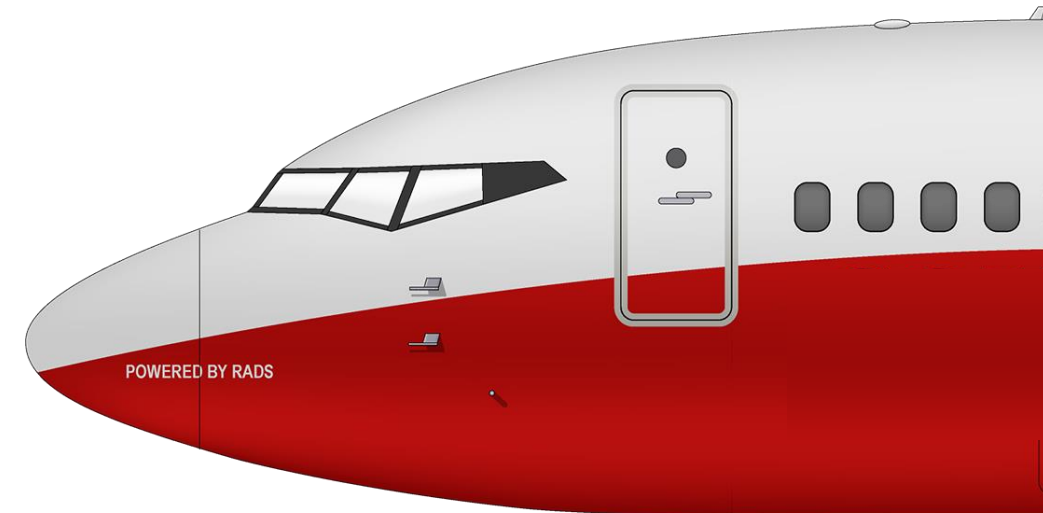
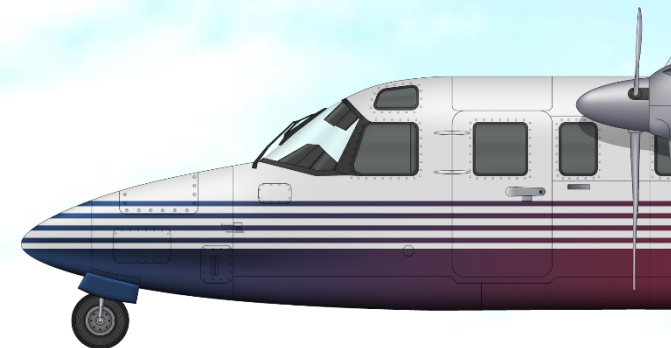
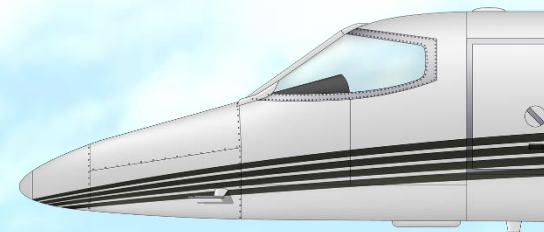


# Firefighting aircraft of Australia 2018/19



# Aerial Fire Fighting

Aerial firefighting is the use of aircraft to support firefighting and fire management operations.

One of the earliest documented uses of aerial firefighting in Australia was when the Forests Commission Victoria utilised Westland Wapiti aircraft from the Royal Australian Air Force for fire detection and observation flights in the late 1920s.

The use of aircraft across Australia for firefighting has developed over time with the adoption of fire bombing, fire crew transport & insertion, reconnaissance & mapping, aerial incendiary operations and other specialist roles including night fire bombing.

The primary purpose of aerial firefighting is to support those on the ground, both ground firefighting crews and communities at risk. While firebombing is the most common use of aircraft, the use of aircraft for gathering information for incident management teams and community warnings has grown markedly in recent years.

Fixed wing aircraft and helicopters are used for aerial fire fighting. Each aircraft has a call sign that designates its primary firefighting role and capacity. The table below lists the common aerial firefighting roles and the types of aircraft that regularly perform each role.

Roles	Airframe Type	Call sign
Firebombing	Fixed wing & helicopter	Bomber, Helitak, Firebird
Air Attack Supervision	Fixed wing & helicopter	Firebird, Firespotter, Birddog
Incident observation	Fixed wing & helicopter	Firebird, Firespotter, Birddog
Incident mapping	Fixed wing & helicopter	Firebird, Firespotter, Birddog, Firescan
Winching & Rappelling	Helicopter	Helitak, Firebird
Transport - Fire crew	Fixed wing & helicopter	Firebird, Helitak, Firespotter, Birddog
Transport - General cargo	Fixed wing & helicopter	Firebird, Helitak, Firespotter, Birddog
Transport - Passengers	Fixed wing & helicopter	Firebird, Helitak, Firespotter, Birddog
Aerial Ignition - Drip torch	Helicopter	Firebird
Aerial Ignition - Machine	Fixed wing & helicopter	Firebird, Birddog, Firespotter
Sling Load - Long & Short line	Helicopter	Firebird, Helitak

Where it is safe, efficient and cost effective to do so, all States and Territories utilise aircraft to support their firefighting and other fire management activities. Most firefighting aircraft are chartered from appropriately experienced and qualified commercial aircraft service providers. A small number of aircraft are directly owned and operated by fire agencies.

In Australia each State and Territory faces its own unique fire and emergency conditions and has its own organisational arrangements. The fleet configuration and use of aircraft in each State and Territory is therefore tailored to meet local requirements.

# National Aerial Firefighting Centre

In Australia, individual States and Territories are responsible for the management of bushfires and a range of other emergencies, and for most land management. State and Territory governments and the Australian Government have recognised the importance of collaboration and cooperation in aerial firefighting and have established the National Aerial Firefighting Centre to support and facilitate collaboration across Australia

The National Aerial Firefighting Centre facilitates the coordination and procurement of a fleet of highly specialised firefighting aircraft that are readily available for use by State and Territory emergency service and land management agencies across Australia.

This national aircraft fleet complements aerial firefighting resources that are arranged directly by the States and Territories. Some services in the national aerial firefighting fleet receive funding support from the Australian Government as well as State and Territory government funding.

NAFC also plays a key role in ensuring the sharing of aerial firefighting resources between emergency service and land management agencies throughout Australia, and in the development of national protocols and systems for aerial firefighting.



**Disclaimer:**

The material in this document has, as far as practical, been fact checked with aircraft manufacturers, aircraft operators, and fire agency staff, and represents the typical performance of these types of aircraft when operating in their primary fire fighting roles. There will be times when the aircraft under or over perform the figures given.

Some aircraft types are represented by a single variant of the aircraft type. As an example there at least six different sub types of AS350 ‘squirrel’ helicopter in use for fire fighting in Australia. We have included details of two variants of the AS350 in this guide.

Some aircraft types in regular use by State and Territory fire agencies, but not contracted through NAFC, have not been included in this edition. They include Ayres Thrush, American Champion Scout and Bell Jet Ranger.

The material in this document is provided as an information source only and errors or omissions may have occurred in its production. The information is provided solely on the basis that readers will be responsible for making their own assessment of the material presented and are strongly advised to verify its accuracy, completeness, currency, and relevance for their purposes.

Any representations of specific aircraft are provided for the reader’s convenience and do not constitute endorsement of the aircraft, its operator, or any associated organisation, product or service.

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**Credit:**

Aircraft profile images in this edition have all been illustrated, by Bill Dady of [www.clavework-graphics.co.uk](http://www.clavework-graphics.co.uk)

# National Aerial Firefighting Fleet

The 2018-19 National Aerial Firefighting Fleet comprises approximately 143 contracted aircraft primarily made up of types listed here. These aircraft, contracted by NAFC on behalf of State and Territory governments, are supplemented by additional state owned, and state contracted aircraft and other aircraft hired to meet peak demand across Australia. In total more than 500 aircraft, provided by over 200 operators, are available for firefighting across Australia.

## Contracted aircraft locations:

ACT		Victoria	
Hume Helibase	2	Stawell	5
NSW			
Camden	5	Moorabbin	5
Nowra	4	Mansfield	3
Bankstown	4	Avalon Airport	3
Dubbo	3	Ovens	3
Richmond	3	Bairnsdale	3
Moree	2	Latrobe Valley	3
Scone	2	Ballarat	3
Cowra	2	Hamilton	3
Grafton	2	Bendigo	2
Armadale	1	Benambra	2
Mogo	1	Casterton	2
Salamander Bay	1	Colac	2
Cessnock	1	Essendon	2
Tumut	1	Albury	2
Wagga Wagga	1	Mangalore	1
Griffith	1	Benalla	1
Kempsey	1	Olinda	1
Queensland		Donald	1
Toowoomba	6	Heyfield	1
Bundaberg	2	Shepparton	1
SA		North West	1
Claremont	13	Healesville	1
		WA	
Port Lincoln	4	Jandakot Airport	7
Hoyleton	4	Albany	2
Mt Gambier	3	Busselton	2
Naracoorte	1	Serpentine	1
Tasmania		NT	
Launceston	2	Batchelor	3
Hobart / Cambridge	5		

Aircraft counts and locations vary from time to time as the fleet balance is adjusted and individual airframes are updated or replaced.

The facts sheets on subsequent pages detail each of the aircraft types in the order listed below:

## Contracted aircraft types:

Eurocopter EC120B Colibri	3
Bell 206L-3 LongRanger	3
Eurocopter AS355F1 Twin Squirrel	5
Eurocopter AS350 Squirrel	20
MBB / Kawasaki BK 117	3
Eurocopter EC145	2
Sikorsky S76*	1
Eurocopter AS365N2 Dauphin	2
Bell 204B	2
Bell 212	6
Bell 412	5
Bell 214B – Big Lifter	14
Sikorsky S61N	3
Erickson S64E - Aircrane	6
Cessna 182 Skylane	2
Cessna 337 Skymaster	3
Cessna 208B Grand Caravan	2
Piper PA46 Meridian*	1
Rockwell Aero Commander AC500	1
Rockwell Turbo Commander 690B	3
Beechcraft KingAir 200	1
Gates Learjet 35A/36A	3
PZL M18T (Hubler) Dromader	2
Air Tractor AT-802F	42
Air Tractor AT-802F (Fireboss)	2
Avro RJ85 airtanker	3
Coulson C130Q airtanker	2
Boeing 737 airtanker	1

\* No facts sheet



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# Helicopters 2018/19







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## Eurocopter EC120B Colibri

Call sign "Firebird"  
 Primary role air attack supervision  
 Other roles reconnaissance / utility  
 Single engine helicopter  
 Single pilot, four passengers  
 1715 kg gross weight  
 Cruise speed 220 km/h  
 Three bladed main and eight bladed tail rotors  
 11.5 m length, 10.0 rotor diameter,  
 Turbomeca Arrius 2F Turbo shaft engine,  
 Fuel consumption 100 litres/h of Jet-A1  
 500 HP available at take off  
 2+ fire agency radios  
 Satellite tracking

The EC120B is a modern design light helicopter from manufacturer Eurocopter, now know as Airbus Helicopters. Its composite fuselage, Spheriflex main rotor and Fenestron tail rotor make it quiet, comfortable and economical to operate. It is used by fire agencies primarily for supervision of fire operations, fire detection, reconnaissance and utility missions carrying the pilot and up to four passengers or crew depending on the mission.

The EC120B is particularly well suited to the supervision of firebombing operations with its high speed enabling it to keep up with the largest of firebombing helicopters and the ability to slow down and loiter in the fire area. When working as a 'firebird' the primary responsibility for the crew is to supervise aerial fire fighting operations and to collect information about a fire and pass it on to the incident management team. The EC120B is also used for utility missions including ferrying passengers and cargo.

