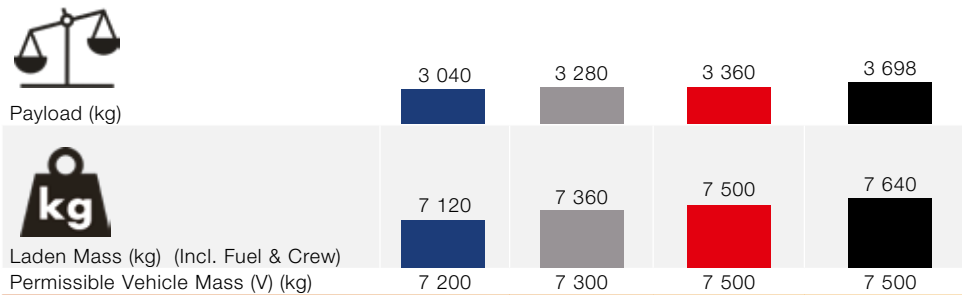## Truck Test 2014 - technical specifications
7 000 kg - 8 000 kg

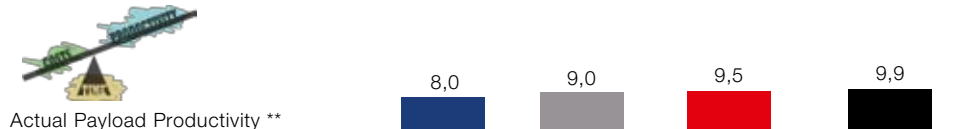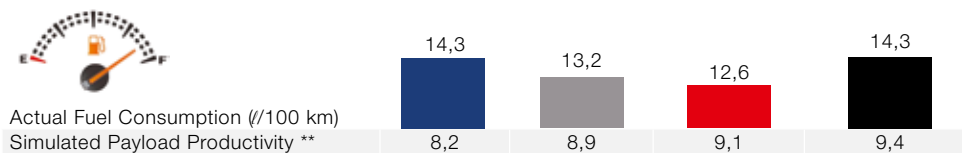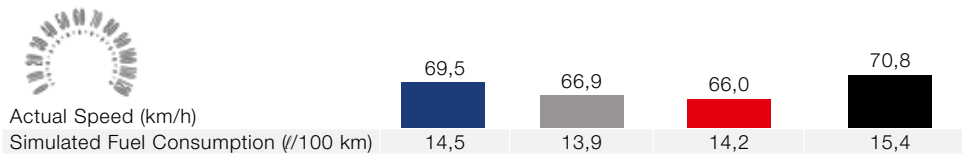| Model	Hyundai HD 72	Hino 300 Series 815 Auto	Isuzu NPR 400 AMT	Fuso Canter FE7-136
Dimensions				
Wheelbase (mm)	3 735	4 200	3 815	3 850
Body Length (mm)	4 700	4 400	4 150	4 200
Body Width (mm)	2 100	2 100	2 100	2 200
Body Height (mm)	2 000	1 900	1 900	2 000
Masses				
Tare Mass (kg) (Incl. Fuel & Crew)	2 764	2 749	2 884	2 682
Body Mass (kg/m)	280	303	303	300
Unladen Mass (kg) (Incl. Fuel & Crew)	4 080	4 080	4 140	3 942
Payload (kg)	3 040	3 280	3 360	3 698
Laden Mass (kg) (Incl. Fuel & Crew)	7 120	7 360	7 500	7 640
Permissible Vehicle Mass (V) (kg)	7 200	7 300	7 500	7 500
Day 1: Hartbeespoort to Belfast Return - 511 km (Laden)				
Simulated Speed (km/h)	73,4	73,5	73,6	73,2
Actual Speed (km/h)	73,8	69,8	69,5	73,8
Simulated Fuel Consumption (ℓ/100 km)	15,1	14,5	14,8	16,1
Actual Fuel Consumption (ℓ/100 km)	14,1	13,7	13,3	14,7
Day 2: Hartbeespoort to Gerotek Return - 94,7 km (Laden)				
Simulated Speed (km/h)	53,1	53,7	53,7	52,6
Actual Speed (km/h)	39,6	43,5	47,2	47,9
Simulated Fuel Consumption (ℓ/100 km)	20,7	19,6	20,2	20,6
Actual Fuel Consumption (ℓ/100 km)	19,8	20,6	19,1	19,9
Day 3: Hartbeespoort to Belfast Return - 511 km (Unladen)				
Simulated Speed (km/h)	74,3	74,4	74,4	74,3
Actual Speed (km/h)	74,4	70,1	67,0	73,5
Simulated Fuel Consumption (ℓ/100 km)	12,8	12,3	12,4	13,7
Actual Fuel Consumption (ℓ/100 km)	13,5	11,2	10,7	12,9
Overall Results - 1 116,7 km				
Simulated Speed (km/h)	71,8	71,9	72,0	71,7
Actual Speed (km/h)	69,5	66,9	66,0	70,8
Simulated Fuel Consumption (ℓ/100 km)	14,5	13,9	14,2	15,4
Actual Fuel Consumption (ℓ/100 km)	14,3	13,2	12,6	14,3
Simulated Payload Productivity **	8,2	8,9	9,1	9,4
Actual Payload Productivity **	8,0	9,0	9,5	9,9

