

Jump TO Article



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Jump TO Article

Air transport operations – past, present and future

an address¹ to the Institute on 25 March 2008 by
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Air transport, both strategic and tactical, is an integral component of contemporary military operations across the broad spectrum from warfighting to humanitarian relief. In the Royal Australian Air Force, this capability is provided by the Air Lift Group. Here, the Group's commander, "Jack" Plenty, provides an overview of the Air Lift Group, its genesis in World War II, its current capability and the personnel, equipment and infrastructure challenges that it is now facing.

In the Royal Australian Air Force today, the air transport capability is provided by the Air Lift Group whose mission is to conduct and sustain combat airlift operations. The Air lift Group seeks to be a combat-focused airlift force, which is structured for war and trained to win. It has eight specific roles:

- air logistic support;
- airborne operations (air drop, air land, paratrooping);
- special operations;
- joint personnel rescue;
- special purpose transport (VIP);
- air-to-air refuelling;
- aero-medical evacuation; and
- national support commitments.

Over the last two to three decades, the Air Lift Group has supported Defence Force operations in Rwanda, Somalia, Iraq, Kuwait, Kyrgyzstan, Afghanistan, Pakistan, Cambodia, Indonesia, East Timor, Irian Jaya, Papua New Guinea, Bougainville and the Solomon Islands.

Organisation

The Air Lift Group is one of six groups commanded directly by the Air Commander Australia, the other five groups being: air combat, surveillance and response, combat support, aerospace operational support, and air force training.

The Air Lift Group, itself, consists of five operational squadrons, which operate 48 aircraft of seven different types plus five leased VIP aircraft; and it has 1316 personnel, including 116 reservists. The squadrons are grouped in two wings and are deployed as follows:

- No. 33 Squadron (6 x Boeing 707 long-haul and air-to-air refuelling aircraft), Richmond;

- No. 34 Squadron (2 x BBJ and 3 x CL604 Challenger VIP transport aircraft), Fairbairn;
- No. 36 Squadron (4 x C-17A Globemaster strategic transport aircraft), Amberley;
- No. 37 Squadron (12 x C-130H and 12 x C-130J-30 Hercules strategic transport aircraft), Richmond; and
- No. 38 Squadron (14 x DHC-4A Caribou tactical air transport aircraft), Townsville.

Within the Group providing operational and training support to these squadrons is: an air movements control centre; an Army air despatch company; a simulator squadron (No. 285 Squadron); an air movements training and development unit; and a project team managing the introduction to service of the KC-30B aircraft which will shortly begin replacing the Boeing 707s in the long-haul and air-to-air refuelling roles.

No. 33 Squadron, Richmond

No. 33 Squadron was formed at Townsville on 16 February 1942 and operated seven aircraft types in its first year: Short Empire Flying Boats, Avro Ansons, DH-82 Tiger Moths, DH-84 Dragons, Vultee Vigilants and Junkers. On 14 September 1942, the Gurney strip at Milne Bay was named after the squadron's first commanding officer, Squadron Leader Raymond (Bob) Gurney, who was killed-in-action on 2 May 1942 while acting as second pilot in a United States Army Air Force B-26 Marauder. Subsequently, the squadron was relocated to Port Moresby on 25 December 1942; converted to C-47A Dakotas³ in September 1943; and relocated successively to Milne Bay on 1 January 1944, Lae on 15 January 1945 and finally Townsville on 11 March 1946, where it was disbanded on 13 May 1946.

¹Attended by 86 members and guests

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³The C-47A was the first military version of the DC-2 and DC-3 Dakota civilian general-purpose (passengers and/or cargo) transport aircraft which had been developed and introduced into commercial service during the 1930s.

No. 33 Squadron was re-raised at Richmond on 1 July 1983 with four Boeing 707 aircraft to perform long-haul air logistic support and VIP roles. In 1988, three additional B707s were purchased (one as a spares hulk) and four aircraft were converted to the air-to-air refuelling role. The squadron was called on to help maintain civil airline services during the airline strike in 1989; it lost five crew in a training accident in 1991; and deployed aircraft to Kyrgyzstan during Operation Slipper in 2003.

