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SERVICE INFORMATION LETTER

Flight Management System (FMS) – Flight Plan Display Gap after Direct-to Action

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Transmittal Information

Publication Number D201610000025

Summary

This is the INITIAL release.

Revision History

This service information letter has had no revision(s) as shown in Table 1.

Table 1. Revision History

Revision Number	Revision Date
0	8 Nov 2016

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1. **General Information**

A. **Effectivity**

(1) This service information letter is applicable to the EPIC platforms given in Table 2.

Table 2. Applicable EPIC Platforms

Type	PN
AgustaWestland AW139	EB7030191-00105 (Phase 4) EB7030191-00107 (Phase 5) EB7030191-00108 (Phase 6) EB7030191-00109 (Phase 6 HW3/PM) EB7030191-00110 (Phase 7) EB7030191-00111 (Phase 7 V1) EB7030191-00111 (Phase 7 V3) EB7030191-00112 (Phase 7 V4)
Cessna Sovereign	EB7031847-00105 (Phase 3) EB7031847-00106 (Phase 4) EB7031847-00108 (Phase 4.1) EB7031847-00109 (Phase 4.2) EB7031847-00111 (Phase 5) EB7031847-00114 (Phase 5.2)
Dassault PRIMUS EPIC F900	EB7036889-00112 Load 21 EB7036889-00114 (EASy II) Load 24.0 EB7036889-00116 (EASy II) Load 26.0 EB7036889-00117 (EASy II) Load 26.0 EB7036889-00118 (EASy II) Load 26.2 EB7036889-00120 (EASy II) Load 28.2
Dassault PRIMUS EPIC F2000	EB7036889-00203 Load 12.0 EB7036889-00205 Load 14.2 EB7036889-00206 Load 14.4 EB7036889-00207 (EASy II) Load 16.0 EB7036889-00208 (EASy II) Load 16.2 EB7036889-00209 (EASy II) Load 18.0
Dassault F7X	EB7034843-00102 Load 10.0 EB7034843-00103 Load 10.2 EB7034843-00104 (EASy II) Load 12.0 EB7034843-00107 (EASy II) Load 12.2 EB7034843-00108 (EASy II) Load 14.2
Embraer 170	PS7027709-00124 (Load 21.2) PS7027709-00126 (Load 21.4) PS7027709-00127 (Load 23.1) PS7027709-00128 (Load 21.5) PS7027709-00129 (Load 23.2)
Embraer 190	PS7027709-00214 (Load 23.1) PS7027709-00215 (Load 21.4) PS7027709-00216 (Load 21.5) PS7027709-00217 (Load 23.2)

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Table 2. Applicable EPIC Platforms (Cont)

Type	PN
Embraer 170/190	PS7027709-00303 (Load 25.1.0.1) PS7027709-00302 (Load 25.2) PS7027709-00304 (Load 25.3) PS7037709-00305 (Load 25.4) PS7027709-00309 (Load 25.5.0.1) PS7027709-00310 (Load 25.6)
Gulfstream G450	EB7031236-00409 (Foxtrot) EB7031236-00410 (Delta) EB7031236-00411 (Echo) EB7031236-00414 (Foxtrot) EB7031236-00415 (Foxtrot SSEC) EB7031236-00416 (ASC 909/909A) EB7031236-00417 (ASC 910) EB7031236-00418 (ASC909B) EB7031236-00420 (ASC911) EB7031236-00421 (ASC912)
Gulfstream G500/G550	EB7031236-00314 (Foxtrot) EB7031236-00315 (Delta) EB7031236-00316 (Echo) EB7031236-00317 (ASC 909) EB7031236-00319 (Foxtrot) EB7031236-00320 (Foxtrot) EB7031236-00321 (ASC 910) EB7031236-00322 (ASC909B) EB7031236-00323 (ASC911) EB7031236-00325 (ASC912)
Hawker 4000	EB7030192-001XX (Load 19) EB60000578-0114 (Load 20)
Pilatus PC-12NG	EB7037248-00103 (Build 6.2) EB7037248-00104 (Build 7.2) EB7037248-00106 (Build 8.3.3) EB60000487-0108 (Build 8.6) EB60000487-0111 (Build 8.8) EB60000487-0112 (Build 10.9)
Viking DHC6-400	EB7032889-00101 (Load 1.3) EB60002734-0104 (Load 4.4)

B. Reason

- (1) The purpose of this service information letter is to advise operators of a condition observed upon activating a direct-to command in which crews may observe on the INAV display the aircraft is off path from the transition.
- (2) Figure 1 and Figure 2 give an example of the function behavior issue described herein.

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(3) **Problem**

- (a) Analysis shows that the root cause is an issue in the software, where the lateral navigation (LNAV) transition data is correct, but is not properly updated (for small course changes) when sent to the graphical display function.
- (b) When the difference in aircraft heading and the desired track to the new waypoint is 3 to 4 degrees, the display system draws the direct waypoint at the aircraft with no transition. This small course change computation is shown as a straight leg (white line, Figure 2) instead of a curve transition to connect the white and magenta lines on the display. Refer to Figure 3.

(4) **Solution**

- (a) Honeywell has confirmed the LNAV function is computing the correct latitude/longitude and turn radius transition data in order for the transition to connect the active direct waypoint. Figure 2 shows the behavior reported from flight crews.
- (5) Figure 3 shows proper “displayed” transition behavior after direct-to activation.

