

21/02/2014

201402127

OCCURRENCE LISTING

Aircraft Below 5700kg

OCCURRENCES RECORDED BETWEEN 01 February 2014 and 28 February 2014

FIXED WING AIRCRAFT

LYCOMING

AVIONS ROBIN DR400

EGBJ (GLO): Approach 235 FAMILY Gloucestershire UK Reportable Accident: Forced landing due to fuel exhaustion. One POB, no injuries reported. Subject to AAIB AARF investigation. BEECH 200 PRATT & WHITNEY Cruise Overhead London 11/12/2013 201316063 (CANADA) PT-6 FAMILY Dual transponder failure. Transponder #2 failed en route. Switched to transponder #1 which also failed. Recycled both units, #2 worked until landing then #1 booted up again. BEECH 200 PRATT & WHITNEY Climb to cruising STAFA 16/01/2014 201400632 (CANADA) level or altitude **PT-6 FAMÍLY** Aircraft climbed above cleared FL120 and was observed with Mode C showing FL128. Pilot when questioned had confirmed cleared level of FL120. BEECH 200 PRATT & WHITNEY EGGD (BRS): Normal descent 20/01/2014 201400648 (CANADA) PT-6 FAMILY Bristol/Lulsgate

Aircraft descended below cleared altitude of 2500ft and was observed at below 2300ft. Aircraft levelled at 2000ft at about 6nm final before descending on the glide path. DWM spoke to the captain later who appreciated that they had descended below their cleared level and was waiting to see when the pilot under training noticed. He believed this to be necessary from a training perspective and as they were VFR he saw no safety implications. I explained that they were under a RCS and should have informed ATC if failing to comply with instructions. This was acknowledged.

Content:	This list contains occurrences and accidents to aircraft of 5700kg and below recorded on the MOR database during the period shown above. The list includes information reported to the CAA, information from CAA investigations and deductions by CAA staff. The authenticity of the contents or absence of errors and omissions cannot be guaranteed. The list contains preliminary information.			
Purpose:	The information is supplied for flight safety purposes only.			
Queries & Reporting:	Contact Safety Data Department, Civil Aviation Authority, Aviation House, Gatwick Airport, W Sussex, RH6 0YR. Tel: 01293 573220, Fax: 01293 573972, sdd@caa.co.uk			
YOUR REPORT COULD PREVENT SOMEONE ELSE'S ACCIDENT				

BEECH 200 PRATT & WHITNEY Normal descent En route 01/02/2014 201401370 (CANADA)

PT-6 FAMILY

Contaminated fuel.

When passing approximately FL180 in the descent, the master warning annunciator illuminated for RH low fuel pressure. The RH fuel gauge was fluctuating from almost zero to approx 400lbs/hr. Originally the crew report they had about 300lbs/hr set in the descent. It continued to fluctuate with associated torque fluctuations and aircraft yaw. The crew put the standby pump on but it appeared to have no effect. This was happening for about 2 or 3 minutes. The crew then pulled the Right hand power lever back to about 400lbs torque and it seemed to stay there ok without fluctuations. They used this time to decide what to do. The crew discussed shutting the engine down. However, since at that time it was stable at 400lbs they decided to keep it running. The crew experimented increasing the power again at about FL80. The engine responded as normal. ATC informed of the issue of fluctuations with the Right hand engine and the crew requested radar vectors for a priority landing. An emergency was not declared. ATC facilitated an expeditious approach and we believe they initiated a local standby. A normal landing and taxi were carried out. Additional information: During cruise, the temperature started about -31, decreasing to -40. The crew requested descent to FL240 (from FL260) where the temperature was -37 at FL240. On the climb out, the crew noticed the LH fuel gauge fluctuate. It went to maximum flow then back to normal again. At this time there were no other engine fluctuations and the crew considered this to be a gauge error. Engineering Input: Inspection of fuel system and engine, and fuel drained by Engineering. Evidence of water contamination in the old fuel, plus corrosion evident within the firewall filter of the affected engine. There was also evidence of sitting water taken from the fuel drains and within the filter bowls. Both fuel systems have been flushed and filters cleaned. Engine ground runs have been completed. The Engine performance is satisfactory. New fuel has been added and the Engine fuel heaters hav

BEECH 200	UNKNOWN	Approach	EGPF (GLA): Glasgow	12/02/2014	201401731
Laser attack.					
BEECH 200	PRATT & WHITNEY (CANADA) PT-6 FAMILY	Climb to cruising level or altitude	Abeam EXMOR	16/02/2014	201401908

Infringement of Airway N90 (Class A) by an aircraft squawking 0027 at FL194 in receipt of a Basic Service. Descent of aircraft inbound to Bristol was stopped. I was working as the Sector 6, 9 & 36 Tactical controller in bandboxed configuration in a busy traffic environment. I had been made aware of an aircraft displaying a 0027 squawk, in communication with the London FIS. I was informed that the aircraft had requested an airtest at FL260 but had been refused by Swanwick Military. As a result he was speaking to the FISO and had been advised to remain outside controlled airspace. At approximately 1155Z I observed the 0027 squawk enter airway N90 (east abeam EXMOR), indicating FL194. As a precaution I stopped the descent of an aircraft inbound to Bristol. I telephoned the FIS who advised that the pilot had just reported turning away. I asked the FISO to advise the pilot he was inside controlled airspace, but was rightly advised by the FISO that they were not permitted to do so. Following communication with the Operations Supervisor, the pilot was requested to telephone the Operations Supervisor on landing. Supplementary (1) 18/02/14:

Aircraft called on frequency at 1136 12nm east of egho requesting climb to fl260 remaining clear of airways. I informed the a/c that I can only give a service to FL195. Then put a/c on a 0027 squawk and told him we would have a word with the military and see if they would give him a service. Because the pilot had not pre-requested a service with them before he got airborne, they denied him a service, so the pilot elected to stay with me. I reiterated that I could only provide a service to FL195 and suggested that he remain below FL195 and also remain outside CAS which he confirmed he would. A while later my assistant received a call from sector 6 to say that he was getting close to airway N90 so I again asked the a/c to confirm he was remaining outside cas, especially N90 to the east of N864 to which he replied that he was doing a 180 degree turn at that time. A short time later s6 atco informed us that he had infringed and they would be filing. We told EGLF to instruct the pilot to call the Sup's desk once he had landed. The pilot had not filed a flight plan and was operating VFR.

Supplementary (2) 18/02/14:

I was captain of the aircraft on 16 Feb 14. I was flying single crew with 2 passengers/engineers for the purpose of an airtest to confirm the serviceability of all aircraft systems as part of a pre purchase inspection. The checks at altitude were principally to confirm the serviceability of the cabin pressurisation systems. The route of the flight was to Thruxton and onwards to Yeovilton, remaining outside Class A airspace. It was expected that the altitudes would vary during the flight due to the nature of the airtesting and hence more altitude flexibility could be achieved outside controlled airspace during the flight. FL194 was achieved as final cruise and a flight information service was provided by London Information with a dedicated transponder code. It was apparent on the climb that one of the 2 aircraft pressurisation packs was not performing satisfactorily. This needed detailed assessment at altitude. The aircraft was accelerated to maximum speed and I flew beyond Yeovilton and then turned southerly. This was a period when I was also heavily involved with aircraft systems monitoring. As I turned southerly the controlled asked to confirm if I was turning to avoid airspace and I confirmed I was. The workload was heaviest at that stage and the aircraft goundspeed was also high. I was not aware that I had infringed N90 and he asked me to report on CAA 4114 form; I queried this today and was requested to use this form.

BEECH 200	UNKNOWN	Intermediate approach	EGPM (SCS): Scatsta	27/02/2014	201402392	
Green laser attack.						
BEECH 76	UNKNOWN	Climb to cruising level or altitude	NEDUL	27/01/2014	201400885	

Aircraft on own navigation climbed above cleared altitude 4000ft and reached 4300ft. Standard separation maintained.

At 1031 I issued Bournemouth Radar a clearance for aircraft NEDUL, THRED 4A Q990, and contact Solent Radar 120.225. At approximately 1035 I observed aircraft in Bournemouth's delegated airspace (Area F) indicating 4300ft. I telephoned Bournemouth to query aircraft's level, and they said he was maintaining 4000ft. In a subsequent conversation with Bournemouth Radar, they stated that when the instructed aircraft to resume own navigation for NEDUL, the aircraft indicated 4300ft for approximately 5 seconds before it descended. The Bournemouth trainee ATCO queried aircraft's level as soon as they spotted the bust. Supplementary 12/02/14:

A training aircraft working Bournemouth Radar, briefly leaves the level assigned by Solent Radar. The Solent Radar controller quickly queries Bournemouth regarding this, and simultaneously the aircraft indicates back at the assigned level. No other aircraft are affected by the level bust. The reason for the level bust is unknown as the pilot did not think they had left the assigned level when queried by the Bournemouth controller.

BEECH 90 PRATT & WHITNEY Initial Approach EGKB (BQH): Biggin hill 06/12/2013 201315843 (CANADA) PT-6 FAMILY

Transponder malfunction.

The aircraft was inbound during a busy evening rush. On three separate occasions, I noticed his Mode C displayed level did not correspond to that to which the aircraft had been cleared. On the second occasion it would have resulted in a loss of separation - upon spotting the discrepancy, I challenged the pilot immediately and his response, I think, was that he was maintaining the cleared altitude, he just has an inaccurate transponder. Unfortunately I am unable to recollect the exact words used but it was along those lines and I think this needs to be challenged with the pilot/operator.

