



DEKRA Test Center

2024 Report 24CD8EXT-145



Report 24CD8EXT-145

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Report 24CD8EXT-145 – Introduction

Comparison fuel consumption 40 – 44 T in Portugal



- Request for information/proposal from ANTRAM (Associação Nacional de Transportadores Públicos Rodoviários de Mercadorias) for a vehicle testing service to deliver in Portugal, regarding the following case:
 - ✓ Heavy vehicles in Portugal can circulate until 44T, but in Spain they can only circulate until 40T.
 - ✓ ANTRAM is searching for an independent entity to carry out heavy vehicle test in order to measure the consumption difference between both conditions.
- Aim of the test:
 - Objective comparison on road between Meirinhas and Vilar Formoso back and forth.
 - Comparison of fuel consumption between 40T and 44T.
 - Emission of DEKRA Certificate/report.

Report 24CD8EXT-145 – Timing – Staff

Comparison fuel consumption 40 – 44 T in Portugal



- Date : Thursday 25th and Friday 26th July
- Both days were run with dry conditions
- DEKRA Test Center:
 - ✓ 2 Engineers witnessing the fuel consumption test
- ANTRAM:
 - ✓ 2 Organizers (ANTRAM's staff) following the fuel consumption test
- Professional hauliers company:
 - ✓ 2 Professional Drivers to drive the heavy vehicles

Report 24CD8EXT-145 – Vehicles – Load

Comparison fuel consumption 40 – 44 T in Portugal



- **Trucks**

- 2 identical trucks:
 - Same brand : IVECO – same model : S-WAY 460 – and same options (for example : classic mirrors)
 - Same mileage : 646 000 and 633 000 km
 - Tires : same brand and model
 - Front : Bridgestone (New) – 385/55 R 22.5
 - Rear : Bridgestone (Regrooved – New) – 315/70 R 22.5
 - Maintenance done: oil change, oil filter, air filter and fuel filter replaced within the month preceding the test.

- **Trailers**

- 2 identical trailers :
 - Same brand : SCHMITZ GOTHA
 - Model : SCF 24G
 - Tires : same brand and model, on 3 axles Michelin Regrooved – New) – 385/55 R 22.5
- 1 loaded to reach 44 T when coupled
- 1 loaded to reach 40 T when coupled