The EC120B operates alongside other fire fighting aircraft to support fire fighting crews on the ground. Carried on board the aircraft are sophisticated communication and tracking equipment that keep the aircraft in constant contact with other aircraft and the fire agency crews managing fires on the ground.

The Victorian Governments have contracted, through NAFC, three EC120B helicopters for the 2018-19 fire season. Aircraft in the national aerial fire fighting fleet are available for use across all states and territories



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## Bell 206L-3 LongRanger

Call sign "Firebird"

Primary role: air attack supervision

Other roles: reconnaissance / utility

Single engine helicopter

Single pilot, six passengers

1800 kg gross weight

Cruise speed 220 km/h

Two bladed main and tail rotors

13.0 m length, 11.3 rotor diameter,

Rolls Royce / Allison C30P Turbo shaft engine,

Fuel consumption 140 litres/h of Jet-A1

650 HP available at take off

2+ fire agency radios

Satellite tracking

The Bell 206L LongRanger light helicopter is a more powerful, stretched version of the Bell 206B JetRanger light helicopter. It is used by fire agencies primarily for supervision of fire operations, fire detection, reconnaissance and utility missions carrying the pilot and up to six passengers or crew depending on the mission.

The B206L is particularly well suited to the supervision of firebombing operations with its high speed enabling it to keep up with the largest of firebombing helicopters and the ability to slow down and loiter in the fire area. When working as a 'firebird' the primary responsibility for the crew is to supervise aerial fire fighting operations and to collect intelligence information about a fire and pass it on to the incident management team.

The B206L is also used for utility missions including ferrying passengers and cargo, firebombing with a 550 litre underslung bucket, and aerial incendiary operations. The B206L can also be specifically equipped with high quality visual and/or infrared camera systems and digital video transmission equipment to beam live images of the fire ground back to fire agency headquarters and incident management teams.

The B206L operates alongside other fire fighting aircraft to support fire fighting crews on the ground. Carried on board the aircraft are sophisticated communication and tracking equipment that keep the aircraft in constant contact with other aircraft and the fire agency crews managing fires on the ground.

The NSW and Victorian Governments have contracted, through NAFC, two 206 LongRanger helicopters for the 2018-19 fire season. Aircraft in the national aerial fire fighting fleet are available for use across all states and territories



## Eurocopter AS355F1 Twin Squirrel

Call sign "Firebird"

Primary roles: Supervision, firebombing

Other roles: Reconnaissance, utility

Twin engine helicopter

Single pilot, up to five passengers

680 litre firebombing tank or bucket

2400 kg gross weight

Cruise speed 230 km/h

Three bladed composite main rotor

12.9m length, 10.9m rotor diameter

2x Rolls Royce Allison 250-C20F turbo shaft engines

840 HP available at take off

Fuel consumption 220 litres/h of Jet-A1

2+ fire agency radios, Satellite tracking

The Eurocopter AS355F1 is the twin engined version of the popular 'Squirrel' helicopters from manufacturer Aerospatiale, then Eurocopter and now Airbus helicopters. With its twin engines the AS355F1 is more powerful and faster than the standard AS350 helicopter. It is used by fire agencies primarily for supervision of fire operations, firebombing and transport of fire crews. Other roles include fire detection, reconnaissance and utility missions carrying the pilot and up to five passengers or crew depending on the mission.

The AS355F1 is particularly well suited to supervision of fire fighting operations with its speed and endurance allowing it to keep up with the largest of firebombing helicopters and the ability to slow down and loiter affording the crew an unobstructed view of the fire area.

When firebombing the AS355F1 can pick up 680 litres of water in an under slung bucket. To this the pilot can add a measured quantity of fire fighting suppressant foam to increase the effectiveness of the load when it is dropped on a fire.

The AS355F1 can be used to transport fire fighters into remote areas. The AS355F1 is also used to conduct aerial observation and fire detection operations where it is used to collect intelligence information about a fire and pass it on to the incident management team.

The AS355F1 helicopters operate alongside other fire fighting aircraft to support fire fighting crews on the ground. Carried on board the aircraft are sophisticated communication and tracking equipment that keep the aircraft in constant contact with other aircraft and the fire agency crews managing fires on the ground.

The Queensland, Tasmanian, and West Australian Governments have contracted, through NAFC, five Eurocopter AS355F1 helicopters for the 2018-19 fire season. Aircraft in the national aerial fire fighting fleet are available for use across all states and territories





## Eurocopter AS350B3 Squirrel

Call sign "Firebird"

Primary roles: Firebombing, supervision, winching

Other roles: Reconnaissance, utility

Single engine helicopter

Single pilot, up to five passengers

1100 litre firebombing tank or bucket

2800 kg gross weight

Cruise speed 200 km/h

Three bladed composite main rotor

12.9m length, 10.7m rotor diameter

Turbomeca Arriel 2D turbo shaft engine

847 HP available at take off

Fuel consumption 160 litres/h of Jet-A1

2+ fire agency radios, Satellite tracking

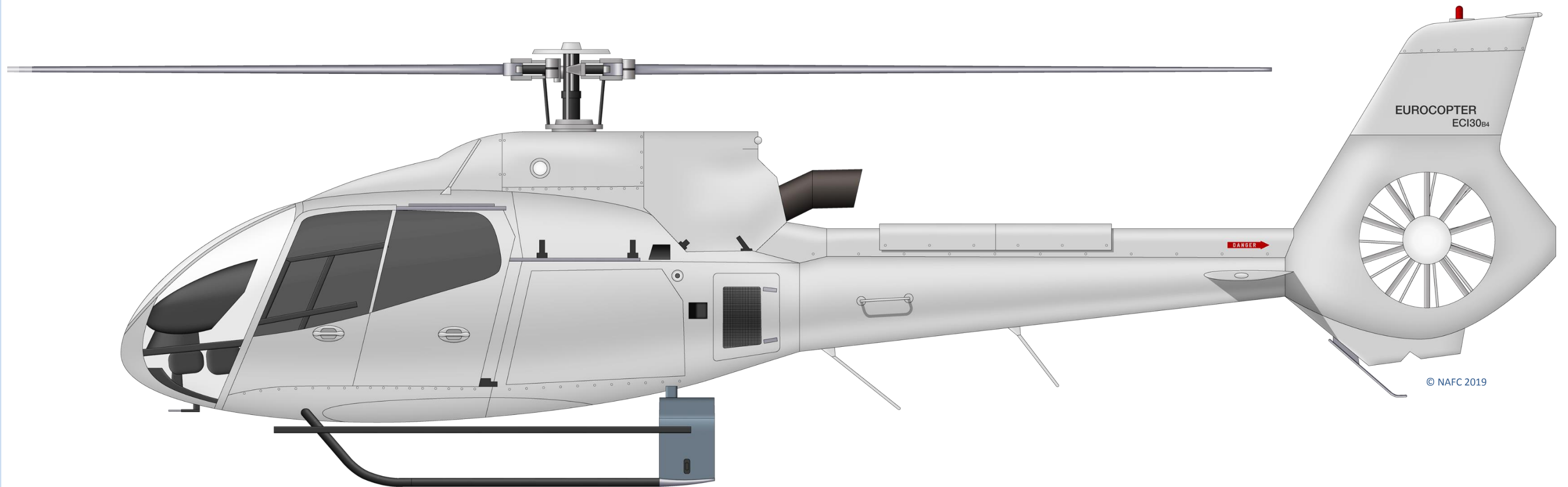
The Eurocopter AS350B3 helicopter is the latest in the line of 'Squirrel' helicopters from manufacturer Aerospatiale, then Eurocopter and now Airbus Helicopters. The AS350B3 is a more powerful, heavier lifting version of the standard AS350 helicopter. It is used by fire agencies primarily for firebombing, supervision of fire operations, and winching of fire crews into remote areas. Other roles include fire detection, reconnaissance and utility missions carrying the pilot and up to five passengers or crew depending on the mission.

The AS350B3 is particularly well suited to fire fighting operations with its 'hot and high' performance allowing it to operate at or near its peak performance in typical fire conditions. When firebombing the AS350B3 can regularly pick up 900 litres of water in its firebombing tank or in an under slung bucket. To this the pilot can add a measured quantity of fire fighting suppressant foam to increase the effectiveness of the load when it is dropped on a fire.

The AS350B3 can be fitted with a winch capable of lifting a 200kg load. With this winch fitted the aircraft is used to insert firefighting teams into areas to remote to quickly access by road or foot. The AS350B3 is also used to supervise aerial fire fighting operations and to collect intelligence information about a fire and pass it on to the incident management team.

The AS350B3 helicopters operate alongside other fire fighting aircraft to support fire fighting crews on the ground. Carried on board the aircraft are sophisticated communication and tracking equipment that keep the aircraft in constant contact with other aircraft and the fire agency crews managing fires on the ground.

The Australian State and Territory Governments have contracted, through NAFC, twenty Eurocopter AS350 helicopters (AS350B3 and other variants) for the 2018-19 fire season. Aircraft in the national aerial fire fighting fleet are available for use across all states and territories



## Eurocopter EC130 B4

Call sign "Firebird"

Primary roles: Reconnaissance, supervision

Other roles: Firebombing, utility

Single engine helicopter

Single pilot, up to six passengers

750 litre firebombing bucket

2425 kg gross weight

Cruise speed up to 240 km/h

Three bladed composite main rotor

12.6m length, 10.7m rotor diameter

Turbomeca Arriel 2B1 turbo shaft engine

847 HP available at take off

Fuel consumption 175 litres/h of Jet-A1

2+ fire agency radios, Satellite tracking

The Eurocopter EC130 helicopter light single engine utility helicopter from manufacturer Eurocopter, now Airbus Helicopters. The EC130 helicopter a development of the AS350 'Squirrel' helicopter with a wider fuselage and a Fenestron tail rotor. It is used by fire agencies primarily for reconnaissance and supervision of fire operations and the insertion of fire crews into remote areas. Other roles include fire bombing, and utility missions carrying the pilot and up to six passengers or crew depending on the mission.

The EC130 is particularly well suited to supervising fire fighting operations with its performance allowing it to quickly reach the fire area and then operate there for long periods while affording the crew an ergonomic comfortable environment to work. The EC130 is also used to conduct aerial observation and fire detection operations where it is used to collect intelligence information about fires and pass this on to incident management teams on the ground.

When firebombing the EC130 can lift up to 750 litres of water in an under slung bucket. To this the pilot can add a measured quantity of fire fighting suppressant foam to increase the effectiveness of the load when it is dropped on a fire. The EC130 can also be used to insert fire crews into areas to remote to quickly access by road or foot.

The EC130 helicopter operates alongside other fire fighting aircraft to support fire fighting crews on the ground. Carried on board the aircraft are sophisticated communication and tracking equipment that keep the aircraft in constant contact with other aircraft and the fire agency crews managing fires on the ground.

The South Australian Government has contracted, through NAFC, one Eurocopter EC130 B4 helicopter for the 2018-19 fire season. Aircraft in the national aerial fire fighting fleet are available for use across all states and territories



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## MBB/Kawasaki BK 117

Call sign "Helitak"

Primary roles: Fire crew insertion, Firebombing

Other roles: Transport, utility

Twin engine helicopter

270kg 75m 'Breeze Eastern' HS-20200 rescue hoist

Single pilot, up to eight passengers

900 litre firebombing bucket

3500 kg gross weight

Cruise speed 215 km/h

Four bladed composite main rotor

13.0m length, 11.0m rotor diameter

2 x 750HP Honeywell LTS101-850B-2 turbo shaft engines

Fuel consumption 300 litres/h of Jet-A1

2+ fire agency radios, Satellite tracking

The MBB/Kawasaki BK 117 helicopter is a medium weight, multi role, twin engined helicopter produced as joint development between Messerschmitt-Bölkow-Blohm (MBB) of Germany and Kawasaki of Japan. It is used by fire agencies primarily for winching of fire crews into remote areas and firebombing. Other roles include transport and utility missions carrying the pilot and up to eight passengers or crew depending on the mission.

