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## EU TYPE-APPROVAL CERTIFICATE

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|   |  |
|---|--|
| Communication concerning:<br><del>EC type-approval<sup>(4)</sup></del><br>extension of EC type-approval <sup>(1)</sup><br>refusal of EC type-approval <sup>(4)</sup><br>withdrawal of EC type-approval <sup>(4)</sup> | Of a Type of:<br><del>complete vehicle<sup>(4)</sup></del><br><del>completed vehicle<sup>(4)</sup></del><br><del>incomplete vehicle<sup>(4)</sup></del><br>vehicle with complete and incomplete variants <sup>(1)</sup><br><del>vehicle with completed and incomplete variants<sup>(4)</sup></del> |
|---|--|

with regard to Directive 2007/46/EC as last amended by Commission Regulation (EU) No. 2015/166

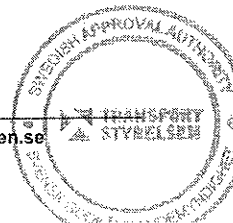
EC type-approval No: e5\*2007/46\*1193\*03

Reason(s) for extension: To cover;

- 1) Addition of new indirect vision devices
- 2) Addition of new interior materials
- 3) Addition of new electrical / electronic devices
- 4) Addition of new OBD-D Engine
- 5) Addition of new representative drawing
- 6) Addition of optional rear axle load capacity
- 7) Addition of new FDR values
- 8) Correction of manufacturer's engine code for Electric Engine
- 9) Modification of Annex List
- 10) Update of Part II & Part III of information document
- 11) Correction of template of 2007/46 information document
- 12) Change of items 1.8, 1.8.1, 2.4.2.3, 2.6, 2.6.1, 2.8.1, 3.3.1.1.2, 4.6, 9.9.1.2, 9.9.1.3, 9.9.2 of information document
- 13) Update of items 3.2.1.11, 3.2.12.2.7.0.4, 3.2.12.2.7.0.5, 3.2.12.2.7.0.6, 3.2.12.2.7.6.5, 3.2.12.2.7.7, 3.2.12.2.8.1, 3.2.12.2.8.2.1, 3.2.12.2.8.4, 3.2.12.2.8.7, 3.2.12.2.8.8.2, 3.2.12.2.8.6. of information document
- 14) Update of amendment level to (EU) 2015/166

### SECTION I

- 0.1. Make (trade name of manufacturer): TEMSA
- 0.2. Type: N
- 0.2.1 Commercial name(s)<sup>(2)</sup>:  
Avenue LF, AVENUE, AVENUE L, AVENUE LE, AVENUE LF CNG, AVENUE CNG L,  
AVENUE LE RHD, AVENUE LF RHD, IBUS, AVENUE IBUS, MEGAPOL, MEGAPOL LE,  
MEGAPOL LF, AVENUE LF12 L, AVENUE LF12, LF12, LF12 L, Avenue Plus, Avenue EV,  
Avenue electriCITY, Avenue EVL, Avenue Electron
- 0.3. Means of identification of type, if marked on the vehicle: By vehicle identification number
- 0.3.1. Location of that marking: On statutory plate and on body profiles in the front right wheel space (if applicable)
- 0.4. Category of vehicle<sup>(3)</sup>: M3



- 0.5. Company name and address of manufacturer of the complete/completed vehicle <sup>(1)</sup>

TEMSA ULAŞIM ARAÇLARI SANAYİ VE TİCARET A.Ş.  
Sarihamzalı Mahallesi Turhan Cemal Beriker Bulvarı,  
No: 563/A Seyhan / ADANA / TURKEY

- 0.5.1. For multi-stage approved vehicles, company name and address of the manufacturer of the base/previous stage(s) vehicle: Not applicable

- 0.8. Name(s) and address(es) of assembly plant(s):

TEMSA ULAŞIM ARAÇLARI SANAYİ VE TİCARET A.Ş.  
Sarihamzalı Mahallesi Turhan Cemal Beriker Bulvarı,  
No: 563/A Seyhan / ADANA / TURKEY

- 0.9. Name and address of the manufacturer's representative (if any):

TEMSA Deutschland GmbH  
Gottlieb-Daimler-Ring 8  
74906 Bad Rappenau, Germany

## SECTION II

The undersigned hereby certifies the accuracy of the manufacturer's description in the attached information document of the vehicle(s) described above ((a) sample(s) having been selected by the EC type-approval authority and submitted by the manufacturer as prototype(s) of the vehicle type) and that the attached test results are applicable to the vehicle type.

1. For complete and completed vehicles / variants <sup>(1)</sup>:

The vehicle type meets / ~~does not meet~~ <sup>(1)</sup> the technical requirements of all the relevant regulatory acts as prescribed in Annex IV and Annex XI <sup>(1)</sup> <sup>(4)</sup> to Directive 2007/46/EC.

2. For incomplete vehicles / variants <sup>(1)</sup>:

The vehicle type meets / ~~does not meet~~ <sup>(1)</sup> the technical requirements of the regulatory acts listed in the table on side 2.

3. The approval is GRANTED / REFUSED / WITHDRAWN <sup>(1)</sup>

4. ~~The approval is granted in accordance with Article 20 and the validity of the approval is thus limited to dd/mm/yy. Not applicable~~

Place: Borlänge

Signature:



Staffan Erlandsson  
Investigator

Date:

22 JULY 2020

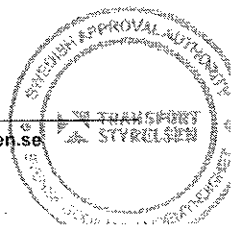
Attachments: Information package.

Test results (see Annex VIII).

~~Name(s) and specimen(s) of the signature(s) of the person(s) authorised to sign certificates of conformity and a statement of their position in the company.~~

NB: If this model is used for type-approval pursuant to Articles 20, 22 or 23, it may not bear the heading, "EC Vehicle Type-Approval Certificate" except:

- in the case mentioned in Article 20 where the Commission has decided to allow a Member State to grant a type-approval in accordance with this Directive.
- In the case of vehicles of the category M1, type-approved according to the procedure prescribed in Article 22.



## Side 2

This EC type-approval is, where incomplete and completed vehicles, variants or versions are concerned, based on the approval(s) for incomplete vehicles listed below: Not applicable

Stage 1: Manufacturer of the base vehicle: Not applicable

EC type-approval number:

Dated:

Applicable to variants or versions (as appropriate):

Stage 2: Manufacturer: Not applicable

EC type-approval number:

Dated:

Applicable to variants or versions (as appropriate):

Stage 3: Manufacturer: Not applicable

EC type-approval number:

Dated:

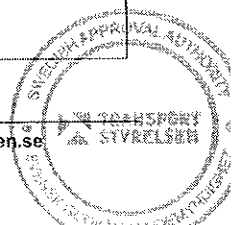
Applicable to variants or versions (as appropriate):

In the case where the approval includes one or more incomplete variants or versions (as appropriate), list those variants or versions (as appropriate) which are complete or completed.

Complete variant(s): CXC6, CEEV

List of requirements applicable to the approved incomplete vehicle type, variant or version (as appropriate, taking account of the scope and latest amendment to each of the regulatory acts listed below).

| Item | Subject  | Regulatory act reference | Last amended | Applicable to variant or, if need be, to version |
|------|--|--------------------------|--------------|--|
| 1    | Permissible Sound Levels                               | 51R                      | 02           | CXC6, CXEV                                       |
| 3A   | Prevention of Fire Risks                               | 34R                      | 02           | CXC6   |
| 3B   | Rear under-run protective devices and installation     | 58R                      | 03           | CXC6, CXEV                                       |
| 4A   | Space for mounting and fixing rear registration plates | 1003/2010                | 2015/166     | CXC6, CXEV                                       |
| 5A   | Steering equipment                                     | 79R                      | 03           | CXC6, CXEV                                       |
| 7A   | Audible warning devices and signals                    | 28R                      | 00           | CXC6   |



|     |   |           |           |            |
|-----|---|-----------|-----------|------------|
|     |   | 28R       | 00        | CXEV       |
| 8A  | Devices for indirect vision and their installation  | 46R       | 03        | CXC6       |
|     |   | 46R       | 04        | CXEV       |
| 9A  | Braking of vehicle and trailers   | 13R       | 11        | CXC6       |
|     |   | 13R       | 11        | CXEV       |
| 10A | Electromagnetic compatibility   | 10R       | 05        | CXC6       |
|     |   | 10R       | 05        | CXEV       |
| 13A | Protection of motor vehicle against unauthorised use                                      | 18R       | 03        | CXC6, CXEV |
| 15A | Seats, their anchorages and any head restraints   | 17R       | 08        | CXC6, CXEV |
| 17A | Vehicle access and manoeuvrability  | 130/2012  | 130/2012  | CXC6, CXEV |
| 17B | Speedometer equipment including its installation  | 39R       | 01        | CXC6, CXEV |
| 18A | Manufacturer's statutory plate and vehicle identification number                          | 19/2011   | 249/2012  | CXC6, CXEV |
| 19A | Safety-belt anchorages, ISOFIX anchorage systems and ISOFIX top tether anchorages         | 14R       | 09        | CXC6, CXEV |
| 20A | Installation of lighting and light signalling devices on vehicles                         | 48R       | 04        | CXC6, CXEV |
| 27A | Towing device   | 1005/2010 | 1005/2010 | CXC6, CXEV |
| 31A | Seat-belts  | 16R       | 06        | CXC6, CXEV |
| 33A | Location and identification of hand controls, tell-tales and indicators                   | 121R      | 01        | CXC6, CXEV |
| 36A | Heating Systems   | 122R      | 00        | CXC6, CXEV |
| 41A | Emissions (Euro VI) heavy duty vehicles/access to information                             | 595/2009  | 2018/932D | CXC6       |
| 45A | Safety glazing materials and their installation on vehicles.                              | 43R       | 01        | CXC6, CXEV |
| 46A | Installation of tyres   | 458/2011  | 2015/166  | CXC6, CXEV |
| 47A | Speed Limitation of Vehicles  | 89R       | 00        | CXC6, CXEV |
| 48A | Masses and dimensions   | 1230/2012 | 1230/2012 | CXC6, CXEV |
| 51A | Burning behaviour of materials used in the interior construction of certain categories of | 118R      | 03        | CXC6, CXEV |

|    |                 |      |       |      |
|----|-----------------|------|-------|------|
|    | motor vehicles  |      |       |      |
| 69 | Electric safety | 100R | 01&02 | CXEV |

(List only subjects for which an EC type-approval exists)

In the case of special purpose vehicles, exemptions granted or special provisions applied pursuant to Annex XI and exemptions granted pursuant to Article 20: Not applicable

| Regulatory act reference | Item Number | Kind of approval and nature of exemption | Applicable to variant or, if need be, to version |
|--------------------------|-------------|--|--|
| -                        | -           | -  | -  |

- (1) Delete where not applicable.
- (2) If not available at the time of granting the type-approval, this item shall be completed at the latest when the vehicle is introduced on the market.
- (3) As defined in Annex II.A.
- (4) See side 2.

### APPENDIX

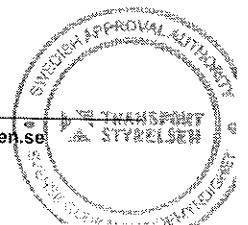
List of regulatory acts to which the type of vehicle complies

(to be filled in only in the case of type-approval in accordance with Article 6(3)).

Not applicable

| Subject <sup>(1)</sup>                | Regulatory act reference <sup>(1)</sup> | As amended by | Applicable to variants |
|---------------------------------------|---|---------------|------------------------|
| 1. Permissible sound level            | -                                       | -             | -                      |
| 2. Emissions                          | -                                       | -             | -                      |
| 3. Fuel tanks/Rear protective devices | -                                       | -             | -                      |

- (1) In accordance with Annex IV to this directive.



### ANNEX VIII: TEST RESULTS

(To be completed by the type-approval authority and attached to the vehicle EC type-approval certificate)

In each case, the information must make clear to which variant and version it is applicable. One version may not have more than one result. However, a combination of several results per version indicating the worst case is permissible. In the latter case, a note shall state that for items marked (\*) only worst case results are given.

#### 1. Results of the sound level tests

Number of the base regulatory act and latest amending regulatory act applicable to the approval. In case of a regulatory act with two or more implementation stages, indicate also the implementation stage: See table

|                          |            |            |
|--------------------------|------------|------------|
| Variant / Version:       | CEC6, CXC6 | CEEV, CXEV |
| Base regulatory act:     | ECE R51    | ECE R51    |
| Amending regulatory act: | 02 series  | 02 series  |
| Moving (dB(A) / E):      | 78         | 79         |
| Stationary (dB(A) / E):  | 82.6       | NA         |
| at (min <sup>-1</sup> ): | 1575       | NA         |

#### 2. Results of the exhaust emissions tests

##### 2.1. Emissions from motor vehicles tested under the test procedure for light-duty vehicles: Not applicable

Indicate the latest amending regulatory act applicable to the approval. In case the regulatory act has two or more implementation stages, indicate also the implementation stage: See table

Fuel(s)<sup>(a)</sup>: (diesel, petrol, LPG, NG, Bi-fuel: petrol/NG, LPG, Flex-fuel: petrol/ethanol, NG/H2NG): See table

##### 2.1.1. Type 1 test<sup>(b)(c)</sup> (vehicle emissions in the test cycle after a cold start): Not applicable

|   |   |   |   |
|---|---|---|---|
| Variant / Version:                              | - | - | - |
| CO (mg/km):                                     | - | - | - |
| THC (mg/km):                                    | - | - | - |
| NMHC (mg/km):                                   | - | - | - |
| NOx (mg/km):                                    | - | - | - |
| THC + NOx (mg/km):                              | - | - | - |
| Mass of particulate matter (PM) (mg/km):        | - | - | - |
| Number of particles (P) (#/km) <sup>(1)</sup> : | - | - | - |

2.1.2. Type 2 test<sup>(b)(c)</sup> (emissions data required at type-approval for roadworthiness purposes):

Type 2, low idle test

|                                    |   |   |   |
|------------------------------------|---|---|---|
| Variant / Version:                 | - | - | - |
| CO (% vol.):                       | - | - | - |
| Engine speed (min <sup>-1</sup> ): | - | - | - |
| Engine oil temperature (°C):       | - | - | - |

Type 2, high idle test:

|                                    |   |   |   |
|------------------------------------|---|---|---|
| Variant / Version:                 | - | - | - |
| CO (% vol.):                       | - | - | - |
| Lambda value:                      | - | - | - |
| Engine speed (min <sup>-1</sup> ): | - | - | - |
| Engine oil temperature (°C):       | - | - | - |

2.1.3. Type 3 test (emissions of crankcase gases): Not applicable

2.1.4. Type 4 test (evaporative emissions): Not applicable

2.1.5. Type 5 test (durability of anti-pollution control devices): Not applicable

Ageing distance covered (km) (e.g. 160 000 km): Not applicable

Deterioration factor DF: calculated/fixed<sup>(2)</sup>

Value: Not applicable

|  |   |   |   |
|--|---|---|---|
| Variant / Version:                       | - | - | - |
| CO:                                      | - | - | - |
| THC:                                     | - | - | - |
| NMHC:                                    | - | - | - |
| NOx:                                     | - | - | - |
| THC + NOx:                               | - | - | - |
| Mass of particulate matter (PM):         | - | - | - |
| Number of particles (P) <sup>(1)</sup> : | - | - | - |

2.1.6. Type 6 test (average emissions at low ambient temperatures): Not applicable

|                    |   |   |   |
|--------------------|---|---|---|
| Variant / Version: | - | - | - |
| CO g/km:           | - | - | - |
| THC g/km:          | - | - | - |

2.1.7. OBD: yes/no<sup>(2)</sup> Not applicable



## 2.2 Emissions from engines tested under the test procedure for heavy-duty vehicles

Indicate the latest amending regulatory act applicable to the approval. In case the regulatory act has two or more implementation stages, indicate also the implementation stage: Implementation stage is D

Fuel(s)<sup>(a)</sup> (diesel, petrol, LPG, NG, ethanol...): See table

|                          |                                     |           |
|--------------------------|-------------------------------------|-----------|
| Variant / Version:       | CXC6/CEC6                           | CXEV/CEEV |
| Amending regulatory act: | 595/2009<br>amended by<br>2018/932D | -         |
| Fuel(s):                 | Diesel                              | -         |

### 2.2.1 Results of the ESC test<sup>(1)(e)(f)</sup>

For variant: CXC6/CEC6

| WHSC test (if applicable)                          |                |                 |                             |                     |                          |                        |
|--|----------------|-----------------|-----------------------------|---------------------|--------------------------|------------------------|
| DF   | CO             | THC             | NO <sub>x</sub>             | PM Mass             | NH <sub>3</sub>          | PM Number              |
| Mult <sup>(1)</sup>                                | 1.3            | 1.3             | 1.15                        | 1.05                | 1                        | 1                      |
| Emissions  | CO<br>(mg/kWh) | THC<br>(mg/kWh) | NO <sub>x</sub><br>(mg/kWh) | PM Mass<br>(mg/kWh) | NH <sub>3</sub><br>(ppm) | PM Number<br>(#/kWh)   |
| Test result  | 18.00          | 44.00           | 54.00                       | 2.90                | 0.28                     | 3.822x10 <sup>11</sup> |
| Calculated<br>with DF                              | 23.40          | 57.20           | 62.10                       | 3.05                | 0.28                     | 3.822x10 <sup>11</sup> |
| CO <sub>2</sub> emissions mass emission: 657 g/kWh |                |                 |                             |                     |                          |                        |
| Fuel consumption: 207.13 g/kWh                     |                |                 |                             |                     |                          |                        |

