



NSAI

ECE TYPE-APPROVAL CERTIFICATE



Communication concerning:²

Approval granted
~~Approval extended~~
~~Approval refused~~
~~Approval withdrawn~~
~~Production definitively discontinued~~

of a vehicle type with regard to steering equipment pursuant to Regulation No. 79.

Approval No: **E24*79R02/01*0058*00**

Reason(s) for extension: N/A

- | | | |
|-----|---|---|
| 1. | Trade name or mark of vehicle: | <i>Iveco / System Truck</i> |
| 2. | Vehicle Type: | <i>ST MP MS34Y 79R</i> |
| | Variant(s): | <i>See information document
ST_MP_MS34Y_79R_00 for details</i> |
| | Commercial description: | <i>See information document point 0.2.1.</i> |
| 3. | Manufacturer's name and address: | <i>S.T. System Truck S.p.A.
Via Paesa, 28
IT-46048 Roverbella (MN)
Italy</i> |
| 4. | If applicable, name and address of manufacturer's representative: | <i>N/A</i> |
| 5. | Brief description of the steering equipment: | |
| 5.1 | Type of steering equipment: | <i>Power assisted steering</i> |
| 5.2 | Steering Control: | <i>Steering wheel</i> |
| 5.3 | Steering Transmission: | <i>Mechanical</i> |

Approval No: E24*79R02/01*0058*00

- 5.4 Steered Wheels: **1st & 2nd Axle**
- 5.5 Energy Source: **Hydraulic assistance**
6. Results of tests, vehicle characteristics:
- 6.1 Steering effort required to achieve a turning circle of 12m radius with an intact system and 20m radius with a system in the failed condition:

6.1.1 Under normal conditions:

Turning circle	Steering effort	
12 m radius	Limit [daN]	Measured [daN]
Left	20	6
Right	20	5.5

6.1.2 After failure of special equipment:

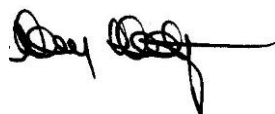
Turning circle	Steering effort	
20 m radius	Limit [daN]	Measured [daN]
Left	45	20
Right	45	18

- 6.2 Other tests required by this regulation (pass/~~fail~~): **Pass**
- 6.3 Adequate documentation in accordance with Annex 6 was supplied in respect of the following parts of the steering system: **N/A**
7. Applicable only to towing vehicles
- 7.1. The towing vehicle is / is not¹ equipped with an electrical connector fulfilling the relevant requirements of Annex 7: **N/A**
- 7.2. The maximum current available is: **N/A**
8. Applicable only to trailers
- 8.1. The steering system of the trailer fulfils the relevant provisions of Annex 7 to UN Regulation No. 79: **Yes/No**
- 8.2. The maximum current required for the trailer steering system is **N/A**
- 8.3. The trailer steering system is/is not² able to supply auxiliary equipment on the trailer with electrical energy: **N/A**

¹ Strike out what does not apply.

Approval No: E24*79R02/01*0058*00

9. Vehicle submitted for approval on: **12.03.2021**
10. Technical service responsible for conducting approval tests: **FAKT S.r.l.,
Via Lithos, 53
I-25086 Rezzato (BS)
Italy**
11. Date of report issued by that service: **09.03.2021**
12. Number of report issued by that service: **IT21/0229 - 00**
13. Approval granted/extended/refused/withdrawn:² **Granted**
14. Position of the approval mark on the vehicle: **Adhesive plate on the front wall behind radiator grill**
15. Place: **Dublin**
16. Date: **7th April, 2021**

17. Signature: 



18. Annexed to this communication is a list of documents in the approval file deposited at the administration services having delivered the approval and which can be obtained on request.

² Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).



Approval No: E24*79R02/01*0058*00

Index to the Information Package

Date of issue:	<i>7th April, 2021</i>
Date of latest amendment:	<i>N/A</i>
Reason for extension/revision:	<i>N/A</i>
1. Additional conditions, and advisory notes on legal alternatives.	
2. Test report(s)	
- numbers(s):	<i>IT21/0229 - 00</i>
- date of issue:	<i>09.03.2021</i>
- date of latest amendment:	<i>N/A</i>
3. Information document	
- number(s):	<i>ST_MP_MS34Y_79R_00</i>
- date of issue:	<i>01.02.2021</i>
- date of latest amendment:	<i>N/A</i>
Documentation:	<i>22 pages</i>



Approval No: E24*79R02/01*0058*00

Appendix: **Additional conditions, and advisory notes on legal alternatives**

A: Additional conditions:

1. The attached technical report, with any of its attachments, forms part of this Type Approval certificate.
2. Each type from series production shall be to the measurements specified in the attached drawings, and shall be manufactured only from the materials specified in the Approval documents.
3. Changes in the type are permitted only with the explicit permission of NSAI. Breaches of this requirement will lead to a withdrawal of the Type Approval, and in addition may be subject to criminal prosecution.
4. At regular intervals, any tests or associated checks prescribed by the applicable legislation to verify continued conformity with the approved type shall be carried out. The manufacturer shall demonstrate compliance with this by submitting to NSAI evidence of adequate arrangements and documented control plans for each type approved.
5. Any set of samples or test pieces showing evidence of non-conformity shall give rise to further sampling and testing and all steps shall be taken to restore conformity of production.
6. This Type Approval will expire when it is surrendered by the holder, or withdrawn by NSAI, or when the approved type no longer conforms to legal requirements. The recall of the Type Approval can be issued by NSAI when the conditions required for the issuing or continuation of the Type Approval are no longer current, or when the Approval holder is in breach of the duties attached to the Type Approval, or when it is established that the approved type no longer meets the requirements of traffic safety.
7. Changes in the company name, address or manufacturing site, as well as in any of the sales or other agents specified in the issuing of the approval must immediately be notified to NSAI.
8. The duties imposed by the issuing of this certificate are not transferable. The legal protection of third parties is not affected by this certificate.
9. When the manufacture or sale of the system, component or separate technical unit has not been started within one year of the date of issue of this certificate, then NSAI is to be informed. This requirement also applies when the manufacture or sale has been halted for more than one year, or when it ought to have been halted for more than one year. The initial commencement of manufacture or sale, or the resumption of manufacture or sale, shall then be notified to NSAI within one month of commencement or resumption.

B: Legal Options:

Any objection to the requirements set out in this certificate shall be made within one month of the date of issue. The objection shall be made, in writing, to NSAI in Dublin.

Test Report No.: IT21/0229 - 00
UN-R79-02

Type: ST MP MS34Y 79R

Manufacturer: S.T. System Truck S.p.A.
IT-46048 Roverbella (MN)



Test Report

No. IT21/0229 Vers. 00

Agreement concerning the Adoption of Harmonized Technical United Nations Regulations for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or be Used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of these United Nations Regulations (Revision 3)

Uniform provisions concerning the approval of vehicles with regard to steering equipment

UN-R79

of **01.06.1970**

as last amended by

series of amendments 02 – Supplement 01

of **16.10.2018**

Approval status

☒	Granting of a type approval No. E24*79R02/01*0058*00 (Allocated in advance)
☐	Extension to type approval no. ...
☐	Correction to type approval no. ...
☐	Documentation of test results

Structure of the Test Report:

- 0 : General
- 1 : Test vehicle(s)/-object(s)
- 2 : Test record
- 3 : Enclosures
- 4 : Statement of conformity

Duplication and publishing in extracts of the Test Report is allowed only by written permission of the Test Laboratory.

