

SERIOUS INCIDENT

Aircraft Type and Registration:	Boeing 737-89P, SP-LWA	
No & Type of Engines:	2 CFM 56-7B26 turbofan engines	
Year of Manufacture:	2005 (Serial no: 30682)	
Date & Time (UTC):	20 May 2019 at 0630 hrs	
Location:	On takeoff from London Heathrow Airport	
Type of Flight:	Commercial Air Transport (Passenger)	
Persons on Board:	Crew - 6	Passengers - 128
Injuries:	Crew - None	Passengers - None
Nature of Damage:	None	
Commander's Licence:	Airline Transport Pilot's Licence	
Commander's Age:	58 years	
Commander's Flying Experience:	17,500 hours (of which 12,500 were on type) Last 90 days - 80 hours Last 28 days - 50 hours	
Information Source:	Aircraft Accident Report Form submitted by the commander, information supplied by the Operator and further enquiries by the AAIB	

Synopsis

After an uneventful takeoff from London Heathrow the flight crew were informed that the aircraft was 953 kg heavier than indicated on the load sheet. The flight crew corrected the figures in the aircraft's flight management computer and the flight continued without incident.

The load sheet error occurred because a consignment of mail was initially recorded twice in the operator's computer load management system. A correction was applied by both the dispatcher and by an electronic message from the cargo company, which resulted in both entries being removed.

The handling agent and operator have taken safety action to prevent reoccurrence.

History of the flight

SP-LWA was operating a flight from London Heathrow to Warsaw Chopin Airport in Poland. The load sheet for the flight was produced by a dispatcher from the handling agent used by the operator at Heathrow, using the operator's load management computer system.

The commander recalled that during boarding the dispatcher presented him with a provisional load sheet. However, when the commander entered the figures in the flight management computer (FMC), he noticed that the stabiliser trim was close to limits so

asked the dispatcher to check the load sheet. The commander thought that the dispatcher had moved some bags from hold 3 to holds 1 and 2. The dispatcher did not recall being told that the provisional load sheet was close to a limit and did not recall moving any bags. The dispatcher remembered processing several pieces of excess cabin baggage which needed to be loaded in the hold and updating the load sheet accordingly. However, when the dispatcher produced the final load sheet, the commander agreed it was now acceptable and signed it. The load sheet was then used to load the FMC and calculate the takeoff performance. The aircraft pushed back from its stand at 0552 hrs.

The commander reported that the takeoff was normal.

At 0630 hrs, during the cruise at FL350, a new load sheet was received, via ACARS, showing an increase in zero fuel weight of 953 kg and a change to the trim of 3% (centre of gravity forward). The flight crew updated the FMC and the remainder of the flight proceeded without further incident.

Weight and balance

Investigation after the flight revealed that the 953 kg of mail, which was loaded into hold 2, had been omitted from the final load sheet.

Report from the handling agent

The dispatcher reported that when he initially looked at the loading of the flight on the operator's load management system he saw that a consignment of mail (weighing 953 kg) had been recorded twice. The handling agent reported that this duplicate recording was not uncommon. The dispatcher deleted one of the two entries for the mail and produced the Loading Instruction Report (LIR) which was used to load the aircraft. The LIR was printed at approximately 0500 hrs. Later the dispatcher returned to the computer system to print the load sheet. When he tried to print the load sheet the system displayed a message 'EXTERNAL INPUT ACCEPT/REJECT'. The dispatcher was not familiar with the message and thought it was a system error. He accepted the message and was able to print the load sheet. The load sheet was printed at 0542 hrs. At this stage he did not notice that the consignment of mail had now been removed from the system (but had been loaded onto the aircraft).

After the flight had departed he returned to the system to complete his administrative tasks for the flight. He then realised the consignment of mail had been omitted from the load sheet and sent a corrected load sheet to the aircraft.

Report from the operator

After the incident the operator reviewed the load management system logs to understand how the 953 kg had been deleted. The log showed that at 0534 hrs the cargo company sent an electronic message which deleted 981 kg of cargo and added 28 kg of mail to the flight, producing a net reduction of 953 kg.

The cause of the original duplicate entry was not determined.

Analysis

A consignment of mail was initially recorded twice in the load management system. It was not determined why this had occurred. The handling agent reported that this was not uncommon but that this was normally resolved by the dispatcher. On this incident flight, the dispatcher noticed the duplication and deleted one entry and produced a correct LIR. Shortly afterwards the cargo company sent an electronic message to update the system. This resulted in the 953 kg of mail being removed from the system entirely.

When the dispatcher produced the load sheet the system generated a message to tell him that there had been an external change. However, the dispatcher was not familiar with the message and did not appreciate the implications. The dispatcher did not notice that the consignment of mail was missing from the load sheet.

After the flight had departed the dispatcher realised the mail had been omitted and sent a corrected load sheet to the aircraft.

The handling agent has taken safety action to remind its dispatchers of the importance of checking the load sheet reflects the actual loading of the aircraft. It also recognised that its dispatchers work with many operators who each use slightly different IT systems and that it can be challenging for dispatchers to remember the subtleties of each system. The handling agent has therefore taken safety action to change dispatcher work patterns so that they will cover all IT products they service during one set of shifts. The change aims to ensure dispatchers can remain familiar with all the IT systems they need to use.

The operator has asked the handling company to report any future occurrence of duplicate cargo entries so that they can investigate the cause and rectify the problem.

Conclusion

The load sheet presented to the commander gave an aircraft weight 953 kg lighter than actual, due to the omission of a consignment of mail loaded in compartment 2.

The mail was initially recorded in the system twice but subsequently both entries were removed.

Safety action

The handling agent has taken safety action to remind all dispatchers of the importance of checking that the load sheet reflects the actual loading of the aircraft. They have also changed work patterns to ensure dispatchers will remain familiar with the IT systems used by all the operators they service.

The operator has taken safety action by asking for all future occurrence for duplicate cargo figure to be report to them so that they can determine the cause.