

ACN: 1593017

Time / Day

Date : 201811

Place

Altitude.AGL.Single Value : 0

Aircraft

Reference : X

Aircraft Operator : Air Carrier

Make Model Name : B737 Next Generation Undifferentiated

Flight Phase.Other

Person

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Carrier

Function.Flight Crew : Captain

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 1593017

Human Factors : Confusion

Human Factors : Training / Qualification

Events

Anomaly.Deviation - Procedural : Published Material / Policy

Detector.Person : Flight Crew

When Detected : Pre-flight

Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Aircraft

Contributing Factors / Situations : Manuals

Primary Problem : Manuals

Narrative: 1

The recently released **737 MAX8** Emergency Airworthiness Directive directs pilots how to deal with a known issue, but it does nothing to address the systems issues with the AOA system.

MCAS (Maneuvering Characteristics Augmentation System) is implemented on the **737 MAX** to enhance pitch characteristics with flaps UP and at elevated angles of attack. The MCAS function commands nose down stabilizer to enhance pitch characteristics during steep turns with elevated load factors and during flaps up flight at airspeeds approaching stall. MCAS is activated without pilot input and only operates in manual, flaps up flight. The system is designed to allow the flight crew to use column trim switch or stabilizer aisle stand cutout switches to override MCAS input. The function is commanded by the Flight

Control computer using input data from sensors and other airplane systems.

The MCAS function becomes active when the airplane Angle of Attack exceeds a threshold based on airspeed and altitude. Stabilizer incremental commands are limited to 2.5 degrees and are provided at a rate of 0.27 degrees per second. The magnitude of the stabilizer input is lower at high Mach number and greater at low Mach numbers. The function is reset once angle of attack falls below the Angle of Attack threshold or if manual stabilizer commands are provided by the flight crew. If the original elevated AOA condition persists, the MCAS function commands another incremental stabilizer nose down command according to current aircraft Mach number at actuation.

This description is not currently in the 737 Flight Manual Part 2, nor the Boeing FCOM, though it will be added to them soon. This communication highlights that an entire system is not described in our Flight Manual. This system is now the subject of an AD.

I think it is unconscionable that a manufacturer, the FAA, and the airlines would have pilots flying an airplane without adequately training, or even providing available resources and sufficient documentation to understand the highly complex systems that differentiate this aircraft from prior models. The fact that this airplane requires such jury rigging to fly is a red flag. Now we know the systems employed are error prone--even if the pilots aren't sure what those systems are, what redundancies are in place, and failure modes.

I am left to wonder: what else don't I know? The Flight Manual is inadequate and almost criminally insufficient. All airlines that operate the MAX must insist that Boeing incorporate ALL systems in their manuals.

Synopsis

B737MAX Captain expressed concern that some systems such as the MCAS are not fully described in the aircraft Flight Manual.

ACN: 1587343

Time / Day

Date : 201810

Place

Altitude.AGL.Single Value : 0

Aircraft

Reference : X

Aircraft Operator : Air Carrier

Make Model Name : B737 Next Generation Undifferentiated

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 121

Flight Plan : IFR

Mission : Passenger

Flight Phase : Taxi

Person

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : General Seating Area

Reporter Organization : Air Carrier

Function.Flight Attendant : Off Duty

Qualification.Flight Attendant : Current

ASRS Report Number.Accession Number : 1587343

Human Factors : Situational Awareness

Events

Anomaly.Aircraft Equipment Problem : Less Severe

Anomaly.Deviation - Procedural : FAR

Anomaly.Deviation - Procedural : Published Material / Policy

Detector.Person : Passenger

Detector.Person : Flight Attendant

Were Passengers Involved In Event : Y

When Detected : Taxi

Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Aircraft

Primary Problem : Aircraft

Narrative: 1

I was pass riding this flight on the new **737 Max**. From my seat towards the rear of the aircraft, with seats that appear to be higher, it was impossible to see the Flight Attendant perform the safety demo. It was brought to my attention when overhearing a nearby passenger comment that they could not see the demo asking if they were supposed to be able to see it.

Synopsis

Off duty Flight Attendant reported being unable to see the B737 Max cabin safety demonstration because the passenger seats are too high.

ACN: 1583127

Time / Day

Date : 201810

Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : DEN.Airport

State Reference : CO

Altitude.MSL.Single Value : 7000

Environment

Flight Conditions : VMC

Aircraft

Reference : X

ATC / Advisory.Tower : DEN

Aircraft Operator : Air Carrier

Make Model Name : B737-800

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 121

Flight Plan : IFR

Flight Phase : Initial Approach

Airspace.Class B : DEN

Person

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Carrier

Function.Flight Crew : Pilot Flying

Function.Flight Crew : Captain

Qualification.Flight Crew : Multiengine

Qualification.Flight Crew : Instrument

Qualification.Flight Crew : Air Transport Pilot (ATP)

Experience.Flight Crew.Total : 18000

ASRS Report Number.Accession Number : 1583127

Human Factors : Situational Awareness

Events

Anomaly.Deviation - Procedural : Published Material / Policy

Anomaly.Inflight Event / Encounter : Unstabilized Approach

Detector.Person : Flight Crew

When Detected : In-flight

Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Aircraft

Contributing Factors / Situations : Human Factors

Primary Problem : Human Factors

Narrative: 1

The purpose of this [report] is to explain a situation where I unintentionally used a high rate of descent to recapture a glide path landing in DEN in a **737 MAX**. I have flown the MAX a few times [before] but this was the first time I've flown it in a high density altitude airport. The landing was uneventful and I felt like I was in control the entire final approach but the rate of descent was higher than I anticipated or normally use due to my hesitancy to quickly revert from reliance on technology to visual approach procedures. I understand the emphasis on visual approaches in training and safety.

