

# WAMASC Newsletter

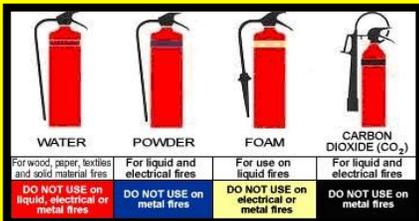


January 2020

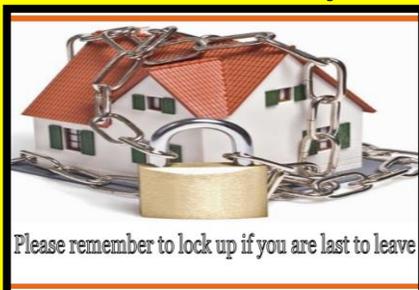
## The Gooney Bird



## OH&S



## Field Security



should any individual have anything at all they would like to contribute, share or add to this newsletter, please feel free to contact the [editor](#) through the [Club Secretary](#) via ✉ [secretary@wamasc.com.au](mailto:secretary@wamasc.com.au) – enjoy

## The Gooney Bird

The **DC-3** first flew on December the 17<sup>th</sup>, 1935. Coincidentally, it was just 32 years to the day since **Orville WRIGHT** made history flying a powered aircraft across the sand dunes of **Kill Devil Hill**, in **North Carolina**. On that historic day, Orville WRIGHT remained airborne for twelve seconds, and covered a distance of one hundred and twenty feet, just twenty-five feet more than the wingspan of a DC-3. It is incredible to think that in the space of thirty-two years man would develop a machine capable of carrying thirty people a thousand miles, at nearly two hundred miles an hour. Now by today's standards this feat falls into insignificance - however; it was a breathtaking technical achievement for the time and era of aviation, the DC-3 becoming one of the most reliable aircraft ever made and the standard airline aircraft of the western world.



In was in late August of 1945 when one of the last aircraft made rolled of the production line at the **Douglas Aircraft Company**'s factory in **Santa Monica**. It was delivered as a military **C-47** to the **USAF** (United States Air Force). The Douglas C-47 **Skytrain** or **Dakota** is a military transport aircraft that was developed from the civilian Douglas DC-3 airliner (the 'C' designating Cargo). Powered by two (2), fourteen-cylinder, twin-row, radial, **Pratt & Whitney**, Wasp piston engines with a capacity of 1830in<sup>3</sup> – it produced 2400 horsepower (1200 horsepower each) at take-off.

Used extensively by the Allies during WWII it still remains in front-line service with various military operators today. Indeed; our own **RAAF**

(Royal Australian Air Force) still operate a modified C-47 at the **ARDU** (Australian Research & Development Unit) based at **RAAF Base Edinburgh** in Adelaide, SA. C-47, **A65-95** (pictured below right), is still frequently used to this present day as a test bed for trialling experimental and classified aviation technologies along with the **OT&E** (Operational Testing & Evaluation) for upcoming and advanced Aeronautical product etc. A65-95 has proved itself to be a remarkable 'work horse' with a lot of airframe hours still left on the clock for further longevity.



The C-47 **differed** from the civilian DC-3 in **numerous modifications**, which included the fitment of a **cargo door**, **hoist attachment**, and a **strengthened floor**, along with a **shortened tail cone** for **glider-towing shackles**, and an **astrodome** in the cabin roof.

During World War II, the armed forces of many countries used the C-47 and modified DC-3's for the transport of troops, cargo, and wounded (the U.S. **Naval** designation was **R4D**).

More than 10,000 aircraft were produced at the **Long Beach** and **Santa Monica, California** and **Oklahoma City, Oklahoma** factories. Between March 1943 and August 1945, the Oklahoma City plant produced a staggering 5,354 C-47s.

The **specialized C-53 Skyrooper** troop transport started production in October 1941 at the Douglas Aircraft's Santa Monica plant. It lacked the cargo door, hoist attachment, and reinforced floor of the C-47. Only 380 aircraft were produced in all because the C-47 was found to be more versatile.

The C-47 was vital to the success of many Allied campaigns, in particular those at **Guadalcanal** and in the jungles of **New Guinea** and **Burma**, where the C-47 and its **naval version**, the R4D, made it possible for Allied troops to counter the mobility of the light-travelling Japanese Army.

C-47s were used to airlift supplies to the encircled American forces during the **Battle of Bastogne** in **Belgium**.

Possibly its most influential role in military aviation, however, was flying "**The Hump**" from **India** into **China**. The expertise gained flying "The Hump" was later used in the **Berlin Airlift** (C-47 shown, below left, unloading coal), in which the C-47 played a major role, until the aircraft were replaced by the Douglas **C-54 Skymaster**.