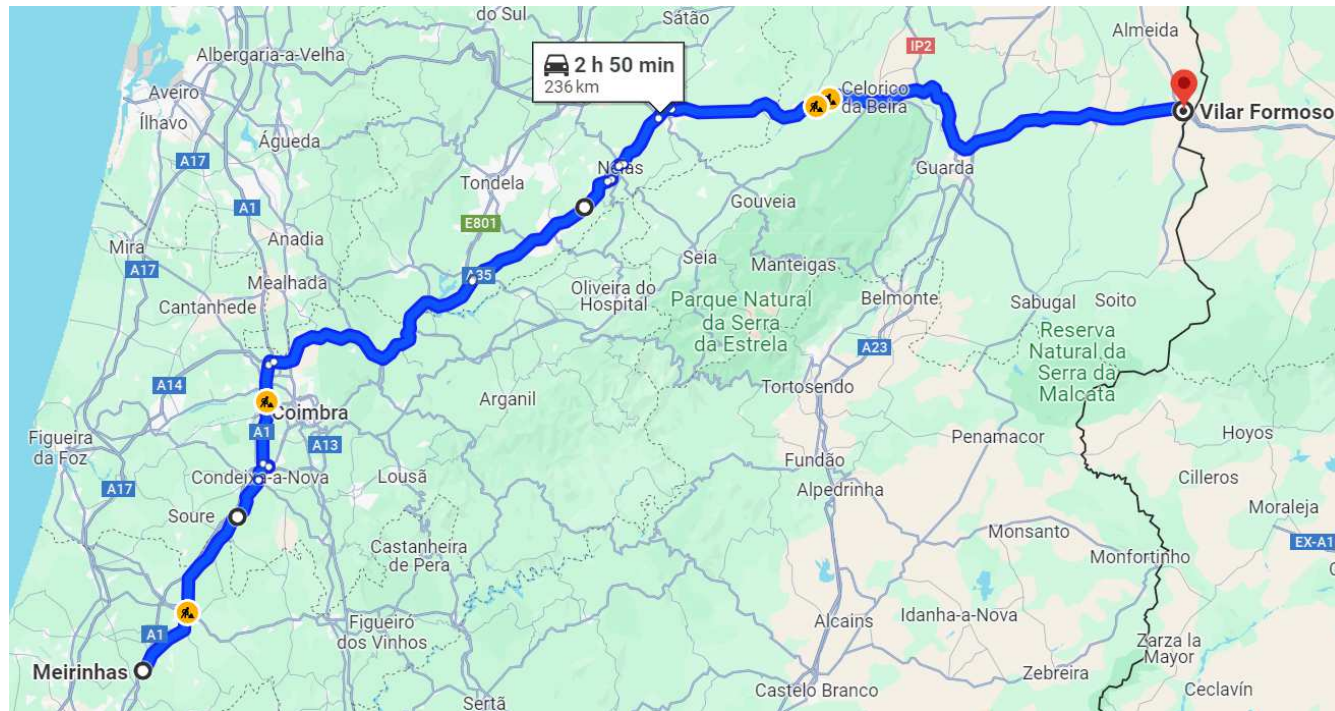


Report 24CD8EXT-145 – Road

Comparison fuel consumption 40 – 44 T in Portugal



- Start / End of the loop: Meirinhas
- Road N1: Meirinhas / Condeixa-a-Nova
- Highway A1: Condeixa-a-Nova / Trouxemil
- 2 x 2 lanes IP3 : Trouxemil / Vimieiro
- Highway A35: Vimieiro / Canas de Senhorim
- Road N234: Canas de Senhorim / Mangualde
- Highway A25 : Mangualde / Vilar Formoso



Report 24CD8EXT-145 – Protocol

Comparison fuel consumption 40 – 44 T in Portugal

Day 1
July, 25th 2024

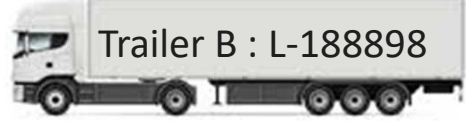
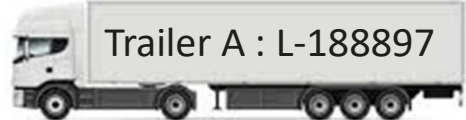
Truck 1 : 30-ET-50	 Trailer A : L-188897	= 43,98 T
Truck 2 : 30-ET-46	 Trailer B : L-188898	= 40,00 T

Trailers permutation
between both trucks



between Day 1 and Day 2

Day 2
July, 26th 2024

Truck 1 : 30-ET-50	 Trailer B : L-188898	= 40,00 T
Truck 2 : 30-ET-46	 Trailer A : L-188897	= 43,98T

- Delayed start of 5 minutes between both trucks to avoid any aerodynamic effect.

 **Adelino Duarte da Mota, S.A.**
MATÉRIAS-PRIMAS PARA A INDÚSTRIA CERÂMICA

Tel.: +351 236 949 060
(Chamada para o rede fixa nacional)
Apartado 8
3106-601 Meirinhos (Pombal)
E-mail: adm@mota-sc.com

Talão de Pesagem Nº 155751
Data: 2024-07-25
Entrada: 11:13:21
Saída: 11:27:36

(ORIGINAL)


Cliente : - POMBALENSE

Matricula : 30-AT-50 Reboque : L-188897

Produto : ZP7219006 - Pesagem
Peso Bruto : 43980 Kg Tara: 15000 Kg Peso Líquido: 28980 Kg
Guia Externa: Nº Guia Transp.:
Peso Fornecedor: Arm. Descarga:

RÚBRICA DO PESADOR

Registada na Cons. Reg. Com. Pombal s/o n.º 500 306 087 | Capital Social 12.500.000 € | CONTRIBUINTE N.º 500 306 087