For variants CXEV, CEEV: Not applicable

### 2.2.2 Result of the ELR test<sup>(1)</sup> Not applicable

|                                 |   |   |   |
|---------------------------------|---|---|---|
| Variant / Version:              | - | - | - |
| Smoke value (m <sup>-1</sup> ): | - | - | - |

**2.2.3. Result of the ETC test<sup>(e)(f)</sup>**

For variant: CXC6/CEC6 (OBD-D)

| WHTC test   |                |                 |                  |                             |                             |                     |                          |                         |
|---|----------------|-----------------|------------------|-----------------------------|-----------------------------|---------------------|--------------------------|-------------------------|
| DF Mult<br>(1)  | CO             | THC             | NMHC             | CH <sub>4</sub>             | NO <sub>x</sub>             | PM Mass             | NH <sub>3</sub>          | PM<br>Number            |
|   | 1.3            | 1.3             | NA               | NA                          | 1.15                        | 1.05                | 1                        | 1                       |
| Emission<br>s   | CO<br>(mg/kWh) | THC<br>(mg/kWh) | NMHC<br>(mg/kWh) | CH <sub>4</sub><br>(mg/kWh) | NO <sub>x</sub><br>(mg/kWh) | PM Mass<br>(mg/kWh) | NH <sub>3</sub><br>(ppm) | PM<br>Number<br>(#/kWh) |
| Cold start  | 106.20         | 7.30            | NA               | NA                          | 815.00                      | 3.22                | 0.40                     | 1.16E+12                |
| Hot start<br>w/o<br>regeneration                      | 26.10          | 0.80            | NA               | NA                          | 202.00                      | 4.17                | 0.50                     | 9.19E+10                |
| Hot start<br>with<br>regeneration <sup>(1)</sup>      | NA             | NA              | NA               | NA                          | NA                          | NA                  | NA                       | NA                      |
| k <sub>r,u</sub> (add)<br>(1)                         | 1.51           | 3.51            | NA               | NA                          | 23.95                       | 0.55                | NA                       | 1.57E+09                |
| Weighted<br>test<br>result                            | 38.98          | 5.23            | NA               | NA                          | 312.98                      | 4.58                | 0.49                     | 2.45E+11                |
| Final test<br>result<br>with DF                       | 50.68          | 6.81            | NA               | NA                          | 359.93                      | 4.81                | 0.49                     | 2.45E+11                |
| CO <sub>2</sub> emissions mass emission: 685.55 g/kWh |                |                 |                  |                             |                             |                     |                          |                         |
| Fuel consumption: 216.47 g/kWh                        |                |                 |                  |                             |                             |                     |                          |                         |

**2.2.4. Idle test<sup>(1)</sup> Not applicable**

|                                    |   |   |   |
|------------------------------------|---|---|---|
| Variant / Version:                 | - | - | - |
| CO (% vol.):                       | - | - | - |
| Lambda value <sup>(1)</sup> :      | - | - | - |
| Engine speed (min <sup>-1</sup> ): | - | - | - |
| Engine oil temperature<br>(K):     | - | - | - |

2.3. Diesel smoke: Not applicable

Indicate the latest amending regulatory act applicable to the approval. In case the regulatory act has two or more implementation stages, indicate also the implementation stage:

2.3.1. Results of the test under free acceleration

|   |   |   |   |
|---|---|---|---|
| Variant / Version:  | - | - | - |
| Corrected value of the absorption coefficient (m <sup>-1</sup> ): | - | - | - |
| Normal engine idling speed:                                       | - | - | - |
| Maximum engine speed:   | - | - | - |
| Oil temperature (min / max)                                       | - | - | - |

3. Results of the CO<sub>2</sub> emission, fuel/electric energy consumption, and electric range tests: Not applicable

Number of the base regulatory act and the latest amending regulatory act applicable to the approval: Not applicable

3.1. Internal combustion engines, including not externally chargeable hybrid electric vehicles (NOVC) <sup>(1)(d)</sup> Not applicable

|   |   |   |   |
|---|---|---|---|
| Variant / Version:  | - | - | - |
| CO <sub>2</sub> mass emission (urban conditions) (g/km):              | - | - | - |
| CO <sub>2</sub> mass emission (extra-urban conditions) (g/km):        | - | - | - |
| CO <sub>2</sub> mass emission (combined) (g/km):                      | - | - | - |
| Fuel consumption (urban conditions) (l/100 km) <sup>(9)</sup> :       | - | - | - |
| Fuel consumption (extra-urban conditions) (l/100 km) <sup>(9)</sup> : | - | - | - |
| Fuel consumption (combined) (l/100 km) <sup>(9)</sup> :               | - | - | - |

**3.2. Externally chargeable hybrid electric vehicles (OVC)<sup>(1)</sup> Not applicable**

|  |   |   |   |
|--|---|---|---|
| Variant / Version:   | - | - | - |
| CO <sub>2</sub> mass emission (Condition A, combined) (g/km):        | - | - | - |
| CO <sub>2</sub> mass emission (Condition B, combined) (g/km):        | - | - | - |
| CO <sub>2</sub> mass emission (weighted, combined) (g/km):           | - | - | - |
| Fuel consumption (Condition A, combined) (l/100 km) <sup>(9)</sup> : | - | - | - |
| Fuel consumption (Condition B, combined) (l/100 km) <sup>(9)</sup> : | - | - | - |
| Fuel consumption (weighted, combined) (l/100 km) <sup>(9)</sup> :    | - | - | - |
| Electric energy consumption (Condition A, combined) (Wh/km):         | - | - | - |
| Electric energy consumption (Condition B, combined) (Wh/km):         | - | - | - |
| Electric energy consumption (weighted and combined) (Wh/km):         | - | - | - |
| Pure electric range (km):  | - | - | - |

**3.3. Pure electric vehicles<sup>(1)</sup> Not applicable**

|                                      |   |   |   |
|--------------------------------------|---|---|---|
| Variant / Version:                   | - | - | - |
| Electric energy consumption (Wh/km): | - | - | - |
| Range (km):                          | - | - | - |

**3.4. Hydrogen fuel cell vehicles<sup>(1)</sup> Not applicable**

|                               |   |   |   |
|-------------------------------|---|---|---|
| Variant / Version:            | - | - | - |
| Fuel consumption (kg/100 km): | - | - | - |

4. Results of the tests for vehicles fitted with eco-innovation(s)<sup>(h1)(h2)(h3)</sup>  
Not applicable

| Variant/Version ...   |  |   |   |  |  |   |   |
|---|--|---|---|--|--|---|---|
| Decision approving the eco-innovation <sup>(h4)</sup>         | Code of the eco-innovation <sup>(h5)</sup> | 1. CO <sub>2</sub> emissions of the baseline vehicle (g/km) | 2. CO <sub>2</sub> emissions of the eco-innovation vehicle (g/km) | 3. CO <sub>2</sub> emissions of the baseline vehicle under type 1 test-cycle <sup>(h6)</sup> | 4. CO <sub>2</sub> emissions of the eco-innovation vehicle under type 1 test-cycle (= 3.5.1.3) | 5. Usage factor (UF) i.e. temporal share of technology usage in normal operation conditions | CO <sub>2</sub> emissions savings ((1 - 2) - (3 - 4))*5 |
| xxxx/201x   | ...  | ...   | ...   | ...  | ...  | ...   | ...   |
| ...   | ...  | ...   | ...   | ...  | ...  | ...   | ...   |
| ...   | ...  | ...   | ...   | ...  | ...  | ...   | ...   |
| Total CO <sub>2</sub> emissions saving (g/km) <sup>(h7)</sup> |  |   |   |  |  |   | ...   |

4.1. General code of the eco-innovation(s)<sup>(h8)</sup> Not applicable

## Explanatory notes

- (1) If applicable.
- (2) Delete where not applicable.
- (a) When restrictions for the fuel are applicable, indicate these restrictions (e.g. for natural gas the L range or the H range).
- (b) For bi fuel vehicles, the table shall be repeated for both fuels.
- (c) For flex fuel vehicles, when the test is to be performed on both fuels, according to Figure I.2.4 of Annex I to Regulation (EC) No 692/2008, and for vehicles running on LPG or NG/Biomethane, either bi-fuel or mono-fuel, the table shall be repeated for the different reference gases used in the test, and an additional table shall display the worst results obtained. When applicable, in accordance with sections 1.1.2.4 and 1.1.2.5 of Annex I to Regulation (EC) No 692/2008, it shall be shown if the results are measured or calculated.
- (d) Repeat the table for each reference fuel tested.
- (e) For Euro VI, ESC shall be understood as WHSC and ETC as WHTC.
- (f) For Euro VI, if CNG and LPG fuelled engines are tested on different reference fuels, the table shall be reproduced for each reference fuel tested.
- (g) The unit "l/100 km" is replaced by "m<sup>3</sup>/100 km" for vehicles fuelled with NG and H<sub>2</sub>NG, and by "kg/100 km" for vehicles fuelled with hydrogen.
- (h) Eco-innovations.
- (h1) Repeat the table for each variant/version.
- (h2) Repeat the table for each reference fuel tested.
- (h3) Expand the table if necessary, using one extra row per eco-innovation.
- (h4) Number of the Commission Decision approving the eco-innovation.
- (h5) Assigned in the Commission Decision approving the eco-innovation.
- (h6) If a modelling methodology is applied instead of the type 1 test cycle, this value shall be the one provided by the modelling methodology.
- (h7) Sum of the CO<sub>2</sub> emissions savings of each individual eco-innovation.
- (h8) (The general code of the eco-innovation(s) shall consist of the following elements each separated by a blank space:  
— Code of the approval authority as defined in Annex VII,  
— Individual code of each eco-innovation fitted in the vehicle, indicated in chronological order of the Commission approval decisions.  
E.g. the general code of three eco-innovations approved chronologically as 10, 15 and 16 and fitted to a vehicle certified by the German type approval authority should be: "e1 10 15 16".)



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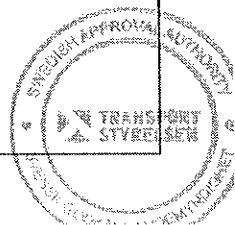
03

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Extension to the EC type approval no: e5\*2007/46\*1193\*02





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**Extension Summary**

Paragraphs that are changed in the documentation: (changes are fonted in red)

**Reason for extension: To cover:**

- 1) Addition of new indirect vision devices
- 2) Addition of new interior materials
- 3) Addition of new electrical / electronic devices
- 4) Addition of new OBD-D Engine
- 5) Addition of new representative drawing
- 6) Addition of optional rear axle load capacity
- 7) Addition of new FDR values
- 8) Correction of manufacturer's engine code for Electric Engine
- 9) Modification of Annex List
- 10) Update of Part II & Part III of information document
- 11) Correction of template of 2007/46 information document
- 12) Change of items 1.8, 1.8.1, 2.4.2.3, 2.6, 2.6.1, 2.8.1, 3.3.1.1.2, 4.6, 9.9.1.2, 9.9.1.3, 9.9.2 of information document
- 13) Update of items 3.2.1.11, 3.2.12.2.7.0.4, 3.2.12.2.7.0.5, 3.2.12.2.7.0.6, 3.2.12.2.7.6.5, 3.2.12.2.7.7, 3.2.12.2.8.1, 3.2.12.2.8.2.1, 3.2.12.2.8.4, 3.2.12.2.8.7, 3.2.12.2.8.8.2, 3.2.12.2.8.6.
- 14) Update of amendment level to (EU) 2015/166

|          |  |
|----------|--|
| PART II  | Type - Variant - Version: List of Vehicles |
|          | Type - Variant - Version: Coding Table     |
| PART III | List of System Type Approvals              |







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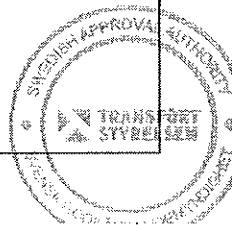
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**List of Annexes:**

| No | Annex Code    | Document Name   |
|----|---------------|---|
| 1  | 1.2. Sketch 1 | Representative Drawing of Avenue LF                           |
| 2  | 1.2. Sketch 2 | Representative Drawing of Avenue LF RHD                       |
| 3  | 1.2. Sketch 3 | Representative Drawing of Avenue LF CNG                       |
| 4  | 1.2. Sketch 4 | Representative Drawing of Avenue LF with 2 double doors       |
| 5  | 1.2. Sketch 5 | Representative Drawing of Avenue LF HYBRID                    |
| 6  | 1.1.AA        | Representative Drawing of Avenue EV                           |
| 7  | 1.1.AB        | Representative Drawing of Avenue EV (New)                     |
| 8  | 1.1.AC        | Representative Drawing of Avenue Electron                     |
| 9  | 1.1.AD        | Representative Drawing of Avenue Electron (New)               |
| 10 | 4.1.F         | Summation Gearbox   |
| 11 | Annex 2       | Load Distribution table                                       |
| 12 | CA_501        | Front Axle Drawing  |
| 13 | CA_901        | Statutory plate   |
| 14 | CA_902        | VIN Coding System   |
| 15 | CA_N903       | VIN Number Location - Avenue                                  |
| 16 | CA_N904       | Location of Statutory Plate - Avenue                          |
| 17 | 6.1 Sketch 7  | Front Axle Suspension Arrangement                             |
| 18 | 6.1 Sketch 8  | Rear Axle Suspension Arrangement (ELECTRICITY)                |
| 19 | 6.1 Sketch 9  | Rear Axle Suspension Arrangement                              |
| 20 | 6.1 Sketch 10 | Rear Axle Suspension Arrangement                              |
| 21 | 6.1 Sketch 11 | Rear Axle Suspension Arrangement                              |
| 22 | 6.1 Sketch 12 | Rear Axle Suspension Arrangement                              |
| 23 | 6.1 Sketch 13 | Rear Axle Suspension Arrangement                              |
| 24 | NK119012      | Chassis Drawing - Avenue LF CNG                               |
| 25 | NK119018      | Chassis Drawing - Avenue LF                                   |
| 26 | 1.4 Sketch 5  | Chassis Drawing - Avenue EV                                   |
| 27 | 1.4 Sketch 6  | Chassis Drawing - Avenue Electron                             |
| 28 | 1.4 Sketch 7  | Chassis Drawing - Avenue Electron (Revar)                     |
| 29 | NK144008      | Roof Exhaust Cover Assembly                                   |
| 30 | Annex 9       | Cummins OBD D Engine Approval (e5*595/2009*2018/932D*0018*00) |
| 31 | Annex 0       | COC Signatures  |
| 32 | Annex 0.1     | Certificate of Conformity Sample                              |
| 33 | Annex TM      | TM4 Declaration   |

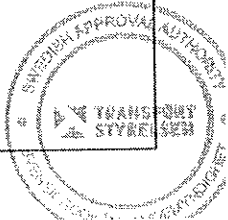


|   |                                  |                  |              |
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**PART I  
A. FOR CATEGORIES M**

**0. GENERAL**

- 0.1. Make (trade name of manufacturer) : TEMSA
- 0.2. Type : N
- 0.2.1. Commercial name(s) (if available) :  
Avenue LF, AVENUE, AVENUE L, AVENUE LE, AVENUE LF CNG, AVENUE CNG L, AVENUE LE RHD, AVENUE LF RHD, IBUS, AVENUE IBUS, MEGAPOL, MEGAPOL LE, MEGAPOL LF, AVENUE LF12 L, AVENUE LF12, LF12, LF12 L, Avenue Plus, Avenue EV, Avenue electricITY ,Avenue EVL, Avenue Electron
- 0.2.2. For multi-stage approved vehicles, type-approval information of the base/previous stage vehicle (list the information for each stage. This can be done with a matrix):
- |   |                |
|---|----------------|
| Type:   | Not applicable |
| Variants:   | Not applicable |
| Version(s):                                       | Not applicable |
| Type-approval number, including extension number: | Not applicable |
- 0.3. Means of identification of type, if marked on the vehicle <sup>(b)</sup> : By vehicle identification number
- 0.3.1. Location of that marking: : On statutory plate and on body profiles in the front right wheel space (if applicable)
- 0.4. Category of vehicle <sup>(c)</sup> : M3
- 0.4.1. Classification(s) according to the dangerous goods which the vehicle is intended to transport: : N/A
- 0.5. Company name and address of manufacturer: : TEMSA ULAřIM ARAÇLARI SANAYİ VE TİCARET A.ř.  
Sarıhamzalı Mahallesi Turhan Cemal Beriker Bulvarı,  
No: 563/A Seyhan / ADANA / TURKEY
- 0.5.1. For multi-stage approved vehicles, company name and address of the manufacturer of the base/previous stage(s) vehicle : Not Applicable





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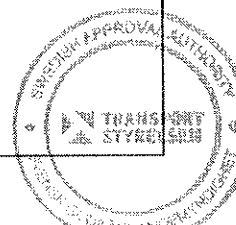
- 0.8. Name and address(es) of assembly plant(s) : TEMSA ULAŞIM ARAÇLARI SANAYİ VE TİCARET A.Ş.  
Sarıhamzalı Mahallesi Turhan Cemal Beriker Bulvarı,  
No: 563/A Seyhan / ADANA / TURKEY
- 0.9. Name and address of the manufacturer's representative (if any) : TEMSA Deutschland GmbH  
Gottlieb-Daimler-Ring 8  
74906 Bad Rappenau, Germany


