

# Real World Fuel Economy Test - Brisbane

9<sup>th</sup> of April 2014

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## 01 TEST OVERVIEW

Two vehicles, a 2013 Ford Falcon XR6 and a 2013 Holden Cruze 1.8L were evaluated for fuel consumption on a 'simulated' New European drive Cycle at Willowbank raceway and then in the real world, on an urban drive cycle in Brisbane on the 9<sup>th</sup> of April 2014.

Test overview: >90% fuel. 2 people on board. A/C and headlights off on simulated NEDC, A/C and headlights on for real world. Three tests conducted on each course in each vehicle and results averaged.

The fuel consumption figures on the 'simulated' cycle and in the real world were compared back to the data provided on the Government's Green Vehicle Guide (GVG). The difference in annual fuel costs, at two fuel prices, were calculated between the GVG and the real world.

It should be noted that the NEDC represents the 'best' possible fuel consumption figures you would be likely to achieve.

In summary, at a fuel price of \$1.479/L and average driving distance of 13,600 kilometres per year, the increase in annual fuel costs of the real world urban driving compared to the Green Vehicle Guide figures was calculated to be:

CRUZE      \$420.39 additional per year (+19.7%)

FALCON     \$267.52 additional per year (+9.1%)



## 02 TEST SUMMARY: HOLDEN CRUZE

### VEHICLE SPECIFICATIONS

#### 2013 Holden Cruze 4D SEDAN

Model Year	2013
Body Style	4D SEDAN
Engine Size	1.8L
Fuel Type	Unleaded Petrol
Fuel Consumption	7.4 L / 100 km
Max Power	104kW @ 6200 RPM
Drive	FWD
Transmission	6 SPD AUTOMATIC

### FUEL CONSUMPTION DATA

Fuel consumption calculated from CAN data. Average of three tests of simulated NEDC and real world driving course.

#### Real World Economy

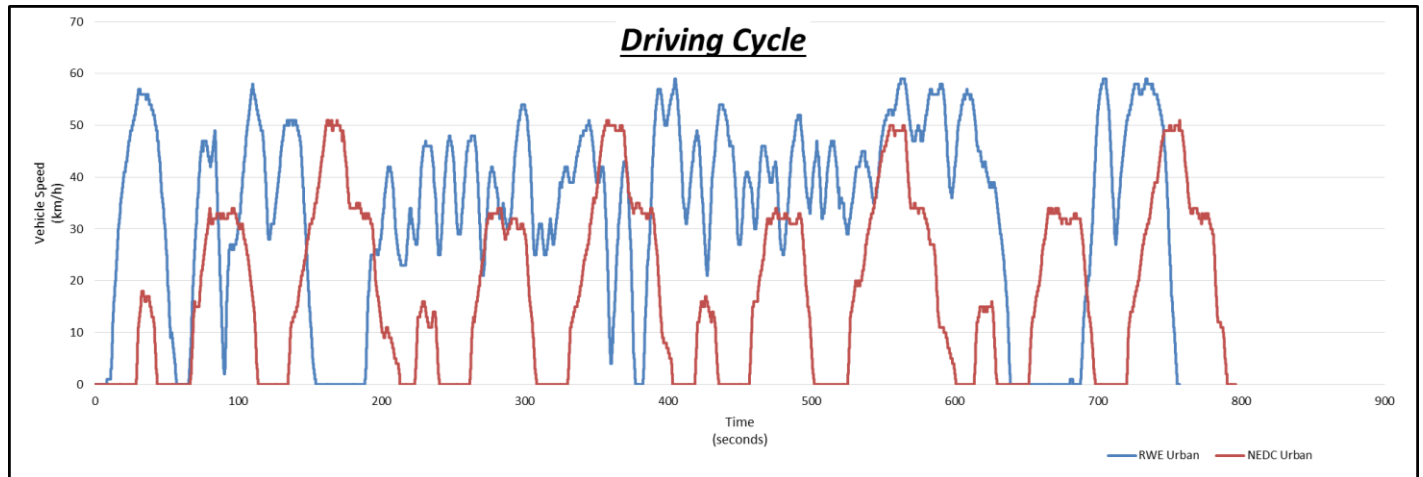
	Fuel Consumption (L/100km)	Fuel Consumption increase % to manufacturer data	Annual Running Cost (13600km/year)	
			National Average	Brisbane
			\$1.479	\$1.649
Manufacture data	10.60		\$ 2,132.13	\$ 2,377.20
NEDC Willowbank	11.18	+6.0%	\$ 2,373.50	\$ 2,646.32
RWE City Driving	12.69	+19.7%	\$ 2,552.52	\$ 2,845.91

