



## **Standard OPS-012**

# **Visibility, Recognition and Presentation**

The National Aerial Firefighting Centre or NAFC is a business unit of the  
Australasian Fire and Emergency Service Authorities Council Limited (ACN 060 049 327).  
The Members are the States and Territories of Australia

**The purpose of this standard is to outline the requirements for visibility, recognition and presentation on aircraft utilised by NAFC and the Members for fire and emergency operations**

Aircraft operating at low level and in low visibility environments, such as those typically found around fires, are at increased risk of collision with other aircraft. Visibility enhancement equipment fitted to the aircraft and high visibility livery make the aircraft easier to see and therefore may reduce the likelihood of an aircraft collision.

Personnel on the ground and in other aircraft, at times, need to be able to quickly recognise and identify aircraft operating nearby. Affixing all or part of the aircraft's Special Task Operations callsign to the aircraft aids this identification. Where an aircraft's STO callsign is "Helitak 123", acceptable designs for the callsign may include just the numbers "123" or "3". Advice should be sought from NAFC or a Member as to which callsign design is appropriate for each aircraft and or Service.

This standard refers to "50 Watt incandescent landing lights". It is acknowledged that the aircraft industry is transitioning to high intensity LED lighting. The reference to incandescent lighting sets a base line for intensity and brightness. Any LED lighting should be as intense and bright as the incandescent light referenced, or brighter.

The requirement for high intensity white recognition lights is related to the requirements of FAA FAR PART 91.205(c) and related documents. However it should be noted that the requirements of this standard exceed the FAR in that the lights must be visible from directly above and below the aircraft and that there is no age based exemption to the need to meet the intensity requirements. All aircraft operating in low visibility environments must be fitted with bright anti-collision / recognition lighting that make them visible from all around the aircraft.

When a contract refers to this standard the term "operator" in this standard also includes the "Contractor" as defined in the contract.

**Document Control**

<b>Version</b>	<b>Author</b>	<b>Amendment</b>	<b>Approved</b>
008	NAFC	Initial draft	
009	NAFC	Update to refer to AFAC and Members	Sept 18

## **Standard OPS-012**

### **Visibility, Recognition and Presentation**

Operators providing aircraft services must ensure that aircraft provided meet the requirements of this standard.

Requirements of any contract take precedence over requirements of this standard. Any exceptions to this standard will be made at the absolute discretion of NAFC or a Member.

Aircraft markings and lighting must meet Australian civil aviation legislation and regulations.

Aircraft must meet the lighting, markings and presentation specifications as detailed below:

#### **Lighting:**

##### All Aircraft:

- All Aircraft must be equipped with high visibility strobing white recognition lights, with a minimum intensity of 400 candelas. Sufficient lights must be provided to permit direct viewing of lights from any position above the aircraft, within the same horizontal plane as the aircraft and below the aircraft. These high visibility strobing white recognition lights must be operated at all times where operational requirements allow them to be used.

##### Rotary Wing Aircraft:

- Rotary Wing Aircraft must be equipped with two forward facing, high visibility, alternating on and off, white recognition lights, each with a minimum light output equivalent to a 50 watt incandescent aircraft landing light. These high-visibility, alternating on and off, white recognition lights must be operated at all times where operational requirements allow them to be used.

##### Fixed Wing – Airwork:

- Where required Fixed wing aircraft conducting airwork operations be equipped with two forward facing, high visibility, alternating on and off, white recognition lights, each with a minimum light output equivalent to a 50 watt incandescent aircraft landing light. These high-visibility, alternating on and off, white recognition lights must be operated at all times where operational requirements allow them to be used.

##### Fixed Wing – Firebombing:

- Fixed wing aircraft that may be used for firebombing must be equipped with two forward facing, high visibility, alternating on and off, white recognition lights, each with a minimum light output equivalent to a 50 watt incandescent aircraft landing light. These high-visibility, alternating on and off, white recognition lights must be operated at all times where operational requirements allow them to be used.

#### **Markings:**

- Rotary wing aircraft must be equipped with rotor blades painted in distinctly different colours or alternating patterns in a manner acceptable to NAFC

## Callsigns

All aircraft that have been assigned a Special Task Operations call sign must have identifying letters or numbers affixed to the aircraft depicting the aircraft's assigned callsign:

- of a design acceptable to NAFC,
- as large as is reasonably practicable and which in any case will permit recognition of the aircraft from a distance of 50 metres from any position in the same horizontal plane as the aircraft excepting a 60° arc centred on the tail of the aircraft, and where it is not practical, excepting a 60° arc centred on the nose of the aircraft,
- on the underside of the aircraft, as large as is reasonably practicable, and which in any case permits recognition of the aircraft from a position 200 feet (approximately 70 metres) immediately below the aircraft.

## Livery & Logos

- At all times during any period of service the aircraft livery must be of a colour and design, acceptable to NAFC; and that ensures that the Aircraft is highly visible in conditions normally encountered in fire and emergency operations and other activities.
- During any period of service the operator will not permit to remain attached to the aircraft any corporate design or symbol of any other company, agency or entity, other than that which identifies the operator or that which normally identifies the manufacturer or model of the aircraft or normal components, without permission from NAFC or a Member.
- Outside of any period of service the operator will not permit to remain attached to the aircraft any corporate symbols or identifications of NAFC or NAFC clients and agents or Members or sponsors should the aircraft conduct operations for any other clients of the operator, without permission from NAFC or a Member.

## Presentation:

- At all times during any period of service the aircraft must be well presented and clean, as far as is practicable.

## Summary:

Visibility, Recognition & Presentation	Rotary Wing	Fixed Wing Airwork	Fixed Wing Firebombing
High visibility strobing white recognition lights	Required	Required	Required
Forward facing, high visibility, alternating on and off, white recognition lights	Required	Preferred	Required
Rotors having opposite blades painted in distinctly different colours or alternating patterns	Required	N/A	N/A
Letters or numbers affixed to the Aircraft depicting the Aircraft's assigned callsign	Required	Required	Required
Aircraft livery, colour and design, acceptable to NAFC	Required	Required	Required
Aircraft clean and well presented	Required	Required	Required