BEECH 90 UNKNOWN Climb to cruising EGNM (LBA): LEEDS 15/01/2014 201400541 level or altitude BRADFORD

An aircraft departed on a POL SID climbing to 3000ft instead of correct FL70. Standard separation maintained.

An aircraft departed climbing to 3A, when the SID climbs to FL70. MACC queried the aircraft's cleared level, and informed them that it should be FL70 and they said they were definitely only climbing to 3A. The POL2X SID, will climb to 3A initially, and then 3.5A and then FL70, although it is not a step climb SID, these are the altitude restrictions that must be reached.

BRITTEN NORMAN BN2A LYCOMING En-route Overhead Buxton 27/02/2014 201402403 540 FAMILY Green laser attack.

BRITTEN NORMAN BN2A LYCOMING EGBE (CVT): Coventry 18/02/2014 Maintenance 201402110 540 FAMILY phases

Alleged sub standard maintenance.

Aircraft obtained for AOC operation in accordance with OPS 1.165 under a dry lease from the new registered owners whereby it was understood that the aircraft was previously operated under an AOC by the previous owners. The new operator carried out a pre operation review of all aircraft documentation and a survey of the aeroplane which revealed that it had been maintained to a poor standard of airworthiness such that the validity of the Certificate of Airworthiness was questionable. The lessee of the aircraft became the CAMO and has corrected all the known defects such that it is now in operation under the new AOC with a valid Certificate of Airworthiness.

BRITTEN NORMAN BN2A LYCOMING Initial Approach EGJB (GCI): Guernsey, 01/02/2014 201401153 540 FAMILY Channel Is.

Flapless landing carried out due to jammed trim wheel.

TO Flap was selected for initial approach rwy 27. The trim continued to run fwd to a full nose down attitude and then the trim wheel was jammed. Excessive back pressure was required to attempted to maintain glide path. However this was not possible. Flaps were then selected to up and trim wheel became available for manual use. Considered pulling the Trim CB however as I was able to trim the Aircraft so I decided to land flapless with good control and trim forces relieved. A normal flapless landing was then conducted and tech log entry was made to ground the aircraft.

BRITTEN NORMAN BN2T ROLLS-ROYCE Standing : EGNR : Hawarden 12/02/2014 201401792 250-B17 Engine(s) Not Operating

Significant loss of oil from RH engine.

Post aircraft ferry to Paint Facility, the aircraft was positioned in the Services Hangar. A significant volume of oil was observed leaking from the RH Engine. Over several days approximately 3 quarts of oil was lost from the engine, which is in excess of 50% of the engine oil. Background- this is a new production aircraft with new engines, which at the time of the incident had completed 3 hours of operation. During initial Engine Ground Running in January 2014, both engines behaved normally. During subsequent Engine Start for Compass Swing, smoke was observed for the RH Engine and a flameout from the outboard exhaust gallery. The engine was immediately shut down and the Operations & Maintenance Manual 11W2 was consulted. The cause of the smoke and flame out was thought to be internal static leak as a result of engine bedding in, similar events had been seen before on new engines. A compressor wash was then carried out iaw 11W2 and another ground run completed without incident. During the flight, there was no loss of engine oil pressure and the engine behaved normally. On inspection of the aircraft on landing, there was no evidence of oil streaking on the airframe and therefore we conclude that the engine oil loss occurred on the ground after arrival. After detection of the oil loss from the RH Engine, the engine manufacturer was informed and an Engineer from their Approved Engine Repair Station attended to investigate the incident. An interim report has been raised by the Engineer which states that oil was found in the Burner Drain Valve, Compressor Case, Compressor Scroll, Exhaust Collector Ducts and Turbine Wheels. The report suggests that the possible cause is a failure of the No 5 or No 8 Seals / Bearings. The engine was removed from the Aircraft and transported for in depth investigation.

CESSNA 152 UNKNOWN Landing roll - on EGNX (EMA): 05/01/2014 201400107 runway NOTTINGHAM EAST MIDI ANDS

Aircraft left the runway after landing.

Aircraft landed at 11:32. Shortly after landing, he veered left of the runway onto the grass. The crash alarm was activated but almost immediately afterwards and before the RFFS checked in, the pilot had corrected the aircraft and had taxied back onto the runway. I asked the pilot if he needed assistance and I believe that he replied "Negative not now, that was a bit of a crosswind". He then requested to taxi back to the school. The RFFFS checked in and after confirming again with the pilot that he required no further assistance, were advised to stand down at their discretion. This was at 1:36. The surface wind was 20/14 with no reported gusts.

CESSNA 172 LYCOMING EGBB (BHX): Birmingham 20/01/2014 201400657 Climb to cruising 320 FAMILY level or altitude

Infringement of the Birmingham CTA (Class D) by an aircraft squawking 7000 climbing to 2500ft. Traffic info given, Standard separation maintained. Inbound and outbound aircraft given headings to avoid.

Aircraft transponding 7000 entered controlled airspace climbing to altitude 2500', crossed the 33 approach at 10 miles towards Coventry. It then appeared to join the Coventry overhead and descended to altitude 2000'. Coventry did not have any details and suspected R/T failure. The aircraft then continued to descend tracking to the south west and left controlled airspace at 1700' to the south. Inbound and outbound aircraft were both given headings to avoid. The aircraft then selected a Coventry code and the details of the aircraft were passed on from them.

At approx 1255 a 7000 squawk observed entering the control zone from the south at 2500ft, turned towards the Coventry overhead, made one orbit descending and left the zone to the south. Blind calls were made on 118.050 with no answer, the a/c was tracked after it left the zone, eventually the squawk changed to a BE conspicuity code, and details obtained. Inbound aircraft was given a heading to keep clear, as was the outbound aircraft. No avoiding action was required.

CESSNA 172 LYCOMING EGHH (BOH): 02/02/2014 201401183 Cruise Bournemouth/Hurn 320 FAMILY

Infringement of the Bournemouth CTA (Class D) by a C172 at 3000ft. Standard separation maintained.

CESSNA 172 LYCOMING En-route EGBB (BHX): Birmingham 16/02/2014 201401907 320 FAMILY

Infringement of the Birmingham CTA-2 (Class D) by a C172 at 2000ft. Traffic info and avoiding action given to an inbound DHC8. Standard separation maintained. I was operating as the Radar 1 controller, controlling two inbounds to Birmingham; the first was established on a LOC/DME approach for 33 and the second, DHC8 on a downwind heading west of Birmingham airport in the descent to 4000 ft. I became aware of a 7000 squawk tracking south-east towards CTA2 and 2NM north west of Snitterfield, just before it infringed CAS at 2000ft. I gave DHC8 an avoiding action turn to the right onto 330 degrees and instructed it to stop descent at 6000 ft. Traffic information was passed about the infringing aircraft. I hovered the mouse pointer over the track data block of the infringing aircraft which revealed the registration of the aircraft. Two blind calls were made to this callsign, but no response was received. The infringer continued on a consistent south-easterly track, so I continued the approach for the DHC8 with a right turn onto a downwind heading. As the infringer left controlled airspace and tracked towards Wellesbourne, I asked the assistant to contact Wellesbourne to see if they were talking to the C172. They confirmed that they were in contact with that aircraft and it was transferred to 118.050. Upon calling Birmingham Radar, I gave the C172 a squawk of 0401 and positively identified this registration with the contact that had infringed

CESSNA 182 LYCOMING Cruise En route 29/12/2013 201316837 540 FAMILY

520 FAMILY

Emergency declared and aircraft returned due to electrical failure accompanied by a burning smell in the cockpit.

At the time of the incident I was acting as combined ADI/APC controller. The aircraft was on a local detail to the west of the aerodrome. At 1340 the a/c called stating he had an emergency due to an electrical failure. The a/c was cleared to make a right base join to runway 19 and a Full Emergency was initiated using the crash alarm. Two fire vehicles responded and were positioned at holding point Charlie. The ATSA advised me that the operator on the Red Care line (which we use for calling in outside services) had asked if a response from non-airfield services was required. This was unusual as such a response is normally automatic for a full emergency. However, as the a/c was already on short final to land and no further problems were evident, I indicated no outside services were required. At 1345 the aircraft landed safely. The pilot indicated he was happy to taxi in as normal as 'the fumes have gone away'. Both fire vehicles followed the a/c down the runway and into parking. The incident was closed by the fire leader at 1350.

Supplementary 28/12/13:

Whilst in the cruise, the MFD failed completely (black screen) and almost immediately both crew noticed a strong electrical overheat/burning smell. An emergency was declared, an immediate recovery to EGTK was initiated and the checklist carried out. The smell vanished almost immediately when the alternators were switched off. The aircraft was landed safely with no further incident.

CESSNA 206 LYCOMING Intermediate GOW 02/02/2014 201401173 540 FAMILY approach

Altitude excursion. Standard separation maintained.

C206 was being vectored IFR inbound for a cloud break and visual approach to a neighbouring airfield. He had been given descent to 4A in the Edinburgh Buffer. Whilst position 110/23 from GOW with about 15NM to run to the neighbouring airfield I noticed his Mode C indicating 3.8. I asked him to confirm he was maintaining 4A on 993 Hectopascals. He read this back and confirmed he was level at 4A. The Mode C then descended to 3.6. I informed him that his Mode C was indicating 3.6 and asked him to confirm he was level at 4A on 993. He again confirmed he was level at 4A on 993. His Mode C then adjusted upward slowly to 4A. He was terrain safe at all times

CESSNA 310 CONTINENTAL Climb to cruising TARTN 31/01/2014 201401127 (TELEDYNE) USA level or altitude

Altitude excursion. Standard separation maintained.

