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SERVICE INFORMATION LETTER

Early Initial Turn When the Flight Management System (FMS) Intercepts a Course at 45°

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Transmittal Information

Publication Number D201608000009

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	21 Nov 2016

Honeywell

SERVICE INFORMATION LETTER

1. **General Information**

A. **Effectivity**

- (1) This service information letter is applicable to all NZ-2000/FMZ-2000/FMZ2010/PRIMUS Apex/PRIMUS EPIC Platforms as listed 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, -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

Honeywell

SERVICE INFORMATION LETTER

Table 2. Effectivity Configuration Data (Cont)

Equipment Model or Aircraft Identification	Part Number and/or Load
	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
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)

Honeywell

SERVICE INFORMATION LETTER

Table 2. Effectivity Configuration Data (Cont)

Equipment Model or Aircraft Identification	Part Number and/or Load
	PN EB7031236-00420 (ASC911) PN EB7031236-00421 (ASC912)
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 (ASC911) PN EB7031236-00325 (ASC912)
Hawker 4000	PN EB7030192-001XX (Load 19) PN EB60000578-0114 (Load 20)
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. Applicability

- (1) This service information letter is only applicable to equipment received from Original Equipment Manufacturers (OEM) or equipment received from in-service aircraft. Aircraft tail number should be provided, as applicable. This service information letter is not applicable to excess equipment and equipment removed from parked or dismantled aircraft.

C. Reason

- (1) This service information letter advises operators of a condition that may be observed while navigating an instrument departure procedure that contains heading legs.

Honeywell

SERVICE INFORMATION LETTER

D. References

- (1) Not applicable.

E. Summary

- (1) Some crews have reported the FMS initiates a brief left turn on the KSAN PEBLE6 Departure, RW27 before turning right to the desired heading. In accordance with the published chart, there is no left turn and the aircraft should maintain the runway heading before turning right to capture a 293° course.

F. Background

- (1) The KSAN PEBLE6 departure procedure is loaded as shown in Figure 1. This displays the altitude leg (*ALT01) followed by a 293° course into the *LL01 waypoint.
- (2) The flight plan on the CDU given in Figure 1, properly reflects the intended path for this procedure.

