

# Lighting

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## Lighting 4 Introduction

For all types of lamps covered in section 4, as at 19 December 2003, the following brand names of manufacturers of lights fitted as original equipment (OE) at the time of manufacture to Japanese domestic vehicles are recognised as meeting the relevant Japanese technical standards (TS):

- Aoki Seisakusyo Co Ltd
- Bosch K.K.
- Cateye Co Ltd
- Ichikoh Industries Ltd
- Imasen Electric Industrial Co Ltd
- IPF Corporation
- IKI
- Iwaki Glass Co Ltd
- Joto Kogyo Co Ltd
- Knight Beam Co Ltd
- Koito Manufacturing Co Ltd
- Life Elex Inc
- Oshima Electric Words Co Ltd (OEW)
- Stanley Electric Co Ltd
- SYS Metal Product Corp
- Tokai Denso Co Ltd
- Toshiba Lighting and Technology Corp
- Totyo Industry Co Ltd

**Table 4-1. List of approved standards for lighting and signalling components**

	UN-ECE Regulation no.	EEC/EC Directive	FMVSS	ADR	Japan
Headlamps	1 31 82 5 56 98 8 57 112 20 72 113 76 123	76/761 89/517 99/17	108	46 54 55 77	JIS D5500 JIS D5504 TS for headlamps Article 32
Front fog lamps	19	76/762 99/18	108	50	JIS D5500 TS for front fog lamps Article 33
Daytime running lamps	87		108	45 76	
Forward-facing position lamps	7 50	76/758 89/516 97/30	108	49 53	TS for clearance lamps TS for front end-outline marker lamps TS for front and rear position lamps JIS D5500 Article 34
Rearward-facing position lamps	7 50	76/758 89/516 97/30	108	49 53	TS for front and rear position lamps TS for tail lamps TS for rear end-outline marker lamps JIS D5500 Article 34
Rearward-facing retroreflectors	3	76/757 87/354 97/29	108	47	TS for rear reflex reflectors TS for large-sized rear reflex reflectors JIS D5500 Article 38
Direction indicator lamps	6 50	76/759 89/277 99/15	108	6 53	TS for direction indicator lamps JIS D5500 Article 41
Stop lamps	7 50	76/758 89/516 97/30	108	49 53	TS for stop lamps JIS D5500 Article 39
High-mounted stop lamps	7	76/758 89/516 97/30	108	60	TS for auxiliary stop lamps JIS D5500 Article 39

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**Lighting** 4 Introduction (cont.)

	UN-ECE Regulation no	EEC/EC Directive	FMVSS	ADR	Japan
Registration plate lamps	4 50	76/760 97/31	108	48 53	TS for number plate lamps JIS D5500 Article 36
Reversing lamps	23	77/539 97/32	108	1	TS for back-up lamps JIS D5500 Article 40
Rear fog lamps	38	77/538	108	52	JIS D5500 TS for rear fog lamps Article 37
Retroreflective material	104		108		
Side-marker lamps	91	76/758 89/516 97/30	108	45 74	JIS D5500 TS for side-marker lamps Article 35
End-outline marker lamps	7	76/758 89/516 97/30	108	49	JIS D5500 TS for front end-outline marker lamps TS for rear end-outline marker lamps Article 37

**Note** If a scratch-built or replica vehicle is presented for entry certification, ensure that the F001 includes a reference to the relevant lighting standards

The lighting installation standards, listed in **Table 4-2** below, set out the lighting requirements for the vehicle as a whole. All the lighting components must meet approved standards. All vehicles manufactured **on or after 27 February 2005** must meet one of these approved installation standards (or a more recent version)

**OR**

All the fitting requirements in the following sections of the Land Transport Rule: Vehicle Lighting 2004:

- Section 3.3 (headlamps)
- Section 4.3 (stop lamps)
- Section 5.3 (high-mounted stop lamps)
- Section 6.3 (direction indicator lamps)
- Section 7.3 (forward-facing position lamps)
- Section 7.4 (rearward-facing position lamps)
- Section 7.5 (side-marker lamps)
- Section 7.6 (end-outline marker lamps)
- Section 8.3 (registration plate illumination lamps)
- Section 9.3 (retroreflectors and retroreflective material)

These sections specify the fitting and visibility requirements for these lamps. This information is in the *VIRM: In-service certification*.