## 1. GENERAL CONSTRUCTION CHARACTERISTICS OF THE VEHICLE

- 1.1. Photographs and/or drawings of a representative vehicle : 

| VEHICLE         | See Annex      |
|-----------------|----------------|
| Avenue LF       | 1.2            |
| Avenue EV       | 1.1.AA, 1.1.AB |
| Avenue Electron | 1.1.AC, 1.1.AD |
- 1.3. Number of axles and wheels : Axles:2 , Wheels:6
- 1.3.1. Number and position of axles with twin wheels : One, at the rear.
- 1.3.2. Number and position of steered axles : One, at the front.
- 1.3.3. Powered axles (number, position, interconnection) : One powered axle at the rear, interconnected through gearbox, propeller shaft and rear axle
- 1.4. Chassis (if any) (overall drawing) : 

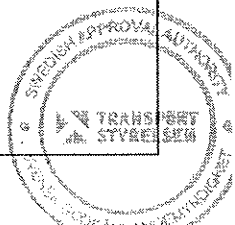
| Chassis Type:   | Annex No :       |
|-----------------|------------------|
| Avenue LF       | NK119018         |
| Avenue LF CNG   | NK119012         |
| Avenue EV       | 1.4 Sketch 5     |
| Avenue Electron | 1.4 Sketch 6 & 7 |
- 1.6. Position and arrangement of the engine : Electric engine is located near rear axle, on the driver's side, arranged horizontally.
- 1.8. Hand of drive : Left
- 1.8.1. Vehicle is equipped to be driven in right/left <sup>(1)</sup> hand traffic : Right hand traffic
- 1.9. Specify if the towing vehicle is intended to tow semi-trailers or other trailers and, if the trailer is a semi-, drawbar-, centre-axle- or rigid drawbar trailer : The motor vehicle is not intended to tow semi-trailers or other trailers.
- 1.10. Specify if the vehicle is specially designed for the controlled-temperature carriage of goods: : Not applicable



|   |                                  |                  |              |
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## 2. MASSES AND DIMENSIONS <sup>(f)(g)(7)</sup> (in kg and mm) (Refer to drawing where applicable)

- 2.1. Wheelbase(s) (fully loaded) <sup>(g1)</sup>
- 2.1.1. Two axle vehicles : 5805 mm
- 2.1.2. Vehicles with three or more axles : N/A
- 2.1.2.1. Axle spacing between consecutive axles going from the foremost to the rearmost axle : N/A
- 2.1.2.2. Total axle spacing : N/A
- 2.3.1. Track of each steered axle <sup>(g4)</sup> : 2140 - 2161 mm
- 2.3.2. Track of all other axles <sup>(g4)</sup> : Min: 1820 mm, Max: 1837 mm (optional aluminium rim)
- 2.4. Range of vehicle dimensions (overall)
- 2.4.1. For chassis without bodywork
- 2.4.1.1. Length <sup>(g5)</sup> : N/A
- 2.4.1.1.1. Maximum permissible length : N/A
- 2.4.1.1.2. Minimum permissible length : N/A
- 2.4.1.2. Width <sup>(g7)</sup> : N/A
- 2.4.1.2.1. Maximum permissible width : N/A
- 2.4.1.2.2. Minimum permissible width : N/A
- 2.4.1.3. Height (in running order) <sup>(g8)</sup> (for suspensions adjustable for height, indicate normal running position) : N/A
- 2.4.2. For chassis with bodywork
- 2.4.2.1. Length <sup>(g5)</sup> : 12000 mm  
12028 - 12095 mm for Avenue Electron
- 2.4.2.1.1. Length of the loading area : N/A





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2.4.2.2. Width <sup>(g7)</sup> : 2550 mm

2.4.2.2.1. Thickness of the walls (in the case of vehicles designed for controlled-temperature transport of goods) : N/A

2.4.2.3. Height (in running order) <sup>(g8)</sup> (for suspensions adjustable for height, indicate normal running position):

| Vehicle         | Options                              | Height         |
|-----------------|--------------------------------------|----------------|
| Avenue LF       | 2-doors                              | 3267 mm        |
| Avenue LF       | 3-doors                              | 3200 mm        |
| Avenue LF       | with different exhaust outlet height | 3305 mm        |
| Avenue EV       | 3-doors                              | 3604 mm        |
| Avenue Electron | 3-doors                              | 3176 – 3237 mm |

2.5. Minimum mass on the steering axle(s) for incomplete vehicles: See item 2.6.1

2.6. Mass in running order <sup>(h)</sup>

(a) minimum and maximum for each variant:

(b) mass of each version (a matrix must be provided):

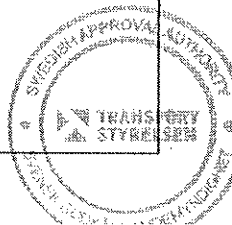
|                  | Incomplete vehicle | Complete vehicle | Avenue EV | Avenue EV (OPTRAC Engine) | Avenue Electron |
|------------------|--------------------|------------------|-----------|---------------------------|-----------------|
| <b>Min (kg)</b>  | 8700               | 10520            | 12250     | 12600                     | 12140           |
| <b>Max. (kg)</b> | 11650              | 11900            | 14000     | 13350                     | 13550           |

2.6.1 Distribution of this mass among the axles and, in the case of a semi-trailer a rigid drawbar trailer or a centre-axle trailer, the mass on the coupling:

(a) minimum and maximum for each variant:

(b) mass of each version (a matrix must be provided):

|            | Incomplete Vehicle |           |
|------------|--------------------|-----------|
|            | Min. (kg)          | Max. (kg) |
| Front axle | 2180               | 2920      |
| Rear axle  | 6520               | 8730      |





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|               | Complete Vehicles |              | Avenue EV    |              | Avenue EV<br>(OPTRAC ENGINE) |           | Avenue<br>Electron |              |
|---------------|-------------------|--------------|--------------|--------------|------------------------------|-----------|--------------------|--------------|
|               | Min.<br>(kg)      | Max.<br>(kg) | Min.<br>(kg) | Max.<br>(kg) | Min. (kg)                    | Max. (kg) | Min.<br>(kg)       | Max.<br>(kg) |
| Front<br>Axle | 3340              | 3900         | 4470         | 5105         | 4160                         | 4400      | 4500               | 4900         |
| Rear<br>Axle  | 7180              | 8000         | 7780         | 8895         | 8440                         | 8950      | 7640               | 8650         |

2.6.2 Mass of the optional equipment (as defined in point (5) of Article 2 of Regulation (EU) No 1230/2012: : Electrical battery: 1350 – 3500 kg

2.7. Minimum mass of the completed vehicle as stated by the manufacturer, in the case of an incomplete vehicle: : See item 2.6.1

2.8. Technically permissible maximum laden mass stated by the manufacturer <sup>(1)(3)</sup> :

| Vehicle  | Max. Laden Mass (kg) |
|----------|----------------------|
| ALL      | 18000                |
| Optional | 19145                |

2.8.1. Distribution of this mass among the axles and, in the case of a semi-trailer or centre-axle trailer, load on the coupling point <sup>(3)</sup> :

| Front Axle<br>(kg) | Rear Axle<br>(kg) |
|--------------------|-------------------|
| 7245               | 11500             |
|                    | 11900             |
|                    | 12000             |

2.9. Technically permissible maximum mass on each axle : See item 2.8.1

2.10. Technically permissible mass on each group of axles: : N/A

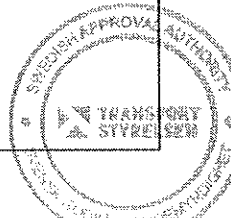
2.11. Technically permissible maximum towable mass of the towing vehicle in case of :

2.11.1. Drawbar trailer : N/A

2.11.2. Semi-trailer : N/A

2.11.3. Centre-axle trailer : N/A

2.11.4. Rigid drawbar trailer: : N/A





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2.11.5. Technically permissible maximum laden mass of the combination <sup>(3)</sup> : N/A

2.11.6. Maximum mass of unbraked trailer : N/A

2.12. Technically permissible maximum mass at the coupling point : N/A

2.12.1. Of a towing vehicle: : N/A

2.12.2. of a semi-trailer, a centre-axle trailer or a rigid drawbar trailer: : N/A

2.16. Registration/in service maximum permissible masses (optional) :

2.16.1. Registration/in service maximum permissible laden mass :

|                | Option 1 | Option 2 | Option 3 | Option 4 | Option 5 | Option 6 | Option 7 | Option 8 | Option 9 | Option 10 | Option 11 |
|----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|
| Front Axle(kg) | 6500     | 6500     | 6500     | 7245     | 7000     | 7100     | 7245     | 7245     | 7100     | 7100      | 7100      |
| Rear Axle(kg)  | 11500    | 12000    | 12000    | 13000    | 12000    | 12300    | 11500    | 11900    | 12000    | 12300     | 12600     |
| Total (kg)     | 18000    | 18000    | 18500    | 19145    | 19000    | 19000    | 18000    | 19000    | 19000    | 19000     | 19145     |

2.16.2. Registration/in service maximum permissible mass on each axle and, in the case of a semi-trailer or centre-axle trailer, intended load on the coupling point stated by the manufacturer if lower than the technically permissible maximum mass on the coupling point : Refer to 2.16.1

2.16.3. Registration/in service maximum permissible mass on each group of axles : N/A

2.16.4. Registration/in service maximum permissible towable mass : N/A

2.16.5. Registration/in service maximum permissible mass of the combination : N/A

2.17. Vehicle submitted to multi-stage type-approval (only in the case of incomplete or : No





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completed vehicles of category N1 within  
the scope of Regulation (EC) No  
715/2007:

2.17.1 Mass of the base vehicle in running order : N/A

2.17.2 Default added mass (DAM), calculated in  
accordance with Section 5 of Annex XII to  
Regulation (EC) No 692/2008: : N/A

### 3. POWER PLANT<sup>(k)</sup>

3.1. Manufacturer of the engine :

| Vehicle            | Manufacturer                |
|--------------------|-----------------------------|
| Avenue<br>LF       | Cummins Engine Company      |
| Avenue<br>EV       | Prestolite TM4 e-Propulsion |
|                    | Aselsan                     |
| Avenue<br>Electron | Prestolite TM4 e-Propulsion |

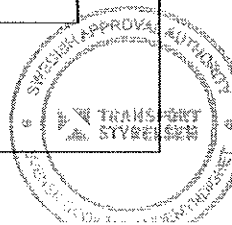
3.1.1. Manufacturer's engine code (as marked on  
the engine or other means of identification) :

| VEHICLE            | MAKE       | ENGINE CODE                    |
|--------------------|------------|--------------------------------|
| Avenue<br>LF       | Cummins    | B6.7E6D280B /<br>DC07 101      |
|                    | Cummins    | B6.7E6D300B                    |
| Avenue<br>EV       | Prestolite | DDM155A(LSM2<br>80A-HV2700-A1) |
|                    | Aselsan    | MG-9090-001<br>DCBRLS          |
| Avenue<br>Electron | Prestolite | DDM155A(LSM2<br>80A-HV2700-A1) |

3.1.2. Approval number (if appropriate) including  
fuel identification marking :

(heavy-duty vehicles only)

| MAKE    | ENGINE CODE | TYPE APPROVAL NO              |
|---------|-------------|-------------------------------|
| Cummins | B6.7E6D280B | e5*595/2009*2018/932D*0018*00 |
|         | B6.7E6D300B |                               |







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### 3.2. Internal combustion engine :

#### 3.2.1.1. Working principle :

| Manufacturer | Engine Code | Ignition    | Stroke |
|--------------|-------------|-------------|--------|
| Cummins      | B6.7E6D280B | Compression | Four   |
| Cummins      | B6.7E6D300B | Compression | Four   |

DDM155A(LSM280A-HV2700-A1): N/A  
ASELSAN OPTRAC-625 and HVSM-287:N/A

#### 3.2.1.1.1 Type of dual-fuel engine: : N/A

#### 3.2.1.1.2. Gas Energy Ratio over the hot part of the WHTC test-cycle : N/A

#### 3.2.1.2. Number and arrangement of cylinders : 6 cylinders in line

#### 3.2.1.3. Engine capacity (m) :

| Manufacturer | Engine Code                | Engine Capacity(cm <sup>3</sup> ) |
|--------------|----------------------------|-----------------------------------|
| Cummins      | B6.7E6D280B<br>B6.7E6D300B | 6700                              |

#### 3.2.1.6. Normal engine idling speed (2) :

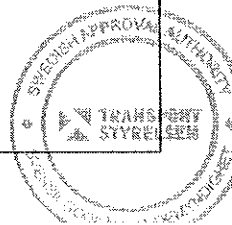
| Manufacturer | Engine Code                | Normal engine idling speed (min-1) |
|--------------|----------------------------|------------------------------------|
| Cummins      | B6.7E6D280B<br>B6.7E6D300B | 600-800                            |

#### 3.2.1.6.2. Idle in diesel (1)(x1) : Yes

#### 3.2.1.8. Maximum net power (n): :

| Manufacturer | Engine Code | Net Power (kW at .. min -1)      |
|--------------|-------------|----------------------------------|
| Cummins      | B6.7ED280B  | 204 kW at 2100 min <sup>-1</sup> |
| Cummins      | B6.7E6D300B | 220 kW at 2100 min <sup>-1</sup> |

3.2.1.11. (Euro VI only) Manufacturer references of the Documentation package required by Articles 5, 7 and 9 of Regulation (EU) No 582/2011 : Refer to approval;  
e5\*595/2009\*2018/932D\*0018\*00





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enabling the approval authority to evaluate the emission control strategies and the systems on-board the engine to ensure the correct operation of NOx control measures

3.2.2.1. Light-duty vehicles: : N/A

3.2.2.2. Heavy duty vehicles Diesel/Petrol/LPG/NG-H/NG-L/NG-HL/Ethanol (ED95)/Ethanol (E85)/LNG/LNG<sub>20</sub> <sup>(1)(6)</sup> :

| Manufacturer | Engine Code                | Fuel Type |
|--------------|----------------------------|-----------|
| Cummins      | B6.7E6D280B<br>B6.7E6D300B | Diesel    |

3.2.2.2.1. (Euro VI only) Fuels compatible with use by the engine declared by the manufacturer in accordance with Section 1.1.3 of Annex I to Regulation (EU) No 582/2011 (as applicable) : B20 (Diesel with up to %20 FAME),

3.2.2.4. Vehicle fuel type: : Mono fuel

3.2.2.5. Maximum amount of biofuel acceptable in fuel (manufacturer's declared value) :

| Manufacturer | Engine Code                | Amount of Biofuel |
|--------------|----------------------------|-------------------|
| Cummins      | B6.7E6D280B<br>B6.7E6D300B | 0%                |

3.2.3. Fuel tank(s) :

3.2.3.1. Service fuel tank(s) :

3.2.3.1.1. Number and capacity of each tank :

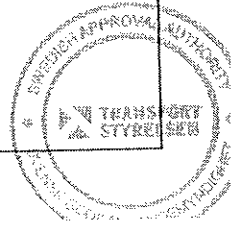
| Vehicle          | Unit Capacity (lt) | Quantity | Total Capacity (lt) |
|------------------|--------------------|----------|---------------------|
| Avenue LF Diesel | 285±2              | 1        | 285±2               |

3.2.3.2. Reserve fuel tank(s) : N/A

3.2.3.2.1. Number and capacity of each tank: : N/A

3.2.4. Fuel feed

3.2.4.1. By carburettor(s): : No





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3.2.4.2. By fuel injection (compression  
ignition or dual-fuel only) :

| Manufacturer | Engine Code                | By Fuel Injection<br>(Compression Ignition only) |
|--------------|----------------------------|--|
| Cummins      | B6.7E6D280B<br>B6.7E6D300B | Yes  |

3.2.4.2.2.

Working principle:

| Manufacturer | Engine Code                | Working Principle |
|--------------|----------------------------|-------------------|
| Cummins      | B6.7E6D280B<br>B6.7E6D300B | Direct Injection  |

3.2.4.3.

By fuel injection (positive ignition  
only):

| Manufacturer | Engine Code                | By fuel injection<br>(positive ignition only) |
|--------------|----------------------------|---|
| Cummins      | B6.7E6D280B<br>B6.7E6D300B | N/A   |

3.2.7

Cooling system

: Liquid

3.2.8

Intake system

:

3.2.8.1

Pressure charger:

| Manufacturer | Engine Code                | Pressure Charger |
|--------------|----------------------------|------------------|
| Cummins      | B6.7E6D280B<br>B6.7E6D300B | Yes              |

3.2.8.2.