 **Adelino Duarte da Mota, S.A.**
MATÉRIAS-PRIMAS PARA A INDÚSTRIA CERÂMICA

Tel.: +351 236 949 060
(Chamada para o rede fixa nacional)
Apartado 8
3106-601 Meirinhos (Pombal)
E-mail: adm@mota-sc.com

Talão de Pesagem Nº 155760
Data: 2024-07-25
Entrada: 11:45:20
Saída: 11:51:54

(DUPLICADO)

Cliente : - POMBALENSE

Matricula : 30-ZT-46 Reboque : L-188898

Produto : ZP7219006 - Pesagem
Peso Bruto : 40000 Kg Tara: 15000 Kg Peso Líquido: 25000 Kg
Guia Externa: Nº Guia Transp.:
Peso Fornecedor: Arm. Descarga:

RÚBRICA DO PESADOR

Report 24CD8EXT-145 – Results

Comparison fuel consumption 40 – 44 T in Portugal



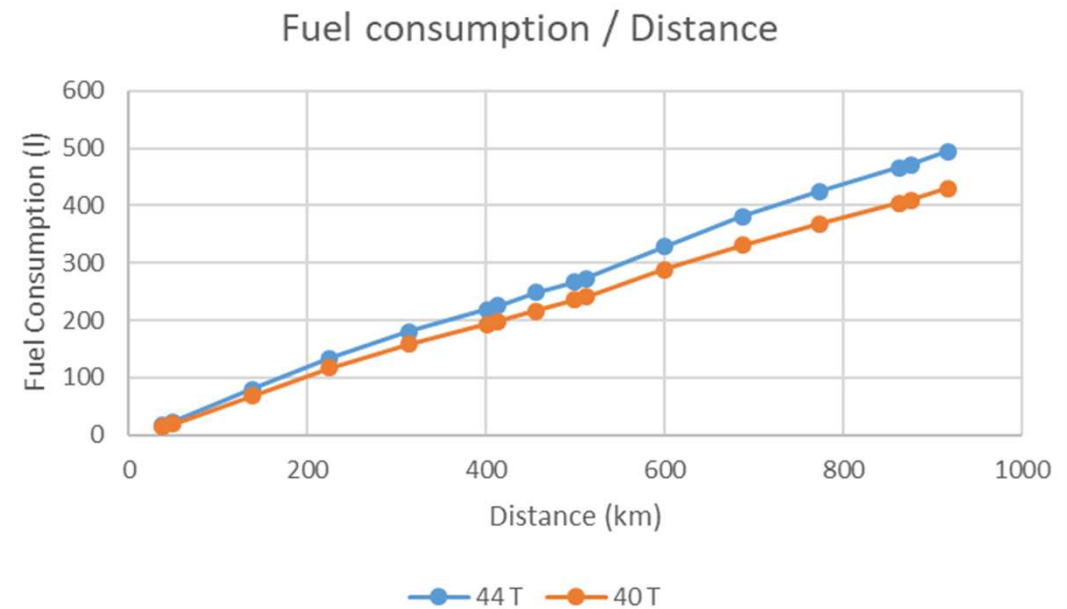
44 T	#1 Road N1	#2 Highway A1	#3 2 x 2 lanes - Highway - Road IP3 - A35 - N234	#4 Highway A25		40 T	#1 Road N1	#2 Highway A1	#3 2 x 2 lanes - Highway - Road IP3 - A35 - N234	#4 Highway A25
25/07-2024 - Truck 1						25/07-2024 - Truck 2				
Liters	18	5	56	54		Liters	14	5	49	49
	Meirinhas => Vilar Formoso						Meirinhas => Vilar Formoso			
Kilometers	37	13	88	87		Kilometers	37	13	88	87
25/07-2024 - Truck 1						25/07-2024 - Truck 2				
Liters	23	6	39	47		Liters	18	5	35	41
	Meirinhas <= Vilar Formoso						Meirinhas <= Vilar Formoso			
Kilometers	42	13	88	88		Kilometers	42	13	88	88
26/07-2024 - Truck 2						26/07-2024 - Truck 1				
Liters	19	6	55	53		Liters	19	5	48	43
	Meirinhas => Vilar Formoso						Meirinhas => Vilar Formoso			
Kilometers	43	13	88	88		Kilometers	43	13	88	88
26/07-2024 - Truck 2						26/07-2024 - Truck 1				
Liters	23	6	41	44		Liters	21	4	37	37
	Meirinhas <= Vilar Formoso						Meirinhas <= Vilar Formoso			
Kilometers	41	14	88	87		Kilometers	41	14	88	87