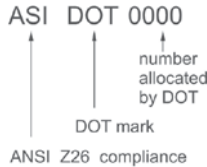


If a vehicle is fitted with OE lights that exceed the amount permitted in the Land Transport Rule: Vehicle Lighting 2004, it may be certified if it was manufactured to comply with an approved installation standard.



**Table 4-2. Approved standards for installation of lighting and signalling**

	UN-ECE Regulation no	EEC/EC Directive	FMVSS	ADR	Japan
Installation of lighting equipment	48 74 53 86	76/756 93/92 80/233 82/244 83/276 84/8 89/278 91/663 97/28 2000/73 78/933 2007/35 2008/89	108	13 19	Safety Regulations for Road Vehicles, chapter II Article 32-42 Technical Standard (TS) Attachment 52

The following standard markings may assist in determining compliance with approved standards.

				
<b>Economic Commission for Europe (ECE)</b>	<b>European Economic Commission (EEC)</b>	<b>Federal Motor Vehicle Safety Standards (FMVSS)</b>	<b>Japanese Industrial Standards</b>	<b>Japanese Technical Standards</b>

**Figure 4-1. Approved lighting and signalling standard markings**



Lighting

4-1 Headlamps

Summary of legislation

Applicable legislation

- Land Transport Rule: Vehicle Lighting 2004

Mandatory equipment

- Vehicles must comply with the requirements relating to mandatory equipment set out in the *VIRM: In-service certification*, section 4-1.

Compliance with approved standards

- The headlamps required to be fitted to the following vehicles must comply with one or more of the approved headlamp standards in **Table 4-1-1**:
  - vehicles of class MA and NA manufactured on or after 1 January 1992
  - vehicles of class MB, MC, MD1, MD2, MD3, MD4, ME, NB and NC manufactured on or after 1 January 1996
  - vehicles of group L manufactured on or after 1 January 2006.

Condition and performance

- Headlamps must comply with the requirements relating to condition and performance set out in the *VIRM: In-service certification*, section 4-1.

Reasons for rejection

Mandatory equipment

- A vehicle does not comply with a requirement relating to mandatory equipment set out in the *VIRM: In-service certification*, section 4-1.

Compliance with approved standards

- A headlamp that is required to comply with an approved headlamp standard does not comply, or cannot be demonstrated to comply, with at least one of the standards listed in **Table 4-1-1**.

Condition and performance

- A headlamp does not comply with a requirement relating to condition or performance set out in the *VIRM: In-service certification*, section 4-1.

Table 4-1-1. Approved headlamp standards\*

UN-ECE Regulation no.	EEC/EC Directive	FMVSS	ADR	Japan
1	76/761	108	46	JIS D5500
5	89/517		54	JIS D5504
8	99/17		55	TS for headlamps
20			77	Article 32
31				
56				
57				

\* A headlamp that is required to comply with an approved headlamp standard must comply with at least one of the standards listed in the table.

The following standard markings may assist in determining compliance with approved standards.







				
Economic Commission for Europe (ECE)	Federal Motor Vehicle Safety Standards (FMVSS)	European Economic Commission (EEC)	Japanese Technical Standards	Japanese Industrial Standards
		Models of Wagner 7" sealed beam headlamps marked with the following logo and bearing the part numbers 4651, H4651, 5731, or 7019 on the back of the reflective surface comply with approved standards.		

Figure 4-1-1. Approved headlamp standard markings



## Lighting

## 4-2 Front and rear fog lamps

### Summary of legislation

#### Applicable legislation

- Land Transport Rule: Vehicle Lighting 2004

#### Permitted equipment

- Vehicles must comply with the requirements relating to permitted equipment set out in the *VIRM: In-service certification*, section 4-2.

#### Compliance with approved standards

- Front fog lamps fitted to the following vehicles must comply with one or more of the approved fog lamp standards in **Table 4-2-1**:
  - vehicles of group M and N manufactured on or after 1 January 1996
  - vehicles of group L manufactured on or after 1 January 2006.
- Rear fog lamps fitted to vehicles manufactured on or after 1 January 2006 must comply with one or more of the approved standards in **Table 4-2-2**.

#### Condition and performance

- Front fog lamps must comply with the requirements relating to condition and performance set out in the *VIRM: In-service certification*, section 4-2.
- Rear fog lamps must comply with the requirements relating to condition and performance set out in the *VIRM: In-service certification*, section 4-2.

### Reasons for rejection

#### Permitted equipment

- A vehicle does not comply with a requirement relating to permitted equipment set out in the *VIRM: In-service certification*, section 4-2.