Increase in Fuel Cost

\$ 420.39	\$ 468.71
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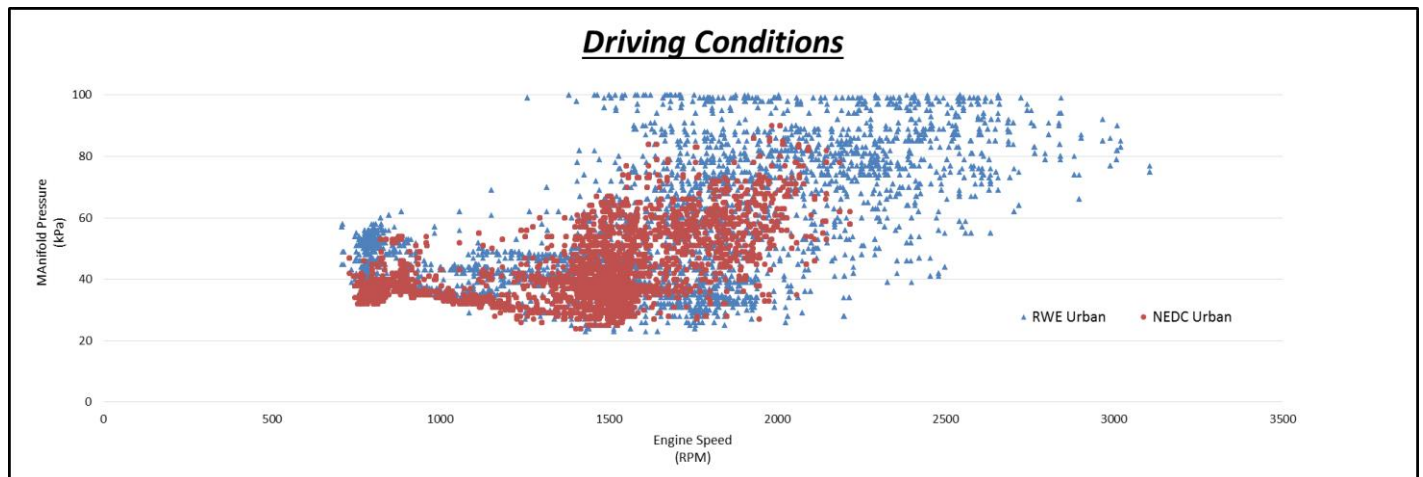
## CRUZE DRIVE CYCLE AND DRIVING CONDITIONS

### NEDC Drive Cycle & RWE overlayed



Note the real world drive (blue), has significantly higher average speeds than the NEDC and many more accelerations over the same time period.

### Recorded Engine Speed vs Engine Load



Note the real world drive (blue), has significantly higher engine RPM and manifold pressure (engine load) than the simulated NEDC data. In the real world, the engine is operating under very different conditions to those on the NEDC. These higher loads and engine speed result in higher fuel consumption.

## 03 TEST SUMMARY: FORD FALCON XR6

### VEHICLE SPECIFICATIONS

2013 Ford Falcon 4D SEDAN XR6

Model Year	2013
Body Style	4D SEDAN
Engine Size	4.0L
Fuel Type	Unleaded Petrol
Fuel Consumption	9.9 L / 100 km
Max Power	195kW @ 6000 RPM
Drive	RWD
Transmission	6 SP AUTO SEQ SPORTS

### FUEL CONSUMPTION DATA

Fuel consumption calculated from CAN data. Average of three tests of simulated NEDC and real world driving course.

