

# Up to the challenge

The new UD 80C freight carrier is an impressive vehicle in many respects, as VIC OLIVER discovers

**W**ant to succeed within your industry sector? One of the most vital business imperatives is that of listening to your customers.

Some businesses get this right; others fail dismally. The former statement almost certainly applies to the company that used to be called Nissan Diesel, and – as of September 1, 2011 – became known as UD Trucks Southern Africa. Its customers have been asking for a vehicle in the 8 to 9-t segment of the market that would reduce lifetime running costs by being extremely fuel efficient and highly productive. These



## Trip simulation results

These tables have been generated using **TransSolve** Transport Solutions Software (for a free trial CD, visit [www.htm.co.za](http://www.htm.co.za)).

Nissan Diesel UD 80C & Dropside Body												
	Jhb - Dbn				Jhb - Cape Town				Jhb - Pretoria			
	Laden 2 ways		Laden 1 way		Laden 2 ways		Laden 1 way		Laden 2 ways		Laden 1 way	
Purchase Price (Rands)	554000		554000		554000		554000		554000		554000	
Interest Rate (%)	10		10		10		10		10		10	
Payload (tons)	7.8		7.8		7.8		7.8		7.8		7.8	
Distance (km)	1132.5		1132.5		2797.2		2797.2		113.1		113.1	
Time taken (hrs:min)	16:31		15:53		38:01		37:33		1:49		1:45	
Ave Speed (km/h)	69		71.7		73.6		74.5		61.8		63.7	
Fuel Used (litres)	259.1		225.1		597		534.9		26.3		21.3	
Consumption (l/100 km)	22.7		19.8		21.3		19.1		23.3		19.0	
Fuel Price (R/l)	7.54		7.54		7.54		7.54		7.54		7.54	
Productivity Factor	19.6		13.2		27.0		14.1		18.7		14.1	
Ave Distance p.a. (km)	75105		96013		85034		97651		26414		39121	
Ave carried p.a. (tons)	1028		666		582		252		3661		2711	
<b>Fixed Costs</b>	<b>Rands/annum</b>		<b>Rands/annum</b>		<b>Rands/annum</b>		<b>Rands/annum</b>		<b>Rands/annum</b>		<b>Rands/annum</b>	
Instalments	141250		141250		141250		141250		141250		141250	
Crew	55744		55744		55744		55744		55744		55744	
Insurance	46536		46536		46536		46536		46536		46536	
Licence	4329		4329		4329		4329		4329		4329	
Overheads	27540		27540		27540		27540		27540		27540	
Total fixed costs	275399		275399		275399		275399		275399		275399	
<b>Final analysis</b>	<b>R/km</b>	<b>R/Ton</b>	<b>R/km</b>	<b>R/Ton</b>	<b>R/km</b>	<b>R/Ton</b>	<b>R/km</b>	<b>R/Ton</b>	<b>R/km</b>	<b>R/Ton</b>	<b>R/km</b>	<b>R/Ton</b>
Total fixed costs	3.67	267.90	2.87	413.51	3.24	473.19	2.82	1092.85	10.43	75.23	7.04	101.59
<b>Variable Costs</b>												
- Fuel	1.73	126.52	1.5	219.86	1.62	291.58	1.45	522.2	1.78	12.82	1.45	20.86
- Tyres	0.25	18.24	0.25	37.17	0.26	46.28	0.26	93.45	0.15	1.08	0.2	2.93
- Maintenance	0.74	53.74	0.74	107.46	0.74	132.09	0.74	264.05	0.74	5.31	0.74	10.61
- Toll Fees	0.52	37.78	0.52	75.84	0.18	32.1	0.18	64.34				
<b>Total Costs</b>	<b>6.91</b>	<b>504.18</b>	<b>5.88</b>	<b>853.84</b>	<b>6.04</b>	<b>975.24</b>	<b>5.45</b>	<b>2036.89</b>	<b>13.01</b>	<b>94.44</b>	<b>9.43</b>	<b>135.99</b>

\* Productivity = payload (tons) x average speed / fuel consumption ( l/100km)

# UD 80C freight carrier Road test by Vic Oliver



operators also wanted an environmentally friendly vehicle that was easy to maintain without the need for expensive diagnostic equipment.