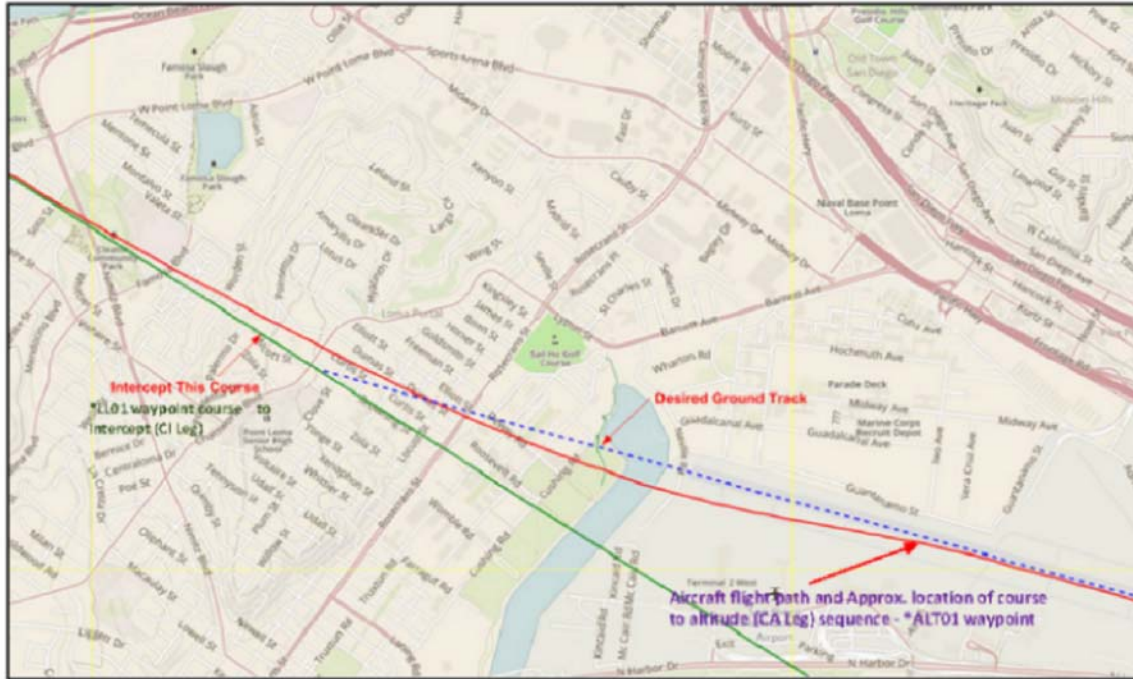


Figure 1. (Sheet 1 of 1) PEBLE6 Departure Procedure as Loaded

- (3) After takeoff and engagement of the autopilot, when the aircraft reaches the *ALT01 point, the aircraft may initiate a turn to capture the 293° course to the *LL01 waypoint. Refer to the red line shown in Figure 2.

Honeywell

SERVICE INFORMATION LETTER



ID-609218

Figure 2. (Sheet 1 of 1) Dotted blue line shows aircraft ground track versus aircraft flight path (red line)

G. Root Cause

- (1) This behavior is due to the method the FMS uses to capture a course when it becomes active with a large cross track error. In these cases, the aircraft will maneuver to intercept the active leg at 45°.

H. Action

- (1) Honeywell recommends flight crews brief all departure procedures. For standard instrument departures (SID) whose first legs specify heading, crews may elect to fly aircraft in a mode other than lateral navigation (LNAV). If the LNAV is utilized, the crew may see some deviations from the expected path. Please refer to OEM documentation for further guidance.
- (2) The KSAN PEBLE6 and KEGE EKR2 departure procedures have been removed from the affected navigation databases (effective cycle 1605). The procedures in Table 3 may exhibit the same behavior as identified in this service information letter. This behavior will be mitigated in the navigation database by May 2017.

NOTE: Table 3 is for reference only and will not be updated.

Table 3. Departure Procedures

Airport	SID	Runway
EGUL	TIDP1A	RW06
EGYE	DEP6	RW28
EKBI	ASKO1A	RW27

Honeywell

SERVICE INFORMATION LETTER

Table 3. Departure Procedures (Cont)

Airport	SID	Runway
ENBN	DETR3C	RW04
	DETR3D	RW22
	SOMB4C	RW04
	ULV4C	RW04
	ULV4D	RW22
	VEGA4C	RW04
	VEGA4D	RW22
ESMQ	LAGI4B	RW16
	LATV4B	RW16
	MOVI2B	RW16
	TILS4B	RW16
ETAD	ROPU1X	RW23
ETAR	TOLE2E	RW26
	TOLE2L	RW26
	TOLE2N	RW26
	TOLE2S	RW26
	TOLE2W	RW26
FMEE	ANTI4A	RW14
	ANTI4C	RW12
	FF4F	RW30
	GERA4A	RW14
	GERA4C	RW12
	GETI4A	RW14
	GETI4C	RW12
	NIBI4F	RW30
	UVEN4F	RW30
GMMX	BGA3D	RW10
	LSR3D	RW10
	MBP3D	RW10
	MGV3D	RW10
	MKR3D	RW10

Honeywell

SERVICE INFORMATION LETTER

Table 3. Departure Procedures (Cont)

Airport	SID	Runway
KEGE	EKR2	RW25
	GYP5M5	RW25
KEWR	EWR2	RW04L
		RW04R
KLCK	LCK3	RW05L
		RW05R
KOAK	SLNT9	RW30
KPHX	BXX4	RW25L
		RW25R
		RW26
	MAXX03	RW25L
		RW25R
		RW26
	MOBIE4	RW25L
		RW25R
		RW26
	TFD4	RW25L
		RW25R
		RW26
KRIC	COLIN6	RW16
KSAN	PEBLE6	RW27
KSFO	SFO3	RW01L
		RW01R
KTEB	TEB1	RW01
		RW06
		RW24