The BK117 is fitted with a winch capable of lifting a 270kg load on a 75m cable. With this winch the aircraft is used to insert remote area firefighting teams into areas to remote to quickly access by road or foot.

With its two upgraded engines the 850B-2 BK117 is particularly well suited to winching and other fire fighting operations. Its high speed allows it to reach remote fires quickly.

When firebombing the BK117 can pick up 900 litres of water in an under slung bucket. The pilot can add a measured quantity of fire fighting suppressant foam to this water increase its effectiveness when it is dropped on a fire.

The BK117 helicopters operate alongside other fire fighting aircraft to support fire fighting crews on the ground. Carried on board the aircraft are sophisticated communication and tracking equipment that keep the aircraft in constant contact with other aircraft and the fire agency crews managing fires on the ground.

The New South Wales Government has contracted, through NAFC, three MBB/Kawasaki BK 117 helicopters for the 2018-19 fire season. Aircraft in the national aerial fire fighting fleet are available for use across all states and territories.





## Eurocopter EC145

Call sign "Helitak"

Primary roles: Fire crew insertion, Firebombing

Other roles: Transport, utility

Twin engine helicopter

270kg 91m 'Goodrich' Winch

Single pilot, up to eight passengers

910 litre firebombing bucket

3585 kg gross weight

Cruise speed 220 km/h

Four bladed composite main rotor

13.0m length, 11.0m rotor diameter

2 x 700HP Arriel 1E2 turbo shaft engines

Fuel consumption 265 litres/h of Jet-A1

2+ fire agency radios, Satellite tracking

The Eurocopter EC145 helicopter is a medium weight, multi role, twin engined helicopters from manufacturer Aerospatiale, then Eurocopter and now Airbus helicopters. It is used by fire agencies primarily for winching of fire crews into remote areas and firebombing. Other roles include transport and utility missions carrying the pilot and up to eight passengers or crew depending on the mission.

The EC145 is fitted with a winch capable of lifting a 270kg load on a 90m cable. With this winch the aircraft is used to insert remote area firefighting teams into areas to remote to quickly access by road or foot.

With its two powerful engines the EC145 is particularly well suited to winching and other fire fighting operations. Its high speed allows it to reach remote fires quickly. A distinctive feature of the EC145 are the clam-shell rear doors and large open cabin area, this allows for the aircraft to be radially configured for a number of different roles.

When firebombing the EC145 can pick up 850 litres of water in an under slung bucket. The pilot can add a measured quantity of fire fighting suppressant foam to this water increase its effectiveness when it is dropped on a fire.

The EC145 helicopters operate alongside other fire fighting aircraft to support fire fighting crews on the ground. Carried on board the aircraft are sophisticated communication and tracking equipment that keep the aircraft in constant contact with other aircraft and the fire agency crews managing fires on the ground.

The New South Wales Government has contracted, through NAFC, one Eurocopter EC145 helicopter for the 2018-19 fire season. Aircraft in the national aerial fire fighting fleet are available for use across all states and territories



## Eurocopter AS365N2 Dauphin

Call sign "Helitak"

Primary roles: Reconnaissance, firebombing

Other roles: Fire crew insertion, transport, utility

Twin engine helicopter

270kg 100m 'Air Equipment' Winch

Single pilot, up to eight passengers

1025 litre firebombing bucket

4250 kg gross weight

Cruise speed 260 km/h

Four bladed composite main rotor

13.7m length, 11.9m rotor diameter

2 x 750HP Arriel 1C2 turbo shaft engines

Fuel consumption 340 litres/h of Jet-A1

2+ fire agency radios, Satellite tracking

The Eurocopter AS365N2 Dauphin helicopter is a medium weight twin engined helicopters from manufacturer Aerospatiale, then Eurocopter and now Airbus helicopters. It is used by fire agencies primarily for insertion of fire crews into remote areas and firebombing. The AS365N2 can also be configured with an infrared camera and mapping systems to provide a high quality fire reconnaissance system. Other roles include transport and utility missions carrying the pilot and up to eight passengers or crew depending on the mission.

With its two powerful engines the AS365N2 is particularly well suited to firefighting operations. Its high speed allows it to reach remote fires quickly. A distinctive feature of the AS365 is the "fenestron" tail rotor. The fenestron reduces the noise of the aircraft and increases performance.

When firebombing the AS365N2 can pick up 1000 litres of water in an under slung bucket. The pilot can add a measured quantity of fire fighting suppressant foam to this water increase its effectiveness when it is dropped on a fire. The AS365N2 can be fitted with a winch capable of lifting a 270kg load on a 100m cable. With this winch the aircraft is used to insert remote area firefighting teams into areas to remote to quickly access by road or foot.

The AS365N2 helicopters operate alongside other fire fighting aircraft to support fire fighting crews on the ground. Carried on board the aircraft are sophisticated communication and tracking equipment that keep the aircraft in constant contact with other aircraft and the fire agency crews managing fires on the ground.

The Western Australian Government has contracted, through NAFC, two Eurocopter AS365N2 helicopter for the 2018-19 fire season. Aircraft in the national aerial fire fighting fleet are available for use across all states and territories



## Bell 204B

Call sign "Helitak"  
 Primary roles: Firebombing  
 Other roles: Transport, utility  
 Single engine helicopter  
 Single pilot, up to eleven passengers  
 1290 litre long-line firebombing bucket  
 4300 kg gross weight  
 Cruise speed 185 km/h  
 Two bladed main rotor  
 17.3m length, 14.6m rotor diameter  
 1400HP Pratt and Whitney T53-13B turbo shaft engine  
 Fuel consumption 340 litres/h of Jet-A1  
 2+ fire agency radios  
 Satellite tracking

The Bell 204B helicopter is a medium weight single engine helicopter. It is a civilian derivative of the Bell UH-1 "Huey" helicopter usually fitted with an upgraded engine. It is used by fire agencies primarily for firebombing. Other roles include transport and utility missions carrying the pilot and up to eleven passengers or crew depending on the mission.

The 204B is typically fitted with a 'PowerFill' firefighting bucket on a 150 foot 'long-line'. With this equipment the aircraft can fill from quite small water sources including rivers, dams, ponds and swimming pools. The long line allows the aircraft to lift water from water sources where there is not enough clearance from obstacles to safely allow the helicopter to descend and hover fill with a pond snorkel and tank. Pilots are able to mix in a measured quantity of fire fighting suppressant foam to increase the effectiveness of the load when it is dropped on a fire.

The 204B can be quickly reconfigured to carry passengers or other loads internally, or up to 1400 kg loads externally on its cargo hook.

The Bell 204B helicopters operate alongside other fire fighting aircraft to support fire fighting crews on the ground. Carried on board the aircraft are sophisticated communication and tracking equipment that keep the aircraft in constant contact with other aircraft and the fire agency crews managing fires on the ground.

The New South Wales and Victorian Governments have contracted, through NAFC, two Bell 204B helicopters for the 2016-17 fire season. Aircraft in the national aerial fire fighting fleet are available for use across all states and territories





## Bell 212

Call sign "Helitak"

Primary roles: Firebombing, fire crew insertion

Other roles: Transport, utility

Twin engine helicopter

Two line rappel system

Single pilot, up to fourteen passengers

1477 litre firebombing tank

5090 kg gross weight

Cruise speed 185 km/h

Two bladed main rotor

17.4m length, 14.6m rotor diameter

1800HP Pratt and Whitney PT6T-3BFTwin-Pac engine

Fuel consumption 340 litres/h of Jet-A1

2+ fire agency radios

Satellite tracking

The Bell 212 helicopter is a medium weight twin engined helicopter. It is a modern derivative of the Bell UH-1 "Huey" helicopter. It is used by fire agencies primarily for firebombing and insertion of fire crews into remote areas. Other roles include transport and utility missions carrying the pilot and up to fourteen passengers or crew depending on the mission.

The 212 may be fitted with two line rappel system or winch. With this equipment the aircraft is used to insert specially trained firefighting into fires that cannot be quickly accessed by road or foot. The rappel system also includes a cargo arm that allows a crewman on board the helicopter to lower cargo to fire fighters on the ground.

With its two powerful engines driving a common gearbox the 212 is particularly well suited to rappelling and other fire fighting operations. The majority of firefighting 212 helicopters are fitted with BLR Fast Fins and tail boom strakes. These modifications increase tail rotor effectiveness allowing the aircraft to lift a greater load with greater control.

Most contracted Bell 212s are fitted with a 1477 litre Conair 85 KE firebombing belly tank. The aircraft can hover-fill from quite small water sources including rivers, dams, ponds and swimming pools. Pilots are able to mix in a measured quantity of fire fighting suppressant foam to increase the effectiveness of the load when it is dropped on a fire.

The Bell 212 helicopters operate alongside other fire fighting aircraft to support fire fighting crews on the ground. Carried on board the aircraft are sophisticated communication and tracking equipment that keep the aircraft in constant contact with other aircraft and the fire agency crews managing fires on the ground.

The Victorian Government has contracted, through NAFC, six Bell 212 helicopters for the 2018-19 fire season. Aircraft in the national aerial fire fighting fleet are available for use across all states and territories.



## Bell 412

Call sign "Helitak"

Primary roles: Firebombing, fire crew insertion

Other roles: Transport, utility

Twin engine helicopter

270kg, 75m 'Goodrich' winch or two line rappel system

Single pilot, up to eleven passengers

1400 litre firebombing tank

5400 kg gross weight

Cruise speed 225 km/h

Four bladed main rotor

17.1m length, 14.0m rotor diameter

1800HP Pratt and Whitney PT6T-3BF Twin-Pac engine

Fuel consumption 410 litres/h of Jet-A1

2+ fire agency radios, Satellite tracking

The Bell 412 helicopter is a medium weight twin engined helicopter. It is a modern derivative of the Bell UH-1 "Huey" helicopter. It is used by fire agencies primarily for firebombing and insertion of fire crews into remote areas. Other roles include transport and utility missions carrying the pilot and up to eleven passengers or crew depending on the mission.

The 412 can be fitted with a winch capable of lifting a 270kg load on a 75m cable or with a two line rappel system. With the rappel system or winch the aircraft is used to insert remote area firefighting teams into fires that cannot be quickly accessed by road or foot.

With its two powerful engines driving a common gearbox the 412 is particularly well suited to rappelling, winching and other fire fighting operations. Its high speed allows it to reach remote fires quickly. The 412 aircraft are fitted with BLR Fast Fins and tail boom strakes, these modifications increase tail rotor effectiveness allowing the aircraft to lift a greater load with greater control.

The 412 is fitted with a 1400+ litre firebombing belly tank. The aircraft can hover-fill from quite small water sources including rivers, dams, ponds and swimming pools. Pilots can mix a measured quantity of fire fighting suppressant foam to increase the effectiveness of the load when it is dropped on a fire.

The Bell 412 helicopters operate alongside other fire fighting aircraft to support fire fighting crews on the ground. Carried on board the aircraft are sophisticated communication and tracking equipment that keep the aircraft in constant contact with other aircraft and the fire agency crews managing fires on the ground.

The NSW and Victorian Governments have contracted, through NAFC, five Bell 412 helicopters for the 2018-19 fire season. Aircraft in the national aerial fire fighting fleet are available for use across all states and territories



## Bell 214B Big Lifter

Call sign "Helitak"

Primary role: Firebombing

Other roles: passenger / cargo transport

Single engine helicopter

Single pilot, up to 14 passengers

2650 litre firebombing tank capacity

Cruise speed 240 km/h

Two bladed main and tail rotors

6300 kg maximum take-off weight

17.7 m length, 14.7 rotor diameter,

2950 HP Lycoming T5508D turbo shaft engine,

Fuel consumption 600 litres/h of Jet-A1

2+ fire agency radios, satellite tracking

The Bell 214B helicopter is the largest, most powerful single engined helicopter in the world. It is used by fire agencies primarily for firebombing, passenger and cargo transport and utility missions carrying the pilot and up to 14 passengers depending on configuration.

