

Section 1: General Information

0. Identification of the type

0.1 0.2 0.4 Type ID: 71-103-0002-2-001-001

0.3 Date of record: 2021-11-26

1. General Information

1.1 Type name: Bimodal Toyota Hilux 1435/1668 GIS

1.2 Alternative type name: Bimodal Toyota Hilux Cat.9c 1435/1668 GIS

1.3 Manufacturer:

1.3.1 Manufacturer identification data:

1.3.1.1 Name of organisation: Siderurgica Requena

1.3.1.2 Registered business number:

1.3.1.3 Organisation code:

1.3.2 Manufacturer contact data:

1.3.2.1 Address of organisation, street and number: C/ Eduardo Barreiros, 116

1.3.2.2 Town: Madrid

1.3.2.3 Country code:

1.3.2.4 Post code: 28041

1.3.2.5 E-mail address: comercial@siderurgicarequena.com

Registration Method: New Type

Registered Vehicle Type:

1.4 Category: Special Vehicles

1.5 Subcategory: Self-propelled special vehicle

1.6 Platform: TOYOTA HILUX

Section 2: Conformity with TSI

2.1 Conformity with TSI and Sections not complied with:

1435mm / Autonomous / None

Not conform to any TSI

1668mm / Autonomous / None

Not conform to any TSI

2.3 Applicable specific cases (specific cases conformity with which has been assessed)

2.2 Reference of 'EC type examination certificates'

Reference of 'EC type examination certificates' - if module SB applied - and/or 'design verification certificate' - if module SH1 applied

BELGORAIL/1/SB/2021/RST/EN/18080021MR-2/V01

Section 3: Authorisations

Spain

3.0 Area Of Use: ES(Spain)

3.1.1 Member state of authorisation: Spain(ES)

3.1.2.1 Status: Valid

3.1.2.2 Validity of Authorisation (until):

3.1.2.3 Coded conditions for use and other restrictions:

1435mm / Autonomous / None

1 Technical restriction related to construction

1.1 Minimum curve radius in meters: 150 m

1.2 Track circuit restrictions: True

1.3 Speed restrictions in Km/h: 10 km/h

2 Geographical restriction

2.1 Kinematic gauge (coding WAG TSI): G1 (partes altas) / GI1 (partes bajas)

2.2 Wheelset gauge: 2.2.4 Gauge 1435

2.3 No CCS on board: True

3 Environmental restrictions

3.1 Climatic zone: 3.1.3 T3

1668mm / Autonomous / None

1 Technical restriction related to construction

1.1 Minimum curve radius in meters: 150 m

1.2 Track circuit restrictions: True

1.3 Speed restrictions in Km/h: 10 km/h

2 Geographical restriction

2.1 Kinematic gauge (coding WAG TSI): G1 (partes altas) / GI1 (partes bajas)

2.2 Wheelset gauge: 2.2.8 Gauge 1668

2.3 No CCS on board: True

3 Environmental restrictions

3.1 Climatic zone: 3.1.3 T3

3.1.2.4 Non-coded conditions for use and other restrictions:

1435mm / Autonomous / None

El vehículo no puede ser incorporado a un tren.

El vehículo no podrá remolcar a ningún otro cuando se emplee como vehículo ferroviario.

El vehículo deberá circular al amparo de una entrega de vía bloqueada (EVB). Al paso por aparatos de vía y tramos metálicos la velocidad deberá realizarse a velocidad reducida [≤ 5 km/h].

El vehículo es susceptible de interferir el gálibo en partes bajas debido a las ruedas neumáticas. Por tanto, se deberá verificar la compatibilidad del sistema de rodadura con el trayecto que se desea efectuar.

Para los trabajos en vía, la dotación del vehículo deberá incluir, como mínimo, dos dispositivos de comunicación de radio de largo alcance tipo "walkie-talkie" o teléfono móvil. En cualquier caso, se deberá disponer de cargador para dichos dispositivos.

La pendiente máxima de circulación es de 20‰ [mm/m].

En el vehículo podrán ir un máximo de 3 personas.