Intercooler:

: Yes

3.2.8.3.3

(Euro VI only) Actual Intake system  
depression at rated engine speed  
and at 100 % load on the vehicle

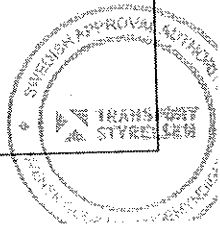
| Manufacturer | Engine Code                | Intake depression |
|--------------|----------------------------|-------------------|
| Cummins      | B6.7E6D280B<br>B6.7E6D300B | Max. 3.7 kPa      |

3.2.9

Exhaust system

:

3.2.9.2.1

(Euro VI only) Description and/or  
drawing of the elements of the  
exhaust system that are not part of  
the engine system: EGR, VGT, DOC, DPF, SCR,  
Exhaust Valve, Crosshead, Rocker Lever, Pushrod,  
Camshaft, Manifold, Turbocharger  
(B6.7E6D280B, B6.7E6D300B)



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3.2.9.3.1 (Euro VI only) Actual exhaust back pressure at rated engine speed and at 100 % load on the vehicle (compression-ignition engines only)

| Manufacturer | Engine Code                | Max. exhaust back pressure                        |
|--------------|----------------------------|---|
| Cummins      | B6.7E6D280B<br>B6.7E6D300B | 40 kPa (After regeneration 60 kPa max. allowable) |

3.2.9.4 Type, marking of exhaust silencer(s)

| Manufacturer | Engine Code                | Type & Marking |
|--------------|----------------------------|----------------|
| Cummins      | B6.7E6D280B<br>B6.7E6D300B | A040M890       |

Where relevant for exterior noise, reducing measures in the engine compartment and on the engine

: Engine Shields

3.2.9.5 Location of the exhaust outlet

| Manufacturer | Engine Code | By Fuel Injection (Compression)  |
|--------------|-------------|--|
| Cummins      | B6.7E6D280B | On the rear part of the floor (under the vehicle), to the back side of the vehicle |
|              | B6.7E6D300B | On the roof to the back side of the vehicle(optional)                              |

3.2.9.7.1 (Euro VI only) Acceptable Exhaust system volume

: (OBD D Diesel Engines Only) Acceptable Exhaust System Volume:  
Min: 102,7 dm<sup>3</sup>  
Max: 125,2 dm<sup>3</sup>

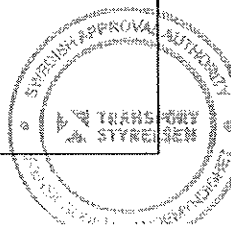
3.2.12 Measures taken against air pollution

3.2.12.1.1. (Euro VI only) Device for recycling crankcase gases:  
If yes, description and drawings:  
If no, compliance with Annex V to Regulation (EU) No 582/2011 required

: Refer to approval;

e5\*595/2009\*2018/932D\*0018\*00

3.2.12.2 Additional pollution control devices (if any, and if not covered by another heading)





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3.2.12.2.1 Catalytic converter

: See Engine Type Approvals  
e5\*595/2009\*2018/932D\*0018\*003.2.12.2.1.11. Regeneration systems/method of  
exhaust after-treatment systems,  
description

: Diesel: In cylinder, post injection only

3.2.12.2.1.11.6 Consumable reagents:

| Manufacturer | Engine Code                | Consumable Reagents |
|--------------|----------------------------|---------------------|
| Cummins      | B6.7E6D280B<br>B6.7E6D300B | Yes                 |

3.2.12.2.1.11.7 Type and concentration of reagent  
needed for catalytic action

| Manufacturer | Engine Code                | Concentration of Reagents                    |
|--------------|----------------------------|--|
| Cummins      | B6.7E6D280B<br>B6.7E6D300B | Urea Solution<br>32,5% by weight<br>in water |

3.2.12.2.2. Oxygen sensor:

| Manufacturer | Engine Code                | Oxygen sensor |
|--------------|----------------------------|---------------|
| Cummins      | B6.7E6D280B<br>B6.7E6D300B | No            |

3.2.12.2.3 Air injection:

: No

3.2.12.2.4 Exhaust gas recirculation:

| Manufacturer | Engine Code                | Exhaust Gas Recirculation |
|--------------|----------------------------|---------------------------|
| Cummins      | B6.7E6D280B<br>B6.7E6D300B | Yes                       |

3.2.12.2.5 Evaporative emissions control  
system (petrol and ethanol engines  
only):

: No

3.2.12.2.6. Particulate trap:

| Manufacturer | Engine Code                | Particulate Trap |
|--------------|----------------------------|------------------|
| Cummins      | B6.7E6D280B<br>B6.7E6D300B | Yes              |

3.2.12.2.6.9. Other systems:

: No

3.2.12.2.6.9.1 Description and operation

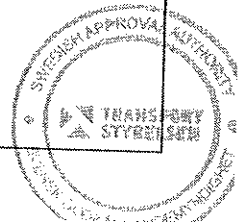
: N/A

3.2.12.2.7. On-board-diagnostic (OBD) system:

: Yes

3.2.12.2.7.0.1 (Euro VI only) Number of OBD

: One





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engine families within the engine family

3.2.12.2.7.0.2 (Euro VI only) List of the OBD engine families (when applicable) :

| Manufacturer | Engine Family |        |
|--------------|---------------|--------|
| Cummins      | ESR348077     | Diesel |

3.2.12.2.7.0.3 (Euro VI only) Number of the OBD engine family the parent engine / the engine member belongs to :

| Manufacturer | Engine Family |
|--------------|---------------|
| Cummins      | B6.7          |

3.2.12.2.7.0.4 (Euro VI only) Manufacturer references of the OBD-Documentation required by Article 5(4)(c) and Article 9(4) of Regulation (EU) No 582/2011 and specified in Annex X to that Regulation for the purpose of approving the OBD system :

| Manufacturer | Engine Family             | Test Report No.               |
|--------------|---------------------------|-------------------------------|
| Cummins      | B6.7ED280B<br>B6.7E6D300B | e5*595/2009*2018/932D*0018*00 |

3.2.12.2.7.0.5 (Euro VI only) When appropriate, manufacturer reference of the Documentation for installing in a vehicle an OBD equipped engine system :

Diesel:

e5\*595/2009\*2018/932D\*0018\*00

3.2.12.2.7.0.6 (Euro VI only) When appropriate, manufacturer reference of the documentation package related to the installation on the vehicle of the OBD system of an approved engine :

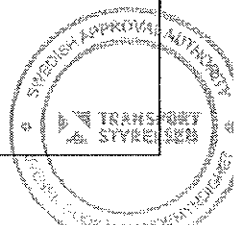
Diesel:


e5\*595/2009\*2018/932D\*0018\*00

3.2.12.2.7.6.5 (Euro VI only) OBD Communication protocol standard :

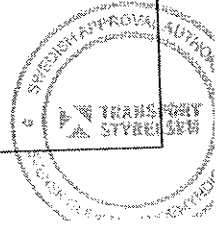
Diesel:

e5\*595/2009\*2018/932D\*0018\*00



|   |                                  |                  |              |
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- 3.2.12.2.7.7. (Euro VI only) Manufacturer reference of the OBD related information required by of Article 5(4)(d) and Article 9(4) of Regulation (EU) No 582/2011 for the purpose of complying with the provisions on access to vehicle OBD and vehicle Repair and Maintenance Information, or : Diesel:  
e5\*595/2009\*2018/932D\*0018\*00
- 3.2.12.2.7.7.1 As an alternative to a manufacturer reference provided in Section 3.2.12.2.7.7 reference of the attachment to the information document set out in Appendix 4 of Annex III to Regulation (EU) No 582/2011 that contains the following table, once completed according to the given example : N/A
- 3.2.12.2.7.8. (EURO VI only) OBD components on-board the vehicle : N/A
- 3.2.12.2.7.8.1 List of OBD components on-board the vehicle : N/A
- 3.2.12.2.7.8.2 Written description and/or drawing of the MI <sup>(10)</sup> : N/A
- 3.2.12.2.7.8.3 Written description and/or drawing of the OBD off-board communication interface <sup>(10)</sup> : N/A
- 3.2.12.2.8. Other systems (description and operation) : Yes
- 3.2.12.2.8.1. (Euro VI only) Systems to ensure the correct operation of NOx control measures : Diesel:  
e5\*595/2009\*2018/932D\*0018\*00
- 3.2.12.2.8.2. Driver inducement system : Yes
- 3.2.12.2.8.2.1 (Euro VI only) Engine with permanent deactivation of the driver inducement, for use by the rescue services or in vehicles specified in point (b) of Article 2(3) of this Directive : Diesel:  
e5\*595/2009\*2018/932D\*0018\*00





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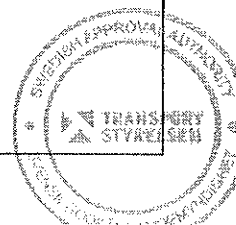
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- 3.2.12.2.8.3. (Euro VI only) Number of OBD engine families within the engine family considered when ensuring the correct operation of NOx control measures : One
- 3.2.12.2.8.4. (Euro VI only) List of the OBD engine families (when applicable) : Diesel:  
e5\*595/2009\*2018/932D\*0018\*00
- 3.2.12.2.8.5. (Euro VI only) Number of the OBD engine family the parent engine / the engine member belongs to : One
- 3.2.12.2.8.6. (Euro VI only) Lowest concentration of the active ingredient present in the reagent that does not activate the warning system (CD<sub>min</sub>) : Diesel: 21.5 Cd<sub>min</sub>
- 3.2.12.2.8.7. (Euro VI only) When appropriate, manufacturer reference of the Documentation for installing in a vehicle the systems to ensure the correct operation of NOx control measures : Diesel:  
e5\*595/2009\*2018/932D\*0018\*00
- 3.2.12.2.8.8. Components on-board the vehicle of the systems ensuring the correct operation of NOx control measures :
- | Manufacturer | Engine Code                | correct operation of NOx control measures |
|--------------|----------------------------|---|
| Cummins      | B6.7E6D280B<br>B6.7E6D300B | N/A                                       |
- 3.2.12.2.8.8.1 Activation of the creep mode: :
- | Manufacturer | Engine Code                | See Engine Type Approval |
|--------------|----------------------------|--------------------------|
| Cummins      | B6.7E6D280B<br>B6.7E6D300B | Disable after restart    |
- 3.2.12.2.8.8.2 When appropriate, manufacturer reference of the documentation package related to the installation on the vehicle of the system ensuring : Diesel:  
e5\*595/2009\*2018/932D\*0018\*00







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the correct operation of NOx control measures of an approved engine

3.2.12.2.8.3 Written description and/or drawing of the warning signal <sup>(6)</sup> :

| Manufacturer | Engine Code                | See Engine Type Approval  |
|--------------|----------------------------|---|
| Cummins      | B6.7E6D280B<br>B6.7E6D300B | e5*595/2009<br>*2018/932D*<br>0018*00<br>Referenced<br>in CTR<br>67329 and<br>Cummins<br>AEB 191.42 |

3.2.12.2.9 Torque limiter:

| Manufacturer | Engine Code                | Torque limiter |
|--------------|----------------------------|----------------|
| Cummins      | B6.7E6D280B<br>B6.7E6D300B | N/A            |

3.2.13.1. Location of the absorption coefficient symbol (compression ignition engines only) : See Engine Approval Documents e5\*595/2009\*2018/932D\*0018\*00

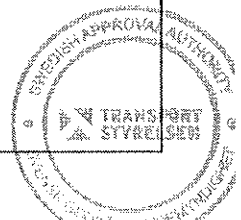
3.2.15. LPG fuelling system: : No

3.2.16. NG fuelling system: : No

3.2.17.8.1.0.1 (Euro VI only) Self adaptive feature? Yes/No <sup>(1)</sup> : N/A

3.2.17.8.1.0.2 ((Euro VI only) Calibration for a specific gas composition NG-H/NG-L/NG-HL <sup>(1)</sup> : N/A

Transformation for a specific gas composition NG-Ht/NG-Lt/NG-HLt <sup>(1)</sup>





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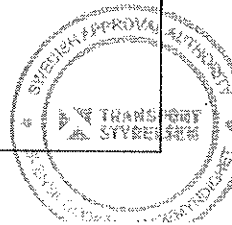
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- 3.3. Electric Motor :**
- 3.3.1. Type (winding, excitation): : Permanent magnet  
Performance Battery Voltage:300-750 VDC
- 3.3.1.1. Maximum hourly output: : 195 kW (Nominal)
- 3.3.1.1.1. Maximum net power <sup>(n)</sup> : 

|                         |        |
|-------------------------|--------|
| Aselsan OPTRAC Engine   | 230 kW |
| TM4 e-Propulsion Engine | 250 kW |
- 3.3.1.1.2. Maximum 30 minutes power <sup>(n)</sup> : 225 kW
- 3.3.1.2. Operating voltage: : 500V-750V DC, negative ground
- 3.3.2. Battery :
- 3.3.2.4. Position: : Located on the roof of the vehicle
- 3.4. Engine or motor combination :**
- 3.4.1. Hybrid electric vehicle: : No
- 3.4.2. Category of hybrid electric vehicle:  
off-vehicle charging/not off-vehicle  
charging : N/A
- 3.5.4. (Euro VI only) CO<sub>2</sub> emissions for  
heavy duty engines
- 3.5.4.1. CO<sub>2</sub> mass emissions WHSC test <sup>(x3)</sup>: See Engine Approval Documents  
e5\*595/2009\*2018/932D\*0018\*00
- 3.5.4.2. CO<sub>2</sub> mass emissions WHSC test in  
diesel mode <sup>(x2)</sup> See Engine Approval Documents  
e5\*595/2009\*2018/932D\*0018\*00
- 3.5.4.3. CO<sub>2</sub> mass emissions WHSC test in  
dual-fuel mode <sup>(x1)</sup> : See Engine Approval Documents  
e5\*595/2009\*2018/932D\*0018\*00
- 3.5.4.4. CO<sub>2</sub> mass emissions WHTC test  
<sup>(9)(x3)</sup> : See Engine Approval Documents  
e5\*595/2009\*2018/932D\*0018\*00
- 3.5.4.5. CO<sub>2</sub> mass emissions WHTC test in  
diesel mode <sup>(9)(x2)</sup> : See Engine Approval Documents  
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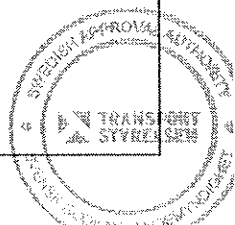
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- 3.5.4.6. CO2 mass emissions WHTC test in dual-fuel mode <sup>(9)(x1)</sup> : See Engine Approval Documents e5\*595/2009\*2018/932D\*0018\*00
- 3.5.5. (Euro VI only) Fuel consumption for heavy duty engines :
- 3.5.5.1. Fuel consumption WHSC test <sup>(x3)</sup> : See Engine Approval Documents e5\*595/2009\*2018/932D\*0018\*00
- 3.5.5.2. Fuel consumption WHSC test in diesel mode <sup>(x2)</sup> : See Engine Approval Documents e5\*595/2009\*2018/932D\*0018\*00
- 3.5.5.3. Fuel consumption WHSC test in dual-fuel mode : See Engine Approval Documents e5\*595/2009\*2018/932D\*0018\*00
- 3.5.5.4. Fuel consumption WHTC test <sup>(9)(x3)</sup> : See Engine Approval Documents e5\*595/2009\*2018/932D\*0018\*00
- 3.5.5.5. Fuel consumption WHTC test in diesel mode <sup>(9)(x2)</sup> : See Engine Approval Documents e5\*595/2009\*2018/932D\*0018\*00
- 3.5.5.6. Fuel consumption WHTC test in dual-fuel mode <sup>(9)(x1)</sup> : See Engine Approval Documents e5\*595/2009\*2018/932D\*0018\*00

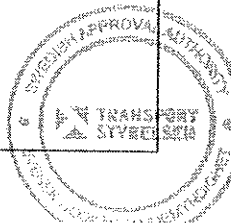
3.6.5 Lubricant temperature :

| Manufacturer | Engine Code                | Lubricant Temperature |       |
|--------------|----------------------------|-----------------------|-------|
|              |                            | Min                   | Max   |
| Cummins      | B6.7E6D280B<br>B6.7E6D300B | 233 K                 | 408 K |



|   |                                  |                  |              |
|---|----------------------------------|------------------|--------------|
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|   | According to:                    | Document Number  | 2007/46_N004 |
|   | 2007/46/EC*2015/166 EU Annex III |                  |              |

4. **TRANSMISSION** <sup>(P)</sup>
- 4.2. Type (mechanical, hydraulic, electric, etc.)  
Mechanical (with internal retarder)
- 4.5. **Gearbox**
- 4.5.1. Type (manual/automatic/CVT (continuously variable transmission)) <sup>(1)</sup>  
Refer to Annex 4.1.F / Automatic