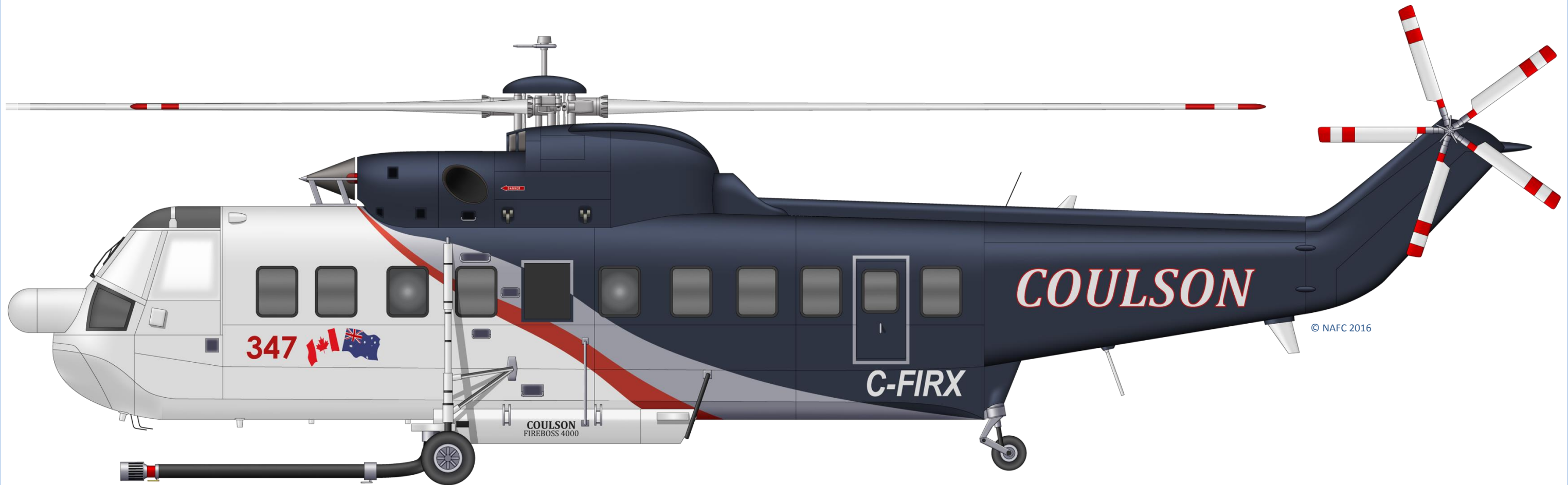
The 214B is typically fitted with 'Tsunami' firebombing belly tank. With this fitted the pilot can fill 2650 litres of water in approximately 35 seconds. To this they can mix a measured quantity of fire fighting suppressant foam to increase the effectiveness of the load when it is dropped on a fire. Pilots can hover fill from quite small water sources including rivers, dams, ponds and swimming pools, however they do need a reasonable clearance around the filling point to avoid damage or disruption due to the substantial down wash from the aircraft rotor and to give the aircraft a clear path to approach and depart.

The 214B is also used for transport of passengers and cargo. Some aircraft are fitted with extra high skids to allow them to land in long grass and other low vegetation in remote areas where constructed helipads do not exist.

The 214B operates alongside other fire fighting aircraft to support fire fighting crews on the ground. Carried on board the aircraft are sophisticated communication and tracking equipment that keep the aircraft in constant contact with other aircraft and the fire agency crews managing fires on the ground.

The State Governments of Australia have contracted, through NAFC, twelve Bell 214B helicopters for the 2018-19 fire season. Aircraft in the national aerial fire fighting fleet are available for use across all states and territories





## Sikorsky S61N

Call sign "Helitak"

Primary roles: Firebombing, fire crew insertion,

Other roles: Transport, utility

Twin engine helicopter

Coulson single line rappel system

Single pilot, up to eighteen passengers

4000 litre firebombing tank

9980 kg gross weight

Cruise speed 225 km/h

Five bladed main rotor

21.95m length, 18.9m rotor diameter

2 x 1500HP General Electric CT58-140 turbo shaft engines

Fuel consumption 625 litres/h of Jet-A1

2+ fire agency radios, Satellite tracking

The Sikorsky S61N helicopter is a heavy lift, multi role, twin engined helicopter it is a civil variant of the successful SH-3 Sea King helicopter. It is used by fire agencies primarily for firebombing. Other roles include rappelling of fire crews into fires in remote areas and transport missions carrying the pilot and up to eighteen passengers or crew depending on the mission.

When firebombing the S61N can pick up 4000 litres of water in it's firebombing tank or 2850 litres in an under slung bucket. The pilot can add a measured quantity of fire fighting suppressant foam to this water increase its effectiveness when it is dropped on a fire.

The S61N is a multi-role aircraft. It can be readily reconfigured from firebombing with a tank to long line operations with a power-fill bucket. It can also be used to transport up to 18 passengers in airline style comfort or large amounts of cargo inside the aircraft or slung underneath.

The S61N is fitted with a single line rappel system. With this rappel system the aircraft is used to insert fire fighting crews into areas too remote to quickly access by road or foot.

One S61N aircraft is specially configured to conduct operations under night vision goggles. This aircraft will be used to continue night firebombing trials in Victoria.

The Sikorsky S61N helicopters operate alongside other fire fighting aircraft to support fire fighting crews on the ground. Carried on board the aircraft are sophisticated communication and tracking equipment that keep the aircraft in constant contact with other aircraft and the fire agency crews managing fires on the ground.

The Victorian Government has contracted, through NAFC, are three Sikorsky S61N helicopters for the 2018-19 fire season. Aircraft in the national aerial fire fighting fleet are available for use across all states and territories.



## Erickson S64E - Aircrane

Call sign "Helitak"

Primary role: Firebombing

Other roles: Heavy lifting

Twin engine heavy helicopter

Two pilots for firebombing operations

7560 litre firebombing tank

7700 kg realistic external load

19090 kg gross weight

Cruise speed 215 km/h

Six bladed main rotor

26.8m length, 22.0m rotor diameter

2 x 4500HP Pratt & Whitney JFTD12A-4A turbo shaft engines

Fuel consumption 1985 litres/h of Jet-A1

2+ fire agency radios, Satellite tracking

The Erickson S64E Aircrane is a purpose built heavy lift helicopter. It is the civil variant of the Sikorsky CH-54A Tarhe. Erickson Aircrane purchased the Type Certificate and manufacturing rights from Sikorsky 1992 and now able to zero time or remanufacture these unique aircraft

The S64E Aircrane is used by fire agencies primarily for firebombing. In this role it typically utilises a computer controlled firebombing tank system that is designed to deliver a constant flow of fire suppressant or retardant on to the target area regardless of the movement of the aircraft. If required the Aircrane can be fitted with an underslung power fill bucket on a long line.

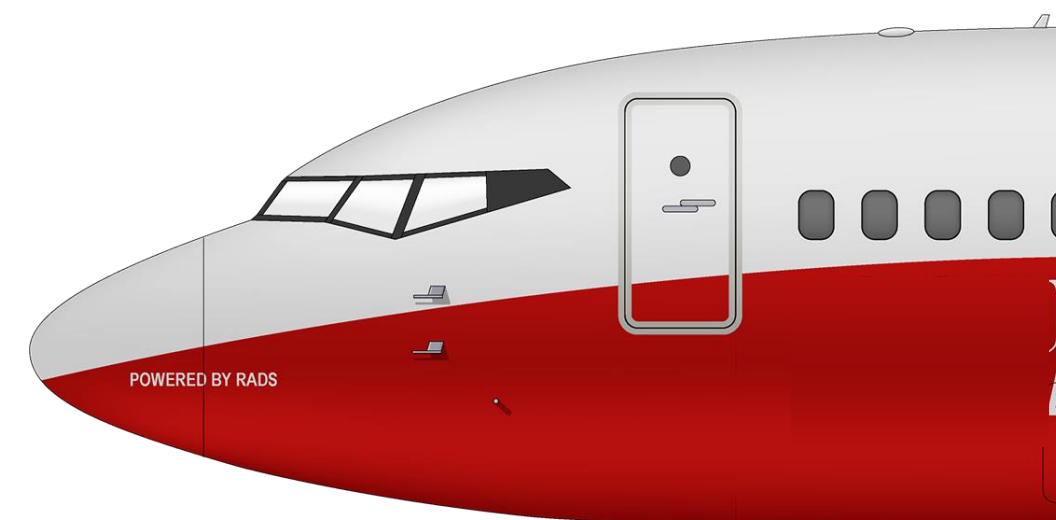
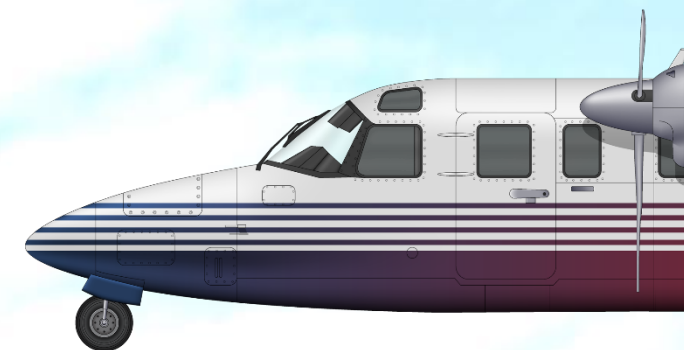
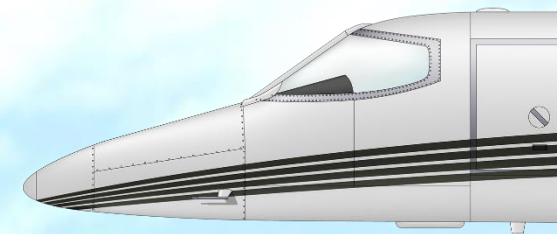
The S64E Aircrane can pick up 7560 litres of water in its firebombing tank with its 'pond' snorkel while hovering for 45 seconds or where larger bodies of water are available in 30 seconds by flying low over the water's surface with its 'sea' snorkel extended. The pilot can add a measured quantity of fire fighting suppressant foam to this water increase its effectiveness when it is dropped on a fire. Where circumstances call for it ground crew can set up tanks of pre mixed fire retardant solution for the Aircrane to fill from.

Other roles include the lifting of heavy or oversize loads underslung on a long line beneath the helicopter. In these missions the aircraft may carry a third person as a rear facing observer-pilot to assist with precisely positioning the load.

The S64E Aircrane helicopters operate alongside other fire fighting aircraft to support fire fighting crews on the ground. Carried on board the aircraft are sophisticated communication and tracking equipment that keep the aircraft in constant contact with other aircraft and the fire agency crews managing fires on the ground.

The State Governments of Australia have contracted, through NAFC, six Erickson S64E Aircrane helicopters for the 2016-17 fire season. Aircraft in the national aerial fire fighting fleet are available for use across all states and territories.

# Fixed Wing Aircraft 2018/19







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## Cessna 182T Skylane

Reconnaissance / utility aircraft.

Single Engine High wing

Call sign "Fire spotter"

Single pilot crew

Three passengers

1400 kg gross weight

Cruise speed 270 km/h

8.8 m length, 11 m wingspan,

230 HP Lycoming IO-540 piston engine

Three bladed constant speed propeller

Fuel consumption 55 litres/h of AvGas

Day, night and instrument flight

Garmin 1000 'glass' cockpit

2+ fire agency radios

Satellite tracking

The Cessna 182T Skylane is a modern version of the well known Cessna 182 line of aircraft. It is used by fire agencies primarily for fire detection, reconnaissance and utility missions carrying the pilot and up to three passengers or crew.

