



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety

July 30, 2019

Enhanced Ground Proximity Warning System (EGPWS) Download

CEN19LA054

This document contains 2 embedded photos.

A. ACCIDENT

Location: Uvalde, TX
Date: 1/12/2019
Aircraft: Canadair CL-600-2A12, Registration Number: N813WT
NTSB IIC: David Bowling

B. EXAMINATION PARTICIPANTS:

Jack Vanover
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C. SUMMARY

Download of the EGPWS (Serial number- 4591), was conducted on July 30, 2019 at the facilities of Honeywell, Redmond, WA.

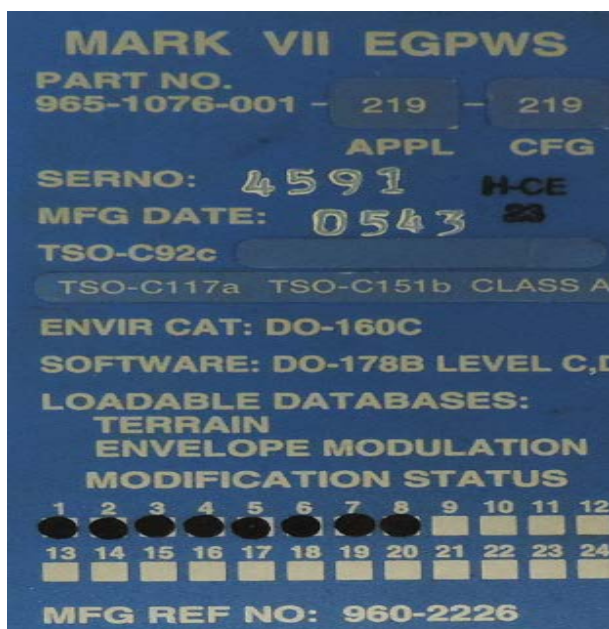


Figure 1: Photo of data plate

D. INSPECTION OF THE UNIT PRIOR TO DOWNLOAD

No impact damage or deformation to the outer assembly was noted. The main data interface connector, and all connection ports appear to be intact.

E. DISASSEMBLY OF THE UNIT

Outer screws and front panel assembly removed. Circuit Card Assemblies (CCAs), were removed, examined, and appeared to be intact. All connector pins to the interface unit appeared to be intact. Chip U53 was identified as being the chip that held non-volatile memory (NVM). Chip U53 was removed from the CCA board and downloaded using a chip reader¹. U53 was reinstalled on the CCA and reinstalled into the unit.

F. EGPWS DOWNLOAD

Power to the EGPWS established through normal means and appeared to be fully operational and downloadable, visual amber light indicating power to the EGPWS observed, depicted in figure 2. Download of data from the last operational use was successful. Flight Leg 1545 established as the last flight leg that was recorded.