In July this year, the squadron will move to Amberley preparatory to being re-equipped with KC-30B aircraft in 2009 when it will receive five aircraft and a simulator. The KC-30B, which is a variant of the A330 European Airbus, is much bigger than the B707 that it will replace. It can carry 272 passengers and either eight 463-litre pallets or 26 LD3 containers; and has a considerably enhanced air-to-air refuelling capability. It also has a much greater ground support equipment requirement, such as air-stairs, cargo lifts, hydrant carts, power carts and tow motors. The squadron should achieve initial operational capability by December 2009, and become fully operationally capable in 2011.

No. 34 Squadron, Fairbairn

No. 34 Squadron was formed in Darwin on 23 February 1942 and subsequently operated DH-82 Tiger Moths, DH-84 Dragons and Avro Ansons from Daly Waters, Batchelor, Hughes and Manbulloo, before being allotted to 6 Communications Flight on 13 December 1942. It was re-formed at Parafield, South Australia, with DH-84 Dragons and later C-47A Dakotas on 3 January 1943 and provided courier services throughout Australia and to Port Moresby. On 1 June 1944, it became the first operational squadron to have women posted to it (1 officer and 20 airwomen) and in December 1944 commenced courier services to the Halmaheras before becoming fully operational at Morotai on 12 April 1945. On 15 May 1945, it airlifted No. 76 Squadron to Tawitawi Island in the Philippines, then provided courier services to Labuan, Tarakan and Balikpapan. After hostilities ended, it evacuated prisoners-of-war from Singapore and provided courier services to Tokyo. It was disbanded at Richmond on 6 June 1946.

On 1 March 1948, the squadron was reformed at Mallala as 34 (Communications) Squadron and was equipped with C-47B Dakotas. It continued to operate in that role at Mallala until it was disbanded there on 28

October 1955. It was re-formed at Fairbairn as 34(VIP) Flight (a flight of 86 Wing) on 12 March 1956, again equipped with C-47Bs. It was re-designated twice – as 34 (Special Transport) Squadron on 1 July 1959; and then as 34 Squadron on 13 June 1963. In 1964, the C-47Bs were replaced by two Vickers Viscounts and Convair 440s. More recently, it has operated its own BAC 111 and HS748 aircraft and leased Falcon 900 and Falcon 20 aircraft. It currently leases two BBJ and three CL604 Challenger aircraft. The leases expire in 2014.

No. 36 Squadron, Amberley

No. 36 Squadron was formed on 11 March 1942 at Laverton and was equipped with DC-2 Dakota, DH-82 Tiger Moth, DH-84 Dragon, DH-86, and Beechcraft aircraft. On 17 July 1942, it was relocated to Essendon and commenced courier services to Port Moresby. It was relocated to Townsville on 11 December 1942 and on 19 January 1943 began operating the Royal Australian Air Force's first DC-3 Dakotas, which were loaned to it by the United States Army Air Force. In mid-1943, a detachment was deployed to New Guinea and another to Richmond – the latter to operate a DC-2 Parachute Training Flight. In April-May 1944, the DC-3s were replaced with C-47A Dakotas. As the war drew to a close in August 1945, No. 36 Squadron transported the first paratroopers to occupy Singapore. It deployed detachments to Darwin, Ambon and Morotai and operated couriers to Tokyo and Hiroshima. In November 1945, No. 36 Air Ambulance Flight was added to the squadron.

No. 36 Squadron was relocated to Schofields, New South Wales, in August 1946. From August 1948 to August 1949, 20 of the squadron's personnel were assigned to the Royal Air Force to fly C-47s in the Berlin Airlift. On 1 July 1949, Nos. 36 and 38 Squadrons were joined at Richmond where No. 36 Squadron was disbanded on 8 March 1953 when it was absorbed by No. 38 Squadron. The following day, No. 30 Transport Unit at Iwakuni, Japan, was designated No. 36 Squadron and subsequently was re-located to Canberra in 1955.

On 18 August 1958, the squadron was moved to Richmond and was re-equipped with C-130A Hercules between December 1958 and March 1959. During the Vietnam War, the squadron provided regular courier flights to Vietnam and return aero-medical evacuation flights. In 1978, the C-130H replaced the C-130A and an electronic warfare self-protection kit – chaff, flares, radar warning receiver – was later fitted to these aircraft. The squadron provided air logistic support during the domestic pilots strike in 1989; and again during the wars in Iraq and Afghanistan commencing in 2003.