When I took over as TLA T&P C310 was already in the climb to FL90. This was his requested cruising level, which differed from his flight planned level of FL95. At 1105 I observed the Mode C indicating FL97. When I asked the pilot to confirm he was maintaining FL90 as his mode C was indicating FL97 he immediately requested FL100 for icing. I instructed him to climb to FL100 and at 1107 observed the mode C indicating FL105. I asked the pilot to check his altimeter setting. At this point the pilot reporting levelling at FL100 whilst his mode C was showing a rapid rate of descent to this level.

During 'After Take Off' checks a strong odour of burning rubber was noticed in the cockpit. Previous experienced suggested that such odour occurring after landing gear retraction may be caused by spinning wheel in landing bay. Nevertheless a thorough check of all the systems, especially electrics, were carried out, and a diversion plan formulated in case of fire. However, nothing abnormal was discovered and the burning odour disappeared a little later, so I continued to destination. However, during search for source of unidentified burning odour the workload increased significantly and altimeter setting change was missed. QNH remained set instead of required standard setting, which resulted in level bust climb to altitude instead of flight level. A moderate icing also contributed to increased workload.

CESSNA 404 CONTINENTAL Boscombe Down 15/01/2014 201400872 Cruise (TELEDYNE) USA

Infringement of Danger Area D127 (Boscombe Down) by an aircraft at 6000ft.

520 FAMILY

Emergency flood response at Salisbury following the River Bourne north bound. The initial planned lines infringed D127 and were amended to keep the survey clear of D127 on site. During discussion about the survey we arranged entry into D123/124/125 with Salisbury Ops. D128/126 were active up to 1400 feet only and no factor. To reduce the time in the complex during flight we raised the altitude to 6000 feet with what I understood to be the same line parameter and dimensions. On the initial south line (most easterly line) we infringed the western tip of D127 near Old Sarum. When we moved to the North sector of the survey the transposed lines ended approx 1.5nm North of D127 and we flew these and I was aware of the proximity. At the end of the first line we started a right turn to the W before taking a N heading to run south on the second line. During the turn the controller asked us to turn Left which we complied with and positioned to the N. The controller then told us we had infringed D127 and could we turn before railway line on the edge of D127. I then confirmed the lines, and the transposed lines ended before the railway line. On the 2nd South line I instructed HEP to turn at the required point (N of Railway line) and at this time had ~2.5nm to run until the end of the survey line. Both the 2nd and 3rd line runs were clear of D127. The increased altitude changed the dimensions of the survey of which I was not aware. This change caused the infringement. The GNS 430 did not display danger area, although it does show restricted areas. A GPS aware unit will be taken on all flights to counter the lack of info from GPS.

CESSNA 406 PRATT & WHITNEY Final approach EGPE (INV): Inverness 31/01/2014 201401179 (CANADA) PT-6 FAMILY

Autopilot runaway. Aircraft pitched down to an estimated -5/6deg and with a sudden increase in rate of descent to between 1500ft and 2200ft/min. At approximately 2000 ft on a coupled ILS approach to Inverness Rwy 05 after normal localiser and glide path capture, the aircraft pitched down to an estimated -5/6 degrees and with a sudden increase in rate of descent to between 1500 ft and 2200 ft /min. The captain pressed the autopilot disconnect button immediately and simultaneously applied back pressure and manual trim to overcome the pitch down and to regain the glide path. The captain's autopilot disconnect was ineffective so he instructed the F/O to use the right hand column disconnect button. This also failed to have any effect so the captain tripped the electric trim circuit breaker and instructed the F/O to trip the autopilot circuit breaker located on the starboard side of the cockpit. The controls remained stiffer than normal at first, but were manageable. The crew were visual with the runway and had clearance to land so the captain elected to continue. The aircraft had deviated below the glide path so was restored to profile and the approach was stabilised by 1500 ft QNH. By 500 ft agl the control forces felt normal once more. The landing and taxi to stand were without further incident. No functional defects were found with the autopilot disconnect system or pitch actuator, however the roll actuator intermittently remained engaged in left roll despite system disconnection. The pitch actuator has been changed as a precaution and the aircraft awaits a maintenance check flight. The possibility of icing contributing to the failure is also being considered. Further investigation is in process

PRATT & WHITNEY (CANADA) CESSNA 510 Initial climb LSGG (GVA): 20/02/2014 201402218 Geneve/Cointrin Other

RH engine oil temperature warning, engine shut down, PAN declared and aircraft returned.

Aircraft Grounded. Engineering performed ground run and could not duplicate the problem. The Right Engine oil temperature sensor was replaced in AHM 79-30-10. Leak run performed and found satisfactory, aircraft released to service. Operator currently investigating the occurrence, further information will be provided.

CESSNA 525 UNKNOWN Climb to cruising DVR 31/01/2014 201401133 level or altitude

C525 exceeded cleared level during climb resulting in a loss of separation against an A319.

Flight crew missed the change to altimeter setting, resulting in the subsequent deviation.

CAA Closure:

Crew apologised and have been debriefed accordingly by the Flight Operations Manager

EGTF : Fairoaks CESSNA 560 UNKNOWN Intermediate 14/02/2014 201401800

approach

Altitude excursion. Standard separation maintained.

Told to descend to 2,400 feet which was read back after a pilot self correction. Observed to descend to 1,400 feet.

Supplementary 15/02/14:

I was the APS OJTI with an high hours trainee working in high traffic levels. Cloud was SCT at 600ft and BKN around 2200ft. There was no LARS traffic due to high winds and rain in the south of the UK. TC were also busy. C560 was on track ROVUS and ran on for some time due to the trainee sorting out an LK inbound vs a LF inbound. The trainee turned the C560 onto a heading of 080 from ROVUS initially then onto 110 after prompting from me to widen him out a bit (there was traffic on the ILS). The trainee then issued an instruction to descend to 2.4A. The pilot read back 'descend to one, er, two thousand four hundred feet'. When the aircraft was in the Guildford area, we both noted that the Mode C was indicating 1400ft. Without prompting, the trainee issued a climb to 1700ft (as per the SMAC) and after acknowledgement and seeing the Mode C level at and maintain 1.6A (within tolerance) issued a turn onto base leg. As this was below the pattern altitude, the trainee confirmed with TF that they had no traffic to effect. The controller had to subsequently reinforce a turn instruction onto LOC closing heading as the pilot didn't seem to be turning and was heading toward the Heathrow Zone. He also passed traffic information to SVFR. The aircraft then established on the LOC with no further incident.

CESSNA F406 PRATT & WHITNEY Cruise NUMPI 13/02/2014 201401778 (CANADA) **PT-6 FAMÍLY**

Altitude excursion. Standard separation maintained.

C406 Mode c observed A053 on own nav photo survey in vicinity of Ballykinler, cleared level A050. Pilot was asked to check QNH and level. Aircraft subsequently descended to maintain within Mode C limits for A050. No traffic in the vicinity at the time.

CIRRUS SR22 CONTINENTAL Cruise EGBJ (GLO): 04/12/2013 201315766 (TELEDYNE) USA Gloucestershire 550 FAMILY PAN declared due electrical failure and rough running engine. At approximately 1010z assistant called to pre note aircraft inbound. He advised that the aircraft had declared a PAN due to a total electrical failure and rough running engine. Full emergency declared. Pilot was offered RW09 for a straight in approach which was accepted and the aircraft landed safely at 1025. **CIRRUS SR22** CONTINENTAL Take-off EGMC (SEN): Southend 11/01/2014 201400352 (TELEDYNE) USA . 550 FAMILY Full emergency and aircraft return due to rough running engine. Soon after departure aircraft reported a rough running engine. Full emergency declared. Aircraft returned DIAMOND DA40 THIELERT EGHH (BOH): 06/02/2014 201401411 Scheduled Centurion 1.7 (TAE Bournemouth/Hurn maintenance 125) Cracked turbocharger clamps. During scheduled maintenance work we have recently identified 2 turbocharger clamps on separate aircraft that have cracked. From first aircraft, records show that the clamp was fitted in Feb 1013 and removed having consumed 214 Flight Hours. From second aircraft, records show that the clamp was fitted in July 1012 and removed having consumed 686 Flight Hours. Both clamps have been replaced and the engine Type Certificate Holder has been informed. DIAMOND DA40 THIFI FRT EGKA (ESH): Shoreham 25/02/2014 201402369 En-route Centurion 1.7 (TAE 125) Green laser attack. **DIAMOND DA40** UNKNOWN Scheduled EGKA (ESH): Shoreham 18/02/2014 201401962 maintenance Maintenance recorded but allegedly not carried out. Subsequent failure of affected part. During accident investigation, serious delamination was found on the turbo charger inlet hose. It is likely that the collapse of the inner layer, which was found, would have caused restriction even blockage of the air intake and resulted in a severe power drop. It is in question that the Service Bulletin MSB-D4-088 was performed as the part found installed has been confirmed as the non-suitable part. DIAMOND DA42 THIELERT Climb to cruising EGHH (BOH): 20/01/2014 201400672 Centurion 1.7 (TAE Bournemouth/Hurn level or altitude 125)

Incorrect directions issued by ATC.

Upon departure, Tower controller cleared the aircraft for a left turn out to SAM. After turning left and heading direct SAM Radar controller asked to confirm intentions and stated it should always be a right turn to SAM from Runway 26. No further action required and cleared direct SAM without further incident.

DIAMOND DA42 THIELERT Cruise EGHH (BOH): 19/02/2014 201402093

Centurion 1.7 (TAE Bournemouth/Hurn

RH gearbox oil leak.