Honeywell

SERVICE INFORMATION LETTER

Table 3. Departure Procedures (Cont)

Airport	SID	Runway
LEMG	BLN1L	RW30
	BLN1S	RW30
	BLN1T	RW30
	INKA1S	RW30
	JRZ1L	RW30
	JRZ1S	RW30
	NESD1S	RW30
	PEKO1S	RW30
	PEPA1T	RW30
	PIMO1S	RW30
	ROLA1S	RW30
	ROLA1T	RW30
	SVL1L	RW30
	SVL1S	RW30
	ULPE1S	RW30
	VIBA1S	RW30
VIBA1T	RW30	
LFTH	BIRG2E	RW05
	JULE2E	RW05
	LERM2E	RW05
	OMAR2E	RW05
	STP2E	RW05
	VARE2E	RW05
LGRP	ASIM2M	RW25
	VANE2M	RW25
LGST	DELA2K	RW05
	LABU1K	RW05
	MOKI2K	RW05
	XAVI2K	RW05

Honeywell

SERVICE INFORMATION LETTER

Table 3. Departure Procedures (Cont)

Airport	SID	Runway
LIBA	EKTO5M	RW11
	EKTO5N	RW29
	ERPO5M	RW11
	TOPN5N	RW29
	UVOK5B	RW29
	VIE5C	RW11
		RW29
	VIE5D	RW11
RW29		
LIEA	GINO5A	RW20
	GOPA5A	RW20
	KOLU5N	RW20
	KOLU6C	RW20
	MINK5N	RW20
	POUL7A	RW20
	SODI7A	RW20
	SODI7C	RW20
	SUPU5A	RW20
	LIEE	CAR5T
KOVA5Q		RW32
LEDR5T		RW32
LIMS	CORT5Q	RW30
	GEN6Q	RW30
	KALM6Q	RW30
	LUPO5T	RW30
	VOG5Q	RW30

Honeywell

SERVICE INFORMATION LETTER

Table 3. Departure Procedures (Cont)

Airport	SID	Runway
LIPR	AMLO6A	RW31
	AMLO6B	RW13
	ANC6A	RW31
	ANC6B	RW13
	BOA7A	RW31
	BOA7B	RW13
	EKTU5A	RW31
	EKTU5B	RW13
LJLJ	GIMI1J	RW30
LLBG	LORI1F	RW30
	NAT3F	RW30
LPMA	IRKI6N	RW05
	SNT6E	RW05
	SNT6N	RW05
LTAI	ADAS1N	RW36R
	ADAS1T	RW36C
		RW36L
	ALPA1N	RW36R
	BRON1B	RW18L
	BRON1N	RW36R
	DAML1N	RW36R
	DAML1T	RW36C
		RW36L
	DERY1B	RW18L
	DERY1N	RW36R
	DERY1T	RW36C
		RW36L
	ERGI1B	RW18L
	ERGI1N	RW36R
	KONA1T	RW36C
		RW36L
KUMR1B	RW18L	

Honeywell

SERVICE INFORMATION LETTER

Table 3. Departure Procedures (Cont)

Airport	SID	Runway
	KUMR1N	RW36R
	LAMS1B	RW18L
	LAMS1N	RW36R
	MANA1N	RW36R
	MANA1T	RW36C
		RW36L
LTCB	EMLA1A	RW28
	EMLA1B	RW10
	IPSA1A	RW28
	IPSA1B	RW10
MKJS	BOSOM6	RW25
	KEMBO2	RW25
	KESPA1	RW25
	LIBEX1	RW25
MMLT	LTO3A	RW16
	LTO3B	RW34
MMML	MXL3B	RW28
MMSL	CSL2A	RW11
	DUVIT1	RW11
	SJD1D	RW11
	SJD3C	RW11
MMTJ	JOYA3A	RW09
	SEVRA2	RW09
	TIJ2B	RW09
	TOPO4A	RW09
MMZH	AVROX2	RW26
	EBGAB2	RW26
	GABNU2	RW26
	IPTX2	RW26
	ZIH1B	RW26
	ZIH1C	RW08