In November 2006, the squadron was moved to Amberley preparatory to conversion to C-17A Globemaster aircraft and its C-130H aircraft were transferred to No. 37 Squadron. It now has four C-17As – two are operational, supported by five crews and associated maintenance, logistics and administrative personnel. Full operational capability – four aircraft, 16 crews and associated maintenance, logistics and



C47 Dakota

administrative personnel, a simulator facility and the squadron headquarters – accompanied by upgrades to Air Movements Sections at Townsville, Darwin, Pearce, Williamtown and Edinburgh, is scheduled for 2011.

No. 37 Squadron, Richmond

No. 37 Squadron was formed on 15 July 1943 at Laverton, equipped with Lockheed Lodestars, and provided courier services within Australia and to Dutch New Guinea. In 1945, the C-47B Dakota was introduced and courier services were extended to the Dutch East Indies. In July 1946, the squadron was transferred to Schofields and took on the Japan courier service from No. 36 Squadron. It was disbanded at Schofields on 24 February 1948.

On 21 February 1966, No. 37 Squadron was re-formed for the Vietnam War and was equipped with C-130E Hercules aircraft. It provided aero-medical evacuations to Australia until the withdrawal in 1972, when it assisted with evacuation of refugees and subsequently ferried United Nations relief supplies to Vietnam. After Cyclone Tracy in December 1974, the first aircraft to arrive in Darwin was from No. 37 Squadron; and the squadron evacuated the staff from the Australian Embassy in Laos on 9 June 1975. The squadron transported troops to Cambodia for the United Nations force in 1991; to Bahrain for the Gulf War also in 1991; and to Somalia in 1993. The squadron has had C-130s deployed continuously on operations in the Middle East since February 2003 and, as of 23 March 2008, these had flown 2130 missions (7861 sorties) carrying 19,631 tonnes of cargo and 86,155 personnel.

Commencing in 1999, twelve C-130J-30 aircraft were acquired. In November 2006, twelve C-130H aircraft were transferred from No. 36 Squadron to No. 37 Squadron, making the latter the largest operational squadron in the Group with 24 aircraft and 510 personnel. The planned withdrawal dates for these aircraft are: 2013 for the twelve C-130Hs; and 2030 for the twelve C-130J-30s.

No. 38 Squadron, Townsville

No. 38 Squadron was formed at Richmond on 15 September 1943 for the transport of personnel, cargo and VIPs. It was initially equipped with Hudson aircraft, which were replaced by C-47 Dakotas in March 1944. In 1944, it supported paratroop training; commenced courier services to Papua New Guinea and the Dutch East Indies; and undertook supply drops over Papua New Guinea. It moved to Archerfield in December that year; deployed a detachment at Morotai for supply drops over Borneo in July 1945; and evacuated prisoners-of-war from Singapore following Japanese surrender. It re-located to Schofields in August 1946 and transported pig



bristles, which were in short supply, from Chunking (China) to Hong Kong, for subsequent shipment to Australia. From January 1947 to January 1948, it operated the world's longest twin-engine regular service between Schofields and Japan; and between August 1948 and August 1949 assigned five crews to the Royal Air Force to fly C-47s in the Berlin Airlift.

During the Malayan Emergency from June 1950 to December 1952, No. 38 Squadron was based at Changi (Singapore) and made supply drops from Kuala Lumpur. Subsequently, it re-located to Richmond and later Canberra in the VIP transport role. It returned to Richmond in 1958 as a transport training squadron for Dakota crews and air movements personnel.

In March 1964, it was re-equipped with the DHC-4A Caribou tactical air transport aircraft which it operated in: Vietnam for the duration of that war; in Papua New Guinea until the latter's independence in 1976; and, from 1975 to 1978, in Pakistan in support of the United Nations military observer group. During the civil war in Portuguese Timor in 1975, a Caribou aircraft was hijacked to Darwin where the hijacker surrendered to authorities.

During the 1980s, the disposition of the Caribou fleet of 21 aircraft was: No. 35 Squadron, Townsville – 5 aircraft plus 1 aircraft at Darwin; and No. 38 Squadron, Richmond – 13 aircraft plus 1 aircraft at Pearce. In October 1992, No. 38 Squadron was moved to Amberley and, in 2001, all Caribou aircraft were assigned to No. 38 Squadron – initially 20 aircraft; subsequently reduced to 16 then 14. In January 2008, the squadron and its remaining 14 DHC-4A Caribous were moved to Townsville.