#### Compliance with approved standards

- A front fog lamp that is required to comply with an approved fog lamp standard does not comply, or cannot be demonstrated to comply, with at least one of the standards listed in **Table 4-2-1**.
- A rear fog lamp that is required to comply with an approved fog lamp standard does not comply, or cannot be demonstrated to comply, with at least one of the standards listed in **Table 4-2-2**.

#### Condition and performance

- A front fog lamp does not comply with a requirement relating to condition or performance set out in the *VIRM: In-service certification*, section 4-2.
- A rear fog lamp does not comply with a requirement relating to condition or performance set out in the *VIRM: In-service certification*, section 4-2.

**Table 4-2-1. Approved front fog lamp standards\***

UN-ECE Regulation no.	EEC/EC Directive	FMVSS	ADR	Japan
19	76/762 99/18	108	50	JIS D5500 TS for front fog lamps Article 33

\* A fog lamp that is required to comply with an approved fog lamp standard must comply with at least one of the standards listed in the table.




**Table 4-2-2. Approved rear fog lamp standards\***

UN-ECE Regulation no.	EEC/EC Directive	FMVSS	ADR	Japan
38	77/538 89/518 1999/14	108	52	JIS D5500 TS for rear fog lamps Article 37

\* A fog lamp that is required to comply with an approved fog lamp standard must comply with at least one of the standards listed in the table.

**Lighting** 4-2 Front and rear fog lamps (cont.)

The following standard markings may assist in determining compliance with approved standards.

		<p>DOT 0000</p> <p>↑</p> <p>number allocated by DOT</p> <p>↑</p> <p>DOT mark</p>	
<p><b>Economic Commission for Europe (ECE)</b></p>	<p><b>European Economic Commission (EEC)</b></p>	<p><b>Federal Motor Vehicle Safety Standards (FMVSS)</b></p>	<p><b>Japanese Industrial Standards</b></p>

**Figure 4-2-1. Approved fog lamp standard markings**

## Summary of legislation

### Applicable legislation

- Land Transport Rule: Vehicle Lighting 2004

### Permitted equipment

1. Vehicles must comply with the requirements relating to permitted equipment set out in the *VIRM: In-service certification*, section 4-3.

### Condition and performance

2. Cornering lamps must comply with the requirements relating to condition and performance set out in the *VIRM: In-service certification*, section 4-3.

## Reasons for rejection

### Permitted equipment

1. A vehicle does not comply with a requirement relating to permitted equipment set out in the *VIRM: In-service certification*, section 4-3.

### Condition and performance

2. A cornering lamp does not comply with a requirement relating to condition or performance set out in the *VIRM: In-service certification*, section 4-3.



## Lighting

## 4-4 Daytime running lamps

### Summary of legislation

#### Applicable legislation

- Land Transport Rule: Vehicle Lighting 2004

#### Permitted equipment

- Vehicles must comply with the requirements relating to permitted equipment set out in the *VIRM: In-service certification*, section 4-4.

#### Compliance with approved standards

- Daytime running lamps fitted to the following vehicles must comply with one or more of the approved daytime running lamp standards in **Table 4-4-1**:
  - vehicles of group M and N manufactured on or after 1 January 1996
  - vehicles of group L manufactured on or after 1 January 2006.

#### Condition and performance

- Daytime running lamps must comply with the requirements relating to condition and performance set out in the *VIRM: In-service certification*, section 4-4.

### Reasons for rejection

#### Permitted equipment

- A vehicle does not comply with a requirement relating to permitted equipment set out in the *VIRM: In-service certification*, section 4-4.

#### Compliance with approved standards

- A daytime running lamp that is required to comply with an approved daytime running lamp standard does not comply, or cannot be demonstrated to comply, with at least one of the standards listed in **Table 4-4-1**.

#### Condition and performance

- A daytime running lamp does not comply with a requirement relating to condition or performance set out in the *VIRM: In-service certification*, section 4-4.


**Note 1** See Technical bulletin 12 for guidance on identifying daytime running lamps.

**Table 4-4-1. Approved daytime running lamp standards\***

UN-ECE Regulation no.	FMVSS	ADR
87	108	45, 76

\* A daytime running lamp that is required to comply with an approved daytime running lamp standard must comply with at least one of the standards listed in the table.

The following standard markings may assist in determining compliance with approved standards.