** Payload Productivity = ((payload (t) x leg1 km / overall km) + (payload (t) x leg2 km / overall km)) x overall km/h / overall ℓ/100 km

Notes:

Hyundai HD 72:
A penalty mass of 236 kg was added on day three to increase the unladen mass from 3 844 kg to 4 080 kg to result in a body mass of 280 kg/m.

On day two this vehicle took a wrong turn on the way back from Gerotek to Hartbeespoort, resulting in a 9,6 km shorter trip distance. The return time was therefore assumed to be the same as the outbound time and the fuel consumption was increased by 1,9 litres at 19.8 ℓ/100 km as per the difference simulated between the two routes using the TransSolve software. The overall performance for the day was then very similar to the other vehicles, although the average speed was lower due to excessive speed violations on the section through Hartbeespoort.

Total minutes added for speed violations over the three days = 33 minutes, reducing the average speed from 72,4 km/h to 69,5 km/h.

Hino 300 Series 815 Auto:
On day three the vehicle missed the weighbridge on the return leg and had to turn around and make a 15,9 km detour back to the weighbridge. To make the results more realistic, the fuel consumption was therefore reduced by two litres at 12,6 ℓ/100 km as per the TransSolve simulation and the time was reduced by 18 minutes at 53 km/h as recorded by the co-driver for that section.

Total minutes added for speed violations over the three days = 30 minutes, reducing the average speed from 68,8 km/h to 66,9 km/h.
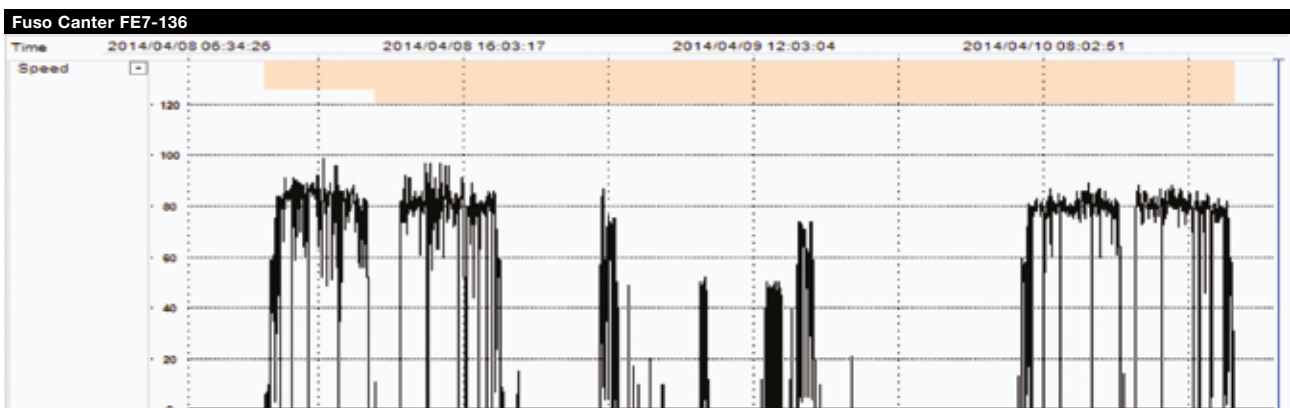
Isuzu NPR 400 AMT:
Total minutes added for speed violations over the three days = 17 minutes, reducing the average speed from 67,1 km/h to 66 km/h.