Test Report No.: IT21/0229 - 00
UN-R79-02

Type: ST MP MS34Y 79R

Manufacturer: S.T. System Truck S.p.A.
IT-46048 Roverbella (MN)



0 General

- 0.1 Make : Iveco / System Truck
- 0.2 Type : ST MP MS34Y 79R
- 0.2.1 Variant(s)/version(s) : See information document
- 0.2.2 Commercial name(s) : See information document point 0.2.1.
- 0.3 Category of vehicle : N3
- 0.4 Name and address of the manufacturer : S.T. System Truck S.p.A.
Via Paesa, 28
IT-46048 Roverbella (MN)
- 0.4.1 For multi-stage approved vehicles, company name and address of the manufacturer of the base/previous stage(s) vehicle: : Iveco Magirus AG
DE-89070 Ulm
- 0.5 Information folder :
Information document
- No : ST_MP_MS34Y_79R_00
- Date of issue : 01.02.2021
- Date of last change : not applicable
- 0.6 List of modifications : not applicable (basic test report)

Test Report No.: IT21/0229 - 00
UN-R79-02

Type: ST MP MS34Y 79R

Manufacturer: S.T. System Truck S.p.A.
IT-46048 Roverbella (MN)



1 Test vehicle(s)/ - object(s):

- 1.1 Description: : representative vehicle
- 1.1.1 Type: : ST MP MS34Y 79R
Variant: : 4C1622
Version: : DAAECW13ND2DSN
VIN (Stage 1): : WJMJ63MWZMC441579
- 1.1.2 Gear box type: : 12TX 2620 TD
No. of gears: : 12
- 1.1.3 Number and arrangement of axles: : 4; 1st steering / non powered axle
2nd steering / non powered axle
3rd fixed / powered axle
4th fixed / powered axle
- 1.1.4 Wheelbase(s): : 1-2: 1875 mm
2-3: 4325 mm
3-4: 1395 mm
- 1.1.5 Tyres
1st axle : 315/80 R22,5 (single)
2nd axle : 315/80 R22,5 (single)
3rd axle : 315/80 R22,5 (twin)
4th axle : 315/80 R22,5 (twin)
- 1.1.6 Kind of suspension: : 1st mechanical
2nd mechanical
3rd pneumatic
4th pneumatic
- 1.1.7 Engine
Manufacturer: : FPT Industrial S.p.A.
Type: : F3HGE611A*N

1.1.8 Steering

Type of steering transmission : steering wheel connected by a universal joint shaft to the steering gear-box which transmits the steering force to the front wheels (1st and 2nd axle) through leverages and articulated joints

Linkage to wheels : Mechanical

Method of assistance : balls circulation hydraulic steering (Type ZF8099)

1.1.9 Mass of vehicle during test(s)

laden

Total: : 36320 kg

1st axle: : 9200 kg

2nd axle: : 9240 kg

3rd axle: : 8930 kg

4th axle: : 8950 kg

1.1.10 Maximum speed: : 90 km/h

2 Test record

2.1 Place of test : IT-Roverbella (MN)

Date of test : series of tests A: 09.03.2021

2.2 Parameter of the test area

Test track : Asphalt & concrete dry, ceramic tiles wet

Air temperature : series of tests A: 12 °C

Velocity of wind : < 2,5m/s

2.3 Equipment for measuring and testing : The equipment on which the tests were carried out, fulfilled the requirements of the above-mentioned Regulation.

2.4 Test results

Series of tests A

- 2.4.1 General provisions : Fulfilled
(see also point 2.4.7.)
- 2.4.2 Special provisions for trailers : Not applicable
- 2.4.3 Failure provisions and performance : Fulfilled
(see also point 2.4.7.)
- 2.4.4 Warning signals : Fulfilled
- 2.4.5 Provisions for the periodic technical inspection of steering equipment : Fulfilled
- 2.4.6 Provisions for ACSF : Not applicable (vehicle not equipped with an ACSF)
- 2.4.7 Provisions for motor vehicles
- It shall be possible to leave a curve with a radius of 50 m at a tangent without unusual vibration in the steering equipment at 40 km/h : Fulfilled
- Steering effort : Series of tests A
- Intact steering equipment : Turning radius: 12m
Steering control effort to the right: 60N
Steering control time to the right: 3.0s
Steering control effort to the left: 55N
Steering control time to the left: 3.1s
- Failure in the steering equipment : Turning radius: 20m
Steering control effort to the right: 200N
Steering control time to the right: 4.2s
Steering control effort to the left: 180N
Steering control time to the left: 4.8s

Test Report No.: IT21/0229 - 00
UN-R79-02

Type: ST MP MS34Y 79R

Manufacturer: S.T. System Truck S.p.A.
IT-46048 Roverbella (MN)



2.4.8 Additional provisions for vehicles : not applicable
equipped with ASE

2.5 Remarks : not applicable

3 Enclosures:

1. Further enclosures : Not applicable

4 Statement of conformity:

The information folder as mentioned under No. 0.5 and the type described therein are - i n c o m p l i a n c e - with the Test Specification mentioned above.

For the present type, the selected test vehicles together with the information documents of remaining variant/version, is representative.

The tests have been carried out, considering the relevant requirements of ISO/IEC 17025:2017.

This report includes pages 1 to 6.
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TEST LABORATORY

Rezzato, 09.03.2021
aa/ah

File No.:



PR-21/0050

A blue ink signature, appearing to read "A. Adami", written over a light blue circular stamp.

A. Adami
Test engineer



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Fax: +39-030-2590395



INDICE DEL FASCICOLO DI OMOLOGAZIONE
INDEX TO THE INFORMATION PACKAGE

Veicolo: Autotelaio per autoveicolo
Vehicle: Chassis without bodywork

Categoria del veicolo: N3
Category of vehicle:

Nome e indirizzo del costruttore: (fase 1) Iveco Magirus AG
Name and address of manufacturer: (stage 1) D-89070 Ulm
(fase 2) S.T. System Truck S.p.A.
(stage 2) I-46048 Roverbella (MN) - Via Paesa, 28

Nome e indirizzo dell'eventuale rappresentante del costruttore: non ricorre
Name and address of the manufacturer's representative (if any): not applicable

Nome e indirizzo del trasformatore: S.T. System Truck S.p.A.
Name and address of converter: I-46048 Roverbella (MN) - Via Paesa, 28

Marca (denominazione commerciale del costruttore): Iveco / System Truck
Make (trade name of manufacturer):

Tipo: ST MP MS34Y 79R
Type:

Scheda informativa: Information document:	ST_MP_MS34Y_79R_00		del of	01.02.2021
chiave interpretazione varianti e versioni variants and versions explanation key	ST_MP_MS34Y_79R_00	allegato 0.0 annex 0.0	del of	01.02.2021
combinazioni possibili permissible combination	ST_MP_MS34Y_79R_00	allegato 0.1 annex 0.1	del of	01.02.2021
masse e dimensioni masses and dimensions	ST_MP_MS34Y_79R_00	allegato 1 annex 1	del of	01.02.2021
sospensione suspension	ST_MP_MS34Y_79R_00	allegato 2 annex 2	del of	01.02.2021

Disegni allegati:
Attachment drawings:

disegno complessivo (passo 6200 mm): overall drawing (wheelbase 6200 mm):	55.01.00.0125	rev.0 rev.0	del of	10.02.2020
schemi dell'asse o degli assi sterzanti: steering system diagram:	5802287105	rev. A0 rev. A0	del of	11.2015
schema complessivo dell'equipaggiamento sterzo: diagram of the steering equipment:	5802037500	rev. A1 rev. A1	del of	10.11.2017



SCHEDA INFORMATIVA INFORMATION DOCUMENT

N°
Nr ST_MP_MS34Y_79R_00
del
of 01.02.2021

INDICE DELLA SCHEDA INFORMATIVA INDEX TO THE INFORMATION DOCUMENT

0.	DATI GENERALI <i>GENERAL</i>	pag. 2 <i>page 2</i>
1.	CARATTERISTICHE COSTRUTTIVE GENERALI DEL VEICOLO <i>GENERAL CONSTRUCTION CHARACTERISTICS OF THE VEHICLE</i>	pag. 2 <i>page 2</i>
2.	MASSE E DIMENSIONI <i>MASSES AND DIMENSIONS</i>	pag. 3 <i>page 3</i>
6.	SOSPENSIONI <i>SUSPENSION</i>	pag. 4 <i>page 4</i>
7.	STERZO <i>STEERING</i>	pag. 5 <i>page 5</i>
	CHIAVE INTERPRETAZIONE VARIANTI E VERSIONI <i>VARIANTS AND VERSIONS EXPLANATION KEY</i>	All. 0.0 <i>Ann. 0.0</i>
	COMBINAZIONI POSSIBILI <i>PERMISSIBLE COMBINATION</i>	All. 0.1 <i>Ann. 0.1</i>