	DOT 0000 ↑ number allocated by DOT ↑ DOT mark
<b>Economic Commission for Europe (ECE)</b>	<b>Federal Motor Vehicle Safety Standards (FMVSS)</b>

**Figure 4-4-1. Approved daytime running lamp standard markings**

TALMU ARK- HV01 001Va VD002 Made in Finland
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**Figure 4-4-2. Marks on daytime running lamps that indicate the lamp is exempt from compliance with approved standards**



Lighting

4-5 Direction indicator lamps

Summary of legislation

Applicable legislation

- Land Transport Rule: Vehicle Lighting 2004

Mandatory equipment

- Vehicles must comply with the requirements relating to mandatory equipment set out in the *VIRM: In-service certification*, section 4-5.

Compliance with approved standards

- The direction indicator lamps fitted to the following vehicles must comply with one or more of the approved direction indicator lamp standards in **Table 4-5-1**:
  - vehicles of group L, M, and class TC and TD manufactured on or after 1 January 1996
  - vehicles of class TA, TB and group N manufactured on or after 1 January 2006.

Condition and performance

- Direction indicator lamps must comply with the requirements relating to condition and performance set out in the *VIRM: In-service certification*, section 4-5.

Reasons for rejection

Mandatory equipment

- A vehicle does not comply with a requirement relating to mandatory equipment set out in the *VIRM: In-service certification*, section 4-5.

Compliance with approved standards

- A direction indicator lamp that is required to comply with an approved direction indicator lamp standard does not comply, or cannot be demonstrated to comply, with at least one of the standards listed in **Table 4-5-1**.

Condition and performance

- A direction indicator lamp does not comply with a requirement relating to condition or performance set out in the *VIRM: In-service certification*, section 4-5.

Table 4-5-1. Approved direction indicator lamp standards\*

UN-ECE Regulation no.	EEC/EC Directive	FMVSS	ADR	Japan
6	76/759	108	6	JIS D5500
50	89/277 99/15		53	TS for direction indicator lamps Article 41

\* A direction indicator lamp that is required to comply with an approved direction indicator lamp standard must comply with at least one of the standards listed in the table.

The following standard markings may assist in determining compliance with approved standards.



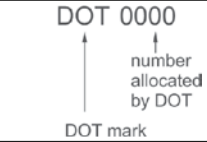

			
Economic Commission for Europe (ECE)	European Economic Commission (EEC)	Federal Motor Vehicle Safety Standards (FMVSS)	Japanese Industrial Standards

Figure 4-5-1. Approved direction indicator lamp standard markings



Lighting

4-6 Forward-facing position lamps

Summary of legislation

Applicable legislation

- Land Transport Rule: Vehicle Lighting 2004

Mandatory equipment

- Vehicles must comply with the requirements relating to mandatory equipment set out in the *VIRM: In-service certification*, section 4-6.

Compliance with approved standards

- The forward-facing position lamps fitted to the following vehicles must comply with one or more of the approved forward-facing position lamp standards in **Table 4-6-1**:
  - vehicles of class MA and NA manufactured on or after 1 January 1992
  - vehicles of class MB, MC, MD1, MD2, MD3, MD4, ME, NB, NC, TC and TD manufactured on or after 1 January 1996
  - vehicles of class TA, TB and group L manufactured on or after 1 January 2006.

Condition and performance

- Forward-facing position lamps must comply with the requirements relating to condition and performance set out in the *VIRM: In-service certification*, section 4-6.

Reasons for rejection

Mandatory equipment

- A vehicle does not comply with a requirement relating to mandatory equipment set out in the *VIRM: In-service certification*, section 4-6.

Compliance with approved standards

- A forward-facing position lamp that is required to comply with an approved forward-facing position lamp standard does not comply, or cannot be demonstrated to comply, with at least one of the standards listed in **Table 4-6-1**.

Condition and performance

- A forward-facing position lamp does not comply with a requirement relating to condition or performance set out in the *VIRM: In-service certification*, section 4-6.

Table 4-6-1. Approved forward-facing position lamp standards\*

UN-ECE Regulation no.	EEC/EC Directive	FMVSS	ADR	Japan
7	76/758	108	49	TS for clearance lamps
50	89/516 97/30		53	TS for front end-outline marker lamps TS for front and rear position lamps JIS D5500 Article 34

\* A forward-facing position lamp that is required to comply with an approved forward-facing position lamp standard must comply with at least one of the standards listed in the table.