The C182T is particularly well suited to the fire detection and reconnaissance mission with its high wing offering excellent visibility from all seats, and the ability to slow down and loiter in the fire area. When working as a 'fire spotter' the primary responsibility for the crew is to collect relevant information about the fires below and pass it on to the incident management team.

The C182T is also used for utility missions ferrying passengers and cargo into locations as diverse as major city airports to the remote dusty rural airstrips. When required the C182T can also be utilised for air attack supervision where an experienced fire agency crew member takes charge of part of the fire fighting operation from their aircraft while orbiting overhead.

With the C182T Cessna takes advantage of modern design and technology to advance safety through the inclusion of features such as a digital cockpit, lightning detection, airbag seat belts, pulsed recognition lighting and traffic awareness technology. The aircraft's range and performance allows it to operate over long distances, and from sea level up into the mountains

The Cessna 182 aircraft operates alongside other fire fighting aircraft to support fire fighting crews on the ground. Carried on board the aircraft are sophisticated communication and tracking equipment that keep the aircraft in constant contact with other aircraft and the fire agency crews managing fires on the ground.

The New South Wales Government has contracted, through NAFC, two Cessna 182 aircraft for the 2018-19 fire season. Aircraft in the national aerial fire fighting fleet are available for use across all states and territories



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## Cessna 337G Skymaster

Call sign "Birddog"

Primary role: air attack supervision

Other roles: reconnaissance / utility aircraft.

Centreline thrust twin engine design

High wing, piston engined

Single pilot, 3 passengers

2100 kg gross weight

Cruise speed 250 km/h

9.0 m length, 11.6 m wingspan

2 x 210 HP Continental IO-360-G engines

Fuel consumption 80 litres/h of AvGas

Day, night and instrument flight

Up to 6 hours endurance

2+ fire agency radios

Satellite tracking

The Cessna 337 Skymaster is a unique design with its two engines in a push pull configuration and a twin boom tail. The C337 is used by fire agencies primarily for supervision of fire operations, fire detection, reconnaissance and utility missions carrying the pilot and up to three passengers or crew depending on the mission and aircraft configuration.

The C337 is particularly well suited to the fire detection, reconnaissance and supervision missions with its high wing offering excellent visibility from the front seats, and the ability to slow down and loiter in the fire area. When working as a 'Birddog' the primary responsibility for the crew is to supervise aerial fire fighting operations and to collect intelligence information about a fire and pass it on to the incident management team.

The C337 is also used for utility missions ferrying passengers and cargo into locations such as major city airports and remote dusty rural airstrips and everywhere in between. The C337 can be equipped with specialist intelligence gathering equipment including cameras that stream real time vision of the fire scene to incident management teams on the ground

The C337 is regarded as a rugged and reliable aircraft. Its centreline thrust arrangement means that the aircraft has no tendency to yaw to one side in the event of an engine failure. The C337s speed and range make it ideal for supporting fire operations in regional locations.

The Cessna 337G aircraft operates alongside other fire fighting aircraft to support fire fighting crews on the ground. Carried on board the aircraft are sophisticated communication and tracking equipment that keep the aircraft in constant contact with other aircraft and the fire agency crews managing fires on the ground.

The Victorian Government has contracted, through NAFC, three Cessna 337G aircraft for the 2018-19 fire season. Aircraft in the national aerial fire fighting fleet are available for use across all states and territories.



## Cessna 208B Grand Caravan

Call sign "Birddog"

Primary role: air attack supervision

Other roles: reconnaissance / utility aircraft.

Single engine, turbo prop, high wing

Single pilot, nine passengers

3950 kg gross weight

Cruise speed 300 km/h

12.7 m length, 15.8 m wingspan,

675 HP Pratt & Whitney PT6A-114A Turbo shaft engine

Three bladed constant speed reversible propeller

Fuel consumption 175 litres/h of Jet-A1

Day, night and instrument flight

Up to 6 hours endurance

2+ fire agency radios

Satellite tracking

The Cessna 208 Grand Caravan is the largest single-engine airplane ever produced by Cessna. It is used by fire agencies primarily for supervision of fire operations, fire detection, reconnaissance and utility missions carrying the pilot and up to nine passengers or crew depending on the mission.

The C208B is particularly well suited to the fire detection, reconnaissance and supervision missions with its high wing offering excellent visibility from all seats, and the ability to slow down and loiter in the fire area. When working as a 'birddog' the primary responsibility for the crew is to supervise aerial fire fighting operations and to collect intelligence information about a fire and pass it on to the incident management team.

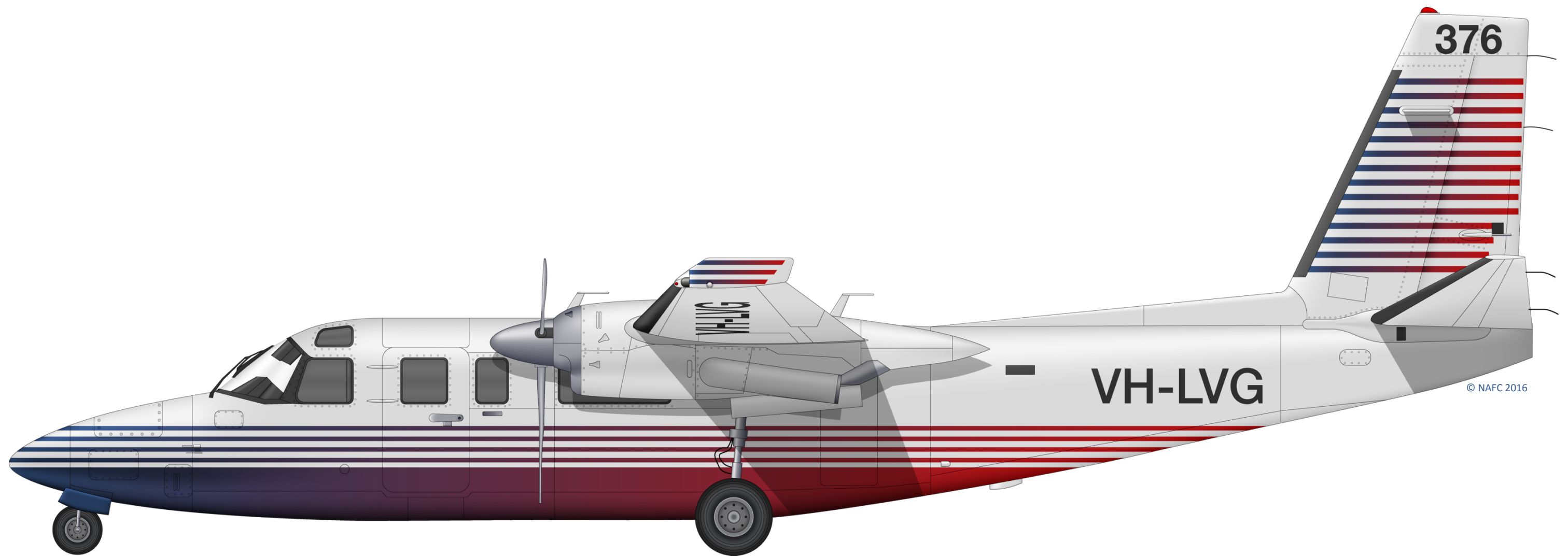
The C208B is also used for utility missions ferrying passengers and cargo into locations such as major city airports and remote dusty rural airstrips and everywhere in between. The large passenger and cargo carrying capacity allows the aircraft to move small teams of fire fighters and their equipment around quickly to meet the requirements of fire agencies.

With the C208B Cessna takes advantage of the proven record of the P&W PT6 turbo prop engine to produce a high performance, high reliability aircraft. The aircraft's range and performance allows it to operate over long distances, and from sea level up into the mountains

The Cessna 208B aircraft operates alongside other fire fighting aircraft to support fire fighting crews on the ground. Carried on board the aircraft are sophisticated communication and tracking equipment that keep the aircraft in constant contact with other aircraft and the fire agency crews managing fires on the ground.

The South Australian and Victorian Governments have contracted, through NAFC, two Cessna 208B aircraft for the 2018-19 fire season. Aircraft in the national aerial fire fighting fleet are available for use across all states and territories





## Rockwell Turbo Commander 690B

Call sign "Birdog"

Primary role: air attack supervision

Other roles: reconnaissance / utility aircraft.

Twin engine, turbo prop, high wing

Single pilot, 5 passengers

4650 kg gross weight

Typical cruise speed 500 km/h

Typical cruise altitude 18,000 feet

13.5 m length, 14.2 m wingspan

2 x 717 HP Garrett TPE 331-10 engines

Fuel consumption 300 litres/h of JetA1

Day, night and instrument flight

More than 3.5 hours endurance

2+ fire agency radios & satellite tracking

Smoke trail generator

The Rockwell Turbo Commander 690B is a twin engine, high wing, passenger transport aircraft. The Turbo Commander is used by fire agencies primarily for aerial supervision of airtanker operations. Other roles include supervision of fire operations, fire detection, reconnaissance and utility missions carrying the pilot and up to five passengers or crew depending on the mission.

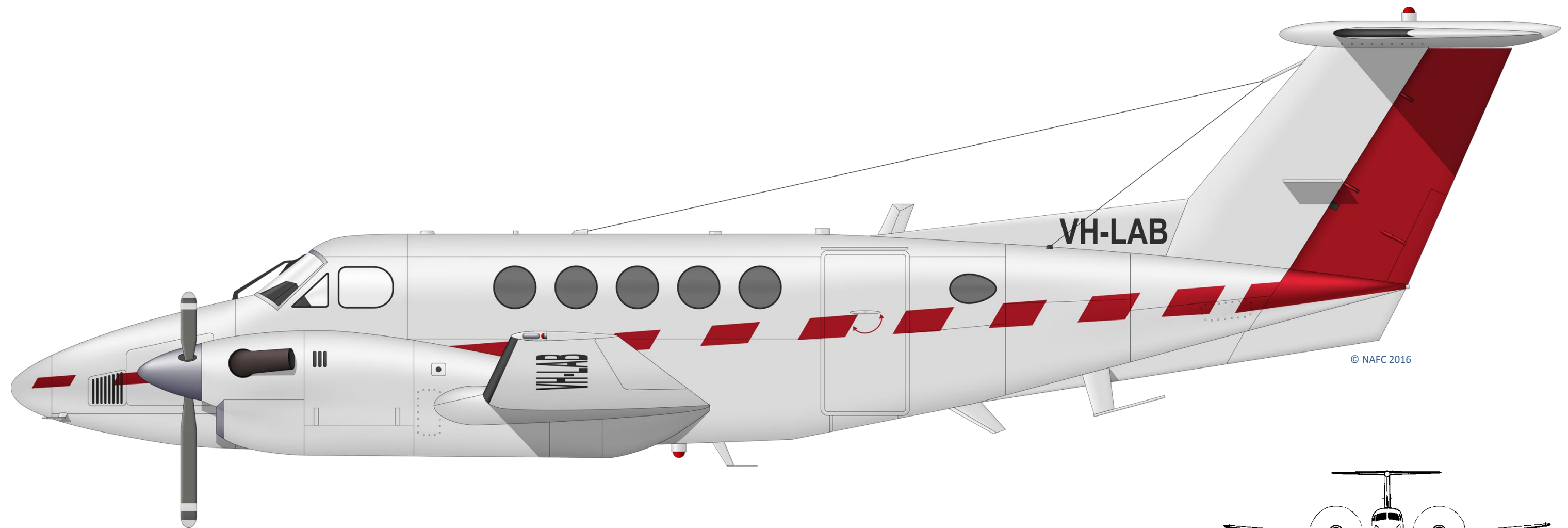
The Turbo Commander is particularly well suited to aerial supervision with its high wing offering excellent visibility from the front seats, and the ability to slow down and loiter in the fire area. When working as a 'Birdog' the main responsibility for the crew is to supervise aerial fire fighting operations and to collect intelligence information about a fire and pass it on to the incident management team.