SCHEDA INFORMATIVA INFORMATION DOCUMENT

N°
Nr ST_MP_MS34Y_79R_00
del
of 01.02.2021

0. DATI GENERALI GENERAL

- 0.1. Marca (denominazione commerciale del costruttore):
Make (trade name of manufacturer): Iveco / System Truck
Iveco / System Truck
- 0.2. Tipo:
Type: ST MP MS34Y 79R
ST MP MS34Y 79R
- Varianti:
Variants: vedere allegato n° 0.0
see annex Nr. 0.0
- Versioni:
Versions: vedere allegato n° 0.0
see annex Nr. 0.0
- 0.3. Mezzi di identificazione del tipo, se marcati sul veicolo:
Means of identification of type, if marked on the vehicle: numero di omologazione del tipo su targhetta
type approval number on manufacturer's plate
- 0.3.1. Posizione della marcatura:
Location of that marking: su targhetta VIN
on VIN plate
- 0.4. Categoria del veicolo:
Category of vehicle: N3
N3
- 0.5. Nome della società e indirizzo del costruttore:
Company name and address of manufacturer: S.T. System Truck S.p.A.
I-46048 Roverbella (MN) - Via Paesa, 28
- 0.5.1. Per i veicoli omologati in più fasi, ragione sociale e indirizzo del fabbricante del veicolo nella fase iniziale / precedente:
For multi-stage approved vehicles, company name and address of the manufacturer of the base / previous stage(s) vehicle: Iveco Magirus AG
D-89070 Ulm
- 0.8. Denominazione/i e indirizzo/i dello/gli stabilimento/i di montaggio:
Name(s) and address(es) of assembly plant(s): S.T. System Truck S.p.A.
I-46048 Roverbella (MN) - Via Paesa, 28
- 0.9. Denominazione e indirizzo dell'(eventuale) rappresentante del costruttore:
Name and address of the manufacturer's representative (if any): non ricorre
not applicable
- 0.10. Posizione e modalità di fissaggio del marchio di omologazione sul veicolo:
Location and method of attachment of approval mark on the vehicle: targhetta adesiva su parete frontale, dietro griglia radiatore
adhesive plate on the front wall behind radiator grill

1. CARATTERISTICHE COSTRUTTIVE GENERALI DEL VEICOLO GENERAL CONSTRUCTION CHARACTERISTICS OF THE VEHICLE

- 1.1. Fotografie e/o disegni di un veicolo rappresentativo: 55.01.00.0125 rev.0 del 10.02.2020
Photographs and/or drawings of a representative vehicle: 55.01.00.0125 rev.0 of 10.02.2020



Fotografia ¾ anteriore
Photo ¾ front



Fotografia ¾ posteriore
Photo ¾ rear

varianti - versioni:
variants - versions:

4C1622 - ??????????????



SCHEDA INFORMATIVA INFORMATION DOCUMENT

N°
Nr ST_MP_MS34Y_79R_00
del
of 01.02.2021

1.3.	Numero di assi e di ruote: <i>Number of axles and wheels:</i>	4	assi, axles,	12 ruote 12 wheels	
1.3.1.	Numero e posizione degli assi a ruote gemellate: <i>Number and position of axles with twin wheels:</i>	2	assi, axles,	3° e 4° asse 3 rd and 4 th axle	
1.3.2.	Numero e posizione degli assi sterzanti: <i>Number and position of steered axles:</i>	2	assi, axles,	1° e 2° asse 1 st and 2 nd axle	
1.3.3.	Assi motore (numero, posizione, interconnessione): <i>Powered axles (number, position, interconnection):</i>	2	assi, axles,	3° e 4° asse 3 rd and 4 th axle	albero di trasm. propeller shaft
1.8.	Lato di guida: <i>Hand of drive:</i>	a sinistra left	oppure or	a destra right	
2.	MASSE E DIMENSIONI (in kg e mm) MASSES AND DIMENSIONS (in kg and mm) (eventualmente con riferimento ai disegni) (refer to drawing where applicable)				
2.1.	Interasse o interassi (a pieno carico): <i>Wheelbase(s) (fully loaded):</i>	vedere allegato n° see annex Nr. 1		1	
2.3.1.	Carreggiata di ciascun asse sterzante: <i>Track of each steered axle:</i>	1° e 2°: 2040 ÷ 2140 mm 1 st and 2 nd 2040 ÷ 2140 mm			
2.4.	Dimensioni (fuori tutto) del veicolo <i>Range of vehicle dimensions (overall)</i>				
2.4.1.	Telai non carrozzati <i>For chassis without bodywork</i>				
2.4.1.1.	Lunghezza: <i>Length:</i>	max 12000 mm max 12000 mm			
2.4.1.2.	Larghezza: <i>Width:</i>	max 2600 mm max 2600 mm			
2.4.1.4.	Sbalzo anteriore: <i>Front overhang:</i>	1410 mm 1410 mm			
2.4.1.5.	Sbalzo posteriore: <i>Rear overhang:</i>	1334 ÷ 2995 mm 1334 ÷ 2995 mm			
2.4.2.	Telai carrozzati <i>For chassis with bodywork</i>				
2.4.2.1.	Lunghezza: <i>Length:</i>	non ricorre not applicable			
2.4.2.2.	Larghezza: <i>Width:</i>	non ricorre not applicable			
2.4.2.4.	Sbalzo anteriore: <i>Front overhang:</i>	non ricorre not applicable			
2.4.2.5.	Sbalzo posteriore: <i>Rear overhang:</i>	non ricorre not applicable			
2.8.	Massa massima a pieno carico tecnicamente ammissibile dichiarata dal costruttore: <i>Technically permissible maximum laden mass stated by the manufacturer:</i>	vedere allegato n° 1 see annex Nr. 1			
2.9.	Carico/massa massima tecnicamente ammissibile su ciascun asse: <i>Technically permissible maximum mass on each axle:</i>	vedere allegato n° 1 see annex Nr. 1			



SCHEDA INFORMATIVA INFORMATION DOCUMENT

N°
Nr
del
of
ST_MP_MS34Y_79R_00
01.02.2021

- 2.10. Massa tecnicamente ammissibile su ciascun gruppo di assi:
Technically permissible mass on each group of axles: vedere allegato n° 1
see annex Nr. 1
6. **SOSPENSIONI**
SUSPENSION
- 6.2. Tipo e modello della sospensione di ciascun asse o ruota:
Type and design of the suspension of each axle or wheel:
- 1°: sospensione meccanica, ammortizzatori idraulici
leaf suspension, hydraulic shock absorbers
 - 2°: sospensione meccanica o pneumatica, ammortizzatori idraulici
leaf or air suspension, hydraulic shock absorbers
 - 3°: sospensione meccanica o pneumatica, ammortizzatori idraulici
leaf or air suspension, hydraulic shock absorbers
 - 4°: sospensione meccanica o pneumatica, ammortizzatori idraulici
leaf or air suspension, hydraulic shock absorbers
- 6.6. Pneumatici e ruote
Tyres and wheels
- 6.6.1. Combinazione/i pneumatico/cerchione:
Tyre / wheel combination(s):
- a) per gli pneumatici indicare la designazione della misura, l'indice della capacità di carico, il simbolo della categoria di velocità ed eventualmente la resistenza al rotolamento ai sensi della norma ISO 28580
a) for tyres indicate size designation, load-capacity index, speed category symbol, rolling resistance in accordance with ISO 28580 (where applicable)
 - b) per le ruote, indicare dimensioni del cerchione e dati della campanatura
b) for wheels indicate rim size(s) and off-set(s)
- 6.6.1.1. Assi
Axels
- 6.6.1.1.1. Asse 1:
Axle 1: vedere allegato n° 2
see annex Nr. 2
 - 6.6.1.1.2. Asse 2:
Axle 2: vedere allegato n° 2
see annex Nr. 2
 - 6.6.1.1.3. Asse 3:
Axle 3: vedere allegato n° 2
see annex Nr. 2
 - 6.6.1.1.4. Asse 4:
Axle 4: vedere allegato n° 2
see annex Nr. 2
- 6.6.1.2. Ruota di scorta (se disponibile):
Spare wheel, if any: vedere punto 6.6.1.1.
see point 6.6.1.1.
- 6.6.3. Pressione/i degli pneumatici raccomandata dal fabbricante del veicolo:
Tyre pressure(s) as recommended by the vehicle manufacturer:
- 6.6.3.1. 1° asse:
1st axle: vedere 6.6.1.1.1.
see 6.6.1.1.1.
 - 6.6.3.2. 2° asse:
2nd axle: vedere 6.6.1.1.2.
see 6.6.1.1.2.