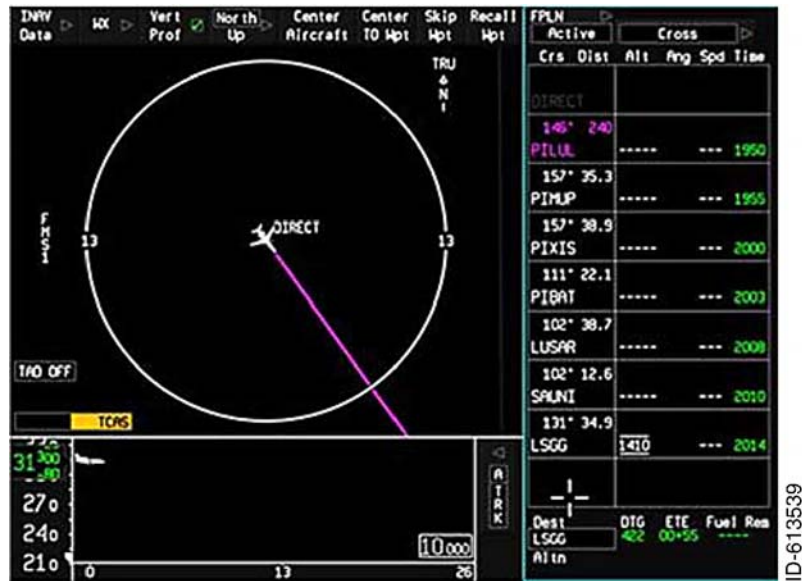


Figure 1. (Sheet 1 of 1) Aircraft on Active Leg

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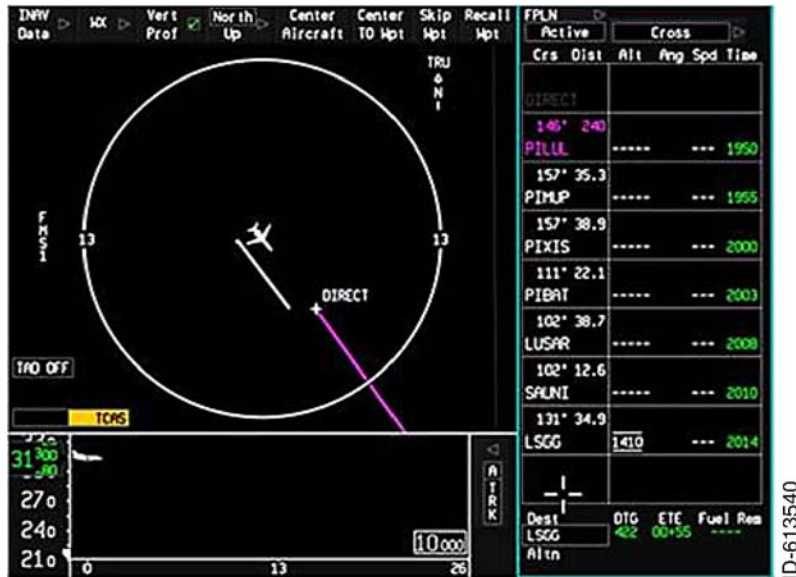


Figure 2. (Sheet 1 of 1) Aircraft is off the Transition

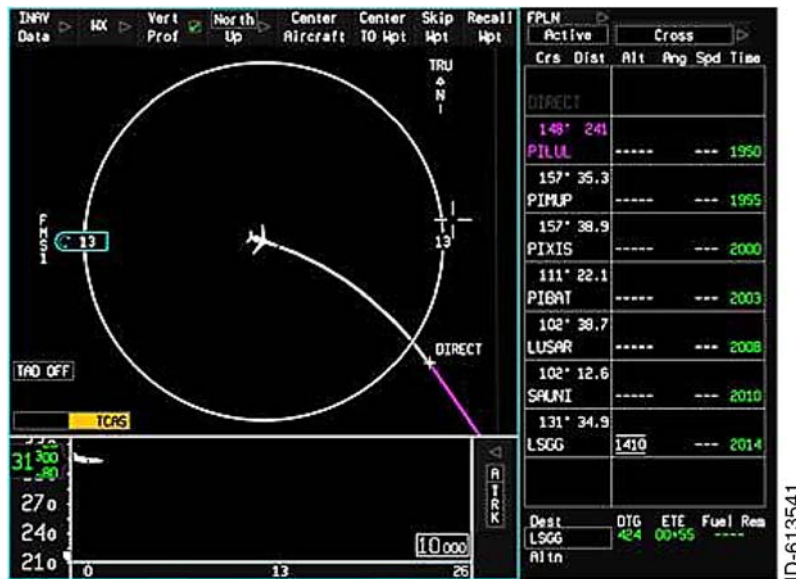


Figure 3. (Sheet 1 of 1) Correct Displayed Transition

C. References

- (1) Not applicable.

D. Summary

- (1) After performing a direct-to it is expected that the INAV system will display the aircraft on a flight path line from the present position of the aircraft, to the desired waypoint. Flight crews have observed that the flight path is offset from the location of the aircraft on the INAV display.

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E. Action

- (1) Honeywell recommends flight crews monitor all phases of flight.
- (2) For more information regarding this service information letter, contact the applicable Honeywell field service engineer or the location identified below.

F. Contact Information

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

Honeywell Aerospace Technical Support
Telephone: 855-808-6500 (Toll Free U.S.A./Canada)
Telephone: 602-365-6500 (International Direct)
Option 1 for Avionics or Option 2 for Mechanical.
E-mail: AeroTechSupport@honeywell.com