Whilst configured for an incipient stall practice, fluid was identified on the RH engine. On closer inspection it appeared to be oil, leaking from the front of the engine near to the gearbox oil inspection window and from gaps in the engine cowling. All engine parameters remained normal. ATC were informed of abnormality and aircraft was returned for precaution and completed a normal landing with both engines operative. Aircraft was referred to engineering. Fluid was identified as gearbox oil and oil pipe was found to have failed. Part replaced.

DIAMOND DA42 THIELERT Standing: EGPC (WIC): Wick 02/02/2014 201402253
Centurion 1.7 (TAE Engine(s) Start-up

Uncommanded engine shutdown on the ground.

Pre-flight checks were completed up to engine start and iaw SOPs, the LH engine started first. Following a successful start, the engine instrumentation was observed to be in normal operating ranges and as expected given that the aircraft had been shut down for less than one hour. However, prior to starting the RH engine, a left ECU B fail caption illuminated. We decided to continue with the start of the RH engine and successive check items with the opinion that if it was just a sensor fault it may clear during the ECU test. The ECU test was initiated and far from clearing the caption, when the ECU on the LH engine changed from A to B, the engine ran rough for 1-2 seconds and stopped. We subsequently shut down both engines and after sufficient time, restarted the LH engine to perform the test again. The caption remained and the engine stopped a second time with notably less rough running. Flying the aircraft back was not an option and we cancelled our flight plan. Ops were informed and we positioned home by road. LH engine FADEC download carried out and the following was observed: A/B differential propeller speed 1895 RPM lane1 0, lane2 fault, traced to B crankshaft speed sensor and replaced. EGR carried out, all observations and indications now fully satisfactory.

EUROPA EUROPA BOMBARDIER ROTAX Initial climb EGSC (CBG): Cambridge 17/12/2013 201316435 PAN declared due to stuck open throttle. Full emergency actions were carried out. Pilot had shut the engine down and glided to a successful landing FOURNIER RE6 Maintaining 29/12/2013 201316826 CONTINENTAL EGBJ (GLO): (TELEDYNE) USA 200 FAMILY position Gloucestershire Suspected engine fire at holding point. Pilot reported "We have a problem, a bit of a fire" whilst at the holding point prior to departure. Aircraft ground incident initiated. Aircraft shut down and crew selfevacuated before RFFS reached the scene. Operator reported a suspected oil leak. Aircraft towed to maintenance GROB G115 LYCOMING Cruise EGGP (LPL): Liverpool 20/01/2014 201400822 235 FAMILY Infringement of Liverpool CTR (Class D) by a Grob 115 at 1300ft squawking 7000. Standard separation maintained. GROB G115 UNKNOWN EGUY : Wyton 28/01/2014 201400999 Taxi to runway Runway incursion. An aircraft taxied past cleared Holding point C. An aircraft called for taxi instructions and was given Taxi to holding point 'C'. Runway in use was 15LH. There was an aircraft on the runway and one on final approach on a continue, the a/c proceeded past the holding point intending to cross the runway. The controller noticed this and repeated the hold at 'C'. The a/c then turned around just short of the runway and returned to holding point 'C' GROB G115 52 39 N / 00 16 W LYCOMING Manoeuvring: 04/02/2014 201401900 360 FAMILY Other UK AIRPROX 2014/009 - Grob G115 and a model aircraft in Class G airspace. **GRUMMAN AA5** LYCOMING Climb to cruising EGHI (SOU): Southampton 04/11/2013 201316720 320 FAMILY level or altitude Loss of communications due to RT failure. Aircraft given transit clearance, for eventual instrument training at destination. Shortly after entering CAS from the East, the aircraft went RT fail. One departure just airborne was vectored around this aircraft , but as the aircraft had not been given a clearance beyond a certain point, there was uncertainty as to what it would do so all subsequent departures were held on the ground. Repeated calls and enquiries to adjacent units failed to achieve communication until at which point two way communication was re-established and the pilot stated that it had suffered an RT failure on one box. Transit aircraft experienced a RT failure. Causal factor 1: Interaction with environment/ Pilot-Controller Communications/ Aircraft radio failure/ Causal/ Pilot 1. The ATCO made several attempts to establish communication with the aircraft. Aircraft had been cleared to enter CAS on track to airport, no en-route clearance had been given and pilot did not read back on his initial clearance so therefore it is unknown as to what the pilot would have done should he of had a total RT fail. The ATCO ensured that 5nm separation was achieved from the aircraft and an outbound aircraft during the RT fail. Aircraft did not squawk 7600 but communications were re-established as the aircraft reached destination. **HAWKER SIDDELEY HS125** GARRET AIRESEARCH EGLC (LCY): London city 31/01/2014 201401123

Aircraft landed without acknowledging clearance

TFE 731 SERIES

The ADC controller alerted me that the inbound aircraft had not checked in and he was broadcasting blind to it. They cleared the aircraft to land but no response was heard. The aircraft was seen on the ATM inside 2.5nm. Controller immediately hit the Priority line to THAMES RADAR and informed them that the aircraft was cleared to land and heard them issue the instruction in the background but was informed that no response was heard. The aircraft landed and began to backtrack the runway. I instructed the ADC controller to contact the AOSU vehicle for follow me duties. The OPS vehicle escorted the aircraft back to the Jet Centre. During the taxi, the aircraft checked in on the frequency. The ADC controller asked the pilot if he was receiving our transmissions but could not respond. The pilot said he had not heard our transmissions. Subsequently the pilot called and said that he HAD heard our transmissions. The runway was sterile. We were attempting to contact the aircraft and I did not have time to activate the ALDIS lamp.

LAKE LA4 LYCOMING Landing roll - on EGSX : North Weald 16/02/2014 201402066
360 FAMILY runway

Serious Incident: Landing gear failed to extend prior to landing. Gear-up landing performed. Two POB no injuries. Subject AAIB AARF investigation.

OTHER (MICROLIGHT) BOMBARDIER ROTAX En-route EGBE (CVT): Coventry 16/02/2014 201401909

Infringement of Coventry ATZ (Class G) and Birmingham CTA-2 (Class D) by an unknown aircraft squawking 7000, resulting in loss of separation with a Birmingham inbound aircraft. Traffic info and avoiding action given. Aircraft identified as a microlight.

I was on watch as the Radar 1 Controller at Birmingham. At approx 1310 I noticed a 7000 squawk in the vicinity of Bitteswell Industrial Estate VRP at 2000ft that had been tracking SW make a turn towards Coventry overhead. I commented to the Assistant that I was surprised it wasn't on a Coventry Squawk as it looked like it was joining their circuit. The Coventry Corner had been delegated to Coventry but I continued to monitor the aircraft. As it passed through Coventry's overhead still tracking SW I called Coventry Radar to check the aircraft's intentions. The Radar Assistant answered and said they had been trying to call the aircraft. I was vectoring an aircraft inbound towards the LOC/DME procedure for RW33 and had descended the aircraft to 6000ft. I deliberately delayed giving the aircraft further descent as I wasn't comfortable about the intentions of the unknown aircraft. As soon as the Coventry Radar Assistant told me they were not working the unknown aircraft. As soon as the Coventry Radar Assistant told me they were not working the unknown aircraft a respective to the unknown aircraft and a voiding action turn left onto heading 240, told the aircraft to stop descent and passed traffic information. Inbound aircraft acknowledged the avoiding action and reported levelling at 6000ft. After a brief period monitoring the tracks of the aircraft, I gave the inbound aircraft a further left turn onto 060 and advised the crew I would set them up for another approach. Minimum separation was approx 3.6nm lateral and 4200ft vertical. A radar trainee sat in the Radar 2 position unsuccessfully attempted to obtain Mode S information from the unknown air and continued to track the aircraft. When approx 20nm SW of Coventry the aircraft changed to a Brize squawk and the ident was obtained from Brize Radar. The pilot subsequently called and reported he had planned to route via Southam Cement Works VRP which would have kept him outside CAS. He was surprised to be told he was at least 5nm off track and that he had flown throug

PILATUS PC12 PRATT & WHITNEY Cruise THRED 11/02/2014 201401604 (CANADA)
PT-6 FAMILY

Altitude excursion. Standard separation maintained.

PC12 called on S21 (129.425) north of THRED passing altitude 5500 climbing FL100 and was observed climbing to FL106. I checked his cleared level and then asked him to check his pressure setting. The Mode C was then observed descending back to FL100. When I queried the pilot said there had between a discrepancy in pressure settings i.e. he was still using QNH rather than SPS.

PIPER PA22 LYCOMING Cruise EGTR : Elstree 31/08/2013 201311019 235 FAMILY

MAYDAY declared and aircraft diverted due to engine problems.

The pilot of an aircraft flying outside controlled airspace and on the Radar frequency advised of engine running problems and within seconds declared a 'MAYDAY'. I acknowledged this, asked him to squawk 7700, and pointed out a nearby aerodrome, which he elected to divert to. I alerted the Group Supervisor (Airports) and requested that the aerodrome be informed of the details. Before changing frequency, the pilot advised that the engine had regained power but would proceed with the diversion. The aircraft landed safely.

PIPER PA28 LYCOMING Initial climb EGBE (CVT): Coventry 10/12/2013 201316049 320 FAMILY

Alternator failure and smell of burning in cockpit. Full emergency initiated.

On climb out into the circuit at around 400ft AAL, the pilot requested immediate return by tear-dropping to the reciprocal runway. A clearance to land was issued. The pilot went onto state that he had an alternator failure and there was a smell of burning in the cockpit. A full emergency was initiated. The aircraft went around from its approach to RWY 05 and landed safely one minute later on RWY 23. The RFFS was alerted via the crash alarm and outside services were informed but stopped at time 19:56.