The following standard markings may assist in determining compliance with approved standards.



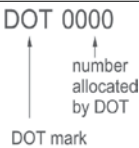

			
Economic Commission for Europe (ECE)	European Economic Commission (EEC)	Federal Motor Vehicle Safety Standards (FMVSS)	Japanese Industrial Standards

Figure 4-6-1. Approved forward-facing position lamp standard markings



## Lighting

## 4-7 Rearward-facing position lamps

### Summary of legislation

#### Applicable legislation

- Land Transport Rule: Vehicle Lighting 2004

#### Mandatory equipment

- Vehicles must comply with the requirements relating to mandatory equipment set out in the *VIRM: In-service certification*, section 4-7.

#### Compliance with approved standards

- The rearward-facing position lamps fitted to the following vehicles must comply with one or more of the approved rearward-facing position lamp standards in **Table 4-7-1**:
  - vehicles of class MA and NA manufactured on or after 1 January 1992
  - vehicles of class MB, MC, MD1, MD2, MD3, MD4, ME, NB, NC, TC and TD manufactured on or after 1 January 1996
  - vehicles of class TA, TB and group L manufactured on or after 1 January 2006.

#### Condition and performance

- Rearward-facing position lamps must comply with the requirements relating to condition and performance set out in the *VIRM: In-service certification*, section 4-7.

### Reasons for rejection

#### Mandatory equipment

- A vehicle does not comply with a requirement relating to mandatory equipment set out in the *VIRM: In-service certification*, section 4-7.

#### Compliance with approved standards

- A rearward-facing position lamp that is required to comply with an approved rearward-facing position lamp standard does not comply, or cannot be demonstrated to comply, with at least one of the standards listed in **Table 4-7-1**.

#### Condition and performance



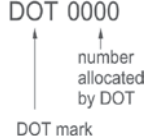

- A rearward-facing position lamp does not comply with a requirement relating to condition or performance set out in the *VIRM: In-service certification*, section 4-7.

**Table 4-7-1. Approved rearward-facing position lamp standards\***

UN-ECE Regulation no.	EEC/EC Directive	FMVSS	ADR	Japan
7	76/758	108	49	TS for front and rear position lamps
50	89/516 97/30		53	TS for tail lamps TS for rear end-outline marker lamps JIS D5500 Article 34

\* A rearward-facing position lamp that is required to comply with an approved rearward-facing position lamp standard must comply with at least one of the standards listed in the table.

The following standard markings may assist in determining compliance with approved standards.

			
<b>Economic Commission for Europe (ECE)</b>	<b>European Economic Commission (EEC)</b>	<b>Federal Motor Vehicle Safety Standards (FMVSS)</b>	<b>Japanese Industrial Standards</b>

**Figure 4-7-1. Approved rearward-facing position lamp standard markings**



## Lighting

## 4-8 Side-marker lamps

### Summary of legislation

#### Applicable legislation

- Land Transport Rule: Vehicle Lighting 2004.

#### Permitted equipment

- Vehicles must comply with the requirements relating to permitted equipment set out in the *VIRM: In-service certification*, section 4-8.

#### Compliance with approved standards

- Side-marker lamps fitted to the following vehicles must comply with one or more of the approved end-outline marker standards in **Table 4-8-1**:
  - vehicles of Class MD3, MD4, ME, NB, NC, TC and TD manufactured on or after 1 January 2006.

#### Condition and performance

- Side-marker lamps must comply with the requirements relating to condition and performance set out in the *VIRM: In-service certification*, section 4-8.

### Reasons for rejection

#### Mandatory requirements

- A vehicle does not comply with a requirement relating to permitted equipment set out in the *VIRM: In-service certification*, section 4-8.

#### Compliance with approved standards

- A side-marker lamp that is required to comply with an approved side-marker lamp standard does not comply, or cannot be demonstrated to comply, with at least one of the standards listed in **Table 4-8-1**.

#### Condition and performance

- A side-marker lamp does not comply with a requirement relating to condition and performance set out in the *VIRM: In-service certification*, section 4-8.

**Table 4-8-1. Approved side-marker lamp standards\***

UN-ECE Regulation no.	EEC/EC Directive	FMVSS	ADR	Japan
91	76/758	108	45 or, 74	JIS D5500 TS for side-marker lamps

- \* A side-marker lamp that is required to comply with an approved side-marker standard must comply with at least one of the standards listed in the table.



