

### Vehicle Conspicuity and safety markings - REMA guide for Airport Airside Fleets

This REMA guide helps airport fleet operators globally to select the most appropriate materials and configurations for their fleet to maximise vehicle and occupant safety when operating in the unique environment of live airside areas whilst also considering brand deployment.

The primary reason to adopt these markings is to reduce vehicle collisions and injuries, by making size and shape identification simple from any distance in an approaching vehicle. The use of retro-reflective materials makes this possible with light bounced back to the driver of the approaching (source) vehicle.

This guide is based on the legislation in **ECE104** for contour marking on trucks and trailers, and specifications in **Chapter 8** of the Traffic Signs Manual that cover vehicles that operate on the motorway & all-purpose trunk road network across the UK with consideration to the CAA documents CAP642 and CAA Vehicle and Mobile Object Marking and Lighting regulations.

Due to the environment airside, and to provide maximum visibility at all distances, we recommend the use of R3B markings where possible, and ECE104 materials on larger, high vehicles where this is not practical. Please note these guidelines will enable air and roadside vehicles to legally operate in both environments.

**REMA, established for 40 years, is the UK's only trade association for manufacturers of retro-reflective traffic safety products, we offer this guide to help users make sense of standards to specify appropriate (and legal) best practice markings for their fleets.**

	Vehicle type	Example vehicles	Specification recommended by REMA
1	Any vehicle under 7.5 tonnes	Cars Vans Pickups	<ul style="list-style-type: none"> <li>&gt; Rear chevrons in class R3B red and non-reflective fluorescent yellow</li> <li>&gt; Rear facing door edging / lockers / guardrail strips in red class R3B material</li> <li>&gt; AIRPORT or AIRSIDE OPERATIONS legends in non-reflective black on yellow (if applicable)</li> <li>&gt; Outline to cab / side of vehicle min. 50mm width in class R3B fluorescent yellow-green* material</li> <li>&gt; Centre side stripe of at least 100mm in reflective fluorescent yellow-green* or Orange class R3B</li> </ul>
2	Vehicles OVER 7.5 tonnes	spreaders gritters tippers sweepers tankers	<ul style="list-style-type: none"> <li>&gt; Rear chevrons in class R3B red and non-reflective fluorescent yellow</li> <li>&gt; Rear facing door edging / lockers / guardrail strips in red class R3B material</li> <li>&gt; Rear marker chevrons as above where they can be applied</li> <li>&gt; 50mm red rear and yellow side outlines in ECE104</li> </ul>
3	Low cab or low bed vehicles	Baggage trucks Tugs, trailers Towable Steps Cargo equipment Buses, coaches	<p>Where the above cannot be easily applied due to the shape and nature of the vehicle:</p> <ul style="list-style-type: none"> <li>&gt; White reflective markings to front of vehicle to ECE104 or R3B specification (optional)</li> <li>&gt; Yellow reflective (ECE104 or R3B) partial contour (outline) marking to minimum of 80% of length, or a complete box contour, ideally 100mm width</li> <li>&gt; Red reflective (ECE104 or R3B) outline to rear (if chevrons cannot be deployed)</li> </ul>

#### Brand markings

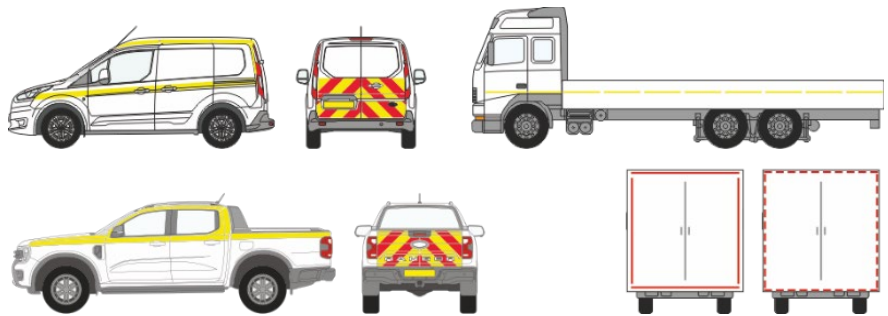
For company brand markings, cut or printed reflective (engineering grade ECE104 class D or E) products can be used. This ensures that different fleet operators can be distinguished day and night; this lower grade reflective minimises interference with the safety markings.

#### Chevron design and outline / striping:

Rear markings for cars and vans are upward facing chevrons in red and yellow alternating stripes with each stripe no less than 150mm in width. The colours and material are designed to maximise night-time visibility with good daytime visibility.

Chevrons should cover as much of the rear as possible without obscuring windows, lights or registration plates.

Side stripe should run the entire length of the vehicle, whether that is a van or truck or other, to give a clear indication of the length of the vehicle being approached, whilst the outline helps define the shape and size of the vehicle to the approaching vehicle occupants.



Suitable materials that meet the relevant legislation			
Material	Supplier	Red reflective R3B compliant	Yellow non-reflective fluorescent
<b>Chapter 8 R3B compliant reflective red &amp; non reflective fluorescent yellow</b>	3M	Diamond Grade DG3 4092	Scotchcal 3485
	Lakeside Group	Avery T-6000, V8108, Aura 191	Aura 139
	Orafol	Brilliant Grade 6930, VC612RA-012, VC412RA-012	ORACAL 7510/7510RA 7710RA
	Rennicks	Nikkalite Crystal Grade 92805	Hi-S cal 7F-310

<b>Branding (if reflective) typical materials</b>	3M	580, 680	<b>Side Stripe</b>	3M	Diamond Grade DG3 4091, 4083
	Lakeside Group	M0500, V4000, Aura 124		Lakeside Group	Avery V6700, Aura 144
	Orafol	5600, 5650		Orafol	6929, VC612-112, 412RA-112
	Rennicks	48012, 48005, 48006, 8512		Rennicks	92804, 92844

It is the user's responsibility to maintain markings in accordance with material manufacturer's guidelines and inspect / replace them within expected performance life.

\*For material specifications and performance tables, please refer to BSEN12899-1, ASTM D8514 or the R3B (German) tables which include fluorescent yellow-green.

>> See also: **REMA best practice guide to Chapter8** for vehicle conspicuity markings on highways. <https://www.rema.org.uk/download/vehicle-conspicuity-bulletin-updated-april-2023/>

These REMA guidelines were produced and updated with latest changes in conjunction with HE and DfT for advisory purposes only and are intended to clarify official guidance / legislation applicable at the time of publication. They are given in good faith but without liability and should not be taken as legal advice.

**For further information on REMA and its members, please visit [www.rema.org.uk](http://www.rema.org.uk). Or email REMA Secretariat - [info@rema.org.uk](mailto:info@rema.org.uk)**

For links to the sources of the latest legislation and guidelines referred to in producing this document, please visit the information page on our website: [www.rema.org.uk/information/vehicle-conspicuity-markings](http://www.rema.org.uk/information/vehicle-conspicuity-markings)