 PIPER PA28
 LYCOMING
 En-route
 EGKK (LGW):
 02/02/2014
 201401166

 320 FAMILY
 London/Gatwick

Infringement of the Gatwick CTA (Class D) by a PA28 at 2000ft. Traffic info and avoiding action given to an inbound B747. Standard separation maintained.

PIPER PA28 LYCOMING En-route Burnham 07/02/2014 201401432 320 FAMILY

Infringement of the LTMA (Class A) by a PA28 at 2800ft. Heathrow North departures stopped. Standard separation maintained.

I was working as the TC NE deps controller. I saw a magenta return tracking east toward White Waltham currently 3nm west of White Waltham. The Mode C indicated A25 ssr:7000. The a/c climbed to A28 and tracked towards Burnham. I stopped LL north departures. The a/c got to 3nm west of Burnham and turned towards White Waltham and started descending.

 PIPER PA28
 LYCOMING
 En-route
 EGNX (EMA):
 20/02/2014
 201402302

 360 FAMILY
 NOTTINGHAM EAST

MIDLANDS

Green laser attack.

PIPER PA28R LYCOMING Initial climb EGPK (PIK): GLASGOW 29/12/2013 201316835 360 FAMILY PRESTWICK

Aircraft returned immediately after departure due to a rough running engine.

Aircraft departed and elected to return due to a rough running engine. Local standby declared, aircraft landed safely. Local standby stood down by Officer in Charge Fire 3. Runway inspection completed immediately after landing and nothing was reported.

PIPER PA34 UNKNOWN En-route 25nm NW EGGP 16/12/2013 201316300

PAN declared due to a fuel pressure problem in the LH engine. A/c returned.

ATC advised that aircraft on a training flight had declared a PAN at FL60 due to a fuel pressure problem in the port engine. Aircraft opted to return and was vectored for an ILS approach. A full emergency was declared.

Supplementary 16/12/13:

Aircraft advised ATC that he had an Oil Pressure engine warning and wished to return. The request was approved and when asked, the pilot confirmed he was declaring a PAN. The POB was requested (2), along with any other information that might affect the flight. The pilot was happy to take a frequency change and landed safely shortly after.

PIPER PA34 CONTINENTAL Cruise EGHI (SOU): Southampton 07/02/2014 201401438 (TELEDYNE) USA 360 FAMILY

Altitude excursion. Standard separation maintained.

PA34 maintaining FL080 briefly indicated FL077. The pilot was challenged and the instructor reported that the level had been left.

Supplementary 20/02/14:

A height bust going from FL80 to FL77 not picked up straight away because the student was presenting me with his lack of good cockpit management, resulting in a short period in which my monitoring of his flying accuracy was not maintained. This incident is being investigated by the Flight Safety Officer.

PIPER PA46 UNKNOWN Intermediate Coventry 07/02/2014 201401431 approach

Altitude excursion. Avoiding action given. Standard separation maintained.

P46T from ELLX was inbound to EĞBO. As this route is not covered by the silent agreement with EGBB it was individually co-ordinated with Birmingham at FL90 (same as for their inbounds). Due to CAT B activity just to the north west of HON the aircraft was given descent to FL90 to be level 5 miles before HON at approx 10.15. There was faster jet traffic inbound to EGBB at the same time so I co-ordinated FL80 on the EGBB traffic and transferred this traffic to EGBB once passing through FL90. I then transferred the PA46T to Birmingham whilst he was passing about FL93. I subsequently noticed that was continuing his descent but presumed this had been initiated by EGBB to free up FL90 for the next EGBB inbound jet traffic. We then received a phone call from Birmingham radar stating that the PA46T had called on their frequency descending to altitude 5000ft.

Supplementary 09/02/14:

Whilst acting as mentor, FL90 was co-ordinated with TC for PA46 inbound to Honiley, destination Halfpenny Green with the intention of treating it as a Birmingham inbound initially. TC subsequently co-ordinated E170 at FL80 inbound behind PA46 as he was faster. When E170 called PA46 was observed to have descended below FL90 and was turning toward HON. I instructed my trainee to turn the E170 left to ensure separation as we didn't know the intentions of PA46. A turn of 10 degrees was given initially which I then got her to change and turn the E170 onto heading 255. We called TC to see whether or not PA46 was on their frequency as it hadn't called us, but they thought that the aircraft had been transferred maintaining FL90. PA46 then called and informed us that he was descending to FL50 to be level either 5 or 15 miles before HON. At this point I believe that the aircraft was passing @FL67 in descent and was instructed to stop descent at 6000 feet. The E170 was vectored onto final approach at 5000 feet. No outbound traffic was pending at the time. Separation was maintained at all times. Filed as a level bust from our point of view.

PIPER PA46 UNKNOWN Climb to cruising EGNH (BLK): Blackpool 11/02/2014 201401598 level or altitude

Altitude excursion. Standard separation maintained.

PA46 from EGNH to EGSH, joined controlled airspace from EGNH and was instructed to climb to his cruising altitude of FL130. I observed the mode C of this aircraft climb to FL135, at which point I instructed the pilot to confirm his level and informed him that his cleared level was FL130. The pilot reported that they were adjusting the level, after which I observed the mode C descend back down to FL130.

PITTS S2 UNKNOWN En-route Wethersfield 02/02/2014 201401172

Infringement of the Stansted CTA (Class D) by a Pitts Special at 2000ft. Two inbound aircraft vectored to remain clear. Pitts Special given ATC assistance to steer clear of the zone. Standard separation maintained.

RAYTHEON 390 WILLIAMS Climb into traffic LFMV (AVN): Avignon 02/01/2014 201400082 FJ44 pattern Caumont

Aircraft diverted due to 'L WING OVHT' intermittent annunciation.

On initial climb out, passing through approx FL200 flickering of the 'L WING OVHT'. Annunciator was observed together with sporadic triggering of the flashing red warning light. On passing FL250 this failure became a fixed annunciation. Climb was halted at FL280. The QRH was consulted. As no icing systems were selected at the time of this event the associated actions and Procedures described in the QRH were considered inappropriate. Visual inspection of the left wing and assessment of the engine instrumentation provided further evidence to suggest that this was a sensor failure as opposed to a true bleed air event. Decision was taken to land as soon as practical. Given aircraft loading, the nearest suitable airfield that permitted a MLW landing was identified. Diversion request was made, actioned and an uneventful landing performed. Annunciation extinguished passing FL90 descent.

SOCATA TB10 LYCOMING En-route Overhead Welshpool 28/12/2013 201316814 360 FAMILY

PAN declared due to rough running engine, aircraft returned.

Aircraft was on frequency with FIS from 1644hrs en route at 4.0'. At 1702hrs the pilot declared a PAN with a rough running engine and requested if local airport was open for landing. The aircraft was maintaining its level with an engine speed of 24rpm. There was no answer from using the published number from the which also stated the airfield usually closes at 1700hrs. I passed this information back to the pilot. Another pilot on frequency stated that airfield was expecting him at approx 1745hrs and also passed to me the alternate telephone contact airport manager. There was no answer from this number, a message was left by us. I informed the pilot of this information. At this point I requested that he squawk 7700 and contact London Centre on 121.5.

Supplementary 28/12/13:

Aircraft called D&D on 121.5 after being transferred by London Information suffering a rough running engine. Aircraft unable to raise a diversion airfield on frequency. He subsequently requested a steer to departure airfield stating he had intermittent engine problems. The ac was given a steer and asked to report visual. When approx 12nm pilot stated that the ac was no longer showing any malfunctions but wished to remain on 121.5 until visual with the airfield.

SOCATA TB10 LYCOMING Taxi to runway EGTC : Cranfield 19/01/2014 201400658 360 FAMILY

Aircraft taxied beyond clearance limit.

Taxiway Alpha was blocked near A1 due to a disabled aircraft, a message to this effect was on the ATIS and all aircraft were cleared to B1 for departure. Socata TB10 was cleared to B1 for a 21 departure, which was correctly read back. Shortly after the aircraft was observed midway between B1 and A1 doing power checks. The aircraft subsequently called "taxiing back to B1 ready for departure" at which point he was reminded that his clearance limit was B1.

SOCATA TBM700 PRATT & WHITNEY Cruise KONAN 02/02/2014 201401163 (CANADA)
PT-6 FAMILY

Separation lost between TBM700 and an A320 passing FL237. Avoiding action given.

I took over from the previous controller who had the A320 on a Radar heading to go behind the TBM700. Among transmissions to other aircraft I first turned the A320 left onto 130 degrees and then further left to head towards the KOK direction. The SM showed an Orange indication at 5.5-6 miles and based on the climb rate and the heading I was happy the separation would be kept. On the replay the SM briefly flicked to Red twice (for a matter of seconds) which when I was controlling I missed as I was sorting out other aircraft in the sector. Every time I looked back the SM showed Orange. I transferred the TBM700 to 131.1 on the Radar Heading. As I went to 'Own Nav' the A320 the SM briefly flicked to Red and then back to Orange but again I was happy with the Climb rate so I continued with the 'Own Nav' to KOK. I transferred the A320 to 132.205 as it was passing FL236 and still looked to be climbing well, and a short time later I noticed that the A320 had slowed down the climb rate and was only passing FL237/FL238 and the SM showed a Red interaction just below the 5 Mile line. All the way through I was happy that with the Climb rate and the Headings (and direct to KOK) would be enough to maintain separation.

Supplementary 03/02/14: Eurocontrol

TBM700 was observed to be maintaining FL230. A320 made initial call with Maastricht, passing FL237, on a track converging with the TBM700. Maastricht issued a turn to the A320 but a separation infringement could not be avoided.