Fuso Canter FE7-136:
This vehicle was carrying a 78 kg penalty mass on the unladen leg on day three to ensure that the body mass was at least 280 kg/m. However, when this vehicle was weighed at Donkerhoek, the body mass was actually in excess of the required minimum and therefore the 78 kg penalty was deducted from the unladen mass; resulting in a more realistic unladen mass of 3 924 kg with the body mass at 300 kg/m.
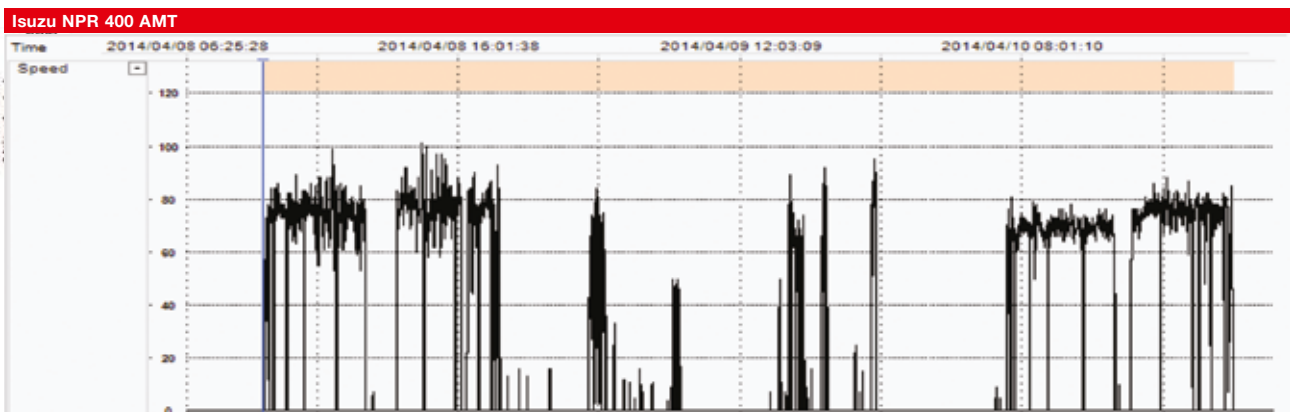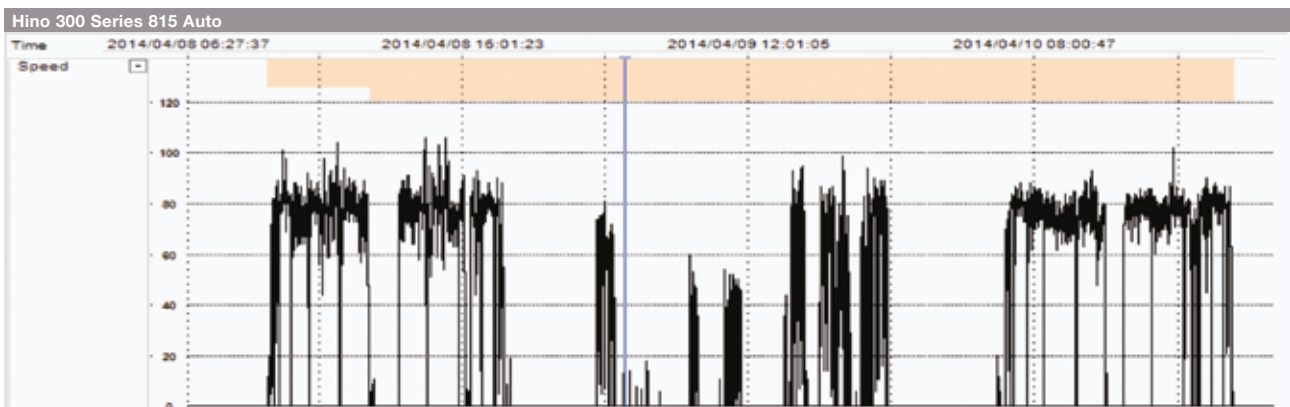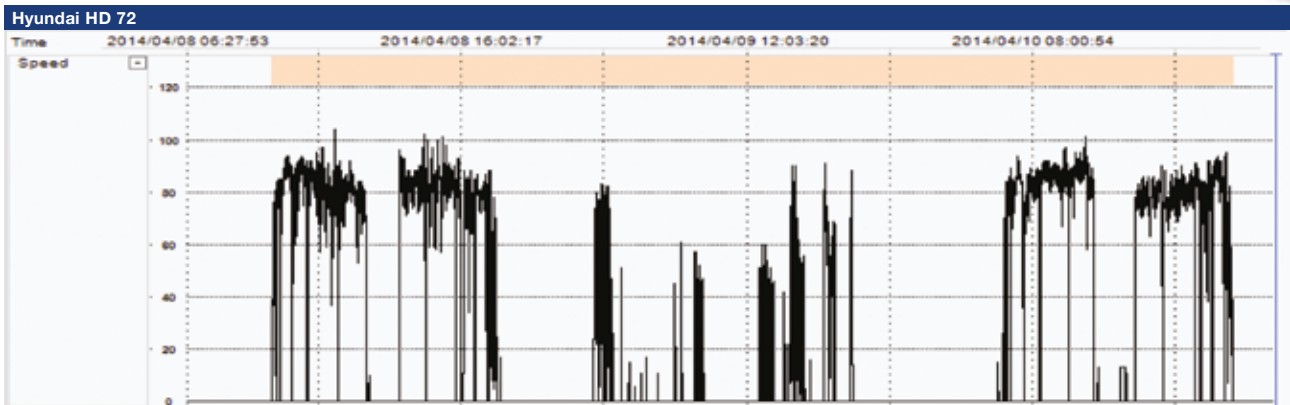
Total minutes added for speed violations over the three days = seven minutes, reducing the average speed from 71,3 km/h to 70,8 km/h.