The answer? The new UD 80C, introduced as a direct result of Nissan Diesel, or UD Trucks Southern Africa, listening to its customers' needs.

The truck features the well-proven Nissan Diesel FE6TA turbocharged engine, which delivers 157 kW (211 hp) of power. This is married to a six-speed synchromesh transmission and high-speed rear differential ratio of 6.166:1. Surprisingly, with a rear differential ratio of 6.166:1, the vehicle is still able to achieve an expectable gradeability of 30.58% at full Gross Vehicle Mass (GVM),

when operated as a solo unit.

The Nissan Diesel FE6TA engine is easy to maintain, as it is equipped with a mechanical engine governor while the only electronic equipment on the vehicle is the ignition timer. Therefore no expensive diagnostic equipment is needed to maintain the vehicle. The engine also meets the Euro 2 emission standards.

But what's it like to drive? In order to answer this question, I took the UD 80C freight carrier on a 226 km test route from Rosslyn to the Kendal-Ogies-Balmoral turn-off on the Witbank highway and then back again. This proved beyond any doubt that the UD 80C is a very fuel-efficient vehicle, which offers high vehicle productivity.

The vehicle was loaded to its full permissible Gross Vehicle Weight Rating of 14 000 kg. Being a factory test vehicle, it was not fitted with a body. To carry the load the vehicle was fitted with steel weights secured to the chassis frame. This meant there was no air resistance from a truck body, which would have marginally affected the fuel consumption of the test vehicle. The fuel consumption achieved on the **FOCUS** test run was 4.71 km// and the round trip was completed in three hours and 15 minutes, resulting in an average speed of 69.6 km/h.

On the road the vehicle handled well. It was driver-friendly and easy to drive. The gearing is good. At 80 km/h, the engine revved at 1 700 r/min, which is very close to the middle of the engine maximum torque and one of the reasons why the fuel consumption is so good. Good engine torque is available between 1 400 and 2 200 r/min, which reduces the number of gear changes. This, in turn, minimises maintenance costs.

The vehicle performed well on the test route and negotiated the uphill climbs easily.

However, in my opinion, this vehicle does not have sufficient power to comfortably pull a trailer on routes with steep gradients, even though it has a Gross Combination Mass (GCM) rating of 18 000 kg, which legally allows that vehicle to draw a trailer.

The interior noise level is at an acceptable level and communication in the cab between the driver and passenger is possible at normal voice levels.

The driver's seat is comfortable as it is a mechanical suspension seat, but the passenger seat is fixed and is not very comfortable for the passenger on a long trip.

But this is a minor niggle; in virtually all other areas, this is an outstanding truck. In conclusion, I believe that the new UD 80C freight carrier is ideal for distribution type applications. It will offer operators the opportunity to minimise lifetime operating costs, which means it will almost certainly

### Loading (Side View - Summary) Nissan Diesel UD 80C (Prototype)

  
  

	Front	Total	Rear	
Tare	2,620 kg	4,470 kg	1,850 kg	Tare
Extras	184 kg	248 kg	64 kg	Extras
Body	283 kg	1,480 kg	1,197 kg	Body
Unladen	3,087 kg	6,198 kg	3,111 kg	Unladen
Payload	1,908 kg	7,797 kg	5,889 kg	Payload
Gross	4,995 kg	13,995 kg	9,000 kg	Gross
Permissible	5,900 kg	14,000 kg	9,000 kg	Permissible
Overload	-0.19%	-0.04%	0.00%	Overload

  

**Notes**

- Included in Unladen = 200l Fuel, Tools, Spare Wheel; Excluded from Unladen = Fifth Wheel
- Accessories Added = Custom Dropside Body - 220 kg/m
- Legislation = South African Road Traffic Act

**Warnings**

- The default payload centre of gravity has been adjusted
- Left versus right mass distribution is not calculated

  

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Disclaimer: The information in this report is an estimate only, the supplier of this report and the supplier of the software shall not be liable for consequential damage or loss arising from the reliance on the information supplied in this report.

\*These graphs illustrate the vehicle's operating costs but are not based on the road test.

These tables have been generated using TransSolve Transport Solutions Software. For a free trial CD visit the [trm.co.za](http://trm.co.za) website.