Report 24CD8EXT-145 – Results

Comparison fuel consumption 40 – 44 T in Portugal



Cumulated consumption on both trucks				
44 Tons	495	liters	917	kilometers
40 Tons	430	liters	917	kilometers
44 Tons	54,0	liters / 100 km	115,1%	
40 Tons	46,9	liters / 100 km	100%	



Report 24CD8EXT-145 – Conclusion

Comparison fuel consumption 40 – 44 T in Portugal



After:

- Minimizing as much as possible the external effects (trucks, trailers, drivers) during a test of 917 Km on open roads,
- Driving on mixed profile roads : 2*2 lanes, highway, with flat areas, uphill and downhill,
- Loading at 40T and 44T fulltime,

For the same distance, 917 km,

vehicles weighing 40T consumed : 430 liters

vehicles weighing 44T consumed : 495 liters

We can conclude that the difference of fuel consumption linked to the load of the vehicles is :

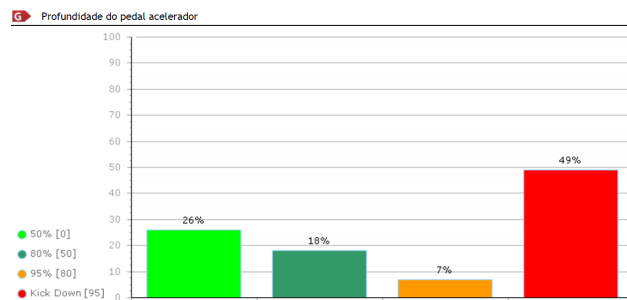
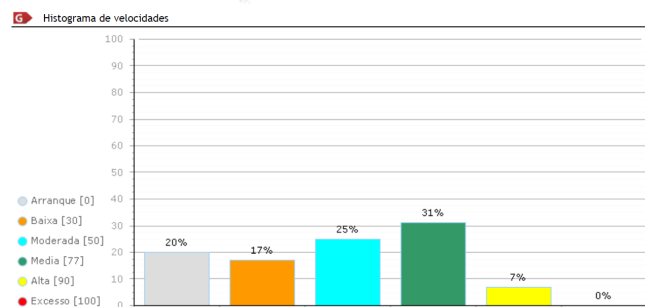
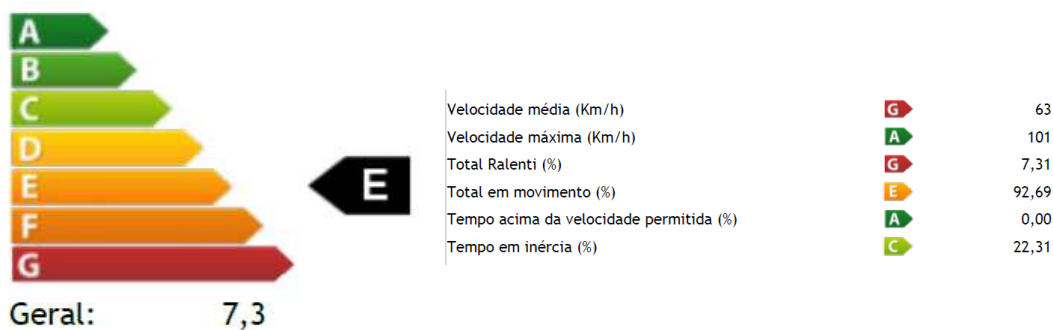
+ 7,1 l / 100 km	} between 40 and 44 T.
+ 15,1%	