SCHEDA INFORMATIVA INFORMATION DOCUMENT

N° ST_MP_MS34Y_79R_00
Nr
del 01.02.2021
of

6.6.3.3.	3° asse: 3 rd axle:	vedere 6.6.1.1.3. see 6.6.1.1.3.
6.6.3.4.	4° asse: 4 th axle:	vedere 6.6.1.1.4. see 6.6.1.1.4.
7.	STERZO STEERING	
7.1.	Schemi dell'asse o degli assi sterzanti: <i>Steering system diagram:</i>	dis. n° 5802287105 del 11.2015 rev. A0 <i>drawing No. 5802287105 of 11.2015 rev. A0</i>
7.2.	Trasmissione e comando <i>Transmission and control</i>	
7.2.1.	Tipo di trasmissione dello sterzo (precisare se anteriore o posteriore): <i>Type of steering transmission (specify for front and rear, if applicable):</i>	volante collegato mediante un albero alla scatola dello sterzo che trasmette la forza dello sterzo alle ruote anteriori (1° e 2° asse) mediante leveraggi e giunti a snodo <i>steering wheel connected by a universal joint shaft to the steering gear-box which transmits the steering force to the front wheels (1st and 2nd axle) through leverages and articulated joints</i>
7.2.2.	Trasmissione alle ruote (compresi sistemi diversi da quelli meccanici; eventualmente, specificare se anteriore o posteriore): <i>Linkage to wheels (including other than mechanical means; specify for front and rear, if applicable):</i>	vedere punto 7.2.1. <i>see item 7.2.1.</i>
7.2.3.	Tipo degli eventuali servocomandi: <i>Method of assistance, if any:</i>	idroguida a circolazione di sfere (ZF opp. Bosch 8099) <i>balls circulation hydraulic steering (ZF or Bosch 8099)</i>
7.2.4.	Schema complessivo dell'equipaggiamento sterzo illustrante la posizione sul veicolo dei vari dispositivi di sterzata: <i>Diagram of the steering equipment as a whole, showing the position on the vehicle of the various devices influencing its steering behaviour:</i>	dis n° 5802037500 del 10.11.2017 rev. A1 <i>drawing No. 5802037500 of 10.11.2017 rev. A1</i>
7.2.5.	Schema del comando sterzo <i>Schematic diagram of the steering control</i>	
7.3.	Angolo massimo di sterzata delle ruote <i>Maximum steering angle</i>	
7.3.1.	A destra: Numero di giri del volante (o dati equivalenti): <i>To the right:</i> <i>Number of turns of the steering wheel (or equivalent data)</i>	vedere punto 7.2.4. vedere punto 7.2.4. <i>see item 7.2.4.</i> <i>see item 7.2.4.</i>
7.3.2.	A sinistra: Numero di giri del volante (o dati equivalenti): <i>To the left:</i> <i>Number of turns of the steering wheel (or equivalent data):</i>	vedere punto 7.2.4. vedere punto 7.2.4. <i>see item 7.2.4.</i> <i>see item 7.2.4.</i>

Revisione 0 del 01.02.2021
Revision of

x La Ditta

(ing. Paolo MARTINI)
Ruolo: Direttore tecnico
Position: Technical Director



SCHEMA INFORMATIVA INFORMATION DOCUMENT

All n°
Annex Nr
del
of

0.0

01.02.2021

CHIAVE INTERPRETAZIONE VARIANTI E VERSIONI VARIANTS AND VERSIONS EXPLANATION KEY

Caratteristiche Characteristics	Descrizione Description	Tipo Type	Varianti Variants	Versioni Versions
Nome costruttore Manufacturer's company name	Iveco / S.T. System Truck S.p.A.	ST		
Tipo di modifica della fase 2 Stage 2 modify kind	Modifica passo Wheelbase modify	MP		
Marca, modello, categoria, tipo e numero di assi della fase 1 Make, model, category and number of axles of stage 1	Iveco Magirus, X-Way ON MY 2019, cat. N3, 350X e 360X, 4 assi Iveco Magirus, X-Way ON MY 2019, cat. N3, 350X and 360X, 4 assi axles	MS34Y		
Fase di completamento Extent of build	incompleto X-Way ON MY 2019: cabinato non carrozzato incomplete X-Way ON MY 2019: chassis cab without body		4	
Motore Engine	combustione interna internal combustion		C	
Principio di funzionamento Working principle	accensione spontanea compression ignition		1	
Numero di cilindri Cylinders number	6 in linea 6 in line		6	
Numero assi motore Number driving axle	2 (3° e 4° asse) 2 (3 rd and 4 th axle)		2	
Numero assi sterzanti Number steering axle	2 (1° e 2° asse) 2 (1 st and 2 nd axle)		2	
Massa massima GVW	32000 kg 36000 kg 35500 kg			C D F
Massa massima su 1° asse Maximum mass on 1 st axle	8000 kg 7500 kg 8500 kg 9000 kg			A B C D
Massa massima su 2° asse Maximum mass on 2 nd axle	8000 kg 7500 kg 8500 kg 9000 kg			A B C D



SCHEMA INFORMATIVA INFORMATION DOCUMENT

All n°
Annex Nr
del
of
0.0
01.02.2021

CHIAVE INTERPRETAZIONE VARIANTI E VERSIONI VARIANTS AND VERSIONS EXPLANATION KEY

Caratteristiche Characteristics	Descrizione Description	Tipo Type	Varianti Variants	Versioni Versions
Massa massima su 3° asse Maximum mass on 3 rd axle	11500 kg 10500 kg			C E
Massa massima su 4° asse Maximum mass on 4 th axle	10500 kg 11500 kg			C D
Rimorchiabilità Towing vehicle	Non atto al traino / No trailer Atto al traino / Unbraked trailer			X W
Cilindrata Engine capacity	8710 cm ³ 11120 cm ³ 12882 cm ³			09 11 13
Potenza del motore Engine power	265 kW 309 kW 338 kW 353 kW 294 kW 375 kW 419 kW			A B E G L M N
Carburante Fuel	Gasolio Diesel			D
Rumore in marcia Running noise level	81 dB 82 dB			1 2
Direttiva emissioni Directive emission	Euro VI D			D
Tipo cabina Cab type	AD AT AS			D T S
ADR	con ADR / with ADR con ADR classe AT / with ADR Class AT senza ADR / without ADR			S T N



SCHEDA INFORMATIVA INFORMATION DOCUMENT

All n° 0.1
Annex Nr
del
of 01.02.2021

COMBINAZIONI POSSIBILI PERMISSIBLE COMBINATION

Varianti Variants	Versioni Versions
4 C 1 6 2 2	F B B E C X 0 9 A D 2 D D S W L T N T
4 C 1 6 2 2	F B B E C X 1 1 B D 1 D D S W E T N G T
4 C 1 6 2 2	F B B E C X 1 3 M D 2 D D S S W N N T
4 C 1 6 2 2	D A A E C X 0 9 A D 2 D D S W L T N T
4 C 1 6 2 2	D A A E C X 1 1 B D 1 D D S W E T N G T
4 C 1 6 2 2	D A A E C X 1 3 M D 2 D D S S W N N T
4 C 1 6 2 2	D C C E C X 0 9 A D 2 D D S W L T N T
4 C 1 6 2 2	D C C E C X 1 1 B D 1 D D S W E T N G T
4 C 1 6 2 2	D C C E C X 1 3 M D 2 D D S S W N N T
4 C 1 6 2 2	D D D E C X 0 9 A D 2 D D S W L T N T
4 C 1 6 2 2	D D D E C X 1 1 B D 1 D D S W E T N G T
4 C 1 6 2 2	D D D E C X 1 3 M D 2 D D S S W N N T
4 C 1 6 2 2	D A A C D X 0 9 A D 2 D D S W L T N T
4 C 1 6 2 2	D A A C D X 1 1 B D 1 D D S W E T N G T
4 C 1 6 2 2	D A A C D X 1 3 M D 2 D D S S W N N T

