



Advisory Circular

CAA-AC-AGA610

September 2022

GUIDANCE ON MARKING AND LIGHTING OF AIRSIDE VEHICLES

1. PURPOSE

This provides guidance, specifications and standards for the painting, marking, and lighting of vehicles operating at the airside on an airport. The lights, colours, and markings herein are intended to ensure that vehicles are visible both on the ground and from the air to pilots, controllers and other drivers.

2. REFERENCES

- 2.1. The Civil Aviation (Aerodrome) Regulations, 2022
- 2.2. CAA-AC-AGA606 Ground vehicle operations on aerodromes

3. INTRODUCTION

3.1. An aerodrome Operator must ensure that vehicles and other mobile objects, excluding aircraft, on the movement area of an aerodrome are marked, and, where the aerodrome is operated at night or in conditions of low visibility, the vehicles must have the appropriate lights on them and in use. Vehicles that do not routinely operate at the airside, and require airside access to the apron only, must either be escorted by a properly marked and lighted vehicle, or be fitted with temporary flags and obstacle lights. This circular provides guidance to all aerodrome operators on how to meet the requirements for marking and lighting airside vehicles.

4. MARKING OF VEHICLES

4.1. All mobile objects to be marked shall be coloured in a conspicuous colour for the aerodrome's environment, or, for temporary airside vehicles, display flags.

- a. When mobile objects are marked by colour, a single conspicuous colour, preferably yellowish green or red for emergency vehicles, except ambulances which may be white, and yellow for service vehicles, shall be used, unless an aeronautical study, to the satisfaction of the Civil Aviation Authority Directorate of Safety Security and Economic Regulation, indicates that two contrasting colours are more conspicuous in the conditions experienced the aerodrome. Suitable contrasting colours might be black and yellow, or dark red and white.
- b. Vehicles may not be marked or otherwise fitted with anything that may affect the driver's visibility, such as side, front or rear window film that cuts out more than 30% of light, or thick grills.
- c. Flags used to mark mobile objects shall be displayed around, on top of, or around the highest edge of the object and flags but must not increase the hazard presented by the object that they are intended to mark; for example, when passing under passenger boarding bridges or when working under the approach, take-off climb paths, or beside the runway strips under the transitional surface.
- d. Flags used to mark mobile objects shall not be less than 0.9 m on each side and shall consist of a chequered pattern, each square having sides of not less than 0.3 m;
- e. The colours of the flag pattern shall contrast each with the other and with the background against which they will be seen, as determined by the aerodrome operator and included in the aerodrome manual;
- f. Orange and white or alternatively red and white shall be used to colour flags, except where such colours merge with the background;

4.2. Airside Operations Vehicles on the Manoeuvring Area

4.2.1. Airside Operations vehicles that require access to the manoeuvring area will be painted in colours designated by the aerodrome operator. Markings of vehicles to be used on the manoeuvring area should also be coordinated with the air traffic control tower and identified as per the service level agreement between aerodrome and ATC operators. Vehicles shall have an identification number on each side as well as on the roof (the bonnet/hood can be used for vehicles without roof). These numbers must be large enough to be conspicuous. The aerodrome operator should coordinate the allocation of these vehicle numbers, as far as practicable, to avoid duplication, and provide a description of the numbering scheme in the aerodrome manual.

4.3. Ground Service Equipment and Other Apron Vehicles

4.3.1 Ground Service Equipment and Other Vehicles shall be marked in conspicuous colours suitable for the environment, floodlighting (if applicable) and area in which they are working. For example, vehicles that predominantly operate on an apron under sodium floodlights should avoid colours that are not visible under sodium light.

4.4. Contractor vehicles for airside works

4.4.1. Contractors vehicles not normally based at the airport, should comply with the conspicuous colour requirements. If they don't, then they must be escorted by a properly marked and lighted vehicle, AND fitted with temporary flags and yellow obstacle lights.

5. LIGHTING OF AIRSIDE VEHICLES

5.1. Airside Operations, Maintenance & Service Vehicles

5.1.1 Airside service vehicles shall be fitted with yellow obstacle lights.

5.2. Rescue and Fire Fighting Vehicles

5.2.1 RFFS vehicles shall have flashing blue lights fitted for emergency use, and at least one flashing yellow lights on the highest point of the vehicle for non-emergency use.

5.3. Airport Security Vehicles

5.3.1 Airport security vehicles shall have either yellow or blue flashing light, depending on the routine or emergency classification of each security vehicle. If fitted with blue obstacle lights, then in addition, as in 5.2.1 above, security vehicles shall be fitted with at least one flashing yellow lights on the highest point of the vehicle for non-emergency use.

5.4. Ambulances

5.4.1 Ambulances are emergency vehicles. The Aerodrome Ambulance roof mounted obstacle lights shall be a flashing blue for emergency use, and at least one flashing yellow light on the highest point of the vehicle for non-emergency use.

6. CHARACTERISTICS OF VEHICLE OBSTACLE LIGHTS

6.1 Details of the luminance and colour characteristics of vehicle obstacle lights, often referred to as beacons, are contained in the Civil Aviation (Aerodrome) Regulations. The following additional guidance is provided to assist compliance by aerodrome operators:

- a. Vehicle obstacle lights must be operated at all times by every vehicle when it is airside at an airport, except when it is parked in a designated parking area, and the engine is switched off and the ignition key removed.
- b. Aerodrome based emergency vehicles that are fitted with both yellow and blue obstacle lights may use only the yellow lights when moving around the aerodrome on non-emergency activities.

- c. When emergency vehicles are responding to an emergency, whether real or practice, they shall operate all obstacle lights, blue and yellow, and operate sirens until in attendance at the standby point or emergency scene.
- d. In vehicles that are permanently airside, yellow obstacle lights may be wired through the ignition, to be permanently on when the vehicle is in use.
- e. When vehicles are on a runway, day or night, drivers shall operate vehicle headlights in addition to the obstacle lights (beacons).
- f. Vehicle obstacle lights may consist of flashing LED, flashing incandescent bulbs, or occulted rotating mirror lamps, but in every case the flash rate shall be between 60 and 90 flashes per minute per obstacle light.
- g. Capacitive discharge (strobe) lights should not normally be used for roof mounted obstacle lights due to the possible stroboscopic effect if they are the only light illuminating turning propellers or rotors.
- h. Drivers should not use hazard warning lights (4-way yellow flashers) as this prevents them from using normal left and right indicators whilst driving on service roads, runways and taxiways.

7. DANGEROUS GOODS

7.1 Vehicles carrying dangerous goods, such as flammable gasses (propane, acetylene), ammunition (bird scaring cartridges), additional fuels, must be suitably marked with the UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS, Rev.7 or as revised) for the items carried.

8. ENFORCEMENT OF PAINTING, MARKING AND LIGHTING OF AIRSIDE VEHICLES

8.1 Operators of airside vehicles that do not follow the painting, marking and lighting of vehicles shall have their vehicles detained and or removed from the airside, and will not be allowed to move on the airside until rectified to the satisfaction of the aerodrome operator in full compliance with this circular and the Civil Aviation (Aerodromes) Regulations.

9. Enquiries

9.1 Any enquiries should be addressed to:

Director of Safety Security and Economic Regulation
Civil Aviation Authority
PO Box 5536
Kampala
Uganda



Director Safety, Security and Economic Regulation