## Summary of legislation

### Applicable legislation

- Land Transport Rule: Vehicle Lighting 2004.

### Mandatory, permitted and prohibited equipment

- Vehicles must comply with the requirements relating to mandatory, permitted and prohibited equipment set out in the *VIRM: In-service certification*, section 4-9.

### Compliance with approved standards

- End-outline marker lamps fitted to the following vehicles must comply with one or more of the approved end-outline marker standards in **Table 4-9-1**:
  - vehicles of Class MD3, MD4, ME, NB NC, TC and TD manufactured on or after 1 January 2006.

### Condition and performance

- End-outline marker lamps must comply with the requirements relating to condition and performance set out in the *VIRM: In-service certification*, section 4-9.

## Reasons for rejection

### Mandatory requirements

- A vehicle does not comply with a requirement relating to mandatory equipment set out in the *VIRM: In-service certification*, section 4-9.

### Compliance with approved standards

- An end-outline marker lamp that is required to comply with an approved end-outline marker lamp standard does not comply, or cannot be demonstrated to comply, with at least one of the standards listed in **Table 4-9-1**.

### Condition and performance

- An end-outline marker lamp does not comply with a requirement relating to condition or performance set out in the *VIRM: In-service certification*, section 4-9.

**Table 4-9-1. Approved end-outline marker lamp standards\***

UN-ECE Regulation no.	EEC/EC Directive	FMVSS	ADR	Japan
7	76/758	108	49	JIS D5500 TS for front end outline marker lamps TS for rear end outline marker lamps

- \* An end-outline marker lamp that is required to comply with an approved end-outline marker standard must comply with at least one of the standards listed in the table.



## Lighting

## 4-10 Stop lamps

### Summary of legislation

#### Applicable legislation

- Land Transport Rule: Vehicle Lighting 2004

#### Mandatory equipment

- Vehicles must comply with the requirements relating to mandatory equipment set out in the *VIRM: In-service certification*, section 4-10.

#### Compliance with approved standards

- The stop lamps fitted to the following vehicles must comply with one or more of the approved stop lamp standards in **Table 4-10-1**:
  - vehicles of class MA and NA manufactured on or after 1 January 1992
  - vehicles of class MB, MC, MD, ME, NB, NC, TC and TD manufactured on or after 1 January 1996
  - vehicles of class TA, TB or group L manufactured on or after 1 January 2006.

#### Condition and performance

- Stop lamps must comply with the requirements relating to condition and performance set out in the *VIRM: In-service certification*, section 4-10.

### Reasons for rejection

#### Mandatory equipment

- A vehicle does not comply with a requirement relating to mandatory equipment set out in the *VIRM: In-service certification*, section 4-10.

#### Compliance with approved standards

- A stop lamp that is required to comply with an approved stop lamp standard does not comply, or cannot be demonstrated to comply, with at least one of the standards listed in **Table 4-10-1**.

#### Condition and performance



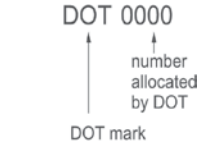

- A stop lamp does not comply with a requirement relating to condition or performance set out in the *VIRM: In-service certification*, section 4-10.

**Table 4-10-1. Approved stop lamp standards\***

UN-ECE Regulation no.	EEC/EC Directive	FMVSS	ADR	Japan
7	76/758	108	49	JIS D5500
50	89/516 97/30		53	TS for stop lamps Article 39

\* A stop lamp that is required to comply with an approved stop lamp standard must comply with at least one of the standards listed in the table.

The following standard markings may assist in determining compliance with approved standards.

			
<b>Economic Commission for Europe (ECE)</b>	<b>European Economic Commission (EEC)</b>	<b>Federal Motor Vehicle Safety Standards (FMVSS)</b>	<b>Japanese Industrial Standards</b>

**Figure 4-10-1. Approved stop lamp standard markings**



Lighting

4-11 High-mounted stop lamps

Summary of legislation

Applicable legislation

- Land Transport Rule: Vehicle Lighting 2004

Mandatory equipment

- Vehicles must comply with the requirements relating to mandatory equipment set out in the *VIRM: In-service certification*, section 4-11.

Compliance with approved standards

- The high-mounted stop lamps fitted to the following vehicles must comply with one or more of the approved high-mounted stop lamp standards in **Table 4-11-1**:
  - vehicles of class MA manufactured on or after 1 January 1991
  - vehicles of class MB, MC, MD, ME, group N, L and T manufactured on or after 1 January 2006.