TECNAM P2002 BOMBARDIER ROTAX Scheduled EGBJ (GLO): 30/01/2014 201401139
912 maintenance Gloucestershire

RH engine nr3 cylinder exhaust riser and muffler severely worn.

Starboard engine no 3 cylinder exhaust riser and muffler severely worn causing exhaust gasses to enter the engine bay muffler and riser knuckle joints worn to a knife edge. We are waiting for a response.

OCCURRENCE LISTING

Aircraft Below 5700kg

OCCURRENCES RECORDED BETWEEN 01 February 2014 and 28 February 2014

ROTARY WING AIRCRAFT

AEROSPATIALE AS350 TURBOMECA, EGNH (BLK): Blackpool Scheduled 28/01/2014 201400946 FRANCE maintenance ARRIEL

Cracked rear LH float bracket.

During the 13 month repetitive inspection of the Emergency Floatation Gear Attachment Brackets, as required by ASB AS350-05.00.63 paragraph 1.E.2, and mandated by EASA AD 2011-0072, the rear left hand bracket, Part Number 158172, was found to be cracked. The crack is in a different area than those detailed in ASB Figure 1 Area A-A. Cracked bracket replaced

AEROSPATIALE AS350 UNKNOWN Scheduled EGHL (QLA): Lasham 11/02/2014 201402118 maintenance

Cracks found in upper vertical stabiliser during inspection.

During the scheduled 100hr/1 year maintenance check, two cracks were found in the upper stabiliser LH side at the lower part of the skin doubler bracing. The crack indications and length was confirmed following an NDT Eddy Current Inspection with crack lengths indicated at 50mm and 27mm respectively. Aircraft is still in maintenance and will require a replacement Upper Stabiliser to be sourced and fitted

AEROSPATIALE AS355 ALLISON USA EGKR (KRH): Redhill 25/12/2013 201316980 Cruise 250 FAMILY

Aircraft returned due to engine chip caption illuminated in flight.

After 20mins of normal flight, LH ENG CHIP caption illuminated. Check list sanctioned and aircraft diverted back to home airfield without any further incident. Maintenance inspection carried out and fault rectified. Caption caused by damp electrical connection

AEROSPATIALE AS355 ALLISON USA Cruise EGKR (KRH): Redhill 201400235 06/01/2014 250 FAMILY

Aircraft returned due to tail rotor gearbox chip caption illuminated.

5mins after take-off, TRG CHIP caption illuminated. Checklist sanctioned, aircraft diverted back to home airfield without further incident. Chafed cable found and repaired. Aircraft returned to service

ALLISON USA 250 FAMILY **AEROSPATIALE AS355** Cruise Camborne 11/02/2014 201401666

Airborne conflict between an AS355 and a met balloon.

While patrolling a pipeline survey north abeam Camborne in Cornwall, a Met balloon release was spotted and narrowly missed by approx 200ft through avoiding action. The aircraft was just approaching the village of Kehilland, Cornwall and presume that this was the launch site. There were no NOTAM's of launches in this area, the nearest launches were for north of Newquay or in the Plymouth area

AEROSPATIALE AS355 ALLISON USA Cruise EGLL (LHR): 19/02/2014 201402037 250 FAMILY London/Heathrow

Helicopter operating SVFR failed to follow crossing procedure at Heathrow. Traffic info given.

Helicopter was holding at Bedfont, waiting to perform a standard northbound cross. Clearance given was: Behind a 777 on 3nm final, cross rwy 27L, route east of the 27R threshold and hold at Sipson. The pilot initially read back that he heard the first part but questioned where to hold. Sipson was reiterated after which he read back the clearance. When abeam the 27R threshold he was then cleared onwards via Sipson, H9N to Northolt. However, c/s 12G, waiting to depart from the 27R threshold subsequently reported (on Air N frg) that the helicopter had crossed 27R ahead of him, rather than behind the threshold as instructed

C/s 12G was holding on the threshold of 27R for departure and I passed traffic information that the helicopter would be passing behind him as part of the crossing procedure with 27L. He queried this as the helicopter appeared to be passing in front of him and directly crossing 27R.

AEROSPATIALE AS355 ALLISON USA Cruise EGTO (RCS): Rochester 01/12/2013 201315850 250 FAMILY

Precautionary landing made due to door caption illuminated in flight.

Door caption illuminated in flight. Precautionary landing made, door found to be closed. Door opened and reclosed. Warning extinguished and flight continued without incident.

AGUSTA A109 PRATT & WHITNEY Standing : EGNC (CAX): Carlisle 04/12/2013 201316050 (CANADA) Engine(s) Not PW200 FAMILY Operating

Engine hot air bleed pipe split.

During post flight walk around, the paint on top of the No2 engine cowling was slightly discoloured. On further inspection it was hot to touch. Upon lifting the engine cowling the hot air bleed pipe from the top of the engine to the ECS had split and some of the insulation had been pushed out. This had caused a hot gas leak that had caused the cowling to get hot. The aircraft was grounded pending engineering support. #2 Engine ECS hot air supply pipe split - pipe to be replaced.

AGUSTA A109 UNKNOWN Cruise London CTR 09/02/2014 201401501

Loss of separation between SVFR helicopter traffic and a Heathrow inbound A320 inside the London CTR.

I was mentoring a trainee at the time of the incident. An Agusta 109 was given a clearance to transit the London CTR via Battersea not above 1500' SVFR. The aircraft was approaching from the north and I considered 1500' an appropriate altitude to avoid restricted area R157, and remain separated from LL inbounds on the ILS for 27R. Whilst it was always apparent that the helicopter was approaching from a North Westerly direction he in fact routed via Barnes and not Battersea as cleared. This change in his location meant that he was no longer separated from an A320 on the ILS for 27R. The two aircraft were separated by 1000' at their nearest point (9DME) however, once they had passed each other, and the A320 continued to descend via the ILS this separation was eroded. No corrective action was taken by me as the distance between the two aircraft was always increasing.

AGUSTA A109 UNKNOWN Scheduled EGBK (ORM): 30/01/2014 201401369
maintenance Northampton/Sywell

Main rotor servo actuator found with loose and missing parts.

During the 800 hour inspection the yellow main rotor servo actuator (p/n 109-0110-42-135 s/n 6274) upper rod end found to be loose. The lock washer was missing and the lock nut was loose. The rod end has been fretting on the servo upper threaded portion and a large amount of play is apparent. A black residue (dust) was found indicating heavy fretting. The aircraft manufacturer was informed and the parts were removed and returned under their instruction for inspection and investigation into the incident/occurrence.

BELL (TEXTRON B429) PRATT & WHITNEY Scheduled EGNH (BLK): Blackpool 20/02/2014 201402067 (CANADA) maintenance

Crack found in main rotor blade spar leading edge abrasion strip.

Main rotor blade leading edge spar cracked chordwise. Following damage in the hangar to main rotor blade S/N A-2876 trim tab, the blade was removed for repair. During the receiving inspection, a crack was discovered on the lower face of the blade spar extending chordwise to the apex of the leading edge at main rotor blade station 186.3. The remaining blades were inspected with a further crack being found in main rotor blade serial number A-2887. The remaining 3 blades were then also sent for further inspection / repair where they carried out dye penetrant inspection of all blades and discovered two cracks on main rotor blade serial number A-2887; the first at main rotor blade station 186 and the second at main rotor blade station 170. The second crack was only visible following dye penetrant inspection. Both affected main rotor blades replaced.

Supplementary 21/02/14:

Main rotor blade trim tab damaged. Blade removed and sent for repair. Blade found cracked at blade station 186. Crack extends from apex of leading edge extending on the underside to the aft edge of the leading edge spar abrasion strip. Remaining blades inspected. Blade S/N A-2887 found cracked at blade station 186. Remaining three blades sent to RBL for inspection and repair. Second crack found on blade S/N A-2887 at blade station 170. Crack evident following dye penetrant inspection. main rotor blades replaced. Cracked blades returned for evaluation.

EUROCOPTER EC135 TURBOMECA, Cruise EGCB : Manchester/Barton 27/01/2014 201401086 FRANCE ARRIUS

Nr2 supply fuel tank indication failure.

F QTY FAIL caption illuminated on CAD. Nr2 Supply Fuel Tank Quantity display showed tank as empty and then caption cleared. This occurred 3 times. Actions completed iaw FRCs. Decision made to divert. Crew informed and ambulance redirected to collect patient. On landing fault cleared. Operations informed and engineering assistance sought. Investigation under 201316084.

FUROCOPTER FC135 TURBOMECA, Cruise Spadeadam 03/02/2014 201401222 FRANCE ARRIUS

Infringement of active Danger Area D510A (Spadeadam) by a helicopter squawking 0057 at 1200ft.

EUROCOPTER EC135 11/02/2014 TURBOMECA, Scheduled EGWC : Cosford 201401672

FRANCE ARRIUS

maintenance

Nr2 supply tank contents indication failed check.

During the company required 50hr/1month fuel system indication check, the nr2 supply tank indication sensor fails the check. Sensor removed cleaned and refitted iaw AMM. Further ground run check of fuel contents indication system carried out and found serviceable. Aircraft returned to service

EUROCOPTER EC135 TURBOMECA, EGTG (FZO): Bristol/Filton 14/02/2014 201401789 Cruise FRANCE ARRIUS

Navigation Display (ND) Failure.