Varianti
Variants

4	C	1	6	2	2
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4	C	1	6	2	2
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4	C	1	6	2	2
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4	C	1	6	2	2
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4	C	1	6	2	2
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4	C	1	6	2	2
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4	C	1	6	2	2
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4	C	1	6	2	2
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4	C	1	6	2	2
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4	C	1	6	2	2
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4	C	1	6	2	2
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4	C	1	6	2	2
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Versioni
Versions

D	C	C	C	D	X	0	9	A	D	2	D	D	S
					W			L				T	N
													T

D	C	C	C	D	X	1	1	B	D	1	D	D	S
					W			E				T	N
								G					T

D	C	C	C	D	X	1	3	M	D	2	D	S	S
					W			N					N
													T

D	D	D	C	D	X	0	9	A	D	2	D	D	S
					W			L				T	N
													T

D	D	D	C	D	X	1	1	B	D	1	D	D	S
					W			E				T	N
								G					T

D	D	D	C	D	X	1	3	M	D	2	D	S	S
					W			N					N
													T

C	B	B	E	C	X	0	9	A	D	2	D	D	S
					W			L					N
													T

C	B	B	E	C	X	1	1	B	D	1	D	D	S
					W			E					N
								G					T

C	A	A	E	C	X	0	9	A	D	2	D	D	S
					W			L					N
													T

C	A	A	E	C	X	1	1	B	D	1	D	D	S
					W			E					N
								G					T

C	A	A	C	D	X	0	9	A	D	2	D	D	S
					W			L					N
													T

C	A	A	C	D	X	1	1	B	D	1	D	D	S
					W			E					N
								G					T



SCHEDA INFORMATIVA INFORMATION DOCUMENT

All n°
Annex Nr
del
of

1
01.02.2021

Punto Item	Variante Variant	Versione Version	Descrizione Description			
2.1.	4C1622	??????????????	$1^\circ \div 2^\circ$ 1875 mm	$2^\circ \div 3^\circ$ 4325 mm	$3^\circ \div 4^\circ$ 1395 mm	
2.8.	4C1622	?BBEC??????????	35500 kg			
	4C1622	?AAEC??????????	36000 kg			
	4C1622	?CCEC??????????	36000 kg			
	4C1622	?DDEC??????????	36000 kg			
	4C1622	?AACD??????????	36000 kg			
	4C1622	?CCCD??????????	36000 kg			
	4C1622	?DDCD??????????	36000 kg			
	4C1622	?BBEC??????????	32000 kg	(*)		
	4C1622	?AAEC??????????	32000 kg	(*)		
	4C1622	?AACD??????????	32000 kg	(*)		
2.9.	4C1622	?BBEC??????????	1° 7500	2° 7500	3° 10500	4° 10500 kg
	4C1622	?AAEC??????????	8000	8000	10500	10500 kg
	4C1622	?CCEC??????????	8500	8500	10500	10500 kg
	4C1622	?DDEC??????????	9000	9000	10500	10500 kg
	4C1622	?AACD??????????	8000	8000	11500	11500 kg
	4C1622	?CCCD??????????	8500	8500	11500	11500 kg
	4C1622	?DDCD??????????	9000	9000	11500	11500 kg
	4C1622	?BBEC??????????	7500	7500	10500	10500 kg (*)
	4C1622	?AAEC??????????	8000	8000	10500	10500 kg (*)
	4C1622	?AACD??????????	8000	8000	11500	11500 kg (*)
2.10.	4C1622	?BBEC??????????	T_{ant} / T_{front} 15000 kg	T_{post} / T_{rear} 21000 kg		
	4C1622	?AAEC??????????	16000 kg	21000 kg		
	4C1622	?CCEC??????????	17000 kg	21000 kg		
	4C1622	?DDEC??????????	18000 kg	21000 kg		
	4C1622	?AACD??????????	16000 kg	23000 kg		
	4C1622	?CCCD??????????	17000 kg	23000 kg		
	4C1622	?DDCD??????????	18000 kg	23000 kg		
	4C1622	?BBEC??????????	15000 kg	21000 kg	(*)	
	4C1622	?AAEC??????????	16000 kg	21000 kg	(*)	
	4C1622	?AACD??????????	16000 kg	23000 kg	(*)	

(*) con telaio 6,7 mm

(*) with 6,7 mm frame



SCHEMA INFORMATIVA INFORMATION DOCUMENT

All n°
Annex Nr
del
of

2

01.02.2021

Punto Item	Variante Variant	Versione Version	Descrizione Description								
	Varianti Variants	Versioni Versions	Dimensione Size	Ind. di carico Load index	Carico Payload	Indice di vel. Speed index	Dim. cerchio Rim size	Offset acciaio Offset steel	Offset alluminio Offset aluminium	Raggio Radius	Pressione Pressure
6.6.1.1.1.	4C1622	?B????????????	315/80 R22,5	154	7500	G	22,5 x 9,00	161-162	150-154	523	8,00 bar
			315/70 R22,5	154	7500	G	22,5 x 9,00	161-162	150-154	492	9,00 bar
			13 R22,5	154	7500	G	22,5 x 9,00	161-162	150-154	546	8,00 bar
			295/80 R22,5	154	7500	G	22,5 x 8,25 22,5 x 9,00	152-159 161-162	145-148 150-154	507	9,00 bar
			385/55 R22,5	154	7500	G	22,5 x 11,75	130	120-135	480	7,75 bar
			385/65 R22,5	154	7500	G	22,5 x 11,75	120-135	120-135	517	7,50 bar
			315/80 R22,5	156	8000	G	22,5 x 9,00	161-162	150-154	523	8,50 bar
			315/70 R22,5	156	8000	G	22,5 x 9,00	161-162	150-154	492	9,00 bar
			13 R22,5	156	8000	G	22,5 x 9,00	161-162	150-154	546	8,50 bar
			385/55 R22,5	156	8000	G	22,5 x 11,75	130	120-135	480	8,50 bar
			385/65 R22,5	156	8000	G	22,5 x 11,75	120-135	120-135	517	8,00 bar
			315/80 R22,5	158	8500	G	22,5 x 9,00	161-162	150-154	523	9,00 bar
	4C1622	?C????????????	385/55 R22,5	158	8500	G	22,5 x 11,75	130	120-135	480	9,00 bar
			385/65 R22,5	158	8500	G	22,5 x 11,75	120-135	120-135	517	8,50 bar
			385/55 R22,5	160	9000	G	22,5 x 11,75	130	120-135	480	9,00 bar
	4C1622	?D????????????	385/65 R22,5	160	9000	G	22,5 x 11,75	120-135	120-135	517	9,00 bar
6.6.1.1.2.	4C1622	??B????????????	315/80 R22,5	154	7500	G	22,5 x 9,00	161-162	150-154	523	8,00 bar
			315/70 R22,5	154	7500	G	22,5 x 9,00	161-162	150-154	492	9,00 bar
			13 R22,5	154	7500	G	22,5 x 9,00	161-162	150-154	546	8,00 bar
			295/80 R22,5	154	7500	G	22,5 x 8,25 22,5 x 9,00	152-159 161-162	145-148 150-154	507	9,00 bar
			385/55 R22,5	154	7500	G	22,5 x 11,75	130	120-135	480	7,75 bar
			385/65 R22,5	154	7500	G	22,5 x 11,75	120-135	120-135	517	7,50 bar
			315/80 R22,5	156	8000	G	22,5 x 9,00	161-162	150-154	523	8,50 bar
			315/70 R22,5	156	8000	G	22,5 x 9,00	161-162	150-154	492	9,00 bar
			13 R22,5	156	8000	G	22,5 x 9,00	161-162	150-154	546	8,50 bar
			385/55 R22,5	156	8000	G	22,5 x 11,75	130	120-135	480	8,50 bar
			385/65 R22,5	156	8000	G	22,5 x 11,75	120-135	120-135	517	8,00 bar
	4C1622	??A????????????									