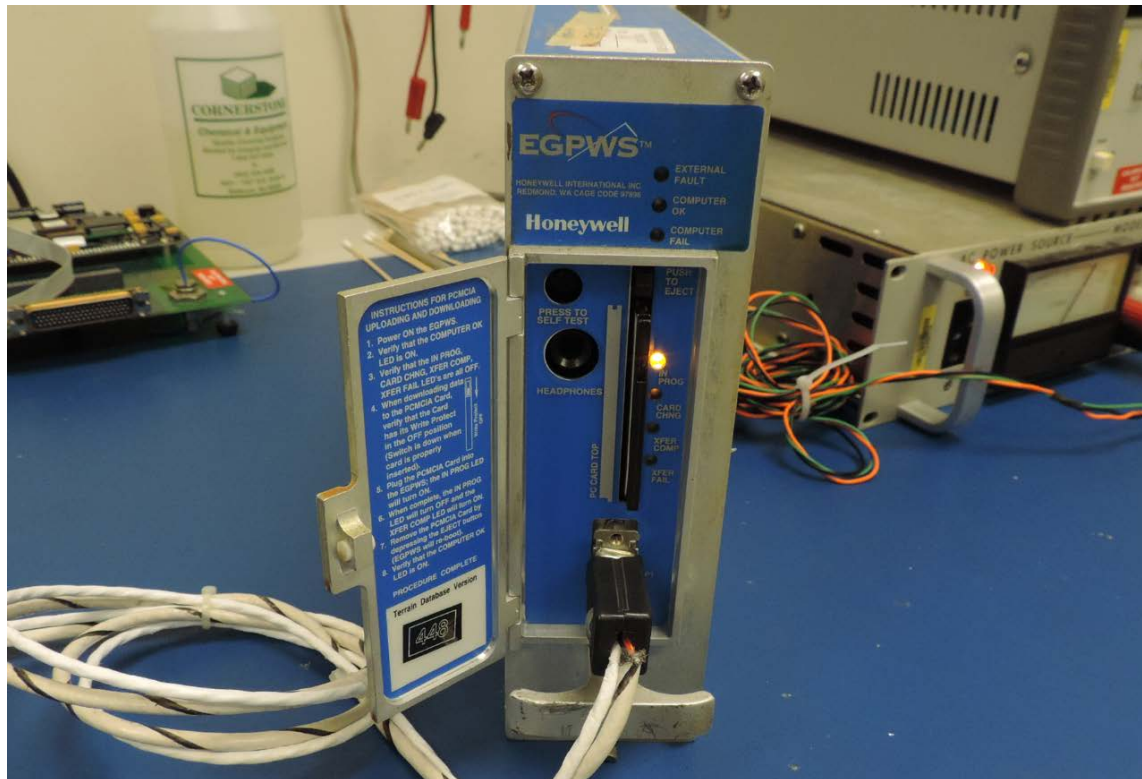


Figure 2: Download

¹ Done as a precaution prior to powering the unit up.

G. DATA FROM DOWNLOAD

Terrain Database Version installed: 448. The current version at the time of the accident was 609. The Honeywell representative (Maggie) will ask the Honeywell database team if the change in versions would have affected the accident flight.

Boot up Time at Honeywell:

5645:03:08

Takeoff:

FLIGHT LEG 1545: (5644:14:15)
Lat/Long: 32.82515 / -97.36167
Geometric Alt: 740.00 True Hdg: -12.66
GPS Alt: 750.00 VFOM: 120.00
Pos. Uncert: 0.0146 Pos. Source: GPS1
Airport: KFTW

Landing:

FLIGHT LEG 1545: (5645:01:04)
Lat/Long: 29.45343 / -100.11439
Geometric Alt: 1346.00 True Hdg: 0.00
GPS Alt: 1326.00 VFOM: 136.00
Pos. Uncert: 0.0168 Pos. Source: GPS1
Airport: 3TA6

Faults

Fault Type = stANASIG
Flt Msg (sigflt) = sigfltLtMOALeft
Flight Leg = 1545
Count = 1 Status = InAir Failure Code = fc_EVD
-----,1618

Fault Type = stANASIG
Flt Msg (sigflt) = sigfltRawMD80Mag2
Flight Leg = 1545
Count = 1 Status = InAir Failure Code = fc_EVD
-----,1619

Fault Type = stDIGSIG
Flt Msg (sigflt) = sigfltGPWCGear1 Bus = GPIR2B "GPIRS 2 BUS"
Flight Leg = 1545
Count = 4 Status = InAir Failure Code = fc_UPD

No TANA.CSV records for flight leg 1545
No Event.TXT records for flight leg 1545

Alerts

TACAUT 1545 5644:59:49

TACAUT	1545	5645:00:07
TAPU 1545		5645:00:10
TACAUT	1545	5645:00:28
TAPU 1545		5645:00:30
TAPU 1545		5645:00:39
TCF 1545		5645:00:50
M1SK 1545		5645:00:56
M1SK 1545		5645:01:04
M6BA	1545	5645:01:09
TAPU 1545		5645:01:14
TCF 1545		5645:01:15
TCF 1545		5645:01:17
TACAUT	1545	5645:01:18
TAPU 1545		5645:01:18
TCF 1545		5645:01:22

Submitted by: Investigator Jack Vanover