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## 4.6. Gear ratios:


| ALLISON T 310R |            |                   |                  |                   |                  |
|----------------|------------|-------------------|------------------|-------------------|------------------|
| Gear           | Gear Ratio | Final Drive Ratio | Total Gear Ratio | Final Drive Ratio | Total Gear Ratio |
| 1st gear       | 3,49       | 5,74              | 20,03            | 5,73              | 20,0             |
| 2nd gear       | 1,86       |                   | 10,68            |                   | 10,66            |
| 3rd gear       | 1,41       |                   | 8,09             |                   | 8,08             |
| 4th gear       | 1,00       |                   | 5,74             |                   | 5,73             |
| 5th gear       | 0,75       |                   | 4,31             |                   | 4,3              |
| 6th gear       | 0,65       |                   | 3,73             |                   | 3,72             |
| Reverse        | 5,03       |                   | 28,87            |                   | 28,82            |

| ALLISON T 350R |            |                   |                  |                   |                  |
|----------------|------------|-------------------|------------------|-------------------|------------------|
| Gear           | Gear Ratio | Final Drive Ratio | Total Gear Ratio | Final Drive Ratio | Total Gear Ratio |
| 1st gear       | 3,49       | 5,74              | 20,03            | 5,73              | 20,0             |
| 2nd gear       | 1,86       |                   | 10,68            |                   | 10,66            |
| 3rd gear       | 1,41       |                   | 8,09             |                   | 8,08             |
| 4th gear       | 1,00       |                   | 5,74             |                   | 5,73             |
| 5th gear       | 0,75       |                   | 4,31             |                   | 4,3              |
| 6th gear       | 0,65       |                   | 3,73             |                   | 3,72             |
| Reverse        | 5,03       |                   | 28,87            |                   | 28,82            |

| ALLISON T 375R |            |                   |                  |                   |                  |
|----------------|------------|-------------------|------------------|-------------------|------------------|
| Gear           | Gear Ratio | Final Drive Ratio | Total Gear Ratio | Final Drive Ratio | Total Gear Ratio |
| 1st gear       | 3,49       | 5,74              | 20,03            | 5,73              | 20,0             |
| 2nd gear       | 1,86       |                   | 10,68            |                   | 10,66            |
| 3rd gear       | 1,41       |                   | 8,09             |                   | 8,08             |
| 4th gear       | 1,00       |                   | 5,74             |                   | 5,73             |
| 5th gear       | 0,75       |                   | 4,31             |                   | 4,3              |
| 6th gear       | 0,65       |                   | 3,73             |                   | 3,72             |
| Reverse        | 5,03       |                   | 28,87            |                   | 28,82            |

| 6AP 1200B – ZF ECOLIFE |            |                   |                  |                   |                  |
|------------------------|------------|-------------------|------------------|-------------------|------------------|
| Gear                   | Gear Ratio | Final Drive Ratio | Total Gear Ratio | Final Drive Ratio | Total Gear Ratio |
| 1st gear               | 3,36       | 5,74              | 19,29            | 5,73              | 19,25            |
| 2nd gear               | 1,91       |                   | 10,96            |                   | 10,94            |
| 3rd gear               | 1,42       |                   | 8,15             |                   | 8,14             |
| 4th gear               | 1,00       |                   | 5,74             |                   | 5,73             |
| 5th gear               | 0,72       |                   | 4,13             |                   | 4,12             |
| 6th gear               | 0,62       |                   | 3,55             |                   | 3,55             |
| Reverse                | 4,24       |                   | 24,33            |                   | 24,29            |



|   |                                  |                  |              |
|---|----------------------------------|------------------|--------------|
|  | <b>TYPE N</b>                    | Original Date    | 25.03.2019   |
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| Temsal Ulaşım Araçları San. ve Tic. A.Ş.  | Information Document             | Extension Number | 03           |
|   | According to:                    | Document Number  | 2007/46_N004 |
|   | 2007/46/EC*2015/166 EU Annex III |                  |              |

| 6AP 1400 – ZF ECOLIFE |            |                   |                  |                   |                  |
|-----------------------|------------|-------------------|------------------|-------------------|------------------|
| Gear                  | Gear Ratio | Final Drive Ratio | Total Gear Ratio | Final Drive Ratio | Total Gear Ratio |
| 1st gear              | 3,36       | 5,74              | 19,29            | 5,73              | 19,25            |
| 2nd gear              | 1,91       |                   | 10,96            |                   | 10,94            |
| 3rd gear              | 1,42       |                   | 8,15             |                   | 8,14             |
| 4th gear              | 1,00       |                   | 5,74             |                   | 5,73             |
| 5th gear              | 0,72       |                   | 4,13             |                   | 4,12             |
| 6th gear              | 0,62       |                   | 3,55             |                   | 3,55             |
| Reverse               | 4,24       |                   | 24,33            |                   | 24,29            |

| 6AP 1200B – ZF ECOLIFE |            |                   |                  |
|------------------------|------------|-------------------|------------------|
| Gear                   | Gear Ratio | Final Drive Ratio | Total Gear Ratio |
| 1st gear               | 3,36       | 6,19              | 20,80            |
| 2nd gear               | 1,91       |                   | 11,82            |
| 3rd gear               | 1,42       |                   | 8,79             |
| 4th gear               | 1,00       |                   | 6,19             |
| 5th gear               | 0,72       |                   | 4,46             |
| 6th gear               | 0,62       |                   | 3,84             |
| Reverse                | 4,24       |                   | 26,25            |

For Prestolite TM4 e-Propulsion electric engine; gear ratio: 7,38 and 7,36  
For OPTRAC-625 and HVSM-287 electric engine; gear ratio: 7,38 and 7,36

4.7. Maximum vehicle design speed (in km/h) <sup>(9)</sup>

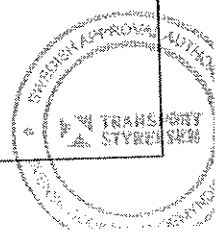
100 km/h, 80 km/h (optional)  
70 km/h for ASELSAN OPTRAC-625 and HVSM-287 electric engine  
70 km/h for Prestolite TM4 e-Propulsion electric engine for Avenue Electron


4.9. Tachograph: yes

4.9.1. Approval mark

| Component                    | Approval Mark                |
|------------------------------|------------------------------|
| Siemens VDO DTDO             | e1 84 02                     |
| Siemens VDO KITAS            | e1 175 02                    |
| Continental VDO – KITAS 2185 | e1*165/2014*2018/502*0002*00 |

4.11. Gear shift indicator (GSI)



|  |                                  |                  |              |
|--|----------------------------------|------------------|--------------|
| <br><b>TEMISA</b> | <b>TYPE N</b>                    | Original Date    | 25.03.2019   |
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|  | According to:                    | Document Number  | 2007/46_N004 |
|  | 2007/46/EC*2015/166 EU Annex III |                  |              |

4.11.1. Acoustic indication available yes/no (1). If yes, description of sound and sound level at the driver's ear in dB(A). (Acoustic indication always switchable on/off)

N/A

4.11.2. Information according to point 4.6 of Annex I to Regulation (EU) No 65/2012 (determined at type-approval)

N/A

## 5. AXLES

### 5.1. Description of each axle

|            |                           |
|------------|---------------------------|
| Front Axle | Independent- Annex CA_501 |
| Rear Axle  | Driven Drop Center Axle   |

5.2. Make : ZF

5.3. Type :

|            |             |
|------------|-------------|
| Front Axle | RL82EC      |
| Rear Axle  | AV 132/ 80° |
|            | AV 133/ 80° |

5.4. Position of retractable axle(s) : N/A

5.5. Position of loadable axle(s) : N/A

## 6. SUSPENSION

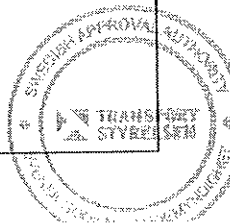
6.2. Type and design of the suspension of each axle or wheel:

| Axle  | Type and Design  |
|-------|--|
| Front | Independent double wishbone type air spring suspension |
| Rear  | Dampers and Air spring suspension                      |

6.2.1. Level adjustment: Yes

6.2.3. Air-suspension for driving axle(s): Yes

6.2.3.1. Suspension of driving axle equivalent to air-suspension: No





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2007/46\_N004

6.2.4. Air-suspension for non-driving axle(s) : Yes

6.2.4.1. Suspension of non-driving axle(s) : N/A  
equivalent to air-suspension

6.6.1. Tyre/wheel combination(s) :

(a) for tyres indicate size designation, load-capacity index, speed category symbol, rolling resistance in accordance with ISO 28580 (where applicable) <sup>(1)</sup> :

|                    |                  |
|--------------------|------------------|
| Tyre               | 275/70 R 22,5    |
| Load Index:        | 148/145          |
|                    | 150/145          |
|                    | 150/148          |
| Speed Category:    | M & J (optional) |
| Rolling resistance | Min 4.7          |
|                    | Max 8.34         |

(b) for wheels indicate rim size(s) and off-set(s) :

|          |                       |
|----------|-----------------------|
| Rim size | 22,5*8,25<br>22,5*7,5 |
| Offset   | 152±2 mm              |
|          | 153±2 mm              |
|          | 157±2 mm              |

6.6.1.1. Axles :

6.6.1.1.1. Axle 1 : Tyre 275/70 R 22,5

6.6.1.1.2. Axle 2 : Tyre 275/70 R 22,5

6.6.1.2. Spare wheel, if any : N/A

6.6.2. Upper and lower limit of rolling radii :

6.6.2.1. Axle 1 :

|        |        |
|--------|--------|
| Upper  | Lower  |
| 465 mm | 465 mm |

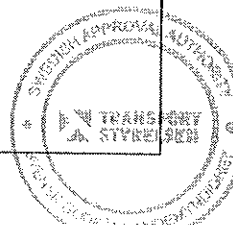
6.6.2.2. Axle 2 :

|        |        |
|--------|--------|
| Upper  | Lower  |
| 465 mm | 465 mm |


## 7. STEERING

7.2. Transmission and control

7.2.1 Type of steering transmission (specify for front and rear, if : Ball-nut type

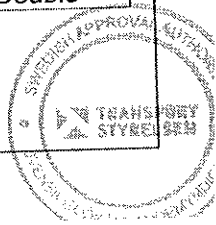





|   |                                  |                  |              |
|---|----------------------------------|------------------|--------------|
| <br><b>TEMSA</b> | <b>TYPE N</b>                    | Original Date    | 25.03.2019   |
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| Temsal Ulaşım Araçları San. ve Tic. A.Ş.  | Information Document             | Extension Number | 03           |
|   | According to:                    | Document Number  | 2007/46_N004 |
|   | 2007/46/EC*2015/166 EU Annex III |                  |              |

- applicable) (specify for front and rear, if applicable)
- 7.2.2. Linkage to wheels (including other than mechanical means; specify for front and rear, if applicable) : Mechanical
- 7.2.3. Method of assistance, if any : Hydraulic power assistance
- 8. BRAKES**
- 8.5. Anti-lock braking system: : Yes
- 8.9. Brief description of the braking system according to item 1.6 of the Addendum to Appendix 1 of Annex IX to Directive 71/320/EEC : **Service Braking System**  
Foot operated  
Pneumatic  
2 separate braking circuits for axle 1 and 2  
ABS operating on Axle 1 and 2  
EBS is optional
- Auxiliary Brake**  
part of service braking system- one circuit of the service braking system
- Parking Brake**  
hand operated  
operating on axle 2
- 8.11. Particulars of the type(s) of endurance braking system(s) : Internal retarder (intarder) combined with transmission  
It is automatically activated when the brake pedal is pressed and manually activated with hand
- 9. BODYWORK**
- 9.1 Type of bodywork using the codes set out in Part C of Annex II : CE,CX
- 9.3. **Occupant doors, latches and hinges**
- 9.3.1. Door configuration and number of doors :

| Variant  | Door   |           |               |
|----------|--------|-----------|---------------|
|          | Number | Side      | Configuration |
| All      | 4      | Passenger | 2 Double      |
| Variants | 6      |           | 3 Double      |



|   |                                  |                  |              |
|---|----------------------------------|------------------|--------------|
|  | <b>TYPE N</b>                    | Original Date    | 25.03.2019   |
|   | Whole Vehicle Type Approval      | Extension Date   | 10.07.2020   |
| Temsa Ulaşım Araçları San. ve Tic. A.Ş.   | Information Document             | Extension Number | 03           |
|   | According to:                    | Document Number  | 2007/46_N004 |
|   | 2007/46/EC*2015/166 EU Annex III |                  |              |

**9.9. Devices for indirect vision**

9.9.1. Rear-view mirrors, stating, for each rear-view mirror

9.9.1.1. Make : NZN,Akırmak, Mekra

9.9.1.2. Type-approval mark: : NZN-II E8 46R 02 5516, IV E6 46R020073, Akırmak-II E9 46R 6586, E8 02 5516  
 NZN-II E24 46R04/04\*0168, NZN-IV E24 46R04/04\*0169  
 NZN-II E6 46R 020026  
 AKIRMAK-II E9 04 11182,  
 AKIRMAK-IV E6 IV 02 0035  
 Mekra – E1 II 020951  
 Mekra – E1 IV 020952  
 Mekra – E1 II 020915  
 NZN – E8 VI 02 5650

9.9.1.3. Variant : Class II & Class IV & Class VI

9.9.1.6. Optional equipment which may affect the rearward field of vision : N/A

9.9.2. Devices for indirect vision other than mirrors : Mobilbil IP Camera  
 Camos Camera  
 AUDIOBUS Camera

9.9.2.1. Type and description of the device : N/A

**9.10. Interior arrangement :**

9.10.3. Seats :

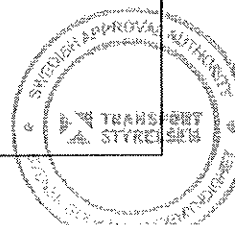
9.10.3.1. Number of seating positions <sup>(s)</sup> : 25-39


9.10.3.1.1. Location and arrangement: Refer to Annex 2

9.10.3.2. Seat(s) designated for use only when the vehicle is stationary : N/A

9.10.4.1. Type(s) of head restraints: : N/A

9.10.4.2. Type-approval number(s), if available : N/A



|   |   |                  |              |
|---|---|------------------|--------------|
|  | <h1>TYPE N</h1>   | Original Date    | 25.03.2019   |
|   | <b>Whole Vehicle Type Approval</b>                              | Extension Date   | 10.07.2020   |
| <b>Temsa Ulaşım Araçları San. ve Tic. A.Ş.</b>                                    | <b>Information Document</b>                                     | Extension Number | 03           |
|   | <b>According to:</b><br><b>2007/46/EC*2015/166 EU Annex III</b> | Document Number  | 2007/46_N004 |

9.10.8 Gas used as refrigerant in the air-conditioning system : R134 A

9.10.8.1. The air-conditioning system is designed to contain fluorinated greenhouse gases with a global warming potential higher than 150 : Yes

9.12.2 Nature and position of supplementary restraint systems (indicate yes/no/optional) : No

**9.17 Statutory plates**

9.17.1. Photographs and/or drawings of the locations of the statutory plates and inscriptions and of the vehicle identification number :

| Identification Type                        | Annex   |
|--|---------|
| Statutory Plate                            | CA_N904 |
| Vehicle Identification Number (on Chassis) | CA_N903 |

9.17.2 Photographs and/or drawings of the statutory plate and inscriptions (completed example with dimensions) : See Annex: CA\_N904

9.17.3 Photographs and/or drawings of the vehicle identification number (completed example with dimensions) : See Annex: CA\_901

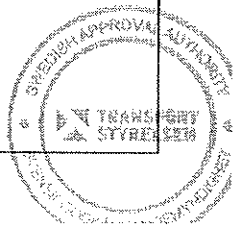
9.17.4.1 The meaning of characters in the second section and, if applicable, in the third section used to comply with the requirements of section 5.3 of ISO Standard 3779-1983 shall be explained : See Annex: CA\_902


9.17.4.2 If characters in the second section are used to comply with the requirements of section 5.4 of ISO Standard 3779-1983, these characters shall be indicated: : See item 9.17.4.1.

**9.22 Front under-run protection** :

9.22.0. Presence: : No

**9.23 Pedestrian protection** :



|   |                                  |                  |              |
|---|----------------------------------|------------------|--------------|
|  | <b>TYPE N</b>                    | Original Date    | 25.03.2019   |
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|   | According to:                    | Document Number  | 2007/46_N004 |
|   | 2007/46/EC*2015/166 EU Annex III |                  |              |

9.23.1 A detailed description, including photographs and/or drawings, of the vehicle with respect to the structure, the dimensions, the relevant reference lines and the constituent materials of the frontal part of the vehicle (interior and exterior), including detail of any active protection system installed : N/A

9.24 Frontal protection systems :

9.24.1 General arrangement (drawings or photographs) indicating the position and attachment of the frontal protection systems : N/A

9.24.3 Complete details of fittings required and full instructions, including torque requirements, for fitting : N/A

**11 Connections Between Towing Vehicles And Trailers And Semi-Trailers**

11.1. Class and type of the coupling device(s) fitted or to be fitted  
N/A

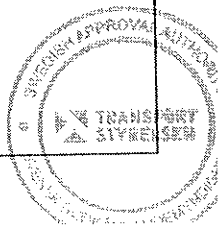
11.3. Instructions for attachment of the coupling type to the vehicle and photographs or drawings of the fixing points at the vehicle as stated by the manufacturer; additional information, if the use of the coupling type is restricted to certain variants or versions of the vehicle type  
N/A

11.4. Information of the fitting of special towing brackets or mounting plates:  
N/A

11.5. Type-approval number(s):  
N/A

**12. MISCELLANEOUS**

12.7.1. Vehicle equipped with 24 GHz short-range radar equipment  
No





# TYPE N

Original Date

25.03.2019

Whole Vehicle Type Approval

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Temsa Ulaşım Araçları San.  
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Extension Number

03

According to:  
2007/46/EC\*2015/166 EU Annex III

Document Number

2007/46\_N004

### 13. SPECIAL PROVISIONS FOR BUSES AND COACHES

13.1. Class of vehicle : Class I

13.1.2 Chassis types where the type-approved bodywork can be installed (manufacturer(s), and vehicle(s) types) : N/A

13.3 Number of passengers (seated and standing) :

13.3.1 Total (N)

|                 | Min. | Max. |
|-----------------|------|------|
| Avenue LF       | 70   | 117  |
| Avenue LF CNG   | 90   | 93   |
| Avenue EV       | 71   | 95   |
| Avenue Electron | 64   | 98   |

13.3.2 Upper deck (N<sub>a</sub>) <sup>(1)</sup>: N/A13.3.3 Lower deck (N<sub>b</sub>) <sup>(1)</sup>: N/A

13.4 Number of passengers (seated) :

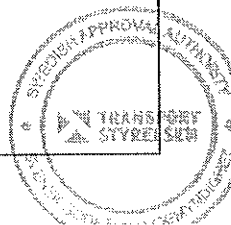
13.4.1 Total (A)