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3.1.3.1.1 Date of the original authorisation:

2021-11-25

3.1.3.1.2 Authorisation holder:

3.1.3.1.2.1 Authorisation holder identification data:

3.1.3.1.2.1.1 Name of organisation:

Gestión Integral del Suelo S.L.

3.1.3.1.2.1.2 Registered business number:

B81480352

3.1.3.1.2.1.3 Organisation code:

3.1.3.1.2.2 Authorisation holder contact data:

3.1.3.1.2.2.1 Address of organisation, street and number:

Paseo de la Castellana 127. 2ºB

3.1.3.1.2.2.2 Town:

Madrid

3.1.3.1.2.2.3 Country code:

ES

3.1.3.1.2.2.4 Post code:

28046

3.1.3.1.2.2.5 E-mail address:

gis@gis-ingenieria.com

3.1.3.1.3 Authorisation document reference:

ES8020210219

3.1.3.1.4 Certificate of verification : Reference of type examination or design examination type:

ES/00000B814
80352/2020/0
00001

3.1.3.1.5 Parameters for which conformity to applicable national rules has been assessed:

1435mm / Autonomous / None

2015/2299/EU

1.2.1 Maintenance instructions

2 Structure and mechanical parts

2.1.2.1 Load conditions and weighed mass

2.1.5 Fixing of devices to car body structure

2.2.2 Characteristics of rescue coupling

3 Track interaction and gauging

3.1 Vehicle gauge

3.2.5 Minimum horizontal curve radius, vertical concave curve radius, convex curve radius

3.3.2 Wheelset (complete)

3.3.3 Wheel

3.3.4 Wheel/rail interaction influencing systems

3.3.6 Bearings on the wheelset

3.3.8 Axle bearing condition monitoring

3.4 Limit of maximum longitudinal positive and negative acceleration

4.1 Functional requirements for braking at train level

4.4.1 Emergency braking command

4.4.2 Service braking command

4.4.3 Direct braking command

4.4.5 Parking braking command

4.5 Brake performance

- 4.5.1 Emergency braking performance
- 4.5.2 Service braking performance
- 4.5.3 Calculations related to thermal capacity
- 4.5.4 Parking brake performance
- 4.5.5 Brake performance calculation
- 4.7.5 Parking brake
- 6 Environmental conditions and aerodynamic effects
 - 7.2.1 Vehicle marking
 - 7.2.2 External lights
 - 7.2.2.1 Headlights
 - 7.2.2.2 Marker lights
 - 7.2.2.3 End-of-train signal
 - 7.2.2.4 Lamp controls
 - 7.2.3 Audible signal systems
- 13 Specific operational requirements
 - 1668mm / Autonomous / None
 - 2015/2299/EU
 - 1.2.1 Maintenance instructions
 - 2 Structure and mechanical parts
 - 2.1.2.1 Load conditions and weighed mass
 - 2.1.5 Fixing of devices to car body structure
 - 2.2.2 Characteristics of rescue coupling
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- 4.5 Brake performance
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 - 7.2.2.2 Marker lights
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 - 7.2.2.4 Lamp controls
 - 7.2.3 Audible signal systems
- 13 Specific operational requirements

Área de uso ES RFIG ancho de vía 1435/1668 mm

20210519_Declaración de riesgos.pdf y fecha:
24/05/2021

3.1.3.1.6 Comments:

3.1.3.1.7 Reference to the written declaration by the proposer referred to in Article 3(11) of Regulation (EU) 402/2013:

3.1.3.1 Initial Registration

3.1.2.3 Coded conditions for use and other restrictions:

1435mm / Autonomous / None

- 1 Technical restriction related to construction
 - 1.1 Minimum curve radius in meters: 150 m
 - 1.2 Track circuit restrictions: True
 - 1.3 Speed restrictions in Km/h: 10 km/h
- 2 Geographical restriction
 - 2.1 Kinematic gauge (coding WAG TSI): G1 (partes altas) / GI1 (partes bajas)
 - 2.2 Wheelset gauge: 2.2.4 Gauge 1435
 - 2.3 No CCS on board: True
- 3 Environmental restrictions
 - 3.1 Climatic zone: 3.1.3 T3

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3.1.3.1.5 Parameters for which conformity to applicable national rules has been assessed:

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1.2.1 Maintenance instructions

2 Structure and mechanical parts

2.1.2.1 Load conditions and weighed mass

2.1.5 Fixing of devices to car body structure

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- 3.3.2 Wheelset (complete)
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- 3.3.6 Bearings on the wheelset
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 - 1668mm / Autonomous / None
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 - 7.2.3 Audible signal systems
- 13 Specific operational requirements
- Área de uso ES RFIG ancho de vía 1435/1668 mm
- 20210519_Declaración de riesgos.pdf y fecha: 24/05/2021

3.1.3.1.6 Comments:

3.1.3.1.7 Reference to the written declaration by the proposer referred to in Article 3(11) of Regulation (EU) 402/2013:

Section 4: Technical Characteristics

4.1.3 Wheel set gauge	1435	mm
RC	1668	mm

4.13.1 Signalling

4.13.1.1 ETCS equipment on-board and the set of specifications from CCS TSI Annex A RC	None
4.13.1.5 Class B or other train protection control and warning systems installed (system and if applicable version) RC	None
4.13.1.8 ETCS System Compatibility	Not applicable
4.13.2 Radio	
4.13.2.1 GSM-R Radio voice on board and its Baseline RC	None
4.13.2.3 Class B or other radio systems installed (system and if applicable version) RC	None
4.13.2.5 Radio Voice System Compatibility	Not applicable
4.13.2.7 GSM-R Radio Data communication on board and its Baseline RC	None
4.13.2.8 Radio Data System Compatibility	Not applicable
4.10.1 Energy supply system (voltage and frequency) RC	Autonomous
4.1.2 Speed	
4.1.2.1 Maximum design speed	1435mm / Autonomous / 10 km/h None
	1668mm / Autonomous / 10 km/h None
4.2.1 Reference profile RC	G1 GI1 (Specific case Spain – lower parts)
4.3.1 Temperature range	T3 (-25 to +45)
4.3.3 Snow, ice and hail conditions	Nominal
4.4.1 Fire safety category RC	OTM
4.5.2 Design mass	

4.5.2.1 Design mass in working order		2419	kg
4.5.2.2 Design mass under normal payload		3210	kg
4.5.2.3 Design mass under exceptional payload RC		3210	kg
4.5.3 Static axle load			
4.5.3.1 Static axle load in working order		320	kg
4.5.3.2 Static axle load under normal payload		320	kg
4.5.3.3 Static axle load under exceptional payload RC		320	kg
4.5.3.4 Position of the axles along the unit (axle spacing) : a: Distance between axles b: Distance from end axle to the end of the nearest coupling plane c: distance between two inside axles	1435mm / Autonomous / None	a: 0003,08 m b: 0001,25 m c: 0003,08 m	Explanations: Vehículo de dos ejes
	1668mm / Autonomous / None	a: 0003,08 m b: 0001,25 m c: 0003,08 m	Explanations: Vehículo de dos ejes
4.5.5 Total vehicle mass (for each vehicle of the unit)	1435mm / Autonomous / None	2370	kg
	1668mm / Autonomous / None	2370	kg
4.7.1 Maximum average deceleration		2.5	m/s ²
4.7.2.1 Brake performance on steep gradients with normal payload			
4.7.3 Parking brake			
4.7.4.1 Eddy current brake			
4.7.4.1.1 Eddy current track brake fitted RC		False	
4.7.4.2 Magnetic brake			
4.7.4.2.1 Magnetic track brake fitted RC		False	
4.7.4.3 Regenerative brake (only for vehicles with electrical traction)			
4.7.4.3.1 Regenerative brake fitted RC		False	

4.7.8 Wheel slide protection system	1435mm / Autonomous / None	False	
	1668mm / Autonomous / None	False	
4.8.1 Vehicle length		5.36	m
4.8.2 Minimum in-service wheel diameter RC		235	mm
4.8.4 Minimum horizontal curve radius capability RC		150	m
4.9.1 Type of end coupling	Manual		
4.9.2 Axle bearing condition monitoring (hot axles box detection) RC		No aplica	
4.14.1 Type of train detection systems for which the vehicle has been designed and assessed RC		None	