In Europe, the C-47 and a specialized paratroop variant, the **C-53 Skyrooper**, were used in vast numbers in the later stages of the war, in particularly, to tow gliders and drop paratroopers into theatres of conflict.

During the **invasion of Sicily** in July 1943, the C-47 dropped 4,381 Allied paratroopers alone.

More than 50,000 paratroopers were dropped by C-47s during the first few days of **D-Day** campaign also known and referred to as the **invasion of Normandy**, France, in

June 1944. In the **Pacific War**, with careful use of the island landing strips of the Pacific Ocean, C-47s were used for ferrying soldiers serving in the Pacific theatre back to the United States for convalescence and repatriation.

Two-thousand C-47s were received by the Commonwealth and British Forces (Services) during WWII under a **Lend/Lease contract scheme**. These aircraft were bequeathed the name '**Dakota**', due to the acronym "**DACoTA**" which stood for **Douglas Aircraft Company Transport Aircraft**.

The C-47 also earned the informal nickname '**Gooney Bird**' in the European theatre of operations as it was the first aircraft, a **USMC R2D** (the military version of the DC-2) that landed on **Midway Island**, previously home to the long-winged **albatross** known as the **gooney bird** which was native to Midway.



The United States **Air Force's Strategic Air Command** had Skytrain's in service from **1946** through to **1967**.

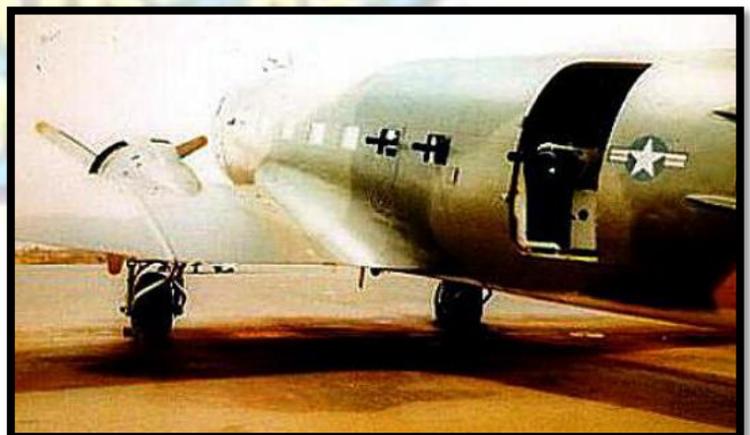
The US Air Force's **6<sup>th</sup> Special Operations Squadron** was flying the C-47 until **2008**.

With all of the aircraft and pilots having been part of the **Indian Air Force** prior to independence, both the Indian Air Force and **Pakistan Air Force** used C-47s to transport supplies to their soldiers fighting in the **Indo-Pakistan War** of 1947.

After WWII, thousands of surplus C-47s were converted to civil airline use, some remaining in operation until **2012**, as well as being used as private aircraft.

Several C-47 variations were used in the **Vietnam Conflict** by the United States Air Force, including three advanced electronic-warfare variations, which sometimes were called "**electric gooneys**" designated **EC-47N**, **EC-47P**, or **EC-47Q** depending on the engine used. Air International, Miami International Airport was a USAF military depot used to convert the commercial DC-3s/C-47s into military use. They came in as commercial aircraft purchased from third-world airlines and were completely stripped, rebuilt, and reconditioned. Long-range fuel tanks were installed, along with upgraded avionics and gun mounts. They left as first-rate military aircraft headed for combat in Vietnam in a variety of missions. EC-47s were also operated by the **Vietnamese**, **Laotian**, and **Cambodian** Air Forces.

A **gunship** variation, using three 7.62 mm miniguns, designated AC-47 "**Spooky**", often nicknamed "**Puff the magic dragon**" (pictured below), was also deployed during the Vietnam Conflict.





The 'Gooney Bird'



U.S. Navy C-117Ds at RAF Mildenhall in 1967

Large numbers of DC-3s and surplus C-47s were in commercial use in the United States in the 1940s. In response to proposed changes to the **Civil Air Regulations Airworthiness** requirements that would limit the continuing use of these aircraft, Douglas offered a late-1940s DC-3 conversion to improve take-off and single-engine performance. This new model, the **DC-3S** or "Super DC-3", was 39 in (0.99 m) longer. It allowed 30 passengers to be carried, with increased speed to compete with newer airliners. The rearward shift in the centre of gravity led to larger tail surfaces and new outer, swept-back wings. More powerful engines were installed along with shorter, jet ejection-type exhaust stacks. These were either 1,475 hp (1,100 kW) Wright R-1820 Cyclones or 1,450 hp (1,081 kW) Pratt & Whitney R-2000 Twin Wasps in larger engine nacelles. Minor changes included wheel-well doors, a partially retractable tailwheel, flush rivets, and low-drag antenna. These all contributed to an increased top speed of 250 mph (400 km/h; 220 knots). With greater than 75% of the original DC-3/C-47 configuration changed; the modified design was virtually a new aircraft. The first DC-3S made its maiden flight on the 23<sup>rd</sup> of June 1949.

