

## AIR TRANSPORT

(TGT) did not exceed 635°C, and ensured that engine torque was more than 31 bar (450 lb/in<sup>2</sup>) — any less and the take-off would have been abandoned. With full power, the brakes were released, and the Vanguard began its charge down Coventry's single 1,615m runway 05/23. At around 118kt (220km/h), Moore rotated the nose and, with a positive rate-of-climb achieved, the undercarriage was retracted.

As an altitude of 400ft was achieved, with air speed increasing to 160kt, the flaps were selected from the T/O position (20°) to the climb setting (5°). Thrust was reduced to "max continuous" (13,500 LP RPM), and course set for our initial waypoint, COWLY, just to the south-east of Oxford.

At 1,500ft, the nose was lowered to achieve the flaps-up speed of 200kt, and once "cleaned-up", the Vanguard climbed at around 230kt with a rate-of-climb of 1,800ft/min (9.1m/s). Engine LP RPM was 12,500, while TGT was 600°C.

As we climbed towards our *en route* altitude of FL190 (19,000ft), we received clearance for a direct routing towards the Dover VOR navigation beacon, which cut the corner off our official airway routing.

Settled in the cruise, the Vanguard recorded an indicated air speed of 250kt, equivalent to a true air speed of 315kt. "This is slower than the cruising speed used during its passenger carrying days," remarked Moore, "but it still compares well to contemporary turboprops such as the Dornier 328."

Moore explained that the Vanguard also compared favourably in fuel-consumption terms. "During the cruise, we are burning

around 600gal of fuel [2,725litres] per hour, while our consumption for the entire [1h] flight is some 700gal (3,178 litres)." This was similar to that of the Lockheed Electra, but the Vanguard was heavier and had the capability to carry more payload.

The flexibility offered by Vanguard's 19,000kg payload capability will be missed by Hunting. "One of the [cargo] Viscounts parked next to us at Coventry recently had a technical problem," recalled Smart, "and so we took his entire payload on top of our own, to Brussels. Not a problem — other than a few difficulties in removing the tail-support strut which we use when loading."

### 250KT DESCENT

For the 250kt/1,800ft/min descent into Brussels, we routed via the Kosky and then the Bruno VOR beacons north of the airport. Air traffic control then provided vectors for a radar approach to Zaventem's runway 25R.

Speed was reduced to 200kt and the Fowler-type flaps were moved to their first approach position, ie, the "take-off" setting. Before joining the glide slope, with the speed coming back to 175kt, the undercarriage was selected down, and moments later a "three-greens" indication confirmed that the gear was down and locked. The initial approach was flown at around 150kt, and as the descent on to the glideslope commenced, approach flap (32°) was called for, and speed further reduced to 140kt (ie, the threshold speed —  $V_{AT}$  — + 20kt). Passing runway 25R's outer marker, land flap was deployed and speed came back to around 130kt. Moore was

the handling-pilot, while Smart called the speeds and ran through the check list.

The Vanguard felt rocksteady as it drilled down the glideslope towards the neon glow of runway 25R, and speed was progressively reduced to the 120kt  $V_{AT}$ . Following a brief, smooth round-out, the aircraft settled gently on to the tarmac, and the engines were brought into the ground beta mode. Reverse pitch was available, but not normally used by Hunting. At 60kt, Smart engaged the control locks.

The taxi to our stand followed a meandering path through the lines of Electra, Convair 580, Boeing 727, 757, and McDonnell Douglas DC-8 freighters which were parked on the DHL apron. The "follow-me" van guided us to a slot among a row of Hunting and Channel Express Electras, and we parked under the glare of the powerful floodlights which were illuminating the entire cargo ramp.

The local time was 02.00, but the activity on the apron suggested that this was the airport's busiest period of the day. On a typical night, some 250t of cargo goes through DHL's Brussels hub, on board some 25 aircraft.

There was a 2h stop-over at Brussels, with most of the activity in the Vanguard's cargo-bay seeming to occur in the first and final 5min. Soon, the world's last airworthy Vanguard was heading west again, and, after a brief 25min stop at Coventry to change cargo, the *Echo Papa* departed for Belfast, and was back on Irish soil by around 06.00. Ten days later the Vanguard had flown its last revenue service, and the crew was undergoing conversion to its successors, the Lockheed Electra and Boeing 727. □

## VANGUARD VARIATIONS

**T**HE MERCHANTMAN'S origins lay with the 100- to 140-seat Vickers Vanguard of the early 1960s. The four-engined turboprop was first flown from the Vickers-Armstrongs factory at Brooklands on 20 January 1959, and entered service with British European Airways (BEA) in December 1960. Although very economical to operate, the design was quickly overtaken by the passenger appeal of the new short-haul, jet-powered airliners then being introduced. Just 43 aircraft were sold, to two customers, BEA and Trans Canada Airlines (now Air Canada).

The Vanguard's wide cabin, and "double-bubble" fuselage configuration which provided large underfloor cargo holds, made the aircraft an ideal candidate for freighter conversion. BEA converted several Vanguards to freighters in the late 1960s and early 1970s, with the cargo version named "Merchantman".

Hunting introduced the Vanguard/Merchantman in November 1976, when it acquired a single aircraft from British Airways. At that time, the company was

known as Air Bridge Carriers. More ex-BA aircraft were added, with the fleet ultimately totalling seven aircraft. The name change to Hunting Cargo Airlines was made in 1992, to identify the connections with parent Hunting Aviation.

By 1994, just two Vanguards were in operation with Hunting, which by then was the sole operator of the type. The final aircraft, G-APEP, remained in service until the end of September, before being retired to Brooklands.



Trans Canada Airlines was one of only two customers for the Vanguard