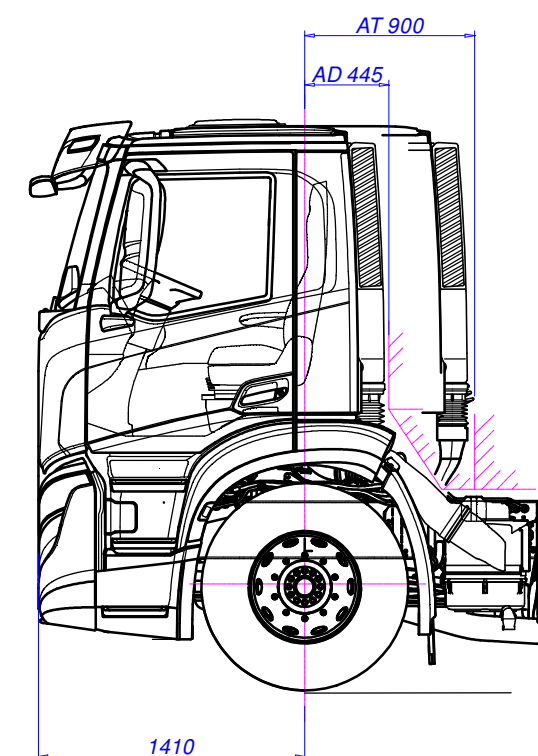
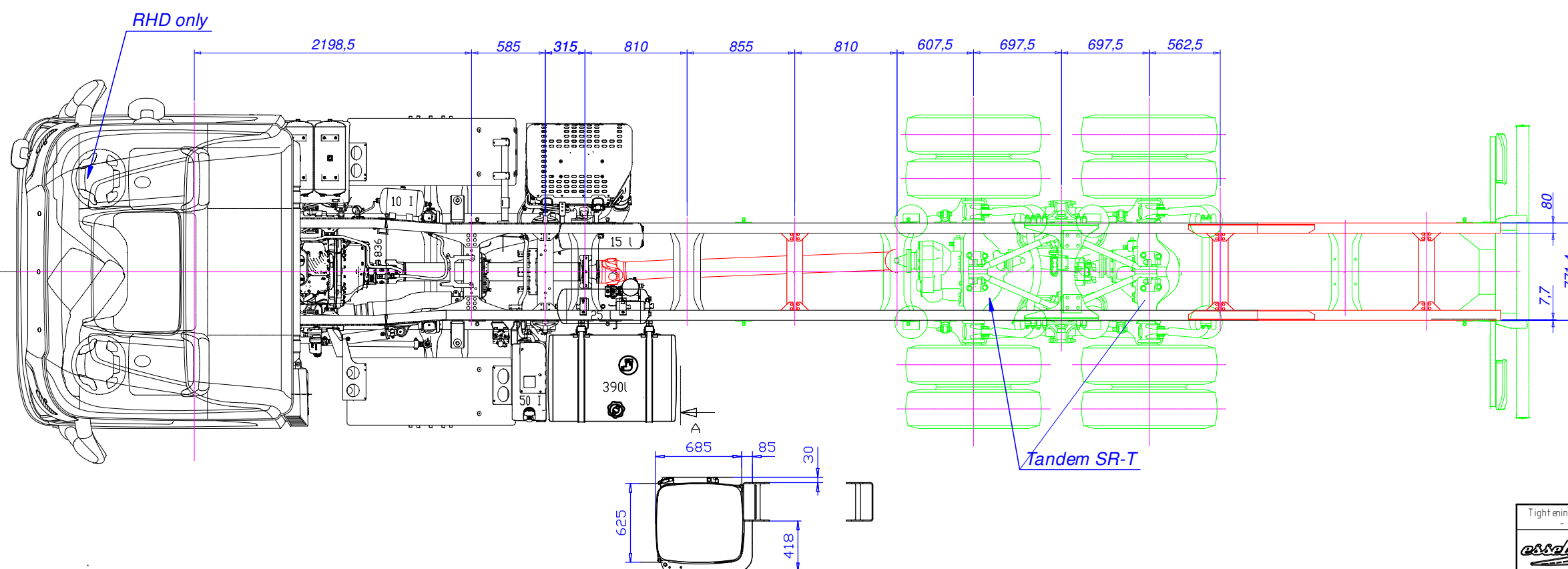
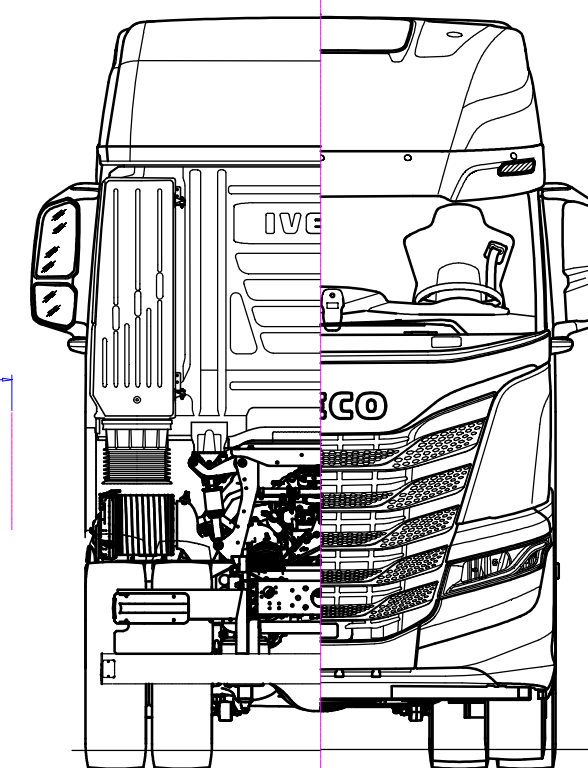
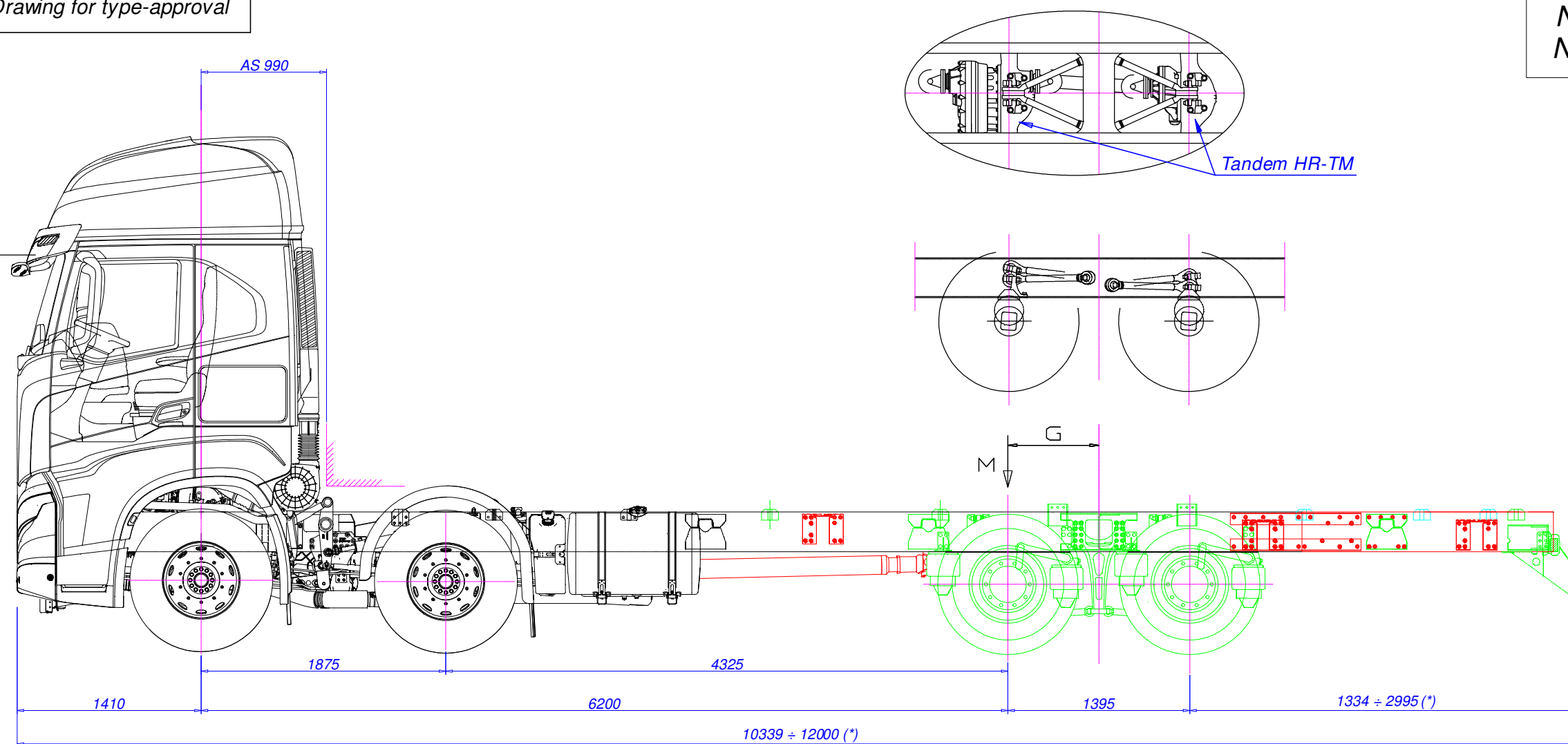
SCHEMA INFORMATIVA INFORMATION DOCUMENT

