load 21.2), PN PS7027709-00126 (Load 21.4), PN PS7027709-00127 (Load 23.1), PN PS7027709-00128 (Load 21.5), PN PS7027709-00129 (Load 23.2)
Embraer 190	PN PS7027709-00214 (Load 23.1), PN PS7027709-00215 (Load 21.4), PN PS7027709-00216 (Load 21.5), PN PS7027709-00217 (Load 23.2)
Embraer 170/190	PN PS7027709-00303 (Load 25.1.0.1), PN PS7027709-00302 (Load 25.2), PN PS7027709-00304 (Load 25.3), PN PS7027709-00305 (Load 25.4), PN PS7027709-00309 (Load 25.5.0.1) PN PS7027709-00310 (Load 25.6)
Gulfstream G350/450	PN EB7031236-00410 (Delta), PN EB7031236-00411 (Echo), PN EB7031236-00409 (Foxtrot), PN EB7031236-00414 (Foxtrot), PN EB7031236-00415 (Foxtrot SSEC), PN EB7031236-00416 (ASC909/909A), PN EB7031236-00417 (ASC910), PN EB7031236-00418 (ASC909B), PN EB7031236-00420 (ASC 911), PN EB7031236-00421 (ASC 912)
Gulfstream G500/550	PN EB7031236-00315 (Delta), PN EB7031236-00316 (Echo), PN EB7031236-00314 (Foxtrot), PN EB7031236-00319 (Foxtrot), PN EB7031236-00320 (Foxtrot), PN EB7031236-00317 (ASC909), PN EB7031236-00321 (ASC910), PN EB7031236-00322 (ASC909B), PN EB7031236-00323 (ASC 911), PN EB7031236-00325 (ASC 912)
Gulfstream G650	PN PS60001006-0024 (Type Cert.) PN PS60001006-0053 (Block Point)
Hawker 4000	PN EB7030192-001XX (Load 19), PN EB60000578-0114 (Load 20)

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Table 2. Effectivity Configuration Data (Cont)

Equipment Model or Aircraft Identification	Part Number and/or Load
Pilatus PC-12NG	PN EB7037248-00103 (Build 6.2), PN EB7037248-00104 (Build 7.2), PN EB7037428-00105 (Build 8), PN EB7037428-00106 (Build 8.3.3), PN EB60000487-00108 (Build 8.6), PN EB60000487-00111 (Build 8.8), PN EB60000487-0112 (Build 10.9)
Viking DHC6-400	PN EB7032889-00101 (Load 1.3), PN EB60002734-0104 (Load 4.4)

B. Reason

- (1) The purpose of this service information letter is to advise affected operators of a condition that may occur during racetrack pattern entry, where the racetrack is constructed with coding that defines it with CF-CF courses.
- (2) The racetrack procedure is defined by the International Civil Aviation Organization (ICAO) as a procedure that enables the aircraft to reduce altitude during the initial approach segment and/or establish the aircraft inbound when the entry into a reversal procedure is not practical.

C. References

- (1) To find, see, and download Honeywell Technical Publications, go to www.myaerospace.com.
- (2) The document(s) that follow(s) is/are recommended but not necessary for this service information letter. Unless specified differently, you can use subsequent revisions.

NOTE: The documents below are commercially available and should not be ordered from Honeywell as part of this service information letter.

- ICAO, Doc 8168 OPS/611 Aircraft Operations Volume II, Construction of Visual and Instrument Flight Procedures
- Aeronautical Radio, Incorporated (ARINC) 424 Navigation System Data Base Specification, Attachment 5, 6.3.1 Approach Transition Route Coding Rules.