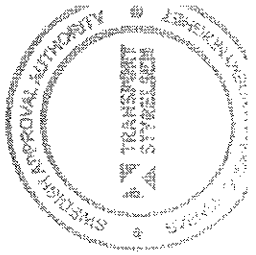
|                 | Min. | Max. |
|-----------------|------|------|
| Avenue LF       | 25   | 39   |
| Avenue LF CNG   | 26   | 30   |
| Avenue EV       | 35   | 35   |
| Avenue Electron | 31   | 35   |

13.4.2 Upper deck (A<sub>a</sub>) <sup>(1)</sup>: N/A13.4.3 Lower deck (A<sub>b</sub>) <sup>(1)</sup>: N/A13.4.4 Number of wheelchair positions for category M<sub>2</sub> and M<sub>3</sub> vehicles: 1-2

### 16. Access To Vehicle Repair And Maintenance Information

16.1 Address of principal website for access to vehicle repair and maintenance information: online.temsa.com.tr





| TVV Coding Table |                  | According to: 2007/46/EC Annex II Part B | Date: 10.07.2020    |                       |                            |                                     |  |                             |             |                    |                      |                        |
|------------------|------------------|--|---------------------|-----------------------|----------------------------|-------------------------------------|--|-----------------------------|-------------|--------------------|----------------------|------------------------|
| Type             | Variant          |  |                     |                       | Version                    |                                     |  |                             | Description |                    |                      |                        |
|                  | Type of Bodywork | Class of Vehicle                         | Stage of Completion | Type of Energy Supply | Working Principle          | Number and Arrangement of Cylinders | Technically Permissible Maximum Laden Mass | Maximum Engine Power Output |             | Nature of the Fuel | Drive-by Sound Level | Exhaust Emission Level |
| N                | CE               | CX                                       | Complete            | CX                    | Internal Combustion Engine | L6                                  | 18000 kg.                                  | 6700 cm <sup>3</sup>        | Diesel      | 76 dB(A)           | N/A                  | OBD D ENGINE           |
|                  |                  |  |                     |                       |                            |                                     |  |                             |             |                    |                      |                        |
| C6               | EV               |  |                     |                       |                            |                                     |  |                             |             |                    |                      | OBD D ENGINE           |
|                  |                  |  |                     |                       |                            |                                     |  |                             |             |                    |                      |                        |
| E1               |                  |  |                     |                       |                            |                                     |  |                             |             |                    |                      | OBD D ENGINE           |
|                  |                  |  |                     |                       |                            |                                     |  |                             |             |                    |                      |                        |
| E2               |                  |  |                     |                       |                            |                                     |  |                             |             |                    |                      | OBD D ENGINE           |
|                  |                  |  |                     |                       |                            |                                     |  |                             |             |                    |                      |                        |



TEMESA

Company  
TEMESA  
Construction  
& Design

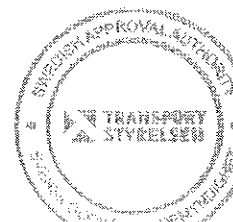
Number of  
Sections  
Right  
Number of  
Axles  
2  
Energy  
Supply Mode  
Onboard

# PART II

## TVV List of Vehicles

According to : Date:  
 2007/46/EC  
 Annex II Part B 10.07.2020

|           | Type | Variant | Version |       |
|-----------|------|---------|---------|-------|
| Variant 1 | N    | CE C6   | 18 6E   |       |
|           |      | CX C6   | 18 6E   |       |
|           |      | CE C6   | 19 6E   |       |
|           |      | CX C6   | 19 6E   |       |
| Variant 2 | N    | CE C6   | 18 6F   |       |
|           |      | CX C6   | 18 6F   |       |
|           |      | CE C6   | 19 6F   |       |
|           |      | CX C6   | 19 6F   |       |
| Variant 3 | N    | CE      | EV      | 18 E1 |
|           |      |         | EV      | 19 E1 |
|           |      | CX      | EV      | 18 E1 |
|           |      |         | EV      | 19 E1 |
| Variant 4 | N    | CE      | EV      | 18 E2 |
|           |      |         | EV      | 19 E2 |
|           |      | CX      | EV      | 18 E2 |
|           |      |         | EV      | 19 E2 |



| No Subject |  | TYPE N<br>PART III: List of Test Reports and System Approvals |   |                          |                  | Last Updated:<br>10.07.2020  |
|------------|--|---|---|--------------------------|------------------|------------------------------|
|            |  | Type Approval Number  | Member State or Contracting Party Issuing the type-approval | Approval Date            | Extension Number | Variant(s)/Version(s)        |
| 1          | ECE R 51.02 Permissible Sound Levels   | E57*51R02/10*0003*03  | RSM   | 25.11.2019               | 03               | ALL                          |
| 3A         | ECE R34.02 Fuel Tanks  | E24 34RI-020026   | NSAI  | 13.05.2015               | 01               | CEC6<br>CXC6                 |
| 3B         | ECE R58.03 Rear Protective Device  | E57*58R03/00*0050*00  | RSM   | 13.11.2019               | 00               | ALL                          |
| 4A         | EU 1003/2010/EU Rear Registration Plate Space as amended by 2015/166   | e9*1003/2010*2015/166*1447*01                                 | ESP   | 14.05.2019               | 01               | ALL                          |
| 5A         | ECE R79.03 Sleeping Effort   | E57*79R03/00*0005*03  | RSM   | 5.11.2019                | 03               | ALL                          |
| 7A         | ECE R28.00 Audible Warning   | E24 28R-000008<br>E57*28R00/05*0002*02                        | NSAI<br>RSM   | 14.10.2015<br>23.10.2019 | 04<br>02         | CEC6<br>CXC6<br>CEEV<br>CXEV |
| 8A         | ECE R46.03-04 Indirect Vision Devices  | E24 46R-030029<br>E57*46R04/06*0004*03                        | NSAI<br>RSM   | 01.02.2013<br>05.11.2019 | -<br>03          | CEC6<br>CXC6<br>CEEV<br>CXEV |
| 9A         | ECE R13.11 Braking   | E57*13R11/16*0020*02  | RSM   | 12.11.2019               | 02               | CEC6<br>CXC6                 |
|            |  | E57*13R11/16*0014*03  | RSM   | 12.11.2019               | 03               | CEEV<br>CXEV                 |
| 10A        | ECE R10.05 EMC   | E57*10R05/01*0036*03  | RSM   | 6.03.2020                | 03               | CEC6<br>CXC6                 |
|            |  | E57*10R05/01*0018*05  | RSM   | 6.03.2020                | 05               | CEEV<br>CXEV                 |
| 13A        | ECE R18.03 Anti-theft and immobilizer  | E24*18R03/03*0003*06  | NSAI  | 22.10.2019               | 06               | ALL                          |
| 15A        | ECE-R17.08 The Seats and their Anchorages  | E57*17R08/04*0006*02  | RSM   | 4.11.2019                | 02               | ALL                          |
| 17A        | EU 130/2012 Vehicle Access and Manoeuvrability   | e9*130/2012*130/2012*1140*02                                  | ESP   | 16.10.2019               | 02               | ALL                          |
| 17B        | ECE R39.01 Speedometer and Reverse Gear  | E57*39R01/01*0004*03  | RSM   | 6.11.2019                | 03               | ALL                          |
| 18A        | EU 19/2011/EU Statutory Plates as am. By EU 249/2012   | e5*19/2011*249/2012*1041*01                                   | SWE   | 6.12.2019                | 01               | ALL                          |
| 19A        | ECE-R14.09 Safety Belt Anchorages  | E57*14R09/00*0007*02  | RSM   | 4.11.2019                | 02               | ALL                          |
| 20A        | ECE-R48.04 Installation of Lighting and Light Signalling Devices   | E11 48R-043685  | VCA   | 1.11.2019                | 23               | ALL                          |
| 27A        | EU 1005/2010/EU Towing Hooks   | e9*1005/2010*1005/2010*1296*01                                | ESP   | 10.04.2019               | 01               | ALL                          |
| 31A        | ECE-R16.06 Seat Belts  | E57*16R06/11*0005*02  | RSM   | 6.11.2019                | 02               | ALL                          |
| 33A        | ECE R121.01 Identification of controls, tell-tales and indicators  | E57*121R01/03*0010*02   | RSM   | 18.10.2019               | 02               | ALL                          |
| 34A        | EU Regulation 672/2010 Windscreen defrosting and demisting systems   | Suitable system   | -   | -                        | -                | ALL                          |
| 35A        | EU Regulation 1008/2010 Windscreen wiper and washer systems  | Suitable system   | -   | -                        | -                | ALL                          |
| 36A        | ECE R122.00 Heating Systems  | E57*122R00/04*0006*03   | RSM   | 23.10.2019               | 03               | ALL                          |
| 41A        | EC 595/2009 Emissions (Euro VI) heavy duty vehicles/access to information amended by regulation (EU) No 2019/1242, As implemented by regulation (EU) No 582/2011, as last amended by regulation (EU) No 2018/932 | e1*595/2009*2018/932D*0139*00                                 | KBA   | 16.06.2020               | 00               | CEC6<br>CXC6                 |
| 45A        | ECE-R43.01 Safety Glazing  | E57*43R01/08*0003*03  | RSM   | 4.11.2019                | 03               | ALL                          |
| 46A        | 458/2011/EU as am. by 2015/166 Installation of Tyres   | e9*458/2011*2015/166*6278*02                                  | ESP   | 23.10.2019               | 02               | ALL                          |
| 47A        | ECE R89.00 Speed Limitation Devices  | E57*89R00/03*0007*03  | RSM   | 8.11.2019                | 03               | ALL                          |
| 48A        | EU 1230/2012/EU Masses and Dimensions  | e9*1230/2012*1230/2012*6035*03                                | ESP   | 18.10.2019               | 03               | ALL                          |
| 51A        | ECE-R118.01 Burning Behavior of Materials Vehicle Installation   | E57*118R103/01*0057*00  | RSM   | 10.07.2020               | 00               | ALL                          |
| 52A        | ECE-R107.06 Buses and Coaches  | E57*107R06/07*0012*03   | RSM   | 21.04.2020               | 03               | CEC6<br>CEEV                 |
| 69         | ECE-R100.01 Electric Safety<br>ECE-R100.02 Electric Safety   | E11*100R-011094   | VCA   | 15.07.2016               | 00               | CEEV                         |
|            |  | E57*100R02/03*0004*00   | RSM   | 10.05.2019               | 00               | CXEV                         |

Responsible Engineer Esin Ates  
Position: Homologation Engineer  
Date: 10.07.2020

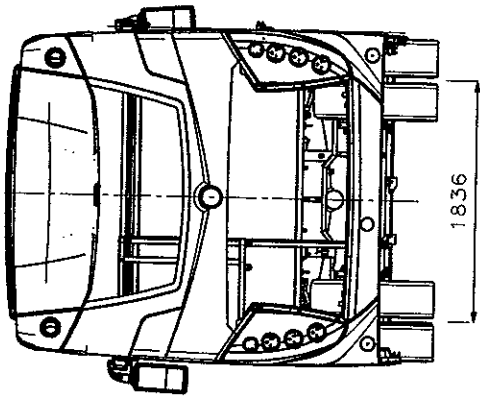
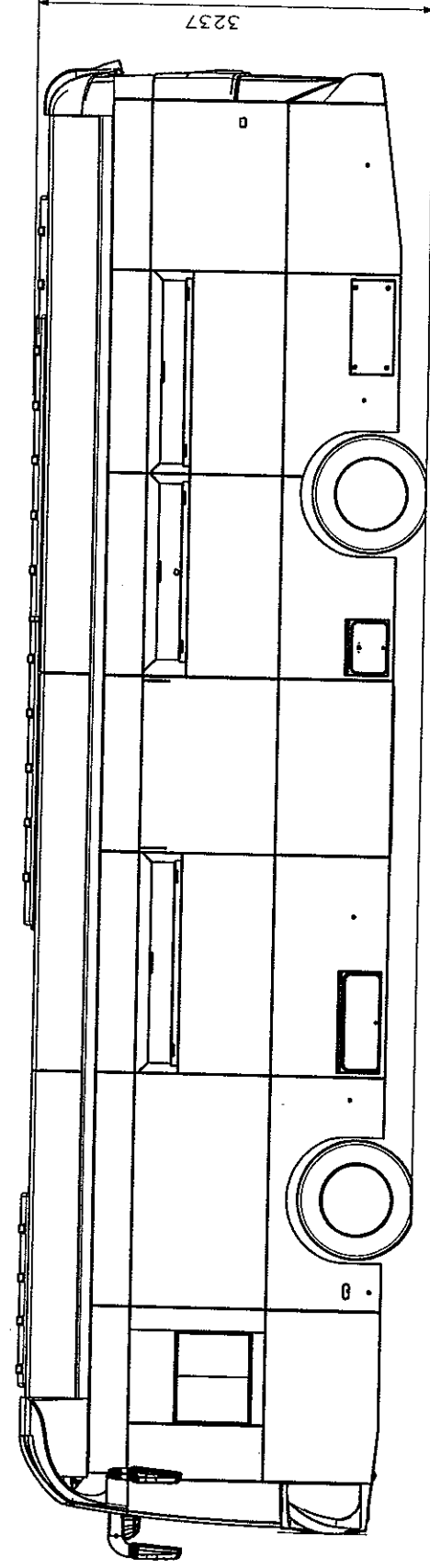
Esin Ates  
TEKNIK BÜROMLU  
ESINATES  
Esin Ates





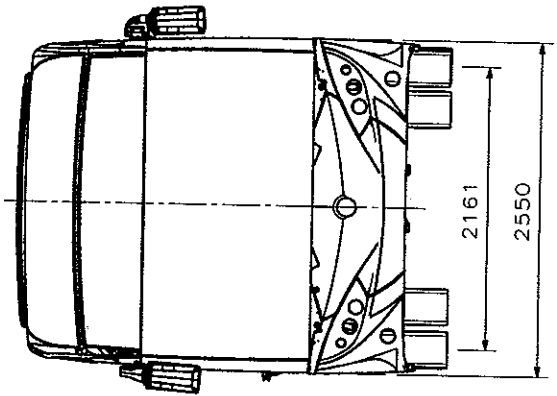
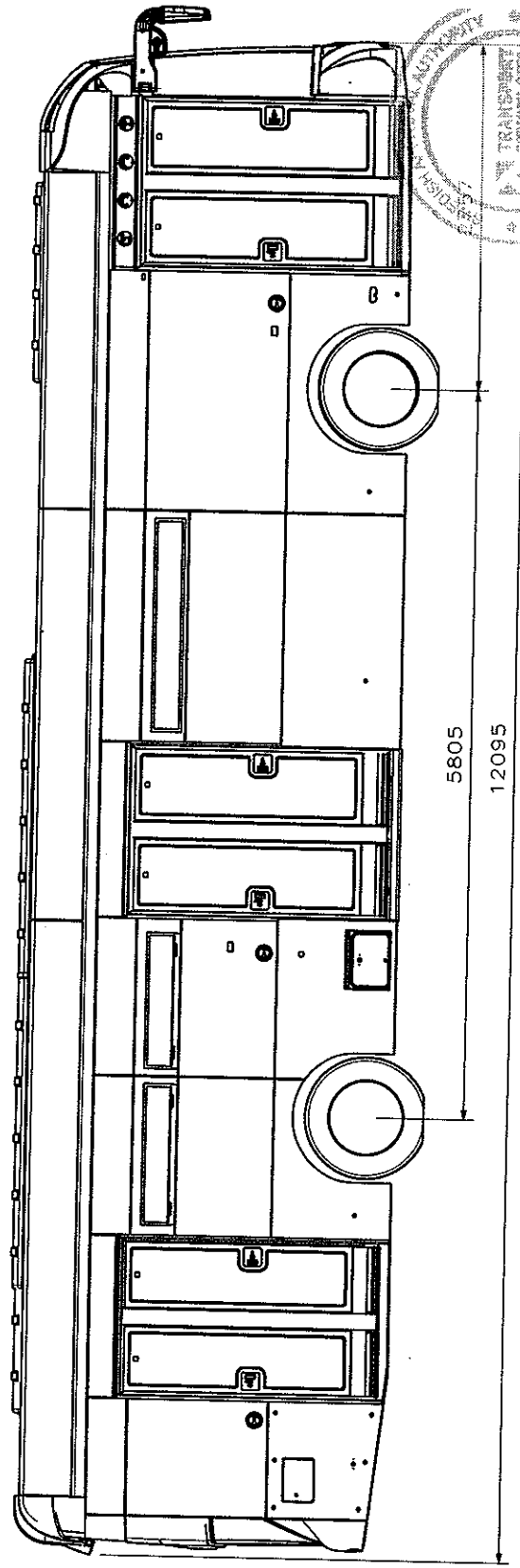
Annex 1.1.AD  
AVENUE ELECTRON

SOL

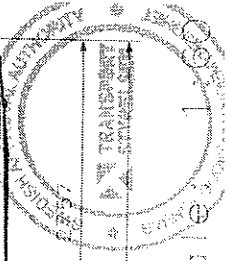


ARKA

SAG

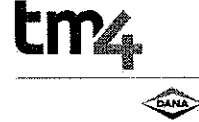


ÖN



Scale

# ANNEX TM



January 17<sup>th</sup>, 2019

**To: Mrs Duygu Yaycioğlu**  
TEMSA ULASIM ARACLARI SANAYI VE TICARET A.S.  
Sarihamzali Mah. Turhan Cemal Beriker Blv. No:563  
0110 Adana, TURKEY

**SUB : Motor commercial name for ECE R85**

TM4 would like to hereby state that the ECE R85 report number E9-85R-00.1353-00 contains a typo resulting in an incorrect reference to the commercial name of the electric motor certified under this report.