The Turbo Commander is used to supervise airtanker operations. An on board air attack supervisor will direct air tankers where and how to drop their load on the fire. The aircraft can be used to fly the drop profile to show the airtanker where to fly and to identify hazards and landmarks. In some circumstances the Turbo Commander can be used to lead the airtanker through its drop pattern and generate a smoke marker trail at the required drop location.

The Turbo Commanders speed, range and climb performance make it ideal for supporting fire operations in regional locations. It can quickly climb to altitude cruise at high speed, then descend and slow down in the fire area. It can readily match the speed of large air tankers when operating in the fire area.

The Rockwell Turbo Commander aircraft operates alongside other fire fighting aircraft to support fire fighting crews on the ground. Carried on board the aircraft are sophisticated communication and tracking equipment that keep the aircraft in constant contact with other aircraft and the fire agency crews managing fires on the ground.

The NSW, QLD and Victorian Governments have contracted, through NAFC, three Rockwell Turbo Commander aircraft and one similar piston engine Aero Commander for the 2018-19 fire season. Aircraft in the national aerial fire fighting fleet are available for use across all states and territories.



## Beechcraft King Air - B200T

Call sign "Firescan"

Primary role: Fire Scanning

Other roles: Reconnaissance / utility

Twin engined turboprop

Single pilot, one system operator

Operating speed 245 Knots ( 450 km/h)

1300m Runway required normal ops

6100 kg maximum take-off weight

13.3 m length, 16.8 wing span

Two P&W PT6A-42 turboprop engines

Fuel consumption 340 litres/h of Jet-A1

Infrared and multispectral line scanner

Satellite broad band data transmission

2+ fire agency radios, Satellite tracking

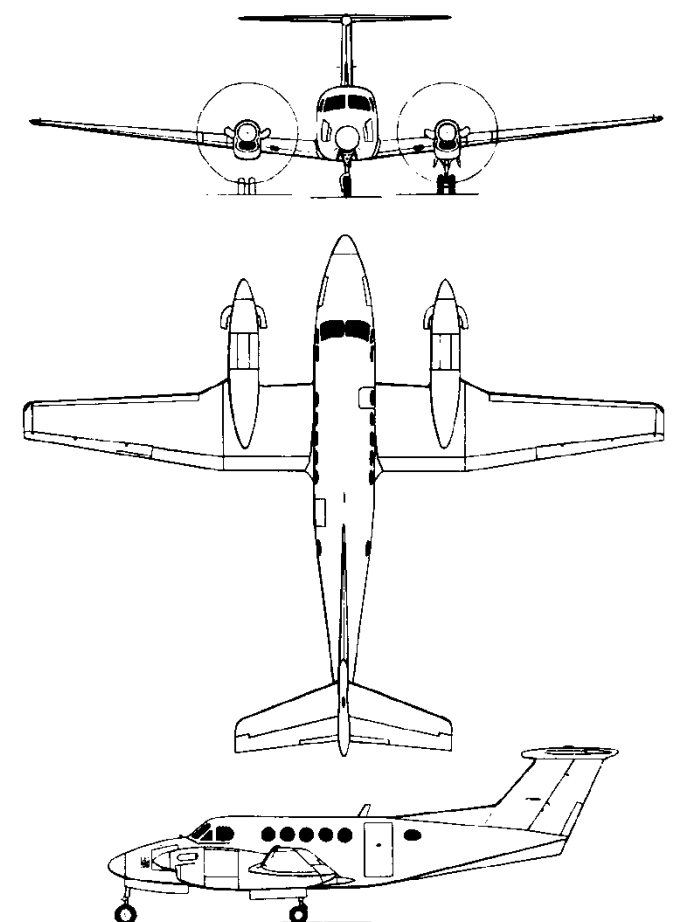
The Beechcraft Super King Air is one of the most common twin engined turboprop aircraft available. Since the first model was built in 1974 the King Air range has had the longest production run of any civilian turboprop aircraft in its class. It is primarily used by fire agencies for fire detection and fire mapping operations, other uses may include passenger and cargo transport and utility missions carrying the pilot and up to 10 passengers. When conducting fire scanning missions the aircraft is fitted with an infrared and multispectral line scanning instrument and data processing system.

When fire scanning the aircraft flies over a fire area at high level, imaging the fire and its surrounding terrain with sensitive thermal and visual sensors. Processing systems on board the aircraft combine the image data with GPS, inertial measurement systems and terrain elevation data. This processing geo-rectifies the image to make it usable in mapping software and geospatial information systems. The combination of thermal and visual sensors used and the geo-rectification process creates images that are easy for fire fighters to interpret and for them to understand where the fire is and what it is doing.

A broadband satellite data communication system enables rapid transfer of processed and raw data from the aircraft to users on the ground regardless of the aircraft's location.

The B200T King Air operates alongside other fire fighting aircraft to support fire fighting crews on the ground. Carried on board the aircraft are sophisticated communication and tracking equipment that keep the aircraft in constant contact with other aircraft and the fire agency crews managing fires on the ground.

The Victorian and NSW Governments have contracted, through NAFC, one Beechcraft King Air fire scanning aircraft. Aircraft in the national aerial fire fighting fleet are available for use across all states and territories of Australia.





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## Gates Learjet 35A

Call sign "Firescan"  
 Primary role: Fire Scanning  
 Other roles: Reconnaissance / utility  
 Twin engaged turbofan  
 Two pilots, one system operator  
 Operating speed 350 Knots ( 650 km/h)  
 1800m Runway required normal ops  
 8300kg maximum take-off weight  
 14.8m length, 12.0m wing span  
 Two Honeywell TFE731 turbofan engines  
 Fuel consumption 1000 litres/h of Jet-A1  
 Infrared and multispectral line scanner  
 Satellite broad band data transmission  
 2+ fire agency radios, Satellite tracking

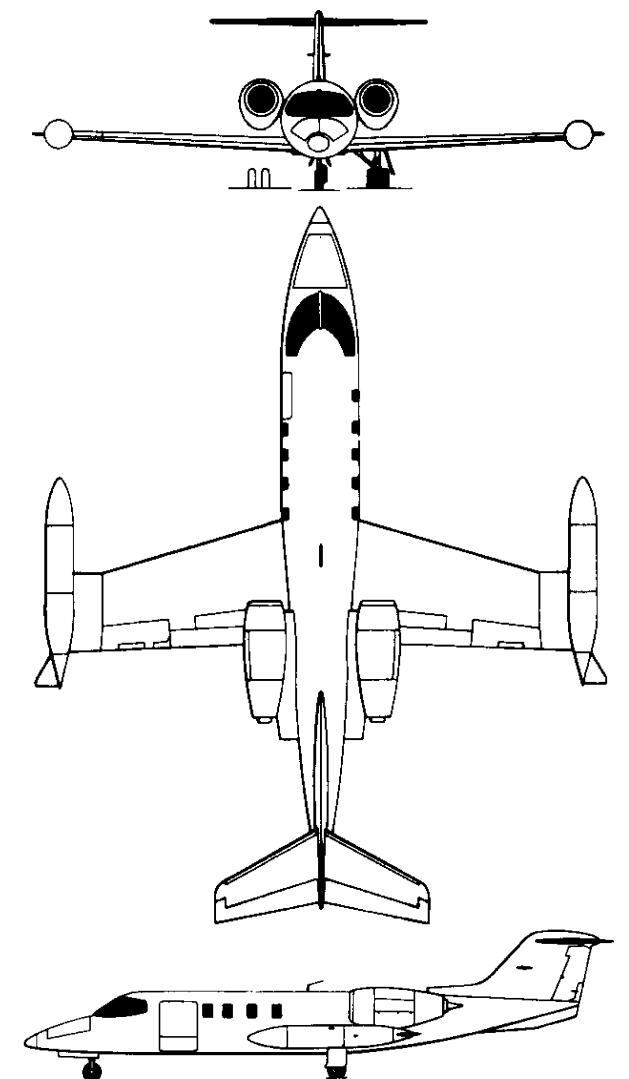
The Learjet is widely recognised as the aircraft that introduced practical private jets to the world. The model 35A was first flown in 1973. Production of the model 35/36 series continued until 1994. The design of the Learjet wing allows the carriage of external stores mounted on hard points built into the wing. The Learjet 35A is used by fire agencies primarily for fire detection and fire mapping operations, other uses include reconnaissance and utility missions. When conducting fire scanning missions the aircraft is fitted with an infrared and multispectral line scanning instrument and data processing system. The scanner instrument may be fitted in a pod under one wing, or in a standard aerial photography camera mount inside the aircraft fuselage.

When fire scanning the aircraft flies over a fire area at high level, imaging the fire and its surrounding terrain with sensitive thermal and visual sensors. Processing systems on board the aircraft combine the image data with GPS, inertial measurement systems and terrain elevation data. This processing geo-rectifies the image to make it usable in mapping software and geospatial information systems. The combination of thermal and visual sensors used and the geo-rectification process creates images that are easy for fire fighters to interpret and for them to understand where the fire is and what it is doing.

A broadband satellite data communication system enables rapid transfer of processed and raw data from the aircraft to users on the ground regardless of the aircraft's location.

The Learjet 35A operates alongside other fire fighting aircraft to support fire fighting crews on the ground. Carried on board the aircraft are sophisticated communication and tracking equipment that keep the aircraft in constant contact with other aircraft and the fire agency crews managing fires on the ground.

The Victorian and NSW Governments have contracted, through NAFC, three Gates Learjet 35/36 fire scanning aircraft for the 2018/19 fire season. Aircraft in the national aerial fire fighting fleet are available for use across all states and territories of Australia.







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## PZL M18T (Hubler) Dromader

Single Engined Air Tanker.

Call sign "Bomber"

Single pilot crew

2375 litre capacity

5300 kg gross weight

Drop speed 160 km/h

Cruise speed 230 km/h

11.3 m length, 18 m wingspan

Honeywell TPE-331-11 turboprop engine, 1100 HP

Fuel consumption 240 litres/h of Jet A1

Fire retardant or fire suppressant

2+ fire agency radios

Satellite tracking

The PZL M18T Dromader is a fire fighting conversion of the PZL M18B agricultural aircraft. The Hubler conversion replaces the original radial piston engine with a Honeywell TPE331-11 turbine engine. The M18 is designed and built to be a rugged and reliable high performance agricultural aircraft.

The M18T can be filled with a 2375 litre load of either fire retardant or fire suppressant solution. Its turbine engine and high lift wing allow it to safely manoeuvre in steep, rugged country. The pilot can accurately drop the load while flying approximately 30 metres above the target. The M18T returns to the nearest firebombing base to reload. It can reload and be airborne again in 6 to 8 minutes.

The PZL M18T is utilised for both initial attack with fire suppressant on new fires and fire retardant line building on larger fires. Its flexibility enables the M18T to work in both the urban interface and remote areas such as parks and forests.

The PZL M18T aircraft operate alongside other fire fighting aircraft to support fire fighting crews on the ground. Carried on board the aircraft are sophisticated communication and tracking equipment that keep the aircraft in constant contact with the fire agency crews that supervise their operations.

The State Government of Victoria has contracted, through NAFC, two M18T aircraft for the 2018-19 fire season. Aircraft in the national aerial fire fighting fleet are available for use across all states and territories



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## Air Tractor AT802F

Single Engined Air Tanker.