Vehicles weighing 44 tons consume 7.1 liters of fuel more for 100 km

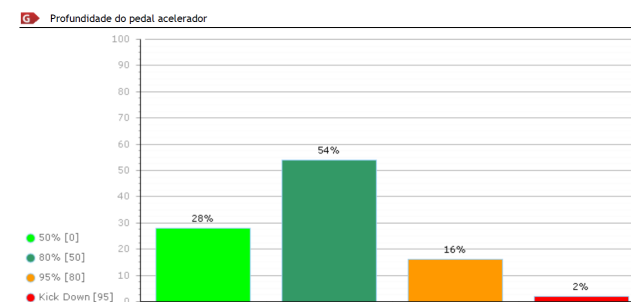
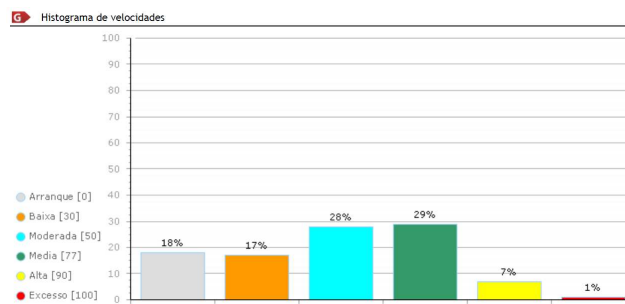
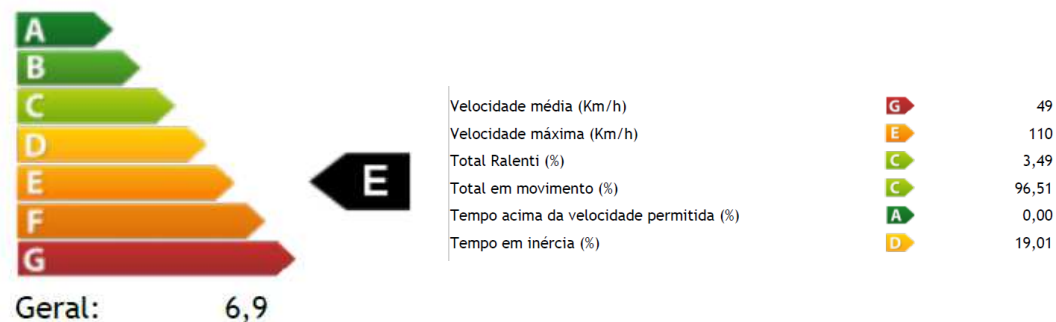
Report 24CD8EXT-145 - Appendix 1 – Telemetry



Truck 1 : 30-ET-50 – Day 1 – 44T



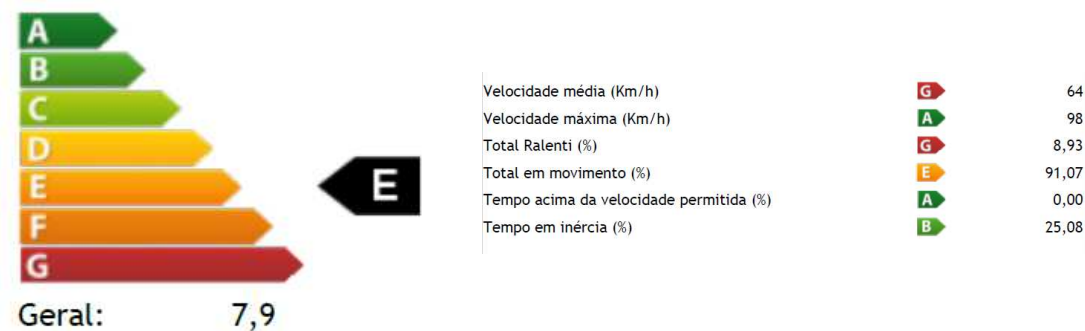
Truck 1 : 30-ET-50 – Day 2 – 40T



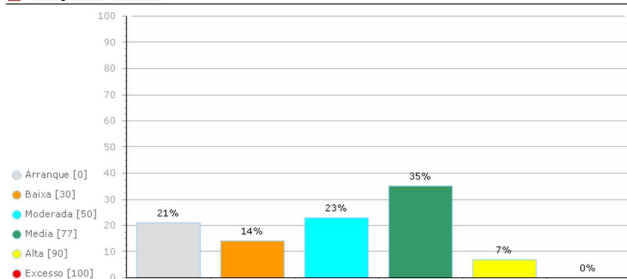
Report 24CD8EXT-145 - Appendix 1 – Telemetry



