

It's not often that you find the Captain of a passenger aircraft, standing on the wing dipping the oil in the engines but that's exactly where I found Jonathan Gordon, Lydd Air's Chief Pilot as I walked out onto the airport apron in preparation for a day's experience of the right-hand-seat of the company's scheduled Trislander service to Le Touquet.



The aircraft, painted a dazzling gloss white with black lettering, crouched on the concrete outside the terminal. A low slung cigar tube of an aircraft with a narrow, tapering nose, it was clearly a Britten Norman Islander with one too many engines and Jonathan Gordon, who had flown his own aircraft in from his home in Le Touquet a few minutes earlier, was running through the first inspection of the day before his engineers had even arrived for their morning tea.

Inside the airport, twelve passengers and making themselves comfortable in the Biggles Restaurant, while they waited for the 09:30 flight to open, possibly one of the most relaxed check in procedures that you'll find in a British airport today, meanwhile Captain Gordon and his dipstick had now found his way around to engine number two, bolted across the aircraft's tailplane on what I've heard another airline pilot facetiously describe as "The Lydd Tri-Star."

The BN-2A Mk III Trislander is an unusual aircraft with an equally unusual history, a typically British design story from the Bembridge-based aircraft manufacturer Britten Norman. A development of the company's popular and successful Islander aircraft but designed to offer greater carrying capacity and flexibility, the Trislander, with 17 seats, has a longer fuselage, a third (tail-mounted) engine and modified landing gear. The first prototype, constructed from a stretched Islander prototype, first flew in 1970 and the first of 85 production Trislanders flew in March 1971. The Lydd Air Trislander, G-Boot, the white "stretched limo", I was to be flying, goes back to 1976, which Captain Gordon tells me can make the regular maintenance bills expensive as their airframe life draws to an end.

Chief Operating Officer as well as Chief Pilot for Lydd Air, Jonathan Gordon had been a British Caledonian pilot before starting his own aircraft sales and air taxi business and became a founder member of the Lydd Airport Group, a consortium, which in 1987 bought the airport lease. Eight years on with

planning consent, a newly-surfaced runway, thirteen acres of apron and new ATC facilities, Gordon predicts that passenger and cargo jets will be using the airport by the end of 2006 and Lydd Air will be expanding to meet the demand generated by the airport development.

Climbing down from the wing, Jonathan invites me into the cockpit for an engine test. The Trislander, he tells me, is a unique aircraft, in regard to JAR OPS. Before the aircraft was with Lydd Air, working for Sky Trek, the company's previous incarnation, it was the first airline to write an operations manual (JAR OPS-1) because, says Jonathan, "JAR OPS doesn't recognise the Trislander we had to all sorts of things to do get the performance side recognised."



A glass cockpit this is definitely not and other than the presence of a very old model Garmin GPS, the Trislander's panel hasn't moved on since it left the factory in 1976. Running through an engine start sequence that begins with the run-up of the three 260hp Lycoming O-540-E4C5 flat six piston engines with their two blade constant speed Hartzell propellers, Jonathan continues, "You have an aircraft that can get airborne at 4536 kilos. The average empty weight is 2,800 kilos, so the APS weight, when you have a pilot on board and with minimum fuel of about 3 tons, gives you a useful weight of about 1.5 metric tons which won't take you very far. With a full fuel load of 497 KG you can carry around 1,100 KG and go 400 NM. "Typically", he adds, "we will take freight on a sector run of about 1,300 kilos from Lydd or Southend to destinations like Amsterdam, Jersey, Le Bourget or Ostende."



It's quite simple to re-role the Trislander and pilots are authorised to do this with a proper tech-log entry. The seats come right out and the cargo net which is retained in the back of the aircraft is rolled forward to the same anchor points as the seats and with the addition of a cargo partition, the area behind the pilot is transformed into a complete cargo compartment.