In the transit to a task, whilst carrying out a lookout scan I saw a message flash up and then very quickly disappear on the Primary Flight Display (PFD)screen. I immediately noticed the ND had failed to a blank black screen and could not be turned back on. With the Standby DI and the PFD in Nav mode I continued as I had to heading reference systems. Remaining VFR throughout. After approx 15 minutes the ND screen came back to life with no non standard symbology visible. Aircraft returned to base and engineering advice sought. Aircraft limited to DAY VFR with visibility greater than 1500m and no over water flight without sight of the shore.

EUROCOPTER EC135 UNKNOWN Manoeuvring Overhead Redcar 26/02/2014 201402393

Laser attack.

EUROCOPTER EC135 PRATT & WHITNEY 23/02/2014 Taxi from runway EGNR : Hawarden 201402173 (USA)

Other

ARRIEL

Incorrect indication nr1 fuel supply tank.

On arrival back at base after completing a task, I noted that the supply tank 2 indication had decreased by 5kgs to 38kgs where as the supply tank 1 remained at full, 47kgs. The Main tank was showing 39kgs. As supply tank had not decreased, and in light of recent incidents, I switched the transfer pumps off and ran the aircraft on the ground where supply tank 2 continued to decrease but supply tank 1 continued to indicate full (47kgs). IAW with the MEL requirements, the low fuel indications were checked. The amber fuel caption illuminated at 32kgs, as indicated by Supply tank 2. Low Fuel 2 illuminated at 29kgs and Low Fuel 1 illuminated approximately 30 seconds later, however the supply tank 1 continued to indicate full, 47kgs. Refuelling again confirmed that supply tank 1 was indeed not full. Investigation under 201400807, 201400199 and 201316084.

EUROCOPTER EC135 TURBOMECA. Scheduled EGUB (BEX): Benson 03/02/2014 201401264 FRANCE maintenance

Nr2 supply tank contents indication failed company 50hr indication check.

During the company required 50hr fuel system indication check the FUEL LOW captions illuminated before the FUEL CAUTION captions and the nr2 supply tank indication continuously reads 43kg. Both supply tank fuel content sensors removed, cleaned and refitted. Further ground run check of fuel contents indication system carried out. Indication system serviceable. Aircraft returned to service

TURBOMECA, EGHS: Henstridge **EUROCOPTER EC135** Cruise 04/02/2014 201401389 FRANCE

Main and supply tank fuel quantity indications fluctuation.

ARRIUS

During the one minute run down at scene, with the aircraft on ground, sloping approx 5deg nose down and the fuselage in a level attitude, the main tank fuel quantity arriving with less than the 299kg first indicated. En route to a second tasking straight from the hospital, in straight and level flight, the nr2 supply tank fluctuated between 43-41kg with approx 170kg indicated in the main tank. Arrived at base with 108kg in main tank. refuelled prior to engine wash to 320kg in main tank. Departed on task with 307kg in main tank as expected after engine wash. During the climb out to 1000ft at 100kt attitude, main tank quantity increased to 312kg. Stood down by control and to return to base. After 25mins flying time when I would expect to see about 310kg in total, the indications were 350kg total. The crew member in the front seat reported the nr2 supply fluctuating between 43/42kg. The crew member also reported that the rate of consumption in the main tank appeared to be static occasionally. Arriving back overhead the airfield, I carried out some steep turns climbing and descending, climbs appeared to increase the main tank quantity, descending turns caused a decrease. it was noted that a steep right turn caused the nr2 supply to decrease to 42kg occasionally. Arrival fuel back at base in the main tank was 173kg (Used 307-173=134) which ties in with the flight time of approx 43 mins. Engineers and Operations informed. Main tank and supply tank fuel quantity sensors removed iaw AMM. Water residue found main tank aft sensor and nr1 supply tanks sensor. All four sensors cleaned iaw ASB and refitted iaw AMM. Ground run fuel quantity indication system check carried out and found serviceable. Flight check carried out to minor indicating system, no fuel quantity indication fluctuations. Aircraft returned to service

EUROCOPTER EC135 TURBOMECA, **EGEG: GLASGOW CITY** 13/02/2014 201401744 Hovering out of HELIPORT **FRANCE** around effect ARRIUS

Medium frequency "whirring" noise apparent during LH pedal inputs.

During low speed flight, a whirring sound was heard by all three crew members. The noise was more apparent when more left pedal was used. The aircraft was placed unserviceable for further investigation. Tail rotor drive, tail rotor fenestron assembly inspected iaw AMM. No defects found. Rear TR control rod disconnected and freedom of movement check carried out, rear control rod reconnected iaw AMM. Tail rotor balance check carried out iaw AMM, slight imbalance found, adjustments carried out, balance of 0.062IPS obtained. Balance within limits. Flight test carried out, no further whirring noise apparent. Aircraft declared serviceable and returned to service

EUROCOPTER EC135 TURBOMECA, Standing : EGHS : Henstridge 17/02/2014 201402041 FRANCE ARRIUS Engine(s) Not Operating

Erroneous main tank fuel indication.

Departed base with 400kgs (310kgs in main tank) of fuel. On landing at HEMS operating site after 15min flight the contents ion the main tank indicated 250kgs. Departed HEMS operating site, returned to base, on landing main tank indicated 290KGS. Main fuel tank drained to empty. Quantity indication still shows 89kgs. Check of indication system carried out in accordance with Service Bulletin (SB) No 2 supply tank., 'LOW FUEL' warning light illuminated before 'FUEL CAUTION' @ 32kgs indicated. Aircraft defueled and all 4 fuel quantity sensors removed, cleaned and refitted and aircraft fuelled in accordance with AMM and SB. When residue fuel was collected during sensors being removed, no sign of water contamination evident when supply tank sensors removed but small quantity, approx 2ml, evident when aft main tank sensor removed. Ground run check of fuel indication system carried out in accordance with SB, indication system serviceable. Aircraft returned to service. Investigation under 201416084, 201400199 & 201400807

TURBOMECA, **EUROCOPTER EC135** Cruise En route 18/02/2014 201402042 **FRANCE** ARRIUS

Erroneous main tank fuel indication.

En route to main base, main tank quantity indication increased by approx 25-30kgs. Aircraft defueled to empty and all 4 fuel tank equipment plates removed and inspected, during removal a small quantify, 1ml of water found in main tank. All 4 fuel equipment plates refitted. Main fuel tank fwd and aft fuel quantity sensors replaced. Fuel indication accuracy check carried out and within limits. Ground run check of fuel indication system carried out, indication system serviceable. Aircraft returned to service. Investigation under 201416084, 201400199 & 201400807.

EUROCOPTER EC135 TURBOMECA, Standing St Athan 18/02/2014 201402083 **FRANCE** Engine(s) Start-up

Main transmission 'Chip' caption illuminated during engine start.

XMSN CHIP caption illuminated on the CAD. Aircraft shutdown and taken off-line. Duty Ops and engineering informed.

ARRIUS

EUROCOPTER EC135 TURBOMECA, 201402105 Service bulletin EGPE (INV): Inverness 20/02/2014 FRANCE ARRIUS

Nr1 supply tank contents indication failed 50hr indication check.

During company required 50hr fuel system indication check, using Service Bulletin EC135-28A-018 as reference, the nr1 supply tank indication system failed the check. Nr1 supply tank fuel content sensor removed, cleaned and refitted in accordance with ASB EC135-28A-018 rev A and AMM 28-40-00, 4-1, 5-1. Further ground run check of fuel contents indication system carried out in accordance with ASB, indication system serviceable, aircraft returned to service. Investigation under 201416084, 201400199 & 201400807.

EUROCOPTER EC225 ALLISON USA 250 FAMILY Unknown EGPD (ABZ): 29/11/2013 201315574 Aberdeen/Dyce Foreign object debris (FOD) found during runway inspection. Tie down ring detached from aircraft. On a routine inspection of R/W 32, FOD was found, on investigation it was found to be a tethering ring (L/H main wheel) from another aircraft which was identified. The FOD was found on the centre line of R/W 32 adjacent to the main R/W 34. Supplementary 29/11/13: Airport personnel found an aircraft tie down ring on Runway 32 adjacent to Runway 34 during a routine inspection. Object identified as tie down ring from LH main undercarriage. KAWASAKI BK117 TURBOMECA. EGAA (BFS): Belfast/Aldergrove 10/02/2014 Cruise 201401539 FRANCE ARRIEL Altitude excursion. Standard separation maintained.

Time 1120z EC145 at 14DME SW of BEL was cleared climb FL100. Aircraft Mode C observed FL107. Crew were asked to confirm level, check their pressure setting and subsequently confirmed readjusting. Mode C then observed within tolerance FL100. There was no impact on any other movements at the time. MBB BK117 TURBOMECA, Manoeuvring Overhead London City 11/02/2014 201401743 **FRANCE** Airport **ARRIFI** Two separate green laser attacks on a/c. PRATT & WHITNEY MD HELICOPTER 902 Final approach EGSX : North Weald 07/12/2013 201316155 (CANADA) PW200 FÁMILY Transmission low oil pressure red caption.

Returning from HEMS incident, on short finals to land at dispersal at the main operating base, the yellow transmission low oil pressure caption illuminated with a pressure of 70% and reducing. A couple of seconds later the red caption illuminated with the lowest pressure observed at 64%. The crew were notified with the intention to continue to land. As the aircraft was on approach, the power was already below 56%. The display button on the IIDS was selected. From the initial caption illuminating to the landing was around 20 seconds, during this time the red caption flickered off/on/off. Owing to the short time to a pre-planned landing a PAN was not declared. As the lever was lowered on the ground, the yellow caption flickered then extinguished. Oil temperature was 80 deg C steady. Rectification carried out. Replacement of 3 micron and 75 micron filters carried out. Ground run hover check and flight test produced normal oil pressure and temperature indications MD HELICOPTER MD900 PRATT & WHITNEY Hovering - landing EGXZ : Topcliffe 05/12/2013 201316006 (USA) Throttle problems on landing.