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Hyundai HD 72

Time   2014/04/08 06:27:53   2014/04/08 16:02:17   2014/04/09 12:03:20   2014/04/10 08:00:54

Hino 300 Series 815 Auto

Time   2014/04/08 06:27:37   2014/04/08 16:01:23   2014/04/09 12:01:05   2014/04/10 08:00:47

Isuzu NPR 400 AMT

Time   2014/04/08 06:25:28   2014/04/08 16:01:38   2014/04/09 12:03:09   2014/04/10 08:01:10

Fuso Canter FE7-136

Time   2014/04/08 06:34:26   2014/04/08 16:03:17   2014/04/09 12:03:04   2014/04/10 08:02:51

Truck Test 2014 - technical specifications		
8 000 kg - 9 000 kg		
Model	**Hino 300 Series 915**	**Isuzu NQR 500 AMT**
Dimensions		
Wheelbase (mm)	4 200	4 175
Body Length (mm)	4 400	4 440
Body Width (mm)	2 100	2 100
Body Height (mm)	1 900	1 900
Masses		
Tare Mass (kg) (Incl. Fuel & Crew)	2 794	3 044
Body Mass (kg/m)	280	287
Unladen Mass (kg) (Incl. Fuel & Crew)	4 026	4 320
Payload (kg)	4 534	4 115
Laden Mass (kg) (Incl. Fuel & Crew)	8 560	8 435
Permissible Vehicle Mass (V) (kg)	8 500	8 500
Day 1: Hartbeespoort to Belfast Return - 511 km (Laden)		
Simulated Speed (km/h)	73,2	73,2
Actual Speed (km/h)	68,3	70,3
Simulated Fuel Consumption (ℓ/100 km)	15,8	16,0
Actual Fuel Consumption (ℓ/100 km)	14,2	15,2
Day 2: Hartbeespoort to Gerotek Return - 94,7 km (Laden)		
Simulated Speed (km/h)	53,1	52,6
Actual Speed (km/h)	40,6	44,7
Simulated Fuel Consumption (ℓ/100 km)	21,7	22,0
Actual Fuel Consumption (ℓ/100 km)	21,5	20,7
Day 3: Hartbeespoort to Belfast Return - 511 km (Unladen)		
Simulated Speed (km/h)	74,3	74,3
Actual Speed (km/h)	68,1	68,2
Simulated Fuel Consumption (ℓ/100 km)	12,6	13,0
Actual Fuel Consumption (ℓ/100 km)	11,4	12,0
Overall Results - 1 116,7 km		
Simulated Speed (km/h)	71,7	71,7
Actual Speed (km/h)	64,8	66,4
Simulated Fuel Consumption (ℓ/100 km)	14,8	15,2
Actual Fuel Consumption (ℓ/100 km)	13,5	14,2
Simulated Payload Productivity **	11,9	10,6
Actual Payload Productivity **	11,8	10,4

** Payload Productivity = ((payload (t) x leg1 km / overall km) + (payload (t) x leg2 km / overall km)) x overall km/h / overall ℓ/100 km

Notes:

Hino 300 Series 915:

A penalty mass of 22 kg was added on day three to increase the unladen mass from 4 004 kg to 4 026 kg to result in a body mass of 280 kg/m.

Total minutes added for speed violations over the three days = 40 minutes, reducing the average speed from 67,5 km/h to 64,8 km/h.

Isuzu NQR 500 AMT:

This vehicle was overloaded by 7,1 percent on the front axle and therefore the laden mass was reduced by 65 kg to bring the overload into the five percent tolerance, resulting in a slightly lower payload.

Total minutes added for speed violations over the three days = 24 minutes, reducing the average speed from 67,6 km/h to 66,4 km/h.

Hino 300 Series 915

| Time | 2014/04/08 06:25:49 | 2014/04/08 16:00:15 | 2014/04/09 12:01:02 | 2014/04/10 08:01:49 |

Speed

Isuzu NQR 500 AMT

| Time | 2014/04/08 06:22:22 | 2014/04/08 16:02:33 | 2014/04/09 12:01:38 | 2014/04/10 08:00:43 |

Speed