The aircraft, Jonathan tells me, is configured in 18 seats and will take as many as seventeen passengers but the web-enabled computer reservations system at Lydd will only take 16 seats and the final seat is allocated manually, to ensure the correct average weight mix of male and female passengers for the predicted load sheet for the average fuel and baggage weights for the daily Le Touquet trip.

Forty-five minutes later and the tech-log entry, security check, paperwork, load-sheet, seating plan and "plog" are complete and the passengers, having watched a safety video in the departure lounge, have been loaded into the aircraft. I take my place in the co-pilot or final passenger seat, an unusual feature of the Trislander's operation, where it is licensed to have a passenger sitting at the controls. For any PPL quick to book this seat for a flight, the Trislander offers a very cheap way of experiencing multi-engine flying with a day trip to France included at around £56. The Le Touquet schedule is very popular in the summer months and Lydd Air can find itself operating as many as three of their "Fly Dine" flights at lunchtime.

The engine start-up profile is quite unique to Trislanders, with an isolation switch which isolates the aircraft electrics from the starters. As this is a carburettor driven aircraft, the pilot first gives ten pumps of the throttle which can amuse the watching passengers and then the number two engine is started first, because it is up high and provides a warning to anyone out of sight of the pilot. The port engine comes in next with the starter button followed by the left magneto and as soon as engine catches, the starboard engine, number three follows.

With the aircraft now cleared to taxi to the Bravo hold for Lydd's runway 21, Jonathan runs through the pre-flight checks come next, the GPS is switched-on and because the Trislander is approved as a single pilot operation,

Checklists are used as "Check Lists" rather than "Read and Do". Pilots are required to carry out all checks using memory drills. Jonathan tells me of his own drill for takeoff using a mnemonic "TMPFGH" covering over 20 systems/checks on the aircraft and good for many aircraft types including the DC-10's he used to fly. Whatever chosen memory method is used, Lydd Air pilots use the company checklist to "check" they have performed the appropriate drill properly.



Checks complete, Jonathan switches on the intercom and turns around to talk to his passengers, giving them a quick, cheery, briefing on what is to follow. It's my turn next and he runs through the take-off briefing and engine-out procedure double-checking and identifying the navigation aids with me as we are cleared on to the runway for departure.

Lydd's new runway is more than long enough for the Trislander, which is capable of taking off from a 450m long landing strip and can also readily operate from unprepared surfaces.





As the Trislander starts its roll along the runway the pilot checks for full static and then dynamic thrust, as the aircraft gathers speed checking the Ts and Ps and looking for 50 knots on the ASIs with the next look at 80 knots, the take-off safety speed, the aircraft can actually rotate at speeds close to 63 knots at lower weights but this is not take-off safety speed. Eighty knots is also the flap-retract speed retract speed and in an engine-out situation the aircraft will not achieve its two engine climb performance with the flaps extended. The Trislander is a performance "C" category aircraft meaning that takeoffs are not permitted with a cloud base of less than 200 ft. This is why the flaps are retracted at 200 ft. Jonathan tells me that this clean configuration then allows for a (presumed) engine failure at 200 ft and the aircraft is then assumed to perform its engine out net takeoff flight path in cloud and at maximum takeoff weight. This is the most performance limiting condition for the Trislander operation.

Jonathan conducts the CofA tests on the Trislander and like to show his pilots on flight tests that the aircraft will climb successfully at maximum weight with a critical engine out, which is important, he tells me, because there was an incident in the Channel Islands where a Trislander lost an engine immediately after take-off and chose to land it on the nearest beach full of passengers, rather than continue his climb with two engines and take the aircraft back around into an emergency, two-engine landing, on the runway.