The changes fully met the new FAR 4B Airworthiness requirements, with significantly improved performance. However, little interest was expressed by commercial operators in the DC-3S. It was too expensive for the smaller operators that were its main target; only three were sold to **Capital Airlines**.

The U.S. Navy and U.S. Marine Corps had 100 of their R4D aircraft modified to Super DC-3 standards as the R4D-8, later redesignated the C-117D.



As the 'Monty Python' team would say – 'and now for something completely different'. Well for an aircraft that has been around for longer than Phillis Diller it must have a few strange yarns attached to it.

Many pilots regarded the DC-3 as psychic and exceptionally forgiving. The plane, they say, actually had a knack of anticipating pilot errors and compensating for those mistakes. Some insisted it could actually fly by itself.

In 1957, a USAF DC-3 ran out of gas over Missouri. Everyone bailed out and made it to the ground safely. The DC-3 glided over the horizon and made a perfect, unassisted landing in a cornfield. Now while it is very rare for a plane to land without a pilot, it is equally unusual to have **monkeys** assisting in a landing. In 1959, John Stevens was flying a planeload of monkeys from Pakistan to Morocco in a DC-3. He ran into a storm, and several crates broke loose, giving the monkeys the run of the airplane. The pilot,

concentrating on his flying, did not notice the carnival going on behind him. When the monkeys invaded the cockpit, it was too late for him to do anything. Buttons, switches, and levers were all fair game for the playful primates. Stevens never admitted the monkeys helped land the plane, but he said he'd rather fly through a monsoon than with a cockpit full of monkeys again.

In **1959**, Southern Airways' mechanics were performing a maintenance inspection on a DC-3. When they pulled the wing, they found a cracked bolt. They changed the bolt and sent the cracked bolt to the Douglas engineers asking for their comments.

The engineers traced the maintenance history of the aircraft and found the bolt was part of the original factory-built aircraft 22 years earlier. The engineers said the bolt had a theoretical life of 16,000 hours and the defective bolt had accumulated 64,879 hours before it cracked. The engineers' comment back to Southern was a simple, **“Congratulations.”**

In **1985**, a South African Air Force Dakota made a rough landing on a bush airstrip. It swerved and hit a tree and tore off about three feet of one wing tip. The mechanic on board responsible for the aircraft simply trimmed the rough edges, bound the end with masking tape and the Dakota took off and carried out the rest of its mission.

Maj R.G. HOUGHTON was the leader of No 3 Dakota Flight on December the 10<sup>th</sup>, **1985**. The flight was a run through and practice for the intended 50<sup>th</sup> Anniversary of the Dakota to take place a few days later. Shortly after leading his formation into position he experienced a high frequency vibration through the control column, and the aircraft rolled to the starboard. He recovered the aircraft through large rudder inputs as the ailerons seemed to have no effect.

It was then that the co-pilot informed Maj HOUGHTON that the number two aircraft had collided with them, and that about one-third of the aileron and a large portion of the wing tip were missing.

Maj HOUGHTON broke formation and after establishing the limits of control, decided to fly a high speed, flapless approach to landing. It turned out that because of the extensive aileron damage, both the pilot and co-pilot were required to physically effect lateral control for the final approach. The pilot landed the aircraft safely at the airfield.

In **1958**, the prestigious **Institute of Design** of the **Illinois Institute of Technology** set out to determine the 100 best-designed mass-produced products of modern times. When the researchers had compiled the data, only two aircraft made the list: the Beechcraft Bonanza and the Douglas DC-3.

## OH&S

All members please be aware that **Occupational Health and Safety** is a **mandatory** requirement of every and each individual.

The onus and responsibility **are not** borne by one person alone with WAMASC having to check many boxes at the beginning and throughout each Financial Year to attain the privilege of maintaining its MAAA Insurance Cover. Please make note that when in attendance at the Field the **Transmitter Shed** (Compound) must be open to access **‘First Aid’** facilities in the event of an incident. Said First Aid Kit(s) are **frequently** checked and re-stocked thus ensuring contents are complete and up to date. You are asked to ensure that the internal **‘contents sheet’** is amended (annotated)

Please remember that access to the TX Compound during attendance at the Field is a mandatory requirement.