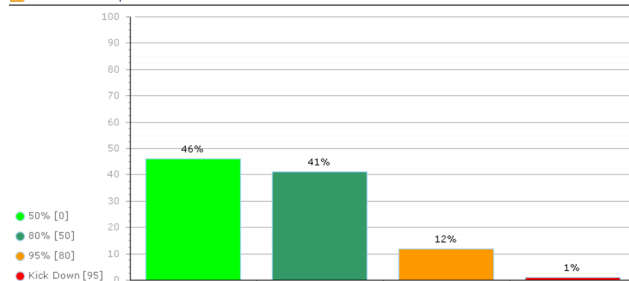
Truck 2 : 30-ET-46 – Day 1 – 40T



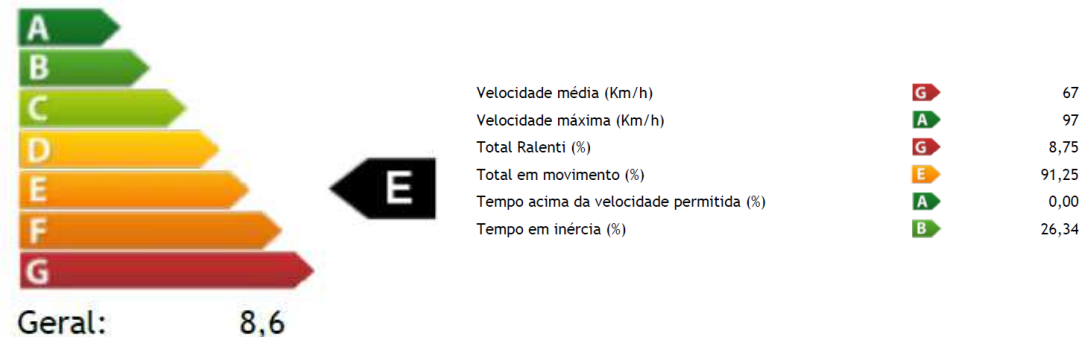
G Histograma de velocidades



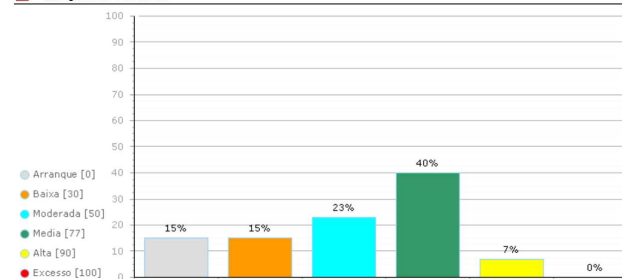
D Profundidade do pedal acelerador



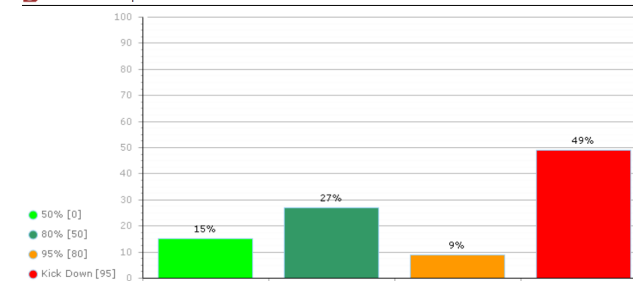
Truck 2 : 30-ET-46 – Day 2 – 44T



G Histograma de velocidades



G Profundidade do pedal acelerador



Report 24CD8EXT-145 - Appendix 2 – Vehicle description



COMUNIDADE EUROPEIA | REPÚBLICA PORTUGUESA
INSTITUTO DOS REGISTOS E DO NOTARIADO, I. P. / INSTITUTO DA MOBILIDADE E DOS TRANSPORTES, I. P.
DIREÇÃO REGIONAL DOS TRANSPORTES DOS AÇORES / DIREÇÃO REGIONAL DA ECONOMIA E TRANSPORTES DA MADEIRA / DIREÇÃO REGIONAL DA ADMINISTRAÇÃO DA JUSTIÇA DA MADEIRA