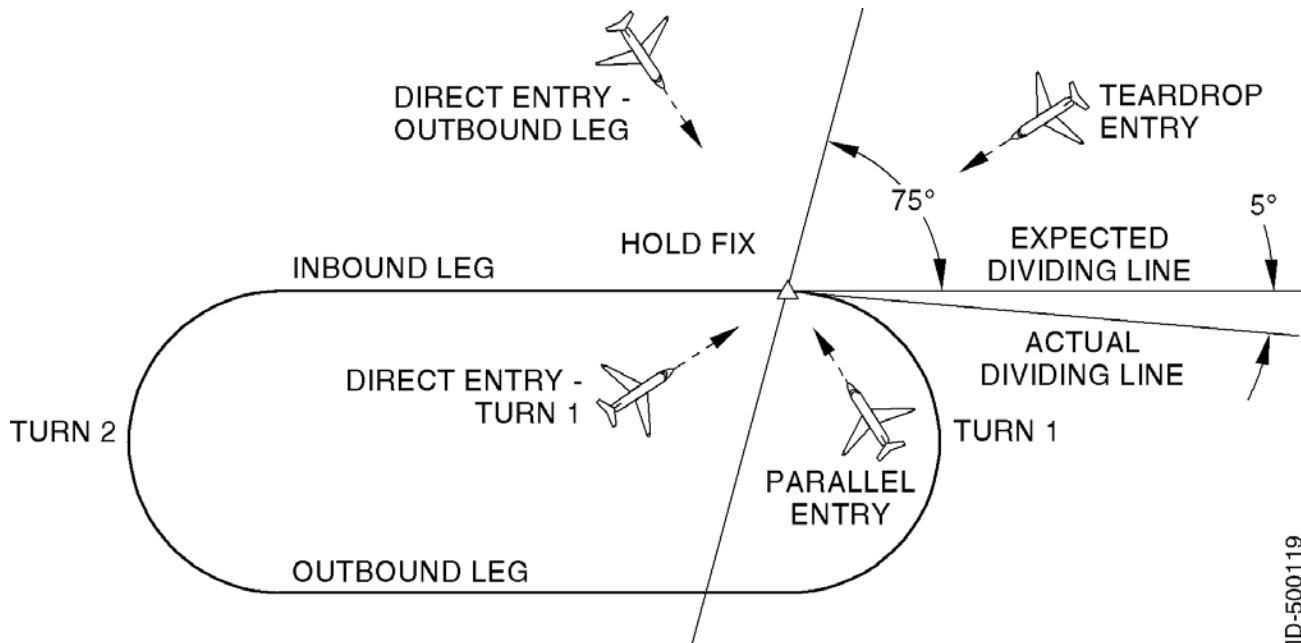
D. Summary

- (1) It has been reported from operators that upon entering a racetrack pattern from various directions, the flight management system (FMS) may provide incorrect pattern entry guidance.
- (2) This condition results from how the racetrack pattern is coded and how the FMS will process the coding. ARINC 424 provides a recommendation for racetrack pattern coding when the final approach fix is not the racetrack pattern entry point, which states "a series of legs must be substituted representing the original flight path."
- (3) The coding constructed for a racetrack procedure using CF-CF legs does not allow the FMS to make an entry calculation as it does for a holding or procedure turn leg.

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- (4) Figure 1 shows the holding pattern entry type based on the inbound geometry. Because the racetrack procedure does not contain holding pattern information this entry logic will not be used. As a result, the FMS guidance may not be appropriate for the desired pattern entry.



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Figure 1. (Sheet 1 of 1) Holding Pattern Entry Geometry

- (5) The FMS will indicate which way the pattern entry turn may occur by way of a turn direction arrow observed on the display. This allows the pilot take action by using heading mode or steer the aircraft manually. The chart sample in Figure 2 depicts a racetrack, but there is no holding procedure coded on the procedure.

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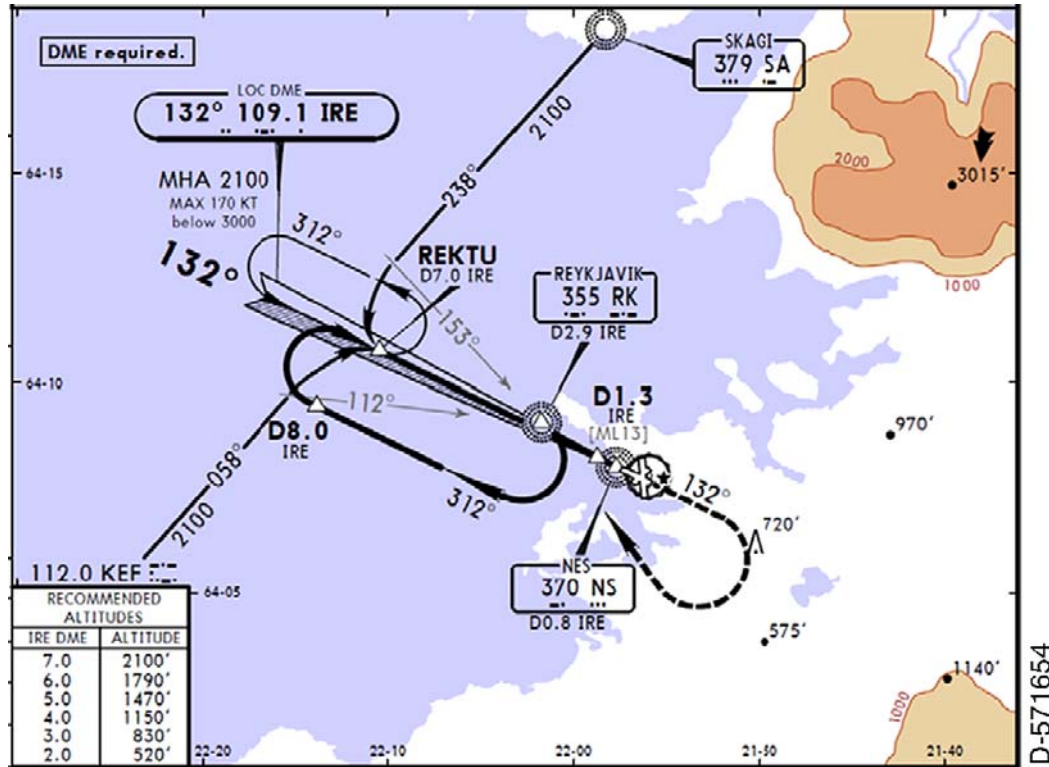


Figure 2. (Sheet 1 of 1) Racetrack Procedure at BIRK LOC RWY 13 (Chart sample, courtesy of Jeppesen)

E. Action

- (1) Pilots should use vigilance when flying approach transitions that contain a racetrack pattern and consider manually flying the racetrack transition using heading mode.

F. Recommendation

- (1) The Honeywell Aerospace Technical Support (ATS) team can be contacted for additional information on this SIL.

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