After an uneventful flight to DEN we were given a left downwind turn to base for DEN runway 16L outside of LEETS at 7000 feet. It was a clear night so I accepted the visual when offered and slowed appropriately for the final decent. To increase my familiarity of the MAX, prior to top of descent, I briefed and intended to engage ARM III below 5000 feet AGL and set up the HUD to do so. As we neared LEETS I pushed the Approach ARM button (with 7000 feet in the MCP) but my attention was outside and on the flight display system when I made a rookie mistake. I didn't notice that the Approach mode did not arm.

I have flown the **737 MAX** a few times and was familiar with, what I believe to be, slightly different descent characteristics. Also, I armed the speed brakes but apparently when I did so the handle was slightly past the detent. I don't know if the ARM switch wouldn't engage as a result of this or not? Also I don't know if the Landing Attitude Modifier behaves differently due to the speed brake handle not precisely set in detent? Of course since I had 7000 feet in the MCP as we flew past LEETS I lost vertical path display and in the moment(s) it took to evaluate what was happening, I got high on path.

The vertical guidance displays were now unusable so I abandoned the idea of the CAT III practice and adjusted to a high rate of descent to visually get on the PAPI. Since DEN is 5434 feet I rationalized that a higher descent rate was appropriate due to the high density altitude and called "stable" at 1000 feet with a 1200 feet rate of descent but correcting. When I adjusted the throttles, the speed brake green light went to amber and the FO (First Officer) quickly and correctly armed the speed brake. I didn't get enough power in soon enough and ended up getting three reds on the PAPI and a "Glide Slope" announcement to which I adjusted up to regain path. I continued to an uneventful landing.

As a result of this situation which happened very quickly, I will 1) recommit to confirming buttons arm when pushed, 2) recommit to confirming the speed brake handle is fully in the arm detent (in addition to the green arm light) 3) react more swiftly to visual methods (or go around) when appropriate when displays don't appear as expected and 4) continue to ensure stabilized approaches or go around as necessary.

Synopsis

B737 MAX Captain reported an unstabilized approach into DEN due to human factors and aircraft familiarization.

ACN: 1568887

Time / Day

Date : 201808

Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : ZZZ.Airport

State Reference : US

Altitude.AGL.Single Value : 0

Environment

Flight Conditions : VMC

Light : Night

Aircraft

Reference : X

ATC / Advisory.Ramp : ZZZ

Aircraft Operator : Air Carrier

Make Model Name : B737-800

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 121

Flight Plan : IFR

Mission : Passenger

Flight Phase : Taxi

Person

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Carrier

Function.Flight Crew : Pilot Flying

Function.Flight Crew : Captain

Qualification.Flight Crew : Air Transport Pilot (ATP)

Experience.Flight Crew.Total : 11000

ASRS Report Number.Accession Number : 1568887

Human Factors : Situational Awareness

Events

Anomaly.Conflict : Ground Conflict, Critical

Detector.Person : Flight Crew

When Detected : Taxi

Result.Flight Crew : Took Evasive Action

Assessments

Contributing Factors / Situations : Human Factors

Primary Problem : Human Factors

Narrative: 1

Upon taxi into gate, [guidance system] was active, both pilots cleared ramp area. Approximately 20 ft remaining FO yells for me to stop. I immediately stopped aircraft and FO [advised] fueler was backing up into our safety zone. We were in a B737 MAX with the split winglets and thus the clearance provided below the wingtip was considerably less. After speaking with ramp [personnel] who reviewed the ramp video, I believe the monitoring and quick response of the FO averted possible damage or impact to aircraft. Ramp fueler personnel inattentive to position on ramp. [Not] all ramp personnel may be accustomed to the **737 MAX** winglet design and the increased clearance required. Training for this may be beneficial.

Synopsis

B737-800 Captain reported making a sudden stop to avoid a collision with a fuel truck on the ramp.