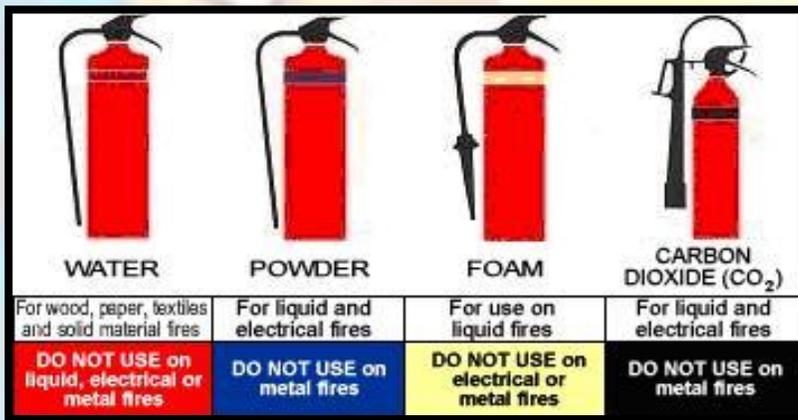


should you make use of any **consumables** (contents). Should you administer any form of first aid please enter it into the **First Aid Book** as this will make it easier to replace items without the need of a thorough stocktake.

**Please note that as BETADINE may cause an allergic reaction in some personnel it has been replaced with DETOL antiseptic.**

For your convenience WAMASC has taken advantage of some specifically qualified individual(s) who have undertaken various courses in **OH&S** and **First Aid** and asked them to perform certain duties at the club. These '**First Aid Personnel**' who have undertaken the appropriate First Aid training courses and hold either a current St John's Ambulance Certificate in First Aid; it's equivalent, or better, are **Stuart HAMILTON**, **Michael CUERDEN** and **John KRESS** – you are asked to please make yourself conversant and familiar with these personnel should anyone be unfortunate enough to require their services.

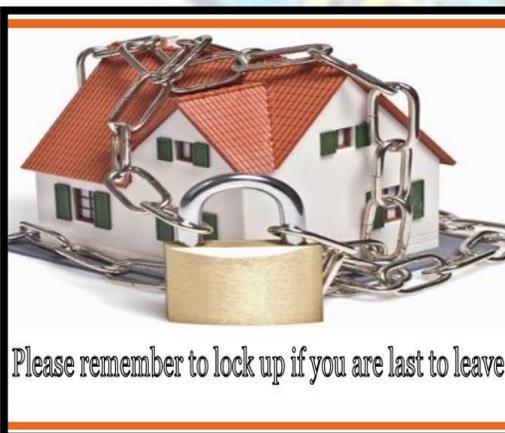
A quantity of **fire extinguishers** are on hand for fighting **fires** and one should not be concerned in using one should the requirement dictate. It is far easier to replace an extinguisher than lose property, see a person come to harm or lose our venue. Please be very much aware that different types of extinguishers are for use on different types of fires and using the appropriate one for your needs is paramount.



With this in mind '**Fire Fighting Equipment**' such as **rakes**, **nap-sack** and **shovels** are readily available and accessible from within our TX Shed (Compound); just another reason why it should be open during attendance at the field. Please note that the **defibrillator** is now located within the entrance to the **ACROD** toilet.

Any major incident, by law, should be recorded so please inform the committee of anything untoward. This information is used to give feed-back and attain the necessary tools to make things better – it is also a requirement in not losing our insurance cover. Although it would be a very rare occurrence, on a safety point, it is not advisable to attend the Field and fly alone. The possibilities abound for snake bite, stroke and personal injury. Many of our brethren, especially older statesmen, are on some form of medication. Should that be some form of blood thinning agent such as warfarin, heparin or fondaparinux etc. a minor nick can result in a person bleeding out very quickly.

## Field Security



In conjunction with maintaining a good insurance coverage all members are politely reminded that WAMASC **SECURITY** is **paramount** and the responsibility of each and every individual member.

It is a task that we all agree too during our '**joining induction**', which includes a **safety brief**. Unfortunately, there have been some recent breeches. Unless certain protocol(s) are maintained and adhered too; we (WAMASC members) could possibly find our membership fees having to be increased to cope with the rising cost of insurance premiums due to either theft, damage or repair at the field. This is not something to be

taken lightly, and not something, or a predicament, that anyone wishes to occur. Please remember the combination code to the Main Gate, TX Shed (Compound) and ACROD Toilet lock(s) may be found on the reverse of your WAMASC 2019/20 Membership Card.

I reiterate; that if you are the first to arrive at the field and gain access through the gate, you are also asked to open the TX Shed (Compound) and ACROD Toilet.

As mentioned, the requirement for the TX Shed (Compound) to be open when personnel are in attendance at the field is of great safety importance as it houses both the **First Aid Kit** and **Fire Fighting equipment**.

The ACROD Toilet must be open for ease of access to the 'defibrillator'.

Conversely should you be the last to **depart** the field you are asked to ensure that the TX Shed (Compound), Building, Main Gate and ACROD Toilet are all secured correctly.



# SAFE FLYING

‘A real friend is one who walks in when the rest  
of the world walks out.’