CERTIFICADO DE MATRÍCULA
REGISTRATION CERTIFICATE | CERTIFICAT D'IMMATRICULATION | ZULASSUNGSBESCHEINIGUNG | PERMISO DE CIRCULACIÓN

A 30-ZT-46 0
B 2020-01-23 I 2020-01-23 N.º 23844137 7
Emissão 2020-02-14

C.1.1 X
C.1.2 JLS-TRANSPORTES INTERNACIONAIS SA
X
X
C.1.3 RUA QUINTA DO PAUL Nº 4 FRAGOSELA DE BAIXO
3505 390 VISEU
C.3.1 X
C.3.2 X
X
X
C.3.3 X
X
C.4 O TITULAR É O PROPRIETÁRIO DO VEÍCULO

D.1 IVECO
D.2 BA3C
VAR 1A11 ; VER BADSE8013Z00HSMXND
D.3 AS440ST/P
E WJMM62ATZ0C425172 P.1 11120
F.1/F.2 X/044000 P.2 338
F.3 (DO CONJUNTO) P.3 GASOLEO
G 06765 Q X
H X S.1 002
J.1 TRACTOR S.2 X
J.2 MERCADORIAS U.1 84.0
J.3 SEM CAIXA V.1 018
K e3*2007/46*0135* X.1 385/55R22.5
K.1 2012100044180105 X.2 315/70R22.5
N.1 N.2 N.3 N.4 N.5 07500; 12000
O.1 X O.2 X R BRANCO E OUTRAS
Z.3 OU LOT. 3; PN 13R22.5; 315/70R22.5; 315/80R22.5; FR 385/65
R22.5; PMTA 1º 8000kg 2º 13000kg; Euro VI D
X
X



COMUNIDADE EUROPEIA | REPÚBLICA PORTUGUESA
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DIREÇÃO REGIONAL DOS TRANSPORTES DOS AÇORES / DIREÇÃO REGIONAL DA ECONOMIA E TRANSPORTES DA MADEIRA / DIREÇÃO REGIONAL DA ADMINISTRAÇÃO DA JUSTIÇA DA MADEIRA

CERTIFICADO DE MATRÍCULA
REGISTRATION CERTIFICATE | CERTIFICAT D'IMMATRICULATION | ZULASSUNGSBESCHEINIGUNG | PERMISO DE CIRCULACIÓN

A 30-ZT-50 8
B 2020-01-23 I 2020-01-23 N.º 23844141 5
Emissão 2020-02-14

C.1.1 X
C.1.2 JLS-TRANSPORTES INTERNACIONAIS SA
X
X
C.1.3 RUA QUINTA DO PAUL Nº 4 FRAGOSELA DE BAIXO
3505 390 VISEU
C.3.1 X
C.3.2 X
X
X
C.3.3 X
X
C.4 O TITULAR É O PROPRIETÁRIO DO VEÍCULO

D.1 IVECO
D.2 BA3C
VAR 1A11 ; VER BADSE8013Z00HSMXND
D.3 AS440ST/P
E WJMM62ATZ0C425277 P.1 11120
F.1/F.2 X/044000 P.2 338
F.3 (DO CONJUNTO) P.3 GASOLEO
G 06765 Q X
H X S.1 002
J.1 TRACTOR S.2 X
J.2 MERCADORIAS U.1 84.0
J.3 SEM CAIXA V.1 018
K e3*2007/46*0135* X.1 385/55R22.5
K.1 2012100044180105 X.2 315/70R22.5
N.1 N.2 N.3 N.4 N.5 07500; 12000
O.1 X O.2 X R BRANCO E OUTRAS
Z.3 OU LOT. 3; PN 13R22.5; 315/70R22.5; 315/80R22.5; FR 385/65
R22.5; PMTA 1º 8000kg 2º 13000kg; Euro VI D
X
X