Call sign "Bomber"

Single pilot crew

3200 litre capacity

7250 kg gross weight

Drop speed 200 km/h

Cruise speed 350 km/h

11 m length, 18 m wingspan,

P&W PT6A turboprop engine 1350-1600 HP

Fuel consumption 280 litres/h of Jet A1

Gen II Fire Retardant Dispersal System

Fire retardant or fire suppressant

4+ Radios & Satellite tracking

The Air Tractor 802F is a purpose built fire fighting aircraft. It is the largest single engined turbo prop aircraft currently in production. It is designed and built to be a rugged and reliable high performance firebombing aircraft.

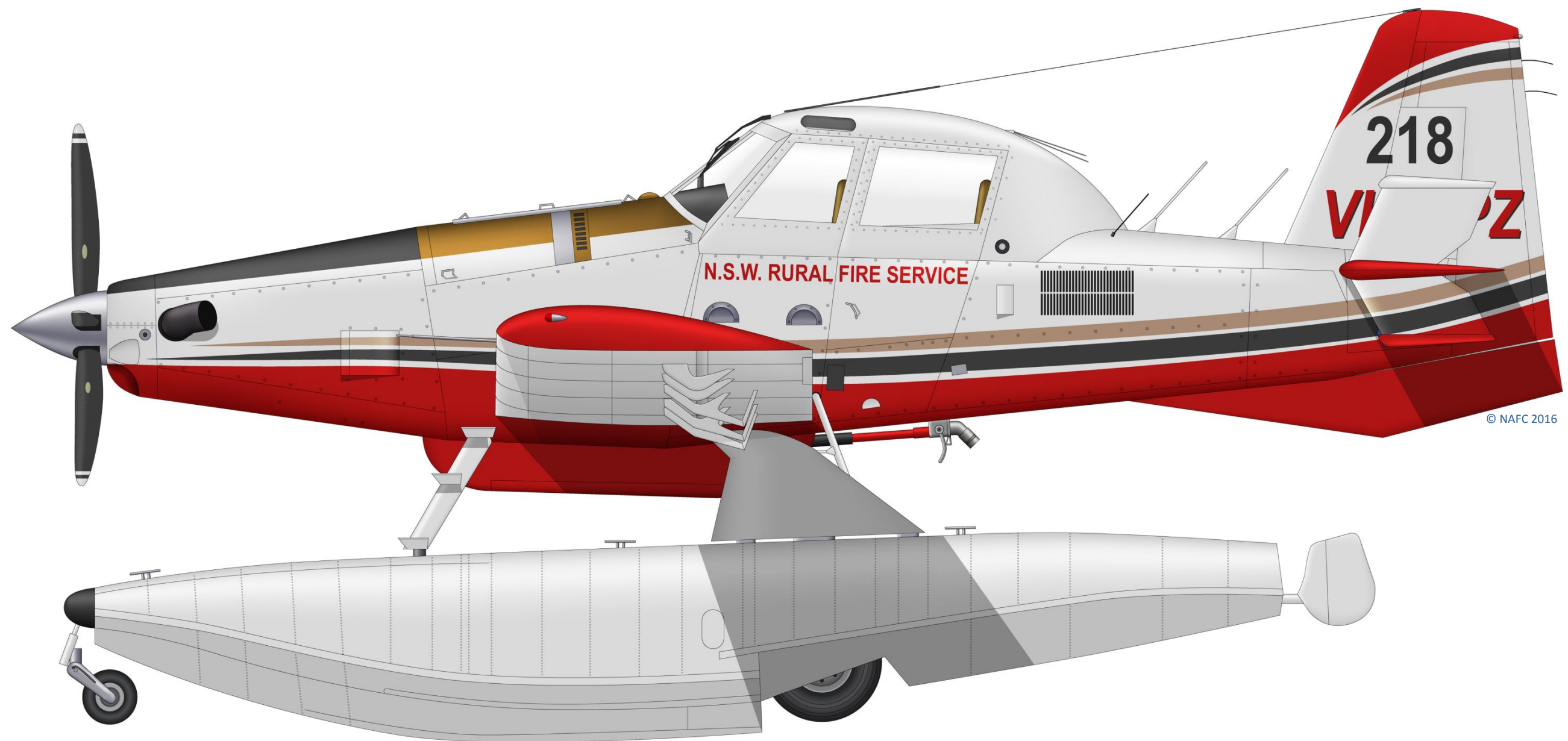
The AT802F can be airborne in less than five minutes from call out and its fast cruise speed means it can reach a fire 50km away in approximately 10 minutes. The computer controlled firebombing system assists the pilot to accurately drop the 3200 litre load while flying approximately 30 metres above the target. The AT802F returns to the nearest firebombing base to reload. It can reload and be airborne again in 6 to 8 minutes.

The AT802F is utilised for both initial attack with fire suppressant on new fires and fire retardant line building on larger fires. Its flexibility enables the AT802F to work in both the urban interface and remote areas such as parks and forests.

The AT802F aircraft operate alongside other fire fighting aircraft to support fire fighting crews on the ground. Carried on board the aircraft are sophisticated communication and tracking equipment that keep the aircraft in constant contact with the fire agency crews that supervise their operations.

The State Governments of Australia have contracted, through NAFC, forty two AT802F aircraft for the 2018-19 fire season. These aircraft are equipped with a variety engines and equipment and can have one or two seats. Aircraft in the national aerial fire fighting fleet are available for use across all states and territories





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## Air Tractor AT802F - Fireboss

Amphibious Single Engined Air Tanker.  
 Call sign "Bomber"  
 Single pilot crew  
 3200 litre capacity  
 7250 kg gross weight  
 Drop speed 200 km/h  
 Cruise speed 275 km/h  
 11 m length, 18 m wingspan,  
 P&W PT6A-67F turboprop engine 1600 HP  
 Fuel consumption 280 litres/h of Jet A1  
 Gen II Fire Retardant Dispersal System  
 Fire retardant or fire suppressant  
 330 litre Foam Concentrate capacity  
 4+ Radios & Satellite tracking

The Air Tractor AT802F - Fireboss is a purpose built amphibious fire fighting aircraft. The Fireboss is a variant of the rugged and reliable Air Tractor AT802F firebombing aircraft. It is able pick up water by skimming over the surface of suitable lakes and rivers.

The Fireboss, while normally based on land, can utilise water sources nearby the fire to refill its firebombing system in just 30 seconds. This can significantly increase the amount of fire suppressant delivered to the fire per hour when suitable water sources are available. Able to operate from water sources at least 750m long and clear of obstructions and the Fireboss is particularly suited to the coastal river country such as that found in Northern NSW and the rivers and dams in the Upper Murray river. The computer controlled firebombing system assists the pilot to accurately drop the 3200 litre load while flying approximately 30 metres above the fire.

While the Fireboss is well suited to initial attack with fire suppressant on fires with nearby water sources it can also operate from air bases on land and be utilised for fire retardant line building on larger or more remote fires. This flexibility enables the Fireboss to operate in both the urban - rural interface and remote areas such as parks and forests.

The Fireboss aircraft operates alongside other fire fighting aircraft to support fire fighting crews on the ground. Carried on board the aircraft are sophisticated communication and tracking equipment that keep the aircraft in constant contact with the fire agency crews that supervise their operations.

The New South Wales and Victorian Governments have contracted, through NAFC, two AT802F – Fireboss aircraft for the 2018-19 fire season. Aircraft in the national aerial fire fighting fleet are available for use across all states and territories





## Avro RJ85 airtanker

Type 1 Airtanker  
 Primary role: Firebombing  
 Two pilots when firebombing  
 Conair constant flow firebombing system  
 11,350 litre retardant capacity  
 Cruise speed (loaded) 680 km/h  
 Typical cruise altitude (loaded) 18,000 feet  
 Typical runway required 1,650m  
 Max runway required (full load hot day) 1,950m  
 28.6 length, 26.3m wingspan  
 42,200 kg gross weight  
 4 x Honeywell LF507-1F turbo fan engines  
 Fuel consumption 3200 litres/h of Jet-A1  
 2+ fire agency radios, Satellite tracking

The Avro RJ85 airtanker is a modification of an Avro RJ85 passenger jet. In its airliner configuration the RJ85 carries up to 100 passengers typically on short haul routes. The RJ85 is a modernised, more powerful upgrade of the well-known BAe-146 line of passenger jets.

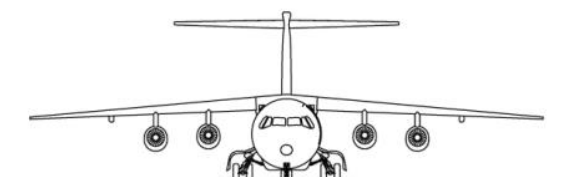
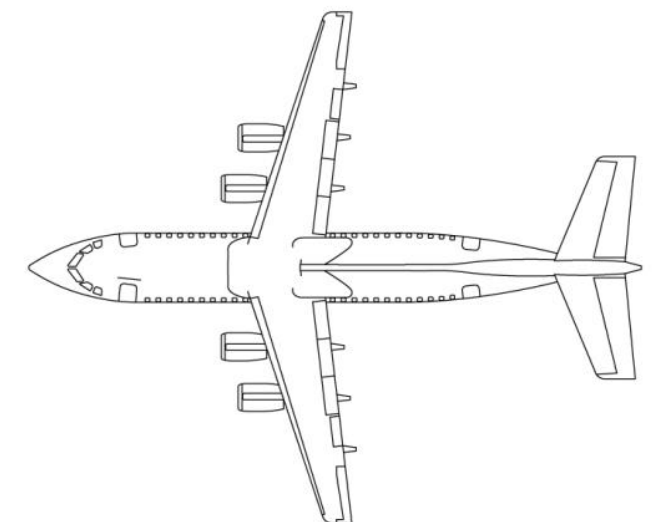
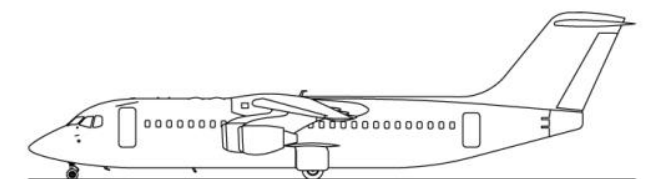
Conair have designed and certified a modification to the RJ85 to integrate a 3,100 US gallon firebombing system. This system installs an external saddle tank around the centre of the aircraft fuselage. An 11,350 litre load of fire retardant solution can be carried on board the aircraft. The computerised firebombing system delivers a constant flow of fire retardant or suppressant to the target area

The RJ85 is used by fire agencies in North America and Australia primarily for firebombing. It can be utilised for both initial attack of new fires with fire suppressant solutions and line building with fire retardant on larger fires. Its flexibility enables the RJ85 to work in both the urban interface and remote areas such as parks and forests.

The RJ85 can operate from many airfields across Australia. With a full retardant load on a 45 degree Celsius day the aircraft requires a 1,950m runway. Shorter runways can be utilised with a slightly lighter load or on cooler days. The RJ85 was specifically designed as a short haul airliner to use short runways with steep approaches.

The Avro RJ85 airtanker operates alongside other fire fighting aircraft to support fire fighting crews on the ground. Carried on board the aircraft are sophisticated communication and tracking equipment that keep the aircraft in constant contact with other aircraft and the fire agency crews managing fires on the ground.

The Victorian and New South Wales Governments have contracted, through NAFC, three Avro RJ85 airtanker for the 2018-19 fire season. Aircraft in the national aerial fire fighting fleet are available for use across all states and territories of Australia.