Condition and performance

- High-mounted stop lamps must comply with the requirements relating to condition and performance set out in the *VIRM: In-service certification*, section 4-11.

Reasons for rejection

Mandatory equipment

- A vehicle does not comply with a requirement relating to mandatory equipment set out in the *VIRM: In-service certification*, section 4-11.

Compliance with approved standards

- A high-mounted stop lamp that is required to comply with an approved high-mounted stop lamp standard does not comply, or cannot be demonstrated to comply, with at least one of the standards listed in **Table 4-11-1**.

Condition and performance

- A high-mounted stop lamp does not comply with a requirement relating to condition or performance set out in the *VIRM: In-service certification*, section 4-11.

Table 4-11-1. Approved high-mounted stop lamp standards\*

UN-ECE Regulation no.	EEC/EC Directive	FMVSS	ADR	Japan
7	76/758 89/516 97/30	108	60	JIS D5500TS for auxiliary stop lamps Article 39

\* A high-mounted stop lamp that is required to comply with an approved high-mounted stop lamp standard must comply with at least one of the standards listed in the table.

The following standard markings may assist in determining compliance with approved standards.


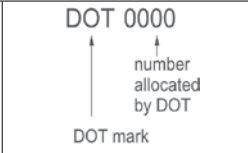

		
Economic Commission for Europe (ECE)	Federal Motor Vehicle Safety Standards (FMVSS)	Japanese Industrial Standards

Figure 4-11-1. Approved high-mounted stop lamp standard markings



Lighting

4-12 Registration plate lamps

Summary of legislation

Applicable legislation

- Land Transport Rule: Vehicle Lighting 2004

Mandatory equipment

- Vehicles must comply with the requirements relating to mandatory equipment set out in the *VIRM: In-service certification*, section 4-12.

Compliance with approved standards

- The registration plate lamps fitted to the following vehicles must comply with one or more of the approved registration plate lamp standards in **Table 4-12-1**:
  - vehicles of group M, N, and class TC and TD manufactured on or after 1 January 1996
  - vehicles of class LC, LD, LE, TA and TB manufactured on or after 1 January 2006.

Performance

- Registration plate lamps must comply with the requirements relating to performance set out in the *VIRM: In-service certification*, section 4-12.

Reasons for rejection

Mandatory equipment

- A vehicle does not comply with a requirement relating to mandatory equipment set out in the *VIRM: In-service certification*, section 4-12.

Compliance with approved standards

- A registration plate lamp that is required to comply with an approved registration plate lamp standard does not comply, or cannot be demonstrated to comply, with at least one of the standards listed in **Table 4-12-1**.

Performance

- A registration plate lamp does not comply with a requirement relating to performance set out in the *VIRM: In-service certification*, section 4-12.

Table 4-12-1. Approved registration plate lamp standards\*

UN-ECE Regulation no.	EEC/EC Directive	FMVSS	ADR	Japan
4	76/760	108	48	JIS D5500
50	97/31		53	TS for number plate lamps Article 36

\* A registration plate lamp that is required to comply with an approved registration plate lamp standard must comply with at least one of the standards listed in the table.

The following standard markings may assist in determining compliance with approved standards.



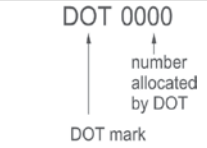

			
Economic Commission for Europe (ECE)	European Economic Commission (EEC)	Federal Motor Vehicle Safety Standards (FMVSS)	Japanese Industrial Standards

Figure 4-12-1. Approved registration plate lamp standard markings



Lighting

4-13 Rearward-facing retroreflectors

Summary of legislation

Applicable legislation

- Land Transport Rule: Vehicle Lighting 2004

Mandatory equipment

- Vehicles must comply with the requirements relating to mandatory equipment set out in the *VIRM: In-service certification*, section 4-13.

Compliance with approved standards

- The rearward-facing retroreflectors fitted to the following vehicles must comply with one or more of the approved rearward-facing retroreflector standards in **Table 4-13-1**:
  - vehicles of class MA manufactured on or after 1 January 1991
  - vehicles of group L, class MB, MC, MD, ME, group N, and class TC and TD manufactured on or after 1 January 1992
  - vehicles of class TA and TB manufactured on or after 1 January 2006.

Condition

- Rearward-facing retroreflectors must comply with the requirements relating to condition set out in the *VIRM: In-service certification*, section 4-13.