Since it acquired the Caribous, No. 38 Squadron has been involved in numerous regional military and disaster relief operations and overseas deployments. Eight aircraft have been lost during this period, three in each of Vietnam and Papua New Guinea and two in Australia. In Vietnam, two were lost on landing (in 1964 and 1967) and one to mortar fire at Than Son Mar in March 1970. In Papua New Guinea, two involved landing/overshoot problems (in 1965 and 1968) and one a crash during foul weather at Kudjeru Gap in August 1972. In the latter,

there were 26 fatalities and five survivors. It took three days to find the survivors. In Australia, both losses involved landing/overshoot problems (in 1964 and 1986).

No. 285 Squadron, Richmond

No. 285 Squadron was formed in September 1999 as a training centre of excellence for aircrew and maintainers. It is equipped with Hercules (C130H, C130J) and Boeing 707 simulators. It has a high training workload and makes substantial use of reservists and civilian instructors in both syllabus development and training support.

Air Movements Training and Development Unit

The Air Movements and Training Development Unit was first raised in 1958 as the Air Movements Training Flight. Its current designation was adopted in 1962. It is a joint Air Force-Army unit consisting of 28 permanent Air Force, 25 Army and two Air Force reserve personnel. It provides a centre of excellence relating to loading, lifting and extraction; it investigates airdrop malfunctions; and it trains aircrew and movements staff.

Future

In the immediate future, the Air Lift Group faces the need to continue to operate ageing C-130 Hercules and DHC-4 Caribou aircraft. At the same time, it must develop the C-130J-30 Hercules fleet to full service, acquire additional airframes for it, and add self-protection and joint precision aerial delivery systems to the aircraft. We also need to determine what the future battlefield mix of transport aircraft should be, decide on what should replace the Hercules capability and take into account the future of Richmond as an Air Force base.

There are a range of challenges ahead, including:

- multiple capability transitions of both personnel and facilities;
- new sustainment models;
- mission training in simulators, including the need to link the simulators and to periodically upgrade them (which can involve several months of downtime);
- becoming fully “networked” within the Australian Defence Force-wide system;
- aircrew management issues, including the future of air combat officers and flight engineers, the shortage of pilots and load masters, and qualified flying instructor liabilities;
- management of the maintenance workforce, including maintenance of skills and challenges posed by ‘black box’ components; and
- infrastructure issues, such as the future of Richmond, facilities for the squadrons at Amberley and Townsville and the future location of Lift Wing.



C-17A Globemaster

Conclusion

From their genesis during World War II up to the present day, the squadrons of Air Lift Group have a proud record of undertaking military and humanitarian air lift operations in support of the Australian Defence Force, the United Nations, and other allies around the world. The Group’s fleet of ageing Hercules, Caribou and Boeing aircraft which it has operated since the 1960s is progressively being supplemented by more modern and capable aircraft, including the C-17A Globemaster and the KC-30B, but a range of personnel, equipment and facilities challenges remain.

The Author: Air Commodore Jack Plenty joined the Royal Australian Air Force in 1975. He has undertaken three operational flying tours at No. 38 Squadron flying Caribou aircraft; a secondment to the Papua New Guinea Defence Force for instructional duties on C47D Dakota aircraft; and three flying instructional tours. He has been a member of the aerobatic team, The Roulettes, has flown 14 aircraft types and has around 6900 flying hours, of which around 3300 hours are as a qualified flying instructor. He has commanded No. 38 Squadron at Amberley, No. 86 Wing at Richmond, Joint Task Force 632 supporting the Bougainville Peace Talks, and Joint Task Force 633 supporting the Solomon Islands Peace Initiative. Staff postings have included: Staff Officer to the Vice Chief of the Defence Force; Director Exercises, Defence Force Warfare Centre; Chief of Staff, Headquarters Australian Theatre; and Director-General, Headquarters Joint Operations Command Project. He is a graduate of RAAF Command and Staff Course (1992) and the Armed Forces of the United Kingdom, Higher Command and Staff Course (2003); and holds a Master of Public Administration degree from the University of Canberra (1996). He took up his current appointment as Commander Air Lift Group on 2 February 2007. He was appointed a Member in the Military Division of the Order of Australia in 2002 for services as Officer Commanding No. 86 Wing. [Photo of Air Commodore Plenty: Department of Defence]