Honeywell

SERVICE INFORMATION LETTER

Table 3. Departure Procedures (Cont)

Airport	SID	Runway
MSLP	ATUM2B	RW07
	MORA2B	RW07
	MUTA2B	RW07
	RELT2B	RW07
OIIE	PAXI2G	RW29L
		RW29R
OIII	DHN2C	RW29L
		RW29R
	RADA2C	RW29L
		RW29R
OIMM	CHAR1D	RW13L
		RW13R
	CHAR1J	RW13L
		RW13R
OINN	IMKE2B	RW10
OISS	ASNI1A	RW29L
		RW29R
	DEPS1A	RW29L
		RW29R
	DEPS1C	RW29L
		RW29R
	IVER1A	RW29L
		RW29R
	IVER1C	RW29L
		RW29R
	KASO1A	RW29L
		RW29R
	KATA1A	RW29L
		RW29R
KATU1A	RW29L	
	RW29R	

Honeywell

SERVICE INFORMATION LETTER

Table 3. Departure Procedures (Cont)

Airport	SID	Runway
	KATU1C	RW29L
		RW29R
	KAVI1A	RW29L
		RW29R
	KAVO1A	RW29L
		RW29R
	KAVO1C	RW29L
		RW29R
	KISE1A	RW29L
		RW29R
	KUGV1A	RW29L
		RW29R
	KUGV1C	RW29L
		RW29R
	KUPT1A	RW29L
		RW29R
NALB1A	RW29L	
	RW29R	
TAGT1A	RW29L	
	RW29R	
OOMS	DAPO1X	RW26R
	EMUR1X	RW26R
	IVET1X	RW26R
	IZK1X	RW26R
	MUSR1X	RW26R
RJER	RSE1R	RW07
RJFS	KIKYU5	RW11
	SGE2R	RW11
RJKN	TKE4	RW01
RJSA	MRE1R	RW24
	TIKYU2	RW06
RJTQ	MIYA1R	RW02

Honeywell

SERVICE INFORMATION LETTER

Table 3. Departure Procedures (Cont)

Airport	SID	Runway
RKNY	YAG2S	RW15
	YAG2T	RW15
RKPU	APAR7S	RW18
	KPO7S	RW18
RKSI	RADA3D	RW34
RPVI	BSG3A	RW02
SBCT	DAKMI1	RW29
SBFI	ANBUK	RW14
SCPQ	PAMBU1	RW35
SCQP	LIXA1A	RW01
SKPS	MER2	RW02
SVPR	EPANA1	RW08
	GNA1	RW08
	TOBLA1	RW08
	TUC1	RW08
UAAA	EKLA4G	RW23L
		RW23R
UUDD	DK14W	RW14R
	LO14W	RW14R
	OKR14G	RW14R
	OKR14W	RW14R
	SF14W	RW14R
	WT14W	RW14R
	WZ14W	RW14R
VEIM	AAT2	RW22
	KKU2	RW22
	LLP2	RW22
VMMC	MIPA6D	RW34
WMKK	SUBA1Y	RW32R
	SUBA1Z	RW32R

Honeywell

SERVICE INFORMATION LETTER

Table 3. Departure Procedures (Cont)

Airport	SID	Runway
ZBAA	REN22D	RW18R
	REN23D	RW18R
	SOS22D	RW18R
ZLXY	NSH12D	RW05L
	NSH21D	RW23R
	NUG11D	RW05L
	NUG21D	RW23R
	TEB11D	RW05L
	TEB21D	RW23R
ZUUU	CZH21D	RW02R

I. Contact Information

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

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