During a night OPC/LPC, while the candidate was landing on the airfield at the conclusion of the sortie, the instructor heard the Nr rising rapidly and immediately prevented any further collective movement. The RH EEC had reverted to MAN and was fixed at 65%, while the LH Tq was 0% and the Nr arrested at 104% - CLP was held at c.20% and the aircraft remained in contact with the ground but light on the skids. After determining that the reversion to MAN was unbidden, the LH throttle was slowly wound off and the collective lowered, returning the aircraft to a safer configuration. Several EEC reset procedures were attempted from both the RHS and LHS but without success. The aircraft was shutdown to enable recovery of the portable landing lights and a ground EEC reset/restart attempted, which was this time successful. Aircraft was hover taxied back to dispersal without further incident, monitoring the IIDS throughout. This event occurred soon after a simulated MAN throttle exercise had been completed by the candidate, during which the EEC was initially reluctant to enter MAN mode. Twisting the LH twist-grip either way out of its detent had produced OPCs on 2nd October and 24th November and reported to maintenance on both occasions. During the OPC on 24th November, a different candidate had experienced an unbidden EEC MAN shortly after declaring LDP - approximately five minutes after conclusion of the manual throttles element during that sortie. The problem was investigated by engineers on 26th November but no fault found and the aircraft remained in service. It has flown c.6:30 of HEMS missions since that check without incident - the problem seems specifically related to the manipulation of manual throttles during training while simulating an EEC FAIL caption. On every occasion, pilots have deliberately twisted the throttle from its detent in flight but not received any IIDS indications, although the system works fine for comp washes. MD HELICOPTER MD900 PRATT & WHITNEY Overhead Southwick 26/02/2014 201402370 Hovering (USA)

Other

Green laser attack.

OTHER (Rotorsport UK Calidus) BOMBARDIER ROTAX Cruise EGGW (LTN): 19/02/2014 201402043

Infringement of the Luton CTA (Class D) by Gyroplane at 1600ft resulting in a loss of separation with an inbound A320. Traffic info and avoiding action given. At approximately 1300z a radar contact with intermittent Mode A/C/S information penetrated the Luton CTR north of Luton Airport, on an easterly track. The intermittent Mode C information indicated it being at 1600 feet. At the time, an A320 and a BD100 were on final approach to runway 26 at Luton, and both had been cleared for the ILS approach. A320 was at approximately 4 miles from touchdown when the Gyroplane penetrated the CTR, and separation was lost, however I passed traffic information and agreed with the crew that the safest course of action was to let him continue to land. As the BD100 was further out on the approach, and the projected track of the Gyroplane was in conflict with it, I decided to discontinue the approach and provide them with delaying action until it was appropriate to commit to a second approach. A Falcon 2000 was also given delaying action by Essex Radar, before control and communication was transferred to me. At approximately 1317z, after the Gyroplane had continued on its easterly track all the way through the Luton CTR, it appeared to let down/land at the approximate location of: 51-56-51 6 - N 00-05-15 2 - S.

ROBINSON R44 LYCOMING Landing EGBP : KEMBLE 31/01/2014 201401140 540 FAMILY

Helicopter landed on non designated runway.

Approximately 09.10z call from aircraft, unable to identify call sign, pilot reports Zone Boundary entering for landing. AFISO passes 08RH QFE, Pilot reads back 28RH. AFISO corrected to 08RH QFE 984 No known traffic. Pilot reports skirting the villages to come direct. AFISO confirms call sign and report final 08 wind 150-7kts. No known traffic within the zone. Pilot responds Probably not final for 08. But we are final. AFISO responds I don't understand that, Roger. Pilot replies we are final 26, we are not going around to 08. Aircraft lands runway 26 and vacates to North Apron for fuel. WX - 08RH 3000M BR BCN 006 QFE 984, QNH 999.

SIKORSKY S76 TURBOMECA, Initial climb Ravenspurn North Oil 04/12/2013 201315722
FRANCE Platform
ARRIFI

Aircraft climbed above cleared level of 1000ft.

I was on duty as the Radar Controller. I had aircraft 1 outbound at 2,000ft when aircraft 2 lifted from the platform. As there were intermittent IMC conditions in the area, I instructed aircraft 2 to maintain 1,000ft, on first contact just in case IMC conditions existed. I then got aircraft 2 details and later inquired whether they were requesting a further climb, aircraft 2 said that they would maintain 1,000ft if this would help. I told them to maintain a 1,000ft and therefore I did not check the in flight conditions of aircraft 1 to ascertain whether 500ft separation was permitted. I observed the height readout as 1,300 feet and indicating that the helicopter was still climbing. I reinquired whether the helicopter was climbing to a standard level of 1,500 ft, or if they were going to maintain 1,000 feet and if so to descend as their height readout was indicating 1,300ft. The pilot replied that they were descending to 1,000ft, aircraft 1 was not directly in the opposite direction helicopters 12 O'clock and there was more than 10 miles separation between the two helicopters. The pilot apologised and stated that there had been a problem with the autopilot.

It was my intention to climb to 1500ft inbound, it was also my intention to arrange this with ATC before climbing through 1000ft. By the time the after take-off checks had been completed, we were almost at 1000ft. The radio call was initiated at between 900 and 1000ft. We were able to talk to ATC at that level but there was background noise on the radio. At the same time, another aircraft was talking on the log frequency, which I attempted to monitor in case it was relevant traffic below 1000ft or lifting nearby. There was also a background hiss on this frequency. As far as I was concerned I had levelled the aircraft at 1000ft initially, which seems to be confirmed by the air traffic transcript. However, I was flying the aircraft with one lane of the autopilot disengaged as we had a series actuator oscillating in pitch, which had been affecting the rotor disc, therefore, no coupled modes were available. The response of the aircraft was as you would expect with an autopilot lane out, degraded to an extent. At a moment of high workload the aircraft started to drift upwards. The conditions were VMC and I was aware the nearest traffic was opposite direction beyond 20 miles. I noticed the aircraft had drifted upwards before reaching 1300ft, the radio exchange was almost complete and I expected to climb to 1500ft bearing in mind the traffic was beyond 20miles. Nevertheless, I adjusted aircraft attitude to arrest the climb rate which I remember as being approx 300ft/min. At this point I was made aware of the fact that I had to maintain 1000ft, my correction had all but levelled the aircraft, however the altimeter just touched 1300ft as we started to descend back down to 1000ft. I had attempted to monitor both radios throughout but the volume of radio traffic and the background noise meant I was not able to do so. On arrival in flight planning I had a message to phone the watch manager, he informed me of a level bust being filed and as ked me if he would like to add some comments for his report.

SIKORSKY S76 UNKNOWN Cruise Viking Gas Field, North 05/02/2014 201401337 Sea

Altitude excursion.

S76 called Anglia Radar as he coasted out on the Norfolk Coast. The aircraft was initially flying at 2000ft but the pilot requested descent to 1000ft due to icing. Once he was level at 1000ft, the pilot requested a climb to non-standard 1500ft as he was intending to carry out an Airborne Radar Approach at his destination. Other aircraft called the frequency and I was organising a HOOPS message due to the presence of icing as I noticed the S76 carry out a left turn as he was overhead his destination rig. I called the aircraft but didn't receive a reply. The pilot did call me as he passed 900ft to advise he had started his radar approach.

OCCURRENCE LISTING

Aircraft Below 5700kg

OCCURRENCES RECORDED BETWEEN 01 February 2014 and 28 February 2014

OTHER

SCHLEICHER ASK21	OTHER (Not	Initital climb	Overhead Tibenham	22/02/2014	201402265	
	applicable)					

UK AIRPROX 2014/013 - ASK 21 glider and an unknown light aircraft at 1500ft, overhead Tibenham in Class G airspace.

OCCURRENCE LISTING

Aircraft Below 5700kg

OCCURRENCES RECORDED BETWEEN 01 February 2014 and 28 February 2014

ABBREVIATIONS

AAIB Air Accidents Investigation Branch

Above aerodrome level AAL **AARF** Aircraft Accident Report Form

A/c Aircraft (or a/c)

Airworthiness Directive ΑD

ADELT Automatically Deployed Emergency Locator Transmitter

AFS Airport Fire Service

AIP Aeronautical Information Publication

A/P Autopilot

ASI Airspeed indicator Basic Service BS

CAIT Controlled Airspace Intrusion Tool

Controlled Airspace CAS Deconfliction Service DS

EFIS Electronic Flight Instrument System

FIS Flight Information Service

FRC Flight Reference Card

GASIL General Aviation Safety Information Leaflet **IHUMS** Integrated Health and Usage Monitoring System

Kts Knots

London Area Control Centre LACC LTCC London Terminal Control Centre

LH Left-hand

MACC Manchester Area Control Centre

MGB Main gearbox Main Landing Gear MLG

MPD Maintenance planning document or Mandatory Permit Directive

MOR Mandatory Occurrence Report

Nose landing gear NLG Nr1 Number 1 NM Nautical Miles РС Prestwick Centre PCB Printed Circuit Board POB Persons on board Right-hand RH Radio Telephony RT

R/W Runway

ScACC Scottish Area Control Centre SOP Standard Operating Procedure TDA Temporary Danger Area

VATDA Volcanic Ash Temporary Danger Area

Visual Control Room (Tower) **VCR**

If another abbreviation that you do not understand appears in the listing please email sdd@caa.co.uk for a definition, or try an internet search engine such as Google.