## Coulson C130Q airtanker

Type 1 Airtanker  
 Primary role: Firebombing  
 Other roles: Transport  
 Two pilots and one flight engineer  
 RADS-XXL constant flow firebombing system  
 15,450 litre retardant capacity  
 Cruise speed (loaded) 545 km/h  
 Typical cruise altitude (loaded) 12,500 feet  
 Typical runway required 1,600m  
 Max runway required (full load hot day) 1,950m  
 30.3m length, 40.4m wingspan  
 68,000 kg gross weight  
 4 x 4,500HP Allison T56-A-16 turbo prop engines  
 Fuel consumption 2,650 litres/h of Jet-A1  
 2+ fire agency radios, Satellite tracking

The Coulson C130Q airtanker is a modification of the ubiquitous Lockheed Martin C130 military transport aircraft. In its original configuration as an EC-C130Q, the aircraft was used by the US Navy in the TACAMO role where it operated as a communication relay in the event of a crisis. Subsequently, it was operated by NASA before being purchased by Coulson Aviation.

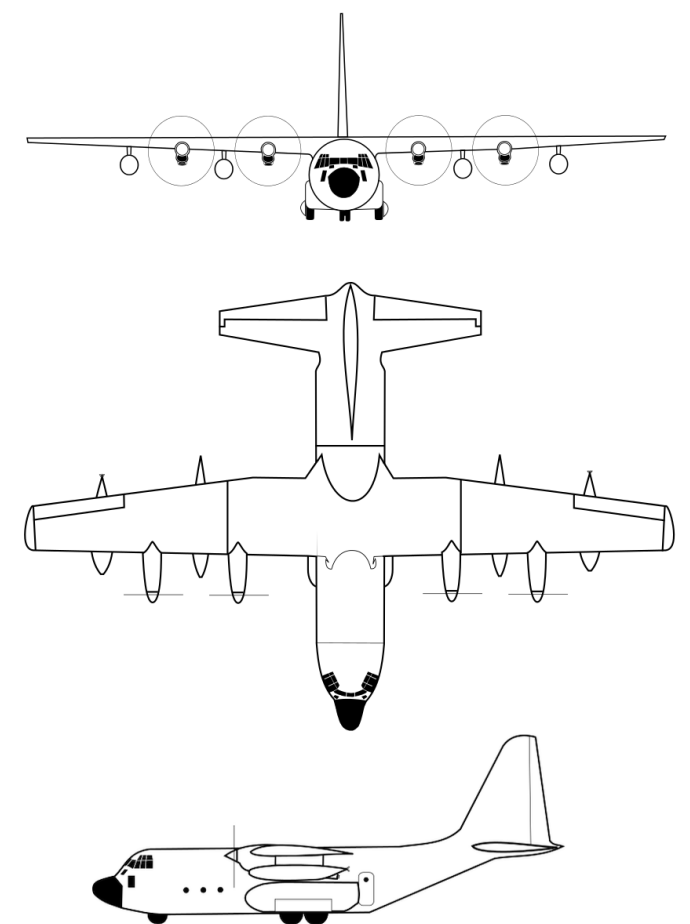
Coulson Aviation have designed and certified a modification to the C130 to integrate a 4,300 US gallon firebombing system. This system is a derivative of the well regarded Aero Union RADS 1 firebombing tank. A 15,450 litre load of fire retardant solution can be carried on board the aircraft. The GPS linked computer controlled firebombing system delivers a constant flow of fire retardant or suppressant to the target area.

The C130Q is used by fire agencies in North America and Australia primarily for firebombing. It can be utilised for both initial attack of new fires with fire suppressant solutions and line building with fire retardant on larger fires. Its flexibility enables the C130Q to work in both the urban interface and remote areas such as parks and forests.

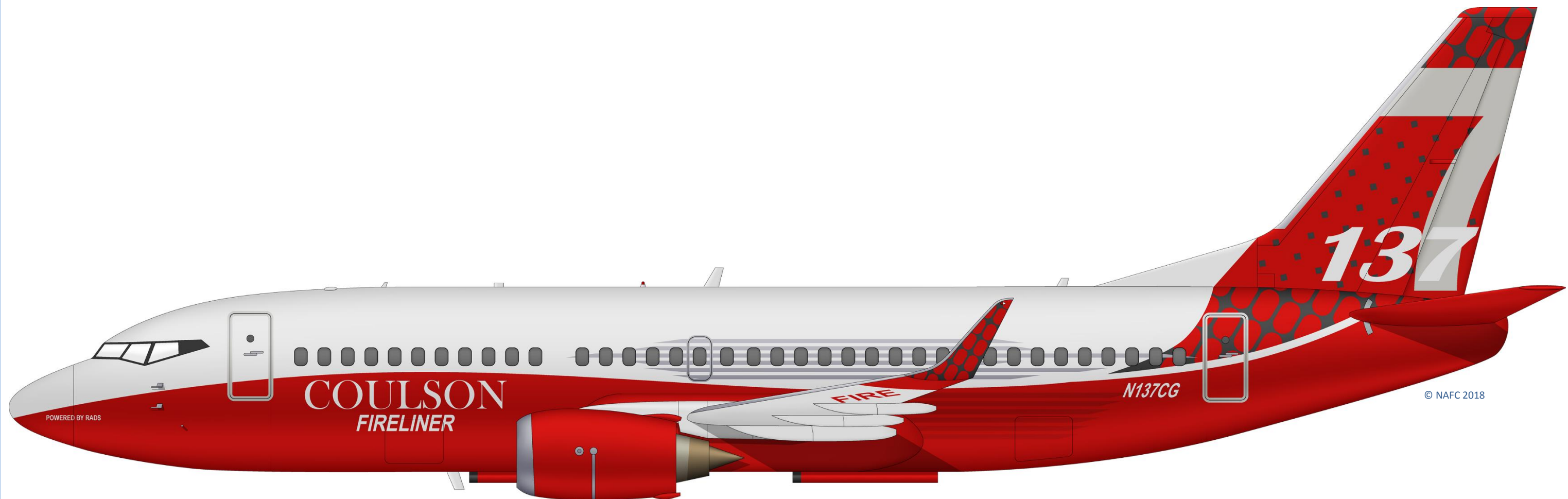
The C130Q can operate from many airfields across Australia. With a full retardant load on a 45 degree Celsius day the aircraft requires a 1,950m runway. Shorter runways can be utilised with a slightly lighter load or on cooler days. The C130 was designed as a tactical airlifter and is ideally suited to operating at low level around fires.

The C130Q airtanker operates alongside other fire fighting aircraft to support fire fighting crews on the ground. Carried on board the aircraft are sophisticated communication and tracking equipment that keep the aircraft in constant contact with other aircraft and the fire agency crews managing fires on the ground.

The Victorian and New South Wales Governments have contracted, through NAFC, two Coulson C130Q airtanker for the 2018-19 fire season. Aircraft in the national aerial fire fighting fleet are available for use across all states and territories of Australia.







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## Coulson 737 Fireliner Airtanker

Type 1 Airtanker  
 Primary role: firebombing  
 Other roles: crew and cargo transport  
 Two pilot crew, up to 72 passengers  
 RADS-XXL/2 constant flow firebombing system  
 15,142 litre retardant capacity  
 Cruise speed (loaded) up to 850km/h  
 Typical cruise altitude (loaded) 25,000 feet  
 Typical runway required 1,950m  
 33m length, 31.2m wingspan  
 Up to 61,700kg gross weight  
 2 x 9,100kg thrust CFM 56-3 turbo fan engines  
 Jet-A1 fuel consumption up to 3,400 litres/hr  
 2+ fire agency radios, Satellite tracking

The Coulson 737 Fireliner is a modification of a Boeing 737-300 passenger transport aircraft. The Boeing 737 is the most produced passenger jetliner and is used by airlines, cargo and military operators around the world.

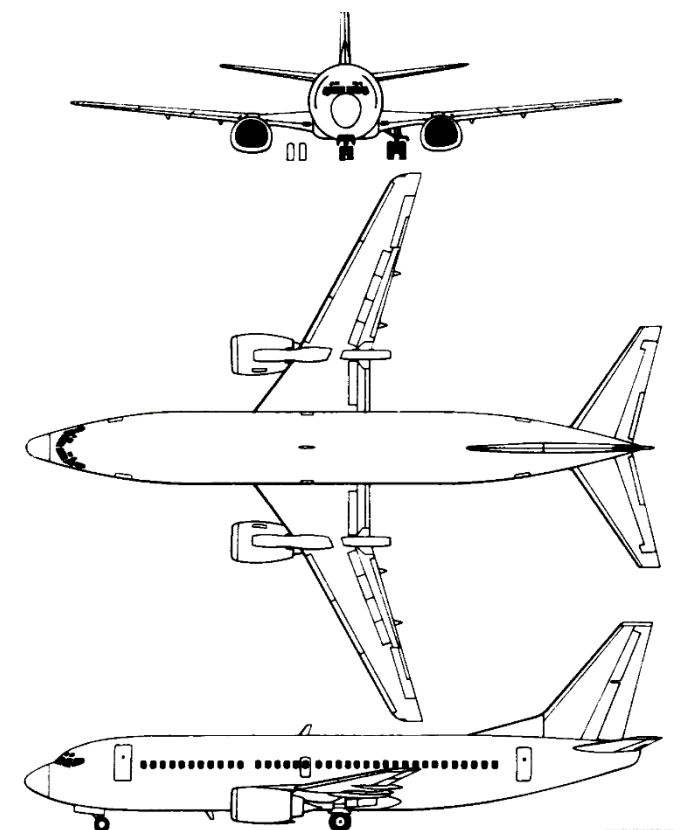
Coulson Aviation have designed and certified a modification to the B737 to integrate a 4,300 US gallon firebombing system. This system is a derivative of the Coulson RADS-XXL system carried in C130 and L100 airtankers which is a derivative of the well regarded Aero Union RADS 1 firebombing tank. A 15,142 litre load of fire retardant solution can be carried on board the aircraft. The RADS-XXL/2 system splits this load between two tanks systems, one forward and one aft of the wings. The GPS linked computer controlled firebombing system delivers a constant flow of fire retardant or suppressant to the target area. The B737 has the capability to carry an on-board system for mixing fire suppressant solutions so it can operate from remote airfields where only water is available.

The B737 airtanker has been tested by fire agencies in North America, and in Australia will be used primarily for firebombing. It can be utilised for both initial attack of new fires with fire suppressant solutions, and line building with fire retardant on larger fires. Its flexibility enables the B737 to work in both the urban interface and remote areas such as parks and forests. In addition to its firebombing role the B737 airtanker is has the capability to transport passengers and cargo – use in these roles is subject to local regulatory approval.

The B737 can operate from many airfields across Australia. On a 40 degree Celsius day with a full retardant load and 3 hours of fuel the aircraft requires a 2,300m runway. Shorter runways can be utilised with less fuel, a lighter load, or on cooler days.

The B737 airtanker operates alongside other fire fighting aircraft to support fire fighting crews on the ground. Carried on board the aircraft are sophisticated communication and tracking equipment that keep the aircraft in constant contact with other aircraft and the fire agency crews managing fires on the ground.

The New South Wales Government has contracted, through NAFC, one Coulson 737 Fireliner Airtanker for the 2018-19 fire season. Aircraft in the national aerial fire fighting fleet are available for use across all states and territories of Australia.





# Firefighting aircraft of Australia - 2018/19



Eurocopter EC120B Colibri



Bell 206L-3 LongRanger



Eurocopter AS355F1 Twin Squirrel



Eurocopter AS350B3 Squirrel



Cessna 182T Skylane



Eurocopter EC130



MBB/Kawasaki BK 117



Eurocopter EC145



Eurocopter AS365N2 Dauphin



Cessna 337G Skymaster



Cessna 208B Grand Caravan



Rockwell Turbo Commander 690B



Bell 204B



Bell 212



PZL M18T (Hubler) Dromader



Air Tractor AT802F



Air Tractor AT802F Fireboss



Bell 412SP



Bell 214B Big Lifter



Beechcraft Kingair B200T – “Firescan”



Gates Learjet 35A – “Firescan”.



Sikorsky S61N



Erickson S64E Air crane



Avro RJ85 airtanker



Coulson C130Q airtanker



Coulson 737 airtanker