All n°
Annex Nr
del
of
2
01.02.2021

Punto Item	Variante Variant	Versione Version	Descrizione Description								
6.6.1.1.3.	4C1622	??C???????????	315/80 R22,5	158	8500	G	22,5 x 9,00	161-162	150-154	523	9,00 bar
			385/55 R22,5	158	8500	G	22,5 x 11,75	130	120-135	480	9,00 bar
			385/65 R22,5	158	8500	G	22,5 x 11,75	120-135	120-135	517	8,50 bar
	4C1622	??D???????????	385/55 R22,5	160	9000	G	22,5 x 11,75	130	120-135	480	9,00 bar
			385/65 R22,5	160	9000	G	22,5 x 11,75	120-135	120-135	517	9,00 bar
			315/80 R22,5	142	10500	G	22,5 x 9,00	161-162	150-154	523	6,25 bar
	4C1622	???E???????????	315/70 R22,5	142	10500	G	22,5 x 9,00	161-162	150-154	492	7,00 bar
			13 R22,5	142	10500	G	22,5 x 9,00	161-162	150-154	546	6,00 bar
			295/80 R22,5	142	10500	G	22,5 x 8,25	152-159	145-148	507	7,00 bar
	4C1622	???C???????????	22,5 x 9,00				161-162	150-154			
			315/80 R22,5	145	11500	G	22,5 x 9,00	161-162	150-154	523	6,75 bar
			315/70 R22,5	145	11500	G	22,5 x 9,00	161-162	150-154	492	7,75 bar
			13 R22,5	145	11500	G	22,5 x 9,00	161-162	150-154	546	6,75 bar
			295/80 R22,5	145	11500	G	22,5 x 8,25	152-159	145-148	507	7,75 bar
6.6.1.1.4.	4C1622	????C???????????	22,5 x 9,00				161-162	150-154			
			315/80 R22,5	142	10500	G	22,5 x 9,00	161-162	150-154	523	6,25 bar
			315/70 R22,5	142	10500	G	22,5 x 9,00	161-162	150-154	492	7,00 bar
	4C1622	????D???????????	13 R22,5	142	10500	G	22,5 x 9,00	161-162	150-154	546	6,00 bar
			295/80 R22,5	142	10500	G	22,5 x 8,25	152-159	145-148	507	7,00 bar
			22,5 x 9,00				161-162	150-154			
	4C1622	????D???????????	315/80 R22,5	145	11500	G	22,5 x 9,00	161-162	150-154	523	6,75 bar
			315/70 R22,5	145	11500	G	22,5 x 9,00	161-162	150-154	492	7,75 bar
			13 R22,5	145	11500	G	22,5 x 9,00	161-162	150-154	546	6,75 bar
			295/80 R22,5	145	11500	G	22,5 x 8,25	152-159	145-148	507	7,75 bar
			22,5 x 9,00				161-162	150-154			

Disegno per omologazione
Drawing for type-approval

Nota (): vedere scheda informativa*
Note (): see information document*



Tightening Tolerance - I004	ISO 2768 - ---- Tolerance ISO 8015	Author P. MARTINI	Date 10/02/2020		Scale 1:20
	Description ALL proprietary right is reserved by S.T. System Truck SpA for the use of the present drawing and of all rights of this document and in relation to the construction of its content to other suppliers without the written consent of S.T. System Truck SpA. (prohibited since ISO 9006:2018) VECO MS34 Y/AT/AS 350/360X...Z...HR ON + 8x4 PASSO DA 5820-1395 A 6200-1395 MM				
S.T. System Truck SpA Via Pavia, 28 - I-46048 Rovereto (MN) Tel. +390376 698089 www.stsystem.it	Code 55 01 01 0125 Drawing 55 01 01 0125 Sheet 1/1 Format A4				

E24*79R02/01*0058*00

hydraulic diagram

hydraulic scheme

Item	Description	TYPE/Characteristics
1	1) 1,5-CIRCUIT STEERING GEAR WITH INTEGRATED PRESSURE RELIEF VALVE 1a) WITH SWITCH-VALVE FOR EMERGENCY CIRCUIT 1b) WITH SWITCH-OFF VALVE FOR MASTER-CYLINDER	8099-1,5 i=22,2-26,2
2	VANE PUMP ENGINE-DRIVEN WITHOUT PRESSURE RELIEF VALVE	FN32 $Q_{\text{cont}}=25\text{l/min}$ $Q_{900}=32\text{cm}^3/\text{rev}$
3	RADIAL PISTON PUMP GROUND-DRIVEN WITHOUT PRESSURE RELIEF VALVE	RN 8605 $Q_{\text{cont}}=16\text{l/min}$ $Q_{900}=16\text{cm}^3/\text{rev}$
4	FLOW INDICATOR (ON-switch)	flow < 4-5l/min switch contacts closed flow > 4-5l/min switch contacts open
5	HYDRAULIC CYLINDER	D=70/d=32 length L1 = 578mm, L2=828mm stroke max. 250mm
6	STEERING OIL TANK (2 chambers) with integrated filter elements for each chamber and level sensor/indicator	1x 2,1l nominal size alternatively 2x 1,5l nominal size