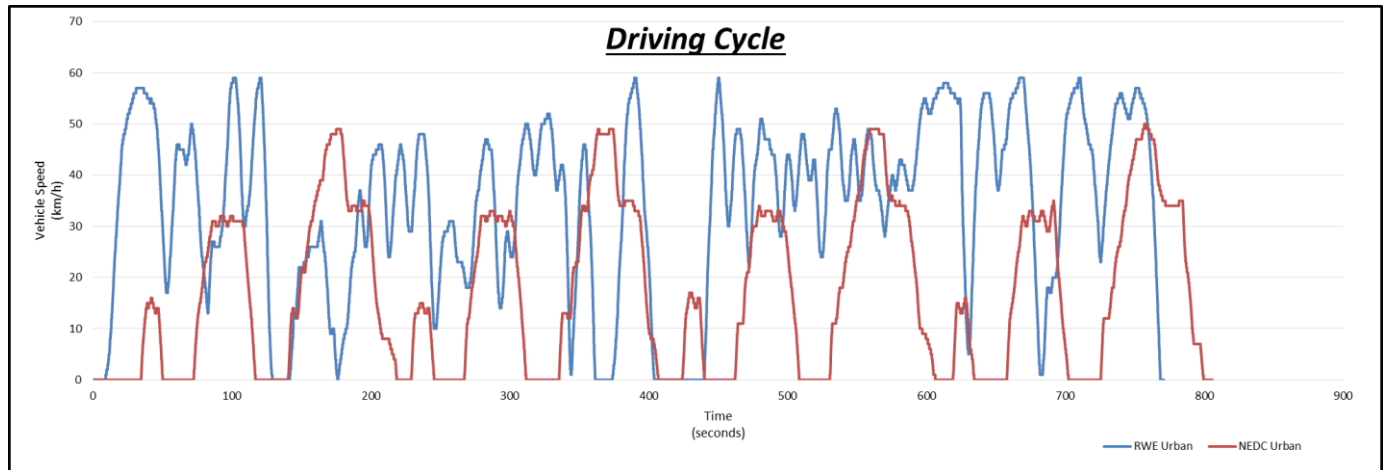
		Fuel Consumption (L/100km)	Fuel Consumption increase % to manufacturer data	Annual Running Cost (13600km/year)	
				National Average	Brisbane
				\$1,479	\$1,649
Manufacture data		14.60		\$ 2,936.70	\$ 3,274.25
NEDC	Willowbank	14.79	+1.3%	\$ 2,974.92	\$ 3,316.86
RWE	City Driving	15.93	+9.1%	\$ 3,204.22	\$ 3,572.53

Increase in Fuel Cost

\$ 267.52	\$ 298.27
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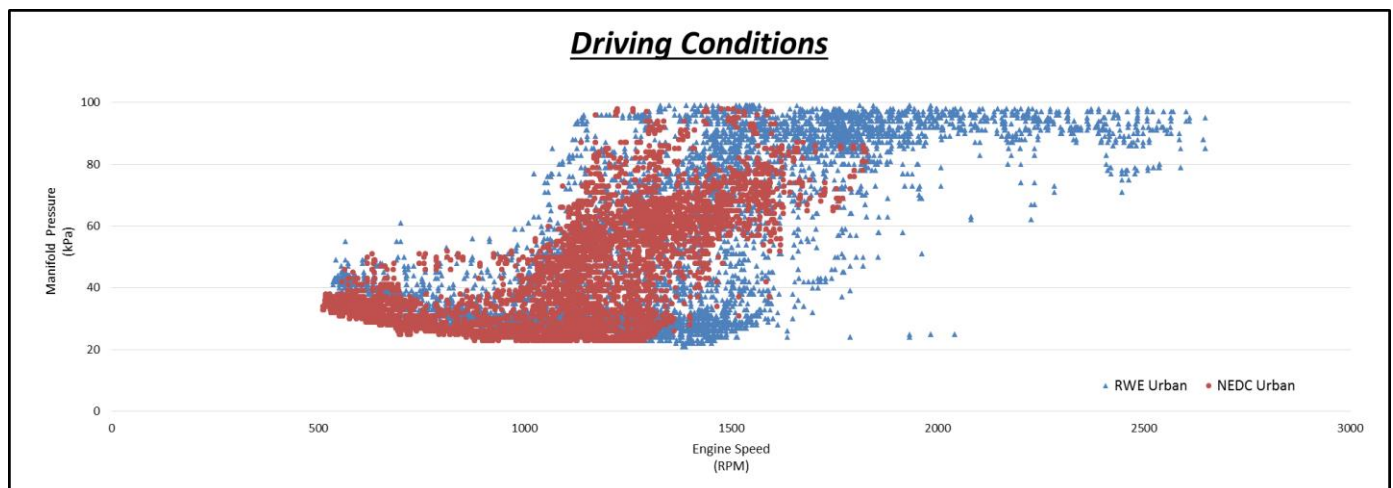
## FALCON DRIVE CYCLE AND DRIVING CONDITIONS

### NEDC Drive Cycle & RWE overlayed



Note the real world drive (blue), has significantly higher average speeds than the NEDC and many more accelerations over the same time period.

### Recorded Engine Speed vs Engine Load



Note the real world drive (blue), has higher engine RPM and manifold pressure (engine load) than the simulated NEDC data. However, on average, the engine data has a smaller shift away from the NEDC than the Cruze which explains why the Ford actual fuel consumption was closer to the green vehicle guide data than that of the Cruze.