Report 24CD8EXT-145 - Appendix 2 – Vehicle description



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DIREÇÃO REGIONAL DOS TRANSPORTES DOS AÇORES
DIREÇÃO REGIONAL DA ECONOMIA E TRANSPORTES DA MADEIRA / DIREÇÃO REGIONAL DA ADMINISTRAÇÃO DA JUSTIÇA DA MADEIRA

CERTIFICADO DE MATRÍCULA
REGISTRATION CERTIFICATE | CERTIFICAT D'IMMATRICULATION | ZULASSUNGSBESCHEINIGUNG | PERMISO DE CIRCULACIÓN

A L-188897 0 N.º 48174313 8
B 2008-08-04 I 2008-08-04 Emissão 2022-09-06

C.1.1 X
C.1.2 TRANSPORTES CENTRAL POMBALENSE LDA
X
X
C.1.3 MEIRINHA DE CIMA
3105 253 MEIRINHAS
C.3.1 X
C.3.2 X
X
X
C.3.3 X
X
C.4 O TITULAR É O PROPRIETÁRIO DO VEÍCULO

COMUNIDADE EUROPEIA | REPÚBLICA PORTUGUESA
INSTITUTO DOS REGISTOS E DO NOTARIADO, I. P. / INSTITUTO DA MOBILIDADE E DOS TRANSPORTES, I. P.
DIREÇÃO REGIONAL DOS TRANSPORTES DOS AÇORES
DIREÇÃO REGIONAL DA ECONOMIA E TRANSPORTES DA MADEIRA / DIREÇÃO REGIONAL DA ADMINISTRAÇÃO DA JUSTIÇA DA MADEIRA

CERTIFICADO DE MATRÍCULA
REGISTRATION CERTIFICATE | CERTIFICAT D'IMMATRICULATION | ZULASSUNGSBESCHEINIGUNG | PERMISO DE CIRCULACIÓN

A L-188898 3 N.º 48169818 3
B 2008-08-04 I 2008-08-04 Emissão 2022-09-06

C.1.1 X
C.1.2 TRANSPORTES CENTRAL POMBALENSE LDA
X
X
C.1.3 MEIRINHA DE CIMA
3105 253 MEIRINHAS
C.3.1 X
C.3.2 X
X
X
C.3.3 X
X
C.4 O TITULAR É O PROPRIETÁRIO DO VEÍCULO

D.1 SCHMITZ GOTHA
D.2 SCF 24G
X
D.3 X
E WSK00000001241921 P.1 ***
F.1/F.2 X/035000 P.2 X
F.3 X P.3 ***
G 05800 Q X
H X S.1 X
J.1 SEMI-REBOQUE S.2 X
J.2 CARGA U.1 X
J.3 BERÇO PORTA CONTENT. V.1 X
K X X.1 X
K.1 2008300083800000 X.2 385/55R22.5
N.1 N.2 N.3 N.4 N.5 08000; 08000; 08000
O.1 X O.2 X R ***
Z.3 VEIC.EXTENSÍVEL C/3 POSIÇÕES EIXO/APOIO = 5850MM; 7580MM; 8150MM, COMP.MÁX. 13580MM
X
X

https://justica.gov.pt/servicos/DUA

D.1 SCHMITZ GOTHA
D.2 SCF 24G
X
D.3 X
E WSK00000001241919 P.1 ***
F.1/F.2 X/035000 P.2 X
F.3 X P.3 ***
G 05800 Q X
H X S.1 X
J.1 SEMI-REBOQUE S.2 X
J.2 CARGA U.1 X
J.3 BERÇO PORTA CONTENT. V.1 X
K X X.1 X
K.1 2008300083910000 X.2 385/55R22.5
N.1 N.2 N.3 N.4 N.5 08000; 08000; 08000
O.1 X O.2 X R ***
Z.3 VEIC.EXTENSÍVEL C/3 POSIÇÕES EIXO/APOIO = 5850MM; 7580MM; 8150MM, COMP.MÁX. 13580MM
X
X

https://justica.gov.pt/servicos/DUA