The Trislander, like its close relation, the Islander is heavy on the controls and I comment on how tight the throttle and mixture controls are. We increase our speed with all three engines working normally and the flaps retracted to a cruise climb of 100 knots to 1300 feet above the English Channel, to stay away from single-engine, cross channel traffic which fly much higher. Jonathan sets up the cruise with 2350 rpm and 2350 inches of manifold pressure and trims the aircraft, looking for a neutral deck angle to overcome the induced drag curve as the speed creeps up to an indicated 140 knots. During the course of the short flight across the Channel, the Trislander will burn 20 litres of fuel on the start-up and taxi and just under 50 litres on the sector run. I notice Jonathan checking regularly for the presence of carburettor

icing, a familiar problem in the Islander family and at one point in the flight, he points to a small drop in engine number one and applies "carb heat", telling me that it's important to keep a close eye on the engine performance.



It's only a matter of ten minutes into the cruise before we have to start preparing for the Le Touquet arrival and changing frequencies at mid-channel. With good visibility, the tower Le Touquet has told us to report at eight miles as we look for NDB and ILS/DME localiser confirmation of approach into the airport which under radar control from Lille Approach. The Trislander is certified up to a 25knot crosswind limit, useful for Le Touquet, where one is invariably present and despite its slow speed it can crab into wind and is both docile and stable, one reason it's been given single pilot IFR clearance on top of the training regime that Lydd Air offers.

Le Touquet clears us into a right-hand downwind approach to runway 32, joining the circuit at 1000 feet at which point the manifold pressures are reduced to 17/18 inches for a gentle deceleration. The limit stage for the first stage of flaps has a limit speed 134 knots but Jonathan is looking for 110 knots, with full flap being applied at 100 knots. The end of the descent profile sees the fuel pumps on, flaps down, mixtures rich, landing lights on and the passengers briefed, with hydraulics on and heater in the off position as we turn on to the final approach.



As with any aircraft of any size on landing, it's important to get the approach speed right and the Trislander has a raw threshold velocity of 80 knots. An extra 5 knots is added to this if the aircraft is heavy and a further crosswind "gust factor", of 10 knots on this flight is added, taking our approach velocity up to 95 knots. Jonathan tells me that it's very important to close the throttle at round- out in order to achieve a smooth landing, as it's an aircraft "That's not easy to land well. Because of its high wing and slow speed", he tells me, "there's no ground effect and as you round out, the main wheels are pivoting on the ground and so, if you're too fast you bang it on to the ground and if you're too slow, it won't flare properly."

My own impression of the landing experience was analogous to taking a low-slung Formula One racing car and driving it off a ramp; onto the runway at 100 mph with a slight jolt and a brief wobble from side to side at it decelerated in time to catch the second exit from the runway. There was, as Jonathan suggested, no real feeling of a flare, just an arrival at speed but without the violence of the Pitts S1 I used to own, which was more like landing a metal bathtub on a concrete runway.

"How was that?" Jonathan turns around to ask the passengers immediately after we arrive outside the terminal and the aircraft has been shutdown. It's been nineteen minutes since we received our takeoff clearance at Lydd and everyone behind me appears quite happy and looking forward to their lunch in the town. In fact, after disembarkation, Jonathan, who lives close to the airport, gives the visit a personal touch by gathering the passengers around, pointing out the sights on one of the free maps available and suggesting the best restaurants to make the most of a summer's day out at the Paris Plage.

With a return flight to Lydd yet to come, I'm impressed by Jonathan's professionalism and by the robust flexibility of the Trislander. It's far from being a modern airliner but it offers a solid learning curve and solid experience for the pilots who may join Lydd Air, as a step on the career a path towards a career in one of the larger commercial airlines. When you are on your own

crossing the English Channel to France with passengers, at low-level in all weather, frequently more bad than good, there's a great deal of responsibility involved and a demand for the highest standards of airmanship. The docile nature of the Trislander, like a large Cessna 172 with three engines makes it possible for the pilot to experience the challenges of flying a "real" aircraft while gaining the experience required in commercial aviation and for the job it is required to do, the Trislander does well in the time that the aircraft has left before history catches-up with it.