Reasons for rejection

Mandatory equipment

- A vehicle does not comply with a requirement relating to mandatory equipment set out in the *VIRM: In-service certification*, section 4-13.

Compliance with approved standards

- A rearward-facing retroreflector that is required to comply with an approved rearward-facing retroreflector standard does not comply, or cannot be demonstrated to comply, with at least one of the standards listed in **Table 4-13-1**.

Condition

- A rearward-facing retroreflector does not comply with a requirement relating to condition set out in the *VIRM: In-service certification*, section 4-13.

Table 4-13-1. Approved rearward-facing retroreflector standards\*

UN-ECE Regulation no.	EEC/EC Directive	FMVSS	ADR	Japan
3	76/757 87/354 97/29	108	47	TS for rear reflex reflectors TS for large-sized rear reflex reflectors JIS D5500 Article 38

\* A rearward-facing retroreflector that is required to comply with an approved rearward-facing retroreflector standard must comply with at least one of the standards listed in the table.

The following standard markings may assist in determining compliance with approved standards.



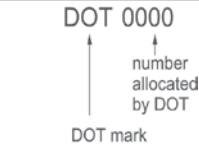

			
Economic Commission for Europe (ECE)	European Economic Commission (EEC)	Federal Motor Vehicle Safety Standards (FMVSS)	Japanese Industrial Standards

Figure 4-13-1. Approved rearward-facing retroreflector standard markings



Lighting

4-14 Reversing lamps

Summary of legislation

Applicable legislation

- Land Transport Rule: Vehicle Lighting 2004

Permitted equipment

- Vehicles must comply with the requirements relating to permitted equipment set out in the *VIRM: In-service certification*, section 4-14.

Compliance with approved standards

- Reversing lamps fitted to the following vehicles must comply with one or more of the approved reversing lamp standards in **Table 4-14-1**:
  - vehicles of group M and N manufactured on or after 1 January 1996
  - vehicles of group L manufactured on or after 1 January 2006.

Performance

- Reversing lamps must comply with the requirements relating to performance set out in the *VIRM: In-service certification*, section 4-14.

Reasons for rejection

Permitted equipment

- A vehicle does not comply with a requirement relating to permitted equipment set out in the *VIRM: In-service certification*, section 4-14.

Compliance with approved standards

- A reversing lamp that is required to comply with an approved reversing lamp standard does not comply, or cannot be demonstrated to comply, with at least one of the standards listed in **Table 4-14-1**.

Performance

- A reversing lamp does not comply with a requirement relating to performance set out in the *VIRM: In-service certification*, section 4-14.

Table 4-14-1. Approved reversing lamp standards\*

UN-ECE Regulation no.	EEC/EC Directive	FMVSS	ADR	Japan
23	77/539 97/32	108	1	JIS D5500 TS for back-up lamps Article 40

\* A reversing lamp that is required to comply with an approved reversing lamp standard must comply with at least one of the standards listed in the table.

The following standard markings may assist in determining compliance with approved standards.



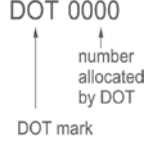

			
Economic Commission for Europe (ECE)	European Economic Commission (EEC)	Federal Motor Vehicle Safety Standards (FMVSS)	Japanese Industrial Standards

Figure 4-14-1. Approved reversing lamp standard markings



Lighting

4-15 Cosmetic lamps

Vehicles must comply with the requirements relating to permitted equipment, condition and performance set out in the *VIRM: In-service certification*, section 4-15.

There are no additional requirements in respect of cosmetic lamps for the inspection and certification of vehicles for entry into service.



Lighting

4-16 PSV audible and visible reversing  
warning devices

Vehicles must comply with the requirements relating to mandatory equipment, condition and performance set out in the *VIRM: In-service certification*, section 4 -16.

There are no additional requirements in respect of PSV audible and visible reversing warning devices for the inspection and certification of vehicles for entry into service.



## Summary of legislation

### Applicable legislation

- Land Transport Rule: Passenger Service Vehicles 1999.

### Mandatory requirements

1. Interior lights must be positioned so that they adequately illuminate doorways, aisles and steps, but without interfering with the driver's vision when the doors are closed.

## Reasons for rejection

### Mandatory requirements

1. A doorway, aisle or set of steps is not adequately illuminated by interior lighting.
2. An interior light interferes with the driver's vision when the doors are closed.