ACN: 1517486

Time / Day

Date : 201802

Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport

State Reference : US

Altitude.AGL.Single Value : 0

Environment

Light : Daylight

Aircraft

Reference : X

Aircraft Operator : Air Carrier

Make Model Name : B737 Undifferentiated or Other Model

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 121

Flight Plan : IFR

Mission : Passenger

Flight Phase : Taxi

Person

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Carrier

Function.Flight Crew : Pilot Flying

Function.Flight Crew : Captain

Qualification.Flight Crew : Air Transport Pilot (ATP)

ASRS Report Number.Accession Number : 1517486

Human Factors : Communication Breakdown

Human Factors : Training / Qualification

Events

Anomaly.Deviation - Procedural : Published Material / Policy

Anomaly.Ground Event / Encounter : Other / Unknown

Detector.Person : Flight Crew

When Detected : Aircraft In Service At Gate

When Detected : Taxi

Assessments

Contributing Factors / Situations : Company Policy

Contributing Factors / Situations : Airport

Contributing Factors / Situations : Procedure

Contributing Factors / Situations : Human Factors

Primary Problem : Procedure

Narrative: 1

As we contacted the Pushback Driver for the required exchange of call outs, we finished running the Before Pushback Checklist. The First Officer and I, and Company Dispatcher doing his annual qualification on the jumpseat, were all listening on the Flight interphone to the exchange between the Pushback Driver and me. All call outs were normal up to the pushback call for "Brakes Set". Once the return reply "Brakes Set" was said by me, at that second the communication plugs were pulled and the communications ended. All three of us in the cockpit heard the headset connection plugs pulled out along with the door shut. I also watched the Ramp Agent walk away with the box in hand.

This was very disturbing because we were starting the new **737 MAX** engines, and number 2 was not stable and running yet. I was hoping for them to stay until we cleared them off, as per procedure. They all started to walk off without even any hand signals. I opened my window, and with number 1 still shut down, I got the attention of the nearby Wing Walker, and asked him to tell the pushback to "hook back up". After enduring their looks as if I had asked them to do something insane, they hooked back up. At this point all three of us in the cockpit listened to what I could only call a cover up for their poor and improper adherence to our procedures.

We didn't have any communication problems during this push; it was crystal clear, all up to this re-plug in. It was still very clear; however, every time I made a call or statement on the interphone, it was followed by the pushback saying "can you hear me". I changed the pace of my calls, different intervals, and was never interrupted, just the reply, "can you hear me" after each of my responses. You could tell they were making a joke out of this. I stated on the intercom that this entire pushback is so wrong, and their attitudes showed they don't care. "I will write this up, and this activity will stop".

After my comments, he responded in a manner that showed he heard me just fine. All three of us in the cockpit listened and observed this low moment in communications intended for Safety. The other two Crew Members are willing to verify this report. This type of unsafe, anti-procedure behavior cannot be tolerated. This is becoming a nation-wide trend, with this being one of the worst examples. I'm sure excuses will be made concerning poor communications involving equipment. I will not buy that excuse in this example. The attitudes on the Ramp came through loud and clear on this day that they do not buy into our Company procedures.

Synopsis

A pilot reported a tug driver and ramp crew did not follow proper procedures during pushback.

ACN: 1488017

Time / Day

Date : 201710

Local Time Of Day : 1201-1800

Environment

Light : Night

Aircraft

Reference : X

Aircraft Operator : Air Carrier

Make Model Name : B737 Undifferentiated or Other Model

Crew Size.Number Of Crew : 2

Operating Under FAR Part : Part 121

Flight Plan : IFR

Mission : Passenger

Flight Phase : Descent

Component

Aircraft Component : FMS/FMC

Aircraft Reference : X

Problem : Design

Problem : Malfunctioning

Person

Reference : 1

Location Of Person.Aircraft : X

Location In Aircraft : Flight Deck

Reporter Organization : Air Carrier

Function.Flight Crew : Captain

Function.Flight Crew : Pilot Flying

Qualification.Flight Crew : Air Transport Pilot (ATP)

Experience.Flight Crew.Type : 522

ASRS Report Number.Accession Number : 1488017

Human Factors : Human-Machine Interface

Human Factors : Troubleshooting

Events

Anomaly.Aircraft Equipment Problem : Less Severe

Anomaly.Deviation - Procedural : Published Material / Policy

Anomaly.Deviation - Procedural : FAR

Detector.Person : Flight Crew

When Detected : In-flight

Result.Flight Crew : FLC Override Automation

Assessments

Contributing Factors / Situations : Aircraft

Primary Problem : Aircraft

Narrative: 1

During training, for the 737-MAX there was no mention that using the Altitude Intervention (ALT INTV) button would change the FMC altitude. However, when we entered a lower altitude from cruise altitude and selected the ALT INTV button, the MCP altitude was entered into the FMC. When we received a new lower altitude and entered it in the MCP and with VNAV selected the aircraft did not start a descent like previous NG aircraft.

We noticed that the FMC had a new cruise altitude that we had not entered through the FMC. (The altitude had automatically been entered from the MCP.) We selected the ALT INTV button to allow the aircraft to descend again. This happened two or three times.

This safety issue was unexpected and could lead to an altitude violation and safety hazard. 737-MAX FRM (Fault Reporting Manual) 4.1.3 item 10 Altitude Intervention switch: under "push-(during VNAV cruise)" states: "Lower FMC cruise altitude cannot be entered using ALT INTV switch." Our aircraft DID reset the FMC altitude with the ALT INTV switch.

Synopsis

Captain reported procedural issues with the FMS on the 737-MAX in reference to descent capabilities.