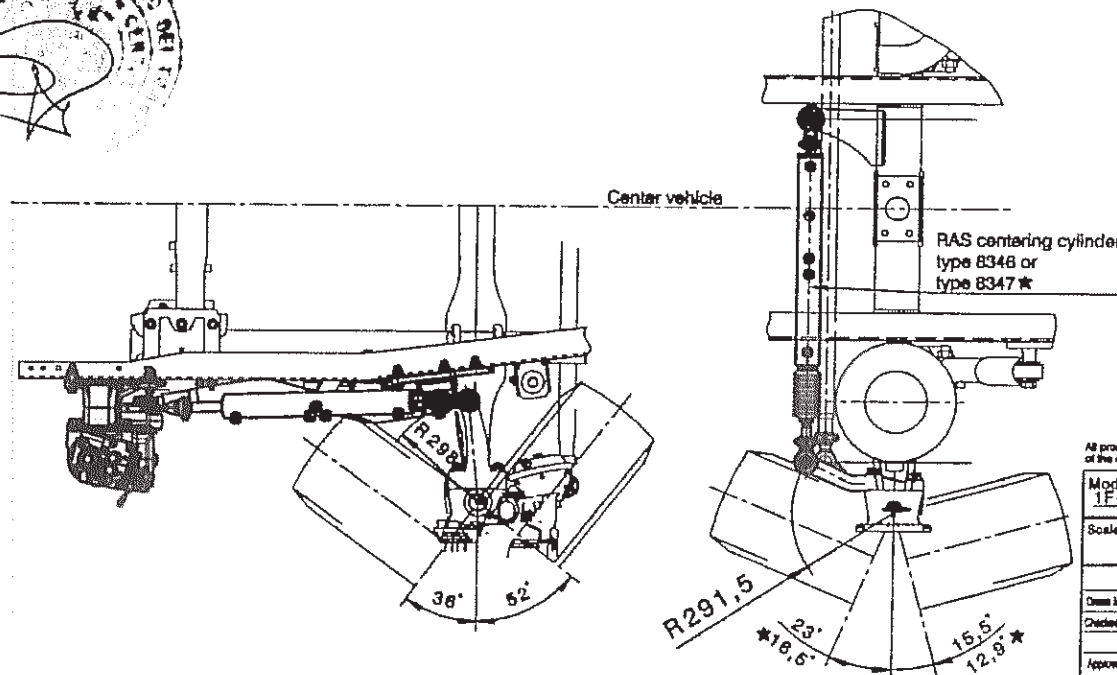
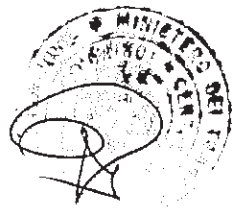
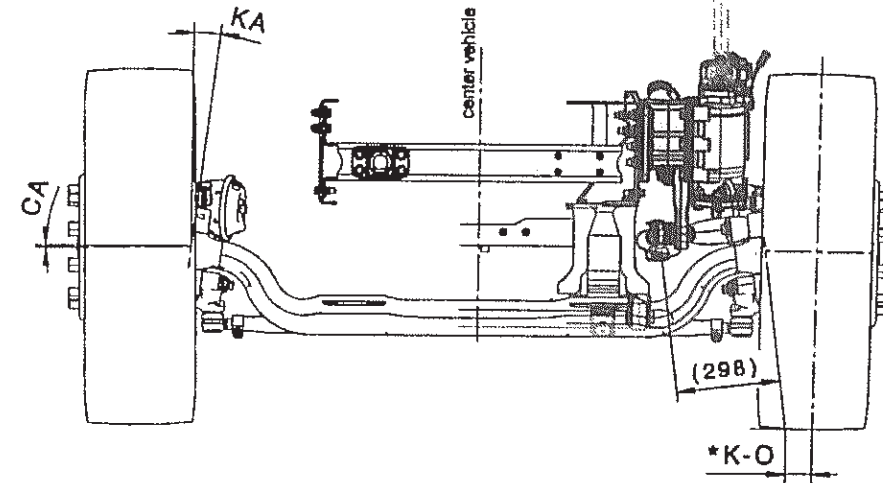
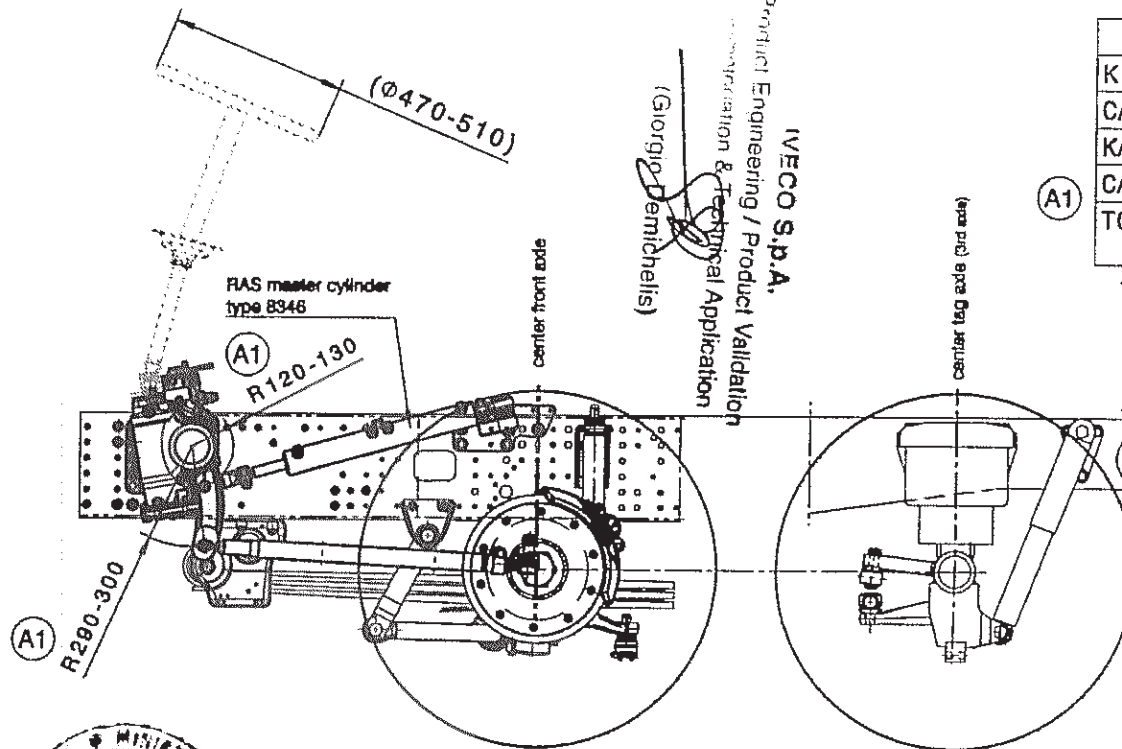
All proprietary rights reserved by CNH Industrial N.V. and/or one of its subsidiaries. This drawing shall not be reproduced, or in any way used, for the manufacture of the component or unit herein illustrated and must not be released to other parties, without written consent of the proprietor. Any infringement will be legally pursued.

STANDARD 10-2359		Material		Standards		Code No	
Schema	CNH	n°	0	n°	0		
Drawn by	DRR/Philo	Date	17/11/2016	Drawn by	DRR/Philo	Date	17/11/2016
Checked by	DRR/Philo	Date	18/11/2016	Checked by	DRR/Philo	Date	18/11/2016
Approved by	DRR/Philo	Date	18/11/2016	Approved by	DRR/Philo	Date	18/11/2016
Line Diagram		8x4/8x8 LHD/RHD_8099-1,5		5802287105 DC 50-1494		1/2 A2	

IVECO S.p.A.
Product Engineering / Product Validation
Application & Technical Application
(Giorgio Demichellis)

	front axle	tag axle
K-O (KINGPIN-OFFSET)	*75 - 130	*75 - 130
CA (CAMBER-ANGLE)	0,8°	0,8°
KA (KINGPIN-ANGLE)	7°	7°
CASTER ANGLE	1,38° - 3°	0°
TOE-IN nominal value	+1,5mm/m	-3,5mm/m
tolerance	(±1,5mm/m)	(±1,5mm/m)

* K-O (KINGPIN-OFFSET) depends on tyres and rim-sizes



steering wheel rotation angle: 2088°
(from center to end lock: 1044° left and 1044° right)

overall ratio front axle = $2088° / (52° + 36°) = 23,7$
overall ratio tag axle = $2088° / (23° + 15,5°) = 54,2$
overall ratio tag axle = $2088° / (16,5° + 12,9°) = 71,0 \star$

Shown is LHD.
RHD is mirror image.

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Model 1F+T LHD+RHD steering-gear-type 8099-2-pumps l=22,2-26,2 Opt.78325 (Emergency steering circuit)					
Scale	schematic	A1	11EGM02043040	18.11.17	Exc
Name	Date	AD	12CRY01009040	18.04.18	NAB
Drawn by	SCHNEIDER ERM	07.11.2017	Lock	Modification Notice Code	Doc
Checked by	SCHNEIDER ERM	10.11.2017			
Approved	KOEBERLE	04.04			
			Designation		Lex Code 155367
			GROUP-STEERINGGEAR WITH LINKAGE		
			1F+T_LHD+RHD_8099-1.5_Opt.78325		
			No		Sheet
			5802037500 DD 50-1402		1/1



E24*79R02/01*0058*00

Modifications A1 - IVECO this block replaced by CNH title block. Please also radius modified (was 500). Caster angle of front axle (was 2-3°) and toe-in values updated. Add of 164-1-1-2 variant