The report refers to the motor as having a the commercial name "LSM280C-HV2700-A1" while the correct name is in fact "LSM280A-HV2700-A1". There as never been a similar product sold under the name "LSM280C-HV2700-A1" at TM4.

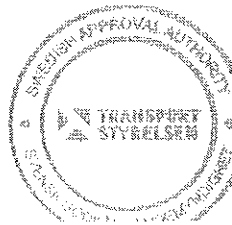
When possible and suitable, TM4 will have the report updated with the correct commercial name but in the meantime, considering the minor nature of the incoherence in the commercial name caused by this error, we would like to ask homologation authorities to consider that our aforementioned ECE R85 certificate is valid for products that have been labeled with the commercial name "LSM280A-HV2700-A1".

We thank you in advance for your cooperation.

Yours sincerely,

Eric Azeroual  
Director, Sales and Customer support  
**TM4 Inc.**

TM4 Inc.  
135, J.-A.-Bombardier, Suite 25 Boucherville (Québec), J4B 8P1 Canada  
Telephone: (450) 645-1444 Fax: (450) 645-1864





**CETOC TS**

CETOC Technical Service srl  
Via della Bufalotta, 374,  
00139 Roma

Inspection Report Nr.: TU-23-1-68-W20-0472-FIR  
Manufacturer: TEMSA ULAŞIM ARAÇLARI SANAYİ VE  
TİCARET A.Ş.  
Type: N

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## Whole Vehicle

### 0. Legislation:

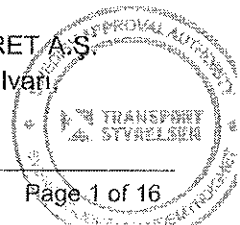
0.1. Requirements according to : (EC) No 2007/46 as amended Regulation EU 2015/166

### 1. General

- 1.1. Reason for Inspection Report : ~~New approval / Extension of approval / Test report only~~
- 1.2. Reason of extension : 1) Addition of new indirect vision devices  
2) Addition of new interior materials  
3) Addition of new electrical / electronic devices  
4) Addition of new OBD-D Engine  
5) Addition of new representative drawing  
6) Addition of optional rear axle load capacity  
7) Addition of new FDR values  
8) Correction of manufacturer's engine code for Electric Engine  
9) Modification of Annex List  
10) Update of Part II & Part III of information document  
11) Correction of template of 2007/46 information document  
12) Change of items 1.8, 1.8.1, 2.4.2.3, 2.6, 2.6.1, 2.8.1, 3.3.1.1.2, 4.6, 9.9.1.2, 9.9.1.3, 9.9.2 of information document  
13) Update of items 3.2.1.11, 3.2.12.2.7.0.4, 3.2.12.2.7.0.5, 3.2.12.2.7.0.6, 3.2.12.2.7.6.5, 3.2.12.2.7.7, 3.2.12.2.8.1, 3.2.12.2.8.2.1, 3.2.12.2.8.4, 3.2.12.2.8.7, 3.2.12.2.8.8.2, 3.2.12.2.8.6. of information document  
14) Update of amendment level to (EU) 2015/166
- 1.3. Manufacturer's Representative(s) : No attendance
- 1.4. CETOC TS Representative(s) : No attendance
- 1.5. Location of Test : Not applicable
- 1.2. Data of test : Not applicable

### 2. Manufacturer Details

- 2.1. Make : TEMSA
- 2.2. Type : N
- 2.3. Variant/Version : See Part II of information document
- 2.4. Commercial Name : Avenue LF, AVENUE, AVENUE L, AVENUE LE, AVENUE LF  
CNG, AVENUE CNG L, AVENUE LE RHD, AVENUE LF  
RHD, IBUS, AVENUE IBUS, MEGAPOL, MEGAPOL LE,  
MEGAPOL LF, AVENUE LF12 L, AVENUE LF12, LF12, LF12  
L, Avenue Plus, Avenue EV, Avenue electricITY ,Avenue  
EVL, Avenue Electron
- 2.5. Category : M3
- 2.6. Name and Address of manufacturer : TEMSA ULAŞIM ARAÇLARI SANAYİ VE TİCARET A.Ş.  
Sarıhamzalı Mahallesi Turhan Cemal Beriker Bulvarı  
No: 563/A Seyhan / ADANA / TURKEY





**CETOC TS**

CETOC Technical Service srl  
Via della Bufalotta, 374,  
00139 Roma

Inspection Report Nr.: TU-23-1-68-W20-0472-FIR  
Manufacturer: TEMSA ULAŞIM ARAÇLARI SANAYİ VE  
TİCARET A.Ş.  
Type: N



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### 3. Conclusion:

#### 3.1. Final conclusion of the inspection:

The above mentioned type was tested in accordance with the above mentioned legislation and was found to comply in all respects. This Inspection report relates only to the items tested.

Signature: :

Name: : Mehmet Kılıç

Massimo Peraboni

Position: : Type Approval Engineer

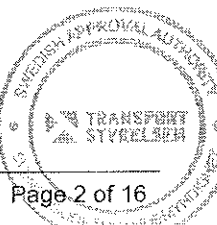
Tech. Mgr. / Vice Tech. Mgr.

Place and date: : İstanbul, 10.07.2020

Roma, 21.07.2020

### 4. List of annexes:

| Annex Nr. | Page Nr. | Subject   |
|-----------|----------|---|
| Annex I   | 1        | List of modifications   |
| Annex II  | 10       | Report of the conformity check requirements of Directive (EC) 2007/46, Annex IV |
| Annex III | 36       | Information document Nr. 2007/46_N004   |





**CETOC TS**

CETOC Technical Service srl  
Via della Bufalotta, 374,  
00139 Roma

Inspection Report Nr.: TU-23-1-68-W20-0472-FIR  
Manufacturer: TEMSA ULAŞIM ARAÇLARI SANAYİ VE  
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Type: N



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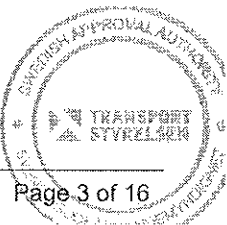
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See annexes,

Manufacturer has applied step-by-step type-approval procedure.

5. **Worst Case Rationale** : All type-approval certificates pursuant to the regulation acts which is applicable for the vehicle type in question were checked and it is confirmed that they cover the relative vehicle type.  
List of regulatory acts for EC type-approval of vehicles produced in unlimited series was checked.  
  
For the new changes / corrections / additions, the manufacturer has submitted below approvals.
6. **Significant Interpretations, Alternative Test Methods, New Technologies** : Not applicable
7. **Additional Information** :
- 7.1 Name and address of assembly plant : TEMSA ULAŞIM ARAÇLARI SANAYİ VE TİCARET A.Ş.  
Sarıhamzalı Mahallesi Turhan Cemal Beriker  
Bulvarı, No: 563/A Seyhan / ADANA / TURKEY
- 7.2 Name and address of manufacturer's representative : TEMSA Deutschland GmbH  
Gottlieb-Daimler-Ring 8  
74906 Bad Rappenau, Germany
- 7.3 Location of approval mark (where applicable) : Close to the manufacturer's statutory plate
- 7.4 Approval type : ~~Step-by-step type-approval~~  
~~Single-step type-approval~~  
~~Mixed type-approval~~
- 7.5 Report Status : ~~for type of complete vehicle~~  
~~for type of completed vehicle~~  
~~for type of incomplete vehicle~~  
for type of vehicle with complete and incomplete variants  
for type of vehicle with completed and incomplete variants
8. **Vehicle Specification**
- 8.1 Vehicle Identification Number
- 8.2 Variant / Version
- 8.3 Class of Vehicle
- 8.4 Number of Passenger : Not applicable for this application.
- 8.5 Tyre Size
- 8.6 Size/Make/Type
- 8.7 Pressure (bar)





## CETOC TS

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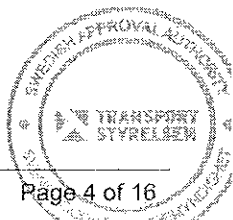
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- 8.8 Tread Depth (mm)
- 8.9 Maximum Laden Mass
- 8.10 Mass in Running Order
- 8.11 Test Mass
- 8.12 Engine Type
- 8.13 Rated Power
- 8.14 Transmission
- 8.15 Axle Ratio
- 8.16 Maximum Vehicle Speed
- 8.17 Steering Wheel Nominal Diameter
- 8.18 Vehicle Length (mm)
- 8.19 Vehicle Height (mm)
- 8.20 Vehicle Width (mm)
- 8.21 Wheelbase (mm)
- 8.22 Overhang (mm)
- 8.23 Track
- 8.24 Centre of Gravity (mm)
- 8.25 Number of Cylinders
- 8.26 Catalyst Part Number(s)
- 8.27 Silencer Part Number(s)
- 8.28 Air Cleaner Part Number
- 8.29 Intake Silencer Part Number

Not applicable for this application.

### 9. Test Conditions

- 9.1.1. Parameter of the test area : Not applicable
- 9.1.2. Equipment for measuring and testing : Not applicable
- 9.2.1. Check of requirements of Directive (EC) 2007/46, Annex IV : See system type approvals
  - 9.2.1.1. Requirements fulfilled :  Yes  
 No
  - 9.2.1.2. Proof of requirements : ~~Test report / test sheet /~~ type approval
  - 9.2.2. Used virtual- and self-testing methods by manufacturer





## CETOC TS

CETOC Technical Service srl  
Via della Bufalotta, 374,  
00139 Roma

Inspection Report Nr.: TU-23-1-68-W20-0472-FIR  
Manufacturer: TEMSA ULAŞIM ARAÇLARI SANAYİ VE  
TİCARET A.Ş.  
Type: N



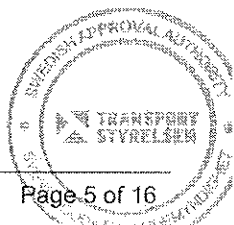
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- 9.2.2.1. Virtual testing methods :  Yes  
:  No
- 9.2.2.2. Self-testing methods by manufacturer :  Yes  
:  No
- 9.2.2.3. Proof of requirements :  Yes  
:  No
10. Remarks : CETOC TS apply measurement uncertainty to calibrated items but not test results.





**CETOC TS**

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## Annex I

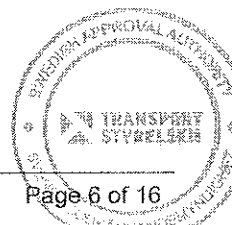
### List of modifications

### Annex 1

More details for application of

Date : 10.07.2020

- Correction of : Manufacturer's engine code for Electric Engine  
Template of 2007/46 information document
  
- Modification of : Annex List  
Part II & Part III of information document  
items 1.8, 1.8.1, 2.4.2.3, 2.6, 2.6.1, 2.8.1, 3.3.1.1.2, 4.6, 9.9.1.2,  
9.9.1.3, 9.9.2 of information document  
items 3.2.1.11, 3.2.12.2.7.0.4, 3.2.12.2.7.0.5, 3.2.12.2.7.0.6,  
3.2.12.2.7.6.5, 3.2.12.2.7.7, 3.2.12.2.8.1, 3.2.12.2.8.2.1,  
3.2.12.2.8.4, 3.2.12.2.8.7, 3.2.12.2.8.8.2, 3.2.12.2.8.6. of infor-  
mation document  
Amendment level to (EU) 2015/166
  
- Addition of : New indirect vision devices  
New interior materials  
New electrical / electronic devices  
New OBD-D Engine  
New representative drawing  
Optional rear axle load capacity  
New FDR values
  
- Deletion of : -
  
- Reasons(s) of modifica- : -  
tions (if required)







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00139 Roma

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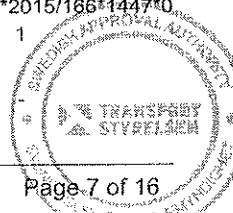
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## Annex II

### Report of the conformity check requirements of Directive (EC) 2007/46, Annex IV

| Subject  | Regulatory act reference (1)                   | As amended by | Applicable to versions | Approval Number/ Test Report Number |
|--|--|---------------|------------------------|-------------------------------------|
| Previous stage(s) whole vehicle type approval<br><br>(if applicable) | Directive 2007/46/EC<br><br>2007/46 Annex XVII | -             | -                      | -                                   |
| Multi stage build Additional manufacturer's plate (if applicable)    | Multistage Procedures Section 4                | -             | -                      | -                                   |
| 1. Permissible sound level   | Directive 70/157/EEC                           | -             | -                      | -                                   |
| 1a. Sound level  | Regulation (EU) 540/2014                       | -             | -                      | -                                   |
| 2. Emissions   |  |               |                        |                                     |
| Emissions (Euro 5 & 6) light-duty vehicles                           | Directive 70/157/EEC --                        | 02            | ALL                    | E57*51R02/10*0003*03                |
| 2a. /access to information   | UNECE Regulation No.51                         |               |                        |                                     |
| 3. Fuel tanks/Rear protective devices                                | Directive 70/221/EEC                           | -             | -                      | -                                   |
| Prevention of Fire Risks   | Regulation (EC) 661/2009 UNECE                 | 02            | CEC6 CXC6              | E24 34RI-020026 (Ext. 01)           |
| 3a.  | Regulation No.34                               |               |                        |                                     |
| 3b. Rear under-run protective devices and installation               | UNECE Regulation No.58                         | 03            | ALL                    | E57*58R03/00*0050*00                |
| 4. Rear registration plate space                                     | Directive 70/222/EEC                           | -             | -                      | -                                   |
| Space for mounting and fixing rear registration plates               | Regulation (EU) 1003/2010                      | 2015/166      | ALL                    | e9*1003/2010*2015/166*1447*0        |
| 4a.  |  |               |                        | 1                                   |
| 5. Steering effort   | Directive 70/311/EEC                           | -             | -                      | -                                   |





# CETOC TS

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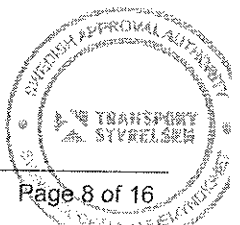


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|     |  |                                       |    |              |                          |
|-----|--|---------------------------------------|----|--------------|--------------------------|
| 5a. | Steering equipment   | Regulation (EC) No.<br>661/2009 UNECE | 03 | ALL          | E57*79R03/00*0005*03     |
|     |  | Regulation No.79                      |    |              |                          |
| 6.  | Door latches and hinges                                    | Directive 70/387/EEC                  | -  | -            | -                        |
|     |  | Regulation (EC)<br>No. 661/2009       | -  | -            | -                        |
| 6a. | Vehicle access and<br>manoeuvrability                      | Regulation (EU)<br>No.130/2012        | -  | -            | -                        |
| 6b. | Door latches and door re-<br>tention components            | Regulation (EC) No<br>661/2009 UNECE  | -  | -            | -                        |
|     |  | Regulation No.11                      |    |              |                          |
| 7   | Audible warning  | Directive 70/388/EEC                  | -  | -            | -                        |
|     |  | Regulation (EC) No.<br>661/2009 UNECE | 00 | CEC6<br>CXC6 | E24 28R-000008 (Ext. 04) |
| 7a. | Audible warning devices and<br>signals                     | Regulation No. 28                     | 00 | CEEV<br>CXEV | E57*28R00/05*0002*02     |
| 8.  | Indirect vision devices di-<br>rective                     | Directive 2003/97/EC                  | -  | -            | -                        |
|     |  | Regulation (EC) No.<br>661/2009 UNECE | 03 | CEC6<br>CXC6 | E24 46R-030029           |
| 8a. | Devices for indirect vision<br>and their installation      | Regulation No. 46                     | 04 | CEEV<br>CXEV | E57*46R04/06*0004*03     |
| 9.  | Braking  | Directive 71/320/EEC                  | -  | -            | -                        |
|     |  | UNECE                                 | 11 | CEC6<br>CXC6 | E57*13R11/16*0020*02     |
| 9a. | Braking of vehicle and<br>trailers                         | Regulation No. 13                     | 11 | CEEV<br>CXEV | E57*13R11/16*0014*03     |
| 9b. | Braking of passenger cars                                  | Regulation (EC) No<br>661/2009 UNECE  | -  | -            | -                        |
|     |  | Regulation No.13-H                    |    |              |                          |
| 10. | Radio Interference<br>(electromagnetic com-<br>patibility) | Directive 72/245/EEC                  | -  | -            | -                        |





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TİCARET A.Ş.  
Type: N



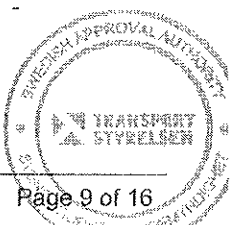
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|------|--|--|----|--------------|----------------------|
|      |  |  | 05 | CEC6<br>CXC6 | E57*10R05/01*0036*03 |
| 10a. | Electromagnetic compatibility  | UNECE<br>Regulation No.10                              | 05 | CEEV<br>CXEV | E57*10R05/01*0018*05 |
| 12   | Interior fittings  | Directive 74/60/EEC                                    | -  | -            | -                    |
|      |  | Regulation (EC) No 661/2009 UNECE                      | -  | -            | -                    |
| 12a  | Interior fittings  | Regulation No. 21                                      | -  | -            | -                    |
| 13.  | Anti-theft and immobiliser   | Directive 74/61/EEC                                    | -  | -            | -                    |
| 13a. | Protection of motor vehicle against unauthorised use                           | Regulation (EC) No. 661/2009 UNECE<br>Regulation No.18 | 03 | ALL          | E24*18R03/03*0003*06 |
| 13b. | Protection of motor vehicle against unauthorised use                           | Regulation (EC) No 661/2009 UNECE<br>Regulation No.116 | -  | -            | -                    |
| 14   | Protective Steering  | Directive 74/297/EEC                                   | -  | -            | -                    |
| 14a. | Protection of the driver against the steering mechanism in the event of impact | Regulation (EC) No 661/2009 UNECE<br>Regulation No. 12 | -  | -            | -                    |
| 15   | Seat strength  | Directive 74/408/EEC                                   | -  | -            | -                    |
| 15a. | Seats, their anchorages and any head restraints                                | UNECE<br>Regulation No. 17                             | 08 | ALL          | E57*17R08/04*0006*02 |
| 15b  | Seats of large passenger vehicles  | UNECE<br>Regulation No. 80                             | -  | -            | -                    |
| 16   | Exterior projections   | Directive 74/483/EEC                                   | -  | -            | -                    |
| 16a  | External projections   | Regulation (EC) No 661/2009 UNECE<br>Regulation No. 26 | -  | -            | -                    |
| 17.  | Speedometer and reverse gear   | Directive 75/443/EEC                                   | -  | -            | -                    |





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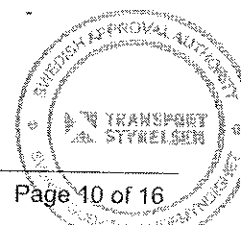


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|      |  |                                       |          |     |                              |
|------|--|---------------------------------------|----------|-----|------------------------------|
| 17a. | Vehicle access and manoeuvrability   | Regulation (EC) No.<br>661/2009       | 130/2012 | ALL | e9*130/2012*130/2012*1140*02 |
|      |  | Regulation (EU) No.<br>130/2012       |          |     |                              |
| 17b. | Speedometer equipment including its installation   | Regulation (EC) No.<br>661/2009 UNECE | 01       | ALL | E57*39R01/01*0004*03         |
|      |  | Regulation No. 39                     |          |     |                              |
| 18.  | Plates (statutory)   | Directive 76/114/EEC                  | -        | -   | -                            |
| 18a. | Manufacturer's statutory plate and vehicle identification number   | Regulation (EC) No.<br>661/2009       | 249/2012 | ALL | e5*19/2011*249/2012*1041*01  |
|      |  | Regulation (EU)<br>19/2011            |          |     |                              |
| 19.  | Seat-belt anchorages   | Directive 76/115/EEC                  | -        | -   | -                            |
| 19a. | Safety-belt anchorages, ISOFIX anchorage systems and ISOFIX top tether anchorages                            | UNECE<br>Regulation No. 14            | 09       | ALL | E57*14R09/00*0007*02         |
| 20.  | Installation of lighting and light signalling devices  | Directive 76/756/EEC                  | -        | -   | -                            |
| 20a. | Installation of lighting and light signalling devices on vehicles  | Regulation (EC) No.<br>661/2009 UNECE | 04       | ALL | E11 48R-043685 (Ext. 23)     |
|      |  | Regulation No. 48                     |          |     |                              |
| 21.  | Retro reflectors   | Directive 76/757/EEC                  | -        | -   | -                            |
| 21a. | Retro-reflecting devices for power-driven vehicles and their trailers  | Regulation (EC) No.<br>661/2009 UNECE | -        | -   | -                            |
|      |  | Regulation No. 3                      |          |     |                              |
| 22.  | End-outline, front-position (side), rear-position (side), stop, side marker, daytime running lamps           | Directive<br>76/758/EEC               | -        | -   | -                            |
| 22a. | Front and rear position lamps, stop-lamps and end outline marker lamps for motor vehicles and their trailers | Regulation (EC) No.<br>661/2009 UNECE | -        | -   | -                            |
|      |  | Regulation No. 7                      |          |     |                              |
| 22b. | Daytime running lamps for power-driven vehicles  | Regulation (EC) No.<br>661/2009 UNECE | -        | -   | -                            |
|      |  | Regulation No. 87                     |          |     |                              |





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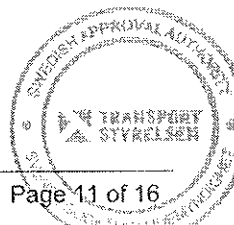


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|------|---|------------------------------------|---|---|---|
| 22c. | Side marker lamps for motor vehicles and their trailers   | Regulation (EC) No. 661/2009 UNECE | - | - | - |
|      |   | Regulation No. 91                  |   |   |   |
| 23.  | Direction indicators  | Directive 76/759/EEC               | - | - | - |
| 23a. | Direction indicators for power-driven vehicles and their trailers   | Regulation (EC) No.661/2009 UNECE  | - | - | - |
|      |   | Regulation No.6                    |   |   |   |
| 24.  | Rear registration plate lamps   | Directive 76/760/EEC               | - | - | - |
| 24a. | Illumination of rear- registration plates of power-driven vehicles and their trailers   | Regulation (EC) No.661/2009 UNECE  | - | - | - |
|      |   | Regulation No.4                    |   |   |   |
| 25.  | Headlamps (including bulbs)   | Directive 76/761/EEC               | - | - | - |
| 25a. | Power-driven vehicle sealed beam headlamps emitting a European asymmetrical passing beam or a driving lamp or both                          | Regulation (EC) No. 661/2009 UNECE | - | - | - |
|      |   | Regulation No. 31                  |   |   |   |
| 25b. | Filament lamps for use in approved lamp units of power-driven vehicles and their trailers   | Regulation (EC) No.661/2009 UNECE  | - | - | - |
|      |   | Regulation No. 37                  |   |   |   |
| 25c. | Motor vehicles headlamps equipped with gas discharge light sources  | Regulation (EC) No.661/2009 UNECE  | - | - | - |
|      |   | Regulation No. 98                  |   |   |   |
| 25d. | Gas discharge light sources for use in approved gas discharge lamp units of power-driven vehicles   | Regulation (EC) No. 661/2009 UNECE | - | - | - |
|      |   | Regulation No.99                   |   |   |   |
| 25e. | Motor vehicle headlamps emitting an asymmetrical passing beam or a driving beam or both and equipped with filament lamps and/or LED modules | Regulation (EC) No. 661/2009 UNECE | - | - | - |
|      |   | Regulation No.112                  |   |   |   |





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|------|---|--|-----------|-----|--------------------------------|
| 25f. | Adaptive front lighting systems (AFS) for motor vehicles                                    | Regulation (EC) No. 661/2009 UNECE<br>Regulation No. 123     | -         | -   | -                              |
| 26.  | Front fog lamps   | Directive 77/762/EEC   | -         | -   | -                              |
| 26a. | Power-driven vehicles front fog lamps   | Regulation (EC) No. 661/2009 UNECE<br>Regulation No.19       | -         | -   | -                              |
| 27.  | Towing hooks  | Directive 77/389/EEC   | -         | -   | -                              |
| 27a. | Towing device   | Regulation (EC) No. 661/2009<br>Regulation (EU) No.1005/2010 | 1005/2010 | ALL | e9*1005/2010*1005/2010*1296*01 |
| 28.  | Rear fog lamps  | Directive 77/538/EEC   | -         | -   | -                              |
| 28a. | Rear fog lamps for power-driven vehicles and their trailers                                 | Regulation (EC) No. 661/2009 UNECE<br>Regulation No.38       | -         | -   | -                              |
| 29.  | Reversing lamps   | Directive 77/539/EEC   | -         | -   | -                              |
| 29a. | Reversing lights for power-driven vehicles and their trailers                               | Regulation (EC) No. 661/2009 UNECE<br>Regulation No. 23      | -         | -   | -                              |
| 30.  | Parking lamps   | Directive 77/540/EEC   | -         | -   | -                              |
| 30a. | Parking lamps for power-driven vehicles   | Regulation (EC) No.661/2009 UNECE<br>Regulation No.77        | -         | -   | -                              |
| 31.  | Seat-belts and restraint systems  | Directive 77/541/EEC   | -         | -   | -                              |
| 31a. | Safety belts, restraint systems, child restraint systems and ISOFIX child restraint systems | UNECE<br>Regulation No.16                                    | 06        | ALL | E57*16R06/11*0005*02           |
| 32.  | Forward vision  | Directive 77/649/EEC   | -         | -   | -                              |
| 32a. | Forward field of vision   | Regulation (EC) No 661/2009 UNECE<br>Regulation No.125       | -         | -   | -                              |





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|------|--|-----------------------------------|--|-----------|-------------------------------|
| 33.  | Identification of controls, tell-tales and indicators                      | Directive 78/316/EEC              | -  | -         | -                             |
|      |  | Regulation (EC) No.661/2009 UNECE | 01   | ALL       | E57*121R01/03*0010*02         |
| 33a. | Location and identification of hand controls, tell-tales and indicators    | Regulation No. 121                |  |           |                               |
| 34.  | Defrost/demist   | Directive 78/317/EEC              | -  | -         | -                             |
|      |  | Regulation (EC) No 661/2009       |  |           |                               |
| 34a  | Windscreen defrosting and demisting systems                                | Regulation (EU) No 672/2010       | -  | -         | -                             |
| 35.  | Wash/wipe  | Directive 78/318/EEC              | -  | -         | -                             |
|      |  | Regulation (EC) No 661/2009       |  |           |                               |
| 35a  | Windscreen wiper and washer systems  | Regulation (EU) No 1008/2010      | -  | -         | -                             |
| 36.  | Heating systems  | Directive 2001/56/EC              | -  | -         | -                             |
|      |  | UNECE                             |  |           |                               |
| 36a. | Heating Systems  | Regulation No.122                 | 00   | ALL       | E57*122R00/04*0006*03         |
| 37   | Wheel guards   | Directive 78/549/EEC              | -  | -         | -                             |
|      |  | Regulation (EC) No 661/2009       |  |           |                               |
| 37a  | Wheel guards   | Regulation (EU) No 1009/2010      | -  | -         | -                             |
| 38   | Head restraints  | Directive 78/932/EEC              | -  | -         | -                             |
|      |  | Regulation (EC) No 661/2009 UNECE |  |           |                               |
| 38a  | Head restraints (head-rests), whether or not incorporated in vehicle seats | Regulation No. 25                 | -  | -         | -                             |
| 41.  | Emissions (Euro IV & V) heavy duty vehicles                                | Directive 2005/55/EC              | -  | -         | -                             |
|      |  |                                   | imp. by EU Reg. 582/2011, as last am. by EU Reg. 2018/932D | CEC6 CXC6 | e1*595/2009*2018/932D*0139*00 |
| 41a  | Emissions (Euro IV) heavy duty vehicles /access to information             | Regulation (EC) No.595/2009       |  |           | 0                             |





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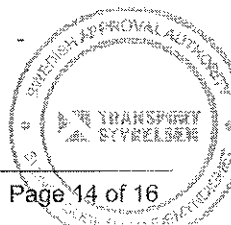
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| 44   | Masses and dimensions<br>(cars)  | Directive 92/21/EEC                   | -        | -   | -                            |
|      |  | Regulation (EC) No<br>661/2009        |          |     |                              |
| 44a  | Masses and dimensions  | Regulation (EU) No<br>1230/2012       | -        | -   | -                            |
| 45.  | Safety glazing   | Directive 92/22/EEC                   | -        | -   | -                            |
| 45a. | Safety glazing materials<br>and their installation on ve-<br>hicles.                           | UNECE<br>Regulation No.43             | 01       | ALL | E57*43R01/08*0003*03         |
| 46.  | Tyres  | Directive 92/23/EEC                   | -        | -   | -                            |
|      |  | Regulation (EC) No.<br>661/2009       | 2015/166 | ALL | e9*458/2011*2015/166*6278*02 |
| 46a. | Installation of tyres  | Regulation (EU)<br>No.458/2011        |          |     |                              |
| 46b. | Pneumatic Tyres for com-<br>mercial vehicles and their<br>trailers (Class C1)                  | Regulation (EC) No<br>661/2009 UNECE  | -        | -   | -                            |
|      |  | Regulation No. 30                     |          |     |                              |
| 46c. | Pneumatic Tyres for com-<br>mercial vehicles and their<br>trailers (Classes C2 and C3)         | Regulation (EC)<br>No.661/2009 UNECE  | -        | -   | -                            |
|      |  | Regulation No.54                      |          |     |                              |
| 46d. | Tyre rolling sound<br>emissions on wet sur-<br>faces and rolling re-<br>sistance               | Regulation (EC) No.<br>661/2009 UNECE | -        | -   | -                            |
|      |  | Regulation No.117                     |          |     |                              |
| 46e. | Temporary-use spare unit,<br>run-flat tyres/systems and<br>tyre pressure monitoring<br>systems | Regulation (EC) No<br>661/2009 UNECE  | -        | -   | -                            |
|      |  | Regulation No. 64                     |          |     |                              |
| 47   | Speed limitation devices   | Directive 92/24/EEC                   | -        | -   | -                            |
|      |  | Regulation (EC)<br>No.661/2009 UNECE  | 00       | ALL | E57*89R00/03*0007*03         |
| 47a. | Speed Limitation of Ve-<br>hicles  | Regulation No. 89                     |          |     |                              |
| 48.  | Masses and dimensions<br>(other than vehicles referred<br>to in item 44)                       | Directive 97/27/EC                    | -        | -   | -                            |







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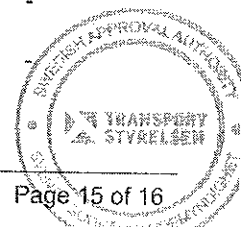


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|------|--|--|-----------|--------------|------------------------------------|
| 48a. | Masses and dimensions  | Regulation (EU)<br>No.1230/2012                        | 1230/2012 | ALL          | e9*1230/2012*1230/2012*6035*<br>03 |
| 50.  | Couplings  | Directive 94/20/EC                                     | -         | -            | -                                  |
|      | Mechanical coupling components of combination of vehicles  | UNECE<br>Regulation No. 55                             | -         | -            | -                                  |
| 50a. |  |  |           |              |                                    |
| 51   | Flammability   | Directive 95/28/EC                                     | -         | -            | -                                  |
|      | Burning behaviour of materials used in the interior construction of certain categories of motor vehicles | Regulation (EC) No 661/2009 UNECE<br>Regulation No.118 | 03        | ALL          | E57*118R103/01*0057*00             |
| 51a  |  |  |           |              |                                    |
| 52   | Buses and coaches  | Directive 2001/85/EC                                   | -         | -            | -                                  |
|      | M2 and M3 vehicles   | UNECE<br>Regulation No.107                             | 06        | CEC6<br>CEEV | E57*107R06/07*0012*03              |
| 52a  |  |  |           |              |                                    |
| 52b  | Strength of the superstructure of large passenger vehicles   | UNECE<br>Regulation No.66                              | -         | -            | -                                  |
| 53   | Frontal impact   | Directive 96/79/EC                                     | -         | -            | -                                  |
|      | Protection of occupants in the event of a frontal collision  | Regulation (EC) No 661/2009 UNECE<br>Regulation No.94  | -         | -            | -                                  |
| 53a  |  |  |           |              |                                    |
| 54.  | Side impact  | Directive 96/27/EC                                     | -         | -            | -                                  |
|      | Protection of occupants in the event of lateral collision  | Regulation (EC) No 661/2009 UNECE<br>Regulation No.95  | -         | -            | -                                  |
| 54a. |  |  |           |              |                                    |
| 58.  | Pedestrian protection  | Regulation (EC) No 78/2009                             | -         | -            | -                                  |
| 59.  | Recyclability  | Directive 2005/64/EC                                   | -         | -            | -                                  |
| 61   | Air-conditioning systems   | Directive 2006/40/EC                                   | -         | -            | -                                  |





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| 62. | Hydrogen System  | Regulation (EC)<br>No.79/2009   | -        | -            | -  |
| 63. | General Safety   | Regulation (EC)<br>No.661/2009  | -        | -            | -  |
| 64. | Gear shift indicators  | Regulation (EC) No<br>661/2009 [1229/12-<br>116] (EU) No.<br>65/2012  | -        | -            | -  |
| 65. | Advanced emergency<br>braking system                                       | Regulation (EC) No.<br>661/2009<br><br>Regulation (EU)<br>No.347/2012 | -        | -            | -  |
| 66. | Lane departure warning sys-<br>tem   | Regulation (EC) No.<br>661/2009<br><br>Regulation (EU)<br>No.351/2012 | -        | -            | -  |
| 67. | Specific components for LPG<br>and their installation on motor<br>vehicles | Regulation (EC) No.<br>661/2009 UNECE<br><br>Regulation No. 67        | -        | -            | -  |
| 68. | Vehicle alarm systems<br>(VAS)   | Regulation (EC) No<br>661/2009 UNECE<br><br>Regulation No 97          | -        | -            | -  |
| 69. | Electrical safety  | Regulation (EC) No.<br>661/2009 UNECE<br><br>Regulation No. 100       | 01<br>02 | CEEV<br>CXEV | E11*100R-011094 (Ext. 00)<br>E57*100R02/03*0004*00 |
| 70. | Specific components for CNG<br>and their installation on motor<br>vehicles | Regulation (EC) No.<br>661/2009 UNECE<br><br>Regulation No. 110       | -        | -            | -  |
| 72. | eCall system   | Regulation (EU)<br>2015/758   | -        | -            | -  |

**TEMSA**  
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